

LinMot®

PRELIMINARY

Linear Motors with ATEX-Certification



Designed for explosion proof environment



Categories: gas zones 1/2, dust zones 21/22



Stainless steel housing EN1.4404 / AISI 316



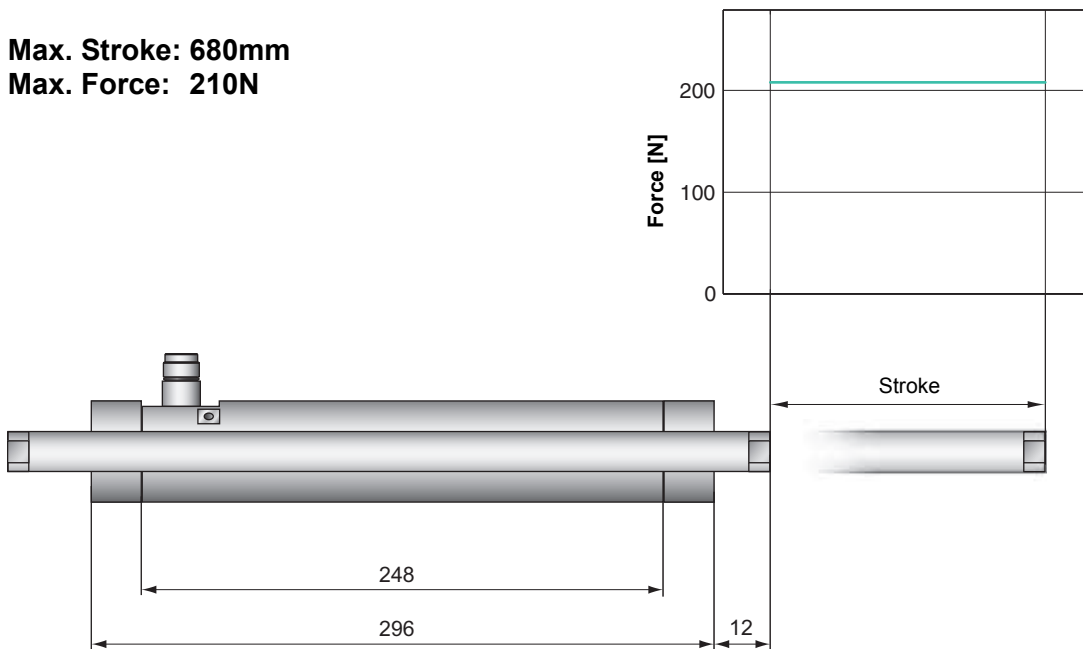
Completely sealed, protection IP69K



Available with integrated Fluid cooling

The linear motor technology for industrial applications

Max. Stroke: 680mm
Max. Force: 210N



— E1250-UC, 72VDC
 — E1100-XC, 72VDC



Dimensions in mm

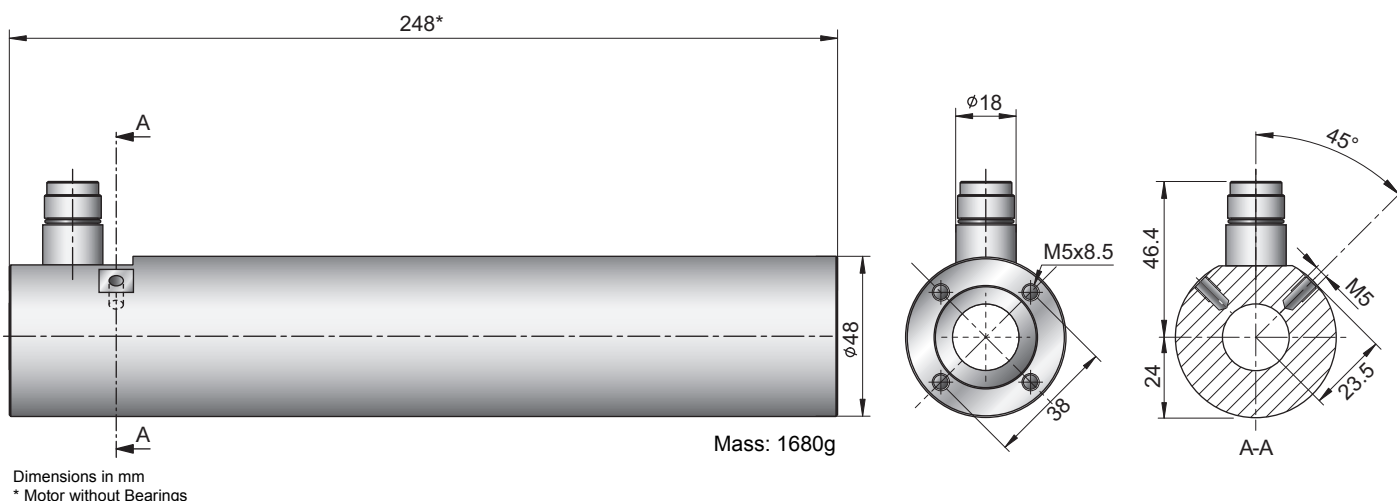
Motor Specification*

		P01-37x120F/...x...-HP-ATEX							
		75 (2.95)	180 (7.09)	280 (11.02)	380 (14.96)	480 (18.90)	580 (22.83)	680 (26.77)	
Stroke	mm (in)								
Max. Force E12x0 - UC	N (lbf)				210 (47.2)				
Max. Force E11x0 - XC	N (lbf)				210 (47.2)				
Cont. Force	N (lbf)				24 (5.4)				
Cont. Force Liquid cooling	N (lbf)				65 (14.6)				
Force Constant	N/A (lbf/A)				14 (3.1)				
Max. Current @ 72VDC	A				15				
Max. Velocity @ 72VDC	m/s (in/s)				- (-)				
Phase Resist. 25/80 °C	Ohm				2.5/3				
Phase Inductance	mH				1.6				
Thermal Resistance	°K/W				-				
Thermal Time Const.	sec				-				
Stator Diameter	mm (in)				48 (1.89)				
Stator Length	mm (in)				296 (11.65)				
Stator Mass	g (lb)				2200 (4.85)				
Slider Diameter	mm (in)				19 (0.75)				
