

## WMS Serisi Silindirler / WMS Series Cylinders



### Teknik Özellikler / Technical Specifications

- 1- Manyetik silindir rod üzerinde milsiz olarak doğrusal hareket yapmaktadır. Bunu sağlayabilmek için mobil araba ve boru içinde halka şeklinde mıknatıslarla hareket etmektedir.
- 2- Silindir üzeri mobil araba ile boru arasında toz geçirmez bir izolasyon vardır.
- 3- Kompak bir yapıya sahiptir.
- 4- Ruber tamponlar silindirin içinde ve dışında yastıklamalarla sorunsuz bir çalışma sunmaktadır.

- 1- This magnetic cylinder is basically a pneumatic rodless cylinder featuring a mobile piston fitted with annular magnets. The mobile carriage is also equipped with magnets to provide magnetic coupling (carriage/piston). The carriage slide freely along the main tube
- 2- It is dust-proof as the isolation between the carriage and piston.
- 3- It is compact in space.
- 4- The non adjustable ruber bumpers and the adjustable pneumatic cushioning on both ends of the cylinder provide the action smoothly.

### Sipariş Verme Tablosu / Ordering Code

Örnek Example	<b>WMS -</b> <input type="checkbox"/> <b>- 20 x 500 -</b> <input type="checkbox"/> <b>- P</b>					
Anlamları Meanings	Model Model	Versiyon Version	Çap Bore size	Stroke Stroke	Montaj Mounting	Diş Tipi Thread type
Açıklama Explain	Milsiz Manyetik Silindir RMS:Rodless Magnetic cylinder	Blank:Basic P:P Size version F: Fsize version			Blank:Non bracket LB:LB type FA: FA type	P:PT T:NPT G:G



Seriler Series name	WRMS, WRMSF serileri / WRMS, WRMSF Series					WRMSF serileri / WRMSF Series		
Çap Ölçüsü Bore Size (mm)	16	20	25	32	40	16	20	32
Çalışma şekli Acting	çift tesirli / Double acting type							
Akışkan Fluid	hava (40nm filtre edilmiş) / Air (to be filtered by 40um filter element)							
Çalışma basıncı Operating pressure	1.5 ~ 7 bar							
Maksimum basınç Proof pressure	10.5 bar							
Çalışma sıcaklığı Temperature range	-10 ~ 60°C							
Hız aralığı Speed range	50 - 400mm/s							
Yastıklama tipi Cushion type	Ayarlanabilir yastıklama + sabit yastıklama variable cushion + fixed cushion							
Strok toleransı Stroke tolerance (mm)	0 ~ 250 : +1.0 0		251 ~ 1000 : +1.4 0			1001 ~ 1500 : +1.8 0		
Port ölçüleri Auto switches	M5 x 0.8	1/8"			1/4"	M5 x 0.8	1/8"	
Teorik taşıma kuvveti Port size	195	290	390	710	1090	195	290	710

- 1- İşletim yüküne uygun çapta silindir seçmek. yüksek sıcaklıkta çalışabilecek silindir seçilmeli.
- 2- Silindire bağlantı elemanlarını bağlamadan önce bağlantı elemanlarının ve silindirin girişlerinin temizliğine dikkat edilmeli, silindirin içine yabancı madde kaçmamasına özen gösteriniz.
- 3- Kullanılan hava 40 nm ile filtre edilmiş ve yağlanmış olmalıdır.
- 4- Düşük sıcaklık altında silindirin içinde donmuş sıvı oluşmaması için tedbir alınmalıdır.
- 5- İlk test çalışmasında yüklemmeden önce yastıklamaları kontrol ediniz. bir hasara sebebiyet vermeyiniz.
- 6- Silindirin uzun hizmet ömrü alabilmek için yan yük kullanmayınız.
- 7- Silindirleri bir süre kullanmayacaksınız. Temiz tutulduğuna emin olun. Giriş çıkış deliklerini kapatınız.

