



Belt Driven high speed automation modules

For high speed automation, both gantry and articulated arm robots are widely used throughout industry. Because of the many inherent advantages of the gantry robot, it is a solid choice for: palletizing, storage and retrieval, machine loading, parts transfer, material handling, automated assembly. Parker offers numerous standard gantry configurations as well thousands of configured product options to develop a customer specific system solution to solve these and other automation applications. Utilization of these pre-engineered systems enables the user to redirect scarce engineering resources from motion system design to machine or process functionality.

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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 three bearing systems (polyamide roller, steel roller, or square rail), three drive types (belt-and-pulley or rack-and-pinion, or linear servo motor), 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.

HPLA Series

Page 200-213



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.

- Travel Range: 9.0 meters
- Load Capacity: 1530 kg
- Maximum Speed: 5 meters/sec.
- Duty Cycle: 100%
- Repeatability: ± 0.2 mm

HLE-RB Series

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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.

- Travel Range: 7.9 meters
- Load Capacity: 600 kg
- Maximum Speed: 5 meters/sec.
- Duty Cycle: 100%
- Repeatability: ± 0.2 mm

HLE-SR Series

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The "SR" series, having a square rail ball bearing system, complement the RB series by providing increased moment load capacities without an increase in profile size. The SR utilizes the same reliable timing belt and pulley drive system found in the RB.

- Travel Range: 6.0 meters
- Load Capacity: 600 kg
- Maximum Speed: 3 meters/sec.
- Duty Cycle: 100%
- Repeatability: ± 0.2 mm

HLE-Z Series

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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.

- Travel Range: 50 meters
- Load Capacity: 600 kg
- Maximum Speed: 5 meters/sec.
- Duty Cycle: 100%
- Repeatability: ± 0.05 mm

HZR Series

Page 246-251

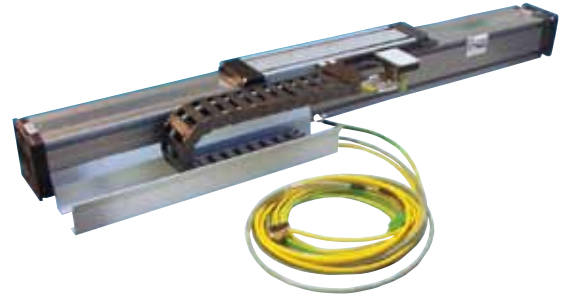


The HZR is a vertical unit specifically designed to meet the high speed and force requirements of the automation industry. The fixed housing and movable aluminum extrusion permit the unit to retract out of the work area, thereby keeping the work area free of obstructions.

- Travel Range: 2.0 meters
- Load Capacity: 150 kg
- Maximum Speed: 5 meters/sec.
- Duty Cycle: 100%
- Repeatability: ± 0.2 mm

BLMA Series

Page 252-253



The BLMA is a plug and play linear motor actuator which houses a powerful linear servo motor (386 pounds of peak thrust) in a high strength rigid aluminum body to enable high end performance with highly repeatable positioning over long unsupported spans.

- Travel Range: 6.0 meters
- Load Capacity: 700 kg
- Maximum Speed: 7 meters/sec.
- Duty Cycle: 100%
- Repeatability: ± 0.01 mm

Gantry Systems

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Parker's gantry systems provide cost-effective, easy to integrate solutions that satisfy the vast majority of automation requirements. In addition to these standard gantry systems, Parker offers products with additional capabilities to fulfill the needs of special applications. Our engineering skill and manufacturing expertise have integrated these products into custom-tailored gantry solutions which have successfully addressed the most unique and exacting requirements of machine builders and integrators around the world.



Support Structures

Page 270

Parker can include the support structure and machine guarding as part of your complete system solution. Parker's ParFrame™ extruded aluminum structures are suited for light to medium duty requirements. High strength steel supports are offered for applications involving greater loads and forces.



Motors, Drives, and Controls (Electrical Subsystems)

Page 271

A high speed multi-axis Gantry Robot requires a complete electromechanical solution where the machine Interface, Control and Motor/Drive functions are seamlessly integrated with the mechanical elements. Parker's wide range of electrical products and subsystems enable Gantry Robots to be supplied to the customer at the level of integration most suitable for his need. Whether you need a basic mechanical unit, a unit including drives and motors, or a full-blown electromechanical system ready to run or link to a PLC, Parker has the best solution.



Additional Capabilities

Page 277-280



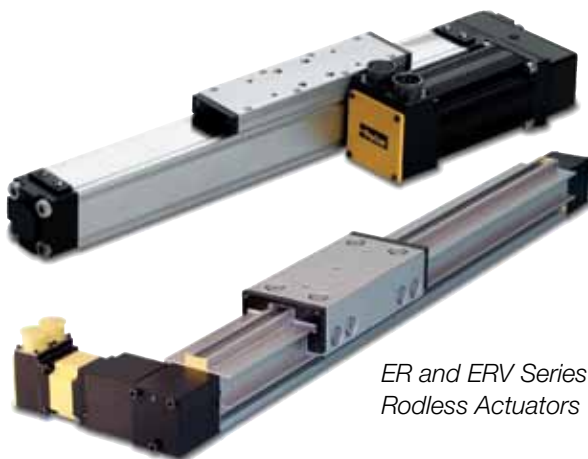
HDM Series Rotary Motion Modules



ET Series Rod Style Electric Cylinders



HTR Telescopic Vertical Units



*ER and ERV Series
Rodless Actuators*



**Belt Driven
Tables**



*LCB Series Compact
Rodless Actuators*

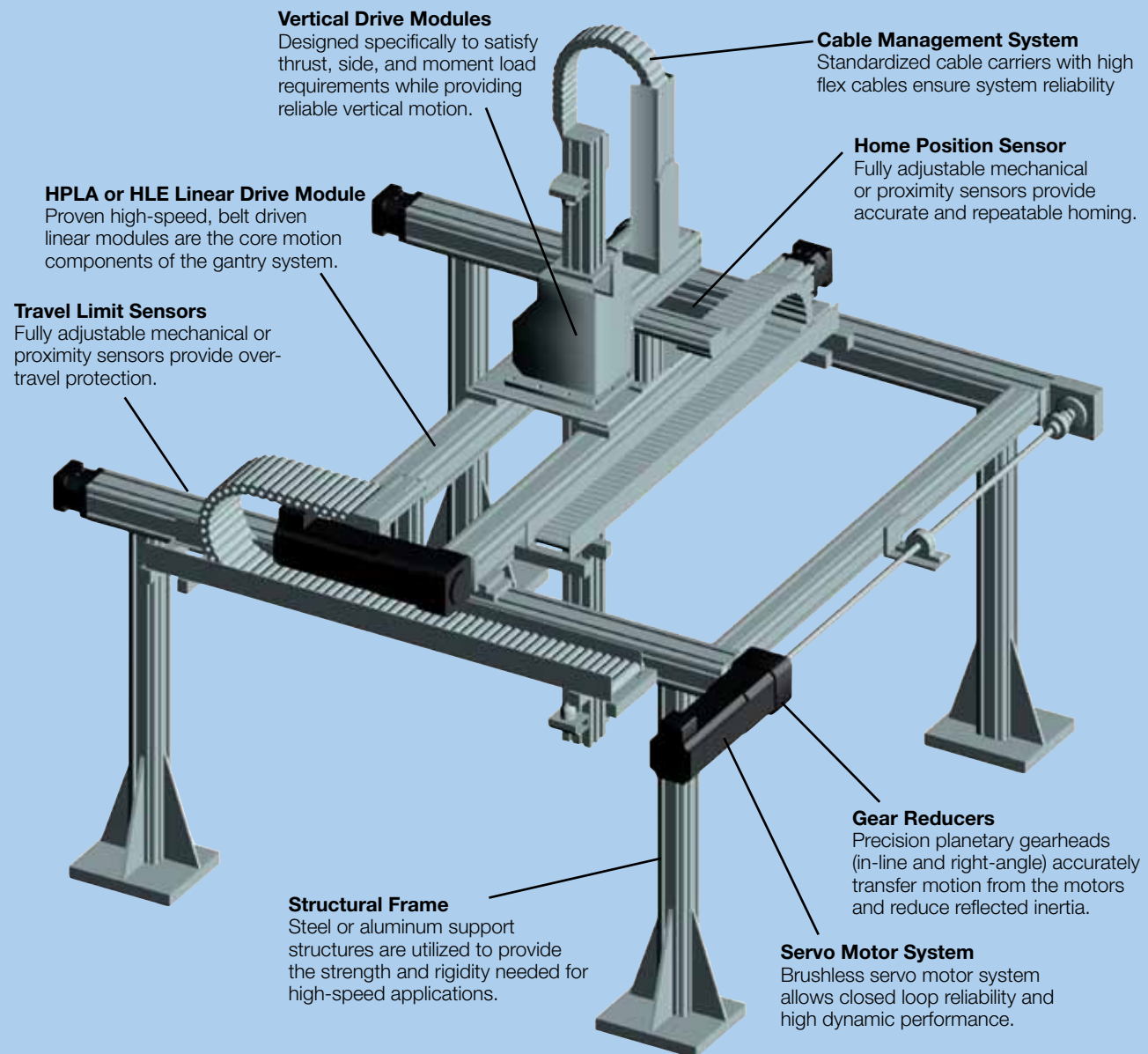
Parker Gantry Systems Minimize Your Engineering Effort

Parker's gantry systems provide cost-effective, easy to integrate solutions that satisfy the vast majority of automation requirements. In addition to our standard gantry systems, Parker offers products with additional capabilities to fulfill the needs of special applications. Our engineering skill and manufacturing expertise have integrated these products into custom-tailored gantry solutions which have successfully addressed the most unique and exacting requirements of machine builders and integrators around the world.

Additional Capabilities

- Motors, Drives and Controls
- Extended Travels
- Rotary Motion Modules
- Cleanroom Preparations
- External Position Feedback
- Vertical Axis Brakes
- End Effectors
- Protective Guarding
- Custom Support Structures

Gantry Robot Elements





Parker's seven standard system configurations are designed to satisfy the vast majority of gantry robot applications. By standardizing on these configurations, Parker has simplified sizing and selection, shortened lead times, and reduced costs for users of these systems. The travels and loads indicated are nominal, and should not be considered limiting factors. Longer travels and increased loads are attainable depending upon the combination of parameters.

System One

Two Axis: $XX' - Y$



System Two

Two Axis: $XX' - YY'$



System Three

Two Axis: $XX' - Z$



System Four

Two Axis: $XX' - Z$



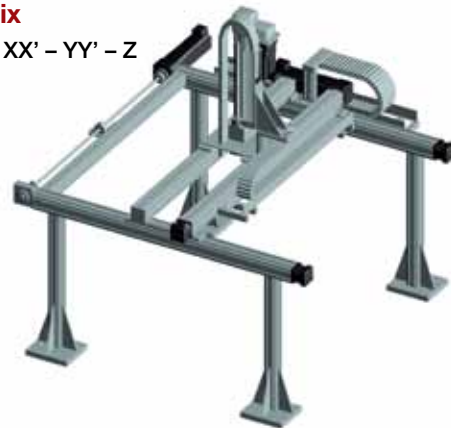
System Five

Two Axis: $XX' - Z$



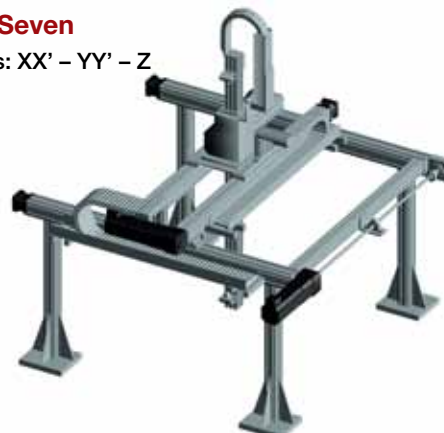
System Six

Three Axis: $XX' - YY' - Z$



System Seven

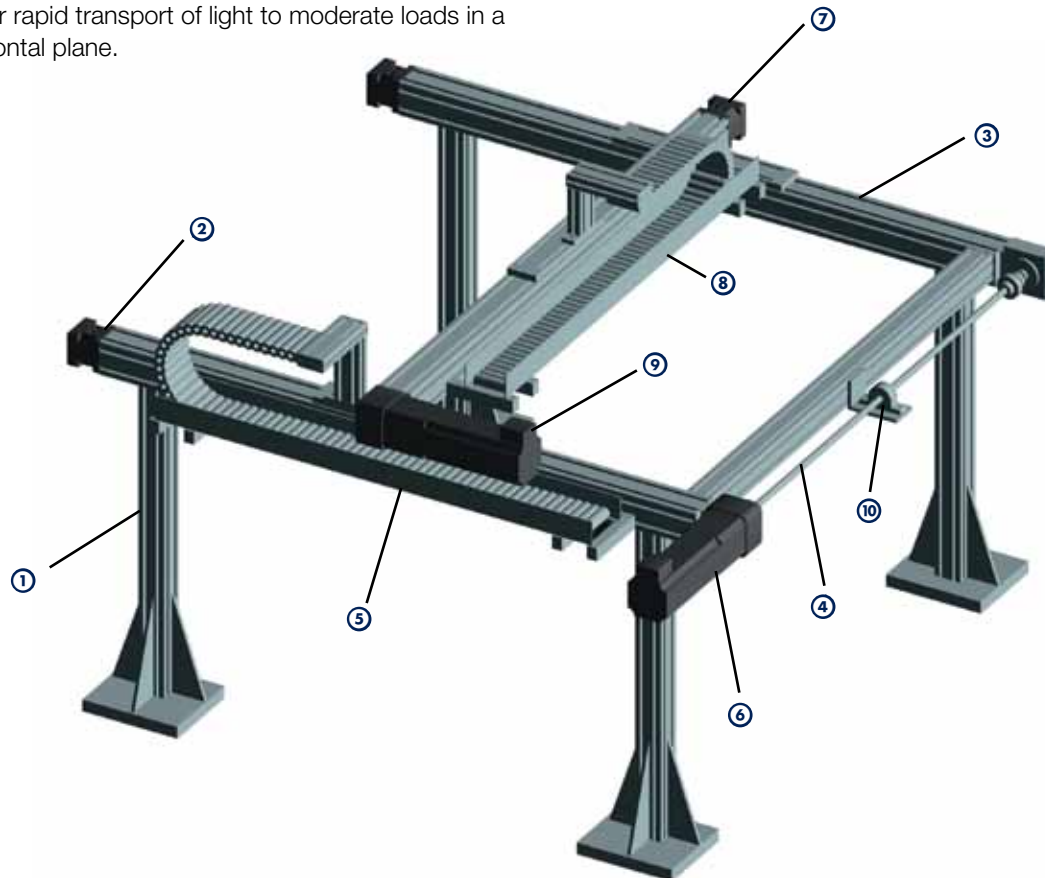
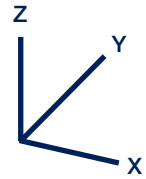
Three Axis: $XX' - YY' - Z$



Belt Driven
Tables

System One

System One provides two axes of horizontal motion. The primary axis (X) is comprised of two HPLA or HLE Linear Modules linked by a common drive shaft, and the secondary axis (Y) is comprised of one HPLA or HLE Linear Module. These linear modules are capable of high speeds and accelerations over long travels. This system is designed for rapid transport of light to moderate loads in a single horizontal plane.