Slider Length	mm (in)	395 (15.55)	500 (19.69)	600 (23.62)	700 (27.56)	800 (31.50)	900 (35.43)	1000 (39.37)	
Slider Mass	g (lb)	746 (1.64)	958 (2.11)	1167 (2.57)	1376 (3.03)	1586 (3.50)	1785 (3.94)	1980 (4.37)	
Position Repeatability	mm (in)				±0.05 (±0.0020)				
Linearity	%				±0.10				
Repeatability with EPS	mm (in)				±0.01 (±0.0004)				
Linearity with EPS	mm (in)				±0.01 (±0.0004)				

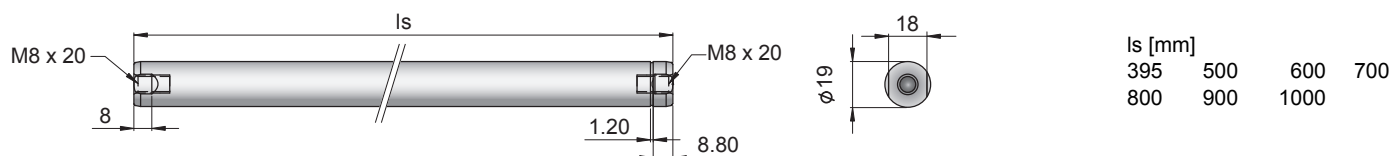


*for Motors with Bearings, other Values without Bearings (see LinMot Designer)

PS01-37x120F-HP-ATEX



PL01-19x.../...



Linear Motor		Stator		Slider	
Type	Art. Nr.	Type	Art. No.	Type	Art No.
P01-37x120F/75x75-HP-ATEX	-->			& PL01-19x395/320	0150-1452
P01-37x120F/180x180-HP-ATEX	-->			& PL01-19x500/420	0150-1455
P01-37x120F/280x280-HP-ATEX	-->			& PL01-19x600/520	0150-1456
P01-37x120F/380x380-HP-ATEX	-->	PS01-37x120F-HP-ATEX-R-FC	0150-1298	& PL01-19x700/620	0150-1457
P01-37x120F/480x480-HP-ATEX	-->			& PL01-19x800/720	01-50-1458
P01-37x120F/580x580-HP-ATEX	-->			& PL01-19x900/820	0150-1459
P01-37x120F/680x680-HP-ATEX	-->			& PL01-19x1000/920	0150-1460

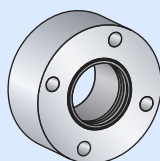
Connectors

Motor Connector Wiring

Ph 1+	red	1
Ph 1-	pink	2
Ph 2+	blue	3
Ph 2-	gray	4
+5VDC	white	A
GND	inner Shield	B
Sine	yellow	C
Cosine	green	D
Temp.	black	E
Shield	outer Shield	Case

