

Rotary gripper module EHMD

FESTO



Characteristics

At a glance

Link [ehmd](#)

- The most compact rotary gripper module in its class is ideal for handling small objects in a wide variety of applications.
- It is particularly suitable for laboratory automation, e.g. for easily opening a large range of sample vials
- The rotary movement is achieved via a stepper motor
- The gripping motion is achieved either electrically via a stepper motor or pneumatically via a cylinder
- The Z module automatically adjusts to the thread pitches of the covers
- In conjunction with the CMMT-ST servo drive, the gripper can grip in force mode. This enables flexible gripping
- With the servo drive controller CMMT-ST, simple control is possible: via I/O connection, Modbus TCP, EtherCAT, PROFINET, EtherNet/IP

Rotation

Closed loop control

- Enables motor torque to be controlled via the motor current. This allows the torque to be limited when closing a cover
- No step loss is possible in the event of overload
- It is possible to use the entire output torque of the motor

Open loop control

- The motor is actuated in microstep operation with a constant, defined phase current
- Holding current reduction is required to prevent overheating
- A torque reserve is required to prevent step losses

Homing

- The encoder zero pulse can be used to home the axis of rotation
- One zero pulse per revolution
- Defined angular orientation based on this zero pulse

Gripping

Closed loop control

- Makes it possible to control the motor torque via the motor current
- The gripping force of the gripper can be set by a limited driving torque of the drive screw

Open loop control

- The motor is actuated in microstep operation with a constant, defined phase current
- Holding current reduction is required to prevent overheating
- The gripper drive is spring-mounted for force setting so that defined gripping forces can be set in positioning mode

Homing

- The gripper motor has an incremental encoder. There is no end position sensor
- In the opening direction, homing must be to a stop

Note:

- Specially developed gripper jaws enable the pick-up and transport of microtiter plates (for SBS/ANSI formats).
- (See accessories)

Characteristics

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.

Electric Motion Sizing

- Quickly and reliably to the optimum drive package: Electric Motion Sizing calculates suitable combinations of electric axis, electric motor and servo drive from just a few items of application data. You receive all relevant data for your selected combination, including the bill of materials and documentation. This avoids incorrect designs and results in significantly improved energy efficiency of the system. Consistency right through to Festo Automation Suite also makes commissioning easier for you.

Festo Automation Suite

- Parameterization, programming and commissioning in a clear and user-friendly interface
- Optimal support for complex procedures by guided assistants (e.g. for initial commissioning, drive configuration ...)
- Quick access to required documents and further information
- Easy integration of electric drives into the control programming

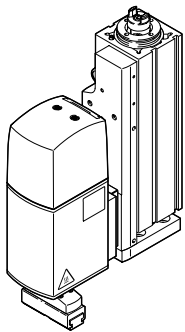
Diagrams

[Link](#) [ehmd](#)



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

Overview



Combination options with mini slide EGSC-BS, EGSL, electric slide EGSK and three-dimensional gantry EXCL

EHMD-40

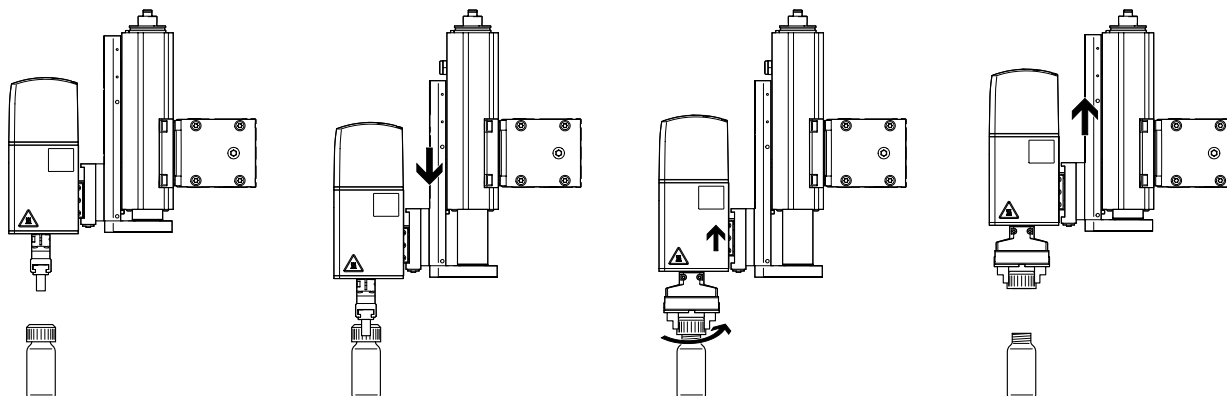
- with EGSC-BS-25/32
- with EGSL-35/45
- with EXCL-15
- with EGSK-20/26

EHMD-50

- with EGSC-32/35/45
- with EGSK-20/26
- with EXCL-15

Characteristics

Application example



Screwing covers onto vials and removing them
(explanation of links)

Figure 1

- Mini slide EGSC-BS retracted
- Mounting EHAM-E20

Figure 2

- Mini slide EGSC-BS extends
- Rotary gripper module EHMD grips the cover

Figure 3

- Rotary gripper module EHMD turns and removes the cover from the vial
- The mounting EHAM-E20 takes on the Z-compensation without the need to move the mini slide (Z-axis)

Figure 4

- Once the cover has been removed, the mini slide EGSC-BS retracts
- The Z-compensation moves back into the lower end position due to the weight

Type code

001	Series	
EHMD	Rotary gripper module	
002	Size [mm]	
40	40	
50	50	
003	Rotary module actuator system	
RE	Electric	

004	Pneumatic gripper actuator system	
GP	Pneumatic	
GE	Electric	
005	Stroke per gripper jaw	
	5 mm	
15	15 mm	
16	16 mm	

Datasheet

General technical data				
Size	40			50
Pneumatic gripper actuator system	Pneumatic	Electric		
Stroke per gripper jaw	5 mm		15 mm	
Structural design	Electric rotary actuator	Electric rotary actuator		Electric rotary actuator electric gripper drive
	Pneumatic gripper	Electric gripper		
Motor type	Stepper motor			
Position sensing	Turning: Motor encoder Gripping: slot for proximity sensor	Turning: Motor encoder Gripping: Motor encoder		
Homing	Turning: Encoder index	Turning: Encoder index Gripping: Fixed-stop block		
Gripper function	Parallel			
Number of gripper jaws	2			
Rotation angle	Infinite			
Type of mounting	With dovetail slot			
Mounting position	Any			
Product weight	577 g	681 g	724 g	1,255 g

Technical data - Rotation			
Size	40		50
Stroke per gripper jaw	5 mm	15 mm	
Mode of operation, rotation	Hybrid stepper motor		
Max. output torque	0.3 Nm		1 Nm
Max. output speed	240 rpm		
DC nominal voltage	24 V		
Nominal current per phase, rotation	0.9 A		2.8 A
Holding torque motor, rotation	0.3 Nm		1 Nm
Winding resistance phase, rotation	5.8 Ohm		0.83 Ohm
Winding inductance phase, rotation	11 mH		2.3 mH
Step angle full step, rotation	1.8 deg		
Stepping angle tolerance, rotation	±5%		
Mass moment of inertia, rotation	0.125 kgcm ²	0.234 kgcm ²	0.51 kgcm ²
Electrical connection 1, connection technology	Connection pattern F1		PTSM
Electrical connection 1, connection type	Plug		

Encoder technical data – Rotation	
Nominal operating voltage DC, rotation	5 V
Max. current consumption, rotation	60 mA
Pulses per revolution, rotation	500
Rotor position sensor	Incremental encoder
Rotor position sensor interface	RS422 TTL A/B channels + zero index
Rotor position sensor measuring principle	Optical

Datasheet

Technical data – Gripping				
Size	40			50
Pneumatic gripper actuator system	Pneumatic	Electric		
Stroke per gripper jaw	5 mm		15 mm	
Structural design	Electric rotary actuator, Pneumatic gripper	Electric rotary actuator, Electric gripper		Electric rotary actuator, electric gripper drive
Gripping force per gripper jaw	5 ... 35 N	7 ... 35 N	3 ... 14 N	18 ... 67 N
Residual gripping force in a power failure	–	10 N	4 N	–
DC nominal voltage	24 V			
Nominal current per phase	–	0.5 A		
Motor holding torque	–	0.043 Nm		0.115 Nm
Phase winding resistance	–	5.6 Ohm		2 Ohm
Winding inductance phase	–	4 mH		2.8 mH
Step angle with full step	–	1.8 deg		
Step angle tolerance	–	±5%		
Mass moment of inertia	–	0.009 kgcm²		0.038 kgcm²
Max. output speed	240 rpm			
Feed constant	–	1.48 mm/U	4.4 mm/U	2.3 mm/U
Max. gripping speed per gripper jaw	–	25 mm/s	70 mm/s	10 mm/s
Electrical connection 1, connection type	Plug			
Electrical connection 1, connection technology	Connection pattern F1			PTSM

Encoder technical data – gripping	
Nominal operating voltage DC	24 V
Max. current consumption	60 mA
Pulses per revolution	500
Rotor position sensor	Incremental encoder
Rotor position sensor interface	RS422 TTLA/B channels + zero index
Rotor position sensor measuring principle	Optical

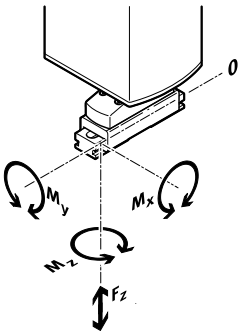
Operating and environmental conditions		
Size	40	50
Pneumatic gripper actuator system	Pneumatic	Electric
Operating pressure	1.5 ... 8 bar	–
Ambient temperature	0 ... 40°C	18 ... 28°C
Storage temperature	-20 ... 70°C	
Relative air humidity	0 - 85%, Non-condensating	
Degree of protection	IP20	
Insulation protection class	B	
Duty cycle	100%	
Vibration resistance	Transport application test with severity level 1 as per FN 942017-4 and EN 60068-2-6	
Corrosion resistance class (CRC) ¹⁾	1 - Low corrosion stress	
CE marking (see declaration of conformity) ²⁾	As per EU EMC directive As per EU RoHS directive	
UKCA marking (see declaration of conformity) ³⁾	To UK instructions for EMC	
KC characters	KC-EMV	–
Certification	RCM compliance mark	

1) For more information, visit www.festo.com/x/topic/kbk2) Further information www.festo.com/catalogue/ehmd → Support/Downloads3) Further information www.festo.com/catalogue/ehmd → Support/Downloads

Datasheet

Materials		
Size	40	50
Pneumatic gripper actuator system	Pneumatic	Electric
Housing material	Wrought aluminum alloy, anodized	
Note on materials	RoHS compliant	
Cover material	PA	PA-reinforced
LABS (PWIS) conformity	VDMA24364 Zone III	

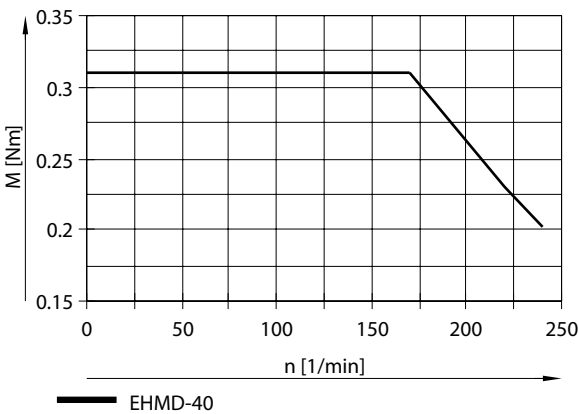
Characteristic static load values at the gripper jaws



The specified permissible forces and torques refer to one gripper jaw. They include the lever arm, additional weight forces due to the workpiece or external gripper fingers and acceleration forces occurring during the movement. The zero coordinate line (gripper jaw guide) must be taken into consideration when calculating torques.

