

Swivel modules DSM/DSM-B



# Swivel modules DSM/DSM-B

Key features

FESTO

## At a glance

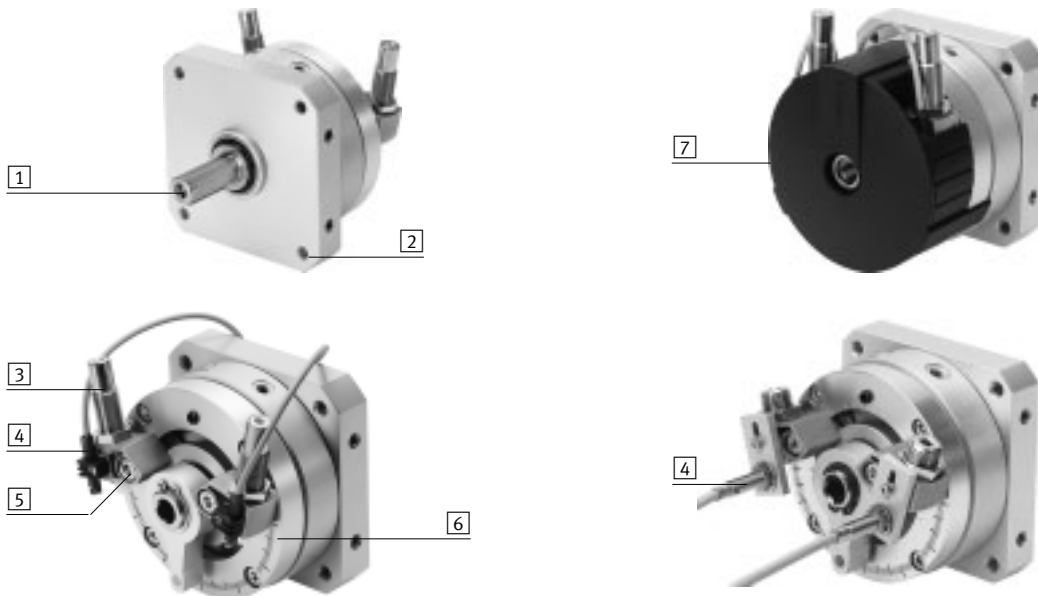
- Double-acting swivel module with rotary vanes
- The swivel angle is infinitely adjustable over the entire swivel range
- High precision thanks to metal fixed stops
- Polyurethane ensures a long service life for the rotary vane and sealing system
- Easy precision adjustment of the end positions using the cushioning components
- The mechanical gearing between the stop element and the swivel module 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



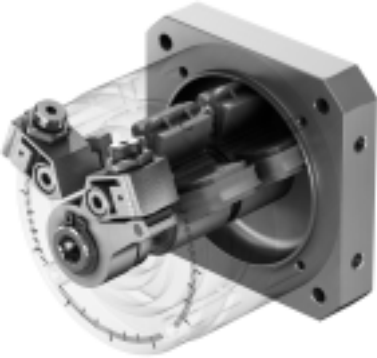
- 1** Interface
  - Choice of:
    - Spigot shaft
    - Flanged shaft
- 2** Wide range of mounting options
- 3** Cushioning with size 6 ... 10:
  - Elastic cushioning components with metal fixed stop (P)
  - Adjustable, elastic cushioning components (P1)
  - Hydraulic shock absorbers (CC)
- 3** Cushioning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

# Swivel modules DSM/DSM-B

Key features

## Wide choice of variants

DSM-T-...: Swivel module with tandem rotary vanes



The arrangement of two rotary vanes on the multi-tooth shaft enables torques of up to 80 Nm to be achieved.

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

- Infinitely adjustable swivel angle
- Identical interfaces
- Identical accessories

DSM-...-HD: Swivel module with heavy-duty bearing



Backlash-free, preloaded, high-quality bearing elements allow very high load torques and very precise bearing with high 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

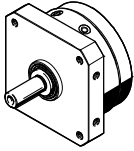
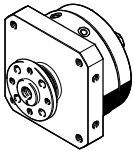
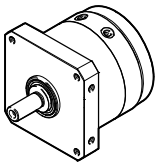
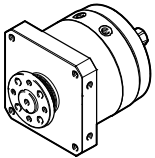
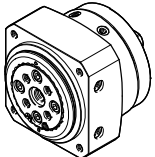
# Swivel modules DSM/DSM-B

Product range overview



## Characteristic values of the swivel modules

The specifications shown in the table are maximum values. The precise values for each of the sizes can be found in the relevant technical data in the catalogue.

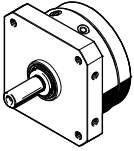
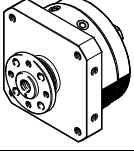
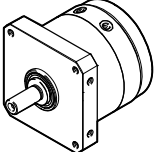
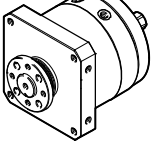
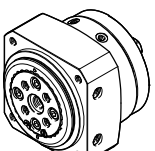
Version	Type	Size	Swivel angle [°]	Torque [Nm]	Axial force [N]	Radial force [N]
<b>Spigot shaft</b>						
	DSM-...	6, 8, 10	90, 180	0.85	10	30
		10	240			
		12, 16, 25, 32, 40, 63	270	40	500	500
		12, 16, 25, 32	246			
		40, 63	240			
<b>Flanged shaft</b>						
	DSM-...-FW	6, 8, 10	90, 180	0.85	10	30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

# Swivel modules DSM/DSM-B

Product range overview

## Characteristic values of the swivel modules

The specifications shown in the table are maximum values. The precise values for each of the sizes can be found in the relevant technical data in the catalogue.

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

- 1) The cushioning type P1 can be ordered as an accessory (→ 53).
- 2) The stop kit (adjustable swivel angle) can be ordered as an accessory (→ 53).
- 3) The mounting kit (for position sensing) can be ordered as an accessory (→ 53).

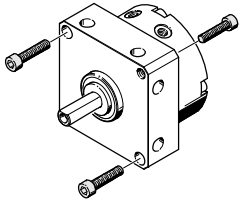
# Swivel modules DSM/DSM-B

Key features

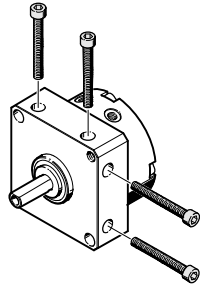
## Mounting options

Size 6 ... 10

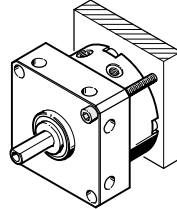
Via threaded through-holes/  
through-holes



Via through-holes, lateral

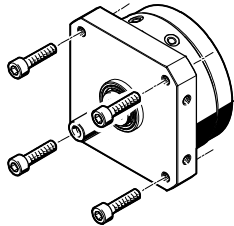


Via threaded holes, lateral

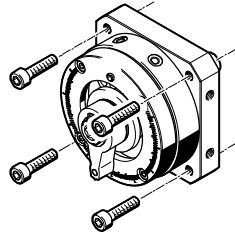


Size 12 ... 63

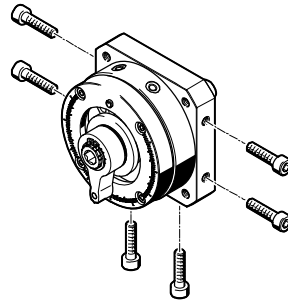
Via threaded through-holes



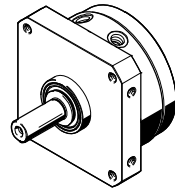
Via through-holes



Via threaded holes, lateral

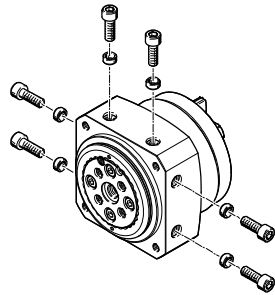


Centring via centring collar

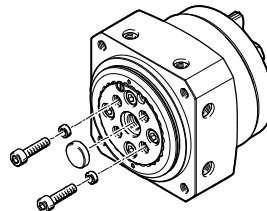


## Special mounting options for DSM-...-HD

Via threaded holes, lateral



Of attachments



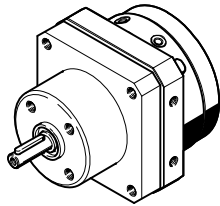
Positive-locking connections possible through use of centring sleeves ZBH.

# Swivel modules DSM/DSM-B

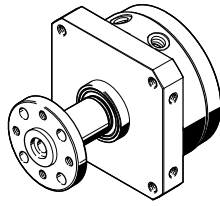
Key features

## Accessories

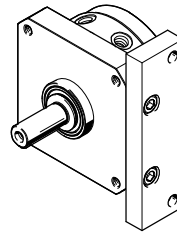
Freewheel unit FLSM  
Size 6 ... 40



Push-on flange FWSR  
Size 6 ... 40



Mounting plate HSM  
Size 12 ... 40

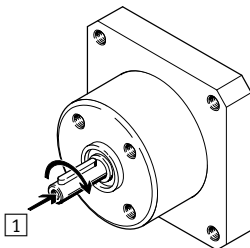


## Direction of rotation in combination with freewheel unit FLSM

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

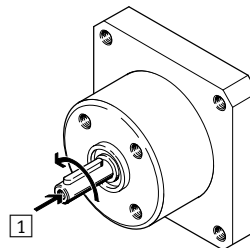
Dimensions and ordering data → 49

### FLSM-...-R, right-hand (clockwise) rotation



1 View towards drive shaft

### FLSM-...-L, left-hand (anti-clockwise) rotation



# Swivel modules DSM

Type codes DSM-6 ... 10

## DSM-...: Swivel module

		DSM	-	8	-	180	-	P	-	A	-	FF	-	FW
<b>Type</b>														
Double-acting														
DSM	Swivel module													
<b>Size [mm]</b>														
<b>Swivel angle [°]</b>														
<b>Cushioning</b>														
P	Elastic cushioning rings/pads at both ends													
<b>Position sensing</b>														
-	No position sensing													
A	Via proximity sensor													
<b>Adjustable swivel angle</b>														
-	Fixed swivel angle													
FF	Adjustable swivel angle													
<b>Shaft</b>														
-	Spigot shaft													
FW	Flanged shaft													

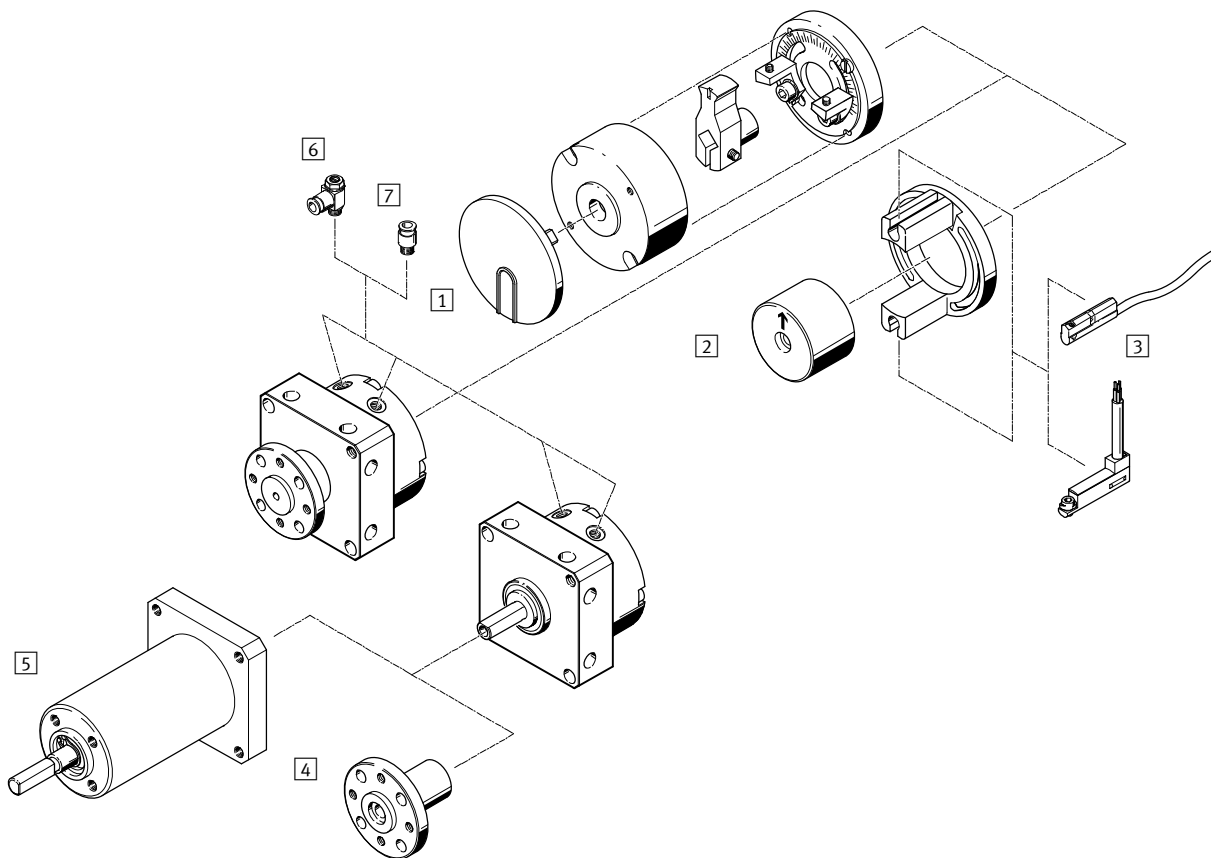
## DSM-T-...: Swivel module with tandem rotary vanes

		DSM	-	T	-	8	-	180	-	P	-	FW
<b>Type</b>												
Double-acting												
DSM	Swivel module											
<b>Design</b>												
T	Tandem rotary vanes											
<b>Size [mm]</b>												
<b>Swivel angle [°]</b>												
<b>Cushioning</b>												
P	Elastic cushioning rings/pads at both ends											
<b>Shaft</b>												
-	Spigot shaft											
FW	Flanged shaft											



# Swivel modules DSM

Peripherals overview DSM-6 ... 10



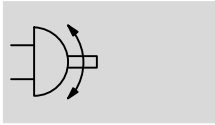
Accessories		→ Page/Internet
	Brief description	
1	Stop kit KSM	53
2	Mounting kit WSM-...-SME-10	53
3	Proximity sensor SME/SMT-10	54
4	Push-on flange FWSR	51
5	Freewheel unit FLSM	49
6	One-way flow control valve GRLA	56
7	Push-in fitting QS	quick star

# Swivel modules DSM

Technical data DSM-6 ... 10

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Function



Size  
6 ... 10

General technical data				
Size		6	8	10
Pneumatic connection		M3		
Design		Rotary vane		
Cushioning		Elastic cushioning rings/pads at both ends		
Type of mounting		Via 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 in accordance with 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		Specified types → <a href="http://www.festo.com">www.festo.com</a>		

1) Note operating range of proximity sensors

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	[N]	10		
Max. permissible radial force on drive shaft	[N]	15	20	30
Max. perm. mass moment of inertia on drive shaft <sup>1)</sup>	[kgm <sup>2</sup> ]	0.00065	0.0013	0.0026

1) Maximum value, please see graphs → 12

# Swivel modules DSM

Technical data 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 flanged shaft</b>			
DSM-T-...-P-FW	65	117	210

## Materials

Sectional view

With spigot shaft

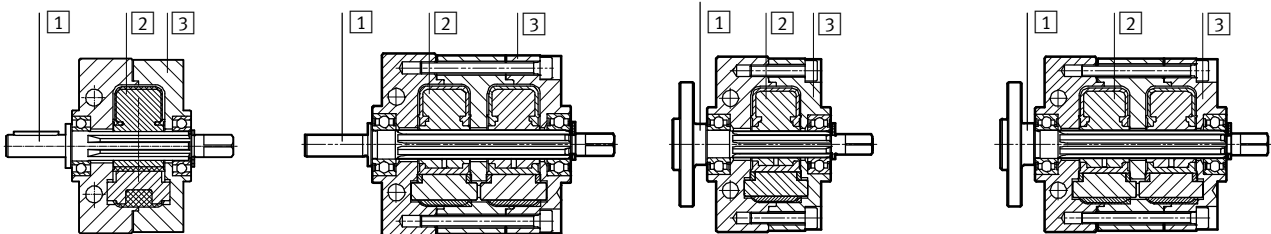
DSM-...

