

## Power Valve



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3 Position Valve: **VEX3**.....P.5.1-10  
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High Noise Reduction Silencer:  
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Exhaust Cleaner for  
Clean Rooms: **AMP**.....P.5.4-1

VEX

AN

AMC

AMP

# Power Valve Regulator Valve

## Series VEX1

### Large Capacity Relief Regulator

3 port large capacity pop-  
pet exhausting regulator  
equipped with a relief port  
the same size as the con-  
nection port.



Air operated

Symbol

Air operated



### Specifications

| Model                         |                 | VEX110□- <sup>01</sup> <sub>02</sub>                        | VEX120□- <sup>01</sup> <sub>02</sub> | VEX130□- <sup>02</sup> <sub>03</sub> <sup>04</sup> <sub>04</sub> | VEX150□- <sup>04</sup> <sub>06</sub> <sup>10</sup> <sub>10</sub> | VEX170□- <sup>10</sup> <sub>12</sub> | VEX190□- <sup>14</sup> <sub>20</sub> |      |      |      |      |       |       |       |       |
|-------------------------------|-----------------|-------------------------------------------------------------|--------------------------------------|------------------------------------------------------------------|------------------------------------------------------------------|--------------------------------------|--------------------------------------|------|------|------|------|-------|-------|-------|-------|
| Operating style               |                 | Air operated                                                |                                      |                                                                  |                                                                  |                                      |                                      |      |      |      |      |       |       |       |       |
| Fluid                         |                 | Air, Inert gas                                              |                                      |                                                                  |                                                                  |                                      |                                      |      |      |      |      |       |       |       |       |
| Proof pressure                |                 | 1.5MPa                                                      |                                      |                                                                  |                                                                  |                                      |                                      |      |      |      |      |       |       |       |       |
| Max. operating pressure       |                 | 1.0MPa                                                      |                                      |                                                                  |                                                                  |                                      |                                      |      |      |      |      |       |       |       |       |
| Set press. range              | Air operated    | 0.05 to 0.9MPa                                              |                                      |                                                                  |                                                                  |                                      |                                      |      |      |      |      |       |       |       |       |
| Ambient and fluid temperature |                 | 0 to 50°C(Air operated: 0 to 60°C)                          |                                      |                                                                  |                                                                  |                                      |                                      |      |      |      |      |       |       |       |       |
| Hysteresis                    |                 | 0.03MPa                                                     |                                      |                                                                  |                                                                  |                                      |                                      |      |      |      |      |       |       |       |       |
| Repeatability                 |                 | 0.01MPa                                                     |                                      |                                                                  |                                                                  |                                      |                                      |      |      |      |      |       |       |       |       |
| Sensitivity                   |                 | 0.01MPa                                                     |                                      |                                                                  |                                                                  |                                      |                                      |      |      |      |      |       |       |       |       |
| Mounting                      |                 | Free                                                        |                                      |                                                                  |                                                                  |                                      |                                      |      |      |      |      |       |       |       |       |
| Lubrication                   |                 | Not required (Use turbine oil No.1 ISO VG32, if lubricated) |                                      |                                                                  |                                                                  |                                      |                                      |      |      |      |      |       |       |       |       |
| Port size                     | Port            | 01                                                          | 02                                   | 01                                                               | 02                                                               | 02                                   | 03                                   | 04   | 04   | 06   | 10   | 10    | 12    | 14    | 20    |
|                               | P               |                                                             |                                      |                                                                  |                                                                  |                                      |                                      |      |      |      |      |       |       |       |       |
|                               | A               | 1/8                                                         | 1/4                                  | 1/8                                                              | 1/4                                                              | 1/4                                  | 3/8                                  | 1/2  | 1/2  | 3/4  | 1    | 1     | 1 1/4 | 1 1/2 | 2     |
|                               | R               |                                                             |                                      |                                                                  |                                                                  |                                      |                                      |      |      |      |      | 1 1/4 |       | 2     |       |
| Effective area                | mm <sup>2</sup> | 16                                                          | 25                                   | 16                                                               | 25                                                               | 36                                   | 60                                   | 70   | 130  | 160  | 180  | 300   | 330   | 590   | 670   |
|                               | Nl/min          | 883                                                         | 1374                                 | 883                                                              | 1374                                                             | 1963                                 | 3238                                 | 3827 | 7066 | 8735 | 9815 | 16685 | 17667 | 32389 | 36315 |
| Weight (kg)                   | Air operated    | 0.1                                                         |                                      | 0.2                                                              |                                                                  | 0.4                                  |                                      | 1.3  |      | 1.9  |      | 3.9   |       |       |       |

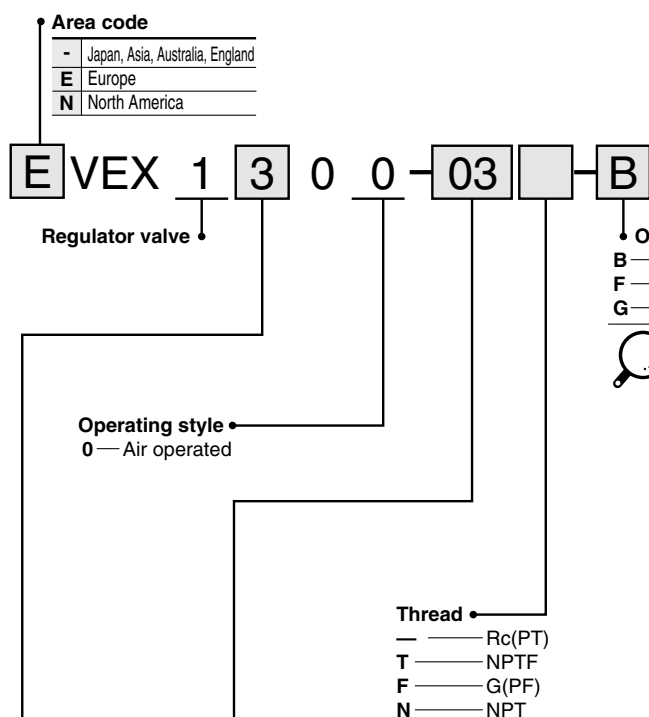
### Options

| Parts name                    |   | Part No.                             |                                      |                                                                  |                                                                  |                                      |                                      |
|-------------------------------|---|--------------------------------------|--------------------------------------|------------------------------------------------------------------|------------------------------------------------------------------|--------------------------------------|--------------------------------------|
|                               |   | VEX110□- <sup>01</sup> <sub>02</sub> | VEX120□- <sup>01</sup> <sub>02</sub> | VEX130□- <sup>02</sup> <sub>03</sub> <sup>04</sup> <sub>04</sub> | VEX150□- <sup>04</sup> <sub>06</sub> <sup>10</sup> <sub>10</sub> | VEX170□- <sup>10</sup> <sub>12</sub> | VEX190□- <sup>14</sup> <sub>20</sub> |
| Bracket                       | B | VEX1-18-1A                           | —                                    | VEX3-32A                                                         | VEX5-32A                                                         | VEX7-32A                             | VEX9-32A                             |
| (with bolt and washer)        | F | VEX1-18-2A                           | —                                    | —                                                                | —                                                                | —                                    | —                                    |
| Pressure gauge <sup>(1)</sup> | G | G27-10-01                            |                                      | G36-10-01                                                        | G46-10-01                                                        |                                      |                                      |



Note 1) When requiring the gauge except mentioned above, specify the model number. Option is packed with it.  
(Refer to Best Pneumatics 4.)  
Example: VEX1300-03  
G36-4-01

## How to Order



| Body size    |   | Port size |                  |        |
|--------------|---|-----------|------------------|--------|
|              |   | Port      | P, A port        | R port |
| Body ported  | 1 | 01        | 1/8              | 1/8    |
|              |   | 02        | 1/4              | 1/4    |
|              | 3 | 03        | 3/8              | 3/8    |
|              |   | 04        | 1/2              | 1/2    |
|              | 5 | 04        | 1/2              | 1/2    |
|              |   | 06        | 3/4              | 3/4    |
|              | 7 | 10        | 1                | 1      |
|              |   | 12        | 1 1/4            | 1 1/4  |
|              | 9 | 14        | 1 1/2            | 2      |
|              |   | 20        | 2                | 2      |
| Base mounted | 2 | —         | Without subplate |        |
|              |   | 01        | 1/8              | 1/8    |
|              |   | 02        | 1/4              | 1/4    |

## Model

| Model           | Air operated | Port size     |               |
|-----------------|--------------|---------------|---------------|
|                 |              | P, A port     | R port        |
| Regulator valve | VEX1100      | 1/8, 1/4      | 1/8, 1/4      |
|                 | VEX1200      | 1/8, 1/4      | 1/8, 1/4      |
|                 | VEX1300      | 1/4, 3/8, 1/2 | 1/4, 3/8, 1/2 |
|                 | VEX1500      | 1/2, 3/4, 1   | 1/2, 3/4, 1   |
|                 | VEX1700      | 1, 1 1/4      | 1 1/4         |
|                 | VEX1900      | 1, 1 1/2      | 2             |

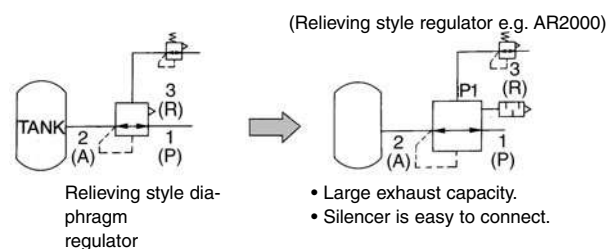
## Caution

Refer to p.0-33 to 0-36 for Safety Instructions and common precautions.

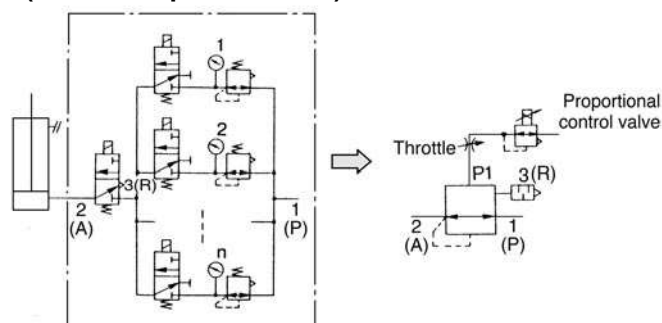
## Applications

### ① Relief regulator

#### (Rapid tank internal pressure setting)



### ② Multiple step pressure control (Toward stepless control)



- The main driving system is simple consisting of one VEX only.
- Remotely controlled by compact pilot system.
- Steplessly and remotely controlled by electric signals.
- Flexibility for pressure control for welders.

VEX

AN

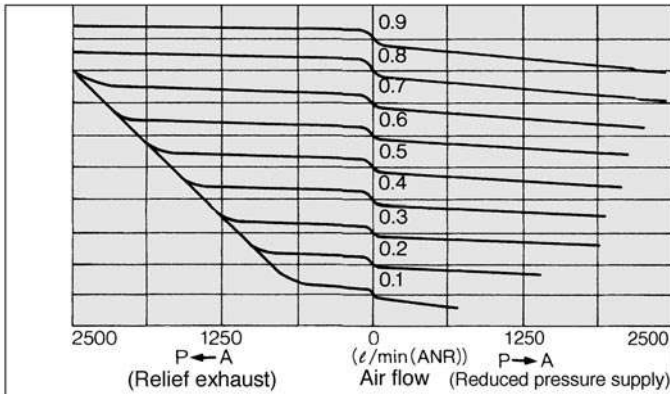
AMC

AMP

## Flow Characteristics

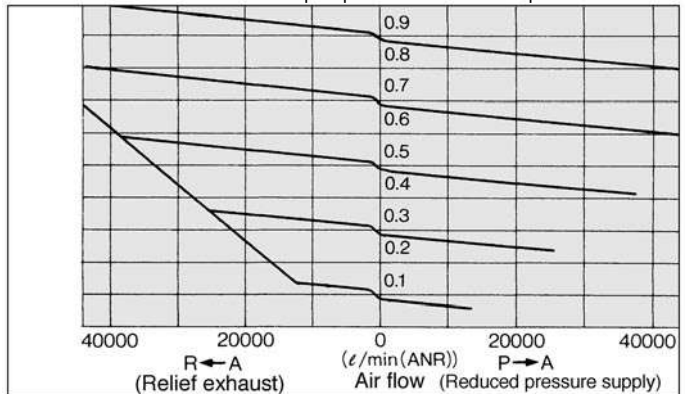
**VEX110□, 120□**

A port pressure MPa P Port pressure 1.0 MPa



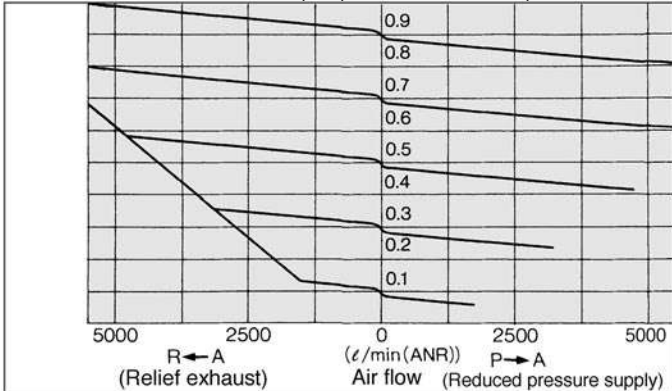
**VEX190□**

A port pressure MPa P Port pressure 1.0 MPa



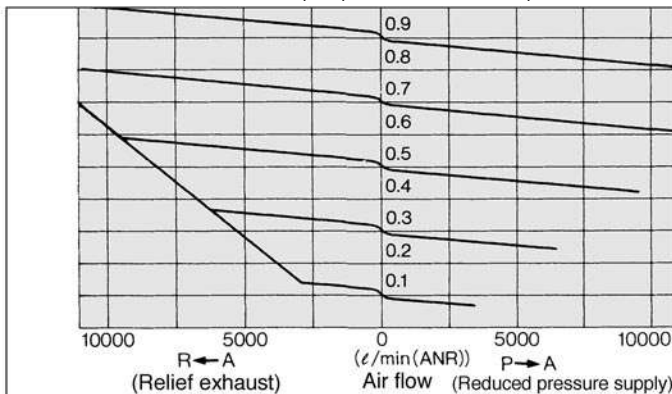
**VEX130□**

A port pressure MPa P Port pressure 1.0 MPa



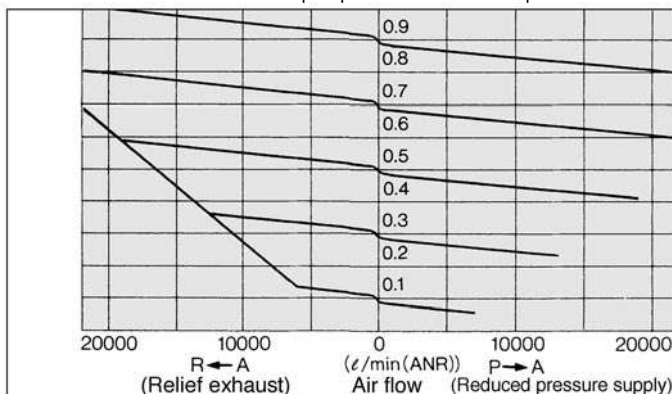
**VEX150□**

A port pressure MPa P Port pressure 1.0 MPa



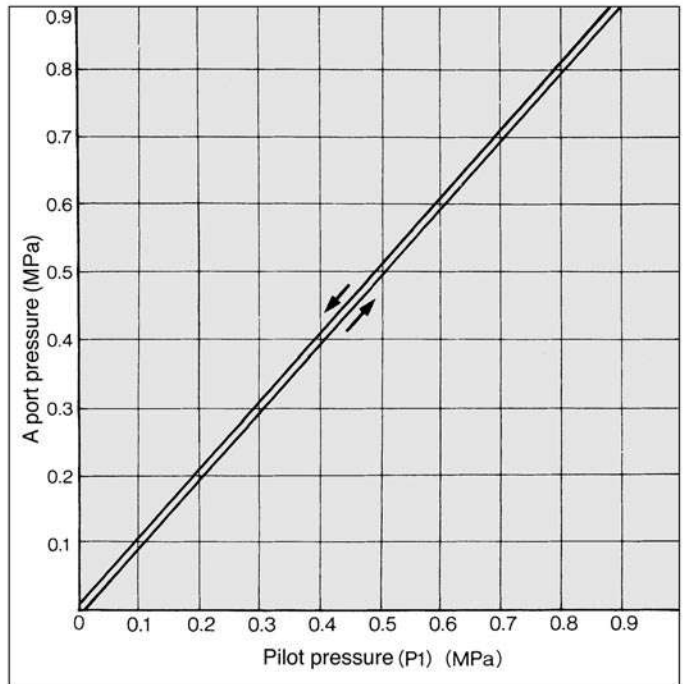
**VEX170□**

A port pressure MPa P Port pressure 1.0 MPa



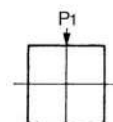
## Setting Pressure Characteristics

A port pressure is set in accordance with pilot pressure



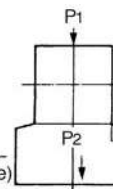
## External Pilot Piping

**VEX110□**



(P port side)

**VEX120□**



(A port side) (P, R port side)

**VEX130□**

**VEX150□**

**VEX170□**

**VEX190□**



P port size

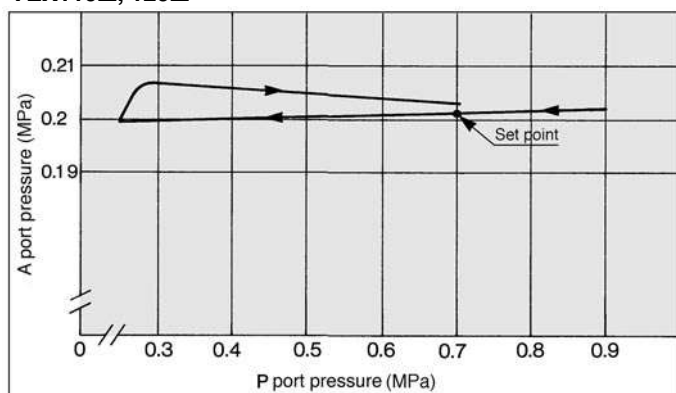
| Port | VEX1□00        |
|------|----------------|
| P1   | External Pilot |
| P2   | —              |

## Pressure Characteristics

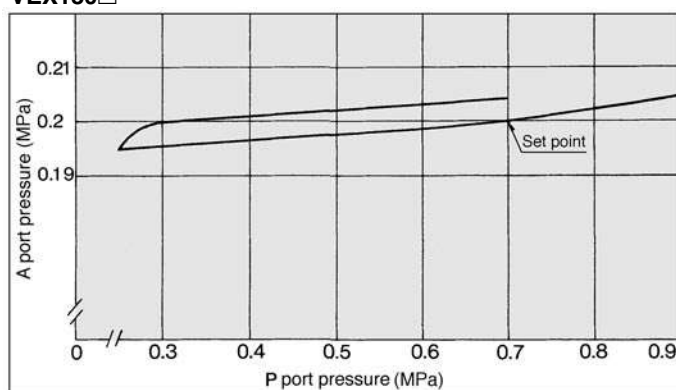
Shown the change of secondary pressure (A port) to the change of supply pressure (P port).

