



Dover Motion

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Features

- :: Ideal for scanning and step and repeat applications
- :: High speed linear motor
- :: Space-saving shuttle design

Description

The SAS Series high speed linear actuator shuttle stages provide high speeds in a very compact design. The stage design uses recirculating bearings to minimize the overall stage size. Its brushless linear servo motor allows high speed operation with smooth positioning, making it ideal for use in high throughput scanning or accurate stepping

applications.

A linear encoder is standard and available in several resolutions. Standard units include flexible bellows. This unit's cabling terminates on a static base plate, simplifying external wiring for convenient integration.

SAS-IC High Power Motor Table Specifications

Specifications	SAS-IC-800	SAS-IC-1200	SAS-IC-1800	SAS-IC-2400	SAS-IC-3600
Travel (inches)	8	12	18	24	36
Overall Height (inches)	3	3	3	3	3
Positional Accuracy (μm) ¹	6	9	11	13	21
Resolution (for all, μm)	1 or 0.1 μm , others available upon request				
Bidirectional Repeatability (μm)	± 0.5	± 0.5	± 0.5	± 0.5	± 0.5
Load Capacity (kg) ²	70	70	70	70	70
Pitch & Yaw (arc-seconds)	15	20	25	30	50
Flatness & Straightness (μm)	3	5	9	13	30
Mass (kg)	Moving	6.6	6.6	6.6	6.6
	Total	20	23	27	32

SAS-IC Motor Characteristics

Motor Force Constant (for all, N/A)	51.5
Fundamental Motor Constant (for all, 130°)	20.5 N/Watts
Bank-emf Constant (for all, V/m/s)	42.0
Coil Resistance (for all, 25°, ohm)	3.0
Coil Inductance (for all, mH)	9.7
Continuous Current (for all, 130°, Amps)	3.3
Peak Current (for all, Amps)	13.7
Continuous Force (for all, 130°, N)	171
Peak Force (for all, N)	550
Continuous Power Rating (for all, Watts)	69

¹ With 2 point Slope Correction.

² Please contact our Applications Engineers for loads exceeding 75 Kg.

³ Maximum speed is encoder and load dependant

SAS-IL Smooth Motion Motor Table Specifications

Specifications	SAS-IL-800	SAS-IL-1200	SAS-IL-1800	SAS-IL-2400	SAS-IL-3600	
Travel (inches)	8	12	18	24	36	
Overall Height (inches)	3	3	3	3	3	
Positional Accuracy (microns) ¹	6	9	11	13	21	
Resolution (for all, micron)	5, 1, 0.5, 0.1					
Bidirectional Repeatability (microns)	±0.5	±0.5	±0.5	±0.5	±0.5	
Load Capacity (for all, g) ²	70					
Pitch & Yaw (arc-seconds)	15	20	25	30	50	
Flatness & Straightness (micron)	3	5	9	13	30	
Mass (kg)	Moving		5.2			
	Total		18	21	25	30

SAS-IC Motor Characteristics

Motor Force Constant (for all, N/A)	16.9
Fundamental Motor Constant (for all, 130°)	6.6 N/Watts
Bank-emf Constant (for all, V/m/s)	13.8
Coil Resistance (for all, 25°, ohm)	3.1
Coil Inductance (for all, mH)	0.65
Continuous Current (for all, 130°, Amps)	4.5
Peak Current (for all, Amps)	14.2
Continuous Force (for all, 130°, N)	76
Peak Force (for all, N)	240
Continuous Power Rating (for all, Watts)	131

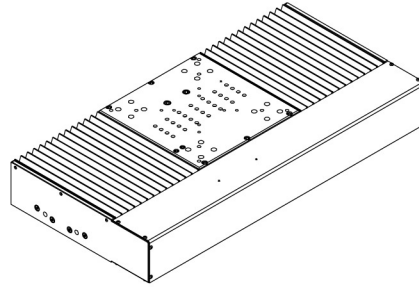
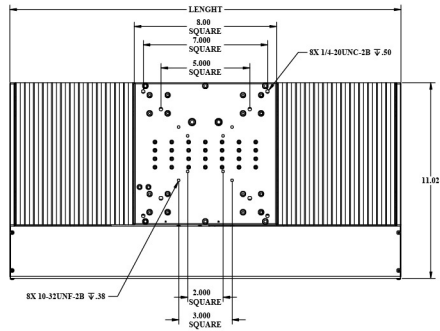
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Dimensions

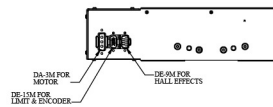
Top View



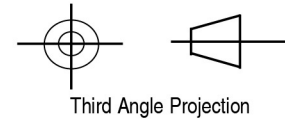
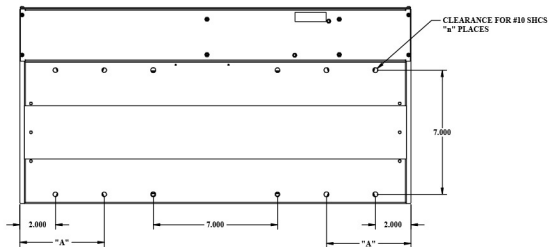
Side View



End View



Bottom View



Model	Travel (T)	Length (L)	n	A
SAS-800-Stage	8.00	22	8	-
SAS-1200-Stage	12.00	26	8	-
SAS-1800-Stage	18.00	32.5	12	7.375
SAS-2400-Stage	24.00	39.5	12	9.125
SAS-3600-Stage	36.00	53	12	12.5
Measurements in inches				