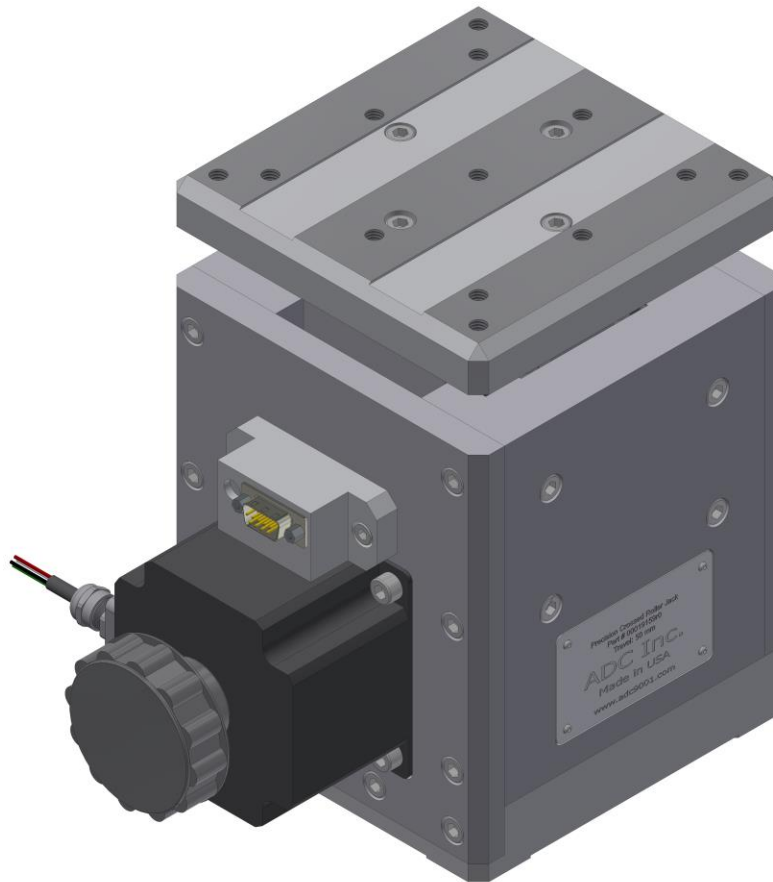


# DJ410 Series

Precision Mechanical Lift Stages



**SUBMICRON ACCURACY**

**PRELOADED BALL SCREW**

**PRECISION GROUND BASE AND TOP PLATE**

**LONG-LIFE LINEAR GUIDE BEARING SYSTEM**

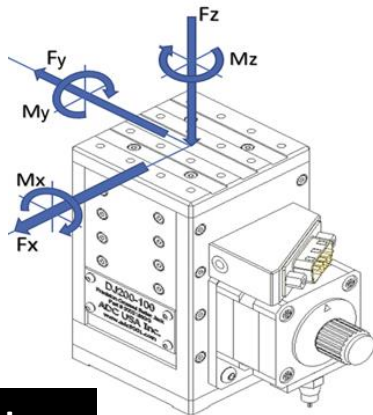
126 Ridge Rd, Lansing NY, 14882  
[www.adc9001.com](http://www.adc9001.com)

ADVANCED DESIGN  
CONSULTING USA, INC.

1-607-533-3531  
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## DJ410 SERIES SPECIFICATIONS

The DJ410 series jacks 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 vertical 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 jack also features two adjustable, normally closed limit switches at the end of travel.



### KEY FEATURES

- Travels 50-200mm
- 1  $\mu$ m Repeatability
- Various Motor Options
- Load Capacity up to 46 kg
- High Dynamic Performance

### LOAD CHARACTERISTICS

Description	Fx (N)	Fy (N)	Fz (N)	Mx (Nm)	My (Nm)	Mz (Nm)
DJ410	1970	1675	2815	230	260	400

