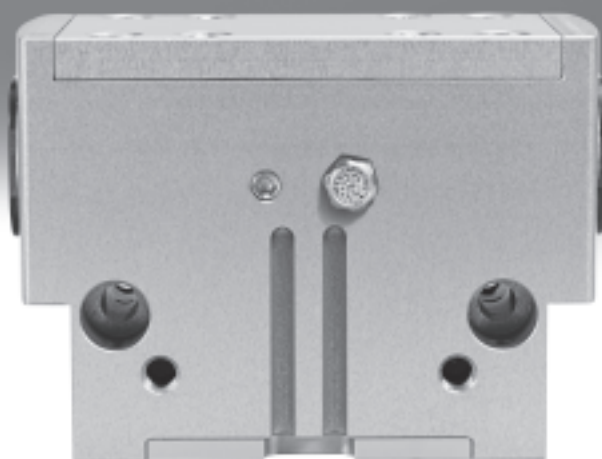


Parallel grippers HGPD, sealed

FESTO



Parallel grippers HGPS, sealed

Key features

FESTO

At a glance

General information

The fully encapsulated gripper kinematics enable the gripper to be used in extremely harsh ambient conditions.

Sturdy and precise kinematics for maximum torque resistance and long service life.

The force generated by the linear motion is translated into the gripper jaw movement via a wedge

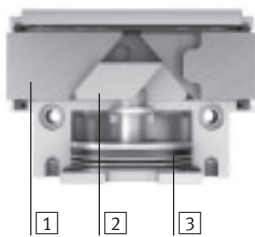
mechanism with forced motion sequence. This also guarantees synchronous movement of the gripper jaw. The ground gripper jaws and slideway ensure a virtually backlash-free movement.

Flexible range of applications

- Can be used as a double-acting and single-acting gripper
- Compression spring for supplementary or retaining gripping forces
- Suitable for external and internal gripping

The technology in detail

Gripper closed



Gripper open



- 1 Gripper jaw
- 2 Wedge with forced guidance
- 3 Piston with magnet

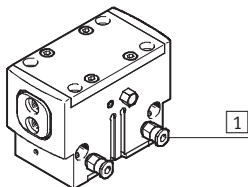
Note

Gripper selection
sizing software
→ www.festo.com

Wide range of supply ports

Direct

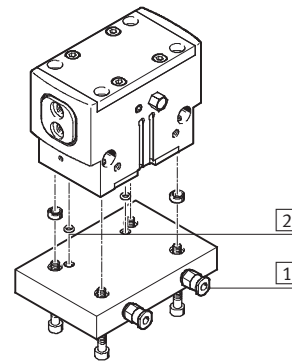
From the front



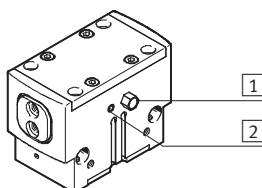
- 1 Supply ports
- 2 O-rings

Via adapter plate

From underneath

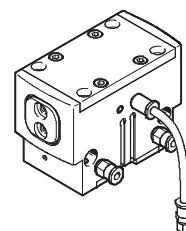


Other ports



- 1 Exhaust hole or sealing air port
- 2 Port for lubrication nipple

Use in harsh ambient conditions



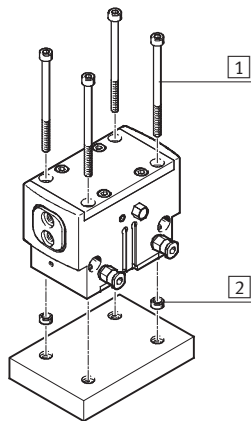
When using the gripper in damp environments or with liquid/gaseous media, make sure that the filter is installed in a neutral environment. The same applies to unused supply ports when operating the gripper as a single-acting gripper.

Parallel grippers HGPD, sealed

Key features

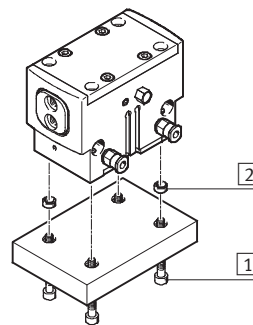
Mounting options

Direct mounting
From above



- 1 Mounting screws
- 2 Centring sleeves

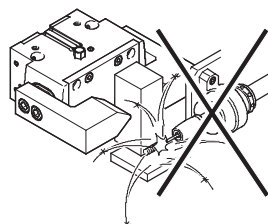
Via adapter plate
From underneath



Note

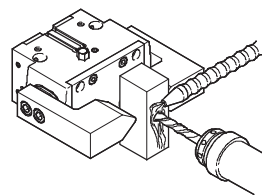
These grippers are not suitable or are of limited suitability for the following sample applications:

Not suitable for:

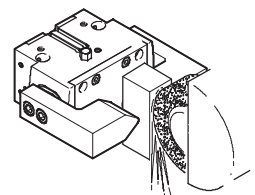


- Welding spatter

Of limited suitability for:



- Aggressive media only possible after consultation with Festo



- Grinding dust

Parallel grippers HGPD, sealed

Type codes

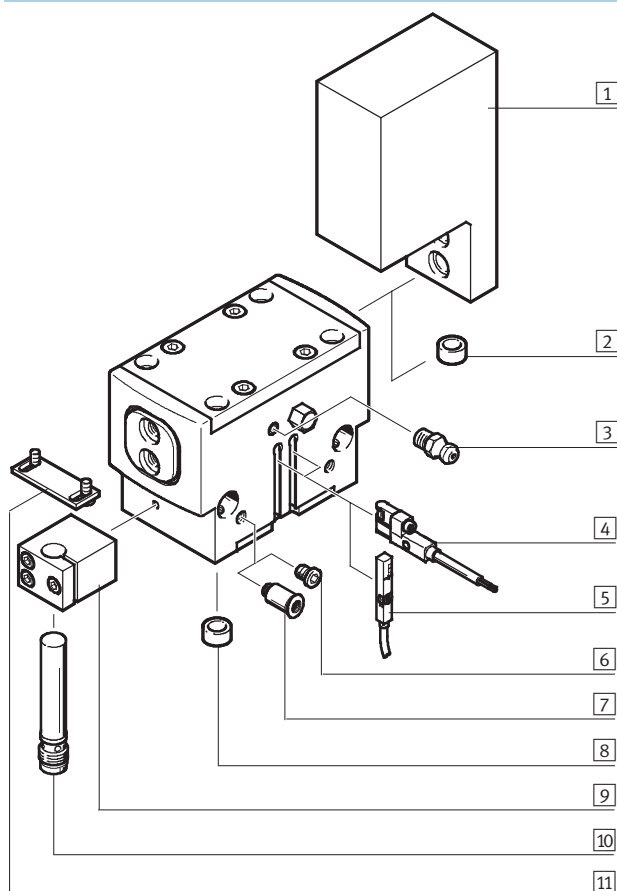
FESTO

		HGPD	—	16	—	A	—	
Type								
HGPD	Parallel gripper							
Size								
Position sensing								
A	Via proximity sensor							
Gripping force retention								
G1	Opening							
G2	Closing							

