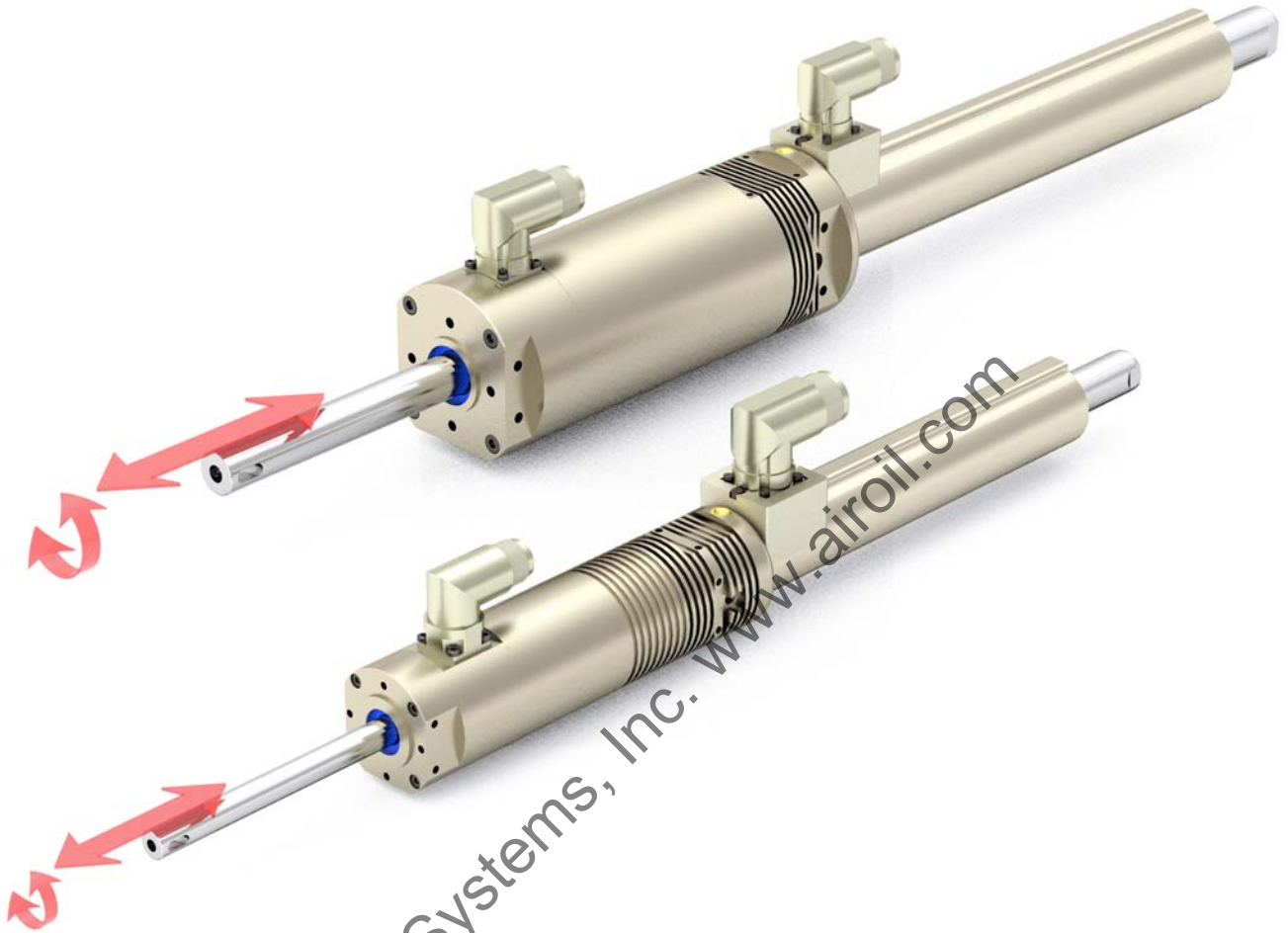


# LinMot®

## Linear-Rotary Motors



**Linear and rotary direct drive**



**Independent linear and rotary motion**



**Synchronised linear and rotary motion**

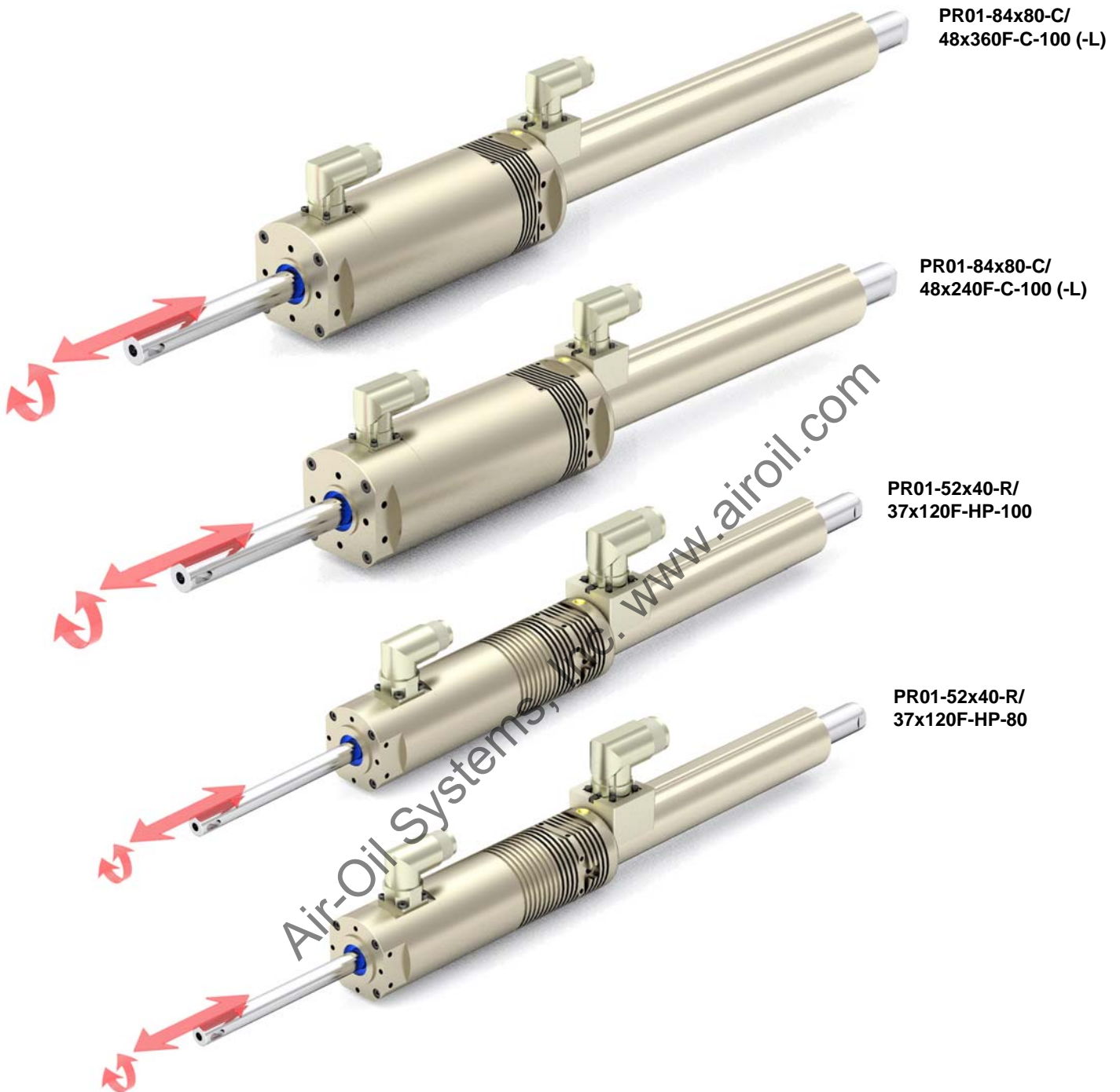


**Programmable press force up to 1'024N**



**Programmable tightening torque up to 7,5Nm**

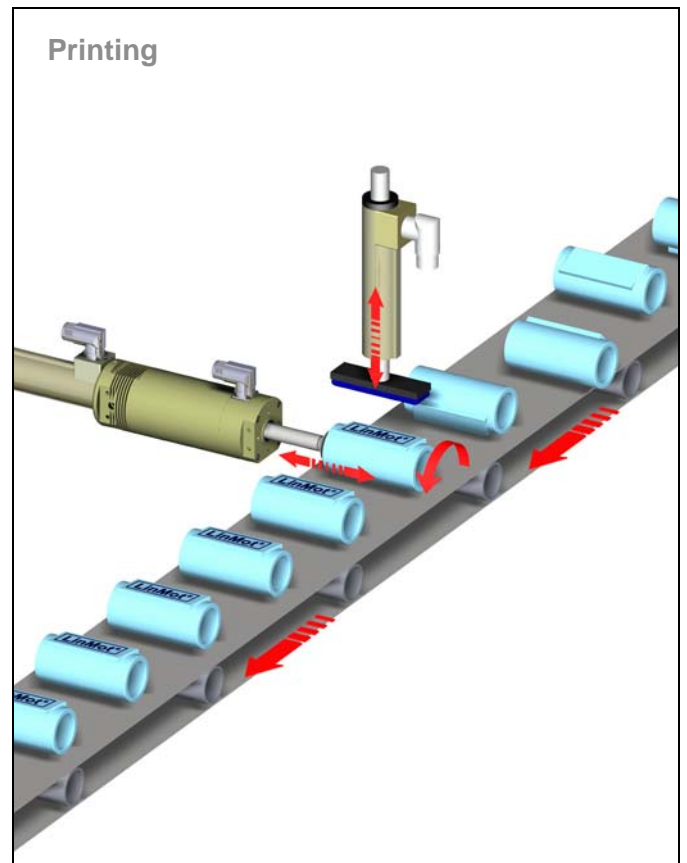
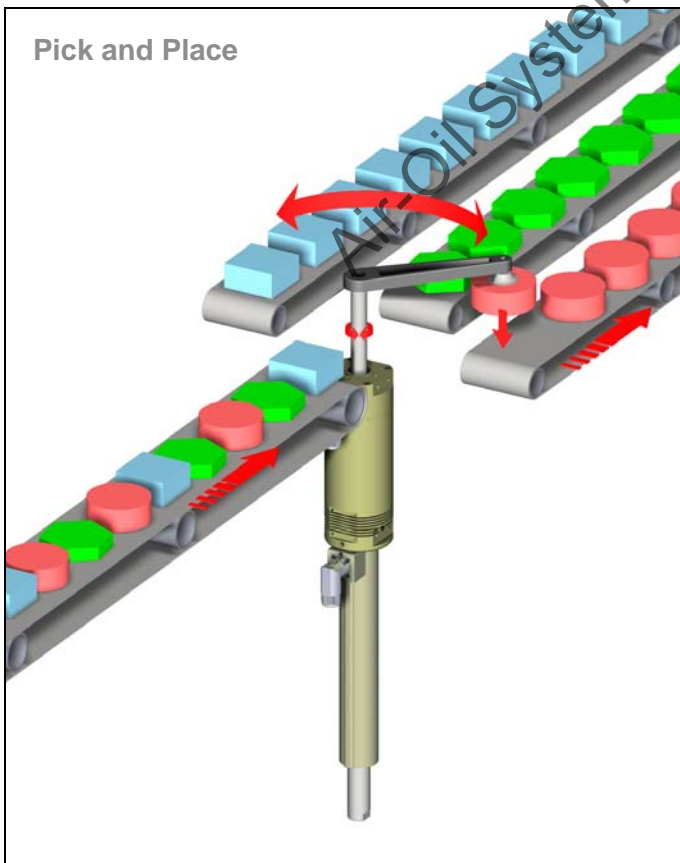
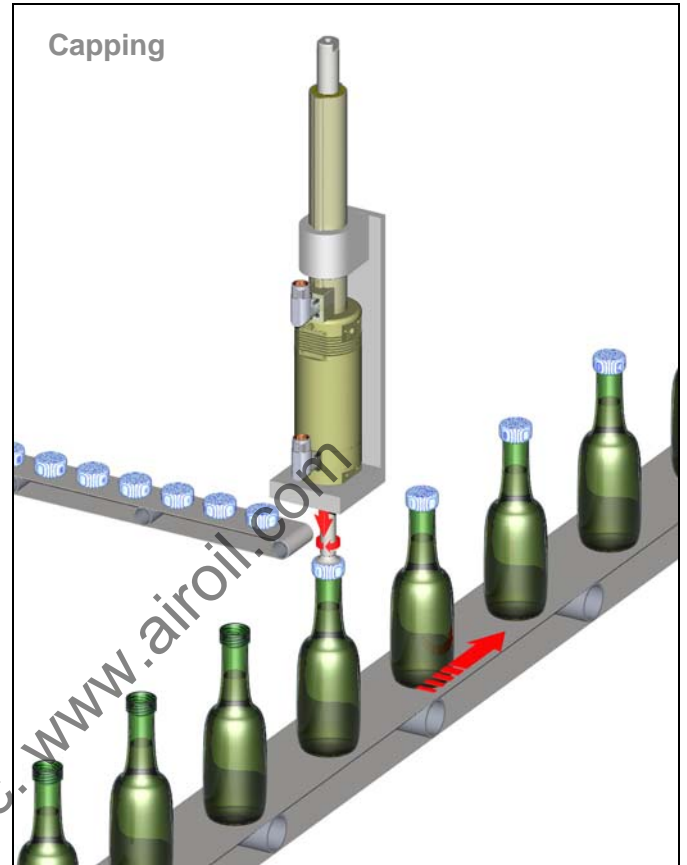
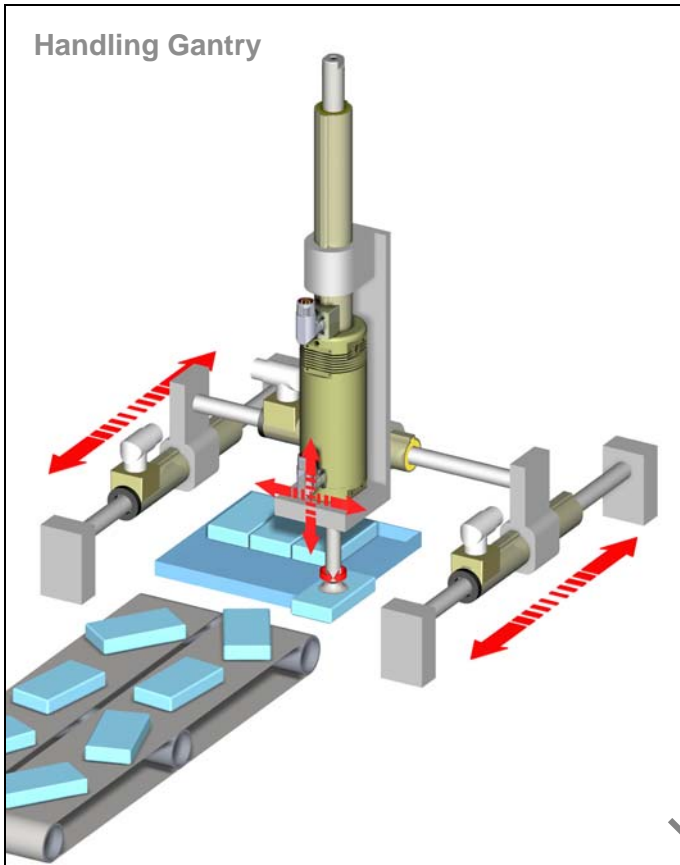