DSM-T-...

With flanged shaft

DSM-...-FW

DSM-T-...-FW



Swivel module	
1 Shaft	High-alloy stainless steel
2 Rotary vane	Glass fibre-reinforced plastic
3 Housing	Anodised aluminium
- Screws	Galvanised steel
- Seals	Polyurethane
- Note on materials	Free of copper and PTFE
	RoHS-compliant

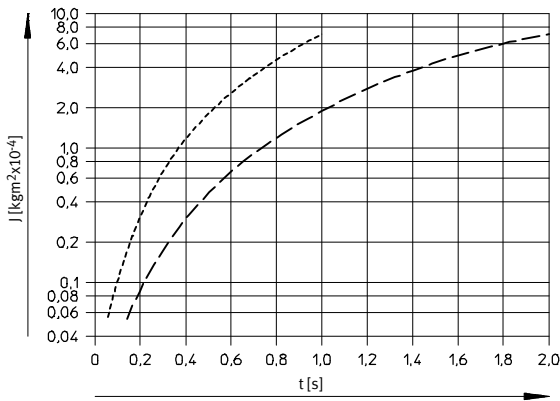
# Swivel modules DSM

Technical data DSM-6 ... 10

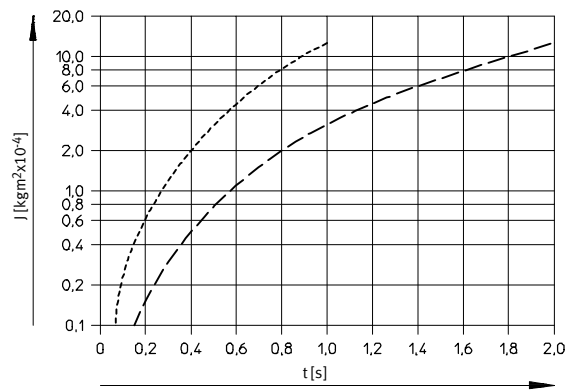


## Mass moment of inertia J as a function of swivel time t

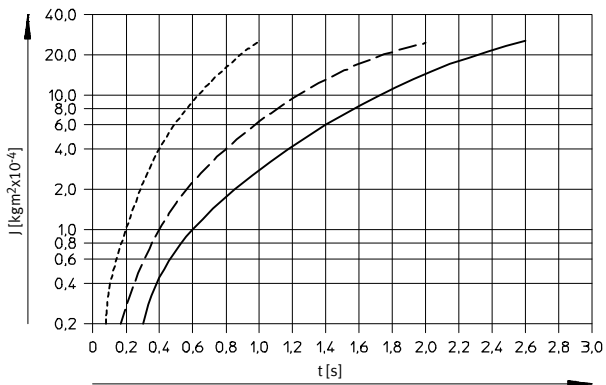
DSM-6



DSM-8



DSM-10



- - - 90°
- - - 180°
- 240°

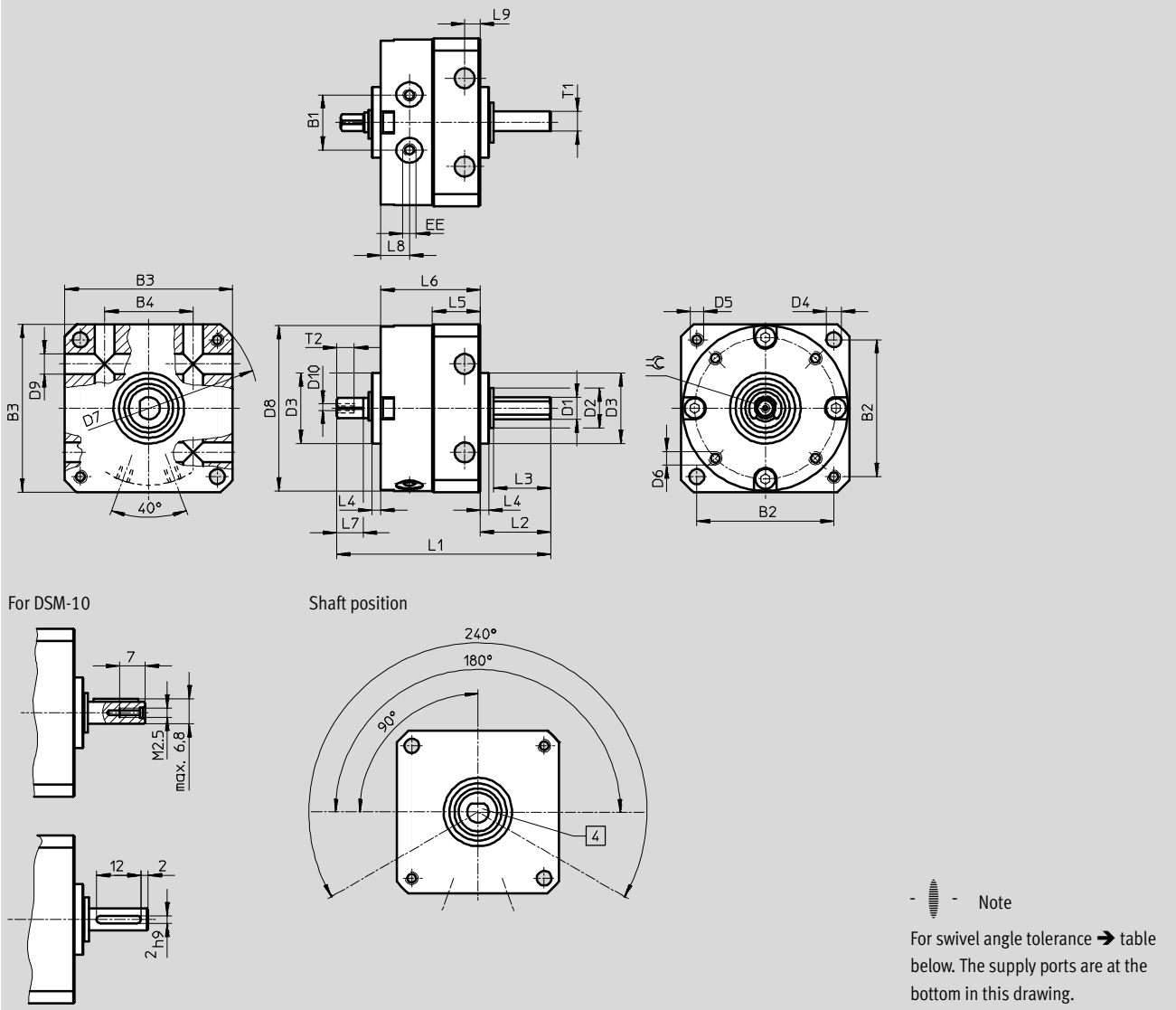
# Swivel modules DSM

Technical data DSM-6 ... 10

## Dimensions

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

DSM-... – With spigot shaft



Size	B1	B2	B3	B4	D1 ∅ g7	D2 ∅	D3 ∅ f8	D4 ∅ H12	D5	D6	D7 ∅ H12	D8 ∅	D9 ∅ 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 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°

# Swivel modules DSM

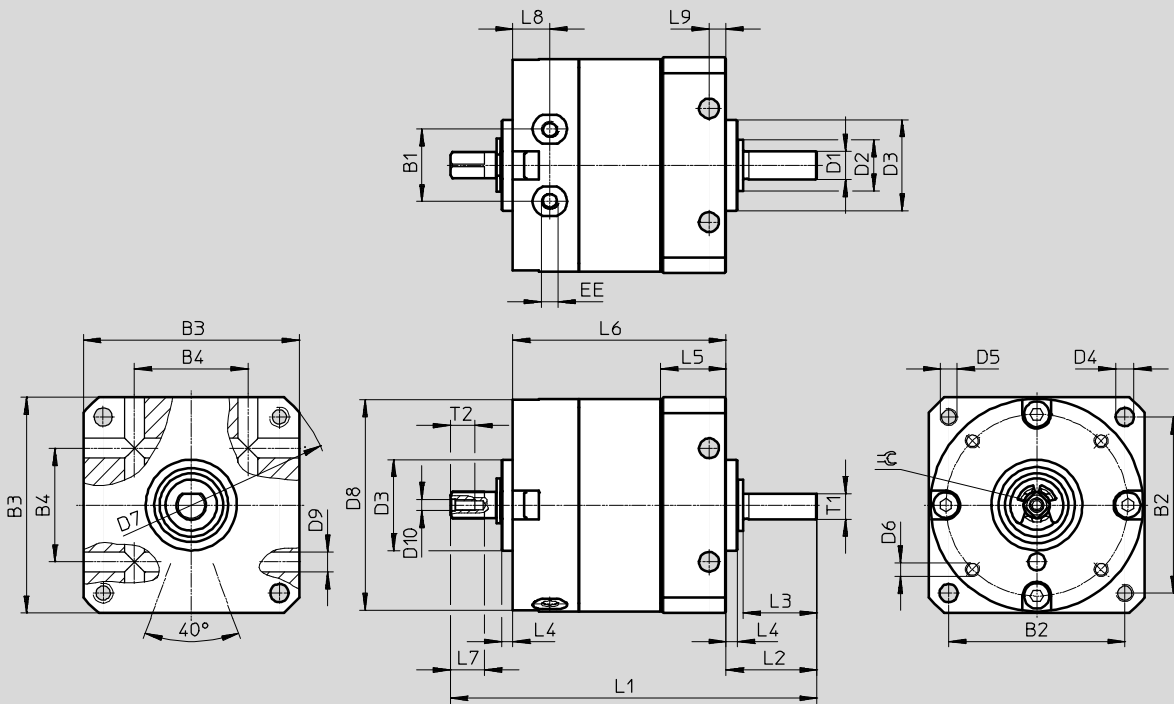
Technical data DSM-6 ... 10



## Dimensions

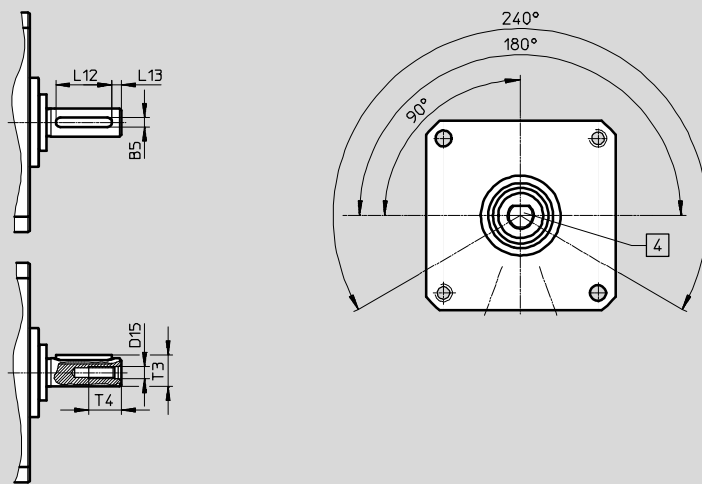
Download CAD data → [www.festo.com](http://www.festo.com)

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



For DSM-T-10

Shaft position



Note

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

Size	B1	B2	B3	B4	D1 ∅ g7	D2 ∅	D3 ∅ f8	D4 ∅ H12	D5	D6	D7 ∅ H12	D8 ∅	D9 ∅ 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 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°

# Swivel modules DSM

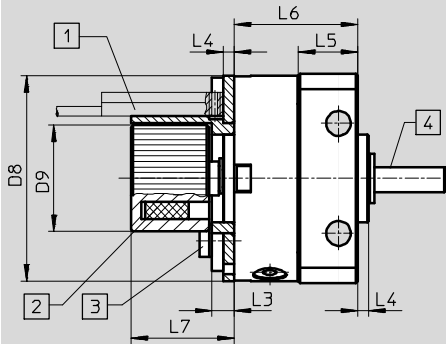
Technical data DSM-6 ... 10

## 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 sensor not included in the scope of delivery. Observe fitting space for proximity sensor and cable

2 Magnet position

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

4 The flat or feather key on the shaft indicates the position of the rotary vane

Size	D8 ∅	D9 ∅	L3	L4	L5	L6		L7	Tightening torque [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

# Swivel modules DSM

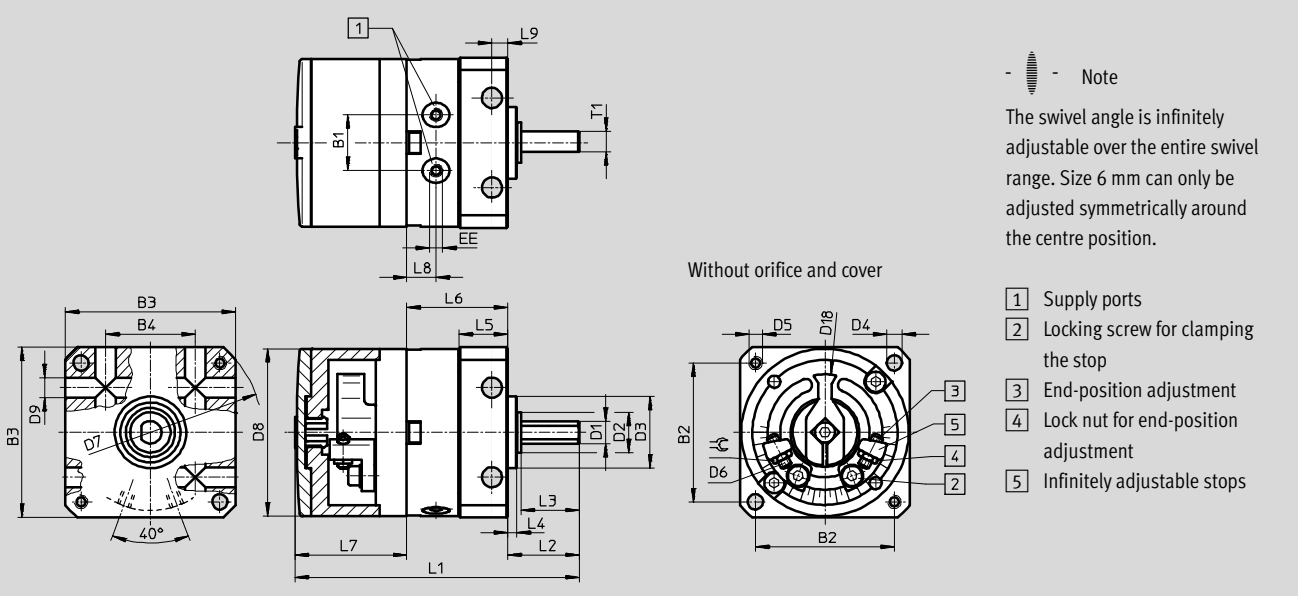
Technical data DSM-6 ... 10

## Dimensions

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

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

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



Size	B1	B2	B3	B4	D1 Ø g7	D2 Ø	D3 Ø f8	D4 Ø H12	D5	D6	D7 Ø H12	D8 Ø	D9 Ø H12	D18 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	⌀	Max. swivel angle	Precision adjustment per end
					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°