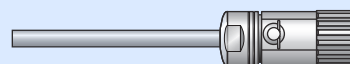
Accessories

Plain Bearing



PB 01-37x24-P-SSC
Art. No. 0150-3290

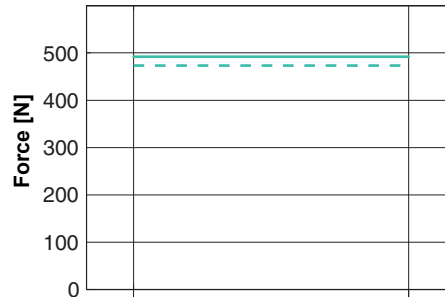
Connector



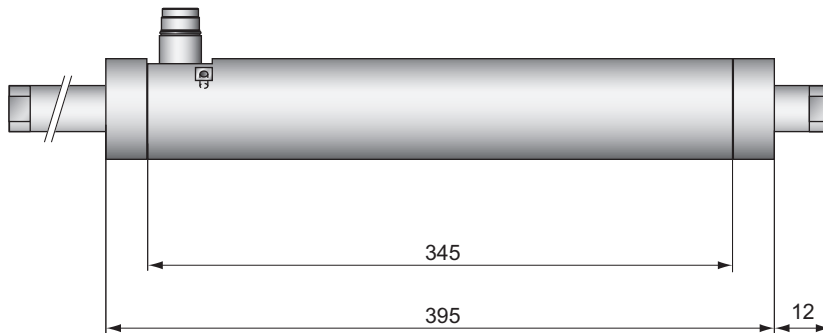
MC01-R/f-IP69K-SSC
Art. No. 0150-3347

MC01-R/f-IP69K-SSC-as
Art. No. 0150-3343

Max. Stroke: 980mm
Max. Force: 496N



— E1250-UC, 72VDC
 - - - E1100-XC, 72VDC

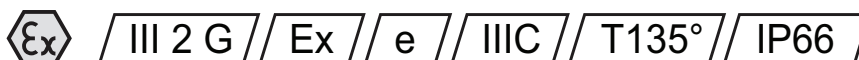


Dimensions in mm



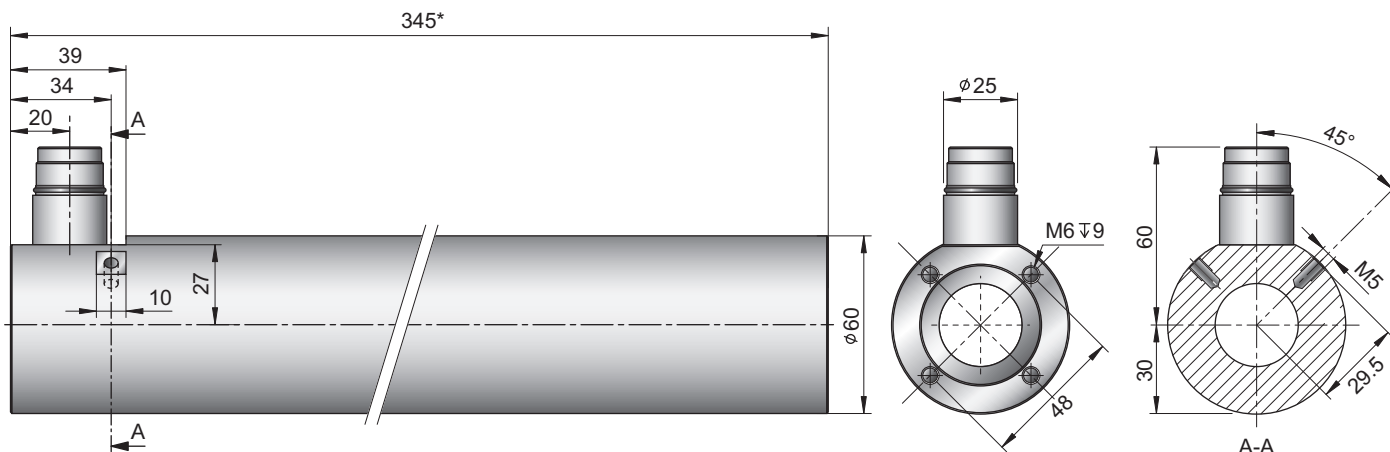
Motor Specification*

		P01-48x240F/...x...-ATEX							
Stroke	mm (in)	80 (3.15)	200 (7.87)	290 (11.42)	380 (14.96)	500 (19.69)	590 (23.23)	800 (31.50)	980 (38.58)
Max. Force E12x0 - UC	N (lbf)					496 (111.51)			
Max. Force E11x0 - XC	N (lbf)					477 (107.23)			
Cont. Force	N (lbf)					86 (19.33)			
Cont. Force Liquid cooling	N (lbf)					241 (54.18)			
Force Constant	N/A (lbf/A)					19.1 (4.29)			
Max. Current @ 72VDC	A					26			
Max. Velocity @ 72VDC	m/s (in/s)					3.4 (134)			
Phase Resist. 25/80 °C	Ohm					1.0/1.2			
Phase Inductance	mH					1.0			
Thermal Resistance	°K/W					- (-)			
Thermal Time Const.	sec					- (-)			
Stator Diameter	mm (in)					60 (2.36)			
Stator Length	mm (in)					345 (13.58)			
Stator Mass	g (lb)					3710 (8.18)			
Slider Diameter	mm (in)					27 (0.059)			
Slider Length	mm (in)	500(19.69)	620(24.41)	710(27.95)	800(31.50)	920(36.22)	1010(39.76)	1220(48.03)	1400(55.12)
