

Positioning axes DMES

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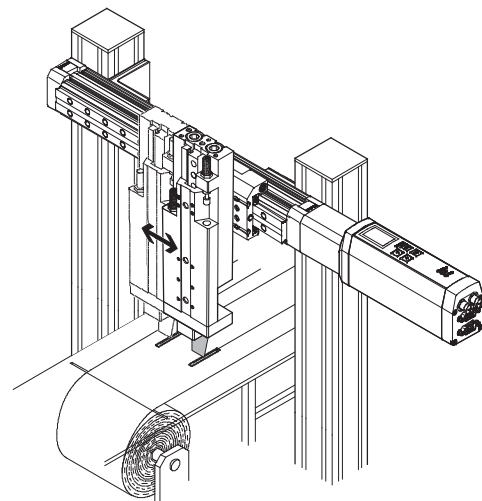
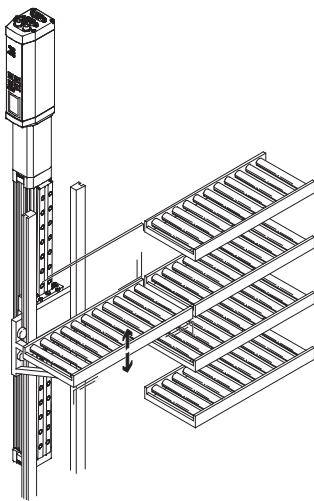
Positioning axes DMES

Key features

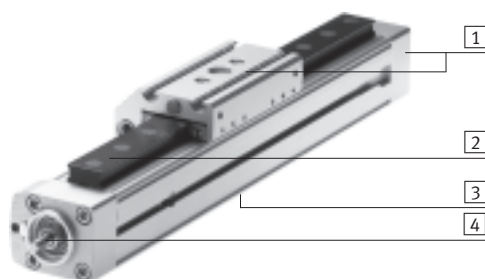
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At a glance		
General	Properties	Range of applications
DMES positioning axes are mechanical linear drives that are specially designed for movements involving high forces. The mechanical interfaces are compatible with the spindle axis DGE-SP.	• High mechanical torques • High feed forces up to 3,000 N • Self-retarding lead-screw spindle • Compact dimensions • Cost optimised	• Alternatively: – without guide – with plain-bearing guide GF – with recirculating ball bearing guide KF • For format adjustment: – in printing, paper and foil wrapping machines – in packaging machines – in feed technology

Application examples	
Adjusting sorting conveyors	Programming formats for paper or foil cutting machines



The technology in detail	
Positioning axis → 4	Motor → 48



- 1 Mechanical interfaces are identical to spindle axes DGE-...-SP
- 2 Choice of two guide variants:
 - GF: Plain-bearing guide
 - KF: Recirculating ball bearing guide
- 3 Slot for proximity sensor
- 4 Lead-screw spindle, for use with high forces

The lead-screw spindle is self-retarding, which means that slow movements cannot be excluded in the event of vibration.

The entire system with intelligent motor unit MTR-DCI is self-locking.



Motor unit
MTR-DCI

Intelligent servo motor
EMMS-ST

Servo motor
EMMS-AS

A range of specially adapted complete solutions is available for the positioning axes DMES and the motors.

Two motor interfaces are available:

- Axial motor interface
- Parallel motor interface

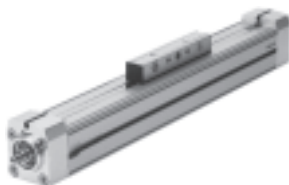
Positioning axes DMES

Key features

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Wide choice of variants

Basic design DMES, without guide



- For connection to an existing guide
- For small loads

Plain-bearing guide DMES-GF



- With standard slide (GK) or extended slide (GV)
- For medium loads
- For medium guide precision

Recirculating ball bearing guide DMES-KF



- With standard slide (GK) or extended slide (GV)
- For higher loads
- For high guide precision

Protected version DMES-GA

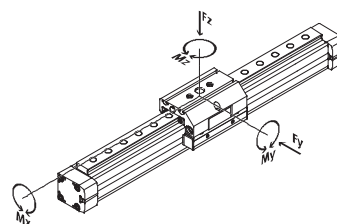
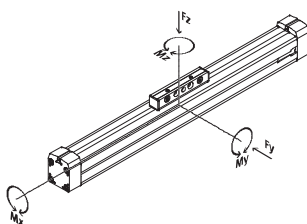


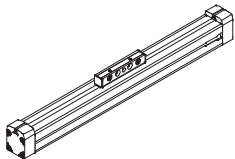
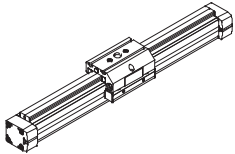
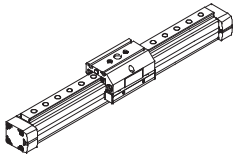
- With standard slide (GK)
- With plain or recirculating ball bearing guide as an option
- Guide and slide are fitted with a cover to protect against the ingress of particles from above and from the side

Guide characteristics

The specifications shown in the table are maximum values.

The precise values for each of the variants can be found in the relevant technical data in the catalogue.

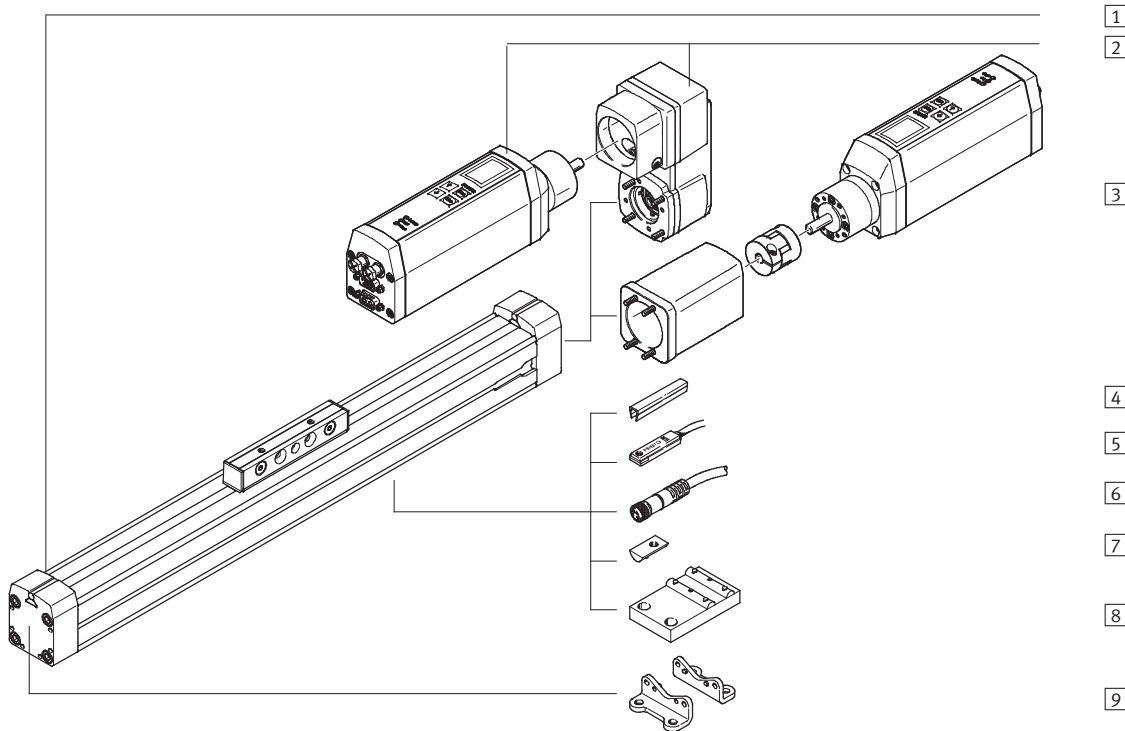


	Size	Working stroke [mm]	Speed [m/s]	Repetition accuracy [mm]	Feed force [N]	Forces and torques					→ Page/ Internet
						Fy [N]	Fz [N]	Mx [Nm]	My [Nm]	Mz [Nm]	
Basic design DMES											
	18	50 ... 400	0.05	±0.05	240	36	80	0.4	2	0.7	6
	25	50 ... 700	0.05	±0.05	500	80	100	1.3	4	1.6	
	40	50 ... 1,200	0.05	±0.05	1,000	92	390	2.2	20	4.6	
	63	50 ... 1,800	0.05	±0.07	3,000	300	900	12	80	22	
Plain-bearing guide DMES-GF											
	18	50 ... 400	0.05	±0.05	240	930	930	7	45	45	22
	25	50 ... 700	0.05	±0.05	500	1,650	1,650	23	95	95	
	40	50 ... 1,200	0.05	±0.05	1,000	3,990	3,990	89	360	360	
	63	50 ... 1,800	0.05	±0.07	3,000	7,250	7,250	290	980	980	
Recirculating ball bearing guide DMES-KF											
	18	50 ... 400	0.05	±0.05	240	930	930	7	45	45	22
	25	50 ... 700	0.05	±0.05	500	3,080	3,080	45	170	170	
	40	50 ... 1,200	0.05	±0.05	1,000	7,300	7,300	170	660	660	
	63	50 ... 1,800	0.05	±0.07	3,000	13,900	14,050	580	1,820	1,820	

Positioning axes DMES, without guide

Peripherals overview

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Variants and accessories		
Type/Order code	Brief description	→ Page/Internet
1 Positioning axis DMES	Electromechanical axis without guide	6
2 Intelligent servo unit and parallel kit U	Complete package for parallel motor attachment, comprising parallel kit and intelligent motor unit MTR-DCI	15
3 Intelligent servo unit and axial kit AX	Complete package for axial motor attachment, comprising axial kit and intelligent motor unit MTR-DCI	15
4 Slot cover B/S	For protecting against ingress of dirt	56
5 Proximity sensor SMT-8	For providing a proximity signal or safety sensing	55
6 Connecting cable KM8	For proximity sensor	55
7 Slot nut for mounting slot Y	For mounting attachments	56
8 Central support M	For mounting the axis	52
9 Foot mounting F	For mounting the axis (can only be attached to end cap, must be combined with central support)	52

Note

Servo, stepper motors and the corresponding mounting kits must be ordered separately → 48

Positioning axes DMES, without guide

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Type code

		DMES	-	25	-	500	-	AX	:	ZUB	-		2Y	2M	
Type															
DMES	Positioning axis														
Size															
Stroke [mm]															
Motor unit															
AX	Intelligent servo unit and axial kit														
U	Intelligent servo unit and parallel kit														
Accessories															
ZUB	Accessories supplied loose														
Slot cover															
...S	Sensor slot														
...B	Mounting slot														
Slot nut															
...Y	For mounting slot														
Central support															
...M	Central support														
Foot mounting															
...F	Foot mounting														

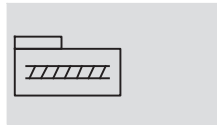
Positioning axes DMES, without guide

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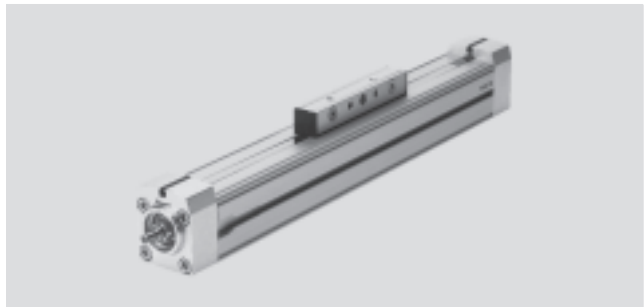
Technical data

Function

www.festo.com/en/
Spare_parts_service



-N- Size
18 ... 63
-T- Stroke length
50 ... 1,800 mm



General technical data				
Size	18	25	40	63
Design	Electromechanical linear axis with lead-screw spindle			
Guide	None			
Assembly position	Any			
Working stroke [mm]	50 ... 400	50 ... 700	50 ... 1,200	50 ... 1,800
Max. feed force F_x [N]	240	500	1,000	3,000
Max. driving torque [Nm]	0.3	0.9	3	14
Max. no-load driving torque ¹⁾ [Nm]	0.07	0.2	0.45	1.1
Max. radial force ²⁾ [N]	40	75	250	800
Max. speed [m/s]	0.05			
Max. acceleration [m/s ²]	2.5			
Repetition accuracy [mm]	±0.05			±0.07
Positioning rigidity [N/mm]	1,700	2,300	4,200	5,600
Duty cycle [%]	100			
Reversing backlash ³⁾ [mm]	< 0.1			

1) Measured at a speed of 200 rpm.

2) On drive shaft

3) In new condition

Operating and environmental conditions	
Ambient temperature ¹⁾ [°C]	0 ... +50
Protection class	IP40

1) Note operating range of proximity sensors

Weights [kg]				
Size	18	25	40	63
Basic weight with 0 mm stroke ¹⁾	0.49	0.98	2.9	10.05
Additional weight per 100 mm stroke	0.2	0.36	0.74	1.97
Moving load	0.06	0.15	0.47	1.51

1) Without coupling housing

Positioning axes DMES, without guide

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Technical data

Mass moment of inertia					
Size		18	25	40	63
J_0	[kg cm ²]	0.0028	0.0147	0.1824	1.7747
j_H per metre stroke	[kg cm ² /m]	0.0210	0.0980	0.8400	5.5600
j_L per kg working load	[kg cm ² /Kg]	0.0006	0.0023	0.0041	0.0091

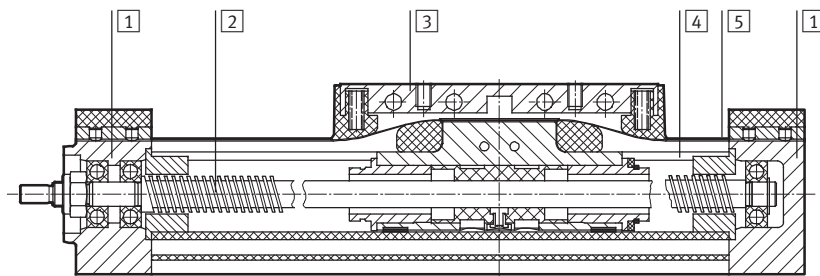
The mass moment of inertia J_A of the entire axis is calculated as follows:

$$J_A = J_0 + j_H \times \text{working stroke [m]} + j_L \times m_{\text{working load [kg]}}$$

Spindle					
Size		18	25	40	63
Diameter	[mm]	8	12	20	32
Pitch	[mm/rev.]	1.5	2.5	4	6

Materials

Sectional view



Positioning axis	
1 Cover	Wrought aluminium alloy, anodised
2 Spindle	Steel
3 Piston, driver	Wrought aluminium alloy, anodised
4 Profile	Wrought aluminium alloy, anodised
5 Cover strip	High-alloy stainless steel

Positioning axes DMES, without guide

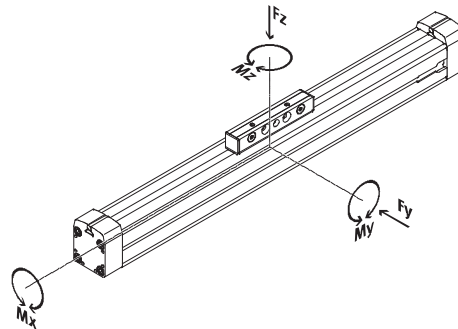
Technical data

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Characteristic load values

The indicated forces refer to the centre line of the internal diameter of the profile.

They must not be exceeded during dynamic operation. Special attention must be paid to the cushioning phase.



If the axis is subjected to more than two of the indicated forces simultaneously, the following equation must be satisfied in addition to the indicated maximum loads:

$$\frac{|F_y|}{F_{y_{max}}} + \frac{|F_z|}{F_{z_{max}}} + \frac{|M_x|}{M_{x_{max}}} + \frac{|M_y|}{M_{y_{max}}} + \frac{|M_z|}{M_{z_{max}}} \leq 1$$

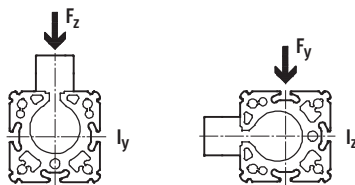
Note

Positioning axes DMES without guide are not designed to absorb lateral forces or torques on the slide.

