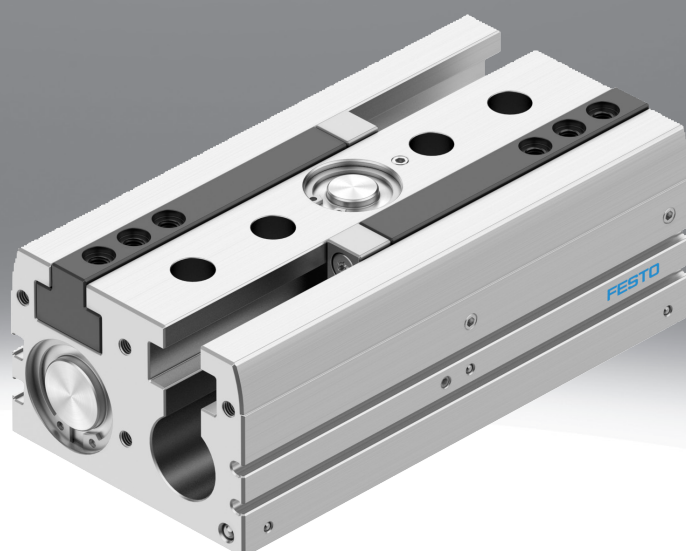


Parallel gripper HPPL

FESTO



Characteristics

At a glance

[Link](#) [hppl](#)

The robust pneumatic long-stroke gripper HPPL with double-piston drive is specially designed for gripping components of different sizes. It is used in various industries, including general mechanical engineering, machine tool construction, battery production and the food industry.

- Twin-piston actuator, power transmission via rack and pinion principle
- Space-saving, high forces and torques
- Reliable, precise and central gripping up to a total stroke of 300 mm
- Suitable for external and internal gripping
- Adjustability of the opening stroke for time optimization by means of stroke reduction
- H1 Grease for use in the food industry
- Recommended for production plants for manufacturing Li-ion batteries

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

- Machining
- Aggressive media
- Grinding dust
- Welding spatter

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 achieving this goal. Throughout the entire value chain, they help you size your system correctly, tap into unimagined productivity reserves or generate additional productivity. In every phase of your project, from initial contact to modernization of your machine, you will come across a number of tools that will prove beneficial to you.

Gripper selection:

- This tool helps you find the right grippers by simply entering the exact parameters for your application

Diagrams

[Link](#) [hppl](#)



The diagrams shown in this document are also available online. There, it is possible to display precise values.

Position sensing

[A] For proximity sensor

With the help of proximity switches, position detection allows for any position to be sensed.

Type code

001	Series	
HPPL	Parallel gripper	
002	Size [mm]	
16	16	
25	25	
32	32	
40	40	
50	50	
63	63	

003	Complete stroke [mm]	
40	40	
80	80	
120	120	
160	160	
200	200	
300	300	

004	Position sensing	
A	For proximity sensor	

005	Special material properties	
F1A	Recommended for production plants for manufacturing lithium-ion batteries, F1A	

Datasheet

General technical data						
Size	16	25	32	40	50	63
Complete stroke	40 mm, 80 mm, 120 mm, 160 mm			40 mm, 80 mm, 120 mm, 160 mm, 200 mm	80 mm, 120 mm, 160 mm, 200 mm	120 mm, 200 mm, 300 mm
Stroke per gripper jaw	20 mm, 40 mm, 60 mm, 80 mm			20 mm, 40 mm, 60 mm, 80 mm, 100 mm	40 mm, 60 mm, 80 mm, 100 mm	60 mm, 100 mm, 150 mm
Structural design	Double piston Guide Piston gate valve T-shape Gear rack/pinion					
Guide	Heavy-duty guide					
Actuator system	Pneumatic					
Mode of operation	Double-acting					
Gripping force backup	None					
Gripper function	Parallel					
Number of gripper jaws	2					
Max. mass per external gripper finger ¹⁾	80 g	250 g	330 g	420 g	730 g	940 g
Pneumatic connection ²⁾	M3, M5	M5			G1/8	
Pneumatic gripper repetition accuracy ³⁾	<0.03 mm					
Cushioning	Elastic cushioning rings/pads at both ends, without fixed metal stop					
Position sensing	Via proximity switch					
Type of mounting	With internal thread and centering sleeve Via through-hole and centering sleeve					
Mounting position	Any					

1) Applies to unthrottled operation The grippers must be throttled for larger masses.

2) HPPL-16: Pneumatic connection on the side = M5

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

Operating and environmental conditions						
Size	16	25	32	40	50	63
Operating pressure	0.2 ... 0.8 MPa					
Operating pressure	2 ... 8 bar					
Operating pressure	29 ... 116 psi					
Operating medium	Compressed air as per ISO 8573-1:2010 [7:4:4]					
Information on operating and pilot media	Operation with oil lubrication possible (required for further use)					
Ambient temperature ¹⁾	-10 ... 80°C					
Degree of protection	IP40					
Vibration resistance	Transport application test with severity level 2 as per FN 942017-4 and EN 60068-2-6					
Shock resistance	Shock test with severity level 2 as per FN 942017-5 and EN 60068-2-27					
Corrosion resistance class (CRC) ²⁾	1 - Low corrosion stress					

1) Note operating range of proximity switches

2) Further information, visit www.festo.com/x/topic/kbk

Weights - HPPL-16 ... 25								
Size	16				25			
Complete stroke	40	80	120	160	40	80	120	160
Product weight	341 g	492 g	638 g	788 g	889 g	1,230 g	1,561 g	1,902 g

Weights - HPPL-32 ... 40									
Size	32				40				
Complete stroke	40	80	120	160	40	80	120	160	200
Product weight	1,361 g	1,845 g	2,307 g	2,790 g	2,150 g	2,861 g	3,570 g	4,236 g	4,944 g

Datasheet

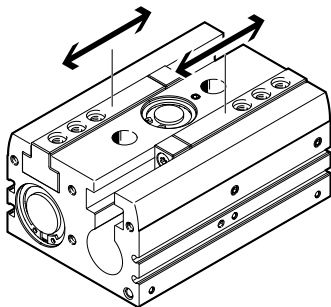
Weights - HPPL-50 ... 63

Size	50				63		
Complete stroke	80	120	160	200	120	200	300
Product weight	4,494 g	5,527 g	6,506 g	7,538 g	8,610 g	11,522 g	15,266 g

Materials

Size	16	25	32	40	50	63
Housing material	Wrought aluminum alloy, anodized					
Cover cap material	Wrought aluminum alloy, anodized					
End plate material	Wrought aluminum alloy, anodized					
Piston rod material	high-alloy stainless steel					
O-ring material	NBR					
Material of screws	Steel, chemically nickel-plated					
Material of piston	Wrought aluminum alloy, anodized					
Piston seal material	TPE-U(PU)					
Gear wheel material	High-alloy steel					
Gripper jaw material	high-alloy stainless steel					
Gripper finger material	Wrought aluminum alloy, anodized					
Note on materials	RoHS compliant Free of copper					
LABS (PWIS) conformity	VDMA24364-B1/B2-L					
Suitability for the production of Li-ion batteries	Suitable for battery production with reduced Cu/Zn/Ni values (F1a)					

Measured gripping force with a lever arm of 0 mm



Size	16	25	32	40	50	63
Theoretical total gripping force at 0 mm, 0.6 MPa (6 bar, 87 psi) close	<222 N	<544 N	<890 N	<1376 N	<2064 N	<3480 N
Theoretical total gripping force at 0 mm, 0.6 MPa (6 bar, 87 psi) open	<160 N	<450 N	<754 N	<1240 N	<1822 N	<3238 N
Close theoretical gripping force per Gripper jaw at 0 mm, 0.6 MPa (6 bar, 87 psi)	<111 N	<272 N	<445 N	<688 N	<1032 N	<1740 N
Theoretical opening gripping force per Gripper jaw at 0 mm, 0.6 MPa (6 bar, 87 psi)	<80 N	<225 N	<377 N	<620 N	<911 N	<1619 N

Datasheet

Measured gripping force with a lever arm of 10 mm / 15 mm (HPPL-16 / HPPL-25)

Size	16				25			
Complete stroke	40	80	120	160	40	80	120	160
Gripping force per gripper jaw at 6 bar, closing	186 N	202 N	208 N	210 N	460 N	494 N	500 N	530 N
Gripping force per gripper jaw at 6 bar, opening	124 N	140 N	146 N	148 N	366 N	398 N	406 N	436 N
Gripping force per gripper jaw at 6 bar, closing	93 N	101 N	104 N	105 N	230 N	247 N	250 N	265 N
Gripping force per gripper jaw at 6 bar, opening	62 N	70 N	73 N	74 N	183 N	199 N	203 N	218 N

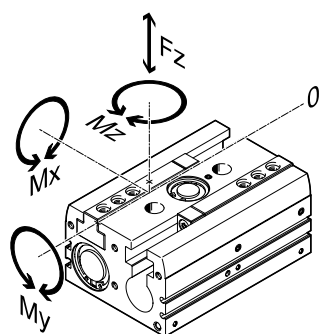
Measured gripping force with a lever arm of 15 mm (HPPL-32 / HPPL-40)

Size	32				40				
Complete stroke	40	80	120	160	40	80	120	160	200
Gripping force per gripper jaw at 6 bar, closing	790 N	812 N	860 N	878 N	1,190 N	1,248 N	1,310 N	1,346 N	1,350 N
Gripping force per gripper jaw at 6 bar, opening	654 N	676 N	724 N	742 N	1,054 N	1,112 N	1,174 N	1,210 N	1,214 N
Gripping force per gripper jaw at 6 bar, closing	395 N	406 N	430 N	439 N	595 N	624 N	656 N	673 N	675 N
Gripping force per gripper jaw at 6 bar, opening	327 N	338 N	362 N	371 N	527 N	556 N	587 N	605 N	607 N

Measured gripping force with a lever arm of 15 mm / 25 mm (HPPL-50 / HPPL-63)

Size	50				63		
Complete stroke	80	120	160	200	120	200	300
Gripping force per gripper jaw at 6 bar, closing	1,758 N	1,930 N	1,948 N	2,018 N	2,910 N	2,990 N	3,284 N
Gripping force per gripper jaw at 6 bar, opening	1,516 N	1,688 N	1,706 N	1,776 N	2,668 N	2,748 N	3,042 N
Gripping force per gripper jaw at 6 bar, closing	879 N	965 N	974 N	1,009 N	1,455 N	1,495 N	1,643 N
Gripping force per gripper jaw at 6 bar, opening	758 N	844 N	853 N	888 N	1,334 N	1,374 N	1,521 N

Load values at the gripper jaws

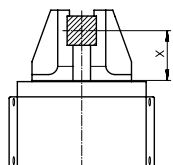


The indicated permissible forces and torques apply to a single gripper jaw. They include the lever arm, additional applied loads created by the workpiece or external gripper fingers and acceleration forces occurring during movement. The zero coordinate line (gripper jaw guide) must be taken into account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

Size	16	25	32	40	50	63
Max. force F_z	500 N	1,500 N	2,200 N	3,000 N	5,300 N	9,000 N
Maximum torque on gripper jaw, M_x static	35 Nm	100 Nm	115 Nm	125 Nm	240 Nm	300 Nm
Maximum torque on gripper jaw, M_y static	35 Nm	60 Nm	70 Nm	80 Nm	150 Nm	200 Nm
Maximum torque on gripper jaw, M_z static	35 Nm	70 Nm	85 Nm	100 Nm	220 Nm	250 Nm

Datasheet

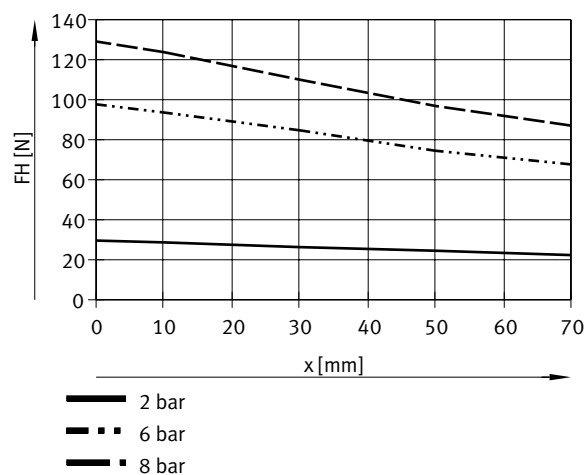
Gripping force FH per gripper jaw as a function of operating pressure and lever arm x – external gripping (closing)



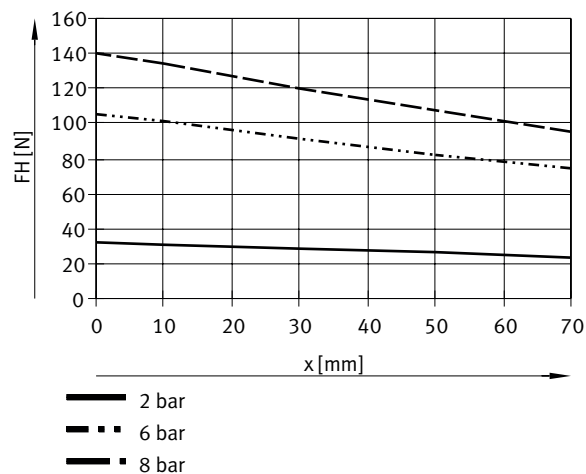
The gripping forces as a function of the operating pressure and of lever arm can be determined from the following graphs.

Sizing software for gripper selection → www.festo.com

Gripping force FH per Gripper jaw as a function of the operating pressure and the Lever arm x - External gripping (closing) - HPPL-16-40

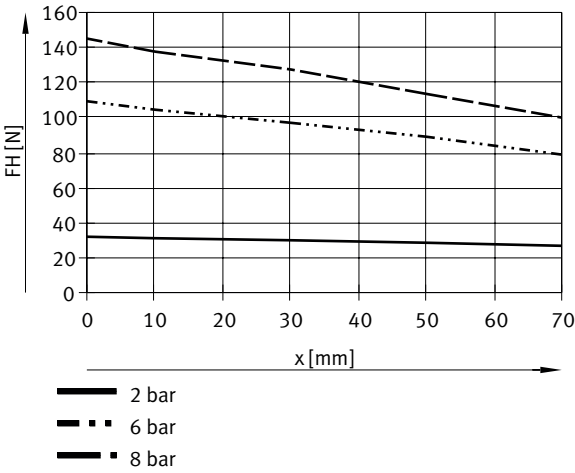


Gripping force FH per Gripper jaw as a function of the operating pressure and the Lever arm x - External gripping (closing) - HPPL-16-80

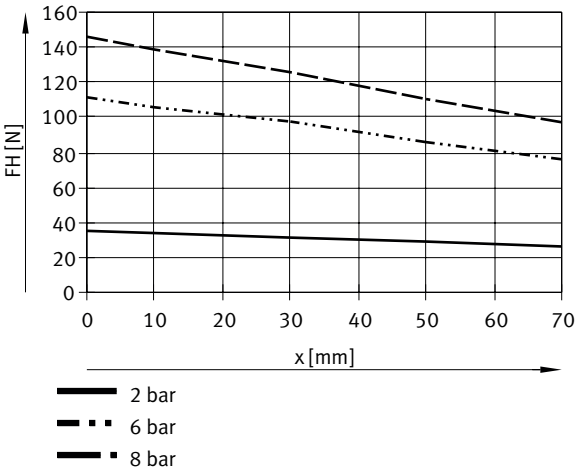


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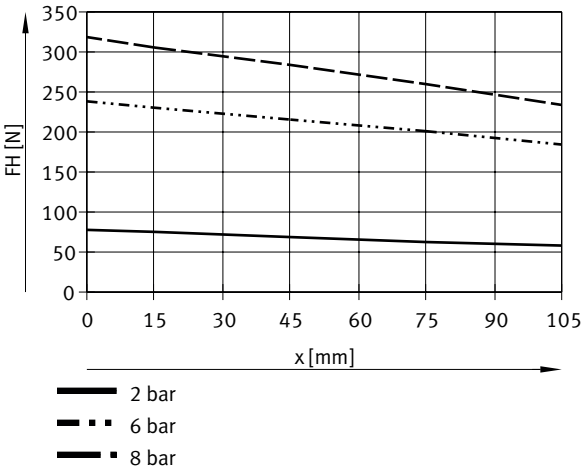
Gripping force FH per Gripper jaw as a function of the operating pressure and the Lever arm x - External gripping (closing) - HPPL-16-120