The linear motor technology for industrial applications



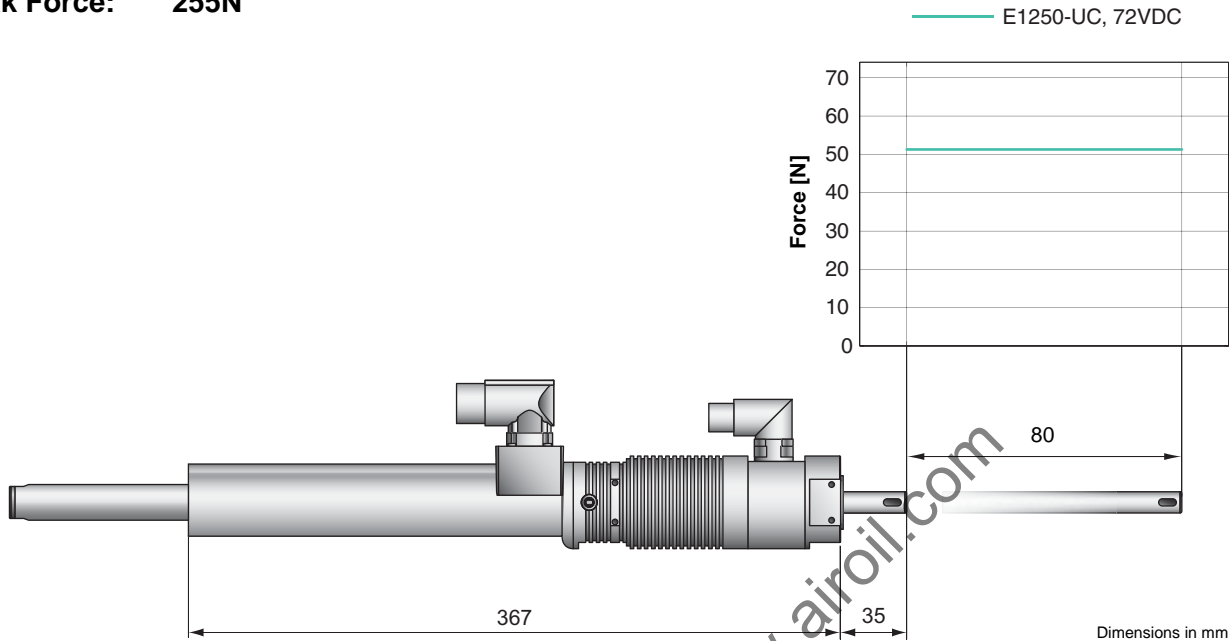
Models

Model	Stroke [mm / in]	Linear	Rotary	
		Peak Force [N / lbf]	Max. Revolutions [rpm]	Torque [Nm / lbf·in]
PR01-52x40-R/37x120F-HP-80	80 / 3.15	255 / 57.3	2000	1.4 / 12.39
PR01-52x60-R/37x120F-HP-100	100 / 3.94	255 / 57.3	1500	2 / 17.70
PR01-84x80-C/48x240F-C-100 (-L)	130 / 5.12	572 / 128.6	1000	7.5 / 66.38
PR01-84x80-C/48x360F-C-100 (-L)	130 / 5.12	1024 / 230.2	1000	7.5 / 66.38