Slider Mass	g (lb)	2010(4.43)	2530(5.58)	2920(6.44)	3310(7.30)	3830(8.44)	4220(9.30)	5130(11.31)	5910(13.03)
Position Repeatability	mm (in)					±0.05 (±0.0020)			
Linearity	%					±0.10			
Repeatability with EPS	mm (in)					±0.01 (±0.0004)			
Linearity with EPS	mm (in)					±0.01 (±0.0004)			



*for Motors with Bearings, other Values without Bearings (see LinMot Designer)

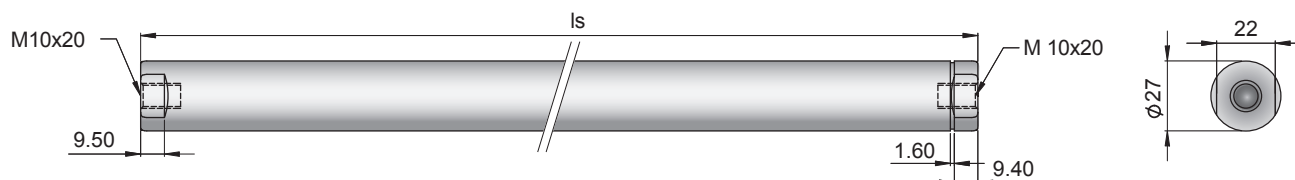
PS01-48x240F-ATEX



Dimensions in mm
* Motor without Bearings

PL01-27x.../...

Is [mm]			
500	620	710	800
920	1010	1220	1400



Linear Motor	Stator		Slider	
Type	Art. Nr.	Type	Art. No.	Art No.
P01-48x240F/80x80-ATEX	-->		& PL01-27x500/420	0150-1469
P01-48x240F/200x200-ATEX	-->		& PL01-27x620/540	0150-1470
P01-48x240F/290x290-ATEX	-->		& PL01-27x710/630	0150-1471
P01-48x240F/380x380-ATEX	-->	PS01-48x240F-ATEX-C-FC	0150-1299 & PL01-27x800/720	0150-1472
P01-48x240F/500x500-ATEX	-->		& PL01-27x920/840	0150-1447
P01-48x240F/590x590-ATEX	-->		& PL01-27x1010/930	0150-1473
P01-48x240F/800x800-ATEX	-->		& PL01-27x1220/1140	0150-1587
P01-48x240F/980x980-ATEX	-->		& PL01-27x1400/1320	0150-1588

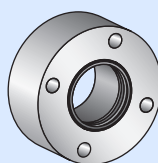
Connectors

Motor Connector Wiring

Ph 1+	red	1
Ph 1-	pink	2
Ph 2+	blue	3
Ph 2-	gray	4
+5VDC	white	A
GND	inner Shield	B
Sine	yellow	C
Cosine	green	D
Temp.	black	E
Shield	outer Shield	Case