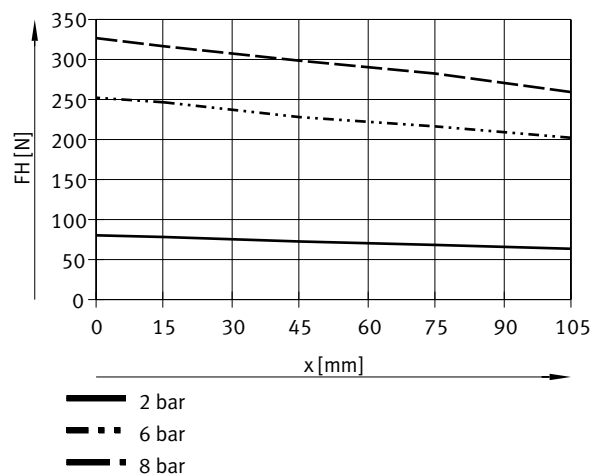
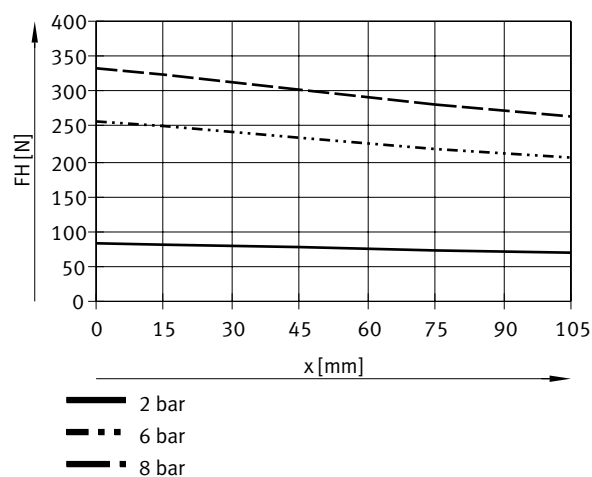
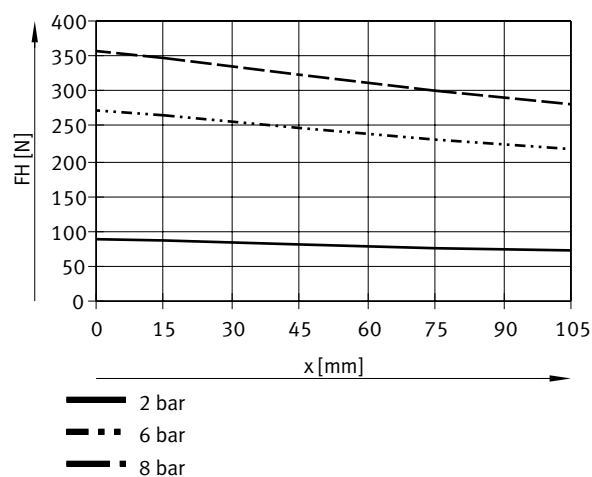
Gripping force FH per Gripper jaw as a function of the operating pressure and the Lever arm x - External gripping (closing) - HPPL-16-160



Gripping force FH per Gripper jaw as a function of the operating pressure and the Lever arm x - External gripping (closing) - HPPL-25-40

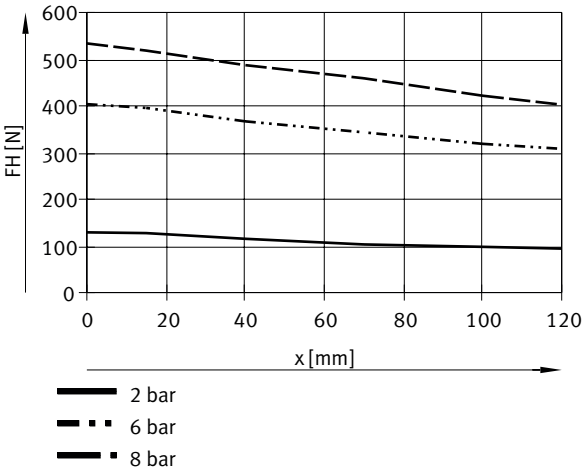


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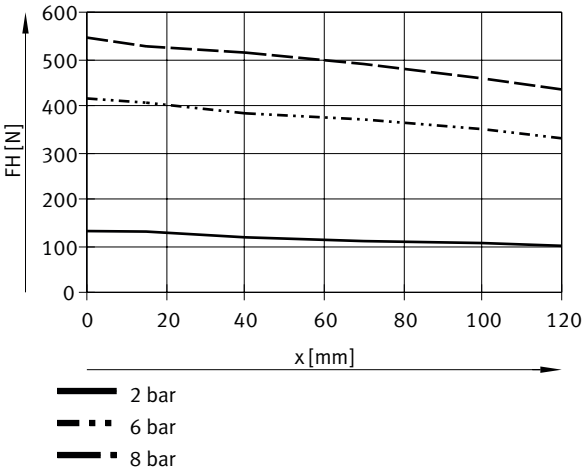
Gripping force F_H per Gripper jaw as a function of the operating pressure and the Lever arm x - External gripping (closing) - HPPL-25-80Gripping force F_H per Gripper jaw as a function of the operating pressure and the Lever arm x - External gripping (closing) - HPPL-25-120Gripping force F_H per Gripper jaw as a function of the operating pressure and the Lever arm x - External gripping (closing) - HPPL-25-160

Datasheet

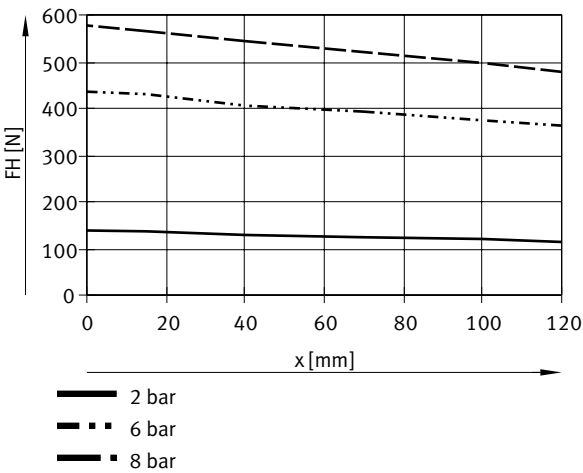
Gripping force FH per Gripper jaw as a function of the operating pressure and the Lever arm x - External gripping (closing) - HPPL-32-40



Gripping force FH per Gripper jaw as a function of the operating pressure and the Lever arm x - External gripping (closing) - HPPL-32-80

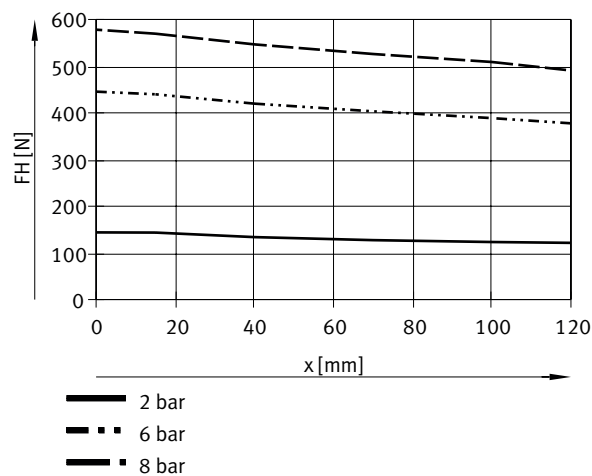


Gripping force FH per Gripper jaw as a function of the operating pressure and the Lever arm x - External gripping (closing) - HPPL-32-120

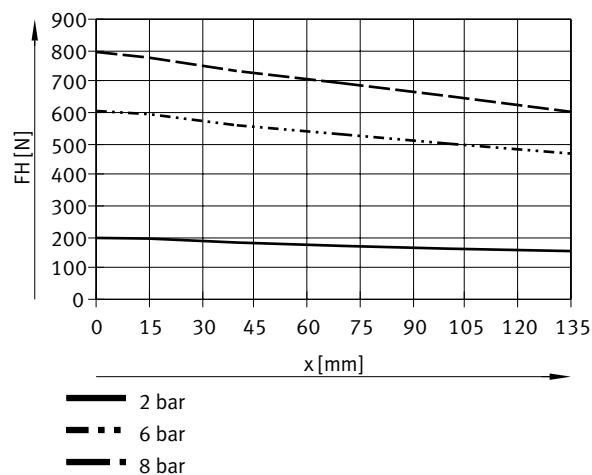


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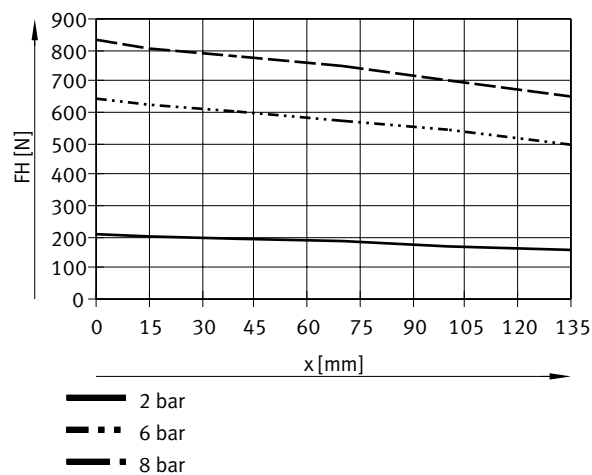
Gripping force FH per Gripper jaw as a function of the operating pressure and the Lever arm x - External gripping (closing) - HPPL-32-160



Gripping force FH per Gripper jaw as a function of the operating pressure and the Lever arm x - External gripping (closing) - HPPL-40-40

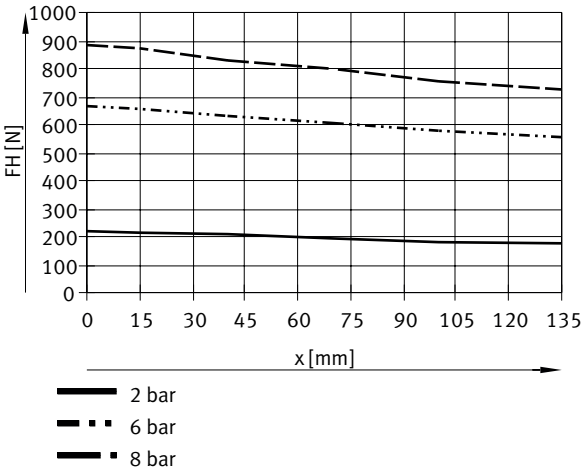


Gripping force FH per Gripper jaw as a function of the operating pressure and the Lever arm x - External gripping (closing) - HPPL-40-80

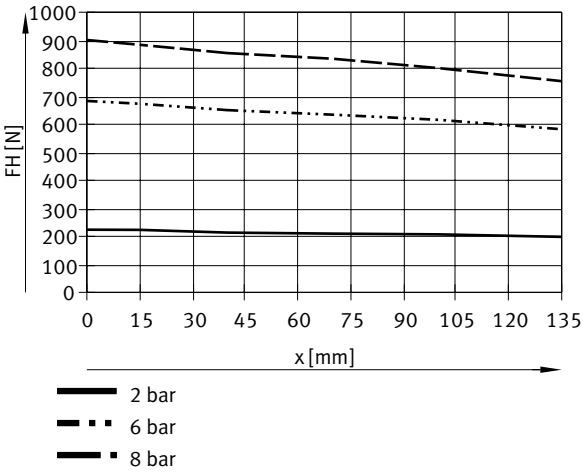


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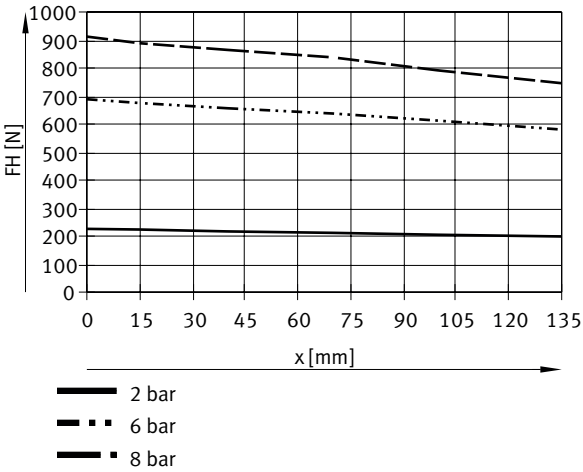
Gripping force FH per Gripper jaw as a function of the operating pressure and the Lever arm x - External gripping (closing) - HPPL-40-120



Gripping force FH per Gripper jaw as a function of the operating pressure and the Lever arm x - External gripping (closing) - HPPL-40-160

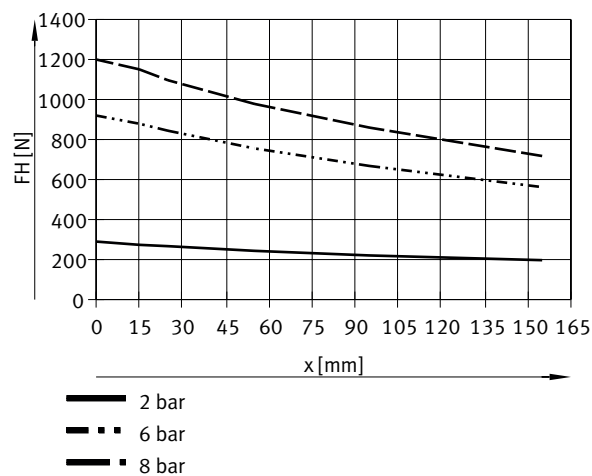


Gripping force FH per Gripper jaw as a function of the operating pressure and the Lever arm x - External gripping (closing) - HPPL-40-200

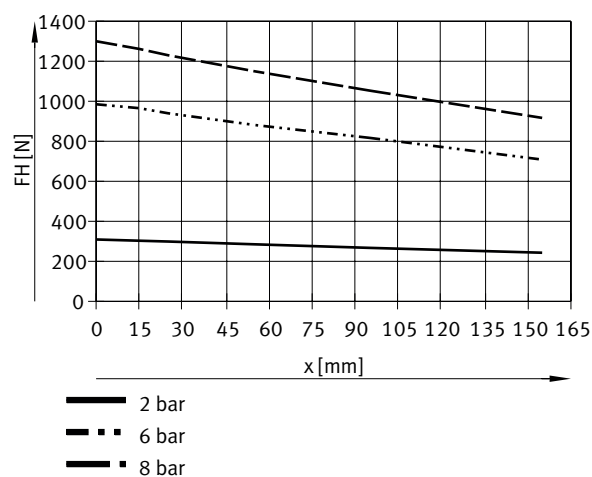


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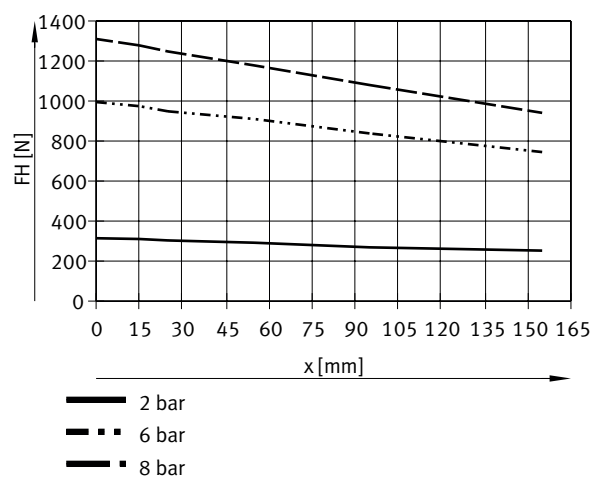
Gripping force FH per Gripper jaw as a function of the operating pressure and the Lever arm x - External gripping (closing) - HPPL-50-80



Gripping force FH per Gripper jaw as a function of the operating pressure and the Lever arm x - External gripping (closing) - HPPL-50-120

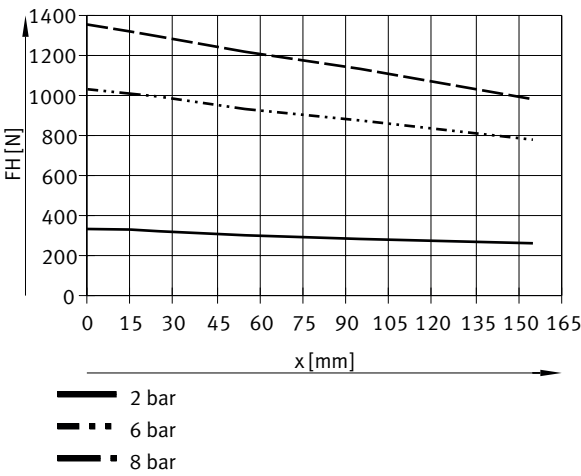


Gripping force FH per Gripper jaw as a function of the operating pressure and the Lever arm x - External gripping (closing) - HPPL-50-160

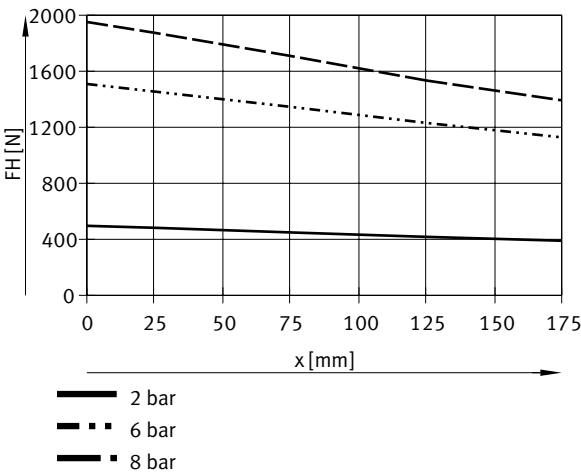


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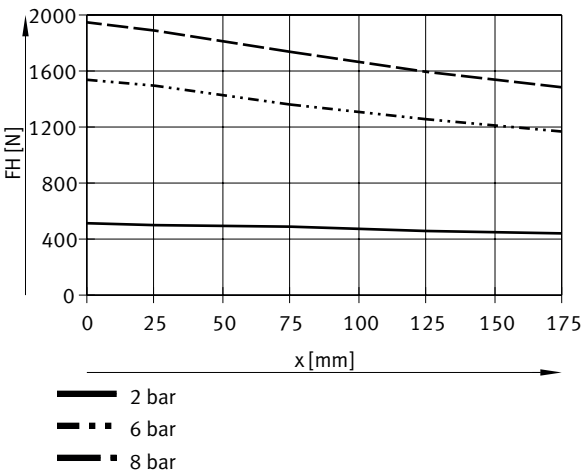
Gripping force FH per Gripper jaw as a function of the operating pressure and the Lever arm x - External gripping (closing) - HPPL-50-200