# Swivel modules DSM

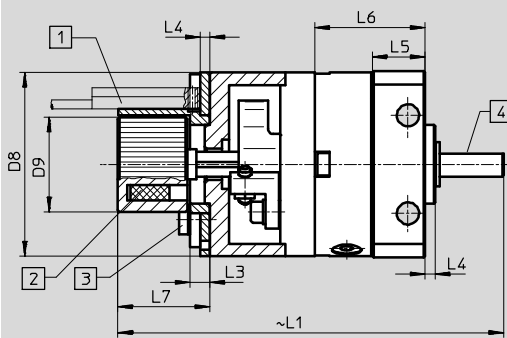
Technical data DSM-6 ... 10

## Dimensions

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

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 sensor and cable

2 Magnet position

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

4 The flat or feather key on the shaft indicates the position of the rotary vane

Size	D8 ∅	D9	L1		L3	L4	L5	L6		L7	Tightening torque [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

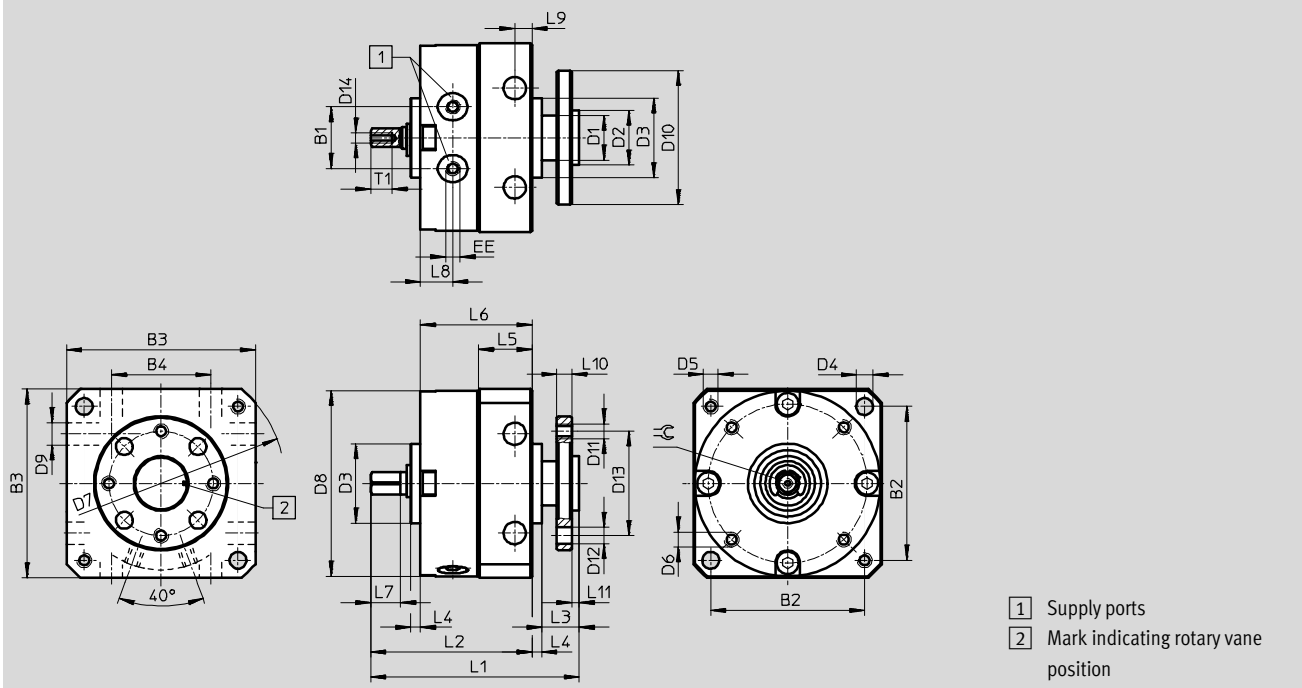
# Swivel modules DSM

Technical data DSM-6 ... 10

## Dimensions

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

DSM-... – With flanged shaft



Size	B1	B2	B3	B4	D1 ∅	D2 ∅ g7	D3 ∅ f8	D4 ∅	D5	D6	D7 ∅ H12	D8 ∅	D9 ∅ H12	D10 ∅	D11	D12 ∅ H13	D13 ∅
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 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°

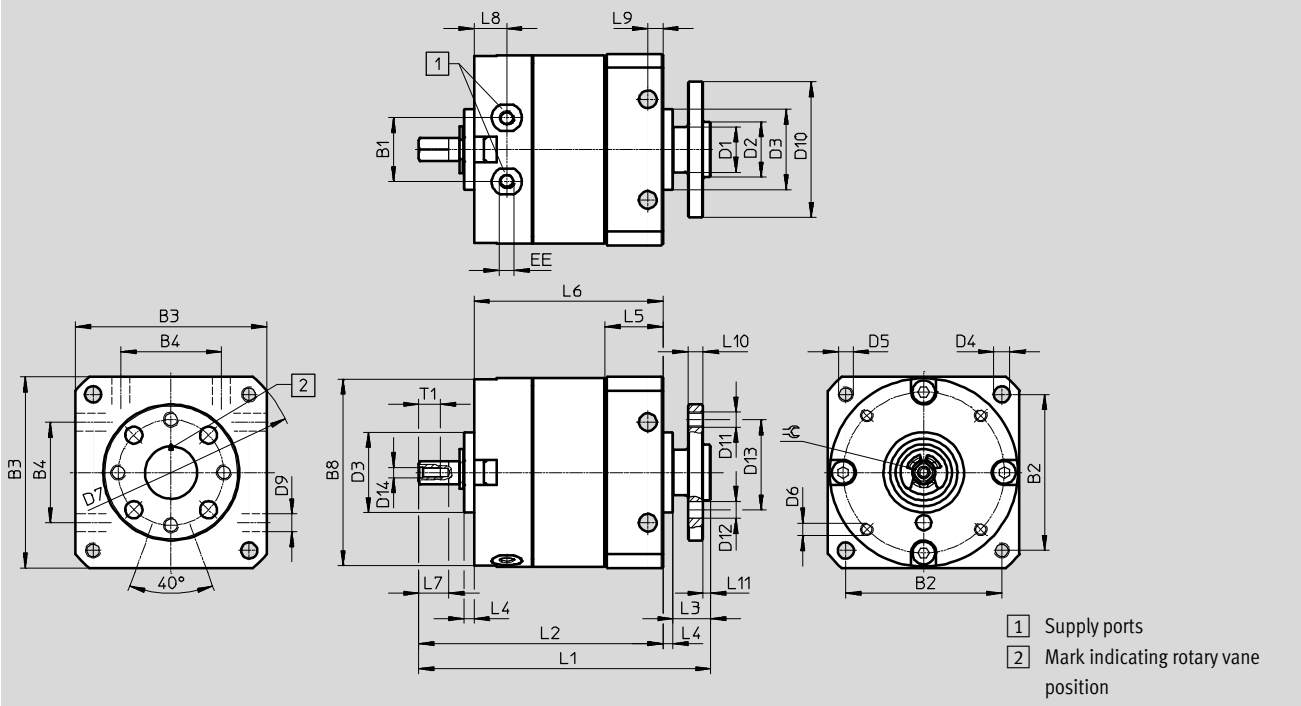
# Swivel modules DSM

Technical data DSM-6 ... 10

## Dimensions

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

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



Size	B1	B2	B3	B4	D1 ∅	D2 ∅ g7	D3 ∅ f8	D4 ∅	D5	D6	D7 ∅ H12	D8 ∅	D9 ∅ H12	D10 ∅	D11	D12 ∅ H13	D13 ∅
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	≈C	Swivel angle 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°

# Swivel modules DSM

Technical data DSM-6 ... 10

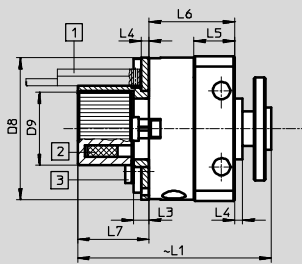


## Dimensions

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

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

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



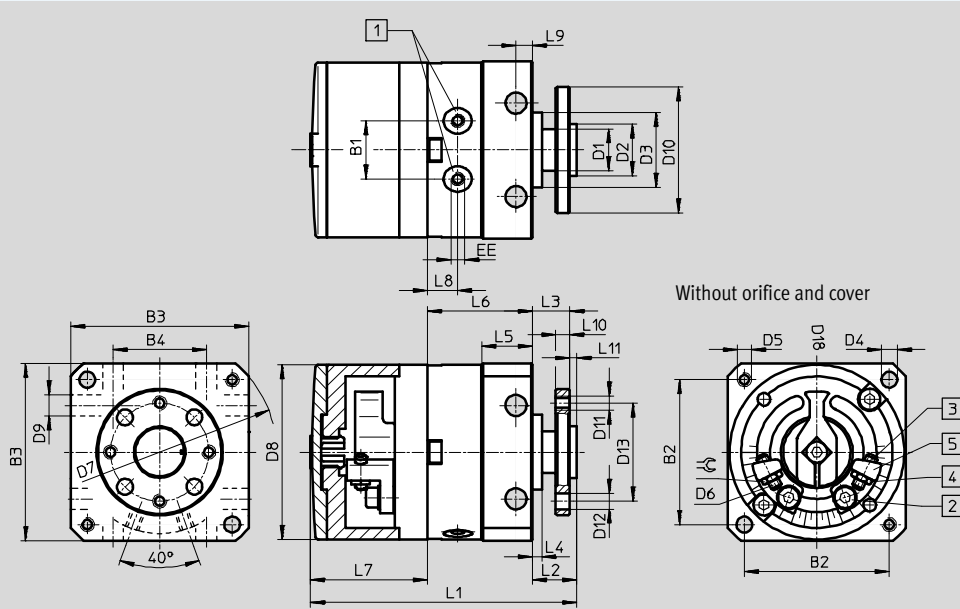
1 Proximity sensor not included in the scope of delivery. Observe fitting space for proximity sensor and cable

2 Magnet position  
3 Max. tightening torque for sensor bracket screw → table below

Size	D8 ∅	D9 ∅	L1		L3	L4	L5	L6		L7	Tightening torque [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 flanged shaft and adjustable swivel angle

DSM-T... – With flanged 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 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 ∅	D2 ∅ g7	D3 ∅ f8	D4 ∅ H12	D5	D6	D7 ∅ H12	D8 ∅	D9 ∅ H12	D10 ∅	D11	D12 ∅ H13	D13 ∅	D18 ∅	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	≈C	Max. swivel angle	Precision adjustment per end
	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°

# Swivel modules DSM

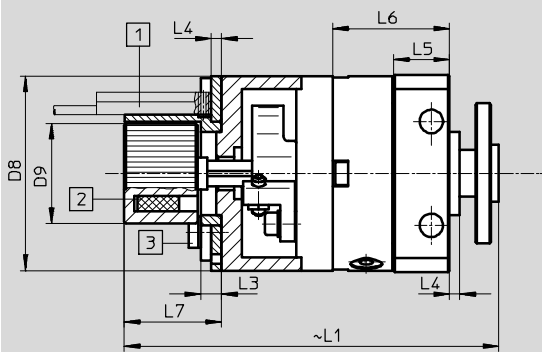
Technical data DSM-6 ... 10

## Dimensions

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

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

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



1 Proximity sensor not included in the scope of delivery. Observe fitting space for proximity sensor and cable

2 Magnet position

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

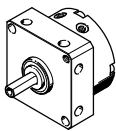
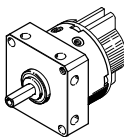
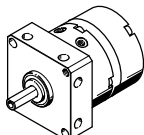
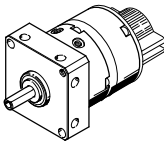
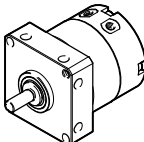
Note

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

Size	D8 ∅	D9 ∅	L1		L3	L4	L5	L6		L7	Tightening torque [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

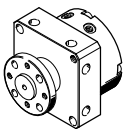
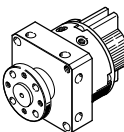
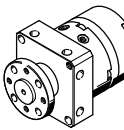
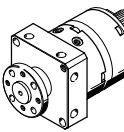
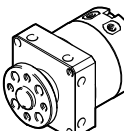
# Swivel modules DSM

Technical data DSM-6 ... 10

Ordering data							
Swivel module	Features	Swivel angle	Size [mm]	Part No.	Type		
Spigot shaft							
	<ul style="list-style-type: none"> <li>Elastic cushioning rings/pads 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/pads 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/pads 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/pads at both ends</li> </ul>	180°	6	175830	DSM-6-180-P-A-FF		
			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/pads at both ends</li> </ul>	90°	6	1564894	DSM-T-6-90-P		
			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	

# Swivel modules DSM

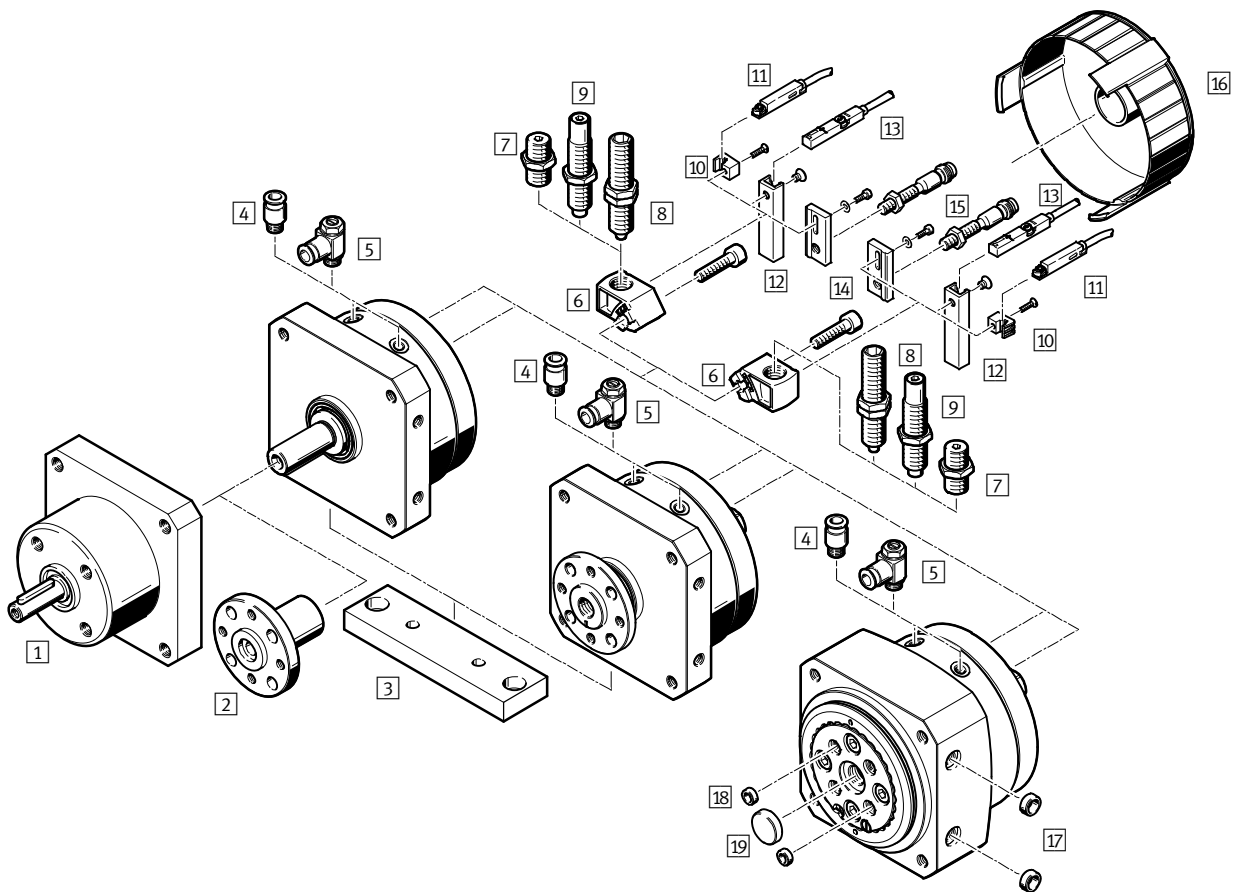
Technical data DSM-6 ... 10

Ordering data							
Swivel module	Features	Swivel angle	Size [mm]	Part No.	Type		
Flanged shaft							
	<ul style="list-style-type: none"> <li>Elastic cushioning rings/pads 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/pads 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/pads 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/pads 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/pads 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

