

# Instruction Manual

## BS Series



**NOTE:** Owner/Operator must read and understand this instruction manual before using the lift table.

RevB: 02/2009

# Operation and Service Manual

BEFORE OPERATING THE LIFT TABLE, READ THIS MANUAL CAREFULLY AND UNDERSTAND COMPLETELY. KEEP THIS MANUAL ON FILE FOR FUTURE REFERENCE. IF THIS IS LOST, PLEASE CONTACT YOUR LOCAL SUPPLIER FOR A NEW COPY. ALSO, IF THE WARNING/CAUTION DECAL ON THE UNIT IS LOST, PLEASE CONTACT YOUR LOCAL SUPPLIER FOR A NEW DECAL.

NOTE: On this manual, WARNING means the danger which can lead to death or serious injury. CAUTION means the danger which can lead to slight injury or property damage.

## 1. WARNING

- 1.DO NOT put foot or hand in scissors mechanism.
- 2.DO NOT allow other person to stand in front of or behind lift table when it is moving.
- 3.DO NOT move lift table when table is in raised position. Load could fall down.
- 4.DO NOT enter under table.
- 5.DO NOT overload lift table.
- 6.DO NOT put foot in front of rolling wheels. Injury could result.
- 7.WATCH difference and hardness of floor level when moving lift table. Load could fall down.
- 8.DO NOT use lift table on slope or inclined surface, lift table may become uncontrollable and create danger.
- 9.DO NOT lift people. People could fall down and suffer severe injury.

## 2. CAUTION

- 1.Read this operation manual carefully and understand completely operating lift table. Improper operation could create danger.
- 2.This lift table is a movable lifter designed to lift or lower rated load on table. NO NOT use lift table for other purpose than its intended use.
- 3.DO NOT allow person to operate lift table who does not understand its operation.
- 4.DO NOT lower table too fast. Load could fall down and create danger.
- 5.KEEP watching the condition of load. Stop operating lift table if load becomes unstable.
- 6.Byake lift table when sliding load on of off table.
- 7.DO NOT side or end load. Load must be distributed on at least 80%of table area.
- 8.DO NOT use lift table with unstable, unbalanced loosely stacked load.
- 9.Practice maintenance work according to service instructions.
10. DO NOT modify lift table without manufacturer's written consent.
11. REMOVE load from table and use safety stopper to prevent table from lowering when servicing lift table.
12. This lift table is not designed to be water resistant. Use lift table under dry condition.

## 3. DAILY INSPECTION

Daily inspection is effective to find the malfunction or fault on lift table. Check lift table on the following points before operation.

**CAUTION**

DO NOT use lift table if any malfunction or fault is found.

- (1) Check for scratch, bending or cracking on the lift table.
- (2) Check if there is any oil leakage from the cylinder.
- (3) Check the vertical creep of the table.
- (4) Check the smooth movement of the wheel.
- (5) Check the function of brake.
- (6) Check if all the bolt and nuts are tightened firmly.

## 4. OPERATING LIFTTABLE

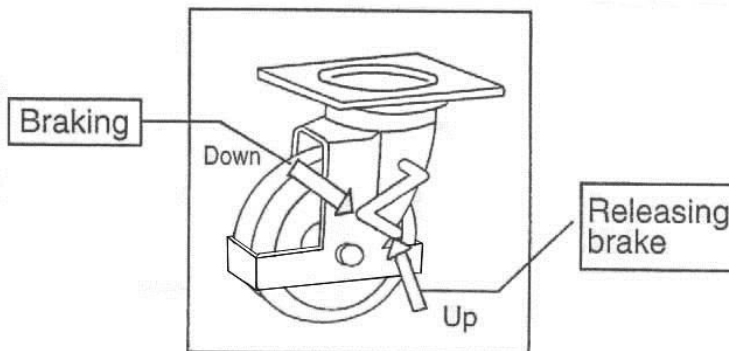
4-1. How to use the brake.

**CAUTION**

Brake lift table when not moving it in order to prevent sudden movement.

The brake is equipped with the swivel caster on the right side.

- (1) Braking the wheel, press the brake pedal.
- (2) Releasing the brake, lift up the brake pedal.



4-2 Lifting the table

**WARNING**

1. DO NOT overload lift table, stay within its rated capacity.
2. DO NOT side end load must be distributed on at least 80% of table area.

Press the lifting pedal several times until the table reaches the desired position.

The table does not elevate after reaching the highest position even if the lifting pedal is pressed.

The table lowers slightly after reaching the highest position.

**MAXIMUM CAPACITY OF TABLE**

BS15	BS25	BS50	BS75	BS100	BS30D	BS50D	BS80D
150KG	250KG	500KG	750KG	1000KG	300KG	500KG	800KG

**NOTE:**

The hydraulic cylinder is designed to hold table. As is the nature of the hydraulic system, table lowers very slowly over an extended period of time, Please note the table does not stay at the same position indefinitely.

4-3. Lowering table

**WARNING**

DO NOT put foot or hand in scissors mechanism.

**Pull the lowering down and table lowers.**

**5. Specifications**

Model	Capacity (kg)	Table (mm)	Table Height(mm)	Stroke	L×W×H (mm)	Pedal to top. (approx. times)	Wheel (mm) φ	Weight (kg)
BS15	150	700×450	225-760	535	1000×450×950	16	100	41
BS25	250	830×500	335-915	580	1100×500×1010	25	125	78
BS50	500	1010×520	430-1000	570	1130×520×1185	44	150	118
BS75	750	1010×520	432-1000	568	1130×520×1260	55	150	120
BS100	1000	1010×520	440-960	520	1130×520×1260	68	150	137
BS30D	300	1010×520	435-1585	1150	1130×520×1260	53	150	150
BS50D	500	1010×520	435-1585	1150	1130×520×1260	68	150	168
BS80D	800	1010×520	490-1400	910	1130×520×1275	95	150	165

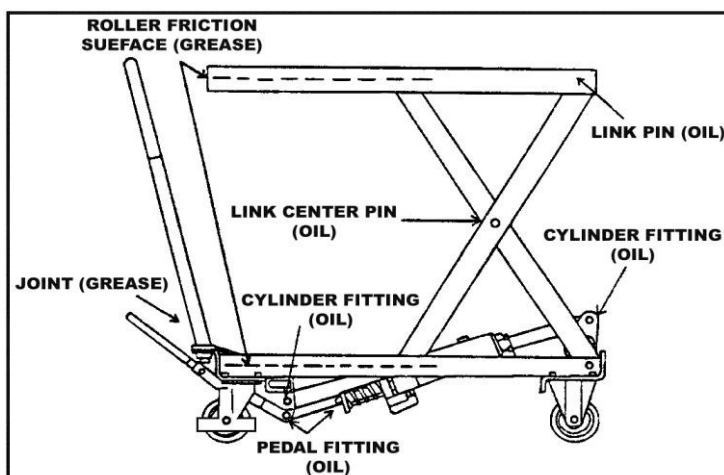
**6. Service instruction**

6.1-1. Lubricate each point described below every month:

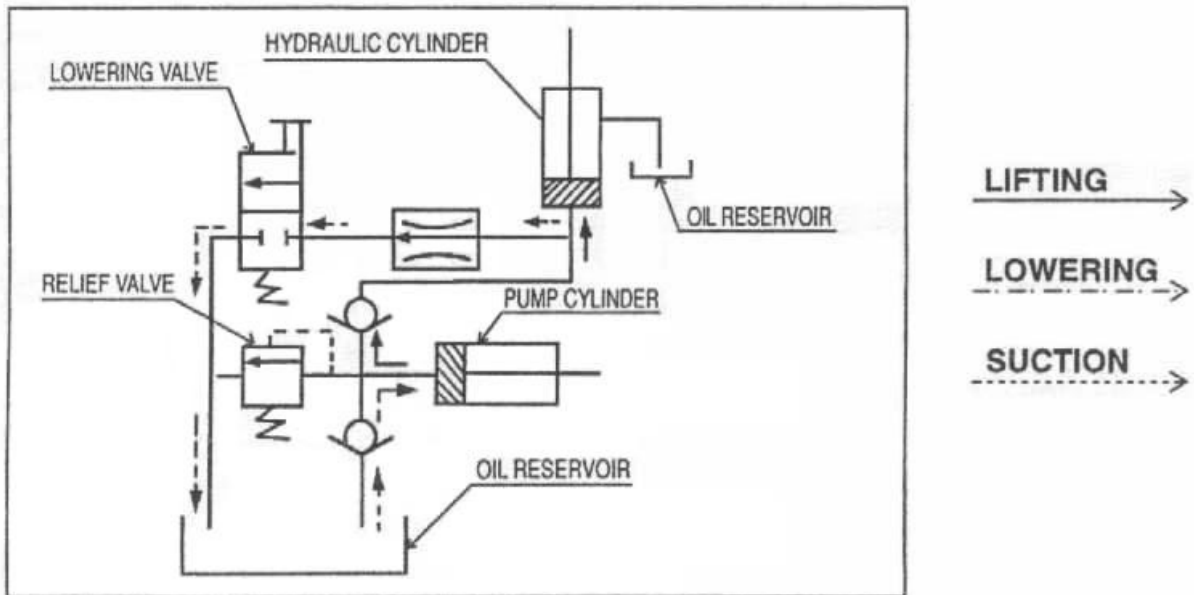
6.2. Change hydraulic oil every 12 months.

Lubricating Points

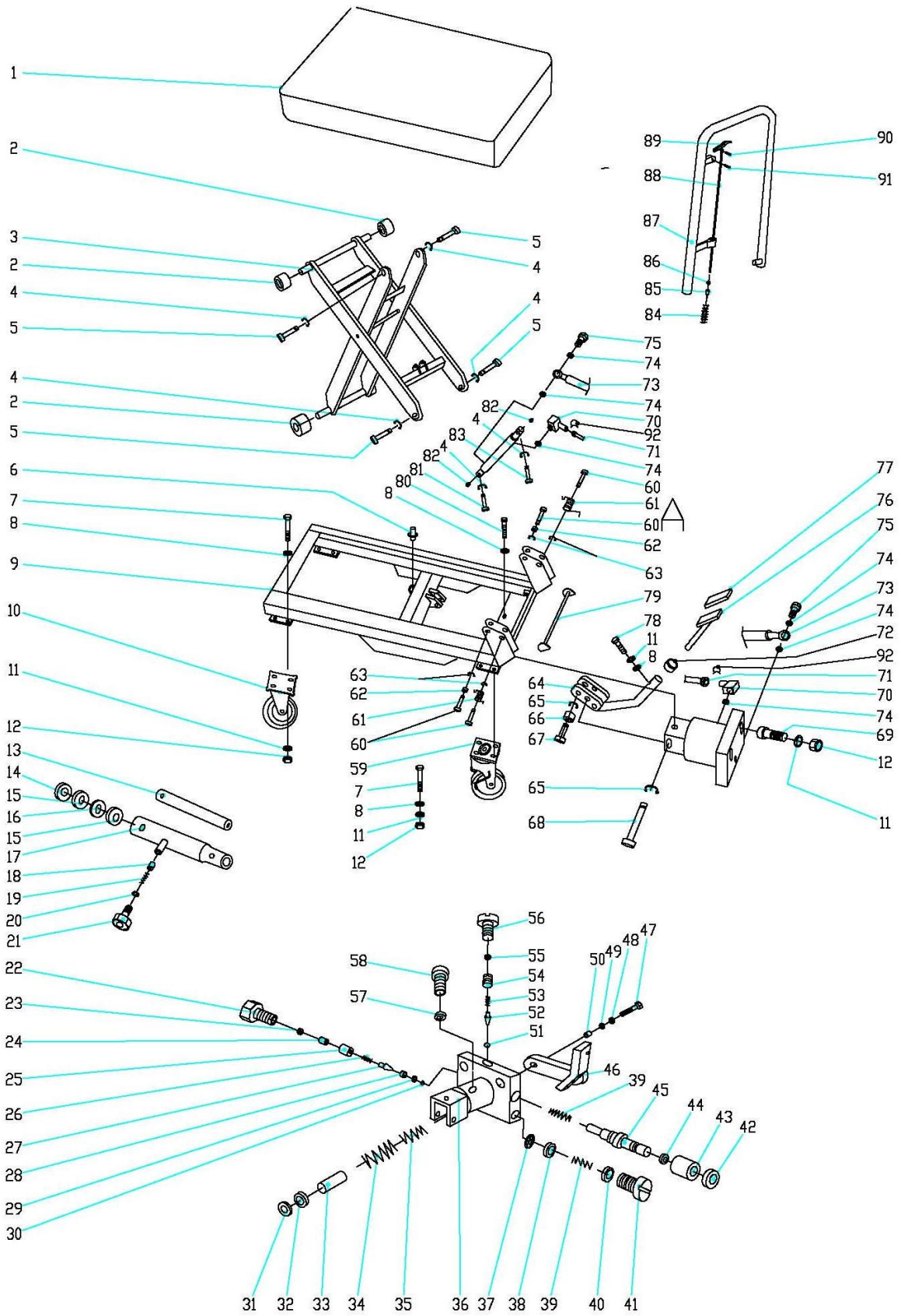
- (1) Fitting of cylinder.....Oil
- (2) Roller friction surface.....Grease
- (3) Link Pin .....Oil
- (4) Pedal fitting point.....Oil
- (5) Link center pin.....Oil
- (6) Joint.....Grease
- (7) Grease nipple.....Grease
- (8) Hydraulic circuit



