Three-point gripper HGDT

FESTO

Characteristics

At a glance Link hgdt

The force is transmitted from the linear motion to the gripper jaw movement via a wedge mechanism with force-guided motion. This also ensures that the gripper jaws move synchronously. The plain-bearing guide is virtually backlash-free thanks to the ground-in gripper jaws.

Flexible range of applications:
- Double-acting gripper
- Compression spring for supporting or retaining the gripping forces; can be used as a single-acting gripper if only one supply port is used
- Suitable for external and internal gripping

Sealing air connection:
- When sealing air (max. 0.5 bar) is connected, compressed air flows past the gripper jaws. This prevents dust, for example, from entering the gripper jaw guide.

These grippers are not designed for the following or similar application examples:
- Welding spatter

These grippers are of limited suitability for the following application examples:
- Machining possible with sealing air
- Aggressive media: only possible after consultation with Festo

Engineering tools Link engineering tools

Save time with engineering tools Smart Engineering for the optimal solution. Our goal is to increase your productivity. Our engineering tools play an integral part in this. They help you size your system correctly, tap into unimagined productivity reserves and generate additional productivity along the entire value chain. In every phase of your project, from the initial contact to the modernisation of your machine, you will come across a number of different tools which will be of use to you.

Gripper selection:
- This tool helps you to select the right grippers by simply entering the exact parameters for your application

Diagrams Link hgdt

The diagrams shown in this document are also available online. These can be used to display precise values.

Position sensing

[A]	For proximity sensor

By using proximity switches, any position can be detected.

Gripping force

[_]	Standard

- Stroke per gripper jaw: 3 ... 10 mm
- Total gripping force: 207 ... 1728 N

[F]	High

- Stroke per gripper jaw: 1.5 ... 5 mm
- Total gripping force: 411 ... 3372 N

Gripping force backup

[G1]	Opening

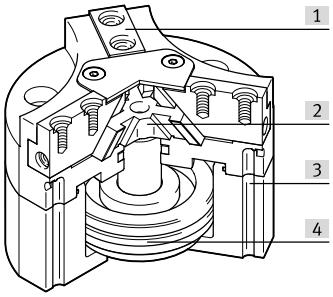
Opened by spring force in depressurised state

[G2]	N/O contact

Closed by spring force in depressurised state

Characteristics

Overview



[1] Gripper jaw
[2] Wedge mechanism
[3] Slot for proximity switch
[4] Piston with magnet

Type code

001	Series	
HGDT	Three-point gripper, sturdy	

002	Size [mm]	
25	25	
35	35	
40	40	
50	50	
63	63	

003	Position sensing	
A	For proximity sensor	

004	Gripping force	
	Standard	
F	High	

005	Gripping force backup	
	None	
G1	Opening	
G2	N/O contact	

Datasheet

General technical data										
Size	25		35		40		50		63	
Gripping force	High	Standard	High	Standard	High	Standard	High	Standard	High	Standard
Stroke per gripper jaws	1.5 mm	3 mm	2 mm	4 mm	3 mm	6 mm	4 mm	8 mm	5 mm	10 mm

Design	Wedge-shaped drive Force pilot operated motion sequence
Mode of operation	Double-acting
Gripping force backup	None Opening N/O contact
Gripper function	3-point
Number of gripper jaws	3
Max. mass per external gripper finger [1]	10 g / 30 g / 70 g / 160 g / 250 g
Pneumatic connection	M5 / G1/8
Pneumatic connection, blocked air	M5
Repetition accuracy, gripper [2]	≤0.03 mm
Rotationally symmetrical	≤0.2 mm
Max. replacement accuracy	≤0.2 mm
Max. operating frequency of gripper	≤4 Hz
Position detection	Via proximity switch
Type of mounting	Either: Via through-hole and dowel pin Via female thread and dowel pin
Mounting position	optional

1) Applies to unthrottled operation

2) Under constant exposure to operating conditions, end-position drift occurs concentrically to the central axis, at 100 consecutive strokes

Operating and environmental conditions					
Size	25	35	40	50	63

Operating medium	Compressed air to ISO 8573-1:2010 [7:4:4]
Note on operating and pilot medium	Lubricated operation possible (in which case lubricated operation will always be required)
Ambient temperature [1]	5 ... 60°C
Corrosion resistance class CRC [2]	2 - Moderate corrosion stress
Lubrication interval for guide components	5 MioCyc

1) Note the operating range of the proximity switches

2) More information: www.festo.com/x/topic/kbk

Operating pressure – HGDT-25 ... 40									
Size	25			35			40		
Gripping force backup	None	N/O contact	Opening	None	N/O contact	Opening	None	N/O contact	Opening
Operating pressure	3 ... 8 bar	4 ... 8 bar		3 ... 8 bar	4 ... 8 bar		3 ... 8 bar	4 ... 8 bar	
Operating pressure of blocked air	0 ... 0.5 bar								

Operating pressure – HGDT-50 ... 63						
Size	50			63		
Gripping force backup	None	N/O contact	Opening	None	N/O contact	Opening
Operating pressure	3 ... 8 bar	4 ... 8 bar		3 ... 8 bar	4 ... 8 bar	
Operating pressure of blocked air	0 ... 0.5 bar					

Weight – HGDT-25 ... 40									
Size	25			35			40		
Gripping force backup	None	Opening	N/O contact	None	Opening	N/O contact	None	Opening	N/O contact
Product weight	185 g	203 g		307 g	337 g	385 g	712 g	840 g	837 g

Datasheet

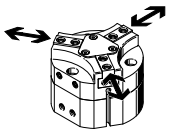
Weight – HGDT-50 ... 63

Size	50			63		
Gripping force backup	None	Opening	N/O contact	None	Opening	N/O contact
Product weight	1,104 g	1,592 g	1,440 g	1,873 g	2,469 g	2,543 g

Materials

Size	25	35	40	50	63
Material housing	Wrought aluminium alloy Coated with COMPCOTE				
Material gripper jaws	Hardened steel				
Material cover cap	High-alloy stainless steel				
Note on materials	RoHS-compliant				
LABS (PWIS) conformity	VDMA24364-B1/B2-L				

Gripping force – HGDT-25 ... 40



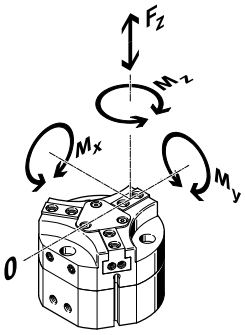
Size	25		35		40	
Gripping force	High	Standard	High	Standard	High	Standard
Total gripping force, closing, 0.6MPa (6bar, 87 psi)	444 N	207 N	822 N	456 N	990 N	618 N
Total gripping force, opening, 0.6MPa (6bar, 87 psi)	540 N	246 N	882 N	492 N	1,101 N	687 N
Gripper force per gripper jaw, closing, 0.6 MPa (6 bar, 87 psi)	148 N	69 N	274 N	152 N	330 N	206 N
Gripper force per gripper jaw, opening, 0.6 MPa (6 bar, 87 psi)	180 N	82 N	294 N	164 N	367 N	229 N

Gripping force – HGDT-50 ... 63

Size	50		63	
Gripping force	High	Standard	High	Standard
Total gripping force, closing, 0.6MPa (6bar, 87 psi)	1,875 N	921 N	2,592 N	1,653 N
Total gripping force, opening, 0.6MPa (6bar, 87 psi)	2,220 N	1,041 N	3,372 N	1,728 N
Gripper force per gripper jaw, closing, 0.6 MPa (6 bar, 87 psi)	625 N	307 N	864 N	551 N
Gripper force per gripper jaw, opening, 0.6 MPa (6 bar, 87 psi)	740 N	347 N	1,124 N	576 N

