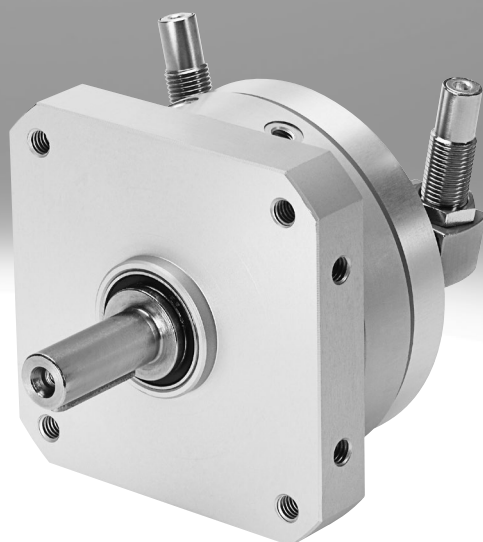


## Swivel modules DSM/DSM-B

**FESTO**



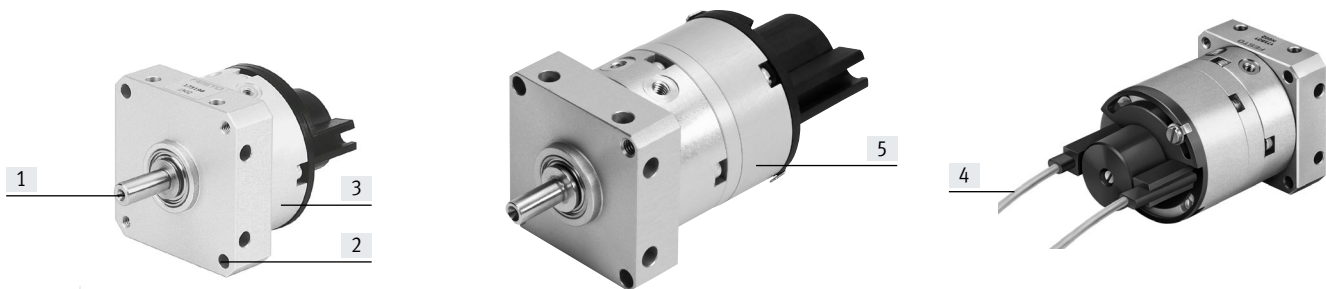
## Key features

### At a glance

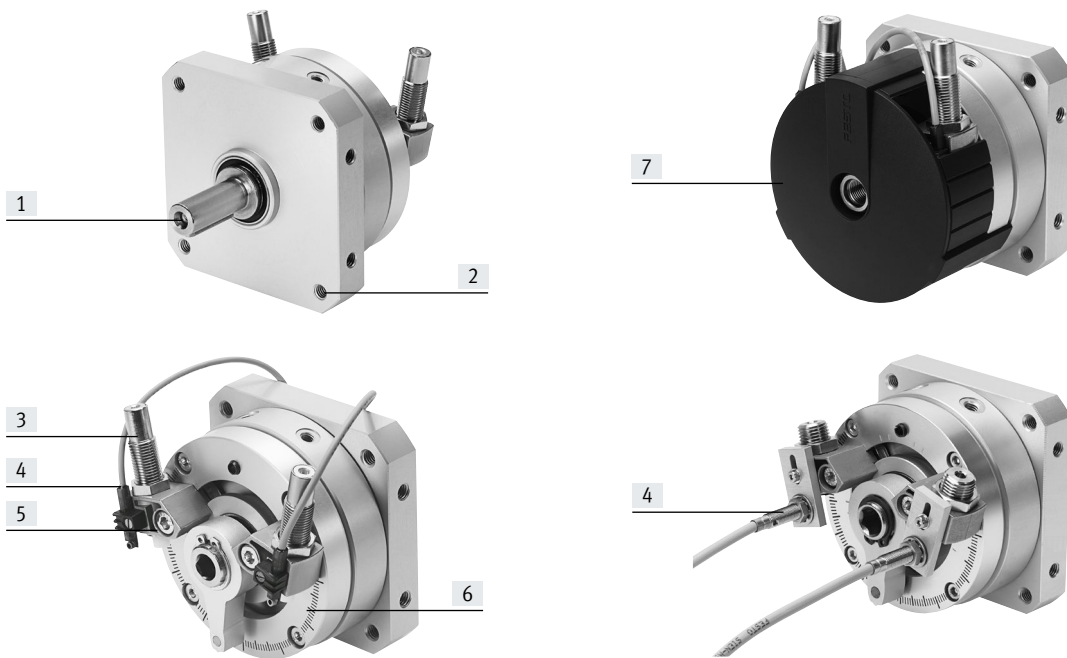
- Double-acting semi-rotary drive with vane
- The swivel angle is infinitely adjustable over the entire swivel range
- High precision thanks to fixed metal stops
- Polyurethane ensures a long service life for the rotary vane and sealing system
- Easy precision adjustment of the end positions using the cushioning components
- The mechanical gearing between the stop element and the semi-rotary drive prevents movement of the stop system under load
- Torques of up to 80 Nm with tandem rotary vanes in combination with multi-tooth shaft

### The technology in detail

Size 6 ... 10



Size 12 ... 63

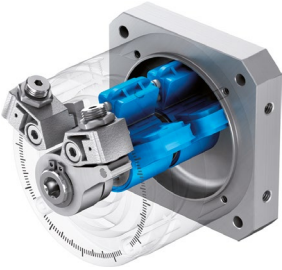


- [1] Interface  
Choice of:
  - Spigot shaft
  - Flanged shaft
- [2] Wide range of mounting options
- [3] Cushioning with size 6 ... 10: elastic cushioning elements with metal fixed stop (P)  
Cushioning with size 12 ... 63:  
Three cushioning types, with metal fixed stop:
  - Elastic cushioning components (P)
  - Adjustable, elastic cushioning elements (P1)
  - Hydraulic shock absorbers (CC)
- [4] Position sensing
  - With size 6 ... 10: SME/SMT-10
  - With size 12 ... 40: SME/SMT-10 or SIEN
  - For size 63: SME/SMT-8
- [5] Precision adjustment of the end positions: the end positions can be very accurately adjusted by moving the stops
- [6] Angle scale: the required swivel angle can be easily preset using the scale
- [7] The cover cap prevents unwanted interference in the swivel motion and reduces the risk of injury

## Key features

### Wide choice of variants

DSM-T-...: semi-rotary drive with tandem rotary vanes



Torques of up to 80 Nm can be achieved by having two rotary vanes on the multi-tooth shaft.

The functionality is the same as that of the DSM without tandem rotary vanes:

- Infinitely adjustable swivel angle
- Identical interfaces
- Identical accessories

DSM-...-HD: : semi-rotary drive with heavy-duty bearing



High-quality bearing elements with backlash-free preloading enable very high load torques and an extremely precise bearing with excellent running accuracy. The functionality corresponds to that of the DSM-B without heavy-duty bearing:

- Infinitely adjustable swivel angle
- Identical mounting interfaces
- Identical accessories

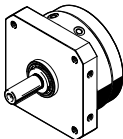
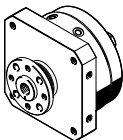
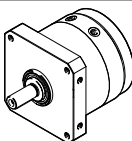
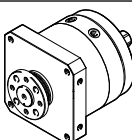
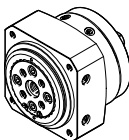
Choice of two cushioning types:

- Cushioning P1 and CC

Product range overview

Characteristic values of the semi-rotary drives

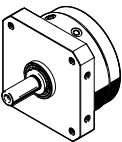
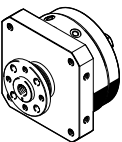
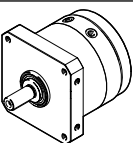
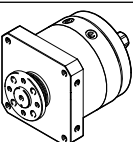
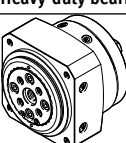
The specifications shown in the table are maximum values. The exact values for the individual sizes can be found on the following pages.

| Version                                                                            | Type         | Size                   | Swivel angle<br>[°] | Torque<br>[Nm] | Axial force<br>[N] | Radial force<br>[N] |
|------------------------------------------------------------------------------------|--------------|------------------------|---------------------|----------------|--------------------|---------------------|
| Spigot shaft                                                                       |              |                        |                     |                |                    |                     |
|    | DSM-...      | 6, 8, 10               | 90, 180             | 0.85           | 10                 | 30                  |
|                                                                                    |              | 10                     | 240                 |                |                    |                     |
|                                                                                    |              | 12, 16, 25, 32, 40, 63 | 270                 | 40             | 500                | 500                 |
|                                                                                    |              | 12, 16, 25, 32         | 246                 |                |                    |                     |
|                                                                                    |              | 40, 63                 | 240                 |                |                    |                     |
| Flanged shaft                                                                      |              |                        |                     |                |                    |                     |
|    | DSM-...-FW   | 6, 8, 10               | 90, 180             | 0.85           | 10                 | 30                  |
|                                                                                    |              | 10                     | 240                 |                |                    |                     |
|                                                                                    |              | 12, 16, 25, 32, 40, 63 | 270                 | 40             | 500                | 500                 |
|                                                                                    |              | 12, 16, 25, 32         | 246                 |                |                    |                     |
|                                                                                    |              | 40, 63                 | 240                 |                |                    |                     |
| Tandem rotary vanes and spigot shaft                                               |              |                        |                     |                |                    |                     |
|  | DSM-T-...    | 6, 8, 10               | 90, 180             | 1.7            | 10                 | 30                  |
|                                                                                    |              | 10                     | 240                 |                |                    |                     |
|                                                                                    |              | 12, 16, 25, 32, 40, 63 | 270                 | 80             | 500                | 500                 |
|                                                                                    |              | 12, 16, 25, 32         | 246                 |                |                    |                     |
|                                                                                    |              | 40, 63                 | 240                 |                |                    |                     |
| Tandem rotary vanes and flange shaft                                               |              |                        |                     |                |                    |                     |
|  | DSM-T-...-FW | 6, 8, 10               | 90, 180             | 1.7            | 10                 | 30                  |
|                                                                                    |              | 10                     | 240                 |                |                    |                     |
|                                                                                    |              | 12, 16, 25, 32, 40, 63 | 270                 | 80             | 500                | 500                 |
|                                                                                    |              | 12, 16, 25, 32         | 246                 |                |                    |                     |
|                                                                                    |              | 40, 63                 | 240                 |                |                    |                     |
| Heavy-duty bearing                                                                 |              |                        |                     |                |                    |                     |
|  | DSM-...-HD   | 12, 16, 25, 32, 40, 63 | 270                 | 40             | 1 300              | 1 800               |
|                                                                                    |              | 12, 16, 25, 32         | 246                 |                |                    |                     |
|                                                                                    |              | 40, 63                 | 240                 |                |                    |                     |

## Product range overview

### Characteristic values of the semi-rotary drives

The specifications shown in the table are maximum values. The exact values for the individual sizes can be found on the following pages.

| Version                                                                             | Cushioning |                 |    | Adjustable swivel angle | Position sensing | → Page |
|-------------------------------------------------------------------------------------|------------|-----------------|----|-------------------------|------------------|--------|
|                                                                                     | P          | P1              | CC |                         | A                |        |
| Spigot shaft                                                                        |            |                 |    |                         |                  |        |
|    | ■          | —               | —  | ■                       | ■                | 8      |
|                                                                                     | ■          | —               | —  | ■                       | ■                |        |
|                                                                                     | ■          | —               | —  | ■                       | ■                | 24     |
|                                                                                     | —          | ■               | ■  | ■                       | ■                |        |
|                                                                                     | —          | ■               | ■  | ■                       | ■                |        |
| Flanged shaft                                                                       |            |                 |    |                         |                  |        |
|    | ■          | —               | —  | ■                       | ■                | 8      |
|                                                                                     | ■          | —               | —  | ■                       | ■                |        |
|                                                                                     | ■          | —               | —  | ■                       | ■                | 24     |
|                                                                                     | —          | ■               | ■  | ■                       | ■                |        |
|                                                                                     | —          | ■               | ■  | ■                       | ■                |        |
| Tandem rotary vanes and spigot shaft                                                |            |                 |    |                         |                  |        |
|  | ■          | —               | —  | ■ <sup>2)</sup>         | ■ <sup>3)</sup>  | 8      |
|                                                                                     | ■          | —               | —  | ■ <sup>2)</sup>         | ■ <sup>3)</sup>  |        |
|                                                                                     | ■          | —               | —  | ■                       | ■                | 24     |
|                                                                                     | —          | ■ <sup>1)</sup> | ■  | ■                       | ■                |        |
|                                                                                     | —          | ■ <sup>1)</sup> | ■  | ■                       | ■                |        |
| Tandem rotary vanes and flange shaft                                                |            |                 |    |                         |                  |        |
|  | ■          | —               | —  | ■ <sup>2)</sup>         | ■ <sup>3)</sup>  | 8      |
|                                                                                     | ■          | —               | —  | ■ <sup>2)</sup>         | ■ <sup>3)</sup>  |        |
|                                                                                     | ■          | —               | —  | ■                       | ■                | 24     |
|                                                                                     | —          | ■ <sup>1)</sup> | ■  | ■                       | ■                |        |
|                                                                                     | —          | ■ <sup>1)</sup> | ■  | ■                       | ■                |        |
| Heavy-duty bearing                                                                  |            |                 |    |                         |                  |        |
|  | —          | —               | —  | ■                       | ■                | 24     |
|                                                                                     | —          | ■               | ■  | ■                       | ■                |        |
|                                                                                     | —          | ■               | ■  | ■                       | ■                |        |

1) The cushioning type P1 can be ordered as an accessory (→ page 53).

2) The stop kit (adjustable swivel angle) can be ordered as an accessory (→ page 54).

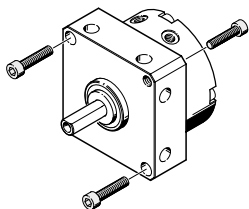
3) The mounting kit (for position sensing) can be ordered as an accessory (→ page 54).

## Key features

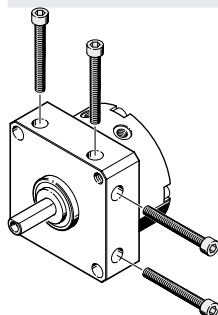
### Mounting options

Size 6 ... 10

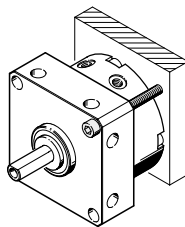
Via threaded through-hole/through-hole



Via through-hole, lateral

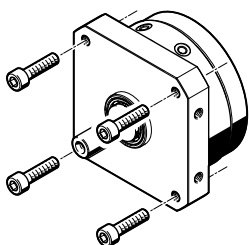


Via thread, lateral

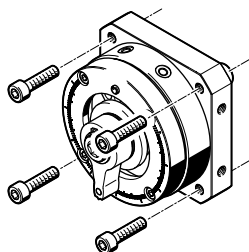


Size 12 ... 63

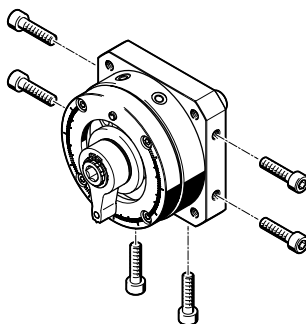
Via threaded through-hole



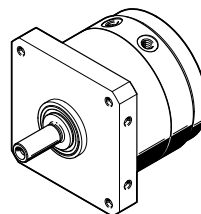
Via through-hole



Via thread, lateral

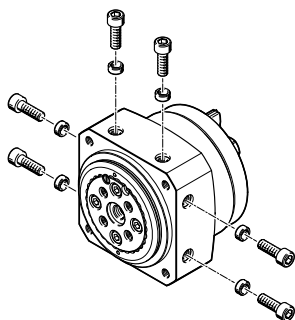


Centring via centring collar

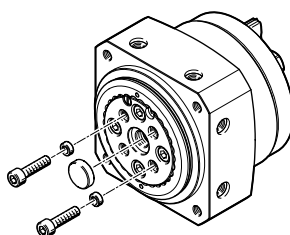


### Special mounting options for DSM-...-HD

Via thread, lateral



Of attachments



Positive-locking connections possible through use of centring sleeves ZBH.

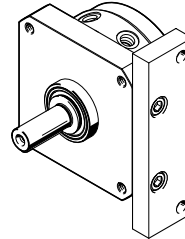
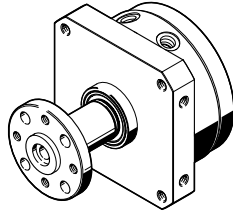
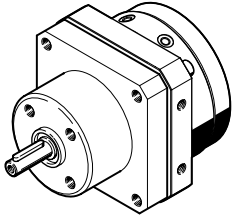
## Key features

### Accessories

Free wheel unit FLSM  
Size 6 ... 40

Push-on flange FWSR  
Size 6 ... 40

Mounting plate HSM  
Size 12 ... 40

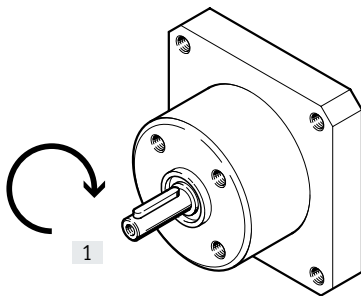


### Direction of rotation in combination with freewheel unit FLSM

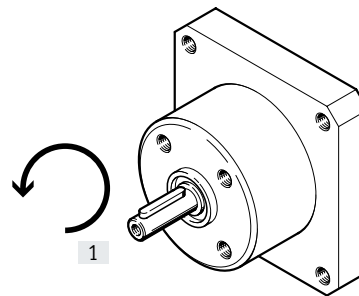
The freewheel unit only allows movement in one of the two possible swivel directions of the swivel module DSM. The reverse direction is blocked.

Dimensions and ordering data  
→ page 49

### FLSM-...-R, clockwise rotation



### FLSM-...-L, anti-clockwise rotation



[1] View towards drive shaft

### Position sensor SRBS

The position sensor is used for sensing the end positions of the swivel module DSM.

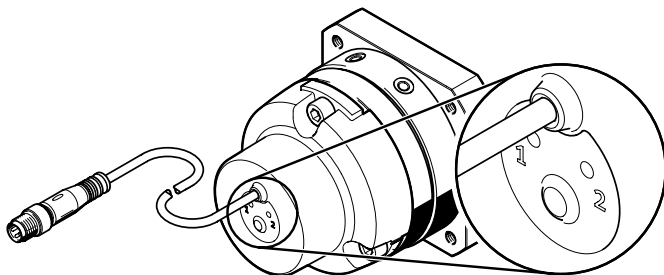
Sensing is magnetic and contactless. Two switching points are output.

#### Key features:

- Quick assembly without having to manually search for switching points
- Simple and reliable operation using one pushbutton
- Only one connecting cable required
- Long service life thanks to sturdy and non-contacting position sensing

#### Technical data:

- Possible sensing range: 0 ... 270°
- Repetition accuracy:  $\leq 1^\circ$
- 2 switching outputs (24 V)
- Switching output: PNP or NPN, programmable
- Switching element function: N/O contact or N/C contact programmable

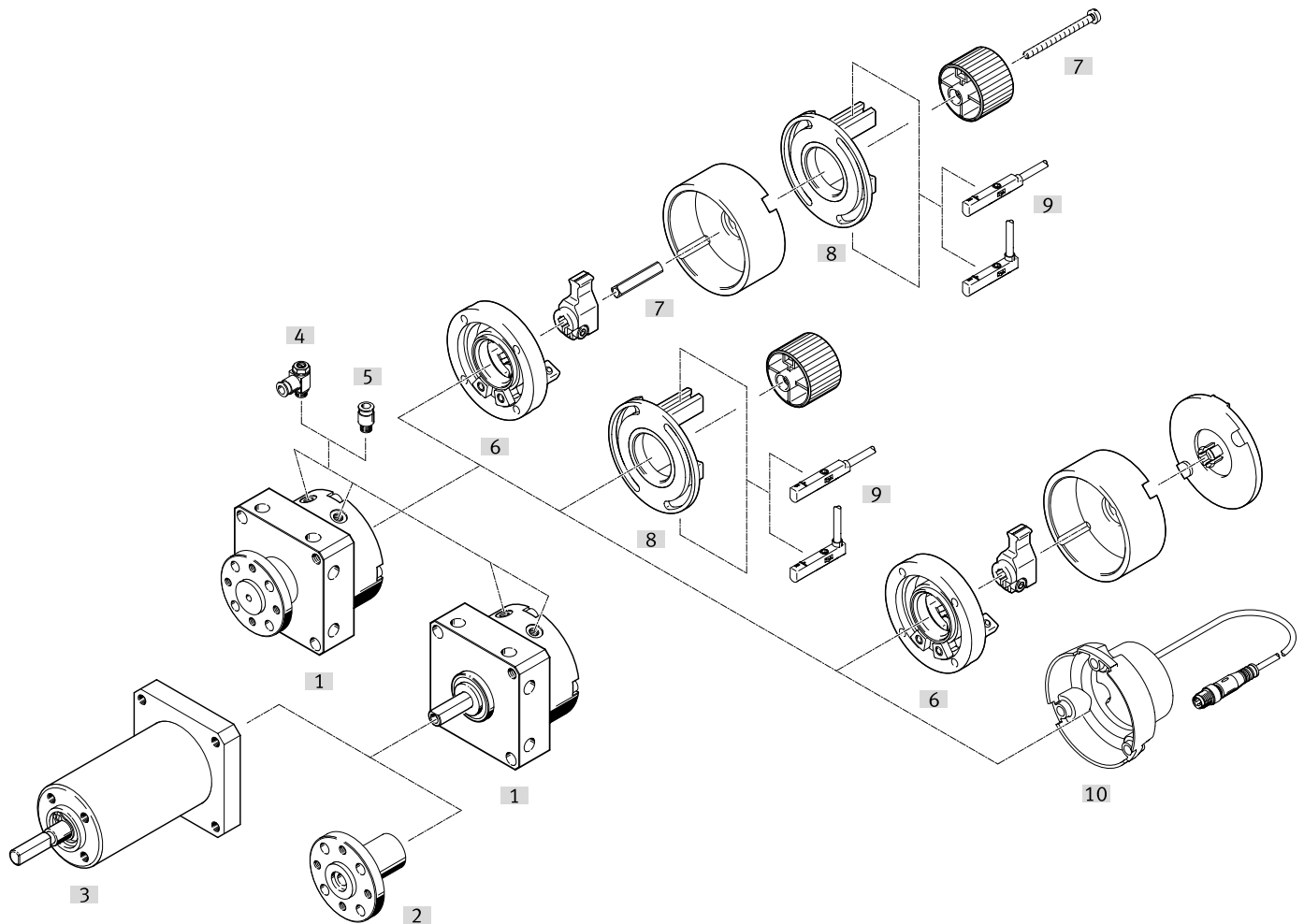


Type codes DSM-6 ... 10

|     |                          |
|-----|--------------------------|
| 001 | Series                   |
| DSM | Semi-rotary drive        |
| 002 | Design type              |
|     | Standard                 |
| T   | Tandem vane              |
| 003 | Size                     |
| 6   | 6                        |
| 8   | 8                        |
| 10  | 10                       |
| 004 | Nominal swivel angle [°] |
| 90  | 90                       |
| 180 | 180                      |
| 200 | 200                      |
| 240 | 240                      |

|     |                                               |
|-----|-----------------------------------------------|
| 005 | Cushioning                                    |
| P   | Elastic cushioning rings/plates on both sides |
| 006 | Position sensing                              |
|     | None                                          |
| A   | For proximity sensor                          |
| 007 | Adjustable swivel angle                       |
|     | Fixed swivel angle                            |
| FF  | Adjustable swivel angle                       |
| 008 | Shaft                                         |
|     | Spigot shaft                                  |
| FW  | Flanged shaft                                 |

Peripherals overview DSM-6 ... 10



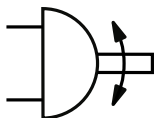


## Peripherals overview DSM-6 ... 10

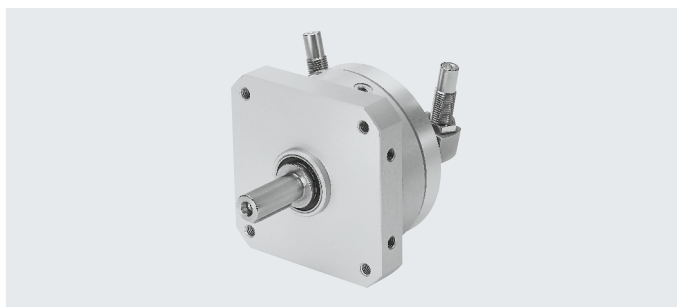
| Accessories |                                    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                    | → Page/Internet |
|-------------|------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| [1]         | Quarter turn actuator<br>DSM       | Drives with rotary vanes                                                                                                                                                                                                                                                                                                                                                                                                                       | 10              |
| [2]         | Push-on flange<br>FWSR             | For retrofitting on swivel module DSM with spigot shaft                                                                                                                                                                                                                                                                                                                                                                                        | 51              |
| [3]         | Freewheel unit<br>FLSM             | <ul style="list-style-type: none"> <li>For synchronised rotary movement in one direction</li> <li>Only in combination with swivel module DSM with spigot shaft</li> </ul>                                                                                                                                                                                                                                                                      | 49              |
| [4]         | One-way flow control valve<br>GRLA | For regulating speed                                                                                                                                                                                                                                                                                                                                                                                                                           | 57              |
| [5]         | Push-in fitting<br>QS              | For connecting tubing with standard O.D.                                                                                                                                                                                                                                                                                                                                                                                                       | qs              |
| [6]         | Stop kit<br>KSM                    | <ul style="list-style-type: none"> <li>For adjusting the swivel angle</li> <li>Can be retrofitted for semi-rotary drive DSM-...-P(-A)/DSM-...-P(-A)-FW</li> <li>With DSM-T-..., the stop kit must be ordered separately as an accessory</li> <li>Can be combined with mounting kit WSM</li> <li>The adapter kit DADP-AK must also be ordered in combination with mounting kit WSM → page 54</li> </ul>                                         | 54              |
| [7]         | Adapter kit<br>DADP-AK             | For attaching mounting kit WSM to stop kit KSM                                                                                                                                                                                                                                                                                                                                                                                                 | 54              |
| [8]         | Mounting kit<br>WSM-...-SME-10     | <ul style="list-style-type: none"> <li>For sensing the swivel angle</li> <li>For mounting the proximity switch SME-/SMT-10;</li> <li>Can be retrofitted for semi-rotary drive DSM-...-P(-FF)/DSM-...-P(-FF)-FW</li> <li>The mounting kit must be ordered as an accessory with DSM-T-...</li> <li>Can be combined with stop kit KSM</li> <li>The adapter kit DADP-AK must also be ordered in combination with stop kit KSM → page 54</li> </ul> | 54              |
| [9]         | Proximity switch<br>SME/SMT-10     | Proximity switches for sensing the end position                                                                                                                                                                                                                                                                                                                                                                                                | 54              |
| [10]        | Position sensor<br>SRBS            | <ul style="list-style-type: none"> <li>For sensing the swivel angle</li> <li>No adjustment of the proximity switches required</li> <li>The end positions of the swivel angle are taught in at the touch of a button</li> <li>Can only be mounted directly on the semi-rotary drive, without other accessories</li> <li>Must be ordered separately as an accessory</li> </ul>                                                                   | 53              |