Permissible forces and torques

Size	18	25	40	63
F _y _{max.} [N]	36	80	92	300
F _z _{max.} [N]	80	100	390	900
M _x _{max.} [Nm]	0.4	1.3	2.2	12
M _y _{max.} [Nm]	2	4	20	80
M _z _{max.} [Nm]	0.7	1.6	4.6	22

2nd moment of area



Size	18	25	40	63
I _y [cm ⁴]	6.90	20.92	76.24	587.74
I _z [cm ⁴]	6.83	21.20	71.01	464.30

Note

Sizing software
PositioningDrives
→ www.festo.com

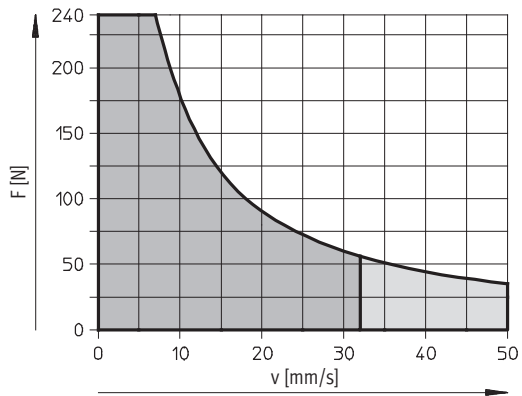
Positioning axes DMES, without guide

Technical data

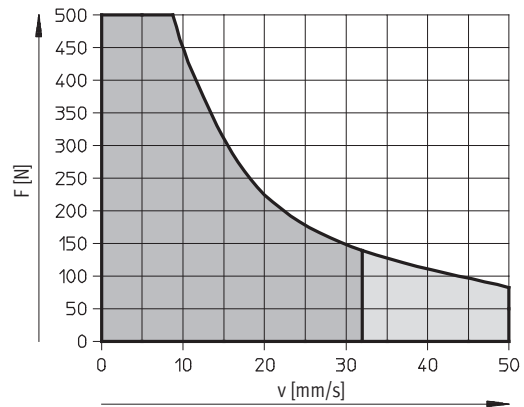
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Maximum permissible feed force F as a function of the feed speed v

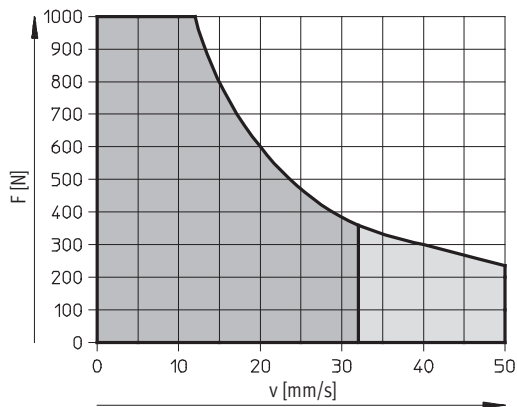
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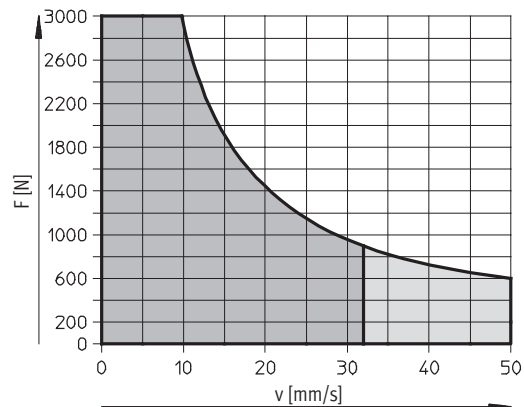
Size 25



Size 40



Size 63



- Recommended operating range
- Permissible operating range (duty cycle < 50% recommended)

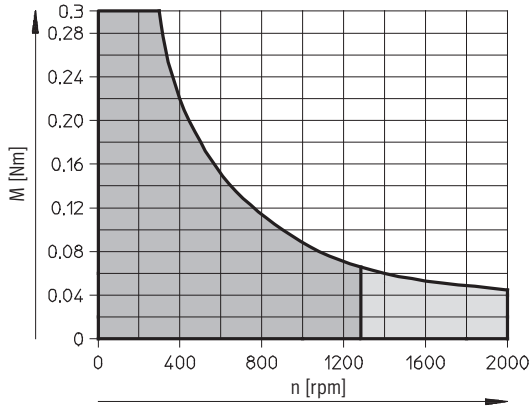
Positioning axes DMES, without guide

Technical data

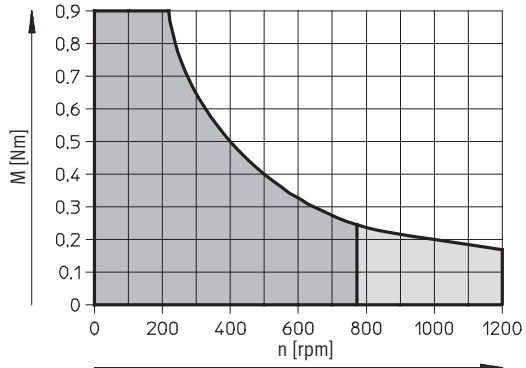
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Maximum permissible driving torque M as a function of n (rpm)

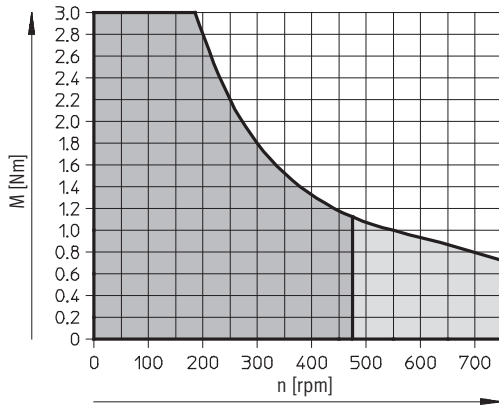
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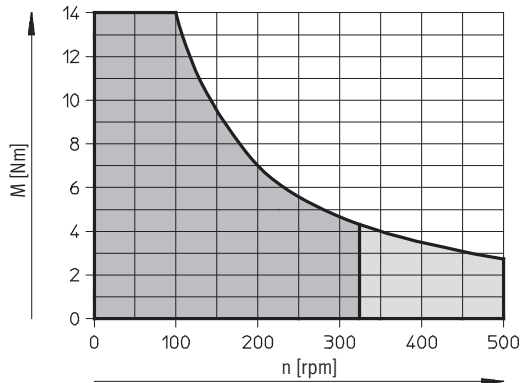
Size 25



Size 40

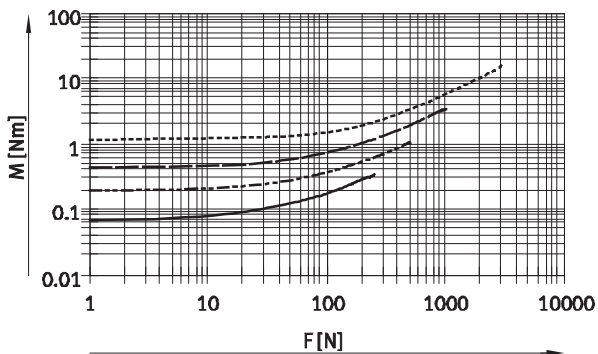


Size 63

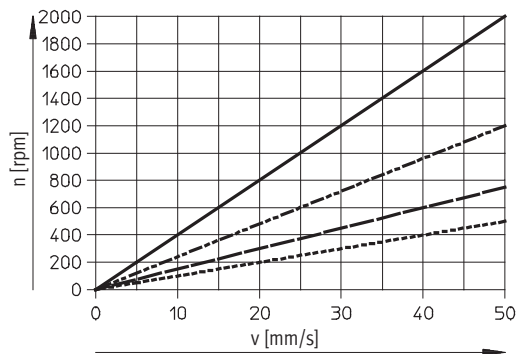


- Recommended operating range
- Permissible operating range (duty cycle < 50% recommended)

Driving torque M as a function of the feed force F



Speed as a function of the feed speed v



- DMES-18
- - - DMES-25
- · - DMES-40
- DMES-63

Technical data

Size 18

Technical drawing of a 18mm size ball valve assembly, showing three views: top view, side view, and cross-sectional view.

Top View Dimensions:

- Overall length: 147+
- Handle length: 84.6
- Handle diameter: 6^{H7}
- Handle offset: 5.5
- Body length: 73.5
- Body diameter: 26
- Mounting hole diameter: 12
- Mounting hole offset: 4.7
- Mounting hole diameter: $\varnothing 30$
- Mounting hole offset: 45°

Side View Dimensions:

- Overall length: 147+
- Handle length: 84.6
- Handle diameter: 6^{H7}
- Handle offset: 5.5
- Body length: 73.5
- Body diameter: 26
- Mounting hole diameter: 12
- Mounting hole offset: 4.7
- Mounting hole diameter: $\varnothing 30$
- Mounting hole offset: 45°

Cross-sectional View Dimensions:

- Overall length: 147+
- Handle length: 84.6
- Handle diameter: 6^{H7}
- Handle offset: 5.5
- Body length: 73.5
- Body diameter: 26
- Mounting hole diameter: 12
- Mounting hole offset: 4.7
- Mounting hole diameter: $\varnothing 30$
- Mounting hole offset: 45°

Size 25/40/63

1 Coupling housing
2 Coupling
3 Centring hole for foot mounting HP
4 Lubrication opening
+ = plus stroke length

The drawing shows a hydraulic cylinder with a coupling housing. The front view (top left) shows the cylinder body with dimensions H1, H2, H3, H4, H5, J2, D6, B5, B6, B1, B4, B3, and B2. The side view (top right) shows the cylinder body with dimensions L1, L2, L3, L4, L5, L6, L7, L8, L9, L10, L11, L12, L13, D7, D8, D9, D10, D11, D12, D13, D14, D15, D16, D17, D18, D19, D20, D21, D22, D23, D24, D25, D26, D27, D28, D29, D30, D31, D32, D33, D34, D35, D36, D37, D38, D39, D40, D41, D42, D43, D44, D45, D46, D47, D48, D49, D50, D51, D52, D53, D54, D55, D56, D57, D58, D59, D60, D61, D62, D63, D64, D65, D66, D67, D68, D69, D70, D71, D72, D73, D74, D75, D76, D77, D78, D79, D80, D81, D82, D83, D84, D85, D86, D87, D88, D89, D90, D91, D92, D93, D94, D95, D96, D97, D98, D99, D100, D101, D102, D103, D104, D105, D106, D107, D108, D109, D110, D111, D112, D113, D114, D115, D116, D117, D118, D119, D120, D121, D122, D123, D124, D125, D126, D127, D128, D129, D130, D131, D132, D133, D134, D135, D136, D137, D138, D139, D140, D141, D142, D143, D144, D145, D146, D147, D148, D149, D150, D151, D152, D153, D154, D155, D156, D157, D158, D159, D160, D161, D162, D163, D164, D165, D166, D167, D168, D169, D170, D171, D172, D173, D174, D175, D176, D177, D178, D179, D180, D181, D182, D183, D184, D185, D186, D187, D188, D189, D190, D191, D192, D193, D194, D195, D196, D197, D198, D199, D200, D201, D202, D203, D204, D205, D206, D207, D208, D209, D210, D211, D212, D213, D214, D215, D216, D217, D218, D219, D220, D221, D222, D223, D224, D225, D226, D227, D228, D229, D230, D231, D232, D233, D234, D235, D236, D237, D238, D239, D240, D241, D242, D243, D244, D245, D246, D247, D248, D249, D250, D251, D252, D253, D254, D255, D256, D257, D258, D259, D260, D261, D262, D263, D264, D265, D266, D267, D268, D269, D270, D271, D272, D273, D274, D275, D276, D277, D278, D279, D280, D281, D282, D283, D284, D285, D286, D287, D288, D289, D290, D291, D292, D293, D294, D295, D296, D297, D298, D299, D300, D301, D302, D303, D304, D305, D306, D307, D308, D309, D310, D311, D312, D313, D314, D315, D316, D317, D318, D319, D320, D321, D322, D323, D324, D325, D326, D327, D328, D329, D330, D331, D332, D333, D334, D335, D336, D337, D338, D339, D340, D341, D342, D343, D344, D345, D346, D347, D348, D349, D350, D351, D352, D353, D354, D355, D356, D357, D358, D359, D360, D361, D362, D363, D364, D365, D366, D367, D368, D369, D370, D371, D372, D373, D374, D375, D376, D377, D378, D379, D380, D381, D382, D383, D384, D385, D386, D387, D388, D389, D390, D391, D392, D393, D394, D395, D396, D397, D398, D399, D400, D401, D402, D403, D404, D405, D406, D407, D408, D409, D410, D411, D412, D413, D414, D415, D416, D417, D418, D419, D420, D421, D422, D423, D424, D425, D426, D427, D428, D429, D430, D431, D432, D433, D434, D435, D436, D437, D438, D439, D440, D441, D442, D443, D444, D445, D446, D447, D448, D449, D450, D451, D452, D453, D454, D455, D456, D457, D458, D459, D460, D461, D462, D463, D464, D465, D466, D467, D468, D469, D470, D471, D472, D473, D474, D475, D476, D477, D478, D479, D480, D481, D482, D483, D484, D485, D486, D487, D488, D489, D490, D491, D492, D493, D494, D495, D496, D497, D498, D499, D500, D501, D502, D503, D504, D505, D506, D507, D508, D509, D510, D511, D512, D513, D514, D515, D516, D517, D518, D519, D520, D521, D522, D523, D524, D525, D526, D527, D528, D529, D530, D531, D532, D533, D534, D535, D536, D537, D538, D539, D540, D541, D542, D543, D544, D545, D546, D547, D548, D549, D550, D551, D552, D553, D554, D555, D556, D557, D558, D559, D560, D561, D562, D563, D564, D565, D566, D567, D568, D569, D570, D571, D572, D573, D574, D575, D576, D577, D578, D579, D580, D581, D582, D583, D584, D585, D586, D587, D588, D589, D590, D591, D592, D593, D594, D595, D596, D597, D598, D599, D600, D601, D602, D603, D604, D605, D606, D607, D608, D609, D610, D611, D612, D613, D614, D615, D616, D617, D618, D619, D620, D621, D622, D623, D624, D625, D626, D627, D628, D629, D630, D631, D632, D633, D634, D635, D636, D637, D638, D639, D640, D641, D642, D643, D644, D645, D646, D647, D648, D649, D650, D651, D652, D653, D654, D655, D656, D657, D658, D659, D660, D661, D662, D663, D664, D665, D666, D667, D668, D669, D670, D671, D672, D673, D674, D675, D676, D677, D678, D679, D680, D681, D682, D683, D684, D685, D686, D687, D688, D689, D690, D691, D692, D693, D694, D695, D696, D697, D698, D699, D700, D701, D702, D703, D704, D705, D706, D707, D708, D709, D710, D711, D712, D713, D714, D715, D716, D717, D718, D719, D720, D721, D722, D723, D724, D725, D726, D727, D728, D729, D730, D731, D732, D733, D734, D735, D736, D737, D738, D739, D740, D741, D742, D743, D744, D745, D746, D747, D748, D749, D750, D751, D752, D753, D754, D755, D756, D757, D758, D759, D760, D761, D762, D763, D764, D765, D766, D767, D768, D769, D770, D771, D772, D773, D774, D775, D776, D777, D778, D779, D780, D781, D782, D783, D784, D785, D786, D787, D788, D789, D790, D791, D792, D793, D794, D795, D796, D797, D798, D799, D800, D801, D802, D803, D

Size	H4	H5	J2	L1	L2	L3	L6	L7	L8	L9	L11	L13			T1	T2	T3
												1)	2)	3)			
25	19.6	26.5	4	175	87.5	25	108.8	30	–	50	105	88	101	–	13	2	7.5
40	26.5	37	5	250	126	31	170.8	70	130	40	151	121	135	–	13	6	10
63	44.5	61	8	328	164	36	233.8	110	190	70	196	150	150	150	21	6	12.5

- 2013/05 – Subject to change

Positioning axes DMES, without guide

Technical data

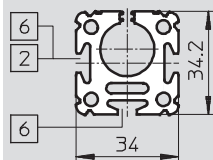
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Dimensions

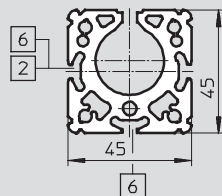
Download CAD Data → www.festo.com/us/cad

Profile

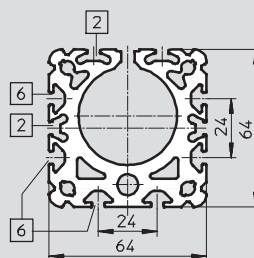
Size 18



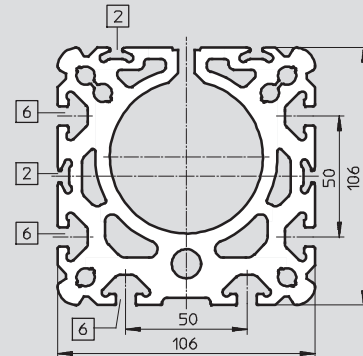
Size 25



Size 40



Size 63



2 Sensor slot for proximity sensor

6 Mounting slot for slot nut NST

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13

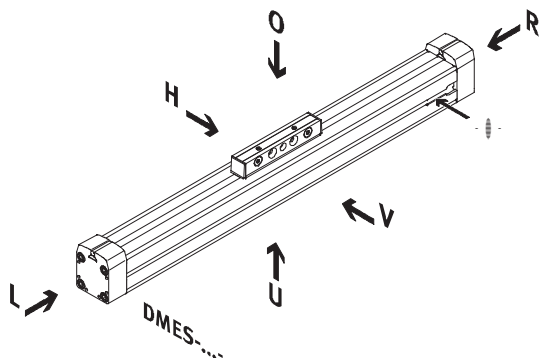
Positioning axes DMES, without guide

Ordering data – Modular products

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Order code

Mandatory data



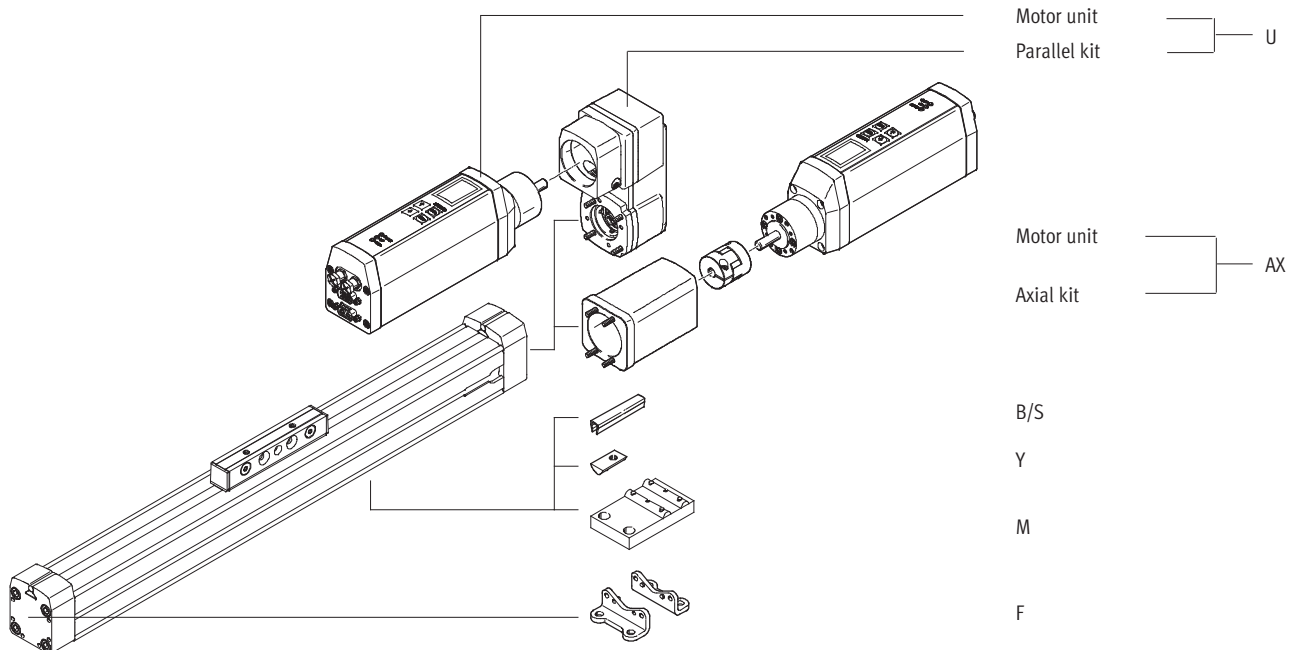
Note

The insertion point for the proximity sensor is located on the right-hand side of the positioning axis.

