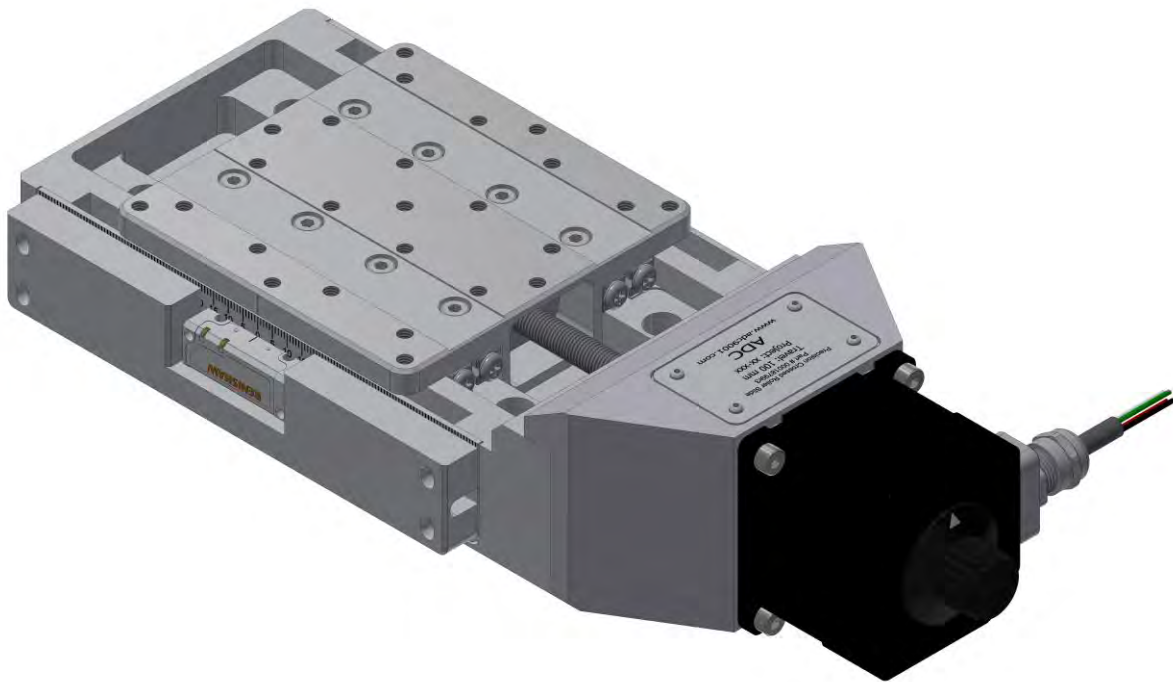


DS310 Series

Precision Mechanical Linear Stages



SUBMICRON ACCURACY

PRECISION GROUND BALL SCREW

PRELOADED CROSSED ROLLER BEARINGS

HIGH RESOLUTION AND REPEATABILITY

126 Ridge Rd, Lansing NY, 14882
www.adc9001.com

ADVANCED DESIGN
CONSULTING USA, INC.

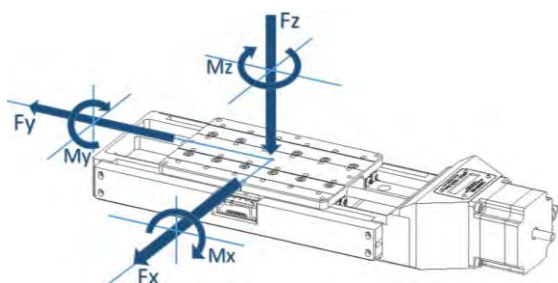
1-607-533-3531
adc@adc9001.com

DS310 SERIES SPECIFICATIONS

The DS310 Series linear slides provide an accurate and rigid platform for use in any positioning system. The rugged anodized aluminum housing features a precision ground base and top plate, each with multiple utility holes for easy integration into the users' system. The stage is driven by a high class preloaded ball screw coupled to a high torque 200 step per revolution stepper motor which can be run in full, half, or micro stepping mode to meet your resolution requirements. Maximum rigidity is assured using preloaded crossed roller linear bearings. Each slide also features two fully adjustable, normally closed limit switches to define the extents of travel.