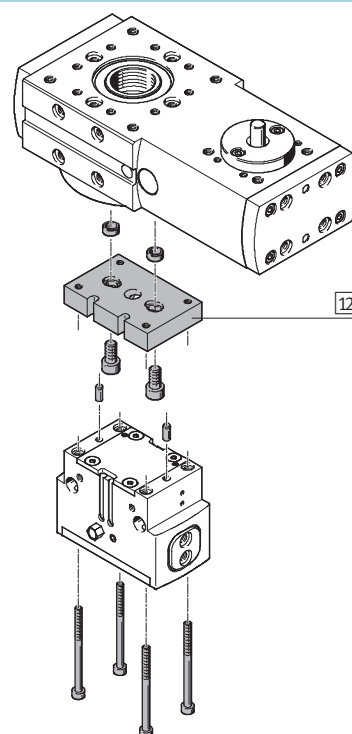
Parallel grippers HGPB, sealed

Peripherals overview

Peripherals overview



System product for handling and assembly technology

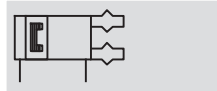


Accessories			
Type	Brief description		→ Page/Internet
1 Gripper jaw blank BUB-HGPB	Blank specially matched to the gripper jaws for custom fabrication of gripper fingers		20
2 Centring pin/sleeve ZBS/ZBH	<ul style="list-style-type: none"> For centring gripper jaw blanks/gripper fingers on the gripper jaws 4 centring pins/sleeves included in the scope of delivery of the gripper 		21
3 Lubrication nipple	Included in the scope of delivery of the gripper		–
4 Proximity sensor SMT-8G/SMT-10G	<ul style="list-style-type: none"> For sensing the piston position Proximity sensor does not project past the housing 		22
5 Position transmitter SMAT-8M	<ul style="list-style-type: none"> Continuously senses the position of the piston. Has an analogue output with an output signal in proportion to the piston position. For size 40 ... 80 		22
6 Blanking plug B	For sealing the supply ports when using the lower supply ports		21
7 Push-in fitting QS	For connecting compressed air tubing with standard O.D.		quick star
8 Centring sleeve ZBH	For centring the gripper when mounting		21
9 Sensor bracket DASI	Clamping block for securing the proximity sensors SIEH or SIEN		21
10 Proximity sensor SIEH/SIEN	For sensing the piston position		23
11 Sensor bracket DASI	Switch lug for sensing the gripper jaw position. Mounted on the gripper jaw blank		21
12 Adapter kit DHAA	Connecting plate between drive and gripper		17

Parallel grippers HGPB, sealed

Technical data

Function
Double-acting
HGPB-...A



-N- Size
16 ... 80 mm
-T- Total stroke
6 ... 40 mm

[www.festo.com/en/
Spare_parts_service](http://www.festo.com/en/Spare_parts_service)

Function – Variants
Single-acting or
with gripping force retention ...
... opening HGPB-...-G1



... closing HGPB-...-G2



General technical data								
Size	16	20	25	35	40	50	63	80
Design	Wedge-shaped actuator							
	Forced motion sequence							
Mode of operation	Double-acting							
Gripper function	Parallel							
Number of gripper jaws	2							
Max. applied load per external gripper finger ¹⁾ [N]	0.25	0.57	1.38	2.78	4.45	8.13	13.4	21.7
Stroke per gripper jaw [mm]	3	4	6	8	10	12	16	20
Pneumatic connection	M5	M5	M5	M5	M5	G1/8	G1/8	G1/4
Pneumatic connection for sealing air	M3	M3	M5	M5	M5	M5	M5	M5
Pneumatic connection for lubrication nipple	M3	M3	M5	M5	M5	M5	M5	M5
Repetition accuracy ²⁾ [mm]	≤ 0.03	≤ 0.04		≤ 0.05				
Max. interchangeability [mm]	≤ ±0.2							
Max. operating frequency [Hz]	≤ 3				≤ 2			
Rotational symmetry [mm]	< Ø 0.2							
Position sensing	Via proximity sensor							
Type of mounting	Via through-hole and dowel pin/centring sleeve							
	Via female thread and dowel pin/centring sleeve							
Mounting position	Any							

1) Valid for unthrottled operation

2) End-position drift under constant conditions of use with 100 consecutive strokes in the direction of movement of the gripper jaws

Operating and environmental conditions	
Min. operating pressure	
HGPB-...-A [bar]	3
HGPB-...-A-G [bar]	4
Max. operating pressure [bar]	8
Operating pressure for sealing air [bar]	0 ... 0.5
Operating medium	Filtered compressed air, lubricated or unlubricated
Ambient temperature ¹⁾ [°C]	+5 ... +60
Corrosion resistance class CRC ²⁾	2

1) Note operating range of proximity sensors

2) Corrosion resistance class 2 according to Festo standard 940 070

Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

Parallel grippers HGPS, sealed

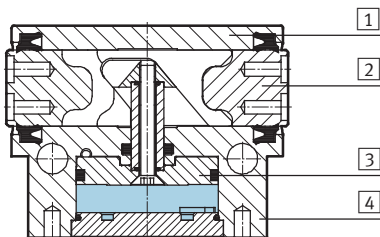
Technical data

FESTO

Weight [g]								
Size	16	20	25	35	40	50	63	80
HGPS-...-A	100	163	327	572	1,044	1,766	3,365	6,252
HGPS-...-A-G	117	182	361	682	1,223	2,150	3,998	7,484

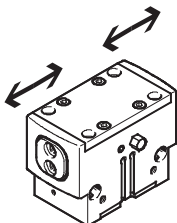
Materials

Sectional view



Parallel gripper		
1	Cover cap	High-alloy stainless steel
2	Gripper jaw	Hardened steel
3	Piston	Hard anodised aluminium
4	Housing	Anodised aluminium
-	Seals	Nitrile rubber
-	Note on materials	Free of copper and PTFE
-		RoHS-compliant

Gripping force [N] at 6 bar



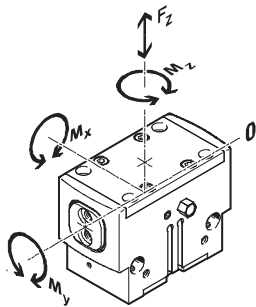
Size	16	20	25	35	40	50	63	80
Gripping force per gripper jaw								
HGPS-...-A	Opening	54	80	144	291	315	472	967
	Closing	47	75	133	267	267	447	928
Total gripping force								
HGPS-...-A	Opening	107	159	288	581	630	944	1,935
	Closing	94	150	266	534	598	894	1,856

Parallel grippers HGPD, sealed

Technical data

FESTO

Characteristic load values at the gripper jaws



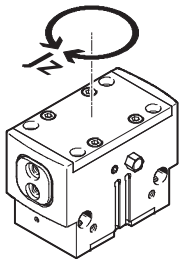
The indicated permissible forces and torques apply to a single gripper jaw. They include the lever arm, additional applied loads due to the workpiece or external gripper fingers and acceleration forces occurring during

movement.

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

Size		16	20	25	35	40	50	63	80
Max. permissible force F_z	[N]	150	250	500	750	1,200	2,000	3,000	6,000
Max. permissible torque M_x	[Nm]	8	12	30	40	70	90	120	170
Max. permissible torque M_y	[Nm]	4	7	25	30	45	60	80	130
Max. permissible torque M_z	[Nm]	3	6	15	25	35	50	65	110

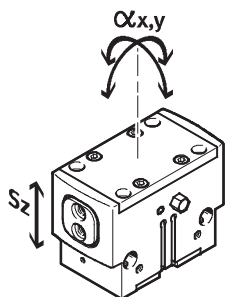
Mass moment of inertia [kgcm²]



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

Size		16	20	25	35	40	50	63	80
HGPD-...-A		0.22	0.40	1.32	3.56	10.10	26.19	80.33	236.48
HGPD-...-A-G		0.27	0.52	1.72	4.88	14.09	36.74	116.19	319.95

Gripper jaw backlash



The plain-bearing guide used in the grippers means that there is backlash between the gripper jaws and the housing. The values entered in the table for the backlash were calculated in accordance with the traditional accumulative tolerance method.

