

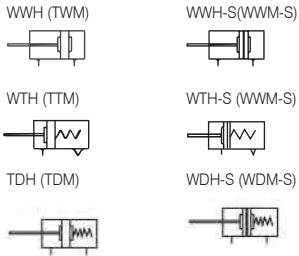
WWH-WWM Serisi Stopper Silindir / WWH-WWM Series Stopper Cylinder



Özellikler / Specification

Series	TWH							TWM
Bore Size (mm)	20	25	32	40	50	63	80	50
Fluid	Air (to be filtered by 40 µm filter element)							
Action	Double acting type, Single acting-pull type							
Operating Pressure	0.15~1.0MPa(23~145psi)							
	Φ20:0.25~1.0MPa(35~145psi) Others:0.2~1.0MPa(28~145psi)							
Proof pressure	1.5MPa(215psi)							
Temperature °C	-20~80							
Range of stroke tolerance	+1.0 0							
Cushion type	Bumper							
Lubrication	Non required							
Mounting type	Flange							
Stopper type	Shock less stopper (With non adjustable absorber)				Shock less stopper (With adjustable absorber)			
Port size ①	M5X0.8			1/8"		1/4"	1/8"	
Sensor's thread	M8X0.5				M8X1.0			

Sembol / Symbol



Ürün Özelliği / Product feature

- JIS standard is implemented.
- Widening the piston rod can effectively improve the impact resistance ability of the cylinder.
- Heavy type stopper cylinder has shock absorber adjustable shock absorber, which can reliably absorb the impact energy.
- Shockless stopper cylinder is equipped with self-lock device, which can prevent the returning of rebound of rocker caused by bar objects.
- Several series and specifications for stopper cylinders can be selected.

Sipariş Kodu / Ordering code

WWH-S-50 x 30-K □ -1-P

Model _____

WWH : Stopper cylinder (Double acting type)
 WDH : Stopper cylinder
 (Built-in spring double acting type)
 WTH : Stopper cylinder (Single acting-Pull type)
 WWM : Stopper cylinder (Double acting type)
 WDM : Stopper cylinder
 (Built-in spring double acting type)
 WTM : Stopper cylinder (Single acting-Pull type)

Magnet _____

Blank : Without magnet
 S : With magnet

Bore size _____

Model	Bore size
WWH,WDH, WTH	20 25 32 40 50 63 80
WWM, WDM, WTM	50

Stroke _____

Bore size	Standard stroke (mm)
20,25	15
32	20
40,50,63	30
80	40

Thread Type

P: PT
 T: NPT
 G: G

Sensor switch

Blank : Without sensor switch
 t: With sensor switch

Self-lock function

Blank : Without self-lock
 F: With Self-lock

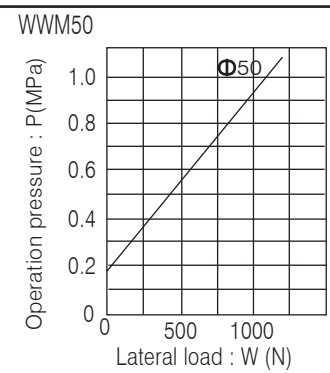
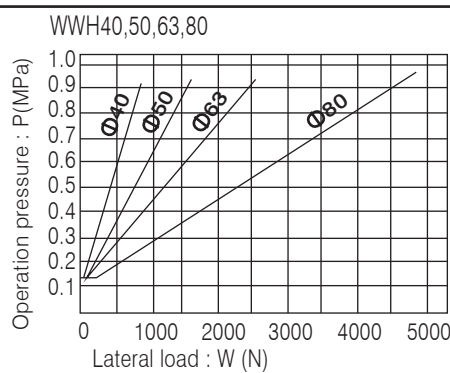
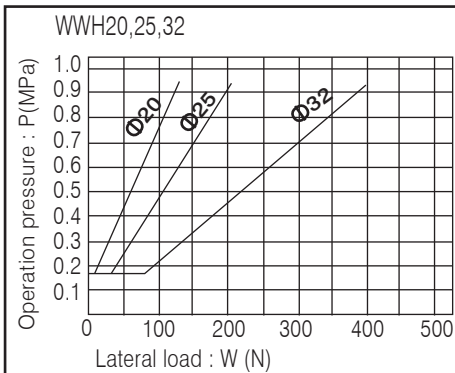
Stroke

Model	Stopper
WWH	L: Shockless stopper (Non-adjustable absorber)
WDH	K: Shockless stopper (adjustable absorber)
WTH	K: Shockless stopper (adjustable absorber)
WWM,WDM,WTM	K: Shockless stopper (adjustable absorber)

① When the thread is standard, the code is blank.