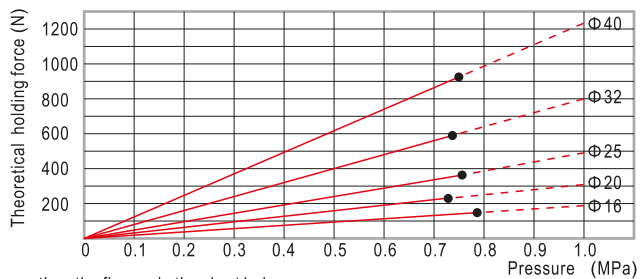
- 1- According to the operating load, the suitable cylinder bore size. Under the high-temperature environment, use the high-temperature type cylinder.
- 2- Before fitting correct fittings in, make sure the thread ports and fittings are clean. Beware of dust or fitting tap falling into the cylinder.
- 3- It is suggested to use the medium lubricated by 40um filter element.
- 4- Under the low-temperature environment, take measures to avoid frozen fluid inside system.
- 5- It must be no-loading test first and the cushion adjust to tight before using, gradually releasing. Avoid damaged.
- 6- In order for the cylinder to achieve long service life, do not side-load cylinder.
- 7- If the fittings were removed from the cylinder for a period of time, be sure to block the thread port with protecting cap to keep the dust away.

**WMS Serisi Silindirler / WMS Series Cylinders**

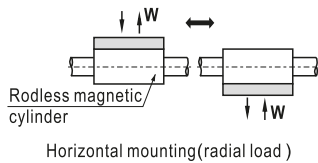
**Product Series**

Series name	Mounting type			Acting type	Bore size
	Basic	LB	FA		
WMS Series	●	●	●	Double acting	16
					20
					25
					32
					40
WMSP Series	●	●	●	Double acting	16
					20
					32
					40
WMSF Series	●	●	●	Double acting	16
					20
					25
					32
					40

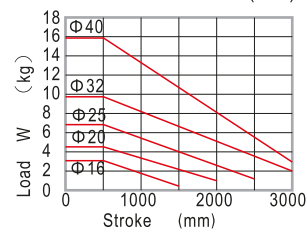
1. The maxi load to move must be less than the theoretical holding force.



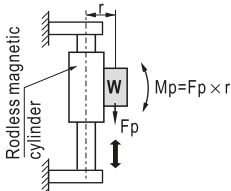
2. Horizontal mounting, the permissible radial load must be lower than the figures in the chart below.



Bore size	Max. load W
16	2.8kg
20	4.7kg
25	6.8kg
32	9.7kg
40	15.8kg

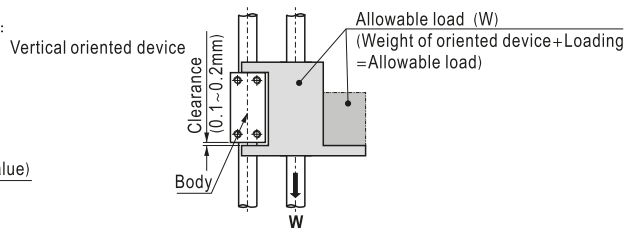
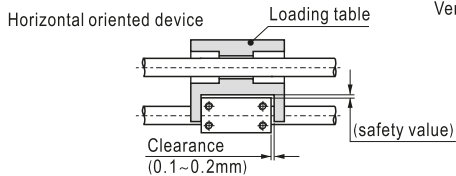


3. Vertical mounting, the allowable direction moment must be lower than the figures in the chart below, the dimensions of geometrical can be determined by the relation graph between loading and stroke.



Bore size	Allowable direction moment Mp
16	1.20kgf · m
20	2.45kgf · m
25	3.92kgf · m
32	8.83kgf · m
40	13.7kgf · m

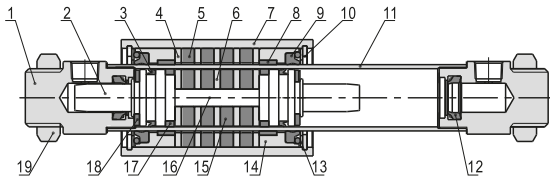
Note) Loading should be used with oriented device, example:



- Dirty substances in the pipe must be eliminated before cylinder is connected with pipeline to prevent the entrance of impurities into the cylinder.
- The medium used by cylinder shall be filtered to 40 μm or below.
- If the cylinder is dismantled and stored for a long time, pay attention to conduct anti-rust treatment to the surface. Anti-dust jam cap shall be added in air inlet and outlet ports.

**WMS Serisi Silindirler / WMS Series Cylinders**

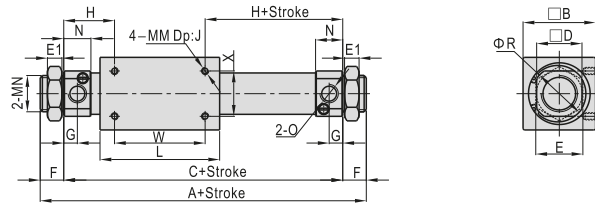
**Inner Structure and material of major parts**