## Application Example

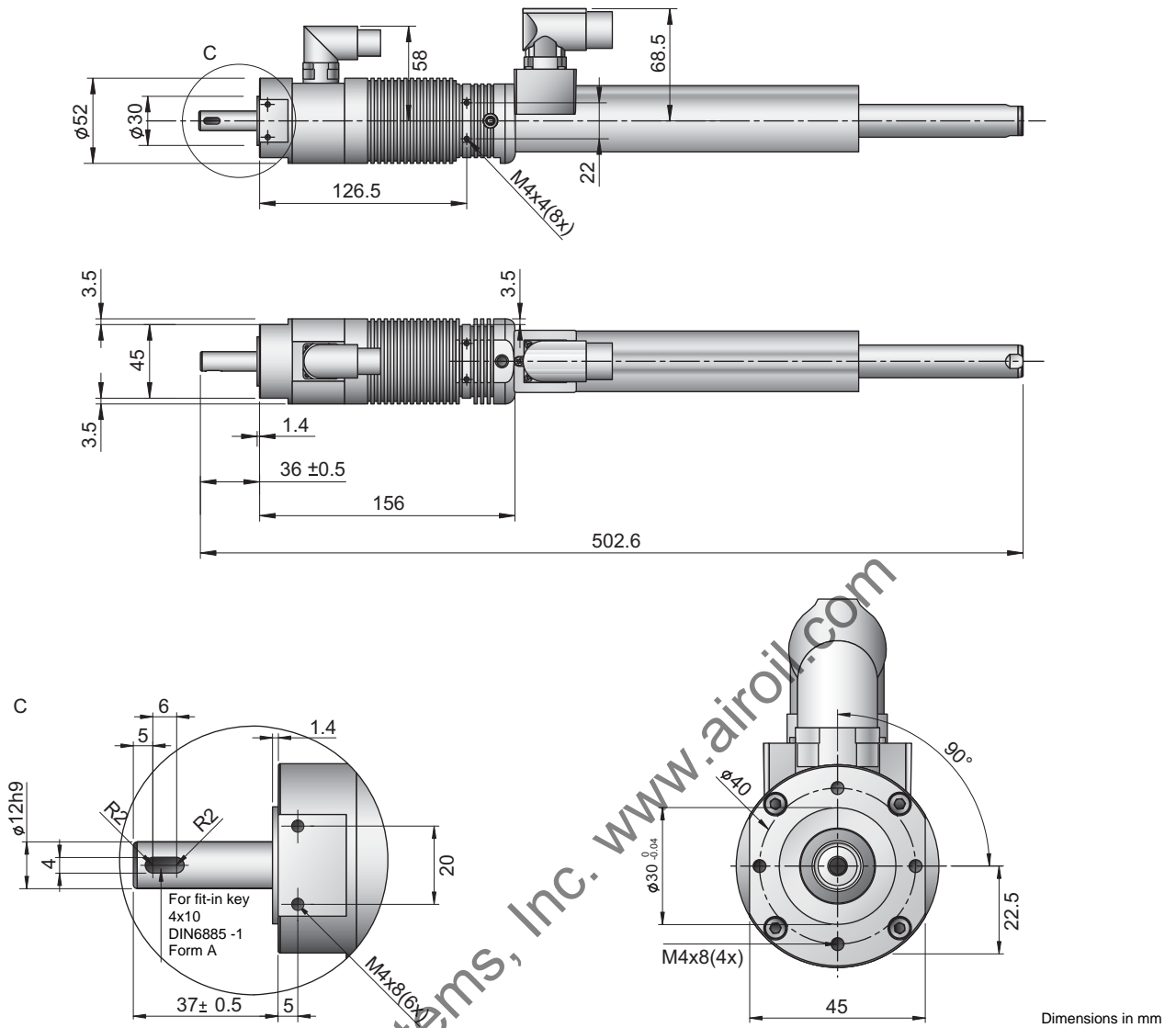


**Max. Stroke:** 80mm  
**Peak Force:** 255N



**Motor Specifications**

		PR01-52x40-R/37x120F-HP-C-80
<b>Linear Motion</b>		
Stroke Max.	mm (in)	80 (3.15)
Stroke SS	mm (in)	80 (3.15)
Peak Force E12x0 - UC	N (lbf)	255 (57.3)
Cont. Force	N (lbf)	51 (11.5)
Cont. Force Fan cooling	N (lbf)	92 (20.7)
Force Constant	N/A (lbf/A)	17 (3.8)
Max. Current @ 72VDC	A	15
Max. Velocity @ 72VDC	m/s (in/s)	3.9 (154)
Position Repeatability	mm (in)	±0.05 (±0.0020)
Linearity	%	±0.10
<b>Rotary Motion</b>		
Peak Torque	Nm (lbf·in)	1.4 (12.39)
Constant Torque (Halt)	Nm (lbf·in)	0.4 (3.54)
Max. Number of revolutions	Rpm	2000
Torque Constant	Nm/A <sub>rms</sub> (lbf·in/A <sub>rms</sub> )	0.43 (3.81)
Max. Current @ 72VDC	A <sub>rms</sub>	5.7
Repeatability	°	±0.05
<b>Mechanical Dimensions</b>		
Overall Length	mm (in)	503 (22.48)
Diameter Linear Unit	mm (in)	37 (1.46)
Diameter Rotary Unit	mm (in)	52 (2.05)
Connection flange front	mm (in)	30 (1.18)
Mass	g (lb)	2680 (5.91)
Mass linear moved	g (lb)	790 (1.74)
Rotary Torque of inertia	kgcm <sup>2</sup> lbf <sup>2</sup>	0.22 (0.00052)
Axle Diameter	mm (in)	12h9 (0.47h0.35)
Optional Axle with hole		no
Protection Class		IP64



Dimensions in mm

**Ordering information**

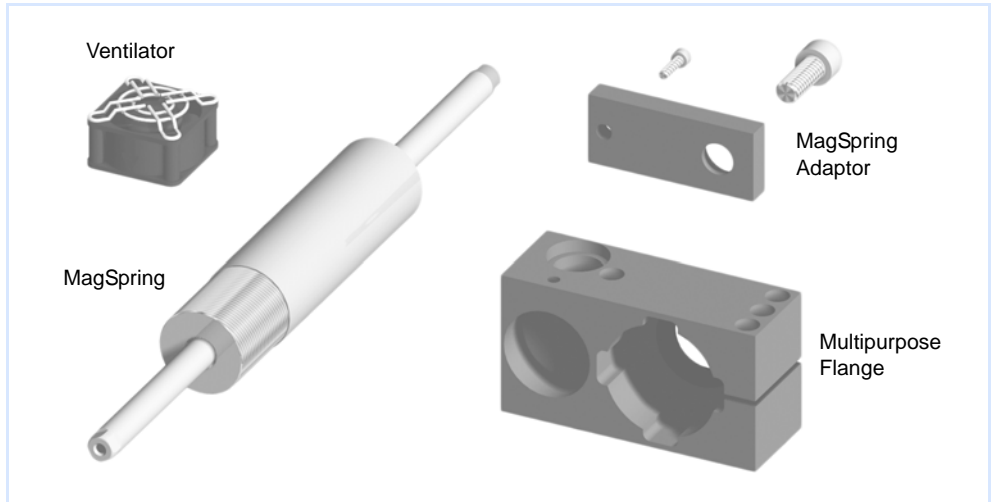
Item	Description	Part Number
PR01-52x40-R/37x120F-HP-C-80	Linear Rotary Motor	0150-1573

**Connectors**

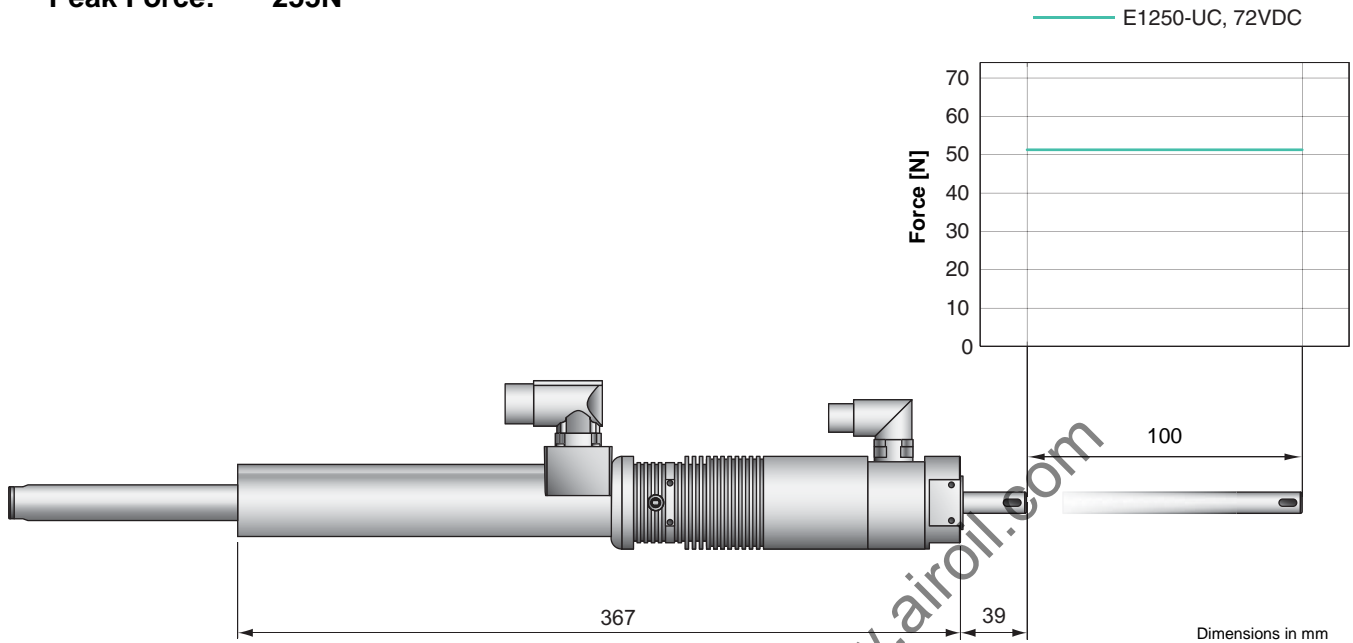
Motor Connector Wiring

		Linear Motor: C-Connector	Rotary Motor: C- or R-Connector
Ph 1+ / A	red	A	1
Ph 1- / B	pink	B	2
Ph 2+ / C	blue	C	3
Ph 2- / NC	gray	D	4
+5VDC	white	E	A
GND	inner Shield	F	B
Sine	yellow	G	C
Cosine	green	H	D
Temp.	black	L	E
Shield	outer Shield	Case	Case

