

# SureStep - Stepper Systems by AutomationDirect

Motion Control - the ability to positively command the position, velocity, and acceleration of moving systems

**DC Stepper Motors - Mostly for lower speeds and small force requirements - The torque falls off as speed increases - Best below 1000 RPM**

Stepper Controllers - Move at a fixed velocity, move a number of steps and then stop, accelerate from one velocity to another (linear move), trapazoidal move, s-curve move

Usually commanded by a pulse train - Each pulse into the drive directs the motor to move one step - 200 steps / 360 degree revolution / 1.8 degree or movement

Microstepping - PLC output frequency (pulses per second) divided by Microstepping Resolution (steps/revolution) times 60 sec/min = Stepping Motor RPM

					Step 1	Step 2	Step 3	Step 4
<b>Amps</b>	<b>Holding Torque on-in</b>	<b>Rotor Inertia oz-in2</b>	<b>Maximum Radial Load (lb)</b>	<b>Maximum Thrust Load (lb)</b>	<b>2 phase Stepper Motor Bipolar - D - Encoder - E Washdown - W</b>	<b>Microstepping Drive 200-51200 Steps/Rev 0.1-5A/phase 18-53VDC</b>	<b>Unregulated Linear Power Supply</b>	<b>Extension Cable</b>
0.35	8	0.08	6.000	6.000	SPT-MTRL-14026 - D,E	STP-DRV-4850	STP-PWR-3204	STP-EXTL-020
0.80	20	0.08	6.000	6.000	STP-MTRL-14034 - D,E	STP-DRV-4850	STP-PWR-3204	STP-EXTL-020
1.70	61	0.28	6.000	6.000	STP-MTR-17040 - D,E,W	STP-DRV-4850	STP-PWR-4810	STP-EXT-020
2.00	83	0.37	6.000	6.000	STP-MTR-17048 - D,E,W	STP-DRV-4850	STP-PWR-4810	STP-EXT-020
2.00	115	0.56	6.000	6.000	STP-MTR-17060 - D,E,W	STP-DRV-4850	STP-PWR-4810	STP-EXT-020
2.80	166	1.46	15.000	13.000	STP-MTR-23055 - D,E,W	STP-DRV-4850	STP-PWR-4810	STP-EXT-020
2.80	276	2.60	15.000	13.000	STP-MTR-23079 - D,E,W	STP-DRV-4850	STP-PWR-4810	STP-EXT-020
2.80	434	7.66	39.000	25.000	STP-MTR-34066 - D,W	STP-DRV-4850	STP-PWR-4810	STP-EXT-020
						<b>0.1-10A/phase 18-88VDC</b>		
5.60	286	2.60	15.000	13.000	STP-MTRH-23079 - D,E,W	STP-DRV-80100	STP-PWR-7005	STP-EXTH-020
6.30	434	7.66	39.000	25.000	STP-MTRH-34066 - D,W	STP-DRV-80100	STP-PWR-7005	STP-EXTH-020
6.30	800	14.80	39.000	25.000	STP-MTRH-34097 - D,W	STP-DRV-80100	STP-PWR-7005	STP-EXTH-020
6.30	1288	21.90	39.000	25.000	STP-MTRH-34127 - D,W	STP-DRV-80100	STP-PWR-7005	STP-EXTH-020
			<b>Max Shaft inch Play @ 1lb</b>	<b>Max End inch Play @ 2.2lb</b>		<b>High Voltage 0.6-2.5A/phase</b>	<b>High Torque 90-240VAC</b>	
0.71	75	0.66	0.020	0.080	STP-MTRAC-23044 - D	STP-DRVAC-24025	AC	10' included
0.71	149	1.64	0.020	0.080	STP-MTRAC-23055 - D	STP-DRVAC-24025	AC	10' included
0.71	227	2.62	0.020	0.080	STP-MTRAC-23078 - D	STP-DRVAC-24025	AC	10' included
2.15	821	7.38	0.025	0.075	STP-MTRAC-34075 - D	STP-DRVAC-24025	AC	10' included
2.05	1110	14.74	0.025	0.075	STP-MTRAC-34115 - D	STP-DRVAC-24025	AC	10' included
2.55	1841	24.06	0.020	0.080	STP-MTRAC-34156 - D	STP-DRVAC-24025	AC	10' included
							<b>Step 5 - Options</b>	
Configuration Software							STP-PRO	
Programming/Communication Cable							SPP-232RJ11-CBL	
Extension Cables for "W" motors							STP-EXTW-020	
Extension Cables for "H" "W" motors							STP-EXTHW-020	
Encoder Cables							STP-CBL-EA20	
Regen Clamp 50W (non enclosed)							STP-DRVA-RC-050	
Regen Clamp 50W (enclosed)							STP-DRVA-RC-050A	
Breaking Resistor							STP-DRVA-BR-100	
Damper for use with 17 Frame							STP-MTRA-17DMP	
Damper for use with 23 Frame							STP-MTRA-23DMP	