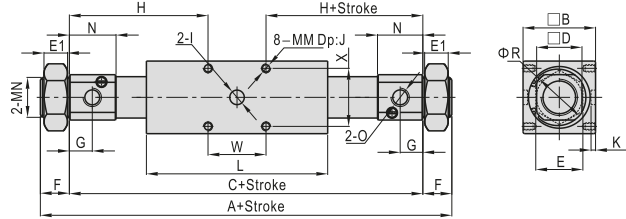
NO.	Item	Material
1	End cap	Aluminum alloy
2	Piston	Aluminum alloy
3	Piston seal	TPU
4	Magnet washer	Carbon steel
5	Magnet	Rare-earth material
6	Magnet washer	Carbon steel
7	Body	Aluminum alloy
8	Wear ring	Wear resistant material
9	Scraping dust ring	Plastics
10	C Clip	Spring steel
11	Barrel	Stainless steel
12	Cushion O-ring	TPU
13	Washer	Stainless steel
14	Cover	Aluminum alloy
15	Magnet	Rare-earth material
16	Connecting rod	Stainless steel
17	Wear ring	Wear resistant material
18	Bumper	NBR
19	Nut	Stainless steel

**Dimensions**

**WMS, WMS-P**



**WMS-F**



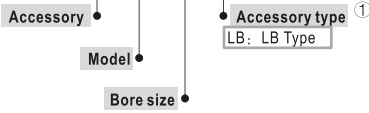
Model\Item	A	B	C	D	E	E1	F	G	H	I	J	K
WMS16	103		83		14	4	10	5.5	24	-	5	-
WMSF16	205		181		24	8	12	20	77.5	8	7.5	3
WMS20	132	35	106	20	26	8	13	7.5	28	-	5.5	-
WMSF20	264	70	212	40	26	8	14	10	37.5	-	7	-
WMS25	137		111		32	8	13	7.5	30.5	-	7.5	-
WMSF25	274	70	206	30	29	7	16	20	85	10	10	3
WMS32	156		124		32	8		8	37	-	8	-
WMSF32	312	60	133	36	32	8	16	10	41.5	-	8	-
WMS40	182	70	150	46	41	10		11	45	-	9	-
WMSF40	364	140	295	46	46	8	16	25	122	12	16	4.5

Model\Item	L	MM	MN	N	O	R	X	W
WMS16	57	M4 × 0.7	M10 × 1.0	10			19	35
WMSF16	80	M5 × 0.8	M16 × 1.5	34			26	26
WMS20	66	M4 × 0.7	M20 × 1.5	15	1/8"		25	50
WMSF20	90	M5 × 0.8	M22 × 1.5	29.5	1/8"		32	32
WMS25	70	M5 × 0.8	M26 × 1.5	15	1/8"		30	50
WMSF25	90	M6 × 1.0	M22 × 1.5	37.5	1/8"	33.5	36	36
WMS32	80		M26 × 1.5	16	1/8"			
WMSF32	110	M6 × 1.0	M30 × 1.5	48	1/8"	39.5	48	48
WMS40	92	M6 × 1.0	M32 × 2.0	22	1/4"	49.5	40	60
WMSF40	130	M8 × 1.25	M38 × 1.5	44.5	1/4"		56	50

## WMS Serisi Silindirler / WMS Series Cylinders

### Ordering Code Of Accessories

#### F-WMS 32 LB



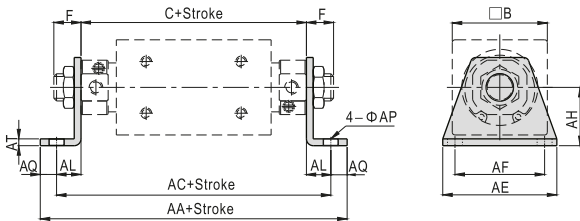
① The list accessories are for RMS cylinder. Accessories that are adaptable to other cylinder are not shown. Please refer to accessory list for selection and ordering information.

### Accessory selection

Accessories\Cylinder model	WRMS	WRMSP	WRMSF
Mounting accessories	LB	FA	

### Dimensions

#### WMS-LB, WMSP-LB

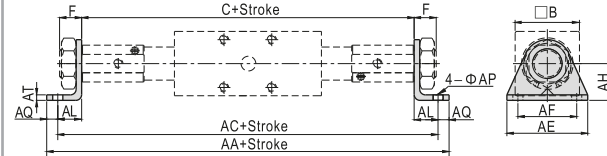


Bore size\Item	AA		AC		C		F	
	WMS	WMSP	WMS	WMSP	WMS	WMSP	WMS	WMSP
16	113	122	101	110	83	92	10	10
20	158	167	142	151	106	115	13	14
25	167	-	151	-	111	-	13	-
32	184	193	170	179	124	133	16	16
40	216	-	196	-	150	-	16	-

