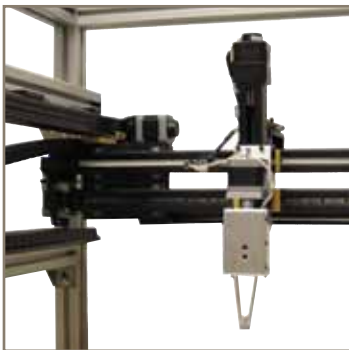




aerospace
climate control
electromechanical
filtration
fluid & gas handling
hydraulics
pneumatics
process control
sealing & shielding



LCR Series Positioners

Light Capacity Rodless Miniature Linear Positioners



ENGINEERING YOUR SUCCESS.

The LCR Series Value:

Performance You Can Count On; Value You Can Bank On

For OEMs looking to automate light payloads, the new LCR (Light Capacity Rodless) linear positioner family provides the smallest form factor with unmatched, easy-to-use flexibility.

With any “build-it-yourself” positioner, all the parts required to build a linear motion axis from scratch must be ordered, tracked, received, inventoried, assembled and tested. In contrast, the LCR Series is a completely pre-engineered, pre-tested, ready-to-use positioner solution, which allows OEMs to significantly reduce their time to market with minimized design, procurement, manufacturing, assembly and qualification time or effort.

Parker is an industry leading supplier who can provide complete technical and engineered solutions to OEMs for any linear positioning requirement. Parker’s innovative engineering, breadth of product, worldwide distribution, and outstanding customer service set the standard for the industrial motion market in all these areas:

- **Application analysis**
- **Engineering assistance**
- **Systems design**
- **Assemblies, kits and subsystems**
- **Extended warranty options**
- **ISO certified**
- **Global support and services**



Based on the proven life science track record of Parker’s MX80 and LP28 Series, the LCR was developed specifically to provide a high-quality, easy-to-use, off-the-shelf linear actuator.

LCR solutions are ideal for Maldi-plate and micro-titer tray automation. Rated for 100% duty cycle, the LCR offers smooth, quiet motion ideal for keeping instrument noise to a minimum. With selectable travel lengths up to 1000 mm and payloads up to 100 N (25 lbs), the ability to automate laboratory instruments has never been easier.

Bottom line:

The LCR’s proven pre-engineered design will significantly reduce your instrument time to market and improve your ROI.



- **Miniature footprint – 22 x 30 or 30 x 40 mm cross-sections**
- **Internal square rail or glider bearing design**
- **100% duty cycle**
- **IP30 stainless steel strip seal**
- **Low noise 2 and 10 mm leadscrew or long travel belt drive**
- **Travel lengths to 1000 mm**
- **Attractive black anodize finish**
- **Extruded aluminum body incorporates dovetail mounting, T-slots and belt return**
- **Toe clamp mounting for easy installation**
- **Dowel pin holes in the LCR30 carriage for repeatable mounting**
- **Multiple motor mount options accommodate NEMA 8, 11, 17 and 23 steppers and NEMA 16 servo motors**
- **Flush-mounted NPN, PNP, N.O. or N.C. fully adjustable limit sensors maximize flexibility and minimize footprint impact**

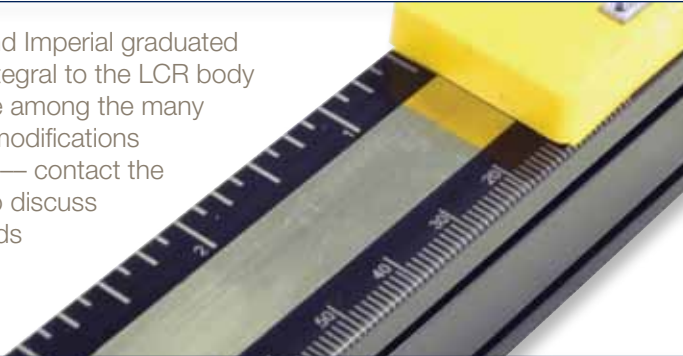
LCR Performance Overview

Model	Screw-Driven		Belt-Driven	
	LCR22	LCR30	LCR22	LCR30
Page	4 – 5	6 – 7	8 – 9	10 – 11
Width x Height (mm)	22 x 30	30 x 40	22 x 30	30 x 40
Repeatability (±mm)	0.1	0.1	0.5	0.5
Max. Normal Load ¹ (N)	45	100	45	100
Max. Axial Load (N)	25	60	25	45
Max. Speed ² (mm/s)	20	150	600	900
Max. Travel Length (mm)	150	600	500	1000
Screw Lead Options (mm/rev)	2	2, 10	—	—

¹ Specifications for square rail design, bushing version reduces normal load to 50% value.

² Specifications for fast screw lead, the fine screw lead will reduce maximum speed.

Metric and Imperial graduated scales integral to the LCR body frame are among the many custom modifications available — contact the factory to discuss your needs



Tailored to Meet Every Requirement

The LCR is an easy-to-configure off-the-shelf solution with a virtually unlimited array of standard configurations available.

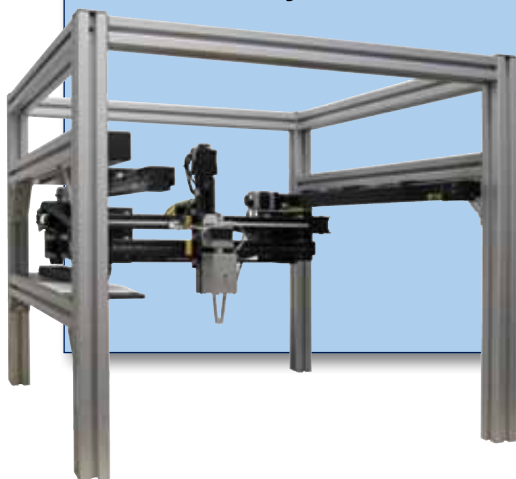
If your application demands a special design, Parker takes the next step and customizes the product to meet your required specification. Common modifications include:

- Clean room components
- Special tool plates
- Mounts for 3rd party motors
- Single or parallel acting electric grippers
- Maximum height or length modifications for space constraints
- And much more

Whether you need blue anodize or a design with a custom carriage for larger than standard payloads, or anything else, Parker excels at application solutions and will modify the LCR to fit your specific needs.

Please call us at 800-245-6903 to discuss your requirements.

Ideal for High-Volume, Light-Capacity, Electrically-Controlled Motion



Life science applications:

- Mass spectroscopy
- Course microscopy
- Analytical instruments
- Laboratory automation
- Micro titer automation
- MALDI plate automation
- Liquid handling
- Syringe pumps

General-purpose applications:

- Point-of-purchase kiosks
- Adjustable guide widths for conveyor lines
- Storage and retrieval
- Part shuttling
- Light payload automation conversion from rodless pneumatics to electric
- General automation for any ≤25 lb payload with basic repeatability requirements

LCR Design Advantages

Miniature Screw- & Belt-Driven Designs with Maximum Versatility

The most motor mounting options standard with more options easily available

Encoder options for position verification and position maintenance

Simple and powerful plug and spin ion stepper drive option (See next page)

Machined aluminum carriage mounting surface with locating holes (Locating holes on LCR30 size carriage only)

Rugged internal square rail re-circulating bearing or quiet glider bearing for lighter payload needs

Stainless steel sealing strip for best in class bearing and drive train protection

Minimal instrument/machine size with flush mount limit sensors

Quick and easy mounting options with toe clamps or standard multi-axis connection kits

Flexible drive train options with multiple screw leads for high thrust or reinforced belt drive for highest speeds

Two unique profile sizes (22 and 30 mm wide) provide high rigidity for minimal deflection along with "T" and dovetail slots