KEY FEATURES

- Travels 50-200mm
- 1 μm Repeatability
- Various Motor Options
- Load Capacity up to 46 kg
- Ultra-fine Resolution



LOAD CHARACTERISTICS

Description	Fx (N)	Fy (N)	Fz (N)	Mx (Nm)	My (Nm)	Mz (Nm)
DS310	730	465	860	103	109	95.7

*Loads are not simultaneous

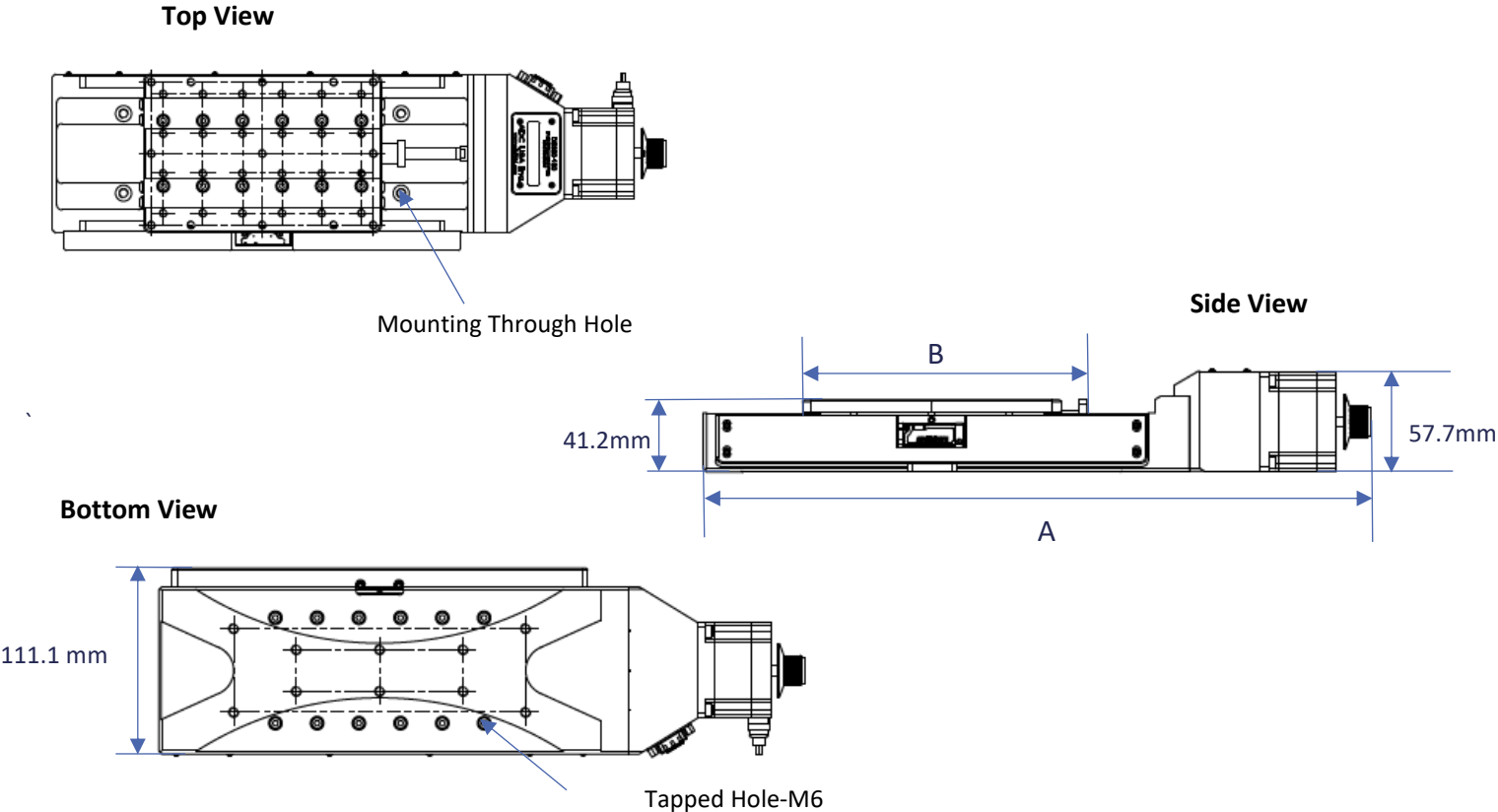
MECHANICAL

Description	50	100	150	200
Travel (mm)	50	100	150	200
Optional Linear Encoder	Yes	Yes	Yes	Yes
Repeatability (μm RMS)	1	1	1	1
Lead Accuracy ($\mu\text{m}/25\text{mm}$)	5	5	5	5
Trajectory Straightness ($\mu\text{m}/25\text{mm}$)	4	4	4	4
Ball Screw Lead (mm)	1	1	1	1
Maximum Speed (mm/sec)	100	100	100	100
Load Capacity (kg)	46	46	46	46
Mass (kg)	2.9	4	4.7	5.6

