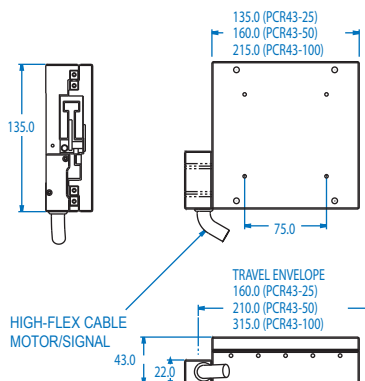


PCR43-100

Feature Summary:

- Travels up to 100mm
- Loads up to 10 kg
- Encoder resolution to 10nm
- Precision cross roller bearings provide exceptionally smooth motion.
- Center-driven brushless linear motor eliminates backlash, windup & stiction.
- Drivetrain and feedback systems are non-contact
- Multi-axis configurations available
- Class 10,000 cleanroom option.



Overview

The Primatics PCR43 Series positioning stages are the most compact of our linear stages. Ideal for demanding applications such as high precision alignment, attachment and inspection, the PCR43 offers unparalleled flexibility and allows the user to fit a highly specialized product into their most space restrictive applications.

Alignment applications require high resolution and step accuracy for optimal performance; the PCR43

employs a center-driven, brushless linear motor and an internal high resolution glass scale linear encoder specifically for this purpose. All the multiplication electronics are internal to the PCR43, eliminating large external electronics and simplifying cable management. The PCR43 can also be utilized in vertical applications using an optional counter-balance system.

Performance Verification

All PCR43 performance specifications are verified with a laser interferometer system, and a full set of accuracy, repeatability, straightness and flatness plots are included with each stage. Additionally, each unit undergoes extensive burn-in and testing. These steps ensure that the stage will deliver optimal performance over a long period of time.

For more information and a complete datasheet, go to www.primatics.com

Performance Specifications	PCR43-25	PCR43-50	PCR43-100
Travel (mm)	25	50	100
Positional Accuracy (μm) over Total Table Travel ²	+/- 1	+/- 2	+/- 3
Error Mapped Accuracy w/ Anti-Cage Creep Bearings (μm)	+/- 0.25		
Positional Repeatability (μm) (bi-directional w/ACS) ²	+/- 0.125		
Positional Repeatability (μm) (bi-directional w/out ACS) ³	+/- 0.05		
Pitch Angular Error (arc-seconds)	7	8	10
Yaw Angular Error (arc-seconds)	7	8	10
Straight-line Accuracy (μm) over Total Table Travel ²	+/- 0.75	+/- 1.5	+/- 2
Flatness Accuracy (μm) over Total Table Travel ²	+/- 0.75	+/- 1.5	+/- 2
Max Speed (mm/s) ¹	200		
Direct Load Capacity (kg)	10		
Continuous Thrust (w/o air cooling) (N)	14		
Peak Thrust (N)	41		
Minimum Resolution (nanometers)	10		

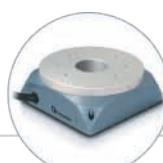
¹Maximum Obtainable Speed is Load and Move Profile Dependent

²Measured 50mm above center of carriage

³10 or 20 nanometer resolution



Linear Positioning



Rotary Positioning



Motion Controls



OEM Solutions

MODEL NUMBER CONFIGURATION

OPTIONS:

SAMPLE MODEL NUMBER:

		PCR	43	AL	0100	A	D3	H1	L1	E7	B1	P1	X0	-M
Model Series														
Cross Roller Bearings.....	PCR													
Table Height														
43 mm.....	43													
Base Material														
Cast Iron ¹	CI													
Aluminum.....	AL													
Table Travel														
25 mm.....	0025													
50 mm.....	0050													
100 mm.....	0100													
Bearings														
Standard Cross Roller.....	C													
Anti-Cage Creep Cross Roller.....	A													
Drivetrain														
Linear Motor - 1 Stack.....	D3													
Home Sensor														
N.C. Current Sinking.....	H1													
N.O. Current Sinking.....	H2													
Travel Limits														
N.C. Current Sinking.....	L1													
N.O. Current Sinking.....	L2													
Encoder														
Linear Encoder - 10 nanometer.....	E6													
Linear Encoder - 20 nanometer.....	E7													
Pneumatic Counterbalance														
No Counterbalance.....	B1													
With Counterbalance ²	B2													
Protection Level														
Level 1 - Class 10,000 Cleanroom.....	P1													
Multi-Axis Stacking														
Single axis - no cable management.....	X0													
X axis (with multi-axis cable management).....	X1													
Y axis (with multi-axis cable management).....	X2													
Z axis (with multi-axis cable management).....	X3													
Options														
Error Mapping.....	M													
No Options.....	(Leave Blank)													

¹ Allow Longer Delivery Time ² Includes Z bracket

* Not all configurations are valid. Consult factory for assistance.

