

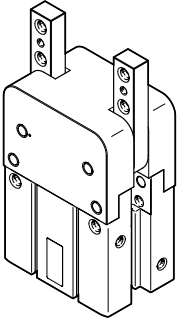
Angle grippers DHWC

FESTO



Key features

At a glance



- Lateral gripper jaw support for high torque loads
- Gripper jaw centring options
- Maximum repetition accuracy
- Proximity switch for sensing the piston position at the end positions and position transmitter for sensing the piston position at any location
- Wide range of adaptation options on the drives
- Flexible application options: can be used as a double-acting and single-acting gripper

Position sensing

[A] Via proximity switch

The position sensing function uses proximity switches to sense any required positions.

Gripper function

[] Double-acting

Open or close when pressurised with compressed air

[S] Single-acting, open

Open in unpressurised state. Closed when pressurised with compressed air

Gripping force backup

[NO] Opening

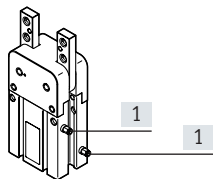
Opened by spring force when unpressurised

-  - **Note**

Engineering software
Gripper selection
→ www.festo.com

Key features

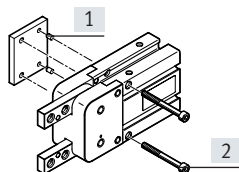
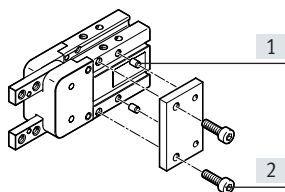
Supply ports



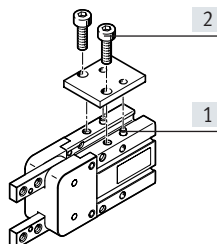
[1] Supply ports

Mounting options

On the side



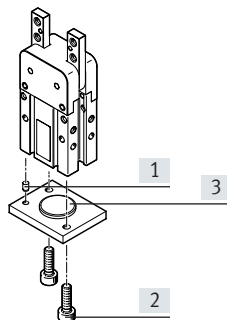
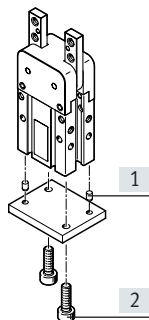
Vertical



[1] Centring sleeves

[2] Retaining screws

From underneath

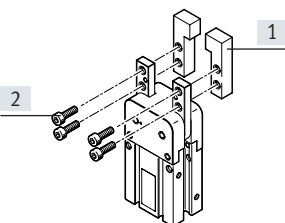


[1] Centring sleeves

[2] Retaining screws

[3] Base

Mounting external gripper fingers

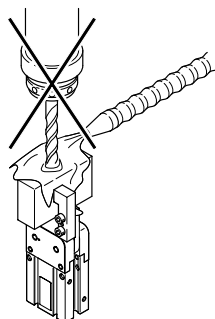


[1] External gripper fingers

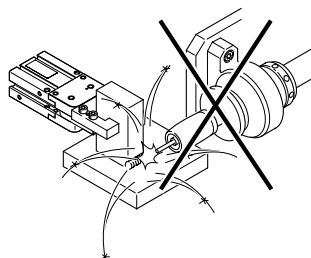
[2] Retaining screws

 Note

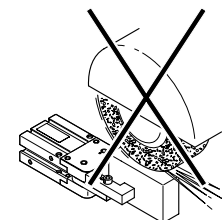
These grippers are not suitable for the following or similar applications:



- Machining
- Aggressive media



- Grinding dust

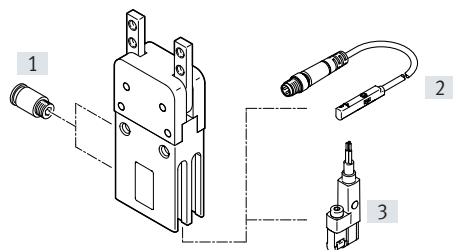


- Welding spatter

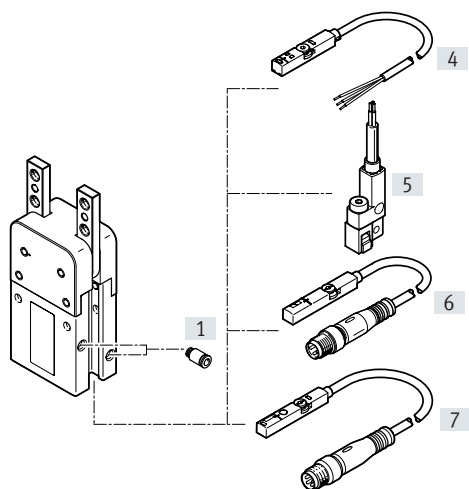
Peripherals overview

Peripherals overview

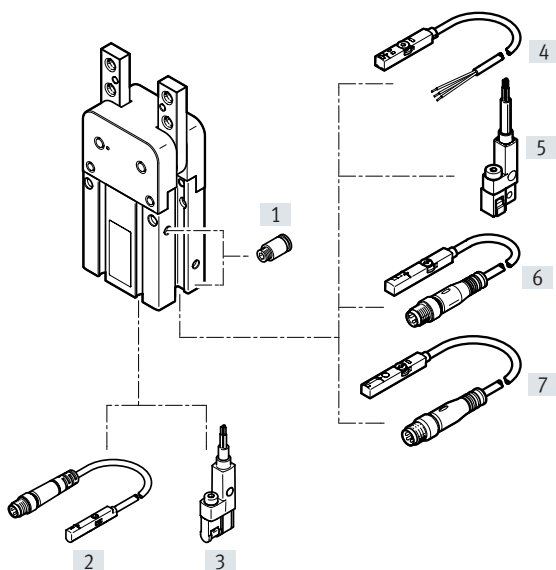
Size 6



Size 10



Size 16 ... 32



Accessories

	Type/order code	For size	Description	→ Page/Internet
[1]	Push-in fitting QS	6 ... 32	For connecting tubing with standard O.D.	qs
[2]	Proximity switch SMT-10M	6, 16 ... 32	For sensing the piston position at the end positions	21
[3]	Proximity switch SMT-10G	6, 16 ... 32	For sensing the piston position at the end positions	21
[4]	Proximity switch SMT-8M	10 ... 32	For sensing the piston position at the end positions	21
[5]	Proximity switch SMT-8G	10 ... 32	For sensing the piston position at the end positions	21
[6]	Position transmitter SMAT-8M	10 ... 32	For sensing the piston position at any location	22
[7]	Position transmitter SDAS-MHS	10 ... 32	For sensing the piston position at any location	22

Type codes

001	Series	
DHWC	Angle gripper	

002	Size [mm]	
6	6	
10	10	
16	16	
20	20	
25	25	
32	32	

003	Position sensing	
A	For proximity sensor	

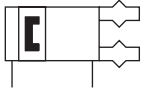
004	Gripper function	
	Double-acting	
S	Single-acting, open	

