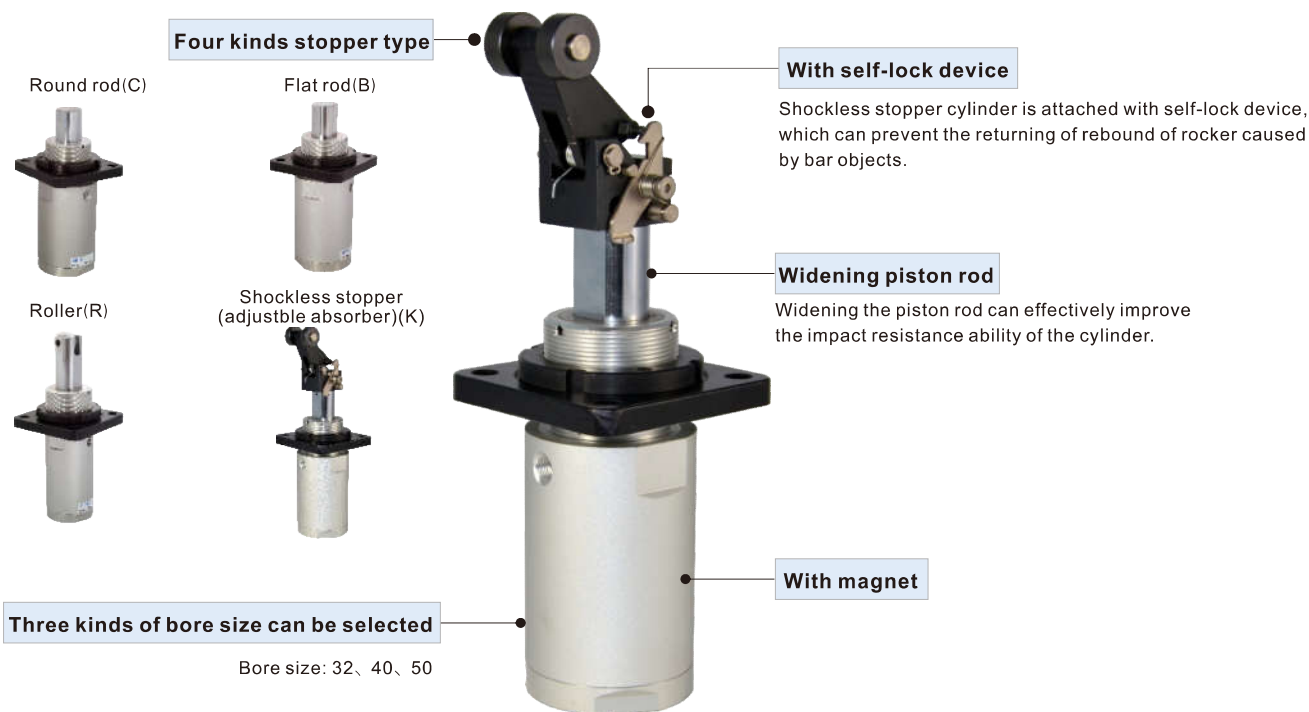




Stopper cylinder —TWG Series

Compendium of TWG Series



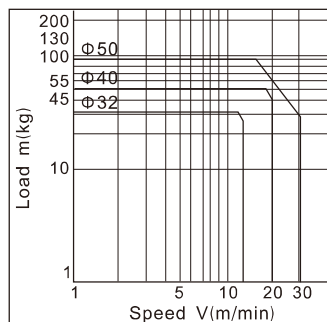
Installation and application



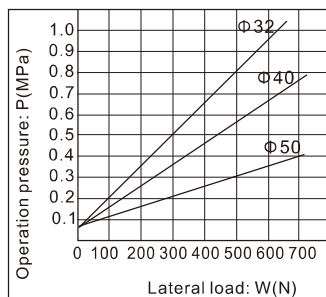
1. When load changes in the work, the cylinder with abundant output capacity shall be selected.
2. Relative cylinder with high temperature resistance or corrosion resistance shall be chosen under the condition of high temperature or corrosion.
3. Necessary protection measure shall be taken in the environment 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 $40\ \mu\text{m}$ 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.

