



Stopper cylinder — TWQ Series

Compendium of TWQ Series

Four kinds stopper type

Round rod(C) Flat rod(B)

Roller(R) Shockless stopper (adjustable absorber)(K)

With self-lock device
Shockless stopper cylinder is attached with self-lock device, which can prevent the returning of rebound of rocker caused by bar objects.

Widening piston rod
Widening the piston rod can effectively improve the impact resistance ability of the cylinder.

Magnetic switch slots around the cylinder body
There are magnetic switch slots around the cylinder body convenient to install inducting switch.

Five kinds of bore size can be selected
Bore size: 20、25、32、40、50

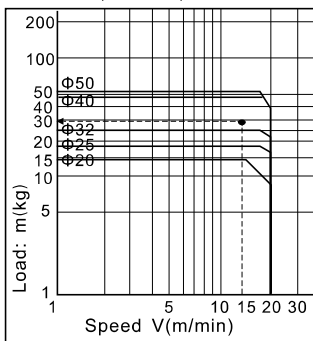
Installation and application



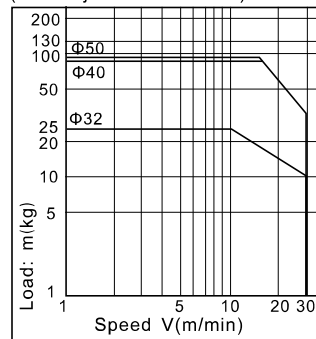
1. When load changes in the work, the cylinder with abundant output capacity shall be selected.
2. Relative cylinder with high temperature resistance or corrosion resistance shall be chosen under the condition of high temperature or corrosion.
3. Necessary protection measure shall be taken in the environment with higher humidity, much dust or water drops, oil dust and welding dregs.
4. Dirty substances in the pipe must be eliminated before cylinder is connected with pipeline. Impurities must be prevented from entering the cylinder.
5. The medium used by cylinder shall be filtered to 40 μm or below.
6. The lateral load of the cylinder shall not exceed the allowable value in operation so as to maintain its normal operation and extend its service life.
7. Anti-freezing measure shall be adopted under low temperature environment to prevent the water freezing in cylinder.
8. If the cylinder is dismantled and stored for a long time, please conduct anti-rust treatment to the surface. Anti-dust caps shall be added in air inlet and outlet ports.

How to select

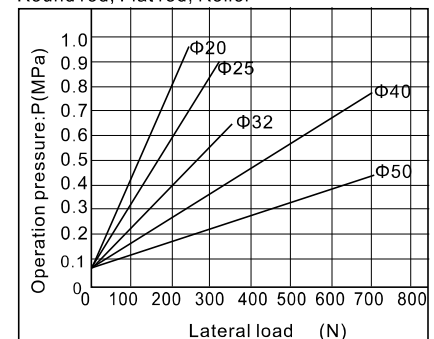
Round rod, Flat rod, roller



Shockless stopper (With adjustable absorber)



Lateral load & operation pressure Round rod, Flat rod, Roller



Stopper cylinder

TWQ Series



Specification

Bore size(mm)	20	25	32	40	50
Fluid	Double acting type、Single acting-pull type				
Action	Air(to be filtered by 40 μ m filter element)				
Operating pressure	Double acting type	0.15~1.0MPa(23~145psi)			
	Single acting-pull type	Φ20: 0.25~1.0MPa(35~145psi) others: 0.2~1.0MPa(28~145psi)			
Proof pressure	1.5MPa(215psi)				
Temperature °C	-20~70				
Range of stroke tolerance	+1.0 0				
Cushion type	Bumper				
Lubrication	Non required				
Mounting type	Thru hole or screw hole				
Stopper type	Φ20/Φ25	Round rod, Flat rod/Roller			
	Φ32/Φ40/Φ50	Round rod, Flat rod/Roller, Shock less stopper(with absorber)			
Port size [Note1]	M5×0.8			1/8"	

[Note1] PT thread, G thread and NPT thread are available.

Add) Refer to Page 338 for details of sensor switch.

Symbol



Product feature

1. JIS standard is implemented.
2. Widening the piston rod can effectively improve the impact resistance ability of the cylinder.
3. The installation height is adjustable and several rod end modes can be selected.
The stopper cylinder with shock absorber has a better cushion effect.
4. Shockless stopper cylinder is attached with self-lock device, which can prevent the returning of rebound of rocker caused by bar objects.
5. Several series and specifications for stopper cylinders can be selected.

