

## Guided drives DFM-N-B, NPT

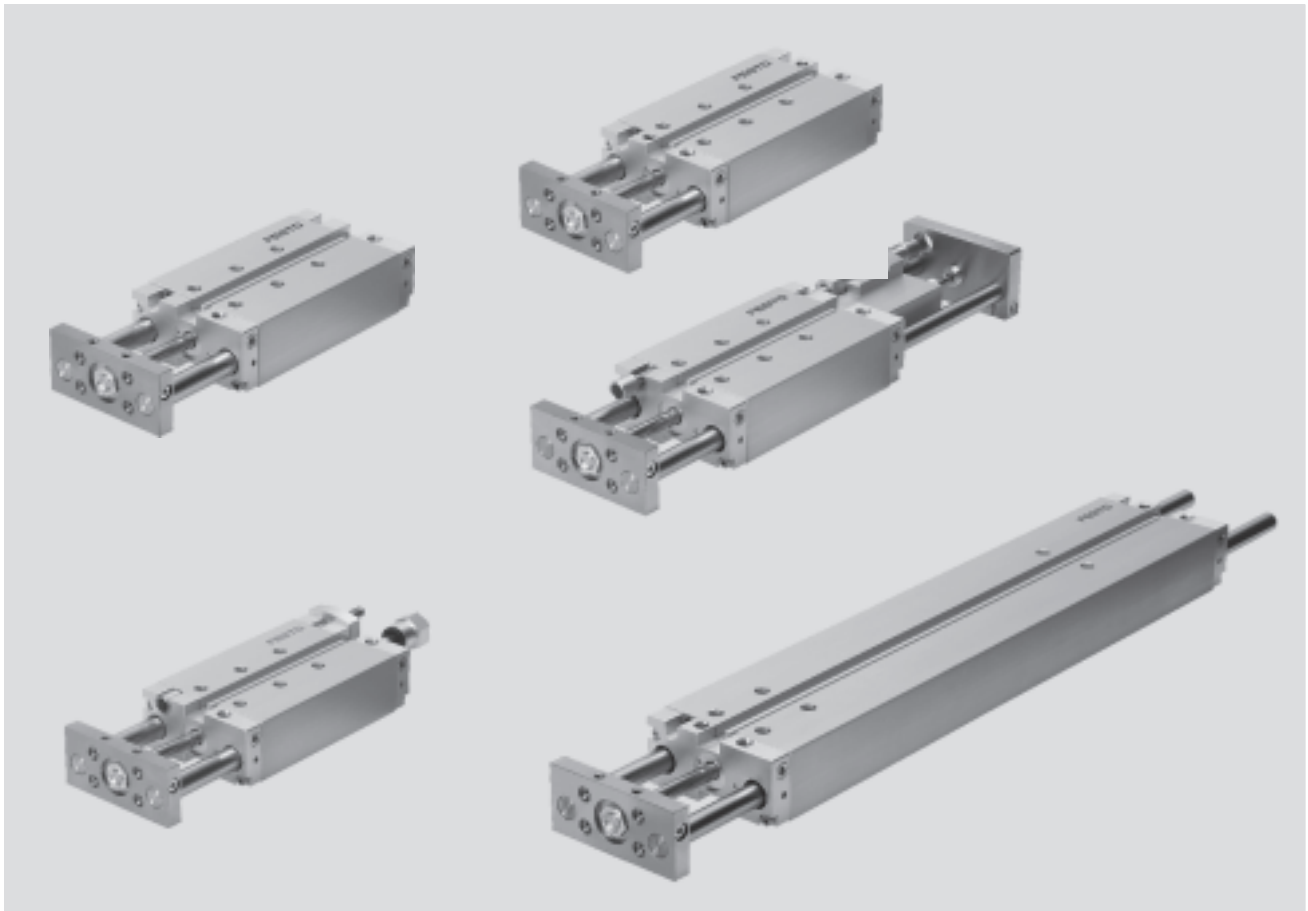
**FESTO**



## Guided drives DFM-N-B, NPT

Key features

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### Drive and guide unit in a single housing

- Minimal space requirement
- Minimal assembly time
- Choice of supply ports
- Wide range of mounting options

### Sturdy and precise

- Good protection against torsion
- Rigid construction
- Maintenance-free

### High resistance to torques and lateral forces

- With plain-bearing guide:  
It offers high rigidity thanks to its guide rods with large diameter and four plain-bearing bushes
- With recirculating ball bearing guide:  
For applications involving torque loads

### Wide choice of variants

- With heat-resistant seals up to 120 °C
- With adjustable end position
- With shock absorbers
- With pneumatic end-position cushioning
- Long-stroke versions

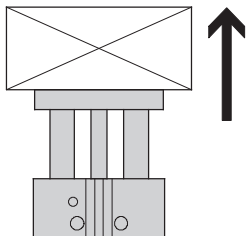
# Guided drives DFM-N-B, NPT

Key features

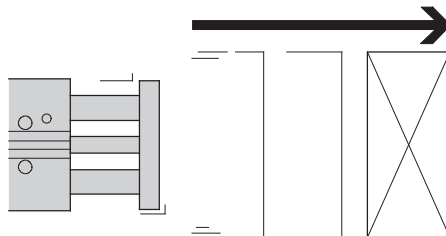
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## Use in conveyor systems

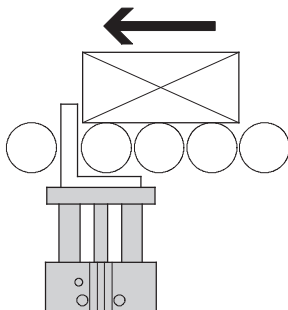
### Lifting



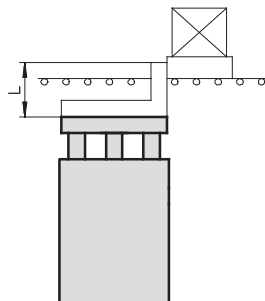
### Pushing



### Stopping



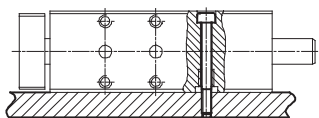
### Stopping via stop bracket



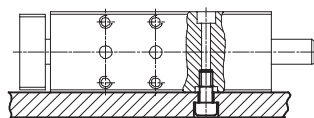
It is recommended to fit a buffer on the workpiece carrier.

## Mounting options

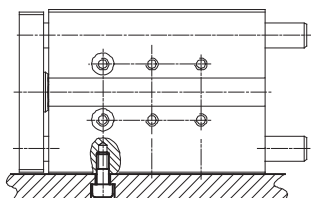
### Flat from above



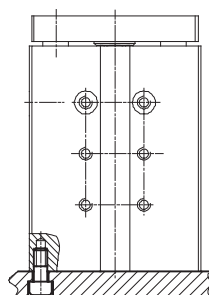
### Flat from below



### Side from below



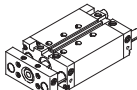
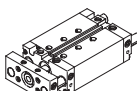
### On end



# Guided drives DFM-N-B, NPT

Product range overview

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| Function      | Version                                                                           | Type                                  | Piston Ø   | Stroke                                                    | Variable stroke |
|---------------|-----------------------------------------------------------------------------------|---------------------------------------|------------|-----------------------------------------------------------|-----------------|
|               |                                                                                   |                                       | [mm]       | [mm]                                                      | [mm]            |
| Double-acting | DFM-N-B with recirculating ball bearing guide                                     |                                       |            |                                                           |                 |
|               |  | DFM-N-B<br>Single-ended<br>piston rod | 12, 16     | 10, 20, 25, 30, 40, 50, 80, 100, 125, 160, 200            | 10 ... 200      |
|               |                                                                                   |                                       | 20, 25, 32 | 20, 25, 30, 40, 50, 80, 100, 125, 160, 200, 250, 320, 400 | 20 ... 400      |
|               |                                                                                   |                                       | 40, 50, 63 | 25, 50, 80, 100, 125, 160, 200, 250, 320, 400             | 25 ... 400      |
|               |                                                                                   |                                       |            |                                                           |                 |
|               | DFM-N-B with plain-bearing guide                                                  |                                       |            |                                                           |                 |
|               |  | DFM-N-B<br>Single-ended<br>piston rod | 12, 16     | 10, 20, 25, 30, 40, 50, 80, 100, 125, 160, 200            | 10 ... 200      |
|               |                                                                                   |                                       | 20, 25, 32 | 20, 25, 30, 40, 50, 80, 100, 125, 160, 200, 250, 320, 400 | 20 ... 400      |
|               |                                                                                   |                                       | 40, 50, 63 | 25, 50, 80, 100, 125, 160, 200, 250, 320, 400             | 25 ... 400      |
|               |                                                                                   |                                       |            |                                                           |                 |

# Guided drives DFM-N-B, NPT

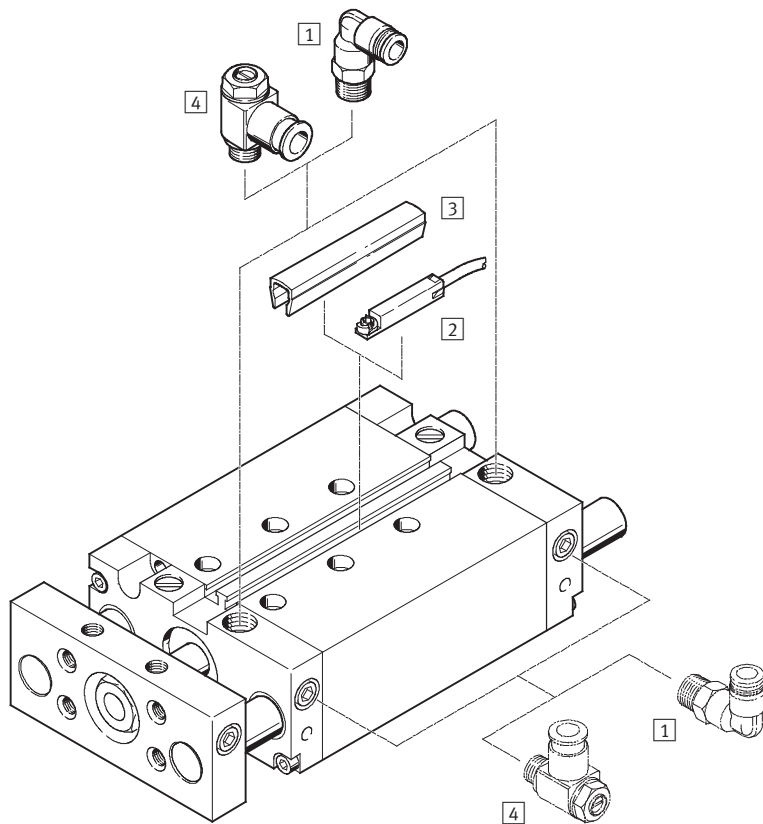
Product range overview

| Type                                          | Position sensing | Cushioning     |                            |                                                        | Heat-resistant seals | Precision end-position adjustment |                        | → Page/Internet |
|-----------------------------------------------|------------------|----------------|----------------------------|--------------------------------------------------------|----------------------|-----------------------------------|------------------------|-----------------|
|                                               |                  | Not adjustable | Adjustable for heavy loads | Self-adjusting end position adjustable for heavy loads |                      | Advanced end position             | Retracted end position |                 |
|                                               | A                | P              | PPV                        | YSRW                                                   | S6                   | AJ                                | EJ                     |                 |
| DFM-N-B with recirculating ball bearing guide |                  |                |                            |                                                        |                      |                                   |                        |                 |
| DFM-N-B<br>Single-ended piston rod            | ■                | ■              | ■<br>Ø 16 and above        | ■<br>Ø 20 and above                                    | –                    | ■                                 | ■<br>Ø 20 and above    | 30              |
| DFM-N-B with plain-bearing guide              |                  |                |                            |                                                        |                      |                                   |                        |                 |
| DFM-N-B<br>Single-ended piston rod            | ■                | ■              | ■                          | –                                                      | ■                    | ■                                 | ■                      | 30              |

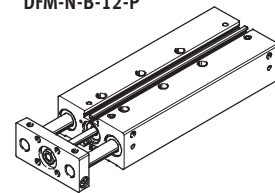
# Guided drives DFM-N-B, NPT

Peripherals overview

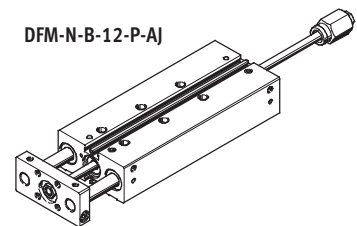
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DFM-N-B-12-P

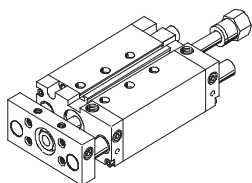


DFM-N-B-12-P-AJ

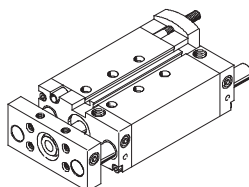


## Variants

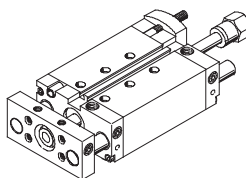
AJ



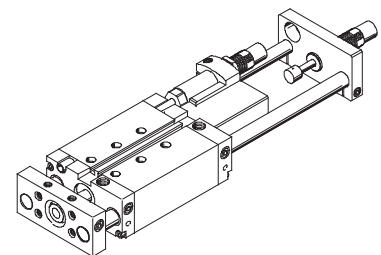
EJ



AJ + EJ



YSRW



## Accessories

|                                   | Brief description                                                        | → Page/Internet |
|-----------------------------------|--------------------------------------------------------------------------|-----------------|
| 1 Push-in fitting QS              | For connecting compressed air tubing with standard O.D.                  | quick star      |
| 2 Proximity sensor SME-/SMT-8     | Can be integrated in the profile barrel                                  | 38              |
| 3 Slot cover ABP-5-S              | For protecting the sensor cable and keeping dirt out of the sensor slots | 38              |
| 4 One-way flow control valve GRLA | For speed regulation                                                     | 39              |
| – Centring sleeves ZBH            | 4 or 6 pieces included in the scope of delivery                          | 38              |

- Note

Proximity sensors SM...O-8E cannot be used with the DFM-N-B.

# Guided drives DFM-N-B, NPT

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Type codes

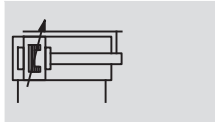
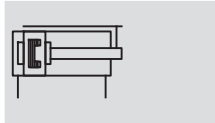
|                             |                                                  |     |   |   |   |    |   |    |   |   |   |   |   |   |   |    |   |    |   |    |   |     |   |     |   |   |
|-----------------------------|--------------------------------------------------|-----|---|---|---|----|---|----|---|---|---|---|---|---|---|----|---|----|---|----|---|-----|---|-----|---|---|
|                             |                                                  | DFM | - | N | - | 50 | - | 80 | - | B | - | P | - | A | - | GF | - | S6 | - | AJ | - | ZUB | - | 10S | - | G |
| <b>Type</b>                 |                                                  |     |   |   |   |    |   |    |   |   |   |   |   |   |   |    |   |    |   |    |   |     |   |     |   |   |
| DFM                         | Guided drive                                     |     |   |   |   |    |   |    |   |   |   |   |   |   |   |    |   |    |   |    |   |     |   |     |   |   |
| <b>System of units</b>      |                                                  |     |   |   |   |    |   |    |   |   |   |   |   |   |   |    |   |    |   |    |   |     |   |     |   |   |
| N                           | Imperial                                         |     |   |   |   |    |   |    |   |   |   |   |   |   |   |    |   |    |   |    |   |     |   |     |   |   |
| <b>Piston Ø [mm]</b>        |                                                  |     |   |   |   |    |   |    |   |   |   |   |   |   |   |    |   |    |   |    |   |     |   |     |   |   |
|                             |                                                  |     |   |   |   |    |   |    |   |   |   |   |   |   |   |    |   |    |   |    |   |     |   |     |   |   |
| <b>Stroke [mm]</b>          |                                                  |     |   |   |   |    |   |    |   |   |   |   |   |   |   |    |   |    |   |    |   |     |   |     |   |   |
|                             |                                                  |     |   |   |   |    |   |    |   |   |   |   |   |   |   |    |   |    |   |    |   |     |   |     |   |   |
| <b>Generation</b>           |                                                  |     |   |   |   |    |   |    |   |   |   |   |   |   |   |    |   |    |   |    |   |     |   |     |   |   |
| B                           | Series                                           |     |   |   |   |    |   |    |   |   |   |   |   |   |   |    |   |    |   |    |   |     |   |     |   |   |
| <b>Cushioning</b>           |                                                  |     |   |   |   |    |   |    |   |   |   |   |   |   |   |    |   |    |   |    |   |     |   |     |   |   |
| P                           | Flexible cushioning rings/<br>pads at both ends  |     |   |   |   |    |   |    |   |   |   |   |   |   |   |    |   |    |   |    |   |     |   |     |   |   |
| PPV                         | Pneumatic cushioning,<br>adjustable at both ends |     |   |   |   |    |   |    |   |   |   |   |   |   |   |    |   |    |   |    |   |     |   |     |   |   |
| YSRW                        | Self-adjusting at both ends                      |     |   |   |   |    |   |    |   |   |   |   |   |   |   |    |   |    |   |    |   |     |   |     |   |   |
| <b>Position sensing</b>     |                                                  |     |   |   |   |    |   |    |   |   |   |   |   |   |   |    |   |    |   |    |   |     |   |     |   |   |
| A                           | Via proximity sensor                             |     |   |   |   |    |   |    |   |   |   |   |   |   |   |    |   |    |   |    |   |     |   |     |   |   |
| <b>Guide</b>                |                                                  |     |   |   |   |    |   |    |   |   |   |   |   |   |   |    |   |    |   |    |   |     |   |     |   |   |
| GF                          | Plain-bearing guide                              |     |   |   |   |    |   |    |   |   |   |   |   |   |   |    |   |    |   |    |   |     |   |     |   |   |
| KF                          | Recirculating ball bearing<br>guide              |     |   |   |   |    |   |    |   |   |   |   |   |   |   |    |   |    |   |    |   |     |   |     |   |   |
| <b>Variant</b>              |                                                  |     |   |   |   |    |   |    |   |   |   |   |   |   |   |    |   |    |   |    |   |     |   |     |   |   |
| S6                          | Heat-resistant seals<br>up to max. 120 °C        |     |   |   |   |    |   |    |   |   |   |   |   |   |   |    |   |    |   |    |   |     |   |     |   |   |
| <b>Precision adjustment</b> |                                                  |     |   |   |   |    |   |    |   |   |   |   |   |   |   |    |   |    |   |    |   |     |   |     |   |   |
| AJ                          | Advanced end position                            |     |   |   |   |    |   |    |   |   |   |   |   |   |   |    |   |    |   |    |   |     |   |     |   |   |
| EJ                          | Retracted end position                           |     |   |   |   |    |   |    |   |   |   |   |   |   |   |    |   |    |   |    |   |     |   |     |   |   |
| <b>Accessories</b>          |                                                  |     |   |   |   |    |   |    |   |   |   |   |   |   |   |    |   |    |   |    |   |     |   |     |   |   |
| ZUB                         | Supplied separately                              |     |   |   |   |    |   |    |   |   |   |   |   |   |   |    |   |    |   |    |   |     |   |     |   |   |
| <b>Slot cover</b>           |                                                  |     |   |   |   |    |   |    |   |   |   |   |   |   |   |    |   |    |   |    |   |     |   |     |   |   |
| ...S                        | Sensor slot                                      |     |   |   |   |    |   |    |   |   |   |   |   |   |   |    |   |    |   |    |   |     |   |     |   |   |
| <b>Proximity sensor</b>     |                                                  |     |   |   |   |    |   |    |   |   |   |   |   |   |   |    |   |    |   |    |   |     |   |     |   |   |
| ...G                        | With cable, 2.5 m                                |     |   |   |   |    |   |    |   |   |   |   |   |   |   |    |   |    |   |    |   |     |   |     |   |   |
| ...I                        | Contactless with cable, 2.5 m                    |     |   |   |   |    |   |    |   |   |   |   |   |   |   |    |   |    |   |    |   |     |   |     |   |   |

