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RUNCHENG



# **Precision Technology**

LXR Series Direct Drive Linear Motor Table

# 北京润诚时代科技有限公司

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ENGINEERING YOUR SUCCESS.

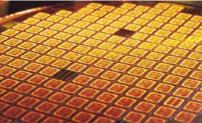


Parker Facility in Offenburg, Germany Manufacturing and Service for Precision Components in Europe









# **Precision Automation**

Applications and industries integrating precision motion control have requirements that exceed most motion product capabilities - levels of accuracy, repeatability, straightness, flatness and orthogonality that demand specialized product designs and manufacturing capabilities. With more than 25 years of product design and manufacturing experience in the most demanding precision motion markets, Parker is ready to provide the products and systems to serve our customers' most challenging needs.

## Customization and Services

Unlike many other motion technologies, precision electromechanical applications often require custom solutions. Many solutions are complete one-of-a kind systems.

# Our experienced engineers and technicians provide:

- Application advice
- Product sizing and selection, including mechanics, motors, drives and controls
- System design
- System manufacturing including testing and axis alignment
- System commissioning
- System maintenance

#### Parker Precision Automation customers can receive many optional services such as:

- 3D Custom assembly drawings
- Matches motor control systems
- Life-load diagrams
- Customized cabling systems

### Advanced Manufacturing Capabilities

Our advanced manufacturing and assembly process allows us to build quality and consistency into every element of your motion system. Each mechanical system is fully assembled prior to shipment and each component is properly handled to protect finish and appearance. While providing advanced manufacturing capabilities, we also strive to maintain the industry's best lead times for precision motion products. **Performance and specifications are verified with state-of-the-art testing, including** 

- Cleanroom-approved versions - Parker is equipped with in house particulate testing facilties to certify materials for cleanroom ratings.
- **EMI testing** Parker has an EMI test chamber, which allows us to test equipment to verify levels of electromagnetic interference.
- Precision Metrology Lab When precision is critical to your process, you need validated, proven performance data. Parker certifies all precision-grade positioners using state-of-the-art laser interferometers, and provides reports to validate accuracy and bidirectional repeatability.

## Parker Automation Technology Centers

Parker Automation Technology Centers are a network of premier product and service providers who can serve you locally for your automation needs. Each Automation Technology Center is certified to have completed significant product training and has the ability to provide subsystem solutions with local support. Parker Automation Technology Centers are located throughout Europe, and are served by our European manufacturing facility in Offenburg, Germany.

# Selectable Levels of Integration

Parker's **Selectable Levels of Integration** is a philosophy of product development and management that allows the machine builder to select an appropriate system, subsystem, or component to meet a specific need. Parker has solutions for machine builders of all types, from those who want a complete integrated system to those who want to build their own system from "best of breed" components.

#### Systems

Machine builders and OEMs often choose to integrate a complete electromechanical system into their machine. They have confidence in knowing that our knowledge, experience, and support will ensure that their goals are met. Minimal design engineering ensures component compatibility from a single source.

#### **Subsystems and Bundled Products**

For a cost-effective and efficient solution, Parker offers bundled or kitted systems. We can combine motors, gearheads, and positioning systems to deliver a configured subsystem ready for installation. Parker configuration and setup software accommodates the rest of the product line, making startup a snap. Combining this with our custom product modification capabilities gives the machine builder an economical custom-fit solution, with reduced engineering effort, straightforward integration, and modular compatibility.

#### **Component Products**

We offer the broadest range of linear and rotary motion products available for automation systems. If you have the capability and experience to develop your own systems, our innovative, easy-to-use products will help you get the job done. Parker provides short lead times, large selection, and proven reliability.

## **LXR Series**

www.parker-eme.com/lxr

## LXR Series Features

Linear motors cannot function on their own. Before motion can occur. a platform must be engineered to provide support, direction, and feedback for the linear motor. Bearings, cables, connectors, encoder, travel stops, homing sensor and other components must be performance matched and integrated to achieve desired motion and control.

Parker linear motor tables provide all this and more in a pre-engineered, easily mounted, ready to run package. The linear motor magnet rail is mounted to a stationary base and the forcer is mounted to the moveable carriage. The only contact between the moving carriage and the stationary base is through the linear support bearings. High-precision square rail bearings provide load support, low-friction translation, and a precise linear path. A high resolution linear encoder provides the required velocity and positional information to the motor controller, and a unique cable management system enables high performance motion with a life of 30 million cycles and beyond. Parker tables, with the slotless linear motor, are offered in three sizes: 404LXR, 406LXR, and 412LXR.

#### **Performance matched** components

The LXR Series linear servo motor tables achieve optimum performance by combining slotless motor technology with performance matched mechanical elements and feedback devices. Fast response, high acceleration, smooth translation, high velocity, and quick settling time describe the performance characteristics found in the LXR while high repeatability, precise accuracy, and submicrometer resolution define the positioning attributes.

- Pre-engineered package
- Performance matched components
- Environmental protection
- Laser certified precision



#### Sized to fit

The LXR Tables are offered in three widths (100, 150, and 300 mm), and travel lengths up to 3 m to accommodate the size and performance requirements of many industries including life sciences, photonics, semiconductor, digital

printing, solar panel, and general automation.



#### "Designer friendly" features and options

A vast assortment of "designer friendly" features and options simplify the engineering challenges often confronted with "base model" positioning devices.

Features like the IP30 protective strip seal and long life cable ma-



nagement system exemplify the built-in value found in the LXR units. Other selectable enhancements like cleanroom compatibility, travel limit sensors, motor drives, encoder resolution, and pinning holes for tooling location, simplify machine design and integration efforts.

# Flexibility and multi-axis compatibility

The LXR's selection flexibility and mounting compatibility with the XR ballscrew driven tables enables

single-axis or complex multi-axis units to be configured in a straightforward manner.

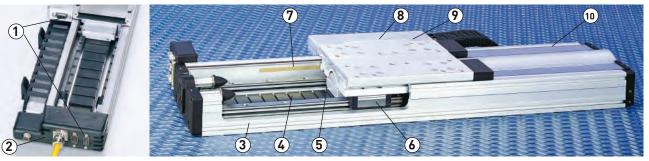


Parker's matching servo drives and motion controllers can be included to complete the motion system.