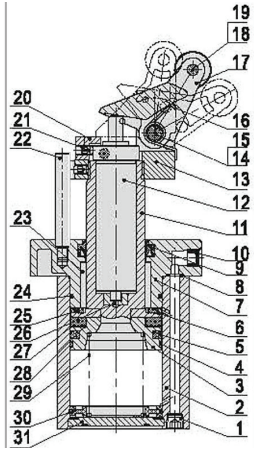
Note: The buffer is not adjustable if the bore size is 20 and 25 It is adjustable if the bore is over 32.

Yanal Yük ve Çalışma Basıncı / Lateral Load and Operation pressure



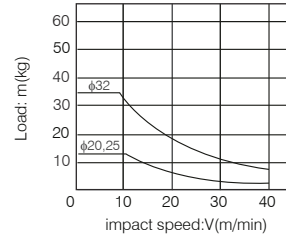
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Ana parçaların iç yapısı ve malzemesi / Inner structure and material of major parts

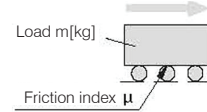


No.	item	Material
1	Countersink screw	Carbon steel
2	Body	Aluminum alloy
3	Piston	Aluminum alloy
4	Wear ring	Wear resistant material
5	Piston seal	NBR
6	Magnet washer	Aluminum alloy
7	Front cover	Aluminum alloy
8	O-ring	NBR
9	Packing	NBR
10	Slicer	Sintered bronze particle
11	Piston rod	S45C grinding rod
12	Shock absorber	
13	Fixed seat	Nodular cast iron
14	PIN	S45C grinding rod
15	Clip	Spring steel
16	Torsion spring	Spring steel
17	Rocker	Cast steel/ Nodular cast iron
18	PIN	S45C grinding rod
19	PIN Gasket	S45C grinding rod
20	Obstruck block	Powder metallurgy
21	Cauntersink screw	Carbon steel
22	Leader	S45C grinding rod
23	Silding bushing	Wear resistant material
24	O-ring	NBR
25	Bumper	TPU
26	Absorber fix and adjus seat	POM
27	Magnet	Plastic
28	Magnet washer	NBR
29	Spring	Spring steel
30	Cushion	POM
31	Back cover	Aluminum alloy

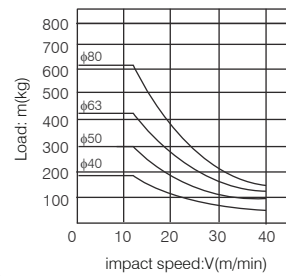
Boyutlar / Dimensions

 Bore size $\phi 20, \phi 25, \phi 32$, Friction index $\mu = 0.1$


Impact speed V (m/min)

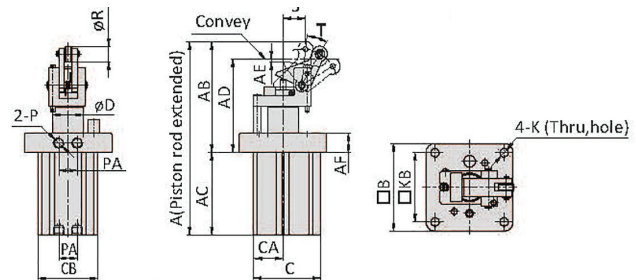


Note:
When the speed is the same, the friction index more higher the load more lighter.
So the rubbing surface is smoother is better.

 Bore size $\phi 40, \phi 50, \phi 63, \phi 80$, Friction index $\mu = 0.1$


Selection way,
When load is 300 kg, speed is 15m/min, and friction factor is 0.1, draw a horizontal line in the 300 position of Y axis in table 3 to join with X axis' 15 m/min $\phi 63$ cylinder used in this application will be selected.

