



Capacity Chart

Chart indicates maximum bending capacities for hydraulic rotary benders under average conditions with standard tool holders. See machine specifications or consult Pines Manufacturing for confirmation for specific applications or custom made shapes.

SIR CYL	SIZE	MACH #
19"	4 1/2" ϕ	2
19"	3" ϕ	1 1/4
10"	4" ϕ	1
10"	3" ϕ	3/4

Max. Bending Capacity and Specifications	Units of Measures	MACHINE MODEL								
		1400	3/4	1	- 1¼	2	3	4	6	8
Round Tubing Non-Ferrous Y.P. to 25,000 psi OD X Wall	Inches	1¼ x .065	1½ x .065	1½ x .188	3 x .065	3 x .188	5½ x .148	6 x .250	8 x .375	10 x .375
	Metric	31 x 1.65	38 x 1.65	38 x 4.75	76 x 1.65	76 x 4.75	140 x 3.75	152 x 6.3	203 x 9.5	254 x 9.5
Round Tubing Mild Steel Y.P. to 40,000 psi OD X Wall	Inches	1 1/8 x .065	1 3/8 x .065	1 1/2 x .109	2 1/2 x .065	3 x .109	5 1/2 x .095	6 x .165	8 x .250	10 x .250
	Metric	28.6 x 1.6	35 x 1.6	38 x 2.8	63.5 x 1.6	76 x 2.8	140 x 2.4	152 x 4.2	203 x 6.3	254 x 6.3
Round Tubing Stainless Y.P. to 60,000 psi OD X Wall	Inches	7/8 x .065	1 1/8 x .065	1 3/8 x .065	1 3/4 x .065	3 x .065	4 1/2 x .083	4 1/2 x .250	8 x .172	10 x .165
	Metric	22.2 x 1.6	28.6 x 1.6	35 x 1.6	44.4 x 1.6	76 x 1.6	114 x 2.1	114 x 6.3	203 x 4.3	254 x 4.2
Steel Pipe Schedule 80	Inches	1/2 (.840x.147)	3/4 (1.050x.154)	1 (1.315x.179)	1 1/4 (1.660x.191)	2 (2.375x.218)	3 (3.50x.300)	4 (4.50x.337)	6 (6.625x.432)	8 (8.625x.500)
	Metric	21.3 x 3.7	26.6 x 30.9	33.3 x 4.5	42.1 x 4.8	60.3 x 5.5	88.9 x 7.6	114.3x 8.5	168.2 x 10.9	219 x 12.7
Square Tubing Mild Steel	Inches	3/4 x .083	1 x .065	1 1/8 x .120	1 3/4 x .065	2 1/2 x .083	3 1/2 x .144	4 x .250	6 x .250	8 x .250
	Metric	19 x 2.1	25.4 x 1.6	28.6 x 3	44.4 x 1.6	63.5 x 2.1	88.9 x 3.6	131.6 x 6.3	152.4 x 6.3	203.2 x 6.3
Rectangular Tubing Mild Steel E-Plane	Inches	3/4 x 1 x .065	1 x 1 1/4 x .065	1x 1 1/2 x .120	1 1/2 x 2 1/2 x .065	1 1/2 x 3 x .148	2 x 5 x .250	3 x 6 x .250	4 x 8 x .380	6 x 10 x .380
	Metric	19 x 25.4 x 1.6	25.4 x 31.7 x 1.6	25.4 x 38 x 3	38 x 63.5 x 1.6	38 x 76 x 3.7	50.8 x 127 x 6.3	76.2 x 152.4 x 6.3	101.6 x 203.2 x 9.6	152.4 x 254 x 9.6
Rectangular Tubing Mild Steel H-Plane	Inches	3/4 x 1 x .049	1 x 1 1/4 x .049	1 x 1 1/2 x .083	1 1/4 x 2 x .083	1 1/2 x 2 1/2 x .120	2 x 4 x .180	3 x 5 x .250	4 x 8 x .250	6 x 10 x .250
	Metric	19 x 25.4 x 1.2	25.4 x 31.7 x 1.2	25.4 x 38 x 2.1	31.7 x 50.8 x 2.1	38 x 63.5 x 3	50.8 x 101.6 x 4.6	76.2 x 127 x 6.3	101.6 x 203.2 x 6.3	152.4 x 254 x 6.3
Round Bar Mild Steel	Inches	3/4	7/8	1 1/8	1 3/8	1 7/8	2 3/4	3 1/2	4 7/8	6 1/4
	Metric	19	22.2	28.6	34.9	47.6	69.8	88.9	123.8	158.7
Square Bar Mild Steel	Inches	9/16	11/16	3/4	1 1/8	1 11/16	2 1/2	3 1/8	4 1/8	5 1/4
	Metric	14.3 x 1.65	17.4	19	28.6	42.8	63.5	79.4	104.7	133.3
Section Modulus (z)* Max., Mild Steel	Inches	.054	.087	.157	.288	.716	2.200	4.266	12.200	24.88
	Metric									
Max. Horizontal & Vertical Dimensions**	Inches	1 3/8	1 5/8	1 5/8	3 1/4	3 1/4	6	6	9	10
	Metric	34.9	41.3	41.3	82.5	82.5	152.4	152.4	228.6	254

* Section modulus (z) is a measure of comparative section strength. To determine a machine's capacity to bend mild steel work not listed, section modulus for machine must be greater than z for shape under consideration. For other strength metals, 60,000 psi x z for machine model must be equal to or greater than ultimate strength of proposed metal x its section modulus.

** Dimensions listed can be exceeded in some cases by use of special tool holders and accessories, providing larger work does not exceed machine maximum bending power capacity.