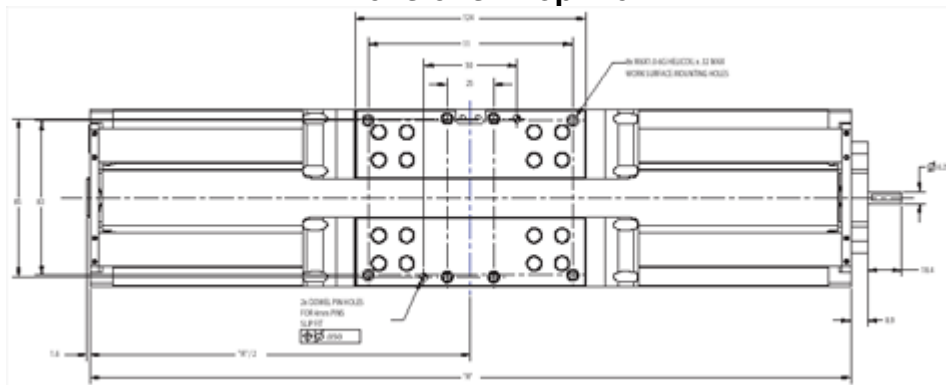


DS4 - Series Positioning Tables



Product Dimensions

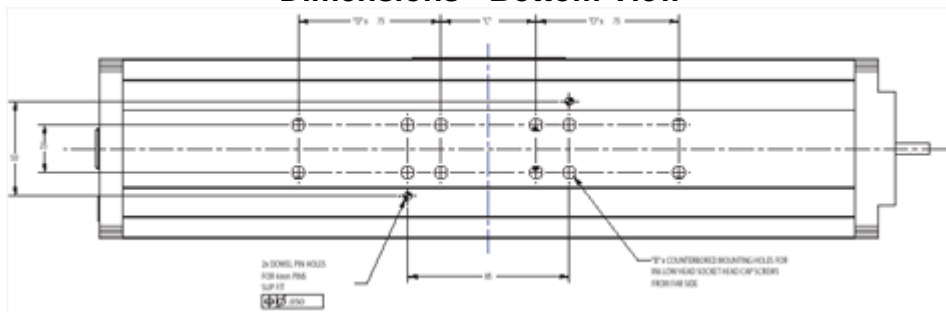
Dimensions - Top View



Dimensions - Side View

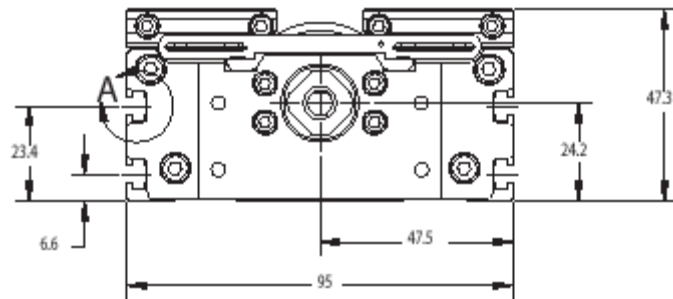


Dimensions - Bottom View

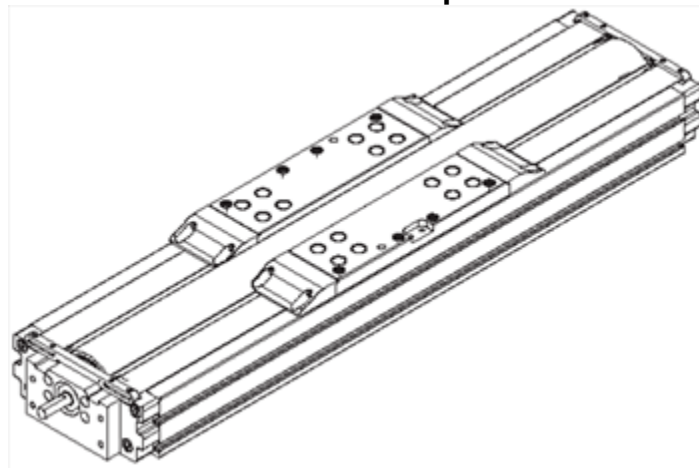


DS4 - Series Positioning Tables

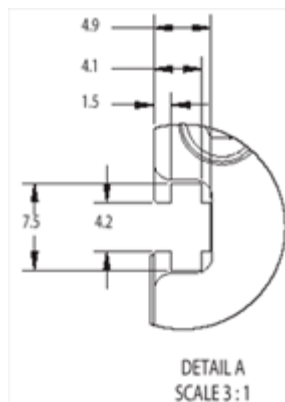
Dimensions - End View



Dimensions - Perspective



Dimensions - Detail A





DS4 - Series Positioning Tables

Model #	Travel	A	B	C	D
DS4-050	50	259.1	8	150	0
DS4-100	100	309.1	12	50	1
DS4-150	150	359.1	12	50	1
DS4-200	200	409.1	12	50	1
DS4-250	250	459.1	16	50	2
DS4-300	300	509.1	16	50	2
DS4-350	350	559.1	16	50	2
DS4-400	400	609.1	20	50	3
DS4-450	450	659.1	20	50	3
DS4-500	500	709.1	20	50	3
DS4-550	550	759.1	24	50	4
DS4-600	600	809.1	24	50	4