Datasheet

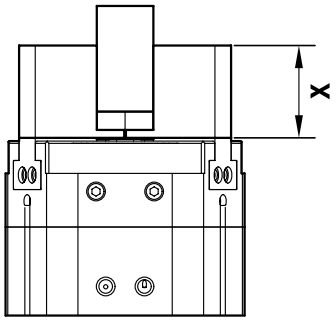
Characteristic load values for the gripper jaws



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

Size	25	35	40	50	63
Max. force on gripper jaw Fz static	350 N	400 N	800 N	1,500 N	2,500 N
Max. torque at gripper Mx static	7 Nm	15 Nm	30 Nm	50 Nm	80 Nm
Max. torque at gripper My static	10 Nm		20 Nm	30 Nm	50 Nm
Max. torque at gripper Mz static	5 Nm	10 Nm	25 Nm	40 Nm	60 Nm

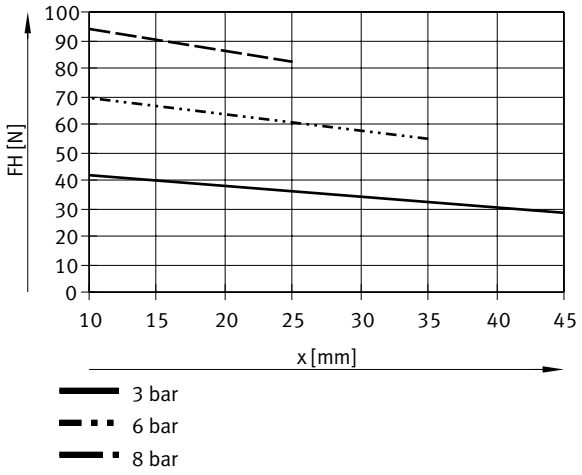
Gripping force FH per gripper jaw as a function of operating pressure and lever arm x



The following graphs can be used to determine the gripping forces as a function of the operating pressure and the lever arm.
The gripping torque is not constant within the opening angle.

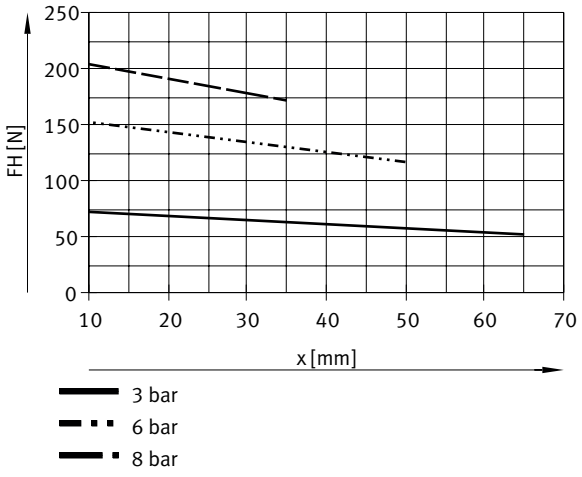
Gripper selection design software → https://www.festo.com/x/topic/eng

Gripping force FH per gripper jaw as a function of operating pressure and lever arm x – external gripping (closing), standard gripping force – HGDT-25

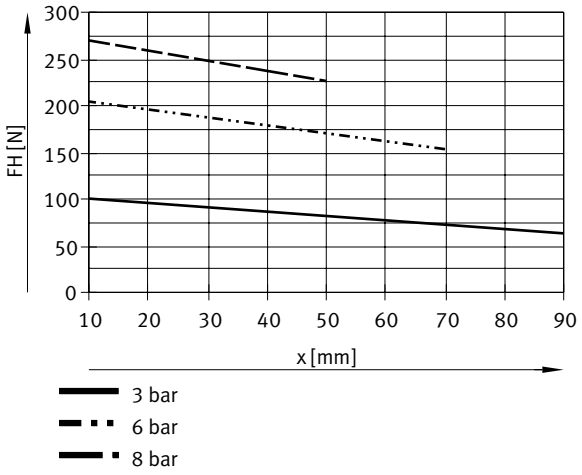


Datasheet

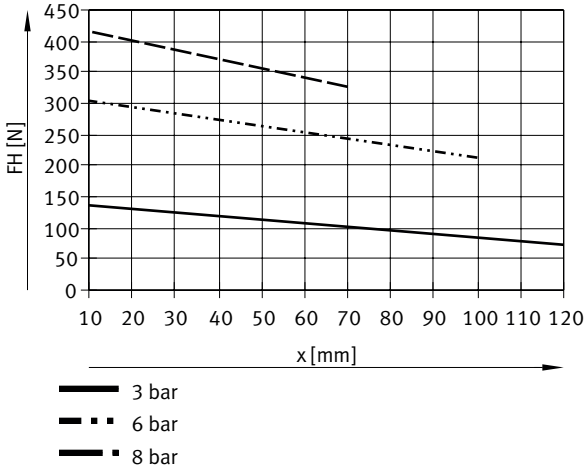
Gripping force FH per gripper jaw as a function of operating pressure and lever arm x – external gripping (closing), standard gripping force – HGDT-35



Gripping force FH per gripper jaw as a function of operating pressure and lever arm x – external gripping (closing), standard gripping force – HGDT-40

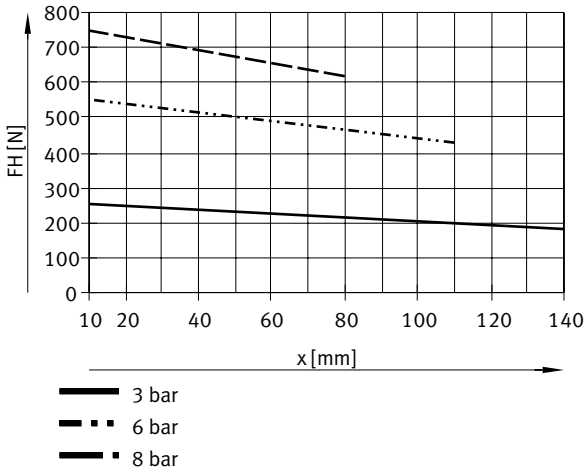


Gripping force FH per gripper jaw as a function of operating pressure and lever arm x – external gripping (closing), standard gripping force – HGDT-50

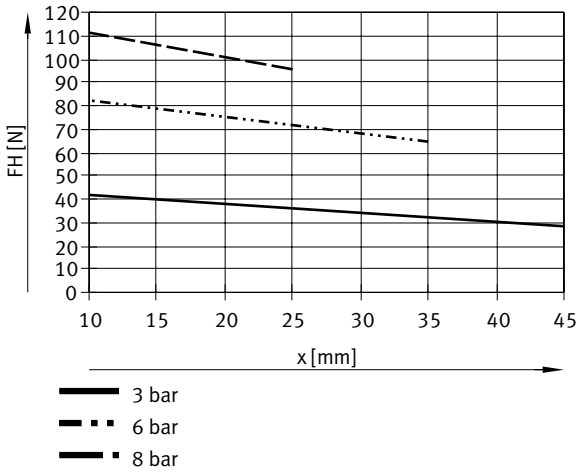


Datasheet

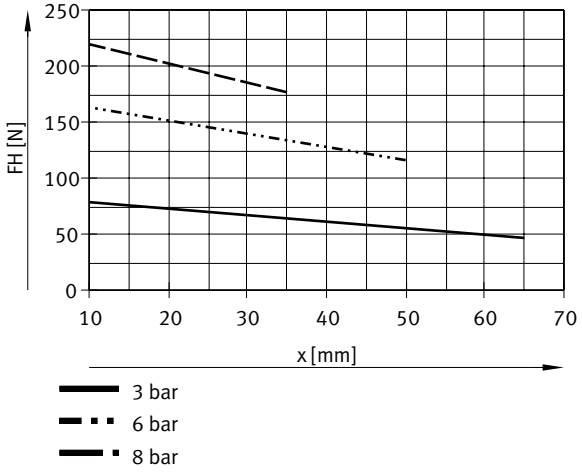
Gripping force FH per gripper jaw as a function of operating pressure and lever arm x – external gripping (closing), standard gripping force – HGDT-63



