

## Linear Modules Introduction

Parker's family of linear modules provides the most comprehensive line of high throughput linear positioning devices in the industry. These electromechanical positioners are designed to shuttle a payload at high speeds to multiple locations along a linear travel path. They serve as the primary building blocks for Parker pre-engineered gantry systems or customer designed automation systems. Parker linear modules are offered in several unique product families which can address a broad range of travel, speed, load, accuracy, and environmental requirements. There are two bearing systems (roller or square rail), two drive types (belt and pulley or rack-and-pinion), and up to six different cross sectional sizes (60, 80, 100, 120, 150 and 180 mm) from which to choose. Systems designed around these elements have effectively, efficiently, and economically satisfied the widest range of application requirements for high speed automation.

### HLE-RB Series / see pages B20 - B37

These are the most popular electromechanical modules in the Parker line. They utilize a unique composite roller wheel bearing design coupled with a timing belt and pulley drive mechanism to provide long travel with high speed and high acceleration.

**Features:**

- Travel Range:** 9 meters
- Load Capacity:** 600 kg
- Maximum Speed:** 5 meters/sec.
- Duty Cycle:** 100%
- Repeatability:**  $\pm 0,1$  mm



### HLE-SR Series / see pages B38 - B47

The "SR" series modules complement the RB series by providing increased moment load capacities without an increase in size. This is accomplished by the high capacity square rail ball bearing system employed in the SR. The SR utilizes the same reliable timing belt and pulley drive system found in the RB.

**Features:**

- Travel Range:** 6 meters
- Load Capacity:** 600 kg
- Maximum Speed:** 3 meters/sec.
- Duty Cycle:** 100%
- Repeatability:**  $\pm 0,1$  mm



### HPLA Series / see pages B48 - B55

The next generation of belt driven modules, the HPLA expands on the roller wheel bearing design with the addition of high-load capacity steel wheels. The steel wheels significantly increase normal and moment load capacities of this belt driven actuator.

**Features:**

- Travel Range:** 9 meters
- Load Capacity:** 1375 kg
- Maximum Speed:** 5 meters/sec.
- Duty Cycle:** 100%
- Repeatability:**  $\pm 0,1$  mm



**HLE-Z Series / see pages B56 - B61**

The “endless” linear unit is designed for positioning payloads over long travel distances with high rigidity and repeatability. This is accomplished by incorporating Parker’s uniquely designed rack-and-pinion based drive system with the “RB” series roller wheel bearing system.

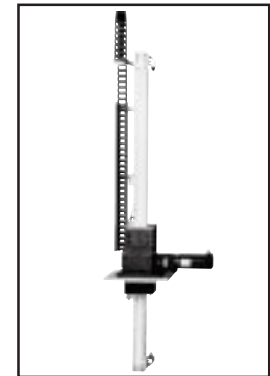


**Features:**

- Travel Range:** 50 meters
- Load Capacity:** 600 kg
- Maximum Speed:** 5 meters/sec.
- Duty Cycle:** 100%
- Repeatability:** ±0,1 mm

**HZR Series / see pages B62 - B67**

The HZR is a vertical unit specifically designed to meet the high speed and force requirements of the automation industry. The fixed housing and movable aluminum extrusion permit the unit to retract out of the work area, thereby keeping the work area free of obstructions.



**Features:**

- Travel Range:** 1.5 meters
- Load Capacity:** 150 kg
- Maximum Speed:** 5 meters/sec.
- Duty Cycle:** 100%
- Repeatability:** ±0,1 mm

**Additional Capabilities / see pages B68 - B79**

<p><b>Drives, Motors &amp; Controls</b></p>	<p><b>Rotary Motion Modules</b></p>	<p><b>Telescopic Vertical Units</b></p>	<p><b>Modular Structures &amp; Supports</b></p>	<p><b>Rod Style Electric Cylinders</b></p>
<p><b>Accessories:</b></p>	<p> Gear Reducers</p>	<p> Limit &amp; Home Sensors</p>	<p> Mounting Brackets &amp; Hardware</p>	<p> Cable Carriers</p>

**Linear Modules Performance Summary (with standard carriage)**

	Units	HLE60RB	HLE60SR	HLE80RB	HLE100RB	HLE100SR	HLEZ100	HPLA120	HPLA120 (steel wheels)	HLE150RB	HLEZ150	HPLA180	HPLA180 (steel wheels)
Max. Normal Load, F <sub>z</sub>	N (lbs)	355 (80)	1800 (405)	850 (190)	1600 (360)	6000 (1350)	1600 (360)	2700 (607)	4100 (922)	3400 (765)	3400 (765)	4700 (1057)	8800 (1978)
Max. Side Load, F <sub>y</sub>	N (lbs)	177 (40)	1800 (405)	425 (96)	785 (177)	6000 (1350)	785 (177)	800 (180)	1300 (292)	1700 (383)	1700 (383)	1500 (337)	2800 (630)
Max. Traction Force, F <sub>x</sub>	N (lbs)	665 (150)	665 (150)	1050 (236)	1470 (330)	1650 (370)	720 (162)	3000 (674)	3000 (674)	2825 (636)	1440 (324)	6100 (1371)	6100 (1371)
Catalog Reference Page		B20	B38	B20	B20	B38	B56	B48	B48	B20	B56	B48	B48