As per JIS B8372 (Pneumatic regulator)

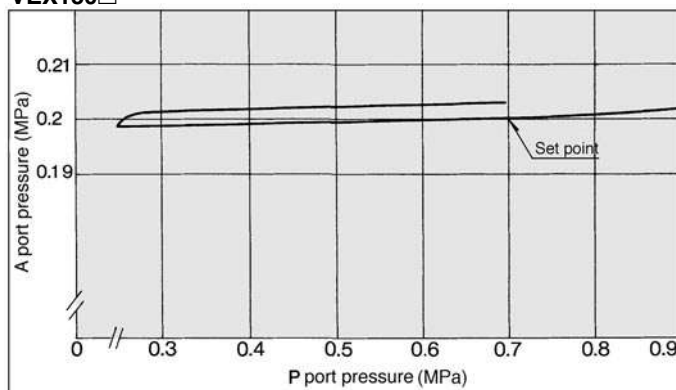
VEX110□, 120□



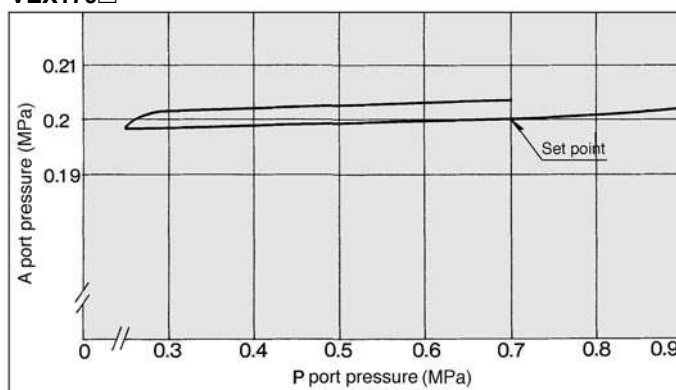
VEX130□



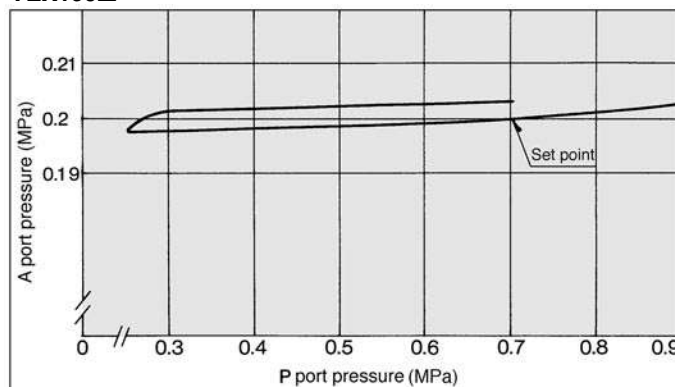
VEX150□



VEX170□

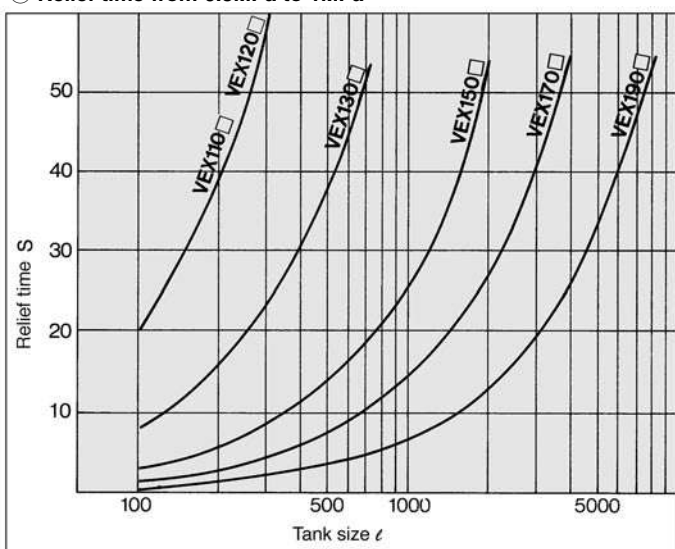


VEX190□

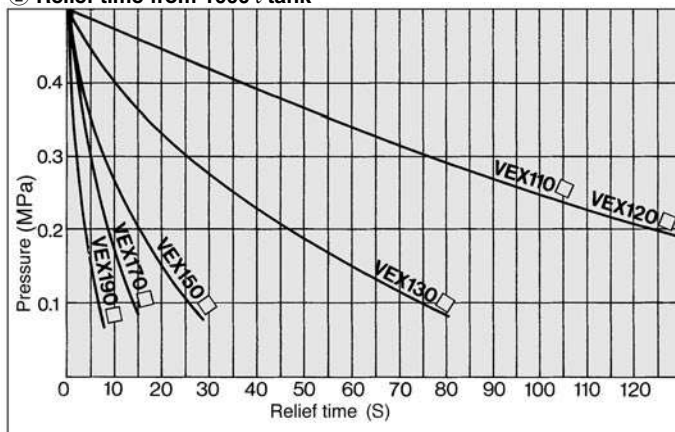


## Relief Time

### ① Relief time from 0.5MPa to 1MPa



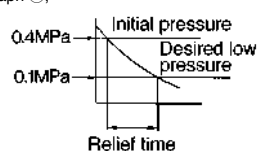
### ② Relief time from 1000 l tank



### ③ Relief time from an arbitrary pressure

[Example] VEX 1500 lowers 2000l tank from 0.4MPa to 0.1MPa:

a) In graph ②,



From the above, the relief time is  
26-3=23S

b) Then, the relief time for the 2000l tank is found by conversion as shown below.

$$t = \frac{\text{Tank capacity}}{1000} \times \left[ \text{Relief time that is read} \right]$$

$$= \frac{2000}{1000} \times 23$$

$$= 46$$

The result is 46S.

VEX

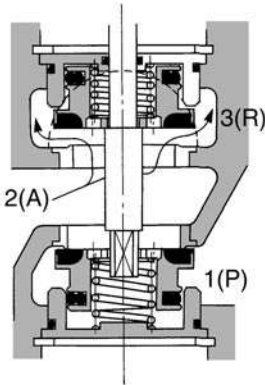
AN

AMC

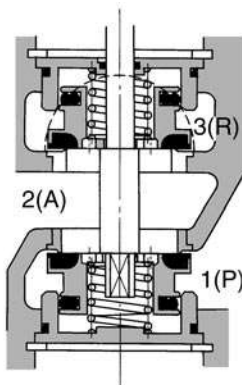
AMP

## Construction/Operation Principles/Component Parts

[1] When A port pressure is high.

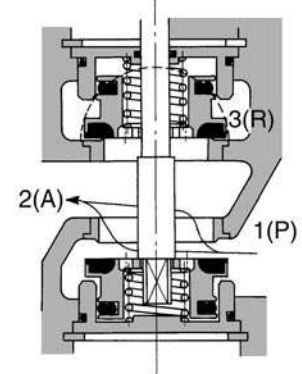


[2] Setting pressure condition



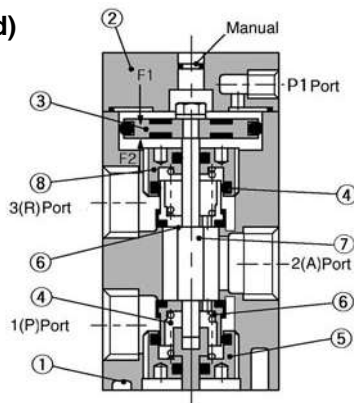
[3] When A port pressure is low.

Pressure reducing supply.

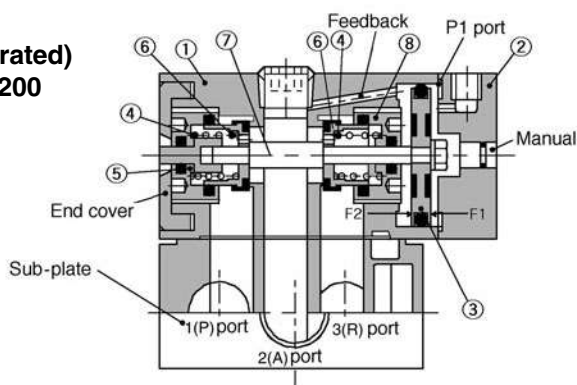


- The balance between the acting force  $F_1$  of the pilot pressure (P1 port) over the upper surface of the pressure regulating piston (3) and the acting force  $F_2$  of the pressure at A port leading to a space under the piston through the feed back flow root closes a couple of poppet valves (6) and sets A port pressure that corresponds to P1 port pressure. The poppet valves are backed up by spring (4) in the pressure balance structure by means of A port pressure. (DRW(2))
- When A port pressure exceeds P1 port pressure,  $F_2$  becomes larger than  $F_1$ , and the pressure regulating piston moves upward, opening the upper poppet valves. Thus air is released from A port to R port. (DRW(1)) When A port pressure lowers enough to restore the balance, the regulator valve returns again to the DRA (2) condition.
- When A port pressure is lower than P1 port pressure,  $F_1$  becomes larger than  $F_2$ , and the pressure regulating piston moves downwards, opening the lower poppet valves. Thus air is supplied from P port to A port. (DRW(3)) When A port pressure rises enough to restore the balance, the regulator valve returns again to the DRW(2) condition.

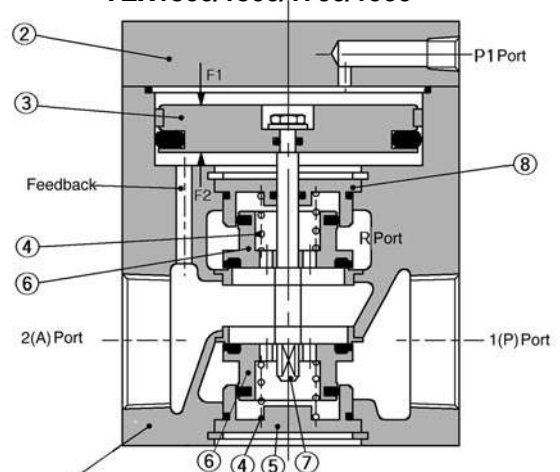
(Air operated)  
VEX1100



(Air operated)  
VEX1200



(Air operated)  
VEX1300/1500/1700/1900

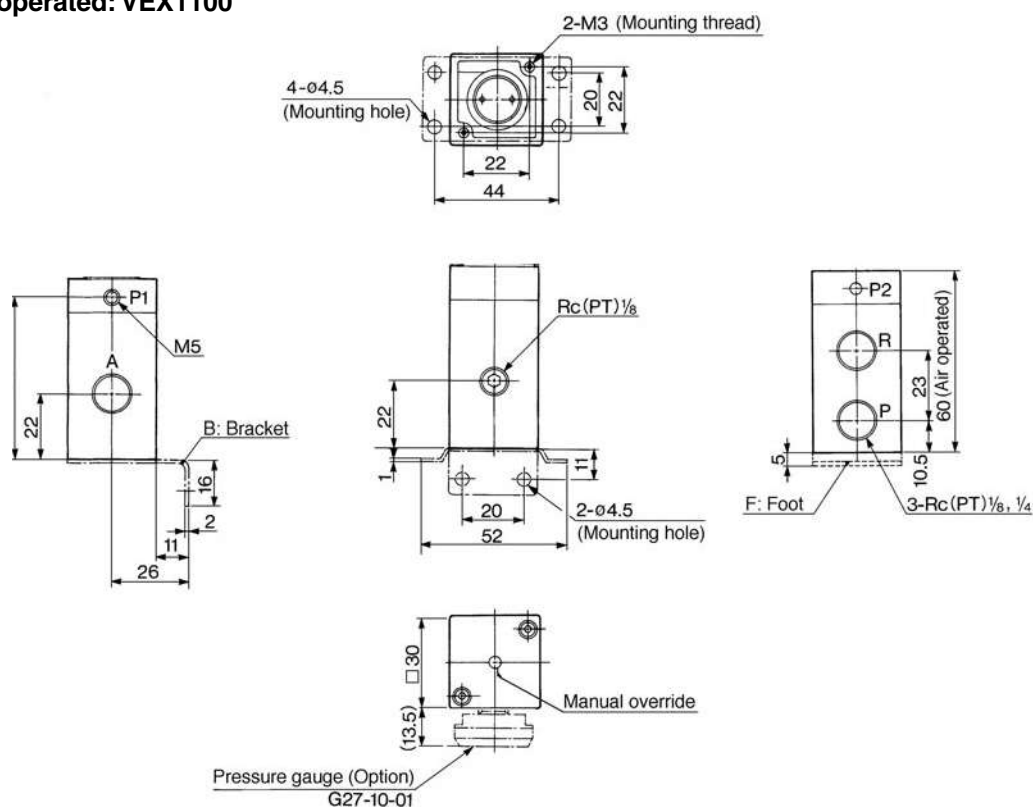


Component Parts

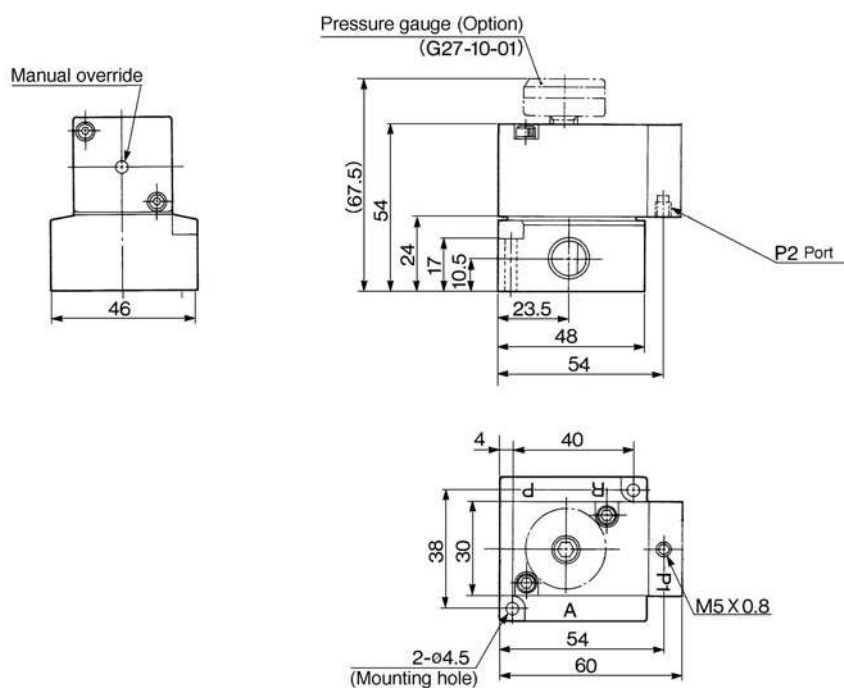
| No. | Description  | Material                 |
|-----|--------------|--------------------------|
| ①   | Body         | Aluminium alloy die cast |
| ②   | Cover        | Aluminium alloy die cast |
| ③   | Piston       | Aluminium alloy          |
| ④   | Spring       | Stainless steel          |
| ⑤   | Valve guide  | Aluminium alloy          |
| ⑥   | Poppet valve | Aluminium alloy, NBR     |
| ⑦   | Shaft        | Stainless steel          |
| ⑧   | Valve guide  | Aluminium alloy          |