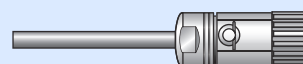
Accessories

Plain Bearing



PB 01-48x25-P-SSC
Art. No. 0150-3281

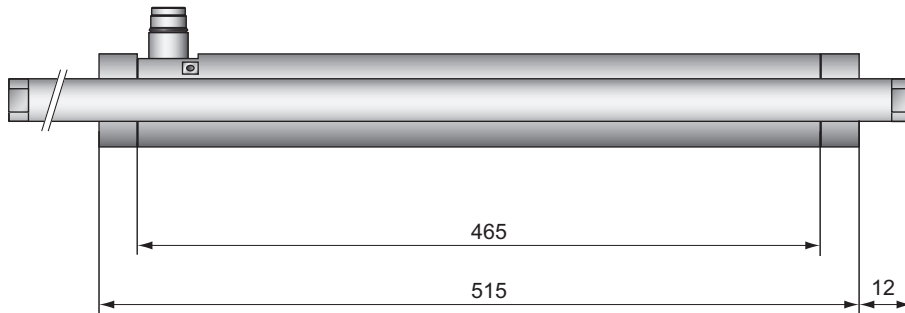
Connector



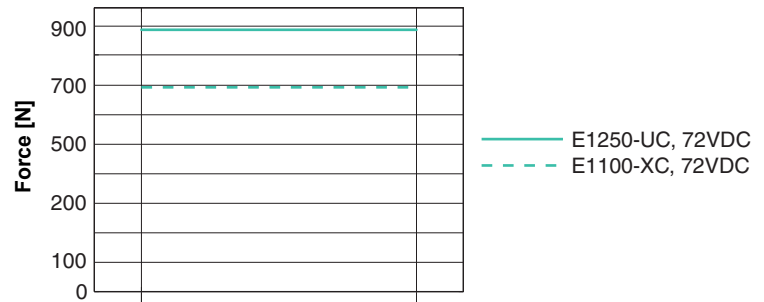
MC01-C/f-IP69K-SSC
Art. No. 0150-3306

MC01-C/f-IP69K-SSC-as
Art. No. 0150-3325

Max. Stroke: 860mm
Max. Force: 888N



Dimensions in mm

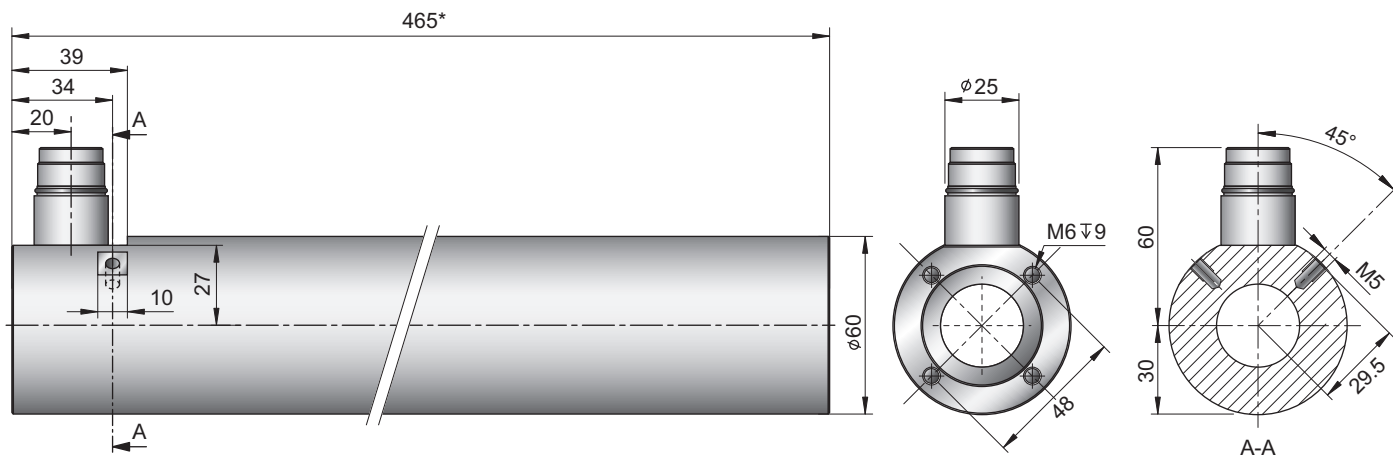


Motor Specification*

		P01-48x360F/...x...-ATEX							
Extended Stroke ES	mm (in)	80 (3.15)	170 (6.69)	260 (10.24)	380 (14.96)	470 (18.50)	680 (26.77)	860 (33.86)	
Max. Force E12x0 - UC	N (lbf)				888 (199.6)				
Max. Force E11x0 - XC	N (lbf)				693 (155.8)				
Cont. Force	N (lbf)				129 (29.0)				
Cont. Force Liquid cooling	N (lbf)				360 (80.9)				
Force Constant	N/A (lbf/A)				27.7 (6.23)				
Max. Current @ 72VDC	A				32				
Max. Velocity @ 72VDC	m/s (in/s)				2.35				
Phase Resist. 25/80 °C	Ohm				1.5/1.8				
Phase Inductance	mH				1.5				
Thermal Resistance	°K/W				- (-)				
Thermal Time Const.	sec				- (-)				
Stator Diameter	mm (in)				60 (2.36)				
Stator Length	mm (in)				465 (18.31)				
Stator Mass	g (lb)				5000 (11.02)				
Slider Diameter	mm (in)				27 (0.059)				
Slider Length	mm (in)	620(24.41)	710(27.95)	800(31.50)	920(36.22)	1010(39.76)	1220(48.03)	1400(55.12)	