Lateral Load and Operation pressure

Lateral Load & Operation pressure



Round rod, Flat rod, Roller



Stopper cylinder

AIRTAC

TWG Series



Specification

Bore size(mm)		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	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		Flange(The mounting high can be changed)		
Stopper type		Round rod, Flat rod, Roller shock less stopper(with absorber)		
Port size [Note1]		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 cushion effect of the stopper cylinder with shock absorber is better.
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

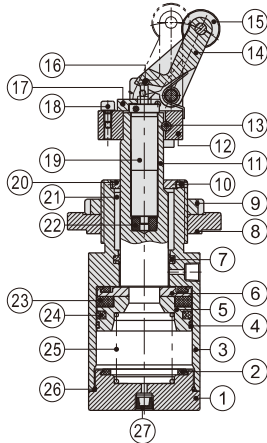
TWG 50 × 20 S K □ □

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
TWG: Stopper cylinder(Adjustable for height, double acting type)	32	10 15 20	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
TTG: Stopper cylinder(Adjustable for height, single acting-pull type)	40	20 25 30				
	50					

Installation and application

TTG-K



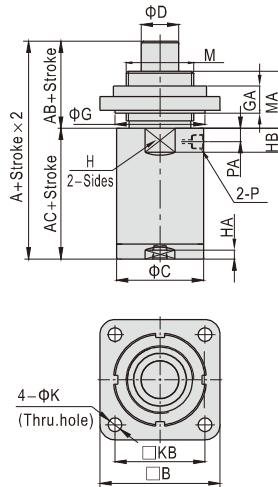
No.	Item	Material
1	Back cover	Aluminum alloy
2	Bumper	TPU
3	Body	Aluminum alloy
4	Wear ring	Wear resistant material
5	Piston	Aluminum alloy
6	Magnet washer	Aluminum alloy
7	Packing	NBR
8	Flange	Aluminum alloy
9	Fixed nut	Carbon steel
10	Countersink screw	Carbon steel
11	Piston rod	Carbon steel with 20 μm chrome plated
12	Fixed seat	Nodular cast iron
13	Lock pin	Cast steel
14	Rocker	Cast steel
15	Roller	Mild steel
16	Steel ball	Stainless steel
17	Obstruct block	Powder metallurgy
18	Cancel cap	Aluminum alloy
19	Shock absorber	
20	Lock ring	Powder metallurgy
21	Sliding bushing	Wear resistant material
22	Absorber fix and adjust seat	POM
23	Magnet	Plastic
24	Piston seal	NBR
25	Spring	Spring steel
26	O-ring	NBR
27	Silence	Sintered bronze particle

Stopper cylinder

TWG Series

Dimensions

Round rod(TWG-C, TTG-C)

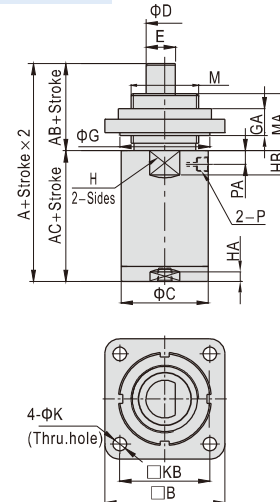


Bore size\Item	A	AB	AC	B	C	D	G	GA	H
32	95	38	57	70	40	20	50	18	37
40	100	38	62	80	47	25	60	18	44
50	100	38	62	80	58	25	60	18	54

Bore size\Item	HA	HB	K	KB	M	MA	P	PA
32	6	15	9	50	M36×1.5	38	1/8"	9
40	6	16	9	60	M45×1.5	38	1/8"	12
50	6	16	9	60	M45×1.5	38	1/8"	10

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

Flat rod(TWG-B, TTG-B)

