

Type codes

001	Series	
DHPS	Parallel gripper	

002	Size	
6	6	
10	10	
16	16	
20	20	
25	25	
35	35	

003	Position sensing	
A	For proximity sensor	

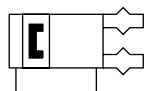
004	Gripping force backup	
	None	
NC	N/O contact	
NO	Opening	

Data sheet

Function

Double-acting

DHPS-...-A



Size
6 ... 35 mm

Total stroke
4 ... 25 mm

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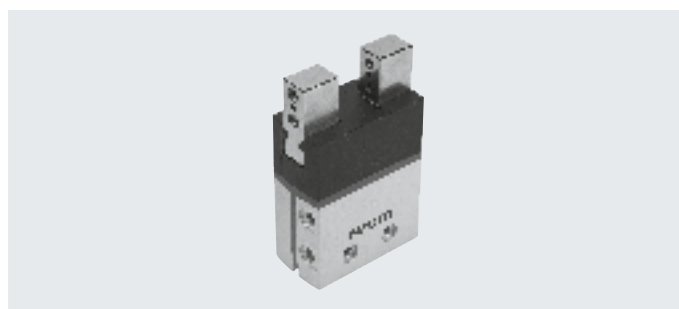
Function – Variant

Single-acting or with gripping force backup

Opening: DHPS-...-NO



Closing: DHPS-...-NC



General technical data							
Size		6	10	16	20	25	35
Design		Lever					
		Guided motion sequence					
Mode of operation		Double-acting					
Gripper function		Parallel					
Guide		Plain-bearing guide					
Gripping force backup		–	NO, NC	NO, NC	NO, NC	NO, NC	NO, NC
Number of gripper jaws		2					
Max. load per gripper finger ¹⁾	[g]	10	60	150	250	350	450
Stroke per gripper jaw	[mm]	2	3	5	6.5	7.5	12.5
Pneumatic connection		M3	M3	M3	M5	G1/8	G1/8
Repetition accuracy ²⁾	[mm]	≤ 0.02					
Max. interchangeability	[mm]	≤ ±0.2					
Max. operating frequency	[Hz]	4			3		2
Rotational symmetry	[mm]	< Ø 0.2					
Position sensing		Via position sensor	Via proximity switch, position transmitter				
Type of mounting		With through-hole and centring sleeve					
		With female thread and centring sleeve					
Mounting position		Any					

1) Applies to unthrottled operation

2) 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	35
Min. operating pressure							
DHPS-...-A	[bar]	2					
DHPS-...-A-N	[bar]	–		4			
Max. operating pressure	[bar]	8					
Operating medium		Compressed air to ISO 8573-1:2010 [7:4:4]					
Note on operating/pilot medium		Lubricated operation possible (in which case lubricated operation will always be required)					
Ambient temperature ¹⁾	[°C]	+5 ... +60					
Corrosion resistance CRC ²⁾		1					

1) Note operating range of proximity switches

2) Corrosion resistance class CRC 1 to Festo standard FN 940070

Low corrosion stress. Dry internal application or transport and storage protection. Also applies to parts behind covers, in the non-visible interior area, and parts which are covered in the application (e. g. drive trunnions).

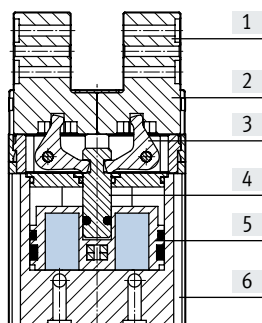
Data sheet

Weights [g]

Size	6	10	16	20	25	35
DHPS-...-A	19	67	184	380	700	1285
DHPS-...-A-N	–	68	188	387	713	1345

Materials

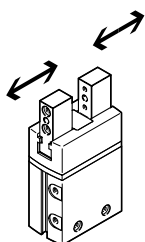
Sectional view



Parallel gripper

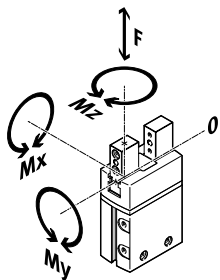
[1]	Gripper jaws	High-alloy stainless steel
[2]	Cover cap	Polyamide
[3]	Reversing lever	Hardened sintered steel
[4]	Piston rod	Tempered steel
[5]	Piston	Polyacetal
[6]	Housing	Hard anodised wrought aluminium alloy
–	Seals	NBR
–	Note on materials	Free of copper and PTFE
		RoHS-compliant

