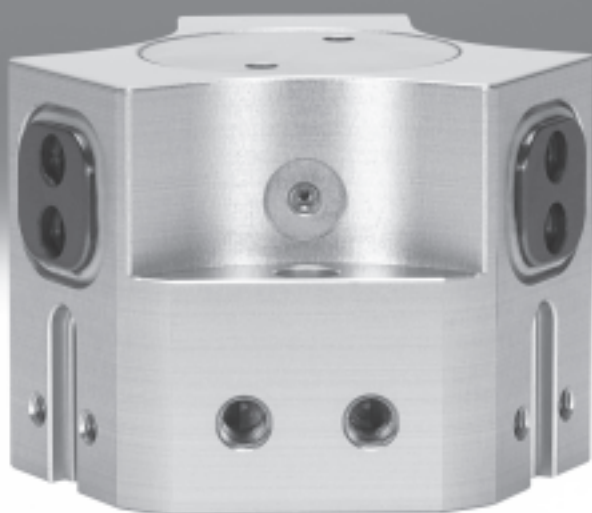


## Three-point grippers HGDD, sealed

**FESTO**



## Three-point grippers HGDD, 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

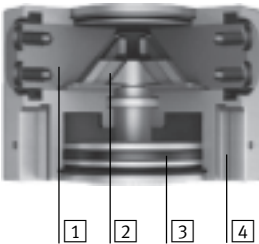
with forced motion sequence. This also guarantees synchronous movement of the gripper jaw. The ground gripper jaws and slideway ensure a virtually backlash-free movement.

#### 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
- 4 Slot for proximity sensor

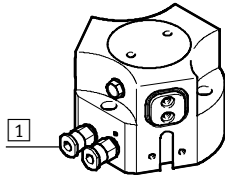
 Note

Gripper selection  
sizing software  
→ [www.festo.com](http://www.festo.com)

### Wide range of supply ports

#### Direct

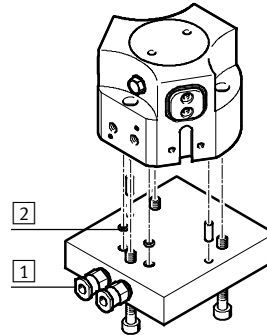
##### From the front



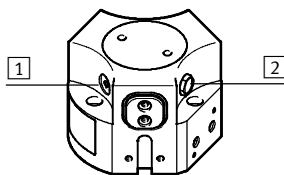
- 1 Supply ports
- 2 O-rings

#### Via adapter plate

##### From underneath

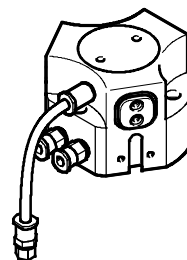


### Other ports



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

### Use in harsh ambient conditions



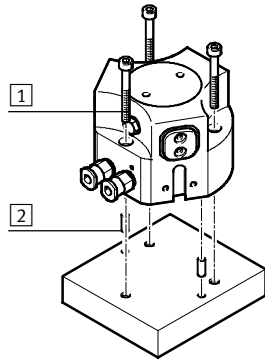
When using the gripper in damp environments or with liquid/gaseous media, make sure that the filter is installed in a neutral environment. The same applies to unused supply ports when operating the gripper as a single-acting gripper.

## Three-point grippers HGDD, sealed

Key features

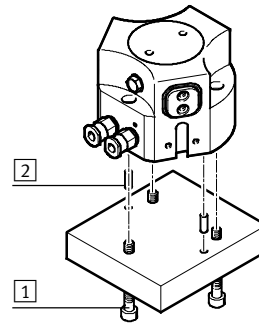
### Mounting options

Direct mounting  
From above



- 1 Mounting screws
- 2 Centring pins

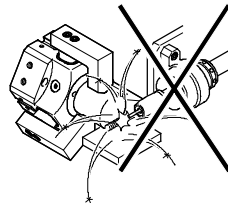
Via adapter plate  
From underneath



 **Note**

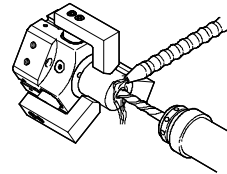
These grippers are not suitable or are of limited suitability for the following sample applications:

Not suitable for:

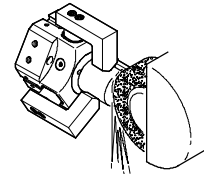


- Welding spatter

Of limited suitability for:



- Aggressive media only possible after consultation with Festo



- Grinding dust

## Three-point grippers HGDD, sealed

Type codes

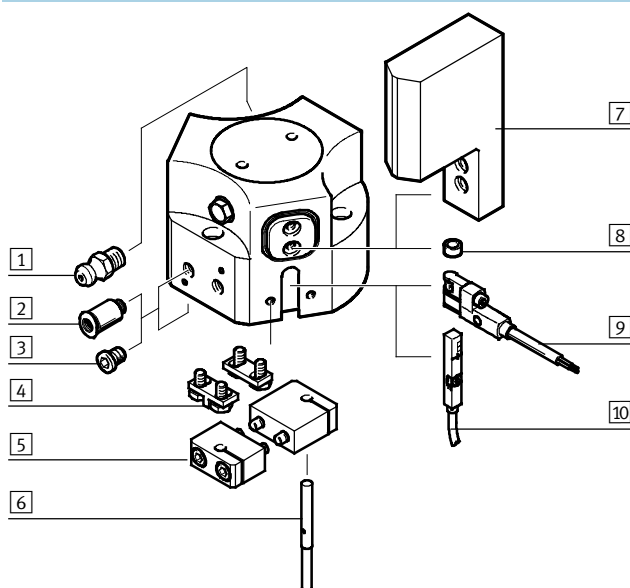
**FESTO**

		HGDD	—	35	—	A	—	G1
<b>Type</b>								
HGDD	Three-point gripper							
<b>Size</b>								
<b>Position sensing</b>								
A	Via proximity sensor							
<b>Gripping force retention</b>								
G1	Opening							
G2	Closing							