#### **Customs and systems**

For specialized applications requiring customization, Parker design engineers can easily modify these tables to suit, or engineer complete interactive linear motion systems to desired specifications. Parker's LXR series tables have taken the mystery, difficulty and cost out of integrating linear motor tables into high throughput precision positioning applications.





#### 1) Pass-through" cabling

Pre-wired, plug-in connection of the moving payload for easy hookup of user instruments or end effectors.

#### (2) Connection panel

Electrically shielded panel provides "plug-in" connectivity and quick disconnect for all signal and power requirements.

#### (3) High strength extruded aluminum body

Extruded aluminum housing is precision machined to provide outstanding straightness and flatness.

#### (4) Magnet rail

Single rail of high energy rare earth magnets offers lower weight and lower cost than double magnet type.

#### **(5)** Slotless linear motor

Provides a highly responsive, zero backlash drive system. Slotless motors offer excellent heat management, durability, and have built-in thermal sensor and hall sensors.

#### (6) Linear guidance system

The highly engineered carriage and bearing system effectively counters the combined problematic effects of heat, high-speed and high acceleration.

#### 7 Integral linear encoder

Protected non-contact feedback with selectable resolutions to 0.1  $\mu$ m. Z channel is factory aligned to home sensor for precise homing.

#### (8) Home/limit sensors

Proximity sensors establish end of travel and "home" location and are easily adjustable over entire length to restrict the travel envelope.

#### (9) "Quick change" cabling

Innovative cable transport module offers extended life (30 million cycles) and a simple cable changing system for preventative maintenance.

#### **10** Protective seals

Hard shell aluminum cover combined with stainless steel strip seals provide IP30 protection to interior components as well as enhances overall appearance.

## LXR Series Technical Data

Frame size	Unit	404LXR	406	LXR	412LXR			
Motor		8-pole	8-pole	12-pole	12-pole			
Continuous Force	[N]	50	75	110	355			
Peak force	[N]	180	225	330	1000			
Continuous current at 230 VAC	[A]	1.620	2.470	2.400	4.450			
Peak current*	[A]	5.8	7.3	7.1	13.4			
Force constant	[N/A]	30.619	30.619	46.54	79.608			
Nominal load	[kg]	45	180	180	950			
Maximum velocity Feedback resolution 0.1 µm Feedback resolution 0.5 µm Feedback resolution 1.0 µm Feedback resolution 5.0 µm Sine - Cosine	[m/s]	0.3 1.5 3.0 3.0 3.0	0.3 1.5 3.0 3.0 3.0	0.3 1.5 3.0 3.0 3.0	0.3 1.5 3.0 3.0 3.0			
Maximum acceleration	[m/s <sup>2</sup> ]		4	9				
Positional Repeatability Feedback resolution 0.1 µm Feedback resolution 0.5 µm Feedback resolution 1.0 µm Feedback resolution 5.0 µm Sine - Cosine	[µm]	± 1.0 ± 1.0 ± 2.0 ± 10.0 (Interpolation dependent)						
Carriage mass	[kg]	1.4	3.2	4.1	12.3			

 based on a winding temperature of up to 60 °C for a period of: 404LXR - 5 s, 406LXR - 3 s, 412LXR - 63 s

#### **Travel dependent specifications**

	A	ccura	acy* [µm]	Unit weight [kg]						
Travel [mm]	Positio Resolut 0.1, 0.5, 1.0		Straightness & flatness	404LXR 8-pole	406LXR 8-pole	406LXR 12-pole	412LXR 12-pole			
50	6	16	6	4.4	8.7	11.1	-			
100	7	17	6	4.8	-	-	-			
150	<b>50</b> 8 18		9	5.2	10.3	13.4	41			
200	200 10 20		10	5.6	-	—	-			
250	12	22	12	6.0	12.6	14.1	45			
300	14	24	13	6.4	-	-	-			
350	16	26	15	6.8	13.3	15.7	49			
400	18	28	16	7.2	-	-	-			
450	20	30	18	-	14.8	17.2	-			
500	21	31	19	8.0	-	—	-			
550	23	33	21	—	16.4	18.7	-			
600	25	35	22	8.9	-	—	-			
650	26	36	24	—	17.9	20.2	61			
700	28	38	25	9.7	-	—	—			
750	29	39	27	—	19.4	21.8	-			
800	31	41	29	10.6	-	-	67			
850	32	43	30	—	20.9	23.3	-			
900	33	44		32 11.5						
950	34	44	33	-	22.5	-	-			
1000	35	45	35	12.4	-	27.1	75			
1050	37	47	36	-	-	-	-			
1200	39	49	41	-	26.3	-	83			
1350	42	52	45	-	-	30.9	-			
1450	43	53	48	-	30.1	-	-			
1500	44	54	50	-	-	-	95			
1600	45	55	53	—	-	34.7	-			
1700	46	56	56	-	33.9	-	-			
1750	46	56	57	-	-	-	105			
1850	47	57	60	-	-	38.6	-			
1950	48	58 58	63	-	37.7	-	_ 113			
2000 2350	48 49	58 59	65 76	-	-	-	113			
2000			80	-	-	-	100			
2500 2850	50 50	60 60	80	-	-	-	133			
				-	-	-	_ 153			
3000	50	60	84	-	-	-	153			

\* The stated precision is specified at an ambient temperature of 20 °C.