Ordering code

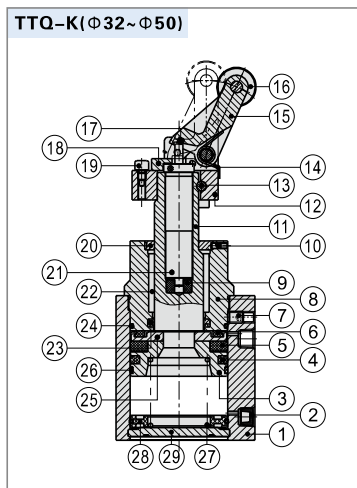
TWQ 50×20 S K □ □

① ② ③ ④ ⑤ ⑥ ⑦

① Model	② Bore size	③ Stroke	④ Magnet	⑤ Stopper	⑥ Self-lock function	⑦ Thread type [Note1]
TWQ: Stopper cylinder(Height locked, double acting type) TTQ: Stopper cylinder(Height locked, single acting-pull type)	20 25 32 40 50	10 15 20 20 25 30	Blank: Without magnet S: With magnet	C: Round rod B: Flat rod R: Roller K: Shockless stopper (adjustble absorber)	Blank: Without self-lock F: With self-lock	Blank: PT G: G T: NPT

[Note1] When the thread is standard, the code is blank.

Installation and application



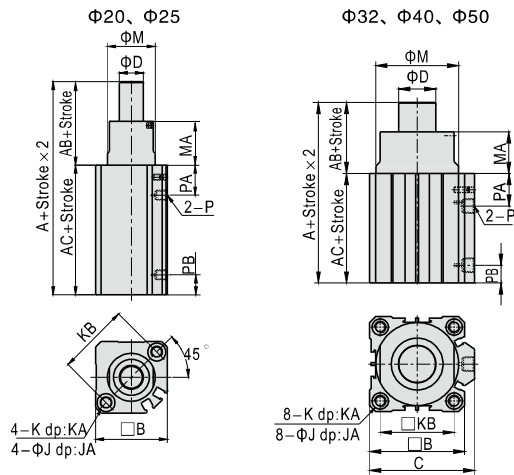
No.	Item	Material	No.	Item	Material
1	Body	Aluminum alloy	16	Roller	Mild steel
2	Silencer	Sintered bronze particle	17	Steel ball	Free cutting steel
3	Piston	Aluminum alloy	18	Obstruct block	Powder metallurgy
4	Piston seal	NBR	19	Cancel cap	Aluminum alloy
5	Magnet	Plastic	20	Locking cushion	Powder metallurgy
6	Bumper	TPU	21	Shock absorber	
7	Countersink screw	Carbon steel	22	Bushing	Sintered bronze particle
8	Front cover	Aluminum alloy	23	O-ring	NBR
9	Absorber fix and adjust seat	POM	24	O-ring	NBR
10	Countersink screw	Carbon steel	25	Magnet washer	Aluminum alloy
11	Piston rod	Carbon steel with 20 μ m chrome plated	26	Bumper	Wear resistant material
12	Mounting seat	Nodular cast iron	27	Spring	Spring steel
13	Lock pin	Cast steel	28	Cushion	POM
14	Torsion spring	Spring steel	29	Back cover	Aluminum alloy
15	Rocker	Cast steel			

Stopper cylinder

TWQ Series

Dimensions

Round rod (TWQ-C, TTQ-C)