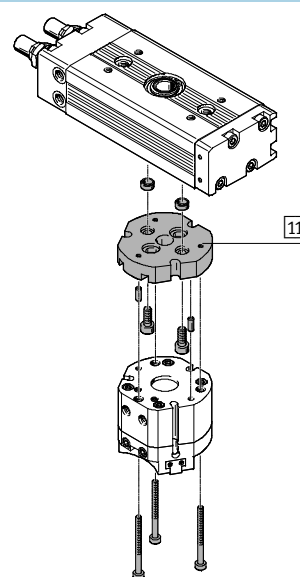
# Three-point grippers HGDD, sealed

Peripherals overview

## Peripherals overview



## System product for handling and assembly technology



Accessories			
Type	Brief description		→ Page/Internet
1	Lubrication nipple	Included in the scope of delivery of the gripper	–
2	Push-in fitting QS	For connecting compressed air tubing with standard O.D.	quick star
3	Blanking plug B	For sealing the supply ports when using the lower supply ports	17
4	Sensor bracket DASI	Switch lug for sensing the gripper jaw position. Mounted on the gripper jaw blank	17
5	Sensor bracket DASI	Clamping block for securing the proximity sensors SIEH or SIEN	17
6	Proximity sensor SIEH/SIEN	For sensing the piston position	18
7	Gripper jaw blank BUB-HGDD	Blank specially matched to the gripper jaws for custom fabrication of gripper fingers	16
8	Centring sleeve ZBH	<ul style="list-style-type: none"> <li>For centring gripper jaw blanks/gripper fingers on the gripper jaws</li> <li>6 centring sleeves included in the scope of delivery of the gripper</li> </ul>	17
9	Proximity sensor SMT-8G	<ul style="list-style-type: none"> <li>For sensing the piston position, 3 slots available</li> <li>Proximity sensor does not project past the housing</li> </ul>	17
10	Position transmitter SMAT-8M	Continuously senses the position of the piston. Has an analogue output with an output signal in proportion to the piston position.	18
11	Adapter plate DHAA	Connecting plate between drive and gripper	14

## Three-point grippers HGDD, sealed

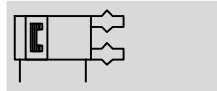
**FESTO**

Technical data

Function

Double-acting

HGDD-...



Size  
35 ... 80 mm

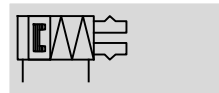
Stroke  
4 ... 12 mm

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

Function – Variants

Single-acting or  
with gripping force retention ...

... opening HGDD-...-G1



... closing HGDD-...-G2



General technical data						
Size	35	40	50	63	80	
Design	Wedge-shaped actuator					
	Forced motion sequence					
Mode of operation	Double-acting					
Gripper function	3-point					
Number of gripper jaws	3					
Max. applied load per external gripper finger <sup>1)</sup>	[N]	0.57	1.30	2.76	4.40	7.90
Stroke per gripper jaw	[mm]	4	6	8	10	12
Pneumatic connection		M5	M5	G1/8	G1/8	G1/8
Pneumatic connection for sealing air		M3	M3	M5	M5	G1/8
Pneumatic connection for lubrication nipple		M3	M3	M5	M5	M5
Repetition accuracy <sup>2)</sup>	[mm]	≤ 0.03			≤ 0.05	
Max. interchangeability	[mm]	≤ ±0.2				
Max. operating frequency	[Hz]	≤ 4				
Rotational symmetry	[mm]	< Ø 0.2				
Position sensing		Via proximity sensor				
Type of mounting		Via through-hole and dowel pin				
		Via female thread and dowel pin				
Mounting position		Any				

1) Valid for unthrottled operation

2) End-position drift under constant conditions of use with 100 consecutive strokes, concentric to the central shaft

Operating and environmental conditions		
Min. operating pressure		
HGDD-...-A	[bar]	3
HGDD-...-A-G	[bar]	4
Max. operating pressure	[bar]	8
Operating pressure for sealing air	[bar]	0 ... 0.5
Operating medium	Compressed air in accordance with ISO 8573-1:2010 [7:4:4]	
Note on operating/pilot medium	Operation with lubricated medium possible (in which case lubricated operation will always be required)	
Ambient temperature <sup>1)</sup>	[°C]	+5 ... +60
Corrosion resistance class CRC <sup>2)</sup>		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.

