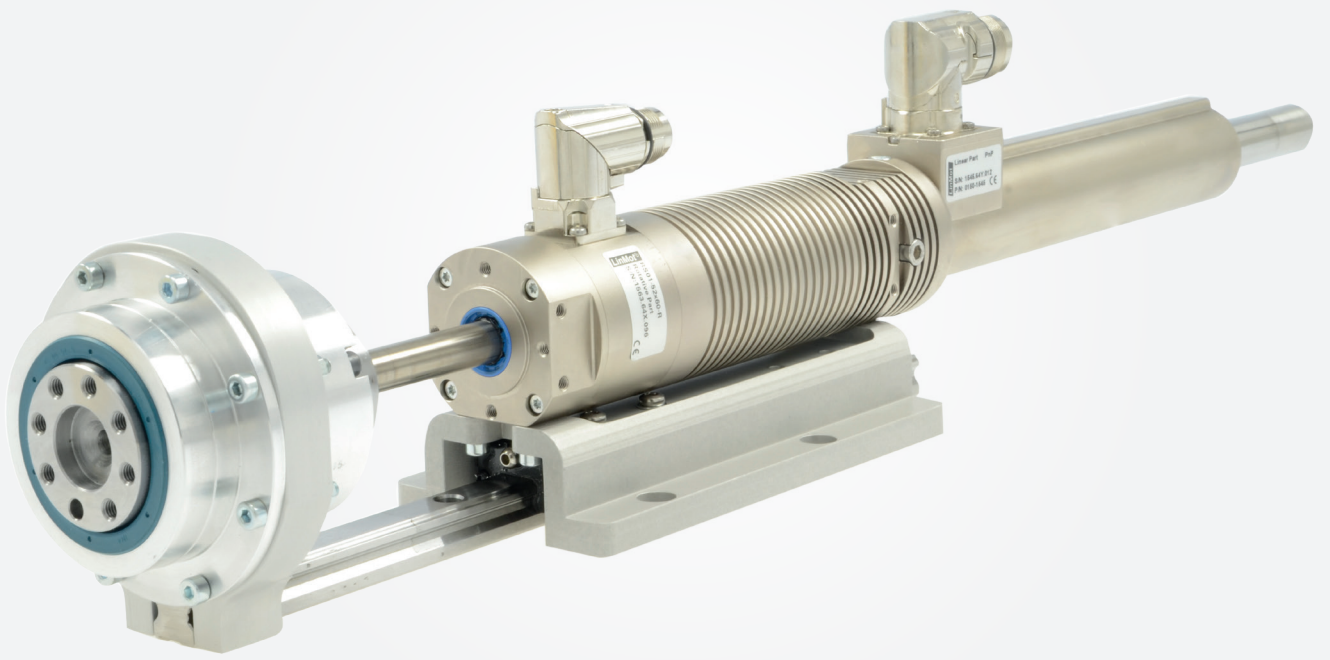


LINEAR ROTARY MOTORS PR01 GEARBOX



10

- ✓ Independent linear and rotary motions
- ✓ For motions with high loads
- ✓ For applications with high torque
- ✓ Three gearbox ratios available
- ✓ With guide rails to bear transverse loads

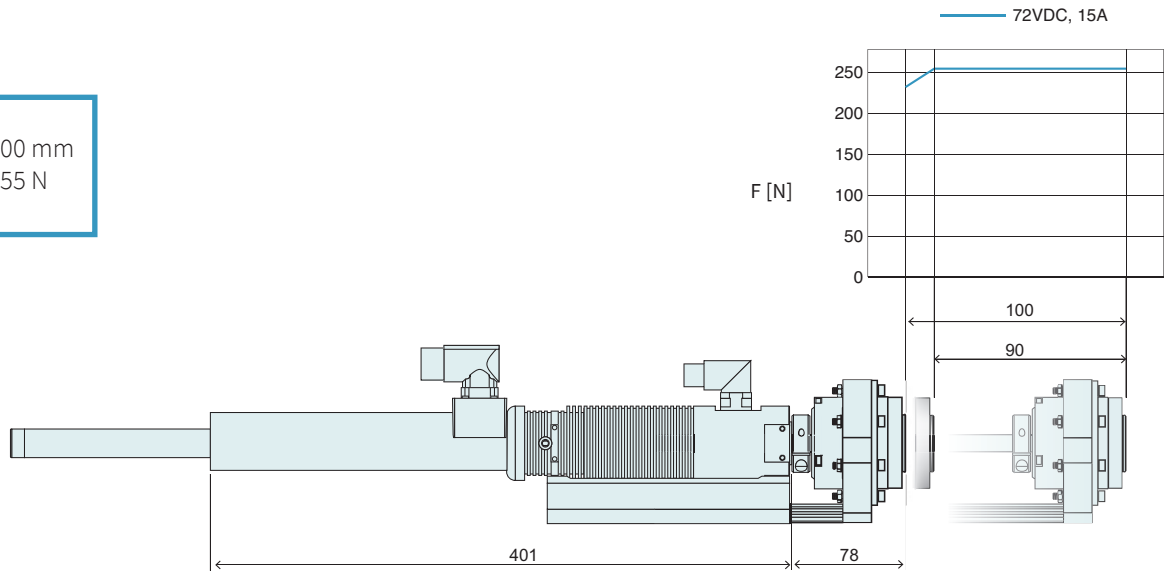


LINEAR ROTARY MOTORS PR01 GEARBOX

PR01-52x60-R/37x120F-HP-C-100-G	837
Technical Data	837
Accessories	839
PR01-84x80-C/48x240F-C-150-G	845
PR01-84x80-C/48x360F-C-150-G	847
Accessories	849

PR01-52x60-R/37x120F-HP-C-100-G...