Boyutlar / Dimensions

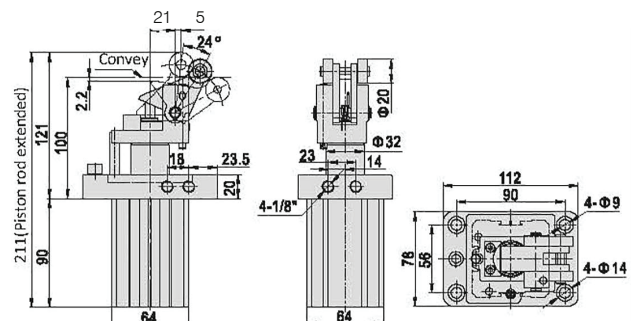


Bore size /Item	A	AB	AC	AD	AE	AF	B	C	CA	CB
20	129	74	55	60	2.5	8	48	40	18	36
25	135.5	78	57.5	64	2.5	12	58	45	20	40

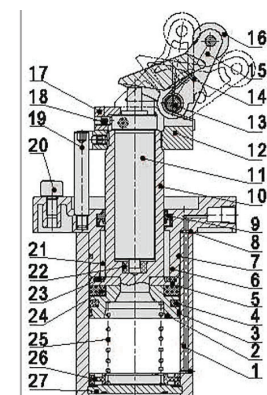
Bore size /Item	D	K	KB	P	PA	R	S	T
20	16	4.5	40	M5X0.812	12	12	16	28
25	16	4.5	47	M5X0.816	16	12	16	28

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

Adjustable absorber (WWM-K(F), WDM-K(F), WM-K(F))



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

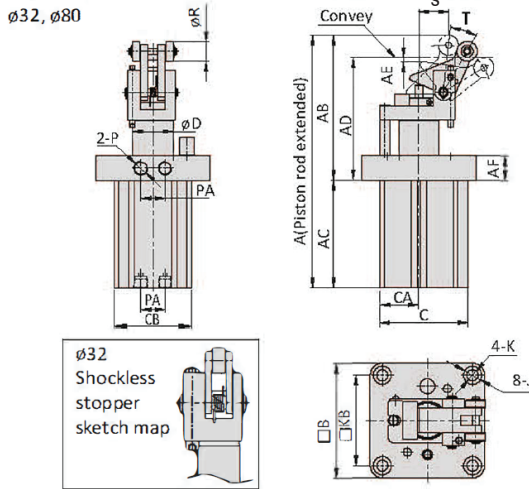


No.	item	Material
1	Body	Aluminum alloy
2	Piston	Aluminum alloy
3	Wear ring	Wear resistant material
4	Piston seal	NBR
5	Magnet washer	Aluminum alloy
6	Front cover	Aluminum alloy
7	O-ring	NBR
8	O-ring	NBR
9	Gasket	NBR
10	Piston rod	S45C grinding rod
11	Shock absorber	
12	Mounting seat	Nodular cast iron
13	PIN	S45C grinding rod
14	Torsion spring	Spring steel
15	Rocker	Nodular cast iron
16	Roller	Powder metallurgy
17	Obstruck block	Powder metallurgy
18	Countersink screw	Carbon steel
19	Leader	S45C grinding rod
20	Cancel cap	Aluminum alloy
21	Silding bushing	Bronze powder metallurgy
22	Absorber fix and adjus seat	POM
23	Bumper	TPU
24	Magnet	Plastic
25	Spring	Spring steel
26	Bumper	TPU
27	Back cover	Aluminum alloy

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Boyutlar / Dimensions

Adjustable absorber (WWH-K(F), WDH-K(F), WTH-K(F))