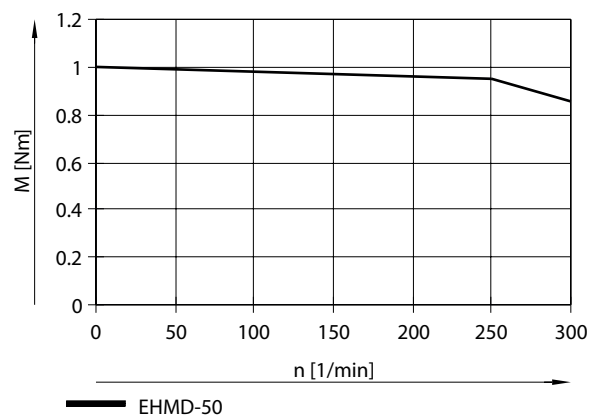
Size	40	50
Pneumatic gripper actuator system	Pneumatic	Electric
Stroke per gripper jaw	5 mm	15 mm
Maximum force on gripper jaw F_z , static	30 N	15 N
Maximum torque on gripper jaw, M_x static	0.7 Nm	3.5 Nm
Maximum torque on gripper jaw, M_y static	1.5 Nm	5 Nm
Maximum torque on gripper jaw, M_z static	0.7 Nm	5 Nm

For rotation: Torque M as a function of rotational speed n for EHMD-40

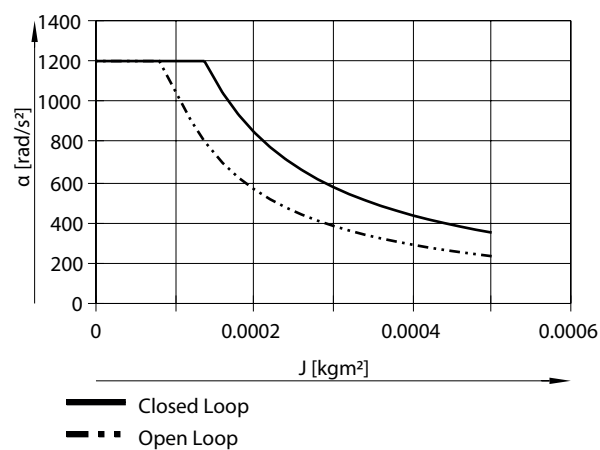


Datasheet

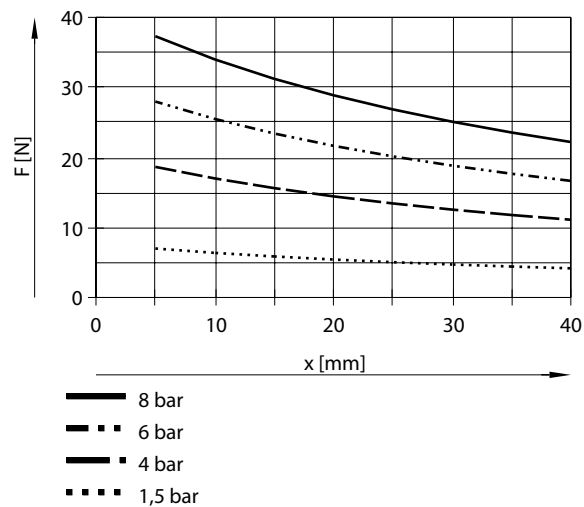
For rotation: Torque M as a function of rotational speed n for EHMD-50



For rotation: Angular acceleration as a function of moment of inertia J for EHMD-40

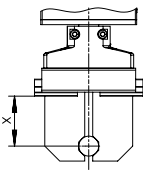


For gripping, pneumatic: Gripping force F as a function of lever arm x and operating pressure d for EHMD-40



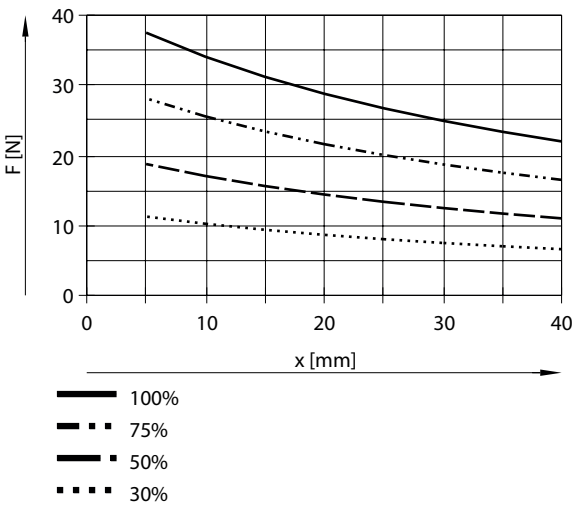
Datasheet

For gripping, electrical with CMMT-ST: Gripping force depending on lever arm x and force specification for EHMD-...

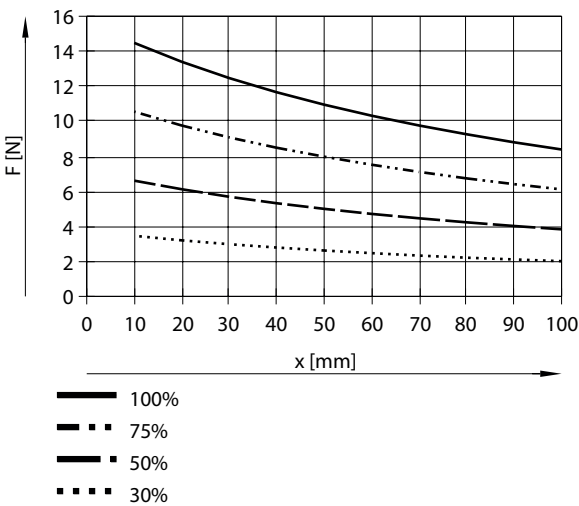


Even if the size of the workpiece is unknown, it is possible to close the gripper with a specific gripping force by limiting the torque. With the CMMT-ST, force operation can be used to close the gripper. The force setpoint is specified as a percentage value and corresponds to the motor current in relation to the nominal current.

For gripping, electrical with CMMT-ST: Gripping force depending on lever arm x and force specification for EHMD-40-GE



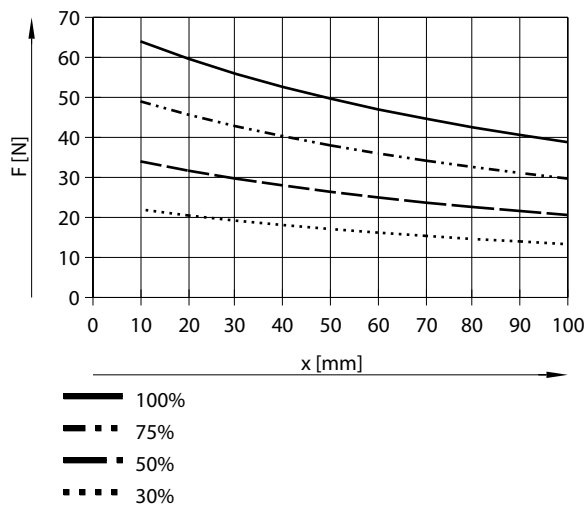
For gripping, electrical with CMMT-ST: Gripping force depending on lever arm x and force specification for EHMD-40-GE-16



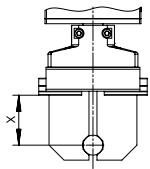
The characteristic curves show typical gripping forces in the new state. Depending on the function, these may fluctuate as a result of internal friction.

Datasheet

For gripping, electrical with CMMT-ST: Gripping force depending on lever arm x and force specification for EHMD-50

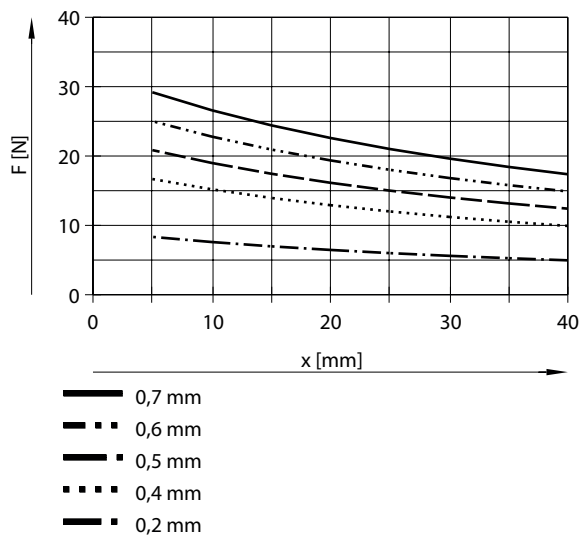


For gripping, electric with servo drive: Gripping force as a function of lever arm x and travel allowance for EHMD-...



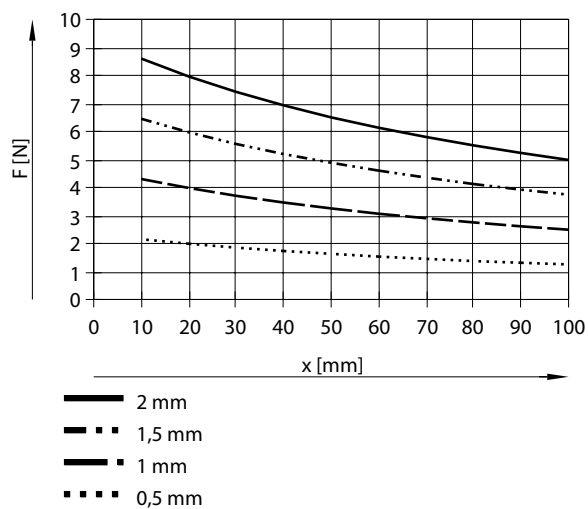
If the workpiece size is known, a specific gripping force can be reached via the spring deflection of the gripper drive. The gripper is closed by a certain distance after it has come into contact with the workpiece. The gripper fingers then remain stationary while the drive continues to move and the spring is tensioned.