O top
U underneath
V front
H rear
R right
L left

Order code

Options



Positioning axes DMES, without guide

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Ordering data – Modular products

M Mandatory data				O Options		
Module No.	Function	Size	Stroke	Motor unit	Accessories	Accessories supplied loose
533 699	DMES	18	50 ... 1,800	AX U		...S, ...B, ...Y, ...M, ...F
533 700		25				
533 701		40				
533 702		63				
Order example 533 700 - DMES - 25 - 700 - : ZUB - 2S2Y2M						
MTR-DCI-...S-...SC-E-...-...IO						

Ordering table							
Size	18	25	40	63	Condition s	Code	Enter code
M Module No.	533 699	533 700	533 701	533 702			
Function	Positioning axis without guided slide					DMES	DMES
Size	18	25	40	63		-...	
Stroke [mm]	50 ... 400	50 ... 700	50 ... 1,200	50 ... 1,800		-...	
O Motor unit	Axial kit and motor unit (enclosed separately)				1	-AX	
	Parallel kit and motor unit (enclosed separately)				1	U	
Accessories	Supplied separately					:ZUB-	:ZUB-
Slot cover	Sensor slot	1 ... 10				...S	
	Mounting slot	-	-	1 ... 10		...B	
Slot nut	Mounting slot	1 ... 10				...Y	
Central support		1 ... 10				...M	
Foot mounting		1 ... 10				...F	

1 AX, U Order processing for intelligent motor unit MTR-DCI → 44.

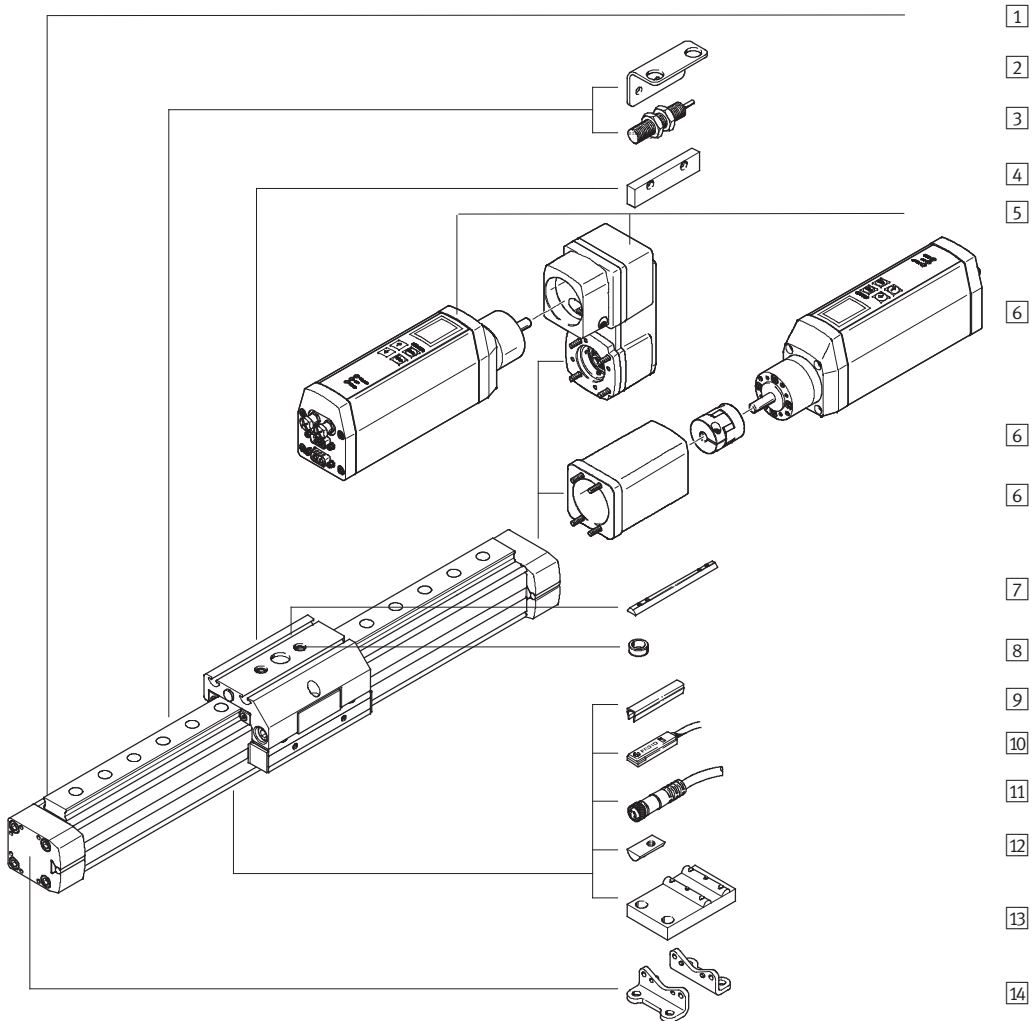
Transfer order code

	DMES	-		-		-		:	ZUB	-	
MTR-DCI-...S-...SC-E-...-...IO											

Positioning axes DMES-GF/-KF, with guide

Peripherals overview

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Positioning axes DMES-GF/-KF, with guide

Peripherals overview

Variants and accessories					
Type/Order code	Brief description	GK/GV	GA	➔ Page/Internet	
1 Positioning axis DMES	Electromechanical axis with spindle and plain-bearing guide or recirculating ball bearing guide	■	■	20	
2 Sensor retainer T	Adapter for mounting the inductive proximity sensors on the axis	■	–	51	
3 Inductive proximity sensor SIEN	For providing a proximity signal or safety sensing	■	–	53	
4 Switching lug L	For sensing the slide position with inductive proximity sensors	■	–	51	
5 Motor unit and parallel kit U	Complete package for parallel motor attachment, comprising parallel kit and intelligent motor unit MTR-DCI	■	■	41	
6 Motor unit and axial kit AX	Complete package for axial motor attachment, comprising axial kit and intelligent motor unit MTR-DCI	■	■	41	
7 Slot nut for slide X	For mounting loads and attachments on the slide	■	■	54	
8 Centring sleeves Z	For centring loads and attachments on the slide	■	■	54	
9 Slot cover B/S	For protecting against ingress of dirt	■	■	54	
10 Proximity sensor SMT-8	For providing a proximity signal or safety sensing	■	■	53	
11 Connecting cable KM8	For proximity sensor	■	■	53	
12 Slot nut for mounting slot Y	For mounting attachments	■	■	54	
13 Central support M	For mounting the axis	■	■	50	
14 Foot mounting F	For mounting the axis (can only be attached to end cap, must be combined with central support)	■	■	50	

GK: Standard slide
GV: Extended slide
GA: Protected version

Note

Servo, stepper motors and the corresponding mounting kits must be ordered separately ➔ 46

Positioning axes DMES-GF/-KF, with guide

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Type code

		DMES	-	25	-	500	-	KF	-	GK	-	SH	-		-	AX
Type																
DMES	Positioning axis															
Size																
Stroke [mm]																
Guide																
GF	Plain-bearing guide															
KF	Recirculating ball bearing guide															
Slide																
GK	Standard slide															
GV	Extended slide															
GA	Protected version															
Slide attachment position																
SV	Front															
SH	Rear															
Additional slide																
KL	Left															
KR	Right															
Motor unit																
AX	Motor unit and axial kit															
U	Motor unit and parallel kit															

Positioning axes DMES-GF/-KF, with guide

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Type code

		: ZUB	-		2X	2M		Z	2T	L
Accessories										
ZUB	Accessories supplied loose									
Slot cover										
...S	Sensor slot									
...B	Mounting slot									
Slot nut										
...Y	For mounting slot									
...X	For slide									
Central support										
...M	Central support									
Foot mounting										
...F	Foot mounting									
Centring sleeves										
...Z	For slide									
Mounting bracket										
...T	For inductive proximity sensors									
Switching lug										
L	Switching lug									

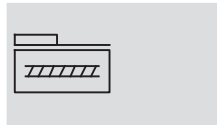
Positioning axes DMES-GF/-KF, with guide

FESTO

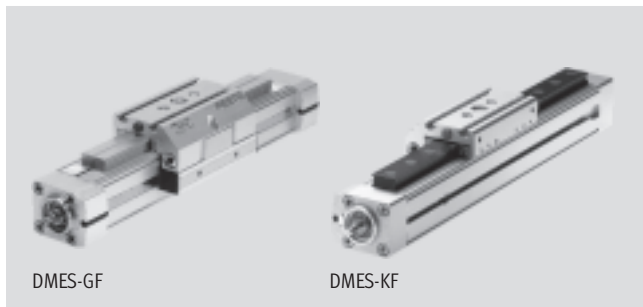
Technical data

Function

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



-N- Size
18 ... 63
-T- Stroke length
50 ... 1,800 mm



General technical data				
Size	18	25	40	63
Design	Electromechanical linear axis with lead-screw spindle			
Guide	With plain-bearing guide or recirculating ball bearing guide			
Assembly position	Any			
Working stroke [mm]	50 ... 400	50 ... 700	50 ... 1,200	50 ... 1,800
Max. feed force F_x [N]	240	500	1,000	3,000
Max. driving torque [Nm]	0.3	0.9	3	14
Max. no-load driving torque ¹⁾ [Nm]	0.07	0.2	0.45	1.1
Max. radial force ²⁾ [N]	40	75	250	800
Max. speed [m/s]	0.05			
Max. acceleration [m/s ²]	2.5			
Repetition accuracy [mm]	±0.05			±0.07
Positioning rigidity [N/mm]	1,700	2,300	4,200	5,600
Duty cycle [%]	100			
Reversing backlash ³⁾ [mm]	< 0.1			

1) Measured at a speed of 200 rpm.

2) On drive shaft

3) In new condition

Operating and environmental conditions	
Ambient temperature ¹⁾ [°C]	0 ... +50
Protection class	IP40

1) Note operating range of proximity sensors

Weights [kg]									
Size		18		25		40		63	
Guide type		GF	KF	GF	KF	GF	KF	GF	KF
Basic weight with 0 mm stroke ¹⁾	GK	0.77	0.93	1.52	1.70	4.11	5.06	13.31	16.48
	GV	1.16	1.37	2.34	2.61	6.53	8.06	21.75	27.14
	GA	1.49	1.65	2.73	2.90	7.15	8.14	–	–
Additional weight per 100 mm stroke	GK	0.238	0.294	0.466	0.547	0.841	1.170	2.079	2.958
	GV	0.238	0.294	0.466	0.547	0.841	1.170	2.079	2.958
	GA	0.313	0.369	0.556	0.638	0.965	1.294	–	–
Moving load	GK	0.29	0.38	0.55	0.66	1.49	1.83	4.48	5.29
	GV	0.48	0.56	0.88	0.99	2.38	2.72	7.06	7.88
	GA	0.71	0.81	1.19	1.30	2.90	3.24	–	–
Additional slide	KL/KR	–	0.29	–	0.440	–	1.21	–	3.55

1) Without coupling housing

Positioning axes DMES-GF/-KF, with guide

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Technical data

Mass moment of inertia									
Size		18		25		40		63	
Guide type		GF	KF	GF	KF	GF	KF	GF	KF
J_0	GK [kg cm ²]	0.0030	0.0030	0.0156	0.0158	0.1865	0.1879	1.8018	1.8093
	GV [kg cm ²]	0.0048	0.0049	0.0263	0.0265	0.3327	0.3340	3.2184	3.2258
	GA [kg cm ²]	0.0038	0.0039	0.0209	0.0212	0.2463	0.2476	–	–
j_H per metre stroke		[kg cm ² /m]		0.0210		0.0980		0.8400	
j_L per kg working load		[kg cm ² /Kg]		0.0006		0.0023		0.0041	
j_W for additional slide		[kg cm ²]		–		0.0010		–	

The mass moment of inertia J_A of the entire axis is calculated as follows:

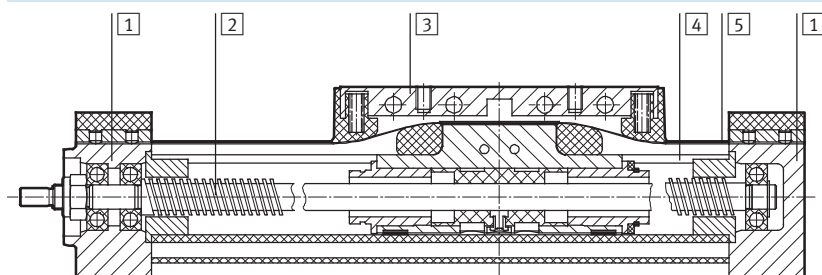
$$J_A = J_0 + j_H \times \text{working stroke [m]} + j_L \times m_{\text{working load [kg]}} + i \times j_W$$

i = Number of additional slides

Spindle					
Size		18	25	40	63
Diameter	[mm]	8	12	20	32
Pitch	[mm/rev.]	1.5	2.5	4	6

Materials

Sectional view



Positioning axis		
1	Cover	Wrought aluminium alloy, anodised
2	Spindle	Steel
3	Piston, driver	Wrought aluminium alloy, anodised
4	Profile	Wrought aluminium alloy, anodised
5	Cover strip	High-alloy stainless steel
–	Guide rail for GF	Anodised aluminium
–	Guide rail for KF	Hardened steel

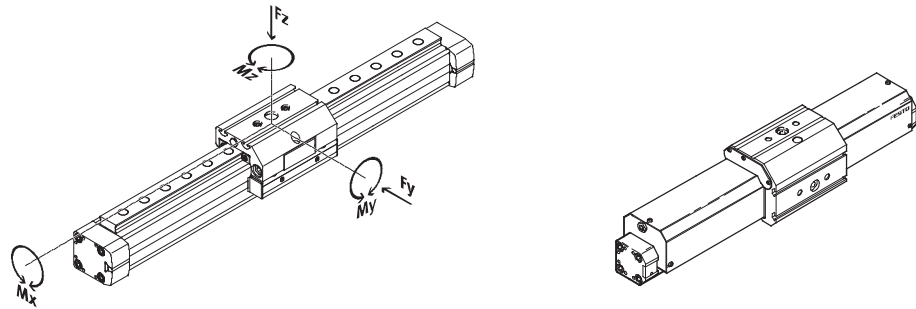
Positioning axes DMES-GF/-KF, with guide

Technical data

FESTO

Characteristic load values for axis with standard slide GK or protected version GA

The indicated forces and torques refer to the centre of the guide rail. They must not be exceeded during dynamic operation. Special attention must be paid to the cushioning phase.

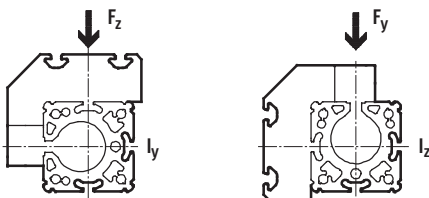


If the axis is subjected to more than two of the indicated forces and torques simultaneously, the following equation must be satisfied in addition to the indicated maximum loads:

$$\frac{|F_y|}{F_{y_{max}}} + \frac{|F_z|}{F_{z_{max}}} + \frac{|M_x|}{M_{x_{max}}} + \frac{|M_y|}{M_{y_{max}}} + \frac{|M_z|}{M_{z_{max}}} \leq 1$$

Permissible forces and torques									
Size	18		25		40		63		
Guide type	GF	KF	GF	KF	GF	KF	GF	KF	
F _y _{max.} [N]	930	930	1,760	2,600	3,070	4,300	3,880	6,600	
F _z _{max.} [N]	930	930	1,760	2,600	4,300	4,300	6,600	6,600	
M _x _{max.} [Nm]	7	7	24	45	98	160	220	400	
M _y _{max.} [Nm]	23	23	52	85	210	330	580	910	
M _z _{max.} [Nm]	23	23	52	85	210	330	580	910	

2nd moment of area



Size	18		25		40		63		
Guide type	GF	KF	GF	KF	GF	KF	GF	KF	
I _y [cm ⁴]	11.19	14.37	39.10	47.60	125.38	176.24	709.04	992.06	
I _z [cm ⁴]	7.11	7.16	25.85	23.34	84.76	95.43	614.44	693.35	

Note

Sizing software
PositioningDrives
→ www.festo.com

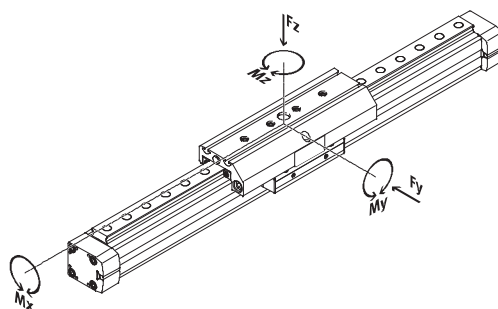
Positioning axes DMES-GF/-KF, with guide

FESTO

Technical data

Characteristic load values for axis with extended slide GV

The indicated forces and torques refer to the centre of the guide rail. They must not be exceeded during dynamic operation. Special attention must be paid to the cushioning phase.

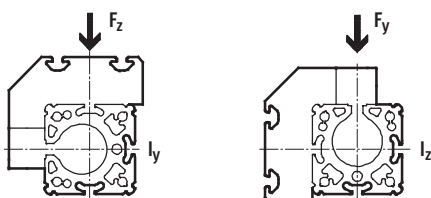


If the axis is subjected to more than two of the indicated forces and torques simultaneously, the following equation must be satisfied in addition to the indicated maximum loads:

$$\frac{|F_y|}{F_{y_{\max.}}} + \frac{|F_z|}{F_{z_{\max.}}} + \frac{|M_x|}{M_{x_{\max.}}} + \frac{|M_y|}{M_{y_{\max.}}} + \frac{|M_z|}{M_{z_{\max.}}} \leq 1$$

Permissible forces and torques									
Size	18		25		40		63		
Guide type	GF	KF	GF	KF	GF	KF	GF	KF	
F _y _{max.} [N]	930	930	1,650	3,080	3,990	7,300	7,250	13,900	
F _z _{max.} [N]	930	930	1,650	3,080	3,990	7,300	7,250	14,050	
M _x _{max.} [Nm]	7	7	23	45	89	170	290	580	
M _y _{max.} [Nm]	45	45	95	170	360	660	980	1,820	
M _z _{max.} [Nm]	45	45	95	170	360	660	980	1,820	

2nd moment of area



Size	18		25		40		63		
Guide type	GF	KF	GF	KF	GF	KF	GF	KF	
I _y [cm ⁴]	11.19	14.37	39.10	47.60	125.38	176.24	709.04	992.06	
I _z [cm ⁴]	7.11	7.16	25.85	23.34	84.76	95.43	614.44	693.35	

Positioning axes DMES-GF/-KF, with guide

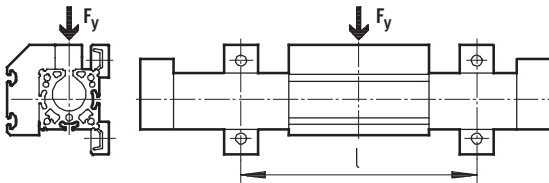
Technical data

FESTO

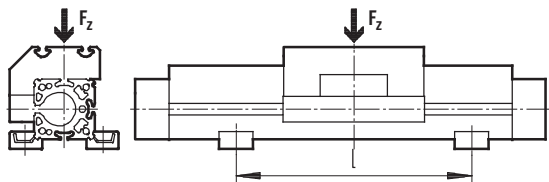
Deflection of the positioning axis as a function of the working load F and the support span l

The following diagrams can be used to determine the deflection of a positioning axis supported externally at both ends (see drawing below). A differentiation is made between two load directions. The axis may also need to be supported with central supports MUP in order to limit deflection in the case of large strokes.

