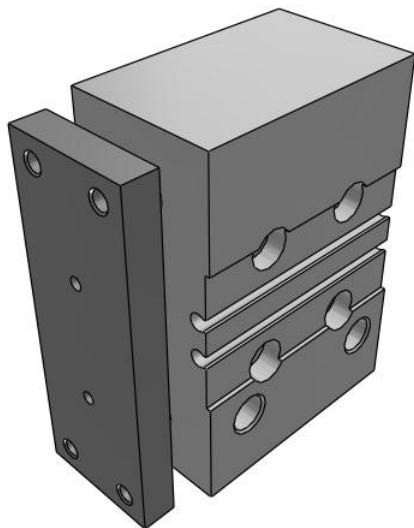




MGP-Z, Compact Guide Cylinder MGPM20TN-20Z

Datasheet

At SMC we have 'rolled' out an upgrade of our MGP Series guide cylinder, which is now smaller and boasts new features. The new MGP-Z is testament to our commitment to invest in ongoing research and development to refine and improve the performance and functionality of SMC products. The MGP-Z is up to 17% lighter and offers space savings thanks to shorter guide rods, without impacting on the variety of functions, robustness and quality performance of the original series. Another recent key development feature is that round auto switches can now be fitted directly onto the MGP-Z cylinder, removing the need for mounting brackets and reducing labour costs. The common issue of incorrectly positioned auto switches is also mitigated when using SMC's two colour indication solid state auto switch, D-M9*W. The MGP-Z has many standard feature options including three types of bearings, four mount designs, piping from two directions and offers copper and fluorine free versions. Suitable for many industries including General Automation and Car, it has several applications including smooth pusher and lifter, lateral load by acting as a stopper where shock is applied, or minimising plate displacement.