Gripping force FH per Gripper jaw as a function of the operating pressure and the Lever arm x - External gripping (closing) - HPPL-63-120

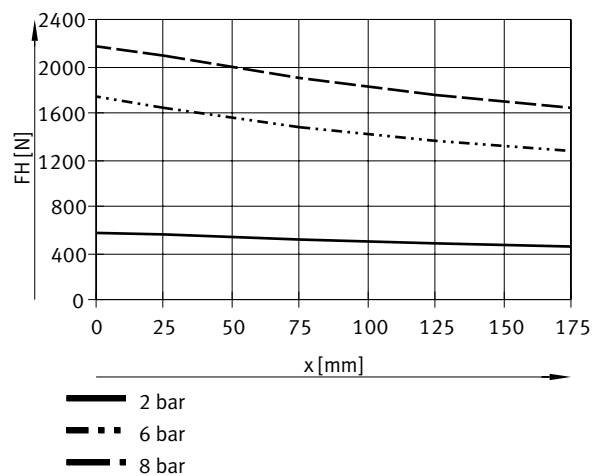


Gripping force FH per Gripper jaw as a function of the operating pressure and the Lever arm x - External gripping (closing) - HPPL-63-200

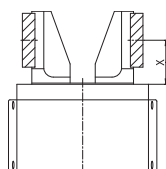


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Gripping force FH per Gripper jaw as a function of the operating pressure and the Lever arm x - External gripping (closing) - HPPL-63-300



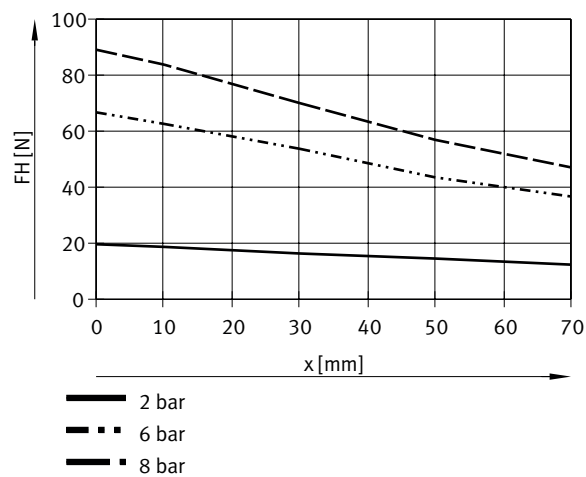
Gripping force FH per gripper jaw as a function of operating pressure and lever arm x – internal gripping (opening)



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

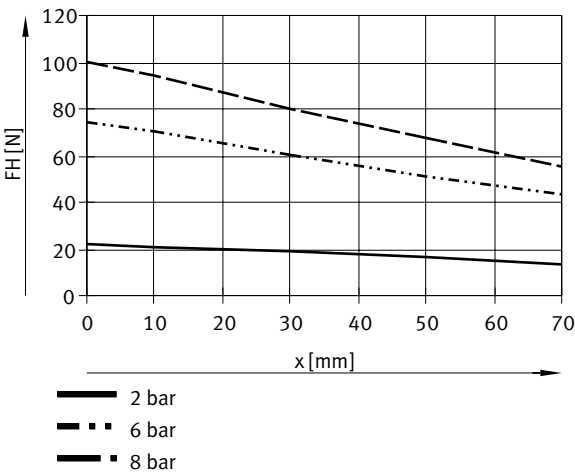
Sizing software for gripper selection → www.festo.com

Gripping force FH per Gripper jaw as a function of the operating pressure and the Lever arm x - Internal gripping (open) - HPPL-16-40

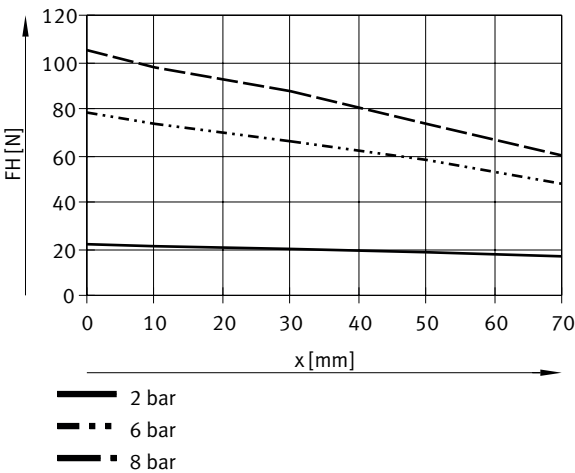


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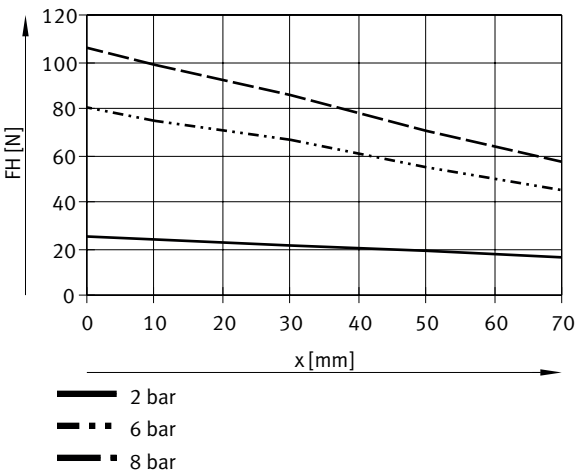
Gripping force FH per Gripper jaw as a function of the operating pressure and the Lever arm x - Internal gripping (open) - HPPL-16-80



Gripping force FH per Gripper jaw as a function of the operating pressure and the Lever arm x - Internal gripping (open) - HPPL-16-120

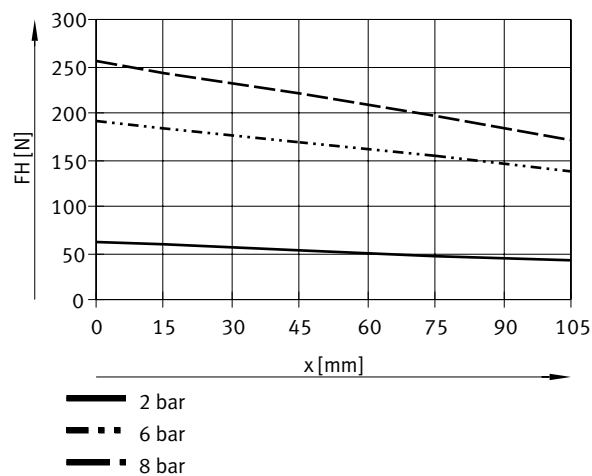


Gripping force FH per Gripper jaw as a function of the operating pressure and the Lever arm x - Internal gripping (open) - HPPL-16-160

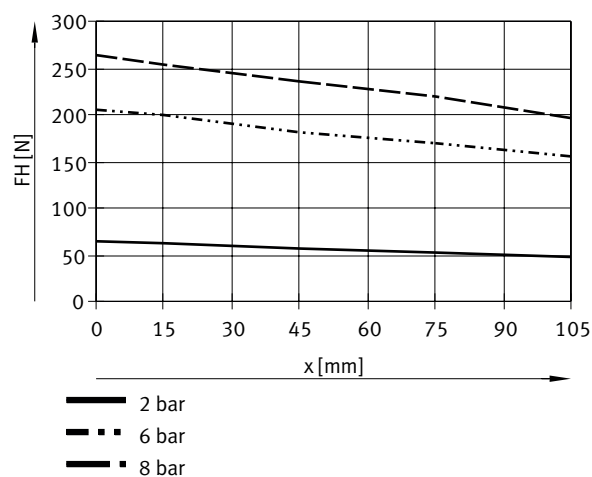


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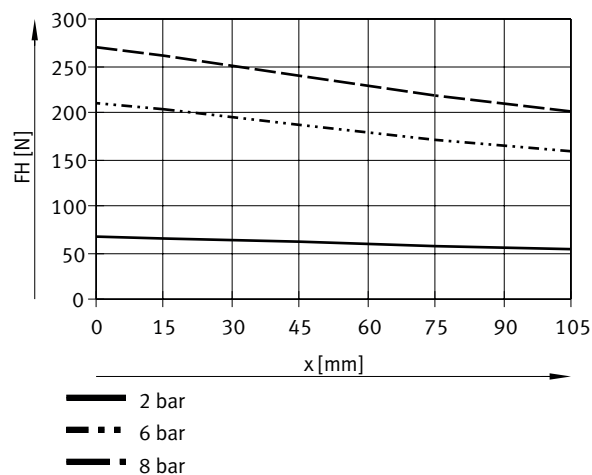
Gripping force FH per Gripper jaw as a function of the operating pressure and the Lever arm x - Internal gripping (open) - HPPL-25-40



Gripping force FH per Gripper jaw as a function of the operating pressure and the Lever arm x - Internal gripping (open) - HPPL-25-80

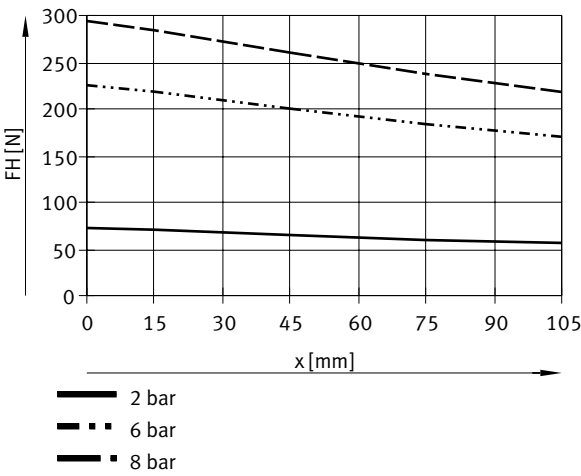


Gripping force FH per Gripper jaw as a function of the operating pressure and the Lever arm x - Internal gripping (open) - HPPL-25-120

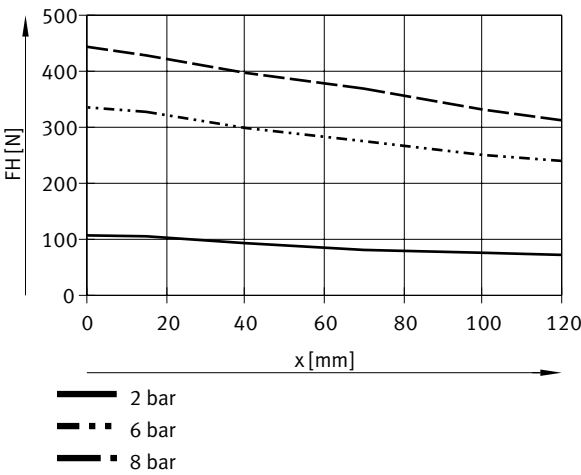


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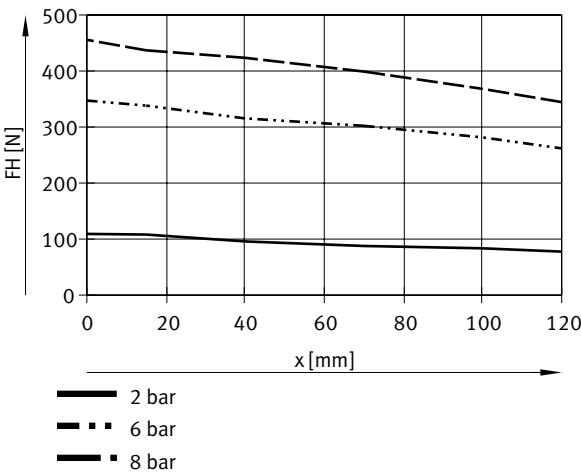
Gripping force FH per Gripper jaw as a function of the operating pressure and the Lever arm x - Internal gripping (open) - HPPL-25-160



Gripping force FH per Gripper jaw as a function of the operating pressure and the Lever arm x - Internal gripping (open) - HPPL-32-40

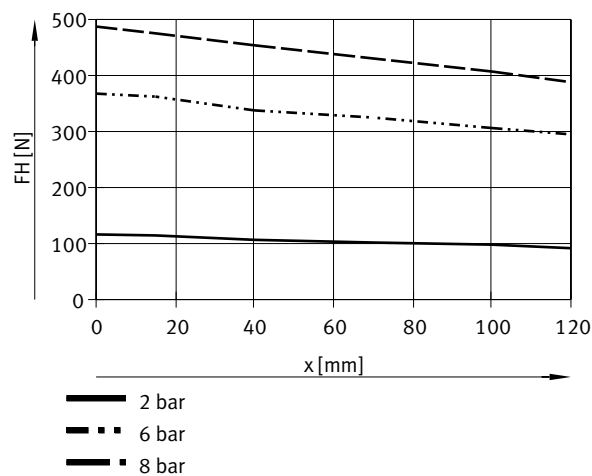


Gripping force FH per Gripper jaw as a function of the operating pressure and the Lever arm x - Internal gripping (open) - HPPL-32-80

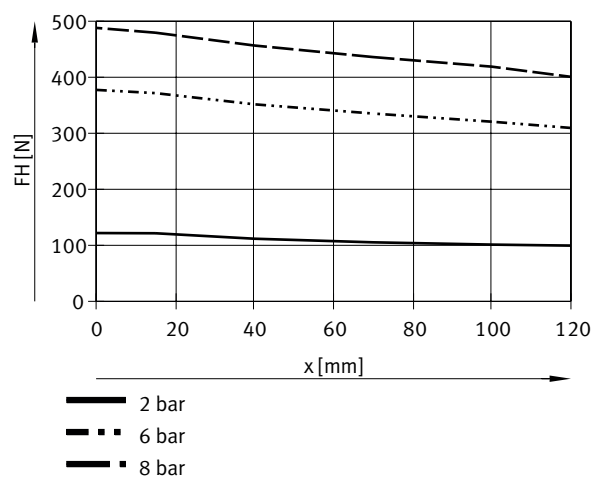


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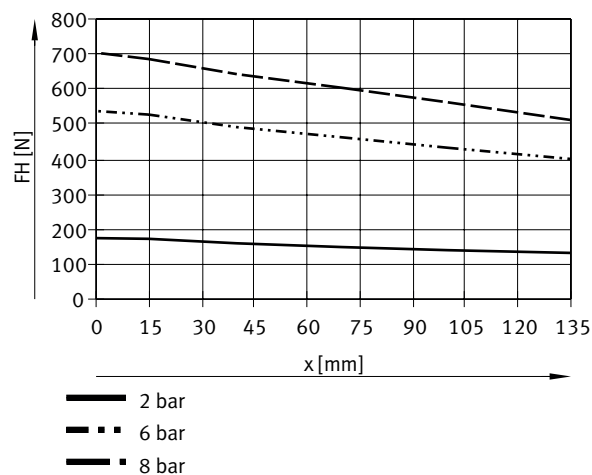
Gripping force FH per Gripper jaw as a function of the operating pressure and the Lever arm x - Internal gripping (open) - HPPL-32-120



Gripping force FH per Gripper jaw as a function of the operating pressure and the Lever arm x - Internal gripping (open) - HPPL-32-160

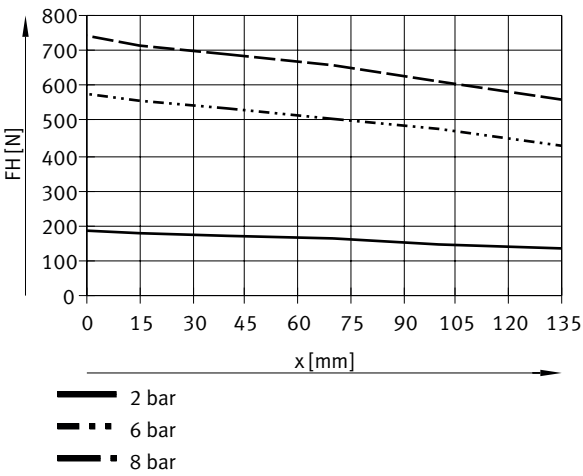


Gripping force FH per Gripper jaw as a function of the operating pressure and the Lever arm x - Internal gripping (open) - HPPL-40-40