# Swivel modules DSM-B

Peripherals overview DSM-12 ... 63

FESTO





## Swivel modules DSM-B

Peripherals overview DSM-12 ... 63

Accessories	For size	Brief description	→ Page/ Internet
1 Freewheel unit FLSM	12 ... 40	<ul style="list-style-type: none"> <li>For indexed rotation in one direction</li> <li>Only in combination with swivel module DSM with spigot shaft</li> </ul>	50
2 Push-on flange FWSR	12 ... 40	For retrofitting on swivel module DSM with spigot shaft	51
3 Mounting plate HSM	12 ... 40	For foot or flange mounting	52
4 Push-in fitting QS	12 ... 63	For connecting compressed air tubing with standard O.D.	quick star
5 One-way flow control valve GRLA	12 ... 63	For regulating speed	56
6 Cushioning mount DSM-B	12 ... 63	<ul style="list-style-type: none"> <li>For mounting elastic cushioning components or shock absorbers</li> <li>Included in the scope of delivery for swivel module DSM-...-P/P1/CC</li> </ul>	53
7 Cushioning kit 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 swivel module DSM-...-P</li> </ul>	46
8 Shock absorber DYEF	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 swivel module DSM-...-P1</li> </ul>	46
9 Shock absorber 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 swivel module DSM-...-CC</li> </ul>	46
10 Sensor bracket SL-DSM-B	12 ... 40	For mounting the proximity sensor SME/SMT-10	54
11 Proximity sensor SME/SMT-10	12 ... 40	For sensing the end positions	54
12 Sensor bracket SL-DSM-63-B	63	For mounting the proximity sensor SME/SMT-8	54
13 Proximity sensor SME/SMT-8	63	For sensing the end positions	55
14 Sensor bracket SL-DSM-S	12 ... 40	For mounting the round inductive proximity sensor SIEN	54
15 Proximity sensor SIEN	12 ... 40	Inductive proximity sensor for sensing the end positions	55
16 Cover cap AKM	12 ... 40	Reduces the risk of injury in the swivel range of the stop lever	52
17 Centring sleeve ZBH	12 ... 63	For centring the drive	56
18 Centring sleeve ZBH	12 ... 63	For centring attachments on the rotating plate	56
19 Centring sleeve/disc ZBH/SLZZ	12, 16, 25, 40, 63	For centring attachments in the middle of the rotating plate	56

# Swivel modules DSM-B

Type codes DSM-12 ... 63

## DSM-...: Swivel module

		DSM	-	16	-	270	-	P	-	FW	-	A	-	B
<b>Type</b>														
Double-acting														
DSM	Swivel module													
<b>Size [mm]</b>														
<b>Max. swivel angle [°], adjustable</b>														
<b>Cushioning</b>														
P	Elastic cushioning at both ends													
P1	Adjustable elastic cushioning components at both ends													
CC	Self-adjusting shock absorbers at both ends													
<b>Shaft</b>														
-	Spigot shaft													
FW	Flanged shaft													
<b>Position sensing</b>														
A	Via proximity sensor													
<b>Variant</b>														
B	B series													

## DSM-T-...: Swivel module with tandem rotary vanes

		DSM	-	T	-	16	-	270	-	P	-	FW	-	A	-	B
<b>Type</b>																
Double-acting																
DSM	Swivel module															
<b>Design</b>																
T	Tandem rotary vanes															
<b>Size [mm]</b>																
<b>Max. swivel angle [°], adjustable</b>																
<b>Cushioning</b>																
P	Elastic cushioning at both ends															
CC	Self-adjusting shock absorbers at both ends															
<b>Shaft</b>																
-	Spigot shaft															
FW	Flanged shaft															
<b>Position sensing</b>																
A	Via proximity sensor															
<b>Variant</b>																
B	B series															

# Swivel modules DSM-B

Type codes DSM-12 ... 63

## DSM-...-HD: Swivel module with heavy-duty bearing

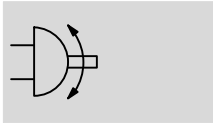
		DSM	-	16	-	270	-	CC	-	HD	-	A	-	B
<b>Type</b>														
Double-acting														
DSM	Swivel module													
<b>Size [mm]</b>														
<b>Max. swivel angle [°], adjustable</b>														
<b>Cushioning</b>														
P1	Adjustable elastic cushioning components at both ends													
CC	Self-adjusting shock absorbers at both ends													
<b>Shaft</b>														
HD	Heavy-duty bearing													
<b>Position sensing</b>														
A	Via proximity sensor													
<b>Variant</b>														
B	B series													

# Swivel modules DSM-B

Technical data DSM-12 ... 63

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Function



Size  
12 ... 63

General technical data							
Size	12	16	25	32	40	63	
Pneumatic connection	M5			G1/8		G1/4	
Design	Swivel module with rotary vane						
Cushioning							
DSM-...-P	Elastic cushioning at both ends						
DSM-...-P1	Adjustable elastic cushioning at both ends						
DSM-...-CC	Self-adjusting shock absorbers at both ends						
Type of mounting	Via 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-...

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

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

# Swivel modules DSM-B

Technical data DSM-12 ... 63

Operating and environmental conditions							
Size		12	16	25	32	40	63
Operating medium	Compressed air in accordance with 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	Specified types → <a href="http://www.festo.com">www.festo.com</a>						

1) Note operating range of proximity sensors

Weight [g]							
Size		12	16	25	32	40	63
Spigot shaft							
DSM-...-	240	410	620	1,250	2,400	4,220	
DSM-...-P	275	470	700	1,425	2,700	4,900	
DSM-...-P1	285	475	715	1,475	2,870	5,090	
DSM-...-CC	285	480	710	1,460	2,800	5,150	
Flanged shaft							
DSM-...-FW	260	450	645	1,325	2,535	4,475	
DSM-...-P-FW	293	510	725	1,500	2,835	5,150	
DSM-...-P1-FW	303	515	740	1,550	3,005	5,340	
DSM-...-CC-FW	300	520	735	1,550	2,935	5,400	
Tandem rotary vanes and spigot shaft							
DSM-T-...	330	590	890	1,865	3,570	6,050	
DSM-T-...-P	365	650	970	2,040	3,870	6,730	
DSM-T-...-CC	375	660	980	2,075	3,970	6,980	
Tandem rotary vanes and flanged shaft							
DSM-T-...-FW	350	630	915	1,940	3,705	6,305	
DSM-T-...-P-FW	383	690	995	2,115	4,005	6,980	
DSM-T-...-CC-FW	390	700	1,005	2,165	4,105	7,230	
Heavy-duty bearing							
DSM-...-HD	375	625	950	1,810	3,712	5,730	
DSM-...-P1-HD	420	700	1,015	2,035	4,100	6,600	
DSM-...-CC-HD	420	705	1,010	2,020	4,030	6,660	

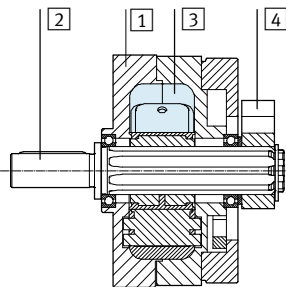
# Swivel modules DSM-B

Technical data DSM-12 ... 63

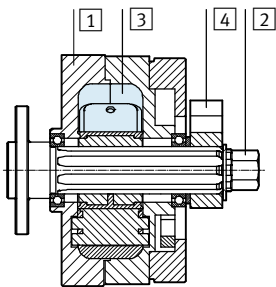
## Materials

Sectional view

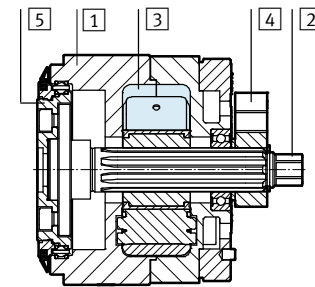
DSM-.../DSM-T-...



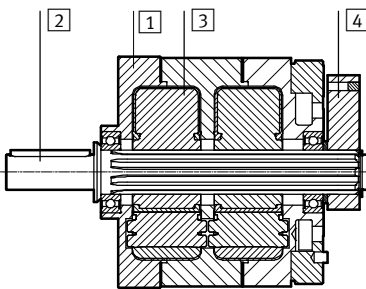
DSM-... FW



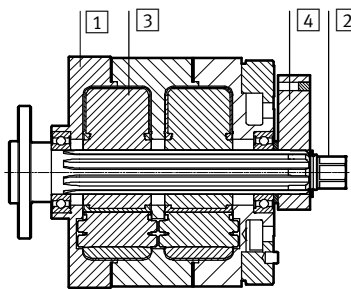
DSM-...-HD



DSM-T-...



DSM-T-...-FW



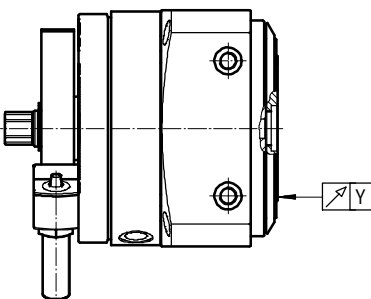
## Swivel module

1	Housing, flange	Anodised aluminium
2	Shaft	Nickel-plated steel
3	Rotary 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	Free of copper and PTFE RoHS-compliant

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

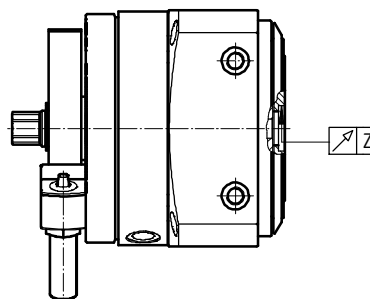
Axial eccentricity

Measured on the surface of the rotating plate at the plate edge, in new condition.



Concentricity

Measured on the centre of the rotating plate, in new condition.

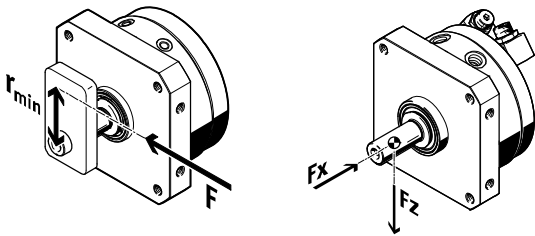


Size		12	16	25	32	40	63
Axial eccentricity Y	[mm]	≤D.02	≤D.02	≤D.02	≤D.04	≤D.04	≤D.04
Concentricity Z	[mm]	≤D.02	≤D.02	≤D.02	≤D.04	≤D.04	≤D.04

# Swivel modules DSM-B

Technical data 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	1,050
Max. perm. dyn. axial force $F_x$ on drive shaft							
DSM-.../DSM-T...	[N]	18	30	50	75	120	500
DSM-...-HD	[N]	180	290	350	450	950	1,300
Max. perm. dyn. radial force $F_z$ on drive shaft							
DSM-.../DSM-T...	[N]	45	75	120	200	350	500
DSM-...-HD	[N]	200	300	450	550	1,200	1,600
Max. permissible mass moment of inertia							
DSM-...-P	[kgm <sup>2</sup> ]	→ 33					
DSM-...-P1	[kgm <sup>2</sup> ]	→ 34					
DSM-...-CC	[kgm <sup>2</sup> ]	→ 35					



**Note**

If the swivel modules DSM-...-A-B are used without a stop system or the mass moment of inertia is exceeded, external stops must be used.

A minimum radius relative to the drive shaft ( $r_{min}$ ) must be observed. The stop force must not exceed the maximum force.

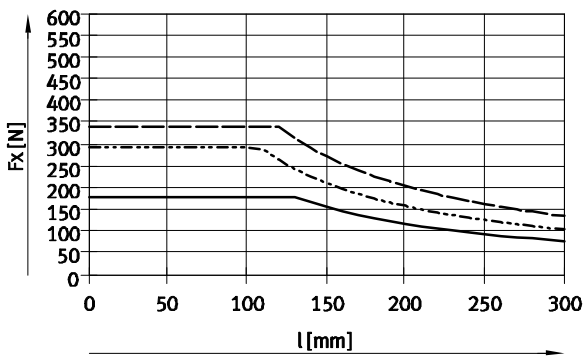
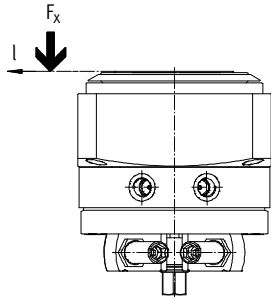
# Swivel modules DSM-B

Technical data DSM-12 ... 63

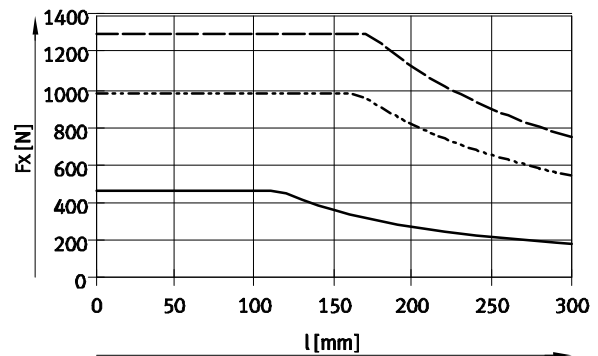


## Permissible dynamic load for DSM-...-HD

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

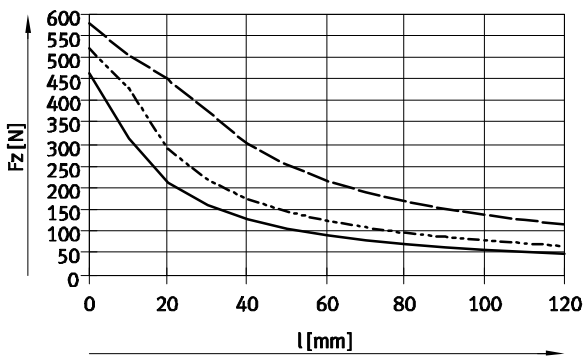
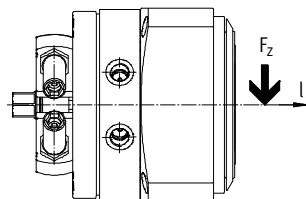