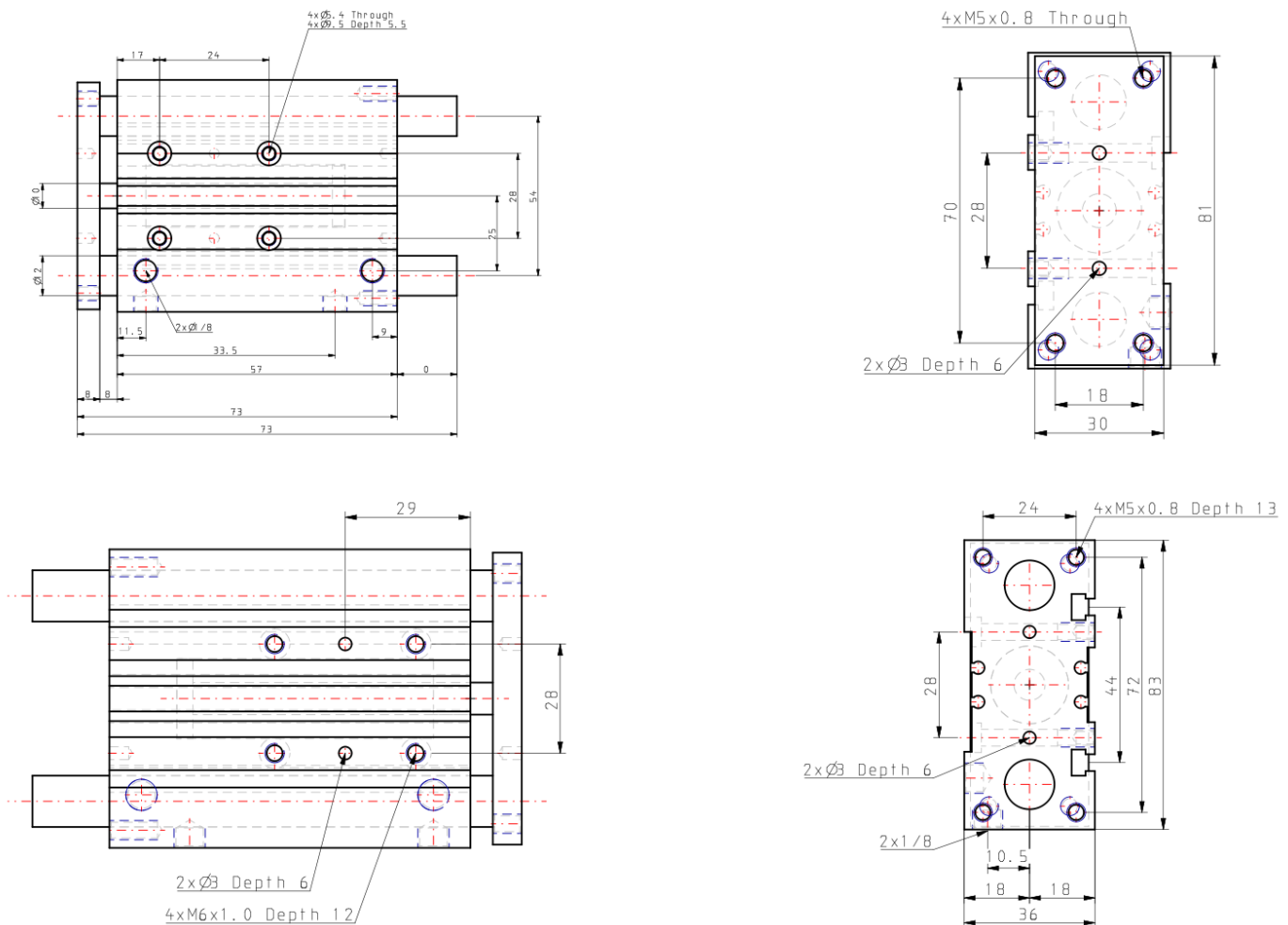
Double-acting, single-rod cylinder

Standard specifications

Bearing Type	M (Slide Bearing)
Bore Size	Ø20 mm
Port Thread Type	TN [NPT]
Lube-retainer	Without Stable Lubrication Function
Stroke	20
Auto Switch	No Switch
Lead Wire Length	0.5m [Or None in the Case of No Switch]
Number of Auto Switches	2 pcs. [Or None in Case of No Switch]
Change of Guide Rod End Shape	None
Temperature Resistance	None
Low Speed	None
Fluororubber Seal	None
Grease for Food Processing Equipment	None

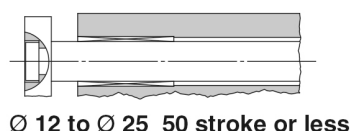
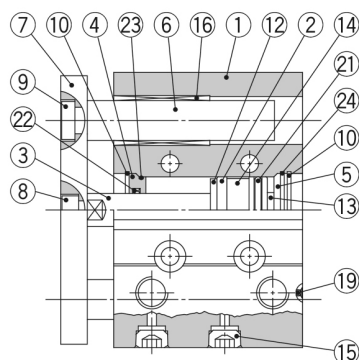
Pressure medium	Compressed air
Maximum temperature of pressure medium	60 °C
Minimum temperature of pressure medium	-10 °C (No freezing)
Maximum operating pressure	1.0 MPa
Minimum operating pressure	0.1 MPa
Proof pressure	1.5 MPa
Maximum ambient temperature	60 °C
Minimum ambient temperature	-10 °C (No freezing)
Numero of pneumatic connections	4 pcs.
Pneumatic input connection	NPT 1 /8-27
Pneumatic exhaust connection	NPT 1 /8-27
Mode of operation of drive	Double acting
Theoretical cylinder force, advance stroke (at 0.5 MPa)	157 N
Theoretical cylinder force, return stroke (at 0.5 MPa)	118 N
Maximum piston speed	500 mm/s
Type of cushioning	Rubber bumper on both ends
Non-rotating accuracy of plate	± 0.06 °
Weight	0.590 Kg

