



Features



Functions



Technical data



Caution for safety
(Read before installing)



Feature

- Patented lever-lock mechanism.
- Proximity sensors are available.
- Adjustable shock absorbers provide good capacity for different applications.
- Magnetic as standard.

Specification

Model	MSBE			
Tube I.D. (mm)	ø32	ø50	ø63	ø80
Stroke (mm)	20	30	30	40
Medium	Air			
Operating pressure range	0.2~1 MPa			
Proof pressure	1.5 MPa			
Ambient temperature	-5~+60°C (No freezing)			
Lubrication	Not required			
Cushion	External stopper	Adjustable shock absorber		
	Internal cylinder	NBR cushion pad		
Sensor switch	RDC(V), RQC(V)  , RDFE(V) 			
Proximity sensor	RJY 			
Weight	550 g	1930 g	3410 g	6340 g

Order example

MSBE — 50 — 30 — D — L — S — G

MODEL

TUBE I.D.
(mm)

STROKE
(mm)

LEVER LOCK

Blank: Without
L: Lock mechanism

STYLE

Blank: Double acting
with spring extend
D: Double acting

ROLLER
MATERIAL

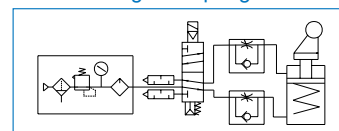
Blank: POM
S: Steel

PORT THREAD

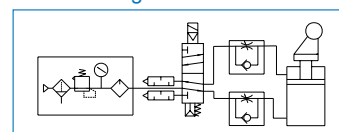
Blank: Rc thread
G: G thread
NPT: NPT thread

Piping diagram

Double acting with spring

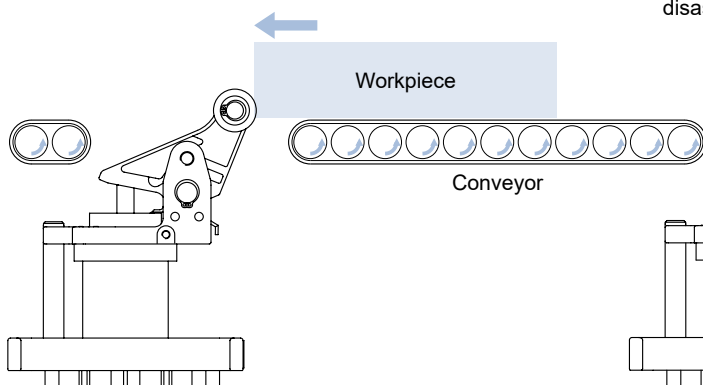


Double acting



Intended use

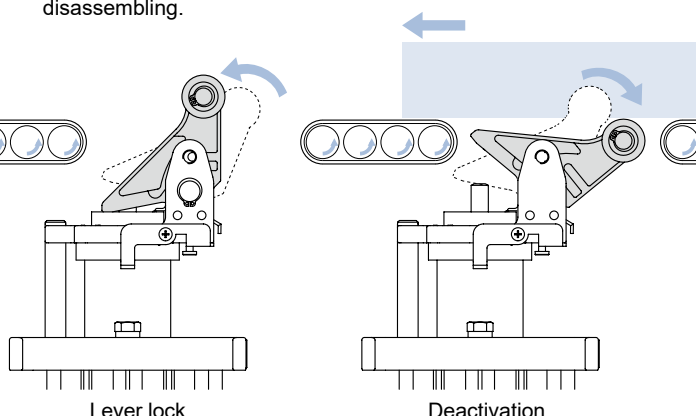
Stopping transferred workpiece.



Lock & Deactivation mechanism

Lock mechanism prevents the light-weight workpiece from moving back by the force of shock absorber after damping.

Deactivation mechanism can deactivate the cylinder without any disassembling.



Pallet control stopper type

Thread (×2)

For inductive proximity sensor.

Guide rod

For protection against rotation.

Knurled cap

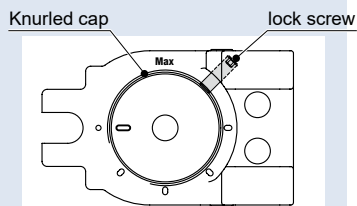
Step 1

Turn knurled cap until the desired cushioning is reached.

