


Spartan Ironworkers Punching Capacities

Tonnage required to punch round holes in mild steel*

Hole Dia.	Material Thickness													
	1/8"	1/4"	3/8"	1/2"	5/8"	3/4"	7/8"	1"	1-1/8"	1-1/4"	1-3/8"	1-1/2"	1-5/8"	
1/8"	1.6													
1/4"	3.2	6.4												
3/8"	4.8	9.5	14											
1/2"	6.4	12.7	18.6	25.5										
5/8"	8	16	23.3	32	40									
3/4"	9.5	19	28	38.3	48	57								
7/8"	11	22.3	32.5	44.5	56	67	78							
1"	12.8	25.5	37.3	51	64	77	89	102						
1-1/8"	14.3	28.7	42	57	72	86	100	115	129					
1-1/4"	16	32	46.5	64	80	96	111	128	144	160				
1-3/8"	17.5	35	51.3	70	88	105	123	140	158	175	193			
1-1/2"	19	38.3	56	76.5	95.7	115	134	153	172	191	210	230		
1-5/8"	20.7	41.5	60	83	104	124	145	166	187	207	228	248	270	
1-3/4"	22	44.7	65	89	112	134	156	179	201	223	245	268	290	
2"	25.5	51	74.5	102	128	153	178	204	230	255	280	306		
2-1/4"	28.7	57.5	84	115	144	172	201	230	258	287	315			
2-1/2"	32	64	93	127	160	191	223	255	287	319				
2-3/4"	35	70	102	140	175	210	245	281	316					
3"	38	76.5	112	153	191	230	268	306						
3-1/4"	41.5	83	121	166	207	248	290							
3-1/2"	44.7	89.3	130	179	223	268								
3-3/4"	48	95.7	140	191	240									
4"	51	102	150	204										

WARNING Avoid serious injury. Never exceed the machine's punching capacity.



* This chart is based on punching mild steel with a 65,000 lb. shear strength. All information in this chart should be verified before applying it to your work particularly when using combinations that approach the machine's maximum tonnage capacity.

Tonnage Conversion Factors*	
Material:	Conversion Factors:
Aluminum (2024-0)36
Brass (1/4 hard)7
Copper (1/2 hard)52
Steel (50% carbon)	1.6
Steel Cold Drawn (1018)	1.24
Stainless Steel (303)	1.5