

# One-touch Fittings

RoHS

## The New "KQ2"

KQ, KQ2, KG and KJ consolidated into the "KQ2"

- Enhanced variation
- Lightweight
- Compact



New KQ2 Series






















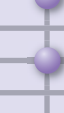


**New** Oval type release button added!

**New** Metal material: Stainless Steel 303



Body type: total of **51** models    Seal method: **3** types    Thread material/Surface treatment (Treated or Non-treated): **3** types<sup>\*1</sup>

\*1 Brass, Brass + Electroless nickel plating, Stainless Steel 303

Applicable tubing	Connection thread	Seal method/Release button shape					
		Sealant		Gasket seal		Face seal	
		Oval Type	Round Type	Oval Type	Round Type	Oval Type	Round Type
Metric size 	M						
	R						
	G						
	Uni						
Inch size 	UNF						
	NPT						
	M						
	R						
	Uni						

**KQ2 Series**

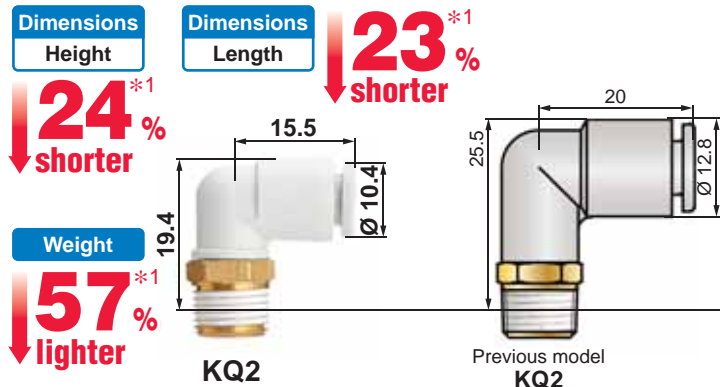


CAT.EUS50-37Dd-UK

## Improved tube insertion/removal



## Compact and lightweight



\*1 Tube removal strength is ensured to be equivalent to previous model. \*1 Previous KQ2 series model: Male elbow, applicable tubing O.D. Ø 6, connection thread R 1/8

## Selectable seal method\*1

\*1 Connection thread: R, NPT



## Selectable surface treatment

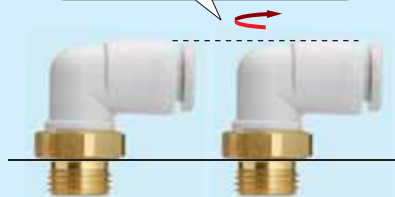
- Brass (No plating)
- Brass + Electroless nickel plating
- Stainless Steel 303

## Face seal adopted for threading

Improved installability (Reduction in amount of tool-tightening required after hand-tightening)

■ Face seal

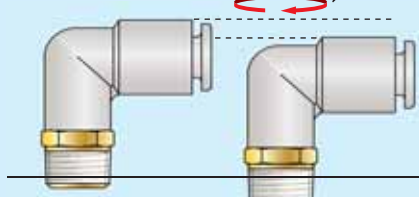
Number of rotations after hand-tightening: **1/6 of a rotation or less**



After hand-tightening    After tool-tightening

■ Sealant

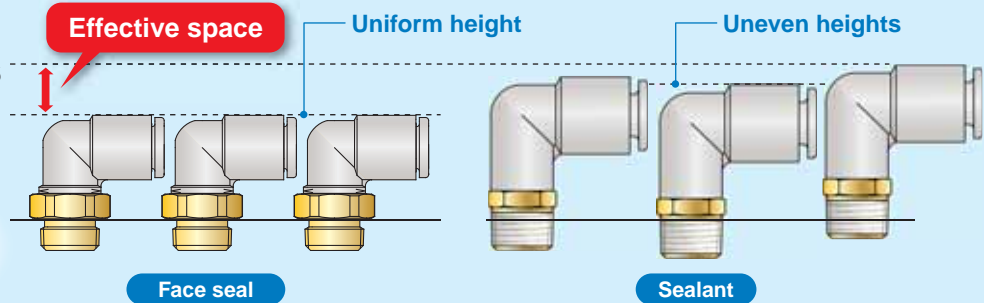
Number of rotations after hand-tightening: **2 to 3 rotations**



After hand-tightening    After tool-tightening

## Uniform height when using multiple fittings

Provides effective space above fittings



## Prevention of sealant residue/protrusion

The current sealant type leaves residue and protrudes out from the threading when installing, making it necessary to clear away the residue using an air blower or similar. However, no residue is created when using a face seal.

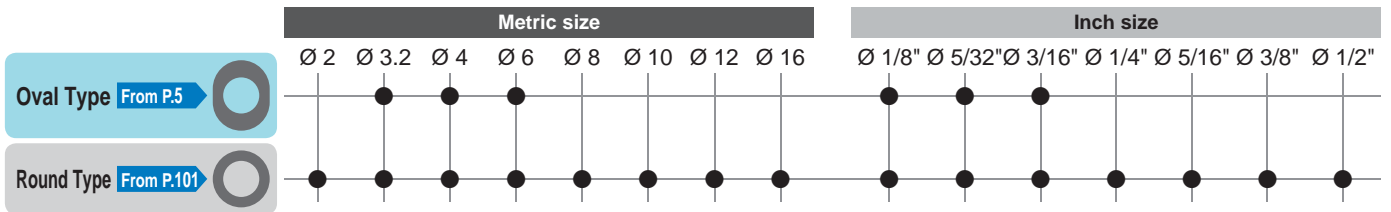
## Re-piping is possible.

Face seal

Repeated re-piping of up to 6 to 10 times is possible due to use of elastic sealant on seating.
































































































































Sealant

Sealant tape is necessary because sealant becomes separated with repeated installation.



Refer to the next page for details on the applicable tubing sizes of each shape.

## Oval Type/Round Type Variations




<b>Hexagon Socket Head Male Connector</b> <b>KQ2S*</b>   	<b>45° Male Elbow</b> <b>KQ2K</b>   	<b>Bulkhead Union</b> <b>KQ2E*</b>   	<b>Universal Female Elbow</b> <b>KQ2VF</b>   
<b>Universal Male Elbow</b> <b>KQ2V*</b>   	<b>Extended Male Elbow</b> <b>KQ2W*</b>   	<b>Bulkhead Connector</b> <b>KQ2E*</b>   	<b>Branch Universal Female Elbow</b> <b>KQ2ZF</b>  
<b>Male Connector</b> <b>KQ2H*</b>   	<b>Female Connector</b> <b>KQ2F*</b>   	<b>Straight Union</b> <b>KQ2H</b>   	<b>Different Diameter Straight</b> <b>KQ2H</b>   
<b>Cross</b> <b>KQ2TW</b>   	<b>Male Elbow</b> <b>KQ2L*</b>   	<b>Union Elbow</b> <b>KQ2L</b>   	<b>Plug-in Elbow</b> <b>KQ2L</b>   
<b>Reducer Elbow</b> <b>KQ2L</b>   	<b>Different Diameter Cross</b> <b>KQ2TX</b>   	<b>Male Branch Tee</b> <b>KQ2T*</b>   	<b>Union Tee</b> <b>KQ2T</b>   
<b>Different Diameter Tee</b> <b>KQ2T</b>   	<b>Different Diameter Tee</b> <b>KQ2T</b>   	<b>Different Diameter Cross</b> <b>KQ2TY</b>   	<b>Hexagon Socket Head Universal Male Elbow</b> <b>KQ2VS</b>   
<b>Branch Male Elbow</b> <b>KQ2LU*</b>  	<b>Female Elbow</b> <b>KQ2LF</b>   	<b>Double Universal Male Elbow</b> <b>KQ2VD</b>   	<b>Triple Universal Male Elbow</b> <b>KQ2VT</b>   
<b>Branch Universal Male Elbow</b> <b>KQ2Z</b>  	<b>Double Branch Universal Male Elbow</b> <b>KQ2ZD</b>  	<b>Male Run Tee</b> <b>KQ2Y*</b>   	<b>Triple Branch Universal Male Elbow</b> <b>KQ2ZT</b>  
<b>Branch Union Elbow</b> <b>KQ2LU</b>  	<b>Extended Plug-in Elbow</b> <b>KQ2W</b>   	<b>Male Delta Union</b> <b>KQ2D</b>   	<b>Delta Union</b> <b>KQ2D</b>   
<b>Double Branch "Y"</b> <b>KQ2UD*</b>  	<b>Different Diameter Double Union "Y"</b> <b>KQ2UD</b>  	<b>Different Diameter Plug-in "Y"</b> <b>KQ2X</b>  	<b>Double Plug-in "Y"</b> <b>KQ2XD</b>  
<b>Union "Y"</b> <b>KQ2U</b>  	<b>Different Diameter Union "Y"</b> <b>KQ2U</b>  	<b>Plug-in "Y"</b> <b>KQ2U</b>  	<b>Branch "Y"</b> <b>KQ2U*</b>  
<b>Plug-in Reducer</b> <b>KQ2R</b>   	<b>Bulkhead Male Elbow</b> <b>KQ2LE</b>   	<b>Tube Cap</b> <b>KQ2C</b>   	

The supported release button type (oval type/round type) is shown next to each product.





\* Stainless steel option available (KQ2-G)

# Oval Type Release Button



## Sealant/Gasket Seal

Applicable tubing	Connection thread				
	M	R	Rc	UNF NPT	
 <p><b>Metric</b></p> <p>Ø 2 Ø 3.2 Ø 4 Ø 6 Ø 8 Ø 10 Ø 12 Ø 16</p>	●	●	●		<b>P.5</b> How to Order ..... P.6 Variations ..... P.7 Dimensions ..... P.9 Made to Order/Clean Series/ Spare Parts ..... P.27
 <p><b>Inch</b></p> <p>Ø 1/8" Ø 5/32" Ø 3/16" Ø 1/4" Ø 5/16" Ø 3/8" Ø 1/2"</p>				● ●	
 <p><b>Inch</b></p> <p>Ø 1/8" Ø 5/32" Ø 3/16" Ø 1/4" Ø 5/16" Ø 3/8" Ø 1/2"</p>	●	●	●		<b>P.49</b> How to Order ..... P.50 Variations ..... P.51 Dimensions ..... P.52 Made to Order/Clean Series/ Spare Parts ..... P.55

## Face Seal

Applicable tubing	Connection thread					
	G	R	Rc	NPT	R	
 <p><b>Metric</b></p> <p>Ø 2 Ø 3.2 Ø 4 Ø 6 Ø 8 Ø 10 Ø 12 Ø 16</p>	●					<b>P.57</b> How to Order ..... P.58 Variations ..... P.59 Dimensions ..... P.60 Spare Parts ..... P.63
 <p><b>Metric</b></p> <p>Ø 2 Ø 3.2 Ø 4 Ø 6 Ø 8 Ø 10 Ø 12 Ø 16</p>			●			
 <p><b>Inch</b></p> <p>Ø 1/8" Ø 5/32" Ø 3/16" Ø 1/4" Ø 5/16" Ø 3/8" Ø 1/2"</p>				●		<b>P.73</b> How to Order ..... P.74 Variations ..... P.75 Dimensions ..... P.76
 <p><b>Inch</b></p> <p>Ø 1/8" Ø 5/32" Ø 3/16" Ø 1/4" Ø 5/16" Ø 3/8" Ø 1/2"</p>					●	

## Gasket Seal (Uni Thread)

Applicable tubing	Connection thread				
	Rc	G	NPT	NPTF	
 <p><b>Metric</b></p> <p>Ø 2 Ø 3.2 Ø 4 Ø 6 Ø 8 Ø 10 Ø 12 Ø 16</p>	●	●	●	●	<b>P.87</b> How to Order ..... P.88 Variations ..... P.89 Dimensions ..... P.90 Made to Order/Clean Series/ Spare Parts ..... P.93
 <p><b>Inch</b></p> <p>Ø 1/8" Ø 5/32" Ø 3/16" Ø 1/4" Ø 5/16" Ø 3/8" Ø 1/2"</p>	●	●	●	●	

# Round Type Release Button

## Sealant/Gasket Seal

Applicable tubing	Connection thread		
	M	R Rc	
<b>Metric</b> Ø 2 Ø 3.2 Ø 4 Ø 6 Ø 8 Ø 10 Ø 12 Ø 16	●	●	<b>P.101</b> How to Order ..... P.102 Variations ..... P.103 Dimensions ..... P.105 Made to Order/Clean Series/ Spare Parts ..... P.131
<b>Inch</b> Ø 1/8" Ø 5/32" Ø 3/16" Ø 1/4" Ø 5/16" Ø 3/8" Ø 1/2"			<b>P.133</b> How to Order ..... P.134 Variations ..... P.135 Dimensions ..... P.137 Made to Order/Clean Series/ Spare Parts ..... P.156
<b>Inch</b> Ø 1/8" Ø 5/32" Ø 3/16" Ø 1/4" Ø 5/16" Ø 3/8" Ø 1/2"	●	●	<b>P.157</b> How to Order ..... P.158 Variations ..... P.159 Dimensions ..... P.160 Made to Order/Clean Series/ Spare Parts ..... P.163

## Face Seal

Applicable tubing	Connection thread					
	G	R	Rc	NPT	R	
<b>Metric</b> Ø 2 Ø 3.2 Ø 4 Ø 6 Ø 8 Ø 10 Ø 12 Ø 16	●					<b>P.165</b> How to Order ..... P.166 Variations ..... P.167 Dimensions ..... P.168 Spare Parts ..... P.172
<b>Metric</b> Ø 2 Ø 3.2 Ø 4 Ø 6 Ø 8 Ø 10 Ø 12 Ø 16			●			<b>P.173</b> How to Order ..... P.174 Variations ..... P.175 Dimensions ..... P.176
<b>Inch</b> Ø 1/8" Ø 5/32" Ø 3/16" Ø 1/4" Ø 5/16" Ø 3/8" Ø 1/2"				●		<b>P.185</b> How to Order ..... P.186 Variations ..... P.187 Dimensions ..... P.188
<b>Inch</b> Ø 1/8" Ø 5/32" Ø 3/16" Ø 1/4" Ø 5/16" Ø 3/8" Ø 1/2"					●	<b>P.195</b> How to Order ..... P.196 Variations ..... P.197 Dimensions ..... P.198

## Gasket Seal (Uni Thread)

Applicable tubing	Connection thread				
	Rc	G	NPT	NPTF	
<b>Metric</b> Ø 2 Ø 3.2 Ø 4 Ø 6 Ø 8 Ø 10 Ø 12 Ø 16	●	●	●	●	<b>P.201</b> How to Order ..... P.202 Variations ..... P.203 Dimensions ..... P.204 Made to Order/Clean Series/ Spare Parts ..... P.207
<b>Inch</b> Ø 1/8" Ø 5/32" Ø 3/16" Ø 1/4" Ø 5/16" Ø 3/8" Ø 1/2"	●	●	●	●	<b>P.209</b> How to Order ..... P.210 Variations ..... P.211 Dimensions ..... P.212 Made to Order/Clean Series/ Spare Parts ..... P.214

Prior to Use .....	P.215
Precautions .....	P.216
Safety Instructions .....	Back cover

Metric Size M, R, Rc

Inch Size UNF, NPT

Inch Size M, R, Rc

Metric Size G

Metric Size R, Rc

Inch Size NPT

Inch Size R

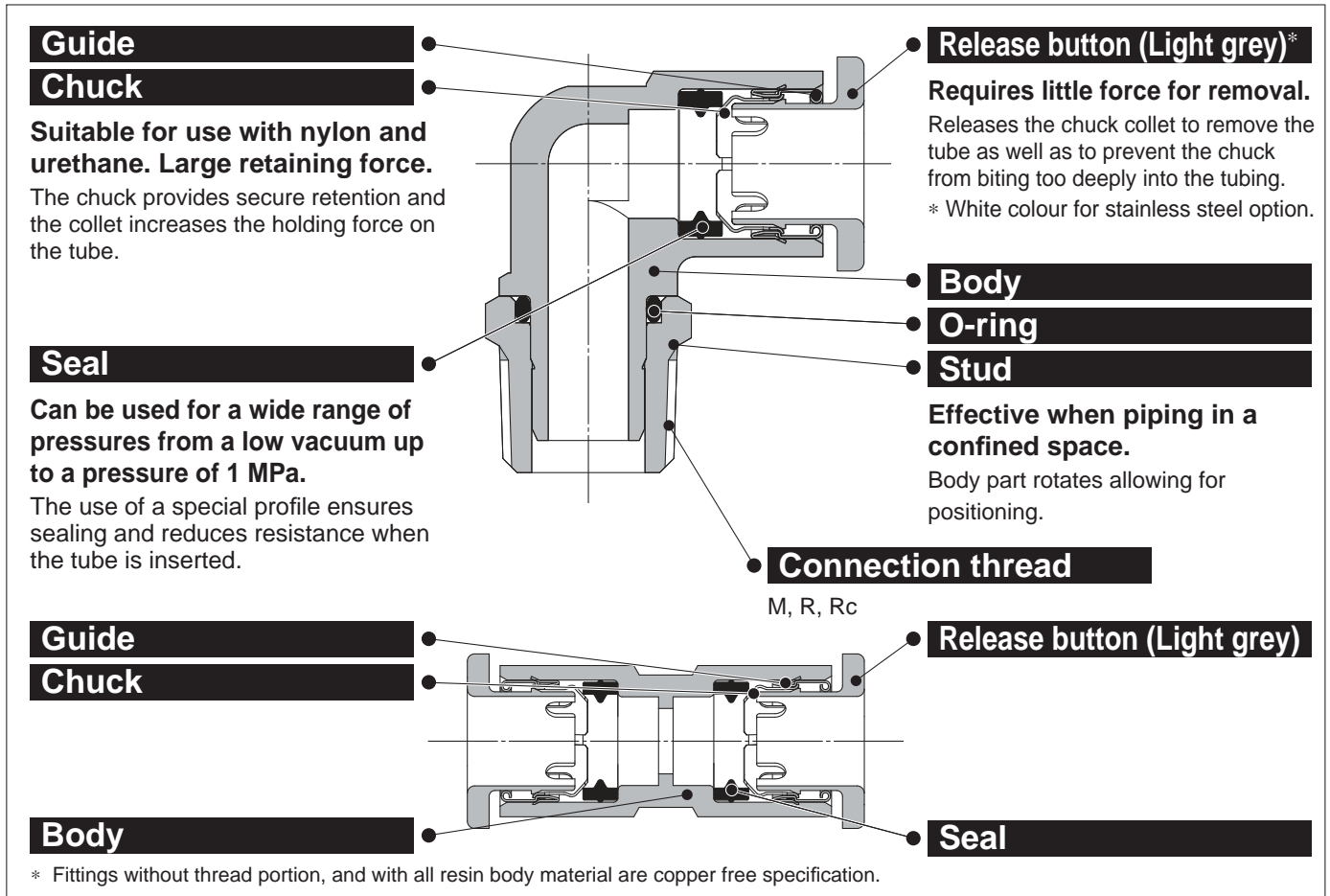
Metric Size Uni

Inch Size Uni

# Oval Type Metric Size One-touch Fittings

Applicable Tubing: Metric Size, Connection Thread: M, R, Rc

## KQ2 Series



**One-touch IN/OUT connection.**  
**Possible to use in vacuum to -100 kPa.**



### Applicable Tubing

Tubing material	FEP, PFA, Nylon, Soft nylon, Polyurethane
Tubing O.D.	Ø 3.2, Ø 4, Ø 6

### Specifications

Fluid		Air, Water*1
Operating pressure range*2		-100 kPa to 1 MPa
Proof pressure (at 23 °C)		3 MPa
Ambient and fluid temperature		-5 to 60 °C, Water: 0 to 40 °C (No freezing)
Thread	Mounting section	JIS B0203 (Taper thread for piping) JIS B0205 (Metric coarse thread)
	Nut section	JIS B0205 (Metric fine thread)
Seal on the threads		With sealant

\*1 The surge pressure must be under the maximum operating pressure.

\*2 Do not use the fittings with a leak tester or for vacuum retention because they are not guaranteed for zero leakage.

### Principal Parts Material

Body	C3604, PBT, PP, Stainless steel 303
Stud	C3604 (Thread portion), Stainless steel 303 (Thread portion)
Chuck	Stainless steel 304
Guide	Stainless steel 304
Release button	POM
Seal, O-ring	NBR
Gasket	Stainless steel 304, NBR



**Made to Order**  
(Refer to page 27 for details.)

## How to Order

### Threaded Type

**KQ2 H 06 - 01 A S 1**

One-touch fittings

Model

Symbol	Model
H	Male connector
S	Hexagon socket head male connector
F	Female connector
L	Male elbow
K	45° male elbow*
V	Universal male elbow
VS	Hexagon socket head universal male elbow*
VF	Universal female elbow*
LF	Female elbow*
VD	Double universal male elbow*
VT	Triple universal male elbow*
W	Extended male elbow
T	Male branch tee
Y	Male run tee
D	Male delta union
E	Bulkhead union
	Bulkhead connector
LE	Bulkhead male elbow*
N	Adapter*

\* Not available for stainless steel.

Oval type release button

Male thread seal method

Symbol	Seal method
—	None
S	With thread sealant

Thread material/Surface treatment

Symbol	Thread material/Surface treatment
A	Brass
N	Brass + Electroless nickel plating
G	Stainless steel 303

Port size/Applicable tubing O.D.

Symbol	Size
Tubing connection	00*1 Same dia. tubing
Thread connection	M3*2 M3 x 0.5
	M5 M5 x 0.8
	M6 M6 x 1.0
	01 R 1/8, Rc 1/8
	02 R 1/4, Rc 1/4
03 R 3/8, Rc 3/8	

\*1 Only for "Bulkhead union" and "Bulkhead male elbow".

\*2 Only for stainless steel.

Applicable tubing O.D.

Symbol	Size
23	∅ 3.2
04	∅ 4
06	∅ 6

#### Spare Parts

Use the part number below to order the gasket for M3, M5, and M6 threads.

Gasket for M3 thread: M-3G2

Gasket for M5 thread: M-5G2

Gasket for M6 thread: M-6G

### Tube - Tube Type

**KQ2 H 06 - 00 A 1**

One-touch fittings

Model

Symbol	Model
H	Straight union
	Different diameter straight
L	Union elbow
	Plug-in elbow
	Reducer elbow
W	Extended plug-in elbow
T	Union tee
	Different diameter tee
TW	Cross
TX	Different diameter cross
TY	Different diameter cross
D	Delta union
R	Plug-in reducer

Oval type release button

Port size/Applicable tubing O.D.

Symbol	Size
Tubing (Rod) connection	00 Same diameter tubing
	99 Same diameter rod
Different dia. tubing (Reducer)	23 ∅ 3.2
	04 ∅ 4
	06 ∅ 6
	08 ∅ 8

Applicable tubing O.D.

Symbol	Size
23	∅ 3.2
04	∅ 4
06	∅ 6

#### Accessories

Symbol	Name
KQ2N	Nipple
	Reducer nipple
KQ2C	Tube cap
KQ2P	Plug

Oval Type

Metric Size M, R, Rc

Inch Size UNF, NPT

Inch Size M, R, Rc

Metric Size G

Metric Size R, Rc

Face Seal

Inch Size NPT

Inch Size R

Metric Size Uni

Gasket Seal

Inch Size Uni

# Metric Size One-touch Fittings

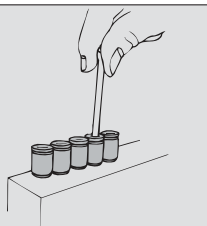
## Oval Type Variations

### Hexagon socket head male connector

KQ2S\* P.10



Internal hexagon socket allows tightening with a hexagon wrench in confined spaces.

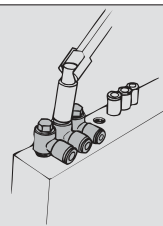


### Universal male elbow

KQ2V\* P.13



Hexagon head of the body allows tightening with a box wrench in confined spaces.

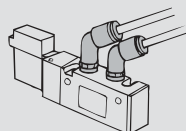


### 45° male elbow

KQ2K P.13



Use to pipe a female thread at a 45° angle. Its direction is in-between that of the male connector and male elbow.

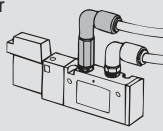


### Extended male elbow

KQ2W\* P.17



Basically, it is used together with a male elbow. Its extended height allows for multi-levelled piping and prevents interference among fittings.

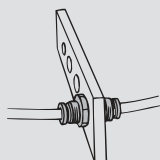


### Bulkhead union

KQ2E\* P.24



Use to connect tubing through a panel, etc.

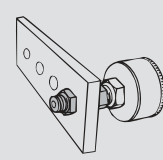


### Bulkhead connector

KQ2E\* P.24



Use to connect a male thread and tubing through a panel, etc.

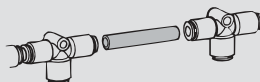


### Nipple

KQ2N P.26



Use to connect One-touch fittings.

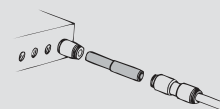


### Reducer nipple

KQ2N P.26



Use to connect One-touch fittings of different sizes.



### Universal female elbow

KQ2VF P.14



Use to branch a male or female thread in the same direction and at a 90° angle. Multiple connections possible.

### Male connector

KQ2H\* P.9



Use to pipe a female thread in the same direction. Most general model.

### Cross

KQ2TW P.20



Use to four-branch a line.

### Reducer elbow

KQ2L P.12



Use to change the tube direction of One-touch fittings by 90° and connect tubing of reduced size.

### Female connector

KQ2F\* P.10



Use to pipe a male thread of a pressure gauge, etc.

### Male elbow

KQ2L\* P.11



Use to pipe a female thread at right angles. Most general model.

### Different diameter cross

KQ2TX P.20



Use to four-branch a line and connect tubing of reduced size at both 90° angles.

### Straight union

KQ2H P.9



Use to connect tubing in the same direction.

### Union elbow

KQ2L P.11



Use to connect tubing at right angles.

### Male branch tee

KQ2T\* P.18



Use to branch a female thread at both 90° angles.

### Different diameter straight

KQ2H P.9



Use to connect tubing of different sizes.

### Plug-in elbow

KQ2L P.12



Use to change the tube direction of One-touch fittings by 90°.

### Union tee

KQ2T P.19



Use to branch tubing at both 90° angles.

\* Stainless steel option available (KQ2-G)



### Different diameter tee

**KQ2T**

P.19

Use to connect tubing of reduced size for branching at both 90° angles.



### Triple universal male elbow

**KQ2VT**

P.15

Use to three-branch a female thread at right angles. Three individual parts rotate 360°.



### Bulkhead male elbow

**KQ2LE**

P.24

Use to connect tubing through a panel, etc. and to change the tube direction by 90°.



### Different diameter tee

**KQ2T**

P.19

Use to connect tubing of reduced size for branching at a 90° angle from two pipes running in the same direction.



### Male run tee

**KQ2Y\***

P.21

Use to branch a female thread in the same direction and at a 90° angle.



### Adapter

**KQ2N**

P.25

Use to connect One-touch fittings and R female threads.



### Different diameter cross

**KQ2TY**

P.20

Use to connect tubing of reduced size for branching in three directions.



### Extended plug-in elbow

**KQ2W**

P.16

Use to change the tube direction of One-touch fittings by 90°. Multi-levelled piping is also possible with the plug-in elbow.



### Tube cap

**KQ2C**

P.25

Use to plug unused tubing.



### Hexagon socket head universal male elbow

**KQ2VS**

P.14

Hexagon socket on the top allows tightening with a hexagon wrench in confined spaces.



### Male delta union

**KQ2D\***

P.22

Use to branch a female thread at two right angles.



### Colour cap

**KQ2C**

P.26

Mount onto the release button and use different colours for piping according to applications.



### Female elbow

**KQ2LF**

P.16

Use to pipe a male thread at right angles.



### Delta union

**KQ2D**

P.23

Use to branch tubing at three right angles.



### Plug

**KQ2P**

P.25

Use to plug unused One-touch fittings.



### Double universal male elbow

**KQ2VD**

P.15

Use to two-branch a female thread at right angles. Two individual parts rotate 360°.



### Plug-in reducer

**KQ2R**

P.23

Use to change size of One-touch fittings.



\* Stainless steel option available (KQ2-G)

The following models do not support oval type release buttons. Refer to the round type (from page 101).

### Branch universal female elbow

**KQ2ZF**

P.115



### Branch male elbow

**KQ2LU\***

P.110



### Branch universal male elbow

**KQ2Z**

P.115



### Double branch universal male elbow

**KQ2ZD**

P.116



### Triple branch universal male elbow

**KQ2ZT**

P.116



### Branch union elbow

**KQ2LU**

P.109



### Double branch "Y"

**KQ2UD\***

P.126



### Different diameter double union "Y"

**KQ2UD**

P.126



### Different diameter plug-in "Y"

**KQ2X**

P.127



### Double plug-in "Y"

**KQ2XD**

P.127



### Union "Y"

**KQ2U**

P.125



### Different diameter union "Y"

**KQ2U**

P.125



### Plug-in "Y"

**KQ2U**

P.125



### Branch "Y"

**KQ2U\***

P.124



⚠ Box wrenches and socket wrenches may interfere with oval type release buttons. Refer to page 217 for details.

# KQ2 Series

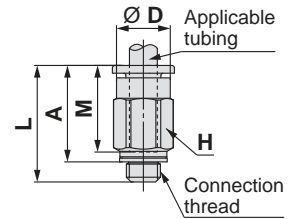
Oval Type Applicable Tubing: Metric Size, Connection Thread: M, R, Rc

## Dimensions

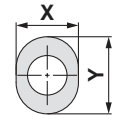
### Male Connector: KQ2H (Gasket seal)



Applicable tubing O.D. [mm]	Connection thread M	Model	H (Width across flats)	Ø D	Release button dimensions		L	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
					X	Y				Nylon	Urethane		
Ø 3.2	M3 x 0.5	KQ2H23-M3G1	7	6.9	6.7	9.5	17	14.4	13.3	0.9	0.9	1.2	2.4
	M5 x 0.8	KQ2H23-M5□1	7	6.9	6.7	9.5	17.3	14.3	13.3	3	2.5	2.5	2.7
Ø 4	M3 x 0.5	KQ2H04-M3G1	8	7.9	7.7	10	17.1	14.5	13.3	0.9	0.9	1.2	2.9
	M5 x 0.8	KQ2H04-M5■1	8	7.9	7.7	10	17.7	14.7	13.3	4	4	2.5	3.3
Ø 6	M6 x 1.0	KQ2H04-M6□1	8	7.9	7.7	10	18.7	14.7	13.3	5.6	4	3	3.6
	M5 x 0.8	KQ2H06-M5■1	10	9.9	9.7	12	17.7	14.7	13.3	4	4	2.5	4.1
	M6 x 1.0	KQ2H06-M6□1	10	9.9	9.7	12	18.8	14.8	13.3	5.6	5.6	3	4.4



Release button dimensions

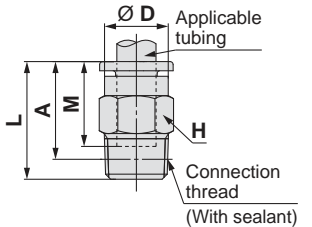


□: A (Brass), N (Brass + Electroless nickel plating)  
 ■: A (Brass), N (Brass + Electroless nickel plating), G (stainless steel)

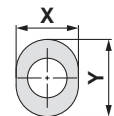
### Male Connector: KQ2H (Sealant)



Applicable tubing O.D. [mm]	Connection thread R	Model	H (Width across flats)	Ø D	Release button dimensions		L	A*1	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
					X	Y				Nylon	Urethane		
Ø 3.2	1/8	KQ2H23-01□S1	10	—	6.7	9.5	14	10.9	13.3	3.4	2.9	2.5	6
	1/4	KQ2H23-02□S1	14	—	6.7	9.5	16.7	12	13.3	3.4	2.9	2.5	15.3
Ø 4	1/8	KQ2H04-01■S1	10	—	7.7	10	14.3	11.2	13.3	4.8	3.4	3	5.6
	1/4	KQ2H04-02■S1	14	—	7.7	10	16.7	12	13.3	4.8	3.4	3	14.6
Ø 6	1/8	KQ2H06-01■S1	10	9.9	9.7	12	18.4	15.3	13.3	13.1	10.4	4.5	5.8
	1/4	KQ2H06-02■S1	14	—	9.7	12	16.7	12	13.3	13.1	10.4	4.5	12.5
	3/8	KQ2H06-03■S1	17	—	9.7	12	18.1	13	13.3	13.1	10.4	4.5	24.5



Release button dimensions

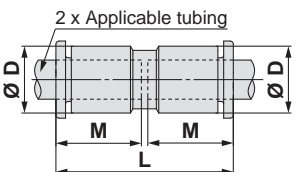


□: A (Brass), N (Brass + Electroless nickel plating) \*1 Reference dimensions after installation of R thread  
 ■: A (Brass), N (Brass + Electroless nickel plating), G (stainless steel)

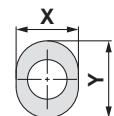
### Straight Union: KQ2H



Applicable tubing O.D. [mm]	Model	Ø D	Release button dimensions		L	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
			X	Y			Nylon	Urethane		
Ø 3.2	KQ2H23-00A1	7.1	6.7	9.5	27.6	13.3	3.4	2.9	2.5	1.4
Ø 4	KQ2H04-00A1	8.2	7.7	10	27.6	13.3	5.6	4	3	1.6
Ø 6	KQ2H06-00A1	10.4	9.7	12	27.6	13.3	13.1	10.4	4.5	2.1



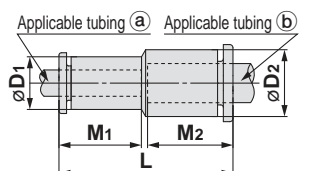
Release button dimensions



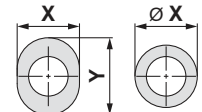
### Different Diameter Straight: KQ2H



Applicable tubing O.D. [mm]		Model	Ø D <sub>1</sub>	Release button dimensions (a)		Ø D <sub>2</sub>	Release button dimensions (b)		L	M <sub>1</sub>	M <sub>2</sub>	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
a	b			Ø X (X)	Y		Ø X (X)	Y				Nylon	Urethane		
Ø 2	Ø 3.2	KQ2H02-23A1	5.8	5.5	—	7.1	6.7	9.5	26.2	11.9	13.3	—	0.9	1.4	1.1
Ø 2	Ø 4	KQ2H02-04A1	5.8	5.5	—	8.2	7.7	10	26.2	11.9	13.3	—	0.9	1.4	1.2
Ø 3.2	Ø 4	KQ2H23-04A1	7.1	6.7	9.5	8.2	7.7	10	27.6	13.3	13.3	3.4	2.9	2.5	1.5
Ø 3.2	Ø 6	KQ2H23-06A1	7.1	6.7	9.5	10.4	9.7	12	27.6	13.3	13.3	3.4	2.9	2.5	1.8
Ø 4	Ø 6	KQ2H04-06A1	8.2	7.7	10	10.4	9.7	12	27.6	13.3	13.3	5.6	5.6	3	2
Ø 6	Ø 8	KQ2H06-08A1	10.4	9.7	12	13.2	13	—	28.5	13.3	14.2	13.1	10.4	4.5	2.9



Release button dimensions



Applicable tubing O.D.:  
 Ø 3.2, Ø 4, Ø 6

# Metric Size One-touch Fittings **KQ2 Series**

**Oval Type** Applicable Tubing: Metric Size, Connection Thread: M, R, Rc

## Dimensions

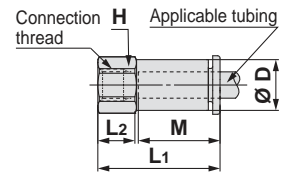
### Female Connector: KQ2F



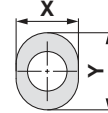
Applicable tubing O.D. [mm]	Connection thread M, Rc	Model	H (Width across flats)	Ø D	Release button dimensions		L1	L2	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
					X	Y				Nylon	Urethane		
					Ø 3.2	M3 x 0.5				KQ2F23-M3□1	7		
	M5 x 0.8	KQ2F23-M5□1	7	6.9	6.7	9.5	19.7	5.7	13.3	3	2.5	2.5	3.3
Ø 4	M3 x 0.5	KQ2F04-M3□1	8	7.9	7.7	10	16.5	5.7	13.3	4	4	2.5	4.1
	M5 x 0.8	KQ2F04-M5□1	8	7.9	7.7	10	19.6	5.7	13.3	4	4	3	4.5
	1/8	KQ2F04-01■1	14	7.9	7.7	10	24.1	8.5	13.3	5.6	4	3	12
	1/4	KQ2F04-02■1	17	7.9	7.7	10	29	12.9	13.3	5.6	4	3	21.5
Ø 6	M5 x 0.8	KQ2F06-M5□1	10	9.9	9.7	12	17.6	5.7	13.3	10	10	4.1	5.5
	1/8	KQ2F06-01■1	14	9.9	9.7	12	23.6	8.5	13.3	13.1	10.4	4.5	12.2
	1/4	KQ2F06-02■1	17	9.9	9.7	12	28.5	12.9	13.3	13.1	10.4	4.5	21.6
	3/8	KQ2F06-03■1	19	9.9	9.7	12	29.9	12.7	13.3	13.1	10.4	4.5	22.7

□: A (Brass), N (Brass + Electroless nickel plating)

■: A (Brass), N (Brass + Electroless nickel plating), G (stainless steel)



Release button dimensions



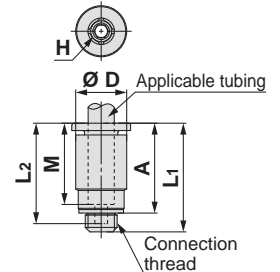
### Hexagon Socket Head Male Connector: KQ2S (Gasket seal)



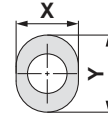
Applicable tubing O.D. [mm]	Connection thread M	Model	H (Width across flats)	Ø D	Release button dimensions		L1	L2	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
					X	Y					Nylon	Urethane		
					Ø 3.2	M3 x 0.5					KQ2S23-M3G1	1.5		
	M5 x 0.8	KQ2S23-M5□1	2	7	6.7	9.5	17.5	16.3	14.5	13.3	2.5	2.5	2	2.6
Ø 4	M3 x 0.5	KQ2S04-M3G1	1.5	8	7.7	10	17.1	16.1	14.5	13.3	1.4	1.4	1.5	2.3
	M5 x 0.8	KQ2S04-M5■1	2.5	8	7.7	10	18.6	17.8	15.6	13.3	4	4	2.5	3
Ø 6	M6 x 1.0	KQ2S04-M6□1	3	8	7.7	10	18.5	17.8	14.5	13.3	4	4	3.1	4.1
	M5 x 0.8	KQ2S06-M5■1	2.5	10	9.7	12	19.5	17.8	16.5	13.3	4	4	2.5	3.5
	M6 x 1.0	KQ2S06-M6□1	3	10	9.7	12	19.1	18.1	15.1	13.3	4	4	3.1	5.1

□: A (Brass), N (Brass + Electroless nickel plating)

■: A (Brass), N (Brass + Electroless nickel plating), G (stainless steel)



Release button dimensions



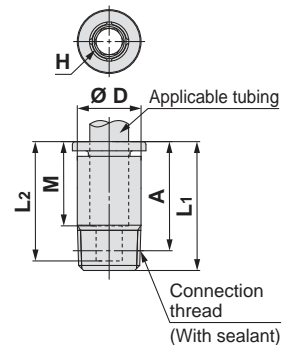
### Hexagon Socket Head Male Connector: KQ2S (Sealant)



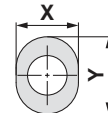
Applicable tubing O.D. [mm]	Connection thread R	Model	H (Width across flats)	Ø D	Release button dimensions		L1	L2	A*1	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
					X	Y					Nylon	Urethane		
					Ø 4	1/8					KQ2S04-01■S1	3		
Ø 6	1/8	KQ2S06-01■S1	4	10	9.7	12	20	18.8	16.9	13.3	10	9.9	4.1	6.5
	1/4	KQ2S06-02■S1	4	13.8	9.7	12	19.8	18.8	15.1	13.3	10.7	10	4.1	13.4

■: A (Brass), N (Brass + Electroless nickel plating), G (stainless steel)

\*1 Reference dimensions after installation of R thread



Release button dimensions



Oval Type

Metric Size M, R, Rc

Sealant/Gasket Seal

Inch Size UNF, NPT

Inch Size M, R, Rc

Metric Size G

Metric Size R, Rc

Face Seal

Inch Size NPT

Inch Size R

Gasket Seal

Metric Size Uni

Inch Size Uni

# KQ2 Series

Oval Type Applicable Tubing: Metric Size, Connection Thread: M, R, Rc

## Dimensions

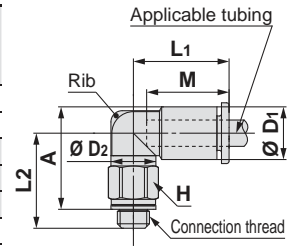
### Male Elbow: KQ2L (Gasket seal)



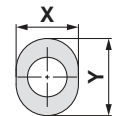
Applicable tubing O.D. [mm]	Connection thread M	Model	H (Width across flats)	Ø D1	Release button dimensions		Ø D2	L1	L2	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]	With a rib
					X	Y						Nylon	Urethane			
Ø 3.2	M3 x 0.5	KQ2L23-M3G1	7	7.1	6.7	9.5	7	15.3	13.8	14.8	13.3	0.8	0.8	1.2	2.7	●
	M5 x 0.8	KQ2L23-M5□1	7	7.1	6.7	9.5	7	15.3	14.3	14.9	13.3	2.6	2.2	2.5	3.1	●
Ø 4	M3 x 0.5	KQ2L04-M3G1	7	8.2	7.7	10	7	15.4	14.3	15.8	13.3	0.8	0.8	1.2	2.7	●
	M5 x 0.8	KQ2L04-M5■1	7	8.2	7.7	10	7	15.4	14.8	15.9	13.3	3.5	3.5	2.5	3.1	●
Ø 6	M6 x 1.0	KQ2L04-M6□1	8	8.2	7.7	10	7	15.4	15.8	15.9	13.3	3.5	3.5	2.5	4.2	●
	M5 x 0.8	KQ2L06-M5■1	7	10.4	9.7	12	7	14.5	16.5	18.7	13.3	3.5	3.5	2.5	3.2	●
	M6 x 1.0	KQ2L06-M6□1	8	10.4	9.7	12	7	14.5	17.5	18.7	13.3	3.5	3.5	2.5	4.3	●

□: A (Brass), N (Brass + Electroless nickel plating)

■: A (Brass), N (Brass + Electroless nickel plating), G (stainless steel)



Release button dimensions



### Male Elbow: KQ2L (Sealant)

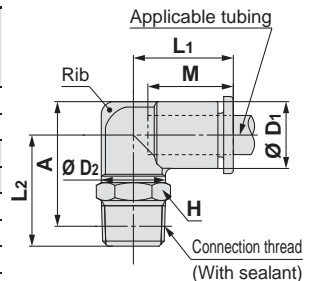


Applicable tubing O.D. [mm]	Connection thread R	Model	H (Width across flats)	Ø D1	Release button dimensions		Ø D2	L1	L2	A*1	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]	With a rib
					X	Y						Nylon	Urethane			
Ø 3.2	1/8	KQ2L23-01□S1	10	7.1	6.7	9.5	10	14.5	16.7	17.2	13.3	3	2.5	2.5	4.6	—
	1/4	KQ2L23-02□S1	14	7.1	6.7	9.5	10	14.5	21.2	20.1	13.3	3	2.5	2.5	14.1	—
Ø 4	1/8	KQ2L04-01■S1	10	8.2	7.7	10	10	14.8	16.2	17.2	13.3	4.6	3.3	3	4.8	●
	1/4	KQ2L04-02■S1	14	8.2	7.7	10	10	14.8	21.7	21.1	13.3	4.6	3.3	3	14.3	●
Ø 6	1/8	KQ2L06-01■S1	10	10.4	9.7	12	10	15.5	17.3	19.4	13.3	11.4	9	4.5	5.2	—
	1/4	KQ2L06-02■S1	14	10.4	9.7	12	10	15.5	22.8	23.3	13.3	11.4	9	4.5	14.7	—
	3/8	KQ2L06-03■S1	17	10.4	9.7	12	10	15.5	24.1	24.2	13.3	11.4	9	4.5	26.5	—

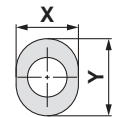
□: A (Brass), N (Brass + Electroless nickel plating)

■: A (Brass), N (Brass + Electroless nickel plating), G (stainless steel)

\*1 Reference dimensions after installation of R thread



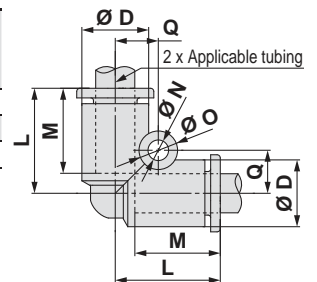
Release button dimensions



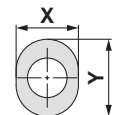
### Union Elbow: KQ2L



Applicable tubing O.D. [mm]	Model	Ø D	Release button dimensions		L	Q	M	Ø O	Ø N	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
			X	Y						Nylon	Urethane		
Ø 3.2	KQ2L23-00A1	7.1	6.7	9.5	14.9	5.4	13.3	6	3.2	3	2.5	2.5	1.6
Ø 4	KQ2L04-00A1	8.2	7.7	10	15.3	5.7	13.3	6	3.2	4.2	4.2	3	1.9
Ø 6	KQ2L06-00A1	10.4	9.7	12	16.3	6.8	13.3	6	3.2	11.4	9	4.5	2.7



Release button dimensions



# Metric Size One-touch Fittings **KQ2 Series**

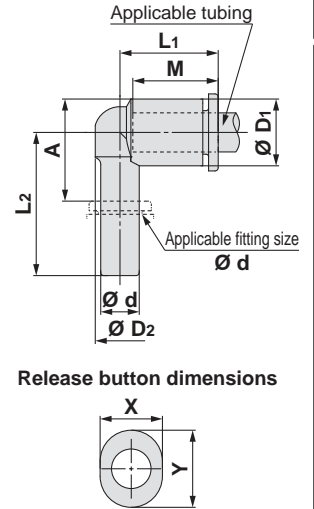
**Oval Type** Applicable Tubing: Metric Size, Connection Thread: M, R, Rc

## Dimensions

### Plug-in Elbow: KQ2L



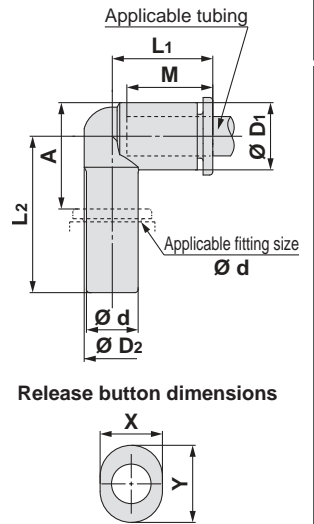
Applicable tubing O.D. [mm]	Applicable fitting size $\varnothing d$	Model	$\varnothing D_1$	Release button dimensions		$\varnothing D_2$	L <sub>1</sub>	L <sub>2</sub>	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
				X	Y						Nylon	Urethane		
$\varnothing 3.2$	$\varnothing 3.2$	KQ2L23-99A1	7.1	6.7	9.5	6.4	14.4	20.9	11.1	13.3	3	2.5	2.2	0.9
$\varnothing 4$	$\varnothing 4$	KQ2L04-99A1	8.2	7.7	10	7.2	14.5	21.1	11.9	13.3	4.2	4.2	2.5	1.2
$\varnothing 6$	$\varnothing 6$	KQ2L06-99A1	10.4	9.7	12	8	15.3	22.3	14.2	13.3	9	9	4	1.8



### Reducer Elbow: KQ2L



Applicable tubing O.D. [mm]	Applicable fitting size $\varnothing d$	Model	$\varnothing D_1$	Release button dimensions		$\varnothing D_2$	L <sub>1</sub>	L <sub>2</sub>	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
				X	Y						Nylon	Urethane		
$\varnothing 3.2$	$\varnothing 4$	KQ2L23-04A1	7.1	6.7	9.5	6.4	14.5	23.9	14.1	13.3	3	2.5	2.5	1.1
	$\varnothing 6$	KQ2L23-06A1	7.1	6.7	9.5	6.4	14.5	24.1	14.3	13.3	3	2.5	2.5	1.3
$\varnothing 4$	$\varnothing 6$	KQ2L04-06A1	8.2	7.7	10	7.2	14.8	24.6	15.4	13.3	4.2	4.2	3	1.5
	$\varnothing 8$	KQ2L04-08A1	8.2	7.7	10	7.2	14.8	29.5	19.4	13.3	4.2	4.2	3	1.8
$\varnothing 6$	$\varnothing 8$	KQ2L06-08A1	10.4	9.7	12	9	15.5	24.2	15.2	13.3	11.4	9	4.5	2.1
	$\varnothing 10$	KQ2L06-10A1	10.4	9.7	12	9	15.5	31.6	21.2	13.3	11.4	9	4.5	2.7



Oval Type

Metric Size M, R, Rc

Sealant/Gasket Seal

Inch Size UNF, NPT

Inch Size M, R, Rc

Metric Size G

Face Seal

Metric Size R, Rc

Inch Size NPT

Inch Size R

Gasket Seal

Metric Size Uni

Inch Size Uni

# KQ2 Series

Oval Type Applicable Tubing: Metric Size, Connection Thread: M, R, Rc

## Dimensions

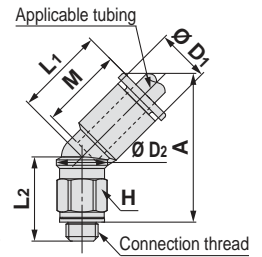
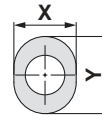
### 45° Male Elbow: KQ2K (Gasket seal)



Applicable tubing O.D. [mm]	Connection thread	Model	H (Width across flats)	Ø D1	Release button dimensions		Ø D2	L1	L2	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
					X	Y						Nylon	Urethane		
Ø 4	M5 x 0.8	KQ2K04-M5□1	7	8.2	7.7	10	8	14.4	13.1	22.8	13.3	3.4	3.4	2.5	3
	M6 x 1.0	KQ2K04-M6□1	8	8.2	7.7	10	8	14.4	14.1	22.8	13.3	3.4	3.4	2.5	4.1
Ø 6	M5 x 0.8	KQ2K06-M5□1	7	10.4	9.7	12	8	14.4	17	27.4	13.3	3.4	3.4	2.5	3.5
	M6 x 1.0	KQ2K06-M6□1	8	10.4	9.7	12	8	14.4	18	27.4	13.3	3.4	3.4	2.5	4.5

□: A (Brass), N (Brass + Electroless nickel plating)

Release button dimensions



### 45° Male Elbow: KQ2K (Sealant)

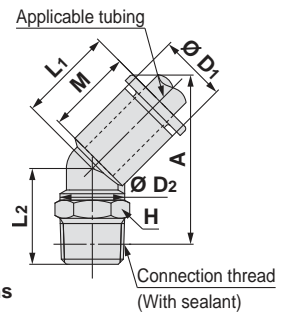
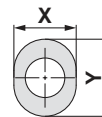


Applicable tubing O.D. [mm]	Connection thread	Model	H (Width across flats)	Ø D1	Release button dimensions		Ø D2	L1	L2	A*1	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
					X	Y						Nylon	Urethane		
Ø 4	1/8	KQ2K04-01□S1	10	8.2	7.7	10	10	14.4	12.7	22.3	13.3	4.8	3.4	3	4.6
	1/4	KQ2K04-02□S1	14	8.2	7.7	10	10	14.4	17.2	25.2	13.3	4.8	3.4	3	14.1
Ø 6	1/8	KQ2K06-01□S1	10	10.4	9.7	12	10	14.7	14.8	25.3	13.3	8.7	6.9	4.5	5
	1/4	KQ2K06-02□S1	14	10.4	9.7	12	10	14.7	19.3	28.2	13.3	8.7	6.9	4.5	14.5
	3/8	KQ2K06-03□S1	17	10.4	9.7	12	10	14.7	20.6	29.1	13.3	8.7	6.9	4.5	26.2

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Reference dimensions after installation of R thread

Release button dimensions



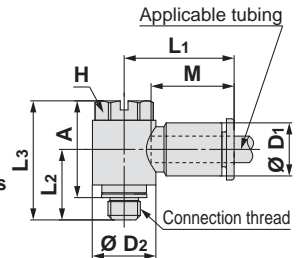
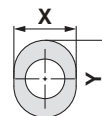
### Universal Male Elbow: KQ2V (Gasket seal)



Applicable tubing O.D. [mm]	Connection thread	Model	H (Width across flats)	Ø D1	Release button dimensions		Ø D2	L1	L2	L3	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
					X	Y							Nylon	Urethane		
Ø 4	M5 x 0.8	KQ2V04-M5■1	8	8.2	7.7	10	9.8	17.5	10.9	18.4	14.9	13.3	2.9	2.9	2.5	5.4
Ø 6	M5 x 0.8	KQ2V06-M5■1	8	10.4	9.7	12	9.8	18.3	10.9	18.4	15.4	13.3	3.8	3.8	2.5	5.7

■: A (Brass), N (Brass + Electroless nickel plating), G (stainless steel)

Release button dimensions



### Universal Male Elbow: KQ2V (Sealant)

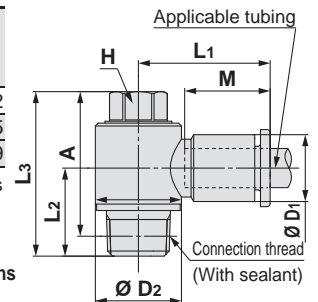
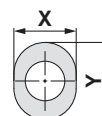


Applicable tubing O.D. [mm]	Connection thread	Model	H (Width across flats)	Ø D1	Release button dimensions		Ø D2	L1	L2	L3	A*1	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
					X	Y							Nylon	Urethane		
Ø 4	1/8	KQ2V04-01■S1	8	8.2	7.7	10	13.4	19.3	13.7	25.6	22.5	13.3	2.9	2.9	3	13.2
Ø 6	1/8	KQ2V06-01■S1	8	10.4	9.7	12	13.4	20.5	13.7	25.6	22.5	13.3	7.5	5.9	4.5	13.5
	1/4	KQ2V06-02■S1	10	10.4	9.7	12	15.3	19.9	17.9	30.5	25.8	13.3	7.5	5.9	4.5	24.9

■: A (Brass), N (Brass + Electroless nickel plating), G (stainless steel)

\*1 Reference dimensions after installation of R thread

Release button dimensions



# Metric Size One-touch Fittings **KQ2 Series**

**Oval Type** Applicable Tubing: Metric Size, Connection Thread: M, R, Rc

## Dimensions

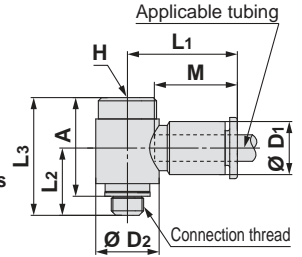
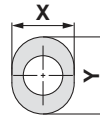
### Hexagon Socket Head Universal Male Elbow: KQ2VS (Gasket seal)



Applicable tubing O.D. [mm]	Connection thread M	Model	H (Width across flats)	Ø D1	Release button dimensions		Ø D2	L1	L2	L3	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
					X	Y							Nylon	Urethane		
Ø 4	M5 x 0.8	KQ2VS04-M5□1	4	8.2	7.7	10	9.8	17.5	10.4	18.2	15.2	13.3	2.9	2.9	2.5	5.3
Ø 6	M5 x 0.8	KQ2VS06-M5□1	4	10.4	9.7	12	9.8	18.3	10.4	18.2	15.2	13.3	3.8	3.8	2.5	5.6

□: A (Brass), N (Brass + Electroless nickel plating)

Release button dimensions



### Hexagon Socket Head Universal Male Elbow: KQ2VS (Sealant)

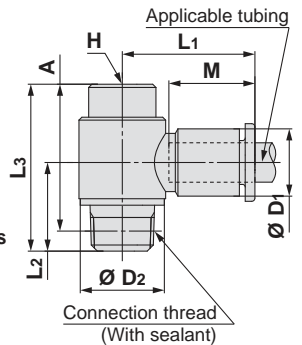
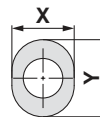


Applicable tubing O.D. [mm]	Connection thread R	Model	H (Width across flats)	Ø D1	Release button dimensions		Ø D2	L1	L2	L3	A*1	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
					X	Y							Nylon	Urethane		
Ø 4	1/8	KQ2VS04-01□S1	6	8.2	7.7	10	13.4	19.3	13.7	25.8	22.7	13.3	2.9	2.9	3	13.2
Ø 6	1/8	KQ2VS06-01□S1	6	10.4	9.7	12	13.4	20.5	13.7	25.8	22.7	13.3	7.5	5.9	4.5	13.5
	1/4	KQ2VS06-02□S1	6	10.4	9.7	12	15.3	19.9	17.9	26.5	21.8	13.3	7.5	5.9	4.5	20.8

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Reference dimensions after installation of R thread

Release button dimensions



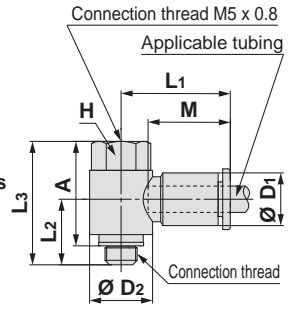
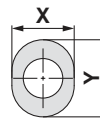
### Universal Female Elbow: KQ2VF (Gasket seal)



Applicable tubing O.D. [mm]	Connection thread M	Model	H (Width across flats)	Ø D1	Release button dimensions		Ø D2	L1	L2	L3	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
					X	Y							Nylon	Urethane		
Ø 4	M5 x 0.8	KQ2VF04-M5□1	8	8.2	7.7	10	9.8	17.5	10.2	19.2	16.2	13.3	2.9	2.9	2.5	5.5
Ø 6	M5 x 0.8	KQ2VF06-M5□1	8	10.4	9.7	12	9.8	18.3	10.2	19.2	16.2	13.3	3.8	3.8	2.5	5.8

□: A (Brass), N (Brass + Electroless nickel plating)

Release button dimensions



### Universal Female Elbow: KQ2VF (Sealant)

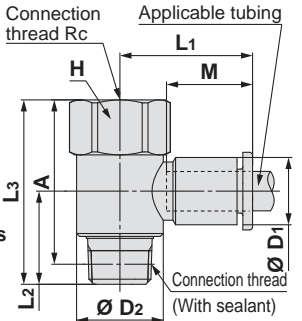
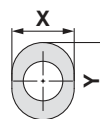


Applicable tubing O.D. [mm]	Connection thread Rc, R	Model	H (Width across flats)	Ø D1	Release button dimensions		Ø D2	L1	L2	L3	A*1	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
					X	Y							Nylon	Urethane		
Ø 4	1/8	KQ2VF04-01□S1	14	8.2	7.7	10	13.4	19.3	14.4	28.5	25.4	13.3	2.9	2.9	3	17.3
Ø 6	1/8	KQ2VF06-01□S1	14	10.4	9.7	12	13.4	20.5	14.4	28.5	25.4	13.3	7.5	5.9	4.5	17.6
	1/4	KQ2VF06-02□S1	17	10.4	9.7	12	17.6	21.2	19.4	37.9	33.2	13.3	7.5	5.9	4.5	37

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Reference dimensions after installation of R thread

Release button dimensions



Oval Type

Metric Size M, R, Rc

Sealant/Gasket Seal

Inch Size UNF, NPT

Inch Size M, R, Rc

Metric Size G

Metric Size R, Rc

Face Seal

Inch Size NPT

Inch Size R

Gasket Seal

Metric Size Uni

Inch Size Uni

# KQ2 Series

Oval Type Applicable Tubing: Metric Size, Connection Thread: M, R, Rc

## Dimensions

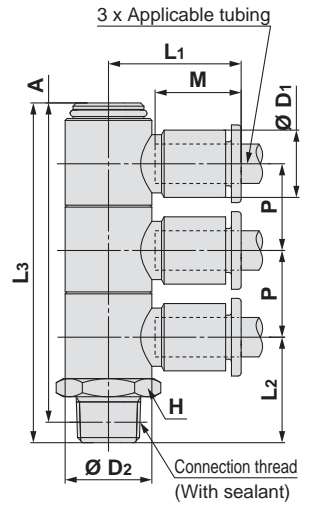
### Triple Universal Male Elbow: KQ2VT (Sealant)



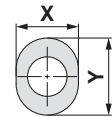
Applicable tubing O.D. [mm]	Connection thread R	Model	H (Width across flats)	Ø D1	Release button dimensions		Ø D2	L1	L2	L3	A*1	M	P	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
					X	Y								Nylon	Urethane		
					Ø 4	1/8								KQ2VT04-01□S1	14		
	1/4	KQ2VT04-02□S1	14	8.2	7.7	10	13.4	19.3	20.7	56.9	52.2	13.3	13.4	2.9	2.9	3	32.9
	3/8	KQ2VT04-03□S1	17	8.2	7.7	10	13.4	19.3	22.1	58.3	53.2	13.3	13.4	2.9	2.9	3	44.8
Ø 6	1/8	KQ2VT06-01□S1	14	10.4	9.7	12	13.4	20.5	16.3	52.5	49.4	13.3	13.4	7.5	5.9	4.5	26.2
	1/4	KQ2VT06-02□S1	14	10.4	9.7	12	13.4	20.5	20.7	56.9	52.2	13.3	13.4	7.5	5.9	4.5	33.9
	3/8	KQ2VT06-03□S1	17	10.4	9.7	12	13.4	20.5	22.1	58.3	53.2	13.3	13.4	7.5	5.9	4.5	45.8

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Reference dimensions after installation of R thread



Release button dimensions



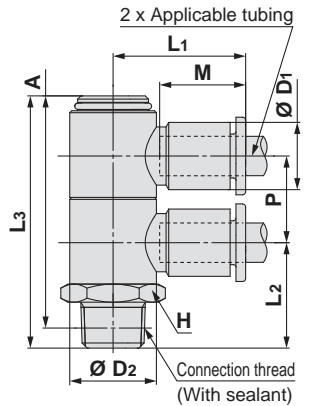
### Double Universal Male Elbow: KQ2VD (Sealant)



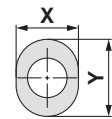
Applicable tubing O.D. [mm]	Connection thread R	Model	H (Width across flats)	Ø D1	Release button dimensions		Ø D2	L1	L2	L3	A*1	M	P	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
					X	Y								Nylon	Urethane		
					Ø 4	1/8								KQ2VD04-01□S1	14		
	1/4	KQ2VD04-02□S1	14	8.2	7.7	10	13.4	19.3	20.7	43.4	38.7	13.3	13.4	2.9	2.9	3	27.4
	3/8	KQ2VD04-03□S1	17	8.2	7.7	10	13.4	19.3	22.1	44.8	39.7	13.3	13.4	2.9	2.9	3	39.3
Ø 6	1/8	KQ2VD06-01□S1	14	10.4	9.7	12	13.4	20.5	16.3	39	35.9	13.3	13.4	7.5	5.9	4.5	20.3
	1/4	KQ2VD06-02□S1	14	10.4	9.7	12	13.4	20.5	20.7	43.4	38.7	13.3	13.4	7.5	5.9	4.5	28
	3/8	KQ2VD06-03□S1	17	10.4	9.7	12	13.4	20.5	22.1	44.8	39.7	13.3	13.4	7.5	5.9	4.5	39.9

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Reference dimensions after installation of R thread



Release button dimensions





# Metric Size One-touch Fittings **KQ2 Series**

**Oval Type** Applicable Tubing: Metric Size, Connection Thread: M, R, Rc

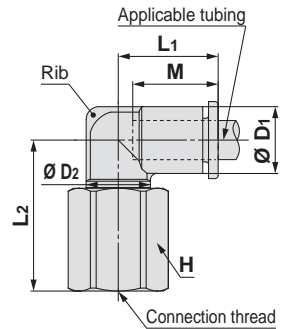
## Dimensions

### Female Elbow: KQ2LF

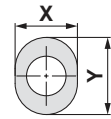


Applicable tubing O.D. [mm]	Connection thread M, Rc	Model	H (Width across flats)	Ø D1	Release button dimensions		Ø D2	L1	L2	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]	With a rib
					X	Y					Nylon	Urethane			
Ø 4	M5 x 0.8	KQ2LF04-M5□1	8	8.2	7.7	10	7	15.4	15.3	13.3	3.5	3.5	2.5	4.7	●
	M6 x 1.0	KQ2LF04-M6□1	8	8.2	7.7	10	7	15.4	16.1	13.3	3.5	3.5	2.5	4.6	●
	1/8	KQ2LF04-01□1	14	8.2	7.7	10	10	14.8	22.4	13.3	4.2	4.2	3	17.6	—
Ø 6	1/4	KQ2LF04-02□1	17	8.2	7.7	10	10	14.8	26.9	13.3	4.2	4.2	3	29.6	—
	M5 x 0.8	KQ2LF06-M5□1	8	10.4	9.7	12	7	14.5	17	13.3	3.5	3.5	2.5	4.8	●
	M6 x 1.0	KQ2LF06-M6□1	8	10.4	9.7	12	7	14.5	17.8	13.3	3.5	3.5	2.5	4.7	●
	1/8	KQ2LF06-01□1	14	10.4	9.7	12	10	15.5	23.5	13.3	11.4	9	4.5	18	—
Ø 6	1/4	KQ2LF06-02□1	17	10.4	9.7	12	10	15.5	28	13.3	11.4	9	4.5	30.1	—
	3/8	KQ2LF06-03□1	19	10.4	9.7	12	10	15.5	28.5	13.3	11.4	9	4.5	34	—

□: A (Brass), N (Brass + Electroless nickel plating)



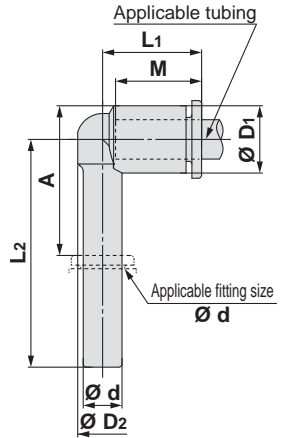
Release button dimensions



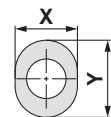
### Extended Plug-in Elbow: KQ2W



Applicable tubing O.D. [mm]	Applicable fitting size Ø d	Model	Ø D1	Release button dimensions		Ø D2	L1	L2	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
				X	Y						Nylon	Urethane		
Ø 3.2	Ø 3.2	KQ2W23-99A1	7.1	6.7	9.5	6.4	14.4	30.5	20.8	13.3	3	2.5	2.5	1
Ø 4	Ø 4	KQ2W04-99A1	8.2	7.7	10	7.2	14.5	31.8	22.6	13.3	4.2	4.2	3	1.3
Ø 6	Ø 6	KQ2W06-99A1	10.4	9.7	12	8	15.3	35.2	27.1	13.3	9	9	4	2



Release button dimensions



Oval Type

Metric Size M, R, Rc

Sealant/Gasket Seal

Inch Size UNF, NPT

Inch Size M, R, Rc

Metric Size G

Metric Size R, Rc

Face Seal

Inch Size NPT

Inch Size R

Gasket Seal

Metric Size Uni

Inch Size Uni

# KQ2 Series

Oval Type Applicable Tubing: Metric Size, Connection Thread: M, R, Rc

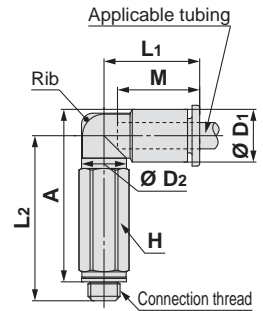
## Dimensions

### Extended Male Elbow: KQ2W (Gasket seal)

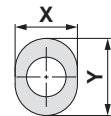


Applicable tubing O.D. [mm]	Connection thread M	Model	H (Width across flats)	Ø D1	Release button dimensions		Ø D2	L1	L2	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]	With a rib
					X	Y						Nylon	Urethane			
					Ø 3.2	M3 x 0.5						KQ2W23-M3G1	7			
	M5 x 0.8	KQ2W23-M5□1	7	7.1	6.7	9.5	7	15.3	25.2	25.7	13.3	2.8	2.4	2.5	5.8	●
Ø 4	M3 x 0.5	KQ2W04-M3G1	7	8.2	7.7	10	7	15.4	23	24.5	13.3	0.8	0.8	1.2	4.9	●
	M5 x 0.8	KQ2W04-M5■1	7	8.2	7.7	10	7	15.4	25.7	26.8	13.3	3	3	2.5	5.8	●
Ø 6	M5 x 0.8	KQ2W06-M5■1	7	10.4	9.7	12	7	14.5	27.4	29.6	13.3	3	3	2.5	5.9	●

□: A (Brass), N (Brass + Electroless nickel plating)  
 ■: A (Brass), N (Brass + Electroless nickel plating), G (stainless steel)



Release button dimensions



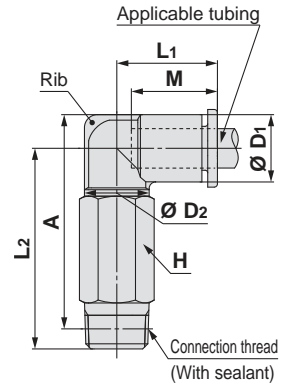
### Extended Male Elbow: KQ2W (Sealant)



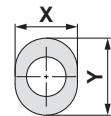
Applicable tubing O.D. [mm]	Connection thread R	Model	H (Width across flats)	Ø D1	Release button dimensions		Ø D2	L1	L2	A*1	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]	With a rib
					X	Y						Nylon	Urethane			
					Ø 3.2	1/8						KQ2W23-01□S1	10			
1/4	KQ2W23-02□S1	14	7.1	6.7		9.5	10	14.5	32.8	31.7	13.3	2.8	2.4	2.5	27.3	—
Ø 4	1/8	KQ2W04-01■S1	10	8.2	7.7	10	10	14.8	29.9	30.9	13.3	4	4	3	11	●
	1/4	KQ2W04-02■S1	14	8.2	7.7	10	10	14.8	33.3	32.7	13.3	4	4	3	27.5	●
Ø 6	1/8	KQ2W06-01■S1	10	10.4	9.7	12	10	15.5	31	33.1	13.3	10.9	8.6	4.5	11.4	—
	1/4	KQ2W06-02■S1	14	10.4	9.7	12	10	15.5	34.4	34.9	13.3	10.9	8.6	4.5	28	—
	3/8	KQ2W06-03■S1	17	10.4	9.7	12	10	15.5	35.7	35.8	13.3	10.9	8.6	4.5	47.4	—

□: A (Brass), N (Brass + Electroless nickel plating)  
 ■: A (Brass), N (Brass + Electroless nickel plating), G (stainless steel)

\*1 Reference dimensions after installation of R thread



Release button dimensions



# Metric Size One-touch Fittings **KQ2 Series**

**Oval Type** Applicable Tubing: Metric Size, Connection Thread: M, R, Rc

## Dimensions

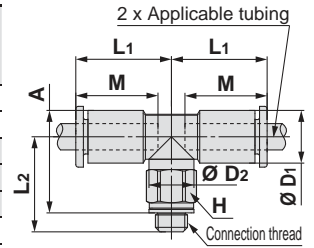
### Male Branch Tee: KQ2T (Gasket seal)



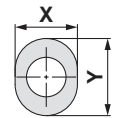
Applicable tubing O.D. [mm]	Connection thread M	Model	H (Width across flats)	Ø D1	Release button dimensions		Ø D2	L1	L2	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
					X	Y						Nylon	Urethane		
Ø 3.2	M3 x 0.5	KQ2T23-M3G1	7	7.1	6.7	9.5	7	15.3	13.8	14.7	13.3	0.9	0.9	1.2	3.1
	M5 x 0.8	KQ2T23-M5□1	7	7.1	6.7	9.5	7	15.3	14.3	14.8	13.3	3.2	2.7	2.5	3.5
Ø 4	M3 x 0.5	KQ2T04-M3G1	7	8.2	7.7	10	7	15.4	14.3	15.8	13.3	0.9	0.9	1.2	3.4
	M5 x 0.8	KQ2T04-M5■1	7	8.2	7.7	10	7	15.4	14.8	15.9	13.3	4.5	4.5	2.5	3.9
Ø 6	M5 x 0.8	KQ2T06-M5■1	7	10.4	9.7	12	7	14.5	16.5	18.7	13.3	4.5	4.5	2.5	4.4
	M6 x 1.0	KQ2T06-M6□1	8	10.4	9.7	12	7	14.5	17.5	18.7	13.3	4.5	4.5	2.5	5.4

□: A (Brass), N (Brass + Electroless nickel plating)

■: A (Brass), N (Brass + Electroless nickel plating), G (stainless steel)



Release button dimensions



### Male Branch Tee: KQ2T (Sealant)

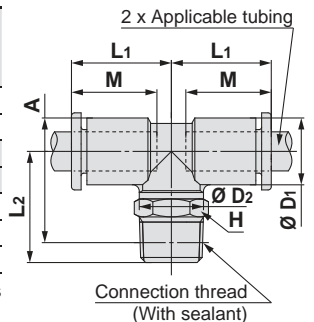


Applicable tubing O.D. [mm]	Connection thread R	Model	H (Width across flats)	Ø D1	Release button dimensions		Ø D2	L1	L2	A*1	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
					X	Y						Nylon	Urethane		
Ø 3.2	1/8	KQ2T23-01□S1	10	7.1	6.7	9.5	10	14.5	16.6	17.1	13.3	3.4	2.9	2.5	5.2
	1/4	KQ2T23-02□S1	14	7.1	6.7	9.5	10	14.5	21.1	20	13.3	3.4	2.9	2.5	14.7
Ø 4	1/8	KQ2T04-01■S1	10	8.2	7.7	10	10	14.8	16.2	17.2	13.3	6	4.1	3	5.5
	1/4	KQ2T04-02■S1	14	8.2	7.7	10	10	14.8	21.7	21.1	13.3	6	4.1	3	15
Ø 6	1/8	KQ2T06-01■S1	10	10.4	9.7	12	10	15.5	17.3	19.4	13.3	13.9	11	4.5	6.1
	1/4	KQ2T06-02■S1	14	10.4	9.7	12	10	15.5	22.8	23.3	13.3	13.9	11	4.5	15.6
	3/8	KQ2T06-03■S1	17	10.4	9.7	12	10	15.5	24.1	24.2	13.3	13.9	11	4.5	27.4

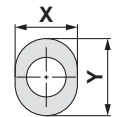
□: A (Brass), N (Brass + Electroless nickel plating)

■: A (Brass), N (Brass + Electroless nickel plating), G (stainless steel)

\*1 Reference dimensions after installation of R thread



Release button dimensions



Oval Type

Metric Size M, R, Rc

Sealant/Gasket Seal

Inch Size UNF, NPT

Inch Size M, R, Rc

Metric Size G

Face Seal

Metric Size R, Rc

Inch Size R

Metric Size Uni

Inch Size Uni

# KQ2 Series

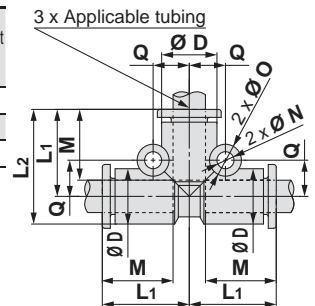
Oval Type Applicable Tubing: Metric Size, Connection Thread: M, R, Rc

## Dimensions

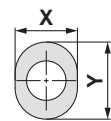
### Union Tee: KQ2T



Applicable tubing O.D. [mm]	Model	∅ D	Release button dimensions		L1	L2	M	Q	∅ O	∅ N	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
			X	Y							Nylon	Urethane		
∅ 3.2	KQ2T23-00A1	7.1	6.7	9.5	14.9	18.5	13.3	5.4	6	3.2	3.4	2.9	2.5	2.3
∅ 4	KQ2T04-00A1	8.2	7.7	10	15.3	19.4	13.3	5.7	6	3.2	6.4	4.4	3	2.8
∅ 6	KQ2T06-00A1	10.4	9.7	12	16.3	21.5	13.3	6.8	6	3.2	13.4	10.6	4.5	3.8



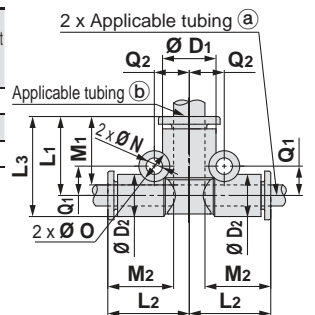
Release button dimensions



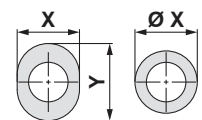
### Different Diameter Tee: KQ2T



Applicable tubing O.D. [mm]		Model	∅ D1	Release button dimensions (a)		∅ D2	Release button dimensions (b)		L1	L2	L3	M1	M2	Q1	Q2	∅ O	∅ N	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
a	b			∅ X (X)	Y		∅ X (X)	Y										Nylon	Urethane		
∅ 3.2	∅ 4	KQ2T23-04A1	8.2	6.7	9.5	7.1	7.7	10	14.9	15.3	18.5	13.3	13.3	5.4	5.8	6	3.2	3.8	3.5	2.5	2.6
∅ 4	∅ 6	KQ2T04-06A1	10.4	7.7	10	8.2	9.7	12	15.3	16.3	19.4	13.3	13.3	5.7	6.8	6	3.2	7.1	6.6	3	3.3
∅ 6	∅ 8	KQ2T06-08A1	13.2	9.7	12	10.4	13	—	17.2	17.3	22.4	14.2	13.3	7.3	8.4	8	4.2	16.4	16.4	4.5	5.3



Release button dimensions

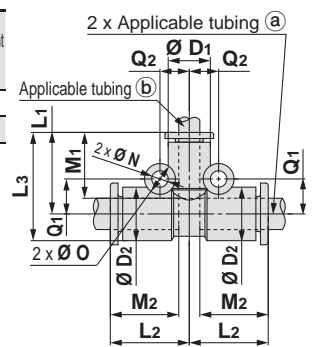


Applicable tubing O.D.:  
∅ 3.2, ∅ 4, ∅ 6

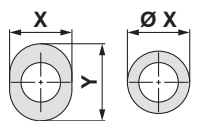
### Different Diameter Tee: KQ2T



Applicable tubing O.D. [mm]		Model	∅ D1	Release button dimensions (a)		∅ D2	Release button dimensions (b)		L1	L2	L3	M1	M2	Q1	Q2	∅ O	∅ N	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
a	b			∅ X (X)	Y		∅ X (X)	Y										Nylon	Urethane		
∅ 6	∅ 4	KQ2T06-04A1	8.2	9.7	12	10.4	7.7	10	16.3	15.3	21.5	13.3	13.3	6.8	5.7	6	3.2	6.4	4.4	3	3.5
∅ 8	∅ 6	KQ2T08-06A1	10.4	13	—	13.2	9.7	12	17.3	17.2	23.9	13.3	14.2	8.4	7.3	8	4.2	13.4	10.6	4.5	6



Release button dimensions



Applicable tubing O.D.:  
∅ 4, ∅ 6

# Metric Size One-touch Fittings **KQ2 Series**

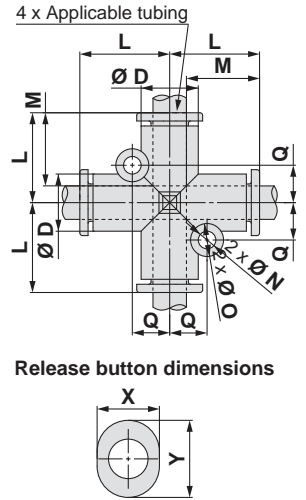
**Oval Type** Applicable Tubing: Metric Size, Connection Thread: M, R, Rc

## Dimensions

### Cross: KQ2TW



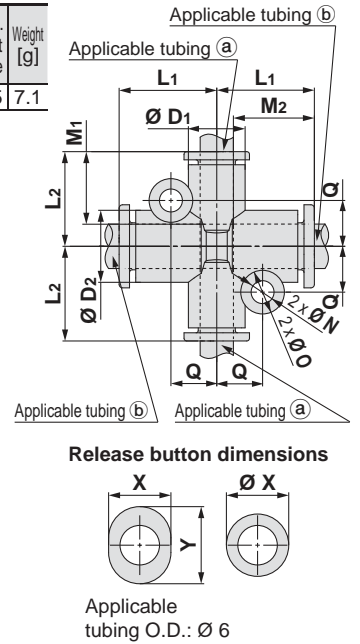
Applicable tubing O.D. [mm]	Model	∅ D	Release button dimensions		L	Q	M	∅ O	∅ N	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
			X	Y						Nylon	Urethane		
			∅ 4	KQ2TW04-00A1						8.2	7.7		
∅ 6	KQ2TW06-00A1	10.4	9.7	12	16.3	6.8	13.3	6	3.2	13.4	10.6	4.5	4.9



### Different Diameter Cross: KQ2TX



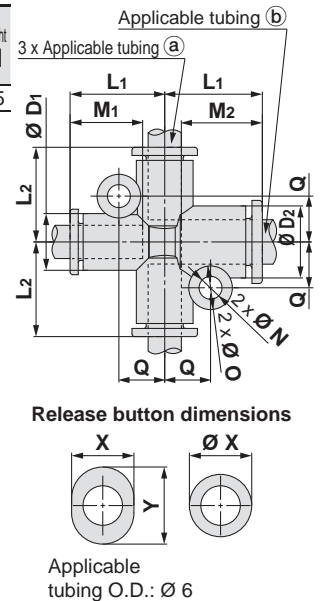
Applicable tubing O.D. [mm]		Model	∅ D <sub>1</sub>	Release button dimensions <b>a</b>		∅ D <sub>2</sub>	Release button dimensions <b>b</b>		L <sub>1</sub>	L <sub>2</sub>	Q	M <sub>1</sub>	M <sub>2</sub>	∅ O	∅ N	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
a	b			X	Y		∅ X (X)	Y								Nylon	Urethane		
∅ 6	∅ 8	KQ2TX06-08A1	10.4	9.7	12	13.2	13	—	17.2	17.3	8.4	13.3	14.2	8	4.2	13.4	10.6	4.5	7.1



### Different Diameter Cross: KQ2TY



Applicable tubing O.D. [mm]		Model	∅ D <sub>1</sub>	Release button dimensions <b>a</b>		∅ D <sub>2</sub>	Release button dimensions <b>b</b>		L <sub>1</sub>	L <sub>2</sub>	Q	M <sub>1</sub>	M <sub>2</sub>	∅ O	∅ N	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
a	b			X	Y		∅ X (X)	Y								Nylon	Urethane		
∅ 6	∅ 8	KQ2TY06-08A1	10.4	9.7	12	13.2	13	—	17.3	17.2	8.4	13.3	14.2	8	4.2	13.4	10.6	4.5	6.5



Oval Type

Metric Size M, R, Rc

Sealant/Gasket Seal

Inch Size UNF, NPT

Inch Size M, R, Rc

Metric Size G

Face Seal

Metric Size R, Rc

Inch Size NPT

Inch Size R

Gasket Seal

Metric Size Uni

Inch Size Uni

# KQ2 Series

Oval Type Applicable Tubing: Metric Size, Connection Thread: M, R, Rc

## Dimensions

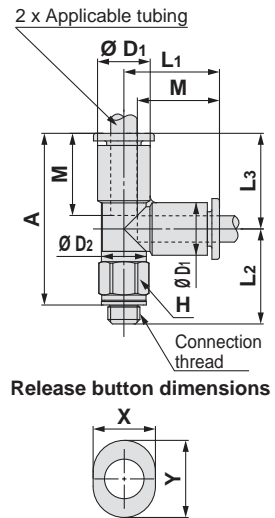
### Male Run Tee: KQ2Y (Gasket seal)



Applicable tubing O.D. [mm]	Connection thread M	Model	H (Width across flats)	Ø D1	Release button dimensions		Ø D2	L1	L2	L3	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
					X	Y							Nylon	Urethane		
					Ø 3.2	M3 x 0.5							KQ2Y23-M3G1	7		
	M5 x 0.8	KQ2Y23-M5□1	7	7.1	6.7	9.5	7	15.3	14.3	15.3	26.6	13.3	3.2	2.7	2.5	3.5
Ø 4	M3 x 0.5	KQ2Y04-M3G1	7	8.2	7.7	10	7	15.4	14.3	15.4	27.1	13.3	0.9	0.9	1.2	3.4
	M5 x 0.8	KQ2Y04-M5■1	7	8.2	7.7	10	7	15.4	14.8	15.4	27.2	13.3	4.5	4.5	2.5	3.9
Ø 6	M3 x 0.5	KQ2Y06-M3■1	7	10.4	9.7	12	7	16.3	16.5	16.3	29.8	13.3	4.5	4.5	2.5	4.6
	M6 x 1.0	KQ2Y06-M6□1	8	10.4	9.7	12	7	16.3	17.5	16.3	29.8	13.3	4.5	4.5	2.5	5.7

□: A (Brass), N (Brass + Electroless nickel plating)

■: A (Brass), N (Brass + Electroless nickel plating), G (stainless steel)



### Male Run Tee: KQ2Y (Sealant)

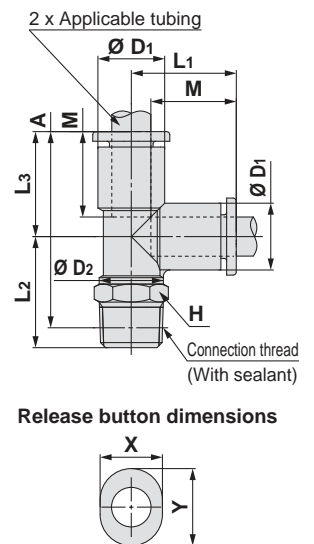


Applicable tubing O.D. [mm]	Connection thread R	Model	H (Width across flats)	Ø D1	Release button dimensions		Ø D2	L1	L2	L3	A*1	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
					X	Y							Nylon	Urethane		
					Ø 3.2	1/8							KQ2Y23-01□S1	10		
1/4	KQ2Y23-02□S1	14	7.1	6.7		9.5	10	14.9	21.1	14.9	31.4	13.3	3.4	2.9	2.5	14.7
Ø 4	1/8	KQ2Y04-01■S1	10	8.2	7.7	10	10	15.3	16.2	15.3	28.4	13.3	6.4	4.4	3	5.6
	1/4	KQ2Y04-02■S1	14	8.2	7.7	10	10	15.3	21.7	15.3	32.3	13.3	6.4	4.4	3	15
Ø 6	1/8	KQ2Y06-01■S1	10	10.4	9.7	12	10	16.3	17.3	16.3	30.5	13.3	13.4	10.6	4.5	6.2
	1/4	KQ2Y06-02■S1	14	10.4	9.7	12	10	16.3	22.8	16.3	34.4	13.3	13.4	10.6	4.5	15.8
	3/8	KQ2Y06-03■S1	17	10.4	9.7	12	10	16.3	24.1	16.3	35.3	13.3	13.4	10.6	4.5	27.5

□: A (Brass), N (Brass + Electroless nickel plating)

■: A (Brass), N (Brass + Electroless nickel plating), G (stainless steel)

\*1 Reference dimensions after installation of R thread



# Metric Size One-touch Fittings **KQ2 Series**

**Oval Type** Applicable Tubing: Metric Size, Connection Thread: M, R, Rc

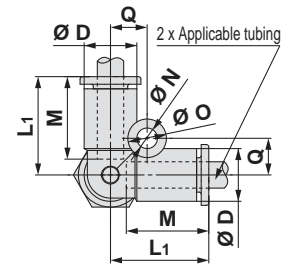
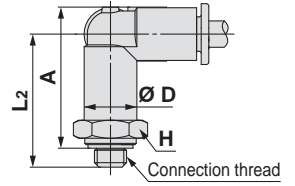
## Dimensions

### Male Delta Union: KQ2D (Gasket seal)

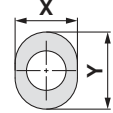


Applicable tubing O.D. [mm]	Connection thread M	Model	H (Width across flats)	Ø D	Release button dimensions		L1	L2	A	M	Q	Ø O	Ø N	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
					X	Y								Nylon	Urethane		
Ø 4	M5 x 0.8	KQ2D04-M5■1	10	8.2	7.7	10	15.8	20.7	21.8	13.3	5.7	6	3.2	2.2	2.2	1.8	6.6
	M6 x 1.0	KQ2D04-M6□1	10	8.2	7.7	10	15.8	21.7	21.8	13.3	5.7	6	3.2	4.3	4.3	3	6.4
Ø 6	M5 x 0.8	KQ2D06-M5■1	12	10.4	9.7	12	16.8	21.7	23.9	13.3	6.7	6	3.2	4.3	4.3	1.8	9.8
	M6 x 1.0	KQ2D06-M6□1	12	10.4	9.7	12	16.8	22.7	23.9	13.3	6.7	6	3.2	4.3	4.3	3	9.7

□: A (Brass), N (Brass + Electroless nickel plating)  
 ■: A (Brass), N (Brass + Electroless nickel plating), G (stainless steel)



Release button dimensions

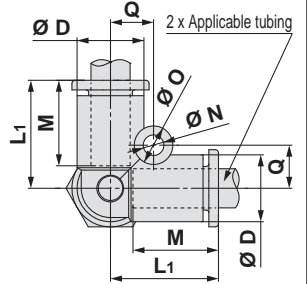
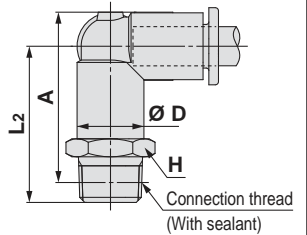


### Male Delta Union: KQ2D (Sealant)

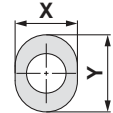


Applicable tubing O.D. [mm]	Connection thread R	Model	H (Width across flats)	Ø D	Release button dimensions		L1	L2	A*1	M	Q	Ø O	Ø N	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
					X	Y								Nylon	Urethane		
Ø 4	1/8	KQ2D04-01■S1	10	8.2	7.7	10	15.8	23.3	24.3	13.3	5.7	6	3.2	6	6	3.6	9.2
	1/4	KQ2D04-02■S1	14	8.2	7.7	10	15.8	27.7	27.1	13.3	5.7	6	3.2	6	6	3.6	19
Ø 6	1/8	KQ2D06-01■S1	12	10.4	9.7	12	16.8	24.3	26.4	13.3	6.7	6	3.2	13.9	11	5.4	10.2
	1/4	KQ2D06-02■S1	14	10.4	9.7	12	16.8	28.7	29.2	13.3	6.7	6	3.2	13.9	11	5.4	19.1
	3/8	KQ2D06-03■S1	17	10.4	9.7	12	16.8	30.1	30.2	13.3	6.7	6	3.2	13.9	11	5.4	31

■: A (Brass), N (Brass + Electroless nickel plating), G (stainless steel) \*1 Reference dimensions after installation of R thread



Release button dimensions



Oval Type

Metric Size M, R, Rc

Sealant/Gasket Seal

Inch Size UNF, NPT

Inch Size M, R, Rc

Metric Size G

Metric Size R, Rc

Inch Size NPT

Inch Size R

Metric Size Uni

Inch Size Uni

# KQ2 Series

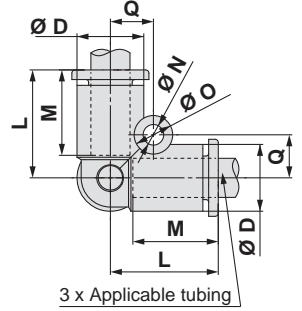
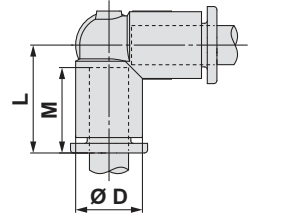
Oval Type Applicable Tubing: Metric Size, Connection Thread: M, R, Rc

## Dimensions

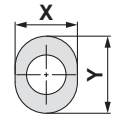
### Delta Union: KQ2D



Applicable tubing O.D. [mm]	Model	Ø D	Release button dimensions		L	M	Q	Ø O	Ø N	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
			X	Y						Nylon	Urethane		
Ø 4	KQ2D04-00A1	8.2	7.7	10	15.8	13.3	5.7	6	3.2	6	4.1	3	2.7
Ø 6	KQ2D06-00A1	10.4	9.7	12	16.8	13.3	6.7	6	3.2	13.9	11	4.5	3.8



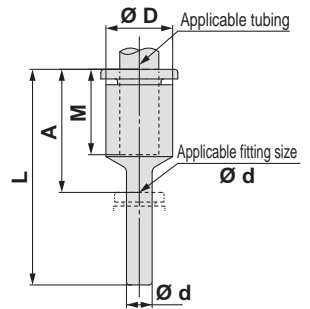
Release button dimensions



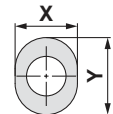
### Plug-in Reducer: KQ2R



Applicable tubing O.D. [mm]	Applicable fitting size Ø d	Model	Ø D	Release button dimensions		L	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
				X	Y				Nylon	Urethane		
Ø 3.2	Ø 4	KQ2R23-04A1	7.1	6.7	9.5	28.6	15.3	13.3	3.4	2.9	2.5	0.8
	Ø 6	KQ2R23-06A1	7.1	6.7	9.5	29.1	15.8	13.3	3.4	2.9	2.5	1
Ø 4	Ø 6	KQ2R04-06A1	8.2	7.7	10	28.6	15.3	13.3	5.6	4	3	1.1
	Ø 8	KQ2R04-08A1	8.2	7.7	10	29.6	15.4	13.3	5.6	4	3	1.3
	Ø 10	KQ2R04-10A1	10.4	7.7	10	31.7	16.1	13.3	5.6	4	3	2.2
Ø 6	Ø 4	KQ2R06-04A1	10.4	9.7	12	33.6	20.3	13.3	4	4	2.5	1.4
	Ø 8	KQ2R06-08A1	10.4	9.7	12	31.6	17.4	13.3	13.1	10.4	4.5	1.7
	Ø 10	KQ2R06-10A1	10.4	9.7	12	33.9	18.3	13.3	13.1	10.4	4.5	2.1
	Ø 12	KQ2R06-12A1	12	9.7	12	35.7	18.7	13.3	13.1	10.4	4.5	3.2



Release button dimensions





# Metric Size One-touch Fittings **KQ2 Series**

**Oval Type** Applicable Tubing: Metric Size, Connection Thread: M, R, Rc

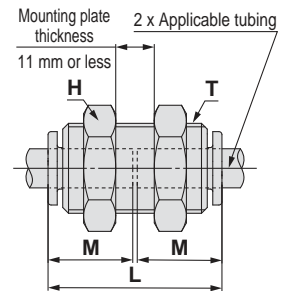
## Dimensions

### Bulkhead Union: KQ2E (Interchangeable with KQ)

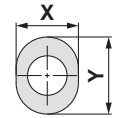


Applicable tubing O.D. [mm]	Model	T (M)	H (Width across flats)	Release button dimensions		L	Mounting hole	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
				X	Y				Nylon	Urethane		
Ø 3.2	KQ2E23-00□1	M12 x 1	14	6.7	9.5	27.3	13	13.3	3.4	2.9	2.5	24.1
Ø 4	KQ2E04-00■1	M12 x 1	14	7.7	10	27.3	13	13.3	5.6	4	3	22.9
Ø 6	KQ2E06-00■1	M14 x 1	17	9.7	12	27.3	15	13.3	13.1	10.4	4.5	28

□: A (Brass), N (Brass + Electroless nickel plating)  
 ■: A (Brass), N (Brass + Electroless nickel plating), G (stainless steel)



Release button dimensions

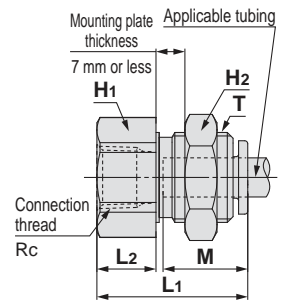


### Bulkhead Connector: KQ2E

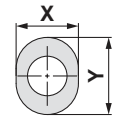


Applicable tubing O.D. [mm]	Connection thread Rc	Model	T (M)	H1 (Width across flats)	H2 (Width across flats)	L1	L2	Release button dimensions		Mounting hole	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
								X	Y			Nylon	Urethane		
Ø 3.2	1/4	KQ2E23-02□1	M12 x 1	17	14	28.7	14.3	6.7	9.5	13	13.3	3.4	2.9	2.5	31.2
Ø 4	1/8	KQ2E04-01■1	M12 x 1	14	14	24.4	10	7.7	10	13	13.3	5.6	4	3	21.2
	1/4	KQ2E04-02■1	M12 x 1	17	14	29	14.6	7.7	10	13	13.3	5.6	4	3	30.9
Ø 6	1/8	KQ2E06-01■1	M14 x 1	17	17	23.6	9.2	9.7	12	15	13.3	13.1	10.4	4.5	28.9
	1/4	KQ2E06-02■1	M14 x 1	17	17	28.4	14	9.7	12	15	13.3	13.1	10.4	4.5	32.4
	3/8	KQ2E06-03■1	M14 x 1	19	17	30.7	16.3	9.7	12	15	13.3	13.1	10.4	4.5	35.9

□: A (Brass), N (Brass + Electroless nickel plating)  
 ■: A (Brass), N (Brass + Electroless nickel plating), G (stainless steel)



Release button dimensions

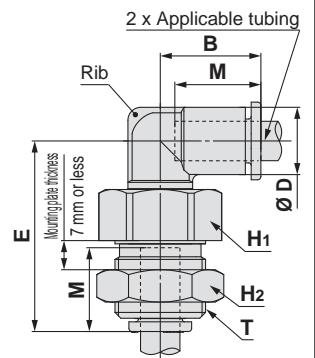


### Bulkhead Male Elbow: KQ2LE

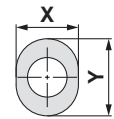


Applicable tubing O.D. [mm]	Model	T (M)	H1 (Width across flats)	H2 (Width across flats)	B	E	Ø D	Release button dimensions		Mounting hole	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]	With a rib
								X	Y			Nylon	Urethane			
Ø 4	KQ2LE04-00□1	M12 x 1	14	14	14.8	28.5	8.2	7.7	10	13	13.3	4.2	4.2	3	21.2	●
Ø 6	KQ2LE06-00□1	M14 x 1	17	17	15.5	29.6	10.4	9.7	12	15	13.3	11.4	9	4.5	29.4	—

□: A (Brass), N (Brass + Electroless nickel plating)



Release button dimensions



Oval Type

Metric Size M, R, Rc

Sealant/Gasket Seal

Inch Size UNF, NPT

Inch Size M, R, Rc

Metric Size G

Metric Size R, Rc

Face Seal

Inch Size NPT

Inch Size R

Metric Size Uni

Inch Size Uni

Gasket Seal

# KQ2 Series

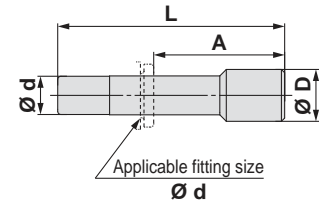
Oval Type Applicable Tubing: Metric Size, Connection Thread: M, R, Rc

## Dimensions

### Plug: KQ2P



Applicable fitting size $\varnothing d$	Model	$\varnothing D$	L	A	Weight [g]
$\varnothing 2$	KJP-02	3	17	5.1	0.1
$\varnothing 3.2$	KQ2P-23	5	31.5	18.2	1
$\varnothing 4$	KQ2P-04	6	32	18.7	1
$\varnothing 6$	KQ2P-06	8	35	21.7	1
$\varnothing 8$	KQ2P-08	10	39	24.8	2
$\varnothing 10$	KQ2P-10	12	43	27.4	3.5
$\varnothing 12$	KQ2P-12	14	45.5	28.5	5
$\varnothing 16$	KQ2P-16	20.9	47	26.4	8

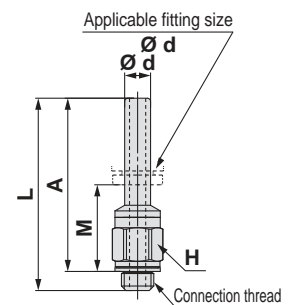


### Adapter: KQ2N (Gasket seal)



Applicable fitting size $\varnothing d$	Connection thread M	Model	H (Width across flats)	L	A	M	Min. port size	Weight [g]
$\varnothing 4$	M5 x 0.8	KQ2N04-M5□	7	29.7	26.7	13.4	2.5	2.4
$\varnothing 6$	M5 x 0.8	KQ2N06-M5□	7	29.7	26.7	13.4	2.5	2.6

□: A (Brass), N (Brass + Electroless nickel plating)



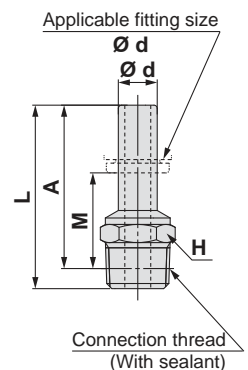
### Adapter: KQ2N (Sealant)



Applicable fitting size $\varnothing d$	Connection thread R	Model	H (Width across flats)	L	A*1	M	Min. port size	Weight [g]
$\varnothing 4$	1/8	KQ2N04-01□S	10	28.3	25.2	11.9	2.5	4
$\varnothing 6$	1/8	KQ2N06-01□S	10	28.3	25.2	11.9	4	4.1
	1/4	KQ2N06-02□S	14	32.8	28.1	14.8	4	13.6
$\varnothing 8$	1/4	KQ2N08-02□S	14	35.9	31.2	17	6	15.7
	3/8	KQ2N08-03□S	17	36	30.9	16.7	6	22.7
$\varnothing 10$	3/8	KQ2N10-03□S	17	40.6	35.5	19.9	7.5	19.1

□: A (Brass), N (Brass + Electroless nickel plating)

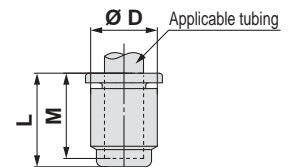
\*1 Reference dimensions after installation of R thread



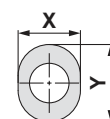
### Tube Cap: KQ2C



Applicable tubing O.D. [mm]	Model	$\varnothing D$	Release button dimensions		L	M	Weight [g]
			X	Y			
$\varnothing 4$	KQ2C04-00A1	8.2	7.7	10	14.5	13.3	0.8
$\varnothing 6$	KQ2C06-00A1	10.4	9.7	12	14.6	13.3	1.1



Release button dimensions



# Metric Size One-touch Fittings **KQ2 Series**

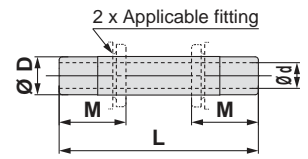
**Oval Type** Applicable Tubing: Metric Size, Connection Thread: M, R, Rc

## Dimensions

### Nipple: KQ2N



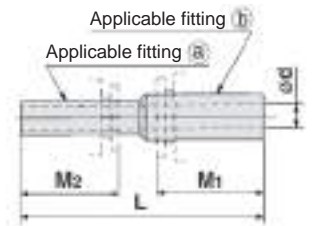
Applicable fitting Ø D	Model	L	M	Ø d	Min. port size	Weight [g]
Ø 4	<b>KQ2N04-99</b>	37	13.3	2.5	2.5	1
Ø 6	<b>KQ2N06-99</b>	39	13.3	4	4	2
Ø 8	<b>KQ2N08-99</b>	43	14.2	6	6	2
Ø 10	<b>KQ2N10-99</b>	49	15.6	7.5	7.5	4
Ø 12	<b>KQ2N12-99</b>	52	17	9	9	3.3
Ø 16	<b>KQ2N16-99</b>	57	20.6	13	13	4.8



### Reducer Nipple: KQ2N



Applicable fitting		Model	L	M <sub>1</sub>	M <sub>2</sub>	Ø d Min. port size	Weight [g]
a	b						
Ø 4	Ø 6	<b>KQ2N04-06</b>	38	13.3	13.3	2.5	2
Ø 6	Ø 8	<b>KQ2N06-08</b>	42	14.2	13.3	4	2
Ø 8	Ø 10	<b>KQ2N08-10</b>	47	15.6	14.2	6	2
Ø 10	Ø 12	<b>KQ2N10-12</b>	51	17	15.6	7.5	3.1
Ø 12	Ø 16	<b>KQ2N12-16</b>	55	20.6	17	9	4.9

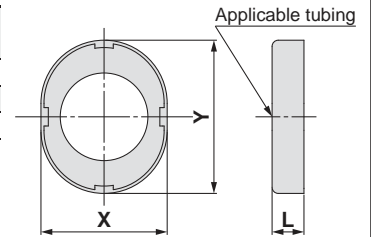


### Colour Cap: KQ2C



Applicable tubing O.D. [mm]	Model	X	Y	L	Weight [g]
Ø 3.2	<b>KQ2C-23□B</b>	7.3	10	2.6	0.1
Ø 4	<b>KQ2C-04□B</b>	8.3	10.5	2.6	0.1
Ø 6	<b>KQ2C-06□B</b>	10.3	12.5	2.6	0.1

□: B (Black), R (Red), YR (Orange), BR (Brown), Y (Yellow), G (Green), CB (Sky blue), GR (Grey), W (White), BU (Blue)



Oval Type

Metric Size M, R, Rc

Sealant/Gasket Seal  
Inch Size UNF, NPT

Inch Size M, R, Rc

Metric Size G

Metric Size R, Rc

Face Seal  
Inch Size NPT

Inch Size R

Gasket Seal  
Metric Size Uni

Inch Size Uni

# KQ2 Series

# Made to Order/Clean Series/Spare Parts

Please contact SMC for detailed dimensions, specifications, and lead times.

## 1 Made to Order

Symbol	Specifications
<b>X12</b>	Lubricant: White vaseline Release button colour: White
<b>X35</b> *1	Body colour: Black Release button colour: Light grey
<b>X41</b>	With fixed orifice*2

\*1 The following models are not available as made-to-order: Hexagon socket head male connector/KQ2S, Bulkhead union/KQ2E, Bulkhead connector/KQ2E, Nipple/KQ2N, Reducer nipple/KQ2N, Male connector/KQ2H, Female connector/KQ2F, Colour cap/KQ2C, Plug/KQ2P

\*2 Please contact SMC for availability.

The following made-to-order products will be provided based on previous models (KQ2 series). Please contact SMC separately.

Symbol	Specifications
<b>X17</b>	Grease-free Rubber material: NBR (With fluorine coating) Release button colour: Light blue
<b>X29</b>	Grease-free Rubber material: NBR (With fluorine coating) Release button colour: Light blue Copper-free (With electroless nickel plating)
<b>X34</b>	Rubber material: FKM
<b>X39</b>	Grease-free Rubber material: NBR (With fluorine coating) Release button colour: Light blue Clean (Copper-free, air blow, double packaging, resin body: white)
<b>X94</b>	Grease-free Rubber material: FKM (With fluorine coating) Release button colour: Light blue

## 3 Spare Parts

Description	Part no.	Applicable thread
Gasket	<b>M-3G2</b>	M3
	<b>M-5G2</b>	M5
	<b>M-6G</b>	M6

### Brass

Description	Part no.	Applicable model
Pipe nut	<b>KQ04-P01A</b>	KQ2E23-00A1, KQ2E04-00A1, KQ2E23-02A1
		KQ2E04-01A1, KQ2E04-02A1, KQ2LE04-00A1
	<b>KQ06-P01A</b>	KQ2E06-00A1, KQ2E06-01A1, KQ2E06-02A1
		KQ2E06-03A1, KQ2LE06-00A1

### Brass + Electroless nickel plating

Description	Part no.	Applicable model
Pipe nut	<b>KQ04-P01N</b>	KQ2E23-00N1, KQ2E04-00N1, KQ2E23-02N1
		KQ2E04-01N1, KQ2E04-02N1, KQ2LE04-00N1
	<b>KQ06-P01N</b>	KQ2E06-00N1, KQ2E06-01N1, KQ2E06-02N1
		KQ2E06-03N1, KQ2LE06-00N1

### Stainless Steel

Description	Part number	Applicable model
Pipe nut	<b>KQ04-P01G</b>	KQ2E04-00G1, KQ2E04-01G1, KQ2E04-02G1
	<b>KQ06-P01G</b>	KQ2E06-00G1, KQ2E06-01G1, KQ2E06-02G1, KQ2E06-03G1
	<b>KQ08-P01G</b>	KQ2E08-00G, KQ2E08-01G, KQ2E08-02G, KQ2E08-03G
	<b>KQ10-P01G</b>	KQ2E10-00G, KQ2E10-02G, KQ2E10-03G
	<b>KQ12-P01G</b>	KQ2E12-00G, KQ2E12-03G, KQ2E12-04G
	<b>KQ16-P01G</b>	KQ2E16-00G, KQ2E16-03G, KQ2E16-04G

## 2 Clean Series

Please consult with SMC separately for applicable models.

Symbol	Specifications
<b>10-</b>	Brass parts: With electroless nickel plating Lubricant: Fluorine grease Air blow in a clean room Double packaging Resin body, Release button colour: White

Example) **10-KQ2H06-02NS1** (With thread)

**10-KQ2H06-00A1** (Without thread)

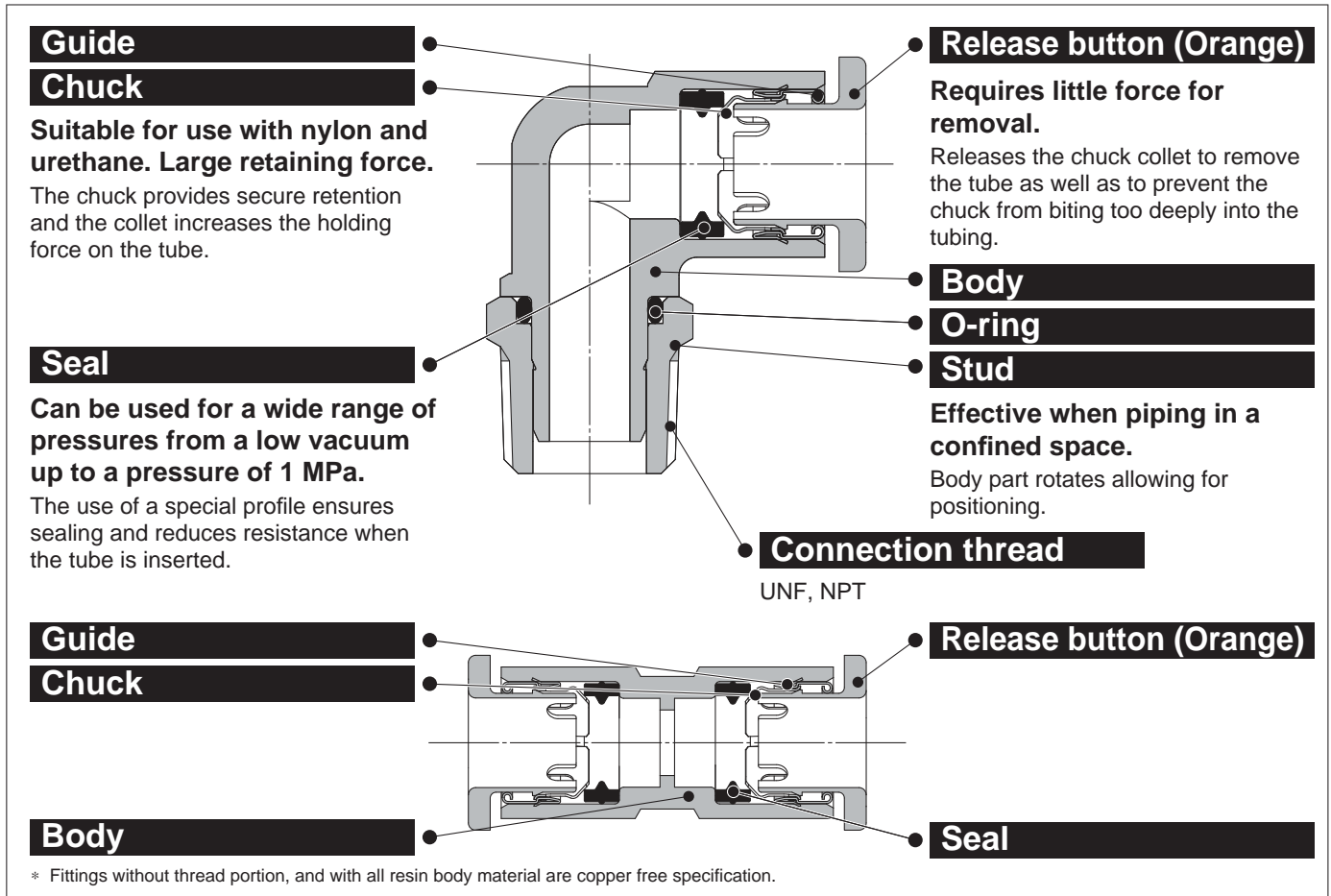
**10-KQ2H06-02GS1** (Stainless steel)

Gasket Seal		Face Seal			Sealant/Gasket Seal		Oval Type
Inch Size Uni	Metric Size Uni	Inch Size R	Inch Size NPT	Metric Size R, Rc	Metric Size G	Inch Size UNF, NPT	Metric Size M, R, Rc

# Oval Type Inch Size One-touch Fittings

Applicable Tubing: Inch Size, Connection Thread: UNF, NPT

## KQ2 Series



**One-touch IN/OUT connection.**  
**Possible to use in vacuum to -100 kPa.**



### Applicable Tubing

Tubing material	FEP, PFA, Nylon, Soft nylon, Polyurethane
Tubing O.D.	Ø 1/8", Ø 5/32", Ø 3/16"

### Specifications

Fluid		Air, Water*1
Operating pressure range*2		-100 kPa to 1 MPa
Proof pressure (at 23 °C)		3 MPa
Ambient and fluid temperature		-5 to 60 °C, Water: 0 to 40 °C (No freezing)
Thread	Mounting section	ANSI/ASME1.20.1 (NPT thread) JIS B0208 (UNF thread)
	Nut section	JIS B0208 (UNF thread)
Seal on the threads		With sealant

\*1 The surge pressure must be under the maximum operating pressure.

\*2 Do not use the fittings with a leak tester or for vacuum retention because they are not guaranteed for zero leakage.

### Principal Parts Material

Body	C3604, PBT, PP
Stud	C3604 (Thread portion)
Chuck	Stainless steel 304
Guide	Stainless steel 304
Release button	POM
Seal, O-ring	NBR
Gasket	Stainless steel 304, NBR



**Made to Order**  
(Refer to page 48 for details.)

## How to Order

### Threaded Type

**KQ2 H 05 - 34 A S 1**

One-touch fittings

Model

Symbol	Model
H	Male connector
S	Hexagon socket head male connector
F	Female connector
L	Male elbow
K	45° male elbow
V	Universal male elbow
VS	Hexagon socket head universal male elbow
VF	Universal female elbow
LF	Female elbow
VD	Double universal male elbow
VT	Triple universal male elbow
W	Extended male elbow
T	Male branch tee
Y	Male run tee
E	Bulkhead union
	Bulkhead connector
LE	Bulkhead male elbow

Oval type release button

Male thread seal method

Symbol	Seal method
—	None
S	With thread sealant

Thread material/Surface treatment

Symbol	Thread material/Surface treatment
A	Brass
N	Brass + Electroless nickel plating

Port size/Applicable tubing O.D.

Symbol	Size	
Thread connection	32	10-32UNF
	33	NPT 1/16
	34	NPT 1/8
	35	NPT 1/4
Tubing connection	00*1	Same diameter tubing

\*1 Only for "Bulkhead union" and "Bulkhead male elbow".

Applicable tubing O.D.

Symbol	Size
01	Ø 1/8"
03	Ø 5/32"
05	Ø 3/16"

#### Spare Parts

Use the part number below to order the gasket for sealing 10-32UNF thread.

Gasket for 10-32UNF: M-5G2

### Tube - Tube Type

**KQ2 H 05 - 00 A 1**

One-touch fittings

Model

Symbol	Model
H	Straight union
	Different diameter straight
L	Union elbow
	Plug-in elbow
	Reducer elbow
R	Plug-in reducer
T	Union tee
	Different diameter tee
TW	Cross

Oval type release button

Port size/Applicable tubing O.D.

Symbol	Size		
Tubing (Rod) connection	00	Same diameter tubing	
	99	Same diameter rod	
	Different dia. tubing (Reducer)	01	Ø 1/8"
		03	Ø 5/32"
		05	Ø 3/16"

Applicable tubing O.D.

Symbol	Size
01	Ø 1/8"
03	Ø 5/32"
05	Ø 3/16"

#### Accessories

Symbol	Name
KQ2N	Nipple
	Reducer nipple
KQ2C	Tube cap
KQ2P	Plug

Oval Type



Metric Size M, R, Rc

Inch Size UNF, NPT

Inch Size M, R, Rc

Metric Size G

Metric Size R, Rc

Inch Size NPT

Inch Size R

Metric Size Uni

Inch Size Uni

# Inch Size One-touch Fittings

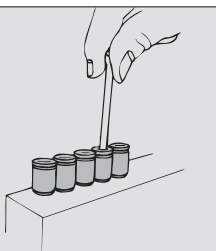
## Oval Type Variations

### Hexagon socket head male connector

KQ2S P.34



Internal hexagon socket allows tightening with a hexagon wrench in confined spaces.

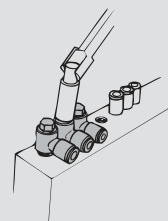


### Universal male elbow

KQ2V P.37



Hexagon head of the body allows tightening with a box wrench in confined spaces.

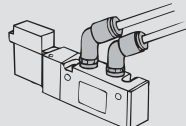


### 45° male elbow

KQ2K P.37



Use to pipe a female thread at a 45° angle. Its direction is in-between that of the male connector and male elbow.

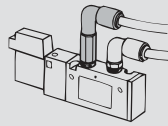


### Extended male elbow

KQ2W P.41



Basically, it is used together with a male elbow. Its extended height allows for multi-levelled piping and prevents interference among fittings.

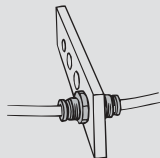


### Bulkhead union

KQ2E P.45



Use to connect tubing through a panel, etc.

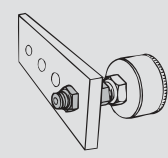


### Bulkhead connector

KQ2E P.45



Use to connect a male thread and tubing through a panel, etc.