Gripping force [N] at 6 bar



Size		6	10	16	20	25	35
Gripping force per gripper jaw							
DHPS-...-A	Opening	15	39	105	162	249	483
	Closing	13.5	34.5	96	147	228	450
Total gripping force							
DHPS-...-A	Opening	30	80	210	320	500	970
	Closing	25	70	190	290	450	910

Characteristic load values at the gripper jaws



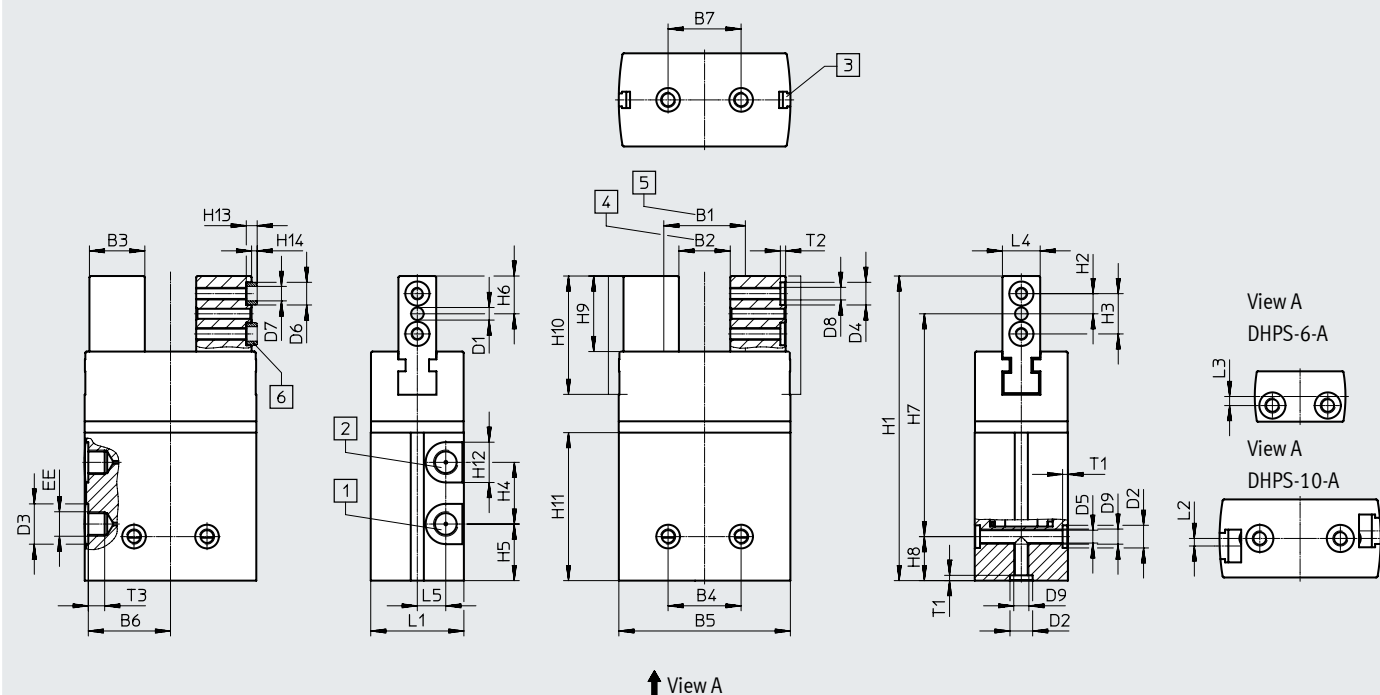
The indicated permissible forces and torques apply to a single gripper jaw. They include the lever arm, additional weight forces created by the workpiece or external gripper fingers and acceleration forces during movement.

The zero coordinate line (gripper jaw guide) must be taken into consideration for the calculation of torques.

