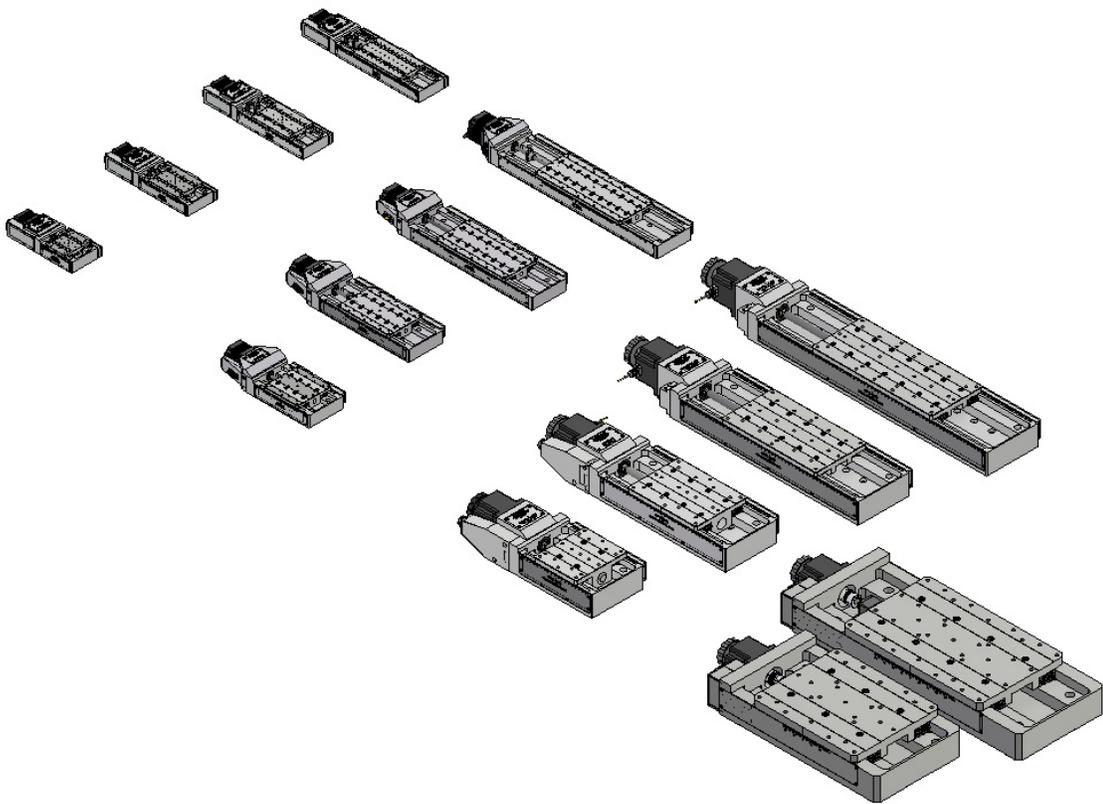




# High Precision Linear Stages

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DS Series



## SPECIFICATIONS

The linear slides are driven by a high quality preloaded ballscrew coupled to a high torque electric motor. Resolution requirements may be met using a gearbox. Maximum rigidity is assured using high quality crossed roller linear bearings. Each slide also features two fully adjustable, normally closed mechanical limit switches to define the extents of travel.

### MECHANICAL

Specification	210 Series	310 Series	410 Series	510 Series
Travel (mm)	30, 50, 75, 100	50, 100, 150, 200	75, 150, 225, 300	100, 200
Mass (kg)	1.2, 1.5, 1.8, 2.1	3, 4, 5, 6	10, 15, 17, 21	25, 33
Lead Accuracy (um/25mm)	2.5	5	6	6
Trajectory Straightness (um/25mm)	2.5	4	5	5
Travel Resolution (mm/rev)	1	1	2	5
Maximum Speed (mm/sec)	50	25	40	100
Load Capacity (kg)	10.5	46	280	575

### ELECTRICAL

Specification	DS210 Series	DS310 Series	DS410 Series	DS510 Series
Motor	2-Phase; 5-Phase Stepper; DC			
Limit Switches	Mechanical, Normally Closed			
Optical Encoder	Not available in the 210 series	Renishaw Incremental or Absolute ( <a href="http://www.renishaw.com">http://www.renishaw.com</a> )		

## LOAD CHARACTERISTICS

Model	Fx (N)	Fy (N)	Fz (N)	Mxz (Nm)	Myz (Nm)	Mxy (Nm)	Mass (kg)
DS210-30	512	297	1029.5	39.5	2	1	1.2
DS210-50	827	495	1663	64	3.5	1.5	1.5
DS210-75	945	569	1900	73	4.5	2	1.8
DS210-100	1260	767	2534	97.5	6	3	2.1

\*Loads are not simultaneous.