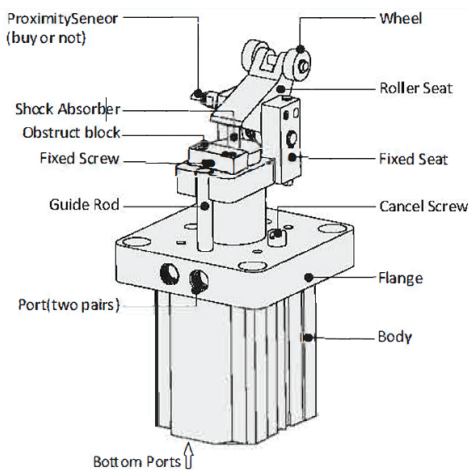
Bore size /Item	A	AB	AC	AD	AE	AF	B	C	CA
32	152.5	87	65.5	73.5	1.5	16	67	51.5	23
40	191	112	79	92.5	3.5	16	82	62	26.5
50	211	128	83	107.5	2	20	93	72	32
63	245.5	144.5	101	122	3.5	25	114	67.5	38.5
80	299.5	171.5	128	145.5	3.5	25	138	109	49

Bore size /Item	CB	D	J	K	KB	P	PA	R	S	T
32	46	20	11	6.5	53	1/8"	16	12	18.5	28
40	53	25	11	6.5	65	1/8"	16	20	21	26
50	64	32	14	9	73	1/8"	18	20	26	24
63	77	40	18	11	90	1/4"	24	20	30	24
80	98	50	20	13	110	1/4"	30	25	37	23

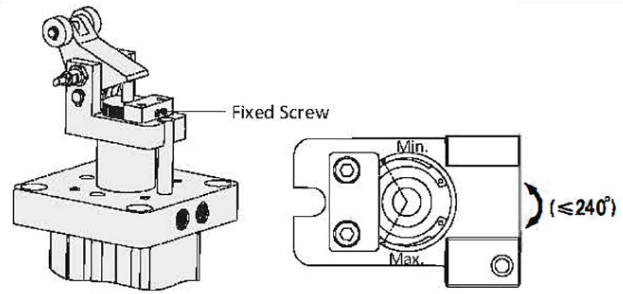
Note: The type with magnet and the type without magnet have the same dimension.
The type with self-lock and the type without self-lock have the same dimension.

Kurulum ve uygulama / Installation and application

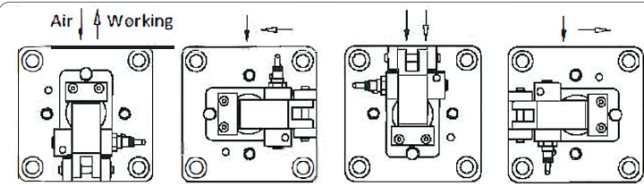
1. Function & Operating Manual



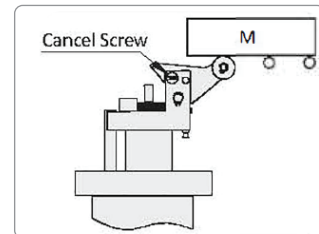
- Adjustment of Shock Absorber
 - The Shock Absorber had been adjusted before the cylinder finished.
 - The client can adjust it if necessary.
 - The steps are as following.
 - Loose the fixed screw.
 - Turn the Shock Absorber to adjust the cushion ability.
 - Fasten the fixed screw.



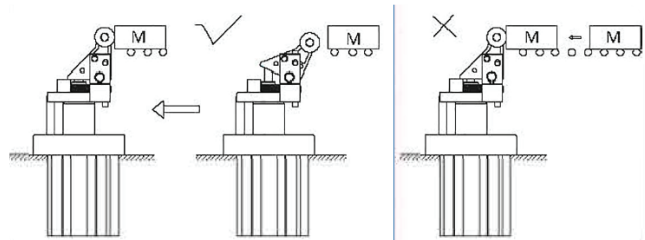
3. Multi-working position
Even the flange is fixed, just adjust the mounting position of guide rod will be changed the working direction of the stopper cylinder.



4. Working Forbidden
- This function is used to cancel the stop action of the cylinder, and make the work piece pass easy.
 - The steps are as following.
 - Screw off the cancel screw from the flange.
 - Put the roller seat down.
 - 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
- When the shock absorber is impacted deeply, added impact energy must be avoided. The cylinder without shock absorber cannot be impacted by load, otherwise mechanical failure may be caused.
 - 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 shocker absorber. in order to keep the work pi ece steady, we have developed this self-locking device.