## Datasheet DSM-6 ... 10

## Function



Size  
6 ... 10



## General technical data

| Size                                                           | 6                                            | 8         | 10                |
|----------------------------------------------------------------|----------------------------------------------|-----------|-------------------|
| Pneumatic connection                                           | M3                                           |           |                   |
| Design                                                         | Vane                                         |           |                   |
| Cushioning                                                     | Elastic cushioning rings/plates at both ends |           |                   |
| Type of mounting                                               | With female thread                           |           |                   |
| Mounting position                                              | Any                                          |           |                   |
| Swivel angle                                                   |                                              |           |                   |
| DSM-... [°]                                                    | 90 or 180                                    | 90 or 180 | 90, 180 or 240    |
| DSM-...-FF [°]                                                 | 0 ... 180                                    |           | 0 ... 200         |
| Max. swivel frequency at 6 bar [Hz]                            | 3                                            |           | 3 (at 240°: 2 Hz) |
| Cushioning angle [°]                                           | 0.5                                          |           |                   |
| Air consumption at swivel angle of 90° and 6 bar <sup>1)</sup> |                                              |           |                   |
| DSM-... [cm <sup>3</sup> ]                                     | 0.6                                          | 0.7       | 5.5               |
| DSM-T-... [cm <sup>3</sup> ]                                   | 1.2                                          | 1.4       | 11                |

1) Theoretical values

## Operating and environmental conditions

| Size                                              | 6                                                                 | 8         | 10        |
|---------------------------------------------------|-------------------------------------------------------------------|-----------|-----------|
| Operating medium                                  | Compressed air to ISO 8573-1:2010 [7:4:4]                         |           |           |
| Operating pressure                                |                                                                   |           |           |
| DSM-... [bar]                                     | 3.5 ... 8                                                         | 3.5 ... 8 | 2.5 ... 8 |
| DSM-T-... [bar]                                   | 4 ... 8                                                           | 4 ... 8   | 3.5 ... 8 |
| Ambient temperature <sup>1)</sup> [°C]            | 0 ... +60                                                         |           |           |
| Storage temperature [°C]                          | 20                                                                |           |           |
| ATEX                                              | Selected types → <a href="http://www.festo.com">www.festo.com</a> |           |           |
| CE marking (see declaration of conformity)        | To EU Explosion Protection Directive (ATEX)                       |           |           |
| UKCA marking (see declaration of conformity)      | To UK explosion regulations                                       |           |           |
| Explosion protection certification outside the EU | EPL Gb (GB)                                                       |           |           |
|                                                   | EPL Db (GB)                                                       |           |           |

1) Note operating range of proximity switches

## Forces and torques

| Size                                                                                     | 6       | 8      | 10     |
|------------------------------------------------------------------------------------------|---------|--------|--------|
| Torque at 6 bar                                                                          |         |        |        |
| DSM-... [Nm]                                                                             | 0.15    | 0.35   | 0.85   |
| DSM-T-... [Nm]                                                                           | 0.3     | 0.7    | 1.7    |
| Max. permissible axial force on drive shaft <sup>1)</sup> [N]                            | 10      |        |        |
| Max. permissible radial force on drive shaft <sup>1)</sup> [N]                           | 15      | 20     | 30     |
| Max. permissible mass moment of inertia on drive shaft <sup>2)</sup> [kgm <sup>2</sup> ] | 0.00065 | 0.0013 | 0.0026 |

1) The axis of rotation and the centre of the drive shaft are the point of reference for the forces

2) Maximum value; please see graphs starting on → page 12

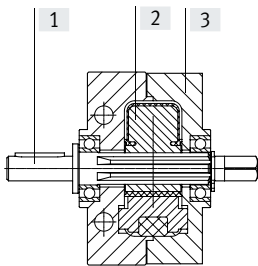
2) Maximum value; please see graphs starting on → page 12

## Datasheet DSM-6 ... 10

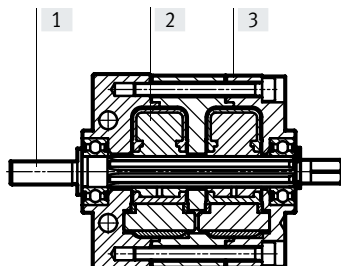
| Weight [g]                                  |    |     |     |
|---------------------------------------------|----|-----|-----|
| Size                                        | 6  | 8   | 10  |
| <b>Spigot shaft</b>                         |    |     |     |
| DSM-...-P                                   | 45 | 78  | 140 |
| DSM-...-P-A                                 | 50 | 85  | 149 |
| DSM-...-P-FF                                | 70 | 140 | 240 |
| DSM-...-P-A-FF                              | 85 | 155 | 255 |
| <b>Flanged shaft</b>                        |    |     |     |
| DSM-...-P-FW                                | 51 | 85  | 150 |
| DSM-...-P-A-FW                              | 56 | 92  | 159 |
| DSM-...-P-FF-FW                             | 76 | 147 | 250 |
| DSM-...-P-A-FF-FW                           | 91 | 162 | 265 |
| <b>Tandem rotary vanes and spigot shaft</b> |    |     |     |
| DSM-T-...-P                                 | 60 | 110 | 200 |
| <b>Tandem rotary vanes and flange shaft</b> |    |     |     |
| DSM-T-...-P-FW                              | 65 | 117 | 210 |

**Materials**

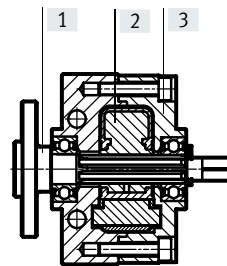
Sectional view  
with spigot shaft  
DSM-...



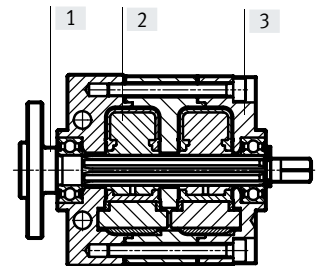
DSM-T-...



with flange shaft  
DSM-...-FW



DSM-T-...-FW

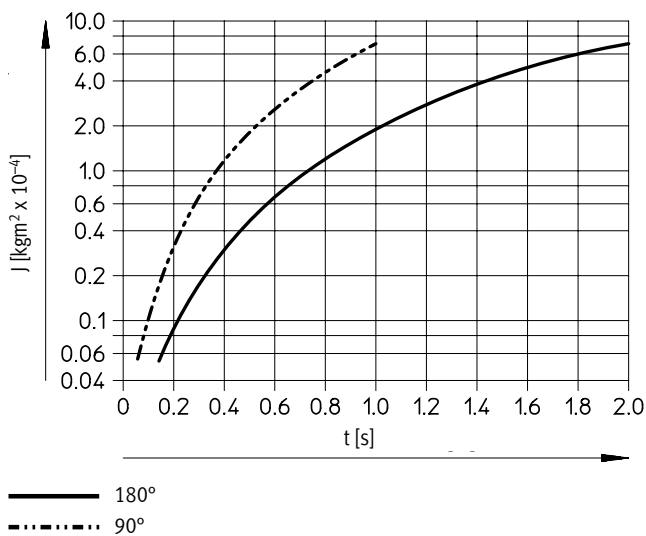
**Semi-rotary drive**

|     |                        |                                |
|-----|------------------------|--------------------------------|
| [1] | Shaft                  | High-alloy stainless steel     |
| [2] | Vane                   | Glass fibre-reinforced plastic |
| [3] | Housing                | Anodised aluminium             |
| –   | Screws                 | Galvanised steel               |
|     | Seals                  | Polyurethane                   |
|     | Note on materials      | RoHS-compliant                 |
|     | LABS (PWIS) conformity | VDMA24364-B1/B2-L              |

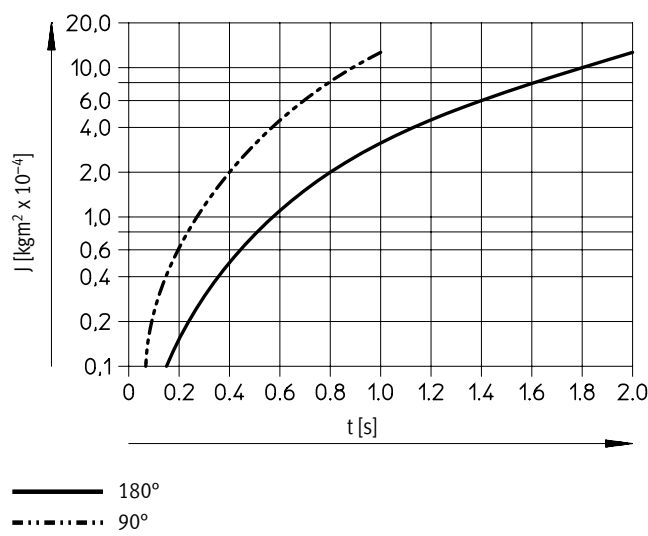
Datasheet DSM-6 ... 10

Mass moment of inertia J as a function of swivel time t

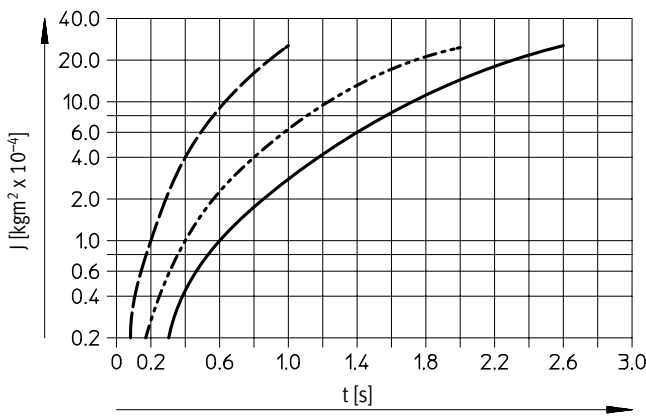
DSM-6



DSM-8



DSM-10

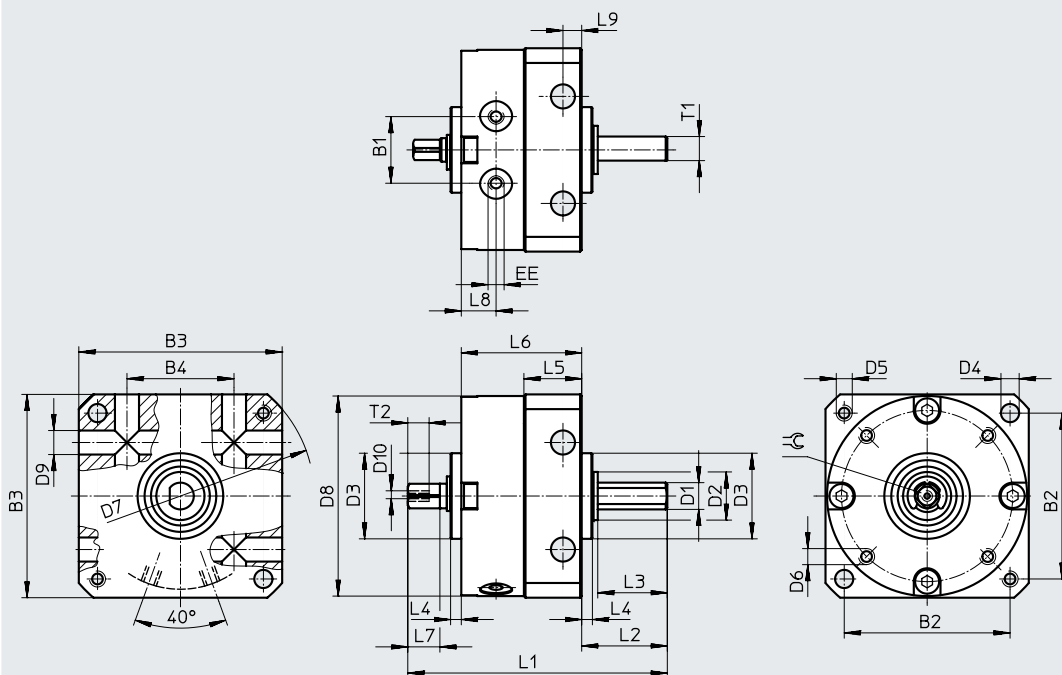


## Datasheet DSM-6 ... 10

## Dimensions

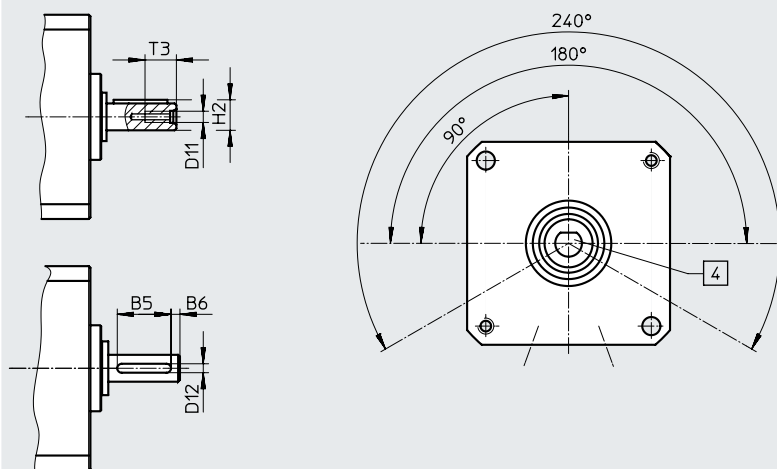
Download CAD data → [www.festo.com](http://www.festo.com)

DSM-... – With spigot shaft



For DSM-10

Shaft position


**Note**

For swivel angle tolerance → table below. The compressed air supply ports are at the bottom in this drawing.

| Size | B1   | B2 | B3 | B4 | D1<br>ø<br>g7 | D2<br>ø | D3<br>ø<br>f8 | D4<br>ø<br>H12 | D5 | D6   | D7<br>ø<br>H12 | D8<br>ø | D9<br>ø<br>H12 | D10  | EE |
|------|------|----|----|----|---------------|---------|---------------|----------------|----|------|----------------|---------|----------------|------|----|
| 6    | 10   | 25 | 30 | 17 | 4             | 8       | 14            | 3.2            | M3 | M2   | 40             | 29.4    | 3.5            | M2   | M3 |
| 8    | 12.8 | 31 | 38 | 20 | 5             | 9       | 16            | 3.2            | M3 | M2.5 | 50             | 37.4    | 3.5            | M2   | M3 |
| 10   | 15.9 | 38 | 47 | 26 | 6             | 12      | 19            | 4.3            | M4 | M3   | 62             | 46.4    | 4.5            | M2.5 | M3 |

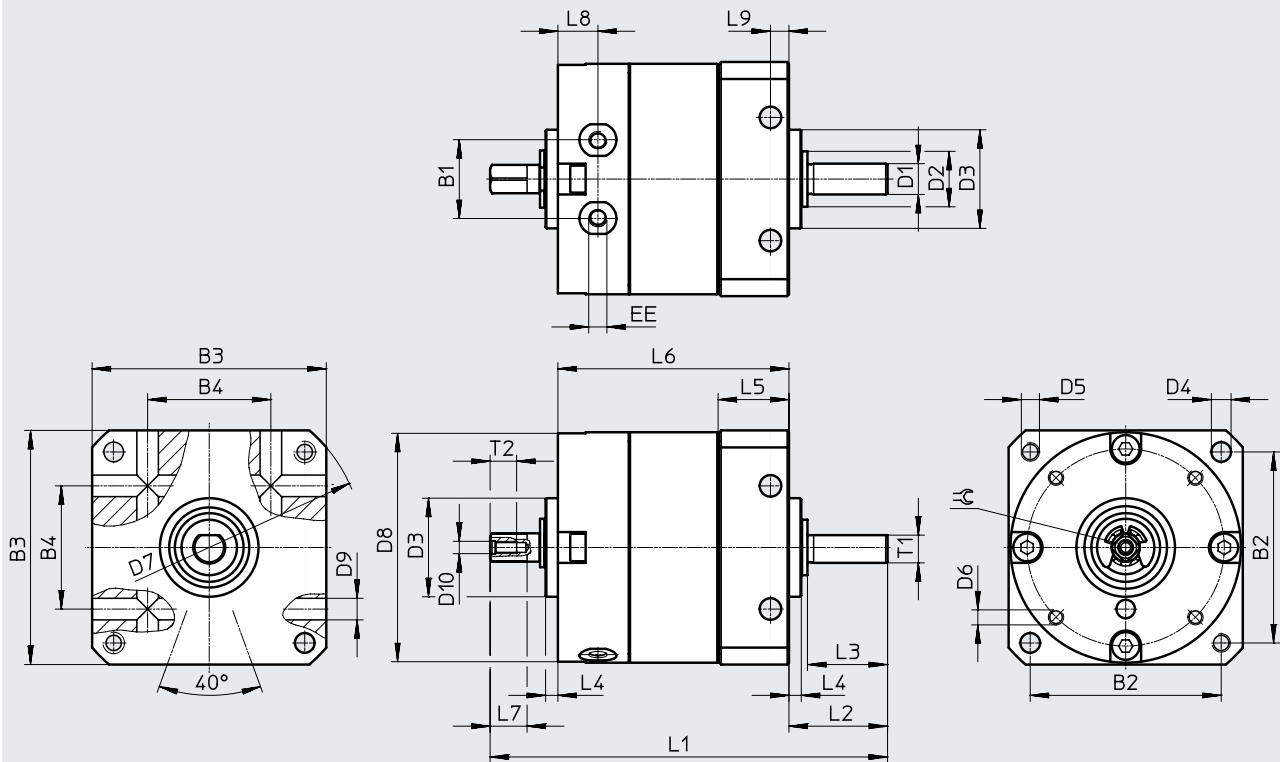
| Size | L1 | L2   | L3 | L4 | L5   | L6   | L7 | L8  | L9 | T1  | T2<br>h12 | ≡   | Swivel angle tolerance |
|------|----|------|----|----|------|------|----|-----|----|-----|-----------|-----|------------------------|
| 6    | 43 | 13   | 10 | 2  | 9.8  | 21   | 5  | 6   | 3  | 3.5 | 4         | 3   | 0/+5°                  |
| 8    | 50 | 16   | 13 | 2  | 11.3 | 23   | 6  | 6.5 | 3  | 4.5 | 4.3       | 3.5 | 0/+5°                  |
| 10   | 61 | 19.6 | 16 | 2  | 14.3 | 28.4 | 8  | 7.5 | 4  | –   | 5         | 4.5 | 0/+5°                  |

Datasheet DSM-6 ... 10

Dimensions

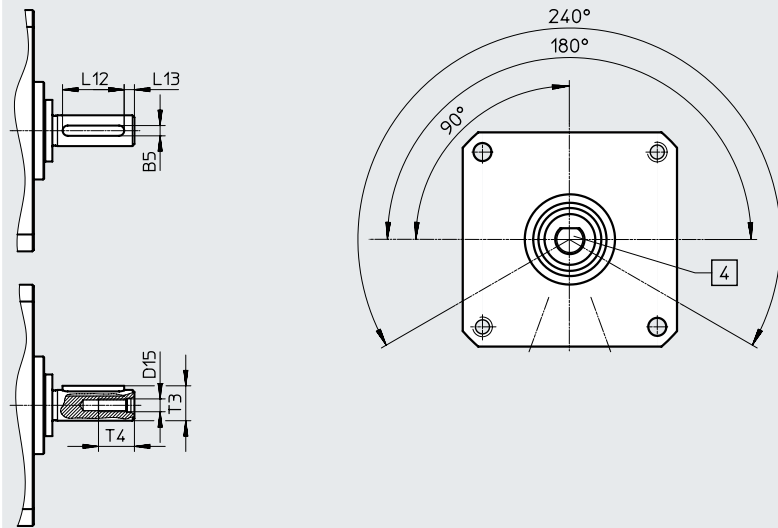
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DSM-T... – With spigot shaft and tandem rotary vanes



For DSM-T-10

Shaft position



**Note**  
For swivel angle tolerance → table below. The compressed air supply ports are at the bottom in this drawing.

| Size | B1   | B2 | B3 | B4 | D1<br>ø<br>g7 | D2<br>ø | D3<br>ø<br>f8 | D4<br>ø<br>H12 | D5 | D6   | D7<br>ø<br>H12 | D8<br>ø | D9<br>ø<br>H12 | D10  |
|------|------|----|----|----|---------------|---------|---------------|----------------|----|------|----------------|---------|----------------|------|
| 6    | 10   | 25 | 30 | 17 | 4             | 8       | 14            | 3.2            | M3 | M2   | 40             | 29.4    | 3.5            | M2   |
| 8    | 12.8 | 31 | 38 | 20 | 5             | 9       | 16            | 3.2            | M3 | M2.5 | 50             | 37.4    | 3.5            | M2   |
| 10   | 15.9 | 38 | 47 | 26 | 6             | 12      | 19            | 4.3            | M4 | M3   | 62             | 46.4    | 4.5            | M2.5 |

| Size | EE | L1   | L2   | L3 | L4 | L5   | L6   | L7 | L8  | L9 | T1  | T2<br>h12 | ⌀   | Swivel angle tolerance |
|------|----|------|------|----|----|------|------|----|-----|----|-----|-----------|-----|------------------------|
| 6    | M3 | 55.5 | 13   | 10 | 2  | 9.8  | 33.5 | 5  | 6   | 3  | 3.5 | 4         | 3   | 0/+5°                  |
| 8    | M3 | 64.5 | 16   | 13 | 2  | 11.3 | 37.5 | 6  | 6.5 | 3  | 4.5 | 4.3       | 3.5 | 0/+5°                  |
| 10   | M3 | 79   | 19.6 | 16 | 2  | 14.3 | 46   | 8  | 7.5 | 4  | –   | 5         | 4.5 | 0/+5°                  |

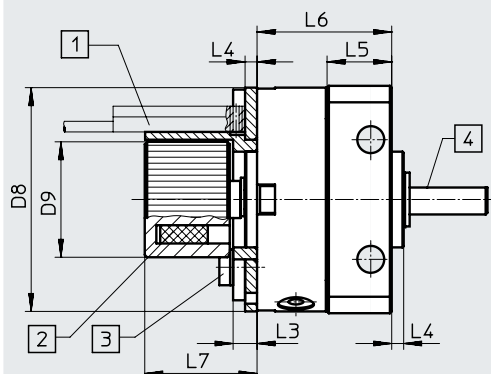
## Datasheet DSM-6 ... 10

## Dimensions

Download CAD data → [www.festo.com](http://www.festo.com)

DSM-... – With spigot shaft and position sensing

DSM-T-... – With spigot shaft, tandem rotary vanes and position sensing



[1] Proximity switch not included in the scope of delivery. Observe fitting space for proximity switch and cable guide

[2] Position of the magnet

[3] Max. tightening torque for sensor bracket screws  
→ table below

[4] The flat or the featherkey on the shaft indicates the position of the rotary vane

| Size | D8<br>∅ | D9<br>∅ | L3 | L4 | L5   | L6      |           | L7   | Tightening torque<br>[Nm] |
|------|---------|---------|----|----|------|---------|-----------|------|---------------------------|
|      |         |         |    |    |      | DSM-... | DSM-T-... |      |                           |
| 6    | 29.4    | 17.3    | 4  | 2  | 9.8  | 21      | 33.5      | 19.5 | 0.19                      |
| 8    | 37.4    | 19.3    | 4  | 2  | 11.3 | 23      | 37.5      | 19.5 | 0.32                      |
| 10   | 46.4    | 22.3    | 4  | 2  | 14.3 | 28      | 45.6      | 19.5 | 0.44                      |

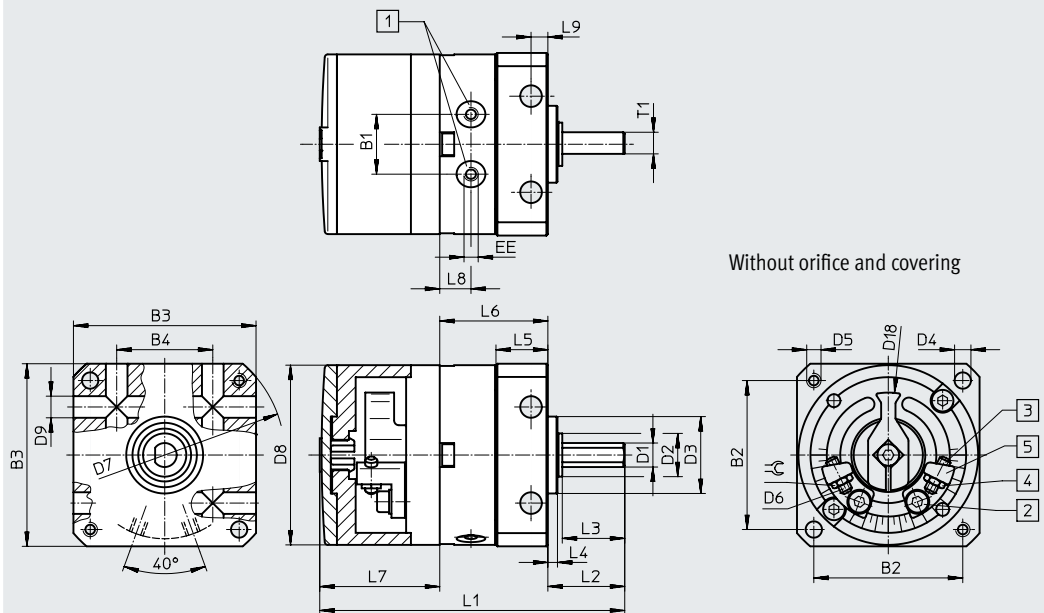
Datasheet DSM-6 ... 10

Dimensions

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DSM-... – With spigot shaft and adjustable swivel angle

DSM-T-... – With spigot shaft, tandem rotary vanes and adjustable swivel angle



**Note**  
The swivel angle is infinitely adjustable over the entire swivel range. Size 6 mm can only be adjusted symmetrically around the center position.