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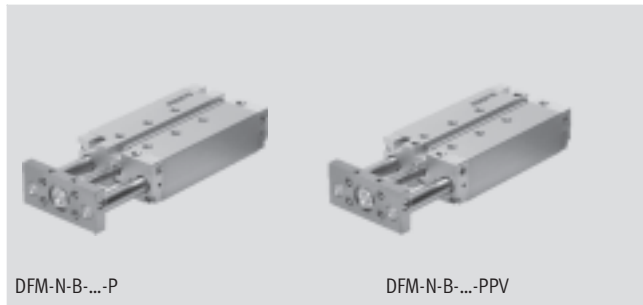
Technical data

Function



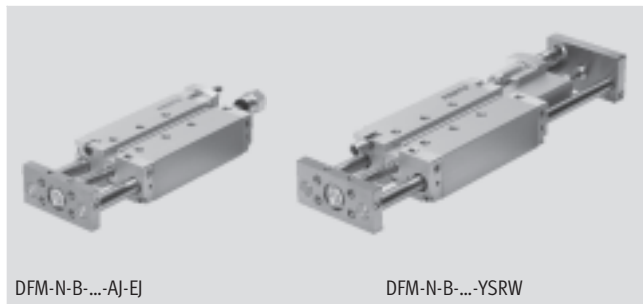
-N- Diameter  
12 ... 63 mm  
-T- Stroke length  
10 ... 400 mm

[www.festo.com/en/  
Spare\\_parts\\_service](http://www.festo.com/en/Spare_parts_service)



DFM-N-B-...-P

DFM-N-B-...-PPV



DFM-N-B-...-AJ-EJ

DFM-N-B-...-YSRW

| General technical data           |                                                                       |                                               |                             |            |            |            |          |          |
|----------------------------------|-----------------------------------------------------------------------|-----------------------------------------------|-----------------------------|------------|------------|------------|----------|----------|
| Piston Ø                         | 12                                                                    | 16                                            | 20                          | 25         | 32         | 40         | 50       | 63       |
| Pneumatic connection             | M5 suitable for 10-32 UNF                                             |                                               |                             | 1/8 NPT    |            |            | 1/4 NPT  |          |
| Operating medium                 | Filtered compressed air, lubricated or unlubricated                   |                                               |                             |            |            |            |          |          |
| Operating pressure [bar]         | 2 ... 10                                                              | 2 ... 10                                      | 2 ... 10                    | 1.5 ... 10 | 1.5 ... 10 | 1.5 ... 10 | 1 ... 10 | 1 ... 10 |
| Design                           | Piston                                                                |                                               |                             |            |            |            |          |          |
|                                  | Piston rod                                                            |                                               |                             |            |            |            |          |          |
|                                  | Guide rods with yoke                                                  |                                               |                             |            |            |            |          |          |
| Cushioning                       | Flexible cushioning rings/pads at both ends                           |                                               |                             |            |            |            |          |          |
|                                  | –                                                                     | Pneumatic cushioning, adjustable at both ends |                             |            |            |            |          |          |
|                                  | –                                                                     | –                                             | Self-adjusting at both ends |            |            |            |          |          |
| Cushioning length (PPV) [mm]     | –                                                                     | 12                                            | 15                          | 15         | 16         | 17         | 19       | 19       |
| Position sensing                 | Via proximity sensor                                                  |                                               |                             |            |            |            |          |          |
| Type of mounting                 | Via through-holes                                                     |                                               |                             |            |            |            |          |          |
|                                  | Via female thread                                                     |                                               |                             |            |            |            |          |          |
| Mounting position                | Any                                                                   |                                               |                             |            |            |            |          |          |
| Protection against torsion/guide | Guide rod with yoke/plain-bearing or recirculating ball bearing guide |                                               |                             |            |            |            |          |          |
|                                  |                                                                       |                                               |                             |            |            |            |          |          |
| Variant AJ, E and YSRW           |                                                                       |                                               |                             |            |            |            |          |          |
| Setting range [mm]               | 0 ... 10                                                              |                                               |                             |            |            |            |          |          |
|                                  |                                                                       |                                               |                             |            |            |            |          |          |
| Variant YSRW with shock absorber |                                                                       |                                               |                             |            |            |            |          |          |
| Repetition accuracy [mm]         | –                                                                     | –                                             | Max. 0.05                   |            |            |            |          |          |

Note: This product conforms to ISO 1179-1 and ISO 228-1

| Ambient conditions                           |                                                                    |                                     |                          |            |
|----------------------------------------------|--------------------------------------------------------------------|-------------------------------------|--------------------------|------------|
|                                              | Plain-bearing guide GF                                             | Recirculating ball bearing guide KF | YSRW with shock absorber | S6         |
| Ambient temperature <sup>1)</sup> [°C]       | –20 ... +80                                                        | –5 ... +60                          | 0 ... +60                | 0 ... +120 |
| Corrosion resistance class CRC <sup>2)</sup> | 2                                                                  | –                                   | –                        | 2          |
| ATEX                                         | Specified types → <a href="http://www.festo.com">www.festo.com</a> |                                     |                          |            |

1) Note operating range of proximity sensors

2) Corrosion resistance class 2 to Festo standard 940 070

Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents



## Guided drives DFM-N-B, NPT

Technical data

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| Speed [m/s]                                                 |     |     |     |     |     |     |     |     |
|-------------------------------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|
| Piston Ø                                                    | 12  | 16  | 20  | 25  | 32  | 40  | 50  | 63  |
| Cushioning P, precision stroke adjustment AJ and EJ         |     |     |     |     |     |     |     |     |
| Maximum speed advancing, retracting                         | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.6 | 0.6 |
| Cushioning P, plain-bearing guide GF in combination with S6 |     |     |     |     |     |     |     |     |
| Maximum speed advancing, retracting                         | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.4 | 0.4 |
| Cushioning PPV, YSRW, PPV S6                                |     |     |     |     |     |     |     |     |
| Maximum speed advancing, retracting                         | –   | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1   | 1   |

| Forces [N]                                              |    |     |     |     |     |     |       |       |
|---------------------------------------------------------|----|-----|-----|-----|-----|-----|-------|-------|
| Piston Ø                                                | 12 | 16  | 20  | 25  | 32  | 40  | 50    | 63    |
| Cushioning P, PPV, YSRW, precision stroke adjustment EJ |    |     |     |     |     |     |       |       |
| Theoretical force at 6 bar, advancing                   | 68 | 121 | 188 | 295 | 482 | 754 | 1,178 | 1,870 |
| Theoretical force at 6 bar, retracting                  | 51 | 90  | 141 | 247 | 415 | 686 | 1,057 | 1,750 |
| Precision stroke adjustment AJ and AJ+EJ                |    |     |     |     |     |     |       |       |
| Theoretical force at 6 bar, advancing                   | 51 | 90  | 141 | 247 | 415 | 686 | 1,057 | 1,750 |
| Theoretical force at 6 bar, retracting                  | 51 | 90  | 141 | 247 | 415 | 686 | 1,057 | 1,750 |

# Guided drives DFM-N-B, NPT

Technical data

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| Impact energy [J]                          |       |       |        |        |        |        |        |         |
|--------------------------------------------|-------|-------|--------|--------|--------|--------|--------|---------|
| Piston Ø                                   | 12    | 16    | 20     | 25     | 32     | 40     | 50     | 63      |
| Cushioning P                               |       |       |        |        |        |        |        |         |
| Max. impact energy in the end positions    | 0.09  | 0.15  | 0.2    | 0.35   | 0.40   | 0.7    | 1.0    | 1.3     |
| Max. impact energy in the end positions S6 | 0.035 | 0.075 | 0.1    | 0.15   | 0.2    | 0.35   | 0.5    | 0.65    |
| Cushioning YSRW                            |       |       |        |        |        |        |        |         |
| Max. energy absorption per stroke          | –     | –     | 4      | 8      | 12     | 35     | 35     | 70      |
| Max. energy absorption per hour            | –     | –     | 21,000 | 30,000 | 41,000 | 68,000 | 68,000 | 100,000 |

Permissible impact velocity:

$$v_{\text{perm.}} = \sqrt{\frac{2 \times E_{\text{perm.}}}{m_{\text{dead}} + m_{\text{load}}}}$$

Maximum permissible load:

$$m_{\text{load}} = \frac{2 \times E_{\text{perm.}}}{v^2} - m_{\text{dead}}$$

$v_{\text{perm.}}$  Permissible impact velocity  
 $E_{\text{perm.}}$  Max. impact energy  
 $m_{\text{Intrinsic}}$  Moving load (drive)  
 $m_{\text{Load}}$  Moving effective load

## Note

This data represents the maximum values that can be achieved. The maximum permissible impact energy must be observed.

| DFM-N-B with plain-bearing guide GF, cushioning P, PPV |               |       |       |       |       |       |        |        |
|--------------------------------------------------------|---------------|-------|-------|-------|-------|-------|--------|--------|
| Stroke [mm]                                            | Piston Ø [mm] |       |       |       |       |       |        |        |
|                                                        | 12            | 16    | 20    | 25    | 32    | 40    | 50     | 63     |
| Product weight [g]                                     |               |       |       |       |       |       |        |        |
| 10                                                     | 385           | 621   | –     | –     | –     | –     | –      | –      |
| 20                                                     | 432           | 680   | 1,026 | 1,474 | 2,163 | –     | –      | –      |
| 25                                                     | 452           | 706   | 1,068 | 1,530 | 2,238 | 2,606 | 4,290  | 5,568  |
| 30                                                     | 476           | 736   | 1,109 | 1,586 | 2,337 | –     | –      | –      |
| 40                                                     | 523           | 795   | 1,215 | 1,726 | 2,489 | –     | –      | –      |
| 50                                                     | 570           | 854   | 1,298 | 1,838 | 2,640 | 3,047 | 5,019  | 6,457  |
| 80                                                     | 712           | 1,033 | 1,572 | 2,218 | 3,210 | 3,663 | 5,909  | 7,503  |
| 100                                                    | 803           | 1,148 | 1,733 | 2,435 | 3,502 | 3,981 | 6,376  | 8,116  |
| 125                                                    | 962           | 1,352 | 2,000 | 2,800 | 4,018 | 4,534 | 7,151  | 9,050  |
| 160                                                    | 1,128         | 1,560 | 2,293 | 3,193 | 4,549 | 5,118 | 8,017  | 10,137 |
| 200                                                    | 1,318         | 1,797 | 2,628 | 3,642 | 5,158 | 5,786 | 9,007  | 11,379 |
| 250                                                    | –             | –     | 3,237 | 4,430 | 6,259 | 6,962 | 10,813 | 13,509 |
| 320                                                    | –             | –     | 3,823 | 5,215 | 7,322 | 8,129 | 12,545 | 15,682 |
| 400                                                    | –             | –     | 4,493 | 6,113 | 8,537 | 9,462 | 14,525 | 18,165 |
| Moving load [g]                                        |               |       |       |       |       |       |        |        |
| 10                                                     | 201           | 283   | –     | –     | –     | –     | –      | –      |
| 20                                                     | 216           | 302   | 506   | 715   | 1,147 | –     | –      | –      |
| 25                                                     | 223           | 312   | 520   | 734   | 1,176 | 1,305 | 2,217  | 2,640  |
| 30                                                     | 230           | 322   | 534   | 753   | 1,230 | –     | –      | –      |
| 40                                                     | 245           | 342   | 586   | 823   | 1,289 | –     | –      | –      |
| 50                                                     | 260           | 362   | 615   | 861   | 1,347 | 1,476 | 2,567  | 2,990  |
| 80                                                     | 304           | 423   | 724   | 1,022 | 1,644 | 1,776 | 3,002  | 3,426  |
| 100                                                    | 333           | 463   | 781   | 1,098 | 1,764 | 1,893 | 3,189  | 3,613  |
| 125                                                    | 420           | 579   | 917   | 1,289 | 2,059 | 2,188 | 3,586  | 4,009  |
| 160                                                    | 472           | 649   | 1,016 | 1,422 | 2,264 | 2,393 | 3,913  | 4,336  |
| 200                                                    | 530           | 730   | 1,129 | 1,573 | 2,499 | 2,627 | 4,286  | 4,710  |
| 250                                                    | –             | –     | 1,489 | 2,017 | 3,164 | 3,293 | 5,351  | 5,774  |
| 320                                                    | –             | –     | 1,688 | 2,283 | 3,574 | 3,703 | 6,005  | 6,428  |
| 400                                                    | –             | –     | 1,914 | 2,587 | 4,042 | 4,171 | 6,752  | 7,176  |

# Guided drives DFM-N-B, NPT

Technical data

**FESTO**

| DFM-N-B with plain-bearing guide GF, cushioning P, PPV, variant S6 |               |       |       |       |       |       |        |        |
|--------------------------------------------------------------------|---------------|-------|-------|-------|-------|-------|--------|--------|
| Stroke<br>[mm]                                                     | Piston Ø [mm] |       |       |       |       |       |        |        |
|                                                                    | 12            | 16    | 20    | 25    | 32    | 40    | 50     | 63     |
| Product weight [g]                                                 |               |       |       |       |       |       |        |        |
| 0                                                                  | 283           | 488   | 745   | 1,080 | 1,594 | 1,847 | 3,124  | 3,992  |
| 10                                                                 | 328           | 548   | –     | –     | –     | –     | –      | –      |
| 20                                                                 | 376           | 607   | 907   | 1,298 | 1,889 | –     | –      | –      |
| 25                                                                 | 395           | 633   | 949   | 1,354 | 1,964 | 2,257 | 3,735  | 4,762  |
| 30                                                                 | 419           | 663   | 990   | 1,410 | 2,063 | –     | –      | –      |
| 40                                                                 | 466           | 722   | 1,096 | 1,550 | 2,215 | –     | –      | –      |
| 50                                                                 | 514           | 781   | 1,179 | 1,662 | 2,366 | 2,698 | 4,464  | 5,651  |
| 80                                                                 | 656           | 959   | 1,452 | 2,042 | 2,936 | 3,314 | 5,354  | 6,696  |
| 100                                                                | 747           | 1,074 | 1,614 | 2,259 | 3,228 | 3,632 | 5,821  | 7,310  |
| 125                                                                | 905           | 1,279 | 1,880 | 2,624 | 3,745 | 4,186 | 6,596  | 8,244  |
| 160                                                                | 1,072         | 1,486 | 2,173 | 3,017 | 4,276 | 4,770 | 7,462  | 9,331  |
| 200                                                                | 1,261         | 1,724 | 2,508 | 3,466 | 4,884 | 5,437 | 8,452  | 10,573 |
| 250                                                                | –             | –     | 3,118 | 4,254 | 5,985 | 6,613 | 10,258 | 12,703 |
| 320                                                                | –             | –     | 3,704 | 5,039 | 7,048 | 7,780 | 11,990 | 14,876 |
| 400                                                                | –             | –     | 4,374 | 5,937 | 8,264 | 9,114 | 19,970 | 17,359 |
| Moving load [g]                                                    |               |       |       |       |       |       |        |        |
| 0                                                                  | 130           | 188   | 329   | 463   | 755   | 810   | 1,428  | 1,601  |
| 10                                                                 | 145           | 208   | –     | –     | –     | –     | –      | –      |
| 20                                                                 | 159           | 229   | 386   | 539   | 873   | –     | –      | –      |
| 25                                                                 | 167           | 239   | 400   | 558   | 902   | 956   | 1,662  | 1,834  |
| 30                                                                 | 174           | 249   | 414   | 577   | 956   | –     | –      | –      |
| 40                                                                 | 188           | 269   | 467   | 647   | 1,015 | –     | –      | –      |
| 50                                                                 | 203           | 289   | 495   | 685   | 1,073 | 1,127 | 2,012  | 2,184  |
| 80                                                                 | 247           | 349   | 604   | 847   | 1,373 | 1,427 | 2,447  | 2,620  |
| 100                                                                | 276           | 389   | 661   | 922   | 1,490 | 1,544 | 2,634  | 2,806  |
| 125                                                                | 364           | 506   | 797   | 1,113 | 1,785 | 1,840 | 3,031  | 3,203  |
| 160                                                                | 415           | 576   | 896   | 1,246 | 1,990 | 2,045 | 3,358  | 3,530  |
| 200                                                                | 474           | 657   | 1,010 | 1,397 | 2,225 | 2,279 | 3,731  | 3,904  |
| 250                                                                | –             | –     | 1,370 | 1,842 | 2,890 | 2,944 | 4,796  | 4,968  |
| 320                                                                | –             | –     | 1,568 | 2,107 | 3,300 | 3,354 | 5,450  | 5,622  |
| 400                                                                | –             | –     | 1,794 | 2,411 | 3,768 | 3,823 | 6,197  | 6,370  |

# Guided drives DFM-N-B, NPT

Technical data

**FESTO**

| DFM-N-B with recirculating ball bearing guide KF, cushioning P, PPV |               |       |       |       |       |       |        |        |
|---------------------------------------------------------------------|---------------|-------|-------|-------|-------|-------|--------|--------|
| Stroke<br>[mm]                                                      | Piston Ø [mm] |       |       |       |       |       |        |        |
|                                                                     | 12            | 16    | 20    | 25    | 32    | 40    | 50     | 63     |
| Product weight [g]                                                  |               |       |       |       |       |       |        |        |
| 10                                                                  | 345           | 543   | –     | –     | –     | –     | –      | –      |
| 20                                                                  | 388           | 596   | 935   | 1,395 | 1,932 | –     | –      | –      |
| 25                                                                  | 405           | 619   | 974   | 1,447 | 1,998 | 2,366 | 3,907  | 5,185  |
| 30                                                                  | 427           | 647   | 1,012 | 1,499 | 2,079 | –     | –      | –      |
| 40                                                                  | 470           | 700   | 1,105 | 1,624 | 2,213 | –     | –      | –      |
| 50                                                                  | 513           | 754   | 1,181 | 1,729 | 2,346 | 2,753 | 4,523  | 5,961  |
| 80                                                                  | 641           | 916   | 1,428 | 2,074 | 2,817 | 3,270 | 5,272  | 6,865  |
| 100                                                                 | 723           | 1,020 | 1,577 | 2,276 | 3,073 | 3,552 | 5,682  | 7,423  |
| 125                                                                 | 852           | 1,190 | 1,809 | 2,599 | 3,490 | 4,006 | 6,327  | 8,226  |
| 160                                                                 | 1,002         | 1,378 | 2,079 | 2,966 | 3,958 | 4,526 | 7,094  | 9,214  |
| 200                                                                 | 1,174         | 1,593 | 2,388 | 3,384 | 4,494 | 5,121 | 7,971  | 10,343 |
| 250                                                                 | –             | –     | 2,905 | 4,073 | 5,369 | 6,072 | 9,419  | 12,115 |
| 320                                                                 | –             | –     | 3,445 | 4,805 | 6,305 | 7,112 | 10,953 | 14,091 |
| 400                                                                 | –             | –     | 4,063 | 5,642 | 7,376 | 8,301 | 12,707 | 16,347 |
| Moving load [g]                                                     |               |       |       |       |       |       |        |        |
| 10                                                                  | 168           | 239   | –     | –     | –     | –     | –      | –      |
| 20                                                                  | 178           | 254   | 437   | 631   | 933   | –     | –      | –      |
| 25                                                                  | 183           | 261   | 447   | 646   | 954   | 1,082 | 1,830  | 2,254  |
| 30                                                                  | 188           | 268   | 458   | 661   | 990   | –     | –      | –      |
| 40                                                                  | 198           | 283   | 498   | 716   | 1,030 | –     | –      | –      |
| 50                                                                  | 208           | 297   | 520   | 746   | 1,071 | 1,199 | 2,067  | 2,491  |
| 80                                                                  | 238           | 341   | 602   | 873   | 1,271 | 1,400 | 2,361  | 2,785  |
| 100                                                                 | 259           | 370   | 646   | 934   | 1,352 | 1,481 | 2,492  | 2,915  |
| 125                                                                 | 316           | 452   | 748   | 1,083 | 1,548 | 1,677 | 2,758  | 3,182  |
| 160                                                                 | 352           | 503   | 824   | 1,189 | 1,690 | 1,819 | 2,986  | 3,410  |
| 200                                                                 | 392           | 561   | 911   | 1,310 | 1,852 | 1,981 | 3,247  | 3,671  |
| 250                                                                 | –             | –     | 1,180 | 1,656 | 2,291 | 2,420 | 3,953  | 4,377  |
| 320                                                                 | –             | –     | 1,332 | 1,868 | 2,575 | 2,703 | 4,410  | 4,833  |
| 400                                                                 | –             | –     | 1,505 | 2,111 | 2,899 | 3,027 | 4,931  | 5,355  |