- ① Support Structure Available (steel or aluminum framing)
- ② X-Axis Drive Rail Assembly
- ③ X-Axis Driven Rail Assembly
- ④ X-Axis Link Shaft Assembly
- ⑤ X-Axis Cable Carrier

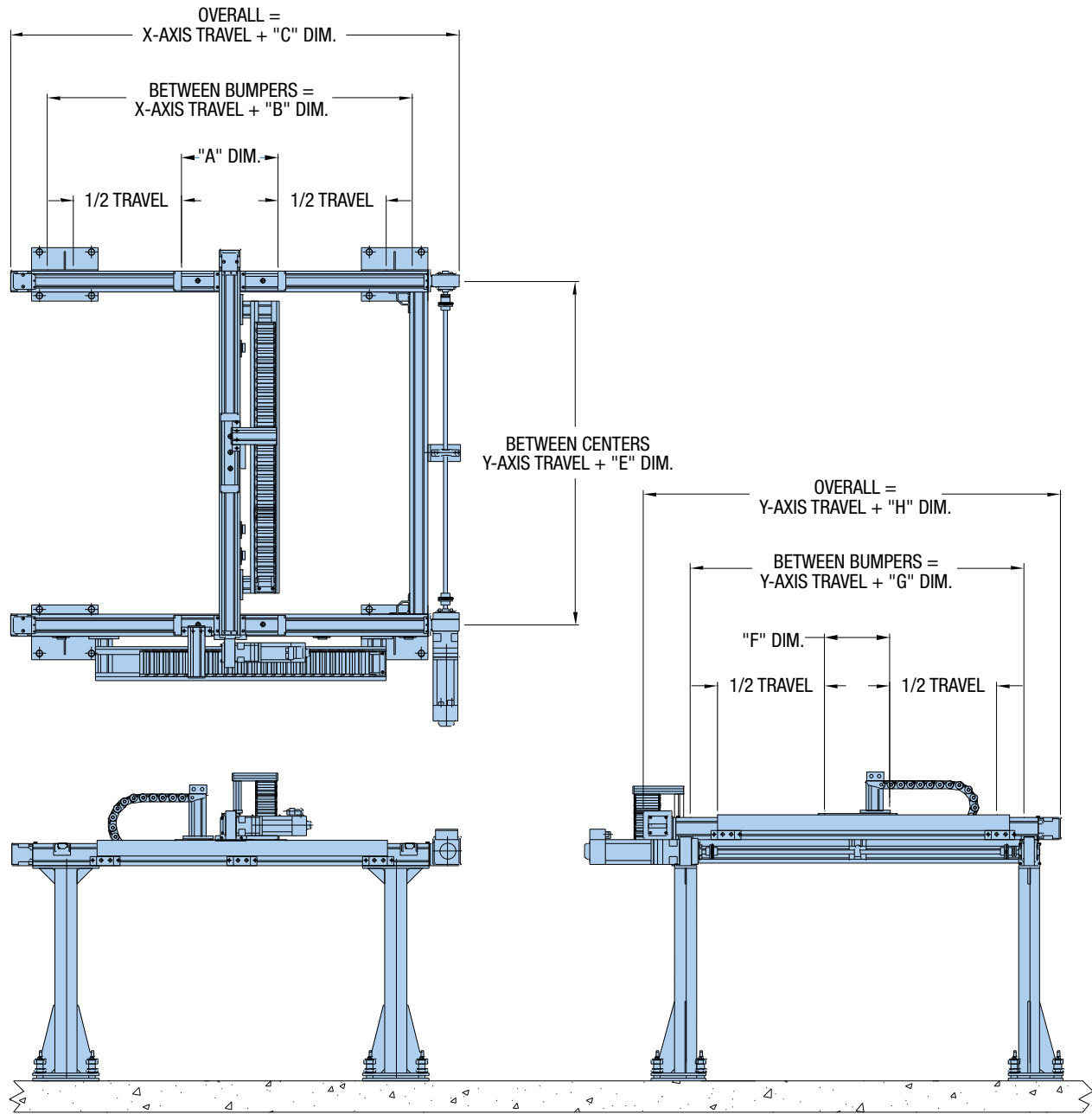
- ⑥ X-Axis Drive Motor
- ⑦ Y-Axis Drive Rail Assembly
- ⑧ Y-Axis Cable Carrier
- ⑨ Y-Axis Drive Motor
- ⑩ Pillow Block Bearing & Support (Based on Application)

Series No.	Axis Model Number			Load (kg)	Travel			Velocity		
	X-Axis	Y-Axis	Z-Axis		X-Axis (meters)	Y-Axis (meters)	Z-Axis (meters)	X-Axis (m/sec.)	Y-Axis (m/sec.)	Z-Axis (m/sec.)
1	HLE60RB	HLE60RB	—	15	2.9	1.3	—	2.0	2.0	—
2	HLE60SR	HLE60SR	—	25	2.8	1.3	—	2.0	2.0	—
3	HPLA080	HPLA080	—	30	5.4	2.0	—	2.0	3.0	—
4	HLE100RB	HLE100RB	—	35	6.0	2.0	—	2.0	3.0	—
5	HLE100SR	HLE100SR	—	75	6.0	2.0	—	2.0	3.0	—
6	HPLA120	HPLA120	—	85	9.3	3.0	—	2.0	3.0	—
7	HLE150RB	HLE150RB	—	100	7.9	3.0	—	2.0	3.0	—

Note: Loads, travels, and velocities shown are interdependent. Increased values are attainable.



Dimensions

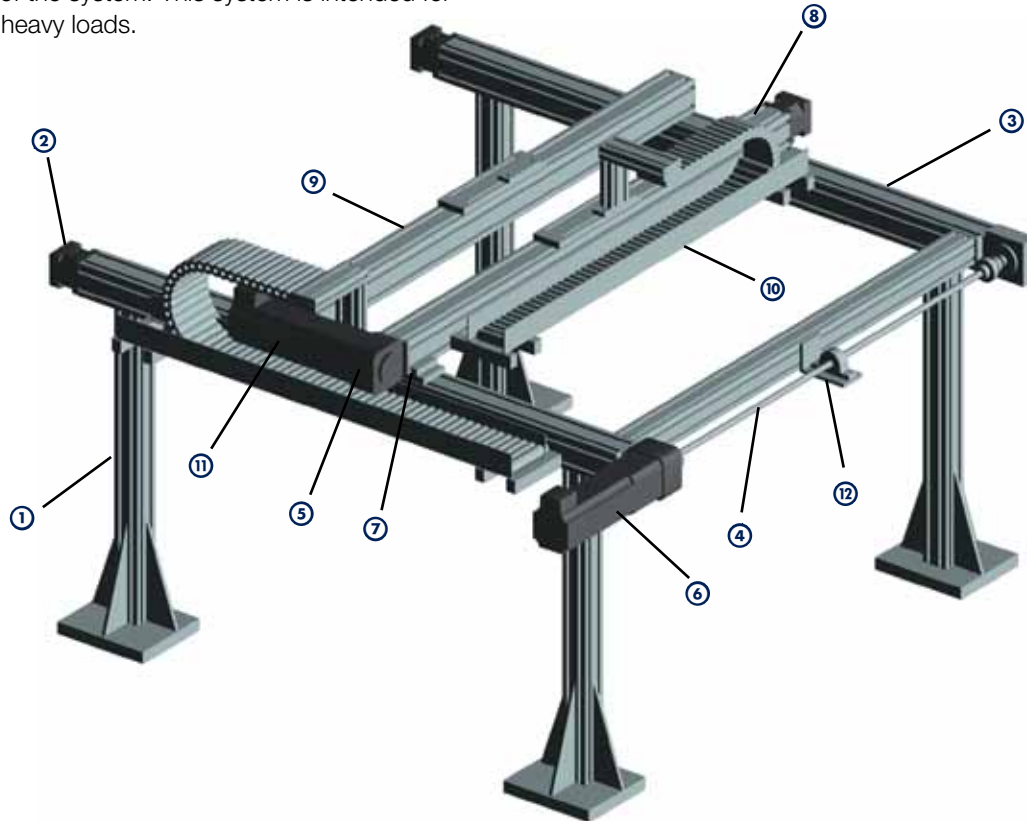
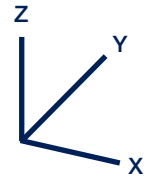


Belt Driven
Tables

System One (XX' – Y)							
Series No.	"A" Dim mm (in.)	"B" Dim mm (in.)	"C" Dim mm (in.)	"E" Dim mm (in.)	"F" Dim mm (in.)	"G" Dim mm (in.)	"H" Dim mm (in.)
1	254.0 (10.00)	504.0 (19.84)	730.0 (28.74)	406.2 (15.99)	152.4 (6.00)	402.4 (15.84)	628.4 (24.74)
2	254.0 (10.00)	504.0 (19.84)	720.0 (28.35)	380.2 (14.97)	152.4 (6.00)	402.4 (15.84)	618.0 (24.33)
3	400.0 (15.75)	650.0 (25.59)	1012.0 (39.84)	530.0 (20.87)	250.0 (9.84)	500.0 (19.69)	862.0 (33.94)
4	450.0 (17.72)	700.0 (27.56)	1090.0 (42.91)	588.0 (23.15)	300.0 (11.81)	550.0 (21.65)	940.0 (37.01)
5	450.0 (17.72)	700.0 (27.56)	1141.0 (44.92)	605.0 (23.82)	300.0 (11.81)	550.0 (21.65)	991.0 (39.02)
6	500.0 (19.69)	750.0 (29.53)	1205.0 (47.44)	560.0 (22.05)	300.0 (11.81)	550.0 (21.65)	1005.0 (39.57)
7	500.0 (19.69)	750.0 (29.53)	1220.0 (48.03)	612.0 (24.09)	350.0 (13.78)	600.0 (23.62)	1070.0 (42.13)

System Two

System Two utilizes two linear modules in both axes (X & Y). The second linear module of the Y-axis is an idler unit which increases load capacity (normal and moment) and permits longer travel. The addition of this unit doubles the load capacity over System One. Traction force can be improved by linking the second axis (Y) module to the first with a common drive shaft. The link shaft doubles the potential acceleration of the system. This system is intended for moderate to heavy loads.



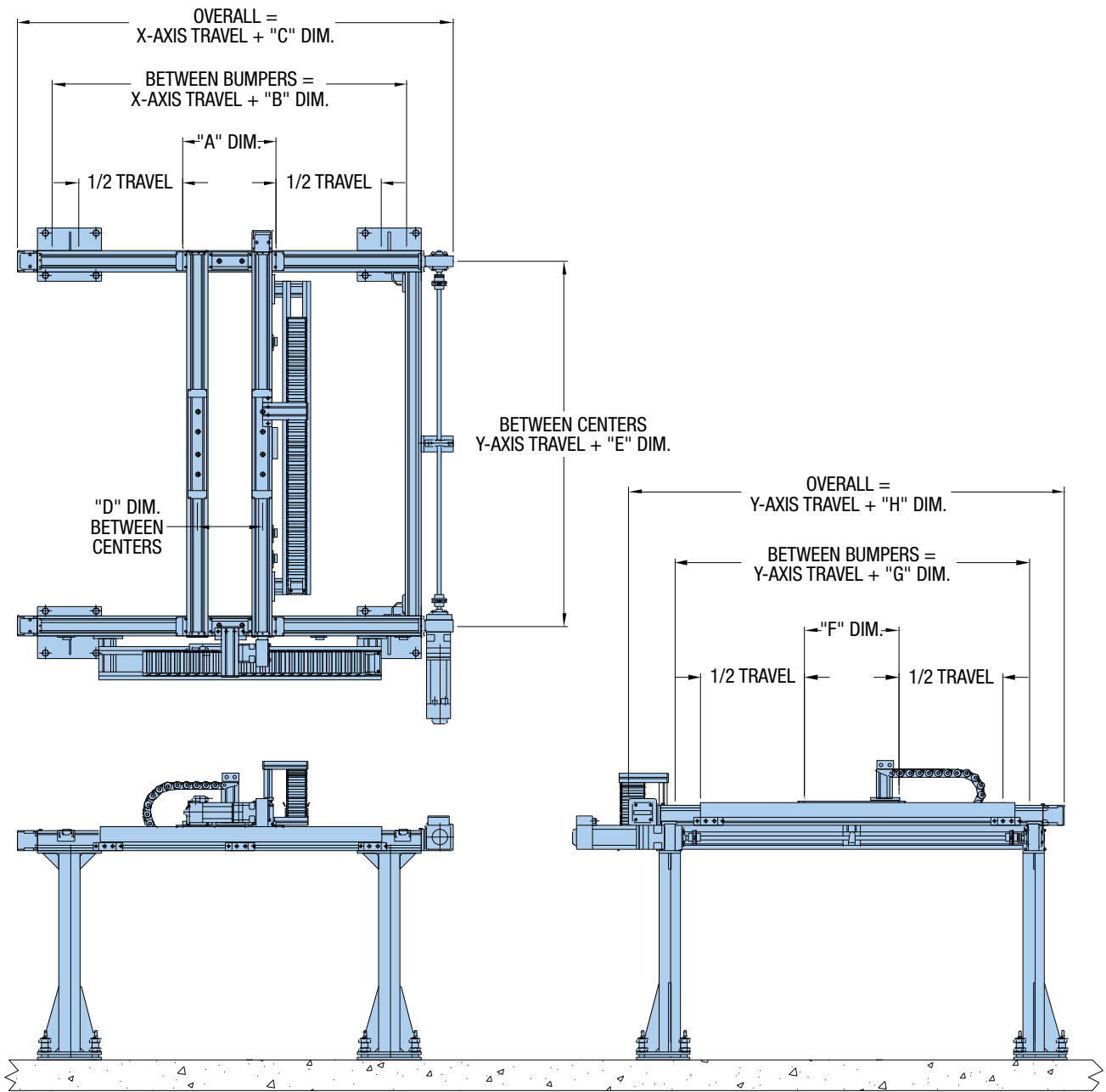
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|---|---|
| ① Support Structure Available (steel or aluminum framing) | ⑦ Clamping Profile |
| ② X-Axis Drive Rail Assembly | ⑧ Y-Axis Drive Rail Assembly |
| ③ X-Axis Driven Rail Assembly | ⑨ Y-Axis Idler Rail Assembly |
| ④ X-Axis Link Shaft Assembly | ⑩ Y-Axis Cable Carrier |
| ⑤ X-Axis Cable Carrier | ⑪ Y-Axis Drive Motor |
| ⑥ X-Axis Drive Motor | ⑫ Pillow Block Bearing & Support (Based on Application) |

Series No.	Axis Model Number			Load (kg)	Travel			Velocity		
	X-Axis	Y-Axis	Z-Axis		X-Axis (meters)	Y-Axis (meters)	Z-Axis (meters)	X-Axis (m/sec.)	Y-Axis (m/sec.)	Z-Axis (m/sec.)
1	HLE60RB	HLE60RB	—	30	2.9	1.3	—	1.0	2.0	—
2	HLE60SR	HLE60SR	—	50	2.8	1.3	—	1.0	2.0	—
3	HPLA080	HPLA080	—	60	5.4	2.0	—	2.0	3.0	—
4	HLE100RB	HLE100RB	—	70	6.0	2.0	—	1.5	4.0	—
5	HLE100SR	HLE100SR	—	150	6.0	2.0	—	1.5	4.0	—
6	HPLA120	HPLA120	—	170	9.3	3.0	—	2.0	4.0	—
7	HLE150RB	HLE150RB	—	200	7.9	3.0	—	2.0	4.0	—

Note: Loads, travels, and velocities shown are interdependent. Increased values are attainable.