\*Loads are not simultaneous

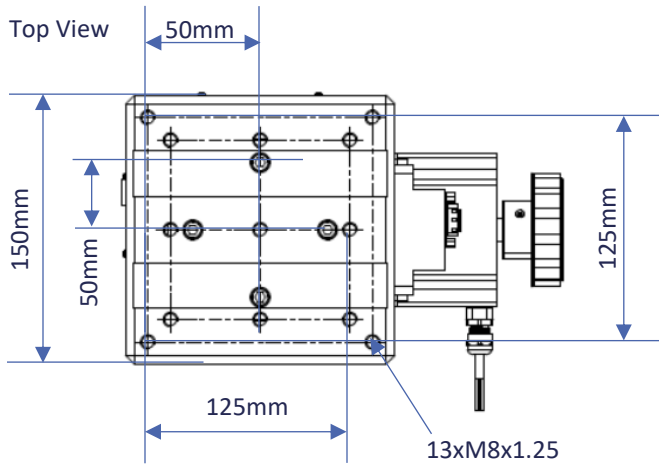
### MECHANICAL

Description	50	100	150	200
Travel (mm)	50	100	150	200
Optional Linear Encoder	Yes	Yes	Yes	Yes
Repeatability ( $\mu$ m RMS)	1	1	1	1
Lead Accuracy ( $\mu$ m/25mm)	5.0	5.0	5.0	5.0
Trajectory Straightness ( $\mu$ m/25mm)	4.0	4.0	4.0	4.0
Ball Screw Lead (mm)	2.0	2.0	2.0	2.0
Maximum Speed (mm/sec)	20	20	20	20
Load Capacity (kg)	280	280	280	280
Mass (kg)	13.6	21.1	25.6	33

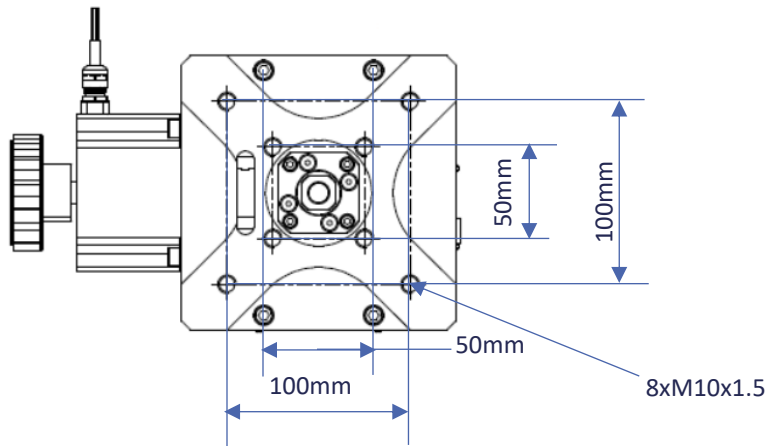
### ELECTRICAL

Description	
Motor	2-Phase, 5-Phase Stepper; DC
Limit Switches	Mechanical, Normally Closed
Optical Encoder Type	Renishaw Tonic ( <a href="http://www.renishaw.com">http://www.renishaw.com</a> )
2-Phase Current (Amps/Phase)	4.2

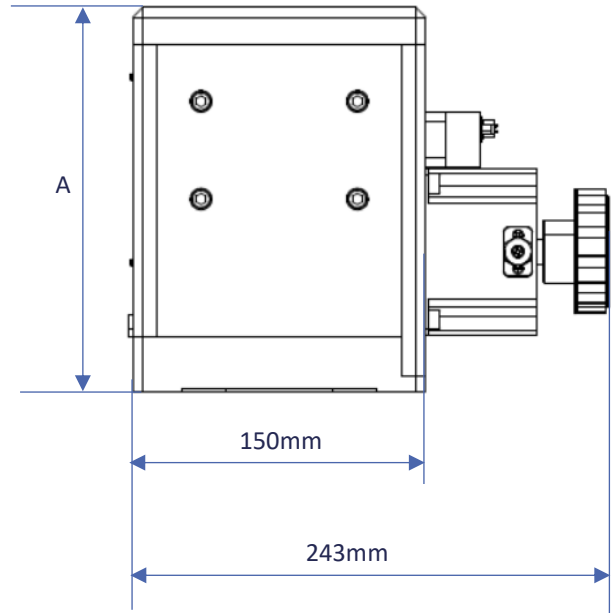
## DJ410 SERIES DIMENSIONS AND INFORMATION