Size		16	20	25	35	40	50	63	80
Max. gripper jaw backlash S_z	[mm]	0.02							
Max. gripper jaw angular backlash α_x, α_y	[°]	0.1							

Parallel grippers HGPS, sealed

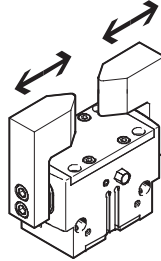
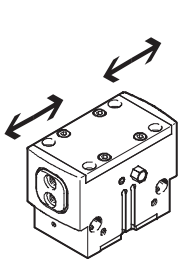
Technical data

FESTO

Opening and closing times [ms] at 6 bar

Without external gripper fingers

With external gripper fingers



The indicated opening and closing times [ms] were measured at room temperature at an operating pressure of 6 bar with horizontally mounted grippers without additional gripper

fingers. The grippers must be throttled for greater applied loads. Opening and closing times must then be adjusted accordingly.

Size		16	20	25	35	40	50	63	80
Without external gripper fingers									
HGPS-...-A	Opening	15	28	29	33	73	90	150	214
	Closing	17	31	35	37	77	100	162	218
HGPS-...-A-G1	Opening	15	13	24	31	73	85	170	235
	Closing	32	25	51	62	157	176	328	353
HGPS-...-A-G2	Opening	30	35	48	50	143	170	294	379
	Closing	15	18	28	36	71	87	185	240
With external gripper fingers (as a function of applied load)									
HGPS-...	0.5 N	20	–	–	–	–	–	–	–
	1 N	28	26	–	–	–	–	–	–
	2 N	40	37	30	–	–	–	–	–
	3 N	–	46	37	34	–	–	–	–
	4 N	–	–	43	40	46	–	–	–
	5 N	–	–	–	55	52	–	–	–
	6 N	–	–	–	–	57	–	–	–
	8 N	–	–	–	–	66	125	–	–
	10 N	–	–	–	–	–	133	–	–
	12 N	–	–	–	–	–	140	–	–
	15 N	–	–	–	–	–	–	183	–
	18 N	–	–	–	–	–	–	201	–
	20 N	–	–	–	–	–	–	211	259
	22 N	–	–	–	–	–	–	–	272
	24 N	–	–	–	–	–	–	–	284

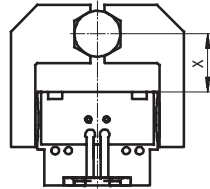
Parallel grippers HGPD, sealed

Technical data

FESTO

Gripping force F_H per gripper jaw as a function of operating pressure and lever arm x

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



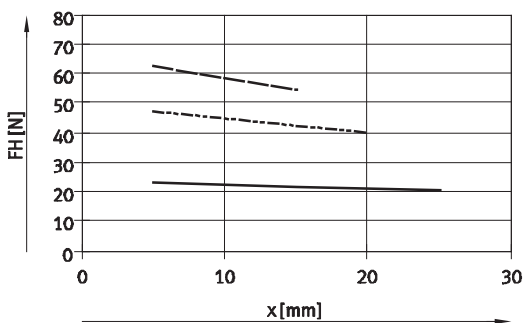
— 3 bar
- - - 6 bar
- · - 8 bar

Note

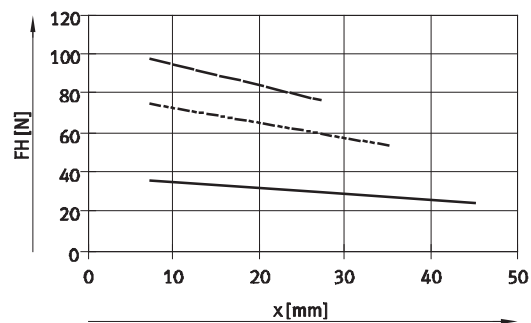
Gripper selection
sizing software
→ www.festo.com

External gripping (closing)

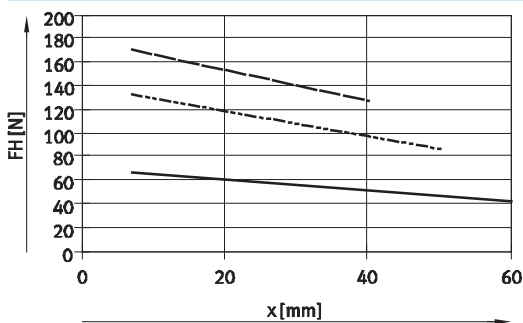
HGPD-16-A



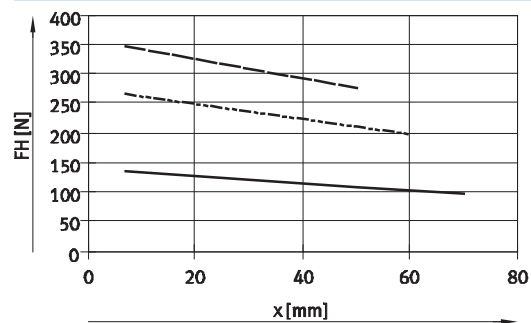
HGPD-20-A



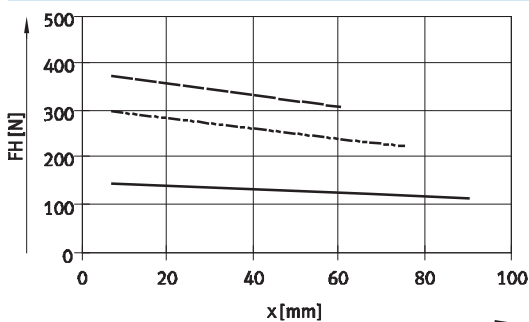
HGPD-25-A



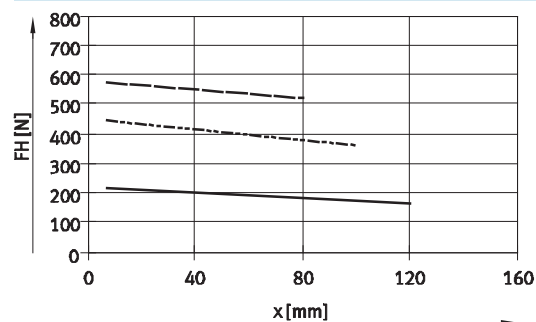
HGPD-35-A



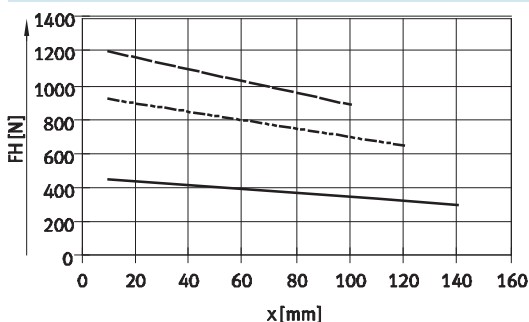
HGPD-40-A



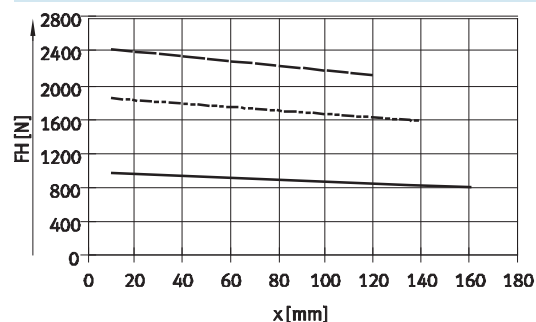
HGPD-50-A



HGPD-63-A



HGPD-80-A



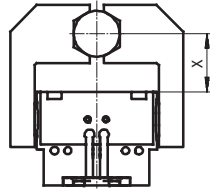
Parallel grippers HGPD, sealed

Technical data

FESTO

Gripping force F_H per gripper jaw as a function of operating pressure and lever arm x