For gripping, electric with servo drive: Gripping force as a function of lever arm x and travel allowance for EHMD-40-GE

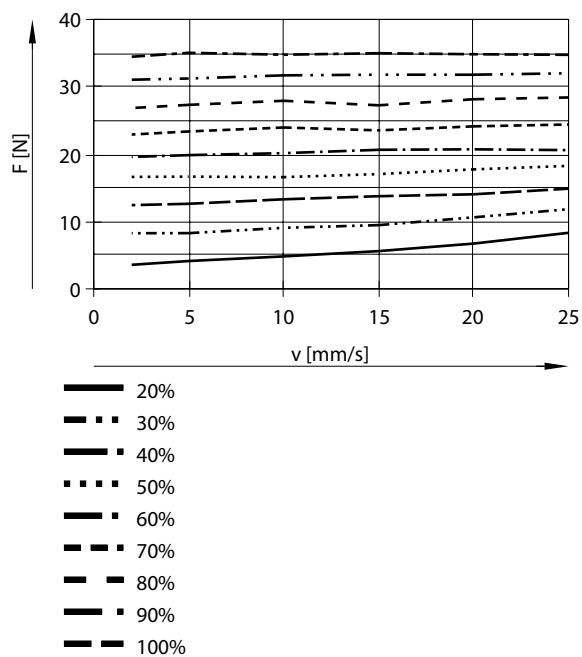


Datasheet

For gripping, electric with servo drive: Gripping force as a function of lever arm x and travel allowance for EHMD-40-GE-16



Gripping force F as a function of speed v for EHMD-40

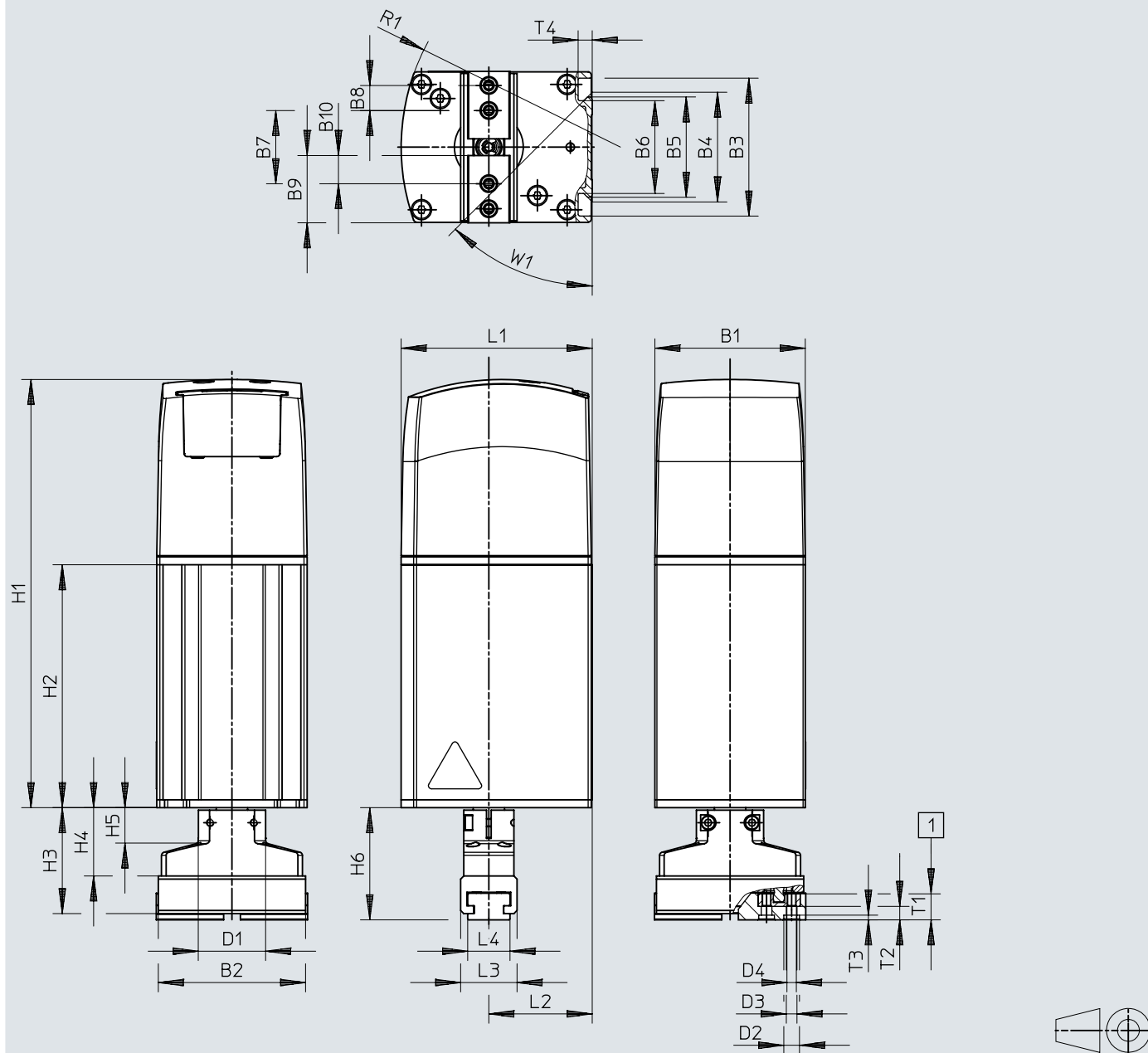


Prerequisite:

- Servo drive CMMT-ST in force mode
- Ambient temperature of 25°C

Dimensions

Dimensions – EHMD-40-RE-GE

Download CAD data www.festo.com

[1] Max. screw-in depth

[2] Included in delivery: 4x screws M3x12, 4x centering sleeves ZBH-5 (for gripper finger)

Dimensions

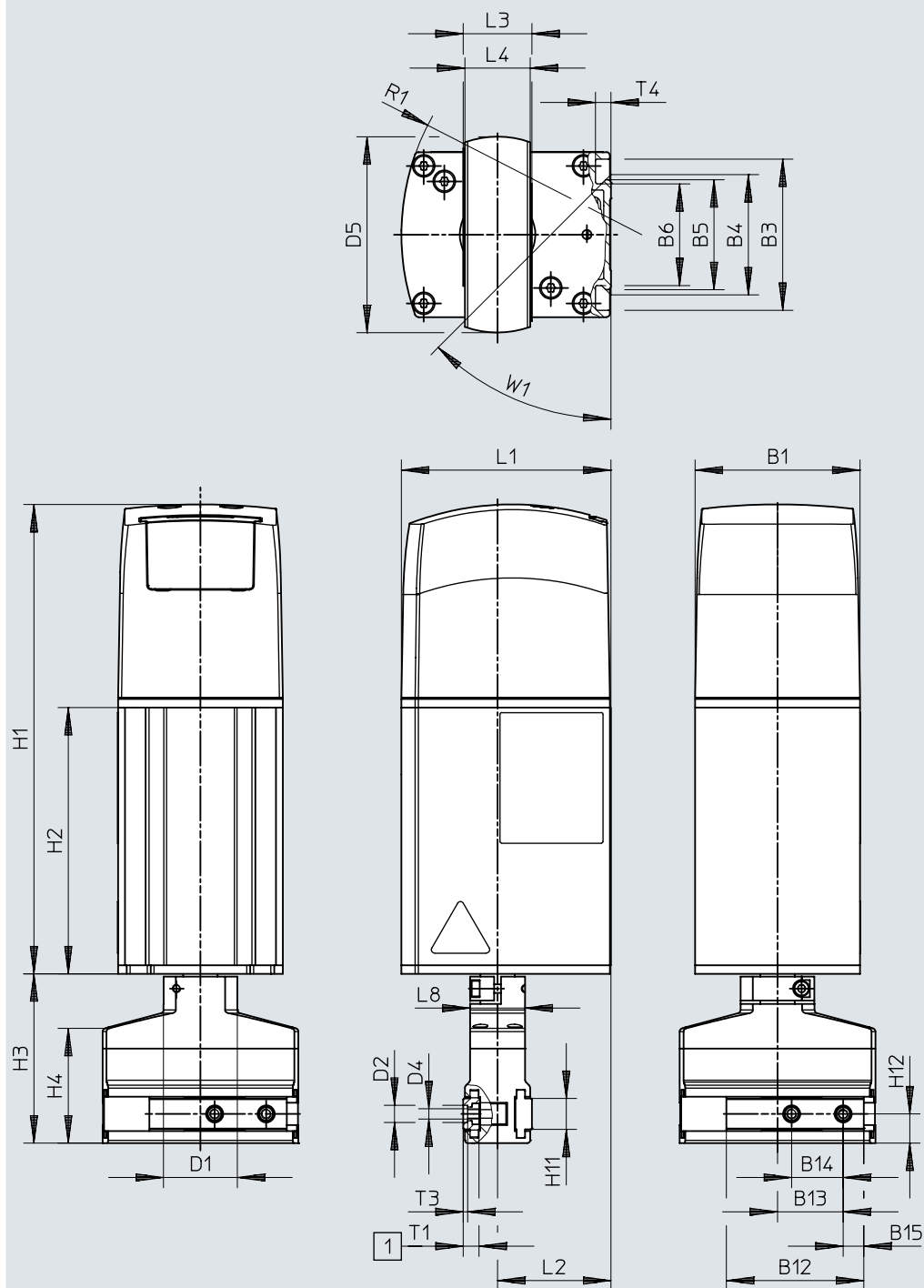
	B1	B2	B3	B4 ±0,15	B5	B6	B7		B8 ±0,08	B9	B10
							min.	max.			
EHMD-40-RE-GE	48	47	44	35	32	29,6	18	28	8	21,5	9

	D1 Ø	D2 Ø H9	D3 Ø	D4	H1	H2	H3	H4	H5	H6
EHMD-40-RE-GE	21,5	5	3,4	M3	136,6	77,5	33,8	21,8	11,3	35,8

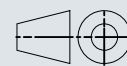
	L1	L2	L3	L4	R1	T1	T2	T3	T4	W1
EHMD-40-RE-GE	61	33	18	13,5	70	8,3	4,3	1,5	4,5	45°

Dimensions

Dimensions – EHMD-40-RE-GE-16

Download CAD data www.festo.com

[1] Max. screw-in depth



Dimensions

	B1	B3	B4 ±0,15	B5	B6	B12	B13		B14	B15
							min.	max.		
EHMD-40-RE-GE-16	48	44	35	32	29,6	40	6	22	15	6