005	Gripping force backup	
	None	
NO	Opening	

Datasheet

Function

Double-acting
DHWC-...-A



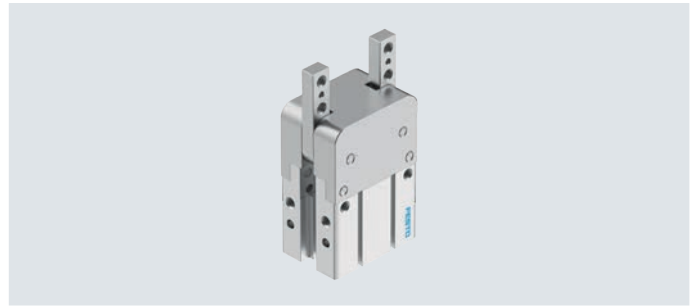
-  - Size
6 ... 32 mm

-  - Opening angle
30°

 www.festo.com

Function – variants

Single-acting
Opening: DHWC-...-S-NO



General technical data						
Size	6	10	16	20	25	32
Design	Connection direction on the side, force-guided motion sequence					
Mode of operation	Double-acting	Double-acting, single-acting, open				
Gripper function	Bracket					
Number of gripper jaws	2					
Max. opening angle	30 deg					
Pneumatic connection	M3			M5		
Gripper repetition accuracy ¹⁾	≤0.1 mm					
Rotational symmetry	≤0.2 mm					
Max. interchangeability	≤0.2 mm					
Max. operating frequency of gripper	≤3 Hz		≤2 Hz			
Position sensing	Via proximity switch					
Type of mounting	Optional: direct mounting via through-hole, direct mounting via thread	Optional: direct mounting via through-hole, direct mounting via thread, with through-hole and dowel pin, with female thread and dowel pin				
Mounting position	Any					

1) Under constant exposure to operating conditions, end-position drift occurs in the direction of movement of the gripper jaws, at 100 consecutive strokes

Operating and environmental conditions						
Size	6	10	16	20	25	32
Operating medium	Compressed air to ISO 8573-1:2010 [7:4:4]					
Note on the operating/pilot medium	Lubricated operation possible (in which case lubricated operation will always be required)					
Ambient temperature ¹⁾	-10 ... 60 °C					
Corrosion resistance class CRC ²⁾	0 - no corrosion stress					

1) Note operating range of proximity switches

2) Corrosion resistance class CRC 0 to Festo standard FN 940070

No corrosion stress. Applies to small, visually unimportant standards-based parts such as threaded pins, circlips and clamping sleeves which are usually only available on the market in a phosphated or burnished version (and possibly oiled) as well as to ball bearings (for components < CRC3) and plain bearings.>

Datasheet

Operating pressure DHWC-...						
Size	6	10	16	20	25	32
Operating pressure	0.25 ... 0.8 MPa		0.1 ... 0.8 MPa			
Operating pressure	36.25 ... 116 psi		14.5 ... 116 psi			
Operating pressure	2.5 ... 8 bar		1 ... 8 bar			

Operating pressure DHWC-...-NO						
Size	10	16	20	25	32	
Operating pressure	0.2 ... 0.8 MPa		0.15 ... 0.8 MPa			
Operating pressure	29 ... 116 psi		21.75 ... 116 psi			
Operating pressure	2 ... 8 bar		1.5 ... 8 bar			

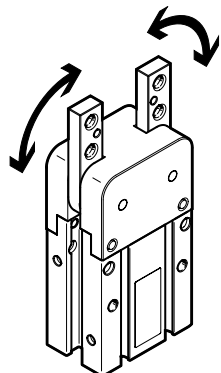
Weights DHWC-...						
Size	6	10	16	20	25	32
Product weight	22 g	48 g	97 g	189.3 g	362 g	639 g

Weights DHWC-...-NO						
Size	10	16	20	25	32	
Product weight	53.5 g	97.5 g	190.5 g	363.5 g	642 g	

Materials						
Size	6	10	16	20	25	32
Housing material	Anodised wrought aluminium alloy					
Gripper jaw material	High-alloy steel					
Cover cap material	Anodised wrought aluminium alloy					
Note on materials	Free of copper and PTFE, RoHS-compliant					

Datasheet

Opening and closing times



The indicated opening and closing times [ms] were measured at room temperature at an operating pressure of 6 bar with the gripper horizontally mounted and without additional gripper fingers (mean values shown).

The grippers must be throttled when handling heavier loads. Opening and closing times must then be adjusted accordingly.

Opening and closing times DHWC-...

Size	6	10	16	20	25	32
Min. opening time at 6 bar	4 ms	8 ms	4 ms	6 ms	38 ms	22 ms
Min. closing time at 6 bar	7 ms	8 ms	12 ms	16 ms	50 ms	34 ms

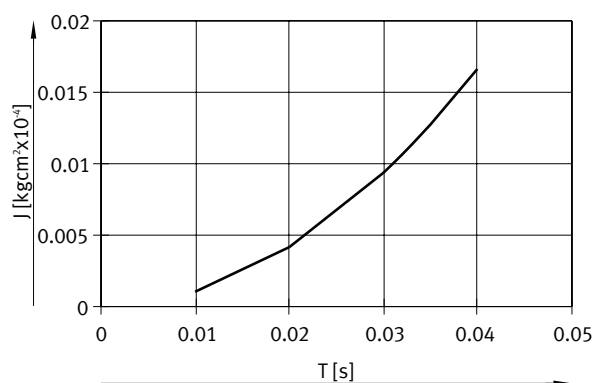
Opening and closing times DHWC-...-NO

Size	10	16	20	25	32
Min. opening time at 6 bar	6 ms	20 ms	13 ms	51 ms	43 ms
Min. closing time at 6 bar	12 ms	14 ms	10 ms	15 ms	16 ms

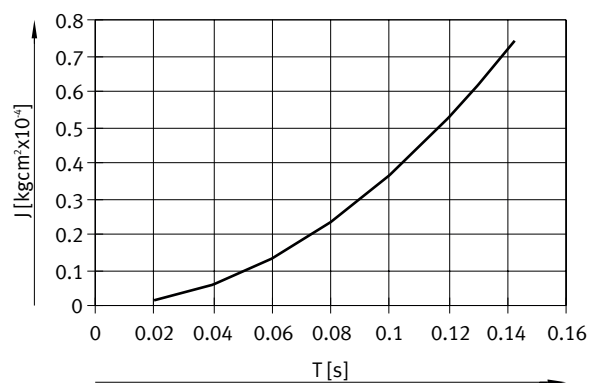
Datasheet

Opening and closing times t to be set at 6 bar as a function of mass moment of inertia of the gripper fingers