### Encoder specifications

Power input         5 VDC ±5 % 150 mA         Output (incremental)         Square wave differential line driver (EIA RS422) 2 channels A and B in quadrature (90°) phase shift.         Reference (Z channel)         Synchronized pulse, duration equal to one resolution bit. Repeatability (unidirectional) with reference to the movement in positive direction.         Limit and home specifications         Power input         +5 to +24 VDC 60 mA (20 mA per sensor)         Output form is selectable with product: NC, sinking         NO, sinking         NO, sourcing         All types sink or source max of 50 mA         Repeatability         Limits: ±10 µm (unidirectional)         Home: see Z channel specifications	Encoder specifications							
Output (incremental)         Square wave differential line driver (EIA RS422) 2 channels A and B in quadrature (90°) phase shift.         Reference (Z channel)         Synchronized pulse, duration equal to one resolution bit. Repeatability (unidirectional) with reference to the movement in positive direction.         Limit and home specifications         Power input         +5 to +24 VDC 60 mA (20 mA per sensor)         Output form is selectable with product: NC, sinking         NO, sourcing         All types sink or source max of 50 mA         Repeatability         Limits: ±10 µm (unidirectional)	Power input							
Square wave differential line driver (EIA RS422) 2 channels A and B in quadra- ture (90°) phase shift. <b>Reference (Z channel)</b> Synchronized pulse, duration equal to one resolution bit. Repeatability (unidi- rectional) with reference to the move- ment in positive direction. <b>Limit and home specifications</b> <b>Power input</b> +5 to +24 VDC 60 mA (20 mA per sensor) <b>Output</b> Output form is selectable with product: NC, sinking NO, sinking NC, sourcing NO, sourcing All types sink or source max of 50 mA <b>Repeatability</b> Limits: ±10 µm (unidirectional)	5 VDC ±5 % 150 mA							
R\$422) 2 channels A and B in quadra- ture (90°) phase shift. <b>Reference (Z channel)</b> Synchronized pulse, duration equal to one resolution bit. Repeatability (unidi- rectional) with reference to the move- ment in positive direction. <b>Limit and home specifications</b> <b>Power input</b> +5 to +24 VDC 60 mA (20 mA per sensor) <b>Output</b> Output form is selectable with product: NC, sinking NO, sinking NO, sourcing All types sink or source max of 50 mA <b>Repeatability</b> Limits: ±10 μm (unidirectional)	Output (incremental)							
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+5 to +24 VDC 60 mA (20 mA per sensor) Output Output form is selectable with product: NC, sinking NO, sinking NC, sourcing NO, sourcing All types sink or source max of 50 mA Repeatability Limits: ±10 μm (unidirectional)								
(20 mA per sensor) Output Output form is selectable with product: NC, sinking NO, sinking NC, sourcing NO, sourcing All types sink or source max of 50 mA Repeatability Limits: ±10 μm (unidirectional)	-							
Output form is selectable with product: NC, sinking NO, sinking NC, sourcing NO, sourcing All types sink or source max of 50 mA <b>Repeatability</b> Limits: ±10 μm (unidirectional)	Power input							
NC, sinking NO, sinking NC, sourcing NO, sourcing All types sink or source max of 50 mA <b>Repeatability</b> Limits: ±10 μm (unidirectional)	Power input +5 to +24 VDC 60 mA							
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	Power input +5 to +24 VDC 60 mA (20 mA per sensor) Output Output form is selectable with product: NC, sinking NO, sinking NC, sourcing NO, sourcing							
	Power input +5 to +24 VDC 60 mA (20 mA per sensor) Output Output form is selectable with product: NC, sinking NO, sinking NC, sourcing NO, sourcing All types sink or source max of 50 mA							

#### Hall effect specifications

Power input
+5 to +24 VDC, 30 mA
Output
Open collector, current sinking, 20 mA
max.

## LXR Series Options & Accessories

#### **LXR Cable Management Options**

#### Cable transport module

The LXR's cable transport module offers the convenience of "plug and play" connectivity for fast, easy table installation and "quick change" replacement. This system of cable management includes the highest quality high-flex ribbon cable with a life rating of 30 million cycles, a cable track with support brackets, a "quick change" carriage cartridge, and a plug-in connector panel housing. It also provides a "pass-through" connection and cabling for customer application. This transport module option is ideal for high throughput continuous duty requirements where downtime is not acceptable.



Quick change cartridge



Cable extensions - flying leads terminations



404LXR cable transport module

#### **Connection ends**





40000011/412000

#### Cable transport module order code

Order	Extension cable								
code	Length [m]	Termination							
CM02	No	extension cables							
CM07	3.0	Flying leads							
CM08	7.5	Flying leads							
CM13	3.0	Aries/ViX conn.							
CM14	7.5	Aries/ViX conn.							
CM17	3.0	Compax3 conn.							
CM18	7.5	Compax3 conn.							
CM22	3.0	only 412LXR-Compax3							
CM23	7.5	only 412LXR-Compax3							

#### OEM cable system order code

Order	Extension cable								
code	Length [m]	Termination							
CM03	3.0	Flying leads							
CM04	7.5	Flying leads							
CM11	3.0	Aries/ViX conn.							
CM12	7.5	Aries/ViX conn.							
CM15	3.0	Compax3 conn.							
CM16	7.5	Compax3 conn.							
CM20	3.0	only 412LXR-Compax3							
CM21	7.5	only 412LXR-Compax3							

#### **OEM** cable system

The LXR's unharnessed cable system is offered for OEMs and others who have independent methods of routing and managing cables. These systems offer the "quick change" cartridge, "pass-through" connection and round high-flex cables in lengths of 3.0 or 7.5 m. They are available with flying lead end terminations as well as connectors for several drive controllers.



2-axis system with expandable cable management

406LXR with OEM cables and flying leads

#### User "pass-through" cabling

Cable concerns regarding routing and durability for payload or instrument signals are addressed by the passthrough connectivity feature included with both of the LXR cable management systems. Nine pin D-connectors provided on the carriage (with the transport module units) and the cable connecting block combine with highflex, long life cables for easy setup and dependable performance.

 Pre-wired plug-in connection to the moving payload

- Nine user conductors for end-effectors or instruments
- High-flex long life cables:
  - Ribbon cable transport module system
    - Round cable OEM system



Note:

Extension cables are available and can be ordered separately – 006-1743-01 (3 m); 006-1743-02 (7.5 m).