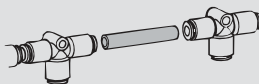


### Nipple

KQ2N P.47



Use to connect One-touch fittings.

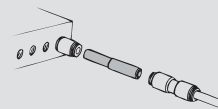


### Reducer nipple

KQ2N P.47



Use to connect One-touch fittings of different sizes.



### Male connector

KQ2H P.33



Use to pipe a female thread in the same direction. Most general model.

### Hexagon socket head universal male elbow

KQ2VS P.38



Hexagon socket on the top allows tightening with a hexagon wrench in confined spaces.

### Union elbow

KQ2L P.35



Use to connect tubing at right angles.

### Female connector

KQ2F P.34



Use to pipe a male thread of a pressure gauge, etc.

### Universal female elbow

KQ2VF P.38



Use to branch a male or female thread in the same direction and at a 90° angle. Multiple connections possible.

### Plug-in elbow

KQ2L P.36



Use to change the tube direction of One-touch fittings by 90°.

### Straight union

KQ2H P.33



Use to connect tubing in the same direction.

### Female elbow

KQ2LF P.36



Use to pipe a male thread at right angles.

### Reducer elbow

KQ2L P.36



Use to change the tube direction of One-touch fittings by 90° and connect tubing of reduced size.

### Different diameter straight

KQ2H P.33



Use to connect tubing of different sizes.

### Double universal male elbow

KQ2VD P.39



Use to two-branch a female thread at right angles. Two individual parts rotate 360°.

### Male branch tee

KQ2T P.42



Use to branch a female thread at both 90° angles.

### Male elbow

KQ2L P.35



Use to pipe a female thread at right angles. Most general model.

### Triple universal male elbow

KQ2VT P.40



Use to three-branch a female thread at right angles. Three individual parts rotate 360°.

### Union tee

KQ2T P.43



Use to branch tubing at both 90° angles.



### Different diameter tee

**KQ2T**

P.43

Use to connect tubing of reduced size for branching at both 90° angles.



### Plug-in reducer

**KQ2R**

P.45

Use to change size of One-touch fittings.



### Plug

**KQ2P**

P.46

Use to plug unused One-touch fittings.



### Cross

**KQ2TW**

P.43

Use to four-branch a line.



### Bulkhead male elbow

**KQ2LE**

P.46

Use to connect tubing through a panel, etc. and to change the tube direction by 90°.



### Colour cap

**KQ2C**

P.47

Mount onto the release button and use different colours for piping according to applications.



### Male run tee

**KQ2Y**

P.44

Use to branch a female thread in the same direction and at a 90° angle.



### Tube cap

**KQ2C**

P.46

Use to plug unused tubing.



The following models do not support oval type release buttons. Refer to the round type (from page 133).

#### Branch universal male elbow

**KQ2Z**

P.146



#### Double branch universal male elbow

**KQ2ZD**

P.146



#### Triple branch universal male elbow

**KQ2ZT**

P.147



#### Branch "Y"

**KQ2U**

P.151



#### Union "Y"

**KQ2U**

P.152



#### Different diameter union "Y"

**KQ2U**

P.152



#### Plug-in "Y"

**KQ2U**

P.152



#### Different diameter plug-in "Y"

**KQ2X**

P.153



⚠ Box wrenches and socket wrenches may interfere with oval type release buttons. Refer to page 217 for details.

Oval Type

Sealant/Gasket Seal

Inch Size M, R, Rc

Inch Size UNF, NPT

Inch Size M, R, Rc

Metric Size G

Metric Size R, Rc

Inch Size NPT

Inch Size R

Gasket Seal

Metric Size Uni

Inch Size Uni

# KQ2 Series

Oval Type Applicable Tubing: Inch Size, Connection Thread: UNF, NPT

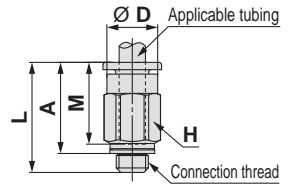
## Dimensions

### Male Connector: KQ2H (Gasket seal)

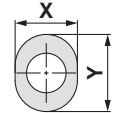


Applicable tubing O.D. [inch]	Connection thread UNF	Model	H (Width across flats)	Ø D	Release button dimensions		L	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
					X	Y				Nylon	Urethane		
Ø 1/8	10-32UNF	KQ2H01-32□1	7	6.9	6.7	9.5	17.4	13.9	13.3	3	2.5	2.3	2.7
Ø 5/32	10-32UNF	KQ2H03-32□1	8	7.9	7.7	10	17.6	14.1	13.3	3.3	3.3	2.3	3.3
Ø 3/16	10-32UNF	KQ2H05-32□1	8	9	8.4	11	17.7	14.2	13.3	3.4	3.4	2.3	3.4

□: A (Brass), N (Brass + Electroless nickel plating)



Release button dimensions



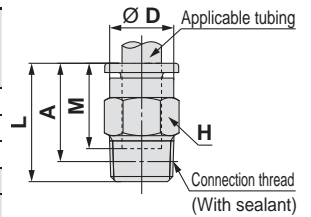
### Male Connector: KQ2H (Sealant)



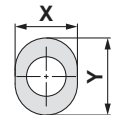
Applicable tubing O.D. [inch]	Connection thread NPT	Model	H (Width across flats)	Ø D	Release button dimensions		L	A*1	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
					X	Y				Nylon	Urethane		
Ø 1/8	1/16	KQ2H01-33□S1	9.5	6.9	6.7	9.5	19.3	15.2	13.3	3	2.5	2.5	6
	1/8	KQ2H01-34□S1	11.11	—	6.7	9.5	14	10.8	13.3	3	2.5	2.5	7.1
	1/4	KQ2H01-35□S1	14.29	—	6.7	9.5	16.7	12.3	13.3	3.4	2.9	2.5	16.2
Ø 5/32	1/16	KQ2H03-33□S1	9.5	7.9	7.7	10	20	15.9	13.3	4.8	3.4	3	6.1
	1/8	KQ2H03-34□S1	11.11	—	7.7	10	14	10.8	13.3	4.8	3.4	3	6.5
	1/4	KQ2H03-35□S1	14.29	—	7.7	10	16.7	12.3	13.3	4.8	3.4	3	15.6
Ø 3/16	1/8	KQ2H05-34□S1	11.11	8.55	8.4	11	17.4	14.2	13.3	7.8	6.5	3.5	7.4
	1/4	KQ2H05-35□S1	14.29	—	8.4	11	16.7	12.3	13.3	7.8	6.5	3.5	14.9

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Reference dimensions after installation of NPT thread



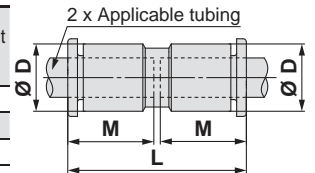
Release button dimensions



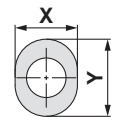
### Straight Union: KQ2H



Applicable tubing O.D. [inch]	Model	Ø D	Release button dimensions		L	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
			X	Y			Nylon	Urethane		
Ø 1/8	KQ2H01-00A1	7.1	6.7	9.5	27.6	13.3	3.4	2.9	2.5	1.4
Ø 5/32	KQ2H03-00A1	8.2	7.7	10	27.6	13.3	5.6	4	3	1.6
Ø 3/16	KQ2H05-00A1	9.1	8.4	11	27.6	13.3	7.8	6.5	3.5	1.9



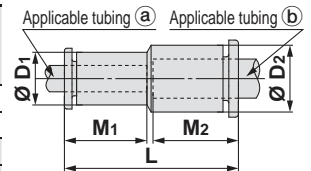
Release button dimensions



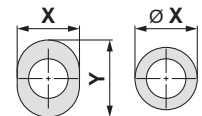
### Different Diameter Straight: KQ2H



Applicable tubing O.D. [inch]	Model	Ø D <sub>1</sub>	Release button dimensions (a)		Ø D <sub>2</sub>	Release button dimensions (b)		L	M <sub>1</sub>	M <sub>2</sub>	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]	
			X	Y		Ø X (X)	Y				Nylon	Urethane			
Ø 1/8	Ø 5/32	KQ2H01-03A1	7.1	6.7	9.5	8.2	7.7	10	27.6	13.3	13.3	3.4	2.9	2.5	1.5
	Ø 1/4	KQ2H01-07A1	7.1	6.7	9.5	11.1	10.9	—	27.6	13.3	13.3	3.4	2.9	2.5	2
Ø 5/32	Ø 3/16	KQ2H03-05A1	8.2	7.7	10	9.1	8.4	11	27.6	13.3	13.3	5.6	5.6	3	1.8
	Ø 1/4	KQ2H03-07A1	8.2	7.7	10	11.1	10.9	—	27.6	13.3	13.3	5.6	5.6	3	2.1
Ø 3/16	Ø 1/4	KQ2H05-07A1	9.1	8.4	11	11.1	10.9	—	27.6	13.3	13.3	7.8	6.5	3.5	2.2



Release button dimensions



Applicable tubing O.D.:  
Ø 1/8",  
Ø 5/32",  
Ø 3/16"

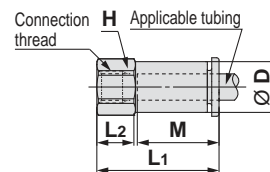
## Dimensions

### Female Connector: KQ2F

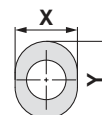


Applicable tubing O.D. [inch]	Connection thread UNF, NPT	Model	H (Width across flats)	Ø D	Release button dimensions		L1	L2	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
					X	Y				Nylon	Urethane		
Ø 1/8	10-32UNF	KQ2F01-32□1	7	6.9	6.7	9.5	19.7	5.7	13.3	3	2.5	2.5	3.4
	1/8	KQ2F01-34□1	14.29	6.9	6.7	9.5	25	9.5	13.3	3	2.5	2.5	13.4
Ø 5/32	10-32UNF	KQ2F01-35□1	17.46	6.9	6.7	9.5	29.8	13.3	13.3	3	2.5	2.5	24.4
	1/4	KQ2F03-32□1	8	7.9	7.7	10	19.5	5.7	13.3	4	4	3	4.5
Ø 5/32	1/8	KQ2F03-34□1	14.29	7.9	7.7	10	24.8	9.5	13.3	5.6	4	3	13.7
	1/4	KQ2F03-35□1	17.46	7.9	7.7	10	29.7	13.3	13.3	5.6	4	3	24.7

□: A (Brass), N (Brass + Electroless nickel plating)



Release button dimensions

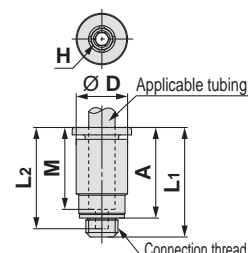


### Hexagon Socket Head Male Connector: KQ2S (Gasket seal)

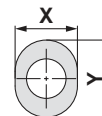


Applicable tubing O.D. [inch]	Connection thread UNF	Model	H (Width across flats)	Ø D	Release button dimensions		L1	L2	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
					X	Y					Nylon	Urethane		
Ø 1/8	10-32UNF	KQ2S01-32□1	2	7	6.7	9.5	17.5	16.3	14.5	13.3	2.5	2.5	2	2.6
Ø 5/32	10-32UNF	KQ2S03-32□1	2.5	8	7.7	10	18.6	17.8	15.6	13.3	4	4	2.5	3

□: A (Brass), N (Brass + Electroless nickel plating)



Release button dimensions



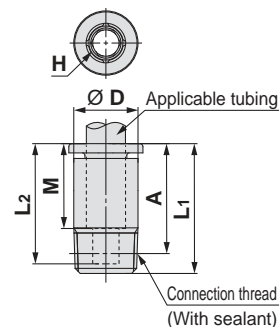
### Hexagon Socket Head Male Connector: KQ2S (Sealant)



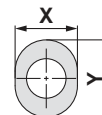
Applicable tubing O.D. [inch]	Connection thread NPT	Model	H (Width across flats)	Ø D	Release button dimensions		L1	L2	A*1	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
					X	Y					Nylon	Urethane		
Ø 5/32	1/16	KQ2S03-33□S1	2.78	8	7.7	10	19.8	18.8	15.7	13.3	4.1	3.6	2.8	4.5
	1/8	KQ2S03-34□S1	2.78	10.3	7.7	10	17.3	16.3	14.1	13.3	4.1	3.6	2.8	6
Ø 3/16	1/8	KQ2S05-34□S1	3.57	11	8.4	11	19.8	18.8	16.6	13.3	7.8	6.5	3.6	7.5

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Reference dimensions after installation of NPT thread



Release button dimensions



**Oval Type**

Metric Size M, R, Rc

Inch Size UNF, NPT

**Sealant/Gasket Seal**

Inch Size M, R, Rc

Metric Size G

**Face Seal**

Metric Size R, Rc

Inch Size NPT

Inch Size R

**Gasket Seal**

Metric Size Uni

Inch Size Uni

# KQ2 Series

Oval Type Applicable Tubing: Inch Size, Connection Thread: UNF, NPT

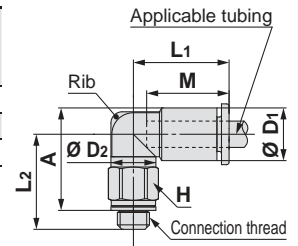
## Dimensions

### Male Elbow: KQ2L (Gasket seal)

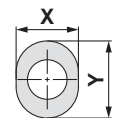


Applicable tubing O.D. [inch]	Connection thread UNF	Model	H (Width across flats)	Ø D1	Release button dimensions		Ø D2	L1	L2	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]	With a rib
					X	Y						Nylon	Urethane			
Ø 1/8	10-32UNF	KQ2L01-32□S1	7	7.1	6.7	9.5	7	15.3	14.2	14.3	13.3	2.6	2.2	2.5	3	●
Ø 5/32	10-32UNF	KQ2L03-32□S1	7	8.2	7.7	10	7	15.4	14.7	15.3	13.3	3.5	3.5	2.5	3.1	●
Ø 3/16	10-32UNF	KQ2L05-32□S1	7	9.1	8.4	11	7	14.5	15.8	16.9	13.3	3.5	3.5	2.5	3.2	●

□: A (Brass), N (Brass + Electroless nickel plating)



Release button dimensions



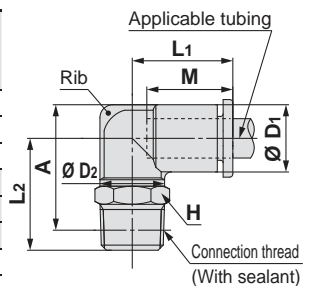
### Male Elbow: KQ2L (Sealant)



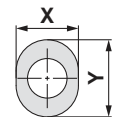
Applicable tubing O.D. [inch]	Connection thread NPT	Model	H (Width across flats)	Ø D1	Release button dimensions		Ø D2	L1	L2	A*1	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]	With a rib
					X	Y						Nylon	Urethane			
Ø 1/8	1/16	KQ2L01-33□S1	11.11	7.1	6.7	9.5	10	14.5	24.3	23.8	13.3	3	2.5	2.5	9.1	—
	1/8	KQ2L01-34□S1	11.11	7.1	6.7	9.5	10	14.5	16.7	17.1	13.3	3	2.5	2.5	5.5	—
	1/4	KQ2L01-35□S1	14.29	7.1	6.7	9.5	10	14.5	21.1	20.3	13.3	3	2.5	2.5	15	—
Ø 5/32	1/16	KQ2L03-33□S1	11.11	8.2	7.7	10	10	14.8	23.8	23.8	13.3	4.6	3.3	3	9.3	●
	1/8	KQ2L03-34□S1	11.11	8.2	7.7	10	10	14.8	16.2	17.1	13.3	4.6	3.3	3	5.6	●
	1/4	KQ2L03-35□S1	14.29	8.2	7.7	10	10	14.8	21.6	21.3	13.3	4.6	3.3	3	15.2	●
Ø 3/16	1/8	KQ2L05-34□S1	11.11	9.1	8.4	11	10	15	16.7	18.1	13.3	6.8	5.6	3.5	5.8	●
	1/4	KQ2L05-35□S1	14.29	9.1	8.4	11	10	15	22.1	22.3	13.3	6.8	5.6	3.5	15.4	—

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Reference dimensions after installation of NPT thread



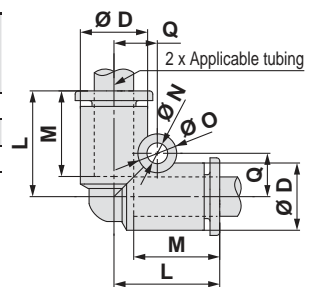
Release button dimensions



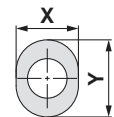
### Union Elbow: KQ2L



Applicable tubing O.D. [inch]	Model	Ø D	Release button dimensions		L	Q	M	Ø O	Ø N	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
			X	Y						Nylon	Urethane		
Ø 1/8	KQ2L01-00A1	7.1	6.7	9.5	14.9	5.4	13.3	6	3.2	3	2.5	2.5	1.6
Ø 5/32	KQ2L03-00A1	8.2	7.7	10	15.3	5.7	13.3	6	3.2	4.2	4.2	3	1.9
Ø 3/16	KQ2L05-00A1	9.1	8.4	11	15.7	6.2	13.3	6	3.2	6.8	5.6	3.5	2.2



Release button dimensions

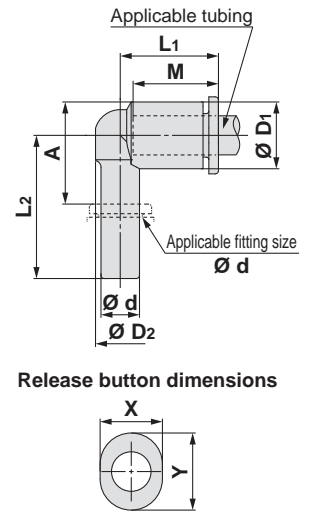


## Dimensions

### Plug-in Elbow: KQ2L



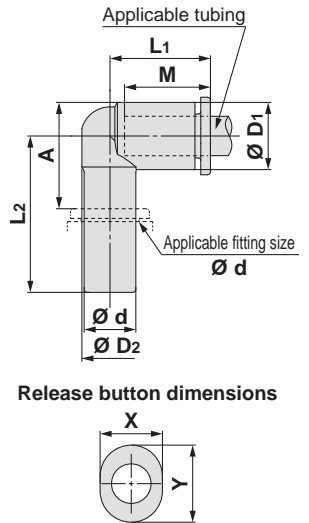
Applicable tubing O.D. [inch]	Applicable fitting size $\varnothing d$ [inch]	Model	$\varnothing D_1$	Release button dimensions		$\varnothing D_2$	L <sub>1</sub>	L <sub>2</sub>	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
				X	Y						Nylon	Urethane		
$\varnothing 1/8$	$\varnothing 1/8$	KQ2L01-99A1	7.1	6.7	9.5	6.4	14.5	20.9	11.1	13.3	3	2.5	2.2	0.9
$\varnothing 5/32$	$\varnothing 5/32$	KQ2L03-99A1	8.2	7.7	10	7.2	14.5	21.1	11.9	13.3	4.2	4.2	2.5	1.2
$\varnothing 3/16$	$\varnothing 3/16$	KQ2L05-99A1	9.1	8.4	11	8	15	22.2	13.4	13.3	6.8	5.6	3.5	1.4



### Reducer Elbow: KQ2L



Applicable tubing O.D. [inch]	Applicable fitting size $\varnothing d$ [inch]	Model	$\varnothing D_1$	Release button dimensions		$\varnothing D_2$	L <sub>1</sub>	L <sub>2</sub>	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
				X	Y						Nylon	Urethane		
$\varnothing 1/8$	$\varnothing 5/32$	KQ2L01-03A1	7.1	6.7	9.5	6.4	14.5	23.9	14.1	13.3	3	2.5	2.5	1.1
	$\varnothing 3/16$	KQ2L01-05A1	7.1	6.7	9.5	6.4	14.5	28.4	18.6	13.3	3	2.5	2.5	1.1
	$\varnothing 1/4$	KQ2L01-07A1	7.1	6.7	9.5	6.4	14.5	24.5	14.7	13.3	3	2.5	2.5	1.3
$\varnothing 5/32$	$\varnothing 3/16$	KQ2L03-05A1	8.2	7.7	10	7.2	14.8	29.1	19.9	13.3	4.2	4.2	3	1.3
	$\varnothing 1/4$	KQ2L03-07A1	8.2	7.7	10	7.2	14.8	21.1	11.9	13.3	4.2	4.2	3	1.4
$\varnothing 3/16$	$\varnothing 1/4$	KQ2L05-07A1	9.1	8.4	11	8	15	21.6	12.8	13.3	6.8	5.6	3.5	1.5
	$\varnothing 5/16$	KQ2L05-09A1	9.1	8.4	11	8	15	30	20.3	13.3	6.8	5.6	3.5	1.9

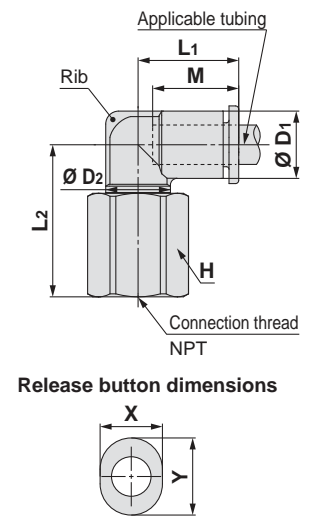


### Female Elbow: KQ2LF



Applicable tubing O.D. [inch]	Connection thread NPT	Model	H (Width across flats)	$\varnothing D_1$	Release button dimensions		$\varnothing D_2$	L <sub>1</sub>	L <sub>2</sub>	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]	With a rib
					X	Y					Nylon	Urethane			
$\varnothing 1/8$	1/8	KQ2LF01-34□1	14.29	7.1	6.7	9.5	10	14.5	22.8	13.3	3	2.5	2.5	18.2	—
	1/4	KQ2LF01-35□1	17.46	7.1	6.7	9.5	10	14.5	26.3	13.3	3	2.5	2.5	31.7	—
$\varnothing 5/32$	1/8	KQ2LF03-34□1	14.29	8.2	7.7	10	10	14.8	22.4	13.3	4.2	4.2	3	18.3	●
	1/4	KQ2LF03-35□1	17.46	8.2	7.7	10	10	14.8	26.9	13.3	4.2	4.2	3	31.9	●

□: A (Brass), N (Brass + Electroless nickel plating)



**Oval Type**

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Sealant/Gasket Seal

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Inch Size M, R, Rc

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Inch Size UNF, NPT

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Inch Size M, R, Rc

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Metric Size G

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Metric Size R, Rc

---

Face Seal

---

Inch Size NPT

---

Inch Size R

---

Inch Size Uni

---

Gasket Seal

---

Metric Size Uni

---

Inch Size Uni

# KQ2 Series

Oval Type Applicable Tubing: Inch Size, Connection Thread: UNF, NPT

## Dimensions

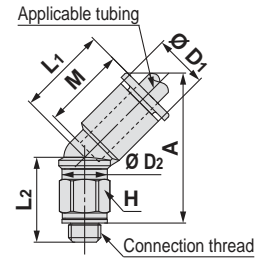
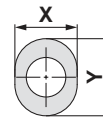
### 45° Male Elbow: KQ2K (Gasket seal)



Applicable tubing O.D. [inch]	Connection thread UNF	Model	H (Width across flats)	Ø D1	Release button dimensions		Ø D2	L1	L2	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
					X	Y						Nylon	Urethane		
Ø 1/8	10-32UNF	KQ2K01-32□1	7	7.1	6.7	9.5	8	14.4	13	21.9	13.3	3	2.5	2.5	2.8
Ø 5/32	10-32UNF	KQ2K03-32□1	7	8.2	7.7	10	8	14.4	13	22.2	13.3	3.4	3.4	2.5	3

□: A (Brass), N (Brass + Electroless nickel plating)

Release button dimensions



### 45° Male Elbow: KQ2K (Sealant)

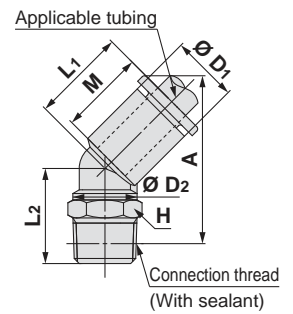
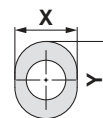


Applicable tubing O.D. [inch]	Connection thread NPT	Model	H (Width across flats)	Ø D1	Release button dimensions		Ø D2	L1	L2	A*1	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
					X	Y						Nylon	Urethane		
Ø 1/8	1/8	KQ2K01-34□S1	11.11	7.1	6.7	9.5	10	14.3	12.7	21.8	13.3	3	2.5	2.5	5.3
Ø 5/32	1/8	KQ2K03-34□S1	11.11	8.2	7.7	10	10	14.4	12.7	22.2	13.3	4.8	3.4	3	5.5
Ø 3/16	1/8	KQ2K05-34□S1	11.11	9.1	8.4	11	10	14.5	13.2	23.1	13.3	6.8	5.6	3.5	5.6

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Reference dimensions after installation of NPT thread

Release button dimensions



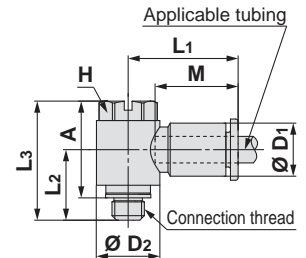
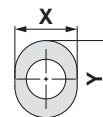
### Universal Male Elbow: KQ2V (Gasket seal)



Applicable tubing O.D. [inch]	Connection thread UNF	Model	H (Width across flats)	Ø D1	Release button dimensions		Ø D2	L1	L2	L3	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
					X	Y							Nylon	Urethane		
Ø 1/8	10-32UNF	KQ2V01-32□1	8	7.1	6.7	9.5	9.8	17.5	10.4	17.9	14.4	13.3	2.2	1.9	2.5	5.2
Ø 5/32	10-32UNF	KQ2V03-32□1	8	8.2	7.7	10	9.8	17.5	10.4	17.9	14.4	13.3	2.9	2.9	2.5	5.3

□: A (Brass), N (Brass + Electroless nickel plating)

Release button dimensions



### Universal Male Elbow: KQ2V (Sealant)

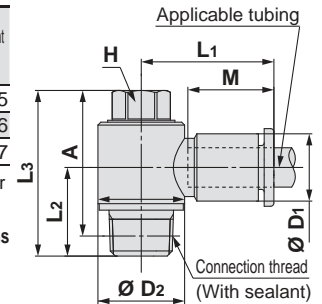
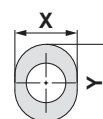


Applicable tubing O.D. [inch]	Connection thread NPT	Model	H (Width across flats)	Ø D1	Release button dimensions		Ø D2	L1	L2	L3	A*1	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
					X	Y							Nylon	Urethane		
Ø 1/8	1/8	KQ2V01-34□S1	8	7.1	6.7	9.5	13.4	19.3	13.7	25.6	22.4	13.3	2.2	1.9	2.5	13.5
Ø 5/32	1/8	KQ2V03-34□S1	8	8.2	7.7	10	13.4	19.3	13.7	25.6	22.4	13.3	2.9	2.9	3	13.6
Ø 3/16	1/8	KQ2V05-34□S1	8	9.1	8.4	11	13.4	19.6	13.7	25.6	22.4	13.3	4.5	3.7	3.5	13.7

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Reference dimensions after installation of NPT thread

Release button dimensions



## Dimensions

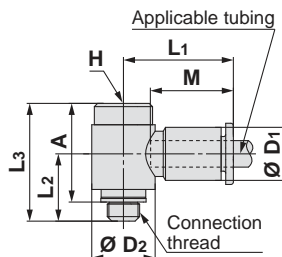
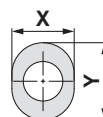
### Hexagon Socket Head Universal Male Elbow: KQ2VS (Gasket seal)



Applicable tubing O.D. [inch]	Connection thread UNF	Model	H (Width across flats)	Ø D1	Release button dimensions		Ø D2	L1	L2	L3	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
					X	Y							Nylon	Urethane		
Ø 1/8	10-32UNF	KQ2VS01-32□1	4	7.1	6.7	9.5	9.8	17.5	10.4	18.2	14.7	13.3	2.2	1.9	2.3	5.3
Ø 5/32	10-32UNF	KQ2VS03-32□1	4	8.2	7.7	10	9.8	17.5	10.4	18.2	14.7	13.3	2.9	2.9	2.3	5.4

□: A (Brass), N (Brass + Electroless nickel plating)

Release button dimensions



### Hexagon Socket Head Universal Male Elbow: KQ2VS (Sealant)

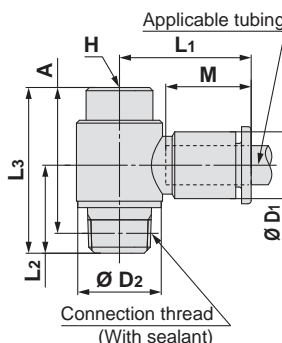
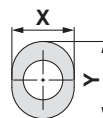


Applicable tubing O.D. [inch]	Connection thread NPT	Model	H (Width across flats)	Ø D1	Release button dimensions		Ø D2	L1	L2	L3	A*1	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
					X	Y							Nylon	Urethane		
Ø 1/8	1/8	KQ2VS01-34□S1	6.35	7.1	6.7	9.5	13.4	19.3	13.7	25.8	22.6	13.3	2.2	1.9	2.5	13.1
Ø 5/32	1/8	KQ2VS03-34□S1	6.35	8.2	7.7	10	13.4	19.3	13.7	25.8	22.6	13.3	2.9	2.9	3	13.2
Ø 3/16	1/8	KQ2VS05-34□S1	6.35	9.1	8.4	11	13.4	19.6	13.7	25.8	22.6	13.3	4.5	3.7	3.5	13.3

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Reference dimensions after installation of NPT thread

Release button dimensions



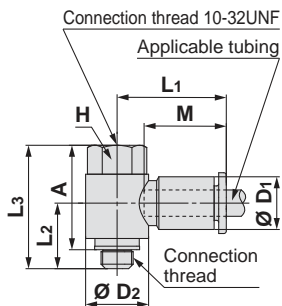
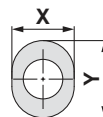
### Universal Female Elbow: KQ2VF (Gasket seal)



Applicable tubing O.D. [inch]	Connection thread UNF	Model	H (Width across flats)	Ø D1	Release button dimensions		Ø D2	L1	L2	L3	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
					X	Y							Nylon	Urethane		
Ø 1/8	10-32UNF	KQ2VF01-32□1	8	7.1	6.7	9.5	9.8	17.5	10.4	19.4	15.9	13.3	2.2	1.9	2.5	5.4
Ø 5/32	10-32UNF	KQ2VF03-32□1	8	8.2	7.7	10	9.8	17.5	10.4	19.4	15.9	13.3	2.9	2.9	2.5	5.5

□: A (Brass), N (Brass + Electroless nickel plating)

Release button dimensions



### Universal Female Elbow: KQ2VF (Sealant)

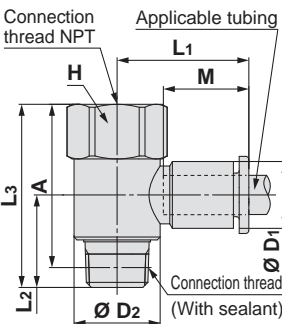
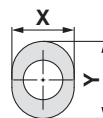


Applicable tubing O.D. [inch]	Connection thread NPT	Model	H (Width across flats)	Ø D1	Release button dimensions		Ø D2	L1	L2	L3	A*1	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
					X	Y							Nylon	Urethane		
Ø 1/8	1/8	KQ2VF01-34□S1	14.29	7.1	6.7	9.5	13.4	19.3	14.4	28.5	25.3	13.3	2.2	1.9	2.5	18
Ø 5/32	1/8	KQ2VF03-34□S1	14.29	8.2	7.7	10	13.4	19.3	14.4	28.5	25.3	13.3	2.9	2.9	3	18.1
Ø 3/16	1/8	KQ2VF05-34□S1	14.29	9.1	8.4	11	13.4	19.6	14.4	28.5	25.3	13.3	4.5	3.7	3.5	18.2

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Reference dimensions after installation of NPT thread

Release button dimensions



**Oval Type**

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**Sealant/Gasket Seal**

Metric Size M, R, Rc

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Inch Size UNF, NPT

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Inch Size M, R, Rc

---

Metric Size G

---

**Face Seal**

Metric Size R, Rc

---

Inch Size NPT

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Inch Size R

---

**Gasket Seal**

Metric Size Uni

---

Inch Size Uni

# KQ2 Series

Oval Type Applicable Tubing: Inch Size, Connection Thread: UNF, NPT

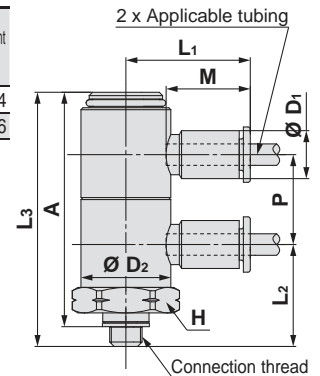
## Dimensions

### Double Universal Male Elbow: KQ2VD (Gasket seal)

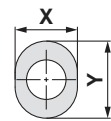


Applicable tubing O.D. [Inch]	Connection thread UNF	Model	H (Width across flats)	Ø D1	Release button dimensions		Ø D2	L1	L2	L3	A	M	P	Effective area (mm <sup>2</sup> )		Min. port size	Weight [g]
					X	Y								Nylon	Urethane		
Ø 1/8	10-32UNF	KQ2VD01-32□1	14.29	7.1	6.7	9.5	13.4	19.3	15.2	37.9	34.4	13.3	13.4	2.2	1.9	2.3	24.4
Ø 5/32	10-32UNF	KQ2VD03-32□1	14.29	8.2	7.7	10	13.4	19.3	15.2	37.9	34.4	13.3	13.4	2.5	2.5	2.3	24.6

□: A (Brass), N (Brass + Electroless nickel plating)



Release button dimensions



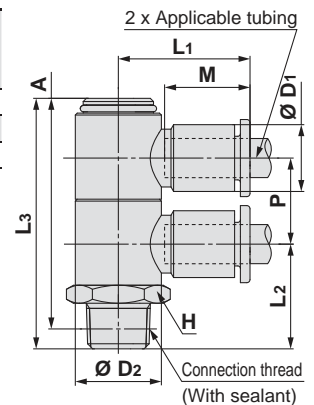
### Double Universal Male Elbow: KQ2VD (Sealant)



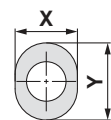
Applicable tubing O.D. [Inch]	Connection thread NPT	Model	H (Width across flats)	Ø D1	Release button dimensions		Ø D2	L1	L2	L3	A*1	M	P	Effective area (mm <sup>2</sup> )		Min. port size	Weight [g]
					X	Y								Nylon	Urethane		
Ø 1/8	1/8	KQ2VD01-34□S1	14.29	7.1	6.7	9.5	13.4	19.3	16.3	39	35.8	13.3	13.4	2.2	1.9	2.5	20
Ø 5/32	1/8	KQ2VD03-34□S1	14.29	8.2	7.7	10	13.4	19.3	16.3	39	35.8	13.3	13.4	2.9	2.9	3	20.2
Ø 3/16	1/8	KQ2VD05-34□S1	14.29	9.1	8.4	11	13.4	19.6	16.3	39	35.8	13.3	13.4	4.5	3.7	3.5	20.5

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Reference dimensions after installation of NPT thread



Release button dimensions





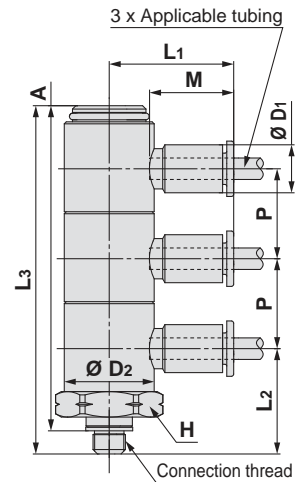
## Dimensions

### Triple Universal Male Elbow: KQ2VT (Gasket seal)

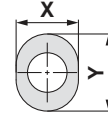


Applicable tubing O.D. [inch]	Connection thread UNF	Model	H (Width across flats)	Ø D1	Release button dimensions		Ø D2	L1	L2	L3	A	M	P	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
					X	Y								Nylon	Urethane		
Ø 1/8	10-32UNF	KQ2VT01-32□1	14.29	7.1	6.7	9.5	13.4	19.3	15.7	51.9	48.4	13.3	13.4	2.2	1.9	2.5	32.4
Ø 5/32	10-32UNF	KQ2VT03-32□1	14.29	8.2	7.7	10	13.4	19.3	15.7	51.9	48.4	13.3	13.4	2.9	2.9	2.5	32.7

□: A (Brass), N (Brass + Electroless nickel plating)



Release button dimensions



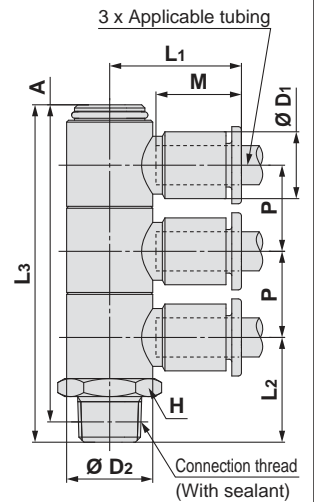
### Triple Universal Male Elbow: KQ2VT (Sealant)



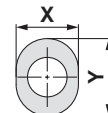
Applicable tubing O.D. [inch]	Connection thread NPT	Model	H (Width across flats)	Ø D1	Release button dimensions		Ø D2	L1	L2	L3	A*1	M	P	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
					X	Y								Nylon	Urethane		
Ø 1/8	1/8	KQ2VT01-34□S1	14.29	7.1	6.7	9.5	13.4	19.3	16.3	52.5	49.3	13.3	13.4	2.2	1.9	2.5	25.5
Ø 5/32	1/8	KQ2VT03-34□S1	14.29	8.2	7.7	10	13.4	19.3	16.3	52.5	49.3	13.3	13.4	2.9	2.9	3	25.8
Ø 3/16	1/8	KQ2VT05-34□S1	14.29	9.1	8.4	11	13.4	19.6	16.3	52.5	49.3	13.3	13.4	4.5	3.7	3.5	26.2

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Reference dimensions after installation of NPT thread



Release button dimensions



Oval Type

Metric Size M, R, Rc

Inch Size UNF, NPT

Inch Size M, R, Rc

Metric Size G

Metric Size R, Rc

Metric Size R, Rc

Inch Size NPT

Inch Size NPT

Inch Size R

Inch Size R

Metric Size Uni

Metric Size Uni

Inch Size Uni

Inch Size Uni

# KQ2 Series

Oval Type Applicable Tubing: Inch Size, Connection Thread: UNF, NPT

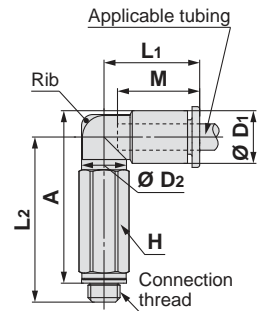
## Dimensions

### Extended Male Elbow: KQ2W (Gasket seal)

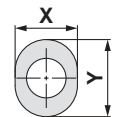


Applicable tubing O.D. [inch]	Connection thread UNF	Model	H (Width across flats)	Ø D1	Release button dimensions		Ø D2	L1	L2	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]	With a rib
					X	Y						Nylon	Urethane			
Ø 1/8	10-32UNF	KQ2W01-32□1	7	7.1	6.7	9.5	7	15.3	25.8	25.9	13.3	2.8	2.4	2.5	5.9	●
Ø 5/32	10-32UNF	KQ2W03-32□1	7	8.2	7.7	10	7	15.4	26.3	26.9	13.3	3	3	2.5	6	●

□: A (Brass), N (Brass + Electroless nickel plating)



Release button dimensions



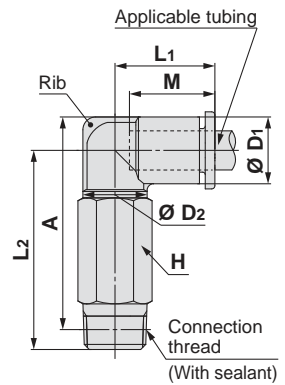
### Extended Male Elbow: KQ2W (Sealant)



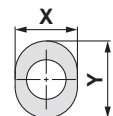
Applicable tubing O.D. [inch]	Connection thread NPT	Model	H (Width across flats)	Ø D1	Release button dimensions		Ø D2	L1	L2	A*1	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]	With a rib
					X	Y						Nylon	Urethane			
Ø 1/8	1/16	KQ2W01-33□S1	11.11	7.1	6.7	9.5	10	14.5	35.9	35.4	13.3	2.8	2.4	2.5	16.6	—
	1/8	KQ2W01-34□S1	11.11	7.1	6.7	9.5	10	14.5	30.3	30.7	13.3	2.8	2.4	2.5	13.9	—
	1/4	KQ2W01-35□S1	14.29	7.1	6.7	9.5	10	14.5	32.7	31.9	13.3	2.8	2.4	2.5	27.3	—
Ø 5/32	1/16	KQ2W03-33□S1	11.11	8.2	7.7	10	10	14.8	35.4	35.4	13.3	4	4	3	16.7	●
	1/8	KQ2W03-34□S1	11.11	8.2	7.7	10	10	14.8	29.9	30.8	13.3	4	4	3	14.1	●
	1/4	KQ2W03-35□S1	14.29	8.2	7.7	10	10	14.8	33.2	32.9	13.3	4	4	3	27.5	●
Ø 3/16	1/8	KQ2W05-34□S1	11.11	9.1	8.4	11	10	15	30.4	31.7	13.3	6.8	5.6	3.5	14.3	—
	1/4	KQ2W05-35□S1	14.29	9.1	8.4	11	10	15	33.7	33.9	13.3	6.8	5.6	3.5	27.7	—

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Reference dimensions after installation of NPT thread



Release button dimensions



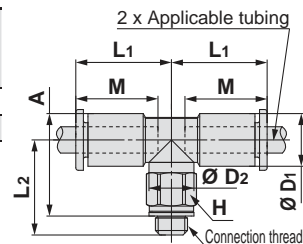
## Dimensions

### Male Branch Tee: KQ2T (Gasket seal)

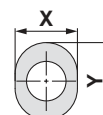


Applicable tubing O.D. [inch]	Connection thread UNF	Model	H (Width across flats)	Ø D1	Release button dimensions		Ø D2	L1	L2	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
					X	Y						Nylon	Urethane		
Ø 1/8	10-32UNF	KQ2T01-32□1	7	7.1	6.7	9.5	7	15.3	14.2	14.2	13.3	3.2	2.7	2.5	3.5
Ø 5/32	10-32UNF	KQ2T03-32□1	7	8.2	7.7	10	7	15.4	14.7	15.3	13.3	4.5	4.5	2.5	3.8

□: A (Brass), N (Brass + Electroless nickel plating)



Release button dimensions



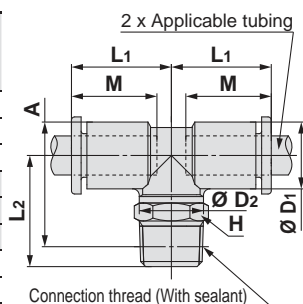
### Male Branch Tee: KQ2T (Sealant)



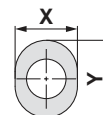
Applicable tubing O.D. [inch]	Connection thread NPT	Model	H (Width across flats)	Ø D1	Release button dimensions		Ø D2	L1	L2	A*1	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
					X	Y						Nylon	Urethane		
Ø 1/8	1/16	KQ2T01-33□S1	11.11	7.1	6.7	9.5	10	14.5	24.2	23.7	13.3	3.4	2.9	2.5	9.7
	1/8	KQ2T01-34□S1	11.11	7.1	6.7	9.5	10	14.5	16.6	17	13.3	3.4	2.9	2.5	6
	1/4	KQ2T01-35□S1	14.29	7.1	6.7	9.5	10	14.5	21	20.2	13.3	3.4	2.9	2.5	15.6
Ø 5/32	1/16	KQ2T03-33□S1	11.11	8.2	7.7	10	10	14.8	23.8	23.8	13.3	6	4.1	3	10
	1/8	KQ2T03-34□S1	11.11	8.2	7.7	10	10	14.8	16.2	17.1	13.3	6	4.1	3	6.3
	1/4	KQ2T03-35□S1	14.29	8.2	7.7	10	10	14.8	21.6	21.3	13.3	6	4.1	3	15.9
Ø 3/16	1/8	KQ2T05-34□S1	11.11	9.1	8.4	11	10	15	16.7	18	13.3	8.4	7	3.5	6.6
	1/4	KQ2T05-35□S1	14.29	9.1	8.4	11	10	15	22.1	22.2	13.3	8.4	7	3.5	16.2

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Reference dimensions after installation of NPT thread



Release button dimensions



**Oval Type**

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**Sealant/Gasket Seal**

---

**Face Seal**

---

**Gasket Seal**

Metric Size M, R, Rc

Inch Size M, R, Rc

Metric Size G

Metric Size R, Rc

Inch Size NPT

Inch Size R

Metric Size Uni

Inch Size Uni

# KQ2 Series

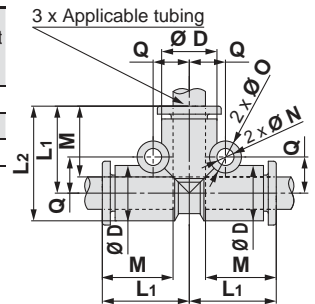
Oval Type | Applicable Tubing: Inch Size, Connection Thread: UNF, NPT

## Dimensions

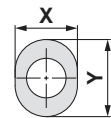
### Union Tee: KQ2T



Applicable tubing O.D. [inch]	Model	∅ D	Release button dimensions		L <sub>1</sub>	L <sub>2</sub>	M	Q	∅ O	∅ N	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
			X	Y							Nylon	Urethane		
∅ 1/8	KQ2T01-00A1	7.1	6.7	9.5	14.9	18.5	13.3	5.4	6	3.2	3.4	2.9	2.5	2.3
∅ 5/32	KQ2T03-00A1	8.2	7.7	10	15.3	19.4	13.3	5.7	6	3.2	6.4	4.4	3	2.8
∅ 3/16	KQ2T05-00A1	9.1	8.4	11	15.7	20.3	13.3	6.2	6	3.2	8.4	7	3.5	3.2



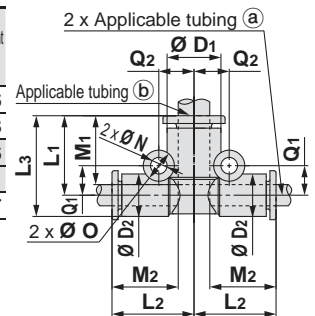
Release button dimensions



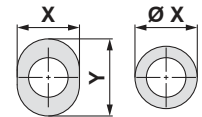
### Different Diameter Tee: KQ2T



Applicable tubing O.D. [inch]	Model	∅ D <sub>1</sub>	Release button dimensions (a)		Release button dimensions (b)		L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	M <sub>1</sub>	M <sub>2</sub>	Q <sub>1</sub>	Q <sub>2</sub>	∅ O	∅ N	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]	
			X	Y	∅ X	Y										Nylon	Urethane			
∅ 5/32	KQ2T01-03A1	8.2	6.7	9.5	7.1	7.7	10	14.9	15.3	18.5	13.3	13.3	5.4	5.8	6	3.2	3.8	3.5	3	2.6
∅ 1/4	KQ2T01-07A1	11.1	6.7	9.5	7.1	10.9	—	14.9	16.5	18.5	13.3	13.3	5.3	7.2	6	3.2	3.8	3.5	3.2	2.8
∅ 5/32	KQ2T03-05A1	9.1	7.7	10	8.2	8.4	11	15.3	15.7	19.4	13.3	13.3	5.7	6.2	6	3.2	7.1	6.6	3.5	2.6
∅ 1/4	KQ2T03-07A1	11.1	7.7	10	8.2	10.9	—	15.3	16.5	19.4	13.3	13.3	5.7	7.2	6	3.2	7.1	6.6	4.1	3
∅ 3/16	KQ2T05-07A1	11.1	8.4	11	9.1	10.9	—	15.7	16.5	20.3	13.3	13.3	6.2	7.2	6	3.2	8.4	7	4.6	3.7



Release button dimensions

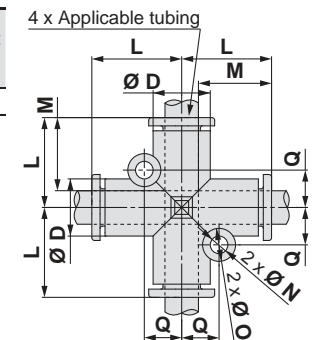


Applicable tubing O.D.:  
∅ 1/8",  
∅ 5/32",  
∅ 3/16"

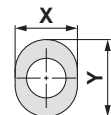
### Cross: KQ2TW



Applicable tubing O.D. [inch]	Model	∅ D	Release button dimensions		L	Q	M	∅ O	∅ N	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
			X	Y						Nylon	Urethane		
∅ 5/32	KQ2TW03-00A1	8.2	7.7	10	15.3	5.7	13.3	6	3.2	6.4	4.4	3	3.5



Release button dimensions



# Inch Size One-touch Fittings **KQ2 Series**

**Oval Type** Applicable Tubing: Inch Size, Connection Thread: UNF, NPT

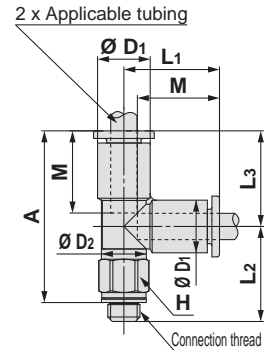
## Dimensions

### Male Run Tee: KQ2Y (Gasket seal)

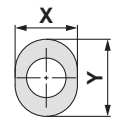


Applicable tubing O.D. [Inch]	Connection thread UNF	Model	H (Width across flats)	Ø D1	Release button dimensions		Ø D2	L1	L2	L3	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
					X	Y							Nylon	Urethane		
Ø 1/8	10-32UNF	KQ2Y01-32□1	7	7.1	6.7	9.5	7	15.3	14.2	15.3	26	13.3	3.2	2.7	2.5	3.5
Ø 5/32	10-32UNF	KQ2Y03-32□1	7	8.2	7.7	10	7	15.4	14.7	15.4	26.6	13.3	4.5	4.5	2.5	3.8

□: A (Brass), N (Brass + Electroless nickel plating)



Release button dimensions



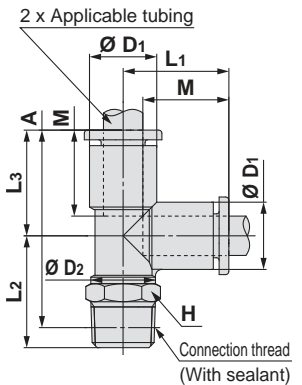
### Male Run Tee: KQ2Y (Sealant)



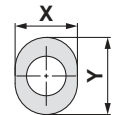
Applicable tubing O.D. [Inch]	Connection thread NPT	Model	H (Width across flats)	Ø D1	Release button dimensions		Ø D2	L1	L2	L3	A*1	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
					X	Y							Nylon	Urethane		
Ø 1/8	1/16	KQ2Y01-33□S1	11.11	7.1	6.7	9.5	10	14.9	24.2	14.9	35.1	13.3	3.4	2.9	2.5	9.8
	1/8	KQ2Y01-34□S1	11.11	7.1	6.7	9.5	10	14.9	16.6	14.9	28.4	13.3	3.4	2.9	2.5	6.1
	1/4	KQ2Y01-35□S1	14.29	7.1	6.7	9.5	10	14.9	21	14.9	31.6	13.3	3.4	2.9	2.5	15.6
Ø 5/32	1/16	KQ2Y03-33□S1	11.11	8.2	7.7	10	10	15.3	23.8	15.3	35	13.3	6.4	4.4	3	10.1
	1/8	KQ2Y03-34□S1	11.11	8.2	7.7	10	10	15.3	16.2	15.3	28.3	13.3	6.4	4.4	3	6.4
Ø 3/16	1/8	KQ2Y05-34□S1	11.11	9.1	8.4	11	10	15.7	16.7	15.7	29.2	13.3	8.4	7	3.5	6.7
	1/4	KQ2Y05-35□S1	14.29	9.1	8.4	11	10	15.7	22.1	15.7	33.4	13.3	8.4	7	3.5	16.3

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Reference dimensions after installation of NPT thread



Release button dimensions



Oval Type

Metric Size M, R, Rc

Sealant/Gasket Seal

Inch Size UNF, NPT

Inch Size M, R, Rc

Metric Size G

Metric Size R, Rc

Metric Size R, Rc

Face Seal

Inch Size NPT

Inch Size R

Inch Size Uni

Metric Size Uni

Inch Size Uni

Metric Size Uni

# KQ2 Series

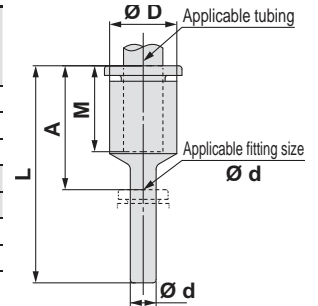
Oval Type Applicable Tubing: Inch Size, Connection Thread: UNF, NPT

## Dimensions

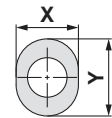
### Plug-in Reducer: KQ2R



Applicable tubing O.D. [inch]	Applicable fitting size $\varnothing d$ [inch]	Model	$\varnothing D$	Release button dimensions		L	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
				X	Y				Nylon	Urethane		
$\varnothing 1/8$	$\varnothing 5/32$	KQ2R01-03A1	7.1	6.7	9.5	28.6	15.3	13.3	3.4	2.9	2.5	0.8
	$\varnothing 3/16$	KQ2R01-05A1	7.1	6.7	9.5	28.7	15.4	13.3	3.4	2.9	2.5	0.8
	$\varnothing 1/4$	KQ2R01-07A1	7.1	6.7	9.5	28.4	15.1	13.3	3.4	2.9	2.5	1
$\varnothing 5/32$	$\varnothing 3/16$	KQ2R03-05A1	8.2	7.7	10	28.7	15.4	13.3	5.6	4	3	1
	$\varnothing 1/4$	KQ2R03-07A1	8.2	7.7	10	31.8	18.5	13.3	5.6	4	3	1.2
$\varnothing 3/16$	$\varnothing 1/4$	KQ2R05-07A1	9.1	8.4	11	31.4	18.1	13.3	7.8	6.5	3.5	1.3
	$\varnothing 5/16$	KQ2R05-09A1	9.1	8.4	11	33.4	19.2	13.3	7.8	6.5	3.5	1.5



Release button dimensions

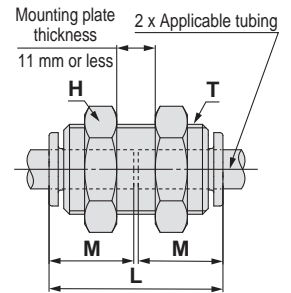


### Bulkhead Union: KQ2E (Interchangeable with KQ)

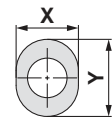


Applicable tubing O.D. [inch]	Model	T (UNF)	H (Width across flats)	Release button dimensions		L	Mounting hole	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
				X	Y				Nylon	Urethane		
$\varnothing 1/8$	KQ2E01-00□1	1/2-20UNF	17.46	6.7	9.5	27.8	13.5	13.3	3.4	2.9	2.5	26.9
$\varnothing 5/32$	KQ2E03-00□1	1/2-20UNF	17.46	7.7	10	27.8	13.5	13.3	5.6	4	3	25.7
$\varnothing 3/16$	KQ2E05-00□1	9/16-18UNF	17.46	8.4	11	29.8	15	13.3	7.8	6.5	3.5	40.3

□: A (Brass), N (Brass + Electroless nickel plating)



Release button dimensions

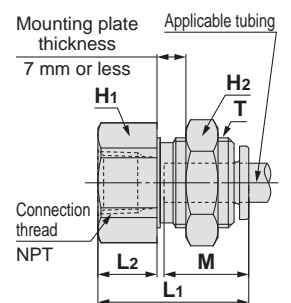


### Bulkhead Connector: KQ2E

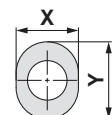


Applicable tubing O.D. [inch]	Connection thread NPT	Model	T (UNF)	H1 (Width across flats)	H2 (Width across flats)	L1	L2	Release button dimensions		Mounting hole	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
								X	Y			Nylon	Urethane		
$\varnothing 1/8$	1/4	KQ2E01-35□1	1/2-20UNF	17.46	17.46	28.7	13.3	6.7	9.5	13.5	13.3	3.4	2.9	2.5	33.3
$\varnothing 5/32$	1/4	KQ2E03-35□1	1/2-20UNF	17.46	17.46	29	13.6	7.7	10	13.5	13.3	5.6	4	3	33.3
$\varnothing 3/16$	1/8	KQ2E05-34□1	9/16-18UNF	17.46	17.46	25.6	9.2	8.4	11	15	13.3	7.8	6.5	3.5	36.6

□: A (Brass), N (Brass + Electroless nickel plating)



Release button dimensions



# Inch Size One-touch Fittings **KQ2 Series**

**Oval Type** Applicable Tubing: Inch Size, Connection Thread: UNF, NPT

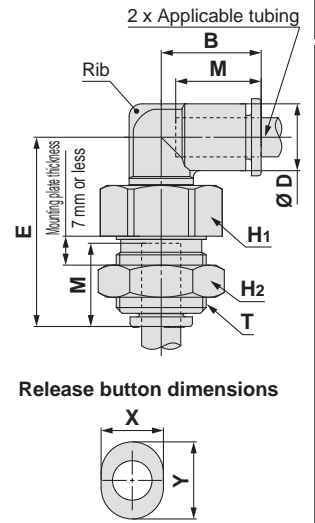
## Dimensions

### Bulkhead Male Elbow: KQ2LE



Applicable tubing O.D. [inch]	Model	T (UNF)	H1 (Width across flats)	H2 (Width across flats)	B	E	Ø D	Release button dimensions		Mounting hole	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]	With a rib
								X	Y			Nylon	Urethane			
Ø 1/8	KQ2LE01-00□1	1/2-20UNF	17.46	17.46	14.5	28.9	7.1	6.7	9.5	13.5	13.3	3	2.5	2.5	27.5	—
Ø 5/32	KQ2LE03-00□1	1/2-20UNF	17.46	17.46	14.8	28.5	8.2	7.7	10	13.5	13.3	4.2	4.2	3	27.1	●
Ø 3/16	KQ2LE05-00□1	9/16-18UNF	17.46	17.46	15	29.7	9.1	8.4	11	15	13.3	6.8	5.6	3.5	34.1	—

□: A (Brass), N (Brass + Electroless nickel plating)

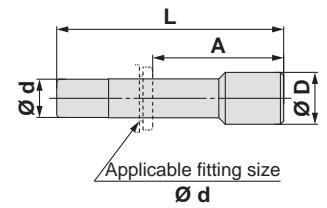


### Plug: KQ2P



Applicable fitting size Ø d [inch]	Model	Ø D*1	L	A	Weight [g]
Ø 1/8	KQ2P-01	5	31.5	18.2	1
Ø 5/32	KQ2P-03	6	32	18.7	1
Ø 3/16	KQ2P-05	6.8	34	20.7	1
Ø 1/4	KQ2P-07	8.5	35	21.7	1
Ø 5/16	KQ2P-09	10	39	24.8	2
Ø 3/8	KQ2P-11	11.5	43	27.4	3.5
Ø 1/2	KQ2P-13	15	45.5	28.5	5

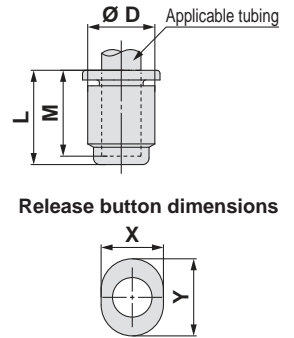
\*1 Ø D is maximum diameter.



### Tube Cap: KQ2C



Applicable tubing O.D. [inch]	Model	Ø D	Release button dimensions		L	M	Weight [g]
			X	Y			
Ø 5/32	KQ2C03-00A1	8.2	7.7	10	14.5	13.3	0.8



Oval Type

Metric Size M, R, Rc

Sealant/Gasket Seal  
Inch Size UNF, NPT

Inch Size M, R, Rc

Metric Size G

Metric Size R, Rc

Face Seal

Inch Size NPT

Inch Size R

Gasket Seal  
Metric Size Uni

Inch Size Uni

# KQ2 Series

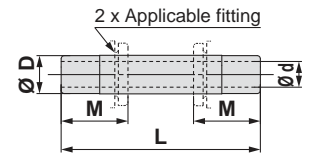
Oval Type Applicable Tubing: Inch Size, Connection Thread: UNF, NPT

## Dimensions

### Nipple: KQ2N



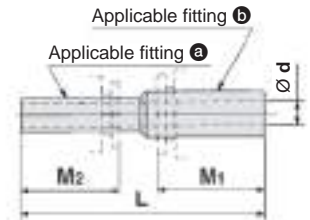
Applicable fitting Ø D	Model	L	M	Ø d Min. port size	Weight [g]
Ø 1/8	<b>KQ2N01-99</b>	36	13.3	2.1	0.2
Ø 3/16	<b>KQ2N05-99</b>	38	13.3	3.4	0.4
Ø 1/4	<b>KQ2N07-99</b>	39	13.3	4.6	1
Ø 3/8	<b>KQ2N11-99</b>	49	15.6	7	2
Ø 1/2	<b>KQ2N13-99</b>	51	17	9.5	3.5



### Reducer Nipple: KQ2N



Applicable fitting		Model	L	M <sub>1</sub>	M <sub>2</sub>	Ø d Min. port size	Weight [g]
a	b						
Ø 1/8	Ø 5/32	<b>KQ2N01-03</b>	36.5	13.3	13.3	2.1	0.2
	Ø 3/16	<b>KQ2N01-05</b>	37	13.3	13.3	2.1	0.4
Ø 5/32	Ø 3/16	<b>KQ2N03-05</b>	37.5	13.3	13.3	2.5	0.4
	Ø 1/4	<b>KQ2N03-07</b>	38	13.3	13.3	2.5	0.6
Ø 3/16	Ø 1/4	<b>KQ2N05-07</b>	38.5	13.3	13.3	3.4	0.6
	Ø 5/16	<b>KQ2N05-09</b>	41	13.3	13.3	3.4	1
Ø 1/4	Ø 5/16	<b>KQ2N07-09</b>	41.5	13.3	13.3	4.6	1
	Ø 3/8	<b>KQ2N07-11</b>	45	15.6	13.3	4.6	1
Ø 5/16	Ø 3/8	<b>KQ2N09-11</b>	46.5	15.6	14.2	6	1.8
	Ø 1/2	<b>KQ2N09-13</b>	47.5	17	14.2	6	2.6
Ø 3/8	Ø 1/2	<b>KQ2N11-13</b>	50	17	15.6	7	3.2

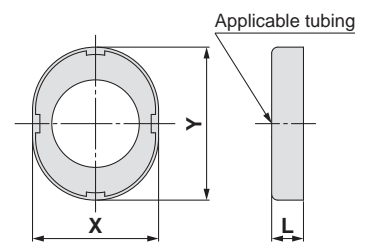


### Colour Cap: KQ2C



Applicable tubing O.D. [inch]	Model	X	Y	L	Weight [g]
Ø 1/8	<b>KQ2C-01□B</b>	7.3	10	2.6	0.1
Ø 3/16	<b>KQ2C-05□B</b>	8.95	11.5	2.6	0.1

□: B (Black), R (Red), YR (Orange), BR (Brown), Y (Yellow), G (Green), CB (Sky blue), GR (Grey), W (White), BU (Blue)





# KQ2 Series

# Made to Order/Clean Series/Spare Parts

Please contact SMC for detailed dimensions, specifications, and lead times.

## 1 Made to Order

Symbol	Specifications
<b>X12</b>	Lubricant: White vaseline Release button colour: White
<b>X35</b> *1	Body colour: Black Release button colour: Orange
<b>X41</b>	With fixed orifice*2

\*1 The following models are not available as made-to-order: Hexagon socket head male connector/KQ2S, Bulkhead union/KQ2E, Bulkhead connector/KQ2E, Nipple/KQ2N, Reducer nipple/KQ2N, Male connector/KQ2H, Female connector/KQ2F, Colour cap/KQ2C, Plug/KQ2P

\*2 Please contact SMC for availability.

The following made-to-order products will be provided based on previous models (KQ2 series). Please contact SMC separately.

Symbol	Specifications
<b>X17</b>	Grease-free Rubber material: NBR (With fluorine coating) Release button colour: Light blue
<b>X29</b>	Grease-free Rubber material: NBR (With fluorine coating) Release button colour: Light blue Copper-free (With electroless nickel plating)
<b>X34</b>	Rubber material: FKM
<b>X39</b>	Grease-free Rubber material: NBR (With fluorine coating) Release button colour: Light blue Clean (Copper-free, air blow, double packaging, resin body: white)
<b>X94</b>	Grease-free Rubber material: FKM (With fluorine coating) Release button colour: Light blue

## 3 Spare Parts

Description	Part no.	Applicable thread
Gasket	<b>M-5G2</b>	10-32UNF

### Brass

Description	Part no.	Applicable model
Pipe nut	<b>KQ01-P01A</b>	KQ2E01-00A1, KQ2E03-00A1, KQ2E01-35A1
		KQ2E03-35A1, KQ2LE01-00A1, KQ2LE03-00A1
Pipe nut	<b>KQ05-P01A</b>	KQ2E05-00A1, KQ2E05-34A1
		KQ2LE05-00A1

### Brass + Electroless nickel plating

Description	Part no.	Applicable model
Pipe nut	<b>KQ01-P01N</b>	KQ2E01-00N1, KQ2E03-00N1, KQ2E01-35N1
		KQ2E03-35N1, KQ2LE01-00N1, KQ2LE03-00N1
Pipe nut	<b>KQ05-P01N</b>	KQ2E05-00N1, KQ2E05-34N1
		KQ2LE05-00N1

## 2 Clean Series

Please consult with SMC separately for applicable models.

Symbol	Specifications
<b>10-</b>	Brass parts: With electroless nickel plating Lubricant: Fluorine grease Air blow in a clean room Double packaging Resin body, Release button colour: White

Example) **10-KQ2H05-35NS1** (With thread)  
**10-KQ2H05-00A1** (Without thread)

Oval Type



Metric Size M, R, Rc

Inch Size UNF, NPT

Inch Size M, R, Rc

Metric Size G

Metric Size R, Rc

Inch Size NPT

Inch Size R

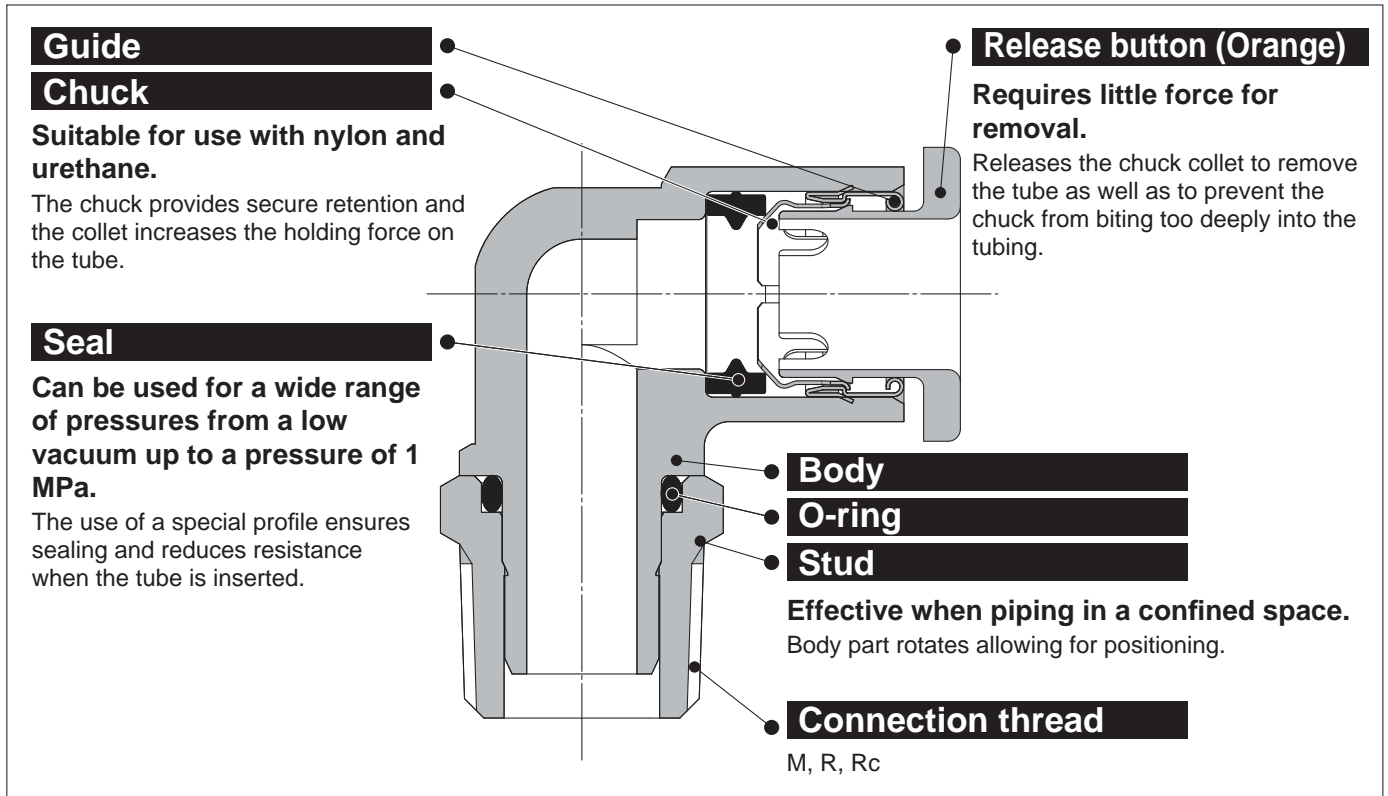
Metric Size Uni

Inch Size Uni

# Oval Type Inch Size One-touch Fittings

Applicable Tubing: Inch Size, Connection Thread: M, R, Rc

## KQ2 Series



**One-touch IN/OUT connection.**  
**Possible to use in vacuum to -100 kPa.**



### Applicable Tubing

Tubing material	FEP, PFA, Nylon, Soft nylon, Polyurethane
Tubing O.D.	Ø 1/8", Ø 3/16"

### Specifications

<b>Fluid</b>		Air, Water* <sup>1</sup>
<b>Operating pressure range*<sup>2</sup></b>		-100 kPa to 1 MPa
<b>Proof pressure (at 23 °C)</b>		3 MPa
<b>Ambient and fluid temperature</b>		-5 to 60 °C, Water: 0 to 40 °C (No freezing)
<b>Thread</b>	<b>Mounting section</b>	JIS B0203 (Taper thread for piping) JIS B0205 (Metric coarse thread)
	<b>Nut section</b>	JIS B0205 (Metric fine thread)
<b>Seal on the threads</b>		With sealant

\*<sup>1</sup> The surge pressure must be under the maximum operating pressure.

\*<sup>2</sup> Do not use the fittings with a leak tester or for vacuum retention because they are not guaranteed for zero leakage.

### Principal Parts Material

Body	C3604, PBT
Stud	C3604 (Thread portion)
Chuck	Stainless steel 304
Guide	Stainless steel 304
Release button	POM
Seal, O-ring	NBR
Gasket	Stainless steel 304, NBR



**Made to Order**  
(Refer to page 55 for details.)

## How to Order

### Threaded Type

**KQ2 H 05 - 01 A S 1**

One-touch Fittings •

Model •

Symbol	Model
<b>H</b>	Male connector
<b>L</b>	Male elbow
<b>T</b>	Male branch tee
<b>W</b>	Extended male elbow
<b>Y</b>	Male run tee
<b>E</b>	Bulkhead union
	Bulkhead connector

Applicable tubing O.D. •

Symbol	Size
<b>01</b>	∅ 1/8"
<b>05</b>	∅ 3/16"

Oval type release button

• Male thread seal method

Symbol	Seal method
—	None
<b>S</b>	With thread sealant

• Thread material/Surface treatment

Symbol	Thread material/Surface treatment
<b>A</b>	Brass
<b>N</b>	Brass + Electroless nickel plating
Bulkhead union	<b>M</b> □ Only for "Bulkhead union"

\* □: A, N

• Port size

Symbol	Size
<b>M5</b>	M5 x 0.8
<b>01</b>	1/8
<b>02</b>	1/4
<b>00</b> *1	Same diameter tubing

\*1 Only for "Bulkhead union".

### Spare Parts

Use the part number below to order the gasket for M5 thread.  
Gasket for M5 thread: M-5G2

Oval Type

Metric Size M, R, Rc

Inch Size UNF, NPT

Inch Size M, R, Rc

Metric Size G

Metric Size R, Rc

Inch Size NPT

Inch Size R

Metric Size Uni

Inch Size Uni

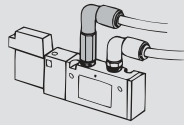
# Inch Size One-touch Fittings

## Oval Type Variations

**Extended male elbow**  
KQ2W P.53



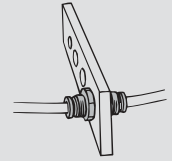
Basically, it is used together with a male elbow. Its extended height allows for multi-levelled piping and prevents interference among fittings.



**Bulkhead union**  
KQ2E P.54



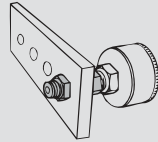
Use to connect tubing through a panel, etc.



**Bulkhead connector**  
KQ2E P.54



Use to connect a male thread and tubing through a panel, etc.



**Male connector**  
KQ2H P.52



Use to pipe a female thread in the same direction. Most general model.

**Male branch tee**  
KQ2T P.53



Use to branch a female thread at both 90° angles.

**Male elbow**  
KQ2L P.52



Use to pipe a female thread at right angles. Most general model.

**Male run tee**  
KQ2Y P.53



Use to branch a female thread in the same direction and at a 90° angle.

This model does not support oval type release buttons. Refer to the round type (from page 157).

**Branch "Y"**  
KQ2U P.162



⚠ Box wrenches and socket wrenches may interfere with oval type release buttons. Refer to page 217 for details.

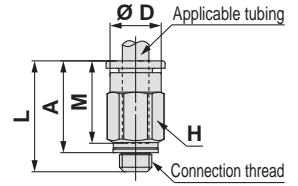
## Dimensions

### Male Connector: KQ2H (Gasket seal)

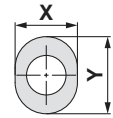


Applicable tubing O.D. [inch]	Connection thread M	Model	H (Width across flats)	Ø D	Release button dimensions		L	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
					X	Y				Nylon	Urethane		
Ø 1/8	M5 x 0.8	KQ2H01-M5□1	7	6.7	6.7	9.5	17.3	14.3	13.3	3.0	2.5	2.5	2.7
Ø 3/16	M5 x 0.8	KQ2H05-M5□1	10	8.3	8.4	11	17.6	14.6	13.3	4.0	4.0	2.5	4.6

□: A (Brass), N (Brass + Electroless nickel plating)



Release button dimensions



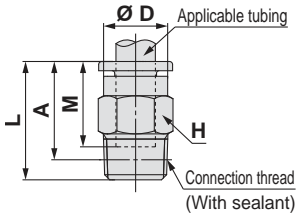
### Male Connector: KQ2H (Sealant)



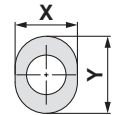
Applicable tubing O.D. [inch]	Connection thread R	Model	H (Width across flats)	Ø D	Release button dimensions		L	A*1	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
					X	Y				Nylon	Urethane		
Ø 1/8	1/8	KQ2H01-01□S1	10	6.7	6.7	9.5	14	10.9	13.3	3.4	2.9	2.5	6
	1/4	KQ2H01-02□S1	14	6.7	6.7	9.5	16.7	12	13.3	3.4	2.9	2.5	15.3
Ø 3/16	1/8	KQ2H05-01□S1	10	8.3	8.4	11	17.9	14.8	13.3	7.8	6.5	3.5	6.4
	1/4	KQ2H05-02□S1	14	8.3	8.4	11	16.7	12	13.3	7.8	6.5	3.5	13.9

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Reference dimensions after installation of R thread



Release button dimensions

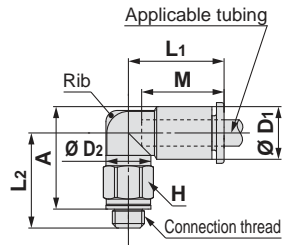


### Male Elbow: KQ2L (Gasket seal)

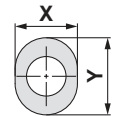


Applicable tubing O.D. [inch]	Connection thread M	Model	H (Width across flats)	Ø D1	Release button dimensions		Ø D2	L1	L2	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]	With a rib
					X	Y						Nylon	Urethane			
Ø 1/8	M5 x 0.8	KQ2L01-M5□1	7	7.1	6.7	9.5	7	15.3	14.3	14.9	13.3	2.6	2.2	2.5	3.1	●

□: A (Brass), N (Brass + Electroless nickel plating)



Release button dimensions



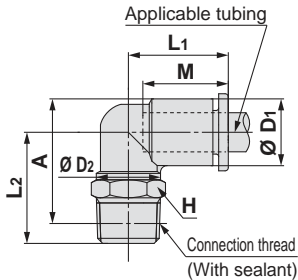
### Male Elbow: KQ2L (Sealant)



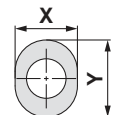
Applicable tubing O.D. [inch]	Connection thread R	Model	H (Width across flats)	Ø D1	Release button dimensions		Ø D2	L1	L2	A*1	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
					X	Y						Nylon	Urethane		
Ø 3/16	1/8	KQ2L05-01□S1	10	9.1	8.4	11	10	15	16.7	18.2	13.3	6.8	5.6	3.5	5
	1/4	KQ2L05-02□S1	14	9.1	8.4	11	10	15	22.2	22.1	13.3	6.8	5.6	3.5	14.5

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Reference dimensions after installation of R thread



Release button dimensions



Oval Type

Metric Size M, R, Rc

Inch Size UNF, NPT

Inch Size M, R, Rc

Metric Size G

Metric Size R, Rc

Inch Size NPT

Inch Size R

Metric Size Uni

Inch Size Uni

# KQ2 Series

Oval Type Applicable Tubing: Inch Size, Connection Thread: M, R, Rc

## Dimensions

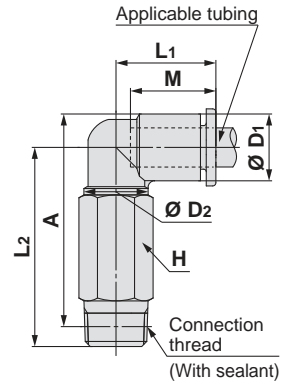
### Extended Male Elbow: KQ2W (Sealant)



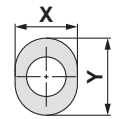
Applicable tubing O.D. [inch]	Connection thread R	Model	H (Width across flats)	Ø D1	Release button dimensions		Ø D2	L1	L2	A*1	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
					X	Y						Nylon	Urethane		
Ø 3/16	1/8	KQ2W05-01□S1	10	9.1	8.4	11	10	15	30.4	31.8	13.3	6.8	5.6	3.5	11.2
	1/4	KQ2W05-02□S1	14	9.1	8.4	11	10	15	33.8	33.7	13.3	6.8	5.6	3.5	27.7

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Reference dimensions after installation of R thread



Release button dimensions



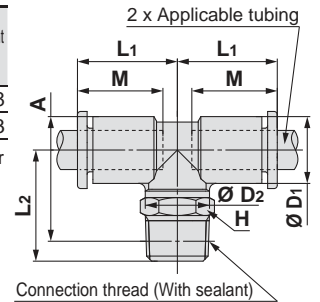
### Male Branch Tee: KQ2T (Sealant)



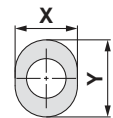
Applicable tubing O.D. [inch]	Connection thread R	Model	H (Width across flats)	Ø D1	Release button dimensions		Ø D2	L1	L2	A*1	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
					X	Y						Nylon	Urethane		
Ø 3/16	1/8	KQ2T05-01□S1	10	9.1	8.4	11	10	15	16.7	18.1	13.3	8.4	7	3.5	5.8
	1/4	KQ2T05-02□S1	14	9.1	8.4	11	10	15	22.2	22	13.3	8.4	7	3.5	15.3

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Reference dimensions after installation of R thread



Release button dimensions



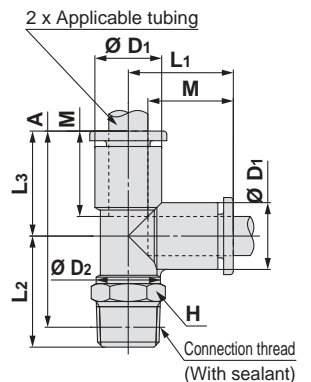
### Male Run Tee: KQ2Y (Sealant)



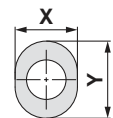
Applicable tubing O.D. [inch]	Connection thread R	Model	H (Width across flats)	Ø D1	Release button dimensions		Ø D2	L1	L2	L3	A*1	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
					X	Y							Nylon	Urethane		
Ø 3/16	1/8	KQ2Y05-01□S1	10	9.1	8.4	11	10	15.7	16.7	15.7	29.3	13.3	8.4	7	3.5	5.9
	1/4	KQ2Y05-02□S1	14	9.1	8.4	11	10	15.7	22.2	15.7	33.2	13.3	8.4	7	3.5	15.4

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Reference dimensions after installation of R thread



Release button dimensions



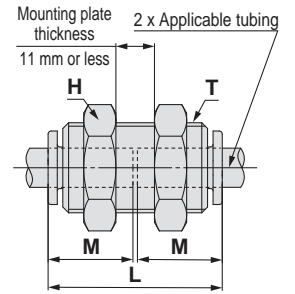
## Dimensions

### Bulkhead Union: KQ2E

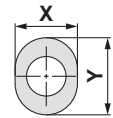


Applicable tubing O.D. [inch]	Model	T (M)	H (Width across flats)	Release button dimensions		L	Mounting hole	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
				X	Y				Nylon	Urethane		
∅ 3/16	<b>KQ2E05-00M</b> □1	M14 x 1	17	8.4	11	27.3	15	13.3	7.8	6.5	3.5	30.5

□: A (Brass), N (Brass + Electroless nickel plating)



Release button dimensions

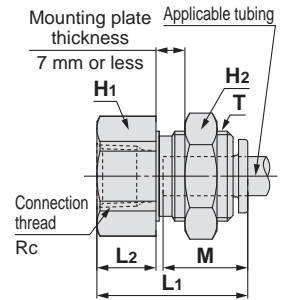


### Bulkhead Connector: KQ2E

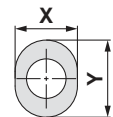


Applicable tubing O.D. [inch]	Connection thread Rc	Model	T (M)	Release button dimensions		H <sub>1</sub> (Width across flats)	H <sub>2</sub> (Width across flats)	L <sub>1</sub>	L <sub>2</sub>	Mounting hole	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
				X	Y	17	17					Nylon	Urethane		
∅ 3/16	1/8	<b>KQ2E05-01</b> □1	M14 x 1	8.4	11	17	17	23.9	9.5	15	13.3	7.8	6.5	3.5	30.8

□: A (Brass), N (Brass + Electroless nickel plating)



Release button dimensions



Oval Type

Metric Size M, R, Rc

Sealant/Gasket Seal

Inch Size UNF, NPT

Inch Size M, R, Rc

Metric Size G

Face Seal

Metric Size R, Rc

Inch Size NPT

Inch Size R

Gasket Seal

Metric Size Uni

Inch Size Uni

# KQ2 Series

# Made to Order/Clean Series/Spare Parts

Please contact SMC for detailed dimensions, specifications, and lead times.

## 1 Made to Order

Symbol	Specifications
<b>X12</b>	Lubricant: White vaseline Release button colour: White
<b>X35</b> *1	Body colour: Black Release button colour: Orange
<b>X41</b>	With fixed orifice*2

\*1 The following models are not available as made-to-order: Bulkhead union/KQ2E, Bulkhead connector/KQ2E, Male connector/KQ2H

\*2 Please contact SMC for availability.

The following made-to-order products will be provided based on previous models (KQ2 series). Please contact SMC separately.

Symbol	Specifications
<b>X17</b>	Grease-free Rubber material: NBR (With fluorine coating) Release button colour: Light blue
<b>X29</b>	Grease-free Rubber material: NBR (With fluorine coating) Release button colour: Light blue Copper-free (With electroless nickel plating)
<b>X34</b>	Rubber material: FKM
<b>X39</b>	Grease-free Rubber material: NBR (With fluorine coating) Release button colour: Light blue Clean (Copper-free, air blow, double packaging, resin body: white)
<b>X94</b>	Grease-free Rubber material: FKM (With fluorine coating) Release button colour: Light blue

## 3 Spare Parts

Description	Part no.	Applicable thread
Gasket	<b>M-5G2</b>	M5

### Brass

Description	Part no.	Applicable model
Pipe nut	<b>KQ06-P01A</b>	KQ2E05-00MA1
		KQ2E05-01A1

### Brass + Electroless nickel plating

Description	Part no.	Applicable model
Pipe nut	<b>KQ06-P01N</b>	KQ2E05-00MN1
		KQ2E05-01N1

## 2 Clean Series

Please consult with SMC separately for applicable models.

Symbol	Specifications
<b>10-</b>	Brass parts: With electroless nickel plating Lubricant: Fluorine grease Air blow in a clean room Double packaging Resin body, Release button colour: White

Example) **10-KQ2H05-02NS1**

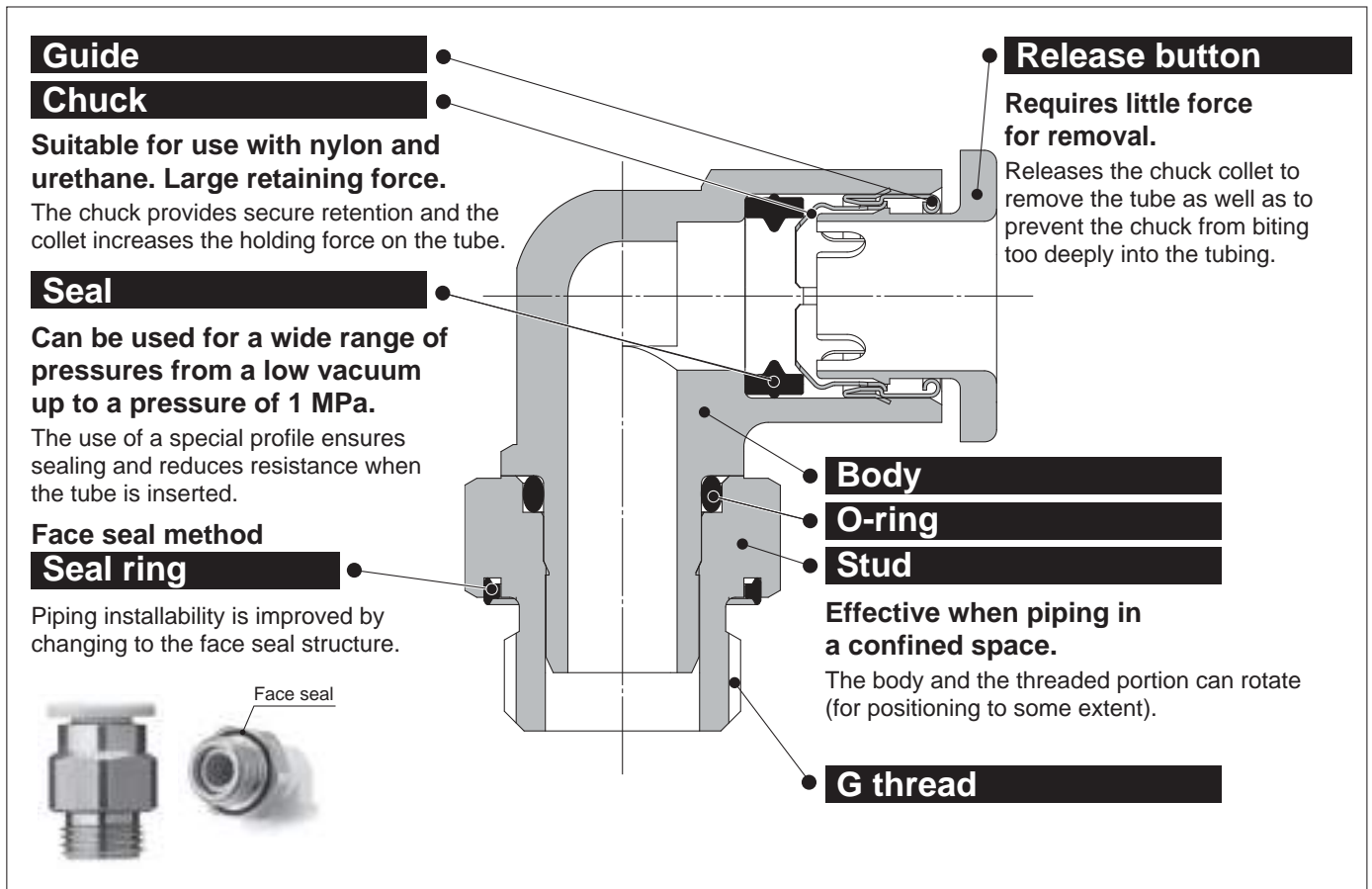


Gasket Seal		Face Seal			Sealant/Gasket Seal		Oval Type	
Inch Size Uni	Metric Size Uni	Inch Size R	Inch Size NPT	Metric Size R, Rc	Metric Size G	Inch Size M, R, Rc	Inch Size UNF, NPT	Metric Size M, R, Rc

# Oval Type Metric Size One-touch Fittings

Applicable Tubing: Metric Size, Connection Thread: G

## KQ2 Series



Applicable to parallel pipe thread (G).

Drastically reduces screw-in time with the face seal method.



### Applicable Tubing

Tubing material	FEP, PFA, Nylon, Soft nylon, Polyurethane
Tubing O.D.	Ø 4, Ø 6

### Specifications

Fluid		Air, Water*1
Operating pressure range*2		-100 kPa to 1 MPa
Proof pressure (at 23 °C)		3 MPa
Ambient and fluid temperature		-5 to 60 °C, Water: 0 to 40 °C (No freezing)
Thread	Mounting section	ISO 16030 (Parallel pipe thread)
	Nut section	JIS B0205 (Metric fine thread)
Sealant on the threads		Seal ring

\*1 The surge pressure must be under the maximum operating pressure.

\*2 Do not use the fittings with a leak tester or for vacuum retention because they are not guaranteed for zero leakage.

### Principal Parts Material

Body	C3604, PBT
Stud	C3604 (Thread portion)
Chuck	Stainless steel 304
Guide	Stainless steel 304
Release button	POM
Seal, O-ring, Seal ring	NBR

## How to Order

### Threaded Type

**KQ2 H 06 - G01 A 1**

One-touch fittings

Model

Symbol	Model
<b>H</b>	Male connector
<b>S</b>	Hexagon socket head male connector
<b>F</b>	Female connector
<b>L</b>	Male elbow
<b>V</b>	Universal male elbow
<b>W</b>	Extended male elbow
<b>T</b>	Male branch tee
<b>Y</b>	Male run tee
<b>E</b>	Bulkhead connector

Oval type release button

Thread material/Surface treatment

Symbol	Thread material/Surface treatment
<b>A</b>	Brass
<b>N</b>	Brass + Electroless nickel plating

Port size

Symbol		Size
Thread connection	<b>G01</b>	G 1/8
	<b>G02</b>	G 1/4
	<b>G03</b>	G 3/8

Applicable tubing O.D.

Symbol	Size
<b>04</b>	Ø 4
<b>06</b>	Ø 6

Oval Type

Metric Size M, R, Rc

Sealant/Gasket Seal

Inch Size UNF, NPT

Inch Size M, R, Rc

Metric Size G

Face Seal

Metric Size R, Rc

Inch Size NPT

Inch Size R

Gasket Seal

Metric Size Uni

Inch Size Uni

# Metric Size One-touch Fittings

## Oval Type Variations

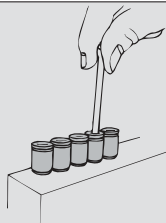
### Hexagon socket head male connector

KQ2S

P.60



Internal hexagon socket allows tightening with a hexagon wrench in confined spaces.



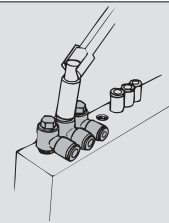
### Universal male elbow

KQ2V

P.61



Hexagon head of the body allows tightening with a box wrench in confined spaces.



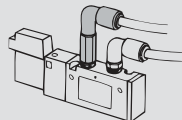
### Extended male elbow

KQ2W

P.61



Basically, it is used together with a male elbow. Its extended height allows for multi-levelled piping and prevents interference among fittings.



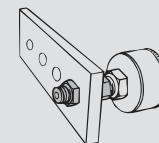
### Bulkhead connector

KQ2E

P.62



Use to connect a male thread and tubing through a panel, etc.



### Male connector

KQ2H

P.60



Use to pipe a female thread in the same direction. Most general model.

### Male elbow

KQ2L

P.60



Use to pipe a female thread at right angles. Most general model.

### Male run tee

KQ2Y

P.62



Use to branch a female thread in the same direction and at a 90° angle.

### Female connector

KQ2F

P.60



Use to pipe a male thread of a pressure gauge, etc.

### Male branch tee

KQ2T

P.61



Use to branch a female thread at both 90° angles.

# Metric Size One-touch Fittings **KQ2 Series**

**Oval Type** Applicable Tubing: Metric Size, Connection Thread: G

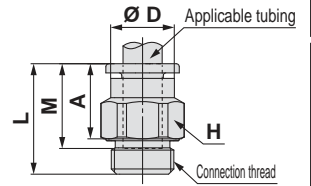
## Dimensions

### Male Connector: KQ2H (Face seal)

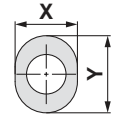


Applicable tubing O.D. [mm]	Connection thread G	Model	H (Width across flats)	Ø D	Release button dimensions		L	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
					X	Y				Nylon	Urethane		
Ø 4	1/8	KQ2H04-G01□1	12	7.9	7.7	10	17.1	11.6	13.3	4.8	3.4	3	7.7
	1/4	KQ2H04-G02□1	17	—	7.7	10	15.4	8.9	13.3	4.8	3.4	3	16.8
Ø 6	1/8	KQ2H06-G01□1	12	9.9	9.7	12	17.3	11.8	13.3	13.1	10.4	4.5	6.6
	1/4	KQ2H06-G02□1	17	—	9.7	12	15.4	8.9	13.3	13.1	10.4	4.5	14.8
	3/8	KQ2H06-G03□1	21	—	9.7	12	16.4	8.9	13.3	13.1	10.4	4.5	27.1

□: A (Brass), N (Brass + Electroless nickel plating)



Release button dimensions

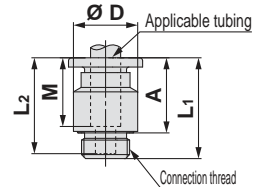


### Hexagon Socket Head Male Connector: KQ2S (Face seal)

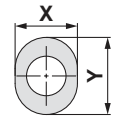


Applicable tubing O.D. [mm]	Connection thread G	Model	H (Width across flats)	Ø D	Release button dimensions		L <sub>1</sub>	L <sub>2</sub>	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
					X	Y					Nylon	Urethane		
Ø 4	1/8	KQ2S04-G01□1	3	13	7.7	10	20.6	19.6	15.1	13.3	4.1	3.6	3.1	11.6
Ø 6	1/8	KQ2S06-G01□1	4	13	9.7	12	19.8	18.8	14.3	13.3	10	9.9	4.1	9.7
	1/4	KQ2S06-G02□1	4	18	9.7	12	19.8	18.8	13.3	13.3	10.7	10	4.1	18

□: A (Brass), N (Brass + Electroless nickel plating)



Release button dimensions

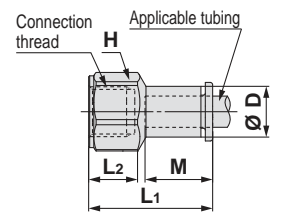


### Female Connector: KQ2F

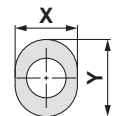


Applicable tubing O.D. [mm]	Connection thread G	Model	H (Width across flats)	Ø D	Release button dimensions		L <sub>1</sub>	L <sub>2</sub>	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
					X	Y				Nylon	Urethane		
Ø 4	1/8	KQ2F04-G01□1	14	7.9	7.7	10	24.7	9.5	13.3	5.6	4	3	12.4
	1/4	KQ2F04-G02□1	17	7.9	7.7	10	30.1	13.9	13.3	5.6	4	3	21.3
Ø 6	1/8	KQ2F06-G01□1	14	9.9	9.7	12	24.3	9.5	13.3	13.1	10.4	4.5	12.6
	1/4	KQ2F06-G02□1	17	9.9	9.7	12	29.6	13.9	13.3	13.1	10.4	4.5	21.4
	3/8	KQ2F06-G03□1	21	9.9	9.7	12	31.1	13.7	13.3	13.1	10.4	4.5	29.6

□: A (Brass), N (Brass + Electroless nickel plating)



Release button dimensions

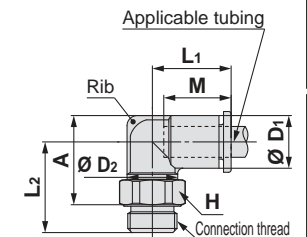


### Male Elbow: KQ2L (Face seal)

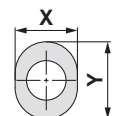


Applicable tubing O.D. [mm]	Connection thread G	Model	H (Width across flats)	Ø D <sub>1</sub>	Release button dimensions		Ø D <sub>2</sub>	L <sub>1</sub>	L <sub>2</sub>	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]	With a rib
					X	Y						Nylon	Urethane			
Ø 4	1/8	KQ2L04-G01□1	12	8.2	7.7	10	10	14.8	16.8	15.4	13.3	4.6	3.3	3	6.3	●
	1/4	KQ2L04-G02□1	17	8.2	7.7	10	10	14.8	20.3	17.9	13.3	4.6	3.3	3	16.7	●
Ø 6	1/8	KQ2L06-G01□1	12	10.4	9.7	12	10	15.5	17.9	17.6	13.3	11.4	9	4.5	6.7	—
	1/4	KQ2L06-G02□1	17	10.4	9.7	12	10	15.5	21.4	20.1	13.3	11.4	9	4.5	17.2	—
	3/8	KQ2L06-G03□1	21	10.4	9.7	12	10	15.5	22.4	20.1	13.3	11.4	9	4.5	28.9	—

□: A (Brass), N (Brass + Electroless nickel plating)



Release button dimensions



Oval Type

Metric Size M, R, Rc

Inch Size UNF, NPT

Inch Size M, R, Rc

Metric Size G

Metric Size R, Rc

Inch Size NPT

Inch Size R

Metric Size Uni

Inch Size Uni

# KQ2 Series

Oval Type Applicable Tubing: Metric Size, Connection Thread: G

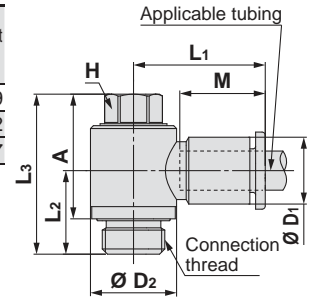
## Dimensions

### Universal Male Elbow: KQ2V (Face seal)

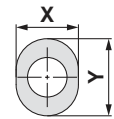


Applicable tubing O.D. [mm]	Connection thread G	Model	H (Width across flats)	Ø D1	Release button dimensions		Ø D2	L1	L2	L3	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
					X	Y							Nylon	Urethane		
Ø 4	1/8	KQ2V04-G01□1	8	8.2	7.7	10	13.4	19.3	13	24.9	19.4	13.3	2.9	2.9	3	12.9
	1/4	KQ2V04-G02□1	8	10.4	9.7	12	13.4	20.5	13	24.9	19.4	13.3	7.5	5.9	4.5	13.2
Ø 6	1/8	KQ2V06-G01□1	10	10.4	9.7	12	18	19.9	15	27.6	21.1	13.3	7.5	5.9	4.5	22.7
	1/4	KQ2V06-G02□1	10	10.4	9.7	12	18	19.9	15	27.6	21.1	13.3	7.5	5.9	4.5	22.7

□: A (Brass), N (Brass + Electroless nickel plating)



Release button dimensions

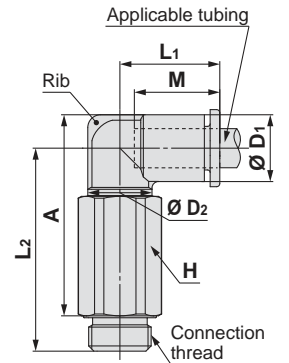


### Extended Male Elbow: KQ2W (Face seal)

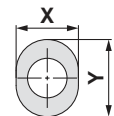


Applicable tubing O.D. [mm]	Connection thread G	Model	H (Width across flats)	Ø D1	Release button dimensions		Ø D2	L1	L2	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]	With a rib
					X	Y						Nylon	Urethane			
Ø 4	1/8	KQ2W04-G01□1	12	8.2	7.7	10	10	14.8	30.5	29.1	13.3	4	4	3	16.5	●
	1/4	KQ2W04-G02□1	17	8.2	7.7	10	10	14.8	31.2	28.8	13.3	4	4	3	35.8	●
Ø 6	1/8	KQ2W06-G01□1	12	10.4	9.7	12	10	15.5	31.6	31.3	13.3	10.9	8.6	4.5	17	—
	1/4	KQ2W06-G02□1	17	10.4	9.7	12	10	15.5	32.3	31	13.3	10.9	8.6	4.5	36.2	—
	3/8	KQ2W06-G03□1	21	10.4	9.7	12	10	15.5	33.3	31	13.3	10.9	8.6	4.5	59.4	—

□: A (Brass), N (Brass + Electroless nickel plating)



Release button dimensions

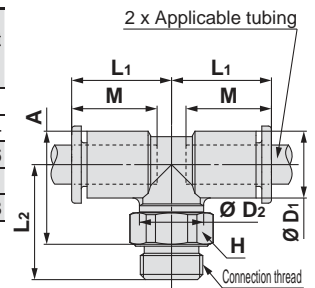


### Male Branch Tee: KQ2T (Face seal)

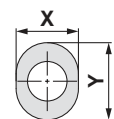


Applicable tubing O.D. [mm]	Connection thread G	Model	H (Width across flats)	Ø D1	Release button dimensions		Ø D2	L1	L2	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
					X	Y						Nylon	Urethane		
Ø 4	1/8	KQ2T04-G01□1	12	8.2	7.7	10	10	14.8	16.8	15.4	13.3	6	4.1	3	7
	1/4	KQ2T04-G02□1	17	8.2	7.7	10	10	14.8	20.3	17.9	13.3	6	4.1	3	17.4
Ø 6	1/8	KQ2T06-G01□1	12	10.4	9.7	12	10	15.5	17.9	17.6	13.3	13.9	11	4.5	7.6
	1/4	KQ2T06-G02□1	17	10.4	9.7	12	10	15.5	21.4	20.1	13.3	13.9	11	4.5	18.1
	3/8	KQ2T06-G03□1	21	10.4	9.7	12	10	15.5	22.4	20.1	13.3	13.9	11	4.5	29.8

□: A (Brass), N (Brass + Electroless nickel plating)



Release button dimensions



# Metric Size One-touch Fittings **KQ2 Series**

**Oval Type** Applicable Tubing: Metric Size, Connection Thread: G

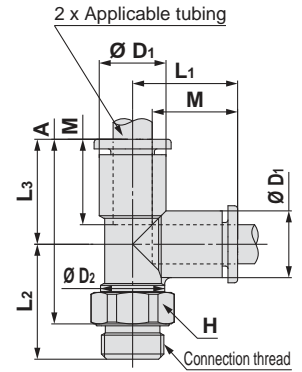
## Dimensions

### Male Run Tee: KQ2Y (Face seal)

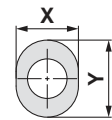


Applicable tubing O.D. [mm]	Connection thread G	Model	H (Width across flats)	Ø D1	Release button dimensions		Ø D2	L1	L2	L3	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
					X	Y							Nylon	Urethane		
Ø 4	1/8	KQ2Y04-G01□1	12	8.2	7.7	10	10	15.3	16.8	15.3	26.6	13.3	6.4	4.4	3	7
	1/4	KQ2Y04-G02□1	17	8.2	7.7	10	10	15.3	20.3	15.3	29.1	13.3	6.4	4.4	3	17.5
Ø 6	1/8	KQ2Y06-G01□1	12	10.4	9.7	12	10	16.3	17.9	16.3	28.7	13.3	13.4	10.6	4.5	7.7
	1/4	KQ2Y06-G02□1	17	10.4	9.7	12	10	16.3	21.4	16.3	31.2	13.3	13.4	10.6	4.5	18.2
	3/8	KQ2Y06-G03□1	21	10.4	9.7	12	10	16.3	22.4	16.3	31.2	13.3	13.4	10.6	4.5	29.9

□: A (Brass), N (Brass + Electroless nickel plating)



Release button dimensions

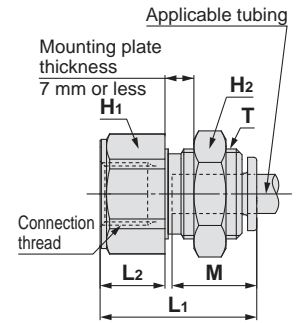


### Bulkhead Connector: KQ2E

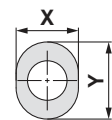


Applicable tubing O.D. [mm]	Connection thread G	Model	T (M)	H1 (Width across flats)	H2 (Width across flats)	L1	L2	Release button dimensions		Mounting hole	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
								X	Y			Nylon	Urethane		
Ø 4	1/8	KQ2E04-G01□1	M12 x 1	14	14	25.1	10.7	7.7	10	13	13.3	5.6	4	3	21.3
	1/4	KQ2E04-G02□1	M12 x 1	17	14	30.7	16.3	7.7	10	13	13.3	5.6	4	3	31.5
Ø 6	1/8	KQ2E06-G01□1	M14 x 1	17	17	24.5	10.1	9.7	12	15	13.3	13.1	10.4	4.5	29.8
	1/4	KQ2E06-G02□1	M14 x 1	17	17	30	15.6	9.7	12	15	13.3	13.1	10.4	4.5	32.8
	3/8	KQ2E06-G03□1	M14 x 1	21	17	32	17.6	9.7	12	15	13.3	13.1	10.4	4.5	45.5

□: A (Brass), N (Brass + Electroless nickel plating)



Release button dimensions



Oval Type

Metric Size M, R, Rc

Inch Size UNF, NPT

Inch Size M, R, Rc

Metric Size G

Metric Size R, Rc

Inch Size NPT

Inch Size R

Metric Size Uni

Inch Size Uni

Gasket Seal

Face Seal

Sealant/Gasket Seal

# KQ2 Series Spare Parts

Please contact SMC for detailed dimensions, specifications, and lead times.

## 1 Spare Parts

### Brass

Description	Part no.	Applicable model
Pipe nut	<b>KQ04-P01A</b>	KQ2E04-G01A1, KQ2E04-G02A1
	<b>KQ06-P01A</b>	KQ2E06-G01A1, KQ2E06-G02A1, KQ2E06-G03A1

### Brass + Electroless nickel plating

Description	Part no.	Applicable model
Pipe nut	<b>KQ04-P01N</b>	KQ2E04-G01N1, KQ2E04-G02N1
	<b>KQ06-P01N</b>	KQ2E06-G01N1, KQ2E06-G02N1, KQ2E06-G03N1

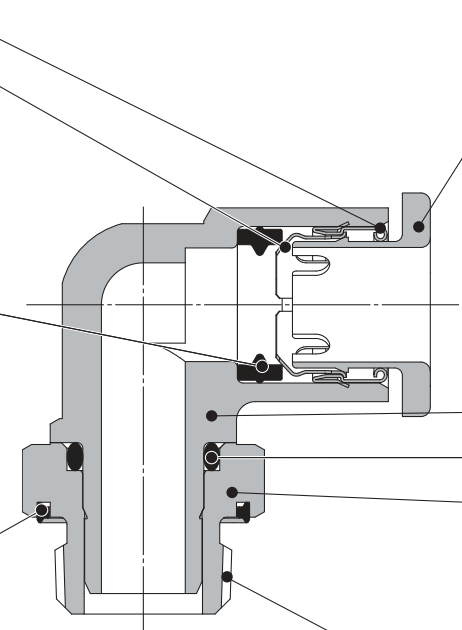


Gasket Seal		Face Seal			Sealant/Gasket Seal	
Inch Size Uni	Metric Size Uni	Inch Size R	Inch Size NPT	Metric Size G	Inch Size UNF, NPT	Metric Size M, R, Rc

# Oval Type Metric Size One-touch Fittings

Applicable Tubing: Metric Size, Connection Thread: R, Rc

## KQ2 Series



**Guide**

**Chuck**

Suitable for use with nylon and urethane. Large retaining force. The chuck provides secure retention and the collet increases the holding force on the tube.

**Release button**

Requires little force for removal. Releases the chuck collet to remove the tube as well as to prevent the chuck from biting too deeply into the tubing.

**Seal**

Can be used for a wide range of pressures from a low vacuum up to a pressure of 1 MPa. The use of a special profile ensures sealing and reduces resistance when the tube is inserted.

**Body**

**O-ring**

**Stud**

Effective when piping in a confined space. Body part rotates allowing for positioning.


**Face seal method**

**Seal ring**

Piping installability is improved by changing to the face seal structure.

**Connection thread**

R, Rc



**One-touch IN/OUT connection.**  
Possible to use in vacuum to -100 kPa.

**Drastically reduces screw-in time with the face seal method.**



### Applicable Tubing

Tubing material	FEP, PFA, Nylon, Soft nylon, Polyurethane
Tubing O.D.	Ø 3.2, Ø 4, Ø 6

### Specifications

Fluid		Air, Water*1
Operating pressure range*2		-100 kPa to 1 MPa
Proof pressure (at 23 °C)		3 MPa
Ambient and fluid temperature		-5 to 60 °C, Water: 0 to 40 °C (No freezing)
Thread	Mounting section	JIS B0203 (Taper thread for piping) JIS B0205 (Metric coarse thread)
	Nut section	JIS B0205 (Metric fine thread)
Sealant on the threads		Seal ring

\*1 The surge pressure must be under the maximum operating pressure.

\*2 Do not use the fittings with a leak tester or for vacuum retention because they are not guaranteed for zero leakage.

### Principal Parts Material

Body	C3604, PBT
Stud	C3604 (Thread portion)
Chuck	Stainless steel 304
Guide	Stainless steel 304
Release button	POM
Seal, O-ring, Seal ring	NBR

## How to Order

### Threaded Type

**KQ2 H 06 - 01 A P 1**

One-touch fittings

Oval type release button

Model

Symbol	Model
<b>H</b>	Male connector
<b>S</b>	Hexagon socket head male connector
<b>L</b>	Male elbow
<b>K</b>	45° male elbow
<b>V</b>	Universal male elbow
<b>VS</b>	Hexagon socket head universal male elbow
<b>VF</b>	Universal female elbow
<b>VD</b>	Double universal male elbow
<b>VT</b>	Triple universal male elbow
<b>W</b>	Extended male elbow
<b>T</b>	Male branch tee
<b>Y</b>	Male run tee
<b>D</b>	Male delta union

Face seal

Thread material/Surface treatment

Symbol	Thread material/Surface treatment
<b>A</b>	Brass
<b>N</b>	Brass + Electroless nickel plating

Port size/Applicable tubing O.D.

Symbol	Size
<b>01</b>	R 1/8, Rc 1/8
<b>02</b>	R 1/4, Rc 1/4
<b>03</b>	R 3/8, Rc 3/8

Applicable tubing O.D.

Symbol	Size
<b>23</b>	∅ 3.2
<b>04</b>	∅ 4
<b>06</b>	∅ 6

Oval Type



Metric Size M, R, Rc

Inch Size UNF, NPT

Inch Size M, R, Rc

Metric Size G

Metric Size R, Rc

Inch Size NPT

Inch Size R

Metric Size Uni

Inch Size Uni

# Metric Size One-touch Fittings

## Oval Type Variations

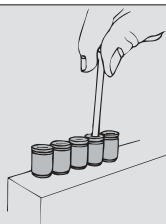
### Hexagon socket head male connector

**KQ2S**

P.68



Internal hexagon socket allows tightening with a hexagon wrench in confined spaces.



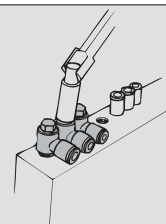
### Universal male elbow

**KQ2V**

P.69



Hexagon head of the body allows tightening with a box wrench in confined spaces.



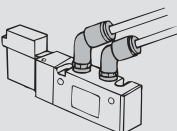
### 45° male elbow

**KQ2K**

P.68



Use to pipe a female thread at a 45° angle. Its direction is in-between that of the male connector and male elbow.



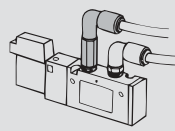
### Extended male elbow

**KQ2W**

P.71



Basically, it is used together with a male elbow. Its extended height allows for multi-levelled piping and prevents interference among fittings.



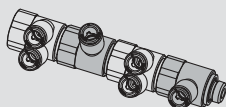
### Universal female elbow

**KQ2VF**

P.69



Use to branch a male or female thread in the same direction and at a 90° angle. Multiple connections possible.



### Male connector

**KQ2H**

P.68



Use to pipe a female thread in the same direction. Most general model.

### Hexagon socket head universal male elbow

**KQ2VS**

P.69



Hexagon socket on the top allows tightening with a hexagon wrench in confined spaces.

### Male run tee

**KQ2Y**

P.71



Use to branch a female thread in the same direction and at a 90° angle.

### Male elbow

**KQ2L**

P.68



Use to pipe a female thread at right angles. Most general model.

### Double universal male elbow

**KQ2VD**

P.70



Use to two-branch a female thread at right angles. Two individual parts rotate 360°.

### Male delta union

**KQ2D**

P.72



Use to branch a female thread at two right angles.

### Male branch tee

**KQ2T**

P.71



Use to branch a female thread at both 90° angles.

### Triple universal male elbow

**KQ2VT**

P.70



Use to three-branch a female thread at right angles. Three individual parts rotate 360°.

The following models do not support oval type release buttons. Refer to the round type (from page 173).

#### Branch universal female elbow

**KQ2ZF**

P.180



#### Branch male elbow

**KQ2LU**

P.177



#### Branch universal male elbow

**KQ2Z**

P.180



#### Double branch universal male elbow

**KQ2ZD**

P.180



#### Triple branch universal male elbow

**KQ2ZT**

P.181



#### Double branch "Y"

**KQ2UD**

P.184



#### Branch "Y"

**KQ2U**

P.183



⚠ Box wrenches and socket wrenches may interfere with oval type release buttons. Refer to page 217 for details.