- Max mark:
Cushion becomes harder.
- 0 mark:
Cushion becomes softer.

Step 2

Tighten lock screw.
Tightening torque: 2 N.m



Through hole (×4)

For mounting.

Sensor switch groove (×6)

Stop roller (×2)

Roller toggle lever

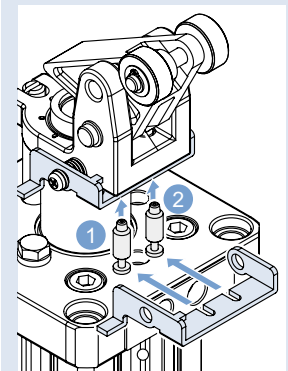
(Optional)

Lock mechanism

For activating / deactivating lever position locking mechanism.

For $\phi 50 \sim \phi 80$, two pins for lever lock and deactivation mechanism are delivered for every L type MSBE.

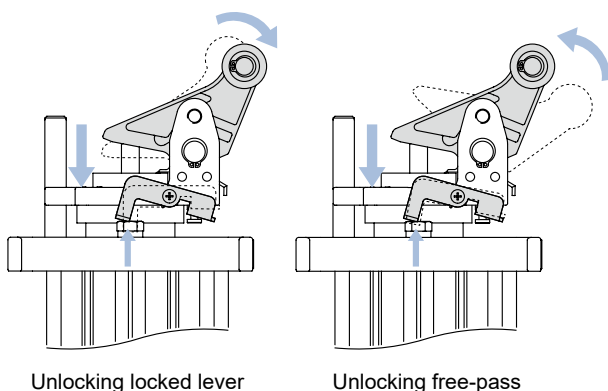
The pin for lever lock function is installed before delivery. The other pin is attached in the package. Please see the assembling guide below for installing.



- 1 Lever-lock function
- 2 Free-pass function

1 Unlock bolt (Accessories)

The locking / deactivation mechanism of **MSBE*-L*** can be unlocked/reactivated by return the piston rod.

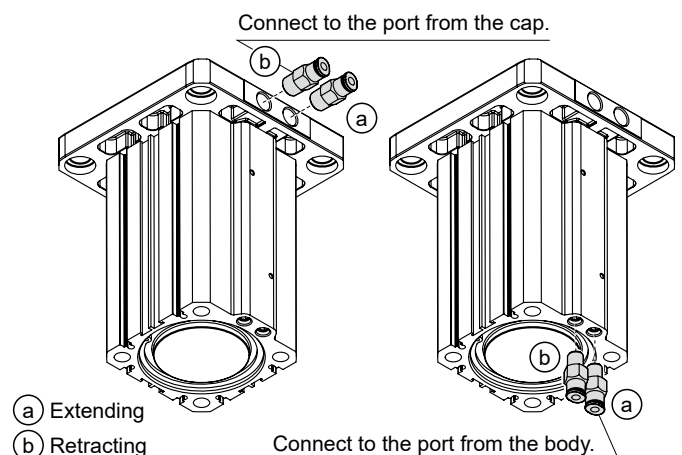


Unlocking locked lever

Unlocking free-pass

2 Port installation & Supply port (×2)

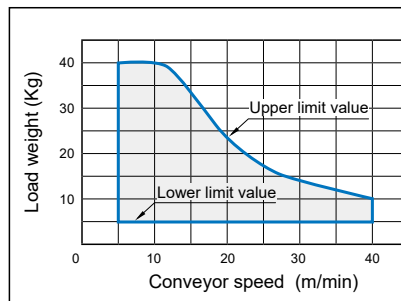
Select one set of port between the top one on the front cap and the one at the bottom.



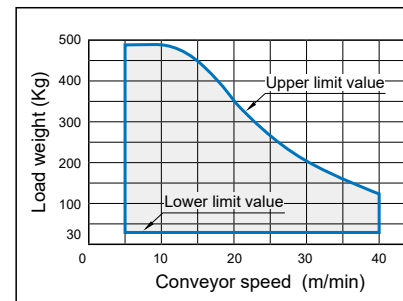
Load-speed chart for conveyor transmission

The chart is applied with the situation of friction coefficient $\mu = 0.1$.