Dimensions

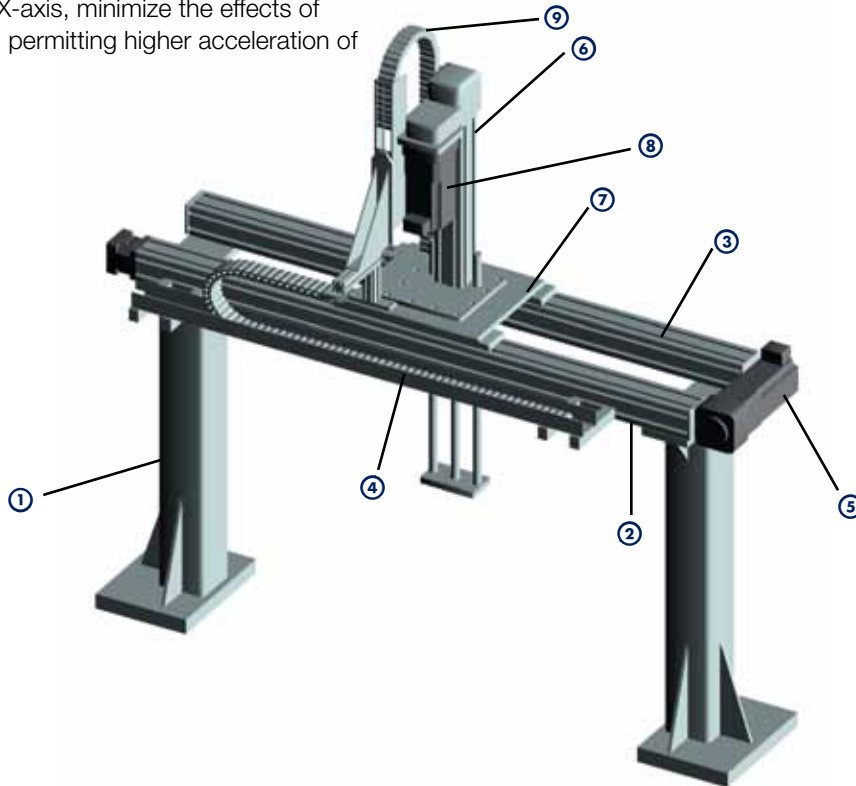
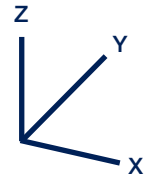


Belt Driven
Tables

Series No.	System Two (XX' – YY')							
	"A" Dim mm (in)	"B" Dim mm (in)	"C" Dim mm (in)	"D" Dim mm (in)	"E" Dim mm (in)	"F" Dim mm (in)	"G" Dim mm (in)	"H" Dim mm (in)
1	254.0 (10.00)	504.0 (19.84)	730.0 (28.74)	169.8 (6.69)	508.2 (20.01)	254.0 (10.00)	504.0 (19.84)	730.0 (28.74)
2	254.0 (10.00)	504.0 (19.84)	720.0 (28.35)	169.8 (6.69)	482.2 (18.98)	254.0 (10.00)	504.0 (19.84)	720.0 (28.35)
3	400.0 (15.75)	650.0 (25.59)	1012.0 (39.84)	280.0 (11.02)	680.0 (26.77)	400.0 (15.75)	650.0 (25.59)	1012.0 (39.84)
4	450.0 (17.72)	700.0 (27.56)	1090.0 (42.91)	310.0 (12.21)	738.0 (29.06)	450.0 (17.72)	700.0 (27.56)	1090.0 (42.91)
5	450.0 (17.72)	700.0 (27.56)	1141.0 (44.92)	310.0 (12.21)	755.0 (29.72)	450.0 (17.72)	700.0 (27.56)	1141.0 (44.92)
6	500.0 (19.69)	750.0 (29.53)	1205.0 (47.44)	330.0 (12.99)	760.0 (29.92)	500.0 (19.69)	750.0 (29.53)	1205.0 (47.44)
7	500.0 (19.69)	750.0 (29.53)	1220.0 (48.03)	300.0 (11.81)	762.0 (30.00)	500.0 (19.69)	750.0 (29.53)	1220.0 (48.03)

System Three

System Three provides two axes of motion in a vertical plane. A ballscrew driven ET Cylinder is utilized to provide high thrust in the vertical direction. ET Rod Guides, in conjunction with the dual X-axis, minimize the effects of moment and side loading, permitting higher acceleration of the payload.



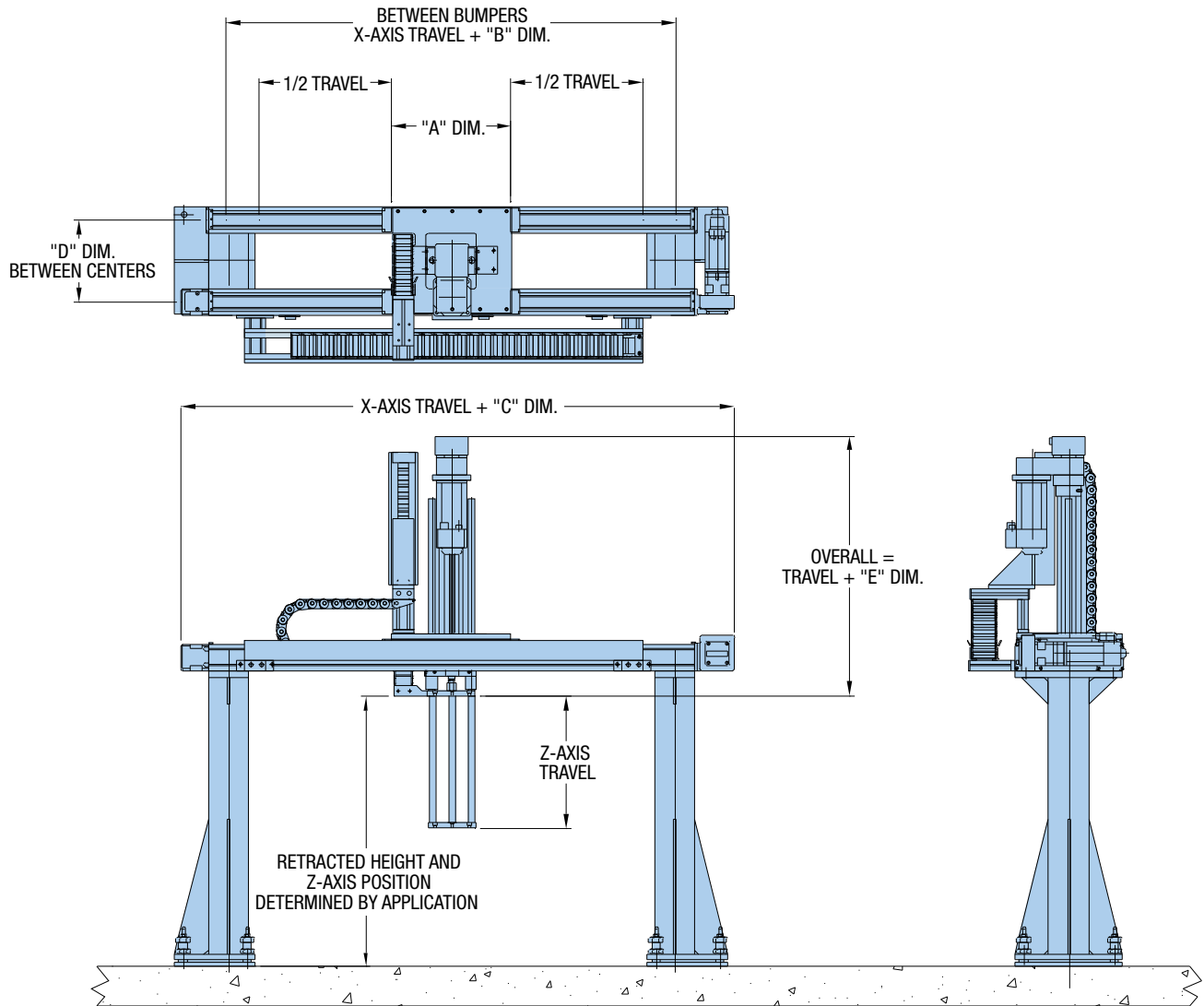
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|---|--|
| ① Support Structure Available (steel or aluminum framing) | ⑥ ET Cylinder Z-Axis with Flange Plate |
| ② X-Axis Drive Rail Assembly | ⑦ Z-Axis Mounting Plate |
| ③ X-Axis Idler Rail Assembly | ⑧ Z-Axis Drive Motor |
| ④ X-Axis Cable Carrier | ⑨ Z-Axis Cable Carrier |
| ⑤ X-Axis Drive Motor | |

Series No.	Axis Model Number			Load (kg)	Travel			Velocity		
	X-Axis	Y-Axis	Z-Axis		X-Axis (meters)	Y-Axis (meters)	Z-Axis (meters)	X-Axis (m/sec.)	Y-Axis (m/sec.)	Z-Axis (m/sec.)
1	HLE60RB	—	ETB32	10	2.9	—	0.3	1.5	—	0.5
2	HLE60RB	—	ETB50	20	2.9	—	0.5	1.5	—	0.8
3	HLE60SR	—	ETB32	10	2.8	—	0.3	1.5	—	0.5
4	HLE60SR	—	ETB50	20	2.8	—	0.5	1.5	—	0.8
5	HPLA080	—	ETB50	35	5.4	—	0.5	2.0	—	0.8
6	HLE100RB	—	ETB50	40	6.0	—	0.5	2.0	—	0.8
7	HLE100RB	—	ETB80	50	6.0	—	1.0	2.0	—	0.5
8	HLE100SR	—	ETB50	40	6.0	—	0.5	2.0	—	0.5
9	HLE100SR	—	ETB80	50	6.0	—	1.0	2.0	—	0.5
10	HPLA120	—	ETB80	75	9.3	—	1.0	2.5	—	0.5
11	HPLA120	—	ETB100	100	9.3	—	1.0	2.5	—	1.0
12	HLE150RB	—	ETB80	75	7.9	—	1.0	2.5	—	0.5
13	HLE150RB	—	ETB100	100	7.9	—	1.0	2.5	—	1.0

Note: Loads, travels, and velocities shown are interdependent. Increased values are attainable.



