

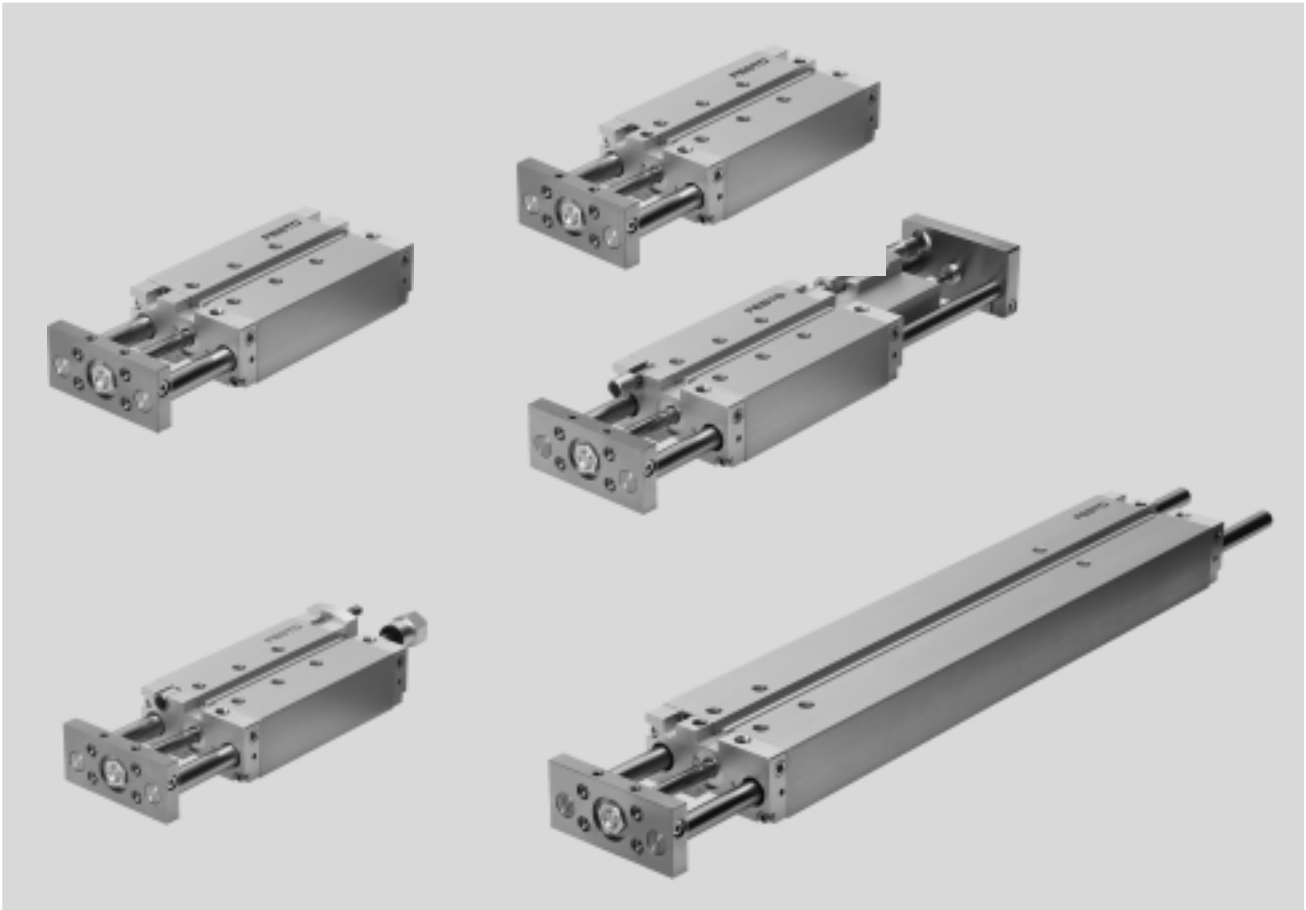
Guided drives DFM-N-B, NPT

FESTO



Guided drives DFM-N-B, NPT

Key features



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

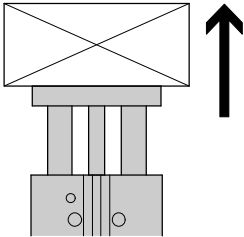
- With heat-resistant seals up to 120 °C
- With adjustable end position
- With shock absorbers
- With pneumatic end-position cushioning
- Long-stroke versions

Guided drives DFM-N-B, NPT

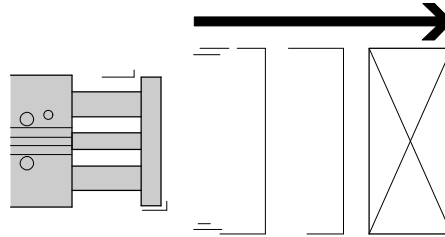
Key features

Use in conveyor systems

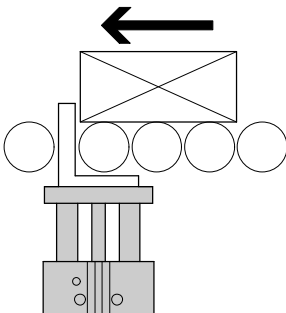
Lifting



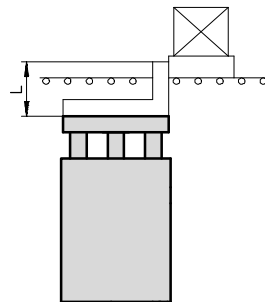
Pushing



Stopping



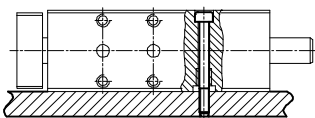
Stopping via stop bracket



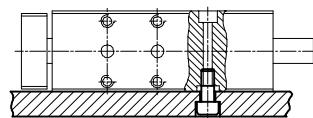
It is recommended to fit a buffer on the workpiece carrier.

Mounting options

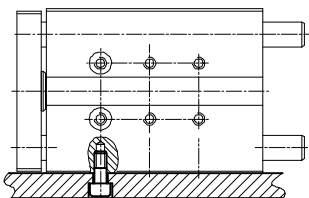
Flat from above



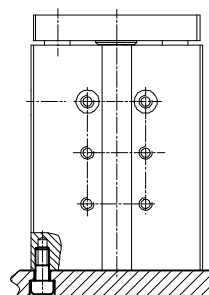
Flat from below



Side from below

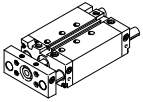
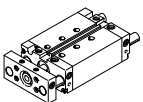


On end



Guided drives DFM-N-B, NPT

Product range overview

| Function | Version | Type | Piston \varnothing | Stroke | Variable stroke |
|---------------|-----------------------------------------------------------------------------------|-------------------------------------------|----------------------|-----------------------------------------------------------|-----------------|
| | | | [mm] | [mm] | [mm] |
| Double-acting | DFM-N-B with recirculating ball bearing guide | | | | |
| |  | DFM-N-B Single-ended 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 Single-ended 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 |
| | | | | | |

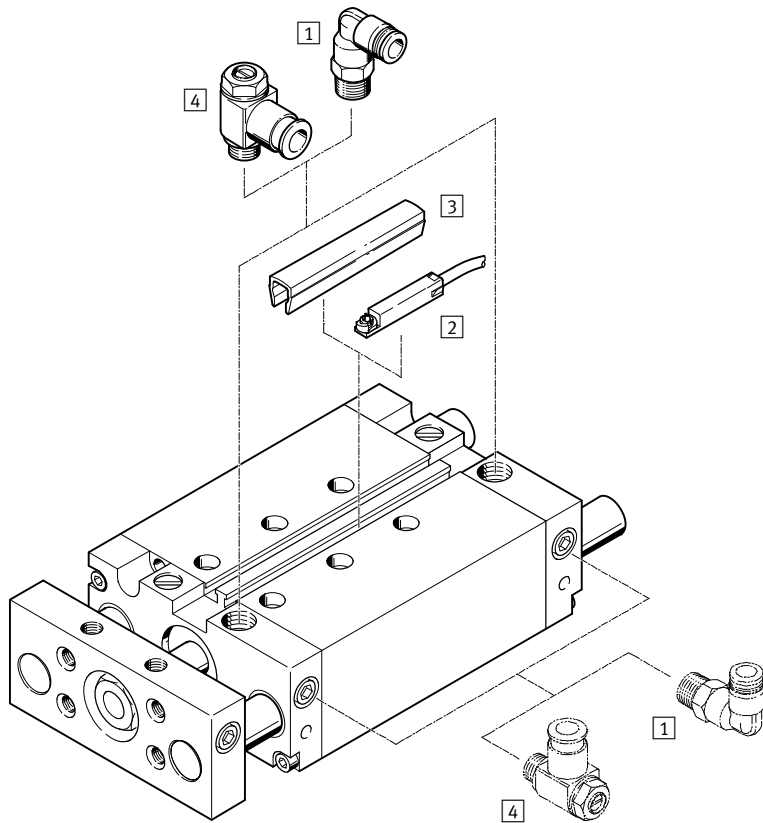
Guided drives DFM-N-B, NPT

Product range overview

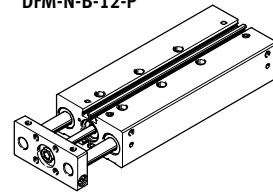
| Type | Position sensing | Cushioning | | | Heat-resistant seals | Precision end-position adjustment | | → Page/Internet |
|------------------------------------------------------|------------------|----------------|----------------------------|--------------------------------------------------------|----------------------|-----------------------------------|------------------------|-----------------|
| | | 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 Single-ended piston rod | ■ | ■ | ■ ∅ 16 and above | ■ ∅ 20 and above | – | ■ | ■ ∅ 20 and above | 30 |
| DFM-N-B with plain-bearing guide | | | | | | | | |
| DFM-N-B Single-ended piston rod | ■ | ■ | ■ | – | ■ | ■ | ■ | 30 |

Guided drives DFM-N-B, NPT

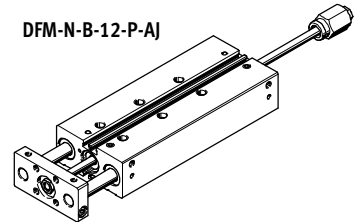
Peripherals overview



DFM-N-B-12-P



DFM-N-B-12-P-AJ



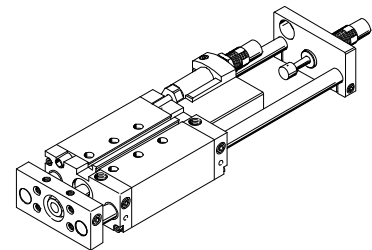
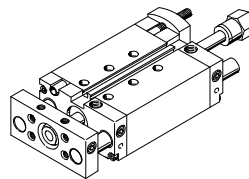
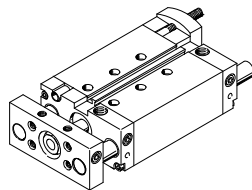
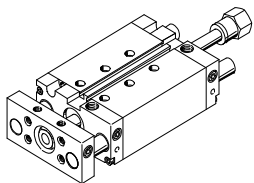
Variants

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 | 39 |
| 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 | 40 |
| - Centring sleeves ZBH | 4 or 6 pieces included in the scope of delivery | 38 |
| - Adapters | For drive/drive combinations | 41 |
| | For drive/gripper combinations | gripper |

-  - Note
Proximity sensors SM...0-8E cannot be used with the DFM-N-B.

