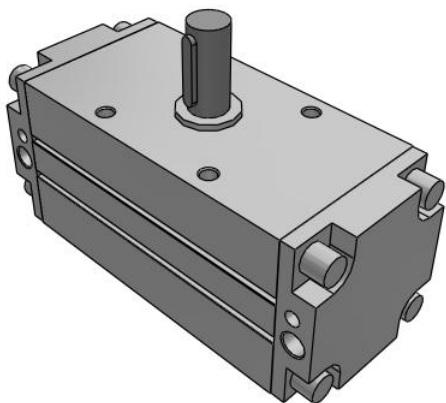


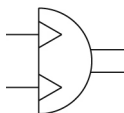


## C(D)RA1-Z\*30-100, Rotary Actuator, Rack & Pinion, Standard CDRA1BS100TF-100CZ

Datasheet

### General series information

At SMC we are continuing to focus on optimising the performance and functionality of our products by upgrading our rack and pinion type rotary actuator. The CRA1-Z Series allows for the cushion valve to be adjusted more easily, is lighter in weight and allows greater flexibility to the auto switch mounting. The cushion valve is indented, features a retaining ring that prevents a drop out and can be adjusted by simply using a hexagon wrench. The CRA1-Z is also interchangeable with the current CRA1 model as the shaft diameter, exterior and mounting dimensions are the same. Thanks to the port, cushion valve and auto switch positioned on the same surface, the CRA1-Z Series is easy to manipulate. Also the round type auto switches can be mounted from the front onto two surfaces and positioned anywhere on the mounting groove at any time. Ideal to meet the demands of several applications, such as robotics and material handling, the CRA1-Z is available in eight different shaft type variations and four rotating angles as standard.

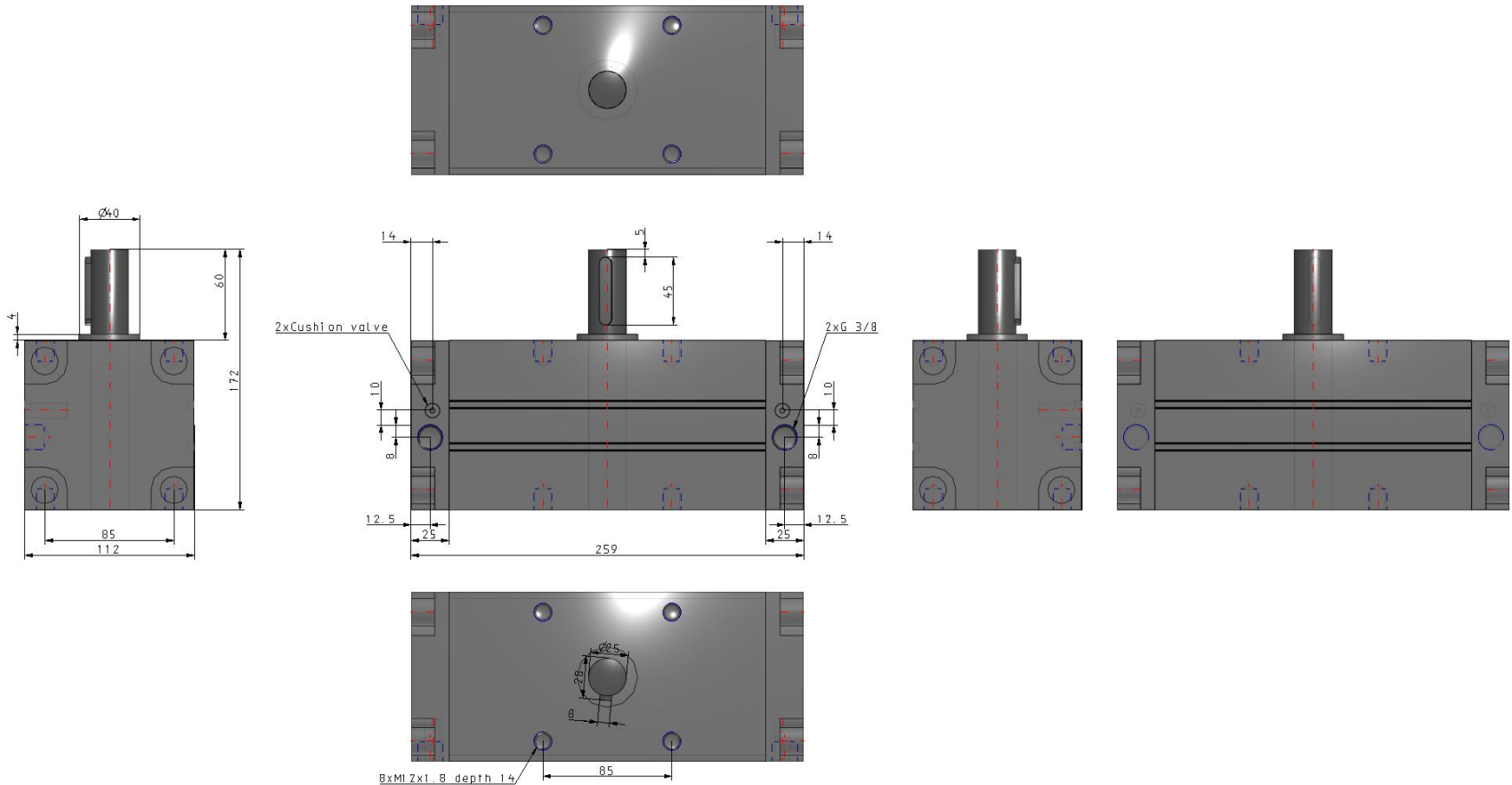


*Semi-rotary actuator, double acting*

### Standard specifications

|                                        |                                          |
|----------------------------------------|------------------------------------------|
| Magnet                                 | D (Built-in)                             |
| Mounting                               | B (Basic)                                |
| Shaft Type                             | S (Single Shaft)                         |
| Angle Adjusting Unit                   | None                                     |
| Type                                   | Pneumatic                                |
| Size                                   | 100 mm                                   |
| Port Thread                            | TF (G)                                   |
| Rotation Angle                         | 100°                                     |
| Type of Cushioning                     | C (Air Cushion)                          |
| Auto Switch                            | No Switch                                |
| Lead Wire or Pre-wired Connector       | 0.5 m (Or None in the Case of No Switch) |
| Number                                 | 2 pcs. (Or None in Case of No Switch)    |
| Pressure medium                        | Compressed air (non-lube)                |
| Maximum temperature of pressure medium | 60 °C                                    |