Dimensions

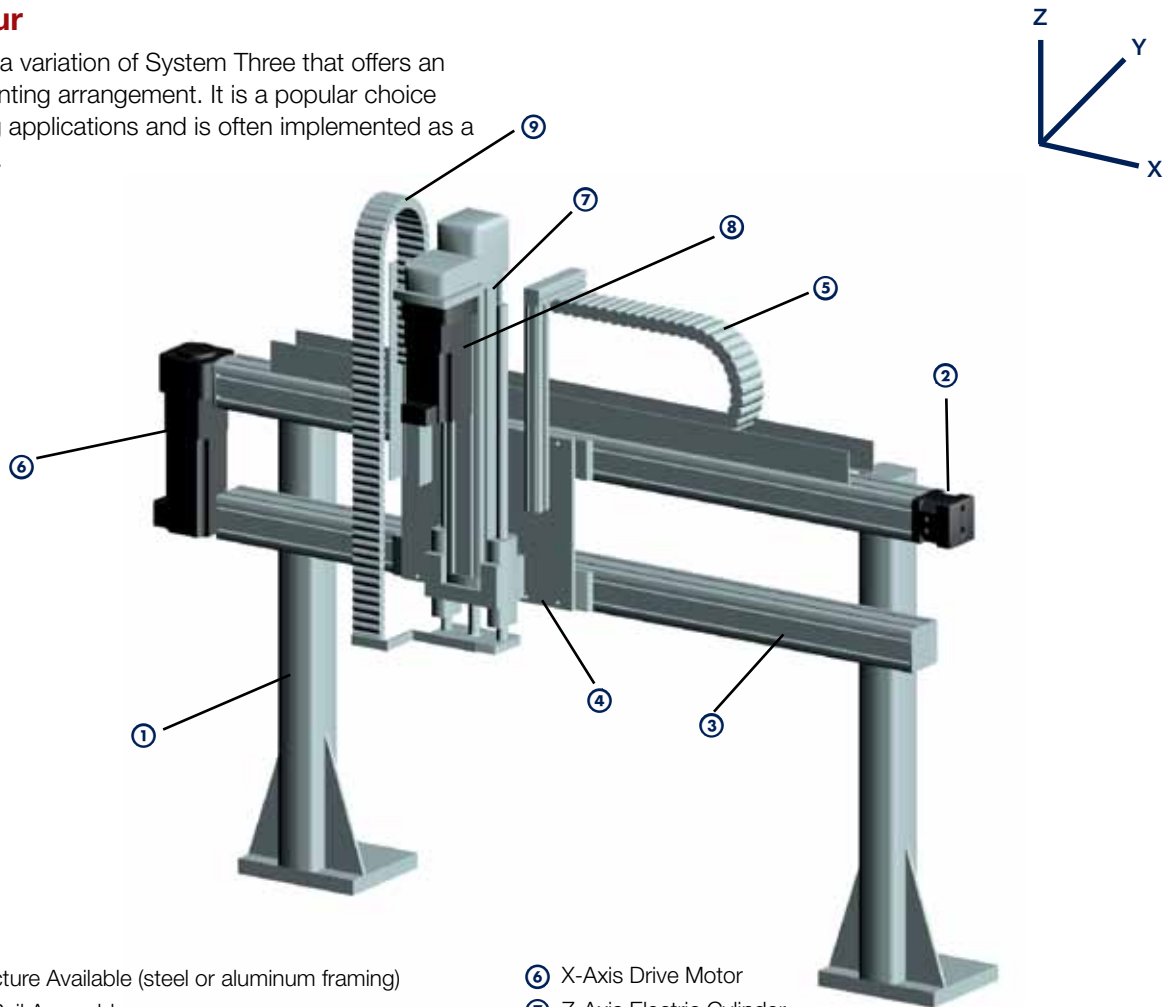


Belt Driven
Tables

System Three XX' – Z (Electric Cylinder)					
Series No.	"A" Dim mm (in.)	"B" Dim mm (in.)	"C" Dim mm (in.)	"D" Dim mm (in.)	"E" Dim mm (in.)
1	254.0 (10.00)	504.0 (19.84)	730.0 (28.74)	200.0 (7.87)	238.0 (9.37)
2	254.0 (10.00)	504.0 (19.84)	730.0 (28.74)	200.0 (7.87)	304.1 (11.97)
3	254.0 (10.00)	504.0 (19.84)	720.0 (28.35)	200.0 (7.87)	238.0 (9.37)
4	254.0 (10.00)	504.0 (19.84)	720.0 (28.35)	200.0 (7.87)	304.1 (11.97)
5	400.0 (15.75)	650.0 (25.59)	1012.0 (39.84)	250.0 (9.84)	304.1 (11.97)
6	450.0 (17.72)	700.0 (27.56)	1090.0 (42.91)	300.0 (11.81)	304.1 (11.97)
7	450.0 (17.72)	700.0 (27.56)	1090.0 (42.91)	300.0 (11.81)	321.9 (12.67)
8	450.0 (17.72)	700.0 (27.56)	1141.0 (44.92)	300.0 (11.81)	304.1 (11.97)
9	450.0 (17.72)	700.0 (27.56)	1141.0 (44.92)	300.0 (11.81)	321.9 (12.67)
10	500.0 (19.69)	750.0 (29.53)	1205.0 (47.44)	350.0 (13.78)	321.9 (12.67)
11	500.0 (19.69)	750.0 (29.53)	1205.0 (47.44)	350.0 (13.78)	494.0 (19.45)
12	500.0 (19.69)	750.0 (29.53)	1220.0 (48.03)	350.0 (13.78)	321.9 (12.67)
13	500.0 (19.69)	750.0 (29.53)	1220.0 (48.03)	350.0 (13.78)	494.0 (19.45)

System Four

System Four is a variation of System Three that offers an alternative mounting arrangement. It is a popular choice for front loading applications and is often implemented as a wall mount unit.



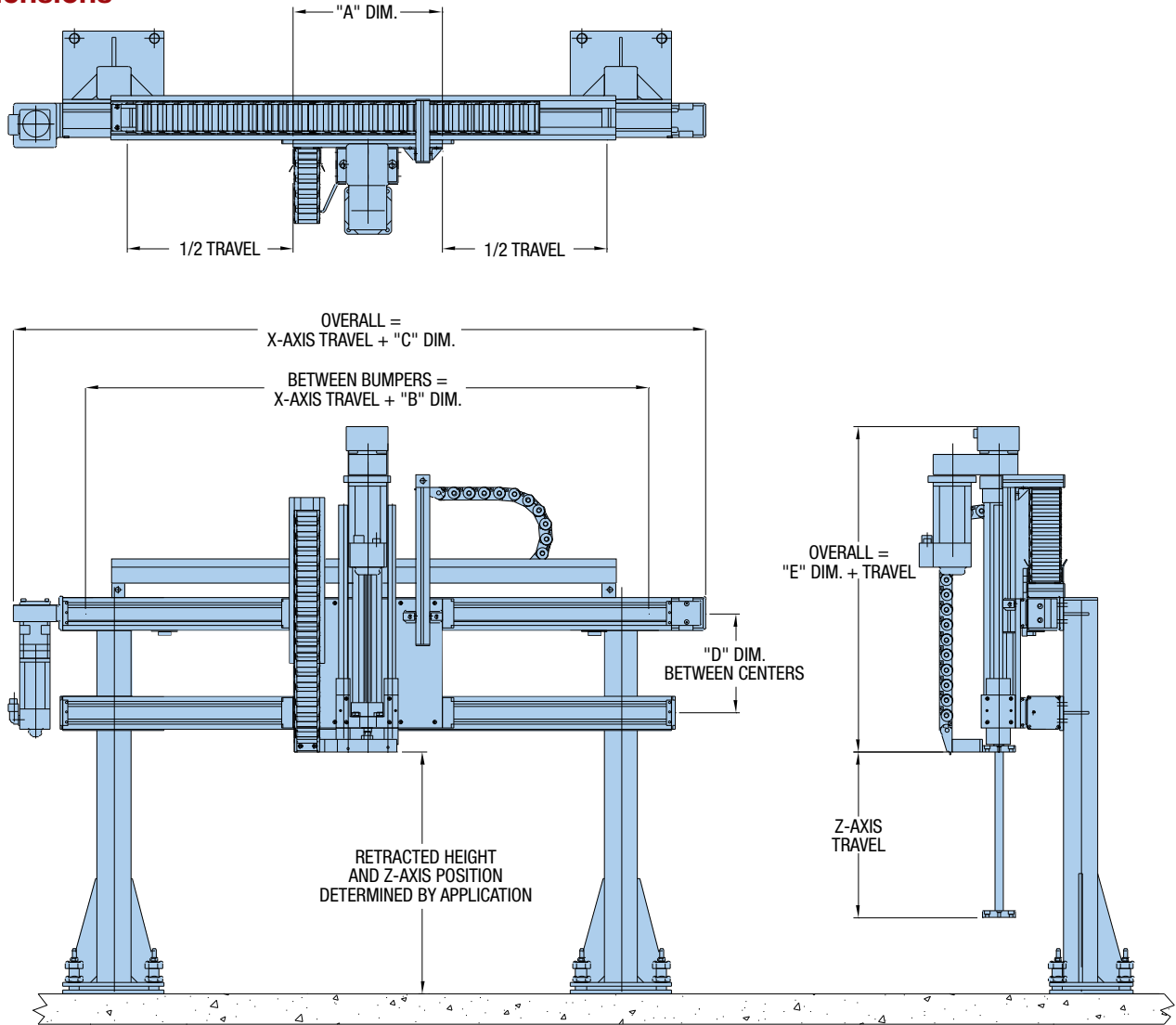
- ① Support Structure Available (steel or aluminum framing)
- ② X-Axis Drive Rail Assembly
- ③ X-Axis Idler Rail Assembly
- ④ Z-Axis Mounting Plate
- ⑤ X-Axis Cable Carrier
- ⑥ X-Axis Drive Motor
- ⑦ Z-Axis Electric Cylinder
- ⑧ Z-Axis Drive Motor
- ⑨ Z-Axis Cable Carrier

Series No.	Axis Model Number			Load (kg)	Travel			Velocity		
	X-Axis	Y-Axis	Z-Axis		X-Axis (meters)	Y-Axis (meters)	Z-Axis (meters)	X-Axis (m/sec.)	Y-Axis (m/sec.)	Z-Axis (m/sec.)
1	HLE60RB	—	ETB32	10	2.9	—	0.3	1.5	—	0.5
2	HLE60RB	—	ETB50	20	2.9	—	0.5	1.5	—	0.8
3	HLE60SR	—	ETB32	10	2.8	—	0.3	1.5	—	0.5
4	HLE60SR	—	ETB50	20	2.8	—	0.5	1.5	—	0.8
5	HPLA080	—	ETB50	35	5.4	—	0.5	2.0	—	0.8
6	HLE100RB	—	ETB50	40	6.0	—	0.5	2.0	—	0.8
7	HLE100RB	—	ETB80	50	6.0	—	1.0	2.0	—	0.5
8	HLE100SR	—	ETB50	40	6.0	—	0.5	2.0	—	0.5
9	HLE100SR	—	ETB80	50	6.0	—	1.0	2.0	—	0.5
10	HPLA120	—	ETB80	75	9.3	—	1.0	2.5	—	0.5
11	HPLA120	—	ETB100	100	9.3	—	1.0	2.5	—	1.0
12	HLE150RB	—	ETB80	75	7.9	—	1.0	2.5	—	0.5
13	HLE150RB	—	ETB100	100	7.9	—	1.0	2.5	—	1.0

Note: Loads, travels, and velocities shown are interdependent. Increased values are attainable.



Dimensions

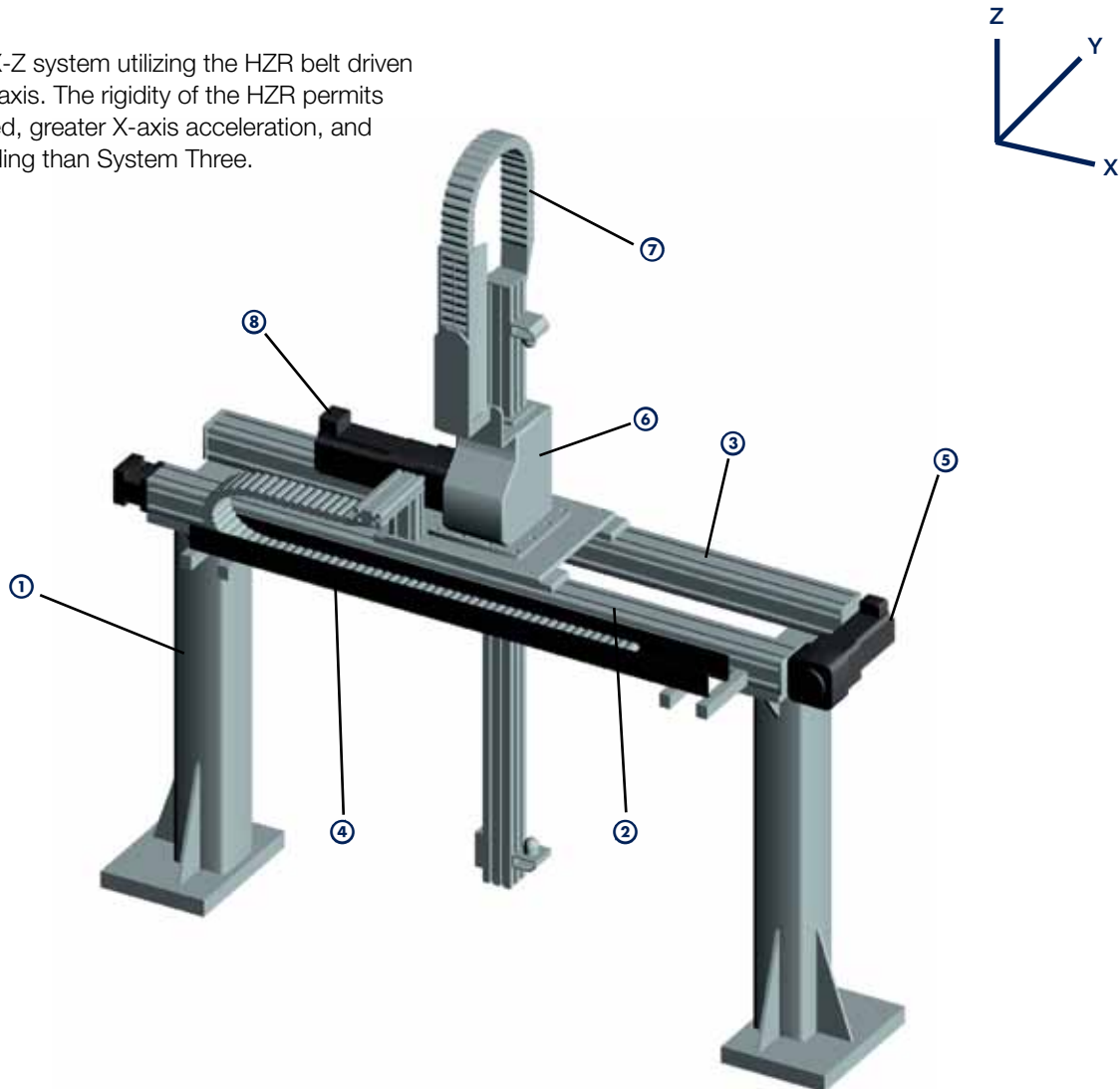


Belt Driven
Tables

System Four XX' – Z (Electric Cylinder)					
Series No.	"A" Dim. mm (in.)	"B" Dim. mm (in.)	"C" Dim. mm (in.)	"D" Dim. mm (in.)	"E" Dim. mm (in.)
1	254.0 (10.00)	504.0 (19.84)	730.0 (28.74)	200.0 (7.87)	238.0 (9.37)
2	254.0 (10.00)	504.0 (19.84)	730.0 (28.74)	200.0 (7.87)	304.1 (11.97)
3	254.0 (10.00)	504.0 (19.84)	720.0 (28.35)	200.0 (7.87)	238.0 (9.37)
4	254.0 (10.00)	504.0 (19.84)	720.0 (28.35)	200.0 (7.87)	304.1 (11.97)
5	400.0 (15.75)	650.0 (25.59)	1012.0 (39.84)	250.0 (9.84)	304.1 (11.97)
6	450.0 (17.72)	700.0 (27.56)	1090.0 (42.91)	300.0 (11.81)	304.1 (11.97)
6	450.0 (17.72)	700.0 (27.56)	1090.0 (42.91)	300.0 (11.81)	321.9 (12.67)
7	450.0 (17.72)	700.0 (27.56)	1141.0 (44.92)	300.0 (11.81)	304.1 (11.97)
8	450.0 (17.72)	700.0 (27.56)	1141.0 (44.92)	300.0 (11.81)	321.9 (12.67)
10	500.0 (19.69)	750.0 (29.53)	1205.0 (47.44)	350.0 (13.78)	321.9 (12.67)
11	500.0 (19.69)	750.0 (29.53)	1205.0 (47.44)	350.0 (13.78)	494.0 (19.45)
12	500.0 (19.69)	750.0 (29.53)	1220.0 (48.03)	350.0 (13.78)	321.9 (12.67)
13	500.0 (19.69)	750.0 (29.53)	1220.0 (48.03)	350.0 (13.78)	494.0 (19.45)

System Five

System Five is an X-Z system utilizing the HZR belt driven unit for the vertical axis. The rigidity of the HZR permits higher vertical speed, greater X-axis acceleration, and larger moment loading than System Three.