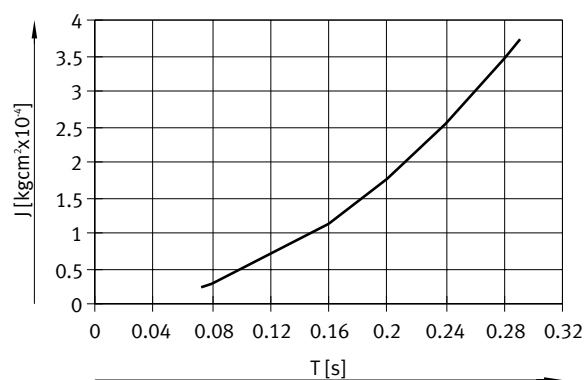
DHWC-6



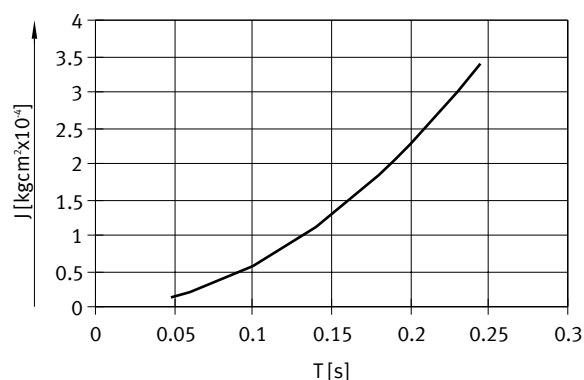
DHWC-10



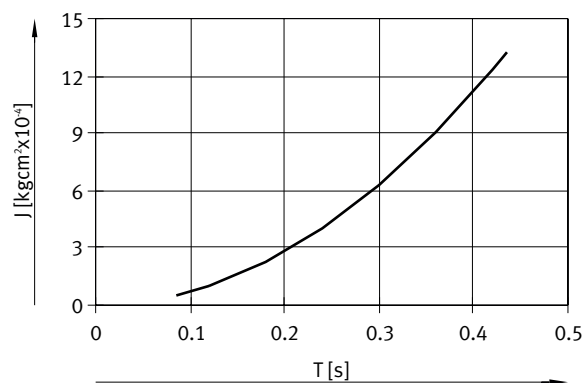
DHWC-16



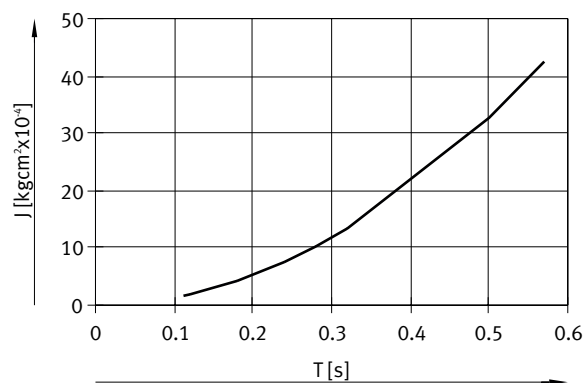
DHWC-20



DHWC-25

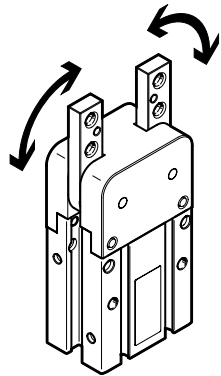


DHWC-32



Datasheet

Total gripping torque



The gripping torque is not constant across the opening angle → page 15

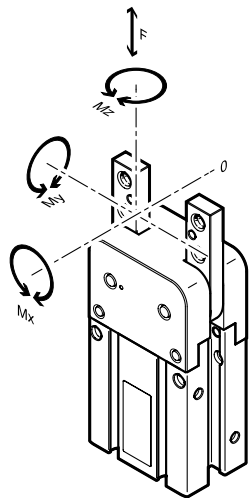
Total gripping torque DHWC-...

Size	6	10	16	20	25	32
Total gripping torque at 6 bar, opening	7.3 Ncm	25.1 Ncm	78.2 Ncm	173.5 Ncm	322.6 Ncm	687.6 Ncm
Total gripping torque at 6 bar, closing	5.4 Ncm	20.6 Ncm	65.7 Ncm	142.9 Ncm	265.1 Ncm	578.6 Ncm

Total gripping torque DHWC-...-NO

Size	10	16	20	25	32
Total gripping torque at 6 bar, closing	15.9 Ncm	53.3 Ncm	120.9 Ncm	233.9 Ncm	550.7 Ncm

Static characteristic load values at the gripper jaws



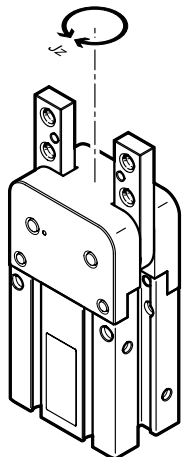
The indicated permissible forces and torques apply to a single gripper jaw. They include the lever arm, additional applied loads due to the workpiece or external gripper fingers and acceleration forces occurring during movement. The zero coordinate line (gripper jaw guide) must be taken into consideration when calculating torques.

Static characteristic load values at the gripper jaws

Size	6	10	16	20	25	32
Max. force on gripper jaw F_z , static	18 N	40 N	60 N	100 N	140 N	210 N
Maximum torque on gripper jaw M_x , static	0.3 Nm	0.4 Nm	1.2 Nm	1.5 Nm	2.2 Nm	5 Nm
Maximum torque on gripper jaw M_y , static	0.3 Nm	0.5 Nm	0.9 Nm	2.2 Nm		5 Nm
Maximum torque on gripper jaw M_z , static	0.3 Nm	0.5 Nm	0.9 Nm	2.2 Nm		5 Nm

Datasheet

Mass moments of inertia



Mass moment of inertia of the angle gripper in relation to the central axis, without external gripper fingers, without load.

Mass moments of inertia DHWC-...

Size	6	10	16	20	25	32
Mass moment of inertia	0.009 kgcm ²	0.035 kgcm ²	0.115 kgcm ²	0.253 kgcm ²	1.083 kgcm ²	2.769 kgcm ²

Mass moments of inertia DHWC-...-NO

Size	10	16	20	25	32
Mass moment of inertia	0.039 kgcm ²	0.116 kgcm ²	0.255 kgcm ²	1.087 kgcm ²	2.782 kgcm ²

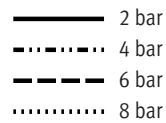
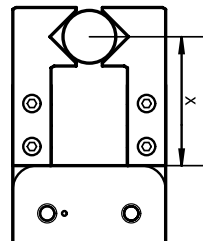
Datasheet

Gripping force F_{Gr} per gripper jaw as a function of the operating pressure and lever arm x

The gripping forces as a function of the operating pressure and lever arm can be determined from the following graphs.

The gripping torque is not constant across the opening angle

→ page 15.