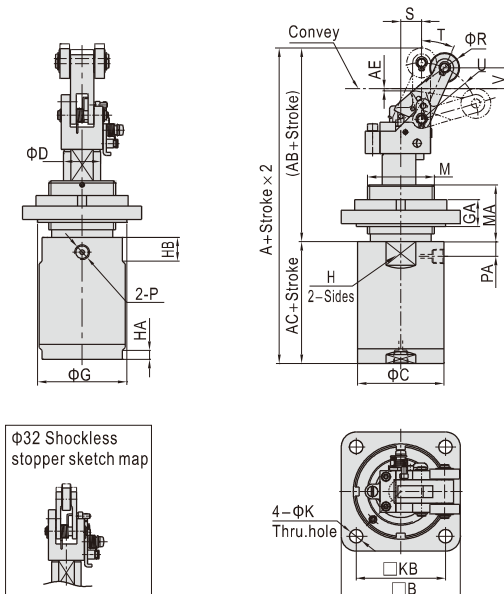


Bore size\Item	A	AB	AC	B	C	D	E	G	GA
32	95	38	57	70	40	20	18.5	50	18
40	100	38	62	80	47	25	22.5	60	18
50	100	38	62	80	58	25	22.5	60	18

Bore size\Item	H	HA	HB	K	KB	M	MA	P	PA
32	37	6	15	9	50	M36×1.5	38	1/8"	9
40	44	6	16	9	60	M45×1.5	38	1/8"	12
50	54	6	16	9	60	M45×1.5	38	1/8"	10

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

Shockless stopper(TWG-K(F), TTG-K(F))

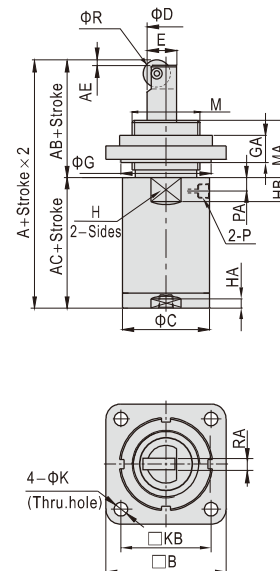


Bore size\Item	A	AB	AC	AE	B	C	D	G	GA	H	HA	HB
32	147	90.5	57	1	70	40	20	50	18	37	6	15
40	172	110	62	1.5	80	47	25	60	18	44	6	16
50	172	110	62	1.5	80	58	25	60	18	54	6	16

Bore size\Item	K	KB	M	MA	P	PA	R	S	T	U	V
32	9	50	M36×1.5	38	1/8"	9	15	11.5	28	24.5	4.5
40	9	60	M45×1.5	38	1/8"	12	20	14	24	38	14
50	9	60	M45×1.5	38	1/8"	10	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.

Roller(TWG-R, TTG-R)



Bore size\Item	A	AB	AC	AE	B	C	D	E	G	GA	H	HA
32	116	59	57	4	70	40	20	18.5	50	18	37	6
40	123	61	62	4	80	47	25	22.5	60	18	44	6
50	123	61	62	4	80	58	25	22.5	60	18	54	6

Bore size\Item	HB	K	KB	M	MA	P	PA	R	RA
32	15	9	50	M36×1.5	38	1/8"	9	20	8
40	16	9	60	M45×1.5	38	1/8"	12	20	8
50	16	9	60	M45×1.5	38	1/8"	10	20	8