Easily adjustable belt tension system reducing maintenance and down time

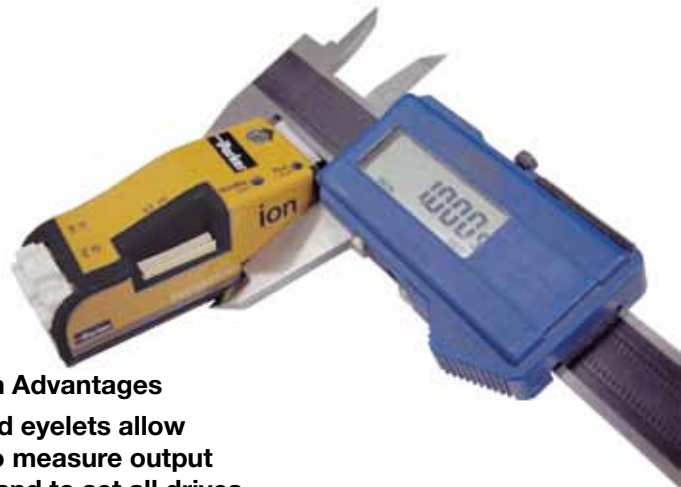
The New **i**on Drive is an OEM-Friendly Design...

ion Completes the LCR as an Easy-to-Use Motion Solution

Pairing the LCR with the new **i**on drive, instrument builders eliminate another costly design component and complete their motion package with a single-vendor, easy-to-use solution.

The **i**on drive is only 1" x 1" x 3" in size, but packs 2 A of current at 24 VDC to provide superior power density for simple step and direction motion.

The Parker **i**on Stepper Drive is a complete step and direction indexer for hybrid step motors. The **i**on drive operates stepper motors in full, half, quarter, and sixteenth step modes with an output drive capacity up to 24 VDC and 2.0 amps.



Key Design Advantages

- On board eyelets allow OEMs to measure output current and to set all drives equally
- Two potentiometers allow for easy adjustment of standby and run current
- No programming
- No code to learn
- Robust, high quality product with 100% pre-ship testing

Key Design Features

- Supply voltage 12 to 24 VDC
- 2.0 amps max motor output current
- Adjustable run current and standby current
- Single or differential ended inputs
- Enable, step and direction inputs voltages up to ± 14 VDC (low/high input): < 0.8 V Low, > 2 V High
- 1.0 μ s minimum step pulse width
- 1.0 μ s minimum step pulse low time
- 0 to 40°C operating temperature with natural convection
- 5 to 95% relative humidity, non-condensing
- Optional DIN rail mount
- Resolutions of 200, 400, 800 and 3200 steps/rev (with 1.8° step motor)
- Small package (80 mm x 25 mm x 25 mm)
- RoHS compliant

ion saves a lot more than space...



The **i**on Series offers added value to customers who traditionally specify board level drives or design their own drives in house.

① Free-up engineering, procurement, quality, and assembly resources in house. The **i**on Series reduces the instrument/machine design time by utilizing an off-the-shelf solution.

The result: faster time to market for new products, allowing customers to focus on core competency.

② The **i**on also reduces procurement complexity by reducing the need to chase multiple vendors versus a do-it-yourself drive design.

The result: better return on investment.

③ The **i**on Series provides the customer added flexibility to mount the enclosed, protected drive directly onto a motion axis such as the Parker LCR Series, or DIN rail mount in a convenient location.

The result: a well protected, robust drive with quick and easy installation for an easy out-of-box user experience.

LCR Screw-Driven Specifications

Performance



LCR Screw-Driven Performance by Profile Size

Specification	Units	LCR22		LCR30	
		S (Square Rail)	B (Bushing)	S (Square Rail)	B (Bushing)
Grade					
Bidirectional Repeatability	mm	± 0.1	± 0.2	± 0.1	± 0.2
Duty Cycle	%	100	100	100	100
Max. Acceleration*	m/s ²	20	20	20	20
Normal Load	N	45	25	90	45
Moment Load					
Roll	Nm	0.9	0.1	2.6	0.3
Yaw		2.0	0.3	6.5	0.8
Pitch		2.5	0.8	8.2	1.5
Max. Axial Load	N	25	25	70	70
Screw Efficiency					
2.0 mm Lead	%	50	50	50	50
10.0 mm Lead		—	—	70	70
Breakaway Torque	mNm	21	30	30 (2 mm lead) 45 (10 mm lead)	40 (2 mm lead) 90 (10 mm lead)
Screw Diameter	mm	3.3	3.3	6.4	6.4
Coefficient of Friction		0.02	0.10	0.02	0.10
Carriage Weight	N	0.2	0.2	0.5	0.5
Base Moment of Inertia					
I_{xx}	mm ⁴	10,332	10,332	39,778	36,162
I_{yy}		11,808	11,808	46,273	42,066

*Do not exceed allowable axial and moment loading.

LCR22 Screw-Driven Performance by Travel Length

Travel	Max. Screw Speed* (RPS)	Max. Linear Speed (mm/s)	Table Weight	Input Inertia 10 ⁻⁷ kg-m ²
		2.0 mm	M11	2.0 mm
25	15	30	0.42	1.25
50	15	30	0.44	1.27
75	15	30	0.47	1.30
100	15	30	0.49	1.32
125	15	30	0.52	1.34
150	15	30	0.54	1.37

*Maximum Screw Speed of 15 rps is based upon stepper motor resonance zones, for higher speeds please consult product maintenance manual.

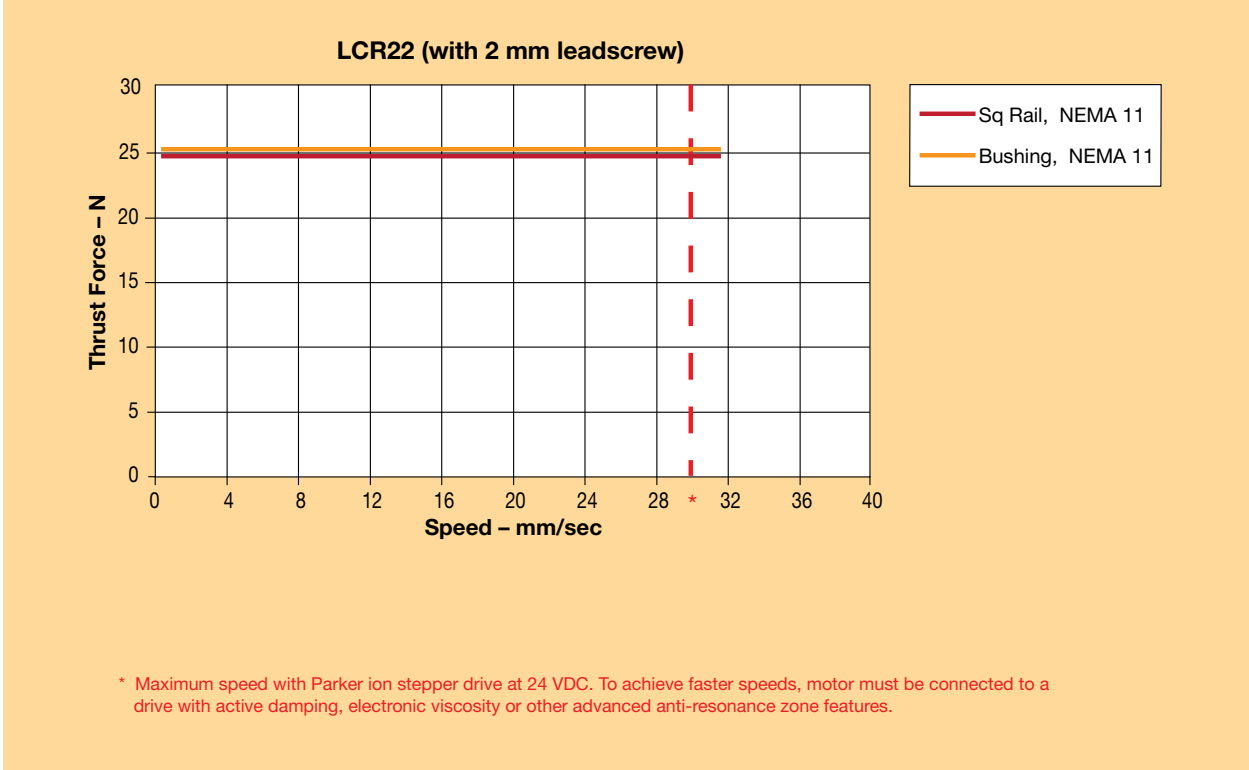
LCR30 Screw-Driven Performance by Travel Length