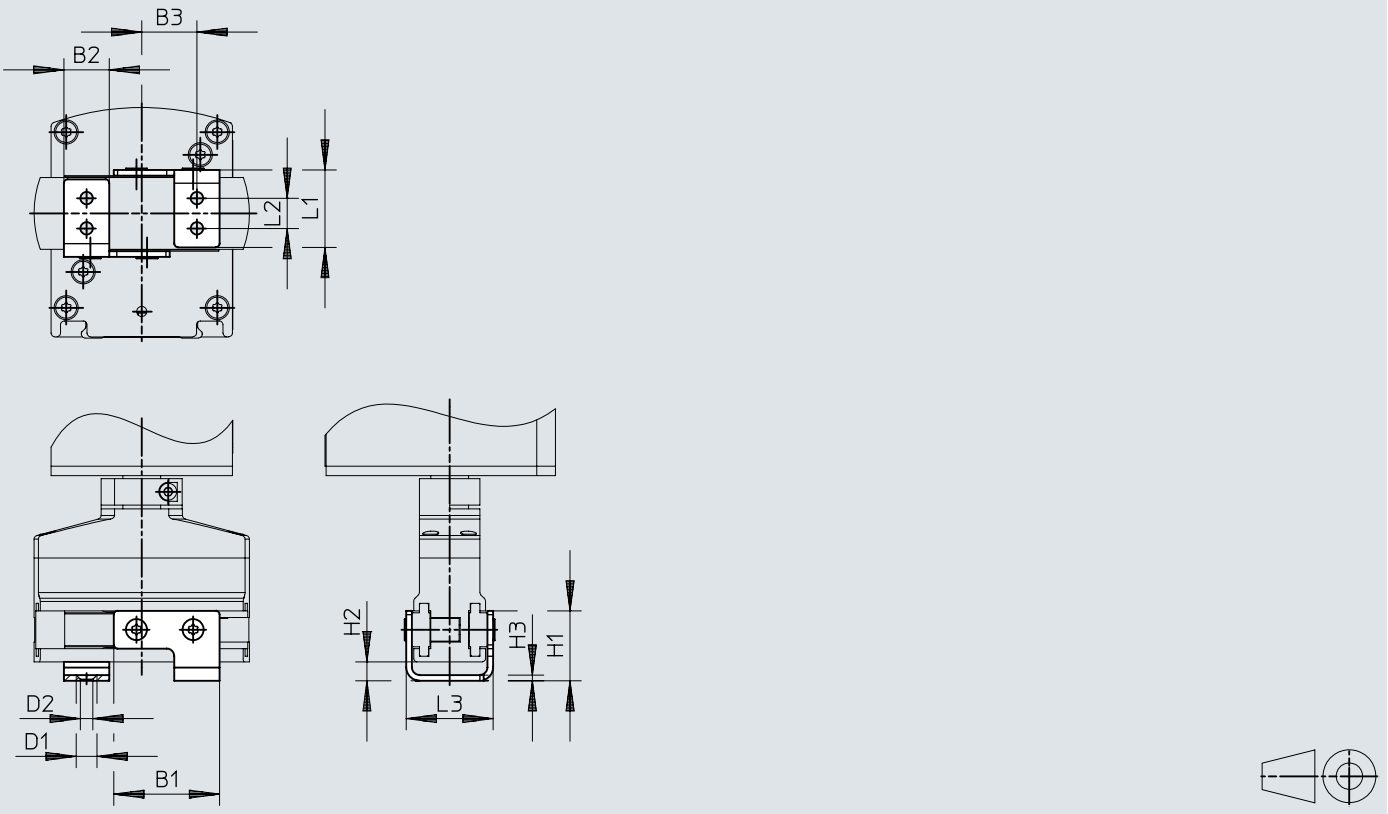
	D1 Ø	D2 Ø H8	D4	D5 Ø	H1	H2	H3	H4	H11	H12
EHMD-40-RE-GE-16	21,5	5	M3	57	136,6	77,5	49,3	33,2	9	8,5

	L1	L2	L3	L4	L8	R1	T1	T3	T4	W1
EHMD-40-RE-GE-16	61	33	20	19	16	70	4,6	1,3	4,5	45°

Dimensions

Dimensions – EHMD-40-RE-GE-16 with bracket for gripper jaw mounting

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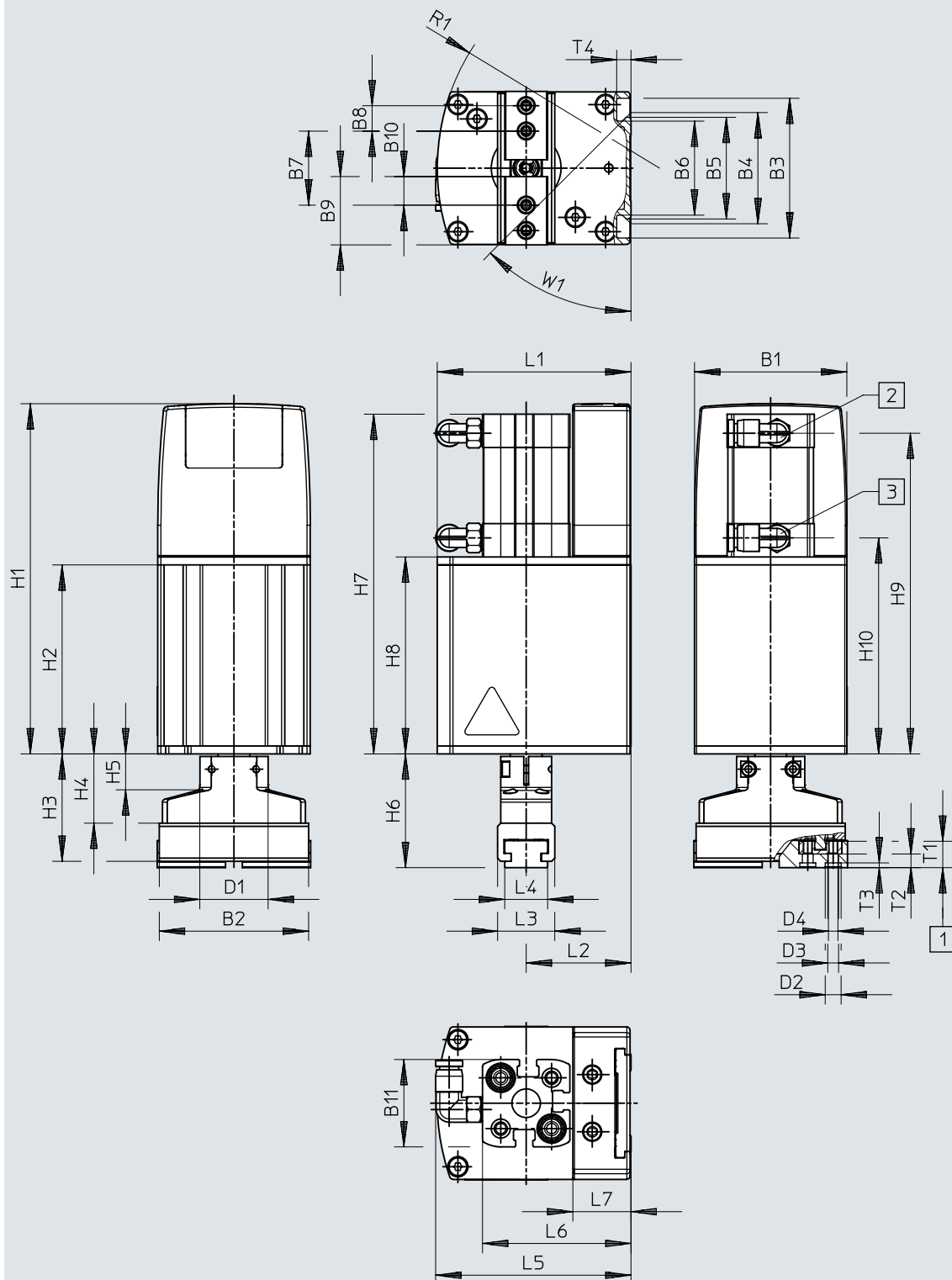
[1] Included in delivery of the gripper: 2x angle bracket, 8x countersunk screws M3x6, 4x centering sleeves ZBH-5

	B1	B2	B3		D1 Ø	D2 Ø	H1	H2	H3	L1	L2	L3	L4
			min.	max.									
EHMD-...-GE-16	28	12	7	23	5,5	3,3	18,5	5	1,5	20,5	8	23	19

Dimensions

Dimensions – EHMD-40-RE-GP

Download CAD data www.festo.com



- [1] Max. screw-in depth
- [2] Open push-in fitting for gripper
- [3] Close push-in fitting for gripper
- [4] Included in delivery: 4x screws M3x12, 4x centering sleeves ZBH-5 (for gripper finger)



Dimensions

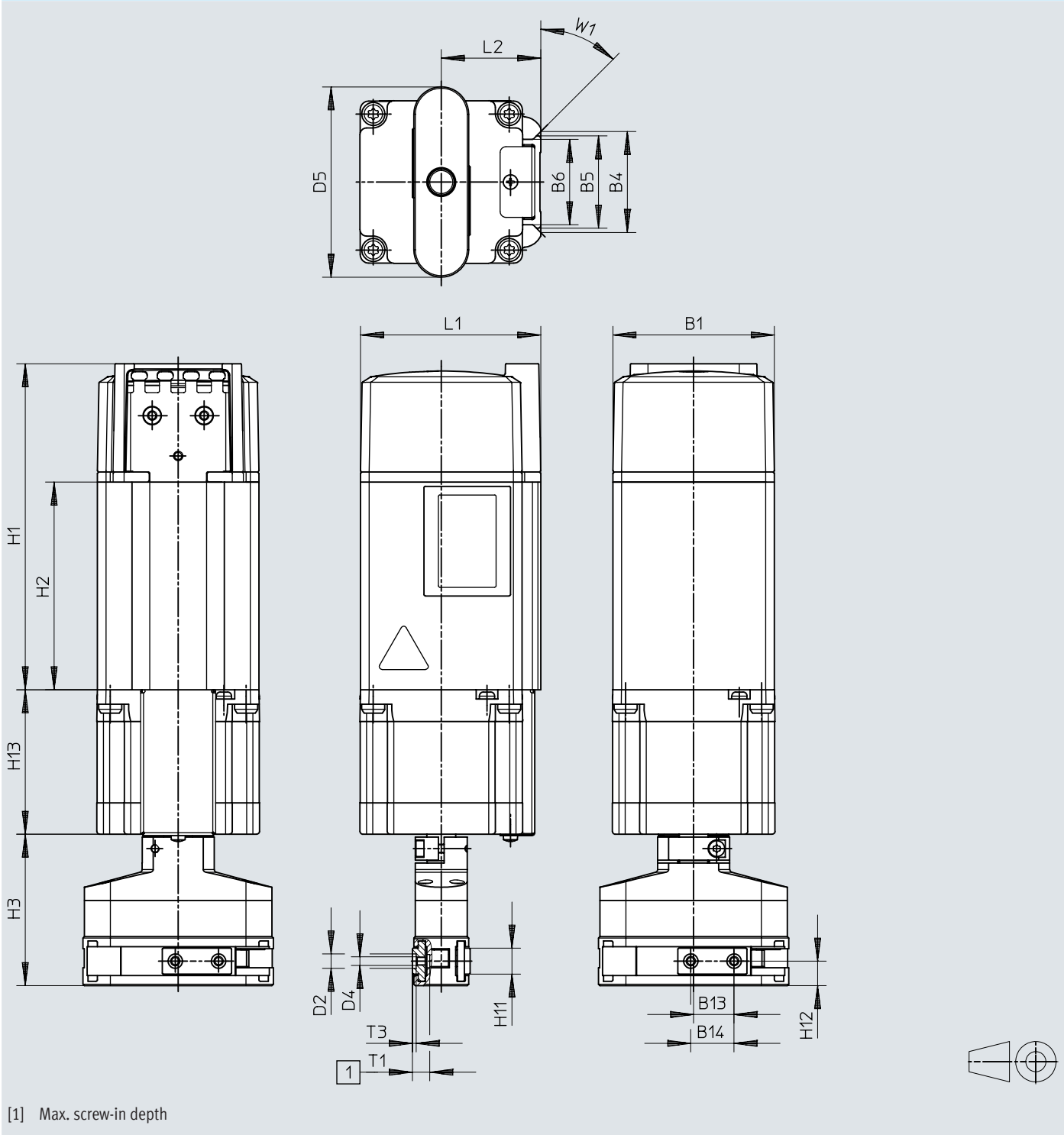
	B1	B2	B3	B4	B5	B6	B7		B8	B9	B10	B11	D1
				±0,15			min.	max.	±0,08				∅
EHMD-40-RE-GP	48	47	44	35	32	29,6	18	28	8	21,5	9	27,5	21,5