**Accessories**

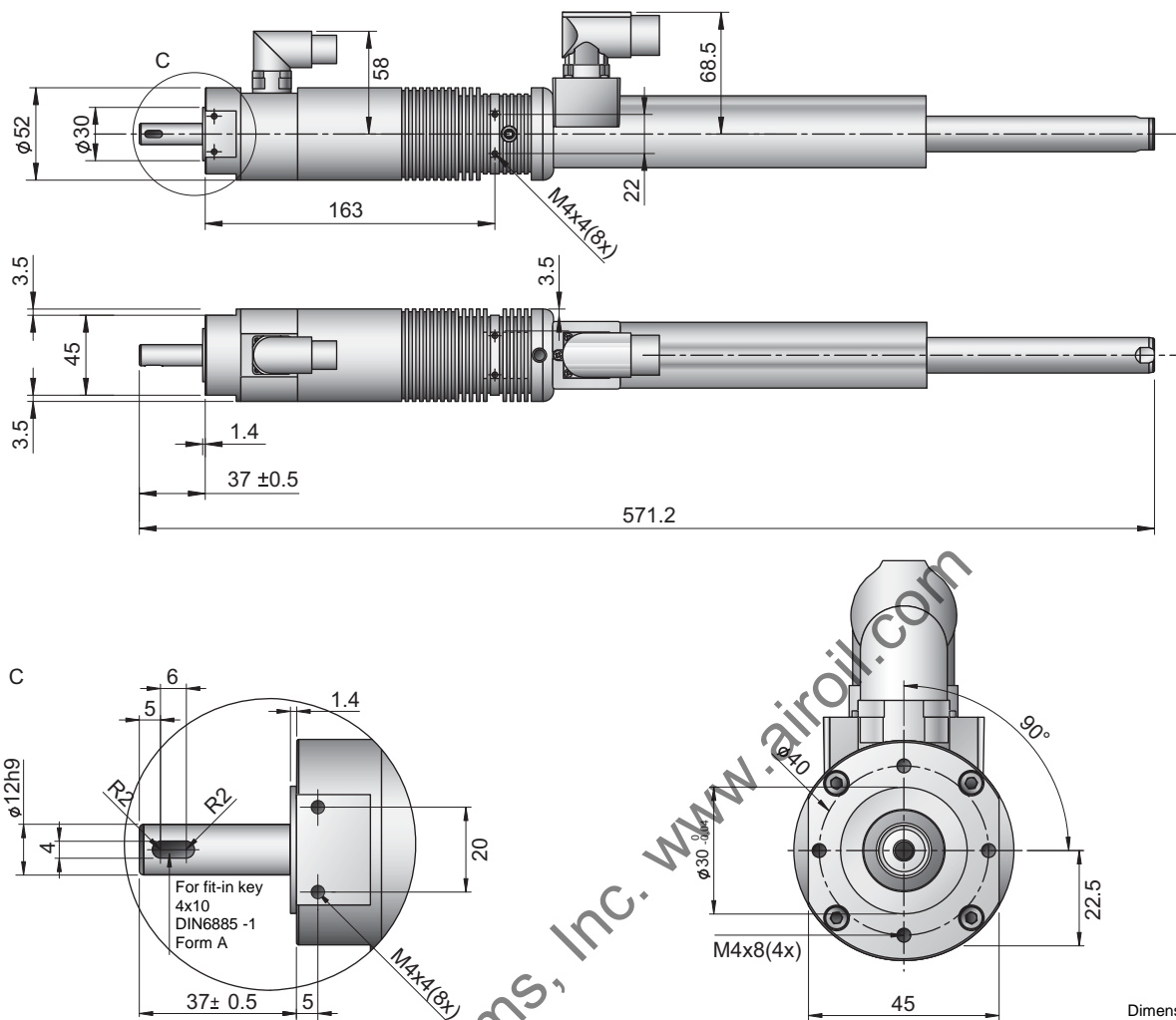


**Max. Stroke:** 100mm  
**Peak Force:** 255N



**Motor Specifications**

		PR01-52x60-R/37x120F-HP-C-100
<b>Linear Motion</b>		
Stroke Max.	mm (in)	100 (3.94)
Stroke SS	mm (in)	100 (3.94)
Peak Force E12x0 - UC	N (lbf)	255 (57.3)
Cont. Force	N (lbf)	51 (11.5)
Cont. Force Fan cooling	N (lbf)	92 (20.7)
Force Constant	N/A (lbf/A)	17 (3.8)
Max. Current @ 72VDC	A	15
Max. Velocity @ 72VDC	m/s (in/s)	3.9 (154)
Position Repeatability	mm (in)	±0.05 (±0.0020)
Linearity	%	±0.10
<b>Rotary Motion</b>		
Peak Torque	Nm (lbf·in)	2 (17.7)
Constant Torque (Halt)	Nm (lbf·in)	0.5 (4.4)
Max. Number of revolutions	Rpm	1500
Torque Constant	Nm/A <sub>rms</sub> (lbf·in/A <sub>rms</sub> )	0.46 (4.07)
Max. Current @ 72VDC	A <sub>rms</sub>	6.2
Repeatability	°	±0.05
<b>Mechanical Dimensions</b>		
Overall Length	mm (in)	571 (22.48)
Diameter Linear Unit	mm (in)	37 (1.46)
Diameter Rotary Unit	mm (in)	52 (2.05)
Connection flange front	mm (in)	30 (1.18)
Mass	g (lb)	3120 (6.88)
Mass linear moved	g (lb)	860 (1.90)
Rotary Torque of inertia	kgcm <sup>2</sup> lbf <sup>2</sup>	0.26 (0.0061)
Axle Diameter	mm (in)	12h9 (0.47h0.35)
Optional Axle with hole		no
Protection Class		IP64



Dimensions in mm

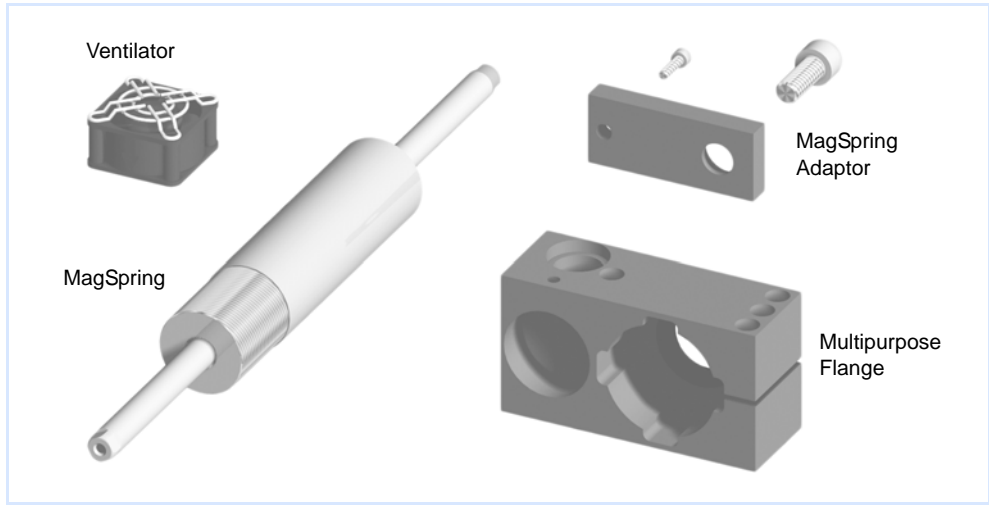
**Ordering information**

Item	Description	Part Number
PR01-52x60-R/37x120F-HP-C-100	Linear Rotary Motor	0150-1197