Travel	Max. Screw Speed* (RPS)	Max. Linear Speed (mm/s)		Table Weight		Input Inertia 10 ⁻⁷ kg-m ²	
		2.0 mm	10.0 mm	M11	M17	2.0 mm	10.0 mm
25	15	30	150	0.70	0.80	4.11	5.26
50	15	30	150	0.74	0.84	4.42	5.57
75	15	30	150	0.78	0.88	4.8	5.88
100	15	30	150	0.83	0.93	5.1	6.19
125	15	30	150	0.87	0.97	5.36	6.50
150	15	30	150	0.91	1.01	5.67	6.82
175	15	30	150	0.95	1.05	5.99	7.13
200	15	30	150	0.99	1.09	6.3	7.44
225	15	30	150	1.03	1.13	6.61	7.75
250	15	30	150	1.07	1.17	6.92	8.06
275	15	30	150	1.12	1.21	7.23	8.37
300	15	30	150	1.16	1.26	7.54	8.68
325	15	30	150	1.20	1.30	7.85	8.99
350	15	30	150	1.24	1.34	8.16	9.31
375	14	28	140	1.28	1.38	8.47	9.62
400	12	24	120	1.32	1.42	8.79	9.93
425	11	22	110	1.36	1.46	9.11	10.24
450	10	20	100	1.40	1.50	9.41	10.56
475	9	18	90	1.45	1.54	9.72	10.86
500	9	18	90	1.49	1.59	10.03	11.17
525	8	16	80	1.53	1.63	10.33	11.49
550	7	14	70	1.57	1.67	10.65	11.80
575	7	14	70	1.61	1.71	10.97	12.11
600	6	12	60	1.65	1.75	11.28	12.42

*Maximum Screw Speed of 15 rps is based upon stepper motor resonance zones, for higher speeds please consult product maintenance manual.

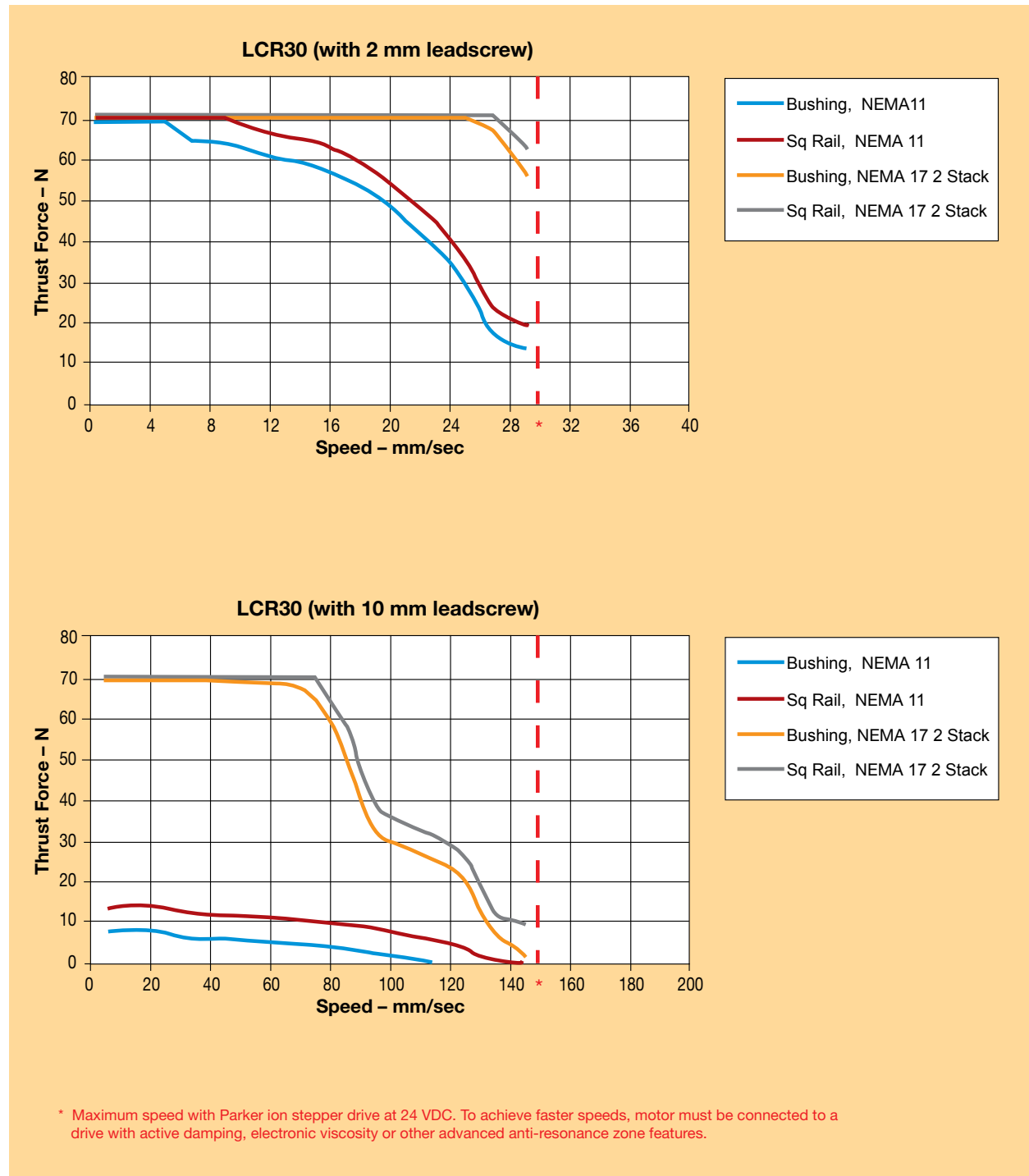
LCR Screw-Driven Specifications

LCR22 Linear Speed-Force Performance



Refer to critical speed limitations on page 7 for specific stroke length maximum speeds.

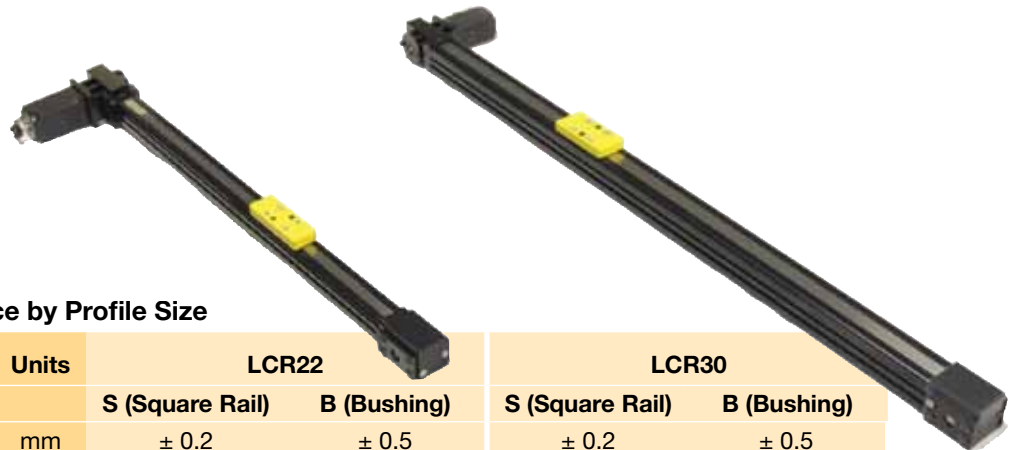
LCR30 Linear Speed-Force Performance



Refer to critical speed limitations on page 7 for specific stroke length maximum speeds.