- 1) Supply ports
- 2) Locking screw for clamping the stop
- 3) End-position adjustment
- 4) Lock nut for end-position adjustment
- 5) Infinitely adjustable stops

| Size | B1   | B2 | B3 | B4 | D1<br>ø<br>g7 | D2<br>ø<br>f8 | D3<br>ø<br>H12 | D4<br>ø<br>H12 | D5 | D6   | D7<br>ø<br>H12 | D8<br>ø<br>H12 | D9<br>ø<br>H12 | D18<br>ø | EE | L1      |           |
|------|------|----|----|----|---------------|---------------|----------------|----------------|----|------|----------------|----------------|----------------|----------|----|---------|-----------|
|      |      |    |    |    |               |               |                |                |    |      |                |                |                |          |    | DSM-... | DSM-T-... |
| 6    | 10   | 25 | 30 | 17 | 4             | 8             | 14             | 3.2            | M3 | M2   | 40             | 29.4           | 3.5            | 22       | M3 | 52      | 64.5      |
| 8    | 12.8 | 31 | 38 | 20 | 5             | 9             | 16             | 3.2            | M3 | M2.5 | 50             | 37.4           | 3.5            | 26       | M3 | 64      | 78.5      |
| 10   | 15.9 | 38 | 47 | 26 | 6             | 12            | 19             | 4.3            | M4 | M3   | 62             | 46.4           | 4.5            | 35.8     | M3 | 76      | 93.6      |

| Size | L2   | L3 | L4 | L5   | L6      |           | L7   | L8  | L9 | T1  | ≈G  | Max. swivel angle | Precision adjustment per side |
|------|------|----|----|------|---------|-----------|------|-----|----|-----|-----|-------------------|-------------------------------|
|      |      |    |    |      | DSM-... | DSM-T-... |      |     |    |     |     |                   |                               |
| 6    | 13   | 10 | 2  | 9.8  | 21      | 33.5      | 17.8 | 6   | 3  | 3.5 | 4   | 180°+5°           | +1°/-5°                       |
| 8    | 16   | 13 | 2  | 11.3 | 23      | 37.5      | 24.9 | 6.5 | 3  | 4.5 | 5   | 180°+5°           | +1°/-5°                       |
| 10   | 19.6 | 16 | 2  | 14.3 | 28.4    | 46        | 28.2 | 7.5 | 4  | -   | 5.5 | 200°+5°           | +1°/-5°                       |



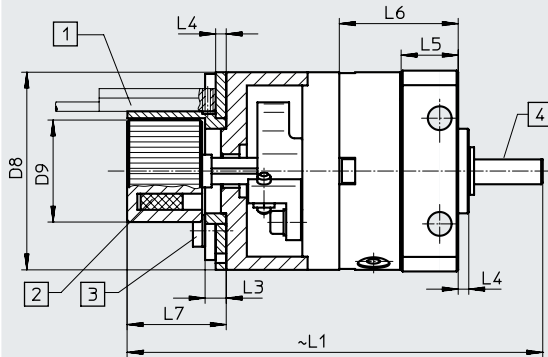
## Datasheet DSM-6 ... 10

## Dimensions

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DSM-... – With spigot shaft, adjustable swivel angle and position sensing

DSM-T-... – With spigot shaft, tandem rotary vanes, adjustable swivel angle and position sensing



[1] Sensor not included in the scope of delivery. Observe fitting space for proximity switch and cable guide

[2] Position of the magnet

[3] Max. tightening torque for sensor bracket screw  
→ table below

[4] The flat or the featherkey on the shaft indicates the position of the rotary vane

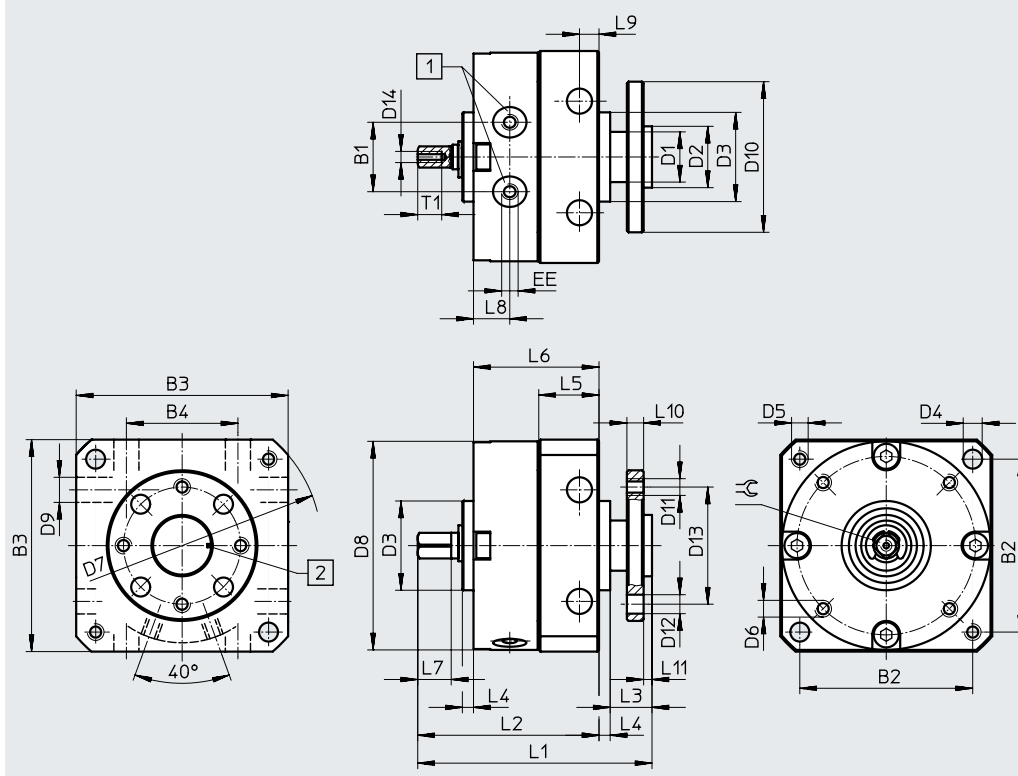
| Size | D8<br>Ø | D9   | L1      |           | L3 | L4 | L5   | L6      |           | L7   | Tightening torque<br>[Nm] |
|------|---------|------|---------|-----------|----|----|------|---------|-----------|------|---------------------------|
|      |         |      | DSM-... | DSM-T-... |    |    |      | DSM-... | DSM-T-... |      |                           |
| 6    | 29.4    | 17.3 | 68.5    | 81        | 4  | 2  | 9.8  | 21      | 33.5      | 19.5 | 0.19                      |
| 8    | 37.4    | 19.3 | 80      | 94.5      | 4  | 2  | 11.3 | 23      | 37.5      | 19.5 | 0.32                      |
| 10   | 46.4    | 22.3 | 91.5    | 109.1     | 4  | 2  | 14.3 | 28.4    | 46        | 19.5 | 0.44                      |

## Datasheet DSM-6 ... 10

## Dimensions

Download CAD data → [www.festo.com](http://www.festo.com)

DSM-... – With flange shaft



| Size | B1   | B2 | B3 | B4 | D1<br>ø | D2<br>ø<br>g7 | D3<br>ø<br>f8 | D4<br>ø | D5 | D6   | D7<br>ø<br>H12 | D8<br>ø | D9<br>ø<br>H12 | D10<br>ø | D11 | D12<br>ø<br>H13 | D13<br>ø |
|------|------|----|----|----|---------|---------------|---------------|---------|----|------|----------------|---------|----------------|----------|-----|-----------------|----------|
| 6    | 10   | 25 | 30 | 17 | 8       | 8             | 14            | 3.2     | M3 | M2   | 40             | 29.4    | 3.5            | 23       | M3  | 3.4             | 16       |
| 8    | 12.8 | 31 | 38 | 20 | 9       | 11            | 16            | 3.2     | M3 | M2.5 | 50             | 37.4    | 3.5            | 27       | M3  | 3.4             | 21       |
| 10   | 15.9 | 38 | 47 | 26 | 10      | 11            | 19            | 4.3     | M4 | M3   | 62             | 46.4    | 4.5            | 30       | M3  | 3.4             | 21       |

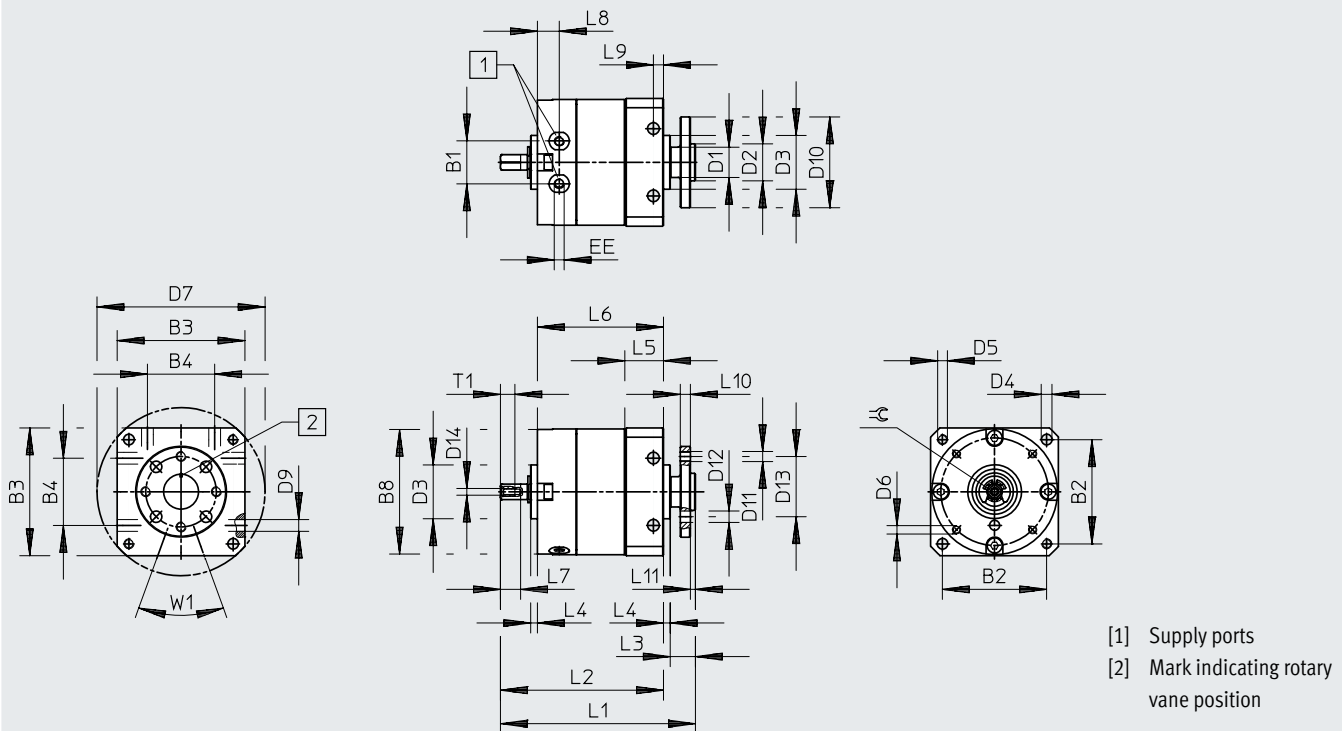
| Size | D14  | EE | L1   | L2   | L3  | L4 | L5   | L6   | L7 | L8  | L9 | L10 | L11 | T1  | ≡   | Swivel angle<br>tolerance |
|------|------|----|------|------|-----|----|------|------|----|-----|----|-----|-----|-----|-----|---------------------------|
| 6    | M2   | M3 | 39.5 | 30   | 7.5 | 2  | 9.8  | 21   | 5  | 6   | 3  | 3   | 1.5 | 4   | 3   | 0/+5°                     |
| 8    | M2   | M3 | 43.5 | 34   | 7.5 | 2  | 11.3 | 23   | 6  | 6.5 | 3  | 3   | 1.5 | 4.3 | 3.5 | 0/+5°                     |
| 10   | M2.5 | M3 | 53   | 41.4 | 9.6 | 2  | 14.3 | 28.4 | 8  | 7.5 | 4  | 3   | 1.6 | 5   | 4.5 | 0/+5°                     |

## Datasheet DSM-6 ... 10

## Dimensions

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DSM-T... – With flange shaft and tandem rotary vanes



| Size | B1   | B2 | B3 | B4 | D1<br>ø | D2<br>ø<br>g7 | D3<br>ø<br>f8 | D4<br>ø | D5 | D6   | D7<br>ø<br>H12 | D8<br>ø | D9<br>ø<br>H12 | D10<br>ø | D11 | D12<br>ø<br>H13 | D13<br>ø |
|------|------|----|----|----|---------|---------------|---------------|---------|----|------|----------------|---------|----------------|----------|-----|-----------------|----------|
| 6    | 10   | 25 | 30 | 17 | 8       | 8             | 14            | 3.2     | M3 | M2   | 40             | 29.4    | 3.5            | 23       | M3  | 3.4             | 16       |
| 8    | 12.8 | 31 | 38 | 20 | 9       | 11            | 16            | 3.2     | M3 | M2.5 | 50             | 37.4    | 3.5            | 27       | M3  | 3.4             | 21       |
| 10   | 15.9 | 38 | 47 | 26 | 10      | 11            | 19            | 4.3     | M4 | M3   | 62             | 46.4    | 4.5            | 30       | M3  | 3.4             | 21       |

| Size | D14  | EE | L1 | L2   | L3  | L4 | L5   | L6   | L7 | L8  | L9 | L10 | L11 | T1  | ≅   | Swivel angle<br>tolerance |
|------|------|----|----|------|-----|----|------|------|----|-----|----|-----|-----|-----|-----|---------------------------|
| 6    | M2   | M3 | 52 | 42.5 | 7.5 | 2  | 9.8  | 33.5 | 5  | 6   | 3  | 3   | 1.5 | 4   | 3   | 0/+5°                     |
| 8    | M2   | M3 | 58 | 48.5 | 7.5 | 2  | 11.3 | 37.5 | 6  | 6.5 | 3  | 3   | 1.5 | 4.3 | 3.5 | 0/+5°                     |
| 10   | M2.5 | M3 | 71 | 59.4 | 9.6 | 2  | 14.3 | 46   | 8  | 7.5 | 4  | 3   | 1.6 | 5   | 4.5 | 0/+5°                     |

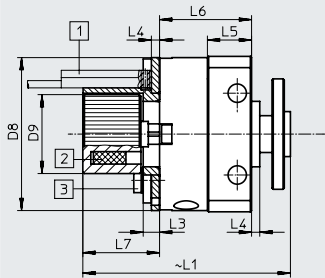
## Datasheet DSM-6 ... 10

## Dimensions

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DSM-... – With flange shaft and position sensing

DSM-T-... – With flange shaft, tandem rotary vanes and position sensing



[1] Proximity switch not included in the scope of delivery. Observe fitting space for proximity switch and cable guide

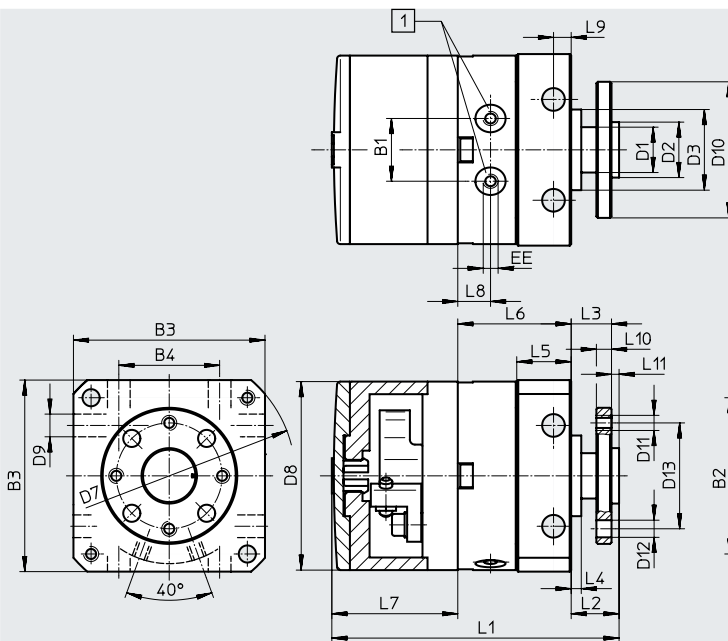
[2] Position of the magnet

[3] Max. tightening torque for sensor bracket screw → table below

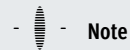
| Size | D8<br>ø | D9<br>ø | L1      |           | L3 | L4 | L5   | L6      |           | L7   | Tightening torque<br>[Nm] |
|------|---------|---------|---------|-----------|----|----|------|---------|-----------|------|---------------------------|
|      |         |         | DSM-... | DSM-T-... |    |    |      | DSM-... | DSM-T-... |      |                           |
| 6    | 29.4    | 17.3    | 50      | 62.5      | 4  | 2  | 9.8  | 21      | 33.5      | 19.5 | 0.19                      |
| 8    | 37.4    | 19.3    | 52      | 66.5      | 4  | 2  | 11.3 | 23      | 37.5      | 19.5 | 0.32                      |
| 10   | 46.4    | 22.3    | 59.5    | 77.1      | 4  | 2  | 14.3 | 28.4    | 46        | 19.5 | 0.44                      |

DSM-... – With flange shaft and adjustable swivel angle

DSM-T-... – With flange shaft, tandem rotary vanes and adjustable swivel angle



Without orifice and covering



## Note

The swivel angle is infinitely adjustable over the entire swivel range.  
Size 6 mm can only be adjusted symmetrically around the centre position.

- [1] Supply ports
- [2] Locking screw for clamping the stop
- [3] End-position adjustment
- [4] Lock nut for end-position adjustment
- [5] Infinitely adjustable stops

| Size | B1   | B2 | B3 | B4 | D1<br>ø | D2<br>ø<br>g7 | D3<br>ø<br>f8 | D4<br>ø<br>H12 | D5 | D6   | D7<br>ø<br>H12 | D8<br>ø | D9<br>ø<br>H12 | D10<br>ø | D11 | D12<br>ø<br>H13 | D13<br>ø | D18<br>ø | EE |
|------|------|----|----|----|---------|---------------|---------------|----------------|----|------|----------------|---------|----------------|----------|-----|-----------------|----------|----------|----|
| 6    | 10   | 25 | 30 | 17 | 8       | 8             | 14            | 3.2            | M3 | M2   | 40             | 29.4    | 3.5            | 23       | M3  | 3.4             | 16       | 22       | M3 |
| 8    | 12.8 | 31 | 38 | 20 | 9       | 11            | 16            | 3.2            | M3 | M2.5 | 50             | 37.4    | 3.5            | 27       | M3  | 3.4             | 21       | 26       | M3 |
| 10   | 15.9 | 38 | 47 | 26 | 10      | 11            | 19            | 4.3            | M4 | M3   | 62             | 46.4    | 4.5            | 30       | M3  | 3.4             | 21       | 35.8     | M3 |

| Size | L1      |           | L2   | L3 | L4 | L5   | L6      |           | L7   | L8  | L9 | L10 | L11 | ≈   | Max.<br>Swivel angle | Precision<br>adjustment<br>per side |
|------|---------|-----------|------|----|----|------|---------|-----------|------|-----|----|-----|-----|-----|----------------------|-------------------------------------|
|      | DSM-... | DSM-T-... |      |    |    |      | DSM-... | DSM-T-... |      |     |    |     |     |     |                      |                                     |
| 6    | 48      | 60.5      | 9.5  | 8  | 2  | 9.8  | 21      | 33.5      | 17.8 | 6   | 3  | 3   | 1.5 | 4   | 180° +5°             | +1°/-5°                             |
| 8    | 58      | 72.5      | 9.5  | 8  | 2  | 11.3 | 23      | 37.5      | 24.9 | 6.5 | 3  | 3   | 1.5 | 5   | 180° +5°             | +1°/-5°                             |
| 10   | 68      | 85.6      | 11.6 | 10 | 2  | 14.3 | 28.4    | 46        | 28.2 | 7.5 | 4  | 3   | 1.6 | 5.5 | 200° +5°             | +1°/-5°                             |

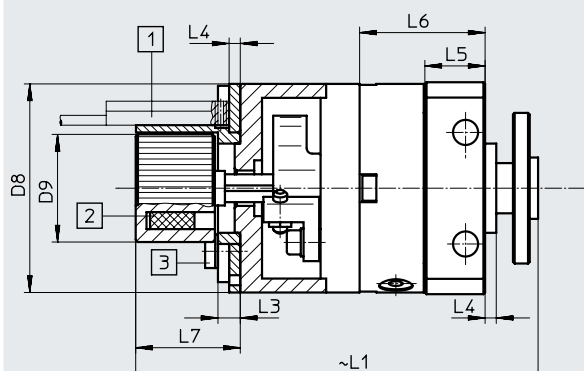
## Datasheet DSM-6 ... 10

## Dimensions

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DSM-... – With flange shaft, adjustable swivel angle and position sensing

DSM-T-... – With flange shaft, tandem rotary vanes, adjustable swivel angle and position sensing



[1] Proximity switch not included in the scope of delivery. Observe fitting space for proximity switch and cable guide

[2] Position of the magnet

[3] Max. tightening torque for sensor bracket screws  
→ table below

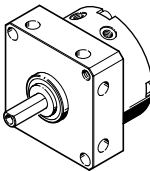
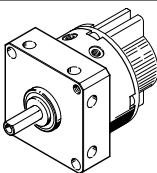
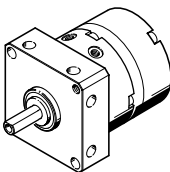
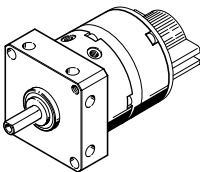
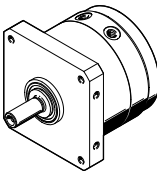


## Note

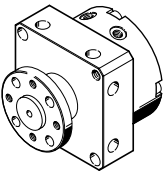
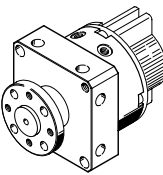
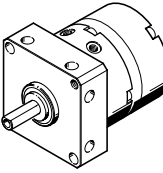
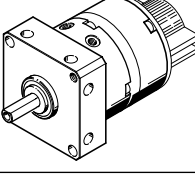
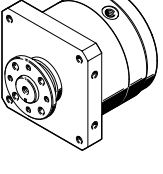
The swivel angle is infinitely adjustable over the entire swivel range. the 6 mm can only be adjusted symmetrically around the centre position.

| Size | D8<br>Ø | D9<br>Ø | L1      |           | L3 | L4 | L5   | L6      |           | L7   | Tightening torque<br>[Nm] |
|------|---------|---------|---------|-----------|----|----|------|---------|-----------|------|---------------------------|
|      |         |         | DSM-... | DSM-T-... |    |    |      | DSM-... | DSM-T-... |      |                           |
| 6    | 29.4    | 17.3    | 65      | 77.5      | 4  | 2  | 9.8  | 21      | 33.5      | 19.5 | 0.19                      |
| 8    | 37.4    | 19.3    | 73.5    | 88        | 4  | 2  | 11.3 | 23      | 37.5      | 19.5 | 0.32                      |
| 10   | 46.4    | 22.3    | 83      | 100.6     | 4  | 2  | 14.3 | 28.4    | 46        | 19.5 | 0.44                      |

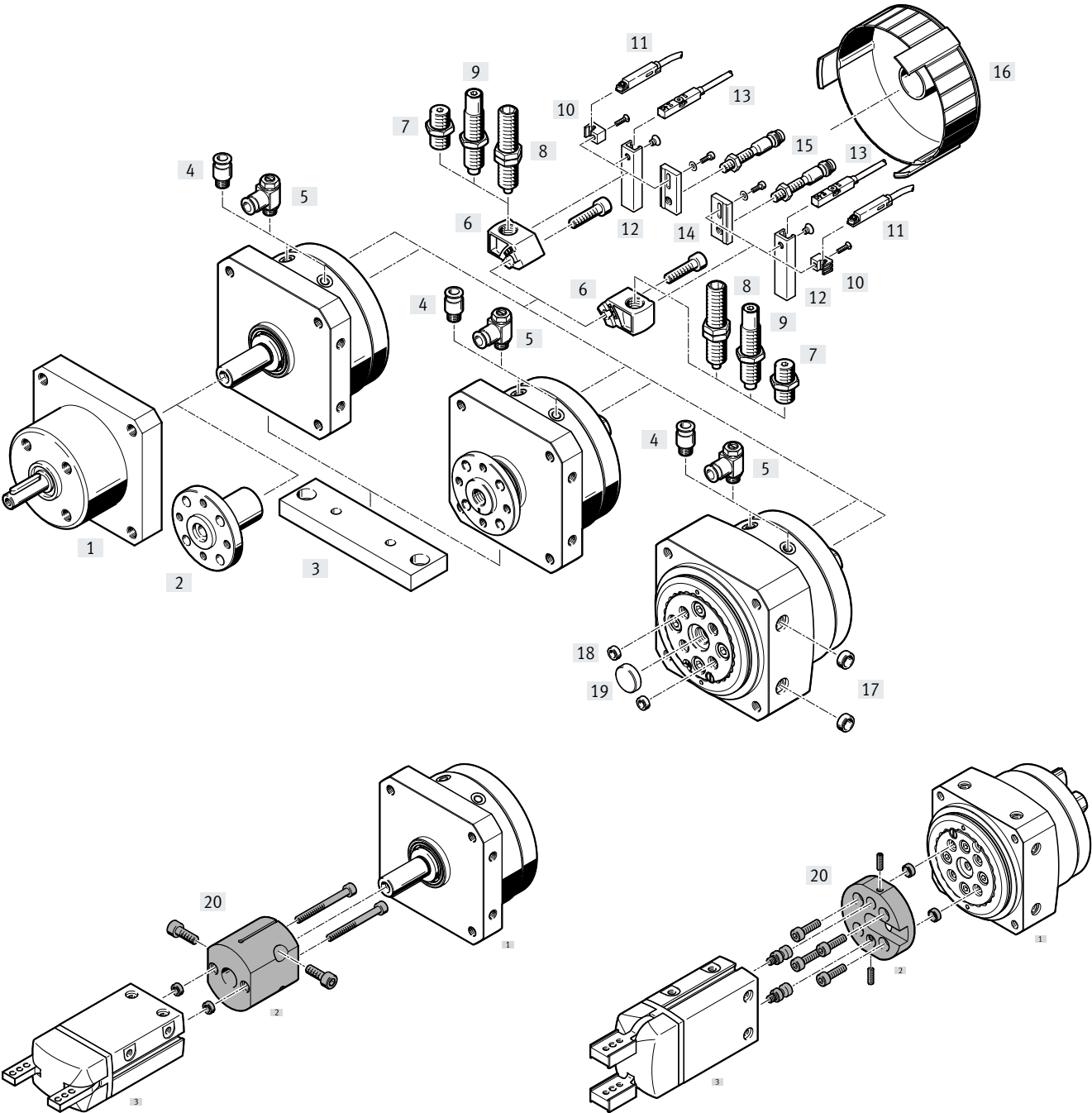
## Datasheet DSM-6 ... 10

| Ordering data                                                                    |                                                                                                                              | Key features                                                                                                             | Swivel angle                                                                                                          | Size<br>[mm]                                                                                                                                          | Part No.          | Type    |                |
|----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|---------|----------------|
| Semi-rotary drive                                                                |                                                                                                                              |                                                                                                                          |                                                                                                                       |                                                                                                                                                       |                   |         |                |
| Spigot shaft                                                                     |                                                                                                                              |                                                                                                                          |                                                                                                                       |                                                                                                                                                       |                   |         |                |
|  | <ul style="list-style-type: none"><li>Elastic cushioning rings/plates at both ends</li></ul>                                 | 90°                                                                                                                      | 6                                                                                                                     | 173188                                                                                                                                                | DSM-6-90-P        |         |                |
|                                                                                  |                                                                                                                              |                                                                                                                          | 8                                                                                                                     | 173190                                                                                                                                                | DSM-8-90-P        |         |                |
|                                                                                  |                                                                                                                              |                                                                                                                          | 10                                                                                                                    | 173192                                                                                                                                                | DSM-10-90-P       |         |                |
|                                                                                  |                                                                                                                              | 180°                                                                                                                     | 6                                                                                                                     | 173189                                                                                                                                                | DSM-6-180-P       |         |                |
|                                                                                  |                                                                                                                              |                                                                                                                          | 8                                                                                                                     | 173191                                                                                                                                                | DSM-8-180-P       |         |                |
|                                                                                  |                                                                                                                              |                                                                                                                          | 10                                                                                                                    | 173193                                                                                                                                                | DSM-10-180-P      |         |                |
|                                                                                  |                                                                                                                              | 240°                                                                                                                     | 10                                                                                                                    | 173194                                                                                                                                                | DSM-10-240-P      |         |                |
|                                                                                  |                                                                                                                              |                                          | <ul style="list-style-type: none"><li>Position sensing</li><li>Elastic cushioning rings/plates at both ends</li></ul> | 90°                                                                                                                                                   | 6                 | 173195  | DSM-6-90-P-A   |
|                                                                                  |                                                                                                                              |                                                                                                                          |                                                                                                                       |                                                                                                                                                       | 8                 | 173197  | DSM-8-90-P-A   |
| 10                                                                               | 173199                                                                                                                       |                                                                                                                          |                                                                                                                       |                                                                                                                                                       | DSM-10-90-P-A     |         |                |
| 180°                                                                             | 6                                                                                                                            |                                                                                                                          |                                                                                                                       | 173196                                                                                                                                                | DSM-6-180-P-A     |         |                |
|                                                                                  | 8                                                                                                                            |                                                                                                                          |                                                                                                                       | 173198                                                                                                                                                | DSM-8-180-P-A     |         |                |
|                                                                                  | 10                                                                                                                           |                                                                                                                          |                                                                                                                       | 173200                                                                                                                                                | DSM-10-180-P-A    |         |                |
| 240°                                                                             | 10                                                                                                                           |                                                                                                                          |                                                                                                                       | 173201                                                                                                                                                | DSM-10-240-P-A    |         |                |
|  | <ul style="list-style-type: none"><li>Adjustable swivel angle</li><li>Elastic cushioning rings/plates at both ends</li></ul> |                                                                                                                          |                                                                                                                       | 180°                                                                                                                                                  | 6                 | 175827  | DSM-6-180-P-FF |
|                                                                                  |                                                                                                                              |                                                                                                                          |                                                                                                                       |                                                                                                                                                       | 8                 | 175828  | DSM-8-180-P-FF |
|                                                                                  |                                                                                                                              | 200°                                                                                                                     | 10                                                                                                                    | 175829                                                                                                                                                | DSM-10-240-P-FF   |         |                |
|                                                                                  |                                                                                                                              |                                                                                                                          |                                     | <ul style="list-style-type: none"><li>Position sensing</li><li>Adjustable swivel angle</li><li>Elastic cushioning rings/plates at both ends</li></ul> | 180°              | 6       | 175830         |
| 8                                                                                | 175831                                                                                                                       | DSM-8-180-P-A-FF                                                                                                         |                                                                                                                       |                                                                                                                                                       |                   |         |                |
| 200°                                                                             | 10                                                                                                                           | 175832                                                                                                                   |                                                                                                                       |                                                                                                                                                       | DSM-10-240-P-A-FF |         |                |
|                                                                                  |                                            | <ul style="list-style-type: none"><li>Tandem rotary vanes</li><li>Elastic cushioning rings/plates at both ends</li></ul> |                                                                                                                       |                                                                                                                                                       | 90°               | 6       | 1564894        |
| 8                                                                                |                                                                                                                              |                                                                                                                          |                                                                                                                       |                                                                                                                                                       |                   | 1563451 | DSM-T-8-90-P   |
| 10                                                                               |                                                                                                                              |                                                                                                                          |                                                                                                                       |                                                                                                                                                       |                   | 1559484 | DSM-T-10-90-P  |
| 180°                                                                             |                                                                                                                              |                                                                                                                          | 6                                                                                                                     | 1565579                                                                                                                                               | DSM-T-6-180-P     |         |                |
|                                                                                  |                                                                                                                              |                                                                                                                          | 8                                                                                                                     | 1564407                                                                                                                                               | DSM-T-8-180-P     |         |                |
|                                                                                  |                                                                                                                              |                                                                                                                          | 10                                                                                                                    | 1561689                                                                                                                                               | DSM-T-10-180-P    |         |                |
| 240°                                                                             |                                                                                                                              |                                                                                                                          | 10                                                                                                                    | 1562093                                                                                                                                               | DSM-T-10-240-P    |         |                |

