

Guide units FEN/FENG for Inch Series cylinders

Overview



- High-precision guiding for types DSNU, DNC and DNG cylinders
- Protects cylinders against rotation due to torque loads
- Plain-bearing and recirculating ball bearing guide versions available

Product range overview				
Function	Type	Version	For piston Ø [in]	Stroke [in]
For DSNU cylinders	FEN	Plain-bearing guide	5/16, 3/8, 1/2, 5/8, 3/4, 1	0.04 ... 10.0
		KF Recirculating ball bearing guide	5/16, 3/8, 1/2, 5/8, 3/4, 1	0.04 ... 10.0
For DNC and DNG cylinders	FENG	Plain-bearing guide	1-1/4, 1-5/8, 2, 2-1/2, 3, 4	0.4 ... 20.0
		KF Recirculating ball bearing guide	1-1/4, 1-5/8, 2, 2-1/2, 3, 4	0.4 ... 20.0

Position sensing

When the cylinders DSNU-...-A or DNG-...-A are used, the piston position can be detected by proximity

sensors. These sensors require mounting kits which are listed in the table on the right.

Cylinder	Piston Ø	Mounting kits
DNG-...-A	1-1/4 ... 2	SMB-2-B
	2-1/2 ... 4	SMB-3-B
DSNU-...-A	5/16 ... 1	SMBR-...
DNC-...-A	1-1/4 ... 4	SMB-8-FENG-...

Note

The cylinders DNC-...-A have integrated sensor slots and thus do not normally require mounting kits. However, when a cylinder DNC-...-A is combined with the guide unit FENG, the

mounting kit SMB-8-FENG-... is required due to the covered front mounting position of the proximity sensor.

Guide units FEN/FENG for Inch Series cylinders

FESTO

Technical data

FEN

Diameter

5/16 ... 1 inch

- For use with DSNU
- Plain bearing guide
- Recirculating ball bearing guide (KF)

Stroke length

0.0 ... 10 inch



FENG

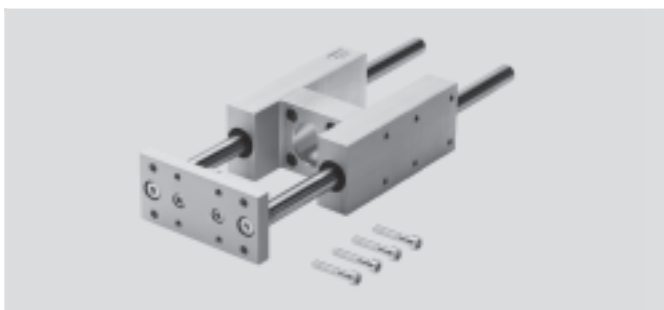
Diameter

1-1/4 ... 4 inch

- For use with DNC or DNG
- Plain bearing guide
- Recirculating ball bearing guide (KF)

Stroke length

0.04 ... 20 inch



General technical data

Ambient temperature	[°F]	-4 ... +176 °F
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Product weight FEN [oz]

Piston Ø [in]	5/16, 3/8	1/2, 5/8	3/4	1
With plain bearing guide				
Product weight at 0 inch stroke	11.7	17.3	30.8	30.6
Additional weight per 1 inch stroke	0.9	1.2	1.2	1.2
With recirculating ball bearing guide				
Product weight at 0 inch stroke	10.6	15.1	29.2	28.7
Additional weight per 1 inch stroke	1.0	1.3	1.3	1.3

Product weight FENG [oz]

