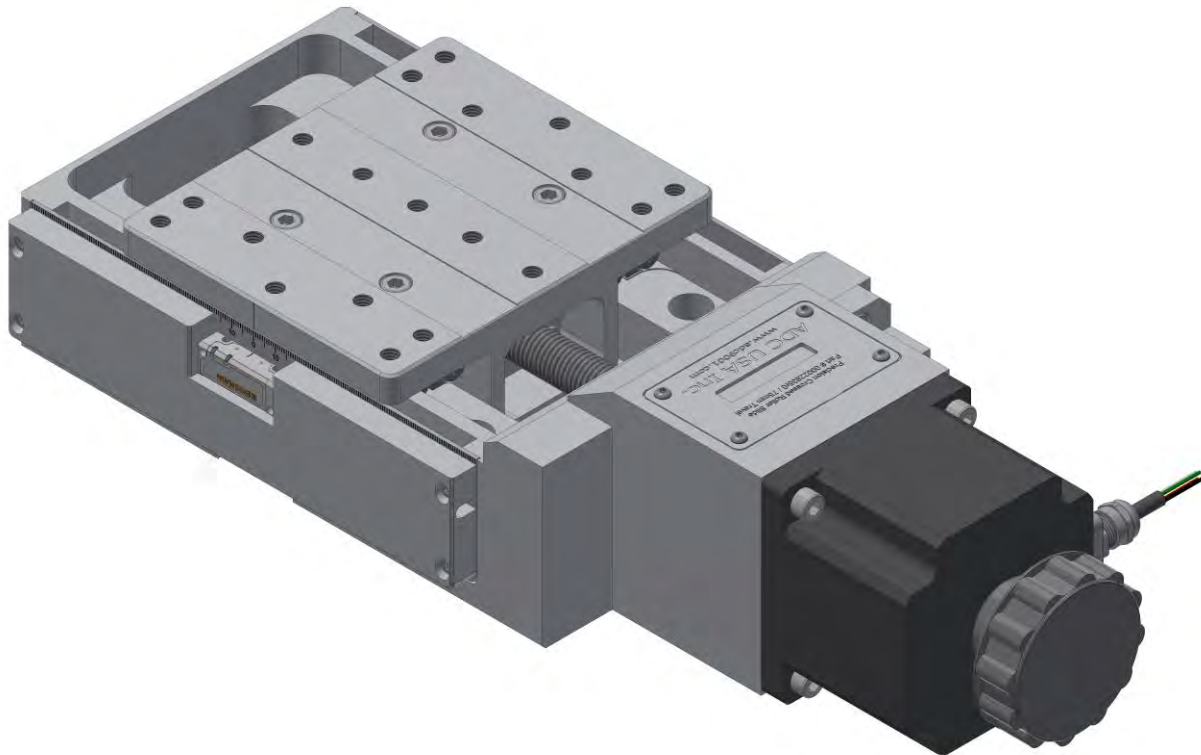


DS410 Series

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.

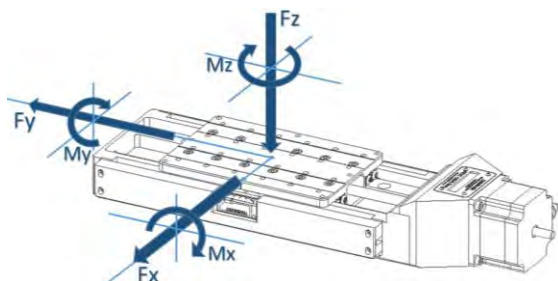
1-607-533-3531
adc@adc9001.com

DS410 SERIES SPECIFICATIONS

The DS410 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 75-300mm
- 1 μ m Repeatability
- Various Motor Options
- Load Capacity up to 280 kg
- Ultra-fine Resolution



LOAD CHARACTERISTICS

| Description | Fx (N) | Fy (N) | Fz (N) | Mx (Nm) | My (Nm) | Mz (Nm) |
|-------------|-----------|-----------|-----------|------------|------------|------------|
| DS410 | 1675 | 2815 | 1970 | 260 | 400 | 230 |