## Dimensions

### Air operated: VEX1100



### Air operated: VEX1200



VEX

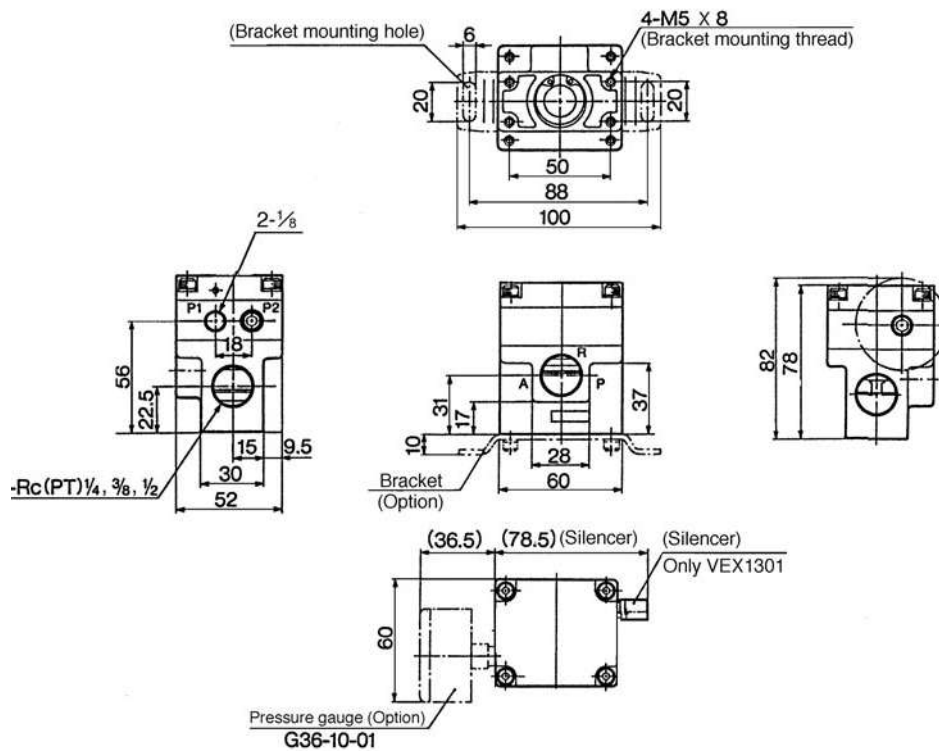
AN

AMC

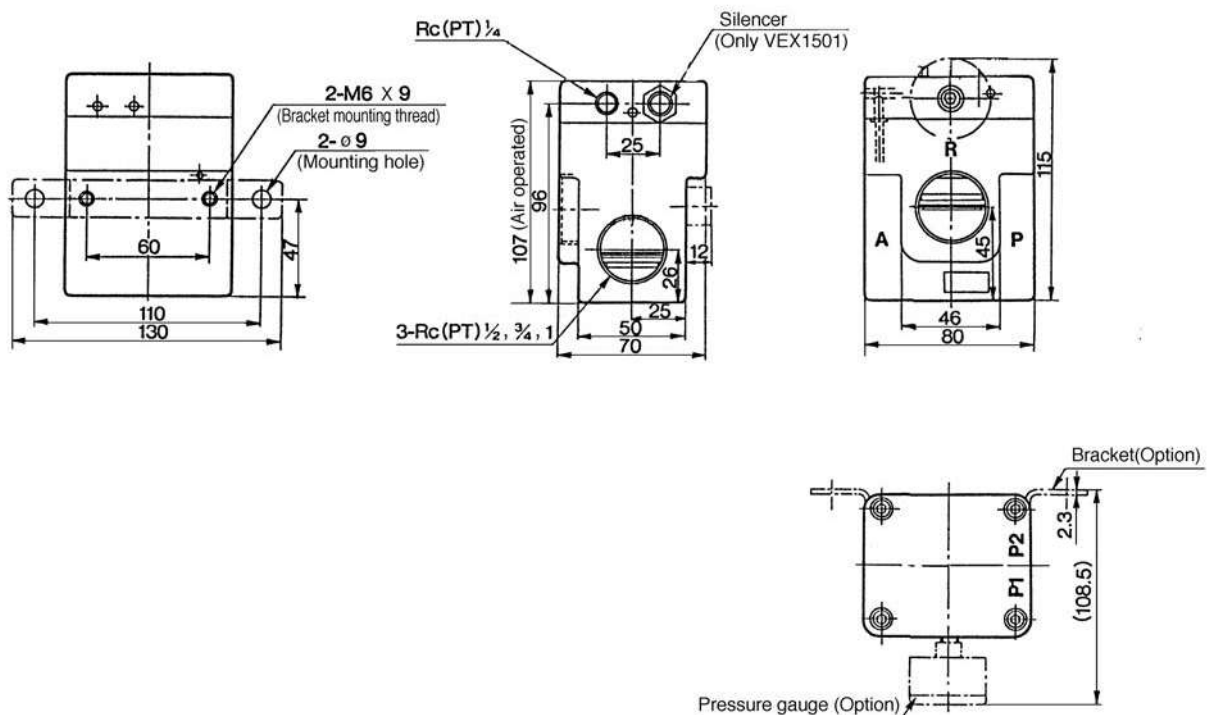
AMP

## Dimensions

### Air operated: VEX1300

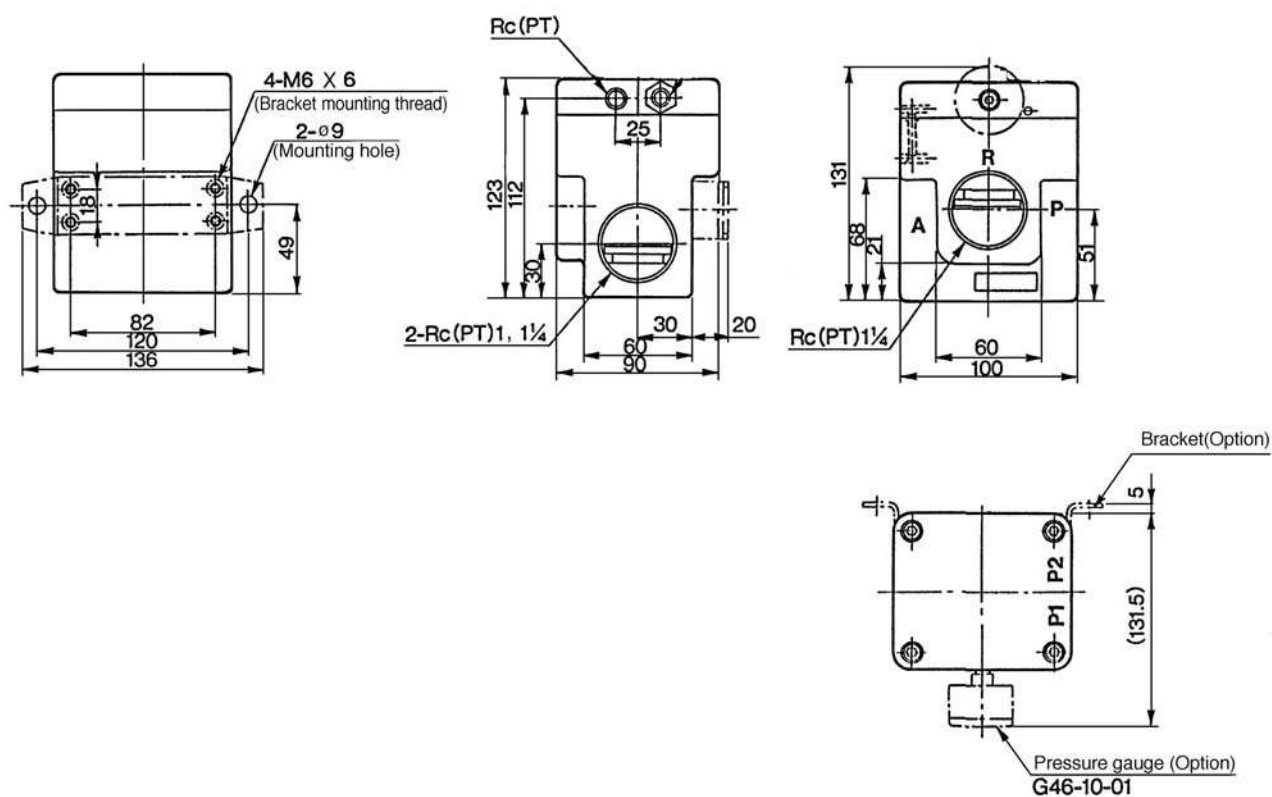


### Air operated: VEX1500

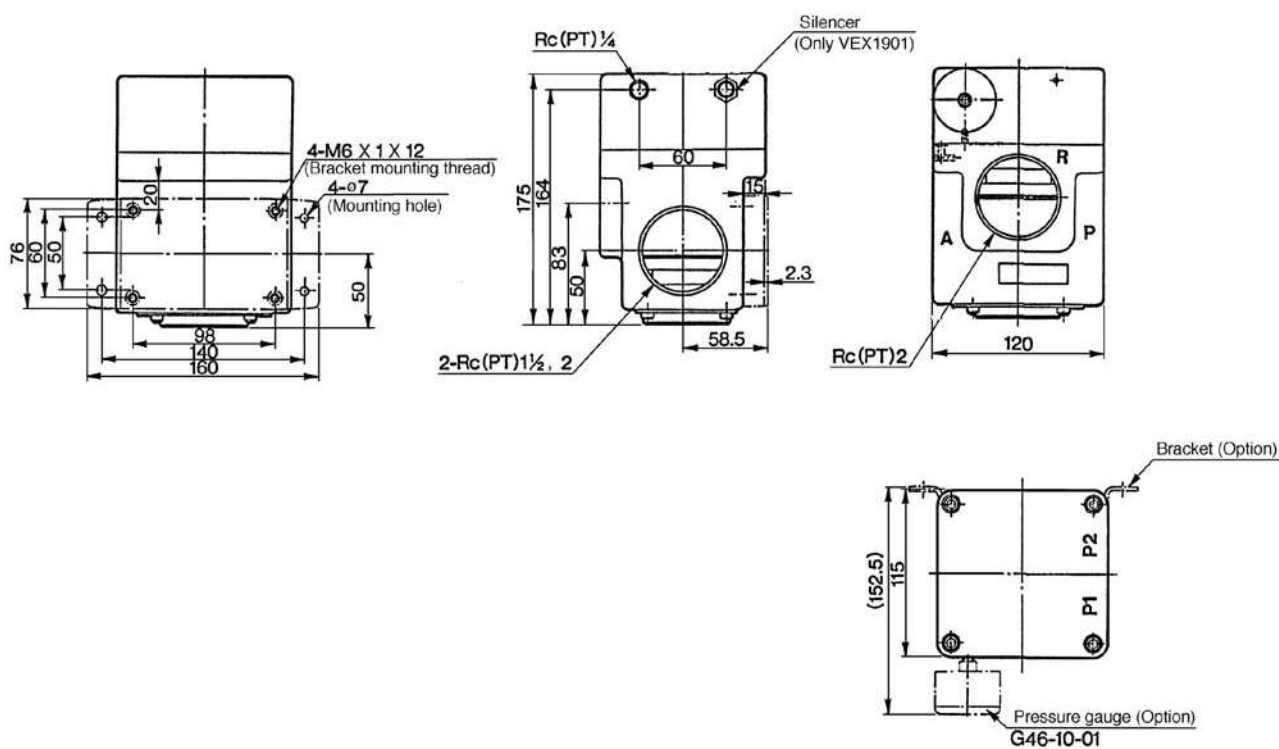


## Dimensions

### Air operated: VEX1700



### Air operated: VEX1900



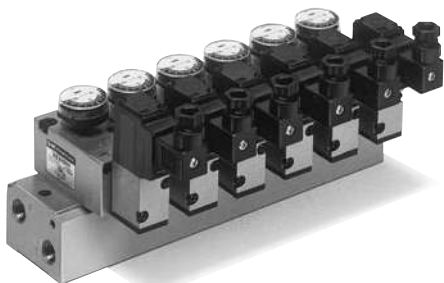
VEX

AN

AMC

AMP

# Series VEX1 Manifold



## Specifications

|                        |                                 |
|------------------------|---------------------------------|
| Valve stations         | 2 to 8 <sup>(1)</sup>           |
| Passage specifications | Common SUP, EXH                 |
| Port size P, A, R port | Rc(PT), NPTF, G(PF), NPT 1/4    |
| Applicable valve       | VEX1200, VEX1201 <sup>(2)</sup> |
| Applicable blank plate | VEX1-17 (With gasket, bolt)     |

Note 1) When there are 5 stations or more, pressurize from P ports on both sides and exhaust from R ports on both sides.

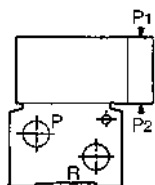
Note 2) Manifold base P1 (pilot port) is not used for VEX1200 (air operated) and VEX1201 (external pilot solenoid operated) because both are of an individual external pilot.

## How to Order

|                         |  |              |           |
|-------------------------|--|--------------|-----------|
| Series VEX1<br>Manifold |  | VVEX2-1-6-02 |           |
| Stations                |  | 6            |           |
| Port thread             |  | 02           |           |
| P, A, R port size       |  | 02           | Rc(PT)1/4 |

## External Pilot Piping

| Valve port | Style          | Air operated |
|------------|----------------|--------------|
| Valve      | VEX1200        |              |
| P1         | External pilot |              |
| P2         | —              |              |



## How to Order Manifold

Please order the appropriate regulator valve and/or blank plate with manifold base.

(Ex.) VVEX2-1-5-02N.....1 5 stations manifold base, port thread NPT

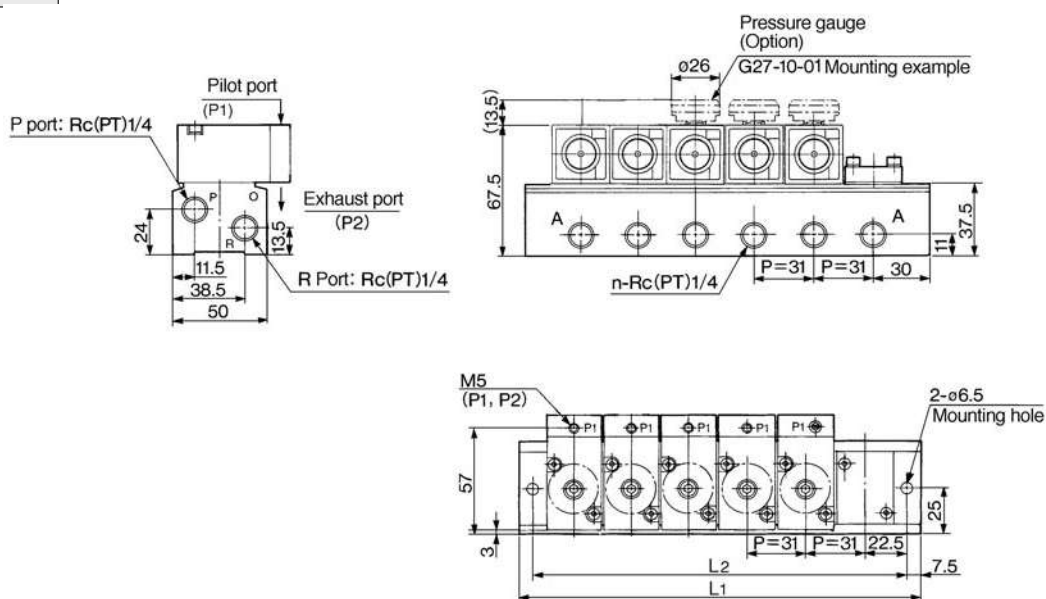
\* VEX1201-5DOZ-G...4 Regulator valve, External pilot solenoid valve, 24V DC, DIN connector (without connector), with indicator light and surge voltage suppressor, Option...With pressure gauge <sup>(1)</sup>

\* VEX1-17.....1 Blank plate

Note 1) In case of manifold, pressure gauge: Only G27-10-01(O.D.φ26)

## Dimensions

### VVEX2-1-1- Station -02

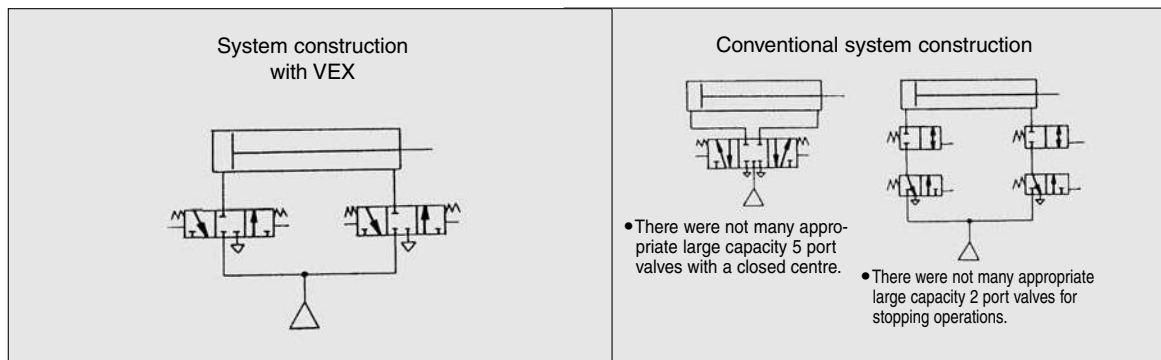


|    |   | n: Station |     |     |     |     |     |     |             |
|----|---|------------|-----|-----|-----|-----|-----|-----|-------------|
| L  | n | 2          | 3   | 4   | 5   | 6   | 7   | 8   | Calculation |
| L1 |   | 91         | 122 | 153 | 184 | 215 | 246 | 277 | L1=31Xn+29  |
| L2 |   | 76         | 107 | 138 | 169 | 200 | 231 | 262 | L2=31Xn+14  |

# Power Valve

## 3 Position Valve

### A variety of circuits in simple construction ■ Intermediate and emergency stops with a large size cylinder



## Cylinder Speed

This table should be used as a guide only, because the cylinder speed is subject to the equipment in the piping. For details, refer to the cylinder working capacity and maximum working speed data on p.5.1-13.