# Metric Size One-touch Fittings **KQ2 Series**

**Oval Type** Applicable Tubing: Metric Size, Connection Thread: R, Rc

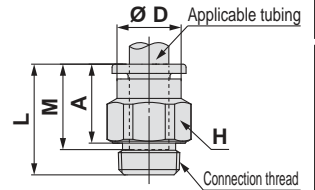
## Dimensions

### Male Connector: KQ2H (Face seal)

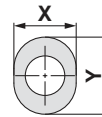


Applicable tubing O.D. [mm]	Connection thread R	Model	H (Width across flats)	Ø D	Release button dimensions		L	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
					X	Y				Nylon	Urethane		
					Ø 3.2	1/8				KQ2H23-01□P1	12		
	1/4	KQ2H23-02□P1	17	—	6.7	9.5	15	7.4	13.3	3.4	2.9	2.5	15.1
Ø 4	1/8	KQ2H04-01□P1	12	7.9	7.7	10	16.4	11.2	13.3	4.8	3.4	3	6.9
	1/4	KQ2H04-02□P1	17	—	7.7	10	15	7.4	13.3	4.8	3.4	3	14.5
Ø 6	1/8	KQ2H06-01□P1	12	9.9	9.7	12	17.2	12	13.3	13.1	10.4	4.5	6.5
	1/4	KQ2H06-02□P1	17	—	9.7	12	14	6.4	13.3	13.1	10.4	4.5	10.6
	3/8	KQ2H06-03□P1	21	—	9.7	12	15.2	7.6	13.3	13.1	10.4	4.5	22.8

□: A (Brass), N (Brass + Electroless nickel plating)



Release button dimensions

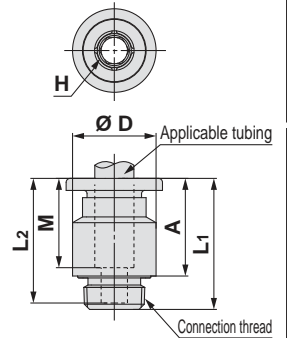


### Hexagon Socket Head Male Connector: KQ2S (Face seal)

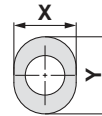


Applicable tubing O.D. [mm]	Connection thread R	Model	H (Width across flats)	Ø D	Release button dimensions		L <sub>1</sub>	L <sub>2</sub>	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
					X	Y					Nylon	Urethane		
					Ø 4	1/8					KQ2S04-01□P1	3		
Ø 6	1/8	KQ2S06-01□P1	4	13	9.7	12	19.8	18.8	14.6	13.3	10	10	4	9.6
	1/4	KQ2S06-02□P1	4	18	9.7	12	19.8	18.8	12.2	13.3	10.7	10	4.1	16.3

□: A (Brass), N (Brass + Electroless nickel plating)



Release button dimensions

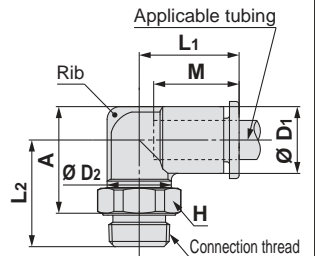


### Male Elbow: KQ2L (Face seal)

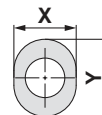


Applicable tubing O.D. [mm]	Connection thread R	Model	H (Width across flats)	Ø D <sub>1</sub>	Release button dimensions		Ø D <sub>2</sub>	L <sub>1</sub>	L <sub>2</sub>	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]	With a rib
					X	Y						Nylon	Urethane			
					Ø 3.2	1/8						KQ2L23-01□P1	12			
1/4	KQ2L23-02□P1	17	7.1	6.7		9.5	10	14.5	19.4	15.3	13.3	3	2.5	2.5	14.3	—
Ø 4	1/8	KQ2L04-01□P1	12	8.2	7.7	10	10	14.8	15.5	14.4	13.3	4.6	3.3	3	5.2	●
	1/4	KQ2L04-02□P1	17	8.2	7.7	10	10	14.8	19.9	16.4	13.3	4.6	3.3	3	14.5	●
Ø 6	1/8	KQ2L06-01□P1	12	10.4	9.7	12	10	15.5	16.6	16.6	13.3	11.4	9	4.5	5.7	—
	1/4	KQ2L06-02□P1	17	10.4	9.7	12	10	15.5	21	18.6	13.3	11.4	9	4.5	15	—
	3/8	KQ2L06-03□P1	21	10.4	9.7	12	10	15.5	23	20.6	13.3	11.4	9	4.5	30.2	—

□: A (Brass), N (Brass + Electroless nickel plating)



Release button dimensions

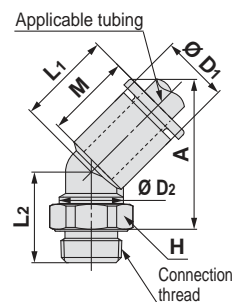


### 45° Male Elbow: KQ2K (Face seal)

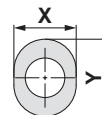


Applicable tubing O.D. [mm]	Connection thread R	Model	H (Width across flats)	Ø D <sub>1</sub>	Release button dimensions		Ø D <sub>2</sub>	L <sub>1</sub>	L <sub>2</sub>	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
					X	Y						Nylon	Urethane		
					Ø 4	1/8						KQ2K04-01□P1	12		
1/4	KQ2K04-02□P1	17	8.2	7.7		10	10	14.4	15.4	20.5	13.3	4.8	3.4	3	14.3
Ø 6	1/8	KQ2K06-01□P1	12	10.4	9.7	12	10	14.7	14.1	22.5	13.3	8.7	6.9	4.5	5.5
	1/4	KQ2K06-02□P1	17	10.4	9.7	12	10	14.7	17.5	23.5	13.3	8.7	6.9	4.5	14.7
	3/8	KQ2K06-03□P1	21	10.4	9.7	12	10	14.7	19.5	25.5	13.3	8.7	6.9	4.5	29.9

□: A (Brass), N (Brass + Electroless nickel plating)



Release button dimensions



Oval Type



Metric Size M, R, Rc

Sealant/Gasket Seal

Inch Size UNF, NPT

Inch Size M, R, Rc

Metric Size G

Metric Size R, Rc

Face Seal

Inch Size NPT

Inch Size R

Gasket Seal

Metric Size Uni

Inch Size Uni

# KQ2 Series

Oval Type Applicable Tubing: Metric Size, Connection Thread: R, Rc

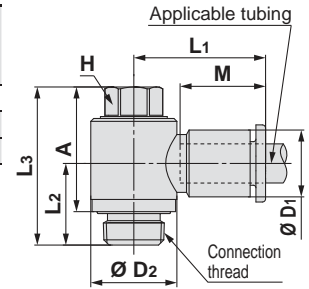
## Dimensions

### Universal Male Elbow: KQ2V (Face seal)

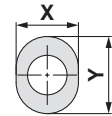


Applicable tubing O.D. [mm]	Connection thread R	Model	H (Width across flats)	Ø D1	Release button dimensions		Ø D2	L1	L2	L3	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
					X	Y							Nylon	Urethane		
Ø 4	1/8	KQ2V04-01□P1	8	8.2	7.7	10	13.4	19.3	12.7	24.6	19.4	13.3	2.9	2.9	3	12.6
Ø 6	1/8	KQ2V06-01□P1	8	10.4	9.7	12	13.4	20.5	12.7	24.6	19.4	13.3	7.5	5.9	4.5	12.9
	1/4	KQ2V06-02□P1	10	10.4	9.7	12	18	19.9	16.1	28.7	21.1	13.3	7.5	5.9	4.5	23.2

□: A (Brass), N (Brass + Electroless nickel plating)



Release button dimensions

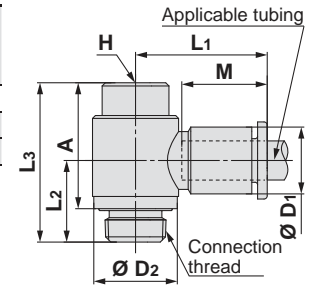


### Hexagon Socket Head Universal Male Elbow: KQ2VS (Face seal)

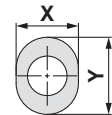


Applicable tubing O.D. [mm]	Connection thread R	Model	H (Width across flats)	Ø D1	Release button dimensions		Ø D2	L1	L2	L3	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
					X	Y							Nylon	Urethane		
Ø 4	1/8	KQ2VS04-01□P1	6	8.2	7.7	10	13.4	19.3	12.7	24.8	19.6	13.3	2.9	2.9	3	12.6
Ø 6	1/8	KQ2VS06-01□P1	6	10.4	9.7	12	13.4	20.5	12.7	24.8	19.6	13.3	7.5	5.9	4.5	12.9
	1/4	KQ2VS06-02□P1	6	10.4	9.7	12	18	19.9	16.1	24.7	17.1	13.3	7.5	5.9	4.5	19.2

□: A (Brass), N (Brass + Electroless nickel plating)



Release button dimensions

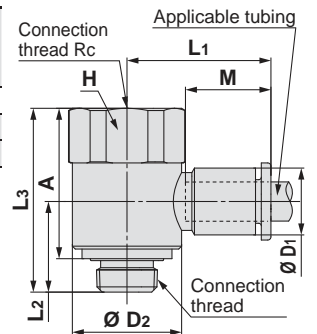


### Universal Female Elbow: KQ2VF (Face seal)

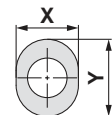


Applicable tubing O.D. [mm]	Connection thread R, Rc	Model	H (Width across flats)	Ø D1	Release button dimensions		Ø D2	L1	L2	L3	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
					X	Y							Nylon	Urethane		
Ø 4	1/8	KQ2VF04-01□P1	17	8.2	7.7	10	17	21.2	14.1	28.6	23.4	13.3	2.9	2.9	3	28.5
Ø 6	1/8	KQ2VF06-01□P1	17	10.4	9.7	12	17	22.4	14.1	28.6	23.4	13.3	7.5	5.9	4.5	28.9
	1/4	KQ2VF06-02□P1	22	10.4	9.7	12	21.7	23.2	17.6	36.4	28.8	13.3	7.5	5.9	4.5	60.3

□: A (Brass), N (Brass + Electroless nickel plating)



Release button dimensions



# Metric Size One-touch Fittings **KQ2 Series**

**Oval Type** Applicable Tubing: Metric Size, Connection Thread: R, Rc

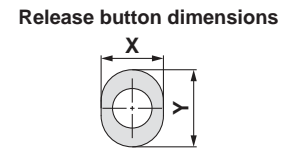
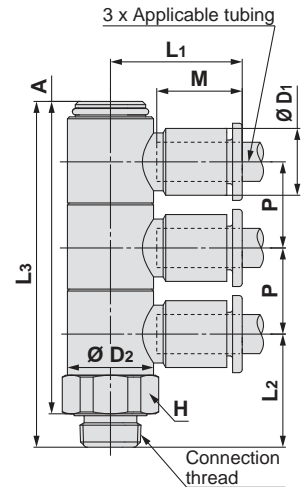
## Dimensions

### Triple Universal Male Elbow: KQ2VT (Face seal)



Applicable tubing O.D. [mm]	Connection thread R	Model	H (Width across flats)	Ø D1	Release button dimensions		Ø D2	L1	L2	L3	A	M	P	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
					X	Y								Nylon	Urethane		
Ø 4	1/8	KQ2VT04-01□P1	14	8.2	7.7	10	13.4	19.3	17.6	53.8	48.6	13.3	13.4	2.9	2.9	3	27.5
	1/4	KQ2VT04-02□P1	17	8.2	7.7	10	13.4	19.3	21	57.2	49.6	13.3	13.4	2.9	2.9	3	36.8
	3/8	KQ2VT04-03□P1	21	8.2	7.7	10	13.4	19.3	23	59.2	51.6	13.3	13.4	2.9	2.9	3	54.4
Ø 6	1/8	KQ2VT06-01□P1	14	10.4	9.7	12	13.4	20.5	17.6	53.8	48.6	13.3	13.4	7.5	5.9	4.5	28.5
	1/4	KQ2VT06-02□P1	17	10.4	9.7	12	13.4	20.5	21	57.2	49.6	13.3	13.4	7.5	5.9	4.5	37.8
	3/8	KQ2VT06-03□P1	21	10.4	9.7	12	13.4	20.5	23	59.2	51.6	13.3	13.4	7.5	5.9	4.5	55.4

□: A (Brass), N (Brass + Electroless nickel plating)

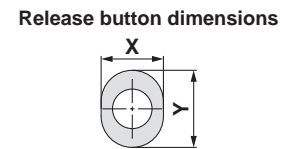
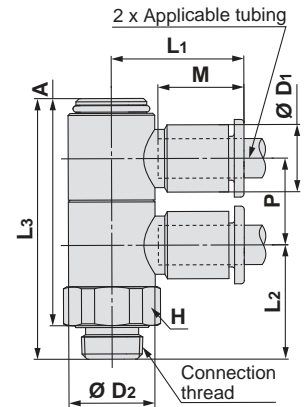


### Double Universal Male Elbow: KQ2VD (Face seal)



Applicable tubing O.D. [mm]	Connection thread R	Model	H (Width across flats)	Ø D1	Release button dimensions		Ø D2	L1	L2	L3	A	M	P	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
					X	Y								Nylon	Urethane		
Ø 4	1/8	KQ2VD04-01□P1	14	8.2	7.7	10	13.4	19.3	17.6	40.3	35.1	13.3	13.4	2.9	2.9	3	22
	1/4	KQ2VD04-02□P1	17	8.2	7.7	10	13.4	19.3	21	43.7	36.1	13.3	13.4	2.9	2.9	3	31.2
	3/8	KQ2VD04-03□P1	21	8.2	7.7	10	13.4	19.3	23	45.7	38.1	13.3	13.4	2.9	2.9	3	48.7
Ø 6	1/8	KQ2VD06-01□P1	14	10.4	9.7	12	13.4	20.5	17.6	40.3	35.1	13.3	13.4	7.5	5.9	4.5	22.6
	1/4	KQ2VD06-02□P1	17	10.4	9.7	12	13.4	20.5	21	43.7	36.1	13.3	13.4	7.5	5.9	4.5	31.8
	3/8	KQ2VD06-03□P1	21	10.4	9.7	12	13.4	20.5	23	45.7	38.1	13.3	13.4	7.5	5.9	4.5	49.3

□: A (Brass), N (Brass + Electroless nickel plating)



Oval Type

Metric Size M, R, Rc

Sealant/Gasket Seal

Inch Size UNF, NPT

Inch Size M, R, Rc

Metric Size G

Face Seal

Metric Size R, Rc

Inch Size NPT

Inch Size R

Gasket Seal

Metric Size Uni

Inch Size Uni

# KQ2 Series

Oval Type Applicable Tubing: Metric Size, Connection Thread: R, Rc

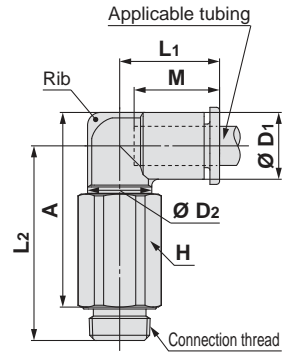
## Dimensions

### Extended Male Elbow: KQ2W (Face seal)

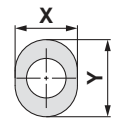


Applicable tubing O.D. [mm]	Connection thread R	Model	H (Width across flats)	Ø D1	Release button dimensions		Ø D2	L1	L2	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]	With a rib
					X	Y						Nylon	Urethane			
Ø 3.2	1/8	KQ2W23-01□P1	12	7.1	6.7	9.5	10	14.5	29.6	28	13.3	2.8	2.4	2.5	15.3	—
	1/4	KQ2W23-02□P1	17	7.1	6.7	9.5	10	14.5	31	27	13.3	2.8	2.4	2.5	34.6	—
Ø 4	1/8	KQ2W04-01□P1	12	8.2	7.7	10	10	14.8	29.2	28.1	13.3	4	4	3	15.5	●
	1/4	KQ2W04-02□P1	17	8.2	7.7	10	10	14.8	31.5	28	13.3	4	4	3	34.9	●
Ø 6	1/8	KQ2W06-01□P1	12	10.4	9.7	12	10	15.5	30.3	30.3	13.3	10.9	8.6	4.5	15.9	—
	1/4	KQ2W06-02□P1	17	10.4	9.7	12	10	15.5	32.6	30.2	13.3	10.9	8.6	4.5	35.3	—
	3/8	KQ2W06-03□P1	21	10.4	9.7	12	10	15.5	34.6	32.2	13.3	10.9	8.6	4.5	62.8	—

□: A (Brass), N (Brass + Electroless nickel plating)



Release button dimensions

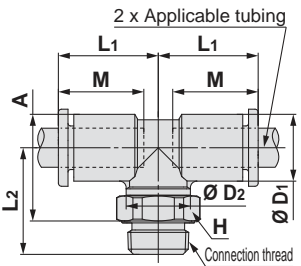


### Male Branch Tee: KQ2T (Face seal)

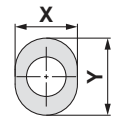


Applicable tubing O.D. [mm]	Connection thread R	Model	H (Width across flats)	Ø D1	Release button dimensions		Ø D2	L1	L2	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
					X	Y						Nylon	Urethane		
Ø 3.2	1/8	KQ2T23-01□P1	12	7.1	6.7	9.5	10	14.5	15.9	14.3	13.3	3.4	2.9	2.5	5.7
	1/4	KQ2T23-02□P1	17	7.1	6.7	9.5	10	14.5	19.3	15.3	13.3	3.4	2.9	2.5	14.9
Ø 4	1/8	KQ2T04-01□P1	12	8.2	7.7	10	10	14.8	15.5	14.4	13.3	6	4.1	3	5.9
	1/4	KQ2T04-02□P1	17	8.2	7.7	10	10	14.8	19.9	16.4	13.3	6	4.1	3	15.2
Ø 6	1/8	KQ2T06-01□P1	12	10.4	9.7	12	10	15.5	16.6	16.6	13.3	13.9	11	4.5	6.6
	1/4	KQ2T06-02□P1	17	10.4	9.7	12	10	15.5	21	18.6	13.3	13.9	11	4.5	15.9
	3/8	KQ2T06-03□P1	21	10.4	9.7	12	10	15.5	23	20.6	13.3	13.9	11	4.5	31.1

□: A (Brass), N (Brass + Electroless nickel plating)



Release button dimensions

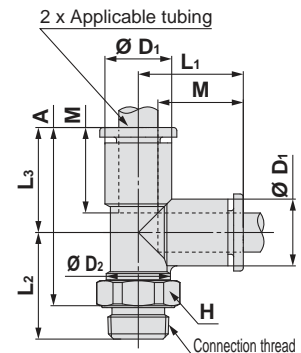


### Male Run Tee: KQ2Y (Face seal)

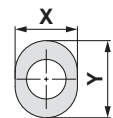


Applicable tubing O.D. [mm]	Connection thread R	Model	H (Width across flats)	Ø D1	Release button dimensions		Ø D2	L1	L2	L3	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
					X	Y							Nylon	Urethane		
Ø 3.2	1/8	KQ2Y23-01□P1	12	7.1	6.7	9.5	10	14.9	15.9	14.9	25.7	13.3	3.4	2.9	2.5	5.7
	1/4	KQ2Y23-02□P1	17	7.1	6.7	9.5	10	14.9	19.3	14.9	26.7	13.3	3.4	2.9	2.5	14.9
Ø 4	1/8	KQ2Y04-01□P1	12	8.2	7.7	10	10	15.3	15.5	15.3	25.6	13.3	6.4	4.4	3	6
	1/4	KQ2Y04-02□P1	17	8.2	7.7	10	10	15.3	19.9	15.3	27.6	13.3	6.4	4.4	3	15.2
Ø 6	1/8	KQ2Y06-01□P1	12	10.4	9.7	12	10	16.3	16.6	16.3	27.7	13.3	13.4	10.6	4.5	6.7
	1/4	KQ2Y06-02□P1	17	10.4	9.7	12	10	16.3	21	16.3	29.7	13.3	13.4	10.6	4.5	16
	3/8	KQ2Y06-03□P1	21	10.4	9.7	12	10	16.3	23	16.3	31.7	13.3	13.4	10.6	4.5	31.2

□: A (Brass), N (Brass + Electroless nickel plating)



Release button dimensions





# Metric Size One-touch Fittings **KQ2 Series**

**Oval Type** Applicable Tubing: Metric Size, Connection Thread: R, Rc

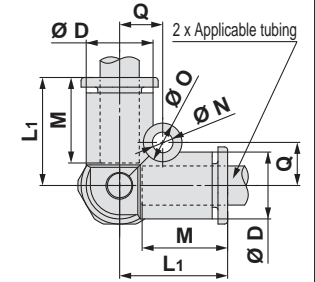
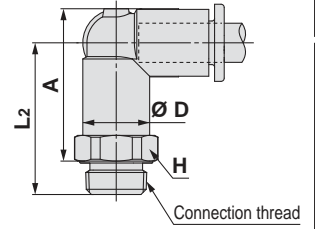
## Dimensions

### Male Delta Union: KQ2D (Face seal)

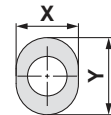


Applicable tubing O.D. [mm]	Connection thread R	Model	H (Width across flats)	Ø D	Release button dimensions		L1	L2	A	M	Q	Ø O	Ø N	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
					X	Y								Nylon	Urethane		
Ø 4	1/8	KQ2D04-01□P1	12	8.2	7.7	10	15.8	22.6	21.5	13.3	5.7	6	3.2	6	6	3.6	9.1
	1/4	KQ2D04-02□P1	17	8.2	7.7	10	15.8	26	22.5	13.3	5.7	6	3.2	6	6	3.6	19
Ø 6	1/8	KQ2D06-01□P1	12	10.4	9.7	12	16.8	23.6	23.6	13.3	6.7	6	3.2	13.9	11	5.4	9.7
	1/4	KQ2D06-02□P1	17	10.4	9.7	12	16.8	27	24.6	13.3	6.7	6	3.2	13.9	11	5.4	19.3
	3/8	KQ2D06-03□P1	21	10.4	9.7	12	16.8	26.5	24.1	13.3	6.7	6	3.2	13.9	11	5.4	27.6

□: A (Brass), N (Brass + Electroless nickel plating)



Release button dimensions



Oval Type



Metric Size M, R, Rc

Sealant/Gasket Seal  
Inch Size UNF, NPT

Inch Size M, R, Rc

Metric Size G

Face Seal  
Metric Size R, Rc

Inch Size NPT

Inch Size R

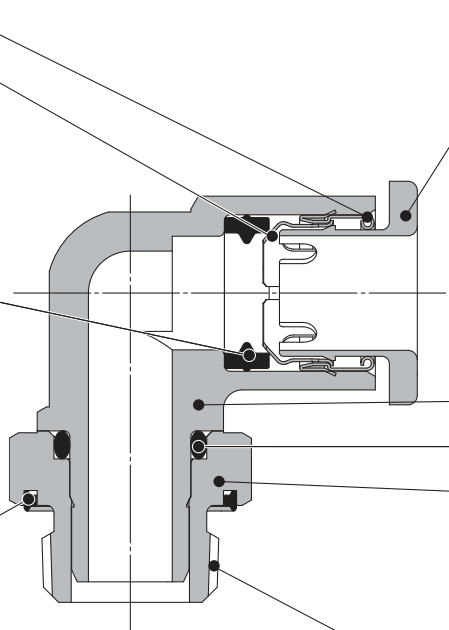
Gasket Seal  
Metric Size Uni

Inch Size Uni

# Oval Type Inch Size One-touch Fittings

Applicable Tubing: Inch Size, Connection Thread: NPT

## KQ2 Series



**Guide**

**Chuck**  
Suitable for use with nylon and urethane. Large retaining force.  
The chuck provides secure retention and the collet increases the holding force on the tube.

**Seal**  
Can be used for a wide range of pressures from a low vacuum up to a pressure of 1 MPa.  
The use of a special profile ensures sealing and reduces resistance when the tube is inserted.

**Face seal method**  
**Seal ring**  
Piping installability is improved by changing to the face seal structure.


**Release button**  
Requires little force for removal.  
Releases the chuck collet to remove the tube as well as to prevent the chuck from biting too deeply into the tubing.

**Body**

**O-ring**

**Stud**  
Effective when piping in a confined space.  
Body part rotates allowing for positioning.

**Connection thread**  
NPT



**One-touch IN/OUT connection.**  
**Possible to use in vacuum to -100 kPa.**

**Drastically reduces screw-in time with the face seal method.**



### Applicable Tubing

Tubing material	FEP, PFA, Nylon, Soft nylon, Polyurethane
Tubing O.D.	Ø 1/8", Ø 5/32", Ø 3/16"

### Specifications

Fluid		Air, Water*1
Operating pressure range*2		-100 kPa to 1 MPa
Proof pressure (at 23 °C)		3 MPa
Ambient and fluid temperature		-5 to 60 °C, Water: 0 to 40 °C (No freezing)
Thread	Mounting section	ANSI/ASME1.20.1 (NPT thread) JIS B0208 (UNF thread)
	Nut section	JIS B0208 (UNF thread)
Sealant on the threads		Seal ring

\*1 The surge pressure must be under the maximum operating pressure.

\*2 Do not use the fittings with a leak tester or for vacuum retention because they are not guaranteed for zero leakage.

### Principal Parts Material

Body	C3604, PBT
Stud	C3604 (Thread portion)
Chuck	Stainless steel 304
Guide	Stainless steel 304
Release button	POM
Seal, O-ring, Seal ring	NBR

## How to Order

### Threaded Type

**KQ2 H 05 - 34 A P 1**

One-touch fittings

Model

Symbol	Model
<b>H</b>	Male connector
<b>S</b>	Hexagon socket head male connector
<b>L</b>	Male elbow
<b>K</b>	45° male elbow
<b>V</b>	Universal male elbow
<b>VS</b>	Hexagon socket head universal male elbow
<b>VF</b>	Universal female elbow
<b>VD</b>	Double universal male elbow
<b>VT</b>	Triple universal male elbow
<b>W</b>	Extended male elbow
<b>T</b>	Male branch tee
<b>Y</b>	Male run tee

Oval type release button

Face seal

Thread material/Surface treatment

Symbol	Thread material/Surface treatment
<b>A</b>	Brass
<b>N</b>	Brass + Electroless nickel plating

Port size/Applicable tubing O.D.

Symbol	Size
33	NPT 1/16
34	NPT 1/8
35	NPT 1/4

Applicable tubing O.D.

Symbol	Size
<b>01</b>	∅ 1/8"
<b>03</b>	∅ 5/32"
<b>05</b>	∅ 3/16"

Oval Type



Metric Size M, R, Rc

Inch Size UNF, NPT

Inch Size M, R, Rc

Metric Size G

Metric Size R, Rc

Inch Size NPT

Inch Size R

Metric Size Uni

Inch Size Uni

# Inch Size One-touch Fittings

## Oval Type Variations

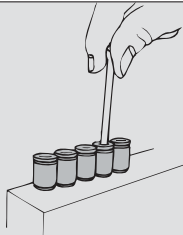
### Hexagon socket head male connector

KQ2S

P.76



Internal hexagon socket allows tightening with a hexagon wrench in confined spaces.



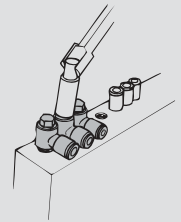
### Universal male elbow

KQ2V

P.77



Hexagon head of the body allows tightening with a box wrench in confined spaces.



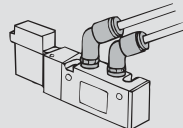
### 45° male elbow

KQ2K

P.77



Use to pipe a female thread at a 45° angle. Its direction is in-between that of the male connector and male elbow.



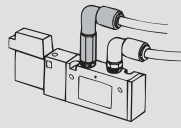
### Extended male elbow

KQ2W

P.79



Basically, it is used together with a male elbow. Its extended height allows for multi-levelled piping and prevents interference among fittings.



### Male connector

KQ2H

P.76



Use to pipe a female thread in the same direction. Most general model.

### Universal female elbow

KQ2VF

P.78



Use to branch a male or female thread in the same direction and at a 90° angle. Multiple connections possible.

### Male branch tee

KQ2T

P.79



Use to branch a female thread at both 90° angles.

### Male elbow

KQ2L

P.76



Use to pipe a female thread at right angles. Most general model.

### Double universal male elbow

KQ2VD

P.78



Use to two-branch a female thread at right angles. Two individual parts rotate 360°.

### Male run tee

KQ2Y

P.79



Use to branch a female thread in the same direction and at a 90° angle.

### Hexagon socket head universal male elbow

KQ2VS

P.77



Hexagon socket on the top allows tightening with a hexagon wrench in confined spaces.

### Triple universal male elbow

KQ2VT

P.78



Use to three-branch a female thread at right angles. Three individual parts rotate 360°.

The following models do not support oval type release buttons. Refer to the round type (from page 185).

#### Branch universal male elbow

KQ2Z

P.191



#### Double branch universal male elbow

KQ2ZD

P.192



#### Triple branch universal male elbow

KQ2ZT

P.192



#### Branch "Y"

KQ2U

P.194



⚠ Box wrenches and socket wrenches may interfere with oval type release buttons. Refer to page 217 for details.

# Inch Size One-touch Fittings **KQ2 Series**

**Oval Type** Applicable Tubing: Inch Size, Connection Thread: NPT

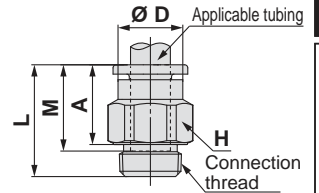
## Dimensions

### Male Connector: KQ2H (Face seal)

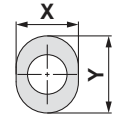


Applicable tubing O.D. [inch]	Connection thread NPT	Model	H (Width across flats)	Ø D	Release button dimensions		L	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
					X	Y				Nylon	Urethane		
Ø 1/8	1/16	KQ2H01-33□P1	11.11	6.7	6.7	9.5	16.8	11.4	13.3	3	2.5	2.5	14.9
	1/8	KQ2H01-34□P1	12.7	6.7	6.7	9.5	14.3	8.9	13.3	3	2.5	2.5	8.7
	1/4	KQ2H01-35□P1	17.46	6.7	6.7	9.5	15.6	7.5	13.3	3.4	2.9	2.5	16.6
Ø 5/32	1/16	KQ2H03-33□P1	11.11	7.7	7.7	10	19	13.6	13.3	4.8	3.4	3	13.9
	1/8	KQ2H03-34□P1	12.7	7.7	7.7	10	16.4	11	13.3	4.8	3.4	3	7.6
	1/4	KQ2H03-35□P1	17.46	7.7	7.7	10	15.6	7.5	13.3	4.8	3.4	3	16
Ø 3/16	1/8	KQ2H05-34□P1	12.7	8.3	8.4	11	16.9	11.5	13.3	7.8	6.5	3.6	7.8
	1/4	KQ2H05-35□P1	17.46	8.3	8.4	11	15.6	7.5	13.3	7.8	6.5	3.5	15.3

□: A (Brass), N (Brass + Electroless nickel plating)



Release button dimensions

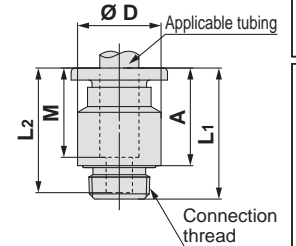


### Hexagon Socket Head Male Connector: KQ2S (Face seal)

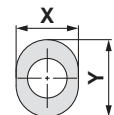


Applicable tubing O.D. [inch]	Connection thread NPT	Model	H (Width across flats)	Ø D	Release button dimensions		L <sub>1</sub>	L <sub>2</sub>	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
					X	Y					Nylon	Urethane		
Ø 5/32	1/16	KQ2S03-33□P1	2.78	12	7.7	10	19	16.3	13.6	13.3	4.1	3.6	2.8	7.5
	1/8	KQ2S03-34□P1	2.78	14	7.7	10	17.3	16.3	11.9	13.3	4.1	3.6	2.8	9.2
Ø 3/16	1/8	KQ2S05-34□P1	3.57	14	8.4	11	19.8	18.8	14.4	13.3	7.8	6.5	3.6	11.7

□: A (Brass), N (Brass + Electroless nickel plating)



Release button dimensions

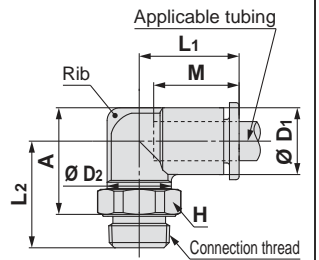


### Male Elbow: KQ2L (Face seal)

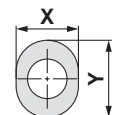


Applicable tubing O.D. [inch]	Connection thread NPT	Model	H (Width across flats)	Ø D <sub>1</sub>	Release button dimensions		Ø D <sub>2</sub>	L <sub>1</sub>	L <sub>2</sub>	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]	With a rib
					X	Y						Nylon	Urethane			
Ø 1/8	1/16	KQ2L01-33□P1	11.11	7.1	6.7	9.5	10	14.5	21.6	19.8	13.3	3	2.5	2.5	14.6	—
	1/8	KQ2L01-34□P1	12.7	7.1	6.7	9.5	10	14.5	16.7	14.9	13.3	3	2.5	2.5	6.1	—
	1/4	KQ2L01-35□P1	17.46	7.1	6.7	9.5	10	14.5	21.4	16.9	13.3	3	2.5	2.5	18.3	—
Ø 5/32	1/16	KQ2L03-33□P1	11.11	8.2	7.7	10	10	14.8	21.1	19.8	13.3	4.6	3.3	3	14.9	●
	1/8	KQ2L03-34□P1	12.7	8.2	7.7	10	10	14.8	16.2	14.9	13.3	4.6	3.3	3	6.3	●
	1/4	KQ2L03-35□P1	17.46	8.2	7.7	10	10	14.8	21.9	17.9	13.3	4.6	3.3	3	18.5	●
Ø 3/16	1/8	KQ2L05-34□P1	12.7	9.1	8.4	11	10	15	16.7	15.8	13.3	6.8	5.6	3.5	6.5	—
	1/4	KQ2L05-35□P1	17.46	9.1	8.4	11	10	15	22.4	18.8	13.3	6.8	5.6	3.5	18.7	—

□: A (Brass), N (Brass + Electroless nickel plating)



Release button dimensions



Oval Type

Metric Size M, R, Rc

Inch Size UNF, NPT

Inch Size M, R, Rc

Metric Size G

Metric Size R, Rc

Face Seal

Inch Size NPT

Inch Size R

Metric Size Uni

Inch Size Uni

Gasket Seal

# KQ2 Series

Oval Type Applicable Tubing: Inch Size, Connection Thread: NPT

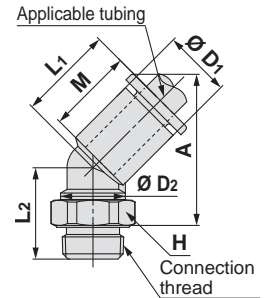
## Dimensions

### 45° Male Elbow: KQ2K (Face seal)

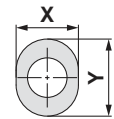


Applicable tubing O.D. [inch]	Connection thread NPT	Model	H (Width across flats)	Ø D1	Release button dimensions			Ø D2	L1	L2	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
					X	Y	Nylon						Urethane			
Ø 1/8	1/8	KQ2K01-34□P1	12.7	7.1	6.7	9.5	10	14.3	12.7	19.6	13.3	3	2.5	2.5	5.9	
Ø 5/32	1/8	KQ2K03-34□P1	12.7	8.2	7.7	10	10	14.4	12.7	20	13.3	4.8	3.4	3	6.1	
Ø 3/16	1/8	KQ2K05-34□P1	12.7	9.1	8.4	11	10	14.5	13.2	20.9	13.3	6.8	5.6	3.5	6.3	

□: A (Brass), N (Brass + Electroless nickel plating)



Release button dimensions

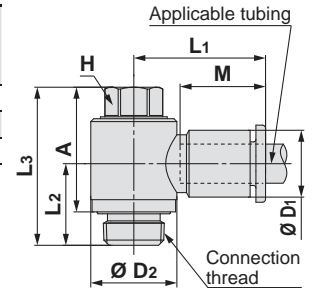


### Universal Male Elbow: KQ2V (Face seal)

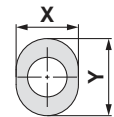


Applicable tubing O.D. [inch]	Connection thread NPT	Model	H (Width across flats)	Ø D1	Release button dimensions			Ø D2	L1	L2	L3	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
					X	Y	Nylon							Urethane			
Ø 1/8	1/8	KQ2V01-34□P1	8	7.1	6.7	9.5	14	19.3	12.9	24.8	19.4	13.3	2.2	1.9	2.5	13.1	
Ø 5/32	1/8	KQ2V03-34□P1	8	8.2	7.7	10	14	19.3	12.9	24.8	19.4	13.3	2.9	2.9	3	13.2	
Ø 3/16	1/8	KQ2V05-34□P1	8	9.1	8.4	11	14	19.6	12.9	24.8	19.4	13.3	4.5	3.7	3.5	13.4	

□: A (Brass), N (Brass + Electroless nickel plating)



Release button dimensions

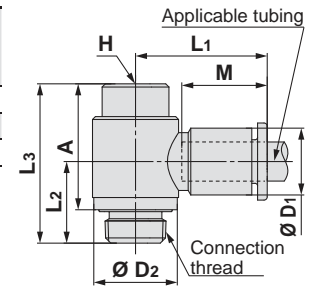


### Hexagon Socket Head Universal Male Elbow: KQ2VS (Face seal)

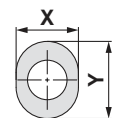


Applicable tubing O.D. [inch]	Connection thread NPT	Model	H (Width across flats)	Ø D1	Release button dimensions			Ø D2	L1	L2	L3	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
					X	Y	Nylon							Urethane			
Ø 1/8	1/8	KQ2VS01-34□P1	6.35	7.1	6.7	9.5	14	19.3	12.9	25	19.6	13.3	2.2	1.9	2.5	12.7	
Ø 5/32	1/8	KQ2VS03-34□P1	6.35	8.2	7.7	10	14	19.3	12.9	25	19.6	13.3	2.9	2.9	3	12.8	
Ø 3/16	1/8	KQ2VS05-34□P1	6.35	9.1	8.4	11	14	19.6	12.9	25	19.6	13.3	4.5	3.7	3.5	13.1	

□: A (Brass), N (Brass + Electroless nickel plating)



Release button dimensions



# Inch Size One-touch Fittings **KQ2 Series**

**Oval Type** Applicable Tubing: Inch Size, Connection Thread: NPT

## Dimensions

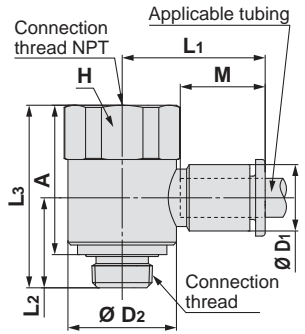
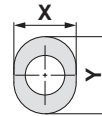
### Universal Female Elbow: KQ2VF (Face seal)



Applicable tubing O.D. [inch]	Connection thread NPT	Model	H (Width across flats)	Ø D1	Release button dimensions		Ø D2	L1	L2	L3	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
					X	Y							Nylon	Urethane		
Ø 1/8	1/8	KQ2VF01-34□P1	17.46	7.1	6.7	9.5	17	21.2	14.3	28.8	23.4	13.3	2.2	1.9	2.5	28.4
Ø 5/32	1/8	KQ2VF03-34□P1	17.46	8.2	7.7	10	17	21.2	14.3	28.8	23.4	13.3	2.9	2.9	3	28.5
Ø 3/16	1/8	KQ2VF05-34□P1	17.46	9.1	8.4	11	17	21.5	14.3	28.8	23.4	13.3	4.5	3.7	3.5	28.7

□: A (Brass), N (Brass + Electroless nickel plating)

Release button dimensions



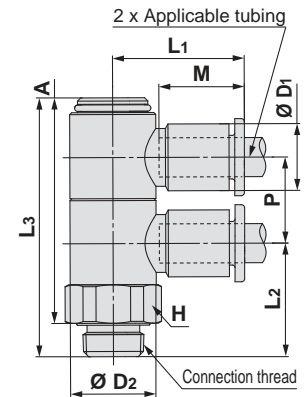
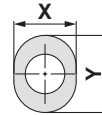
### Double Universal Male Elbow: KQ2VD (Face seal)



Applicable tubing O.D. [inch]	Connection thread NPT	Model	H (Width across flats)	Ø D1	Release button dimensions		Ø D2	L1	L2	L3	A	M	P	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
					X	Y								Nylon	Urethane		
Ø 1/8	1/8	KQ2VD01-34□P1	14.29	7.1	6.7	9.5	13.4	19.3	18.2	40.9	35.5	13.3	13.4	2.2	1.9	2.5	22.8
Ø 5/32	1/8	KQ2VD03-34□P1	14.29	8.2	7.7	10	13.4	19.3	18.2	40.9	35.5	13.3	13.4	2.9	2.9	3	23.1
Ø 3/16	1/8	KQ2VD05-34□P1	14.29	9.1	8.4	11	13.4	19.6	18.2	40.9	35.5	13.3	13.4	4.5	3.7	3.5	23.3

□: A (Brass), N (Brass + Electroless nickel plating)

Release button dimensions



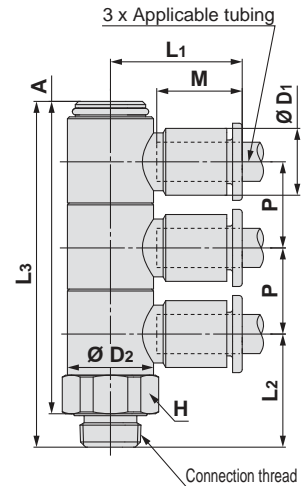
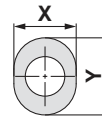
### Triple Universal Male Elbow: KQ2VT (Face seal)



Applicable tubing O.D. [inch]	Connection thread NPT	Model	H (Width across flats)	Ø D1	Release button dimensions		Ø D2	L1	L2	L3	A	M	P	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
					X	Y								Nylon	Urethane		
Ø 1/8	1/8	KQ2VT01-34□P1	14.29	7.1	6.7	9.5	13.4	19.3	18.2	54.4	49	13.3	13.4	2.2	1.9	2.5	28.3
Ø 5/32	1/8	KQ2VT03-34□P1	14.29	8.2	7.7	10	13.4	19.3	18.2	54.4	49	13.3	13.4	2.9	2.9	3	28.7
Ø 3/16	1/8	KQ2VT05-34□P1	14.29	9.1	8.4	11	13.4	19.6	18.2	54.4	49	13.3	13.4	4.5	3.7	3.5	29

□: A (Brass), N (Brass + Electroless nickel plating)

Release button dimensions



Oval Type

Metric Size M, R, Rc

Sealant/Gasket Seal

Inch Size UNF, NPT

Inch Size M, R, Rc

Metric Size G

Metric Size R, Rc

Face Seal

Inch Size NPT

Inch Size R

Gasket Seal

Metric Size Uni

Inch Size Uni

# KQ2 Series

Oval Type Applicable Tubing: Inch Size, Connection Thread: NPT

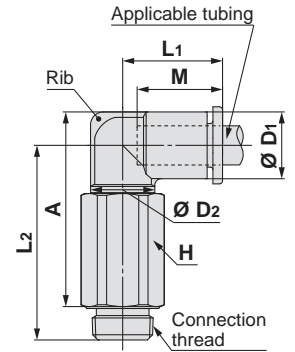
## Dimensions

### Extended Male Elbow: KQ2W (Face seal)

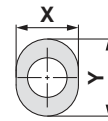


Applicable tubing O.D. [inch]	Connection thread NPT	Model	H (Width across flats)	Ø D1	Release button dimensions		Ø D2	L1	L2	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]	With a rib
					X	Y						Nylon	Urethane			
Ø 1/8	1/16	KQ2W01-33□P1	11.11	7.1	6.7	9.5	10	14.5	33.2	31.4	13.3	2.8	2.4	2.5	14.3	—
	1/8	KQ2W01-34□P1	12.7	7.1	6.7	9.5	10	14.5	30.3	28.5	13.3	2.8	2.4	2.5	18	—
	1/4	KQ2W01-35□P1	17.46	7.1	6.7	9.5	10	14.5	33	28.5	13.3	2.8	2.4	2.5	39.9	—
Ø 5/32	1/16	KQ2W03-33□P1	11.11	8.2	7.7	10	10	14.8	32.7	31.4	13.3	4	4	3	14.4	●
	1/8	KQ2W03-34□P1	12.7	8.2	7.7	10	10	14.8	29.9	28.6	13.3	4	4	3	18.2	●
	1/4	KQ2W03-35□P1	17.46	8.2	7.7	10	10	14.8	33.5	29.5	13.3	4	4	3	40.1	●
Ø 3/16	1/8	KQ2W05-34□P1	12.7	9.1	8.4	11	10	15	30.4	29.5	13.3	6.8	5.6	3.5	18.4	—
	1/4	KQ2W05-35□P1	17.46	9.1	8.4	11	10	15	34	30.5	13.3	6.8	5.6	3.5	40.3	—

□: A (Brass), N (Brass + Electroless nickel plating)



Release button dimensions

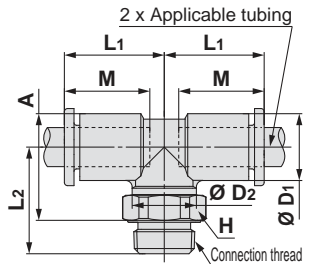


### Male Branch Tee: KQ2T (Face seal)

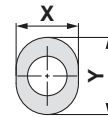


Applicable tubing O.D. [inch]	Connection thread NPT	Model	H (Width across flats)	Ø D1	Release button dimensions		Ø D2	L1	L2	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
					X	Y						Nylon	Urethane		
Ø 1/8	1/16	KQ2T01-33□P1	11.11	7.1	6.7	9.5	10	14.5	21.5	19.7	13.3	3.4	2.9	2.5	7.7
	1/8	KQ2T01-34□P1	12.7	7.1	6.7	9.5	10	14.5	16.6	14.8	13.3	3.4	2.9	2.5	6.7
	1/4	KQ2T01-35□P1	17.46	7.1	6.7	9.5	10	14.5	21.3	16.8	13.3	3.4	2.9	2.5	18.9
Ø 5/32	1/16	KQ2T03-33□P1	11.11	8.2	7.7	10	10	14.8	21.1	19.8	13.3	6	4.1	3	16.3
	1/8	KQ2T03-34□P1	12.7	8.2	7.7	10	10	14.8	16.2	14.9	13.3	6	4.1	3	7
	1/4	KQ2T03-35□P1	17.46	8.2	7.7	10	10	14.8	21.9	17.9	13.3	6	4.1	3	19.2
Ø 3/16	1/8	KQ2T05-34□P1	12.7	9.1	8.4	11	10	15	16.7	15.8	13.3	8.4	7	3.5	7.3
	1/4	KQ2T05-35□P1	17.46	9.1	8.4	11	10	15	22.4	18.8	13.3	8.4	7	3.5	19.5

□: A (Brass), N (Brass + Electroless nickel plating)



Release button dimensions

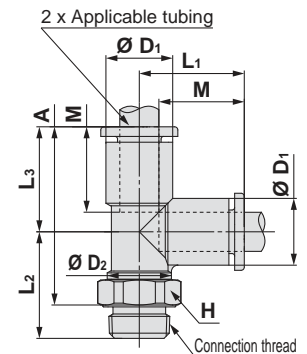


### Male Run Tee: KQ2Y (Face seal)

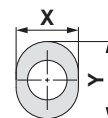


Applicable tubing O.D. [inch]	Connection thread NPT	Model	H (Width across flats)	Ø D1	Release button dimensions		Ø D2	L1	L2	L3	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
					X	Y							Nylon	Urethane		
Ø 1/8	1/16	KQ2Y01-33□P1	11.11	7.1	6.7	9.5	10	14.9	21.5	14.9	31.1	13.3	3.4	2.9	2.5	15.8
	1/8	KQ2Y01-34□P1	12.7	7.1	6.7	9.5	10	14.9	16.6	14.9	26.2	13.3	3.4	2.9	2.5	6.7
	1/4	KQ2Y01-35□P1	17.46	7.1	6.7	9.5	10	14.9	21.3	14.9	28.2	13.3	3.4	2.9	2.5	18.9
Ø 5/32	1/16	KQ2Y03-33□P1	11.11	8.2	7.7	10	10	15.3	21.1	15.3	31	13.3	6.4	4.4	3	16.4
	1/8	KQ2Y03-34□P1	12.7	8.2	7.7	10	10	15.3	16.2	15.3	26.1	13.3	6.4	4.4	3	7
	1/4	KQ2Y03-35□P1	17.46	8.2	7.7	10	10	15.3	21.9	15.3	29.1	13.3	6.4	4.4	3	19.2
Ø 3/16	1/8	KQ2Y05-34□P1	12.7	9.1	8.4	11	10	15.7	16.7	15.7	27	13.3	8.4	7	3.5	7.3
	1/4	KQ2Y05-35□P1	17.46	9.1	8.4	11	10	15.7	22.4	15.7	30	13.3	8.4	7	3.5	19.6

□: A (Brass), N (Brass + Electroless nickel plating)



Release button dimensions



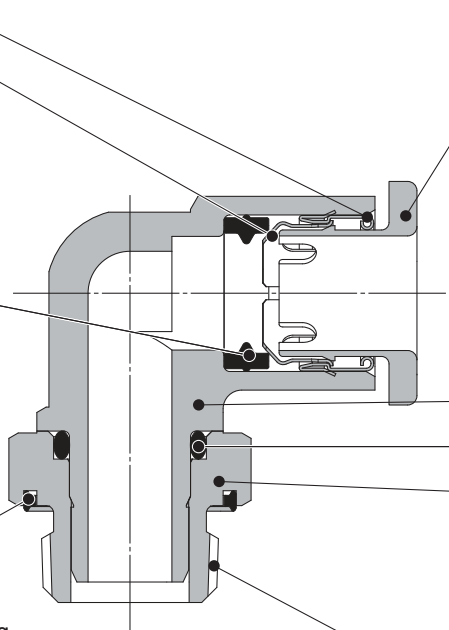


Gasket Seal		Face Seal			Sealant/Gasket Seal	
Inch Size Uni	Metric Size Uni	Inch Size R	Inch Size NPT	Metric Size R, Rc	Metric Size G	Inch Size UNF, NPT
						Metric Size M, R, Rc

# Oval Type Inch Size One-touch Fittings

Applicable Tubing: Inch Size, Connection Thread: R

## KQ2 Series



**Guide**  
**Chuck**  
Suitable for use with nylon and urethane. Large retaining force.  
The chuck provides secure retention and the collet increases the holding force on the tube.


**Seal**  
Can be used for a wide range of pressures from a low vacuum up to a pressure of 1 MPa.  
The use of a special profile ensures sealing and reduces resistance when the tube is inserted.

**Face seal method**  
**Seal ring**  
Piping installability is improved by changing to the face seal structure.

**Release button**  
Requires little force for removal.  
Releases the chuck collet to remove the tube as well as to prevent the chuck from biting too deeply into the tubing.

**Body**  
**O-ring**  
**Stud**  
Effective when piping in a confined space.  
Body part rotates allowing for positioning.

**Connection thread**  
R



**One-touch IN/OUT connection.**  
**Possible to use in vacuum to -100 kPa.**

**Drastically reduces screw-in time with the face seal method.**



### Applicable Tubing

Tubing material	FEP, PFA, Nylon, Soft nylon, Polyurethane
Tubing O.D.	Ø 1/8", Ø 3/16"

### Specifications

Fluid		Air, Water*1
Operating pressure range*2		-100 kPa to 1 MPa
Proof pressure (at 23 °C)		3 MPa
Ambient and fluid temperature		-5 to 60 °C, Water: 0 to 40 °C (No freezing)
Thread	Mounting section	JIS B0203 (Taper thread for piping) JIS B0205 (Metric coarse thread)
	Nut section	JIS B0205 (Metric fine thread)
Sealant on the threads		Seal ring

\*1 The surge pressure must be under the maximum operating pressure.

\*2 Do not use the fittings with a leak tester or for vacuum retention because they are not guaranteed for zero leakage.

### Principal Parts Material

Body	C3604, PBT
Stud	C3604 (Thread portion)
Chuck	Stainless steel 304
Guide	Stainless steel 304
Release button	POM
Seal, O-ring, Seal ring	NBR

## How to Order

### Threaded Type

**KQ2 H 05 - 01 A P 1**

One-touch fittings

Model

Symbol	Model
<b>H</b>	Male connector
<b>L</b>	Male elbow
<b>T</b>	Male branch tee
<b>W</b>	Extended male elbow
<b>Y</b>	Male run tee

Oval type release button

Face seal

Thread material/Surface treatment

Symbol	Thread material/Surface treatment
<b>A</b>	Brass
<b>N</b>	Brass + Electroless nickel plating

Port size

Symbol	Size
<b>01</b>	R 1/8
<b>02</b>	R 1/4

Applicable tubing O.D.

Symbol	Size
<b>01</b>	Ø 1/8"
<b>05</b>	Ø 3/16"

Oval Type

Metric Size M, R, Rc

Sealant/Gasket Seal

Inch Size UNF, NPT

Inch Size M, R, Rc

Metric Size G

Face Seal

Metric Size R, Rc

Inch Size NPT

Inch Size R

Gasket Seal

Metric Size Uni

Inch Size Uni

# Inch Size One-touch Fittings

## Oval Type Variations

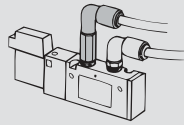
### Extended male elbow

KQ2W

P.84



Basically, it is used together with a male elbow. Its extended height allows for multi-levelled piping and prevents interference among fittings.



### Male connector

KQ2H

P.84



Use to pipe a female thread in the same direction. Most general model.

### Male branch tee

KQ2T

P.85



Use to branch a female thread at both 90° angles.

### Male elbow

KQ2L

P.84



Use to pipe a female thread at right angles. Most general model.

### Male run tee

KQ2Y

P.85



Use to branch a female thread in the same direction and at a 90° angle.

This model does not support oval type release buttons. Refer to the round type (from page 195).

### Branch "Y"

KQ2U

P.199



⚠ Box wrenches and socket wrenches may interfere with oval type release buttons. Refer to page 217 for details.

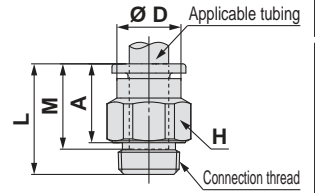
## Dimensions

### Male Connector: KQ2H (Face seal)

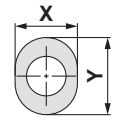


Applicable tubing O.D. [inch]	Connection thread R	Model	H (Width across flats)	Ø D	Release button dimensions		L	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
					X	Y				Nylon	Urethane		
Ø 1/8	1/8	KQ2H01-01□P1	12	6.7	6.7	9.5	14.1	8.9	13.3	3.4	2.9	2.5	6.3
	1/4	KQ2H01-02□P1	17	6.7	6.7	9.5	15	7.4	13.3	3.4	2.9	2.5	15.1
Ø 3/16	1/8	KQ2H05-01□P1	12	8.3	8.4	11	16.7	11.5	13.3	7.8	6.5	3.5	6.8
	1/4	KQ2H05-02□P1	17	8.3	8.4	11	15	7.4	13.3	7.8	6.5	3.5	13.9

□: A (Brass), N (Brass + Electroless nickel plating)



Release button dimensions

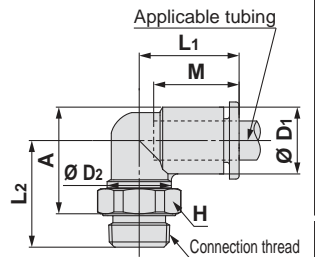


### Male Elbow: KQ2L (Face seal)

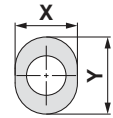


Applicable tubing O.D. [inch]	Connection thread R	Model	H (Width across flats)	Ø D1	Release button dimensions		Ø D2	L1	L2	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
					X	Y						Nylon	Urethane		
Ø 3/16	1/8	KQ2L05-01□P1	12	9.1	8.4	11	10	15	16	15.3	13.3	6.8	5.6	3.5	5.4
	1/4	KQ2L05-02□P1	17	9.1	8.4	11	10	15	20.4	17.3	13.3	6.8	5.6	3.5	14.7

□: A (Brass), N (Brass + Electroless nickel plating)



Release button dimensions

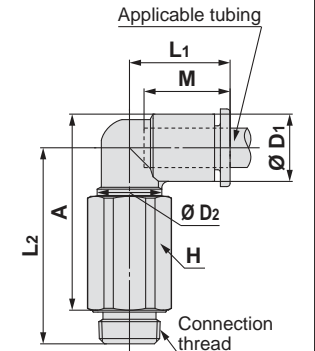


### Extended Male Elbow: KQ2W (Face seal)

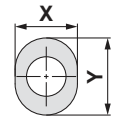


Applicable tubing O.D. [inch]	Connection thread R	Model	H (Width across flats)	Ø D1	Release button dimensions		Ø D2	L1	L2	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
					X	Y						Nylon	Urethane		
Ø 3/16	1/8	KQ2W05-01□P1	12	9.1	8.4	11	10	15	29.7	29	13.3	6.8	5.6	3.5	15.7
	1/4	KQ2W05-02□P1	17	9.1	8.4	11	10	15	32	29	13.3	6.8	5.6	3.5	35.1

□: A (Brass), N (Brass + Electroless nickel plating)



Release button dimensions



Oval Type

Metric Size M, R, Rc

Inch Size UNF, NPT

Inch Size M, R, Rc

Metric Size G

Metric Size R, Rc

Inch Size NPT

Inch Size R

Metric Size Uni

Inch Size Uni

# KQ2 Series

Oval Type Applicable Tubing: Inch Size, Connection Thread: R

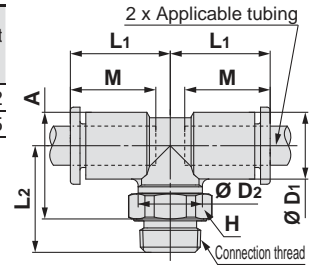
## Dimensions

### Male Branch Tee: KQ2T (Face seal)

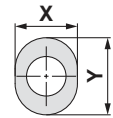


Applicable tubing O.D. [inch]	Connection thread R	Model	H (Width across flats)	Ø D1	Release button dimensions		Ø D2	L1	L2	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
					X	Y						Nylon	Urethane		
					Ø 3/16	1/8						KQ2T05-01□P1	12		
	1/4	KQ2T05-02□P1	17	9.1	8.4	11	10	15	20.4	17.3	13.3	8.4	7	3.5	15.5

□: A (Brass), N (Brass + Electroless nickel plating)



Release button dimensions

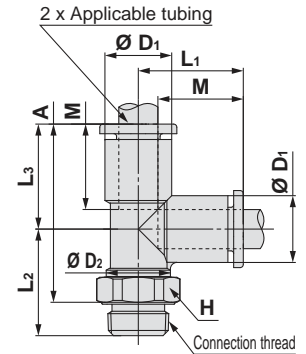


### Male Run Tee: KQ2Y (Face seal)

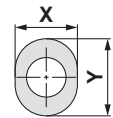


Applicable tubing O.D. [inch]	Connection thread R	Model	H (Width across flats)	Ø D1	Release button dimensions		Ø D2	L1	L2	L3	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
					X	Y							Nylon	Urethane		
					Ø 3/16	1/8							KQ2Y05-01□P1	12		
	1/4	KQ2Y05-02□P1	17	9.1	8.4	11	10	15.7	20.4	15.7	28.5	13.3	8.4	7	3.5	15.6

□: A (Brass), N (Brass + Electroless nickel plating)



Release button dimensions

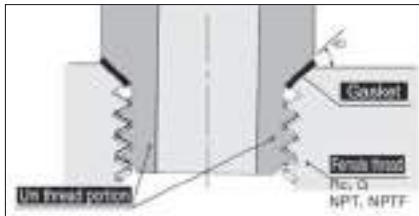
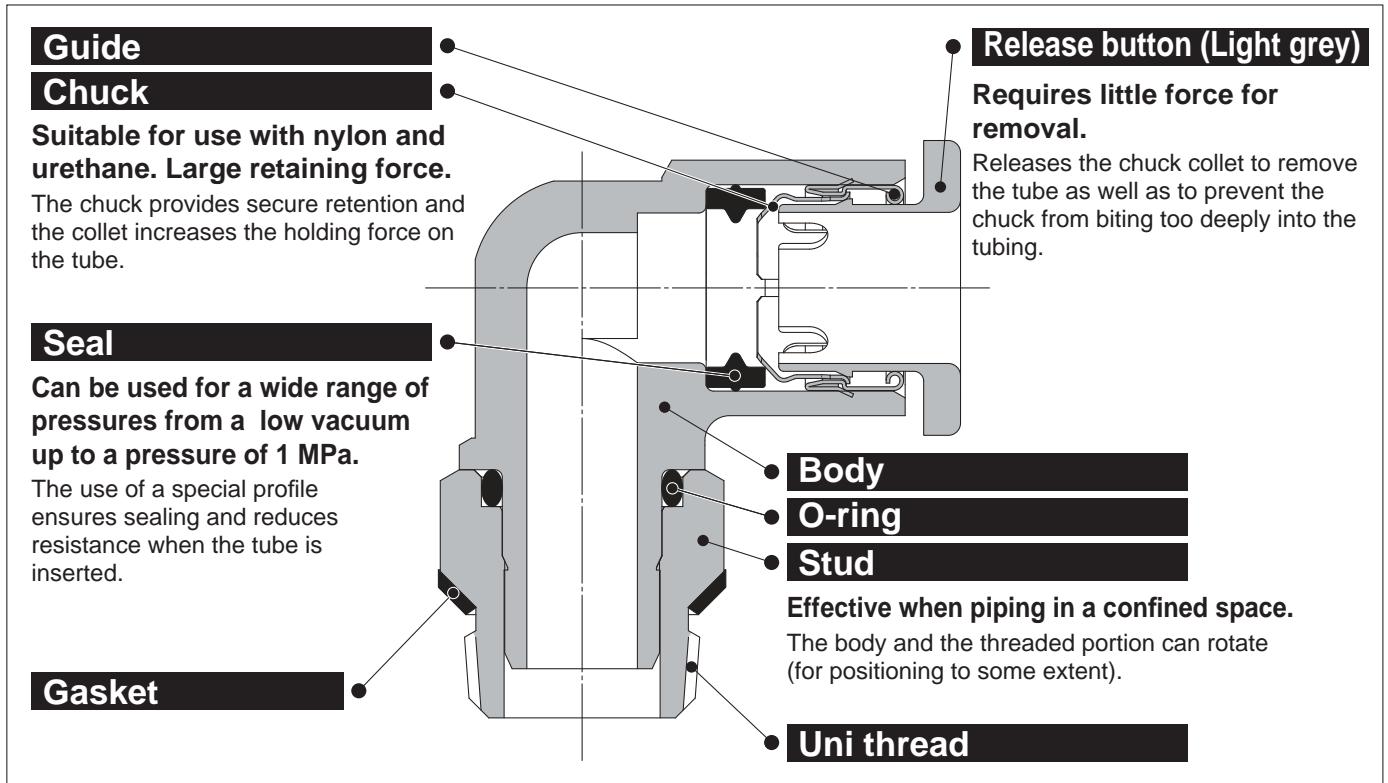


Gasket Seal		Face Seal			Sealant/Gasket Seal		Oval Type
Inch Size Uni	Metric Size Uni	Inch Size R	Inch Size NPT	Metric Size R, Rc	Metric Size G	Inch Size UNF, NPT	Metric Size M, R, Rc

# Oval Type Metric Size Uni One-touch Fittings

Applicable Tubing: Metric Size, Connection Thread: Rc, G, NPT, NPTF

## KQ2 Series



### Uni thread ridge shape

A gasket made of a stainless sheet covered with laminated NBR on both sides is seated on the chamfer of a female thread for a perfect sealing construction irrespective of the difference in thread diameters due to the difference in the types of female threads, variation in tolerance, or difference in the size of chamfer. (It is applicable to any female thread with an ordinary chamfer.)

A ridge shape has been created as a Uni thread for common applications for Rc, G, NPT and NPTF.

Drastically cuts piping work-hours with the gasket seal method.



### Applicable Tubing

Tubing material	FEP, PFA, Nylon, Soft nylon, Polyurethane
Tubing O.D.	Ø 4, Ø 6

### Specifications

Fluid	Air, Water*1
Operating pressure range*2	-100 kPa to 1 MPa
Proof pressure (at 23 °C)	3 MPa
Ambient and fluid temperature	-5 to 60 °C, Water: 0 to 40 °C (No freezing)

\*1 The surge pressure must be under the maximum operating pressure.

\*2 Do not use the fittings with a leak tester or for vacuum retention because they are not guaranteed for zero leakage.

### Principal Parts Material

Body	C3604, PBT
Stud	C3604 (Thread portion)
Chuck	Stainless steel 304
Guide	Stainless steel 304
Release button	POM
Seal, O-ring	NBR
Gasket	Stainless steel 304, NBR



**Made to Order**  
(Refer to page 93 for details.)



## How to Order

### Threaded Type

**KQ2 H 06 - U01 A 1**

One-touch fittings

Model

Symbol	Model
<b>H</b>	Male connector
<b>S</b>	Hexagon socket head male connector
<b>L</b>	Male elbow
<b>K</b>	45° male elbow
<b>V</b>	Universal male elbow
<b>T</b>	Male branch tee
<b>W</b>	Extended male elbow
<b>Y</b>	Male run tee

Applicable tubing O.D.

Symbol	Size
<b>04</b>	Ø 4
<b>06</b>	Ø 6

Oval type release button

Thread material/Surface treatment

Symbol	Thread material/Surface treatment
<b>A</b>	Brass
<b>N</b>	Brass + Electroless nickel plating

Port size

Symbol	Size
<b>U01</b>	Uni 1/8
<b>U02</b>	Uni 1/4
<b>U03</b>	Uni 3/8

### Spare Parts

#### How to Order Gasket

**KQG - U01**

Gasket for Uni One-touch fittings

Applicable port size

Symbol	Size
<b>U01</b>	Uni 1/8
<b>U02</b>	Uni 1/4
<b>U03</b>	Uni 3/8



Metric Size M, R, Rc

Inch Size UNF, NPT

Inch Size M, R, Rc

Metric Size G

Metric Size R, Rc

Inch Size NPT

Inch Size R

Metric Size Uni

Inch Size Uni

# Metric Size Uni One-touch Fittings

## Oval Type Variations

### Hexagon socket head male connector

KQ2S

P.90



Internal hexagon socket allows tightening with a hexagon wrench in confined spaces.



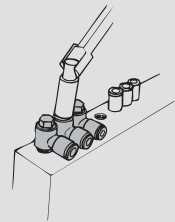
### Universal male elbow

KQ2V

P.91



Hexagon head of the body allows tightening with a box wrench in confined spaces.



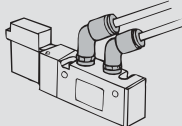
### 45° male elbow

KQ2K

P.91



Use to pipe a female thread at a 45° angle. Its direction is in-between that of the male connector and male elbow.



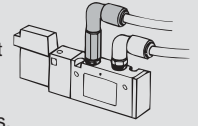
### Extended male elbow

KQ2W

P.91



Basically, it is used together with a male elbow. Its extended height allows for multi-levelled piping and prevents interference among fittings.



### Male connector

KQ2H

P.90



Use to pipe a female thread in the same direction. Most general model.

### Male run tee

KQ2Y

P.92



Use to branch a female thread in the same direction and at a 90° angle.

### Male elbow

KQ2L

P.90



Use to pipe a female thread at right angles. Most general model.

### Male branch tee

KQ2T

P.92



Use to branch a female thread at both 90° angles.

This model does not support oval type release buttons. Refer to the round type (from page 201).

### Branch "Y"

KQ2U

P.206



⚠ Box wrenches and socket wrenches may interfere with oval type release buttons. Refer to page 217 for details.

# Metric Size Uni One-touch Fittings **KQ2 Series**

**Oval Type**

Applicable Tubing: Metric Size, Connection Thread: Rc, G, NPT, NPTF

## Dimensions

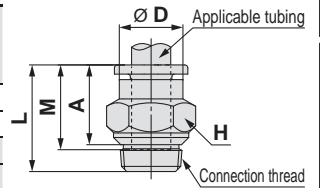
### Male Connector: KQ2H (Gasket seal)



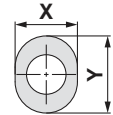
Applicable tubing O.D. [mm]	Connection thread Uni	Model	H (Width across flats)	Ø D	Release button dimensions		L	A*1	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
					X	Y				Nylon	Urethane		
Ø 4	1/8	KQ2H04-U01□1	10	7.7	7.7	10	15.9	11.1	13.3	4.8	3.4	3	6.6
	1/4	KQ2H04-U02□1	14	7.7	7.7	10	15.3	8.9	13.3	4.8	3.4	3	12.7
Ø 6	1/8	KQ2H06-U01□1	12	9.7	9.7	12	16.7	11.9	13.3	13.1	10.4	4.5	6.2
	1/4	KQ2H06-U02□1	14	9.7	9.7	12	17	10.6	13.3	13.1	10.4	4.5	12.8
	3/8	KQ2H06-U03□1	17	9.7	9.7	12	14.9	8.5	13.3	13.1	10.4	4.5	18.1

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Reference dimensions after installation of Uni thread



Release button dimensions



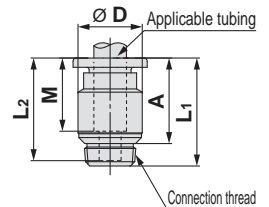
### Hexagon Socket Head Male Connector: KQ2S (Gasket seal)



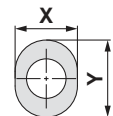
Applicable tubing O.D. [mm]	Connection thread Uni	Model	H (Width across flats)	Ø D	Release button dimensions		L <sub>1</sub>	L <sub>2</sub>	A*1	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
					X	Y					Nylon	Urethane		
Ø 4	1/8	KQ2S04-U01□1	3	10	7.7	10	20.6	19.6	15.8	13.3	4.1	3.6	3.1	8
Ø 6	1/8	KQ2S06-U01□1	4	12	9.7	12	19.8	18.8	15	13.3	10	9.9	4.1	8.2
	1/4	KQ2S06-U02□1	4	14	9.7	12	19.8	18.8	13.4	13.3	10.7	10	4.1	12.3

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Reference dimensions after installation of Uni thread



Release button dimensions



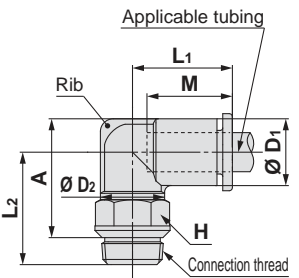
### Male Elbow: KQ2L (Gasket seal)



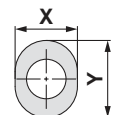
Applicable tubing O.D. [mm]	Connection thread Uni	Model	H (Width across flats)	Ø D <sub>1</sub>	Release button dimensions		Ø D <sub>2</sub>	L <sub>1</sub>	L <sub>2</sub>	A*1	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]	With a rib
					X	Y						Nylon	Urethane			
Ø 4	1/8	KQ2L04-U01□1	10	8.2	7.7	10	10	14.8	16.4	15.7	13.3	4.6	3.3	3	4.8	●
	1/4	KQ2L04-U02□1	14	8.2	7.7	10	10	14.8	19.2	16.9	13.3	4.6	3.3	3	11.5	●
Ø 6	1/8	KQ2L06-U01□1	10	10.4	9.7	12	10	15.5	17.5	17.9	13.3	11.4	9	4.5	5.3	—
	1/4	KQ2L06-U02□1	14	10.4	9.7	12	10	15.5	20.3	19.1	13.3	11.4	9	4.5	12	—
	3/8	KQ2L06-U03□1	17	10.4	9.7	12	10	15.5	21.4	20.2	13.3	11.4	9	4.5	21.4	—

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Reference dimensions after installation of Uni thread



Release button dimensions



Oval Type

Metric Size M, R, Rc

Inch Size UNF, NPT

Inch Size M, R, Rc

Metric Size G

Metric Size R, Rc

Face Seal

Inch Size NPT

Inch Size R

Metric Size Uni

Inch Size Uni

Gasket Seal

# KQ2 Series

Oval Type Applicable Tubing: Metric Size, Connection Thread: Rc, G, NPT, NPTF

## Dimensions

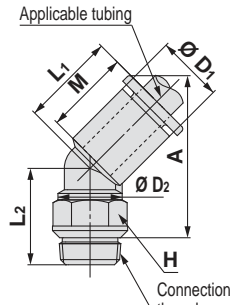
### 45° Male Elbow: KQ2K (Gasket seal)



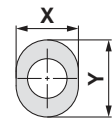
Applicable tubing O.D. [mm]	Connection thread Uni	Model	H (Width across flats)	Ø D1	Release button dimensions		Ø D2	L1	L2	A*1	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
					X	Y						Nylon	Urethane		
Ø 4	1/8	KQ2K04-U01□1	10	8.2	7.7	10	10	14.4	12.9	20.8	13.3	4.8	3.4	4.5	4.7
	1/4	KQ2K04-U02□1	14	8.2	7.7	10	10	14.4	14.7	21	13.3	4.8	3.4	4.5	11.3
Ø 6	1/8	KQ2K06-U01□1	10	10.4	9.7	12	10	14.7	15	23.8	13.3	8.7	6.9	4.5	5.1
	1/4	KQ2K06-U02□1	14	10.4	9.7	12	10	14.7	16.8	24	13.3	8.7	6.9	4.5	11.7
	3/8	KQ2K06-U03□1	17	10.4	9.7	12	10	14.7	17.9	25.1	13.3	8.7	6.9	4.5	21.2

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Reference dimensions after installation of Uni thread



Release button dimensions



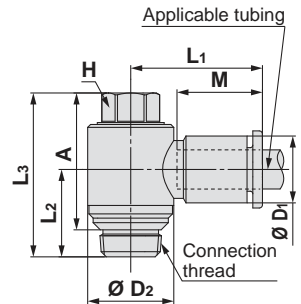
### Universal Male Elbow: KQ2V (Gasket seal)



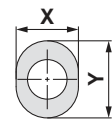
Applicable tubing O.D. [mm]	Connection thread Uni	Model	H (Width across flats)	Ø D1	Release button dimensions		Ø D2	L1	L2	L3	A*1	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
					X	Y							Nylon	Urethane		
Ø 4	1/8	KQ2V04-U01□1	8	8.2	7.7	10	13.4	19.3	13.6	25.5	20.7	13.3	2.9	2.9	4.5	13.5
Ø 6	1/8	KQ2V06-U01□1	8	10.4	9.7	12	13.4	20.5	13.6	25.5	20.7	13.3	7.5	5.9	4.5	13.9
	1/4	KQ2V06-U02□1	10	10.4	9.7	12	15.3	19.9	15.4	28	21.6	13.3	7.5	5.9	4.5	21.8

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Reference dimensions after installation of Uni thread



Release button dimensions



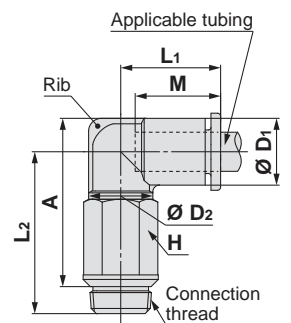
### Extended Male Elbow: KQ2W (Gasket seal)



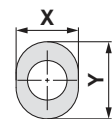
Applicable tubing O.D. [mm]	Connection thread Uni	Model	H (Width across flats)	Ø D1	Release button dimensions		Ø D2	L1	L2	A*1	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]	With a rib
					X	Y						Nylon	Urethane			
Ø 4	1/8	KQ2W04-U01□1	10	8.2	7.7	10	10	14.8	24.1	23.4	13.3	4	4	3	8.3	●
	1/4	KQ2W04-U02□1	14	8.2	7.7	10	10	14.8	30.1	27.8	13.3	4	4	3	23.9	●
Ø 6	1/8	KQ2W06-U01□1	10	10.4	9.7	12	10	15.5	31.2	31.6	13.3	10.9	8.6	4.5	11.5	—
	1/4	KQ2W06-U02□1	14	10.4	9.7	12	10	15.5	31.2	30	13.3	10.9	8.6	4.5	24.3	—
	3/8	KQ2W06-U03□1	17	10.4	9.7	12	10	15.5	32.3	31.1	13.3	10.9	8.6	4.5	41	—

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Reference dimensions after installation of Uni thread



Release button dimensions



# Metric Size Uni One-touch Fittings **KQ2 Series**

**Oval Type**

Applicable Tubing: Metric Size, Connection Thread: Rc, G, NPT, NPTF

## Dimensions

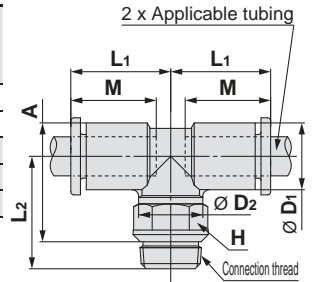
### Male Branch Tee: KQ2T (Gasket seal)



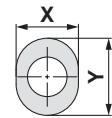
Applicable tubing O.D. [mm]	Connection thread Uni	Model	H (Width across flats)	Ø D1	Release button dimensions			Ø D2	L1	L2	A*1	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
					X	Y	Nylon						Urethane			
Ø 4	1/8	KQ2T04-U01□1	10	8.2	7.7	10	10	14.8	16.4	15.7	13.3	6	4.1	3	5.5	
	1/4	KQ2T04-U02□1	14	8.2	7.7	10	10	14.8	19.2	16.9	13.3	6	4.1	3	12.2	
Ø 6	1/8	KQ2T06-U01□1	10	10.4	9.7	12	10	15.5	17.5	17.9	13.3	13.9	11	4.5	6.2	
	1/4	KQ2T06-U02□1	14	10.4	9.7	12	10	15.5	20.3	19.1	13.3	13.9	11	4.5	12.9	
	3/8	KQ2T06-U03□1	17	10.4	9.7	12	10	15.5	21.4	20.2	13.3	13.9	11	4.5	22.3	

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Reference dimensions after installation of Uni thread



Release button dimensions



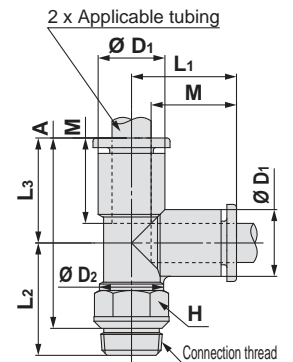
### Male Run Tee: KQ2Y (Gasket seal)



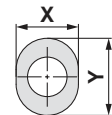
Applicable tubing O.D. [mm]	Connection thread Uni	Model	H (Width across flats)	Ø D1	Release button dimensions			Ø D2	L1	L2	L3	A*1	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
					X	Y	Nylon							Urethane			
Ø 4	1/8	KQ2Y04-U01□1	10	8.2	7.7	10	10	15.3	16.4	15.3	26.9	13.3	6.4	4	3	5.6	
	1/4	KQ2Y04-U02□1	14	8.2	7.7	10	10	15.3	19.2	15.3	28.1	13.3	6.4	4	3	12.2	
Ø 6	1/8	KQ2Y06-U01□1	10	10.4	9.7	12	10	16.3	17.5	16.3	29	13.3	13.4	10.6	4.5	6.3	
	1/4	KQ2Y06-U02□1	14	10.4	9.7	12	10	16.3	20.3	16.3	30.2	13.3	13.4	10.6	4.5	13	
	3/8	KQ2Y06-U03□1	17	10.4	9.7	12	10	16.3	21.4	16.3	31.3	13.3	13.4	10.6	4.5	22.5	

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Reference dimensions after installation of Uni thread



Release button dimensions



Oval Type

Metric Size M, R, Rc

Inch Size UNF, NPT

Inch Size M, R, Rc

Metric Size G

Metric Size R, Rc

Inch Size NPT

Inch Size R

Metric Size Uni

Inch Size Uni

# KQ2 Series

# Made to Order/Clean Series/Spare Parts

Please contact SMC for detailed dimensions, specifications, and lead times.

## 1 Made to Order

Symbol	Specifications
<b>X12</b>	Lubricant: White vaseline Release button colour: White
<b>X35</b> *1	Body colour: Black Release button colour: Light grey
<b>X41</b>	With fixed orifice*2

\*1 The following models are not available as made-to-order: Hexagon socket head male connector/KQ2S, Male connector/KQ2H

\*2 Please contact SMC for availability.

**The following made-to-order products will be provided based on previous models (KQ2 series). Please contact SMC separately.**

Symbol	Specifications
<b>X17</b>	Grease-free Rubber material: NBR (With fluorine coating) Release button colour: Light blue
<b>X29</b>	Grease-free Rubber material: NBR (With fluorine coating) Release button colour: Light blue Copper-free (With electroless nickel plating)
<b>X39</b>	Grease-free Rubber material: NBR (With fluorine coating) Release button colour: Light blue Clean (Copper-free, air blow, double packaging, resin body: white)

## 3 Spare Parts

Description	Part no.	Applicable thread
Gasket	<b>KQG-U01</b>	Uni 1/8
	<b>KQG-U02</b>	Uni 1/4
	<b>KQG-U03</b>	Uni 3/8

## 2 Clean Series

Please consult with SMC separately for applicable models.

Symbol	Specifications
<b>10-</b>	Brass parts: With electroless nickel plating Lubricant: Fluorine grease Air blow in a clean room Double packaging Resin body, Release button colour: White

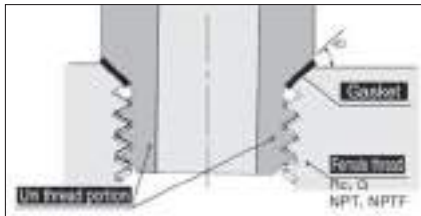
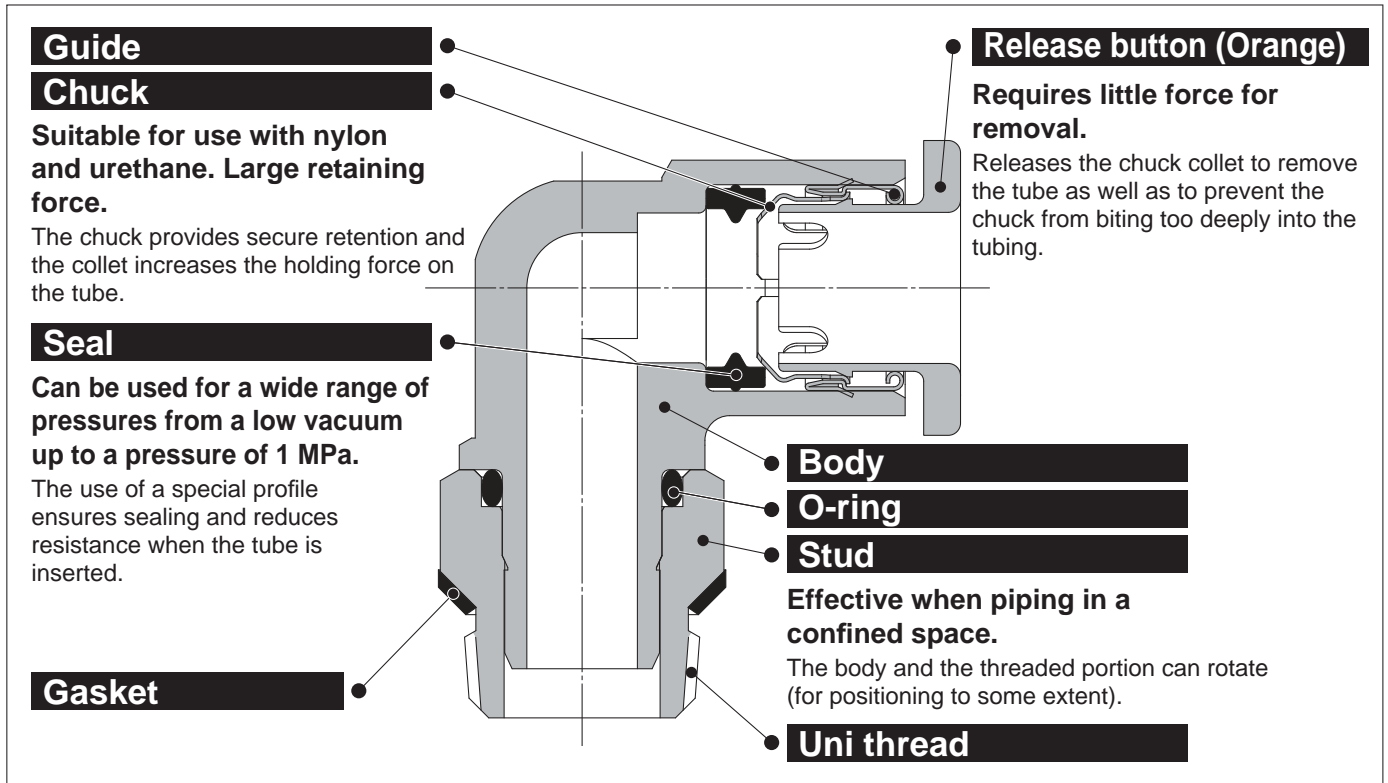
Example) **10-KQ2H06-U01N1**

Gasket Seal		Face Seal			Sealant/Gasket Seal		Oval Type
Inch Size Uni	Metric Size Uni	Inch Size R	Inch Size NPT	Metric Size R, Rc	Metric Size G	Inch Size UNF, NPT	Metric Size M, R, Rc

# Oval Type Inch Size Uni One-touch Fittings

Applicable Tubing: Inch Size, Connection Thread: Rc, G, NPT, NPTF

## KQ2 Series



### Uni thread ridge shape

A gasket made of a stainless sheet covered with laminated NBR on both sides is seated on the chamfer of a female thread for a perfect sealing construction irrespective of the difference in thread diameters due to the difference in the types of female threads, variation in tolerance, or difference in the size of chamfer. (It is applicable to any female thread with an ordinary chamfer.)

A ridge shape has been created as a Uni thread for common applications for Rc, G, NPT and NPTF.

Drastically cuts piping work-hours with the gasket seal method.



### Applicable Tubing

Tubing material	FEP, PFA, Nylon, Soft nylon, Polyurethane
Tubing O.D.	Ø 1/8", Ø 5/32", Ø 3/16"

### Specifications

Fluid	Air, Water*1
Operating pressure range*2	-100 kPa to 1 MPa
Proof pressure (at 23 °C)	3 MPa
Ambient and fluid temperature	-5 to 60 °C, Water: 0 to 40 °C (No freezing)

\*1 The surge pressure must be under the maximum operating pressure.

\*2 Do not use the fittings with a leak tester or for vacuum retention because they are not guaranteed for zero leakage.

### Principal Parts Material

Body	C3604, PBT
Stud	C3604 (Thread portion)
Chuck	Stainless steel 304
Guide	Stainless steel 304
Release button	POM
Seal, O-ring	NBR
Gasket	Stainless steel 304, NBR



**Made to Order**  
 (Refer to page 100 for details.)



## How to Order

### Threaded Type

**KQ2 H 05 - U01 A 1**

One-touch fittings

Model

Symbol	Model
<b>H</b>	Male connector
<b>L</b>	Male elbow
<b>T</b>	Male branch tee
<b>W</b>	Extended male elbow
<b>Y</b>	Male run tee

Applicable tubing O.D.

Symbol	Size
<b>01</b>	Ø 1/8"
<b>03</b>	Ø 5/32"
<b>05</b>	Ø 3/16"

Oval type release button

Thread material/Surface treatment

Symbol	Thread material/Surface treatment
<b>A</b>	Brass
<b>N</b>	Brass + Electroless nickel plating

Port size

Symbol	Size
Thread connection <b>U01</b>	Uni 1/8
<b>U02</b>	Uni 1/4

### Spare Parts

How to Order Gasket

**KQG - U01**

Gasket for Uni One-touch fittings

Applicable port size

Symbol	Size
<b>U01</b>	Uni 1/8
<b>U02</b>	Uni 1/4

Oval Type



Metric Size M, R, Rc

Inch Size UNF, NPT

Inch Size M, R, Rc

Metric Size G

Metric Size R, Rc

Inch Size NPT

Inch Size R

Metric Size Uni

Inch Size Uni

Gasket Seal

Face Seal

Sealant/Gasket Seal

# Inch Size Uni One-touch Fittings

## Oval Type Variations

### Male connector

**KQ2H**

P.98



Use to pipe a female thread in the same direction. Most general model.

### Male elbow

**KQ2L**

P.98



Use to pipe a female thread at right angles. Most general model.

### Extended male elbow

**KQ2W**

P.98



Basically, it is used together with a male elbow. Its extended height allows for multi-levelled piping and prevents interference among fittings.

### Male run tee

**KQ2Y**

P.99



Use to branch a female thread in the same direction and at a 90° angle.

### Male branch tee

**KQ2T**

P.99



Use to branch a female thread at both 90° angles.

This model does not support oval type release buttons. Refer to the round type (from page 209).

### Branch "Y"

**KQ2U**

P.213



⚠ Box wrenches and socket wrenches may interfere with oval type release buttons. Refer to page 217 for details.

# Inch Size Uni One-touch Fittings **KQ2 Series**

Oval Type

Applicable Tubing: Inch Size, Connection Thread: Rc, G, NPT, NPTF

## Dimensions

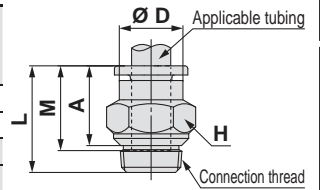
### Male Connector: KQ2H (Gasket seal)



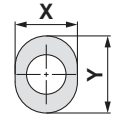
Applicable tubing O.D. [inch]	Connection thread Uni	Model	H (Width across flats)	Ø D	Release button dimensions		L	A*1	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
					X	Y				Nylon	Urethane		
Ø 1/8	1/8	KQ2H01-U01□	11.11	—	6.7	9.5	15.2	10.4	13.3	3.4	2.9	2.5	7.9
	1/4	KQ2H01-U02□	14.29	—	6.7	9.5	15.3	8.9	13.3	3.4	2.9	2.5	13.7
Ø 5/32	1/8	KQ2H03-U01□	11.11	—	7.7	10	15.7	10.9	13.3	4.8	3.4	3	7.7
	1/4	KQ2H03-U02□	14.29	—	7.7	10	15.3	8.9	13.3	4.8	3.4	3	13
Ø 3/16	1/8	KQ2H05-U01□	12.7	8.55	8.4	11	16	11.2	13.3	6.8	5.6	3.5	7.7
	1/4	KQ2H05-U02□	14.29	—	8.4	11	15.3	8.9	13.3	6.8	5.6	3.5	12.4

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Reference dimensions after installation of Uni thread



Release button dimensions



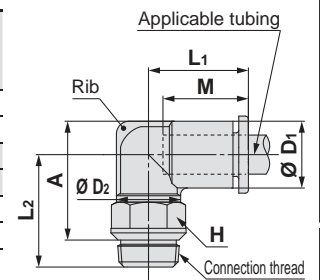
### Male Elbow: KQ2L (Gasket seal)



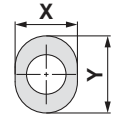
Applicable tubing O.D. [inch]	Connection thread Uni	Model	H (Width across flats)	Ø D <sub>1</sub>	Release button dimensions		Ø D <sub>2</sub>	L <sub>1</sub>	L <sub>2</sub>	A*1	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]	With a rib
					X	Y						Nylon	Urethane			
Ø 1/8	1/8	KQ2L01-U01□	11.11	7.1	6.7	9.5	10	14.5	17.9	16.7	13.3	3	2.5	2.5	6	—
	1/4	KQ2L01-U02□	14.29	7.1	6.7	9.5	10	14.5	19.2	16.4	13.3	3	2.5	2.5	12.1	—
Ø 5/32	1/8	KQ2L03-U01□	11.11	8.2	7.7	10	10	14.8	17.4	16.7	13.3	4.6	3.3	3	6.2	●
	1/4	KQ2L03-U02□	14.29	8.2	7.7	10	10	14.8	19.7	17.4	13.3	4.6	3.3	3	12.3	●
Ø 3/16	1/8	KQ2L05-U01□	11.11	9.1	8.4	11	10	15	17.9	17.7	13.3	6.8	5.6	3.5	6.4	—
	1/4	KQ2L05-U02□	14.29	9.1	8.4	11	10	15	20.2	18.4	13.3	6.8	5.6	3.5	12.5	—

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Reference dimensions after installation of Uni thread



Release button dimensions



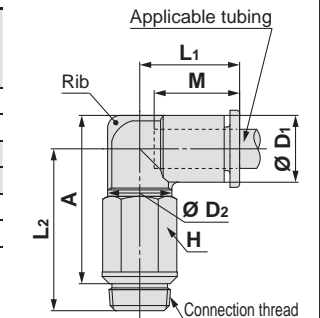
### Extended Male Elbow: KQ2W (Gasket seal)



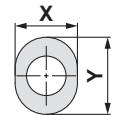
Applicable tubing O.D. [inch]	Connection thread Uni	Model	H (Width across flats)	Ø D <sub>1</sub>	Release button dimensions		Ø D <sub>2</sub>	L <sub>1</sub>	L <sub>2</sub>	A*1	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]	With a rib
					X	Y						Nylon	Urethane			
Ø 1/8	1/8	KQ2W01-U01□	11.11	7.1	6.7	9.5	10	14.5	31.5	30.3	13.3	2.8	2.4	2.5	14.5	—
	1/4	KQ2W01-U02□	14.29	7.1	6.7	9.5	10	14.5	30.8	28	13.3	2.8	2.4	2.5	26	—
Ø 5/32	1/8	KQ2W03-U01□	11.11	8.2	7.7	10	10	14.8	31.1	30.4	13.3	4	4	3	14.6	●
	1/4	KQ2W03-U02□	14.29	8.2	7.7	10	10	14.8	31.3	29	13.3	4	4	3	26.2	●
Ø 3/16	1/8	KQ2W05-U01□	11.11	9.1	8.4	11	10	15	31.6	31.3	13.3	6.8	5.6	3.5	14.8	—
	1/4	KQ2W05-U02□	14.29	9.1	8.4	11	10	15	31.8	30	13.3	6.8	5.6	3.5	26.4	—

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Reference dimensions after installation of Uni thread



Release button dimensions



Oval Type

Metric Size M, R, Rc

Inch Size UNF, NPT

Inch Size M, R, Rc

Metric Size G

Metric Size R, Rc

Inch Size NPT

Inch Size R

Metric Size Uni

Inch Size Uni

# KQ2 Series

Oval Type Applicable Tubing: Inch Size, Connection Thread: Rc, G, NPT, NPTF

## Dimensions

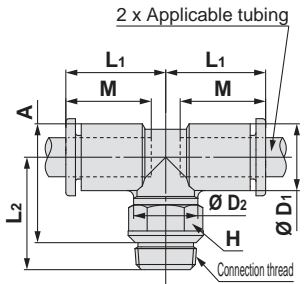
### Male Branch Tee: KQ2T (Gasket seal)



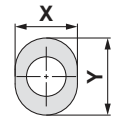
Applicable tubing O.D. [inch]	Connection thread Uni	Model	H (Width across flats)	Ø D1	Release button dimensions		Ø D2	L1	L2	A*1	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
					X	Y						Nylon	Urethane		
					Ø 1/8	1/8						KQ2T01-U01□	11.11		
	1/4	KQ2T01-U02□	14.29	7.1	6.7	9.5	10	14.5	19.1	16.3	13.3	3.4	2.9	2.5	12.7
Ø 5/32	1/8	KQ2T03-U01□	11.11	8.2	7.7	10	10	14.8	17.4	16.7	13.3	6	4.1	3	6.9
	1/4	KQ2T03-U02□	14.29	8.2	7.7	10	10	14.8	19.7	17.4	13.3	6	4.1	3	13
Ø 3/16	1/8	KQ2T05-U01□	11.11	9.1	8.4	11	10	15	17.9	17.6	13.3	6.8	5.6	3.5	7.1
	1/4	KQ2T05-U02□	14.29	9.1	8.4	11	10	15	20.2	18.3	13.3	6.8	5.6	3.5	13.3

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Reference dimensions after installation of Uni thread



Release button dimensions



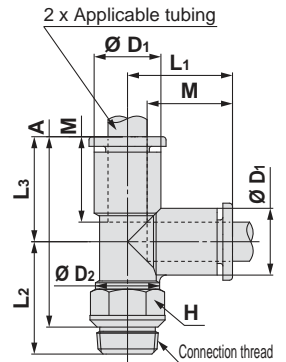
### Male Run Tee: KQ2Y (Gasket seal)



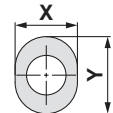
Applicable tubing O.D. [inch]	Connection thread Uni	Model	H (Width across flats)	Ø D1	Release button dimensions		Ø D2	L1	L2	L3	A*1	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
					X	Y							Nylon	Urethane		
					Ø 1/8	1/8							KQ2Y01-U01□	11.11		
1/4	KQ2Y01-U02□	14.29	7.1	6.7		9.5	10	14.9	19.1	14.9	27.7	13.3	3.4	2.9	2.5	12.8
Ø 5/32	1/8	KQ2Y03-U01□	11.11	8.2	7.7	10	10	15.3	17.4	15.3	27.9	13.3	6.4	4.4	3	6.9
	1/4	KQ2Y03-U02□	14.29	8.2	7.7	10	10	15.3	19.7	15.3	28.6	13.3	6.4	4.4	3	13.1
Ø 3/16	1/8	KQ2Y05-U01□	11.11	9.1	8.4	11	10	15.7	17.9	15.7	28.8	13.3	6.8	5.6	3.5	7.2
	1/4	KQ2Y05-U02□	14.29	9.1	8.4	11	10	15.7	20.2	15.7	29.5	13.3	6.8	5.6	3.5	13.4

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Reference dimensions after installation of Uni thread



Release button dimensions



# KQ2 Series

# Made to Order/Clean Series/Spare Parts

Please contact SMC for detailed dimensions, specifications, and lead times.

## 1 Made to Order

Symbol	Specifications
<b>X12</b>	Lubricant: White vaseline Release button colour: White
<b>X35</b> *1	Body colour: Black Release button colour: Orange
<b>X41</b>	With fixed orifice*2

\*1 The following model is not available as made-to-order: Male connector/ KQ2H

\*2 Please contact SMC for availability.

The following made-to-order products will be provided based on previous models (KQ2 series). Please contact SMC separately.

Symbol	Specifications
<b>X17</b>	Grease-free Rubber material: NBR (With fluorine coating) Release button colour: Light blue
<b>X29</b>	Grease-free Rubber material: NBR (With fluorine coating) Release button colour: Light blue Copper-free (With electroless nickel plating)
<b>X39</b>	Grease-free Rubber material: NBR (With fluorine coating) Release button colour: Light blue Clean (Copper-free, air blow, double packaging, resin body: white)

## 3 Spare Parts

Description	Part no.	Applicable thread
Gasket	<b>KQG-U01</b>	Uni 1/8
	<b>KQG-U02</b>	Uni 1/4

## 2 Clean Series

Please consult with SMC separately for applicable models.

Symbol	Specifications
<b>10-</b>	Brass parts: With electroless nickel plating Lubricant: Fluorine grease Air blow in a clean room Double packaging Resin body, Release button colour: White

Example) **10-KQ2H05-U01N1**

Oval Type



Metric Size M, R, Rc

Inch Size UNF, NPT

Inch Size M, R, Rc

Metric Size G

Metric Size R, Rc

Inch Size NPT

Inch Size R

Metric Size Uni

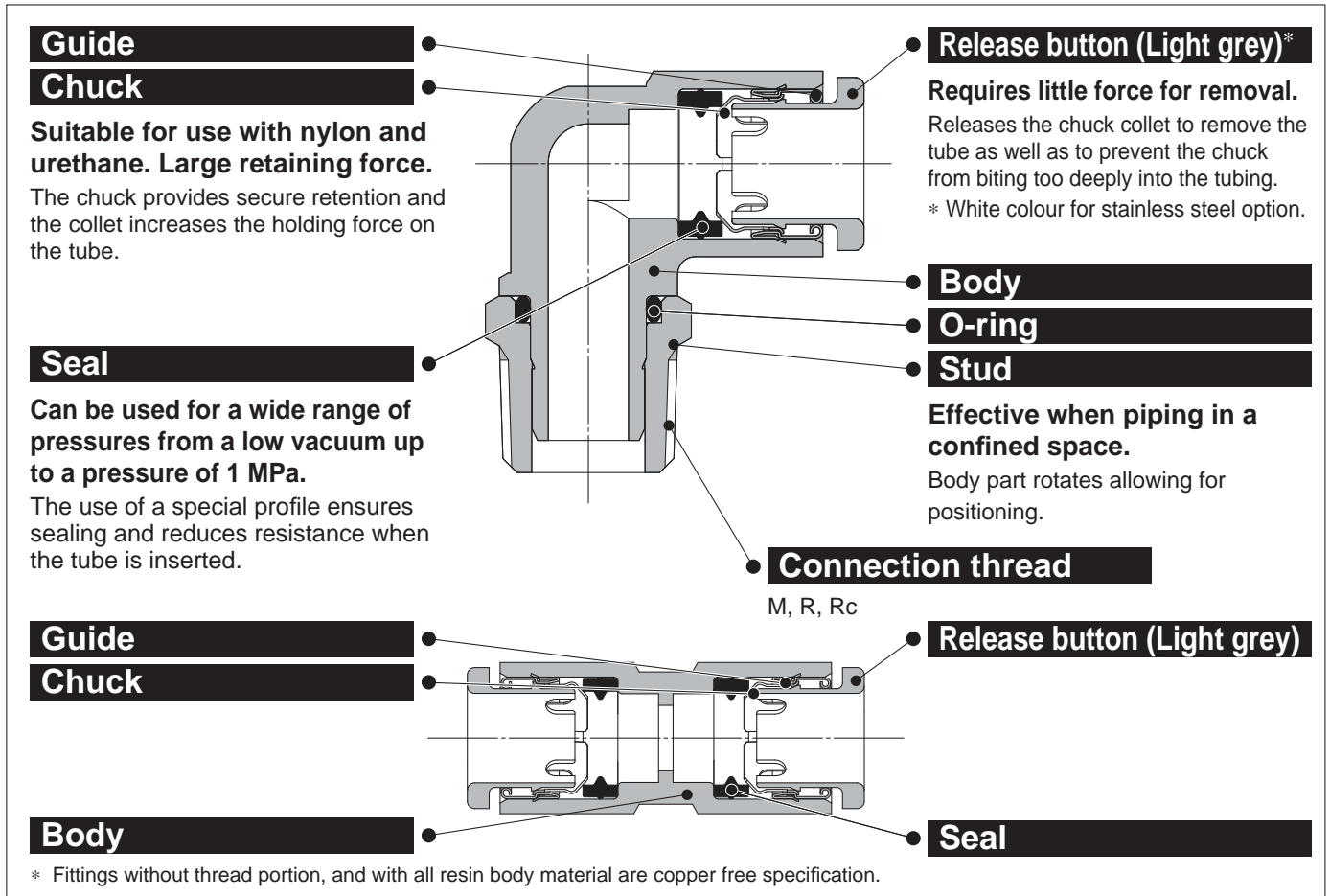
Inch Size Uni

Inch Size Uni

# Metric Size One-touch Fittings

Applicable Tubing: Metric Size, Connection Thread: M, R, Rc

## KQ2 Series



**One-touch IN/OUT connection.**  
**Possible to use in vacuum to -100 kPa.**



**Made to Order**  
(Refer to page 131 for details.)

### Applicable Tubing

Tubing material	FEP, PFA, Nylon, Soft nylon, Polyurethane
Tubing O.D.	Ø 2, Ø 3.2, Ø 4, Ø 6, Ø 8, Ø 10, Ø 12, Ø 16

### Specifications

Fluid		Air, Water*1
Operating pressure range*2		-100 kPa to 1 MPa
Proof pressure (at 23 °C)		3 MPa
Ambient and fluid temperature		-5 to 60 °C, Water: 0 to 40 °C (No freezing)
Thread	Mounting section	JIS B0203 (Taper thread for piping) JIS B0205 (Metric coarse thread)
	Nut section	JIS B0205 (Metric fine thread)
Seal on the threads		With sealant

\*1 The surge pressure must be under the maximum operating pressure.

\*2 Do not use the fittings with a leak tester or for vacuum retention because they are not guaranteed for zero leakage.

### Principal Parts Material

Body	C3604, PBT, PP, Stainless steel 303
Stud	C3604 (Thread portion), Stainless steel 303 (Thread portion)
Chuck	Stainless steel 304
Guide	Stainless steel 304
Release button	POM
Seal, O-ring	NBR
Gasket	Stainless steel 304, NBR

## How to Order

### Threaded Type

**KQ2 H 06 - 01 A S**

One-touch fittings

Model

Symbol	Model
H	Male connector
S	Hexagon socket head male connector
F	Female connector
L	Male elbow
LU	Branch male elbow
K	45° male elbow*
V	Universal male elbow*
VS	Hexagon socket head universal male elbow*
VF	Universal female elbow*
LF	Female elbow*
VD	Double universal male elbow*
VT	Triple universal male elbow*
Z	Branch universal male elbow*
ZF	Branch universal female elbow*
ZD	Double branch universal male elbow*
ZT	Triple branch universal male elbow*
W	Extended male elbow
T	Male branch tee
Y	Male run tee
D	Male delta union
U	Branch "Y"
UD	Double branch "Y"
E	Bulkhead union
	Bulkhead connector
LE	Bulkhead male elbow
N	Adapter

\* Not available for stainless steel.

Male thread seal method

Symbol	Seal method
—	None
S	With thread sealant

Thread material/Surface treatment

Symbol	Thread material/Surface treatment
A	Brass
N	Brass + Electroless nickel plating
G	Stainless steel 303 (Connection thread: Only male thread and M3)
Bulkhead union	<input type="checkbox"/> J Interchangeable with KJE

\* : A, N

Port size/Applicable tubing O.D.

Symbol	Size
Tubing connection	00*1 Same dia. tubing
Thread connection	M3*2 M3 x 0.5
	M5 M5 x 0.8
	M6 M6 x 1.0
	01 R 1/8, Rc 1/8
	02 R 1/4, Rc 1/4
	03 R 3/8, Rc 3/8
04 R 1/2, Rc 1/2	

\*1 Only for "Bulkhead union" and "Bulkhead male elbow".

\*2 Only for stainless steel.

Applicable tubing O.D.

Symbol	Size
02	Ø 2
23	Ø 3.2
04	Ø 4
06	Ø 6
08	Ø 8
10	Ø 10
12	Ø 12
16	Ø 16

Spare Parts

Use the part number below to order the gasket for M3, M5, and M6 threads.

Gasket for M3 thread: M-3G2

Gasket for M5 thread: M-5G2

Gasket for M6 thread: M-6G

### Tube - Tube Type

**KQ2 H 06 - 00 A**

One-touch fittings

Model

Symbol	Model
H	Straight union
	Different diameter straight
L	Union elbow
	Plug-in elbow
	Reducer elbow
LU	Branch union elbow
W	Extended plug-in elbow
T	Union tee
	Different diameter tee
TW	Cross
TX	Different diameter cross
TY	Different diameter cross
D	Delta union
	Union "Y"
U	Plug-in "Y"
	Different diameter union "Y"
	Different diameter double union "Y"
UD	Different diameter double union "Y"
X	Different diameter plug-in "Y"
R	Plug-in reducer
XD	Double plug-in "Y"

Port size/Applicable tubing O.D.

Symbol	Size	
Tubing (Rod) connection	00 Same diameter tubing	
	99 Same diameter rod	
	Different dia. tubing (Reducer)	23 Ø 3.2
		04 Ø 4
		06 Ø 6
		08 Ø 8
		10 Ø 10
		12 Ø 12
		16 Ø 16

Applicable tubing O.D.

Symbol	Size
02	Ø 2
23	Ø 3.2
04	Ø 4
06	Ø 6
08	Ø 8
10	Ø 10
12	Ø 12
16	Ø 16

Accessories

Symbol	Name
KQ2N	Nipple
	Reducer nipple
KQ2C	Tube cap
KQ2P	Plug

Round Type



Metric Size M, R, Rc

Sealant/Gasket Seal

Inch Size UNF, NPT

Inch Size M, R, Rc

Metric Size G

Face Seal

Metric Size R, Rc

Inch Size NPT

Inch Size R

Gasket Seal

Metric Size Uni

Inch Size Uni

# Metric Size One-touch Fittings

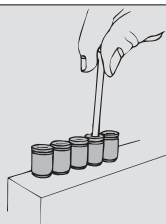
## Round Type Variations

### Hexagon socket head male connector

KQ2S\* P.107



Internal hexagon socket allows tightening with a hexagon wrench in confined spaces.

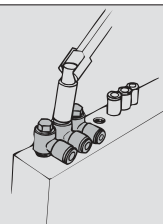


### Universal male elbow

KQ2V\* P.112



Hexagon head of the body allows tightening with a box wrench in confined spaces.

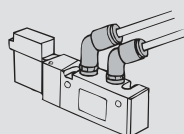


### 45° male elbow

KQ2K P.111



Use to pipe a female thread at a 45° angle. Its direction is in-between that of the male connector and male elbow.

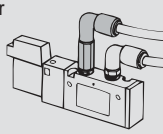


### Extended male elbow

KQ2W\* P.118



Basically, it is used together with a male elbow. Its extended height allows for multi-levelled piping and prevents interference among fittings.

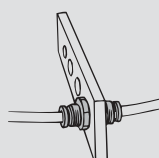


### Bulkhead union

KQ2E\* P.128



Use to connect tubing through a panel, etc.

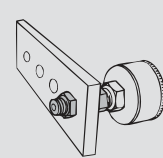


### Bulkhead connector

KQ2E\* P.128



Use to connect a male thread and tubing through a panel, etc.

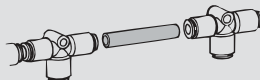


### Nipple

KQ2N P.130



Use to connect One-touch fittings.

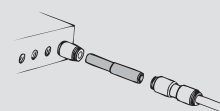


### Reducer nipple

KQ2N P.130



Use to connect One-touch fittings of different sizes.



### Universal female elbow

KQ2VF P.113



Use to branch a male or female thread in the same direction and at a 90° angle. Multiple connections possible.

### Branch universal female elbow

KQ2ZF P.115



Use to two-branch a male or female thread in the same direction and at a 90° angle. Multiple connections possible.

### Male connector

KQ2H\* P.105



Use to pipe a female thread in the same direction. Most general model.

### Cross

KQ2TW P.121



Use to four-branch a line.

### Reducer elbow

KQ2L P.109



Use to change the tube direction of One-touch fittings by 90° and connect tubing of reduced size.

### Female connector

KQ2F\* P.106



Use to pipe a male thread of a pressure gauge, etc.

### Male elbow

KQ2L\* P.108



Use to pipe a female thread at right angles. Most general model.

### Different diameter cross

KQ2TX P.121



Use to four-branch a line and connect tubing of reduced size at both 90° angles.

### Straight union

KQ2H P.105



Use to connect tubing in the same direction.

### Union elbow

KQ2L P.109



Use to connect tubing at right angles.

### Male branch tee

KQ2T\* P.119



Use to branch a female thread at both 90° angles.

### Different diameter straight

KQ2H P.106



Use to connect tubing of different sizes.

### Plug-in elbow

KQ2L P.109



Use to change the tube direction of One-touch fittings by 90°.

### Union tee

KQ2T P.120



Use to branch tubing at both 90° angles.

\* Stainless steel option available (KQ2-G)



**Different diameter tee**

**KQ2T** P.120



Use to connect tubing of reduced size for branching at both 90° angles.

**Different diameter tee**

**KQ2T** P.120



Use to connect tubing of reduced size for branching at a 90° angle from two pipes running in the same direction.

**Different diameter cross**

**KQ2TY** P.121



Use to connect tubing of reduced size for branching in three directions.

**Hexagon socket head universal male elbow**

**KQ2VS** P.112



Hexagon socket on the top allows tightening with a hexagon wrench in confined spaces.

**Branch male elbow**

**KQ2LU\*** P.110



Use to two-branch a female thread at right angles.

**Female elbow**

**KQ2LF** P.117



Use to pipe a male thread at right angles.

**Double universal male elbow**

**KQ2VD** P.114



Use to two-branch a female thread at right angles. Two individual parts rotate 360°.

**Triple universal male elbow**

**KQ2VT** P.114



Use to three-branch a female thread at right angles. Three individual parts rotate 360°.

**Branch universal male elbow**

**KQ2Z** P.115



Hexagon head of the body allows tightening with a box wrench. Use for branch connections.

**Double branch universal male elbow**

**KQ2ZD** P.116



Use to four-branch a female thread at right angles. Two individual parts rotate 360°.

**Male run tee**

**KQ2Y\*** P.122



Use to branch a female thread in the same direction and at a 90° angle.

**Triple branch universal male elbow**

**KQ2ZT** P.116



Use to six-branch a female thread at right angles. Three individual parts rotate 360°.

**Branch union elbow**

**KQ2LU** P.109



Use to branch tubing at right angles.

**Extended plug-in elbow**

**KQ2W** P.117



Use to change the tube direction of One-touch fittings by 90°. Multi-levelled piping is also possible with the plug-in elbow.

**Male delta union**

**KQ2D\*** P.123



Use to branch a female thread at two right angles.

**Delta union**

**KQ2D** P.124



Use to branch tubing at three right angles.

**Double branch "Y"**

**KQ2UD\*** P.126



Use to four-branch a female thread.

**Different diameter double union "Y"**

**KQ2UD** P.126



Use to connect tubing of reduced size for four-branching in the same direction.

**Different diameter plug-in "Y"**

**KQ2X** P.127



Use to branch One-touch fittings and connect tubing of reduced size in the same direction.

**Double plug-in "Y"**

**KQ2XD** P.127



Use to four-branch One-touch fittings in the same direction.

**Union "Y"**

**KQ2U** P.125



Use to branch tubing in the same direction.

**Different diameter union "Y"**

**KQ2U** P.125



Use to connect tubing of reduced size for branching in the same direction.

**Plug-in "Y"**

**KQ2U** P.125



Use to branch One-touch fittings in the same direction.

**Branch "Y"**

**KQ2U\*** P.124



Use to branch a female thread in the same direction.

**Plug-in reducer**

**KQ2R** P.128



Use to change size of One-touch fittings.

**Bulkhead male elbow**

**KQ2LE** P.129



Use to connect tubing through a panel, etc. and to change the tube direction by 90°.

**Adapter**

**KQ2N** P.129



Use to connect One-touch fittings and R female threads.

**Tube cap**

**KQ2C** P.130



Use to plug unused tubing.

**Colour cap**

**KQ2C** P.130



Mount onto the release button and use different colours for piping according to applications.

**Plug**

**KQ2P** P.129



Use to plug unused One-touch fittings.

\* Stainless steel option available (KQ2-G)

Round Type



Metric Size M, R, Rc

Sealant/Gasket Seal

Inch Size UNF, NPT

Inch Size M, R, Rc

Metric Size G

Face Seal

Metric Size R, Rc

Inch Size NPT

Inch Size R

Gasket Seal

Metric Size Uni

Inch Size Uni

# KQ2 Series

Applicable Tubing: Metric Size, Connection Thread: M, R, Rc

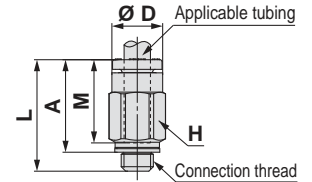
## Dimensions

### Male Connector: KQ2H (Gasket seal)



Applicable tubing O.D. [mm]	Connection thread M	Model	H (Width across flats)	Ø D	L	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
								Nylon	Urethane		
Ø 2	M3 x 0.5	KQ2H02-M3G	5.5	5.5	15.6	13	11.9	—	0.9	1.2	1.5
	M5 x 0.8	KQ2H02-M5□	7	5.5	13.8	10.8	11.9	—	0.9	1.4	2
Ø 3.2	M3 x 0.5	KQ2H23-M3G	7	6.7	17	14.4	13.3	0.9	0.9	1.2	2.4
	M5 x 0.8	KQ2H23-M5□	7	6.7	17.3	14.3	13.3	3	2.5	2.5	2.7
Ø 4	M3 x 0.5	KQ2H04-M3G	8	7.7	17.1	14.5	13.3	0.9	0.9	1.2	2.9
	M5 x 0.8	KQ2H04-M5□	8	7.7	17.7	14.7	13.3	4	4	2.5	3.3
Ø 6	M6 x 1.0	KQ2H04-M6□	8	7.7	18.7	14.7	13.3	5.6	4	3	3.6
	M5 x 0.8	KQ2H06-M5□	10	9.7	17.7	14.7	13.3	4	4	2.5	4.1
Ø 6	M6 x 1.0	KQ2H06-M6□	10	9.7	18.8	14.8	13.3	5.6	5.6	3	4.4

□: A (Brass), N (Brass + Electroless nickel plating)



### Male Connector: KQ2H (Sealant)

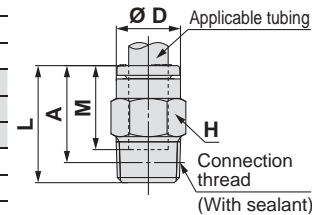


Applicable tubing O.D. [mm]	Connection thread R	Model	H (Width across flats)	Ø D	L	A*1	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
								Nylon	Urethane		
Ø 3.2	1/8	KQ2H23-01□S	10	6.7	14	10.9	13.3	3.4	2.9	2.5	6
	1/4	KQ2H23-02□S	14	6.7	16.7	12	13.3	3.4	2.9	2.5	15.3
Ø 4	1/8	KQ2H04-01□S	10	7.7	14.3	11.2	13.3	4.8	3.4	3	5.6
	1/4	KQ2H04-02□S	14	7.7	16.7	12	13.3	4.8	3.4	3	14.6
Ø 6	1/8	KQ2H06-01□S	10	9.7	18.4	15.3	13.3	13.1	10.4	4.5	5.8
	1/4	KQ2H06-02□S	14	9.7	16.7	12	13.3	13.1	10.4	4.5	12.5
Ø 6	3/8	KQ2H06-03□S	17	9.7	18.1	13	13.3	13.1	10.4	4.5	24.5
	1/8	KQ2H08-01■S	14	13	22.5	19.4	14.2	26.1	18	6	11.9
Ø 8	1/4	KQ2H08-02■S	14	13	22	17.3	14.2	26.1	18	6	13.9
	3/8	KQ2H08-03■S	17	13	18.1	13	14.2	26.1	18	6	21
Ø 10	1/8	KQ2H10-01■S	17	15.6	23.8	20.7	15.6	26.1	26.1	6	16.9
	1/4	KQ2H10-02■S	17	15.6	27.3	22.6	15.6	41.5	29.5	7.5	22.1
Ø 10	3/8	KQ2H10-03■S	17	15.6	23.5	18.4	15.6	41.5	29.5	7.5	22.5
	1/2	KQ2H10-04■S	22	15.6	22.3	15.9	15.6	41.5	29.5	7.5	44.7
Ø 12	1/4	KQ2H12-02■S	19	18.2	28.7	24	17	58.3	46.1	9	24.3
	3/8	KQ2H12-03■S	19	18.2	25.9	20.8	17	58.3	46.1	9	25.2
Ø 12	1/2	KQ2H12-04■S	22	18.2	22.3	15.9	17	58.3	46.1	9	37.7
	1/4	KQ2H16-02□S	24	23.6	32.5	27.8	20.6	58.3	58.3	9	37.4
Ø 16	3/8	KQ2H16-03■S	24	23.6	33.1	28	20.6	81	67	11	42.4
	1/2	KQ2H16-04■S	24	23.6	32.1	25.7	20.6	113	67	13	44.6

□: A (Brass), N (Brass + Electroless nickel plating)

■: A (Brass), N (Brass + Electroless nickel plating), G (stainless steel)

\*1 Reference dimensions after installation of R thread

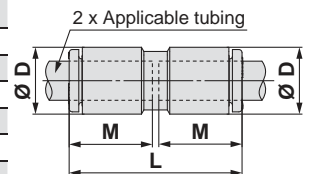


### Straight Union: KQ2H



Applicable tubing O.D. [mm]	Model	Ø D*1	L	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
					Nylon	Urethane		
Ø 2	KQ2H02-00A	5.8	24.8	11.9	—	0.9	1.4	0.8
Ø 3.2	KQ2H23-00A	7.1	27.6	13.3	3.4	2.9	2.5	1.4
Ø 4	KQ2H04-00A	8.2	27.6	13.3	5.6	4	3	1.6
Ø 6	KQ2H06-00A	10.4	27.6	13.3	13.1	10.4	4.5	2.1
Ø 8	KQ2H08-00A	13.2	29.4	14.2	26.1	18	6	3.7
Ø 10	KQ2H10-00A	15.9	32.2	15.6	41.5	29.5	7.5	5.5
Ø 12	KQ2H12-00A	18.5	35	17	58.3	46.1	9	8.2
Ø 16	KQ2H16-00A	23.8	42.2	20.6	113	67	13	15.2

\*1 Ø D is maximum diameter.