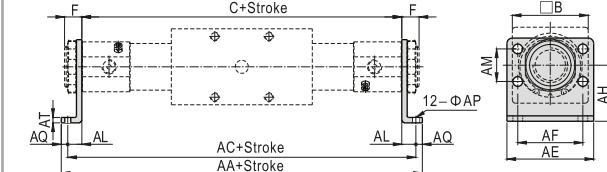
Bore size\Item	AE	AF	AH	AL	AP	AQ	AT	B
	16	42	33	20	9	5.5	6	2.5
20	43	30	23	18	6.5	8	3	40
25	54	40	26	20	6.5	8	4	46
32	62	46	33	23	7	7	4	60
40	75	55	38	23	9	10	5	70

#### WMSF-LB

Φ16~Φ25



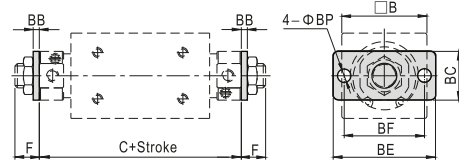
Φ32, Φ40



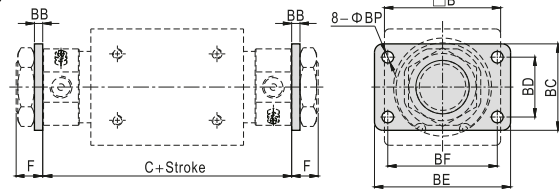
Bore size\Item	AA	AC	AE	AF	AH	AL	AM	AP	AQ	AT	B	C	F
	16	221	209	44	32	20	14	-	5.5	6	2.5	35	181
20	235	219	54	40	23	17	-	6.5	8	3	40	185	16
25	256	240	54	40	26	17	-	6.5	8	4	46	206	16
32	280	266	66	52	33	14	28	7	7	4	60	238	16
40	353	333	80	60	38	19	30	9	10	5	70	295	16

#### WMS-FA, WMSP-FA

Φ16~Φ32



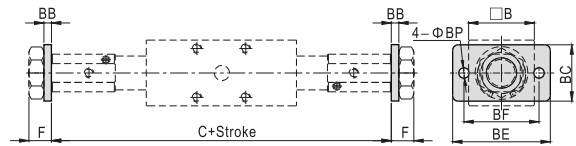
Φ40



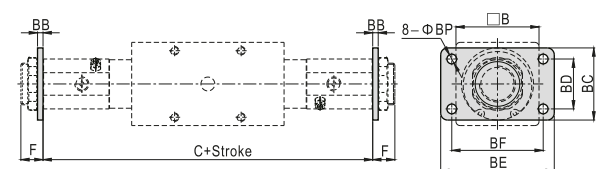
Bore size\Item	B	BB	BC	BD	BE	BF	BP	C		F	
								WRMS	WRMSP	WRMS	WRMSP
16	35	2.5	20	-	42	33	5.5	83	92	10	10
20	40	4	34	-	75	60	7	106	115	13	14
25	46	4	40	-	75	60	7	111	-	13	-
32	60	4	40	-	75	60	7	124	133	16	16
40	70	5	52	36	82	66	7	150	-	16	-

#### WMSF-FA

Φ16~Φ25



Φ32



Bore size\Item	B	BB	BC	BD	BE	BF	BP	C	F
20	40	4	38	-	64	50	6.5	185	16
25	46	4	38	-	64	50	6.5	206	16
32	60	4	50	36	84	70	6.5	238	16

Bore size\accessories	Cylinder model	Mounting accessories	
		LB	FA
16	WMS	F-WMS16LB	F-WPB12FA
	WMSP	F-WMS16LB	F-WMI12FA
	WMSF	F-WMS16LB	F-WMI12FA
20	WMS	F-WMS20LB	F-WMF20FA
	WMSP	F-WMS20LB	F-WMA20FA
	WMSF	F-WMS20LB	F-WMA20FA
25	WMS	F-WMS25LB	F-WMA25FA
	WMSP	F-WMS25LB	F-WMA20FA
	WMSF	F-WMS25LB	F-WMA20FA
32	WMS	F-WRMS32LB	F-WMF25FA
	WMSP	F-WMS32LB	F-WMF25FA
	WMSF	F-WMS32LB	F-WMF25FA
40	WMS	F-WMS40LB	F-WMF40FA
	WMSP	F-WMS40LB	F-WMF40FA
	WMSF	F-WMS40LB	-