## Datasheet DSM-6 ... 10

| Ordering data                                                                       |                                                                                                                                                       | Key features | Swivel angle | Size<br>[mm] | Part No.             | Type |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|--------------|--------------|----------------------|------|
| Semi-rotary drive                                                                   |                                                                                                                                                       |              |              |              |                      |      |
| Flanged shaft                                                                       |                                                                                                                                                       |              |              |              |                      |      |
|    | <ul style="list-style-type: none"><li>Elastic cushioning rings/plates at both ends</li></ul>                                                          | 90°          | 6            | 185928       | DSM-6-90-P-FW        |      |
|                                                                                     |                                                                                                                                                       |              | 8            | 185934       | DSM-8-90-P-FW        |      |
|                                                                                     |                                                                                                                                                       |              | 10           | 185940       | DSM-10-90-P-FW       |      |
|                                                                                     |                                                                                                                                                       | 180°         | 6            | 185929       | DSM-6-180-P-FW       |      |
|                                                                                     |                                                                                                                                                       |              | 8            | 185935       | DSM-8-180-P-FW       |      |
|                                                                                     |                                                                                                                                                       |              | 10           | 185941       | DSM-10-180-P-FW      |      |
|                                                                                     |                                                                                                                                                       | 240°         | 10           | 185942       | DSM-10-240-P-FW      |      |
|                                                                                     |                                                                                                                                                       |              |              |              |                      |      |
|                                                                                     |                                                                                                                                                       |              |              |              |                      |      |
|    | <ul style="list-style-type: none"><li>Position sensing</li><li>Elastic cushioning rings/plates at both ends</li></ul>                                 | 90°          | 6            | 185930       | DSM-6-90-P-A-FW      |      |
|                                                                                     |                                                                                                                                                       |              | 8            | 185936       | DSM-8-90-P-A-FW      |      |
|                                                                                     |                                                                                                                                                       |              | 10           | 185943       | DSM-10-90-P-A-FW     |      |
|                                                                                     |                                                                                                                                                       | 180°         | 6            | 185931       | DSM-6-180-P-A-FW     |      |
|                                                                                     |                                                                                                                                                       |              | 8            | 185937       | DSM-8-180-P-A-FW     |      |
|                                                                                     |                                                                                                                                                       |              | 10           | 185944       | DSM-10-180-P-A-FW    |      |
|                                                                                     |                                                                                                                                                       | 240°         | 10           | 185945       | DSM-10-240-P-A-FW    |      |
|                                                                                     |                                                                                                                                                       |              |              |              |                      |      |
|                                                                                     |                                                                                                                                                       |              |              |              |                      |      |
|   | <ul style="list-style-type: none"><li>Adjustable swivel angle</li><li>Elastic cushioning rings/plates at both ends</li></ul>                          | 180°         | 6            | 185932       | DSM-6-180-P-FF-FW    |      |
|                                                                                     |                                                                                                                                                       |              | 8            | 185938       | DSM-8-180-P-FF-FW    |      |
|                                                                                     |                                                                                                                                                       | 200°         | 10           | 185946       | DSM-10-240-P-FF-FW   |      |
|                                                                                     |                                                                                                                                                       |              |              |              |                      |      |
|  | <ul style="list-style-type: none"><li>Position sensing</li><li>Adjustable swivel angle</li><li>Elastic cushioning rings/plates at both ends</li></ul> | 180°         | 6            | 185933       | DSM-6-180-P-A-FF-FW  |      |
|                                                                                     |                                                                                                                                                       |              | 8            | 185939       | DSM-8-180-P-A-FF-FW  |      |
|                                                                                     |                                                                                                                                                       | 200°         | 10           | 185947       | DSM-10-240-P-A-FF-FW |      |
|                                                                                     |                                                                                                                                                       |              |              |              |                      |      |
|  | <ul style="list-style-type: none"><li>Tandem rotary vanes</li><li>Elastic cushioning rings/plates at both ends</li></ul>                              | 90°          | 6            | 1565425      | DSM-T-6-90-P-FW      |      |
|                                                                                     |                                                                                                                                                       |              | 8            | 1564334      | DSM-T-8-90-P-FW      |      |
|                                                                                     |                                                                                                                                                       |              | 10           | 1560818      | DSM-T-10-90-P-FW     |      |
|                                                                                     |                                                                                                                                                       | 180°         | 6            | 1565483      | DSM-T-6-180-P-FW     |      |
|                                                                                     |                                                                                                                                                       |              | 8            | 1564669      | DSM-T-8-180-P-FW     |      |
|                                                                                     |                                                                                                                                                       |              | 10           | 1561556      | DSM-T-10-180-P-FW    |      |
|                                                                                     |                                                                                                                                                       | 240°         | 10           | 1562318      | DSM-T-10-240-P-FW    |      |
|                                                                                     |                                                                                                                                                       |              |              |              |                      |      |
|                                                                                     |                                                                                                                                                       |              |              |              |                      |      |

Peripherals overview DSM-12 ... 63





## Peripherals overview DSM-12 ... 63

| Accessories                            | For size           | Description                                                                                                                                                                                     | → Page/Internet |
|----------------------------------------|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| [1] Freewheel unit<br>FLSM             | 12 ... 40          | <ul style="list-style-type: none"> <li>For synchronised rotary movement in one direction</li> <li>Only in combination with swivel module DSM with spigot shaft</li> </ul>                       | 50              |
| [2] Push-on flange<br>FWSR             | 12 ... 40          | For retrofitting on swivel module DSM with spigot shaft                                                                                                                                         | 51              |
| [3] Mounting plate<br>HSM              | 12 ... 40          | For foot or flange mounting                                                                                                                                                                     | 52              |
| [4] Push-in fitting<br>QS              | 12 ... 63          | For connecting tubing with standard O.D.                                                                                                                                                        | qs              |
| [5] One-way flow control valve<br>GRLA | 12 ... 63          | For regulating speed                                                                                                                                                                            | 57              |
| [6] Cushioning mount<br>DSM-B          | 12 ... 63          | <ul style="list-style-type: none"> <li>For fastening elastic cushioning elements or shock absorbers</li> <li>Included in the scope of delivery for semi-rotary drive DSM-...-P/P1/CC</li> </ul> | 53              |
| [7] Cushioning kit<br>DSM-...-P        | 12 ... 63          | <ul style="list-style-type: none"> <li>Elastic cushioning components with fixed stop</li> <li>Included in the scope of delivery for semi-rotary drive DSM-...-P</li> </ul>                      | 46              |
| [8] Shock absorber<br>DVEF             | 12 ... 63          | <ul style="list-style-type: none"> <li>Adjustable, elastic cushioning components with fixed stop</li> <li>Included in the scope of delivery for semi-rotary drive DSM-...-P1</li> </ul>         | 46              |
| [9] Shock absorber<br>DYSC             | 12 ... 63          | <ul style="list-style-type: none"> <li>Self-adjusting shock absorbers with fixed stop</li> <li>Included in the scope of delivery for semi-rotary drive DSM-...-CC</li> </ul>                    | 46              |
| [10] Sensor bracket<br>SL-DSM-B        | 12 ... 40          | For mounting the proximity switch SME/SMT-10                                                                                                                                                    | 54              |
| [11] Proximity switch<br>SME/SMT-10    | 12 ... 40          | For sensing the end positions                                                                                                                                                                   | 54              |
| [12] Sensor bracket<br>SL-DSM-63-B     | 63                 | For mounting the proximity switch SME/SMT-8                                                                                                                                                     | 54              |
| [13] Proximity switch<br>SME/SMT-8     | 63                 | For sensing the end positions                                                                                                                                                                   | 55              |
| [14] Sensor bracket<br>SL-DSM-S        | 12 ... 40          | For mounting the inductive proximity sensor SIEN                                                                                                                                                | 54              |
| [15] Proximity switch<br>SIEN          | 12 ... 40          | Inductive proximity switch for sensing the end positions                                                                                                                                        | 56              |
| [16] Cover cap<br>AKM                  | 12 ... 40          | <ul style="list-style-type: none"> <li>Reduces the risk of injury in the swivel range of the stop lever</li> <li>Cannot be used in combination with inductive proximity sensor SIEN</li> </ul>  | 52              |
| [17] Centring sleeve<br>ZBH            | 12 ... 63          | For centring the drive                                                                                                                                                                          | 57              |
| [18] Centring sleeve<br>ZBH            | 12 ... 63          | For centring attachments on the rotating plate                                                                                                                                                  | 57              |
| [19] Centring sleeve/disc<br>ZBH/SLZZ  | 12, 16, 25, 40, 63 | For centring attachments in the middle of the rotating plate                                                                                                                                    | 57              |
| [20] Adapter kit<br>HAPG, DHAA         | 12 ... 40          | For drive/gripper connections                                                                                                                                                                   | Gripper         |

## Type codes DSM-12 ... 63

|     |                   |  |
|-----|-------------------|--|
| 001 | Series            |  |
| DSM | Semi-rotary drive |  |

|     |             |  |
|-----|-------------|--|
| 002 | Design type |  |
|     | Standard    |  |
| T   | Tandem vane |  |

|     |      |  |
|-----|------|--|
| 003 | Size |  |
| 12  | 12   |  |
| 16  | 16   |  |
| 25  | 25   |  |
| 32  | 32   |  |
| 40  | 40   |  |
| 63  | 63   |  |

|     |                          |  |
|-----|--------------------------|--|
| 004 | Nominal swivel angle [°] |  |
| 240 | 240                      |  |
| 246 | 246                      |  |
| 270 | 270                      |  |

|     |                                                         |  |
|-----|---------------------------------------------------------|--|
| 005 | Cushioning                                              |  |
|     | None                                                    |  |
| P   | Elastic cushioning rings/plates on both sides           |  |
| P1  | Elastic cushioning components, at both ends, adjustable |  |
| CC  | Shock absorber at both ends, self-adjusting             |  |

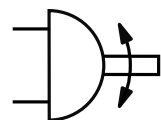
|     |                                    |  |
|-----|------------------------------------|--|
| 006 | Shaft                              |  |
|     | Spigot shaft                       |  |
| FW  | Flanged shaft                      |  |
| HD  | Flange shaft for high load torques |  |

|     |                      |  |
|-----|----------------------|--|
| 007 | Position sensing     |  |
| A   | For proximity sensor |  |

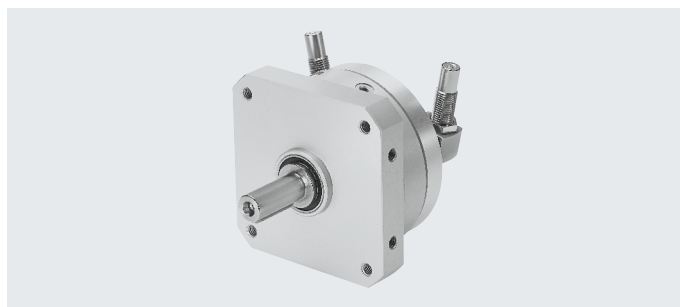
|     |          |  |
|-----|----------|--|
| 008 | Variant  |  |
| B   | B-series |  |

## Datasheet DSM-12 ... 63

## Function



Size  
12 ... 63



| General technical data  |                                             |    |     |      |     |      |  |
|-------------------------|---------------------------------------------|----|-----|------|-----|------|--|
| Size                    | 12                                          | 16 | 25  | 32   | 40  | 63   |  |
| Pneumatic connection    | M5                                          |    |     | G1/8 |     | G1/4 |  |
| Design                  | Vane                                        |    |     |      |     |      |  |
| Cushioning              |                                             |    |     |      |     |      |  |
| DSM-...-P               | Elastic cushioning, at both ends            |    |     |      |     |      |  |
| DSM-...-P1              | Adjustable elastic cushioning at both ends  |    |     |      |     |      |  |
| DSM-...-CC              | Shock absorber, self-adjusting at both ends |    |     |      |     |      |  |
| Type of mounting        | With female thread                          |    |     |      |     |      |  |
| Mounting position       | Any                                         |    |     |      |     |      |  |
| Swivel angle            |                                             |    |     |      |     |      |  |
| DSM-... [°]             | 270                                         |    |     |      |     |      |  |
| DSM-...-P [°]           | 270/262 <sup>1)</sup>                       |    | 270 |      |     |      |  |
| DSM-...-P1 [°]          | 246                                         |    |     |      | 240 |      |  |
| DSM-...-CC [°]          | 246                                         |    |     |      | 240 |      |  |
| Swivel angle adjustment |                                             |    |     |      |     |      |  |
| DSM-...-P [°]           | −6                                          |    |     |      |     |      |  |
| DSM-...-P1 [°]          | −6                                          |    |     |      |     |      |  |
| DSM-...-CC [°]          | −3                                          |    |     |      |     |      |  |
| Cushioning angle        |                                             |    |     |      |     |      |  |
| DSM-...-P1 [°]          | 10                                          | 9  | 7.5 | 6.5  | 6.5 | 6    |  |
| DSM-...-CC [°]          | 15                                          | 12 | 10  | 12   | 16  | 17.5 |  |
| Repetition accuracy     |                                             |    |     |      |     |      |  |
| DSM-...-P [°]           | 1                                           |    |     |      |     |      |  |
| DSM-...-P1 [°]          | 0.1                                         |    |     |      |     |      |  |
| DSM-...-CC [°]          | 0.1                                         |    |     |      |     |      |  |

1) Restricted swivel angle in combination with sensor bracket SL-DSM-S-...

| Swivel frequency [Hz]     |     |     |    |     |     |     |
|---------------------------|-----|-----|----|-----|-----|-----|
| Size                      | 12  | 16  | 25 | 32  | 40  | 63  |
| DSM-... / DSM-T-...       |     |     |    |     |     |     |
| With max. swivel angle    |     |     |    |     |     |     |
| DSM-...-P                 | 2   |     |    |     |     | 1.6 |
| DSM-...-P1                | 2   |     |    |     |     | 1.6 |
| DSM-...-CC                | 1.5 | 1   |    |     | 0.7 | 0.6 |
| With smaller swivel angle |     |     |    |     |     |     |
| DSM-...-CC                | 2   | 1.5 |    |     |     |     |
| DSM-...-HD                |     |     |    |     |     |     |
| With max. swivel angle    |     |     |    |     |     |     |
| DSM-...-P1                | 1.5 |     |    |     |     | 1   |
| DSM-...-CC                | 1   |     |    | 0.5 |     |     |

## Datasheet DSM-12 ... 63

| Operating and environmental conditions            |                                                                   |            |            |    |    |    |
|---------------------------------------------------|-------------------------------------------------------------------|------------|------------|----|----|----|
| Size                                              | 12                                                                | 16         | 25         | 32 | 40 | 63 |
| Operating medium                                  | Compressed air to ISO 8573-1:2010 [7:-:-]                         |            |            |    |    |    |
| Operating pressure                                |                                                                   |            |            |    |    |    |
| DSM-... [bar]                                     | 2 ... 10                                                          | 1.8 ... 10 | 1.5 ... 10 |    |    |    |
| DSM-T... [bar]                                    | 2.5 ... 10                                                        |            | 2 ... 10   |    |    |    |
| DSM-...-HD [bar]                                  | 3 ... 10                                                          |            | 2 ... 10   |    |    |    |
| Ambient temperature <sup>1)</sup> [°C]            | -10 ... +60                                                       |            |            |    |    |    |
| Storage temperature [°C]                          | 20                                                                |            |            |    |    |    |
| ATEX                                              | Selected types → <a href="http://www.festo.com">www.festo.com</a> |            |            |    |    |    |
| CE marking (see declaration of conformity)        | To EU Explosion Protection Directive (ATEX)                       |            |            |    |    |    |
| UKCA marking (see declaration of conformity)      | To UK explosion regulations                                       |            |            |    |    |    |
| Explosion protection certification outside the EU | EPL Gb (GB)                                                       |            |            |    |    |    |
|                                                   | EPL Db (GB)                                                       |            |            |    |    |    |

1) Note operating range of proximity switches

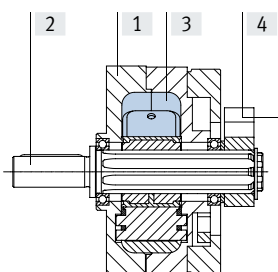
| Weight [g]                                  |     |     |      |      |      |      |
|---------------------------------------------|-----|-----|------|------|------|------|
| Size                                        | 12  | 16  | 25   | 32   | 40   | 63   |
| <b>Spigot shaft</b>                         |     |     |      |      |      |      |
| DSM-...-                                    | 240 | 410 | 620  | 1250 | 2400 | 4220 |
| DSM-...-P                                   | 275 | 470 | 700  | 1425 | 2700 | 4900 |
| DSM-...-P1                                  | 285 | 475 | 715  | 1475 | 2870 | 5090 |
| DSM-...-CC                                  | 285 | 480 | 710  | 1460 | 2800 | 5150 |
| <b>Flanged shaft</b>                        |     |     |      |      |      |      |
| DSM-...-FW                                  | 260 | 450 | 645  | 1325 | 2535 | 4475 |
| DSM-...-P-FW                                | 293 | 510 | 725  | 1500 | 2835 | 5150 |
| DSM-...-P1-FW                               | 303 | 515 | 740  | 1550 | 3005 | 5340 |
| DSM-...-CC-FW                               | 300 | 520 | 735  | 1550 | 2935 | 5400 |
| <b>Tandem rotary vanes and spigot shaft</b> |     |     |      |      |      |      |
| DSM-T...                                    | 330 | 590 | 890  | 1865 | 3570 | 6050 |
| DSM-T...-P                                  | 365 | 650 | 970  | 2040 | 3870 | 6730 |
| DSM-T...-CC                                 | 375 | 660 | 980  | 2075 | 3970 | 6980 |
| <b>Tandem rotary vanes and flange shaft</b> |     |     |      |      |      |      |
| DSM-T...-FW                                 | 350 | 630 | 915  | 1940 | 3705 | 6305 |
| DSM-T...-P-FW                               | 383 | 690 | 995  | 2115 | 4005 | 6980 |
| DSM-T...-CC-FW                              | 390 | 700 | 1005 | 2165 | 4105 | 7230 |
| <b>Heavy-duty bearing</b>                   |     |     |      |      |      |      |
| DSM-...-HD                                  | 375 | 625 | 950  | 1810 | 3712 | 5730 |
| DSM-...-P1-HD                               | 420 | 700 | 1015 | 2035 | 4100 | 6600 |
| DSM-...-CC-HD                               | 420 | 705 | 1010 | 2020 | 4030 | 6660 |

## Datasheet DSM-12 ... 63

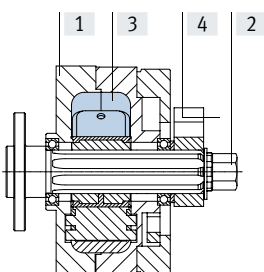
## Materials

Sectional view

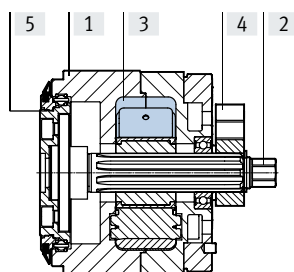
DSM-... / DSM-T-...



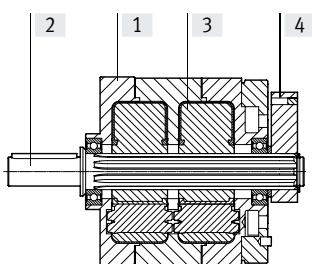
DSM-... FW



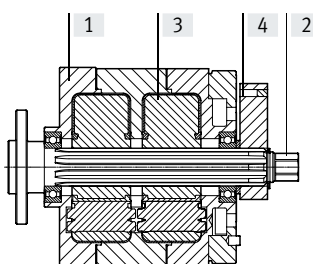
DSM-...-HD



DSM-T-...



DSM-T-...-FW



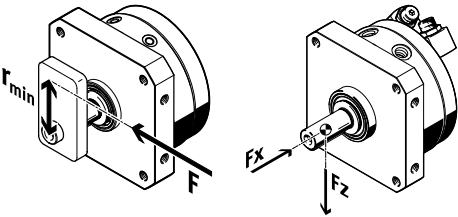
## Semi-rotary drive

|     |                        |                                |
|-----|------------------------|--------------------------------|
| [1] | Housing, flange        | Anodised aluminium             |
| [2] | Shaft                  | Nickel-plated steel            |
| [3] | Vane                   | Glass fibre-reinforced plastic |
| [4] | Stop lever             | Anodised aluminium             |
| [5] | Rotating plate         | Anodised aluminium             |
| –   | Fixed stops            | Stainless steel                |
|     | Screws                 | Galvanised steel               |
|     | Cover cap              | Glass fibre-reinforced plastic |
|     | Seals                  | Polyurethane                   |
|     | Note on materials      | RoHS-compliant                 |
|     | LABS (PWIS) conformity | VDMA24364-B1/B2-L              |

Datasheet DSM-12 ... 63

| Forces and torques                                                       |                     |           |      |      |      |      |       |
|--------------------------------------------------------------------------|---------------------|-----------|------|------|------|------|-------|
| Size                                                                     |                     | 12        | 16   | 25   | 32   | 40   | 63    |
| Torque at 6 bar                                                          |                     |           |      |      |      |      |       |
| DSM-...                                                                  | [Nm]                | 1.25      | 2.5  | 5    | 10   | 20   | 40    |
| DSM-T...                                                                 | [Nm]                | 2.5       | 5    | 10   | 20   | 40   | 80    |
| DSM-...-HD                                                               | [Nm]                | 1.25      | 2.5  | 5    | 10   | 20   | 40    |
| Torque per bar                                                           |                     |           |      |      |      |      |       |
| DSM-...                                                                  | [Nm]                | 0.2       | 0.41 | 0.83 | 1.66 | 3.33 | 6.66  |
| DSM-T...                                                                 | [Nm]                | 0.4       | 0.82 | 1.66 | 3.33 | 6.66 | 13.33 |
| Min. perm. stop radius r                                                 | [mm]                | 15        | 17   | 21   | 28   | 40   | 50    |
| Max. perm. stop force F                                                  | [N]                 | 90        | 160  | 320  | 480  | 650  | 1050  |
| Max. permissible dynamic axial force $F_x$ on drive shaft <sup>1)</sup>  |                     |           |      |      |      |      |       |
| DSM-... / DSM-T...                                                       | [N]                 | 18        | 30   | 50   | 75   | 120  | 500   |
| DSM-...-HD                                                               | [N]                 | 180       | 290  | 350  | 450  | 950  | 1300  |
| Max. permissible dynamic radial force $F_z$ on drive shaft <sup>1)</sup> |                     |           |      |      |      |      |       |
| DSM-... / DSM-T...                                                       | [N]                 | 45        | 75   | 120  | 200  | 350  | 500   |
| DSM-...-HD                                                               | [N]                 | 200       | 300  | 450  | 550  | 1200 | 1600  |
| Max. permissible mass moment of inertia                                  |                     |           |      |      |      |      |       |
| DSM-...-P                                                                | [kgm <sup>2</sup> ] | → Page 33 |      |      |      |      |       |
| DSM-...-P1                                                               | [kgm <sup>2</sup> ] | → Page 34 |      |      |      |      |       |
| DSM-...-CC                                                               | [kgm <sup>2</sup> ] | → Page 35 |      |      |      |      |       |

1) The axis of rotation and the centre of the drive shaft are the point of reference for the forces



 **Note**

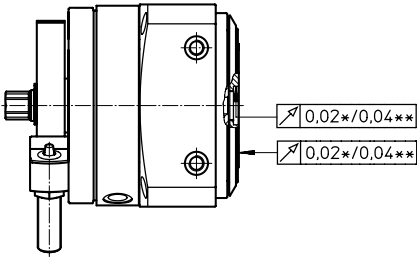
If the semi-rotary drives DSM-...-A-B are used without a stop system or the maximum mass moment of inertia is exceeded, external stops must be attached. A minimum radius relative to the drive shaft ( $r_{min}$ ) must be observed. The stop force must not exceed the maximum force.

Datasheet DSM-12 ... 63

Axial eccentricity and concentricity of DSM-...-HD

Axial eccentricity:  
Measured on the surface of the rotating plate, at the edge of the plate, when new.

Concentricity:  
Measured at the centre of the rotating plate, when new.