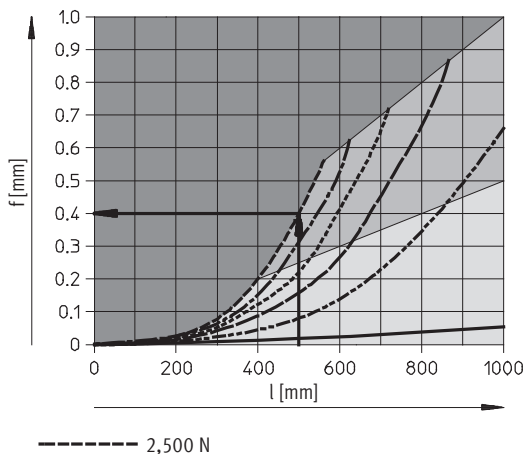
Deflection along the y-axis



Deflection along the z-axis



Example showing how to determine deflection



Impermissible range:	The positioning axis may not be used.
Static range:	The slide must not be moved under load.
Static and dynamic range:	The slide must be moved under load.

Given:

Positioning axis
DMES-25-700-KF...

Working stroke = 700 mm
Total length of the positioning axis,
dimensional drawing → 31
700 mm + 175 mm = 875 mm
Working load F = 2,500 N
Support span l = 500 mm

To be found:

Deflection f

Procedure:

A support span of 500 mm (see X-axis) and a working load of 2,500 N (see characteristic curve) produces a deflection of 0.4 mm.

Note:

The slide may not be moved under this load as the operating point is in the static area of the diagram. In order to be able to operate the slide dynamically, the support span must be reduced to 400 mm.

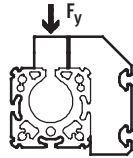
Positioning axes DMES-GF/-KF, with guide

FESTO

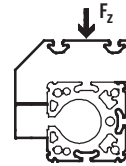
Technical data

Deflection of the positioning axis as a function of the working load F and the working stroke l

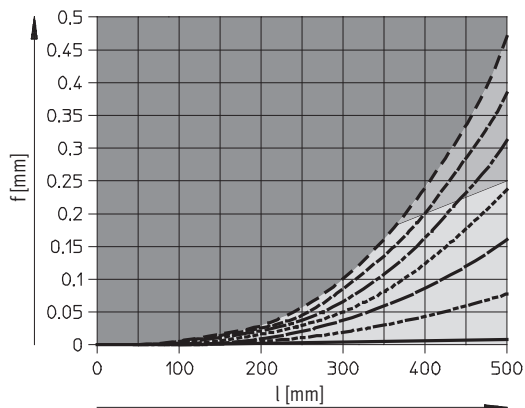
Along the y-axis



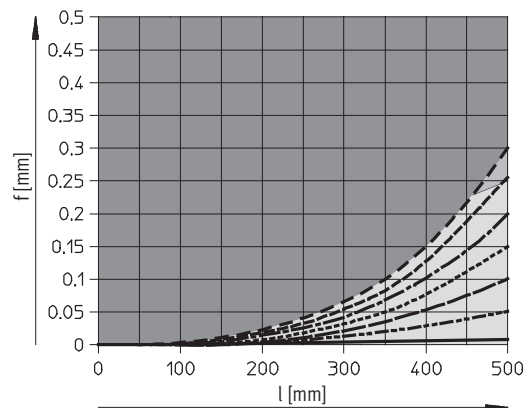
Along the z-axis



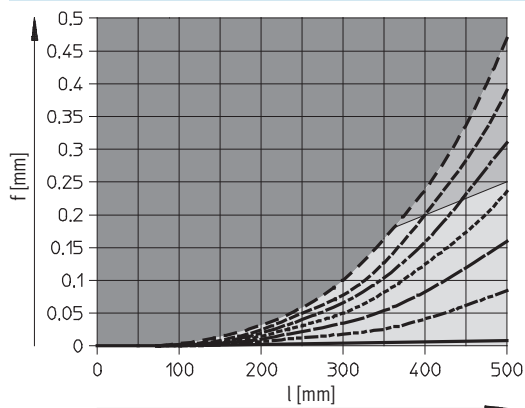
DMES-18-GF, with plain-bearing guide



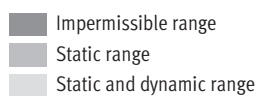
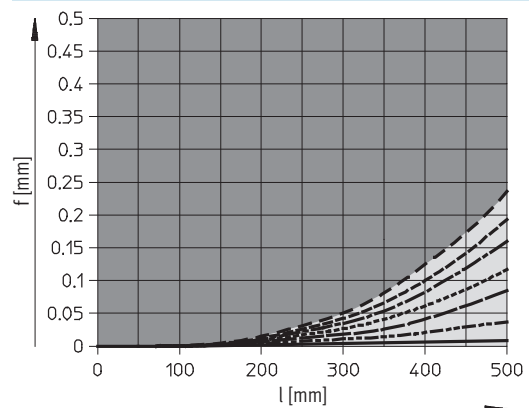
DMES-18-GF, with plain-bearing guide



DMES-18-KF, with recirculating ball bearing guide



DMES-18-KF, with recirculating ball bearing guide



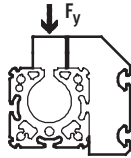
Positioning axes DMES-GF/-KF, with guide

FESTO

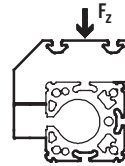
Technical data

Deflection of the positioning axis as a function of the working load F and the working stroke l

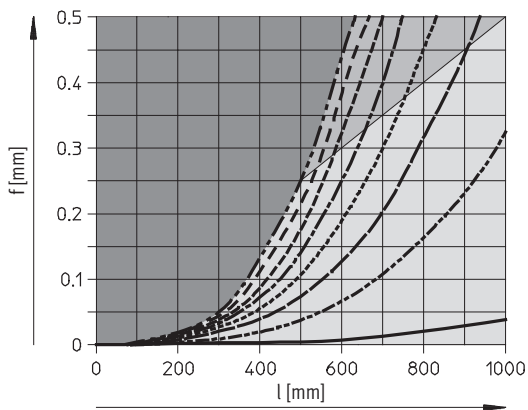
Along the y-axis



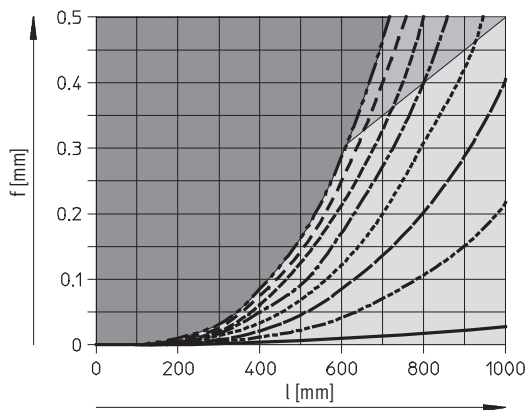
Along the z-axis



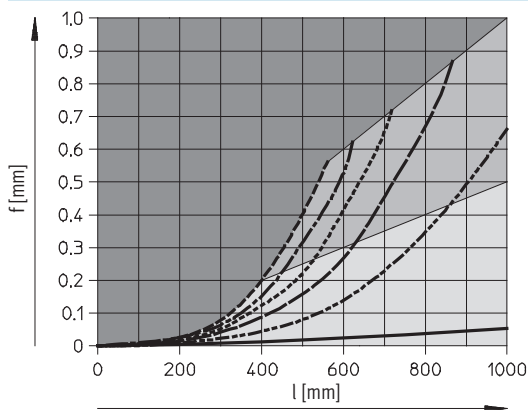
DMES-25-GF, with plain-bearing guide



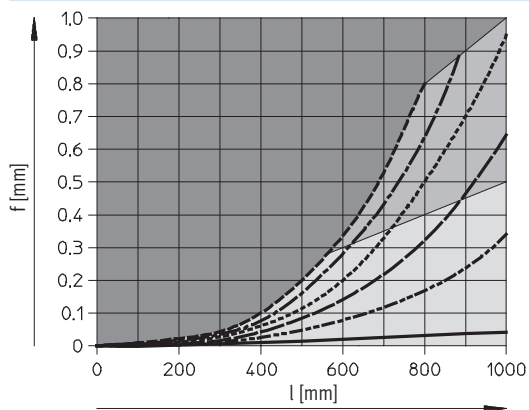
DMES-25-GF, with plain-bearing guide



DMES-25-KF, with recirculating ball bearing guide



DMES-25-KF, with recirculating ball bearing guide



- Impermissible range
- Static range
- Static and dynamic range

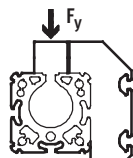
Positioning axes DMES-GF/-KF, with guide

FESTO

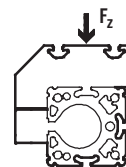
Technical data

Deflection of the positioning axis as a function of the working load F and the working stroke l

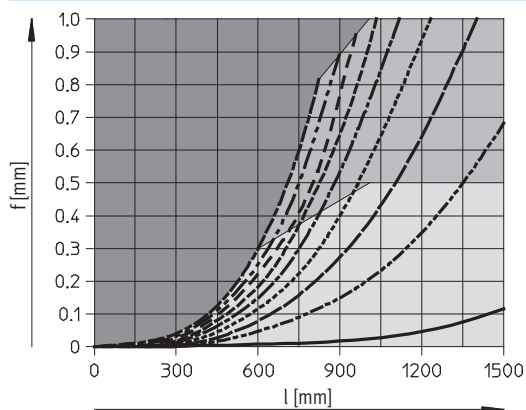
Along the y-axis



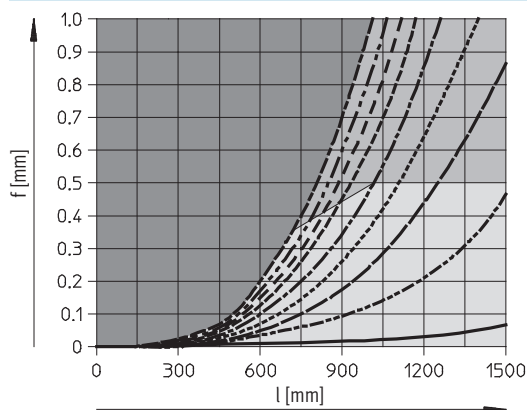
Along the z-axis



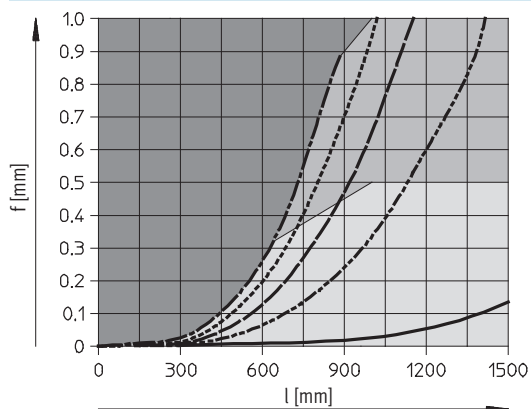
DMES-40-GF, with plain-bearing guide



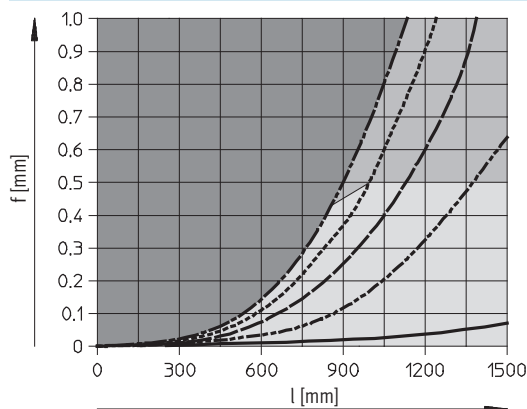
DMES-40-GF, with plain-bearing guide



DMES-40-KF, with recirculating ball bearing guide



DMES-40-KF, with recirculating ball bearing guide



- Impermissible range
- Static range
- Static and dynamic range

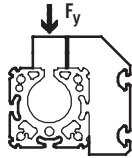
Positioning axes DMES-GF/-KF, with guide

FESTO

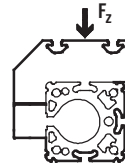
Technical data

Deflection of the positioning axis as a function of the working load F and the working stroke l

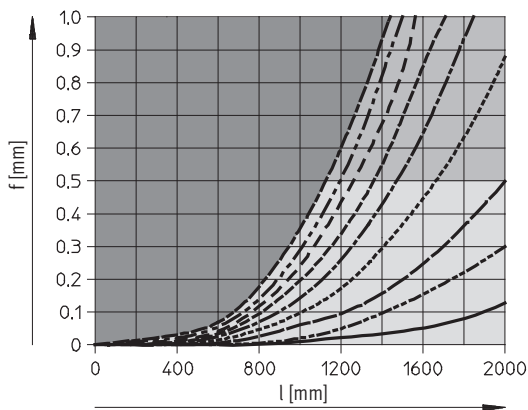
Along the y-axis



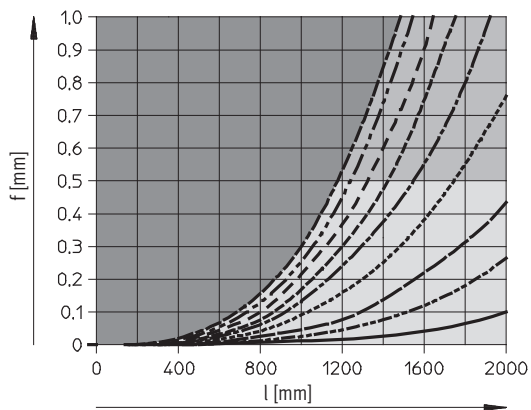
Along the z-axis



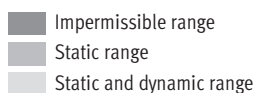
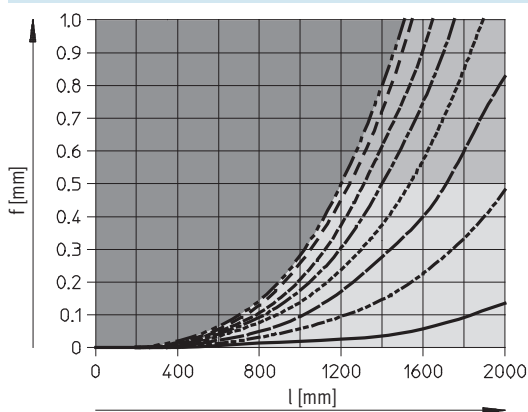
DMES-63-GF, with plain-bearing guide



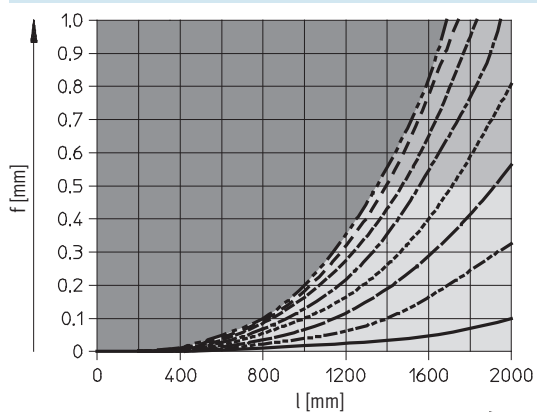
DMES-63-GF, with plain-bearing guide



DMES-63-KF, with recirculating ball bearing guide



DMES-63-KF, with recirculating ball bearing guide



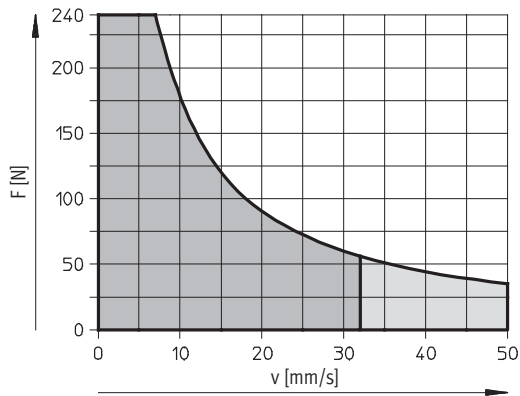
Positioning axes DMES-GF/-KF, with guide

Technical data

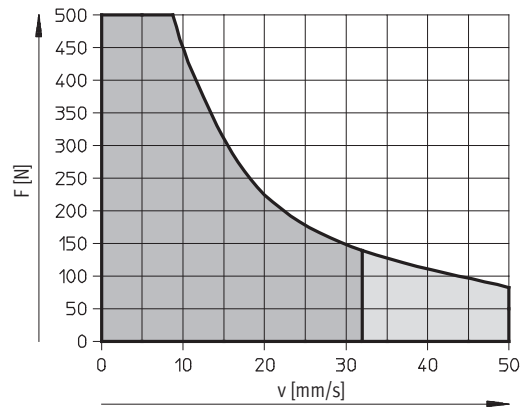
FESTO

Maximum permissible feed force F as a function of the feed speed v

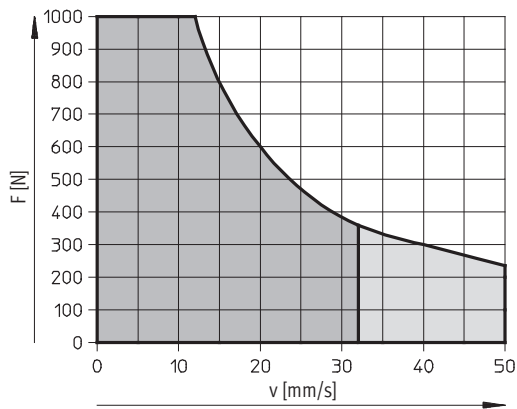
Size 18



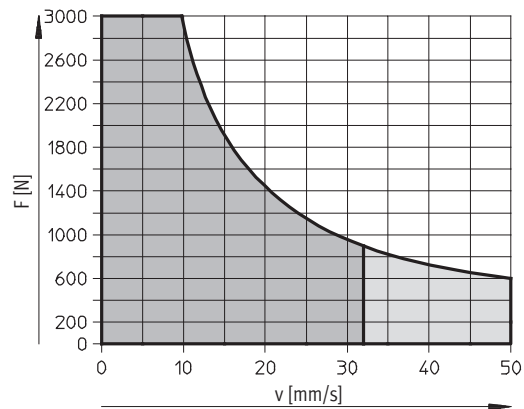
Size 25



Size 40



Size 63



- Recommended operating range
- Permissible operating range (duty cycle < 50% recommended)