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

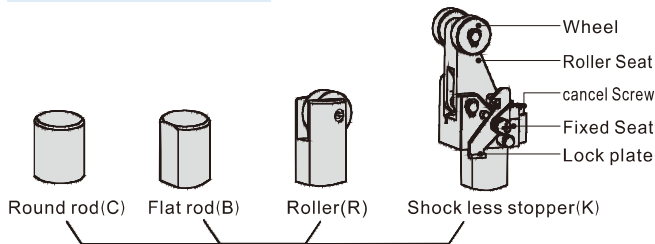
Stopper cylinder

TWG Series

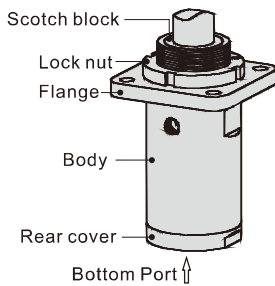
Installation and application

1. Function & Operating Manual

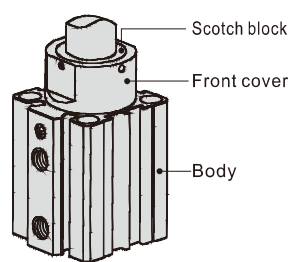
The appearance of Stopper



TWG Series appearance

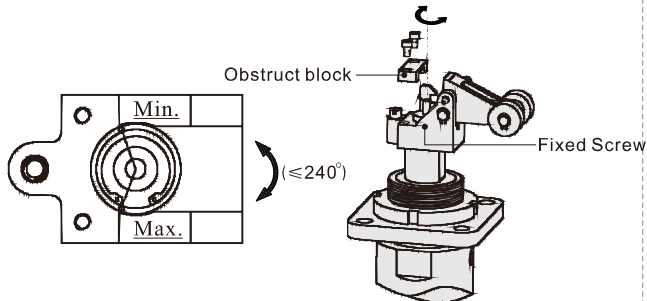


TWQ Series appearance



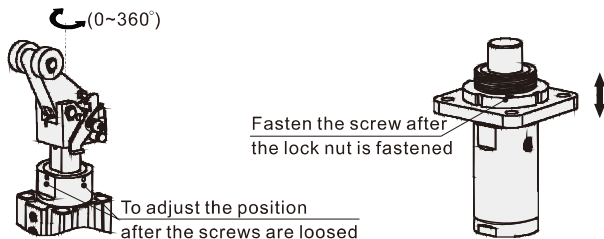
2. Adjustment of Shock Absorber

- 2.1) The Shock Absorber had been adjusted before the cylinder finished.
- 2.2) The client can adjust it if necessary.
- 2.3) The steps are as following.
 - a. Loose the fixed screw.
 - b. Turn the Shock Absorber to adjust the cushion ability.
 - c. Fasten the fixed screw.



3. Multi-working position

- 3.1) If the body is fixed, just to adjust the scotch block, the working direction of the cylinder will be changed.
- 3.2) For TWG series, adjusting the position of flange can be changed the working height.

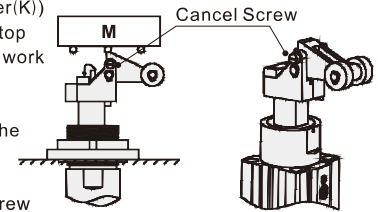


4. Working Forbidden(Shock less stopper(K))

- 4.1) This function is used to cancel the stop action of the cylinder, and make the work piece pass easy.

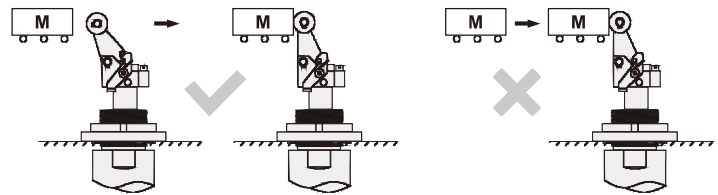
4.2) The steps are as following.

- a. Screw off the cancel screw from the flange.
- b. Put the roller seat down.
- c. Fasten the cancel screw in the screw hole on the fixed seat and the tail of the cancel screw should be inserted in the hole made on the roller seat.



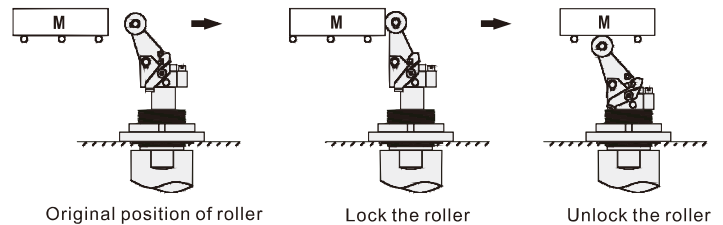
5. How to use stopper function

- 5.1) When the shock absorber is impacted deeply, added impact energy must be avoided. The cylinder without shock absorber can't be impacted by load, otherwise mechanical failure may be caused.
- 5.2) The maximum impact kinetic energy acting on the piston rod can't exceed the allowable maximum values, otherwise mechanical failure may be caused.



6. Self-locking

Unusually, when the stopper cylinder is operating, work piece will be rebound as the effect of shoker absorber. In order to keep the work piece steady, we have developed this self-locking device.



7. 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		