# Guided drives DFM-N-B, NPT

Technical data

**FESTO**

## Additional weights with precision stroke adjustment AJ – GF, KF

When using the precision stroke adjustment AJ, the following weight must be taken into account in addition to the load specified from page 10.

| Product weight [g] – Precision stroke adjustment AJ (piston rod + stop) |               |       |       |       |       |       |       |       |
|-------------------------------------------------------------------------|---------------|-------|-------|-------|-------|-------|-------|-------|
| Stroke [mm]                                                             | Piston Ø [mm] |       |       |       |       |       |       |       |
|                                                                         | 12            | 16    | 20    | 25    | 32    | 40    | 50    | 63    |
| 10                                                                      | 55.4          | 58.8  | –     | –     | –     | –     | –     | –     |
| 20                                                                      | 57.6          | 61    | 75.6  | 115.4 | 185.7 | –     | –     | –     |
| 25                                                                      | 58.7          | 62.1  | 77.6  | 118.5 | 190.2 | 188.7 | 350.7 | 350.5 |
| 30                                                                      | 59.9          | 63.3  | 79.6  | 121.6 | 194.7 | –     | –     | –     |
| 40                                                                      | 62.1          | 65.5  | 83.6  | 127.8 | 203.6 | –     | –     | –     |
| 50                                                                      | 64.3          | 67.7  | 87.5  | 134   | 212.5 | 211   | 390.4 | 390.2 |
| 80                                                                      | 71            | 74.4  | 99.5  | 152.6 | 239.3 | 237.8 | 438   | 437.8 |
| 100                                                                     | 75.5          | 78.9  | 107.5 | 165   | 257.2 | 255.7 | 469.8 | 469.6 |
| 125                                                                     | 81.1          | 84.5  | 117.3 | 180.5 | 279.5 | 278   | 509.5 | 509.3 |
| 160                                                                     | 88.9          | 92.3  | 131.2 | 202.5 | 310.8 | 309.3 | 565.1 | 564.9 |
| 200                                                                     | 97.8          | 101.2 | 147.1 | 227   | 346.5 | 345   | 628.6 | 628.4 |
| 250                                                                     | –             | –     | 167   | 258.1 | 391.2 | 389.7 | 708.1 | 707.9 |
| 320                                                                     | –             | –     | 194.8 | 301.5 | 453.8 | 452.3 | 819.2 | 819   |
| 400                                                                     | –             | –     | 226.5 | 351.1 | 525.2 | 523.7 | 946.3 | 946.1 |

| Moving load [g] – Precision stroke adjustment AJ (piston rod + stop) |               |      |       |       |       |       |       |       |
|----------------------------------------------------------------------|---------------|------|-------|-------|-------|-------|-------|-------|
| Stroke [mm]                                                          | Piston Ø [mm] |      |       |       |       |       |       |       |
|                                                                      | 12            | 16   | 20    | 25    | 32    | 40    | 50    | 63    |
| 10                                                                   | 51.5          | 52.3 | –     | –     | –     | –     | –     | –     |
| 20                                                                   | 53.7          | 54.5 | 76    | 116.6 | 185.9 | –     | –     | –     |
| 25                                                                   | 54.8          | 55.6 | 78    | 119.7 | 190.4 | 190   | 351.7 | 351.7 |
| 30                                                                   | 56            | 56.8 | 80    | 122.8 | 194.9 | –     | –     | –     |
| 40                                                                   | 58.2          | 59   | 84    | 129   | 203.8 | –     | –     | –     |
| 50                                                                   | 60.4          | 61.2 | 87.9  | 135.2 | 212.7 | 212.7 | 391.4 | 391.4 |
| 80                                                                   | 67.1          | 67.9 | 99.9  | 153.8 | 239.5 | 239.5 | 439   | 439   |
| 100                                                                  | 71.6          | 72.4 | 107.8 | 166.2 | 257.4 | 257.4 | 470.8 | 470.8 |
| 125                                                                  | 77.2          | 78   | 117.7 | 181.7 | 279.7 | 279.7 | 510.5 | 510.5 |
| 160                                                                  | 85            | 85.8 | 131.6 | 203.4 | 311   | 311   | 566.1 | 566.1 |
| 200                                                                  | 93.9          | 94.7 | 147.5 | 228.2 | 346.7 | 346.7 | 629.6 | 629.6 |
| 250                                                                  | –             | –    | 167.4 | 259.3 | 391.4 | 391.4 | 709.1 | 709.1 |
| 320                                                                  | –             | –    | 195.2 | 302.7 | 454   | 454   | 820.2 | 820.2 |
| 400                                                                  | –             | –    | 226.9 | 352.3 | 525.4 | 525.4 | 947.3 | 947.3 |

# Guided drives DFM-N-B, NPT

Technical data

FESTO

## Additional weights with precision stroke adjustment EJ – GF, KF

When using the precision stroke adjustment EJ, the following weight must be taken into account in addition to the load specified from page 10.

| Product weight [g] – Precision stroke adjustment EJ (piston rod + stop) |               |       |       |       |       |       |
|-------------------------------------------------------------------------|---------------|-------|-------|-------|-------|-------|
| Stroke [mm]                                                             | Piston Ø [mm] |       |       |       |       |       |
|                                                                         | 20            | 25    | 32    | 40    | 50    | 63    |
| 20                                                                      | 55.7          | 117.1 | 134.1 | –     | –     | –     |
| 25                                                                      | 56.4          | 119.1 | 136.1 | 153.9 | 302.8 | 354   |
| 30                                                                      | 57.2          | 121   | 138   | –     | –     | –     |
| 40                                                                      | 58.8          | 125   | 142   | –     | –     | –     |
| 50                                                                      | 60.3          | 129   | 146   | 163.8 | 318.3 | 369.5 |
| 80                                                                      | 65            | 140.9 | 157.9 | 175.7 | 336.9 | 388.1 |
| 100                                                                     | 68.1          | 148.8 | 165.8 | 183.6 | 349.4 | 400.6 |
| 125                                                                     | 71.9          | 158.8 | 175.8 | 193.6 | 364.9 | 416.1 |
| 160                                                                     | 77.4          | 172.7 | 189.7 | 207.5 | 386.6 | 437.8 |
| 200                                                                     | 83.6          | 188.5 | 205.5 | 223.3 | 411.4 | 462.6 |
| 250                                                                     | 91.3          | 208.4 | 225.4 | 243.2 | 442.4 | 493.6 |
| 320                                                                     | 102.2         | 236.2 | 253.2 | 271   | 485.9 | 537.1 |
| 400                                                                     | 114.6         | 268   | 285   | 302.8 | 535.5 | 586.7 |

| DFM-N-B with recirculating ball bearing guide KF, cushioning YSRW |               |       |        |        |        |        |
|-------------------------------------------------------------------|---------------|-------|--------|--------|--------|--------|
| Stroke [mm]                                                       | Piston Ø [mm] |       |        |        |        |        |
|                                                                   | 20            | 25    | 32     | 40     | 50     | 63     |
| Product weight [g]                                                |               |       |        |        |        |        |
| 20                                                                | 1,684         | 2,641 | 3,717  | –      | –      | –      |
| 25                                                                | 1,733         | 2,707 | 3,801  | 4,995  | 7,594  | 10,816 |
| 30                                                                | 1,780         | 2,773 | 3,884  | –      | –      | –      |
| 40                                                                | 1,874         | 2,903 | 4,053  | –      | –      | –      |
| 50                                                                | 1,970         | 3,035 | 4,222  | 5,455  | 8,275  | 11,657 |
| 80                                                                | 2,257         | 3,429 | 4,720  | 5,999  | 9,092  | 12,629 |
| 100                                                               | 2,444         | 3,687 | 5,047  | 6,352  | 9,614  | 13,298 |
| 125                                                               | 2,677         | 4,008 | 5,458  | 6,801  | 10,294 | 14,137 |
| 160                                                               | 3,015         | 4,473 | 6,050  | 7,446  | 11,255 | 15,319 |
| 200                                                               | 3,401         | 5,004 | 6,728  | 8,183  | 12,354 | 16,670 |
| 250                                                               | 3,855         | 5,641 | 7,545  | 9,074  | 13,700 | 18,340 |
| 320                                                               | 4,530         | 6,569 | 8,730  | 10,363 | 15,623 | 20,704 |
| 400                                                               | 5,302         | 7,631 | 10,085 | 11,837 | 17,821 | 23,405 |
| Moving load [g]                                                   |               |       |        |        |        |        |
| 20                                                                | 874           | 1,323 | 1,933  | –      | –      | –      |
| 25                                                                | 894           | 1,350 | 1,969  | 2,386  | 3,735  | 4,996  |
| 30                                                                | 914           | 1,378 | 2,005  | –      | –      | –      |
| 40                                                                | 953           | 1,432 | 2,077  | –      | –      | –      |
| 50                                                                | 993           | 1,487 | 2,149  | 2,566  | 4,021  | 5,282  |
| 80                                                                | 1,111         | 1,650 | 2,365  | 2,782  | 4,365  | 5,625  |
| 100                                                               | 1,190         | 1,759 | 2,509  | 2,926  | 4,594  | 5,855  |
| 125                                                               | 1,289         | 1,896 | 2,690  | 3,106  | 4,880  | 6,141  |
| 160                                                               | 1,427         | 2,087 | 2,942  | 3,359  | 5,281  | 6,542  |
| 200                                                               | 1,585         | 2,305 | 3,230  | 3,647  | 5,739  | 7,000  |
| 250                                                               | 1,782         | 2,578 | 3,590  | 4,007  | 6,312  | 7,572  |
| 320                                                               | 2,059         | 2,959 | 4,095  | 4,512  | 7,114  | 8,374  |
| 400                                                               | 2,375         | 3,396 | 4,671  | 5,088  | 8,030  | 9,290  |

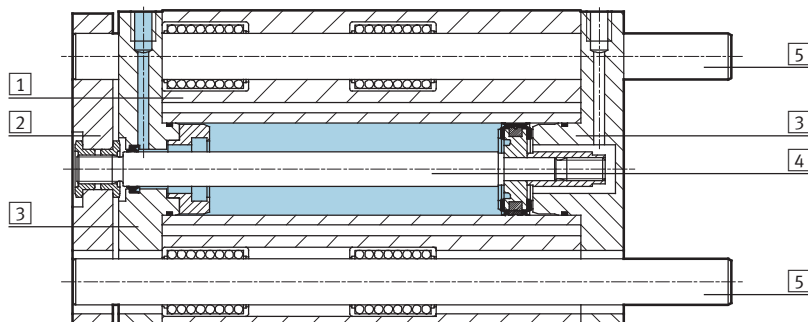
# Guided drives DFM-N-B, NPT

Technical data

FESTO

## Materials

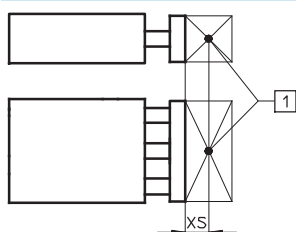
Sectional view



| Guided drive           | Plain-bearing guide GF           | Recirculating ball bearing guide KF | S6                               |
|------------------------|----------------------------------|-------------------------------------|----------------------------------|
| 1 Housing              | Anodised wrought aluminium alloy | Anodised wrought aluminium alloy    | Anodised wrought aluminium alloy |
| 2 Yoke plate           | Tempered steel                   | Tempered steel                      | Wrought aluminium alloy          |
| 3 Bearing and end caps | Anodised wrought aluminium alloy | Anodised wrought aluminium alloy    | Anodised wrought aluminium alloy |
| 4 Piston rod           | High-alloy stainless steel       | High-alloy stainless steel          | High-alloy stainless steel       |
| 5 Guide rods           | High-alloy steel                 | Tempered steel                      | High-alloy steel                 |
| – Static seals         | Nitrile rubber                   | Nitrile rubber                      | Fluoro elastomer                 |
| – Dynamic seals        | Polyurethane                     | Polyurethane                        | Fluoro elastomer                 |
| – Lubricant            | Klüberplex BE 31-102             | Klüberplex BE 31-102                | Mobiltemp SHC 100                |
| Note on material       | –                                | Free of copper, PTFE and silicone   | –                                |

## Maximum effective load F [N]

Plain-bearing guide GF and recirculating ball bearing guide KF



1 Centre of gravity of effective load

| Piston Ø<br>[mm] | XS<br>[mm] | Stroke [mm] |    |     |     |     |     |     |     |     |     |     |     |     |     |     |
|------------------|------------|-------------|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|                  |            |             | 10 | 20  | 25  | 30  | 40  | 50  | 80  | 100 | 125 | 160 | 200 | 250 | 320 | 400 |
| 12               | GF         | 25          | 53 | 47  | 45  | 43  | 39  | 36  | 28  | 25  | 23  | 20  | 15  | –   | –   | –   |
|                  | KF         |             | 47 | 42  | 40  | 38  | 35  | 32  | 26  | 23  | 20  | 16  | 13  | –   | –   | –   |
| 16               | GF         | 50          | 95 | 86  | 83  | 79  | 73  | 67  | 55  | 49  | 37  | 30  | 25  | –   | –   | –   |
|                  | KF         |             | 75 | 69  | 66  | 64  | 58  | 56  | 51  | 48  | 30  | 21  | 17  | –   | –   | –   |
| 20               | GF         | 50          | –  | 99  | 96  | 92  | 110 | 103 | 86  | 77  | 71  | 63  | 55  | 47  | 41  | 35  |
|                  | KF         |             | –  | 80  | 77  | 75  | 91  | 88  | 80  | 75  | 65  | 56  | 47  | 40  | 34  | 29  |
| 25               | GF         | 50          | –  | 121 | 116 | 112 | 123 | 115 | 96  | 86  | 86  | 76  | 67  | 53  | 45  | 39  |
|                  | KF         |             | –  | 88  | 86  | 84  | 100 | 97  | 89  | 85  | 80  | 66  | 56  | 46  | 38  | 32  |
| 32               | GF         | 50          | –  | 188 | 180 | 173 | 161 | 150 | 166 | 150 | 168 | 146 | 127 | 106 | 91  | 78  |
|                  | KF         |             | –  | 120 | 118 | 116 | 112 | 109 | 134 | 128 | 144 | 135 | 126 | 135 | 125 | 100 |
| 40               | GF         | 50          | –  | –   | 180 | –   | –   | 150 | 166 | 150 | 168 | 146 | 127 | 106 | 91  | 78  |
|                  | KF         |             | –  | –   | 118 | –   | –   | 109 | 134 | 128 | 144 | 135 | 126 | 135 | 125 | 100 |
| 50               | GF         | 50          | –  | –   | 257 | –   | –   | 216 | 234 | 212 | 229 | 200 | 174 | 145 | 124 | 105 |
|                  | KF         |             | –  | –   | 182 | –   | –   | 168 | 201 | 193 | 211 | 199 | 188 | 179 | 158 | 130 |
| 63               | GF         | 50          | –  | –   | 257 | –   | –   | 216 | 234 | 212 | 229 | 200 | 174 | 145 | 124 | 105 |
|                  | KF         |             | –  | –   | 182 | –   | –   | 168 | 201 | 193 | 211 | 199 | 188 | 179 | 158 | 130 |

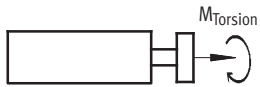
# Guided drives DFM-N-B, NPT

Technical data

FESTO

## Permissible torque [Nm]

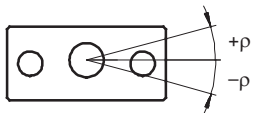
Plain-bearing guide GF and recirculating ball bearing guide KF



| Piston Ø<br>[mm] |    | Stroke [mm] |      |       |      |      |       |       |       |       |       |       |       |      |      |
|------------------|----|-------------|------|-------|------|------|-------|-------|-------|-------|-------|-------|-------|------|------|
|                  |    | 10          | 20   | 25    | 30   | 40   | 50    | 80    | 100   | 125   | 160   | 200   | 250   | 320  | 400  |
| 12               | GF | 1.10        | 0.95 | 0.90  | 0.85 | 0.80 | 0.75  | 0.60  | 0.50  | 0.45  | 0.40  | 0.30  | –     | –    | –    |
|                  | KF | 0.95        | 0.85 | 0.80  | 0.75 | 0.70 | 0.65  | 0.50  | 0.45  | 0.40  | 0.30  | 0.25  | –     | –    | –    |
| 16               | GF | 2.20        | 2.00 | 1.90  | 1.80 | 1.70 | 1.50  | 1.30  | 1.10  | 0.85  | 0.70  | 0.60  | –     | –    | –    |
|                  | KF | 1.70        | 1.60 | 1.50  | 1.45 | 1.35 | 1.30  | 1.20  | 1.10  | 0.70  | 0.50  | 0.40  | –     | –    | –    |
| 20               | GF | –           | 2.90 | 2.80  | 2.70 | 3.20 | 3.00  | 2.50  | 2.20  | 2.10  | 1.80  | 1.60  | 1.40  | 1.20 | 1.00 |
|                  | KF | –           | 2.30 | 2.20  | 2.15 | 2.60 | 2.55  | 2.30  | 2.20  | 1.90  | 1.60  | 1.40  | 1.20  | 1.00 | 0.85 |
| 25               | GF | –           | 4.15 | 3.95  | 3.80 | 4.20 | 3.90  | 3.25  | 2.90  | 2.90  | 2.60  | 2.30  | 1.80  | 1.50 | 1.30 |
|                  | KF | –           | 3.00 | 2.92  | 2.85 | 3.40 | 3.30  | 3.02  | 2.89  | 2.70  | 2.20  | 1.90  | 1.50  | 1.30 | 1.10 |
| 32               | GF | –           | 7.30 | 7.00  | 6.70 | 6.20 | 5.80  | 6.40  | 5.80  | 6.50  | 5.70  | 5.00  | 4.10  | 3.50 | 3.00 |
|                  | KF | –           | 4.70 | 4.60  | 4.55 | 4.40 | 4.25  | 5.25  | 5.00  | 5.60  | 5.25  | 4.90  | 5.20  | 4.80 | 3.90 |
| 40               | GF | –           | –    | 7.90  | –    | –    | 6.55  | 7.25  | 6.55  | 7.35  | 6.40  | 5.55  | 4.60  | 4.0  | 3.40 |
|                  | KF | –           | –    | 5.20  | –    | –    | 4.80  | 5.90  | 5.65  | 6.35  | 5.95  | 5.55  | 5.95  | 5.50 | 4.40 |
| 50               | GF | –           | –    | 14.15 | –    | –    | 11.85 | 12.85 | 11.65 | 12.55 | 11.00 | 9.60  | 7.98  | 6.82 | 5.78 |
|                  | KF | –           | –    | 10.00 | –    | –    | 9.30  | 11.00 | 10.6  | 11.60 | 11.00 | 10.30 | 9.82  | 8.67 | 7.17 |
| 63               | GF | –           | –    | 15.90 | –    | –    | 13.30 | 14.45 | 13.10 | 14.10 | 12.30 | 10.70 | 9.06  | 7.75 | 6.56 |
|                  | KF | –           | –    | 11.30 | –    | –    | 10.50 | 12.50 | 12.00 | 13.20 | 12.40 | 11.70 | 11.16 | 9.85 | 8.15 |