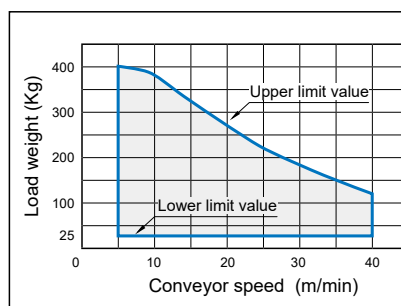
ø32-20



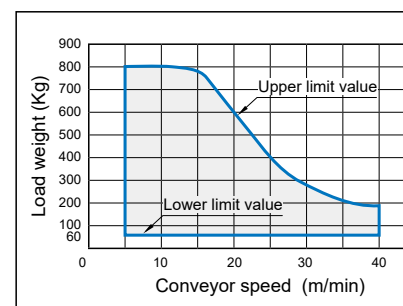
ø63-30



ø50-30



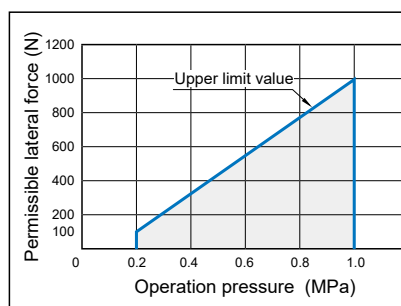
ø80-40



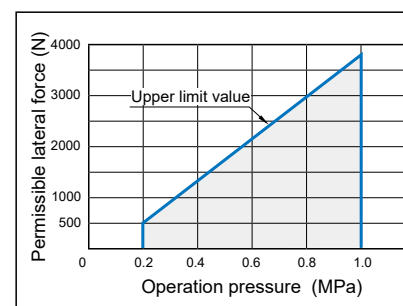
Lateral force-operation pressure chart

The lateral force is caused by the blocking object on the conveyor. The lateral force limit is proportional to operation pressure.

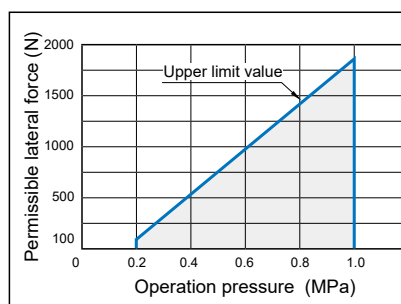
ø32-20



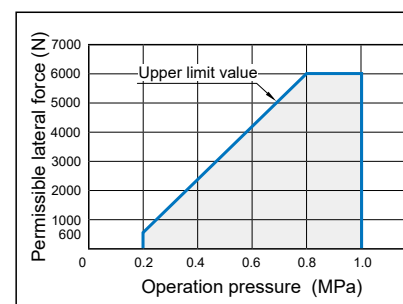
ø63-30



ø50-30

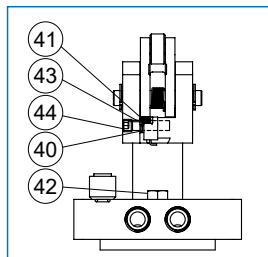


ø80-40

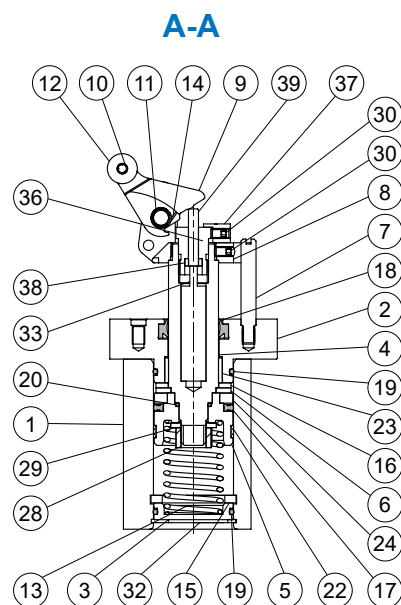
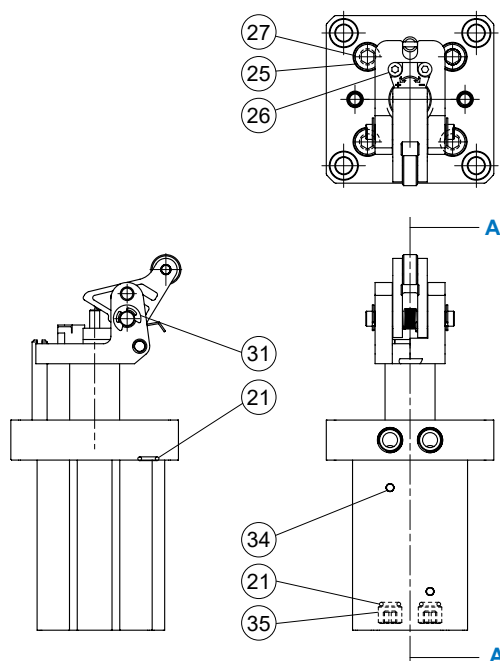
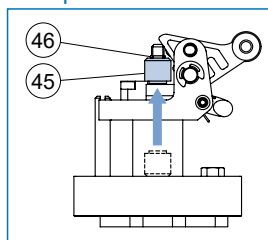