Condition: Pressure 0.5MPa, Load 50%, Piping length 5m

|                    |                        | Effective area<br>mm <sup>2</sup> (Nl/min) | Port size | Cylinder speed<br>(mm/s) | Bore size (mm) |     |     |     |      |      |      |      |      |      |      |      |
|--------------------|------------------------|--------------------------------------------|-----------|--------------------------|----------------|-----|-----|-----|------|------|------|------|------|------|------|------|
|                    |                        |                                            |           |                          | ø40            | ø50 | ø63 | ø80 | ø100 | ø125 | ø140 | ø160 | ø180 | ø200 | ø250 | ø300 |
| Body ported        | VEX312□<br>-01, 02     | 25(1374)<br>02 (1¼)                        | 250       |                          |                |     |     |     |      |      |      |      |      |      |      |      |
|                    |                        |                                            | 500       |                          |                |     |     |     |      |      |      |      |      |      |      |      |
|                    |                        |                                            | 750       |                          |                |     |     |     |      |      |      |      |      |      |      |      |
|                    | VEX332□<br>-02, 03, 04 | 60(3238)<br>03 (¾)                         | 250       |                          |                |     |     |     |      |      |      |      |      |      |      |      |
|                    |                        |                                            | 500       |                          |                |     |     |     |      |      |      |      |      |      |      |      |
|                    |                        |                                            | 750       |                          |                |     |     |     |      |      |      |      |      |      |      |      |
|                    | VEX350□<br>-04, 06, 10 | 160(8735)<br>06 (¾)                        | 250       |                          |                |     |     |     |      |      |      |      |      |      |      |      |
|                    |                        |                                            | 500       |                          |                |     |     |     |      |      |      |      |      |      |      |      |
|                    |                        |                                            | 750       |                          |                |     |     |     |      |      |      |      |      |      |      |      |
|                    | VEX370□<br>-10, 12     | 300(16685)<br>10(1)                        | 500       |                          |                |     |     |     |      |      |      |      |      |      |      |      |
|                    |                        |                                            | 750       |                          |                |     |     |     |      |      |      |      |      |      |      |      |
|                    |                        |                                            | 1000      |                          |                |     |     |     |      |      |      |      |      |      |      |      |
| VEX390□<br>-14, 20 | 590(32389)<br>14(1½)   | 500                                        |           |                          |                |     |     |     |      |      |      |      |      |      |      |      |
|                    |                        | 750                                        |           |                          |                |     |     |     |      |      |      |      |      |      |      |      |
|                    |                        | 1000                                       |           |                          |                |     |     |     |      |      |      |      |      |      |      |      |
| Base mounted       | VEX322□<br>-01, 02     | 25(1374)<br>02 (1¼)                        | 250       |                          |                |     |     |     |      |      |      |      |      |      |      |      |
|                    |                        |                                            | 500       |                          |                |     |     |     |      |      |      |      |      |      |      |      |
|                    |                        |                                            | 750       |                          |                |     |     |     |      |      |      |      |      |      |      |      |
|                    | VEX342□<br>-02, 03, 04 | 70(3827)<br>04(1½)                         | 250       |                          |                |     |     |     |      |      |      |      |      |      |      |      |
|                    |                        |                                            | 500       |                          |                |     |     |     |      |      |      |      |      |      |      |      |
|                    |                        |                                            | 750       |                          |                |     |     |     |      |      |      |      |      |      |      |      |

VEX

AN

AMC

AMP

How to Order



| Body size | Port size |           |        |
|-----------|-----------|-----------|--------|
|           | Port      | P, A port | R port |
| 12        | 01        | 1/8       |        |
|           | 02        | 1/4       |        |
| 32        | 02        | 1/4       |        |
|           | 03        | 3/8       |        |
| 50        | 04        | 1/2       |        |
|           | 04        | 1/2       |        |
|           | 06        | 3/4       |        |
| 70        | 10        | 1         |        |
|           | 12        | 1 1/4     |        |
|           | 14        | 1 1/4     |        |
| 90        | 20        | 2         |        |

Body ported

VEX3 12 0 01 [ ] B

Base mounted

VEX3 22 0 01 [ ] B



Operation  
0 — Air operated

- Option
- B — Bracket (Except VEX332□)
  - F — Foot (Only VEX312□, VEX332□)
  - N — Silencer for pilot exhaust (P<sub>2</sub>) port (Only solenoids)

| Body size | Port size |                  |        |
|-----------|-----------|------------------|--------|
|           | Port      | P, A port        | R port |
| 22        | —         | Without subplate |        |
|           | 01        | 1/8              |        |
|           | 02        | 1/4              |        |
| 42        | —         | Without subplate |        |
|           | 02        | 1/4              |        |
|           | 03        | 3/8              |        |
|           | 04        | 1/2              |        |

Thread

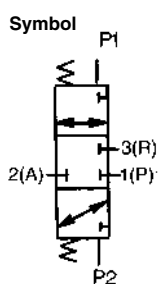
- Rc(PT)
- T NPTF
- F G(PF)
- N NPT

⚠ Caution

Refer to p.0-33 to 0-36 for Safety Instructions and common precautions



Air operated



Air operated

## Specifications

| Model                         | Body ported     | VEX312□- <sup>01</sup> <sub>02</sub>                         | VEX332□- <sup>02</sup> <sub>03</sub> <sup>04</sup> | VEX350□- <sup>04</sup> <sub>06</sub> <sup>10</sup> | VEX370□- <sup>10</sup> <sub>12</sub> | VEX390□- <sup>14</sup> <sub>20</sub> |      |      |      |       |       |       |       |
|-------------------------------|-----------------|--------------------------------------------------------------|----------------------------------------------------|----------------------------------------------------|--------------------------------------|--------------------------------------|------|------|------|-------|-------|-------|-------|
|                               | Base mounted    | VEX322□- <sup>01</sup> <sub>02</sub>                         | VEX342□- <sup>02</sup> <sub>03</sub> <sup>04</sup> | —                                                  | —                                    | —                                    |      |      |      |       |       |       |       |
| Operation                     |                 | Air operated                                                 |                                                    |                                                    |                                      |                                      |      |      |      |       |       |       |       |
| Fluid                         |                 | Air                                                          |                                                    |                                                    |                                      |                                      |      |      |      |       |       |       |       |
| Proof pressure                |                 | 1.5MPa                                                       |                                                    |                                                    |                                      |                                      |      |      |      |       |       |       |       |
| Set pressure range            | Air operated    | Low vacuum to 1.0MPa                                         |                                                    |                                                    |                                      |                                      |      |      |      |       |       |       |       |
|                               |                 | External pilot pressure 0.2 to 1.0MPa                        |                                                    |                                                    |                                      |                                      |      |      |      |       |       |       |       |
| Ambient and fluid temperature |                 | Max. 50°C (Air operated: 60°C)                               |                                                    |                                                    |                                      |                                      |      |      |      |       |       |       |       |
| Response time                 |                 | 40ms or less<br>(Pilot pressure 0.5MPa)                      | 60ms or less (Pilot pressure 0.5MPa)               |                                                    |                                      |                                      |      |      |      |       |       |       |       |
| Max. operating frequency      |                 | 3 cycles/s                                                   |                                                    |                                                    |                                      |                                      |      |      |      |       |       |       |       |
| Mounting                      |                 | Free                                                         |                                                    |                                                    |                                      |                                      |      |      |      |       |       |       |       |
| Lubrication                   |                 | Not required (Use turbine oil No.1, ISO VG32, if lubricated) |                                                    |                                                    |                                      |                                      |      |      |      |       |       |       |       |
| Port size                     | Port            | 01                                                           | 02                                                 | 02                                                 | 03                                   | 04                                   | 04   | 06   | 10   | 10    | 12    | 14    | 20    |
|                               | P               |                                                              |                                                    |                                                    |                                      |                                      |      |      |      |       |       |       |       |
|                               | A               | 1/8                                                          | 1/4                                                | 1/4                                                | 3/8                                  | 1/2                                  | 1/2  | 3/4  | 1    | 1     | 1 1/4 | 1 1/2 | 2     |
| Effective area                | R               |                                                              |                                                    |                                                    |                                      |                                      |      |      |      | 1 1/4 |       | 2     |       |
|                               | mm <sup>2</sup> | 16                                                           | 25                                                 | 36                                                 | 60                                   | 70                                   | 130  | 160  | 180  | 300   | 330   | 590   | 670   |
|                               | Nl/min          | 883.35                                                       | 1374.10                                            | 1963                                               | 3238                                 | 3827                                 | 7066 | 8735 | 9815 | 16685 | 17667 | 32389 | 36315 |

## Option

| Parts name                          |   | Part No.                             |                                      |                                                    |                                                    |                                                    |                                      |                                      |
|-------------------------------------|---|--------------------------------------|--------------------------------------|----------------------------------------------------|----------------------------------------------------|----------------------------------------------------|--------------------------------------|--------------------------------------|
|                                     |   | VEX312□- <sup>01</sup> <sub>02</sub> | VEX322□- <sup>01</sup> <sub>02</sub> | VEX332□- <sup>02</sup> <sub>03</sub> <sup>04</sup> | VEX342□- <sup>02</sup> <sub>03</sub> <sup>04</sup> | VEX350□- <sup>04</sup> <sub>06</sub> <sup>10</sup> | VEX370□- <sup>10</sup> <sub>12</sub> | VEX390□- <sup>14</sup> <sub>20</sub> |
| Bracket<br>(With bolt and washer)   | B | VEX1-18-1A                           | —                                    | —                                                  | —                                                  | VEX5-32A                                           | VEX7-32A                             | VEX9-32A                             |
| Foot<br>(With bolt and washer)      | F | VEX1-18-2A                           | —                                    | VEX3-32-2A                                         | —                                                  | —                                                  | —                                    | —                                    |
| Pilot exhaust<br>(P2) port silencer | N | AN120-M5                             |                                      | AN103-01                                           |                                                    | AN210-02                                           |                                      |                                      |

## Weight (kg)

| Model        | VEX312□- <sup>01</sup> <sub>02</sub> | VEX322□- <sup>01</sup> <sub>02</sub> | VEX332□- <sup>02</sup> <sub>03</sub> <sup>04</sup> | VEX342□- <sup>02</sup> <sub>03</sub> <sup>04</sup> | VEX350□- <sup>04</sup> <sub>06</sub> <sup>10</sup> | VEX370□- <sup>10</sup> <sub>12</sub> | VEX390□- <sup>14</sup> <sub>20</sub> |
|--------------|--------------------------------------|--------------------------------------|----------------------------------------------------|----------------------------------------------------|----------------------------------------------------|--------------------------------------|--------------------------------------|
| Air operated | 0.1                                  | 0.2                                  | 0.3                                                | 0.6                                                | 1.4                                                | 2.1                                  | 3.3                                  |

VEX

AN

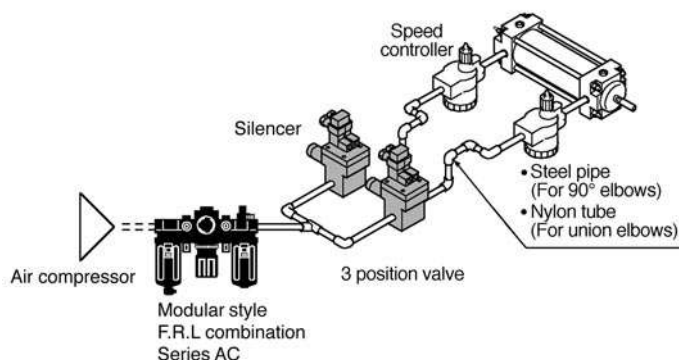
AMC

AMP

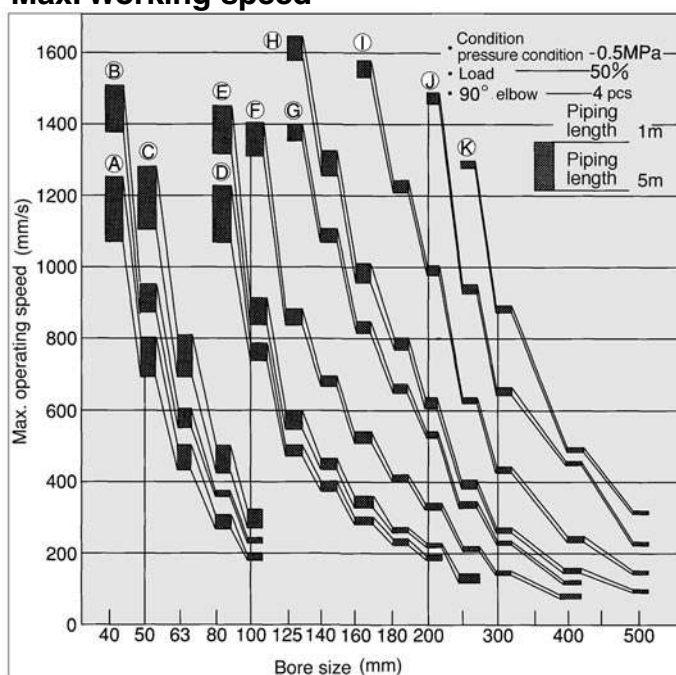
# VEX3

## Cylinder Speed

### System



### Max. Working speed



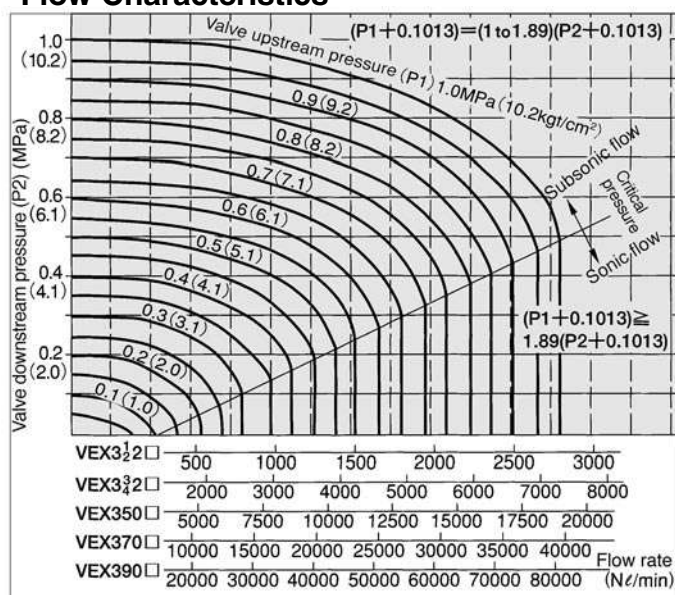
| System | Solenoid valve       | Speed controller | Silencer | Port size            | Fitting (One side)<br>4 pcs |
|--------|----------------------|------------------|----------|----------------------|-----------------------------|
| A      | VEX3 $\frac{1}{2}$ □ | AS4000           | AN200    | T1075* (ø10)         | DL10-02                     |
| B      |                      |                  |          | T1209* (ø12)         | DL12-02                     |
| C      | VEX3 $\frac{3}{4}$ □ | AS420            | AN300    | T1209* (ø12)         | DL12-03                     |
| D      |                      | AS420            | AN400    | SGP1 $\frac{1}{2}$ B | 90° elbow                   |
| E      | VEX350□              | AS420            | AN400    | SGP1 $\frac{1}{2}$ B | 90° elbow                   |
| F      |                      | AS500            | AN500    | SGP $\frac{3}{4}$ B  | 90° elbow                   |
| G      |                      | AS600            | AN600    | SGP1 B               | 90° elbow                   |
| H      | VEX370□              | AS600            | AN600    | SGP1 B               | 90° elbow                   |
| I      |                      | AS700            | AN700    | SGP1 $\frac{1}{4}$ B | 90° elbow                   |
| J      | VEX390□              | AS800            | AN800    | SGP1 $\frac{1}{2}$ B | 90° elbow                   |
| K      |                      | AS900            | AN900    | SGP2 B               | 90° elbow                   |

\* Nylon tube No.

### Caution

- The cushion incorporated in the cylinder has a limit to the relationship between maximum working speed and load. Please check it with the cylinder catalog.
- When the load factor is 0% (no load), the maximum working speed will be 1.2 times, and when the load factor is 75%, it will be 0.7 times.

## Flow Characteristics



When air is used, the flow characteristics are subject to  $P_1$  (Mpa),  $P_2$  (Mpa)  $\Delta P$  (Mpa), and the distinction between sonic and subsonic flow.

① Equation in the domain of subsonic flow.

