

# FEU Linear Guide



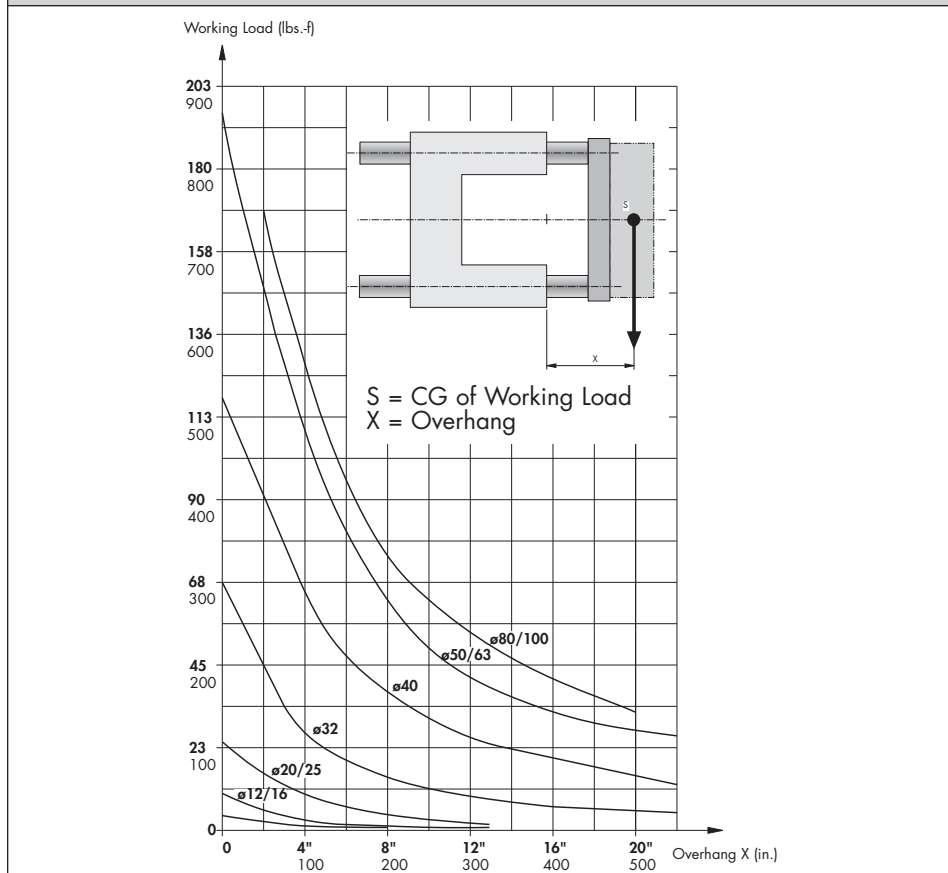
## Specifications

Features							
Installation	In any Position						
Temperature Range	Min. -4° F (-20° C) Max. +176° F (+80° C)						
Material							
Guide Body	Aluminium, Anodized						
Guide Rods	Stainless Steel						
Guide Bushing	Sintered Bronze						
Mounting Plate	Aluminium, Anodized						
Piston Rod Mounting	Stainless Steel						
Weight	Bore	ø8/10		ø12/16		ø20/25	
With 100mm Stroke	lbs. (kg)	0.44 (0.20)		0.84 (0.38)		1.50 (0.68)	
Per add. 100mm Stroke	lbs. (kg)	0.11 (0.05)		0.18 (0.08)		0.29 (0.13)	
Weight (mass)	Bore	ø32	ø40	ø50	ø63	ø80	ø100
With 100mm Stroke	lbs. kg	2.91 1.32	4.37 1.98	7.39 3.35	10.14 4.60	18.30 8.30	23.92 10.85
Per add. 100mm Stroke	lbs. kg	0.40 0.18	0.71 0.32	1.10 0.50	1.10 0.50	1.70 0.77	1.70 0.77