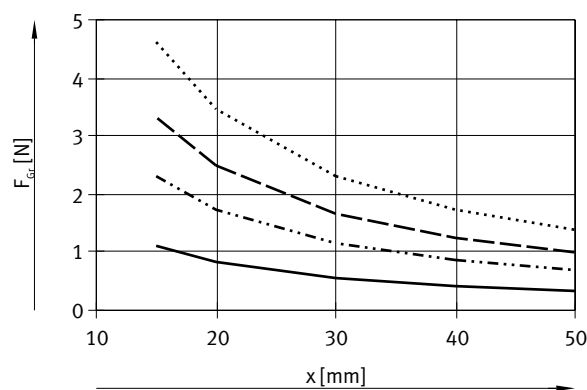


Note
Engineering software
Gripper selection
→ www.festo.com

External gripping (closing)

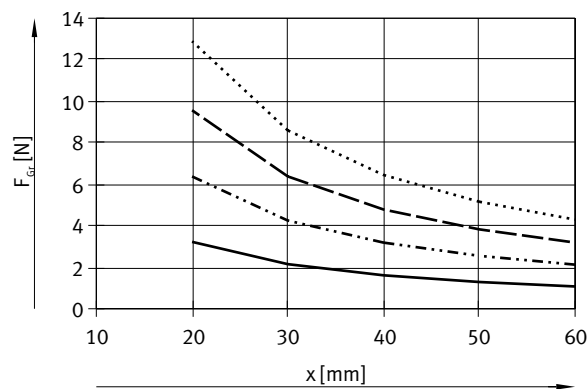
Double-acting

DHWC-6-A

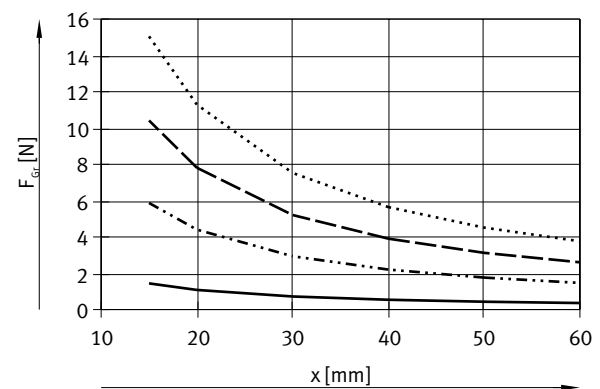


Single-acting

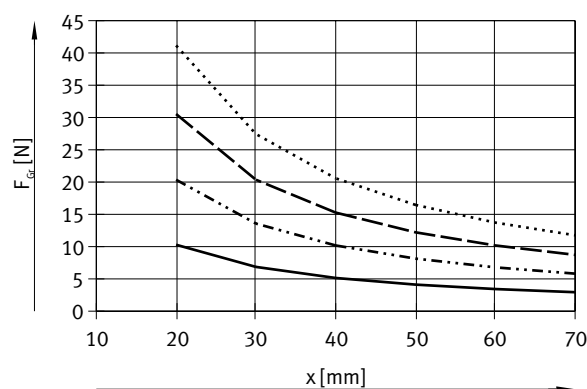
DHWC-10-A



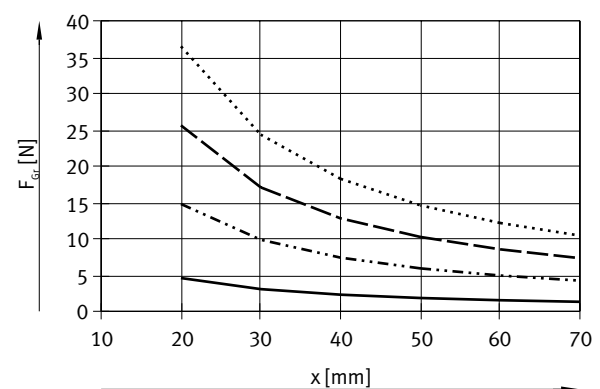
DHWC-10-A-S-NO



DHWC-16-A



DHWC-16-A-S-NO



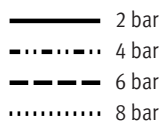
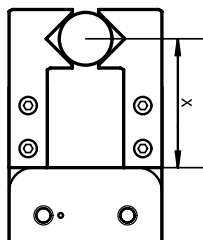
Datasheet

Gripping force F_{Gr} per gripper jaw as a function of the operating pressure and lever arm x

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The gripping torque is not constant across the opening angle

→ page 15.

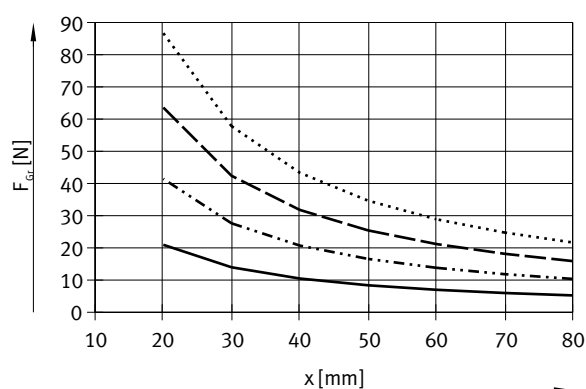


 **Note**
Engineering software
Gripper selection
→ www.festo.com

External gripping (closing)