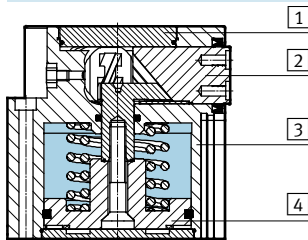
## Three-point grippers HGDD, sealed

Technical data

Weight [g]					
Size	35	40	50	63	80
HGDD-...-A	309	599	1,117	2,175	3,522
HGDD-...-A-G	370	775	1,495	2,848	4,788

### Materials

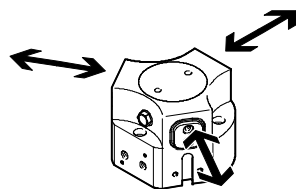
Sectional view



#### Three-point gripper

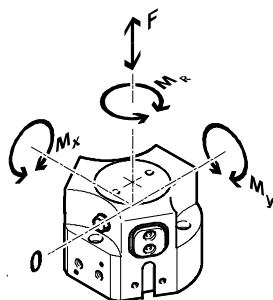
1	Cover cap	High-alloy stainless steel
2	Gripper jaw	Hardened steel
3	Housing	Anodised aluminium
4	Piston	Hard anodised aluminium
-	Seals	Nitrile rubber
-	Note on materials	Free of copper and PTFE
		RoHS-compliant

### Gripping force [N] at 6 bar



Size	35	40	50	63	80
Gripping force per gripper jaw					
HGDD-...-A	Opening	122	216	371	582
	Closing	112	200	348	553
Total gripping force					
HGDD-...-A	Opening	366	648	1,113	1,746
	Closing	336	600	1,044	1,659

### 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 finger point of rotation) must be taken into consideration for the calculation of torques.

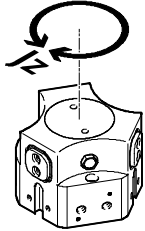
Size	35	40	50	63	80
Max. permissible force $F_z$	[N]	300	700	1,300	2,300
Max. permissible torque $M_x$	[Nm]	12	25	45	70
Max. permissible torque $M_y$	[Nm]	8	18	30	45
Max. permissible torque $M_r$	[Nm]	8	20	30	50

## Three-point grippers HGDD, sealed

Technical data

**FESTO**

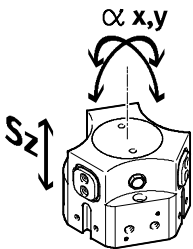
### Mass moment of inertia [kgcm<sup>2</sup>]



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

Size	35	40	50	63	80
HGDD-...-A	1.01	3.31	9.65	29	70.22
HGDD-...-A-G	1.37	5.01	15.07	45.05	109

### Gripper jaw backlash



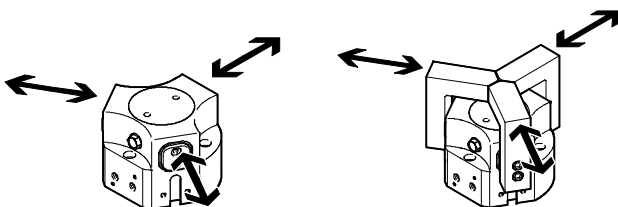
The plain-bearing guide used in the grippers means that there is backlash between the gripper jaws and the guide element. The values entered in the table for the backlash were calculated in accordance with the traditional accumulative tolerance method.

Size	35	40	50	63	80
Max. gripper jaw backlash Sz [mm]	0.05				
Max. gripper jaw angular backlash ax, ay [°]	0.1				

### 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	35	40	50	63	80
Without external gripper fingers					
HGDD-...-A	Opening	44	78	93	115
	Closing	52	106	128	145
HGDD-...-A-G1	Opening	38	70	25	48
	Closing	85	211	160	190
HGDD-...-A-G2	Opening	81	144	111	135
	Closing	42	110	87	68
With external gripper fingers per gripper finger (as a function of applied load)					
HGDD-...	2 N	52	–	–	–
	4 N	74	70	–	–
	5 N	83	78	–	–
	8 N	105	99	106	–
	10 N	–	111	118	–
	15 N	–	–	145	209
	18 N	–	–	172	229
	20 N	–	–	181	241
	22 N	–	–	–	253
	24 N	–	–	–	264

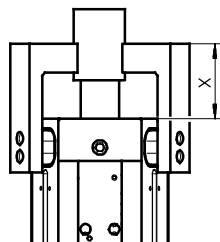


## Three-point grippers HGDD, sealed

Technical data

### 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.

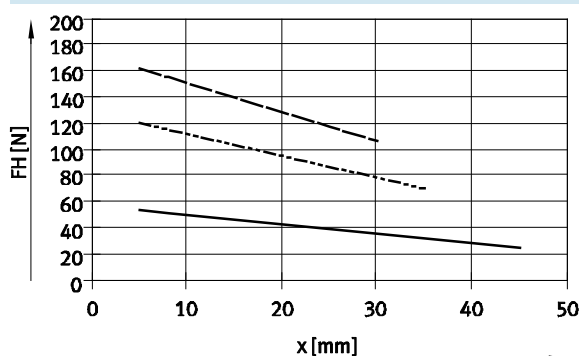


— 3 bar  
- - - 6 bar  
- · - 8 bar

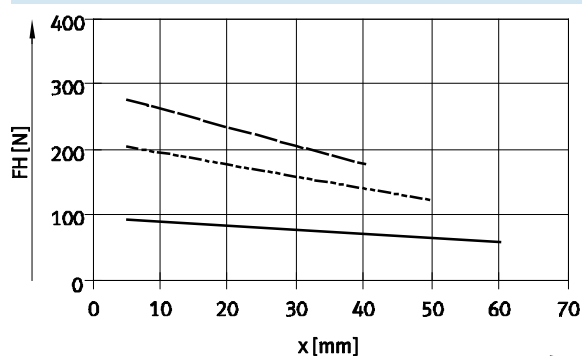
 Note  
Gripper selection  
sizing software  
→ [www.festo.com](http://www.festo.com)