## Series FEUG Linear Guide, "U-Form"

For cylinders conforming to  
ISO 6431/6432  
ø8mm - 100mm

### Maximum working load in relation to overhang - FEUG version with plain bearings



# FEU Linear Guide



## Ordering Information

### Linear Guide, "U-Form"

Type: FEU

**Example:** Bore: Ø50mm  
 Stroke: 160mm  
 Type: FEUG 50/160  
 Order No. PD 38019-0160

ISO 6432 Cylinders Plain Bearing: Type FEUG Bore Ø		8-10mm	12-16mm	20mm	25mm
Type #		FEUG 8-10/xx	FEUG 12-16/xx	FEUG 20/xx	FEUG 25/xx
Order #		PD 38013-	PD 38014-	PD 38015-	PD 38016-
Strokes (MM)					
(xx) 25		0025	—	—	—
50		0050	0050	0050	0050
100		0100	0100	0100	0100
160		—	—	0160	0160
200		—	0200	0200	0200
250		—	—	0250	0250
320		—	—	0400	0400

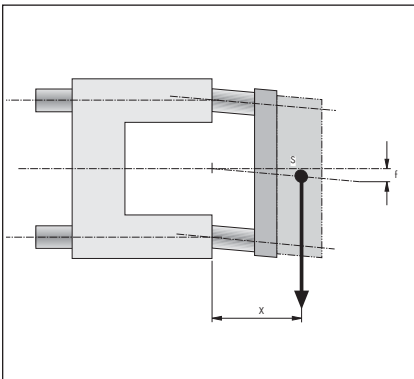
  

ISO 6431 Cylinders Plain Bearing: Type FEUG Bore Ø		32mm	40mm	50mm	63mm	80mm	100mm
Type #		FEUG 32/xx	FEUG 40/xx	FEUG 50/xx	FEUG 63/xx	FEUG 80/xx	FEUG 100/xx
Order #		PD 38017-	PD 38018-	PD 38019-	PD 38020-	PD 38021-	PD 38022-
Strokes (MM)							
50		0050	0050	0050	0050	0050	0050
100		0100	0100	0100	0100	0100	0100
160		0160	0160	0160	0160	0160	0160
200		0200	0200	0200	0200	0200	0200
250		0250	0250	0250	0250	0250	0250
320		0320	0320	0320	0320	0320	0320

Note: All units use metric mounting threads only.  
 Contact factory for special stroke lengths.