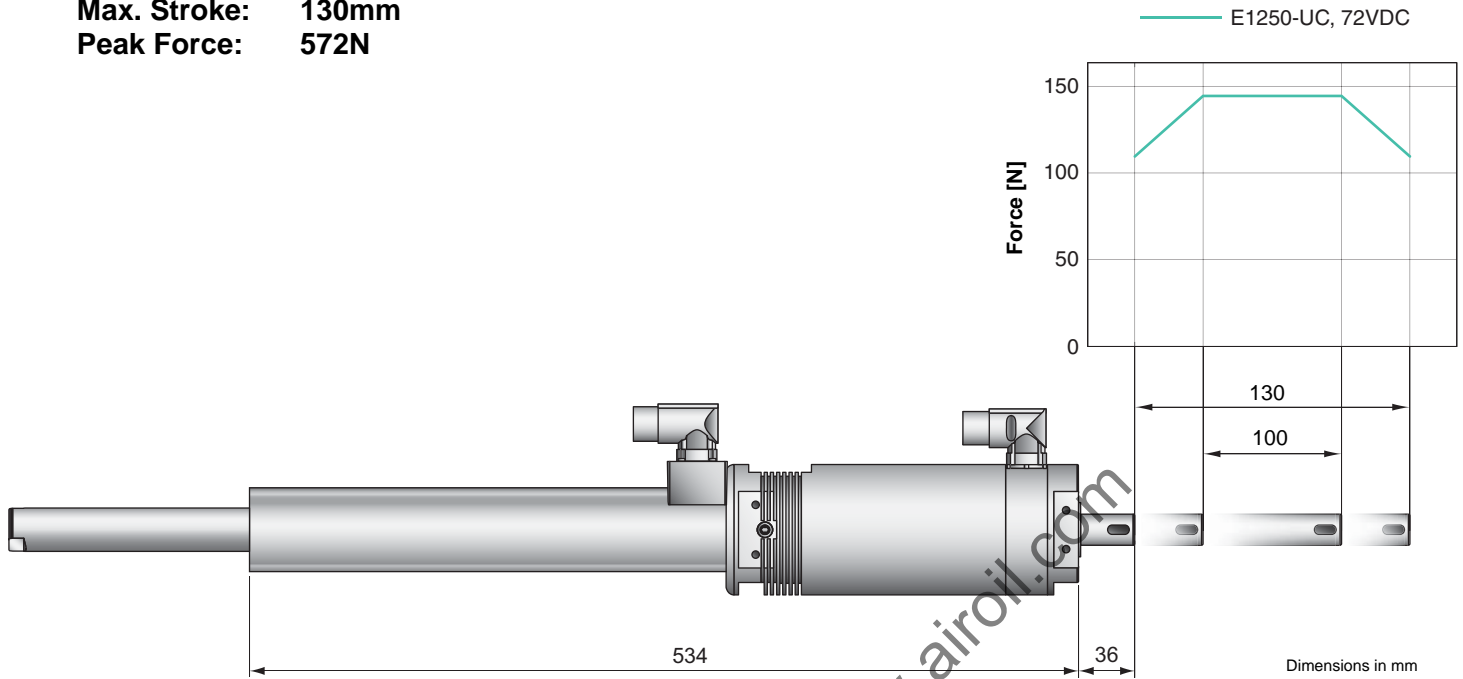
**Connectors**

Motor Connector Wiring		Linear Motor: C-Connector	Rotary Motor: C- or R-Connector
Ph 1+ / A	red	A	1
Ph 1- / B	pink	B	2
Ph 2+ / C	blue	C	3
Ph 2- / NC	gray	D	4
+5VDC	white	E	A
GND	inner Shield	F	B
Sine	yellow	G	C
Cosine	green	H	D
Temp.	black	L	E
Shield	outer Shield	Case	Case

**Accessories**



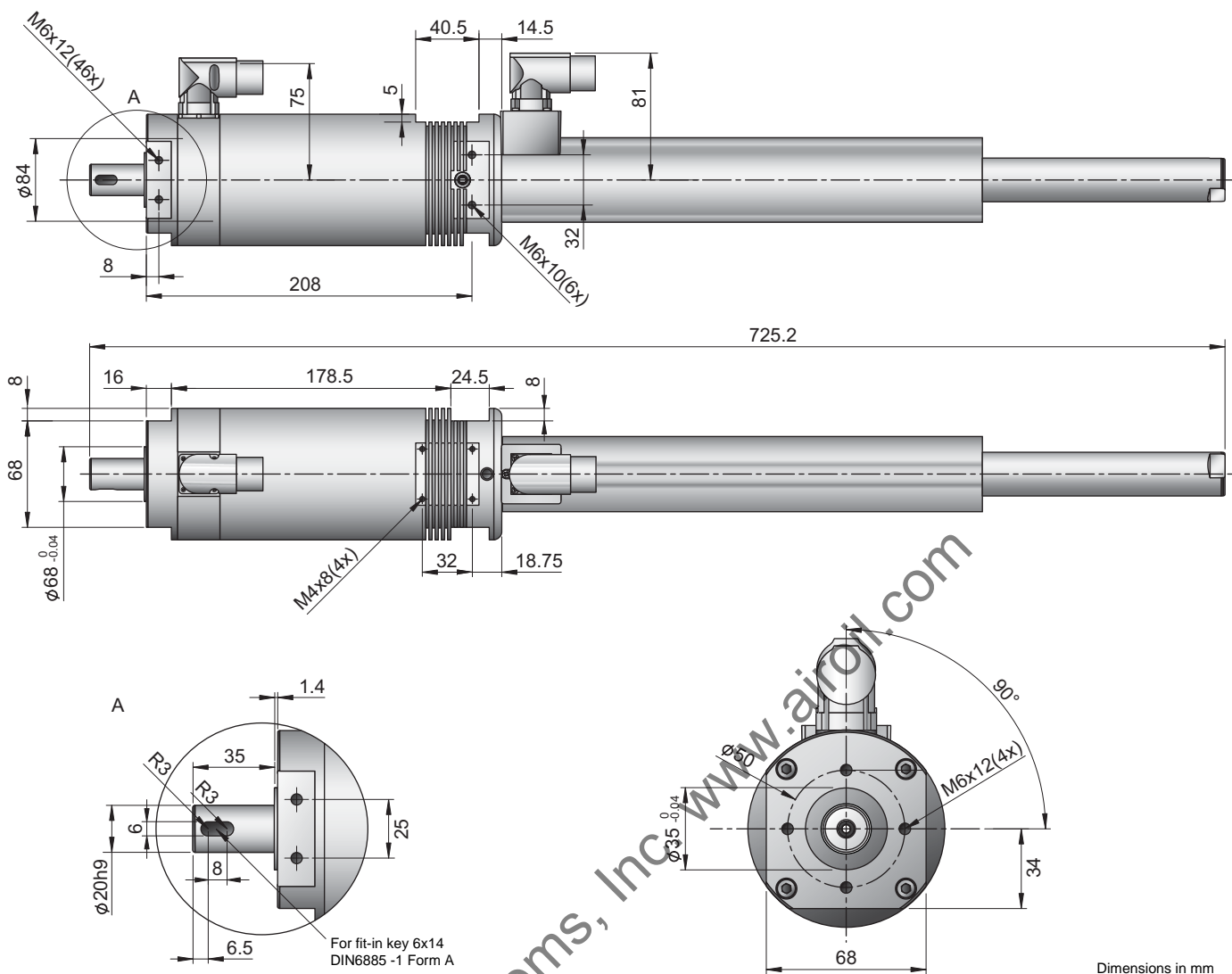
**Max. Stroke:** 130mm  
**Peak Force:** 572N



**Motor Specifications**

PR01-84x80-C/48x240F-C-100 (-L)		
<b>Linear Motion</b>		
Stroke Max	mm (in)	130 (5.12)
Stroke SS	mm (in)	100 (3.94)
Peak Force E12x0 - UC	N (lbf)	572 (128.6)
Cont. Force	N (lbf)	145 (74.2)
Cont. Force Fan cooling	N (lbf)	258 (58.0)
Force Constant	N/A (lbf/A)	22 (5.0)
Max. Current @ 72VDC	A	26
Max. Velocity @ 72VDC	m/s (in/s)	3.0 (118)
Position Repeatability	mm (in)	±0.05 (±0.0020)
Linearity	%	±0.15
<b>Rotary Motion</b>		
Peak Torque	Nm (lbf·in)	7.5 (66.4)
Constant Torque (Halt)	Nm (lbf·in)	3 (26.6)
Max. Number of revolutions	Rpm	1000
Torque Constant	Nm/A <sub>rms</sub> (lbf·in/A <sub>rms</sub> )	0.31 (2.74)
Max. Current @ 72VDC	A <sub>rms</sub>	25
Repeatability	°	±0.05
<b>Mechanical Dimensions</b>		
Overall Length	mm (in)	726 (28.58)
Diameter Linear Unit	mm (in)	48 (1.89)
Diameter Rotary Unit	mm (in)	84 (3.31)
Connection flange front	mm (in)	35 (1.38)
Mass	g (lb)	8850 (19.51)
Mass linear moved	g (lb)	2450 (5.40)
Rotary Torque of inertia	kgcm <sup>2</sup> lbf <sup>2</sup>	2.0 (0.0047)
Axle Diameter	mm (in)	20h9 (0.79h0.35)
Optional Axle with hole		yes
Protection Class		IP64





Dimensions in mm

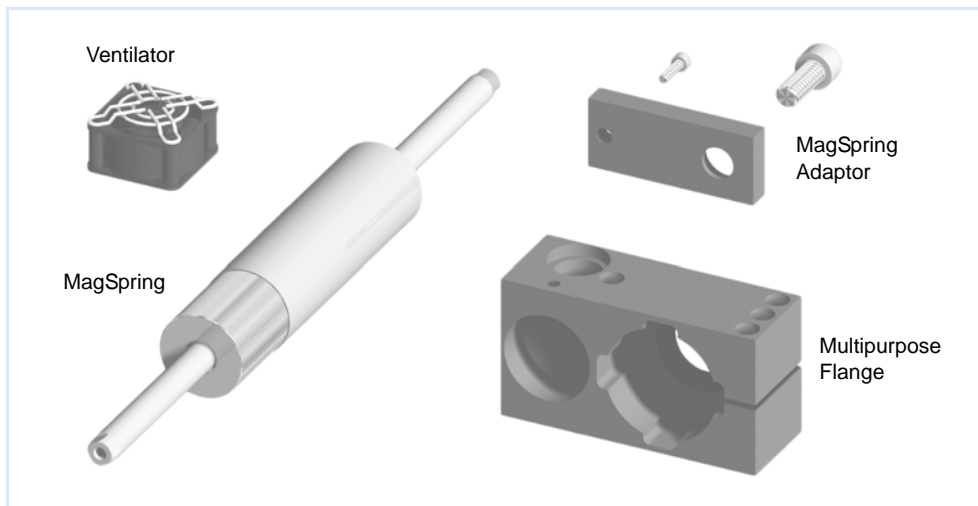
**Ordering information**

Item	Description	Part Number
PR01-84x80-C/48x240F-C-100	Linear Rotary Motor	0150-1194
PR01-84x80-C/48x240F-C-100-L	Linear Rotary Motor with hollow Shaft	0150-1196