Slider Mass	g (lb)	2530(5.58)	2920(6.44)	3310(7.30)	3830(8.44)	4220(9.30)	5130(11.31)	5910(13.03)	
Position Repeatability	mm (in)				±0.05 (±0.0020)				
Linearity	%				±0.10				
Repeatability with EPS	mm (in)				±0.01 (±0.0004)				
Linearity with EPS	mm (in)				±0.01 (±0.0004)				



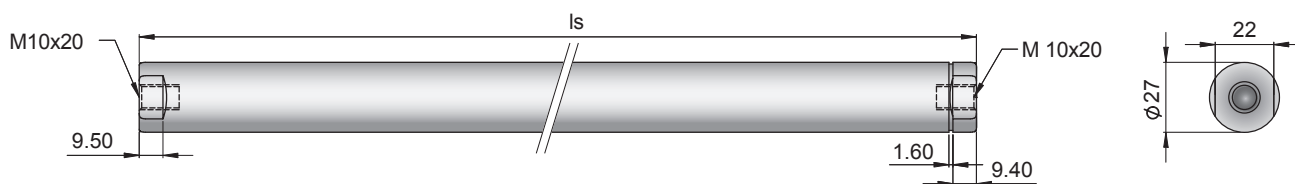
*for Motors with Bearings, other Values without Bearings (see LinMot Designer)



Dimensions in mm
* Motor without Bearings

PL01-27x.../...

ls [mm]			
620	710	800	920
1010	1220	1400	



Linear Motor Type	Art. Nr.	Stator Type	Art. No.	Slider Type	Art No.
P01-48x360F/80x80-ATEX	-->			& PL01-27x620/540	0150-1470
P01-48x360F/170x170-ATEX	-->			& PL01-27x710/630	0150-1471
P01-48x360F/260x260-ATEX	-->			& PL01-27x800/720	0150-1472
P01-48x360F/380x380-ATEX	-->	PS01-48x360F-ATEX-C-FC	0150-1300	& PL01-27x920/840	0150-1447
P01-48x360F/470x470-ATEX	-->			& PL01-27x1010/930	0150-1473
P01-48x360F/680x680-ATEX	-->			& PL01-27x1220/1140	0150-1587
P01-48x360F/860x860-ATEX	-->			& PL01-27x1400/1320	0150-1588

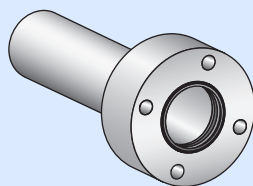
Connectors

Motor Connector Wiring

Ph 1+	red	1
Ph 1-	pink	2
Ph 2+	blue	3
Ph 2-	gray	4
+5VDC	white	A
GND	inner Shield	B
Sine	yellow	C
Cosine	green	D
Temp.	black	E
Shield	outer Shield	Case