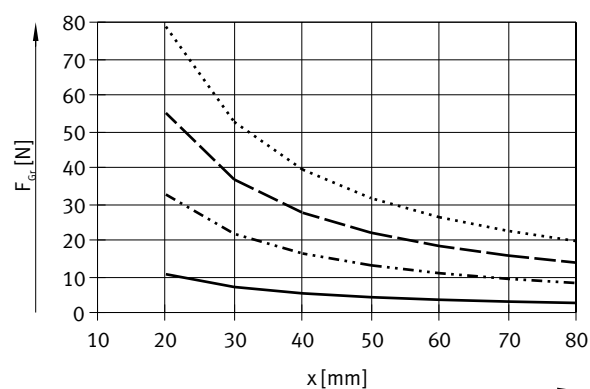
Double-acting

DHWC-20-A

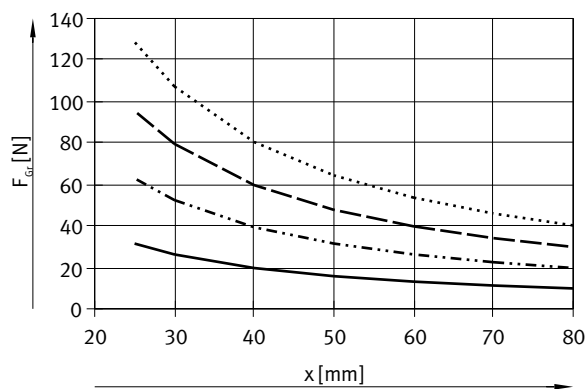


Single-acting

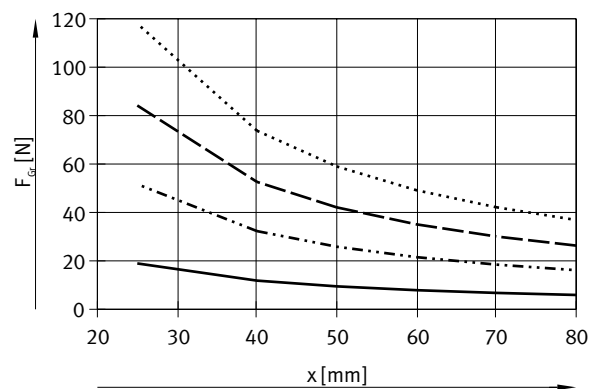
DHWC-20-A-S-NO



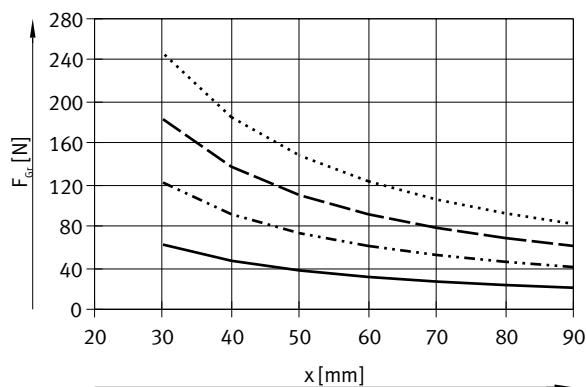
DHWC-25-A



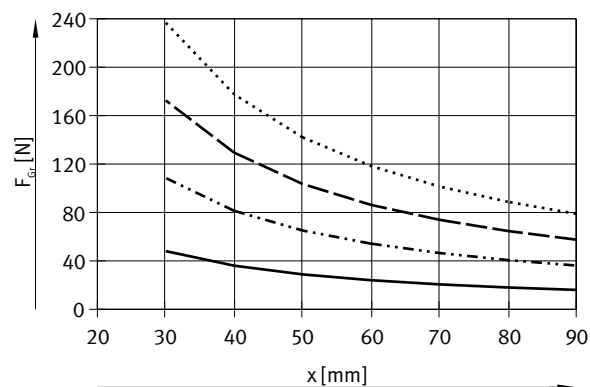
DHWC-25-A-S-NO



DHWC-32-A



DHWC-32-A-S-NO



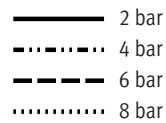
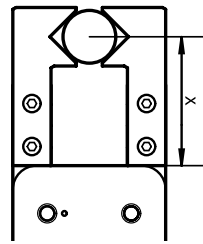
Datasheet

Gripping force F_{Gr} per gripper jaw as a function of the operating pressure and lever arm x

The gripping forces as a function of the operating pressure and lever arm can be determined from the following graphs.

The gripping torque is not constant across the opening angle

→ page 15.

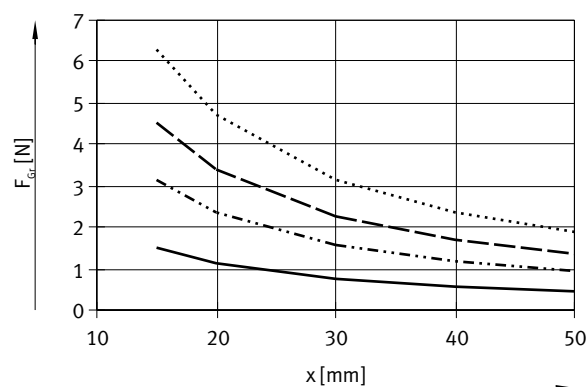


Note
Engineering software
Gripper selection
→ www.festo.com

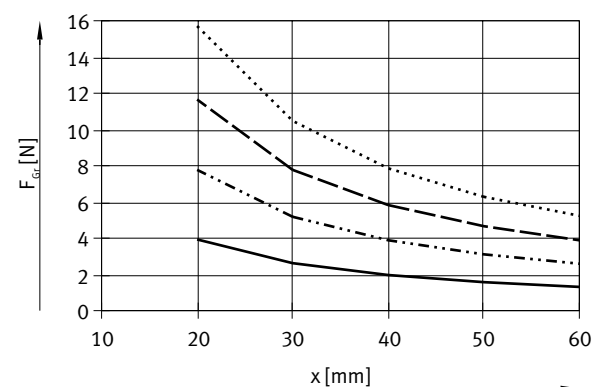
Internal gripping (opening)