- DSM-12-...-HD
- - - DSM-16-...-HD
- · - DSM-25-...-HD

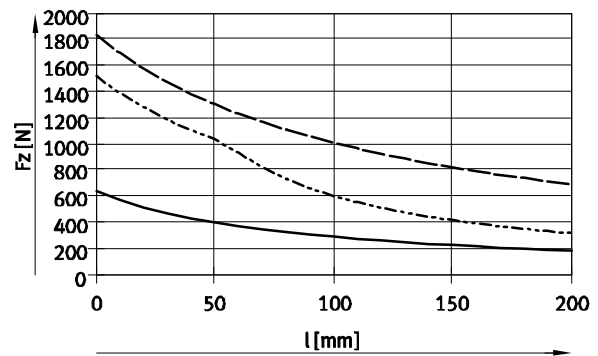


- DSM-32-...-HD
- - - DSM-40-...-HD
- · - DSM-63-...-HD

## 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

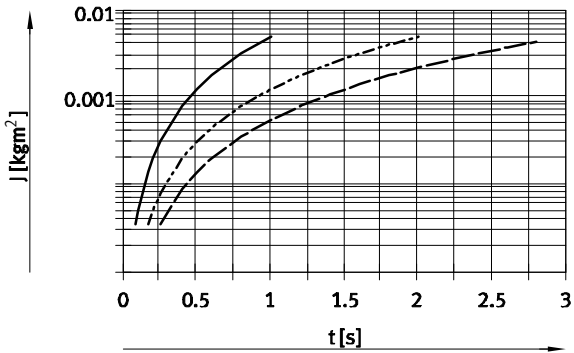


# Swivel modules DSM-B

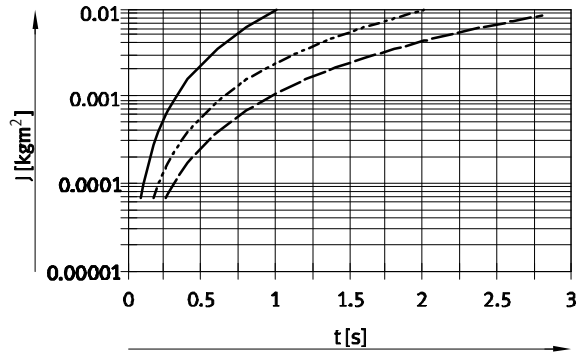
Technical data DSM-12 ... 63

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

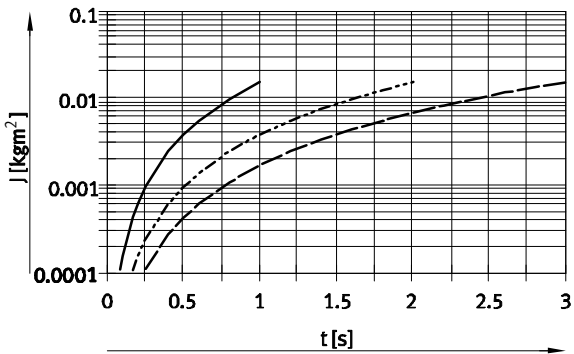
DSM-12-270-P



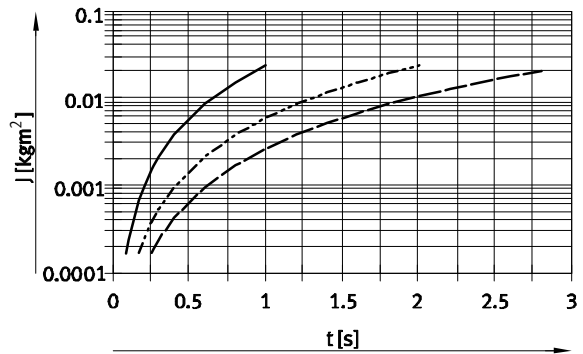
DSM-16-270-P



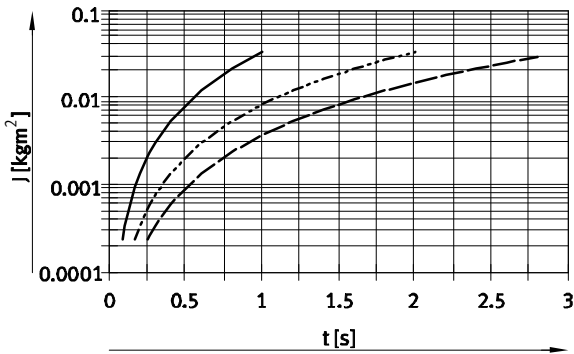
DSM-25-270-P



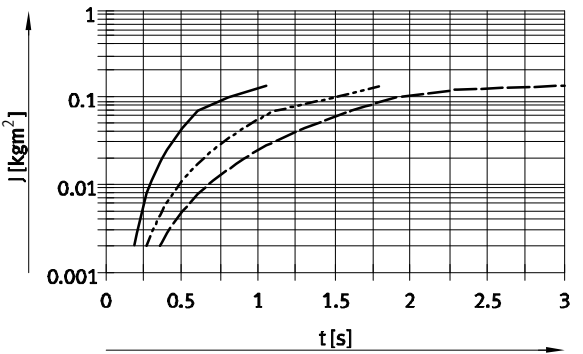
DSM-32-270-P



DSM-40-270-P



DSM-63-270-P



- 90°
- - - 180°
- · - 270°

Note

Sizing software for calculating mass moment of inertia  
[www.festo.com](http://www.festo.com)

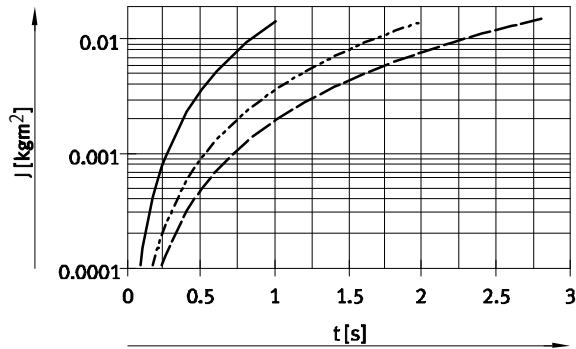
# Swivel modules DSM-B

Technical data DSM-12 ... 63



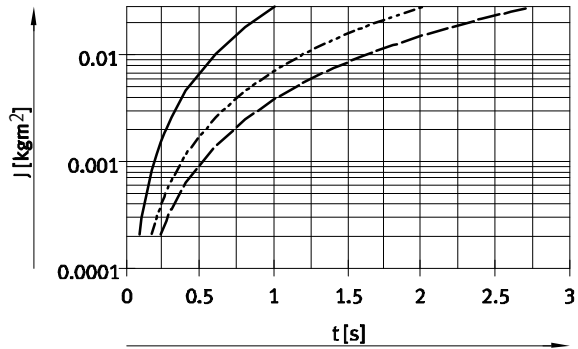
Mass moment of inertia  $J$  as a function of swivel time  $t$   
With adjustable, elastic cushioning components (P1)

DSM-12-270-P1

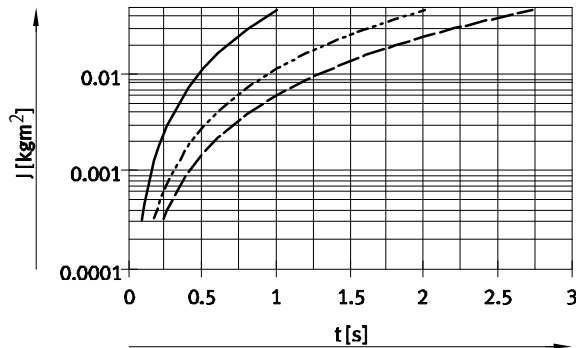


- 90°
- - - 180°
- · - 246°

DSM-16-270-P1

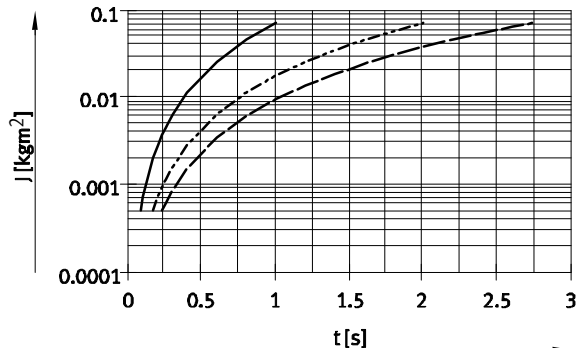


DSM-25-270-P1

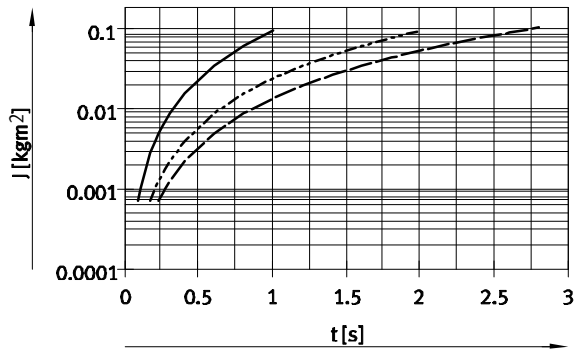


- 90°
- - - 180°
- · - 246°

DSM-32-270-P1

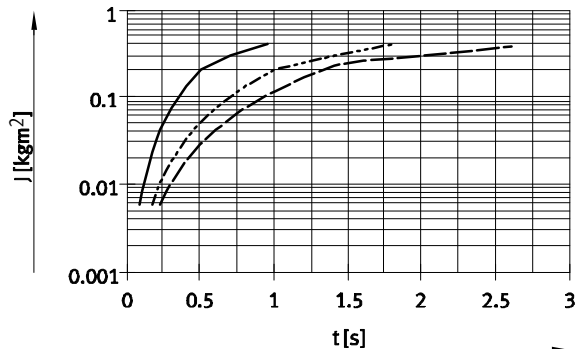


DSM-40-270-P1



- 90°
- - - 180°
- · - 240°

DSM-63-270-P1

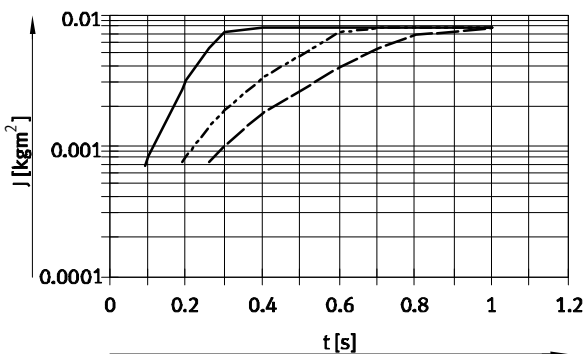


# Swivel modules DSM-B

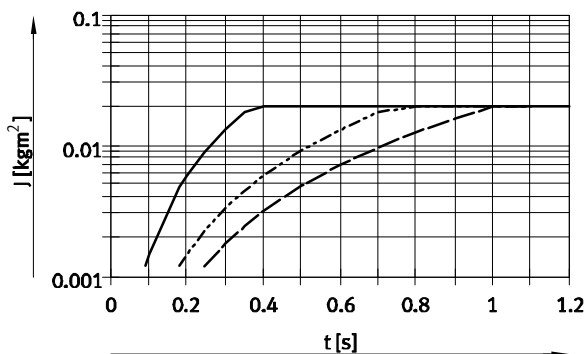
Technical data DSM-12 ... 63

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

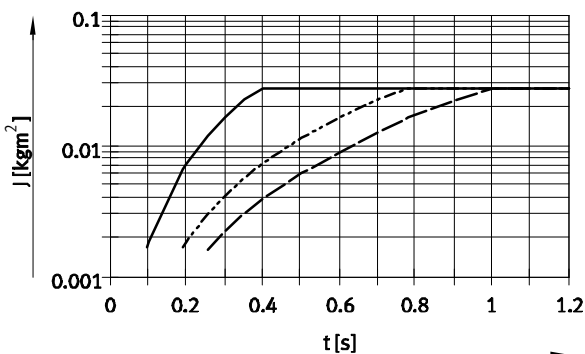
DSM-12-270-CC



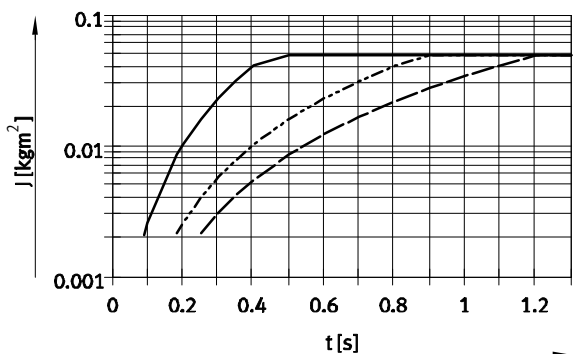
DSM-16-270-CC



DSM-25-270-CC

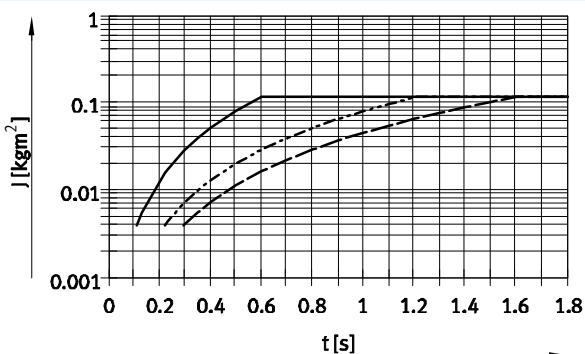


DSM-32-270-CC

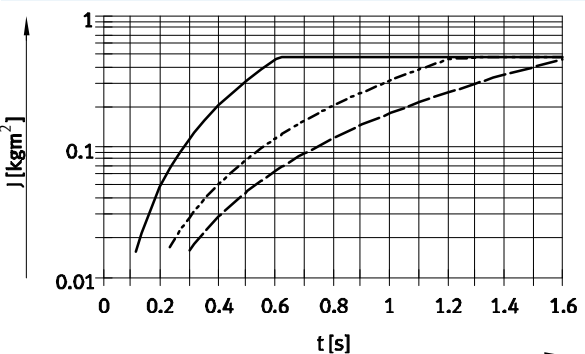


- 90°
- - - 180°
- · - · 246°

DSM-40-270-CC



DSM-63-270-CC



- 90°
- - - 180°
- · - · 240°

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.