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



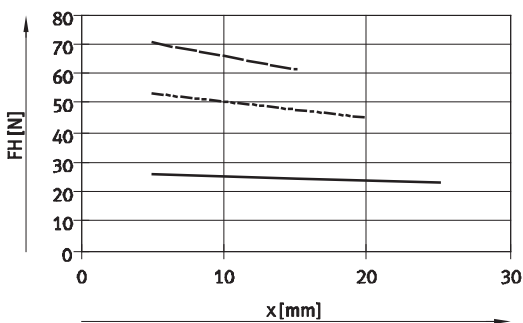
— 3 bar
- - - 6 bar
- · - 8 bar

Note

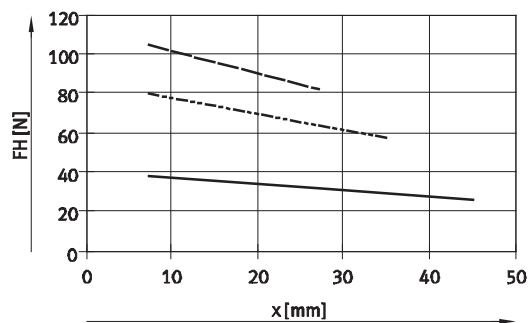
Gripper selection
sizing software
→ www.festo.com

Internal gripping (opening)

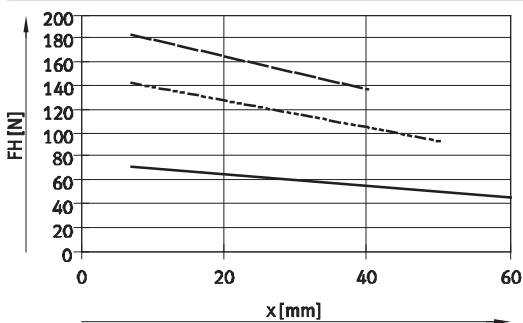
HGPD-16-A



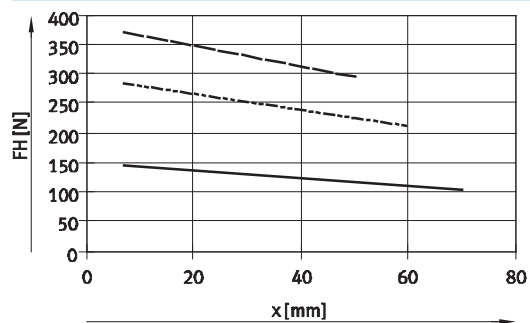
HGPD-20-A



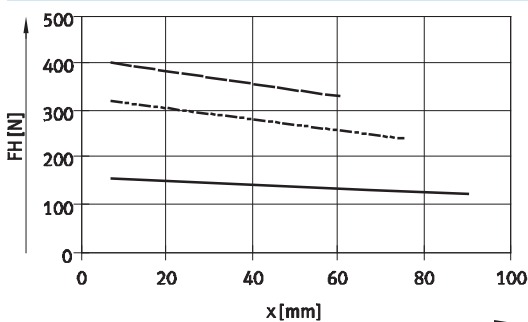
HGPD-25-A



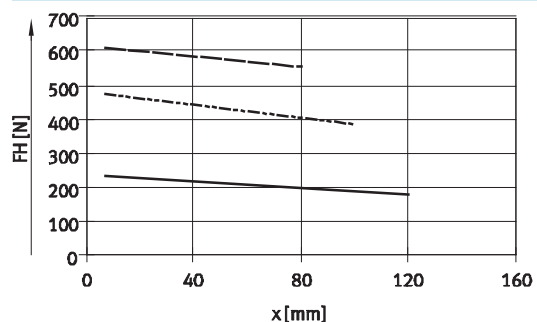
HGPD-35-A



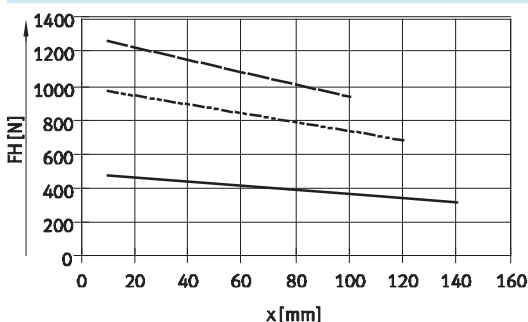
HGPD-40-A



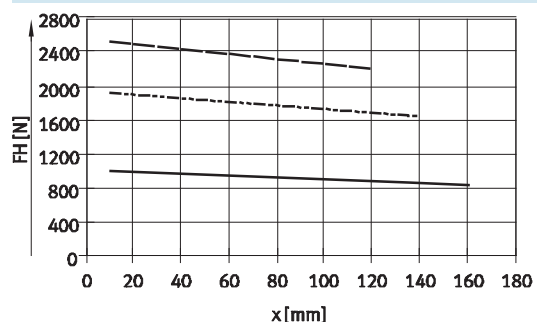
HGPD-50-A



HGPD-63-A



HGPD-80-A



Parallel grippers HGPД, sealed

Technical data

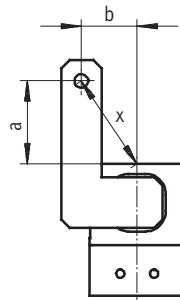
FESTO

Gripping force F_H 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_H can be read from the graphs (→ 10) using the calculated value x .



Calculation example

Given:

Distance $a = 45$ mm

Distance $b = 40$ mm

To be calculated:

The gripping force at 6 bar,
with an HGPД-40,
used as an external gripper

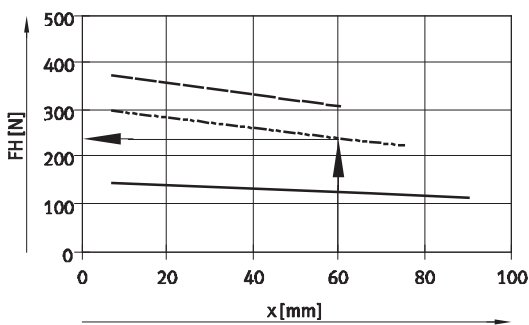
Procedure:

Calculating the lever arm x

$$x = \sqrt{45^2 + 40^2}$$

$$x = 60$$
 mm

The graph (→ 10) gives a value of F_H
= 240 N for the gripping force.



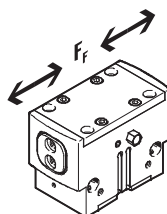
Parallel grippers HGPD, sealed

Technical data

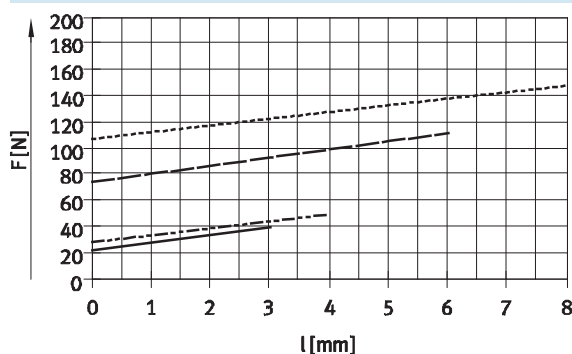
Spring force F_F as a function of size and gripper jaw stroke l

Gripping force retention for HGPD-...-G...

The spring forces F_F as a function of gripper jaw stroke l can be determined from the following graph.