Guided drives DFM-N-B, NPT

Type codes

DFM – N – 50 – 80 – B – P – A – GF – S6 – AJ – ZUB – 10S – G

Type

| | |
|-----|--------------|
| DFM | Guided drive |
|-----|--------------|

System of units

| | |
|---|----------|
| N | Imperial |
|---|----------|

Piston Ø [mm]

Stroke [mm]

Generation

| | |
|---|--------|
| B | Series |
|---|--------|

Cushioning

| | |
|------|-----------------------------------------------|
| P | Flexible cushioning rings/pads at both ends |
| PPV | Pneumatic cushioning, adjustable at both ends |
| YSRW | Self-adjusting at both ends |

Position sensing

| | |
|---|----------------------|
| A | Via proximity sensor |
|---|----------------------|

Guide

| | |
|----|----------------------------------|
| GF | Plain-bearing guide |
| KF | Recirculating ball bearing guide |

Variant

| | |
|----|----------------------------------------|
| S6 | Heat-resistant seals up to max. 120 °C |
|----|----------------------------------------|

Precision adjustment

| | |
|----|------------------------|
| AJ | Advanced end position |
| EJ | Retracted end position |

Accessories

| | |
|-----|---------------------|
| ZUB | Supplied separately |
|-----|---------------------|

Slot cover

| | |
|------|-------------|
| ...S | Sensor slot |
|------|-------------|

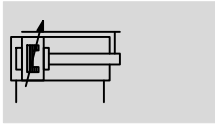
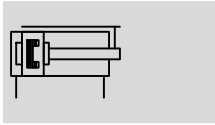
Proximity sensor

| | |
|------|-------------------------------|
| ...G | With cable, 2.5 m |
| ...I | Contactless with cable, 2.5 m |



Guided drives DFM-N-B, NPT

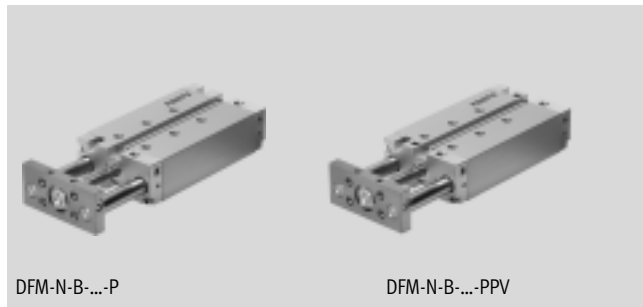
Technical data

Function



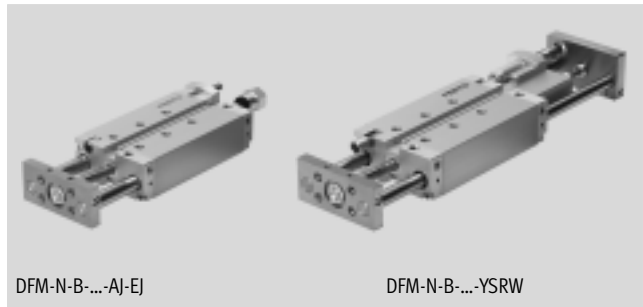
 www.festo.com

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



DFM-N-B-...-P


DFM-N-B-...-PPV



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

DFM-N-B-...-YSRW

| General technical data | | | | | | | | |
|----------------------------------|--------------------------------------------------------------------------------------------------------|-----------------------------------------------|-----------------------------|------------|------------|------------|----------|----------|
| Piston \varnothing | 12 | 16 | 20 | 25 | 32 | 40 | 50 | 63 |
| Pneumatic connection | M5 suitable for 10-32 UNF | | | | 1/8 NPT | | 1/4 NPT | |
| Operating medium | Compressed air in accordance with ISO 8573-1:2010 [7:4:4] | | | | | | | |
| Note on operating/pilot medium | Operation with lubricated medium possible (in which case lubricated operation will always be required) | | | | | | | |
| 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, EJ 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 to ISO 228-1

Guided drives DFM-N-B, NPT

Technical data

| Ambient conditions | | | | |
|----------------------------------------------|--------------------------------------------------------------------|-------------------------------------|--------------------------|------------|
| | Plain-bearing guide GF | Recirculating ball bearing guide KF | YSRW with shock absorber | S6 |
| Ambient temperature ¹⁾ [°C] | -20 ... +80 | -5 ... +60 | 0 ... +60 | 0 ... +120 |
| Corrosion resistance class CRC ²⁾ | 2 | - | - | 2 |
| ATEX | Specified types → www.festo.com | | | |

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

| Speed [m/s] | | | | | | | | |
|-------------------------------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|
| Piston Ø | 12 | 16 | 20 | 25 | 32 | 40 | 50 | 63 |
| Cushioning P, precision stroke adjustment AJ and E] | | | | | | | | |
| 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 E] | | | | | | | | |
| 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+E] | | | | | | | | |
| 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

| 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:

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

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

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

Maximum permissible load:

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

| 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

| DFM-N-B with plain-bearing guide GF, cushioning P, PPV, variant S6 | | | | | | | | |
|--------------------------------------------------------------------|---------------|-------|-------|-------|-------|-------|--------|--------|
| Stroke [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

| DFM-N-B with recirculating ball bearing guide KF, cushioning P, PPV | | | | | | | | |
|---------------------------------------------------------------------|---------------|-------|-------|-------|-------|-------|--------|--------|
| Stroke [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

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

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 |

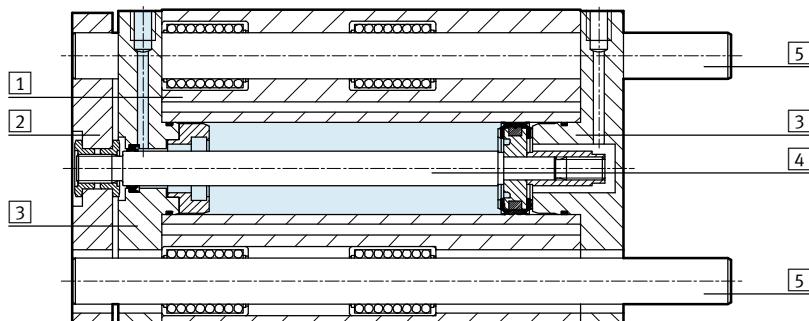
| DFM-N-B with recirculating ball bearing guide KF, cushioning YSRW | | | | | | |
|-------------------------------------------------------------------|---------------|-------|--------|--------|--------|--------|
| Stroke [mm] | Piston Ø [mm] | | | | | |
| | 20 | 25 | 32 | 40 | 50 | 63 |
| Product weight [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

Materials

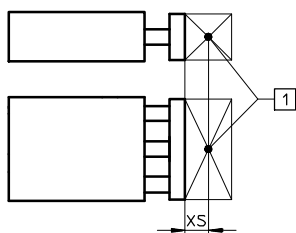
Sectional view



| 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 |
| 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

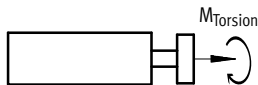
| Piston Ø [mm] | XS [mm] | Stroke [mm] | | | | | | | | | | | | | | |
|---------------|---------|-------------|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | | | 10 | 20 | 25 | 30 | 40 | 50 | 80 | 100 | 125 | 160 | 200 | 250 | 320 | 400 |
| 12 | GF | 25 | 53 | 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

Permissible torque [Nm]

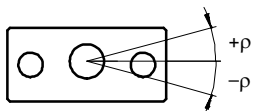
Plain-bearing guide GF and recirculating ball bearing guide KF



| Piston \varnothing [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



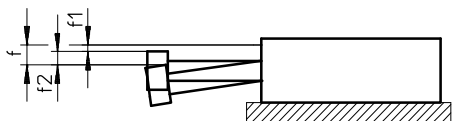
| Piston \varnothing | | 12 | 16 | 20 | 25 | 32 | 40 | 50 | 63 |
|------------------------|----|------|------|------|------|------|------|------|------|
| Torsional backlash [°] | GF | 0.09 | 0.09 | 0.07 | 0.07 | 0.06 | 0.06 | 0.05 | 0.05 |
| | KF | 0.08 | 0.08 | 0.07 | 0.07 | 0.05 | 0.05 | 0.05 | 0.05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

Guided drives DFM-N-B, NPT

Technical data

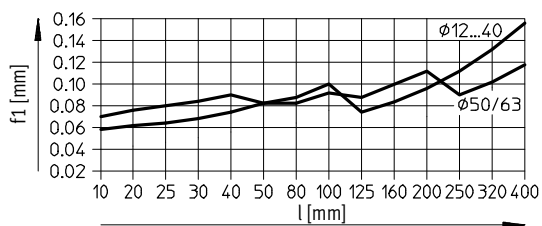
Deflection of piston rod – Plain-bearing guide GF

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



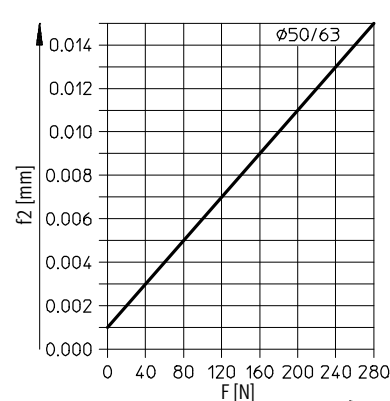
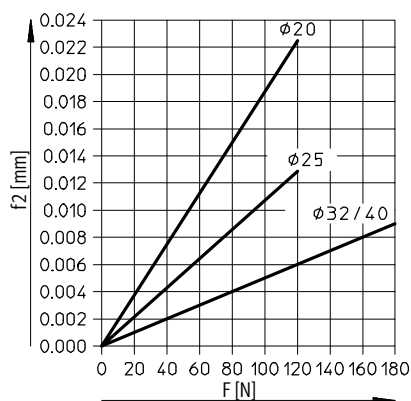
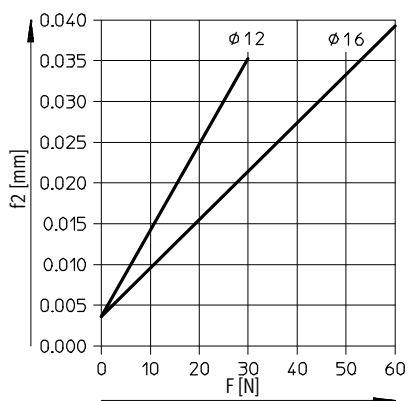
- $f = f_1 + f_2$
- f = Total deflection of piston rod
- f_1 = Deflection due to bearing backlash
- f_2 = Deflection due to lateral force

DFM-N-GF with 2 bearings per guide rod

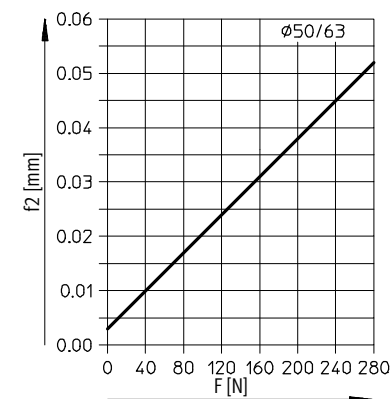
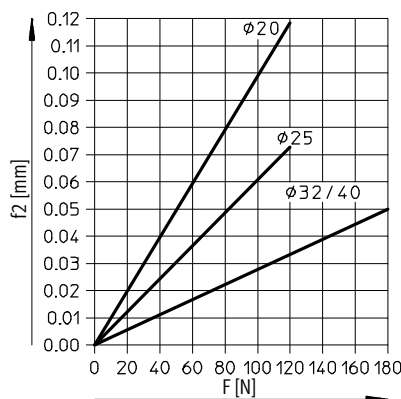
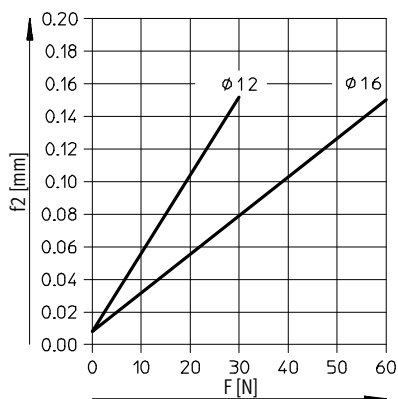


Deflection f_2 due to lateral force F as a function of stroke with plain-bearing guide GF