	D2 ∅ H9	D3 ∅	D4	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10
EHMD-40-RE-GP	5	3,4	M3	110,3	59,5	33,8	21,8	11,3	35,8	107	62	101	68

	L1	L2	L3	L4	L5	L6	L7	R1	T1	T2	T3	T4	W1
EHMD-40-RE-GP	61	33	18	13,5	61,5	46,8	18,3	70	8,3	4,3	1,5	4,5	45°

Dimensions

Dimensions – EHMD-50-RE-GE-15 Download CAD data www.festo.com



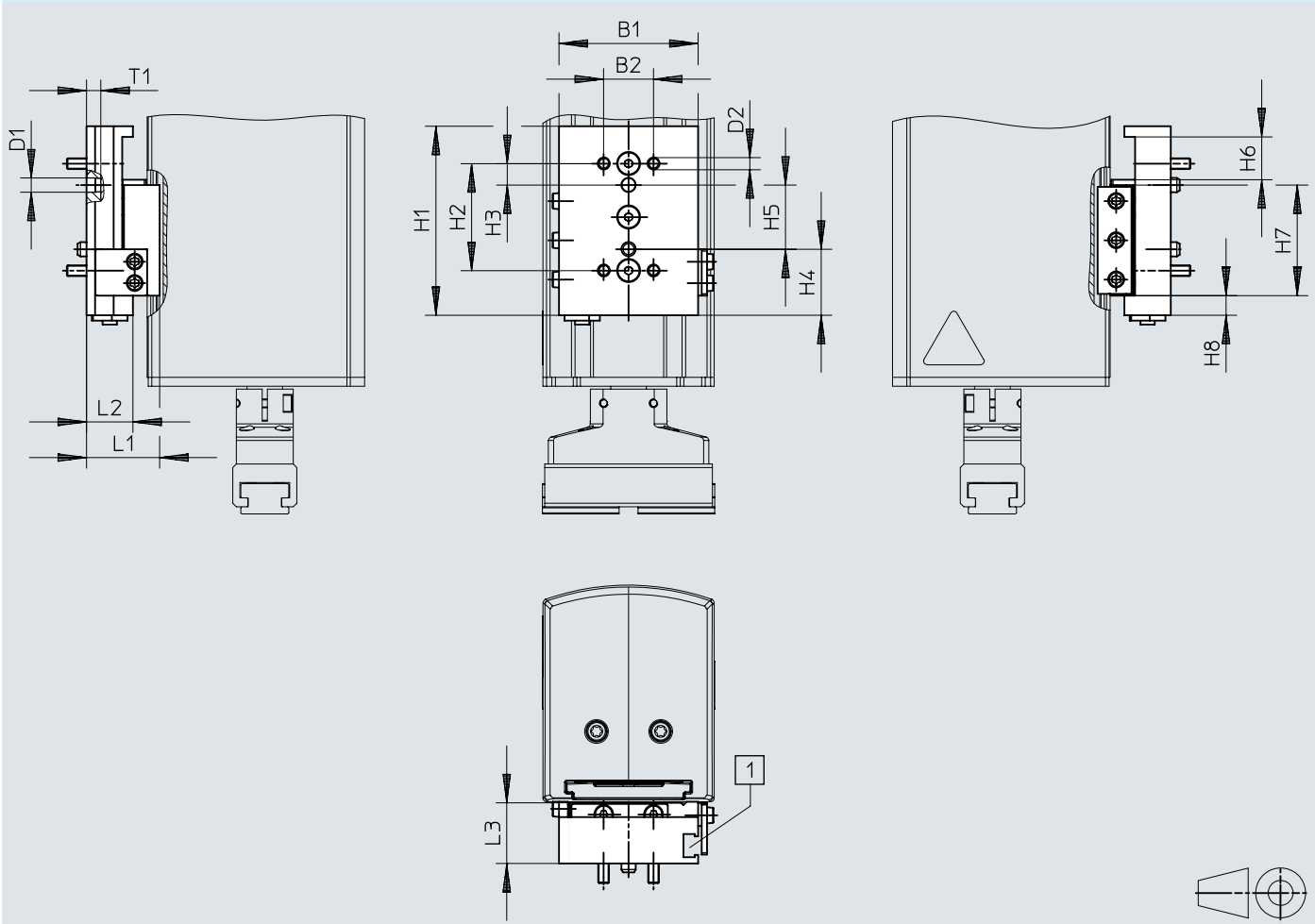
Dimensions

	B1	B4 ±0,15	B5	B6	B13		B14 ±0,03	D2 Ø H8	D4	D5 Ø
					min.	max.				
EHMD-50-RE-GE-15	56	35	32	29,6	6,5	21,5	15	5	M3	66

	H1	H2	H3	H11	H12	H13	L1	L2	T1	T3	W1
EHMD-50-RE-GE-15	113	72	52,5	9	8,5	50,1	62,5	34,5	6	1,3	45°

Dimensions

Dimensions – Mounting EHAM-E20-40-Z Download CAD data www.festo.com



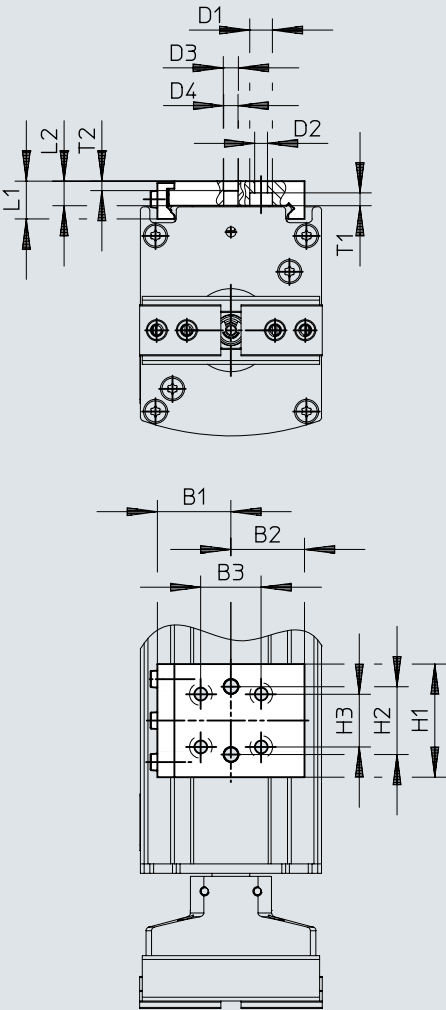
- [1] T-slot for proximity switch
- [2] Included in delivery: 4x screws M3x8, 2x centering pins ZBS-4 (for mounting on Z-axis)
- [3] Mounting option via dovetail mounting. The mounting compensates for the thread pitch when turning (fitting/removing) covers on vials without needing additional movement of the Z-axis. (Z compensation = 12 mm)

	B1	B2	D1 Ø H8	D3 Ø	H1	H2	H3	H4	H5 ±0,05	H6	H7	H8	L1	L2	L3	T1
EHAM-E20-40-Z	39	14	4	3,4	53	30	6	18,5	18	12	31	5,5	20,5	13	17	2,5

Dimensions

Dimensions – Mounting EHAM-E20-40

Download CAD data www.festo.com

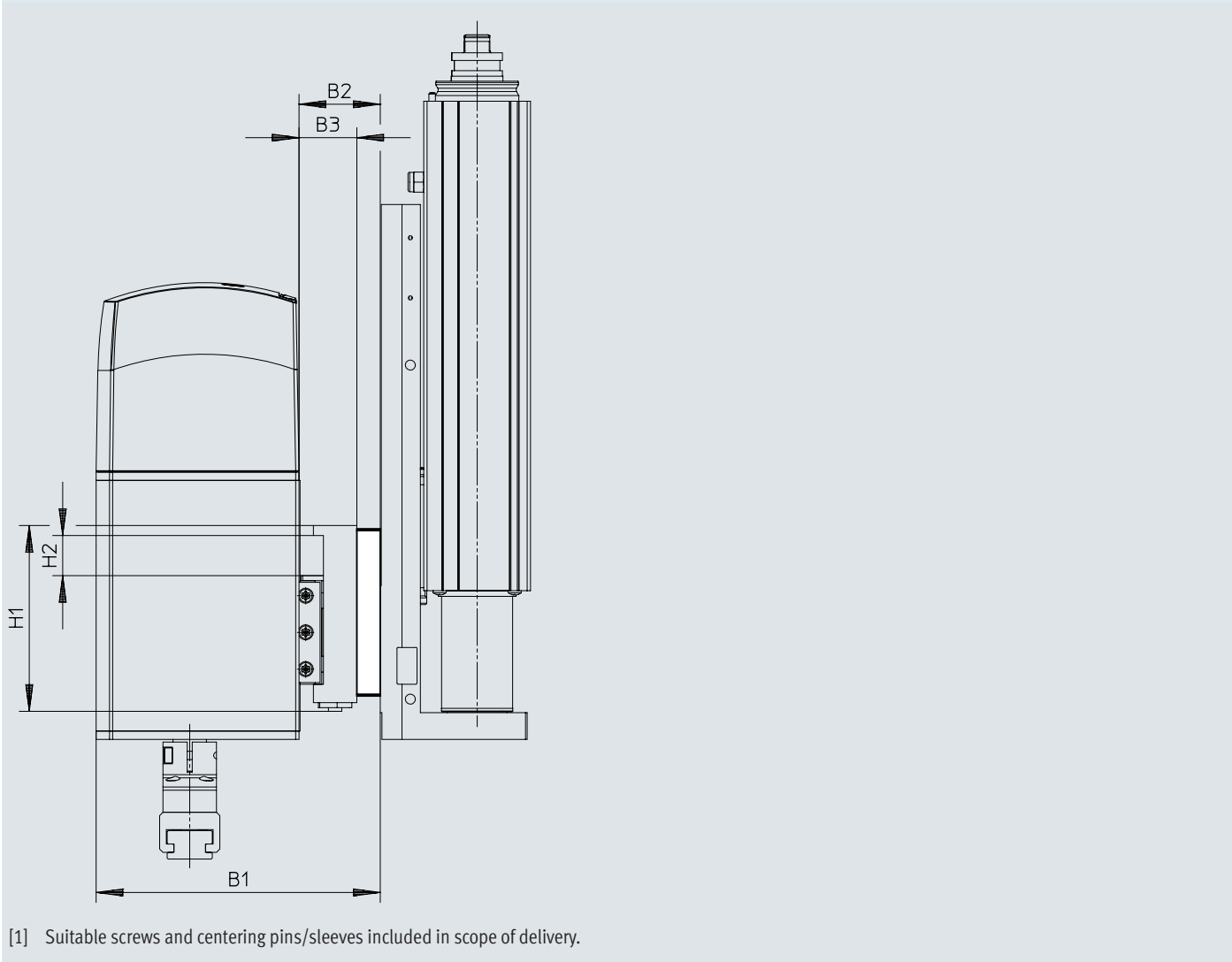


[1] Included in delivery: 4x screws M3x8, 2x centering pins ZBS-4 (for mounting on Z-axis)