## 7. Hydraulic Circuit



# BS15

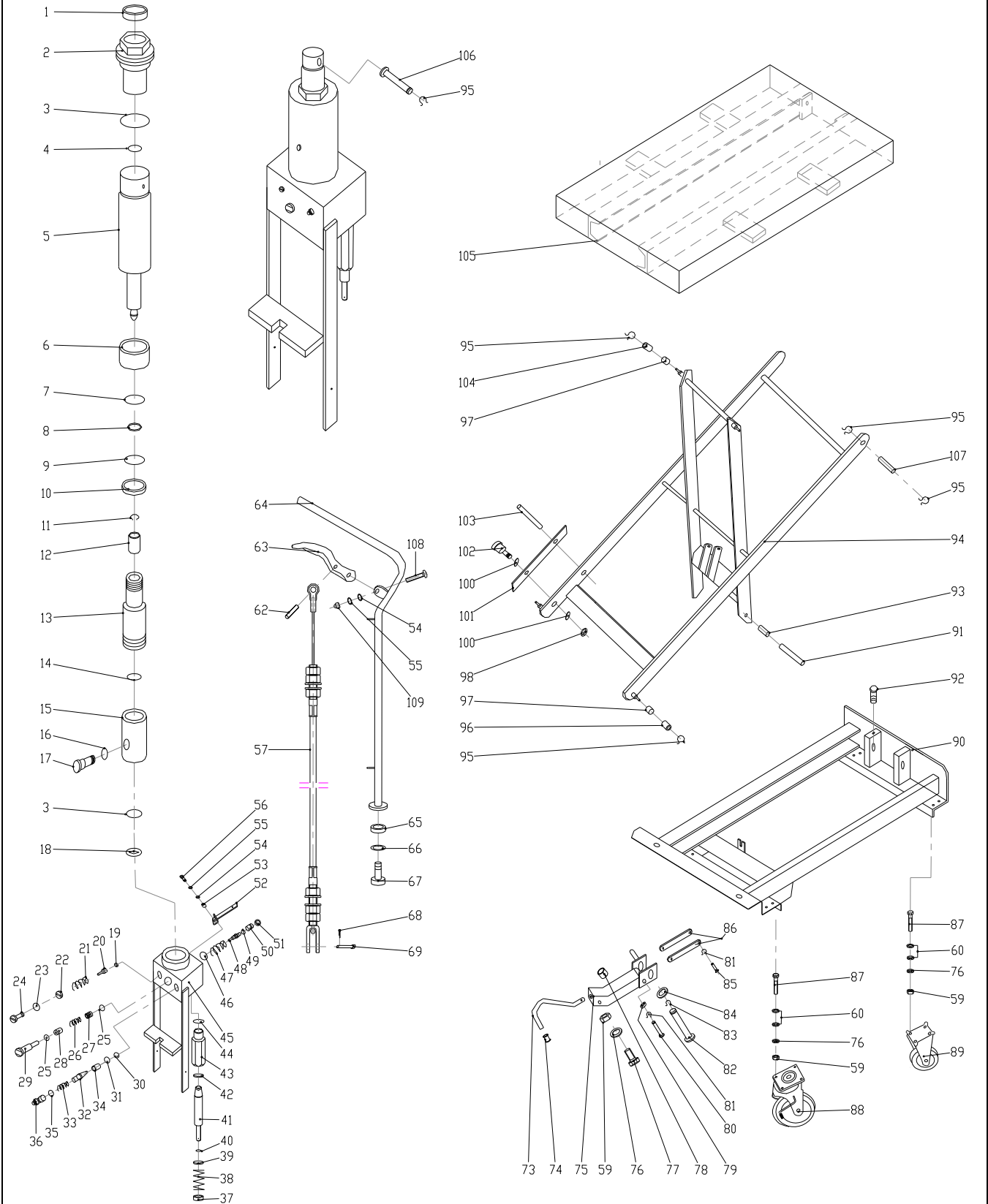


NO.	DESCRIPTION	Qty	NO.	DESCRIPTION	Qty
1	Table pair	1	48	Spring washer	1
2	Guide roller	4	49	Washer	1
3	Scissors	1	50	Bushing	1
4	Snap ring	6	51	Steel ball	1
5	Link pin	4	52	Steel ball holder	1
6	Safety pin	1	53	Relief spring	1
7	Hex bolt	16	54	Regulating pressure plug	1
8	Washer	18	55	O ring	1
9	Frame pair	1	56	Relief plug	1
10	Front wheel	2	57	O ring	1
11	Spring washer	19	58	Plug	1
12	Hex. nut	18	59	Rear wheel	2
13	Piston rod	1	60	Handle pin	4
14	Dust seal	1	61	Handle lock spring L	1
15	O ring	2	61A	Handle lock spring R	1
16	Back up ring	1	62	Bushing	2
17	Cylinder pair	1	63	Snap ring	4
18	Spring seat	1	64	Pedal holder	1
19	Spring	1	65	Snap ring	2
20	Seal ring	1	66	Pressure roller	1
21	Joint	1	67	Pressure roller pin	1
22	Flow control joint	1	68	Pedal Pivot Pin	1
23	O ring	1	69	Hex. bolt	2
24	Adjust casing	1	70	Elbow	2
25	Spring seat	1	71	Oil return hose	1
26	Valve spring	1	72	Rubber bushing	1
27	Conical valve	1	73	High pressure hose	1
28	Valve seat	1	74	Seal ring	6
29	O ring	1	75	Adaptor	2
30	Steel ball $\phi 7$	1	76	Pedal Pair	1
31	Dust seal	1	77	Pedal rubber	1
32	Y ring	1	78	Hex bolt	1
33	Plunger	1	79	Lock bar	1
34	Pump spring B	1	80	Hex. bolt	1
35	Pump spring A	1	81	Cylinder pivot pin	1
36	Pump bass	1	82	Grease fitting	2
37	Net	1	83	Piston head pin	1
38	Washer	1	84	Roller chain	1
39	Back valve spring	2	85	Valve rod II	1
40	O-ring	1	86	Nut M6	1
41	Plug	1	87	Handle pair	1

42	O ring	1	88	Valve rod I	1
43	Steering bush	1	89	Control link	1
44	O ring	1	90	Roll pin	1
45	Discharge lever	1	91	Roll pin	1
46	Valve arm	1	92	Check ring	2
47	Socket head screw	1			
A	Cylinder Assembly	13-21			
B	Pump Unit Assembly	64-78			
C	Pump Unit Sub Assembly	22-58			
D	Handle Assembly	84-91			
E	Pedal Assembly	76-77			
F	Seal kit ass'y	14,15,20,23,29,31,32,40,42,44,55,57,74			