**Linear Guides Only: Corresponding Cylinders Need to be Ordered Separately!**

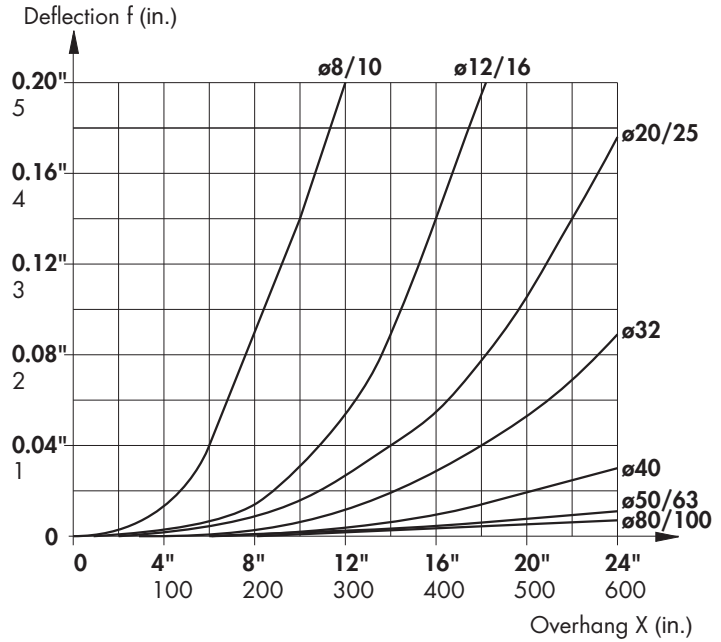
## Cylinder Details



S = CG of working load  
 X = Overhang  
 f = Deflection

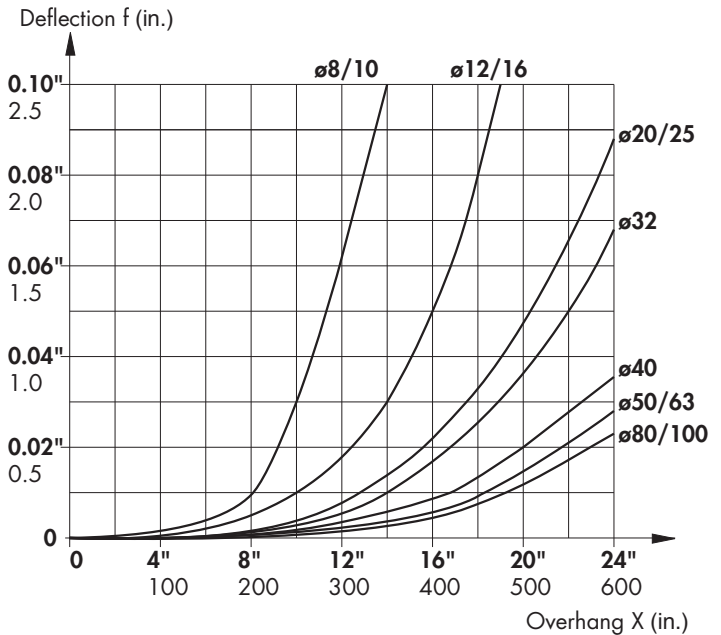
### Deflection -FEUG version with plain bearings

Diagram 1 - Deflection with a working load of 23 lbs.



The total deflection is the sum of the deflection under own weight (Diagram 2) and the deflection under load (Diagram 1).  
 The deflection for every 23 lb. load is shown in Diagram 1.