LCR Belt-Driven Specifications

Performance



LCR Belt-Driven Performance by Profile Size

Specification	Units	LCR22		LCR30	
		S (Square Rail)	B (Bushing)	S (Square Rail)	B (Bushing)
Grade					
Bidirectional Repeatability	mm	± 0.2	± 0.5	± 0.2	± 0.5
Duty Cycle	%	100	100	100	100
Max. Acceleration*	m/s ²	20	20	20	20
Max. Linear Speed	mm/s	675	675	870	870
Normal Load	N	45	25	90	45
Moment Load					
Roll	Nm	0.9	0.1	2.6	0.3
Yaw					
Pitch					
		2.0	0.3	6.5	0.8
		2.5	0.8	8.2	1.5
Max. Axial Load	N	25	25	45	45
Linear Travel/Rev	mm	44.0	44.0	58.0	58.0
Breakaway Torque	mNm	75.0	75.0	85.0	85.0
Coefficient of Friction		0.02	0.10	0.02	0.10
Carriage Weight	N	0.2	0.2	0.5	0.5
Base Moment of Inertia					
I _{xx}	mm ⁴	11,365	10,332	39,778	36,162
I _{yy}					
		12,989	11,808	46,273	42,066

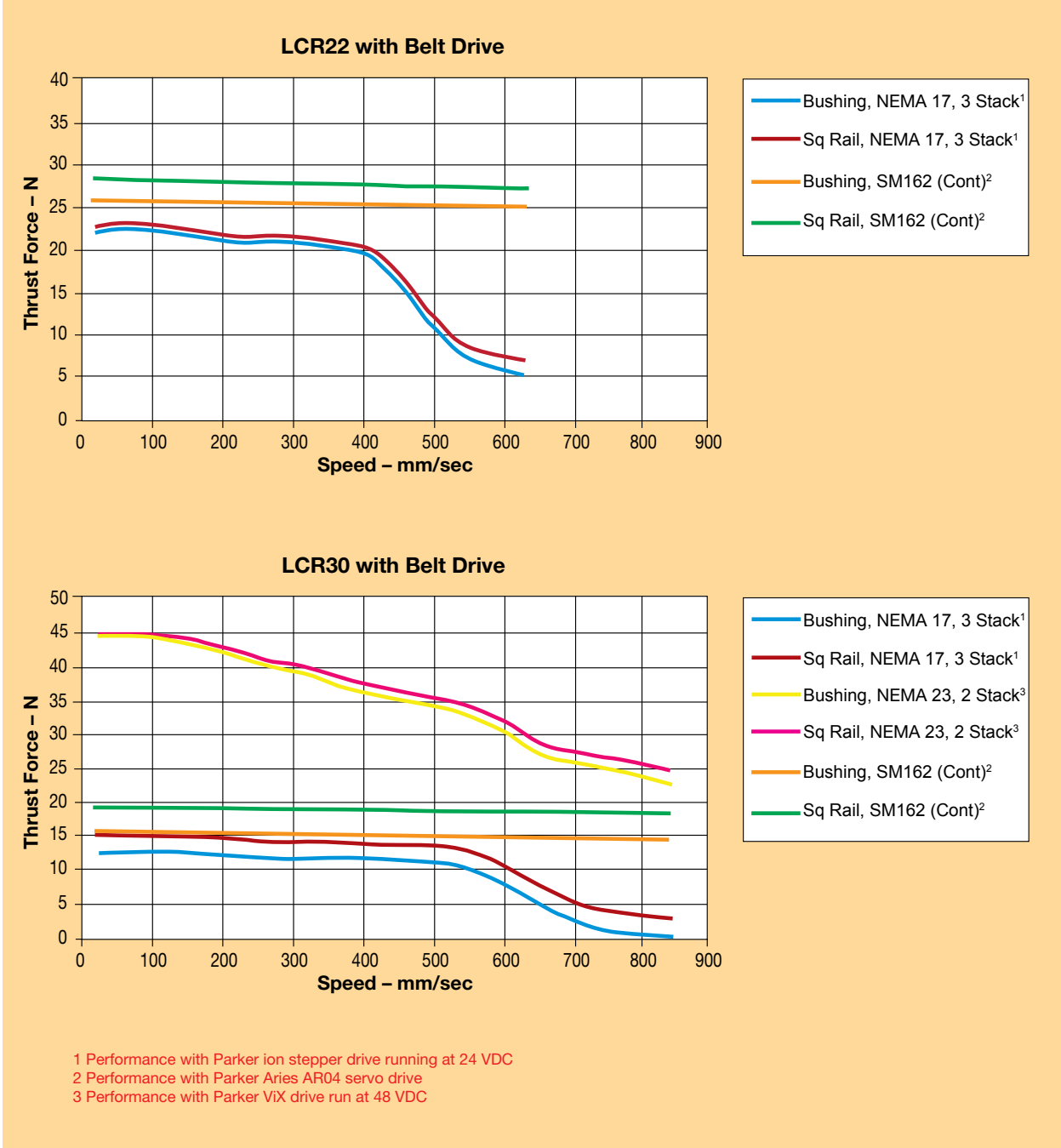
*Do not exceed allowable axial and moment loading.

LCR Belt-Driven Performance by Travel Length (no load)