**Connectors**

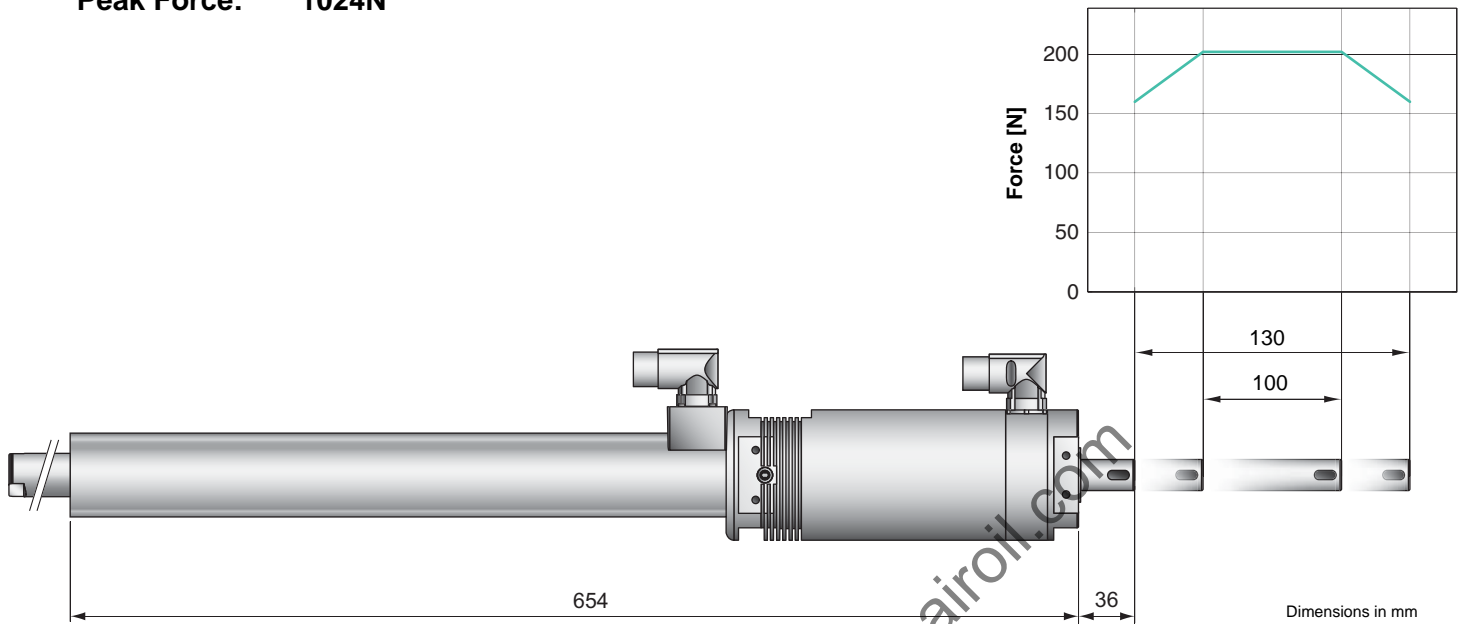
Motor Connector Wiring		Linear Motor: C-Connector	Rotary Motor: C- or R-Connector
Ph 1+ / A	red	A	1
Ph 1- / B	pink	B	2
Ph 2+ / C	blue	C	3
Ph 2- / NC	gray	D	4
+5VDC	white	E	A
GND	inner Shield	F	B
Sine	yellow	G	C
Cosine	green	H	D
Temp.	black	L	E
Shield	outer Shield	Case	Case

**Accessories**



**Max. Stroke:** 130mm  
**Peak Force:** 1024N

E1250-UC, 72VDC



**Motor Specifications**

**PR01-84x80-C/48x360F-C-100 (-L)**

**Linear Motion**

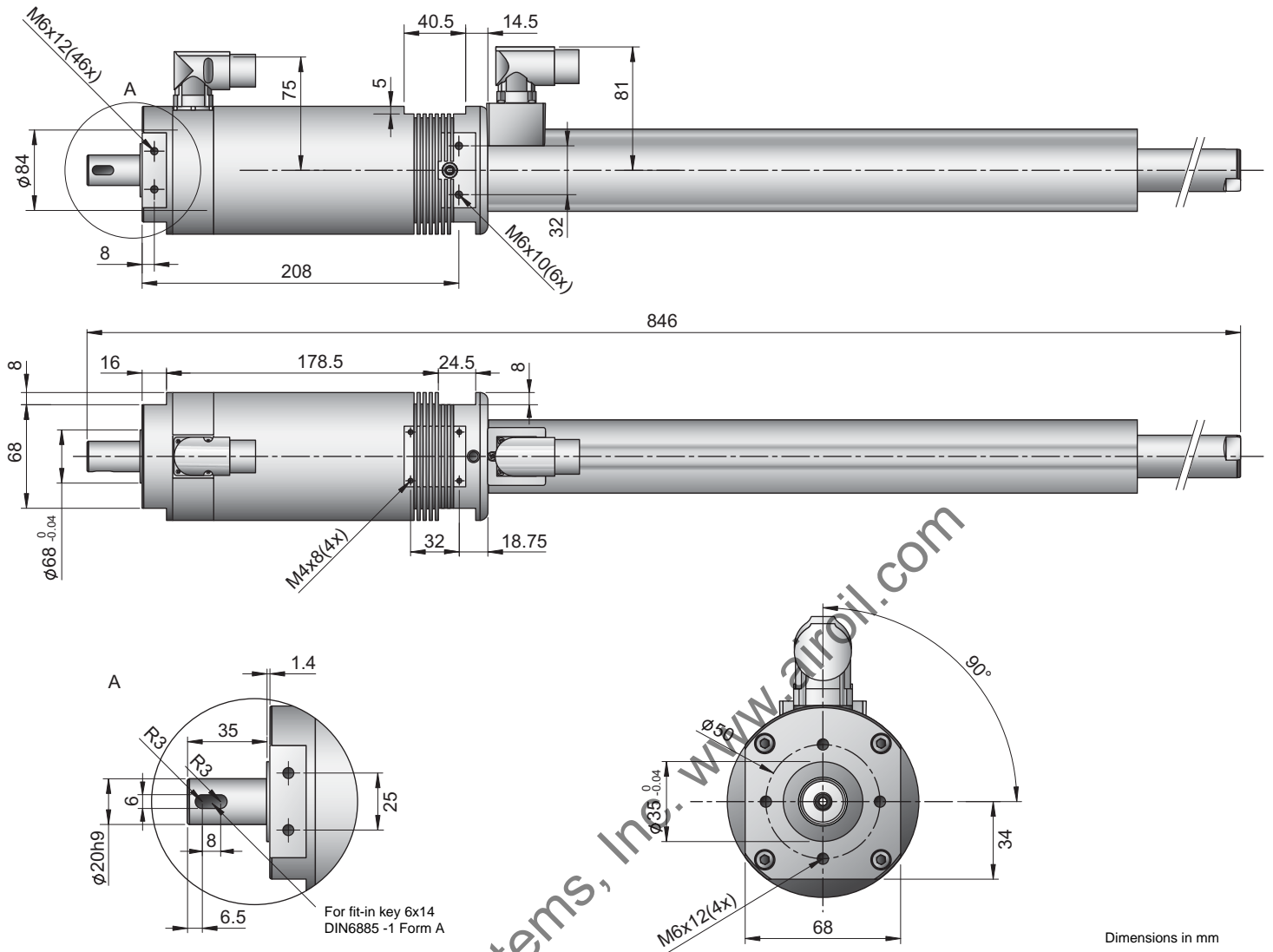
Stroke Max	mm (in)	130 (5.12)
Stroke SS	mm (in)	100 (3.94)
Peak Force E12x0 - UC	N (lbf)	1024 (230.2)
Cont. Force	N (lbf)	203 (45.6)
Cont. Force Fan cooling	N (lbf)	354 (79.6)
Force Constant	N/A (lbf/A)	22 (4.9)
Max. Current @ 72VDC	A	32
Max. Velocity @ 72VDC	m/s (in/s)	2.1 (83)
Position Repeatability	mm (in)	±0.05 (±0.0020)
Linearity	%	±0.15

**Rotary Motion**

Peak Torque	Nm (lbf·in)	7.5 (66.4)
Constant Torque (Halt)	Nm (lbf·in)	3 (26.6)
Max. Number of revolutions	Rpm	1000
Torque Constant	Nm/A <sub>rms</sub> (lbf·in/A <sub>rms</sub> )	0.31 (2.74)
Max. Current @ 72VDC	A <sub>rms</sub>	25
Repeatability	°	±0.05

**Mechanical Dimensions**

Overall Length	mm (in)	849 (33.43)
Diameter Linear Unit	mm (in)	48 (1.89)
Diameter Rotary Unit	mm (in)	84 (3.31)
Connection flange front	mm (in)	35 (1.38)
Mass	g (lb)	10480 (23.10)
Mass linear moved	g (lb)	2900 (6.39)
Rotary Torque of inertia	kgcm <sup>2</sup> lbf <sup>2</sup>	2.0 (0.0047)
Axle Diameter	mm (in)	20h9 (0.79h0.35)
Optional Axle with hole		yes
Protection Class		IP64



Dimensions in mm

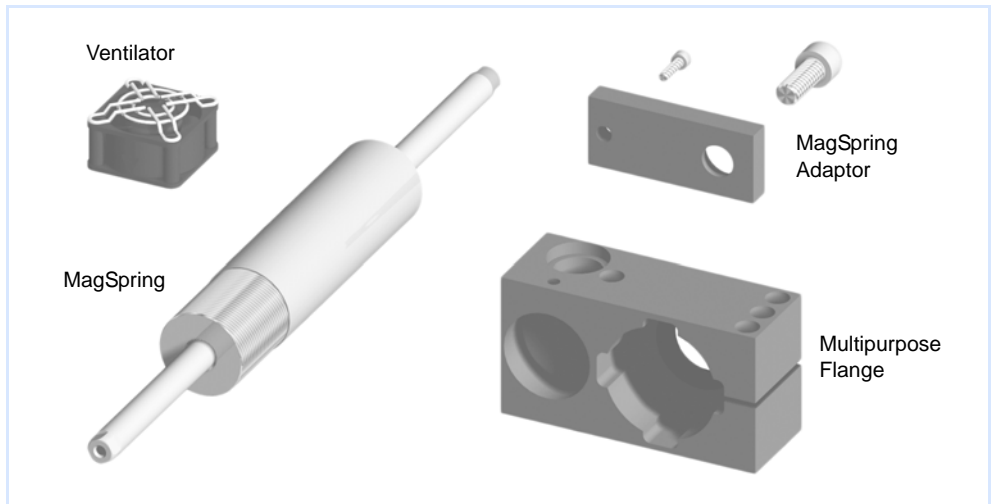
**Ordering information**

Item	Description	Part Number
PR01-84x80-C/48x360F-C-100	Linear Rotary Motor	0150-1199
PR01-84x80-C/48x360F-C-100-L	Linear Rotary Motor with hollow Shaft	0150-1200