Max. Stroke: 100 mm
Peak Force: 255 N

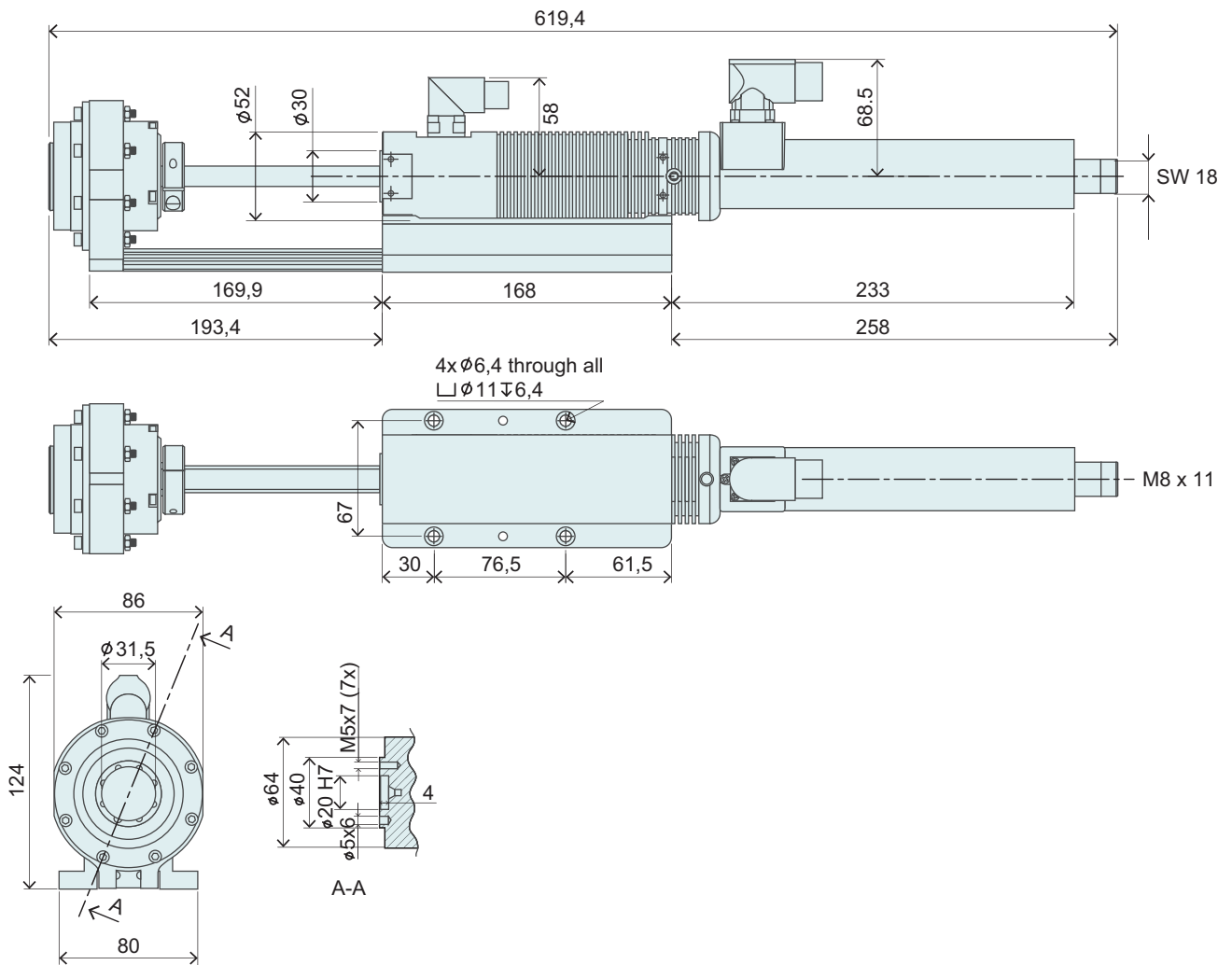


Dimensions in mm

Motor Specifications		PR01-52x60-R/37x120F-HP-C-100-G05	PR01-52x60-R/37x120F-HP-C-100-G10
Linear Motion			
Extended Stroke ES	mm (in)	100 (3.94)	
Standard Stroke SS	mm (in)	90 (3.54)	
Peak Forc E12x0 - UC	N (lbf)	255 (57.3)	
Constant Force	N (lbf)	51 (11.5)	
Constant Force Fan cooling	N (lbf)	92 (20.7)	
Force Constant	N/A _{pk} (lbf/A _{pk})	17 (3.8)	
Max. Current @ 72VDC	A _{pk}	15	
Max. Velocity @ 72VDC	m/s (in/s)	3.9 (154)	
Position Repeatability	mm (in)	±0.05 (±0.0020)	
Linearity	%	±0.10	
Rotary Motion			
Peak Torque (± 10%)	Nm (lbf·in)	2.2 (19.5)	
Constant Torque (Halt)	Nm (lbf·in)	0.47 (4.2)	
Max. Number of revolutions	rpm	1500	
Torque Constant 1	Nm/A _{pk} (lbf·in/A _{pk})	0.16 (1.42)	
Torque Constant 2	Nm/A _{rms} (lbf·in/A _{rms})	0.23 (2.04)	
Max. Current @ 72VDC	A _{pk} / A _{rms}	13.5 / 9.55	
Position Repeatability	°	±0.1	
Gearbox			
Gear Ratio	i	5	10
Max. Revolution (gearbox output)	U/min	300	150
Peak Torque (gearbox output)	Nm (lbf·in)	10 (89)	20 (177)
Continuous Torque (gearbox output)	Nm (lbf·in)	2 (18)	4 (35)
Efficiency at load		1-stage 94% ; 2-stage 92%	
Lubrication		Lifetime lubrication	
Protection Class		IP65	
Operating temperature range		-20 °C to 90 °C	
Mechanical Data			
Overall length	mm (in)	620 (24.41)	
Diameter Linear Unit	mm (in)	37 (1.46)	
Diameter Rotary Unit	mm (in)	52 (2.05)	
Mass	g (lb)	5150 (11.35)	
Linear Moving mass	g (lb)	2400 (5.29)	
Rotary Torque of Inertia	kgcm ² (lbf ²)	2 (0.0047)	
Axle Diameter	mm (in)	12h9 (0.47)	
Protection Class		IP54	