*Loads are not simultaneous

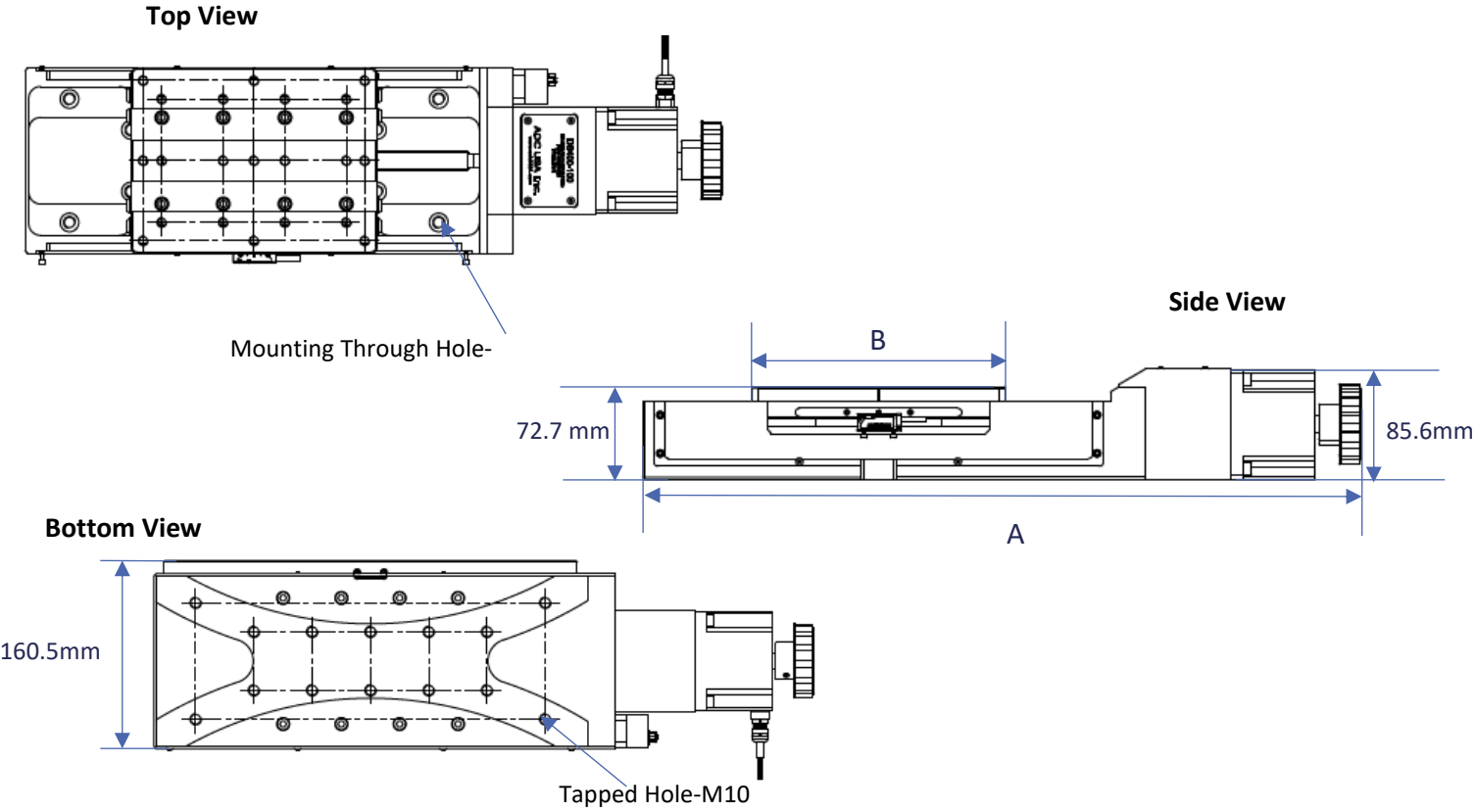
MECHANICAL

| Description | 75 | 150 | 225 | 300 |
|---|-----|------|-----|------|
| Travel (mm) | 75 | 150 | 225 | 300 |
| Optional Linear Encoder | Yes | Yes | Yes | Yes |
| Repeatability (μ m RMS) | 1 | 1 | 1 | 1 |
| Lead Accuracy (μ m/25mm) | 6 | 6 | 6 | 6 |
| Trajectory Straightness (μ m/25mm) | 5 | 5 | 5 | 5 |
| Ball Screw Lead (mm) | 2 | 2 | 2 | 2 |
| Maximum Speed (mm/sec) | 40 | 40 | 40 | 40 |
| Load Capacity (kg) | 280 | 280 | 280 | 280 |
| Mass (kg) | 10 | 13.3 | 16 | 19.7 |