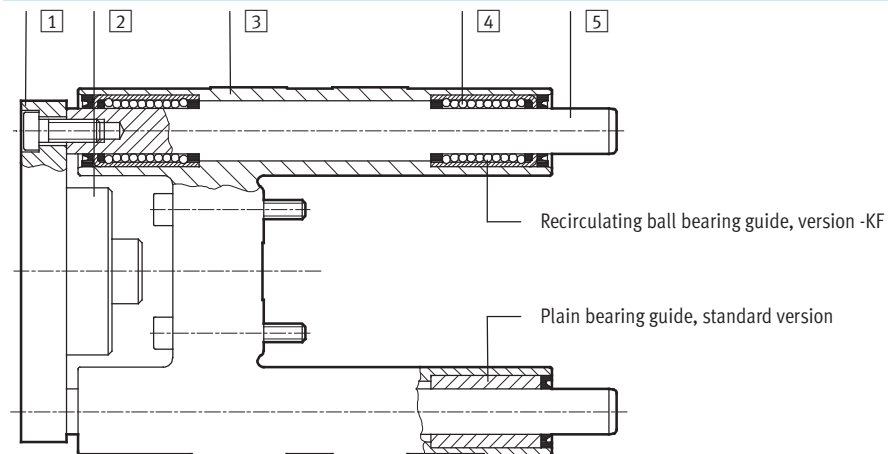
Piston Ø [in]	1-1/4	1-5/8	2	2-1/2	3	4
With plain bearing guide						
Product weight at 0 inch stroke	55.4	87.5	147.8	195.4	378.1	473.4
Additional weight per 1 inch stroke	1.5	2.8	4.2	4.3	6.3	6.3
With recirculating ball bearing guide						
Product weight at 0 inch stroke	54.0	83.6	142.2	190.8	367.9	458.2
Additional weight per 1 inch stroke	1.6	2.9	4.5	4.4	7.2	7.2

Guide units FEN/FENG for Inch Series cylinders

Technical data

Materials

Sectional view



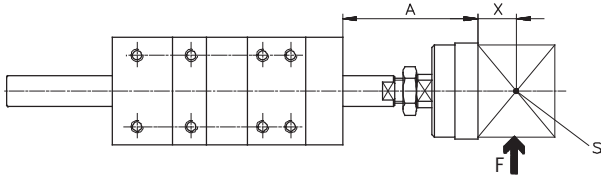
	FEN/FENG with plain bearing guide	FEN/FENG with recirculating ball bearing guide (KF)
1 Yoke plate	Aluminum	Aluminum
2 Coupling	Steel	Steel
3 Guide	Aluminum	Aluminum
4 Bearing	Sintered bronze	Steel
5 Guide rods	Steel	Steel
- Note on material	-	Free of copper, PTFE and silicone

Guide units FEN/FENG for Inch Series cylinders

Technical data



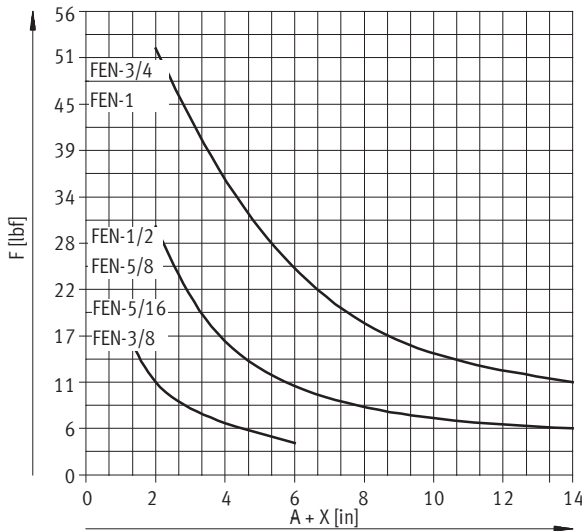
Max. working load F as a function of cantilever extension A



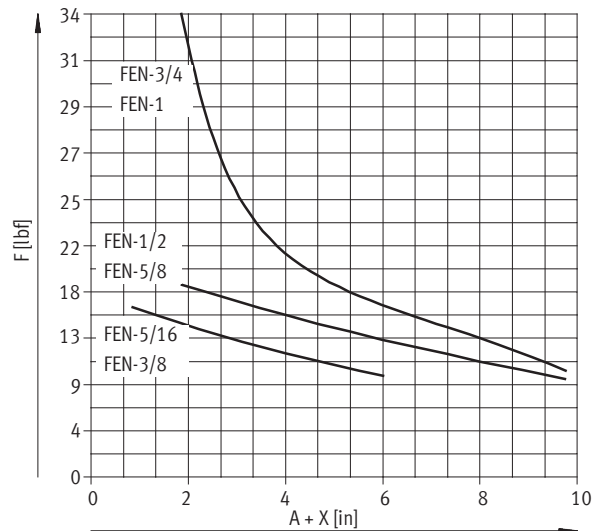
- A = Cantilever extension
- X = Distance for center of gravity of working load
- S = Center of gravity of working load