10

DIMENSIONS

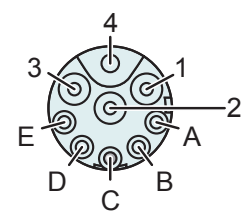
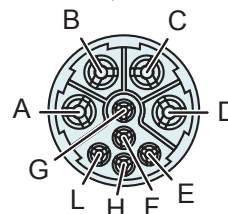


Dimensions in mm

CONNECTORS

Motor Connector Wiring	Linear Unit: C-Connector	Rotary Unit: R-Connector	Wire Color Motor Cable
Ph 1+ / Ph A	A	1	red
Ph 1- / Ph B	B	2	pink
Ph 2+ / Ph C	C	3	blue
Ph 2- / (-)	D	4 (not connected)	grey
+5VDC	E	A	white
GND	F	B	inner shield
Sin	G	C	yellow
Cos	H	D	green
Temp.	L	E	black
Shield	Housing	Housing	outer Shield

C-Connector



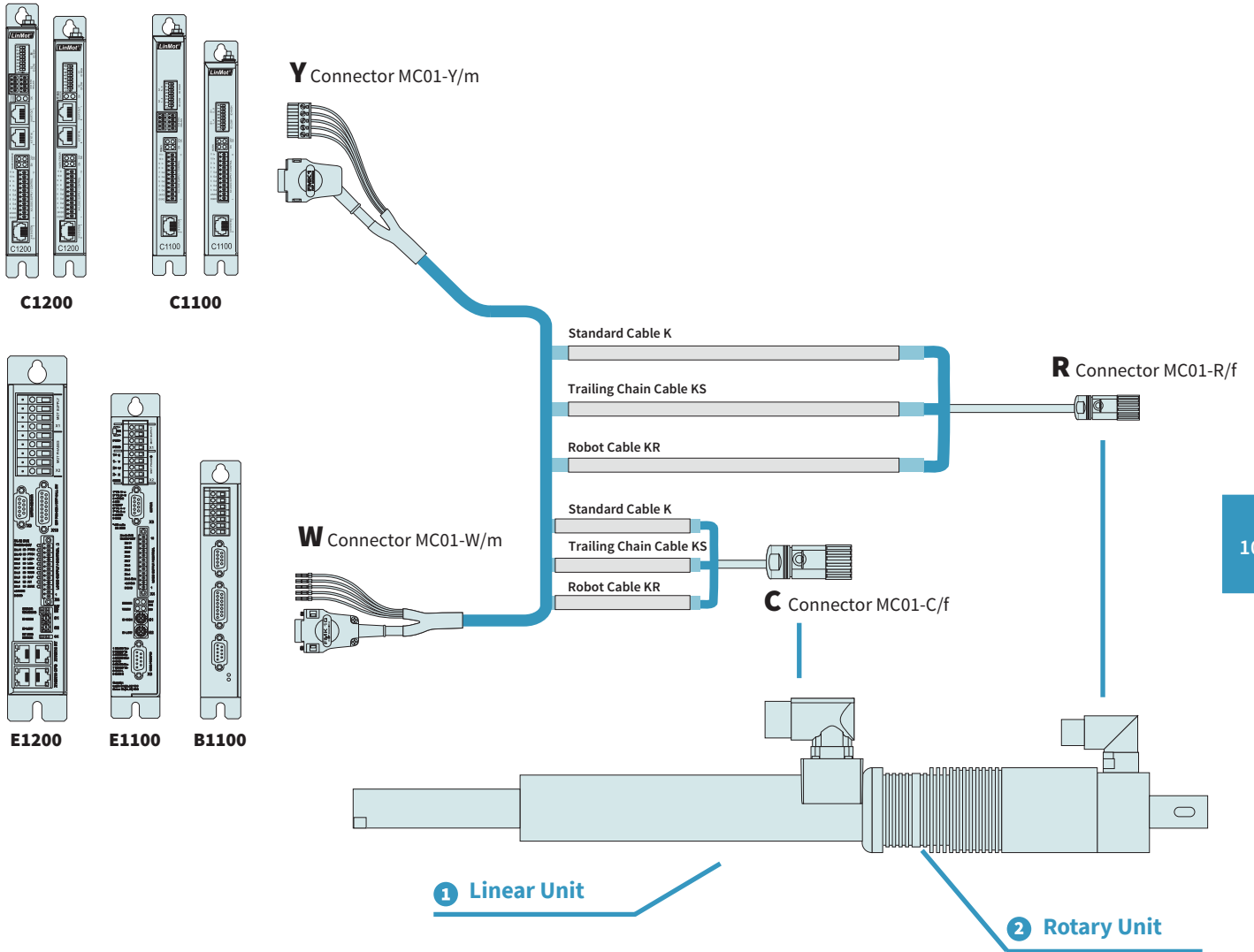
R-Connector

View: Motor connector, plug on

Item	Description	Item-No.
PR01-52x60-R/37x120F-HP-C-100-G05	Linear Rotary Motor with Gearbox 5:1	0150-2648
PR01-52x60-R/37x120F-HP-C-100-G10	Linear Rotary Motor with Gearbox 10:1	0150-2647

Accessories

MOTOR CABLE



ORDERING INFORMATION

1 Linear Unit

Standard Cable		
Item	Description	Item-No.
K05-W/C-2	Motor Cable W/C, 2 m	0150-2123
K05-W/C-4	Motor Cable W/C, 4 m	0150-2124
K05-W/C-6	Motor Cable W/C, 6 m	0150-2125
K05-W/C-8	Motor Cable W/C, 8 m	0150-2126
K05-W/C-	Motor Cable W/C, Custom length	0150-3263