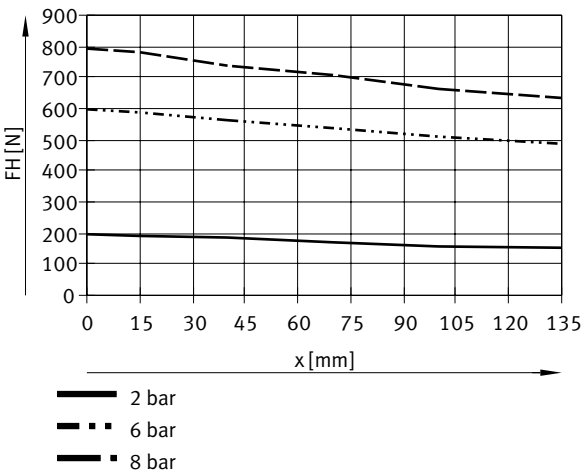


Datasheet

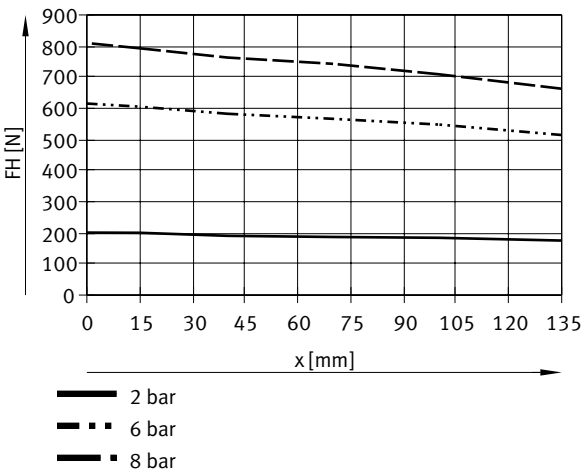
Gripping force FH per Gripper jaw as a function of the operating pressure and the Lever arm x - Internal gripping (open) - HPPL-40-80



Gripping force FH per Gripper jaw as a function of the operating pressure and the Lever arm x - Internal gripping (open) - HPPL-40-120

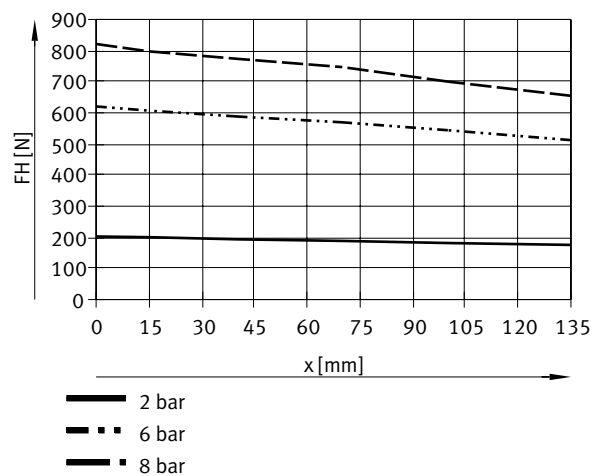


Gripping force FH per Gripper jaw as a function of the operating pressure and the Lever arm x - Internal gripping (open) - HPPL-40-160

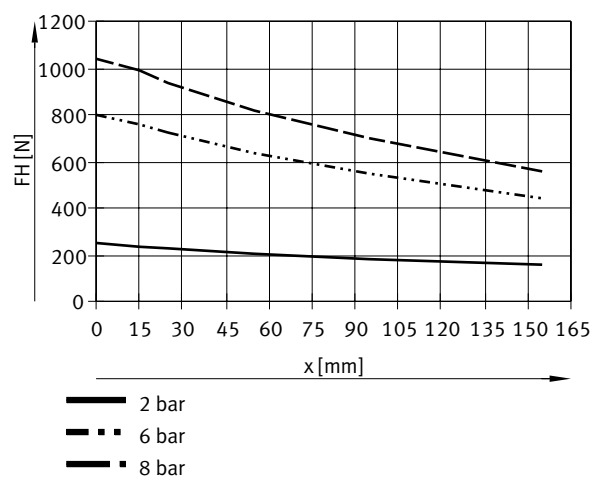


Datasheet

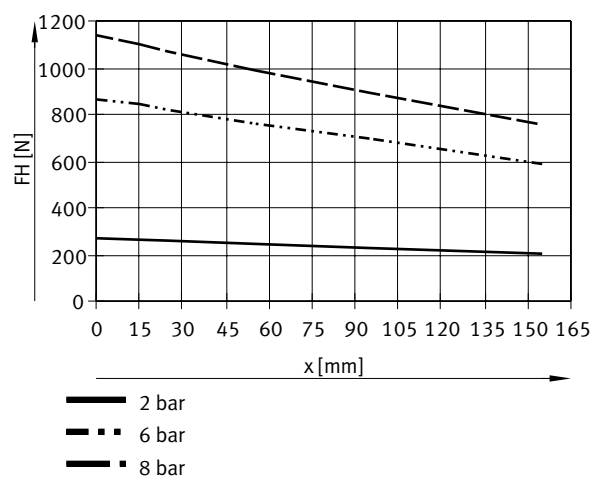
Gripping force FH per Gripper jaw as a function of the operating pressure and the Lever arm x - Internal gripping (open) - HPPL-40-200



Gripping force FH per Gripper jaw as a function of the operating pressure and the Lever arm x - Internal gripping (open) - HPPL-50-80

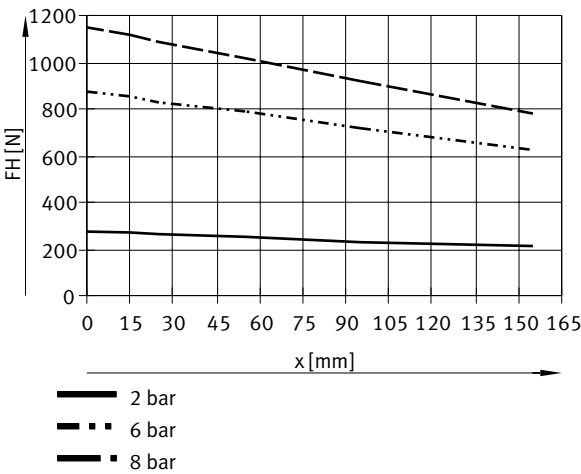


Gripping force FH per Gripper jaw as a function of the operating pressure and the Lever arm x - Internal gripping (open) - HPPL-50-120

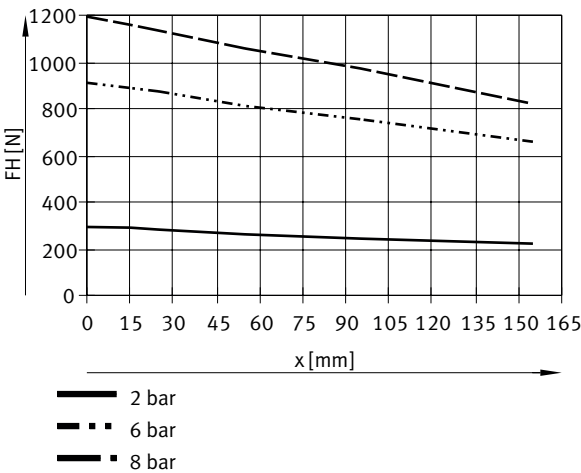


Datasheet

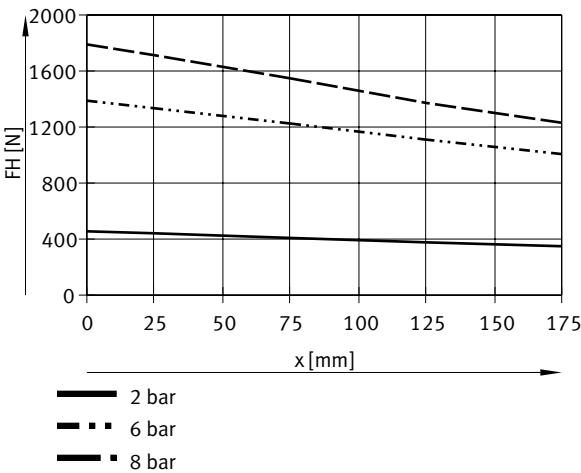
Gripping force FH per Gripper jaw as a function of the operating pressure and the Lever arm x - Internal gripping (open) - HPPL-50-160



Gripping force FH per Gripper jaw as a function of the operating pressure and the Lever arm x - Internal gripping (open) - HPPL-50-200

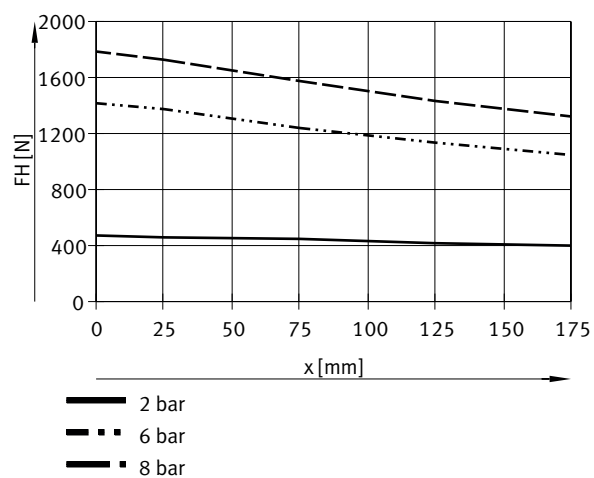


Gripping force FH per Gripper jaw as a function of the operating pressure and the Lever arm x - Internal gripping (open) - HPPL-63-120

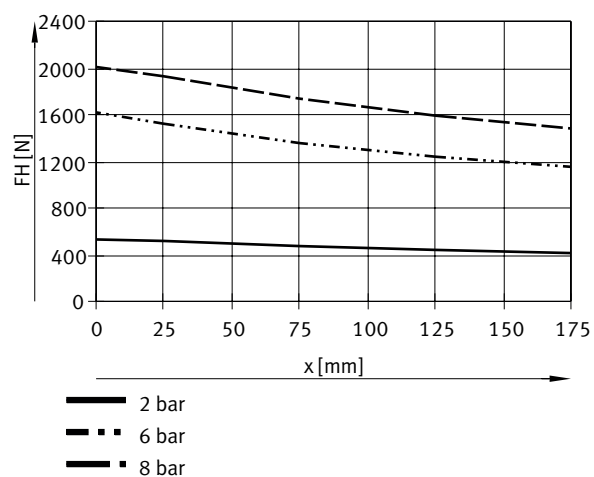


Datasheet

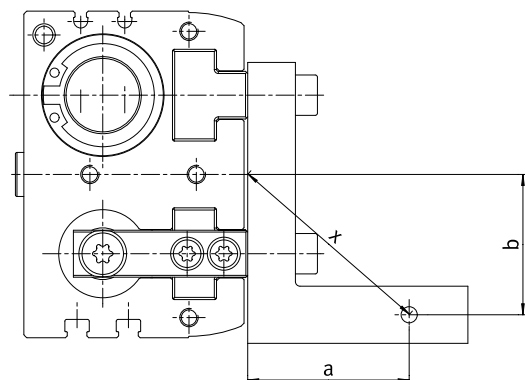
Gripping force FH per Gripper jaw as a function of the operating pressure and the Lever arm x - Internal gripping (open) - HPPL-63-200



Gripping force FH per Gripper jaw as a function of the operating pressure and the Lever arm x - Internal gripping (open) - HPPL-63-300



Gripping force FH per gripper jaw at 0.6 MPa (6 bar, 87 psi) as a function of lever arm x and eccentricity a and b



Datasheet

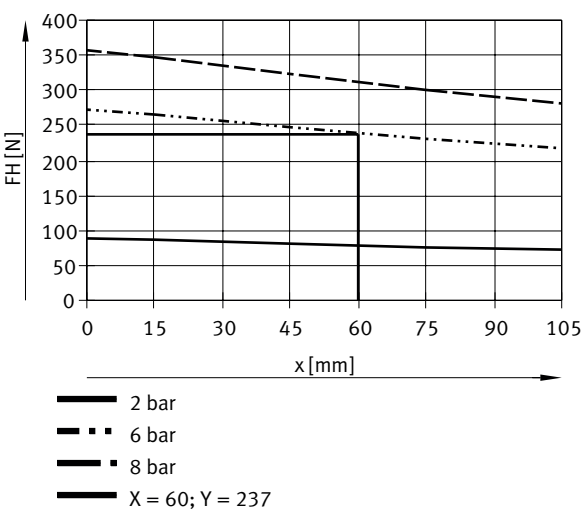
Gripper jaw force FH per Gripper jaw at 0.6 MPa (6 bar, 87 psi) as a function of Lever arm x and eccentricity a and b

$x = \sqrt{a^2 + b^2} = \sqrt{45^2 + 40^2} = 60 \text{ mm}$

The formula (on the left) must be used to calculate the lever arm x for eccentric gripping.
The gripping force FH can then be read from the graphs using the calculated value x.

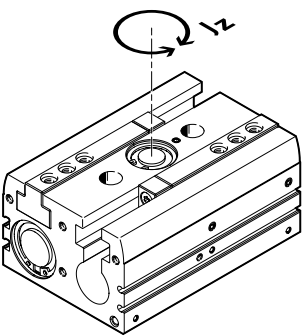
Calculation example:
Where:
Distance a = 45 mm
Distance b = 40 mm
To be determined:
The gripping force at 6 bar, with a HPPL-25-160, used as an external gripper.

Gripper jaw force FH per Gripper jaw at 0.6 MPa (6 bar, 87 psi) as a function of Lever arm x and eccentricity a and b



The diagram shows a value of FH = 237 N for the gripping force.

Mass moments of inertia



Mass moment of inertia of the parallel grippers in relation to the central axis, without external gripper fingers, with no load.

Mass moments of inertia – HPPL-16 ... 25

Size	16				25			
Complete stroke	40	80	120	160	40	80	120	160
Mass moment of inertia	2.2 kgcm ²	6.12 kgcm ²	13.51 kgcm ²	25.75 kgcm ²	8.68 kgcm ²	20.02 kgcm ²	39.54 kgcm ²	70.64 kgcm ²

Mass moments of inertia – HPPL-32 ... 40

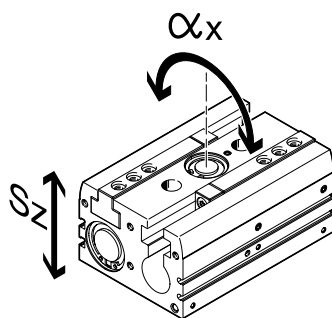
Size	32				40				
Complete stroke	40	80	120	160	40	80	120	160	200
Mass moment of inertia	16.85 kgcm ²	35.72 kgcm ²	66.77 kgcm ²	115.46 kgcm ²	32.8 kgcm ²	63.66 kgcm ²	114.77 kgcm ²	187.44 kgcm ²	293.46 kgcm ²

Datasheet

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

Size	50				63		
Complete stroke	80	120	160	200	120	200	300
Mass moment of inertia	123.53 kgcm ²	209.15 kgcm ²	329.29 kgcm ²	499.63 kgcm ²	404.29 kgcm ²	880.63 kgcm ²	1,955.33 kgcm ²

Gripper jaw backlash



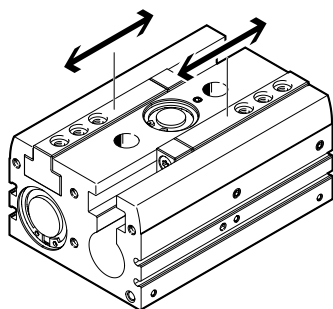
The plain-bearing guide used in the grippers means that there is backlash between the gripper jaws and the housing. The values listed in the table apply in new condition.

Size	16	25	32	40	50	63
Max. gripper jaw backlash Sz ¹⁾	<0.05 mm					
Max. gripper jaw angular play ax, ay ²⁾	<0.2 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 – HPPL-16 ... 25



The specified opening and closing times were measured at room temperature, 06 MPa (6 bar, 87 psi) operating pressure and with the gripper installed horizontally without additional Gripper fingers.

For higher masses than the specified unthrottled maximum mass per external gripper finger, the grippers must be throttled. Opening and closing times then have to be set accordingly.