Calculation by effective area

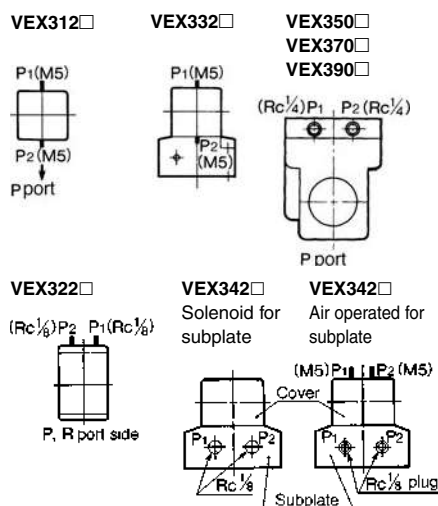
$$Q = 226S \sqrt{\frac{\Delta P(P_2 + 0.1013)}{G}} \cdot \sqrt{\frac{273}{273 + \theta}} \dots \text{l/min(ANR)}$$

② Equation in the domain of sonic flow.

$$Q = 113S(P_1 + 0.1013) \cdot \frac{1}{\sqrt{G}} \cdot \sqrt{\frac{273}{273 + \theta}} \dots \text{l/min(ANR)}$$

Q: Flow rate (l/min)  
 $\Delta P$ : Pressure differential ( $P_1 - P_2$ )  
 $P_1$ : Upstream pressure (MPa)  
 $P_2$ : Downstream pressure (MPa)  
 $G$ : Specific gravity (Air = 1)  
 $\theta$ : Temperature ( $^{\circ}\text{C}$ )  
 $S$ : Effective area ( $\text{mm}^2$ )

## External Pilot Piping

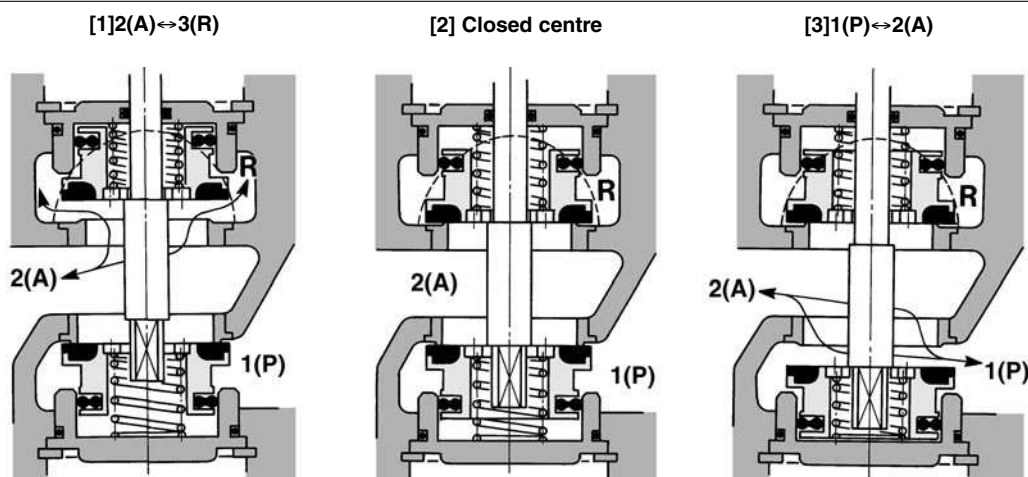


| Port | VEX3□□0        |
|------|----------------|
| P1   | External pilot |
| P2   | External pilot |

### Caution

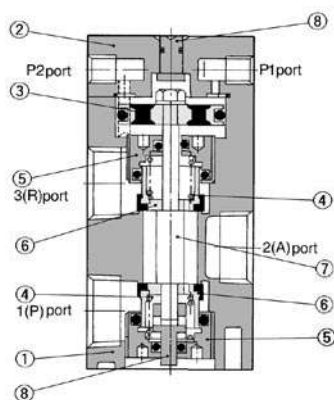
When the VEX3420 air operated power valve is delivered from our factory, the M5 threaded pilot ports P1 and P2 in the cover are open and the Rc1/8 pilot port in the subplate is plugged. Before connecting pipes to P1 and P2 ports in the subplate, remove the 1/8 plug from the subplate and put M5 plugs into P1 and P2 ports in the cover. M5 plug - M-5P

## Construction/Operation Principles

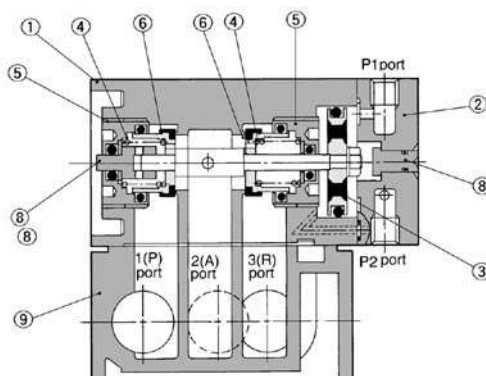


- This is a 3 port switch valve in which the shaft ⑦- extending from the driving piston ③ opens/closes a pair of poppet valves ⑥. The poppet valve has a pressure balancing mechanism in which A port pressure is constantly applied from the back and the centre spring ④ is acting as a backup.
- When neither the pilot solenoid valve "a" nor "b" are energized (or when air is exhausted both from the P1 and P2 ports of the air-operated style), no force will act on the working piston, and the spring closes the poppet valve, thus the valve assuming the closed centre position. ([2])
- When the pilot solenoid valve "a" is energized (or when pressurised air enters through the P1 port of the air operated style), pilot air that enters the space above the working piston pushes down the piston and opens the lower poppet valve, thus connecting the P port and A port. ([3]) The upper poppet valve continues to close the R port by means of pressure balance and the spring.
- When the pilot solenoid valve "b" is energized (or when pressurised air enters through the P2 port of the air-operated style), the pilot air that enters the space under the working piston pushes the piston upward and opens the upper poppet valve, thus connecting the A port and R port. ([1]) The lower poppet valve continues to close the P port by means of pressure balance and the spring.

### VEX3120(Air operated)

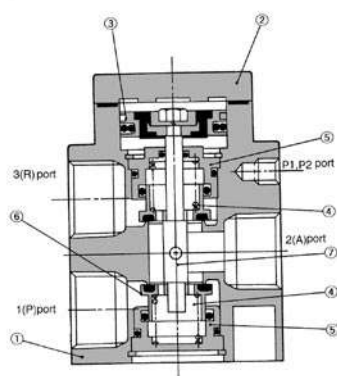


### VEX3220(Air operated)

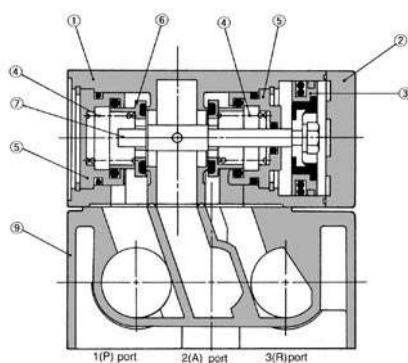


## Construction (Component Parts)

### VEX3320 (Air operated)



### VEX3420 (Air operated)



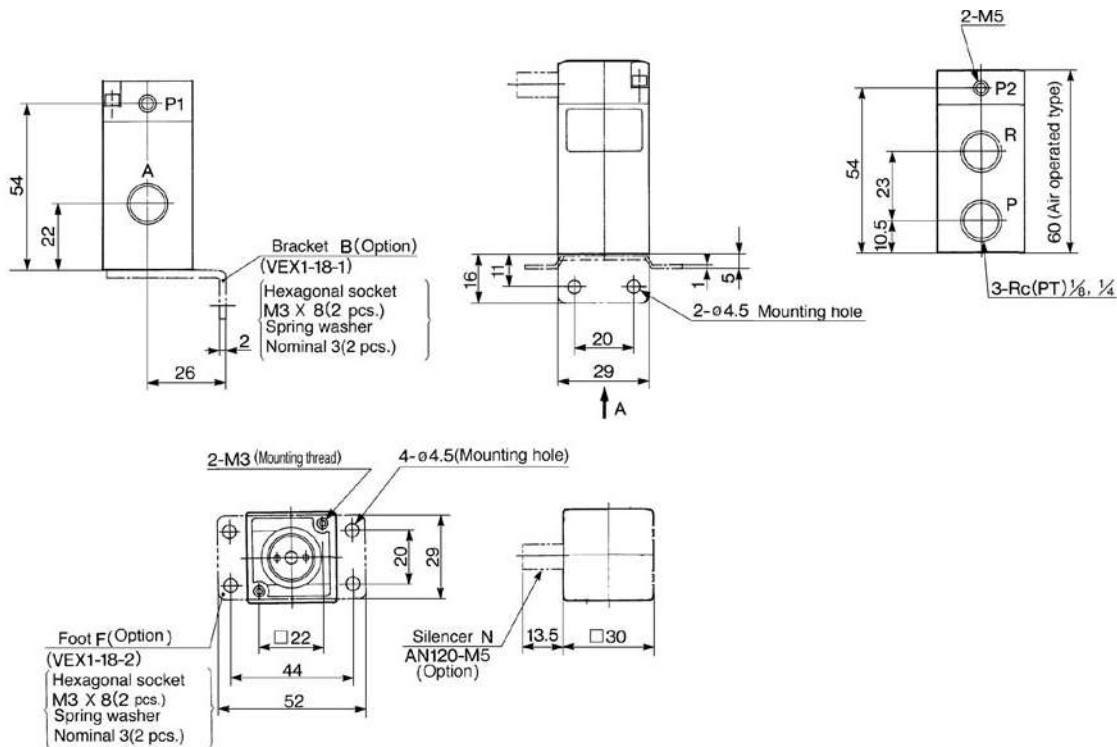
#### Component Parts

| No. | Description     | Material             |
|-----|-----------------|----------------------|
| ①   | Body            | Aluminium alloy      |
| ②   | Cover           | Aluminium alloy      |
| ③   | Working piston  | Aluminium alloy      |
| ④   | Center spring   | Stainless steel      |
| ⑤   | Valve guide     | Aluminium alloy      |
| ⑥   | Poppet valve    | Aluminium alloy, NBR |
| ⑦   | Shaft           | Stainless steel      |
| ⑧   | Manual override | P.O.M                |
| ⑨   | Sub-plate       | Aluminium alloy      |