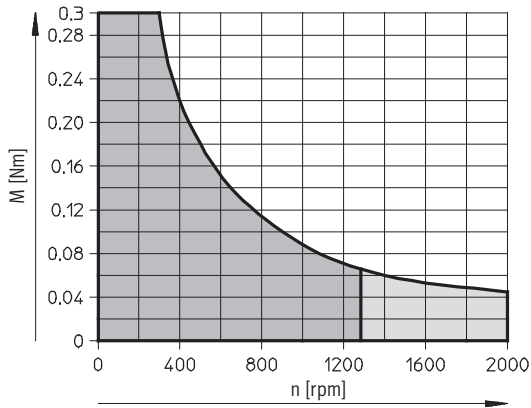
Positioning axes DMES-GF/-KF, with guide

Technical data

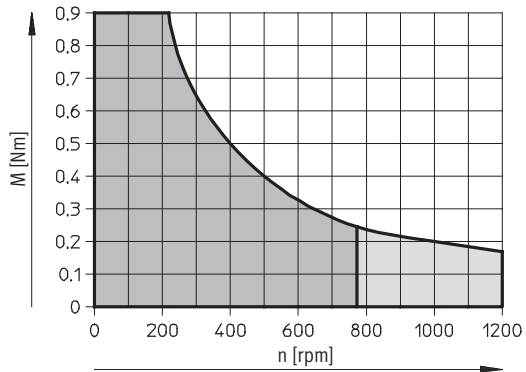
FESTO

Maximum permissible driving torque M as a function of n (rpm)

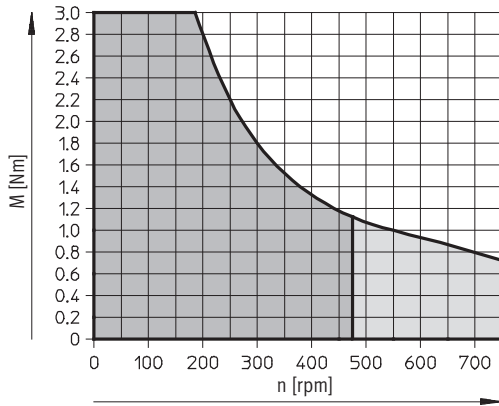
Size 18



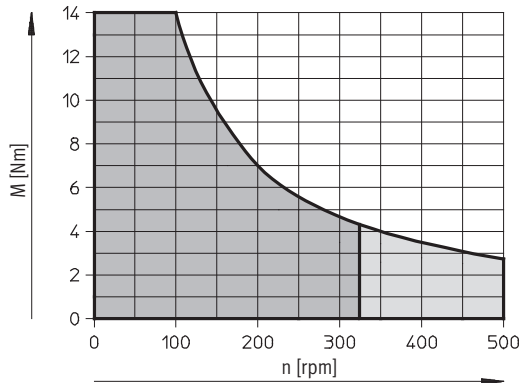
Size 25



Size 40

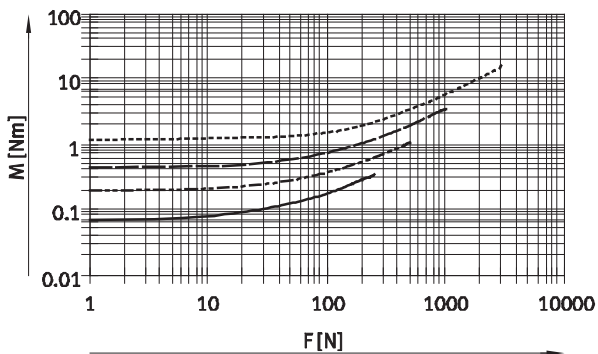


Size 63

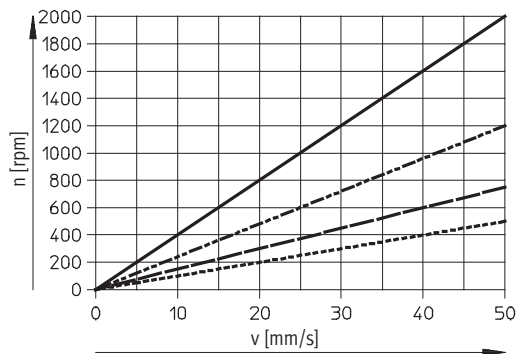


- Recommended operating range
- Permissible operating range (duty cycle < 50% recommended)

Driving torque M as a function of the feed force F



Speed as a function of the feed speed v



- DMES-18
- - - DMES-25
- · - DMES-40
- DMES-63

Positioning axes DMES-GF/-KF, with guide

Technical data

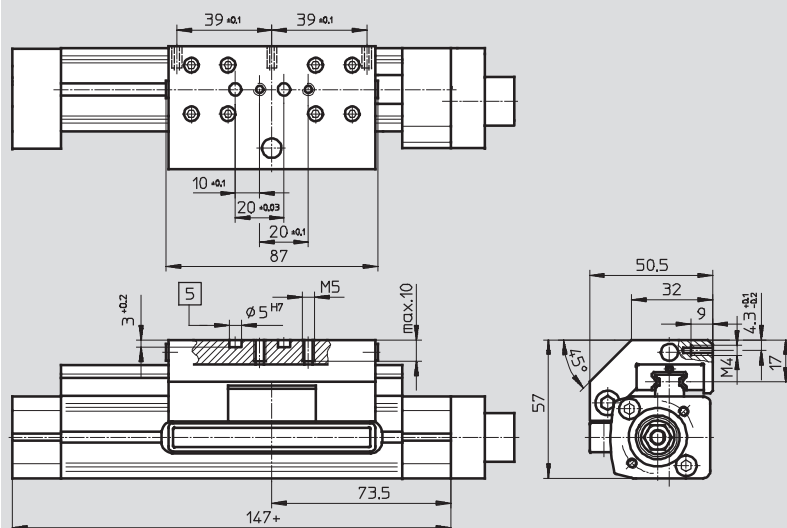
FESTO

Dimensions

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

Standard slide GK

Size 18

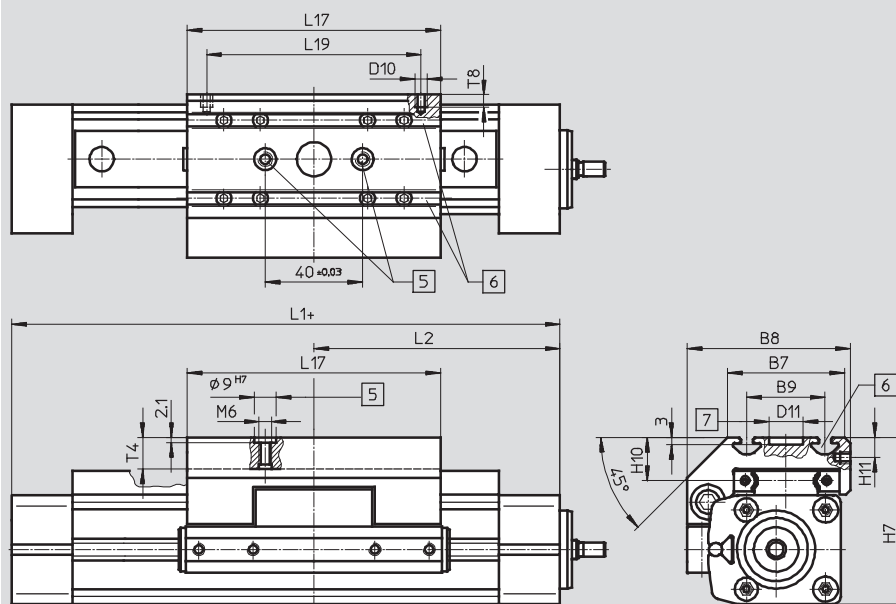


5 Hole for centring pin ZBS-5

Basic dimensions

→ 11

Size 25/40/63



5 Hole for centring pin ZBH-9

6 Mounting slot for slot nut NSTL

7 Hole for central mounting SLZZ

+ = plus stroke length

Basic dimensions

→ 11

Size	B7	B8	B9	D10	D11 Ø G7	H7	H10	H11	L1	L2	L17	L19	T4	T8
			±0.2					+0.3				±0.1	max.	
25	48	67	32	M5	14	68.5	18.5	8.2	175	87.5	105	88	12.5	8.5
40	78.5	96.5	55	M5	25	90.5	20	7	250	126	167	150	12.5	8.5
63	121	142	90	M8	25	144.5	30	12.5	328	164	230	200	20.5	10.5

Positioning axes DMES-GF/-KF, with guide

Technical data

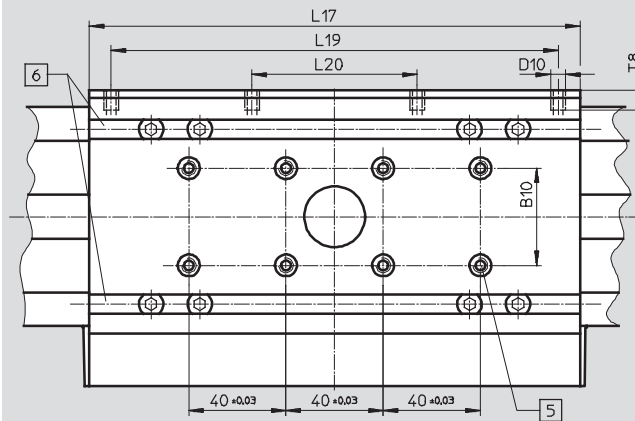
FESTO

Dimensions

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

Standard slide GK

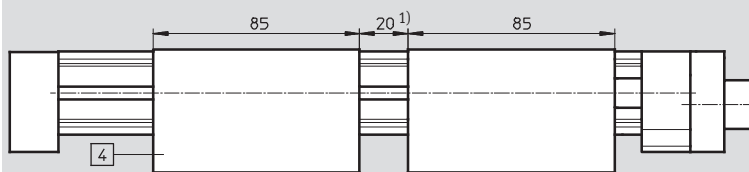
Size 40/63



- 5 Hole for centring pin ZBH-9
- 6 Mounting slot for slot nut NSTL
- + = plus stroke length

Additional slide KL/KR

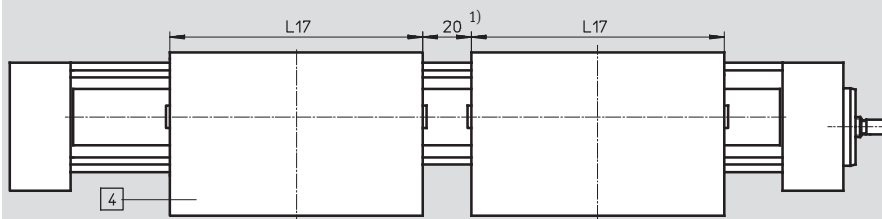
Size 18



- 4 Additional slide
DMES-...-KL/KR

1) Recommended minimum distance for access to lubrication nipple

Size 25/40/63



- 4 Additional slide
DMES-...-KL/KR

1) Recommended minimum distance for access to lubrication nipple

Size	D10	L17	L19	L20	T8
			±0.1	±0.1	
25	M5	105	88	–	8.5
40	M5	167	150	58	8.5
63	M8	230	200	72	10.5

Positioning axes DMES-GF/-KF, with guide

Technical data

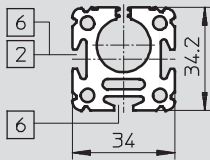
FESTO

Dimensions

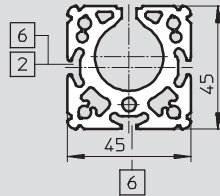
Download CAD Data → www.festo.com/us/cad

Profile

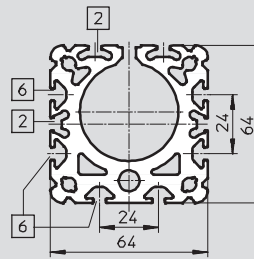
Size 18



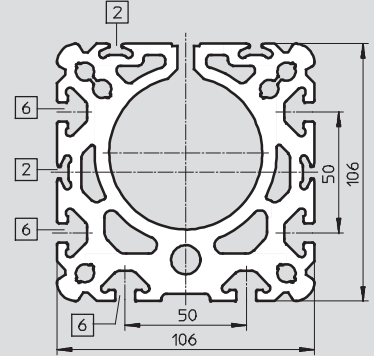
Size 25



Size 40



Size 63



2 Sensor slot for proximity sensor

6 Mounting slot for slot nut NST

Positioning axes DMES-GF/-KF, with guide

Technical data

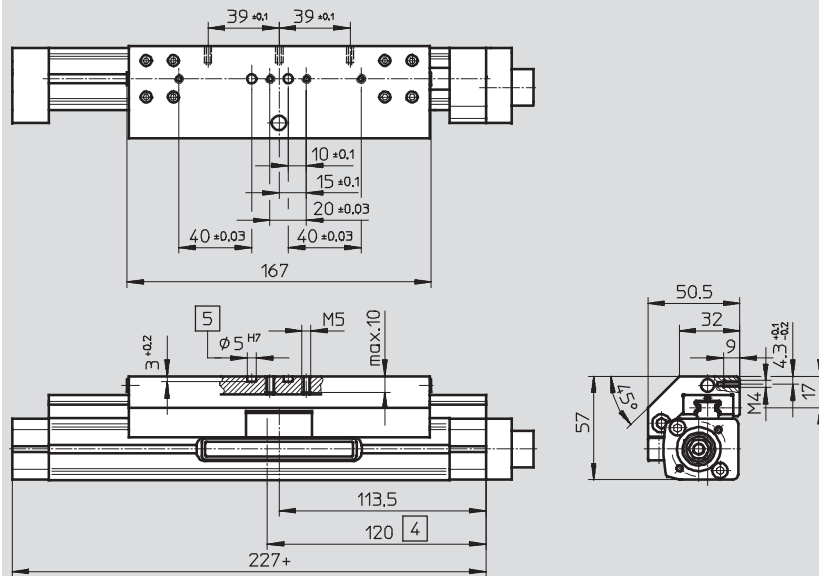
FESTO

Dimensions

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

Extended slide GV

Size 18



- 4 Lubrication opening
- 5 Hole for centring pin ZBS-5
- + = plus stroke length

Basic dimensions

→ 11

Positioning axes DMES-GF/-KF, with guide

Technical data

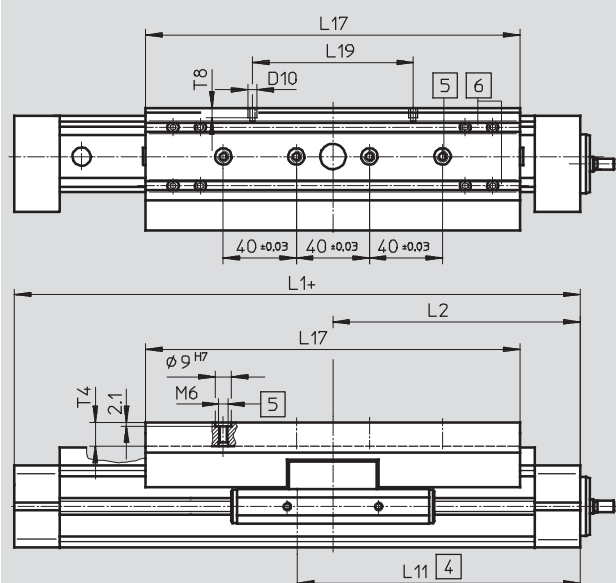
FESTO

Dimensions

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

Extended slide GV

Size 25/40/63

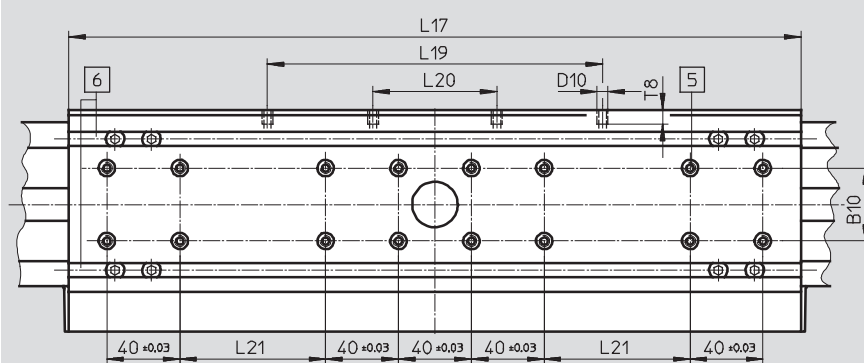


- 4 Lubrication opening
- 5 Hole for centring pin ZBS-9
- 6 Slot for slot nut NSTL
- 7 Hole for central mounting SLZZ
- + = plus stroke length

Basic dimensions

→ 11

Size 40



- 5 Hole for centring pin ZBH-9
- 6 Mounting slot for slot nut NSTL

Size	B7	B8	B9 ±0.2	B10	D10	D11 Ø G7	H7	H10	H11 +0.3
25	48	67	32	–	M5	14	68.5	18.5	8.2
40	78.5	96.5	55	20	M5	25	90.5	20	7
63	121	142	90	40	M8	25	144.5	30	12.5

Size	L1	L2	L11	L17 ±0.1	L19 ±0.1	L20 ±0.1	L21 ±0.1	T4 max.	T8
25	275	137.5	155	205	88	–	–	12.5	8.5
40	420	211	236	337	150	58	40	12.5	8.5
63	578	289	321	480	200	72	120	20.5	10.5