Gripping force FH per gripper jaw as a function of operating pressure and lever arm x – internal gripping (opening), standard gripping force – HGDT-25

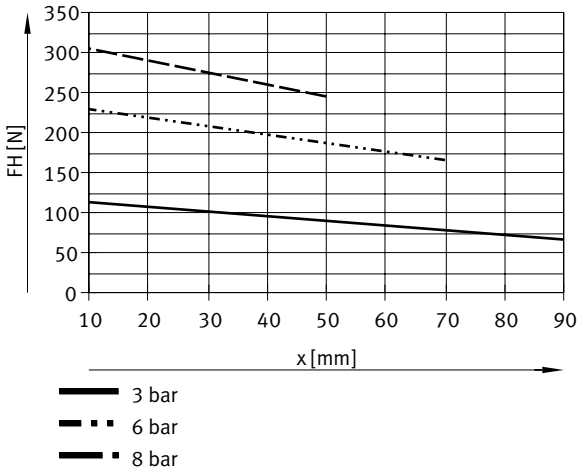


Gripping force FH per gripper jaw as a function of operating pressure and lever arm x – internal gripping (opening), standard gripping force – HGDT-35

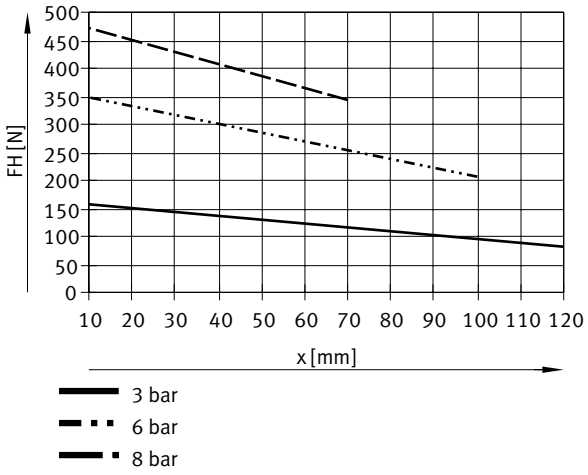


Datasheet

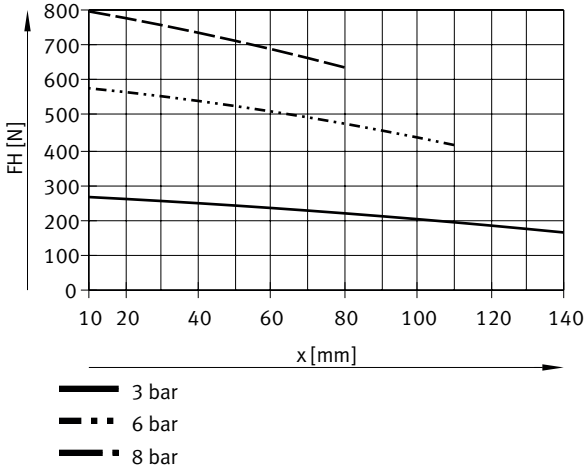
Gripping force FH per gripper jaw as a function of operating pressure and lever arm x – internal gripping (opening), standard gripping force – HGDT-40



Gripping force FH per gripper jaw as a function of operating pressure and lever arm x – internal gripping (opening), standard gripping force – HGDT-50

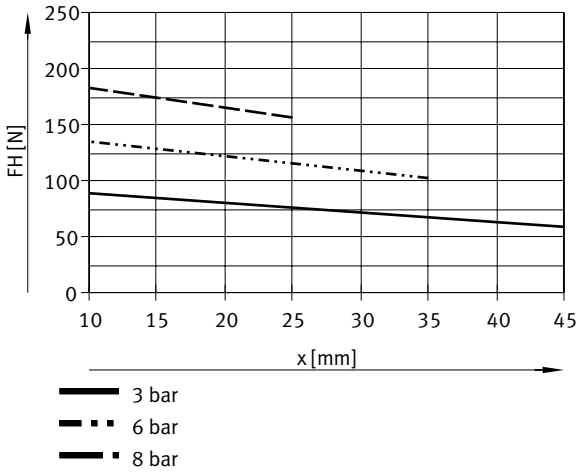


Gripping force FH per gripper jaw as a function of operating pressure and lever arm x – internal gripping (opening), standard gripping force – HGDT-63

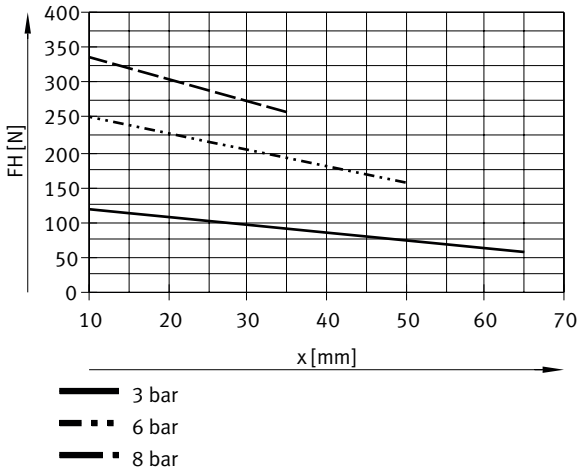


Datasheet

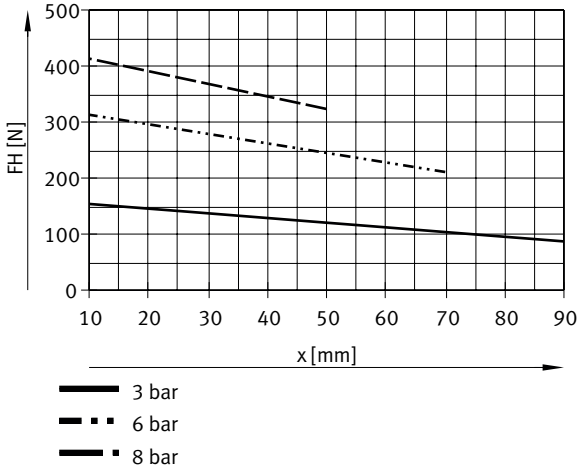
Gripping force FH per gripper jaw as a function of operating pressure and lever arm x – external gripping (closing), high gripping force – HGDT-25-...-F



Gripping force FH per gripper jaw as a function of operating pressure and lever arm x – external gripping (closing), high gripping force – HGDT-35-...-F

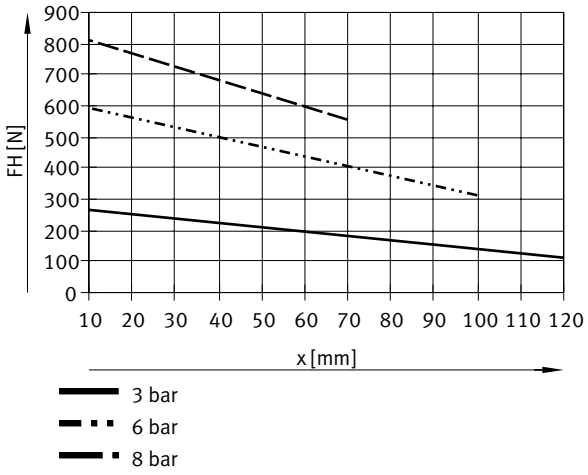


Gripping force FH per gripper jaw as a function of operating pressure and lever arm x – external gripping (closing), high gripping force – HGDT-40-...-F