Stroke 50 mm



Stroke 100 mm

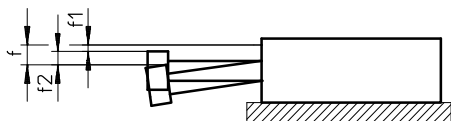


Guided drives DFM-N-B, NPT

Technical data

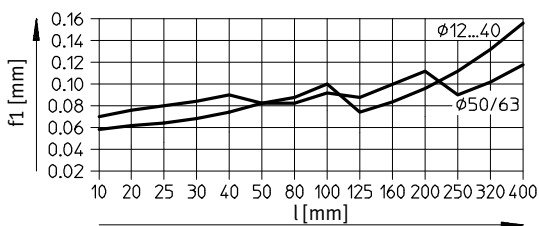
Deflection of piston rod – Plain-bearing guide GF

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



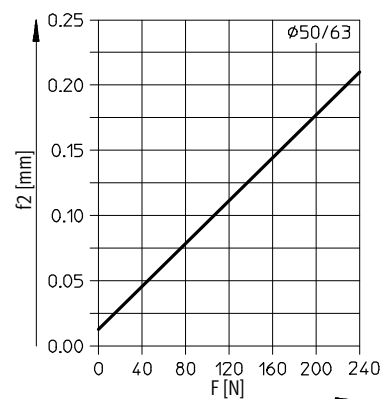
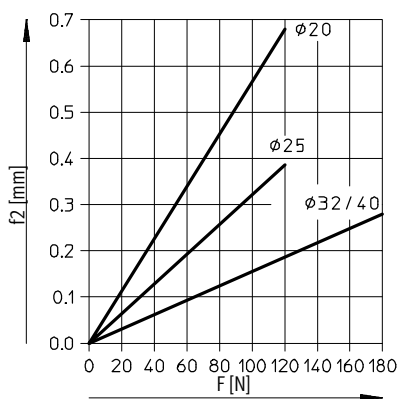
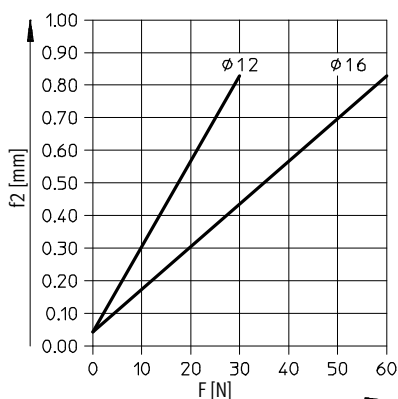
- $f = f_1 + f_2$
- $f =$ Total deflection of piston rod
- $f_1 =$ Deflection due to bearing backlash
- $f_2 =$ Deflection due to lateral force

DFM-N-GF with 2 bearings per guide rod

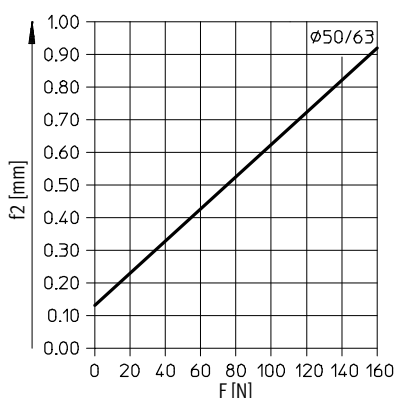
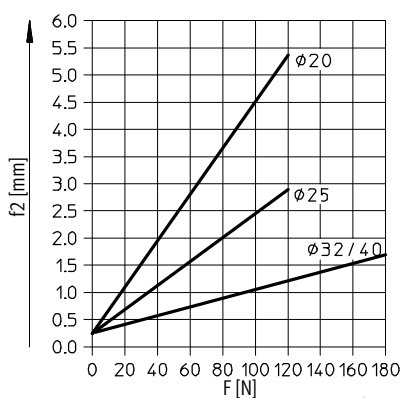


Deflection f_2 due to lateral force F as a function of stroke with plain-bearing guide GF

Stroke 200 mm



Stroke 400 mm

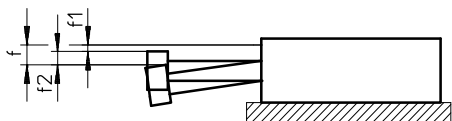


Guided drives DFM-N-B, NPT

Technical data

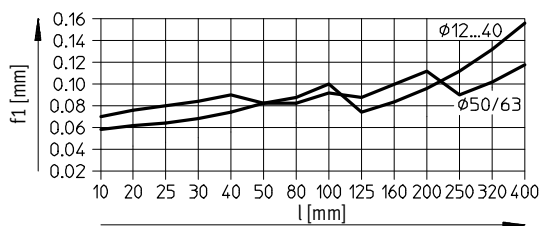
Deflection of piston rod – Recirculating ball bearing guide KF

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



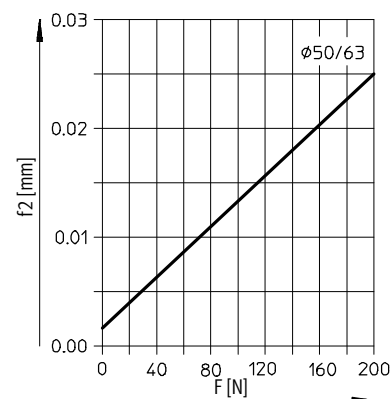
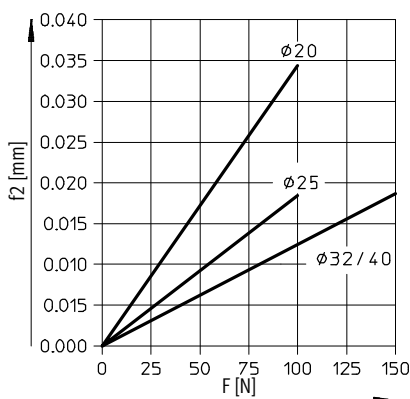
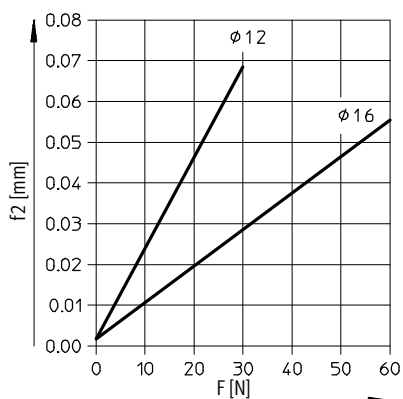
- $f = f_1 + f_2$
- f = Total deflection of piston rod
- f_1 = Deflection due to bearing backlash
- f_2 = Deflection due to lateral force

DFM-N-KF with 2 bearings per guide rod

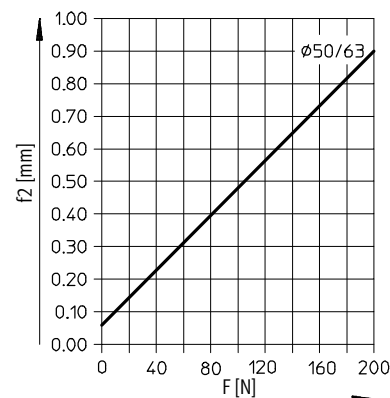
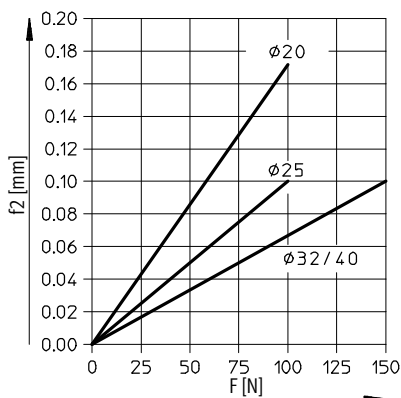
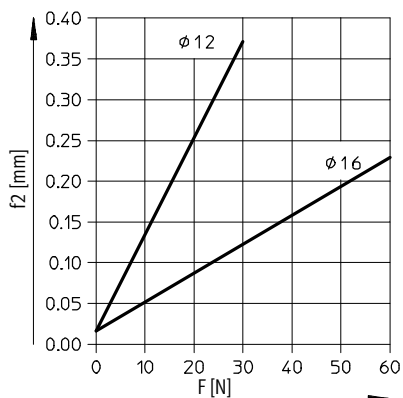


Deflection f_2 due to lateral force F as a function of stroke with recirculating ball bearing guide KF

Stroke 50 mm



Stroke 100 mm

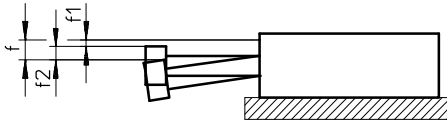


Guided drives DFM-N-B, NPT

Technical data

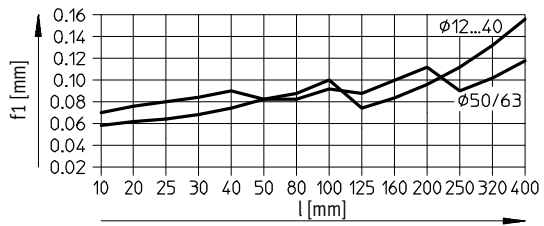
Deflection of piston rod – Recirculating ball bearing guide KF

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



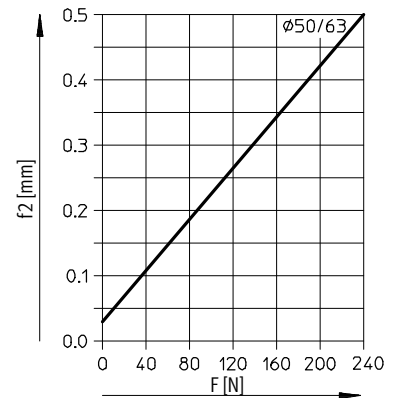
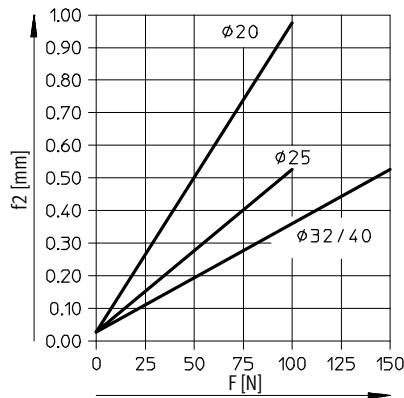
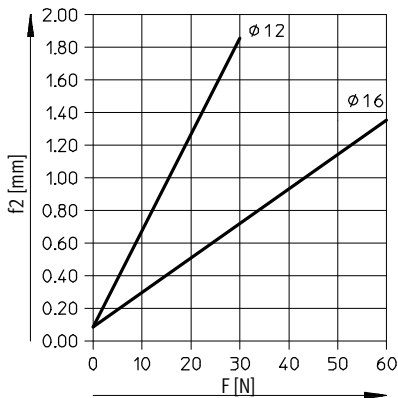
- $f = f_1 + f_2$
- f = Total deflection of piston rod
- f_1 = Deflection due to bearing backlash
- f_2 = Deflection due to lateral force

DFM-N-KF with 2 bearings per guide rod

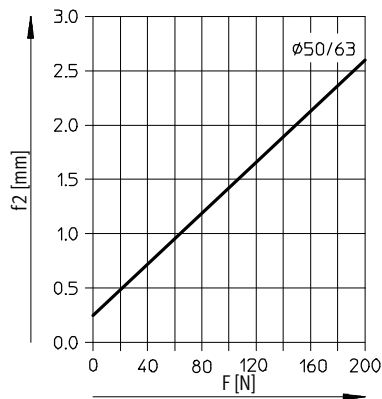
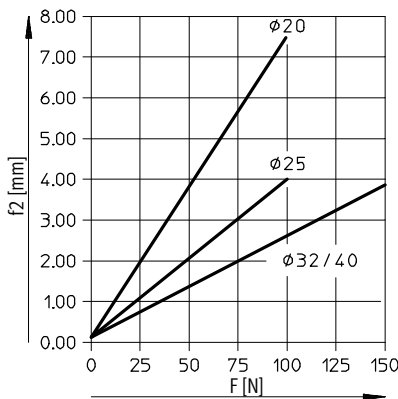


Deflection f_2 due to lateral force F as a function of stroke with recirculating ball bearing guide KF