STOPPER CYLINDER

L: Lock mechanism



Free pass mechanism



Material

No.	Part name	Material	Q'y	Repair kits (inclusion)
1	Body	Aluminum	1	
2	Cover	Aluminum	1	
3	Cover	Aluminum	1	
4	Piston rod	Steel	1	
5	Piston	Aluminum	1	
6	Magnet holder	Aluminum	1	
7	Guide rod	Steel	1	
8	Lever holder	Steel	1	
9	Lever	Steel	1	
10	Roller pin	Steel	1	
11	Lever pin	Steel	1	
12	Roller	Resin	1	
		Alloy steel *1	1	
13	Piston spring	Steel	1	
14	Lever spring	Steel	1	
15	Cushion pad	NBR	1	●
16	Rod cushion pad	NBR	1	●
17	Piston seal	NBR	1	●
18	Seal	NBR	1	●
19	O-ring	NBR	2	●
20	O-ring	NBR	1	●
21	O-ring	NBR	4	●
22	Wear ring	Resin	1	
23	Rod bush	Resin	1	
24	Magnet ring	Magnet	1	
25	Hexagon bolt	Steel	4	

*1. S type.

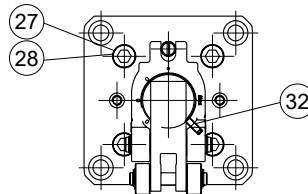
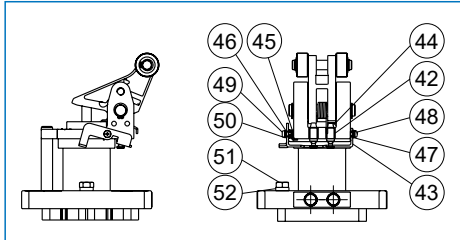
No.	Part name	Material	Q'y	Repair kits (inclusion)
26	Hexagon nut	Steel	2	
27	Washer	Steel	4	
28	Hexagon nut	Steel	1	
29	Spring washer	Steel	1	
30	Hexagon screw	Steel	2	
31	Stop ring	Steel	2	
		Steel	1	
32	Shock absorber	Steel	1	
33	Ball	Steel	2	
34	Plug	Alloy steel	2	
35	Adjustable cap	Stainless steel	1	
36	Damper lock	Stainless steel	1	
37	Locating ring	Aluminum	1	
38	Pin	Steel	1	
39	Lever lock	Steel	1	
40	Lock spring	Steel	1	
41	Hexagon screw	Stainless steel	1	
42	Pin	Steel	1	
43	Hexagon screw	Steel	1	
44	Locating pin	Aluminum	1	
45	O-ring	NBR	1	