Bottom View

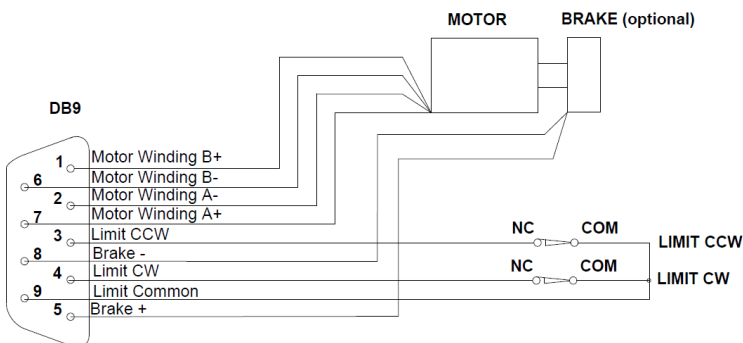


Side View



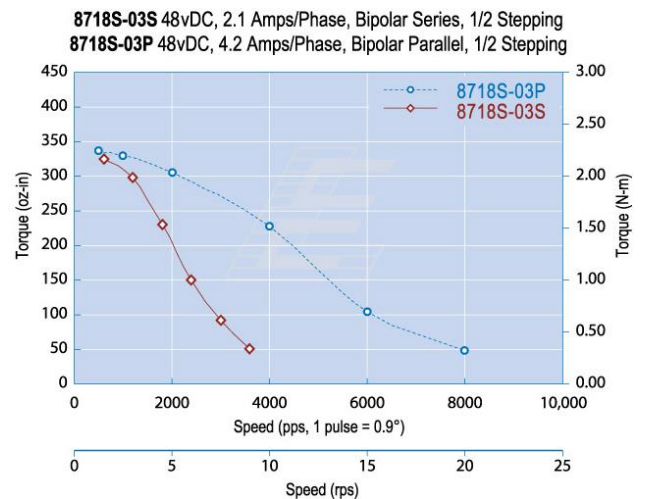
Model	50	100	150	200
A- Closed Height (mm)	196.5	319	394	519

## ELECTRICAL CONNECTOR



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

## 2-PHASE MOTOR TORQUE GRAPH



## DJ410 ORDERING INFORMATION

DJ410	-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

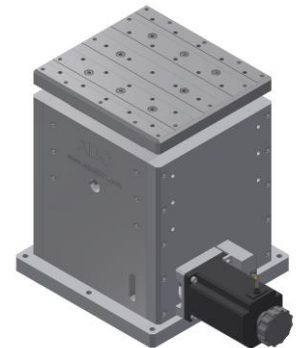
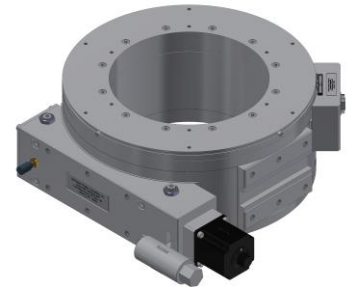
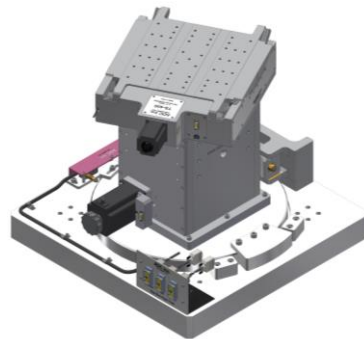
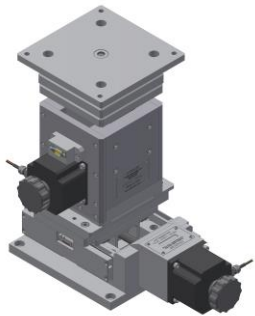
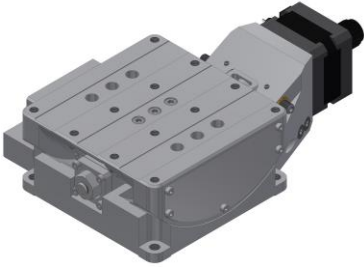
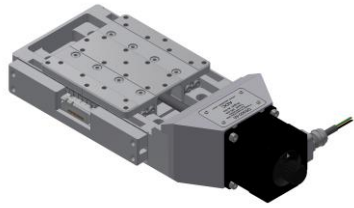
Available from 3:1 to 100:1 ratios

### Example Order

#### DJ410-50-A-N-B-2PH

This is an order for a DJ400 Precision Crossed Roller Jack 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	DJ310
DS410	DJ410 (Shown)
DS510	
Tilt Stages/ Goniometers	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](mailto:adc@adc9001.com) or visit our website [www.adc9001.com](http://www.adc9001.com)



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