

<a href="#">Bend Radius</a>	<a href="#">Metal Slitter</a>	<a href="#">Metal Brake</a>	<a href="#">Ironworker</a>	<a href="#">Plate Roll</a>	<a href="#">Bore Repair</a>
<a href="#">Cold Saw</a>	<a href="#">Hydraulic Press</a>	<a href="#">Lathe machine</a>	<a href="#">Plasma Table</a>	<a href="#">Band Saw</a>	<a href="#">Press Brake</a>



**Minimum Bend Radii:** The minimum bend radius data shown in these charts is measured to the inside of the bend. The bend radii listed are standard minimum if manufacturing for aircraft and aerospace applications. Since commercial sheet metal bending can be done with less concern for stresses caused during forming operation, the radius can be near zero for thin sheet metal. Grain Direction is formed in metal in the direction in which the sheet was rolled at the steel mill. Grain Direction is not to be confused with surface finishes made by sanding or other finishing operations. Grain direction is often specified on stainless steel in order to achieve minimum bend radius or to control spring back. The grain can be seen by looking at a new piece of sheet metal and noticing the direction of visible lines going from one end to the other.

**ALUMINUM - Recommended Minimum Bend Radius for maximum strength**

	THICKNESS OF ALUMINUM														
MATERIAL	.012	.016	.020	.025	.032	.040	.050	.063	.071	.080	.090	.100	.125	.160	.190
2024-0 & W	.06	.06	.06	.06	.06	.06	.09	.09	.12	.12	.16	.19	.22	.31	.36
2024-T3	.06	.06	.06	.09	.09	.12	.16	.22	.25	.31	.38	.44	.62	.75	1.00
2024-T36	.06	.09	.09	.09	.12	.16	.19	.25	.31	.38	.44	.50	.75	1.00	1.25
3003-0	.06	.06	.06	.06	.06	.06	.06	.06	.09	.09	.09	.12	.12	.16	.19
3003-H14	.06	.06	.06	.06	.06	.09	.09	.12	.12	.16	.19	.22	.31	.38	.44
5052-0	.06	.06	.06	.06	.06	.06	.06	.09	.09	.09	.12	.12	.16	.19	.22
6061-0 & W	.06	.06	.06	.06	.06	.06	.06	.09	.09	.09	.12	.12	.16	.19	.22
6061-T4 & T6	.06	.06	.06	.06	.06	.06	.09	.09	.12	.12	.16	.19	.22	.31	.38
7075-0 & W	.06	.06	.06	.06	.09	.09	.12	.16	.19	.22	.25	.31	.38	.50	.62
7075-T6	.06	.09	.12	.12	.16	.22	.25	.31	.41	.44	.50	.69	.87	1.00	1.25
7178-0 & W	.06	.06	.06	.06	.09	.09	.12	.19	.22	.25	.31	.38	.50	.75	-
7178-T6	.06	.09	.16	.19	.22	.31	.38	.50	.56	.62	.62	.75	1.00	1.25	-

**STAINLESS STEEL Recommended Minimum Bend Radius for maximum strength**

	THICKNESS OF STAINLESS STEEL															
MATERIAL	.012	.016	.020	.025	.032	.036	.040	.045	.050	.063	.080	.090	.112	.125	.160	.190
302 Annealed	.06	.06	.06	.06	.06	.06	.09	.09	.09	.09	.12	.12	.16	.19	.22	.25
347-1A	.06	.06	.06	.09	.09	.06	.06	.09	.09	.09	.12	.12	.16	.19	.22	.25
1/4 Hard Cres	.06	.06	.06	.06	.06	.09	.09	.09	.12	.12	.16	.19	.22	.25	.31	.38
1/2 Hard Cres	.06	.06	.06	.09	.09	.12	.12	.12	.16	.16	.25	.25	.31	.38	.50	.62
Full Hard Cres	.06	.06	.09	.12	.12	.16	.16	.19	.22	.25	.31	.38	.44	.50	.62	.87

**MILD STEEL Recommended Bend Allowance**

BEND RADIUS	THICKNESS OF MILD STEEL							
	0.022	0.032	0.040	0.051	0.064	0.091	0.128	0.187
	Bend Allowance in inches per Degree							
1/32	0.00072	0.00079	0.00086	0.00094	0.00104	0.00125	0.00154	0.00200

1/16	0.00126	0.00135	0.00140	0.00149	0.00159	0.00180	0.00209	0.00255
3/32	0.00180	0.00188	0.00195	0.00203	0.00213	0.00234	0.00263	0.00309
1/8	0.00235	0.00243	0.00249	0.00258	0.00268	0.00289	0.00317	0.00364
5/32	0.00290	0.00297	0.00304	0.00312	0.00322	0.00343	0.00372	0.00418
3/16	0.00344	0.00352	0.00358	0.00367	0.00377	0.00398	0.00426	0.00473
7/32	0.00398	0.00406	0.00412	0.00421	0.00431	0.00452	0.00481	0.00527
1/4	0.00454	0.00461	0.00467	0.00476	0.00486	0.00507	0.00535	0.00582
9/32	0.00507	0.00515	0.00521	0.00530	0.00540	0.00561	0.00590	0.00636
5/16	0.00562	0.00570	0.00576	0.00584	0.00595	0.00616	0.00644	0.00691
11/32	0.00616	0.00624	0.00630	0.00639	0.00649	0.00670	0.00699	0.00745
3/8	0.00671	0.00679	0.00685	0.00693	0.00704	0.00725	0.00753	0.00800
13/32	0.00725	0.00733	0.00739	0.00748	0.00758	0.00779	0.00808	0.00854
7/16	0.00780	0.00787	0.00794	0.00802	0.00812	0.00834	0.00862	0.00908
15/32	0.00834	0.00842	0.00848	0.00857	0.00867	0.00888	0.00917	0.00963
1/2	0.00889	0.00896	0.00903	0.00911	0.00921	0.00943	0.00971	0.01017
17/32	0.00943	0.00951	0.00957	0.00966	0.00976	0.00997	0.01025	0.01072
9/16	0.00998	0.01005	0.01012	0.01020	0.01030	0.01051	0.01080	0.01126
19/32	0.01051	0.01058	0.01065	0.01073	0.01083	0.01105	0.01133	0.01179
5/8	0.01107	0.01114	0.01121	0.01129	0.01139	0.01160	0.01189	0.01235
21/32	0.01161	0.01170	0.01175	0.01183	0.01193	0.01214	0.01245	0.01289
11/16	0.01216	0.01223	0.01230	0.01238	0.01248	0.01268	0.01298	0.01344
23/32	0.01269	0.01276	0.01283	0.01291	0.01301	0.01322	0.01351	0.01397
3/4	0.01324	0.01332	0.01338	0.01347	0.01357	0.01378	0.01407	0.01453

Below is a conversion chart that converts sheet metal gauge numbers into metal thickness.

26 gauge	24 ga.	22 ga.	20 ga.	18 ga.	16 ga.	14 ga.	13 ga.	12 ga.	11 ga.	10 ga.	9 ga.	8 ga.	7 ga.	6 ga.
.018"	.024"	.030"	.036"	.048"	.060"	.075"	.090"	.105"	.120"	.135"	.150"	.164"	.180"	.194
.46mm	.61mm	.76mm	.91mm	1.2mm	1.5mm	1.9mm	2.3mm	2.7mm	3mm	3.4mm	3.8mm	4mm	4.6mm	4.9mm

Special editing thanks to Dave Treanor

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