

**\* PRESS BRAKE BENDING CHART**

THICKNESS OF METALS																	
Gauge	20	18	16	14	12	11	10	3/16"	1/4"	5/16"	3/8"	7/16"	1/2"	5/8"	3/4"	7/8"	1"
Inches	0.036"	0.048"	0.060"	0.075"	0.105"	0.120"	0.135"	0.188"	0.250"	0.313"	0.375"	0.438"	0.500"	0.625"	0.750"	0.875"	1"
WIDTH OF V DIE OPENING																	
1/4"	3.72	6.36	11.52														
5/16"	2.76	4.80	8.52	14.28													
3/8"	2.04	3.60	6.72	11.04	9.127												
7/16"	1.68	3.00	5.40	9.12	20.04												
1/2"	1.32	2.64	4.56	7.56	15.72	23.04											
5/8"		2.04	3.36	5.64	11.64	17.04	22.32										
3/4"		1.56	2.64	4.20	9.60	13.32	17.40	32.88									
7/8"			2.16	3.60	7.80	10.80	14.28	27.72									
1"			1.80	3.00	6.72	9.00	11.88	11.88	47.28								
1-1/8"				2.52	5.52	7.56	10.20	19.68	39.96								
1-1/4"				2.16	4.92	6.60	8.76	17.16	35.40	60.48							
1-1/2"					3.84	5.28	6.96	13.44	27.24	47.76	73.92						
2"						3.84	4.80	9.00	18.48	32.40	50.76	74.04					
2-1/2"								6.84	13.68	23.64	37.08	54.96	76.32				
3"								5.28	10.80	18.36	28.80	42.48	58.56	103.44			
3-1/2"									8.88	15.24	23.52	34.32	34.32	84.00	132.00		
4"									7.32	12.60	19.56	29.28	19.56	69.96	111.60	164.40	
5"										9.24	14.76	20.76	29.52	51.72	82.44	124.80	171.60
6"											11.40	17.76	23.28	39.96	64.20	96.84	135.60
7"												13.44	19.08	32.88	52.32	77.52	109.44
8"													15.72	27.96	43.80	63.48	91.44
10"														20.28	32.52	47.64	67.56
12"															25.20	37.92	53.04

**Tons required per foot to bend mild steel having max 72,000 PSI tensile strength and max 40,000 PSI yield strength.**

The tonnages indicated in black boxes are for die openings 8 times thickness of metal up 1/4" and 10 times thickness of metal recommended above 1/4" in orange boxes.

The inside radius of a right angle bend is approximately equal to the thickness of the material. Bending tonnages for other metals, as compared to mild steel on the chart, are as follows:

- **Soft Brass:** 50% of pressure shown
- **Soft Aluminum:** 50% of pressure shown
- **Aluminum Heat-treated Alloys:** same as steel
- **Stainless Steel:** 50% more than steel
- **Chrome Molybdenum:** 100% more than steel.

All of the bending tonnages are nominal and represent average conditions. These values are dependent upon the radius of the dies, the yield strength of the material, the temper of the material, the direction of the rolling strains, etc.

**THEREFORE A SAFETY FACTOR OF AT LEAST 20% SHOULD BE PROVIDED IN SELECTING A PRESS FOR A GIVEN JOB.**

Website: [www.punchtools.com](http://www.punchtools.com) • Email: [sales@punchtools.com](mailto:sales@punchtools.com)

PTI PUNCH TOOLS INC.

#11-211 Schoolhouse Street; Coquitlam, BC; V3K 4X9 Canada