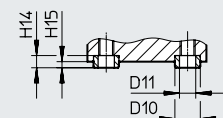
Size		6	10	16	20	25	35
Max. permissible force F_z	[N]	10	60	150	250	350	450
Max. permissible torque M_x	[Nm]	0.5	3	8	14	30	50
Max. permissible torque M_y	[Nm]	0.5	3	8	14	30	50
Max. permissible torque M_z	[Nm]	0.5	3	8	14	30	50

Data sheet

Dimensions

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- [1] Supply port, opening
- [2] Supply port, closing
- [3] Slot for proximity switch
- [4] Normal position for DHPS-...-A and DHPS-...-A-NC
- [5] Normal position for DHPS-...-A-NO
- [6] Centring sleeves ZBH (size 10 and above: 4 included in the scope of delivery)
- [7] Mounting interface: centring sleeves ZBH for mounting the gripper (2 included in the scope of delivery)



Size	B1	B2	B3	B4 ¹⁾	B5	B6	B7 ¹⁾	D1 Ø H8	D2 Ø H8	D3 Ø	D4 Ø H8
[mm]	±0.5	±0.5	-0.03		±0.1						
6	10	6	5.5	11	18	8.65	11	1.5	5	7	-
10	21.8	15.8	7	16	32	15.4	16	2	5	7	5
16	27.8	17.8	13	25	47	22.65	25	3	7	7	7
20	30	17	17.5	25	55.6	26.65	25	4	7	10	7
25	35.4	20.4	22	29	68.2	32.65	29	4	9	16	9
35	56	31	27	33	88	42.25	33	5	12	16	9

1) Tolerance for centring hole ±0.02 mm; tolerance for thread ±0.1 mm

Data sheet

Size [mm]	D5 ∅ +0.1	D6 ∅ h7	D7 ∅	D8	D9	D10 ∅ h7	D11 ∅	EE	H1	H2	H3 ¹⁾
6	2.5	–	–	M2	M3	–	–	M3	45.5	2.9	5.8
10	2.5	5	3.2	M3	M3	5	3.2	M3	66	4	8
16	3.3	7	5.3	M4	M4	5	3.2	M3	80	5.5	11
20	3.3	7	5.3	M4	M4	7	5.3	M5	101	7	14
25	5.1	9	6.4	M5	M6	9	6.4	G1/8	121	8	16
35	6.4	9	6.4	M6	M8	12	10.3	G1/8	142	8.5	17

Size [mm]	H4	H5	H6	H7 ±0.2	H8 ²⁾	H9	H10	H11	H12	H13 –0.2	H14 –0.3
6	15	4	5	33	7.5	9.55	15.8	25.3	7	–	–
10	15.5	10.5	7.5	51	7.5	15.2	23	35	7	2.4	1.2
16	18	11	10	62.5	7.5	20	32.5	38.1	7	3	1.4
20	23	16	12.5	81	7.5	25	39.5	50	10	3	1.4
25	24.5	22.5	15	88.5	17.5	30	47	58.8	16	4	1.9
35	29	24	16	108.5	17.5	32	53	65.3	16	4	1.9

Size [mm]	H15 –0.2	H16 –0.3	L1	L2	L3 ¹⁾	L4 –0.05	L5	T1 +0.1	T2 +0.1	T3 +0.5
6	–	–	10 ^{+0.1}	–	1.8	5	1.5	1.2	–	3.5
10	2.4	1.2	15.5 ^{+0.1}	1.5	–	7	5	1.2	1.2	5
16	3	1.4	22 ^{+0.1}	–	–	10	7	1.6	1.6	6
20	3	1.4	30±0.1	–	–	12	9	1.6	1.6	6
25	4	1.9	37±0.1	–	–	15	11.3	2.1	2.1	6.5
35	4	1.9	45 ^{+0.1}	–	–	20	13.5	2.6	2.1	6.5

1) Tolerance for centring hole ±0.02 mm; tolerance for thread ±0.1 mm

2) Tolerance for centring hole ±0.05 mm; tolerance for thread ±0.1 mm

Ordering data

Size [mm]	Double-acting without compression spring		Single-acting or with gripping force backup			
	Part no.	Type	Opening Part no.	Type	Closing Part no.	Type
6	1254039	DHPS-6-A	–	–	–	–
10	1254040	DHPS-10-A	1254041	DHPS-10-A-NO	1254042	DHPS-10-A-NC
16	1254043	DHPS-16-A	1254044	DHPS-16-A-NO	1254045	DHPS-16-A-NC
20	1254046	DHPS-20-A	1254047	DHPS-20-A-NO	1254048	DHPS-20-A-NC
25	1254049	DHPS-25-A	1254050	DHPS-25-A-NO	1254051	DHPS-25-A-NC
35	1254052	DHPS-35-A	1254053	DHPS-35-A-NO	1254054	DHPS-35-A-NC