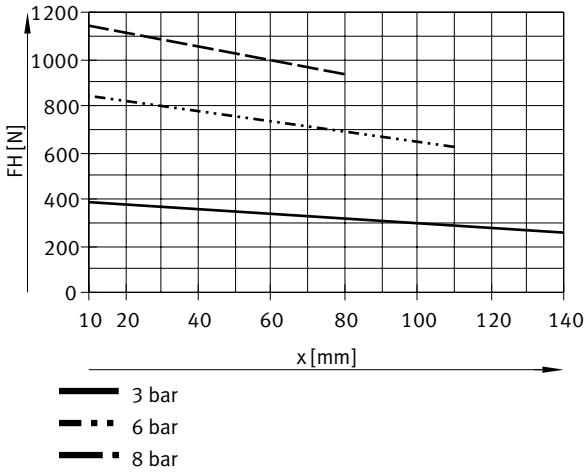


Datasheet

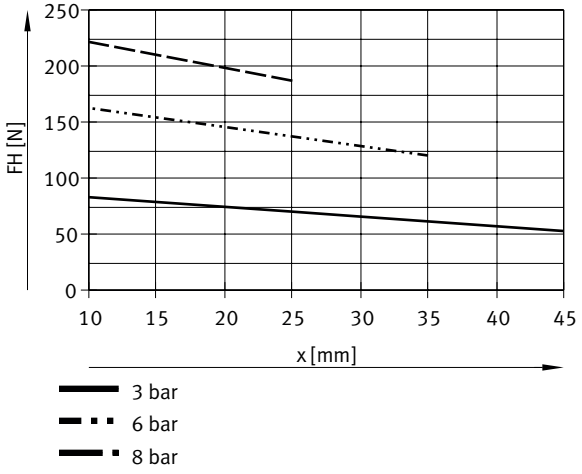
Gripping force FH per gripper jaw as a function of operating pressure and lever arm x – external gripping (closing), high gripping force – HGDT-50-...-F



Gripping force FH per gripper jaw as a function of operating pressure and lever arm x – external gripping (closing), high gripping force – HGDT-63-...-F

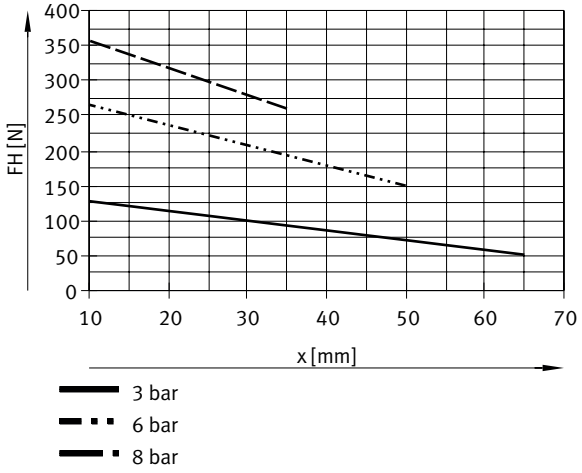


Gripping force FH per gripper jaw as a function of operating pressure and lever arm x – internal gripping (opening), high gripping force – HGDT-25-...-F

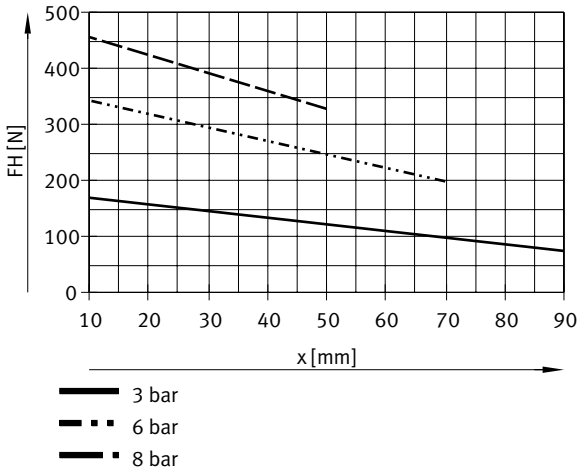


Datasheet

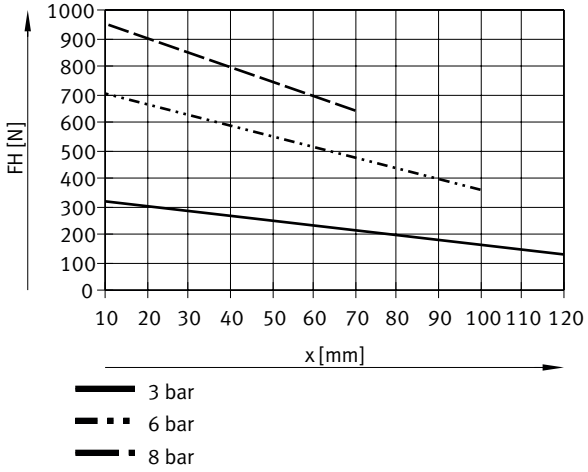
Gripping force FH per gripper jaw as a function of operating pressure and lever arm x – internal gripping (opening), high gripping force – HGDT-35-...-F



Gripping force FH per gripper jaw as a function of operating pressure and lever arm x – internal gripping (opening), high gripping force – HGDT-40-...-F

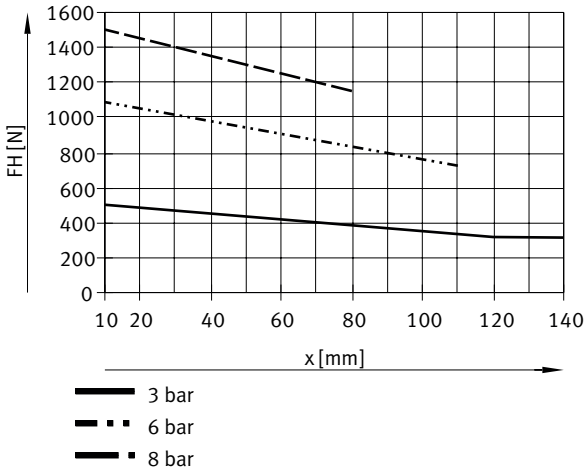


Gripping force FH per gripper jaw as a function of operating pressure and lever arm x – internal gripping (opening), high gripping force – HGDT-50-...-F

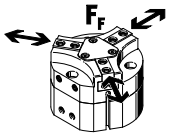


Datasheet

Gripping force FH per gripper jaw as a function of operating pressure and lever arm x – internal gripping (opening), high gripping force – HGDT-63-...-F



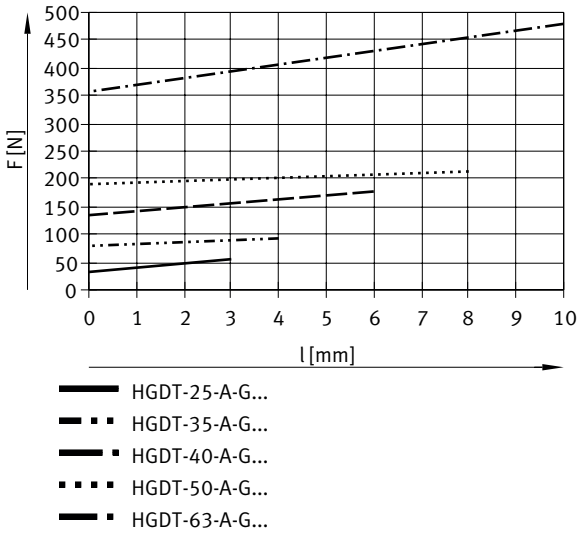
Spring force FF as a function of size, gripper jaw stroke l and lever arm x, per gripper finger – with gripping force retention



The following diagram can be used to determine the spring forces FF as a function of the gripper jaw stroke l.