#### External gripping (closing)

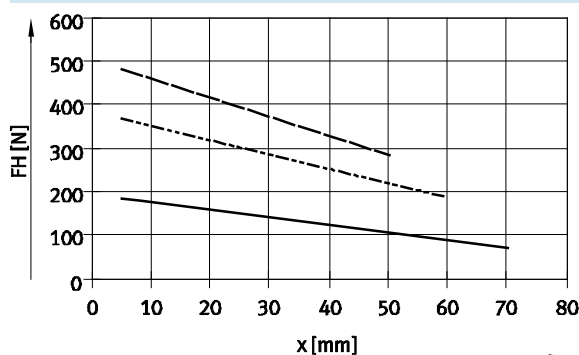
HGDD-35-A



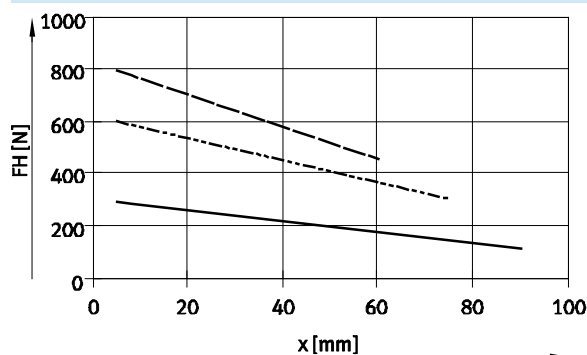
HGDD-40-A



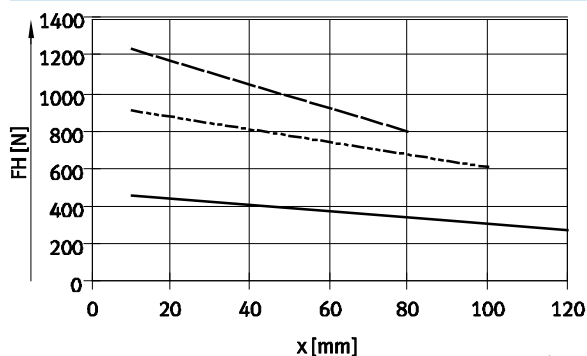
HGDD-50-A



HGDD-63-A



HGDD-80-A



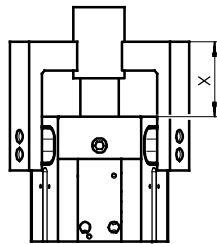
## Three-point grippers HGDD, sealed

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.

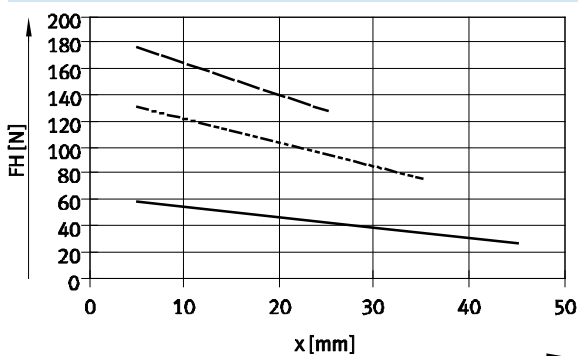


— 3 bar  
- - - 6 bar  
- · - 8 bar

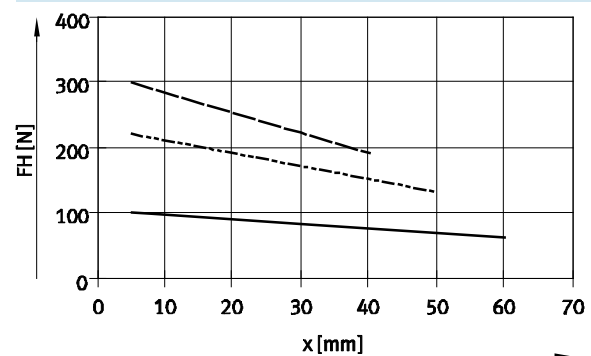
 **Note**  
Gripper selection  
sizing software  
→ [www.festo.com](http://www.festo.com)

