

# Guided drive DFM-20-80-P-A-KF-F1A

Part number: 8118855

FESTO



[PDF](#) General operating condition

## Data sheet

| Feature                                                  | Value                                                                                                                                                                                                                          |
|----------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Distance from centre of gravity of load to yoke plate xs | 50 mm                                                                                                                                                                                                                          |
| Stroke                                                   | 80 mm                                                                                                                                                                                                                          |
| Piston diameter                                          | 20 mm                                                                                                                                                                                                                          |
| Operating mode, drive unit                               | Yoke                                                                                                                                                                                                                           |
| Cushioning                                               | Elastic cushioning rings/plates at both ends                                                                                                                                                                                   |
| Mounting position                                        | optional                                                                                                                                                                                                                       |
| Guide                                                    | Recirculating ball bearing guide                                                                                                                                                                                               |
| Design                                                   | Guidance                                                                                                                                                                                                                       |
| Position detection                                       | Via proximity switch                                                                                                                                                                                                           |
| Symbol                                                   | 00991737                                                                                                                                                                                                                       |
| Variants                                                 | Metals with copper, zinc or nickel by mass as main constituent are excluded from use. Exceptions are nickel in steel, chemically nickel-plated surfaces, printed circuit boards, cables, electrical plug connectors and coils. |
| Operating pressure                                       | 0.2 MPa ... 1 MPa                                                                                                                                                                                                              |
| Operating pressure                                       | 2 bar ... 10 bar                                                                                                                                                                                                               |
| Max. speed                                               | 0.8 m/s                                                                                                                                                                                                                        |
| Mode of operation                                        | Double-acting                                                                                                                                                                                                                  |
| Operating medium                                         | Compressed air to ISO 8573-1:2010[7:4:4]                                                                                                                                                                                       |
| Note on operating and pilot medium                       | Lubricated operation possible (in which case lubricated operation will always be required)                                                                                                                                     |
| Corrosion resistance class CRC                           | 0 - No corrosion stress                                                                                                                                                                                                        |
| LABS (PWIS) conformity                                   | VDMA24364-B1/B2-L                                                                                                                                                                                                              |
| Suitability for the production of Li-ion batteries       | Suitable for battery production according to the Festo internal definition of the degree of severity F1A with restrictions regarding the use of Cu/Zn/Ni                                                                       |
| Cleanroom class                                          | Class 6 according to ISO 14644-1                                                                                                                                                                                               |
| Ambient temperature                                      | -5 °C ... 60 °C                                                                                                                                                                                                                |
| Impact energy in end positions                           | 0.2 J                                                                                                                                                                                                                          |
| Max. force Fy                                            | 817 N                                                                                                                                                                                                                          |
| Max. force Fy static                                     | 1020 N                                                                                                                                                                                                                         |
| Max. force Fz                                            | 817 N                                                                                                                                                                                                                          |
| Max. force Fz static                                     | 1020 N                                                                                                                                                                                                                         |
| Max. moment Mx                                           | 23.69 Nm                                                                                                                                                                                                                       |
| Max. torque Mx static                                    | 29.58 Nm                                                                                                                                                                                                                       |
| Max. moment My                                           | 15.11 Nm                                                                                                                                                                                                                       |
| Max. torque My static                                    | 18.87 Nm                                                                                                                                                                                                                       |

| Feature                                                          | Value                      |
|------------------------------------------------------------------|----------------------------|
| Max. moment Mz                                                   | 15.11 Nm                   |
| Max. torque Mz static                                            | 18.87 Nm                   |
| Max. permissible torque load Mx as a function of stroke          | 3.36 Nm                    |
| Max. effective load dependent upon stroke at defined distance xs | 86 N                       |
| Theoretical force at 0.6 MPa (6 bar, 87 psi), return stroke      | 141 N                      |
| Theoretical force at 0.6 MPa (6 bar, 87 psi), advance stroke     | 188 N                      |
| Moving mass                                                      | 584 g                      |
| Product weight                                                   | 1310 g                     |
| Centre of gravity of moving mass as a function of stroke         | 50.9 mm                    |
| alternative connections                                          | See product drawing        |
| Pneumatic connection                                             | M5                         |
| Note on materials                                                | RoHS-compliant             |
| Material cover                                                   | Wrought aluminium alloy    |
| Material seals                                                   | NBR                        |
| Material housing                                                 | Wrought aluminium alloy    |
| Material piston rod                                              | High-alloy stainless steel |