Diagram 2 - Deflection under own weight

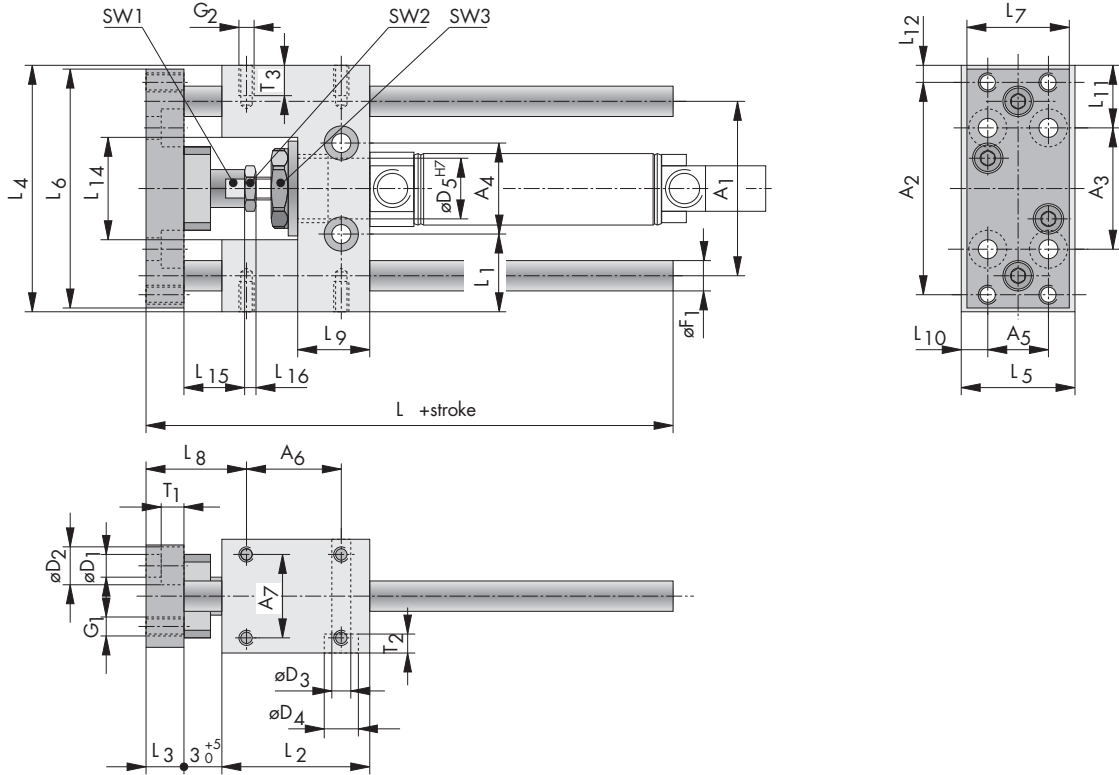


# FEU Linear Guide



## Dimensional Details

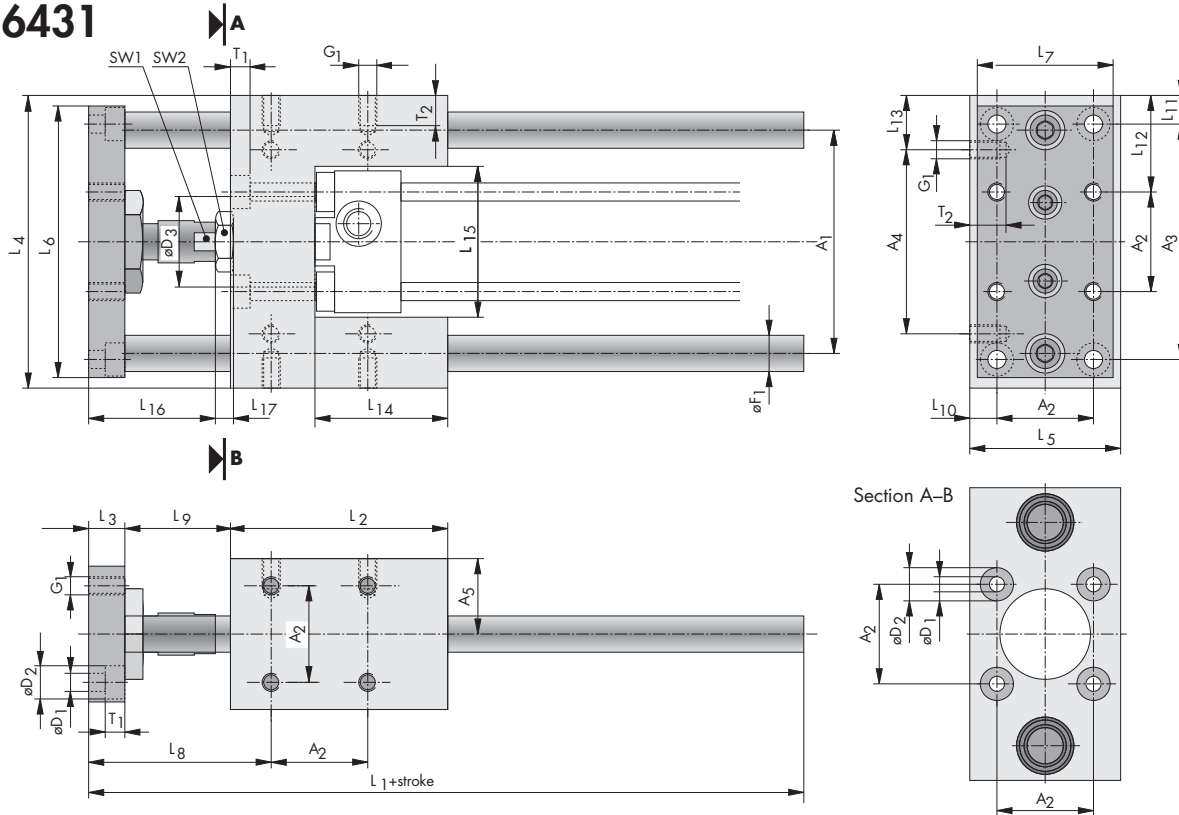
### FEUG Ø8-25mm ISO 6432



Bore Ø	A <sub>1</sub>	A <sub>2</sub>	A <sub>3</sub>	A <sub>4</sub>	A <sub>5</sub>	A <sub>6</sub>	A <sub>7</sub>	D <sub>1</sub>	D <sub>2</sub>	D <sub>3</sub>	D <sub>4</sub>	D <sub>5<sup>H7</sup></sub>	F <sub>1</sub>	G <sub>1</sub>	G <sub>2</sub>	L <sub>1+stroke</sub>	L <sub>2</sub>	L <sub>3</sub>	L <sub>4</sub>
8	1.57	1.65	0.98	0.94	0.63	0.75	0.75	0.22	0.39	0.18	-	0.47	0.24			2.36	1.38	0.39	2.20
	40	42	25	24	16	19	19	5.5	10	4.5	-	12	6	M5	M4	60	35	10	56
10	1.57	1.65	0.98	0.94	0.63	0.75	0.75	0.22	0.39	0.18	-	0.47	0.24			2.36	1.38	0.39	2.20
	40	42	25	24	16	19	19	5.5	10	4.5	-	12	6	M5	M4	60	35	10	56
12	1.81	1.81	1.26	0.94	0.63	0.98	0.87	0.22	0.39	0.22	-	0.63	0.31			2.72	1.54	0.39	2.56
	46	46	32	24	16	25	22	5.5	10	5.5	-	16	8	M5	M4	69	39	10	65
16	1.81	1.81	1.26	0.94	0.63	0.98	0.87	0.22	0.39	0.22	-	0.63	0.31			2.72	1.54	0.39	2.56
	46	46	32	24	16	25	22	5.5	10	5.5	-	16	8	M5	M4	69	39	10	65
20	2.28	2.68	1.57	1.50	0.79	1.28	0.91	0.22	0.39	0.26	0.43	0.87	0.39			3.35	2.17	0.47	3.11
	58	68	40	38	20	32.5	23	5.5	10	6.6	11	22	10	M5	M6	85	55	12	79
25	2.28	2.68	1.57	1.50	0.79	1.28	0.91	0.22	0.39	0.26	0.43	0.87	0.39			3.35	2.17	0.47	3.11