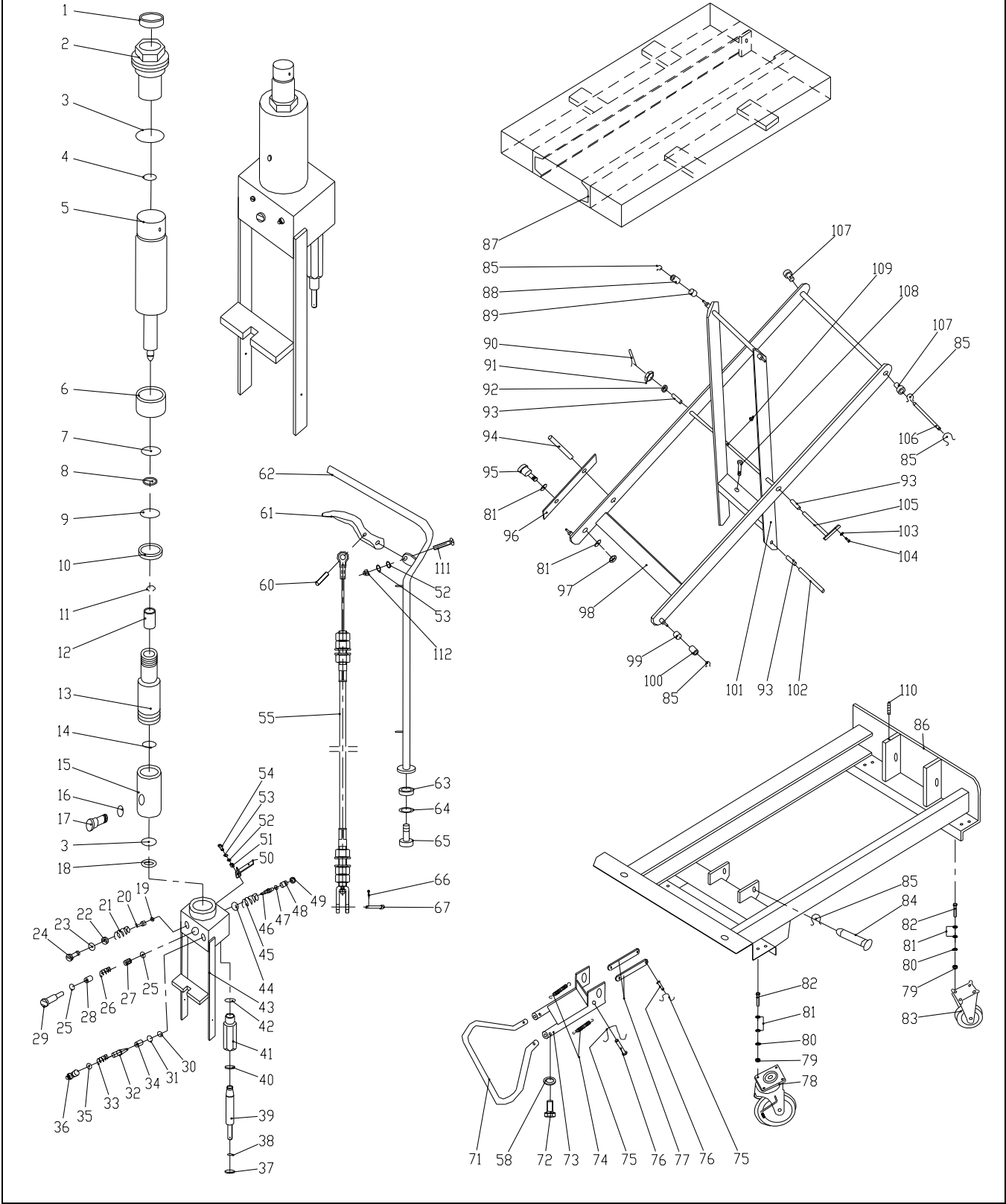
# BS25



NO.	DESCRIPTION	Qty	NO.	DESCRIPTION	Qty
1.	Seal cover d30×D42×7	1	53.	Lever bushing	1
2.	Cylinder cover	1	54.	Washer 6	2
3.	O-ring d63×2.65	2	55.	Spring washer 6	1
4.	O-ring d30×3.55	1	56.	Hex soch screw M6×16	1
5.	Piston rod	1	57.	Put pressure assembly line	1
6.	Spacing casing	1	59.	Nut M8	17
7.	Guide ring δ1.5×15	1	60.	Washer 8	30
8.	O-ring D20×2.4	1	62.	Spring pin	1
9.	Seal ring d34×D40×4.5	1	63.	Control link	1
10.	Piston rod retainer	1	64.	Handle	1
11.	Retaining ring 18	1	65.	Spacing casing	2
12.	Piston	1	66.	Spring washer 12	2
13.	Cylinder	1	67.	Hexagon head stud M12×30	2
14.	Cylinder washer	1	68.	Split pin	1
15.	Reservior	1	69.	Pin	1
16.	O-ring d10×2.65	1	73.	Pedal bent pipe	1
17.	Filler screw	1	74.	Pedal rubber	1
18.	Washer for reservior	1	75.	Shake link	1
19.	Steel ball 5	1	76.	Spring washer 8	17
20.	Spring base	1	77.	Hex soch screw	1
21.	Regulating pressure spring	1	78.	Buffer mat	1
22.	Regulating pressure screw	1	79.	Partition set	1
23.	O-ring d7.1×1.8	1	80.	Pin axle	1
24.	End cover	1	81.	Retainer 10	2
25.	O-ring d15×2.65	2	82.	Pin axle	1
26.	Regulating speed spring	1	83.	Retainer 20	1
27.	Regulating speed slide valve	1	84.	Washer	1
28.	Regulating speed spring casing	1	85.	Pin axle	1
29.	Regulating speed valve casing	1	86.	Link	2
30.	Steel ball 7	1	87.	Hex soch screw M8×25	16
31.	O-ring d6.9×1.8	1	88.	Wheel	2
32.	Conical valve	1	89.	Wheel	2
33.	Check valve spring	1	90.	Chassis	1
34.	Check valve casing	1	91.	Pin axle	1
35.	O-ring d10×1.8	1	92.	Bolt M6×8	1
36.	Check valve screw	1	93.	Bushing	2
37.	Spring base	1	94.	Scissors lever	1
38.	Spring	1	95.	Retainer 16	9
39.	Seal cover d18×D25×4.5	1	96.	Roller for chassis	2
40.	O-ring d18×2.65	1	97.	Bushing	2
41.	Pump plunger	1	98.	Nut M10	2

42.	Y-ring	1	100.	Washer 10	4
43.	Pump body for plunger	1	101.	Safety rod	2
44.	O-ring d28×3.1	1	102.	Screw bolt M10×40	2
45.	Pump body	1	103.	Spring pin 8×30	2
46.	O-ring d10.6×2.65	1	104.	Roller for table	2
47.	Spring	1	105.	Table	1
48.	Reflux rod	1	106.	Pin axle	1
49.	O-ring d4×1.8	1	107.	Pin axle	2
50.	Guide casing	1	108.	Screw M6×30	1
51.	Protect casing	1	109.	Cover-type nut M6	1
52.	Lever	1			
A	Pump ass'y	1~51			
B	Swivel wheel ass'y	88			
C	Front wheel ass'y	89			
D	Seal kit ass'y	1,3,4,7,8,9,16,23,25,31,35,39,40,42,44,46,49			
E	Handle ass'y	54,55,57,62,63,64,68,69,108,109			