Size	16				25			
Complete stroke	40	80	120	160	40	80	120	160
Min. opening time at 6 bar	94 ms	200 ms	255 ms	297 ms	100 ms	209 ms	300 ms	404 ms
Min. closing time at 6 bar	61 ms	127 ms	201 ms	199 ms	80 ms	164 ms	241 ms	314 ms

Opening and closing times – HPPL-32 ... 40

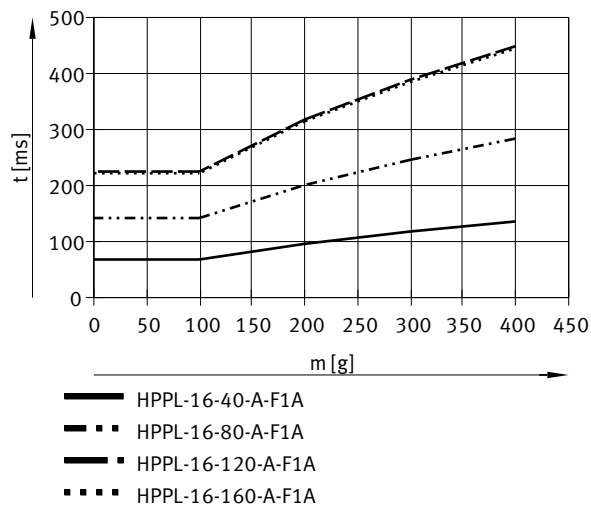
Size	32				40				
Complete stroke	40	80	120	160	40	80	120	160	200
Min. opening time at 6 bar	96 ms	172 ms	270 ms	398 ms	131 ms	252 ms	377 ms	509 ms	649 ms
Min. closing time at 6 bar	70 ms	128 ms	187 ms	324 ms	102 ms	200 ms	295 ms	407 ms	521 ms

Opening and closing times – HPPL-50 ... 63

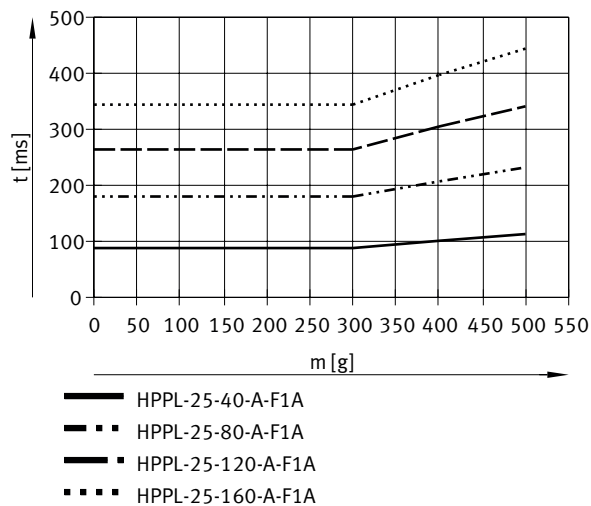
Size	50				63		
Complete stroke	80	120	160	200	120	200	300
Min. opening time at 6 bar	277 ms	424 ms	587 ms	753 ms	414 ms	687 ms	1,043 ms
Min. closing time at 6 bar	225 ms	335 ms	456 ms	601 ms	313 ms	512 ms	824 ms

Datasheet

Opening and closing times depending on the gripper finger mass - HPPL-16

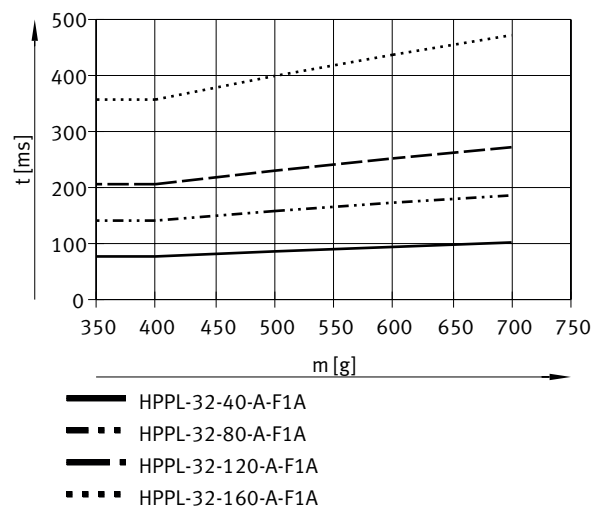


Opening and closing times depending on the gripper finger mass - HPPL-25

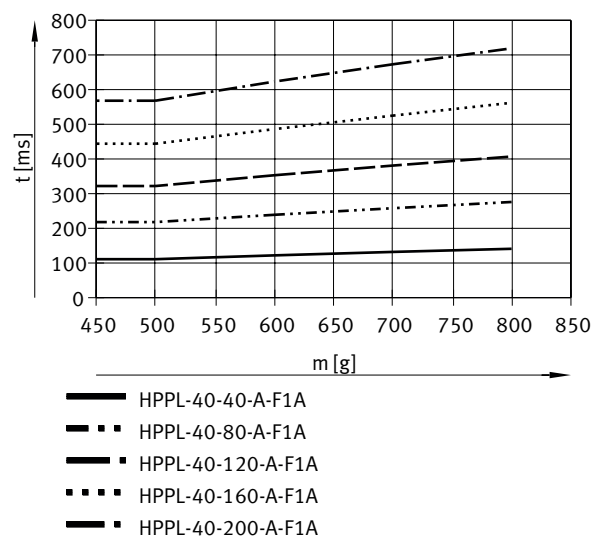


Datasheet

Opening and closing times depending on the gripper finger mass - HPPL-32

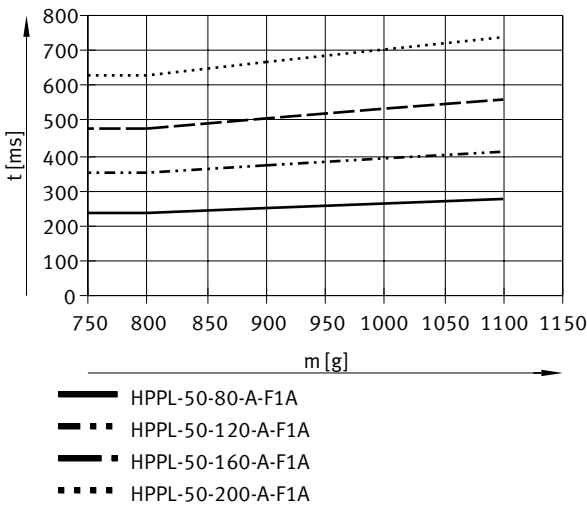


Opening and closing times depending on the gripper finger mass - HPPL-40

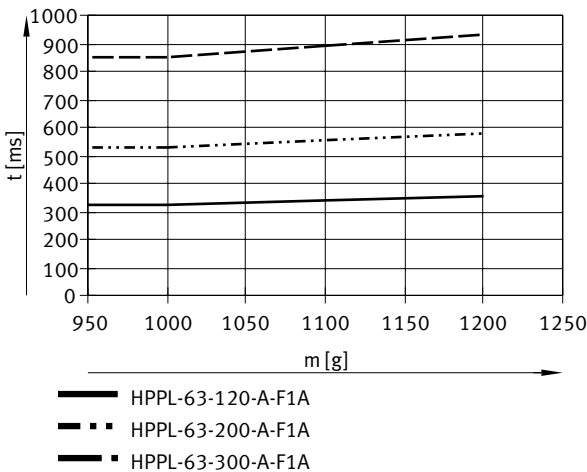


Datasheet

Opening and closing times depending on the gripper finger mass - HPPL-50

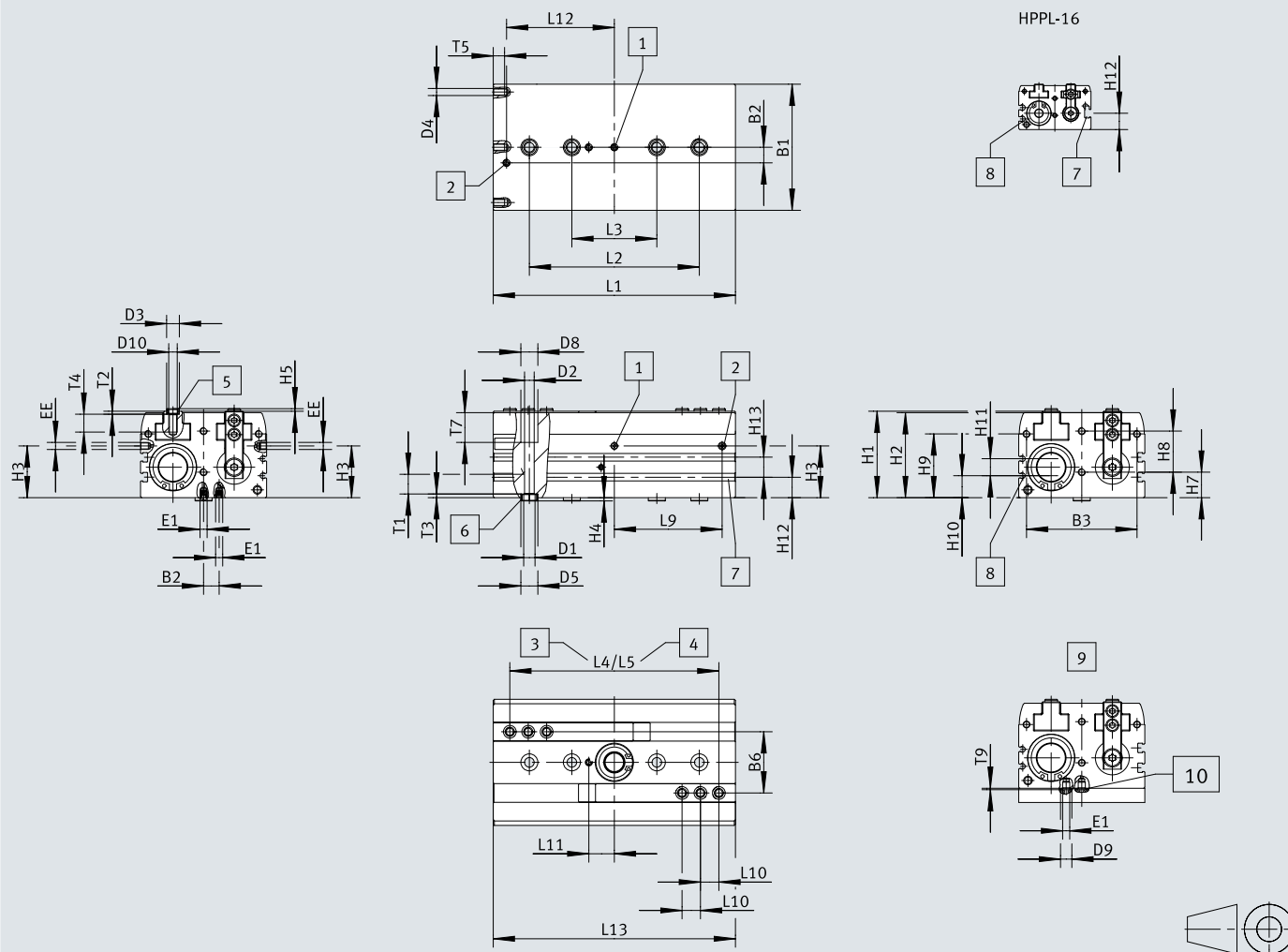


Opening and closing times depending on the gripper finger mass - HPPL-63



Dimensions

Dimensions – Parallel gripper HPPL (page 1 of 2)

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- [1] Compressed air connection opening, either on the side or underneath (delivery status: connection underneath sealed)
- [2] Compressed air connection closing, either at the side or underneath (delivery status: connection underneath sealed)
- [3] Gripper jaws open
- [4] Gripper jaws closed
- [5] Centering sleeves ZBH (4 included in the scope of delivery)
- [6] Centering sleeves ZBH (2 included in the scope of delivery)
- [7] T-slot for proximity switch
- [8] C-slot for proximity switch
- [9] Compressed air supply underneath
- [10] O-ring for Parallel gripper HPPL-16: Ø 3x1,5 / HPPL-25: Ø 5x1,5 / HPPL-32: Ø 5x1,5 / HPPL-40: Ø 5x1,5 / HPPL-50: Ø 12x1,5 / HPPL-63: Washer 12x1.5

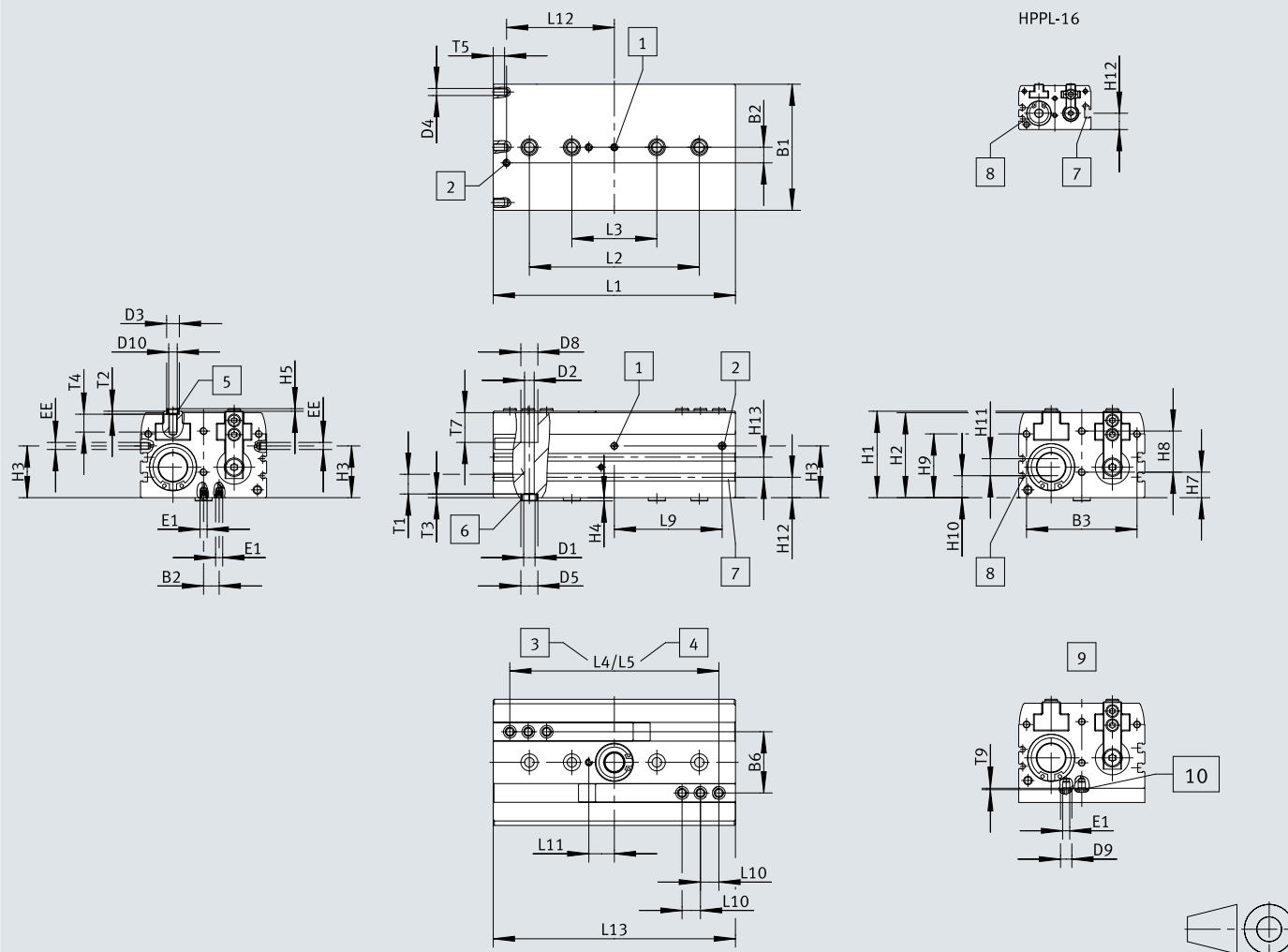
Dimensions

	B1 ±0,1	B2 ±0,1	B3 ±0,1	B6 ±0,05	D1	D2 ∅ ±0,1	D3 ∅ H8	D4	D5 ∅ H8	D8 ∅ H13	D9 ∅
HPPL-16-40-A-F1A	51	4	43	22,5	M5	4,2	5	M3	9	7,4	6
HPPL-16-80-A-F1A	51	4	43	22,5	M5	4,2	5	M3	9	7,4	6
HPPL-16-120-A-F1A	51	4	43	22,5	M5	4,2	5	M3	9	7,4	6
HPPL-16-160-A-F1A	51	4	43	22,5	M5	4,2	5	M3	9	7,4	6
HPPL-25-40-A-F1A	76,6	7,2	65,6	38	M6	5,1	7	M5	9	10	8
HPPL-25-80-A-F1A	76,6	7,2	65,6	38	M6	5,1	7	M5	9	10	8
HPPL-25-120-A-F1A	76,6	7,2	65,6	38	M6	5,1	7	M5	9	10	8
HPPL-25-160-A-F1A	76,6	7,2	65,6	38	M6	5,1	7	M5	9	10	8
HPPL-32-40-A-F1A	89	11	78	43,2	M8	6,8	9	M5	12	12	8
HPPL-32-80-A-F1A	89	11	78	43,2	M8	6,8	9	M5	12	12	8
HPPL-32-120-A-F1A	89	11	78	43,2	M8	6,8	9	M5	12	12	8
HPPL-32-160-A-F1A	89	11	78	43,2	M8	6,8	9	M5	12	12	8
HPPL-40-40-A-F1A	105	12,8	92	50	M10	8,5	9	M6	15	15	8
HPPL-40-80-A-F1A	105	12,8	92	50	M10	8,5	9	M6	15	15	8
HPPL-40-120-A-F1A	105	12,8	92	50	M10	8,5	9	M6	15	15	8
HPPL-40-160-A-F1A	105	12,8	92	50	M10	8,5	9	M6	15	15	8
HPPL-40-200-A-F1A	105	12,8	92	50	M10	8,5	9	M6	15	15	8
HPPL-50-80-A-F1A	124	14,5	112	63	M10	8,5	12	M6	15	15	15
HPPL-50-120-A-F1A	124	14,5	112	63	M10	8,5	12	M6	15	15	15
HPPL-50-160-A-F1A	124	14,5	112	63	M10	8,5	12	M6	15	15	15
HPPL-50-200-A-F1A	124	14,5	112	63	M10	8,5	12	M6	15	15	15
HPPL-63-120-A-F1A	154	17	136	78	M12	10,4	15	M8	15	16,5	15
HPPL-63-200-A-F1A	154	17	136	78	M12	10,4	15	M8	15	16,5	15
HPPL-63-300-A-F1A	154	17	136	78	M12	10,4	15	M8	15	16,5	15