Model	Fx (N)	Fy (N)	Fz (N)	Mxz (Nm)	Myz (Nm)	Mxy (Nm)	Mass (kg)
DS310-50	3005.5	2441.5	6048	314	28	14	3
DS310-100	4508.5	2827	9072	471.5	43	21.5	4
DS310-150	5152.5	2827	10368	539	49.5	24.5	5
DS310-200	6440.5	2827	12960	673.5	62	31	6

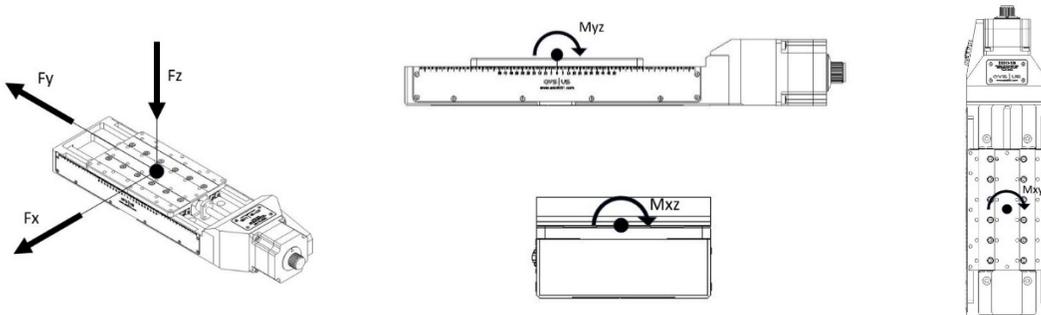
\*Loads are not simultaneous.

Model	Fx (N)	Fy (N)	Fz (N)	Mxz (Nm)	Myz (Nm)	Mxy (Nm)	Mass (kg)
DS410-75	6860	5157	13804	1218.5	100.5	50	10
DS410-150	12740.5	5654.5	25636	2263.5	210	100.5	15
DS410-225	15680.5	5654.5	31552	2786	251	125.5	17
DS410-300	22541	5654.5	45356	4004.5	368.5	184	21

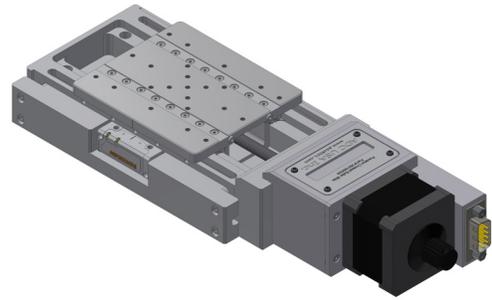
\*Loads are not simultaneous.

Model	Fx (N)	Fy (N)	Fz (N)	Mxz (Nm)	Myz (Nm)	Mxy (Nm)	Mass (kg)
DS510-100	39878.5	2261.5	80240	11474	1057	528.5	25
DS510-200	46916	2261.5	94400	13499	1255.5	627.5	33

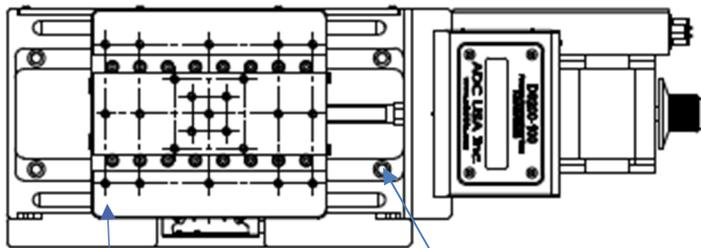
\*Loads are not simultaneous.