#### Internal gripping (opening)

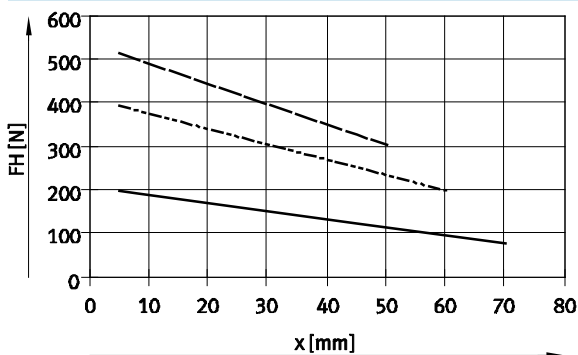
HGDD-35-A



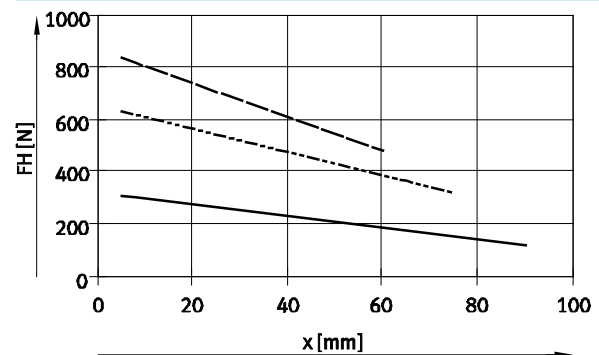
HGDD-40-A



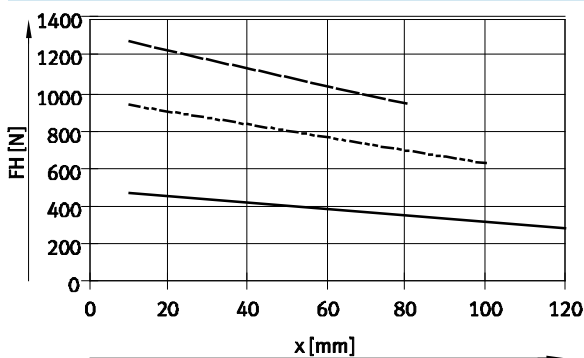
HGDD-50-A



HGDD-63-A



HGDD-80-A



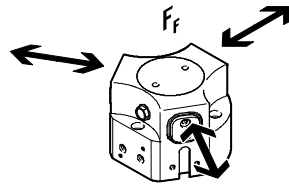
## Three-point grippers HGDD, sealed

Technical data

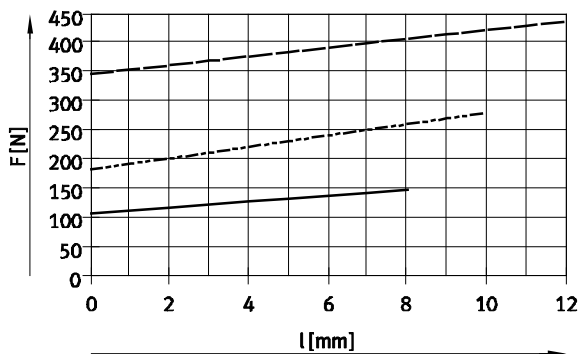
### Spring force $F_F$ as a function of size and gripper jaw stroke $l$ per gripper finger

Gripping force retention for HGDD-...-G...

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

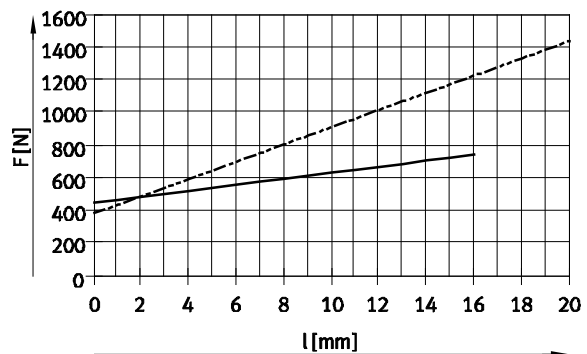


Size 35 ... 50



— HGDD-35-A-G  
- - - HGDD-40-A-G  
- · - HGDD-50-A-G

Size 63 ... 80



— HGDD-63-A-G  
- - - HGDD-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	35	$-0.85 \cdot x + 0.45 \cdot F_F$
	40	$-0.55 \cdot x + 0.35 \cdot F_F$
	50	$-2.5 \cdot x + 0.75 \cdot F_F$
	63	$-0.2 \cdot x + 0.4 \cdot F_F$
	80	$-1.5 \cdot x + 0.35 \cdot F_F$
Gripping force retention	Size	$F_{Ftotal}$ per gripper finger
G2	35	$-0.6 \cdot x + 0.45 \cdot F_F$
	40	$-0.55 \cdot x + 0.35 \cdot F_F$
	50	$-2.5 \cdot x + 0.6 \cdot F_F$
	63	$-1.0 \cdot x + 0.4 \cdot F_F$
	80	$-4.0 \cdot x + 0.85 \cdot F_F$

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

The three-point grippers with integrated spring type HGDD-...-G1 (opening gripping force retention) and HGDD-...-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 finger), 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"> <li>Gripping with spring force: <math>F_{Gr} = F_{Ftotal}</math></li> <li>Gripping with pressure force: <math>F_{Gr} = F_H - F_{Ftotal}</math></li> </ul>	<ul style="list-style-type: none"> <li>Gripping with pressure and spring force: <math>F_{Gr} = F_H + F_{Ftotal}</math></li> </ul>	<ul style="list-style-type: none"> <li>Gripping with spring force: <math>F_{Gr} = F_{Ftotal}</math></li> </ul>