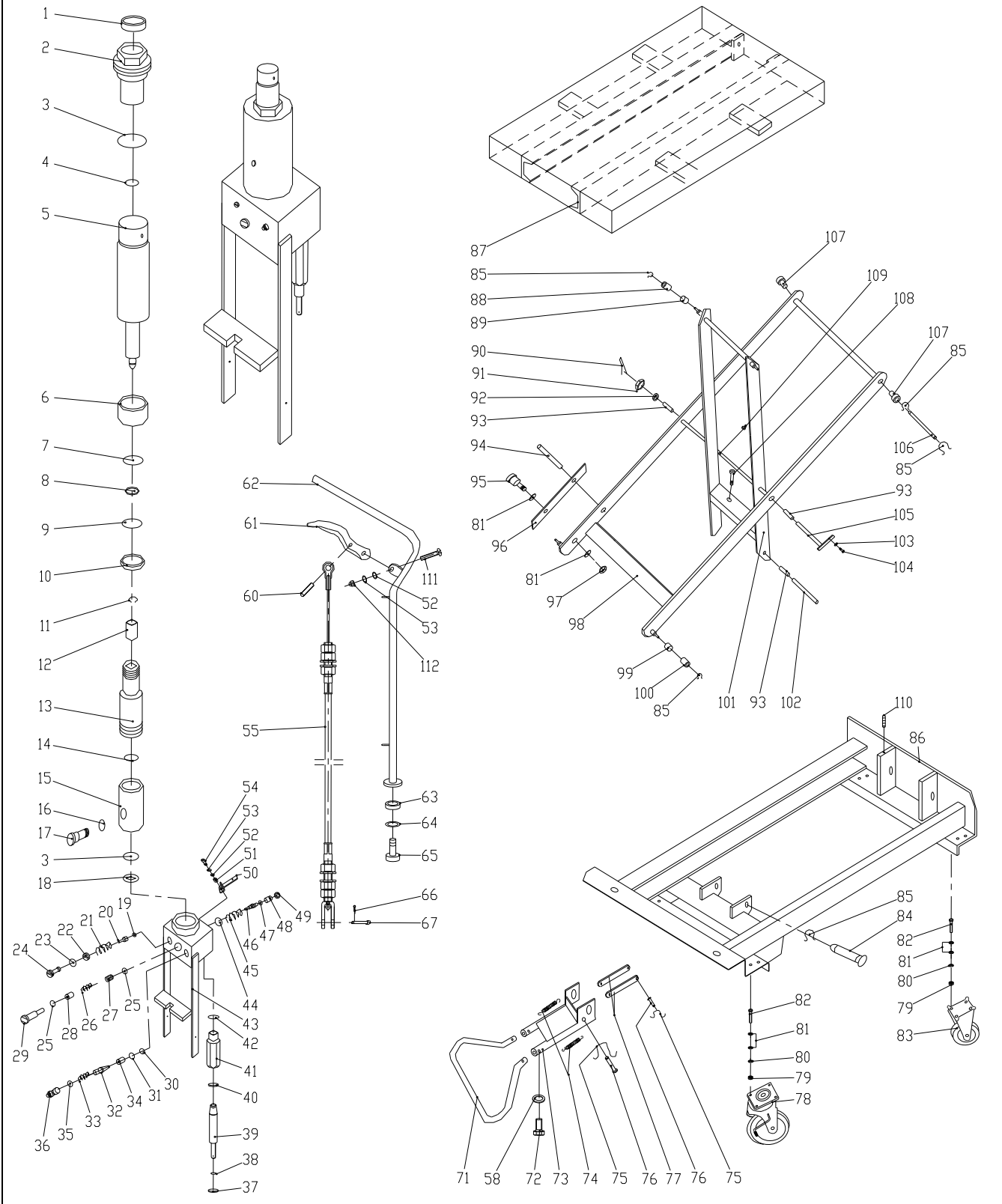
# BS50



NO.	DESCRIPTION	Qty	NO.	DESCRIPTION	Qty
1.	Seal cover d30×D42×7	1	54.	Hex soch screw M6×16	1
2.	Cylinder cover	1	55.	Put pressure assembly line	1
3.	O-ring d63×2.65	2	58.	Washer 8	2
4.	O-ring d30×3.55	1	60.	Spring pin 5×14	1
5.	Piston Rod	1	61.	Control link	1
6.	Spacing casing	1	62.	Handle	1
7.	Guidering δ1.5×15	1	63.	Spacing casing	2
8.	O-ring D20×2.4	1	64.	Spring washer 12	2
9.	Seal ring d34×D40×4.5	1	65.	Hex screw M12×30	2
10.	Retainer for piston rod	1	66.	Split pin 2×15	1
11.	Spacing retainer 18	1	67.	Pin	1
12.	Piston	1	71.	Pedal bent pipe	1
13.	Cylinder	1	72.	Hex soch screw M8×20	2
14.	Washer for cylinder	1	73.	Shake link	1
15.	Reservior	1	74.	Spring	2
16.	O-ring d10×2.65	1	75.	Retainer 10	2
17.	Filler screw	1	76.	Pin axle	2
18.	Washer for reservior	1	77.	Link	2
19.	Steel ball 5	1	78.	Wheel	2
20.	Spring base	1	79.	Nut M10	16
21.	Regulating pressure spring	1	80.	Spring washer 10	16
22.	Regulating pressure screw	1	81.	Washer 10	36
23.	O-ring d7.1×1.8	1	82.	Hex soch screw M10×25	16
24.	End cover	1	83.	Wheel	2
25.	O-ring d15×2.65	2	84.	axle	1
26.	Regulating speed spring	1	85.	Retainer 20	7
27.	Regulating slide-valve	1	86.	Chassis	1
28.	Regulating speed spring casing	1	87.	Table	1
29.	Regulating speed slide-casing	1	88.	Roller for table	2
30.	Steel ball 7	1	89.	Bushing	2
31.	O-ring d6.9×1.8	1	90.	Split pin 3.2×26	1
32.	Conical valve	1	91.	Nut M16	1
33.	Spring	1	92.	Washing	1
34.	Check valve casing	1	93.	Bushing	4
35.	O-ring d10×1.8	1	94.	Spring pin 8×30	2
36.	Check valve screw	1	95.	Screw bolt M10×40	2
37.	Seal cover d18×D25×4.5	1	96.	Safety rod	2
38.	O-ring d18×2.65	1	97.	Nut M10	2
39.	Pump plunger	1	98.	External scissors lever	1
40.	Y-ring	1	99.	Bushing	2
41.	Pump body for plunger	1	100.	Roller for chassis	2

42.	O-ring D28×3.1	1	101.	Internal scissors lever	1
43.	Pump body	1	102.	Pin axle for chassis	1
44.	O-ring d10.6×2.65	1	103.	Spring washer 8	1
45.	Spring	1	104.	Hex screw M8×16	1
46.	Reflux rod	1	105.	Pin axle for scissors	1
47.	O-ring d4×1.8	1	106.	Pin axle for table	1
48.	Guide casing	1	107.	Bushing	2
49.	Protect casing	1	108.	Bolt M8×12	1
50.	Lever	1	109.	Oil cup	2
51.	Lever bushing	1	110.	Bolt M6×8	1
52.	Washer 6	2	111.	Screw M6×30	1
53.	Spring washer 6	2	112.	Cover-type nut M6	1
A	Pump ass'y	1~49			
B	Swivel wheel ass'y	78			
C	Front wheel ass'y	83			
D	Seal kit ass'y	1,3,4,7,8,9,16,23,25,31,35,37,38,40,42,44,47			
E	Handle ass'y	52,53,55,60,61,62,66,67,111,112			