#### Compax3 – Servo Drive: High Performance Servo Drives

www.parker-eme.com/c3



#### Compax3S

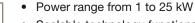
- Rated power 1 up to 25 kW
- Auxiliary supply voltage 24 VDC +/-10 %
- Installation in 300 mm control cabinets
- All connections on front panel

#### **Compax3 technologies**

Compax3 T10:



Analog or step/direction input



- Scalable technology functions
- 1 encoder output / 1 encoder input
- 8 digital inputs, 4 digital outputs
- 2 analogue inputs (14 Bit)
- 2 analogue outputs (8 Bit)

#### User-friendly software

- One tool for all: "Parker Integrated Engineering Tool, including ServoManager, motor and valve libraries
  - Commissioning, configuration and setup, motor control,
  - Programming, optimization and maintenance
  - Suitable for multi-axis applications
  - Integrated 4-channel oscilloscope for signal analysis

ETHERNET

EtherCAT Profinet CANopen Profibus DeviceNet RS232/RS485



Positioning

Compax3 T30:



IEC61131-3 Positioning with function modules according to PLCopen

Compax3 T40:



IEC61131-3 Positioning with Cam function modules

#### **Dowel pinning options**

#### Order codes: P1, P2, P3

AStandard dowel pin locating holes P1 are offered on all LXR units to facilitate repeatable mounting of tooling or payload.

In addition, pinning options P2 and P3 are offered for precise orthogonal mounting of the second axis in a multi-axis system. In this case, the bottom side of the table base is match drilled and reamed to the first axis to provide exact orthogonal location. This convenient option eliminates concerns regarding contamination or damage often associated with machining for locating pins in an assembled unit. In some instances a 404LXR pinning adapter may be required part number 100-9584-01.



Two locating dowel holes, right (P1 option) shown in 404LXR carriage

#### Cleanroom Preparation Option Order code: R2

Cleanroom compatible linear tables are often required for laboratory and production applications in industries such as semiconductor, life science, electronics, and pharmaceuticals. LXR tables with cleanroom preparation were tested in Parker's vertical laminar flow work station, which utilizes ULPA filters to produce a clean environment prior to testing. Tables were tested in a variety of orientations with sampling both below the table and at the carriage mounting surface. Laminar flow rate is 0.16 kPa.



404LXR with cleanroom cover

#### Standard cleanroom preparation

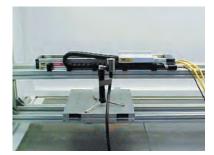
- Stringent cleaning and handling measures
- Cleanroom rated lubrication
- Strip seal replaced with hard shell cover

#### LXR cleanroom compatibility

Special cleanroom testing can be provided upon request. For more information on cleanroom testing, contact a Parker Applications Engineer.



Testing at 114.3 mm below table



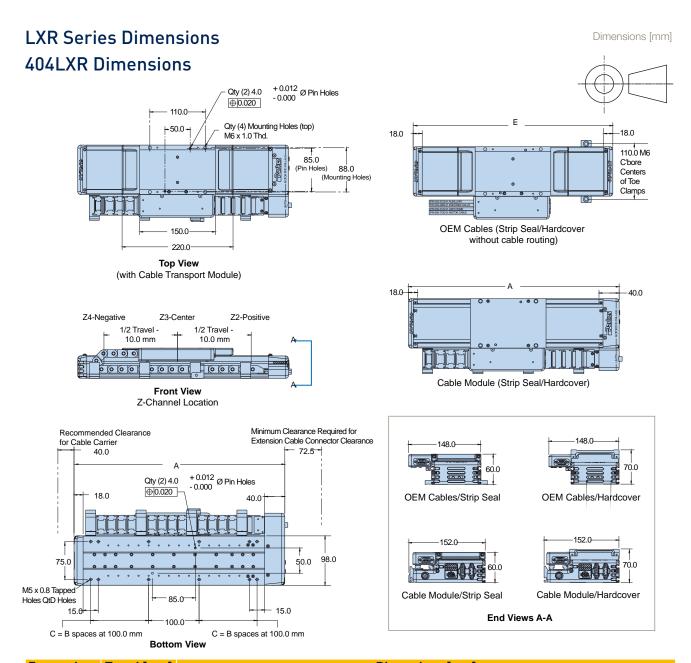
Testing at carriage mounting surface

#### Toe clamp accessory

Toe clamps for mounting LXR tables are ordered separately. Note that LXR Series toe clamps are not interchangeable with toe clamps for XR series tables.

Part number: 100-8376-01 (404LXR) 002-3624-01 (406LXR) 002-2160-01 (412LXR)