### Cushioning time of the shock absorber

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

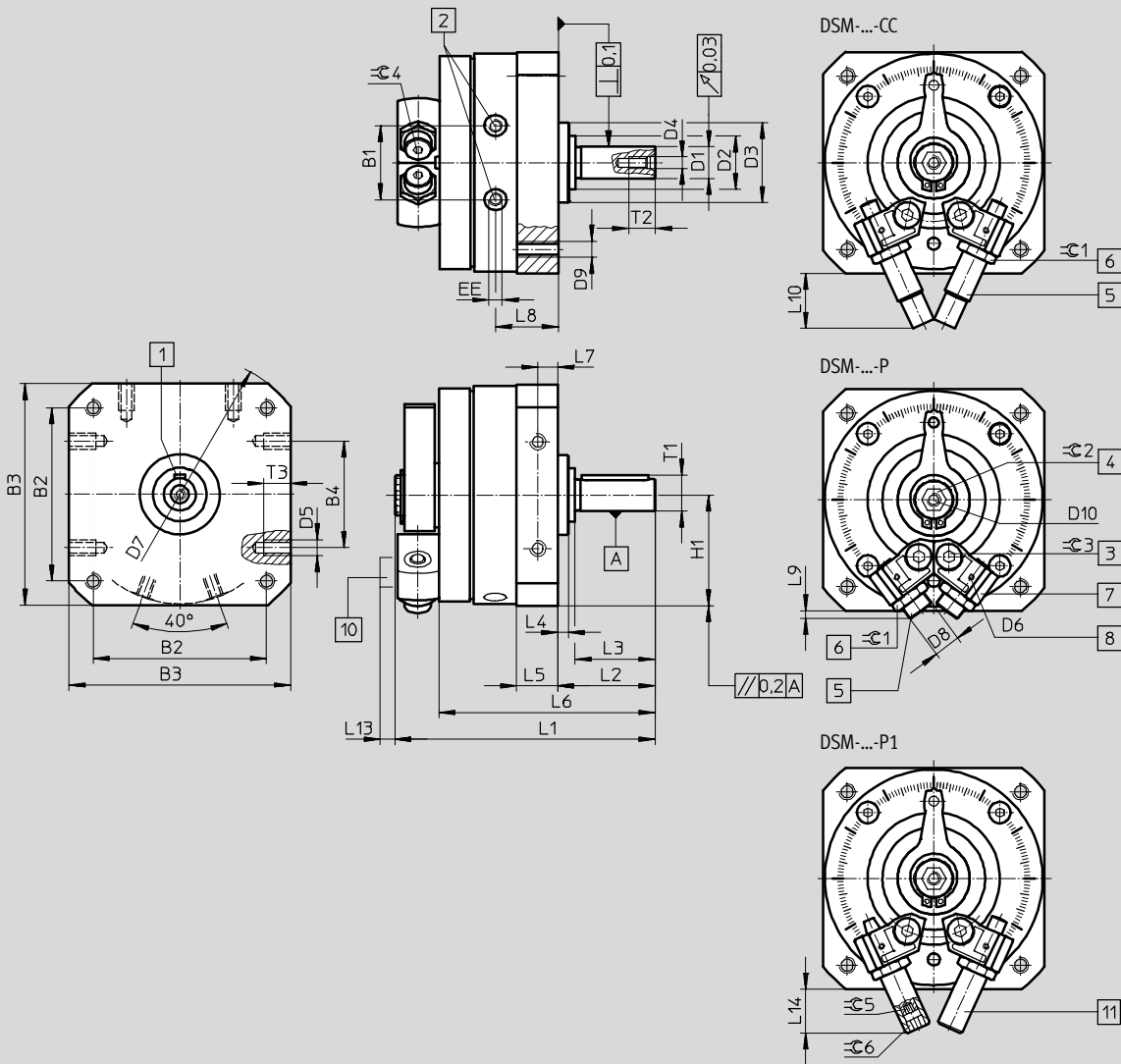
# Swivel modules DSM-B

Technical data DSM-12 ... 63

## Dimensions

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

DSM-... – With spigot shaft



- |                              |   |  |                                      |
|------------------------------|---|--|--------------------------------------|
| 1 Feather key position at 0° | 3 Locking screw for clamping the stop   | 5 End-position adjustment              | 8 Mounting thread for sensor bracket |
| 2 Supply ports               | 4 Manual override (internal hex). The position of the internal hex is not defined | 6 Lock nut for end-position adjustment | 10 Sensor bracket                    |
|                              |   | 7 Infinitely adjustable stops          | 11 End-position adjustment           |

# Swivel modules DSM-B

Technical data DSM-12 ... 63

Size	B1 ±0.5	B2	B3	B4	D1 ∅ g7	D2 ∅	D3 ∅ 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	18.0.3	28	M3
25	28	65±0.3	83±0.3	40±0.2	12	20.0.3	30	M4
32	35.5	85±0.3	105±0.3	60±0.3	16	27.0.4	42	M5
40	43.8	105±0.3	130±0.5	80±0.3	20	36.0.4	52	M6
63	50.3	125±0.5	152±0.2	80±0.3	25	40±0.3	70	M10

Size	D5	D6	D7 ∅	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 ±0.2	L1	L2 +0.6 -0.7	L3	L4 ±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 max.	T1 max.	T2 +2	T3 +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	≈C 1	≈C 2	≈C 3	≈C 4	≈C 5	≈C 6	Feather key 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

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

# Swivel modules DSM-B

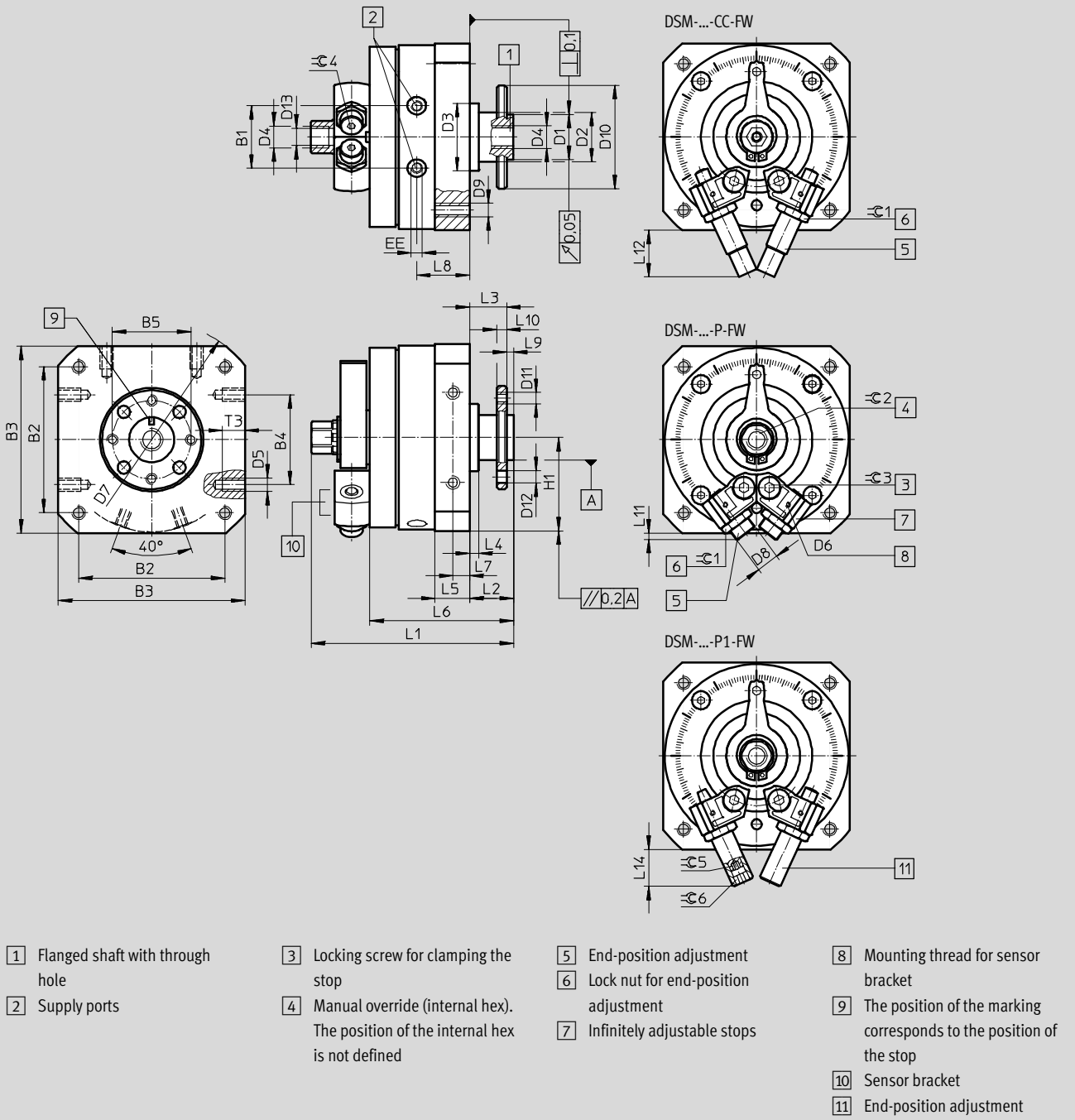
Technical data DSM-12 ... 63

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## Dimensions

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

DSM-...-FW – With flanged shaft



# Swivel modules DSM-B

Technical data DSM-12 ... 63

Size	B1 ±0.5	B2	B3	B4	B5	D1 ∅ f8	D2 ∅	D3 ∅ 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	G $\frac{1}{8}$	M6
32	35.5	85±0.3	105±0.3	60±0.3	45	28	27 <sub>-0.4</sub>	42	G $\frac{1}{8}$	M8
40	43.8	105±0.3	130±0.5	80±0.3	54	36	36 <sub>-0.4</sub>	52	G $\frac{1}{4}$	M10
63	50.3	125±0.5	152±0.2	80±0.3	64	38	40±0.3	70	G $\frac{1}{4}$	M10

Size	D6	D7 ∅	D8	D9	D10 ∅	D11	D12 H13	D13	EE	H1 ±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	G $\frac{1}{8}$	52.5
40	M2	168±0.5	M16x1	M10	70	M8	9	11.5	G $\frac{1}{8}$	65
63	M3	200±0.5	M22x1.5	M12	88	M8	12	11.5	G $\frac{1}{4}$	76

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

Size	L11	L12	L14 max.	T3 +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	-	-

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

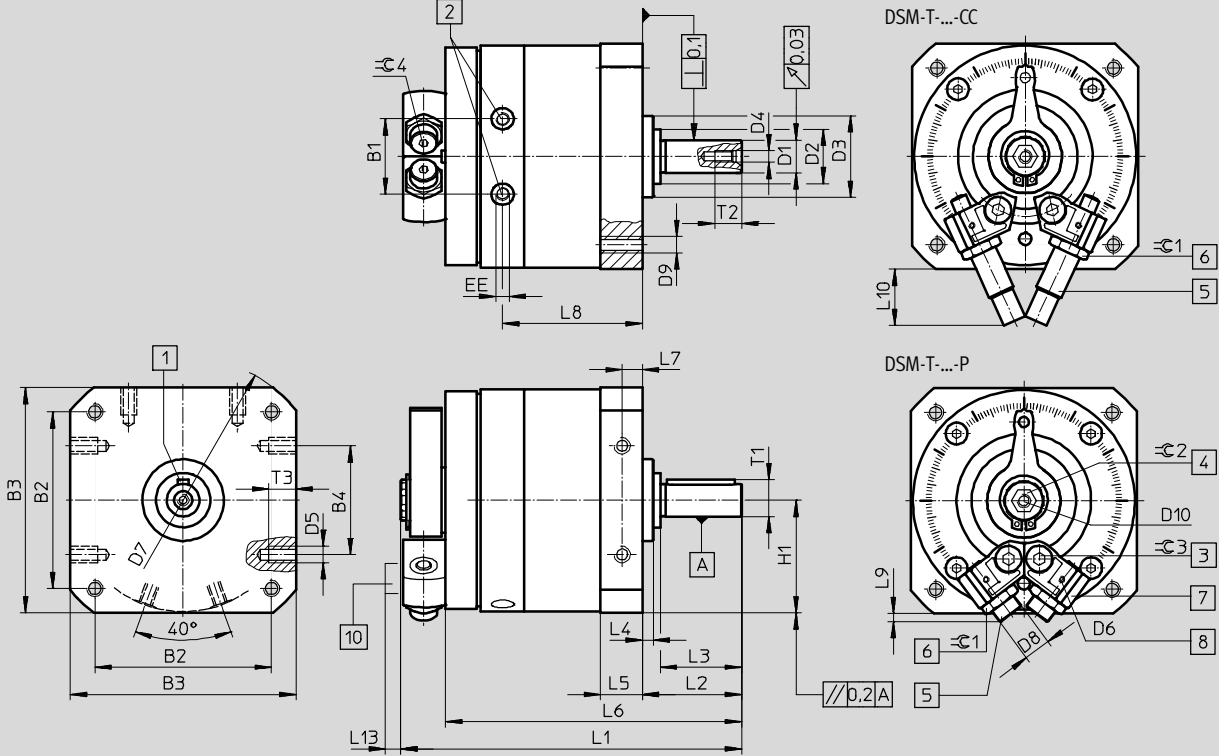
# Swivel modules DSM-B

Technical data DSM-12 ... 63

## Dimensions

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

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



- |                              |   |  |                                      |
|------------------------------|---|--|--------------------------------------|
| 1 Feather key position at 0° | 3 Locking screw for clamping the stop   | 5 End-position adjustment              | 8 Mounting thread for sensor bracket |
| 2 Supply ports               | 4 Manual override (internal hex). The position of the internal hex is not defined | 6 Lock nut for end-position adjustment | 10 Sensor bracket                    |
|                              |   | 7 Infinitely adjustable stops          |                                      |



# Swivel modules DSM-B

Technical data DSM-12 ... 63

Size	B1 ±0.5	B2	B3	B4	D1 ∅ g7	D2 ∅	D3 ∅ 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 ∅	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 ±0.2	L1	L2 +0.6 -0.7	L3	L4 ±0.4	L5
12	M5	29.5	87.3±0.3	24.5	20±0.2	3	10.3 <sup>+0.2/-0.3</sup>
16	M5	35	106.6±1	28	23±0.2	2.6	13 <sup>+0.2/-0.4</sup>
25	M5	41.5	125.5±0.5	36.5	30±0.2	4	15.2 <sup>+0.2/-0.4</sup>
32	G <sup>1</sup> / <sub>8</sub>	52.5	164±0.5	51	40±0.2	8	19.2 <sup>+0.2/-0.4</sup>
40	G <sup>1</sup> / <sub>8</sub>	65	200.5±0.6	62	50±0.3	8	23.7 <sup>+0.2/-0.4</sup>
63	G <sup>1</sup> / <sub>4</sub>	76	254.4 <sup>+0.4/-0.55</sup>	75.5	60±0.3	10.5	28.5 <sup>+0.3/-0.5</sup>

Size	L6	L7	L8	L9	L10	L13	T1 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 +2	T3 +0.2	≈C 1	≈C 2	≈C 3	≈C 4	Feather key to 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