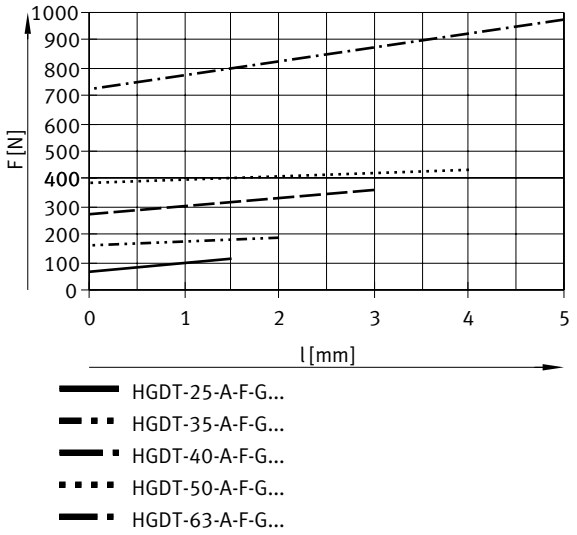
Gripper selection design software → https://www.festo.com/x/topic/eng

Spring force FF as a function of the size, the gripper jaw stroke l and the lever arm x, per gripper finger – wWith gripping force retention, standard gripping force – HGDT-...-G...



Datasheet

Spring force FF as a function of the size, the gripper jaw stroke l and the lever arm x, per gripper finger – with gripping force retention, high gripping force – HGDT-...-F-G...



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

To determine the actual spring force FFges, the lever arm x must be taken into account.
Formulas for calculating the spring force FFges per gripper finger:

Standard gripping force – HGDT-....-G...:
HGDT-25-...-G...: -0.3 * x + 0.85 * FF
HGDT-35-...-G...: -0.5 * x + 0.75 * FF
HGDT-40-...-G...: -0.5 * x + 0.8 * FF
HGDT-50-....-G...: -0.6 * x + 0.7 * FF
HGDT-63-...-G...: -0.6 * x + 0.75 * FF

High gripping force – HGDT-...-F-G...:
HGDT-25-...-F-G...: -2.24 * x + 0.64 * FF
HGDT-35-...-F-G...: -0.97 * x + 0.7 * FF
HGDT-40-...-F-G...: -1.45 * x + 0.66 * FF
HGDT-50-...-F-G...: -0.97 * x + 0.51 * FF
HGDT-63-...-F-G...: -2.35 * x + 0.72 * FF

Determining the actual gripping forces FGr per gripper finger for HGDT-...-G1 and HGDT-...-G2 as a function of application per gripper finger

The grippers with built-in spring, type HGDT-...-G1 (gripping force retention opening) and HGDT-...-G2 (gripping force retention closing), can be used as required as:
- Single-acting grippers
- Grippers with gripping force support and
- Grippers with gripping force retention

.

To calculate the available gripping forces FGr (per gripper jaw), the data from the gripping force FH and spring force FFges must be combined accordingly.

Datasheet

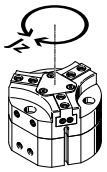
Determining the actual gripping forces FGr per gripper finger for HGDT-...-G1 and HGDT-...-G2 as a function of application – application

Single-acting:
- Gripping with spring force: FGr = FFges
- Gripping with pressure force: FGr = FH – FFges

Gripping force support:
- Gripping with pressure and spring force: FGr = FH + FFges

Gripping force retention
- Gripping with spring force: FGr = FFges

Mass moments of inertia – HGDT-25 ... 40



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

Size	25			35			40		
Gripping force backup	None	N/O contact	Opening	None	N/O contact	Opening	None	N/O contact	Opening
Mass moment of inertia	0.48 kgcm²	0.5 kgcm²		1.17 kgcm²	1.37 kgcm²		4.37 kgcm²	5.23 kgcm²	5.59 kgcm²

Mass moments of inertia – HGDT-50 ... 63

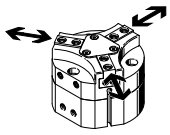
Size	50			63		
Gripping force backup	None	N/O contact	Opening	None	N/O contact	Opening
Mass moment of inertia	11.05 kgcm²	13.92 kgcm²	15.33 kgcm²	28.77 kgcm²	39.5 kgcm²	42.44 kgcm²

Gripper jaw backlash

Size	25	35	40	50	63
Max. gripper jaw backlash Sz [1]	≤0.05 mm				
Max. angular gripper jaw backlash ax, ay [2]	≤0.1 deg				

1) The values only apply when the gripper is open.
2) The values only apply when the gripper is open.

Opening and closing times – HGDT-25



The indicated opening and closing times [ms] were measured at room temperature, 0.6 MPa (6 bar, 87 psi) operating pressure and with the gripper installed horizontally without additional gripper fingers.
The grippers must be throttled for higher masses [g]. Opening and closing times must then be adjusted accordingly.

Size	25					
Gripping force	High			Standard		
Gripping force backup	None	N/O contact	Opening	None	N/O contact	Opening
Min. opening time at 0.6 MPa (6 bar, 87 psi)	20 ms	38 ms	25 ms	28 ms	33 ms	27 ms
Min. closing time at 0.6 MPa (6 bar, 87 psi)	30 ms	33 ms	61 ms	25 ms		33 ms

Datasheet

Opening and closing times – HGDT-35						
Size	35					
Gripping force	High			Standard		
Gripping force backup	None	N/O contact	Opening	None	N/O contact	Opening
Min. opening time at 0.6 MPa (6 bar, 87 psi)	43 ms	53 ms	29 ms	40 ms	46 ms	32 ms
Min. closing time at 0.6 MPa (6 bar, 87 psi)	39 ms	36 ms	67 ms	45 ms	35 ms	56 ms