Stroke 200 mm



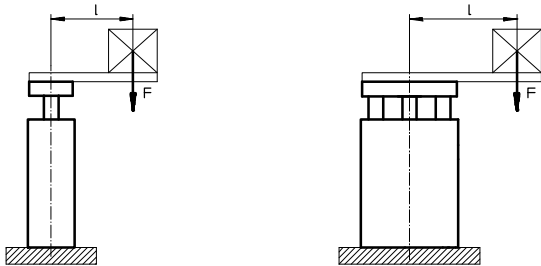
Stroke 400 mm



Guided drives DFM-N-B, NPT

Technical data

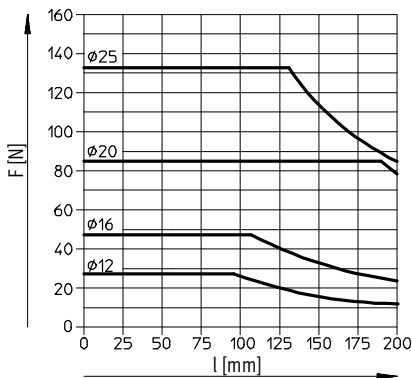
Used as a lifting cylinder



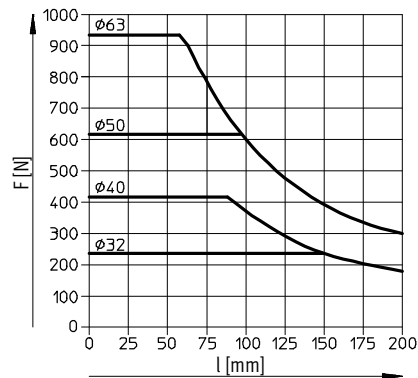
F = Longitudinal force [N]
l = Lever arm [mm]

Permissible load with plain-bearing guide GF

Stroke 40 ... 400 mm

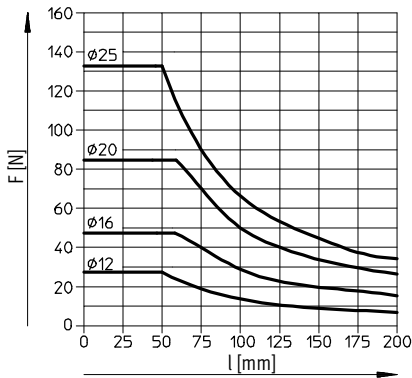


Stroke 250 ... 400 mm

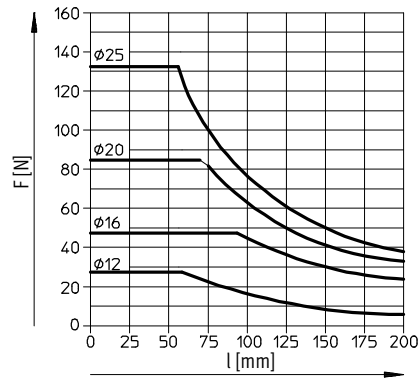


Permissible load with recirculating ball bearing guide KF

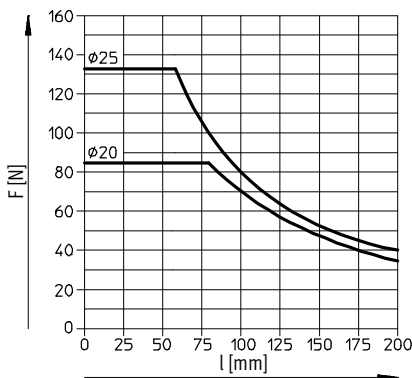
Stroke 40 ... 100 mm



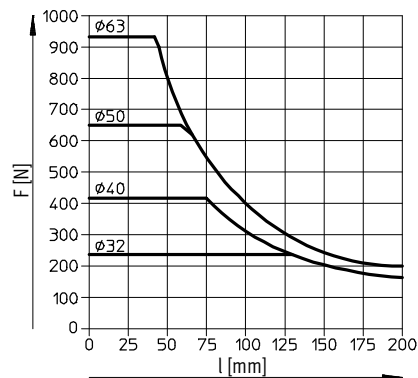
Stroke 125 ... 200 mm



Stroke 250 ... 400 mm



Stroke 200 ... 400 mm

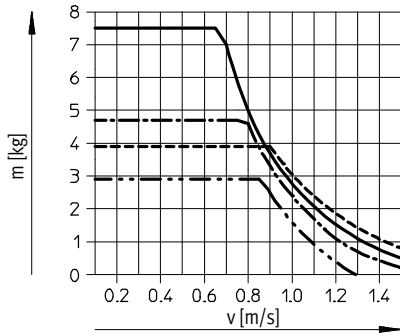


Guided drives DFM-N-B, NPT

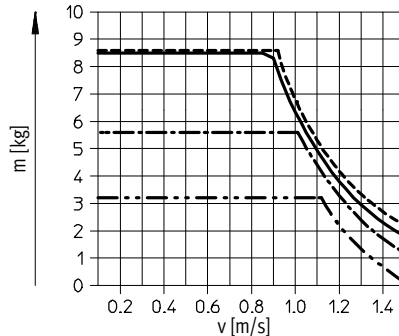
Technical data

Permissible load m as a function of permissible speed v
 Horizontal operation, cushioning YSRW

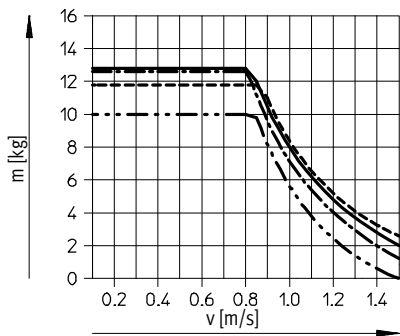
DFM-N-20-...-B-YSRW



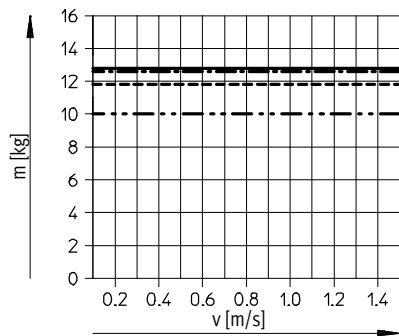
DFM-N-25-...-B-YSRW



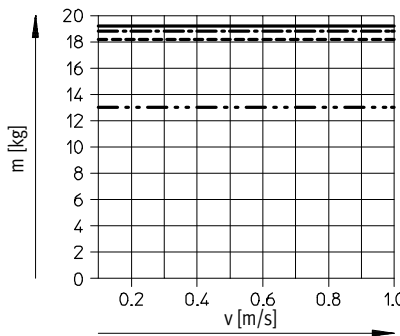
DFM-N-32-...-B-YSRW



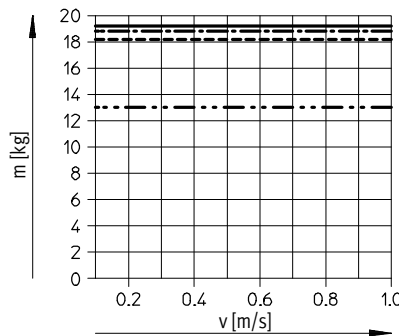
DFM-N-40-...-B-YSRW



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



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



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

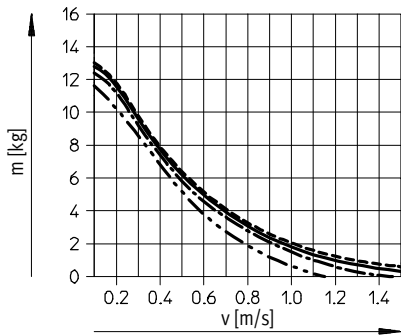
Guided drives DFM-N-B, NPT

Technical data

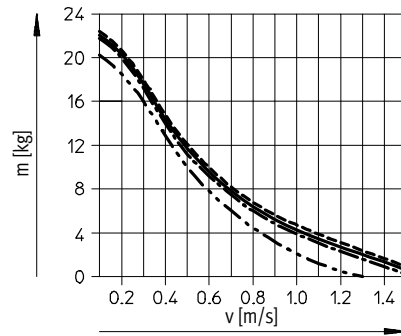
Permissible load m as a function of permissible speed v

Vertical operation, cushioning YSRW

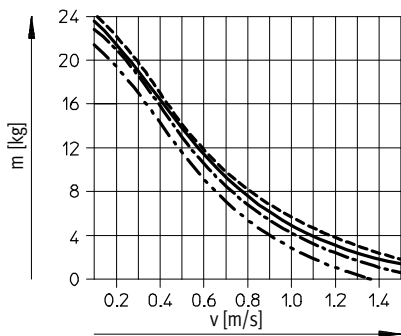
DFM-N-20-...-B-YSRW



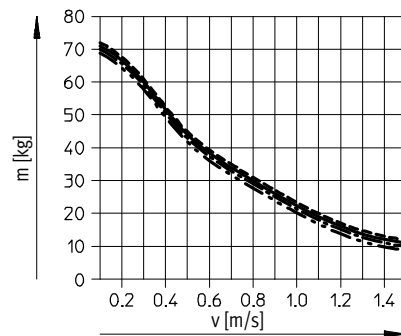
DFM-N-25-...-B-YSRW



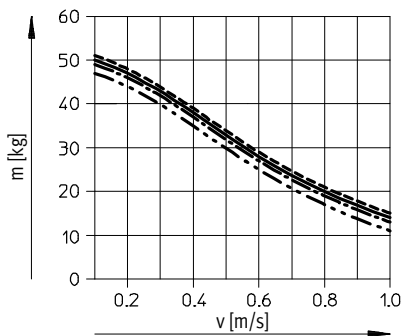
DFM-N-32-...-B-YSRW



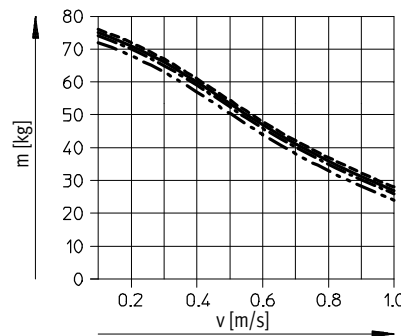
DFM-N-40-...-B-YSRW



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



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



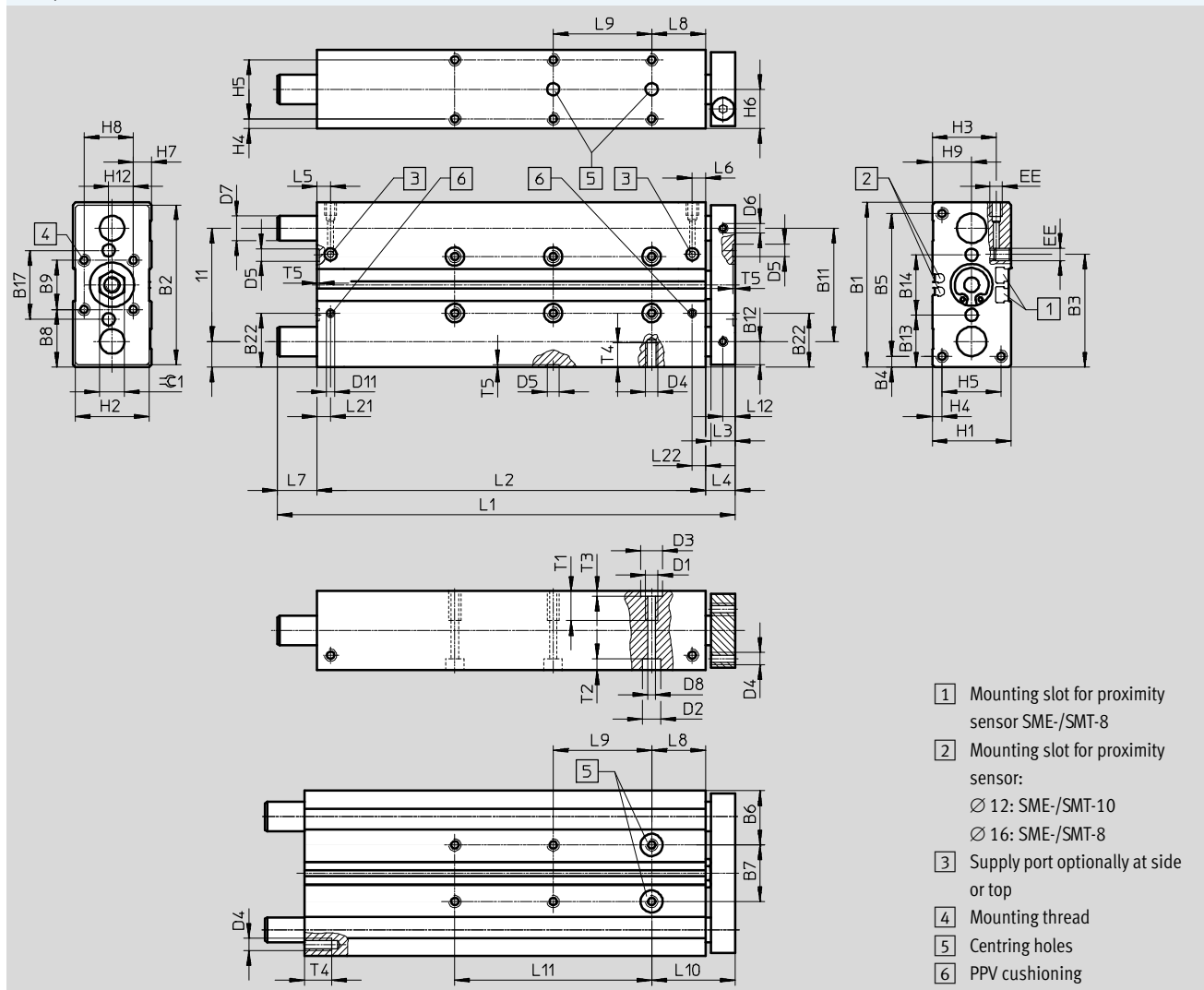
- 25 mm stroke
- 100 mm stroke
- · - · - 200 mm stroke
- · · · · 400 mm stroke