ELECTRICAL

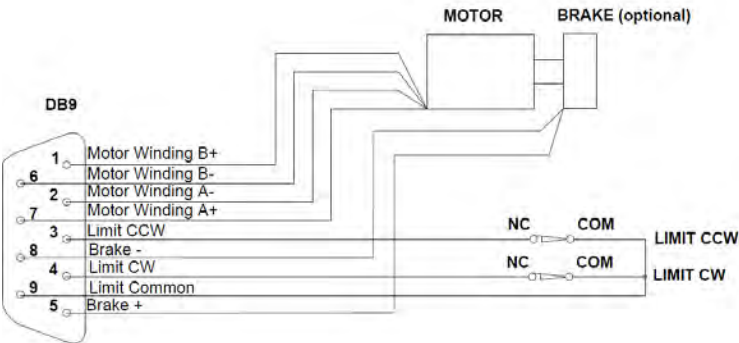
Description	
Motor	2-Phase, 5-Phase Stepper; DC
Limit Switches	Mechanical, Normally Closed
Optical Encoder Type	Renishaw Tonic (http://www.renishaw.com)
2-Phase Current (Amps/Phase)	2.8

DS310 SERIES DIMENSIONS AND INFORMATION



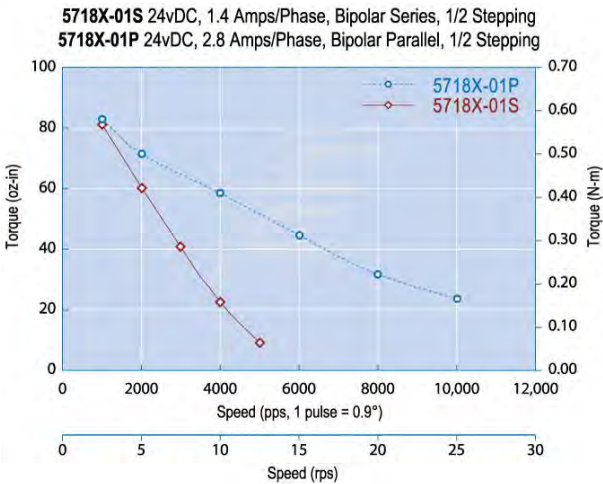
Model	50	100	150	200
A- Total Length (mm)	283	387	483	587
B- Stage Length (mm)	100	150	200	250

ELECTRICAL CONNECTOR



ADC uses a standard male DB-9 Connector for both the motor and limit switches.

2-PHASE MOTOR TORQUE GRAPH



DS310 ORDERING INFORMATION

DS310	-50	-A	-N	-B	-2PH	-G
Series	Model	Air Type	Encoder	Brake	Motor	Gearbox
	-50	-A	-E	-B	-2PH	3:1
	-100	-HV	-N	-N	-5PH	to
	-150				-DC	100:1
	-200					ratio

Travel Options

-50	50mm Stage Travel
-100	100mm Stage Travel
-150	150mm Stage Travel
-200	200mm Stage Travel

Air Preparation Options

-A	Standard Air Stage
-HV	High Vacuum Air Stage, 10^{-7} torr

Optical Encoder Options

-E	With Optical Encoder
-N	Without Optical Encoder

Brake Options

-B	With Brake, 24VDC
-N	Without Brake

Motor Options

-2PH	Standard 2 Phase Bi-Polar Stepper Motor
-5PH	5 Phase Stepper Motor
-DC	DC Motor

Gearbox Option

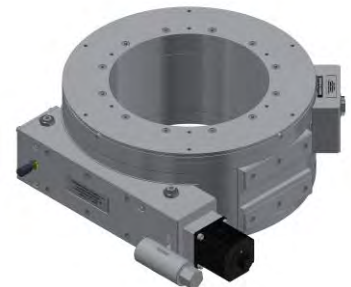
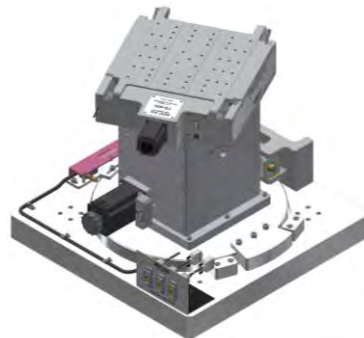
Available from 3:1 to 100:1 ratios

Example Order

DS310-50-A-N-B-2PH

This is an order for a DS310 Precision Crossed Roller Slide with 50 mm travel, in air, with no encoder, with a brake, and a 2-phase motor.

Similar ADC Products



Linear Stages	Lift Stages
DS210	DJ210
DS310 (Shown)	DJ310
DS410	DJ410
DS510	
Tilt Stages/Gonimeters	Rotation Stages
TS-50	RS-100
TS-90	RS-200
TS-160	RS-300
TS-300	RS-400
TS-400	RS-500
Mounting Brackets	Big Jacks
MB200	BJ25-50
MB300	BJ25-100
MB400	BJ25-150
	BJ25-200

Custom Complex Motion Systems

For custom complex motion systems, contact ADC at adc@adc9001.com or visit our website www.adc9001.com



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