	D10	EE	E1	H1	H2 ±0,1	H3 ±0,1	H4 -0,3	H5 -0,3	H7 ±0,1	H8 ±0,1	H9 ±0,1
HPPL-16-40-A-F1A	M3	M5	M3	32	31	21,8	1,9	1,1	10	12	27
HPPL-16-80-A-F1A	M3	M5	M3	32	31	21,8	1,9	1,1	10	12	27
HPPL-16-120-A-F1A	M3	M5	M3	32	31	21,8	1,9	1,1	10	12	27
HPPL-16-160-A-F1A	M3	M5	M3	32	31	21,8	1,9	1,1	10	12	27
HPPL-25-40-A-F1A	M5	M5	M5	50	47	29	1,9	1,4	18	19	37
HPPL-25-80-A-F1A	M5	M5	M5	50	47	29	1,9	1,4	18	19	37
HPPL-25-120-A-F1A	M5	M5	M5	50	47	29	1,9	1,4	18	19	37
HPPL-25-160-A-F1A	M5	M5	M5	50	47	29	1,9	1,4	18	19	37
HPPL-32-40-A-F1A	M6	M5	M5	61	60	36,5	2,4	1,9	18	29	45
HPPL-32-80-A-F1A	M6	M5	M5	61	60	36,5	2,4	1,9	18	29	45
HPPL-32-120-A-F1A	M6	M5	M5	61	60	36,5	2,4	1,9	18	29	45
HPPL-32-160-A-F1A	M6	M5	M5	61	60	36,5	2,4	1,9	18	29	45
HPPL-40-40-A-F1A	M6	M5	M5	80	76	46,5	2,9	1,9	17,5	40	56
HPPL-40-80-A-F1A	M6	M5	M5	80	76	46,5	2,9	1,9	17,5	40	56
HPPL-40-120-A-F1A	M6	M5	M5	80	76	46,5	2,9	1,9	17,5	40	56
HPPL-40-160-A-F1A	M6	M5	M5	80	76	46,5	2,9	1,9	17,5	40	56
HPPL-40-200-A-F1A	M6	M5	M5	80	76	46,5	2,9	1,9	17,5	40	56
HPPL-50-80-A-F1A	M8	G1/8	G1/8	98,5	97	59,5	2,9	2,4	25	50	70
HPPL-50-120-A-F1A	M8	G1/8	G1/8	98,5	97	59,5	2,9	2,4	25	50	70
HPPL-50-160-A-F1A	M8	G1/8	G1/8	98,5	97	59,5	2,9	2,4	25	50	70
HPPL-50-200-A-F1A	M8	G1/8	G1/8	98,5	97	59,5	2,9	2,4	25	50	70
HPPL-63-120-A-F1A	M10	G1/8	G1/8	121,5	117,5	69	2,9	2,9	28,5	65	82
HPPL-63-200-A-F1A	M10	G1/8	G1/8	121,5	117,5	69	2,9	2,9	28,5	65	82
HPPL-63-300-A-F1A	M10	G1/8	G1/8	121,5	117,5	69	2,9	2,9	28,5	65	82

Dimensions

Dimensions – Parallel gripper HPPL (page 2 of 2)

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- [10] O-ring for Parallel gripper HPPL-16: Ø 3x1,5 / HPPL-25: Ø 5x1,5 / HPPL-32: Ø 5x1,5 / HPPL-40: Ø 5x1,5 / HPPL-50: Ø 12x1,5 / HPPL-63: Washer 12x1.5

Dimensions

	H10	H11	H12	H13	L1 ±0,05	L2 ¹⁾	L3 ¹⁾	L4 ²⁾ +1,6	L5 ²⁾ ±0,8	L9 ±0,1	L10 ¹⁾
HPPL-16-40-A-F1A	7,5	8	11,5	–	78	36	–	62	22	32,9	8
HPPL-16-80-A-F1A	7,5	8	11,5	–	118	60	–	102	22	52,9	8
HPPL-16-120-A-F1A	7,5	8	11,5	–	158	100	60	142	22	72,9	8
HPPL-16-160-A-F1A	7,5	8	11,5	–	198	100	60	182	22	92,9	8
HPPL-25-40-A-F1A	11	10	10	12	86	60	–	64	24	35	10
HPPL-25-80-A-F1A	11	10	10	12	126	60	–	104	24	55	10
HPPL-25-120-A-F1A	11	10	10	12	166	100	60	144	24	75	10
HPPL-25-160-A-F1A	11	10	10	12	206	100	60	184	24	95	10
HPPL-32-40-A-F1A	15,5	12	14,5	14	91	60	–	67	27	36,1	13
HPPL-32-80-A-F1A	15,5	12	14,5	14	131	60	–	107	27	56,1	13
HPPL-32-120-A-F1A	15,5	12	14,5	14	171	120	60	147	27	76,1	13
HPPL-32-160-A-F1A	15,5	12	14,5	14	211	120	60	187	27	96,1	13
HPPL-40-40-A-F1A	20	16	17,5	21	95	66	–	70	30	37,2	15
HPPL-40-80-A-F1A	20	16	17,5	21	135	100	–	110	30	57,2	15
HPPL-40-120-A-F1A	20	16	17,5	21	175	100	–	150	30	77,2	15
HPPL-40-160-A-F1A	20	16	17,5	21	215	180	100	190	30	97,2	15
HPPL-40-200-A-F1A	20	16	17,5	21	255	200	100	230	30	117,2	15
HPPL-50-80-A-F1A	23,5	20	18,7	29,6	142	100	–	118	38	58,1	18
HPPL-50-120-A-F1A	23,5	20	18,7	29,6	182	100	–	158	38	78,1	18
HPPL-50-160-A-F1A	23,5	20	18,7	29,6	222	180	100	198	38	98,1	18
HPPL-50-200-A-F1A	23,5	20	18,7	29,6	262	200	100	238	38	118,1	18
HPPL-63-120-A-F1A	27,5	27	24	34	190	100	–	160	40	81,1	22
HPPL-63-200-A-F1A	27,5	27	24	34	270	200	100	240	40	121,1	22
HPPL-63-300-A-F1A	27,5	27	24	34	370	300	100	340	40	171,1	22

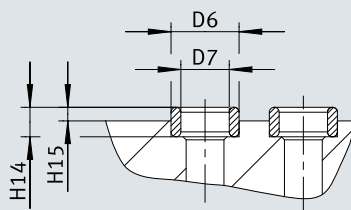
	L11 ±0,1	L12 ±0,1	L13 ²⁾ ±1	T1 min.	T2 +0,1	T3 +0,1	T4 min.	T5 min.	T7 +0,1	T9
HPPL-16-40-A-F1A	10,3	32,9	78	12,5	1,3	2,1	6	7,5	12	1
HPPL-16-80-A-F1A	10,3	52,9	118	12,5	1,3	2,1	6	7,5	12	1
HPPL-16-120-A-F1A	10,3	72,9	158	12,5	1,3	2,1	6	7,5	12	1
HPPL-16-160-A-F1A	10,3	92,9	198	12,5	1,3	2,1	6	7,5	12	1
HPPL-25-40-A-F1A	17	36,3	86	12,5	1,6	2,1	9,4	7,5	15	1
HPPL-25-80-A-F1A	17	56,3	126	12,5	1,6	2,1	9,4	7,5	15	1
HPPL-25-120-A-F1A	17	76,3	166	12,5	1,6	2,1	9,4	7,5	15	1
HPPL-25-160-A-F1A	17	96,3	206	12,5	1,6	2,1	9,4	7,5	15	1
HPPL-32-40-A-F1A	18	36,1	91	13,9	2,1	2,6	12,6	8	21	1
HPPL-32-80-A-F1A	18	56,1	131	13,9	2,1	2,6	12,6	8	21	1
HPPL-32-120-A-F1A	18	76,1	171	13,9	2,1	2,6	12,6	8	21	1
HPPL-32-160-A-F1A	18	96,1	211	13,9	2,1	2,6	12,6	8	21	1
HPPL-40-40-A-F1A	20	37,2	95	15,5	2,1	3,1	12,6	7	27,5	1
HPPL-40-80-A-F1A	20	57,2	135	15,5	2,1	3,1	12,6	7	27,5	1
HPPL-40-120-A-F1A	20	77,2	175	15,5	2,1	3,1	12,6	7	27,5	1
HPPL-40-160-A-F1A	20	97,2	215	15,5	2,1	3,1	12,6	7	27,5	1
HPPL-40-200-A-F1A	20	117,2	255	15,5	2,1	3,1	12,6	7	27,5	1
HPPL-50-80-A-F1A	26	58,1	142	15,5	2,6	3,1	16	8	32	1
HPPL-50-120-A-F1A	26	78,1	182	15,5	2,6	3,1	16	8	32	1
HPPL-50-160-A-F1A	26	98,1	222	15,5	2,6	3,1	16	8	32	1
HPPL-50-200-A-F1A	26	118,1	262	15,5	2,6	3,1	16	8	32	1
HPPL-63-120-A-F1A	30	81,1	190	18	3,1	3,1	21	14	42,5	1
HPPL-63-200-A-F1A	30	121,1	270	18	3,1	3,1	21	14	42,5	1
HPPL-63-300-A-F1A	30	171,1	370	18	3,1	3,1	21	14	42,5	1

1) Tolerance for centering hole HPPL-16 ... 32: ±0.02 mm; HPPL-40 ... 63: ±0.03 mm / Tolerance for Thread ±0.1 mm

2) The specified tolerance only applies in a pressure-free state. A larger tolerance can be assumed when opening the gripper. A smaller tolerance can be assumed when closing the gripper.

Dimensions

Dimensions – Parallel gripper HPPL with Centring sleeve ZBH

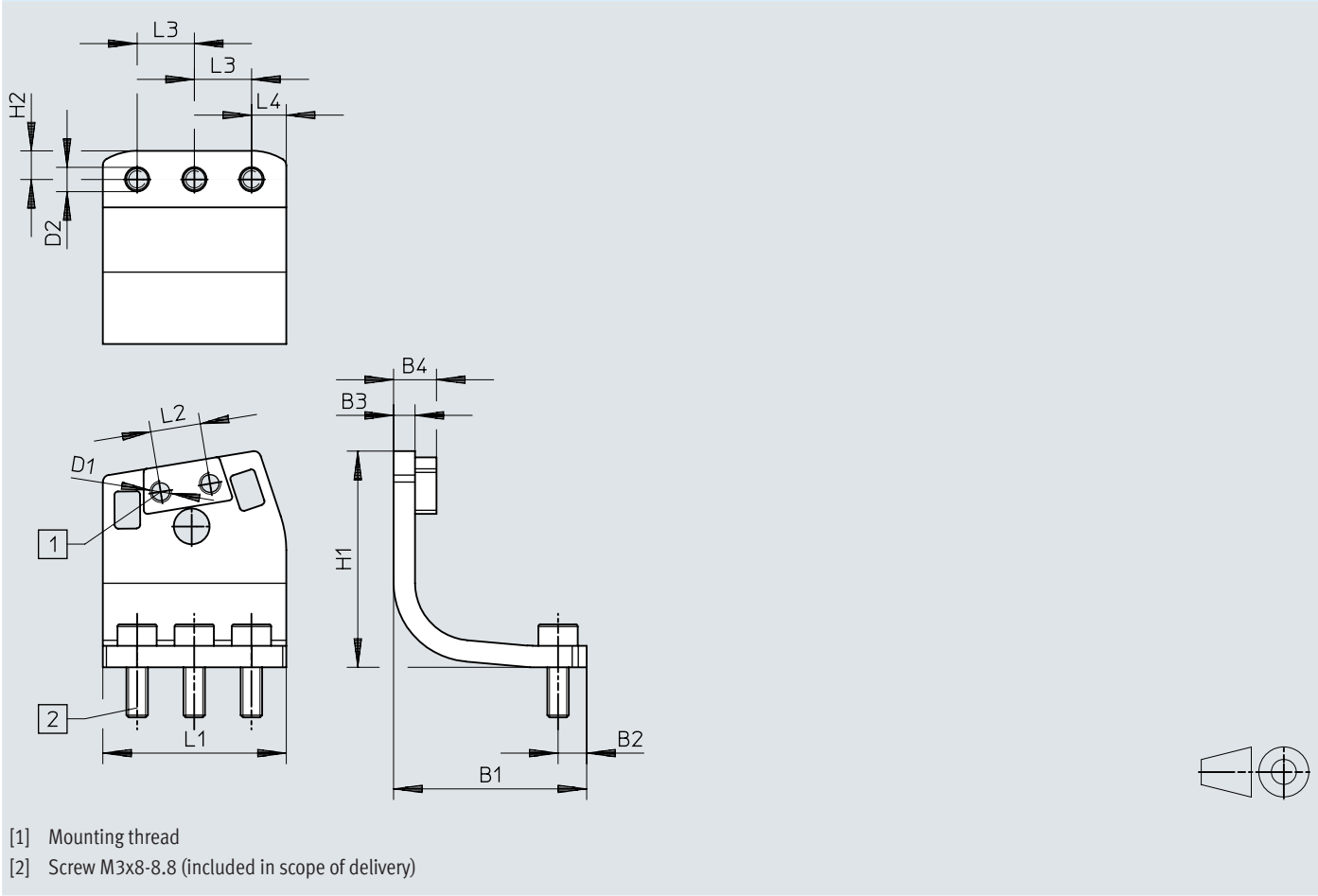
Download CAD data www.festo.com

1)		D6 ø h7	D7 ø	H14 ±0,1	H15 −0,3
HPPL-16	ZBH-9	9	6,4	3,9	1,9
HPPL-25	ZBH-9	9	6,4	3,9	1,9
HPPL-32	ZBH-12	12	10,3 ^{+0,1}	4,9	2,4
HPPL-40	ZBH-15	15	12,4	5,9	2,9
HPPL-50	ZBH-15	15	12,4	5,9	2,9
HPPL-63	ZBH-15	15	12,4	5,9	2,9

2)		D6 ø h7	D7 ø	H14 ±0,1	H15 −0,3
HPPL-16	ZBH-9	5	3,2	2,3	1,1
HPPL-25	ZBH-9	7	5,3	2,9	1,4
HPPL-32	ZBH-12	9	6,4	3,9	1,9
HPPL-40	ZBH-15	9	6,4	3,9	1,9
HPPL-50	ZBH-15	12	10,3 ^{+0,1}	4,9	2,4
HPPL-63	ZBH-15	15	12,4	5,9	2,9