Travel	LCR22			LCR30		
	Table Weight (M17)	Total Inertia Reflected (kg-m ²)		Table Weight (M23)	Total Inertia Reflected (kg-m ²)	
		No Load	2.5 kg Load		No Load	2.5 kg Load
25	0.64	1.602 ⁻⁶	1.241 ⁻⁴	1.23	3.111 ⁻⁶	2.161 ⁻⁴
50	0.66	1.627 ⁻⁶	1.241 ⁻⁴	1.27	3.145 ⁻⁶	2.161 ⁻⁴
75	0.68	1.652 ⁻⁶	1.242 ⁻⁴	1.30	3.189 ⁻⁶	2.162 ⁻⁴
100	0.71	1.677 ⁻⁶	1.242 ⁻⁴	1.34	3.232 ⁻⁶	2.162 ⁻⁴
125	0.73	1.702 ⁻⁶	1.242 ⁻⁴	1.37	3.276 ⁻⁶	2.163 ⁻⁴
150	0.75	1.727 ⁻⁶	1.242 ⁻⁴	1.41	3.319 ⁻⁶	2.163 ⁻⁴
175	0.78	1.752 ⁻⁶	1.243 ⁻⁴	1.44	3.363 ⁻⁶	2.163 ⁻⁴
200	0.80	1.777 ⁻⁶	1.243 ⁻⁴	1.48	3.406 ⁻⁶	2.164 ⁻⁴
225	0.83	1.802 ⁻⁶	1.243 ⁻⁴	1.52	3.500 ⁻⁶	2.164 ⁻⁴
250	0.85	1.827 ⁻⁶	1.243 ⁻⁴	1.55	3.493 ⁻⁶	2.165 ⁻⁴
275	0.87	1.852 ⁻⁶	1.244 ⁻⁴	1.59	3.536 ⁻⁶	2.165 ⁻⁴
300	0.90	1.877 ⁻⁶	1.244 ⁻⁴	1.62	3.580 ⁻⁶	2.166 ⁻⁴
325	0.92	1.902 ⁻⁶	1.244 ⁻⁴	1.66	3.623 ⁻⁶	2.166 ⁻⁴
350	0.95	1.927 ⁻⁶	1.244 ⁻⁴	1.69	3.667 ⁻⁶	2.166 ⁻⁴
375	0.97	1.952 ⁻⁶	1.245 ⁻⁴	1.73	3.710 ⁻⁶	2.167 ⁻⁴
400	0.99	1.977 ⁻⁶	1.245 ⁻⁴	1.76	3.754 ⁻⁶	2.167 ⁻⁴
425	1.02	2.002 ⁻⁶	1.245 ⁻⁴	1.80	3.797 ⁻⁶	2.168 ⁻⁴
450	1.04	2.027 ⁻⁶	1.245 ⁻⁴	1.83	3.841 ⁻⁶	2.168 ⁻⁴
475	1.07	2.052 ⁻⁶	1.246 ⁻⁴	1.87	3.884 ⁻⁶	2.169 ⁻⁴
500	1.09	2.077 ⁻⁶	1.246 ⁻⁴	1.90	3.927 ⁻⁶	2.169 ⁻⁴
525	—	—	—	1.94	3.980 ⁻⁶	2.170 ⁻⁴
550	—	—	—	1.97	4.014 ⁻⁶	2.170 ⁻⁴
575	—	—	—	2.01	4.058 ⁻⁶	2.170 ⁻⁴
600	—	—	—	2.04	4.101 ⁻⁶	2.171 ⁻⁴
625	—	—	—	2.08	4.145 ⁻⁶	2.171 ⁻⁴
650	—	—	—	2.11	4.188 ⁻⁶	2.172 ⁻⁴
675	—	—	—	2.15	4.232 ⁻⁶	2.172 ⁻⁴
700	—	—	—	2.18	4.275 ⁻⁶	2.173 ⁻⁴
725	—	—	—	2.22	4.319 ⁻⁶	2.173 ⁻⁴
750	—	—	—	2.25	4.362 ⁻⁶	2.173 ⁻⁴
775	—	—	—	2.29	4.405 ⁻⁶	2.174 ⁻⁴
800	—	—	—	2.32	4.449 ⁻⁶	2.174 ⁻⁴
825	—	—	—	2.36	4.492 ⁻⁶	2.175 ⁻⁴
850	—	—	—	2.40	4.536 ⁻⁶	2.175 ⁻⁴
875	—	—	—	2.43	4.579 ⁻⁶	2.176 ⁻⁴
900	—	—	—	2.47	4.623 ⁻⁶	2.176 ⁻⁴
925	—	—	—	2.50	4.666 ⁻⁶	2.176 ⁻⁴
950	—	—	—	2.54	4.710 ⁻⁶	2.177 ⁻⁴
975	—	—	—	2.57	4.753 ⁻⁶	2.177 ⁻⁴
1000	—	—	—	2.61	4.796 ⁻⁶	2.178 ⁻⁴

LCR Belt-Driven Specifications

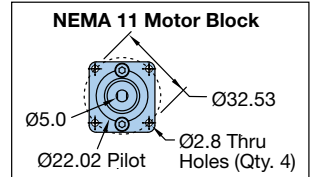
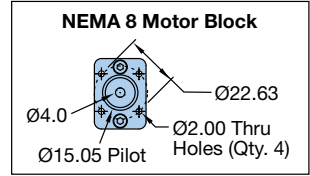
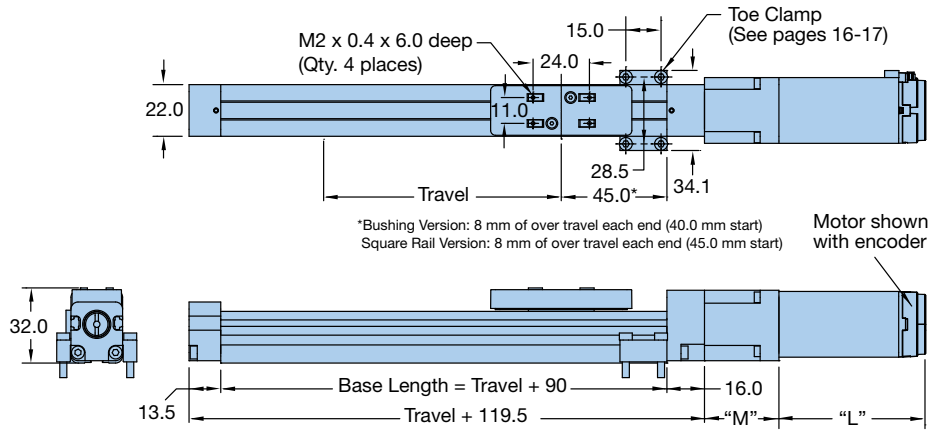
Linear Speed-Force Performance



Dimensions (mm)

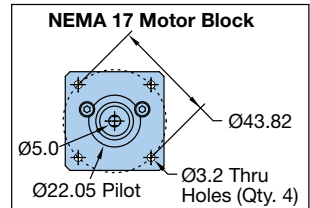
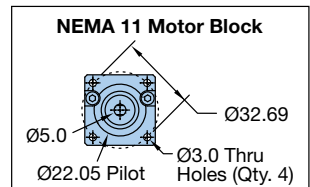
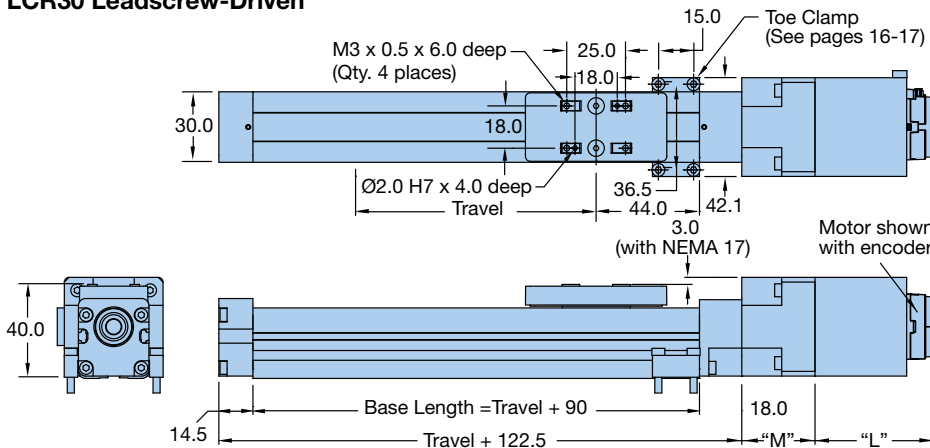
Leadscrew-Driven

LCR22 Leadscrew-Driven



Motor Option	M	L	Description
N08E0	26.5	0	NEMA 8 Motor Mount
N11E0	31.8	0	NEMA 11 Motor Mount
M11E0	31.8	62.5	NEMA 11 Stepper Motor
M11E1/E2	31.8	62.5	NEMA 11 Stepper Motor with Encoder