Specifications

Travel (mm)	50	100	150	200	250	300	350	400	450	500	550	600
Overall Height (mm)	47											
Overall Height (mm)	95											
Positional Accuracy (μ)												
Commercial Grade	12	12	14	20	22	24	26	26	28	34	36	40
Precision Grade	8	8	10	12	12	14	14	16	19	21	23	25
Straightness & Flatness (μ)	6	6	9	12	12	14	18	21	23	23	25	25
Bi-directional Repeatability, open loop												
Commercial Grade (μ)	+/- 3											
Precision Grade (μ)	+/- 1.3											
Pitch / Yaw (arc-sec)												
Commercial Grade	20	24	28	36	40	44	47	53	56	61	64	68
Precision Grade	12	14	17	22	25	27	29	33	35	38	40	42
Load Capacity, Normal (kg) (max)	170											
Axial Load Capacity (kg)	95											
Acceleration (max) (m/sec^2)	20											
Moving Mass (kg)	0.75											
Total Mass (kg)	2.7	3.0	3.3	3.6	3.9	4.1	4.4	4.7	5.0	5.3	5.6	5.9
Ballscrew Diameter (mm)	16											
Duty Cycle (%)	100											
Ballscrew Efficiency (%)	90											
Max. Breakaway Torque (oz-in)	18											
Max. Running Torque (oz-in)	16											
Ballscrew Leads Available (mm)	5, 10											
Input Inertia ($\times 10^{-5} kg-m^2$)	1.17	1.24	1.67	1.93	2.18	2.43	2.68	2.93	3.19	3.44	3.69	3.94
Max. Ballscrew Speed (rev/sec)	80						60		55		50	

All performance specifications are based upon proper mounting procedures, with the DS4 fully supported on a flat surface (flat within 0.008mm/300mm). See Section 4 of the user's manual for proper mounting procedures.

Positional accuracy specifications are for inline motor mount models only.

Above specifications are measured 37.5mm directly above the center of the carriage.

Specifications are based upon operation at 20° C. Contact IDC to discuss your low- and high-temperature applications

DS4 positioning tables are rated for normal loads (load vector directed down onto the surface of the carriage), for axial loads (load vector directed in the direction of travel), and for moment loads (torsional loads caused by loads with an offset center of gravity). The moment loading limits are based on the maximum moment in pitch, roll or yaw including any dynamic components that are move profile dependent.



DS4 - Series Positioning Tables

Part Numbering / Ordering Information

	Travel	Grade	Ballscrew Lead	Motor	Motor Mount	Coupling/ Orientation and Pulley	Limits	Home	Shaft Option	Linear Encoder	Additional Options
DS4											
1	2	3	4	5	6	7	8	9	10	11	12

DS4 - Series Positioning Tables

1. Base Unit		7B. Motor Orientation & Pulley Bore (parallel models)	
DS4		PRxx*	Parallel Right motor mount
2. Travel		PUxx*	Parallel Left motor mount
50mm to 600mm in 50mm increments			*select pulley bore diameter below
3. Grade		xx3E	3/16" pulley bore diameter
C	Commercial Grade	xx4E	1/4" pulley bore diameter
P	Precision Grade	xx5E	5/16" pulley bore diameter
4. Ballscrew Lead		xx6E	3/8" pulley bore diameter
5G	5mm Lead	xx5M	5mm pulley bore diameter
10G	10mm Lead	xx8M	8mm pulley bore diameter
5. Motor		xx9M	9mm pulley bore diameter
P21	Stepper, NEMA 23, 130 oz-in, 200 step	8. Limit Sensors (Qty. 2)	
IDR26	Brushless Servo, NEMA 23	L0	No End-of-Travel Limits
	(Blank if no motor selected)	LN1	Limits, NPN type Normal Open
6. Motor Mounts		LN2	Limits, NPN type Normal Closed
X16	1.6" frame mount	LP1	Limits, PNP type Normal Open
X17	NEMA 17 mount	LP2	Limits, PNP type Normal Closed
X23	NEMA 23 mount*	9. Home Switch	
X34	NEMA 34 mount**	H0	No Home Sensor
X70	70mm frame mount**	HN1	Home, NPN type Normal Open
	* default for P21 and IDR26 motors	HN2	Home, NPN type Normal Closed
	** not available in parallel mounts	HP1	Home, PNP type Normal Open
7A. Couplings (inline models)		HP2	Home, PNP type Normal Closed
OE3	Oldham style, 3/16" bore	10. Shaft End Options	
OE4	Oldham style, 1/4" bore*	BS	Brake on ballscrew, 24VDC Power-off
OE5	Oldham style, 5/16" bore	ES	Rotary encoder on ballscrew, 1250 line
OE6	Oldham style, 3/8" bore**		Note: Shaft brake and rotary encoder options can not be used in conjunction with each other.
OE8	Oldham style, 1/2" bore	11. Linear Encoders	
OM5	Oldham style, 5mm bore	E0	No linear encoder
OM8	Oldham style, 8mm bore	E1	1 micron resolution linear encoder
OM9	Oldham style, 9mm bore	E2	0.5 micron resolution linear encoder
OM11	Oldham style, 11mm bore	E3	0.1 micron resolution linear encoder
BE3	Bellows style, 3/16" bore	12. Additional Options	
BE4	Bellows style, 1/4" bore*	P1	Standard Pinning of x-axis carriage
BE5	Bellows style, 5/16" bore	P2	Precision Pinning of x-axis carriage, matched to y-axis or z-axis base
BE6	Bellows style, 3/8" bore**	P3	Precision Pinning of y-axis base, matched to x-axis carriage
BE8	Bellows style, 1/2" bore	P4	Precision Pinning of z-axis base, matched to x-axis carriage
BM5	Bellows style, 5mm bore		
BM8	Bellows style, 8mm bore	CLN	Cleanroom Prep – Class 100
BM9	Bellows style, 9mm bore		
BM11	Bellows style, 11mm bore		
* Select a 1/4" bore coupling for P21 motor (OE4 or BE4)			
**Select a 3/8" bore coupling for IDR26 motor			