# DS210



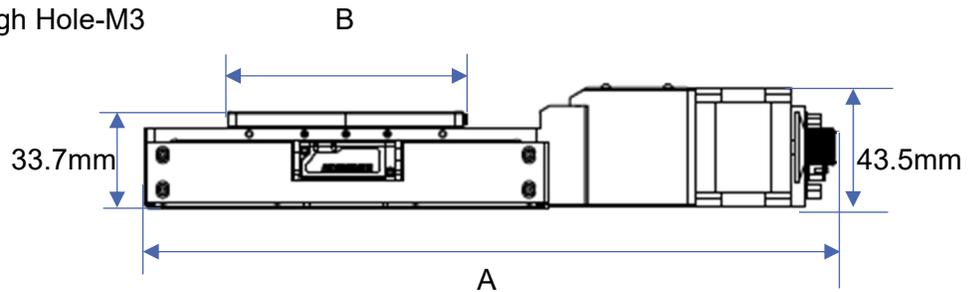
Top View



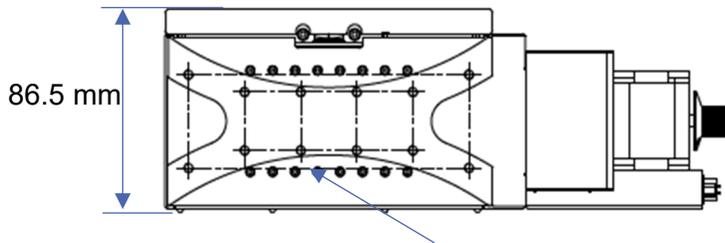
Mounting Through Hole-M3

Tapped Hole-M3x0.5

Side View



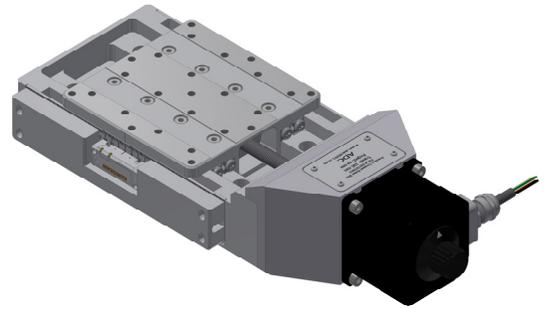
Bottom View



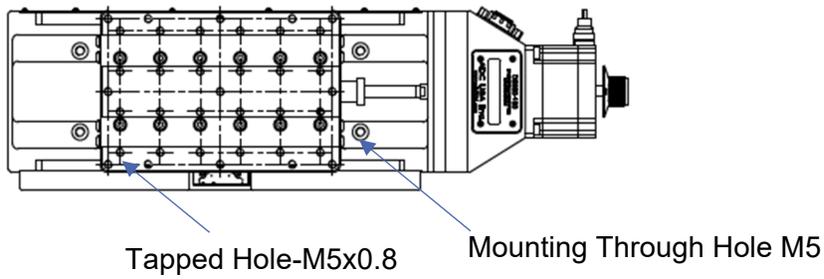
Tapped Hole-M4x0.7

Model	30	50	75	100
A- Total Length (mm)	202	252	302	352
B- Stage Length (mm)	55	85	105	135