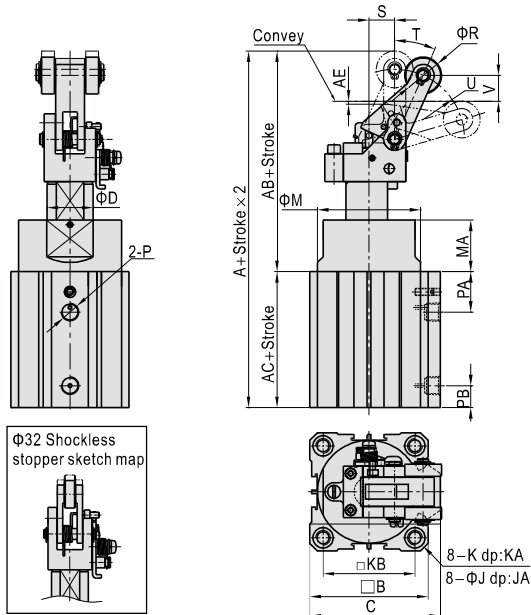


Bore size/Item	A	AB	AC	B	C	D	J	JA
20	67	22	45	36	-	12	9	7
25	68	20	48	40	-	16	9	7
32	68	20	48	45	49.5	20	9	7
40	80.5	28	52.5	53	57	25	9	7
50	82	28	54	64	71	25	11	8

Bore size/Item	K	KA	KB	M	MA	P	PA	PB
20	M6×1.0	10	36	24	22	M5×0.8	16.5	9
25	M6×1.0	10	40	30	20	M5×0.8	18	9
32	M6×1.0	10	34	36	20	1/8"	20	10
40	M6×1.0	10	40	44	28	1/8"	20	11
50	M8×1.25	14	50	56	28	1/8"	22	12

Note: The type with magnet and the type without magnet have the same dimension.

Shockless stopper (TWQ-K(F), TTQ-K(F)) Φ32, Φ40, Φ50

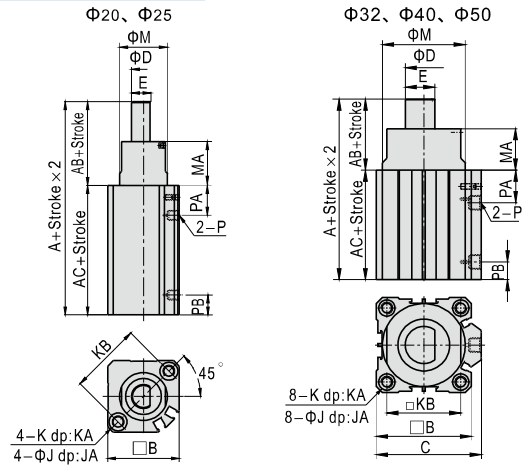


Bore size/Item	A	AB	AC	AE	B	C	D	J	JA	K	KA
32	120.5	72.5	48	1	45	49.5	20	9	7	M6×1.0	10
40	152.5	100	52.5	1.5	53	57	25	9	7	M6×1.0	10
50	154	100	54	1.5	64	71	25	11	8	M8×1.25	14

Bore size/Item	KB	M	MA	P	PA	PB	R	S	T	U	V
32	34	36	20	1/8"	20	10	15	11.5	28	24.5	4.5
40	40	44	28	1/8"	20	11	20	14	24	38	14
50	50	56	28	1/8"	22	12	20	14	24	38	14

Note: The type with magnet and the type without magnet have the same dimension.
The type with self-lock and the type without selflock have the same dimension.

Flat rod (TWQ-B, TTQ-B)

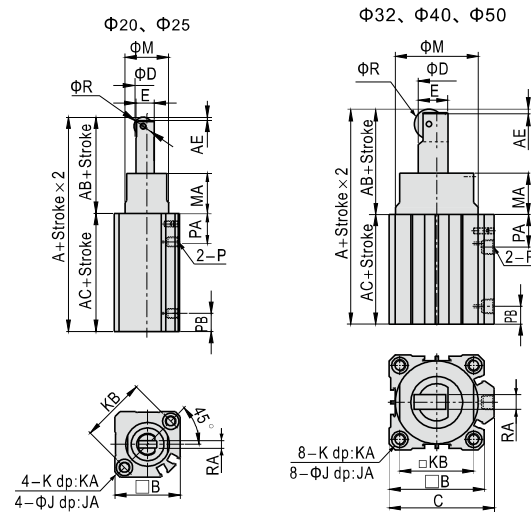


Bore size/Item	A	AB	AC	B	C	D	E	J	JA
20	67	22	45	36	-	12	10	9	7
25	68	20	48	40	-	16	14	9	7
32	68	20	48	45	49.5	20	18.5	9	7
40	80.5	28	52.5	53	57	25	22.5	9	7
50	82	28	54	64	71	25	22.5	11	8

Bore size/Item	K	KA	KB	M	MA	P	PA	PB
20	M6×1.0	10	36	24	22	M5×0.8	16.5	9
25	M6×1.0	10	40	30	20	M5×0.8	18	9
32	M6×1.0	10	34	36	20	1/8"	20	10
40	M6×1.0	10	40	44	28	1/8"	20	11
50	M8×1.25	14	50	56	28	1/8"	22	12

Note: The type with magnet and the type without magnet have the same dimension.