Guided drives DFM-N-B, NPT

Technical data

Dimensions Download CAD data → www.festo.com

Ø 12, 16 mm



- 1 Mounting slot for proximity sensor SME-/SMT-8
- 2 Mounting slot for proximity sensor:
Ø 12: SME-/SMT-10
Ø 16: SME-/SMT-8
- 3 Supply port optionally at side or top
- 4 Mounting thread
- 5 Centring holes
- 6 PPV cushioning

| Ø | B1 | B2 | B3 | B4 | B5 | B6 | B7 | B8 | B9 | B10 | B11 | B12 | B13 | B14 | B17 | B22 | D1 |
|------|----|----|------|-----|----|------|---------------------|------|----|------|-----|-----|------|---------------------|-----|------|----|
| [mm] | | | | | | | ±0.02 ¹⁾ | | | | | | | ±0.02 ¹⁾ | | | |
| 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 | 22.5 | M5 |

| Ø | D2 | D3 | D4 | D5 | D6 | D7 | | D8 | D11 | EE ²⁾ | H1 | H2 | H3 | H4 | H5 | H6 | H7 |
|------|-----|----|----|----|----|------------------|------------------|-----|-----|------------------|----|----|------|----|----|----|-----|
| | Ø | Ø | | Ø | | Ø | Ø | Ø | | | | | | | | | |
| [mm] | | H7 | | H7 | | GF | KF | H7 | | | | | | | | | |
| 12 | 8 | 9 | M4 | 5 | M4 | 10 _{h8} | 8 _{h6} | 4.3 | – | M5 | 28 | 26 | 24 | 4 | 20 | 14 | 4 |
| 16 | 7.5 | 9 | M5 | 5 | M4 | 12 _{h8} | 10 _{h6} | 4.3 | 3.3 | M5 | 32 | 30 | 26.5 | 4 | 24 | 16 | 7.4 |

| Ø | H8 | H9 | H12 | L3 | L4 | L5 | L6 | L8 | L10 | L12 | L21 | L22 | T1 | T2 | T3 | T4 | T5 | ≈C1 |
|------|----|----|-----|----|----|------|------|----|-----|-----|-----|-----|----|-----|-----|----|-----|-----|
| [mm] | | | | | | | | | | | | | | | | | | |
| 12 | 20 | 14 | 10 | 10 | 13 | 14.8 | 11.2 | 21 | 34 | 5 | – | – | 10 | 9.4 | 2.1 | 8 | 1.2 | 10 |
| 16 | 20 | 16 | 10 | 10 | 12 | 9.8 | 9.3 | 22 | 34 | 5 | 9.8 | 9.3 | 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

| Stroke [mm] | Piston Ø [mm] | | | | | | | | | |
|----------------|---------------|-----|----|---------------------------|-----|-----|-----|----|---------------------------|-----|
| | 12 | | | | | 16 | | | | |
| | L1 | L2 | L7 | L9 ±0.02 ¹⁾ | L11 | L1 | L2 | L7 | L9 ±0.02 ¹⁾ | 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

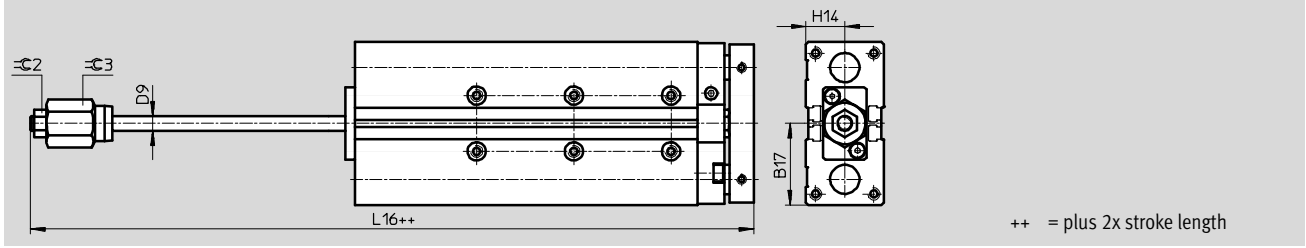
 - Note

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

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



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

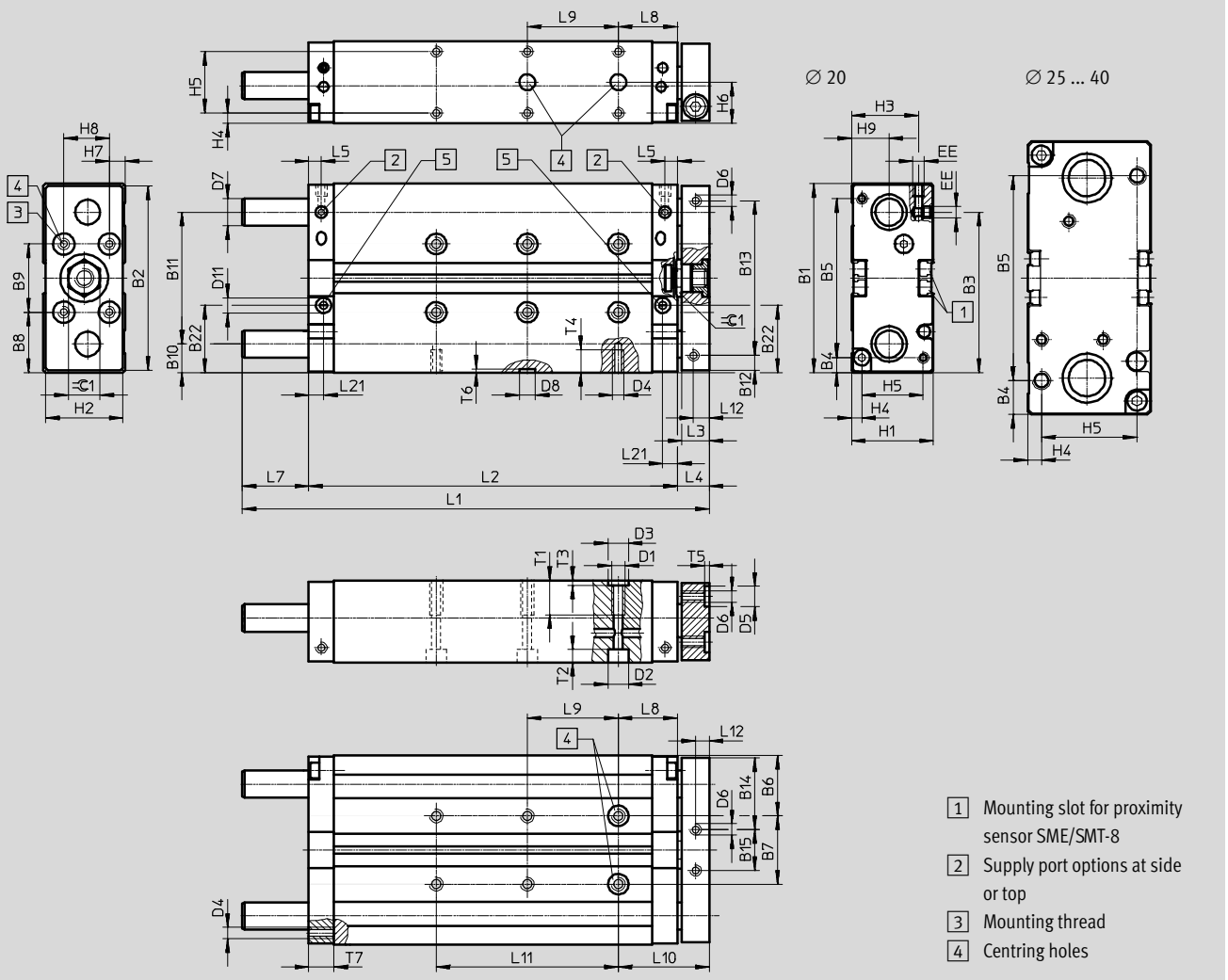
Guided drives DFM-N-B, NPT

Technical data

Dimensions

Download CAD data → www.festo.com

∅ 20 ... 40 mm



Guided drives DFM-N-B, NPT

Technical data

| ∅ [mm] | B1 | B2 | B3 | B4 | B5 | B6 | B7 ±0.02 ¹⁾ | B8 | B9 ±0.02 ¹⁾ | B10 | B11 | B12 | B13 | B14 | B15 | B22 | D1 |
|-----------|-----|-----|------|------|----|------|---------------------------|------|---------------------------|------|-----|------|-----|------|-----|------|----|
| 20 | 83 | 81 | 70.5 | 6.5 | 70 | 26.5 | 30 | 26.5 | 30 | 12.5 | 58 | 6.5 | 68 | 31.5 | 18 | 29.5 | M6 |
| 25 | 95 | 93 | 67 | 15.5 | 64 | 30 | 35 | 27.5 | 40 | 13.5 | 68 | 12.5 | 68 | 32.5 | 28 | 33.5 | M6 |
| 32 | 110 | 108 | 77 | 20 | 70 | 33.5 | 43 | 35 | 40 | 16 | 78 | 15 | 78 | 41 | 26 | 41 | M8 |
| 40 | 120 | 118 | 86 | 15 | 90 | 34.5 | 51 | 35 | 50 | 16 | 88 | 15 | 88 | 41 | 36 | 41 | M8 |

| ∅ [mm] | D2 ∅ | D3 ∅ H7 | D4 | D5 ∅ H7 | D6 ∅ | D7 ∅ | | D8 ∅ H7 | D11 ∅ | EE | H1 | H2 | H3 | H4 | H5 | H6 | H7 |
|-----------|---------|---------------|----|---------------|---------|---------|----|---------------|----------|------------------|----|----|------|-----|----|------|-----|
| | | | | | | GF | KF | | | | | | | | | | |
| 20 | 9 | 9 | M5 | 9 | M5 | 14 | 12 | 7 | 6 | M5 ²⁾ | 36 | 34 | 29.5 | 4.5 | 27 | 18 | 7 |
| 25 | 9 | 9 | M6 | 9 | M6 | 16 | 14 | 7 | 8 | 1/8 NPT | 44 | 42 | 34.8 | 4.5 | 35 | 22 | 12 |
| 32 | 11 | 12 | M6 | 9 | M6 | 20 | 16 | 9 | 8 | 1/8 NPT | 49 | 47 | 39 | 6 | 37 | 24.5 | 8.5 |
| 40 | 11 | 12 | M8 | 9 | M6 | 20 | 16 | 9 | 8 | 1/8 NPT | 54 | 52 | 41.5 | 6 | 42 | 27 | 10 |