## Torsional backlash p

Plain-bearing guide GF and recirculating ball bearing guide KF in retracted state, without load



| Piston Ø               |    | 12   | 16   | 20   | 25   | 32   | 40   | 50   | 63   |
|------------------------|----|------|------|------|------|------|------|------|------|
| Torsional backlash [°] | GF | 0.09 | 0.09 | 0.07 | 0.07 | 0.06 | 0.06 | 0.05 | 0.05 |
|                        | KF | 0.08 | 0.08 | 0.07 | 0.07 | 0.05 | 0.05 | 0.05 | 0.05 |



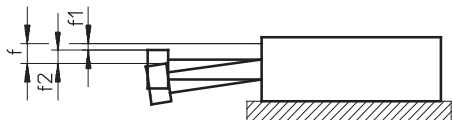
# Guided drives DFM-N-B, NPT

Technical data

FESTO

## Deflection of piston rod – Plain-bearing guide GF

Mean deflection  $f_1$  due to bearing backlash as a function of stroke  $l$



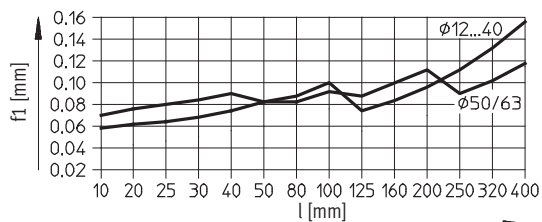
$f = f_1 + f_2$

$f$  = Total deflection of piston rod

$f_1$  = Deflection due to bearing backlash

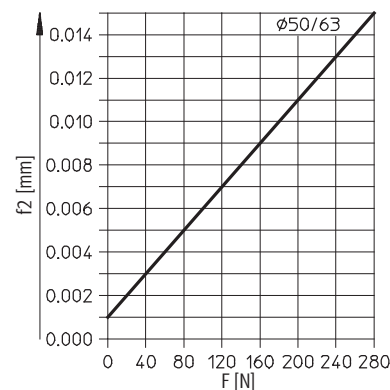
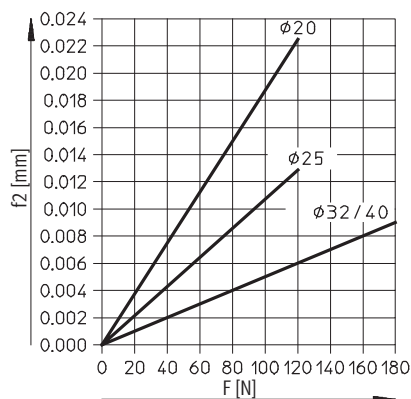
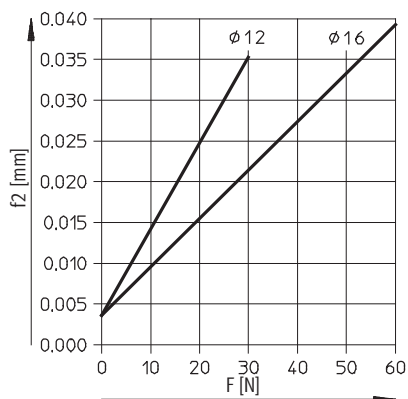
$f_2$  = Deflection due to lateral force

DFM-N-GF with 2 bearings per guide rod

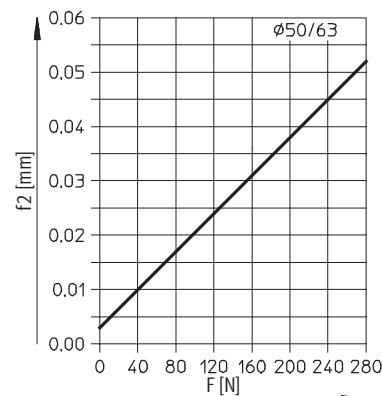
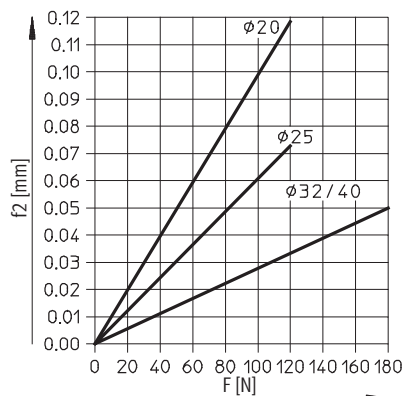
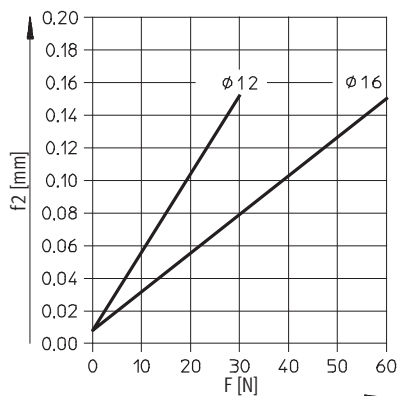


## Deflection $f_2$ due to lateral force $F$ as a function of stroke with plain-bearing guide GF

Stroke 50 mm



Stroke 100 mm



# Guided drives DFM-N-B, NPT

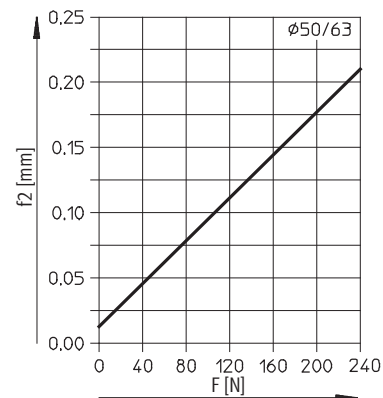
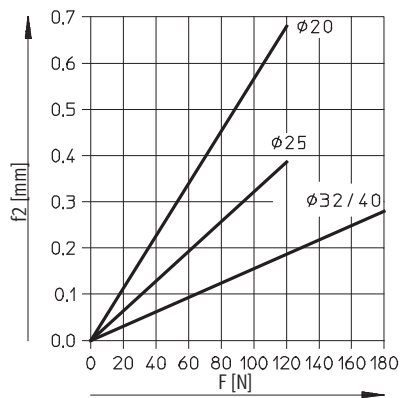
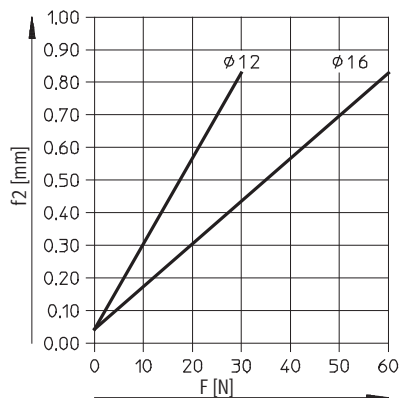
Technical data

FESTO

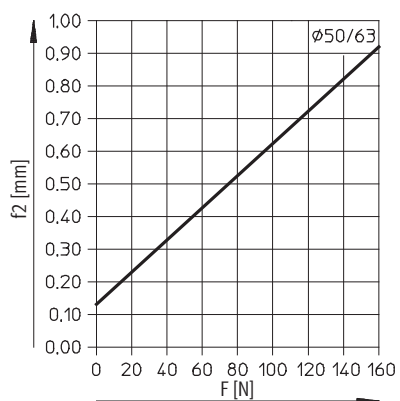
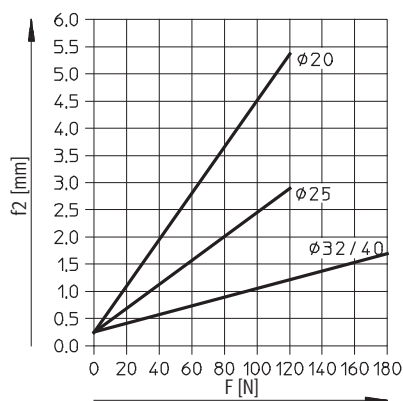
## Deflection of piston rod – Plain-bearing guide GF

Deflection  $f_2$  due to lateral force  $F$  as a function of stroke with plain-bearing guide GF

Stroke 200 mm



Stroke 400 mm



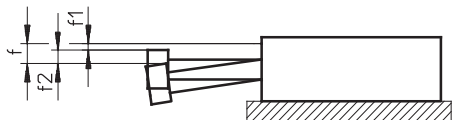
# Guided drives DFM-N-B, NPT

Technical data

FESTO

## Deflection of piston rod – Recirculating ball bearing guide KF

Mean deflection  $f_1$  due to bearing backlash as a function of stroke  $l$



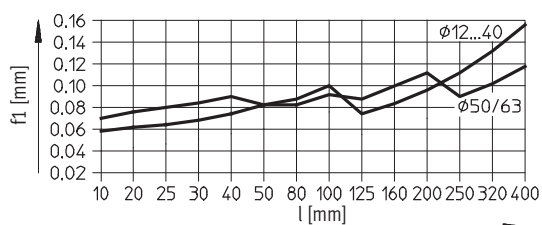
$f = f_1 + f_2$

$f$  = Total deflection of piston rod

$f_1$  = Deflection due to bearing backlash

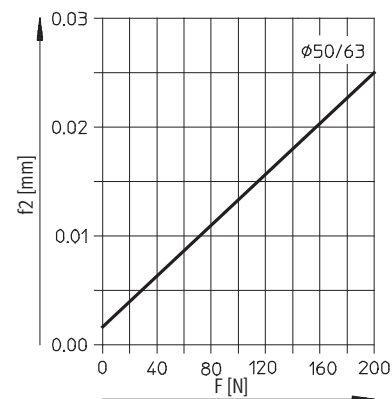
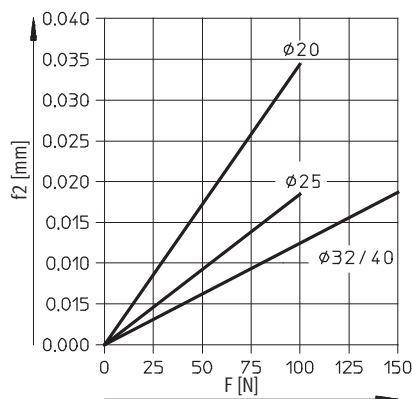
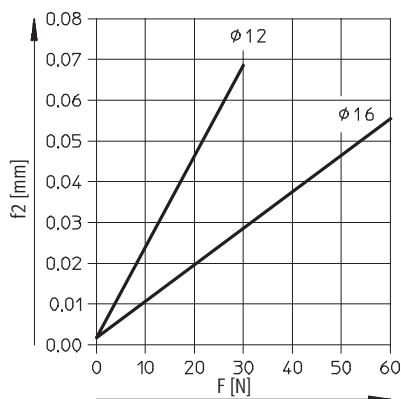
$f_2$  = Deflection due to lateral force

DFM-N-KF with 2 bearings per guide rod

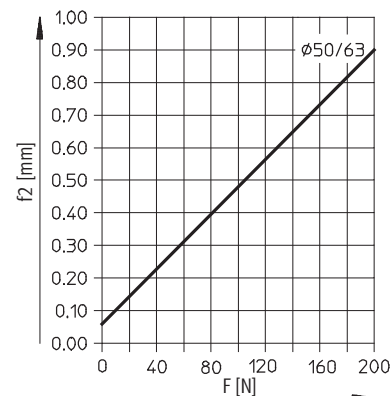
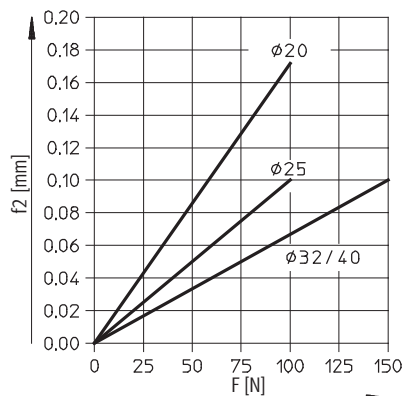
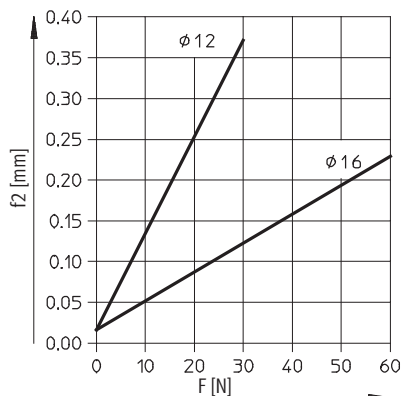


## Deflection $f_2$ due to lateral force $F$ as a function of stroke with recirculating ball bearing guide KF

Stroke 50 mm



Stroke 100 mm



# Guided drives DFM-N-B, NPT

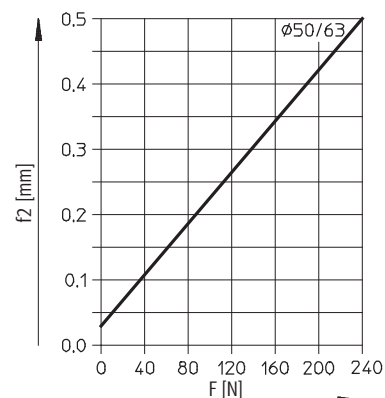
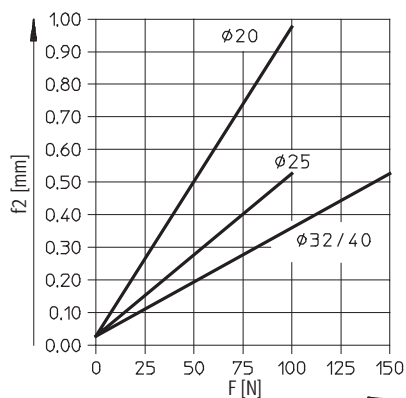
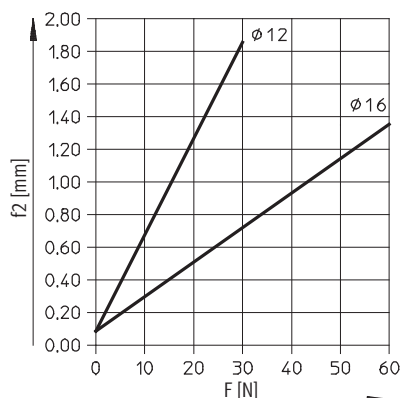
Technical data

FESTO

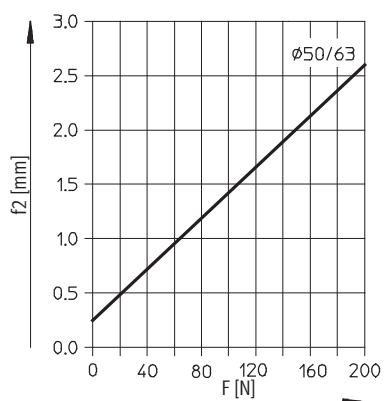
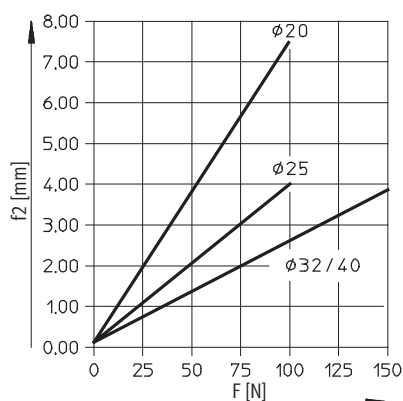
## Deflection of piston rod – Recirculating ball bearing guide KF

Deflection  $f_2$  due to lateral force  $F$  as a function of stroke with recirculating ball bearing guide KF

Stroke 200 mm



Stroke 400 mm

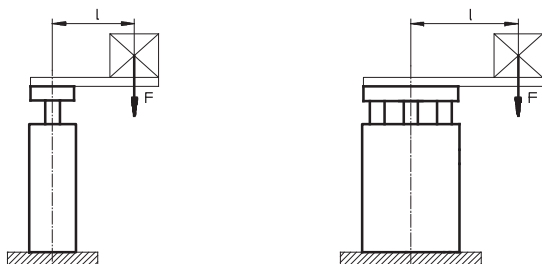


# Guided drives DFM-N-B, NPT

Technical data

FESTO

## Used as a lifting cylinder

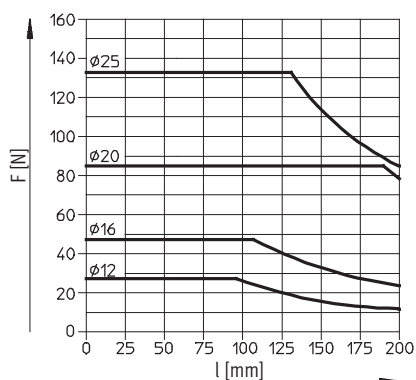


F = Longitudinal force [N]

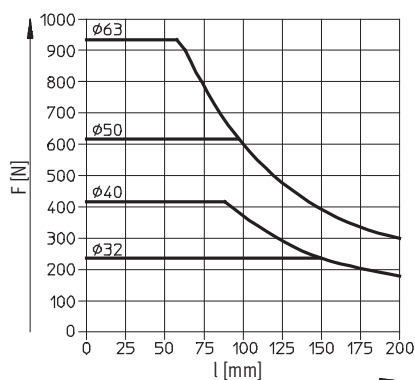
L = Lever arm [mm]

## Permissible load with plain-bearing guide GF

Stroke 40 ... 400 mm

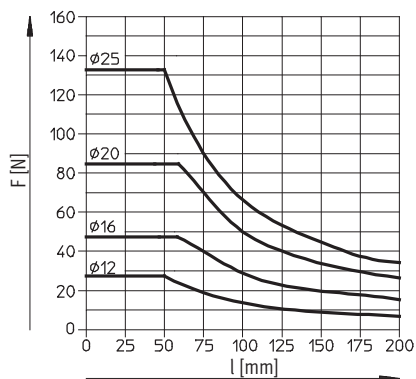


Stroke 250 ... 400 mm

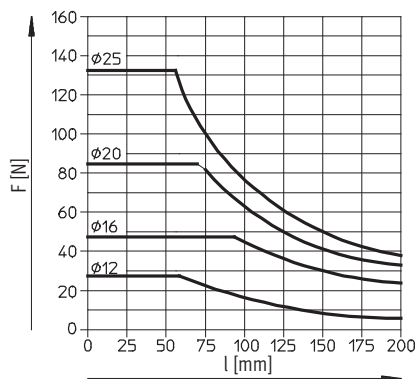


## Permissible load with recirculating ball bearing guide KF

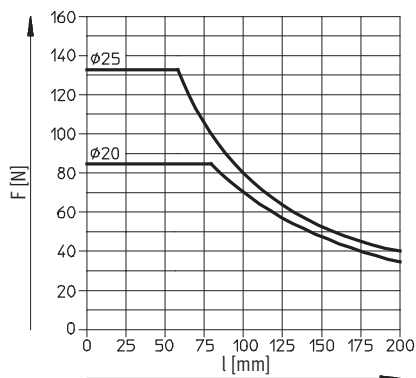
Stroke 40 ... 100 mm



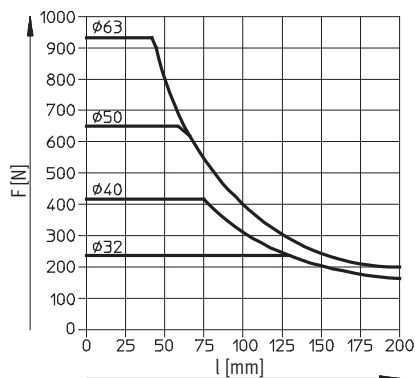
Stroke 125 ... 200 mm



Stroke 250 ... 400 mm



Stroke 200 ... 400 mm



# Guided drives DFM-N-B, NPT

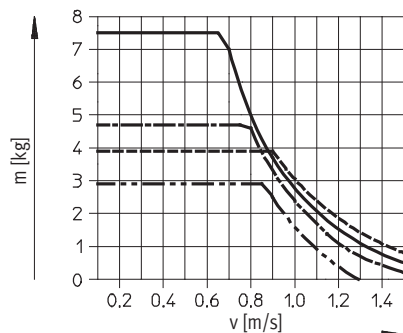
Technical data

FESTO

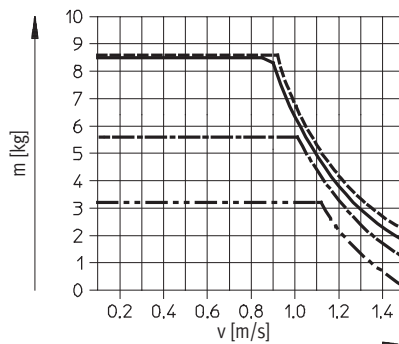
## Permissible load $m$ as a function of permissible speed $v$