K05-Y/C-2	Motor Cable Y/C, 2 m	0150-2425
K05-Y/C-4	Motor Cable Y/C, 4 m	0150-2426
K05-Y/C-6	Motor Cable Y/C, 6 m	0150-2427
K05-Y/C-8	Motor Cable Y/C, 8 m	0150-2428
K05-Y-Fe/C-	Motor Cable Y-Fe/C, Custom length	0150-3502

Robot Cable		
Item	Description	Item-No.
KR05-Y-Fe/C-	Robot Cable KR05-Y-Fe/C-, Custom length	0150-3513

Trailing Chain Cable		
Item	Description	Item-No.
KS05-W/C-4	Trailing Chain Cable W/C, 4 m	0150-2127
KS05-W/C-6	Trailing Chain Cable W/C, 6 m	0150-2128
KS05-W/C-8	Trailing Chain Cable W/C, 8 m	0150-2129
KS05-W/C-	Trailing Chain Cable W/C, Custom length	0150-3204

KS05-Y/C-4	Trailing Chain Cable Y/C, 4 m	0150-2436
KS05-Y/C-6	Trailing Chain Cable Y/C, 6 m	0150-2437
KS05-Y/C-8	Trailing Chain Cable Y/C, 8 m	0150-2438
KS05-Y-Fe/C-	Trailing Chain Cable Y/C, Custom length	0150-3508

Connector & Cable (individual)		
Item	Description	Item-No.
MC01-C/f	Motor connector C/f	0150-3080
MC01-W/m	Motor connector W/m	0150-3140
MC01-Y-Fe/m	Motor connector Y-Fe/m	0150-3289
K05-04/05	Motor Cable per m	0150-1920
KS05-04/05	Trailing Chain Cable per m	0150-1938
KR05-04/05	Robot Cable per m	0150-1846

2 Rotary Unit

Standard Cable		
Item	Description	Item-No.
K05-W/R-2	Motor Cable W/R, 2 m	0150-2119
K05-W/R-4	Motor Cable W/R, 4 m	0150-2120
K05-W/R-6	Motor Cable W/R, 6 m	0150-2121
K05-W/R-8	Motor Cable W/R, 8 m	0150-2122
K05-W/R-	Motor Cable K05-W/R, Custom length	0150-3262

K05-Y/R-2	Motor Cable Y/R, 2 m	0150-2421
K05-Y/R-4	Motor Cable Y/R, 4 m	0150-2422
K05-Y/R-6	Motor Cable Y/R, 6 m	0150-2423
K05-Y/R-8	Motor Cable Y/R, 8 m	0150-2424
K05-Y-Fe/R-	Motor Cable K05-Y-Fe/R, Custom length	0150-3501

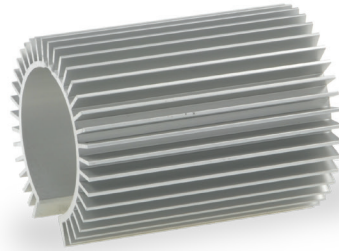
Robot Cable		
Item	Description	Item-No.
KR05-W/R-	Robot Cable KR05-W/R, Custom length	0150-3336
KR05-Y-Fe/R-	Robot Cable KR05-Y-Fe/R, Custom length	0150-3512

Trailing Chain Cable		
Item	Description	Item-No.
KS05-W/R-4	Trailing Chain Cable W/R, 4 m	0150-2106
KS05-W/R-6	Trailing Chain Cable W/R, 6 m	0150-2131
KS05-W/R-8	Trailing Chain Cable W/R, 8 m	0150-2107
KS05-W/R-	Trailing Chain Cable KS05-W/R, Custom length	0150-3256

KS05-Y/R-4	Trailing Chain Cable Y/R, 4 m	0150-2433
KS05-Y/R-6	Trailing Chain Cable Y/R, 6 m	0150-2434
KS05-Y/R-8	Trailing Chain Cable Y/R, 8 m	0150-2435
KS05-Y-Fe/R-	Trailing Chain Cable KS05-Y-Fe/R, Custom length	0150-3507

Connector & Cable (individual)		
Item	Description	Item-No.
MC01-R/f	Motor cable R/f	0150-3129
MC01-W/m	Motor cable W/m	0150-3140
MC01-Y-Fe/m	Motor cable Y-Fe/m	0150-3289
K05-04/05	Motor Cable per m	0150-1920
KS05-04/05	Trailing Chain Cable per m	0150-1938
KR05-04/05	Robot Cable per m	0150-1846

COOLING PROFILE



Item	Description	Item-No.
PC01-37x68	Cooling profile for PS01-37 Linear Motor	0160-2131

10

FLANGE



Item	Description	Item-No.
PF02-37x100	Flange 37x100 mm	0150-1998
PF02-37x140	Flange 37x140 mm	0150-2105

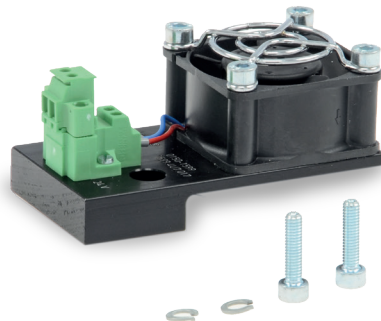
FAN COOLING FOR LINEAR UNIT



Item	Description	Item-No.
HV01-37/48	Fan cooling for H01-37/48 & PF02-37/48	0150-5051

10

FAN COOLING FOR ROTARY UNIT



Item	Description	Item-No.
RS01-VA52-Kit	Fan Kit for RS01-52 Linear Rotary Motor	0150-1599