- ① Support Structure Available (steel or aluminum framing)
- ② X-Axis Drive Rail Assembly
- ③ X-Axis Idler Rail Assembly
- ④ X-Axis Cable Carrier

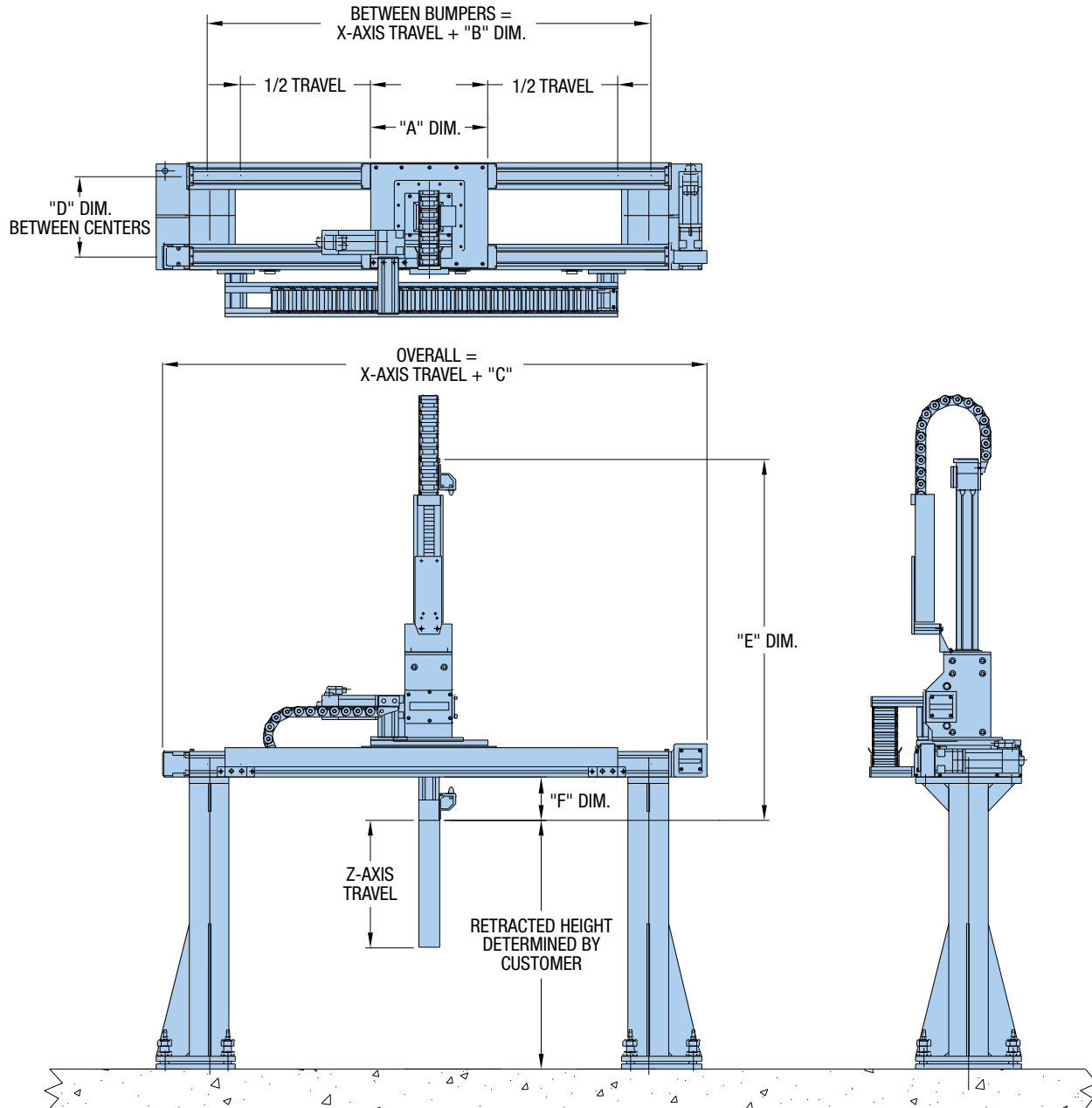
- ⑤ X-Axis Drive Motor
- ⑥ HZR Z-Axis with Flange Plate
- ⑦ Z-Axis Cable Carrier
- ⑧ Z-Axis Drive Motor

Series No.	Axis Model Number			Load (kg)	Travel			Velocity		
	X-Axis	Y-Axis	Z-Axis		X-Axis (meters)	Y-Axis (meters)	Z-Axis (meters)	X-Axis (m/sec.)	Y-Axis (m/sec.)	Z-Axis (m/sec.)
1	HLE100RB	—	HZR80	50	6.0	—	1.0	2.0	—	1.5
2	HLE100RB	—	HZR100	100	6.0	—	1.5	2.0	—	1.5
3	HLE100SR	—	HZR80	50	6.0	—	1.0	2.0	—	1.5
4	HLE100SR	—	HZR100	100	6.0	—	1.5	2.0	—	1.5
5	HPLA120	—	HZR80	50	9.3	—	1.0	2.5	—	1.5
6	HPLA120	—	HZR100	100	9.3	—	1.5	2.5	—	1.5
7	HLE150RB	—	HZR80	50	7.9	—	1.0	2.5	—	1.5
8	HLE150RB	—	HZR100	100	7.9	—	1.5	2.5	—	1.5

Note: Loads, travels, and velocities shown are interdependent. Increased values are attainable.



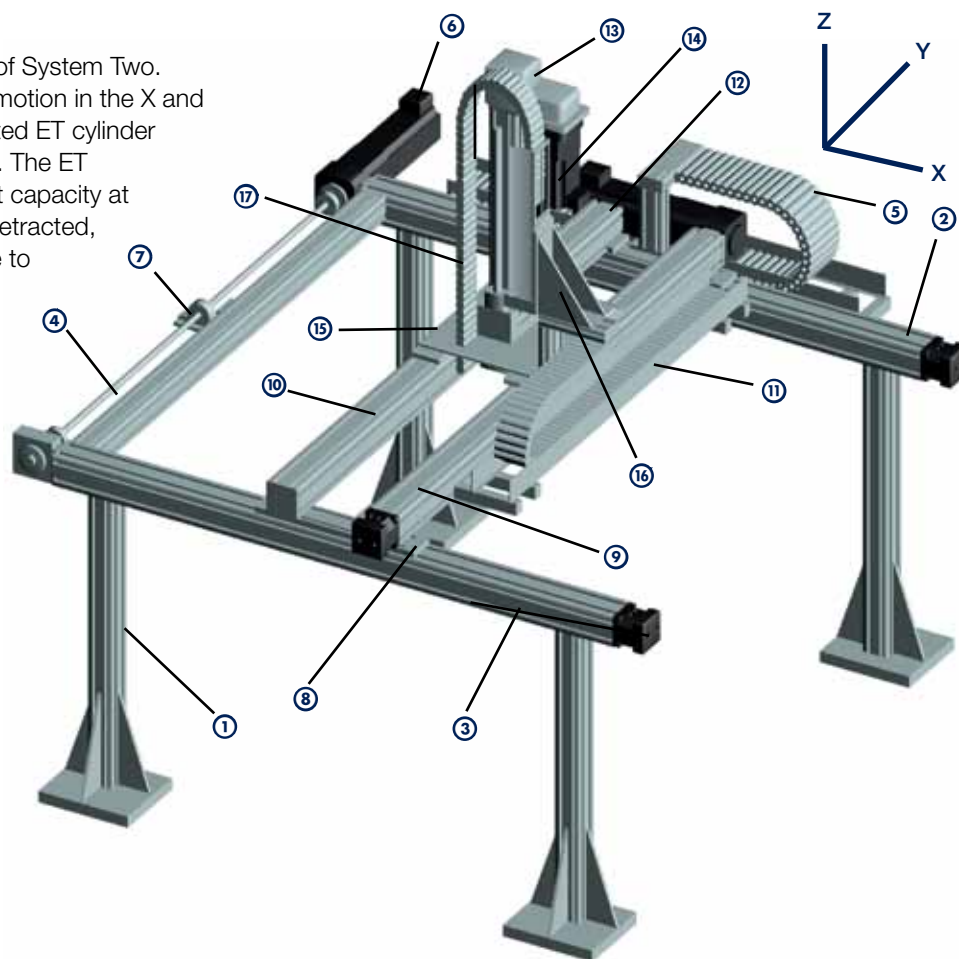
Dimensions



Belt Driven
Tables

System Five XX' – Z (HZR)						
Series No.	"A" Dim mm (in.)	"B" Dim mm (in.)	"C" Dim mm (in.)	"D" Dim mm (in.)	"E" Dim mm (in.)	"F" Dim mm (in.)
1	450.0 (17.72)	700.0 (27.56)	1090.0 (42.91)	310.0 (12.21)	885.0 (34.84)	170.0 (6.69)
2	450.0 (17.72)	700.0 (27.56)	1090.0 (42.91)	360.0 (14.17)	1030.0 (40.55)	245.0 (9.65)
3	450.0 (17.72)	700.0 (27.56)	1141.0 (44.92)	310.0 (12.21)	885.0 (34.84)	170.0 (6.69)
4	450.0 (17.72)	700.0 (27.56)	1141.0 (44.92)	360.0 (14.17)	1030.0 (40.55)	245.0 (9.65)
5	500.0 (19.69)	750.0 (29.53)	1205.0 (47.44)	400.0 (15.75)	885.0 (34.84)	115.0 (4.53)
6	500.0 (19.69)	750.0 (29.53)	1205.0 (47.44)	400.0 (15.75)	1030.0 (40.55)	190.0 (7.48)
7	500.0 (19.69)	750.0 (29.53)	1220.0 (48.03)	400.0 (15.75)	885.0 (34.84)	115.0 (4.53)
8	500.0 (19.69)	750.0 (29.53)	1220.0 (48.03)	400.0 (15.75)	1030.0 (40.55)	190.0 (7.48)

System Six is a three-axes version of System Two. HPLA/HLE linear modules provide motion in the X and Y directions while a vertically mounted ET cylinder provides the third axis (Z) of motion. The ET cylinder provides high vertical thrust capacity at moderate speeds. With the Z-axis retracted, this system can transport moderate to heavy loads at high rates of speed over long travel distances.

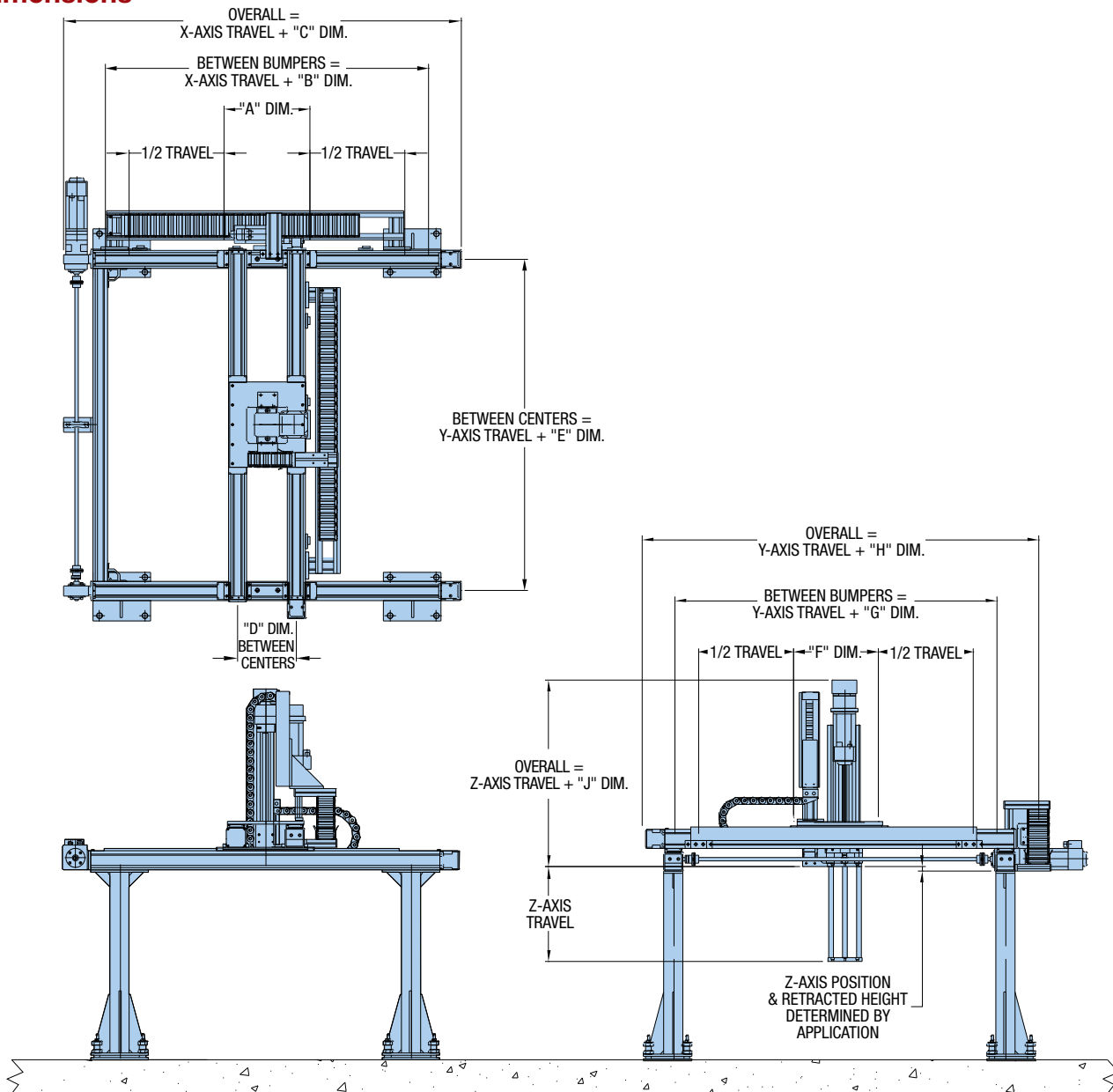


- | | |
|---|--------------------------------------|
| ① Support Structure Available (steel or aluminum framing) | ⑩ Y-Axis Idler Rail Assembly |
| ② X-Axis Drive Rail Assembly | ⑪ Y-Axis Cable Carrier |
| ③ X-Axis Driven Rail Assembly | ⑫ Y-Axis Drive Motor |
| ④ X-Axis Link Shaft Assembly | ⑬ Z-Axis ET Electric Cylinder |
| ⑤ X-Axis Cable Carrier | ⑭ Z-Axis Drive Motor |
| ⑥ X-Axis Drive Motor | ⑮ Electric Cylinder Mounting Plate |
| ⑦ Pillow Block Bearing Support (Based on Application) | ⑯ Electric Cylinder Mounting Bracket |
| ⑧ Clamping Profile | ⑰ Z-Axis Cable Carrier |
| ⑨ Y-Axis Drive Rail Assembly | |

Note: Loads, travels, and velocities shown are interdependent. Increased values are attainable.



