

Guide units FEN/FENG for ISO cylinders

FESTO

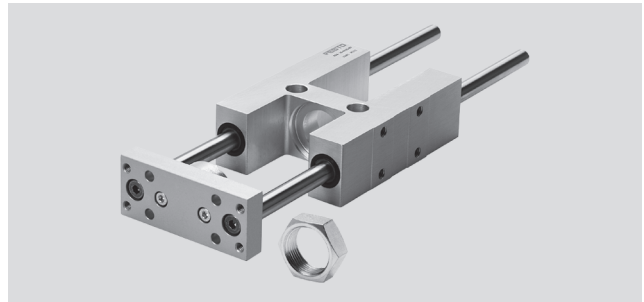
Technical data

FEN to ISO 6432



Ø - Diameter
8 ... 25 mm

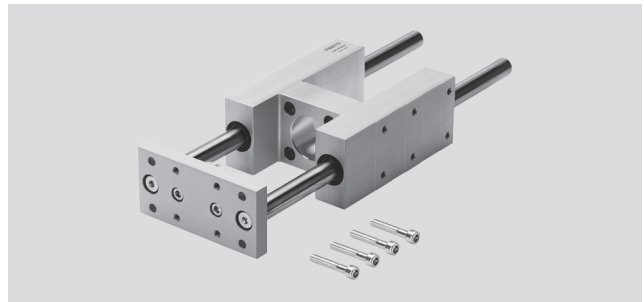
┌ - Stroke length
1 ... 250 mm



FENG to ISO 15552

Ø - Diameter
32 ... 100 mm

┌ - Stroke length
10 ... 500 mm



General technical data											
Type	FEN-...					FENG-...					
Piston diameter	8, 10	12, 16	20	25		32	40	50	63	80	100
Stroke [mm]	1 ... 100	1 ... 200	2 ... 250			10 ... 500					
Design	Guide										
Guidance											
FEN/FENG-...-GF	Plain-bearing guide										
FEN/FENG-...-KF	Recirculating ball bearing guide										
Displacement force											
FEN/FENG-...-GF [N]	15	15	15	15		30	30	50	50	70	70
FEN/FENG-...-KF [N]	15	15	15	15		15	15	15	15	40	40
Type of mounting	Via female thread										
Mounting position	Any										
Ambient temperature [°C]	-20 ... +80 °C										

Weight [g] (for calculation example → page 8)											
Type	FEN-...					FENG-...					
Piston diameter	8, 10	12, 16	20	25		32	40	50	63	80	100
Plain-bearing guide (GF)											
Basic weight with 0 mm stroke	332	490	873	866		1570	2480	4190	5540	10720	13420
Additional weight per 10 mm stroke	8	12	12	12		17	31	48	48	76	76
Moving mass with 0 mm stroke	90	161	269	269		478	782	1414	1720	4955	5935
Additional mass per 10 mm stroke	8	12	12	12		17	31	48	48	76	76
Recirculating ball bearing guide (KF)											
Basic weight with 0 mm stroke	300	429	828	813		1530	2370	4030	5410	10430	12990
Additional weight per 10 mm stroke	8	12	12	12		18	32	49	49	77	77
Moving mass with 0 mm stroke	90	161	269	269		483	792	1430	1739	4990	5970
Additional mass per 10 mm stroke	8	12	12	12		18	32	49	49	77	77

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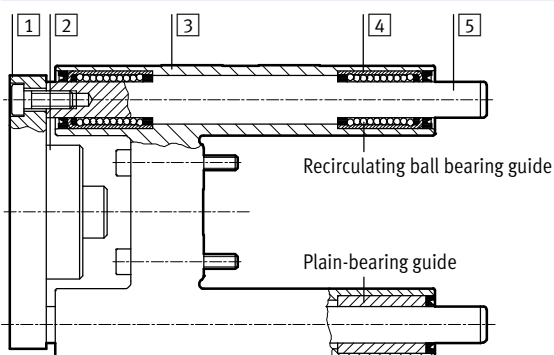
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Technical data

Centre of gravity of the moving mass [mm] (for calculation example → page 8)										
Type	FEN-...				FENG-...					
Piston diameter	8, 10	12, 16	20	25	32	40	50	63	80	100
With 0 mm stroke	30	40	42	42	43	57	60	69	54	47
Supplement per 10 mm stroke	4.9	4.9	4.7	4.7	4.5	4.7	4.7	4.6	3.9	3.6

Materials

Sectional view



Guide unit	FEN/FENG-...-GF	FEN/FENG-...-KF
1 Yoke plate		
Piston diameter 32 ... 63	Aluminium	Aluminium
Piston diameter 80, 100	Steel	Steel
2 Coupling	Steel	Steel
3 Guide	Aluminium	Aluminium
4 Bearing	Sintered bronze	Steel
5 Guide rods	Steel	Steel
– Note on materials	–	Free of copper and PTFE
	RoHS compliant	

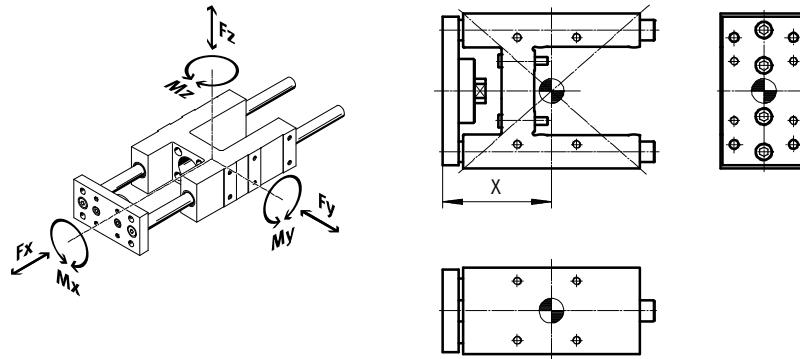
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Technical data

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Characteristic load value for FEN-...-KF/FENG-...-KF

The indicated forces and torques refer to the guide centre.



If the guide unit is subjected to two or more of the indicated forces and torques simultaneously, the following equation must be satisfied in addition to the indicated maximum loads.

Calculating the load comparison factor:

$$f_v = \frac{|F_{y,dyn}|}{F_{y,max}} + \frac{|F_{z,dyn}|}{F_{z,max}} + \frac{|M_{x,dyn}|}{M_{x,max}} + \frac{|M_{y,dyn}|}{M_{y,max}} + \frac{|M_{z,dyn}|}{M_{z,max}} \leq 1$$

Distance X (for calculation example → page 8)

Type	FEN-...-KF			FENG-...-KF					
Piston diameter	8, 10	12, 16	20, 25	32	40	50	63	80	100
Dimension X	55	68	69	83	85	99	117	142	145

Max. permissible forces and torques

Type	FEN-...-KF			FENG-...-KF					
Piston diameter	8, 10	12, 16	20, 25	32	40	50	63	80	100
Static									
F _{y,max.} /F _{z,max.}	680	830	830	1020	1260	1600	1600	3120	3120
M _{x,max.}	16	20	24	38	55	83	95	231	268
M _{y,max.} /M _{z,max.}	7	12	31	46	65	89	115	259	267
Dynamic (for a service life of 5000 km)									
F _{y,max.} /F _{z,max.}	450	520	520	750	1000	1260	1260	2300	2300
M _{x,max.}	11	12	15	28	44	65	75	170	198
M _{y,max.} /M _{z,max.}	5	7	20	34	52	70	90	191	197