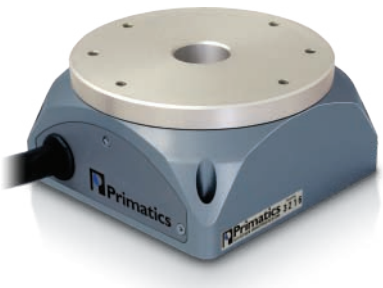
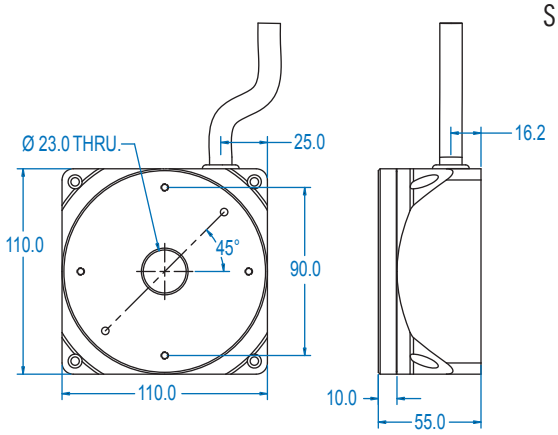
PDR110 Series Rotary Table

PDR110
SERIES





Feature Summary:

- Direct drive continuous rotary motion
- Space saving, compact design; at only 55 mm tall, the PDR110 is among the most compact direct drive stages on the market.
- 110 mm diameter model
- Low maintenance & longer life; integrated brushless servo motor drivetrain eliminates gear wear, backlash and torque variation.
- Resolutions to 0.36 arc-seconds
- All multiplication electronics are internal and there is only one external connection cable.
- Class 10 cleanroom option

Overview

Primatics PDR110 rotary tables are among the most advanced direct drive tables available. They feature a high performance direct drive motor that creates arc second repeatability and fast settling times, making the PDR series ideal for semiconductor wafer inspection, high speed laser machining & precision metrology. The compact design also yields a smaller footprint than comparable worm drives.

Superior Performance

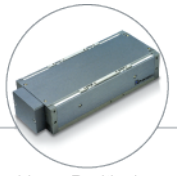
The PDR's high efficiency neodymium servo motor permits greater acceleration, shorter settling times and less motor heating than other types of direct drive stages. In addition, the PDR motors have a high pole count, which aides in obtaining low velocity ripple even at very low speeds. The PDR110's high performance motor, coupled with its platen mounted high resolution glass scale, results in high servo stiffness over a wide dynamic range.

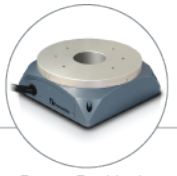
For more information and a complete datasheet, go to www.primatics.com

Direct Drive - Glass Encoder	PDR110		
Travel (degrees)	360		
Resolution (arc-seconds)	0.36	3.6	21.6
Accuracy (arc-seconds)	+/- 50		+/- 90
Error Mapped Accuracy w/ E3 Rotary Encoder (arc-seconds)	+/- 5		
Max Speed (rpm)[1, 2]	110	350	
Bi-directional Repeatability (counts)	+/- 4	+/- 2	
Wobble (arc-seconds)	7		
Axial Runout (µm)	3		
Radial Runout (µm)	5		
Continuous Torque (N-m)[2, 3]	0.4		
Peak Torque (N-m)[2, 4]	2.7		
Axial Load Capacity (kg)	10		
Radial Load Capacity (kg)	5		
Weight (kg)	1.9		

[1] Resolution & Controller Dependant [2] Assumes 100 VDC Bus [3] Assumes 25 Degrees C Temperature Rise [4] At 10% duty cycle & 1 second maximum
All specifications subject to chance w/o notice.

Primatics


Linear Positioning


Rotary Positioning


Motion Controls


OEM Solutions

CONNECTOR PIN OUTS

Servo Axis connector for rotary tables that include motor and encoder

Mating Connector: FCI (Burndy) Male, circular connector, 28 contacts, size 20 shell pin-out

Pin	Function
A	Motor A
B	Motor B
C	Motor C
D	Motor Shield
E	Encoder 5V - power for encoder
F	Encoder A+ output
G	Encoder A- output
H	Encoder B+ output
J	Encoder B- output
K	Encoder Shield
L	12VDC - for limit, home, and temp sensor
M	DCCOM
N	Home - switch to DCCOM when on forward side of home position
P	NC
R	NC

Pin	Function
S	Chassis
T	Hall V+
U	Hall V-
V	Encoder Common
W	Encoder Index +
X	Encoder Index -
Y	NC
Z	NC
a	NC
b	Hall A
c	Hall B
d	Temperature monitor - connect to DCCOM for temperature OK
e	Hall C

MODEL NUMBER CONFIGURATION

OPTIONS:

SAMPLE MODEL NUMBER:

PDR 110 AL H1 L1 E1 P4 -M

Model Series
Direct Drive ..... **PDR**

Tabletop Width
110 mm .....**110** 210 mm **210**
160 mm **160**

Base Material
Aluminum ..... **AL**

Home Sensors
N.C.....**H1** N.O.....**H2**

Limit Signals*
N.C.....**L1** N.O.....**L2**

Encoder Resolution (arc-sec)

PDR110	PDR160	PDR210	
21.6	16.0	11.25	..... **E1**
3.6	2.0	1.0	..... **E2**
0.36	0.25	0.18	..... **E3**

Clean Room Options
Level 1 - Class 10,000 Cleanroom **P1**
Level 4 - Class 10 Cleanroom **P4**

Options
Error Mapping ..... **M**
No Options ..... **(Leave Blank)**

***The PDR does not include limit switches. The Limit Signal options are provided for compatibility with motion controller requirements.**

32114 Mallard Ave., PO Box 409, Tangent, OR 97389-0409, USA | Phone: [541] 791-9678 | Toll Free: [888] 754-3111 | Fax: [541] 791-9410
www.primatics.com