Positioning axes DMES-GF/-KF, with guide

Technical data

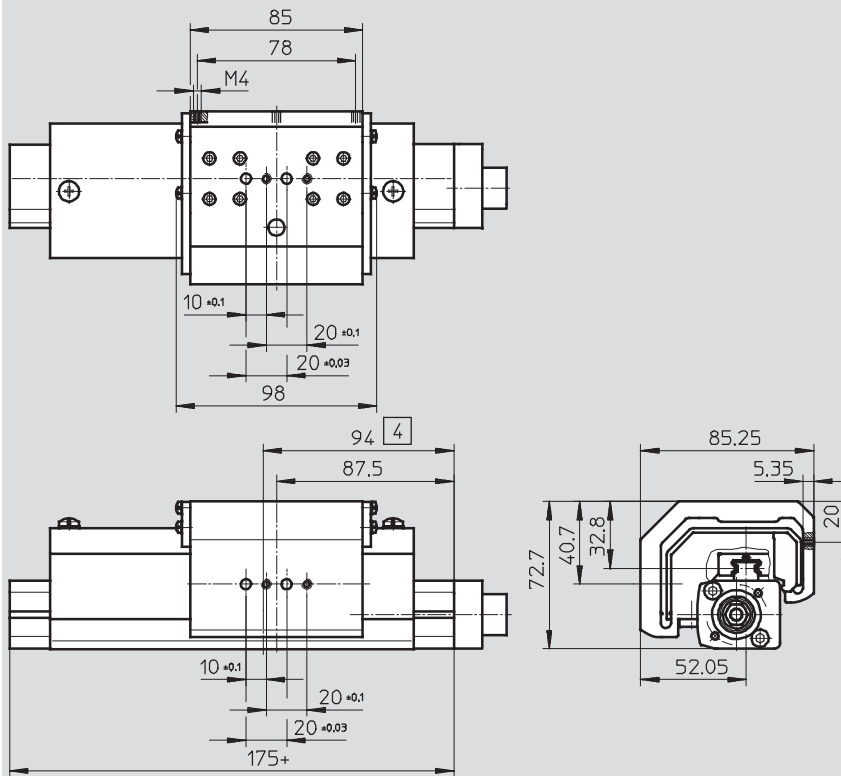
FESTO

Dimensions

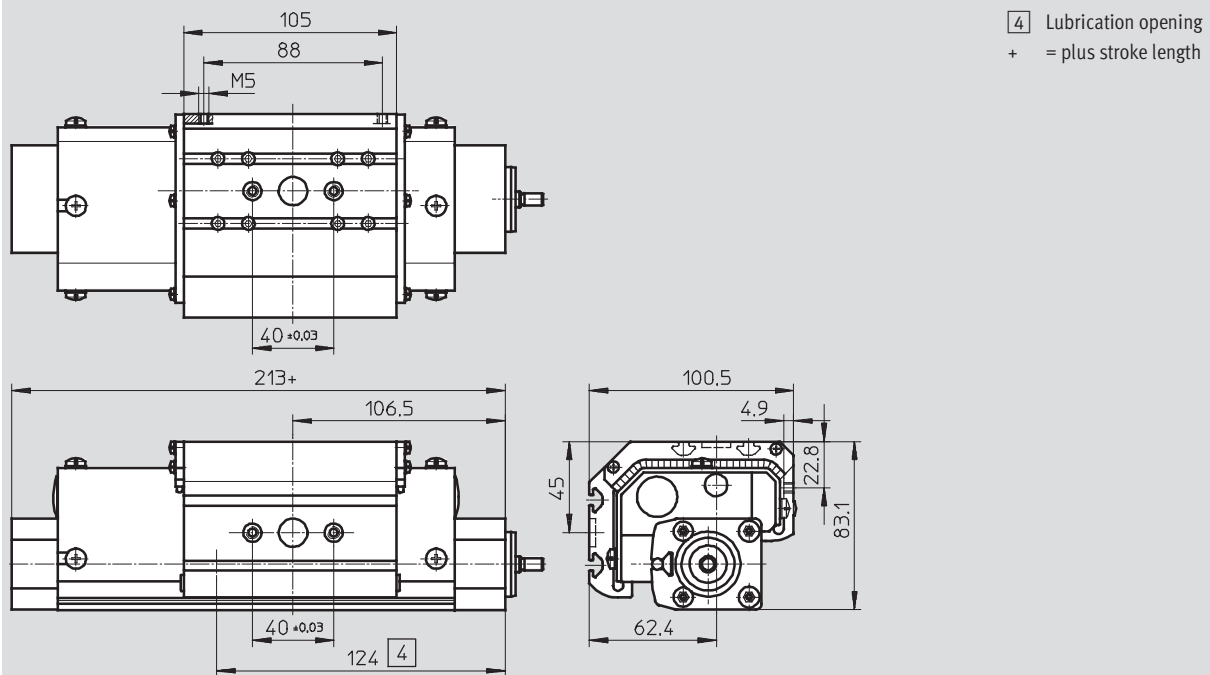
Download CAD Data → www.festo.com/us/cad

Protected version GA

Size 18



Size 25



Positioning axes DMES-GF/-KF, with guide

Technical data

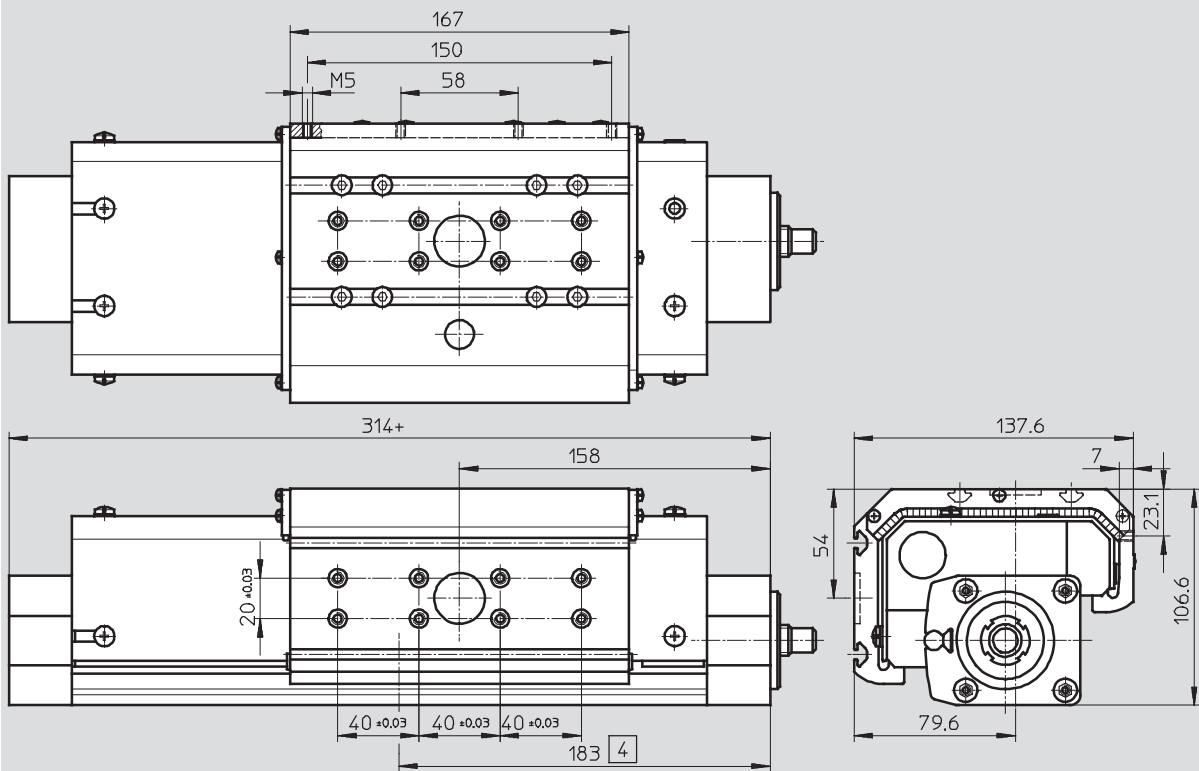
FESTO

Dimensions

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

Protected version GA

Size 40



4 Lubrication opening
+ = plus stroke length

FESTO

Ordering data – Modular products

Order processing for positioning axis DMES in combination with intelligent motor unit MTR-DCI

1 Ordering positioning axis DMES

Ordering table → 40

The drive unit and corresponding accessories are configured in the ordering table for the positioning axis DMES.

The code “AX” or “U” is used to specify whether an intelligent motor unit MTR-DCI and an axial or a parallel kit are required for the positioning axis.

The motor unit design must be defined separately.

Unit Information				Options							
Unit Number	Unit Title	Unit Credits	Unit Status	Prerequisite	Unit Title	Unit Credits	Unit Status	Prerequisite	Unit Title	Unit Credits	Unit Status
101-101	Unit 101	3	Open	101-101	101-101	3	Open	101-101	101-101	3	Open
101-102	Unit 102	3	Open	101-102	101-102	3	Open	101-102	101-102	3	Open
101-103	Unit 103	3	Open	101-103	101-103	3	Open	101-103	101-103	3	Open
101-104	Unit 104	3	Open	101-104	101-104	3	Open	101-104	101-104	3	Open
101-105	Unit 105	3	Open	101-105	101-105	3	Open	101-105	101-105	3	Open
101-106	Unit 106	3	Open	101-106	101-106	3	Open	101-106	101-106	3	Open
101-107	Unit 107	3	Open	101-107	101-107	3	Open	101-107	101-107	3	Open
101-108	Unit 108	3	Open	101-108	101-108	3	Open	101-108	101-108	3	Open
101-109	Unit 109	3	Open	101-109	101-109	3	Open	101-109	101-109	3	Open
101-110	Unit 110	3	Open	101-110	101-110	3	Open	101-110	101-110	3	Open
101-111	Unit 111	3	Open	101-111	101-111	3	Open	101-111	101-111	3	Open
101-112	Unit 112	3	Open	101-112	101-112	3	Open	101-112	101-112	3	Open
101-113	Unit 113	3	Open	101-113	101-113	3	Open	101-113	101-113	3	Open
101-114	Unit 114	3	Open	101-114	101-114	3	Open	101-114	101-114	3	Open
101-115	Unit 115	3	Open	101-115	101-115	3	Open	101-115	101-115	3	Open
101-116	Unit 116	3	Open	101-116	101-116	3	Open	101-116	101-116	3	Open
101-117	Unit 117	3	Open	101-117	101-117	3	Open	101-117	101-117	3	Open
101-118	Unit 118	3	Open	101-118	101-118	3	Open	101-118	101-118	3	Open
101-119	Unit 119	3	Open	101-119	101-119	3	Open	101-119	101-119	3	Open
101-120	Unit 120	3	Open	101-120	101-120	3	Open	101-120	101-120	3	Open
101-121	Unit 121	3	Open	101-121	101-121	3	Open	101-121	101-121	3	Open
101-122	Unit 122	3	Open	101-122	101-122	3	Open	101-122	101-122	3	Open
101-123	Unit 123	3	Open	101-123	101-123	3	Open	101-123	101-123	3	Open
101-124	Unit 124	3	Open	101-124	101-124	3	Open	101-124	101-124	3	Open
101-125	Unit 125	3	Open	101-125	101-125	3	Open	101-125	101-125	3	Open
101-126	Unit 126	3	Open	101-126	101-126	3	Open	101-126	101-126	3	Open
101-127	Unit 127	3	Open	101-127	101-127	3	Open	101-127	101-127	3	Open
101-128	Unit 128	3	Open	101-128	101-128	3	Open	101-128	101-128	3	Open
101-129	Unit 129	3	Open	101-129	101-129	3	Open	101-129	101-129	3	Open
101-130	Unit 130	3	Open	101-130	101-130	3	Open	101-130	101-130	3	Open
101-131	Unit 131	3	Open	101-131	101-131	3	Open	101-131	101-131	3	Open
101-132	Unit 132	3	Open	101-132	101-132	3	Open	101-132	101-132	3	Open
101-133	Unit 133	3	Open	101-133	101-133	3	Open	101-133	101-133	3	Open
101-134	Unit 134	3	Open	101-134	101-134	3	Open	101-134	101-134	3	Open
101-135	Unit 135	3	Open	101-135	101-135	3	Open	101-135	101-135	3	Open
101-136	Unit 136	3	Open	101-136	101-136	3	Open	101-136	101-136	3	Open
101-137	Unit 137	3	Open	101-137	101-137	3	Open	101-137	101-137	3	Open
101-138	Unit 138	3	Open	101-138	101-138	3	Open	101-138	101-138	3	Open
101-139	Unit 139	3	Open	101-139	101-139	3	Open	101-139	101-139	3	Open
101-140	Unit 140	3	Open	101-140	101-140	3	Open	101-140	101-140	3	Open
101-141	Unit 141	3	Open	101-141	101-141	3	Open	101-141	101-141	3	Open
101-142	Unit 142	3	Open	101-142	101-142	3	Open	101-142	101-142	3	Open
101-143	Unit 143	3	Open	101-143	101-143	3	Open	101-143	101-143	3	Open
101-144	Unit 144	3	Open	101-144	101-144	3	Open	101-144	101-144	3	Open
101-145	Unit 145	3	Open	101-145	101-145	3	Open	101-145	101-145	3	Open
101-146	Unit 146	3	Open	101-146	101-146	3	Open	101-146	101-146	3	Open
101-147	Unit 147	3	Open	101-147	101-147	3	Open	101-147	101-147	3	Open
101-148	Unit 148	3	Open	101-148	101-148	3	Open	101-148	101-148	3	Open
101-149	Unit 149	3	Open	101-149	101-149	3	Open	101-149	101-149	3	Open
101-150	Unit 150	3	Open	101-150	101-150	3	Open	101-150	101-150	3	Open
101-151	Unit 151	3	Open	101-151	101-151	3	Open	101-151	101-151	3	Open
101-152	Unit 152	3	Open	101-152	101-152	3	Open	101-152	101-152	3	Open
101-153	Unit 153	3	Open	101-153	101-153	3	Open	101-153	101-153	3	Open
101-154	Unit 154	3	Open	101-154	101-154	3	Open	101-154	101-154	3	Open
101-155	Unit 155	3	Open	101-155	101-155	3	Open	101-155	101-155	3	Open
101-156	Unit 156	3	Open	101-156	101-156	3	Open	101-156	101-156	3	Open
101-157	Unit 157	3	Open	101-157	101-157	3	Open	101-157	101-157	3	Open
101-158	Unit 158	3	Open	101-158	101-158	3	Open	101-158	101-158	3	Open
101-159	Unit 159	3	Open	101-159	101-159	3	Open	101-159	101-159	3	Open
101-160	Unit 160	3	Open	101-160	101-160	3	Open	101-160	101-160	3	Open
101-161	Unit 161	3	Open	101-161	101-161	3	Open	101-161	101-161	3	Open
101-162	Unit 162	3	Open	101-162	101-162	3	Open	101-162	101-162	3	Open
101-163	Unit 163	3	Open	101-163	101-163	3	Open	101-163	101-163	3	Open
101-164	Unit 164	3	Open	101-164	101-164	3	Open	101-164	101-164	3	Open
101-165	Unit 165	3	Open	101-165	101-165	3	Open	101-165	101-165	3	Open
101-166	Unit 166	3	Open	101-166	101-166	3	Open	101-166	101-166	3	Open
101-167	Unit 167	3	Open	101-167	101-167	3	Open	101-167	101-167	3	Open
101-168	Unit 168	3	Open	101-168	101-168	3	Open	101-168	101-168	3	Open
101-169	Unit 169	3	Open	101-169	101-169	3	Open	101-169	101-169	3	Open
101-170	Unit 170	3	Open	101-170	101-170	3	Open	101-170	101-170	3	Open
101-171	Unit 171	3	Open	101-171	101-171	3	Open	101-171	101-171	3	Open
101-172	Unit 172	3	Open	101-172	101-172	3	Open	101-172	101-172	3	Open
101-173	Unit 173	3	Open	101-173	101-173	3	Open	101-173	101-173	3	Open
101-174	Unit 174	3	Open	101-174	101-174	3	Open	101-174	101-174	3	Open
101-175	Unit 175	3	Open	101-175	101-175	3	Open	101-175	101-175	3	Open
101-176	Unit 176	3	Open	101-176	101-176	3	Open	101-176	101-176	3	Open
101-177	Unit 177	3	Open	101-177	101-177	3	Open	101-177	101-177	3	Open
101-178	Unit 178	3	Open	101-178	101-178	3	Open	101-178	101-178	3	Open
101-179	Unit 179	3	Open	101-179	101-179	3	Open	101-179	101-179	3	Open
101-180	Unit 180	3	Open	101-180	101-180	3	Open	101-180	101-180	3	Open
101-181	Unit 181	3	Open	101-181	101-181	3	Open	101-181	101-181	3	Open
101-182	Unit 182	3	Open	101-182	101-182	3	Open	101-182	101-182	3	Open
101-183	Unit 183	3	Open	101-183	101-183	3	Open	101-183	101-183	3	Open
101-184	Unit 184	3	Open	101-184	101-184	3	Open	101-184	101-184	3	Open
101-185	Unit 185	3	Open	101-185	101-185	3	Open	101-185	101-185	3	Open
101-186	Unit 186	3	Open	101-186	101-186	3	Open	101-186	101-186	3	Open
101-187	Unit 187	3	Open	101-187	101-187	3	Open	101-187	101-187	3	Open
101-188	Unit 188	3	Open	101-188	101-188	3	Open	101-188	101-188	3	Open
101-189	Unit 189	3	Open	101-189	101-189	3	Open	101-189	101-189	3	Open
101-190	Unit 190	3	Open	101-190	101-190	3	Open	101-190	101-190	3	Open
101-191	Unit 191	3	Open	101-191	101-191	3	Open	101-191	101-191	3	Open
101-192	Unit 192	3	Open	101-192	101-192	3	Open	101-192	101-192	3	Open
101-193	Unit 193	3	Open	101-193	101-193	3	Open	101-193	101-193	3	Open
101-194	Unit 194	3	Open	101-194	101-194	3	Open	101-194	101-194	3	Open
101-195	Unit 195	3	Open	101-195	101-195	3	Open	101-195	101-195	3	Open
101-196	Unit 196	3	Open	101-196	101-196	3	Open	101-196	101-196	3	Open
101-197	Unit 197	3	Open	101-197	101-197	3	Open	101-197	101-197	3	Open
101-198	Unit 198	3	Open	101-198	101-198	3	Open	101-198	101-198	3	Open
101-199	Unit 199	3	Open	101-199	101-199	3	Open	101-199	101-199	3	Open
101-200	Unit 200	3	Open	101-200	101-200	3	Open	101-200	101-200	3	Open
101-201	Unit 201	3	Open	101-201	101-201	3	Open	101-201	101-201	3	Open
101-202	Unit 202	3	Open	101-202	101-202	3	Open	101-202	101-202	3	Open
101-203	Unit 203	3	Open	101-203	101-203	3	Open	101-203	101-203	3	Open
101-204	Unit 204	3	Open	101-204	101-204	3	Open	101-204	101-204	3	Open
101-205	Unit 205	3	Open	101-205	101-205	3	Open	101-205	101-205	3	Open
101-206	Unit 206	3	Open	101-206	101-206	3	Open	101-206	101-206	3	Open
101-207	Unit 207	3	Open	101-207	101-207	3	Open	101-207	101-207	3	Open
101-208	Unit 208	3	Open	101-208	101-208	3	Open	101-208	101-208	3	Open
101-209	Unit 209	3	Open	101-209	101-209	3	Open	101-209	101-209	3	Open
101-210	Unit 210	3	Open	101-210	101-210	3	Open	101-210	101-210	3	Open
101-211	Unit 211	3	Open	101-211	101-211	3	Open	101-211	101-211	3	Open
101-212	Unit 212	3	Open	101-212	101-212						

2 Permissible combinations with intelligent motor unit MTR-DCI

Positioning axis	Motor unit
DMES-18-...	MTR-DCI-32S-VCSC-E...
DMES-25-...	MTR-DCI-42S-VCSC-E...
DMES-40-...	MTR-DCI-52S-VCSC-E...
DMES-63-...	MTR-DCI-62S-VDSC-E...