Dimensions

Dimensions – Mounting bracket DHAS-MA-B6-60 Download CAD data www.festo.com

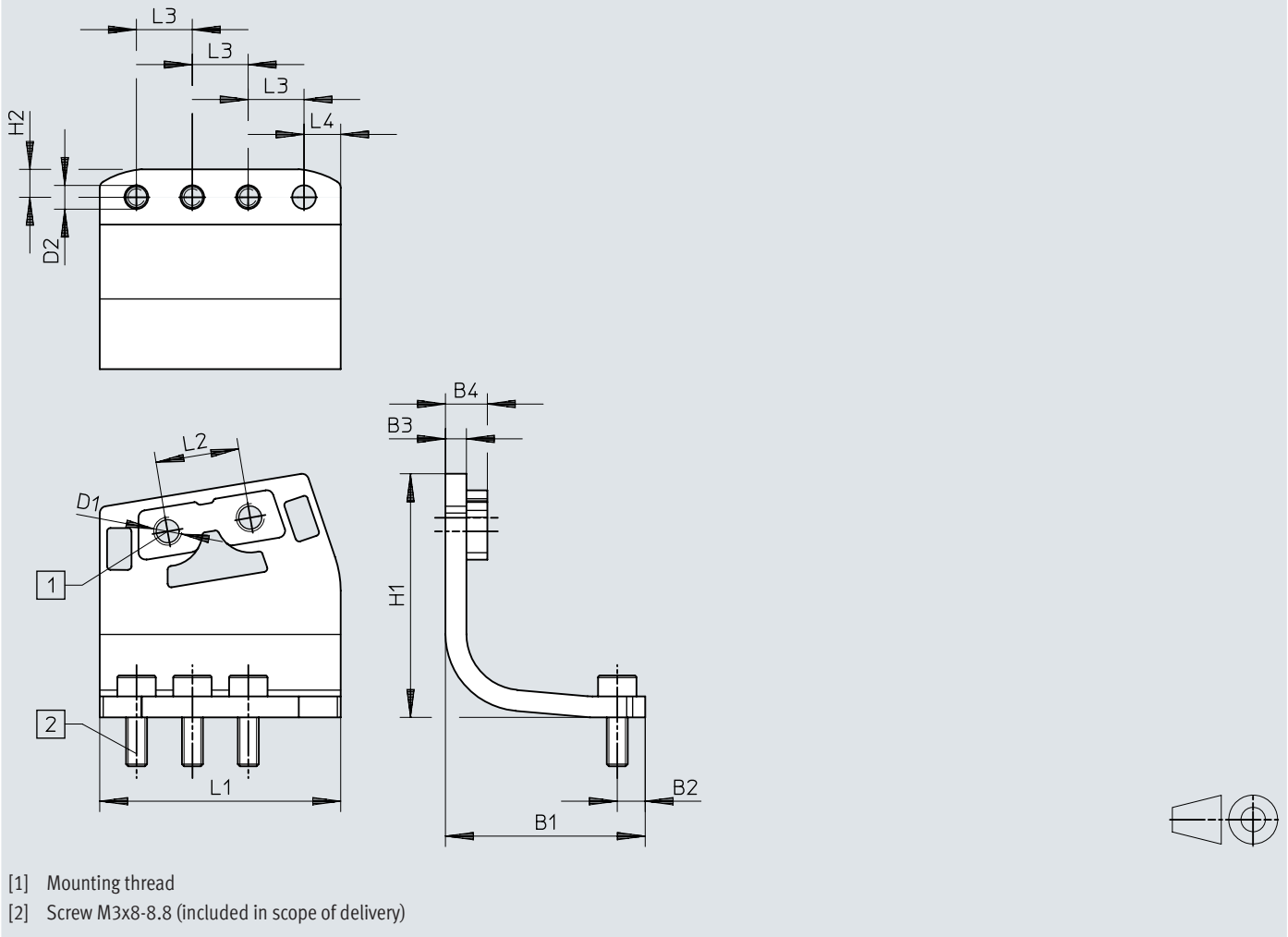


	B1	B2	B3	B4	D1	D2	H1	H2	L1	L2	L3	L4
			±0,2	±0,1		∅				±0,1	±0,1	
DHAS-MA-B6-60	27	4	3	6	M3	3,4	30,3	4	25,7	7	8	4,85

Dimensions

Dimensions – Mounting bracket DHAS-MA-B6-80

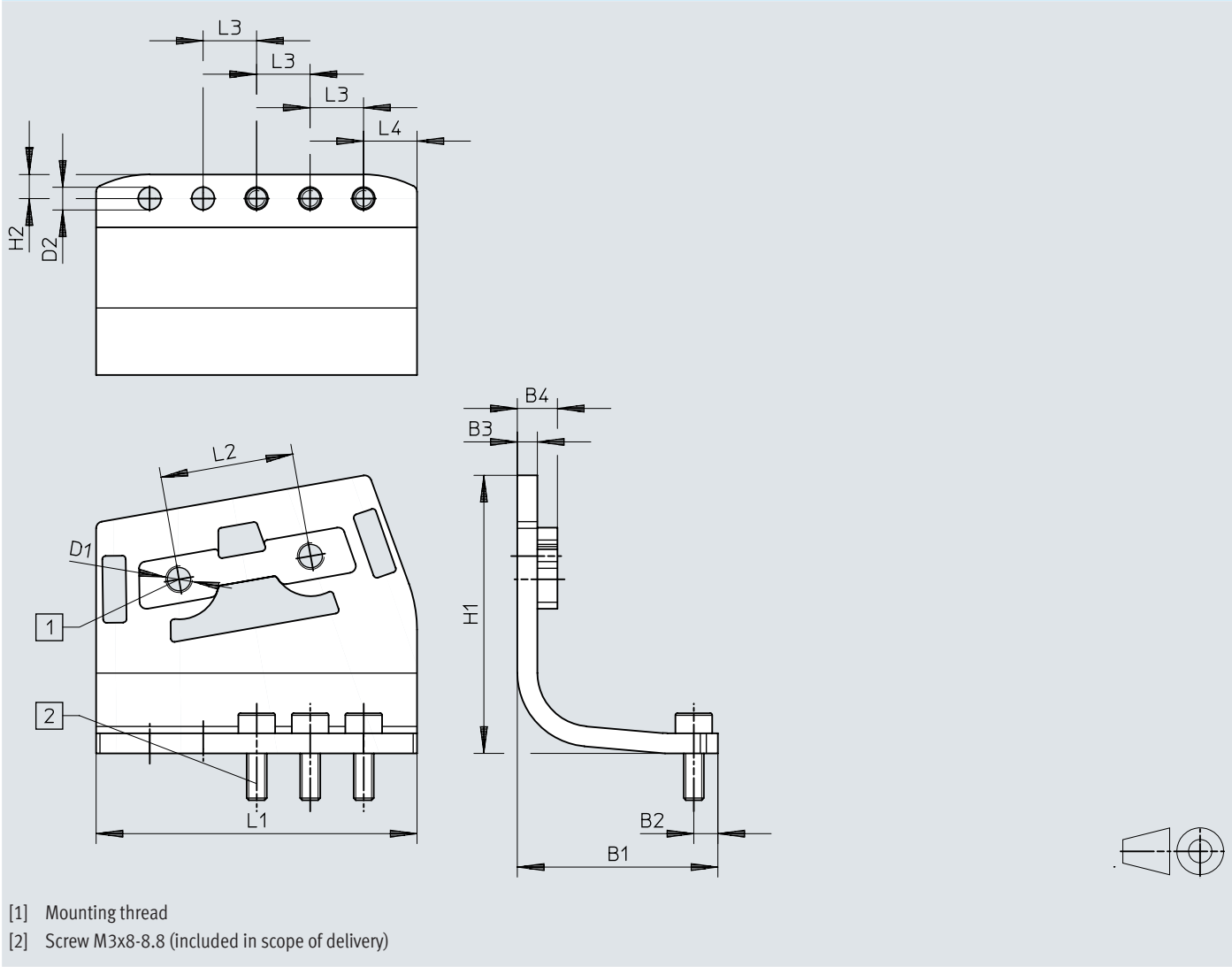
Download CAD data www.festo.com



	B1	B2	B3	B4	D1	D2	H1	H2	L1	L2	L3	L4
			±0,2	±0,1		∅				±0,1	±0,1	
DHAS-MA-B6-80	28,6	4	3	6	M4	3,3	35	4	34,5	12	8	5,25

Dimensions

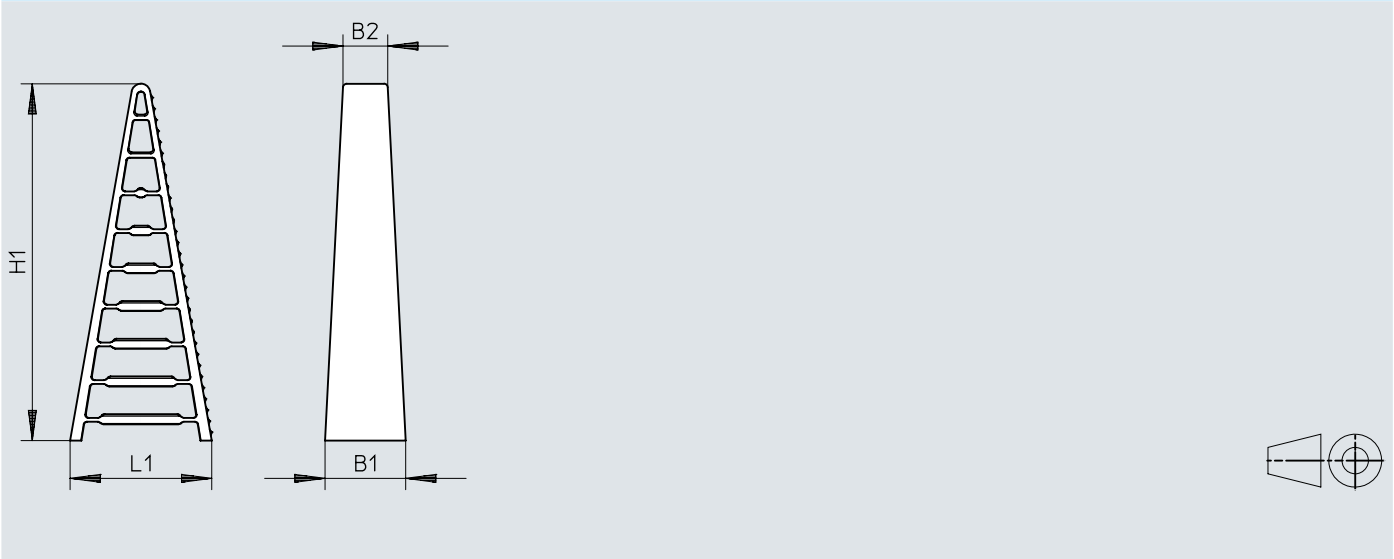
Dimensions – Mounting bracket DHAS-MA-B6-120 Download CAD data www.festo.com



	B1	B2	B3	B4	D1	D2	H1	H2	L1	L2	L3	L4
			±0,2	±0,1		Ø				±0,1	±0,1	
DHAS-MA-B6-120	30	3,6	3	6	M4	3,4	41,7	3,6	48	20	8	7,9

Dimensions

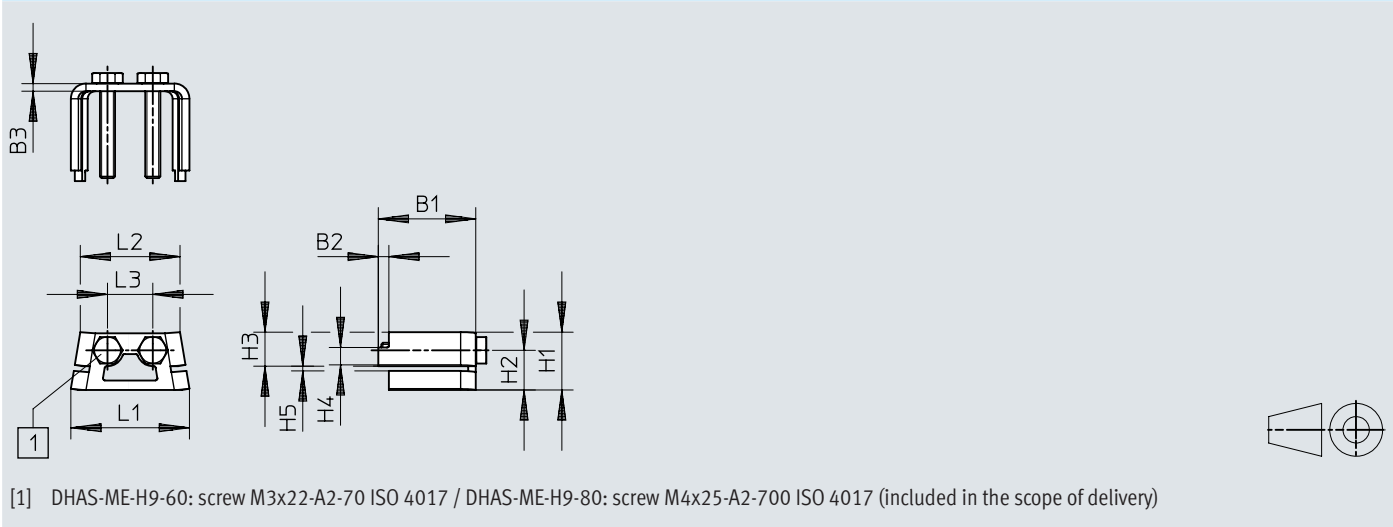
Dimensions – Adaptive gripper finger DHAS-GF [Download CAD data](#) www.festo.com



	B1	B2	H1	L1
DHAS-GF-60-U-BU	18	11,8	61,5	26
DHAS-GF-80-U-BU	21,3	11,8	94,5	37,5
DHAS-GF-120-U-BU	25	11,8	134,5	50

Dimensions

Dimensions – Mounting kit DHAS-ME-H9-60/80 Download CAD data www.festo.com

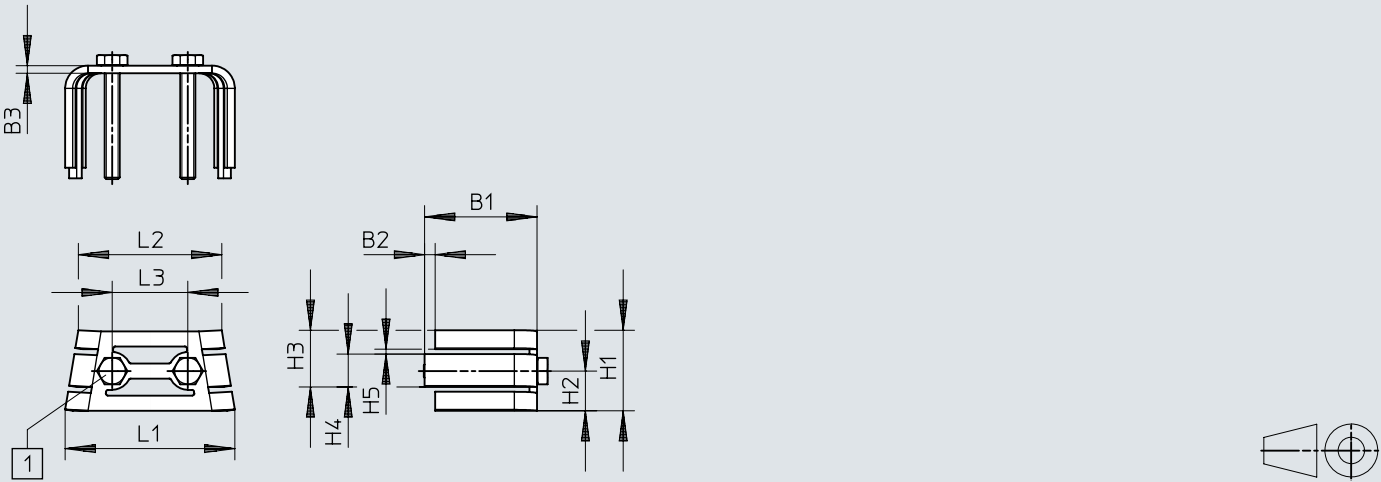


	B1	B2	B3	H1	H2	H3	H4	H5	L1	L2	L3
			±0,1					±0,1			±0,1
DHAS-ME-H9-60	22,8	2,8	2	10,3	6,7	7	3,6	1,3	20,7	17,4	7
DHAS-ME-H9-80	25,8	2,8	2	15,3	10,5	9	4,6	1,3	31,4	26,4	12

Dimensions

Dimensions – Mounting kit DHAS-ME-H9-120

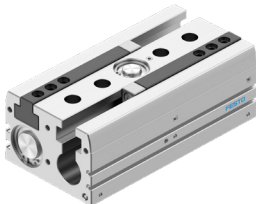
Download CAD data www.festo.com



[1] DHAS-ME-H9-120: screw M4x30-A2-70 ISO 4017 (included in the scope of delivery)

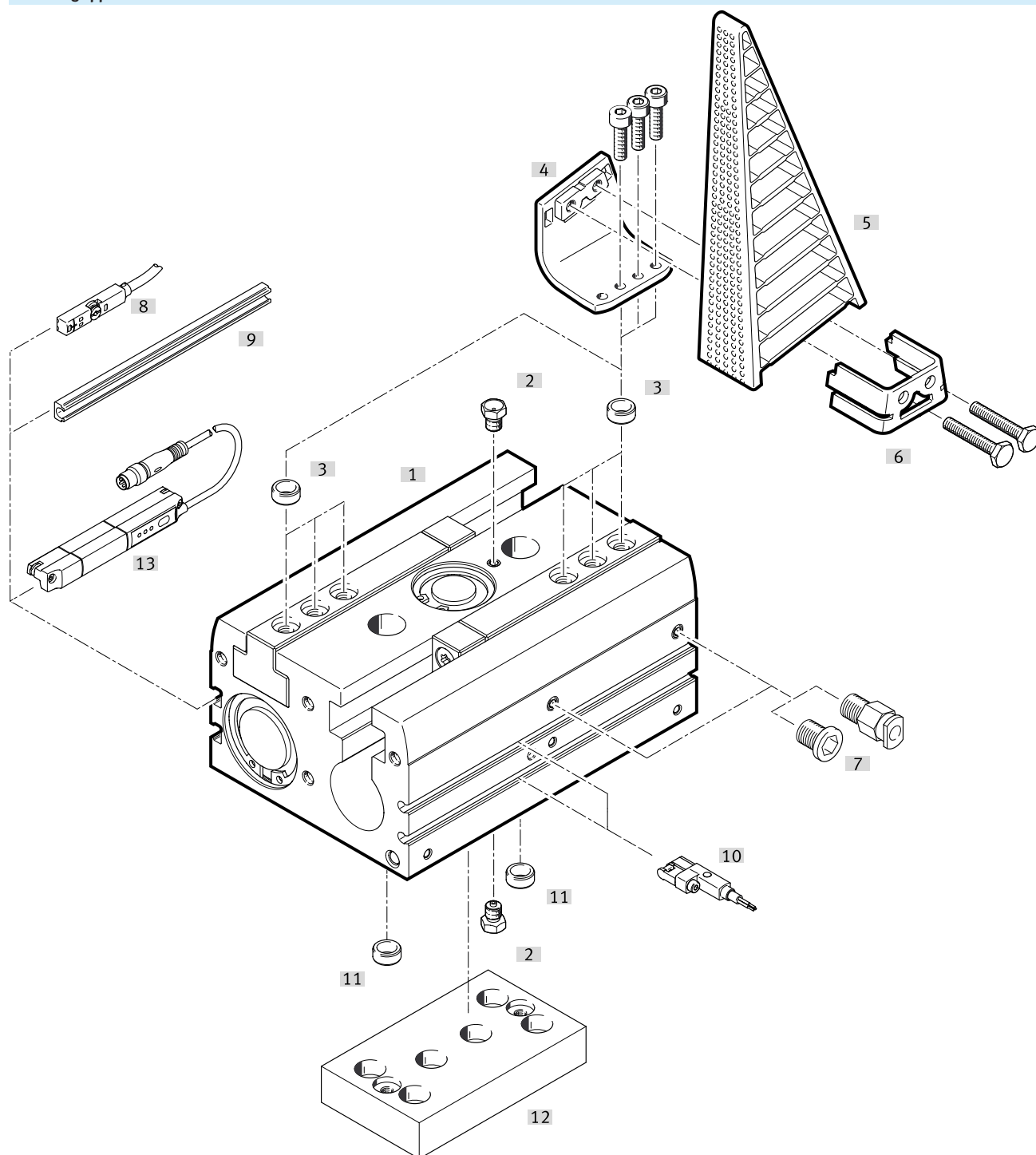
	B1	B2	B3	H1	H2	H3	H4	H5	L1	L2	L3
			±0,1					±0,1			±0,1
DHAS-ME-H9-120	29,8	2,8	2	21,3	10,5	15	8,7	1,3	44,9	38	20