Horizontal operation, cushioning YSRW

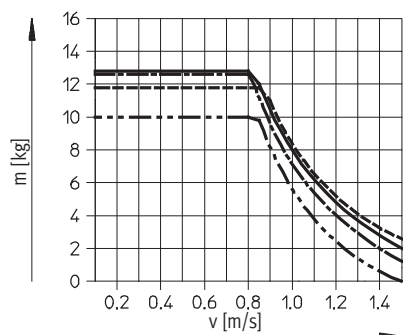
DFM-N-20-...-B-YSRW



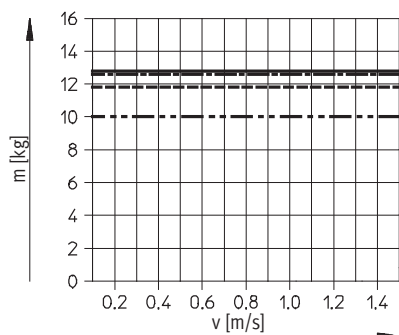
DFM-N-25-...-B-YSRW



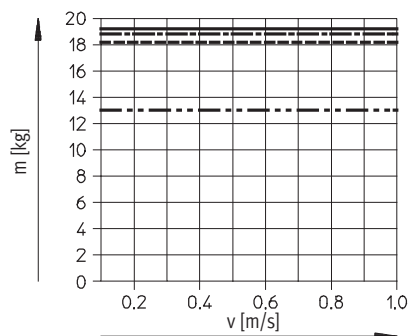
DFM-N-32-...-B-YSRW



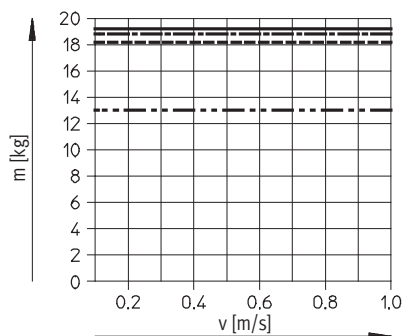
DFM-N-40-...-B-YSRW



DFM-N-50-...-B-YSRW



DFM-N-63-...-B-YSRW



----- 25 mm stroke  
 \_\_\_\_\_ 100 mm stroke  
 -.-.-.-.- 200 mm stroke  
 ..... 400 mm stroke

# Guided drives DFM-N-B, NPT

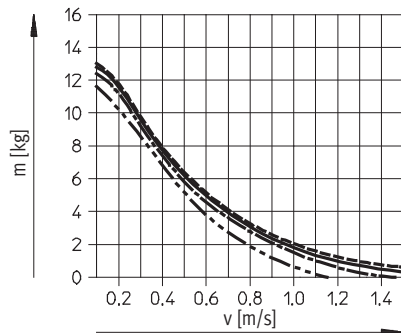
Technical data

FESTO

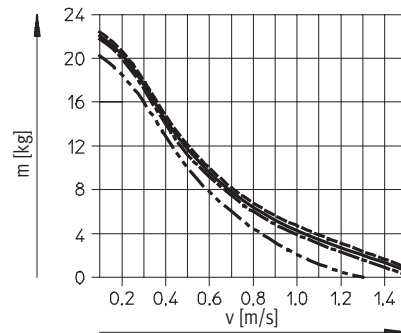
## Permissible load $m$ as a function of permissible speed $v$

Vertical operation, cushioning YSRW

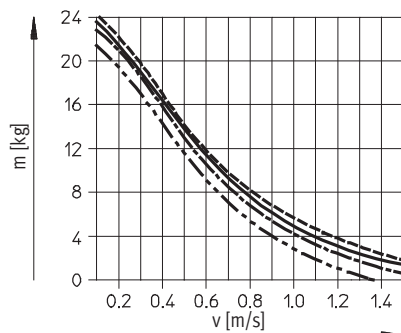
DFM-N-20-...-B-YSRW



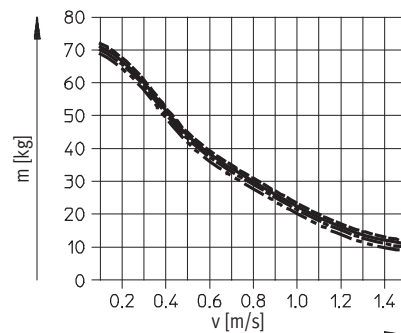
DFM-N-25-...-B-YSRW



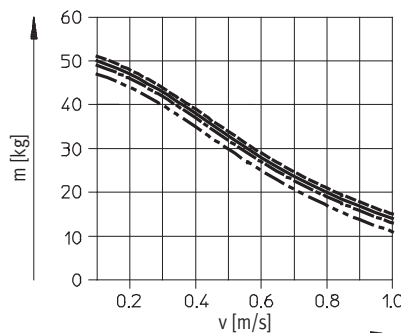
DFM-N-32-...-B-YSRW



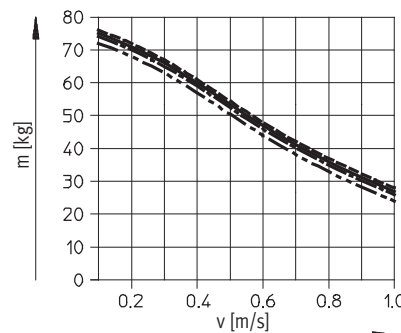
DFM-N-40-...-B-YSRW



DFM-N-50-...-B-YSRW



DFM-N-63-...-B-YSRW



- 25 mm stroke
- 100 mm stroke
- · - · - 200 mm stroke
- 400 mm stroke

# Guided drives DFM-N-B, NPT

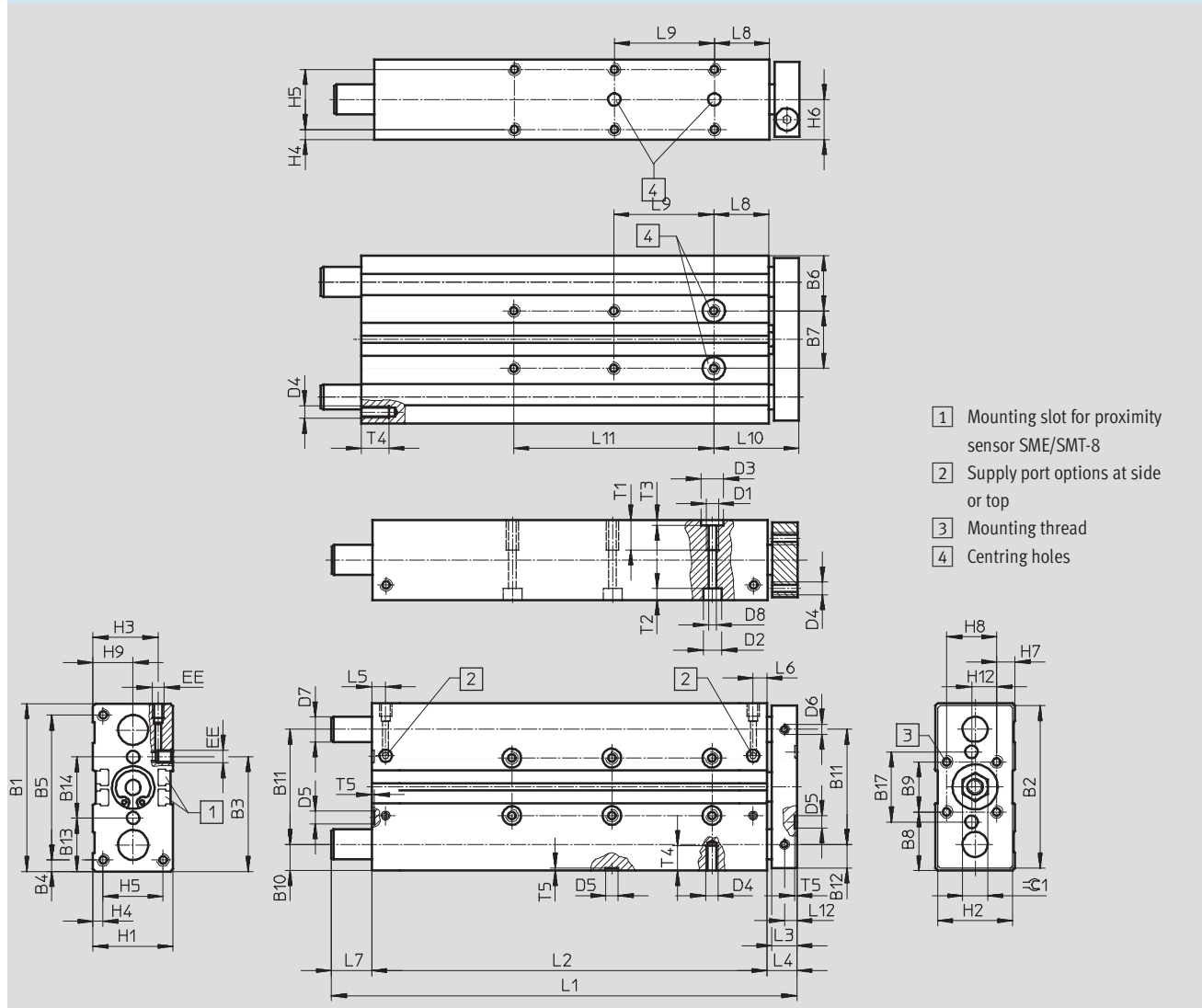
Technical data

FESTO

## Dimensions

Ø 12, 16 mm

Download CAD Data → [www.festo.com/us/cad](http://www.festo.com/us/cad)



| Ø    | B1 | B2 | B3   | B4  | B5 | B6   | B7                  | B8   | B9 | B10  | B11 | B12 | B13  | B14                 | B17 | D1 |
|------|----|----|------|-----|----|------|---------------------|------|----|------|-----|-----|------|---------------------|-----|----|
| [mm] |    |    |      |     |    |      | ±0.02 <sup>1)</sup> |      |    |      |     |     |      | ±0.02 <sup>1)</sup> |     |    |
| 12   | 60 | 58 | 40.7 | 4.5 | 51 | 20.5 | 19                  | 20   | 20 | 9.5  | 41  | 8.5 | 19.5 | 21                  | 25  | M5 |
| 16   | 67 | 65 | 45   | 4.5 | 58 | 22   | 23                  | 23.5 | 20 | 10.5 | 46  | 9.5 | 21.3 | 24.4                | 28  | M5 |

| Ø    | D2  | D3 | D4 | D5 | D6 | D7               |                  | D8  | EE <sup>2)</sup> | H1 | H2 | H3   | H4 | H5 | H6 | H7  |
|------|-----|----|----|----|----|------------------|------------------|-----|------------------|----|----|------|----|----|----|-----|
| [mm] | Ø   | Ø  |    | Ø  | Ø  | GF               | KF               | Ø   |                  |    |    |      |    |    |    |     |
| 12   | 8   | 9  | M4 | 5  | M4 | 10 <sub>h8</sub> | 8 <sub>h6</sub>  | 4.3 | M5               | 28 | 26 | 24   | 4  | 20 | 14 | 4   |
| 16   | 7.5 | 9  | M5 | 5  | M4 | 12 <sub>h8</sub> | 10 <sub>h6</sub> | 4.3 | M5               | 32 | 30 | 26.5 | 4  | 24 | 16 | 7.4 |

| Ø    | H8 | H9 | H12 | L2 | L3 | L4 | L5   | L6   | L8 | L10 | L12 | T1 | T2  | T3  | T4 | T5  | ≈C1 |
|------|----|----|-----|----|----|----|------|------|----|-----|-----|----|-----|-----|----|-----|-----|
| [mm] |    |    |     |    |    |    |      |      |    |     |     |    |     |     |    |     |     |
| 12   | 20 | 14 | 10  | 40 | 10 | 13 | 14.8 | 11.2 | 21 | 34  | 5   | 10 | 9.4 | 2.1 | 8  | 1.2 | 10  |
| 16   | 20 | 16 | 10  | 58 | 10 | 12 | 9.8  | 9.3  | 22 | 34  | 5   | 12 | 4.6 | 2.1 | 10 | 1.2 | 10  |

1) Tolerance between centring holes

2) Suitable for 10-32 UNF



# Guided drives DFM-N-B, NPT

Technical data

FESTO

| Stroke<br>[mm] | Piston Ø [mm] |     |    |                           |     |     |     |    |                           |     |
|----------------|---------------|-----|----|---------------------------|-----|-----|-----|----|---------------------------|-----|
|                | 12            |     |    |                           |     | 16  |     |    |                           |     |
|                | L1            | L2  | L7 | L9<br>±0.02 <sup>1)</sup> | L11 | L1  | L2  | L7 | L9<br>±0.02 <sup>1)</sup> | L11 |
| 10             | 74            | 50  | 11 | –                         | –   | 80  | 68  | –  | –                         | –   |
| 20             | 84            | 60  | 11 | –                         | –   | 90  | 78  | –  | –                         | –   |
| 25             | 89            | 65  | 11 | 20                        | –   | 95  | 83  | –  | 20                        | –   |
| 30             | 94            | 70  | 11 | 20                        | –   | 100 | 88  | –  | 20                        | –   |
| 40             | 104           | 80  | 11 | 20                        | –   | 110 | 98  | –  | 20                        | –   |
| 50             | 114           | 90  | 11 | 40                        | –   | 120 | 108 | –  | 40                        | –   |
| 80             | 144           | 120 | 11 | 40                        | –   | 150 | 138 | –  | 40                        | –   |
| 100            | 164           | 140 | 11 | 40                        | 80  | 170 | 158 | –  | 40                        | 80  |
| 125            | 230           | 165 | 52 | 40                        | 80  | 229 | 183 | 34 | 40                        | 80  |
| 160            | 265           | 200 | 52 | 40                        | 120 | 264 | 218 | 34 | 40                        | 120 |
| 200            | 305           | 240 | 52 | 40                        | 160 | 304 | 258 | 34 | 40                        | 160 |

1) Tolerance between centring holes

## Note

If the guide rods project beyond the housing when the unit is in its retracted end position (→ dimension L7), a recess must be provided in the

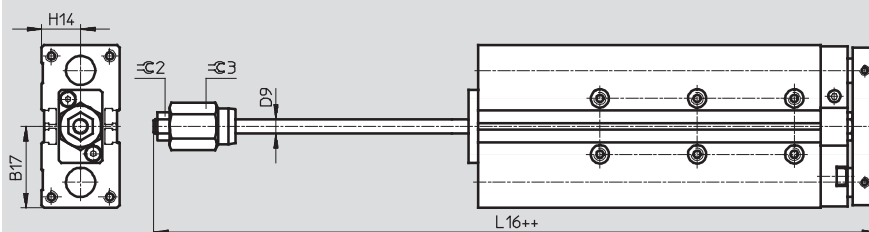
mounting surface if the unit is to be mounted against a surface in order to allow the guide rods to move freely.

When using a variable stroke, the dimensions L1, L2, L7, L9 and L11 correspond to the next longest standard stroke.

## Dimensions

Download CAD Data → [www.festo.com/us/cad](http://www.festo.com/us/cad)

AJ – Precision stroke adjustment, advanced end position  
Ø 12, 16 mm



++ = plus 2x stroke length

| Ø    | B17  | D9<br>Ø | H14 | L16   | ⌀C2 | ⌀C3 |
|------|------|---------|-----|-------|-----|-----|
| [mm] |      |         |     |       |     |     |
| 12   | 30.5 | 6       | 14  | 90.6  | 10  | 17  |
| 16   | 33.5 | 6       | 16  | 107.9 | 10  | 17  |

# Guided drives DFM-N-B, NPT

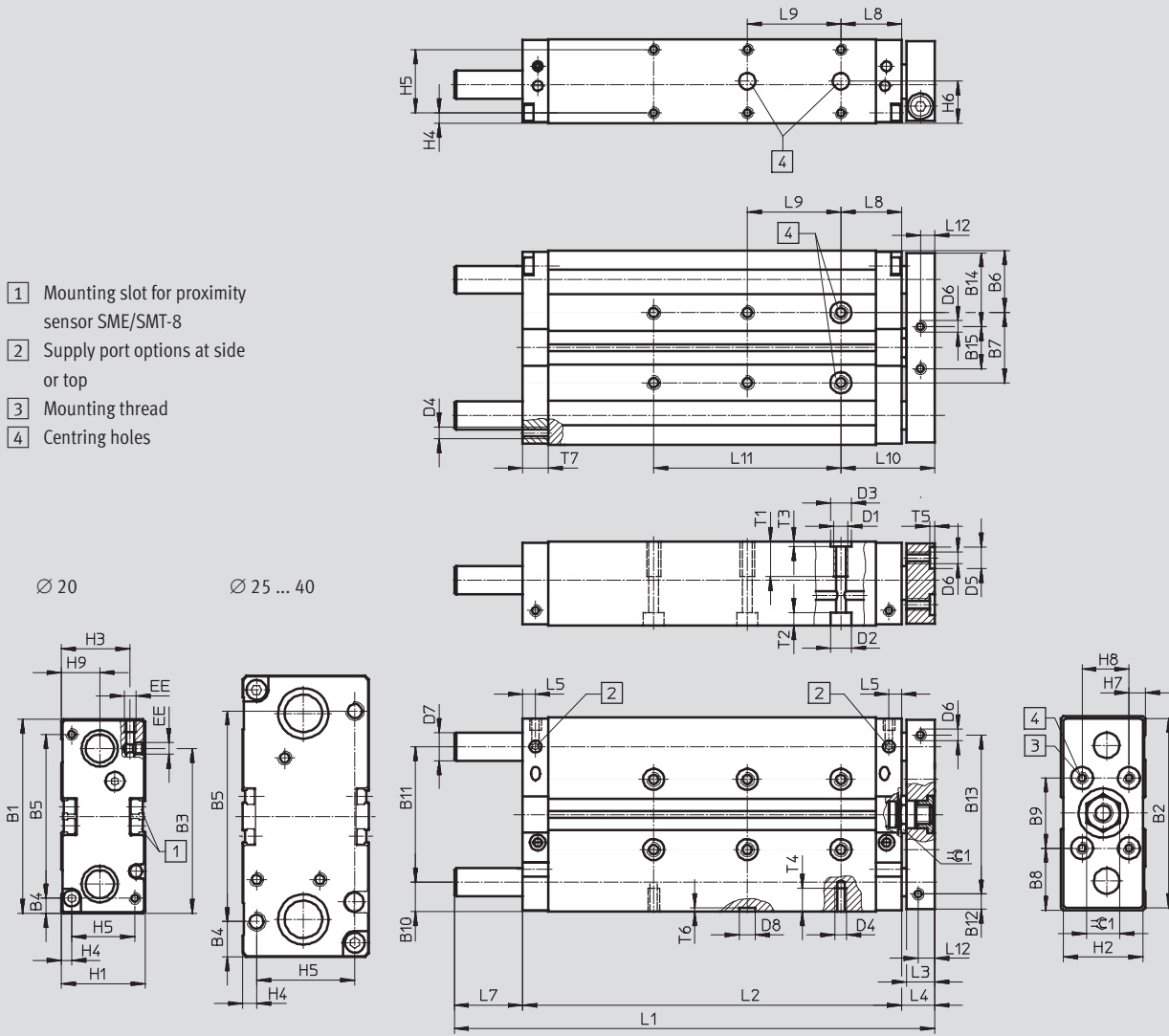
Technical data

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## Dimensions

Download CAD Data → [www.festo.com/us/cad](http://www.festo.com/us/cad)