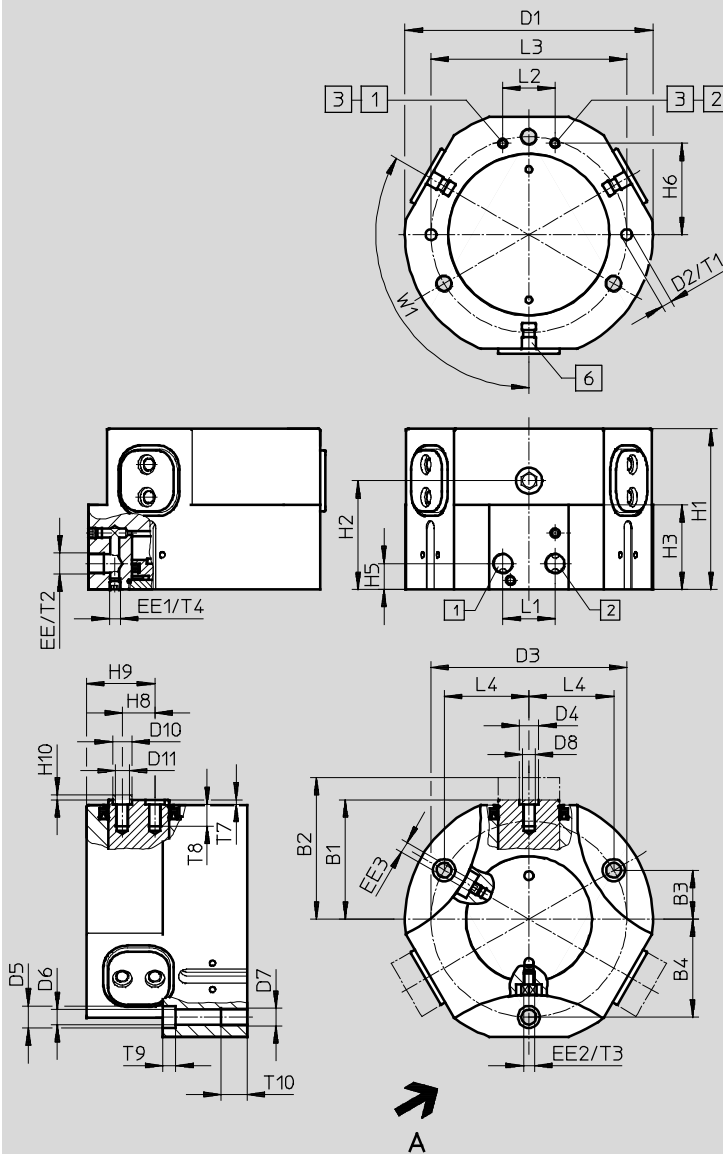
## Three-point grippers HGDD, sealed

Technical data

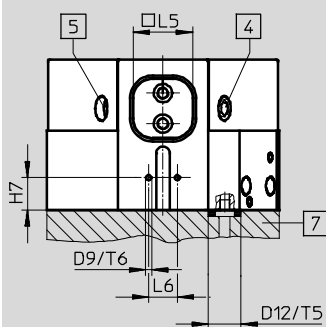
**FESTO**

### Dimensions

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



View A



- 1 Supply port, opening
- 2 Supply port, closing
- 3 Alternative supply port (supplied sealed)
- 4 Exhaust hole (filter integrated)
- 5 Lubrication nipple (supplied sealed)
- 6 Slot for proximity sensor
- 7 O-ring for three-point gripper  
HGDD-35:  $\varnothing$  3x1.5  
HGDD-40 ... 80:  $\varnothing$  5x1.5

## Three-point grippers HGDD, sealed

Technical data

Size	B1	B2	B3	B4	D1 Ø	D2 Ø	D3 Ø	D4 Ø	D5 Ø	D6 Ø	D7	D8	D9
[mm]	±0.5	±0.5			±0.1	H8	±0.1	H8	H13	H13			
35	28	32	11	22	58	3	44	5	5.9	3.3	M4	M3	M3
40	36	42	14	28	74	4	56	7	9.4	5.1	M6	M4	M3
50	44.5	52.5	17.5	35	93	5	70	9	10.2	6.8	M8	M6	M3
63	55	65	22.5	45	114	5	90	9	10.2	6.8	M8	M6	M3
80	68	80	28	56	139	6	112	9	13.5	8.4	M10	M6	M3

Size	D10 Ø	D11 Ø	D12 Ø	EE	EE1	EE2	EE3	H1		H2	
								±0.05	-G ±0.05		-G
[mm]	h7		+0.2								
35	5	3.2	6	M5	M3	M3	M3	41	51	29	39
40	7	5.3	8	M5	M5	M3	M3	48.5	66	34.5	52
50	9	6.4	8	G $\frac{1}{8}$	M5	M5	M5	58.5	83.5	40.4	65.4
63	9	6.4	8	G $\frac{1}{8}$	M5	M5	M5	74	104	50	80
80	9	6.4	8	G $\frac{1}{8}$	M5	G $\frac{1}{8}$	M5	83.5	120.5	55.5	92.5

Size	H3		H5	H6	H7		H8 <sup>1)</sup>	H9	H10	L1	L2	L3	L4
	-0.2	-G -0.2			±0.1	-G ±0.1							
[mm]			±0.1	±0.1				-0.02	-0.3	±0.1	±0.1	±0.02	
35	23	33	9	18.5	7	17	7	15.5	1.2	12	15	45	19.05
40	27.5	45	9	25	10	27.5	10	19	1.4	12	18	56	24.25
50	32.5	57.5	12	32	12.5	37.5	12	24.1	1.9	24	18	70	30.31
63	39	69	12	42	16	46	15	31.5	1.9	24	24	90	38.97
80	43	80	12	53	21	58	18	37	1.9	30	30	112	48.5

Size	L5	L6	T1	T2	T3	T4	T5	T6	T7	T8	T9	T10	W1
[mm]	-0.02	±0.1	min.	min.	min.	min.	+0.1	min.	+0.1	min.	+0.2	min.	
35	14	12	5	5	3	3	1.2	4	1.3	5	3.2	8	120°
40	18	12	6	6	3	5	1.2	5	1.6	6	5	10	120°
50	22	12	8	7	6	5	1.2	5	2.1	10	6.1	12	120°
63	28	14	8	7	6	5	1.2	5	2.1	10	6.1	12	120°
80	32	14	10	8	10	5	1.2	5	2.1	10	8	15	120°