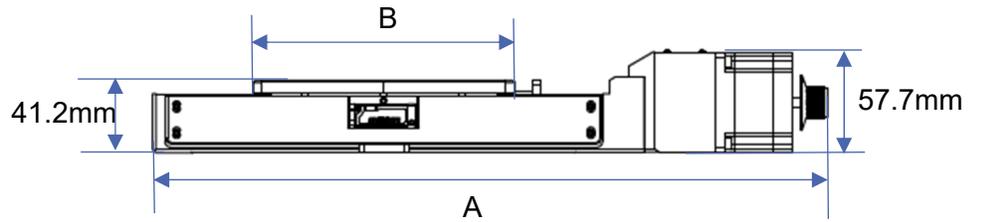
# DS310



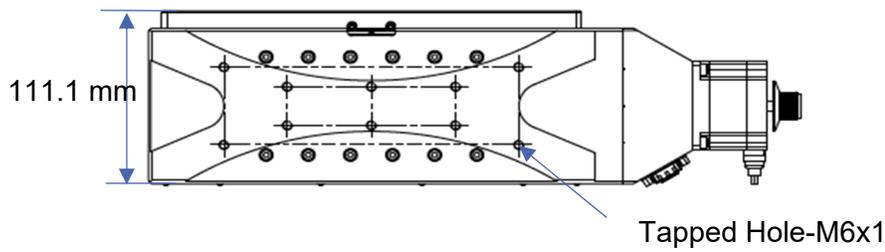
Top View



Side View

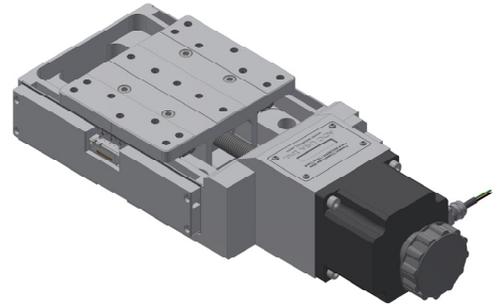


Bottom View

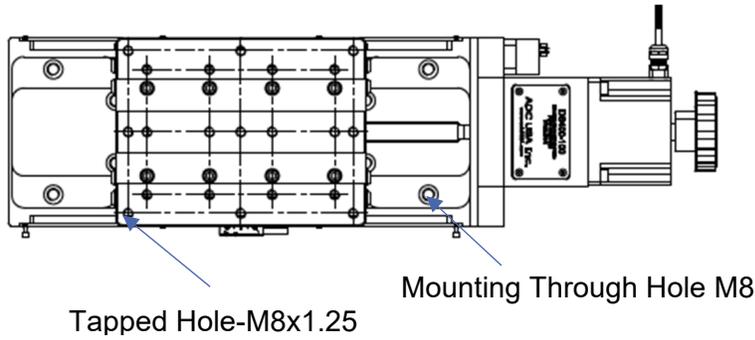


Model	50	100	150	200
A- Total Length (mm)	283	387	483	587
B- Stage Length (mm)	100	150	200	250

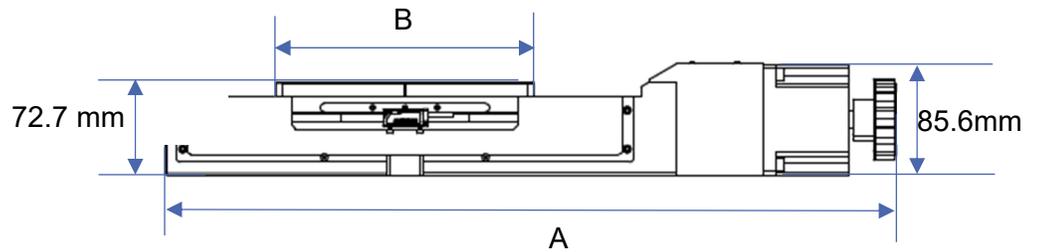
# DS410



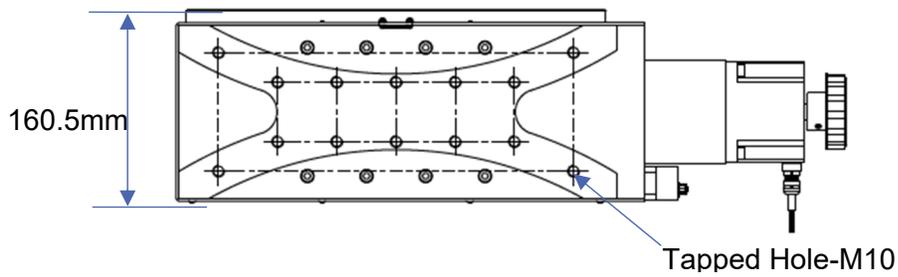
Top View



Side View



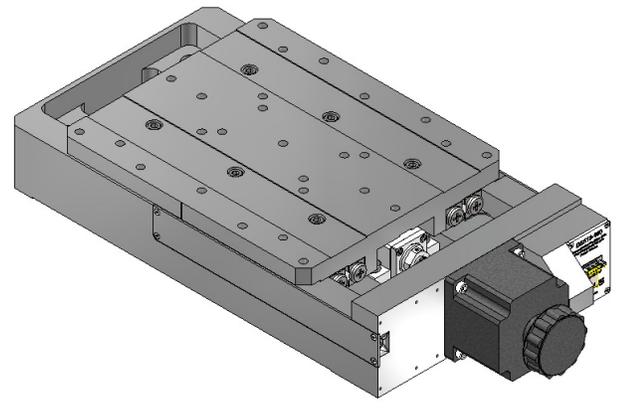
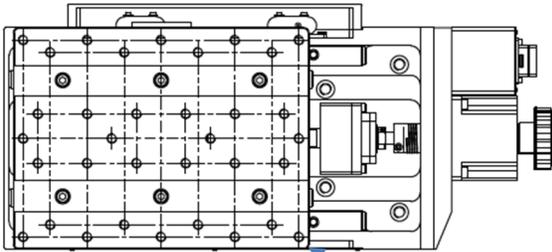
Bottom View



Model	75	150	225	300
A- Total Length (mm)	411	567	724	875
B- Stage Length (mm)	125	200	275	350