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

# Swivel modules DSM-B

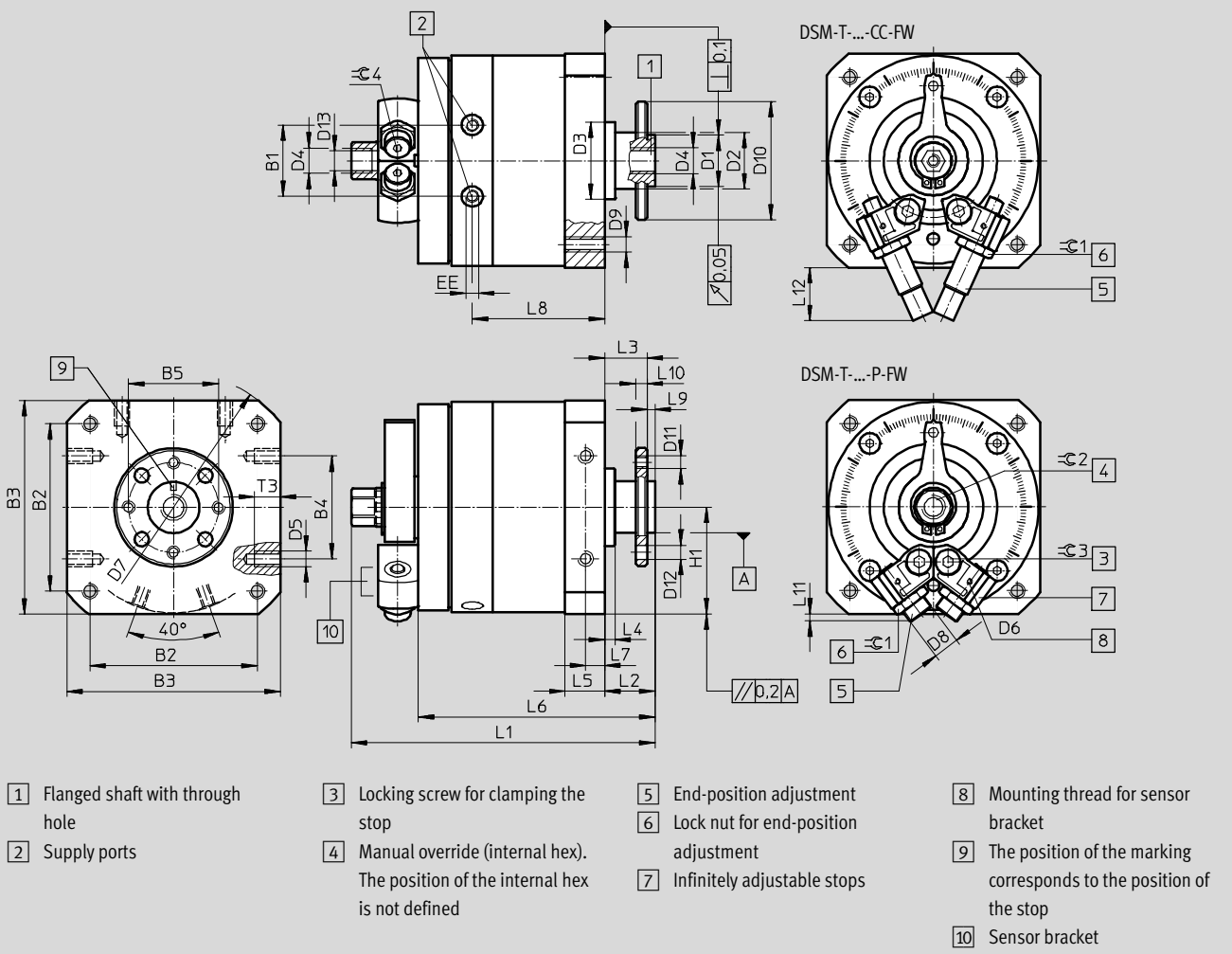
Technical data DSM-12 ... 63

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## Dimensions

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

DSM-T-...-FW – With flanged shaft and tandem rotary vanes



# Swivel modules DSM-B

Technical data DSM-12 ... 63

Size	B1 ±0.5	B2	B3	B4	B5	D1 ∅ f8	D2 ∅	D3 ∅ 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 ∅	D8	D9	D10 ∅	D11	D12 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 ±0.2	L1	L2 +0.5 -0.85	L3 +0.5 -0.62	L4 ±0.4	L5	L6 ±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 -0.2	L10	L11	L12	T3 +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

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

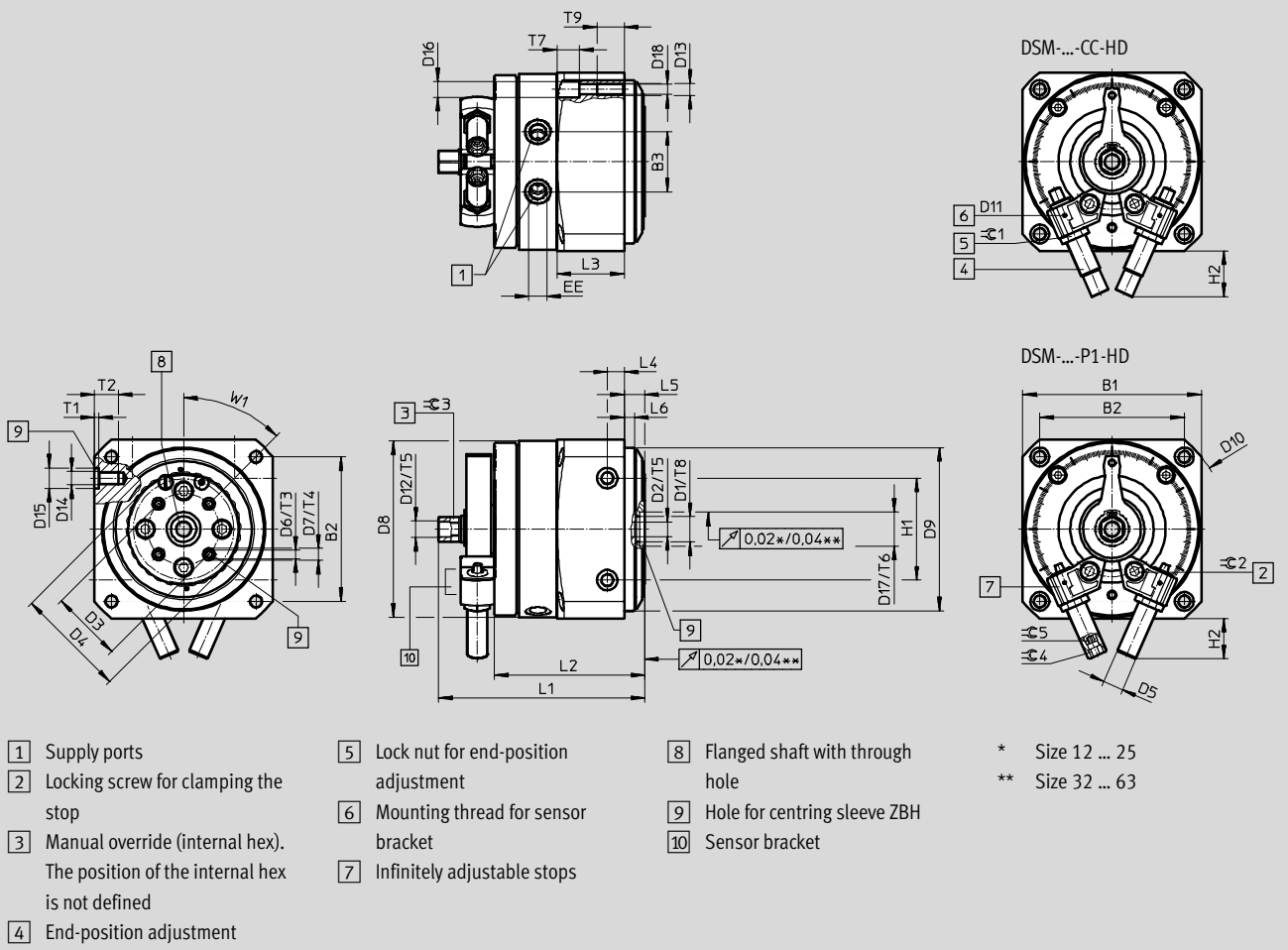
# Swivel modules DSM-B

Technical data DSM-12 ... 63

## Dimensions

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DSM-...-HD – With heavy-duty bearing



# Swivel modules DSM-B

Technical data DSM-12 ... 63

Size	B1 ±0.3	B2 ±0.3	B3 ±0.5	D1 <sup>1)</sup>	D2 <sup>2)</sup> ∅	D3 ±0.02	D4	D5 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	G <sup>1</sup> / <sub>8</sub>	-	30	50	M10x1
32	105	85	35.5	15	G <sup>1</sup> / <sub>8</sub>	42	65	M12x1
40	130	105	43.8	20	G <sup>1</sup> / <sub>4</sub>	56	90	M16x1
63	152	125	50.3	20	G <sup>1</sup> / <sub>4</sub>	70	105	M22x1.5

Size	D6	D7 H7	D8	D9 f8	D10 ±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	G <sup>1</sup> / <sub>8</sub>	M6	M6
32	M5	7	103.5	96	135	M2	G <sup>1</sup> / <sub>8</sub>	M8	M8
40	M8	12	128	126	168	M2	G <sup>1</sup> / <sub>4</sub>	M10	M10
63	M8	12	149	150	200	M3	G <sup>1</sup> / <sub>4</sub>	M12	M10

Size	D15 H7	D16	D17 H8	D18	EE	H1 ±0.03	H2 max.		L1 +0.4 -0.65	L2 +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	G <sup>1</sup> / <sub>8</sub>	60	23	29.1	121	88.5
40	12	15	25	8.5	G <sup>1</sup> / <sub>8</sub>	80	36.5	43.5	154	112
63	12	18	25	10.2	G <sup>1</sup> / <sub>4</sub>	80	44	72.5	185.5	129.5

Size	L3	L4 ±0.1	L5 ±0.2	L6 ±0.1	T1 +0.1	T2	T3	T4 +0.1	T5	T6 +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

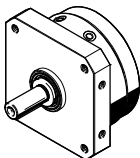
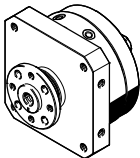
Size	T7	T8	T9	≈C 1	≈C 2	≈C 3 h13	≈C 4		≈C 5 DSM-...-P1	W1
							DSM-...-P1	DSM-...-CC		
12	6.3	5.5	12	10	2.5	8	5	2.5	2.5	45°
16	8.5	6	14	13	3	11	6	3	3	45°
25	10	5.3	16	13	4	13	6	3	3	45°
32	9.5	-	20	15	5	13	8	4	4	45°
40	15	-	24	19	6	19	8	5	5	45°
63	18	-	28	27	8	22	10	5	5	45°

1) Thread for compressed air through-feed with size 12 ... 25  
 2) Thread for compressed air through-feed with size 32 ... 63  
 - † - Note: This product conforms to ISO 1179-1 and to ISO 228-1

# Swivel modules DSM-B

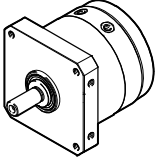
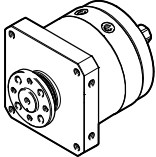
Technical data DSM-12 ... 63

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Ordering data – DSM-..., swivel module					
Swivel module	Features	Swivel angle	Size	Part No.	Type
<b>Spigot shaft</b>					
	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
		240°	32	566209	DSM-32-270-P1-A-B
			40	566211	DSM-40-270-P1-A-B
			63	566213	DSM-63-270-P1-A-B
	CC With shock absorbers	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
240°		32	547584	DSM-32-270-CC-A-B	
		40	547588	DSM-40-270-CC-A-B	
		63	552081	DSM-63-270-CC-A-B	
<b>Flanged shaft</b>					
	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
		240°	32	566210	DSM-32-270-P1-FW-A-B
			40	566212	DSM-40-270-P1-FW-A-B
			63	566214	DSM-63-270-P1-FW-A-B
	CC Shock absorbers	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
240°		32	547585	DSM-32-270-CC-FW-A-B	
		40	547589	DSM-40-270-CC-FW-A-B	
		63	552082	DSM-63-270-CC-FW-A-B	

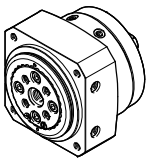
# Swivel modules DSM-B

Technical data DSM-12 ... 63

Ordering data – DSM-T-..., swivel module with tandem rotary vanes					
Swivel module	Features	Swivel angle	Size	Part No.	Type
<b>Spigot shaft</b>					
	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 absorbers	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
		240°	32	1145106	DSM-T-32-270-CC-A-B
			40	1145112	DSM-T-40-270-CC-A-B
			63	1145118	DSM-T-63-270-CC-A-B
<b>Flanged shaft</b>					
	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 absorbers	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
		240°	32	1145107	DSM-T-32-270-CC-FW-A-B
			40	1145113	DSM-T-40-270-CC-FW-A-B
			63	1145119	DSM-T-63-270-CC-FW-A-B

# Swivel modules DSM-B

Technical data DSM-12 ... 63

Ordering data – DSM-...-HD, swivel module with heavy-duty guide					
Swivel module	Features	Swivel angle	Size	Part No.	Type
Heavy-duty bearing					
	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
		240°	32	1369119	DSM-32-270-P1-HD-A-B
			40	1369120	DSM-40-270-P1-HD-A-B
			63	1369121	DSM-63-270-P1-HD-A-B
	CC With shock absorbers	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
240°		32	1369125	DSM-32-270-CC-HD-A-B	
		40	1369126	DSM-40-270-CC-HD-A-B	
		63	1369127	DSM-63-270-CC-HD-A-B	



# Swivel modules DSM/DSM-B

Accessories

## Freewheel unit FLSM

For size 6, 8

Material:

Housing: Anodised aluminium

Shaft, sleeve: Size 6, 8:

Steel

Size 10:

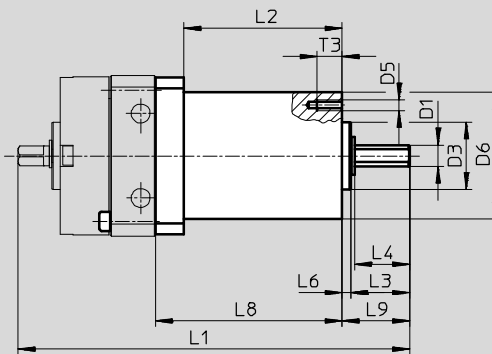
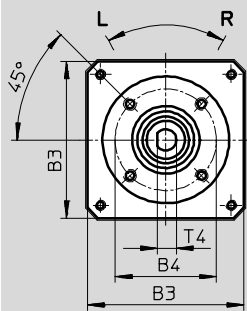
Hardened steel



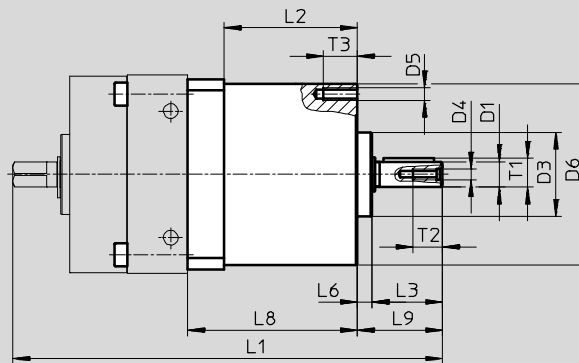
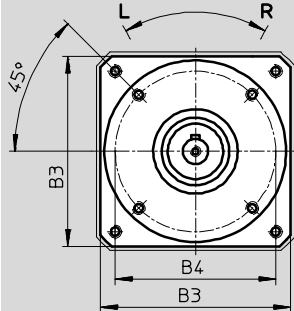
Note  
The minimum possible swivel angle is 3°. Switching accuracy is, however, dependent on speed and load.

### Dimensions and ordering data

FLSM-6/8



FLSM-10



For size	B3	B4	D1	D3	D4	D5	D6	L1	L2	L3	L4	L6
		±0.15	∅ g7	∅ h8			∅ ±0.3					±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	L9	T1	T2	T3	T4	Feather key to DIN 6885	CRC <sup>1)</sup>	Weight	Direction of rotation	Part No.	Type
	±0.1								[g]			
6	43	12.8	-	-	5	3.5	-	2	100	Anti-clockwise rotation	<b>188523</b>	<b>FLSM-6-L</b>
										Clockwise rotation	<b>188522</b>	<b>FLSM-6-R</b>
8	44.5	16	-	-	6	4.5	-	2	125	Anti-clockwise rotation	<b>188525</b>	<b>FLSM-8-L</b>
										Clockwise rotation	<b>188524</b>	<b>FLSM-8-R</b>
10	40	20.2	6.8	7	8	-	A2x2x12	2	160	Anti-clockwise rotation	<b>188527</b>	<b>FLSM-10-L</b>
										Clockwise rotation	<b>188526</b>	<b>FLSM-10-R</b>

1) CRC2: Corrosion resistance class to Festo standard 940 070  
Components with medium corrosion exposure. Externally visible components with significant decorative function in direct contact with normal industrial atmosphere or media such as coolants and lubricants.