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

Ordering data													
Size	Double-acting					Single-acting or with gripping force retention							
	without compression spring					Opening				Closing			
[mm]	Part No.	Type				Part No.	Type			Part No.	Type		
35	1163037	HGDD-35-A				1163038	HGDD-35-A-G1			1163039	HGDD-35-A-G2		
40	1163040	HGDD-40-A				1163041	HGDD-40-A-G1			1163042	HGDD-40-A-G2		
50	1163043	HGDD-50-A				1163044	HGDD-50-A-G1			1163045	HGDD-50-A-G2		
63	1163046	HGDD-63-A				1163047	HGDD-63-A-G1			1163048	HGDD-63-A-G2		
80	1163049	HGDD-80-A				1163050	HGDD-80-A-G1			1163051	HGDD-80-A-G2		

## Three-point grippers HGDD, sealed

Accessories

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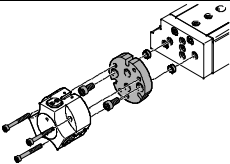
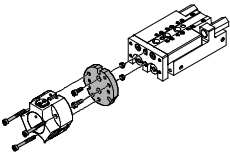
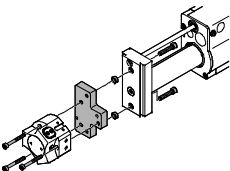
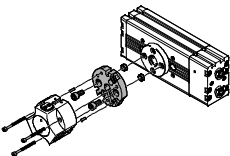
### Adapter kit DHAA

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 → <a href="http://www.festo.com">www.festo.com</a>		
Combination	Drive	Gripper	Adapter kit		
	Size	Size	CRC <sup>1)</sup>	Part No.	Type
DGSL/HGDD	DGSL	HGDD	DHAA		
	16, 20, 25	35	2	542436	HAPG-94
	20, 25	40		542437	HAPG-95
	25	50		542443	HAPG-SD2-36
SLT/HGDD	SLT	HGDD	DHAA		
	16	35	2	542435	HAPG-99
	20, 25	35		542436	HAPG-94
	20, 25	40		542437	HAPG-95
	25	50		542443	HAPG-SD2-36
HMP/HGDD	HMP	HGDD	DHAA		
	16	35	2	542434	HAPG-98
	16, 20, 25	40		542437	HAPG-95
	20, 25, 32	50		542443	HAPG-SD2-36
	25, 32	63		542438	HAPG-96
DRQD/HGDD	DRQD	HGDD	DHAA		
	20, 25, 32	35	2	542441	HAPG-SD2-34
	20 <sup>2)</sup> , 25/32 <sup>3)</sup>	35		542441	HAPG-SD2-34
	25, 32	40		542442	HAPG-SD2-35
	25/32 <sup>3)</sup>	40		542442	HAPG-SD2-35
	32	50		542443	HAPG-SD2-36
	32 <sup>3)</sup>	50		542443	HAPG-SD2-36

- 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.
- In combination with DRQD-...-E422 (flanged shaft with energy through-feed).
- In combination with DRQD-...-E444 (flanged shaft with energy through-feed).

## Three-point grippers HGDD, sealed

Accessories

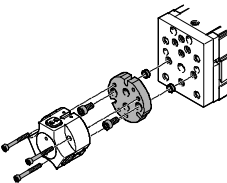
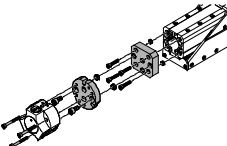
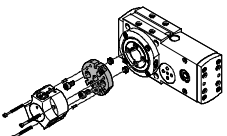
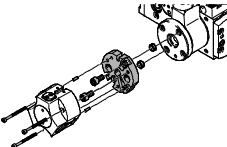
### Adapter kit DHAA

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 → <a href="http://www.festo.com">www.festo.com</a>	
Combination	Drive	Gripper	Adapter kit		
	Size	Size	CRC <sup>1)</sup>	Part No.	Type
EGSL/HGDD	EGSL	HGDD	DHAA		
	45, 55, 75	35	2	542436	HAPG-94
	75	40		542437	HAPG-95
	75	50		542443	HAPG-SD2-36
EGSA/HGDD	EGSA	HGDD	DHAA		
	50	35	2	542436	HAPG-94
				560017	HMSV-61
				548805	ZBV-9-7
	60	35		542436	HAPG-94
				560018	HMSV-62
				548806	ZBV-12-9
	60	40		542437	HAPG-95
				560018	HMSV-62
				548806	ZBV-12-9
ERMB/HGDD	ERMB	HGDD	DHAA		
	20, 25, 32	35	2	542441	HAPG-SD2-34
	25, 32	40		542442	HAPG-SD2-35
	32	50		542443	HAPG-SD2-36
EHMB/HGDD	EHMB	HGDD	DHAA		
	20	35	2	542441	HAPG-SD2-34
	20	40		542442	HAPG-SD2-35
	25, 32	63		542443	HAPG-SD2-36

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.