MOUNTING FLANGE



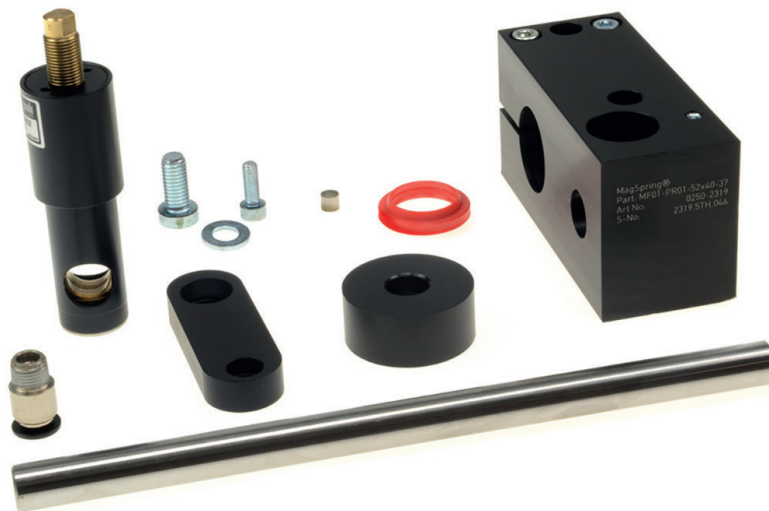
Item	Description	Item-No.
MF01-PR01-52x40-20	Mounting Flange MS01-20-140	0250-2322
MF01-PR01-52x40-37	Mounting Flange MS01-37-155	0250-2319

MAGSPRING ADAPTER



Item	Description	Item-No.
MA01-PR01-52-37/20	MagSpring Adapter for Linear Rotary Motors	0250-0128

BRAKE KIT

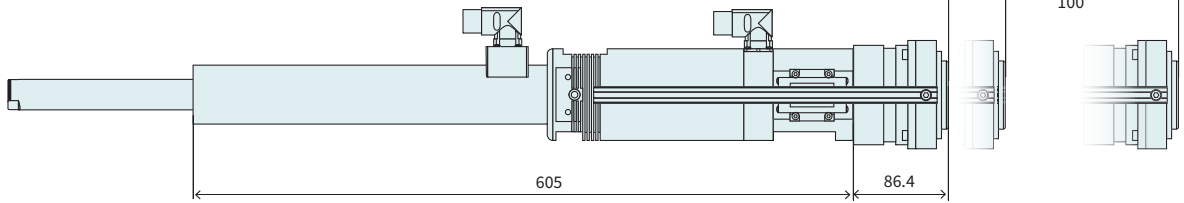
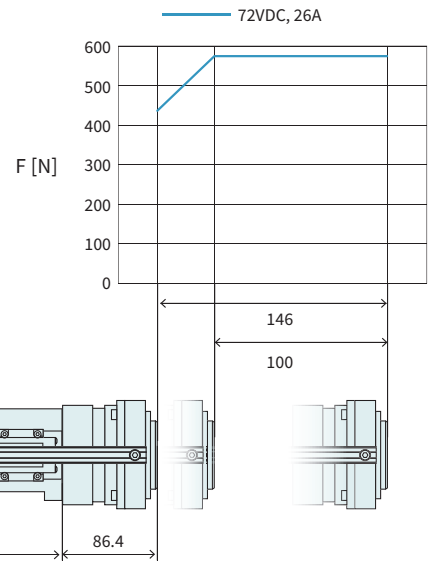


Item	Description	Item-No.
MF01-BK52	Brake Kit for PR01-52 Linear Rotary Motor	0250-2344

Area with horizontal dotted lines for notes.

PR01-84x80-C/48x240F-C-150-G...

Max. Stroke: 146 mm
Peak Force: 572 N



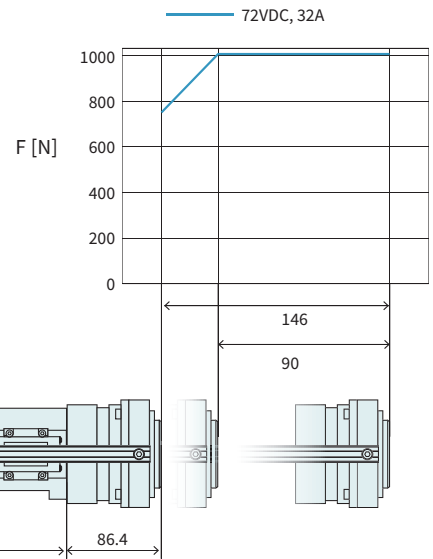
Dimensions in mm

Motor Specifications			
	PR01-84x80-C/ 48x240F-C-150-G05	PR01-84x80-C/ 48x240F-C-150-G07	PR01-84x80-C/ 48x240F-C-150-G10
Linear Motion			
Extended Stroke ES	mm (in)	146 (5.75)	
Standard Stroke SS	mm (in)	100 (3.94)	
Peak Forc E12x0 - UC	N (lbf)	572 (128.6)	
Constant Force	N (lbf)	145 (32.6)	
Constant Force Fan cooling	N (lbf)	255 (57.3)	
Force Constant	N/A _{pk} (lbf/A _{pk})	22 (4.9)	
Max. Current @ 72VDC	A _{pk}	26	
Max. Velocity @ 72VDC	m/s (in/s)	3 (118)	
Position Repeatability	mm (in)	+/- 0.05 (-0.002)	
Linearity	%	+/- 0.15	
Rotary Motion			
Peak Torque (± 10%)	Nm (lbf·in)	8.9 (78)	
Constant Torque (Halt)	Nm (lbf·in)	1.9 (17)	
Max. Number of revolutions	rpm	1000	
Torque Constant 1	Nm/A _{pk} (lbf·in/A _{pk})	0.36 (3.19)	
Torque Constant 2	Nm/A _{rms} (lbf·in/A _{rms})	0.5035 (4.46)	
Max. Current @ 72VDC	A _{pk} / A _{rms}	25 / 17.68	
Position Repeatability	°	+/- 0.05°(*/-3°)	
Gearbox			
Gear Ratio	i	5	7
Max. Revolution (gearbox output)	U/min	200	142
Peak Torque (gearbox output)	Nm (lbf·in)	40 (354)	56 (496)
Continuous Torque (gearbox output)	Nm (lbf·in)	8.5 (75)	12 (106)
Efficiency at load		1-stage 94%; 2-stage 92%	
Lubrication		Lifetime lubrication	
Protection Class		IP65	
Operating temperature range		-20 °C to 90 °C	
Mechanical Data			
Overall length	mm (in)	862 (33.94)	
Diameter Linear Unit	mm (in)	48 (1.89)	
Diameter Rotary Unit	mm (in)	84 (3.31)	
Mass	g (lb)	13'000 (28.66)	
Linear Moving mass	g (lb)	6'730 (14.84)	
Rotary Torque of Inertia	kgcm ² (lb ²)	2.3 (20.34)	
Protection Class		IP54	

* mit Servo Drive E1250-UC

PR01-84x80-C/48x360F-C-150-G...