# Metric Size One-touch Fittings **KQ2 Series**

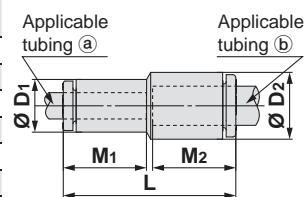
Applicable Tubing: Metric Size, Connection Thread: M, R, Rc

## Dimensions

### Different Diameter Straight: KQ2H



Applicable tubing O.D. [mm]		Model	*1 Ø D1	*1 Ø D2	L	M1	M2	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
a	b							Nylon	Urethane		
Ø 2	Ø 3.2	KQ2H02-23A	5.8	7.1	26.2	11.9	13.3	—	0.9	1.4	1.1
Ø 2	Ø 4	KQ2H02-04A	5.8	8.2	26.2	11.9	13.3	—	0.9	1.4	1.2
Ø 3.2	Ø 4	KQ2H23-04A	7.1	8.2	27.6	13.3	13.3	3.4	2.9	2.5	1.5
Ø 3.2	Ø 6	KQ2H23-06A	7.1	10.4	27.6	13.3	13.3	3.4	2.9	2.5	1.8
Ø 4	Ø 6	KQ2H04-06A	8.2	10.4	27.6	13.3	13.3	5.6	5.6	3	2
Ø 6	Ø 8	KQ2H06-08A	10.4	13.2	28.5	13.3	14.2	13.1	10.4	4.5	2.9
Ø 8	Ø 10	KQ2H08-10A	13.2	15.9	30.8	14.2	15.6	26.1	18	6	4.9
Ø 10	Ø 12	KQ2H10-12A	15.9	18.5	33.6	15.6	17	41.5	29.5	7.5	7.2
Ø 12	Ø 16	KQ2H12-16A	18.5	23.8	38.6	17	20.6	58.3	46.1	9	12.4

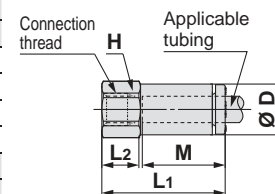


\*1 Ø D1, Ø D2 are maximum diameters.

### Female Connector: KQ2F



Applicable tubing O.D. [mm]	Connection thread Rc	Model	H (Width across flats)	*1 Ø D	L1	L2	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
								Nylon	Urethane		
Ø 3.2	M3 x 0.5	KQ2F23-M3□	7	6.9	17.3	5.7	13.3	3	2.5	2.5	3.1
	M5 x 0.8	KQ2F23-M5□	7	6.9	19.7	5.7	13.3	3	2.5	2.5	3.3
Ø 4	M3 x 0.5	KQ2F04-M3□	8	7.9	16.5	5.7	13.3	4	4	2.5	4.1
	M5 x 0.8	KQ2F04-M5□	8	7.9	19.6	5.7	13.3	4	4	3	4.5
	1/8	KQ2F04-01□	14	7.9	24.1	8.5	13.3	5.6	4	3	12
	1/4	KQ2F04-02□	17	7.9	29	12.9	13.3	5.6	4	3	21.5
Ø 6	M5 x 0.8	KQ2F06-M5□	10	9.9	17.6	5.7	13.3	10	10	4.1	5.5
	1/8	KQ2F06-01□	14	9.9	23.6	8.5	13.3	13.1	10.4	4.5	12.2
	1/4	KQ2F06-02□	17	9.9	28.5	12.9	13.3	13.1	10.4	4.5	21.6
Ø 8	3/8	KQ2F06-03□	19	9.9	29.9	12.7	13.3	13.1	10.4	4.5	22.7
	1/8	KQ2F08-01■	14	13	24.1	8.5	14.2	26.1	18	6	12.9
	1/4	KQ2F08-02■	17	13	29	12.2	14.2	26.1	18	6	22.1
Ø 10	3/8	KQ2F08-03■	19	13	30.4	13.4	14.2	26.1	18	6	30.7
	1/4	KQ2F10-02■	17	15.6	30	12.9	15.6	41.5	29.5	7.5	24.2
Ø 12	3/8	KQ2F10-03■	19	15.6	31.3	13.3	15.6	41.5	29.5	7.5	25.5
	1/4	KQ2F12-02■	19	18.2	30.9	12.1	17	58.3	46.1	9	32.6
	3/8	KQ2F12-03■	19	18.2	32.3	13.3	17	58.3	46.1	9	27.6
Ø 16	1/2	KQ2F12-04■	24	18.2	36.3	15.9	17	58.3	46.1	9	46.3
	3/8	KQ2F16-03□	24	23.6	34.7	12.6	20.6	81	67	13	53.8
	1/2	KQ2F16-04□	24	23.6	38.7	15.9	20.6	113	67	13	51.6



□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D is maximum diameter.

■: A (Brass), N (Brass + Electroless nickel plating), G (stainless steel)

Round Type

Metric Size M, R, Rc

Sealant/Gasket Seal

Inch Size UNF, NPT

Inch Size M, R, Rc

Metric Size G

Metric Size R, Rc

Face Seal

Inch Size NPT

Inch Size R

Gasket Seal

Metric Size Uni

Inch Size Uni

# KQ2 Series

Applicable Tubing: Metric Size, Connection Thread: M, R, Rc

## Dimensions

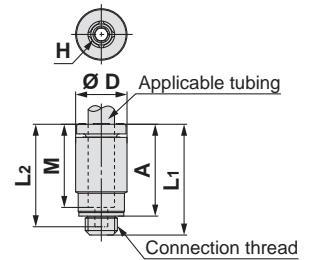
### Hexagon Socket Head Male Connector: KQ2S (Gasket seal)



Applicable tubing O.D. [mm]	Connection thread M	Model	H (Width across flats)	*1 Ø D	L1	L2	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
									Nylon	Urethane		
Ø 2	M3 x 0.5	KQ2S02-M3G	1.5	5.5	15.7	14.7	13.1	11.9	—	0.9	1.5	1.7
	M3 x 0.5	KQ2S23-M3G	1.5	7	17.1	16.1	14.5	13.3	1.4	1.4	1.5	2.2
Ø 3.2	M5 x 0.8	KQ2S23-M5□	2	7	17.5	16.3	14.5	13.3	2.5	2.5	2	2.6
	M3 x 0.5	KQ2S04-M3G	1.5	8	17.1	16.1	14.5	13.3	1.4	1.4	1.5	2.3
Ø 4	M5 x 0.8	KQ2S04-M5□	2.5	8	18.6	17.8	15.6	13.3	4	4	2.5	3
	M6 x 1.0	KQ2S04-M6□	3	8	18.5	17.8	14.5	13.3	4	4	3.1	4.1
Ø 6	M5 x 0.8	KQ2S06-M5□	2.5	10	19.5	17.8	16.5	13.3	4	4	2.5	3.5
	M6 x 1.0	KQ2S06-M6□	3	10	19.1	18.1	15.1	13.3	4	4	3.1	5.1

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D is maximum diameter.



### Hexagon Socket Head Male Connector: KQ2S (Sealant)



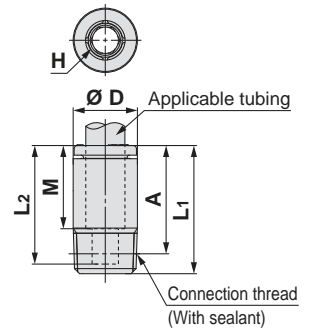
Applicable tubing O.D. [mm]	Connection thread R	Model	H (Width across flats)	*1 Ø D	L1	L2	A*2	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
									Nylon	Urethane		
Ø 4	1/8	KQ2S04-01□S	3	9.8	19.7	18.8	16.6	13.3	4.1	3.6	3.1	8.1
Ø 6	1/8	KQ2S06-01□S	4	10	20	18.8	16.9	13.3	10	9.9	4.1	6.5
	1/4	KQ2S06-02□S	4	13.8	19.8	18.8	15.1	13.3	10.7	10	4.1	13.4
Ø 8	1/8	KQ2S08-01■S	5	13	22.9	19.7	19.8	14.2	17.2	16.2	5.1	10.2
	1/4	KQ2S08-02■S	6	14	23.2	19.5	18.5	14.2	23.3	16.2	6.1	14.3
	3/8	KQ2S08-03■S	6	17	20.7	19.7	15.6	14.2	23.3	16.2	6.1	21.1
Ø 10	1/8	KQ2S10-01■S	5	15.6	24.3	21.1	21.2	15.6	17.2	16.2	5.1	12
	1/4	KQ2S10-02■S	8	15.6	24.6	20.1	19.9	15.6	39	26.6	8.1	12.4
	3/8	KQ2S10-03■S	8	17	25.1	20.1	20	15.6	39	26.6	8.1	23.2
	1/2	KQ2S10-04■S	8	22	21.1	20.1	14.7	15.6	39	26.6	8.1	37.4
Ø 12	1/4	KQ2S12-02■S	8	18.2	29	21.5	24.3	17	46	44.5	8.1	21
	3/8	KQ2S12-03■S	10	18.2	26.4	21.8	21.3	17	60	44.5	10.1	21.2
	1/2	KQ2S12-04■S	10	22	22.8	21.8	16.4	17	60	44.5	10.1	30.5
Ø 16	1/4	KQ2S16-02□S	8	23.6	32.5	25.1	27.8	20.6	46	46	8.1	25.7
	3/8	KQ2S16-03□S	10	23.6	33.5	25.4	28.4	20.6	81	67	10.1	38.3
	1/2	KQ2S16-04□S	12	23.6	33.4	26.1	27	20.6	113	67	12.1	43.5

□: A (Brass), N (Brass + Electroless nickel plating)

■: A (Brass), N (Brass + Electroless nickel plating), G (stainless steel)

\*1 Ø D is maximum diameter.

\*2 Reference dimensions after installation of R thread



# Metric Size One-touch Fittings **KQ2 Series**

Applicable Tubing: Metric Size, Connection Thread: M, R, Rc

## Dimensions

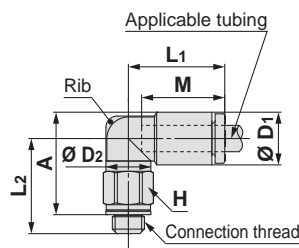
### Male Elbow: KQ2L (Gasket seal)



Applicable tubing O.D. [mm]	Connection thread M	Model	H (Width across flats)	*1 Ø D1	Ø D2	L1	L2	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]	With a rib
										Nylon	Urethane			
Ø 2	M3 x 0.5	KQ2L02-M3G	5.5	5.8	5.5	12.6	12.5	12.8	11.9	—	0.8	1.2	1.6	●
	M5 x 0.8	KQ2L02-M5□	7	5.8	5.5	12.6	13	12.9	11.9	—	0.8	1.4	2.7	●
Ø 3.2	M3 x 0.5	KQ2L23-M3G	7	7.1	7	15.3	13.8	14.8	13.3	0.8	0.8	1.2	2.7	●
	M5 x 0.8	KQ2L23-M5□	7	7.1	7	15.3	14.3	14.9	13.3	2.6	2.2	2.5	3.1	●
Ø 4	M3 x 0.5	KQ2L04-M3G	7	8.2	7	15.4	14.3	15.8	13.3	0.8	0.8	1.2	2.7	●
	M5 x 0.8	KQ2L04-M5□	7	8.2	7	15.4	14.8	15.9	13.3	3.5	3.5	2.5	3.1	●
	M6 x 1.0	KQ2L04-M6□	8	8.2	7	15.4	15.8	15.9	13.3	3.5	3.5	2.5	4.2	●
Ø 6	M5 x 0.8	KQ2L06-M5□	7	10.4	7	14.5	16.5	18.7	13.3	3.5	3.5	2.5	3.2	●
	M6 x 1.0	KQ2L06-M6□	8	10.4	7	14.5	17.5	18.7	13.3	3.5	3.5	2.5	4.3	●

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D1 is maximum diameter.



### Male Elbow: KQ2L (Sealant)



Applicable tubing O.D. [mm]	Connection thread M	Model	H (Width across flats)	*1 Ø D1	Ø D2	L1	L2	A*2	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]	With a rib
										Nylon	Urethane			
Ø 3.2	1/8	KQ2L23-01□S	10	7.1	10	14.5	16.7	17.2	13.3	3	2.5	2.5	4.6	—
	1/4	KQ2L23-02□S	14	7.1	10	14.5	21.2	20.1	13.3	3	2.5	2.5	14.1	—
Ø 4	1/8	KQ2L04-01□S	10	8.2	10	14.8	16.2	17.2	13.3	4.6	3.3	3	4.8	●
	1/4	KQ2L04-02□S	14	8.2	10	14.8	21.7	21.1	13.3	4.6	3.3	3	14.3	●
Ø 6	1/8	KQ2L06-01□S	10	10.4	10	15.5	17.3	19.4	13.3	11.4	9	4.5	5.2	—
	1/4	KQ2L06-02□S	14	10.4	10	15.5	22.8	23.3	13.3	11.4	9	4.5	14.7	—
Ø 6	3/8	KQ2L06-03□S	17	10.4	10	15.5	24.1	24.2	13.3	11.4	9	4.5	26.5	—
	Ø 8	KQ2L08-01■S	10	13.2	10	16.4	18.7	22.2	14.2	11.4	11.4	4.5	6.1	●
1/8		KQ2L08-01■QS	12	13.2	12	17.2	23.5	27.0	14.2	21.6	14.9	6	9.3	●
Ø 8	1/4	KQ2L08-02■S	14	13.2	12	17.2	25.4	27.3	14.2	21.6	14.9	6	17.7	●
	3/8	KQ2L08-03■S	17	13.2	12	17.2	25.5	27.0	14.2	21.6	14.9	6	24.7	●
	1/8	KQ2L10-01■S	12	15.9	12	18.6	23.6	28.4	15.6	21.6	14.9	6	11.1	●
Ø 10	1/4	KQ2L10-02■S	17	15.9	17	19.3	28.7	31.9	15.6	35.2	25	7.5	21.7	●
	3/8	KQ2L10-03■S	17	15.9	17	19.3	29.6	32.4	15.6	35.2	25	7.5	22.2	●
	1/2	KQ2L10-04■S	22	15.9	17	19.3	33.6	35.1	15.6	35.2	25	7.5	44.6	●
Ø 12	1/4	KQ2L12-02■S	17	18.5	17	21.5	30.0	34.5	17	50.2	39.7	9	23.5	●
	3/8	KQ2L12-03■S	17	18.5	17	21.5	30.9	35.0	17	50.2	39.7	9	24.1	●
	1/2	KQ2L12-04■S	22	18.5	17	21.5	34.9	37.7	17	50.2	39.7	9	46.5	●
Ø 16	1/4	KQ2L16-02□S	17	23.8	17	25.1	32.6	39.8	20.6	50.2	50.2	9	27.8	●
	3/8	KQ2L16-03■S	22	23.8	21	27.1	35.4	42.2	20.6	71	58.9	11	40.8	—
	1/2	KQ2L16-04■S	22	23.8	21	27.1	34.1	39.6	20.6	100	58.9	13	44.5	—

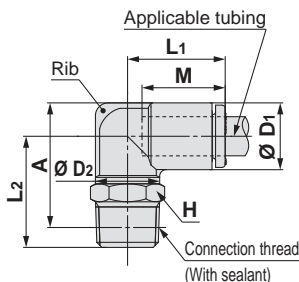
□: A (Brass), N (Brass + Electroless nickel plating)

■: A (Brass), N (Brass + Electroless nickel plating), G (stainless steel)

\*1 Ø D1 is maximum diameter.

\*2 Reference dimensions after installation of R thread

\*3 For details, refer to page 131.



Round Type

Metric Size M, R, Rc

Inch Size UNF, NPT

Inch Size M, R, Rc

Metric Size G

Metric Size R, Rc

Inch Size NPT

Inch Size R

Metric Size Uni

Inch Size Uni

# KQ2 Series

Applicable Tubing: Metric Size, Connection Thread: M, R, Rc

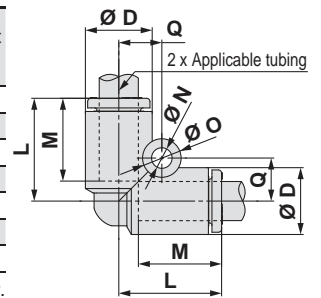
## Dimensions

### Union Elbow: KQ2L



Applicable tubing O.D. [mm]	Model	*1 $\varnothing D$	L	Q	M	$\varnothing O$	$\varnothing N$	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
								Nylon	Urethane		
$\varnothing 3.2$	KQ2L23-00A	7.1	14.9	5.4	13.3	6	3.2	3	2.5	2.5	1.6
$\varnothing 4$	KQ2L04-00A	8.2	15.3	5.7	13.3	6	3.2	4.2	4.2	3	1.9
$\varnothing 6$	KQ2L06-00A	10.4	16.3	6.8	13.3	6	3.2	11.4	9	4.5	2.7
$\varnothing 8$	KQ2L08-00A	13.2	18.2	8.4	14.2	8	4.2	21.6	14.9	6	4.7
$\varnothing 10$	KQ2L10-00A	15.9	20.6	9.6	15.6	8	4.2	35.2	25	7.5	7.1
$\varnothing 12$	KQ2L12-00A	18.5	23	10.7	17	8	4.2	50.2	39.7	9	10.3
$\varnothing 16$	KQ2L16-00A	23.8	28.6	13.4	20.6	8	4.2	100	58.9	13	19.7

\*1  $\varnothing D$  is maximum diameter.

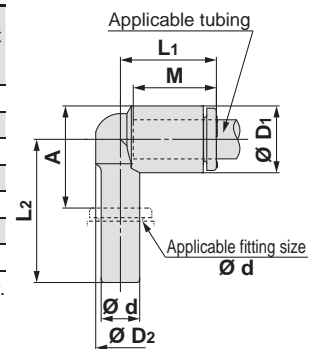


### Plug-in Elbow: KQ2L



Applicable tubing O.D. [mm]	Applicable fitting size $\varnothing d$	Model	*1 $\varnothing D_1$	$\varnothing D_2$	L <sub>1</sub>	L <sub>2</sub>	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
									Nylon	Urethane		
$\varnothing 3.2$	$\varnothing 3.2$	KQ2L23-99A	7.1	6.4	14.4	20.9	11.1	13.3	3	2.5	2.2	0.9
$\varnothing 4$	$\varnothing 4$	KQ2L04-99A	8.2	7.2	14.5	21.1	11.9	13.3	4.2	4.2	2.5	1.2
$\varnothing 6$	$\varnothing 6$	KQ2L06-99A	10.4	8	15.3	22.3	14.2	13.3	9	9	4	1.8
$\varnothing 8$	$\varnothing 8$	KQ2L08-99A	13.2	10	17.2	26.2	18.6	14.2	21.6	14.9	6	3
$\varnothing 10$	$\varnothing 10$	KQ2L10-99A	15.9	12	19.3	28.2	20.5	15.6	35.2	25	7.5	4.7
$\varnothing 12$	$\varnothing 12$	KQ2L12-99A	18.5	14	21.5	31	23.2	17	50.2	39.7	9	7
$\varnothing 16$	$\varnothing 16$	KQ2L16-99A	23.8	20	27.1	36.8	28.1	20.6	100	58.9	13	13.7

\*1  $\varnothing D_1$  is maximum diameter.

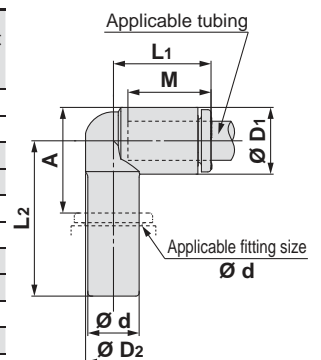


### Reducer Elbow: KQ2L



Applicable tubing O.D. [mm]	Applicable fitting size $\varnothing d$	Model	*1 $\varnothing D_1$	$\varnothing D_2$	L <sub>1</sub>	L <sub>2</sub>	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
									Nylon	Urethane		
$\varnothing 3.2$	$\varnothing 4$	KQ2L23-04A	7.1	6.4	14.5	23.9	14.1	13.3	3	2.5	2.5	1.1
	$\varnothing 6$	KQ2L23-06A	7.1	6.4	14.5	24.1	14.3	13.3	3	2.5	2.5	1.3
$\varnothing 4$	$\varnothing 6$	KQ2L04-06A	8.2	7.2	14.8	24.6	15.4	13.3	4.2	4.2	3	1.5
	$\varnothing 8$	KQ2L04-08A	8.2	7.2	14.8	29.5	19.4	13.3	4.2	4.2	3	1.8
$\varnothing 6$	$\varnothing 8$	KQ2L06-08A	10.4	9	15.5	24.2	15.2	13.3	11.4	9	4.5	2.1
	$\varnothing 10$	KQ2L06-10A	10.4	9	15.5	31.6	21.2	13.3	11.4	9	4.5	2.7
$\varnothing 8$	$\varnothing 10$	KQ2L08-10A	13.2	10	18.8	27.1	18.1	14.2	21.6	14.9	6	3.5
	$\varnothing 12$	KQ2L08-12A	13.2	10	18.8	34	23.6	14.2	21.6	14.9	6	4.9
$\varnothing 10$	$\varnothing 12$	KQ2L10-12A	15.9	12	19.3	35.6	26.5	15.6	35.2	25	7.5	5.6
$\varnothing 12$	$\varnothing 16$	KQ2L12-16A	18.5	14	21.5	42.6	31.2	17	50.2	39.7	9	8.7

\*1  $\varnothing D_1$  is maximum diameter.

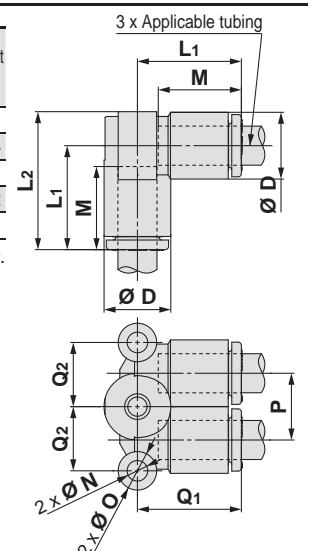


### Branch Union Elbow: KQ2LU



Applicable tubing O.D. [mm]	Model	*1 $\varnothing D$	L <sub>1</sub>	L <sub>2</sub>	Q <sub>1</sub>	Q <sub>2</sub>	M	P	$\varnothing O$	$\varnothing N$	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
											Nylon	Urethane		
$\varnothing 4$	KQ2LU04-00A	8.2	15.8	19.9	15.8	7.9	13.3	8.2	6	3.2	6	4.1	3	3.1
$\varnothing 6$	KQ2LU06-00A	10.4	16.5	21.7	16.5	10	13.3	10.4	6	3.2	13.9	11	4.5	4.4
$\varnothing 8$	KQ2LU08-00A	13.2	18.2	24.8	18.2	13.1	14.2	13.2	8	4.2	26.3	18.2	6	8
$\varnothing 10$	KQ2LU10-00A	15.9	20.3	28.3	20.3	15.9	15.6	15.9	8	4.2	40.8	29	7.5	12.2
$\varnothing 12$	KQ2LU12-00A	18.5	22.5	31.7	22.5	17.9	17	18.5	8	4.2	57.2	45.2	9	18.1

\*1  $\varnothing D$  is maximum diameter.



# Metric Size One-touch Fittings **KQ2 Series**

Applicable Tubing: Metric Size, Connection Thread: M, R, Rc

## Dimensions

### Branch Male Elbow: KQ2LU (Gasket seal)

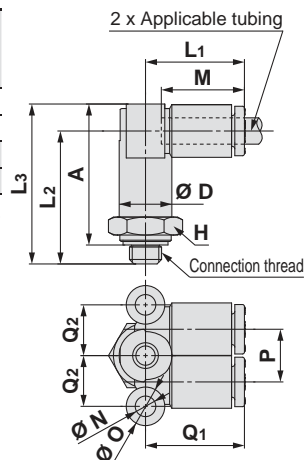


Applicable tubing O.D. [mm]	Connection thread	Model	H (Width across flats)	*1 Ø D	L1	L2	L3	A	M	P	Ø O	Ø N	Q1	Q2	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
															Nylon	Urethane		
Ø 4	M5 x 0.8	KQ2LU04-M5	10	8.2	15.8	20.7	24.8	21.8	13.3	8.2	6	3.2	15.8	7.9	4.3	4.1	1.8	6.9
	M6 x 1.0	KQ2LU04-M6	10	8.2	15.8	21.7	25.8	21.8	13.3	8.2	6	3.2	15.8	7.9	4.3	4.1	3	6.8
Ø 6	M5 x 0.8	KQ2LU06-M5	12	10.4	16.5	21.4	26.6	23.6	13.3	10.4	6	3.2	16.5	10	4.3	4.3	1.8	10.3
	M6 x 1.0	KQ2LU06-M6	12	10.4	16.5	22.4	27.6	23.6	13.3	10.4	6	3.2	16.5	10	4.3	4.3	3	10.3

□: A (Brass), N (Brass + Electroless nickel plating)

■: A (Brass), N (Brass + Electroless nickel plating), G (stainless steel)

\*1 Ø D is maximum diameter.



### Branch Male Elbow: KQ2LU (Sealant)

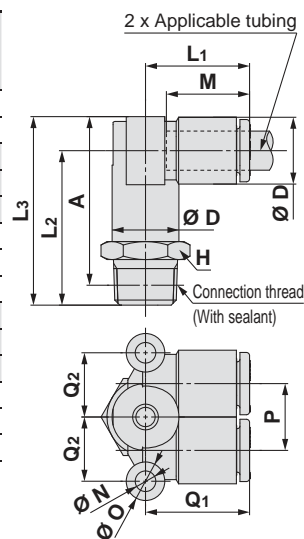


Applicable tubing O.D. [mm]	Connection thread	Model	H (Width across flats)	*1 Ø D	L1	L2	L3	A*2	M	P	Ø O	Ø N	Q1	Q2	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
															Nylon	Urethane		
Ø 4	1/8	KQ2LU04-01	10	8.2	15.8	23.3	27.4	24.3	13.3	8.2	6	3.2	15.8	7.9	6	4.1	3	9.5
	1/4	KQ2LU04-02	14	8.2	15.8	27.7	31.8	27.1	13.3	8.2	6	3.2	15.8	7.9	6	4.1	3	19.3
Ø 6	1/8	KQ2LU06-01	12	10.4	16.5	24	29.2	26.1	13.3	10.4	6	3.2	16.5	10	13.9	11	4.5	10.6
	1/4	KQ2LU06-02	14	10.4	16.5	28.4	33.6	28.9	13.3	10.4	6	3.2	16.5	10	13.9	11	4.5	19.5
Ø 8	1/8	KQ2LU08-01	14	13.2	18.2	25.7	32.3	29.2	14.2	13.2	8	4.2	18.2	13.1	26.3	18.2	6	16.4
	1/4	KQ2LU08-02	14	13.2	18.2	30.1	36.7	32	14.2	13.2	8	4.2	18.2	13.1	26.3	18.2	6	21.5
Ø 10	3/8	KQ2LU08-03	17	13.2	18.2	31.5	38.1	33	14.2	13.2	8	4.2	18.2	13.1	26.3	18.2	6	33.3
	1/4	KQ2LU10-02	17	15.9	20.3	32.2	40.2	35.5	15.6	15.9	8	4.2	20.3	15.9	40.8	29	7.5	26.6
Ø 12	3/8	KQ2LU10-03	17	15.9	20.3	33.6	41.6	36.5	15.6	15.9	8	4.2	20.3	15.9	40.8	29	7.5	34.4
	1/2	KQ2LU10-04	22	15.9	20.3	37.8	45.8	39.4	15.6	15.9	8	4.2	20.3	15.9	40.8	29	7.5	62.3
Ø 12	1/4	KQ2LU12-02	19	18.5	22.5	34.4	43.6	38.9	17	18.5	8	4.2	22.5	17.9	57.2	45.2	9	37.7
	3/8	KQ2LU12-03	19	18.5	22.5	35.8	45	39.9	17	18.5	8	4.2	22.5	17.9	57.2	45.2	9	40.6
	1/2	KQ2LU12-04	22	18.5	22.5	40	49.2	42.8	17	18.5	8	4.2	22.5	17.9	57.2	45.2	9	62.7

■: A (Brass), N (Brass + Electroless nickel plating), G (stainless steel)

\*1 Ø D is maximum diameter.

\*2 Reference dimensions after installation of R thread



Round Type

Metric Size M, R, Rc

Sealant/Gasket Seal

Inch Size UNF, NPT

Inch Size M, R, Rc

Metric Size G

Metric Size R, Rc

Face Seal

Inch Size NPT

Inch Size R

Gasket Seal

Metric Size Uni

Inch Size Uni

# KQ2 Series

Applicable Tubing: Metric Size, Connection Thread: M, R, Rc

## Dimensions

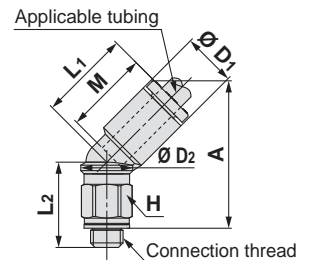
### 45° Male Elbow: KQ2K (Gasket seal)



Applicable tubing O.D. [mm]	Connection thread M	Model	H (Width across flats)	*1 Ø D1	Ø D2	L1	L2	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
										Nylon	Urethane		
Ø 4	M5 x 0.8	KQ2K04-M5□	7	8.2	8	14.4	13.1	22.8	13.3	3.4	3.4	2.5	3
	M6 x 1.0	KQ2K04-M6□	8	8.2	8	14.4	14.1	22.8	13.3	3.4	3.4	2.5	4.1
Ø 6	M5 x 0.8	KQ2K06-M5□	7	10.4	8	14.4	17	27.4	13.3	3.4	3.4	2.5	3.5
	M6 x 1.0	KQ2K06-M6□	8	10.4	8	14.4	18	27.4	13.3	3.4	3.4	2.5	4.5

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D1 is maximum diameter.



### 45° Male Elbow: KQ2K (Sealant)



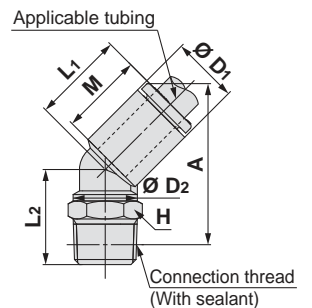
Applicable tubing O.D. [mm]	Connection thread R	Model	H (Width across flats)	*1 Ø D1	Ø D2	L1	L2	A*2	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
										Nylon	Urethane		
Ø 4	1/8	KQ2K04-01□S	10	8.2	10	14.4	12.7	22.3	13.3	4.8	3.4	3	4.6
	1/4	KQ2K04-02□S	14	8.2	10	14.4	17.2	25.2	13.3	4.8	3.4	3	14.1
Ø 6	1/8	KQ2K06-01□S	10	10.4	10	14.7	14.8	25.3	13.3	8.7	6.9	4.5	5
	1/4	KQ2K06-02□S	14	10.4	10	14.7	19.3	28.2	13.3	8.7	6.9	4.5	14.5
	3/8	KQ2K06-03□S	17	10.4	10	14.7	20.6	29.1	13.3	8.7	6.9	4.5	26.2
Ø 8	1/8	KQ2K08-01□S	10	13.2	10	16	15.7	28	14.2	8.7	8.7	4.5	6
		KQ2K08-01□QS <sup>*3</sup>	12	13.2	12	16	20.5	32.8	14.2	19.7	19.7	6	9.1
	1/4	KQ2K08-02□S	14	13.2	12	16	22.4	33.1	14.2	19.7	19.7	6	17.5
	3/8	KQ2K08-03□S	17	13.2	12	16	22.5	32.8	14.2	19.7	19.7	6	24.5
Ø 10	1/8	KQ2K10-01□S	12	15.9	12	18.2	21.5	36.2	15.6	30.9	23.2	6	11.1
	1/4	KQ2K10-02□S	17	15.9	17	17.6	29.1	41.8	15.6	30.9	23.2	7.5	21.8
	3/8	KQ2K10-03□S	17	15.9	17	17.6	24.3	36.6	15.6	30.9	23.2	7.5	21.7
	1/2	KQ2K10-04□S	22	15.9	17	17.6	28.3	39.3	15.6	30.9	23.2	7.5	44.1
Ø 12	1/4	KQ2K12-02□S	17	18.5	17	19.4	29	43.8	17	44.5	35.1	9	23.3
	3/8	KQ2K12-03□S	17	18.5	17	19.4	24.2	38.6	17	44.5	35.1	9	23.2
	1/2	KQ2K12-04□S	22	18.5	17	19.4	28.2	41.3	17	44.5	35.1	9	45.7
Ø 16	1/4	KQ2K16-02□S	17	23.8	17	24.3	29.6	49.2	20.6	44.5	44.5	9	27.7
	3/8	KQ2K16-03□S	22	23.8	21	23.8	31.4	50.2	20.6	65.8	58	11	39.2
	1/2	KQ2K16-04□S	22	23.8	21	23.8	30.1	47.6	20.6	91.9	58	13	42.9

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D1 is maximum diameter.

\*2 Reference dimensions after installation of R thread

\*3 For details, refer to page 131.





# Metric Size One-touch Fittings **KQ2 Series**

Applicable Tubing: Metric Size, Connection Thread: M, R, Rc

## Dimensions

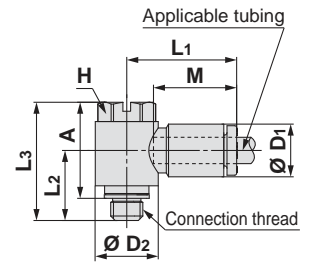
### Universal Male Elbow: KQ2V (Gasket seal)



Applicable tubing O.D. [mm]	Connection thread M	Model	H (Width across flats)	*1 Ø D1	Ø D2	L1	L2	L3	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
											Nylon	Urethane		
Ø 4	M5 x 0.8	KQ2V04-M5□	8	8.2	9.8	17.5	10.9	18.4	14.9	13.3	2.9	2.9	2.5	5.4
Ø 6	M5 x 0.8	KQ2V06-M5□	8	10.4	9.8	18.3	10.9	18.4	14.9	13.3	3.8	3.8	2.5	5.7

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D1 is maximum diameter.



### Universal Male Elbow: KQ2V (Sealant)



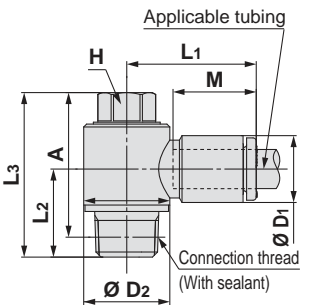
Applicable tubing O.D. [mm]	Connection thread R	Model	H (Width across flats)	*1 Ø D1	Ø D2	L1	L2	L3	A*2	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
											Nylon	Urethane		
Ø 4	1/8	KQ2V04-01□S	8	8.2	13.4	19.3	13.7	25.6	22.5	13.3	2.9	2.9	3	13.2
	1/4	KQ2V06-02□S	10	10.4	15.3	19.9	17.9	30.5	25.8	13.3	7.5	5.9	4.5	13.5
Ø 6	1/8	KQ2V08-01■S	12	13.2	17.6	23.5	15.1	27.6	24.5	14.2	16	11.2	6	22.6
	1/4	KQ2V08-02■S	12	13.2	17.6	23.5	18.5	31	26.3	14.2	16	11.2	6	29.1
	3/8	KQ2V08-03■S	14	13.2	20.6	23.1	19.5	35.3	30.2	14.2	16	11.2	6	44.4
Ø 8	1/4	KQ2V10-02■S	14	15.9	20.6	25.9	19.9	34.9	30.2	15.6	27	20.3	7.5	38.1
	3/8	KQ2V10-03■S	14	15.9	20.6	25.9	20.3	35.3	30.2	15.6	27	20.3	7.5	45.7
Ø 10	3/8	KQ2V12-03■S	17	18.5	25.2	28.5	21.4	37.6	32.5	17	39	30.8	9	59.6
	1/2	KQ2V12-04■S	17	18.5	25.2	28.5	24.6	40.8	34.4	17	39	30.8	9	78.2
Ø 12	3/8	KQ2V16-03□S	21	23.8	32.3	34.2	25.1	45.4	40.3	20.6	55	46	11	99.5
	1/2	KQ2V16-04□S	21	23.8	32.3	34.2	28.3	48.6	42.2	20.6	78	46	13	107.9

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D1 is maximum diameter.

■: A (Brass), N (Brass + Electroless nickel plating), G (stainless steel)

\*2 Reference dimensions after installation of R thread



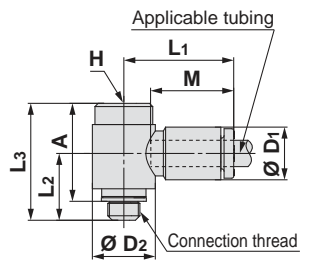
### Hexagon Socket Head Universal Male Elbow: KQ2VS (Gasket seal)



Applicable tubing O.D. [mm]	Connection thread M	Model	H (Width across flats)	*1 Ø D1	Ø D2	L1	L2	L3	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
											Nylon	Urethane		
Ø 4	M5 x 0.8	KQ2VS04-M5□	4	8.2	9.8	17.5	10.4	18.2	15.2	13.3	2.9	2.9	2.5	5.3
Ø 6	M5 x 0.8	KQ2VS06-M5□	4	10.4	9.8	18.3	10.4	18.2	15.2	13.3	3.8	3.8	2.5	5.6

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D1 is maximum diameter.



### Hexagon Socket Head Universal Male Elbow: KQ2VS (Sealant)

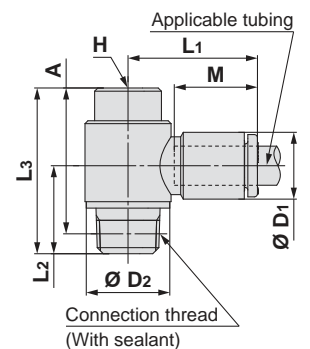


Applicable tubing O.D. [mm]	Connection thread R	Model	H (Width across flats)	*1 Ø D1	Ø D2	L1	L2	L3	A*2	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
											Nylon	Urethane		
Ø 4	1/8	KQ2VS04-01□S	6	8.2	13.4	19.3	13.7	25.8	22.7	13.3	2.9	2.9	3	13.2
	1/8	KQ2VS06-01□S	6	10.4	13.4	20.5	13.7	25.8	22.7	13.3	7.5	5.9	4.5	13.5
Ø 6	1/4	KQ2VS06-02□S	6	10.4	15.3	19.9	17.9	26.5	21.8	13.3	7.5	5.9	4.5	20.8
	1/8	KQ2VS08-01□S	8	13.2	17.6	23.5	15.1	26	22.9	14.2	16	11.2	6	19.2
	1/4	KQ2VS08-02□S	8	13.2	17.6	23.5	18.5	29.5	24.8	14.2	16	11.2	6	25.7
Ø 8	3/8	KQ2VS08-03□S	8	13.2	20.6	23.1	19.5	31.4	26.3	14.2	16	11.2	6	37
	1/4	KQ2VS10-02□S	8	15.9	20.6	25.9	19.7	30.8	26.1	15.6	27	20.3	7.5	30.4
Ø 10	3/8	KQ2VS10-03□S	8	15.9	20.6	25.9	20.3	31.4	26.3	15.6	27	20.3	7.5	38.3
	3/8	KQ2VS12-03□S	10	18.5	25.2	28.5	21.4	35.1	30	17	39	30.8	9	51.4
Ø 12	1/2	KQ2VS12-04□S	10	18.5	25.2	28.5	24.6	38.3	31.9	17	39	30.8	9	70

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D1 is maximum diameter.

\*2 Reference dimensions after installation of R thread



Round Type

Metric Size M, R, Rc

Inch Size UNF, NPT

Inch Size M, R, Rc

Metric Size G

Metric Size R, Rc

Face Seal

Inch Size NPT

Inch Size R

Metric Size Uni

Inch Size Uni

Gasket Seal

# KQ2 Series

Applicable Tubing: Metric Size, Connection Thread: M, R, Rc

## Dimensions

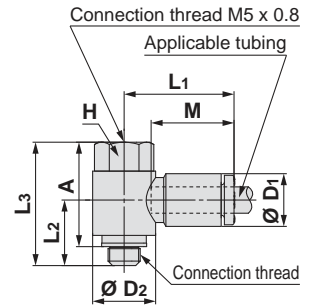
### Universal Female Elbow: KQ2VF (Gasket seal)



Applicable tubing O.D. [mm]	Connection thread M	Model	H (Width across flats)	*1 Ø D1	Ø D2	L1	L2	L3	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
											Nylon	Urethane		
Ø 4	M5 x 0.8	KQ2VF04-M5□	8	8.2	9.8	17.5	10.2	19.2	16.2	13.3	2.9	2.9	2.5	5.5
Ø 6	M5 x 0.8	KQ2VF06-M5□	8	10.4	9.8	18.3	10.2	19.2	16.2	13.3	3.8	3.8	2.5	5.8

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D1 is maximum diameter.



### Universal Female Elbow: KQ2VF (Sealant)

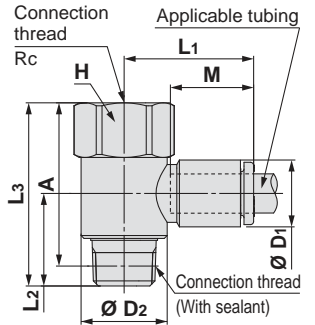


Applicable tubing O.D. [mm]	Connection thread R, Rc	Model	H (Width across flats)	*1 Ø D1	Ø D2	L1	L2	L3	A*2	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
											Nylon	Urethane		
Ø 4	1/8	KQ2VF04-01□S	14	8.2	13.4	19.3	14.4	28.5	25.4	13.3	2.9	2.9	3	17.3
	1/8	KQ2VF06-01□S	14	10.4	13.4	20.5	14.4	28.5	25.4	13.3	7.5	5.9	4.5	17.6
Ø 6	1/4	KQ2VF06-02□S	17	10.4	17.6	21.2	19.4	37.9	33.2	13.3	7.5	5.9	4.5	37
	1/8	KQ2VF08-01□S	17	13.2	17.6	23.5	15.5	30	26.9	14.2	16	11.2	6	27.5
Ø 8	1/4	KQ2VF08-02□S	17	13.2	17.6	23.5	18.9	37.9	33.2	14.2	16	11.2	6	38.1
	3/8	KQ2VF08-03□S	22	13.2	25.2	24.9	24	44	38.9	14.2	16	11.2	6	64.5
Ø 10	1/4	KQ2VF10-02□S	19	15.9	20.6	25.9	20.4	40.3	35.6	15.6	27	20.3	7.5	46.4
	3/8	KQ2VF10-03□S	22	15.9	25.2	26.3	23.2	44	38.9	15.6	27	20.3	7.5	65.3
Ø 12	3/8	KQ2VF12-03□S	22	18.5	25.2	28.5	22.5	44	38.9	17	39	30.8	9	67.2
	1/2	KQ2VF12-04□S	24	18.5	27	29.9	24.4	48.9	42.5	17	39	30.8	9	95.6

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D1 is maximum diameter.

\*2 Reference dimensions after installation of R thread



# Metric Size One-touch Fittings **KQ2 Series**

Applicable Tubing: Metric Size, Connection Thread: M, R, Rc

## Dimensions

### Triple Universal Male Elbow: KQ2VT (Sealant)

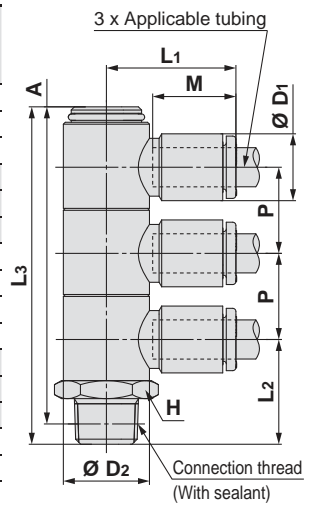


Applicable tubing O.D. [mm]	Connection thread R	Model	H (Width across flats)	*1 Ø D1	Ø D2	L1	L2	L3	A*2	M	P	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
												Nylon	Urethane		
Ø 4	1/8	KQ2VT04-01□S	14	8.2	13.4	19.3	16.3	52.5	49.4	13.3	13.4	2.9	2.9	3	25.3
	1/4	KQ2VT04-02□S	14	8.2	13.4	19.3	20.7	56.9	52.2	13.3	13.4	2.9	2.9	3	32.9
	3/8	KQ2VT04-03□S	17	8.2	13.4	19.3	22.1	58.3	53.2	13.3	13.4	2.9	2.9	3	44.8
Ø 6	1/8	KQ2VT06-01□S	14	10.4	13.4	20.5	16.3	52.5	49.4	13.3	13.4	7.5	5.9	4.5	26.2
	1/4	KQ2VT06-02□S	14	10.4	13.4	20.5	20.7	56.9	52.2	13.3	13.4	7.5	5.9	4.5	33.9
	3/8	KQ2VT06-03□S	17	10.4	13.4	20.5	22.1	58.3	53.2	13.3	13.4	7.5	5.9	4.5	45.8
Ø 8	1/8	KQ2VT08-01□S	19	13.2	17.6	23.7	19	61.8	58.7	14.2	15.9	16	11.2	6	59.6
	1/4	KQ2VT08-02□S	19	13.2	17.6	23.7	22.4	65.2	60.5	14.2	15.9	16	11.2	6	64.9
	3/8	KQ2VT08-03□S	19	13.2	17.6	23.7	23	65.8	60.7	14.2	15.9	16	11.2	6	69.5
Ø 10	1/4	KQ2VT10-02□S	21	15.9	20.6	25.7	24.3	75.5	70.8	15.6	19.2	27	20.3	7.5	82
	3/8	KQ2VT10-03□S	21	15.9	20.6	25.7	24.7	75.9	70.8	15.6	19.2	27	20.3	7.5	81.9
	1/2	KQ2VT10-04□S	22	15.9	20.6	25.7	28.7	79.9	73.5	15.6	19.2	27	20.3	7.5	103.9
Ø 12	1/4	KQ2VT12-02□S	26	18.5	25.2	28.9	26.5	84.1	79.4	17	21.6	39	30.8	9	139.3
	3/8	KQ2VT12-03□S	26	18.5	25.2	28.9	26.9	84.5	79.4	17	21.6	39	30.8	9	129.7
	1/2	KQ2VT12-04□S	26	18.5	25.2	28.9	30.1	87.7	81.3	17	21.6	39	30.8	9	142.2

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D1 is maximum diameter.

\*2 Reference dimensions after installation of R thread



### Double Universal Male Elbow: KQ2VD (Sealant)

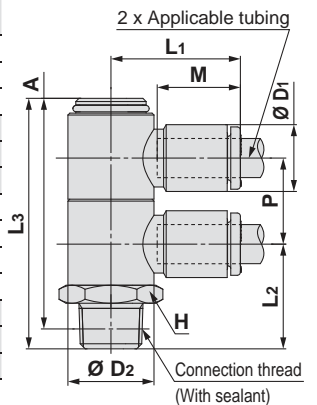


Applicable tubing O.D. [mm]	Connection thread R	Model	H (Width across flats)	*1 Ø D1	Ø D2	L1	L2	L3	A*2	M	P	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
												Nylon	Urethane		
Ø 4	1/8	KQ2VD04-01□S	14	8.2	13.4	19.3	16.3	39	35.9	13.3	13.4	2.9	2.9	3	19.7
	1/4	KQ2VD04-02□S	14	8.2	13.4	19.3	20.7	43.4	38.7	13.3	13.4	2.9	2.9	3	27.4
	3/8	KQ2VD04-03□S	17	8.2	13.4	19.3	22.1	44.8	39.7	13.3	13.4	2.9	2.9	3	39.3
Ø 6	1/8	KQ2VD06-01□S	14	10.4	13.4	20.5	16.3	39	35.9	13.3	13.4	7.5	5.9	4.5	20.3
	1/4	KQ2VD06-02□S	14	10.4	13.4	20.5	20.7	43.4	38.7	13.3	13.4	7.5	5.9	4.5	28
	3/8	KQ2VD06-03□S	17	10.4	13.4	20.5	22.1	44.8	39.7	13.3	13.4	7.5	5.9	4.5	39.9
Ø 8	1/8	KQ2VD08-01□S	19	13.2	17.6	23.7	19	45.8	42.7	14.2	15.9	16	11.2	6	45.1
	1/4	KQ2VD08-02□S	19	13.2	17.6	23.7	22.4	49.2	44.5	14.2	15.9	16	11.2	6	44.3
	3/8	KQ2VD08-03□S	19	13.2	17.6	23.7	23	49.8	44.7	14.2	15.9	16	11.2	6	52.3
Ø 10	1/4	KQ2VD10-02□S	21	15.9	20.6	25.7	24.3	56.2	51.5	15.6	19.2	27	20.3	7.5	63.1
	3/8	KQ2VD10-03□S	21	15.9	20.6	25.7	24.7	56.6	51.5	15.6	19.2	27	20.3	7.5	65.1
	1/2	KQ2VD10-04□S	22	15.9	20.6	25.7	28.7	60.6	54.2	15.6	19.2	27	20.3	7.5	87
Ø 12	1/4	KQ2VD12-02□S	26	18.5	25.2	28.9	26.5	62.4	57.7	17	21.6	39	30.8	9	107
	3/8	KQ2VD12-03□S	26	18.5	25.2	28.9	26.9	62.8	57.7	17	21.6	39	30.8	9	102.1
	1/2	KQ2VD12-04□S	26	18.5	25.2	28.9	30.1	66	59.6	17	21.6	39	30.8	9	116.1

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D1 is maximum diameter.

\*2 Reference dimensions after installation of R thread



Round Type

Metric Size M, R, Rc

Sealant/Gasket Seal

Inch Size UNF, NPT

Inch Size M, R, Rc

Metric Size G

Face Seal

Metric Size R, Rc

Inch Size NPT

Inch Size R

Gasket Seal

Metric Size Uni

Inch Size Uni

# KQ2 Series

Applicable Tubing: Metric Size, Connection Thread: M, R, Rc

## Dimensions

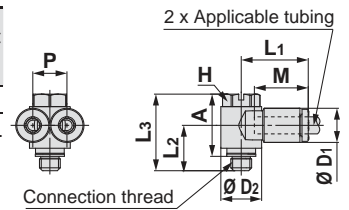
### Branch Universal Male Elbow: KQ2Z (Gasket seal)



Applicable tubing O.D. [mm]	Connection thread	Model	H (Width across flats)	*1 Ø D1	Ø D2	L1	L2	L3	A	M	P	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
												Nylon	Urethane		
Ø 4	M5 x 0.8	KQ2Z04-M5□	8	8.2	9.8	16.5	10.9	18.4	14.9	13.3	8.2	3.4	3.4	2.5	6.2

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D1 is maximum diameter.



### Branch Universal Male Elbow: KQ2Z (Sealant)

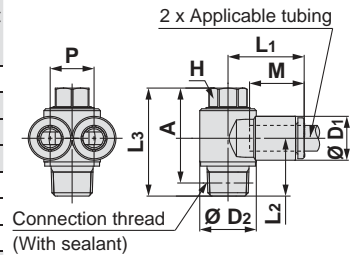


Applicable tubing O.D. [mm]	Connection thread	Model	H (Width across flats)	*1 Ø D1	Ø D2	L1	L2	L3	A*2	M	P	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
												Nylon	Urethane		
Ø 4	1/8	KQ2Z04-01□S	8	8.2	13.4	18.5	13.7	25.6	22.5	13.3	8.2	4.7	4.7	3	14
	1/8	KQ2Z06-01□S	8	10.4	13.4	18.4	13.7	25.6	22.5	13.3	10.4	10.8	8.6	4.5	14.6
Ø 6	1/4	KQ2Z06-02□S	14	10.4	20.6	21.5	19.1	34.9	30.2	13.3	10.4	10.8	8.6	4.5	37
	3/8	KQ2Z06-03□S	14	10.4	20.6	21.5	19.5	35.3	30.2	13.3	10.4	10.8	8.6	4.5	44.6
Ø 8	1/8	KQ2Z08-01□S	12	13.2	17.6	21.2	15.1	27.6	24.5	14.2	13.2	20.5	14.2	6	24.3
	1/4	KQ2Z08-02□S	12	13.2	17.6	21.2	18.5	31	26.3	14.2	13.2	20.5	14.2	6	30.8
Ø 8	3/8	KQ2Z08-03□S	14	13.2	20.6	22.3	19.5	35.3	30.2	14.2	13.2	20.5	14.2	6	46.3
	1/4	KQ2Z10-02□S	14	15.9	21.6	23.6	19.9	34.9	30.2	15.6	15.9	31.8	22.6	7.5	41.7
Ø 10	3/8	KQ2Z10-03□S	14	15.9	21.6	23.6	20.3	35.3	30.2	15.6	15.9	31.8	22.6	7.5	49.3
	3/8	KQ2Z12-03□S	17	18.5	24.1	26.9	21.2	37.6	32.5	17	18.5	44.6	35.3	9	63.4
Ø 12	1/2	KQ2Z12-04□S	17	18.5	24.1	26.9	24.4	40.8	34.4	17	18.5	44.6	35.3	9	82

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D1 is maximum diameter.

\*2 Reference dimensions after installation of R thread



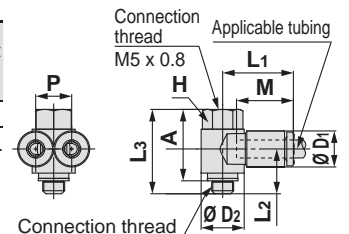
### Branch Universal Female Elbow: KQ2ZF (Gasket seal)



Applicable tubing O.D. [mm]	Connection thread	Model	H (Width across flats)	*1 Ø D1	Ø D2	L1	L2	L3	A	M	P	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
												Nylon	Urethane		
Ø 4	M5 x 0.8	KQ2ZF04-M5□	8	8.2	9.8	16.5	11.4	19.2	16.2	13.3	8.2	3.4	3.4	2.5	6.3

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D1 is maximum diameter.



### Branch Universal Female Elbow: KQ2ZF (Sealant)

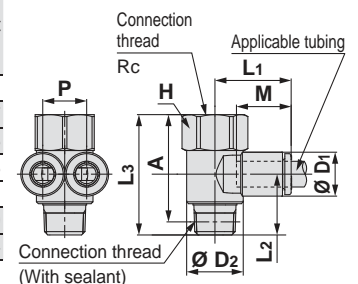


Applicable tubing O.D. [mm]	Connection thread R, Rc	Model	H (Width across flats)	*1 Ø D1	Ø D2	L1	L2	L3	A*2	M	P	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
												Nylon	Urethane		
Ø 4	1/8	KQ2ZF04-01□S	14	8.2	13.4	18.5	14.4	28.5	25.4	13.3	8.2	4.7	4.7	3	18.1
	1/8	KQ2ZF06-01□S	14	10.4	13.4	18.4	14.4	28.5	25.4	13.3	10.4	10.8	8.6	4.5	18.7
Ø 6	1/4	KQ2ZF06-02□S	19	10.4	20.6	21.5	21.2	40.3	35.6	13.3	10.4	10.8	8.6	4.5	45.3
	1/8	KQ2ZF08-01□S	17	13.2	17.6	21.2	15.5	30	26.9	14.2	13.2	20.5	14.2	6	29.3
Ø 8	1/4	KQ2ZF08-02□S	19	13.2	20.6	22.3	21.2	40.3	35.6	14.2	13.2	20.5	14.2	6	47
	1/4	KQ2ZF10-02□S	19	15.9	21.6	23.6	20.4	40.3	35.6	15.6	15.9	31.8	22.6	7.5	49.9
Ø 10	3/8	KQ2ZF10-03□S	22	15.9	25.2	25.5	23.2	44	38.9	15.6	15.9	31.8	22.6	7.5	68.4
	3/8	KQ2ZF12-03□S	22	18.5	24.1	26.9	22.7	44	38.9	17	18.5	44.6	35.3	9	71
Ø 12	1/2	KQ2ZF12-04□S	24	18.5	27	29.9	24.4	48.9	42.5	17	18.5	44.6	35.3	9	100.5

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D1 is maximum diameter.

\*2 Reference dimensions after installation of R thread



# Metric Size One-touch Fittings **KQ2 Series**

Applicable Tubing: Metric Size, Connection Thread: M, R, Rc

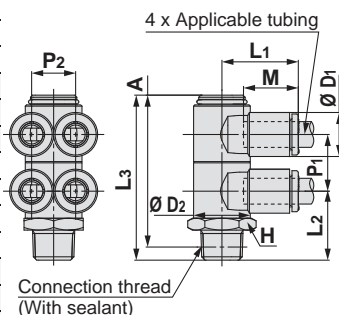
## Dimensions

### Double Branch Universal Male Elbow: KQ2ZD (Sealant)



Applicable tubing O.D. (mm)	Connection thread R	Model	H (Width across flats)	*1 Ø D1	Ø D2	L1	L2	L3	A*2	M	P1	P2	Effective area (mm <sup>2</sup> )		Min. port size	Weight [g]
													Nylon	Urethane		
Ø 4	1/8	KQ2ZD04-01□S	14	8.2	13.4	18.5	16.3	39	35.9	13.3	13.4	8.2	4.7	4.7	3	21.3
	1/4	KQ2ZD04-02□S	14	8.2	13.4	18.5	20.7	43.4	38.7	13.3	13.4	8.2	4.7	4.7	3	29
	3/8	KQ2ZD04-03□S	17	8.2	13.4	18.5	22.1	44.8	39.7	13.3	13.4	8.2	4.7	4.7	3	40.9
Ø 6	1/8	KQ2ZD06-01□S	14	10.4	13.4	18.4	16.3	39	35.9	13.3	13.4	10.4	10.8	8.6	4.5	22.5
	1/4	KQ2ZD06-02□S	14	10.4	13.4	18.4	20.7	43.4	38.7	13.3	13.4	10.4	10.8	8.6	4.5	30.2
	3/8	KQ2ZD06-03□S	17	10.4	13.4	18.4	22.1	44.8	39.7	13.3	13.4	10.4	10.8	8.6	4.5	42.1
Ø 8	1/8	KQ2ZD08-01□S	19	13.2	17.6	21.2	19	45.8	42.7	14.2	15.9	13.2	20.5	14.2	6	48.7
	1/4	KQ2ZD08-02□S	19	13.2	17.6	21.2	22.4	49.2	44.5	14.2	15.9	13.2	20.5	14.2	6	48
	3/8	KQ2ZD08-03□S	19	13.2	17.6	21.2	23	49.8	44.7	14.2	15.9	13.2	20.5	14.2	6	55.9
	1/2	KQ2ZD08-04□S	22	13.2	17.6	21.2	27.2	54	47.6	14.2	15.9	13.2	20.5	14.2	6	82.1
Ø 10	1/4	KQ2ZD10-02□S	21	15.9	20.6	23.6	24.3	56.2	51.5	15.6	19.2	15.9	31.8	21.6	7.5	69
	3/8	KQ2ZD10-03□S	21	15.9	20.6	23.6	24.7	56.6	51.5	15.6	19.2	15.9	31.8	21.6	7.5	71
	1/2	KQ2ZD10-04□S	22	15.9	20.6	23.6	28.7	60	53.6	15.6	19.2	15.9	31.8	21.6	7.5	92.9
Ø 12	1/4	KQ2ZD12-02□S	26	18.5	25.2	26.8	26.5	62.4	57.7	17	21.6	18.5	44.6	35.3	9	116.6
	3/8	KQ2ZD12-03□S	26	18.5	25.2	26.8	26.9	62.8	57.7	17	21.6	18.5	44.6	35.3	9	110.7
	1/2	KQ2ZD12-04□S	26	18.5	25.2	26.8	30.1	66	59.6	17	21.6	18.5	44.6	35.3	9	124.7

□: A (Brass), N (Brass + Electroless nickel plating) \*1 Ø D1 is maximum diameter.  
\*2 Reference dimensions after installation of R thread

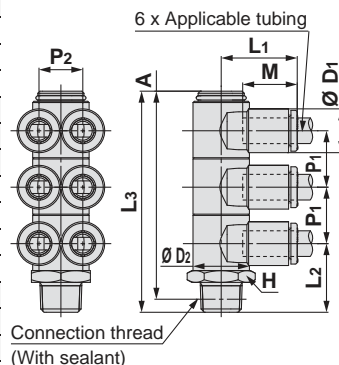


### Triple Branch Universal Male Elbow: KQ2ZT (Sealant)



Applicable tubing O.D. (mm)	Connection thread R	Model	H (Width across flats)	*1 Ø D1	Ø D2	L1	L2	L3	A*2	M	P1	P2	Effective area (mm <sup>2</sup> )		Min. port size	Weight [g]
													Nylon	Urethane		
Ø 4	1/8	KQ2ZT04-01□S	14	8.2	13.4	18.5	16.3	52.5	49.4	13.3	13.4	8.2	4.7	4.7	3	27.7
	1/4	KQ2ZT04-02□S	14	8.2	13.4	18.5	20.7	56.9	52.2	13.3	13.4	8.2	4.7	4.7	3	35.3
	3/8	KQ2ZT04-03□S	17	8.2	13.4	18.5	22.1	58.3	53.2	13.3	13.4	8.2	4.7	4.7	3	47.2
Ø 6	1/8	KQ2ZT06-01□S	14	10.4	13.4	18.4	16.3	52.5	49.4	13.3	13.4	10.4	10.8	8.6	4.5	29.5
	1/4	KQ2ZT06-02□S	14	10.4	13.4	18.4	20.7	56.9	52.2	13.3	13.4	10.4	10.8	8.6	4.5	37.2
	3/8	KQ2ZT06-03□S	17	10.4	13.4	18.4	22.1	58.3	53.2	13.3	13.4	10.4	10.8	8.6	4.5	49.1
Ø 8	1/8	KQ2ZT08-01□S	19	13.2	17.6	21.2	19	61.8	58.7	14.2	15.9	13.2	20.5	14.2	6	65.1
	1/4	KQ2ZT08-02□S	19	13.2	17.6	21.2	22.4	65.2	60.5	14.2	15.9	13.2	20.5	14.2	6	62.3
	3/8	KQ2ZT08-03□S	19	13.2	17.6	21.2	23	65.8	60.7	14.2	15.9	13.2	20.5	14.2	6	70.4
	1/2	KQ2ZT08-04□S	22	13.2	17.6	21.2	27.2	70	63.6	14.2	15.9	13.2	20.5	14.2	6	97
Ø 10	1/4	KQ2ZT10-02□S	21	15.9	20.6	23.6	24.3	75.5	70.8	15.6	19.2	15.9	31.8	21.6	7.5	90.9
	3/8	KQ2ZT10-03□S	21	15.9	20.6	23.6	24.7	75.9	70.8	15.6	19.2	15.9	31.8	21.6	7.5	90.7
	1/2	KQ2ZT10-04□S	22	15.9	20.6	23.6	28.7	79.9	73.5	15.6	19.2	15.9	31.8	21.6	7.5	112.7
Ø 12	1/4	KQ2ZT12-02□S	26	18.5	25.2	26.8	26.5	84.1	79.4	17	21.6	18.5	44.6	35.3	9	152.2
	3/8	KQ2ZT12-03□S	26	18.5	25.2	26.8	26.9	84.5	79.4	17	21.6	18.5	44.6	35.3	9	142.6
	1/2	KQ2ZT12-04□S	26	18.5	25.2	26.8	30.1	87.7	81.3	17	21.6	18.5	44.6	35.3	9	155.1

□: A (Brass), N (Brass + Electroless nickel plating) \*1 Ø D1 is maximum diameter.  
\*2 Reference dimensions after installation of R thread



Round Type

Metric Size M, R, Rc

Sealant/Gasket Seal

Inch Size UNF, NPT

Inch Size M, R, Rc

Metric Size G

Face Seal

Metric Size R, Rc

Inch Size NPT

Inch Size R

Gasket Seal

Metric Size Uni

Inch Size Uni

# KQ2 Series

Applicable Tubing: Metric Size, Connection Thread: M, R, Rc

## Dimensions

### Female Elbow: KQ2LF

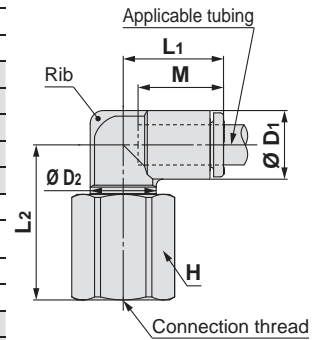


Applicable tubing O.D. [mm]	Connection thread M, Rc	Model	H (Width across flats)	*1 Ø D1	Ø D2	L1	L2	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]	With a rib
									Nylon	Urethane			
Ø 4	M5 x 0.8	KQ2LF04-M5□	8	8.2	7	15.4	15.3	13.3	3.5	3.5	2.5	4.7	●
	M6 x 1.0	KQ2LF04-M6□	8	8.2	7	15.4	16.1	13.3	3.5	3.5	2.5	4.6	●
	1/8	KQ2LF04-01□	14	8.2	10	14.8	22.4	13.3	4.2	4.2	3	17.6	●
Ø 6	1/4	KQ2LF04-02□	17	8.2	10	14.8	26.9	13.3	4.2	4.2	3	29.6	●
	M5 x 0.8	KQ2LF06-M5□	8	10.4	7	14.5	17	13.3	3.5	3.5	2.5	4.8	●
	M6 x 1.0	KQ2LF06-M6□	8	10.4	7	14.5	17.8	13.3	3.5	3.5	2.5	4.7	●
	1/8	KQ2LF06-01□	14	10.4	10	15.5	23.5	13.3	11.4	9	4.5	18	—
Ø 8	1/4	KQ2LF06-02□	17	10.4	10	15.5	28	13.3	11.4	9	4.5	30.1	—
	3/8	KQ2LF06-03□	19	10.4	10	15.5	28.5	13.3	11.4	9	4.5	34	—
	1/8	KQ2LF08-01□	14	13.2	10	16.4	24.9	14.2	11.4	11.4	4.5	18.8	●
		KQ2LF08-01□*2	14	13.2	12	17.2	23	14.2	21.6	14.9	6	14.6	●
Ø 10	1/4	KQ2LF08-02□	17	13.2	12	17.2	28.8	14.2	21.6	14.9	6	28.7	●
	3/8	KQ2LF08-03□	19	13.2	12	17.2	29.3	14.2	21.6	14.9	6	32.3	●
	1/4	KQ2LF10-02□	17	15.9	17	19.3	27.4	15.6	21.6	14.9	7.5	26.4	●
	3/8	KQ2LF10-03□	19	15.9	17	19.3	33.5	15.6	35.2	25	7.5	31	●
Ø 12	1/2	KQ2LF10-04□	24	15.9	17	19.3	36.5	15.6	35.2	25	7.5	57.6	●
	1/4	KQ2LF12-02□	17	18.5	17	21.5	28.7	17	50.2	39.7	9	28.2	●
	3/8	KQ2LF12-03□	19	18.5	17	21.5	34.8	17	50.2	39.7	9	32.9	●
	1/2	KQ2LF12-04□	24	18.5	17	21.5	37.8	17	50.2	39.7	9	59.5	●

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D1 is maximum diameter.

\*2 For details, refer to page 131.

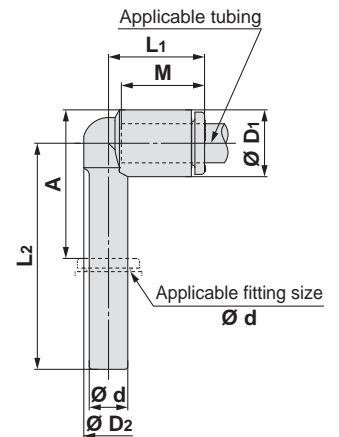


### Extended Plug-in Elbow: KQ2W



Applicable tubing O.D. [mm]	Applicable fitting size Ø d	Model	*1 Ø D1	Ø D2	L1	L2	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
									Nylon	Urethane		
Ø 3.2	Ø 3.2	KQ2W23-99A	7.1	6.4	14.4	30.5	20.8	13.3	3	2.5	2.5	1
Ø 4	Ø 4	KQ2W04-99A	8.2	7.2	14.5	31.8	22.6	13.3	4.2	4.2	3	1.3
Ø 6	Ø 6	KQ2W06-99A	10.4	8	15.3	35.2	27.1	13.3	9	9	4	2
Ø 8	Ø 8	KQ2W08-99A	13.2	10	17.2	41.9	34.3	14.2	21.6	14.9	6	3.5
Ø 10	Ø 10	KQ2W10-99A	15.9	12	19.3	46.6	38.9	15.6	35.2	25	7.5	5.5
Ø 12	Ø 12	KQ2W12-99A	18.5	14	21.5	52	44.2	17	50.2	39.7	9	8.4

\*1 Ø D1 is maximum diameter.



# Metric Size One-touch Fittings **KQ2 Series**

Applicable Tubing: Metric Size, Connection Thread: M, R, Rc

## Dimensions

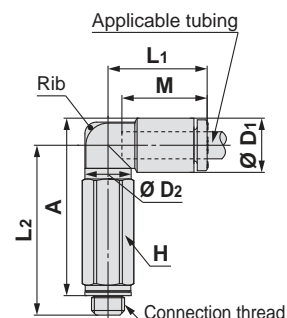
### Extended Male Elbow: KQ2W (Gasket seal)



Applicable tubing O.D. [mm]	Connection thread M	Model	H (Width across flats)	*1 Ø D1	Ø D2	L1	L2	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]	With a rib
										Nylon	Urethane			
Ø 2	M3 x 0.5	KQ2W02-M3G	5.5	5.8	5.5	12.6	18.8	19.1	11.9	—	0.8	1.2	2.6	●
	M5 x 0.8	KQ2W02-M5□	7	5.8	5.5	12.6	19.3	19.2	11.9	—	0.8	1.2	4.6	●
Ø 3.2	M3 x 0.5	KQ2W23-M3G	7	7.1	7	15.3	22.5	23.4	13.3	0.8	0.8	1.2	4.8	●
	M5 x 0.8	KQ2W23-M5□	7	7.1	7	15.3	25.2	25.7	13.3	2.8	2.4	2.5	5.8	●
Ø 4	M3 x 0.5	KQ2W04-M3G	7	8.2	7	15.4	23	24.5	13.3	0.8	0.8	1.2	4.9	●
	M5 x 0.8	KQ2W04-M5□	7	8.2	7	15.4	25.7	26.8	13.3	3	3	2.5	5.8	●
Ø 6	M5 x 0.8	KQ2W06-M5□	7	10.4	7	14.5	27.4	29.6	13.3	3	3	2.5	5.9	●

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D1 is maximum diameter.



### Extended Male Elbow: KQ2W (Sealant)



Applicable tubing O.D. [mm]	Connection thread R	Model	H (Width across flats)	*1 Ø D1	Ø D2	L1	L2	A*2	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]	With a rib
										Nylon	Urethane			
Ø 3.2	1/8	KQ2W23-01□S	10	7.1	10	14.5	30.3	30.8	13.3	2.8	2.4	2.5	10.8	—
	1/4	KQ2W23-02□S	14	7.1	10	14.5	32.8	31.7	13.3	2.8	2.4	2.5	27.3	—
Ø 4	1/8	KQ2W04-01□S	10	8.2	10	14.8	29.9	30.9	13.3	4	4	3	11	●
	1/4	KQ2W04-02□S	14	8.2	10	14.8	33.3	32.7	13.3	4	4	3	27.5	●
Ø 6	1/8	KQ2W06-01□S	10	10.4	10	15.5	31	33.1	13.3	10.9	8.6	4.5	11.4	—
	1/4	KQ2W06-02□S	14	10.4	10	15.5	34.4	34.9	13.3	10.9	8.6	4.5	28	—
	3/8	KQ2W06-03□S	17	10.4	10	15.5	35.7	35.8	13.3	10.9	8.6	4.5	47.4	—
Ø 8	1/8	KQ2W08-01■S	10	13.2	10	16.4	32.4	35.9	14.2	10.9	10.9	4.5	12.2	●
		KQ2W08-01■QS	*3	12	13.2	12	17.2	42.4	45.9	14.2	20.5	14.2	6	23.7
	1/4	KQ2W08-02■S	14	13.2	12	17.2	39.1	41	14.2	20.5	14.2	6	40	●
Ø 10	3/8	KQ2W08-03■S	17	13.2	12	17.2	39.2	40.7	14.2	20.5	14.2	6	47	●
	1/4	KQ2W10-02■S	17	15.9	17	19.3	52.9	56.2	15.6	33.5	23.8	7.5	59	●
	3/8	KQ2W10-03■S	17	15.9	17	19.3	48.5	51.4	15.6	33.5	23.8	7.5	51.3	●
Ø 12	1/2	KQ2W10-04■S	22	15.9	17	19.3	52.5	54.1	15.6	33.5	23.8	7.5	92	●
	1/4	KQ2W12-02■S	17	18.5	17	21.5	54.2	58.8	17	47.7	37.7	9	60.7	●
	3/8	KQ2W12-03■S	17	18.5	17	21.5	49.8	54	17	47.7	37.7	9	53.2	●
Ø 16	1/2	KQ2W12-04■S	22	18.5	17	21.5	53.8	56.7	17	47.7	37.7	9	93.9	●
	1/4	KQ2W16-02□S	17	23.8	17	25.1	56.9	64.1	20.6	47.7	47.7	9	67.4	●
	3/8	KQ2W16-03□S	22	23.8	21	27.1	59.7	66.5	20.6	71	58.9	11	105.5	—
1/2	KQ2W16-04□S	22	23.8	21	27.1	58.4	63.9	20.6	100	58.9	13	101.7	—	

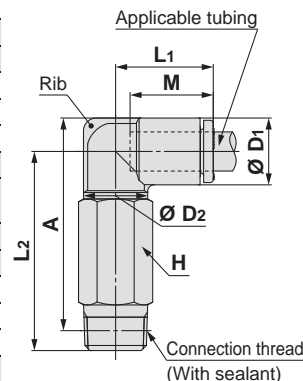
□: A (Brass), N (Brass + Electroless nickel plating)

■: A (Brass), N (Brass + Electroless nickel plating), G (stainless steel)

\*1 Ø D1 is maximum diameter.

\*2 Reference dimensions after installation of R thread

\*3 For details, refer to page 131.



Round Type

Metric Size M, R, Rc

Sealant/Gasket Seal

Inch Size UNF, NPT

Inch Size M, R, Rc

Metric Size G

Metric Size R, Rc

Face Seal

Inch Size NPT

Inch Size R

Gasket Seal

Metric Size Uni

Inch Size Uni

# KQ2 Series

Applicable Tubing: Metric Size, Connection Thread: M, R, Rc

## Dimensions

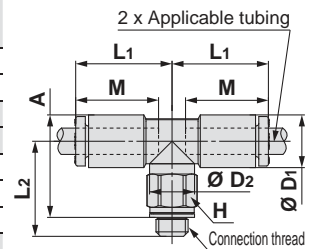
### Male Branch Tee: KQ2T (Gasket seal)



Applicable tubing O.D. [mm]	Connection thread M	Model	H (Width across flats)	*1 Ø D1	Ø D2	L1	L2	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
										Nylon	Urethane		
Ø 2	M3 x 0.5	KQ2T02-M3G	5.5	5.8	5.5	12.6	12.5	12.8	11.9	—	0.9	1.2	1.9
	M5 x 0.8	KQ2T02-M5□	7	5.8	5.5	12.6	13	12.9	11.9	—	0.9	1.4	3
Ø 3.2	M3 x 0.5	KQ2T23-M3G	7	7.1	7	15.3	13.8	14.7	13.3	0.9	0.9	1.2	3.1
	M5 x 0.8	KQ2T23-M5□	7	7.1	7	15.3	14.3	14.8	13.3	3.2	2.7	2.5	3.5
Ø 4	M3 x 0.5	KQ2T04-M3G	7	8.2	7	15.4	14.3	15.8	13.3	0.9	0.9	1.2	3.4
	M5 x 0.8	KQ2T04-M5□	7	8.2	7	15.4	14.8	15.9	13.3	4.5	4.5	2.5	3.9
	M6 x 1.0	KQ2T04-M6□	8	8.2	7	15.4	15.8	15.9	13.3	4.5	4.5	2.5	4.9
Ø 6	M5 x 0.8	KQ2T06-M5□	7	10.4	7	14.5	16.5	18.7	13.3	4.5	4.5	2.5	4.4
	M6 x 1.0	KQ2T06-M6□	8	10.4	7	14.5	17.5	18.7	13.3	4.5	4.5	2.5	5.4

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D1 is maximum diameter.



### Male Branch Tee: KQ2T (Sealant)



Applicable tubing O.D. [mm]	Connection thread R	Model	H (Width across flats)	*1 Ø D1	Ø D2	L1	L2	A*2	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
										Nylon	Urethane		
Ø 3.2	1/8	KQ2T23-01□S	10	7.1	10	14.5	16.6	17.1	13.3	3.4	2.9	2.5	5.2
	1/4	KQ2T23-02□S	14	7.1	10	14.5	21.1	20	13.3	3.4	2.9	2.5	14.7
Ø 4	1/8	KQ2T04-01□S	10	8.2	10	14.8	16.2	17.2	13.3	6	4.1	3	5.5
	1/4	KQ2T04-02□S	14	8.2	10	14.8	21.7	21.1	13.3	6	4.1	3	15
Ø 6	1/8	KQ2T06-01□S	10	10.4	10	15.5	17.3	19.4	13.3	13.9	11	4.5	6.1
	1/4	KQ2T06-02□S	14	10.4	10	15.5	22.8	23.3	13.3	13.9	11	4.5	15.6
	3/8	KQ2T06-03□S	17	10.4	10	15.5	24.1	24.2	13.3	13.9	11	4.5	27.4
Ø 8	1/8	KQ2T08-01■S	10	13.2	10	16.4	18.7	22.2	14.2	14	14	4.5	7.9
	1/4	KQ2T08-01■QS	12	13.2	12	17.2	23.5	27	14.2	26.3	18.2	6	11.0
	3/8	KQ2T08-03■S	17	13.2	12	17.2	25.5	27	14.2	26.3	18.2	6	26.5
Ø 10	1/8	KQ2T10-01■S	12	15.9	12	18.6	23.5	28.4	15.6	21.6	14.9	6	13.9
	1/4	KQ2T10-02■S	17	15.9	17	19.3	28.6	31.9	15.6	35.2	25	7.5	24.3
	3/8	KQ2T10-03■S	17	15.9	17	19.3	29.5	32.4	15.6	35.2	25	7.5	24.8
Ø 12	1/2	KQ2T10-04■S	22	15.9	17	19.3	33.5	35.1	15.6	35.2	25	7.5	47.3
	1/4	KQ2T12-02■S	17	18.5	17	21.5	29.9	34.5	17	57.2	45.2	9	27.3
	3/8	KQ2T12-03■S	17	18.5	17	21.5	30.8	35	17	57.2	45.2	9	28
Ø 16	1/2	KQ2T12-04■S	22	18.5	17	21.5	34.8	37.7	17	57.2	45.2	9	50.4
	1/4	KQ2T16-02□S	17	23.8	17	25.1	32.6	39.8	20.6	57.2	57.2	9	35.5
	3/8	KQ2T16-03■S	22	23.8	21	27.1	35.4	42.2	20.6	71	58.9	11	47.7
Ø 16	1/2	KQ2T16-04■S	22	23.8	21	27.1	34.1	39.6	20.6	100	58.9	13	51.4

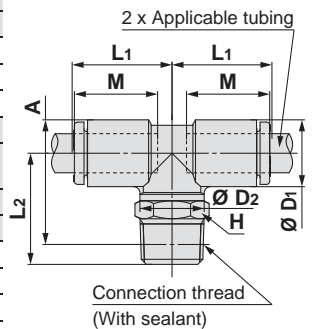
□: A (Brass), N (Brass + Electroless nickel plating)

■: A (Brass), N (Brass + Electroless nickel plating), G (stainless steel)

\*1 Ø D1 is maximum diameter.

\*2 Reference dimensions after installation of R thread

\*3 For details, refer to page 131.





# Metric Size One-touch Fittings **KQ2 Series**

Applicable Tubing: Metric Size, Connection Thread: M, R, Rc

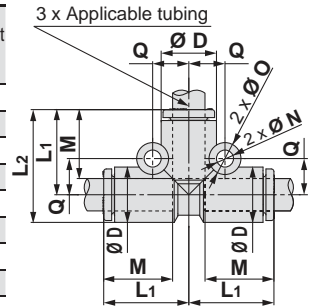
## Dimensions

### Union Tee: KQ2T



Applicable tubing O.D. [mm]	Model	*1 $\varnothing D$	L1	L2	M	Q	$\varnothing O$	$\varnothing N$	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
									Nylon	Urethane		
$\varnothing 2$	KQ2T02-00A	5.8	12.9	15.8	11.9	4.5	6	3.2	—	0.9	1.4	1.4
$\varnothing 3.2$	KQ2T23-00A	7.1	14.9	18.5	13.3	5.4	6	3.2	3.4	2.9	2.5	2.3
$\varnothing 4$	KQ2T04-00A	8.2	15.3	19.4	13.3	5.7	6	3.2	6.4	4.4	3	2.8
$\varnothing 6$	KQ2T06-00A	10.4	16.3	21.5	13.3	6.8	6	3.2	13.4	10.6	4.5	3.8
$\varnothing 8$	KQ2T08-00A	13.2	18.2	24.8	14.2	8.4	8	4.2	25.6	17.7	6	7
$\varnothing 10$	KQ2T10-00A	15.9	20.6	28.6	15.6	9.6	8	4.2	40	28.4	7.5	11
$\varnothing 12$	KQ2T12-00A	18.5	23	32.3	17	10.7	8	4.2	57.4	45.4	9	15.7
$\varnothing 16$	KQ2T16-00A	23.8	28.6	40.5	20.6	13.4	8	4.2	100	58.9	13	29.8

\*1  $\varnothing D$  is maximum diameter.

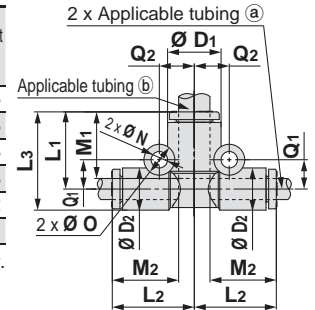


### Different Diameter Tee: KQ2T



Applicable tubing O.D. [mm]		Model	*1 $\varnothing D_1$	$\varnothing D_2$	L1	L2	L3	M1	M2	Q1	Q2	$\varnothing O$	$\varnothing N$	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
a	b													Nylon	Urethane		
$\varnothing 3.2$	$\varnothing 4$	KQ2T23-04A	8.2	7.1	14.9	15.3	18.5	13.3	13.3	5.4	5.8	6	3.2	3.8	3.5	2.5	2.6
$\varnothing 4$	$\varnothing 6$	KQ2T04-06A	10.4	8.2	15.3	16.3	19.4	13.3	13.3	5.7	6.8	6	3.2	7.1	6.6	3	3.3
$\varnothing 6$	$\varnothing 8$	KQ2T06-08A	13.2	10.4	17.2	17.3	22.4	14.2	13.3	7.3	8.4	8	4.2	16.4	16.4	4.5	5.3
$\varnothing 8$	$\varnothing 10$	KQ2T08-10A	15.9	13.2	19.6	19.2	26.2	15.6	14.2	8.4	9.6	8	4.2	36	27.2	6	8.3
$\varnothing 10$	$\varnothing 12$	KQ2T10-12A	18.5	15.9	22	21.6	30	17	15.6	9.6	10.7	8	4.2	56	44.5	7.5	12.2
$\varnothing 12$	$\varnothing 16$	KQ2T12-16A	23.8	18.5	26.6	25	35.9	20.6	17	10.7	13.4	8	4.2	108.5	74	9	20.1

\*1  $\varnothing D_1$  is maximum diameter.

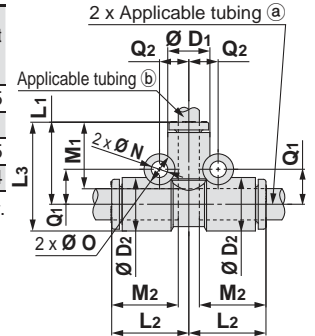


### Different Diameter Tee: KQ2T



Applicable tubing O.D. [mm]		Model	*1 $\varnothing D_1$	$\varnothing D_2$	L1	L2	L3	M1	M2	Q1	Q2	$\varnothing O$	$\varnothing N$	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
a	b													Nylon	Urethane		
$\varnothing 6$	$\varnothing 4$	KQ2T06-04A	8.2	10.4	16.3	15.3	21.5	13.3	13.3	6.8	5.7	6	3.2	6.4	4.4	3	3.5
$\varnothing 8$	$\varnothing 6$	KQ2T08-06A	10.4	13.2	17.3	17.2	23.9	13.3	14.2	8.4	7.3	8	4.2	13.4	10.6	4.5	6
$\varnothing 10$	$\varnothing 8$	KQ2T10-08A	13.2	15.9	19.2	19.6	27.2	14.2	15.6	9.6	8.4	8	4.2	25.6	17.7	6	9.5
$\varnothing 12$	$\varnothing 10$	KQ2T12-10A	15.9	18.5	21.6	22	30.9	15.6	17	10.7	9.6	8	4.2	40	28.4	7.5	13.4

\*1  $\varnothing D_1$  is maximum diameter.



Round Type

Metric Size M, R, Rc

Sealant/Gasket Seal

Inch Size UNF, NPT

Metric Size G

Metric Size R, Rc

Face Seal

Inch Size NPT

Inch Size R

Gasket Seal

Metric Size Uni

Inch Size Uni

# KQ2 Series

Applicable Tubing: Metric Size, Connection Thread: M, R, Rc

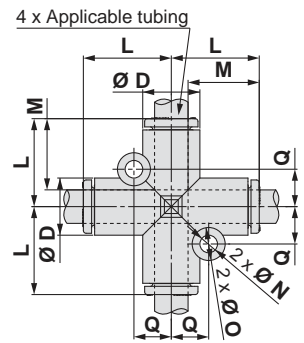
## Dimensions

### Cross: KQ2TW



Applicable tubing O.D. [mm]	Model	*1 $\varnothing D$	L	Q	M	$\varnothing O$	$\varnothing N$	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
								Nylon	Urethane		
$\varnothing 4$	KQ2TW04-00A	8.2	15.3	5.7	13.3	6	3.2	6.4	4.4	3	3.5
$\varnothing 6$	KQ2TW06-00A	10.4	16.3	6.8	13.3	6	3.2	13.4	10.6	4.5	4.9
$\varnothing 8$	KQ2TW08-00A	13.2	18.2	8.4	14.2	8	4.2	25.6	17.7	6	8.5
$\varnothing 10$	KQ2TW10-00A	15.9	20.6	9.6	15.6	8	4.2	40	28.4	7.5	12.7
$\varnothing 12$	KQ2TW12-00A	18.5	23	10.7	17	8	4.2	57.4	45.4	9	18.4

\*1  $\varnothing D$  is maximum diameter.

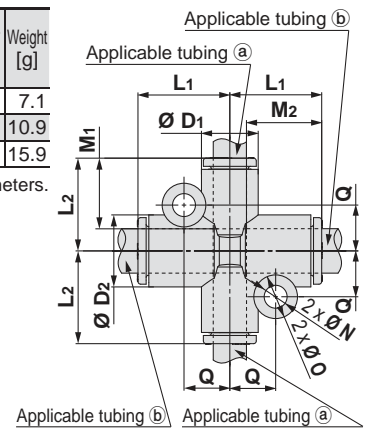


### Different Diameter Cross: KQ2TX



Applicable tubing O.D. [mm]		Model	*1 $\varnothing D_1$	*1 $\varnothing D_2$	L <sub>1</sub>	L <sub>2</sub>	Q	M <sub>1</sub>	M <sub>2</sub>	$\varnothing O$	$\varnothing N$	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
a	b											Nylon	Urethane		
$\varnothing 6$	$\varnothing 8$	KQ2TX06-08A	10.4	13.2	17.2	17.3	8.4	13.3	14.2	8	4.2	13.4	10.6	4.5	7.1
$\varnothing 8$	$\varnothing 10$	KQ2TX08-10A	13.2	15.9	19.6	19.2	9.6	14.2	15.6	8	4.2	25.6	17.7	6	10.9
$\varnothing 10$	$\varnothing 12$	KQ2TX10-12A	15.9	18.5	22	21.6	10.7	15.6	17	8	4.2	40	28.4	7.5	15.9

\*1  $\varnothing D_1$ ,  $\varnothing D_2$  are maximum diameters.

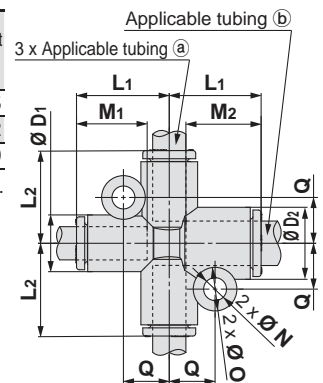


### Different Diameter Cross: KQ2TY



Applicable tubing O.D. [mm]		Model	*1 $\varnothing D_1$	*1 $\varnothing D_2$	L <sub>1</sub>	L <sub>2</sub>	Q	M <sub>1</sub>	M <sub>2</sub>	$\varnothing O$	$\varnothing N$	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
a	b											Nylon	Urethane		
$\varnothing 6$	$\varnothing 8$	KQ2TY06-08A	10.4	13.2	17.3	17.2	8.4	13.3	14.2	8	4.2	13.4	10.6	4.5	6.5
$\varnothing 8$	$\varnothing 10$	KQ2TY08-10A	13.2	15.9	19.2	19.6	9.6	14.2	15.6	8	4.2	25.6	17.7	6	10.2
$\varnothing 10$	$\varnothing 12$	KQ2TY10-12A	15.9	18.5	21.6	22	10.7	15.6	17	8	4.2	40	28.4	7.5	14.9

\*1  $\varnothing D_1$ ,  $\varnothing D_2$  are maximum diameters.



# Metric Size One-touch Fittings **KQ2 Series**

Applicable Tubing: Metric Size, Connection Thread: M, R, Rc

## Dimensions

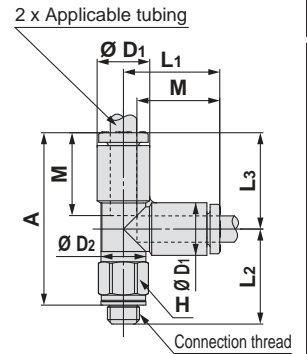
### Male Run Tee: KQ2Y (Gasket seal)



Applicable tubing O.D. [mm]	Connection thread M	Model	H (Width across flats)	*1 Ø D1	Ø D2	L1	L2	L3	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
											Nylon	Urethane		
Ø 2	M3 x 0.5	KQ2Y02-M3G	5.5	5.8	5.5	12.9	12.5	12.9	22.8	11.9	—	0.9	1.2	2
	M5 x 0.8	KQ2Y02-M5□	7	5.8	5.5	12.9	13	12.9	22.9	11.9	—	0.9	1.4	3.1
Ø 3.2	M3 x 0.5	KQ2Y23-M3G	7	7.1	7	15.3	13.8	15.3	26.5	13.3	0.9	0.9	1.2	3.1
	M5 x 0.8	KQ2Y23-M5□	7	7.1	7	15.3	14.3	15.3	26.6	13.3	3.2	2.7	2.5	3.5
Ø 4	M3 x 0.5	KQ2Y04-M3G	7	8.2	7	15.4	14.3	15.4	27.1	13.3	0.9	0.9	1.2	3.4
	M5 x 0.8	KQ2Y04-M5□	7	8.2	7	15.4	14.8	15.4	27.2	13.3	4.5	4.5	2.5	3.9
	M6 x 1.0	KQ2Y04-M6□	8	8.2	7	15.4	15.8	15.4	27.2	13.3	4.5	4.5	2.5	4.9
Ø 6	M5 x 0.8	KQ2Y06-M5□	7	10.4	7	16.3	16.5	16.3	29.8	13.3	4.5	4.5	2.5	4.6
	M6 x 1.0	KQ2Y06-M6□	8	10.4	7	16.3	17.5	16.3	29.8	13.3	4.5	4.5	2.5	5.7

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D1 is maximum diameter.



### Male Run Tee: KQ2Y (Sealant)



Applicable tubing O.D. [mm]	Connection thread R	Model	H (Width across flats)	*1 Ø D1	Ø D2	L1	L2	L3	A*2	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
											Nylon	Urethane		
Ø 3.2	1/8	KQ2Y23-01□S	10	7.1	10	14.9	16.6	14.9	28.5	13.3	3.4	2.9	2.5	5.3
	1/4	KQ2Y23-02□S	14	7.1	10	14.9	21.1	14.9	31.4	13.3	3.4	2.9	2.5	14.7
Ø 4	1/8	KQ2Y04-01□S	10	8.2	10	15.3	16.2	15.3	28.4	13.3	6.4	4.4	3	5.6
	1/4	KQ2Y04-02□S	14	8.2	10	15.3	21.7	15.3	32.3	13.3	6.4	4.4	3	15
Ø 6	1/8	KQ2Y06-01□S	10	10.4	10	16.3	17.3	16.3	30.5	13.3	13.4	10.6	4.5	6.2
	1/4	KQ2Y06-02□S	14	10.4	10	16.3	22.8	16.3	34.4	13.3	13.4	10.6	4.5	15.8
	3/8	KQ2Y06-03□S	17	10.4	10	16.3	24.1	16.3	35.3	13.3	13.4	10.6	4.5	27.5
Ø 8	1/8	KQ2Y08-01■S	10	13.2	10	18.2	18.7	18.2	33.8	14.2	13.4	13.4	4.5	8
	1/4	KQ2Y08-02■S	14	13.2	12	18.2	25.4	18.2	38.9	14.2	25.6	17.7	6	19.5
	3/8	KQ2Y08-03■S	17	13.2	12	18.2	25.5	18.2	38.6	14.2	25.6	17.7	6	26.5
Ø 10	1/8	KQ2Y10-01■S	12	15.9	12	20.6	23.5	20.6	41.1	15.6	40	28.4	6	14
	1/4	KQ2Y10-02■S	17	15.9	17	20.6	28.6	20.6	44.6	15.6	40	28.4	7.5	24.5
	3/8	KQ2Y10-03■S	17	15.9	17	20.6	29.5	20.6	45.1	15.6	40	28.4	7.5	25
	1/2	KQ2Y10-04■S	22	15.9	17	20.6	33.5	20.6	47.8	15.6	40	28.4	7.5	47.4
Ø 12	1/4	KQ2Y12-02■S	17	18.5	17	23	29.9	23	48.3	17	57.4	45.4	9	27.6
	3/8	KQ2Y12-03■S	17	18.5	17	23	30.8	23	48.8	17	57.4	45.4	9	28.2
	1/2	KQ2Y12-04■S	22	18.5	17	23	34.8	23	51.5	17	57.4	45.4	9	50.7
Ø 16	1/4	KQ2Y16-02□S	17	23.8	17	28.6	32.6	28.6	56.5	20.6	57.4	45.4	9	36
	3/8	KQ2Y16-03■S	22	23.8	21	28.6	35.4	28.6	58.9	20.6	81	60	11	48.3
	1/2	KQ2Y16-04■S	22	23.8	21	28.6	34.1	28.6	56.3	20.6	113	60	13	52

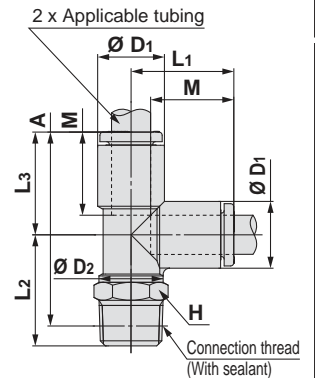
□: A (Brass), N (Brass + Electroless nickel plating)

■: A (Brass), N (Brass + Electroless nickel plating), G (stainless steel)

\*1 Ø D1 is maximum diameter.

\*2 Reference dimensions after installation of R thread

\*3 For details, refer to page 131.



Round Type

Metric Size M, R, Rc

Inch Size UNF, NPT

Inch Size M, R, Rc

Metric Size G

Metric Size R, Rc

Inch Size NPT

Inch Size R

Metric Size Uni

Inch Size Uni

# KQ2 Series

Applicable Tubing: Metric Size, Connection Thread: M, R, Rc

## Dimensions

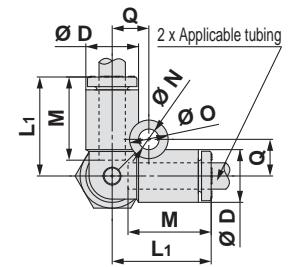
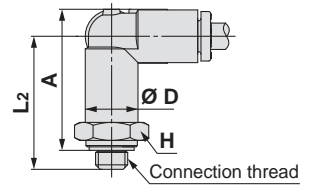
### Male Delta Union: KQ2D (Gasket seal)



Applicable tubing O.D. [mm]	Connection thread M	Model	H (Width across flats)	*1 Ø D	L1	L2	A	M	Q	Ø O	Ø N	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
												Nylon	Urethane		
Ø 4	M5 x 0.8	KQ2D04-M5□	10	8.2	15.8	20.7	21.8	13.3	5.7	6	3.2	2.2	2.2	1.8	6.6
	M6 x 1.0	KQ2D04-M6□	10	8.2	15.8	21.7	21.8	13.3	5.7	6	3.2	4.3	4.3	3	6.4
Ø 6	M5 x 0.8	KQ2D06-M5□	12	10.4	16.8	21.7	23.9	13.3	6.7	6	3.2	4.3	4.3	1.8	9.8
	M6 x 1.0	KQ2D06-M6□	12	10.4	16.8	22.7	23.9	13.3	6.7	6	3.2	4.3	4.3	3	9.7

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D is maximum diameter.



### Male Delta Union: KQ2D (Sealant)



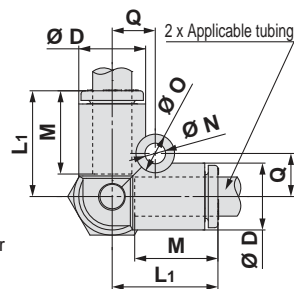
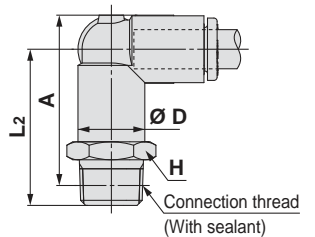
Applicable tubing O.D. [mm]	Connection thread R	Model	H (Width across flats)	*1 Ø D	L1	L2	A*2	M	Q	Ø O	Ø N	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
												Nylon	Urethane		
Ø 4	1/8	KQ2D04-01□S	10	8.2	15.8	23.3	24.3	13.3	5.7	6	3.2	6	6	3.6	9.2
	1/4	KQ2D04-02□S	14	8.2	15.8	27.7	27.1	13.3	5.7	6	3.2	6	6	3.6	19
Ø 6	1/8	KQ2D06-01□S	12	10.4	16.8	24.3	26.4	13.3	6.7	6	3.2	13.9	11	5.4	10.2
	1/4	KQ2D06-02□S	14	10.4	16.8	28.7	29.2	13.3	6.7	6	3.2	13.9	11	5.4	19.1
	3/8	KQ2D06-03□S	17	10.4	16.8	30.1	30.2	13.3	6.7	6	3.2	13.9	11	5.4	31
Ø 8	1/8	KQ2D08-01■S	14	13.2	18.8	26.3	29.8	14.2	8.4	8	4.2	26.3	18.2	6	15.3
	1/4	KQ2D08-02■S	14	13.2	18.8	30.7	32.6	14.2	8.4	8	4.2	26.3	18.2	7.3	20.4
	3/8	KQ2D08-03■S	17	13.2	18.8	32.1	33.6	14.2	8.4	8	4.2	26.3	18.2	7.3	32.1
Ø 10	1/4	KQ2D10-02■S	17	15.9	21.2	33.1	36.3	15.6	9.6	8	4.2	40.8	29	9	24.9
	3/8	KQ2D10-03■S	17	15.9	21.2	34.5	37.3	15.6	9.6	8	4.2	40.8	29	9.4	32.7
	1/2	KQ2D10-04■S	22	15.9	21.2	38.7	40.2	15.6	9.6	8	4.2	40.8	29	9.4	60.6
Ø 12	1/4	KQ2D12-02■S	19	18.5	23.6	35.5	40	17	10.7	8	4.2	57.2	45.2	9	35
	3/8	KQ2D12-03■S	19	18.5	23.6	36.9	41	17	10.7	8	4.2	57.2	45.2	11	38
	1/2	KQ2D12-04■S	22	18.5	23.6	41.1	43.9	17	10.7	8	4.2	57.2	45.2	11.6	60

□: A (Brass), N (Brass + Electroless nickel plating)

■: A (Brass), N (Brass + Electroless nickel plating), G (stainless steel)

\*1 Ø D is maximum diameter.

\*2 Reference dimensions after installation of R thread



# Metric Size One-touch Fittings **KQ2 Series**

Applicable Tubing: Metric Size, Connection Thread: M, R, Rc

## Dimensions

### Branch "Y": KQ2U (Gasket seal)

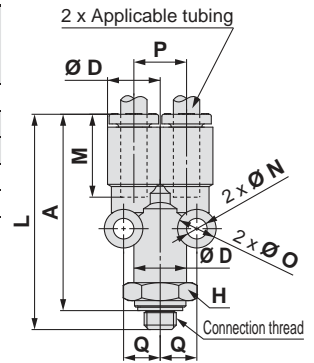


Applicable tubing O.D. [mm]	Connection thread M	Model	H (Width across flats)	*1 Ø D	L	A	M	P	Q	Ø O	Ø N	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
												Nylon	Urethane		
Ø 3.2	M5 x 0.8	KQ2U23-M5□	10	7.1	33.8	30.8	13.3	7.1	5.2	6	3.2	2.2	2.2	1.8	5.8
	M5 x 0.8	KQ2U04-M5■	10	8.2	33.9	30.9	13.3	8.2	5.7	6	3.2	2.2	2.2	1.8	6.7
Ø 4	M6 x 1.0	KQ2U04-M6□	10	8.2	34.9	30.9	13.3	8.2	5.7	6	3.2	2.2	2.2	3	6.6
	M5 x 0.8	KQ2U06-M5■	12	10.4	35	32	13.3	10.4	6.8	6	3.2	2.2	2.2	1.8	10
Ø 6	M6 x 1.0	KQ2U06-M6□	12	10.4	36	32	13.3	10.4	6.8	6	3.2	2.2	2.2	3	9.8

□: A (Brass), N (Brass + Electroless nickel plating)

■: A (Brass), N (Brass + Electroless nickel plating), G (stainless steel)

\*1 Ø D is maximum diameter.



### Branch "Y": KQ2U (Sealant)



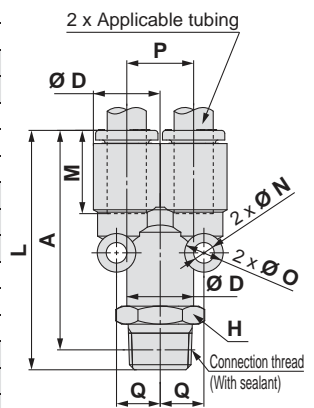
Applicable tubing O.D. [mm]	Connection thread R	Model	H (Width across flats)	*1 Ø D	L	A*2	M	P	Q	Ø O	Ø N	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
												Nylon	Urethane		
Ø 3.2	1/8	KQ2U23-01□S	10	7.1	36.4	33.3	13.3	7.1	5.2	6	3.2	3.4	2.9	2.7	8.6
	1/4	KQ2U23-02□S	14	7.1	40.8	36.1	13.3	7.1	5.2	6	3.2	3.4	2.9	2.7	19
Ø 4	1/8	KQ2U04-01■S	10	8.2	36.5	33.4	13.3	8.2	5.7	6	3.2	4.2	4.2	3.6	9.3
	1/4	KQ2U04-02■S	14	8.2	40.9	36.2	13.3	8.2	5.7	6	3.2	4.2	4.2	3.6	19.1
Ø 6	1/8	KQ2U06-01■S	12	10.4	37.6	34.5	13.3	10.4	6.8	6	3.2	13.4	10.6	5.4	10.3
	1/4	KQ2U06-02■S	14	10.4	42	37.3	13.3	10.4	6.8	6	3.2	13.4	10.6	5.4	19.2
	3/8	KQ2U06-03■S	17	10.4	43.4	38.3	13.3	10.4	6.8	6	3.2	13.4	10.6	5.4	31.2
Ø 8	1/8	KQ2U08-01■S	14	13.2	40.7	37.6	14.2	13.2	8.7	8	4.2	25.6	17.7	6	15.8
	1/4	KQ2U08-02■S	14	13.2	45.1	40.4	14.2	13.2	8.7	8	4.2	25.6	17.7	7.3	20.9
Ø 10	3/8	KQ2U08-03■S	17	13.2	46.5	41.4	14.2	13.2	8.7	8	4.2	25.6	17.7	7.3	32.7
	1/4	KQ2U10-02■S	17	15.9	49	44.3	15.6	15.9	10.1	8	4.2	40	28.4	9	25.6
	3/8	KQ2U10-03■S	17	15.9	50.4	45.3	15.6	15.9	10.1	8	4.2	40	28.4	9.4	33.4
Ø 12	1/2	KQ2U10-04■S	22	15.9	54.6	48.2	15.6	15.9	10.1	8	4.2	40	28.4	9.4	61.3
	1/4	KQ2U12-02■S	19	18.5	53	48.3	17	18.5	11.4	8	4.2	57.4	45.4	9	36
Ø 16	3/8	KQ2U12-03■S	19	18.5	54.4	49.3	17	18.5	11.4	8	4.2	57.4	45.4	11	38.9
	1/2	KQ2U12-04■S	22	18.5	58.6	52.2	17	18.5	11.4	8	4.2	57.4	45.4	11.6	61
Ø 16	1/4	KQ2U16-02□S	24	23.8	62.4	57.7	20.6	23.8	14	8	4.2	57.4	45.4	9	67.6
	3/8	KQ2U16-03□S	24	23.8	63.8	58.7	20.6	23.8	14	8	4.2	81	60	11	71.5
Ø 16	1/2	KQ2U16-04□S	24	23.8	68	61.6	20.6	23.8	14	8	4.2	113	60	13	82.6

□: A (Brass), N (Brass + Electroless nickel plating)

■: A (Brass), N (Brass + Electroless nickel plating), G (stainless steel)

\*1 Ø D is maximum diameter.

\*2 Reference dimensions after installation of R thread

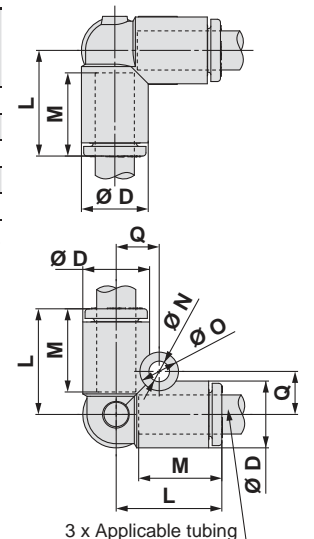


### Delta Union: KQ2D



Applicable tubing O.D. [mm]	Model	*1 Ø D	L	M	Q	Ø O	Ø N	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
								Nylon	Urethane		
Ø 4	KQ2D04-00A	8.2	15.8	13.3	5.7	6	3.2	6	4.1	3	2.7
Ø 6	KQ2D06-00A	10.4	16.8	13.3	6.7	6	3.2	13.9	11	4.5	3.8
Ø 8	KQ2D08-00A	13.2	18.8	14.2	8.4	8	4.2	26.3	18.2	6	6.8
Ø 10	KQ2D10-00A	15.9	21.2	15.6	9.6	8	4.2	40.8	29	7.5	10.3
Ø 12	KQ2D12-00A	18.5	23.6	17	10.7	8	4.2	57.2	45.2	9	15.2

\*1 Ø D is maximum diameter.



Round Type

Metric Size M, R, Rc

Inch Size UNF, NPT

Inch Size M, R, Rc

Metric Size G

Metric Size R, Rc

Face Seal

Inch Size NPT

Inch Size R

Metric Size Uni

Inch Size Uni

Gasket Seal

# KQ2 Series

Applicable Tubing: Metric Size, Connection Thread: M, R, Rc

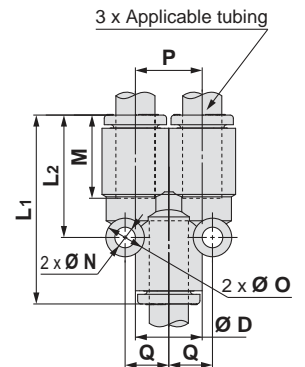
## Dimensions

### Union "Y": KQ2U



Applicable tubing O.D. [mm]	Model	*1 $\varnothing D$	L1	L2	P	M	Q	$\varnothing O$	$\varnothing N$	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
										Nylon	Urethane		
$\varnothing 2$	KQ2U02-00A	5.8	25.8	16.1	5.8	11.9	4.5	6	3.2	—	0.9	1.2	1.6
$\varnothing 3.2$	KQ2U23-00A	7.1	28.9	18	7.1	13.3	5.2	6	3.2	3.4	2.9	2.5	2.4
$\varnothing 4$	KQ2U04-00A	8.2	29	18.2	8.2	13.3	5.7	6	3.2	4.2	4.2	3	2.9
$\varnothing 6$	KQ2U06-00A	10.4	30.1	19.4	10.4	13.3	6.8	6	3.2	13.4	10.6	4.5	4.1
$\varnothing 8$	KQ2U08-00A	13.2	33.2	22.3	13.2	14.2	8.7	8	4.2	25.6	17.7	6	7.4
$\varnothing 10$	KQ2U10-00A	15.9	37.1	25	15.9	15.6	10.1	8	4.2	40	28.4	7.5	11.2
$\varnothing 12$	KQ2U12-00A	18.5	41.1	27.8	18.5	17	11.4	8	4.2	57.4	45.4	9	16.4
$\varnothing 16$	KQ2U16-00A	23.8	51.5	35	23.8	20.6	14	8	4.2	113	60	13	30.6

\*1  $\varnothing D$  is maximum diameter.

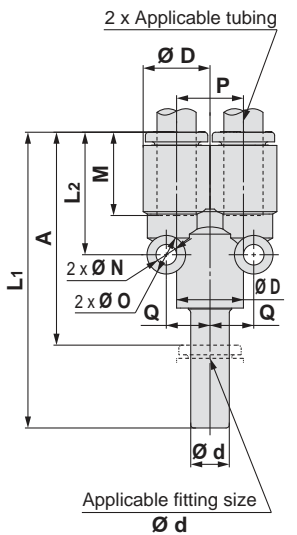


### Plug-in "Y": KQ2U



Applicable tubing O.D. [mm]	Applicable fitting size $\varnothing d$	Model	*1 $\varnothing D$	L1	L2	P	A	M	Q	$\varnothing O$	$\varnothing N$	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
												Nylon	Urethane		
$\varnothing 3.2$	$\varnothing 3.2$	KQ2U23-99A	7.1	45.1	18	7.1	31.8	13.3	5.2	6	3.2	3.4	2.9	2	2.5
$\varnothing 4$	$\varnothing 4$	KQ2U04-99A	8.2	44.8	18.2	8.2	31.5	13.3	5.7	6	3.2	4.2	4.2	2.5	3.1
$\varnothing 6$	$\varnothing 6$	KQ2U06-99A	10.4	46.3	19.4	10.4	33	13.3	6.8	6	3.2	13.4	10.6	4	4.5
$\varnothing 8$	$\varnothing 8$	KQ2U08-99A	13.2	52.1	22.3	13.2	37.9	14.2	8.7	8	4.2	25.6	17.7	6	8
$\varnothing 10$	$\varnothing 10$	KQ2U10-99A	15.9	57.3	25	15.9	41.7	15.6	10.1	8	4.2	40	28.4	7.5	12.3
$\varnothing 12$	$\varnothing 12$	KQ2U12-99A	18.5	63	27.8	18.5	46	17	11.4	8	4.2	57.4	45.4	9	18.3
$\varnothing 16$	$\varnothing 16$	KQ2U16-99A	23.8	75.9	35	23.8	55.3	20.6	14	8	4.2	113	60	13	33.5

\*1  $\varnothing D$  is maximum diameter.

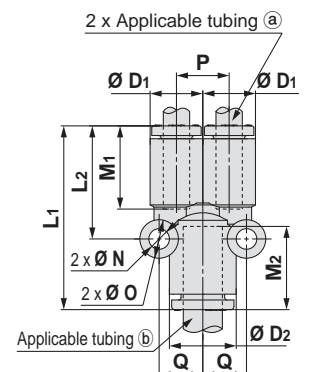


### Different Diameter Union "Y": KQ2U



Applicable tubing O.D. [mm]		Model	*1 $\varnothing D_1$	*1 $\varnothing D_2$	L1	L2	P	M1	M2	Q	$\varnothing O$	$\varnothing N$	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
a	b												Nylon	Urethane		
$\varnothing 2$	$\varnothing 3.2$	KQ2U02-23A	5.8	7.1	28.2	16.6	5.8	11.9	13.3	5.2	6	3.2	—	0.9	1.2	1.9
$\varnothing 2$	$\varnothing 4$	KQ2U02-04A	5.8	8.2	27.6	15.7	5.8	11.9	13.3	5.7	6	3.2	—	0.9	1.2	2.1
$\varnothing 3.2$	$\varnothing 4$	KQ2U23-04A	7.1	8.2	28.9	18	7.1	13.3	13.3	5.7	6	3.2	3.2	2.7	2.5	2.7
$\varnothing 4$	$\varnothing 6$	KQ2U04-06A	8.2	10.4	29	18	8.2	13.3	13.3	6.8	6	3.2	4.2	4.2	3	3.3
$\varnothing 6$	$\varnothing 8$	KQ2U06-08A	10.4	13.2	31	19.3	10.4	13.3	14.2	8.2	6	3.2	13.4	10.6	4.5	5
$\varnothing 8$	$\varnothing 10$	KQ2U08-10A	13.2	15.9	34.6	22.3	13.2	14.2	15.6	10.1	8	4.2	25.6	17.7	6	8.6
$\varnothing 10$	$\varnothing 12$	KQ2U10-12A	15.9	18.5	38.5	25	15.9	15.6	17	11.4	8	4.2	40	28.4	7.5	12.7
$\varnothing 12$	$\varnothing 16$	KQ2U12-16A	18.5	23.8	47.9	31	18.5	17	20.6	14	8	4.2	57.4	45.4	9	21.2

\*1  $\varnothing D_1, \varnothing D_2$  are maximum diameters.



# Metric Size One-touch Fittings **KQ2 Series**

Applicable Tubing: Metric Size, Connection Thread: M, R, Rc

## Dimensions

### Double Branch "Y": KQ2UD (Sealant)

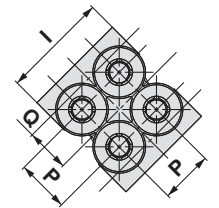
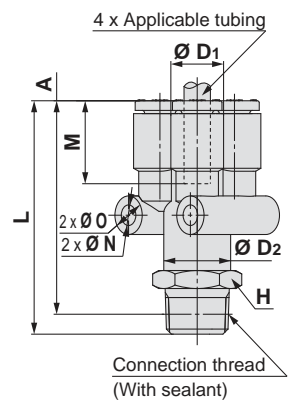


Applicable tubing O.D. [mm]	Connection thread R	Model	H (Width across flats)	*1 $\varnothing D_1$	$\varnothing D_2$	L	I	A*2	M	P	Q	$\varnothing O$	$\varnothing N$	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
														Nylon	Urethane		
$\varnothing 4$	1/8	KQ2UD04-01S	12	8.2	10.4	36.7	16.6	33.6	13.3	8.2	6.8	6	3.2	4.2	4.2	5.4	11.7
	1/4	KQ2UD04-02S	14	8.2	10.4	41.1	16.6	36.4	13.3	8.2	6.8	6	3.2	4.2	4.2	5.4	20.6
$\varnothing 6$	1/8	KQ2UD06-01S	14	10.4	13.2	39.5	21	36.4	13.3	10.4	8.2	6	3.2	13.4	10.6	6	16.4
	1/4	KQ2UD06-02S	14	10.4	13.2	43.9	21	39.2	13.3	10.4	8.2	6	3.2	13.4	10.6	7.3	21.6

■: A (Brass), N (Brass + Electroless nickel plating), G (stainless steel)

\*1  $\varnothing D_1$  is maximum diameter.

\*2 Reference dimensions after installation of R thread

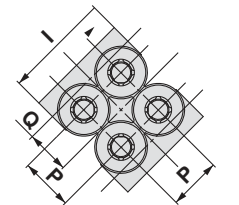
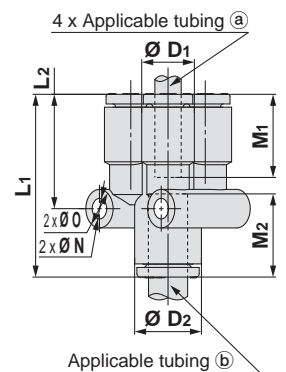


### Different Diameter Double Union "Y": KQ2UD



Applicable tubing O.D. [mm]		Model	*1 $\varnothing D_1$	*1 $\varnothing D_2$	L <sub>1</sub>	L <sub>2</sub>	P	I	M <sub>1</sub>	M <sub>2</sub>	Q	$\varnothing O$	$\varnothing N$	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
a	b													Nylon	Urethane		
$\varnothing 4$	$\varnothing 6$	KQ2UD04-06A	8.2	10.4	29.2	18.2	8.2	16.6	13.3	13.3	6.8	6	3.2	4.2	4.2	3	5.4
$\varnothing 6$	$\varnothing 8$	KQ2UD06-08A	10.4	13.2	32	20.5	10.4	21	13.3	14.2	8.2	6	3.2	13.4	10.6	4.5	8.1

\*1  $\varnothing D_1$ ,  $\varnothing D_2$  are maximum diameters.