Dimensions

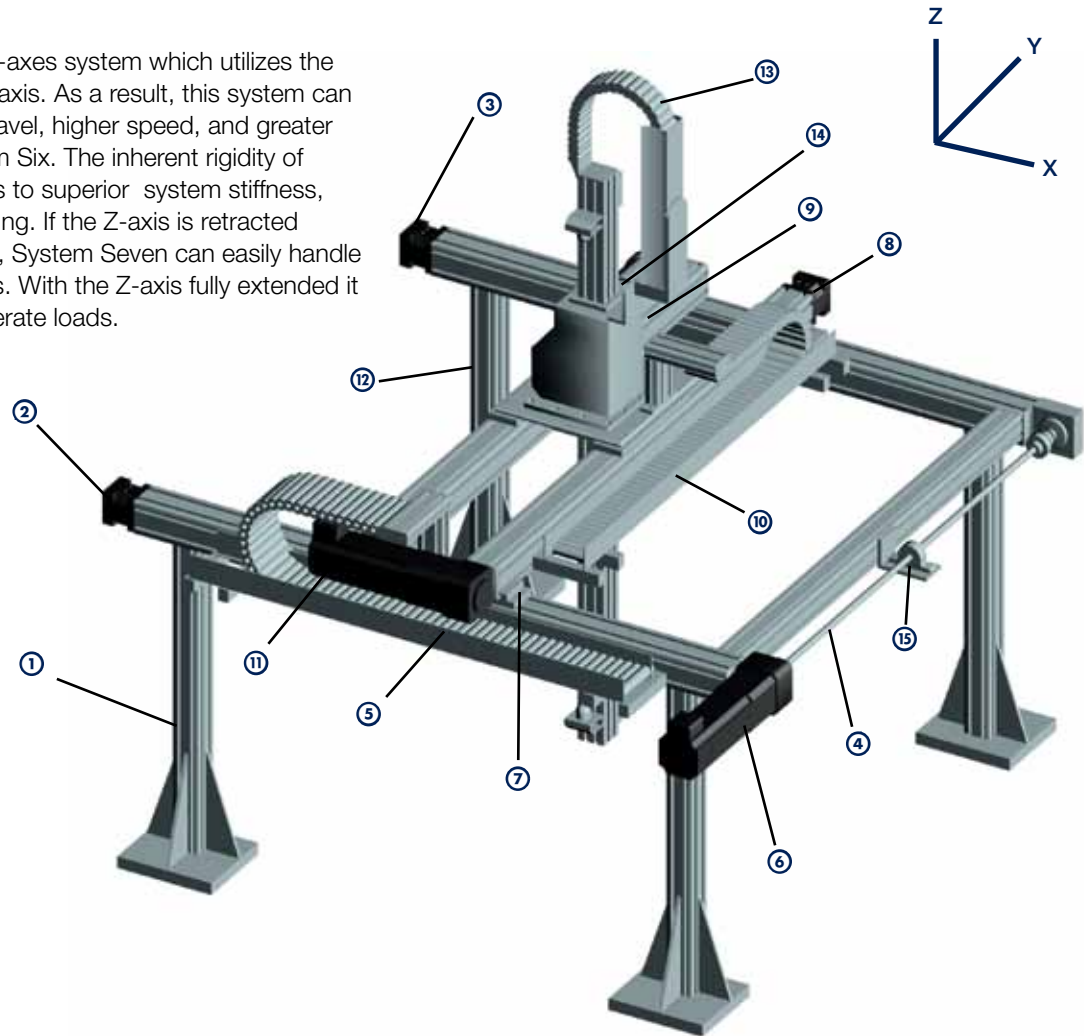


Belt Driven
Tables

System Six XX' – YY' – Z (Electric Cylinder)									
Series No.	"A" Dim. mm (in.)	"B" Dim. mm (in.)	"C" Dim. mm (in.)	"D" Dim. mm (in.)	"E" Dim. mm (in.)	"F" Dim. mm (in.)	"G" Dim. mm (in.)	"H" Dim. mm (in.)	"J" Dim. mm (in.)
1	254.0 (10.00)	504.0 (19.84)	730.0 (28.74)	169.8 (6.69)	508.2 (20.01)	254.0 (10.00)	504.0 (19.84)	730.0 (28.74)	238.0 (9.37)
2	254.0 (10.00)	504.0 (19.84)	730.0 (28.74)	169.8 (6.69)	508.2 (20.01)	254.0 (10.00)	504.0 (19.84)	730.0 (28.74)	304.1 (11.97)
3	254.0 (10.00)	504.0 (19.84)	720.0 (28.35)	169.8 (6.69)	482.2 (19.98)	254.0 (10.00)	504.0 (19.84)	720.0 (28.35)	238.0 (9.37)
4	254.0 (10.00)	504.0 (19.84)	720.0 (28.35)	169.8 (6.69)	482.2 (19.98)	254.0 (10.00)	504.0 (19.84)	720.0 (28.35)	304.1 (11.97)
5	400.0 (15.75)	650.0 (25.59)	1012.0 (39.84)	280.0 (0.02)	680.0 (26.77)	400.0 (15.75)	650.0 (25.59)	1012.0 (39.84)	304.1 (11.97)
6	450.0 (17.72)	700.0 (27.56)	1090.0 (42.91)	310.0 (12.21)	738.0 (29.06)	450.0 (17.72)	700.0 (27.56)	1090.0 (42.91)	321.9 (12.67)
7	450.0 (17.72)	700.0 (27.56)	1141.0 (44.92)	310.0 (12.21)	755.0 (29.72)	450.0 (17.72)	700.0 (27.56)	1141.0 (44.92)	321.9 (12.67)
8	500.0 (19.69)	750.0 (29.53)	1205.0 (47.44)	330.0 (12.99)	760.0 (29.92)	500.0 (19.69)	750.0 (29.53)	1205.0 (47.44)	494.0 (19.45)
9	500.0 (19.69)	750.0 (29.53)	1220.0 (48.03)	300.0 (11.81)	762.0 (30.00)	500.0 (19.69)	750.0 (29.53)	1220.0 (48.03)	494.0 (19.45)

System Seven

System Seven is a three-axes system which utilizes the HZR unit for the vertical axis. As a result, this system can provide longer vertical travel, higher speed, and greater acceleration than System Six. The inherent rigidity of the HZR also contributes to superior system stiffness, stability, and ease of tuning. If the Z-axis is retracted during horizontal motion, System Seven can easily handle moderate to heavy loads. With the Z-axis fully extended it can handle light to moderate loads.



- ① Support Structure Available (steel or aluminum framing)
- ② X-Axis Drive Rail Assembly
- ③ X-Axis Driven Rail Assembly
- ④ X-Axis Link Shaft Assembly
- ⑤ X-Axis Cable Carrier
- ⑥ X-Axis Drive Motor
- ⑦ Clamping Profile
- ⑧ Y-Axis Drive Rail Assembly

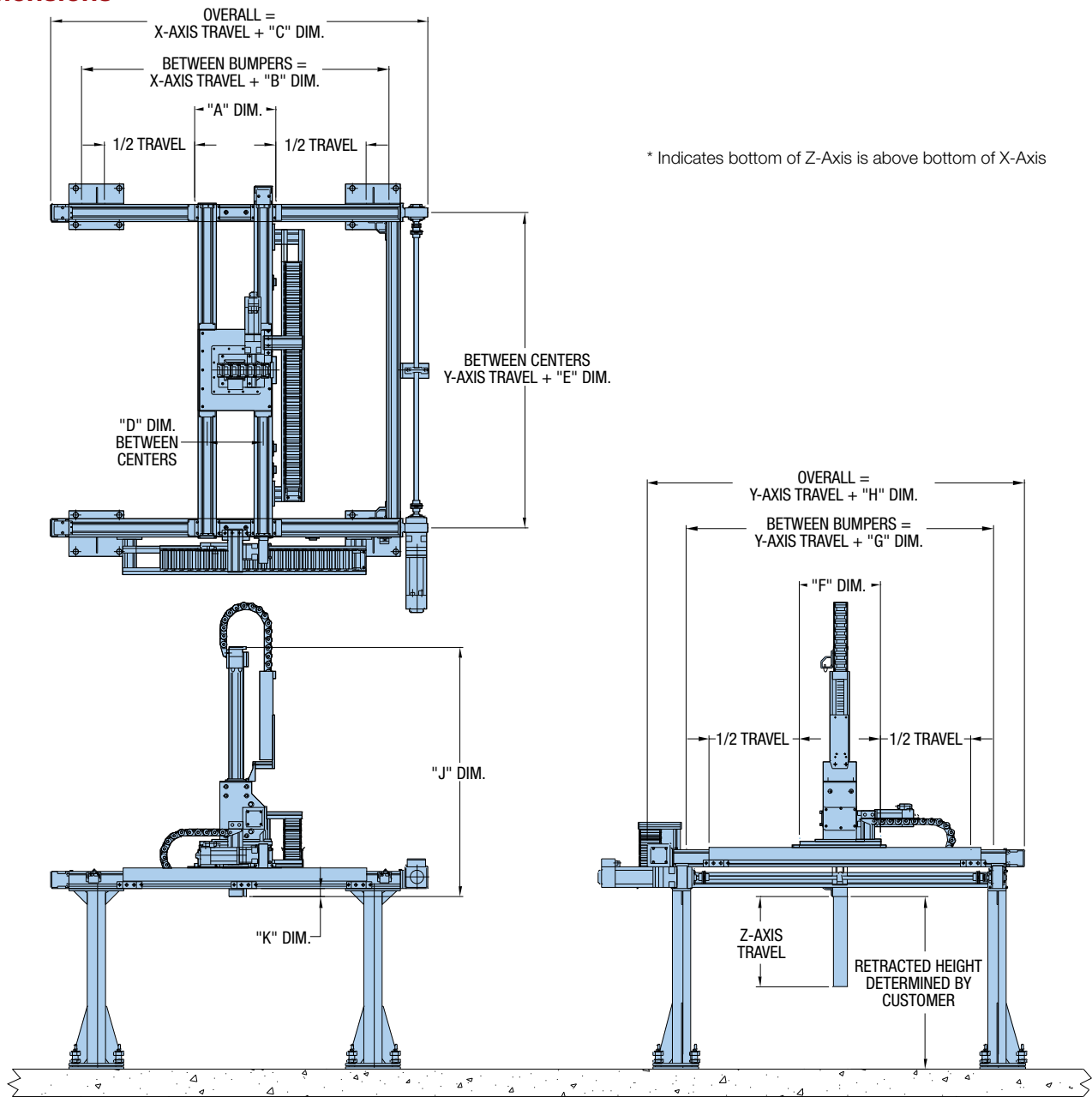
- ⑨ Y-Axis Idler Rail Assembly
- ⑩ Y-Axis Cable Carrier
- ⑪ Y-Axis Drive Motor
- ⑫ HZR Z-Axis with Flange Plate
- ⑬ Z-Axis Cable Carrier
- ⑭ Z-Axis Drive Motor
- ⑮ Pillow Block Bearing & Support (Based on Application)

Series No.	Axis Model Number			Load (kg)	Travel			Velocity		
	X-Axis	Y-Axis	Z-Axis		X-Axis (meters)	Y-Axis (meters)	Z-Axis (meters)	X-Axis (m/sec.)	Y-Axis (m/sec.)	Z-Axis (m/sec.)
1	HLE100RB	HLE100RB	HZR80	50	6.0	2.0	1.0	2.0	2.0	1.5
2	HLE100RB	HLE100RB	HZR100	100	6.0	1.3	1.5	2.0	2.0	1.5
3	HLE100SR	HLE100SR	HZR80	50	6.0	2.0	1.0	2.0	2.0	1.5
4	HLE100SR	HLE100SR	HZR100	100	6.0	1.3	1.5	2.0	2.0	1.5
5	HPLA120	HPLA120	HZR80	50	9.3	4.0	1.0	2.5	2.5	1.5
6	HPLA120	HPLA120	HZR100	100	9.3	3.3	1.5	2.5	2.5	1.5
7	HLE150RB	HLE150RB	HZR80	50	7.9	4.0	1.0	2.5	2.5	1.5
8	HLE150RB	HLE150RB	HZR100	100	7.9	3.3	1.5	2.5	2.5	1.5

Note: Loads, travels, and velocities shown are interdependent. Increased values are attainable.