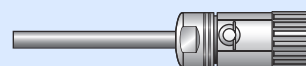
Accessories

Plain Bearing



PB 01-48x25-80-P-SSC
Art. No. 0150-3213

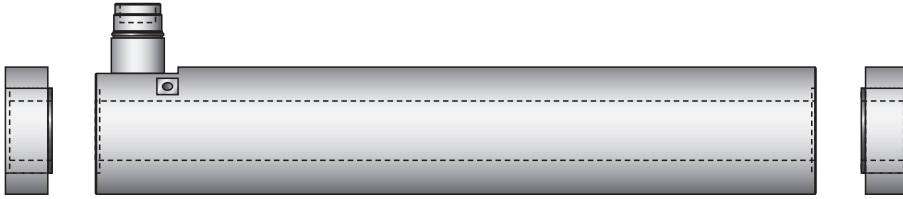
Connector



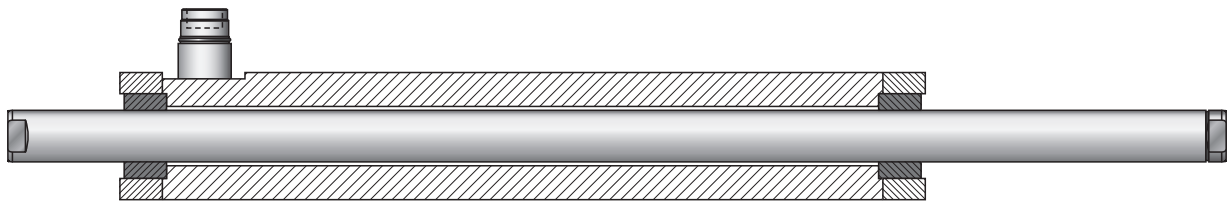
MC01-C/f-IP69K-SSC
Art. No. 0150-3306

MC01-C/f-IP69K-SSC-as
Art. No. 0150-3325

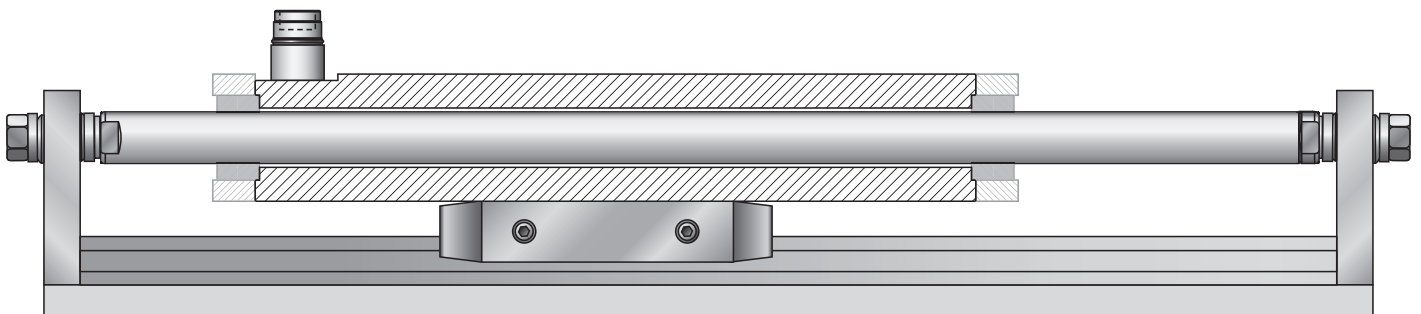
External bearings



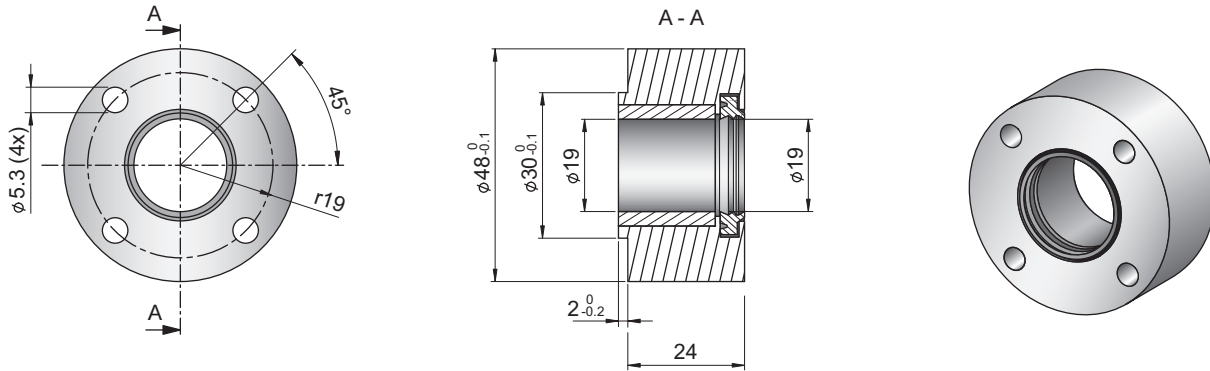
ATEX Stator with bearings



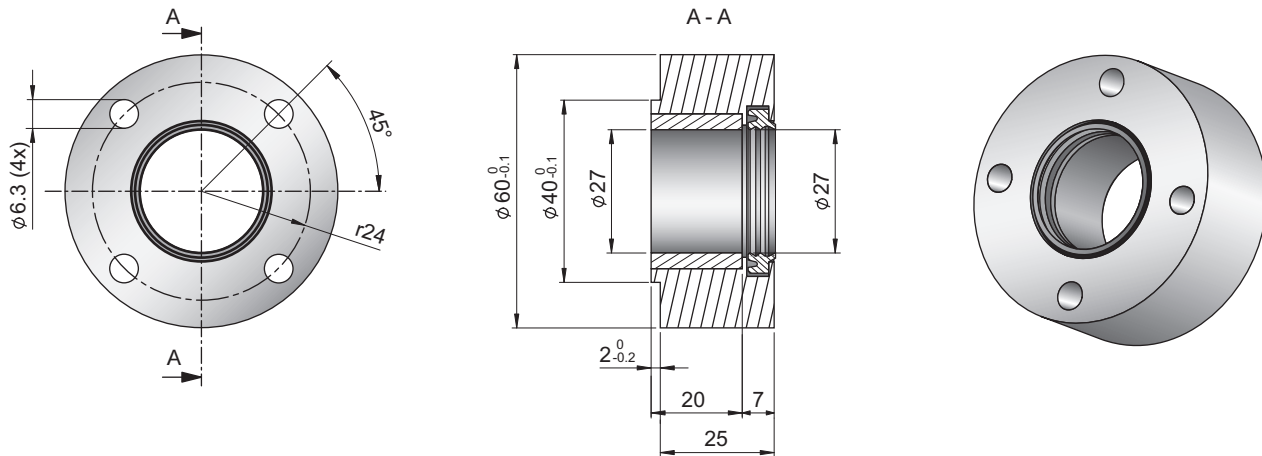
