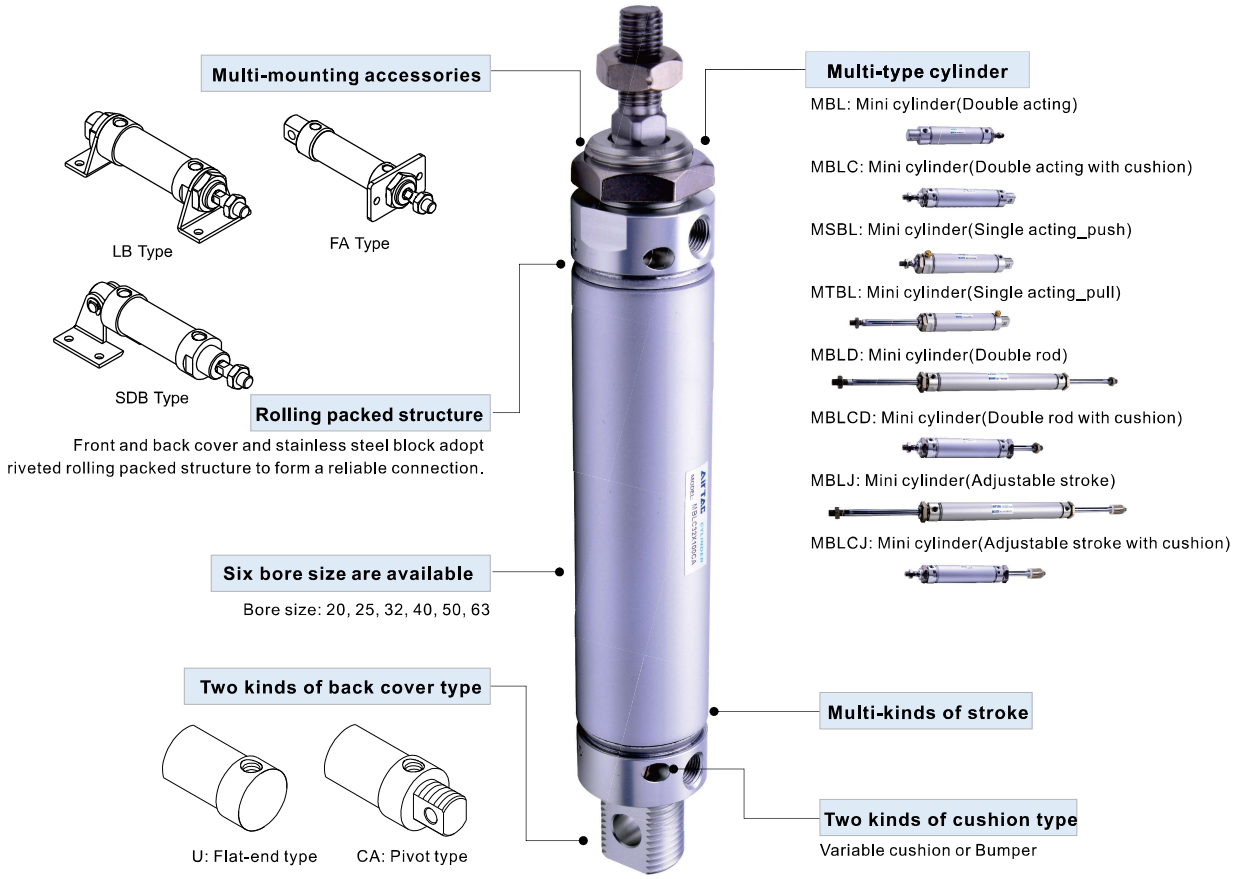
Mini cylinder(Aluminum barrel)——MBL Series

Compendium of MBL Series



Criteria for selection: Cylinder thrust

Unit : Newton(N)

Bore size	Rod size	Acting type		Pressure area(mm^2)	Operating pressure(MPa)						
					0.1	0.2	0.3	0.4	0.5	0.6	0.7
20	8	Single acting	Push side	314.0	-	15.7	47.1	78.5	109.9	141.3	172.7
			Pull side	263.8	-	5.7	32.0	58.4	84.8	111.2	137.5
		Double acting	Push side	314.0	31.4	62.8	94.2	125.6	157.0	188.4	219.8
			Pull side	263.8	26.4	52.8	79.1	105.5	131.9	158.3	184.7
25	10	Single acting	Push side	490.6	-	24.6	73.7	122.8	171.8	220.9	269.9
			Pull side	412.1	-	8.9	50.1	91.4	132.6	173.8	215.0
		Double acting	Push side	490.6	49.1	98.1	147.2	196.2	245.3	294.4	343.4
			Pull side	412.1	41.2	82.4	123.6	164.8	206.1	247.3	288.5
32	12	Single acting	Push side	804.3	-	40.2	120.6	200.9	281.3	361.7	442.1
			Pull side	691.2	-	17.6	86.6	155.7	224.8	293.9	363.0
		Double acting	Push side	804.3	80.4	160.9	241.3	321.7	402.2	482.6	563.0
			Pull side	691.2	69.1	138.2	207.4	276.5	345.6	414.7	483.8
40	16	Single acting	Push side	1256.6	-	62.8	188.4	314.0	439.6	565.2	690.8
			Pull side	1055.6	-	22.6	128.1	233.6	339.1	444.6	550.1
		Double acting	Push side	1256.6	125.7	251.3	377.0	502.6	628.3	754.0	879.6
			Pull side	1055.6	105.6	211.1	316.7	422.2	527.8	633.4	738.9
50	16	Double acting	Push side	1962.5	196.3	392.5	588.8	785.0	981.3	1177.5	1373.8
			Pull side	1761.5	176.2	352.3	528.5	704.6	880.8	1056.9	1233.1
63	16	Double acting	Push side	3115.7	311.6	623.1	934.7	1246.3	1557.9	1869.4	2181.0
			Pull side	2914.7	291.5	582.9	874.4	1165.9	1457.4	1748.8	2040.3