Ø 20 ... 40 mm



# Guided drives DFM-N-B, NPT

Technical data

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| Ø<br>[mm] | B1  | B2  | B3   | B4   | B5 | B6   | B7<br>±0.02 <sup>1)</sup> | B8   | B9<br>±0.02 <sup>1)</sup> | B10  | B11 | B12  | B13 | B14  | B15 | D1 |
|-----------|-----|-----|------|------|----|------|---------------------------|------|---------------------------|------|-----|------|-----|------|-----|----|
| 20        | 83  | 81  | 70.5 | 6.5  | 70 | 26.5 | 30                        | 26.5 | 30                        | 12.5 | 58  | 6.5  | 68  | 31.5 | 18  | M6 |
| 25        | 95  | 93  | 67   | 15.5 | 64 | 30   | 35                        | 27.5 | 40                        | 13.5 | 68  | 12.5 | 68  | 32.5 | 28  | M6 |
| 32        | 110 | 108 | 77   | 20   | 70 | 33.5 | 43                        | 35   | 40                        | 16   | 78  | 15   | 78  | 41   | 26  | M8 |
| 40        | 120 | 118 | 86   | 15   | 90 | 34.5 | 51                        | 35   | 50                        | 16   | 88  | 15   | 88  | 41   | 36  | M8 |

| Ø<br>[mm] | D2<br>Ø | D3<br>Ø<br>H7 | D4 | D5<br>Ø<br>H7 | D6<br>Ø | D7<br>Ø |    | D8<br>Ø<br>H7 | EE               | H1 | H2 | H3   | H4  | H5 | H6   | H7  |
|-----------|---------|---------------|----|---------------|---------|---------|----|---------------|------------------|----|----|------|-----|----|------|-----|
|           |         |               |    |               |         | GF      | KF |               |                  |    |    |      |     |    |      |     |
| 20        | 9       | 9             | M5 | 9             | M5      | 14      | 12 | 7             | M5 <sup>2)</sup> | 36 | 34 | 29.5 | 4.5 | 27 | 18   | 7   |
| 25        | 9       | 9             | M6 | 9             | M6      | 16      | 14 | 7             | 1/8 NPT          | 44 | 42 | 34.8 | 4.5 | 35 | 22   | 12  |
| 32        | 11      | 12            | M6 | 9             | M6      | 20      | 16 | 9             | 1/8 NPT          | 49 | 47 | 39   | 6   | 37 | 24.5 | 8.5 |
| 40        | 11      | 12            | M8 | 9             | M6      | 20      | 16 | 9             | 1/8 NPT          | 54 | 52 | 41.5 | 6   | 42 | 27   | 10  |

| Ø<br>[mm] | H8 | H9   | L3 | L4 | L5  | L8 | L10 | L12 | T1 | T2  | T3  | T4 | T5  | T6  | T7 | ≈G1 |
|-----------|----|------|----|----|-----|----|-----|-----|----|-----|-----|----|-----|-----|----|-----|
| 20        | 20 | 16.5 | 12 | 14 | 5.5 | 26 | 40  | 6   | 12 | 5.7 | 2.1 | 10 | 2.1 | 1.6 | 11 | 14  |
| 25        | 20 | 19   | 12 | 14 | 8.5 | 26 | 40  | 6   | 15 | 5.7 | 2.1 | 12 | 2.1 | 1.6 | 15 | 17  |
| 32        | 30 | 21   | 14 | 16 | 8.5 | 29 | 45  | 7   | 20 | 6.8 | 2.6 | 11 | 2.1 | 2.1 | 15 | 17  |
| 40        | 30 | 26   | 14 | 16 | 8.5 | 29 | 45  | 7   | 20 | 6.8 | 2.6 | 16 | 2.1 | 2.1 | 15 | 17  |

| Stroke<br><br>[mm] | Piston Ø [mm] |     |     |                           |     |     |     |    |                           |     |     |     |    |                           |     |     |     |     |                           |     |
|--------------------|---------------|-----|-----|---------------------------|-----|-----|-----|----|---------------------------|-----|-----|-----|----|---------------------------|-----|-----|-----|-----|---------------------------|-----|
|                    | 20            |     |     |                           |     | 25  |     |    |                           |     | 32  |     |    |                           |     | 40  |     |     |                           |     |
|                    | L1            | L2  | L7  | L9<br>±0.02 <sup>1)</sup> | L11 | L1  | L2  | L7 | L9<br>±0.02 <sup>1)</sup> | L11 | L1  | L2  | L7 | L9<br>±0.02 <sup>1)</sup> | L11 | L1  | L2  | L7  | L9<br>±0.02 <sup>1)</sup> | L11 |
| 20                 | 105           | 82  | 9   | 20                        | –   | 111 | 90  | 7  | 20                        | –   | 118 | 95  | 7  | 20                        | –   | –   | 96  | –   | –                         | –   |
| 25                 | 110           | 87  |     |                           |     | 116 | 95  |    |                           |     | 123 | 100 |    |                           |     | 123 | 101 | 6   | 20                        |     |
| 30                 | 115           | 92  |     |                           |     | 121 | 100 |    |                           |     | 133 | 105 |    |                           |     | –   | 106 | –   | –                         |     |
| 40                 | 135           | 102 | 19  | 20                        | –   | 141 | 110 | 17 | 20                        | –   | 143 | 115 | 12 | 20                        | –   | –   | 116 | –   | –                         | –   |
| 50                 | 145           | 112 |     |                           |     | 151 | 120 |    |                           |     | 153 | 125 |    |                           |     | 153 | 126 | 11  | –                         |     |
| 80                 | 185           | 142 |     |                           |     | 196 | 150 |    |                           |     | 208 | 155 |    |                           |     | 208 | 156 | 36  | –                         |     |
| 100                | 205           | 162 | 29  | 80                        | 216 | 170 | 32  | 80 | 228                       | 175 | 37  | 20  | 80 | 228                       | 176 | –   | 80  |     |                           |     |
| 125                | 257           | 187 |     |                           | 271 | 195 |     |    | 283                       | 200 |     |     |    | 283                       | 201 | –   |     |     |                           |     |
| 160                | 292           | 222 |     |                           | 306 | 230 |     |    | 318                       | 235 |     |     |    | 318                       | 236 | 66  |     | –   |                           |     |
| 200                | 332           | 262 | 56  | 40                        | 346 | 270 | 62  | 40 | 358                       | 275 | 67  | 40  | 80 | 358                       | 276 |     | –   | 120 |                           |     |
| 250                | 472           | 312 |     |                           | 476 | 320 |     |    | 483                       | 325 |     |     |    | 483                       | 326 |     | –   |     |                           |     |
| 320                | 542           | 382 |     |                           | 546 | 390 |     |    | 553                       | 395 |     |     |    | 553                       | 396 | 141 | –   |     |                           |     |
| 400                | 622           | 462 | 146 | 40                        | 626 | 470 | 142 | 40 | 633                       | 475 | 142 | 40  | 80 | 633                       | 476 |     | –   |     | 320                       |     |

1) Tolerance between centring holes

2) Suitable for 10-32 UNF

Note: This product conforms to ISO 1179-1 and ISO 228-1

## Note

If the guide rods project beyond the housing when the unit is in its retracted end position (→ dimension L7), a recess must be provided in the

mounting surface if the unit is to be mounted against a surface in order to allow the guide rods to move freely.

When using a variable stroke, the dimensions L1, L2, L7, L9 and L11 correspond to the next longest standard stroke.

# Guided drives DFM-N-B, NPT

Technical data

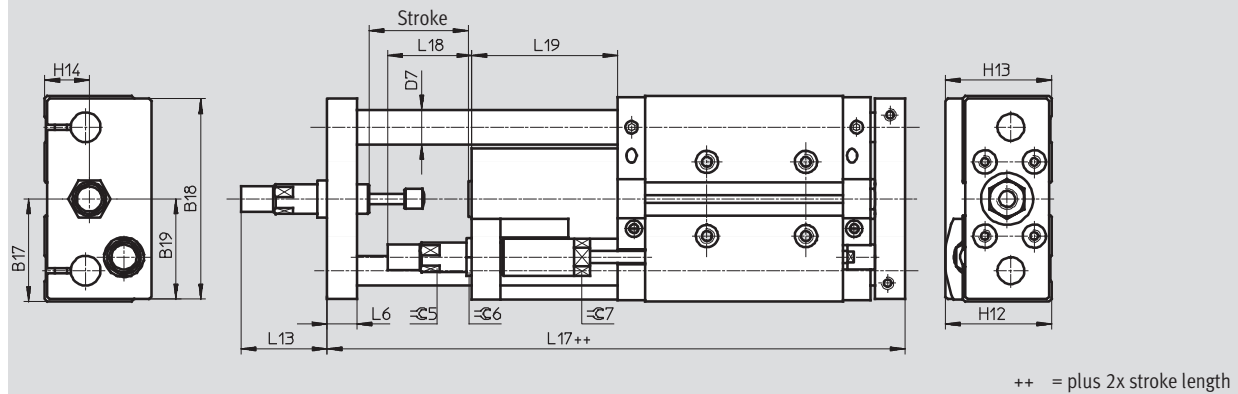
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## Dimensions

Download CAD Data → [www.festo.com/us/cad](http://www.festo.com/us/cad)

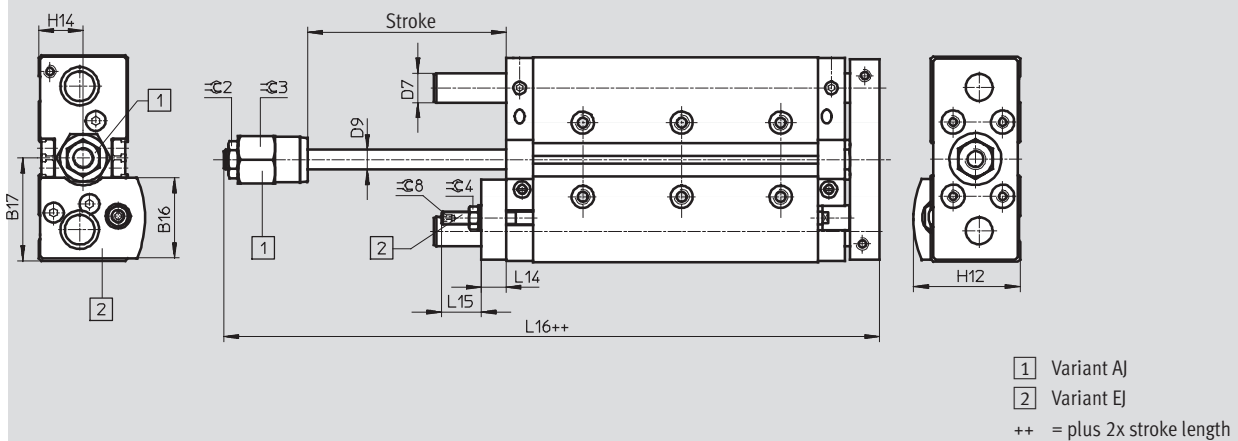
YSRW – Self-adjusting cushioning

Ø 20 ... 40 mm



AJ/EJ – Precision stroke adjustment, advanced end position and retracted end position

Ø 20 ... 40 mm



## Guided drives DFM-N-B, NPT

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Technical data

| Ø<br>[mm] | B16  | B17  | B18 | B19  | D7<br>Ø |    | D9<br>Ø | H12  | H13  | H14  | L6 | L13  | L14 |
|-----------|------|------|-----|------|---------|----|---------|------|------|------|----|------|-----|
|           |      |      |     |      | GF      | KF |         |      |      |      |    |      |     |
| 20        | 32.5 | 41.5 | 81  | 40.5 | 14      | 12 | 8       | 43   | 43   | 18   | 12 | 36.5 | 10  |
| 25        | 38.6 | 47.5 | 90  | 45   | 16      | 14 | 10      | 49.5 | 50.5 | 22   | 14 | 43   | 12  |
| 32        | 43.4 | 55   | 105 | 52.5 | 20      | 16 | 12      | 56.5 | 56   | 24.5 | 16 | 52   | 12  |
| 40        | 46.2 | 60   | 116 | 58   | 20      | 16 | 12      | 62.5 | 63.5 | 27   | 16 | 72   | 12  |

| Ø<br>[mm] | L15  | L16   | L17   | L18  | L19 | ≈G2 | ≈G3 | ≈G4 | ≈G5 | ≈G6 | ≈G7 | ≈G8 |
|-----------|------|-------|-------|------|-----|-----|-----|-----|-----|-----|-----|-----|
| 20        | 16   | 110   | 153.5 | 34   | 59  | 13  | 19  | 8   | 11  | 15  | 13  | 2.5 |
| 25        | 23.5 | 119.5 | 176.5 | 37.5 | 71  | 17  | 24  | 13  | 13  | 17  | 16  | 4   |
| 32        | 18.5 | 129.5 | 190.5 | 48.5 | 76  | 17  | 30  | 13  | 15  | 17  | 19  | 4   |
| 40        | 18.5 | 132   | 209.5 | 55.5 | 95  | 17  | 30  | 13  | 20  | 22  | 27  | 4   |

# Guided drives DFM-N-B, NPT

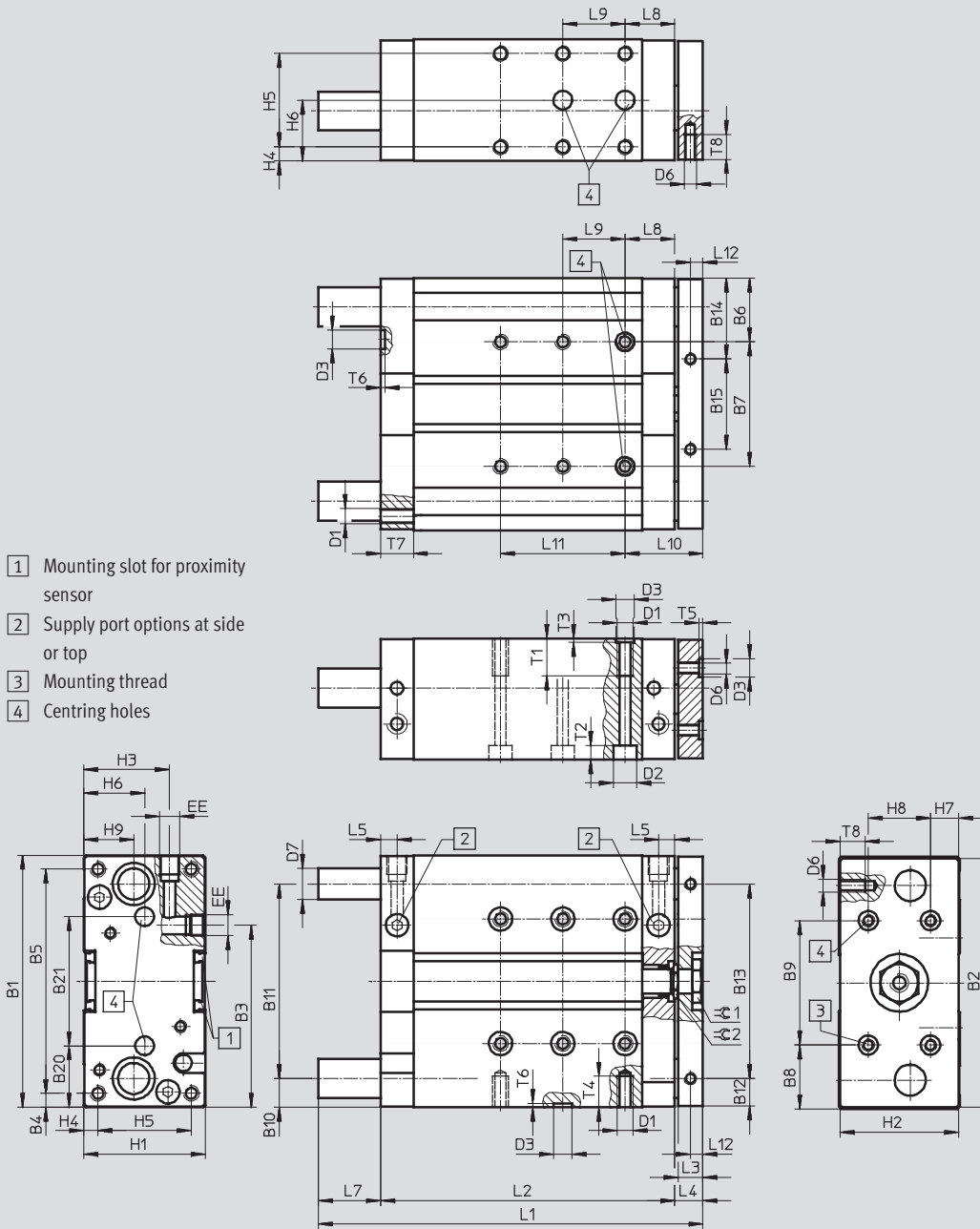
Technical data

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## Dimensions

Download CAD Data → [www.festo.com/us/cad](http://www.festo.com/us/cad)

Ø 50 ... 63 mm



# Guided drives DFM-N-B, NPT

Technical data

**FESTO**

| Ø<br>[mm] | B1  | B2  | B3    | B4 | B5  | B6 | B7<br>±0.02 <sup>1)</sup> | B8 | B9<br>±0.02 <sup>1)</sup> | B10  | B11 | B12  | B13 | B14 | B15 | B20  |
|-----------|-----|-----|-------|----|-----|----|---------------------------|----|---------------------------|------|-----|------|-----|-----|-----|------|
| 50        | 148 | 146 | 104.5 | 19 | 110 | 42 | 64                        | 44 | 60                        | 19   | 110 | 18   | 110 | 52  | 42  | 40   |
| 63        | 162 | 160 | 117   | 9  | 144 | 41 | 80                        | 41 | 80                        | 18.5 | 125 | 17.5 | 125 | 51  | 58  | 39.5 |

| Ø<br>[mm] | B21<br>±0.02 <sup>1)</sup> | D1  | D2<br>Ø | D3<br>Ø<br>H7 | D6<br>Ø | D7<br>Ø |    | EE <sup>2)</sup> | H1 | H2 | H3   | H4 | H5 | H6 | H7 | H8 |
|-----------|----------------------------|-----|---------|---------------|---------|---------|----|------------------|----|----|------|----|----|----|----|----|
|           |                            |     |         |               |         | GF      | KF |                  |    |    |      |    |    |    |    |    |
| 50        | 68                         | M8  | 11      | 12            | M8      | 25      | 20 | 1/4 NPT          | 64 | 62 | 48.5 | 7  | 50 | 32 | 12 | 40 |
| 63        | 83                         | M10 | 15      | 12            | M8      | 25      | 20 | 1/4 NPT          | 78 | 76 | 55   | 9  | 60 | 39 | 19 | 40 |

| Ø<br>[mm] | H9 | L3 | L4 | L5   | L8 | L10 | L12 | T1 | T2  | T3  | T4 | T5  | T6  | T7 | T8 | ≈C1 | ≈C2 |
|-----------|----|----|----|------|----|-----|-----|----|-----|-----|----|-----|-----|----|----|-----|-----|
| 50        | 29 | 16 | 18 | 10.5 | 32 | 50  | 8   | 20 | 9.8 | 2.6 | 16 | 2.6 | 2.6 | 21 | 16 | 24  | 19  |
| 63        | 32 | 16 | 18 | 10.5 | 32 | 50  | 8   | 24 | 9   | 2.6 | 20 | 2.6 | 2.6 | 21 | 16 | 24  | 19  |

| Stroke<br><br>[mm] | Piston Ø [mm] |     |     |                           |     |     |     |     |                           |     |    |     |
|--------------------|---------------|-----|-----|---------------------------|-----|-----|-----|-----|---------------------------|-----|----|-----|
|                    | 50            |     |     |                           |     | 63  |     |     |                           |     |    |     |
|                    | L1            | L2  | L7  | L9<br>±0.02 <sup>1)</sup> | L11 | L1  | L2  | L7  | L9<br>±0.02 <sup>1)</sup> | L11 |    |     |
| 25                 | 137           | 113 | 6   | 20                        | –   | 137 | 114 | 5   | 20                        | –   |    |     |
| 50                 | 177           | 138 | 21  | 40                        |     | 177 | 139 | 20  | 40                        |     |    |     |
| 80                 | 227           | 168 | 41  |                           |     | 227 | 169 | 40  |                           |     | 40 |     |
| 100                | 247           | 188 |     |                           |     | 247 | 189 |     |                           |     |    |     |
| 125                | 293           | 213 | 62  |                           |     | 293 | 214 | 61  |                           |     |    |     |
| 160                | 328           | 248 |     |                           |     | 328 | 249 |     |                           |     |    |     |
| 200                | 368           | 288 |     |                           |     | 368 | 289 |     |                           |     |    |     |
| 250                | 495           | 338 | 139 |                           |     | 200 | 495 | 339 |                           |     |    | 138 |
| 320                | 565           | 408 |     |                           |     | 240 | 565 | 409 |                           |     |    |     |
| 400                | 645           | 488 |     |                           |     | 320 | 645 | 489 |                           |     |    |     |
|                    |               |     |     |                           |     |     |     |     |                           |     |    |     |

1) Tolerance between centring holes

2) Suitable for 10-32 UNF

Note: This product conforms to ISO 1179-1 and ISO 228-1

## Note

Since the guide rods project beyond the housing when the unit is in its retracted end position (→ dimension L7), a recess must be provided in the

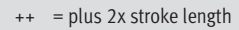
mounting surface if the unit is to be mounted against a surface in order to allow the guide rods to move freely.

