

Precision Linear Motion Platform

FEATURES

- High capacity
- 300mm Travel
- Zero backlash, precision ground ball screws
- Optical limit switches with home
- Stepper motor drive
- Recirculating ball linear ways



The HDS-BS Series stages are designed for high loading capacities and long travels in a variety of applications. This ball screw stage is built for high duty cycles and long life and can attain high velocities for factory automation and semiconductor processing equipment. Recirculating ball linear ways and a precision ground ball screw offer extremely smooth operation and velocity control. The HDS-BS series stages can be stacked to create X, Y, and Z motion. An optional brake can be added for safety.



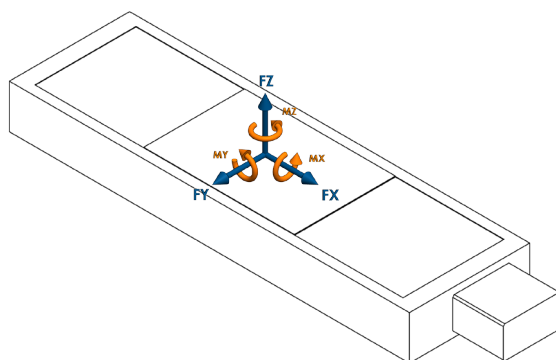
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P: 866.906.2709 | F: 919.882.1430
www.griffinmotion.com

HDS-300-BS-B-N-S-E-00

Motion Specifications

Product Specifications

Force X (N)	150
Force Y (N)	500
Force Z (N)	1000
Flatness (μm)	10
Height (mm)	55
Length (mm)	599
Limit Switches	Yes
Linear Accuracy (μm)	30
Linear Repeatability (μm)	3
Linear Velocity (mm/s)	25
Moment X (N·m)	200
Moment Y (N·m)	300
Moment Z (N·m)	100
Moving Mass X (kg)	1.71
Pitch +/- (arc-sec)	16
Screw Lead (mm)	2
Stage Mass (kg)	7.92
Stepper Motor Resolution (Whole Steps/rev)	400
Straightness (μm)	10
Width (mm)	150
Yaw +/- (arc-sec)	16



