

Press brake air-bending estimates

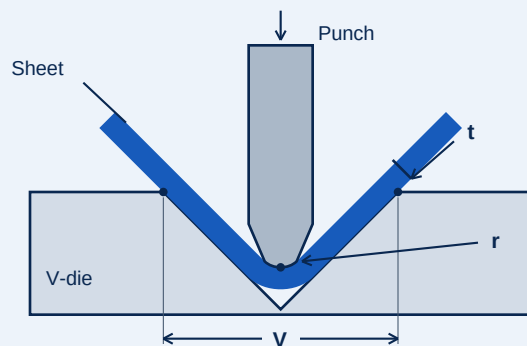
90-degree air bending | 60,000 psi tensile mild steel | U.S. short tons per foot (2,000 lb per ton)

Find the thickness row, then read across to the V-die opening in inches.

Size	t (in)	1/4	3/8	1/2	5/8	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4	5	6	8	10
20 ga	0.0360	3.0	2.0														
18 ga	0.0478		3.5	2.6													
16 ga	0.0598		5.5	4.1	3.3												
14 ga	0.0747			6.4	5.1	4.3											
12 ga	0.1046					8.4	6.3	5.0									
11 ga	0.1196					11.0	8.2	6.6									
10 ga	0.1345						10.4	8.3	6.9								
3/16	0.1875							16.2	13.5	10.1							
1/4	0.2500								24.0	18.0	14.4	12.0					
5/16	0.3125									28.1	22.5	18.7					
3/8	0.3750										32.3	27.0	20.2				
7/16	0.4375											36.7	27.5	22.0			
1/2	0.5000											47.9	35.9	28.8	24.0		
5/8	0.6250												56.2	44.9	37.4		
3/4	0.7500													64.7	53.9	40.4	
7/8	0.8750														73.4	55.0	44.0
1	1.0000														95.8	71.9	57.5

Gray = outside the displayed V/t range of 6-12; blank cells are not a tooling recommendation. Values rounded to 0.1 ton/ft.

1 THREE-POINT AIR BENDING



2 WORKED EXAMPLE

t = 0.2500 in (1/4 in)

V = 2 in | Bend length = 4 ft

$575 \times 0.2500 \times 0.2500 / 2$

= 17.96875 U.S. tons/ft

$17.96875 \times 4 = 71.875$ U.S. tons

Estimated total: 71.9 U.S. tons

Use unrounded values to calculate the total.

3 BASIS AND LIMITS

Formula: tons/ft = $575 \times t \times t / V$.

Tonnage basis checked against Wysong.

Gauge thicknesses are nominal; use actual thickness and tensile strength for setup.

Air bending only; not bottoming or coining.

Confirm punch, die, holders, and machine total AND load-per-length ratings.

Drawing is schematic, not to scale.

Not a statement of Blue Star shop capacity.