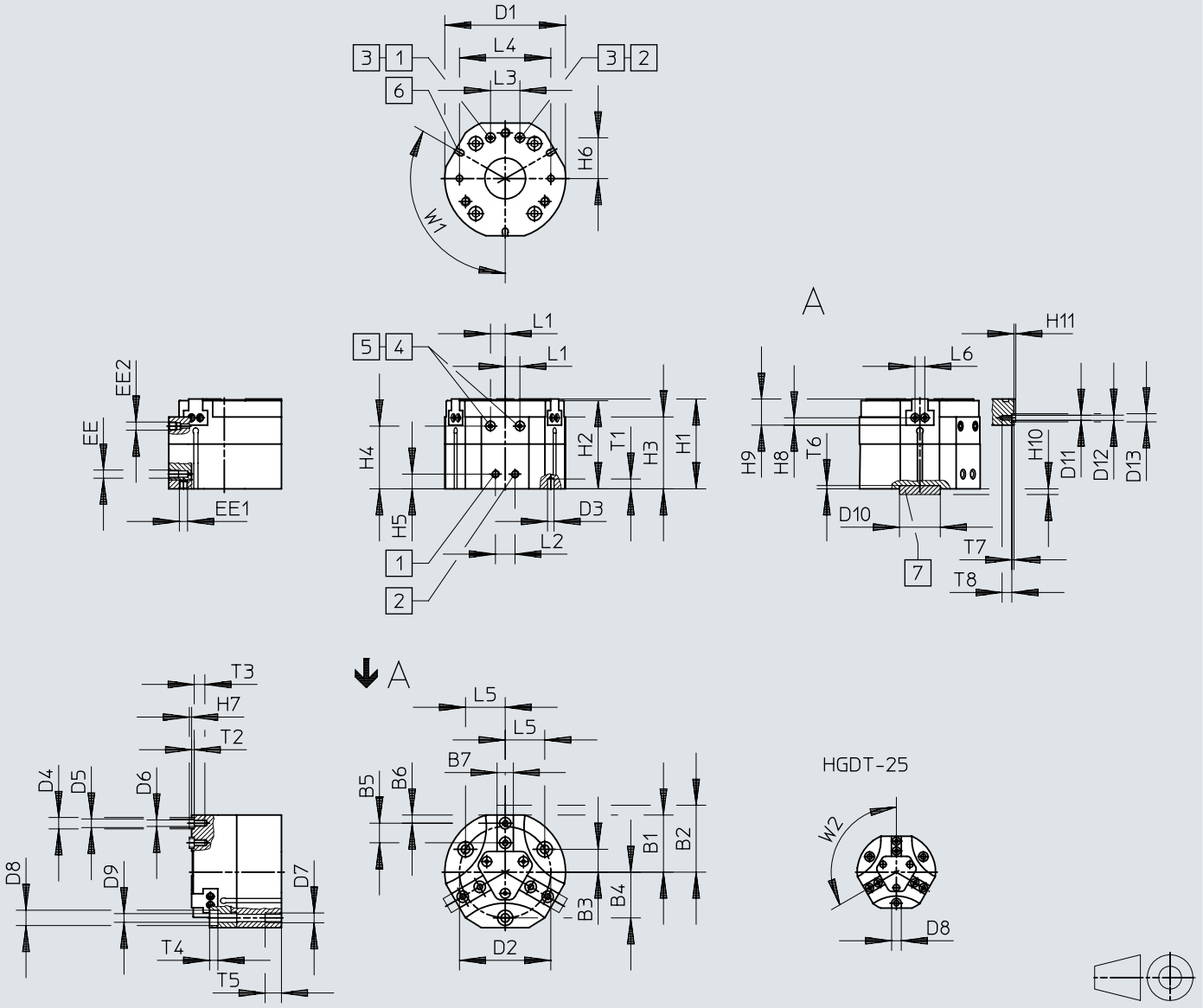
Opening and closing times – HGDT-40						
Size	40					
Gripping force	High			Standard		
Gripping force backup	None	N/O contact	Opening	None	N/O contact	Opening
Min. opening time at 0.6 MPa (6 bar, 87 psi)	48 ms	117 ms	63 ms	62 ms	111 ms	58 ms
Min. closing time at 0.6 MPa (6 bar, 87 psi)	49 ms	104 ms	190 ms	59 ms	87 ms	160 ms

Opening and closing times – HGDT-50						
Size	50					
Gripping force	High			Standard		
Gripping force backup	None	N/O contact	Opening	None	N/O contact	Opening
Min. opening time at 0.6 MPa (6 bar, 87 psi)	96 ms	88 ms	31 ms	85 ms	61 ms	32 ms
Min. closing time at 0.6 MPa (6 bar, 87 psi)	83 ms	65 ms	170 ms	75 ms	70 ms	146 ms

Opening and closing times – HGDT-63						
Size	63					
Gripping force	High			Standard		
Gripping force backup	None	N/O contact	Opening	None	N/O contact	Opening
Min. opening time at 0.6 MPa (6 bar, 87 psi)	163 ms	169 ms	70 ms	152 ms	159 ms	48 ms
Min. closing time at 0.6 MPa (6 bar, 87 psi)	162 ms	128 ms	299 ms	142 ms	107 ms	246 ms

Dimensions

Dimensions – Three-point gripper HGDT Download CAD data www.festo.com



[1] Open compressed air supply port
[2] Close compressed air supply port
[3] Alternative air supply port (sealed on delivery)
[4] Sealing air connection (sealed on delivery)
[5] Lubrication nipple (sealed on delivery)
[6] Slot for proximity switch
[7] Centring disc

Dimensions

	B1	B2		B3	B4	B5	B6	B7	D1	D2	D3	D4
		HGDT-...	HGDT-...F					–0,05	Ø	Ø	Ø	Ø
	±0,5	±0,5	±0,5			±0,02	±0,02	–0,1	±0,1	±0,1	H8	H8/h7
HGDT-25-A	22	25	23,5	9,5	19	6	3	6	48	38	3	5
HGDT-25-A-G...												
HGDT-35-A	27	31	29	11	22	8	4	6,5	58	44	3	5
HGDT-35-A-G...												
HGDT-40-A	35	41	38	14	28	12	5	10	74	56	4	7
HGDT-40-A-G...												
HGDT-50-A	43,5	51,5	47,5	17,5	35	15	6	12	93	70	5	9
HGDT-50-A-G...												
HGDT-63-A	54	64	59	22,5	45	18	10	14	116	90	5	9
HGDT-63-A-G...												

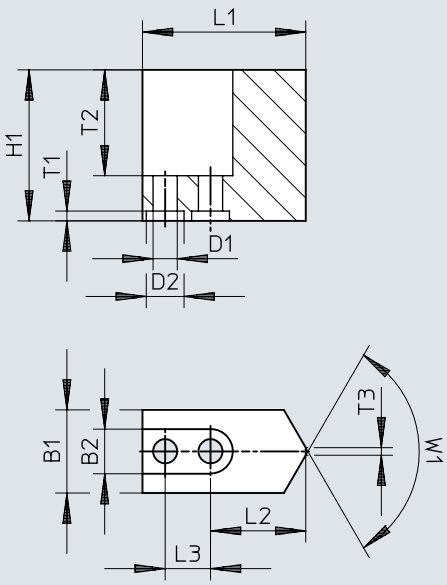
	D5	D6	D7	D8	D9	D10	D11	D12	D13	EE	EE1	EE2	H1
	Ø	Ø	Ø	Ø	Ø	Ø		Ø	Ø				
				H13	H13	H8			H8/h7				±0,05
HGDT-25-A	3,2	M3	M4	5,9	3,3	14	M2	–	–	M5	M3	M5	41,5
HGDT-25-A-G...													
HGDT-35-A	3,2	M3	M4	5,9	3,3	25	M3	3,2	5	M5	M3	M5	46
HGDT-35-A-G...													52
HGDT-40-A	5,3	M4	M6	9,4	5,1	25	M3	3,2	5	M5	M5	M5	55
HGDT-40-A-G...													72
HGDT-50-A	6,4	M6	M8	10,2	6,4	25	M5	5,3	7	G1/8	M5	M5	64,5
HGDT-50-A-G...													82
HGDT-63-A	6,4	M6	M8	10,4	6,4	25	M5	5,3	7	G1/8	M5	M5	69
HGDT-63-A-G...													96

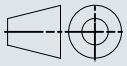
	H2	H3	H4	H5	H6	H7	H8	H9	H10	H11	L1	L2	L3	L4
	±0,05			±0,1	±0,1	–0,3		–0,02	–0,2	–0,3	±0,5	±0,1	±0,1	±0,02
HGDT-25-A	40,5	32,5	29,3	9	13,5	1,1	2,25±0,1	8,5	3,5	–	6	12	12	38
HGDT-25-A-G...														
HGDT-35-A	45	37	33,5	9	18,5	1,1	3±0,02	12	3,5	1,1	7	12	15	45
HGDT-35-A-G...	51	43	39,5											
HGDT-40-A	54	44	38,4	9	25	1,4	4,5±0,02	16	3,5	1,1	9	12	18	56
HGDT-40-A-G...	71	61	55,4											
HGDT-50-A	63,5	50,5	45	12	32	1,9	5,5±0,02	19	3,5	1,4	9	24	18	70
HGDT-50-A-G...	81	68	62,5											
HGDT-63-A	68	50	44,5	12	42	1,9	5,5±0,02	22	3,5	1,4	12	24	24	90
HGDT-63-A-G...	95	77	71,5											