Dimensions

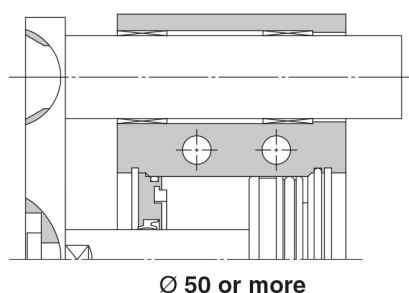
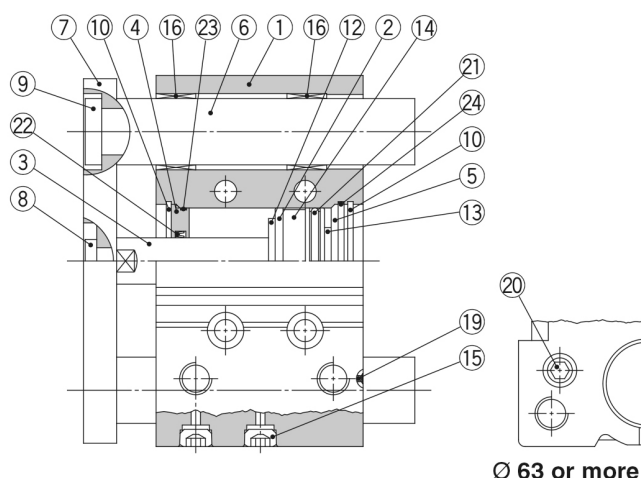


Constructions

MGPM12 to 25



MGPM32 to 100



Component Parts

No.	Description	Material	Note
1	Body	Aluminium alloy	Hard anodised
2	Piston	Aluminium alloy	
3	Piston rod	Stainless steel	Ø 12 to Ø 25
		Carbon steel	Ø 32 to Ø 100 Hard chrome plating
4	Collar	Aluminium alloy	Chromated
5	Head cover	Aluminium alloy	Ø 12 to Ø 63 Chromated Ø 80, Ø 100 Painted
6	Guide rod	Carbon steel	Hard chrome plating
7	Plate	Carbon steel	Nickel plating
8	Plate mounting bolt	Carbon steel	Nickel plating
9	Guide bolt	Carbon steel	Nickel plating
10	Retaining ring	Carbon tool steel	Phosphate coated
11	Retaining ring	Carbon tool steel	Phosphate coated
12	Bumper A	Urethane	
13	Bumper B	Urethane	
14	Magnet	—	
15	Plug	Carbon steel	Ø 12, Ø 16 Ø 20 to Ø 100 Nickel plating
	Hexagon socket head plug		
16	Slide bearing	Bearing alloy	

※: A felt is not installed on the slide bearing.

Component Parts

No.	Description	Material	Note
17	Ball bushing		
18	Spacer	Aluminium alloy	
19	Steel ball	Carbon steel	Ø 12 to Ø 50
20	Plug	Carbon steel	Ø 63 to Ø 100 Nickel plating
21*	Piston seal	NBR	
22*	Rod seal	NBR	
23*	Gasket A	NBR	
24*	Gasket B	NBR	

Replacement Parts/Seal Kit

Bore size [mm]	Kit no.	Contents	Bore size [mm]	Kit no.	Contents
12	MGP12-Z-PS	Set of nos.	40	MGP40-Z-PS	Set of nos.
16	MGP16-Z-PS	above	50	MGP50-Z-PS	above
20	MGP20-Z-PS	21, 22, 23, 24	63	MGP63-Z-PS	21, 22, 23, 24
25	MGP25-Z-PS	21, 22, 23, 24	80	MGP80-Z-PS	21, 22, 23, 24
32	MGP32-Z-PS	21, 22, 23, 24	100	MGP100-Z-PS	21, 22, 23, 24

※: Seal kit includes 21 to 24. Order the seal kit, based on each bore size.

※: Since the seal kit does not include a grease pack, order it separately.

Grease pack part number: GR-S-010 (10 g)

Additional information

Catalogue

[MGP-Z-Dd_EU.pdf](#)

Operation manuals

[om_mgp-z_mgpx-om0047pen-b.pdf](#)