Double-acting

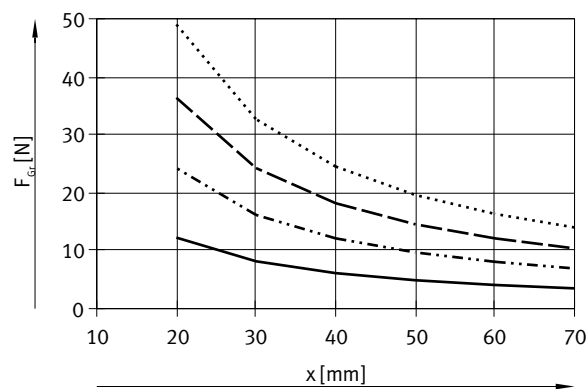
DHWC-6-A



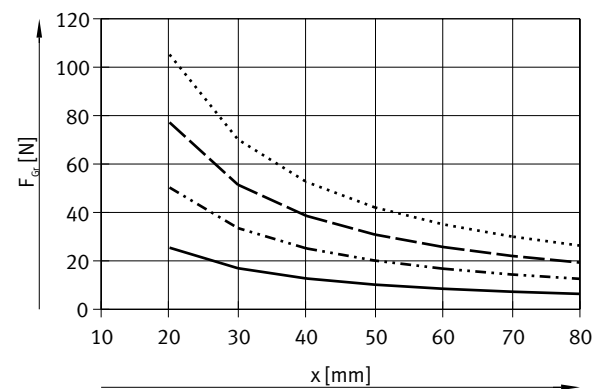
DHWC-10-A



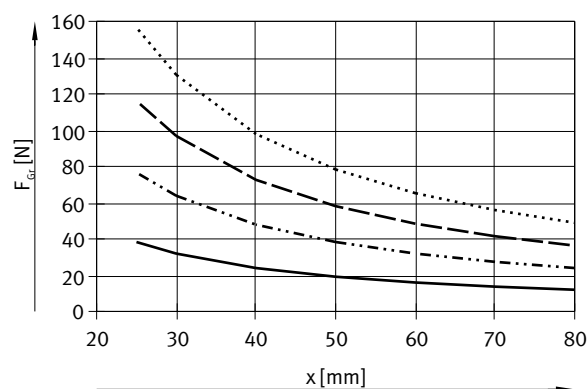
DHWC-16-A



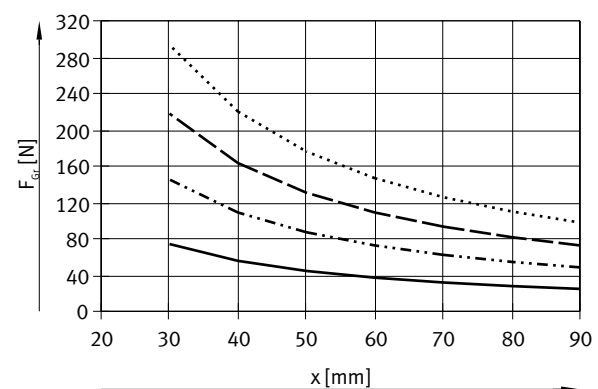
DHWC-20-A



DHWC-25-A



DHWC-32-A



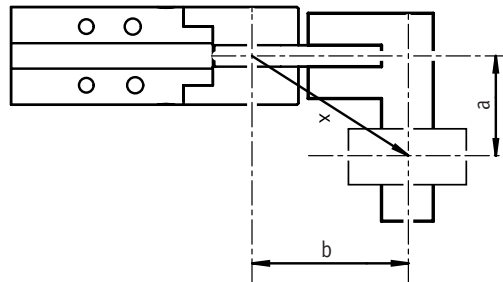
Datasheet

Gripping force F_{Gr} per gripper jaw at 6 bar as a function of lever arm x and eccentricity a and b

The following formula must be used to calculate the lever arm x with eccentric gripping:

$$x = \sqrt{a^2 + b^2}$$

The gripping force F_{Gr} can then be read from the graphs (→ page 12/13/14) using the calculated value x .



Calculation example

Assuming:

Distance $a = 20$ mm

Distance $b = 25$ mm

To be determined:

The gripping force at 6 bar,
with a DHWC-16-A,
used as an external gripper

Procedure:

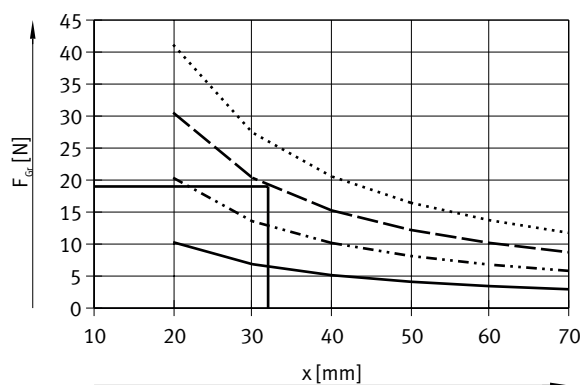
Calculating the lever arm x

$$x = \sqrt{20^2 + 25^2}$$

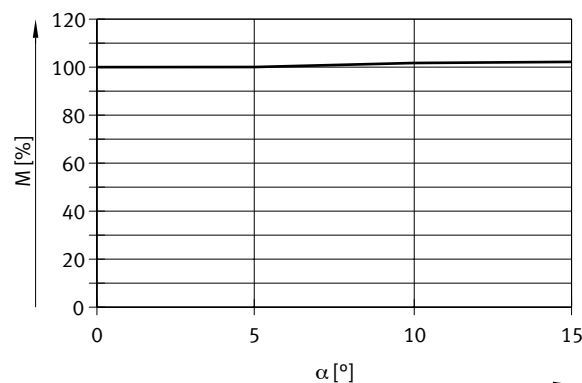
$$x = 32 \text{ mm}$$

The graph

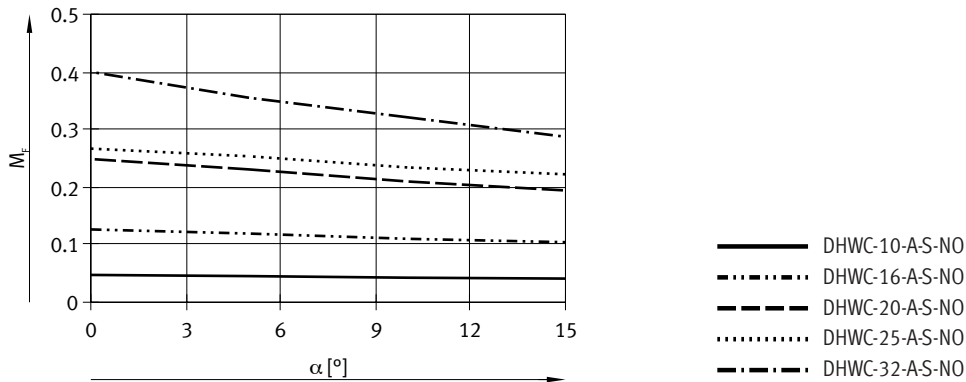
(→ page 12) gives a value for the gripping force of $F_{Gr} = 20$ N.

Torque curve M as a function of opening angle α

The drive principle of the gripper jaws means that the torque is not constant across the opening angle. The percentage of torque available in each case can be determined from the graph. Opening angle of 0° means: parallel gripper jaw position



Datasheet

Spring torque M_F as a function of opening angle α Calculation of the actual gripping torques $M_{Gr\text{ges}}$ for DHWC-...-S-NO as a function of the application

The angle gripper with integrated spring, DHWC-...-S-NO (opening), can be used as:

- Single-acting gripper

To calculate the available gripping torque $M_{Gr\text{ges}}$ (per gripper jaw), the data from the graphs for gripping force F_{Gr} (→ page 12/13/14),

$$M_{Gr} = F_{Gr} \cdot x \cdot M [\%]$$

torque curve M (→ page 15) and spring torque M_F (→ page 16) must be combined accordingly.

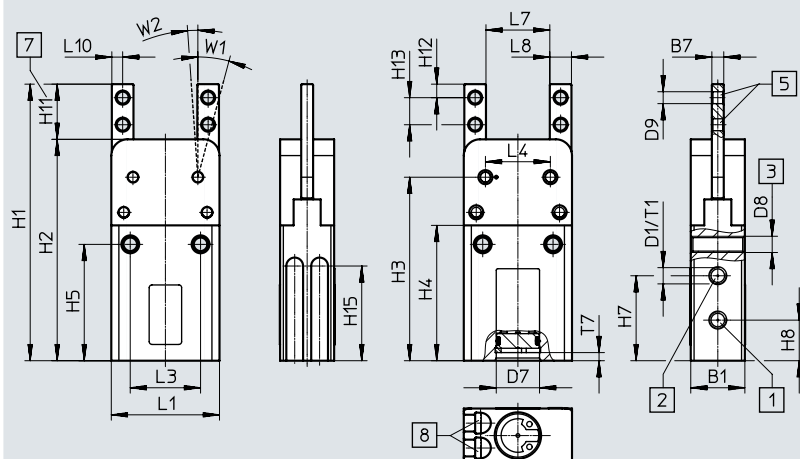
M_{Gr} Gripping torque
 F_{Gr} Gripping force
 x Lever arm
 M Torque curve