Round Type

Metric Size M, R, Rc

Sealant/Gasket Seal

Inch Size UNF, NPT

Inch Size M, R, Rc

Metric Size G

Metric Size R, Rc

Face Seal

Inch Size NPT

Inch Size R

Gasket Seal

Metric Size Uni

Inch Size Uni

# KQ2 Series

Applicable Tubing: Metric Size, Connection Thread: M, R, Rc

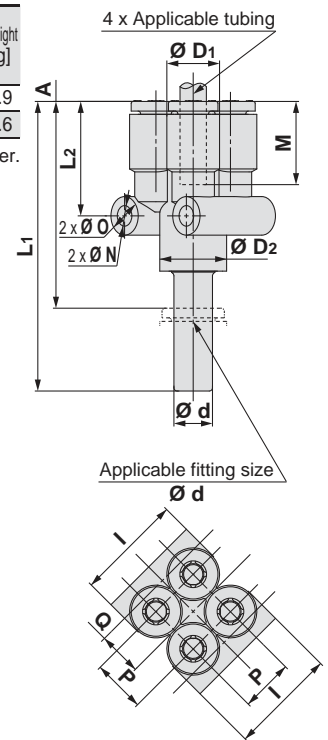
## Dimensions

### Double Plug-in “Y”: KQ2XD



Applicable tubing O.D. [mm]	Applicable fitting size $\varnothing d$	Model	$\varnothing D_1$ <sup>*1</sup>	$\varnothing D_2$	L <sub>1</sub>	L <sub>2</sub>	A	I	P	M	Q	$\varnothing O$	$\varnothing N$	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
														Nylon	Urethane		
$\varnothing 4$	$\varnothing 6$	KQ2XD04-06A	8.2	10.4	45.4	18.2	32.1	16.6	8.2	13.3	6.8	6	3.2	4.2	4.2	3	5.9
$\varnothing 6$	$\varnothing 8$	KQ2XD06-08A	10.4	13.2	50.9	20.5	36.7	21	10.4	13.3	8.2	6	3.2	13.4	10.6	4.5	8.6

\*1  $\varnothing D_1$  is maximum diameter.

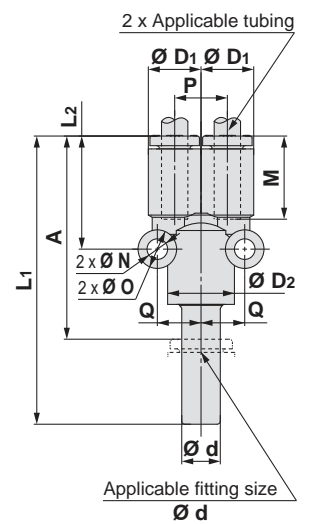


### Different Diameter Plug-in “Y”: KQ2X



Applicable tubing O.D. [mm]	Applicable fitting size $\varnothing d$	Model	$\varnothing D_1$ <sup>*1</sup>	$\varnothing D_2$ <sup>*1</sup>	L <sub>1</sub>	L <sub>2</sub>	A	P	M	Q	$\varnothing O$	$\varnothing N$	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
													Nylon	Urethane		
$\varnothing 3.2$	$\varnothing 4$	KQ2X23-04A	7.1	8.2	44.7	18	31.4	7.1	13.3	5.7	6	3.2	3.2	2.7	2.5	2.8
$\varnothing 4$	$\varnothing 6$	KQ2X04-06A	8.2	10.4	45.2	18	31.9	8.2	13.3	6.8	6	3.2	4.2	4.2	3	3.8
$\varnothing 6$	$\varnothing 8$	KQ2X06-08A	10.4	13.2	49.9	19.3	35.7	10.4	13.3	8.2	6	3.2	13.4	10.6	4.5	5.5
$\varnothing 8$	$\varnothing 10$	KQ2X08-10A	13.2	15.9	54.8	22.3	39.2	13.2	14.2	10.1	8	4.2	25.6	17.7	6	9.8
$\varnothing 10$	$\varnothing 12$	KQ2X10-12A	15.9	18.5	60.4	25	43.4	15.9	15.6	11.4	8	4.2	40	28.4	7.5	14.6

\*1  $\varnothing D_1$ ,  $\varnothing D_2$  are maximum diameters.





# Metric Size One-touch Fittings **KQ2 Series**

Applicable Tubing: Metric Size, Connection Thread: M, R, Rc

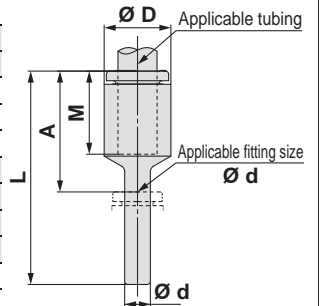
## Dimensions

### Plug-in Reducer: KQ2R



Applicable tubing O.D. [mm]	Applicable fitting size Ø d	Model	Ø D*1	L	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
							Nylon	Urethane		
Ø 2	Ø 4	KQ2R02-04A	5.8	27.8	14.5	11.9	—	0.9	1.4	0.6
	Ø 4	KQ2R23-04A	7.1	28.6	15.3	13.3	3.4	2.9	2.5	0.8
Ø 3.2	Ø 6	KQ2R23-06A	7.1	29.1	15.8	13.3	3.4	2.9	2.5	1
	Ø 6	KQ2R04-06A	8.2	28.6	15.3	13.3	5.6	4	3	1.1
Ø 4	Ø 8	KQ2R04-08A	8.2	29.6	15.4	13.3	5.6	4	3	1.3
	Ø 10	KQ2R04-10A	10.4	31.7	16.1	13.3	5.6	4	3	2.2
	Ø 4	KQ2R06-04A	10.4	33.6	20.3	13.3	4	4	2.5	1.4
Ø 6	Ø 8	KQ2R06-08A	10.4	31.6	17.4	13.3	13.1	10.4	4.5	1.7
	Ø 10	KQ2R06-10A	10.4	33.9	18.3	13.3	13.1	10.4	4.5	2.1
	Ø 12	KQ2R06-12A	12	35.7	18.7	13.3	13.1	10.4	4.5	3.2
Ø 8	Ø 10	KQ2R08-10A	13.2	35.1	19.5	14.2	26.1	18	6	2.9
	Ø 12	KQ2R08-12A	13.2	36.5	19.5	14.2	26.1	18	6	3.4
Ø 10	Ø 12	KQ2R10-12A	15.9	39.2	22.2	15.6	41.5	32.8	7.5	4.5
	Ø 16	KQ2R10-16A	16	44.7	24.1	15.6	41.5	32.8	7.5	6
Ø 12	Ø 16	KQ2R12-16A	18.5	45.7	25.1	17	58.3	46.1	9	7

\*1 Ø D is maximum diameter.



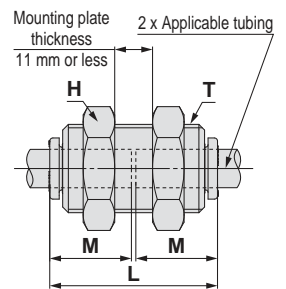
### Bulkhead Union: KQ2E (Interchangeable with KQ)



Applicable tubing O.D. [mm]	Model	T (M)	H (Width across flats)	L	Mounting hole	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
							Nylon	Urethane		
Ø 3.2	KQ2E23-00□	M12 x 1	14	27.3	13	13.3	3.4	2.9	2.5	24.1
Ø 4	KQ2E04-00□	M12 x 1	14	27.3	13	13.3	5.6	4	3	22.9
Ø 6	KQ2E06-00□	M14 x 1	17	27.3	15	13.3	13.1	10.4	4.5	28
Ø 8	KQ2E08-00■	M16 x 1	19	29.1	17	14.2	26.1	18	6	34
Ø 10	KQ2E10-00■	M20 x 1	24	31.9	21	15.6	41.5	29.5	7.5	64.4
Ø 12	KQ2E12-00■	M22 x 1	27	34.7	23	17	58.3	46.1	9	63.8
Ø 16	KQ2E16-00■	M28 x 1.5	32	41.9	29	20.6	113	67	13	120.1

□: A (Brass), N (Brass + Electroless nickel plating)

■: A (Brass), N (Brass + Electroless nickel plating), G (stainless steel)

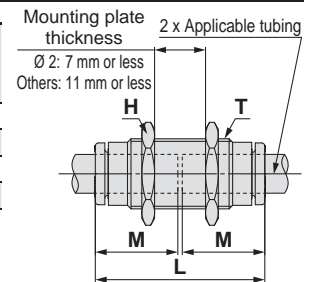


### Bulkhead Union: KQ2E (Interchangeable with KJ)



Applicable tubing O.D. [mm]	Model	T (M)	H (Width across flats)	L	Mounting hole	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
							Nylon	Urethane		
Ø 2	KQ2E02-00□J	M7 x 0.75	9	24.5	8	11.9	—	0.9	1.4	5.2
Ø 3.2	KQ2E23-00□J	M8 x 0.75	10	27.3	9	13.3	3	2.5	2.5	6.9
Ø 4	KQ2E04-00□J	M9 x 0.75	11	27.3	10	13.3	4	4	3	8.3
Ø 6	KQ2E06-00□J	M11 x 0.75	14	27.3	12	13.3	10	10	4.5	11.2

□: A (Brass), N (Brass + Electroless nickel plating)



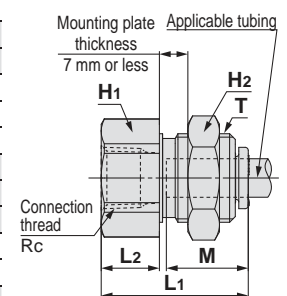
### Bulkhead Connector: KQ2E



Applicable tubing O.D. [mm]	Connection thread Rc	Model	T (M)	H1 (Width across flats)	H2 (Width across flats)	L1	L2	Mounting hole	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
										Nylon	Urethane		
Ø 3.2	1/4	KQ2E23-02□	M12 x 1	17	14	28.7	14.3	13	13.3	3.4	2.9	2.5	31.2
	1/8	KQ2E04-01□	M12 x 1	14	14	24.4	10	13	13.3	5.6	4	3	21.2
Ø 4	1/4	KQ2E04-02□	M12 x 1	17	14	29	14.6	13	13.3	5.6	4	3	30.9
	1/8	KQ2E06-01□	M14 x 1	17	17	23.6	9.2	15	13.3	13.1	10.4	4.5	28.9
Ø 6	1/4	KQ2E06-02□	M14 x 1	17	17	28.4	14	15	13.3	13.1	10.4	4.5	32.4
	3/8	KQ2E06-03□	M14 x 1	19	17	30.7	16.3	15	13.3	13.1	10.4	4.5	35.9
	1/8	KQ2E08-01■	M16 x 1	17	19	24.1	6.7	17	14.2	26.1	18	6	30.5
Ø 8	1/4	KQ2E08-02■	M16 x 1	17	19	28.4	11	17	14.2	26.1	18	6	33.1
	3/8	KQ2E08-03■	M16 x 1	19	19	31.7	14.3	17	14.2	26.1	18	6	37.4
	1/4	KQ2E10-02■	M20 x 1	22	24	29.3	9.9	21	15.6	41.5	29.5	7.5	63.8
Ø 10	3/8	KQ2E10-03■	M20 x 1	22	24	31.4	12	21	15.6	41.5	29.5	7.5	71.6
	3/8	KQ2E12-03■	M22 x 1	24	27	32.3	11.9	23	17	58.3	46.1	9	69.3
Ø 12	1/2	KQ2E12-04■	M22 x 1	24	27	37.7	17.3	23	17	58.3	46.1	9	72.7
	3/8	KQ2E16-03■	M28 x 1.5	30	32	34.4	11.5	29	20.6	96	67	13	122.2
Ø 16	1/2	KQ2E16-04■	M28 x 1.5	30	32	38.8	15.9	29	20.6	113	67	13	132.1

□: A (Brass), N (Brass + Electroless nickel plating)

■: A (Brass), N (Brass + Electroless nickel plating), G (stainless steel)



Round Type



Metric Size M, R, Rc

Sealant/Gasket Seal

Inch Size UNF, NPT

Inch Size M, R, Rc

Metric Size G

Metric Size R, Rc

Face Seal

Inch Size NPT

Inch Size R

Gasket Seal

Metric Size Uni  
Inch Size Uni

# KQ2 Series

Applicable Tubing: Metric Size, Connection Thread: M, R, Rc

## Dimensions

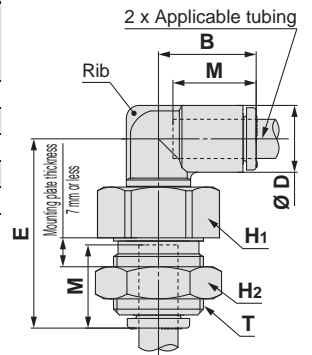
### Bulkhead Male Elbow: KQ2LE



Applicable tubing O.D. [mm]	Model	T (M)	H1 (Width across flats)	H2 (Width across flats)	B	E	*1 Ø D	Mounting hole	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]	With a rib
										Nylon	Urethane			
Ø 4	KQ2LE04-00□	M12 x 1	14	14	14.8	28.5	8.2	13	13.3	4.2	4.2	3	21.2	●
Ø 6	KQ2LE06-00□	M14 x 1	17	17	15.5	29.6	10.4	15	13.3	11.4	9	4.5	29.4	—
Ø 8	KQ2LE08-00□	M16 x 1	17	19	17.2	32.3	13.2	17	14.2	21.6	14.9	6	30.4	●
Ø 10	KQ2LE10-00□	M20 x 1	22	24	19.3	37.9	15.9	21	15.6	35.2	25	7.5	53.5	●
Ø 12	KQ2LE12-00□	M22 x 1	24	27	21.5	40.8	18.5	23	17	50.2	39.7	9	61	●

□: A (Brass), N (Brass + Electroless nickel plating)

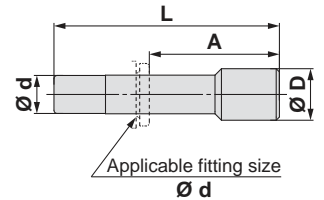
\*1 Ø D is maximum diameter.



### Plug: KQ2P



Applicable fitting size Ø d	Model	Ø D	L	A	Weight [g]
Ø 2	KJP-02	3	17	5.1	0.1
Ø 3.2	KQ2P-23	5	31.5	18.2	1
Ø 4	KQ2P-04	6	32	18.7	1
Ø 6	KQ2P-06	8	35	21.7	1
Ø 8	KQ2P-08	10	39	24.8	2
Ø 10	KQ2P-10	12	43	27.4	3.5
Ø 12	KQ2P-12	14	45.5	28.5	5
Ø 16	KQ2P-16	20.9	47	26.4	8

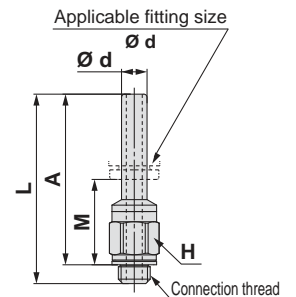


### Adapter: KQ2N (Gasket seal)



Applicable fitting size Ø d	Connection thread M	Model	H (Width across flats)	L	A	M	Min. port size	Weight [g]
Ø 4	M5 x 0.8	KQ2N04-M5□	7	29.7	26.7	13.4	2.5	2.4
Ø 6	M5 x 0.8	KQ2N06-M5□	7	29.7	26.7	13.4	2.5	2.6

□: A (Brass), N (Brass + Electroless nickel plating)



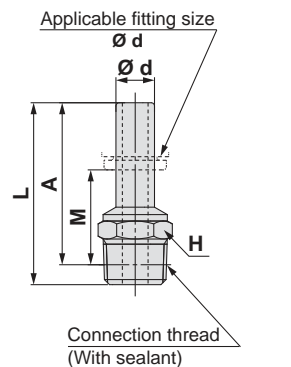
### Adapter: KQ2N (Sealant)



Applicable fitting size Ø d	Connection thread R	Model	H (Width across flats)	L	A*1	M	Min. port size	Weight [g]
Ø 4	1/8	KQ2N04-01□S	10	28.3	25.2	11.9	2.5	4
Ø 6	1/8	KQ2N06-01□S	10	28.3	25.2	11.9	4	4.1
	1/4	KQ2N06-02□S	14	32.8	28.1	14.8	4	13.6
Ø 8	1/4	KQ2N08-02□S	14	35.9	31.2	17	6	15.7
	3/8	KQ2N08-03□S	17	36	30.9	16.7	6	22.7
Ø 10	3/8	KQ2N10-03□S	17	40.6	35.5	19.9	7.5	19.1

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Reference dimensions after installation of R thread



# Metric Size One-touch Fittings **KQ2 Series**

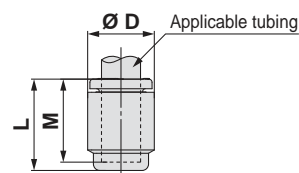
Applicable Tubing: Metric Size, Connection Thread: M, R, Rc

## Dimensions

### Tube Cap: KQ2C



Applicable tubing O.D. [mm]	Model	∅ D*1	L	M	Weight [g]
∅ 4	KQ2C04-00A	8.2	14.5	13.3	0.8
∅ 6	KQ2C06-00A	10.4	14.6	13.3	1.1
∅ 8	KQ2C08-00A	13.2	15.7	14.2	2
∅ 10	KQ2C10-00A	15.9	17.3	15.6	2.9
∅ 12	KQ2C12-00A	18.5	18.9	17	4.5
∅ 16	KQ2C16-00A	23.8	23	20.6	8.4

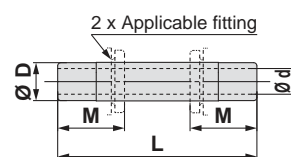


\*1 ∅ D is maximum diameter.

### Nipple: KQ2N



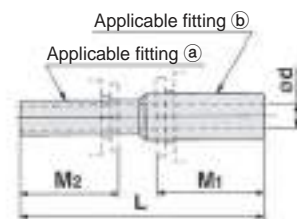
Applicable fitting ∅ D	Model	L	M	∅ d	Min. port size	Weight [g]
∅ 4	KQ2N04-99	37	13.3	2.5	2.5	1
∅ 6	KQ2N06-99	39	13.3	4	4	2
∅ 8	KQ2N08-99	43	14.2	6	6	2
∅ 10	KQ2N10-99	49	15.6	7.5	7.5	4
∅ 12	KQ2N12-99	52	17	9	9	3.3
∅ 16	KQ2N16-99	57	20.6	13	13	4.8



### Reducer Nipple: KQ2N



Applicable fitting		Model	L	M <sub>1</sub>	M <sub>2</sub>	∅ d Min. port size	Weight [g]
a	b						
∅ 4	∅ 6	KQ2N04-06	38	13.3	13.3	2.5	2
∅ 6	∅ 8	KQ2N06-08	42	14.2	13.3	4	2
∅ 8	∅ 10	KQ2N08-10	47	15.6	14.2	6	2
∅ 10	∅ 12	KQ2N10-12	51	17	15.6	7.5	3.1
∅ 12	∅ 16	KQ2N12-16	55	20.6	17	9	4.9

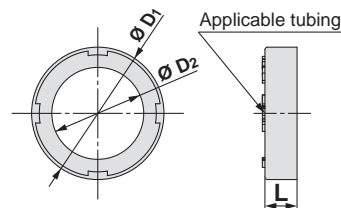


### Colour Cap: KQ2C



Applicable tubing O.D. [mm]	Model	∅ D <sub>1</sub>	∅ D <sub>2</sub>	L	Weight [g]	Note
∅ 2	KQ2C-02□A	6.1	3.2	2.6	0.1	Applicable for products with enlarged outside diameter of release button
∅ 3.2	KQ2C-23□A	7.3	4.3	2.6	0.1	
∅ 4	KQ2C-04□A	8.3	5.2	2.6	0.1	
∅ 6	KQ2C-06□A	10.3	7.2	2.6	0.1	
∅ 8	KQ2C-08□B	13.6	9.2	2.6	0.1	
∅ 10	KQ2C-10□B	16.2	11.2	2.7	0.1	
∅ 16	KQ2C-16□B	24.2	17.2	3.2	0.3	

□: B (Black), R (Red), YR (Orange), BR (Brown), Y (Yellow), G (Green), CB (Sky blue), GR (Grey), W (White), BU (Blue)



In order to improve operability, the outside diameter of the release button has been enlarged for the new KQ2 series. Therefore, the usable colour caps will differ between pre-change and post-change products. Refer to page 221 for details.

Round Type



Metric Size M, R, Rc

Sealant/Gasket Seal

Inch Size UNF, NPT

Inch Size M, R, Rc

Metric Size G

Face Seal

Metric Size R, Rc

Inch Size NPT

Inch Size R

Gasket Seal

Metric Size Uni

Inch Size Uni

# KQ2 Series

# Made to Order/Clean Series/Spare Parts

Please contact SMC for detailed dimensions, specifications, and lead times.

## 1 Made to Order

Symbol	Specifications
<b>X12</b>	Lubricant: White vaseline, Release button colour: White
<b>X35</b> *1	Body colour: Black, Release button colour: Light grey
<b>X41</b>	With fixed orifice*2
<b>KQ2□08-01□Q□</b>	Effective area is interchangeable with the current product (KQ series). Applicable model: Male elbow *3, 45° male elbow, Female elbow, Extended male elbow *3, Male branch tee *3, Male run tee *3 Applicable tubing O.D./Port size: Ø 8/R 1/8 Thread material/Surface treatment: Brass, Brass + Electroless nickel plating, Stainless Steel Example) <b>KQ2L08-01AQ5</b> <b>KQ2L09-01GQS</b>

\*1 The following models are not available as made-to-order: Hexagon socket head male connector/KQ2S, Bulkhead union/KQ2E, Bulkhead connector/KQ2E, Nipple/KQ2N, Reducer nipple/KQ2N, Male connector/KQ2H, Female connector/KQ2F, Colour cap/KQ2C, Plug/KQ2P

\*2 Please contact SMC for availability.

\*3 Stainless Steel option available.

The following made-to-order products will be provided based on previous models (KQ2 series). Please contact SMC separately.

Symbol	Specifications
<b>X17</b>	Grease-free Rubber material: NBR (With fluorine coating) Release button colour: Light blue
<b>X29</b>	Grease-free Rubber material: NBR (With fluorine coating) Release button colour: Light blue Copper-free (With electroless nickel plating)
<b>X34</b>	Rubber material: FKM
<b>X39</b>	Grease-free Rubber material: NBR (With fluorine coating) Release button colour: Light blue Clean (Copper-free, air blow, double packaging, resin body: white)
<b>X94</b>	Grease-free Rubber material: FKM (With fluorine coating) Release button colour: Light blue

## 2 Clean Series

Please consult with SMC separately for applicable models.

Symbol	Specifications
<b>10-</b>	Brass parts: With electroless nickel plating Lubricant: Fluorine grease Air blow in a clean room Double packaging Resin body, Release button colour: White

Example) **10-KQ2H06-02NS** (With thread)

**10-KQ2H06-00A** (Without thread)

**10-KQ2H06-02GS** (Stainless Steel)

## 3 Spare Parts

Description	Part no.	Applicable thread
Gasket	<b>M-3G2</b>	M3
	<b>M-5G2</b>	M5
	<b>M-6G</b>	M6

### Stainless Steel

Description	Part no.	Applicable model
Pipe nut	<b>KQ04-P01G</b>	KQ2E04-00G1, KQ2E04-01G1, KQ2E04-02G1
	<b>KQ06-P01G</b>	KQ2E06-00G1, KQ2E06-01G1, KQ2E06-02G1, KQ2E06-03G1
	<b>KQ08-P01G</b>	KQ2E08-00G, KQ2E08-01G, KQ2E08-02G, KQ2E08-03G
	<b>KQ10-P01G</b>	KQ2E10-00G, KQ2E10-02G, KQ2E10-03G
	<b>KQ12-P01G</b>	KQ2E12-00G, KQ2E12-03G, KQ2E12-04G
	<b>KQ16-P01G</b>	KQ2E16-00G, KQ2E16-03G, KQ2E16-04G

### Brass

Description	Part no.	Applicable model
Pipe nut	<b>KQ02-P01AJ</b>	KQ2E02-00AJ
	<b>KQ23-P01AJ</b>	KQ2E23-00AJ
	<b>KQ04-P01AJ</b>	KQ2E04-00AJ
	<b>KQ06-P01AJ</b>	KQ2E06-00AJ
	<b>KQ04-P01A</b>	KQ2E23-00A, KQ2E04-00A, KQ2E23-02A KQ2E04-01A, KQ2E04-02A, KQ2LE04-00A
	<b>KQ06-P01A</b>	KQ2E06-00A, KQ2E06-01A, KQ2E06-02A KQ2E06-03A, KQ2LE06-00A
	<b>KQ08-P01A</b>	KQ2E08-00A, KQ2E08-01A, KQ2E08-02A KQ2E08-03A, KQ2LE08-00A
	<b>KQ10-P01A</b>	KQ2E10-00A, KQ2E10-02A, KQ2E10-03A KQ2LE10-00A
	<b>KQ12-P01A</b>	KQ2E12-00A, KQ2E12-03A, KQ2E12-04A KQ2LE12-00A
	<b>KQ16-P01A</b>	KQ2E16-00A KQ2E16-03A, KQ2E16-04A

### Brass + Electroless nickel plating

Description	Part no.	Applicable model
Pipe nut	<b>KQ02-P01NJ</b>	KQ2E02-00NJ
	<b>KQ23-P01NJ</b>	KQ2E23-00NJ
	<b>KQ04-P01NJ</b>	KQ2E04-00NJ
	<b>KQ06-P01NJ</b>	KQ2E06-00NJ
	<b>KQ04-P01N</b>	KQ2E23-00N, KQ2E04-00N, KQ2E23-02N KQ2E04-01N, KQ2E04-02N, KQ2LE04-00N
	<b>KQ06-P01N</b>	KQ2E06-00N, KQ2E06-01N, KQ2E06-02N KQ2E06-03N, KQ2LE06-00N
	<b>KQ08-P01N</b>	KQ2E08-00N, KQ2E08-01N, KQ2E08-02N KQ2E08-03N, KQ2LE08-00N
	<b>KQ10-P01N</b>	KQ2E10-00N, KQ2E10-02N, KQ2E10-03N KQ2LE10-00N
	<b>KQ12-P01N</b>	KQ2E12-00N, KQ2E12-03N, KQ2E12-04N KQ2LE12-00N
	<b>KQ16-P01N</b>	KQ2E16-00N KQ2E16-03N, KQ2E16-04N

### Colour Cap

Applicable tubing O.D. [mm]	Model	Ø D1	Ø D2	L	Weight [g]	Note
Ø 8	<b>KQ2C-08□A</b>	12.8	9.2	2.6	0.1	Applicable for products before enlargement of outside diameter of release button
Ø 10	<b>KQ2C-10□A</b>	15.2	11.2	2.7	0.1	
Ø 12	<b>KQ2C-12□A</b>	17.6	13.2	2.7	0.1	
Ø 16	<b>KQ2C-16□A</b>	22.4	17.2	3.2	0.2	

□: B (Black), R (Red), YR (Orange), BR (Brown), Y (Yellow), G (Green), CB (Sky blue), GR (Grey), W (White), BU (Blue)

Gasket Seal		Face Seal			Sealant/Gasket Seal		Round Type
Inch Size Uni	Metric Size Uni	Inch Size R	Inch Size NPT	Metric Size R, Rc	Metric Size G	Inch Size UNF, NPT	Metric Size M, R, Rc

# Inch Size One-touch Fittings

Applicable Tubing: Inch Size, Connection Thread: UNF, NPT

## KQ2 Series

**Guide**  
**Chuck**  
Suitable for use with nylon and urethane. Large retaining force.  
The chuck provides secure retention and the collet increases the holding force on the tube.

**Seal**  
Can be used for a wide range of pressures from a low vacuum up to a pressure of 1 MPa.  
The use of a special profile ensures sealing and reduces resistance when the tube is inserted.

**Release button (Orange)**  
Requires little force for removal.  
Releases the chuck collet to remove the tube as well as to prevent the chuck from biting too deeply into the tubing.

**Body**  
**O-ring**  
**Stud**  
Effective when piping in a confined space.  
Body part rotates allowing for positioning.

**Connection thread**  
UNF, NPT

**Guide**  
**Chuck**

**Body**  
**Seal**

\* Fittings without thread portion, and with all resin body material are copper free specification.

**One-touch IN/OUT connection.**  
**Possible to use in vacuum to -100 kPa.**



**Made to Order**  
(Refer to page 156 for details.)

### Applicable Tubing

Tubing material	FEP, PFA, Nylon, Soft nylon, Polyurethane
Tubing O.D.	Ø 1/8", Ø 5/32", Ø 3/16", Ø 1/4", Ø 5/16", Ø 3/8", Ø 1/2"

### Specifications

Fluid		Air, Water*1
Operating pressure range*2		-100 kPa to 1 MPa
Proof pressure (at 23 °C)		3 MPa
Ambient and fluid temperature		-5 to 60 °C, Water: 0 to 40 °C (No freezing)
Thread	Mounting section	ANSI/ASME1.20.1 (NPT thread) JIS B0208 (UNF thread)
	Nut section	JIS B0208 (UNF thread)
Seal on the threads		With sealant

\*1 The surge pressure must be under the maximum operating pressure.

\*2 Do not use the fittings with a leak tester or for vacuum retention because they are not guaranteed for zero leakage.

### Principal Parts Material

Body	C3604, PBT, PP
Stud	C3604 (Thread portion)
Chuck	Stainless steel 304
Guide	Stainless steel 304
Release button	POM
Seal, O-ring	NBR
Gasket	Stainless steel 304, NBR

## How to Order

### Threaded Type

**KQ2 H 05 - 34 A S**

One-touch fittings

Model

Symbol	Model
H	Male connector
S	Hexagon socket head male connector
F	Female connector
L	Male elbow
K	45° male elbow
V	Universal male elbow
VS	Hexagon socket head universal male elbow
VF	Universal female elbow
LF	Female elbow
VD	Double universal male elbow
VT	Triple universal male elbow
Z	Branch universal male elbow
ZD	Double branch universal male elbow
ZT	Triple branch universal male elbow
W	Extended male elbow
T	Male branch tee
Y	Male run tee
U	Branch "Y"
E	Bulkhead union
	Bulkhead connector
LE	Bulkhead male elbow

Male thread seal method

Symbol	Seal method
—	None
S	With thread sealant

Thread material/Surface treatment

Symbol	Thread material/Surface treatment
A	Brass
N	Brass + Electroless nickel plating
Bulkhead union	<input type="checkbox"/> J Interchangeable with KJE

\* : A, N

Port size/Applicable tubing O.D.

Symbol	Size	
Thread connection	32	10-32UNF
	33	NPT 1/16
	34	NPT 1/8
	35	NPT 1/4
	36	NPT 3/8
Tubing connection	37	NPT 1/2
	00*1	Same diameter tubing

\*1 Only for "Bulkhead union" and "Bulkhead male elbow".

Applicable tubing O.D.

Symbol	Size
01	Ø 1/8"
03	Ø 5/32"
05	Ø 3/16"
07	Ø 1/4"
09	Ø 5/16"
11	Ø 3/8"
13	Ø 1/2"

Spare Parts

Use the part number below to order the gasket for sealing 10-32UNF thread.

Gasket for 10-32UNF: M-5G2

### Tube - Tube Type

**KQ2 H 05 - 00 A**

One-touch fittings

Model

Symbol	Model
H	Straight union
	Different diameter straight
L	Union elbow
	Plug-in elbow
	Reducer elbow
R	Plug-in reducer
T	Union tee
	Different diameter tee
TW	Cross
U	Union "Y"
	Plug-in "Y"
	Different diameter union "Y"
X	Different diameter plug-in "Y"

Port size/Applicable tubing O.D.

Symbol	Size		
Tubing (Rod) connection	00	Same diameter tubing	
	99	Same diameter rod	
	Different dia. tubing (Reducer)	01	Ø 1/8"
		03	Ø 5/32"
		05	Ø 3/16"
		07	Ø 1/4"
		09	Ø 5/16"
		11	Ø 3/8"
13	Ø 1/2"		

Applicable tubing O.D.

Symbol	Size
01	Ø 1/8"
03	Ø 5/32"
05	Ø 3/16"
07	Ø 1/4"
09	Ø 5/16"
11	Ø 3/8"
13	Ø 1/2"

Accessories

Symbol	Name
KQ2N	Nipple
	Reducer nipple
KQ2C	Tube cap
KQ2P	Plug

Round Type



Metric Size M, R, Rc

Inch Size UNF, NPT

Inch Size M, R, Rc

Metric Size G

Metric Size R, Rc

Inch Size NPT

Inch Size R

Metric Size Uni

Inch Size Uni

# Inch Size One-touch Fittings

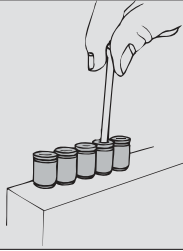
## Round Type Variations

### Hexagon socket head male connector

KQ2S P.139



Internal hexagon socket allows tightening with a hexagon wrench in confined spaces.

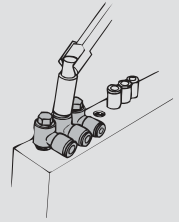


### Universal male elbow

KQ2V P.142



Hexagon head of the body allows tightening with a box wrench in confined spaces.

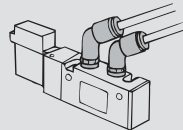


### 45° male elbow

KQ2K P.142



Use to pipe a female thread at a 45° angle. Its direction is in-between that of the male connector and male elbow.

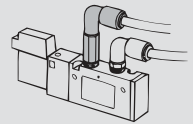


### Extended male elbow

KQ2W P.147



Basically, it is used together with a male elbow. Its extended height allows for multi-levelled piping and prevents interference among fittings.

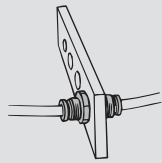


### Bulkhead union

KQ2E P.153



Use to connect tubing through a panel, etc.

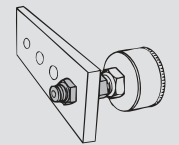


### Bulkhead connector

KQ2E P.154



Use to connect a male thread and tubing through a panel, etc.

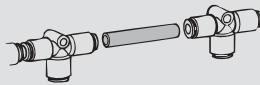


### Nipple

KQ2N P.155



Use to connect One-touch fittings.

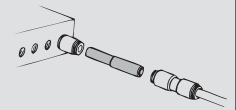


### Reducer nipple

KQ2N P.155



Use to connect One-touch fittings of different sizes.



### Male connector

KQ2H P.137



Use to pipe a female thread in the same direction. Most general model.

### Hexagon socket head universal male elbow

KQ2VS P.143



Hexagon socket on the top allows tightening with a hexagon wrench in confined spaces.

### Branch universal male elbow

KQ2Z P.146



Hexagon head of the body allows tightening with a box wrench. Use for branch connections.

### Female connector

KQ2F P.138



Use to pipe a male thread of a pressure gauge, etc.

### Universal female elbow

KQ2VF P.143



Use to branch a male or female thread in the same direction and at a 90° angle. Multiple connections possible.

### Double branch universal male elbow

KQ2ZD P.146



Use to four-branch a female thread at right angles. Two individual parts rotate 360°.

### Straight union

KQ2H P.138



Use to connect tubing in the same direction.

### Female elbow

KQ2LF P.141



Use to pipe a male thread at right angles.

### Triple branch universal male elbow

KQ2ZT P.147



Use to six-branch a female thread at right angles. Three individual parts rotate 360°.

### Different diameter straight

KQ2H P.138



Use to connect tubing of different sizes.

### Double universal male elbow

KQ2VD P.144



Use to two-branch a female thread at right angles. Two individual parts rotate 360°.

### Union elbow

KQ2L P.141



Use to connect tubing at right angles.

### Male elbow

KQ2L P.140



Use to pipe a female thread at right angles. Most general model.

### Triple universal male elbow

KQ2VT P.145



Use to three-branch a female thread at right angles. Three individual parts rotate 360°.

### Plug-in elbow

KQ2L P.141



Use to change the tube direction of One-touch fittings by 90°.



**Reducer elbow**

**KQ2L** P.141



Use to change the tube direction of One-touch fittings by 90° and connect tubing of reduced size.

**Male branch tee**

**KQ2T** P.148



Use to branch a female thread at both 90° angles.

**Union tee**

**KQ2T** P.149



Use to branch tubing at both 90° angles.

**Different diameter tee**

**KQ2T** P.149



Use to connect tubing of reduced size for branching at both 90° angles.

**Cross**

**KQ2TW** P.149



Use to four-branch a line.

**Male run tee**

**KQ2Y** P.150



Use to branch a female thread in the same direction and at a 90° angle.

**Branch "Y"**

**KQ2U** P.151



Use to branch a female thread in the same direction.

**Union "Y"**

**KQ2U** P.152



Use to branch tubing in the same direction.

**Different diameter union "Y"**

**KQ2U** P.152



Use to connect tubing of reduced size for branching in the same direction.

**Plug-in "Y"**

**KQ2U** P.152



Use to branch One-touch fittings in the same direction.

**Different diameter plug-in "Y"**

**KQ2X** P.153



Use to branch One-touch fittings and connect tubing of reduced size in the same direction.

**Plug-in reducer**

**KQ2R** P.153



Use to change size of One-touch fittings.

**Bulkhead male elbow**

**KQ2LE** P.154



Use to connect tubing through a panel, etc. and to change the tube direction by 90°.

**Tube cap**

**KQ2C** P.155



Use to plug unused tubing.

**Plug**

**KQ2P** P.154



Use to plug unused One-touch fittings.

**Colour cap**

**KQ2C** P.155



Mount onto the release button and use different colours for piping according to applications.

Round Type



Metric Size M, R, Rc

Inch Size UNF, NPT

Inch Size M, R, Rc

Metric Size G

Metric Size R, Rc

Inch Size NPT

Inch Size R

Metric Size Uni

Inch Size Uni

Sealant/Gasket Seal

Face Seal

Gasket Seal

# KQ2 Series

Applicable Tubing: Inch Size, Connection Thread: UNF, NPT

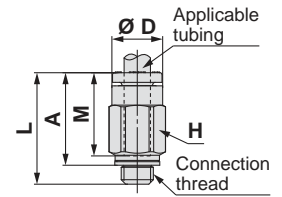
## Dimensions

### Male Connector: KQ2H (Gasket seal)



Applicable tubing O.D. [inch]	Connection thread UNF	Model	H (Width across flats)	Ø D	L	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
								Nylon	Urethane		
Ø 1/8	10-32UNF	KQ2H01-32□	7	6.7	17.4	13.9	13.3	3	2.5	2.3	2.7
Ø 5/32	10-32UNF	KQ2H03-32□	8	7.7	17.6	14.1	13.3	3.3	3.3	2.3	3.3
Ø 3/16	10-32UNF	KQ2H05-32□	8	8.3	17.7	14.2	13.3	3.4	3.4	2.3	3.4
Ø 1/4	10-32UNF	KQ2H07-32□	11.11	10.9	18	14.5	13.3	3.4	3.4	2.3	5.2

□: A (Brass), N (Brass + Electroless nickel plating)



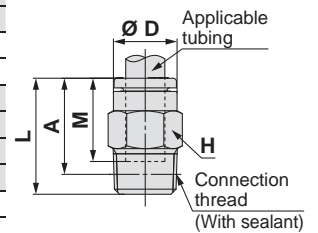
### Male Connector: KQ2H (Sealant)



Applicable tubing O.D. [inch]	Connection thread NPT	Model	H (Width across flats)	Ø D	L	A*1	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
								Nylon	Urethane		
Ø 1/8	1/16	KQ2H01-33□S	9.5	6.7	19.3	15.2	13.3	3	2.5	2.5	6
	1/8	KQ2H01-34□S	11.11	6.7	14	10.8	13.3	3	2.5	2.5	7.1
	1/4	KQ2H01-35□S	14.29	6.7	16.7	12.3	13.3	3.4	2.9	2.5	16.2
Ø 5/32	1/16	KQ2H03-33□S	9.5	7.7	20	15.9	13.3	4.8	3.4	3	6.1
	1/8	KQ2H03-34□S	11.11	7.7	14	10.8	13.3	4.8	3.4	3	6.5
	1/4	KQ2H03-35□S	14.29	7.7	16.7	12.3	13.3	4.8	3.4	3	15.6
Ø 3/16	1/8	KQ2H05-34□S	11.11	8.3	17.4	14.2	13.3	7.8	6.5	3.5	7.4
	1/4	KQ2H05-35□S	14.29	8.3	16.7	12.3	13.3	7.8	6.5	3.5	14.9
Ø 1/4	1/16	KQ2H07-33□S	11.11	10.9	22.5	18.4	13.3	13.5	11.5	4.6	7.6
	1/8	KQ2H07-34□S	11.11	10.9	18	14.8	13.3	13.5	11.5	4.6	6.5
	1/4	KQ2H07-35□S	14.29	10.9	16.7	12.3	13.3	13.5	11.5	4.6	13.1
	3/8	KQ2H07-36□S	17.46	10.9	18.1	13.4	13.3	13.5	11.5	4.6	25.7
Ø 5/16	1/8	KQ2H09-34□S	14.29	13	22.2	19	14.2	26.1	18	6	12.6
	1/4	KQ2H09-35□S	14.29	13	22.1	17.7	14.2	26.1	18	6	15.2
	3/8	KQ2H09-36□S	17.46	13	18.1	13.4	14.2	26.1	18	6	22.5
Ø 3/8	1/8	KQ2H11-34□S	17.46	15.1	24.1	20.9	15.6	26	26	6	19.5
	1/4	KQ2H11-35□S	17.46	15.1	25.1	20.7	15.6	35.3	29.1	7	21
	3/8	KQ2H11-36□S	17.46	15.1	22.7	18	15.6	35.3	29.1	7	23.5
	1/2	KQ2H11-37□S	22.23	15.1	22.3	15.9	15.6	35.3	29.1	7	49.1
Ø 1/2	1/4	KQ2H13-35□S	22.23	19	28.8	24.4	17	58.5	51.7	9	34.4
	3/8	KQ2H13-36□S	22.23	19	27.5	22.8	17	66	51.7	9.6	36.2
	1/2	KQ2H13-37□S	22.23	19	28	21.6	17	66	51.7	9.6	47.1

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Reference dimensions after installation of NPT thread

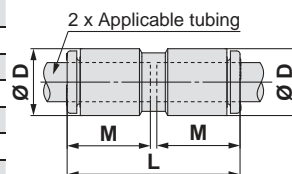


## Dimensions

### Straight Union: KQ2H



Applicable tubing O.D. [inch]	Model	Ø D*1	L	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
					Nylon	Urethane		
Ø 1/8	<b>KQ2H01-00A</b>	7.1	27.6	13.3	3.4	2.9	2.5	1.4
Ø 5/32	<b>KQ2H03-00A</b>	8.2	27.6	13.3	5.6	4	3	1.6
Ø 3/16	<b>KQ2H05-00A</b>	9.1	27.6	13.3	7.8	6.5	3.5	1.9
Ø 1/4	<b>KQ2H07-00A</b>	11.1	27.6	13.3	13.5	11.5	4.6	2.4
Ø 5/16	<b>KQ2H09-00A</b>	13.2	29.4	14.2	26.1	18	6	3.7
Ø 3/8	<b>KQ2H11-00A</b>	15.4	32.2	15.6	35.3	29.1	7	5.2
Ø 1/2	<b>KQ2H13-00A</b>	19.3	35	17	66	51.7	9.6	8.7

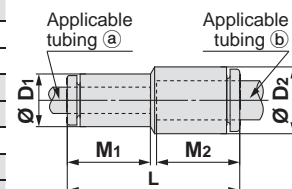


\*1 Ø D is maximum diameter.

### Different Diameter Straight: KQ2H



Applicable tubing O.D. [inch]	Model		Ø D1*1	Ø D2*1	L	M1	M2	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
	a	b						Nylon	Urethane		
Ø 1/8	Ø 5/32	<b>KQ2H01-03A</b>	7.1	8.2	27.6	13.3	13.3	3.4	2.9	2.5	1.5
	Ø 1/4	<b>KQ2H01-07A</b>	7.1	11.1	27.6	13.3	13.3	3.4	2.9	2.5	2
Ø 5/32	Ø 3/16	<b>KQ2H03-05A</b>	8.2	9.1	27.6	13.3	13.3	5.6	5.6	3	1.8
	Ø 1/4	<b>KQ2H03-07A</b>	8.2	11.1	27.6	13.3	13.3	5.6	5.6	3	2.1
Ø 3/16	Ø 1/4	<b>KQ2H05-07A</b>	9.1	11.1	27.6	13.3	13.3	7.8	6.5	3.5	2.2
Ø 1/4	Ø 5/16	<b>KQ2H07-09A</b>	11.1	13.2	28.5	13.3	14.2	13.5	11.5	4.6	3.2
	Ø 3/8	<b>KQ2H07-11A</b>	11.1	15.4	29.9	13.3	15.6	13.5	11.5	4.6	4.1
Ø 5/16	Ø 3/8	<b>KQ2H09-11A</b>	13.2	15.4	30.8	14.2	15.6	26.1	18	6	4.7
	Ø 1/2	<b>KQ2H09-13A</b>	13.2	19.3	32.2	14.2	17	26.1	18	6	6.6
Ø 3/8	Ø 1/2	<b>KQ2H11-13A</b>	15.4	19.3	33.6	15.6	17	35.3	29.1	7	7.3

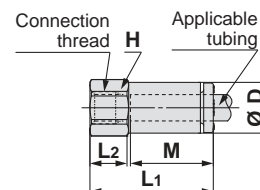


\*1 Ø D1, Ø D2 are maximum diameters.

### Female Connector: KQ2F



Applicable tubing O.D. [inch]	Connection thread UNF, NPT	Model	H (Width across flats)	Ø D*1	L1	L2	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
								Nylon	Urethane		
Ø 1/8	10-32UNF	<b>KQ2F01-32</b> □	7	6.9	19.7	5.7	13.3	3	2.5	2.5	3.4
	1/8	<b>KQ2F01-34</b> □	14.29	6.9	25	9.5	13.3	3	2.5	2.5	13.4
	1/4	<b>KQ2F01-35</b> □	17.46	6.9	29.8	13.3	13.3	3	2.5	2.5	24.4
Ø 5/32	10-32UNF	<b>KQ2F03-32</b> □	8	7.9	19.5	5.7	13.3	4	4	3	4.5
	1/8	<b>KQ2F03-34</b> □	14.29	7.9	24.8	9.5	13.3	5.6	4	3	13.7
	1/4	<b>KQ2F03-35</b> □	17.46	7.9	29.7	13.3	13.3	5.6	4	3	24.7
Ø 1/4	10-32UNF	<b>KQ2F07-32</b> □	11.11	10.9	17.7	5.5	13.3	10.1	10.1	3.9	6.7
	1/8	<b>KQ2F07-34</b> □	14.29	10.9	24.4	9.5	13.3	13	11.5	4.6	14.2
	1/4	<b>KQ2F07-35</b> □	17.46	10.9	29.2	13.3	13.3	13	11.5	4.6	25.1
	3/8	<b>KQ2F07-36</b> □	22.23	10.9	30.5	13.2	13.3	13	11.5	4.6	38.7
Ø 5/16	1/8	<b>KQ2F09-34</b> □	14.29	13	24.8	9.2	14.2	26.1	18	6	15.2
	1/4	<b>KQ2F09-35</b> □	17.46	13	29.7	11.8	14.2	26.1	18	6	26.2
	3/8	<b>KQ2F09-36</b> □	22.23	13	31	12.4	14.2	26.1	18	6	39.8
Ø 3/8	1/4	<b>KQ2F11-35</b> □	17.46	15.1	30.5	11.8	15.6	35.3	29.1	8	27.2
	3/8	<b>KQ2F11-36</b> □	22.23	15.1	31.8	12.4	15.6	35.3	29.1	8	40.7
	1/2	<b>KQ2F11-37</b> □	23.81	15.1	34.9	15.8	15.6	35.3	29.1	8	45.6
Ø 1/2	3/8	<b>KQ2F13-36</b> □	22.23	19	32.6	12.4	17	66	51.7	10	43.8
	1/2	<b>KQ2F13-37</b> □	23.81	19	35.7	15.8	17	66	51.7	10	48.6



□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D is maximum diameter.

Round Type



Metric Size M, R, Rc

Inch Size UNF, NPT

Inch Size M, R, Rc

Metric Size G

Metric Size R, Rc

Inch Size NPT

Inch Size R

Metric Size Uni

Inch Size Uni

# KQ2 Series

Applicable Tubing: Inch Size, Connection Thread: UNF, NPT

## Dimensions

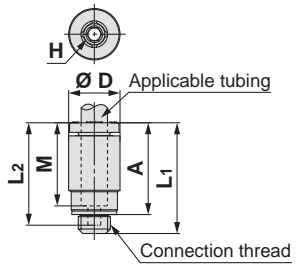
### Hexagon Socket Head Male Connector: KQ2S (Gasket seal)



Applicable tubing O.D. [inch]	Connection thread UNF	Model	H (Width across flats)	Ø D*1	L1	L2	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
									Nylon	Urethane		
Ø 1/8	10-32UNF	KQ2S01-32□	2	7	17.5	16.3	14.5	13.3	2.5	2.5	2	2.6
Ø 5/32	10-32UNF	KQ2S03-32□	2.5	8	18.6	17.8	15.6	13.3	4	4	2.5	3
Ø 1/4	10-32UNF	KQ2S07-32□	2.5	10.3	19	17.8	16	13.3	4	4	2.5	3.7

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D is maximum diameter.



### Hexagon Socket Head Male Connector: KQ2S (Sealant)

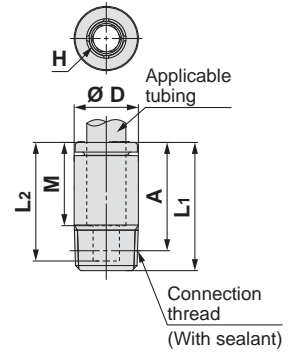


Applicable tubing O.D. [inch]	Connection thread NPT	Model	H (Width across flats)	Ø D*1	L1	L2	A*2	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
									Nylon	Urethane		
Ø 5/32	1/16	KQ2S03-33□S	2.78	8	19.8	18.8	15.7	13.3	4.1	3.6	2.8	4.5
	1/8	KQ2S03-34□S	2.78	10.3	17.3	16.3	14.1	13.3	4.1	3.6	2.8	6
Ø 3/16	1/8	KQ2S05-34□S	3.57	11	19.8	18.8	16.6	13.3	7.8	6.5	3.6	7.5
	1/16	KQ2S07-33□S	3.57	10.3	20.9	18.8	16.8	13.3	8.4	8.4	3.6	6.3
Ø 1/4	1/8	KQ2S07-34□S	4.76	10.3	19.8	18.8	16.6	13.3	13.5	11.5	4.8	7.4
	1/4	KQ2S07-35□S	4.76	13.8	19.8	18.8	15.4	13.3	13.5	11.5	4.8	13.2
	3/8	KQ2S07-36□S	4.76	17	20.8	19.8	16.1	13.3	13.5	11.5	4.8	24
	1/8	KQ2S09-34□S	5.56	13	22.3	19.7	19.1	14.2	17.2	16.2	5.6	9.7
Ø 5/16	1/4	KQ2S09-35□S	6.35	14	21.2	20.1	16.8	14.2	23.3	16.2	6.4	12.6
	3/8	KQ2S09-36□S	6.35	17.5	20.7	19.7	16	14.2	23.3	16.2	6.4	21
Ø 3/8	1/8	KQ2S11-34□S	5.56	15.1	23.7	21.1	20.5	15.6	22.7	22.7	5.6	12.1
	1/4	KQ2S11-35□S	6.35	15.1	24.4	21.1	20	15.6	29.6	29.1	6.4	15.2
	3/8	KQ2S11-36□S	6.35	18	22.1	21.1	17.4	15.6	29.6	29.1	6.4	22.7
	1/2	KQ2S11-37□S	6.35	21.3	22.1	21.1	15.7	15.6	29.6	29.1	6.4	40.6
Ø 1/2	1/4	KQ2S13-35□S	8	19	28.5	22.5	24.1	17	48	48	8.1	18.9
	3/8	KQ2S13-36□S	9.53	19	26.3	22.5	21.6	17	66	51.7	9.6	20.7
	1/2	KQ2S13-37□S	9.53	22	23.5	22.5	17.1	17	66	51.7	9.6	33.3

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D is maximum diameter.

\*2 Reference dimensions after installation of NPT thread



# Inch Size One-touch Fittings **KQ2 Series**

Applicable Tubing: Inch Size, Connection Thread: UNF, NPT

## Dimensions

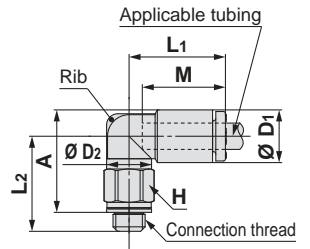
### Male Elbow: KQ2L (Gasket seal)



Applicable tubing O.D. [inch]	Connection thread UNF	Model	H (Width across flats)	*1 Ø D1	Ø D2	L1	L2	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]	With a rib
										Nylon	Urethane			
Ø 1/8	10-32UNF	KQ2L01-32□	7	7.1	7	15.3	14.2	14.3	13.3	2.6	2.2	2.5	3	●
Ø 5/32	10-32UNF	KQ2L03-32□	7	8.2	7	15.4	14.7	15.3	13.3	3.5	3.5	2.5	3.1	●
Ø 3/16	10-32UNF	KQ2L05-32□	7	9.1	7	14.5	15.8	16.9	13.3	3.5	3.5	2.5	3.2	●
Ø 1/4	10-32UNF	KQ2L07-32□	7	11.1	7	15.4	16	18.1	13.3	3.5	3.5	2.5	3.5	●

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D1 is maximum diameter.



### Male Elbow: KQ2L (Sealant)



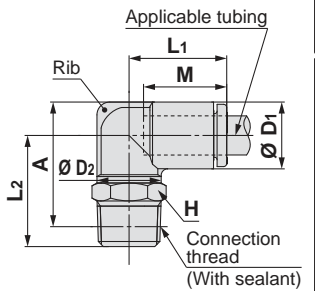
Applicable tubing O.D. [inch]	Connection thread NPT	Model	H (Width across flats)	*1 Ø D1	Ø D2	L1	L2	A *2	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]	With a rib
										Nylon	Urethane			
Ø 1/8	1/16	KQ2L01-33□S	11.11	7.1	10	14.5	24.3	23.8	13.3	3	2.5	2.5	9.1	—
	1/8	KQ2L01-34□S	11.11	7.1	10	14.5	16.7	17.1	13.3	3	2.5	2.5	5.5	—
	1/4	KQ2L01-35□S	14.29	7.1	10	14.5	21.1	20.3	13.3	3	2.5	2.5	15	—
Ø 5/32	1/16	KQ2L03-33□S	11.11	8.2	10	14.8	23.8	23.8	13.3	4.6	3.3	3	9.3	●
	1/8	KQ2L03-34□S	11.11	8.2	10	14.8	16.2	17.1	13.3	4.6	3.3	3	5.6	●
	1/4	KQ2L03-35□S	14.29	8.2	10	14.8	21.6	21.3	13.3	4.6	3.3	3	15.2	●
Ø 3/16	1/8	KQ2L05-34□S	11.11	9.1	10	15	16.7	18.1	13.3	6.8	5.6	3.5	5.8	—
	1/4	KQ2L05-35□S	14.29	9.1	10	15	22.1	22.3	13.3	6.8	5.6	3.5	15.4	—
Ø 1/4	1/16	KQ2L07-33□S	11.11	11.1	10	15.6	25.3	26.8	13.3	6.8	6.8	3.5	9.8	●
	1/8	KQ2L07-34□S	11.11	11.1	10	15.6	17.7	20.1	13.3	11.3	10	4.5	6.1	●
	1/4	KQ2L07-35□S	14.29	11.1	10	15.6	23.1	24.3	13.3	11.3	10	4.5	15.7	●
	3/8	KQ2L07-36□S	17.46	11.1	10	15.6	24.5	25.4	13.3	11.3	10	4.5	28	●
Ø 5/16	1/8	KQ2L09-34□S	11.11	13.2	10	16.4	18.7	22.1	14.2	11.4	11.4	4.5	6.9	●
		KQ2L09-34□QS <sup>*3</sup>	12.7	13.2	12	17.2	23.5	26.9	14.2	21.6	14.9	6	9.9	●
	1/4	KQ2L09-35□S	14.29	13.2	12	17.2	24.1	26.3	14.2	21.6	14.9	6	14.1	●
Ø 3/8	3/8	KQ2L09-36□S	17.46	13.2	12	17.2	25.5	27.4	14.2	21.6	14.9	6	26.2	●
	1/8	KQ2L11-34□S	12.7	15.4	12	18.6	23.2	27.7	15.6	21.2	21.2	6	11.8	●
	1/4	KQ2L11-35□S	17.46	15.4	17	19.3	28.6	31.9	15.6	28.8	23.8	7.5	21.7	●
Ø 1/2	3/8	KQ2L11-36□S	17.46	15.4	17	19.3	29.2	32.2	15.6	28.8	23.8	7.5	19.8	●
	1/2	KQ2L11-37□S	22.23	15.4	17	19.3	33.4	34.7	15.6	28.8	23.8	7.5	46.2	●
	1/4	KQ2L13-35□S	17.46	19.3	17	21.5	30.5	35.7	17	50.3	44.4	9	24	—
	3/8	KQ2L13-36□S	17.46	19.3	17	21.8	26.3	31.2	17	56	44.4	9.5	20.3	—
	1/2	KQ2L13-37□S	22.23	19.3	17	21.8	30.5	33.7	17	56	44.4	9.5	46.3	—

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D1 is maximum diameter.

\*2 Reference dimensions after installation of NPT thread

\*3 For details, refer to page 156.



Round Type

Metric Size M, R, Rc

Inch Size UNF, NPT

Inch Size M, R, Rc

Metric Size G

Metric Size R, Rc

Inch Size NPT

Inch Size R

Metric Size Uni

Inch Size Uni

# KQ2 Series

Applicable Tubing: Inch Size, Connection Thread: UNF, NPT

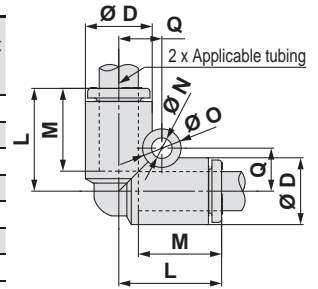
## Dimensions

### Union Elbow: KQ2L



Applicable tubing O.D. [inch]	Model	Ø D*1	L	Q	M	Ø O	Ø N	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
								Nylon	Urethane		
Ø 1/8	KQ2L01-00A	7.1	14.9	5.4	13.3	6	3.2	3	2.5	2.5	1.6
Ø 5/32	KQ2L03-00A	8.2	15.3	5.7	13.3	6	3.2	4.2	4.2	3	1.9
Ø 3/16	KQ2L05-00A	9.1	15.7	6.2	13.3	6	3.2	6.8	5.6	3.5	2.2
Ø 1/4	KQ2L07-00A	11.1	16.5	7.2	13.3	6	3.2	11.6	10	4.6	2.9
Ø 5/16	KQ2L09-00A	13.2	18.2	8.4	14.2	8	4.2	21.6	14.9	6	4.7
Ø 3/8	KQ2L11-00A	15.4	20.4	9.9	15.6	8	4.2	28.8	23.8	7	6.7
Ø 1/2	KQ2L13-00A	19.3	23.4	11.8	17	8	4.2	56.7	44.4	9.6	10.8

\*1 Ø D is maximum diameter.

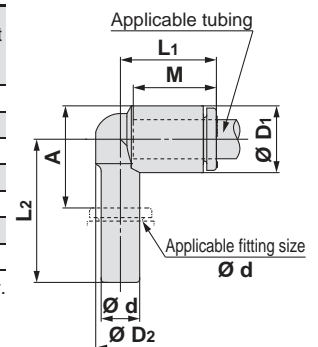


### Plug-in Elbow: KQ2L



Applicable tubing O.D. [inch]	Applicable fitting size Ø d [inch]	Model	Ø D*1	Ø D2	L1	L2	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
									Nylon	Urethane		
Ø 1/8	Ø 1/8	KQ2L01-99A	7.1	6.4	14.5	20.9	11.1	13.3	3	2.5	2.2	0.9
Ø 5/32	Ø 5/32	KQ2L03-99A	8.2	7.2	14.5	21.1	11.9	13.3	4.2	4.2	2.5	1.2
Ø 3/16	Ø 3/16	KQ2L05-99A	9.1	8	15	22.2	13.4	13.3	6.8	5.6	3.5	1.4
Ø 1/4	Ø 1/4	KQ2L07-99A	11.1	8	15.6	22.8	15	13.3	11.6	10	4.6	1.9
Ø 5/16	Ø 5/16	KQ2L09-99A	13.2	10	17.2	26.2	18.6	14.2	21.6	14.9	6	3
Ø 3/8	Ø 3/8	KQ2L11-99A	15.4	12	19.1	28	20.1	15.6	28.8	23.8	7	4.5
Ø 1/2	Ø 1/2	KQ2L13-99A	19.3	14	21.8	38.7	31.3	17	56.7	44.4	9.6	7.8

\*1 Ø D1 is maximum diameter.

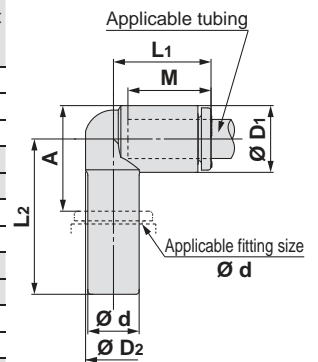


### Reducer Elbow: KQ2L



Applicable tubing O.D. [inch]	Applicable fitting size Ø d [inch]	Model	Ø D*1	Ø D2	L1	L2	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
									Nylon	Urethane		
Ø 1/8	Ø 5/32	KQ2L01-03A	7.1	6.4	14.5	23.9	14.1	13.3	3	2.5	2.5	1.1
	Ø 3/16	KQ2L01-05A	7.1	6.4	14.5	28.4	18.6	13.3	3	2.5	2.5	1.1
	Ø 1/4	KQ2L01-07A	7.1	6.4	14.5	24.5	14.7	13.3	3	2.5	2.5	1.3
Ø 5/32	Ø 3/16	KQ2L03-05A	8.2	7.2	14.8	29.1	19.9	13.3	4.2	4.2	3	1.3
	Ø 1/4	KQ2L03-07A	8.2	7.2	14.8	21.1	11.9	13.3	4.2	4.2	3	1.4
Ø 3/16	Ø 1/4	KQ2L05-07A	9.1	8	15	21.6	12.8	13.3	6.8	5.6	3.5	1.5
	Ø 5/16	KQ2L05-09A	9.1	8	15	30	20.3	13.3	6.8	5.6	3.5	1.9
Ø 1/4	Ø 5/16	KQ2L07-09A	11.1	8	15.6	30.7	22	13.3	11.6	10	4.6	2.3
	Ø 3/8	KQ2L07-11A	11.1	8	15.6	31.1	21	13.3	11.6	10	4.6	3
Ø 5/16	Ø 3/8	KQ2L09-11A	13.2	10	18.8	34.1	25.1	14.2	21.6	14.9	6	3.7
	Ø 1/2	KQ2L09-13A	13.2	10	18.8	35.6	25.2	14.2	21.6	14.9	6	4.6
Ø 3/8	Ø 1/2	KQ2L11-13A	15.4	12	19.1	36.5	27.2	15.6	28.8	23.8	7	5.6

\*1 Ø D1 is maximum diameter.



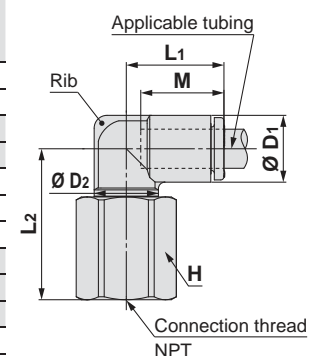
### Female Elbow: KQ2LF



Applicable tubing O.D. [inch]	Connection thread NPT	Model	H (Width across flats)	Ø D*1	Ø D2	L1	L2	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]	With a rib
									Nylon	Urethane			
Ø 1/8	1/8	KQ2LF01-34□	14.29	7.1	10	14.5	22.8	13.3	3	2.5	2.5	18.2	—
	1/4	KQ2LF01-35□	17.46	7.1	10	14.5	26.3	13.3	3	2.5	2.5	31.7	—
Ø 5/32	1/8	KQ2LF03-34□	14.29	8.2	10	14.8	22.4	13.3	4.2	4.2	3	18.3	●
	1/4	KQ2LF03-35□	17.46	8.2	10	14.8	26.9	13.3	4.2	4.2	3	31.9	●
Ø 1/4	1/8	KQ2LF07-34□	14.29	11.1	10	15.6	23.9	13.3	11.3	10	4.5	18.9	●
	1/4	KQ2LF07-35□	17.46	11.1	10	15.6	28.4	13.3	11.3	10	4.5	32.4	●
	3/8	KQ2LF07-36□	22.23	11.1	10	15.6	28.9	13.3	11.3	10	4.5	53.1	●
Ø 3/8	1/4	KQ2LF11-35□	17.46	15.4	17	19.3	27.1	15.6	28.8	23.8	7	28	●
	3/8	KQ2LF11-36□	22.23	15.4	17	19.3	33.3	15.6	28.8	23.8	7	49.6	●
	1/2	KQ2LF11-37□	23.81	15.4	17	19.3	36.3	15.6	28.8	23.8	7	56.9	●
Ø 1/2	3/8	KQ2LF13-36□	22.23	19.3	17	21.8	30.4	17	56	44.4	9.5	51.4	—
	1/2	KQ2LF13-37□	23.81	19.3	17	21.8	33.4	17	56	44.4	9.5	58	—

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D1 is maximum diameter.



# Inch Size One-touch Fittings **KQ2 Series**

Applicable Tubing: Inch Size, Connection Thread: UNF, NPT

## Dimensions

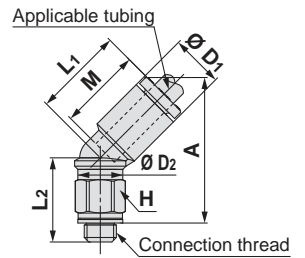
### 45° Male Elbow: KQ2K (Gasket seal)



Applicable tubing O.D. [inch]	Connection thread UNF	Model	H (Width across flats)	*1 Ø D1	Ø D2	L1	L2	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
										Nylon	Urethane		
Ø 1/8	10-32UNF	KQ2K01-32□	7	7.1	8	14.4	13	21.9	13.3	3	2.5	2.5	2.8
Ø 5/32	10-32UNF	KQ2K03-32□	7	8.2	8	14.4	13	22.2	13.3	3.4	3.4	2.5	3
Ø 1/4	10-32UNF	KQ2K07-32□	7	11.1	8	14.9	16.5	26.8	13.3	3.5	3.5	2.5	3.6

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D1 is maximum diameter.



### 45° Male Elbow: KQ2K (Sealant)



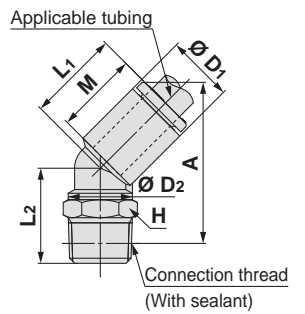
Applicable tubing O.D. [inch]	Connection thread NPT	Model	H (Width across flats)	*1 Ø D1	Ø D2	L1	L2	A*2	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
										Nylon	Urethane		
Ø 1/8	1/8	KQ2K01-34□S	11.11	7.1	10	14.3	12.7	21.8	13.3	3	2.5	2.5	5.3
Ø 5/32	1/8	KQ2K03-34□S	11.11	8.2	10	14.4	12.7	22.2	13.3	4.8	3.4	3	5.5
Ø 3/16	1/8	KQ2K05-34□S	11.11	9.1	10	14.5	13.2	23.1	13.3	6.8	5.6	3.5	5.6
	1/8	KQ2K07-34□S	11.11	11.1	10	14.8	15.2	25.8	13.3	11.3	10	4.5	6
	1/4	KQ2K07-35□S	14.29	11.1	10	14.8	19.6	29	13.3	11.3	10	4.5	15.6
Ø 1/4	3/8	KQ2K07-36□S	17.46	11.1	10	14.8	21	30.1	13.3	11.3	10	4.5	27.8
	1/8	KQ2K09-34□S	11.11	13.2	10	16	15.7	27.9	14.2	11.3	11.3	4.5	6.8
	1/8	KQ2K09-34□QS	12.7	13.2	12	16	20.5	32.7	14.2	19.7	19.7	6	9.7
Ø 5/16	1/4	KQ2K09-35□S	14.29	13.2	12	16	21.1	32.1	14.2	19.7	19.7	6	13.9
	3/8	KQ2K09-36□S	17.46	13.2	12	16	22.5	33.2	14.2	19.7	19.7	6	26
	1/8	KQ2K11-34□S	12.7	15.4	12	18.1	21.1	35.5	15.6	21.2	21.2	6	11.7
Ø 3/8	1/4	KQ2K11-35□S	17.46	15.4	17	17.7	28.6	41.5	15.6	28.8	23.8	7	21.8
	3/8	KQ2K11-36□S	17.46	15.4	17	17.7	23.5	36.1	15.6	28.8	23.8	7	19.2
	1/2	KQ2K11-37□S	22.23	15.4	17	17.7	27.7	38.6	15.6	28.8	23.8	7	45.7
Ø 1/2	1/4	KQ2K13-35□S	17.46	19.3	17	19.4	28.7	44.1	17	50.3	44.4	9	23.8
	3/8	KQ2K13-36□S	17.46	19.3	17	19.4	23.6	38.7	17	56	44.4	9.5	19.9
	1/2	KQ2K13-37□S	22.23	19.3	17	19.4	27.8	41.2	17	56	44.4	9.5	46

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D1 is maximum diameter.

\*2 Reference dimensions after installation of NPT thread

\*3 For details, refer to page 156.



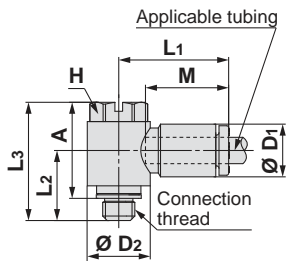
### Universal Male Elbow: KQ2V (Gasket seal)



Applicable tubing O.D. [inch]	Connection thread UNF	Model	H (Width across flats)	*1 Ø D1	Ø D2	L1	L2	L3	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
											Nylon	Urethane		
Ø 1/8	10-32UNF	KQ2V01-32□	8	7.1	9.8	17.5	10.4	17.9	14.9	13.3	2.2	1.9	2.5	5.2
Ø 5/32	10-32UNF	KQ2V03-32□	8	8.2	9.8	17.5	10.4	17.9	14.9	13.3	2.9	2.9	2.5	5.3
Ø 1/4	10-32UNF	KQ2V07-32□	8	11.1	13.4	20.6	12.1	24	20.5	13.3	2.9	2.9	2.5	12.2

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D1 is maximum diameter.



### Universal Male Elbow: KQ2V (Sealant)

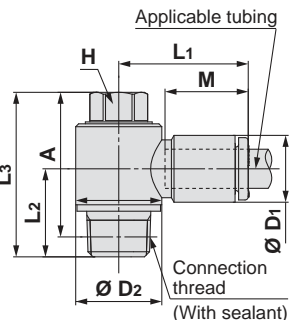


Applicable tubing O.D. [inch]	Connection thread NPT	Model	H (Width across flats)	*1 Ø D1	Ø D2	L1	L2	L3	A*2	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
											Nylon	Urethane		
Ø 1/8	1/8	KQ2V01-34□S	8	7.1	13.4	19.3	13.7	25.6	22.4	13.3	2.2	1.9	2.5	13.5
Ø 5/32	1/8	KQ2V03-34□S	8	8.2	13.4	19.3	13.7	25.6	22.4	13.3	2.9	2.9	3	13.6
Ø 3/16	1/8	KQ2V05-34□S	8	9.1	13.4	19.6	13.7	25.6	22.4	13.3	4.5	3.7	3.5	13.7
Ø 1/4	1/8	KQ2V07-34□S	8	11.1	13.4	20.6	13.7	25.6	22.4	13.3	7.5	6.6	4.5	14.1
	1/4	KQ2V07-35□S	8	11.1	15.3	19.9	18.7	32.1	27.7	13.3	7.5	6.6	4.5	25.6
Ø 5/16	1/8	KQ2V09-34□S	11.11	13.2	17.6	23.5	15.1	27.6	24.4	14.2	16	11.2	6	22.3
	1/4	KQ2V09-35□S	11.11	13.2	17.6	23.5	18.5	31	26.6	14.2	16	11.2	6	29.2
	3/8	KQ2V09-36□S	12.7	13.2	20.6	23.1	19.5	35.3	30.6	14.2	16	11.2	6	44.1
Ø 3/8	1/4	KQ2V11-35□S	12.7	15.4	20.6	25.8	19.6	34.9	30.5	15.6	23.4	19.3	7	37.5
	3/8	KQ2V11-36□S	12.7	15.4	20.6	25.8	20	35.3	30.6	15.6	23.4	19.3	7	45.2
Ø 1/2	3/8	KQ2V13-36□S	17.46	19.3	27	30.5	20.2	35.1	30.4	17	38.8	34.3	9	64
	1/2	KQ2V13-37□S	17.46	19.3	27	30.5	23.4	38.3	31.9	17	38.8	34.3	9	82.6

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D1 is maximum diameter.

\*2 Reference dimensions after installation of NPT thread



Round Type

Metric Size M, R, Rc

Sealant/Gasket Seal

Inch Size UNF, NPT

Inch Size M, R, Rc

Inch Size M, R, Rc

Metric Size G

Metric Size G

Metric Size R, Rc

Face Seal

Inch Size NPT

Inch Size NPT

Inch Size R

Inch Size R

Metric Size Uni

Metric Size Uni

Gasket Seal

Inch Size Uni

# KQ2 Series

Applicable Tubing: Inch Size, Connection Thread: UNF, NPT

## Dimensions

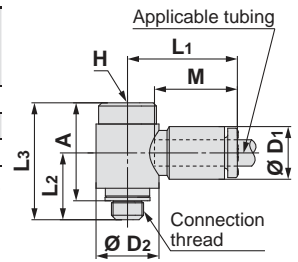
### Hexagon Socket Head Universal Male Elbow: KQ2VS (Gasket seal)



Applicable tubing O.D. [inch]	Connection thread UNF	Model	H (Width across flats)	*1 Ø D1	Ø D2	L1	L2	L3	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
											Nylon	Urethane		
Ø 1/8	10-32UNF	KQ2VS01-32□	4	7.1	9.8	17.5	10.4	18.2	14.9	13.3	2.2	1.9	2.3	5.3
Ø 5/32	10-32UNF	KQ2VS03-32□	4	8.2	9.8	17.5	10.4	18.2	14.9	13.3	2.9	2.9	2.3	5.4
Ø 1/4	10-32UNF	KQ2VS07-32□	6.35	11.1	13.4	20.6	11.1	23.2	20.2	13.3	2.9	2.9	2.5	11.3

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D1 is maximum diameter.



### Hexagon Socket Head Universal Male Elbow: KQ2VS (Sealant)

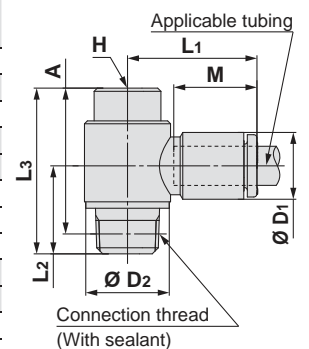


Applicable tubing O.D. [inch]	Connection thread NPT	Model	H (Width across flats)	*1 Ø D1	Ø D2	L1	L2	L3	A*2	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
											Nylon	Urethane		
Ø 1/8	1/8	KQ2VS01-34□S	6.35	7.1	13.4	19.3	13.7	25.8	22.6	13.3	2.2	1.9	2.5	13.1
Ø 5/32	1/8	KQ2VS03-34□S	6.35	8.2	13.4	19.3	13.7	25.8	22.6	13.3	2.9	2.9	3	13.2
Ø 3/16	1/8	KQ2VS05-34□S	6.35	9.1	13.4	19.6	13.7	25.8	22.6	13.3	4.5	3.7	3.5	13.3
Ø 1/4	1/8	KQ2VS07-34□S	6.35	11.1	13.4	20.6	13.7	25.8	22.6	13.3	7.7	6.6	4.6	13.7
	1/4	KQ2VS07-35□S	6.35	11.1	15.3	19.9	18.7	28.1	23.7	13.3	7.7	6.6	4.6	20.8
Ø 5/16	1/8	KQ2VS09-34□S	8	13.2	17.6	23.5	15.1	26	22.8	14.2	16	11.2	6	19.3
	1/4	KQ2VS09-35□S	8	13.2	17.6	23.5	18.5	29.5	25.1	14.2	16	11.2	6	24.6
Ø 3/8	3/8	KQ2VS09-36□S	8	13.2	20.6	23.1	19.5	31.4	26.7	14.2	16	11.2	6	37.6
	1/4	KQ2VS11-35□S	8	15.4	20.6	25.8	19.6	30.8	26.4	15.6	23.4	19.3	7	29
Ø 1/2	3/8	KQ2VS11-36□S	8	15.4	20.6	25.8	20	31.4	26.7	15.6	23.4	19.3	7	38.6
	1/2	KQ2VS13-37□S	9.53	19.3	27	30.5	20.2	33.6	28.9	17	38.8	34.3	9	59.2
			9.53	19.3	27	30.5	23.4	36.8	30.4	17	38.8	34.3	9	78.3

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D1 is maximum diameter.

\*2 Reference dimensions after installation of NPT thread



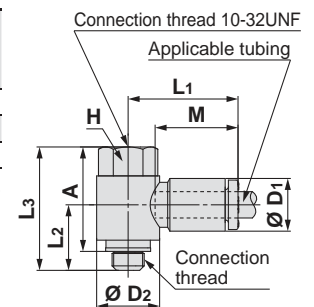
### Universal Female Elbow: KQ2VF (Gasket seal)



Applicable tubing O.D. [inch]	Connection thread UNF	Model	H (Width across flats)	*1 Ø D1	Ø D2	L1	L2	L3	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
											Nylon	Urethane		
Ø 1/8	10-32UNF	KQ2VF01-32□	8	7.1	9.8	17.5	10.4	19.4	16.4	13.3	2.2	1.9	2.5	5.4
Ø 5/32	10-32UNF	KQ2VF03-32□	8	8.2	9.8	17.5	10.4	19.4	16.4	13.3	2.9	2.9	2.5	5.5
Ø 1/4	10-32UNF	KQ2VF07-32□	14.29	11.1	13.4	20.6	12.8	22.4	16.4	13.3	2.9	2.9	2.5	14.2

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D1 is maximum diameter.



### Universal Female Elbow: KQ2VF (Sealant)

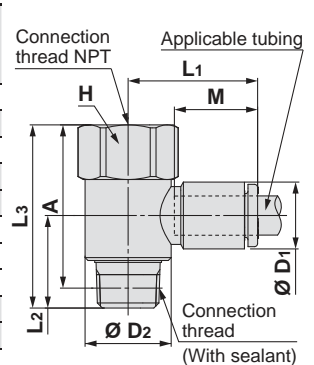


Applicable tubing O.D. [inch]	Connection thread NPT	Model	H (Width across flats)	*1 Ø D1	Ø D2	L1	L2	L3	A*2	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
											Nylon	Urethane		
Ø 1/8	1/8	KQ2VF01-34□S	14.29	7.1	13.4	19.3	14.4	28.5	25.3	13.3	2.2	1.9	2.5	18
Ø 5/32	1/8	KQ2VF03-34□S	14.29	8.2	13.4	19.3	14.4	28.5	25.3	13.3	2.9	2.9	3	18.1
Ø 3/16	1/8	KQ2VF05-34□S	14.29	9.1	13.4	19.6	14.4	28.5	25.3	13.3	4.5	3.7	3.5	18.2
Ø 1/4	1/8	KQ2VF07-34□S	14.29	11.1	13.4	20.6	14.4	28.5	25.3	13.3	7.7	6.6	4.6	18.5
	1/4	KQ2VF07-35□S	17.46	11.1	17.6	21.3	19.4	37.9	33.5	13.3	7.7	6.6	4.6	38.4
Ø 5/16	1/8	KQ2VF09-34□S	17.46	13.2	17.6	23.5	15.5	30	26.8	14.2	16	11.2	6	28.7
	1/4	KQ2VF09-35□S	17.46	13.2	17.6	23.5	18.9	37.9	33.5	14.2	16	11.2	6	39.3
Ø 3/8	3/8	KQ2VF09-36□S	22.23	13.2	25.2	24.9	24	44	39.3	14.2	16	11.2	6	67.2
	1/4	KQ2VF11-35□S	22.23	15.4	20.6	25.8	20.7	40.3	35.9	15.6	23.4	19.3	7	58.7
Ø 1/2	3/8	KQ2VF11-36□S	22.23	15.4	25.2	26.3	23.2	44	39.3	15.6	23.4	19.3	7	67.9
	1/2	KQ2VF13-36□S	25.4	19.3	27	30.5	21.2	40.7	36	17	38.8	34.3	9	69.8
			25.4	19.3	27	30.5	24.4	48.9	42.5	17	38.8	34.3	9	105.7

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D1 is maximum diameter.

\*2 Reference dimensions after installation of NPT thread





# Inch Size One-touch Fittings **KQ2 Series**

Applicable Tubing: Inch Size, Connection Thread: UNF, NPT

## Dimensions

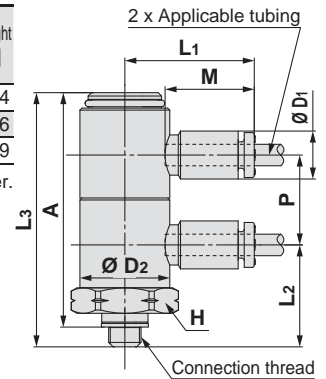
### Double Universal Male Elbow: KQ2VD (Gasket seal)



Applicable tubing O.D. [inch]	Connection thread UNF	Model	H (Width across flats)	*1 Ø D1	Ø D2	L1	L2	L3	A	M	P	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
												Nylon	Urethane		
Ø 1/8	10-32UNF	KQ2VD01-32□	14.29	7.1	13.4	19.3	15.2	37.9	34.9	13.3	13.4	2.2	1.9	2.3	24.4
Ø 5/32	10-32UNF	KQ2VD03-32□	14.29	8.2	13.4	19.3	15.2	37.9	34.9	13.3	13.4	2.5	2.5	2.3	24.6
Ø 1/4	10-32UNF	KQ2VD07-32□	14.29	11.1	13.4	20.6	15.6	38.7	35.7	13.3	13.8	2.5	2.5	2.3	26.9

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D1 is maximum diameter.



### Double Universal Male Elbow: KQ2VD (Sealant)

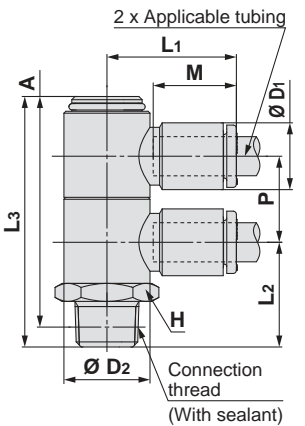


Applicable tubing O.D. [inch]	Connection thread NPT	Model	H (Width across flats)	*1 Ø D1	Ø D2	L1	L2	L3	A*2	M	P	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
												Nylon	Urethane		
Ø 1/8	1/8	KQ2VD01-34□S	14.29	7.1	13.4	19.3	16.3	39	35.8	13.3	13.4	2.2	1.9	2.5	20
Ø 5/32	1/8	KQ2VD03-34□S	14.29	8.2	13.4	19.3	16.3	39	35.8	13.3	13.4	2.9	2.9	3	20.2
Ø 3/16	1/8	KQ2VD05-34□S	14.29	9.1	13.4	19.6	16.3	39	35.8	13.3	13.4	4.5	3.7	3.5	20.5
Ø 1/4	1/8	KQ2VD07-34□S	14.29	11.1	13.4	20.6	17.7	40.8	37.6	13.3	13.8	7.7	6.6	4.6	23.3
	1/4	KQ2VD07-35□S	14.29	11.1	13.4	20.6	21.1	44.2	39.8	13.3	13.8	7.7	6.6	4.6	30.1
	3/8	KQ2VD07-36□S	17.46	11.1	13.4	20.6	22.5	45.6	40.9	13.3	13.8	7.7	6.6	4.6	42.5
Ø 5/16	1/4	KQ2VD09-35□S	19	13.2	17.6	23.7	22.4	49.2	44.8	14.2	15.9	16	11.2	6	45
	3/8	KQ2VD09-36□S	19	13.2	17.6	23.7	23	49.8	45.1	14.2	15.9	16	11.2	6	53.2
	1/2	KQ2VD09-37□S	22.23	13.2	17.6	23.7	27.2	54	47.6	14.2	15.9	16	11.2	6	79.7
Ø 3/8	1/4	KQ2VD11-35□S	22.23	15.4	20.6	25.3	24.4	56.3	51.9	15.6	19.2	23.4	19.3	7	65.5
	3/8	KQ2VD11-36□S	22.23	15.4	20.6	25.3	24.8	56.7	52	15.6	19.2	23.4	19.3	7	67.6
Ø 1/2	1/2	KQ2VD11-37□S	22.23	15.4	20.6	25.3	28.7	60.6	54.2	15.6	19.2	23.4	19.3	7	87.7
	3/8	KQ2VD13-36□S	25.4	19.3	27	30.5	29.6	64.4	59.7	17	22.3	43.8	34.3	9.6	128.6
	1/2	KQ2VD13-37□S	25.4	19.3	27	30.5	32.8	67.6	61.2	17	22.3	43.8	34.3	9.6	146.3

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D1 is maximum diameter.

\*2 Reference dimensions after installation of NPT thread



Round Type

Metric Size M, R, Rc

Inch Size UNF, NPT

Inch Size M, R, Rc

Metric Size G

Metric Size R, Rc

Inch Size NPT

Inch Size R

Metric Size Uni

Inch Size Uni

# KQ2 Series

Applicable Tubing: Inch Size, Connection Thread: UNF, NPT

## Dimensions

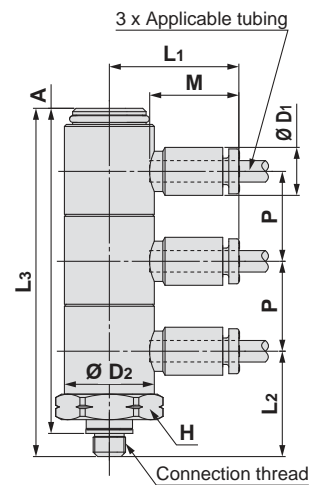
### Triple Universal Male Elbow: KQ2VT (Gasket seal)



Applicable tubing O.D. [inch]	Connection thread UNF	Model	H (Width across flats)	*1 Ø D1	Ø D2	L1	L2	L3	A	M	P	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
												Nylon	Urethane		
Ø 1/8	10-32UNF	KQ2VT01-32□	14.29	7.1	13.4	19.3	15.7	51.9	48.4	13.3	13.4	2.2	1.9	2.5	32.4
Ø 5/32	10-32UNF	KQ2VT03-32□	14.29	8.2	13.4	19.3	15.7	51.9	48.4	13.3	13.4	2.9	2.9	2.5	32.7
Ø 1/4	10-32UNF	KQ2VT07-32□	14.29	11.1	13.4	20.6	16.1	53	49.5	13.3	13.8	2.3	2.3	2.5	35.4

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D1 is maximum diameter.



### Triple Universal Male Elbow: KQ2VT (Sealant)

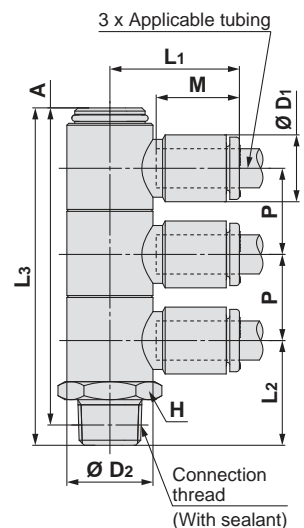


Applicable tubing O.D. [inch]	Connection thread NPT	Model	H (Width across flats)	*1 Ø D1	Ø D2	L1	L2	L3	A*2	M	P	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
												Nylon	Urethane		
Ø 1/8	1/8	KQ2VT01-34□S	14.29	7.1	13.4	19.3	16.3	52.5	49.3	13.3	13.4	2.2	1.9	2.5	25.5
Ø 5/32	1/8	KQ2VT03-34□S	14.29	8.2	13.4	19.3	16.3	52.5	49.3	13.3	13.4	2.9	2.9	3	25.8
Ø 3/16	1/8	KQ2VT05-34□S	14.29	9.1	13.4	19.6	16.3	52.5	49.3	13.3	13.4	4.5	3.7	3.5	26.2
Ø 1/4	1/8	KQ2VT07-34□S	14.29	11.1	13.4	20.6	17.7	54.6	51.4	13.3	13.8	7.7	6.6	4.6	29.7
	1/4	KQ2VT07-35□S	14.29	11.1	13.4	20.6	21.1	58	53.6	13.3	13.8	7.7	6.6	4.6	36.6
Ø 5/16	3/8	KQ2VT07-36□S	17.46	11.1	13.4	20.6	22.5	59.4	54.7	13.3	13.8	7.7	6.6	4.6	49
	1/4	KQ2VT09-35□S	17.46	13.2	17.6	23.7	22.4	65.2	60.8	14.2	15.9	16	11.2	6	55.4
Ø 3/8	3/8	KQ2VT09-36□S	19	13.2	17.6	23.7	23	65.8	61.1	14.2	15.9	16	11.2	6	65.3
	1/2	KQ2VT09-37□S	22.23	13.2	17.6	23.7	27.2	70	63.6	14.2	15.9	16	11.2	6	91.8
Ø 1/2	1/4	KQ2VT11-35□S	22.23	15.4	20.6	25.3	24.4	75.6	71.2	15.6	19.2	23.4	19.3	7	84.2
	3/8	KQ2VT11-36□S	22.23	15.4	20.6	25.3	24.8	76	71.3	15.6	19.2	23.4	19.3	7	91.8
Ø 3/8	1/2	KQ2VT11-37□S	22.23	15.4	20.6	25.3	28.7	79.9	73.5	15.6	19.2	23.4	19.3	7	104.4
	3/8	KQ2VT13-36□S	25.4	19.3	27	30.5	29.6	86.8	82.1	17	22.3	43.8	34.3	9.6	169.3
Ø 1/2	1/2	KQ2VT13-37□S	25.4	19.3	27	30.5	32.8	90	83.6	17	22.3	43.8	34.3	9.6	187

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D1 is maximum diameter.

\*2 Reference dimensions after installation of NPT thread



# Inch Size One-touch Fittings **KQ2 Series**

Applicable Tubing: Inch Size, Connection Thread: UNF, NPT

## Dimensions

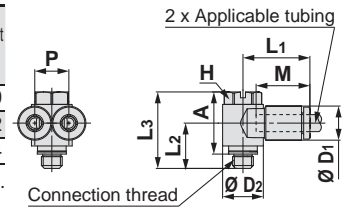
### Branch Universal Male Elbow: KQ2Z (Gasket seal)



Applicable tubing O.D. [inch]	Connection thread UNF	Model	H (Width across flats)	*1 Ø D1	Ø D2	L1	L2	L3	A	M	P	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
												Nylon	Urethane		
Ø 1/8	10-32UNF	KQ2Z01-32□	8	7.1	9.8	16.5	10.4	17.9	14.9	13.3	7.1	2.2	1.9	2.5	5.9
Ø 5/32	10-32UNF	KQ2Z03-32□	8	8.2	9.8	16.5	10.4	17.9	14.9	13.3	8.2	2.9	2.9	2.5	6.2
Ø 1/4	10-32UNF	KQ2Z07-32□	8	11.1	13.4	18.4	12.1	24	20.5	13.3	11.1	2.9	2.9	2.5	13.4

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D1 is maximum diameter.



### Branch Universal Male Elbow: KQ2Z (Sealant)

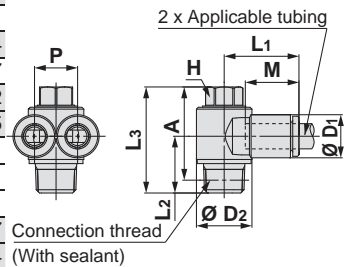


Applicable tubing O.D. [inch]	Connection thread NPT	Model	H (Width across flats)	*1 Ø D1	Ø D2	L1	L2	L3	A*2	M	P	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
												Nylon	Urethane		
Ø 1/8	1/8	KQ2Z01-34□S	8	7.1	13.4	18.5	13.7	25.6	22.4	13.3	7.1	2.2	1.9	2.5	14.1
Ø 5/32	1/8	KQ2Z03-34□S	8	8.2	13.4	18.5	13.7	25.6	22.4	13.3	8.2	2.9	2.9	3	14.4
Ø 3/16	1/8	KQ2Z05-34□S	8	9.1	13.4	18.4	13.7	25.6	22.4	13.3	9.1	4.5	3.7	3.5	14.7
Ø 1/4	1/8	KQ2Z07-34□S	8	11.1	13.4	18.4	13.7	25.6	22.4	13.3	11.1	7.5	6.6	4.5	15.2
	1/4	KQ2Z07-35□S	11.11	11.1	17.6	20.4	18	31	26.6	13.3	11.1	7.7	6.6	4.5	29.5
Ø 5/16	1/8	KQ2Z09-34□S	11.11	13.2	17.6	21.2	15.1	27.6	24.4	14.2	13.2	20.5	14.2	6	24.1
	3/8	KQ2Z09-36□S	12.7	13.2	20.6	22.3	19.5	35.3	30.6	14.2	13.2	20.5	14.2	6	46
Ø 3/8	1/4	KQ2Z11-35□S	12.7	15.4	20.6	25.9	19.1	34.9	30.5	15.6	15.4	23.4	19.3	7	40.7
	3/8	KQ2Z11-36□S	12.7	15.4	20.6	25.9	19.5	35.3	30.6	15.6	15.4	23.4	19.3	7	48.4
Ø 1/2	3/8	KQ2Z13-36□S	17.46	19.3	27	30.1	20.2	35.1	30.4	17	19.3	38.8	34.3	9	69.5
	1/2	KQ2Z13-37□S	17.46	19.3	27	30.1	23.4	38.3	31.9	17	19.3	38.8	34.3	9	88.1

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D1 is maximum diameter.

\*2 Reference dimensions after installation of NPT thread



### Double Branch Universal Male Elbow: KQ2ZD (Sealant)

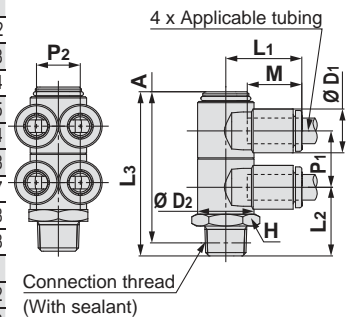


Applicable tubing O.D. [inch]	Connection thread NPT	Model	H (Width across flats)	*1 Ø D1	Ø D2	L1	L2	L3	A*2	M	P1	P2	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
													Nylon	Urethane		
Ø 1/8	1/8	KQ2ZD01-34□S	14.29	7.1	13.4	18.5	16.3	39	35.8	13.3	13.4	7.1	2.2	1.9	2.5	21.2
Ø 5/32	1/8	KQ2ZD03-34□S	14.29	8.2	13.4	18.5	16.3	39	35.8	13.3	13.4	8.2	2.9	2.9	3	21.8
Ø 3/16	1/8	KQ2ZD05-34□S	14.29	9.1	13.4	18.4	16.3	39	35.8	13.3	13.4	9.1	4.5	3.7	3.5	22.4
Ø 1/4	1/8	KQ2ZD07-34□S	14.29	11.1	13.4	18.3	17.7	40.8	37.6	13.3	13.8	11.1	7.7	6.6	4.6	25.5
	1/4	KQ2ZD07-35□S	14.29	11.1	13.4	18.3	21.1	44.2	39.8	13.3	13.8	11.1	7.7	6.6	4.6	32.4
Ø 5/16	3/8	KQ2ZD07-36□S	17.46	11.1	13.4	18.3	22.5	45.6	40.9	13.3	13.8	11.1	7.7	6.6	4.6	44.8
	1/4	KQ2ZD09-35□S	19	13.2	17.6	21.95	22.4	49.2	44.8	14.2	15.9	13.2	20.5	14.2	6	48.7
Ø 5/16	3/8	KQ2ZD09-36□S	19	13.2	17.6	21.95	23	49.8	45.1	14.2	15.9	13.2	20.5	14.2	6	56.8
	1/2	KQ2ZD09-37□S	22.23	13.2	17.6	21.95	27.2	54	47.6	14.2	15.9	13.2	20.5	14.2	6	83.3
Ø 3/8	1/4	KQ2ZD11-35□S	22.23	15.4	20.6	23.6	24.4	56.3	51.9	15.6	19.2	15.4	23.4	19.3	7	71.1
	3/8	KQ2ZD11-36□S	22.23	15.4	20.6	23.6	24.8	56.7	52	15.6	19.2	15.4	23.4	19.3	7	73.2
Ø 1/2	1/2	KQ2ZD11-37□S	22.23	15.4	20.6	23.6	28.7	60.6	54.2	15.6	19.2	15.4	23.4	19.3	7	93.3
	3/8	KQ2ZD13-36□S	25.4	19.3	27	27.9	29.6	64.4	59.7	17	22.3	19.3	43.8	34.3	9.6	137.2
Ø 1/2	1/2	KQ2ZD13-37□S	25.4	19.3	27	27.9	32.8	67.6	61.2	17	22.3	19.3	43.8	34.3	9.6	155

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D1 is maximum diameter.

\*2 Reference dimensions after installation of NPT thread



Round Type

Metric Size M, R, Rc

Inch Size UNF, NPT

Inch Size M, R, Rc

Metric Size G

Metric Size R, Rc

Inch Size NPT

Inch Size R

Metric Size Uni

Inch Size Uni

# KQ2 Series

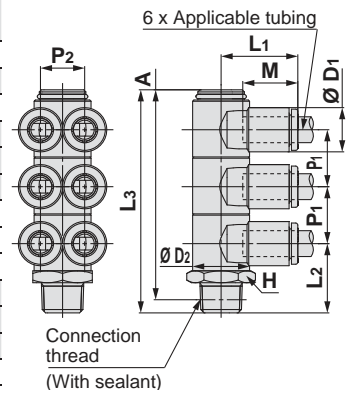
Applicable Tubing: Inch Size, Connection Thread: UNF, NPT

## Dimensions

### Triple Branch Universal Male Elbow: KQ2ZT (Sealant)



Applicable tubing O.D. [inch]	Connection thread NPT	Model	H (Width across flats)	Ø D1*	Ø D2	L1	L2	L3	A*2	M	P1	P2	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
													Nylon	Urethane		
Ø 1/8	1/8	KQ2ZT01-34□S	14.29	7.1	13.4	18.5	16.3	52.5	49.3	13.3	13.4	7.1	2.2	1.9	2.5	27.3
		KQ2ZT03-34□S	14.29	8.2	13.4	18.5	16.3	52.5	49.3	13.3	13.4	8.2	2.9	2.9	3	28.2
Ø 3/16	1/8	KQ2ZT05-34□S	14.29	9.1	13.4	18.4	16.3	52.5	49.3	13.3	13.4	9.1	4.5	3.7	3.5	29
		KQ2ZT07-34□S	14.29	11.1	13.4	18.3	17.7	54.6	51.4	13.3	13.8	11.1	7.7	6.6	4.6	33.1
Ø 1/4	1/4	KQ2ZT07-35□S	14.29	11.1	13.4	18.3	21.1	58	53.6	13.3	13.8	11.1	7.7	6.6	4.6	40
		KQ2ZT07-36□S	17.46	11.1	13.4	18.3	22.5	59.4	54.7	13.3	13.8	11.1	7.7	6.6	4.6	52.4
Ø 5/16	1/4	KQ2ZT09-35□S	17.46	13.2	17.6	21.2	22.4	65.2	60.8	14.2	15.9	13.2	20.5	14.2	6	60.9
		KQ2ZT09-36□S	19	13.2	17.6	21.2	23	65.8	61.1	14.2	15.9	13.2	20.5	14.2	6	70.8
Ø 3/8	3/8	KQ2ZT09-37□S	22.23	13.2	17.6	21.2	27.2	70	63.6	14.2	15.9	13.2	20.5	14.2	6	97.3
		KQ2ZT11-35□S	22.23	15.4	20.6	23.6	24.4	75.6	71.2	15.6	19.2	15.4	23.4	19.3	7	100.2
Ø 3/8	3/8	KQ2ZT11-36□S	22.23	15.4	20.6	23.6	24.8	76	71.3	15.6	19.2	15.4	23.4	19.3	7	100.2
		KQ2ZT11-37□S	22.23	15.4	20.6	23.6	28.7	79.9	73.5	15.6	19.2	15.4	23.4	19.3	7	100.2
Ø 1/2	3/8	KQ2ZT13-36□S	25.4	19.3	27	27.9	29.6	86.8	82.1	17	22.3	19.3	43.8	34.3	9.6	182.3
		KQ2ZT13-37□S	25.4	19.3	27	27.9	32.8	90	83.6	17	22.3	19.3	43.8	34.3	9.6	200



□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D1 is maximum diameter.  
\*2 Reference dimensions after installation of NPT thread

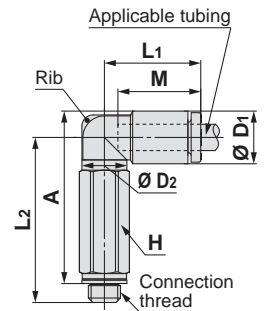
### Extended Male Elbow: KQ2W (Gasket seal)



Applicable tubing O.D. [inch]	Connection thread UNF	Model	H (Width across flats)	Ø D1*	Ø D2	L1	L2	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]	With a rib
										Nylon	Urethane			
Ø 1/8	10-32UNF	KQ2W01-32□	7	7.1	7	15.3	25.8	25.9	13.3	2.8	2.4	2.5	5.9	●
Ø 5/32	10-32UNF	KQ2W03-32□	7	8.2	7	15.4	26.3	26.9	13.3	3	3	2.5	6	●
Ø 1/4	10-32UNF	KQ2W07-32□	7	11.1	7	15.4	27.6	29.7	13.3	3.5	3.5	2.5	6.4	●

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D1 is maximum diameter.



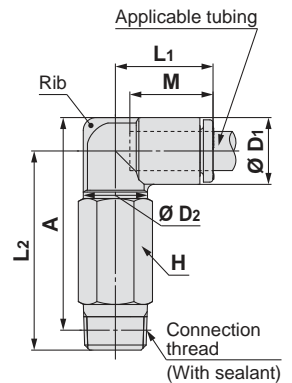
### Extended Male Elbow: KQ2W (Sealant)



Applicable tubing O.D. [inch]	Connection thread NPT	Model	H (Width across flats)	Ø D1*	Ø D2	L1	L2	A*2	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]	With a rib
										Nylon	Urethane			
Ø 1/8	1/16	KQ2W01-33□S	11.11	7.1	10	14.5	35.9	35.4	13.3	2.8	2.4	2.5	16.6	—
	1/8	KQ2W01-34□S	11.11	7.1	10	14.5	30.3	30.7	13.3	2.8	2.4	2.5	13.9	—
	1/4	KQ2W01-35□S	14.29	7.1	10	14.5	32.7	31.9	13.3	2.8	2.4	2.5	27.3	—
Ø 5/32	1/16	KQ2W03-33□S	11.11	8.2	10	14.8	35.4	35.4	13.3	4	4	3	16.7	●
	1/8	KQ2W03-34□S	11.11	8.2	10	14.8	29.9	30.8	13.3	4	4	3	14.1	●
Ø 3/16	1/4	KQ2W03-35□S	14.29	8.2	10	14.8	33.2	32.9	13.3	4	4	3	27.5	●
	1/8	KQ2W05-34□S	11.11	9.1	10	15	30.4	31.7	13.3	6.8	5.6	3.5	14.3	—
Ø 1/4	1/4	KQ2W05-35□S	14.29	9.1	10	15	33.7	33.9	13.3	6.8	5.6	3.5	27.7	—
	1/16	KQ2W07-33□S	11.11	11.1	10	15.6	36.9	38.4	13.3	6.8	6.8	3.5	17.3	●
Ø 1/4	1/8	KQ2W07-34□S	11.11	11.1	10	15.6	31.4	33.7	13.3	11.3	10	4.5	14.6	●
	1/4	KQ2W07-35□S	14.29	11.1	10	15.6	34.7	35.9	13.3	11.3	10	4.5	28	●
	3/8	KQ2W07-36□S	17.46	11.1	10	15.6	36.1	37	13.3	11.3	10	4.5	50.2	●
Ø 5/16	1/8	KQ2W09-34□S	11.11	13.2	10	16.4	32.4	35.8	14.2	11.3	11.3	4.5	15.4	●
		KQ2W09-34□S*	12.7	13.2	12	17.2	42.4	45.8	14.2	20.5	14.2	6	26.4	●
	1/4	KQ2W09-35□S	14.29	13.2	12	17.2	37.8	40	14.2	20.5	14.2	6	26.5	●
Ø 3/8	3/8	KQ2W09-36□S	17.46	13.2	12	17.2	39.2	41.1	14.2	20.5	14.2	6	50	●
	1/4	KQ2W11-35□S	17.46	15.4	17	19.3	48.3	51.6	15.6	28.8	23.8	7.5	54.3	●
Ø 3/8	3/8	KQ2W11-36□S	17.46	15.4	17	19.3	45.1	48.1	15.6	28.8	23.8	7.5	37.8	●
	1/2	KQ2W11-37□S	22.23	15.4	17	19.3	49.3	50.6	15.6	28.8	23.8	7.5	86.5	●
Ø 1/2	1/4	KQ2W13-35□S	17.46	19.3	17	21.5	50.2	55.5	17	50.3	44.4	9	56.6	—
	3/8	KQ2W13-36□S	17.46	19.3	17	21.8	46	51	17	56	44.4	9.5	42.8	—
1/2	KQ2W13-37□S	22.23	19.3	17	21.8	50.2	53.5	17	56	44.4	9.5	95.5	—	

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D1 is maximum diameter.  
\*2 Reference dimensions after installation of NPT thread  
\*3 For details, refer to page 156.



# Inch Size One-touch Fittings **KQ2 Series**

Applicable Tubing: Inch Size, Connection Thread: UNF, NPT

## Dimensions

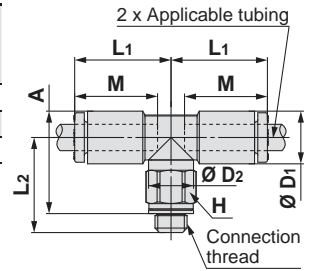
### Male Branch Tee: KQ2T (Gasket seal)



Applicable tubing O.D. [inch]	Connection thread UNF	Model	H (Width across flats)	Ø D1 <sup>*1</sup>	Ø D2	L1	L2	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
										Nylon	Urethane		
Ø 1/8	10-32UNF	KQ2T01-32□	7	7.1	7	15.3	14.2	14.2	13.3	3.2	2.7	2.5	3.5
Ø 5/32	10-32UNF	KQ2T03-32□	7	8.2	7	15.4	14.7	15.3	13.3	4.5	4.5	2.5	3.8
Ø 1/4	10-32UNF	KQ2T07-32□	7	11.1	7	15.4	16	18	13.3	4.5	4.5	2.5	4.7

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D1 is maximum diameter.



### Male Branch Tee: KQ2T (Sealant)



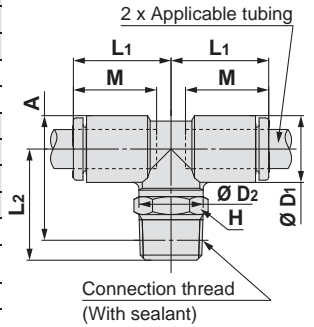
Applicable tubing O.D. [inch]	Connection thread NPT	Model	H (Width across flats)	Ø D1 <sup>*1</sup>	Ø D2	L1	L2	A <sup>*2</sup>	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
										Nylon	Urethane		
Ø 1/8	1/16	KQ2T01-33□S	11.11	7.1	10	14.5	24.2	23.7	13.3	3.4	2.9	2.5	9.7
	1/8	KQ2T01-34□S	11.11	7.1	10	14.5	16.6	17	13.3	3.4	2.9	2.5	6
	1/4	KQ2T01-35□S	14.29	7.1	10	14.5	21	20.2	13.3	3.4	2.9	2.5	15.6
Ø 5/32	1/16	KQ2T03-33□S	11.11	8.2	10	14.8	23.8	23.8	13.3	6	4.1	3	10
	1/8	KQ2T03-34□S	11.11	8.2	10	14.8	16.2	17.1	13.3	6	4.1	3	6.3
Ø 3/16	1/4	KQ2T03-35□S	14.29	8.2	10	14.8	21.6	21.3	13.3	6	4.1	3	15.9
	1/8	KQ2T05-34□S	11.11	9.1	10	15	16.7	18	13.3	8.4	7	3.5	6.6
Ø 1/4	1/4	KQ2T05-35□S	14.29	9.1	10	15	22.1	22.2	13.3	8.4	7	3.5	16.2
	1/16	KQ2T07-33□S	11.11	11.1	10	15.6	25.3	26.8	13.3	8.5	8.5	3.5	11
	1/8	KQ2T07-34□S	11.11	11.1	10	15.6	17.7	20	13.3	14	12.4	4.5	7.3
Ø 5/16	1/4	KQ2T07-35□S	14.29	11.1	10	15.6	23.1	24.2	13.3	14	12.4	4.5	16.9
	3/8	KQ2T07-36□S	17.46	11.1	10	15.6	24.5	25.3	13.3	14	12.4	4.5	29.2
	1/8	KQ2T09-34□S	11.11	13.2	10	16.4	18.7	22.1	14.2	14	14	4.5	8.7
Ø 3/8	1/4	KQ2T09-34□QS <sup>*3</sup>	12.7	13.2	12	17.2	23.5	26.9	14.2	26.3	18.2	6	11.7
	1/4	KQ2T09-35□S	14.29	13.2	12	17.2	24.1	26.3	14.2	26.3	18.2	6	15.9
	3/8	KQ2T09-36□S	17.46	13.2	12	17.2	25.5	27.4	14.2	26.3	18.2	6	27.9
Ø 1/2	1/8	KQ2T11-34□S	12.7	15.4	12	18.6	23.1	27.6	15.6	21.2	21.2	6	14.4
	1/4	KQ2T11-35□S	17.46	15.4	17	19.3	28.5	31.8	15.6	28.8	23.8	7.5	24.1
	3/8	KQ2T11-36□S	17.46	15.4	17	19.3	29.1	32.1	15.6	28.8	23.8	7.5	22.2
Ø 1/2	1/2	KQ2T11-37□S	22.23	15.4	17	19.3	33.3	34.6	15.6	28.8	23.8	7.5	48.7
	1/4	KQ2T13-35□S	17.46	19.3	17	21.5	30.4	35.7	17	57.3	50.6	9	28.1
	3/8	KQ2T13-36□S	17.46	19.3	17	21.8	26.2	31.2	17	63.8	50.6	9.5	24.4
	1/2	KQ2T13-37□S	22.23	19.3	17	21.8	30.4	33.7	17	63.8	50.6	9.5	50.5

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D1 is maximum diameter.

\*2 Reference dimensions after installation of NPT thread

\*3 For details, refer to page 156.



Round Type

Metric Size M, R, Rc

Inch Size UNF, NPT

Inch Size M, R, Rc

Metric Size G

Metric Size R, Rc

Face Seal

Inch Size NPT

Inch Size R

Metric Size Uni

Inch Size Uni

Gasket Seal

# KQ2 Series

Applicable Tubing: Inch Size, Connection Thread: UNF, NPT

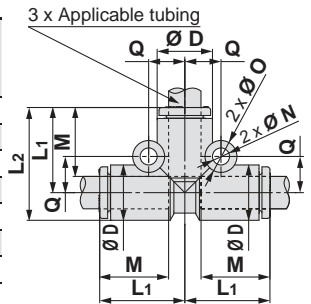
## Dimensions

### Union Tee: KQ2T



Applicable tubing O.D. [inch]	Model	*1 $\varnothing D$	L1	L2	M	Q	$\varnothing O$	$\varnothing N$	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
									Nylon	Urethane		
$\varnothing 1/8$	<b>KQ2T01-00A</b>	7.1	14.9	18.5	13.3	5.4	6	3.2	3.4	2.9	2.5	2.3
$\varnothing 5/32$	<b>KQ2T03-00A</b>	8.2	15.3	19.4	13.3	5.7	6	3.2	6.4	4.4	3	2.8
$\varnothing 3/16$	<b>KQ2T05-00A</b>	9.1	15.7	20.3	13.3	6.2	6	3.2	8.4	7	3.5	3.2
$\varnothing 1/4$	<b>KQ2T07-00A</b>	11.1	16.5	22.1	13.3	7.2	6	3.2	14.4	12.4	4.6	4.3
$\varnothing 5/16$	<b>KQ2T09-00A</b>	13.2	18.2	24.8	14.2	8.4	8	4.2	25.6	17.7	6	7
$\varnothing 3/8$	<b>KQ2T11-00A</b>	15.4	20.4	28.1	15.6	9.9	8	4.2	28.8	23.8	7	10.2
$\varnothing 1/2$	<b>KQ2T13-00A</b>	19.3	23.4	33	17	11.8	8	4.2	64.6	50.6	9.6	16.9

\*1  $\varnothing D$  is maximum diameter.

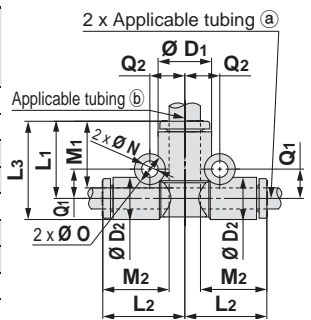


### Different Diameter Tee: KQ2T



Applicable tubing O.D. [inch]	Model	*1 $\varnothing D_1$	$\varnothing D_2$	L1	L2	L3	M1	M2	Q1	Q2	$\varnothing O$	$\varnothing N$	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
													Nylon	Urethane		
$\varnothing 1/8$	$\varnothing 5/32$ <b>KQ2T01-03A</b>	8.2	7.1	14.9	15.3	18.5	13.3	13.3	5.4	5.8	6	3.2	3.8	3.5	3	2.6
	$\varnothing 1/4$ <b>KQ2T01-07A</b>	11.1	7.1	14.9	16.5	18.5	13.3	13.3	5.3	7.2	6	3.2	3.8	3.5	3.2	2.8
$\varnothing 5/32$	$\varnothing 3/16$ <b>KQ2T03-05A</b>	9.1	8.2	15.3	15.7	19.4	13.3	13.3	5.7	6.2	6	3.2	7.1	6.6	3.5	2.6
	$\varnothing 1/4$ <b>KQ2T03-07A</b>	11.1	8.2	15.3	16.5	19.4	13.3	13.3	5.7	7.2	6	3.2	7.1	6.6	4.1	3
$\varnothing 3/16$	$\varnothing 1/4$ <b>KQ2T05-07A</b>	11.1	9.1	15.7	16.5	20.3	13.3	13.3	6.2	7.2	6	3.2	8.4	7	4.6	3.7
	$\varnothing 5/16$ <b>KQ2T07-09A</b>	13.2	11.1	17.4	17.3	23	14.2	13.3	7.4	8.4	8	4.2	14.4	12.4	6	5.6
$\varnothing 1/4$	$\varnothing 3/8$ <b>KQ2T07-11A</b>	15.4	11.1	18.8	18.1	24.4	15.6	13.3	7.7	9.9	8	4.2	14.4	12.4	6.4	6.8
	$\varnothing 3/8$ <b>KQ2T09-11A</b>	15.4	13.2	19.6	19	26.2	15.6	14.2	8.7	9.9	8	4.2	26.3	18.3	7	8.2
$\varnothing 5/16$	$\varnothing 1/2$ <b>KQ2T09-13A</b>	19.3	13.2	21	20.6	27.6	17	14.2	8.7	11.8	8	4.2	26.3	18.3	8.1	10.6
	$\varnothing 3/8$ $\varnothing 1/2$ <b>KQ2T11-13A</b>	19.3	15.4	21.8	22	29.5	17	15.6	9.9	11.8	8	4.2	28.8	23.8	9.6	12.4

\*1  $\varnothing D_1$  is maximum diameter.

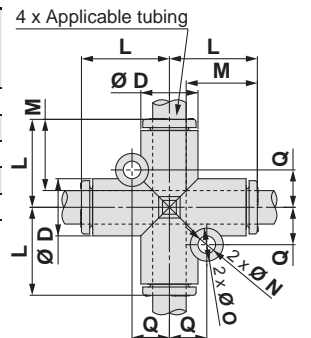


### Cross: KQ2TW



Applicable tubing O.D. [inch]	Model	*1 $\varnothing D_1$	L	Q	M	$\varnothing O$	$\varnothing N$	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
								Nylon	Urethane		
$\varnothing 5/32$	<b>KQ2TW03-00A</b>	8.2	15.3	5.7	13.3	6	3.2	6.4	4.4	3	3.5
$\varnothing 1/4$	<b>KQ2TW07-00A</b>	11.1	16.5	7.2	13.3	6	3.2	14.4	12.4	4.6	5.4
$\varnothing 5/16$	<b>KQ2TW09-00A</b>	13.2	18.2	8.4	14.2	8	4.2	25.6	17.7	6	8.5
$\varnothing 3/8$	<b>KQ2TW11-00A</b>	15.4	20.4	9.9	15.6	8	4.2	28.8	23.8	7	12
$\varnothing 1/2$	<b>KQ2TW13-00A</b>	19.3	23.4	11.8	17	8	4.2	64.6	50.6	9.6	19.7

\*1  $\varnothing D$  is maximum diameter.



# Inch Size One-touch Fittings **KQ2 Series**

Applicable Tubing: Inch Size, Connection Thread: UNF, NPT

## Dimensions

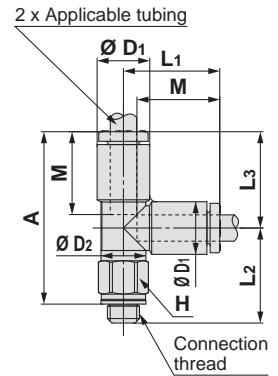
### Male Run Tee: KQ2Y (Gasket seal)



Applicable tubing O.D. [inch]	Connection thread UNF	Model	H (Width across flats)	*1 Ø D1	Ø D2	L1	L2	L3	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
											Nylon	Urethane		
Ø 1/8	10-32UNF	KQ2Y01-32□	7	7.1	7	15.3	14.2	15.3	26	13.3	3.2	2.7	2.5	3.5
Ø 5/32	10-32UNF	KQ2Y03-32□	7	8.2	7	15.4	14.7	15.4	26.6	13.3	4.5	4.5	2.5	3.8
Ø 1/4	10-32UNF	KQ2Y07-32□	7	11.1	7	16.5	16	16.5	29	13.3	4.5	4.5	2.5	4.7

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D1 is maximum diameter.