LCR30 Leadscrew-Driven

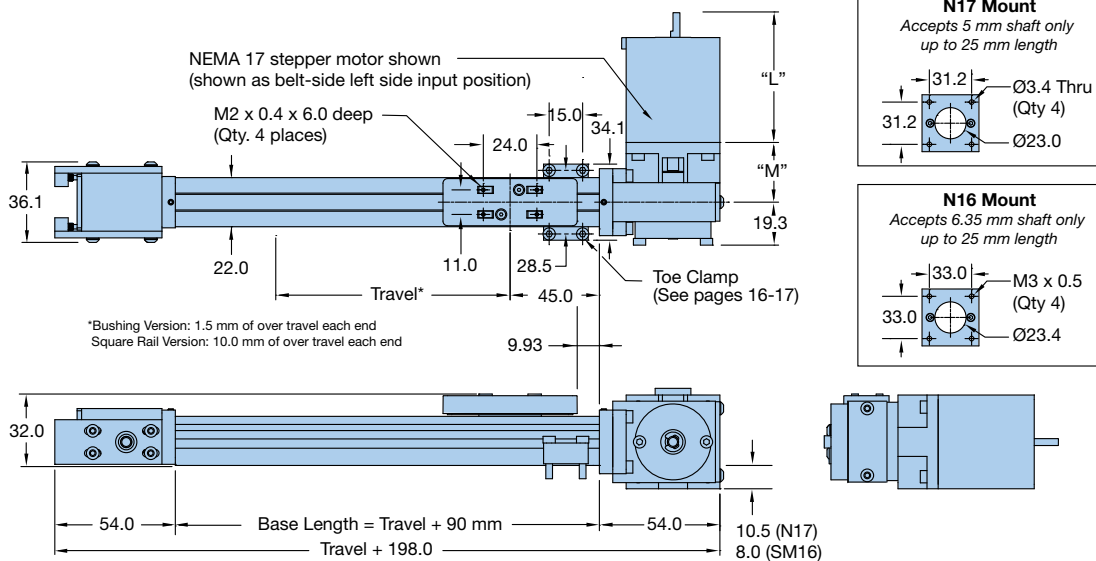


Motor Option	M	L	Description
N11E0	30.6	0	NEMA 11 Motor Mount
M11E0	30.6	62.5	NEMA 11 Stepper Motor
M11E1/E2	30.6	62.5	NEMA 11 Stepper Motor with Encoder
N17E0	31.2	0	NEMA 17 Motor Mount
M17E0	31.2	51.0	NEMA 17 Stepper Motor
M17E1/E2	31.2	51.0	NEMA 17 Stepper Motor with Encoder

Dimensions (mm)

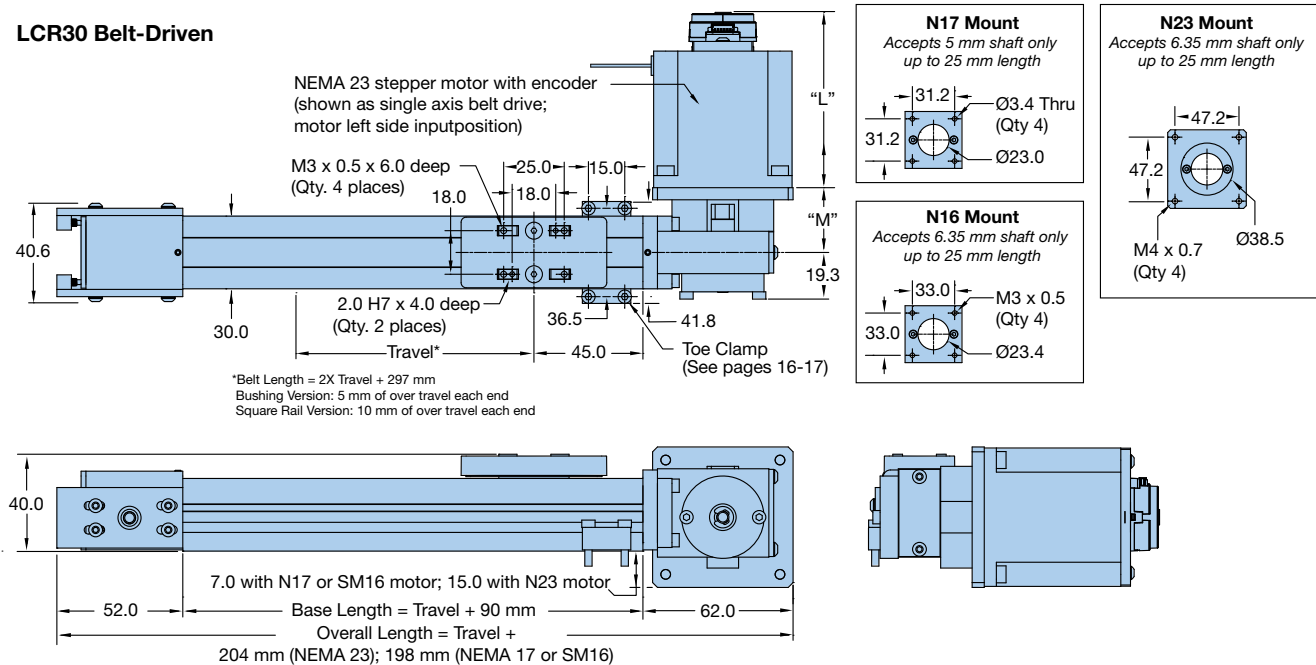
Belt-Driven

LCR22 Belt-Driven



Motor Option	M	L	Description
M17E0	34.3	58.2	NEMA 17 Stepper Motor
M17E1	34.3	58.2	NEMA 17 Stepper Motor with 500 Count Encoder
M17E2	34.3	58.2	NEMA 17 Stepper Motor with 500 Count Encoder
M16E0	39.3	137.0	SM16 Servo Motor Mount with SM162-AQ-FLCN

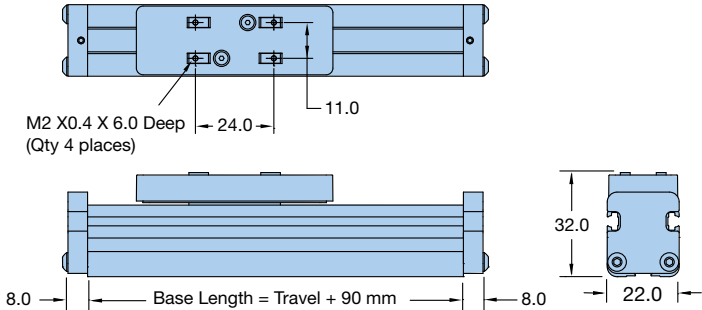
LCR30 Belt-Driven



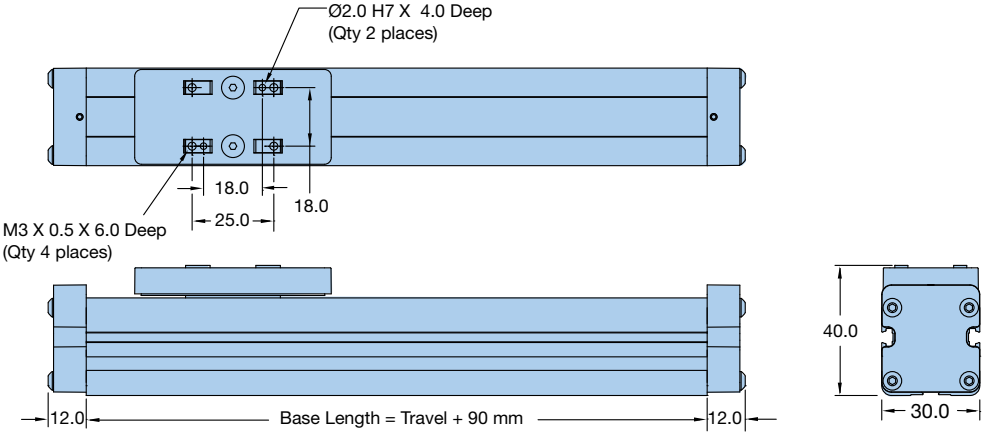
Motor Option	M	L	Description
M23E0	34.3	73.0	LV232 NEMA 23 Stepper Motor
M23E1	34.3	73.0	LV232 NEMA 17 Stepper Motor with 400 Count Encoder
M23E2	34.3	73.0	LV232 NEMA 17 Stepper Motor with 500 Count Encoder
M16E0	39.3	137.0	SM16 Servo Motor Mount with SM162-AQ-FLCN