When using a variable stroke, the dimensions L1, L2, L7, L9 and L11 correspond to the next longest standard stroke.

### Technical data

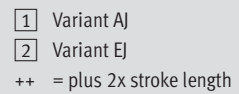
YSRW – Self-adjusting cushioning

Ø 50 ... 63 mm



AJ/EJ – Precision stroke adjustment, advanced end position and retracted end position

Ø 50 ... 63 mm



| Ø<br>[mm] | L15  | L16   | L17   | L18  | L19 | L20 | T9 | ≡C2 | ≡C3 | ≡C4 | ≡C5 | ≡C6 | ≡C7 | ≡C8 | ≡C9 |
|-----------|------|-------|-------|------|-----|-----|----|-----|-----|-----|-----|-----|-----|-----|-----|
| 50        | 24.5 | 152.1 | 226.4 | 58.5 | 93  | 8   | 16 | 19  | 36  | 17  | 20  | 27  | 22  | 5   | 30  |
| 63        | 23.5 | 151.8 | 249.2 | 74   | 110 | 10  | 16 | 19  | 36  | 17  | 24  | 32  | 27  | 5   | 36  |



# Guided drives DFM-N-B, NPT

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Ordering data – Standard types

| Ordering data – Plain-bearing guide GF |          |                       |  |          |                       |  |          |                       |  |  |  |
|----------------------------------------|----------|-----------------------|--|----------|-----------------------|--|----------|-----------------------|--|--|--|
|                                        | Part No. | Type                  |  | Part No. | Type                  |  | Part No. | Type                  |  |  |  |
| Stroke [mm]                            | Ø 12 mm  |                       |  | Ø 16 mm  |                       |  | Ø 20 mm  |                       |  |  |  |
| 10                                     | 570 547  | DFM-N-12-10-B-P-A-GF  |  | 570 555  | DFM-N-16-10-B-P-A-GF  |  | –        | –                     |  |  |  |
| 20                                     | 570 548  | DFM-N-12-20-B-P-A-GF  |  | 570 556  | DFM-N-16-20-B-P-A-GF  |  | 570 563  | DFM-N-20-20-B-P-A-GF  |  |  |  |
| 25                                     | 570 549  | DFM-N-12-25-B-P-A-GF  |  | 570 557  | DFM-N-16-25-B-P-A-GF  |  | 570 564  | DFM-N-20-25-B-P-A-GF  |  |  |  |
| 30                                     | 570 550  | DFM-N-12-30-B-P-A-GF  |  | 570 558  | DFM-N-16-30-B-P-A-GF  |  | 570 565  | DFM-N-20-30-B-P-A-GF  |  |  |  |
| 40                                     | 570 551  | DFM-N-12-40-B-P-A-GF  |  | 570 559  | DFM-N-16-40-B-P-A-GF  |  | 570 566  | DFM-N-20-40-B-P-A-GF  |  |  |  |
| 50                                     | 570 552  | DFM-N-12-50-B-P-A-GF  |  | 570 560  | DFM-N-16-50-B-P-A-GF  |  | 570 567  | DFM-N-20-50-B-P-A-GF  |  |  |  |
| 80                                     | 570 553  | DFM-N-12-80-B-P-A-GF  |  | 570 561  | DFM-N-16-80-B-P-A-GF  |  | 570 568  | DFM-N-20-80-B-P-A-GF  |  |  |  |
| 100                                    | 570 554  | DFM-N-12-100-B-P-A-GF |  | 570 562  | DFM-N-16-100-B-P-A-GF |  | 570 569  | DFM-N-20-100-B-P-A-GF |  |  |  |
| 125                                    | –        | –                     |  | –        | –                     |  | –        | –                     |  |  |  |
| 160                                    | –        | –                     |  | –        | –                     |  | –        | –                     |  |  |  |
| 200                                    | –        | –                     |  | –        | –                     |  | –        | –                     |  |  |  |
|                                        |          |                       |  |          |                       |  |          |                       |  |  |  |
| Stroke [mm]                            | Ø 25 mm  |                       |  | Ø 32 mm  |                       |  | Ø 40 mm  |                       |  |  |  |
| 10                                     | –        | –                     |  | –        | –                     |  | –        | –                     |  |  |  |
| 20                                     | 570 570  | DFM-N-25-20-B-P-A-GF  |  | 570 577  | DFM-N-32-20-B-P-A-GF  |  | –        | –                     |  |  |  |
| 25                                     | 570 571  | DFM-N-25-25P-A-GF     |  | 570 578  | DFM-N-32-25-B-P-A-GF  |  | 570 587  | DFM-N-40-25-B-P-A-GF  |  |  |  |
| 30                                     | 570 572  | DFM-N-25-30-B-P-A-GF  |  | 570 579  | DFM-N-32-30-B-P-A-GF  |  | –        | –                     |  |  |  |
| 40                                     | 570 573  | DFM-N-25-40-B-P-A-GF  |  | 570 580  | DFM-N-32-40-B-P-A-GF  |  | –        | –                     |  |  |  |
| 50                                     | 570 574  | DFM-N-25-50-B-P-A-GF  |  | 570 581  | DFM-N-32-50-B-P-A-GF  |  | 570 588  | DFM-N-40-50-B-P-A-GF  |  |  |  |
| 80                                     | 570 575  | DFM-N-25-80-B-P-A-GF  |  | 570 582  | DFM-N-32-80-B-P-A-GF  |  | 570 589  | DFM-N-40-80-B-P-A-GF  |  |  |  |
| 100                                    | 570 576  | DFM-N-25-100-B-P-A-GF |  | 570 583  | DFM-N-32-100-B-P-A-GF |  | 570 590  | DFM-N-40-100-B-P-A-GF |  |  |  |
| 125                                    | –        | –                     |  | 570 584  | DFM-N-32-125-B-P-A-GF |  | 570 591  | DFM-N-40-125-B-P-A-GF |  |  |  |
| 160                                    | –        | –                     |  | 570 585  | DFM-N-32-160-B-P-A-GF |  | 570 592  | DFM-N-40-160-B-P-A-GF |  |  |  |
| 200                                    | –        | –                     |  | 570 586  | DFM-N-32-200-B-P-A-GF |  | 570 593  | DFM-N-40-200-B-P-A-GF |  |  |  |
|                                        |          |                       |  |          |                       |  |          |                       |  |  |  |
| Stroke [mm]                            | Ø 50 mm  |                       |  | Ø 63 mm  |                       |  |          |                       |  |  |  |
| 10                                     | –        | –                     |  | –        | –                     |  |          |                       |  |  |  |
| 20                                     | –        | –                     |  | –        | –                     |  |          |                       |  |  |  |
| 25                                     | 570 594  | DFM-N-50-25-B-P-A-GF  |  | 570 601  | DFM-N-63-25-B-P-A-GF  |  |          |                       |  |  |  |
| 30                                     | –        | –                     |  | –        | –                     |  |          |                       |  |  |  |
| 40                                     | –        | –                     |  | –        | –                     |  |          |                       |  |  |  |
| 50                                     | 570 595  | DFM-N-50-50-B-P-A-GF  |  | 570 602  | DFM-N-63-50-B-P-A-GF  |  |          |                       |  |  |  |
| 80                                     | 570 596  | DFM-N-50-80-B-P-A-GF  |  | 570 603  | DFM-N-63-80-B-P-A-GF  |  |          |                       |  |  |  |
| 100                                    | 570 597  | DFM-N-50-100-B-P-A-GF |  | 570 604  | DFM-N-63-100-B-P-A-GF |  |          |                       |  |  |  |
| 125                                    | 570 598  | DFM-N-50-125-B-P-A-GF |  | 570 605  | DFM-N-63-125-B-P-A-GF |  |          |                       |  |  |  |
| 160                                    | 570 599  | DFM-N-50-160-B-P-A-GF |  | 570 606  | DFM-N-63-160-B-P-A-GF |  |          |                       |  |  |  |
| 200                                    | 570 600  | DFM-N-50-200-B-P-A-GF |  | 570 607  | DFM-N-63-200-B-P-A-GF |  |          |                       |  |  |  |

# Guided drives DFM-N-B, with plain-bearing guide GF, NPT

FESTO

Ordering data – Modular products

| Mandatory data → |          |        |          |            |            |            |                  |       |
|------------------|----------|--------|----------|------------|------------|------------|------------------|-------|
| Module No.       | Function | Thread | Piston Ø | Stroke     | Generation | Cushioning | Position sensing | Guide |
| 529 119          | DFM      | N      | 12       | 10 ... 400 | B          | P<br>PPV   | A                | GF    |
| 529 120          |          |        | 16       |            |            |            |                  |       |
| 532 316          |          |        | 20       |            |            |            |                  |       |
| 532 317          |          |        | 25       |            |            |            |                  |       |
| 532 318          |          |        | 32       |            |            |            |                  |       |
| 532 319          |          |        | 40       |            |            |            |                  |       |
| 534 769          |          |        | 50       |            |            |            |                  |       |
| 534 770          |          |        | 63       |            |            |            |                  |       |
| Ordering example |          |        |          |            |            |            |                  |       |
| 532 319          | DFM      | - N    | - 40     | - 350      | - B        | - PPV      | - A              | - GF  |

| Ordering table   |                                             |                                               |         |            |         |         |            |         |         |                 |      |               |
|------------------|---------------------------------------------|-----------------------------------------------|---------|------------|---------|---------|------------|---------|---------|-----------------|------|---------------|
| Size             |                                             | 12                                            | 16      | 20         | 25      | 32      | 40         | 50      | 63      | Condi-<br>tions | Code | Enter<br>code |
| M                | Module No.                                  | 529 119                                       | 529 120 | 532 316    | 532 317 | 532 318 | 532 319    | 534 769 | 534 770 |                 |      |               |
|                  | Function                                    | Guided drive                                  |         |            |         |         |            |         |         |                 | DFM  | DFM           |
|                  | Thread                                      | NPT thread                                    |         |            |         |         |            |         |         |                 | N    | -N            |
|                  | Piston Ø [mm]                               | 12                                            | 16      | 20         | 25      | 32      | 40         | 50      | 63      |                 | -... |               |
|                  | Stroke [mm]                                 | 10                                            | 10      | —          | —       | —       | —          | —       | —       |                 | -... |               |
|                  |                                             | 20                                            | 20      | 20         | 20      | 20      | —          | —       | —       |                 | -... |               |
|                  |                                             | 25                                            | 25      | 25         | 25      | 25      | 25         | 25      | 25      |                 | -... |               |
|                  |                                             | 30                                            | 30      | 30         | 30      | 30      | —          | —       | —       |                 | -... |               |
|                  |                                             | 40                                            | 40      | 40         | 40      | 40      | —          | —       | —       |                 | -... |               |
|                  |                                             | 50                                            | 50      | 50         | 50      | 50      | 50         | 50      | 50      |                 | -... |               |
|                  |                                             | 80                                            | 80      | 80         | 80      | 80      | 80         | 80      | 80      |                 | -... |               |
|                  |                                             | 100                                           | 100     | 100        | 100     | 100     | 100        | 100     | 100     |                 | -... |               |
|                  |                                             | 125                                           | 125     | 125        | 125     | 125     | 125        | 125     | 125     |                 | -... |               |
|                  |                                             | 160                                           | 160     | 160        | 160     | 160     | 160        | 160     | 160     |                 | -... |               |
|                  |                                             | 200                                           | 200     | 200        | 200     | 200     | 200        | 200     | 200     |                 | -... |               |
|                  |                                             | —                                             | —       | 250        | 250     | 250     | 250        | 250     | 250     |                 | -... |               |
|                  |                                             | —                                             | —       | 320        | 320     | 320     | 320        | 320     | 320     |                 | -... |               |
|                  |                                             | —                                             | —       | 400        | 400     | 400     | 400        | 400     | 400     |                 | -... |               |
|                  | Variable stroke [mm]                        | 10 ... 200                                    |         | 20 ... 400 |         |         | 25 ... 400 |         |         | 1               | -... |               |
|                  | Generation                                  | B series                                      |         |            |         |         |            |         |         |                 | -B   | -B            |
| Cushioning       | Flexible cushioning rings/pads at both ends |                                               |         |            |         |         |            |         |         | -P              |      |               |
|                  | —                                           | Pneumatic cushioning, adjustable at both ends |         |            |         |         |            |         | 2       | -PPV            |      |               |
| Position sensing | Via proximity sensor                        |                                               |         |            |         |         |            |         |         | -A              | -A   |               |
| Guide            | Plain-bearing guide                         |                                               |         |            |         |         |            |         |         | -GF             | -GF  |               |

1 ... Not with precision adjustment AJ

2 PPV Not with precision adjustment AJ, EJ

Transfer order code

|  |     |   |   |   |  |   |  |   |   |   |  |   |   |   |    |
|--|-----|---|---|---|--|---|--|---|---|---|--|---|---|---|----|
|  | DFM | - | N | - |  | - |  | - | B | - |  | - | A | - | GF |
|--|-----|---|---|---|--|---|--|---|---|---|--|---|---|---|----|

# Guided drives DFM-N-B, with plain-bearing guide GF, NPT

FESTO

Ordering data – Modular products

## Options

| Temperature resistance | Precision adjustment advanced | Precision adjustment retracted | Accessories | Slot cover for sensor slot | Proximity sensor with cable | Proximity sensor, contactless with cable |
|------------------------|-------------------------------|--------------------------------|-------------|----------------------------|-----------------------------|------------------------------------------|
| S6                     | AJ                            | EJ                             | ZUB         | ...S                       | ...G                        | ...I                                     |
| - S6                   | -                             | -                              | ZUB         | - 10S                      | 1G                          | 1I                                       |

| Ordering table |                                |                                                       |          |                                                        |    |    |    |    |    |                 |      |               |  |
|----------------|--------------------------------|-------------------------------------------------------|----------|--------------------------------------------------------|----|----|----|----|----|-----------------|------|---------------|--|
| Size           |                                | 12                                                    | 16       | 20                                                     | 25 | 32 | 40 | 50 | 63 | Condi-<br>tions | Code | Enter<br>code |  |
| 0              | Temperature resistance         | Heat-resistant seals up to max. 120 °C                |          |                                                        |    |    |    |    |    | 3               | S6   |               |  |
|                | Precision adjustment advanced  | Precision adjustment into the end positions, advanced |          |                                                        |    |    |    |    |    |                 | -AJ  |               |  |
|                | Precision adjustment retracted | –                                                     | –        | Precision adjustment into the end positions, retracted |    |    |    |    |    |                 | -EJ  |               |  |
|                | Accessories                    | Supplied separately                                   |          |                                                        |    |    |    |    |    |                 | ZUB- | ZUB-          |  |
|                | Slot cover for sensor slot     | 1 ... 10                                              |          |                                                        |    |    |    |    |    |                 | ...S |               |  |
|                | Proximity sensor               | With cable, 2.5 m                                     | 1 ... 10 |                                                        |    |    |    |    |    |                 |      | ...G          |  |
|                |                                | Contactless with cable, 2.5 m                         | 1 ... 10 |                                                        |    |    |    |    |    |                 |      | ...I          |  |

3 S6 Not with precision adjustment AJ, EJ

### Transfer order code

- [ ] - [ ] - [ ] ZUB - [ ] [ ] [ ]