FEN-5/16 ... 1

with plain bearing guide

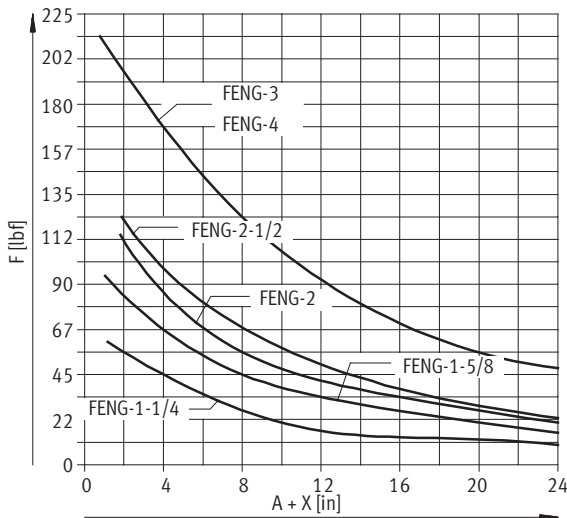


with recirculating ball bearing guide

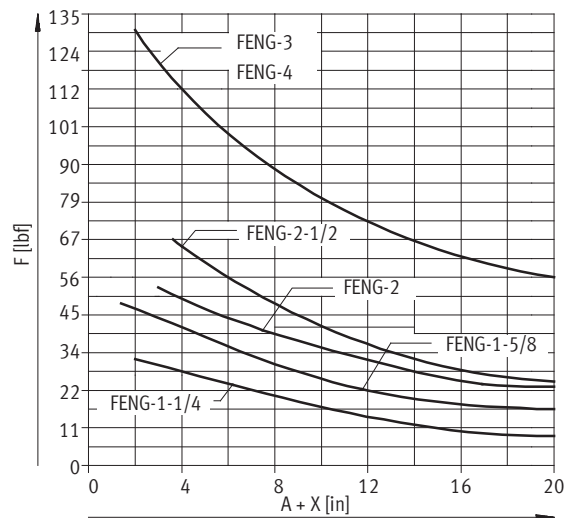


FENG-1-1/4 ... 4

with plain bearing guide



with recirculating ball bearing guide



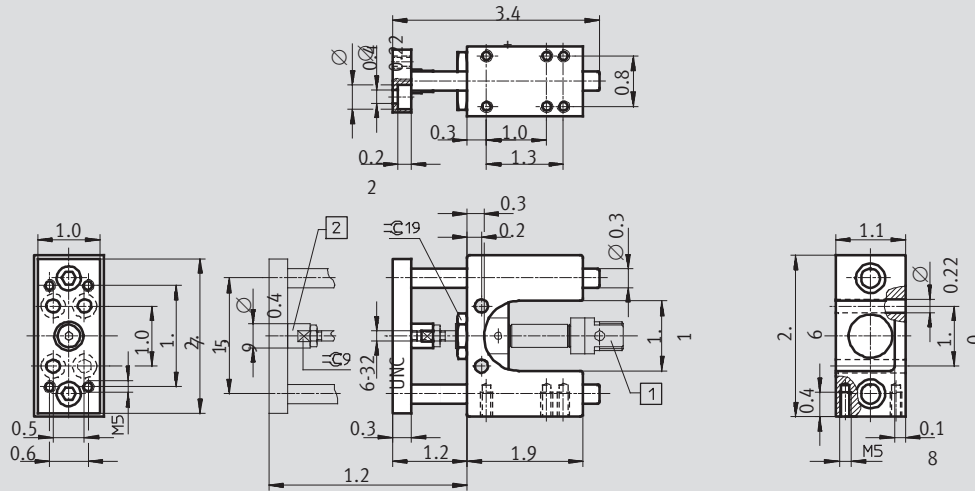
Dimensions are in inch, unless noted otherwise.