# Swivel modules DSM/DSM-B

Accessories



## Freewheel unit FLSM


For size 12 ... 40

Material:

Housing: Anodised aluminium

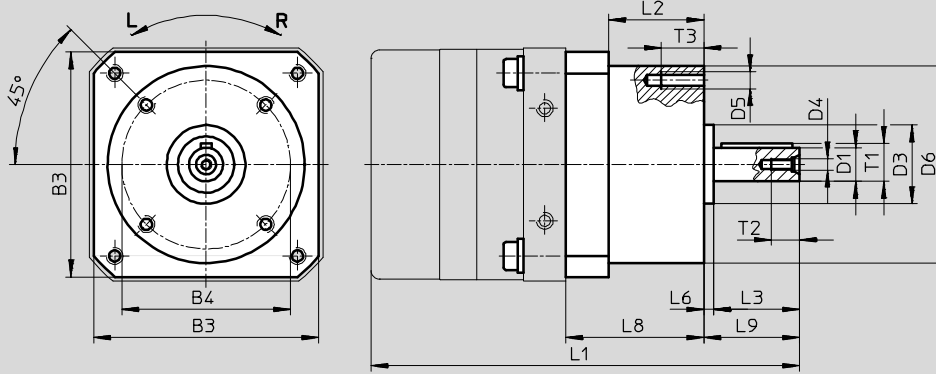
Shaft, sleeve: Hardened steel



 Note  
The minimum possible swivel angle is 3°. Switching accuracy is, however, dependent on speed and load.

## Dimensions and ordering data

FLSM-12 ... 40



For size	B3	B4	D1	D3	D4	D5	D6	L1	L2	L3	L6	L8
		±0.15	∅ g7	∅ h8			∅ ±0.3				+0.2	±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 DIN 6885	CRC <sup>1)</sup>	Weight [g]	Direction of rotation	Part No.	Type
12	24.5	8.8	9	8	A2x2x16	2	300	Anti-clockwise rotation	<b>164229</b>	<b>FLSM-12-L</b>
								Clockwise rotation	<b>164234</b>	<b>FLSM-12-R</b>
16	27.4	11.2	9	10	A3x3x18	2	450	Anti-clockwise rotation	<b>164230</b>	<b>FLSM-16-L</b>
								Clockwise rotation	<b>164235</b>	<b>FLSM-16-R</b>
25	34	13.5	10	15	A4x4x25	2	650	Anti-clockwise rotation	<b>164231</b>	<b>FLSM-25-L</b>
								Clockwise rotation	<b>164236</b>	<b>FLSM-25-R</b>
32	48.5	18	12.5	15	A5x5x36	2	1,500	Anti-clockwise rotation	<b>164232</b>	<b>FLSM-32-L</b>
								Clockwise rotation	<b>164237</b>	<b>FLSM-32-R</b>
40	58	22.5	16	15	A6x6x45	2	2,350	Anti-clockwise rotation	<b>164233</b>	<b>FLSM-40-L</b>
								Clockwise rotation	<b>164238</b>	<b>FLSM-40-R</b>

1) CRC2: Corrosion resistance class to Festo standard 940 070  
Components with medium corrosion exposure. Externally visible components with significant decorative function in direct contact with normal industrial atmosphere or media such as coolants and lubricants.

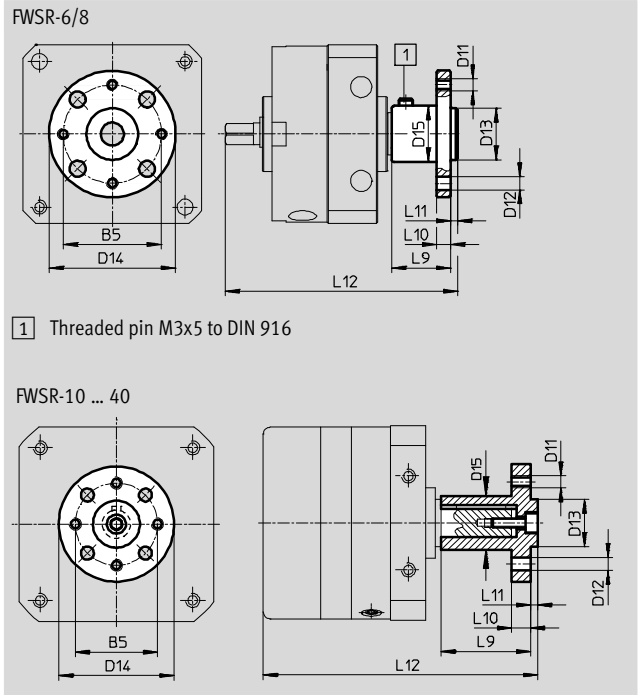
# Swivel modules DSM/DSM-B

Accessories



## Push-on flange FWSR

Material:  
Anodised wrought aluminium alloy  
Free of copper, PTFE and silicone



Dimensions and ordering data														
For size	B5	D11	D12 Ø H13	D13 Ø g7	D14 Ø	D15 Ø	L9	L10	L11	L12	CRC <sup>1)</sup>	Weight [g]	Part No.	Type
6	16	M3	3.4	8	23	10	10.5	3	1.5	45	2	6	185948	FWSR-6
8	21	M3	3.4	11	27	12	12.5	3	1.5	51	2	8	185949	FWSR-8
10	21	M3	3.4	11	30	12	22	3	1.6	68.6	2	14	32798	FWSR-10
12	25	M3	3.4	14	35	15	25	3	3	85.5	2	32	14659	FWSR-12
16	28	M4	4.5	16	40	17	28	5	3	98.8	2	51	13239	FWSR-16
25	35	M5	5.5	20	50	23	38	8	3	116.5	2	68	13240	FWSR-25
32	45	M6	6.5	28	60	28	48	10	4	151.5	2	180	13241	FWSR-32
40	54	M8	9	36	70	38	60	11	5	186.5	2	300	14656	FWSR-40

1) CRC2: Corrosion resistance class to Festo standard 940 070  
Components with medium corrosion exposure. Externally visible components with significant decorative function in direct contact with normal industrial atmosphere or media such as coolants and lubricants.

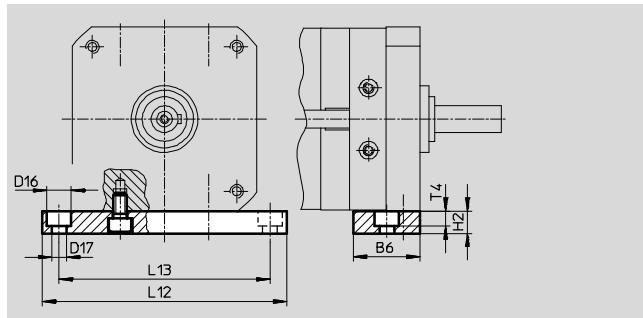
# Swivel modules DSM/DSM-B

Accessories



## Mounting plate HSM

Material:  
Aluminium



### Dimensions and ordering data

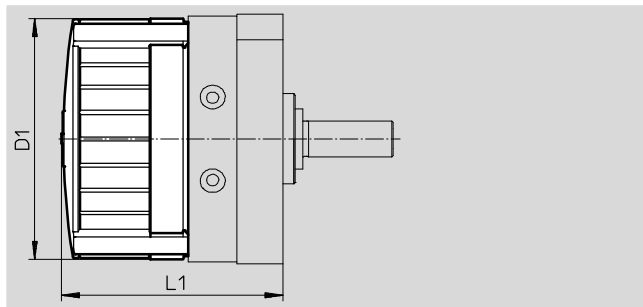
For size	B6	D16 Ø	D17 Ø	H2	L12	L13	T4	CRC <sup>1)</sup>	Weight [g]	Part No.	Type
12	20	8	4.5	10	84	72	4.6	2	48	165571	HSM-12
16	28	10	5.5	10	98	84	5.7	2	80	165572	HSM-16
25	30	11	6.6	10	110	95	6.8	2	94	165573	HSM-25
32	40	15	9	15	145	125	9	2	246	165574	HSM-32
40	45	18	11	20	180	155	11	2	459	165575	HSM-40

1) CRC2: Corrosion resistance class to Festo standard 940 070

Components with medium corrosion exposure. Externally visible components with significant decorative function in direct contact with normal industrial atmosphere or media such as coolants and lubricants.

## Cover cap AKM

Material:  
Polyamide






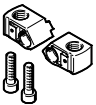
### Dimensions and ordering data

For size	D1 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


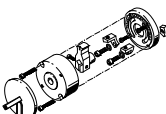
# Swivel modules DSM/DSM-B

Accessories

**FESTO**

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

1) Packaging unit

Ordering data – Kits					
	For size	Brief description	Part No.	Type	
<b>Mounting kit</b> <span style="float: right;">Technical data → Internet: wsm</span>					
	6	For proximity sensors SME/SMT-10	<b>173205</b>	<b>WSM-6-SME-10</b>	
	8		<b>173206</b>	<b>WSM-8-SME-10</b>	
	10		<b>173207</b>	<b>WSM-10-SME-10</b>	
<b>Stop kit</b> <span style="float: right;">Technical data → Internet: ksm</span>					
	6	For adjusting the swivel angle, max. 180°	<b>175833</b>	<b>KSM-6</b>	
	8		<b>175834</b>	<b>KSM-8</b>	
	10	For adjusting the swivel angle, max. 200°	<b>175835</b>	<b>KSM-10</b>	




Ordering data – Kit accessories					
For size	Brief description	Part No.	Type		
6	Adapter for attaching the stop kit KSM in combination with mounting kit WSM-...-SME-10	<b>375098</b>	<b>DSM-6-180-P-A-FF</b>		
8		<b>375099</b>	<b>DSM-8-180-P-A-FF</b>		
10		<b>375100</b>	<b>DSM-10-240-P-A-FF</b>		
6	Socket head screw for attaching the stop kit KSM in combination with mounting kit WSM-...-SME-10	<b>258568</b>	<b>DIN 84-M2x25-4.8</b>		
8		<b>385259</b>	<b>DIN 84-M2x30-4.8</b>		
10		<b>365902</b>	<b>M2.5x32<sup>1)</sup></b>		

1) Screw similar to DIN 84

# Swivel modules DSM/DSM-B


Accessories

FESTO


Ordering data – Sensor bracket					
	For size	Brief description	Part No.	Type	PU <sup>1)</sup>
	12, 16, 25, 32, 40	For proximity sensors SME-/SMT-10	550661	SL-DSM-B	2
	63	For proximity sensors 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 sensors for size 6, 8, 12, 25, 32, 40

Ordering data – Proximity sensors for C-slot, magneto-resistive						Technical data → Internet: smt	
	Type of mounting	Switching output	Electrical connection, connection direction	Cable length [m]	Part No.	Type	
N/O contact							
	For size 6, 8: Via mounting kit WSM-...-SME-10 For size 12, 25, 32, 40: Via sensor bracket SL-DSM-B clamped to DSM	PNP	Cable, 3-wire, in-line	2.5	551373	SMT-10M-PS-24V-E-2,5-L-OE	
			Plug M8x1, 3-pin, in-line	0.3	551375	SMT-10M-PS-24V-E-0,3-L-M8D	

## Proximity sensors for size 6 ... 40

Ordering data – Proximity sensors for C-slot, magnetic reed						Technical data → Internet: sme	
	Type of mounting	Switching output	Electrical connection, connection direction	Cable length [m]	Part No.	Type	
N/O contact							
	For size 6, 8: Via mounting kit WSM-...-SME-10 For size 12, 25, 32, 40: Via sensor bracket SL-DSM-B clamped to DSM	Contacting	Cable, 3-wire, in-line	2.5	173210	SME-10-KL-LED-24	
			Plug M8x1, 3-pin, in-line	0.3	173212	SME-10-SL-LED-24	

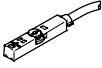
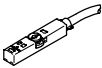
## Proximity sensors for size 12 ... 40

Ordering data – Proximity sensors for C-slot, magnetic reed						Technical data → Internet: sme	
	Type of mounting	Switching output	Electrical connection, connection direction	Cable length [m]	Part No.	Type	
N/O contact							
	Via sensor bracket SL-DSM-B clamped to DSM	Contacting	Cable, 3-wire, in-line	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	

# Swivel modules DSM/DSM-B

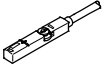

Accessories

## Proximity sensors for size 63

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

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


Technical data → Internet: sme

	Type of mounting	Switching output	Electrical connection	Cable length [m]	Part No.	Type		
<b>N/O contact</b>								
	Insertable in the slot from above, flush with the cylinder profile	Contacting	Cable, 3-wire	2.5	543862	SME-8M-DS-24V-K-2,5-OE		
				5.0	543863	SME-8M-DS-24V-K-5,0-OE		
			Plug M8x1, 3-pin	Cable, 2-wire	2.5	543872	SME-8M-ZS-24V-K-2,5-OE	
				Plug M8x1, 3-pin	0.3	543861	SME-8M-DS-24V-K-0,3-M8D	
					0.3	543861	SME-8M-DS-24V-K-0,3-M8D	
	Insertable in the slot lengthwise, flush with the cylinder profile	Contacting	Cable, 3-wire	2.5	150855	SME-8-K-LED-24		
			Plug M8x1, 3-pin	0.3	150857	SME-8-S-LED-24		

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



### Ordering data – Proximity sensors, inductive

Technical data → Internet: sien

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

### Ordering data – Connecting cables


Technical data → Internet: nebu



	Electrical connection, left	Electrical connection, right	Cable length [m]	Part No.	Type	
	Straight socket, M8x1, 3-pin	Cable, open end, 3-wire	2.5	541333	NEBU-M8G3-K-2.5-LE3	
			5	541334	NEBU-M8G3-K-5-LE3	
	Straight socket, M12x1, 5-pin	Cable, open end, 3-wire	2.5	541363	NEBU-M12G5-K-2.5-LE3	
			5	541364	NEBU-M12G5-K-5-LE3	
	Angled socket, M8x1, 3-pin	Cable, open end, 3-wire	2.5	541338	NEBU-M8W3-K-2.5-LE3	
			5	541341	NEBU-M8W3-K-5-LE3	
	Angled socket, M12x1, 5-pin	Cable, open end, 3-wire	2.5	541367	NEBU-M12W5-K-2.5-LE3	
			5	541370	NEBU-M12W5-K-5-LE3	

# Swivel modules DSM/DSM-B

Accessories

**FESTO**

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

Ordering data – Centring sleeves for DSM-...-HD				Technical data → Internet: zbh		
	For size	Brief description	Part No.	Type	PU <sup>1)</sup>	
	12, 16	For centring the drive for lateral mounting	<b>186717</b>	<b>ZBH-7</b>	10	
	25		<b>150927</b>	<b>ZBH-9</b>		
	32 ... 63		<b>189653</b>	<b>ZBH-12</b>		
	12	For centring attachments on the rotating plate	<b>189652</b>	<b>ZBH-5</b>		
	16 ... 32		<b>186717</b>	<b>ZBH-7</b>		
	40, 63		<b>189653</b>	<b>ZBH-12</b>		
	12, 16	For centring attachments in the middle of the rotating plate	<b>189653</b>	<b>ZBH-12</b>		
	25		<b>191409</b>	<b>ZBH-15</b>		
	40, 63		<b>330670</b>	<b>SLZZ-25/16</b>	1	

1) Packaging unit