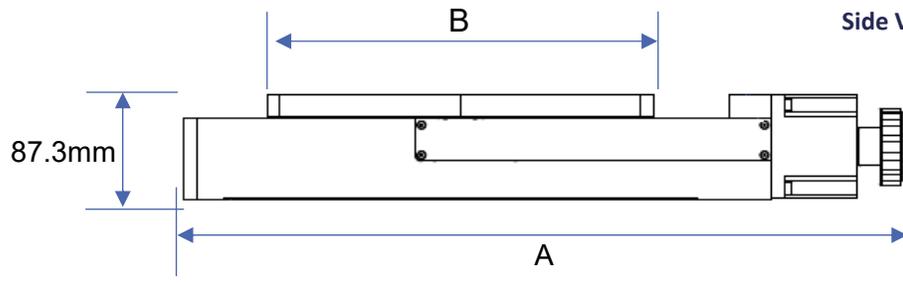
# DS510

Top View

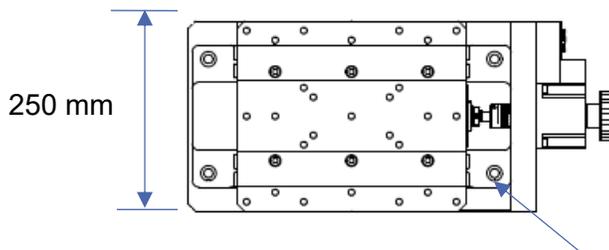


M10 Mounting Tapped Hole x27

Side View



Bottom View



Tapped Hole M14  
Or Pass Through M12

Model	100	200
A- Total Length (mm)	557	758
B- Stage Length (mm)	300	400

## ORDERING INFORMATION

Slides can be ordered with different configurations. Please use the codes provided below when ordering. Please call or e-mail to ask about any other customization required.

DS (Linear Slide)	210 Series	310 Series	410 Series	510 Series
Travel Options (mm)	-30 -50 -75 -100	-50 -100 -150 -200	-75 -150 -225 -300	-100 -200
Air Preparation Options	-A (Standard Air Stage) -V (Vacuum Stage; ask about options when placing order)			
Encoder Options	-R (With Incremental Optical Encoder) -A (With Absolute Optical Encoder) -N (Without 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	-G (customer to enter desired ratio; 3:1 to 100:1 available)			

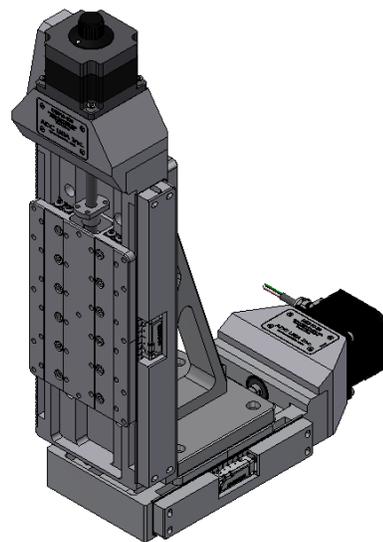
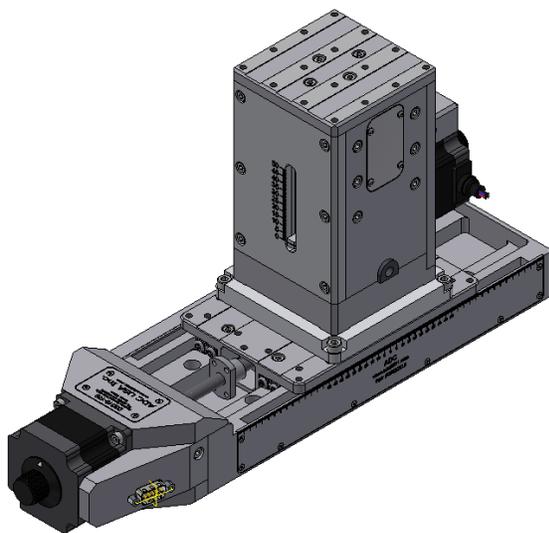
**Example Order:**  
**DS210-30-A-N-N-2PH**

This is an order for a DS210 Precision Crossed Roller Slide with 30 mm travel, in air, no encoder, no brake, a 2-phase motor, and no gearbox.

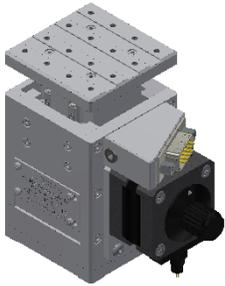
## MOUNTING PLATES AND BRACKETS

The chart below shows the corresponding part number per slide and jack combination.