Datasheet

Dimensions

Download CAD data → www.festo.com

DHWC-6



- [1] Pneumatic connection, opening
- [2] Pneumatic connection, closing
- [3] Threaded hole for mounting the gripper
- [5] Threaded hole for mounting the gripper fingers
- [7] Area for mounting the gripper fingers
- [8] C-slot for proximity switch

Size	B1	B7	D1	D7	D8	D9	H1	H2	H3	H4	H5	H7	H8	H11
[mm]	+0.3	-0.01 -0.05		Ø H8										-0.2
DHWC-6-A	10	2.2	M3	8	M3	2.2 ^{+0.1}	51.1	40.9	33.9	25	21.5	15.7	7.5	10.2

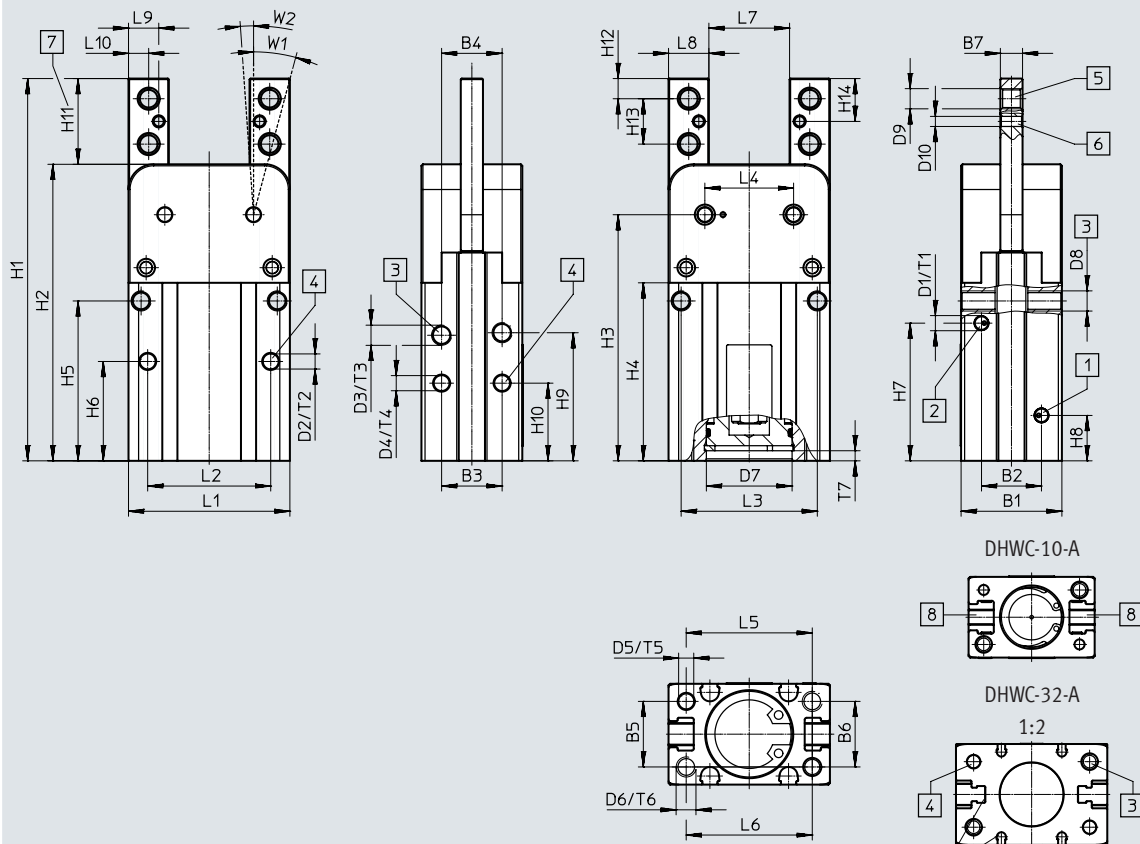
Size	H12	H13	H15	L1	L3	L4	L7	L8	L10	T1	T7	W1	W2
[mm]	-0.2			+0.3			-0.4	-0.4	-0.2			±2°	+3°
DHWC-6-A	2.5	5	17.5	20	13	12	11.8	4	2	4.5	1.5	15°	2°

Datasheet

Dimensions

Download CAD data → www.festo.com

DHWC-10 ... 32



- [1] Pneumatic connection, opening
- [2] Pneumatic connection, closing
- [3] Threaded hole for mounting the gripper
- [4] Centring hole
- [5] Threaded hole for mounting the gripper fingers
- [7] Area for mounting the gripper fingers
- [8] DHWC-10: T-slot for proximity switch
DHWC-16 ... 32: C-slot and T-slot for proximity switch

Datasheet

Size	B1	B2	B3	B4	B5	B6	B7 −0.01	D1	D2 ∅ H9	D3	D4 ∅ H9	D5 ∅ H9	D6	D7 ∅ H8	D8	D9	D10 ∅ +0.02
[mm]	+0.3		±0.02			±0.02	−0.05										
DHWC-10-A	16	10.8	10.8	10.8	10.8	10.8	3	M3	2	M3	2	2	M3	12	M3	3.2 ^{+0.1}	2
DHWC-10-A-S-NO																	
DHWC-16-A	20	11.9	12	12	13	13	4.4		3	M4	3	3	M4	17	M4	M4	
DHWC-16-A-S-NO																	
DHWC-20-A	26	15.6	16	14	16.6	17	5.6	M5	4	M5	4	4	M5	21	M5	M5	
DHWC-20-A-S-NO																	
DHWC-25-A	33	20.4	21	21	20	20	6.6		5	M6	5	5	M6	26	M6	M5	3
DHWC-25-A-S-NO																	
DHWC-32-A	40	24	26	26	26	26	8.6		5	M6	5	5	M6	25	M6	M6	
DHWC-32-A-S-NO																	

Size	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	H11	H12	H13	H14	L1	L2	L3
[mm]						+0.1				+0.1	-0.2	-0.2		-0.2	+0.3	±0.02	
DHWC-10-A	62.4	46.8	38.1	-	21.6	11.6	15.6	7	16.1	8.5	15.6	3.5	8.6	7.8	25	18	18.6
DHWC-10-A-S-NO	68.3	52.7	44		27.5	17.5	21.5		22	14.4							
DHWC-16-A	75.8	58.8	48.8	35.3	31.7	19.7	27.3	9	25.4	15.4	17	4	9	8.5	32	24.4	27
DHWC-16-A-S-NO																	
DHWC-20-A	87.4	68.4	55.9	39.9	35.9	21.9	30	10.2	28.8	16.8	19	5	9	9.5	40	28.4	31.6
DHWC-20-A-S-NO																	
DHWC-25-A	103.2	80.2	65	46.2	41.5	25.8	34.5	10.5	32.9	20.9	23	5.5	12	11.5	50	37.2	37.4
DHWC-25-A-S-NO																	
DHWC-32-A	117	89.3	69.3	46.7	42.2	25.2	34.2	11	33.2	20.2	27.7	6	16	14	60	46	46
DHWC-32-A-S-NO																	