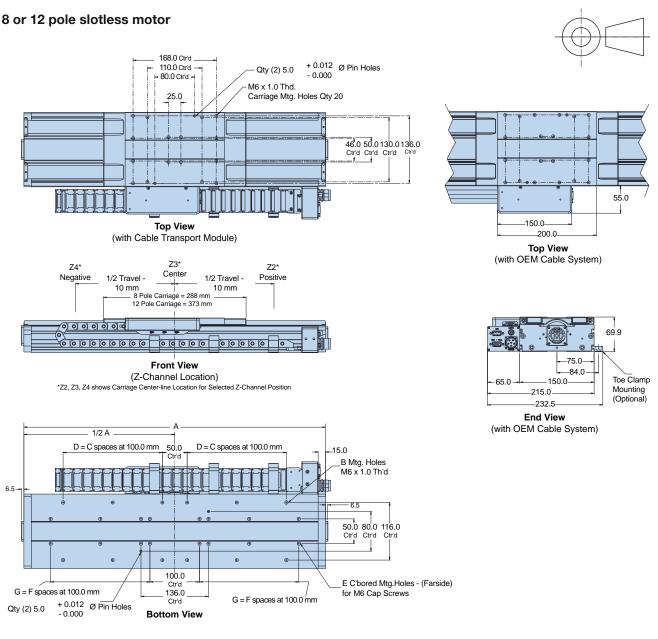




Frame size	Travel [mm]		Dimer	isions [mn	ז]	
		Overall length	Number of spaces left or right		Number of mounting holes	
		Α	В	С	D	E
404T00LXR	50	368.0	1	100.0	12	346.0
404T01LXR	100	418.0	1	100.0	12	396.0
404T02LXR	150	468.0	1	100.0	12	446.0
404T03LXR	200	518.0	1	100.0	12	496.0
404T04LXR	250	568.0	1	100.0	12	546.0
404T05LXR	300	618.0	2	200.0	16	596.0
404T06LXR	350	668.0	2	200.0	16	646.0
404T07LXR	400	718.0	2	200.0	16	696.0
404T08LXR	450	768.0	2	200.0	16	746.0
404T09LXR	500	818.0	3	300.0	20	796.0
404T10LXR	550	868.0	3	300.0	20	846.0
404T11LXR	600	918.0	3	300.0	20	896.0
404T12LXR	650	968.0	3	300.0	20	946.0
404T13LXR	700	1018.0	4	400.0	24	996.0
404T14LXR	750	1068.0	4	400.0	24	1046.0
404T15LXR	800	1118.0	4	400.0	24	1096.0
404T16LXR	850	1168.0	4	400.0	24	1146.0
404T17LXR	900	1218.0	5	500.0	28	1196.0
404T18LXR	950	1268.0	5	500.0	28	1246.0
404T19LXR	1000	1318.0	5	500.0	28	1296.0

### **406LXR Dimensions**

Dimensions [mm]



Frame size	Trave	l [mm]			Dime	ensions [m	m]		
			Overall length	Number of mounting holes	Number of spaces left or right		Number of mounting holes	Number of spaces left or right	
	8 Pole 12 Pole		Α	В	С	D	E	F	G
406T01LXR	50	—	408	8	1	100.0	12	1	100.0
406T02LXR	150	50	508	8	1	100.0	12	1	100.0
406T03LXR	250	150	608	12	2	200.0	16	2	200.0
406T04LXR	350	250	708	12	2	200.0	16	2	200.0
406T05LXR	450	350	808	16	3	300.0	20	3	300.0
406T06LXR	550	450	908	16	3	300.0	20	3	300.0
406T07LXR	650	550	1008	20	4	400.0	24	4	400.0
406T08LXR	750	650	1108	20	4	400.0	24	4	400.0
406T09LXR	850	750	1208	24	5	500.0	28	5	500.0
406T10LXR	950	850	1308	24	5	500.0	28	5	500.0
406T11LXR	1200	1100	1558	32	7	700.0	32	6	600.0
406T12LXR	1450	1350	1808	36	8	800.0	40	8	800.0
406T13LXR	1700	1600	2058	40	9	900.0	44	9	900.0
406T14LXR	1950	1850	2308	44	10	1000.0	48	10	1000.0

#### **412LXR Dimensions** Dimensions [mm] 12 pole slotless motor Qty 8 Mounting Holes (Top) M6 x 1.0 Thd. 300.0-Note:Additional holes are provided for direct mounting, toe clamp mounting and pin holes for the 404LXR and 406LXR (CAD files) -250.0 Ctr'd ÷ + ٦ Т 260.0 Ctr'd 100.0 Ctr'd. 266.0 Ctr'd. Г 1 + -120.0 Ctr'd Qty (2) 8.0 <sup>+0,016</sup> Ø Pin Holes Ø .022 Top View Z3\* Z4\* Z2\* Center Positive Negative 1/2 Travel - 10 mm 1/2 Travel - 10 mm 64.8-285.0 404.0 Toe Clamp Mounting (Optional) -----106.0 00000 <u>ାରାରାରାରାକ</u>ରାରାରାରାରାକ୍ରି ରାରାରାରାର 0000 157.0-Front View 168.0 \*Z2, Z3, Z4 shows Carriage Center-line Location for Selected Z-Channel Position End View А Qty (2) 8.0 +0.016 Ø Pin Holes A/2 + . 0 0 120.0 Ctr'd 240.0 Ctr'd Ļ 0 0 + + . 4 4 4 -D = C spaces at 100.0 mm (See Notes) \_Mounting holes (Number B) M8 x 1,25 mounting holes 100.0 C spaces at 100.0 mm (See Notes) Ctr'd (See Note) tapped thru and counterbored far side for M6 x 1.0 cap screw 260.0 Ctr'd Notes:

Base mounting holes for 412T10 and 412T12 are patterned from one hole on centerline

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**Bottom View** 

Baugröße	Travel [mm]		Dimensions [mm]								
		Overall length	Number of mounting holes	Number of spaces left or right							
		Α	В	С	D						
412T01LXR	150	764	12	2	200						
412T02LXR	250	864	16	3	300						
412T03LXR	350	964	16	3	300						
412T04LXR	650	1264	24	5	500						
412T05LXR	800	1414	24	5	500						
412T06LXR	1000	1614	28	6	600						
412T07LXR	1200	1814	32	7	700						
412T08LXR	1500	2114	40	9	900						
412T09LXR	1750	2364	44	10	1000						
412T10LXR	2000	2614	50	12	1200						
412T11LXR	2500	3114	60	14	1400						
412T12LXR	3000	3614	70	17	1700						

## LXR Series Ordering Information

## 404LXR Ordering Information

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

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Order example	404	<b>T04</b>	LXR	М	Р	D13	H3	L2	<b>CM15</b>	<b>Z</b> 2	E7	R1	A1	P1