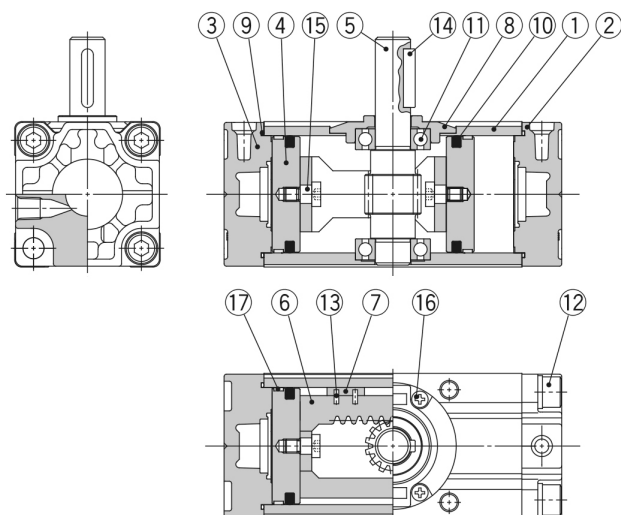
|                                        |               |
|----------------------------------------|---------------|
| Minimum temperature of pressure medium | 0 °C          |
| Maximum operating pressure             | 1.0 MPa       |
| Minimum operating pressure             | 0.1 MPa       |
| Maximum ambient temperature            | 60 °C         |
| Minimum ambient temperature            | 0 °C          |
| Number of pneumatic connections        | 2 pcs.        |
| Pneumatic input connection             | G 3/8         |
| Mode of operation of drive             | Double acting |
| Weight                                 | 8.200 Kg      |



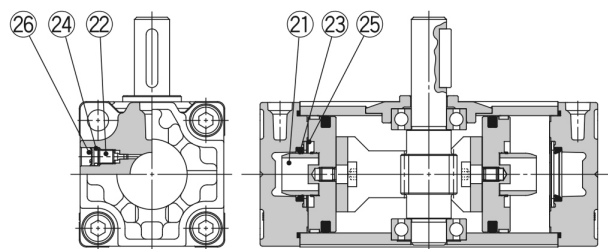
## Constructions

### Construction: Size 50 to 100

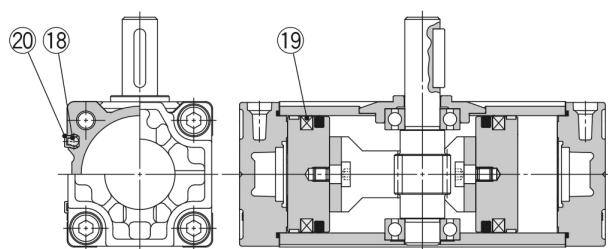
#### Without air cushion



#### With air cushion



#### Without air cushion With auto switch



### Component Parts

| No. | Description                               | Material                         | Note             |
|-----|-------------------------------------------|----------------------------------|------------------|
| 1   | Body                                      | Aluminium alloy                  | Anodised         |
| 2   | Right cover                               | Aluminium alloy                  | Metallic coating |
| 3   | Left cover                                | Aluminium alloy                  | Metallic coating |
| 4   | Piston                                    | Aluminium alloy                  |                  |
| 5   | Shaft                                     | Alloy steel                      |                  |
| 6   | Rack                                      | Carbon steel                     | Nitrided         |
| 7   | Slider                                    | Resin                            |                  |
| 8   | Bearing retainer                          | Aluminium alloy                  | Chromated        |
| 9   | Tube gasket                               | NBR                              |                  |
| 10  | Piston seal                               | NBR                              |                  |
| 11  | Bearing                                   | High carbon chrome bearing steel |                  |
| 12  | Hexagon socket head cap screw with washer | Alloy steel                      | Zinc chromated   |
| 13  | Spring pin                                | Steel                            | Zinc chromated   |
| 14  | Parallel key                              | Carbon steel                     |                  |
| 15  | Connecting screw                          | Carbon steel                     | Zinc chromated   |
| 16  | Cross-recessed pan head tapping screw     | Steel                            | Zinc chromated   |
| 17  | Wear ring                                 | Resin                            |                  |
| 18  | Auto switch                               | —                                |                  |
| 19  | Magnet                                    | —                                |                  |
| 20  | Switch spacer                             | Resin                            |                  |
| 21  | Cushion ring                              | Aluminium alloy                  | Anodised         |
| 22  | Cushion valve                             | Steel                            | Zinc chromated   |
| 23  | Cushion seal                              | Urethane                         |                  |
| 24  | O-ring                                    | NBR                              |                  |
| 25  | Seal retainer                             | Steel                            |                  |
| 26  | Retaining ring                            | Steel                            |                  |

## Additional information

Catalogue

[CRA1-C-Z\\_EU.pdf](#)

Operation manuals

[OM\\_CRA1-Z\\_OM00006EN-E.pdf](#)