Idler Unit – Square Rail Models only

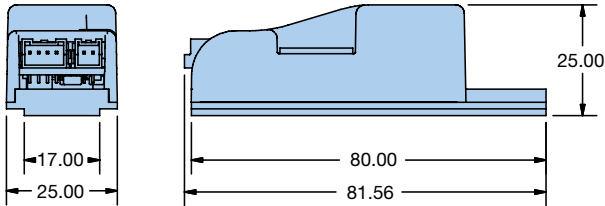
LCR22 Idler



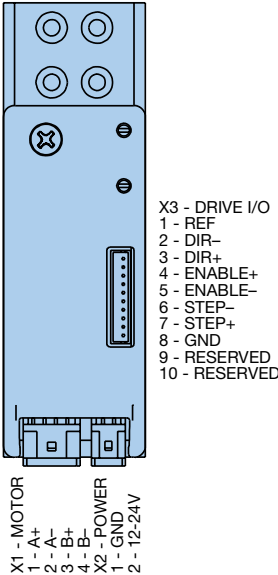
LCR30 Idler



ion Stepper Drive



ion Pin Out Diagram



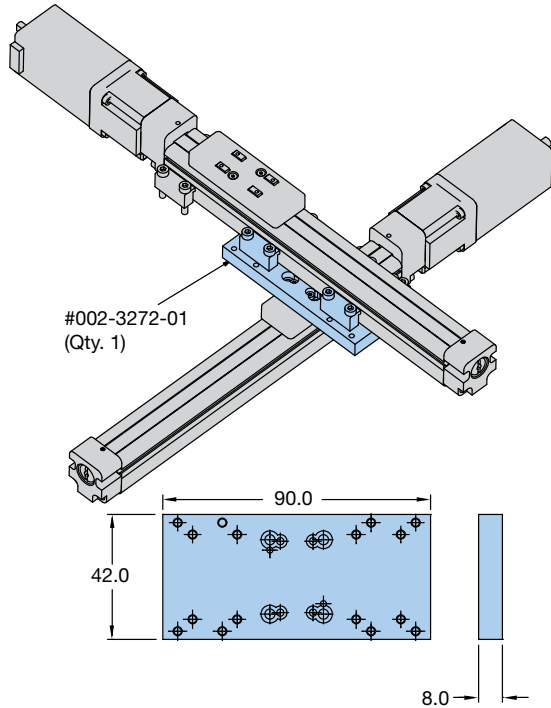
Accessories

X-Y and X-Z Brackets

Dimensions — mm

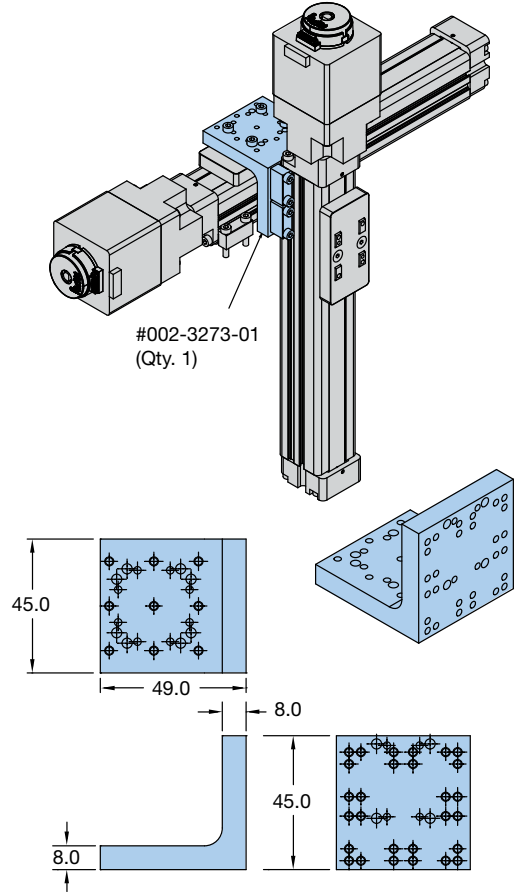
X-Y Bracket for LCR22/LCR30 Screw-Driven Units #002-3272-01

(includes four toe clamps with fasteners)



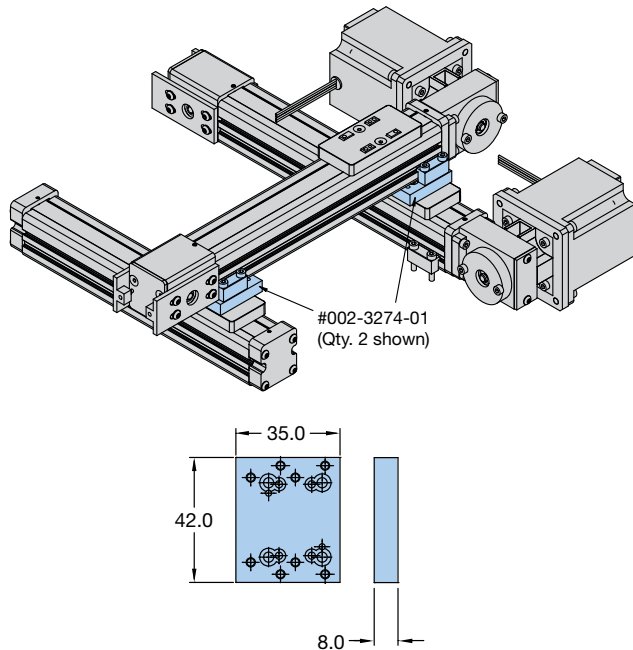
X-Z Bracket for LCR22/LCR30 (All Units) #002-3273-01

(includes four toe clamps with fasteners)

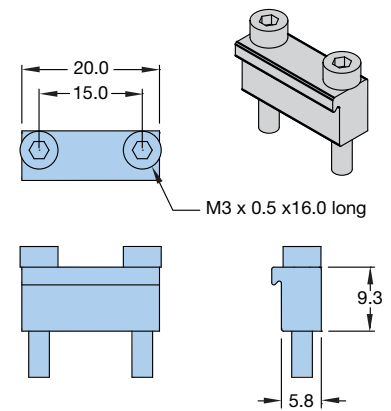


X-Y Bracket for LCR22/LCR30 Belt-Driven Units #002-3274-01

(includes two toe clamps with fasteners)



Toe Clamp Assembly #002-3233-01 (includes toe clamp and two socket head fasteners)



Toe Clamps



Toe clamp kits include socket head fasteners to mount clamp.

Part Number	Quantity
002-3233-01	1
002-3233-04	4
002-3233-100	100

Encoder

When using stepper motors, positional feedback is readily available with the optional rotary encoder. The robust magnetic encoder withstands vibration and provides easy in-position confirmation.



Encoder

Part Number	Counts/rev	Bore
003-4591-01	400	4 mm
003-4591-02	400	5 mm
003-4591-03	500	4 mm
003-4591-04	500	5 mm
003-4591-05	400	6.35 mm
003-4591-06	500	6.35 mm

Encoder Cable (6-pin differential)

006-2398-1.0	1m high flex with flying leads
006-2398-3.0	3m high flex with flying leads

Wiring Connection

Pin	Wire	Function
1	White	Ground
2	Green	A+
3	Yellow	A-
4	Brown	+5 VDC
5	Blue	B+
6	Red	B-
7	Pink	Not used
8	Gray	Not used

End-of-Travel Limit Sensors

Limit sensors offer home and end of travel protection in a flush mount design that minimizes the overall width of the LCR series. The limit sensors are available standard as NPN or PNP with normally open or normally closed designs.