	B1	B2	B3	D1 Ø	D2 Ø	D3 Ø H8	D4 Ø	H1	H2 ±0,05	H3	L1	L2	T1	T2
EHAM-E20-40	19,5	19,5	16	6	3,4	4	3,8	30	18	14	10	6,5	3,4	2,5

Dimensions

Dimensions – with flexible mounting EHAM-E20-40-Z Download CAD data www.festo.com



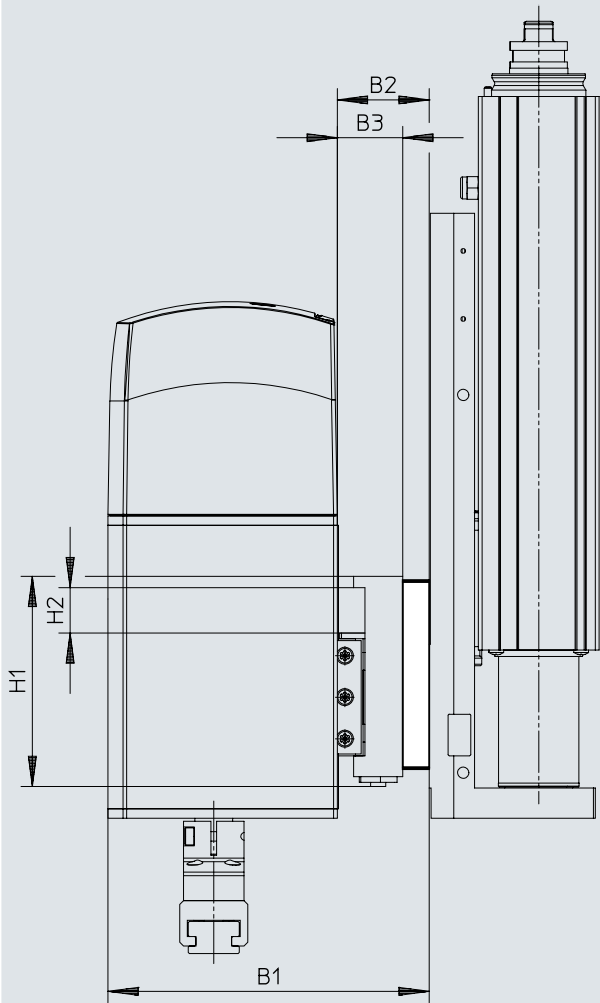
	1)	B1	B2	B3	H1	H2 ²⁾
EHAM-E20-40-E19-25	EGSC-BS-25/32	85	24,3	17,3	55,6	12
EHAM-E20-40-E8-35	EGSL-BS-35/45					
EHAM-E20-40-E9-20	EGSK-20/26					

1) Stroke
2) Automatic Z-stroke offset.

Dimensions

Dimensions – with rigid mountings EHAM-E20-40

Download CAD data www.festo.com



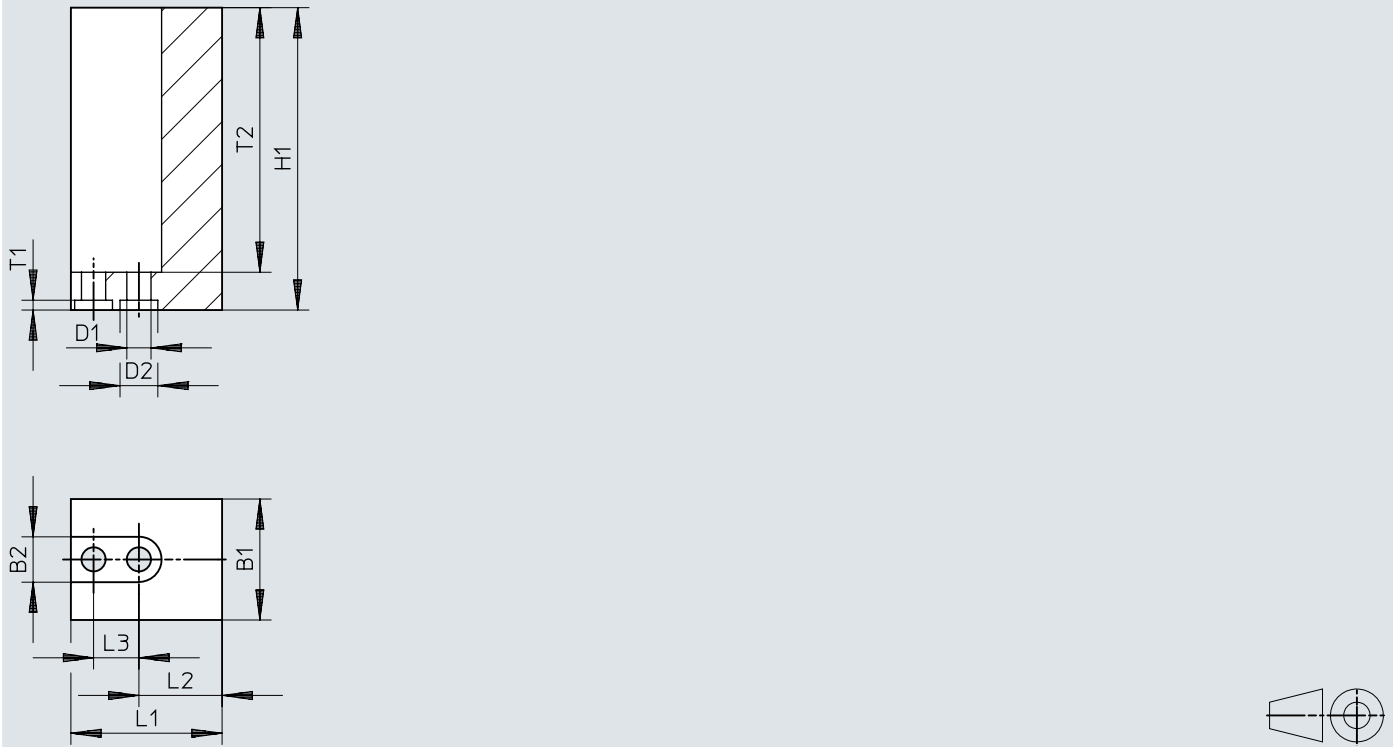
[1] Suitable screws and centering pins/sleeves included in scope of delivery.

	1)	B1	B2	B3	H1
EHAM-E20-40-E19-25	EGSC-BS-25/32	74,5	13,8	6,8	30
EHAM-E20-40-E8-35	EGSL-BS-35/45				
EHAM-E20-40-E9-20	EGSK-20/26				

1) Stroke

Dimensions

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



[1] Use the matching screws and centering sleeves included with the rotary gripper module EHMD to mount it.

	B1	B2	D1 Ø	D2 Ø	H1	L1	L2 ¹⁾	L3 ¹⁾	T1	T2
	±0,05	H13	H13	H8	±0,05	±0,05			+0,1	
BUB-HGPT-16-B	16	6	3,2	5	40	21	10	8	1,3	35

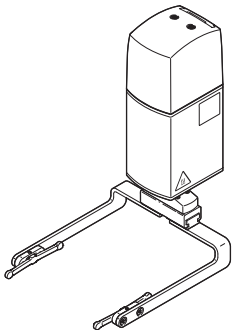
1) Tolerance for centering hole ±0.02 mm Tolerance for thread ±0.1 mm

Ordering data

Ordering data for size 40					
	Rotary module actuator system	Pneumatic gripper actuator system	Stroke per gripper jaw	Part no.	Type
	Electric	Pneumatic	5 mm	4790698	EHMD-40-RE-GP
		Electric		4788875	EHMD-40-RE-GE
			15 mm	8099502	EHMD-40-RE-GE-16

Ordering data for size 50					
	Rotary module actuator system	Pneumatic gripper actuator system	Stroke per gripper jaw	Part no.	Type
	Electric	Electric	15 mm	8176191	EHMD-50-RE-GE-15

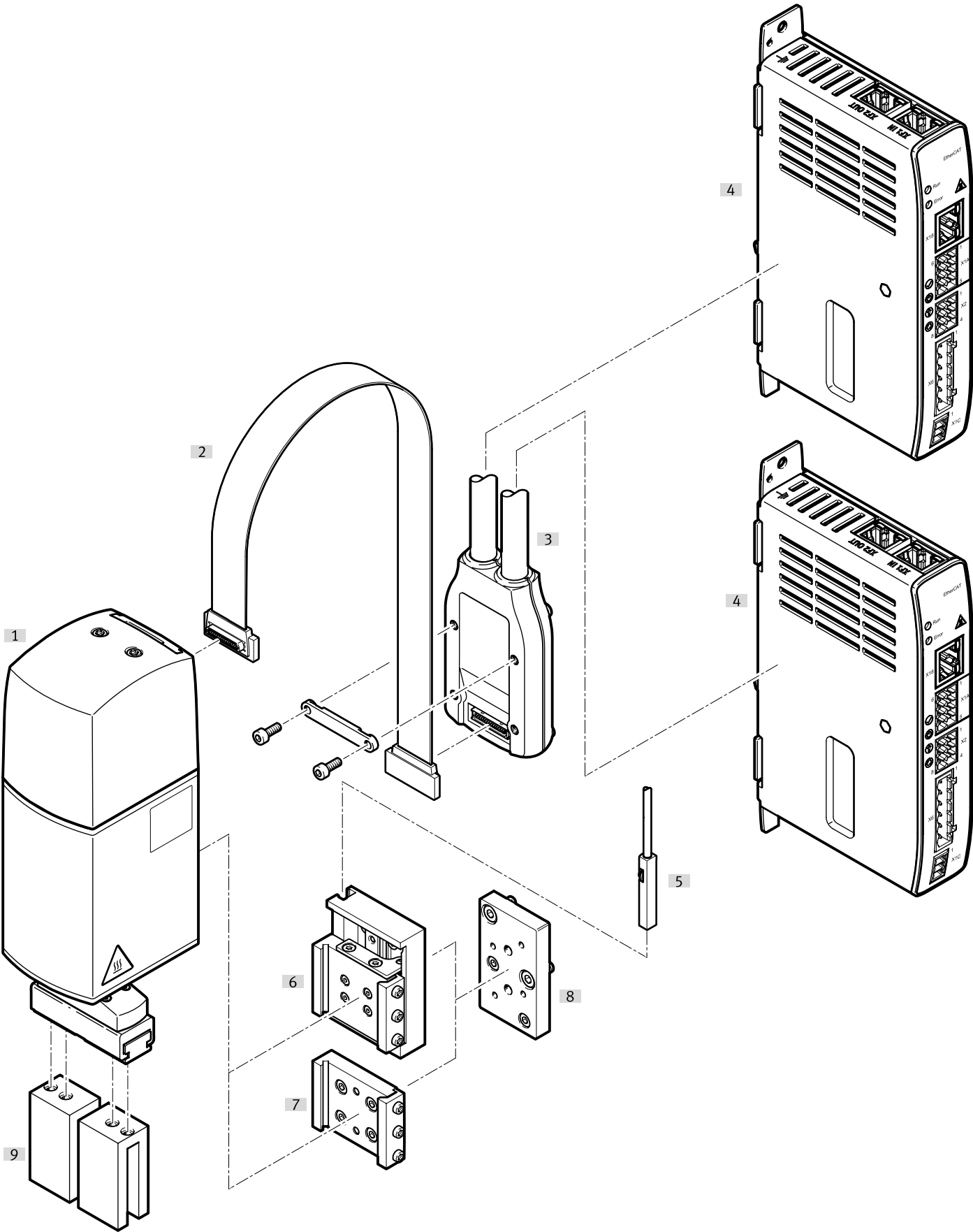
Transport of microwell plates



- Suitable for: EHMD-40-RE-GP and EHMD-40-RE-GE
- Specially developed gripper jaws enable the pick-up or transport of microwell plates (for SBS/ANSI formats).
- (see accessories for ordering details)