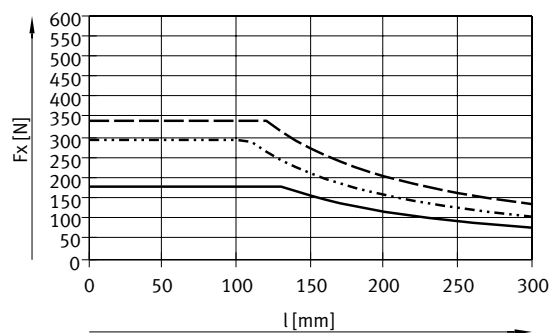
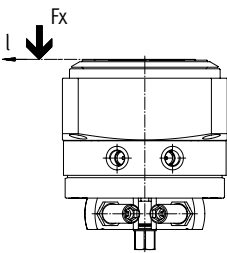


| Size                 |      | 12     | 16     | 25     | 32     | 40     | 63     |
|----------------------|------|--------|--------|--------|--------|--------|--------|
| Axial eccentricity Y | [mm] | ≤ 0.02 | ≤ 0.02 | ≤ 0.02 | ≤ 0.04 | ≤ 0.04 | ≤ 0.04 |
| Concentric running Z | [mm] | ≤ 0.02 | ≤ 0.02 | ≤ 0.02 | ≤ 0.04 | ≤ 0.04 | ≤ 0.04 |

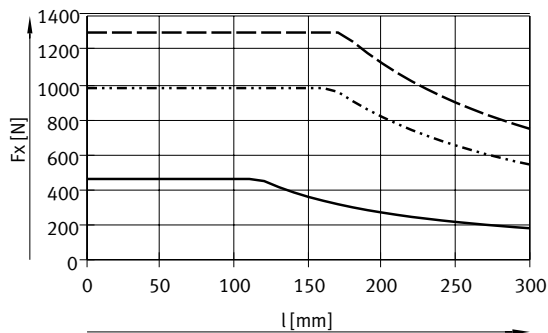
Datasheet DSM-12 ... 63

Permissible dynamic load for DSM-...-HD

Permissible axial force  $F_x$  as a function of distance  $l$

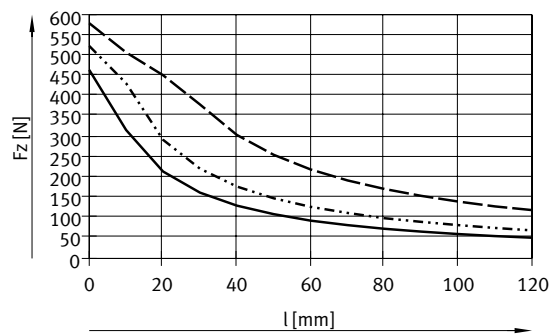
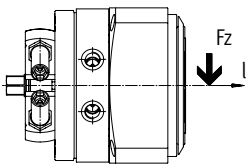


- DSM-12-...-HD
- DSM-16-...-HD
- DSM-25-...-HD

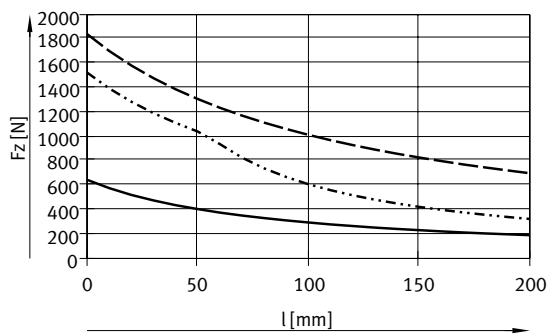


- DSM-32-...-HD
- DSM-40-...-HD
- DSM-63-...-HD

Permissible radial force  $F_z$  as a function of distance  $l$



- DSM-12-...-HD
- DSM-16-...-HD
- DSM-25-...-HD



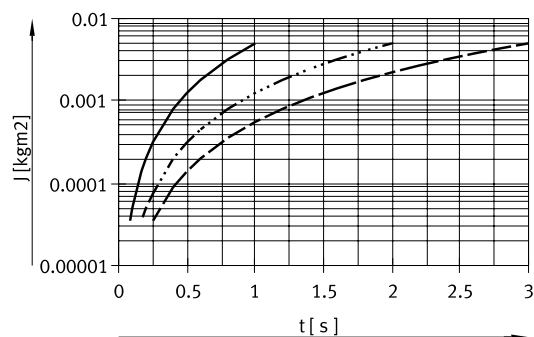
- DSM-32-...-HD
- DSM-40-...-HD
- DSM-63-...-HD



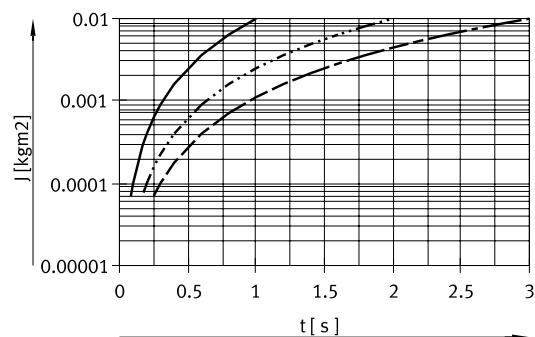
## Datasheet DSM-12 ... 63

**Mass moment of inertia  $J$  as a function of swivel time  $t$**   
**With elastic cushioning components (P)**

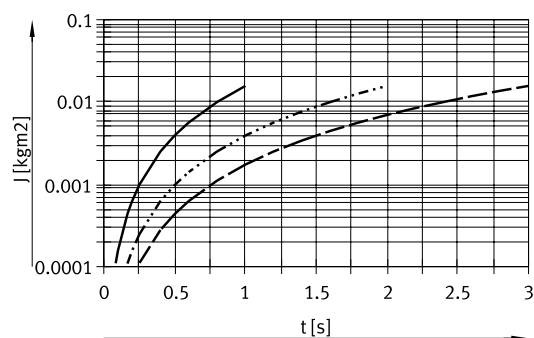
DSM-12-270-P



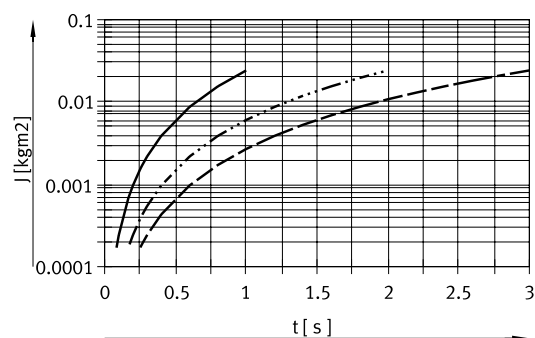
DSM-16-270-P



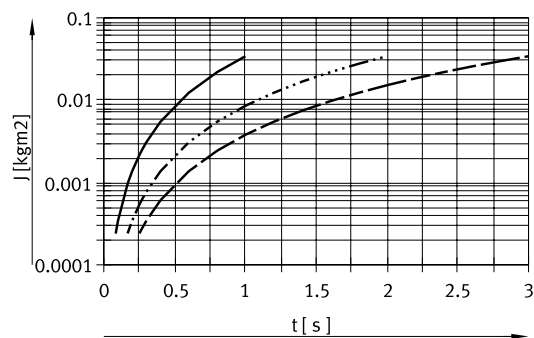
DSM-25-270-P



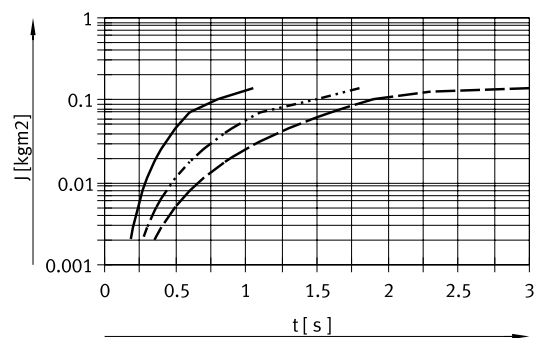
DSM-32-270-P



DSM-40-270-P



DSM-63-270-P



— 90°  
 - · - · 180°  
 - - - 270°

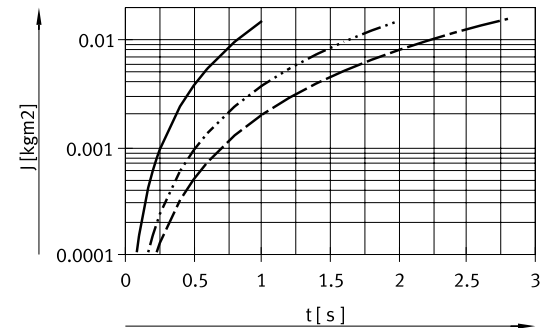
**Note**

Engineering software  
 for calculating inertia  
 → [www.festo.com](http://www.festo.com)

Datasheet DSM-12 ... 63

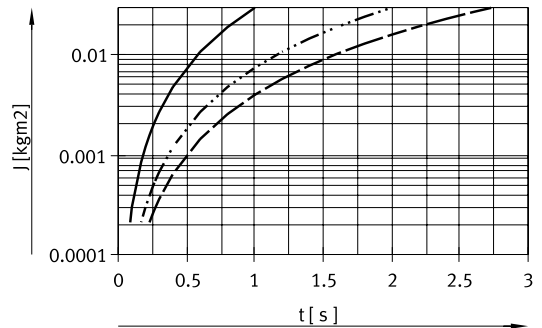
Mass moment of inertia  $J$  as a function of swivel time  $t$   
With adjustable, elastic cushioning components (P1)

DSM-12-270-P1

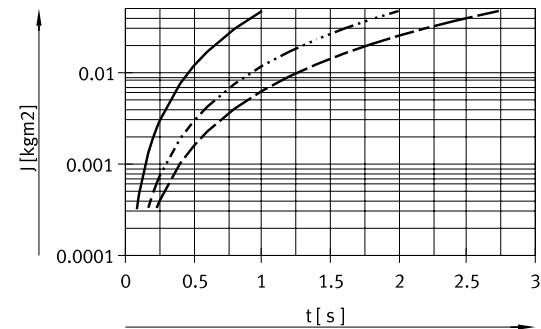


— 90°  
····· 180°  
--- 246°

DSM-16-270-P1

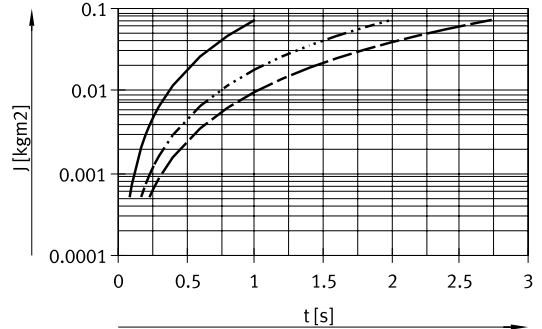


DSM-25-270-P1

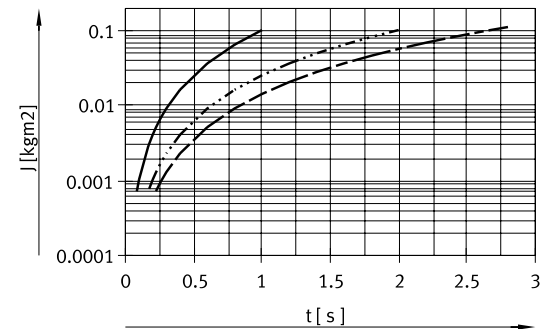


— 90°  
····· 180°  
--- 246°

DSM-32-270-P1

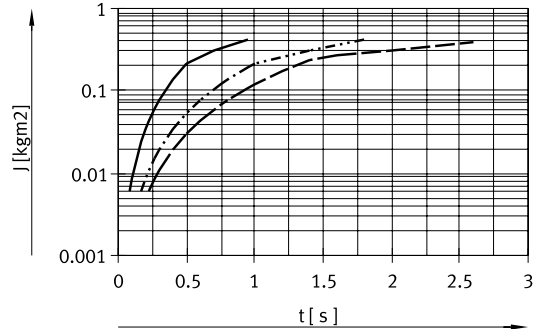


DSM-40-270-P1



— 90°  
····· 180°  
--- 240°

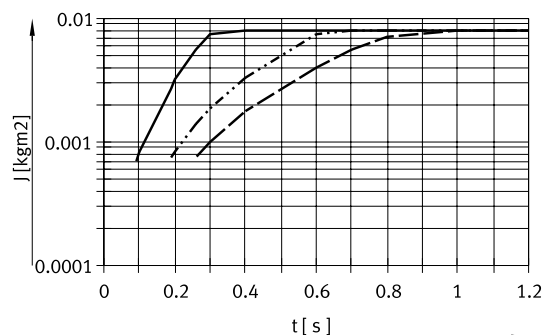
DSM-63-270-P1



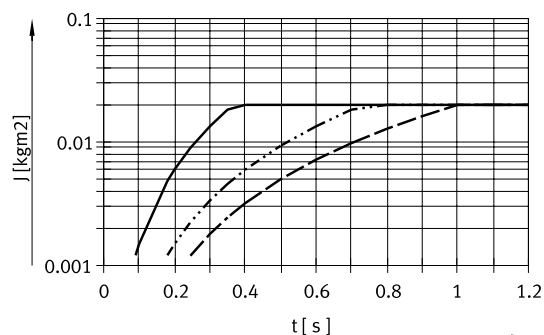
## Datasheet DSM-12 ... 63

**Mass moment of inertia  $J$  as a function of swivel time  $t$**   
**With hydraulic shock absorbers (CC)**

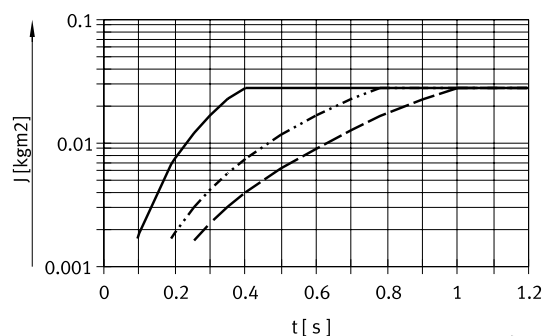
DSM-12-270-CC



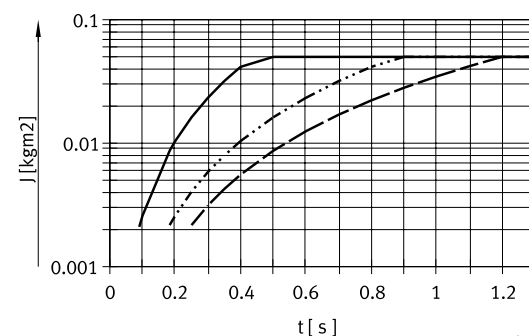
DSM-16-270-CC



DSM-25-270-CC

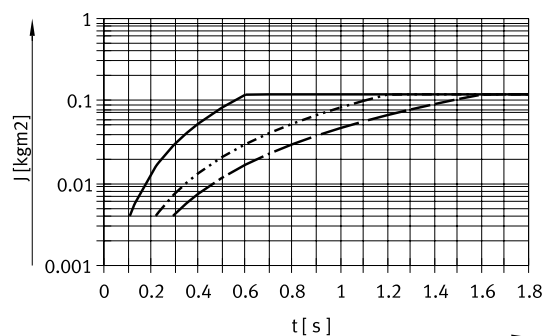


DSM-32-270-CC

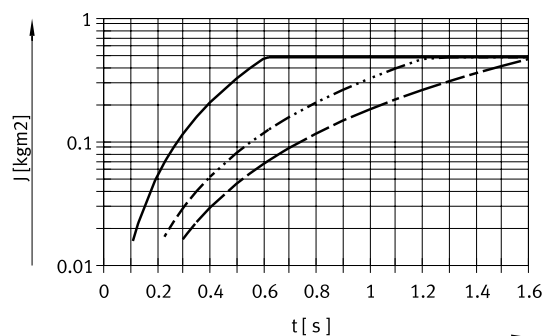


— 90°  
 ..... 180°  
 --- 246°

DSM-40-270-CC



DSM-63-270-CC



— 90°  
 ..... 180°  
 --- 240°

**Cushioning time of the shock absorber**

|                 |     |          |      |     |     |
|-----------------|-----|----------|------|-----|-----|
| Size            |     | 12/16/25 | 32   | 40  | 63  |
| Cushioning time | [s] | 0.1      | 0.25 | 0.3 | 0.4 |

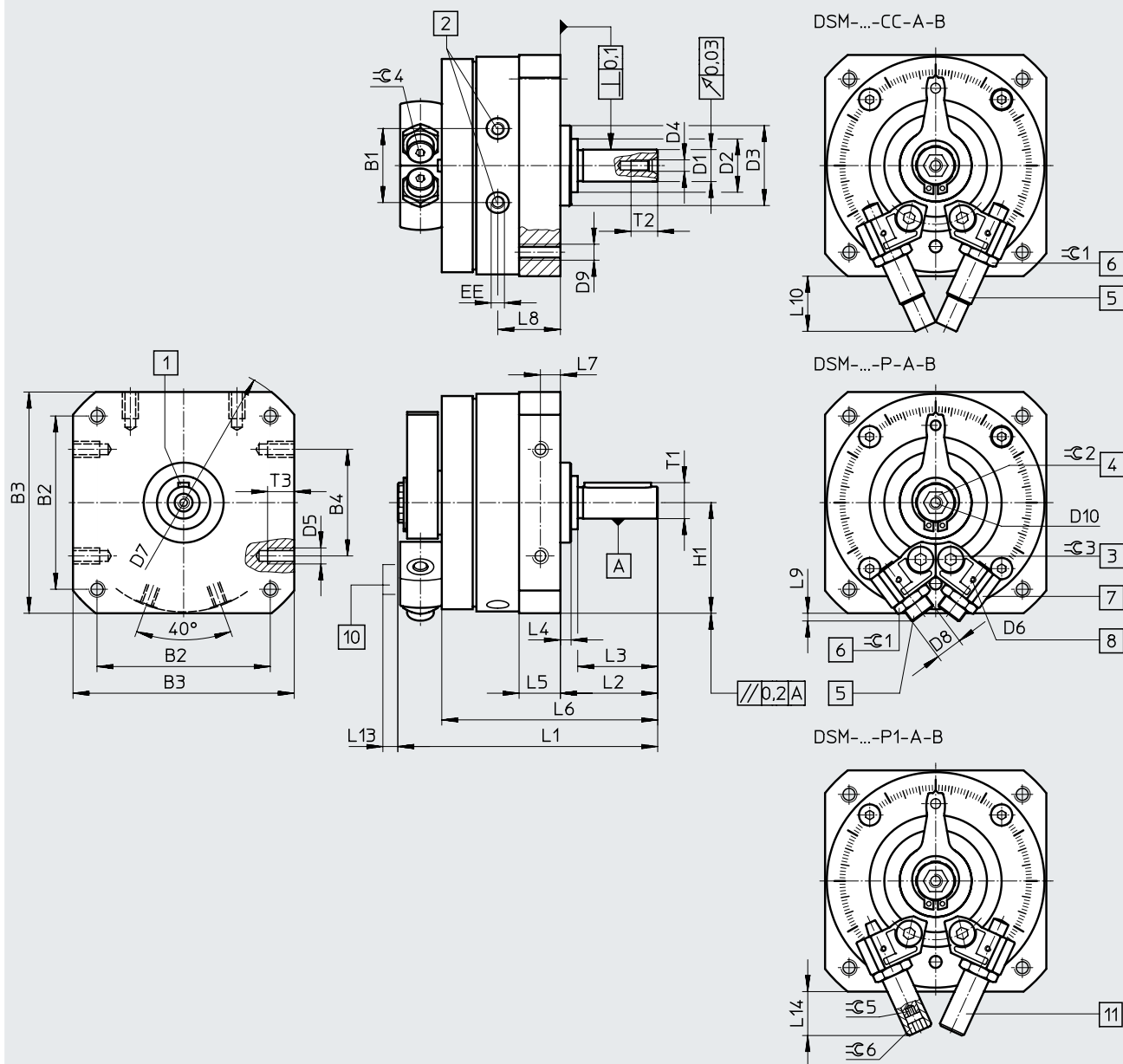
The graphs for the DSM-...-CC show the swivel time up to the point where the stop lever meets the shock absorber. The cushioning time of the shock absorber must be added in order to obtain the total swivel time.

# Datasheet DSM-12 ... 63

## Dimensions

Download CAD data → [www.festo.com](http://www.festo.com)

DSM-... – With spigot shaft



- [1] Featherkey position at 0°
- [2] Compressed air supply ports
- [3] Locking screw for clamping the stop
- [4] Manual override (internal hexagon). The position of the internal hexagon is not defined.
- [5] End-position adjustment

- [6] Lock nut for end-position adjustment
- [7] Infinitely adjustable stops
- [8] Mounting thread for sensor bracket
- [10] Sensor bracket
- [11] End-position adjustment

## Datasheet DSM-12 ... 63

| Size | B1<br>±0.5 | B2      | B3                  | B4     | D1<br>ø<br>g7 | D2<br>ø           | D3<br>ø<br>f8 | D4  |
|------|------------|---------|---------------------|--------|---------------|-------------------|---------------|-----|
| 12   | 19.8       | 48±0.3  | 59±0.3              | 30±0.2 | 8             | 15±0.2            | 24            | M3  |
| 16   | 23.5       | 57±0.3  | 70±0.3              | 40±0.2 | 10            | 18 <sub>0.3</sub> | 28            | M3  |
| 25   | 28         | 65±0.3  | 83±0.3              | 40±0.2 | 12            | 20 <sub>0.3</sub> | 30            | M4  |
| 32   | 35.5       | 85±0.3  | 105±0.3             | 60±0.3 | 16            | 27 <sub>0.4</sub> | 42            | M5  |
| 40   | 43.8       | 105±0.3 | 130±0.5             | 80±0.3 | 20            | 36 <sub>0.4</sub> | 52            | M6  |
| 63   | 50.3       | 125±0.5 | 152 <sup>+0.2</sup> | 80±0.3 | 25            | 40±0.3            | 70            | M10 |

| Size | D5  | D6 | D7<br>ø | D8      | D9  | D10 | EE   |
|------|-----|----|---------|---------|-----|-----|------|
| 12   | M4  | M2 | 78±0.3  | M8x1    | M4  | M4  | M5   |
| 16   | M5  | M2 | 91±0.3  | M10x1   | M5  | M5  | M5   |
| 25   | M6  | M2 | 106±0.3 | M10x1   | M6  | M5  | M5   |
| 32   | M8  | M2 | 135±0.3 | M12x1   | M8  | M5  | G1/8 |
| 40   | M10 | M2 | 168±0.5 | M16x1   | M10 | M6  | G1/8 |
| 63   | M10 | M3 | 200±0.5 | M22x1.5 | M12 | M6  | G1/4 |

| Size | H1<br>±0.2 | L1            | L2<br>+0.6<br>-0.7 | L3     | L4<br>±0.4 | L5            | L6        | L7      |
|------|------------|---------------|--------------------|--------|------------|---------------|-----------|---------|
| 12   | 29.5       | 68.3±0.3      | 24.5               | 20±0.2 | 3          | 10.3+0.2/-0.3 | 55.5±0.8  | 5±0.1   |
| 16   | 35         | 82.7±1        | 28                 | 23±0.2 | 2.6        | 13+0.2/-0.4   | 67.1±0.9  | 6.5±0.2 |
| 25   | 41.5       | 97.5±0.5      | 36.5               | 30±0.2 | 4          | 15.2+0.2/-0.4 | 81±1      | 7.5±0.2 |
| 32   | 52.5       | 127.1±0.5     | 51                 | 40±0.2 | 8          | 19.2+0.2/-0.4 | 107±1.1   | 9.5±0.2 |
| 40   | 65         | 155.5±0.6     | 62                 | 50±0.3 | 8          | 23.7+0.2/-0.4 | 131±1.2   | 12±0.2  |
| 63   | 76         | 197+0.4/-0.55 | 75.5               | 60±0.3 | 10.5       | 28.5+0.3/-0.5 | 159.5±1.2 | 14±0.2  |

| Size | L8   | L9  | L10  | L13 | L14<br>max. | T1<br>max. | T2<br>+2 | T3<br>+0.2 |
|------|------|-----|------|-----|-------------|------------|----------|------------|
| 12   | 16.5 | 3   | 22.7 | 6.5 | 21.2        | 8.8        | 9        | 8          |
| 16   | 20.2 | 7.2 | 26.1 | 6.5 | 22          | 11.2       | 9        | 8          |
| 25   | 23.5 | 2.9 | 20.7 | 6.5 | 17          | 13.5       | 10       | 10         |
| 32   | 30.5 | 3.8 | 29.1 | 6.5 | 23          | 18         | 12.5     | 12         |
| 40   | 36   | 3.4 | 43.5 | 6.5 | 36.5        | 22.5       | 16       | 15         |
| 63   | 45   | 10  | 72.5 | 4.5 | –           | 28         | 22       | 16         |

| Size | ☞ 1 | ☞ 2 | ☞ 3 | ☞ 4 | ☞ 5 | ☞ 6 | Featherkey to DIN 6885 <sup>1)</sup> |
|------|-----|-----|-----|-----|-----|-----|--------------------------------------|
| 12   | 10  | 6   | 2.5 | 2.5 | 2.5 | 2.5 | A2x2x16                              |
| 16   | 13  | 8   | 3   | 3   | 3   | 5   | A3x3x18                              |
| 25   | 13  | 8   | 4   | 3   | 3   | 6   | A4x4x25                              |
| 32   | 15  | 10  | 5   | 4   | 4   | 8   | A5x5x36                              |
| 40   | 19  | 10  | 6   | 5   | 5   | 10  | A6x6x45                              |
| 63   | 27  | 10  | 8   | 5   | –   | –   | A8x7x50                              |

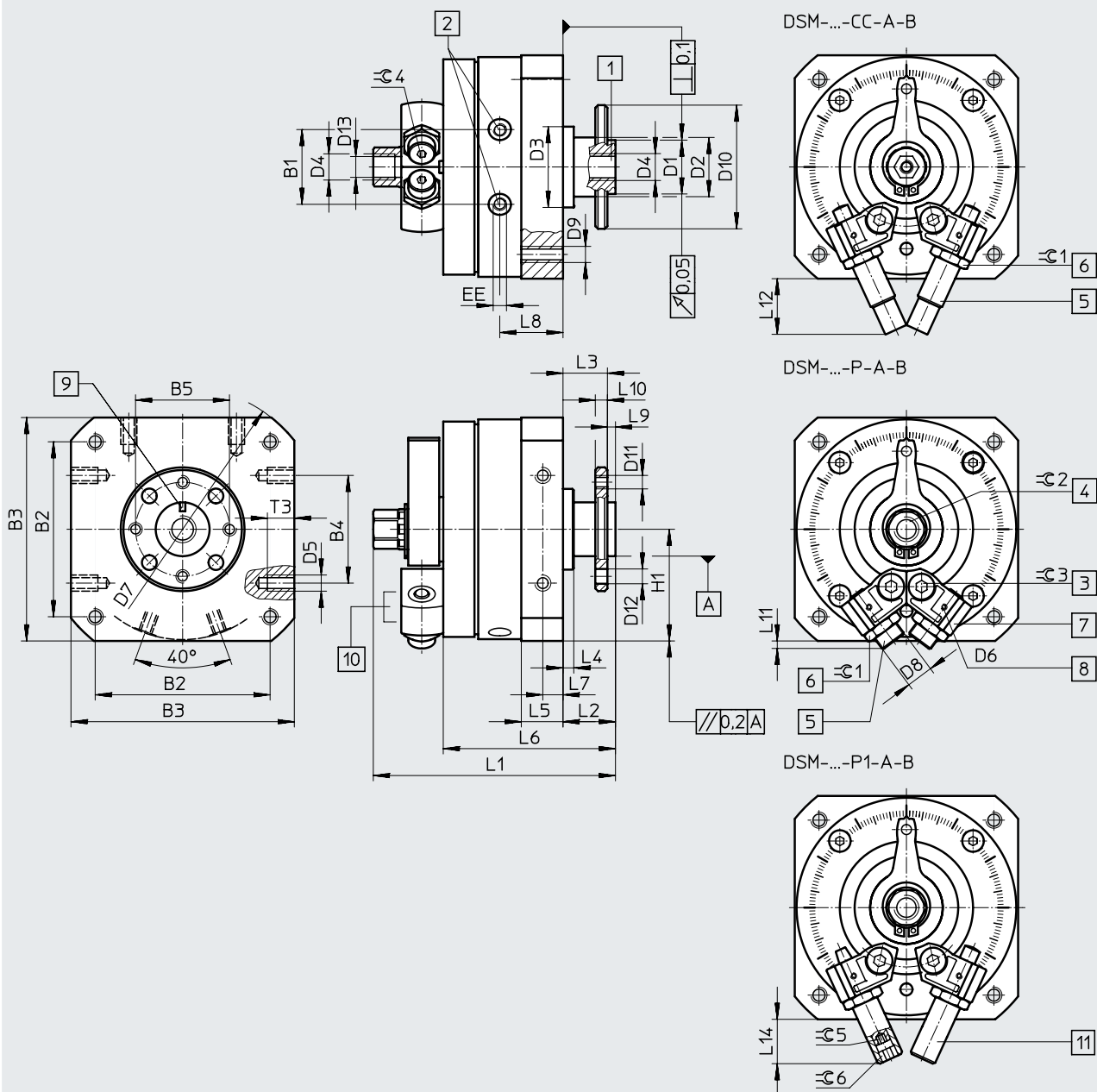
1) Included in the scope of delivery.