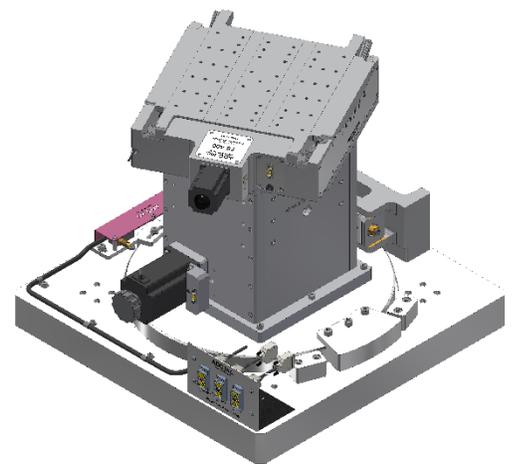
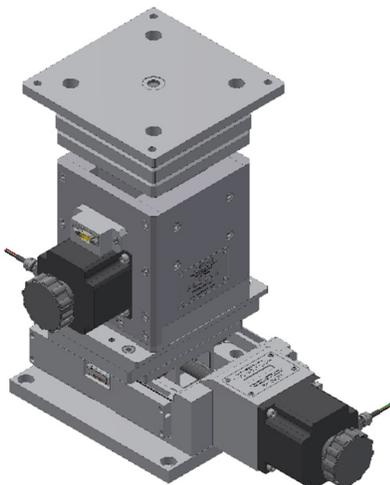
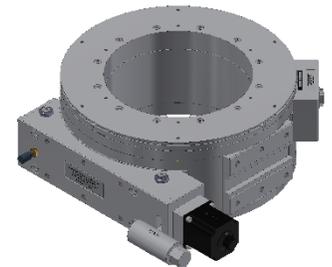
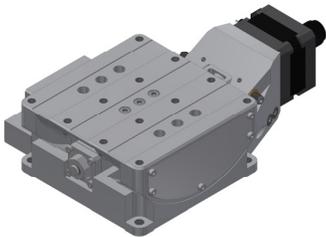
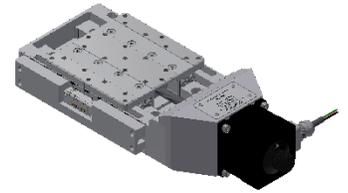
	Mounting Bracket				Mounting Plate
	<b>DS210-30</b>	<b>DS210-50</b>	<b>DS210-75</b>	<b>DS210-100</b>	<b>DJ210-X</b>
<b>DS210-30</b>	MB-200-1	MB-200-2	N/A	N/A	MP-200-6
<b>DS210-50</b>	MB-200-1	MB-200-3	N/A	N/A	MP-200-7
<b>DS210-75</b>	MB-200-1	MB-200-3	MB-200-4	MB-200-5	MP-200-8
<b>DS210-100</b>	MB-200-1	MB-200-3	MB-200-4	MB-200-5	MP-200-7
	<b>DS310-50</b>	<b>DS310-100</b>	<b>DS310-150</b>	<b>DS310-200</b>	<b>DJ310-X</b>
<b>DS310-50</b>	MB-300-1	MB-300-2	N/A	N/A	MP-300-5
<b>DS310-100</b>	MB-300-1	MB-300-2	N/A	N/A	MP-300-5
<b>DS310-150</b>	MB-300-1	MB-300-2	MB-300-3	MB-300-4	MP-300-5
<b>DS310-200</b>	MB-300-1	MB-300-2	MB-300-3	MB-300-4	MP-300-5
	<b>DS410-75</b>	<b>DS410-150</b>	<b>DS410-225</b>	<b>DS410-300</b>	<b>DJ410-X</b>
<b>DS410-75</b>	MB-400-1	MB-400-2	N/A	N/A	MP-400-5
<b>DS410-150</b>	MB-400-1	MB-400-2	N/A	N/A	MP-400-6
<b>DS410-225</b>	MB-400-1	MB-400-2	MB-400-3	MB-400-4	MP-400-7
<b>DS410-300</b>	MB-400-1	MB-400-2	MB-400-3	MB-400-4	MP-400-7



## OTHER STAGES



Linear Stages	Lift Stages
DS210	DJ210
DS310	DJ310
DS410	DJ410
DS510	BJ10
	BJ25
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
TS-565	
TS-700	



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