Size	L4	L5	L6	L7	L8	L9 +0.025	L10	T1	T2	T3	T4	T5	T6	T7	W1	W2
[mm]		±0.02		−0.4	−0.4	−0.225	−0.2								±2°	+3°
DHWC-10-A	14	19	19	13	6	3	3	4	3	4	3	3	4	1.5	15°	2°
DHWC-10-A-S-NO																
DHWC-16-A	17.6	25	25	16	8	6	4	4.5	4	4.5	4	4	6	2		
DHWC-16-A-S-NO																
DHWC-20-A	24.8	31	30	22	9	4.5	6	4	8	4	4	10				
DHWC-20-A-S-NO																
DHWC-25-A	31	38	38	30	10	5	5	7.5	4	10	4	4	12			
DHWC-25-A-S-NO																
DHWC-32-A	38	46	46	36	12	6	6	7.5	5	10	5	5	13			
DHWC-32-A-S-NO																

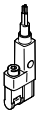
Ordering data

Ordering data			
Size [mm]	Double-acting		Single-acting
	Part no.	Type	Opening Part no. Type
6	8125286	DHWC-6-A	–
10	8125481	DHWC-10-A	8133476 DHWC-10-A-S-NO
16	8128711	DHWC-16-A	8128709 DHWC-16-A-S-NO
20	8128701	DHWC-20-A	8128702 DHWC-20-A-S-NO
25	8128136	DHWC-25-A	8133477 DHWC-25-A-S-NO
32	8128105	DHWC-32-A	8133475 DHWC-32-A-S-NO

Accessories

Proximity switches for size 6, 16 ... 32

Ordering data – Proximity switch for C-slot, magneto-resistive							Datasheets → Internet: smt
	Type of mounting	Electrical connection, outlet direction of connection	Switching output	Cable length [m]	Part no.	Type	
N/O							
	Inserted in the slot from above	Cable, 3-core, lengthwise	PNP	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	
		Cable, 3-core, crosswise	NPN	2.5	551374	SMT-10M-PS-24V-E-2.5-Q-OE	
		Plug M8x1, 3-pin, crosswise		0.3	551376	SMT-10M-PS-24V-E-0.3-Q-M8D	

Ordering data – Proximity switch for C-slot, magneto-resistive							Datasheets → Internet: smt
	Type of mounting	Electrical connection, outlet direction of connection	Switching output	Cable length [m]	Part no.	Type	
N/O							
	Inserted into the slot lengthwise	Cable, 3-core, crosswise	PNP	2.5	547862	SMT-10G-PS-24V-E-2.5Q-OE	
		Plug M8x1, 3-pin, crosswise		0.3	547863	SMT-10G-PS-24V-E-0.3Q-M8D	
		Cable, 3-core, crosswise	NPN	2.5	8065030	SMT-10G-NS-24V-E-2.5Q-OE	
		Plug M8x1, 3-pin, crosswise		0.3	8065029	SMT-10G-NS-24V-E-0.3Q-M8D	

Proximity switch for size 10 ... 32

Ordering data – Proximity switch for T-slot, magneto-resistive						Datasheets → Internet: smt
	Type of mounting	Electrical connection outlet direction of connection	Switching output	Cable length [m]	Part no.	Type
N/O						
	Inserted in the slot from above, short design	Cable, 3-core, lengthwise	PNP	2.5	574335	SMT-8M-A-PS-24V-E-2.5-OE
		Plug M8x1, 3-pin, in-line		0.3	574334	SMT-8M-A-PS-24V-E-0.3-M8D
		Plug M12x1, 3-pin, in-line		0.3	574337	SMT-8M-A-PS-24V-E-0.3-M12
		Cable, 3-core, lengthwise	NPN	2.5	574338	SMT-8M-A-NS-24V-E-2.5-OE
		Plug M8x1, 3-pin, in-line		0.3	574339	SMT-8M-A-NS-24V-E-0.3-M8D
N/C						
	Inserted in the slot from above, short design	Cable, 3-core, lengthwise	PNP	7.5	574340	SMT-8M-A-PO-24V-E-7.5-OE

Ordering data – Proximity switch for T-slot, magneto-resistive							Datasheets → Internet: smt
	Type of mounting	Electrical connection, outlet direction of connection	Switching output	Cable length [m]	Part no.	Type	
N/O							
	Inserted into the slot lengthwise	Cable, 3-core, crosswise	PNP	2.5	547859	SMT-8G-PS-24V-E-2.5Q-OE	
		Plug M8x1, 3-pin, crosswise		0.3	547860	SMT-8G-PS-24V-E-0.3Q-M8D	
		Cable, 3-core, crosswise	NPN	2.5	8065028	SMT-8G-NS-24V-E-2.5Q-OE	
		Plug M8x1, 3-pin, crosswise		0.3	8065027	SMT-8G-NS-24V-E-0.3Q-M8D	

Ordering data – Connecting cables						Datasheets → Internet: nebu
	Electrical connection, left	Electrical connection, right	Cable length [m]	Part no.	Type	
	Straight socket, M8x1, 3-pin	Cable, open end, 3-core	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-core	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-core	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-core	2.5	541367	NEBU-M12W5-K-2.5-LE3	
			5	541370	NEBU-M12W5-K-5-LE3	

Accessories

Position transmitter for size 10 ... 32

The position transmitter continuously senses the position of the piston.
It has an analogue output with an output signal relative to the piston position.

Ordering data – Position transmitter for T-slot

Datasheets → Internet: position transmitter

	Position measuring range	Analogue output [V]	[mA]	Type of mounting	Electrical connection	Cable length [m]	Part no.	Type
	0 ... 40	0 ... 10	–	Inserted in the slot from above	Plug M8x1, 4-pin, in-line	0.3	553744	SMAT-8M-U-E-0.3-M8D

Ordering data – Position transmitter for T-slot

Datasheets → Internet: sdas

	Description	Type of mounting	Electrical connection	Cable length [m]	Part no.	Type
	Choice of two operating modes: • two adjustable switching outputs • IO-Link®	Inserted in the slot from above	Plug M8x1, 4-pin, in-line	0.3	8063974	SDAS-MHS-M40-1L-PNLK-PN-E-0.3-M8
			Cable, open end	2.5	8063975	SDAS-MHS-M40-1L-PNLK-PN-E-2.5-LE

Ordering data – Connecting cables

Datasheets → Internet: nebu

	Electrical connection, left	Electrical connection, right	Cable length [m]	Part no.	Type
	Straight socket, M8x1, 4-pin	Cable, open end, 4-core	2.5	541342	NEBU-M8G4-K-2.5-LE4
			5	541343	NEBU-M8G4-K-5-LE4
	Angled socket, M8x1, 4-pin	Cable, open end, 4-core	2.5	541344	NEBU-M8W4-K-2.5-LE4
			5	541345	NEBU-M8W4-K-5-LE4

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