Order example

Repair kits

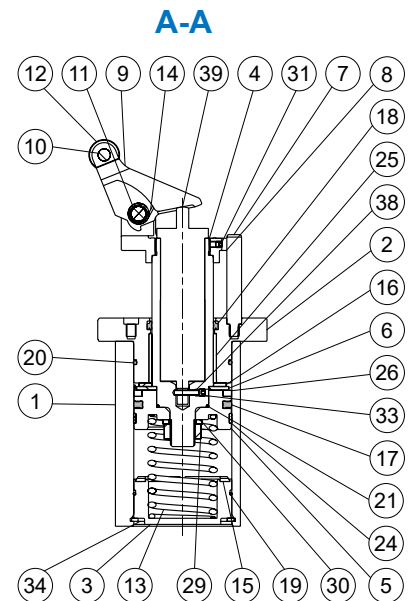
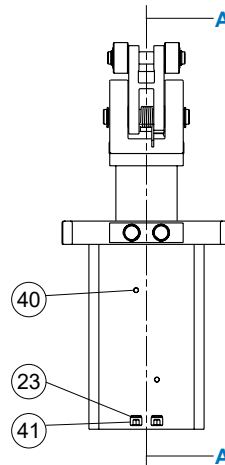
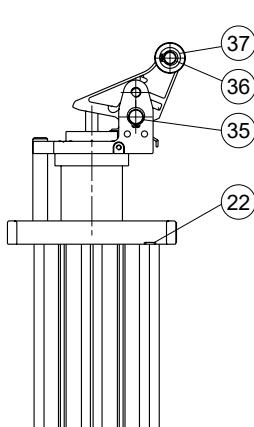
Tube I.D.	Repair kits
ø32	PS-MSBE-32

L: Lock mechanism (Lock + deactivation mechanism)