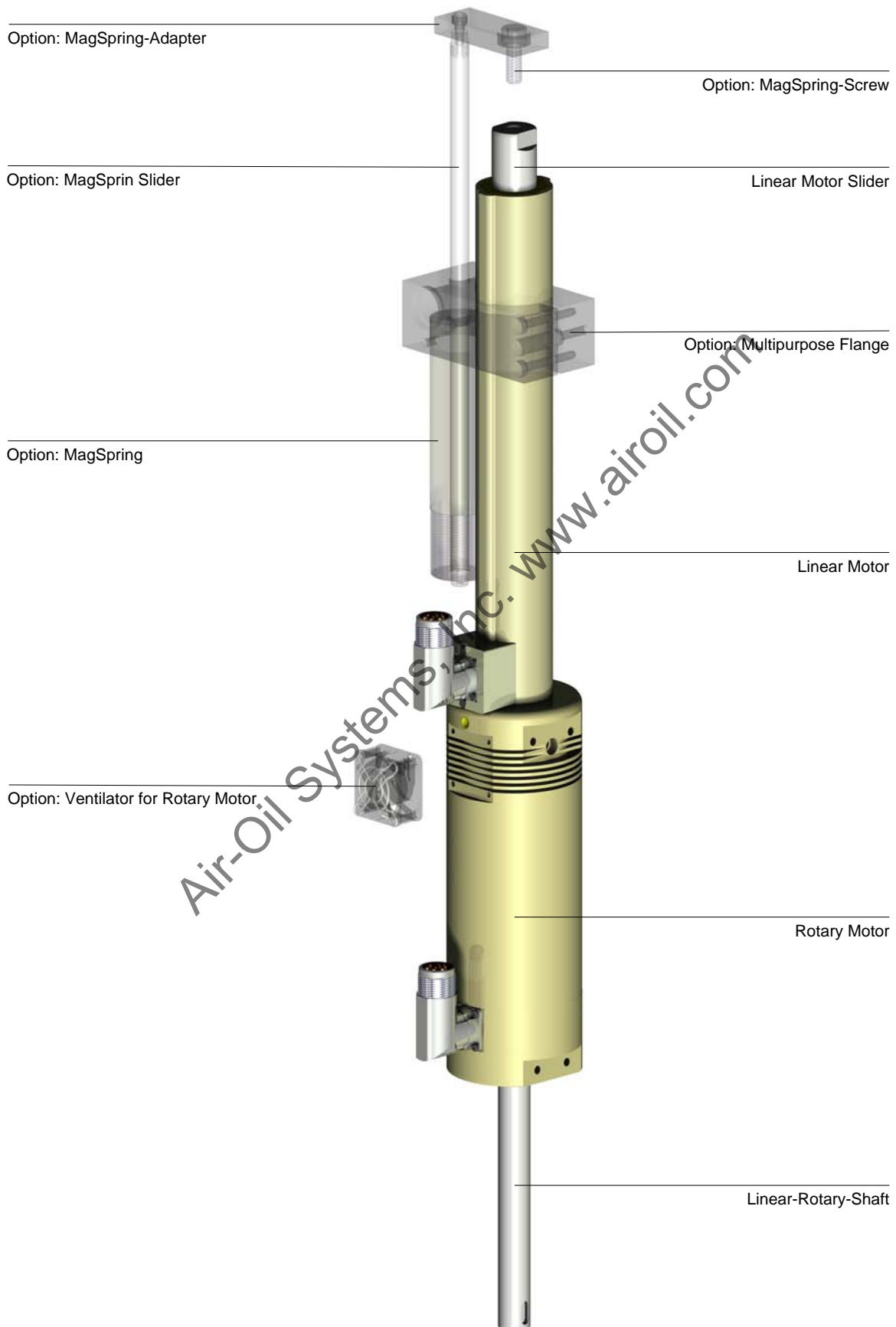
**Connectors**

Motor Connector Wiring		Linear Motor: C-Connector	Rotary Motor: C- or R-Connector
Ph 1+ / A	red	A	1
Ph 1- / B	pink	B	2
Ph 2+ / C	blue	C	3
Ph 2- / NC	gray	D	4
+5VDC	white	E	A
GND	inner Shield	F	B
Sine	yellow	G	C
Cosine	green	H	D
Temp.	black	L	E
Shield	outer Shield	Case	Case

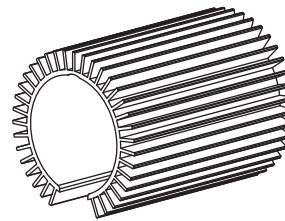
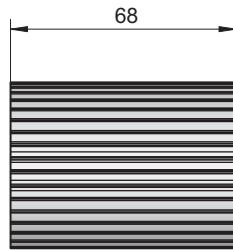
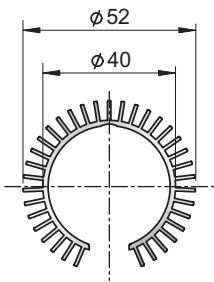
**Accessories**



## Parts



## Optional cooling element for PS01-37x120F-HP-C-100

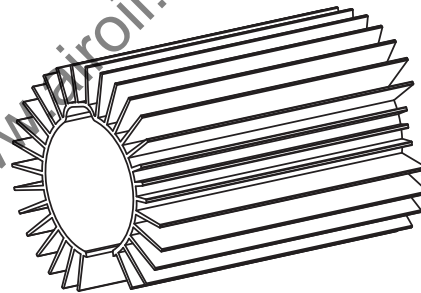
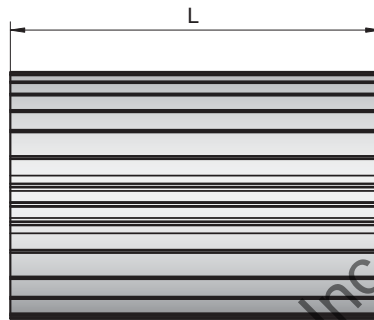
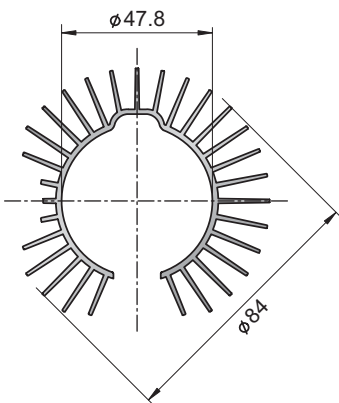


Material: Aluminum (AlMgSi)  
Mass: approx. 7g (0.015lb)

Dimensions in mm

Item	Description	Part Number
PC01-37x68	Cooling Element	0160-2131

## Optional cooling element for PS01-48x240F-C-100 and PS01-48x360F-C-100

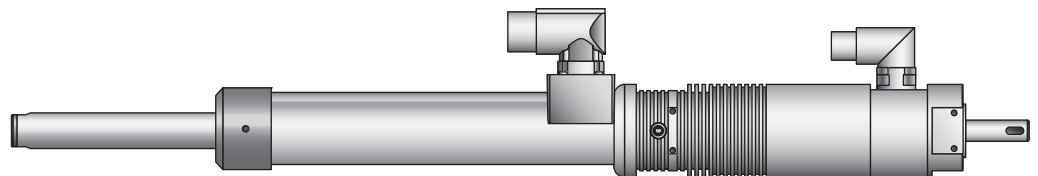
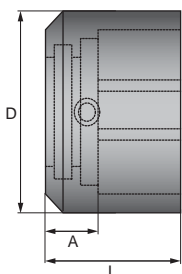


Material: Aluminum (AlMgSi)

Dimensions in mm

Item	Description	L [mm]	Weight [g]	Part Number
PC01-48x100	Cooling Element	99	0.21	0160-2145
PC01-37x68	Cooling Element	117	0.25	0160-2138

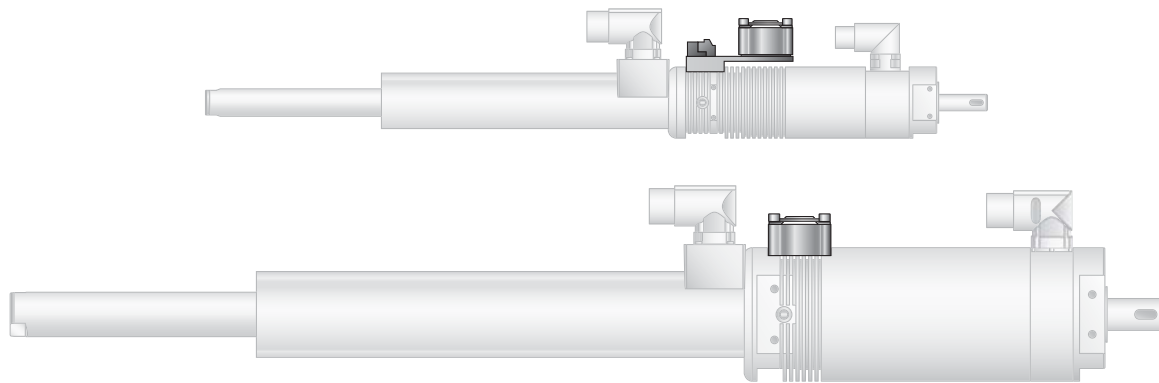
## Optional wipers for linear motorparts



