















## Forming Tonnage Guidelines

Example tonnage for mild steel. Multiplying material thickness by factor results in required tons per foot.

Shape	Description	Air Form Factor	Bottoming Factor
	Vee Die	60	150
	Wiping	-	250
	Offset	150	300/600
	Material Thickness Offset	300	600
	Channel	225	300
	Vee Rib	200	600
	W Die	300	600
	Open Hat Channel	300	450
	Square Hat Channel	-	600
	Preform Curl - Double	-	300
	Preform Curl - Single	-	200
	Close Curl	-	300
	Radius	-	180/300
	Hem	150	420
Shape Considerations		Large Radii, Angle Variation, Concave or Convex Sides	Material. Thickness Radii, Min. Angle Variation, Maintain Flatness

## Forming Tonnage Guidelines

The charts show tonnage estimates for mild steel; for other materials, multiply your result by the following factors:

Stainless Steel (304)	1.55
Aluminum (3003)	0.35
Aluminum (5052)	0.65
Aluminum (6061)	0.75
Brass (260)	1.10

Thickness (in.)		Width of Female Die Opening (in.)																						
Gauge	Dec.	1/4	5/16	3/8	1/2	5/8	3/4	7/8	1	1-1/8	1-1/4	1-1/2	2	2-1/2	3	3-1/2	4	5	6	7	8	10	12	
20	0.036	2.6	<b>2.2</b>	1.6	1.2	1																		
18	0.048		3.5	<b>2.8</b>	2.1	1.7	1.3																	
16	0.060			5.3	<b>3.7</b>	2.8	2.2	1.7																
14	0.075				5.5	<b>4.6</b>	3.5	3	2.5	2.1														
13	0.090					6.4	<b>5.5</b>	4.3	3.6	3.2	2.8													
12	0.105					9.2	6.9	<b>6.2</b>	5	4.3	3.9	3.1												
11	0.120						10.1	8	<b>7</b>	6.1	5.3	4.3	2.9											
10	0.135							10.3	8.7	<b>7.6</b>	6.9	5.7	3.9											
9	0.150								11.9	9.8	<b>8.8</b>	7	5	3.7										
7	0.188									16.9	13.9	<b>11.2</b>	8.3	6.7	4.9									
1/4	0.250										27.5	22.1	<b>15</b>	11.6	9.6	7.9	6.7							
5/16	0.312											39.2	26.5	<b>19.3</b>	15	12.5	10.4	7.7						
3/8	0.375												42.7	31.2	<b>23.8</b>	19.5	16.3	12.4	9.6					
7/16	0.437													45.5	35.2	<b>26.5</b>	24.4	17.4	15	11.5				
1/2	0.500														48.5	39.5	<b>33.2</b>	24.6	19.5	16.1	13.4			
5/8	0.625															65.5	57.9	<b>42.8</b>	33.1	27.3	23.3	17		
3/4	0.750																92.3	68.1	<b>53</b>	43.2	36.2	26.9	21	
7/8	0.875																	103.1	79.9	<b>63.9</b>	52.3	39.2	31.2	
1	1.000																		112.1	90.4	<b>75.5</b>	55.7	43.7	