

# Guided drive DFM-20-50-P-A-KF-F1A

Part number: 8118854

FESTO



[PDF](#) General operating condition

## Data sheet

| Feature                                                   | Value                                                                                                                                                                                                                          |
|-----------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Distance of centre of gravity of payload to yoke plate xs | 50 mm                                                                                                                                                                                                                          |
| Stroke                                                    | 50 mm                                                                                                                                                                                                                          |
| Piston diameter                                           | 20 mm                                                                                                                                                                                                                          |
| Drive unit operating mode                                 | Yoke                                                                                                                                                                                                                           |
| Cushioning                                                | Elastic cushioning rings/pads at both ends                                                                                                                                                                                     |
| Mounting position                                         | Any                                                                                                                                                                                                                            |
| Guide                                                     | Recirculating ball bearing guide                                                                                                                                                                                               |
| Structural design                                         | Guide                                                                                                                                                                                                                          |
| Position sensing                                          | For proximity sensor                                                                                                                                                                                                           |
| 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 as per ISO 8573-1:2010 [7:4:4]                                                                                                                                                                                  |
| Information on operating and pilot media                  | Operation with oil lubrication possible (required for further use)                                                                                                                                                             |
| 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 with reduced Cu/Zn/Ni values (F1a)                                                                                                                                                             |
| Cleanroom class                                           | Class 6 according to ISO 14644-1                                                                                                                                                                                               |
| Ambient temperature                                       | -5 °C ... 60 °C                                                                                                                                                                                                                |
| Impact energy in the 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. torque Mx                                            | 23.69 Nm                                                                                                                                                                                                                       |
| Max. static moment Mx                                     | 29.58 Nm                                                                                                                                                                                                                       |
| Max. torque My                                            | 15.11 Nm                                                                                                                                                                                                                       |
| Max. static moment My                                     | 18.87 Nm                                                                                                                                                                                                                       |
| Max. torque Mz                                            | 15.11 Nm                                                                                                                                                                                                                       |
| Max. static moment Mz                                     | 18.87 Nm                                                                                                                                                                                                                       |

| Feature                                                          | Value                      |
|------------------------------------------------------------------|----------------------------|
| Max. permissible torque load Mx as a function of the stroke      | 4.23 Nm                    |
| Max. payload as a function of the stroke at defined distance xs  | 102 N                      |
| Theoretical force at 6 bar, retracting                           | 141 N                      |
| Theoretical force at 6 bar, advancing                            | 188 N                      |
| Moving mass                                                      | 512 g                      |
| Product weight                                                   | 1064 g                     |
| Center of gravity of the moving mass as a function of the stroke | 38.5 mm                    |
| Alternative connections                                          | See product drawing        |
| Pneumatic connection                                             | M5                         |
| Note on materials                                                | RoHS-compliant             |
| Cover material                                                   | Wrought aluminum alloy     |
| Seals material                                                   | NBR                        |
| Housing material                                                 | Wrought aluminum alloy     |
| Piston rod material                                              | High-alloy stainless steel |