Dimensions



Belt Driven
Tables

System Seven XX' – YY' – HZR										
Series No.	"A" Dim. mm (in.)	"B" Dim. mm (in.)	"C" Dim. mm (in.)	"D" Dim. mm (in.)	"E" Dim. mm (in.)	"F" Dim. mm (in.)	"G" Dim. mm (in.)	"H" Dim. mm (in.)	"J" Dim. mm (in.)	"K" Dim. mm (in.)
1	450 (17.72)	700 (27.56)	1090 (42.91)	310 (12.21)	738 (29.06)	450 (17.72)	700 (27.56)	1090 (42.91)	885 (34.84)	50 (1.97)
2	450 (17.72)	700 (27.56)	1090 (42.91)	310 (12.21)	738 (29.06)	450 (17.72)	700 (27.56)	1090 (42.91)	1030 (40.55)	125 (4.92)
3	450 (17.72)	700 (27.56)	1141 (44.92)	310 (12.21)	755 (29.72)	450 (17.72)	700 (27.56)	1141 (44.92)	885 (34.84)	50 (1.97)
4	450 (17.72)	700 (27.56)	1141 (44.92)	310 (12.21)	755 (29.72)	450 (17.72)	700 (27.56)	1141 (44.92)	1030 (40.55)	125 (4.92)
5	500 (19.69)	750 (29.53)	1205 (47.44)	330 (12.99)	760 (29.92)	500 (19.69)	750 (29.53)	1205 (47.44)	885 (34.84)	60 (2.36)
6	500 (19.69)	750 (29.53)	1205 (47.44)	330 (12.99)	760 (29.92)	500 (19.69)	750 (29.53)	1205 (47.44)	1030 (40.55)	15 (0.59)
7	550 (21.65)	800 (31.50)	1270 (50.00)	350 (13.78)	762 (30.00)	500 (19.69)	750 (29.53)	1220 (48.03)	885 (34.84)	60 (2.36)
8	600 (23.62)	850 (33.47)	1320 (51.97)	400 (15.75)	762 (30.00)	500 (19.69)	750 (29.53)	1220 (48.03)	1030 (40.55)	15 (0.59)

Gantry Systems Capabilities & Accessories

Parker's gantry systems provide cost-effective, easy to integrate solutions that satisfy the vast majority of automation requirements. In addition to these standard gantry systems, Parker offers products with additional capabilities to fulfill the needs of special applications. Our engineering skill and manufacturing expertise have integrated these products into custom-tailored gantry solutions which have successfully addressed the most unique and exacting requirements of machine builders and integrators around the world.



Support Structures

Parker can include the support structure and machine guarding as part of your complete system solution. Parker's ParFrame™ extruded aluminum structures are suited for light to medium duty requirements. High strength steel supports are offered for applications involving greater loads and forces.

Aluminum Structures

- Lightweight aluminum extrusions
- Economical modular construction
- Standard metric sizes – compatible with linear drive units

Steel Support Structures

- Heavy duty support
- High system stiffness
- Ideal for higher overhead gantries
- Engineered and fabricated to customer specifications

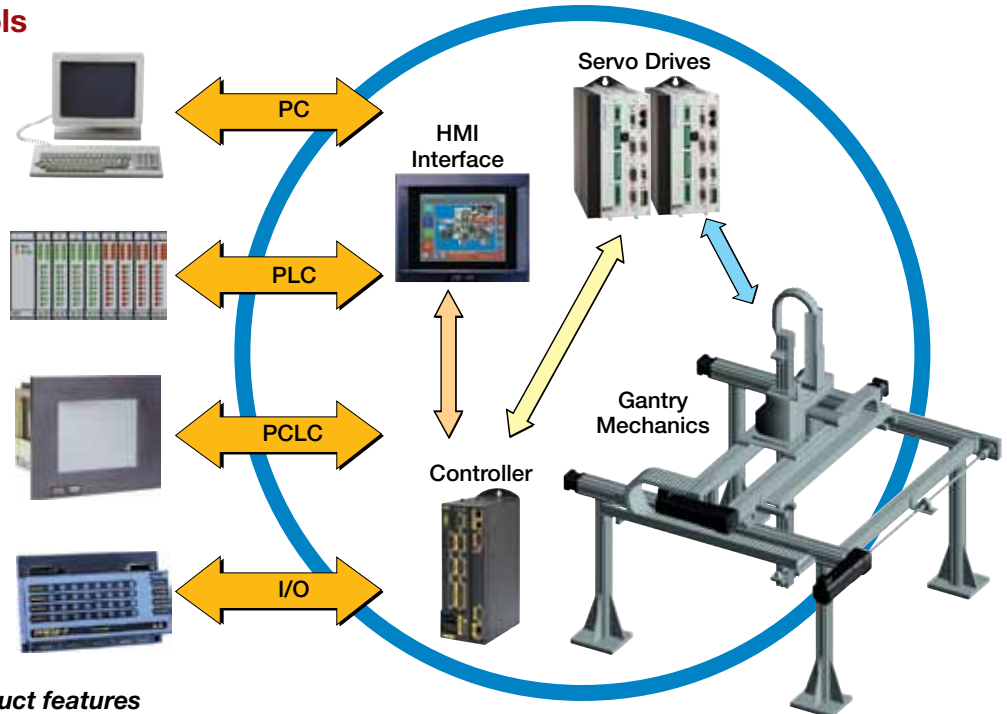
Gantry Robot CD available at www.parkermotion.com

- Sizing
- Software
- CAD Files (Parametric Tools)
- Product Manuals
- Photos/Applications Library
- Movie Gallery



Motors, Drives, and Controls (Electrical Subsystems)

A high speed multi-axis Gantry Robot requires a complete electromechanical solution where the machine Interface, Control and Motor/Drive functions are seamlessly integrated with the mechanical elements. Parker's wide range of electrical products and subsystems enable Gantry Robots to be supplied to the customer at the level of integration most suitable for his need. A basic mechanical unit; a unit including drives and motors; or a full blown electromechanical system ready to run or link to a PLC, whatever is needed for your automation requirement, Parker has the best solution.



For complete details on drive product features and specifications, please refer to the "Drives & Controllers" section of this catalog.

Open Architecture Bundled HMI Solution

Parker's CTC division bundles a tightly integrated Human Machine Interface and PC-based Control solution with an open PC hardware platform. A single source that provides affordable integration of factory-hardened PC workstations with the industry's leading HMI and control software. For additional information on Human to Machine Interface and Integrated Machine Control go to www.ctcusa.com



ACR9000 Series Stand Alone Controller

The ACR9000 series of motion controllers combine high performance and functionality into a standalone unit.

In addition to standard motion control functions, the ACR9000 offers many additional features including triggered floating point electronic gearing, triggered segmented electronic CAM, on-the-fly position and velocity matching, interruptible moves, analog or digital feedback for position or velocity loops, dual-encoder feedback, data teach and learn functions, plus 3-D arcs and splines. The ACR software tools provides further functionality and features.



Compax 3 Servo Drives

With its high-performance and modular design, the Compax3 family of industrial servo drives and drive/controllers offers a new level of servo performance and flexibility. The modular structure of the Compax3 family allows options such as intelligent motion controllers, fieldbus interfaces and industry standard motor feedback. In addition, numerous expansion options can be added to the standard product in order to optimize the capabilities required for today's demanding servo applications.



Brushless Servo Motors

Parker's Compumotor division offers servo drives which feature advanced technologies in motor design: Slotless Stator design, and the Bridged Stator design. These designs provide significant performance advantages to the user. The slotless design eliminates detent torque in the motor, permitting superior performance where smooth, low speed operation is required. The bridged stator design results in very high torque-to-inertia ratios, providing a performance advantage where high accelerations are needed.

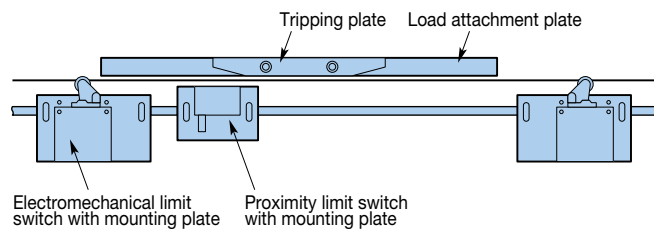


Belt Driven
Tables

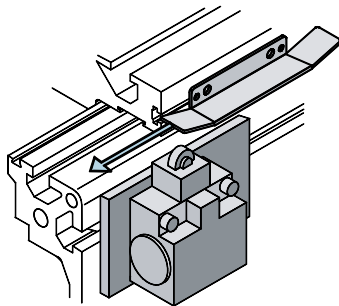
Limit and Home Sensors

“End of Travel” Limit Sensors are offered to assure safe operation of the unit by restricting travel to within allowable parameters. This range is dependent upon the load, velocity and acceleration factors determined by the application.

A “Home” Sensor can be positioned to establish a “Machine Start-up” location within the range of travel. Either mechanical or electrical proximity switches can be selected. Limit sensors can be easily positioned along the length of travel to further reduce the allowable operating envelope.



Mechanical Switches



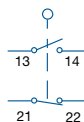
Product

HPLA (all models):
HLE100-RB, HLE100-SR,
HLE150-RB, HLE150-Z

Part Number

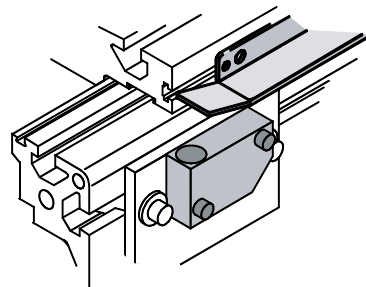
002-2442-01
510-900500
510-900505

Mechanical switches are triggered by the standard tripping plate. These switches provide one NC and one NO contact per switch.



Contact Rating	200 V, 6 A
Mechanical Lifespan	1,000,000 operations
Operating Temperature	-25° C to 40° C (-13° F to 104° F)
Protection Class	IP65
Terminal Capacity	0, 25 mm ² (24 AWG)

Electrical Proximity Switches



4-wire NPN switch with mounting hardware

Product

HPLA (all models):
HLE60-RB, HLE60-SR
HLE100-RB, HLE100-SR
HLE150-RB, HLE150-Z

Part Number

002-2440-03
002-1892-01
510-900010
510-900030

4-wire PNP switch with mounting hardware

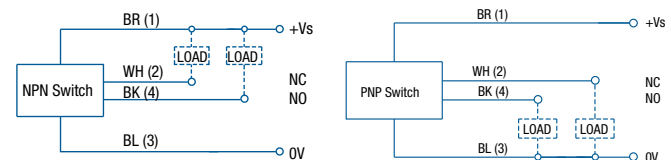
Product

HPLA (all models):
HLE60-RB, HLE60-SR
HLE100-RB, HLE100-SR
HLE150-RB, HLE150-Z

Part Number

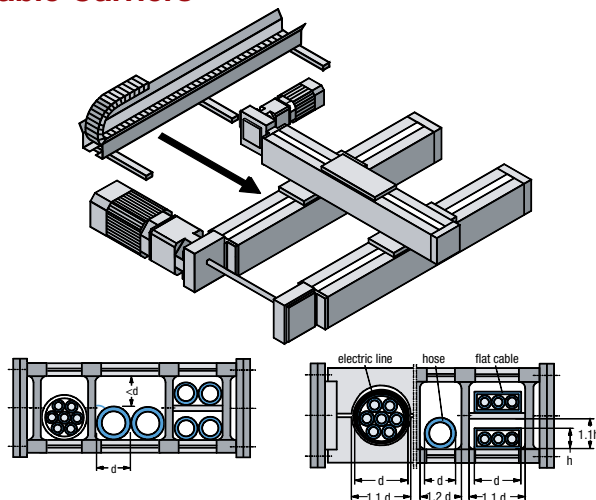
002-2440-01
002-1892-02
510-900020
510-900040

Inductive proximity switches are triggered by a standard tripping plate mounted to the side of the carriage. Available in both NPN and PNP 4-wire DC complementary outputs, the switches can be wired either NO or NC operation.



Sensing Distance	4 mm ± 10%
Voltage Supply	10-30 VDC
Switching Capacity	200 mA
Switching Response	2000 Hz
Current Consumption	<200 mA
Voltage Drop	<3 V
Protection Class	IP67
Operating Temperature	-25° C to 70° C (-13° F to 158° F)
Lead Termination	5 meter (200 in)
Reverse Polarity Protection	Yes
Short Circuit Protection	Yes

Cable Carriers



Typical Cross Sections

A cable carrier assembly is normally needed to transport cables to the carriage or custom payload. A complete cable carrier assembly includes the carrier, trough, end brackets, and mounting hardware. The cable carrier should be specifically matched to the linear actuator and other application requirements. Because of the extreme amount of cable flexing associated with high speed cable management, Parker uses only long life high-flex cables with its gantry systems. We recommend that all electric cables be approved for high speed cable carrier usage and that manufacturer's guidelines for bend radii are followed.

Cable Carrier Guidelines:

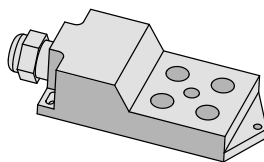
Hose lines should be highly flexible and should only extend slightly under pressure. Weight should be distributed across the cable track as evenly as possible. Cables must not be twisted when routed in the cable carrier and should be routed next to one another with approximately 10% additional space.

Avoid laying several lines on top of each other and laying lines of different diameters directly next to one another. If multiple layers must be used, dividers should be inserted between each layer – should such circumstances arise, please contact a Parker application engineer. If there is no alternative to routing several lines beside each other without subdivisions, the clearance height within the carrier must be less than line diameter. This is the only way of preventing the cables from twisting. The supply cables must be able to move freely in the cable carrier – they must never be fastened or bundled together. Separating strips must always be inserted between flat cables routed in multiple layers.

Due to diversity of the requirements associated with high speed cable management systems, it is recommended that you contact your Parker applications engineer.

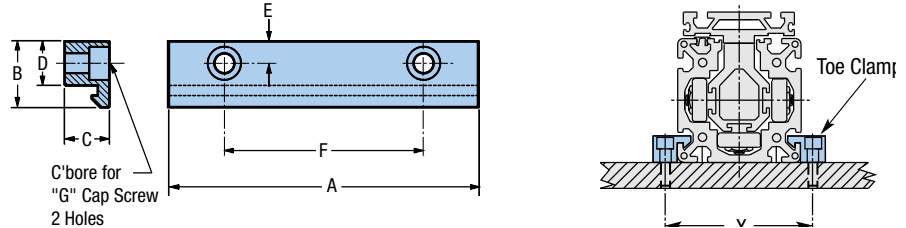
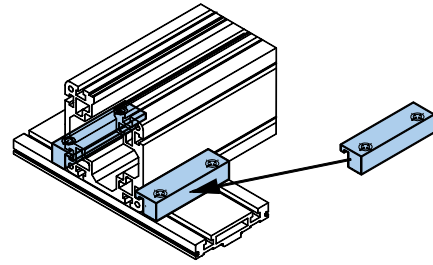
Cable Carrier Junction Box

For systems utilizing cable carriers, Parker recommends and is able to provide junction boxes and high-flex cables for limit switch assemblies. The junction box and cable consolidate the wiring through the cable carriers and provide a “clean” solution for routing limit switch wires to the motion controller.