Max. Stroke: 150 mm
Peak Force: 1024 N



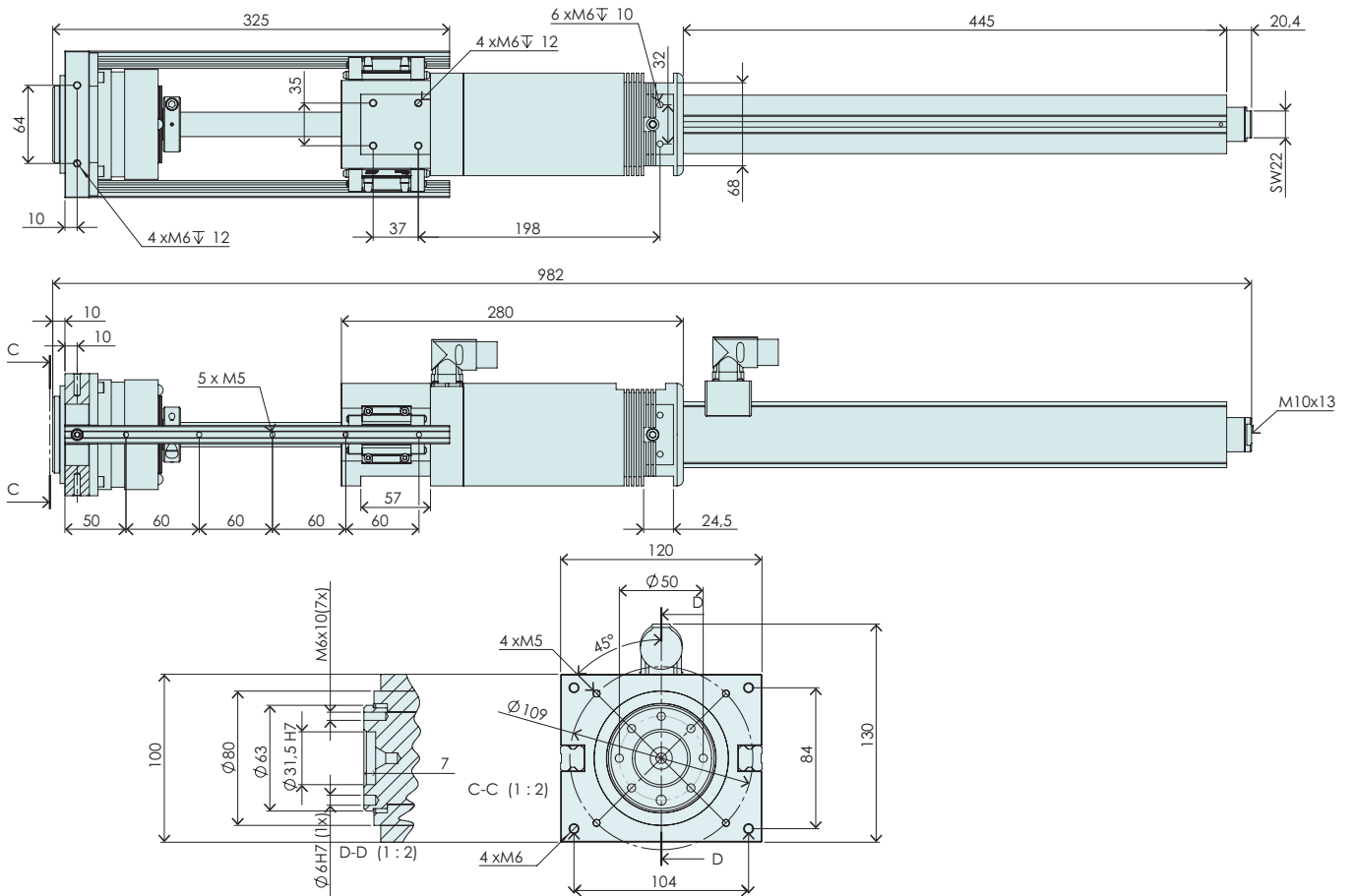
Dimensions in mm

Motor Specifications				
		PR01-84x80-C/ 48x360F-C-150-G05	PR01-84x80-C/ 48x360F-C-150-G07	PR01-84x80-C/ 48x360F-C-150-G10
Linear Motion				
Extended Stroke ES	mm (in)		146 (5.75)	
Standard Stroke SS	mm (in)		100 (3.94)	
Peak Forc E12x0 - UC	N (lbf)		1024 (230.2)	
Constant Force	N (lbf)		203 (45.6)	
Constant Force Fan cooling	N (lbf)		354 (79.6)	
Force Constant	N/A _{pk} (lbf/A _{pk})		32 (7.2)	
Max. Current @ 72VDC	A _{pk}		32	
Max. Velocity @ 72VDC	m/s (in/s)		2.1 (82)	
Position Repeatability	mm (in)		+/- 0.05 (0.002)	
Linearity	%		+/- 0.15	
Rotary Motion				
Peak Torque (± 10%)	Nm (lbf·in)		8.9 (78)	
Constant Torque (Halt)	Nm (lbf·in)		1.9 (17)	
Max. Number of revolutions	rpm		1000	
Torque Constant 1	Nm/A _{pk} (lbf·in/A _{pk})		0.36 (3.19)	
Torque Constant 2	Nm/A _{rms} (lbf·in/A _{rms})		0.5035 (4.46)	
Max. Current @ 72VDC	A _{pk} / A _{rms}		25 / 17.68	
Position Repeatability	°		+/- 0.05° (* / -3°)	
Gearbox				
Gear Ratio	i	5	7	10
Max. Revolution (gearbox output)	U/min	200	142	100
Peak Torque (gearbox output)	Nm (lbf·in)	40 (354)	56 (496)	75 (664)
Continuous Torque (gearbox output)	Nm (lbf·in)	8.5 (75)	12 (106)	17 (150)