Guide units FEN/FENG for Inch Series cylinders

Technical data

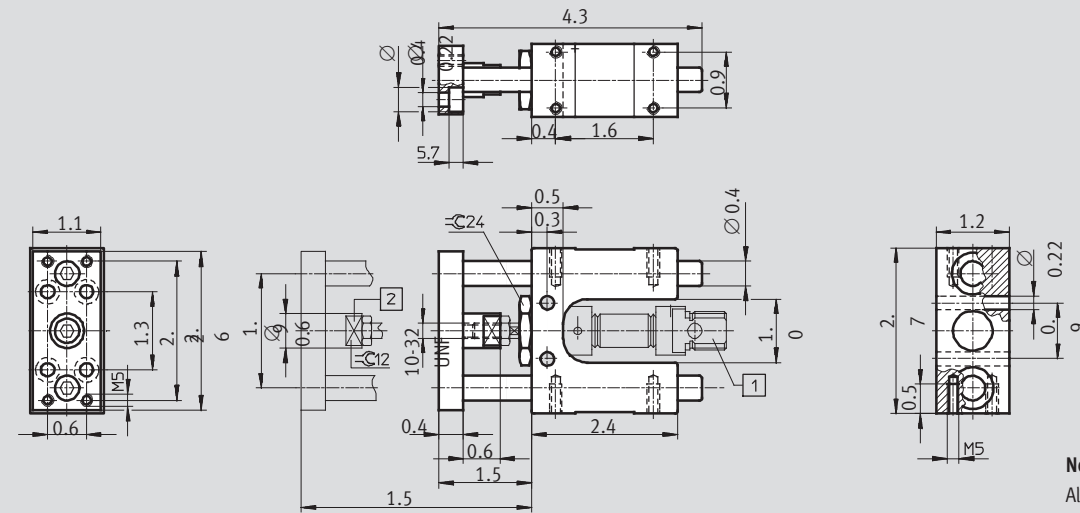
Dimensions

FEN-5/16, 3/8



Note
All wrench dimensions are metric

FEN-1/2, 5/8



Note
All wrench dimensions are metric

- 1 Cylinders DSNU
 - 2 Compensating coupling for radial and axial alignment
- + = plus stroke length

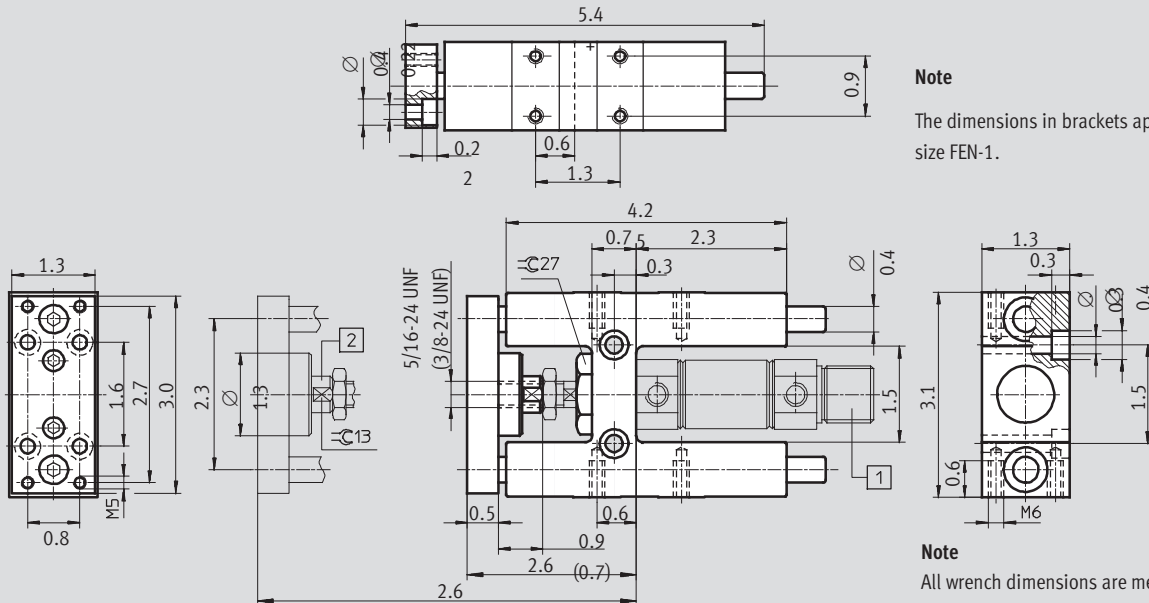
Dimensions are in inch, unless otherwise noted.