# VEX3

## Body Ported/VEX312□

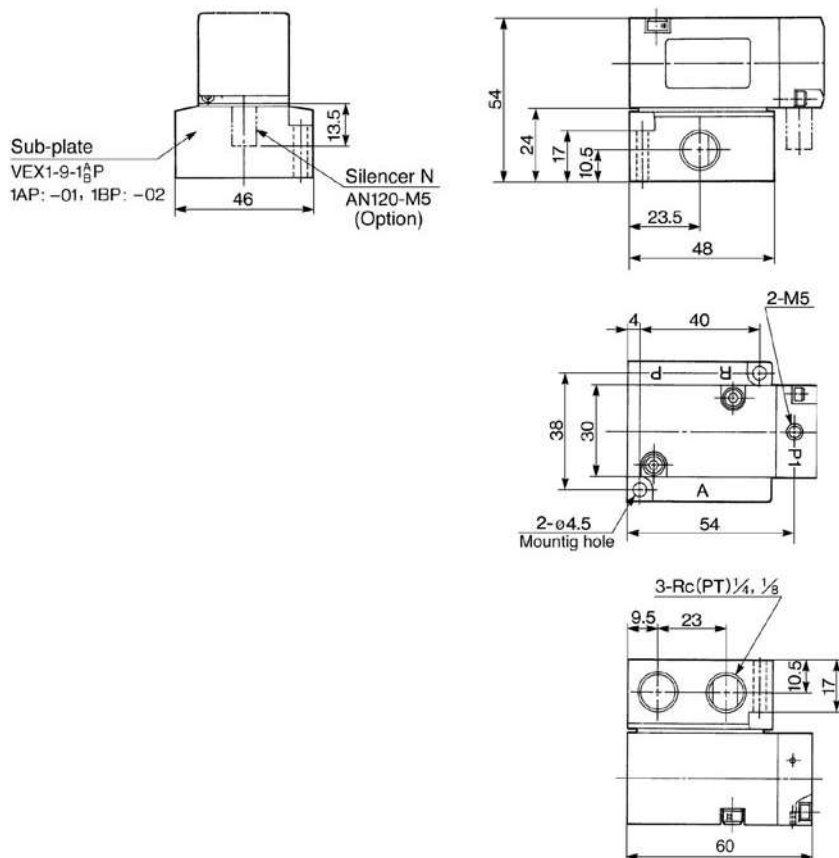
Air operated: VEX3120



A perspective drawing

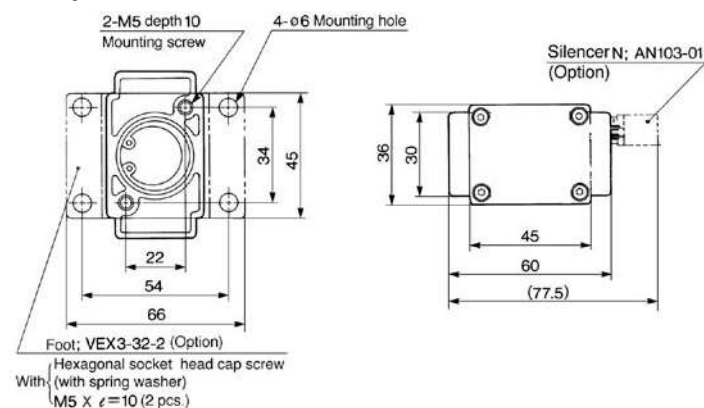
## Base mounted/VEX322□

Air operated: VEX3220

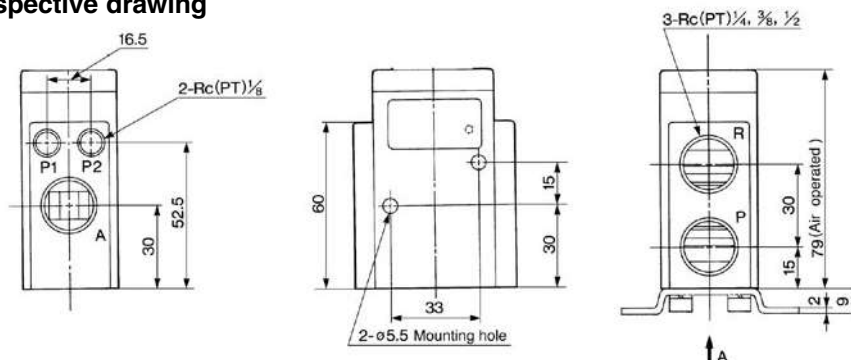


## Body ported: VEX332□

### Air operated: VEX3320

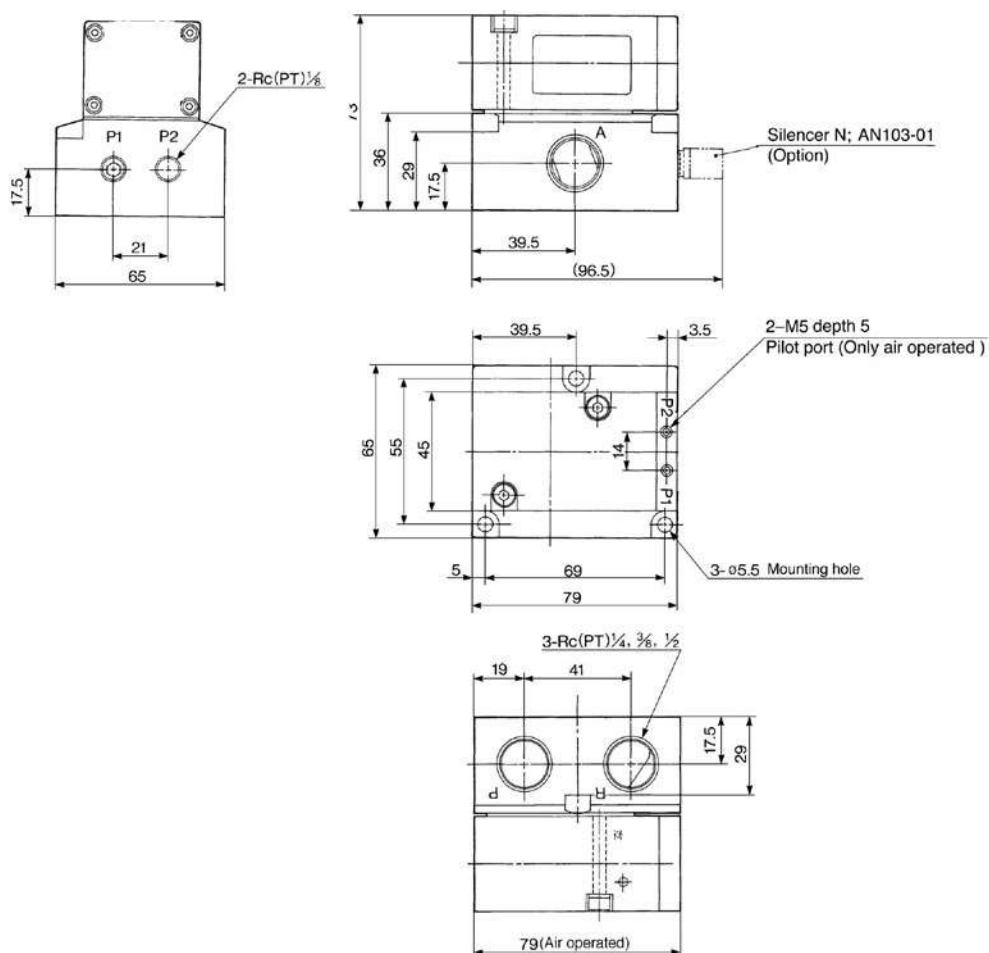


### A perspective drawing



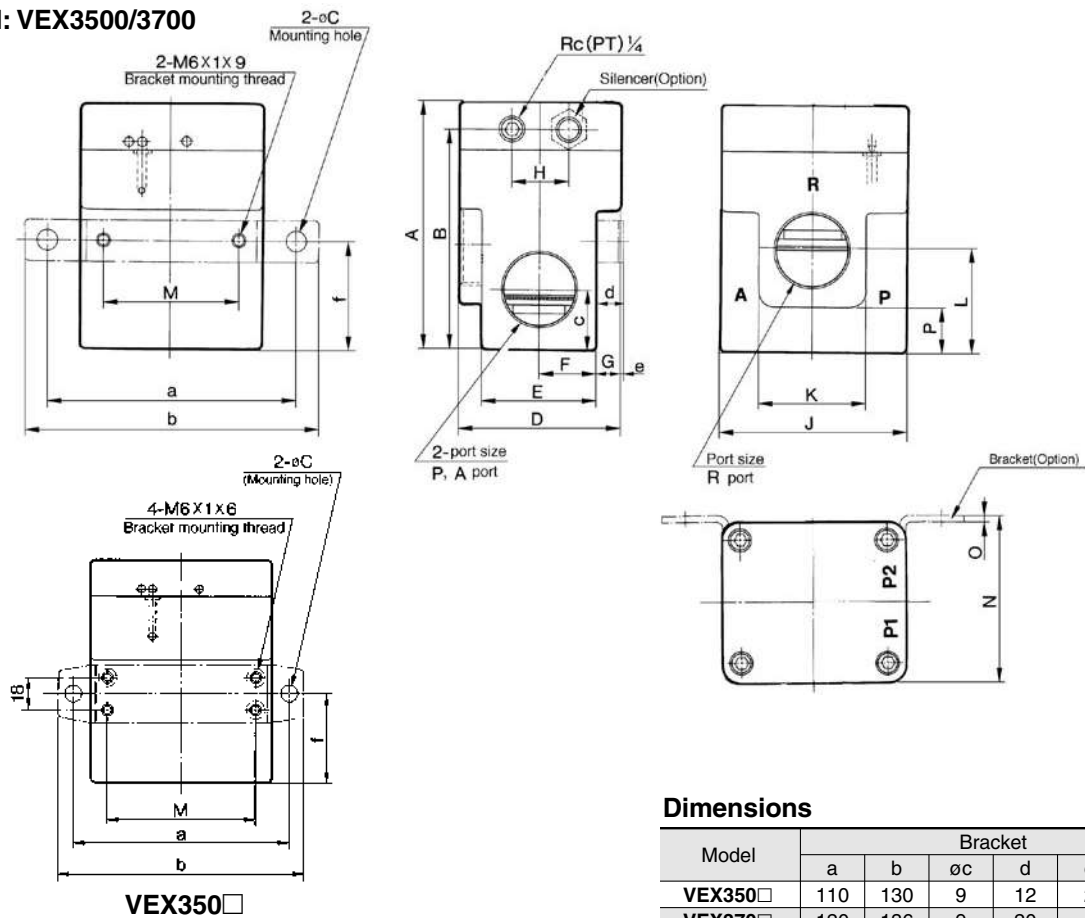
## Base mounted: VEX342□

### Air operated: VEX3420



## Body ported/VEX350□/370□

Air operated: VEX3500/3700



### Dimensions

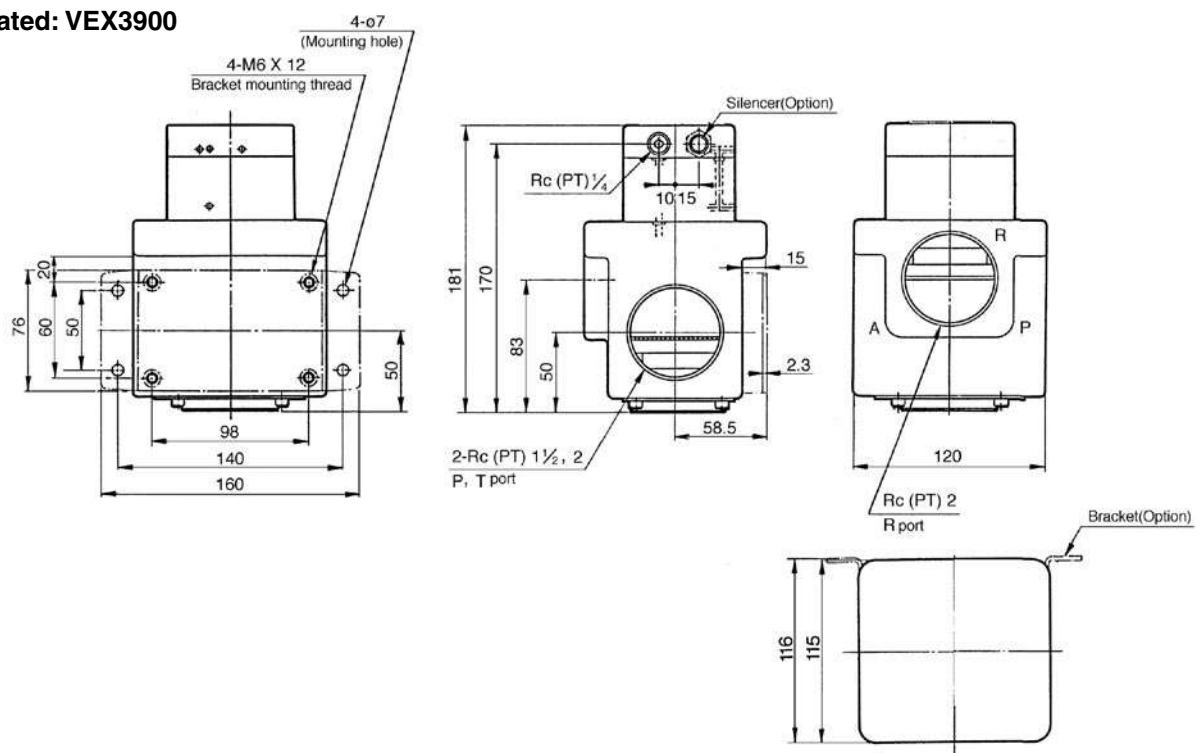
| Model   | Bracket |     |    |    |   |    |
|---------|---------|-----|----|----|---|----|
|         | a       | b   | øc | d  | e | f  |
| VEX350□ | 110     | 130 | 9  | 12 | 2 | 47 |
| VEX370□ | 120     | 136 | 9  | 20 | 5 | 49 |

### Dimensions

| Model   | Port size         |             | A   | B   | C  | D  | E  | F  | G  | H  | J   | K  | L  | M  | N  | O   |
|---------|-------------------|-------------|-----|-----|----|----|----|----|----|----|-----|----|----|----|----|-----|
|         | P, A port         | R port      |     |     |    |    |    |    |    |    |     |    |    |    |    |     |
| VEX350□ | Rc(PT)1/2, 3/4, 1 |             | 107 | 96  | 26 | 70 | 50 | 25 | 10 | 25 | 80  | 46 | 45 | 60 | 72 | 2.3 |
| VEX370□ | Rc(PT)1, 1 1/4    | Rc(PT)1 1/4 | 123 | 112 | 30 | 90 | 60 | 30 | 15 | 25 | 100 | 60 | 51 | 82 | 95 | 2.3 |

## Body ported/VEX390□

Air operated: VEX3900



# Series VEX3 Manifold

## Manifold: Series VVEX



### Specifications

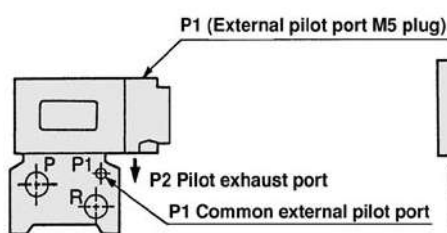
| Model                           |   | VVEX2                                   | VVEX4                                  |     |     |
|---------------------------------|---|-----------------------------------------|----------------------------------------|-----|-----|
| Applicable valve                |   | VEX3220, VEX3222                        | VEX3420, VEX3422                       |     |     |
| Valve stations (1)              |   | 2 to 8                                  | 2 to 6                                 |     |     |
| Port specifications             |   | Common SUP, EXH                         |                                        |     |     |
| Pilot                           |   | Internal pilot, Common external pilot   |                                        |     |     |
| Common external pilot port size |   | M5 X 0.8 Length of thread 5             |                                        |     |     |
| Port size                       | P | 1/4                                     | 3/8                                    | 3/8 | 1/2 |
|                                 | R |                                         | 1/4                                    | 3/8 | 3/8 |
|                                 | A |                                         |                                        |     |     |
| Blank plate                     |   | VEX1-17<br>(With gasket, mounting bolt) | VEX4-5<br>(With gasket, mounting blot) |     |     |



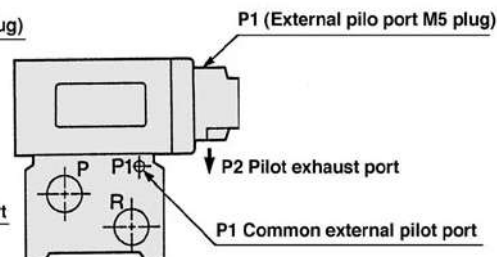
Note 1) When series VVEX2 is used with more than 5 stations, Series VVEX4 is used with more than 4 stations, apply pressure to the P port on both sides and exhaust from the R port on both sides.

### External Pilot Piping

VVEX2-2

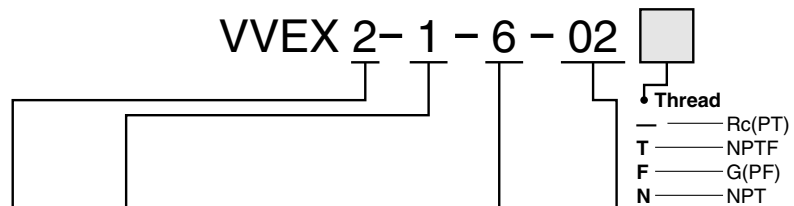


VVEX4-2



## How to Order Manifold Base

VVEX 2-1-6-02



| Body size |             | Pilot style           |                              | Stations       |            | Port size |     |     |     |
|-----------|-------------|-----------------------|------------------------------|----------------|------------|-----------|-----|-----|-----|
| Body size | Pilot style |                       | Applicable Valve             | Valve stations | Port size  |           |     |     |     |
|           |             |                       |                              |                | Port       | P         | R   | A   |     |
| 2         | 1           | Internal pilot        | Air operated:<br>VEX3220 (1) | 2              | 2 stations | 02        | 1/4 |     |     |
|           |             | :                     |                              | :              |            |           |     |     |     |
|           |             | 6                     |                              | 6 stations     |            |           |     |     |     |
|           |             | :                     |                              | :              |            |           |     |     |     |
|           | 2           | Common external pilot |                              | 8              | 8 stations |           |     |     |     |
| 4         | 1           | Internal pilot        | Air operated:<br>VEX3420 (1) | 2              | 2 stations | A         | 3/8 |     | 1/4 |
|           |             | :                     |                              | :              | B          | 3/8       |     |     |     |
|           |             | 6                     |                              | 6 stations     | C          | 1/2       |     | 3/8 |     |
|           | 2           | Common external pilot |                              |                |            |           |     |     |     |

### Note) Air operated

VEX 3220 and VEX3420 (air operated) are used. Distinction between the pilots (internal or external pilot) of the manifold base does not matter. Either may be used.

### Example of ordering a manifold base:

The valve and blank plate for manifold arrangement should be specified in order from the left side of the manifold base (With the A port on your side).

(Example) **VVEX4-2-6-A**

\* VEX3420 — 5 pcs. } Air operated  
\* VEX4-5 — 1 pc. }

VEX

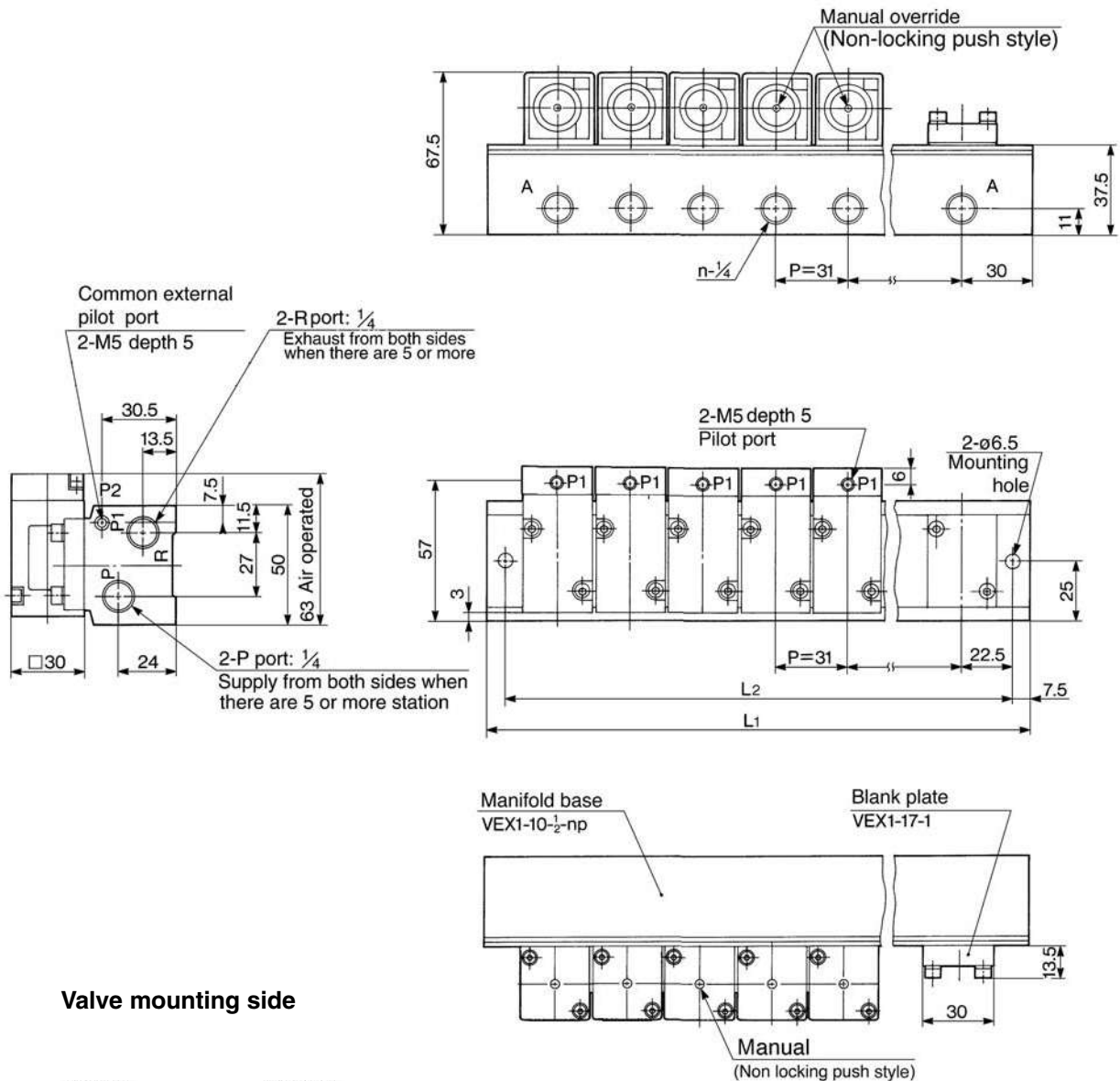
AN

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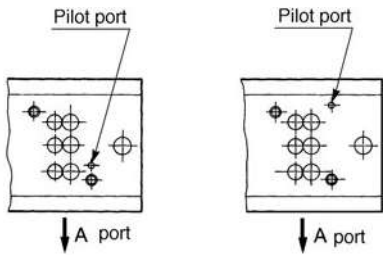
AMP