Note

Servo, stepper motors and the corresponding mounting kits must be ordered separately → 43

3 Ordering intelligent motor unit MTR-DCI

Ordering table → 41

The motor unit order code determined from table 2 must now be completed with the “gear unit” and “parameterisation interface” codes.

The module number of the intelligent motor unit must not be specified when ordering with order code "AX" or "U". It is determined automatically.

20. Monitoring tools										
Module No.	Module code	Page of module	Range of module	Range of class	Monitored voltage	Plug design	Engineered smart monitor	Smart cell	Permeable battery interface	Electrical connection technology
Order example	BM1	103	11 K2 11 11	5	VC V0	7C	E	0.7 0.04 0.1	K2 K0	10
	BM1	103	11	5	VC	7C	E	0.7	K0	10
Distributing tools										
Size	10	10	10	10	10	10	10	10	10	10
Module No.	Module code	Page of module	Range of module	Range of class	Monitored voltage	Plug design	Engineered smart monitor	Smart cell	Permeable battery interface	Electrical connection technology
BM1	103	11	5	5	VC	7C	E	0.7	K2	10
BM2	103	11	5	5	VC	7C	E	0.7	K2	10
BM3	103	11	5	5	VC	7C	E	0.7	K2	10
BM4	103	11	5	5	VC	7C	E	0.7	K2	10
BM5	103	11	5	5	VC	7C	E	0.7	K2	10
BM6	103	11	5	5	VC	7C	E	0.7	K2	10
BM7	103	11	5	5	VC	7C	E	0.7	K2	10
BM8	103	11	5	5	VC	7C	E	0.7	K2	10
BM9	103	11	5	5	VC	7C	E	0.7	K2	10
BM10	103	11	5	5	VC	7C	E	0.7	K2	10
BM11	103	11	5	5	VC	7C	E	0.7	K2	10
BM12	103	11	5	5	VC	7C	E	0.7	K2	10
BM13	103	11	5	5	VC	7C	E	0.7	K2	10
BM14	103	11	5	5	VC	7C	E	0.7	K2	10
BM15	103	11	5	5	VC	7C	E	0.7	K2	10
BM16	103	11	5	5	VC	7C	E	0.7	K2	10
BM17	103	11	5	5	VC	7C	E	0.7	K2	10
BM18	103	11	5	5	VC	7C	E	0.7	K2	10
BM19	103	11	5	5	VC	7C	E	0.7	K2	10
BM20	103	11	5	5	VC	7C	E	0.7	K2	10
BM21	103	11	5	5	VC	7C	E	0.7	K2	10
BM22	103	11	5	5	VC	7C	E	0.7	K2	10
BM23	103	11	5	5	VC	7C	E	0.7	K2	10
BM24	103	11	5	5	VC	7C	E	0.7	K2	10
BM25	103	11	5	5	VC	7C	E	0.7	K2	10
BM26	103	11	5	5	VC	7C	E	0.7	K2	10
BM27	103	11	5	5	VC	7C	E	0.7	K2	10
BM28	103	11	5	5	VC	7C	E	0.7	K2	10
BM29	103	11	5	5	VC	7C	E	0.7	K2	10
BM30	103	11	5	5	VC	7C	E	0.7	K2	10
BM31	103	11	5	5	VC	7C	E	0.7	K2	10
BM32	103	11	5	5	VC	7C	E	0.7	K2	10
BM33	103	11	5	5	VC	7C	E	0.7	K2	10
BM34	103	11	5	5	VC	7C	E	0.7	K2	10
BM35	103	11	5	5	VC	7C	E	0.7	K2	10
BM36	103	11	5	5	VC	7C	E	0.7	K2	10
BM37	103	11	5	5	VC	7C	E	0.7	K2	10
BM38	103	11	5	5	VC	7C	E	0.7	K2	10
BM39	103	11	5	5	VC	7C	E	0.7	K2	10
BM40	103	11	5	5	VC	7C	E	0.7	K2	10
BM41	103	11	5	5	VC	7C	E	0.7	K2	10
BM42	103	11	5	5	VC	7C	E	0.7	K2	10
BM43	103	11	5	5	VC	7C	E	0.7	K2	10
BM44	103	11	5	5	VC	7C	E	0.7	K2	10
BM45	103	11	5	5	VC	7C	E	0.7	K2	10
BM46	103	11	5	5	VC	7C	E	0.7	K2	10
BM47	103	11	5	5	VC	7C	E	0.7	K2	10
BM48	103	11	5	5	VC	7C	E	0.7	K2	10
BM49	103	11	5	5	VC	7C	E	0.7	K2	10
BM50	103	11	5	5	VC	7C	E	0.7	K2	10
BM51	103	11	5	5	VC	7C	E	0.7	K2	10
BM52	103	11	5	5	VC	7C	E	0.7	K2	10
BM53	103	11	5	5	VC	7C	E	0.7	K2	10
BM54	103	11	5	5	VC	7C	E	0.7	K2	10
BM55	103	11	5	5	VC	7C	E	0.7	K2	10
BM56	103	11	5	5	VC	7C	E	0.7	K2	10
BM57	103	11	5	5	VC	7C	E	0.7	K2	10
BM58	103	11	5	5	VC	7C	E	0.7	K2	10
BM59	103	11	5	5	VC	7C	E	0.7	K2	10
BM60	103	11	5	5	VC	7C	E	0.7	K2	10
BM61	103	11	5	5	VC	7C	E	0.7	K2	10
BM62	103	11	5	5	VC	7C	E	0.7	K2	10
BM63	103	11	5	5	VC	7C	E	0.7	K2	10
BM64	103	11	5	5	VC	7C	E	0.7	K2	10
BM65	103	11	5	5	VC	7C	E	0.7	K2	10
BM66	103	11	5	5	VC	7C	E	0.7	K2	10
BM67	103	11	5	5	VC	7C	E	0.7	K2	10
BM68	103	11	5	5	VC	7C	E	0.7	K2	10
BM69	103	11	5	5	VC	7C	E	0.7	K2	10
BM70	103	11	5	5	VC	7C	E	0.7	K2	10
BM71	103	11	5	5	VC	7C	E	0.7	K2	10
BM72	103	11	5	5	VC	7C	E	0.7	K2	10
BM73	103	11	5	5	VC	7C	E	0.7	K2	10
BM74	103	11	5	5	VC	7C	E	0.7	K2	10
BM75	103	11	5	5	VC	7C	E	0.7	K2	10
BM76	103	11	5	5	VC	7C	E	0.7	K2	10
BM77	103	11	5	5	VC	7C	E	0.7	K2	10
BM78	103	11	5	5	VC	7C	E	0.7	K2	10
BM79	103	11	5	5	VC	7C	E	0.7	K2	10
BM80	103	11	5	5	VC	7C	E	0.7	K2	10
BM81	103	11	5	5	VC	7C	E	0.7	K2	10
BM82	103	11	5	5	VC	7C	E	0.7	K2	10
BM83	103	11	5	5	VC	7C	E	0.7	K2	10
BM84	103	11	5	5	VC	7C	E	0.7	K2	10
BM85	103	11	5	5	VC	7C	E	0.7	K2	10
BM86	103	11	5	5	VC	7C	E	0.7	K2	10
BM87	103	11	5	5	VC	7C	E	0.7	K2	10
BM88	103	11	5	5	VC	7C	E	0.7	K2	10
BM89	103	11	5	5	VC	7C	E	0.7	K2	10
BM90	103	11	5	5	VC	7C	E	0.7	K2	10
BM91	103	11	5	5	VC	7C	E	0.7	K2	10
BM92	103	11	5	5	VC	7C	E	0.7	K2	10
BM93	103	11	5	5	VC	7C	E	0.7	K2	10
BM94	103	11	5	5	VC	7C	E	0.7	K2	10
BM95	103	11	5	5	VC	7C	E	0.7	K2	10
BM96	103	11	5	5	VC	7C	E	0.7	K2	10
BM97	103	11	5	5	VC	7C	E	0.7	K2	10
BM98	103	11	5	5	VC	7C	E	0.7	K2	10
BM99	103	11	5	5	VC	7C	E	0.7	K2	10
BM100	103	11	5	5	VC	7C	E	0.7	K2	10

4 Order example

Part No.	Type
	Positioning axis DMES
533 700	DMES-25-700-KF-GK-SH-AX-ZUB-2S2Y1M1F
	Intelligent motor unit MTR-DCI
—	MTR-DCI-42S-VCSC-EG7-R2IO

Positioning axes DMES-GF/-KF, with guide

FESTO

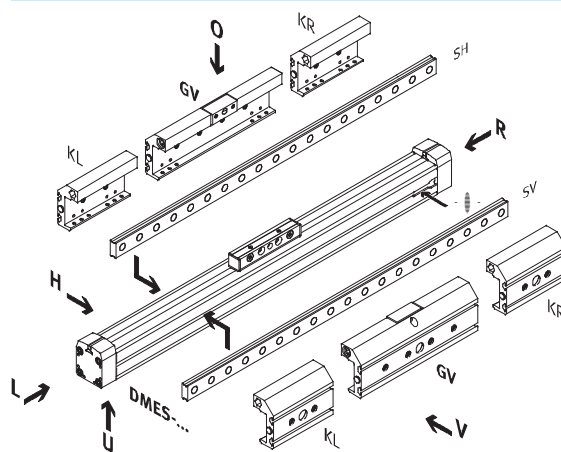
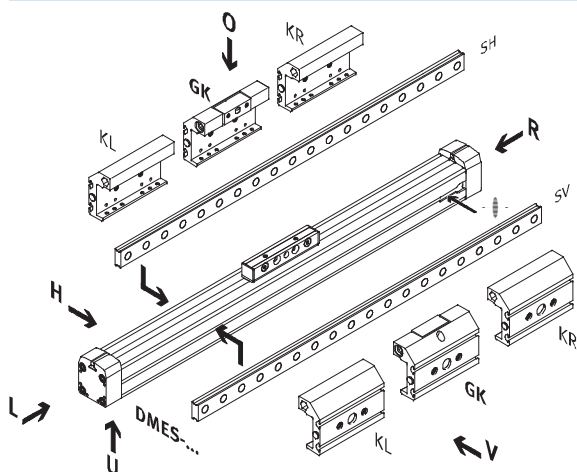
Ordering data – Modular products

Order code

Mandatory data

DMES-...-GK

DMES-...-GV



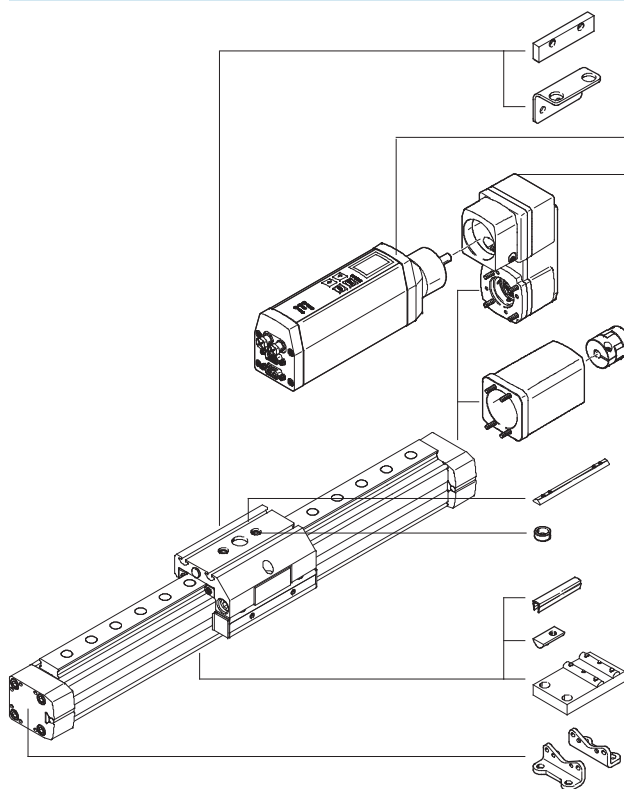
Note

The insertion point for the proximity sensor is located on the right-hand side of the positioning axis.

O top
U underneath
V front
H rear
R right
L left

Order code

Options



L

T

Motor unit

Parallel kit

Motor unit

Axial kit

X

Z

B/S

Y

M

F

U

AX

Positioning axes DMES-GF/-KF, with guide

FESTO

Ordering data – Modular products

Mandatory data			Options								
Module No.	Function	Stroke	Guide	Slide	Slide attachment position	Motor unit	Accessories				
533 699	DMES	18	50 ... 1,800	GF	GK	SV	KL	AX	U	Accessories supplied loose	...S, ...B, ...Y, ...X, ...M, ...F, ...Z, ...T, L
533 700		25		KF	GV	SH	KR				
533 701		40			GA						
533 702		63									
Order example											
533 701	DMES	- 40	- 800	- KF	- GV	- SV	- KL	-	:	ZUB	- 2X2M20Z
MTR-DCI-...S-VCSC-E-...-...IO											

Ordering table									
Size	18	25	40	63	Condition s	Code	Enter code		
M Module No.	533 699	533 700	533 701	533 702					
Function	Positioning axis with slide					DMES	DMES		
Size	18	25	40	63		-...			
Stroke [mm]	50 ... 400	50 ... 700	50 ... 1,200	50 ... 1,800		-...			
O Guide	Plain-bearing guide					1 -GF			
	Recirculating ball bearing guide					1 -KF			
Slide	Standard slide					2 -GK			
	Extended slide					2 -GV			
	Protected version					2 -GA			
Slide attachment position	Slide at front					2 -SV			
	Slide at rear					2 -SH			
Additional slide	Additional slide, standard, at left					3 -KL			
	Additional slide, standard, at right					3 -KR			
Motor unit	Axial kit and motor unit (enclosed separately)					4 -AX			
	Parallel kit and motor unit (enclosed separately)					4 -U			
Accessories	Supplied separately					:ZUB-	:ZUB-		
Slot cover	Sensor slot	1 ... 10				...S			
	Mounting slot	-	-	1 ... 10		...B			
Slot nut	Mounting slot	1 ... 10				...Y			
	Slide	-	1 ... 10			2 ...X			
Central support	1 ... 10					...M			
Foot mounting	1 ... 10					...F			
Centring sleeve (pack of 10)	10 ... 90					2 ...Z			
Mounting bracket for inductive proximity sensors	1 ... 5					5 ...T			
Switching lug	1					5 L			

1 GF, KF Only with slide GK, GV or GA and with slide attachment position SV or SH.

2 GK, GV, GA, SV, SH, X, Z
Only with guide GF or KF

3 KL, KR Only with guide KF (recirculating ball bearing guide) and with slide GK or GV

4 AX, U Order processing for intelligent motor unit MTR-DCI → 41

5 T, L Only with slide GK or GV

Transfer order code

	DMES	-		-		-		-		-		:	ZUB	-	
MTR-DCI-...S-VCSC-E-...-...IO															

Positioning axes DMES

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Accessories – Motor units MTR-DCI

Mandatory data															
Module No.	Motor unit			Flange/size		Nominal voltage		Measuring system		Parameterisation interface					
533 736 533 742 533 748 533 754 Order example	Motor type			Torque class		Plug design		Gearing unit		Electrical connection technology					
	MTR		DCI	32	S	VC	SC	E	G7	R2	IO				
				42		VD			G14	H2	CO				
				52					G22		PB				
				62							DN				
533 742	MTR	-	DCI	-	42	S	-	VC	SC	-	E	G7	-	R2	IO

Ordering table								
Size	32	42	52	62	Conditions	Code	Enter code	
M	Module No.	533 736	533 742	533 748	533 754			
	Motor unit	Motor unit					MTR	MTR
	Motor type	DC servo motor with integrated position controller					-DCI	-DCI
	Flange/size	32	42	52	62		-...	
	Torque class	Standard torque class					S	S
	Nominal voltage [V]	24 DC			–		-VC	
	[V]	–			48 DC		-VD	
	Plug design	Straight plug					SC	SC
	Measuring system	Encoder					-E	-E
	Gearing unit	Integrated planetary gearing i = 6.75					G7	
		Integrated planetary gearing i = 13.73					G14	
		–			Integrated planetary gearing i = 22.21		G22	
	Parameterisation interface	RS232 interface					-R2	
		RS232 interface + control panel					-H2	
	Electrical connection technology	I/O interface					IO	
		CANopen					CO	
		Profibus DP					PB	
		DeviceNet					DN	

Transfer order code

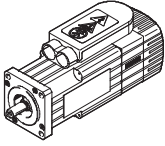
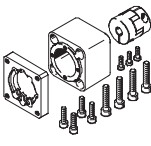
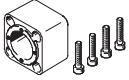
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Positioning axes DMES

Accessories

FESTO

Permissible axis/motor combinations with axial kit – Without gear unit					Technical data → Internet: eamm-a
Motor unit	Axial kit	Axial kit consisting of:			
		Motor flange	Coupling	Coupling housing	
					
Type	Part No. Type	Part No. Type	Part No. Type	Part No. Type	
DMES-18					
With servo motor					
EMMS-AS-40-...	550 961 EAMM-A-E20-40A	552 163 EAMF-A-28B-40A	540 751 EAMC-15-22-5-6	170 374 EAMK-A-E20-28B	
EMMS-AS-55-...	550 963 EAMM-A-E20-55A	529 946 EAMF-A-28A/B-55A	529 953 EAMC-15-22-5-9	170 374 EAMK-A-E20-28B	
With stepper motor					
EMMS-ST-42-...	550 962 EAMM-A-E20-42A	552 164 EAMF-A-28B-42A	530 085 EAMC-15-22-5-5	170 374 EAMK-A-E20-28B	
With motor unit					
MTR-DCI-32S-...	556 991 EAMM-A-E20-32B	–	533 707 EAMC-15-20-5-6	533 703 EAMK-A-E20-32B	
DMES-25					
With servo motor					
EMMS-AS-40-...	550 964 EAMM-A-E32-40A	550 985 EAMF-A-44A/B-40A	123 040 EAMC-30-35-6-6	124 631 EAMK-A-E32-44A	
EMMS-AS-55-...	550 965 EAMM-A-E32-55A	529 942 EAMF-A-44A/B-55A	530 941 EAMC-30-35-6-9	124 631 EAMK-A-E32-44A	
With stepper motor					
EMMS-ST-57-...	550 966 EAMM-A-E32-57A	530 081 EAMF-A-44A/B-57A	530 087 EAMC-30-35-6-6.35	124 631 EAMK-A-E32-44A	
With motor unit					
MTR-DCI-42S-...G7	556 992 EAMM-A-E32-42B	–	533 708 EAMC-30-32-6-8	533 704 EAMK-A-E32-42B	
MTR-DCI-42S-...G14	556 993 EAMM-A-E32-42C	–	533 708 EAMC-30-32-6-8	538 578 EAMK-A-E32-42C	

Note

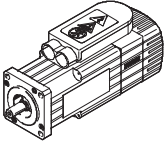
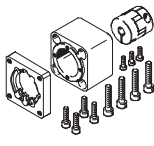
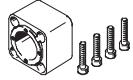
At ambient temperatures below room temperature, the frictional torques increase in the case of the DMES-...-GF (plain-bearing guide). Depending on the combination of motor/motor unit and positioning axis, it may not be possible to reach the maximum feed force of the axis.