	58	68	40	38	20	32.5	23	5.5	10	6.6	11	22	10	M5	M6	85	55	12	79
Bore Ø	L <sub>5</sub>	L <sub>6</sub>	L <sub>7</sub>	L <sub>8</sub>	L <sub>9</sub>	L <sub>10</sub>	L <sub>11</sub>	L <sub>12</sub>	L <sub>13</sub>	L <sub>14</sub>	L <sub>15</sub>	L <sub>16</sub>	SW1	SW2	SW3	T <sub>1</sub>	T <sub>2</sub>	T <sub>3</sub>	
8	1.02	2.13	0.98	0.83	0.67	0.20	0.61	0.28	0.63	0.94	0.75	0.09				0.22	-	0.31	
	26	54	25	21 <sup>+5</sup> <sub>0</sub>	17	5	15.5	7	16	24	19	2.2	9	a	15	5.7	-	8	
10	1.02	2.13	0.98	0.83	0.67	0.20	0.61	0.28	0.63	0.94	0.75	0.09				0.22	-	0.31	
	26	54	25	21 <sup>+5</sup> <sub>0</sub>	17	5	15.5	7	16	24	19	2.2	9	a	15	5.7	-	8	
12	1.18	2.48	1.06	0.77	0.75	0.28	0.65	0.16	0.81	1.06	0.63	0.13				0.22	-	0.31	
	30	63	27	19.5 <sup>+5</sup> <sub>0</sub>	19	7	16.5	4	20.5	27	16	3.2	9	a	19	5.7	-	8	
16	1.18	2.48	1.06	0.77	0.75	0.28	0.65	0.16	0.81	1.06	0.63	0.13				0.22	-	0.31	
	30	63	27	19.5 <sup>+5</sup> <sub>0</sub>	19	7	16.5	4	20.5	27	16	3.2	9	a	19	5.7	-	8	
20	1.34	2.99	1.26	0.94	0.98	0.28	0.77	0.22	0.81	1.46	1.14	0.16				0.22	-	0.55	
	34	76	32	24 <sup>+5</sup> <sub>0</sub>	25	7	19.5	5.5	20.5	37	29	4	13	a	27	5.7	-	14	
25	1.34	2.99	1.26	0.94	0.98	0.28	0.77	0.22	0.81	1.46	0.91	0.24				0.22	0.28	0.55	
	34	76	32	24 <sup>+5</sup> <sub>0</sub>	25	7	19.5	5.5	20.5	37	23	6	13	a	27	5.7	7	14	