Order example Repair kits

Tube I.D.	Repair kits
ø50	PS-MSBE-50
ø63	PS-MSBE-63
ø80	PS-MSBE-80

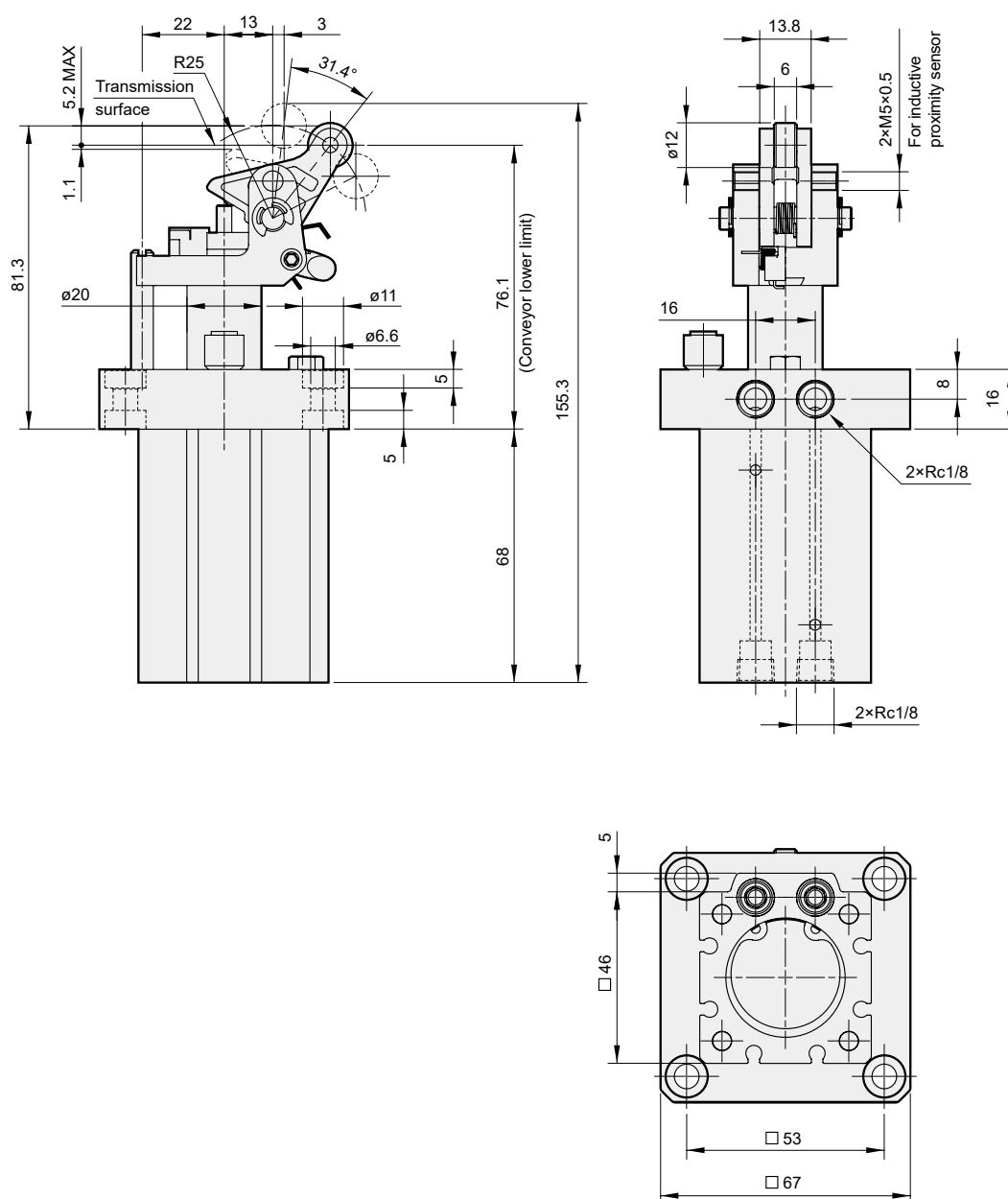


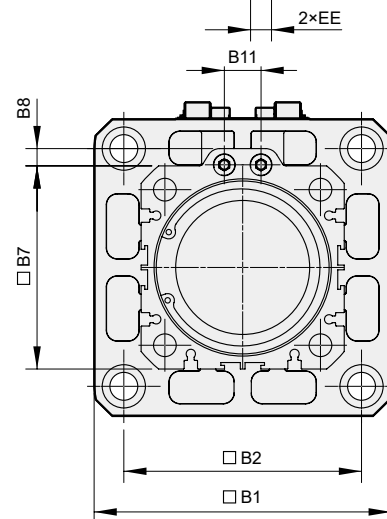
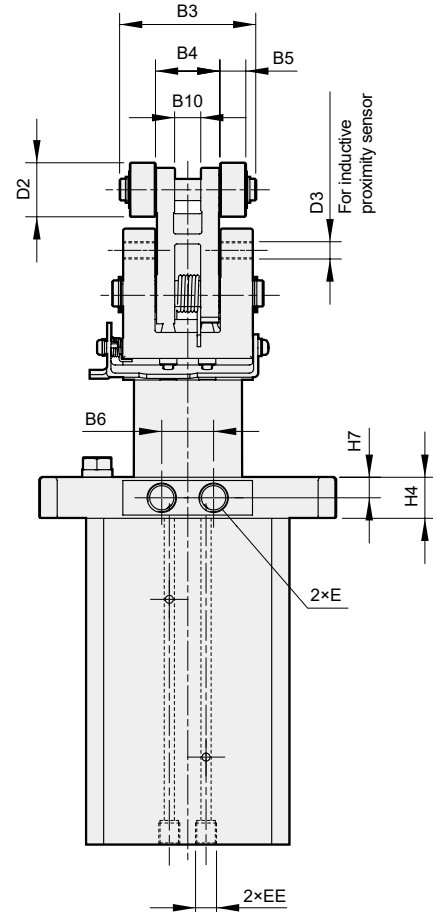
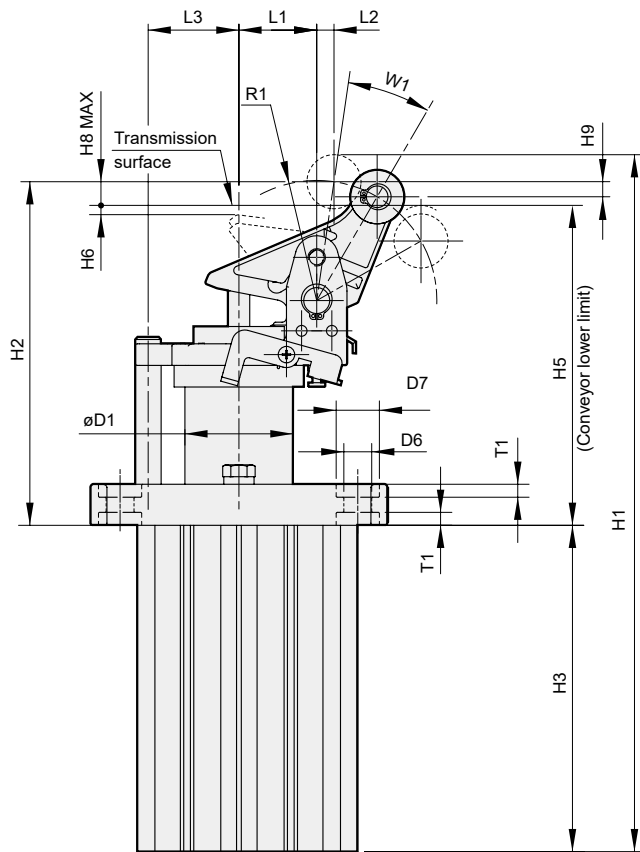
Material