# Datasheet DSM-12 ... 63

## Dimensions

Download CAD data → [www.festo.com](http://www.festo.com)

DSM-...-FW – with flange shaft



- [1] Flange shaft with through-hole
- [2] Compressed air supply ports
- [3] Locking screw for clamping the stop
- [4] Manual override (external hexagon). The position of the external hexagon is not defined.
- [5] End-position adjustment

- [6] Lock nut for end-position adjustment
- [7] Infinitely adjustable stops
- [8] Mounting thread for sensor bracket
- [9] Position of marking corresponds to position of stop
- [10] Sensor bracket
- [11] End-position adjustment

## Datasheet DSM-12 ... 63

| Size | B1<br>±0.5 | B2      | B3      | B4     | B5 | D1<br>∅<br>f8 | D2<br>∅            | D3<br>∅<br>f8 | D4   | D5  |
|------|------------|---------|---------|--------|----|---------------|--------------------|---------------|------|-----|
| 12   | 19.8       | 48±0.3  | 59±0.3  | 30±0.2 | 25 | 14            | 15±0.2             | 24            | M5   | M4  |
| 16   | 23.5       | 57±0.3  | 70±0.3  | 40±0.2 | 28 | 16            | 18 <sub>-0.3</sub> | 28            | M5   | M5  |
| 25   | 28         | 65±0.3  | 83±0.3  | 40±0.2 | 35 | 20            | 20 <sub>-0.3</sub> | 30            | G1/8 | M6  |
| 32   | 35.5       | 85±0.3  | 105±0.3 | 60±0.3 | 45 | 28            | 27 <sub>-0.4</sub> | 42            | G1/8 | M8  |
| 40   | 43.8       | 105±0.3 | 130±0.5 | 80±0.3 | 54 | 36            | 36 <sub>-0.4</sub> | 52            | G1/4 | M10 |
| 63   | 50.3       | 125±0.5 | 152±0.2 | 80±0.3 | 64 | 38            | 40±0.3             | 70            | G1/4 | M10 |

| Size | D6 | D7<br>∅ | D8      | D9  | D10<br>∅ | D11 | D12<br>H13 | D13  | EE   | H1<br>±0.2 |
|------|----|---------|---------|-----|----------|-----|------------|------|------|------------|
| 12   | M2 | 78±0.3  | M8x1    | M4  | 33       | M3  | 3.4        | 4.2  | M5   | 29.5       |
| 16   | M2 | 91±0.3  | M10x1   | M5  | 38       | M4  | 4.5        | 4.2  | M5   | 35         |
| 25   | M2 | 106±0.3 | M10x1   | M6  | 46       | M5  | 5.5        | 8.6  | M5   | 41.5       |
| 32   | M2 | 135±0.3 | M12x1   | M8  | 60       | M6  | 6.5        | 8.6  | G1/8 | 52.5       |
| 40   | M2 | 168±0.5 | M16x1   | M10 | 70       | M8  | 9          | 11.5 | G1/8 | 65         |
| 63   | M3 | 200±0.5 | M22x1.5 | M12 | 88       | M8  | 12         | 11.5 | G1/4 | 76         |

| Size | L1              | L2<br>+0.5<br>-0.85 | L3<br>+0.5<br>-0.62 | L4<br>±0.4 | L5            | L6<br>±1 | L7      | L8   | L9<br>-0.2 | L10     |
|------|-----------------|---------------------|---------------------|------------|---------------|----------|---------|------|------------|---------|
| 12   | 67.3+0.4/-0.65  | 13                  | 11                  | 3          | 10.3+0.2/-0.3 | 44       | 5±0.1   | 16.5 | 2          | 3±0.1   |
| 16   | 79+0.4/-0.65    | 15                  | 13                  | 2.6        | 13+0.2/-0.4   | 54.1     | 6.5±0.2 | 20.2 | 2          | 4±0.1   |
| 25   | 90+0.4/-0.65    | 19.5                | 16.5                | 4          | 15.2+0.2/-0.4 | 64       | 7.5±0.2 | 23.5 | 3          | 4.5±0.1 |
| 32   | 115.8+0.4/-0.65 | 27                  | 23                  | 8          | 19.2+0.2/-0.4 | 83       | 9.5±0.2 | 30.5 | 4          | 6±0.1   |
| 40   | 143.8+0.4/-0.7  | 33                  | 28                  | 8          | 23.7+0.2/-0.4 | 102      | 12±0.2  | 36   | 5          | 7.5±0.1 |
| 63   | 177.4+0.2/-0.55 | 37.5                | 31.5                | 10.5       | 28.5+0.3/-0.5 | 121.5    | 14±0.2  | 45   | 6          | 9±0.2   |

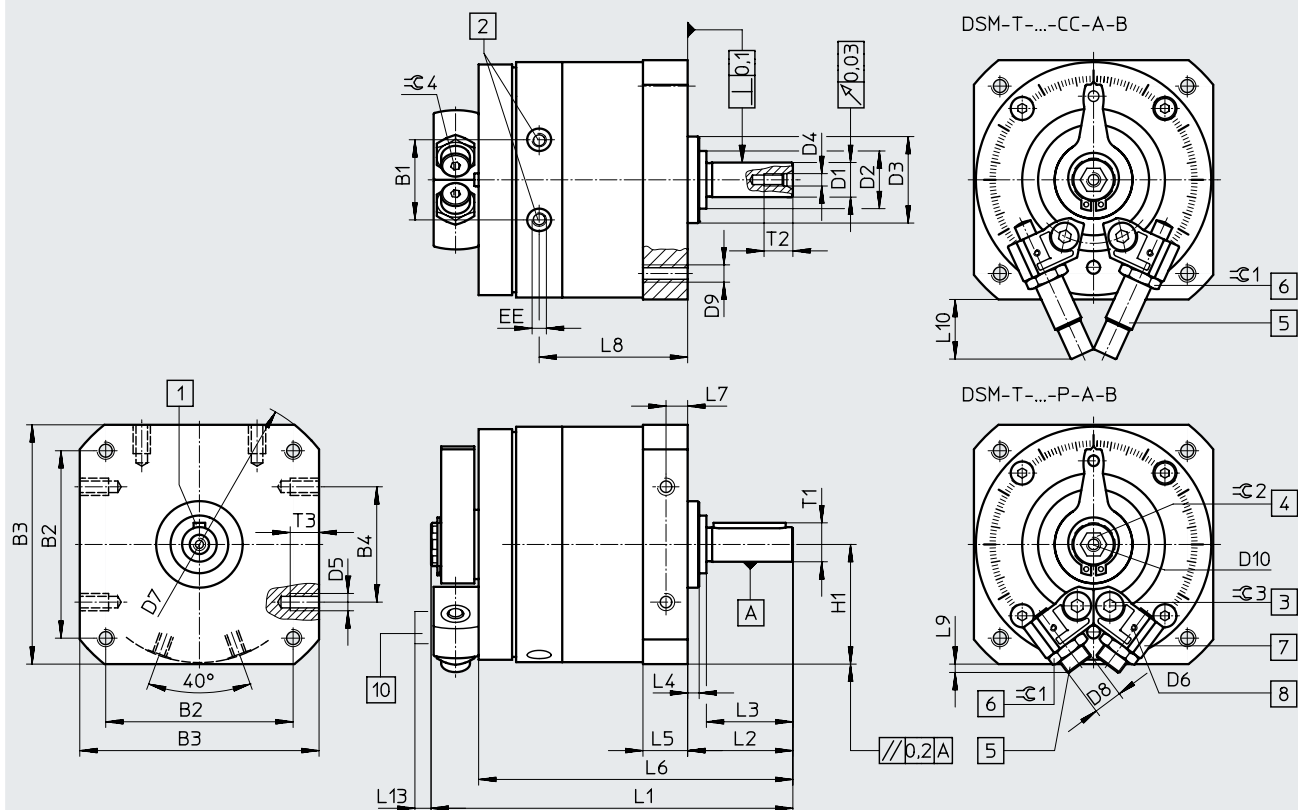
| Size | L11 | L12  | L14<br>max. | T3<br>+0.2 | ≈ 1 | ≈ 2 | ≈ 3 | ≈ 4 | ≈ 5 | ≈ 6 |
|------|-----|------|-------------|------------|-----|-----|-----|-----|-----|-----|
| 12   | 3   | 22.7 | 21.2        | 8          | 10  | 8   | 2.5 | 2.5 | 2.5 | 2.5 |
| 16   | 7.2 | 26.1 | 22          | 8          | 13  | 11  | 3   | 3   | 3   | 5   |
| 25   | 2.9 | 20.7 | 17          | 10         | 13  | 13  | 4   | 3   | 3   | 6   |
| 32   | 3.8 | 29.1 | 23          | 12         | 15  | 13  | 5   | 4   | 4   | 8   |
| 40   | 3.4 | 43.5 | 36.5        | 15         | 19  | 19  | 6   | 5   | 5   | 10  |
| 63   | 10  | 72.5 | –           | 16         | 27  | 22  | 8   | 5   | –   | –   |

## Datasheet DSM-12 ... 63

## Dimensions

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DSM-T... – With spigot shaft and tandem rotary vanes



- [1] Featherkey position at 0°
- [2] Compressed air supply ports
- [3] Locking screw for clamping the stop
- [4] Manual override (internal hexagon). The position of the internal hexagon is not defined.

- [5] End-position adjustment
- [6] Lock nut for end-position adjustment
- [7] Infinitely adjustable stops
- [8] Mounting thread for sensor bracket
- [10] Sensor bracket



## Datasheet DSM-12 ... 63

| Size | B1<br>±0.5 | B2      | B3                  | B4     | D1<br>ø<br>g7 | D2<br>ø           | D3<br>ø<br>f8 |
|------|------------|---------|---------------------|--------|---------------|-------------------|---------------|
| 12   | 19.8       | 48±0.3  | 59±0.3              | 30±0.2 | 8             | 15±0.2            | 24            |
| 16   | 23.5       | 57±0.3  | 70±0.3              | 40±0.2 | 10            | 18 <sub>0.3</sub> | 28            |
| 25   | 28         | 65±0.3  | 83±0.3              | 40±0.2 | 12            | 20 <sub>0.3</sub> | 30            |
| 32   | 35.5       | 85±0.3  | 105±0.3             | 60±0.3 | 16            | 27 <sub>0.4</sub> | 42            |
| 40   | 43.8       | 105±0.3 | 130±0.5             | 80±0.3 | 20            | 36 <sub>0.4</sub> | 52            |
| 63   | 50.3       | 125±0.5 | 152 <sup>+0.2</sup> | 80±0.3 | 25            | 40±0.3            | 70            |

| Size | D4  | D5  | D6 | D7<br>ø | D8      | D9  | D10 |
|------|-----|-----|----|---------|---------|-----|-----|
| 12   | M3  | M4  | M2 | 78±0.3  | M8x1    | M4  | M4  |
| 16   | M3  | M5  | M2 | 91±0.3  | M10x1   | M5  | M5  |
| 25   | M4  | M6  | M2 | 106±0.3 | M10x1   | M6  | M5  |
| 32   | M5  | M8  | M2 | 135±0.3 | M12x1   | M8  | M5  |
| 40   | M6  | M10 | M2 | 168±0.5 | M16x1   | M10 | M6  |
| 63   | M10 | M10 | M3 | 200±0.5 | M22x1.5 | M12 | M6  |

| Size | EE   | H1<br>±0.2 | L1              | L2<br>+0.6<br>-0.7 | L3     | L4<br>±0.4 | L5            |
|------|------|------------|-----------------|--------------------|--------|------------|---------------|
| 12   | M5   | 29.5       | 87.3±0.3        | 24.5               | 20±0.2 | 3          | 10.3+0.2/-0.3 |
| 16   | M5   | 35         | 106.6±1         | 28                 | 23±0.2 | 2.6        | 13+0.2/-0.4   |
| 25   | M5   | 41.5       | 125.5±0.5       | 36.5               | 30±0.2 | 4          | 15.2+0.2/-0.4 |
| 32   | G1/8 | 52.5       | 164±0.5         | 51                 | 40±0.2 | 8          | 19.2+0.2/-0.4 |
| 40   | G1/8 | 65         | 200.5±0.6       | 62                 | 50±0.3 | 8          | 23.7+0.2/-0.4 |
| 63   | G1/4 | 76         | 254.4+0.4/-0.55 | 75.5               | 60±0.3 | 10.5       | 28.5+0.3/-0.5 |

| Size | L6        | L7      | L8   | L9  | L10  | L13 | T1<br>max. |
|------|-----------|---------|------|-----|------|-----|------------|
| 12   | 74.5±0.8  | 5±0.1   | 35.5 | 3   | 22.7 | 6.5 | 8.8        |
| 16   | 91±0.9    | 6.5±0.2 | 44.1 | 7.2 | 26.1 | 6.5 | 11.2       |
| 25   | 109±1     | 7.5±0.2 | 51.5 | 2.9 | 20.7 | 6.5 | 13.5       |
| 32   | 144±1.1   | 9.5±0.2 | 67.4 | 3.8 | 29.1 | 6.5 | 18         |
| 40   | 176±1.2   | 12±0.2  | 81   | 3.4 | 43.5 | 6.5 | 22.5       |
| 63   | 216.5±1.2 | 14±0.2  | 99   | 10  | 72.5 | 4.5 | 28         |

| Size | T2<br>+2 | T3<br>+0.2 | ≡ 1 | ≡ 2 | ≡ 3 | ≡ 4 | Featherkey to<br>DIN 6885 <sup>1)</sup> |
|------|----------|------------|-----|-----|-----|-----|-----------------------------------------|
| 12   | 9        | 8          | 10  | 6   | 2.5 | 2.5 | A2x2x16                                 |
| 16   | 9        | 8          | 13  | 8   | 3   | 3   | A3x3x18                                 |
| 25   | 10       | 10         | 13  | 8   | 4   | 3   | A4x4x25                                 |
| 32   | 12.5     | 12         | 15  | 10  | 5   | 4   | A5x5x36                                 |
| 40   | 16       | 15         | 19  | 10  | 6   | 5   | A6x6x45                                 |
| 63   | 22       | 16         | 27  | 10  | 8   | 5   | A8x7x50                                 |

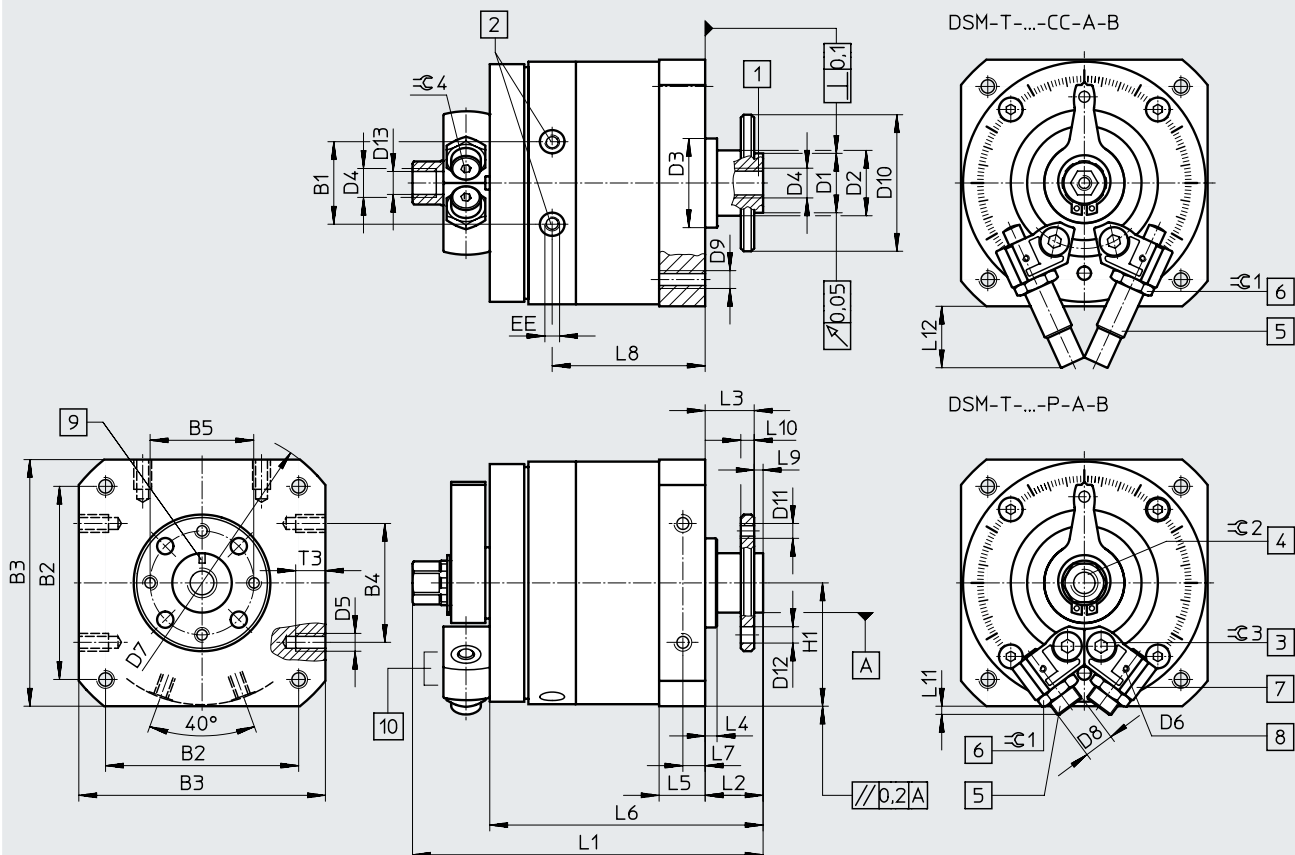
1) Included in the scope of delivery.

# Datasheet DSM-12 ... 63

## Dimensions

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DSM-T-...-FW – with flange shaft tandem rotary vanes



- |                                                                                              |                                                         |
|----------------------------------------------------------------------------------------------|---------------------------------------------------------|
| [1] Flange shaft with through-hole                                                           | [6] Lock nut for end-position adjustment                |
| [2] Compressed air supply ports                                                              | [7] Infinitely adjustable stops                         |
| [3] Locking screw for clamping the stop                                                      | [8] Mounting thread for sensor bracket                  |
| [4] Manual override (external hexagon). The position of the external hexagon is not defined. | [9] Position of marking corresponds to position of stop |
| [5] End-position adjustment                                                                  | [10] Sensor bracket                                     |

## Datasheet DSM-12 ... 63

| Size | B1<br>±0.5 | B2      | B3      | B4     | B5 | D1<br>∅<br>f8 | D2<br>∅            | D3<br>∅<br>f8 | D4   |
|------|------------|---------|---------|--------|----|---------------|--------------------|---------------|------|
| 12   | 19.8       | 48±0.3  | 59±0.3  | 30±0.2 | 25 | 14            | 15±0.2             | 24            | M5   |
| 16   | 23.5       | 57±0.3  | 70±0.3  | 40±0.2 | 28 | 16            | 18 <sub>-0.3</sub> | 28            | M5   |
| 25   | 28         | 65±0.3  | 83±0.3  | 40±0.2 | 35 | 20            | 20 <sub>-0.3</sub> | 30            | G1/8 |
| 32   | 35.5       | 85±0.3  | 105±0.3 | 60±0.3 | 45 | 28            | 27 <sub>-0.4</sub> | 42            | G1/8 |
| 40   | 43.8       | 105±0.3 | 130±0.5 | 80±0.3 | 54 | 36            | 36 <sub>-0.4</sub> | 52            | G1/4 |
| 63   | 50.3       | 125±0.5 | 152±0.2 | 80±0.3 | 64 | 38            | 40±0.3             | 70            | G1/4 |

| Size | D5  | D6 | D7<br>∅ | D8      | D9  | D10<br>∅ | D11 | D12<br>H13 | D13  |
|------|-----|----|---------|---------|-----|----------|-----|------------|------|
| 12   | M4  | M2 | 78±0.3  | M8x1    | M4  | 33       | M3  | 3.4        | 4.2  |
| 16   | M5  | M2 | 91±0.3  | M10x1   | M5  | 38       | M4  | 4.5        | 4.2  |
| 25   | M6  | M2 | 106±0.3 | M10x1   | M6  | 46       | M5  | 5.5        | 8.6  |
| 32   | M8  | M2 | 135±0.3 | M12x1   | M8  | 60       | M6  | 6.5        | 8.6  |
| 40   | M10 | M2 | 168±0.5 | M16x1   | M10 | 70       | M8  | 9          | 11.5 |
| 63   | M10 | M3 | 200±0.5 | M22x1.5 | M12 | 88       | M8  | 12         | 11.5 |

| Size | EE   | H1<br>±0.2 | L1              | L2<br>+0.5<br>-0.85 | L3<br>+0.5<br>-0.62 | L4<br>±0.4 | L5            | L6<br>±1 | L7      |
|------|------|------------|-----------------|---------------------|---------------------|------------|---------------|----------|---------|
| 12   | M5   | 29.5       | 86.3+0.4/-0.65  | 13                  | 11                  | 3          | 10.3+0.2/-0.3 | 63       | 5±0.1   |
| 16   | M5   | 35         | 103+0.4/-0.65   | 15                  | 13                  | 2.6        | 13+0.2/-0.4   | 78       | 6.5±0.2 |
| 25   | M5   | 41.5       | 118+0.4/-0.65   | 19.5                | 16.5                | 4          | 15.2+0.2/-0.4 | 92       | 7.5±0.2 |
| 32   | G1/8 | 52.5       | 152.8+0.4/-0.65 | 27                  | 23                  | 8          | 19.2+0.2/-0.4 | 120      | 9.5±0.2 |
| 40   | G1/8 | 65         | 188.8+0.4/-0.7  | 33                  | 28                  | 8          | 23.7+0.2/-0.4 | 147      | 12±0.2  |
| 63   | G1/4 | 76         | 234.4+0.2/-0.55 | 37.5                | 31.5                | 10.5       | 28.5+0.3/-0.5 | 178.5    | 14±0.2  |

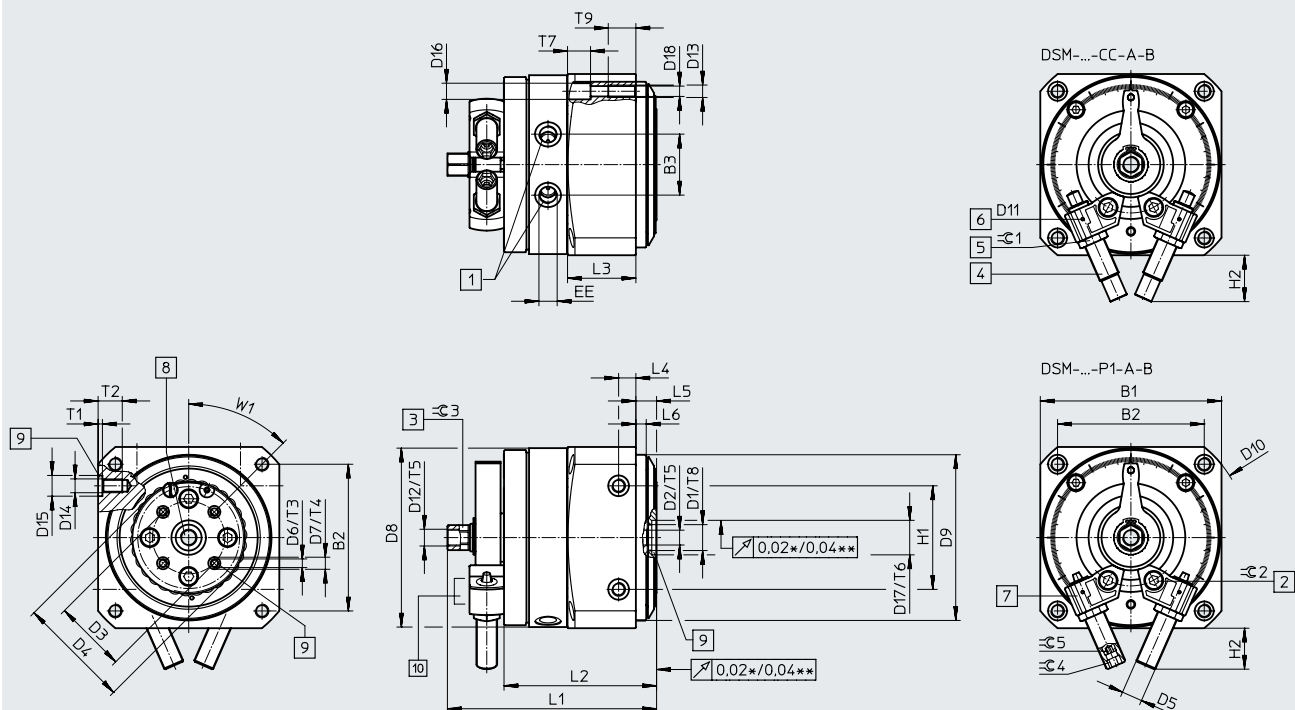
| Size | L8   | L9<br>-0.2 | L10     | L11 | L12  | T3<br>+0.2 | ≈C 1 | ≈C 2 | ≈C 3 | ≈C 4 |
|------|------|------------|---------|-----|------|------------|------|------|------|------|
| 12   | 35.5 | 2          | 3±0.1   | 3   | 22.7 | 8          | 10   | 8    | 2.5  | 2.5  |
| 16   | 44.1 | 2          | 4±0.1   | 7.2 | 26.1 | 8          | 13   | 11   | 3    | 3    |
| 25   | 51.5 | 3          | 4.5±0.1 | 2.9 | 20.7 | 10         | 13   | 13   | 4    | 3    |
| 32   | 67.4 | 4          | 6±0.1   | 3.8 | 29.1 | 12         | 15   | 13   | 5    | 4    |
| 40   | 81   | 5          | 7.5±0.1 | 3.4 | 43.5 | 15         | 19   | 19   | 6    | 5    |
| 63   | 99   | 6          | 9±0.2   | 10  | 72.5 | 16         | 27   | 22   | 8    | 5    |