Ordering data

Parallel gripper HPPL						
	Size	Complete stroke	Mode of operation	Product weight	Part no.	Type
	16	40 mm	Double-acting	341 g	8197420	HPPL-16-40-A-F1A
		80 mm		492 g	8197421	HPPL-16-80-A-F1A
		120 mm		638 g	8197418	HPPL-16-120-A-F1A
		160 mm		788 g	8197419	HPPL-16-160-A-F1A
	25	40 mm		889 g	8191185	HPPL-25-40-A-F1A
		80 mm		1,230 g	8191184	HPPL-25-80-A-F1A
		120 mm		1,561 g	8191186	HPPL-25-120-A-F1A
		160 mm		1,902 g	8191187	HPPL-25-160-A-F1A
	32	40 mm		1,361 g	8200779	HPPL-32-40-A-F1A
		80 mm		1,845 g	8200780	HPPL-32-80-A-F1A
		120 mm		2,307 g	8200778	HPPL-32-120-A-F1A
		160 mm		2,790 g	8200777	HPPL-32-160-A-F1A
	40	40 mm		2,150 g	8202623	HPPL-40-40-A-F1A
		80 mm		2,861 g	8202622	HPPL-40-80-A-F1A
		120 mm		3,570 g	8202626	HPPL-40-120-A-F1A
		160 mm		4,236 g	8202625	HPPL-40-160-A-F1A
		200 mm		4,944 g	8202624	HPPL-40-200-A-F1A
	50	80 mm		4,494 g	8196378	HPPL-50-80-A-F1A
		120 mm		5,527 g	8196375	HPPL-50-120-A-F1A
		160 mm		6,506 g	8196377	HPPL-50-160-A-F1A
		200 mm		7,538 g	8196376	HPPL-50-200-A-F1A
	63	120 mm		8,610 g	8191688	HPPL-63-120-A-F1A
		200 mm		11,522 g	8191687	HPPL-63-200-A-F1A
		300 mm		15,266 g	8191686	HPPL-63-300-A-F1A

Peripherals overview

Parallel gripper HPPL

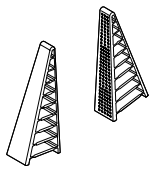


Accessories		→ Page/Internet
Type/order code	Description	
[1] Parallel gripper HPPL	Double-acting drive	hppl
[2] Lubrication nipple	- For relubricating the guide 1 pieces included in the scope of delivery.	hppl
[3] Centering sleeve ZBH	- For centering the gripper jaw blanks/gripper fingers on the gripper jaws 4 pieces included in the scope of delivery.	43
[4] Mounting bracket DHAS-MA	For mounting the adaptive gripper finger DHAS-GF on the gripper	43
[5] Adaptive gripper finger DHAS-GF	- For flexible gripping - Available in the sizes 60, 80, 120 - Mounting components DHAS-MA and DHAS-ME are also required to attach the Gripper fingers to the gripper	43

Peripherals overview

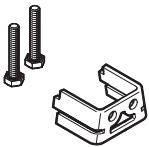
Accessories		→ Page/Internet
Type/order code	Description	
[6] Mounting kit DHAS-ME	Mounting components DHAS-MA and DHAS-ME are also required to attach the Gripper fingers to the gripper	43
[7] Push-in fitting QS	For connecting compressed air tubing with standard O.D.	↗ qs
[7] Blanking plug B	For sealing the supply ports when using the ports at the front	44
[8] Proximity switch SME-8	For querying the piston position in the end positions	44
[8] Proximity switch SMT-8	For querying the piston position in the end positions	45
[9] Sensor rail DASP	Proximity switches SME/SMT-10 can be used by gluing them into the Sensor slot	45
[10] Proximity switch SME-10	For querying the piston position in the end positions	45
[10] Proximity switch SMT-10	For querying the piston position in the end positions	45
[11] Centering sleeve ZBH	• For centering the gripper while mounting • 2 pieces included in the scope of delivery.	43
[12] Adapter kit DHAA, HAPG, HMSV, HMVA	Drive/gripper connections	↗ adapter
[13] Position transmitter SDAT	• To query the piston position at any point • The position transmitter must only be inserted into this slot	47
[13] Position transmitter SMAT	• To query the piston position at any point • The position transmitter must only be inserted into this slot	47

Accessories

Adaptive gripper finger DHAS-GF Link dhas-gf					
	Description ¹⁾	Clamping jaws material	Product weight	Part no.	Type
	for DHAS-MA-B6-60	TPE-U(PU)	7 g	3998967	DHAS-GF-60-U-BU
	for DHAS-MA-B6-80		13 g	3998964	DHAS-GF-80-U-BU
	for DHAS-MA-B6-120		29 g	3998959	DHAS-GF-120-U-BU

1) The DHAS-MA and DHAS-ME mounting components are also required to attach the gripper fingers to the gripper.

Mounting kit DHAS-MA					
	Description	Adapter bracket material	Product weight	Part no.	Type
	for size 16	high-alloy stainless steel	23 g	3920696	DHAS-MA-B6-60
			38 g	3899099	DHAS-MA-B6-80
			59 g	3889257	DHAS-MA-B6-120

Mounting kit DHAS-ME					
	Description	Adapter material	Product weight	Part no.	Type
	for DHAS-GF-60-U-BU	high-alloy stainless steel	7 g	4464306	DHAS-ME-H9-60
	for DHAS-GF-80-U-BU		13 g	4463570	DHAS-ME-H9-80
	for DHAS-GF-120-U-BU		23 g	4461433	DHAS-ME-H9-120

Centering sleeve ZBH-5						
	Description	Sleeve material	Pack size	Product weight	Part no.	Type
	for size 16	high-alloy stainless steel	10	0.2 g	8210493	ZBH-5

Centering sleeve ZBH-7						
	Description	Sleeve material	Pack size	Product weight	Part no.	Type
	for size 25	high-alloy stainless steel	10	0.4 g	8210495	ZBH-7

Centering sleeve ZBH-9						
	Description	Sleeve material	Pack size	Product weight	Part no.	Type
	for sizes 16, 25, 32, 40	high-alloy stainless steel	10	0.9 g	8210498	ZBH-9

Accessories

Centering sleeve ZBH-12

	Description	Sleeve material	Pack size	Product weight	Part no.	Type
	For sizes 32, 50	high-alloy stainless steel	10	1.1 g	8210496	ZBH-12

Centering sleeve ZBH-15

	Description	Sleeve material	Pack size	Product weight	Part no.	Type
	for sizes 40, 50, 63	high-alloy stainless steel	10	3 g	191409	ZBH-15

Blanking plug B-M5

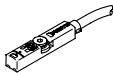
	Description	Blanking plug material	Pack size	Product weight	Part no.	Type
	for sizes 16, 25, 32, 40	Steel, chemically nickel-plated	10	1 g	8142288	B-M5-F1A

Blanking plug B-1/8

	Description	Blanking plug material	Pack size	Product weight	Part no.	Type
	for size 50, 63	Steel, chemically nickel-plated	10	7 g	8142289	B-1/8-F1A

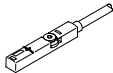
Proximity switch SMT-8M for T-slot, magneto-resistive

Link [smt](#)

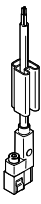
	Type of mounting	Switching output	Electrical connection	Cable length	Part no.	Type
	Screwed on, Can be inserted in slot from above	3-wire NPN N/O contact	Open end	2.5 m	574338	SMT-8M-A-NS-24V-E-2,5-OE
			Plug M8, A-coded	0.3 m	574339	SMT-8M-A-NS-24V-E-0,3-M8D
		3-wire PNP N/C contact	Open end	7.5 m	574340	SMT-8M-A-PO-24V-E-7,5-OE
				2.5 m	574335	SMT-8M-A-PS-24V-E-2,5-OE
		3-wire PNP N/O contact	Plug M8, A-coded	0.3 m	574334	SMT-8M-A-PS-24V-E-0,3-M8D
			Plug M12, A-coded		574337	SMT-8M-A-PS-24V-E-0,3-M12

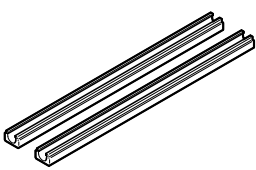
Proximity switch SME-8 for T-slot, magnetic, reed

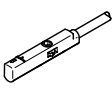
Link [sme](#)

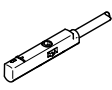
	Type of mounting	Switching output	Electrical connection	Cable length	Part no.	Type
	Screwed on, Can be inserted in slot from above	3-wire N/O contact	Open end	2.5 m	543862	SME-8M-DS-24V-K-2,5-OE
				5 m	543863	SME-8M-DS-24V-K-5,0-OE
		2-wire N/O contact	Plug M8, A-coded	0.3 m	543861	SME-8M-DS-24V-K-0,3-M8D
			Open end	2.5 m	543872	SME-8M-ZS-24V-K-2,5-OE
	Clamped in T slot, Can be inserted in slot lengthwise	Without			150855	SME-8-K-LED-24
			Plug M8, A-coded	0.3 m	150857	SME-8-S-LED-24
		N/C contact, 3-wire	Open end	7.5 m	160251	SME-8-O-K-LED-24

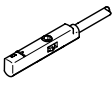
Accessories

Proximity switch SMT-8G for T-slot, magneto-resistive Link smt						
	Type of mounting	Switching output	Electrical connection	Cable length	Part no.	Type
	Clamped in T slot, Can be inserted in slot lengthwise	3-wire PNP N/O contact	Open end	2.5 m	547859	SMT-8G-PS-24V-E-2,5Q-OE
			Plug M8, A-coded	0.3 m	547860	SMT-8G-PS-24V-E-0,3Q-M8D

Sensor rail DASP – for proximity switch SME/SMT-10 Link smt				
	Description	Glue material	Part no.	Type
	for gripper stroke max. 60 mm, to be glued into the slot	Structural adhesive	3528767	DASP-B6-60-C-SR
	for gripper stroke max. 80 mm, to be glued into the slot		3528768	DASP-B6-80-C-SR

Proximity switch SMT-10M for round slot, magnetoresistive Link smt						
	Type of mounting	Switching output	Electrical connection	Cable length	Part no.	Type
	Screwed on, Can be inserted in slot from above	3-wire PNP N/O contact	Open end	2.5 m	551374	SMT-10M-PS-24V-E-2,5-Q-OE
					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
					551376	SMT-10M-PS-24V-E-0,3-Q-M8D

Proximity switch SME-10M for round slot, magnetic, reed Link sme						
	Type of mounting	Switching output	Electrical connection	Cable length	Part no.	Type
	Screwed on, Can be inserted in slot from above	3-wire N/O contact	Open end	2.5 m	551365	SME-10M-DS-24V-E-2,5-L-OE
			Plug M8, A-coded	0.3 m	551367	SME-10M-DS-24V-E-0,3-L-M8D

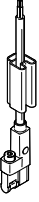
Proximity switch SME-10-KL... for round slot, magnetic, reed Link sme						
	Type of mounting	Digital switching output	Electrical connection	Cable length	Part no.	Type
	Clamped in T slot, Can be inserted in slot lengthwise	3-wire N/O contact	Open end	0.3 m	173212	SME-10-SL-LED-24
				2.5 m	173210	SME-10-KL-LED-24

Proximity switch SMT-10G for round slot, magnetoresistive Link smt						
	Type of mounting	Switching output	Electrical connection	Cable length	Part no.	Type
	Clamped in T slot, Can be inserted in slot lengthwise	3-wire PNP N/O contact	Open end	2.5 m	547862	SMT-10G-PS-24V-E-2,5Q-OE

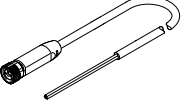
Accessories

Proximity switch SMT-10G for round slot, magnetoresistive

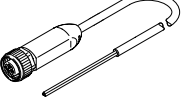
Link [smt](#)

	Type of mounting	Switching output	Electrical connection	Cable length	Part no.	Type
	Clamped in T slot, Can be inserted in slot lengthwise	3-wire PNP N/O contact	Plug M8, A-coded	0.3 m	547863	SMT-10G-PS-24V-E-0,3Q-M8D

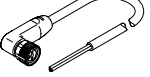
Connecting cables NEBA, straight, M8 connection

	Electrical connection 1, connection technology	Electrical connection 2, connection technology	Electrical connection 2, number of pins/wires	Cable length	Part no.	Type
	M8x1 A-coded as per EN 61076-2-104	Open end	3	2.5 m	8078223	NEBA-M8G3-U-2.5-N-LE3
				5 m	8078224	NEBA-M8G3-U-5-N-LE3

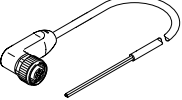
Connecting cables NEBA, straight, M12 connection

	Electrical connection 1, connection technology	Electrical connection 2, connection technology	Electrical connection 2, number of pins/wires	Cable length	Part no.	Type
	M12x1 A-coded as per EN 61076-2-101	Open end	3	2.5 m	8078236	NEBA-M12G5-U-2.5-N-LE3
				5 m	8078237	NEBA-M12G5-U-5-N-LE3

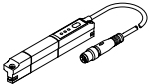
Connecting cables NEBA, angled, M8 connection

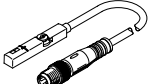
	Electrical connection 1, connection technology	Electrical connection 2, connection technology	Electrical connection 2, number of pins/wires	Cable length	Part no.	Type
	M8x1 A-coded as per EN 61076-2-104	Open end	3	2.5 m	8078230	NEBA-M8W3-U-2.5-N-LE3
				5 m	8078231	NEBA-M8W3-U-5-N-LE3

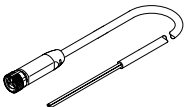
Connecting cables NEBA, angled, M12 connection

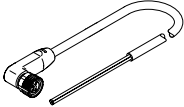
	Electrical connection 1, connection technology	Electrical connection 2, connection technology	Electrical connection 2, number of pins/wires	Cable length	Part no.	Type
	M12x1 A-coded as per EN 61076-2-101	Open end	3	2.5 m	8078245	NEBA-M12W5-U-2.5-N-LE3
				5 m	8078246	NEBA-M12W5-U-5-N-LE3

Accessories

Position transmitter SDAT for T-slot, M8 plug, A-coded							Link sd at
	Sensing range	Analog output	Electrical connection 1, number of pins/wires	Cable length	Part no.	Type	
	0 ... 50.000 mm	4 - 20 mA	4	0.3 m	1531265	SDAT-MHS-M50-1L-SA-E-0.3-M8	
	0 ... 80.000 mm				1531266	SDAT-MHS-M80-1L-SA-E-0.3-M8	
	0 ... 100.000 mm				1531267	SDAT-MHS-M100-1L-SA-E-0.3-M8	
	0 ... 125.000 mm				1531268	SDAT-MHS-M125-1L-SA-E-0.3-M8	
	0 ... 160.000 mm				1531269	SDAT-MHS-M160-1L-SA-E-0.3-M8	

Position transmitter SMAT-8M for T-slot, M8 plug, A-coded							Link sm at
	Sensing range	Analog output	Electrical connection 1, number of pins/wires	Cable length	Part no.	Type	
	52 mm	0 - 10 V	4	0.3 m	553744	SMAT-8M-U-E-0,3-M8D	

Connecting cables NEBA, straight							
	Electrical connection 1, connection technology	Electrical connection 2, connection technology	Electrical connection 2, number of pins/wires	Cable length	Part no.	Type	
	M8x1 A-coded as per EN 61076-2-104	Open end	4	2.5 m	8078227	NEBA-M8G4-U-2.5-N-LE4	
				5 m	8078228	NEBA-M8G4-U-5-N-LE4	

Connecting cables NEBA, angled							
	Electrical connection 1, connection technology	Electrical connection 2, connection technology	Electrical connection 2, number of pins/wires	Cable length	Part no.	Type	
	M8x1 A-coded as per EN 61076-2-104	Open end	4	2.5 m	8078233	NEBA-M8W4-U-2.5-N-LE4	
				5 m	8078234	NEBA-M8W4-U-5-N-LE4	