Efficiency at load			1-stage 94% ; 2-stage 92%	
Lubrication			Lifetime lubrication	
Protection Class			IP65	
Operating temperature range			-20 °C to 90 °C	
Mechanical Data				
Overall length	mm (in)		982 (33.94)	
Diameter Linear Unit	mm (in)		48 (1.89)	
Diameter Rotary Unit	mm (in)		84 (3.31)	
Mass	g (lb)		14'600 (32.19)	
Linear Moving mass	g (lb)		7'330 (16.16)	
Rotary Torque of Inertia	kgcm ² (lb ²)		2.3 (20.34)	
Protection Class			IP54	

* mit Servo Drive E1250-UC

10

DIMENSIONS

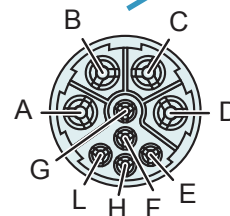


Dimensions in mm

CONNECTORS

Motor Connector Wiring	Linear Unit: C-Connector	Rotary Unit: C-Connector	Wire Color Motor Cable
Ph 1+ / Ph A	A	A	red
Ph 1- / Ph B	B	B	pink
Ph 2+ / Ph C	C	C	blue
Ph 2- / (-)	D	D (not connected)	grey
+5VDC	E	E	white
GND	F	F	inner shield
Sin	G	G	yellow
Cos	H	H	green
Temp.	L	L	black
Shield	Housing	Housing	outer Shield

C-Connector

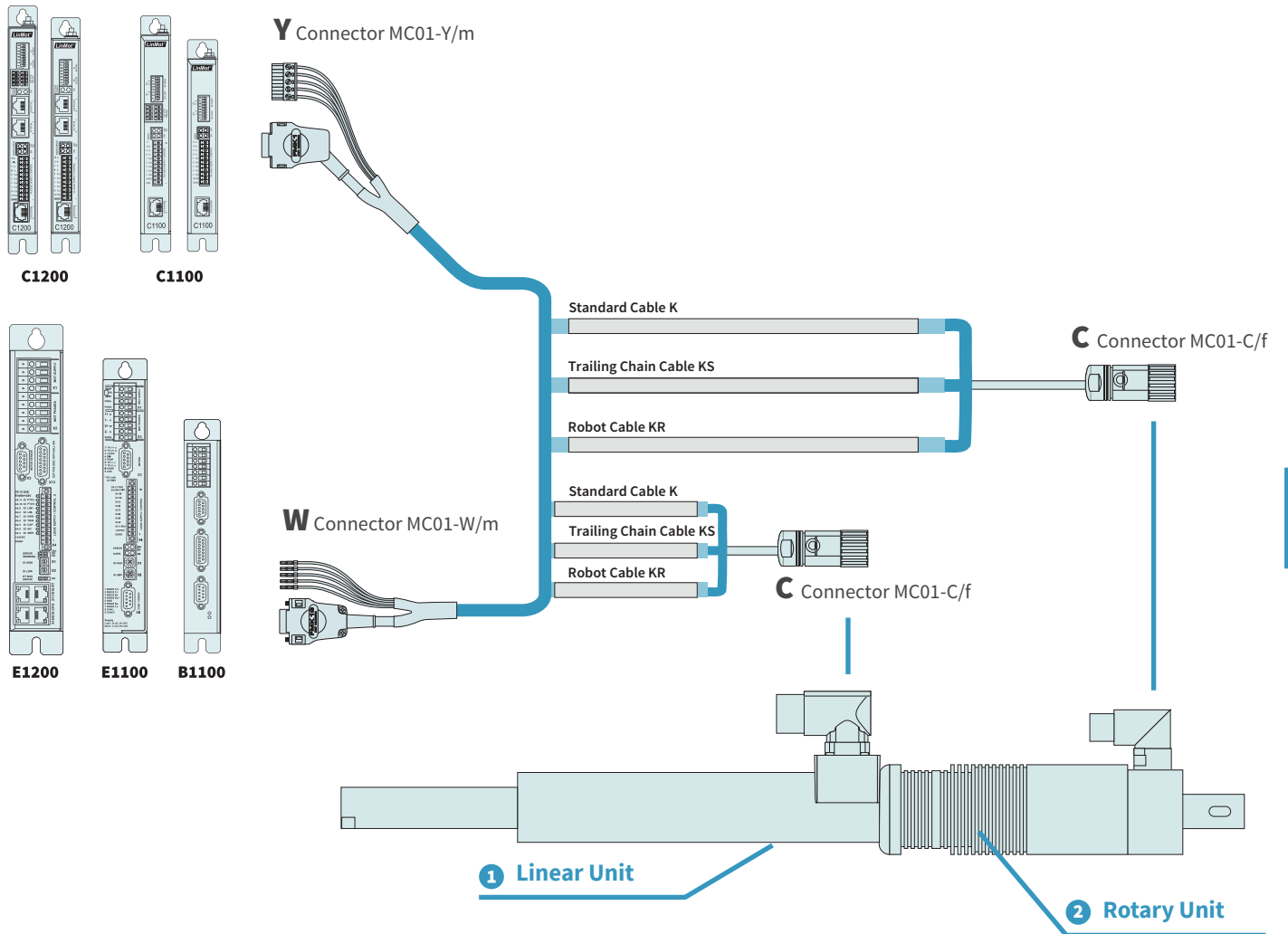


View: Motor connector, plug on

Item	Description	Item-No.
PR01-84x80-C-G/48x360F-C-150-G05	Linear Rotary Motor with Gearbox 5:1	0150-2535
PR01-84x80-C-G/48x360F-C-150-G07	Linear Rotary Motor with Gearbox 7:1	0150-2536
PR01-84x80-C-G/48x360F-C-150-G10	Linear Rotary Motor with Gearbox 10:1	0150-2537