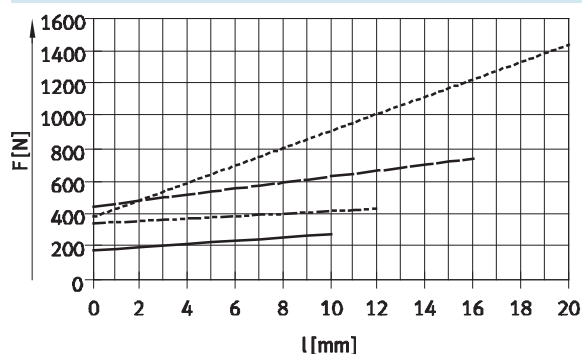


Size 16 ... 35



— HGPD-16-A-G
 - - - HGPD-20-A-G
 - · - HGPD-25-A-G
 · · · HGPD-35-A-G

Size 40 ... 80



— HGPD-40-A-G
 - - - HGPD-50-A-G
 - · - HGPD-63-A-G
 · · · HGPD-80-A-G

Spring force F_F as a function of size, gripper jaw stroke l and lever arm x per gripper finger

The lever arm x must be taken into consideration when determining the actual spring force F_{Ftotal} .

The formulae for calculating the spring force are provided in the table below.

Gripping force retention	Size	F_{Ftotal} per gripper finger
G1	16	$-0.25 \cdot x + 0.6 \cdot F_F$
	20	$-0.25 \cdot x + 0.6 \cdot F_F$
	25	$-0.65 \cdot x + 0.6 \cdot F_F$
	35	$-0.75 \cdot x + 0.8 \cdot F_F$
	40	$-0.7 \cdot x + 0.65 \cdot F_F$
	50	$-0.8 \cdot x + 0.5 \cdot F_F$
	63	$-0.8 \cdot x + 0.65 \cdot F_F$
	80	$-1.3 \cdot x + 0.6 \cdot F_F$

Gripping force retention	Size	F_{Ftotal} per gripper finger
G2	16	$-0.05 \cdot x + 0.6 \cdot F_F$
	20	$-0.5 \cdot x + 0.6 \cdot F_F$
	25	$-0.65 \cdot x + 0.6 \cdot F_F$
	35	$-0.15 \cdot x + 0.8 \cdot F_F$
	40	$-0.6 \cdot x + 0.65 \cdot F_F$
	50	$-0.15 \cdot x + 0.5 \cdot F_F$
	63	$-1 \cdot x + 0.65 \cdot F_F$
	80	$-0.25 \cdot x + 0.6 \cdot F_F$

Determination of the actual gripping forces F_{Gr} for HGPD-...-G1 and HGPD-...-G2 as a function of application

The parallel grippers with integrated spring type HGPD-...-G1 (opening gripping force retention) and HGPD-...-G2 (closing gripping force retention) can be used as

- single-acting grippers

- grippers with supplementary gripping force and
- grippers with gripping force retention depending on requirements.

In order to calculate the available gripping forces F_{Gr} (per gripper jaw), the gripping force (F_H) and spring force (F_{Ftotal}) must be combined accordingly.

Application forces per gripper finger

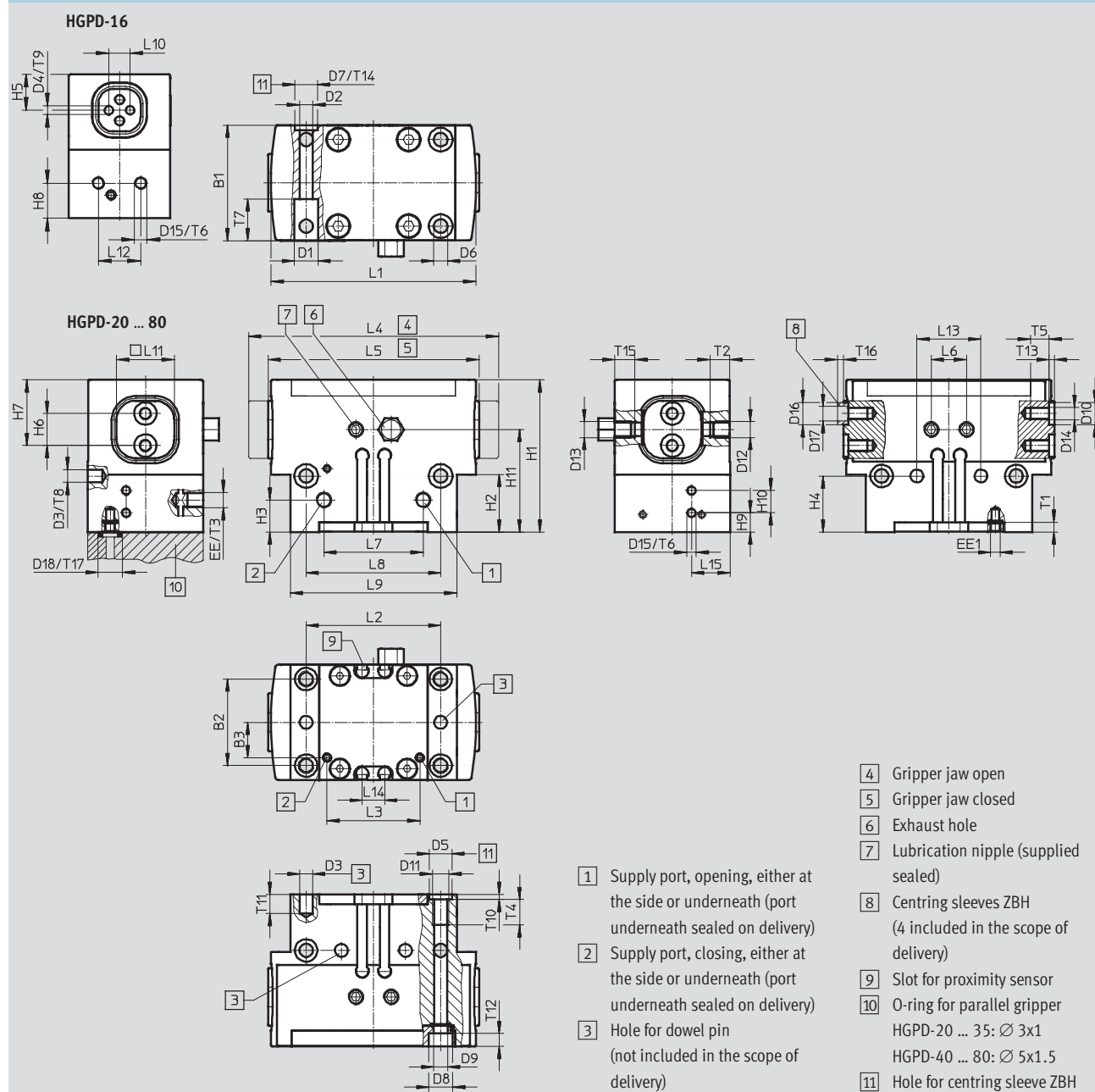
Single-acting	Supplementary gripping force	Gripping force retention
<ul style="list-style-type: none"> Gripping with spring force: $F_{Gr} = F_{Ftotal}$ Gripping with pressure force: $F_{Gr} = F_H - F_{Ftotal}$ 	<ul style="list-style-type: none"> Gripping with pressure and spring force: $F_{Gr} = F_H + F_{Ftotal}$ 	<ul style="list-style-type: none"> Gripping with spring force: $F_{Gr} = F_{Ftotal}$