Application Example: Linear Stage



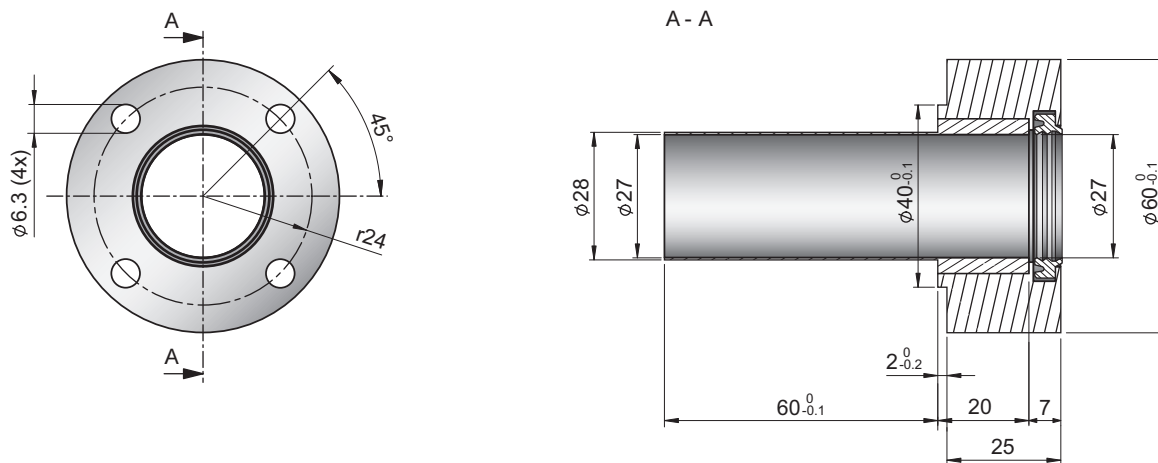
PB01-37x24-P-SSC



PB01-48x25-P-SSC



PB01-48x25-80-P-SSC



Ordering information

Item	Description	Part Number
PB01-37x24-P-SSC	Plain Bearing for PS01-37x120...-SSC (synthetical, FDA materials)	0150-3290
PB01-48x25-P-SSC	Plain Bearing for PS01-48x240...-SSC (synthetical, FDA materials)	0150-3281
PB01-48x25-80-P-SSC	Plain Bearing for PS01-48x360...-SSC (synthetical, FDA materials)	0150-3413