Specifications

Operating Voltage: 10-30 VDC

Repeatability: $\leq \pm 0.1$ mm

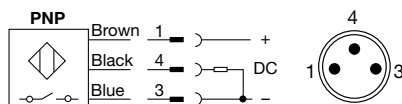
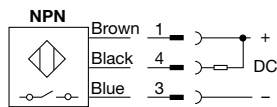
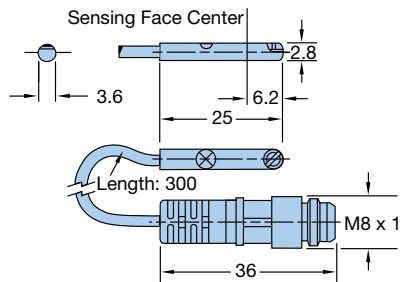
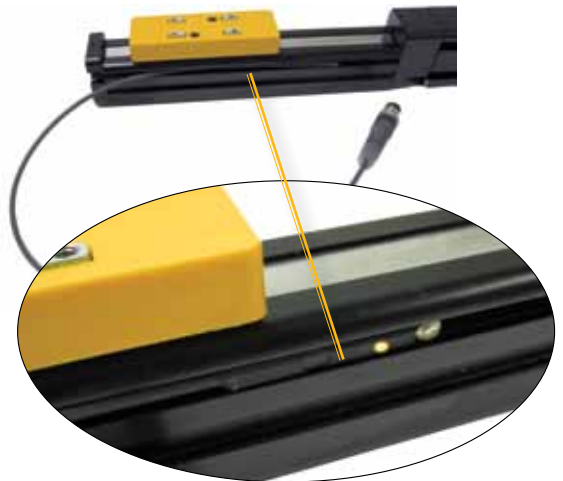
EMC: EN 60 947-5-2

Short circuit protections: Yes

Reverse Polarity Protection: Yes

Enclosure Rating: IP 67

Operating Temperature Range: -25° to 75° C (-13° to 167° F)



Wiring Connection

Pin	Wire	Function
1	Brown	+ VDC
4	Black	NO
3	Blue	- VDC

Part Number	Logic	Cabling
003-4475-01	PNP N.C.	3 meter flying leads
003-4475-02	PNP N.C.	0.3 meter with M8
003-4475-03	NPN N.C.	3 meter flying leads
003-4475-04	NPN N.C.	0.3 meter with M8
003-4475-05	PNP N.O.	3 meter flying leads
003-4475-06	PNP N.O.	0.3 meter with M8
003-4475-07	NPN N.O.	3 meter flying leads
003-4475-08	NPN N.O.	0.3 meter with M8
003-2918-01	All cabling	5 meter extension cable for M8 connections

LCR Ordering Information

Fill in an order code from each of the numbered fields to create a complete model order code.

Order Example:

①	②	③	④	⑤	⑥	⑦	⑧	⑨
LCR	22	LN10	0075	S	S	M08E0	L0	A0

- | | | |
|---|--|---|
| <p>① Series
 LCR Series</p> <p>② Size (width in mm)
 22 22 mm wide profile
 30 30 mm wide profile</p> <p>③ Drive Train
 IDLR Idler unit; no drive mechanism
 LN02 2 mm leadscrew with in-line motor mount
 LN10 10 mm leadscrew with in-line motor mount (available with LCR30 size only)
 BLTL Single axis belt drive; motor left
 BLTR Single axis belt drive; motor right</p> <p>④ Travel Length (mm)
 xxxx 25 mm increments of travel
 LCR22 Screw-Driven: 25 to 150 mm
 LCR30 Screw-Driven: 25 to 600 mm
 LCR22 Belt-Driven: 25 to 500 mm
 LCR30 Belt-Driven: 25 to 1000 mm</p> <p>⑤ Bearing Type
 S Square rail bearing
 B Glider bushing bearing</p> <p>⑥ Environmental Protection
 S Strip seal protection (standard)</p> | <p>⑦ Motor
 M11E0 NEMA 11 stepper motor with no encoder ¹
 M11E1 NEMA 11 stepper motor with 400 count encoder ¹
 M11E2 NEMA 11 stepper motor with 500 count encoder ¹
 M17E0 NEMA 17 stepper motor with no encoder ²
 M17E1 NEMA 17 stepper motor with 400 count encoder ²
 M17E2 NEMA 17 stepper motor with 500 count encoder ²
 M23E0 NEMA 23 stepper motor with no encoder ³
 M23E1 NEMA 23 stepper motor with 400 count encoder ³
 M23E2 NEMA 23 stepper motor with 500 count encoder ³
 M16E1 SM162AQ-FLCN motor mounted with smart encoder ²
 M16E2 SM162AE-FLCN motor mounted with 2000 count encoder ²
 N00E0 Idler version; no motor mount included
 N08E0 NEMA 8 motor mount and coupling only; no motor ⁴
 N11E0 NEMA 11 motor mount and coupling only; no motor ¹
 N17E0 NEMA 17 motor mount and coupling only; no motor
 N16E0 SM16 motor mount and coupling only; no motor
 N23E0 LV23 motor mount and coupling only; no motor ⁵</p> | <p>⑧ Home and End-of-Travel Option
 L0 No limit or home sensors
 L1 3 NPN Sensor (1 N.O.; 2 N.C.)
 L2 1 NPN Sensor (1 N.O.)
 L3 3 PNP Sensor (1 N.O.; 2 N.C.)
 L4 1 PNP Sensor (1 N.O.)
 L5 3 NPN Sensor (2 N.O.; 1 N.C.)
 L6 1 NPN Sensor (1 N.C.)
 L7 3 PNP Sensor (2 N.O.; 1 N.C.)
 L8 1 PNP Sensor (1 N.C.)</p> <p>⑨ Amplifier Option
 A0 No amplifier included
 A1 ion stepper drive/amplifier included (order cable set separately -- see page 19 for cable part numbers)
 A2 ion stepper drive with 1 meter flying lead cable set
 A3 ion stepper drive with 1 meter cable set to ACR controller
 A4 ion stepper drive with 1 meter cable set to 6k controller</p> <p>For longer cable needs, please order the A1 option and order cables separately</p> |
|---|--|---|

¹ Not available with BLTL/BLTR belt Drive Train options
² Not available with LCR22LN02 configuration
³ Only compatible with the LCR30 BLTL & LCR30 BLTR drive options
⁴ Only available with LCR22LN02 configuration. Please ensure motor is capable of supplying enough torque for moving load.
⁵ Not available with LN02 Drive Train option

ion Ordering Information

Ordering Information

Order Example:

① ② ③ ④ ⑤ ⑥

ion D 2 SD E0 FL1

① **Series**
ion Series

② **Intelligence**
D Stepper drive

③ **Power Level**
2 2 amps max

④ **Communication**
SD Step and direction input

⑤ **Feedback**
E0 No encoder

⑥ **Cable Set**
FL0 No cable set
FL1
FL3
AC1 See chart at left
AC3
6K1
6K3



ion Options and Accessories

Part Number	Order Code	Description
006-2342-1.0	—	Power Cable – 1 m , High Flex
006-2342-3.0	—	Power Cable – 3 m , High Flex
006-2343-1.0	—	6K Control Cable – 1 m, High Flex
006-2343-3.0	—	6K Control Cable – 3 m, High Flex
006-2344-1.0	—	ACR Control Cable – 1 m, High Flex
006-2344-3.0	—	ACR Control Cable – 3 m, High Flex
006-2345-1.0	—	Control Cable – Flying Leads – 1 m, High Flex
006-2345-3.0	—	Control Cable – Flying Leads – 3 m, High Flex
006-2357-1.0	—	Motor Power Extension – 1 m
006-2357-3.0	—	Motor Power Extension – 3 m
002-3296-1.0	FL1	1 m Flying Lead Cable Set (contains power and communications cable from above list)
002-3296-3.0	FL3	3 m Flying Lead Cable Set (power and communications cable from above list)
002-3297-1.0	AC1	1 m Cable Set to ACR (power and communications cable from above list)
002-3297-3.0	AC3	3 m Cable Set to ACR (power and communications cable from above list)
002-3298-1.0	6K1	1 m Cable Set to 6K (power and communications cable from above list)
002-3298-3.0	6K3	3 m Cable Set to 6K (power and communications cable from above list)
002-3294-01	—	DIN Rail Mounting Kit (DIN clip and screw)
002-3295-01	—	Mounting kit to attach ion to LCR

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Fax: 12 3954 5262
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LCR Series:
Made in the USA

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