# BS75

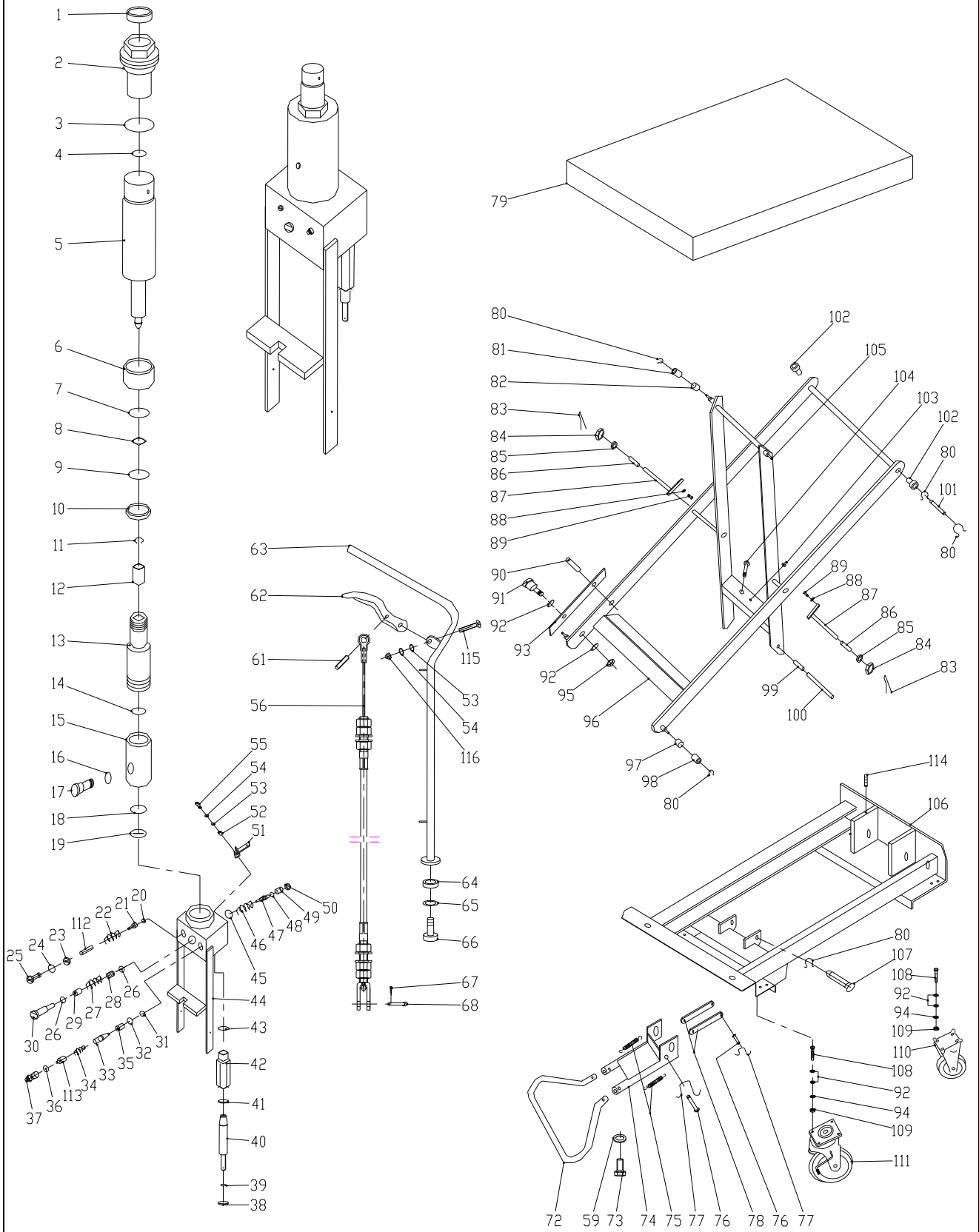


NO.	DESCRIPTION	Qty	NO.	DESCRIPTION	Qty
1.	Seal cover d35×D43.5×5	1	56.	Put pressure assembly line	1
2.	Cylinder cover	1	59.	Washer 8	2
3.	O-ring d75×3.55	1	61.	Spring pin	1
4.	O-ring d35.5×3.55	1	62.	Control link	1
5.	Piston Rod	1	63.	Handle	1
6.	Spacing casing	1	64.	Spacing casing	2
7.	Guideing δ2×15	1	65.	Spring washer 12	2
8.	O-ring D20×2.4	1	66.	Hex screw M12×30	2
9.	Seal ring d39×D45×4.5	1	67.	Split pin 2×15	1
10.	Retainer for piston rod	1	68.	Pin	1
11.	Spacing retainer 18	1	72.	Pedal bent pipe	1
12.	Piston	1	73.	Hex screw M8×20	2
13.	Cylinder	1	74.	Shake link	1
14.	Washer for cylinder	1	75.	Spring	2
15.	Reservior	1	76.	Pin axle	2
16.	O-ring d10×2.65	1	77.	Retainer 10	2
17.	Filler screw	1	78.	Link	2
18.	O-ring d75×2.65	1	79.	Table	1
19.	Washer for reservior	1	80.	Retainer 20	7
20.	Steel ball 5	1	81.	Roller for table	2
21.	Spring base	1	82.	Bushing	2
22.	Regulating pressure spring	1	83.	Split pin 3.2×26	2
23.	Regulating pressure screw	1	84.	Nut M16	2
24.	O-ring d7.1×1.8	1	85.	Washing	2
25.	End cover	1	86.	Bushing	2
26.	O-ring d15×2.65	2	87.	Pin axle for scissors	2
27.	Regulating speed spring	1	88.	Spring washer 8	2
28.	Regulating slide-valve	1	89.	Hex screw M8×16	2
29.	Regulating speed spring casing	1	90.	Spring pin 8×30	2
30.	Regulating speed slide-casing	1	91.	Screw bolt M10×40	2
31.	Steel ball 7	1	92.	Washer 10	36
32.	O-ring d6.9×1.8	1	93.	Safety rod	2
33.	Conical valve	1	94.	Spring washer 10	16
34.	Spring	1	95.	Nut M10	2
35.	Check valve casing	1	96.	External scissors lever	1
36.	O-ring d10×1.8	1	97.	Bushing	2
37.	Check valve screw	1	98.	Roller for chassis	2
38.	Seal cover d18×D25×4.5	1	99.	Bushing	2
39.	O-ring d18×2.65	1	100.	Pin axle for chassis	1
40.	Pump plunger	1	101.	Pin axle for table	1
41.	Y-ring d10×D18×6	1	102.	Bushing	2



42.	Pump body for plunger	1	103.	Oil cup	1
43.	O-ring D28×3.1	1	104.	Bolt M8×12	1
44.	Pump body	1	105.	Internal scissors lever	1
45.	O-ring d10.6×2.65	1	106.	Chassis	1
46.	Spring	1	107.	axle	1
47.	Reflux rod	1	108.	Hex soch screw M10×25	16
48.	O-ring d4×1.8	1	109.	Nut M10	16
49.	Guide casing	1	110.	Wheel	2
50.	Protect casing	1	111.	Wheel	2
51.	Lever	1	112.	Rod	1
52.	Lever bushing	1	113.	Rod	1
53.	Washer 6	2	114.	Bolt M6×8	1
54.	Spring washer 6	2	115.	Screw M6×30	1
55.	Hex soch screw M6×16	1	116.	Cover-type nut M6	1
A	Pump ass'y	1~50,112,113			
B	Swivel wheel ass'y	111			
C	Front wheel ass'y	110			
D	Sealkit ass'y	1,3,4,7,8,9,16,18,24,26,32,36,39,41,43,45,48			
E	Handle ass'y	53,54,56,61,62,63,67,68,115,116			