Guide units FEN/FENG for Inch Series cylinders

Technical data

Dimensions

FEN-3/4, 1



Note
The dimensions in brackets apply to size FEN-1.

Note
All wrench dimensions are metric

- 1 Cylinders DSNU
- 2 Compensating coupling for radial and axial alignment

+ = plus stroke length

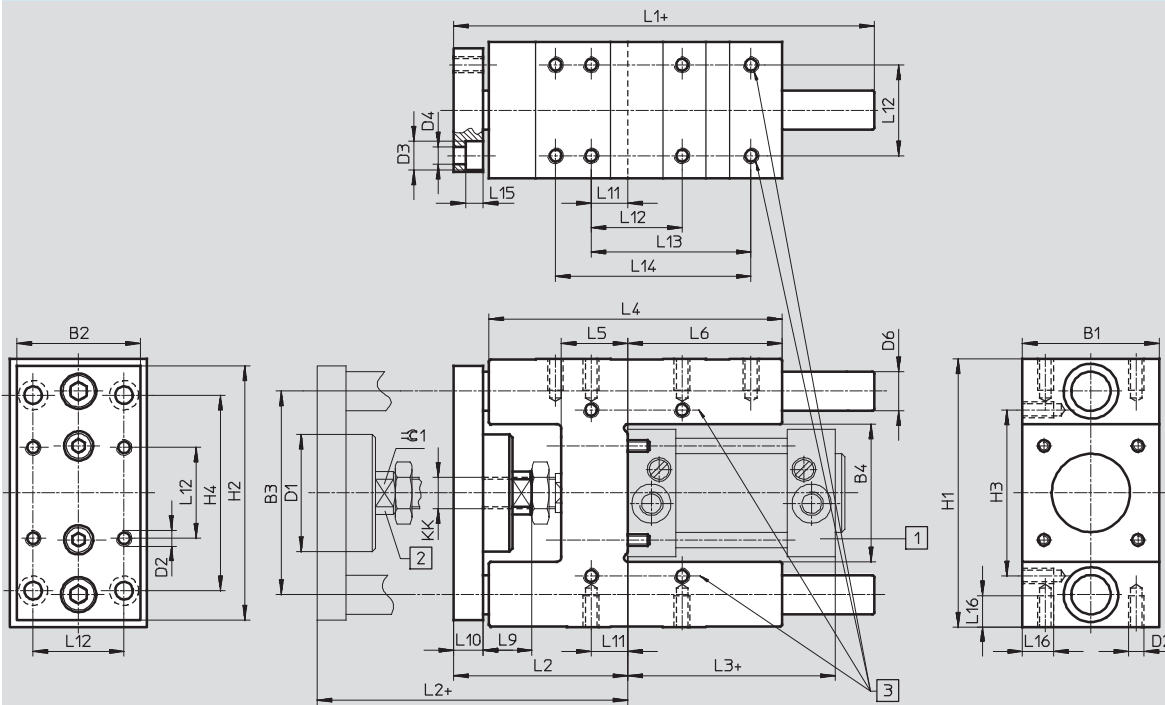
Dimensions are in inch, unless otherwise noted.