### Male Run Tee: KQ2Y (Sealant)



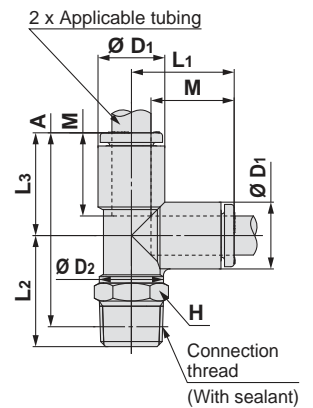
Applicable tubing O.D. [inch]	Connection thread NPT	Model	H (Width across flats)	*1 Ø D1	Ø D2	L1	L2	L3	A*2	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
											Nylon	Urethane		
Ø 1/8	1/16	KQ2Y01-33□S	11.11	7.1	10	14.9	24.2	14.9	35.1	13.3	3.4	2.9	2.5	9.8
	1/8	KQ2Y01-34□S	11.11	7.1	10	14.9	16.6	14.9	28.4	13.3	3.4	2.9	2.5	6.1
	1/4	KQ2Y01-35□S	14.29	7.1	10	14.9	21	14.9	31.6	13.3	3.4	2.9	2.5	15.6
Ø 5/32	1/16	KQ2Y03-33□S	11.11	8.2	10	15.3	23.8	15.3	35	13.3	6.4	4.4	3	10.1
	1/8	KQ2Y03-34□S	11.11	8.2	10	15.3	16.2	15.3	28.3	13.3	6.4	4.4	3	6.4
	1/4	KQ2Y03-35□S	14.29	8.2	10	15.3	21.6	15.3	32.5	13.3	6.4	4.4	3	15.9
Ø 3/16	1/8	KQ2Y05-34□S	11.11	9.1	10	15.7	16.7	15.7	29.2	13.3	8.4	7	3.5	6.7
	1/4	KQ2Y05-35□S	14.29	9.1	10	15.7	22.1	15.7	33.4	13.3	8.4	7	3.5	16.3
Ø 1/4	1/16	KQ2Y07-33□S	11.11	11.1	10	16.5	25.3	16.5	37.7	13.3	8.5	8.5	3.5	11
	1/8	KQ2Y07-34□S	11.11	11.1	10	16.5	17.7	16.5	31	13.3	14	12.4	4.5	7.3
	1/4	KQ2Y07-35□S	14.29	11.1	10	16.5	23.1	16.5	35.2	13.3	14	12.4	4.5	16.9
Ø 5/16	3/8	KQ2Y07-36□S	17.46	11.1	10	16.5	24.5	16.5	36.3	13.3	14	12.4	4.5	29.2
	1/8	KQ2Y09-34□S	11.11	13.2	10	18.2	18.7	18.2	33.7	14.2	14	14	4.5	8.8
	1/4	KQ2Y09-35□S	14.29	13.2	12	18.2	23.5	18.2	38.6	14.2	25.6	17.7	6	11.7
Ø 3/8	3/8	KQ2Y09-36□S	17.46	13.2	12	18.2	25.5	18.2	39	14.2	25.6	17.7	6	28
	1/4	KQ2Y11-35□S	17.46	15.4	17	20.4	28.5	20.4	44.5	15.6	28.8	23.8	7.5	24.3
	3/8	KQ2Y11-36□S	17.46	15.4	17	20.4	29.1	20.4	44.8	15.6	28.8	23.8	7.5	22.3
Ø 1/2	1/2	KQ2Y11-37□S	22.23	15.4	17	20.4	33.3	20.4	47.3	15.6	28.8	23.8	7.5	48.8
	1/4	KQ2Y13-35□S	17.46	19.3	17	23.4	30.4	23.4	49.4	17	57.3	50.6	9	28.5
	3/8	KQ2Y13-36□S	17.46	19.3	17	23.4	26.2	23.4	44.9	17	63.8	50.6	9.5	24.7
	1/2	KQ2Y13-37□S	22.23	19.3	17	23.4	30.4	23.4	47.4	17	63.8	50.6	9.5	50.7

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D1 is maximum diameter.

\*2 Reference dimensions after installation of NPT thread

\*3 For details, refer to page 156.



Round Type

Metric Size M, R, Rc

Inch Size UNF, NPT

Sealant/Gasket Seal

Inch Size M, R, Rc

Metric Size G

Inch Size R, Rc

Metric Size R, Rc

Inch Size NPT

Inch Size R

Inch Size NPT

Inch Size NPT

Inch Size R

Inch Size NPT

Inch Size NPT

Inch Size R

Inch Size NPT

Inch Size NPT

Inch Size R

Inch Size NPT

Inch Size R

Inch Size NPT

Inch Size R

# KQ2 Series

Applicable Tubing: Inch Size, Connection Thread: UNF, NPT

## Dimensions

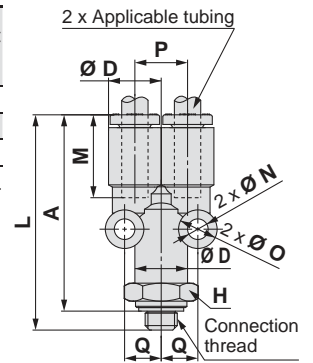
### Branch "Y": KQ2U (Gasket seal)



Applicable tubing O.D. [inch]	Connection thread UNF	Model	H (Width across flats)	*1 Ø D	L	P	A	M	Q	Ø O	Ø N	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
												Nylon	Urethane		
Ø 1/8	10-32UNF	KQ2U01-32□	8	7.1	33.8	7.1	30.3	13.3	5.2	6	3.2	2.2	2.2	1.8	5
Ø 5/32	10-32UNF	KQ2U03-32□	10	8.2	33.9	8.2	30.4	13.3	5.7	6	3.2	2.2	2.2	1.8	6.6
Ø 1/4	10-32UNF	KQ2U07-32□	12	11.1	35.2	11.1	31.7	13.3	7.6	8	4	2.2	2.2	1.8	11.2

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D is maximum diameter.



### Branch "Y": KQ2U (Sealant)

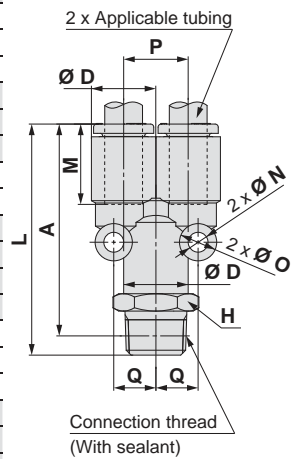


Applicable tubing O.D. [inch]	Connection thread NPT	Model	H (Width across flats)	*1 Ø D	L	P	A*2	M	Q	Ø O	Ø N	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
												Nylon	Urethane		
Ø 1/8	1/16	KQ2U01-33□S	9	7.1	37.3	7.1	33.2	13.3	5.2	6	3.2	3.4	2.9	2.5	7.1
	1/8	KQ2U01-34□S	11.11	7.1	36.4	7.1	33.2	13.3	5.2	6	3.2	3.4	2.9	2.7	9.5
	1/4	KQ2U01-35□S	14.29	7.1	40.8	7.1	36.4	13.3	5.2	6	3.2	3.4	2.9	2.7	20
Ø 5/32	1/16	KQ2U03-33□S	9	8.2	37.4	8.2	33.3	13.3	5.7	6	3.2	4.2	4.2	3.6	7.3
	1/8	KQ2U03-34□S	11.11	8.2	36.5	8.2	33.3	13.3	5.7	6	3.2	4.2	4.2	3.6	9.8
Ø 3/16	1/4	KQ2U03-35□S	14.29	8.2	40.9	8.2	36.5	13.3	5.7	6	3.2	4.2	4.2	3.6	20.1
	1/8	KQ2U05-34□S	11.11	9.1	37.1	9.1	33.9	13.3	6.2	6	3.2	8.4	7	4.1	10.2
Ø 1/4	1/4	KQ2U05-35□S	14.29	9.1	41.5	9.1	37.1	13.3	6.2	6	3.2	8.4	7	4.1	20.5
	1/16	KQ2U07-33□S	12.7	11.1	38.7	11.1	34.6	13.3	7.6	8	4	14.4	12.4	4.6	11.6
Ø 5/16	1/8	KQ2U07-34□S	12.7	11.1	37.8	11.1	34.6	13.3	7.6	8	4	14.4	12.4	5.6	12
	1/4	KQ2U07-35□S	14.29	11.1	42.2	11.1	37.8	13.3	7.6	8	4	14.4	12.4	5.6	21.1
	3/8	KQ2U07-36□S	17.46	11.1	43.6	11.1	38.9	13.3	7.6	8	4	14.4	12.4	5.6	33.5
Ø 3/8	1/8	KQ2U09-34□S	14.29	13.2	40.7	13.2	37.5	14.2	8.7	8	4.2	25.6	17.7	6	16.4
	1/4	KQ2U09-35□S	14.29	13.2	45.1	13.2	40.7	14.2	8.7	8	4.2	25.6	17.7	7.3	21.9
Ø 1/2	3/8	KQ2U09-36□S	17.46	13.2	46.5	13.2	41.8	14.2	8.7	8	4.2	25.6	17.7	7.3	34.1
	1/4	KQ2U11-35□S	17.46	15.4	48.6	15.4	44.2	15.6	9.9	8	4.2	28.8	23.8	8.9	25.7
Ø 3/8	3/8	KQ2U11-36□S	17.46	15.4	50	15.4	45.3	15.6	9.9	8	4.2	28.8	23.8	8.9	35
	1/2	KQ2U11-37□S	22.23	15.4	54.2	15.4	47.8	15.6	9.9	8	4.2	28.8	23.8	8.9	62.8
Ø 1/2	1/4	KQ2U13-35□S	22	19.3	53.4	19.3	49	17	11.8	8	4.2	57.3	50.6	9	42
	3/8	KQ2U13-36□S	22	19.3	54.8	19.3	50.1	17	11.8	8	4.2	64.6	50.6	11	45.8
	1/2	KQ2U13-37□S	22.23	19.3	59	19.3	52.6	17	11.8	8	4.2	64.6	50.6	12.1	62.1

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D is maximum diameter.

\*2 Reference dimensions after installation of NPT thread





# Inch Size One-touch Fittings **KQ2 Series**

Applicable Tubing: Inch Size, Connection Thread: UNF, NPT

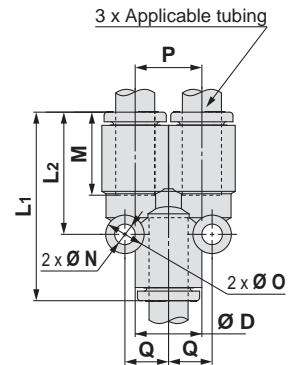
## Dimensions

### Union "Y": KQ2U



Applicable tubing O.D. [inch]	Model	*1 $\varnothing D$	L1	L2	P	M	Q	$\varnothing O$	$\varnothing N$	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
										Nylon	Urethane		
$\varnothing 1/8$	<b>KQ2U01-00A</b>	7.1	28.9	18	7.1	13.3	5.2	6	3.2	3.4	2.9	3.2	2.4
$\varnothing 5/32$	<b>KQ2U03-00A</b>	8.2	29	18.2	8.2	13.3	5.7	6	3.2	4.2	4.2	4.1	2.9
$\varnothing 3/16$	<b>KQ2U05-00A</b>	9.1	29.6	18.9	9.1	13.3	6.2	6	3.2	8.4	7	4.8	3.5
$\varnothing 1/4$	<b>KQ2U07-00A</b>	11.1	30.3	20.2	11.1	13.3	7.6	8	4	14.4	12.4	6.4	5
$\varnothing 5/16$	<b>KQ2U09-00A</b>	13.2	33.2	22.3	13.2	14.2	8.7	8	4.2	25.6	17.7	8.1	7.4
$\varnothing 3/8$	<b>KQ2U11-00A</b>	15.4	36.7	24.6	15.4	15.6	9.9	8	4.2	28.8	23.8	9.6	10.4

\*1  $\varnothing D$  is maximum diameter.

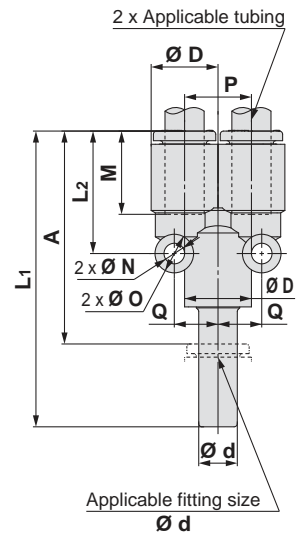


### Plug-in "Y": KQ2U



Applicable tubing O.D. [inch]	Applicable fitting size $\varnothing d$ [inch]	Model	*1 $\varnothing D$	L1	L2	P	A	M	Q	$\varnothing O$	$\varnothing N$	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
												Nylon	Urethane		
$\varnothing 1/8$	$\varnothing 1/8$	<b>KQ2U01-99A</b>	7.1	45.1	18	7.1	31.8	13.3	5.2	6	3.2	3.4	2.9	2	2.5
$\varnothing 5/32$	$\varnothing 5/32$	<b>KQ2U03-99A</b>	8.2	44.8	18.2	8.2	31.5	13.3	5.7	6	3.2	4.2	4.2	2.5	3.1
$\varnothing 3/16$	$\varnothing 3/16$	<b>KQ2U05-99A</b>	9.1	46.1	18.9	9.1	32.8	13.3	6.2	6	3.2	8.4	7	3.5	3.6
$\varnothing 1/4$	$\varnothing 1/4$	<b>KQ2U07-99A</b>	11.1	46.8	20.2	11.1	33.5	13.3	7.6	8	4	14.4	12.4	4.6	5.5
$\varnothing 5/16$	$\varnothing 5/16$	<b>KQ2U09-99A</b>	13.2	52.1	22.3	13.2	37.9	14.2	8.7	8	4.2	25.6	17.7	6	8

\*1  $\varnothing D$  is maximum diameter.

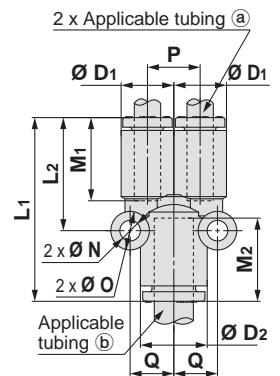


### Different Diameter Union "Y": KQ2U



Applicable tubing O.D. [inch]	Model	*1 $\varnothing D_1$	*1 $\varnothing D_2$	L1	L2	P	M1	M2	Q	$\varnothing O$	$\varnothing N$	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]	
												Nylon	Urethane			
$\varnothing 1/8$	$\varnothing 5/32$	<b>KQ2U01-03A</b>	7.1	8.2	28.9	18	7.1	13.3	13.3	5.7	6	3.2	3.2	2.7	3.3	2.7
	$\varnothing 1/4$	<b>KQ2U01-07A</b>	7.1	11.1	30.3	18.5	7.1	13.3	13.3	7.2	6	3.2	3.2	2.7	3.3	3.3
$\varnothing 5/32$	$\varnothing 3/16$	<b>KQ2U03-05A</b>	8.2	9.1	29.6	18.8	8.2	13.3	13.3	6.2	6	3.2	4.2	4.2	4.1	3.2
	$\varnothing 1/4$	<b>KQ2U03-07A</b>	8.2	11.1	30.3	19	8.2	13.3	13.3	7.2	6	3.2	4.2	4.2	4.1	3.6
$\varnothing 3/16$	$\varnothing 1/4$	<b>KQ2U05-07A</b>	9.1	11.1	30.6	19.8	9.1	13.3	13.3	7.2	6	3.2	8.4	7	4.8	3.9
	$\varnothing 5/16$	<b>KQ2U07-09A</b>	11.1	13.2	32.3	21.3	11.1	13.3	14.2	8.6	8	4	14.4	12.4	6.4	6
$\varnothing 1/4$	$\varnothing 3/8$	<b>KQ2U07-11A</b>	11.1	15.4	34.4	21.7	11.1	13.3	15.6	9.8	8	4	14.4	12.4	6.4	7.2
	$\varnothing 5/16$	<b>KQ2U09-11A</b>	13.2	15.4	35.3	23	13.2	14.2	15.6	9.9	8	4.2	26.3	18.3	8.1	8.5
$\varnothing 5/16$	$\varnothing 1/2$	<b>KQ2U09-13A</b>	13.2	19.3	38.7	24.2	13.2	14.2	17	11.8	8	4.2	26.3	18.3	8.1	11.2
	$\varnothing 3/8$	<b>KQ2U11-13A</b>	15.4	19.3	40.1	26.6	15.4	15.6	17	11.8	8	4.2	28.8	23.8	9.6	13

\*1  $\varnothing D_1, \varnothing D_2$  are maximum diameters.



Round Type

Metric Size M, R, Rc

Inch Size UNF, NPT

Sealant/Gasket Seal

Metric Size M, R, Rc

Inch Size M, R, Rc

Metric Size G

Metric Size R, Rc

Face Seal

Inch Size NPT

Inch Size NPT

Inch Size R

Inch Size R

Metric Size Uni

Gasket Seal

Metric Size Uni

Inch Size Uni

# KQ2 Series

Applicable Tubing: Inch Size, Connection Thread: UNF, NPT

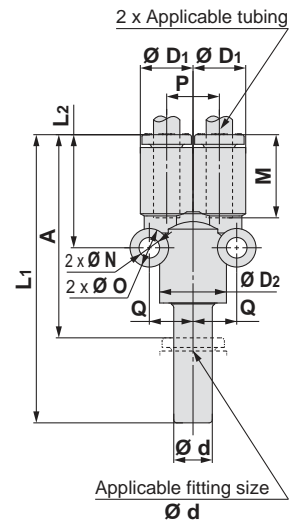
## Dimensions

### Different Diameter Plug-in "Y": KQ2X



Applicable tubing O.D. [inch]	Applicable fitting size $\varnothing d$ [inch]	Model	$\varnothing D_1$ *1	$\varnothing D_2$ *1	L1	L2	A	P	M	Q	$\varnothing O$	$\varnothing N$	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
													Nylon	Urethane		
$\varnothing 1/8$	$\varnothing 5/32$	KQ2X01-03A	7.1	8.2	44.7	18	42.2	7.1	13.3	5.7	6	3.2	3.2	2.7	2.5	2.8
	$\varnothing 3/16$	KQ2X03-05A	8.2	9.1	46.1	18.8	42.6	8.2	13.3	6.2	6	3.2	3.4	2.9	3.5	3.3
$\varnothing 5/32$	$\varnothing 1/4$	KQ2X03-07A	8.2	11.1	46.8	19	42.2	8.2	13.3	7.2	6	3.2	3.4	2.9	4.1	4
	$\varnothing 3/16$	KQ2X05-07A	9.1	11.1	47.1	19.8	42.5	9.1	13.3	7.2	6	3.2	8.4	7	4.6	4.4
$\varnothing 1/4$	$\varnothing 5/16$	KQ2X07-09A	11.1	13.2	51.2	21.3	45.2	11.1	13.3	8.6	8	4	14.4	12.4	6	6.5

\*1  $\varnothing D_1$ ,  $\varnothing D_2$  are maximum diameters.

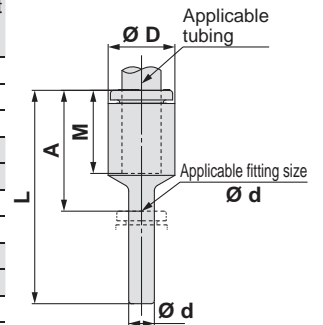


### Plug-in Reducer: KQ2R



Applicable tubing O.D. [inch]	Applicable fitting size $\varnothing d$ [inch]	Model	$\varnothing D$ *1	L	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
							Nylon	Urethane		
$\varnothing 1/8$	$\varnothing 5/32$	KQ2R01-03A	7.1	28.6	15.3	13.3	3.4	2.9	2.5	0.8
	$\varnothing 3/16$	KQ2R01-05A	7.1	28.7	15.4	13.3	3.4	2.9	2.5	0.8
	$\varnothing 1/4$	KQ2R01-07A	7.1	28.4	15.1	13.3	3.4	2.9	2.5	1
$\varnothing 5/32$	$\varnothing 3/16$	KQ2R03-05A	8.2	28.7	15.4	13.3	5.6	4	3	1
	$\varnothing 1/4$	KQ2R03-07A	8.2	31.8	18.5	13.3	5.6	4	3	1.2
$\varnothing 3/16$	$\varnothing 1/4$	KQ2R05-07A	9.1	31.4	18.1	13.3	7.8	6.5	3.5	1.3
	$\varnothing 5/16$	KQ2R05-09A	9.1	33.4	19.2	13.3	7.8	6.5	3.5	1.5
$\varnothing 1/4$	$\varnothing 5/16$	KQ2R07-09A	11.1	33.3	19.1	13.3	13.5	11.5	4.6	1.7
	$\varnothing 3/8$	KQ2R07-11A	11.1	35.9	20.3	13.3	13.5	11.5	4.6	2.2
$\varnothing 5/16$	$\varnothing 3/8$	KQ2R09-11A	13.2	36.2	20.6	14.2	26	18.1	6	2.8
	$\varnothing 1/2$	KQ2R09-13A	13.2	37.2	20.2	14.2	26	18.1	6	3.5
$\varnothing 3/8$	$\varnothing 1/2$	KQ2R11-13A	15.4	39.5	22.5	15.6	35.3	29.1	7	4.2

\*1  $\varnothing D$  is maximum diameter.

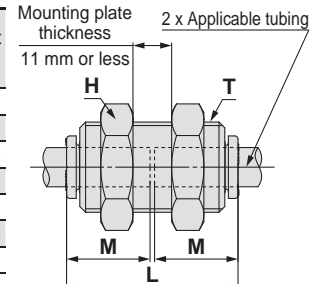


### Bulkhead Union: KQ2E (Interchangeable with KQ)



Applicable tubing O.D. [inch]	Model	T (UNF)	H (Width across flats)	L	Mounting hole	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
							Nylon	Urethane		
$\varnothing 1/8$	KQ2E01-00□	1/2-20UNF	17.46	27.8	13.5	13.3	3.4	2.9	2.5	26.9
$\varnothing 5/32$	KQ2E03-00□	1/2-20UNF	17.46	27.8	13.5	13.3	5.6	4	3	25.7
$\varnothing 3/16$	KQ2E05-00□	9/16-18UNF	17.46	29.8	15	13.3	7.8	6.5	3.5	40.3
$\varnothing 1/4$	KQ2E07-00□	9/16-18UNF	17.46	29.8	15	13.3	13.5	11.5	4.6	36.9
$\varnothing 5/16$	KQ2E09-00□	3/4-16UNF	22.23	31.8	20	14.2	26.1	18	6	61.2
$\varnothing 3/8$	KQ2E11-00□	7/8-14UNF	25.4	33.8	23	15.6	35.3	29.1	7	83.4
$\varnothing 1/2$	KQ2E13-00□	1-12UNF	28.57	37.8	26	17	66	51.7	9.6	109.2

□: A (Brass), N (Brass + Electroless nickel plating)

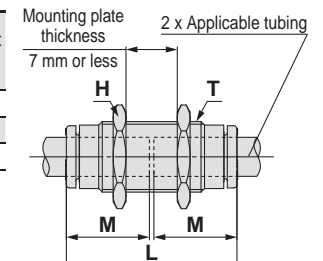


### Bulkhead Union: KQ2E (Interchangeable with KJ)



Applicable tubing O.D. [inch]	Model	T (UNF)	H (Width across flats)	L	Mounting hole	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
							Nylon	Urethane		
$\varnothing 1/8$	KQ2E01-00□J	3/8-24UNF	12.7	27.3	10.5	13.3	3	2.5	2.5	12.6
$\varnothing 5/32$	KQ2E03-00□J	3/8-24UNF	12.7	27.3	10.5	13.3	4	4	3	11.9
$\varnothing 1/4$	KQ2E07-00□J	1/2-20UNF	15.88	27.3	14	13.3	13.5	11.5	4.6	19.2

□: A (Brass), N (Brass + Electroless nickel plating)



# Inch Size One-touch Fittings **KQ2 Series**

Applicable Tubing: Inch Size, Connection Thread: UNF, NPT

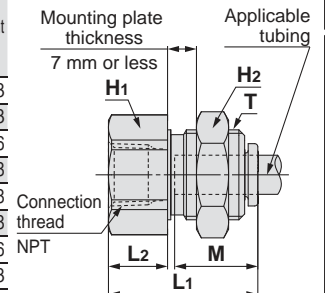
## Dimensions

### Bulkhead Connector: KQ2E



Applicable tubing O.D. [inch]	Connection thread NPT	Model	T (UNF)	H <sub>1</sub> (Width across flats)	H <sub>2</sub> (Width across flats)	L <sub>1</sub>	L <sub>2</sub>	Mounting hole	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
										Nylon	Urethane		
Ø 1/8	1/4	KQ2E01-35□	1/2-20UNF	17.46	17.46	28.7	13.3	13.5	13.3	3.4	2.9	2.5	33.3
Ø 5/32	1/4	KQ2E03-35□	1/2-20UNF	17.46	17.46	29	13.6	13.5	13.3	5.6	4	3	33.3
Ø 3/16	1/8	KQ2E05-34□	9/16-18UNF	17.46	17.46	25.6	9.2	15	13.3	7.8	6.5	3.5	36.6
Ø 1/4	1/4	KQ2E07-35□	9/16-18UNF	17.46	17.46	29.9	13.5	15	13.3	13.5	11.5	4.6	38.8
Ø 5/16	3/8	KQ2E09-36□	3/4-16UNF	22.23	22.23	31	13.6	20	14.2	26.1	18	6	61.8
Ø 3/8	3/8	KQ2E11-36□	7/8-14UNF	25.4	25.4	31.4	12	23	15.6	35.3	29.1	7	83.8
Ø 1/2	3/8	KQ2E13-36□	1-12UNF	28.57	28.57	32	11.6	26	17	66	51.7	9.6	106.6
	1/2	KQ2E13-37□	1-12UNF	28.57	28.57	36.1	15.7	26	17	66	51.7	9.6	114.3

□: A (Brass), N (Brass + Electroless nickel plating)



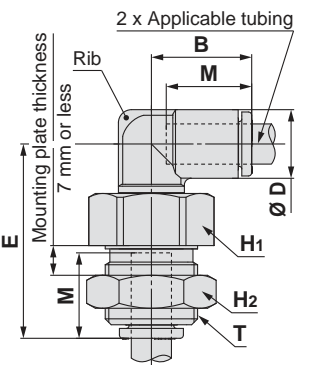
### Bulkhead Male Elbow: KQ2LE



Applicable tubing O.D. [inch]	Model	T (UNF)	H <sub>1</sub> (Width across flats)	H <sub>2</sub> (Width across flats)	B	E	*1 Ø D	Mounting hole	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]	With a rib
										Nylon	Urethane			
Ø 1/8	KQ2LE01-00□	1/2-20UNF	17.46	17.46	14.5	28.9	7.1	13.5	13.3	3	2.5	2.5	27.5	—
Ø 5/32	KQ2LE03-00□	1/2-20UNF	17.46	17.46	14.8	28.5	8.2	13.5	13.3	4.2	4.2	3	27.1	●
Ø 3/16	KQ2LE05-00□	9/16-18UNF	17.46	17.46	15	29.7	9.1	15	13.3	6.8	5.6	3.5	34.1	—
Ø 1/4	KQ2LE07-00□	9/16-18UNF	17.46	17.46	15.6	30.7	11.1	15	13.3	11.3	10	4.5	32.8	●
Ø 5/16	KQ2LE09-00□	3/4-16UNF	22.23	22.23	17.2	34.2	13.2	20	14.2	21.6	14.9	6	55.6	●
Ø 3/8	KQ2LE11-00□	7/8-14UNF	25.4	25.4	19.3	32.6	15.4	23	15.6	28.8	23.8	7	67.7	●
Ø 1/2	KQ2LE13-00□	1-12UNF	28.57	28.57	21.8	43.2	19.3	26	17	56	44.4	9.5	121.5	—

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D is maximum diameter.

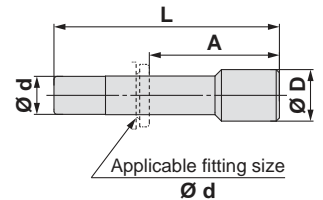


### Plug: KQ2P



Applicable fitting size Ø d [inch]	Model	Ø D*1	L	A	Weight [g]
Ø 1/8	KQ2P-01	5	31.5	18.2	1
Ø 5/32	KQ2P-03	6	32	18.7	1
Ø 3/16	KQ2P-05	6.8	34	20.7	1
Ø 1/4	KQ2P-07	8.5	35	21.7	1
Ø 5/16	KQ2P-09	10	39	24.8	2
Ø 3/8	KQ2P-11	11.5	43	27.4	3.5
Ø 1/2	KQ2P-13	15	45.5	28.5	5

\*1 Ø D is maximum diameter.



Round Type



Metric Size M, R, Rc

Sealant/Gasket Seal

Inch Size UNF, NPT

Inch Size M, R, Rc

Metric Size G

Face Seal

Metric Size R, Rc

Inch Size NPT

Inch Size R

Gasket Seal

Metric Size Uni

Inch Size Uni

# KQ2 Series

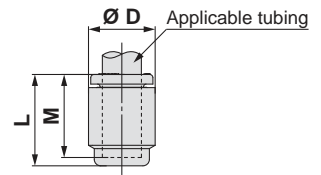
Applicable Tubing: Inch Size, Connection Thread: UNF, NPT

## Dimensions

### Tube Cap: KQ2C



Applicable tubing O.D. [inch]	Model	Ø D*1	L	M	Weight [g]
Ø 5/32	<b>KQ2C03-00A</b>	8.2	14.5	13.3	0.8
Ø 1/4	<b>KQ2C07-00A</b>	11.1	14.8	13.3	1.3
Ø 5/16	<b>KQ2C09-00A</b>	13.2	15.7	14.2	2
Ø 3/8	<b>KQ2C11-00A</b>	15.4	17.3	15.6	2.8

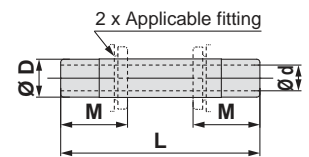


\*1 Ø D is maximum diameter.

### Nipple: KQ2N



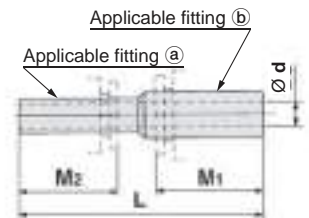
Applicable fitting Ø D	Model	L	M	Ø d Min. port size	Weight [g]
Ø 1/8	<b>KQ2N01-99</b>	36	13.3	2.1	0.2
Ø 3/16	<b>KQ2N05-99</b>	38	13.3	3.4	0.4
Ø 1/4	<b>KQ2N07-99</b>	39	13.3	4.6	1
Ø 3/8	<b>KQ2N11-99</b>	49	15.6	7	2
Ø 1/2	<b>KQ2N13-99</b>	51	17	9.5	3.5



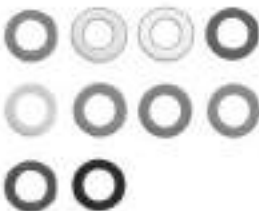
### Reducer Nipple: KQ2N



Applicable fitting	Model		L	M <sub>1</sub>	M <sub>2</sub>	Ø d Min. port size	Weight [g]
	a	b					
Ø 1/8	Ø 5/32	<b>KQ2N01-03</b>	36.5	13.3	13.3	2.1	0.2
	Ø 3/16	<b>KQ2N01-05</b>	37	13.3	13.3	2.1	0.4
Ø 5/32	Ø 3/16	<b>KQ2N03-05</b>	37.5	13.3	13.3	2.5	0.4
	Ø 1/4	<b>KQ2N03-07</b>	38	13.3	13.3	2.5	0.6
Ø 3/16	Ø 1/4	<b>KQ2N05-07</b>	38.5	13.3	13.3	3.4	0.6
	Ø 5/16	<b>KQ2N05-09</b>	41	13.3	13.3	3.4	1
Ø 1/4	Ø 5/16	<b>KQ2N07-09</b>	41.5	13.3	13.3	4.6	1
	Ø 3/8	<b>KQ2N07-11</b>	45	15.6	13.3	4.6	1
Ø 5/16	Ø 3/8	<b>KQ2N09-11</b>	46.5	15.6	14.2	6	1.8
	Ø 1/2	<b>KQ2N09-13</b>	47.5	17	14.2	6	2.6
Ø 3/8	Ø 1/2	<b>KQ2N11-13</b>	50	17	15.6	7	3.2



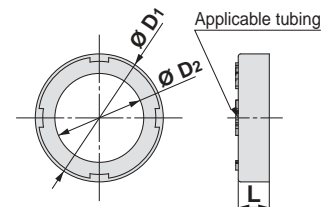
### Colour Cap: KQ2C



Applicable tubing O.D. [inch]	Model	Ø D <sub>1</sub>	Ø D <sub>2</sub>	L	Weight [g]	Note
Ø 1/8	<b>KQ2C-01□A</b>	7.3	4.3	2.6	0.1	Applicable for products with enlarged outside diameter of release button
Ø 3/16	<b>KQ2C-05□A</b>	9	5.9	2.6	0.1	
Ø 1/4*1	<b>KQ2C-07□B</b>	11.5	7.5	2.6	0.1	
Ø 3/8	<b>KQ2C-11□B</b>	15.7	10.7	2.7	0.1	
Ø 1/2	<b>KQ2C-13□B</b>	19.6	13.9	2.7	0.2	

□: B (Black), R (Red), YR (Orange), BR (Brown), Y (Yellow), G (Green), CB (Sky blue), GR (Grey), W (White), BU (Blue)

\*1 The KQ2S07-32□, KQ2S07-33□S, and KQ2S07-34□S are not applicable for products with enlarged outside diameter of release button. The applicable colour cap is KQ2C-07□A.



In order to improve operability, the outside diameter of the release button has been enlarged for the new KQ2 series. Therefore, the usable colour caps will differ between pre-change and post-change products. Refer to page 221 for details.

# KQ2 Series

# Made to Order/Clean Series/Spare Parts

Please contact SMC for detailed dimensions, specifications, and lead times.

## 1 Made to Order

Symbol	Specifications
<b>X12</b>	Lubricant: White vaseline Release button colour: White
<b>X35</b> *1	Body colour: Black Release button colour: Orange
<b>X41</b>	With fixed orifice*2
<b>KQ2□09-34□Q□</b>	Effective area is interchangeable with the current product (KQ series). Applicable model: Male elbow 45° male elbow Extended male elbow Male branch tee Male run tee Applicable tubing O.D./Port size: Ø 5/16"/NPT 1/8 Thread material/Surface treatment: Brass, Brass + Electroless nickel plating Example) <b>KQ2L09-34AQS</b>

\*1 The following models are not available as made-to-order: Hexagon socket head male connector/KQ2S, Bulkhead union/KQ2E, Bulkhead connector/KQ2E, Nipple/KQ2N, Reducer nipple/KQ2N, Male connector/KQ2H, Female connector/KQ2F, Colour cap/KQ2C, Plug/KQ2P

\*2 Please contact SMC for availability.

The following made-to-order products will be provided based on previous models (KQ2 series). Please contact SMC separately.

Symbol	Specifications
<b>X17</b>	Grease-free Rubber material: NBR (With fluorine coating) Release button colour: Light blue
<b>X29</b>	Grease-free Rubber material: NBR (With fluorine coating) Release button colour: Light blue Copper-free (With electroless nickel plating)
<b>X34</b>	Rubber material: FKM
<b>X39</b>	Grease-free Rubber material: NBR (With fluorine coating) Release button colour: Light blue Clean (Copper-free, air blow, double packaging, resin body: white)
<b>X94</b>	Grease-free Rubber material: FKM (With fluorine coating) Release button colour: Light blue

## 2 Clean Series

Please consult with SMC separately for applicable models.

Symbol	Specifications
<b>10-</b>	Brass parts: With electroless nickel plating Lubricant: Fluorine grease Air blow in a clean room Double packaging Resin body, Release button colour: White

Example) **10-KQ2H07-35NS** (With thread)

**10-KQ2H07-00A** (Without thread)

## 3 Spare Parts

Description	Part no.	Applicable thread
Gasket	<b>M-5G2</b>	10-32UNF

### Brass

Description	Part no.	Applicable model
Pipe nut	<b>KQ01-P01AJ</b>	KQ2E01-00AJ, KQ2E03-00AJ
	<b>KQ07-P01AJ</b>	KQ2E07-00AJ
	<b>KQ01-P01A</b>	KQ2E01-00A, KQ2E03-00A, KQ2E01-35A
		KQ2E03-35A, KQ2LF01-00A, KQ2LE03-00A
	<b>KQ05-P01A</b>	KQ2E05-00A, KQ2E07-00A, KQ2E05-34A KQ2E07-35A, KQ2LF05-00A, KQ2LE07-00A
	<b>KQ09-P01A</b>	KQ2E09-00A, KQ2E09-36A, KQ2LE09-00A
	<b>KQ11-P01A</b>	KQ2E11-00A, KQ2E11-36A, KQ2LE11-00A
	<b>KQ13-P01A</b>	KQ2E13-00A, KQ2E13-36A
KQ2E13-37A, KQ2LE13-00A		

### Brass + Electroless nickel plating

Description	Part no.	Applicable model
Pipe nut	<b>KQ01-P01NJ</b>	KQ2E01-00NJ, KQ2E03-00NJ
	<b>KQ07-P01NJ</b>	KQ2E07-00NJ
	<b>KQ01-P01N</b>	KQ2E01-00N, KQ2E03-00N, KQ2E01-35N
		KQ2E03-35N, KQ2LF01-00N, KQ2LE03-00N
	<b>KQ05-P01N</b>	KQ2E05-00N, KQ2E07-00N, KQ2E05-34N KQ2E07-35N, KQ2LF05-00N, KQ2LE07-00N
	<b>KQ09-P01N</b>	KQ2E09-00N, KQ2E09-36N, KQ2LE09-00N
	<b>KQ11-P01N</b>	KQ2E11-00N, KQ2E11-36N, KQ2LE11-00N
	<b>KQ13-P01N</b>	KQ2E13-00N, KQ2E13-36N
KQ2E13-37N, KQ2LE13-00N		

### Colour Cap

Applicable tubing O.D. [inch]	Model	Ø D1	Ø D2	L	Weight [g]	Note
Ø 1/4	<b>KQ2C-07□A</b>	10.7	7.5	2.6	0.1	Applicable for products before enlargement of outside diameter of release button
Ø 3/8	<b>KQ2C-11□A</b>	14.8	10.7	2.7	0.1	
Ø 1/2	<b>KQ2C-13□A</b>	18.5	13.9	2.7	0.1	

□: B (Black), R (Red), YR (Orange), BR (Brown), Y (Yellow), G (Green), CB (Sky blue), GR (Grey), W (White), BU (Blue)

Round Type



Metric Size M, R, Rc

Inch Size UNF, NPT

Inch Size M, R, Rc

Metric Size G

Metric Size R, Rc

Inch Size NPT

Inch Size R

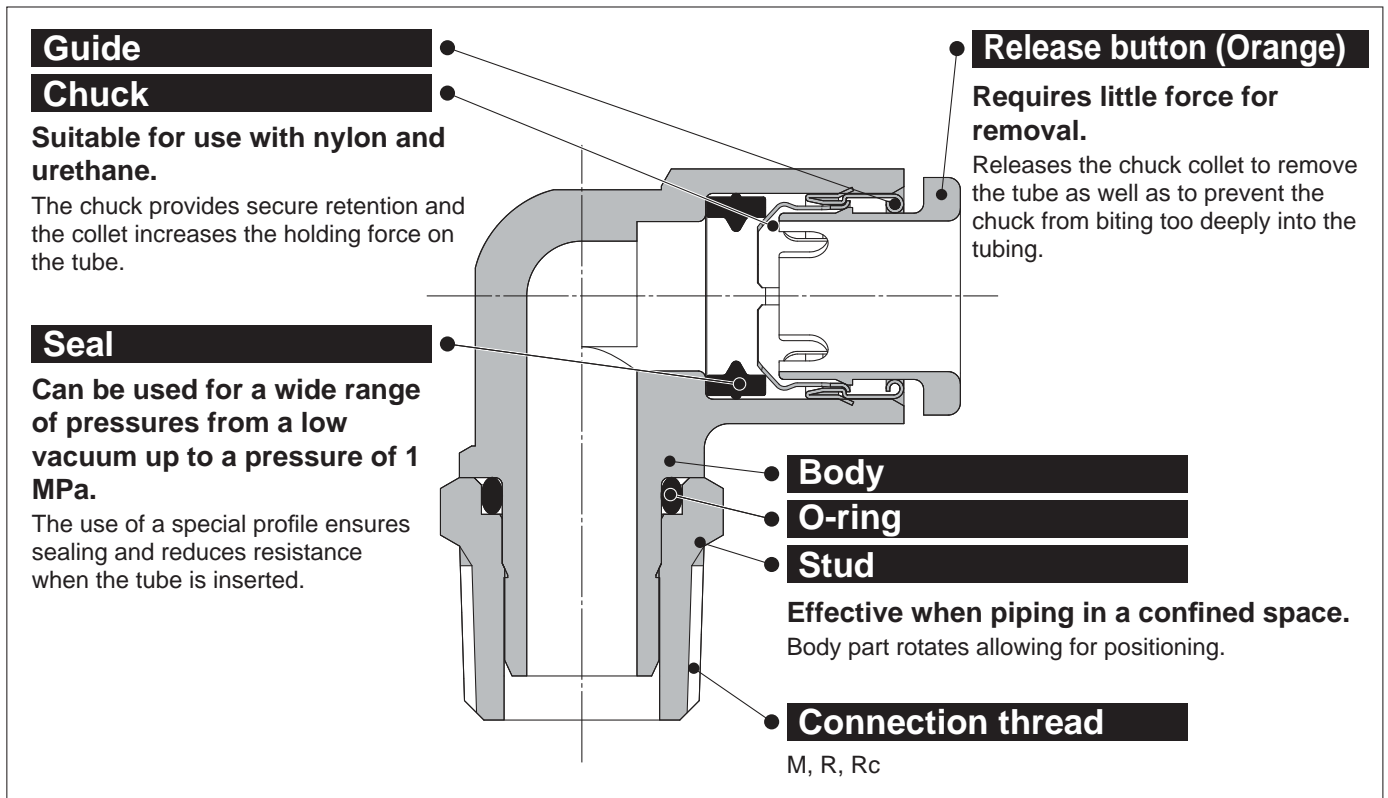
Metric Size Uni

Inch Size Uni

# Inch Size One-touch Fittings

Applicable Tubing: Inch Size, Connection Thread: M, R, Rc

## KQ2 Series



**One-touch IN/OUT connection.**  
**Possible to use in vacuum to -100 kPa.**

### Applicable Tubing

Tubing material	FEP, PFA, Nylon, Soft nylon, Polyurethane
Tubing O.D.	Ø 1/8", Ø 3/16", Ø 1/4", Ø 5/16", Ø 3/8", Ø 1/2"

### Specifications

Fluid		Air, Water* <sup>1</sup>
Operating pressure range* <sup>2</sup>		-100 kPa to 1 MPa
Proof pressure (at 23 °C)		3 MPa
Ambient and fluid temperature		-5 to 60 °C, Water: 0 to 40 °C (No freezing)
Thread	Mounting section	JIS B0203 (Taper thread for piping) JIS B0205 (Metric coarse thread)
	Nut section	JIS B0205 (Metric fine thread)
Seal on the threads		With sealant

\*<sup>1</sup> The surge pressure must be under the maximum operating pressure.

\*<sup>2</sup> Do not use the fittings with a leak tester or for vacuum retention because they are not guaranteed for zero leakage.

### Principal Parts Material

Body	C3604, PBT, PP
Stud	C3604 (Thread portion)
Chuck	Stainless steel 304
Guide	Stainless steel 304
Release button	POM
Seal, O-ring	NBR
Gasket	Stainless steel 304, NBR



**Made to Order**  
(Refer to page 163 for details.)

## How to Order

### Threaded Type

**KQ2 H 05 - 01 A S**

#### One-touch Fittings

#### Model

Symbol	Model
<b>H</b>	Male connector
<b>L</b>	Male elbow
<b>T</b>	Male branch tee
<b>W</b>	Extended male elbow
<b>Y</b>	Male run tee
<b>U</b>	Branch "Y"
<b>E</b>	Bulkhead union
	Bulkhead connector

#### Applicable tubing O.D.

Symbol	Size
<b>01</b>	Ø 1/8"
<b>05</b>	Ø 3/16"
<b>07</b>	Ø 1/4"
<b>09</b>	Ø 5/16"
<b>11</b>	Ø 3/8"
<b>13</b>	Ø 1/2"

#### Male thread seal method

Symbol	Seal method
—	None
<b>S</b>	With thread sealant

#### Thread material/Surface treatment

Symbol	Thread material/Surface treatment
<b>A</b>	Brass
<b>N</b>	Brass + Electroless nickel plating
Bulkhead union	Only for "Bulkhead union"
<b>M</b> □	

\* □: A, N

#### Port size

Symbol	Size
<b>M5</b>	M5 x 0.8
<b>01</b>	1/8
<b>02</b>	1/4
<b>03</b>	3/8
<b>04</b>	1/2
<b>00</b> *1	Same diameter tubing

\*1 Only for "Bulkhead union".

#### Spare Parts

Use the part number below to order the gasket for M5 thread.  
Gasket for M5 thread: M-5G2

Round Type



Metric Size M, R, Rc

Sealant/Gasket Seal

Inch Size UNF, NPT

Inch Size M, R, Rc

Metric Size G

Face Seal

Metric Size R, Rc

Inch Size NPT

Inch Size R

Gasket Seal

Metric Size Uni

Inch Size Uni

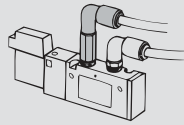
# Inch Size One-touch Fittings

## Round Type Variations

**Extended male elbow**  
KQ2W P.161



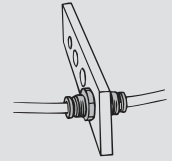
Basically, it is used together with a male elbow. Its extended height allows for multi-levelled piping and prevents interference among fittings.



**Bulkhead union**  
KQ2E P.162



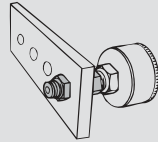
Use to connect tubing through a panel, etc.



**Bulkhead connector**  
KQ2E P.162



Use to connect a male thread and tubing through a panel, etc.



**Male connector**  
KQ2H P.160



Use to pipe a female thread in the same direction. Most general model.

**Male branch tee**  
KQ2T P.161



Use to branch a female thread at both 90° angles.

**Branch "Y"**  
KQ2U P.162



Use to branch a female thread in the same direction.

**Male elbow**  
KQ2L P.160



Use to pipe a female thread at right angles. Most general model.

**Male run tee**  
KQ2Y P.161



Use to branch a female thread in the same direction and at a 90° angle.



# Inch Size One-touch Fittings **KQ2 Series**

Applicable Tubing: Inch Size, Connection Thread: M, R, Rc

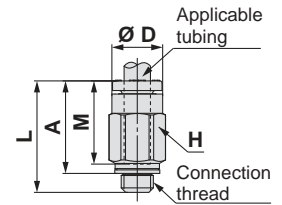
## Dimensions

### Male Connector: KQ2H (Gasket seal)



Applicable tubing O.D. [inch]	Connection thread M	Model	H (Width across flats)	Ø D	L	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
								Nylon	Urethane		
Ø 1/8	M5 x 0.8	KQ2H01-M5□	7	6.7	17.3	14.3	13.3	3.0	2.5	2.5	2.7
	M5 x 0.8	KQ2H05-M5□	10	8.3	17.6	14.6	13.3	4.0	4.0	2.5	4.6
Ø 1/4	M5 x 0.8	KQ2H07-M5□	11	10.9	18.4	15.4	13.3	4.0	4.0	2.5	6.5

□: A (Brass), N (Brass + Electroless nickel plating)



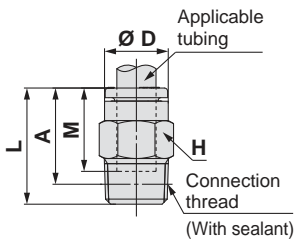
### Male Connector: KQ2H (Sealant)



Applicable tubing O.D. [inch]	Connection thread R	Model	H (Width across flats)	Ø D	L	A*1	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
								Nylon	Urethane		
Ø 1/8	1/8	KQ2H01-01□S	10	6.7	14	10.9	13.3	3.4	2.9	2.5	6
	1/4	KQ2H01-02□S	14	6.7	16.7	12	13.3	3.4	2.9	2.5	15.3
Ø 3/16	1/8	KQ2H05-01□S	10	8.3	17.9	14.8	13.3	7.8	6.5	3.5	6.4
	1/4	KQ2H05-02□S	14	8.3	16.7	12	13.3	7.8	6.5	3.5	13.9
Ø 1/4	1/8	KQ2H07-01□S	12	10.9	18.2	15.1	13.3	13.5	11.5	4.6	7.1
	1/4	KQ2H07-02□S	14	10.9	16.7	12	13.3	13.5	11.5	4.6	12.1
	3/8	KQ2H07-03□S	17	10.9	18.1	13	13.3	13.5	11.5	4.6	24
Ø 5/16	1/8	KQ2H09-01□S	14	13	22.5	19.4	14.2	26.1	18	6	11.9
	1/4	KQ2H09-02□S	14	13	22	17.3	14.2	26.1	18	6	13.9
	3/8	KQ2H09-03□S	17	13	18.1	13	14.2	26.1	18	6	21
Ø 3/8	1/4	KQ2H11-02□S	17	15.1	26.9	22.2	15.6	35.3	29.1	7	22.5
	3/8	KQ2H11-03□S	17	15.1	23.2	18.1	15.6	35.3	29.1	7	22.9
	1/2	KQ2H11-04□S	22	15.1	22.3	15.9	15.6	35.3	29.1	7	45.9
Ø 1/2	1/4	KQ2H13-02□S	19	19	28.7	24	17	58.5	51.7	9	23.3
	3/8	KQ2H13-03□S	19	19	27.2	22.1	17	66.0	51.7	9.6	26.2
	1/2	KQ2H13-04□S	22	19	22.3	15.9	17	66.0	51.7	9.6	35.4

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Reference dimensions after installation of R thread



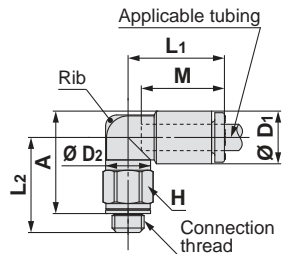
### Male Elbow: KQ2L (Gasket seal)



Applicable tubing O.D. [inch]	Connection thread M	Model	H (Width across flats)	Ø D <sub>1</sub> *1	Ø D <sub>2</sub>	L <sub>1</sub>	L <sub>2</sub>	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]	With a rib
										Nylon	Urethane			
Ø 1/8	M5 x 0.8	KQ2L01-M5□	7	7.1	7	15.3	14.3	14.9	13.3	2.6	2.2	2.5	3.1	●
										2.6	2.2			
Ø 1/4	M5 x 0.8	KQ2L07-M5□	7	11.1	7	15.4	16.1	18.7	13.3	3.5	3.5	2.5	3.6	●

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D<sub>1</sub> is maximum diameter.



### Male Elbow: KQ2L (Sealant)



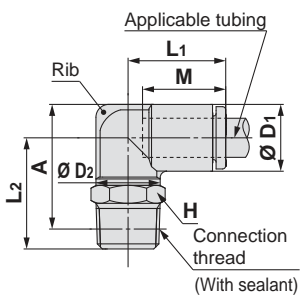
Applicable tubing O.D. [inch]	Connection thread R	Model	H (Width across flats)	Ø D <sub>1</sub> *1	Ø D <sub>2</sub>	L <sub>1</sub>	L <sub>2</sub>	A*2	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]	With a rib
										Nylon	Urethane			
Ø 3/16	1/8	KQ2L05-01□S	10	9.1	10	15	16.7	18.2	13.3	6.8	5.6	3.5	5	—
										6.8	5.6			
Ø 3/16	1/4	KQ2L05-02□S	14	9.1	10	15	22.2	22.1	13.3	6.8	5.6	3.5	14.5	—
										6.8	5.6			
Ø 1/4	1/8	KQ2L07-01□S	10	11.1	10	15.6	17.7	20.2	13.3	11.3	10	4.5	5.3	●
										11.3	10			
										11.3	10			
Ø 1/4	1/4	KQ2L07-02□S	14	11.1	10	15.6	23.2	24.1	13.3	11.3	10	4.5	14.8	●
										11.3	10			
Ø 5/16	3/8	KQ2L07-03□S	17	11.1	10	15.6	24.5	25.0	13.3	11.3	10	4.5	26.5	●
										11.3	10			
										11.3	10			
Ø 5/16	1/8	KQ2L09-01□S	10	13.2	10	16.4	18.7	22.2	14.2	11.4	11.4	4.5	6.1	●
										11.4	11.4			
		KQ2L09-01□QS*3	12	13.2	12	17.2	23.5	27.0	14.2	21.6	14.9	6	9.3	●
Ø 5/16	1/4	KQ2L09-02□S	14	13.2	12	17.2	25.4	27.3	14.2	21.6	14.9	6	17.7	●
										21.6	14.9			
Ø 5/16	3/8	KQ2L09-03□S	17	13.2	12	17.2	25.5	27.0	14.2	21.6	14.9	6	24.7	●
										21.6	14.9			
										21.6	14.9			
Ø 3/8	1/4	KQ2L11-02□S	17	15.4	17	19.3	28.5	31.5	15.6	28.8	23.8	7.5	21.5	●
										28.8	23.8			
										28.8	23.8			
Ø 3/8	3/8	KQ2L11-03□S	17	15.4	17	19.3	29.4	32.0	15.6	28.8	23.8	7.5	22	●
										28.8	23.8			
Ø 3/8	1/2	KQ2L11-04□S	22	15.4	17	19.3	33.4	34.7	15.6	28.8	23.8	7.5	44.4	●
Ø 1/2	1/4	KQ2L13-02□S	17	19.3	17	21.5	30.4	35.3	17	50.3	44.4	9	23.8	—
										50.3	44.4			
										50.3	44.4			
Ø 1/2	3/8	KQ2L13-03□S	17	19.3	17	21.8	28.5	33.0	17	56.7	44.4	9.5	23.2	—
										56.7	44.4			
Ø 1/2	1/2	KQ2L13-04□S	22	19.3	17	21.8	30.5	33.7	17	56.7	44.4	9.5	44.6	—

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D<sub>1</sub> is maximum diameter.

\*2 Reference dimensions after installation of R thread

\*3 For details, refer to page 163.



Round Type

Metric Size M, R, Rc

Sealant/Gasket Seal

Inch Size UNF, NPT

Inch Size M, R, Rc

Metric Size G

Metric Size R, Rc

Face Seal

Inch Size NPT

Inch Size R

Metric Size Uni

Gasket Seal

Inch Size Uni

# KQ2 Series

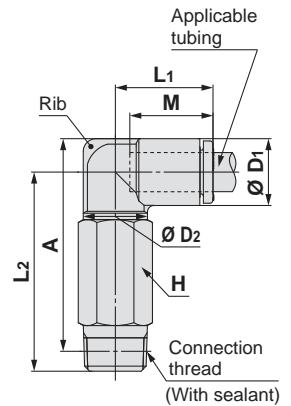
Applicable Tubing: Inch Size, Connection Thread: M, R, Rc

## Dimensions

### Extended Male Elbow: KQ2W (Sealant)



Applicable tubing O.D. [inch]	Connection thread R	Model	H (Width across flats)	*1 Ø D1	Ø D2	L1	L2	A*2	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]	With a rib
										Nylon	Urethane			
Ø 3/16	1/8	KQ2W05-01□S	10	9.1	10	15	30.4	31.8	13.3	6.8	5.6	3.5	11.2	—
	1/4	KQ2W05-02□S	14	9.1	10	15	33.8	33.7	13.3	6.8	5.6	3.5	27.7	—
Ø 1/4	1/8	KQ2W07-01□S	10	11.1	10	15.6	31.4	33.8	13.3	11.6	10.0	4.5	11.5	●
	1/4	KQ2W07-02□S	14	11.1	10	15.6	34.8	35.7	13.3	11.6	10.0	4.5	28	●
	3/8	KQ2W07-03□S	17	11.1	10	15.6	36.1	36.6	13.3	11.6	10.0	4.5	47.4	●
Ø 5/16	1/8	KQ2W09-01□S	10	13.2	10	16.4	32.4	35.9	14.2	11.6	11.6	4.5	12.2	●
	1/4	KQ2W09-02□S	14	13.2	12	17.2	42.4	45.9	14.2	21.5	14.9	6	23.7	●
	3/8	KQ2W09-03□S	17	13.2	12	17.2	39.2	40.7	14.2	21.5	14.9	6	47	●
Ø 3/8	1/4	KQ2W11-02□S	17	15.4	17	19.3	52.7	55.7	15.6	28.8	23.8	7	58.8	●
	3/8	KQ2W11-03□S	17	15.4	17	19.3	48.3	50.9	15.6	28.8	23.8	7	51.1	●
	1/2	KQ2W11-04□S	22	15.4	17	19.3	52.3	53.6	15.6	28.8	23.8	7	91.8	●
Ø 1/2	1/4	KQ2W13-02□S	17	19.3	17	21.5	54.6	59.6	17	56.7	44.4	9	61	—
	3/8	KQ2W13-03□S	17	19.3	17	21.8	48.2	52.8	17	56.7	44.4	9.5	48.4	—
	1/2	KQ2W13-04□S	22	19.3	17	21.8	50.2	53.5	17	56.7	44.4	9.5	92.3	—



□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D1 is maximum diameter.

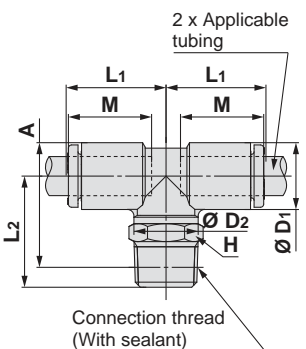
\*2 Reference dimensions after installation of R thread

\*3 For details, refer to page 163.

### Male Branch Tee: KQ2T (Sealant)



Applicable tubing O.D. [inch]	Connection thread R	Model	H (Width across flats)	*1 Ø D1	Ø D2	L1	L2	A*2	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
										Nylon	Urethane		
Ø 3/16	1/8	KQ2T05-01□S	10	9.1	10	15	16.7	18.1	13.3	8.4	7.0	3.5	5.8
	1/4	KQ2T05-02□S	14	9.1	10	15	22.2	22	13.3	8.4	7.0	3.5	15.3
Ø 1/4	1/8	KQ2T07-01□S	10	11.1	10	15.6	17.7	20.1	13.3	14.4	12.4	4.5	6.5
	1/4	KQ2T07-02□S	14	11.1	10	15.6	23.2	24	13.3	14.4	12.4	4.5	16
	3/8	KQ2T07-03□S	17	11.1	10	15.6	24.5	24.9	13.3	14.4	12.4	4.5	27.7
Ø 5/16	1/8	KQ2T09-01□S	10	13.2	10	16.4	18.7	22.2	14.2	14.4	14.4	4.5	7.9
	1/4	KQ2T09-02□S	14	13.2	12	17.2	23.5	27	14.2	26.3	18.2	6	11.0
	3/8	KQ2T09-03□S	17	13.2	12	17.2	25.5	27	14.2	26.3	18.2	6	26.5
Ø 3/8	1/4	KQ2T11-02□S	17	15.4	17	19.3	28.4	31.4	15.6	28.8	23.8	7.5	23.9
	3/8	KQ2T11-03□S	17	15.4	17	19.3	29.3	31.9	15.6	28.8	23.8	7.5	24.4
	1/2	KQ2T11-04□S	22	15.4	17	19.3	33.3	34.6	15.6	28.8	23.8	7.5	46.9
Ø 1/2	1/4	KQ2T13-02□S	17	19.3	17	21.5	30.3	35.3	17	57.3	50.6	9	27.9
	3/8	KQ2T13-03□S	17	19.3	17	21.8	28.4	33	17	63.8	50.6	9.5	27.4
	1/2	KQ2T13-04□S	22	19.3	17	21.8	30.4	33.7	17	63.8	50.6	9.5	48.8



□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D1 is maximum diameter.

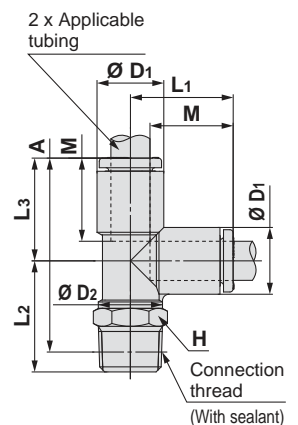
\*2 Reference dimensions after installation of R thread

\*3 For details, refer to page 163.

### Male Run Tee: KQ2Y (Sealant)



Applicable tubing O.D. [inch]	Connection thread R	Model	H (Width across flats)	*1 Ø D1	Ø D2	L1	L2	L3	A*2	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
											Nylon	Urethane		
Ø 3/16	1/8	KQ2Y05-01□S	10	9.1	10	15.7	16.7	15.7	29.3	13.3	8.4	7.0	3.5	5.9
	1/4	KQ2Y05-02□S	14	9.1	10	15.7	22.2	15.7	33.2	13.3	8.4	7.0	3.5	15.4
Ø 1/4	1/8	KQ2Y07-01□S	10	11.1	10	16.5	17.7	16.5	31.1	13.3	14.0	12.4	4.5	6.5
	1/4	KQ2Y07-02□S	14	11.1	10	16.5	23.2	16.5	35	13.3	14.0	12.4	4.5	16
	3/8	KQ2Y07-03□S	17	11.1	10	16.5	24.5	16.5	35.9	13.3	14.0	12.4	4.5	27.7
Ø 5/16	1/8	KQ2Y09-01□S	10	13.2	10	18.2	18.7	18.2	33.8	14.2	14.0	14.0	4.5	8
	1/4	KQ2Y09-02□S	14	13.2	12	18.2	25.4	18.2	38.9	14.2	26.3	18.3	6	19.5
	3/8	KQ2Y09-03□S	17	13.2	12	18.2	25.5	18.2	38.6	14.2	26.3	18.3	6	26.5
Ø 3/8	1/4	KQ2Y11-02□S	17	15.4	17	20.4	28.4	20.4	44.1	15.6	28.8	23.8	7.5	24.1
	3/8	KQ2Y11-03□S	17	15.4	17	20.4	29.3	20.4	44.6	15.6	28.8	23.8	7.5	24.5
	1/2	KQ2Y11-04□S	22	15.4	17	20.4	33.3	20.4	47.3	15.6	28.8	23.8	7.5	47
Ø 1/2	1/4	KQ2Y13-02□S	17	19.3	17	23.4	30.3	23.4	49	17	57.3	50.6	9	28.3
	3/8	KQ2Y13-03□S	17	19.3	17	23.4	28.4	23.4	46.7	17	64.6	50.6	9.5	27.6
	1/2	KQ2Y13-04□S	22	19.3	17	23.4	30.4	23.4	47.4	17	64.6	50.6	9.5	49



□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D1 is maximum diameter.

\*2 Reference dimensions after installation of R thread

\*3 For details, refer to page 163.

# Inch Size One-touch Fittings **KQ2 Series**

Applicable Tubing: Inch Size, Connection Thread: M, R, Rc

## Dimensions

### Branch "Y": KQ2U (Sealant)

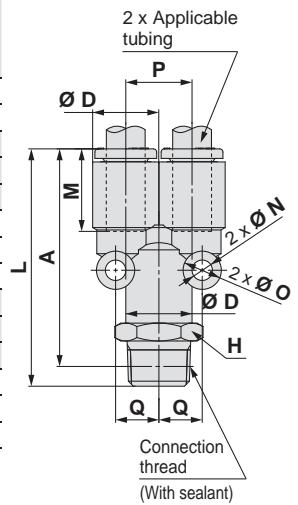


Applicable tubing O.D. [inch]	Connection thread R	Model	H (Width across flats)	*1 Ø D	L	P	A*2	M	Q	Ø	Ø N	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
												Nylon	Urethane		
Ø 3/16	1/8	KQ2U05-01□S	12	9.1	37.1	9.1	34	13.3	6.2	6	3.2	8.4	7.0	3.5	10.3
	1/4	KQ2U05-02□S	14	9.1	41.5	9.1	36.8	13.3	6.2	6	3.2	8.4	7.0	3.5	19.5
Ø 1/4	1/8	KQ2U07-01□S	12	11.1	37.8	11.1	34.7	13.3	7.6	8	4	14.4	12.4	4.6	11.3
	1/4	KQ2U07-02□S	14	11.1	42.2	11.1	37.5	13.3	7.6	8	4	14.4	12.4	4.6	20.1
Ø 5/16	3/8	KQ2U07-03□S	17	11.1	43.6	11.1	38.5	13.3	7.6	8	4	14.4	12.4	4.6	32
	1/8	KQ2U09-01□S	14	13.2	40.7	13.2	37.6	14.2	8.7	8	4.2	26.3	18.3	6	15.8
Ø 3/8	1/4	KQ2U09-02□S	14	13.2	45.1	13.2	40.4	14.2	8.7	8	4.2	26.3	18.3	6	20.9
	3/8	KQ2U09-03□S	17	13.2	46.5	13.2	41.4	14.2	8.7	8	4.2	26.3	18.3	6	32.7
Ø 1/2	1/4	KQ2U11-02□S	17	15.4	48.6	15.4	43.9	15.6	9.9	8	4.2	28.8	23.8	7	24.5
	3/8	KQ2U11-03□S	17	15.4	50	15.4	44.9	15.6	9.9	8	4.2	28.8	23.8	7	33.5
Ø 1/2	1/2	KQ2U11-04□S	22	15.4	54.2	15.4	47.8	15.6	9.9	8	4.2	28.8	23.8	7	61.6
	1/4	KQ2U13-02□S	21	19.3	53.4	19.3	48.7	17	11.8	8	4.2	57.3	50.6	9	40.4
Ø 1/2	3/8	KQ2U13-03□S	21	19.3	54.8	19.3	49.7	17	11.8	8	4.2	64.6	50.6	9.6	43.9
	1/2	KQ2U13-04□S	22	19.3	59	19.3	52.6	17	11.8	8	4.2	64.6	50.6	9.6	61

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D is maximum diameter.

\*2 Reference dimensions after installation of R thread

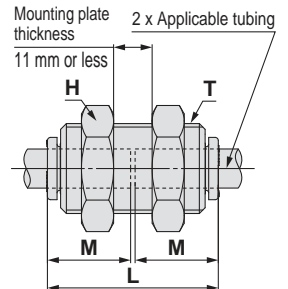


### Bulkhead Union: KQ2E



Applicable tubing O.D. [inch]	Model	T (M)	H (Width across flats)	L	Mounting hole	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
							Nylon	Urethane		
Ø 3/16	KQ2E05-00M□	M14 x 1	17	27.3	15	13.3	7.8	6.5	3.5	30.5
Ø 1/4	KQ2E07-00M□	M14 x 1	17	27.3	15	13.3	13.5	11.5	4.6	27.2
Ø 5/16	KQ2E09-00M□	M16 x 1	19	29.1	17	14.2	26.1	18	6	34
Ø 3/8	KQ2E11-00M□	M20 x 1	24	31.9	21	15.6	35.3	29.1	7	66.1
Ø 1/2	KQ2E13-00M□	M22 x 1	27	34.7	23	17	66.0	51.7	9.6	59.9

□: A (Brass), N (Brass + Electroless nickel plating)

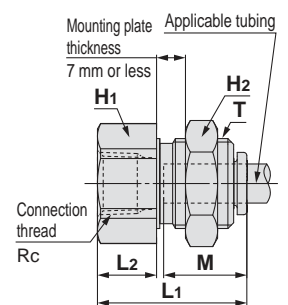


### Bulkhead Connector: KQ2E



Applicable tubing O.D. [inch]	Connection thread Rc	Model	T (M)	H1 (Width across flats)	H2 (Width across flats)	L1	L2	Mounting hole	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
										Nylon	Urethane		
Ø 3/16	1/8	KQ2E05-01□	M14 x 1	17	17	23.9	9.5	15	13.3	7.8	6.5	3.5	30.8
Ø 1/4	1/4	KQ2E07-02□	M14 x 1	17	17	28.4	14	15	13.3	13.5	11.5	4.6	32
Ø 5/16	3/8	KQ2E09-03□	M16 x 1	19	19	31.7	14.3	17	14.2	26.1	18	6	59.2
Ø 3/8	3/8	KQ2E11-03□	M20 x 1	22	24	31.5	12.1	21	15.6	35.3	29.1	7	62.7
Ø 1/2	3/8	KQ2E13-03□	M22 x 1	24	27	32.1	11.7	23	17	66.0	51.7	9.6	66.7
	1/2	KQ2E13-04□	M22 x 1	24	27	37.7	17.3	23	17	66.0	51.7	9.6	70.6

□: A (Brass), N (Brass + Electroless nickel plating)



Round Type

Sealant/Gasket Seal

Metric Size M, R, Rc

Inch Size UNF, NPT

Inch Size M, R, Rc

Face Seal

Metric Size G

Metric Size R, Rc

Gasket Seal

Inch Size NPT

Inch Size R

Metric Size Uni

Inch Size Uni

# KQ2 Series

# Made to Order/Clean Series/Spare Parts

Please contact SMC for detailed dimensions, specifications, and lead times.

## 1 Made to Order

Symbol	Specifications
<b>X12</b>	Lubricant: White vaseline Release button colour: White
<b>X35</b> *1	Body colour: Black Release button colour: Orange
<b>X41</b>	With fixed orifice*2
KQ2□09-01□Q□	Effective area is interchangeable with the current product (KQ series). Applicable model: Male elbow Extended male elbow Male branch tee Male run tee Applicable tubing O.D./Port size: Ø 5/16"/R 1/8 Thread material/Surface treatment: Brass, Brass + Electroless nickel plating Example) <b>KQ2L09-01AQS</b>

\*1 The following models are not available as made-to-order: Bulkhead union/KQ2E, Bulkhead connector/KQ2E, Male connector/KQ2H

\*2 Please contact SMC for availability.

The following made-to-order products will be provided based on previous models (KQ2 series). Please contact SMC separately.

Symbol	Specifications
<b>X17</b>	Grease-free Rubber material: NBR (With fluorine coating) Release button colour: Light blue
<b>X29</b>	Grease-free Rubber material: NBR (With fluorine coating) Release button colour: Light blue Copper-free (With electroless nickel plating)
<b>X34</b>	Rubber material: FKM
<b>X39</b>	Grease-free Rubber material: NBR (With fluorine coating) Release button colour: Light blue Clean (Copper-free, air blow, double packaging, resin body: white)
<b>X94</b>	Grease-free Rubber material: FKM (With fluorine coating) Release button colour: Light blue

## 3 Spare Parts

Description	Part no.	Applicable thread
Gasket	<b>M-5G2</b>	M5

### Brass

Description	Part no.	Applicable model
Pipe nut	<b>KQ06-P01A</b>	KQ2E05-00MA, KQ2E07-00MA KQ2E05-01A, KQ2E07-02A
	<b>KQ08-P01A</b>	KQ2E09-00MA, KQ2E09-03A
	<b>KQ10-P01A</b>	KQ2E11-00MA, KQ2E11-03A
	<b>KQ12-P01A</b>	KQ2E13-00MA KQ2E13-03A, KQ2E13-04A

### Brass + Electroless nickel plating

Description	Part no.	Applicable model
Pipe nut	<b>KQ06-P01N</b>	KQ2E05-00MN, KQ2E07-00MN KQ2E05-01N, KQ2E07-02N
	<b>KQ08-P01N</b>	KQ2E09-00MN, KQ2E09-03N
	<b>KQ10-P01N</b>	KQ2E11-00MN, KQ2E11-03N
	<b>KQ12-P01N</b>	KQ2E13-00MN KQ2E13-03N, KQ2E13-04N

## 2 Clean Series

Please consult with SMC separately for applicable models.

Symbol	Specifications
<b>10-</b>	Brass parts: With electroless nickel plating Lubricant: Fluorine grease Air blow in a clean room Double packaging Resin body, Release button colour: White

Example) **10-KQ2H07-02NS**

Gasket Seal		Face Seal			Sealant/Gasket Seal		Round Type		
Inch Size Uni	Metric Size Uni	Inch Size R	Inch Size NPT	Metric Size R, Rc	Metric Size G	Inch Size M, R, Rc	Inch Size UNF, NPT	Metric Size M, R, Rc	○

# Metric Size One-touch Fittings

Applicable Tubing: Metric Size, Connection Thread: G

## KQ2 Series

**Guide**

**Chuck**  
 Suitable for use with nylon and urethane. Large retaining force.  
 The chuck provides secure retention and the collet increases the holding force on the tube.

**Seal**  
 Can be used for a wide range of pressures from a low vacuum up to a pressure of 1 MPa.  
 The use of a special profile ensures sealing and reduces resistance when the tube is inserted.

**Face seal method**

**Seal ring**  
 Piping installability is improved by changing to the face seal structure.

**Release button**  
 Requires little force for removal.  
 Releases the chuck collet to remove the tube as well as to prevent the chuck from biting too deeply into the tubing.

**Body**

**O-ring**

**Stud**  
 Effective when piping in a confined space.  
 The body and the threaded portion can rotate (for positioning to some extent).

**G thread**

Applicable to parallel pipe thread (G).

Drastically reduces screw-in time with the face seal method.



### Applicable Tubing

Tubing material	FEP, PFA, Nylon, Soft nylon, Polyurethane
Tubing O.D.	Ø 4, Ø 6, Ø 8, Ø 10, Ø 12, Ø 16

### Specifications

Fluid		Air, Water*1
Operating pressure range*2		-100 kPa to 1 MPa
Proof pressure (at 23 °C)		3 MPa
Ambient and fluid temperature		-5 to 60 °C, Water: 0 to 40 °C (No freezing)
Thread	Mounting section	ISO 16030 (Parallel pipe thread)
	Nut section	JIS B0205 (Metric fine thread)
Sealant on the threads		Seal ring

\*1 The surge pressure must be under the maximum operating pressure.

\*2 Do not use the fittings with a leak tester or for vacuum retention because they are not guaranteed for zero leakage.

### Principal Parts Material

Body	C3604, PBT
Stud	C3604 (Thread portion)
Chuck	Stainless steel 304
Guide	Stainless steel 304
Release button	POM
Seal, O-ring, Seal ring	NBR

## How to Order

### Threaded Type

**KQ2 H 06 - G01 A**

One-touch fittings

Model

Symbol	Model
<b>H</b>	Male connector
<b>S</b>	Hexagon socket head male connector
<b>F</b>	Female connector
<b>L</b>	Male elbow
<b>V</b>	Universal male elbow
<b>W</b>	Extended male elbow
<b>T</b>	Male branch tee
<b>Y</b>	Male run tee
<b>E</b>	Bulkhead connector

Thread material/Surface treatment

Symbol	Thread material/Surface treatment
<b>A</b>	Brass
<b>N</b>	Brass + Electroless nickel plating

Port size

Symbol		Size
Thread connection	<b>G01</b>	G 1/8
	<b>G02</b>	G 1/4
	<b>G03</b>	G 3/8
	<b>G04</b>	G 1/2

Applicable tubing O.D.

Symbol	Size
<b>04</b>	Ø 4
<b>06</b>	Ø 6
<b>08</b>	Ø 8
<b>10</b>	Ø 10
<b>12</b>	Ø 12
<b>16</b>	Ø 16

Round Type



Metric Size M, R, Rc

Sealant/Gasket Seal

Inch Size UNF, NPT

Inch Size M, R, Rc

Metric Size G

Metric Size R, Rc

Inch Size NPT

Inch Size R

Metric Size Uni

Inch Size Uni

# Metric Size One-touch Fittings

## Round Type Variations

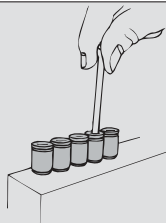
### Hexagon socket head male connector

KQ2S

P.168



Internal hexagon socket allows tightening with a hexagon wrench in confined spaces.



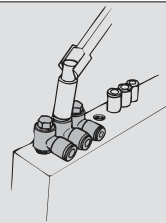
### Universal male elbow

KQ2V

P.169



Hexagon head of the body allows tightening with a box wrench in confined spaces.



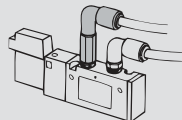
### Extended male elbow

KQ2W

P.170



Basically, it is used together with a male elbow. Its extended height allows for multi-levelled piping and prevents interference among fittings.



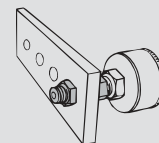
### Bulkhead connector

KQ2E

P.171



Use to connect a male thread and tubing through a panel, etc.



### Male connector

KQ2H

P.168



Use to pipe a female thread in the same direction. Most general model.

### Male elbow

KQ2L

P.169



Use to pipe a female thread at right angles. Most general model.

### Male run tee

KQ2Y

P.171



Use to branch a female thread in the same direction and at a 90° angle.

### Female connector

KQ2F

P.168



Use to pipe a male thread of a pressure gauge, etc.

### Male branch tee

KQ2T

P.170



Use to branch a female thread at both 90° angles.



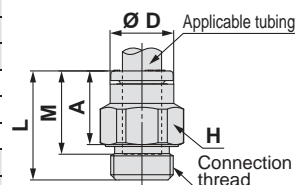
## Dimensions

### Male Connector: KQ2H (Face seal)



Applicable tubing O.D. [mm]	Connection thread G	Model	H (Width across flats)	Ø D	L	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
								Nylon	Urethane		
Ø 4	1/8	KQ2H04-G01	12	7.7	17.1	11.6	13.3	4.8	3.4	3	7.7
	1/4	KQ2H04-G02	17	7.7	15.4	8.9	13.3	4.8	3.4	3	16.8
Ø 6	1/8	KQ2H06-G01	12	9.7	17.3	11.8	13.3	13.1	10.4	4.5	6.6
	1/4	KQ2H06-G02	17	9.7	15.4	8.9	13.3	13.1	10.4	4.5	14.8
	3/8	KQ2H06-G03	21	9.7	16.4	8.9	13.3	13.1	10.4	4.5	27.1
Ø 8	1/8	KQ2H08-G01	14	13	21.4	15.9	14.2	26.1	18	6	7.5
	1/4	KQ2H08-G02	17	13	19.9	13.4	14.2	26.1	18	6	15.5
	3/8	KQ2H08-G03	21	13	16.4	8.9	14.2	26.1	18	6	23.8
Ø 10	1/8	KQ2H10-G01	17	15.6	23.2	17.7	15.6	26.1	26.1	6	15.7
	1/4	KQ2H10-G02	17	15.6	22.8	16.3	15.6	41.5	29.5	7.5	16.8
	3/8	KQ2H10-G03	21	15.6	21.8	14.3	15.6	41.5	29.5	7.5	26.1
	1/2	KQ2H10-G04	27	15.6	17.9	8.9	15.6	41.5	29.5	7.5	39.9
Ø 12	1/4	KQ2H12-G02	19	18.2	25.3	18.8	17	58.3	46.1	9	15.1
	3/8	KQ2H12-G03	21	18.2	23.6	16.1	17	58.3	46.1	9	25.6
	1/2	KQ2H12-G04	27	18.2	24.8	15.8	17	58.3	46.1	9	46.9
Ø 16	3/8	KQ2H16-G03	27	23.6	30.5	23	20.6	81	67	11	47.1
	1/2	KQ2H16-G04	27	23.6	29.7	20.7	20.6	113	67	13	48.8

□: A (Brass), N (Brass + Electroless nickel plating)



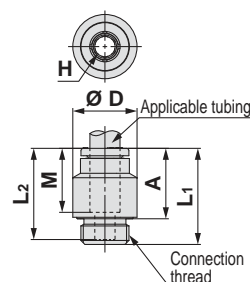
### Hexagon Socket Head Male Connector: KQ2S (Face seal)



Applicable tubing O.D. [mm]	Connection thread G	Model	H (Width across flats)	*1 Ø D	L1	L2	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
									Nylon	Urethane		
Ø 4	1/8	KQ2S04-G01	3	13	20.6	19.6	15.1	13.3	4.1	3.6	3.1	11.6
Ø 6	1/8	KQ2S06-G01	4	13	19.8	18.8	14.3	13.3	10	9.9	4.1	9.7
	1/4	KQ2S06-G02	4	18	19.8	18.8	13.3	13.3	10.7	10	4.1	18
Ø 8	1/8	KQ2S08-G01	5	13	21.7	19.7	16.2	14.2	17.2	16.2	5.1	9.5
	1/4	KQ2S08-G02	6	18	20.5	19.5	14	14.2	23.3	16.2	6.1	17.2
	3/8	KQ2S08-G03	6	22	20.7	19.7	13.2	14.2	23.3	16.2	6.1	27.1
Ø 10	1/8	KQ2S10-G01	5	15.6	23	21.1	17.5	15.6	17.2	16.2	5.1	10.9
	1/4	KQ2S10-G02	8	18	24.1	20.1	17.6	15.6	39	26.6	8.1	19.2
	3/8	KQ2S10-G03	8	22	21.4	20.1	13.9	15.6	39	26.6	8.1	25
	1/2	KQ2S10-G04	8	26	21.1	20.1	12.1	15.6	39	26.6	8.1	34.1
Ø 12	1/4	KQ2S12-G02	8	18.2	25.6	21.5	19.1	17	46	44.5	8.1	18.3
	3/8	KQ2S12-G03	10	22	23.8	21.8	16.3	17	60	44.5	10.1	25.7
	1/2	KQ2S12-G04	10	26	22.8	21.8	13.8	17	60	44.5	10.1	35.6
Ø 16	3/8	KQ2S16-G03	10	23.6	30.8	25.4	23.3	20.6	81	67	10.1	29.2
	1/2	KQ2S16-G04	12	26	30.3	26.1	21.3	20.6	113	67	12.1	45.8

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D is maximum diameter.



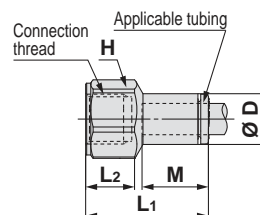
### Female Connector: KQ2F



Applicable tubing O.D. [mm]	Connection thread G	Model	H (Width across flats)	*1 Ø D	L1	L2	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
								Nylon	Urethane		
Ø 4	1/8	KQ2F04-G01	14	7.9	24.7	9.5	13.3	5.6	4	3	12.4
	1/4	KQ2F04-G02	17	7.9	30.1	13.9	13.3	5.6	4	3	21.3
Ø 6	1/8	KQ2F06-G01	14	9.9	24.3	9.5	13.3	13.1	10.4	4.5	12.6
	1/4	KQ2F06-G02	17	9.9	29.6	13.9	13.3	13.1	10.4	4.5	21.4
	3/8	KQ2F06-G03	21	9.9	31.1	13.7	13.3	13.1	10.4	4.5	29.6
Ø 8	1/8	KQ2F08-G01	14	13	24.7	9.5	14.2	26.1	18	6	15.1
	1/4	KQ2F08-G02	17	13	30.1	13.9	14.2	26.1	18	6	24
	3/8	KQ2F08-G03	21	13	31.6	13.7	14.2	26.1	18	6	32.3
Ø 10	1/4	KQ2F10-G02	17	15.6	31.1	13.9	15.6	41.5	29.5	7.5	24.1
	3/8	KQ2F10-G03	21	15.6	32.6	13.7	15.6	41.5	29.5	7.5	32.6
Ø 12	1/4	KQ2F12-G02	19	18.2	32	13.8	17	58.3	46.1	9	33
	3/8	KQ2F12-G03	21	18.2	33.5	13.7	17	58.3	46.1	9	34.1
	1/2	KQ2F12-G04	27	18.2	38.6	16.9	17	58.3	46.1	9	64.9
Ø 16	3/8	KQ2F16-G03	24	23.6	36	14.4	20.6	81	67	13	55.7
	1/2	KQ2F16-G04	27	23.6	41.1	16.9	20.6	113	67	13	71.7

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D is maximum diameter.



Round Type

Metric Size M, R, Rc

Inch Size UNF, NPT

Inch Size M, R, Rc

Metric Size G

Metric Size R, Rc

Inch Size NPT

Inch Size R

Metric Size Uni

Inch Size Uni

# KQ2 Series

Applicable Tubing: Metric Size, Connection Thread: G

## Dimensions

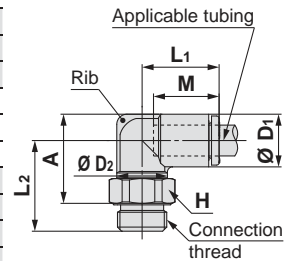
### Male Elbow: KQ2L (Face seal)



Applicable tubing O.D. [mm]	Connection thread G	Model	H (Width across flats)	*1 Ø D1	Ø D2	L1	L2	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]	With a rib
										Nylon	Urethane			
Ø 4	1/8	KQ2L04-G01	12	8.2	10	14.8	16.8	15.4	13.3	4.6	3.3	3	6.3	●
	1/4	KQ2L04-G02	17	8.2	10	14.8	20.3	17.9	13.3	4.6	3.3	3	16.7	●
Ø 6	1/8	KQ2L06-G01	12	10.4	10	15.5	17.9	17.6	13.3	11.4	9	4.5	6.7	—
	1/4	KQ2L06-G02	17	10.4	10	15.5	21.4	20.1	13.3	11.4	9	4.5	17.2	—
	3/8	KQ2L06-G03	21	10.4	10	15.5	22.4	20.1	13.3	11.4	9	4.5	28.9	—
Ø 8	1/8	KQ2L08-G01	12	13.2	10	16.4	19.3	20.4	14.2	11.4	11.4	4.5	7.6	●
	1/4	KQ2L08-G02	17	13.2	12	17.2	22.8	22.9	14.2	21.6	14.9	6	15.9	●
	3/8	KQ2L08-G03	21	13.2	12	17.2	23.8	22.9	14.2	21.6	14.9	6	27.9	●
Ø 10	1/8	KQ2L10-G01	12	15.9	12	18.6	22.5	24.9	15.6	21.6	14.9	6	10.3	●
	1/4	KQ2L10-G02	17	15.9	17	19.3	24.6	26.0	15.6	35.2	25	7.5	17.5	●
	3/8	KQ2L10-G03	21	15.9	17	19.3	27.7	28.1	15.6	35.2	25	7.5	22.6	●
Ø 12	1/2	KQ2L10-G04	27	15.9	17	19.3	29.2	28.1	15.6	35.2	25	7.5	42.5	●
	1/4	KQ2L12-G02	17	18.5	17	21.5	25.9	28.6	17	50.2	39.7	9	19.3	●
	3/8	KQ2L12-G03	21	18.5	17	21.5	29.0	30.7	17	50.2	39.7	9	24.5	●
Ø 16	1/2	KQ2L12-G04	27	18.5	17	21.5	30.5	30.7	17	50.2	39.7	9	44.4	●
	3/8	KQ2L16-G03	21	23.8	21	27.1	33.1	37.5	20.6	71	58.9	11	35.2	—
	1/2	KQ2L16-G04	27	23.8	21	27.1	33.8	36.7	20.6	100	58.9	13	58.7	—

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D1 is maximum diameter.



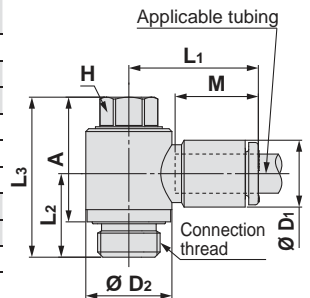
### Universal Male Elbow: KQ2V (Face seal)



Applicable tubing O.D. [mm]	Connection thread G	Model	H (Width across flats)	*1 Ø D1	Ø D2	L1	L2	L3	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
											Nylon	Urethane		
Ø 4	1/8	KQ2V04-G01	8	8.2	13.4	19.3	13	24.9	19.4	13.3	2.9	2.9	3	12.9
Ø 6	1/8	KQ2V06-G01	8	10.4	13.4	20.5	13	24.9	19.4	13.3	7.5	5.9	4.5	13.2
	1/4	KQ2V06-G02	10	10.4	18	19.9	15	27.6	21.1	13.3	7.5	5.9	4.5	22.7
Ø 8	1/8	KQ2V08-G01	12	13.2	17.6	23.5	15	27.5	22	14.2	16	11.2	5	24.5
	1/4	KQ2V08-G02	12	13.2	18	23.5	15.6	28.1	21.6	14.2	16	11.2	6	26.8
	3/8	KQ2V08-G03	14	13.2	22	23.1	17.3	33.1	25.6	14.2	16	11.2	7.5	42.1
Ø 10	1/4	KQ2V10-G02	14	15.9	20.6	25.9	17.9	32.9	26.4	15.6	27	20.3	7.5	37.5
	3/8	KQ2V10-G03	14	15.9	22	25.9	18.1	33.1	25.6	15.6	27	20.3	7.5	43.4
Ø 12	3/8	KQ2V12-G03	17	18.5	25.2	28.5	20.5	36.7	29.2	17	39	30.8	9	60.5
	1/2	KQ2V12-G04	17	18.5	26	28.5	21.1	37.3	28.3	17	39	30.8	9	71
Ø 16	3/8	KQ2V16-G03	21	23.8	32.3	34.2	24.2	44.5	37	20.6	55	46	11	101.7
	1/2	KQ2V16-G04	21	23.8	32.3	34.2	26.2	46.5	37.5	20.6	78	46	13	106.6

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D1 is maximum diameter.



# Metric Size One-touch Fittings **KQ2 Series**

Applicable Tubing: Metric Size, Connection Thread: G

## Dimensions

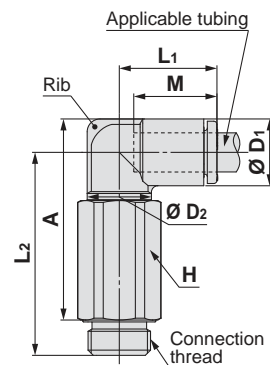
### Extended Male Elbow: KQ2W (Face seal)



Applicable tubing O.D. [mm]	Connection thread G	Model	H (Width across flats)	*1 Ø D1	Ø D2	L1	L2	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]	With a rib
										Nylon	Urethane			
Ø 4	1/8	KQ2W04-G01□	12	8.2	10	14.8	30.5	29.1	13.3	4	4	3	16.5	●
	1/4	KQ2W04-G02□	17	8.2	10	14.8	31.2	28.8	13.3	4	4	3	35.8	●
Ø 6	1/8	KQ2W06-G01□	12	10.4	10	15.5	31.6	31.3	13.3	10.9	8.6	4.5	17	—
	1/4	KQ2W06-G02□	17	10.4	10	15.5	32.3	31	13.3	10.9	8.6	4.5	36.2	—
	3/8	KQ2W06-G03□	21	10.4	10	15.5	33.3	31	13.3	10.9	8.6	4.5	59.4	—
Ø 8	1/8	KQ2W08-G01□	12	13.2	10	16.4	33	34.1	14.2	10.9	10.9	4.5	17.8	●
	1/4	KQ2W08-G02□	17	13.2	12	17.2	36.5	36.6	14.2	20.5	14.2	6	37.5	●
	3/8	KQ2W08-G03□	21	13.2	12	17.2	37.5	36.6	14.2	20.5	14.2	6	63.9	●
Ø 10	1/4	KQ2W10-G02□	17	15.9	17	19.3	48.8	50.3	15.6	33.5	23.8	7.5	45.1	●
	3/8	KQ2W10-G03□	21	15.9	17	19.3	46.6	47.1	15.6	33.5	23.8	7.5	62.6	●
	1/2	KQ2W10-G04□	27	15.9	17	19.3	48.1	47.1	15.6	33.5	23.8	7.5	120.2	●
Ø 12	1/4	KQ2W12-G02□	17	18.5	17	21.5	50.1	52.9	17	47.7	37.7	9	46.9	●
	3/8	KQ2W12-G03□	21	18.5	17	21.5	47.9	49.7	17	47.7	37.7	9	64.5	●
	1/2	KQ2W12-G04□	27	18.5	17	21.5	49.4	49.7	17	47.7	37.7	9	122.1	●
Ø 16	3/8	KQ2W16-G03□	21	23.8	21	27.1	57.4	61.8	20.6	71	58.9	11	71.7	—
	1/2	KQ2W16-G04□	27	23.8	21	27.1	58.1	61	20.6	100	58.9	13	144.1	—

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D1 is maximum diameter.



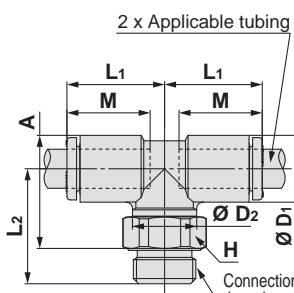
### Male Branch Tee: KQ2T (Face seal)



Applicable tubing O.D. [mm]	Connection thread G	Model	H (Width across flats)	*1 Ø D1	Ø D2	L1	L2	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
										Nylon	Urethane		
Ø 4	1/8	KQ2T04-G01□	12	8.2	10	14.8	16.8	15.4	13.3	6	4.1	3	7
	1/4	KQ2T04-G02□	17	8.2	10	14.8	20.3	17.9	13.3	6	4.1	3	17.4
Ø 6	1/8	KQ2T06-G01□	12	10.4	10	15.5	17.9	17.6	13.3	13.9	11	4.5	7.6
	1/4	KQ2T06-G02□	17	10.4	10	15.5	21.4	20.1	13.3	13.9	11	4.5	18.1
	3/8	KQ2T06-G03□	21	10.4	10	15.5	22.4	20.1	13.3	13.9	11	4.5	29.8
Ø 8	1/8	KQ2T08-G01□	12	13.2	10	16.4	19.3	20.4	14.2	14	14	4.5	9.4
	1/4	KQ2T08-G02□	17	13.2	12	17.2	22.8	22.9	14.2	26.3	18.2	6	17.6
	3/8	KQ2T08-G03□	21	13.2	12	17.2	23.8	22.9	14.2	26.3	18.2	6	29.6
Ø 10	1/8	KQ2T10-G01□	12	15.9	12	18.6	22.4	24.9	15.6	21.6	14.9	6	13.1
	1/4	KQ2T10-G02□	17	15.9	17	19.3	24.5	26	15.6	35.2	25	7.5	20.1
	3/8	KQ2T10-G03□	21	15.9	17	19.3	27.6	28.1	15.6	35.2	25	7.5	25.3
Ø 12	1/4	KQ2T12-G02□	17	18.5	17	21.5	25.8	28.6	17	57.2	45.2	9	23.1
	3/8	KQ2T12-G03□	21	18.5	17	21.5	28.9	30.7	17	57.2	45.2	9	28.4
	1/2	KQ2T12-G04□	27	18.5	17	21.5	30.4	30.7	17	57.2	45.2	9	48.3
Ø 16	3/8	KQ2T16-G03□	21	23.8	21	27.1	33.1	37.5	20.6	71	58.9	11	42.1
	1/2	KQ2T16-G04□	27	23.8	21	27.1	33.8	36.7	20.6	100	58.9	13	65.7

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D1 is maximum diameter.



Round Type

Metric Size M, R, Rc

Sealant/Gasket Seal

Inch Size UNF, NPT

Inch Size M, R, Rc

Metric Size G

Metric Size R, Rc

Face Seal

Inch Size NPT

Inch Size R

Gasket Seal

Metric Size Uni

Inch Size Uni

# KQ2 Series

Applicable Tubing: Metric Size, Connection Thread: G

## Dimensions

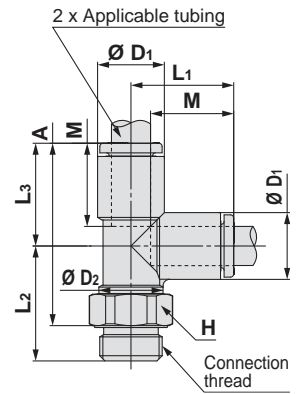
### Male Run Tee: KQ2Y (Face seal)



Applicable tubing O.D. [mm]	Connection thread G	Model	H (Width across flats)	*1 Ø D1	Ø D2	L1	L2	L3	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
											Nylon	Urethane		
Ø 4	1/8	KQ2Y04-G01	12	8.2	10	15.3	16.8	15.3	26.6	13.3	6.4	4.4	3	7
	1/4	KQ2Y04-G02	17	8.2	10	15.3	20.3	15.3	29.1	13.3	6.4	4.4	3	17.5
Ø 6	1/8	KQ2Y06-G01	12	10.4	10	16.3	17.9	16.3	28.7	13.3	13.4	10.6	4.5	7.7
	1/4	KQ2Y06-G02	17	10.4	10	16.3	21.4	16.3	31.2	13.3	13.4	10.6	4.5	18.2
	3/8	KQ2Y06-G03	21	10.4	10	16.3	22.4	16.3	31.2	13.3	13.4	10.6	4.5	29.9
Ø 8	1/8	KQ2Y08-G01	12	13.2	10	18.2	19.3	18.2	32	14.2	13.4	13.4	4.5	9.5
	1/4	KQ2Y08-G02	17	13.2	12	18.2	22.8	18.2	34.5	14.2	25.6	17.7	6	17.7
Ø 10	1/8	KQ2Y10-G01	12	15.9	12	20.6	22.5	20.6	37.5	15.6	40	28.4	6	13.2
	1/4	KQ2Y10-G02	17	15.9	17	20.6	24.6	20.6	38.6	15.6	40	28.4	7.5	20.3
	3/8	KQ2Y10-G03	21	15.9	17	20.6	27.7	20.6	40.7	15.6	40	28.4	7.5	25.4
Ø 12	1/4	KQ2Y12-G02	17	18.5	17	23	25.9	23	42.3	17	57.4	45.4	9	23.4
	3/8	KQ2Y12-G03	21	18.5	17	23	29	23	44.4	17	57.4	45.4	9	28.6
	1/2	KQ2Y12-G04	27	18.5	17	23	30.4	23	44.4	17	57.4	45.4	9	48.5
Ø 16	3/8	KQ2Y16-G03	21	23.8	21	28.6	33.1	28.6	54.2	20.6	81	60	11	42.7
	1/2	KQ2Y16-G04	27	23.8	21	28.6	33.8	28.6	53.4	20.6	113	60	13	66.2

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D1 is maximum diameter.

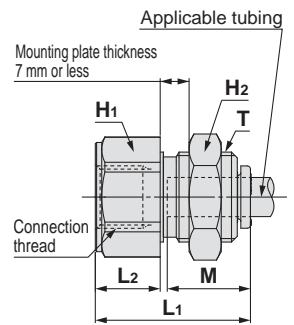


### Bulkhead Connector: KQ2E



Applicable tubing O.D. [mm]	Connection thread G	Model	T (M)	H1 (Width across flats)	H2 (Width across flats)	L1	L2	Mounting hole	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
										Nylon	Urethane		
Ø 4	1/8	KQ2E04-G01	M12 x 1	14	14	25.1	10.7	13	13.3	5.6	4	3	21.3
	1/4	KQ2E04-G02	M12 x 1	17	14	30.7	16.3	13	13.3	5.6	4	3	31.5
Ø 6	1/8	KQ2E06-G01	M14 x 1	17	17	24.5	10.1	15	13.3	13.1	10.4	4.5	29.8
	1/4	KQ2E06-G02	M14 x 1	17	17	30	15.6	15	13.3	13.1	10.4	4.5	32.8
	3/8	KQ2E06-G03	M14 x 1	21	17	32	17.6	15	13.3	13.1	10.4	4.5	45.5
Ø 8	1/8	KQ2E08-G01	M16 x 1	17	19	24.7	7.3	17	14.2	26.1	18	6	30.9
	1/4	KQ2E08-G02	M16 x 1	17	19	30	12.6	17	14.2	26.1	18	6	33.5
Ø 10	3/8	KQ2E08-G03	M16 x 1	21	19	33.1	15.7	17	14.2	26.1	18	6	46.1
	1/4	KQ2E10-G02	M20 x 1	22	24	31	11.6	21	15.6	41.5	29.5	7.5	66.7
Ø 12	3/8	KQ2E10-G03	M20 x 1	22	24	32.5	13.1	21	15.6	41.5	29.5	7.5	61.6
	1/2	KQ2E12-G04	M22 x 1	27	27	39.9	19.5	23	17	58.3	46.1	9	94
Ø 16	3/8	KQ2E16-G03	M28 x 1.5	30	32	35.9	13	29	20.6	96	67	13	127.6
	1/2	KQ2E16-G04	M28 x 1.5	30	32	41	18.1	29	20.6	113	67	13	137.2

□: A (Brass), N (Brass + Electroless nickel plating)



# KQ2 Series Spare Parts

Please contact SMC for detailed dimensions, specifications, and lead times.

## 1 Spare Parts

### Brass

Description	Part no.	Applicable model
Pipe nut	<b>KQ04-P01A</b>	KQ2E04-G01A, KQ2E04-G02A
	<b>KQ06-P01A</b>	KQ2E06-G01A, KQ2E06-G02A, KQ2E06-G03A
	<b>KQ08-P01A</b>	KQ2E08-G01A, KQ2E08-G02A, KQ2E08-G03A
	<b>KQ10-P01A</b>	KQ2E10-G02A, KQ2E10-G03A
	<b>KQ12-P01A</b>	KQ2E12-G03A, KQ2E12-G04A
	<b>KQ16-P01A</b>	KQ2E16-G03A, KQ2E16-G04A

### Brass + Electroless nickel plating

Description	Part no.	Applicable model
Pipe nut	<b>KQ04-P01N</b>	KQ2E04-G01N, KQ2E04-G02N
	<b>KQ06-P01N</b>	KQ2E06-G01N, KQ2E06-G02N, KQ2E06-G03N
	<b>KQ08-P01N</b>	KQ2E08-G01N, KQ2E08-G02N, KQ2E08-G03N
	<b>KQ10-P01N</b>	KQ2E10-G02N, KQ2E10-G03N
	<b>KQ12-P01N</b>	KQ2E12-G03N, KQ2E12-G04N
	<b>KQ16-P01N</b>	KQ2E16-G03N, KQ2E16-G04N

Round  
Type



Sealant/Gasket Seal  
Metric Size M, R, Rc

Inch Size UNF, NPT

Inch Size M, R, Rc

Metric Size G

Face Seal  
Metric Size R, Rc

Inch Size NPT

Inch Size R

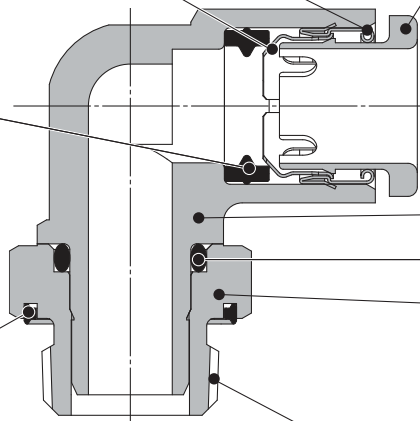
Gasket Seal  
Metric Size Uni

Inch Size Uni

# Metric Size One-touch Fittings

Applicable Tubing: Metric Size, Connection Thread: R, Rc

## KQ2 Series



**Guide**

**Chuck**

Suitable for use with nylon and urethane. Large retaining force. The chuck provides secure retention and the collet increases the holding force on the tube.

**Seal**

Can be used for a wide range of pressures from a low vacuum up to a pressure of 1 MPa. The use of a special profile ensures sealing and reduces resistance when the tube is inserted.

**Face seal method**

**Seal ring**

Piping installability is improved by changing to the face seal structure.

**Release button**

Requires little force for removal. Releases the chuck collet to remove the tube as well as to prevent the chuck from biting too deeply into the tubing.

**Body**


**O-ring**

**Stud**

Effective when piping in a confined space. Body part rotates allowing for positioning.

**Connection thread**

R, Rc



**One-touch IN/OUT connection.**  
Possible to use in vacuum to -100 kPa.

**Drastically reduces screw-in time with the face seal method.**



### Applicable Tubing

Tubing material	FEP, PFA, Nylon, Soft nylon, Polyurethane
Tubing O.D.	Ø 3.2, Ø 4, Ø 6, Ø 8, Ø 10, Ø 12, Ø 16

### Specifications

<b>Fluid</b>		Air, Water*1
<b>Operating pressure range*2</b>		-100 kPa to 1 MPa
<b>Proof pressure (at 23 °C)</b>		3 MPa
<b>Ambient and fluid temperature</b>		-5 to 60 °C, Water: 0 to 40 °C (No freezing)
<b>Thread</b>	<b>Mounting section</b>	JIS B0203 (Taper thread for piping) JIS B0205 (Metric coarse thread)
	<b>Nut section</b>	JIS B0205 (Metric fine thread)
<b>Sealant on the threads</b>		Seal ring

\*1 The surge pressure must be under the maximum operating pressure.

\*2 Do not use the fittings with a leak tester or for vacuum retention because they are not guaranteed for zero leakage.

### Principal Parts Material

Body	C3604, PBT
Stud	C3604 (Thread portion)
Chuck	Stainless steel 304
Guide	Stainless steel 304
Release button	POM
Seal, O-ring, Seal ring	NBR

## How to Order

### Threaded Type

**KQ2 H 06 - 01 A P**

One-touch fittings

Face seal

Model

Symbol	Model
H	Male connector
S	Hexagon socket head male connector
L	Male elbow
LU	Branch male elbow
K	45° male elbow
V	Universal male elbow
VS	Hexagon socket head universal male elbow
VF	Universal female elbow
VD	Double universal male elbow
VT	Triple universal male elbow
Z	Branch universal male elbow
ZF	Branch universal female elbow
ZD	Double branch universal male elbow
ZT	Triple branch universal male elbow
W	Extended male elbow
T	Male branch tee
Y	Male run tee
D	Male delta union
U	Branch "Y"
UD	Double branch "Y"
N	Adapter

Thread material/Surface treatment

Symbol	Thread material/Surface treatment
A	Brass
N	Brass + Electroless nickel plating

Port size/Applicable tubing O.D.

Symbol	Size	
Thread connection	<b>01</b>	R 1/8, Rc 1/8
	<b>02</b>	R 1/4, Rc 1/4
	<b>03</b>	R 3/8, Rc 3/8
	<b>04</b>	R 1/2, Rc 1/2

Applicable tubing O.D.

Symbol	Size
<b>23</b>	Ø 3.2
<b>04</b>	Ø 4
<b>06</b>	Ø 6
<b>08</b>	Ø 8
<b>10</b>	Ø 10
<b>12</b>	Ø 12
<b>16</b>	Ø 16

Round Type



Metric Size M, R, Rc

Sealant/Gasket Seal

Inch Size UNF, NPT

Inch Size M, R, Rc

Metric Size G

Metric Size R, Rc

Face Seal

Inch Size NPT

Inch Size R

Metric Size Uni

Inch Size Uni

Gasket Seal

# Metric Size One-touch Fittings

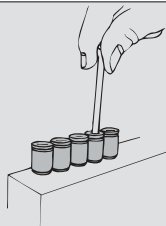
## Round Type Variations

### Hexagon socket head male connector

**KQ2S** P.176



Internal hexagon socket allows tightening with a hexagon wrench in confined spaces.

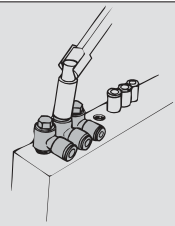


### Universal male elbow

**KQ2V** P.178



Hexagon head of the body allows tightening with a box wrench in confined spaces.

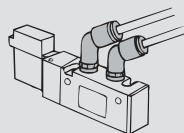


### 45° male elbow

**KQ2K** P.178



Use to pipe a female thread at a 45° angle. Its direction is in-between that of the male connector and male elbow.

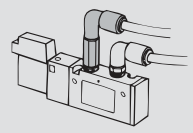


### Extended male elbow

**KQ2W** P.181



Basically, it is used together with a male elbow. Its extended height allows for multi-levelled piping and prevents interference among fittings.

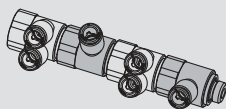


### Universal female elbow

**KQ2VF** P.179



Use to branch a male or female thread in the same direction and at a 90° angle. Multiple connections possible.

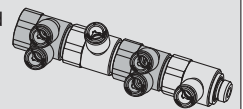


### Branch universal female elbow

**KQ2ZF** P.180



Use to two-branch a male or female thread in the same direction and at a 90° angle. Multiple connections possible.



### Male connector

**KQ2H** P.176



Use to pipe a female thread in the same direction. Most general model.

### Double universal male elbow

**KQ2VD** P.179



Use to two-branch a female thread at right angles. Two individual parts rotate 360°.

### Male elbow

**KQ2L** P.177



Use to pipe a female thread at right angles. Most general model.

### Triple universal male elbow

**KQ2VT** P.179



Use to three-branch a female thread at right angles. Three individual parts rotate 360°.

### Male branch tee

**KQ2T** P.182



Use to branch a female thread at both 90° angles.

### Branch universal male elbow

**KQ2Z** P.180



Hexagon head of the body allows tightening with a box wrench. Use for branch connections.

### Hexagon socket head universal male elbow

**KQ2VS** P.178



Hexagon socket on the top allows tightening with a hexagon wrench in confined spaces.

### Double branch universal male elbow

**KQ2ZD** P.180



Use to four-branch a female thread at right angles. Two individual parts rotate 360°.

### Branch male elbow

**KQ2LU** P.177



Use to two-branch a female thread at right angles.

### Male run tee

**KQ2Y** P.182



Use to branch a female thread in the same direction and at a 90° angle.

### Adapter

**KQ2N** P.184



Use to connect One-touch fittings and R female threads.



# Metric Size One-touch Fittings **KQ2 Series**

Applicable Tubing: Metric Size, Connection Thread: R, Rc

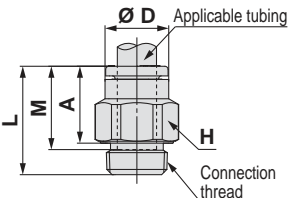
## Dimensions

### Male Connector: KQ2H (Face seal)



Applicable tubing O.D. [mm]	Connection thread R	Model	H (Width across flats)	Ø D	L	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
								Nylon	Urethane		
Ø 3.2	1/8	KQ2H23-01□P	12	6.7	14.1	8.9	13.3	3.4	2.9	2.5	6.3
	1/4	KQ2H23-02□P	17	6.7	15	7.4	13.3	3.4	2.9	2.5	15.1
Ø 4	1/8	KQ2H04-01□P	12	7.7	16.4	11.2	13.3	4.8	3.4	3	6.9
	1/4	KQ2H04-02□P	17	7.7	15	7.4	13.3	4.8	3.4	3	14.5
Ø 6	1/8	KQ2H06-01□P	12	9.7	17.2	12	13.3	13.1	10.4	4.5	6.5
	1/4	KQ2H06-02□P	17	9.7	14	6.4	13.3	13.1	10.4	4.5	10.6
	3/8	KQ2H06-03□P	21	9.7	15.2	7.6	13.3	13.1	10.4	4.5	22.8
Ø 8	1/8	KQ2H08-01□P	14	13	21.1	15.9	14.2	26.1	18	6	11.8
	1/4	KQ2H08-02□P	17	13	19.9	12.3	14.2	26.1	18	6	13.9
	3/8	KQ2H08-03□P	21	13	15.2	7.6	14.2	26.1	18	6	19.6
Ø 10	1/8	KQ2H10-01□P	17	15.6	22.9	17.7	15.6	26.1	26.1	6	16.3
	1/4	KQ2H10-02□P	17	15.6	24.4	16.8	15.6	41.5	29.5	7.5	17.9
	3/8	KQ2H10-03□P	21	15.6	21.2	13.6	15.6	41.5	29.5	7.5	23.7
	1/2	KQ2H10-04□P	27	15.6	18.8	8.4	15.6	41.5	29.5	7.5	40.9
Ø 12	1/4	KQ2H12-02□P	19	18.2	26.6	19	17	58.3	46.1	9	22
	3/8	KQ2H12-03□P	21	18.2	25.1	17.5	17	58.3	46.1	9	28.6
	1/2	KQ2H12-04□P	27	18.2	25.1	14.7	17	58.3	46.1	9	45
Ø 16	1/4	KQ2H16-02□P	24	23.6	30.6	23	20.6	58.3	58.3	9	42.5
	3/8	KQ2H16-03□P	24	23.6	30.6	23	20.6	81	67	11	39.2
	1/2	KQ2H16-04□P	27	23.6	32.1	21.7	20.6	113	67	13	55

□: A (Brass), N (Brass + Electroless nickel plating)



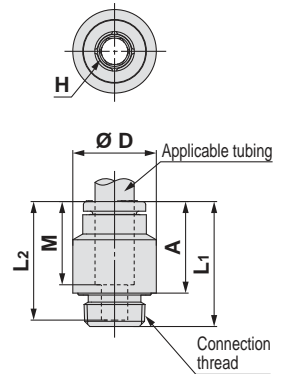
### Hexagon Socket Head Male Connector: KQ2S (Face seal)



Applicable tubing O.D. [mm]	Connection thread R	Model	H (Width across flats)	*1 Ø D	L1	L2	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
									Nylon	Urethane		
Ø 4	1/8	KQ2S04-01□P	3	13	20.6	19.6	15.4	13.3	4.1	3.6	3.1	11.6
Ø 6	1/8	KQ2S06-01□P	4	13	19.8	18.8	14.6	13.3	10	10	4	9.6
	1/4	KQ2S06-02□P	4	18	19.8	18.8	12.2	13.3	10.7	10	4.1	16.3
Ø 8	1/8	KQ2S08-01□P	5	13	21.2	19.7	16	14.2	17.2	16.2	5.1	9
	1/4	KQ2S08-02□P	6	18	20.4	19.5	12.8	14.2	23.3	16.2	6.1	15.5
Ø 10	1/8	KQ2S10-01□P	5	18	23	21.1	17.8	15.6	17.2	16.2	5.1	17.8
	1/4	KQ2S10-02□P	8	18	28.8	20.1	21.2	15.6	39	26.6	8.1	19.2
Ø 12	3/8	KQ2S10-03□P	8	22	21.1	20.1	13.5	15.6	39	26.6	8.1	23.4
	1/2	KQ2S10-04□P	8	26	21.1	20.1	10.7	15.6	39	26.6	8.1	40.6
Ø 16	1/4	KQ2S12-02□P	8	18.2	30.2	21.5	22.6	17	46	44.5	8.1	24.3
	3/8	KQ2S12-03□P	10	22	25.1	21.8	17.5	17	60	44.5	10.1	28.2
	1/2	KQ2S12-04□P	10	26	25.2	21.8	14.8	17	60	44.5	10.1	40.7
Ø 16	1/4	KQ2S16-02□P	8	23.6	30.6	25.1	23	20.6	46	46	8.1	35.1
	3/8	KQ2S16-03□P	10	23.6	30.6	25.4	23	20.6	81	67	10.1	27.9
	1/2	KQ2S16-04□P	12	26	32.1	26.1	21.7	20.6	113	67	12.1	48.2

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D is maximum diameter.



Round Type



Metric Size M, R, Rc

Sealant/Gasket Seal

Inch Size UNF, NPT

Inch Size M, R, Rc

Metric Size G

Face Seal

Metric Size R, Rc

Inch Size NPT

Inch Size R

Gasket Seal

Metric Size Uni

Inch Size Uni

# KQ2 Series

Applicable Tubing: Metric Size, Connection Thread: R, Rc

## Dimensions

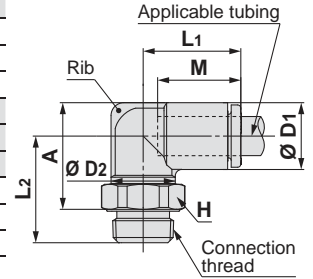
### Male Elbow: KQ2L (Face seal)



Applicable tubing O.D. [mm]	Connection thread R	Model	H (Width across flats)	*1 Ø D1	Ø D2	L1	L2	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]	With a rib
										Nylon	Urethane			
Ø 3.2	1/8	KQ2L23-01□P	12	7.1	10	14.5	16	14.3	13.3	3	2.5	2.5	5.1	—
	1/4	KQ2L23-02□P	17	7.1	10	14.5	19.4	15.3	13.3	3	2.5	2.5	14.3	—
Ø 4	1/8	KQ2L04-01□P	12	8.2	10	14.8	15.5	14.4	13.3	4.6	3.3	3	5.2	●
	1/4	KQ2L04-02□P	17	8.2	10	14.8	19.9	16.4	13.3	4.6	3.3	3	14.5	●
Ø 6	1/8	KQ2L06-01□P	12	10.4	10	15.5	16.6	16.6	13.3	11.4	9	4.5	5.7	—
	1/4	KQ2L06-02□P	17	10.4	10	15.5	21	18.6	13.3	11.4	9	4.5	15	—
	3/8	KQ2L06-03□P	21	10.4	10	15.5	23	20.6	13.3	11.4	9	4.5	30.2	—
Ø 8	1/8	KQ2L08-01□P	12	13.2	10	16.4	18	19.4	14.2	11.4	11.4	4.5	6.5	●
	1/4	KQ2L08-02□P	17	13.2	12	17.2	22.4	21.4	14.2	21.6	14.9	6	13.7	●
	3/8	KQ2L08-03□P	21	13.2	12	17.2	24.4	23.4	14.2	21.6	14.9	6	28.7	●
Ø 10	1/8	KQ2L10-01□P	12	15.9	12	18.6	22.2	24.9	15.6	21.6	14.9	6	10.1	●
	1/4	KQ2L10-02□P	17	15.9	17	19.3	25.7	26.0	15.6	35.2	25	7.5	17.9	●
	3/8	KQ2L10-03□P	21	15.9	17	19.3	25.8	26.1	15.6	35.2	25	7.5	17.8	●
Ø 12	1/4	KQ2L12-02□P	17	18.5	17	21.5	27	28.6	17	50.2	39.7	9	19.6	●
	3/8	KQ2L12-03□P	21	18.5	17	21.5	27.1	28.7	17	50.2	39.7	9	19.7	●
	1/2	KQ2L12-04□P	27	18.5	17	21.5	31.9	30.7	17	50.2	39.7	9	47	●
Ø 16	1/4	KQ2L16-02□P	17	23.8	17	25.1	29.6	33.9	20.6	50.2	50.2	9	24	●
	3/8	KQ2L16-03□P	21	23.8	21	27.1	32.7	37.0	20.6	71	58.9	11	33.8	—
	1/2	KQ2L16-04□P	27	23.8	21	27.1	34.7	36.2	20.6	100	58.9	13	59.9	—

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D1 is maximum diameter.