	L5	L6	T1	T2	T3	T4	T5	T6	T7	T8
			min.	+0,1	min.	+0,2	min.	+0,1	+0,1	min.
HGDT-25-A	16,45	6±0,1	3,5	1,3	5	3,2	8	2	–	3
HGDT-25-A-G...										
HGDT-35-A	19,05	6±0,02	5	1,3	5,5	3,2	8	2	1,3	6
HGDT-35-A-G...										
HGDT-40-A	24,25	6±0,02	6	1,6	6,5	5,1	10	2	1,3	6
HGDT-40-A-G...										
HGDT-50-A	30,31	13±0,02	8	2,1	10,5	6,1	12	2	1,6	9
HGDT-50-A-G...										
HGDT-63-A	38,97	13±0,02	8	2,1	10,5	6,1	12	2	1,6	9
HGDT-63-A-G...										

Dimensions

Dimensions – Gripper jaw blank BUB-HGDT-25 Download CAD data www.festo.com





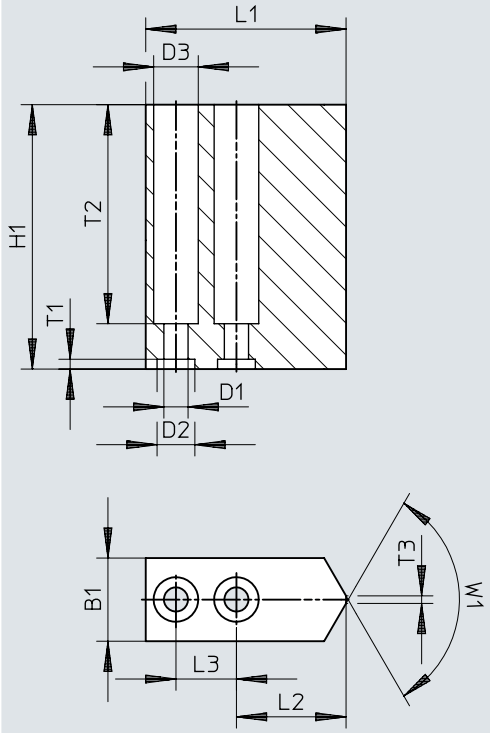
	B1 ±0,05	B2 +0,22	D1 ø H13	D2 ø H8	H1 ±0,05	L1 ±0,05	L2 ±0,02[1] ±0,1[2]	L3 ±0,01[1] ±0,1[1]	T1 +0,1	T2	T3	W1
BUB-HGDT-25	11	5,9	3,2	5	20	21,6	12,6	6	1,3	14	1	120°

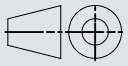
1) For centring
2) For through-hole

Dimensions

Dimensions – Gripper jaw blank BUB-HGDT-35 ... 63

Download CAD data www.festo.com





	B1 ±0,05	D1 ø H13	D2 ø H8	D3 ø +0,22	H1 ±0,05	L1 ±0,05	L2 ±0,02[1] ±0,1[2]	L3 ±0,01[1] ±0,1[1]	T1 +0,1	T2	T3	W1
BUB-HGDT-35	11	3,2	5	5,9	35	26,5	14,5	8	1,3	29	1	120°
BUB-HGDT-40	16	4,3	7	7,4	50	34	17	12	1,6	45		
BUB-HGDT-50	20	6,3	9	10,4	65	42	21	15	2,1	58		
BUB-HGDT-63	24	6,3	9	10,4	80	52	24	18	2,1	73		

1) For centring
2) For through-hole

Ordering data

Double-acting, without compression spring

	Size	Stroke per gripper jaws	Gripping force	Product weight	Part no.	Type
	25	1.5 mm	High	185 g	**560177**	**HGDT-25-A-F**
		3 mm	Standard		**540859**	**HGDT-25-A**
	35	2 mm	High	307 g	**560180**	**HGDT-35-A-F**
		4 mm	Standard		**540862**	**HGDT-35-A**
	40	3 mm	High	712 g	**560183**	**HGDT-40-A-F**
		6 mm	Standard		**540865**	**HGDT-40-A**
	50	4 mm	High	1,104 g	**560186**	**HGDT-50-A-F**
		8 mm	Standard		**540868**	**HGDT-50-A**
	63	5 mm	High	1,873 g	**560189**	**HGDT-63-A-F**
		10 mm	Standard		**540871**	**HGDT-63-A**

Single-acting or with gripping force backup, opening

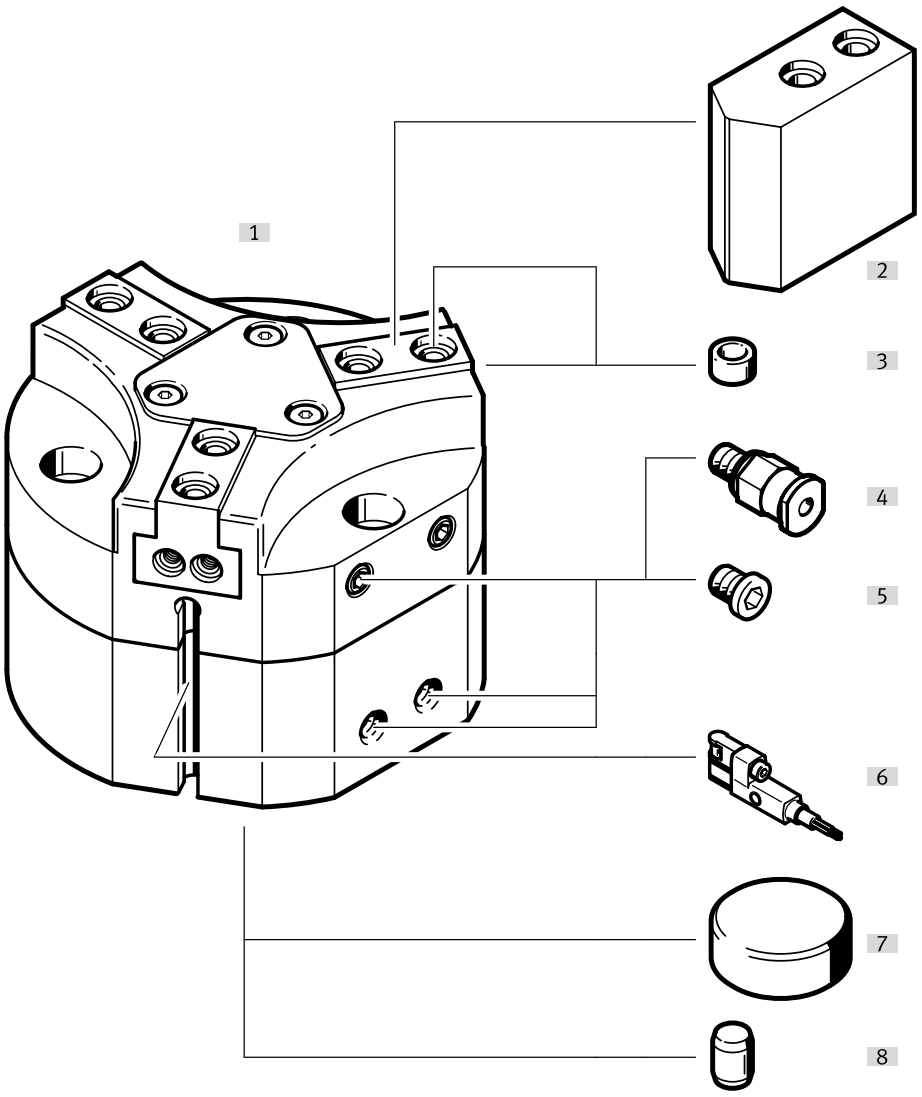
	Size	Stroke per gripper jaws	Gripping force	Product weight	Part no.	Type
	25	1.5 mm	High	203 g	**560178**	**HGDT-25-A-F-G1**
		3 mm	Standard		**540860**	**HGDT-25-A-G1**
	35	2 mm	High	337 g	**560181**	**HGDT-35-A-F-G1**
		4 mm	Standard		**540863**	**HGDT-35-A-G1**
	40	3 mm	High	840 g	**560184**	**HGDT-40-A-F-G1**
		6 mm	Standard		**540866**	**HGDT-40-A-G1**
	50	4 mm	High	1,592 g	**560187**	**HGDT-50-A-F-G1**
		8 mm	Standard		**540869**	**HGDT-50-A-G1**
	63	5 mm	High	2,469 g	**560190**	**HGDT-63-A-F-G1**
		10 mm	Standard		**540872**	**HGDT-63-A-G1**

