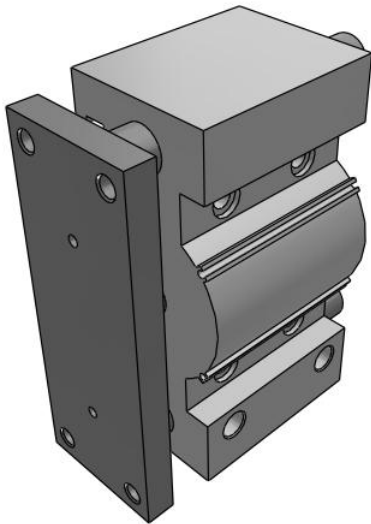
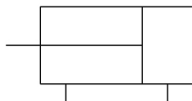




## MGP-Z, Compact Guide Cylinder MGPA80-50Z

### 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.



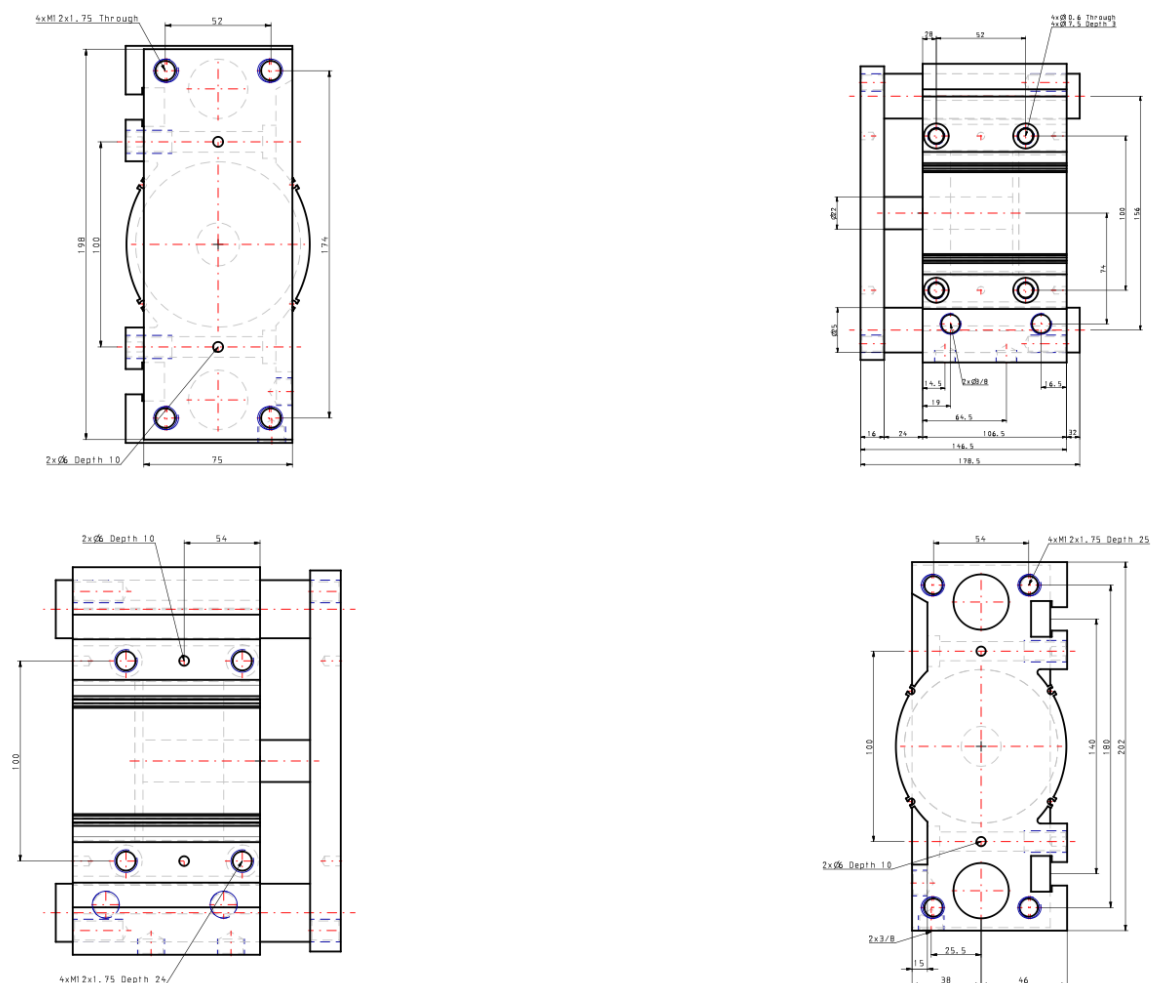
Double-acting, single-rod cylinder

### Standard specifications

|                                      |                                         |
|--------------------------------------|-----------------------------------------|
| Bearing Type                         | A (High precision ball bushing bearing) |
| Bore Size                            | Ø80 mm                                  |
| Port Thread Type                     | Rc [Or M5x0.8 for 12, 16 Bores]         |
| Lube-retainer                        | Without Stable Lubrication Function     |
| Stroke                               | 50                                      |
| 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                                    |

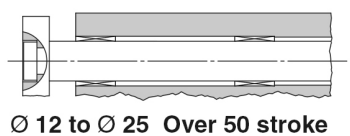
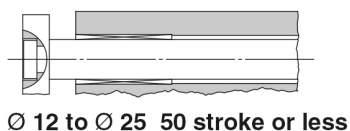
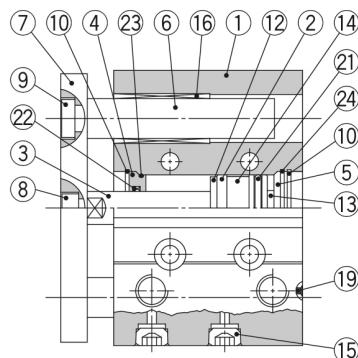
|                                                         |                            |
|---------------------------------------------------------|----------------------------|
| Pressure medium                                         | Compressed air             |
| Maximum temperature of pressure 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                              | R 3/8                      |
| Pneumatic exhaust connection                            | R 3/8                      |
| Mode of operation of drive                              | Double acting              |
| Theoretical cylinder force, advance stroke (at 0.5 MPa) | 2513 N                     |
| Theoretical cylinder force, return stroke (at 0.5 MPa)  | 2323 N                     |
| Maximum piston speed                                    | 400 mm/s                   |
| Type of cushioning                                      | Rubber bumper on both ends |
| Non-rotating accuracy of plate                          | ± 0.01 °                   |
| Weight                                                  | 6.290 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<br>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<br>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 | above          | 63             | MGP63-Z-PS  | above          |
| 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](#)