Parallel grippers HGPD, sealed

Technical data

Dimensions

Download CAD Data → www.festo.com/us/cad



Size	B1	B2 ¹⁾	B3	D1 Ø	D2 Ø	D3 Ø	D4 Ø	D5 Ø	D6 Ø	D7 Ø	D8 Ø	D9 Ø	D10 Ø	D11	D12
[mm]	±0.05		±0.1	H13		H8	H8	H8		H8	H13		H8		
16	24	17	4	4.6	2.6	2	2	5	2.6	–	4.6	–	–	M3	M3
20	28	22	8.7	5.6	3.2	3	–	5	3.2	–	–	–	5	M4	M3
25	36	27	11	7.4	4.2	4	–	7	4.2	7	7.4	4.3	7	M5	M5
35	42	32	13	9.2	5.2	4	–	7	4.2	7	7.4	4.3	9	M5	M5
40	50	38	17	10.4	6.2	5	–	9	5.2	9	9.4	5.3	9	M6	M5
50	60	45	20	13.5	8.2	6	–	12	6.1	12	10.4	6.4	12	M8	M5
63	72	56	24.5	13.5	8.4	6	–	12	6.4	12	10.4	–	12	M8	M5
80	100	70	39.5	18.5	12.2	8	–	12	8.5	15	13.5	8.4	15	M10	M5

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

Parallel grippers HGPD, sealed

Technical data

FESTO

Size [mm]	D13	D14	D15	D16 Ø h7	D17 Ø	D18 Ø +0.2	EE	EE1	H1		H2		H3	
									±0.05	-G ±0.05		-G	±0.1	-G ±0.1
16	M3	M2.5	M3	–	–	–	M5	M3	34	41.5	16.2	23.6	12	12
20	M3	M3	M3	5	3.2	5	M5	M3	39	46	15	22	10	15
25	M5	M4	M3	7	5.3	5	M5	M3	47.5	55.5	18	26	10	20
35	M5	M6	M3	9	6.4	5	M5	M3	57.5	74	21.5	38	12	23.5
40	M5	M6	M3	9	6.4	8	M5	M3	67	85	27	45	15	36
50	M1½	M6	M3	12	10.3	8	G1½	M5	77.5	102.5	32	57	15	30
63	M1½	M8	M3	12	10.3	8	G1½	M5	94	124	39	69	18	26
80	M1½	M10	M3	15	12.4	8	G1¼	M5	110	146	48	84	22	33

Size [mm]	H4 ¹⁾		H5	H6 ¹⁾	H7	H8		H9		H10	H11		L1	L2 ¹⁾	L3
		-G	–0.02		–0.02	±0.1	-G ±0.1	±0.1	-G ±0.1	±0.1	±0.1	-G ±0.1	±0.05		±0.1
16	17.5	24.5	8.5	5	11	8.3	15.8	–	–	–	25.5	33	50	29	22
20	14.5	21.5	–	7	15	6.5	13.5	–	–	–	27.5	34.5	50	35	22.6
25	17.5	26	–	10	20.5	–	–	6	14	7	32	40	64	42	29
35	20	37.5	–	12	24	–	–	9.5	26	7	39.5	56	80	52	39
40	25	42.5	–	15	28.5	–	–	15	33	8	46	64	101	66	47.4
50	30	55	–	18	32	–	–	15.5	40.5	8	54.5	79.5	126	82	61
63	28	68	–	24	40	–	–	26	56	8	66	96	161	100	75
80	34	76	–	24	42	–	–	35	71	8	80	116	201	130	82

Size [mm]	L4	L5	L6	L7	L8 ¹⁾	L9	L10	L11	L12	L13	L14	L15	T1	T2	T3
	±0.5	±0.5	±0.1	±0.1		±0.1	±0.05	–0.02	±0.1	±0.02	+0.1	±0.1	min.	min.	min.
16	58	52	6.5	20	29	36	5	10	10	20	6	–	3	5.5	5.5
20	60	52	7.5	24	35	44	–	14	10	24	6	–	3	5.5	5.5
25	78	66	11	31	42	52	–	18	–	20	7	12	3	6.7	5.5
35	98	82	11	40	52	64	–	22	–	40	7	15	3	6.5	5.5
40	122	102	11	49	66	81	–	28	–	50	10	19	4	6.5	6.5
50	151	127	11	63	82	101	–	32	–	60	10	24	4	6.5	8.5
63	194	162	11	74	100	126	–	40	–	76	10	42	4	6.5	8.5
80	242	202	11	82	130	154	–	45	–	100	10	56	5.5	6.5	10

Size [mm]	T4		T5	T6	T7	T8	T9	T10	T11	T12	T13	T14	T15	T16	T17
	min.	-G min.	min.	min.		min.	+0.1	+0.1	min.	+0.2	+0.1	+0.1	min.	–0.3	+0.1
16	5.5	–	5	3.5	14	4.5	2.6	1.3	4	19.8	–	–	5.5	–	–
20	6.5	–	5	5	18	4	–	1.3	5	3	1.3	–	5.5	1.2	0.6
25	10.5	–	6	5	13	4.5	–	1.6	6	4.1	1.6	1.6	6.7	1.4	0.6
35	8.5	–	7.9	5	16	4.5	–	1.6	6	4.1	2.1	1.6	6.5	1.9	0.6
40	12.5	–	7.9	5	28	6	–	2.1	7	5.1	2.1	2.1	6.5	1.9	1.1
50	12.5	–	10	5	24	6	–	2.6	8	6.1	2.6	2.6	6.5	2.4	1.1
63	12.5	–	12	5	27	6	–	2.6	8	4.5	2.6	2.6	6.5	2.4	1.1
80	12.4	15	15	5	41	10	–	2.6	10	5.5	3.1	3.1	6.5	2.9	1.1

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

Parallel grippers HGPD, sealed

Technical data

FESTO

Ordering data						
Size [mm]	Double-acting without compression spring Part No. Type		Single-acting or with gripping force retention			
			Opening		Closing	
	Part No.	Type	Part No.	Type	Part No.	Type
16	1132936	HGPD-16-A	1132937	HGPD-16-A-G1	1132938	HGPD-16-A-G2
20	1132939	HGPD-20-A	1132940	HGPD-20-A-G1	1132941	HGPD-20-A-G2
25	1132942	HGPD-25-A	1132943	HGPD-25-A-G1	1132944	HGPD-25-A-G2
35	1132945	HGPD-32-A	1132946	HGPD-32-A-G1	1132947	HGPD-32-A-G2
40	1132948	HGPD-40-A	1132949	HGPD-40-A-G1	1132950	HGPD-40-A-G2
50	1132951	HGPD-50-A	1132952	HGPD-50-A-G1	1132953	HGPD-50-A-G2
63	1132954	HGPD-63-A	1132955	HGPD-63-A-G1	1132956	HGPD-63-A-G2
80	1132957	HGPD-80-A	1132958	HGPD-80-A-G1	1132959	HGPD-80-A-G2

Parallel grippers HGPL, sealed



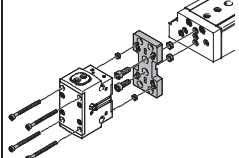
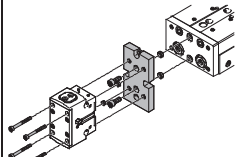
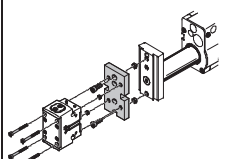
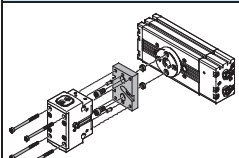
Accessories