# Datasheet DSM-12 ... 63

## Dimensions

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DSM-...-HD – with heavy-duty bearing



- [1] Supply ports
  - [2] Locking screw for clamping the stop
  - [3] Manual override (external hexagon). The position of the external hexagon is not defined.
  - [4] End-position adjustment
  - [5] Lock nut for end-position adjustment
  - [6] Mounting thread for sensor bracket
  - [7] Infinitely adjustable stops
  - [8] Flange shaft with through-hole
  - [9] Drilled hole for centring sleeve ZBH
  - [10] Sensor bracket
- \* Size 12 ... 25  
 \*\* Size 32 ... 63

## Datasheet DSM-12 ... 63

| Size | B1<br>±0.3 | B2<br>±0.3 | B3<br>±0.5 | D1 <sup>1)</sup> | D2 <sup>2)</sup><br>∅ | D3<br>±0.02 | D4  | D5<br>DSM-...-P1/DSM-...-CC |
|------|------------|------------|------------|------------------|-----------------------|-------------|-----|-----------------------------|
| 12   | 59         | 48         | 19.8       | M5               | –                     | 22          | 36  | M8x1                        |
| 16   | 70         | 57         | 23.5       | M5               | –                     | 28          | 45  | M10x1                       |
| 25   | 83         | 65         | 28         | G1/8             | –                     | 30          | 50  | M10x1                       |
| 32   | 105        | 85         | 35.5       | 15               | G1/8                  | 42          | 65  | M12x1                       |
| 40   | 130        | 105        | 43.8       | 20               | G1/4                  | 56          | 90  | M16x1                       |
| 63   | 152        | 125        | 50.3       | 20               | G1/4                  | 70          | 105 | M22x1.5                     |

| Size | D6 | D7<br>H7 | D8    | D9<br>f8 | D10<br>±0.5 | D11 | D12  | D13 | D14 |
|------|----|----------|-------|----------|-------------|-----|------|-----|-----|
| 12   | M3 | 5        | 57.5  | 58       | 78          | M2  | M5   | M4  | M4  |
| 16   | M4 | 7        | 68.5  | 68       | 91          | M2  | M5   | M5  | M5  |
| 25   | M5 | 7        | 81.5  | 76       | 106         | M2  | G1/8 | M6  | M6  |
| 32   | M5 | 7        | 103.5 | 96       | 135         | M2  | G1/8 | M8  | M8  |
| 40   | M8 | 12       | 128   | 126      | 168         | M2  | G1/4 | M10 | M10 |
| 63   | M8 | 12       | 149   | 150      | 200         | M3  | G1/4 | M12 | M10 |

| Size | D15<br>H7 | D16 | D17<br>H8 | D18  | EE   | H1<br>±0.03 | H2<br>max. |            | L1<br>+0.4<br>–0.65 | L2<br>+1 |
|------|-----------|-----|-----------|------|------|-------------|------------|------------|---------------------|----------|
|      |           |     |           |      |      |             | DSM-...-P1 | DSM-...-CC |                     |          |
| 12   | 7         | 6   | 12        | 3.3  | M5   | 30          | 21.2       | 22.7       | 76.3                | 53       |
| 16   | 7         | 8   | 12        | 4.2  | M5   | 40          | 22         | 26.1       | 88.5                | 63.6     |
| 25   | 9         | 10  | 15        | 5.1  | M5   | 40          | 17         | 20.7       | 98.7                | 72.7     |
| 32   | 12        | 11  | 20        | 6.8  | G1/8 | 60          | 23         | 29.1       | 121                 | 88.5     |
| 40   | 12        | 15  | 25        | 8.5  | G1/8 | 80          | 36.5       | 43.5       | 154                 | 112      |
| 63   | 12        | 18  | 25        | 10.2 | G1/4 | 80          | 44         | 72.5       | 185.5               | 129.5    |

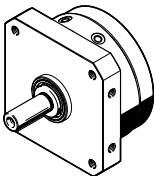
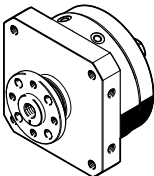
| Size | L3   | L4<br>±0.1 | L5<br>±0.2 | L6<br>±0.1 | T1<br>+0.1 | T2 | T3  | T4<br>+0.1 | T5 | T6<br>+0.1 |
|------|------|------------|------------|------------|------------|----|-----|------------|----|------------|
| 12   | 22.3 | 10         | 10         | 4          | 1.5        | 9  | 9   | 1.2        | 6  | 2.5        |
| 16   | 27.6 | 10         | 10         | 4          | 1.5        | 9  | 9   | 1.5        | 6  | 2.5        |
| 25   | 33.4 | 10         | 10         | 6          | 2          | 12 | 8   | 1.5        | 8  | 2.5        |
| 32   | 39.6 | 10         | 12         | 6          | 2.5        | 14 | 9.5 | 1.5        | 8  | 2.8        |
| 40   | 52.7 | 12         | 14         | 5.5        | 2.5        | 17 | 15  | 2.5        | 12 | 2.8        |
| 63   | 58   | 14         | 16         | 10         | 2.5        | 18 | 14  | 2.5        | 15 | 2.8        |

| Size | T7  | T8  | T9 | ≈ 1 | ≈ 2 | ≈ 3<br>h13 | ≈ 4        |            | ≈ 5<br>DSM-...-P1 | W1  |
|------|-----|-----|----|-----|-----|------------|------------|------------|-------------------|-----|
|      |     |     |    |     |     |            | DSM-...-P1 | DSM-...-CC |                   |     |
| 12   | 6.3 | 5.5 | 12 | 10  | 2.5 | 8          | 5          | 2.5        | 2.5               | 45° |
| 16   | 8.5 | 6   | 14 | 13  | 3   | 11         | 6          | 3          | 3                 | 45° |
| 25   | 10  | 5.3 | 16 | 13  | 4   | 13         | 6          | 3          | 3                 | 45° |
| 32   | 9.5 | –   | 20 | 15  | 5   | 13         | 8          | 4          | 4                 | 45° |
| 40   | 15  | –   | 24 | 19  | 6   | 19         | 8          | 5          | 5                 | 45° |
| 63   | 18  | –   | 28 | 27  | 8   | 22         | 10         | 5          | 5                 | 45° |

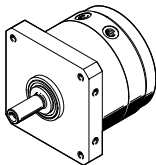
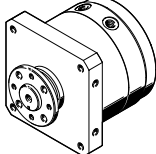
1) Thread for compressed air through-feed with size 12 ... 25

2) Thread for compressed air through-feed with size 32 ... 63

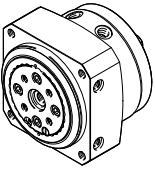
## Datasheet DSM-12 ... 63

| Ordering data – DSM-..., semi-rotary drive                                         |                                                   |              |      |          |                      |
|------------------------------------------------------------------------------------|---------------------------------------------------|--------------|------|----------|----------------------|
| Semi-rotary drive                                                                  | Key features                                      | Swivel angle | Size | Part no. | Type                 |
| Spigot shaft                                                                       |                                                   |              |      |          |                      |
|    | Without cushioning components                     | 270°         | 12   | 547591   | DSM-12-270-A-B       |
|                                                                                    |                                                   |              | 16   | 547592   | DSM-16-270-A-B       |
|                                                                                    |                                                   |              | 25   | 547593   | DSM-25-270-A-B       |
|                                                                                    |                                                   |              | 32   | 547594   | DSM-32-270-A-B       |
|                                                                                    |                                                   |              | 40   | 547595   | DSM-40-270-A-B       |
|                                                                                    |                                                   |              | 63   | 552083   | DSM-63-270-A-B       |
|                                                                                    | P With elastic cushioning components              | 270°         | 12   | 547570   | DSM-12-270-P-A-B     |
|                                                                                    |                                                   |              | 16   | 547574   | DSM-16-270-P-A-B     |
|                                                                                    |                                                   |              | 25   | 547578   | DSM-25-270-P-A-B     |
|                                                                                    |                                                   |              | 32   | 547582   | DSM-32-270-P-A-B     |
|                                                                                    |                                                   |              | 40   | 547586   | DSM-40-270-P-A-B     |
|                                                                                    |                                                   |              | 63   | 552079   | DSM-63-270-P-A-B     |
|                                                                                    | P1 With adjustable, elastic cushioning components | 246°         | 12   | 566203   | DSM-12-270-P1-A-B    |
|                                                                                    |                                                   |              | 16   | 566205   | DSM-16-270-P1-A-B    |
|                                                                                    |                                                   |              | 25   | 566207   | DSM-25-270-P1-A-B    |
|                                                                                    |                                                   |              | 32   | 566209   | DSM-32-270-P1-A-B    |
|                                                                                    |                                                   | 240°         | 40   | 566211   | DSM-40-270-P1-A-B    |
|                                                                                    |                                                   |              | 63   | 566213   | DSM-63-270-P1-A-B    |
|                                                                                    | CC With shock absorber                            | 246°         | 12   | 547572   | DSM-12-270-CC-A-B    |
|                                                                                    |                                                   |              | 16   | 547576   | DSM-16-270-CC-A-B    |
|                                                                                    |                                                   |              | 25   | 547580   | DSM-25-270-CC-A-B    |
|                                                                                    |                                                   |              | 32   | 547584   | DSM-32-270-CC-A-B    |
|                                                                                    |                                                   | 240°         | 40   | 547588   | DSM-40-270-CC-A-B    |
|                                                                                    |                                                   |              | 63   | 552081   | DSM-63-270-CC-A-B    |
| Flanged shaft                                                                      |                                                   |              |      |          |                      |
|  | Without cushioning components                     | 270°         | 12   | 547596   | DSM-12-270-FW-A-B    |
|                                                                                    |                                                   |              | 16   | 547597   | DSM-16-270-FW-A-B    |
|                                                                                    |                                                   |              | 25   | 547598   | DSM-25-270-FW-A-B    |
|                                                                                    |                                                   |              | 32   | 547599   | DSM-32-270-FW-A-B    |
|                                                                                    |                                                   |              | 40   | 547600   | DSM-40-270-FW-A-B    |
|                                                                                    |                                                   |              | 63   | 552084   | DSM-63-270-FW-A-B    |
|                                                                                    | P With elastic cushioning components              | 270°         | 12   | 547571   | DSM-12-270-P-FW-A-B  |
|                                                                                    |                                                   |              | 16   | 547575   | DSM-16-270-P-FW-A-B  |
|                                                                                    |                                                   |              | 25   | 547579   | DSM-25-270-P-FW-A-B  |
|                                                                                    |                                                   |              | 32   | 547583   | DSM-32-270-P-FW-A-B  |
|                                                                                    |                                                   |              | 40   | 547587   | DSM-40-270-P-FW-A-B  |
|                                                                                    |                                                   |              | 63   | 552080   | DSM-63-270-P-FW-A-B  |
|                                                                                    | P1 With adjustable, elastic cushioning components | 246°         | 12   | 566204   | DSM-12-270-P1-FW-A-B |
|                                                                                    |                                                   |              | 16   | 566206   | DSM-16-270-P1-FW-A-B |
|                                                                                    |                                                   |              | 25   | 566208   | DSM-25-270-P1-FW-A-B |
|                                                                                    |                                                   |              | 32   | 566210   | DSM-32-270-P1-FW-A-B |
|                                                                                    |                                                   | 240°         | 40   | 566212   | DSM-40-270-P1-FW-A-B |
|                                                                                    |                                                   |              | 63   | 566214   | DSM-63-270-P1-FW-A-B |
|                                                                                    | CC Shock absorber                                 | 246°         | 12   | 547573   | DSM-12-270-CC-FW-A-B |
|                                                                                    |                                                   |              | 16   | 547577   | DSM-16-270-CC-FW-A-B |
|                                                                                    |                                                   |              | 25   | 547581   | DSM-25-270-CC-FW-A-B |
|                                                                                    |                                                   |              | 32   | 547585   | DSM-32-270-CC-FW-A-B |
|                                                                                    |                                                   | 240°         | 40   | 547589   | DSM-40-270-CC-FW-A-B |
|                                                                                    |                                                   |              | 63   | 552082   | DSM-63-270-CC-FW-A-B |

## Datasheet DSM-12 ... 63

| Ordering data – DSM-T-..., semi-rotary drive with tandem rotary vanes              |                                      |              |                               |          |                        |         |                     |
|------------------------------------------------------------------------------------|--------------------------------------|--------------|-------------------------------|----------|------------------------|---------|---------------------|
| Semi-rotary drive                                                                  | Key features                         | Swivel angle | Size                          | Part no. | Type                   |         |                     |
| Spigot shaft                                                                       |                                      |              |                               |          |                        |         |                     |
|   | Without cushioning components        | 270°         | 12                            | 1145122  | DSM-T-12-270-A-B       |         |                     |
|                                                                                    |                                      |              | 16                            | 1145123  | DSM-T-16-270-A-B       |         |                     |
|                                                                                    |                                      |              | 25                            | 1145124  | DSM-T-25-270-A-B       |         |                     |
|                                                                                    |                                      |              | 32                            | 1145125  | DSM-T-32-270-A-B       |         |                     |
|                                                                                    |                                      |              | 40                            | 1145126  | DSM-T-40-270-A-B       |         |                     |
|                                                                                    |                                      |              | 63                            | 1145127  | DSM-T-63-270-A-B       |         |                     |
|                                                                                    | P With elastic cushioning components | 270°         | 12                            | 1145086  | DSM-T-12-270-P-A-B     |         |                     |
|                                                                                    |                                      |              | 16                            | 1145092  | DSM-T-16-270-P-A-B     |         |                     |
|                                                                                    |                                      |              | 25                            | 1145098  | DSM-T-25-270-P-A-B     |         |                     |
|                                                                                    |                                      |              | 32                            | 1145104  | DSM-T-32-270-P-A-B     |         |                     |
|                                                                                    |                                      |              | 40                            | 1145110  | DSM-T-40-270-P-A-B     |         |                     |
|                                                                                    |                                      |              | 63                            | 1145116  | DSM-T-63-270-P-A-B     |         |                     |
|                                                                                    | CC With shock absorber               | 246°         | 12                            | 1145088  | DSM-T-12-270-CC-A-B    |         |                     |
|                                                                                    |                                      |              | 16                            | 1145094  | DSM-T-16-270-CC-A-B    |         |                     |
|                                                                                    |                                      |              | 25                            | 1145100  | DSM-T-25-270-CC-A-B    |         |                     |
|                                                                                    |                                      |              | 32                            | 1145106  | DSM-T-32-270-CC-A-B    |         |                     |
|                                                                                    |                                      | 240°         | 40                            | 1145112  | DSM-T-40-270-CC-A-B    |         |                     |
|                                                                                    |                                      |              | 63                            | 1145118  | DSM-T-63-270-CC-A-B    |         |                     |
| Flanged shaft                                                                      |                                      |              |                               |          |                        |         |                     |
|  |                                      |              | Without cushioning components | 270°     | 12                     | 1145128 | DSM-T-12-270-FW-A-B |
|                                                                                    | 16                                   | 1145129      |                               |          | DSM-T-16-270-FW-A-B    |         |                     |
|                                                                                    | 25                                   | 1145130      |                               |          | DSM-T-25-270-FW-A-B    |         |                     |
|                                                                                    | 32                                   | 1145131      |                               |          | DSM-T-32-270-FW-A-B    |         |                     |
|                                                                                    | 40                                   | 1145132      |                               |          | DSM-T-40-270-FW-A-B    |         |                     |
|                                                                                    | 63                                   | 1145133      |                               |          | DSM-T-63-270-FW-A-B    |         |                     |
|                                                                                    | P With elastic cushioning components | 270°         | 12                            | 1145087  | DSM-T-12-270-P-FW-A-B  |         |                     |
|                                                                                    |                                      |              | 16                            | 1145093  | DSM-T-16-270-P-FW-A-B  |         |                     |
|                                                                                    |                                      |              | 25                            | 1145099  | DSM-T-25-270-P-FW-A-B  |         |                     |
|                                                                                    |                                      |              | 32                            | 1145105  | DSM-T-32-270-P-FW-A-B  |         |                     |
|                                                                                    |                                      |              | 40                            | 1145111  | DSM-T-40-270-P-FW-A-B  |         |                     |
|                                                                                    |                                      |              | 63                            | 1145117  | DSM-T-63-270-P-FW-A-B  |         |                     |
|                                                                                    | CC Shock absorber                    | 246°         | 12                            | 1145089  | DSM-T-12-270-CC-FW-A-B |         |                     |
|                                                                                    |                                      |              | 16                            | 1145095  | DSM-T-16-270-CC-FW-A-B |         |                     |
|                                                                                    |                                      |              | 25                            | 1145101  | DSM-T-25-270-CC-FW-A-B |         |                     |
|                                                                                    |                                      |              | 32                            | 1145107  | DSM-T-32-270-CC-FW-A-B |         |                     |
|                                                                                    |                                      | 240°         | 40                            | 1145113  | DSM-T-40-270-CC-FW-A-B |         |                     |
|                                                                                    |                                      |              | 63                            | 1145119  | DSM-T-63-270-CC-FW-A-B |         |                     |

## Datasheet DSM-12 ... 63

| Ordering data – DSM-...-HD, semi-rotary drive with heavy-duty guide              |                                                   |              |      |          |                      |
|----------------------------------------------------------------------------------|---------------------------------------------------|--------------|------|----------|----------------------|
| Semi-rotary drive                                                                | Key features                                      | Swivel angle | Size | Part no. | Type                 |
| <b>Heavy-duty bearing</b>                                                        |                                                   |              |      |          |                      |
|  | Without cushioning components                     | 270°         | 12   | 1369110  | DSM-12-270-HD-A-B    |
|                                                                                  |                                                   |              | 16   | 1369111  | DSM-16-270-HD-A-B    |
|                                                                                  |                                                   |              | 25   | 1369112  | DSM-25-270-HD-A-B    |
|                                                                                  |                                                   |              | 32   | 1369113  | DSM-32-270-HD-A-B    |
|                                                                                  |                                                   |              | 40   | 1369114  | DSM-40-270-HD-A-B    |
|                                                                                  |                                                   |              | 63   | 1369115  | DSM-63-270-HD-A-B    |
|                                                                                  | P1 With adjustable, elastic cushioning components | 246°         | 12   | 1369116  | DSM-12-270-P1-HD-A-B |
|                                                                                  |                                                   |              | 16   | 1369117  | DSM-16-270-P1-HD-A-B |
|                                                                                  |                                                   |              | 25   | 1369118  | DSM-25-270-P1-HD-A-B |
|                                                                                  |                                                   |              | 32   | 1369119  | DSM-32-270-P1-HD-A-B |
|                                                                                  |                                                   | 240°         | 40   | 1369120  | DSM-40-270-P1-HD-A-B |
|                                                                                  |                                                   |              | 63   | 1369121  | DSM-63-270-P1-HD-A-B |
|                                                                                  | CC With shock absorber                            | 246°         | 12   | 1369122  | DSM-12-270-CC-HD-A-B |
|                                                                                  |                                                   |              | 16   | 1369123  | DSM-16-270-CC-HD-A-B |
|                                                                                  |                                                   |              | 25   | 1369124  | DSM-25-270-CC-HD-A-B |
|                                                                                  |                                                   |              | 32   | 1369125  | DSM-32-270-CC-HD-A-B |
|                                                                                  |                                                   | 240°         | 40   | 1369126  | DSM-40-270-CC-HD-A-B |
|                                                                                  |                                                   |              | 63   | 1369127  | DSM-63-270-CC-HD-A-B |



## Accessories

### Free wheel unit FLSM

For size 6, 8

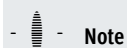
Material:

Housing: Anodised aluminium

Shaft, sleeve:

Size 6, 8: steel

Size 10: hardened steel

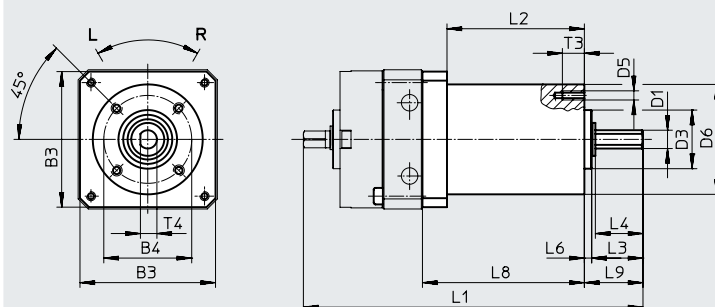


#### Note

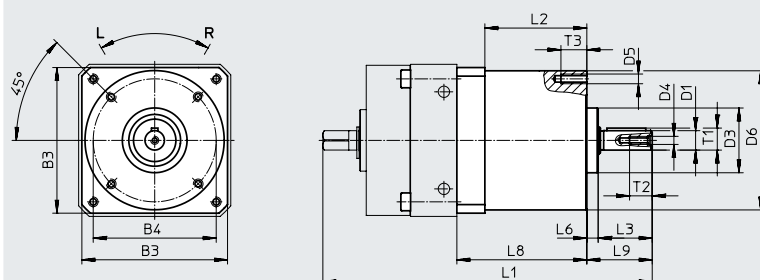
The minimum possible rotation angle is 3°. However, the switching accuracy is dependent on speed and load.

### Dimensions and ordering data

#### FLSM-6/8



#### FLSM-10



| For size | B3   | B4 | D1<br>ø<br>g7 | D3<br>ø<br>h8 | D4   | D5 | D6<br>ø<br>±0.3 | L1   | L2        | L3   | L4 | L6<br>±0.2 |
|----------|------|----|---------------|---------------|------|----|-----------------|------|-----------|------|----|------------|
| 6        | 29.5 | 23 | 4             | 14            | –    | M3 | 28              | 85.8 | 36 ±0.1   | 10.8 | 10 | 2          |
| 8        | 37   | 24 | 5             | 16            | –    | M3 | 30              | 94.5 | 37.5 ±0.1 | 14   | 13 | 2          |
| 10       | 45   | 38 | 6             | 20            | M2.5 | M3 | 43              | 101  | 30 ±0.1   | 16.7 | –  | 3.5        |

| For size | L8<br>±0.1 | L9   | T1  | T2 | T3 | T4  | Featherkey to<br>DIN 6885 | CRC <sup>1)</sup> | Weight<br>[g] | Direction of rotation  | Part no. | Type      |
|----------|------------|------|-----|----|----|-----|---------------------------|-------------------|---------------|------------------------|----------|-----------|
| 6        | 43         | 12.8 | –   | –  | 5  | 3.5 | –                         | 2                 | 100           | Anticlockwise rotation | 188523   | FLSM-6-L  |
|          |            |      |     |    |    |     |                           |                   |               | Clockwise rotation     | 188522   | FLSM-6-R  |
| 8        | 44.5       | 16   | –   | –  | 6  | 4.5 | –                         | 2                 | 125           | Anticlockwise rotation | 188525   | FLSM-8-L  |
|          |            |      |     |    |    |     |                           |                   |               | Clockwise rotation     | 188524   | FLSM-8-R  |
| 10       | 40         | 20.2 | 6.8 | 7  | 8  | –   | A2x2x12                   | 2                 | 160           | Anticlockwise rotation | 188527   | FLSM-10-L |
|          |            |      |     |    |    |     |                           |                   |               | Clockwise rotation     | 188526   | FLSM-10-R |

1) More information: [www.festo.com/x/topic/crc](http://www.festo.com/x/topic/crc)

## Accessories

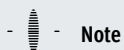
## Free wheel unit FLSM

For size 12 ... 40

Material:

Housing: Anodised aluminium

Shaft, sleeve: Hardened steel

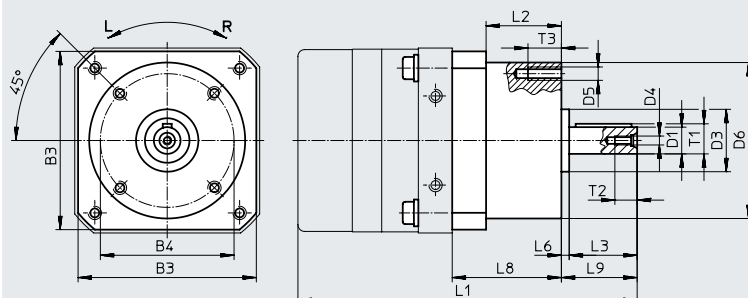


## Note

The minimum possible rotation angle is 3°. However, the switching accuracy is dependent on speed and load.