Roller (TWQ-R, TTQ-R)



Bore size/Item	A	AB	AC	AE	B	C	D	E	J	JA
20	78	33	45	2	36	-	12	10	9	7
25	81	33	48	2	40	-	16	14	9	7
32	87	39	48	3	45	49.5	20	18.5	9	7
40	103.5	51	52.5	4	53	57	25	22.5	9	7
50	105	51	54	4	64	71	25	22.5	11	8

Bore size/Item	K	KA	KB	M	MA	P	PA	PB	R	RA
20	M6×1.0	10	36	24	22	M5×0.8	16.5	9	10	4
25	M6×1.0	10	40	30	20	M5×0.8	18	9	12	6
32	M6×1.0	10	34	36	20	1/8"	20	10	20	8
40	M6×1.0	10	40	44	28	1/8"	20	11	20	8
50	M8×1.25	14	50	56	28	1/8"	22	12	20	8

Note: The type with magnet and the type without magnet have the same dimension.

Installation and application

1. When shockless stopper cylinder ($\Phi 32 \setminus \Phi 40$) be mounted by faceplate, please refer to below steps:

① Machining mounting hole



② Remove head



③ Mounting body



④ Restoration head

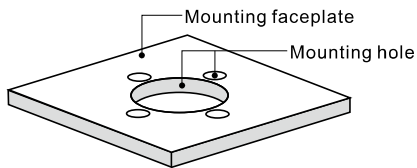
① Machining mounting hole: To process the mounting hole by "dimensions" on the faceplate.

② Remove head: Remove fix seat bolt, take out guide sheath, spring and lock flake, show up pin hole. Screw out plug from pin hole, break out taper pin and take out the whole head downward.

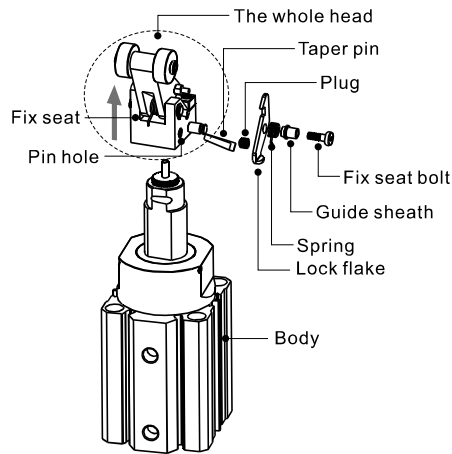
③ Mounting body: Install the body to mounted hole from faceplate down and lock the bolt to finish mounting body.

④ Restoration head: Restoration the whole head by adverse steps of remove head to finish the whole mounting.

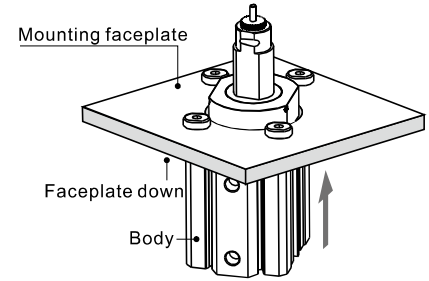
Step ①: Machining mounting hole



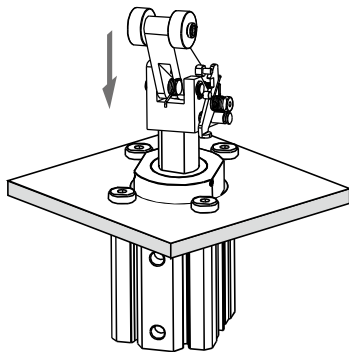
Step ②: Remove head



Step ③: Mounting body



Step ④: Restoration head



2. Shock absorbers are consumable parts. When a decrease in energy absorption capacity is noticed, it must be replaced.

Bore size	32	40	50
Shock absorber type	ASJ1408		

3. The others of "Installation and application" are the same as TWG series, Please refer to page 297 for details.