No.	Part name	Material	Q'y / Tube I.D.			Repair kits (inclusion)
			50	63	80	
1	Body	Aluminum	1			
2	Cover	Aluminum	1			
3	Cover	Aluminum	1			
4	Piston rod	Steel	1			
5	Piston	Aluminum	1			
6	Magnet holder	Aluminum	1			
7	Guide rod	Steel	1			
8	Lever holder	Steel	1			
9	Lever	Steel	1			
10	Roller pin	Steel	1			
11	Lever pin	Steel	1			
12	Roller	Resin	2			
		Alloy steel *1	2			
13	Piston spring	Steel	1			
14	Lever spring	Steel	1			
15	Cushion pad	NBR	1			●
16	Rod cushion pad	NBR	1			●
17	Piston seal	NBR	1			●
18	Seal	NBR	1			●
19	O-ring	NBR	1			●
20	O-ring	NBR	1			●
21	O-ring	NBR	1			●
22	O-ring	NBR	2			●
23	O-ring	NBR	2			●
24	Wear ring	Resin	1			
25	Washer	Resin	1			

*1. S type.

No.	Part name	Material	Q'y / Tube I.D.			Repair kits (inclusion)
			50	63	80	
26	Magnet ring	Magnet	1			
27	Hexagon bolt	Steel	4			
28	Washer	Steel	4			
29	Hexagon nut	Steel	1			
30	Spring washer	Steel	1			
31	Hexagon screw	Steel	1			
32	Hexagon screw	Steel	1			
33	Hexagon screw	Steel	—	1		
34	Stop ring	Steel	1			
35	Stop ring	Steel	2			
36	Stop ring	Steel	2			
37	Roller washer	Steel	2			
38	Spring pin	Steel	—	1		
39	Shock absorber	Steel	1			
40	Ball	Steel	2			
41	Plug	Steel	2			
42	Bush	Resin	2			
43	Lever lock	Steel	1			
44	Pin	Steel	2			
45	Spring	Steel	1			
46	Collar	Steel	1			
47	Collar #2	Steel	1			
48	Screw	Steel	1			
49	Screw	Steel	1			
50	Spring washer	Steel	1			
51	Hexagon screw	Steel	1			
52	Washer	Steel	1			





Code Tubr I.D.	B1	B2	B3	B4	B5	B6	B7	B8	B10	B11
50	93	73	43	20	8	17	62	8	8.1	17
63	114	90	54	25	10	24	75	7	10.1	17
80	138	110	63	30	12	24	94	8	12.1	17

Code Tubr I.D.	D1	D2	D3	D6	D7	E	EE	H1	H2	H3	H4	H5	H6	H7	H8	H9	L1	L2	L3	R1	T1	W1
50	32	2- $\varnothing 20$	2-M8 $\times$ 1	9	14	Rc1/8	Rc1/8	218.8	117.8	91	17.5	109.3	2.8	8.75	8.5	5.7	23	6.3	26	38.5	5	23.5°
63	40	2- $\varnothing 20$	2-M8 $\times$ 1	11	18	Rc1/4	Rc1/8	251	134.0	107	25	126.3	6.3	12.5	7.8	4.8	29	6	34	44.4	6	20.3°
80	50	2- $\varnothing 25$	2-M8 $\times$ 1	13	20	Rc1/4	Rc1/8	322.5	159.0	151	19	146.9	4.3	9.5	12.1	7	36	8	42	55.6	6	21.9°