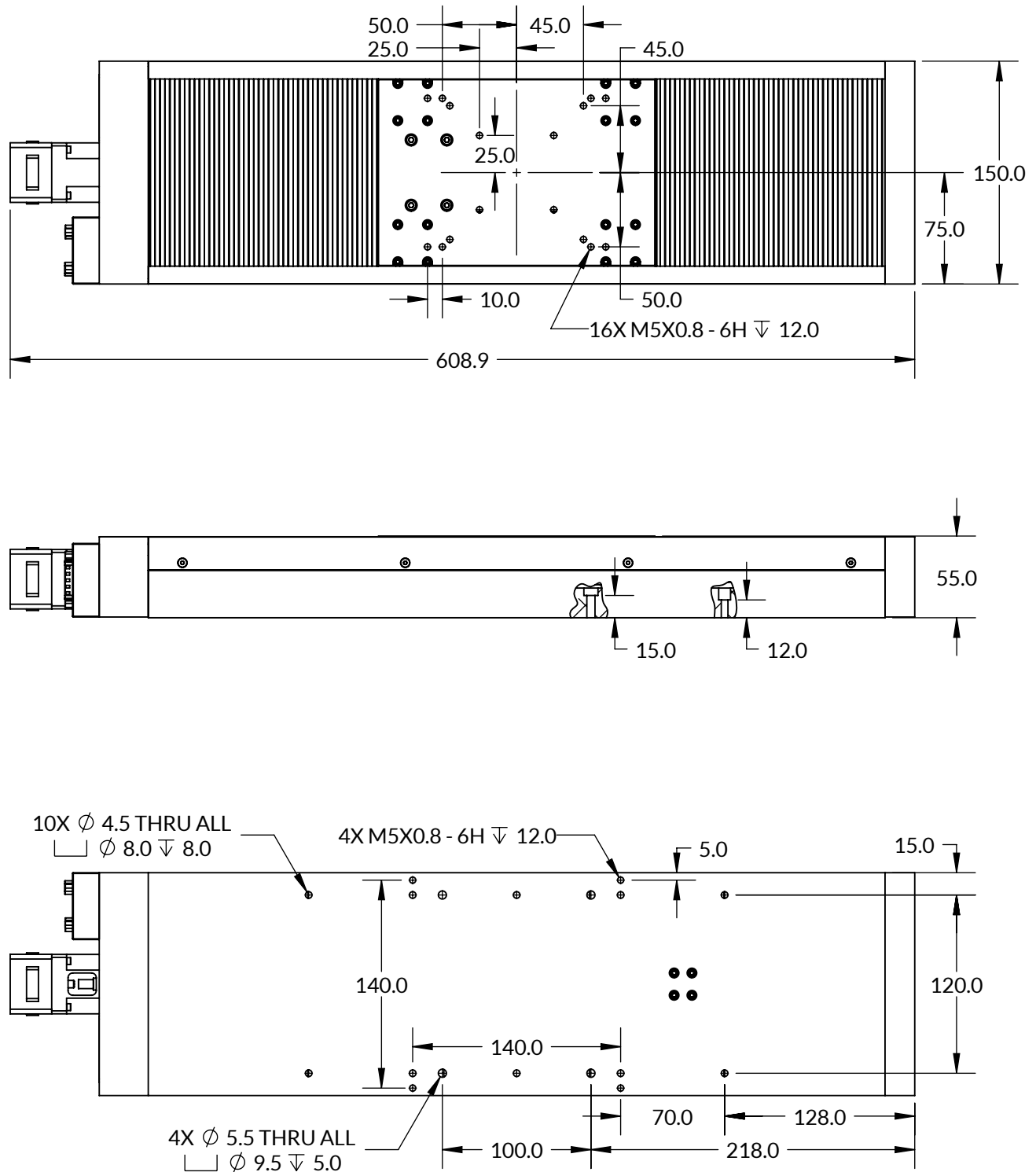
LOAD DIRECTIONS

Part Number Description

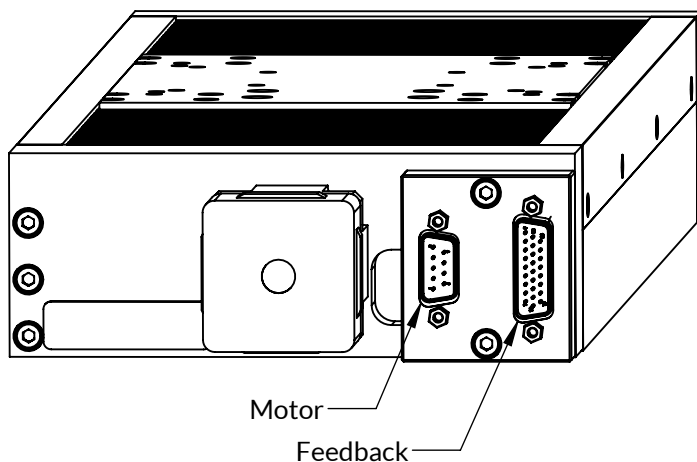
HDS	HDS Series
300	300mm Travel
BS	Ball Screw Drive
B	Stepper Motor
N	Limit and Home Switch Only
S	Standard Precision
E	Bellows
00	Standar Product (Call for custom)

HDS-300-BS-B-N-S-E-00

Mechanical Specifications



Feedback Connector (DSUB26HD MALE)	
PIN	NAME
1	+5V
2	*
3	*
4	*
5	LIM+
6	*
7	*
8	*
9	*
10	*
11	*
12	*
13	*
14	LIM-
15	*
16	*
17	*
18	*
19	GND
20	*
21	*
22	*
23	HOME
24	*
25	*
26	*
* Reserved	



Motor Connector (DSUB9 MALE)	
PIN	NAME
1	*
2	*
3	*
4	*
5	*
6	PHASE A+
7	PHASE A-
8	PHASE B+
9	PHASE B-
* Reserved	



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Electrical Specifications

Motor Specifications	
Motor Type	Bipolar Stepper
Current/phase (A)	0.8
Resistance/phase (Ω)	10.0
Induction/phase(mH)	6.9

Feedback Specifications	
Supply Voltage (V)	5.0 $\pm$ 10%
Supply Current (mA)	250
Encoder Feedback	No
Limit Switches	Yes
Limit Switch Output Type	Open-collector
Limit Switch Output current (mA)	-20.0
Home Switch	Yes
Home Switch Output Type	Open-collector
Home Switch Output current (mA)	-20.0

A home switch is provided near center mechanical travel and a limit switch at each end of travel. The limit switches will be pulled low throughout the travel range of the stage. The output will swing to high-impedance at the end of travel and remain high-impedance until the mechanical limit is reached.