1	Frame	size	9	Cable (	management
L •	404	98 mm profile width	Ū	CM01	None
	-0-1			CM02	Cable transport module (only)
2	Travel	- mm		CM03	3.0 m OEM cable set-FL
		8 pole motor		CM04	7.5 m OEM cable set-FL
	Т00	50		CM07	Cable transport module with 3.0 m-FL*
	T01	100		CM08	Cable transport module with 7.5 m-FL*
	T02	150		CM11	3.0 m OEM cable set-Aries/ViX
	T03	200		CM12	
	T04	250			7.5 m OEM cable set-Aries/ViX
	T05	300		CM13	Cable transport module with 3.0 m-Aries/ViX*
	T06	350		CM14	Cable transport module with 7.5 m-Aries/ViX*
	T07	400		CM15	3.0 m OEM cable set – Compax3
	T08	450		CM16	7.5 m OEM cable set – Compax3
	T09	500		CM17	Cable transport module with 3.0 m-Compax3
	T10	550		CM18	Cable transport module with 7.5 m-Compax3
	T11	600			sion cable for pass through connection is available and can
	T12	650		be or	dered separately: #006-1743-01 (3 m); #006-1743-02 (7.5 m)
	T13	700	10	Z chan	nel location*
	T14	750		Z1	None
	T15	800		Z2	Positive end position
	T16	850		<b>Z</b> 3	Center position
	T17	900		<b>Z</b> 4	Negative end position
	T18	950		* Refer	to dimensions on previous pages
	T19	1000	44	The second	
		1000	11		er option
3	Model			E1	None
•	wouer			<b>F</b> 0	1.0 una una alutian (DC 400)
•	LXR	Linear motor		E2	1.0 μm resolution (RS422)
	LXR	Linear motor		E3	0.5 µm resolution (RS422)
4	LXR Mount	Linear motor ing		E3 E4	0.5 μm resolution (RS422) 0.1 μm resolution (RS422)
	LXR	Linear motor		E3 E4 E5	0.5 μm resolution (RS422) 0.1 μm resolution (RS422) 5.0 μm resolution (RS422)
	LXR Mount	Linear motor ing		E3 E4	0.5 μm resolution (RS422) 0.1 μm resolution (RS422)
4	LXR <mark>Mount</mark> M	Linear motor ing	12	E3 E4 E5 E7	0.5 $\mu$ m resolution (RS422) 0.1 $\mu$ m resolution (RS422) 5.0 $\mu$ m resolution (RS422) Sine Cosine 1 V <sub>ss</sub> for C3F12
4	LXR Mount M Grade P	Linear motor ing Metric Precision	12	E3 E4 E5 E7	0.5 μm resolution (RS422) 0.1 μm resolution (RS422) 5.0 μm resolution (RS422) Sine Cosine 1 V <sub>ss</sub> for C3F12
4	LXR Mount M Grade P Drive t	Linear motor ing Metric Precision ype	12	E3 E4 E5 E7 Enviror	0.5 $\mu$ m resolution (RS422) 0.1 $\mu$ m resolution (RS422) 5.0 $\mu$ m resolution (RS422) Sine Cosine 1 V <sub>ss</sub> for C3F12
4	LXR Mount M Grade P Drive t D3	Linear motor ing Metric Precision ype None - free travel/idler	12	E3 E4 E5 E7 Enviror R1	0.5 $\mu$ m resolution (RS422) 0.1 $\mu$ m resolution (RS422) 5.0 $\mu$ m resolution (RS422) Sine Cosine 1 V <sub>ss</sub> for C3F12
4	LXR Mount M Grade P Drive t	Linear motor ing Metric Precision ype	12	E3 E4 E5 E7 Enviror R1	0.5 μm resolution (RS422) 0.1 μm resolution (RS422) 5.0 μm resolution (RS422) Sine Cosine 1 V <sub>ss</sub> for C3F12 <b>Imental option</b> Strip seal Protective cover
4	LXR Mount M Grade P Drive t D3 D13	Linear motor ing Metric Precision ype None - free travel/idler		E3 E4 E5 E7 Enviror R1 R2 R3	0.5 $\mu$ m resolution (RS422) 0.1 $\mu$ m resolution (RS422) 5.0 $\mu$ m resolution (RS422) Sine Cosine 1 V <sub>ss</sub> for C3F12 <b>Imental option</b> Strip seal Protective cover cleanroom class 10 (ISO 4) Hard cover without cleanroom prep
4 5 6	LXR Mount M Grade P Drive t D3 D13	Linear motor ing Metric Precision ype None - free travel/idler 8 pole motor		E3 E4 E5 E7 Enviror R1 R2 R3 Digital	0.5 μm resolution (RS422) 0.1 μm resolution (RS422) 5.0 μm resolution (RS422) Sine Cosine 1 V <sub>ss</sub> for C3F12 <b>Imental option</b> Strip seal Protective cover cleanroom class 10 (ISO 4) Hard cover without cleanroom prep <b>drive</b>
4 5 6	LXR Mounti M Grade P Drive t D3 D13 Home	Linear motor ing Metric Precision ype None - free travel/idler 8 pole motor sensor		E3 E4 E5 E7 Enviror R1 R2 R3	0.5 $\mu$ m resolution (RS422) 0.1 $\mu$ m resolution (RS422) 5.0 $\mu$ m resolution (RS422) Sine Cosine 1 V <sub>ss</sub> for C3F12 <b>Imental option</b> Strip seal Protective cover cleanroom class 10 (ISO 4) Hard cover without cleanroom prep
4 5 6	LXR Mount M Grade P Drive t D3 D13 Home H1	Linear motor ing Metric Precision ype None - free travel/idler 8 pole motor sensor None		E3 E4 E5 E7 R1 R2 R3 Digital A1	0.5 $\mu$ m resolution (RS422) 0.1 $\mu$ m resolution (RS422) 5.0 $\mu$ m resolution (RS422) Sine Cosine 1 V <sub>ss</sub> for C3F12 <b>mental option</b> Strip seal Protective cover cleanroom class 10 (ISO 4) Hard cover without cleanroom prep <b>drive</b> None
4	LXR Mount M Grade P Drive t D3 D13 Home H1 H2 H3	Linear motor ing Metric Precision ype None - free travel/idler 8 pole motor sensor None NC, sinking NO, sinking NO, sinking	13	E3 E4 E5 E7 Enviror R1 R2 R3 Digital A1	0.5 μm resolution (RS422) 0.1 μm resolution (RS422) 5.0 μm resolution (RS422) Sine Cosine 1 V <sub>ss</sub> for C3F12 <b>Imental option</b> Strip seal Protective cover cleanroom class 10 (ISO 4) Hard cover without cleanroom prep <b>drive</b> None <b>g option</b>