| ∅ [mm] | H8 | H9 | L3 | L4 | L5 | L8 | L10 | L12 | L21 | T1 | T2 | T3 | T4 | T5 | T6 | T7 | ∅C1 |
|-----------|----|------|----|----|-----|----|-----|-----|-----|----|-----|-----|----|-----|-----|----|-----|
| 20 | 20 | 16.5 | 12 | 14 | 5.5 | 26 | 40 | 6 | 6,5 | 12 | 5.7 | 2.1 | 10 | 2.1 | 1.6 | 11 | 14 |
| 25 | 20 | 19 | 12 | 14 | 8.5 | 26 | 40 | 6 | 10 | 15 | 5.7 | 2.1 | 12 | 2.1 | 1.6 | 15 | 17 |
| 32 | 30 | 21 | 14 | 16 | 8.5 | 29 | 45 | 7 | 10 | 20 | 6.8 | 2.6 | 11 | 2.1 | 2.1 | 15 | 17 |
| 40 | 30 | 26 | 14 | 16 | 8.5 | 29 | 45 | 7 | 10 | 20 | 6.8 | 2.6 | 16 | 2.1 | 2.1 | 15 | 17 |

| Stroke [mm] | Piston ∅ [mm] | | | | | | | | | | | | | | | | | | | | |
|----------------|---------------|-----|-----|---------------------------|-----|-----|-----|-----|---------------------------|-----|-----|-----|-----|---------------------------|-----|-----|-----|-----|---------------------------|-----|-----|
| | 20 | | | | | 25 | | | | | 32 | | | | | 40 | | | | | |
| | L1 | L2 | L7 | L9 ±0.02 ¹⁾ | L11 | L1 | L2 | L7 | L9 ±0.02 ¹⁾ | L11 | L1 | L2 | L7 | L9 ±0.02 ¹⁾ | L11 | L1 | L2 | L7 | L9 ±0.02 ¹⁾ | 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 | 19 | 20 | - | 121 | 100 | 17 | 20 | - | 133 | 105 | 12 | 20 | - | - | 106 | - | - | - | |
| 40 | 135 | 102 | | | | 141 | 110 | | | | 143 | 115 | | | | 153 | 125 | 153 | 126 | | 11 |
| 50 | 145 | 112 | 29 | 40 | - | 151 | 120 | 32 | 40 | - | 153 | 125 | 37 | 40 | - | 153 | 126 | 11 | - | - | |
| 80 | 185 | 142 | | | | 196 | 150 | | | | 208 | 155 | | | | 208 | 156 | 36 | | | |
| 100 | 205 | 162 | 56 | 40 | 80 | 216 | 170 | 62 | 40 | 80 | 228 | 175 | 67 | 40 | 80 | 228 | 176 | 36 | - | 80 | |
| 125 | 257 | 187 | | | | 271 | 195 | | | | 283 | 200 | | | | 283 | 201 | | | | |
| 160 | 292 | 222 | 146 | 40 | - | 120 | 306 | 230 | 142 | 40 | 120 | 318 | 235 | 142 | 40 | 120 | 318 | 236 | 66 | 40 | 120 |
| 200 | 332 | 262 | | | | 160 | 346 | 270 | | | 160 | 358 | 275 | | | 160 | 358 | 276 | | | |
| 250 | 472 | 312 | 141 | 40 | - | 200 | 476 | 320 | 142 | 40 | 200 | 483 | 325 | 142 | 40 | 200 | 483 | 326 | 141 | 200 | |
| 320 | 542 | 382 | | | | 240 | 546 | 390 | | | 240 | 553 | 395 | | | 240 | 553 | 396 | | | |
| 400 | 622 | 462 | 141 | 40 | - | 320 | 626 | 470 | 142 | 40 | 320 | 633 | 475 | 142 | 40 | 320 | 633 | 476 | 141 | 320 | |

1) Tolerance between centring holes

2) Suitable for 10-32 UNF

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

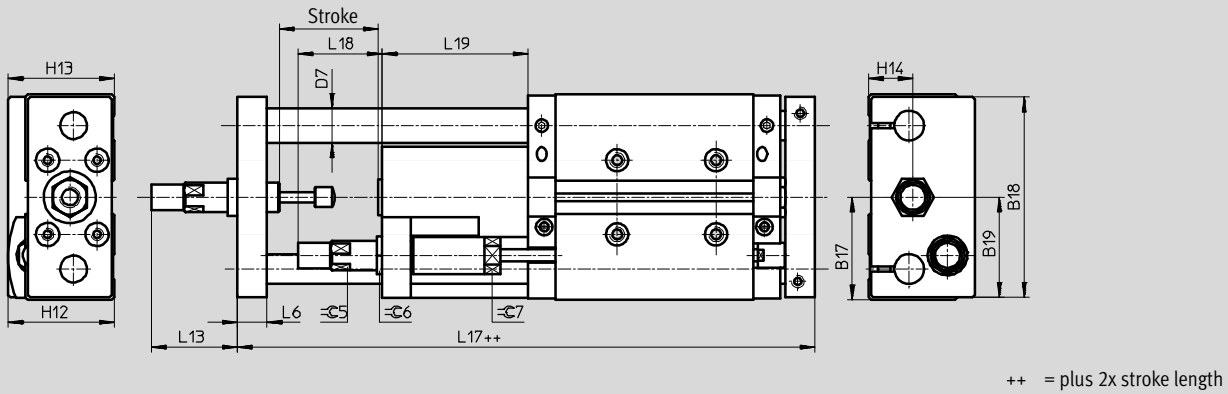
Technical data

Dimensions

Download CAD data → www.festo.com

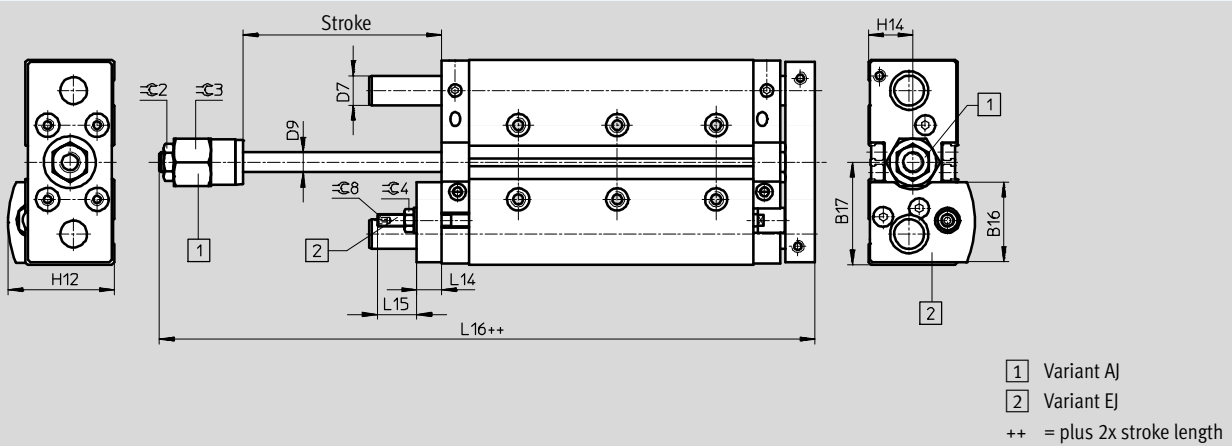
YSRW – Self-adjusting cushioning

∅ 20 ... 40 mm



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

∅ 20 ... 40 mm



Guided drives DFM-N-B, NPT

Technical data

| ∅ [mm] | B16 | B17 | B18 | B19 | D7 ∅ | | D9 ∅ | 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 |

| ∅ [mm] | L15 | L16 | L17 | L18 | L19 | ≈C2 | ≈C3 | ≈C4 | ≈C5 | ≈C6 | ≈C7 | ≈C8 |
|-----------|------|-------|-------|------|-----|-----|-----|-----|-----|-----|-----|-----|
| 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 |

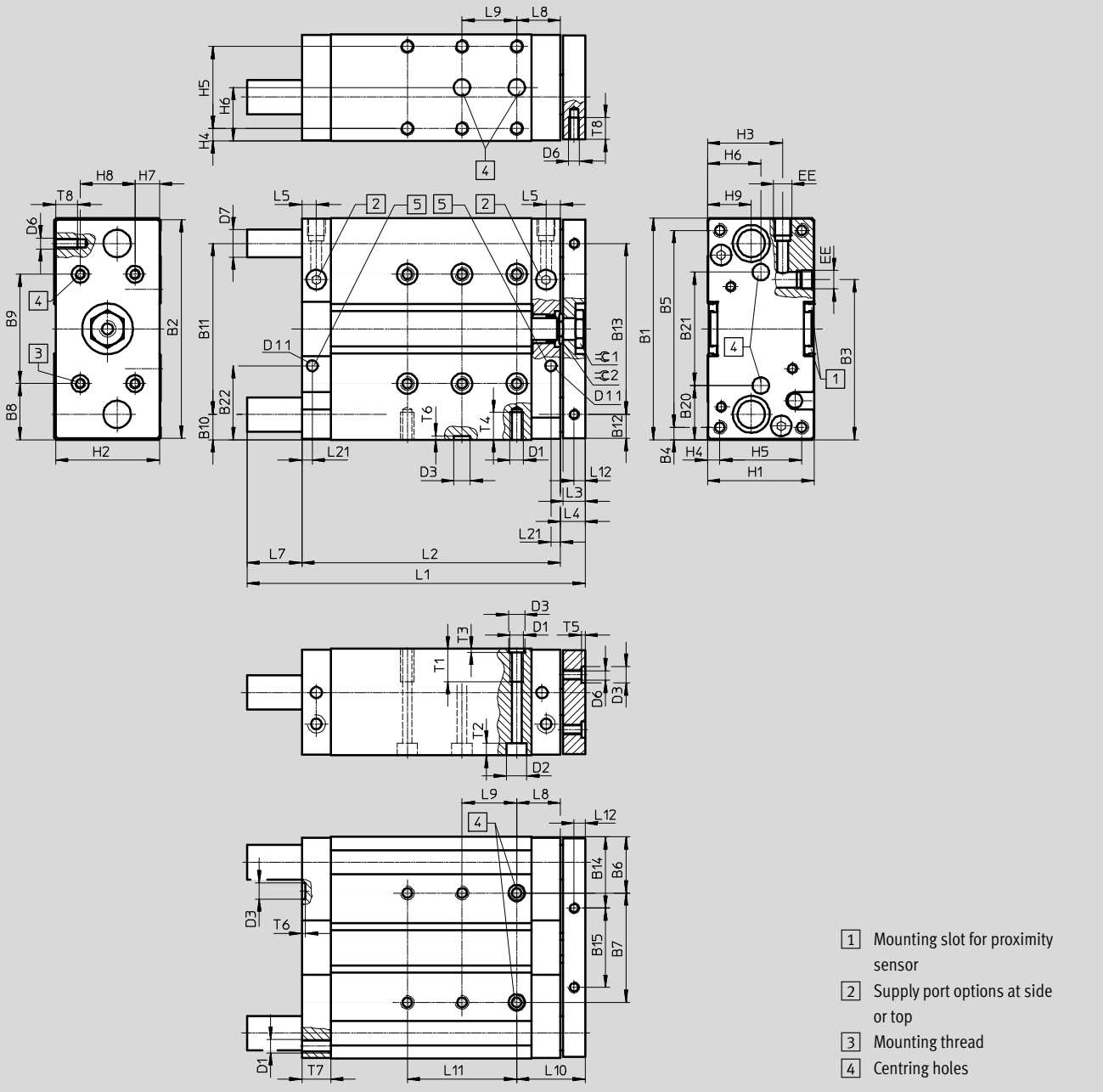
Guided drives DFM-N-B, NPT

Technical data

Dimensions

Ø 50 ... 63 mm

Download CAD data → www.festo.com



Guided drives DFM-N-B, NPT

Technical data

| ∅ | B1 | B2 | B3 | B4 | B5 | B6 | B7 | B8 | B9 | B10 | B11 | B12 | B13 | B14 | B15 | B20 | B21 |
|------|-----|-----|-------|----|-----|----|---------------------|----|---------------------|------|-----|------|-----|-----|-----|------|---------------------|
| [mm] | | | | | | | ±0.02 ¹⁾ | | ±0.02 ¹⁾ | | | | | | | | ±0.02 ¹⁾ |
| 50 | 148 | 146 | 104.5 | 19 | 110 | 42 | 64 | 44 | 60 | 19 | 110 | 18 | 110 | 52 | 42 | 40 | 68 |
| 63 | 162 | 160 | 117 | 9 | 144 | 41 | 80 | 41 | 80 | 18.5 | 125 | 17.5 | 125 | 51 | 58 | 39.5 | 83 |