The following tool is available for sizing:
PositioningDrives
sizing software
→ www.festo.com

Positioning axes DMES

Accessories

FESTO

Permissible axis/motor combinations with axial kit – Without gear unit				Technical data → Internet: eamm-a
Motor/motor unit	Axial kit	Axial kit consisting of:		
		Motor flange	Coupling	Coupling housing
				
Type	Part No. Type	Part No. Type	Part No. Type	Part No. Type
DMES-40				
With servo motor				
EMMS-AS-70-...	557 448 EAMM-A-E48-64A-70A	529 945 EAMF-A-64A/B-70A	525 864 EAMC-40-66-11-12	529 940 EAMK-A-E48-64A
EMMS-AS-100-...	550 973 EAMM-A-E48-100A	529 947 EAMF-A-64A/C/D-100A	529 952 EAMC-40-66-12-19	529 940 EAMK-A-E48-64A
With stepper motor				
EMMS-ST-87-...	550 972 EAMM-A-E48-87A	533 140 EAMF-A-64A/B-87A	525 864 EAMC-40-66-11-12	529 940 EAMK-A-E48-64A
With motor unit				
MTR-DCI-52S-...-G7	556 994 EAMM-A-E48-52B	–	533 709 EAMC-42-50-12-12	533 705 EAMK-A-E48-52B
MTR-DCI-52S-...-G14	556 995 EAMM-A-E48-52C	–	533 709 EAMC-42-50-12-12	538 579 EAMK-A-E48-52C
DMES-63				
With servo motor				
EMMS-AS-70-...	550 975 EAMM-A-E72-70A	529 945 EAMF-A-64A/B-70A	550 999 EAMC-40-66-11-20	529 941 EAMK-A-E72-64A
EMMS-AS-100-...	550 978 EAMM-A-E72-100A	529 947 EAMF-A-64A/C/D-100A	132 847 EAMC-40-66-19-20	529 941 EAMK-A-E72-64A
With stepper motor				
EMMS-ST-87-...	550 977 EAMM-A-E72-87A	533 140 EAMF-A-64A/B-87A	550 999 EAMC-40-66-11-20	529 941 EAMK-A-E72-64A
With motor unit				
MTR-DCI-62S-...	556 996 EAMM-A-E72-62B	–	533 710 EAMC-42-50-14-20	533 706 EAMK-A-E72-62B

Note

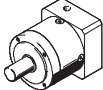
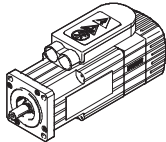
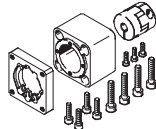
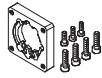
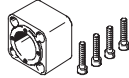
At ambient temperatures below room temperature, the frictional torques increase in the case of the DMES-...-GF (plain-bearing guide). Depending on the combination of motor/motor unit and positioning axis, it may not be possible to reach the maximum feed force of the axis.

The following tool is available for sizing:
PositioningDrives
sizing software
→ www.festo.com

Positioning axes DMES

Accessories

FESTO

Permissible axis/motor combinations with axial kit – With gear unit					Technical data → Internet: eamm-a
Gear unit	Motor	Axial kit	Axial kit consisting of:		
			Motor flange	Coupling	Coupling housing
					
Type	Type	Part No. Type	Part No. Type	Part No. Type	Part No. Type
DMES-63					
With servo motor					
EMGA-60-P-G...-SAS-70	EMMS-AS-70-S-...	550 974 EAMM-A-E72-60G	550 987 EAMF-A-64A/B-60G	550 999 EAMC-40-66-11-20	529 941 EAMK-A-E72-64A
EMGA-80-P-G...-SAS-70	EMMS-AS-70-M-...	550 976 EAMM-A-E72-80G	533 139 EAMF-A-64A/C-80G	123 849 EAMC-40-66-20-20	529 941 EAMK-A-E72-64A
With stepper motor					
EMGA-80-P-G...-SST-87	EMMS-ST-87-L-...	550 976 EAMM-A-E72-80G	533 139 EAMF-A-64A/C-80G	123 849 EAMC-40-66-20-20	529 941 EAMK-A-E72-64A

Note

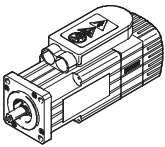
At ambient temperatures below room temperature, the frictional torques increase in the case of the DMES-...-GF (plain-bearing guide). Depending on the combination of motor/motor unit and positioning axis, it may not be possible to reach the maximum feed force of the axis.

The following tool is available for sizing:
PositioningDrives
sizing software
→ www.festo.com

Positioning axes DMES

FESTO

Accessories

Permissible axis/motor combinations with parallel kit – Without gear unit			Technical data → Internet: eamm-u
Motor/motor unit	Parallel kit		
			
Type	Part No.	Type	
DMES-18			
With servo motor			
EMMS-AS-40-...	543 226	EAMM-U-E24-40A	
With motor unit			
MTR-DCI-32S-...	543 225	EAMM-U-E24-32B	
DMES-25			
With servo motor			
EMMS-AS-55-...	543 230	EAMM-U-E32-55A	
With motor unit			
MTR-DCI-42S-...-G7	543 228	EAMM-U-E32-42B	
MTR-DCI-42S-...-G14	543 229	EAMM-U-E32-42C	
DMES-40			
With servo motor			
EMMS-AS-70-...	543 234	EAMM-U-E48-70A	
With motor unit			
MTR-DCI-52S-...-G7	543 232	EAMM-U-E48-52B	
MTR-DCI-52S-...-G14	543 233	EAMM-U-E48-52C	

Note

At ambient temperatures below room temperature, the frictional torques increase in the case of the DMES-...-GF (plain-bearing guide). Depending on the combination of motor/motor unit and positioning axis, it may not be possible to reach the maximum feed force of the axis. The respective no-load driving torque of the kit must be taken into consideration when using parallel kits.

The following tool is available for sizing:
PositioningDrives
sizing software
→ www.festo.com

Positioning axes DMES

Accessories

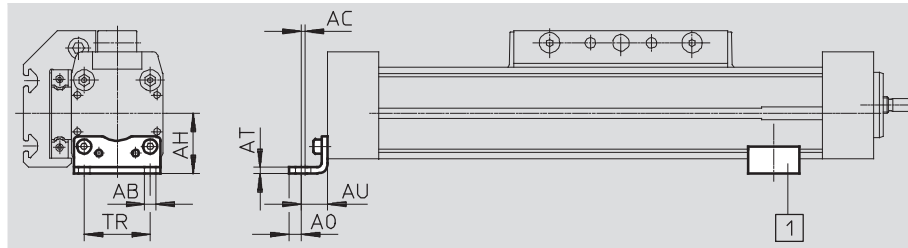
FESTO

Foot mounting HP (order code F)

Material:
Galvanised steel
Free of copper, PTFE and silicone



HP-25



1 Position of the central support along the profile is freely selectable

Dimensions and ordering data

For size	AB Ø	AC	AH	AO	AT	AU	TR	Weight [g]	Part No.	Type
18	5.5	2	24	4.8	3	13.2	24	59	158 472	HP-18
25	5.5	2	29.5	6	3	13	32.5	61	150 731	HP-25
40	6.6	2	46	8.5	5	17.5	45	188	150 733	HP-40
63	11	3	69	13.5	6	28	75	305	150 735	HP-63

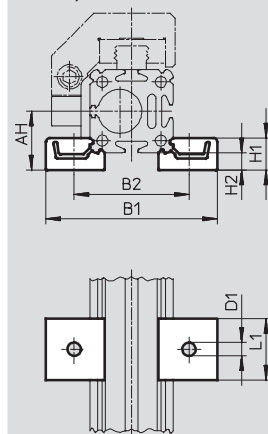
Central support MUP (order code M)

Material:
Galvanised steel
Free of copper, PTFE and silicone

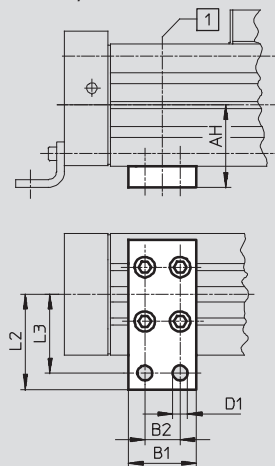


MUP-40

Size 18/25



Size 40/63



1 Position of the central support along the profile is freely selectable

Dimensions and ordering data

For size	AH	B1	B2	D1 Ø	H1	H2	L1	L2	L3	Weight [g]	Part No.	Type
18	24	70.5	47	5.5	13	7	25	–	–	33	150 736	MUP-18/25
25	29.5	81	58	5.5	13	7	25	–	–	33	150 736	MUP-18/25
40	46	35	22	6.6	–	–	–	47	40	126	150 738	MUP-40
63	69	50	26	11	–	–	–	77	65	340	150 800	MUP-63

Positioning axes DMES

FESTO

Accessories

Sensor bracket HWS

for inductive proximity sensors

(order code T)

Material:

Galvanised steel



Switch lug SF

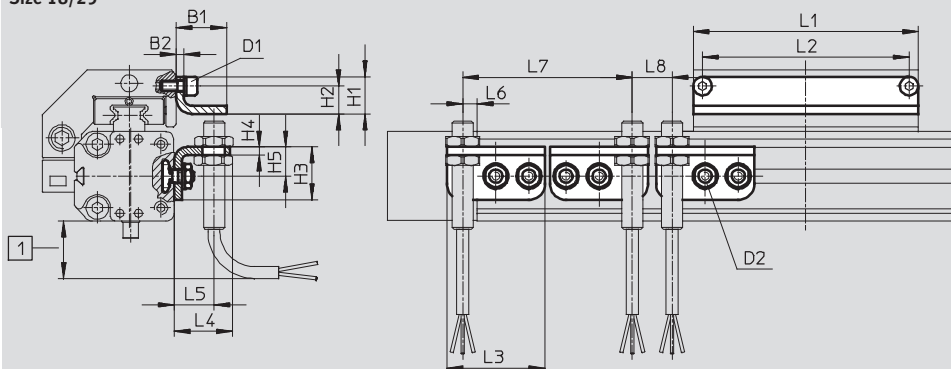
(order code L)

Material:

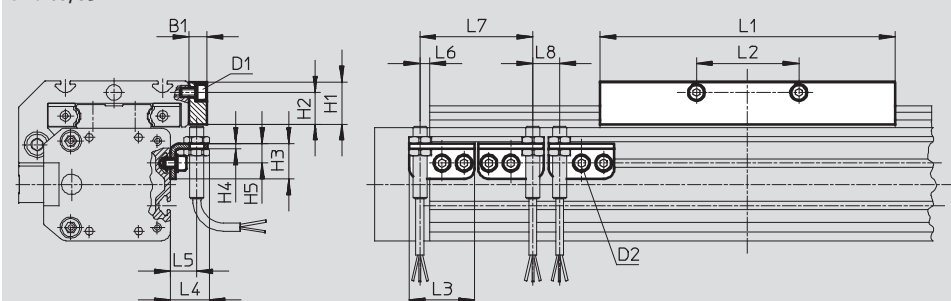
Galvanised steel



Size 18/25



Size 40/63



1 Protruding sensor cable, ensure sufficient installation space

Dimensions and ordering data

For size	D1	D2	B1	B2	H1	H2	H3	H4	H5	L1	L2	L3	L4	L5
18	M4	M5	19	3	14	10.5	20	3	11	85	78	37	22.5	15
25	M5	M5	27	3	20.5	15.3	20	3	11	105	88	37	34.5	27
40	M5	M5	10	–	24	18	20	3	11	167	58	37	22.5	15
63	M8	M5	10	–	35	25	20	3	11	230	72	37	22.5	15

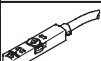
For size	L6 max.	L7 min.	L8 min.	Weight [g]	Part No.	Type
18	5.5	64	15	34	188 968	HWS-18/25-M8
				59	188 964	SF-18
25	5.5	64	15	34	188 968	HWS-18/25-M8
				75	188 965	SF-25
40	5.5	64	15	37	188 969	HWS-40-M8
				328	188 966	SF-40
63	5.5	64	15	45	188 970	HWS-63-M8
				630	188 967	SF-63

Positioning axes DMES

Accessories

FESTO

Ordering data – Inductive proximity sensors M8						Technical data → Internet: sien	
	Electrical connection		Switching output	LED	Cable length [m]	Part No.	Type
	Cable	Plug M8					
N/O contact							
	3-wire	–	PNP	■	2.5	150 386	SIEN-M8B-PS-K-L
	–	3-pin	PNP	■	–	150 387	SIEN-M8B-PS-S-L
N/C contact							
	3-wire	–	PNP	■	2.5	150 390	SIEN-M8B-PO-K-L
	–	3-pin	PNP	■	–	150 391	SIEN-M8B-PO-S-L

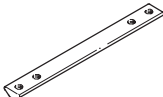
Ordering data – Proximity sensors for T-slot, magneto-resistive						Technical data → Internet: smt	
	Type of mounting	Switching output	Electrical connection	Cable length [m]	Part No.	Type	
N/O contact							
	Insertable in the slot lengthwise, flush with the cylinder profile, short design	PNP	Plug M8x1, 3-pin	0.3	574334	SMT-8M-A-PS-24V-E-0,3-M8D	
			Cable, 3-wire	2.5	574335	SMT-8M-A-PS-24V-E-2,5-OE	

Ordering data – Connecting cable					Technical data ➔ Internet: km8	
	Assembly	Connection	Cable length [m]	Part No.	Type	
Straight socket						
	Union nut M8, both ends	3-pin	0.5	175 488	KM8-M8-GSGD-0,5	
			1	175 489	KM8-M8-GSGD-1	
			2.5	165 610	KM8-M8-GSGD-2,5	
			5	165 611	KM8-M8-GSGD-5	

Positioning axes DMES

Accessories

FESTO

Ordering data				Technical data → Internet: mounting attachment		
	For size	Comment	Order code	Part No.	Type	PU ¹⁾
Slot nut NST						
	18/25	For mounting slot	Y	526 091	NST-HMV-M4	10
	40			150 914	NST-5-M5	1
	63			150 915	NST-8-M6	1
Slot nut NSTL						
	25	For slide	X	158 410	NSTL-25	1
	40			158 412	NSTL-40	1
	63			158 414	NSTL-63	1
Centring pin ZBS/centring sleeve ZBH						
	18	For slide	Z	150 928	ZBS-5	10
	25/40/63			150 927	ZBH-9	10
Slot cover ABP						
	40	For mounting slot every 0.5 m	B	151 681	ABP-5	2
	63			151 682	ABP-8	2
Slot cover ABP-S						
	18/25/40/63	For sensor slot every 0.5 m	S	151 680	ABP-5-S	2

1) Packaging unit

Product Range and Company Overview

A Complete Suite of Automation Services

Our experienced engineers provide complete support at every stage of your development process, including: conceptualization, analysis, engineering, design, assembly, documentation, validation, and production.



Custom Automation Components
Complete custom engineered solutions



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The Broadest Range of Automation Components

With a comprehensive line of more than 30,000 automation components, Festo is capable of solving the most complex automation requirements.



Electromechanical
Electromechanical actuators, motors, controllers & drives



Pneumatics
Pneumatic linear and rotary actuators, valves, and air supply



PLCs and I/O Devices
PLC's, operator interfaces, sensors and I/O devices

Supporting Advanced Automation... As No One Else Can!

Festo is a leading global manufacturer of pneumatic and electromechanical systems, components and controls for industrial automation, with more than 12,000 employees in 56 national headquarters serving more than 180 countries. For more than 80 years, Festo has continuously elevated the state of manufacturing with innovations and optimized motion control solutions that deliver higher performing, more profitable automated manufacturing and processing equipment. Our dedication to the advancement of automation extends beyond technology to the education and development of current and future automation and robotics designers with simulation tools, teaching programs, and on-site services.

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Festo Corporation is committed to supply all Festo products and services that will meet or exceed our customers' requirements in product quality, delivery, customer service and satisfaction.

To meet this commitment, we strive to ensure a consistent, integrated, and systematic approach to management that will meet or exceed the requirements of the ISO 9001 standard for Quality Management and the ISO 14001 standard for Environmental Management.



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