# Guided drives DFM-B, with recirculating ball bearing guide KF, NPT

FESTO

Ordering data – Modular products

| Mandatory data → |          |        |          |            |            |                  |                  |       |
|------------------|----------|--------|----------|------------|------------|------------------|------------------|-------|
| Module No.       | Function | Thread | Piston Ø | Stroke     | Generation | Cushioning       | Position sensing | Guide |
| 529 119          | DFM      | N      | 12       | 10 ... 400 | B          | P<br>PPV<br>YSRW | A                | KF    |
| 529 120          |          |        | 16       |            |            |                  |                  |       |
| 532 316          |          |        | 20       |            |            |                  |                  |       |
| 532 317          |          |        | 25       |            |            |                  |                  |       |
| 532 318          |          |        | 32       |            |            |                  |                  |       |
| 532 319          |          |        | 40       |            |            |                  |                  |       |
| 534 769          |          |        | 50       |            |            |                  |                  |       |
| 534 770          |          |        | 63       |            |            |                  |                  |       |
| Ordering example |          |        |          |            |            |                  |                  |       |
| 532 319          | DFM      | N      | - 40     | - 400      | - B        | - P              | - A              | - KF  |

| Ordering table |                      |                                             |                                               |                                             |         |         |            |         |         |                 |       |               |  |
|----------------|----------------------|---------------------------------------------|-----------------------------------------------|---------------------------------------------|---------|---------|------------|---------|---------|-----------------|-------|---------------|--|
| Size           |                      | 12                                          | 16                                            | 20                                          | 25      | 32      | 40         | 50      | 63      | Condi-<br>tions | Code  | Enter<br>code |  |
| M              | Module No.           | 529 119                                     | 529 120                                       | 532 316                                     | 532 317 | 532 318 | 532 319    | 534 769 | 534 770 |                 |       |               |  |
|                | Function             | Guided drive                                |                                               |                                             |         |         |            |         |         |                 | DFM   | DFM           |  |
|                | Thread               | NPT thread                                  |                                               |                                             |         |         |            |         |         |                 | N     | -N            |  |
|                | Piston Ø [mm]        | 12                                          | 16                                            | 20                                          | 25      | 32      | 40         | 50      | 63      |                 | -...  |               |  |
|                | Stroke [mm]          | 10                                          | 10                                            | —                                           | —       | —       | —          | —       | —       | —               |       | -...          |  |
|                |                      | 20                                          | 20                                            | 20                                          | 20      | 20      | —          | —       | —       | —               |       | -...          |  |
|                |                      | 25                                          | 25                                            | 25                                          | 25      | 25      | 25         | 25      | 25      | 25              |       | -...          |  |
|                |                      | 30                                          | 30                                            | 30                                          | 30      | 30      | —          | —       | —       | —               |       | -...          |  |
|                |                      | 40                                          | 40                                            | 40                                          | 40      | 40      | —          | —       | —       | —               |       | -...          |  |
|                |                      | 50                                          | 50                                            | 50                                          | 50      | 50      | 50         | 50      | 50      | 50              |       | -...          |  |
|                |                      | 80                                          | 80                                            | 80                                          | 80      | 80      | 80         | 80      | 80      | 80              |       | -...          |  |
|                |                      | 100                                         | 100                                           | 100                                         | 100     | 100     | 100        | 100     | 100     | 100             |       | -...          |  |
|                |                      | 125                                         | 125                                           | 125                                         | 125     | 125     | 125        | 125     | 125     | 125             |       | -...          |  |
|                |                      | 160                                         | 160                                           | 160                                         | 160     | 160     | 160        | 160     | 160     | 160             |       | -...          |  |
|                |                      | 200                                         | 200                                           | 200                                         | 200     | 200     | 200        | 200     | 200     | 200             |       | -...          |  |
|                |                      | —                                           | —                                             | 250                                         | 250     | 250     | 250        | 250     | 250     | 250             |       | -...          |  |
|                |                      | —                                           | —                                             | 320                                         | 320     | 320     | 320        | 320     | 320     | 320             |       | -...          |  |
|                |                      | —                                           | —                                             | 400                                         | 400     | 400     | 400        | 400     | 400     | 400             |       | -...          |  |
|                | Variable stroke [mm] | 10 ... 200                                  |                                               | 20 ... 400                                  |         |         | 25 ... 400 |         |         | 1               | -...  |               |  |
|                | Generation           | B series                                    |                                               |                                             |         |         |            |         |         |                 | -B    | -B            |  |
|                | Cushioning           | Flexible cushioning rings/pads at both ends |                                               |                                             |         |         |            |         |         |                 | -P    |               |  |
|                |                      | —                                           | Pneumatic cushioning, adjustable at both ends |                                             |         |         |            |         |         | 2               | -PPV  |               |  |
|                |                      | —                                           | —                                             | Shock absorber, self-adjusting, progressive |         |         |            |         |         | 3               | -YSRW |               |  |
|                | Position sensing     | Via proximity sensor                        |                                               |                                             |         |         |            |         |         |                 | -A    | -A            |  |
|                | Guide                | Recirculating ball bearing guide            |                                               |                                             |         |         |            |         |         |                 | -KF   | -KF           |  |

1 ... Not with precision adjustment AJ, cushioning YSRW

3 YSRW Not with precision adjustment AJ, EJ, since already integrated

2 PPV Not with precision adjustment AJ, EJ

## Transfer order code

|  |     |   |   |   |  |   |  |   |   |   |  |   |   |   |    |
|--|-----|---|---|---|--|---|--|---|---|---|--|---|---|---|----|
|  | DFM | - | N | - |  | - |  | - | B | - |  | - | A | - | KF |
|--|-----|---|---|---|--|---|--|---|---|---|--|---|---|---|----|

# Guided drives DFM-B, with recirculating ball bearing guide KF, NPT

FESTO

Ordering data – Modular products

| Options                       |                                |             |                            |                             |                                          |
|-------------------------------|--------------------------------|-------------|----------------------------|-----------------------------|------------------------------------------|
| Precision adjustment advanced | Precision adjustment retracted | Accessories | Slot cover for sensor slot | Proximity sensor with cable | Proximity sensor, contactless with cable |
| AJ                            | EJ                             | ZUB         | ...S                       | ...G                        | ...I                                     |
| - AJ                          | - EJ                           | ZUB         | - 10S                      | 1G                          | 1I                                       |

| Ordering table |                                |                               |                                                       |    |                                                        |    |    |    |    |                 |      |               |
|----------------|--------------------------------|-------------------------------|-------------------------------------------------------|----|--------------------------------------------------------|----|----|----|----|-----------------|------|---------------|
| Size           |                                | 12                            | 16                                                    | 20 | 25                                                     | 32 | 40 | 50 | 63 | Condi-<br>tions | Code | Enter<br>code |
| 0              | Precision adjustment advanced  |                               | Precision adjustment into the end positions, advanced |    |                                                        |    |    |    |    |                 | -AJ  |               |
|                | Precision adjustment retracted |                               | —                                                     | —  | Precision adjustment into the end positions, retracted |    |    |    |    |                 | -EJ  |               |
|                | Accessories                    |                               | Supplied separately                                   |    |                                                        |    |    |    |    |                 | ZUB- |               |
|                | Slot cover for sensor slot     |                               | 1 ... 10                                              |    |                                                        |    |    |    |    |                 | ...S |               |
|                | Proximity sensor               | With cable, 2.5 m             | 1 ... 10                                              |    |                                                        |    |    |    |    |                 | ...G |               |
|                |                                | Contactless with cable, 2.5 m | 1 ... 10                                              |    |                                                        |    |    |    |    |                 | ...I |               |

Transfer order code

-  -  ZUB -

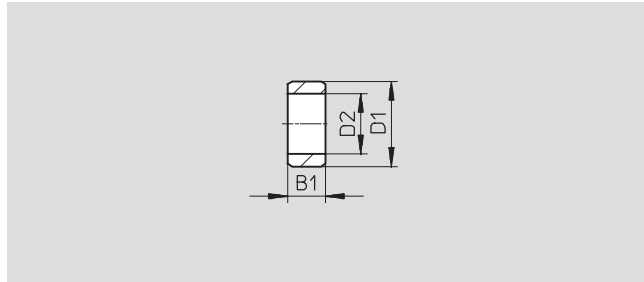
# Guided drives DFM-N-B, NPT

Accessories

FESTO

## Centring sleeve ZBH

Material:  
High-alloy steel



| Dimensions and ordering data (repeat order) |         |      |                   |        |          |        |                  |
|---------------------------------------------|---------|------|-------------------|--------|----------|--------|------------------|
| B1                                          | D1      | D2   | CRC <sup>1)</sup> | Weight | Part No. | Type   | PU <sup>2)</sup> |
| -0.2                                        | Ø<br>h7 | Ø    |                   | [g]    |          |        |                  |
| 2.4                                         | 5       | 3.2  | 2                 | 1      | 189 652  | ZBH-5  | 10               |
| 3                                           | 7       | 5.3  | 2                 | 1      | 186 717  | ZBH-7  | 10               |
| 4                                           | 9       | 6.4  | 2                 | 1      | 150 927  | ZBH-9  | 10               |
| 5                                           | 12      | 10.3 | 2                 | 1      | 189 653  | ZBH-12 | 10               |

- 1) Corrosion resistance class 2 to Festo standard 940 070  
Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents
- 2) Packaging unit

| Centring sleeves included in the scope of delivery |                  |                     |                |
|----------------------------------------------------|------------------|---------------------|----------------|
| DFM-N-B                                            | Piston Ø<br>[mm] | Centring sleeves    |                |
|                                                    |                  | For housing         | For yoke plate |
|                                                    | 12               | 2x ZBH-5, 2x ZBH-9  | 2x ZBH-5       |
|                                                    | 16               | 2x ZBH-5, 2x ZBH-9  | 2x ZBH-5       |
|                                                    | 20               | 2x ZBH-7, 2x ZBH-9  | 2x ZBH-9       |
|                                                    | 25               | 2x ZBH-7, 2x ZBH-9  | 2x ZBH-9       |
|                                                    | 32               | 2x ZBH-9, 2x ZBH-12 | 2x ZBH-9       |
|                                                    | 40               | 2x ZBH-9, 2x ZBH-12 | 2x ZBH-9       |
|                                                    | 50               | 2x ZBH-12           | 2x ZBH-12      |
|                                                    | 63               | 2x ZBH-12           | 2x ZBH-12      |

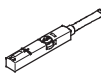
| Ordering data – Slot cover for T-slot |                       |          |          |         |
|---------------------------------------|-----------------------|----------|----------|---------|
|                                       | Assembly              | Length   | Part No. | Type    |
|                                       | Insertable from above | 2x 0.5 m | 151 680  | ABP-5-S |

| Ordering data – Proximity sensors for T-slot, magneto-resistive                     |                                                                    |                  |                       |                  | Technical data → Internet: smt |                         |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------|------------------|-----------------------|------------------|--------------------------------|-------------------------|
|                                                                                     | Type of mounting                                                   | Switching output | Electrical connection | Cable length [m] | Part No.                       | Type                    |
| N/O contact                                                                         |                                                                    |                  |                       |                  |                                |                         |
|  | Insertable in the slot from above, flush with the cylinder profile | PNP              | Cable, 3-wire         | 2.5              | 543 867                        | SMT-8M-PS-24V-K-2,5-OE  |
|                                                                                     |                                                                    |                  | Plug M8x1, 3-pin      | 0.3              | 543 866                        | SMT-8M-PS-24V-K-0,3-M8D |
|                                                                                     |                                                                    |                  | Plug M12x1, 3-pin     | 0.3              | 543 869                        | SMT-8M-PS-24V-K-0,3-M12 |
|                                                                                     |                                                                    | NPN              | Cable, 3-wire         | 2.5              | 543 870                        | SMT-8M-NS-24V-K-2,5-OE  |
|                                                                                     |                                                                    |                  | Plug M8x1, 3-pin      | 0.3              | 543 871                        | SMT-8M-NS-24V-K-0,3-M8D |
|  | Insertable in the slot lengthwise, flush with the cylinder profile | PNP              | Cable, 3-wire         | 2.5              | 175 436                        | SMT-8-PS-K-LED-24-B     |
|                                                                                     |                                                                    |                  | Plug M8x1, 3-pin      | 0.3              | 175 484                        | SMT-8-PS-S-LED-24-B     |
|                                                                                     |                                                                    |                  |                       |                  |                                |                         |
| N/C contact                                                                         |                                                                    |                  |                       |                  |                                |                         |
|  | Insertable in the slot from above, flush with the cylinder profile | PNP              | Cable, 3-wire         | 7.5              | 543 873                        | SMT-8M-PO-24V-K7,5-OE   |

# Guided drives DFM-N-B, NPT

Accessories

**FESTO**

| Ordering data – Proximity sensors for T-slot, magnetic reed                       |                                                                    |                  |                       |                  | Technical data → Internet: sme |                                |
|-----------------------------------------------------------------------------------|--------------------------------------------------------------------|------------------|-----------------------|------------------|--------------------------------|--------------------------------|
|                                                                                   | Type of mounting                                                   | Switching output | Electrical connection | Cable length [m] | Part No.                       | Type                           |
| N/O contact                                                                       |                                                                    |                  |                       |                  |                                |                                |
|  | Insertable in the slot from above, flush with the cylinder profile | Contacting       | Cable, 3-wire         | 2.5              | <b>543 862</b>                 | <b>SME-8M-DS-24V-K-2,5-OE</b>  |
|                                                                                   |                                                                    |                  |                       | 5.0              | <b>543 863</b>                 | <b>SME-8M-DS-24V-K-5,0-OE</b>  |
|                                                                                   |                                                                    |                  | Cable, 2-wire         | 2.5              | <b>543 872</b>                 | <b>SME-8M-ZS-24V-K-2,5-OE</b>  |
|                                                                                   |                                                                    |                  | Plug M8x1, 3-pin      | 0.3              | <b>543 861</b>                 | <b>SME-8M-DS-24V-K-0,3-M8D</b> |
|  | Insertable in the slot lengthwise, flush with the cylinder profile | Contacting       | Cable, 3-wire         | 2.5              | <b>150 855</b>                 | <b>SME-8-K-LED-24</b>          |
|                                                                                   |                                                                    |                  | Plug M8x1, 3-pin      | 0.3              | <b>150 857</b>                 | <b>SME-8-S-LED-24</b>          |
|                                                                                   |                                                                    |                  |                       |                  |                                |                                |
| N/C contact                                                                       |                                                                    |                  |                       |                  |                                |                                |
|  | Insertable in the slot from above, flush with the cylinder profile | Contacting       | Cable, 3-wire         | 7.5              | <b>546 799</b>                 | <b>SME-8M-DO-24V-K-7,5-OE</b>  |

| Ordering data – Connecting cables                                                   |                               |                              |                  | Technical data → Internet: nebu |                      |
|-------------------------------------------------------------------------------------|-------------------------------|------------------------------|------------------|---------------------------------|----------------------|
|                                                                                     | Electrical connection, left   | Electrical connection, right | Cable length [m] | Part No.                        | Type                 |
|    | Straight socket, M8x1, 3-pin  | Cable, open end, 3-wire      | 2.5              | 541 333                         | NEBU-M8G3-K-2.5-LE3  |
|                                                                                     |                               |                              | 5                | 541 334                         | NEBU-M8G3-K-5-LE3    |
|                                                                                     | Straight socket, M12x1, 5-pin | Cable, open end, 3-wire      | 2.5              | 541 363                         | NEBU-M12G5-K-2.5-LE3 |
|                                                                                     |                               |                              | 5                | 541 364                         | NEBU-M12G5-K-5-LE3   |
|  | Angled socket, M8x1, 3-pin    | Cable, open end, 3-wire      | 2.5              | 541 338                         | NEBU-M8W3-K-2.5-LE3  |
|                                                                                     |                               |                              | 5                | 541 341                         | NEBU-M8W3-K-5-LE3    |
|                                                                                     | Angled socket, M12x1, 5-pin   | Cable, open end, 3-wire      | 2.5              | 541 367                         | NEBU-M12W5-K-2.5-LE3 |
|                                                                                     |                               |                              | 5                | 541 370                         | NEBU-M12W5-K-5-LE3   |

| Ordering data – One-way flow control valves                                         |                  |                        |                              | Technical data → Internet: grla |                          |
|-------------------------------------------------------------------------------------|------------------|------------------------|------------------------------|---------------------------------|--------------------------|
|                                                                                     | Connection       |                        | Material                     | Part No.                        | Type                     |
|                                                                                     | Thread           | For tubing O.D. [inch] |                              |                                 |                          |
|  | M5 <sup>1)</sup> | 1/8                    | Plastic design <sup>2)</sup> | 564 839                         | GRLA-10-32-UNF-QB-1/8-U  |
|                                                                                     |                  | 5/32                   | Metal design <sup>3)</sup>   | 165 008                         | GRLA-10-32-UNF-QS-5/32-U |
|                                                                                     |                  | 1/4                    |                              | 192 753                         | GRLA-10-32-UNF-QS-1/4-U  |
|                                                                                     | 1/8 NPT          | 5/32                   |                              | 165 009                         | GRLA-1/8-NPT-QS-5/32-U   |
|                                                                                     |                  | 1/4                    |                              | 165 010                         | GRLA-1/8-NPT-QS-1/4-U    |
|                                                                                     |                  | 5/16                   |                              | 165 013                         | GRLA-1/8-NPT-QS-5/16-U   |
|                                                                                     |                  | 1/4                    |                              | 165 011                         | GRLA-1/4-NPT-QS-1/4-U    |
|                                                                                     | 1/4 NPT          | 5/16                   |                              | 165 014                         | GRLA-1/4-NPT-QS-5/16-U   |
|                                                                                     |                  | 3/8                    |                              | 190 947                         | GRLA-1/4-NPT-QS-3/8-U    |

- 1) Suitable for 10-32 UNF  
 2) Operating pressure range -0.95 ... +8 bar  
 3) Operating pressure range 1 ... 9 bar

## Product Range and Company Overview

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Complete custom engineered solutions



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Comprehensive engineering support and on-site services



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Shipment, stocking and storage services

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Electromechanical actuators, motors, controllers & drives



**Pneumatics**  
Pneumatic linear and rotary actuators, valves, and air supply



**PLCs and I/O Devices**  
PLC's, operator interfaces, sensors and I/O devices

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# Festo North America

## Festo Regional Contact Center

5300 Explorer Drive  
Mississauga, Ontario L4W 5G4  
Canada

### USA Customers:

For ordering assistance,

**Call:** 1.800.99.FESTO (1.800.993.3786)

**Fax:** 1.800.96.FESTO (1.800.963.3786)

**Email:** [customer.service@us.festo.com](mailto:customer.service@us.festo.com)

For technical support,

**Call:** 1.866.GO.FESTO (1.866.463.3786)

**Fax:** 1.800.96.FESTO (1.800.963.3786)

**Email:** [product.support@us.festo.com](mailto:product.support@us.festo.com)

### Canadian Customers:

**Call:** 1.877.GO.FESTO (1.877.463.3786)

**Fax:** 1.877.FX.FESTO (1.877.393.3786)

**Email:** [festo.canada@ca.festo.com](mailto:festo.canada@ca.festo.com)

## USA Headquarters

Festo Corporation  
395 Moreland Road  
P.O. Box 18023  
Hauppauge, NY 11788, USA  
[www.festo.com/us](http://www.festo.com/us)

## USA Sales Offices

### Appleton

North 922 Tower View Drive, Suite N  
Greenville, WI 54942, USA

### Boston

120 Presidential Way, Suite 330  
Woburn, MA 01801, USA

### Chicago

1441 East Business Center Drive  
Mt. Prospect, IL 60056, USA

### Dallas

1825 Lakeway Drive, Suite 600  
Lewisville, TX 75057, USA

### Detroit – Automotive Engineering Center

2601 Cambridge Court, Suite 320  
Auburn Hills, MI 48326, USA

### New York

395 Moreland Road  
Hauppauge, NY 11788, USA

### Silicon Valley

4935 Southfront Road, Suite F  
Livermore, CA 94550, USA

## United States



**USA Headquarters, East:** Festo Corp., 395 Moreland Road, Hauppauge, NY 11788

Phone: 1.631.435.0800; Fax: 1.631.435.8026;

Email: [info@festo-usa.com](mailto:info@festo-usa.com)

[www.festo.com/us](http://www.festo.com/us)

## Canada



**Headquarters:** Festo Inc., 5300 Explorer Drive, Mississauga, Ontario L4W 5G4

Phone: 1.905.624.9000; Fax: 1.905.624.9001;

Email: [festo.canada@ca.festo.com](mailto:festo.canada@ca.festo.com)

[www.festo.ca](http://www.festo.ca)

## Mexico



**Headquarters:** Festo Pneumatic, S.A., Av. Ceylán 3, Col. Tequesquahuac,  
54020 Tlalnepantla, Edo. de México

Phone: 011 52 [55] 53 21 66 00; Fax: 011 52 [55] 53 21 66 65;

Email: [festo.mexico@mx.festo.com](mailto:festo.mexico@mx.festo.com)

[www.festo.com/mx](http://www.festo.com/mx)

## Central USA

Festo Corporation  
1441 East Business  
Center Drive  
Mt. Prospect, IL 60056, USA  
Phone: 1.847.759.2600  
Fax: 1.847.768.9480



## Western USA

Festo Corporation  
4935 Southfront Road,  
Suite F  
Livermore, CA 94550, USA  
Phone: 1.925.371.1099  
Fax: 1.925.245.1286



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