ELECTRICAL

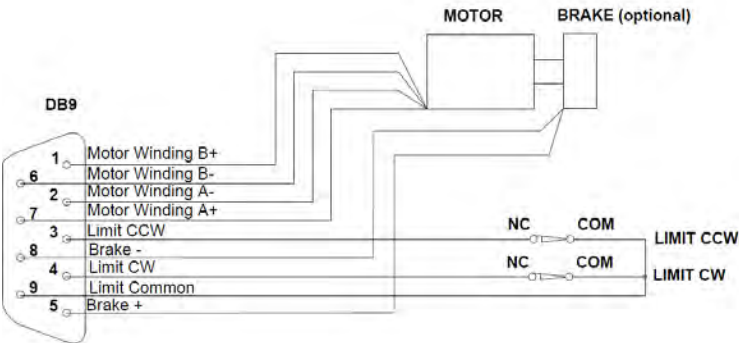
| Description | |
|------------------------------|--|
| Motor | 2-Phase, 5-Phase Stepper; DC |
| Limit Switches | Mechanical, Normally Closed |
| Optical Encoder Type | Renishaw Tonic (http://www.renishaw.com) |
| 2-Phase Current (Amps/Phase) | 4.2 |

DS410 SERIES DIMENSIONS AND INFORMATION



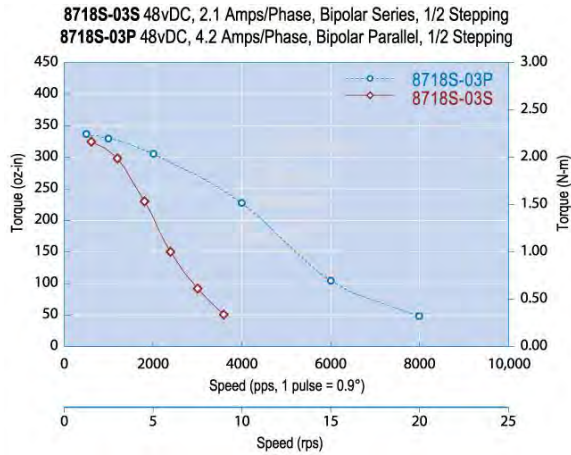
| Model | 75 | 150 | 225 | 300 |
|----------------------|-------|-------|-------|-------|
| A- Total Length (mm) | 410.4 | 566.4 | 723.9 | 874.1 |
| B- Stage Length (mm) | 125 | 200 | 275 | 350 |

ELECTRICAL CONNECTOR



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

2-PHASE MOTOR TORQUE GRAPH



DS410 ORDERING INFORMATION

| DS410 | -75 | -A | -N | -B | -2PH | -G |
|--------|-------|----------|---------|-------|-------|---------|
| Series | Model | Air Type | Encoder | Brake | Motor | Gearbox |
| | -75 | -A | -E | -B | -2PH | 3:1 |
| | -150 | -HV | -N | -N | -5PH | to |
| | -225 | | | | -DC | 100:1 |
| | -300 | | | | | ratio |

Travel Options

| | |
|------|--------------------|
| -75 | 75mm Stage Travel |
| -150 | 150mm Stage Travel |
| -225 | 225mm Stage Travel |
| -300 | 300mm 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

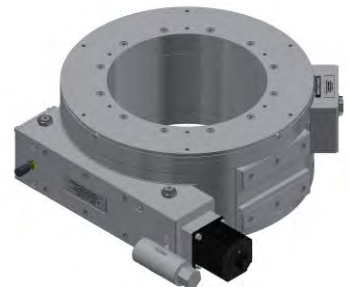
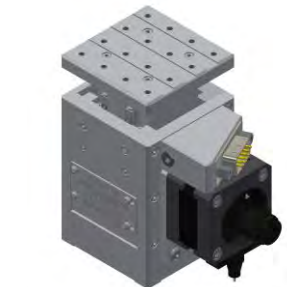
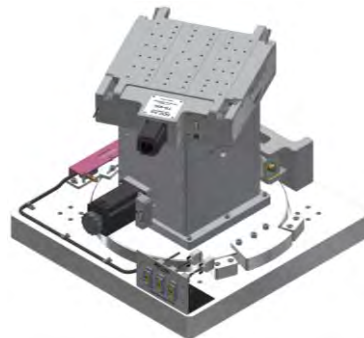
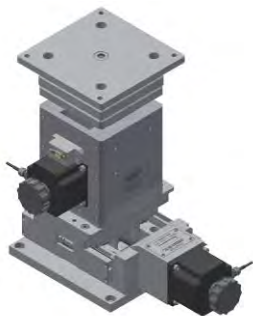
Available from 3:1 to 100:1 ratios

Example Order

DS410-75-A-N-B-2PH

This is an order for a DS410 Precision Crossed Roller Slide with 75 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 (Shown) | 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
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