| ∅ | B22 | D1 | D2 | D3 | D6 | D7 | | D11 | EE ²⁾ | H1 | H2 | H3 | H4 | H5 | H6 | H7 | H8 |
|------|------|-----|----|----|----|----|----|-----|------------------|----|----|------|----|----|----|----|----|
| [mm] | | | ∅ | ∅ | ∅ | GF | KF | ∅ | | | | | | | | | |
| 50 | 52.5 | M8 | 11 | 12 | M8 | 25 | 20 | 8 | ¼ NPT | 64 | 62 | 48.5 | 7 | 50 | 32 | 12 | 40 |
| 63 | 54 | M10 | 15 | 12 | M8 | 25 | 20 | 8 | ¼ NPT | 78 | 76 | 55 | 9 | 60 | 39 | 19 | 40 |


| ∅ | H9 | L3 | L4 | L5 | L8 | L10 | L12 | L21 | T1 | T2 | T3 | T4 | T5 | T6 | T7 | T8 | ≈C1 | ≈C2 |
|------|----|----|----|------|----|-----|-----|------|----|-----|-----|----|-----|-----|----|----|-----|-----|
| [mm] | | | | | | | | | | | | | | | | | | |
| 50 | 29 | 16 | 18 | 10.5 | 32 | 50 | 8 | 13.5 | 20 | 6.8 | 2.6 | 16 | 2.6 | 2.6 | 21 | 16 | 24 | 19 |
| 63 | 32 | 16 | 18 | 10.5 | 32 | 50 | 8 | 13.5 | 24 | 9 | 2.6 | 20 | 2.6 | 2.6 | 21 | 16 | 24 | 19 |

| Stroke | Piston ∅ [mm] | | | | | | | | | |
|--------|---------------|-----|-----|---------------------|-----|-----|-----|-----|---------------------|-----|
| | 50 | | | | | 63 | | | | |
| [mm] | L1 | L2 | L7 | L9 | L11 | L1 | L2 | L7 | L9 | L11 |
| | | | | ±0.02 ¹⁾ | | | | | ±0.02 ¹⁾ | |
| 25 | 137 | 113 | 6 | 20 | - | 137 | 114 | 5 | 20 | - |
| 50 | 177 | 138 | 21 | 40 | 40 | 177 | 139 | 20 | 40 | 40 |
| 80 | 227 | 168 | 41 | | | 227 | 169 | 40 | | |
| 100 | 247 | 188 | | | | 247 | 189 | | | |
| 125 | 293 | 213 | 293 | | | 214 | | | | |
| 160 | 328 | 248 | 62 | 40 | 40 | 120 | 328 | 249 | 61 | 40 |
| 200 | 368 | 288 | 139 | 40 | 40 | 160 | 368 | 289 | 138 | 40 |
| 250 | 495 | 338 | | | | 200 | 495 | 339 | | |
| 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 to 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.

Guided drives DFM-N-B, NPT

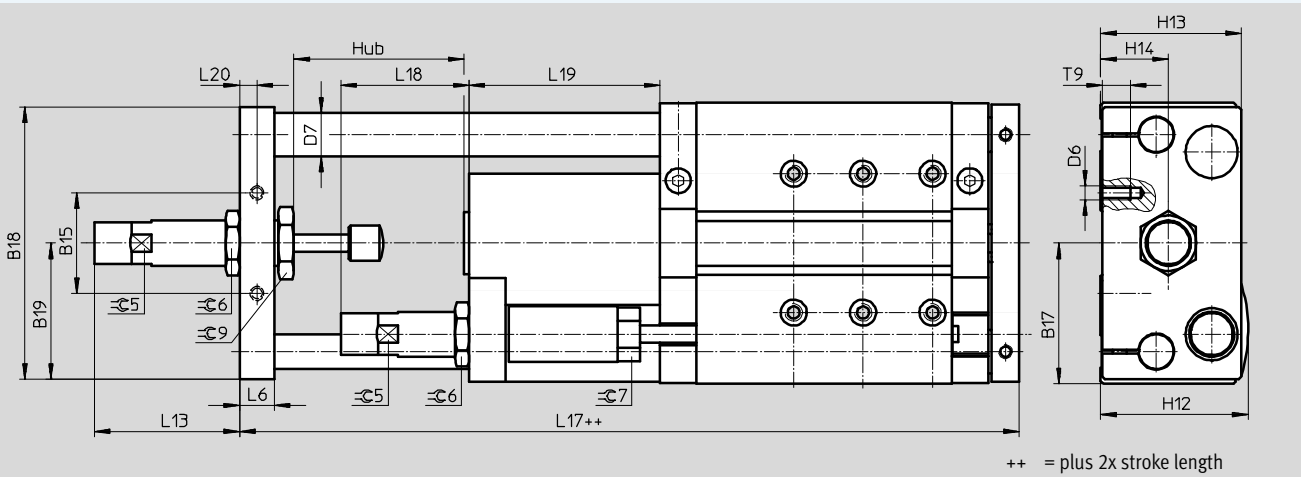
Technical data

Dimensions

Download CAD data → www.festo.com

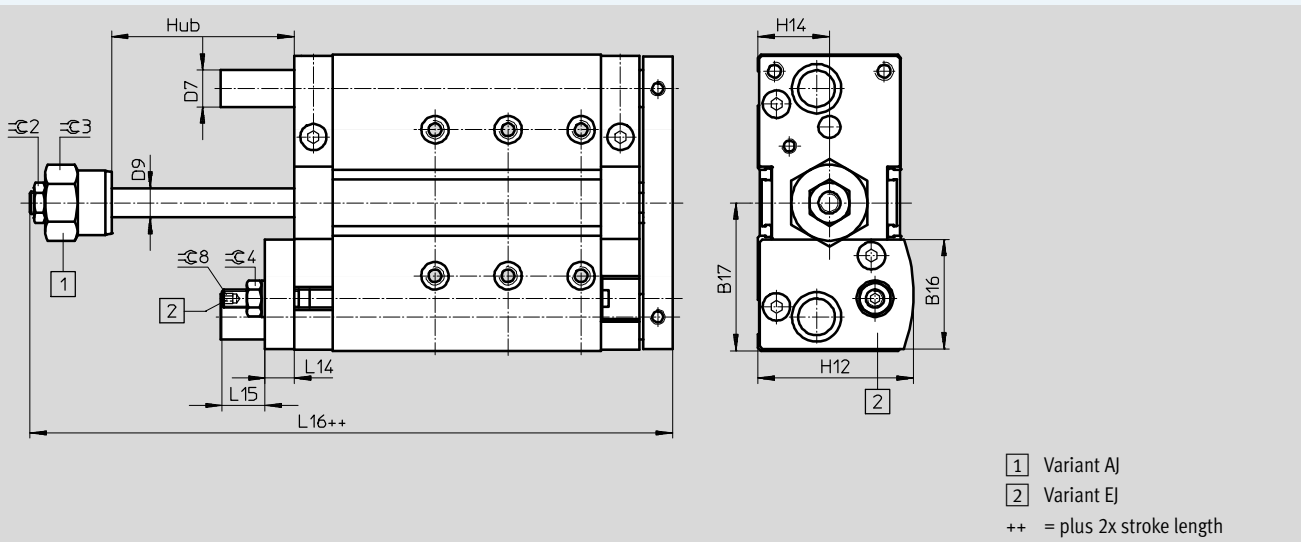
YSRW – Self-adjusting cushioning

∅ 50 ... 63 mm



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

∅ 50 ... 63 mm



| ∅ | B15 | B16 | B17 | B18 | B19 | D6 | D7 | | D9 | H12 | H13 | H14 | L6 | L13 | L14 |
|------|-----|------|-----|-----|------|----|----|----|----|-----|-----|-----|----|------|-----|
| | | | | | | | ∅ | ∅ | | | | | | | |
| [mm] | | | | | | | GF | KF | | | | | | | |
| 50 | 42 | 57.6 | 74 | 157 | 72 | M8 | 25 | 20 | 16 | 74 | 71 | 32 | 16 | 67.6 | 16 |
| 63 | 58 | 60 | 81 | 144 | 78.5 | M8 | 25 | 20 | 16 | 81 | 81 | 39 | 20 | 83.3 | 16 |

| ∅ | L15 | L16 | L17 | L18 | L19 | L20 | T9 | ∅2 | ∅3 | ∅4 | ∅5 | ∅6 | ∅7 | ∅8 | ∅9 |
|------|------|-------|-------|------|-----|-----|----|----|----|----|----|----|----|----|----|
| [mm] | | | | | | | | | | | | | | | |
| 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

Ordering data – Standard types

| Ordering data – Plain-bearing guide GF | | | | | | |
|----------------------------------------|----------|-----------------------|----------|-----------------------|----------|-----------------------|
| Stroke [mm] | Part No. | Type | Part No. | Type | Part No. | Type |
| | 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 | – | – | – | – | – | – |
| | 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 |
| | 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

Ordering data – Modular products

M Mandatory data →

| Module No. | Function | Thread | Piston Ø | Stroke | Generation | Cushioning | Position sensing | Guide |
|-------------------------|------------|------------|-------------|--------------|------------|--------------|------------------|-------------|
| 529 119 | DFM | N | 12 | 10 ... 400 | B | P PPV | A | GF |
| 529 120 | | | | | | | | |
| 532 316 | | | | | | | | |
| 532 317 | | | | | | | | |
| 532 318 | | | | | | | | |
| 532 319 | | | | | | | | |
| 534 769 | | | | | | | | |
| 534 770 | | | | | | | | |
| Ordering example | | | | | | | | |
| 532 319 | DFM | - N | - 40 | - 350 | - B | - PPV | - A | - GF |

Ordering table

| Size | 12 | 16 | 20 | 25 | 32 | 40 | 50 | 63 | Condi- tions | Code | Enter 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

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-tions | Code | Enter 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 | |
| | Proximity sensor 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

Ordering data – Modular products

| M Mandatory data | | | | | | | | |
|-------------------------|----------|--------|----------|------------|------------|------------------|------------------|-------|
| Module No. | Function | Thread | Piston Ø | Stroke | Generation | Cushioning | Position sensing | Guide |
| 529 119 | DFM | N | 12 | 10 ... 400 | B | P PPV YSRW | A | KF |
| 529 120 | | | | | | | | |
| 532 316 | | | | | | | | |
| 532 317 | | | | | | | | |
| 532 318 | | | | | | | | |
| 532 319 | | | | | | | | |
| 534 769 | | | | | | | | |
| 534 770 | | | | | | | | |
| Ordering example | | | | | | | | |
| 532 319 | DFM | N | - 40 | - 400 | - B | - P | - A | - KF |

| Ordering table | | | | | | | | | | | | |
|----------------------|---------------------------------------------|-----------------------------------------------|------------|---------|---------|------------|---------|---------|-----------------|-------|---------------|--|
| Size | 12 | 16 | 20 | 25 | 32 | 40 | 50 | 63 | Condi- tions | Code | Enter 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 | 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 | -... | | | |
| | - | - | 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 | | |
| | - | 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
 2 PPV Not with precision adjustment AJ, EJ