Toe Clamps

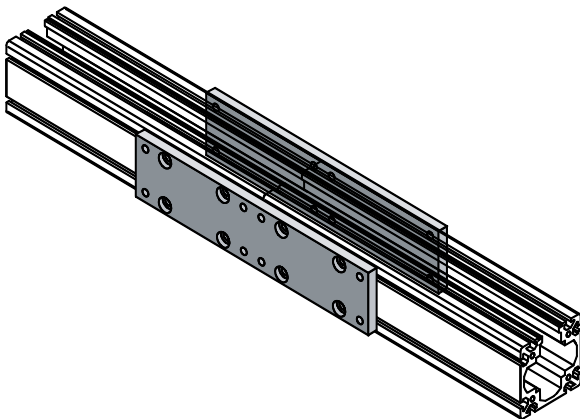
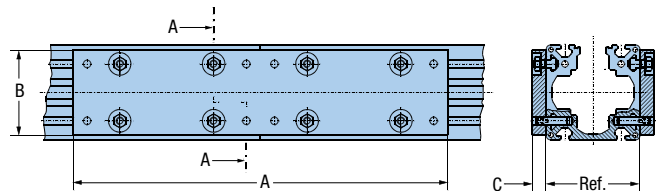
The toe clamps are used to rapidly install and fasten various combinations of linear actuators to each other; to a ParFrame™ structure; or to a mounting surface. Two clamps are required to fasten an HLE, HPLA, or HLEZ to a load attachment plate. The table at right shows the profiles for the various axis combinations.



Used With	Part Number	Dimensions							
		A	B	C	D	E	F	G	X
HLE60-RB, HLE60-SR	000-7752-01	54	18	10	12	6	43	M5	70
HPLA080	500-000931	76	27	17	20	10	48	M5	100
HPLA080	500-000932	90	27	17	20	10	60	M8	100
HPLA080	500-000930	110	27	17	20	10	70	M8	100
HLE100-RB, HLE100-SR	500-000901	90	30	20	20	10	60	M6	120
HPLA120	500-000925	110	37.5	26	25	12.5	70	M8	145
HPLA180	500-000920	170	45	36	30	15	110	M10	210
HLE150-RB, HLE150-Z	500-000902	140	40	30	25	12	90	M8	176

Splice Plates

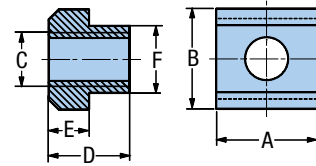
Splice Plates enable travels to be extended significantly beyond the standard range which is limited by extrusion length. Design concepts and factory installation expertise combine to produce perfectly spliced units which are easily recreated on site. The splice plate connection is only recommended for units with the carriage in the top or the bottom position.



Model/Size	Dimensions			
	A	B	C	Ref.
HPLA080	300	70	15	80
HLE100-RB, HLE100-SR	400	90	15	100
HPLA120	400	110	15	120
HLE150-RB, HLE150-Z	500	130	15	150
HPLA180	500	165	20	180

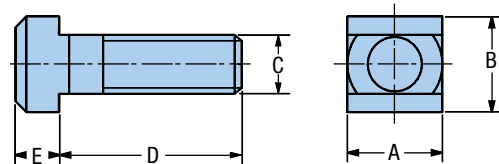
T-Nuts and T-Bolts

The T-nuts and bolts are used to fasten any element into the T-slots of the profile and to the upper side of the flange plate.



T-Nuts

Standard Part Number	Corrosion Resistant Part Number	Used With	Dimensions (mm)					
			A	B	C	D	E	F
100-2353-01	—	HLE60-RB, HLE60-SR	11	9	M5	3	—	—
131-700102	135-725390	HPLA080	10	10	M5	8	4	5.6
131-700147	--	HPLA080	20	10	M5	8	4	5.6
131-700103	135-725400	HLE100-RB, HLE100-SR	13	13	M6	10	6	—
131-700135	—	HPLA120, HLE150-RB, HLE150-Z	15	15	M6	12	6	10
131-700104	135-725402	HPLA120, HLE150-RB, HLE150-Z	15	15	M8	12	6	10
131-700141	135-725406	HPLA120, HLE150-RB, HLE150-Z	30	15	M8	12	6	10
131-700112	135-725401	HPLA180	18	18	M6	14	7	12
131-700111	135-725420	HPLA180	35	18	M10	14	7	12

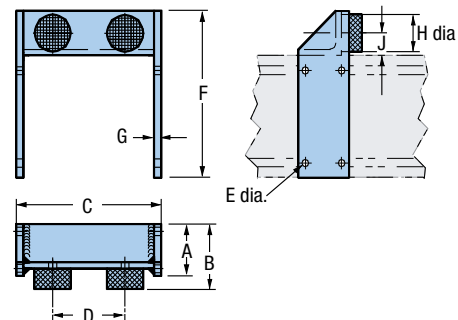
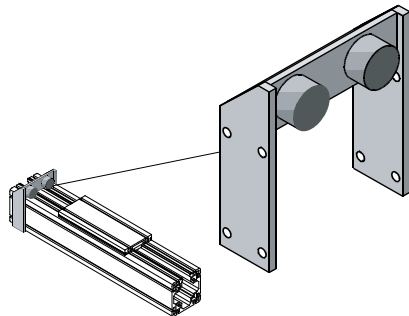


T-Bolts

Standard Part Number	Corrosion Resistant Part Number	Used With	Dimensions (mm)				
			A	B	C	D	E
131-700030	135-725430	HPLA080	10	10	M6	15	4
131-700031	—	HPLA080	10	10	M6	25	4
131-700032	—	HPLA080	10	10	M6	30	4
131-700001	—	HLE100-RB, HLE100-SR	13	13	M8	25	6
131-700002	135-725450	HLE100-RB, HLE100-SR	13	13	M8	32	6
131-700007	135-725459	HPLA120	15	15	M10	25	6
131-700008	135-725460	HPLA120, HLE150-RB, HLE150-Z	15	15	M10	32	6
131-700009	135-725465	HLE150-RB, HLE150-Z	15	15	M10	40	6
131-700016	135-725482	HPLA180	18	18	M12	25	7
131-700015	135-725480	HPLA180	18	18	M12	50	7

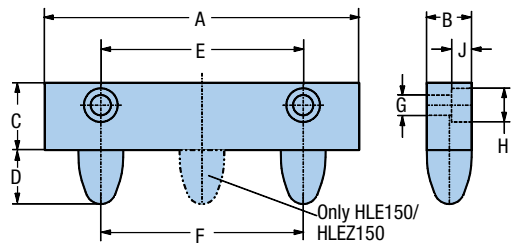
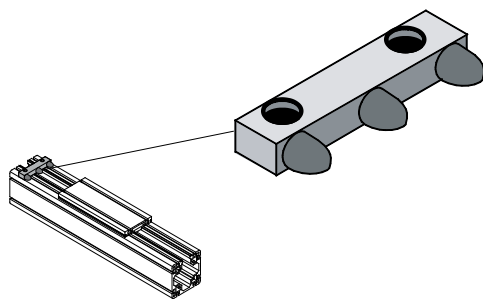
External Bumpers

External bumpers serve as adjustable hard stops. They are fitted to the grooves in the housing profile and are often utilized for restricting total travel.



HPLA Series

Part Number	Used With	Dimensions (mm)								
		A	B	C	D	E	F	G	H	J
510-006497	HPLA080	30	45	90	56	5.5	91	5	15	11
510-007497	HPLA120	50	60	140	74	9	150	10	30	17
510-008497	HPLA150	70	88	200	100	11	225	10	50	30



HLE Series

Part Number	Used With	Dimensions (mm)								
		A	B	C	D	E	F	G	H	J
510-300004	HLE100-RB, HLE100-SR	90	20	30	24	60	40	6.6	11	6.8
510-300005	HLE150-RB, HLE150-Z	140	20	30	24	90	90	6.6	11	9.0

ERV and ER Series Rodless Actuators

www.parker.com/em/erv
www.parker.com/em/er

Parker's ERV Series rodless actuator is designed in an affordable package that includes an extruded base and an external carriage containing outboard roller bearings for high load capacity.

- High-strength extruded body
- External bearing carriage for high loads
- Economical design for high-load and high-speed applications

The ER Series rodless actuator features an internal bearing carriage and the option of a belt or screw drive.

- Modular design with either belt or screw drive
- Internal bearing carriage with strip seal



Series	ER32	ER50	ERV5	ERV8
Max load:				
Roller bearing N (lbf)	222 (50)	445 (100)	1,126 (253)	2,112 (474)
Max load:				
Square rail N (lbf)	1,112 (250)	2,224 (500)	—	—
Extended carriage N (lbf)	—	—	1,915 (430)	3,590 (807)
Max velocity:				
Belt m/sec (in./sec)*	3.5 (140)	—	5.0 (200)	5.0 (200)
Ball screw m/sec (in/sec)*	0.4 (15.6)	1.5 (60)	—	—
Acme screw m/sec (in/sec)*	0.8 (31.2)	0.64 (25)	—	—
Rated acceleration (g)*	9.8 (386)	9.8 (386)	9.8 (386)	9.8 (386)
Max travel m (in)**	1 (39.2)	1.5 (59.0)	6 (238)	6 (237)
Bi-directional repeatability				
Screw (mm)	±0.025/±0.152 (±0.001/±0.006)		—	
Belt (mm)	±0.102/±0.203 (±0.004/±0.008)		±0.1/±0.2 (±0.004/±0.008)	

*Application dependant, consult catalog for specifications.

**Single piece Extrusion, Longer strokes available with spliced units.

LCB Series Compact Rodless Actuators

www.parker.com/em/lcb

The LCB Series of linear actuators incorporates a low-friction, dry running, sliding bearing carriage that provides long and reliable travel life even at 100% duty cycle. The low mass of the carriage and steel-reinforced timing belt design allows for very high accelerations and velocity. Combined with Parker motors and controls, the LCB offers a fully programmable, high-performance solution at a great value.



Series	LCB040	LCB060
Max Load, N (lbf)	60 (13)	295 (66)
Max Velocity, m/sec (in/sec)	8.0 (315)	8.0 (315)
Rated acceleration (g's)*	20 (787)	20 (787)
Max travel m (in)*	2.0 (78)	5.5 (216)
Bi-directional repeatability (mm)	±0.2 (±0.008)	±0.2 (±0.008)

*Application dependant, consult catalog for specifications

LR Series Linear Roller Systems

www.parker.com/em/lr

Linear Roller Series products from Parker IPS provide a high level load-bearing strength, and flexibility in a modular, low-cost package. These products utilize standard components and can adapt to a wide range of applications.

- Carriage loads to 2,597 lb
- Custom carriage options
- Speeds up to 5 m/sec
- Easy mounting to AC motors
- Stroke lengths over 6 m
- Instant motor/gearbox approval



Series	LR 6	LR 14	LR 14HD	LR 25
Maximum carriage load N (lbf)	649 (146)	2,669 (600)	3,350 (753)	11,552 (2,597)
Pulley diameter (mm): reversing unit 40	47.75	47.75	47.75	47.75
Pulley diameter (mm): reversing unit 80	89.12	89.12	89.12	89.12
Pulley lead (mm/rev): reversing unit 40	150	150	150	150
Pulley lead (mm/rev): reversing Unit 80	280	280	280	280
Maximum travel without splice (mm)*	5900	5850	5840	5680
Minimum travel (mm)	300	250	240	80
Maximum drive torque (Nm): reversing unit 40	20	20	20	20
Maximum drive torque (Nm): reversing unit 80	37	37	37	37
Maximum belt traction (lb/belt)	575	575	575	575
Maximum number of belts	1	4	4	4
Maximum speed (m/s)	5	5	5	5
Maximum acceleration at no load (m/s²)	10	10	10	10
Repeatability (mm)	±0.2	±0.2	±0.2	±0.2

*Consult factory for long travel lengths

ET Series Electric Cylinders

www.parker.com/em/et

The ET Series electric cylinders are engineered to provide long life and high thrust capacity in a compact cylinder package. Its robust design ensures durability in the most demanding applications.

- Ball or acme screw drive
- Angular contact thrust bearings for long life
- Stainless steel thrust tube
- Anti-rotate rod guide bearing
- IP65 option available
- Cleanroom preparation available
- 3-D drawings available online



Series	ET32	ET50	ET80	ET100	ET125
Max thrust N (lbf)	600 (135)	3,200 (720)	7,120 (1,600)	23,500 (5,300)	44,500 (10,000)
Max velocity					
Ball screw, m/sec (in/sec)*	1.3 (50)	1.5 (60)	1.3 (50)	1.3 (50)	1.5 (60)
Acme screw, m/sec (in/sec)*	0.8 (31.2)	0.64 (25)	0.8 (31.2)	0.4 (15.6)	—
Rated acceleration (g)*	9.8 (386)	9.8 (386)	9.8 (386)	9.8 (386)	9.8 (386)
Max travel (m)	1000 (39.4)	1500 (59)	1500 (59)	1500 (59)	1500 (59)
Bidirectional repeatability (mm)	±0.025/±0.152 (±0.001/±0.006)				

*Application dependant, consult catalog for specifications

HTR Telescopic Vertical Module

Visit our website for a pdf download

The HTR is a telescopic belt driven module designed to provide a long vertical travel where ceiling height or other overhead restrictions must be considered. Two “tube sections” connected with belts and pulleys generate smooth telescopic extension. A unique guiding mechanism provides overall stability.

- Ideal for low ceiling height
- Modular compatibility with other HLE units
- Capable of five meters per second velocity
- Compact platform and attractive appearance



HDM Rotary Modules

The HDM35 is a compact, easily integrated mechanism that adds rotary motion to the vertical axis of a gantry robot. It is designed to mount to the HZR80 and HZR100 vertical units. The HDM35 utilizes a gearbox and motor combination to rotate a vertical drive shaft that passes through the center of the extruded profile.

- 700 degrees of continuous rotation
- Easily integrated
- 360 degrees per second rotation

The HDM409 is a heavy duty rotary mechanism for use with the HZR100 or HTR80 vertical units. The HDM409 supports and rotates the entire Z-axis, thus permitting the full load carrying capability of the vertical axis to be utilized.

- 350 degrees of rotation
- HTR80 and HZR100 compatible
- Heavy duty gear drive mechanism
- Larger payload capability than the HDM35