Single-acting or with gripping force backup, closing

	Size	Stroke per gripper jaws	Gripping force	Product weight	Part no.	Type
	25	1.5 mm	High	203 g	**560179**	**HGDT-25-A-F-G2**
		3 mm	Standard		**540861**	**HGDT-25-A-G2**
	35	2 mm	High	385 g	**560182**	**HGDT-35-A-F-G2**
		4 mm	Standard		**540864**	**HGDT-35-A-G2**
	40	3 mm	High	837 g	**560185**	**HGDT-40-A-F-G2**
		6 mm	Standard		**540867**	**HGDT-40-A-G2**
	50	4 mm	High	1,440 g	**560188**	**HGDT-50-A-F-G2**
		8 mm	Standard		**540870**	**HGDT-50-A-G2**
	63	5 mm	High	2,543 g	**560191**	**HGDT-63-A-F-G2**
		10 mm	Standard		**540873**	**HGDT-63-A-G2**

Peripherals

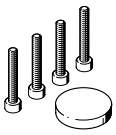
Peripherals overview



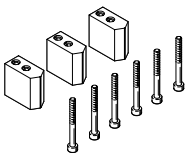
Accessories			→ Link
	Type/order code	Description	
[1]	Three-point gripper HGDT	Double-acting	hgdt
[2]	Gripper jaw blank BUB-HGDT	Blanks specially matched to the gripper jaws for custom manufacturing of gripper fingers	24
[3]	Centring sleeve ZBH	For centring the gripper jaw blanks/gripper fingers on the gripper jaws	24
[4]	Push-in fitting QS	For connecting tubing with standard O.D.	qs
[5]	Blanking plug B	For sealing the supply ports when using the supply ports at the front	24
[6]	Proximity switch SMT-10	There are three slots available for sensing the piston position	25
[7]	Central mounting SLZZ	For centring the gripper during mounting	24
[8]	Dowel pin	For centring the gripper during mounting	hgdt
[9]	Adapter kit DHAA, HAPG	Drive/gripper connections	dhaa

Accessories

Central mounting SLZZ

	Description	Part no.	Type
	For size 25	**150900**	**SLZZ-16/10**
	For sizes 25, 40, 50, 63	**150901**	**SLZZ-25/16**

Gripper jaw blank BUB-HGDT

	Description	Material unmachined part	Product weight per gripper jaw	Part no.	Type
	For size 25	Wrought aluminium alloy	10 g	**541101**	**BUB-HGDT-25**
	For size 35		22 g	**541102**	**BUB-HGDT-35**
	For size 40		60 g	**541103**	**BUB-HGDT-40**
	For size 50		112 g	**541104**	**BUB-HGDT-50**
	For size 63		222 g	**541105**	**BUB-HGDT-63**

Centring sleeve ZBH-5

	Description	Material sleeve	Size of pack	Product weight	Part no.	Type
	For sizes 25, 35, 40	Steel	10	1 g	**8146543**	**ZBH-5-B**

Centring sleeve ZBH-7

	Description	Material sleeve	Size of pack	Product weight	Part no.	Type
	For sizes 40, 50, 63	Steel	10	1 g	**8146544**	**ZBH-7-B**

Centring sleeve ZBH-9

	Description	Material sleeve	Size of pack	Product weight	Part no.	Type
	For sizes 50, 63	Steel	10	2 g	**8137184**	**ZBH-9-B**

Blanking plug B-M3-S9

	Description	Material blanking plug	Size of pack	Product weight	Part no.	Type
	For sizes 25...63	High-alloy stainless steel	10	1 g	★ **30979**	**B-M3-S9**

Blanking plug B-M5-B

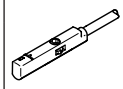
	Description	Material blanking plug	Size of pack	Product weight	Part no.	Type
	For sizes 25...63	Galvanised steel	10	1 g	★ **174308**	**B-M5-B**

Blanking plug B-1/8

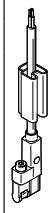
	Description	Material blanking plug	Size of pack	Product weight	Part no.	Type
	For sizes 25...63	Galvanised steel	10	7 g	★ **3568**	**B-1/8**

Accessories

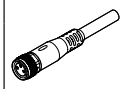
Proximity switch SMT-10M for round slot, magneto-resistive – for sizes 6, 16 ... 32 — Link smt

	Type of mounting	Switching output	Electrical connection	Cable length	Part no.	Type
	Screw-clamped, Insertable in the slot from above	3-wire PNP N/O contact	Open end	2.5 m	★ 551373	SMT-10M-PS-24V-E-2,5-L-OE
			Plug M8, A-coded	0.3 m	★ 551375	SMT-10M-PS-24V-E-0,3-L-M8D

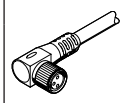
Proximity switch SMT-10G for round slot, magneto-resistive – for sizes 6, 16 ... 32 — Link smt

	Type of mounting	Switching output	Electrical connection	Cable length	Part no.	Type
	Clamped in C-slot, Insertable in the slot lengthwise	3-wire NPN N/O contact	Open end	2.5 m	8065030	SMT-10G-NS-24V-E-2,5Q-OE
			Plug M8, A-coded	0.3 m	8065029	SMT-10G-NS-24V-E-0,3Q-M8D
		3-wire PNP N/O contact	Open end	2.5 m	547862	SMT-10G-PS-24V-E-2,5Q-OE
			Plug M8, A-coded	0.3 m	547863	SMT-10G-PS-24V-E-0,3Q-M8D

Connecting cable NEBU, straight

	Electrical connection 1, connector system	Electrical connection 2, connector system	Electrical connection 2, number of connections/ cores	Cable length	Part no.	Type
	M8x1, A-coded, to EN 61076-2-104	Open end	3	2.5 m	541333	NEBU-M8G3-K-2.5-LE3
				5 m	541334	NEBU-M8G3-K-5-LE3

Connecting cable NEBU, angled

	Electrical connection 1, connector system	Electrical connection 2, connector system	Electrical connection 2, number of connections/ cores	Cable length	Part no.	Type
	M8x1, A-coded, to EN 61076-2-104	Open end	3	2.5 m	541338	NEBU-M8W3-K-2.5-LE3
				5 m	541341	NEBU-M8W3-K-5-LE3