Manifold/VVEX2□

VVEX2-  $\frac{1}{2}$  Applicable valve: VEX3220



Valve mounting side



Internal pilot

Common external pilot

L: Dimensions

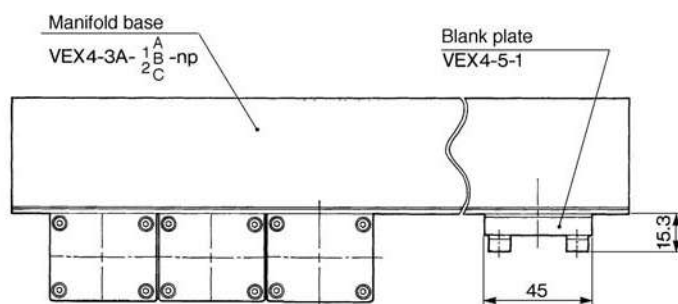
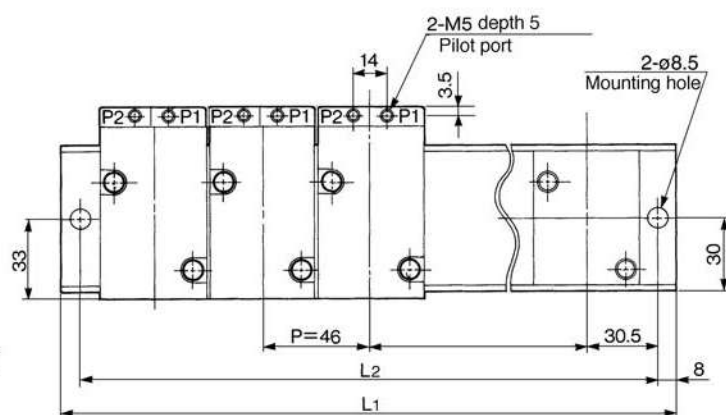
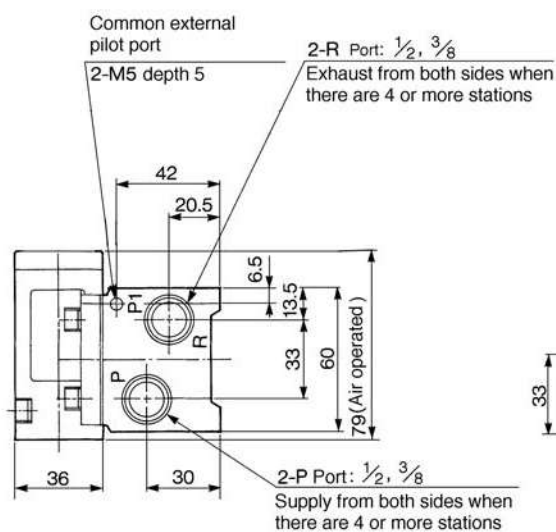
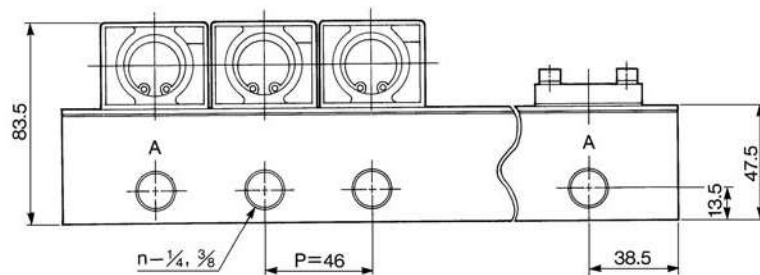
Equation  $L_1=31n+29$ ,  $L_2=31n+14$  n: Station

| L  | n | 2  | 3   | 4   | 5   | 6   | 7   | 8   |
|----|---|----|-----|-----|-----|-----|-----|-----|
| L1 |   | 91 | 122 | 153 | 184 | 215 | 246 | 277 |
| L2 |   | 76 | 107 | 138 | 169 | 200 | 231 | 262 |

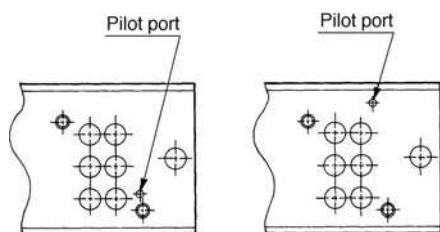
**Manifold/VVEX4-1** ☐

**VVEX4-1 Applicable valve: VEX3420**

**VVEX4-2 Applicable valve: VEX3420**



### Valve mounting side



↓ A port

**Internal pilot**

↓ A port

**Common external pilot**

**L: Dimensions**  $L_1=46n+31$ ,  $L_2=46n+15$  n: Station

| $\begin{array}{c} \diagdown \\ n \end{array}$ | 2   | 3   | 4   | 5   | 6   |
|-----------------------------------------------|-----|-----|-----|-----|-----|
| <b>L<sub>1</sub></b>                          | 123 | 169 | 215 | 261 | 307 |
| <b>L<sub>2</sub></b>                          | 107 | 153 | 199 | 245 | 291 |

# Power Valve Economy Valve Series VEX5

The conventional valve combination circuit has been condensed into a single valve.

Three functions (pressure regulator, switching valve, and speed controller) are provided by a single valve.

A large capacity and economical system.

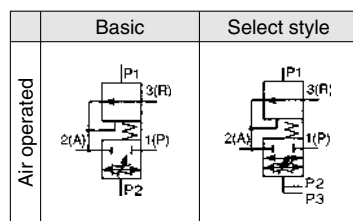
This valve provides twice the system capacity of the conventional circuit. Therefore, it is possible to downsize 1 or 2 sizes (for example, a conventional 32A circuit can be changed to a 25A or a 20A). It is economical, as its performance cost (system price/effective area) is one half of the conventional style. (Comparison based on SMC data.)



Basic



Select style



## Standard Specifications

| Model                    |                 | VEX55□□ <sup>04</sup> <sub>06</sub> <sub>10</sub>          |      |      | VEX57□□ <sup>10</sup> <sub>12</sub> |       | VEX59□□ <sup>14</sup> <sub>20</sub> |       |
|--------------------------|-----------------|------------------------------------------------------------|------|------|-------------------------------------|-------|-------------------------------------|-------|
| Style                    |                 | Air operated                                               |      |      |                                     |       |                                     |       |
| Fluid                    |                 | Air                                                        |      |      |                                     |       |                                     |       |
| Proof pressure           |                 | 1.5MPa                                                     |      |      |                                     |       |                                     |       |
| Pressure range           |                 | 0 to1.0MPa                                                 |      |      |                                     |       |                                     |       |
| Set pressure range       |                 | 0.05 to 0.9MPa                                             |      |      |                                     |       |                                     |       |
| Ambient and fluid temp.  |                 | Max. 50°C(Air operated 60°C)                               |      |      |                                     |       |                                     |       |
| Pilot pressure           |                 | P1: 0.05 to 0.9MPa<br>P2, P3: 0.2 to 0.9MPa P2≤P3          |      |      |                                     |       |                                     |       |
| Repeatability            |                 | 0.01MPa                                                    |      |      |                                     |       |                                     |       |
| Sensitivity              |                 | 0.01MPa                                                    |      |      |                                     |       |                                     |       |
| Response time            |                 | 60ms or less                                               |      |      |                                     |       |                                     |       |
| Max. operating frequency |                 | 3 cycles/sec.                                              |      |      |                                     |       |                                     |       |
| No. of needle rotations  |                 | 6 turns                                                    |      |      | 8 turns                             |       |                                     |       |
| Mounting                 |                 | Free                                                       |      |      |                                     |       |                                     |       |
| Lubrication              |                 | Not required(use turbine oil No.1 ISO VG32, if lubricated) |      |      |                                     |       |                                     |       |
| Port size<br>Rc(PT)      | Port            | 04                                                         | 06   | 10   | 10                                  | 12    | 14                                  | 20    |
|                          | P               | 1/2                                                        | 3/4  | 1    | 1                                   | 1 1/4 | 1 1/4                               | 2     |
|                          | A               |                                                            |      |      | 1 1/4                               |       | 2                                   |       |
|                          | R               |                                                            |      |      |                                     |       |                                     |       |
| Effective area           | mm <sup>2</sup> | 130                                                        | 160  | 180  | 300                                 | 330   | 590                                 | 670   |
|                          | Cv              | 7066                                                       | 8735 | 9815 | 16685                               | 17667 | 32389                               | 36315 |
| Weight (kg)              | Basic           | 2.0                                                        |      |      | 3.2                                 |       | 4.7                                 |       |
|                          | Select          | 2.3                                                        |      |      | 3.5                                 |       | 5.0                                 |       |

## Accessories/Part No.

|                                |       | Part No.                                          |                                     |                                     |
|--------------------------------|-------|---------------------------------------------------|-------------------------------------|-------------------------------------|
| Description                    | Model | VEX55□□ <sup>04</sup> <sub>06</sub> <sub>10</sub> | VEX57□□ <sup>10</sup> <sub>12</sub> | VEX59□□ <sup>14</sup> <sub>20</sub> |
|                                |       | VEX5-32A                                          | VEX7-32A                            | VEX9-32A                            |
| Bracket (With bolt and washer) |       |                                                   |                                     |                                     |
| Pressure gauge                 |       | G46-10-01                                         |                                     |                                     |

How to Order

VEX5

5

1

0

06

B

Economy valve

Option

Style

Operation style

Body size

Port size

0 — Basic

1 — Select

0 — Air operated

B — Bracket

G — Pressure gauge

| Body size | Port size Rc(PT) |        |
|-----------|------------------|--------|
|           | P, A port        | R port |
| 5         | 04 1/2           | 1/2    |
|           | 06 3/4           | 3/4    |
|           | 10 1             | 1      |
| 7         | 10 1             | 1 1/4  |
|           | 12 1 1/4         |        |
| 9         | 14 1 1/4         | 2      |
|           | 20 2             |        |

Model

| Model         | Basic        | Select       | Port size Rc(PT) |             |
|---------------|--------------|--------------|------------------|-------------|
|               | Air operated | Air operated | P, A port        | R port      |
| Economy valve | VEX5500      | VEX5510      | 1/2, 3/4, 1      | 1/2, 3/4, 1 |
|               | VEX5700      | VEX5710      | 1, 1 1/4         | 1 1/4       |
|               | VEX5900      | VEX5910      | 1 1/2, 2         | 2           |

External Pilot Piping

R port size

P port size

⚠ Caution

Refer to p.0-33 to 0-36 for Safety Instructions and common precautions

| Model   | P1             | P2             | P3             |
|---------|----------------|----------------|----------------|
| VEX5□00 | External pilot | External pilot | Plug           |
| VEX5□10 | External pilot | External pilot | External pilot |

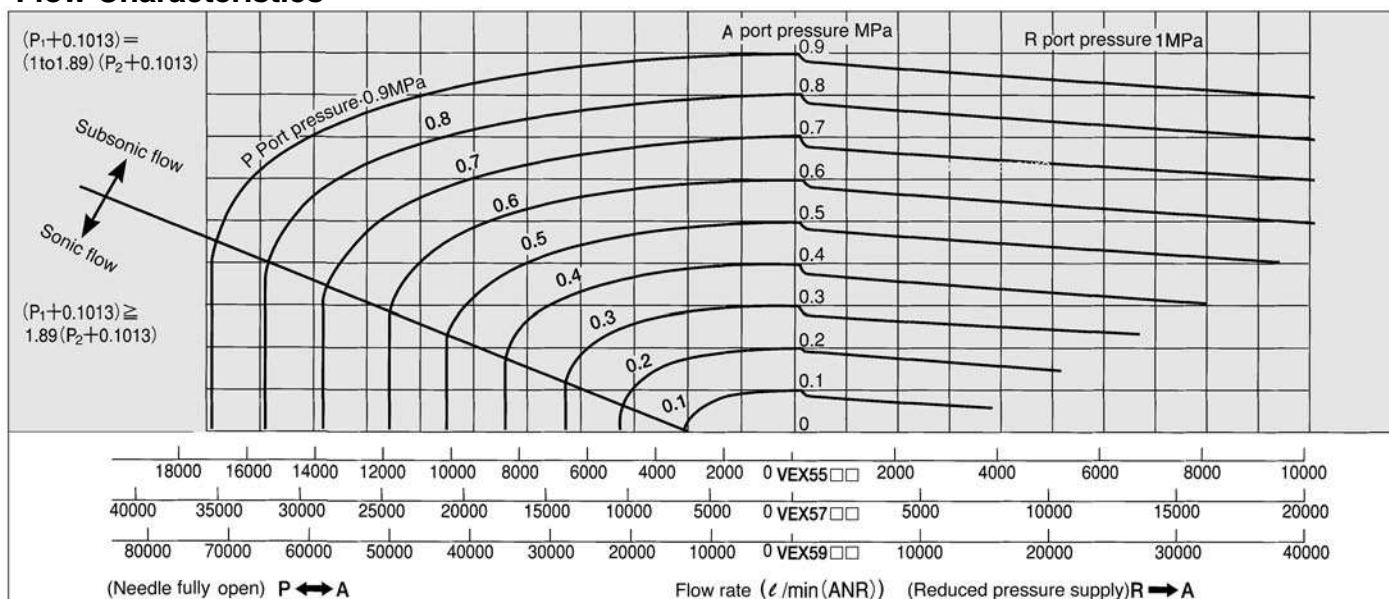
VEX

AN

AMC

AMP

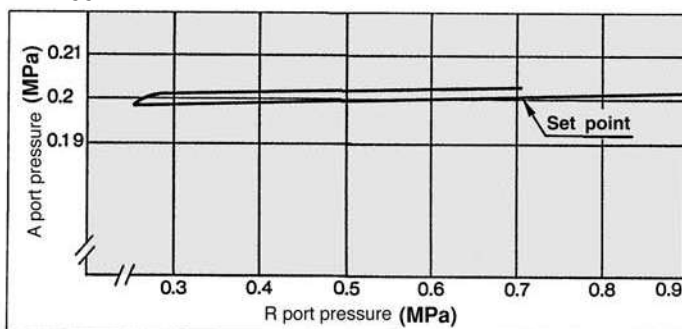
## Flow Characteristics



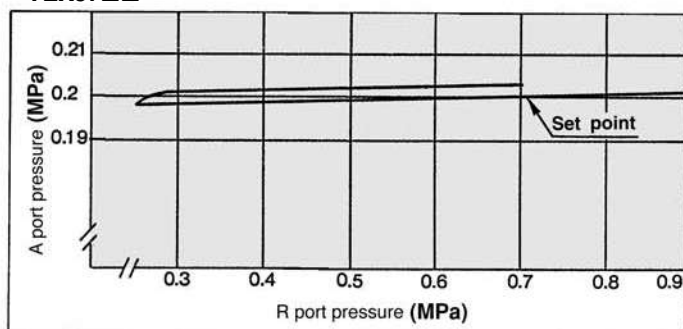
## Pressure Characteristics

Shows secondary pressure (A port) change against primary pressure (R port) change. They conform to JISB8372 (Air pressure regulator)

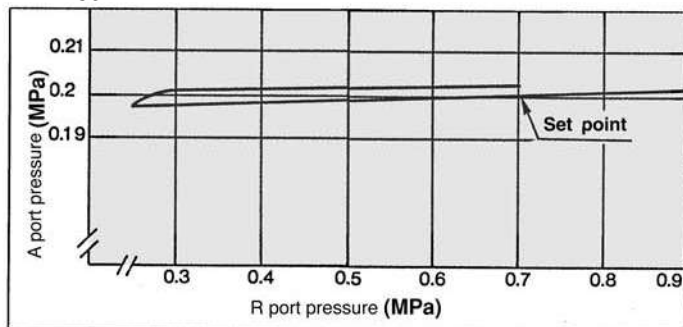
VEX55 □ □



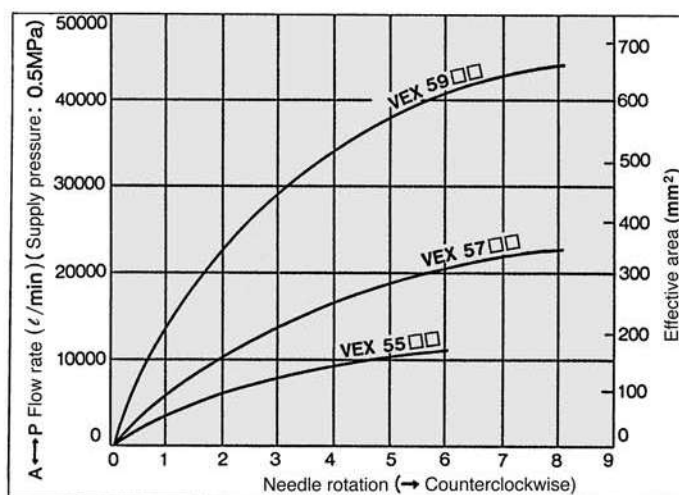
VEX57 □ □



VEX59 □ □

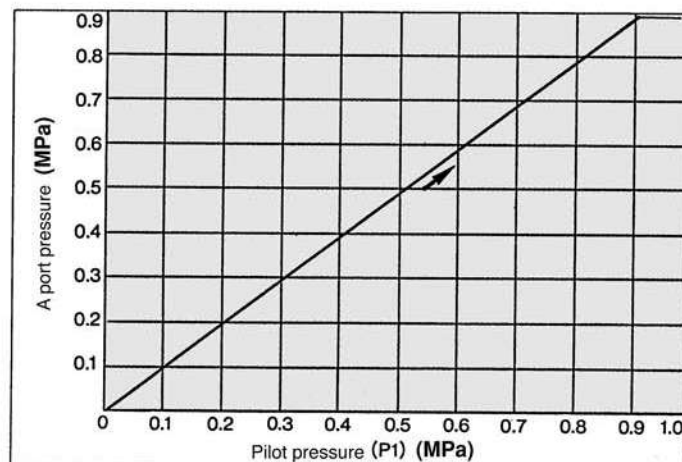


## Needle Characteristics A ↔ P



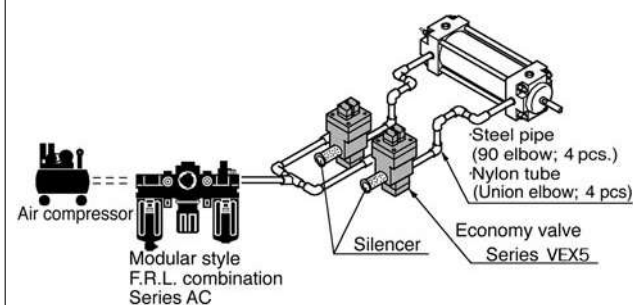
## Setting Pressure Characteristics

A port pressure is set according to pilot pressure (R → A: Non-relief regulator)

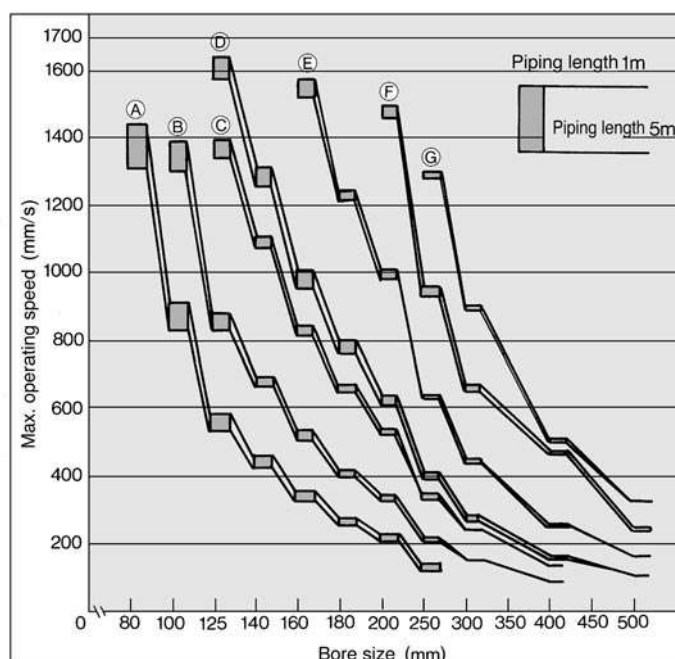


## Cylinder Speed

### System diagram



| System | Solenoid valve | Silencer | Port size | Fitting (One side)<br>4 pcs |
|--------|----------------|----------|-----------|-----------------------------|
| A      | VEX55□□        | AN400    | SGP 1/2 B | 90° Elbow                   |
| B      | VEX55□□        | AN500    | 3/4 B     | 90° Elbow                   |
| C      | VEX55□□        | AN600    | 1B        | 90° Elbow                   |
| D      | VEX57□□        | AN600    | 1B        | 90° Elbow                   |
| E      | VEX57□□        | AN700    | 1 1/4 B   | 90° Elbow                   |
| F      | VEX59□□        | AN800    | 1 1/2 B   | 90° Elbow                   |
| G      | VEX59□□        | AN900    | 2B        | 90° Elbow                   |



### Energy Saving Lifter

#### • Simple

Two economy valves and a tank move the double-acting cylinder to raise and lower heavy objects.

