

# IMService DeskCNC settings for servo motors with SV-500 Drivers

	Sherline Inch	Sherline Metric	Router 12 x 12 Standard	Router 12 x 12 Hi-Speed	Router 12 x 24
<b>Screw Pitch</b>					
Z	0.05	1	0.1	0.1	0.1
X-Y	0.05	1	0.1	0.2	0.5
<b>Max theoretical velocity</b>	50		100	200	500
<b>Design Velocity Units/min</b>					
Z	45		90	90	90
X-Y	45		90	175	350
<b>Steps per Unit</b>					
Z	112936	5646.8	56468	56468	56468
X-Y	112936	5646.8	56468	28234	11293.6
A	1129.36	1129.36		685.7143	685.7143
<b>Design Max Velocity SPS</b>					
Z	84700		84700	84700	84700
X-Y	84700		84700	82349	65879

<b>10% Derated Max Velocity SPS</b>	Enter the lower SPS on the individual axis pages				
Z	76500		76500	76500	76500
X-Y	76500		76500	74000	59500
<b>10% Derated Design Velocity Units/min</b>					
Z	40.5		81	81	81
X-Y	40.5		81	158	315

<b>Design Settings</b>				
Acceleration	14000000	14000000	14000000	14000000
Acceleration Scale	20	58	68	77
Max Velocity	84700	84700	84700	84700
Start Velocity	8470	8470	8470	8470
<b>Resulting Time in Seconds</b>	0.103	0.3	0.351	0.398

<b>Derated Settings</b>				
Acceleration	12000000	12000000	12000000	12000000
Acceleration Scale	18	54	63	72
Max Velocity	76500	76500	76500	76500
Start Velocity	7650	7650	7650	7650
<b>Resulting Time in Seconds</b>	0.1	0.3	0.352	0.402

Note: Start Velocity is always equal to 10% of Max Velocity. After entering velocities, acceleration is set at a value that graphs as a line ending in the upper right corner of the accel time scale graph. Adjusting the acceleration scale will increase the total acceleration time in seconds.