Peripherals overview

Peripherals overview electric gripping

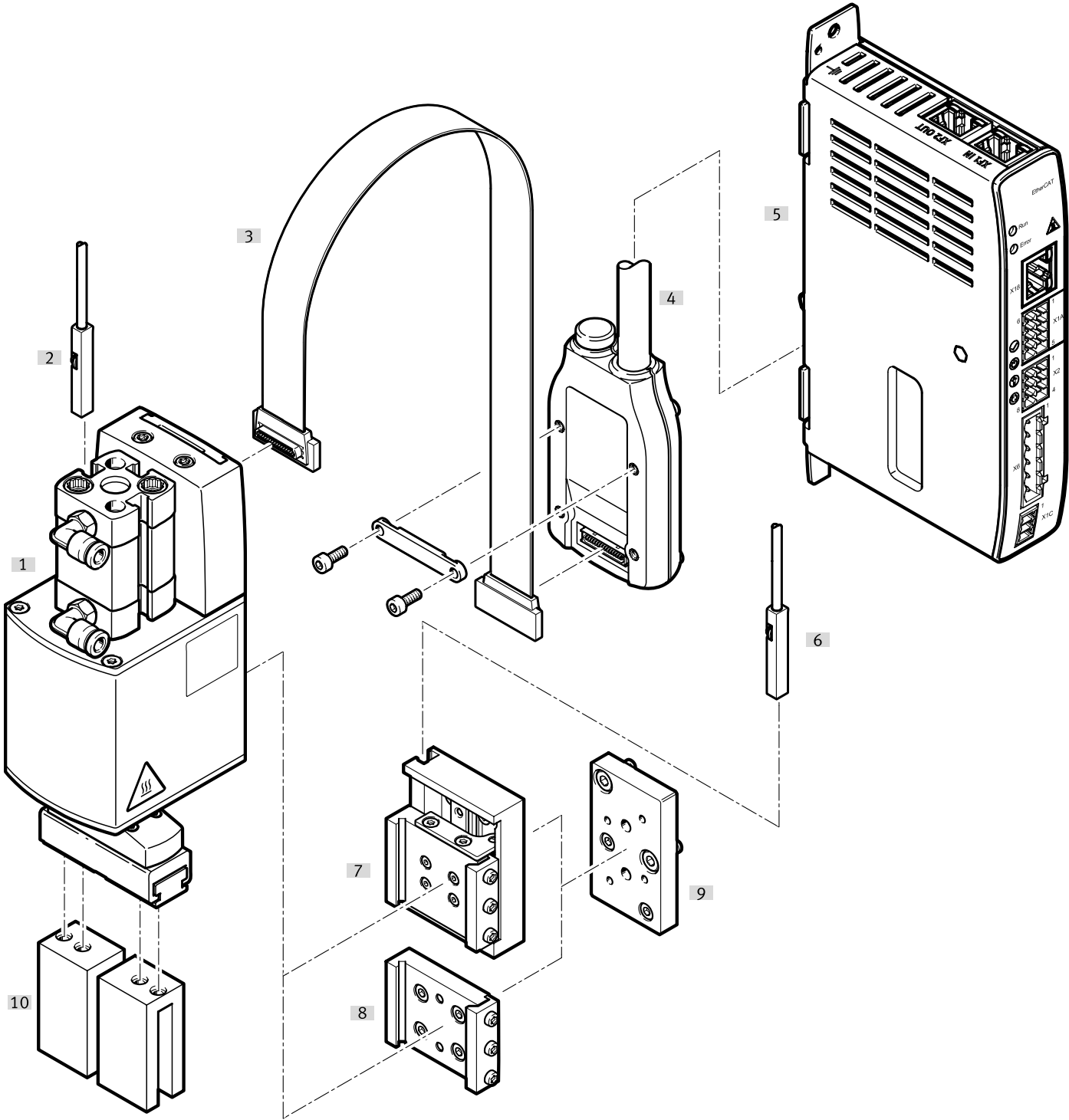


Peripherals overview

Accessories		→ Page/Internet
Type/order code	Description	
[1] Rotary gripper module EHMD	Electric actuator	ehmd
[2] Motor cable NEBM-F1W31	- Connecting cable between EHMD and motor cable NEBM-SF1 - The cable is mandatory for compliance with the EMC Directive	35
[3] Motor cable NEBM-SF1	Line with adapter between motor cable NEBM-F1 and servo drive CMMT-ST	35
[4] Servo drive CMMT-ST	For positioning the rotary or gripping motion	35
[5] Proximity switch, T-slot SIES-M8	Inductive proximity sensor for sensing the Z-compensation position	36
[6] Mounting (with Z-compensation) EHAM-E20-40-Z	- Mounting option via dovetail mounting - The mounting makes it possible to fit or remove covers from vials, for example, without additional Z-axis (Z-compensation = 12 mm)	34
[7] Mounting (rigid) EHAM-E20-40	Mounting option via dovetail mounting	34
[8] Adapter kit EHAM-E20-40-E...	To fit the mountings on the Z-axes: - Mini slide EGSC-BS-25/32 - Mini slide EGSL-BS-35/45 - Electric slide EGSK-20/26	34
[9] Gripper jaw blank BUB-HGPT-16-B	- Blanks specially matched to the gripper jaws for manufacturing gripper fingers. - Not permitted for EHMD-40-RE-GE-16	34

Peripherals overview

Peripherals overview pneumatic gripping



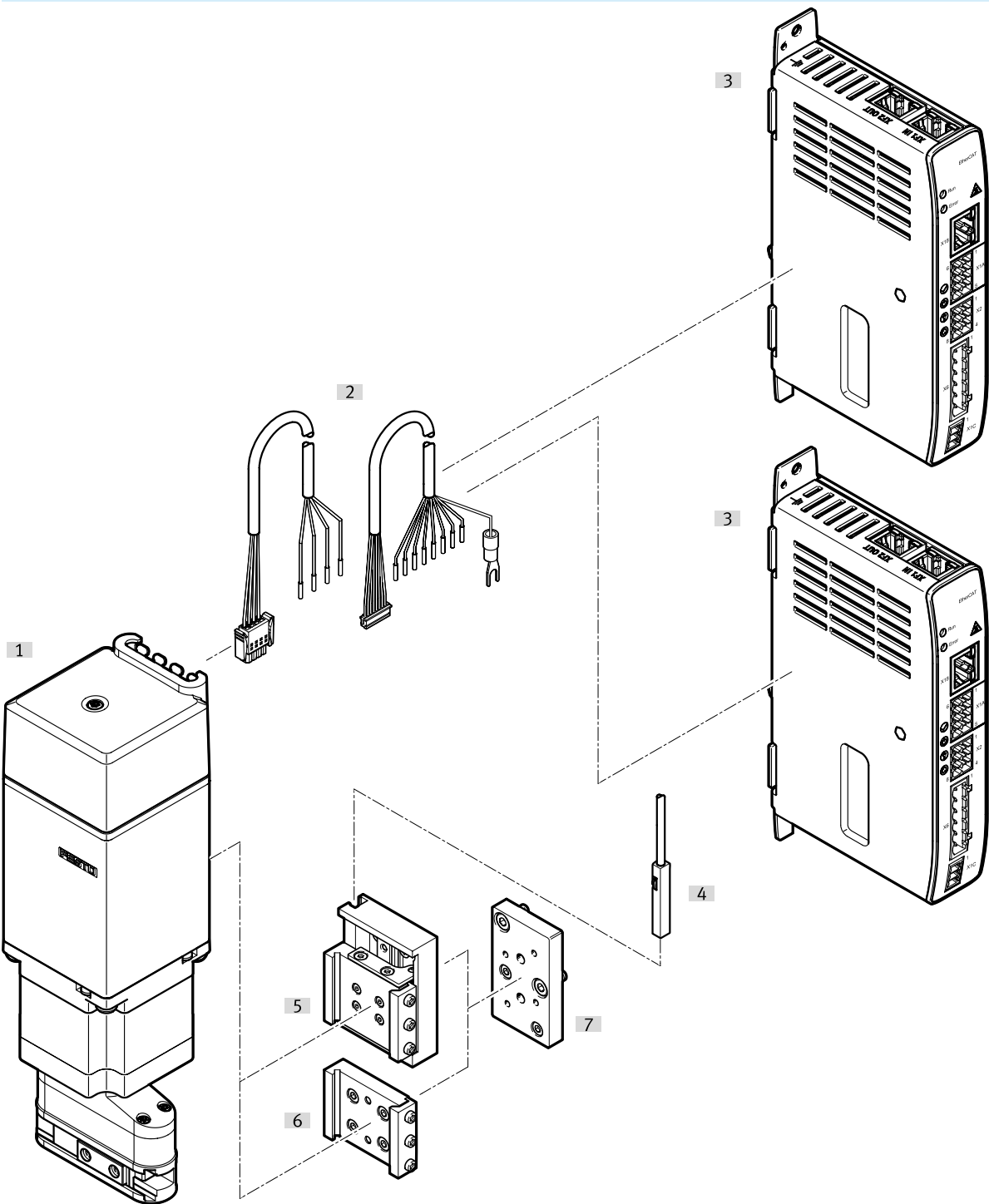
Accessories		→ Page/Internet
Type/order code	Description	
[1] Rotary gripper module EHMD	Electric actuator	ehmd
[2] Proximity switch, T-slot SMT-M8	Proximity switch for sensing the position of the gripper fingers (open/closed)	36
[2] Proximity switch, T-slot SME-M8	Proximity switch for sensing the position of the gripper fingers (open/closed)	36
[3] Motor cable NEBM-F1W31	• Connecting cable between EHMD and motor cable NEBM-SF1 • The cable is mandatory for compliance with the EMC Directive	35
[4] Motor cable NEBM-SF1	Line with adapter between motor cable NEBM-F1 and servo drive CMMT-ST	35
[5] Servo drive CMMT-ST	For positioning the rotary movement	35
[6] Proximity switch, T-slot SIES-M8	Inductive proximity sensor for sensing the Z-compensation position	36