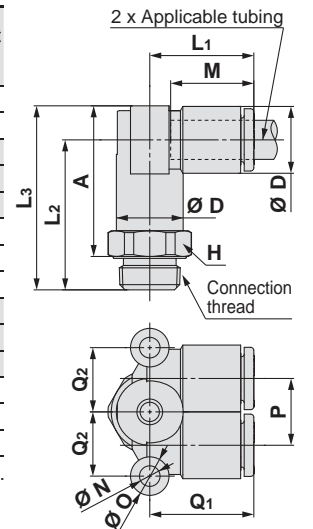
### Branch Male Elbow: KQ2LU (Face seal)



Applicable tubing O.D. [mm]	Connection thread R	Model	H (Width across flats)	*1 Ø D	L1	L2	L3	A	M	P	O	N	Q1	Q2	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
															Nylon	Urethane		
Ø 4	1/8	KQ2LU04-01□P	12	8.2	15.8	22.6	26.7	21.5	13.3	8.2	6	3.2	15.8	7.9	6	4.1	3	9.5
	1/4	KQ2LU04-02□P	17	8.2	15.8	26	30.1	22.5	13.3	8.2	6	3.2	15.8	7.9	6	4.1	3	19.4
Ø 6	1/8	KQ2LU06-01□P	12	10.4	16.5	23.3	28.5	23.3	13.3	10.4	6	3.2	16.5	10	13.9	11	4.5	10.2
	1/4	KQ2LU06-02□P	17	10.4	16.5	26.7	31.9	24.3	13.3	10.4	6	3.2	16.5	10	13.9	11	4.5	19.8
	3/8	KQ2LU06-03□P	21	10.4	16.5	26.2	31.4	23.8	13.3	10.4	6	3.2	16.5	10	13.9	11	4.5	28.1
Ø 8	1/8	KQ2LU08-01□P	14	13.2	18.2	25	31.6	26.4	14.2	13.2	8	4.2	18.2	13.1	26.3	18.2	6	16.4
	1/4	KQ2LU08-02□P	17	13.2	18.2	28.4	35	27.4	14.2	13.2	8	4.2	18.2	13.1	26.3	18.2	6	22
	3/8	KQ2LU08-03□P	21	13.2	18.2	27.9	34.5	26.9	14.2	13.2	8	4.2	18.2	13.1	26.3	18.2	6	30.4
Ø 10	1/4	KQ2LU10-02□P	17	15.9	20.3	30.5	38.5	30.9	15.6	15.9	8	4.2	20.3	15.9	40.8	29	7.5	24.9
	3/8	KQ2LU10-03□P	21	15.9	20.3	30	38	30.4	15.6	15.9	8	4.2	20.3	15.9	40.8	29	7.5	32.4
	1/2	KQ2LU10-04□P	27	15.9	20.3	32.3	40.3	29.9	15.6	15.9	8	4.2	20.3	15.9	40.8	29	7.5	50.5
Ø 12	1/4	KQ2LU12-02□P	17	18.5	22.5	32.7	41.9	34.3	17	18.5	8	4.2	22.5	17.9	57.2	45.2	9	39.3
	3/8	KQ2LU12-03□P	21	18.5	22.5	32.2	41.4	33.8	17	18.5	8	4.2	22.5	17.9	57.2	45.2	9	37
	1/2	KQ2LU12-04□P	27	18.5	22.5	34.5	43.7	33.3	17	18.5	8	4.2	22.5	17.9	57.2	45.2	9	52.5

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D is maximum diameter.



# Metric Size One-touch Fittings **KQ2 Series**

Applicable Tubing: Metric Size, Connection Thread: R, Rc

## Dimensions

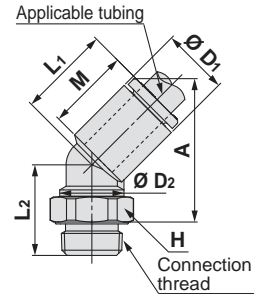
### 45° Male Elbow: KQ2K (Face seal)



Applicable tubing O.D. [mm]	Connection thread R	Model	H (Width across flats)	*1 Ø D1	Ø D2	L1	L2	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
										Nylon	Urethane		
Ø 4	1/8	KQ2K04-01□P	12	8.2	10	14.4	12	19.5	13.3	4.8	3.4	3	5.1
	1/4	KQ2K04-02□P	17	8.2	10	14.4	15.4	20.5	13.3	4.8	3.4	3	14.3
Ø 6	1/8	KQ2K06-01□P	12	10.4	10	14.7	14.1	22.5	13.3	8.7	6.9	4.5	5.5
	1/4	KQ2K06-02□P	17	10.4	10	14.7	17.5	23.5	13.3	8.7	6.9	4.5	14.7
	3/8	KQ2K06-03□P	21	10.4	10	14.7	19.5	25.5	13.3	8.7	6.9	4.5	29.9
Ø 8	1/8	KQ2K08-01□P	12	13.2	10	16	15	25.2	14.2	8.7	8.7	4.5	6.4
	1/4	KQ2K08-02□P	17	13.2	12	16	19.4	27.2	14.2	19.7	19.7	6	13.5
Ø 10	3/8	KQ2K08-03□P	21	13.2	12	16	21.4	29.2	14.2	19.7	19.7	6	28.5
	1/8	KQ2K10-01□P	12	15.9	12	18.2	20.1	32.7	15.6	30.9	23.2	6	10.1
	1/4	KQ2K10-02□P	17	15.9	17	17.6	26.1	35.9	15.6	30.9	23.2	7.5	18
Ø 12	3/8	KQ2K10-03□P	21	15.9	17	17.6	20.5	30.3	15.6	30.9	23.2	7.5	17.3
	1/2	KQ2K10-04□P	27	15.9	17	17.6	25.3	32.3	15.6	30.9	23.2	7.5	44.6
	1/4	KQ2K12-02□P	17	18.5	17	19.4	26	37.9	17	44.5	35.1	9	19.5
Ø 16	3/8	KQ2K12-03□P	21	18.5	17	19.4	20.4	32.3	17	44.5	35.1	9	18.8
	1/2	KQ2K12-04□P	27	18.5	17	19.4	25.2	34.3	17	44.5	35.1	9	46.1
	1/4	KQ2K16-02□P	17	23.8	17	24.3	26.6	43.3	20.6	44.5	44.5	9	23.9
Ø 16	3/8	KQ2K16-03□P	21	23.8	21	23.8	28.7	45	20.6	65.8	58	11	32.2
	1/2	KQ2K16-04□P	27	23.8	21	23.8	30.7	44.2	20.6	91.9	58	13	58.3

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D1 is maximum diameter.



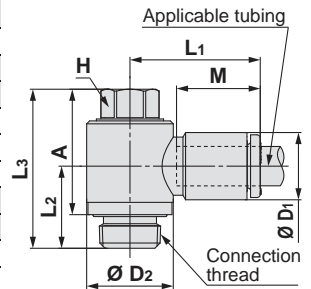
### Universal Male Elbow: KQ2V (Face seal)



Applicable tubing O.D. [mm]	Connection thread R	Model	H (Width across flats)	*1 Ø D1	Ø D2	L1	L2	L3	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
											Nylon	Urethane		
Ø 4	1/8	KQ2V04-01□P	8	8.2	13.4	19.3	12.7	24.6	19.4	13.3	2.9	2.9	3	12.6
Ø 6	1/8	KQ2V06-01□P	8	10.4	13.4	20.5	12.7	24.6	19.4	13.3	7.5	5.9	4.5	12.9
	1/4	KQ2V06-02□P	10	10.4	18	19.9	16.1	28.7	21.1	13.3	7.5	5.9	4.5	23.2
Ø 8	1/8	KQ2V08-01□P	12	13.2	17.6	23.5	14.1	26.6	21.4	14.2	16	11.2	6	22.7
	1/4	KQ2V08-02□P	12	13.2	18	23.5	16.7	29.2	21.6	14.2	16	11.2	6	27.2
	3/8	KQ2V08-03□P	14	13.2	22	23.1	17.4	33.2	25.6	14.2	16	11.2	6	42.1
Ø 10	1/4	KQ2V10-02□P	14	15.9	20.6	25.9	18.1	33.1	25.5	15.6	27	20.3	7.5	36.5
	3/8	KQ2V10-03□P	14	15.9	22	25.9	18.2	33.2	25.6	15.6	27	20.3	7.5	43.4
Ø 12	3/8	KQ2V12-03□P	17	18.5	25.2	28.5	19.3	35.5	27.9	17	39	30.8	9	56.7
	1/2	KQ2V12-04□P	17	18.5	26	28.5	22.6	38.8	28.4	17	39	30.8	9	72.2
Ø 16	3/8	KQ2V16-03□P	21	23.8	32.3	34.2	23	43.3	35.7	20.6	55	46	11	99.9
	1/2	KQ2V16-04□P	21	23.8	32.3	34.2	26.3	46.6	36.2	20.6	78	46	13	113

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D1 is maximum diameter.



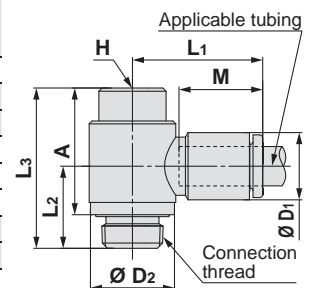
### Hexagon Socket Head Universal Male Elbow: KQ2VS (Face seal)



Applicable tubing O.D. [mm]	Connection thread R	Model	H (Width across flats)	*1 Ø D1	Ø D2	L1	L2	L3	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
											Nylon	Urethane		
Ø 4	1/8	KQ2VS04-01□P	6	8.2	13.4	19.3	12.7	24.8	19.6	13.3	2.9	2.9	3	12.6
Ø 6	1/8	KQ2VS06-01□P	6	10.4	13.4	20.5	12.7	24.8	19.6	13.3	7.5	5.9	4.5	12.9
	1/4	KQ2VS06-02□P	6	10.4	18	19.9	16.1	24.7	17.1	13.3	7.5	5.9	4.5	19.2
Ø 8	1/8	KQ2VS08-01□P	8	13.2	17.6	23.5	14.1	25	19.8	14.2	16	11.2	6	19.3
	1/4	KQ2VS08-02□P	8	13.2	18	23.5	16.7	27.7	20.1	14.2	16	11.2	6	23.8
	3/8	KQ2VS08-03□P	8	13.2	22	23.1	17.4	29.3	21.7	14.2	16	11.2	6	34.4
Ø 10	1/4	KQ2VS10-02□P	8	15.9	20.6	25.9	18.1	29.2	21.6	15.6	27	20.3	7.5	29.2
	3/8	KQ2VS10-03□P	8	15.9	22	25.9	18.2	29.3	21.7	15.6	27	20.3	7.5	35.6
Ø 12	3/8	KQ2VS12-03□P	10	18.5	25.2	28.5	19.3	33	25.4	17	39	30.8	9	48.6
	1/2	KQ2VS12-04□P	10	18.5	26	28.5	22.6	36.3	25.9	17	39	30.8	9	64.1

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D1 is maximum diameter.



Round Type

Metric Size M, R, Rc

Inch Size UNF, NPT

Inch Size M, R, Rc

Metric Size G

Metric Size R, Rc

Inch Size NPT

Inch Size R

Metric Size Uni

Inch Size Uni

# KQ2 Series

Applicable Tubing: Metric Size, Connection Thread: R, Rc

## Dimensions

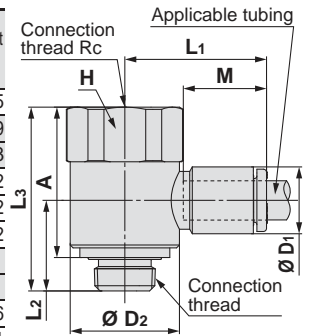
### Universal Female Elbow: KQ2VF (Face seal)



Applicable tubing O.D. [mm]	Connection thread R, Rc	Model	H (Width across flats)	*1 Ø D1	Ø D2	L1	L2	L3	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
											Nylon	Urethane		
											Ø 4	1/8		
Ø 6	1/8	KQ2VF06-01□P	17	10.4	17	22.4	14.1	28.6	23.4	13.3	7.5	5.9	4.5	28.9
	1/4	KQ2VF06-02□P	22	10.4	21.7	23.2	17.6	36.4	28.8	13.3	7.5	5.9	4.5	60.3
Ø 8	1/8	KQ2VF08-01□P	17	13.2	17.6	23.5	14.8	29.3	24.1	14.2	16	11.2	6	27.2
	1/4	KQ2VF08-02□P	22	13.2	21.6	25.1	17.8	36.4	28.8	14.2	16	11.2	6	61.2
	3/8	KQ2VF08-03□P	27	13.2	27.7	26.2	22.2	42.2	34.6	14.2	16	11.2	6	90.2
Ø 10	1/4	KQ2VF10-02□P	22	15.9	22.6	26.9	18.8	38.7	31.1	15.6	27	20.3	7.5	61
	3/8	KQ2VF10-03□P	27	15.9	26.6	27.6	21.4	42.2	34.6	15.6	27	20.3	7.5	90
Ø 12	3/8	KQ2VF12-03□P	27	18.5	26.6	29.9	20.9	42.2	34.6	17	39	30.8	9	91.6
	1/2	KQ2VF12-04□P	30	18.5	31.6	32.1	22.3	47.2	36.8	17	39	30.8	9	144.1

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D1 is maximum diameter.



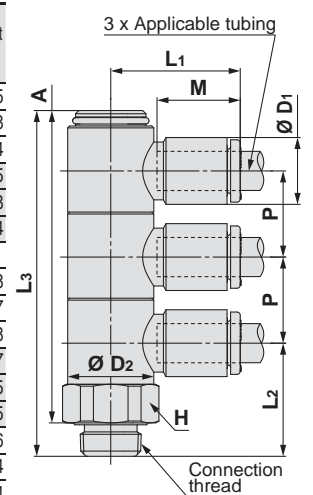
### Triple Universal Male Elbow: KQ2VT (Face seal)



Applicable tubing O.D. [mm]	Connection thread R	Model	H (Width across flats)	*1 Ø D1	Ø D2	L1	L2	L3	A	M	P	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
												Nylon	Urethane		
												Ø 4	1/8		
1/4	KQ2VT04-02□P	17	8.2	13.4	19.3	21	57.2	49.6	13.3	13.4	2.9		2.9	3	36.8
3/8	KQ2VT04-03□P	21	8.2	13.4	19.3	23	59.2	51.6	13.3	13.4	2.9		2.9	3	54.4
Ø 6	1/8	KQ2VT06-01□P	14	10.4	13.4	20.5	17.6	53.8	48.6	13.3	13.4	7.5	5.9	4.5	28.5
	1/4	KQ2VT06-02□P	17	10.4	13.4	20.5	21	57.2	49.6	13.3	13.4	7.5	5.9	4.5	37.8
	3/8	KQ2VT06-03□P	21	10.4	13.4	20.5	23	59.2	51.6	13.3	13.4	7.5	5.9	4.5	55.4
Ø 8	1/8	KQ2VT08-01□P	19	13.2	17.6	23.7	21	63.8	58.6	14.2	15.9	16	11.2	6	67
	1/4	KQ2VT08-02□P	19	13.2	17.6	23.7	23.4	66.2	58.6	14.2	15.9	16	11.2	6	60.8
	3/8	KQ2VT08-03□P	21	13.2	17.6	23.7	24.4	67.2	59.6	14.2	15.9	16	11.2	6	72.7
Ø 10	1/2	KQ2VT08-04□P	27	13.2	17.6	23.7	29.2	72	61.6	14.2	15.9	16	11.2	6	112.8
	1/4	KQ2VT10-02□P	21	15.9	20.6	25.7	25.8	77	69.4	15.6	19.2	27	20.3	7.5	89.7
	3/8	KQ2VT10-03□P	21	15.9	20.6	25.7	25.8	77	69.4	15.6	19.2	27	20.3	7.5	86.5
Ø 12	1/2	KQ2VT10-04□P	27	15.9	20.6	25.7	30.6	81.8	71.4	15.6	19.2	27	20.3	7.5	125.5
	1/4	KQ2VT12-02□P	26	18.5	25.2	28.9	29.1	86.7	79.1	17	21.6	39	30.8	9	158.6
	3/8	KQ2VT12-03□P	26	18.5	25.2	28.9	29.1	86.7	79.1	17	21.6	39	30.8	9	145.4
1/2	KQ2VT12-04□P	27	18.5	25.2	28.9	31.9	89.5	79.1	17	21.6	39	30.8	9	155.4	

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D1 is maximum diameter.



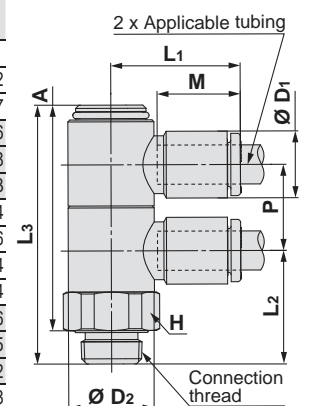
### Double Universal Male Elbow: KQ2VD (Face seal)



Applicable tubing O.D. [mm]	Connection thread R	Model	H (Width across flats)	*1 Ø D1	Ø D2	L1	L2	L3	A	M	P	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
												Nylon	Urethane		
												Ø 4	1/8		
1/4	KQ2VD04-02□P	17	8.2	13.4	19.3	21	43.7	36.1	13.3	13.4	2.9		2.9	3	31.2
3/8	KQ2VD04-03□P	21	8.2	13.4	19.3	23	45.7	38.1	13.3	13.4	2.9		2.9	3	48.7
Ø 6	1/8	KQ2VD06-01□P	14	10.4	13.4	20.5	17.6	40.3	35.1	13.3	13.4	7.5	5.9	4.5	22.6
	1/4	KQ2VD06-02□P	17	10.4	13.4	20.5	21	43.7	36.1	13.3	13.4	7.5	5.9	4.5	31.8
	3/8	KQ2VD06-03□P	21	10.4	13.4	20.5	23	45.7	38.1	13.3	13.4	7.5	5.9	4.5	49.3
Ø 8	1/8	KQ2VD08-01□P	19	13.2	17.6	23.7	21	47.8	42.6	14.2	15.9	16	11.2	6	52.4
	1/4	KQ2VD08-02□P	19	13.2	17.6	23.7	23.4	50.2	42.6	14.2	15.9	16	11.2	6	48.6
	3/8	KQ2VD08-03□P	21	13.2	17.6	23.7	24.4	51.2	43.6	14.2	15.9	16	11.2	6	60.4
Ø 10	1/2	KQ2VD08-04□P	27	13.2	17.6	23.7	29.2	56	45.6	14.2	15.9	16	11.2	6	100.4
	1/4	KQ2VD10-02□P	21	15.9	20.6	25.7	25.8	57.7	50.1	15.6	19.2	27	20.3	7.5	70.6
	3/8	KQ2VD10-03□P	21	15.9	20.6	25.7	25.8	57.7	50.1	15.6	19.2	27	20.3	7.5	69.5
Ø 12	1/2	KQ2VD10-04□P	27	15.9	20.6	25.7	30.6	62.5	52.1	15.6	19.2	27	20.3	7.5	108.2
	1/4	KQ2VD12-02□P	26	18.5	25.2	28.9	29.1	65	57.4	17	21.6	39	30.8	9	125.8
	3/8	KQ2VD12-03□P	26	18.5	25.2	28.9	29.1	65	57.4	17	21.6	39	30.8	9	117.4
1/2	KQ2VD12-04□P	27	18.5	25.2	28.9	31.9	67.8	57.4	17	21.6	39	30.8	9	128.8	

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D1 is maximum diameter.



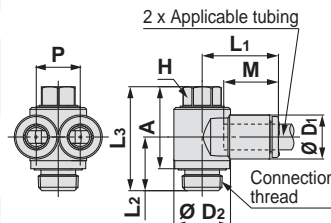
## Dimensions

### Branch Universal Male Elbow: KQ2Z (Face seal)



Applicable tubing O.D. [mm]	Connection thread R	Model	H (Width across flats)	Ø D1 <sup>*1</sup>	Ø D2	L1	L2	L3	A	M	P	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
												Nylon	Urethane		
Ø 4	1/8	KQ2Z04-01□P	8	8.2	13.4	18.5	12.7	24.6	19.4	13.3	8.2	4.7	4.7	3	13.4
	1/8	KQ2Z06-01□P	8	10.4	13.4	18.4	12.7	24.6	19.4	13.3	10.4	10.8	8.6	4.5	14
Ø 6	1/4	KQ2Z06-02□P	14	10.4	20.6	21.5	17.3	33.1	25.5	13.3	10.4	10.8	8.6	4.5	35.4
	3/8	KQ2Z06-03□P	14	10.4	22	21.5	17.4	33.2	25.6	13.3	10.4	10.8	8.6	4.5	42.3
Ø 8	1/8	KQ2Z08-01□P	12	13.2	17.6	21.2	14.1	26.6	21.4	14.2	13.2	20.5	14.2	6	24.5
	1/4	KQ2Z08-02□P	12	13.2	18	21.2	16.7	29.2	21.6	14.2	13.2	20.5	14.2	6	28.9
Ø 8	3/8	KQ2Z08-03□P	14	13.2	22	22.3	17.4	33.2	25.6	14.2	13.2	20.5	14.2	6	44
	1/4	KQ2Z10-02□P	14	15.9	21.6	23.6	18.1	33.1	25.5	15.6	15.9	31.8	22.6	7.5	40
Ø 10	3/8	KQ2Z10-03□P	14	15.9	22	23.6	18.2	33.2	25.6	15.6	15.9	31.8	22.6	7.5	46.9
	1/2	KQ2Z12-04□P	17	18.5	24.1	26.9	19.1	35.5	27.9	17	18.5	44.6	35.3	9	60.5
Ø 12	1/2	KQ2Z12-04□P	17	18.5	26	26.9	22.4	38.8	28.4	17	18.5	44.6	35.3	9	76

□: A (Brass), N (Brass + Electroless nickel plating) \*1 Ø D1 is maximum diameter.

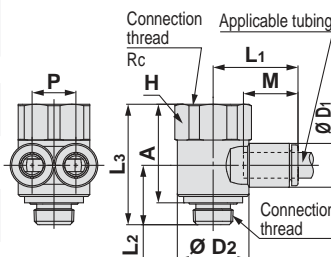


### Branch Universal Female Elbow: KQ2ZF (Face seal)



Applicable tubing O.D. [mm]	Connection thread R, Rc	Model	H (Width across flats)	Ø D1 <sup>*1</sup>	Ø D2	L1	L2	L3	A	M	P	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
												Nylon	Urethane		
Ø 4	1/8	KQ2ZF04-01□P	17	8.2	17	20.5	14.1	28.6	23.4	13.3	8.2	4.7	4.7	3	29.3
	1/8	KQ2ZF06-01□P	17	10.4	17	20.5	14.1	28.6	23.4	13.3	10.4	10.8	8.6	4.5	29.9
Ø 6	1/4	KQ2ZF06-02□P	22	10.4	21.7	22.5	17.6	36.4	28.8	13.3	10.4	10.8	8.6	4.5	61.3
	1/8	KQ2ZF08-01□P	17	13.2	17.6	21.2	14.8	29.3	24.1	14.2	13.2	20.5	14.2	6	28.9
Ø 8	1/4	KQ2ZF08-02□P	22	13.2	21.4	23.3	17.8	36.4	28.8	14.2	13.2	20.5	14.2	6	62.8
	1/4	KQ2ZF10-02□P	22	15.9	22.6	24.6	18.8	38.7	31.1	15.6	15.9	31.8	22.6	7.5	63.8
Ø 10	3/8	KQ2ZF10-03□P	27	15.9	26.6	26.9	21.4	42.2	34.6	15.6	15.9	31.8	22.6	7.5	93
	3/8	KQ2ZF12-03□P	27	18.5	26.6	28.1	20.9	42.2	34.6	17	18.5	44.6	35.3	9	96
Ø 12	1/2	KQ2ZF12-04□P	30	18.5	31.6	32	22.3	47.2	36.8	17	18.5	44.6	35.3	9	148.8

□: A (Brass), N (Brass + Electroless nickel plating) \*1 Ø D1 is maximum diameter.

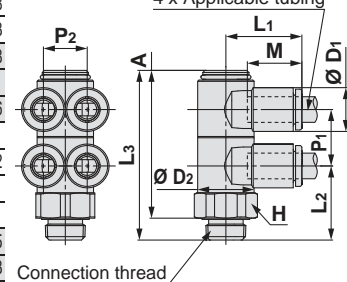


### Double Branch Universal Male Elbow: KQ2ZD (Face seal)



Applicable tubing O.D. [mm]	Connection thread R	Model	H (Width across flats)	Ø D1 <sup>*1</sup>	Ø D2	L1	L2	L3	A	M	P1	P2	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
													Nylon	Urethane		
Ø 4	1/8	KQ2ZD04-01□P	14	8.2	13.4	18.5	17.6	40.3	35.1	13.3	13.4	8.2	4.7	4.7	3	23.6
	1/4	KQ2ZD04-02□P	17	8.2	13.4	18.5	21	43.7	36.1	13.3	13.4	8.2	4.7	4.7	3	32.8
	3/8	KQ2ZD04-03□P	21	8.2	13.4	18.5	23	45.7	38.1	13.3	13.4	8.2	4.7	4.7	3	50.3
Ø 6	1/8	KQ2ZD06-01□P	14	10.4	13.4	18.4	17.6	40.3	35.1	13.3	13.4	10.4	10.8	8.6	4.5	24.8
	1/4	KQ2ZD06-02□P	17	10.4	13.4	18.4	21	43.7	36.1	13.3	13.4	10.4	10.8	8.6	4.5	34
	3/8	KQ2ZD06-03□P	21	10.4	13.4	18.4	23	45.7	38.1	13.3	13.4	10.4	10.8	8.6	4.5	51.6
Ø 8	1/8	KQ2ZD08-01□P	19	13.2	17.6	21.2	21	47.8	42.6	14.2	15.9	13.2	20.5	14.2	6	56.1
	1/4	KQ2ZD08-02□P	19	13.2	17.6	21.2	23.4	50.2	42.6	14.2	15.9	13.2	20.5	14.2	6	52.2
	3/8	KQ2ZD08-03□P	21	13.2	17.6	21.2	24.4	51.2	43.6	14.2	15.9	13.2	20.5	14.2	6	64.1
Ø 8	1/2	KQ2ZD08-04□P	27	13.2	17.6	21.2	29.2	56	45.6	14.2	15.9	13.2	20.5	14.2	6	104.1
	1/4	KQ2ZD10-02□P	21	15.9	20.6	23.6	25.8	57.7	50.1	15.6	19.2	15.9	31.8	21.6	7.5	76.5
Ø 10	3/8	KQ2ZD10-03□P	21	15.9	20.6	23.6	25.8	57.7	50.1	15.6	19.2	15.9	31.8	21.6	7.5	75.3
	1/2	KQ2ZD10-04□P	27	15.9	20.6	23.6	30.6	62.5	52.1	15.6	19.2	15.9	31.8	21.6	7.5	114
Ø 12	1/4	KQ2ZD12-02□P	26	18.5	25.2	26.8	29.1	65	57.4	17	21.6	18.5	44.6	35.3	9	134.4
	3/8	KQ2ZD12-03□P	26	18.5	25.2	26.8	29.1	65	57.4	17	21.6	18.5	44.6	35.3	9	126
Ø 12	1/2	KQ2ZD12-04□P	27	18.5	25.2	26.8	31.9	67.8	57.4	17	21.6	18.5	44.6	35.3	9	137.4

□: A (Brass), N (Brass + Electroless nickel plating) \*1 Ø D1 is maximum diameter.



Round Type

Metric Size M, R, Rc

Inch Size UNF, NPT

Inch Size M, R, Rc

Metric Size G

Metric Size R, Rc

Inch Size NPT

Inch Size R

Metric Size Uni

Inch Size Uni

Gasket Seal

# KQ2 Series

Applicable Tubing: Metric Size, Connection Thread: R, Rc

## Dimensions

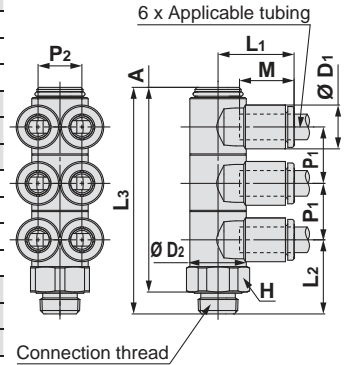
### Triple Branch Universal Male Elbow: KQ2ZT (Face seal)



Applicable tubing O.D. [mm]	Connection thread R	Model	H (Width across flats)	*1 Ø D1	Ø D2	L1	L2	L3	A	M	P1	P2	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
													Nylon	Urethane		
Ø 4	1/8	KQ2ZT04-01□P	14	8.2	13.4	18.5	17.6	53.8	48.6	13.3	13.4	8.2	4.7	4.7	3	29.9
	1/4	KQ2ZT04-02□P	17	8.2	13.4	18.5	21	57.2	49.6	13.3	13.4	8.2	4.7	4.7	3	39.2
	3/8	KQ2ZT04-03□P	21	8.2	13.4	18.5	23	59.2	51.6	13.3	13.4	8.2	4.7	4.7	3	56.8
Ø 6	1/8	KQ2ZT06-01□P	14	10.4	13.4	18.4	17.6	53.8	48.6	13.3	13.4	10.4	10.8	8.6	4.5	31.8
	1/4	KQ2ZT06-02□P	17	10.4	13.4	18.4	21	57.2	49.6	13.3	13.4	10.4	10.8	8.6	4.5	41.1
	3/8	KQ2ZT06-03□P	21	10.4	13.4	18.4	23	59.2	51.6	13.3	13.4	10.4	10.8	8.6	4.5	58.7
Ø 8	1/8	KQ2ZT08-01□P	19	13.2	17.6	21.2	21	63.8	58.6	14.2	15.9	13.2	20.5	14.2	6	72.5
	1/4	KQ2ZT08-02□P	19	13.2	17.6	21.2	23.4	66.2	58.6	14.2	15.9	13.2	20.5	14.2	6	66.3
	3/8	KQ2ZT08-03□P	21	13.2	17.6	21.2	24.4	67.2	59.6	14.2	15.9	13.2	20.5	14.2	6	78.2
Ø 10	1/2	KQ2ZT08-04□P	27	13.2	17.6	21.2	29.2	72	61.6	14.2	15.9	13.2	20.5	14.2	6	118.3
	1/4	KQ2ZT10-02□P	21	15.9	20.6	23.6	25.8	77	69.4	15.6	19.2	15.9	31.8	21.6	7.5	98.5
	3/8	KQ2ZT10-03□P	21	15.9	20.6	23.6	25.8	77	69.4	15.6	19.2	15.9	31.8	21.6	7.5	95.3
Ø 12	1/2	KQ2ZT10-04□P	27	15.9	20.6	23.6	30.6	81.8	71.4	15.6	19.2	15.9	31.8	21.6	7.5	134.3
	1/4	KQ2ZT12-02□P	26	18.5	25.2	26.8	29.1	86.7	79.1	17	21.6	18.5	44.6	35.3	9	171.5
	3/8	KQ2ZT12-03□P	26	18.5	25.2	26.8	29.1	86.7	79.1	17	21.6	18.5	44.6	35.3	9	158.3
	1/2	KQ2ZT12-04□P	27	18.5	25.2	26.8	31.9	89.5	79.1	17	21.6	18.5	44.6	35.3	9	168.3

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D1 is maximum diameter.



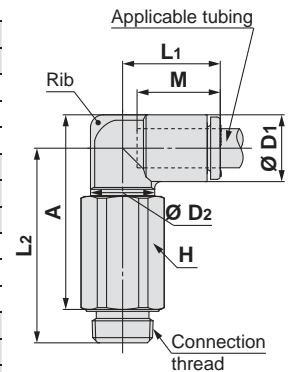
### Extended Male Elbow: KQ2W (Face seal)



Applicable tubing O.D. [mm]	Connection thread R	Model	H (Width across flats)	*1 Ø D1	Ø D2	L1	L2	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]	With a rib
										Nylon	Urethane			
Ø 3.2	1/8	KQ2W23-01□P	12	7.1	10	14.5	29.6	28	13.3	2.8	2.4	2.5	15.3	—
	1/4	KQ2W23-02□P	17	7.1	10	14.5	31	27	13.3	2.8	2.4	2.5	34.6	—
Ø 4	1/8	KQ2W04-01□P	12	8.2	10	14.8	29.2	28.1	13.3	4	4	3	15.5	●
	1/4	KQ2W04-02□P	17	8.2	10	14.8	31.5	28	13.3	4	4	3	34.9	●
Ø 6	1/8	KQ2W06-01□P	12	10.4	10	15.5	30.3	30.3	13.3	10.9	8.6	4.5	15.9	—
	1/4	KQ2W06-02□P	17	10.4	10	15.5	32.6	30.2	13.3	10.9	8.6	4.5	35.3	—
	3/8	KQ2W06-03□P	21	10.4	10	15.5	34.6	32.2	13.3	10.9	8.6	4.5	62.8	—
Ø 8	1/8	KQ2W08-01□P	12	13.2	10	16.4	31.7	33.1	14.2	10.9	10.9	4.5	16.7	●
	1/4	KQ2W08-02□P	17	13.2	12	17.2	36.1	35.1	14.2	20.5	14.2	6	35.4	●
	3/8	KQ2W08-03□P	21	13.2	12	17.2	38.1	37.1	14.2	20.5	14.2	6	64.7	●
Ø 10	1/4	KQ2W10-02□P	17	15.9	17	19.3	50.1	50.5	15.6	33.5	23.8	7.5	54.3	●
	3/8	KQ2W10-03□P	21	15.9	17	19.3	44.7	45.1	15.6	33.5	23.8	7.5	57.8	●
	1/2	KQ2W10-04□P	27	15.9	17	19.3	49.5	47.1	15.6	33.5	23.8	7.5	122.8	●
Ø 12	1/4	KQ2W12-02□P	17	18.5	17	21.5	51.4	53.1	17	47.7	37.7	9	56	●
	3/8	KQ2W12-03□P	21	18.5	17	21.5	46	47.7	17	47.7	37.7	9	59.7	●
	1/2	KQ2W12-04□P	27	18.5	17	21.5	50.8	49.7	17	47.7	37.7	9	124.6	●
Ø 16	1/4	KQ2W16-02□P	17	23.8	17	25.1	54.1	58.4	20.6	47.7	47.7	9	60.4	●
	3/8	KQ2W16-03□P	22	23.8	21	27.1	57	61.3	20.6	71	58.9	11	89.1	—
	1/2	KQ2W16-04□P	27	23.8	21	27.1	59	60.5	20.6	100	58.9	13	155.9	—

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D1 is maximum diameter.



# Metric Size One-touch Fittings **KQ2 Series**

Applicable Tubing: Metric Size, Connection Thread: R, Rc

## Dimensions

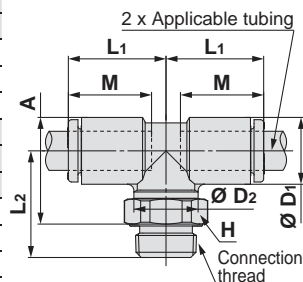
### Male Branch Tee: KQ2T (Face seal)



Applicable tubing O.D. [mm]	Connection thread R	Model	H (Width across flats)	*1 Ø D1	Ø D2	L1	L2	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
										Nylon	Urethane		
Ø 3.2	1/8	KQ2T23-01□P	12	7.1	10	14.5	15.9	14.3	13.3	3.4	2.9	2.5	5.7
	1/4	KQ2T23-02□P	17	7.1	10	14.5	19.3	15.3	13.3	3.4	2.9	2.5	14.9
Ø 4	1/8	KQ2T04-01□P	12	8.2	10	14.8	15.5	14.4	13.3	6	4.1	3	5.9
	1/4	KQ2T04-02□P	17	8.2	10	14.8	19.9	16.4	13.3	6	4.1	3	15.2
Ø 6	1/8	KQ2T06-01□P	12	10.4	10	15.5	16.6	16.6	13.3	13.9	11	4.5	6.6
	1/4	KQ2T06-02□P	17	10.4	10	15.5	21	18.6	13.3	13.9	11	4.5	15.9
	3/8	KQ2T06-03□P	21	10.4	10	15.5	23	20.6	13.3	13.9	11	4.5	31.1
Ø 8	1/8	KQ2T08-01□P	12	13.2	10	16.4	18	19.4	14.2	14	14	4.5	8.3
	1/4	KQ2T08-02□P	17	13.2	12	17.2	22.4	21.4	14.2	26.3	18.2	6	15.5
	3/8	KQ2T08-03□P	21	13.2	12	17.2	24.4	23.4	14.2	26.3	18.2	6	30.4
Ø 10	1/8	KQ2T10-01□P	12	15.9	12	18.6	22.1	24.9	15.6	21.6	14.9	6	12.9
	1/4	KQ2T10-02□P	17	15.9	17	19.3	25.6	26	15.6	35.2	25	7.5	20.5
	3/8	KQ2T10-03□P	21	15.9	17	19.3	25.7	26.1	15.6	35.2	25	7.5	20.4
Ø 12	1/2	KQ2T10-04□P	27	15.9	17	19.3	30.5	28.1	15.6	35.2	25	7.5	47.7
	1/4	KQ2T12-02□P	17	18.5	17	21.5	26.9	28.6	17	57.2	45.2	9	23.5
	3/8	KQ2T12-03□P	21	18.5	17	21.5	27	28.7	17	57.2	45.2	9	23.6
Ø 16	1/2	KQ2T12-04□P	27	18.5	17	21.5	31.8	30.7	17	57.2	45.2	9	50.8
	1/4	KQ2T16-02□P	17	23.8	17	25.1	29.6	33.9	20.6	57.2	57.2	9	31.7
	3/8	KQ2T16-03□P	21	23.8	21	27.1	32.7	37	20.6	71	58.9	11	40.8
1/2	KQ2T16-04□P	27	23.8	21	27.1	34.7	36.2	20.6	100	58.9	13	66.8	

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D1 is maximum diameter.



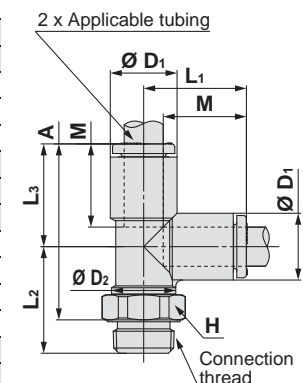
### Male Run Tee: KQ2Y (Face seal)



Applicable tubing O.D. [mm]	Connection thread R	Model	H (Width across flats)	*1 Ø D1	Ø D2	L1	L2	L3	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
											Nylon	Urethane		
Ø 3.2	1/8	KQ2Y23-01□P	12	7.1	10	14.9	15.9	14.9	25.7	13.3	3.4	2.9	2.5	5.7
	1/4	KQ2Y23-02□P	17	7.1	10	14.9	19.3	14.9	26.7	13.3	3.4	2.9	2.5	14.9
Ø 4	1/8	KQ2Y04-01□P	12	8.2	10	15.3	15.5	15.3	25.6	13.3	6.4	4.4	3	6
	1/4	KQ2Y04-02□P	17	8.2	10	15.3	19.9	15.3	27.6	13.3	6.4	4.4	3	15.2
Ø 6	1/8	KQ2Y06-01□P	12	10.4	10	16.3	16.6	16.3	27.7	13.3	13.4	10.6	4.5	6.7
	1/4	KQ2Y06-02□P	17	10.4	10	16.3	21	16.3	29.7	13.3	13.4	10.6	4.5	16
	3/8	KQ2Y06-03□P	21	10.4	10	16.3	23	16.3	31.7	13.3	13.4	10.6	4.5	31.2
Ø 8	1/8	KQ2Y08-01□P	12	13.2	10	18.2	18	18.2	31	14.2	13.4	13.4	4.5	8.4
	1/4	KQ2Y08-02□P	17	13.2	12	18.2	22.4	18.2	33	14.2	25.6	17.7	6	15.6
	3/8	KQ2Y08-03□P	21	13.2	12	18.2	24.4	18.2	35	14.2	25.6	17.7	6	30.5
Ø 10	1/8	KQ2Y10-01□P	12	15.9	12	20.6	22.1	20.6	37.6	15.6	40	28.4	6	13
	1/4	KQ2Y10-02□P	17	15.9	17	20.6	25.6	20.6	38.7	15.6	40	28.4	7.5	20.7
	3/8	KQ2Y10-03□P	21	15.9	17	20.6	25.7	20.6	38.8	15.6	40	28.4	7.5	20.6
Ø 12	1/2	KQ2Y10-04□P	27	15.9	17	20.6	30.5	20.6	40.8	15.6	40	28.4	7.5	47.9
	1/4	KQ2Y12-02□P	17	18.5	17	23	26.9	23	42.4	17	57.4	45.4	9	23.8
	3/8	KQ2Y12-03□P	21	18.5	17	23	27	23	42.5	17	57.4	45.4	9	23.8
Ø 16	1/2	KQ2Y12-04□P	27	18.5	17	23	31.8	23	44.5	17	57.4	45.4	9	51.1
	1/4	KQ2Y16-02□P	17	23.8	17	28.6	29.6	28.6	50.6	20.6	57.4	45.4	9	32.2
	3/8	KQ2Y16-03□P	21	23.8	21	28.6	32.7	28.6	53.7	20.6	81	60	11	41.3
1/2	KQ2Y16-04□P	27	23.8	21	28.6	34.7	28.6	52.9	20.6	113	60	13	67.3	

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D1 is maximum diameter.



Round Type

Metric Size M, R, Rc

Inch Size UNF, NPT

Inch Size M, R, Rc

Metric Size G

Metric Size R, Rc

Face Seal

Inch Size NPT

Inch Size R

Gasket Seal

Inch Size Uni

# KQ2 Series

Applicable Tubing: Metric Size, Connection Thread: R, Rc

## Dimensions

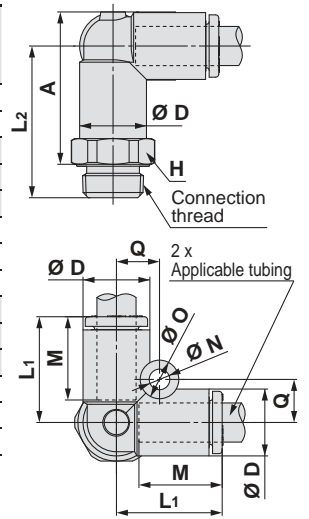
### Male Delta Union: KQ2D (Face seal)



Applicable tubing O.D. [mm]	Connection thread R	Model	H (Width across flats)	*1 Ø D	L1	L2	A	M	Q	Ø O	Ø N	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
												Nylon	Urethane		
Ø 4	1/8	KQ2D04-01□P	12	8.2	15.8	22.6	21.5	13.3	5.7	6	3.2	6	6	3.6	9.1
	1/4	KQ2D04-02□P	17	8.2	15.8	26	22.5	13.3	5.7	6	3.2	6	6	3.6	19
Ø 6	1/8	KQ2D06-01□P	12	10.4	16.8	23.6	13.3	6.7	6	3.2	13.9	11	5.4	9.7	
	1/4	KQ2D06-02□P	17	10.4	16.8	27	13.3	6.7	6	3.2	13.9	11	5.4	19.3	
	3/8	KQ2D06-03□P	21	10.4	16.8	26.5	24.1	13.3	6.7	6	3.2	13.9	11	5.4	27.6
Ø 8	1/8	KQ2D08-01□P	14	13.2	18.8	25.6	27	14.2	8.4	8	4.2	26.3	18.2	6	15.2
	1/4	KQ2D08-02□P	17	13.2	18.8	29	28	14.2	8.4	8	4.2	26.3	18.2	7.3	20.9
Ø 10	3/8	KQ2D08-03□P	21	13.2	18.8	28.5	27.5	14.2	8.4	8	4.2	26.3	18.2	7.3	29.3
	1/4	KQ2D10-03□P	17	15.9	21.2	31.4	31.7	15.6	9.6	8	4.2	40.8	29	9	23.2
	1/2	KQ2D10-04□P	27	15.9	21.2	33.2	30.7	15.6	9.6	8	4.2	40.8	29	9.4	48.8
Ø 12	1/4	KQ2D12-02□P	21	18.5	23.6	33.8	35.4	17	10.7	8	4.2	57.2	45.2	9	36.6
	3/8	KQ2D12-03□P	21	18.5	23.6	33.3	34.9	17	10.7	8	4.2	57.2	45.2	11	34.3
	1/2	KQ2D12-04□P	27	18.5	23.6	35.6	34.4	17	10.7	8	4.2	57.2	45.2	11.6	49.8

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D is maximum diameter.



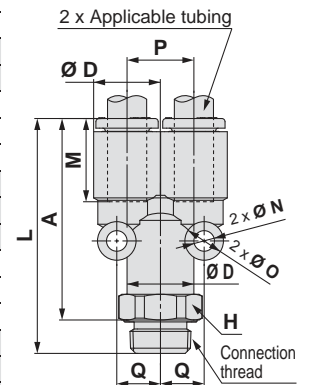
### Branch "Y": KQ2U (Face seal)



Applicable tubing O.D. [mm]	Connection thread R	Model	H (Width across flats)	*1 Ø D	L	A	M	P	Q	Ø O	Ø N	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
												Nylon	Urethane		
Ø 3.2	1/8	KQ2U23-01□P	12	7.1	35.7	30.5	13.3	7.1	5.2	6	3.2	3.4	2.9	2.7	9
	1/4	KQ2U23-02□P	17	7.1	39.1	31.5	13.3	7.1	5.2	6	3.2	3.4	2.9	2.7	19
Ø 4	1/8	KQ2U04-01□P	12	8.2	35.8	30.6	13.3	8.2	5.7	6	3.2	4.2	4.2	3.6	9.3
	1/4	KQ2U04-02□P	17	8.2	39.2	31.6	13.3	8.2	5.7	6	3.2	4.2	4.2	3.6	19.2
Ø 6	1/8	KQ2U06-01□P	12	10.4	36.9	31.7	13.3	10.4	6.8	6	3.2	13.4	10.6	5.4	9.9
	1/4	KQ2U06-02□P	17	10.4	40.3	32.7	13.3	10.4	6.8	6	3.2	13.4	10.6	5.4	19.5
	3/8	KQ2U06-03□P	21	10.4	39.8	32.2	13.3	10.4	6.8	6	3.2	13.4	10.6	5.4	27.8
Ø 8	1/8	KQ2U08-01□P	14	13.2	40	34.8	14.2	13.2	8.7	8	4.2	25.6	17.7	6	15.8
	1/4	KQ2U08-02□P	17	13.2	43.4	35.8	14.2	13.2	8.7	8	4.2	25.6	17.7	7.3	21.4
	3/8	KQ2U08-03□P	21	13.2	42.9	35.3	14.2	13.2	8.7	8	4.2	25.6	17.7	7.3	29.8
Ø 10	1/4	KQ2U10-02□P	17	15.9	47.3	39.7	15.6	15.9	10.1	8	4.2	40	28.4	9	23.9
	3/8	KQ2U10-03□P	21	15.9	46.8	39.2	15.6	15.9	10.1	8	4.2	40	28.4	9.4	31.4
	1/2	KQ2U10-04□P	27	15.9	49.1	38.7	15.6	15.9	10.1	8	4.2	40	28.4	9.4	49.5
Ø 12	1/4	KQ2U12-02□P	21	18.5	51.3	43.7	17	18.5	11.4	8	4.2	57.4	45.4	9	37.6
	3/8	KQ2U12-03□P	21	18.5	50.8	43.2	17	18.5	11.4	8	4.2	57.4	45.4	11	35.2
	1/2	KQ2U12-04□P	27	18.5	53.1	42.7	17	18.5	11.4	8	4.2	57.4	45.4	11.6	50.8
Ø 16	1/4	KQ2U16-02□P	24	23.8	60.7	53.1	20.6	23.8	14	8	4.2	57.4	45.4	9	68.2
	3/8	KQ2U16-03□P	24	23.8	60.2	52.6	20.6	23.8	14	8	4.2	81	60	11	64.7
	1/2	KQ2U16-04□P	27	23.8	62.5	52.1	20.6	23.8	14	8	4.2	113	60	13	70

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D is maximum diameter.





# Metric Size One-touch Fittings **KQ2 Series**

Applicable Tubing: Metric Size, Connection Thread: R, Rc

## Dimensions

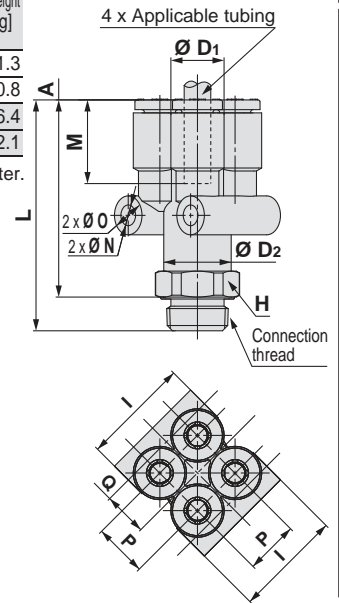
### Double Branch "Y": KQ2UD (Face seal)



Applicable tubing O.D. [mm]	Connection thread R	Model	H (Width across flats)	Ø D1 *1	Ø D2	L	I	A	M	P	Q	Ø O	Ø N	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
														Nylon	Urethane		
Ø 4	1/8	KQ2UD04-01□P	12	8.2	10.4	36	16.6	30.8	13.3	8.2	6.8	6	3.2	4.2	4.2	5.4	11.3
	1/4	KQ2UD04-02□P	17	8.2	10.4	39.4	16.6	31.8	13.3	8.2	6.8	6	3.2	4.2	4.2	5.4	20.8
Ø 6	1/8	KQ2UD06-01□P	14	10.4	13.2	38.8	21	33.6	13.3	10.4	8.2	6	3.2	13.4	10.6	6	16.4
	1/4	KQ2UD06-02□P	17	10.4	13.2	42.2	21	34.6	13.3	10.4	8.2	6	3.2	13.4	10.6	7.3	22.1

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D1 is maximum diameter.

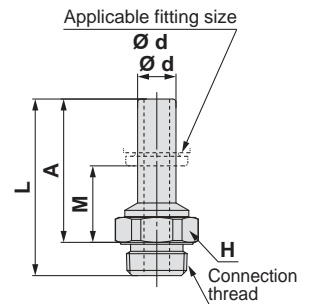


### Adapter: KQ2N (Face seal)



Applicable fitting size Ø d	Connection thread R	Model	H (Width across flats)	L	A	M	Min. port size	Weight [g]
Ø 4	1/8	KQ2N04-01□P	12	27.6	22.4	9.1	2.5	4.4
Ø 6	1/8	KQ2N06-01□P	12	27.6	22.4	9.1	4	4.6
	1/4	KQ2N06-02□P	17	31	23.4	10.1	4	13.8
Ø 8	1/4	KQ2N08-02□P	17	32.9	25.3	11.1	6	11.8
	3/8	KQ2N08-03□P	21	34.9	27.3	13.1	6	26.7
Ø 10	3/8	KQ2N10-03□P	21	36.8	29.2	13.6	7.5	14.7

□: A (Brass), N (Brass + Electroless nickel plating)



Round Type



Metric Size M, R, Rc

Sealant/Gasket Seal

Inch Size UNF, NPT

Inch Size M, R, Rc

Metric Size G

Face Seal

Metric Size R, Rc

Inch Size NPT

Inch Size R

Gasket Seal

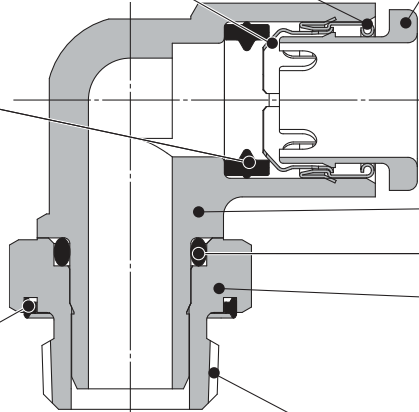
Metric Size Uni

Inch Size Uni

# Inch Size One-touch Fittings

Applicable Tubing: Inch Size, Connection Thread: NPT

## KQ2 Series



**Guide**

**Chuck**

Suitable for use with nylon and urethane. Large retaining force. The chuck provides secure retention and the collet increases the holding force on the tube.

**Seal**

Can be used for a wide range of pressures from a low vacuum up to a pressure of 1 MPa. The use of a special profile ensures sealing and reduces resistance when the tube is inserted.

**Face seal method**

**Seal ring**

Piping installability is improved by changing to the face seal structure.

**Release button**

Requires little force for removal. Releases the chuck collet to remove the tube as well as to prevent the chuck from biting too deeply into the tubing.

**Body**


**O-ring**

**Stud**

Effective when piping in a confined space. Body part rotates allowing for positioning.

**Connection thread**

NPT



**One-touch IN/OUT connection.**  
Possible to use in vacuum to -100 kPa.

**Drastically reduces screw-in time with the face seal method.**



### Applicable Tubing

Tubing material	FEP, PFA, Nylon, Soft nylon, Polyurethane
Tubing O.D.	Ø 1/8", Ø 5/32", Ø 3/16", Ø 1/4", Ø 5/16", Ø 3/8", Ø 1/2"

### Specifications

<b>Fluid</b>		Air, Water*1
<b>Operating pressure range*2</b>		-100 kPa to 1 MPa
<b>Proof pressure (at 23 °C)</b>		3 MPa
<b>Ambient and fluid temperature</b>		-5 to 60 °C, Water: 0 to 40 °C (No freezing)
<b>Thread</b>	<b>Mounting section</b>	ANSI/ASME1.20.1 (NPT thread) JIS B0208 (UNF thread)
	<b>Nut section</b>	JIS B0208 (UNF thread)
<b>Sealant on the threads</b>		Seal ring

\*1 The surge pressure must be under the maximum operating pressure.

\*2 Do not use the fittings with a leak tester or for vacuum retention because they are not guaranteed for zero leakage.

### Principal Parts Material

Body	C3604, PBT
Stud	C3604 (Thread portion)
Chuck	Stainless steel 304
Guide	Stainless steel 304
Release button	POM
Seal, O-ring, Seal ring	NBR

## How to Order

### Threaded Type

**KQ2 H 05 - 34 A P**

One-touch fittings

Face seal

Model

Symbol	Model
H	Male connector
S	Hexagon socket head male connector
L	Male elbow
K	45° male elbow
V	Universal male elbow
VS	Hexagon socket head universal male elbow
VF	Universal female elbow
VD	Double universal male elbow
VT	Triple universal male elbow
Z	Branch universal male elbow
ZD	Double branch universal male elbow
ZT	Triple branch universal male elbow
W	Extended male elbow
T	Male branch tee
Y	Male run tee
U	Branch "Y"

Thread material/Surface treatment

Symbol	Thread material/Surface treatment
A	Brass
N	Brass + Electroless nickel plating

Port size/Applicable tubing O.D.

Symbol	Size
33	NPT 1/16
34	NPT 1/8
35	NPT 1/4
36	NPT 3/8
37	NPT 1/2

Applicable tubing O.D.

Symbol	Size
01	Ø 1/8"
03	Ø 5/32"
05	Ø 3/16"
07	Ø 1/4"
09	Ø 5/16"
11	Ø 3/8"
13	Ø 1/2"

Round Type



Metric Size M, R, Rc

Sealant/Gasket Seal

Inch Size UNF, NPT

Inch Size M, R, Rc

Metric Size G

Metric Size R, Rc

Inch Size NPT

Inch Size R

Metric Size Uni

Inch Size Uni

# Inch Size One-touch Fittings

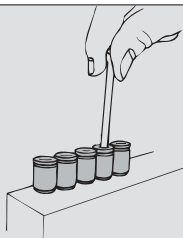
## Round Type Variations

### Hexagon socket head male connector

**KQ2S** P.188



Internal hexagon socket allows tightening with a hexagon wrench in confined spaces.

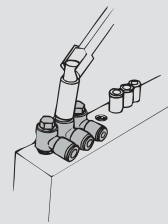


### Universal male elbow

**KQ2V** P.190



Hexagon head of the body allows tightening with a box wrench in confined spaces.

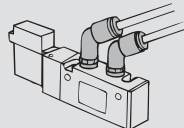


### 45° male elbow

**KQ2K** P.189



Use to pipe a female thread at a 45° angle. Its direction is in-between that of the male connector and male elbow.

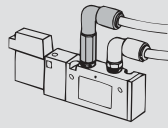


### Extended male elbow

**KQ2W** P.193



Basically, it is used together with a male elbow. Its extended height allows for multi-levelled piping and prevents interference among fittings.



### Male connector

**KQ2H** P.188



Use to pipe a female thread in the same direction. Most general model.

### Double universal male elbow

**KQ2VD** P.191



Use to two-branch a female thread at right angles. Two individual parts rotate 360°.

### Triple branch universal male elbow

**KQ2ZT** P.192



Use to six-branch a female thread at right angles. Three individual parts rotate 360°.

### Male elbow

**KQ2L** P.189



Use to pipe a female thread at right angles. Most general model.

### Triple universal male elbow

**KQ2VT** P.191



Use to three-branch a female thread at right angles. Three individual parts rotate 360°.

### Male branch tee

**KQ2T** P.193



Use to branch a female thread at both 90° angles.

### Hexagon socket head universal male elbow

**KQ2VS** P.190



Hexagon socket on the top allows tightening with a hexagon wrench in confined spaces.

### Branch universal male elbow

**KQ2Z** P.191



Hexagon head of the body allows tightening with a box wrench. Use for branch connections.

### Male run tee

**KQ2Y** P.194



Use to branch a female thread in the same direction and at a 90° angle.

### Universal female elbow

**KQ2VF** P.190



Use to branch a male or female thread in the same direction and at a 90° angle. Multiple connections possible.

### Double branch universal male elbow

**KQ2ZD** P.192



Use to four-branch a female thread at right angles. Two individual parts rotate 360°.

### Branch "Y"

**KQ2U** P.194



Use to branch a female thread in the same direction.

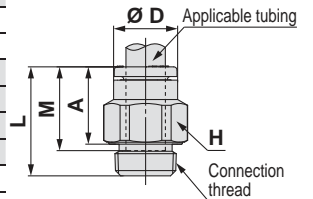
## Dimensions

### Male Connector: KQ2H (Face seal)



Applicable tubing O.D. [inch]	Connection thread NPT	Model	H (Width across flats)	Ø D	L	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
								Nylon	Urethane		
Ø 1/8	1/16	KQ2H01-33□P	11.11	6.7	16.8	11.4	13.3	3	2.5	2.5	14.9
	1/8	KQ2H01-34□P	12.7	6.7	14.3	8.9	13.3	3	2.5	2.5	8.7
	1/4	KQ2H01-35□P	17.46	6.7	15.6	7.5	13.3	3.4	2.9	2.5	16.6
Ø 5/32	1/16	KQ2H03-33□P	11.11	7.7	19	13.6	13.3	4.8	3.4	3	13.9
	1/8	KQ2H03-34□P	12.7	7.7	16.4	11	13.3	4.8	3.4	3	7.6
	1/4	KQ2H03-35□P	17.46	7.7	15.6	7.5	13.3	4.8	3.4	3	16
Ø 3/16	1/8	KQ2H05-34□P	12.7	8.3	16.9	11.5	13.3	7.8	6.5	3.6	7.8
	1/4	KQ2H05-35□P	17.46	8.3	15.6	7.5	13.3	7.8	6.5	3.5	15.3
Ø 1/4	1/16	KQ2H07-33□P	11.11	10.9	19.9	14.5	13.3	13.5	11.5	3.5	6.4
	1/8	KQ2H07-34□P	12.7	10.9	19.5	14.1	13.3	13.5	11.5	4.6	9.4
	1/4	KQ2H07-35□P	17.46	10.9	15.6	7.5	13.3	13.5	11.5	4.6	13.6
	3/8	KQ2H07-36□P	22	10.9	15.1	7	13.3	13.5	11.5	4.6	22.5
Ø 5/16	1/8	KQ2H09-34□P	17.46	13	21.3	15.9	14.2	26.1	18	6	17.8
	1/4	KQ2H09-35□P	17.46	13	20.5	12.4	14.2	26.1	18	6	15.7
	3/8	KQ2H09-36□P	22	13	15.2	7.1	14.2	26.1	18	6	20
Ø 3/8	1/8	KQ2H11-34□P	17.46	15.1	23.1	17.7	15.6	26	26	6	18.4
	1/4	KQ2H11-35□P	17.46	15.1	24.5	16.4	15.6	35.3	29.1	7	19.8
	3/8	KQ2H11-36□P	22	15.1	21.7	13.6	15.6	35.3	29.1	7	26.3
	1/2	KQ2H11-37□P	28.57	15.1	16.9	6.5	15.6	35.3	29.1	7	36.5
Ø 1/2	1/4	KQ2H13-35□P	22	19	27.1	19	17	58.5	51.7	9	29.7
	3/8	KQ2H13-36□P	22	19	26.2	18.1	17	66	51.7	9.6	31.8
	1/2	KQ2H13-37□P	28.57	19	25.8	15.4	17	66	51.7	9.6	52.5

□: A (Brass), N (Brass + Electroless nickel plating)



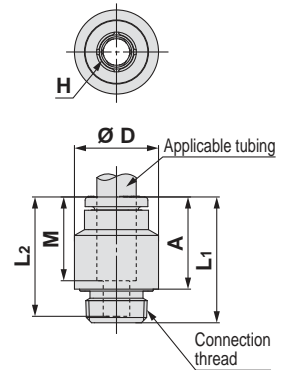
### Hexagon Socket Head Male Connector: KQ2S (Face seal)



Applicable tubing O.D. [inch]	Connection thread NPT	Model	H (Width across flats)	*1 Ø D	L1	L2	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
									Nylon	Urethane		
Ø 5/32	1/16	KQ2S03-33□P	2.78	12	19	16.3	13.6	13.3	4.1	3.6	2.8	7.5
	1/8	KQ2S03-34□P	2.78	14	17.3	16.3	11.9	13.3	4.1	3.6	2.8	9.2
Ø 3/16	1/8	KQ2S05-34□P	3.57	14	19.8	18.8	14.4	13.3	7.8	6.5	3.6	11.7
	1/16	KQ2S07-33□P	2.78	12	19.9	16.3	14.5	13.3	8.4	8.4	2.8	7.1
Ø 1/4	1/8	KQ2S07-34□P	4.76	14	19.8	18.8	14.4	13.3	13.5	11.5	4.8	10.6
	1/4	KQ2S07-35□P	4.76	18	19.8	18.8	11.7	13.3	13.5	11.5	4.8	15.6
	3/8	KQ2S07-36□P	4.76	22	19.8	18.8	11.7	13.3	13.5	11.5	4.8	26.4
Ø 5/16	1/8	KQ2S09-34□P	5.56	13	20.9	19.7	15.5	14.2	17.2	16.2	5.6	8.6
	1/4	KQ2S09-35□P	6.35	18	20.7	19.7	12.6	14.2	23.3	16.2	6.4	15.3
	3/8	KQ2S09-36□P	6.35	22	20.7	19.7	12.6	14.2	23.3	16.2	6.4	25
Ø 3/8	1/8	KQ2S11-34□P	5.56	15.1	23.1	21.1	17.7	15.6	22.7	22.7	5.6	12.1
	1/4	KQ2S11-35□P	6.35	18	24.5	21.1	16.4	15.6	29.6	29.1	6.4	19.9
	3/8	KQ2S11-36□P	6.35	22	22.1	21.1	14	15.6	29.6	29.1	6.4	26.8
	1/2	KQ2S11-37□P	6.35	26	22.1	21.1	11.7	15.6	29.6	29.1	6.4	42.8
Ø 1/2	1/4	KQ2S13-35□P	8	19	31.2	22.5	23.1	17	48	48	8.1	23.9
	3/8	KQ2S13-36□P	9.53	22	26.2	22.5	18.1	17	66	51.7	9.6	30.2
	1/2	KQ2S13-37□P	9.53	26	25.6	22.5	15.2	17	66	51.7	9.6	43.6

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D is maximum diameter.



Round Type

Metric Size M, R, Rc

Inch Size UNF, NPT

Inch Size M, R, Rc

Metric Size G

Metric Size R, Rc

Inch Size NPT

Inch Size R

Metric Size Uni

Inch Size Uni

# KQ2 Series

Applicable Tubing: Inch Size, Connection Thread: NPT

## Dimensions

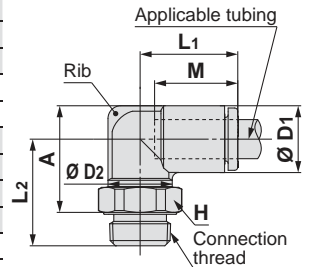
### Male Elbow: KQ2L (Face seal)



Applicable tubing O.D. [inch]	Connection thread NPT	Model	H (Width across flats)	*1 Ø D1	Ø D2	L1	L2	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]	With a rib
										Nylon	Urethane			
Ø 1/8	1/16	KQ2L01-33□P	11.11	7.1	10	14.5	21.6	19.8	13.3	3	2.5	2.5	14.6	—
	1/8	KQ2L01-34□P	12.7	7.1	10	14.5	16.7	14.9	13.3	3	2.5	2.5	6.1	—
	1/4	KQ2L01-35□P	17.46	7.1	10	14.5	21.4	16.9	13.3	3	2.5	2.5	18.3	—
Ø 5/32	1/16	KQ2L03-33□P	11.11	8.2	10	14.8	21.1	19.8	13.3	4.6	3.3	3	14.9	●
	1/8	KQ2L03-34□P	12.7	8.2	10	14.8	16.2	14.9	13.3	4.6	3.3	3	6.3	●
	1/4	KQ2L03-35□P	17.46	8.2	10	14.8	21.9	17.9	13.3	4.6	3.3	3	18.5	●
Ø 3/16	1/8	KQ2L05-34□P	12.7	9.1	10	15	16.7	15.8	13.3	6.8	5.6	3.5	6.5	—
	1/4	KQ2L05-35□P	17.46	9.1	10	15	22.4	18.8	13.3	6.8	5.6	3.5	18.7	—
Ø 1/4	1/16	KQ2L07-33□P	11.11	11.1	10	15.6	22.6	22.7	13.3	6.8	6.8	3.5	8	●
	1/8	KQ2L07-34□P	12.7	11.1	10	15.6	17.7	17.8	13.3	11.3	10	4.5	6.8	●
	1/4	KQ2L07-35□P	17.46	11.1	10	15.6	23.4	20.8	13.3	11.3	10	4.5	19	●
	3/8	KQ2L07-36□P	22	11.1	10	15.6	23.9	21.3	13.3	11.3	10	4.5	32.5	●
Ø 5/16	1/8	KQ2L09-34□P	12.7	13.2	10	16.4	18.7	19.9	14.2	11.4	11.4	4.5	7.5	●
	1/4	KQ2L09-35□P	17.46	13.2	12	17.2	23.4	21.9	14.2	21.6	14.9	6	15.7	●
	3/8	KQ2L09-36□P	22	13.2	12	17.2	24.9	23.4	14.2	21.6	14.9	6	30.8	●
Ø 3/8	1/8	KQ2L11-34□P	12.7	15.4	12	18.6	22.2	24.5	15.6	21.2	21.2	6	10.7	●
	1/4	KQ2L11-35□P	17.46	15.4	17	19.3	25.4	24.9	15.6	28.8	23.8	7.5	18.1	●
	3/8	KQ2L11-36□P	22	15.4	17	19.3	26.1	25.6	15.6	28.8	23.8	7.5	19	●
	1/2	KQ2L11-37□P	28.57	15.4	17	19.3	31.4	28.6	15.6	28.8	23.8	7.5	53.9	●
Ø 1/2	1/4	KQ2L13-35□P	17.46	19.3	17	21.5	27.3	28.8	17	50.3	44.4	9	20.4	—
	3/8	KQ2L13-36□P	22	19.3	17	21.8	28.2	29.7	17	56	44.4	9.5	34.7	—
	1/2	KQ2L13-37□P	28.57	19.3	17	21.8	33.3	32.5	17	56	44.4	9.5	76.4	—

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D1 is maximum diameter.



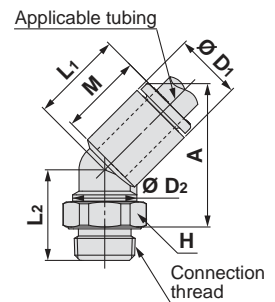
### 45° Male Elbow: KQ2K (Face seal)



Applicable tubing O.D. [inch]	Connection thread NPT	Model	H (Width across flats)	*1 Ø D1	Ø D2	L1	L2	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
										Nylon	Urethane		
Ø 1/8	1/8	KQ2K01-34□P	12.7	7.1	10	14.3	12.7	19.6	13.3	3	2.5	2.5	5.9
Ø 5/32	1/8	KQ2K03-34□P	12.7	8.2	10	14.4	12.7	20	13.3	4.8	3.4	3	6.1
Ø 3/16	1/8	KQ2K05-34□P	12.7	9.1	10	14.5	13.2	20.9	13.3	6.8	5.6	3.5	6.3
Ø 1/4	1/8	KQ2K07-34□P	12.7	11.1	10	14.8	15.2	23.6	13.3	11.3	10	4.5	6.7
	3/8	KQ2K07-35□P	17.46	11.1	10	14.8	19.9	25.6	13.3	11.3	10	4.5	18.9
Ø 5/16	1/4	KQ2K09-34□P	12.7	13.2	10	16	15.7	25.7	14.2	11.3	11.3	4.5	7.4
	3/8	KQ2K09-35□P	17.46	13.2	12	16	20.4	27.7	14.2	19.7	19.7	6	15.5
	1/2	KQ2K09-36□P	22	13.2	12	16	21.9	29.2	14.2	19.7	19.7	6	30.6
Ø 3/8	1/8	KQ2K11-34□P	12.7	15.4	12	18.1	20.1	32.3	15.6	21.2	21.2	6	10.6
	1/4	KQ2K11-35□P	17.46	15.4	17	17.7	25.4	34.6	15.6	28.8	23.8	7	18.2
	3/8	KQ2K11-36□P	22	15.4	17	17.7	20.4	29.6	15.6	28.8	23.8	7	18.4
	1/2	KQ2K11-37□P	28.57	15.4	17	17.7	25.7	32.6	15.6	28.8	23.8	7	53.4
Ø 1/2	1/4	KQ2K13-35□P	17.46	19.3	17	19.4	25.5	37.2	17	50.3	44.4	9	20.2
	3/8	KQ2K13-36□P	22	19.3	17	19.4	25.5	37.2	17	56	44.4	9.5	34.4
	1/2	KQ2K13-37□P	28.57	19.3	17	19.4	30.6	40	17	56	44.4	9.5	76.1

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D1 is maximum diameter.



## Dimensions

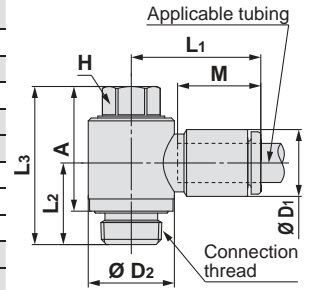
### Universal Male Elbow: KQ2V (Face seal)



Applicable tubing O.D. [inch]	Connection thread NPT	Model	H (Width across flats)	*1 Ø D1	Ø D2	L1	L2	L3	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
											Nylon	Urethane		
Ø 1/8	1/8	KQ2V01-34□P	8	7.1	14	19.3	12.9	24.8	19.4	13.3	2.2	1.9	2.5	13.1
Ø 5/32	1/8	KQ2V03-34□P	8	8.2	14	19.3	12.9	24.8	19.4	13.3	2.9	2.9	3	13.2
Ø 3/16	1/8	KQ2V05-34□P	8	9.1	14	19.6	12.9	24.8	19.4	13.3	4.5	3.7	3.5	13.4
	1/4	KQ2V07-34□P	8	11.1	14	20.6	12.9	24.8	19.4	13.3	7.5	6.6	4.5	13.7
Ø 1/4	1/4	KQ2V07-35□P	8	11.1	18	19.9	17.4	30.8	22.7	13.3	7.5	6.6	4.5	23.9
	1/8	KQ2V09-34□P	11.11	13.2	17.6	23.5	14.3	26.8	21.4	14.2	16	11.2	6	22.4
	1/4	KQ2V09-35□P	11.11	13.2	18	23.5	17.2	29.7	21.6	14.2	16	11.2	6	27.2
Ø 5/16	3/8	KQ2V09-36□P	12.7	13.2	22	23.1	17.9	33.7	25.6	14.2	16	11.2	6	41.3
	1/4	KQ2V11-35□P	12.7	15.4	20.6	25.8	18.3	33.6	25.5	15.6	23.4	19.3	7	35.7
Ø 3/8	3/8	KQ2V11-36□P	12.7	15.4	22	25.8	18.4	33.7	25.6	15.6	23.4	19.3	7	42.4
	1/4	KQ2V13-36□P	17.46	19.3	27	30.5	18.6	33.5	25.4	17	38.8	34.3	7.5	65.1
Ø 1/2	3/8	KQ2V13-37□P	17.46	19.3	27	30.5	21.3	36.2	25.8	17	38.8	34.3	9	75.2

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D1 is maximum diameter.



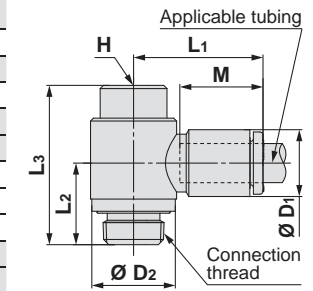
### Hexagon Socket Head Universal Male Elbow: KQ2VS (Face seal)



Applicable tubing O.D. [inch]	Connection thread NPT	Model	H (Width across flats)	*1 Ø D1	Ø D2	L1	L2	L3	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
											Nylon	Urethane		
Ø 1/8	1/8	KQ2VS01-34□P	6.35	7.1	14	19.3	12.9	25	19.6	13.3	2.2	1.9	2.5	12.7
Ø 5/32	1/8	KQ2VS03-34□P	6.35	8.2	14	19.3	12.9	25	19.6	13.3	2.9	2.9	3	12.8
Ø 3/16	1/8	KQ2VS05-34□P	6.35	9.1	14	19.6	12.9	25	19.6	13.3	4.5	3.7	3.5	13.1
	1/4	KQ2VS07-34□P	6.35	11.1	14	20.6	12.9	25	19.6	13.3	7.7	6.6	4.6	13.4
Ø 1/4	1/4	KQ2VS07-35□P	6.35	11.1	18	19.9	17.4	26.8	18.7	13.3	7.7	6.6	4.6	20.9
	1/8	KQ2VS09-34□P	8	13.2	17.6	23.5	14.3	25.2	19.8	14.2	16	11.2	6	19.6
	1/4	KQ2VS09-35□P	8	13.2	18	23.5	17.2	28.2	20.1	14.2	16	11.2	6	24.5
Ø 5/16	3/8	KQ2VS09-36□P	8	13.2	22	23.1	17.9	29.8	21.7	14.2	16	11.2	6	35.1
	1/4	KQ2VS11-35□P	8	15.4	20.6	25.8	18.3	29.5	21.4	15.6	23.4	19.3	7	29.3
Ø 3/8	3/8	KQ2VS11-36□P	8	15.4	22	25.8	18.4	29.8	21.7	15.6	23.4	19.3	7	36.3
	1/4	KQ2VS13-36□P	9.53	19.3	27	30.5	18.6	32	23.9	17	38.8	34.3	9	57.6
Ø 1/2	3/8	KQ2VS13-37□P	9.53	19.3	27	30.5	21.3	34.7	24.3	17	38.8	34.3	9	70.9

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D1 is maximum diameter.



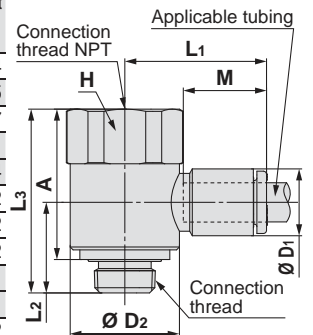
### Universal Female Elbow: KQ2VF (Face seal)



Applicable tubing O.D. [inch]	Connection thread NPT	Model	H (Width across flats)	*1 Ø D1	Ø D2	L1	L2	L3	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
											Nylon	Urethane		
Ø 1/8	1/8	KQ2VF01-34□P	17.46	7.1	17	21.2	14.3	28.8	23.4	13.3	2.2	1.9	2.5	28.4
Ø 5/32	1/8	KQ2VF03-34□P	17.46	8.2	17	21.2	14.3	28.8	23.4	13.3	2.9	2.9	3	28.5
Ø 3/16	1/8	KQ2VF05-34□P	17.46	9.1	17	21.5	14.3	28.8	23.4	13.3	4.5	3.7	3.5	28.7
	1/4	KQ2VF07-34□P	17.46	11.1	17	22.5	14.3	28.8	23.4	13.3	7.7	6.6	4.6	29
Ø 1/4	1/4	KQ2VF07-35□P	22.23	11.1	21.7	23.2	18.1	36.9	28.8	13.3	7.7	6.6	4.6	62.4
	1/8	KQ2VF09-34□P	17.46	13.2	17.6	23.5	15	30.5	25.1	14.2	16	11.2	6	30.2
	1/4	KQ2VF09-35□P	22.23	13.2	21.6	25.1	18.3	36.9	28.8	14.2	16	11.2	6	63.2
Ø 5/16	3/8	KQ2VF09-36□P	25.4	13.2	27.7	26.2	22.7	42.7	34.6	14.2	16	11.2	6	87.2
	1/4	KQ2VF11-35□P	22.23	15.4	22.6	26.4	19.7	39.2	31.1	15.6	23.4	19.3	7	62.1
Ø 3/8	3/8	KQ2VF11-36□P	25.4	15.4	27.7	27.6	22.2	42.7	34.6	15.6	23.4	19.3	7	88
	1/4	KQ2VF13-36□P	25.4	19.3	27.7	30.7	20.9	42.7	34.6	17	38.8	34.3	9	90.2
Ø 1/2	3/8	KQ2VF13-37□P	28.57	19.3	31.6	32.8	22.6	47.1	36.7	17	38.8	34.3	9	136

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D1 is maximum diameter.



Round Type

Metric Size M, R, Rc

Inch Size UNF, NPT

Sealant/Gasket Seal

Inch Size M, R, Rc

Metric Size G

Inch Size R, Rc

Metric Size R, Rc

Face Seal

Inch Size NPT

Inch Size R

Inch Size Uni

Metric Size Uni

Gasket Seal

Inch Size Uni

# KQ2 Series

Applicable Tubing: Inch Size, Connection Thread: NPT

## Dimensions

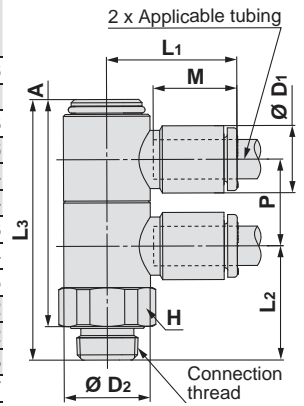
### Double Universal Male Elbow: KQ2VD (Face seal)



Applicable tubing O.D. [inch]	Connection thread NPT	Model	H (Width across flats)	*1 Ø D1	Ø D2	L1	L2	L3	A	M	P	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
												Nylon	Urethane		
Ø 1/8	1/8	KQ2VD01-34□P	14.29	7.1	13.4	19.3	18.2	40.9	35.5	13.3	13.4	2.2	1.9	2.5	22.8
Ø 5/32	1/8	KQ2VD03-34□P	14.29	8.2	13.4	19.3	18.2	40.9	35.5	13.3	13.4	2.9	2.9	3	23.1
Ø 3/16	1/8	KQ2VD05-34□P	14.29	9.1	13.4	19.6	18.2	40.9	35.5	13.3	13.4	4.5	3.7	3.5	23.3
	1/8	KQ2VD07-34□P	14.29	11.1	13.4	20.6	19.2	42.3	36.9	13.3	13.8	7.7	6.6	4.6	25.6
Ø 1/4	1/4	KQ2VD07-35□P	17.46	11.1	13.4	20.6	22.4	45.5	37.4	13.3	13.8	7.7	6.6	4.6	35.4
	3/8	KQ2VD07-36□P	22	11.1	13.4	20.6	23.9	47	38.9	13.3	13.8	7.7	6.6	4.6	53.4
	1/4	KQ2VD09-35□P	19	13.2	17.6	23.7	23.9	50.7	42.6	14.2	15.9	16	11.2	6	49.3
Ø 5/16	3/8	KQ2VD09-36□P	22	13.2	17.6	23.7	24.9	51.7	43.6	14.2	15.9	16	11.2	6	63.4
	1/2	KQ2VD09-37□P	28.57	13.2	17.6	23.7	30.2	57	46.6	14.2	15.9	16	11.2	6	113.5
Ø 3/8	1/4	KQ2VD11-35□P	22	15.4	20.6	25.3	26.1	58	49.9	15.6	19.2	23.4	19.3	7	72.2
	3/8	KQ2VD11-36□P	22	15.4	20.6	25.3	26.1	58	49.9	15.6	19.2	23.4	19.3	7	71.2
	1/2	KQ2VD11-37□P	28.57	15.4	20.6	25.3	31.4	63.3	52.9	15.6	19.2	23.4	19.3	7	119.3
Ø 1/2	3/8	KQ2VD13-36□P	28.57	19.3	27	30.5	31	65.8	57.7	17	22.3	43.8	34.3	9.6	150.7
	1/2	KQ2VD13-37□P	28.57	19.3	27	30.5	33.3	68.1	57.7	17	22.3	43.8	34.3	9.6	161.2

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D1 is maximum diameter.



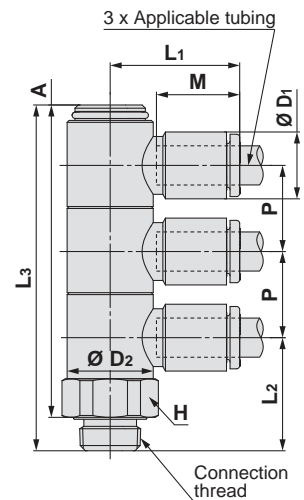
### Triple Universal Male Elbow: KQ2VT (Face seal)



Applicable tubing O.D. [inch]	Connection thread NPT	Model	H (Width across flats)	*1 Ø D1	Ø D2	L1	L2	L3	A	M	P	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
												Nylon	Urethane		
Ø 1/8	1/8	KQ2VT01-34□P	14.29	7.1	13.4	19.3	18.2	54.4	49	13.3	13.4	2.2	1.9	2.5	28.3
Ø 5/32	1/8	KQ2VT03-34□P	14.29	8.2	13.4	19.3	18.2	54.4	49	13.3	13.4	2.9	2.9	3	28.7
Ø 3/16	1/8	KQ2VT05-34□P	14.29	9.1	13.4	19.6	18.2	54.4	49	13.3	13.4	4.5	3.7	3.5	29
	1/8	KQ2VT07-34□P	14.29	11.1	13.4	20.6	19.2	56.1	50.7	13.3	13.8	7.7	6.6	4.6	32.1
Ø 1/4	1/4	KQ2VT07-35□P	17.46	11.1	13.4	20.6	22.4	59.3	51.2	13.3	13.8	7.7	6.6	4.6	41.9
	3/8	KQ2VT07-36□P	22	11.1	13.4	20.6	23.9	60.8	52.7	13.3	13.8	7.7	6.6	4.6	59.9
	1/4	KQ2VT09-35□P	19	13.2	17.6	23.7	23.9	66.7	58.6	14.2	15.9	16	11.2	6	61.4
Ø 5/16	3/8	KQ2VT09-36□P	22	13.2	17.6	23.7	24.9	67.7	59.6	14.2	15.9	16	11.2	6	75.5
	1/2	KQ2VT09-37□P	28.57	13.2	17.6	23.7	30.2	73	62.6	14.2	15.9	16	11.2	6	125.4
Ø 3/8	1/4	KQ2VT11-35□P	22	15.4	20.6	25.3	26.1	77.3	69.2	15.6	19.2	23.4	19.3	7	90.8
	3/8	KQ2VT11-36□P	22	15.4	20.6	25.3	26.1	77.3	69.2	15.6	19.2	23.4	19.3	7	87.8
	1/2	KQ2VT11-37□P	28.57	15.4	20.6	25.3	31.4	82.6	72.2	15.6	19.2	23.4	19.3	7	136
Ø 1/2	3/8	KQ2VT13-36□P	28.57	19.3	27	30.5	31	88.2	80.1	17	22.3	43.8	34.3	9.6	191.4
	1/2	KQ2VT13-37□P	28.57	19.3	27	30.5	33.3	90.5	80.1	17	22.3	43.8	34.3	9.6	191.5

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D1 is maximum diameter.



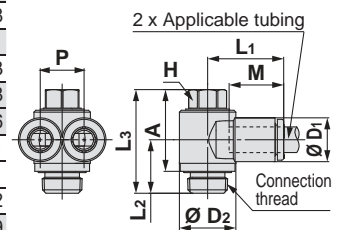
### Branch Universal Male Elbow: KQ2Z (Face seal)



Applicable tubing O.D. [inch]	Connection thread NPT	Model	H (Width across flats)	*1 Ø D1	Ø D2	L1	L2	L3	A	M	P	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
												Nylon	Urethane		
Ø 1/8	1/8	KQ2Z01-34□P	8	7.1	14	18.5	12.9	24.8	19.4	13.3	7.1	2.2	1.9	2.5	13.8
Ø 5/32	1/8	KQ2Z03-34□P	8	8.2	14	18.5	12.9	24.8	19.4	13.3	8.2	2.9	2.9	3	14
Ø 3/16	1/8	KQ2Z05-34□P	8	9.1	14	18.4	12.9	24.8	19.4	13.3	9.1	4.5	3.7	3.5	14.3
	1/8	KQ2Z07-34□P	8	11.1	14	18.4	12.9	24.8	19.4	13.3	11.1	7.5	6.6	4.5	14.8
Ø 1/4	1/4	KQ2Z07-35□P	11.11	11.1	18	20.4	16.7	29.7	21.6	13.3	11.1	7.7	6.6	4.6	27.6
	1/8	KQ2Z09-34□P	11.11	13.2	17.6	21.2	14.3	26.8	21.4	14.2	13.2	20.5	14.2	6	24.1
	1/4	KQ2Z09-35□P	11.11	13.2	18	21.2	17.2	29.7	21.6	14.2	13.2	20.5	14.2	6	29
Ø 5/16	3/8	KQ2Z09-36□P	12.7	13.2	22	22.3	17.9	33.7	25.6	14.2	13.2	20.5	14.2	6	43.2
	1/4	KQ2Z11-35□P	12.7	15.4	20.6	25.9	17.8	33.6	25.5	15.6	15.4	23.4	19.3	7	38.9
Ø 3/8	3/8	KQ2Z11-36□P	12.7	15.4	22	25.9	17.9	33.7	25.6	15.6	15.4	23.4	19.3	7	45.6
	3/8	KQ2Z13-36□P	17.46	19.3	27	30.1	18.6	33.5	25.4	17	19.3	26.9	26.9	7.5	70.6
Ø 1/2	1/2	KQ2Z13-37□P	17.46	19.3	27	30.1	21.3	36.2	25.8	17	19.3	38.8	34.3	9	80.6

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D1 is maximum diameter.





## Dimensions

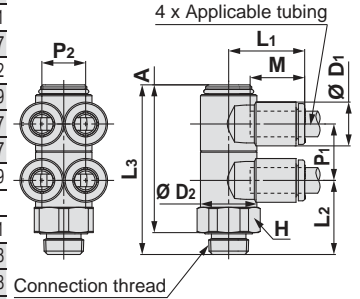
### Double Branch Universal Male Elbow: KQ2ZD (Face seal)



Applicable tubing O.D. [inch]	Connection thread NPT	Model	H (Width across flats)	*1 Ø D1	Ø D2	L1	L2	L3	A	M	P1	P2	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
													Nylon	Urethane		
Ø 1/8	1/8	KQ2ZD01-34□P	14.29	7.1	13.4	18.5	18.2	40.9	35.5	13.3	13.4	7.1	2.2	1.9	2.5	24.1
Ø 5/32	1/8	KQ2ZD03-34□P	14.29	8.2	13.4	18.5	18.2	40.9	35.5	13.3	13.4	8.2	2.9	2.9	3	24.7
Ø 3/16	1/8	KQ2ZD05-34□P	14.29	9.1	13.4	18.4	18.2	40.9	35.5	13.3	13.4	9.1	4.5	3.7	3.5	25.2
Ø 1/4	1/8	KQ2ZD07-34□P	14.29	11.1	13.4	18.3	19.2	42.3	36.9	13.3	13.8	11.1	7.7	6.6	4.6	27.9
	1/4	KQ2ZD07-35□P	17.46	11.1	13.4	18.3	22.4	45.5	37.4	13.3	13.8	11.1	7.7	6.6	4.6	37.7
	3/8	KQ2ZD07-36□P	22	11.1	13.4	18.3	23.9	47	38.9	13.3	13.8	11.1	7.7	6.6	4.6	55.7
Ø 5/16	1/4	KQ2ZD09-35□P	19	13.2	17.6	21.2	23.9	50.7	42.6	14.2	15.9	13.2	20.5	14.2	6	52.9
	3/8	KQ2ZD09-36□P	22	13.2	17.6	21.2	24.9	51.7	43.6	14.2	15.9	13.2	20.5	14.2	6	67
Ø 3/8	1/2	KQ2ZD09-37□P	28.57	13.2	17.6	21.2	30.2	57	46.6	14.2	15.9	13.2	20.5	14.2	6	117.1
	1/4	KQ2ZD11-35□P	22	15.4	20.6	23.6	26.1	58	49.9	15.6	19.2	15.4	23.4	19.3	7	77.8
	3/8	KQ2ZD11-36□P	22	15.4	20.6	23.6	26.1	58	49.9	15.6	19.2	15.4	23.4	19.3	7	76.8
Ø 1/2	1/2	KQ2ZD11-37□P	28.57	15.4	20.6	23.6	31.4	63.3	52.9	15.6	19.2	15.4	23.4	19.3	7	124.9
	3/8	KQ2ZD13-36□P	28.57	19.3	27	27.9	31	65.8	57.7	17	22.3	19.3	43.8	34.3	9.6	159.4
	1/2	KQ2ZD13-37□P	28.57	19.3	27	27.9	33.3	68.1	57.7	17	22.3	19.3	43.8	34.3	9.6	169.9

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D1 is maximum diameter.



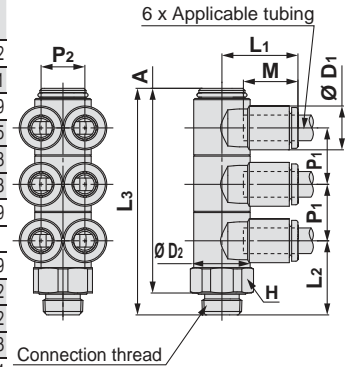
### Triple Branch Universal Male Elbow: KQ2ZT (Face seal)



Applicable tubing O.D. [inch]	Connection thread NPT	Model	H (Width across flats)	*1 Ø D1	Ø D2	L1	L2	L3	A	M	P1	P2	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
													Nylon	Urethane		
Ø 1/8	1/8	KQ2ZT01-34□P	14.29	7.1	13.4	18.5	18.2	54.4	49	13.3	13.4	7.1	2.2	1.9	2.5	30.2
Ø 5/32	1/8	KQ2ZT03-34□P	14.29	8.2	13.4	18.5	18.2	54.4	49	13.3	13.4	8.2	2.9	2.9	3	31.1
Ø 3/16	1/8	KQ2ZT05-34□P	14.29	9.1	13.4	18.4	18.2	54.4	49	13.3	13.4	9.1	4.5	3.7	3.5	31.9
Ø 1/4	1/8	KQ2ZT07-34□P	14.29	11.1	13.4	18.3	19.2	56.1	50.7	13.3	13.8	11.1	7.7	6.6	4.6	35.5
	1/4	KQ2ZT07-35□P	17.46	11.1	13.4	18.3	22.4	59.3	51.2	13.3	13.8	11.1	7.7	6.6	4.6	45.3
	3/8	KQ2ZT07-36□P	22	11.1	13.4	18.3	23.9	60.8	52.7	13.3	13.8	11.1	7.7	6.6	4.6	63.3
Ø 5/16	1/4	KQ2ZT09-35□P	19	13.2	17.6	21.2	23.9	66.7	58.6	14.2	15.9	13.2	20.5	14.2	6	66.9
	3/8	KQ2ZT09-36□P	22	13.2	17.6	21.2	24.9	67.7	59.6	14.2	15.9	13.2	20.5	14.2	6	81
Ø 3/8	1/2	KQ2ZT09-37□P	28.57	13.2	17.6	21.2	30.2	73	62.6	14.2	15.9	13.2	20.5	14.2	6	130.9
	1/4	KQ2ZT11-35□P	22	15.4	20.6	23.6	26.1	77.3	69.2	15.6	19.2	15.4	23.4	19.3	7	96.2
	3/8	KQ2ZT11-36□P	22	15.4	20.6	23.6	26.1	77.3	69.2	15.6	19.2	15.4	23.4	19.3	7	96.2
Ø 1/2	1/2	KQ2ZT11-37□P	28.57	15.4	20.6	23.6	31.4	82.6	72.2	15.6	19.2	15.4	23.4	19.3	7	96.3
	3/8	KQ2ZT13-36□P	28.57	19.3	27	27.9	31	88.2	80.1	17	22.3	19.3	43.8	34.3	9.6	204.4
	1/2	KQ2ZT13-37□P	28.57	19.3	27	27.9	33.3	90.5	80.1	17	22.3	19.3	43.8	34.3	9.6	204.4

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D1 is maximum diameter.



Round Type

Metric Size M, R, Rc

Inch Size UNF, NPT

Inch Size M, R, Rc

Metric Size G

Metric Size R, Rc

Inch Size NPT

Inch Size R

Metric Size Uni

Inch Size Uni

# KQ2 Series

Applicable Tubing: Inch Size, Connection Thread: NPT

## Dimensions

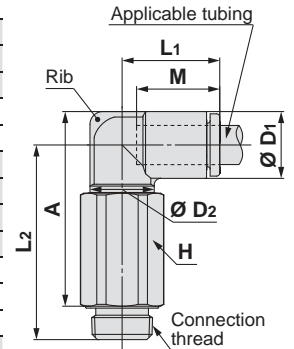
### Extended Male Elbow: KQ2W (Face seal)



Applicable tubing O.D. [inch]	Connection thread NPT	Model	H (Width across flats)	*1 Ø D1	Ø D2	L1	L2	A	M	Effective area [mm²]		Min. port size	Weight [g]	With a rib
										Nylon	Urethane			
Ø 1/8	1/16	KQ2W01-33□P	11.11	7.1	10	14.5	33.2	31.4	13.3	2.8	2.4	2.5	14.3	—
	1/8	KQ2W01-34□P	12.7	7.1	10	14.5	30.3	28.5	13.3	2.8	2.4	2.5	18	—
	1/4	KQ2W01-35□P	17.46	7.1	10	14.5	33	28.5	13.3	2.8	2.4	2.5	39.9	—
Ø 5/32	1/16	KQ2W03-33□P	11.11	8.2	10	14.8	32.7	31.4	13.3	4	4	3	14.4	●
	1/8	KQ2W03-34□P	12.7	8.2	10	14.8	29.9	28.6	13.3	4	4	3	18.2	●
	1/4	KQ2W03-35□P	17.46	8.2	10	14.8	33.5	29.5	13.3	4	4	3	40.1	●
Ø 3/16	1/8	KQ2W05-34□P	12.7	9.1	10	15	30.4	29.5	13.3	6.8	5.6	3.5	18.4	—
	1/4	KQ2W05-35□P	17.46	9.1	10	15	34	30.5	13.3	6.8	5.6	3.5	40.3	—
Ø 1/4	1/16	KQ2W07-33□P	11.11	11.1	10	15.6	34.2	34.4	13.3	6.8	6.8	3.5	15	●
	1/8	KQ2W07-34□P	12.7	11.1	10	15.6	31.4	31.5	13.3	11.3	10	4.5	18.7	●
	1/4	KQ2W07-35□P	17.46	11.1	10	15.6	35	32.5	13.3	11.3	10	4.5	40.7	●
	3/8	KQ2W07-36□P	22	11.1	10	15.6	35.5	33	13.3	11.3	10	4.5	67.5	●
Ø 5/16	1/8	KQ2W09-34□P	12.7	13.2	10	16.4	32.4	33.6	14.2	11.3	11.3	4.5	19.5	●
	1/4	KQ2W09-35□P	17.46	13.2	12	17.2	37.1	35.6	14.2	20.5	14.2	6	38.9	●
	3/8	KQ2W09-36□P	22	13.2	12	17.2	38.6	37.1	14.2	20.5	14.2	6	69.6	●
Ø 3/8	1/4	KQ2W11-35□P	17.46	15.4	17	19.3	45.1	44.7	15.6	28.8	23.8	7.5	49.7	●
	3/8	KQ2W11-36□P	22	15.4	17	19.3	42	41.6	15.6	28.8	23.8	7.5	55.8	●
Ø 1/2	1/2	KQ2W11-37□P	28.57	15.4	17	19.3	47.3	44.6	15.6	28.8	23.8	7.5	128.9	●
	1/4	KQ2W13-35□P	17.46	19.3	17	21.5	47	48.6	17	50.3	44.4	9	52	—
	3/8	KQ2W13-36□P	22	19.3	17	21.8	47.9	49.5	17	56	44.4	9.5	86.7	—
	1/2	KQ2W13-37□P	28.57	19.3	17	21.8	53	52.3	17	56	44.4	9.5	168	—

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D1 is maximum diameter.



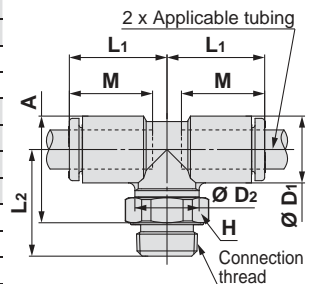
### Male Branch Tee: KQ2T (Face seal)



Applicable tubing O.D. [inch]	Connection thread NPT	Model	H (Width across flats)	*1 Ø D1	Ø D2	L1	L2	A	M	Effective area [mm²]		Min. port size	Weight [g]
										Nylon	Urethane		
Ø 1/8	1/16	KQ2T01-33□P	11.11	7.1	10	14.5	21.5	19.7	13.3	3.4	2.9	2.5	7.7
	1/8	KQ2T01-34□P	12.7	7.1	10	14.5	16.6	14.8	13.3	3.4	2.9	2.5	6.7
	1/4	KQ2T01-35□P	17.46	7.1	10	14.5	21.3	16.8	13.3	3.4	2.9	2.5	18.9
Ø 5/32	1/16	KQ2T03-33□P	11.11	8.2	10	14.8	21.1	19.8	13.3	6	4.1	3	16.3
	1/8	KQ2T03-34□P	12.7	8.2	10	14.8	16.2	14.9	13.3	6	4.1	3	7
	1/4	KQ2T03-35□P	17.46	8.2	10	14.8	21.9	17.9	13.3	6	4.1	3	19.2
Ø 3/16	1/8	KQ2T05-34□P	12.7	9.1	10	15	16.7	15.8	13.3	8.4	7	3.5	7.3
	1/4	KQ2T05-35□P	17.46	9.1	10	15	22.4	18.8	13.3	8.4	7	3.5	19.5
Ø 1/4	1/16	KQ2T07-33□P	11.11	11.1	10	15.6	22.6	22.7	13.3	8.5	8.5	3.5	9.1
	1/8	KQ2T07-34□P	12.7	11.1	10	15.6	17.7	17.8	13.3	14	12.4	4.5	7.9
	1/4	KQ2T07-35□P	17.46	11.1	10	15.6	23.4	20.8	13.3	14	12.4	4.5	20.2
	3/8	KQ2T07-36□P	22	11.1	10	15.6	23.9	21.3	13.3	14	12.4	4.5	33.7
Ø 5/16	1/8	KQ2T09-34□P	12.7	13.2	10	16.4	18.7	19.9	14.2	14	14	4.5	9.4
	1/4	KQ2T09-35□P	17.46	13.2	12	17.2	23.4	21.9	14.2	26.3	18.2	6	17.4
	3/8	KQ2T09-36□P	22	13.2	12	17.2	24.9	23.4	14.2	26.3	18.2	6	32.5
Ø 3/8	1/8	KQ2T11-34□P	12.7	15.4	12	18.6	22.1	24.4	15.6	21.2	21.2	6	13.3
	1/4	KQ2T11-35□P	17.46	15.4	17	19.3	25.3	24.9	15.6	28.8	23.8	7.5	20.5
	3/8	KQ2T11-36□P	22	15.4	17	19.3	26	25.6	15.6	28.8	23.8	7.5	21.4
Ø 1/2	1/2	KQ2T11-37□P	28.57	15.4	17	19.3	31.3	28.6	15.6	28.8	23.8	7.5	56.4
	1/4	KQ2T13-35□P	17.46	19.3	17	21.5	27.2	28.8	17	57.3	50.6	9	24.5
	3/8	KQ2T13-36□P	22	19.3	17	21.8	28.1	29.7	17	63.8	50.6	9.5	38.9
	1/2	KQ2T13-37□P	28.57	19.3	17	21.8	33.2	32.5	17	63.8	50.6	9.5	80.6

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D1 is maximum diameter.



## Dimensions

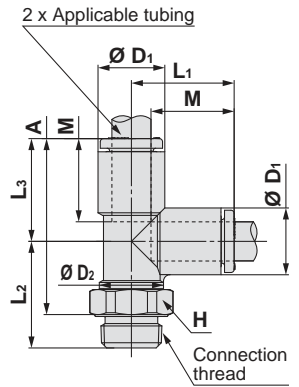
### Male Run Tee: KQ2Y (Face seal)



Applicable tubing O.D. [inch]	Connection thread NPT	Model	H (Width across flats)	*1 Ø D <sub>1</sub>	Ø D <sub>2</sub>	L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
											Nylon	Urethane		
Ø 1/8	1/16	KQ2Y01-33□P	11.11	7.1	10	14.9	21.5	14.9	31.1	13.3	3.4	2.9	2.5	15.8
	1/8	KQ2Y01-34□P	12.7	7.1	10	14.9	16.6	14.9	28.2	13.3	3.4	2.9	2.5	6.7
	1/4	KQ2Y01-35□P	17.46	7.1	10	14.9	21.3	14.9	28.2	13.3	3.4	2.9	2.5	18.9
Ø 5/32	1/16	KQ2Y03-33□P	11.11	8.2	10	15.3	21.1	15.3	31	13.3	6.4	4.4	3	16.4
	1/8	KQ2Y03-34□P	12.7	8.2	10	15.3	16.2	15.3	26.1	13.3	6.4	4.4	3	7
	1/4	KQ2Y03-35□P	17.46	8.2	10	15.3	21.9	15.3	29.1	13.3	6.4	4.4	3	19.2
Ø 3/16	1/8	KQ2Y05-34□P	12.7	9.1	10	15.7	16.7	15.7	27	13.3	8.4	7	3.5	7.3
	1/4	KQ2Y05-35□P	17.46	9.1	10	15.7	22.4	15.7	30	13.3	8.4	7	3.5	19.6
Ø 1/4	1/16	KQ2Y07-33□P	11.11	11.1	10	16.5	22.6	16.5	33.7	13.3	8.5	8.5	3.5	9.2
	1/8	KQ2Y07-34□P	12.7	11.1	10	16.5	17.7	16.5	28.8	13.3	14	12.4	4.5	8
	1/4	KQ2Y07-35□P	17.46	11.1	10	16.5	23.4	16.5	31.8	13.3	14	12.4	4.5	20.2
	3/8	KQ2Y07-36□P	22	11.1	10	16.5	23.9	16.5	32.3	13.3	14	12.4	4.5	33.7
Ø 5/16	1/8	KQ2Y09-34□P	12.7	13.2	10	18.2	18.7	18.2	31.5	14.2	14	14	4.5	9.4
	1/4	KQ2Y09-35□P	17.46	13.2	12	18.2	23.4	18.2	33.5	14.2	25.6	17.7	6	17.5
Ø 3/8	3/8	KQ2Y09-36□P	22	13.2	12	18.2	24.9	18.2	35	14.2	25.6	17.7	6	32.6
	1/4	KQ2Y11-35□P	17.46	15.4	17	20.4	25.3	20.4	37.6	15.6	28.8	23.8	7.5	20.7
Ø 1/2	3/8	KQ2Y11-36□P	22	15.4	17	20.4	26	20.4	38.3	15.6	28.8	23.8	7.5	21.5
	1/2	KQ2Y11-37□P	28.57	15.4	17	20.4	31.3	20.4	41.3	15.6	28.8	23.8	7.5	56.5
Ø 1/2	1/4	KQ2Y13-35□P	17.46	19.3	17	23.4	27.2	23.4	42.5	17	57.3	50.6	9	24.9
	3/8	KQ2Y13-36□P	22	19.3	17	23.4	28.1	23.4	43.4	17	63.8	50.6	9.5	39.1
	1/2	KQ2Y13-37□P	28.57	19.3	17	23.4	33.2	23.4	46.2	17	63.8	50.6	9.5	80.8

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D<sub>1</sub> is maximum diameter.



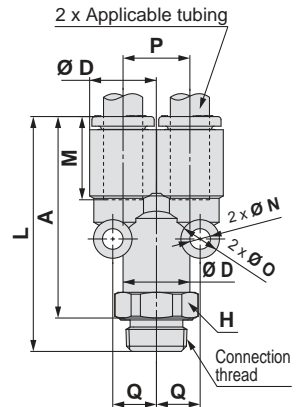
### Branch "Y": KQ2U (Face seal)



Applicable tubing O.D. [inch]	Connection thread NPT	Model	H (Width across flats)	*1 Ø D	L	P	A	M	Q	Ø O	Ø N	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
												Nylon	Urethane		
Ø 1/8	1/16	KQ2U01-33□P	11.11	7.1	35.9	7.1	30.5	13.3	5.2	6	3.2	3.4	2.9	2.5	7.2
	1/8	KQ2U01-34□P	12.7	7.1	35.9	7.1	30.5	13.3	5.2	6	3.2	3.4	2.9	2.7	9.8
	1/4	KQ2U01-35□P	17.46	7.1	39.6	7.1	31.5	13.3	5.2	6	3.2	3.4	2.9	2.7	20.3
Ø 5/32	1/16	KQ2U03-33□P	11.11	8.2	36	8.2	30.6	13.3	5.7	6	3.2	4.2	4.2	3.6	7.5
	1/8	KQ2U03-34□P	12.7	8.2	36	8.2	30.6	13.3	5.7	6	3.2	4.2	4.2	3.6	10.1
Ø 3/16	1/4	KQ2U03-35□P	17.46	8.2	39.7	8.2	31.6	13.3	5.7	6	3.2	4.2	4.2	3.6	20.5
	1/8	KQ2U05-34□P	12.7	9.1	36.6	9.1	31.2	13.3	6.2	6	3.2	8.4	7	4.1	10.6
Ø 1/4	1/4	KQ2U05-35□P	17.46	9.1	40.3	9.1	32.2	13.3	6.2	6	3.2	8.4	7	4.1	20.9
	1/16	KQ2U07-33□P	12.7	11.1	37.3	11.1	31.9	13.3	7.6	8	4	8.5	8.5	3.5	12.2
Ø 1/4	1/8	KQ2U07-34□P	12.7	11.1	37.3	11.1	31.9	13.3	7.6	8	4	14.4	12.4	5.6	11.7
	1/4	KQ2U07-35□P	17.46	11.1	41	11.1	32.9	13.3	7.6	8	4	14.4	12.4	5.6	21.6
	3/8	KQ2U07-36□P	22	11.1	40.5	11.1	32.4	13.3	7.6	8	4	14.4	12.4	5.6	30.6
Ø 5/16	1/8	KQ2U09-34□P	14.29	13.2	40.2	13.2	34.8	14.2	8.7	8	4.2	25.6	17.7	6	16.3
	1/4	KQ2U09-35□P	17.46	13.2	43.9	13.2	35.8	14.2	8.7	8	4.2	25.6	17.7	7.3	22.6
	3/8	KQ2U09-36□P	22	13.2	43.4	13.2	35.3	14.2	8.7	8	4.2	25.6	17.7	7.3	31.5
Ø 3/8	1/4	KQ2U11-35□P	17.46	15.4	47.4	15.4	39.3	15.6	9.9	8	4.2	28.8	23.8	8.9	23.8
	3/8	KQ2U11-36□P	22	15.4	46.9	15.4	38.8	15.6	9.9	8	4.2	28.8	23.8	8.9	32.9
Ø 1/2	1/2	KQ2U11-37□P	28.57	15.4	48.7	15.4	38.3	15.6	9.9	8	4.2	28.8	23.8	8.9	53.2
	1/4	KQ2U13-35□P	22	19.3	52.2	19.3	44.1	17	11.8	8	4.2	57.3	50.6	9	41.4
	3/8	KQ2U13-36□P	22	19.3	51.7	19.3	43.6	17	11.8	8	4.2	64.6	50.6	11	39
Ø 1/2	1/2	KQ2U13-37□P	28.57	19.3	53.5	19.3	43.1	17	11.8	8	4.2	64.6	50.6	12.1	54.8

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D is maximum diameter.



Round Type

Metric Size M, R, Rc

Sealant/Gasket Seal

Inch Size UNF, NPT

Inch Size M, R, Rc

Metric Size G

Metric Size R, Rc

Face Seal

Inch Size NPT

Inch Size R

Gasket Seal

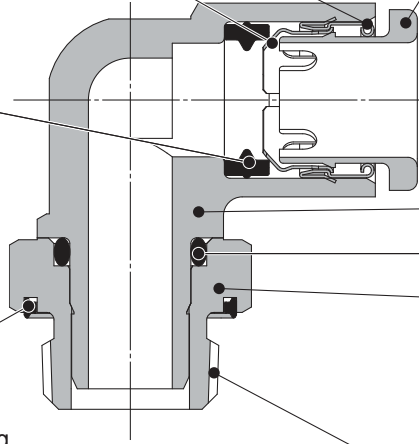
Metric Size Uni

Inch Size Uni

# Inch Size One-touch Fittings

Applicable Tubing: Inch Size, Connection Thread: R

## KQ2 Series



**Guide**  
**Chuck**  
Suitable for use with nylon and urethane. Large retaining force. The chuck provides secure retention and the collet increases the holding force on the tube.


**Seal**  
Can be used for a wide range of pressures from a low vacuum up to a pressure of 1 MPa. The use of a special profile ensures sealing and reduces resistance when the tube is inserted.

**Face seal method**  
**Seal ring**  
Piping installability is improved by changing to the face seal structure.

**Release button**  
Requires little force for removal. Releases the chuck collet to remove the tube as well as to prevent the chuck from biting too deeply into the tubing.

**Body**  
**O-ring**  
**Stud**  
Effective when piping in a confined space. Body part rotates allowing for positioning.

**Connection thread**  
R



**One-touch IN/OUT connection.**  
**Possible to use in vacuum to -100 kPa.**

**Drastically reduces screw-in time with the face seal method.**



### Applicable Tubing

Tubing material	FEP, PFA, Nylon, Soft nylon, Polyurethane
Tubing O.D.	Ø 1/8", Ø 3/16", Ø 1/4", Ø 5/16", Ø 3/8", Ø 1/2"

### Specifications

<b>Fluid</b>		Air, Water*1
<b>Operating pressure range*2</b>		-100 kPa to 1 MPa
<b>Proof pressure (at 23 °C)</b>		3 MPa
<b>Ambient and fluid temperature</b>		-5 to 60 °C, Water: 0 to 40 °C (No freezing)
<b>Thread</b>	<b>Mounting section</b>	JIS B0203 (Taper thread for piping) JIS B0205 (Metric coarse thread)
	<b>Nut section</b>	JIS B0205 (Metric fine thread)
<b>Sealant on the threads</b>		Seal ring

\*1 The surge pressure must be under the maximum operating pressure.

\*2 Do not use the fittings with a leak tester or for vacuum retention because they are not guaranteed for zero leakage.

### Principal Parts Material

Body	C3604, PBT
Stud	C3604 (Thread portion)
Chuck	Stainless steel 304
Guide	Stainless steel 304
Release button	POM
Seal, O-ring, Seal ring	NBR

## How to Order

### Threaded Type

**KQ2 H 05 - 01 A P**

One-touch fittings

Model

Symbol	Model
<b>H</b>	Male connector
<b>L</b>	Male elbow
<b>T</b>	Male branch tee
<b>W</b>	Extended male elbow
<b>Y</b>	Male run tee
<b>U</b>	Branch "Y"

Face seal

Thread material/Surface treatment

Symbol	Thread material/Surface treatment
<b>A</b>	Brass
<b>N</b>	Brass + Electroless nickel plating

Port size

Symbol	Size
<b>01</b>	R 1/8
<b>02</b>	R 1/4
<b>03</b>	R 3/8
<b>04</b>	R 1/2

Applicable tubing O.D.

Symbol	Size
<b>01</b>	∅ 1/8"
<b>05</b>	∅ 3/16"
<b>07</b>	∅ 1/4"
<b>09</b>	∅ 5/16"
<b>11</b>	∅ 3/8"
<b>13</b>	∅ 1/2"

Round Type



Metric Size M, R, Rc

Sealant/Gasket Seal

Inch Size UNF, NPT

Inch Size M, R, Rc

Metric Size G

Face Seal

Metric Size R, Rc

Inch Size NPT

Inch Size R

Gasket Seal

Metric Size Uni

Inch Size Uni

# Inch Size One-touch Fittings

## Round Type Variations

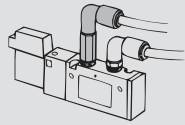
### Extended male elbow

KQ2W

P.198



Basically, it is used together with a male elbow. Its extended height allows for multi-levelled piping and prevents interference among fittings.



### Male connector

KQ2H

P.198



Use to pipe a female thread in the same direction. Most general model.

### Male branch tee

KQ2T

P.199



Use to branch a female thread at both 90° angles.

### Branch "Y"

KQ2U

P.199



Use to branch a female thread in the same direction.

### Male elbow

KQ2L

P.198



Use to pipe a female thread at right angles. Most general model.

### Male run tee

KQ2Y

P.199



Use to branch a female thread in the same direction and at a 90° angle.

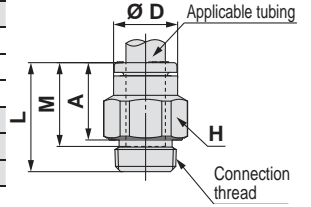
## Dimensions

### Male Connector: KQ2H (Face seal)



Applicable tubing O.D. [inch]	Connection thread R	Model	H (Width across flats)	Ø D	L	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
								Nylon	Urethane		
Ø 1/8	1/8	KQ2H01-01□P	12	6.7	14.1	8.9	13.3	3.4	2.9	2.5	6.3
	1/4	KQ2H01-02□P	17	6.7	15	7.4	13.3	3.4	2.9	2.5	15.1
Ø 3/16	1/8	KQ2H05-01□P	12	8.3	16.7	11.5	13.3	7.8	6.5	3.5	6.8
	1/4	KQ2H05-02□P	17	8.3	15	7.4	13.3	7.8	6.5	3.5	13.9
Ø 1/4	1/8	KQ2H07-01□P	12	10.9	19.4	14.2	13.3	13.5	11.5	4.6	8.2
	1/4	KQ2H07-02□P	17	10.9	15	7.4	13.3	13.5	11.5	4.6	12.2
	3/8	KQ2H07-03□P	21	10.9	14.5	6.9	13.3	13.5	11.5	4.6	20.4
Ø 5/16	1/8	KQ2H09-01□P	14	13	21.1	15.9	14.2	26.1	18	6	11.8
	1/4	KQ2H09-02□P	17	13	19.9	12.3	14.2	26.1	18	6	13.9
	3/8	KQ2H09-03□P	21	13	15.2	7.6	14.2	26.1	18	6	19.6
Ø 3/8	1/4	KQ2H11-02□P	17	15.1	23.9	16.3	15.6	35.3	29.1	7	18
	3/8	KQ2H11-03□P	21	15.1	21.2	13.6	15.6	35.3	29.1	7	24.3
	1/2	KQ2H11-04□P	27	15.1	18.8	8.4	15.6	35.3	29.1	7	42
Ø 1/2	1/4	KQ2H13-02□P	19	19	26.8	19.2	17	58.5	51.7	9	21.3
	3/8	KQ2H13-03□P	21	19	25.6	18	17	66.0	51.7	9.6	28.9
	1/2	KQ2H13-04□P	27	19	26.5	16.1	17	66.0	51.7	9.6	50.9

□: A (Brass), N (Brass + Electroless nickel plating)



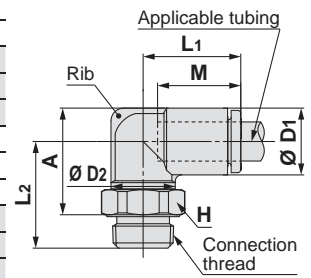
### Male Elbow: KQ2L (Face seal)



Applicable tubing O.D. [inch]	Connection thread R	Model	H (Width across flats)	Ø D <sup>*1</sup>	Ø D <sub>2</sub>	L <sub>1</sub>	L <sub>2</sub>	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]	With a rib
										Nylon	Urethane			
Ø 3/16	1/8	KQ2L05-01□P	12	9.1	10	15	16.0	15.3	13.3	6.8	5.6	3.5	5.4	—
	1/4	KQ2L05-02□P	17	9.1	10	15	20.4	17.3	13.3	6.8	5.6	3.5	14.7	—
Ø 1/4	1/8	KQ2L07-01□P	12	11.1	10	15.6	17.0	17.3	13.3	11.3	10	4.5	5.8	●
	1/4	KQ2L07-02□P	17	11.1	10	15.6	21.4	19.3	13.3	11.3	10	4.5	15	●
	3/8	KQ2L07-03□P	21	11.1	10	15.6	23.4	21.3	13.3	11.3	10	4.5	30.3	●
Ø 5/16	1/8	KQ2L09-01□P	12	13.2	10	16.4	18.0	19.4	14.2	11.4	11.4	4.5	6.5	●
	1/4	KQ2L09-02□P	17	13.2	12	17.2	22.4	21.4	14.2	21.6	14.9	6	13.7	●
	3/8	KQ2L09-03□P	21	13.2	12	17.2	24.4	23.4	14.2	21.6	14.9	6	28.7	●
Ø 3/8	1/4	KQ2L11-02□P	17	15.4	17	19.3	25.5	25.5	15.6	28.8	23.8	7.5	17.7	●
	3/8	KQ2L11-03□P	21	15.4	17	19.3	25.6	25.6	15.6	28.8	23.8	7.5	17.6	●
	1/2	KQ2L11-04□P	27	15.4	17	19.3	30.4	27.6	15.6	28.8	23.8	7.5	44.8	●
Ø 1/2	1/4	KQ2L13-02□P	17	19.3	17	21.5	27.4	29.4	17	50.3	44.4	9	20	—
	3/8	KQ2L13-03□P	21	19.3	17	21.8	27.7	29.7	17	56.7	44.4	9.5	32.6	—
	1/2	KQ2L13-04□P	27	19.3	17	21.8	32.3	31.5	17	56.7	44.4	9.5	64.5	—

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D<sub>1</sub> is maximum diameter.