Accessories

MOTOR CABLE



ORDERING INFORMATION

1 2 Linear Unit / Rotary Unit

Standard Cable		
Item	Description	Item-No.
K15-W/C-2	Motor Cable W/C, 2 m	0150-1811
K15-W/C-4	Motor Cable W/C, 4 m	0150-1801
K15-W/C-6	Motor Cable W/C, 6 m	0150-1802
K15-W/C-8	Motor Cable W/C, 8 m	0150-1803
K15-W/C-	Motor Cable K15-W/C, Custom length	0150-3131

K15-Y/C-2	Motor Cable Y/C, 2 m	0150-2429
K15-Y/C-4	Motor Cable Y/C, 4 m	0150-2430
K15-Y/C-6	Motor Cable Y/C, 6 m	0150-2431
K15-Y/C-8	Motor Cable Y/C, 8 m	0150-2432
K15-Y-Fe/C-	Motor Cable K15-Y-Fe/C, Custom length	0150-3506

Robot Cable		
Item	Description	Item-No.
KR10-W/C-	Robot Cable KR10-W/C, Custom length	0150-3199
KR10-Y-Fe/C-	Robot Cable KR10-Y-Fe/C, Custom length	0150-3515

Trailing Chain Cable		
Item	Description	Item-No.
KS10-W/C-4	Trailing Chain Cable W/C, 4 m	0150-1807
KS10-W/C-6	Trailing Chain Cable W/C, 6 m	0150-1858
KS10-W/C-8	Trailing Chain Cable W/C, 8 m	0150-1808
KS10-W/C-	Trailing Chain Cable KS10-W/C, Custom length	0150-3139

KS10-Y/C-4	Trailing Chain Cable Y/C, 4 m	0150-2439
KS10-Y/C-6	Trailing Chain Cable Y/C, 6 m	0150-2440
KS10-Y/C-8	Trailing Chain Cable Y/C, 8 m	0150-2441
KS10-Y-Fe/C-	Trailing Chain Cable KS10-Y-Fe/C, Custom length	0150-3511

Connector & Cable (individual)		
Item	Description	Item-No.
MC01-C/f	Motor connector C/f	0150-3080
MC01-W/m	Motor connector W/m	0150-3140
MC01-Y-Fe/m	Motor connector Y-Fe/m	0150-3289
K15-04/05	Motor Cable per m	0150-1978
KS10-04/05	Trailing Chain Cable per m	0150-1977
KR10-04/05	Robot Cable per m	0150-1830

COOLING PROFILE



Item	Description	Item-No.
PC01-48x100	Cooling profile for PS01-48 Linear Motor	0160-2145
PC01-48x117	Cooling profile for PS01-48 Linear Motor	0160-2138

FLANGE



Item	Description	Item-No.
PF01-48x120	Flange 48x120 mm	0150-1976
PF01-48x226	Flange 48x226 mm	0150-2108

FAN COOLING FOR LINEAR UNIT



Item	Description	Item-No.
HV01-37/48	Fan cooling for H01-37/48 & PF01-48	0150-5051

FAN COOLING FOR ROTARY UNIT



Item	Description	Item-No.
RS01-VA84-Kit	Fan Kit for RS01-84 Rotary Motors	0150-1600

MOUNTING FLANGE



Item	Description	Item-No.
MF01-PR01-84x80-37-1	MagSpring Mounting Flange for Linear Rotary Motors UNO	0250-2337
MF01-PR01-84x80-37-2	MagSpring Mounting Flange for Linear Rotary Motors DUO	0250-2338

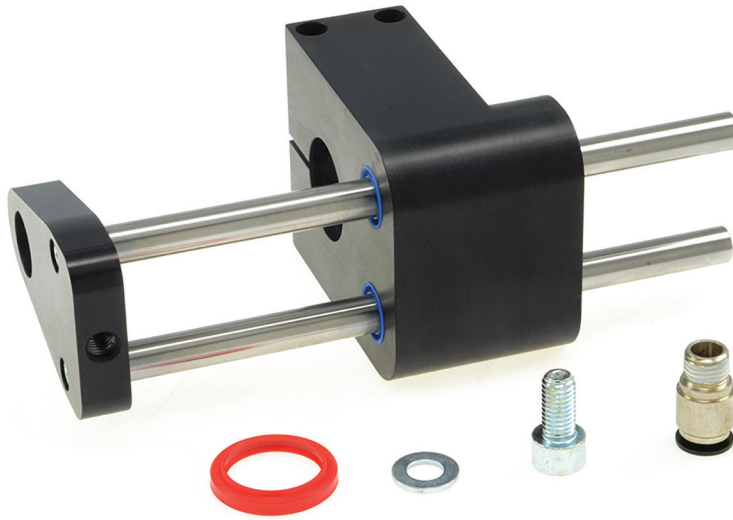
10

MAGSPRING ADAPTER



Item	Description	Item-No.
MA01-PR01-84x80-37-1	MagSpring Adapter for Linear Rotary Motors UNO	0250-2341
MA01-PR01-84x80-37-2	MagSpring Adapter for Linear Rotary Motors DUO	0250-2340

CAM KIT



Item	Description	Item-No.
MF01-PK84	Motor Cam Kit for Linear Rotary Motor	0250-2324

Area with horizontal dotted lines for notes.