Item	D	L	A	Weight
PA01-37	45mm (1.77in)	32mm (1.26in)	12mm (0.47in)	0.028kg
PA01-48	58mm (2.28in)	32mm (1.26in)	14mm (0.55in)	0.056kg

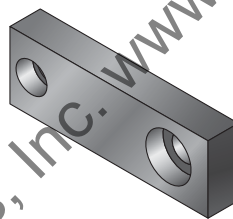
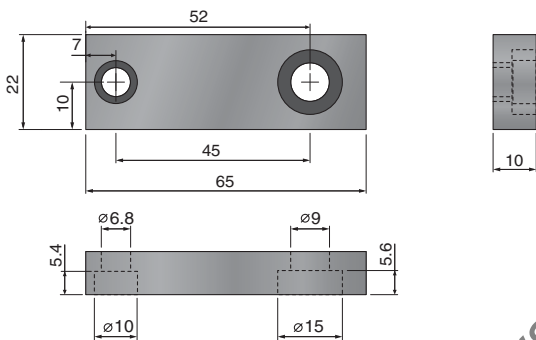
Item	Description	Part Number
PA01-37/20-F	Wiper for PS01-37x... (front wiper)	0150-3126
PA01-48/28-F	Wiper for PS01-48x... (front wiper)	0150-3127

## Optional ventilator for rotational motor RS01-52x60-R



Item	Description	Weight [g]	Part Number
RS01-VA70x40-Kit	Ventilator for rotational motor RS01-52x60-R	75	0150-1599
RS01-VA84	Ventilator for rotational motor RS01-84x80-C	30	0150-1600

## Adaptor for MagSpring M01-37 and Guides H01-37 / B01-37



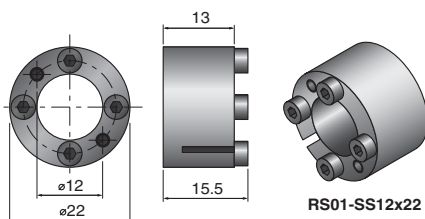
MA01-PR01-52x40-37

Material: Aluminum (AlMgSi), black anodized  
Mass: approx. 34g (0.075lb)

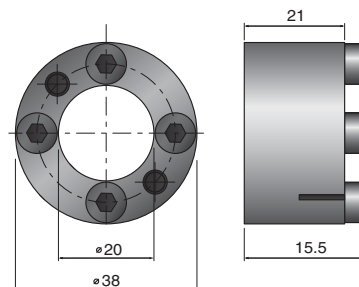
Dimensions in mm

Item	Description	Part Number
MA01-PR01-52x40-37	Adaptor for PR01-52x60-R/37x120F-HP-C-100	0250-0121
MA01-PR01-70x40-37	Adaptor for PR01-84x80-C/48x240F-C-100	0250-0120
MA01-PR01-70x40-37-L	Adaptor for PR01-84x80-C/48x240F-C-100-L	0250-0124

## Shaft Clamping Set



RS01-SS12x22



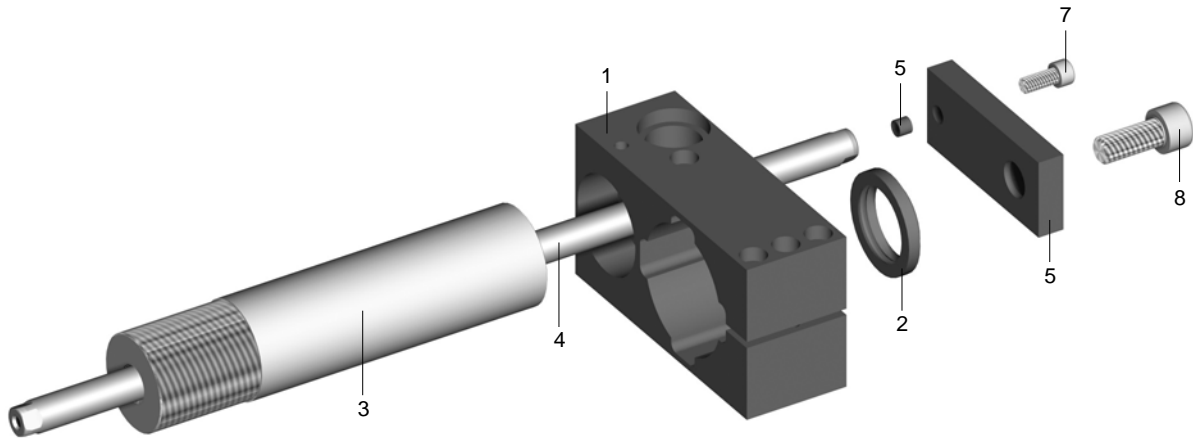
RS01-SS20x38

Material: Aluminum (AlMgSi), black anodized  
Mass: RS01-SS12x22 approx. 22g (0.049lb)  
RS01-SS20x38 approx. 100g (0.220lb)

Dimensions in mm

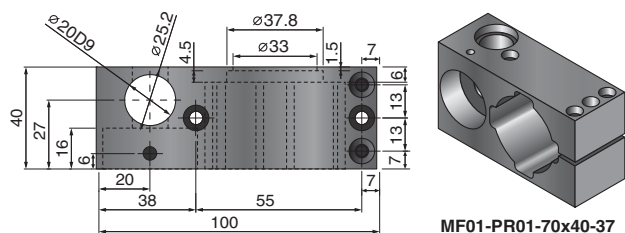
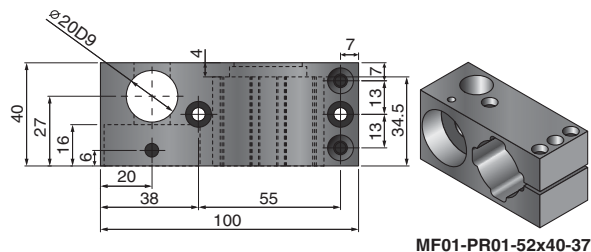
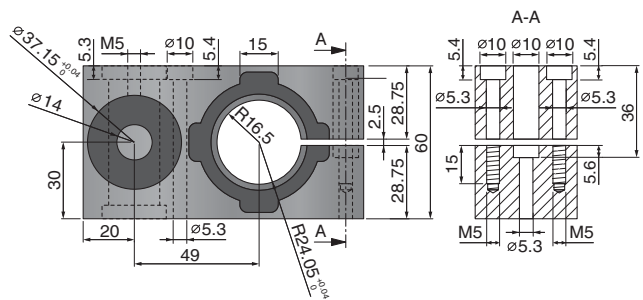
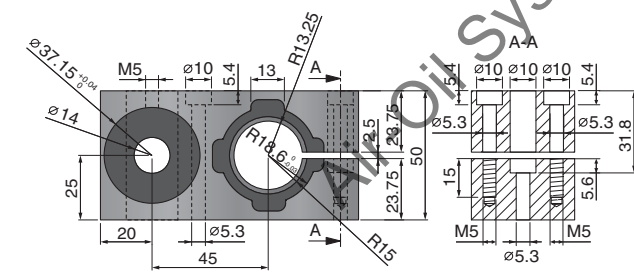
Item	Description	Part Number
RS01-SS12x22	Shaft Clamping Set for PR01-52x60-R/37x120F-HPC-100	0230-0101
RS01-SS20x38	Shaft Clamping Set PR01-84x80-C/48x240F-C-100	0230-0100

## Optional multiflange and MagSpring



	PR01-52x60-R/37x120F-HP-C-100			PR01-84x80-C/48x240F-C-100 and PR01-84x80-C/48x360F-C-100			PR01-84x80-C/48x240F-C-100-L and PR01-84x80-C/48x360F-C-100-L		
	Item	Part Number	Item	Part Number	Item	Part Number			
1	Multiflange	MF01-PR01-52x40-37	MF01-PR01-70x40-37	0250-2318	MF01-PR01-70x40-37	0250-2318			
2	Wiperseal	PAW01-20 (delivered with Pos 1)	PAW01-28 (delivered with Pos 6)	0150-3112	PAW01-28 (delivered with Pos 6)	0150-3133			
3	MagSpring Stator	MS01-37x155	MS01-37x155	0250-2204	MS01-37x155	0250-2204			
4	MagSpring Slider	ML01-12x335/160-20	ML01-12x335/160-20	0250-2320	ML01-12x335/160-20	0250-2320			
5	Distance tube	MA01-PR01-Huelse4,9 (delivered with Pos 6)	MA01-PR01-Huelse4,9 (delivered with Pos 6)	0250-0123	MA01-PR01-Huelse4,9 (delivered with Pos 6)	0250-0123			
6	MagSpring Adaptor	MA01-PR01-52x40-37	MA01-PR01-70x40-37	0250-0121	MA01-PR01-70x40-37-L	0250-0124			
7	Hexagon Socket	Socket M5x14 (delivered with Pos 6)	Socket M5x14 (delivered with Pos 6)		Socket M5x14 (delivered with Pos 6)				
8	Hexagon Socket or coupling device	Socket M8x14 (delivered with Pos 6)	Socket M10x14 (delivered with Pos 6)		Socket or coupling device (delivered with Pos 6)				

## Multipurpose Flanges



Material: Aluminum (AlMgSi), black anodized  
 Mass: MF01-20/H23 approx. 310g (0.683lb)  
 MF01-20/H37 approx. 390g (0.860lb)

Dimensions in mm

Item	Description	Part Number
MF01-PR01-52x40-37	Multipurpose Flange for PR01-52x60-R/37x120F-HP-C-100	0250-2319
MF01-PR01-70x40-37	Multipurpose Flange for PR01-84x80-C/48x240F-C-100	0250-2318

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