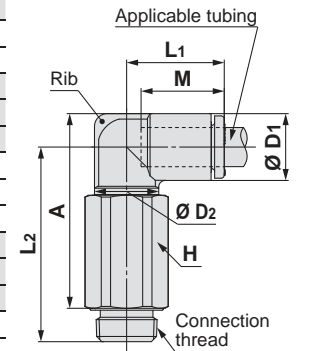
### Extended Male Elbow: KQ2W (Face seal)



Applicable tubing O.D. [inch]	Connection thread R	Model	H (Width across flats)	Ø D <sup>*1</sup>	Ø D <sub>2</sub>	L <sub>1</sub>	L <sub>2</sub>	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]	With a rib
										Nylon	Urethane			
Ø 3/16	1/8	KQ2W05-01□P	12	9.1	10	15	29.7	29	13.3	6.8	5.6	3.5	15.7	—
	1/4	KQ2W05-02□P	17	9.1	10	15	32	29	13.3	6.8	5.6	3.5	35.1	—
Ø 1/4	1/8	KQ2W07-01□P	12	11.1	10	15.6	30.7	31	13.3	11.6	10.0	4.5	16	●
	1/4	KQ2W07-02□P	17	11.1	10	15.6	33	31	13.3	11.6	10.0	4.5	35.4	●
	3/8	KQ2W07-03□P	21	11.1	10	15.6	35	33	13.3	11.6	10.0	4.5	62.8	●
Ø 5/16	1/8	KQ2W09-01□P	12	13.2	10	16.4	31.7	33.1	14.2	11.6	11.6	4.5	16.7	●
	1/4	KQ2W09-02□P	17	13.2	12	17.2	36.1	35.1	14.2	21.5	14.9	6	35.4	●
	3/8	KQ2W09-03□P	21	13.2	12	17.2	38.1	37.1	14.2	21.5	14.9	6	64.7	●
Ø 3/8	1/4	KQ2W11-02□P	17	15.4	17	19.3	49.9	50	15.6	28.8	23.8	7	54.1	●
	3/8	KQ2W11-03□P	21	15.4	17	19.3	44.5	44.6	15.6	28.8	23.8	7	57.5	●
	1/2	KQ2W11-04□P	27	15.4	17	19.3	49.3	46.6	15.6	28.8	23.8	7	122.5	●
Ø 1/2	1/4	KQ2W13-02□P	17	19.3	17	21.5	51.8	53.9	17	56.7	44.4	9	56.4	—
	3/8	KQ2W13-03□P	21	19.3	17	21.8	47.4	49.5	17	56.7	44.4	9.5	81.6	—
	1/2	KQ2W13-04□P	27	19.3	17	21.8	52	51.3	17	56.7	44.4	9.5	143.9	—

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D<sub>1</sub> is maximum diameter.



Round Type

Metric Size M, R, Rc

Sealant/Gasket Seal

Inch Size UNF, NPT

Inch Size M, R, Rc

Metric Size G

Metric Size R, Rc

Face Seal

Metric Size R, Rc

Inch Size NPT

Inch Size R

Metric Size Uni

Gasket Seal

Inch Size Uni

# KQ2 Series

Applicable Tubing: Inch Size, Connection Thread: R

## Dimensions

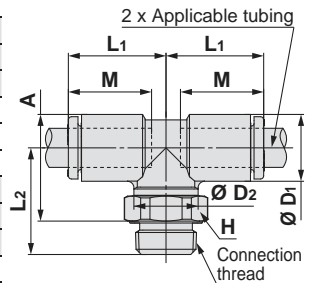
### Male Branch Tee: KQ2T (Face seal)



Applicable tubing O.D. [inch]	Connection thread R	Model	H (Width across flats)	*1 Ø D1	Ø D2	L1	L2	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
										Nylon	Urethane		
Ø 3/16	1/8	KQ2T05-01□P	12	9.1	10	15	16	15.3	13.3	8.4	7.0	3.5	6.2
	1/4	KQ2T05-02□P	17	9.1	10	15	20.4	17.3	13.3	8.4	7.0	3.5	15.5
Ø 1/4	1/8	KQ2T07-01□P	12	11.1	10	15.6	17	17.3	13.3	14.4	12.4	4.5	6.9
	1/4	KQ2T07-02□P	17	11.1	10	15.6	21.4	19.3	13.3	14.4	12.4	4.5	16.2
	3/8	KQ2T07-03□P	21	11.1	10	15.6	23.4	21.3	13.3	14.4	12.4	4.5	31.5
Ø 5/16	1/8	KQ2T09-01□P	12	13.2	10	16.4	18	19.4	14.2	14.4	14.4	4.5	8.3
	1/4	KQ2T09-02□P	17	13.2	12	17.2	22.4	21.4	14.2	26.3	18.2	6	15.5
Ø 3/8	3/8	KQ2T09-03□P	21	13.2	12	17.2	24.4	23.4	14.2	26.3	18.2	6	30.4
	1/4	KQ2T11-02□P	17	15.4	17	19.3	25.4	25.5	15.6	28.8	23.8	7.5	20.1
Ø 1/2	3/8	KQ2T11-03□P	21	15.4	17	19.3	25.5	25.6	15.6	28.8	23.8	7.5	20
	1/2	KQ2T11-04□P	27	15.4	17	19.3	30.3	27.6	15.6	28.8	23.8	7.5	47.3
Ø 1/2	1/4	KQ2T13-02□P	17	19.3	17	21.5	27.3	29.4	17	57.3	50.6	9	24.1
	3/8	KQ2T13-03□P	21	19.3	17	21.8	27.6	29.7	17	63.8	50.6	9.5	36.7
	1/2	KQ2T13-04□P	27	19.3	17	21.8	32.2	31.5	17	63.8	50.6	9.5	68.7

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D1 is maximum diameter.



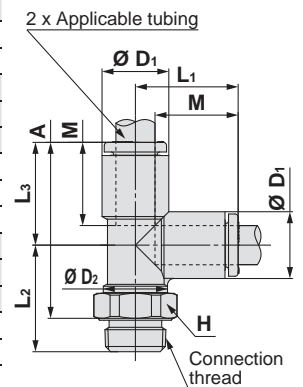
### Male Run Tee: KQ2Y (Face seal)



Applicable tubing O.D. [inch]	Connection thread R	Model	H (Width across flats)	*1 Ø D1	Ø D2	L1	L2	L3	A	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
											Nylon	Urethane		
Ø 3/16	1/8	KQ2Y05-01□P	12	9.1	10	15.7	16	15.7	26.5	13.3	8.4	7.0	3.5	6.3
	1/4	KQ2Y05-02□P	17	9.1	10	15.7	20.4	15.7	28.5	13.3	8.4	7.0	3.5	15.6
Ø 1/4	1/8	KQ2Y07-01□P	12	11.1	10	16.5	17	16.5	28.3	13.3	14.0	12.4	4.5	6.9
	1/4	KQ2Y07-02□P	17	11.1	10	16.5	21.4	16.5	30.3	13.3	14.0	12.4	4.5	16.2
	3/8	KQ2Y07-03□P	21	11.1	10	16.5	23.4	16.5	32.3	13.3	14.0	12.4	4.5	31.5
Ø 5/16	1/8	KQ2Y09-01□P	12	13.2	10	18.2	18	18.2	31	14.2	14.0	14.0	4.5	8.4
	1/4	KQ2Y09-02□P	17	13.2	12	18.2	22.4	18.2	33	14.2	26.3	18.3	6	15.6
Ø 3/8	3/8	KQ2Y09-03□P	21	13.2	12	18.2	24.4	18.2	35	14.2	26.3	18.3	6	30.5
	1/4	KQ2Y11-02□P	17	15.4	17	20.4	25.4	20.4	38.2	15.6	28.8	23.8	7.5	20.2
Ø 1/2	3/8	KQ2Y11-03□P	21	15.4	17	20.4	25.5	20.4	38.3	15.6	28.8	23.8	7.5	20.1
	1/2	KQ2Y11-04□P	27	15.4	17	20.4	30.3	20.4	40.3	15.6	28.8	23.8	7.5	47.4
Ø 1/2	1/4	KQ2Y13-02□P	17	19.3	17	23.4	27.3	23.4	43.1	17	57.3	50.6	9	24.4
	3/8	KQ2Y13-03□P	21	19.3	17	23.4	27.6	23.4	43.4	17	64.6	50.6	9.5	37
	1/2	KQ2Y13-04□P	27	19.3	17	23.4	32.2	23.4	45.2	17	64.6	50.6	9.5	68.9

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D1 is maximum diameter.



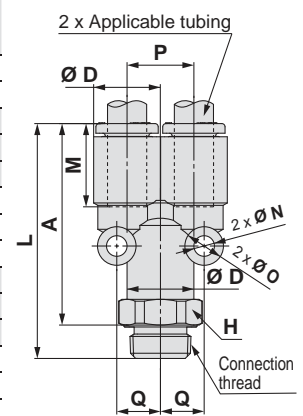
### Branch "Y": KQ2U (Face seal)



Applicable tubing O.D. [inch]	Connection thread R	Model	H (Width across flats)	*1 Ø D	L	P	A	M	Q	Ø O	Ø N	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
												Nylon	Urethane		
Ø 3/16	1/8	KQ2U05-01□P	12	9.1	36.4	9.1	31.2	13.3	6.2	6	3.2	8.4	7.0	4.1	9.8
	1/4	KQ2U05-02□P	17	9.1	39.8	9.1	32.2	13.3	6.2	6	3.2	8.4	7.0	4.1	19.6
Ø 1/4	1/8	KQ2U07-01□P	14	11.1	37.1	11.1	31.9	13.3	7.6	8	4	14.4	12.4	5.6	12.3
	1/4	KQ2U07-02□P	17	11.1	40.5	11.1	32.9	13.3	7.6	8	4	14.4	12.4	5.6	20.4
	3/8	KQ2U07-03□P	21	11.1	40	11.1	32.4	13.3	7.6	8	4	14.4	12.4	5.6	28.7
Ø 5/16	1/8	KQ2U09-01□P	14	13.2	40	13.2	34.8	14.2	8.7	8	4.2	26.3	18.3	6	15.8
	1/4	KQ2U09-02□P	17	13.2	43.4	13.2	35.8	14.2	8.7	8	4.2	26.3	18.3	7.3	21.4
Ø 3/8	3/8	KQ2U09-03□P	21	13.2	42.9	13.2	35.3	14.2	8.7	8	4.2	26.3	18.3	7.3	29.8
	1/4	KQ2U11-02□P	17	15.4	46.9	15.4	39.3	15.6	9.9	8	4.2	28.8	23.8	8.9	22.8
Ø 1/2	3/8	KQ2U11-03□P	21	15.4	46.4	15.4	38.8	15.6	9.9	8	4.2	28.8	23.8	8.9	31.3
	1/2	KQ2U11-04□P	27	15.4	48.7	15.4	38.3	15.6	9.9	8	4.2	28.8	23.8	8.9	49.6
Ø 1/2	1/4	KQ2U13-02□P	21	19.3	51.2	19.3	43.6	17	11.8	8	4.2	57.3	50.6	9	38.8
	3/8	KQ2U13-03□P	21	19.3	51.2	19.3	43.6	17	11.8	8	4.2	64.6	50.6	11	37.6
	1/2	KQ2U13-04□P	27	19.3	53.5	19.3	43.1	17	11.8	8	4.2	64.6	50.6	12.1	51.3

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D is maximum diameter.



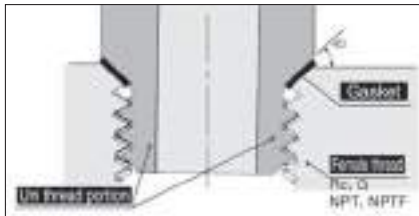
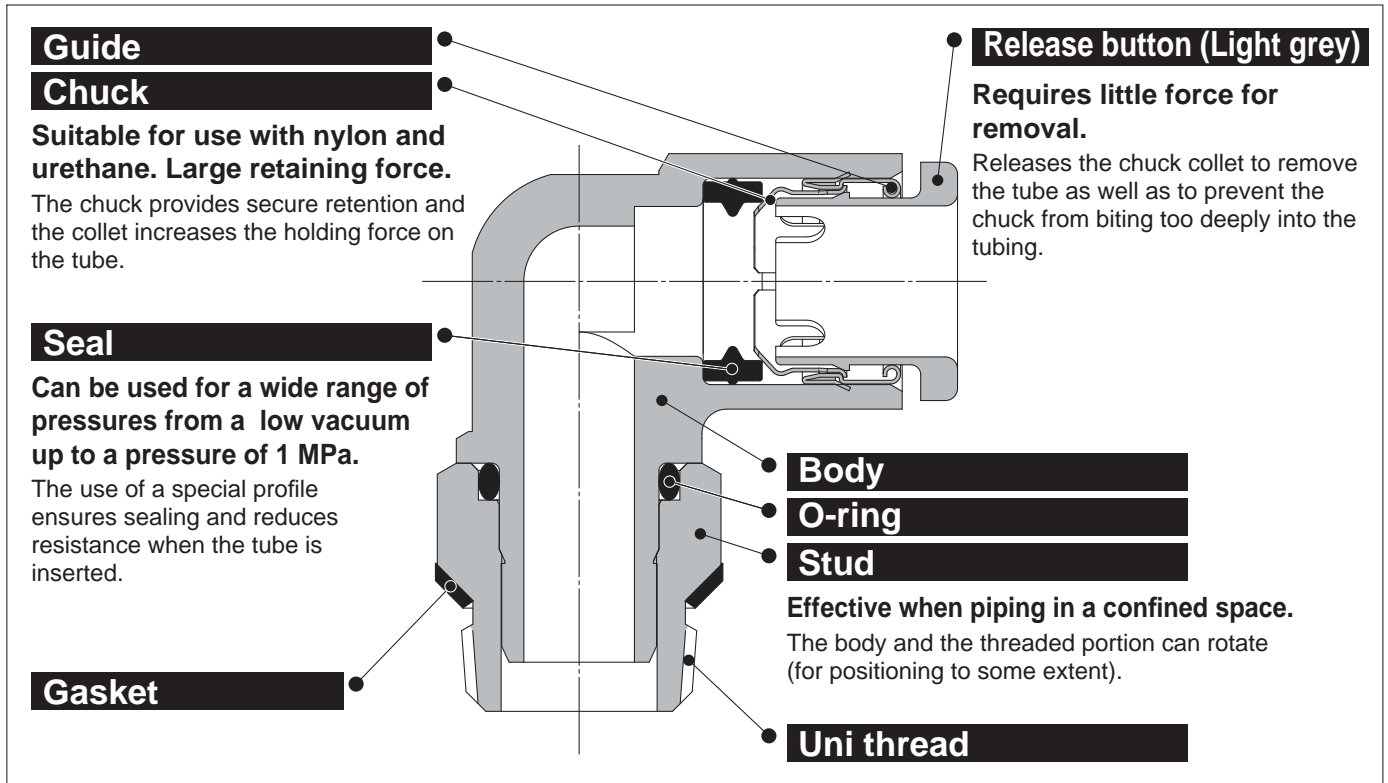


Gasket Seal		Face Seal		Sealant/Gasket Seal	
Inch Size Uni	Metric Size Uni	Inch Size R	Inch Size NPT	Inch Size M, R, Rc	Metric Size M, R, Rc
			Metric Size R, Rc		
					Inch Size UNF, NPT

# Metric Size Uni One-touch Fittings

Applicable Tubing: Metric Size, Connection Thread: Rc, G, NPT, NPTF

## KQ2 Series



### Uni thread ridge shape

A gasket made of a stainless sheet covered with laminated NBR on both sides is seated on the chamfer of a female thread for a perfect sealing construction irrespective of the difference in thread diameters due to the difference in the types of female threads, variation in tolerance, or difference in the size of chamfer. (It is applicable to any female thread with an ordinary chamfer.)

A ridge shape has been created as a Uni thread for common applications for Rc, G, NPT and NPTF.

Drastically cuts piping work-hours with the gasket seal method.



### Applicable Tubing

Tubing material	FEP, PFA, Nylon, Soft nylon, Polyurethane
Tubing O.D.	Ø 4, Ø 6, Ø 8, Ø 10, Ø 12, Ø 16

### Specifications

Fluid	Air, Water*1
Operating pressure range*2	-100 kPa to 1 MPa
Proof pressure (at 23 °C)	3 MPa
Ambient and fluid temperature	-5 to 60 °C, Water: 0 to 40 °C (No freezing)

\*1 The surge pressure must be under the maximum operating pressure.

\*2 Do not use the fittings with a leak tester or for vacuum retention because they are not guaranteed for zero leakage.

### Principal Parts Material

Body	C3604, PBT
Stud	C3604 (Thread portion)
Chuck	Stainless steel 304
Guide	Stainless steel 304
Release button	POM
Seal, O-ring	NBR
Gasket	Stainless steel 304, NBR



Made to Order  
(Refer to page 207 for details.)

# Metric Size Uni One-touch Fittings **KQ2 Series**

Applicable Tubing: Metric Size, Connection Thread: Rc, G, NPT, NPTF

## How to Order

### Threaded Type

**KQ2 H 06 - U01 A**

One-touch fittings

Model

Symbol	Model
<b>H</b>	Male connector
<b>S</b>	Hexagon socket head male connector
<b>L</b>	Male elbow
<b>K</b>	45° male elbow
<b>V</b>	Universal male elbow
<b>T</b>	Male branch tee
<b>W</b>	Extended male elbow
<b>Y</b>	Male run tee
<b>U</b>	Branch "Y"

Applicable tubing O.D.

Symbol	Size
<b>04</b>	Ø 4
<b>06</b>	Ø 6
<b>08</b>	Ø 8
<b>10</b>	Ø 10
<b>12</b>	Ø 12
<b>16</b>	Ø 16

Thread material/Surface treatment

Symbol	Thread material/Surface treatment
<b>A</b>	Brass
<b>N</b>	Brass + Electroless nickel plating

Port size

Symbol		Size
Thread connection	<b>U01</b>	Uni 1/8
	<b>U02</b>	Uni 1/4
	<b>U03</b>	Uni 3/8
	<b>U04</b>	Uni 1/2

### Spare Parts

#### How to Order Gasket

**KQG - U01**

Gasket for Uni One-touch fittings

Applicable port size

Symbol	Size
<b>U01</b>	Uni 1/8
<b>U02</b>	Uni 1/4
<b>U03</b>	Uni 3/8
<b>U04</b>	Uni 1/2

Round Type



Metric Size M, R, Rc

Sealant/Gasket Seal

Inch Size UNF, NPT

Inch Size M, R, Rc

Face Seal

Metric Size G

Metric Size R, Rc

Inch Size NPT

Inch Size R

Gasket Seal

Metric Size Uni

Inch Size Uni

# Metric Size Uni One-touch Fittings

## Round Type Variations

### Hexagon socket head male connector

KQ2S

P.204



Internal hexagon socket allows tightening with a hexagon wrench in confined spaces.



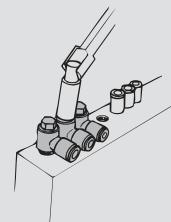
### Universal male elbow

KQ2V

P.205



Hexagon head of the body allows tightening with a box wrench in confined spaces.



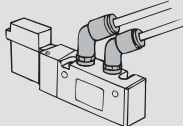
### 45° male elbow

KQ2K

P.205



Use to pipe a female thread at a 45° angle. Its direction is in-between that of the male connector and male elbow.



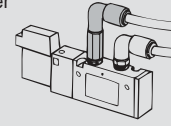
### Extended male elbow

KQ2W

P.205



Basically, it is used together with a male elbow. Its extended height allows for multi-Colour piping and prevents interference among fittings.



### Male connector

KQ2H

P.204



Use to pipe a female thread in the same direction. Most general model.

### Male elbow

KQ2L

P.204



Use to pipe a female thread at right angles. Most general model.

### Male branch tee

KQ2T

P.206



Use to branch a female thread at both 90° angles.

### Branch "Y"

KQ2U

P.206



Use to branch a female thread in the same direction.

### Male run tee

KQ2Y

P.206



Use to branch a female thread in the same direction and at a 90° angle.

# Metric Size Uni One-touch Fittings **KQ2 Series**

Applicable Tubing: Metric Size, Connection Thread: Rc, G, NPT, NPTF

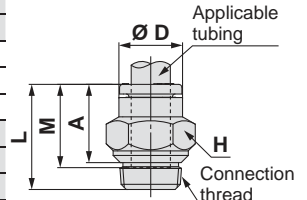
## Dimensions

### Male Connector: KQ2H (Gasket seal)



Applicable tubing O.D. [mm]	Connection thread Uni	Model	H (Width across flats)	Ø D	L	A*1	M	Effective area [mm²]		Min. port size	Weight [g]
								Nylon	Urethane		
Ø 4	1/8	KQ2H04-U01	10	7.7	15.9	11.1	13.3	4.8	3.4	3	6.6
	1/4	KQ2H04-U02	14	7.7	15.3	8.9	13.3	4.8	3.4	3	12.7
Ø 6	1/8	KQ2H06-U01	12	9.7	16.7	11.9	13.3	13.1	10.4	4.5	6.2
	1/4	KQ2H06-U02	14	9.7	17	10.6	13.3	13.1	10.4	4.5	12.8
	3/8	KQ2H06-U03	17	9.7	14.9	8.5	13.3	13.1	10.4	4.5	18.1
Ø 8	1/8	KQ2H08-U01	14	13	20.6	15.8	14.2	26.1	18	6	7
	1/4	KQ2H08-U02	14	13	18.5	12.1	14.2	26.1	18	6	10.1
	3/8	KQ2H08-U03	17	13	14.9	8.5	14.2	26.1	18	6	15
Ø 10	1/8	KQ2H10-U01	17	15.6	22.4	17.6	15.6	26.1	18	6	13.9
	1/4	KQ2H10-U02	17	15.6	23.7	17.3	15.6	41.5	29.5	7.5	17.6
	3/8	KQ2H10-U03	17	15.6	19.5	13.1	15.6	41.5	29.5	7.5	15.6
	1/2	KQ2H10-U04	22	15.6	17	8.4	15.6	41.5	29.5	7.5	29.5
Ø 12	1/4	KQ2H12-U02	19	18.2	24.8	18.4	17	58.3	46.1	9	13.8
	3/8	KQ2H12-U03	19	18.2	21.8	15.4	17	58.3	46.1	9	17.9
	1/2	KQ2H12-U04	22	18.2	17.7	9.1	17	58.3	46.1	9	25.4
Ø 16	3/8	KQ2H16-U03	24	23.6	29.2	22.8	20.6	81	67	11	33.9
	1/2	KQ2H16-U04	24	23.6	26.8	18.2	20.6	113	67	13	31.5

□: A (Brass), N (Brass + Electroless nickel plating) \*1 Reference dimensions after installation of Uni thread

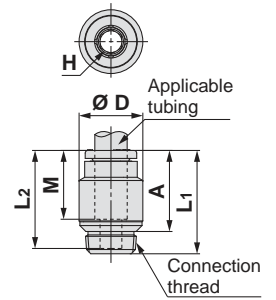


### Hexagon Socket Head Male Connector: KQ2S (Gasket seal)



Applicable tubing O.D. [mm]	Connection thread Uni	Model	H (Width across flats)	Ø D*1	L1	L2	A*2	M	Effective area [mm²]		Min. port size	Weight [g]
									Nylon	Urethane		
Ø 4	1/8	KQ2S04-U01	3	10	20.6	19.6	15.8	13.3	4.1	3.6	3.1	8
Ø 6	1/8	KQ2S06-U01	4	12	19.8	18.8	15	13.3	10	9.9	4.1	8.2
	1/4	KQ2S06-U02	4	14	19.8	18.8	13.4	13.3	10.7	10	4.1	12.3
Ø 8	1/8	KQ2S08-U01	5	14	20.7	19.7	15.9	14.2	17.2	16.2	5.1	9.4
	1/4	KQ2S08-U02	6	14	20.5	19.5	14.1	14.2	23.3	16.2	6.1	10.9
	3/8	KQ2S08-U03	6	17	20.7	19.7	14.3	14.2	23.3	16.2	6.1	19.8
Ø 10	1/8	KQ2S10-U01	5	15.6	22.4	21.9	16.8	15.6	17.2	16.2	5.1	10.5
	1/4	KQ2S10-U02	8	17	23.7	20.1	17.3	15.6	39	26.6	8.1	15.4
	3/8	KQ2S10-U03	8	17	21.1	20.1	14.7	15.6	39	26.6	8.1	16.4
	1/2	KQ2S10-U04	8	21	21.1	20.1	12.5	15.6	39	26.6	8.1	29.7
Ø 12	1/4	KQ2S12-U02	8	18.2	27.8	21.5	21.4	17	46	44.5	8.1	20.7
	3/8	KQ2S12-U03	10	18.2	22.8	21.8	16.4	17	60	44.5	10.1	16.1
	1/2	KQ2S12-U04	10	21	22.8	21.8	14.2	17	60	44.5	10.1	28.1

□: A (Brass), N (Brass + Electroless nickel plating) \*1 Ø D is maximum diameter. \*2 Reference dimensions after installation of Uni thread

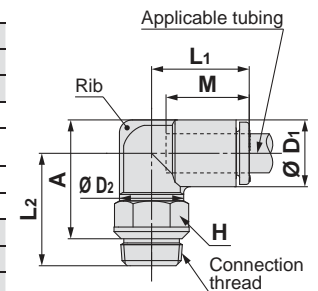


### Male Elbow: KQ2L (Gasket seal)



Applicable tubing O.D. [mm]	Connection thread Uni	Model	H (Width across flats)	Ø D1*1	Ø D2	L1	L2	A*2	M	Effective area [mm²]		Min. port size	Weight [g]	With a rib
										Nylon	Urethane			
Ø 4	1/8	KQ2L04-U01	10	8.2	10	14.8	16.4	15.7	13.3	4.6	3.3	3	4.8	●
	1/4	KQ2L04-U02	14	8.2	10	14.8	19.2	16.9	13.3	4.6	3.3	3	11.5	●
Ø 6	1/8	KQ2L06-U01	10	10.4	10	15.5	17.5	17.9	13.3	11.4	9	4.5	5.3	—
	1/4	KQ2L06-U02	14	10.4	10	15.5	20.3	19.1	13.3	11.4	9	4.5	12	—
	3/8	KQ2L06-U03	17	10.4	10	15.5	21.4	20.2	13.3	11.4	9	4.5	21.4	—
Ø 8	1/8	KQ2L08-U01	10	13.2	10	16.4	18.9	20.7	14.2	11.4	11.4	4.5	6.1	●
		KQ2L08-U01*3	12	13.2	12	17.2	22.7	25.0	14.2	21.6	14.9	6	8.6	●
	1/4	KQ2L08-U02	14	13.2	12	17.2	21.7	21.9	14.2	21.6	14.9	6	10.9	●
	3/8	KQ2L08-U03	17	13.2	12	17.2	22.8	23.0	14.2	21.6	14.9	6	20.2	●
Ø 10	1/8	KQ2L10-U01	14	15.9	12	18.6	21.5	24.6	15.6	21.6	14.9	6	12.3	●
	1/4	KQ2L10-U02	17	15.9	17	19.3	24.3	25.8	15.6	35.2	25	7.5	16.9	●
	3/8	KQ2L10-U03	17	15.9	17	19.3	26.9	28.4	15.6	35.2	25	7.5	17.9	●
	1/2	KQ2L10-U04	22	15.9	17	19.3	34.5	33.8	15.6	35.2	25	7.5	48.2	●
Ø 12	1/4	KQ2L12-U02	17	18.5	17	21.5	25.6	28.4	17	50.2	39.7	9	18.7	●
	3/8	KQ2L12-U03	17	18.5	17	21.5	28.2	31.0	17	50.2	39.7	9	19.8	●
	1/2	KQ2L12-U04	22	18.5	17	21.5	35.8	36.4	17	50.2	39.7	9	50	●
Ø 16	3/8	KQ2L16-U03	22	23.8	21	27.1	32.4	37.9	20.6	71	58.9	11	37.4	—
	1/2	KQ2L16-U04	22	23.8	21	27.1	35.0	38.3	20.6	100	58.9	13	47.9	—

□: A (Brass), N (Brass + Electroless nickel plating) \*1 Ø D1 is maximum diameter. \*2 Reference dimensions after installation of Uni thread \*3 For details, refer to page 207.



Round Type

Metric Size M, R, Rc

Inch Size UNF, NPT

Inch Size M, R, Rc

Metric Size G

Metric Size R, Rc

Face Seal

Inch Size NPT

Inch Size R

Metric Size Uni

Inch Size Uni

# KQ2 Series

Applicable Tubing: Metric Size, Connection Thread: Rc, G, NPT, NPTF

## Dimensions

### 45° Male Elbow: KQ2K (Gasket seal)



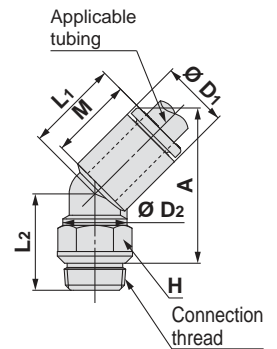
Applicable tubing O.D. [mm]	Connection thread Uni	Model	H (Width across flats)	Ø D1 <sup>*1</sup>	Ø D2	L1	L2	A <sup>*2</sup>	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
										Nylon	Urethane		
Ø 4	1/8	KQ2K04-U01□	10	8.2	10	14.4	12.9	20.8	13.3	4.8	3.4	4.5	4.7
	1/4	KQ2K04-U02□	14	8.2	10	14.4	14.7	21	13.3	4.8	3.4	4.5	11.3
Ø 6	1/8	KQ2K06-U01□	10	10.4	10	14.7	15	23.8	13.3	8.7	6.9	4.5	5.1
	1/4	KQ2K06-U02□	14	10.4	10	14.7	16.8	24	13.3	8.7	6.9	4.5	11.7
	3/8	KQ2K06-U03□	17	10.4	10	14.7	17.9	25.1	13.3	8.7	6.9	4.5	21.2
Ø 8	1/8	KQ2K08-U01□	10	13.2	10	16	15.9	26.5	14.2	8.7	8.7	4.5	6
	1/4	KQ2K08-U01□ <sup>*3</sup> Q	12	13.2	12	16	19.7	30.8	14.2	19.7	13.6	6	8.4
	1/4	KQ2K08-U02□	14	13.2	12	16	18.7	27.7	14.2	19.7	19.7	6	10.7
Ø 10	3/8	KQ2K08-U03□	17	13.2	12	16	19.8	28.8	14.2	19.7	19.7	6	20
	1/8	KQ2K10-U01□	14	15.9	12	18.2	19.4	32.4	15.6	30.9	23.2	6	12.2
	1/4	KQ2K10-U02□	17	15.9	17	17.6	24.7	35.7	15.6	30.9	23.2	7.5	17
	3/8	KQ2K10-U03□	17	15.9	17	17.6	21.6	32.6	15.6	30.9	23.2	7.5	17.4
Ø 12	1/2	KQ2K10-U04□	22	15.9	17	17.6	29.2	38	15.6	30.9	23.2	7.5	47.7
	1/4	KQ2K12-U02□	17	18.5	17	19.4	24.6	37.7	17	44.5	35.1	9	18.5
Ø 12	3/8	KQ2K12-U03□	17	18.5	17	19.4	21.5	34.6	17	44.5	35.1	9	18.9
	1/2	KQ2K12-U04□	22	18.5	17	19.4	29.1	40	17	44.5	35.1	9	49.2

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D1 is maximum diameter.

\*2 Reference dimensions after installation of Uni thread

\*3 For details, refer to page 207.



### Universal Male Elbow: KQ2V (Gasket seal)

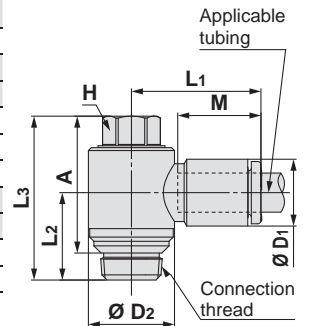


Applicable tubing O.D. [mm]	Connection thread Uni	Model	H (Width across flats)	Ø D1 <sup>*1</sup>	Ø D2	L1	L2	L3	A <sup>*2</sup>	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
											Nylon	Urethane		
Ø 4	1/8	KQ2V04-U01□	8	8.2	13.4	19.3	13.6	25.5	20.7	13.3	2.9	2.9	4.5	13.5
Ø 6	1/8	KQ2V06-U01□	8	10.4	13.4	20.5	13.6	25.5	20.7	13.3	7.5	5.9	4.5	13.9
	1/4	KQ2V06-U02□	10	10.4	15.3	19.9	15.4	28	21.6	13.3	7.5	5.9	4.5	21.8
Ø 8	1/8	KQ2V08-U01□	12	13.2	17.6	23.5	15	27.5	22.7	14.2	16	11.2	6	23.7
	1/4	KQ2V08-U02□	12	13.2	17.6	23.5	17	29.5	23.1	14.2	16	11.2	6	28
Ø 10	3/8	KQ2V08-U03□	14	13.2	20.6	23.1	18.2	34	27.6	14.2	20.5	14.3	7.5	43.1
	1/4	KQ2V10-U02□	14	15.9	20.6	25.9	19	34	27.6	15.6	27	20.3	7.5	38.9
Ø 12	3/8	KQ2V10-U03□	14	15.9	20.6	25.9	19	34	27.6	15.6	27	20.3	7.5	44.4
	1/2	KQ2V12-U04□	17	18.5	25.2	28.5	20.2	36.4	30	17	39	30.8	9	60.5
														74.5

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D1 is maximum diameter.

\*2 Reference dimensions after installation of Uni thread



### Extended Male Elbow: KQ2W (Gasket seal)



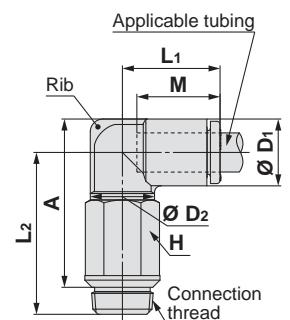
Applicable tubing O.D. [mm]	Connection thread Uni	Model	H (Width across flats)	Ø D1 <sup>*1</sup>	Ø D2	L1	L2	A <sup>*2</sup>	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]	With a rib
										Nylon	Urethane			
Ø 4	1/8	KQ2W04-U01□	10	8.2	10	14.8	24.1	23.4	13.3	4	4	3	8.3	●
	1/4	KQ2W04-U02□	14	8.2	10	14.8	30.1	27.8	13.3	4	4	3	23.9	●
Ø 6	1/8	KQ2W06-U01□	10	10.4	10	15.5	31.2	31.6	13.3	10.9	8.6	4.5	11.5	—
	1/4	KQ2W06-U02□	14	10.4	10	15.5	31.2	30	13.3	10.9	8.6	4.5	24.3	—
	3/8	KQ2W06-U03□	17	10.4	10	15.5	32.3	31.1	13.3	10.9	8.6	4.5	41	—
Ø 8	1/8	KQ2W08-U01□	10	13.2	10	16.4	32.6	34.4	14.2	10.9	10.9	4.5	12.3	●
	1/4	KQ2W08-U01□ <sup>*3</sup> Q	12	13.2	12	17.2	43.6	45.4	14.2	20.5	14.2	6	24.7	●
	1/4	KQ2W08-U02□	14	13.2	12	17.2	35.4	35.6	14.2	20.5	14.2	6	24.1	●
Ø 10	3/8	KQ2W08-U03□	17	13.2	12	17.2	36.5	36.7	14.2	20.5	14.2	6	42.5	●
	1/4	KQ2W10-U02□	17	15.9	17	19.3	48.5	50.1	15.6	33.5	23.8	7.5	54.2	●
	3/8	KQ2W10-U03□	17	15.9	17	19.3	45.8	47.4	15.6	33.5	23.8	7.5	47	●
Ø 12	1/2	KQ2W10-U04□	22	15.9	17	19.3	53.4	52.8	15.6	33.5	23.8	7.5	95.5	●
	1/4	KQ2W12-U02□	17	18.5	17	21.5	49.8	52.7	17	47.7	37.7	9	55.9	●
Ø 12	3/8	KQ2W12-U03□	17	18.5	17	21.5	47.1	50	17	47.7	37.7	9	48.9	●
	1/2	KQ2W12-U04□	22	18.5	17	21.5	54.7	55.4	17	47.7	37.7	9	97.4	●

□: A (Brass), N (Brass + Electroless nickel plating)

\*1 Ø D1 is maximum diameter.

\*2 Reference dimensions after installation of Uni thread

\*3 For details, refer to page 207.



# Metric Size Uni One-touch Fittings **KQ2 Series**

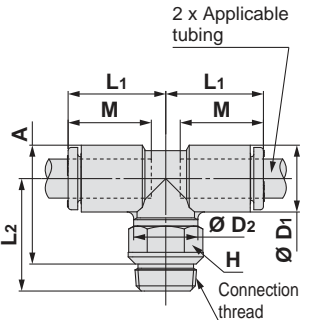
Applicable Tubing: Metric Size, Connection Thread: Rc, G, NPT, NPTF

## Dimensions

### Male Branch Tee: KQ2T (Gasket seal)



Applicable tubing O.D. [mm]	Connection thread Uni	Model	H (Width across flats)	*1 Ø D1	Ø D2	L1	L2	A*2	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
										Nylon	Urethane		
Ø 4	1/8	KQ2T04-U01□	10	8.2	10	14.8	16.4	15.7	13.3	6	4.1	3	5.5
	1/4	KQ2T04-U02□	14	8.2	10	14.8	19.2	16.9	13.3	6	4.1	3	12.2
Ø 6	1/8	KQ2T06-U01□	10	10.4	10	15.5	17.5	17.9	13.3	13.9	11	4.5	6.2
	1/4	KQ2T06-U02□	14	10.4	10	15.5	20.3	19.1	13.3	13.9	11	4.5	12.9
Ø 8	3/8	KQ2T06-U03□	17	10.4	10	15.5	21.4	20.2	13.3	13.9	11	4.5	22.3
	1/8	KQ2T08-U01□	10	13.2	10	16.4	18.9	20.7	14.2	13.9	13.9	4.5	7.9
		KQ2T08-U01□*3	12	13.2	12	17.2	22.7	25	14.2	26.3	18.2	6	10.3
	1/4	KQ2T08-U02□	14	13.2	12	17.2	21.7	21.9	14.2	26.3	18.2	6	12.6
Ø 10	3/8	KQ2T08-U03□	17	13.2	12	17.2	22.8	23	14.2	26.3	18.2	6	21.9
	1/8	KQ2T10-U01□	14	15.9	12	18.6	21.4	24.6	15.6	21.6	14.9	6	15.1
	1/4	KQ2T10-U02□	17	15.9	17	19.3	24.2	25.8	15.6	35.2	25	7.5	19.5
	3/8	KQ2T10-U03□	17	15.9	17	19.3	26.8	28.4	15.6	35.2	25	7.5	20.5
Ø 12	1/2	KQ2T10-U04□	22	15.9	17	19.3	34.4	33.8	15.6	35.2	25	7.5	50.8
	1/4	KQ2T12-U02□	17	18.5	17	21.5	25.5	28.4	17	57.2	45.2	9	22.5
	3/8	KQ2T12-U03□	17	18.5	17	21.5	28.1	31	17	57.2	45.2	9	23.6
	1/2	KQ2T12-U04□	22	18.5	17	21.5	35.7	36.4	17	57.2	45.2	9	53.9
Ø 16	3/8	KQ2T16-U03□	22	23.8	21	27.1	32.4	37.9	20.6	71	58.9	11	44.3
	1/2	KQ2T16-U04□	22	23.8	21	27.1	35	38.3	20.6	100	58.9	13	54.8

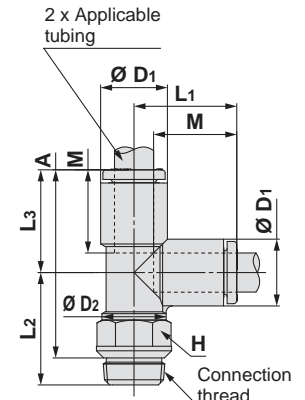


□: A (Brass), N (Brass + Electroless nickel plating) \*1 Ø D1 is maximum diameter.  
 \*2 Reference dimensions after installation of Uni thread  
 \*3 For details, refer to page 207.

### Male Run Tee: KQ2Y (Gasket seal)



Applicable tubing O.D. [mm]	Connection thread Uni	Model	H (Width across flats)	*1 Ø D1	Ø D2	L1	L2	L3	A*2	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
											Nylon	Urethane		
Ø 4	1/8	KQ2Y04-U01□	10	8.2	10	15.3	16.4	15.3	26.9	13.3	6.4	4	3	5.6
	1/4	KQ2Y04-U02□	14	8.2	10	15.3	19.2	15.3	28.1	13.3	6.4	4	3	12.2
Ø 6	1/8	KQ2Y06-U01□	10	10.4	10	16.3	17.5	16.3	29	13.3	13.4	10.6	4.5	6.3
	1/4	KQ2Y06-U02□	14	10.4	10	16.3	20.3	16.3	30.2	13.3	13.4	10.6	4.5	13
Ø 8	3/8	KQ2Y06-U03□	17	10.4	10	16.3	21.4	16.3	31.3	13.3	13.4	10.6	4.5	22.5
	1/8	KQ2Y08-U01□	10	13.2	10	18.2	18.9	18.2	32.3	14.2	13.4	13.4	4.5	8
		KQ2Y08-U01□*3	12	13.2	12	18.2	22.7	18.2	36.7	14.2	25.6	17.7	6	10.4
	1/4	KQ2Y08-U02□	14	13.2	12	18.2	21.7	18.2	33.5	14.2	25.6	17.7	6	12.7
Ø 10	3/8	KQ2Y08-U03□	17	13.2	12	18.2	22.8	18.2	34.6	14.2	25.6	17.7	6	22
	1/8	KQ2Y10-U01□	14	15.9	12	20.6	21.4	20.6	37.3	15.6	40	28.4	6	15.2
	1/4	KQ2Y10-U02□	17	15.9	17	20.6	24.2	20.6	38.5	15.6	40	28.4	7.5	19.7
	3/8	KQ2Y10-U03□	17	15.9	17	20.6	26.8	20.6	41.1	15.6	40	28.4	7.5	20.7
Ø 12	1/2	KQ2Y10-U04□	22	15.9	17	20.6	34.4	20.6	46.5	15.6	40	28.4	7.5	50.9
	1/4	KQ2Y12-U02□	17	18.5	17	23	25.5	23	42.2	17	57.4	45.4	9	22.8
	3/8	KQ2Y12-U03□	17	18.5	17	23	28.1	23	44.8	17	57.4	45.4	9	23.9
	1/2	KQ2Y12-U04□	22	18.5	17	23	35.7	23	50.2	17	57.4	45.4	9	54.2
Ø 16	3/8	KQ2Y16-U03□	22	23.8	21	28.6	32.4	28.6	54.6	20.6	81	60	11	44.9
	1/2	KQ2Y16-U04□	22	23.8	21	28.6	35	28.6	55	20.6	113	60	13	55.4

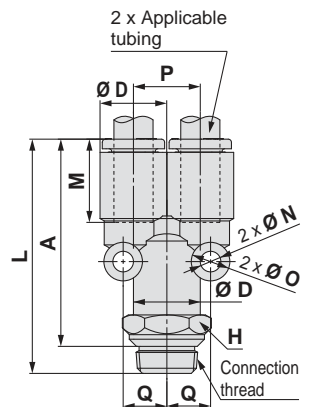


□: A (Brass), N (Brass + Electroless nickel plating) \*1 Ø D1 is maximum diameter.  
 \*2 Reference dimensions after installation of Uni thread  
 \*3 For details, refer to page 207.

### Branch "Y": KQ2U (Gasket seal)



Applicable tubing O.D. [mm]	Connection thread Uni	Model	H (Width across flats)	*1 Ø D	L	P	A*2	M	Q	Ø O	Ø N	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
												Nylon	Urethane		
Ø 4	1/8	KQ2U04-U01□	11	8.2	35.4	8.2	30.6	13.3	5.7	6	3.2	4.2	4.2	3.6	8.6
	1/4	KQ2U04-U02□	14	8.2	37.4	8.2	31	13.3	5.7	6	3.2	4.2	4.2	3.6	14.6
Ø 6	1/8	KQ2U06-U01□	12	10.4	36.8	10.4	32	13.3	6.8	6	3.2	13.4	10.6	5.4	10
	1/4	KQ2U06-U02□	14	10.4	38.5	10.4	32.1	13.3	6.8	6	3.2	13.4	10.6	5.4	15
Ø 8	3/8	KQ2U06-U03□	17	10.4	39.3	10.4	32.9	13.3	6.8	6	3.2	13.4	10.6	5.4	23.3
	1/8	KQ2U08-U01□	14	13.2	41.6	13.2	36.8	14.2	8.7	8	4.2	25.6	17.7	6	17.6
		KQ2U08-U01□	14	13.2	42.6	13.2	36.2	14.2	8.7	8	4.2	25.6	17.7	7.3	18.3
	1/4	KQ2U08-U02□	14	13.2	42.6	13.2	36.2	14.2	8.7	8	4.2	25.6	17.7	7.3	18.3
Ø 10	3/8	KQ2U08-U03□	17	13.2	42.4	13.2	36	14.2	8.7	8	4.2	25.6	17.7	7.3	25.5
	1/4	KQ2U10-U02□	17	15.9	47.6	15.9	41.2	15.6	10.1	8	4.2	40	28.4	9	23.3
	3/8	KQ2U10-U03□	19	15.9	47.5	15.9	41.1	15.6	10.1	8	4.2	40	28.4	9.4	31.6
	1/2	KQ2U10-U04□	22	15.9	49.4	15.9	40.8	15.6	10.1	8	4.2	40	28.4	9.4	47.6
Ø 12	1/4	KQ2U12-U02□	22	18.5	52.1	18.5	45.7	17	11.4	8	4.2	57.4	45.4	9	42.6
	3/8	KQ2U12-U03□	22	18.5	52	18.5	45.6	17	11.4	8	4.2	57.4	45.4	11	41.2
1/2	KQ2U12-U04□	22	18.5	53.4	18.5	44.8	17	11.4	8	4.2	57.4	45.4	11.6	48.8	



□: A (Brass), N (Brass + Electroless nickel plating) \*1 Ø D is maximum diameter.  
 \*2 Reference dimensions after installation of Uni thread

Round Type



Metric Size M, R, Rc

Inch Size UNF, NPT

Inch Size M, R, Rc

Metric Size G

Metric Size R, Rc

Inch Size NPT

Inch Size R

Metric Size Uni

Inch Size Uni

Sealant/Gasket Seal

Face Seal

Gasket Seal

# KQ2 Series

# Made to Order/Clean Series/Spare Parts

Please contact SMC for detailed dimensions, specifications, and lead times.

## 1 Made to Order

Symbol	Specifications
<b>X12</b>	Lubricant: White vaseline Release button colour: White
<b>X35</b> *1	Body colour: Black Release button colour: Light grey
<b>X41</b>	With fixed orifice*2
<b>KQ2□08-U01□Q</b>	Effective area is interchangeable with the current product (KQ series). Applicable model: Male elbow 45° male elbow Extended male elbow Male branch tee Male run tee Applicable tubing O.D./Port size: Ø 8/Uni 1/8 Thread material/Surface treatment: Brass, Brass + Electroless nickel plating Example) <b>KQ2L08-U01AQ</b>

\*1 The following models are not available as made-to-order: Hexagon socket head male connector/KQ2S, Male connector/KQ2H

\*2 Please contact SMC for availability.

The following made-to-order products will be provided based on previous models (KQ2 series). Please contact SMC separately.

Symbol	Specifications
<b>X17</b>	Grease-free Rubber material: NBR (With fluorine coating) Release button colour: Light blue
<b>X29</b>	Grease-free Rubber material: NBR (With fluorine coating) Release button colour: Light blue Copper-free (With electroless nickel plating)
<b>X39</b>	Grease-free Rubber material: NBR (With fluorine coating) Release button colour: Light blue Clean (Copper-free, air blow, double packaging, resin body: white)

## 3 Spare Parts

Description	Part no.	Applicable thread
Gasket	<b>KQG-U01</b>	Uni 1/8
	<b>KQG-U02</b>	Uni 1/4
	<b>KQG-U03</b>	Uni 3/8
	<b>KQG-U04</b>	Uni 1/2

## 2 Clean Series

Please consult with SMC separately for applicable models.

Symbol	Specifications
<b>10-</b>	Brass parts: With electroless nickel plating Lubricant: Fluorine grease Air blow in a clean room Double packaging Resin body, Release button colour: White

Example) **10-KQ2H06-U01N**

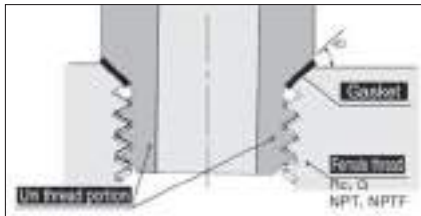
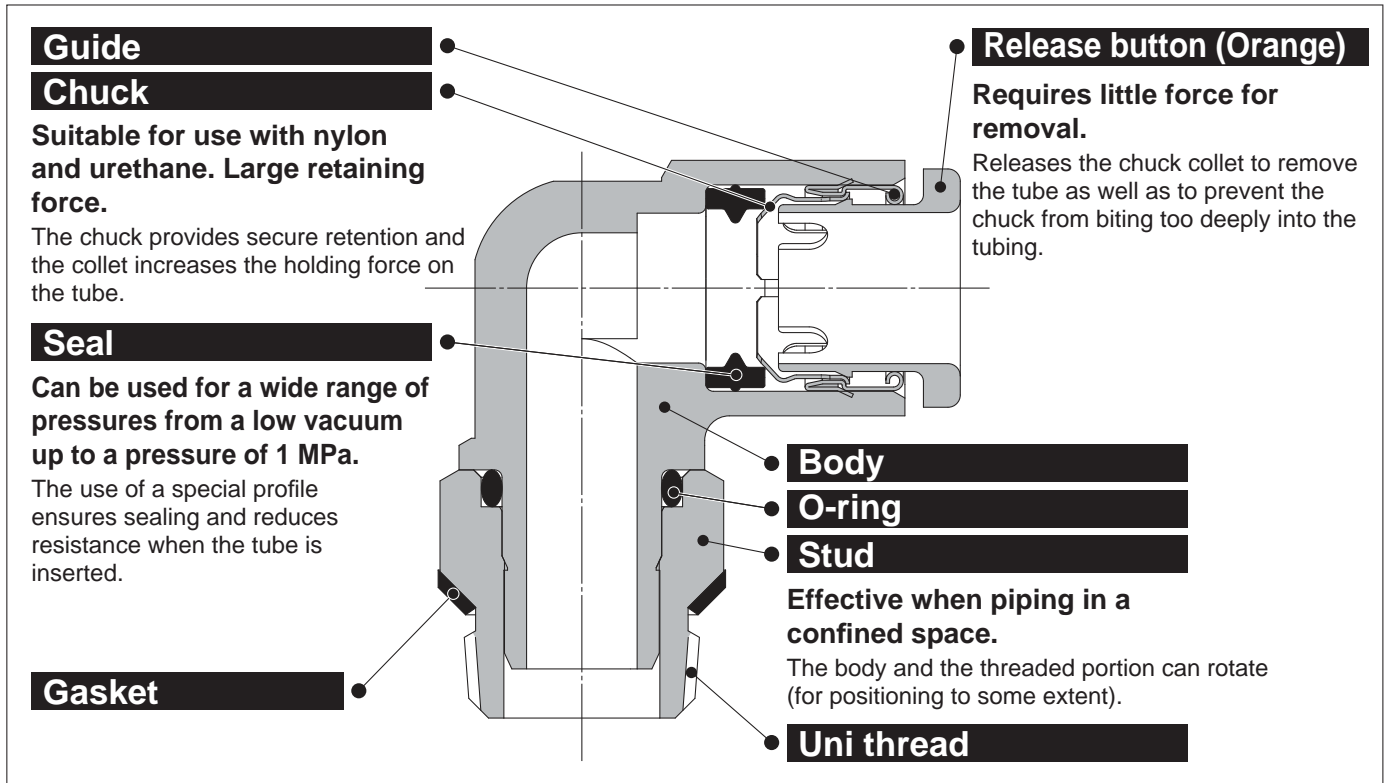


Gasket Seal		Face Seal			Sealant/Gasket Seal		Round Type		
Inch Size Uni	Metric Size Uni	Inch Size R	Inch Size NPT	Metric Size R, Rc	Metric Size G	Inch Size M, R, Rc	Inch Size UNF, NPT	Metric Size M, R, Rc	

# Inch Size Uni One-touch Fittings

Applicable Tubing: Inch Size, Connection Thread: Rc, G, NPT, NPTF

## KQ2 Series



### Uni thread ridge shape

A gasket made of a stainless sheet covered with laminated NBR on both sides is seated on the chamfer of a female thread for a perfect sealing construction irrespective of the difference in thread diameters due to the difference in the types of female threads, variation in tolerance, or difference in the size of chamfer. (It is applicable to any female thread with an ordinary chamfer.)

A ridge shape has been created as a Uni thread for common applications for Rc, G, NPT and NPTF.

Drastically cuts piping work-hours with the gasket seal method.



### Applicable Tubing

Tubing material	FEP, PFA, Nylon, Soft nylon, Polyurethane
Tubing O.D.	Ø 1/8", Ø 5/32", Ø 3/16", Ø 1/4", Ø 5/16", Ø 3/8", Ø 1/2"

### Specifications

Fluid	Air, Water*1
Operating pressure range*2	-100 kPa to 1 MPa
Proof pressure (at 23 °C)	3 MPa
Ambient and fluid temperature	-5 to 60 °C, Water: 0 to 40 °C (No freezing)

\*1 The surge pressure must be under the maximum operating pressure.

\*2 Do not use the fittings with a leak tester or for vacuum retention because they are not guaranteed for zero leakage.

### Principal Parts Material

Body	C3604, PBT
Stud	C3604 (Thread portion)
Chuck	Stainless steel 304
Guide	Stainless steel 304
Release button	POM
Seal, O-ring	NBR
Gasket	Stainless steel 304, NBR



Made to Order  
(Refer to page 214 for details.)

## How to Order

### Threaded Type

**KQ2 H 05 - U01 A**

One-touch fittings

Model

Symbol	Model
H	Male connector
L	Male elbow
T	Male branch tee
W	Extended male elbow
Y	Male run tee
U	Branch "Y"

Applicable tubing O.D.

Symbol	Size
01	Ø 1/8"
03	Ø 5/32"
05	Ø 3/16"
07	Ø 1/4"
09	Ø 5/16"
11	Ø 3/8"
13	Ø 1/2"

Thread material/Surface treatment

Symbol	Thread material/Surface treatment
A	Brass
N	Brass + Electroless nickel plating

Port size

Symbol	Size
U01	Uni 1/8
U02	Uni 1/4
U03	Uni 3/8
U04	Uni 1/2

### Spare Parts

#### How to Order Gasket

**KQG - U01**

Gasket for Uni One-touch fittings

Applicable port size

Symbol	Size
U01	Uni 1/8
U02	Uni 1/4
U03	Uni 3/8
U04	Uni 1/2

Round Type



Metric Size M, R, Rc

Sealant/Gasket Seal

Inch Size UNF, NPT

Inch Size M, R, Rc

Face Seal

Metric Size G

Metric Size R, Rc

Inch Size NPT

Inch Size R

Gasket Seal

Metric Size Uni

Inch Size Uni

# Inch Size Uni One-touch Fittings

## ○ Round Type Variations

### Male connector

**KQ2H** P.212



Use to pipe a female thread in the same direction. Most general model.

### Male elbow

**KQ2L** P.212



Use to pipe a female thread at right angles. Most general model.

### Male branch tee

**KQ2T** P.213



Use to branch a female thread at both 90° angles.

### Male run tee

**KQ2Y** P.213



Use to branch a female thread in the same direction and at a 90° angle.

### Branch "Y"

**KQ2U** P.213



Use to branch a female thread in the same direction.

### Extended male elbow

**KQ2W** P.212



Basically, it is used together with a male elbow. Its extended height allows for multi-colour piping and prevents interference among fittings.

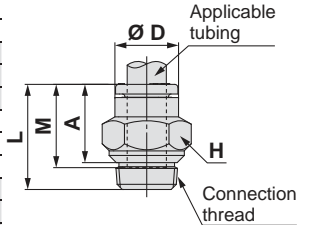
## Dimensions

### Male Connector: KQ2H (Gasket seal)



Applicable tubing O.D. [inch]	Connection thread Uni	Model	H (Width across flats)	Ø D	L	A*1	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
								Nylon	Urethane		
Ø 1/8	1/8	KQ2H01-U01	11.11	6.7	15.2	10.4	13.3	3.4	2.9	2.5	7.9
	1/4	KQ2H01-U02	14.29	6.7	15.3	8.9	13.3	3.4	2.9	2.5	13.7
Ø 5/32	1/8	KQ2H03-U01	11.11	7.7	15.7	10.9	13.3	4.8	3.4	3	7.7
	1/4	KQ2H03-U02	14.29	7.7	15.3	8.9	13.3	4.8	3.4	3	13
Ø 3/16	1/8	KQ2H05-U01	12.7	8.3	16	11.2	13.3	6.8	5.6	3.5	7.7
	1/4	KQ2H05-U02	14.29	8.3	15.3	8.9	13.3	6.8	5.6	3.5	12.4
Ø 1/4	1/8	KQ2H07-U01	12.7	10.9	18.9	14.1	13.3	11.6	10	4.6	8.7
	1/4	KQ2H07-U02	14.29	10.9	15.3	8.9	13.3	11.6	10	4.6	10.7
Ø 5/16	3/8	KQ2H07-U03	17.46	10.9	14.9	8.5	13.3	11.6	10	4.6	18.4
	1/8	KQ2H09-U01	14.29	13	20.6	15.8	14.2	26.1	18	6	10.5
Ø 3/8	1/4	KQ2H09-U02	14.29	13	18.5	12.1	14.2	26.1	18	6	10.7
	3/8	KQ2H09-U03	17.46	13	14.9	8.5	14.2	26.1	18	6	15.5
Ø 1/2	1/4	KQ2H11-U02	17.46	15.1	22.2	15.8	15.6	28.8	23.8	7	16.6
	3/8	KQ2H11-U03	17.46	15.1	18.9	12.5	15.6	28.8	23.8	7	16.2
Ø 3/8	1/2	KQ2H11-U04	22.23	15.1	17	8.4	15.6	28.8	23.8	7	30.9
	1/4	KQ2H13-U02	22.23	19	25.2	18.8	17	50.3	44.4	9	24.9
Ø 1/2	3/8	KQ2H13-U03	22.23	19	23.5	17.1	17	56.7	44.4	9.6	27
	1/2	KQ2H13-U04	22.23	19	21.7	13.1	17	56.7	44.4	9.6	29.8

□: A (Brass), N (Brass + Electroless nickel plating) \*1 Reference dimensions after installation of Uni thread

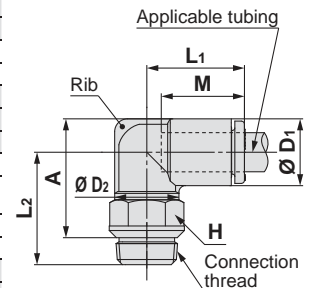


### Male Elbow: KQ2L (Gasket seal)



Applicable tubing O.D. [inch]	Connection thread Uni	Model	H (Width across flats)	Ø D1	Ø D2	L1	L2	A*2	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]	With a rib
										Nylon	Urethane			
Ø 1/8	1/8	KQ2L01-U01	11.11	7.1	10	14.5	17.9	16.7	13.3	3	2.5	2.5	6	—
	1/4	KQ2L01-U02	14.29	7.1	10	14.5	19.2	16.4	13.3	3	2.5	2.5	12.1	—
Ø 5/32	1/8	KQ2L03-U01	11.11	8.2	10	14.8	17.4	16.7	13.3	4.6	3.3	3	6.2	●
	1/4	KQ2L03-U02	14.29	8.2	10	14.8	19.7	17.4	13.3	4.6	3.3	3	12.3	●
Ø 3/16	1/8	KQ2L05-U01	11.11	9.1	10	15	17.9	17.7	13.3	6.8	5.6	3.5	6.4	—
	1/4	KQ2L05-U02	14.29	9.1	10	15	20.2	18.4	13.3	6.8	5.6	3.5	12.5	—
Ø 1/4	1/8	KQ2L07-U01	11.11	11.1	10	15.6	18.9	19.7	13.3	11.3	10	4.5	6.7	●
	1/4	KQ2L07-U02	14.29	11.1	10	15.6	21.2	20.4	13.3	11.3	10	4.5	12.9	●
Ø 5/16	3/8	KQ2L07-U03	17.46	11.1	10	15.6	22.3	21.5	13.3	11.3	10	4.5	23.1	●
	1/8	KQ2L09-U01	11.11	13.2	10	16.4	19.9	21.7	14.2	11.4	11.4	4.5	7.4	●
Ø 3/8	1/4	KQ2L09-U02	14.29	13.2	12	17.2	22.7	25.0	14.2	21.6	14.9	6	9.2	●
	3/8	KQ2L09-U03	17.46	13.2	12	17.2	23.3	23.5	14.2	21.6	14.9	6	21.7	●
Ø 1/2	1/4	KQ2L11-U02	17.46	15.4	17	19.3	24.4	25.7	15.6	28.8	23.8	7.5	18	●
	3/8	KQ2L11-U03	17.46	15.4	17	19.3	27.0	28.3	15.6	28.8	23.8	7.5	18.7	●
Ø 3/8	1/2	KQ2L11-U04	22.23	15.4	17	19.3	34.8	33.9	15.6	28.8	23.8	7.5	50	●
	1/4	KQ2L13-U02	17.46	19.3	17	21.5	26.3	29.5	17	50.3	44.4	9	20.3	—
Ø 1/2	3/8	KQ2L13-U03	17.46	19.3	17	21.8	28.9	32.1	17	56	44.4	9.5	25.1	—
	1/2	KQ2L13-U04	22.23	19.3	17	21.8	31.9	32.9	17	56	44.4	9.5	56	—

□: A (Brass), N (Brass + Electroless nickel plating) \*1 Ø D1 is maximum diameter.  
\*2 Reference dimensions after installation of Uni thread  
\*3 For details, refer to page 214.

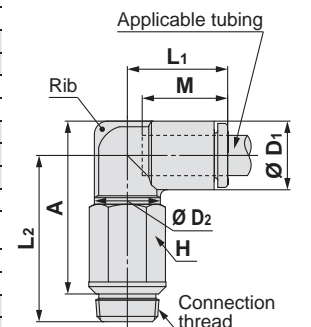


### Extended Male Elbow: KQ2W (Gasket seal)



Applicable tubing O.D. [inch]	Connection thread Uni	Model	H (Width across flats)	Ø D1	Ø D2	L1	L2	A*2	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]	With a rib
										Nylon	Urethane			
Ø 1/8	1/8	KQ2W01-U01	11.11	7.1	10	14.5	31.5	30.3	13.3	2.8	2.4	2.5	14.5	—
	1/4	KQ2W01-U02	14.29	7.1	10	14.5	30.8	28	13.3	2.8	2.4	2.5	26	—
Ø 5/32	1/8	KQ2W03-U01	11.11	8.2	10	14.8	31.1	30.4	13.3	4	4	3	14.6	●
	1/4	KQ2W03-U02	14.29	8.2	10	14.8	31.3	29	13.3	4	4	3	26.2	●
Ø 3/16	1/8	KQ2W05-U01	11.11	9.1	10	15	31.6	31.3	13.3	6.8	5.6	3.5	14.8	—
	1/4	KQ2W05-U02	14.29	9.1	10	15	31.8	30	13.3	6.8	5.6	3.5	26.4	—
Ø 1/4	1/8	KQ2W07-U01	11.11	11.1	10	15.6	32.6	33.3	13.3	11.3	10	4.5	15.1	●
	1/4	KQ2W07-U02	14.29	11.1	10	15.6	32.8	32	13.3	11.3	10	4.5	26.8	●
Ø 5/16	3/8	KQ2W07-U03	17.46	11.1	10	15.6	33.9	33.1	13.3	11.3	10	4.5	45.3	●
	1/8	KQ2W09-U01	11.11	13.2	10	16.4	33.6	35.4	14.2	11.3	11.3	4.5	15.9	●
Ø 3/8	1/4	KQ2W09-U02	14.29	13.2	12	17.2	39.5	41.3	14.2	20.5	14.2	6	24.0	●
	3/8	KQ2W09-U03	17.46	13.2	12	17.2	37	37.2	14.2	20.5	14.2	6	45.5	●
Ø 1/2	1/4	KQ2W11-U02	17.46	15.4	17	19.3	44.1	45.4	15.6	28.8	23.8	7.5	50.6	●
	3/8	KQ2W11-U03	17.46	15.4	17	19.3	42.9	44.2	15.6	28.8	23.8	7.5	45	●
Ø 3/8	1/2	KQ2W11-U04	22.23	15.4	17	19.3	50.7	49.8	15.6	28.8	23.8	7.5	90.9	●
	1/4	KQ2W13-U02	17.46	19.3	17	21.5	46	49.3	17	50.3	44.4	9	52.9	—
Ø 1/2	3/8	KQ2W13-U03	17.46	19.3	17	21.8	48.6	51.9	17	56	44.4	9.5	52.6	—
	1/2	KQ2W13-U04	22.23	19.3	17	21.8	51.6	52.7	17	56	44.4	9.5	114.1	—

□: A (Brass), N (Brass + Electroless nickel plating) \*1 Ø D1 is maximum diameter.  
\*2 Reference dimensions after installation of Uni thread  
\*3 For details, refer to page 214.



Round Type

Metric Size M, R, Rc

Sealant/Gasket Seal

Inch Size UNF, NPT

Inch Size M, R, Rc

Metric Size G

Metric Size R, Rc

Face Seal

Metric Size NPT

Inch Size NPT

Inch Size R

Gasket Seal

Metric Size Uni

Inch Size Uni

# KQ2 Series

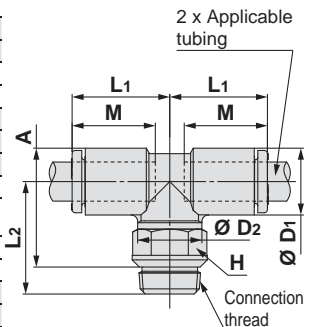
Applicable Tubing: Inch Size, Connection Thread: Rc, G, NPT, NPTF

## Dimensions

### Male Branch Tee: KQ2T (Gasket seal)



Applicable tubing O.D. [inch]	Connection thread Uni	Model	H (Width across flats)	Ø D1 <sup>*1</sup>	Ø D2	L1	L2	A <sup>*2</sup>	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
										Nylon	Urethane		
Ø 1/8	1/8	KQ2T01-U01	11.11	7.1	10	14.5	17.8	16.6	13.3	3.4	2.9	2.5	6.6
	1/4	KQ2T01-U02	14.29	7.1	10	14.5	19.1	16.3	13.3	3.4	2.9	2.5	12.7
Ø 5/32	1/8	KQ2T03-U01	11.11	8.2	10	14.8	17.4	16.7	13.3	6	4.1	3	6.9
	1/4	KQ2T03-U02	14.29	8.2	10	14.8	19.7	17.4	13.3	6	4.1	3	13
Ø 3/16	1/8	KQ2T05-U01	11.11	9.1	10	15	17.9	17.6	13.3	6.8	5.6	3.5	7.1
	1/4	KQ2T05-U02	14.29	9.1	10	15	20.2	18.3	13.3	6.8	5.6	3.5	13.3
Ø 1/4	1/8	KQ2T07-U01	11.11	11.1	10	15.6	18.9	19.6	13.3	11.3	10	4.5	7.8
	1/4	KQ2T07-U02	14.29	11.1	10	15.6	21.2	20.3	13.3	11.3	10	4.5	14.1
	3/8	KQ2T07-U03	17.46	11.1	10	15.6	22.3	21.4	13.3	11.3	10	4.5	24.3
Ø 5/16	1/8	KQ2T09-U01	11.11	13.2	10	16.4	19.9	21.7	14.2	13.9	13.9	4.5	9.3
	1/4	KQ2T09-U02	14.29	13.2	12	17.2	22.7	25	14.2	26.3	18.2	6	10.9
	3/8	KQ2T09-U03	17.46	13.2	12	17.2	23.3	23.5	14.2	26.3	18.2	6	23.4
Ø 3/8	1/4	KQ2T11-U02	17.46	15.4	17	19.3	24.3	25.6	15.6	28.8	23.8	7.5	20.4
	3/8	KQ2T11-U03	17.46	15.4	17	19.3	26.9	28.2	15.6	28.8	23.8	7.5	21.2
Ø 1/2	1/2	KQ2T11-U04	22.23	15.4	17	19.3	34.7	33.8	15.6	28.8	23.8	7.5	52.5
	3/8	KQ2T13-U02	17.46	19.3	17	21.5	26.2	29.5	17	50.3	44.4	9	24.4
Ø 1/2	3/8	KQ2T13-U03	17.46	19.3	17	21.8	28.8	32.1	17	56	44.4	9.5	29.3
	1/2	KQ2T13-U04	22.23	19.3	17	21.8	31.8	32.9	17	56	44.4	9.5	60.2

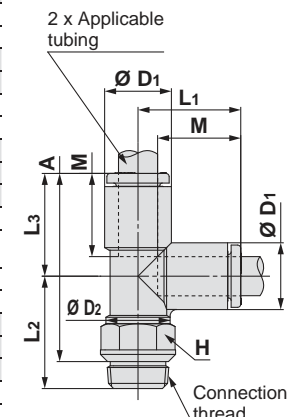


□: A (Brass), N (Brass + Electroless nickel plating) \*1 Ø D1 is maximum diameter.  
 \*2 Reference dimensions after installation of Uni thread  
 \*3 For details, refer to page 214.

### Male Run Tee: KQ2Y (Gasket seal)



Applicable tubing O.D. [inch]	Connection thread Uni	Model	H (Width across flats)	Ø D1 <sup>*1</sup>	Ø D2	L1	L2	L3	A <sup>*2</sup>	M	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
											Nylon	Urethane		
Ø 1/8	1/8	KQ2Y01-U01	11.11	7.1	10	14.9	17.8	14.9	28	13.3	3.4	2.9	2.5	6.6
	1/4	KQ2Y01-U02	14.29	7.1	10	14.9	19.1	14.9	27.7	13.3	3.4	2.9	2.5	12.8
Ø 5/32	1/8	KQ2Y03-U01	11.11	8.2	10	15.3	17.4	15.3	27.9	13.3	6.4	4.4	3	6.9
	1/4	KQ2Y03-U02	14.29	8.2	10	15.3	19.7	15.3	28.6	13.3	6.4	4.4	3	13.1
Ø 3/16	1/8	KQ2Y05-U01	11.11	9.1	10	15.7	17.9	15.7	28.8	13.3	6.8	5.6	3.5	7.2
	1/4	KQ2Y05-U02	14.29	9.1	10	15.7	20.2	15.7	29.5	13.3	6.8	5.6	3.5	13.4
Ø 1/4	1/8	KQ2Y07-U01	11.11	11.1	10	16.5	18.9	16.5	30.6	13.3	11.3	10	4.5	7.9
	1/4	KQ2Y07-U02	14.29	11.1	10	16.5	21.2	16.5	31.3	13.3	11.3	10	4.5	14.1
	3/8	KQ2Y07-U03	17.46	11.1	10	16.5	22.3	16.5	32.4	13.3	11.3	10	4.5	24.3
Ø 5/16	1/8	KQ2Y09-U01	11.11	13.2	10	18.2	19.9	18.2	33.3	14.2	13.4	13.4	4.5	9.3
	1/4	KQ2Y09-U02	14.29	13.2	12	18.2	22.2	18.2	34	14.2	25.6	17.7	6	13.4
	3/8	KQ2Y09-U03	17.46	13.2	12	18.2	23.3	18.2	35.1	14.2	25.6	17.7	6	23.5
Ø 3/8	1/4	KQ2Y11-U02	17.46	15.4	17	20.4	24.3	20.4	38.3	15.6	28.8	23.8	7.5	20.5
	3/8	KQ2Y11-U03	17.46	15.4	17	20.4	26.9	20.4	40.9	15.6	28.8	23.8	7.5	21.3
Ø 1/2	1/2	KQ2Y11-U04	22.23	15.4	17	20.4	34.7	20.4	46.5	15.6	28.8	23.8	7.5	52.6
	3/8	KQ2Y13-U02	17.46	19.3	17	23.4	26.2	23.4	43.2	17	50.3	44.4	9	24.7
Ø 1/2	3/8	KQ2Y13-U03	17.46	19.3	17	23.4	28.8	23.4	45.8	17	56	44.4	9.5	29.5
	1/2	KQ2Y13-U04	22.23	19.3	17	23.4	31.8	23.4	46.6	17	56	44.4	9.5	60.4

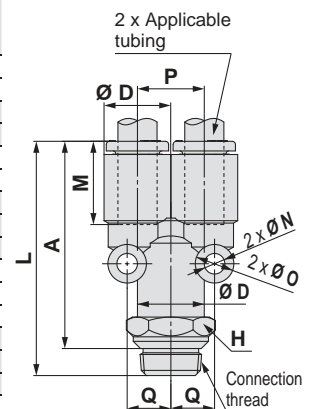


□: A (Brass), N (Brass + Electroless nickel plating) \*1 Ø D1 is maximum diameter.  
 \*2 Reference dimensions after installation of Uni thread  
 \*3 For details, refer to page 214.

### Branch "Y": KQ2U (Gasket seal)



Applicable tubing O.D. [inch]	Connection thread Uni	Model	H (Width across flats)	Ø D1 <sup>*1</sup>	L	P	A <sup>*2</sup>	M	Q	Ø O	Ø N	Effective area [mm <sup>2</sup> ]		Min. port size	Weight [g]
												Nylon	Urethane		
Ø 1/8	1/8	KQ2U01-U01	11.11	7.1	35.1	7.1	30.3	13.3	5.2	6	3.2	3.4	2.9	2.7	8.2
	1/4	KQ2U01-U02	14.29	7.1	37.4	7.1	31	13.3	5.2	6	3.2	3.4	2.9	2.7	14.6
Ø 5/32	1/8	KQ2U03-U01	11.11	8.2	35.4	8.2	30.6	13.3	5.7	6	3.2	4.2	4.2	3.6	8.7
	1/4	KQ2U03-U02	14.29	8.2	37.4	8.2	31	13.3	5.7	6	3.2	4.2	4.2	3.6	14.8
Ø 3/16	1/8	KQ2U05-U01	11.11	9.1	35.8	9.1	31	13.3	6.2	6	3.2	6.8	5.6	4.1	9
	1/4	KQ2U05-U02	14.29	9.1	38.1	9.1	31.7	13.3	6.2	6	3.2	6.8	5.6	4.1	15.3
Ø 1/4	1/8	KQ2U07-U01	12.7	11.1	37.7	11.1	32.9	13.3	7.6	8	4	11.6	10	5.6	12
	1/4	KQ2U07-U02	14.29	11.1	38.8	11.1	32.4	13.3	7.6	8	4	11.6	10	5.6	16.3
	3/8	KQ2U07-U03	17.46	11.1	39.7	11.1	33.3	13.3	7.6	8	4	11.6	10	5.6	25.1
Ø 5/16	1/8	KQ2U09-U01	14.29	13.2	41.6	13.2	36.8	14.2	8.7	8	4.2	25.6	17.7	6	17.9
	1/4	KQ2U09-U02	14.29	13.2	42.6	13.2	36.2	14.2	8.7	8	4.2	25.6	17.7	7.3	18.6
Ø 3/8	3/8	KQ2U09-U03	17.46	13.2	42.4	13.2	36	14.2	8.7	8	4.2	25.6	17.7	7.3	26.1
	1/4	KQ2U11-U02	17.46	15.4	47.2	15.4	40.8	15.6	9.9	8	4.2	28.8	23.8	8.9	24.8
Ø 1/2	3/8	KQ2U11-U03	19	15.4	47.1	15.4	40.7	15.6	9.9	8	4.2	28.8	23.8	8.9	31.5
	1/2	KQ2U11-U04	22.23	15.4	49.3	15.4	40.7	15.6	9.9	8	4.2	81	23.8	8.9	48.9
Ø 1/2	1/4	KQ2U13-U02	22.23	19.3	52.5	19.3	46.1	17	11.8	8	4.2	113	50.6	9	44.3
	3/8	KQ2U13-U03	22.23	19.3	52.4	19.3	46	17	11.8	8	4.2	113	50.6	11	43
Ø 1/2	1/2	KQ2U13-U04	22.23	19.3	54	19.3	45.4	17	11.8	8	4.2	113	50.6	12.1	50



□: A (Brass), N (Brass + Electroless nickel plating) \*1 Ø D1 is maximum diameter.  
 \*2 Reference dimensions after installation of Uni thread

# KQ2 Series

# Made to Order/Clean Series/Spare Parts

Please contact SMC for detailed dimensions, specifications, and lead times.

## 1 Made to Order

Symbol	Specifications
<b>X12</b>	Lubricant: White vaseline Release button colour: White
<b>X35</b> *1	Body colour: Black Release button colour: Orange
<b>X41</b>	With fixed orifice*2
<b>KQ2□09-U01□Q</b>	Effective area is interchangeable with the current product (KQ series). Applicable model: Male elbow Extended male elbow Male branch tee Male run tee Applicable tubing O.D./Port size: Ø 5/16"/Uni 1/8 Thread material/Surface treatment: Brass, Brass + Electroless nickel plating Example) <b>KQ2L09-U01AQ</b>

\*1 The following model is not available as made-to-order: Male connector/ KQ2H

\*2 Please contact SMC for availability.

The following made-to-order products will be provided based on previous models (KQ2 series). Please contact SMC separately.

Symbol	Specifications
<b>X17</b>	Grease-free Rubber material: NBR (With fluorine coating) Release button colour: Light blue
<b>X29</b>	Grease-free Rubber material: NBR (With fluorine coating) Release button colour: Light blue Copper-free (With electroless nickel plating)
<b>X39</b>	Grease-free Rubber material: NBR (With fluorine coating) Release button colour: Light blue Clean (Copper-free, air blow, double packaging, resin body: white)

## 3 Spare Parts

Description	Part no.	Applicable thread
Gasket	<b>KQG-U01</b>	Uni 1/8
	<b>KQG-U02</b>	Uni 1/4
	<b>KQG-U03</b>	Uni 3/8
	<b>KQG-U04</b>	Uni 1/2

## 2 Clean Series

Please consult with SMC separately for applicable models.

Symbol	Specifications
<b>10-</b>	Brass parts: With electroless nickel plating Lubricant: Fluorine grease Air blow in a clean room Double packaging Resin body, Release button colour: White

Example) **10-KQ2H07-U01N**

Round Type



Metric Size M, R, Rc

Inch Size UNF, NPT

Inch Size M, R, Rc

Metric Size G

Metric Size R, Rc

Inch Size NPT

Inch Size R

Metric Size Uni

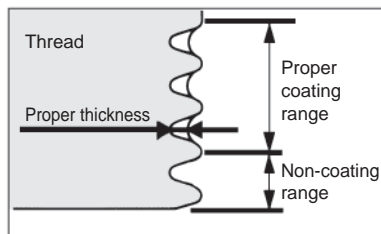
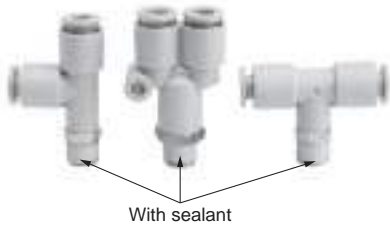
Inch Size Uni

Sealant/Gasket Seal  
Face Seal  
Gasket Seal

# For Pneumatic Piping/Fittings & Tubing Prior to Use

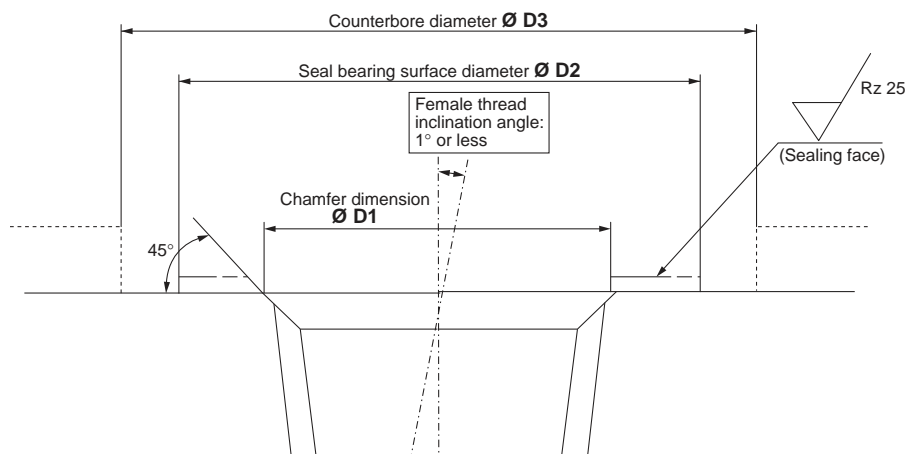
## Fittings with Sealant

Seal material (fluoresin) is coated on the thread part with the proper thickness and range, that reduces the piping work, such as coating the seal on the thread.



## Female Thread Conditions Applicable to Face Seal

1. Surface roughness of bearing surface: Rz 25 or less
2. Chamfer dimension:  $\varnothing D1$ , Seal bearing surface diameter:  $\varnothing D2$  (Refer to the table below.)
3. Female thread inclination angle:  $1^\circ$  or less
4. Counterbore diameter when the female thread is counterbored.:  $\varnothing D3$ 
  - Models with width across flats: Body width across flats x 1.1 or more
  - Models other than hexagon (Hexagon socket head male connector etc.): Body dimensions + 0.2 mm or more
- \* The width across flats and the body dimensions differ depending on the model even when the same thread size is used. Refer to the dimensions in the catalogue.
5. If oil content or sealant is sticking to the female thread, this may cause damage of the product. Remove it before piping.



**Table 1**

Connection thread size	Chamfer dimension $\varnothing D1$ [mm]	Seal bearing surface diameter $\varnothing D2$ [mm]
R 1/8	10.2 to 10.4	12 or more
R 1/4	13.6 to 13.8	17 or more
R 3/8	17.1 to 17.3	21 or more
R 1/2	21.4 to 21.6	27 or more
NPT 1/16	8.2 to 8.4	11.11 or more
NPT 1/8	10.5 to 10.7	12.7 or more
NPT 1/4	14.1 to 14.3	17.46 or more
NPT 3/8	17.4 to 17.6	22 or more
NPT 1/2	21.7 to 21.9	28.7 or more
G 1/8	10.2 to 10.6	12 or more
G 1/4	13.6 to 14.0	17 or more
G 3/8	17.1 to 17.5	21 or more
G 1/2	21.4 to 21.8	27 or more

### ⚠ Precautions

For products that do not satisfy the female thread conditions shown above and the piping with a piping pitch narrower than the product dimension, use the current sealant type.

\* The rubber parts of the face seal cannot be replaced.

\* The rubber parts of the face seal may fall off by the air blow and they cannot be mounted again. Be careful not to perform the air blow.





# Fittings & Tubing Precautions 1

Be sure to read this before handling products.

## Design / Selection

### Warning

#### 1. Confirm the specifications.

Products represented in this catalogue are designed only for use in compressed air systems (including vacuum). Do not operate at pressures, temperatures, etc., beyond the range of specifications, as this can cause damage or malfunction. (Refer to the specifications.)

Please contact SMC when using a fluid other than compressed air (including vacuum).

We do not guarantee against any damage if the product is used outside of the specification range.

#### 2. Do not disassemble the product or make any modifications, including additional machining.

It may cause human injury and/or an accident.

#### 3. Check if PTFE can be used in application.

PTFE powder (Polytetrafluoroethylene resin) is included in the sealant. Confirm that the use of it will not cause any adverse affect on the system.

### Caution

#### 1. Keep the connection part of fittings and tubing from rotating or oscillating movement. Use Rotary One-touch Fittings (KS or KX series) in these cases.

The fittings may be damaged if they are used in the above manner.

#### 2. The tubing bending radius in the vicinity of the fitting should be at least the minimum bending radius of the tubing.

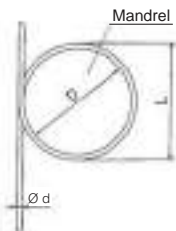
If the bending radius is less than the minimum value, fittings may damage, or tubing may crack or be crushed. The minimum bending radius, with the exception of TS soft nylon tubing, TU polyurethane tubing, TUH hard polyurethane tubing, TUS soft polyurethane tubing, TRBU FR double layer polyurethane tubing, TH FEP tubing, TL PFA tubing, TD modified PTFE tubing, is measured as following in accordance with JIS B 8381-1995.

Tubing deformation ratio at the minimum bending radius is obtained through the following formula, based on tubing diameter and mandrel diameter by winding the same radius mandrel tube.

$$\eta = \left(1 - \frac{L - D}{2d}\right) \times 100$$

**Tube deformation ratio at the minimum bending radius**

Here,  $\eta$  : Deformation ratio [%]  
 $d$  : Tubing diameter [mm]  
 $L$  : Measured length [mm]  
 $D$  : Mandrel diameter [mm]  
(Twice against the minimum bending radius)  
Test temperature: 20 ±5°C  
Relative humidity: 65 ±5%



#### 3. Do not use fluids other than listed on the specifications.

Applicable fluids are air and water. Please consult with SMC if using other fluids.

#### 4. When it is used with water, the fittings or tubing may be damaged depending on the surge pressure.

#### 5. Depending on the storage or operating environment and the period of storage or use, the surface of the brass (C3604) may blacken. If the discoloration of the brass is a problem, we recommend selecting electroless nickel-plated brass instead.

Example) KQ2H06-01 NS

## Mounting / Piping

### Warning

#### 1. Operation manual

Install the products and operate them only after reading the operation manual carefully and understanding its contents. Also, keep the manual where it can be referred to as necessary.

#### 2. Maintenance space

Allow sufficient space for maintenance and inspection.

#### 3. Adhere to the thread tightening method.

Refer to "Connection Thread Tightening Method" when mounting the product.

#### 4. There may be cases of the tubing detaching from the fitting and thrashing around uncontrollably due to tubing degradation or fitting breakage.

To prevent the situation from becoming uncontrollable, fit the tubing with a protective cover or fix it in place.

### Caution

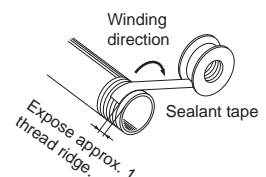
#### 1. Preparation before piping

Before piping is connected, it should be thoroughly blown out with air (flushing) or washed to remove chips, cutting oil and other debris from inside the pipe.

#### 2. Winding of sealant tape

When screwing together pipes and fittings, etc., be certain that chips from the pipe threads and sealant do not get inside the pipe.

Also, when the sealant tape is used, leave approx. 1 thread ridge exposed at the end of the threads.



#### 3. Check the model, type and size before installation. Also, confirm that there is no scratches, gouges or cracks on the product.

#### 4. When connecting the tubing, take pressure or possible changes to the tubing length into account, and allow a sufficient margin.

Failure to do so may result in fitting breakage or detachment of the tubing. Refer to the recommended piping conditions.

#### 5. Do not apply unnecessary forces such as twisting, pulling, moment loads, vibration and impact, etc. on fittings or tubing.

This will cause damage to fittings and will crush, burst or release tubing.

#### 6. Tubing, with the exception of coiled tubing, requires stationary installation. Do not use standard tubing (non-coiled) in applications where tubing is required to travel inside the flexible moving tube. Tubing that travels may sustain abrasion, extension, or severance due to tensile force, or may result in removal of tubing from fitting. Use caution prior to use for proper application.

#### 7. To install the fitting, screw the fitting into the hexagonal face of the body, and tighten with an appropriate wrench.

Affix the wrench at the base of the thread. If the size of hexagonal face and wrench do not match, or tightening takes place near the tube side, it may cause collapse or deformation of the hexagonal face, or damage to the equipment. After installing, confirm that there is no damage to the fitting, etc.

Round Type



Metric Size M, R, Rc

Inch Size UNF, NPT

Inch Size M, R, Rc

Metric Size G

Metric Size R, Rc

Inch Size NPT

Inch Size R

Metric Size Uni

Inch Size Uni



# Fittings & Tubing Precautions 2

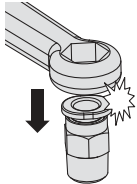
Be sure to read this before handling products.

## Mounting / Piping

### ⚠ Caution

#### 8. Interference in oval type release button

The following models cannot be used if a box wrench or socket wrench is used.



#### KQ2 Series

Model	Applicable tubing	Connection thread	Part number
Male connector	∅ 3.2	M3 x 0.5	KQ2H23-M3G1
	∅ 3.2	M5 x 0.8	KQ2H23-M5□1
	∅ 4	M3 x 0.5	KQ2H04-M3G1
	∅ 4	M5 x 0.8	KQ2H04-M5□1
	∅ 4	M6 x 1.0	KQ2H04-M6□1
	∅ 6	M5 x 0.8	KQ2H06-M5□1
	∅ 6	M6 x 1.0	KQ2H06-M6□1
	∅ 6	R 1/8	KQ2H06-01□S1
	∅ 1/8	10-32UNF	KQ2H01-32□1
	∅ 5/32	10-32UNF	KQ2H03-32□1
	∅ 3/16	10-32UNF	KQ2H05-32□1
	∅ 5/32	NPT 1/16	KQ2H03-33□S1
	∅ 1/8	M5 x 0.8	KQ2H01-M5□1
	∅ 3/16	M5 x 0.8	KQ2H05-M5□1
∅ 3/16	R 1/8	KQ2H05-01□S1	
Female connector	∅ 4	M3 x 0.5	KQ2F04-M3□1
	∅ 4	M5 x 0.8	KQ2F04-M5□1
	∅ 6	M5 x 0.8	KQ2F06-M5□1
	∅ 1/8	10-32UNF	KQ2F01-32□1
	∅ 5/32	10-32UNF	KQ2F03-32□1
	∅ 1/8	M3 x 0.5	KQ2F23-M3□1
∅ 1/8	M5 x 0.8	KQ2F23-M5□1	

□: A (Brass), N (Brass + Electroless nickel plating)

#### KQ2-G Stainless Steel Series

Model	Applicable tubing	Connection thread	Part number
Male connector	∅ 4	M5 x 0.8	KQ2H04-M5G1
	∅ 6	M5 x 0.8	KQ2H06-M5G1
	∅ 6	R 1/8	KQ2H06-01GS1

## Air Supply

### ⚠ Warning

#### 1. Type of fluids

Please consult with SMC when using the product in applications other than compressed air.

Regarding products for general fluids, please contact SMC concerning applicable fluids.

#### 2. When there is a large amount of drainage

Compressed air containing a large amount of drainage can cause malfunction of pneumatic equipment. An air dryer or water separator should be installed upstream from filters.

#### 3. Drain flushing

If condensation in the drain bowl is not emptied on a regular basis, the bowl will overflow and allow the condensation to enter the compressed air lines. This causes the malfunction of pneumatic equipment.

If the drain bowl is difficult to check and remove, the installation of a drain bowl with an auto drain option is recommended.

Refer to "SMC Air Preparation System" for further details on compressed air quality.

#### 4. Use clean air.

Do not use compressed air that contains chemicals, synthetic oils that include organic solvents, salt, corrosive gases, etc., as they can cause damage or malfunction.

## Air Supply

### ⚠ Caution

#### 1. Install an air filter.

Install an air filter at the upstream side of valve.

Select an air filter with a filtration degree of 5 µm or finer.

#### 2. Install an aftercooler, air dryer or water separator, etc.

Compressed air containing a large amount of drainage can cause the malfunction of pneumatic equipment. Therefore, take appropriate measures to ensure air quality, such as by providing an aftercooler, air dryer, or water separator.

#### 3. Ensure that the fluid and ambient temperature are within the specified range.

If the fluid temperature is 5°C or less, the moisture in the circuit could freeze, causing damage to the seals and leading to equipment malfunction. Therefore, take appropriate measures to prevent freezing.

Refer to "SMC Air Preparation System" for further details on compressed air quality.

## Operating Environment

### ⚠ Warning

#### 1. Do not use in an atmosphere where corrosive gases, chemicals, sea water, water, or water steam is present. Do not use in cases where there is direct contact with any of the above.

Refer to each construction drawing on the fittings and tubing material.

#### 2. Do not expose the product to direct sunlight for an extended period of time.

#### 3. Do not use in a place subject to heavy vibration and/or impact.

#### 4. Do not mount the product in locations where it is exposed to radiant heat.

#### 5. Do not use the ordinary fittings and tubing in locations where static electricity would be problematic.

It may result in the system failure and trouble. In such places, use of antistatic fittings (KA series) and antistatic tubing (TA series) are recommended.

#### 6. Do not use the ordinary fittings and tubing in locations where spatter is generated.

Spattering may result in a fire hazard. In such a place, use of flame resistant fittings (KR/KRM series) and flame resistant tubing (TRS/TRB series) are recommended.

#### 7. Do not use in an environment where the product is directly exposed to cutting oil, lubricant, coolant oil, etc.

Please contact SMC if using for an environment exposed to cutting oil, lubricant or coolant oil, etc.

#### 8. Take note that if nylon tubing and soft nylon tubing are used in a clean room.

The antioxidant on the surface of the soft nylon tubing may come off, thereby lowering the cleanliness level.

#### 9. Do not use in environments where foreign matter may stick to the product or get mixed in the product's interior.

This may cause leakage or disconnection of the tubing.



# Fittings & Tubing Precautions 3

Be sure to read this before handling products.

## Maintenance

### Warning

- 1. Perform maintenance inspections according to the procedures indicated in the operation manual.**  
If handled improperly, malfunction and damage of machinery or equipment may occur.
- 2. Maintenance work**  
If handled improperly, compressed air can be dangerous. The assembly, handling, repair, and element replacement of pneumatic systems should be performed by a knowledgeable and experienced person.
- 3. Drain flushing**  
Remove drainage from air filters regularly.
- 4. Removal of equipment and supply/exhaust of compressed air**  
When components are removed, first confirm that measures are in place to prevent workpieces from dropping, run-away equipment, etc. Then, cut off the supply pressure and electric power, and exhaust all compressed air from the system using the residual pressure release function.  
When the equipment is restarted, proceed with caution after confirming that appropriate measures are in place to prevent cylinders from sudden movement.

### Caution

- 1. Be certain to wear safety glasses at all times during periodical inspections.**
- 2. Replace fittings or tubing having the following problems.**
  - 1) Cracks, gouges, wearing, corrosion
  - 2) Air leakage
  - 3) Twists or crushing of tubing
  - 4) Hardening, deterioration, softening of tubing
- 3. When replacing tubes or fittings, do not try to mend or repair and then reuse them.**

## One-touch Fittings Mounting / Piping

### Caution

- 1. Installation and removal of tubing for One-touch fittings**
  - 1) Installation of tubing**
    - (1) Cut the tubing perpendicularly, being careful not to damage the outside surface. Use an SMC tube cutter TK-1, 2, 3, 5 or 6. Do not cut the tubing with pliers, nippers, scissors, etc., otherwise, the tubing will be deformed and trouble may result.
    - (2) The outside diameter of the polyurethane tubing swells when internal pressure is applied to it. Therefore, it may be possible that the tubing cannot be re-inserted into the One-touch fitting. Check the tubing outside diameter, and when the accuracy of the outside diameter is +0.07 mm or larger for Ø 2, +0.15 mm or larger for other sizes, insert into the One-touch fitting again, without cutting the tubing to use it. When the tubing is re-inserted into the One-touch fitting, confirm that the tubing goes through the release button smoothly.

## One-touch Fittings Mounting / Piping

### Caution

- (3) Grasp the tubing, slowly push it straight (0 to 5°) into the One-touch fitting until it comes to a stop.
- (4) Pull the tubing back gently to make sure it has a positive seal. Insufficient installation may cause air to leak or the tubing to release.  
As a guide for checking the tubing is not pulled out, refer to the following table.

Tubing size	Tensile force of tubing [N]
Ø 2, 3.2, 1/8"	5
Ø 4, 5/32", 3/16"	8
Ø 6, 1/4"	12
Ø 8, 5/16"	20
Ø 10, 3/8"	30
Ø 12, 1/2"	35
Ø 16	50

### 2) Removal of tubing

- (1) Push the release button flange evenly and sufficiently to release the tube. Do not push in the tubing before pressing the release button.
- (2) Pull out the tubing while keeping the release button depressed. If the release button is not held down sufficiently, the tubing cannot be withdrawn.
- (3) To reuse the tubing, remove the previously lodged portion of the tubing. If the lodged portion is left on without being removed, it may result in air leakage and removal of the tubing difficult.

### 2. Connecting products with metal rods

Products with metal rods (KC series, previous KQ series, KN series, and KM series, etc.) cannot be connected to KQ2 series One-touch fittings. If connected, the metal rod cannot be retained by the chuck of the One-touch fitting and products with metal rods may project during pressurization, causing serious personal injury or accident.  
Even when products with metal rods can be connected to other One-touch fittings, do not use any tube, resin plug, or reducer after connection. This may cause releasing.  
For details about One-touch fittings that can connect products with metal rods, contact SMC.

Round Type



Metric Size M, R, Rc

Inch Size UNF, NPT

Inch Size M, R, Rc

Metric Size G

Metric Size R, Rc

Inch Size NPT

Inch Size R

Metric Size Uni

Inch Size Uni

Gasket Seal

Inch Size Uni



# Fittings & Tubing Precautions 4

Be sure to read this before handling products.

## Connection Thread Tightening Method

### 1. Connection thread: M3

First, tighten by hand, then use a wrench appropriate for the hexagon flats of the body to tighten an additional 1/4 turn. A reference value for the tightening torque is 0.4 to 0.5 N·m.

### 2. Connection thread: M5 and 10-32UNF

First, tighten by hand, then use a wrench appropriate for the hexagon flats of the body to tighten an additional 1/6 to 1/4 turn. A reference value for the tightening torque is 1 to 1.5 N·m.

### 3. Connection thread: M6

First, tighten by hand, then use a wrench appropriate for the hexagon flats of the body to tighten an additional 1/6 to 1/4 turn.  
\* Excessive tightening may damage the thread portion or deform the gasket and cause air leakage.  
Insufficient tightening may loosen the threads, or cause air leakage.

### 4. Fittings with sealant: R, NPT

1) First, tighten the fitting by hand, then use a wrench appropriate for the hexagon flats of the body to tighten it a further two or three turns.  
For a tightening torque guide, see the table below.

Connection thread size (R, NPT)	Tightening torque [N·m]
1/16, 1/8	3 to 5
1/4	8 to 12
3/8	15 to 20
1/2	20 to 25

- If the fitting is tightened with excessive torque, a large amount of sealant will seep out. Remove the excess sealant.
- Insufficient tightening may cause seal failure, or loosen the threads.
- Reuse
  - Normally, fittings with a sealant can be reused up to 2 to 3 times.
  - To prevent air leakage through the sealant, remove any loose sealant stuck to the fitting by blowing air over the threaded portion.
  - If the sealant no longer provides effective sealing, wind sealing tape over the sealant before reusing. Do not use the sealant in any form other than a tape type.
  - Once the fitting has been tightened, backing it out to its original position often causes the sealant to become defective. Air leakage will occur.

### 5. Face seal fittings: R, NPT, G

1) Tighten fittings with sealant using the proper tightening torques in the table below.

Connection thread size (R, NPT, G)	Proper tightening torque [N·m]
1/16, 1/8	3 to 5
1/4	8 to 12
3/8	15 to 20
1/2	20 to 25

- Insufficient tightening may cause seal failure, or loosen the threads.
- Reuse
  - Normally, fittings with a sealant can be reused up to 6 to 10 times.
  - The seal ring cannot be replaced.

### 6. Uni thread fittings

1) First, tighten the threaded portion by hand, then use a proper wrench, which could be suitable for the width across flats of the hexagon body, to tighten it further at a wrench tightening angle shown below. As a reference value for the tightening torque, refer to the table below.

#### Connection Female Thread: Rc, NPT, NPTF

Uni thread size	Wrench tightening angle after hand-tightening [deg]	Tightening torque [N·m]
1/8	30 to 60	3 to 5
1/4	30 to 60	8 to 12
3/8	15 to 45	14 to 16
1/2	15 to 30	20 to 22

#### Connection Female Thread: G

Uni thread size	Wrench tightening angle after hand-tightening [deg]	Tightening torque [N·m]
1/8	30 to 45	3 to 4
1/4	15 to 30	4 to 5
3/8	15 to 30	8 to 9
1/2	15 to 30	14 to 15

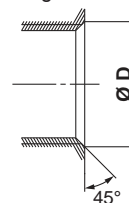
2) The gasket can be reused up to 6 to 10 times. It can be replaced easily when it has sustained damage. A broken gasket can be removed by holding it and then turning it in the same direction as loosening the thread. If gasket is difficult to remove, cut it with nippers, etc. In such a case, use caution not to scratch the seat face because the seat face of 45° gasket of fitting is the sealing face.

## Chamfer Dimension for Female Thread

### ⚠ Caution

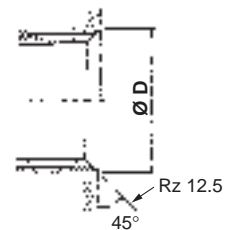
#### 1. Chamfer dimension for female thread of the connection thread M3, M5, 10-32UNF

Confirming to ISO 16030 (air pressure fluid dynamics – connection – ports and stud ends), the chamfer dimensions shown below are recommended. By chamfering as shown in the following table, machining of threads is easier and effective for burr prevention.



Connection thread size	Chamfer dimension Ø D (Recommended value) [mm]
M3	3.1 to 3.4
M5	5.1 to 5.4
10-32UNF	5.0 to 5.3

#### 2. Chamfer dimension of R and NPT thread with sealant, and Uni thread



Connection thread size	Chamfer dimension Ø D (Recommended value)		
	G	Rc	NPT, NPTF
1/16	—	—	8.2 to 8.4
1/8	10.2 to 10.6	10.2 to 10.4	10.5 to 10.7
1/4	13.6 to 14.0	13.6 to 13.8	14.1 to 14.3
3/8	17.1 to 17.5	17.1 to 17.3	17.4 to 17.6
1/2	21.4 to 21.8	21.4 to 21.6	21.7 to 21.9

\* For Uni thread, Rz 12.5 is necessary for sealing at the chamfered part.



# Fittings & Tubing Precautions 5

Be sure to read this before handling products.

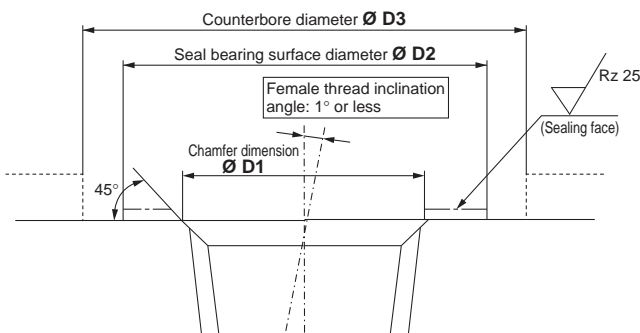
## Chamfer Dimension for Female Thread

### ⚠ Caution

#### 3. Chamfer dimension for female thread of face seal fitting (R, NPT, G)

- 1) Surface roughness of bearing surface: Rz 25 or less
- 2) Chamfer dimension:  $\varnothing D1$ , Seal bearing surface diameter:  $\varnothing D2$  (Refer to the table below.)
- 3) Female thread inclination angle:  $1^\circ$  or less
- 4) Counterbore diameter when the female thread is counterbored.:  $\varnothing D3$ 
  - Models with width across flats: Body width across flats x 1.1 or more
  - Models other than hexagon (Hexagon socket head male connector etc.): Body dimensions + 0.2 mm or more
  - \* The width across flats and the body dimensions differ depending on the model even when the same thread size is used. Refer to the dimensions in the catalogue.
- 5) If oil content or sealant is sticking to the female thread, this may cause damage of the product. Remove it before piping.

Connection thread size	Chamfer dimension $\varnothing D1$ [mm]	Seal bearing surface diameter $\varnothing D2$ [mm]
R 1/8	10.2 to 10.4	12 or more
R 1/4	13.6 to 13.8	17 or more
R 3/8	17.1 to 17.3	21 or more
R 1/2	21.4 to 21.6	27 or more
NPT 1/16	8.2 to 8.4	11.11 or more
NPT 1/8	10.5 to 10.7	12.7 or more
NPT 1/4	14.1 to 14.3	17.46 or more
NPT 3/8	17.4 to 17.6	22 or more
NPT 1/2	21.7 to 21.9	28.7 or more
G 1/8	10.2 to 10.6	12 or more
G 1/4	13.6 to 14.0	17 or more
G 3/8	17.1 to 17.5	21 or more
G 1/2	21.4 to 21.8	27 or more



## Recommended Piping Conditions

1. When connecting piping to the One-touch fitting, use pipe length with sufficient margin, in accordance with the piping conditions shown in Fig. 1.

Also, when using a tying band, etc., to bind the piping together, make sure that external force does not come to bear on the fitting. (See Fig. 2.)

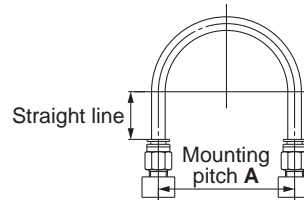


Fig. 1 Recommended piping

Unit: [mm]

Tubing size	Mounting pitch A			Straight line length
	Nylon tubing	Soft nylon tubing	Polyurethane tubing	
$\varnothing 2$	—	—	13 or more	10 or more
$\varnothing 3.2, 1/8"$	44 or more	35 or more	25 or more	16 or more
$\varnothing 4, 5/32"$	56 or more	44 or more	26 or more	20 or more
$\varnothing 3/16"$	67 or more	52 or more	38 or more	24 or more
$\varnothing 6$	84 or more	66 or more	39 or more	30 or more
$\varnothing 1/4"$	89 or more	70 or more	57 or more	32 or more
$\varnothing 8, 5/16"$	112 or more	88 or more	52 or more	40 or more
$\varnothing 10$	140 or more	110 or more	69 or more	50 or more
$\varnothing 3/8"$	134 or more	105 or more	69 or more	48 or more
$\varnothing 12$	168 or more	132 or more	88 or more	60 or more
$\varnothing 1/2"$	178 or more	140 or more	93 or more	64 or more
$\varnothing 16$	224 or more	176 or more	114 or more	80 or more

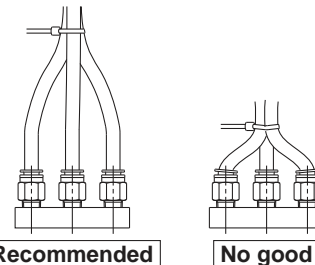


Fig. 2 When using a tying band to bind the piping together

## Tubing Design / Selection

### ⚠ Caution

1. When using a tubing other than from SMC, be careful of the tolerance of the tubing O.D. and tubing material.

- 1) Nylon tubing Within  $\pm 0.1$  mm
- 2) Soft nylon tubing Within  $\pm 0.1$  mm
- 3) Polyurethane tubing Within  $+0.15$  mm, Within  $-0.2$  mm

Do not use the tubing which does not satisfy the specified tubing O.D. accuracy, or if the tubing has a different I.D., material, hardness, or surface roughness from those of SMC's tubing. Please consult SMC if there is anything unclear. It may cause difficulty in connecting the tubing, leakage, disconnection of the tubing, or fitting damage.

When used with tubing other than those from SMC, due to their properties, the products listed below are not subject to warranty.

KQG2, KQB2, KFG2, KF,  $\varnothing 2M$

2. When using fittings other than those from SMC, be certain to confirm that operating conditions are such that no problems will arise.



## KQ2C Series

# Notes when Ordering Colour Caps

In order to improve operability, the outside diameter of the release button has been enlarged for the **new KQ2** series. Therefore, the usable colour caps will differ between pre-change and post-change products. Please contact SMC if anything is unclear.

### Applicable Sizes and Models

	Applicable tubing O.D.	Model
Metric size	∅ 8, ∅ 10, ∅ 12, ∅ 16	All models*1
Inch size	∅ 1/4", ∅ 3/8", ∅ 1/2"	

\*1 Excluding models without release buttons

### How to Identify Release Buttons Before and After Change

The release button for both the fitting/**KQ2** and colour cap/**KQ2C** after the change can be identified by the protruding mark on the left side of the **SMC** logo, and the release button before the change has no protruding mark. The same identification method is used for metric size and inch size.

- \* Along with the change of the release button, the model of the colour cap/**KQ2C** is changed from **KQ2C-□A** to **KQ2C-□B**.
- \* There is no change of the model for the fitting/**KQ2**.

#### Before change



No protruding mark

Release button

#### After change



Protruding mark

Release button

#### Applicable colour cap

##### Metric Size

Applicable tubing O.D. [mm]	Model	∅ D1	∅ D2	L	Weight [g]
∅ 8	<b>KQ2C-08□A</b>	12.8	9.2	2.6	0.1
∅ 10	<b>KQ2C-10□A</b>	15.2	11.2	2.7	0.1
∅ 12	<b>KQ2C-12□A</b>	17.6	13.2	2.7	0.1
∅ 16	<b>KQ2C-16□A</b>	22.4	17.2	3.2	0.2

□: B (Black), R (Red), YR (Orange), BR (Brown), Y (Yellow), G (Green), CB (Sky blue), GR (Grey), W (White), BU (Blue)

##### Inch Size

Applicable tubing O.D. [inch]	Model	∅ D1	∅ D2	L	Weight [g]
∅ 1/4	<b>KQ2C-07□A</b>	10.7	7.5	2.6	0.1
∅ 3/8	<b>KQ2C-11□A</b>	14.8	10.7	2.7	0.1
∅ 1/2	<b>KQ2C-13□A</b>	18.5	13.9	2.7	0.1

□: B (Black), R (Red), YR (Orange), BR (Brown), Y (Yellow), G (Green), CB (Sky blue), GR (Grey), W (White), BU (Blue)

#### Applicable colour cap

##### Metric Size

Applicable tubing O.D. [mm]	Model	∅ D1	∅ D2	L	Weight [g]
∅ 8	<b>KQ2C-08□B</b>	13.6	9.2	2.6	0.1
∅ 10	<b>KQ2C-10□B</b>	16.2	11.2	2.7	0.1
∅ 12	<b>KQ2C-12□B</b>	18.8	13.2	2.7	0.2
∅ 16	<b>KQ2C-16□B</b>	24.2	17.2	3.2	0.3

□: B (Black), R (Red), YR (Orange), BR (Brown), Y (Yellow), G (Green), CB (Sky blue), GR (Grey), W (White), BU (Blue)

##### Inch Size

Applicable tubing O.D. [inch]	Model	∅ D1	∅ D2	L	Weight [g]
∅ 1/4	<b>KQ2C-07□B</b>	11.5	7.5	2.6	0.1
∅ 3/8	<b>KQ2C-11□B</b>	15.7	10.7	2.7	0.1
∅ 1/2	<b>KQ2C-13□B</b>	19.6	13.9	2.7	0.2

□: B (Black), R (Red), YR (Orange), BR (Brown), Y (Yellow), G (Green), CB (Sky blue), GR (Grey), W (White), BU (Blue)

Round  
Type



Sealant/Gasket Seal  
Inch Size M, R, Rc  
Metric Size M, R, Rc

Sealant/Gasket Seal  
Inch Size UNF, NPT

Inch Size M, R, Rc

Metric Size G

Face Seal  
Metric Size R, Rc

Inch Size NPT




Inch Size R

Gasket Seal  
Metric Size Uni

Inch Size Uni

## Safety Instructions

These safety instructions are intended to prevent hazardous situations and/or equipment damage. These instructions indicate the level of potential hazard with the labels of “Caution,” “Warning” or “Danger.” They are all important notes for safety and must be followed in addition to International Standards (ISO/IEC)\*1), and other safety regulations.

-  **Caution:** Caution indicates a hazard with a low level of risk which, if not avoided, could result in minor or moderate injury.
-  **Warning:** Warning indicates a hazard with a medium level of risk which, if not avoided, could result in death or serious injury.
-  **Danger:** Danger indicates a hazard with a high level of risk which, if not avoided, will result in death or serious injury.

- \*1) ISO 4414: Pneumatic fluid power – General rules relating to systems.
- ISO 4413: Hydraulic fluid power – General rules relating to systems.
- IEC 60204-1: Safety of machinery – Electrical equipment of machines. (Part 1: General requirements)
- ISO 10218-1: Manipulating industrial robots - Safety. etc.

### Warning

- 1. The compatibility of the product is the responsibility of the person who designs the equipment or decides its specifications.**  
Since the product specified here is used under various operating conditions, its compatibility with specific equipment must be decided by the person who designs the equipment or decides its specifications based on necessary analysis and test results. The expected performance and safety assurance of the equipment will be the responsibility of the person who has determined its compatibility with the product. This person should also continuously review all specifications of the product referring to its latest catalogue information, with a view to giving due consideration to any possibility of equipment failure when configuring the equipment.
- 2. Only personnel with appropriate training should operate machinery and equipment.**  
The product specified here may become unsafe if handled incorrectly. The assembly, operation and maintenance of machines or equipment including our products must be performed by an operator who is appropriately trained and experienced.
- 3. Do not service or attempt to remove product and machinery/equipment until safety is confirmed.**
  1. The inspection and maintenance of machinery/equipment should only be performed after measures to prevent falling or runaway of the driven objects have been confirmed.
  2. When the product is to be removed, confirm that the safety measures as mentioned above are implemented and the power from any appropriate source is cut, and read and understand the specific product precautions of all relevant products carefully.
  3. Before machinery/equipment is restarted, take measures to prevent unexpected operation and malfunction.
- 4. Contact SMC beforehand and take special consideration of safety measures if the product is to be used in any of the following conditions.**
  1. Conditions and environments outside of the given specifications, or use outdoors or in a place exposed to direct sunlight.
  2. Installation on equipment in conjunction with atomic energy, railways, air navigation, space, shipping, vehicles, military, medical treatment, combustion and recreation, or equipment in contact with food and beverages, emergency stop circuits, clutch and brake circuits in press applications, safety equipment or other applications unsuitable for the standard specifications described in the product catalogue.
  3. An application which could have negative effects on people, property, or animals requiring special safety analysis.
  4. Use in an interlock circuit, which requires the provision of double interlock for possible failure by using a mechanical protective function, and periodical checks to confirm proper operation.

## Limited warranty and Disclaimer/ Compliance Requirements

The product used is subject to the following “Limited warranty and Disclaimer” and “Compliance Requirements”. Read and accept them before using the product.

### Limited warranty and Disclaimer

1. The warranty period of the product is 1 year in service or 1.5 years after the product is delivered, whichever is first.\*2) Also, the product may have specified durability, running distance or replacement parts. Please consult your nearest sales branch.
2. For any failure or damage reported within the warranty period which is clearly our responsibility, a replacement product or necessary parts will be provided. This limited warranty applies only to our product independently, and not to any other damage incurred due to the failure of the product.
3. Prior to using SMC products, please read and understand the warranty terms and disclaimers noted in the specified catalogue for the particular products.

\*2) Vacuum pads are excluded from this 1 year warranty. A vacuum pad is a consumable part, so it is warranted for a year after it is delivered. Also, even within the warranty period, the wear of a product due to the use of the vacuum pad or failure due to the deterioration of rubber material are not covered by the limited warranty.

### Compliance Requirements

1. The use of SMC products with production equipment for the manufacture of weapons of mass destruction (WMD) or any other weapon is strictly prohibited.
2. The exports of SMC products or technology from one country to another are governed by the relevant security laws and regulations of the countries involved in the transaction. Prior to the shipment of a SMC product to another country, assure that all local rules governing that export are known and followed.

### Caution

- 1. The product is provided for use in manufacturing industries.**  
The product herein described is basically provided for peaceful use in manufacturing industries.  
If considering using the product in other industries, consult SMC beforehand and exchange specifications or a contract if necessary.  
If anything is unclear, contact your nearest sales branch.

### Caution

- SMC products are not intended for use as instruments for legal metrology.**  
Measurement instruments that SMC manufactures or sells have not been qualified by type approval tests relevant to the metrology (measurement) laws of each country. Therefore, SMC products cannot be used for business or certification ordained by the metrology (measurement) laws of each country.

## Safety Instructions

Be sure to read “Handling Precautions for SMC Products” (M-E03-3) before using.

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