Adapter kit DHAA

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

Note

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

Permissible drive/gripper combinations with adapter kit					Download CAD Data → www.festo.com/us/cad	
Combination	Drive Size	Gripper Size	Mounting option		Adapter kit	
					CRC ¹⁾	Part No. Type
DGSL/HGPL	DGSL	HGPL			DHAA	
	8, 10	16, 20	■	■	2	564957 DHAA-G-G6-8-B8-16
	12, 16	16, 20	■	■		564954 DHAA-G-G6-16-B8-16
	12, 16	25	■	■		564952 DHAA-G-G6-16-B8-25
	20, 25	25, 35	■	■		537175 HAPG-79
	20, 25	40	■	■		564951 DHAA-G-G6-20-B8-40
SLT/HGPL	SLT	HGPL			DHAA	
	6	16	—	■	2	537168 HAPG-74
	10	16, 20	—	■		564957 DHAA-G-G6-8-B8-16
	16	16, 20	—	■		564954 DHAA-G-G6-16-B8-16
	16	25	—	■		564952 DHAA-G-G3-20-B11-25
	20	25, 35	—	■		537175 HAPG-79
	25	35	—	■		564953 DHAA-G-H2-20-B8-35
	25	40	—	■		564951 DHAA-G-G6-20-B8-40
HMP/HGPL	HMP	HGPL			DHAA	
	16	25	—	■	2	537178 HAPG-81
	20, 25	35	—	■		564953 DHAA-G-H2-20-B8-35
	20, 25	40	—	■		537182 HAPG-84
	25, 32	50	—	■		537185 HAPG-86
	32	63	—	■		537187 HAPG-87
DRQD/HGPL	DRQD	HGPL			DHAA	
	12, 16	16	■	■	2	564958 DHAA-G-Q5-12-B8-16
	16 ²⁾	16, 20	■	■		564959 DHAA-G-Q5-16-B8-16
	12, 16	20	■	■		564955 DHAA-G-Q5-16-B8-20
	16, 20	25	■	■		537181 HAPG-SD2-25
	16, 20 ²⁾	25	■	■		544642 HAPG-SD2-48
	20, 25	35	■	■		537173 HAPG-SD2-23
	20 ²⁾	35	■	■		544642 HAPG-SD2-48
	25, 32	40	■	■		537184 HAPG-SD2-26
	32, 40	50	■	■		564956 DHAA-G-Q5-32-B8-50
	32 ³⁾	50	■	■		544643 HAPG-SD2-49
	40, 50	63	■	■		537188 HAPG-SD2-28

- 1) Corrosion resistance class 2 according to Festo standard 940 070
Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.
- 2) In combination with DRQD-...-E422 (flanged shaft with energy through-feed).
- 3) In combination with DRQD-...-E444 (flanged shaft with energy through-feed).

Parallel grippers HGPD, sealed

Accessories



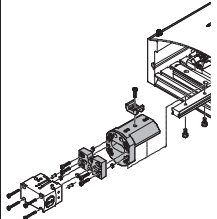
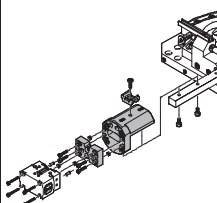
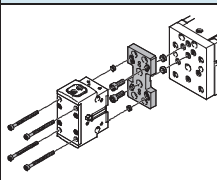
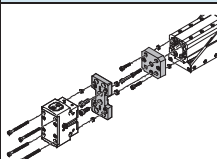
FESTO

Adapter kit DHAA

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

Note

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

Permissible drive/gripper combinations with adapter kit					Download CAD Data → www.festo.com/us/cad		
Combination	Drive Size	Gripper Size	Mounting option		Adapter kit		
					CRC ¹⁾	Part No.	Type
HSP/HGPD	HSP	HGPD			DHAA		
	12	16	■	—	2	564957	DHAA-G-G6-8-B8-16
						540881	HAPG-70-B
	16	16, 20	■	—		564957	DHAA-G-G6-8-B8-16
						540882	HAPG-71-B
	25	16, 20	■	—		564957	DHAA-G-G6-8-B8-16
						540883	HAPG-72-B
HSW/HGPD	HSW	HGPD			DHAA		
	12, 16	16	■	—	2	564957	DHAA-G-G6-8-B8-16
						540882	HAPG-71-B
	16	20	■	—		564957	DHAA-G-G6-8-B8-16
						540882	HAPG-71-B
EGSL/HGPD	EGSL	HGPD			DHAA		
	45, 55	25	■	■	2	564952	DHAA-G-G6-16-B8-25
	75	25, 35	■	■		537175	HAPG-79
	75	40	■	■		564951	DHAA-G-G6-20-B8-40
EGSA/HGPD	EGSA	HGPD			DHAA		
	50	16, 20	■	■	2	564954	DHAA-G-G6-16-B8-16
						560017	HMSV-61
	50	25	■	■		564952	DHAA-G-G6-16-B8-25
						560017	HMSV-61
	60	25	■	■		560018	HAPG-79
						537175	HMSV-62

1) Corrosion resistance class 2 according to Festo standard 940 070

Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

Parallel grippers HGPD, sealed



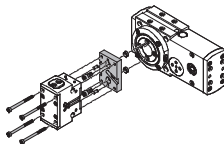
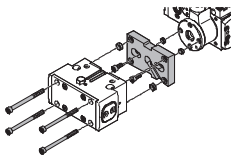
Accessories

Adapter kit DHAA

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

Note

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

Permissible drive/gripper combinations with adapter kit					Download CAD Data → www.festo.com/us/cad		
Combination	Drive	Gripper			Adapter kit		
	Size	Size	Mounting option		CRC ¹⁾	Part No.	Type
							
ERMB/HGPD	ERMB	HGPD			DHAA		
	20	25	■	■	2	537181	HAPG-SD2-25
	20, 25	35	■	■		537173	HAPG-SD2-23
	25, 32	40	■	■		537184	HAPG-SD2-26
	32	50	■	■		564956	DHAA-G-Q5-32-B8-50
EHMB/HGPD	EHMB	HGPD			DHAA		
	20	40	■	■	2	537184	HAPG-SD2-26
	20, 25, 32	50	■	■		564956	DHAA-G-Q5-32-B8-50
	25, 32	63	■	■		537188	HAPG-SD2-28

- 1) Corrosion resistance class 2 according to Festo standard 940 070
Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

Parallel grippers HGPB, sealed

Accessories

FESTO

Gripper jaw blank BUB-HGPB

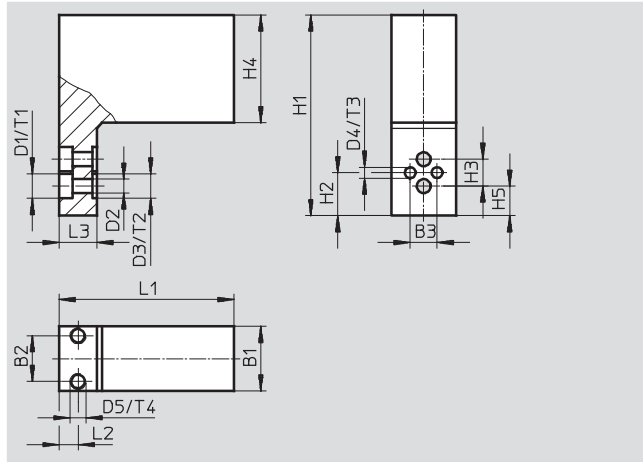
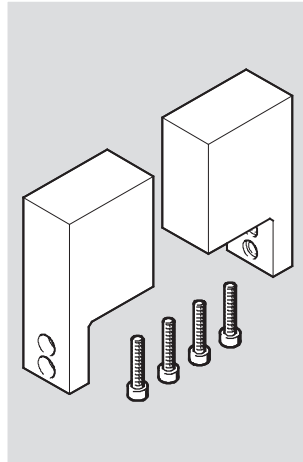
(scope of delivery: 2 pieces)

Material:

Wrought aluminium alloy

Free of copper and PTFE

RoHS-compliant



Dimensions and ordering data								
For size	B1	B2	B3	D1	D2	D3	D4	D5
[mm]	±0.05		±0.01	Ø H13	Ø H13	Ø H8	Ø H7	
16	12	8.5	5	4.6	2.6	–	2	M3
20	14	8.5	–	5.9	3.2	5	–	M3
25	20	14	–	7.4	4.3	7	–	M3
35	29	23	–	10.4	6.4	9	–	M3
40	32	26	–	10.4	6.4	9	–	M3
50	35	26	–	10.4	6.4	12	–	M3
63	40	26	–	13.5	8.4	12	–	M3
80	44	26	–	16.5	10.5	15	–	M3

For size	H1	H2	H3	H4	H5	L1	L2	L3
[mm]	±0.05	±0.02				±0.05		
16	37.3	8	5±0.1	20	–	32.5	3.5	7
20	59	–	7±0.01 ¹⁾	35	8	35.5	3	10
25	76	–	10±0.01 ¹⁾	49.5	4.5	44.5	4.5	12
35	92.5	–	12±0.01 ¹⁾	59	7.5	52.5	6	12
40	110	–	15±0.01 ¹⁾	73.5	6	62.5	6	12
50	144	–	18±0.01 ¹⁾	99	11	78	10	15
63	171.5	–	24±0.01 ¹⁾	119	10	98.5	10.5	15
80	198	–	24±0.01 ¹⁾	139	15	120.5	10	20

For size	T1	T2	T3	T4	Weight per blank [g]	Part No.	Type
[mm]	+0.1	+0.1	+0.1				
16	2.5	–	2.1	4	25	1180947	BUB-HGPB-16
20	3.1	1.3	–	5	57	1180948	BUB-HGPB-20
25	4.2	1.6	–	5	138	1180949	BUB-HGPB-25
35	6.2	2.1	–	5	278	1180950	BUB-HGPB-35
40	6.2	2.1	–	5	445	1180951	BUB-HGPB-40
50	6.2	2.6	–	5	814	1180952	BUB-HGPB-50
63	8.2	2.6	–	5	1,340	1180953	BUB-HGPB-63
80	10.2	3.1	–	5	2,170	1180954	BUB-HGPB-80

1) ±0.02 and ±0.01 applies to the centring D3
±0.1 applies to the through-holes D1 and D2

Parallel grippers HGPD, sealed

Accessories

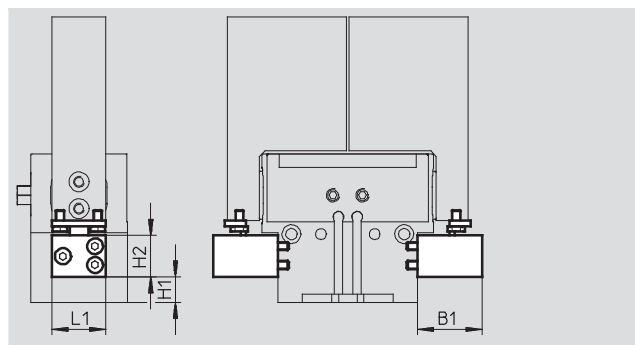
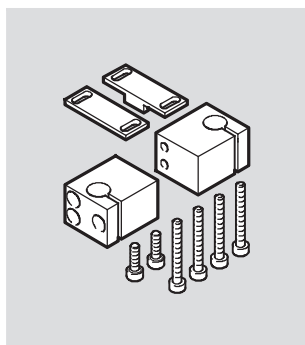
Sensor bracket DASI

(scope of delivery: 1 piece)

Material:

Wrought aluminium alloy



RoHS-compliant



Dimensions and ordering data

For size	B1	H1		H2	L1	Weight	Part No.	Type
[mm]			-G			[g]		
16	18	4.3	11.8	8	18	25	1435225	DASI-B12-16-S3
20	18	2.5	9.5	8	18	22	1435226	DASI-B12-20-S3
25	24	1.5	9.5	15.5	20	50	1435227	DASI-B12-25-S8
35	24	5	21.5	15.5	20	55	1435228	DASI-B12-35-S8
40	29	11.2	29.2	15.6	20	65	1435229	DASI-B12-40-S8
50	34	12	37	16	20	70	1435230	DASI-B12-50-S8
63	54	22	52	16	20	95	1435231	DASI-B12-63-S8
80	54	31	67	16	20	95	1435231	DASI-B12-63-S8

Ordering data

Ordering data						
	For size [mm]	Description	Weight [g]	Part No.	Type	PU ¹⁾
Centring pin/sleeve ZBS/ZBH				Technical data → Internet: zbh		
	16	For centring gripper jaw blanks/gripper fingers on the gripper jaws	1	525273	ZBS-2	10
	20		1	189652	ZBH-5	
	25		1	186717	ZBH-7	
	35, 40		1	150927	ZBH-9	
	50, 63		1	189653	ZBH-12	
	80		3	191409	ZBH-15	
	16, 20	For centring the gripper when mounting	1	189652	ZBH-5	
	25, 35		1	186717	ZBH-7	
	40		1	150927	ZBH-9	
	50, 63, 80		1	189653	ZBH-12	
Blanking plug B				Technical data → Internet: blanking plug		
	16, 20	For sealing the supply ports	1	30979	B-M3-S9	10
	25, 35, 40		1	174308	B-M5-B	
	50, 63		5	3568	B-1/8	
	80		15	3569	B-1/4	


1) Packaging unit

Parallel grippers HGPB, sealed


Accessories

FESTO


Proximity sensor for size 16 ... 35

Ordering data – Proximity sensors for C-slot, magneto-resistive					Technical data → Internet: smt	
	Type of mounting	Electrical connection, connection direction	Switching output	Cable length [m]	Part No.	Type
N/O contact						
	Insertable in the slot lengthwise	Cable, 3-wire, lateral	PNP	2.5	547862	SMT-10G-PS-24V-E-2,5Q-OE
		Plug M8x1, 3-pin, lateral		0.3	547863	SMT-10G-PS-24V-E-0,3Q-M8D

Proximity sensor for size 40 ... 80

Ordering data – Proximity sensors for T-slot, magneto-resistive					Technical data → Internet: smt	
	Type of mounting	Electrical connection, connection direction	Switching output	Cable length [m]	Part No.	Type
N/O contact						
	Insertable in the slot lengthwise	Cable, 3-wire, lateral	PNP	2.5	547859	SMT-8G-PS-24V-E-2,5Q-OE
		Plug M8x1, 3-pin, lateral		0.3	547860	SMT-8G-PS-24V-E-0,3Q-M8D

Proximity sensor for size 40 ... 80

Ordering data – Position transmitters for T-slot					Technical data → Internet: smat	
	Type of mounting	Electrical connection, connection direction	Analogue output [V]	Cable length [m]	Part No.	Type
	Insertable in the slot from above	Plug M8x1, 3-pin, lateral	0 ... 10	0.3	553744	SMAT-8M-U-E-0,3-M8D

Note



Mode of operation:

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



Parallel grippers HGPD, sealed



Accessories

Proximity sensor for size 16, 20

Ordering data – Proximity sensors 3 mm (round design), inductive						Technical data → Internet: sieh
	Electrical connection	LED	Switching output	Cable length [m]	Part No.	Type
N/O contact						
	Cable, 3-wire	■	PNP	2.5	538264	SIEH-3B-PS-K-L
	Plug M8x1, 3-pin	■	PNP	–	538263	SIEH-3B-PS-S-L

Proximity sensor for size 25 ... 80

Ordering data – Proximity sensors M8 (round design), inductive						Technical data → Internet: sien
	Electrical connection	LED	Switching output	Cable length [m]	Part No.	Type
N/O contact						
	Cable, 3-wire	■	PNP	2.5	150386	SIEN-M8B-PS-K-L
	Plug M8x1, 3-pin	■	PNP	–	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	
	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	

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