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 to prevent the entrance of particles into the cylinder.
5. The medium used by cylinder shall be filtered to 40μm or below.
6. Anti-freezing measure shall be adopted under low temperature environment to prevent moisture freezing.
7. To avoid side load, otherwise, piston rod will be bent and deformed and damage the thread at the end of the rod. Single-acting type can not be added in return;
8. If the cylinder is dismantled and stored for a long time, please to conduct anti-rust treatment to the surface. Anti-dust caps shall be added in air inlet and outlet ports. The front and back cover can not be dismantled, which shall be especially noticed.

Mini cylinder(Aluminum barrel)

MBL Series

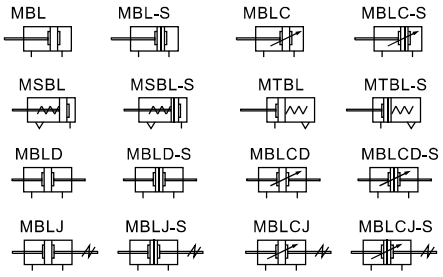


Specification

Bore size(mm)		20	25	32	40	50	63
Acting type	MSBL/MTBL	Single acting				-	
	MBL/MBLD/MBLJ	Double acting					
	MBLC/MBLCD/MBLCJ	Double acting with cushion					
Fluid		Air(to be filtered by 40μm filter element)					
Operating pressure	Double acting	0.15~1.0MPa(22~145psi)(1.5~10.0bar)					
	Single acting	0.2~1.0MPa(28~145psi)(2.0~10.0bar)				-	
Proof pressure		1.5MPa(215psi)(15bar)					
Temperature ℃		-20~70					
Speed range mm/s		Double acting : 30~800 Single acting : 50~800					
Stroke tolerance		$0\sim150\ ^{+1.0}_{0}$ $>150\ ^{+1.5}_{0}$					
Cushion type		MBLC, MBLCD, MBLCJ: Adjustable cushion; Others: Bumper					
Port size [Note1]		1/8"			1/4"		

[Note1] PT thread, G thread thread and NPT thread are available.
Add) Refer to P362 for detail of sensor switch.

Symbol



Stroke

Bore size (mm)		Standard stroke (mm)	Max.std stroke	Max. stroke
MBL MBLC	20/25	10 15 20 25 30 40 50 60 75 80 100 125 150 160 175 200 250 300 350 400 450 500	500	800
	32/40	10 15 20 25 30 40 50 60 75 80 100 125 150 160 175 200 250 300 350 400 450 500	500	800
	50/63	10 15 20 25 30 40 50 60 75 80 100 125 150 160 175 200 250 300 350 400 450 500	500	800
MBLD MBLJ MBLCD MBLCJ	20/25	10 15 20 25 30 40 50 60 75 80 100 125 150 160 175 200 250 300	300	-
	32/40	10 15 20 25 30 40 50 60 75 80 100 125 150 160 175 200 250 300 350 400 450 500	500	-
	50/63	10 15 20 25 30 40 50 60 75 80 100 125 150 160 175 200 250 300 350 400 450 500	500	-
MSBL	20/25	10 15 20 25 30 40 50 60 75 80 100 125 150	-	-
	32/40	10 15 20 25 30 40 50 60 75 80 100 125 150	-	-
MTBL	20/25	10 15 20 25 30 40 50 60 75 80 100	-	-
	32/40	10 15 20 25 30 40 50 60 75 80 100	-	-

[Note] Consult us for non-standard stroke.

Product feature

1. Manufactured by our enterprise.
2. Riveted structure is adopted to connect front and bak cover and cylinder tube to make it credibility.
3. Piston adopts heterogeneous two-way seal structure. It has compact size and has the function of grease reservation.
4. There are several modes of back cover, which makes the installation of cylinder more convenient.
5. There are cylinders and mounting accessories with several specifications for your choice.

Ordering code

MBL 20 ×50 S CA □ □
MBLD 20 ×50 S □ □
MBLJ 20 ×50 -20 S □ □

① ② ③ ④ ⑤ ⑥ ⑦ ⑧

①Model	②Bore size	③Stroke	④Adjustable Stroke	⑤Magnet	⑥Back cover	⑦Mounting type [Note1]	⑧Thread type
MBL: Mini cylinder(Double acting)	20 25 32 40 50 63	Refer to stroke table for details	No this code	Blank: Without magnet S: With magnet	CA: Pivot type U: Flat-end type	Blank: No accessories FA: FA type SDB: SDB type LB: LB type	Blank: PT G: G T: NPT
MBLC: Mini cylinder(Double acting with cushion)							
MSBL: Mini cylinder(Single acting_push)	20 25 32 40						
MTBL: Mini cylinder(Single acting_pull)							
MBLD: Mini cylinder(Double rod)	20 25 32 40 50 63				No this code	Blank: No accessories FA: FA type LB: LB type	
MBLCD: Mini cylinder(Double rod with cushion)							
MBLJ: Mini cylinder(Adjustable stroke)			10 20 30 40 50 75 100				
MBLCJ: Mini cylinder(Adjustable stroke with cushion)							

[Note1] Please refer to page 98~99 for accessory parts.