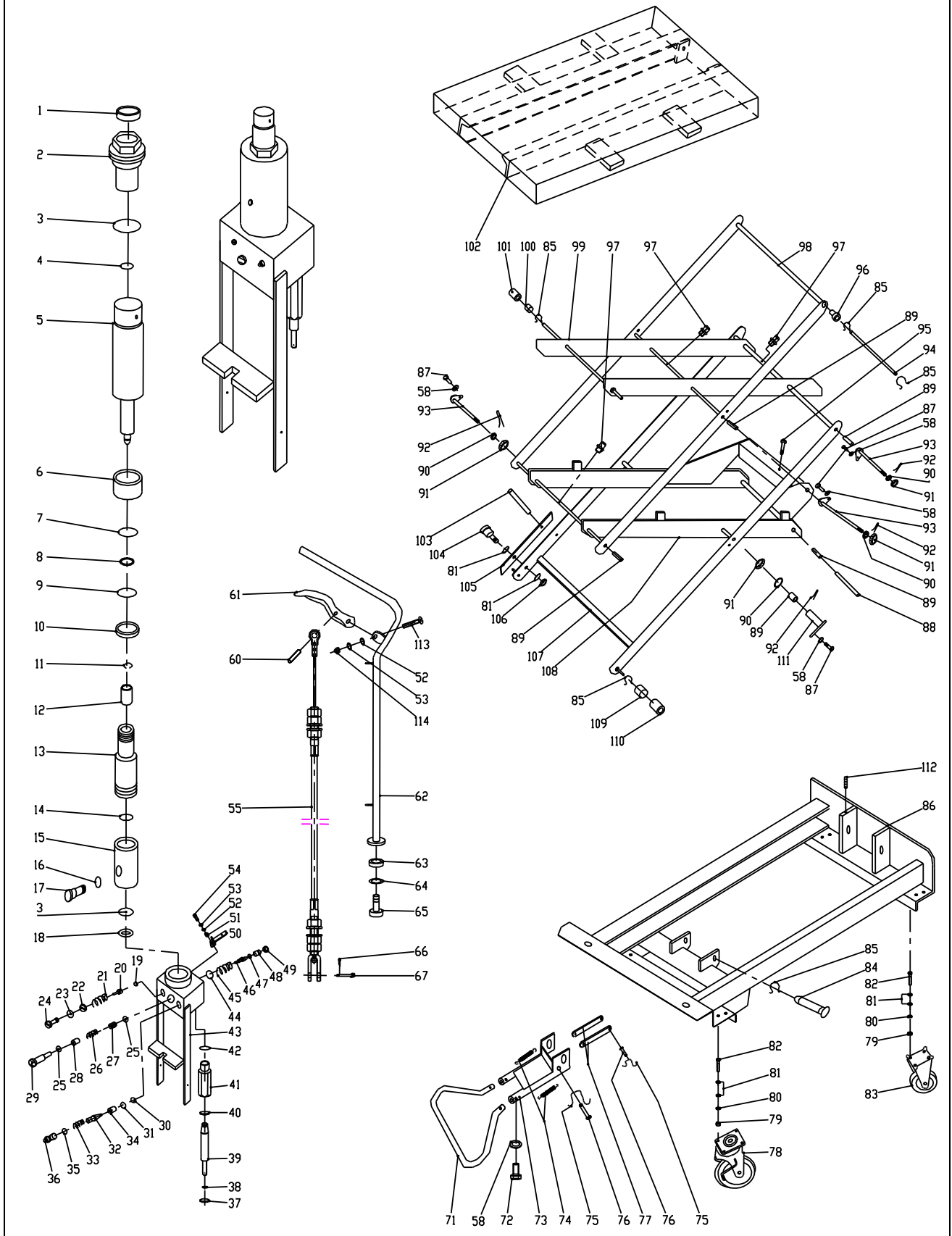
# BS100



NO.	DESCRIPTION	Qty	NO.	DESCRIPTION	Qty
1.	Seal cover d35×D43.5×5	1	56.	Put pressure assembly line	1
2.	Cylinder cover	1	59.	Washer 8	2
3.	O-ring d75×3.55	1	61.	Spring pin	1
4.	O-ring d35.5×3.55	1	62.	Control link	1
5.	Piston Rod	1	63.	Handle	1
6.	Spacing casing	1	64.	Spacing casing	2
7.	Guideing δ2×15	1	65.	Spring washer 12	2
8.	O-ring D20×2.4	1	66.	Hex screw M12×30	2
9.	Seal ring d39×D45×4.5	1	67.	Split pin 2×15	1
10.	Retainer for piston rod	1	68.	Pin	1
11.	Spacing retainer 18	1	72.	Pedal bent pipe	1
12.	Piston	1	73.	Hex screw M8×20	2
13.	Cylinder	1	74.	Shake link	1
14.	Washer for cylinder	1	75.	Spring	2
15.	Reservior	1	76.	Pin axle	2
16.	O-ring d10×2.65	1	77.	Retainer 10	2
17.	Filler screw	1	78.	Link	2
18.	O-ring d75×2.65	1	79.	Table	1
19.	Washer for reservior	1	80.	Retainer 20	7
20.	Steel ball 5	1	81.	Roller for table	2
21.	Spring base	1	82.	Bushing	2
22.	Regulating pressure spring	1	83.	Split pin 3.2×26	2
23.	Regulating pressure screw	1	84.	Nut M16	2
24.	O-ring d7.1×1.8	1	85.	Washing	2
25.	End cover	1	86.	Bushing	2
26.	O-ring d15×2.65	2	87.	Pin axle for scissors	2
27.	Regulating speed spring	1	88.	Spring washer 8	2
28.	Regulating slide-valve	1	89.	Hex screw M8×16	2
29.	Regulating speed spring casing	1	90.	Spring pin 8×30	2
30.	Regulating speed slide-casing	1	91.	Screw bolt M10×40	2
31.	Steel ball 7	1	92.	Washer 10	36
32.	O-ring d6.9×1.8	1	93.	Safety rod	2
33.	Conical valve	1	94.	Spring washer 10	16
34.	Spring	1	95.	Nut M10	2
35.	Check valve casing	1	96.	External scissors lever	1
36.	O-ring d10×1.8	1	97.	Bushing	2
37.	Check valve screw	1	98.	Roller for chassis	2
38.	Seal cover d18×D25×4.5	1	99.	Bushing	2
39.	O-ring d18×2.65	1	100.	Pin axle for chassis	1
40.	Pump plunger	1	101.	Pin axle for table	1

41.	Y-ring d10×D18×6	1	102.	Bushing	2
42.	Pump body for plunger	1	103.	Oil cup	1
43.	O-ring D28×3.1	1	104.	Bolt M8×12	1
44.	Pump body	1	105.	Internal scissors lever	1
45.	O-ring d10.6×2.65	1	106.	Chassis	1
46.	Spring	1	107.	axle	1
47.	Reflux rod	1	108.	Hex soch screw M10×25	16
48.	O-ring d4×1.8	1	109.	Nut M10	16
49.	Guide casing	1	110.	Wheel	2
50.	Protect casing	1	111.	Wheel	2
51.	Lever	1	112.	Rod	1
52.	Lever bushing	1	113.	Rod	1
53.	Washer 6	2	114.	Bolt M6×8	1
54.	Spring washer 6	2	115.	Screw M6×30	1
55.	Hex soch screw M6×16	1	116.	Cover-type nut M6	1
A	Pump ass'y	1~50,112,113			
B	Swivel wheel ass'y	111			
C	Front wheel ass'y	110			
D	Sealkit ass'y	1,3,4,7,8,9,16,18,24,26,32,36,39,41,43,45,48			
E	Handle ass'y	53,54,56,61,62,63,67,68,115,116			