## Dimensional Details

### FEUG Ø32-100mm ISO 6431



Bore Ø	A <sub>1</sub>	A <sub>2</sub>	A <sub>3</sub>	A <sub>4</sub>	A <sub>5</sub>	D <sub>1</sub>	D <sub>2</sub>	D <sub>3</sub>	F <sub>1</sub>	G <sub>1</sub>	L <sub>1+stroke</sub>	L <sub>2</sub>	L <sub>3</sub>	L <sub>4</sub>	L <sub>5</sub>	L <sub>6</sub>
32	2.91 74	1.28 32.5	3.07 78	2.40 61	0.98 25	0.26 6.6	0.43 11	1.18 30	0.47 12	M6	5.24 133	2.83 72	0.47 12	3.82 97	1.97 50	3.54 90
40	3.43 87	1.50 38	3.31 84	2.72 69	1.14 29	0.26 6.6	0.43 11	1.38 35	0.63 16	M6	5.87 149	3.31 84	0.47 12	4.53 115	2.28 58	4.33 110
50	4.09 104	1.83 46.5	3.94 100	3.35 85	1.38 35	0.35 9	0.59 15	1.57 40	0.79 20	M8	6.89 175	3.94 100	0.59 15	5.39 137	2.76 70	5.12 130
63	4.69 119	2.22 56.5	4.13 105	3.94 100	1.67 42.5	0.35 9	0.59 15	1.77 45	0.79 20	M8	7.48 190	4.53 115	0.59 15	5.98 152	3.35 85	5.71 145
80	5.83 148	2.83 72	5.12 130	5.12 130	2.07 52.5	0.43 11	0.71 18	1.77 45	0.98 25	M10	9.37 238	5.91 150	0.79 20	7.44 189	4.13 105	7.09 180
100	6.77 172	3.50 89	5.91 150	5.91 150	2.56 65	0.43 11	0.71 18	2.17 55	0.98 25	M10	9.80 249	6.50 165	0.79 20	8.39 213	5.12 130	7.87 200
Bore Ø	L <sub>7</sub>	L <sub>8</sub>	L <sub>9</sub>	L <sub>10</sub>	L <sub>11</sub>	L <sub>12</sub>	L <sub>13</sub>	L <sub>14</sub>	L <sub>15</sub>	L <sub>16</sub>	L <sub>17</sub>	SW1	SW2	T <sub>1</sub>	T <sub>2</sub>	
32	1.77 45	2.38 60.5 <sup>+5</sup> <sub>0</sub>	1.38 35 <sup>+5</sup> <sub>0</sub>	0.34 8.75	0.37 9.5	1.27 32.25	0.71 18	1.73 44	1.98 50.2	1.18 30	0.24 6	-	-	0.26 6.5	0.39 10	
40	2.13 54	2.50 63.5 <sup>+5</sup> <sub>0</sub>	1.61 41 <sup>+5</sup> <sub>0</sub>	0.39 10	0.61 15.5	1.52 38.5	0.91 23	2.01 51	2.29 58.2	1.42 36	0.28 7	-	-	0.26 6.5	0.39 10	
50	2.48 63	2.99 76 <sup>+5</sup> <sub>0</sub>	1.89 48 <sup>+5</sup> <sub>0</sub>	0.46 11.75	0.73 18.5	1.78 45.25	1.02 26	2.36 60	2.76 70.2	1.65 42	0.31 8	-	-	0.35 9	0.51 13	
63	3.15 80	2.99 76 <sup>+5</sup> <sub>0</sub>	1.89 48 <sup>+5</sup> <sub>0</sub>	0.56 14.25	0.93 23.5	1.88 47.75	1.02 26	2.95 75	3.35 85.2	1.65 42	0.31 8	-	-	0.35 9	0.51 13	
80	3.94 100	3.66 93 <sup>+6</sup> <sub>0</sub>	2.20 56 <sup>+6</sup> <sub>0</sub>	0.65 16.5	1.16 29.5	2.30 58.5	1.16 29.5	4.49 114	4.15 105.4	-	-	27	30	0.43 11	0.63 16	
100	4.72 120	3.76 95.5 <sup>+6</sup> <sub>0</sub>	2.20 56 <sup>+6</sup> <sub>0</sub>	0.81 20.5	1.24 31.5	2.44 62	1.24 31.5	5.04 128	5.13 130.4	-	-	27	30	0.43 11	0.63 16	