4	LXR Mount M Grade P Drive t D3 D13 Home H1 H2	Linear motor ing Metric Precision ype None - free travel/idler 8 pole motor sensor None NOne NC, sinking	13	E3 E4 E5 E7 R1 R2 R3 Digital A1	0.5 µm resolution (RS422) 0.1 µm resolution (RS422) 5.0 µm resolution (RS422) Sine Cosine 1 V <sub>ss</sub> for C3F12 <b>mental option</b> Strip seal Protective cover cleanroom class 10 (ISO 4) Hard cover without cleanroom prep <b>drive</b> None <b>g option</b> None X axis transfer pinning to Y or Z axis
4 5 6 7	LXR Mount M Grade P Drive t D3 D13 D13 Home H1 H2 H3 H4 H3 H4 H5	Linear motor ing Metric Precision ype None - free travel/idler 8 pole motor sensor None NC, sinking NO, sinking NO, sourcing NO, sourcing NO, sourcing	13	E3 E4 E5 E7 Enviror R1 R2 R3 Digital A1 Pinning P1 P2*	0.5 μm resolution (RS422) 0.1 μm resolution (RS422) 5.0 μm resolution (RS422) Sine Cosine 1 V <sub>ss</sub> for C3F12 <b>mental option</b> Strip seal Protective cover cleanroom class 10 (ISO 4) Hard cover without cleanroom prep <b>drive</b> None <b>g option</b> None X axis transfer pinning to Y or Z axis - 30 arcsec
4	LXR Mounti M Grade P Drive t D3 D13 Home H1 H2 H3 H4 H3 H4 H5 Limit s	Linear motor ing Metric Precision ype None - free travel/idler 8 pole motor sensor None NC, sinking NC, sinking NC, sourcing NO, sourcing NO, sourcing	13	E3 E4 E5 E7 Enviror R1 R2 R3 Digital A1 Pinning P1 P2* P3*	0.5 μm resolution (RS422) 0.1 μm resolution (RS422) 5.0 μm resolution (RS422) Sine Cosine 1 V <sub>ss</sub> for C3F12 <b>mental option</b> Strip seal Protective cover cleanroom class 10 (ISO 4) Hard cover without cleanroom prep <b>drive</b> None <b>g option</b> None X axis transfer pinning to Y or Z axis - 30 arcsec Y axis transfer pinning to X axis - 30 arcsec
4 5 6 7	LXR Mounti M Grade P Drive t D3 D13 Home H1 H2 H3 H4 H5 Limit s L1	Linear motor ing Metric Precision ype None - free travel/idler 8 pole motor sensor None NC, sinking NC, sinking NC, sourcing NO, sourcing NO, sourcing NO, sourcing	13	E3 E4 E5 E7 Enviror R1 R2 R3 Digital A1 Pinning P1 P2* P3* * Transt	0.5 µm resolution (RS422) 0.1 µm resolution (RS422) 5.0 µm resolution (RS422) Sine Cosine 1 V <sub>ss</sub> for C3F12 <b>mental option</b> Strip seal Protective cover cleanroom class 10 (ISO 4) Hard cover without cleanroom prep <b>drive</b> None <b>g option</b> None X axis transfer pinning to Y or Z axis - 30 arcsec Y axis transfer pinning to X axis - 30 arcsec fer pinning to XR from LXR requires additional bracket,
4 5 6 7	LXR Mounti M Grade P Drive t D3 D13 H3 H4 H3 H4 H5 Limit s L1 L2	Linear motor ing Metric Precision ype None - free travel/idler 8 pole motor sensor None NC, sinking NC, sourcing NC, sourcing NO, sourcing Sensor None NC, sinking NC, sourcing NO, sourcing Sensor None NC, sinking	13	E3 E4 E5 E7 Enviror R1 R2 R3 Digital A1 Pinning P1 P2* P3* * Transt	0.5 μm resolution (RS422) 0.1 μm resolution (RS422) 5.0 μm resolution (RS422) Sine Cosine 1 V <sub>ss</sub> for C3F12 <b>mental option</b> Strip seal Protective cover cleanroom class 10 (ISO 4) Hard cover without cleanroom prep <b>drive</b> None <b>g option</b> None X axis transfer pinning to Y or Z axis - 30 arcsec Y axis transfer pinning to X axis - 30 arcsec
4 5 6 7	LXR Mounti M Grade P Drive t D3 D13 H3 H4 H2 H3 H4 H5 L1 L2 L3	Linear motor ing Metric Precision ype None - free travel/idler 8 pole motor sensor None NC, sinking NC, sourcing NO, sourcing NO, sourcing Sensor None NC, sinking NC, sourcing NO, sourcing Sensor None NC, sinking NO, sourcing Sensor	13	E3 E4 E5 E7 Enviror R1 R2 R3 Digital A1 Pinning P1 P2* P3* * Transt	0.5 µm resolution (RS422) 0.1 µm resolution (RS422) 5.0 µm resolution (RS422) Sine Cosine 1 V <sub>ss</sub> for C3F12 <b>Imental option</b> Strip seal Protective cover cleanroom class 10 (ISO 4) Hard cover without cleanroom prep <b>drive</b> None <b>g option</b> None X axis transfer pinning to Y or Z axis - 30 arcsec Y axis transfer pinning to X axis - 30 arcsec fer pinning to XR from LXR requires additional bracket,
4 5 6 7	LXR Mounti M Grade P Drive t D3 D13 H3 H4 H3 H4 H5 Limit s L1 L2	Linear motor ing Metric Precision ype None - free travel/idler 8 pole motor sensor None NC, sinking NC, sourcing NC, sourcing NO, sourcing Sensor None NC, sinking NC, sourcing NO, sourcing Sensor None NC, sinking	13	E3 E4 E5 E7 Enviror R1 R2 R3 Digital A1 Pinning P1 P2* P3* * Transt	0.5 µm resolution (RS422) 0.1 µm resolution (RS422) 5.0 µm resolution (RS422) Sine Cosine 1 V <sub>ss</sub> for C3F12 <b>Imental option</b> Strip seal Protective cover cleanroom class 10 (ISO 4) Hard cover without cleanroom prep <b>drive</b> None <b>g option</b> None X axis transfer pinning to Y or Z axis - 30 arcsec Y axis transfer pinning to X axis - 30 arcsec fer pinning to XR from LXR requires additional bracket,