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

Transfer order code

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

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- tions | Code | Enter code | | |
| Options 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 | | | | | | | | | ...G | | | |
| | Contactless with cable, 2.5 m | | | | | | | | | ...I | | | |

Transfer order code

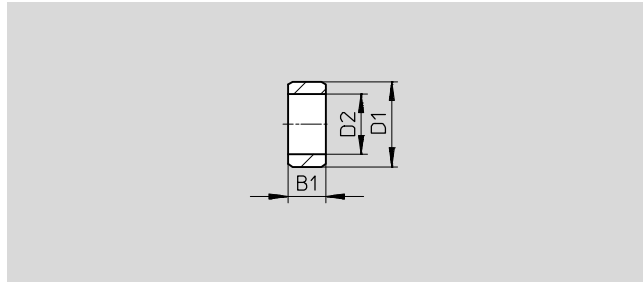
- - **ZUB** -

Guided drives DFM-N-B, NPT

Accessories

Centring sleeve ZBH

Material:
High-alloy steel



| Dimensions and ordering data (repeat order) | | | | | | | |
|---------------------------------------------|---------|------|-------------------|--------|---------------|---------------|------------------|
| B1 | D1 | D2 | CRC ¹⁾ | Weight | Part No. | Type | PU ²⁾ |
| -0.2 | ∅ h7 | ∅ | | [g] | | | |
| 2.4 | 5 | 3.2 | 2 | 1 | 189652 | ZBH-5 | 10 |
| 3 | 7 | 5.3 | 2 | 1 | 186717 | ZBH-7 | 10 |
| 4 | 9 | 6.4 | 2 | 1 | 150927 | ZBH-9 | 10 |
| 5 | 12 | 10.3 | 2 | 1 | 189653 | 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

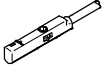
| Centring sleeves included in the scope of delivery | | | |
|----------------------------------------------------|------------------|---------------------|----------------|
| DFM-N-B | Piston ∅ [mm] | Centring sleeves | |
| | | For housing | For yoke plate |
| | 12 | 2x ZBH-5, 2x ZBH-9 | 2x ZBH-5 |
| | 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 | 151680 ABP-5-S |

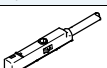
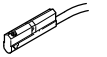
Guided drives DFM-N-B, NPT

Accessories

Proximity sensors for piston Ø 12

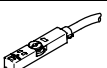
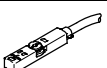
| Ordering data – Proximity sensors for C-slot, magneto-resistive | | | | | | Technical data → Internet: smt | |
|-----------------------------------------------------------------------------------|-----------------------------------|---------------|---------------------------------------------|------------------|----------|--------------------------------|--|
| | Type of mounting | Switch output | Electrical connection, connection direction | Cable length [m] | Part No. | Type | |
| N/O contact | | | | | | | |
|  | Insertable in the slot from above | PNP | Cable, 3-wire, in-line | 2.5 | 551373 | SMT-10M-PS-24V-E-2,5-L-OE | |
| | | | Plug M8x1, 3-pin, in-line | 0.3 | 551375 | SMT-10M-PS-24V-E-0,3-L-M8D | |
| | | | Plug M8x1, 3-pin, angled | 0.3 | 551376 | SMT-10M-PS-24V-E-0,3-Q-M8D | |

Ordering data – Proximity sensors for C-slot, magnetic reed

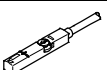
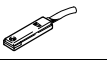
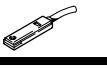
| Ordering data – Proximity sensors for C-slot, magnetic reed | | | | | | Technical data → Internet: sme | |
|-----------------------------------------------------------------------------------|-----------------------------------|---------------|---------------------------------------------|------------------|----------|--------------------------------|--|
| | Type of mounting | Switch output | Electrical connection, connection direction | Cable length [m] | Part No. | Type | |
| N/O contact | | | | | | | |
|  | Insertable in the slot from above | Contacting | Plug M8x1, 3-pin, in-line | 0.3 | 551367 | SME-10M-DS-24V-E-0,3-L-M8D | |
| | | | Cable, 3-wire, in-line | 2.5 | 551365 | SME-10M-DS-24V-E-2,5-L-OE | |
| | | | Cable, 2-wire, in-line | 2.5 | 551369 | SME-10M-ZS-24V-E-2,5-L-OE | |
|  | Insertable in the slot from above | Contacting | Plug M8x1, 3-pin, in-line | 0.3 | 173212 | SME-10-SL-LED-24 | |
| | | | Cable, 3-wire, in-line | 2.5 | 173210 | SME-10-KL-LED-24 | |

Proximity sensors for piston Ø 16 ... 63

Ordering data – Proximity sensors for T-slot, magneto-resistive



| Ordering data – Proximity sensors for T-slot, magneto-resistive | | | | | | Technical data → Internet: smt | |
|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------|---------------|-----------------------|------------------|----------|--------------------------------|--|
| | Type of mounting | Switch output | Electrical connection | Cable length [m] | Part No. | Type | |
| N/O contact | | | | | | | |
|  | Insertable in the slot from above, flush with cylinder profile, short design | PNP | Cable, 3-wire | 2.5 | 574335 | SMT-8M-A-PS-24V-E-2,5-OE | |
| | | | Plug M8x1, 3-pin | 0.3 | 574334 | SMT-8M-A-PS-24V-E-0,3-M8D | |
| | | | Plug M12x1, 3-pin | 0.3 | 574337 | SMT-8M-A-PS-24V-E-0,3-M12 | |
| | | NPN | Cable, 3-wire | 2.5 | 574338 | SMT-8M-A-NS-24V-E-2,5-OE | |
| | | | Plug M8x1, 3-pin | 0.3 | 574339 | SMT-8M-A-NS-24V-E-0,3-M8D | |
| N/C contact | | | | | | | |
|  | Insertable in the slot from above, flush with cylinder profile, short design | PNP | Cable, 3-wire | 7.5 | 574340 | SMT-8M-A-PO-24V-E-7,5-OE | |


Ordering data – Proximity sensors for T-slot, magnetic reed

| Ordering data – Proximity sensors for T-slot, magnetic reed | | | | | | Technical data → Internet: sme | | |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------|---------------|-----------------------|------------------|----------|--------------------------------|------------------------|--|
| | Type of mounting | Switch 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 | 543862 | SME-8M-DS-24V-K-2,5-OE | | |
| | | | | 5.0 | 543863 | SME-8M-DS-24V-K-5,0-OE | | |
| | | | Plug M8x1, 3-pin | Cable, 2-wire | 2.5 | 543872 | SME-8M-ZS-24V-K-2,5-OE | |
| | | | | 0.3 | 543861 | SME-8M-DS-24V-K-0,3-M8D | | |
|  | Insertable in the slot lengthwise, flush with the cylinder profile | Contacting | Cable, 3-wire | 2.5 | 150855 | SME-8-K-LED-24 | | |
| | | | Plug M8x1, 3-pin | 0.3 | 150857 | SME-8-S-LED-24 | | |
| N/C contact | | | | | | | | |
|  | Insertable in the slot from above, flush with the cylinder profile | Contacting | Cable, 3-wire | 7.5 | 546799 | SME-8M-DO-24V-K-7,5-OE | | |

Guided drives DFM-N-B, NPT

Accessories

| 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 | 541333 |
| 5 | | | | | 541334 | NEBU-M8G3-K-5-LE3 |
| Straight socket, M12x1, 5-pin | | Cable, open end, 3-wire | 2.5 | 541363 | NEBU-M12G5-K-2.5-LE3 | |
| | | | 5 | 541364 | NEBU-M12G5-K-5-LE3 | |
|  | Angled socket, M8x1, 3-pin | | Cable, open end, 3-wire | 2.5 | 541338 | NEBU-M8W3-K-2.5-LE3 |
| | | | | 5 | 541341 | NEBU-M8W3-K-5-LE3 |
| | Angled socket, M12x1, 5-pin | | Cable, open end, 3-wire | 2.5 | 541367 | NEBU-M12W5-K-2.5-LE3 |
| | | | | 5 | 541370 | 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 ¹⁾ | 1/8 | Plastic design ²⁾ | 564839 | GRLA-10-32-UNF-QB-1/8-U |
| | | 5/32 | Metal design ³⁾ | 564840 | GRLA-10-32-UNF-QB-5/32-U |
| | | | | 564842 | GRLA-10-32-UNF-QB-1/4-U |
| | 1/8 NPT | 5/32 | | 534656 | GRLA-1/8-QB-5/32-U |
| | | 1/4 | | 534658 | GRLA-1/8-QB-1/4-U |
| | | 5/16 | | 534659 | GRLA-1/8-QB-5/16-U |
| | 1/4 NPT | 1/4 | | 534661 | GRLA-1/4-QB-1/4-U |
| | | 5/16 | | 534662 | GRLA-1/4-QB-5/16-U |
| | | 3/8 | | 190947 | 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

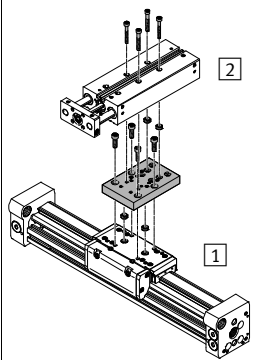
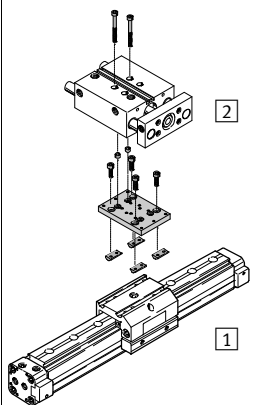
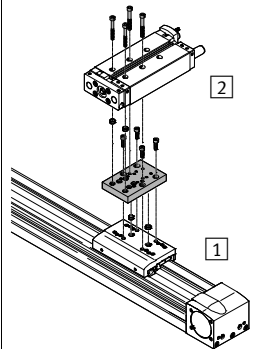
Guided drives DFM-N-B, NPT

Accessories

Adapter kit
DHAA, HAPB

Material:
Wrought aluminium alloy
Free of copper and PTFE
RoHS-compliant

 Note
The kit includes the individual mounting interface as well as the necessary mounting material.

| Permissible drive/drive combinations with adapter kit | | | | Download CAD data → www.festo.com | |
|-------------------------------------------------------------------------------------|------------------|------------|-------------------|----------------------------------------------------------------------|-------------------|
| Combination | 1 | 2 | Adapter kit | | |
| | Drive | Drive | CRC ¹⁾ | Part No. | Type |
| DGC/DFM | DGC | DFM | DHAA | | |
|  | 25 | 12, 16, 20 | 2 | 562152 | DHAA-D-L-25-G7-12 |
| | 20, 25 | 32 | | 562153 | DHAA-D-L-32-G7-20 |
| | 25, 32, 40 | 40 | | 562154 | DHAA-D-L-40-G7-25 |
| | | | | | |
| DGP(I)L, DGE/DFM | DG... | DFM | HAPB | | |
|  | 25 | 12, 16 | 2 | 192690 | HAPB-12/16 |
| | 32 ²⁾ | 20, 25 | | 192691 | HAPB-20/25 |
| | 40 | 32, 40 | | 192692 | HAPB-32/40 |
| | | | | | |
| EGC/DFM | EGC | DFM | DHAA | | |
|  | 80 | 12, 16, 20 | 2 | 562152 | DHAA-D-L-25-G7-12 |
| | 120 | 25, 32, 40 | | 562154 | DHAA-D-L-40-G7-25 |
| | | | | | |

1) Corrosion resistance class CRC 2 to Festo standard FN 940070
Moderate corrosion stress. Indoor applications in which condensation may occur. External visible parts with primarily decorative requirements for the surface and which are in direct contact with the ambient atmosphere typical for industrial applications.

2) Only for DGPL/DGPIL...