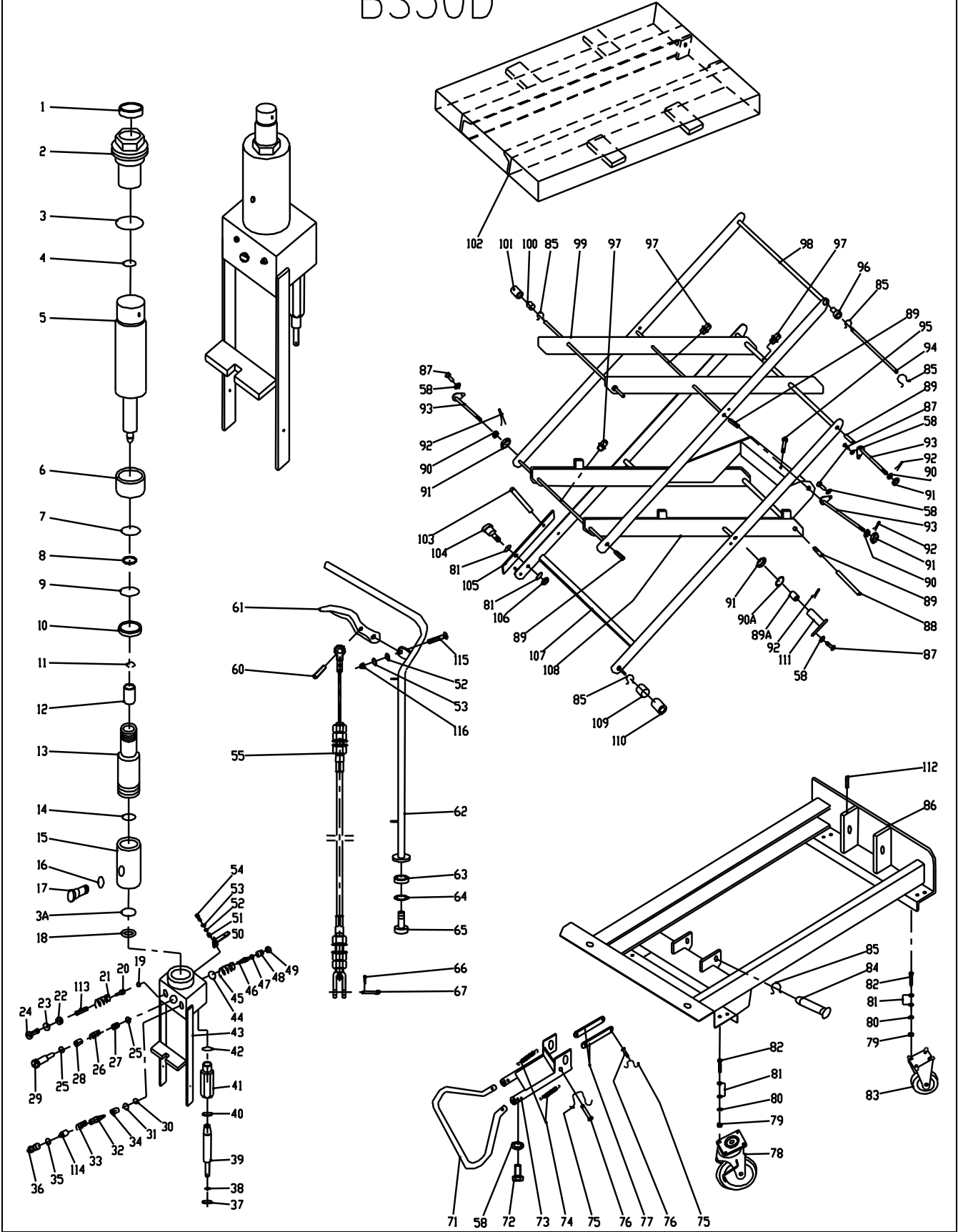
# BS30D



NO.	DESCRIPTION	Qty	NO.	DESCRIPTION	Qty
1.	Seal cover d30×D42×7	1	55.	Put pressure assembly line	1
2.	Cylinder cover	1	58.	Washer 8	2
3.	O-ring d63×2.65	2	60.	Spring pin	1
4.	O-ring d30×3.55	1	61.	Control link	1
5.	Piston Rod	1	62.	Handle	1
6.	Spacing casing	1	63.	Spacing casing	2
7.	Guideing δ1.5×15	1	64.	Spring washer 12	2
8.	O-ring D20×2.4	1	65.	Hex screw M12×30	2
9.	Seal ring d34×D40×4.5	1	66.	Split pin 2×15	1
10.	Retainer for piston rod	1	67.	Pin	1
11.	Spacing retainer 18	1	71.	Pedal bent pipe	1
12.	Piston	1	72.	Hex soch screw M8×20	2
13.	Cylinder	1	73.	Shake link	1
14.	Washer for cylinder	1	74.	Spring	2
15.	Reservior	1	75.	Retainer 10	2
16.	O-ring d10×2.65	1	76.	Pin axle	2
17.	Filler screw	1	77.	Link	2
18.	Washer for reservior	1	78.	Wheel	2
19.	Steel ball 5	1	79.	Nut M10	16
20.	Spring base	1	80.	Spring washer 10	16
21.	Regulating pressure spring	1	81.	Washer 10	36
22.	Regulating pressure screw	1	82.	Hex soch screw M10×25	16
23.	O-ring d7.1×1.8	1	83.	Wheel	2
24.	End cover	1	84.	axle	1
25.	O-ring d15×2.65	2	85.	Retainer 20	7
26.	Regulating speed spring	1	86.	Chassis	1
27.	Regulating slide-valve	1	87.	Hex screw M8×16	5
28.	Regulating speed spring casing	1	88.	Pin axle for chassis	1
29.	Regulating speed slide-casing	1	89.	Bushing	10
30.	Steel ball 7	1	90.	Washing	5
31.	O-ring d6.9×1.8	1	91.	Slotting nut M16×1.5	5
32.	Conical valve	1	92.	Split pin 3.2×26	5
33.	Spring	1	93.	Pin axle	3
34.	Check valve casing	1	94.	Pin axle for table	1
35.	O-ring d10×1.8	1	95.	Hex socket set screw M8×12	1
36.	Check valve screw	1	96.	Bushing	2
37.	Seal cover d18×D25×4.5	1	97.	Oil cup	4
38.	O-ring d18×2.65	1	98.	External scissors lever for table	1
39.	Pump plunger	1	99.	Internal scissors lever for table	1
40.	Y-ring	1	100.	Bushing	2
41.	Pump body for plunger	1	101.	Roller for table	2

42.	O-ring D28×3.1	1	102.	Table	1
43.	Pump body	1	103.	Spring pin 8×30	2
44.	O-ring d10.6×2.65	1	104.	Screw bolt M10×40	2
45.	Spring	1	105.	Safety rod	2
46.	Reflux rod	1	106.	Nut M10	2
47.	O-ring d4×1.8	1	107.	External scissors lever for chassis	1
48.	Guide casing	1	108.	Internal scissors lever for chassis	1
49.	Protect casing	1	109.	Bushing	2
50.	Lever	1	110.	Roller for chassis	2
51.	Lever bushing	1	111.	Pin axle	2
52.	Washer 6	2	112.	Bolt M6×8	1
53.	Spring washer 6	2	113.	Screw M6×30	1
54.	Hex soch screw M6×16	1	114.	Cover-type nut M6	1
A	Pump ass'y		1~49,113,114		
B	Swivel wheel ass'y		78		
C	Front wheel ass'y		83		
D	Sealkit ass'y		1,3,3A,4,7,8,9,16,23,25,31,35,37,38,40,42,44,47		
E	Handle ass'y		52,53,55,60,61,62,66,67,115,116		

# BS50D





NO.	DESCRIPTION	Qty	NO.	DESCRIPTION	Qty
1.	Seal cover d35×D43.5×5	1	60.	Spring pin	1
2.	Cylinder cover	1	61.	Control link	1
3.	O-ring d75×3.55	1	62.	Handle	1
3A	O-ring d75×2.65	1	63.	Spacing casing	2
4.	O-ring d35.5×3.55	1	64.	Spring washer 12	2
5.	Piston Rod	1	65.	Hex screw M12×30	2
6.	Spacing casing	1	66.	Split pin 2×15	1
7.	Guideing δ2×15	1	67.	Pin	1
8.	O-ring D20×2.4	1	71.	Pedal bent pipe	1
9.	Seal ring d39×D45×4.5	1	72.	Hex soch screw M8×20	2
10.	Retainer for piston rod	1	73.	Shake link	1
11.	Spacing retainer 18	1	74.	Spring	2
12.	Piston	1	75.	Retainer 10	2
13.	Cylinder	1	76.	Pin axle	2
14.	Washer for cylinder	1	77.	Link	2
15.	Reservior	1	78.	Wheel	2
16.	O-ring d10×2.65	1	79.	Nut M10	16
17.	Filler screw	1	80.	Spring washer 10	16
18.	Washer for reservior	1	81.	Washer 10	36
19.	Steel ball 5	1	82.	Hex soch screw M10×25	16
20.	Spring base	1	83.	Wheel	2
21.	Regulating pressure spring	1	84.	axle	1
22.	Regulating pressure screw	1	85.	Retainer 20	7
23.	O-ring d7.1×1.8	1	86.	Chassis	1
24.	End cover	1	87.	Hex screw M8×16	5
25.	O-ring d15×2.65	2	88.	Pin axle for chassis	1
26.	Regulating speed spring	1	89.	Bushing	8
27.	Regulating slide-valve	1	89A	Bushing	2
28.	Regulating speed spring casing	1	90.	Washing	3
29.	Regulating speed slide casing	1	90A.	Washing	2
30.	Steel ball 7	1	91.	Slotting nut M16×1.5	5
31.	O-ring d6.9×1.8	1	92.	Split pin 3.2×26	5
32.	Conical valve	1	93.	Pin axle	3
33.	Spring	1	94.	Pin axle for table	1
34.	Check valve casing	1	95.	Hex socket set screw M8×12	1
35.	O-ring d10×1.8	1	96.	Bushing	2
36.	Check valve screw	1	97.	Oil cup	4
37.	Seal cover d18×D25×4.5	1	98.	External scissors lever for table	1
38.	O-ring d18×2.65	1	99.	Internal scissors lever for table	1
39.	Pump plunger	1	100.	Bushing	2
40.	Y-ring d10×D18×6	1	101.	Roller for table	2

41.	Pump body for plunger	1	102.	Table	1
42.	O-ring D28×3.1	1	103.	Spring pin 8×30	2
43.	Pump body	1	104.	Screw bolt M10×40	2
44.	O-ring d10.6×2.65	1	105.	Safety rod	2
45.	Spring	1	106.	Nut M10	2
46.	Reflux rod	1	107.	External scissors lever for chassis	1
47.	O-ring d4×1.8	1	108.	Internal scissors lever for chassis	1
48.	Guide casing	1	109.	Bushing	2
49.	Protect casing	1	110.	Roller for chassis	2
50.	Lever	1	111.	Pin axle	2
51.	Lever bushing	1	112.	Bolt M6×8	1
52.	Washer 6	2	113.	Rod	1
53.	Spring washer 6	2	114.	Rod	1
55.	Put pressure assembly line	1	115.	Screw M6×30	1
58.	Washer 8	2	116.	Cover-type nut M6	1
A	Pump ass'y 1~49,113,114		1~49,113,114		
B	Swivel wheel ass'y		78		
C	Front wheel ass'y		83		
D	Sealkit ass'y		1,3,3A,4,7,8,9,16,23,25,31,35,37,38,40,42,44,47		
E	Handle ass'y		52,53,55,60,61,62,66,67,115,116		