Guide units FEN/FENG for Inch Series cylinders

Technical data

Dimensions

FENG-1-1/4 ... 4



- 1 Cylinder DNC, DNG
 - 2 Compensating coupling for radial and axial alignment
 - 3 Users can drill additional mounting holes along these axes as required.
- + = plus stroke length

∅ [in]	B1	B2	B3	B4	D1 ∅	D2	D3 ∅	D4 ∅	D6 ¹⁾ ∅	H1	H2	H3	H4	KK
1-1/4	2.0	1.8	2.9	2.0	1.7	M6	0.4	0.3	0.5	3.8	3.5	2.4	3.1	3/8-24 UNF
1-5/8	2.3	2.1	3.4	2.3	1.7	M6	0.4	0.3	0.6	4.5	4.3	2.7	3.3	1/2-20 UNF
2	2.8	2.5	4.1	2.8	2.4	M8	0.6	0.4	0.8	5.4	5.1	3.3	3.9	5/8-18 UNF
2-1/2	3.3	3.1	4.7	3.4	2.4	M8	0.6	0.4	0.8	6.0	5.7	3.9	4.1	5/8-18 UNF
3	4.1	3.9	5.8	4.2	3.1	M10	0.7	0.4	1.0	7.4	7.1	4.1	5.1	3/4-16 UNF
4	5.1	4.7	6.8	5.2	3.1	M10	0.7	0.4	1.0	8.4	7.9	5.1	5.9	3/4-16 UNF

∅ [in]	L1	L2	L3	L4	L5	L6	L9	L10	L11	L12	L13	L14	L15	L16	≈C1 [mm]
1-1/4	6.1	2.6	3.7	4.9	0.9	3.0	0.8	0.5	0.2	1.3	2.8	3.1	0.3	0.5	15
1-5/8	6.7	3.0	4.1	5.5	1.1	3.2	0.9	0.5	0.4	1.5	3.3	-	0.3	0.6	15
2	7.4	3.5	4.2	5.9	1.3	3.1	1.0	0.6	0.7	1.8	3.2	3.9	0.4	0.6	19
2-1/2	8.7	3.5	4.8	7.2	1.3	4.4	1.0	0.6	0.6	2.2	4.1	-	0.4	0.6	19
3	10.2	4.4	5.0	8.5	1.6	5.0	1.3	0.8	0.8	2.8	-	-	0.4	0.8	27
4	10.4	4.6	5.4	8.7	1.6	5.0	1.3	0.8	1.0	3.5	-	-	0.4	0.8	27

Dimensions are in inch, unless otherwise noted.

Guide units FEN/FENG for Inch Series cylinders



Ordering Data

Mandatory data			
Function	Piston Ø	Stroke	Bearing type
FEN (For use with DSNU cylinders)	5/16-3/8 1/2-5/8 3/4 1	0.0 ... 20	KF
FENG (For use with DNC & DNG cylinders)	1-1/4 1-5/8 2 2-1/2 3 4		
FEN	5/16"-3/8"	3.5"	KF

Ordering table													
Size	5/16-3/8	1/2-5/8	3/4	1	1-1/4	1-5/8	2	2-1/2	3	4	Code	Enter code	
M Function	Guide unit											FEN	
												FENG	
Piston Ø [In]	FEN	5/16-3/8	1/2-5/8	3/4	1	-	-	-	-	-	-		
	FENG	-	-	-	-	1-1/4	1-5/8	2	2-1/2	3	4		
Stroke [in]	0.0 ... 4	0.0 ... 8	0.0 ... 10		0.4 ... 20						-...		
Bearing type	Plain bearing guide												
	Recirculating bearing guide											-KF	

Note

FEN-5/16-3/8-... is used with 2 cylinder sizes (DSNU-5/16-... and DSNU-3/8-...).

FEN-1/2-5/8-... is used with 2 cylinder sizes (DSNU-1/2-... and DSNU-5/8-...).

Transfer order code

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