# **406LXR Ordering Information** Fill in an order code from each of the numbered fields to create a complete model order code.

									9					
Order example	406	<b>T08</b>	LXR	М	Р	D13	H2	L2	<b>CM15</b>	<b>Z</b> 2	E7	R1	A1	P1

1	Frame	size		9 Cable	9 Cable management					
	406	06 150 mm profile width			None					
2	Travel	vel -mm			Cable transport module (only)					
-	marci	8 pole motor 12 pole motor			3.0 m OEM cable set-FL					
	T01	50	-	CM04	7.5 m OEM cable set-FL					
	T02	150	50	CM07	Cable transport module with 3.0 m-FL*					
	T03	250	150	CM08	Cable transport module with 7.5 m-FL*					
	T04	350	250	CM11	3.0 m OEM cable set-Aries/ViX					
	T05	450	350	CM12	7.5 m OEM cable set-Aries/ViX					
	T06	550	450	CM13	Cable transport module with 3.0 m-Aries/ViX					
	T07	650	550	CM14	Cable transport module with 7.5 m-Aries/ViX 3.0 m OEM cable set – Compax3					
	T08	750	650	CM15						
	T09	850	750	CM16	7.5 m OEM cable set – Compax3					
	T10	950	850	CM17	Cable transport module with 3.0 m-Compax3					
	T11	1200	1100	CM18	Cable transport module with 7.5 m-Compax3					
	T12	1450	1350		nsion cable for pass through connection is available and can					
	T13	<b>3</b> 1700 1650			be ordered separately: #006-1743-01 (3 m); #006-1743-02 (7					
	T14	1950	1850		nnel location*					
3	Model			Z1	None Desitive and a sitism					
3		Linear motor		Z2	Positive end position					
				Z3	Center position					
4	Mount			<b>Z4</b>	Negative end position					
	М	Metric		Refe	r to dimensions on previous pages					
5	Grade				er option					
	Р	Precision		E1	None					
6	Drive t	уре		E2 E3	1.0 µm resolution (RS422)					
			Free travel/idler (no motor) Corresponds to the 8 pole motor		0.5 μm resolution (RS422)					
	D3	-			0.1 µm resolution (RS422)					
	D5	Corresponds to th Linear motor	e 12 pole motor	E5 E7	5.0 µm resolution (RS422)					
	D13	8 pole motor carria			Sine Cosine 1 V <sub>ss</sub> for C3F12					
	D15	12 pole motor car	-	12 Enviro	nmental option					
7	Home	sensor	-	R1	Strip seal					
1	H1	None		R2	Protective cover					
	H2	NC, sinking			cleanroom class 10 (ISO 4)					
	H3	NO, sinking		13 Digital	l drive					
	H4			A1	None					
	H5	NO, sourcing		14 Pinnin	g option					
		No, oouroing		P1	None					
8	Limit s			P2*	X axis transfer pinning to Y or Z axis					
	L1	None			- 30 arcsec					
	L2	NC, sinking		P3*	Y axis transfer pinning to X axis - 30 arcsec					
	L3	NO, sinking			sfer pinning to XR from LXR requires additional bracket, se contact Parker EME.					
	L4	NC, sourcing		prode						
	L5	NO, sourcing								

## 412LXR Bestellinformation

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

									9					
Order example	412	<b>T09</b>	LXR	М	Р	D15	H3	L2	<b>CM20</b>	<b>Z2</b>	E7	<b>R1</b>	A1	P1

1 Frame	e size	9 Cable	management
412	285 mm profile width	CM01	None
2 Travel	mm	CM02	Cable transport module (only)
	12 pole motor	CM03	3.0 m OEM cable set-FL
T01	150	CM04	7.5 m OEM cable set-FL
T02	250	CM07	Cable transport module with 3.0 m-FL*
тоз	350	CM08	Cable transport module with 7.5 m-FL*
T04	650	CM11	3.0 m OEM cable set-Aries/ViX
T05	800	CM12	7.5 m OEM cable set-Aries/ViX
<b>T06</b>	1000	CM13	Cable transport module with 3.0 m-Aries/ViX
Т07	1200	CM14	Cable transport module with 7.5 m-Aries/ViX
<b>T0</b> 8	1500	CM20	3.0 m OEM cable set – Compax3
Т09	1750	CM21	7.5 m OEM cable set – Compax3
T10	2000	CM22	Cable transport module with 3.0 m-Compax3
T11	2500	CM23	Cable transport module with 7.5 m-Compax3
T12	3000		ision cable for pass through connection is available and can dered separately: #006-1743-01 (3 m); #006-1743-02 (7.5 m
3 Mode	l i de la companya d	10 Z Char	nnel location*
LXR	Linear motor	Z1	None
4 Moun	ting	<b>Z</b> 2	Positive end position
M	Metric	Z3	Center position
E Crede		Z4	Negative end position
5 Grade P	Precision	* Refer	to dimensions on previous pages
6 Drive		11 Encod	er option None
D5 D15	None - free travel/idler 12 pole motor	E1 E2	1.0 μm resolution (RS422)
		E3	$0.5 \mu\text{m}$ resolution (RS422)
	sensor	E3 E4	0.1 µm resolution (RS422)
H1	None	E5	5.0 µm resolution (RS422)
H2	NC, sinking	E3 E7	Sine Cosine 1 $V_{ss}$ for C3F12
H3	NO, sinking	E7	
H4	NC, sourcing	12 Enviro	nmental option
H5	NO, sourcing	R1	Strip seal
8 Limit	sensor	R2	Protective cover cleanroom class 10 (ISO 4)
L1	None		
L2	NC, sinking	13 Digital	
L3	NO, sinking	A1	None
L4	NC, sourcing	14 Pinning	g option
L5	NO, sourcing	P1	None
	-	P2*	X axis transfer pinning to Y or Z axis
			- 30 arcsec
		P3*	· -

Transfer pinning to XR from LXR requires additional bracket, please contact Parker EME.






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July 2010



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