## Dimensions and ordering data

FLSM-12 ... 40



| For size | B3  | B4<br>±0.15 | D1<br>∅<br>g7 | D3<br>∅<br>h8 | D4 | D5 | D6<br>∅<br>±0.3 | L1    | L2        | L3 | L6<br>+0.2 | L8<br>±0.1 |
|----------|-----|-------------|---------------|---------------|----|----|-----------------|-------|-----------|----|------------|------------|
| 12       | 55  | 42          | 8             | 25            | M3 | M3 | 48.5            | 125   | 37 ±0.4   | 20 | 3.5        | 47.3       |
| 16       | 65  | 50          | 10            | 24            | M3 | M4 | 60              | 137   | 34 ±0.4   | 23 | 3.5        | 47         |
| 25       | 80  | 60          | 12            | 28            | M4 | M6 | 70              | 152   | 34 ±0.4   | 30 | 3.5        | 49         |
| 32       | 100 | 83          | 16            | 42            | M5 | M6 | 95              | 197.8 | 42.8 ±0.4 | 40 | 7.2        | 60.8       |
| 40       | 120 | 96          | 20            | 52            | M6 | M8 | 110             | 244.5 | 54 ±0.4   | 50 | 6          | 77         |

| For size | L9   | T1   | T2   | T3 | Feather key to<br>DIN 6885 | CRC <sup>1)</sup> | Weight<br>[g] | Direction of rotation  | Part no. | Type      |
|----------|------|------|------|----|----------------------------|-------------------|---------------|------------------------|----------|-----------|
| 12       | 24.5 | 8.8  | 9    | 8  | A2x2x16                    | 2                 | 300           | Anticlockwise rotation | 164229   | FLSM-12-L |
|          |      |      |      |    |                            |                   |               | Clockwise rotation     | 164234   | FLSM-12-R |
| 16       | 27.4 | 11.2 | 9    | 10 | A3x3x18                    | 2                 | 450           | Anticlockwise rotation | 164230   | FLSM-16-L |
|          |      |      |      |    |                            |                   |               | Clockwise rotation     | 164235   | FLSM-16-R |
| 25       | 34   | 13.5 | 10   | 15 | A4x4x25                    | 2                 | 650           | Anticlockwise rotation | 164231   | FLSM-25-L |
|          |      |      |      |    |                            |                   |               | Clockwise rotation     | 164236   | FLSM-25-R |
| 32       | 48.5 | 18   | 12.5 | 15 | A5x5x36                    | 2                 | 1500          | Anticlockwise rotation | 164232   | FLSM-32-L |
|          |      |      |      |    |                            |                   |               | Clockwise rotation     | 164237   | FLSM-32-R |
| 40       | 58   | 22.5 | 16   | 15 | A6x6x45                    | 2                 | 2350          | Anticlockwise rotation | 164233   | FLSM-40-L |
|          |      |      |      |    |                            |                   |               | Clockwise rotation     | 164238   | FLSM-40-R |

1) More information: [www.festo.com/x/topic/crc](http://www.festo.com/x/topic/crc)

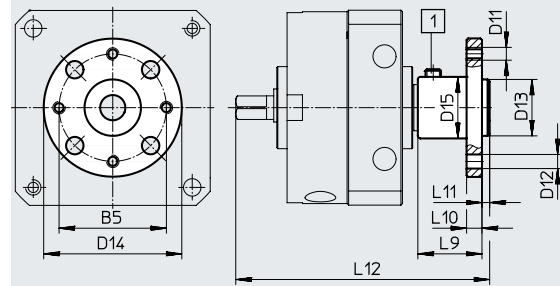
## Accessories

### Push-on flange FWSR

Material:  
Anodised wrought aluminium alloy

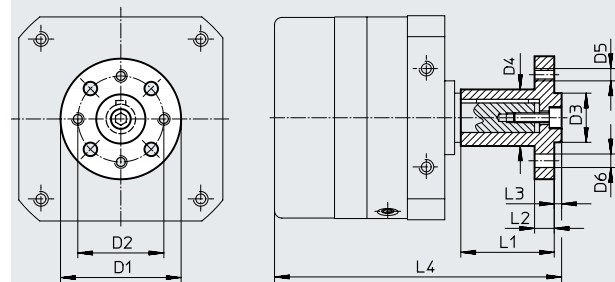


FLSM-6/8



[1] Threaded pin M3x5 DIN 916

FLSM-10



#### Dimensions and ordering data

| For size | B5 | D11 | D12<br>Ø<br>H13 | D13<br>Ø         | D14<br>Ø           | D15<br>Ø<br>+0.4 |
|----------|----|-----|-----------------|------------------|--------------------|------------------|
| 6        | 16 | M3  | 3.4             | 8 <sub>g7</sub>  | 23                 | 10               |
| 8        | 21 | M3  | 3.4             | 11 <sub>g7</sub> | 27                 | 12               |
| 10       | 21 | M3  | 3.4             | 11 <sub>f8</sub> | 30 <sub>-0.5</sub> | 12               |
| 12       | 25 | M3  | 3.4             | 14 <sub>f8</sub> | 35 <sub>-0.5</sub> | 15               |
| 16       | 28 | M4  | 4.5             | 16 <sub>f8</sub> | 40 <sub>-0.5</sub> | 17               |
| 25       | 35 | M5  | 5.5             | 20 <sub>f8</sub> | 50 <sub>-0.5</sub> | 23               |
| 32       | 45 | M6  | 6.5             | 28 <sub>f8</sub> | 60 <sub>-0.5</sub> | 28               |
| 40       | 54 | M8  | 9               | 36 <sub>f8</sub> | 70 <sub>-0.5</sub> | 38               |

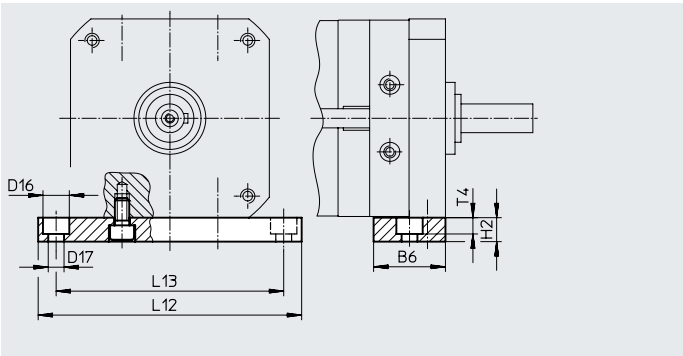
| For size | L9   | L10 | L11 | L12   | CRC <sup>1)</sup> | Weight<br>[g] | Part no. | Type    |
|----------|------|-----|-----|-------|-------------------|---------------|----------|---------|
| 6        | 10.5 | 3   | 1.5 | 45    | 2                 | 6             | 185948   | FWSR-6  |
| 8        | 12.5 | 3   | 1.5 | 51    | 2                 | 8             | 185949   | FWSR-8  |
| 10       | 22   | 3   | 1.6 | 68.6  | 2                 | 10            | 32798    | FWSR-10 |
| 12       | 25   | 3   | 3   | 85.5  | 2                 | 19            | 14659    | FWSR-12 |
| 16       | 28   | 5   | 3   | 98.8  | 2                 | 30            | 13239    | FWSR-16 |
| 25       | 38   | 8   | 3   | 116.5 | 2                 | 70            | 13240    | FWSR-25 |
| 32       | 48   | 10  | 4   | 151.5 | 2                 | 120           | 13241    | FWSR-32 |
| 40       | 60   | 11  | 5   | 186.5 | 2                 | 240           | 14656    | FWSR-40 |

1) More information: [www.festo.com/x/topic/crc](http://www.festo.com/x/topic/crc)

Accessories

Mounting plate HSM

Material:  
Aluminium



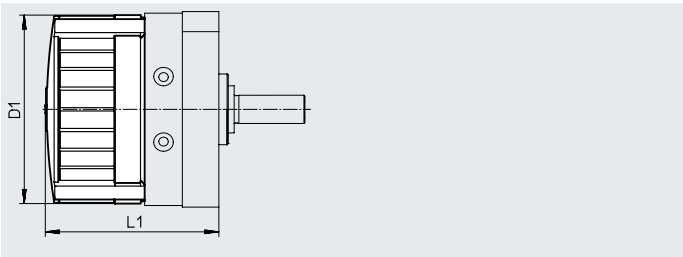
| Dimensions and ordering data |    |          |          |    |     |     |     |                   |               |          |        |
|------------------------------|----|----------|----------|----|-----|-----|-----|-------------------|---------------|----------|--------|
| For size                     | B6 | D16<br>Ø | D17<br>Ø | H2 | L12 | L13 | T4  | CRC <sup>1)</sup> | Weight<br>[g] | Part no. | Type   |
| 12                           | 20 | 8        | 4.5      | 10 | 84  | 72  | 4.6 | 2                 | 48            | 165571   | HSM-12 |
| 16                           | 28 | 10       | 5.5      | 10 | 98  | 84  | 5.7 | 2                 | 80            | 165572   | HSM-16 |
| 25                           | 30 | 11       | 6.6      | 10 | 110 | 95  | 6.8 | 2                 | 94            | 165573   | HSM-25 |
| 32                           | 40 | 15       | 9        | 15 | 145 | 125 | 9   | 2                 | 246           | 165574   | HSM-32 |
| 40                           | 45 | 18       | 11       | 20 | 180 | 155 | 11  | 2                 | 459           | 165575   | HSM-40 |

1) More information: [www.festo.com/x/topic/crc](http://www.festo.com/x/topic/crc)

Cover cap AKM

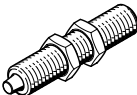
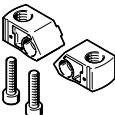
Material:  
Polyamide

Cannot be used in combination with  
inductive proximity sensor SIEN.

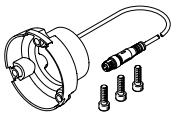


| Dimensions and ordering data |         |           |           |               |          |        |
|------------------------------|---------|-----------|-----------|---------------|----------|--------|
| For size                     | D1<br>Ø | L1        |           |               | Part no. | Type   |
|                              |         | DSM-...   | DSM-T...  | DSM-...-HD... |          |        |
| 12                           | 59      | 56.2±1.2  | 75.2±1.2  | 68.2±1.2      | 549194   | AKM-12 |
| 16                           | 70      | 68±1.2    | 92±1.2    | 82.6±1.2      | 549195   | AKM-16 |
| 25                           | 83      | 73.4±1.2  | 101.5±1.2 | 91.6±1.2      | 549196   | AKM-25 |
| 32                           | 105     | 89.7±1.5  | 126.7±1.5 | 110.2±1.5     | 549197   | AKM-32 |
| 40                           | 130     | 107.1±1.5 | 152.1±1.5 | 136.1±1.5     | 549198   | AKM-40 |

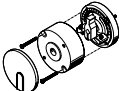
## Accessories

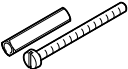
| Ordering data                                                                      |          |                                                                                                                                                                                      |                             |                |                  |
|------------------------------------------------------------------------------------|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|----------------|------------------|
|                                                                                    | For size | Description                                                                                                                                                                          | Part no.                    | Type           | PU <sup>1)</sup> |
| Cushioning kit                                                                     |          |                                                                                                                                                                                      |                             |                |                  |
|   | 12       | <ul style="list-style-type: none"><li>Elastic cushioning components with fixed stop</li><li>Included in the scope of delivery for semi-rotary drive DSM-...-P</li></ul>              | 550657                      | DSM-12-P-B     | 2                |
|                                                                                    | 16, 25   |                                                                                                                                                                                      | 550658                      | DSM-16/25-P-B  |                  |
|                                                                                    | 32       |                                                                                                                                                                                      | 550659                      | DSM-32-P-B     |                  |
|                                                                                    | 40       |                                                                                                                                                                                      | 550660                      | DSM-40-P-B     |                  |
|                                                                                    | 63       |                                                                                                                                                                                      | 552086                      | DSM-63-P-B     |                  |
| Shock absorber                                                                     |          |                                                                                                                                                                                      | Datasheets → Internet: dyef |                |                  |
|   | 12       | <ul style="list-style-type: none"><li>Adjustable, elastic cushioning components with fixed stop</li><li>Included in the scope of delivery for semi-rotary drive DSM-...-P1</li></ul> | 548373                      | DYEF-M8-Y1F    | 1                |
|                                                                                    | 16, 25   |                                                                                                                                                                                      | 548374                      | DYEF-M10-Y1F   |                  |
|                                                                                    | 32       |                                                                                                                                                                                      | 548375                      | DYEF-M12-Y1F   |                  |
|                                                                                    | 40       |                                                                                                                                                                                      | 548377                      | DYEF-M16-Y1F   |                  |
|                                                                                    | 63       |                                                                                                                                                                                      | 1113706                     | DYEF-M22-Y1F   |                  |
| Shock absorber                                                                     |          |                                                                                                                                                                                      | Datasheets → Internet: dysc |                |                  |
|   | 12       | <ul style="list-style-type: none"><li>Self-adjusting shock absorbers with fixed stop</li><li>Included in the scope of delivery for semi-rotary drive DSM-...-CC</li></ul>            | 548011                      | DYSC-5-5-Y1F   | 1                |
|                                                                                    | 16, 25   |                                                                                                                                                                                      | 548012                      | DYSC-7-5-Y1F   |                  |
|                                                                                    | 32       |                                                                                                                                                                                      | 548013                      | DYSC-8-8-Y1F   |                  |
|                                                                                    | 40       |                                                                                                                                                                                      | 548014                      | DYSC-12-12-Y1F |                  |
|                                                                                    | 63       |                                                                                                                                                                                      | 553593                      | DYSC-16-18-Y1F |                  |
| Cushioning mount                                                                   |          |                                                                                                                                                                                      |                             |                |                  |
|  | 12       | <ul style="list-style-type: none"><li>For mounting flexible cushioning elements DSM-...-P-B, DYEF or shock absorber DYSC</li></ul>                                                   | 547900                      | DSM-12-B       | 2                |
|                                                                                    | 16       |                                                                                                                                                                                      | 547901                      | DSM-16-B       |                  |
|                                                                                    | 25       |                                                                                                                                                                                      | 547902                      | DSM-25-B       |                  |
|                                                                                    | 32       |                                                                                                                                                                                      | 547903                      | DSM-32-B       |                  |
|                                                                                    | 40       |                                                                                                                                                                                      | 547904                      | DSM-40-B       |                  |
|                                                                                    | 63       |                                                                                                                                                                                      | 552085                      | DSM-63-B       |                  |

1) Packaging unit

| Ordering data – Position sensor                                                     |          |                                                      |          |                           |                  |
|-------------------------------------------------------------------------------------|----------|------------------------------------------------------|----------|---------------------------|------------------|
|                                                                                     | For size | Description                                          | Part no. | Type                      | PU <sup>1)</sup> |
|  | 6        | • For sensing the end positions                      | 2619969  | SRBS-Q12-6-E270-EP-1-S-M8 | 1                |
|                                                                                     | 8        | • Simple and reliable operation using one pushbutton | 2619972  | SRBS-Q12-8-E270-EP-1-S-M8 |                  |
|                                                                                     | 10       | • Only one connecting cable required                 | 2412001  | SRBS-Q1-10-E270-EP-1-S-M8 |                  |
|                                                                                     |          | • Possible sensing range: 0 ... 270°                 |          |                           |                  |
|                                                                                     |          | • Repetition accuracy: ≤ 1°                          |          |                           |                  |
|                                                                                     |          | • Number of switching outputs: 2                     |          |                           |                  |
|                                                                                     |          | • Switching output: PNP/NPN                          |          |                           |                  |
|                                                                                     |          | • Switching element: N/O contact / N/C contact       |          |                           |                  |

## Accessories

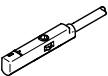
| Ordering data – Kits                                                             |          |                                           |                            |               |
|----------------------------------------------------------------------------------|----------|-------------------------------------------|----------------------------|---------------|
|                                                                                  | For size | Description                               | Part no.                   | Type          |
| Mounting kit                                                                     |          |                                           | Datasheets → Internet: wsm |               |
|  | 6        | Via proximity switches SME/SMT-10         | 173205                     | WSM-6-SME-10  |
|                                                                                  | 8        |                                           | 173206                     | WSM-8-SME-10  |
|                                                                                  | 10       |                                           | 173207                     | WSM-10-SME-10 |
| Stop kit                                                                         |          |                                           | Datasheets → Internet: ksm |               |
|  | 6        | For adjusting the swivel angle, max. 180° | 175833                     | KSM-6         |
|                                                                                  | 8        |                                           | 175834                     | KSM-8         |
|                                                                                  | 10       | For adjusting the swivel angle, max. 200° | 175835                     | KSM-10        |

| Ordering data – Adapter kit                                                      |          |                                                |          |               |
|----------------------------------------------------------------------------------|----------|------------------------------------------------|----------|---------------|
|                                                                                  | For size | Description                                    | Part no. | Type          |
|  | 6        | For attaching mounting kit WSM to stop kit KSM | 3617044  | DADP-AK-Q1-6  |
|                                                                                  | 8        |                                                | 3617045  | DADP-AK-Q1-8  |
|                                                                                  | 10       |                                                | 3617046  | DADP-AK-Q1-10 |

| Ordering data – Sensor brackets                                                    |                    |                                         |          |               |                  |
|------------------------------------------------------------------------------------|--------------------|-----------------------------------------|----------|---------------|------------------|
|                                                                                    | For size           | Description                             | Part no. | Type          | PU <sup>1)</sup> |
|    | 12, 16, 25, 32, 40 | For proximity switches SME-/SMT-10      | 550661   | SL-DSM-B      | 2                |
|                                                                                    | 63                 | For proximity switches SME-/SMT-8       | 552088   | SL-DSM-63-B   | 2                |
|  | 12, 16, 25, 32, 40 | For inductive proximity sensors SIEN-M5 | 1130882  | SL-DSM-S-M5-B | 2                |
|                                                                                    |                    | For inductive proximity sensors SIEN-M8 | 1132360  | SL-DSM-S-M8-B |                  |

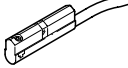
1) Packaging unit

## Proximity switches for size 6, 8, 10, 12, 25, 32, 40 (not suitable for size 16)

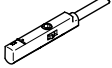
| Ordering data – Proximity switch for C-slot, magneto-resistive <span style="float: right;">Datasheets → Internet: smt</span> |                                                                                                                                        |                  |                                                       |                  |          |                            |
|------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|------------------|-------------------------------------------------------|------------------|----------|----------------------------|
|                                                                                                                              | Type of mounting                                                                                                                       | Switching output | Electrical connection, Outlet direction of connection | Cable length [m] | Part no. | Type                       |
| N/O                                                                                                                          |                                                                                                                                        |                  |                                                       |                  |          |                            |
|                                            | With size 6, 8, 10:<br>Via mounting kit WSM-...SME-10<br>With size 12, 25, 32, 40:<br>Mounted on the DSM using sensor bracket SL-DSM-B | PNP              | Cable, 3-core, lengthwise                             | 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 |

## Accessories

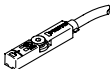
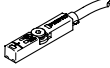
## Proximity switch for size 6 ... 40

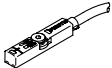
| Ordering data – Proximity switch for C-slot, magnetic reed                        |                                                                                                                                   |                  |                                                       |                  |          |                  | Datasheets → Internet: sme |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|------------------|-------------------------------------------------------|------------------|----------|------------------|----------------------------|
|                                                                                   | Type of mounting                                                                                                                  | Switching output | Electrical connection, Outlet direction of connection | Cable length [m] | Part no. | Type             |                            |
| N/O                                                                               |                                                                                                                                   |                  |                                                       |                  |          |                  |                            |
|  | With size 6, 8, 10:<br>Via mounting kit WSM-...SME-10<br>With size 12 ... 40:<br>Mounted on the DSM using sensor bracket SL-DSM-B | Contacting       | Cable, 3-core, lengthwise                             | 2.5              | 173210   | SME-10-KL-LED-24 |                            |
|                                                                                   |                                                                                                                                   |                  | Plug M8x1, 3-pin, in-line                             | 0.3              | 173212   | SME-10-SL-LED-24 |                            |

## Proximity switch for size 12 ... 40

| Ordering data – Proximity switch for C-slot, magnetic reed                        |                                                  |                  |                                                       |                  |          |                            | Datasheets → Internet: sme |
|-----------------------------------------------------------------------------------|--------------------------------------------------|------------------|-------------------------------------------------------|------------------|----------|----------------------------|----------------------------|
|                                                                                   | Type of mounting                                 | Switching output | Electrical connection, Outlet direction of connection | Cable length [m] | Part no. | Type                       |                            |
| N/O                                                                               |                                                  |                  |                                                       |                  |          |                            |                            |
|  | Mounted on the DSM using sensor bracket SL-DSM-B | Contacting       | Cable, 3-core, lengthwise                             | 2.5              | 551365   | SME-10M-DS-24V-E-2.5-L-OE  |                            |
|                                                                                   |                                                  |                  | Plug M8x1, 3-pin, in-line                             | 0.3              | 551367   | SME-10M-DS-24V-E-0.3-L-M8D |                            |

## Proximity switches for size 63

| Ordering data – Proximity switch for T-slot, magneto-resistive                      |                                                                                |                  |                       |                  |          |                           | Datasheets → Internet: smt |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|------------------|-----------------------|------------------|----------|---------------------------|----------------------------|
|                                                                                     | Type of mounting                                                               | Switching output | Electrical connection | Cable length [m] | Part no. | Type                      |                            |
| N/O                                                                                 |                                                                                |                  |                       |                  |          |                           |                            |
|  | Inserted in the slot from above, flush with the cylinder profile, short design | PNP              | Cable, 3-core         | 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 |                            |
|                                                                                     |                                                                                |                  | 1x M12 plug, 3-pin    | 0.3              | 574337   | SMT-8M-A-PS-24V-E-0.3-M12 |                            |
|                                                                                     |                                                                                | NPN              | Cable, 3-core         | 2.5              | 574338   | SMT-8M-A-NS-24V-E-2.5-OE  |                            |
|                                                                                     |                                                                                |                  | 1x M8 plug, 3-pin     | 0.3              | 574339   | SMT-8M-A-NS-24V-E-0.3-M8D |                            |
| N/C                                                                                 |                                                                                |                  |                       |                  |          |                           |                            |
|  | Inserted in the slot from above, flush with the cylinder profile, short design | PNP              | Cable, 3-core         | 7.5              | 574340   | SMT-8M-A-PO-24V-E-7.5-OE  |                            |

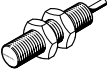
| Ordering data – Proximity switch for T-slot, magnetic reed                          |                                                                  |                  |                       |                  |          |                         | Datasheets → Internet: sme |
|-------------------------------------------------------------------------------------|------------------------------------------------------------------|------------------|-----------------------|------------------|----------|-------------------------|----------------------------|
|                                                                                     | Type of mounting                                                 | Switching output | Electrical connection | Cable length [m] | Part no. | Type                    |                            |
| N/O                                                                                 |                                                                  |                  |                       |                  |          |                         |                            |
|  | Inserted in the slot from above, flush with the cylinder profile | Contacting       | Cable, 3-core         | 2.5              | 543862   | SME-8M-DS-24V-K-2.5-OE  |                            |
|                                                                                     |                                                                  |                  |                       | 5.0              | 543863   | SME-8M-DS-24V-K-5.0-OE  |                            |
|                                                                                     |                                                                  |                  | Cable, 2-core         | 2.5              | 543872   | SME-8M-ZS-24V-K-2.5-OE  |                            |
|                                                                                     |                                                                  |                  | Plug M8x1, 3-pin      | 0.3              | 543861   | SME-8M-DS-24V-K-0.3-M8D |                            |

## Accessories

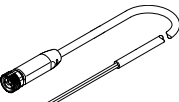
## Inductive proximity sensors for size 12 ... 40

## Ordering data – Proximity switches, inductive

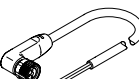
Datasheets → Internet: sien

|                                                                                  | Thread | Contact | Connection   | Part no.      | Type                   |
|----------------------------------------------------------------------------------|--------|---------|--------------|---------------|------------------------|
|  | M5     | N/O     | Cable, 2.5 m | <b>150370</b> | <b>SIEN-M5B-PS-K-L</b> |
|                                                                                  |        |         | Plug         | <b>150371</b> | <b>SIEN-M5B-PS-S-L</b> |
|                                                                                  | M8     | N/O     | Cable, 2.5 m | <b>150386</b> | <b>SIEN-M8B-PS-K-L</b> |
|                                                                                  |        |         | Plug         | <b>150387</b> | <b>SIEN-M8B-PS-S-L</b> |

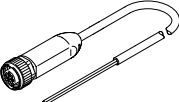
## Connecting cables NEBA, straight, M8 connection

|                                                                                  | Electrical connection 1, connection technology | Electrical connection 2, connection technology | Electrical connection 2, number of pins/cores | Cable length | Part no.       | Type                         |
|----------------------------------------------------------------------------------|------------------------------------------------|------------------------------------------------|-----------------------------------------------|--------------|----------------|------------------------------|
|  | M8x1 A-coded to EN 61076-2-104                 | Open end                                       | 3                                             | 2.5 m        | <b>8078223</b> | <b>NEBA-M8G3-U-2.5-N-LE3</b> |
|                                                                                  |                                                |                                                |                                               | 5 m          | <b>8078224</b> | <b>NEBA-M8G3-U-5-N-LE3</b>   |

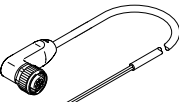
## Connecting cables NEBA, angled, M8 connection

|                                                                                   | Electrical connection 1, connection technology | Electrical connection 2, connection technology | Electrical connection 2, number of pins/cores | Cable length | Part no.       | Type                         |
|-----------------------------------------------------------------------------------|------------------------------------------------|------------------------------------------------|-----------------------------------------------|--------------|----------------|------------------------------|
|  | M8x1 A-coded to EN 61076-2-104                 | Open end                                       | 3                                             | 2.5 m        | <b>8078230</b> | <b>NEBA-M8W3-U-2.5-N-LE3</b> |
|                                                                                   |                                                |                                                |                                               | 5 m          | <b>8078231</b> | <b>NEBA-M8W3-U-5-N-LE3</b>   |

## Connecting cables NEBA, straight, M12 connection

|                                                                                    | Electrical connection 1, connection technology | Electrical connection 2, connection technology | Electrical connection 2, number of pins/cores | Cable length | Part no.       | Type                          |
|------------------------------------------------------------------------------------|------------------------------------------------|------------------------------------------------|-----------------------------------------------|--------------|----------------|-------------------------------|
|  | M12x1, A-coded to EN 61076-2-101               | Open end                                       | 3                                             | 2.5 m        | <b>8078236</b> | <b>NEBA-M12G5-U-2.5-N-LE3</b> |
|                                                                                    |                                                |                                                |                                               | 5 m          | <b>8078237</b> | <b>NEBA-M12G5-U-5-N-LE3</b>   |

## Connecting cables NEBA, angled, M12 connection

|                                                                                    | Electrical connection 1, connection technology | Electrical connection 2, connection technology | Electrical connection 2, number of pins/cores | Cable length | Part no.       | Type                          |
|------------------------------------------------------------------------------------|------------------------------------------------|------------------------------------------------|-----------------------------------------------|--------------|----------------|-------------------------------|
|  | M12x1, A-coded to EN 61076-2-101               | Open end                                       | 3                                             | 2.5 m        | <b>8078245</b> | <b>NEBA-M12W5-U-2.5-N-LE3</b> |
|                                                                                    |                                                |                                                |                                               | 5 m          | <b>8078246</b> | <b>NEBA-M12W5-U-5-N-LE3</b>   |



## Accessories

| Ordering data – One-way flow control valves                                       |            |                   |                 |              | Datasheets → Internet: grla |                  |
|-----------------------------------------------------------------------------------|------------|-------------------|-----------------|--------------|-----------------------------|------------------|
|                                                                                   | For size   | Connection Thread | For tubing O.D. | Material     | Part no.                    | Type             |
| <b>For exhaust air</b>                                                            |            |                   |                 |              |                             |                  |
|  | 12, 16, 25 | M5                | 3               | Metal design | 193137                      | GRLA-M5-QS-3-D   |
|                                                                                   |            |                   | 4               |              | 193138                      | GRLA-M5-QS-4-D   |
|                                                                                   |            |                   | 6               |              | 193139                      | GRLA-M5-QS-6-D   |
|                                                                                   | 32, 40     | G1/8              | 3               |              | 193142                      | GRLA-1/8-QS-3-D  |
|                                                                                   |            |                   | 4               |              | 193143                      | GRLA-1/8-QS-4-D  |
|                                                                                   |            |                   | 6               |              | 193144                      | GRLA-1/8-QS-6-D  |
|                                                                                   |            |                   | 8               |              | 193145                      | GRLA-1/8-QS-8-D  |
|                                                                                   |            |                   | 10              |              | 193147                      | GRLA-1/4-QS-8-D  |
|                                                                                   | 63         | G1/4              | 8               |              | 193147                      | GRLA-1/4-QS-8-D  |
|                                                                                   |            |                   | 10              |              | 193148                      | GRLA-1/4-QS-10-D |

| Ordering data – Centring sleeves for DSM-...-HD                                     |           |                                                              |          |            | Datasheets → Internet: zbh |  |
|-------------------------------------------------------------------------------------|-----------|--------------------------------------------------------------|----------|------------|----------------------------|--|
|                                                                                     | For size  | Description                                                  | Part no. | Type       | PU <sup>1)</sup>           |  |
|    | 12, 16    | For centring the drive in the case of side mounting          | 8146544  | ZBH-7-B    | 10                         |  |
|                                                                                     | 25        |                                                              | 8137184  | ZBH-9-B    |                            |  |
|                                                                                     | 32 ... 63 |                                                              | 8137185  | ZBH-12-B   |                            |  |
|                                                                                     | 12        | For centring attachments on the rotating plate               | 8146543  | ZBH-5-B    |                            |  |
|                                                                                     | 16 ... 32 |                                                              | 8146544  | ZBH-7-B    |                            |  |
|                                                                                     | 40, 63    |                                                              | 8137185  | ZBH-12-B   |                            |  |
|                                                                                     | 12, 16    | For centring attachments in the middle of the rotating plate | 8137185  | ZBH-12-B   |                            |  |
|                                                                                     | 25        |                                                              | 191409   | ZBH-15     |                            |  |
|  | 40, 63    | For centring attachments in the middle of the rotating plate | 8023856  | ZBH-25     | 1                          |  |
|                                                                                     |           |                                                              | 150901   | SLZZ-25/16 |                            |  |

1) Packaging unit