#### • Energy saving

The balancing air reciprocates between the lower cylinder chamber and the tank, thus not being consumed. Low pressure air alone is exhausted from the upper chamber in every cycle, so the air consumption is reduced to 20 to 30% of the air consumption by the double acting cylinder with an ordinary change over valve.

#### • Excellent operation control

The economy valve sets pressure and permits high speed and low speed operation as well as suspension of operation. While the piston moves up and down, the valve controls speed change in the middle of strokes, terminal deceleration, inching, and emergency stops.

#### • Supply air pressure

Set pressure is 0.5MPa both on rod and head side.

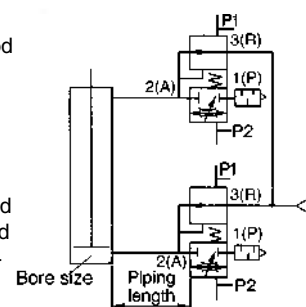
#### • Needle fully open

#### • Load 50%

#### • 90° elbow 4 pcs.

There is a limit to the relation between maximum operational speed and load in the cushion incorporated in the cylinder. Check it with the cylinder catalogue.

Maximum working speed is 1.2 times when load factor is 0% and is 0.7 times when load factor is 75%.



## Caution

\* A lifter circuit can be composed of air operated valves. Contact SMC for details.

### Others

#### Exhaust Cleaner (Series AMC)

- Provides a silencing capability and an oil mist recovery function.
- Can also be used in a centralized piping system.



| Model  | Connection<br>R(PT) | Effective<br>area<br>(mm <sup>2</sup> ) | Max. air flow<br>(l/min) |
|--------|---------------------|-----------------------------------------|--------------------------|
| AMC310 | 3/8                 | 16                                      | 300                      |
| AMC510 | 3/4                 | 55                                      | 1,000                    |
| AMC610 | 1                   | 165                                     | 3,000                    |
| AMC810 | 1 1/2               | 330                                     | 6,000                    |
| AMC910 | 2                   | 550                                     | 10,000                   |

- 99.9% of oil mist removal.

- Over 35dB noise reduction.

- Refer to p.5.3-1 for details.

#### Silencer (Series AN)

- Over 30dB noise reduction
- Sufficient effective area



| Model | Connection<br>R(PT) | Effective<br>area<br>(mm <sup>2</sup> ) |
|-------|---------------------|-----------------------------------------|
| AN110 | 1/8                 | 35                                      |
| AN200 | 1/4                 | 35                                      |
| AN300 | 3/8                 | 60                                      |
| AN400 | 1/2                 | 90                                      |
| AN500 | 3/4                 | 160                                     |
| AN600 | 1                   | 270                                     |
| AN700 | 1 1/4               | 440                                     |
| AN800 | 1 1/2               | 590                                     |
| AN900 | 2                   | 960                                     |



- Refer to p.5.2-1 for details.

VEX

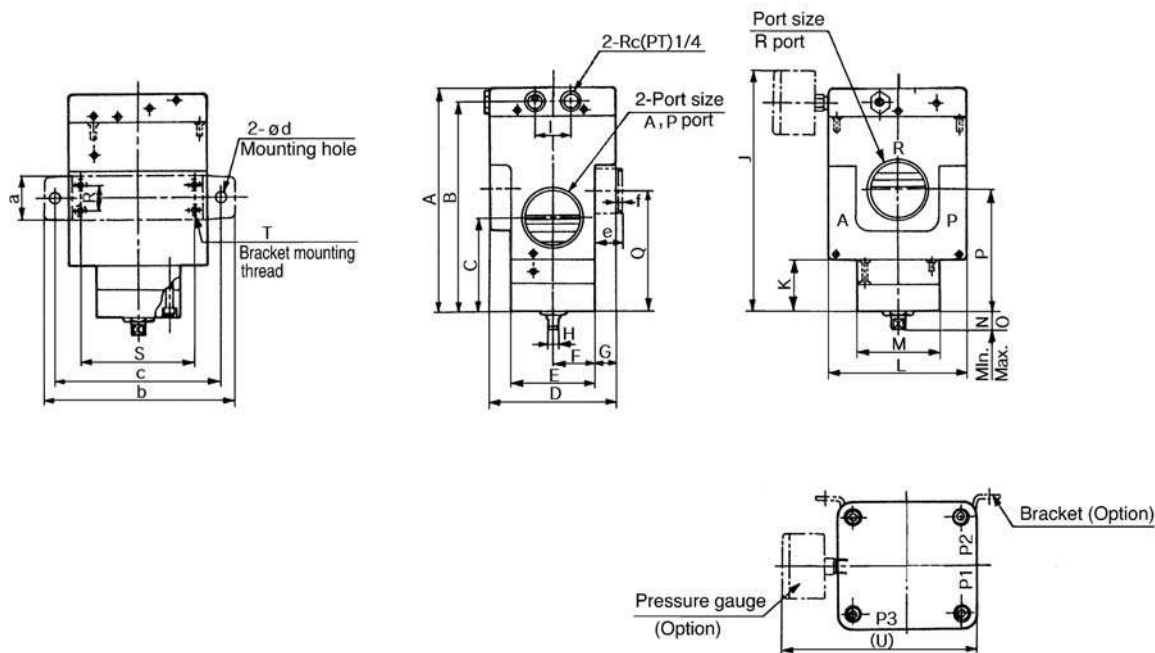
AN

AMC

AMP

Basic Dimensions

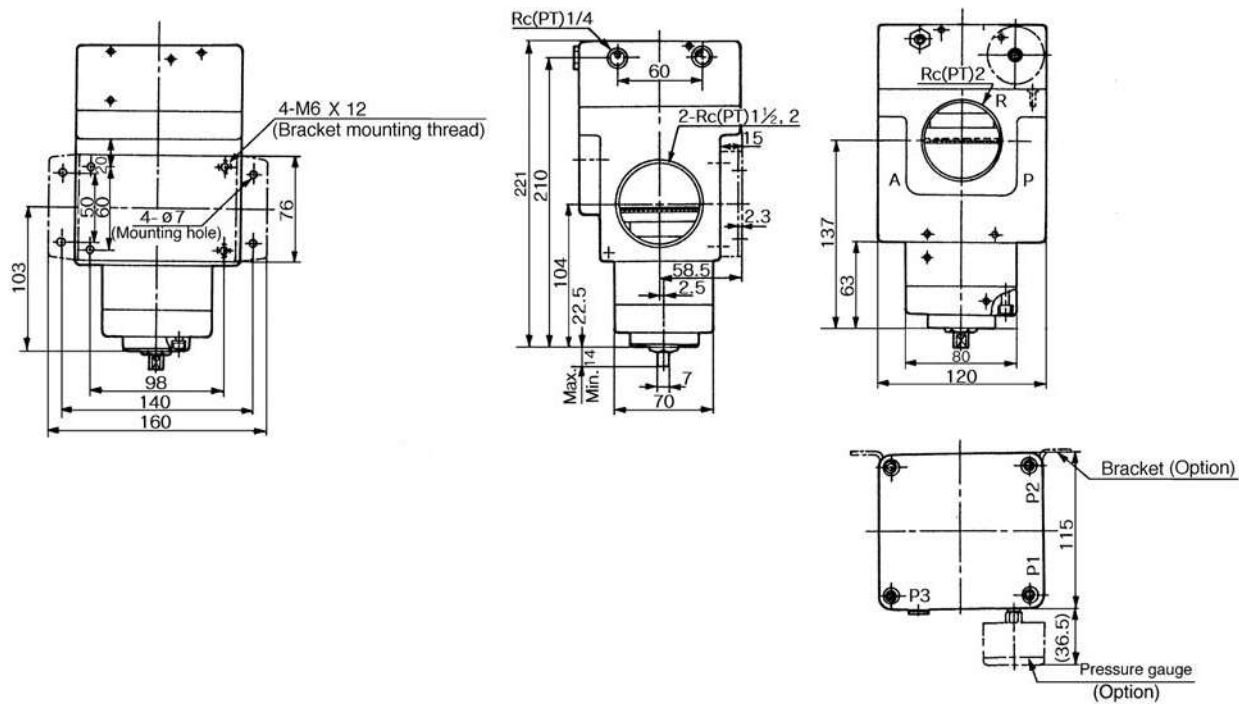
VEX5500  
VEX5700



| Model   | Port size             |                       | A     | B     | C    | D  | E  | F  | G  | H | I  | J     | K    | L   | M  | N    | O  | P    | Q    | R      | S  | T              | U     |
|---------|-----------------------|-----------------------|-------|-------|------|----|----|----|----|---|----|-------|------|-----|----|------|----|------|------|--------|----|----------------|-------|
|         | A, P port             | R port                |       |       |      |    |    |    |    |   |    |       |      |     |    |      |    |      |      |        |    |                |       |
| VEX5500 | Rc(PT)<br>1/2, 3/4, 1 | Rc(PT)<br>1/2, 3/4, 1 | 143.5 | 133.5 | 62.5 | 70 | 50 | 25 | 10 | 7 | 25 | 156.5 | 36.5 | 80  | 60 | 16.5 | 20 | 81.5 | 83.5 | Center | 60 | 2-M6 X Depth 9 | 116.5 |
| VEX5700 | Rc(PT)<br>1, 1 1/4    | Rc(PT)<br>1 1/4       | 160.5 | 150.5 | 62.5 | 90 | 60 | 30 | 15 | 7 | 25 | 173.5 | 37.5 | 100 | 60 | 13   | 17 | 88.5 | 86.5 | 18     | 82 | 4-M6 X Depth 6 | 136.5 |

| Model   | Bracket mounting dimensions |     |     |          |    |     |
|---------|-----------------------------|-----|-----|----------|----|-----|
|         | a                           | b   | c   | $\phi d$ | e  | f   |
| VEX5500 | 19                          | 130 | 110 | 9        | 12 | 2.3 |
| VEX5700 | 32                          | 136 | 120 | 9        | 20 | 2.3 |

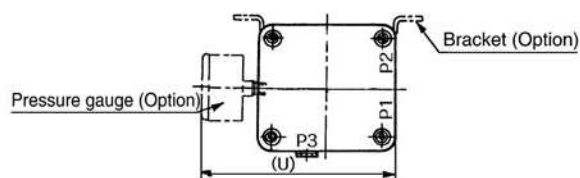
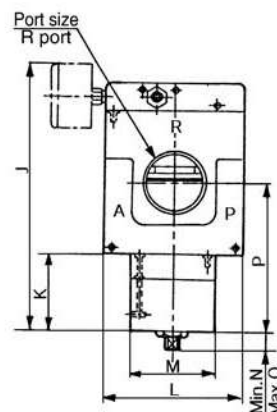
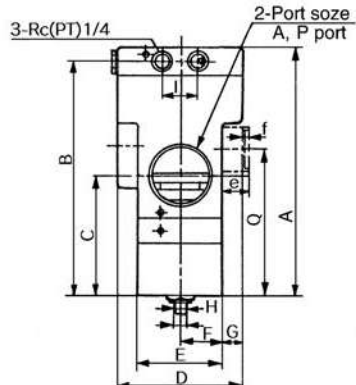
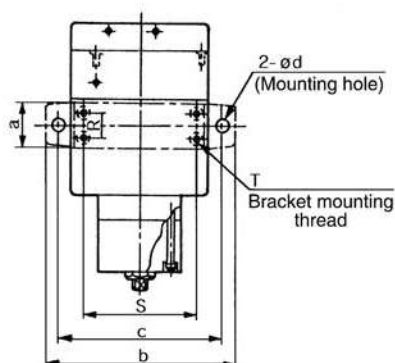
VEX5900



## Select style Dimensions

VEX5510

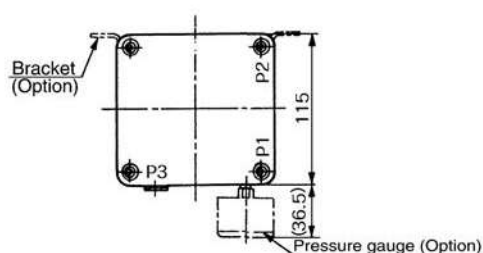
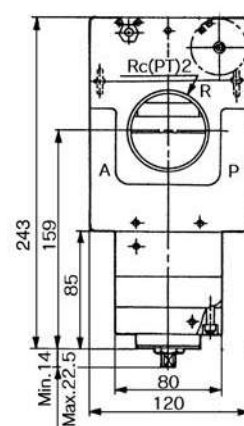
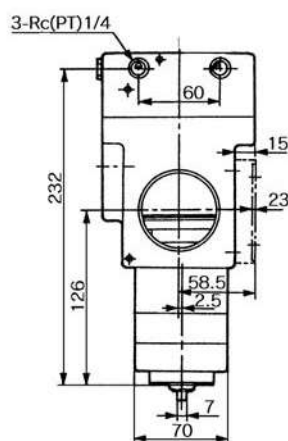
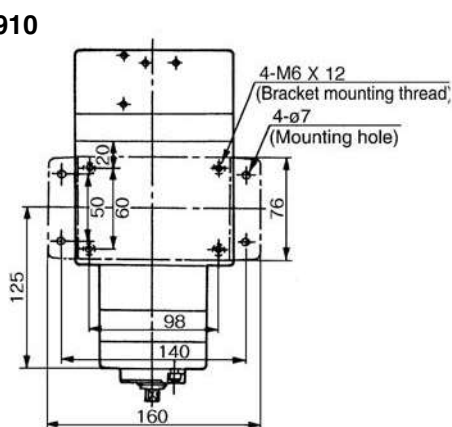
VEX5710



| Model   | Port size             |                       | A     | B     | C    | D  | E  | F  | G  | H | I  | J     | K    | L   | M  | N  | O  | P     | Q     | R      | S  | T              | U     |
|---------|-----------------------|-----------------------|-------|-------|------|----|----|----|----|---|----|-------|------|-----|----|----|----|-------|-------|--------|----|----------------|-------|
|         | A, P port             | R port                |       |       |      |    |    |    |    |   |    |       |      |     |    |    |    |       |       |        |    |                |       |
| VEX5510 | Rc(PT)<br>1/2, 3/4, 1 | Rc(PT)<br>1/2, 3/4, 1 | 160   | 150   | 79   | 70 | 50 | 25 | 10 | 7 | 25 | 173   | 53   | 80  | 60 | 13 | 18 | 98    | 100   | Center | 60 | 2-M6 X depth 9 | 116.5 |
| VEX5710 | Rc(PT)<br>1, 1 1/4    | Rc(PT)<br>1 1/4       | 177.5 | 167.5 | 84.5 | 90 | 60 | 30 | 15 | 7 | 25 | 190.5 | 54.5 | 100 | 60 | 13 | 17 | 105.5 | 103.5 | 18     | 82 | 4-M6 X depth 6 | 136.5 |

| Model   | Bracket mounting dimensions |     |     |    |    |     |
|---------|-----------------------------|-----|-----|----|----|-----|
|         | a                           | b   | c   | ød | e  | f   |
| VEX5510 | 19                          | 130 | 110 | 9  | 12 | 2.3 |
| VEX5710 | 32                          | 136 | 120 | 9  | 20 | 2.3 |

VEX5910



VEX

AN

AMC

AMP