Peripherals overview

Accessories		→ Page/Internet
Type/order code	Description	
[7] Mounting (with Z-compensation) EHAM-E20-40-Z	• Mounting option via dovetail mounting • The mounting makes it possible to fit or remove covers from vials, for example, without additional Z-axis (Z-compensation = 12 mm)	34
[8] Mounting (rigid) EHAM-E20-40	Mounting option via dovetail mounting	34
[9] Adapter kit EHAM-E20-40-E...	To fit the mountings on the Z-axes: • Mini slide EGSC-BS-25/32 • Mini slide EGSL-BS-35/45 • Electric slide EGSK-20/26	34
[10] Gripper jaw blank BUB-HGPT-16-B	Blanks specially matched to the gripper jaws for manufacturing gripper fingers	34

Peripherals overview

EHMD-50-...-GE; Gripping electric

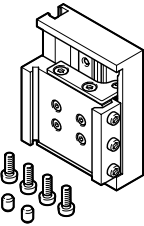


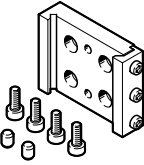
Accessories		→ Page/Internet
Type/order code	Description	
[1] Rotary gripper module EHMD	Electric actuator	ehmd
[2] Motor cable NEBM-L15G24	- Connecting cable between EHMD and motor cable NEBM-SF1 - The cable is mandatory for compliance with the EMC Directive	35
[3] Servo drive CMMT-ST	For positioning the rotary or gripping motion	35
[4] Proximity switch, T-slot SIES-M8	Inductive proximity sensor for sensing the Z-compensation position	36
[5] Mounting (with Z-compensation) EHAM-E20-40-Z	- Mounting option via dovetail mounting - The mounting makes it possible to fit or remove covers from vials, for example, without additional Z-axis (Z-compensation = 12 mm)	34
[6] Mounting (rigid) EHAM-E20-40	Mounting option via dovetail mounting	34

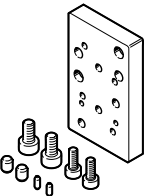
Peripherals overview

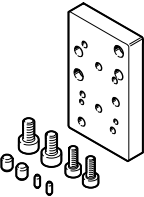
Accessories		→ Page/Internet
Type/order code	Description	
[7] Adapter kit EHAM-E20-40-E...	To fit the mountings on the Z-axes: • Mini slide EGSC-BS-25/32 • Mini slide EGSL-BS-35/45 • Electric slide EGSK-20/26	34

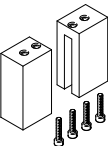
Accessories

Mounting EHAM-E20-40-Z					
	Mounting position	Adapter plate material	Product weight	Part no.	Type
	Vertical	Wrought aluminum alloy	82 g	5293408	EHAM-E20-40-Z

Mounting EHAM-E20-40					
	Mounting position	Adapter plate material	Product weight	Part no.	Type
	Any	Wrought aluminum alloy	26 g	4991965	EHAM-E20-40

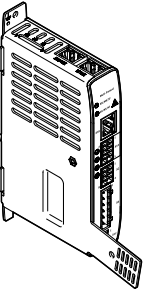
Adapter kit EHAM-E20-40-E... for EHMD-40					
	Description	Mounting position	Adapter plate material	Product weight	Part no. Type
	for EG-SL-BS-35/45	Any	Wrought aluminum alloy	24 g	8081015 EHAM-E20-40-E8-35
	for EGSC-BS-25/32			30 g	8080760 EHAM-E20-40-E19-25
	for EGSK-20/26			36 g	8081016 EHAM-E20-40-E9-20

Adapter kit EHAM-E20-40-E... for EHMD-50					
	Description	Mounting position	Adapter plate material	Product weight	Part no. Type
	for EGSC-BS-35/45	Any	Wrought aluminum alloy	24 g	8081015 EHAM-E20-40-E8-35
	for EGSC-BS-32			30 g	8080760 EHAM-E20-40-E19-25
	for EGSK-20/26			36 g	8081016 EHAM-E20-40-E9-20

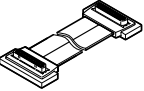
Gripper jaw blank BUB-HGPT					
	Type of mounting ¹⁾	Blank material	Product weight per gripper jaw	Part no.	Type
	Via through-hole and centering sleeve	Wrought aluminum alloy	29 g	560244	BUB-HGPT-16-B

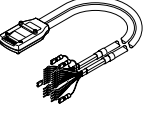
1) Not permitted for EHMD-40-RE-GE-16

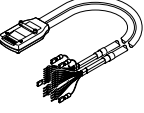
Accessories

Servo drive				Link cmmt-st
	Type of mounting ¹⁾	Fieldbus interface, protocol	Part no.	Type
	Mounting plate, screwed on, With DIN rail	EtherCAT, EtherNet/IP, PROFINET IRT	8163946	CMMT-ST-C8-1C-MP-S0

1) The NEKM assortment of plugs is included in the scope of delivery of the servo drive.

Motor cable NEBM-F1W31 for EHMD-40				Link nebm
	Description	Cable length	Part no.	Type
	for EHMD-40-...-GE and EHMD-40-...-GP, Connecting cable between EHMD and motor cable NEBM-SF1	0.2 m	8113317	NEBM-F1W31-XC-0.2-F1N-DF1W31
		0.5 m	8079819	NEBM-F1W31-XC-0.5-F1N-DF1W31

Motor cable NEBM-SF1W31 for EHMD-40				Link nebm
	Description	Cable length	Part no.	Type
	for EHMD-40-...-GE, Line with adapter between motor cable NEBM-F1 and CMMT-ST	2.6 m	5213342	NEBM-SF1W31-EH-2.6-Q15N-LE28
		5 m	8113307	NEBM-SF1W31-EH-5-Q15N-LE28
		10 m	8113309	NEBM-SF1W31-EH-10-Q15N-LE28
	for EHMD-40-...-GP, Line with adapter between motor cable NEBM-F1 and CMMT-ST	2.6 m	5213343	NEBM-SF1W31-EH-2.6-Q15N-LE14
		5 m	8113308	NEBM-SF1W31-EH-5-Q15N-LE14
		10 m	8113310	NEBM-SF1W31-EH-10-Q15N-LE14

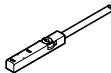
Motor cable NEBM-SF1W31, flexible lines for EHMD-40				Link nebm
	Description	Cable length	Part no.	Type
	for EHMD-40-...-GE, Line with adapter between motor cable NEBM-F1 and CMMT-ST	1 m	8219830	NEBM-SF1W31-E-1-N-LE24
		3 m	8219831	NEBM-SF1W31-E-3-N-LE24
		5 m	8219832	NEBM-SF1W31-E-5-N-LE24

Connecting cable NEBM-L15G24 for EHMD-50				Link nebm
	Description	Cable length	Part no.	Type
	for EHMD-50-..., Connecting cable between EHMD and CMMT-ST	1 m	8178801	NEBM-L15G24-ES-1-LE24
		3 m	8178802	NEBM-L15G24-ES-3-LE24
		5 m	8178803	NEBM-L15G24-ES-5-LE24
		10 m	8178804	NEBM-L15G24-ES-10-LE24

Accessories

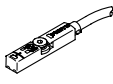
Proximity switch for T-slot, inductive

Link [sies-8m](#)

	Switching element function	Type of mounting	Switching output	Electrical connection 1, connection type	Cable length	Part no.	Type
	NC contact	Flush with T-slot, Screwed on, Can be inserted in slot from above	NPN	Cable	7.5 m	551401	SIES-8M-NO-24V-K-7,5-OE
				Cable with plug	0.3 m	551402	SIES-8M-NO-24V-K-0,3-M8D
			PNP	Cable	7.5 m	551391	SIES-8M-PO-24V-K-7,5-OE
				Cable with plug	0.3 m	551392	SIES-8M-PO-24V-K-0,3-M8D
	N.O. contact		NPN	Cable	7.5 m	551396	SIES-8M-NS-24V-K-7,5-OE
				Cable with plug	0.3 m	551397	SIES-8M-NS-24V-K-0,3-M8D
			PNP	Cable	7.5 m	551386	SIES-8M-PS-24V-K-7,5-OE
				Cable with plug	0.3 m	551387	SIES-8M-PS-24V-K-0,3-M8D

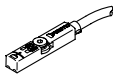
Proximity switch for T-slot, magneto-resistive

Link [smt-8m](#)

	Switching element function	Type of mounting	Switching output	Electrical connection 1, connection type	Cable length	Part no.	Type
	N.O. contact	Screwed on, Can be inserted in slot from above	NPN	Cable	2.5 m	574338	SMT-8M-A-NS-24V-E-2,5-OE
				Cable with plug	0.3 m	574339	SMT-8M-A-NS-24V-E-0,3-M8D
			PNP	Cable	2.5 m	574335	SMT-8M-A-PS-24V-E-2,5-OE
				Cable with plug	0.3 m	574334	SMT-8M-A-PS-24V-E-0,3-M8D
						574337	SMT-8M-A-PS-24V-E-0,3-M12

Proximity switch for T-slot, magnetic reed

Link [sme-8m](#)

	Switching element function	Type of mounting	Switching output	Electrical connection 1, connection type	Cable length	Part no.	Type
	N.O. contact	Screwed on, Can be inserted in slot from above	Contact-based, bipolar	Cable	2.5 m	543872	SME-8M-ZS-24V-K-2,5-OE
						543862	SME-8M-DS-24V-K-2,5-OE
					5 m	543863	SME-8M-DS-24V-K-5,0-OE
				Cable with plug	0.3 m	543861	SME-8M-DS-24V-K-0,3-M8D

Connecting cable NEBA, straight

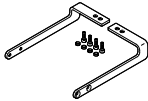
	Electrical connection 1, connection technology	Electrical connection 2, connection technology	Electrical connection 2, number of pins/wires	Cable length	Part no.	Type
	M8x1 A-coded as per EN 61076-2-104	Open end	3	2.5 m	8078223	NEBA-M8G3-U-2.5-N-LE3
				5 m	8078224	NEBA-M8G3-U-5-N-LE3

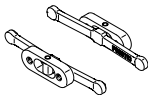
Accessories

Connecting cable 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	3	2.5 m	8078230	NEBA-M8W3-U-2.5-N-LE3
				5 m	8078231	NEBA-M8W3-U-5-N-LE3

ZBH centering sleeve					
	Sleeve material	Pack size	Product weight	Part no.	Type
	high-alloy stainless steel	10	0.5 g	562959	ZBS-4

ZBH centering sleeve					
	Sleeve material	Pack size	Product weight	Part no.	Type
	Steel	10	1 g	8146543	ZBH-5-B

Gripper jaw mounting for microwell plates (only for EHMD-40-RE-GP and EHMD-40-RE-GE)				
	Bracket material	Product weight	Part no.	Type
	high-alloy stainless steel	95 g	8191126	EHAA-G1-E20-40-GGA1-AP

Gripping jaws for microwell plates (only for EHMD-40-RE-GP and EHMD-40-RE-GE)				
	Gripper jaw material	Product weight	Part no.	Type
	high-alloy stainless steel	24.4 g	8119108	DHAS-GG-B18-16-A1