## Three-point grippers HGDD, sealed

Accessories

**FESTO**

### Gripper jaw blank BUB-HGDD

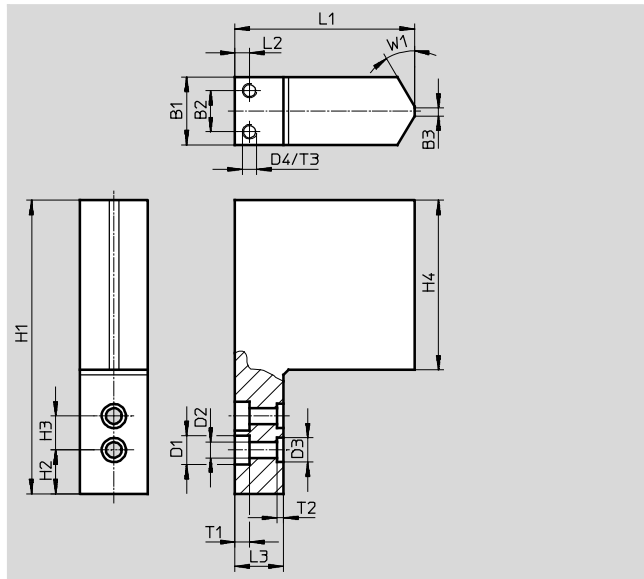
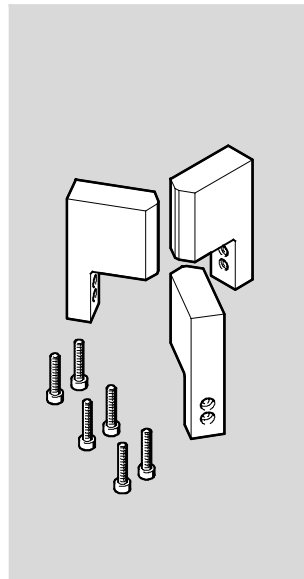
(scope of delivery: 3 pieces)

Material:

Wrought aluminium alloy

Free of copper and PTFE

RoHS-compliant



Dimensions and ordering data							
For size	B1	B2	B3	D1 Ø H13	D2 Ø H13	D3 Ø H8	D4
[mm]	±0.05						
35	14	8.5	2	5.9	3.2	5	M3
40	20	14	2	7.4	4.3	7	M3
50	29	23	2	10.4	6.4	9	M3
63	32	26	2	10.4	6.4	9	M3
80	35	26	2	10.4	6.4	9	M3

For size	H1	H2	H3 <sup>1)</sup>	H4	L1 ±0.05	L2	L3
[mm]	±0.05	±0.02					
35	60.5	9	7	35	37	3	10
40	77	7	10	50	45	5	10
50	96	11	12	60	55	6	12
63	121	13.5	15	75	64	6	12
80	153.5	15.5	18	100	79.4	10	15

For size	T1	T2 +0.1	T3	W1	Weight per blank [g]	Part No.	Type
[mm]							
35	3 <sup>+0.2</sup>	1.3	5	30°	57	1180955	BUB-HGDD-35
40	4 <sup>+0.2</sup>	1.6	5	30°	131	1180956	BUB-HGDD-40
50	6.1 <sup>+0.1</sup>	2.1	5	30°	276	1180957	BUB-HGDD-50
63	6.1 <sup>+0.1</sup>	2.1	5	30°	440	1180958	BUB-HGDD-63
80	6.1 <sup>+0.1</sup>	2.1	5	30°	793	1180959	BUB-HGDD-80

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



## Three-point grippers HGDD, sealed

Accessories

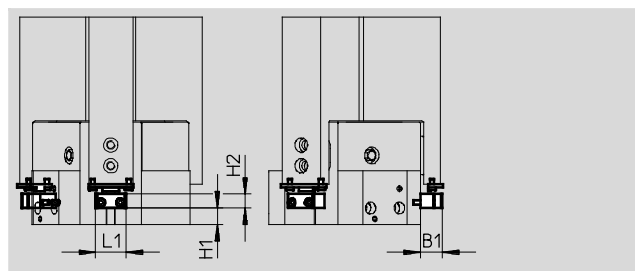
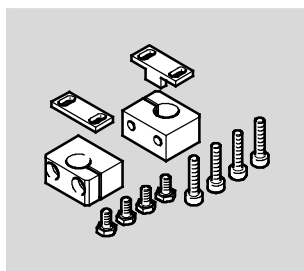
### Sensor bracket DASI

(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]	
35	13	3	13	8	21	20	<b>1435236</b> DASI-B13-35-S3
40	16	6	23.5	10	20	27	<b>1435232</b> DASI-B13-40-S8
50	16	8.5	33.5	10	20	30	<b>1435233</b> DASI-B13-50-S8
63	16	10	36	10	22	35	<b>1435234</b> DASI-B13-63-S8
80	22	10	47	15	22	45	<b>1435235</b> DASI-B13-80-S8

Ordering data						
	For size [mm]	Comment	Weight [g]	Part No.	Type	PU <sup>1)</sup>
Centring sleeve ZBH				Technical data → Internet: <a href="#">zbh</a>		
	35	For centring gripper jaw blanks/gripper fingers on the gripper jaws	1	<b>189652</b>	<b>ZBH-5</b>	10
	40		1	<b>186717</b>	<b>ZBH-7</b>	
	50, 63, 80		1	<b>150927</b>	<b>ZBH-9</b>	
Blanking plug B				Technical data → Internet: <a href="#">blanking plug</a>		
	35, 40	For sealing the supply ports	1	<b>174308</b>	<b>B-M5-B</b>	10
	50, 63, 80		5	<b>3568</b>	<b>B-1/8</b>	

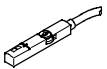
1) Packaging unit


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	<b>547859</b>	<b>SMT-8G-PS-24V-E-2,5Q-OE</b>
		Plug M8x1, 3-pin, lateral		0.3	<b>547860</b>	<b>SMT-8G-PS-24V-E-0,3Q-M8D</b>



## Three-point grippers HGDD, sealed



Accessories



**FESTO**

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	
<b>Mode of operation:</b>	has an analogue output with an output signal in proportion to the piston position.	
The position transmitter continuously senses the position of the piston. It		

Proximity sensor for size 35						
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 40 ... 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	