Holding Power

HOLDING POWER VALUES FOR FASTENERS IN CONCRETE

Ultimate Load Values in 2500 P.S.I. Concrete – Low Velocity Driven Fasteners

				Penetration into Concrete (in Inches)				
Shank Diameter (in Inches)		Shank Surface	Load (lbs.)	1/2	3/4	1	1 1/4	1 1/2
1/8	.125	Smooth	Tension	125	275	350	670	—
			Shear	210	380	640	900	—
9/64	.143	Smooth	Tension	150	320	380	700	—
			Shear	250	400	760	1,010	—
11/64	.172	Smooth	Tension	160	340	410	710	810
			Shear	275	450	850	1,130	1,510

Ultimate Load Values in 3500 P.S.I. Concrete – Low Velocity Driven Fasteners

				Penetration into Concrete (in Inches)				
Shank Diameter (in Inches)		Shank Surface	Load (lbs.)	1/2	3/4	1	1 1/4	1 1/2
1/8	.125	Smooth	Tension	130	305	360	725	—
			Shear	220	395	680	920	—
9/64	.143	Smooth	Tension	145	315	390	775	—
			Shear	270	415	785	1,070	—
11/64	.172	Smooth	Tension	150	325	415	810	890
			Shear	275	470	880	1,200	1,600

Ultimate Load Values in 5000 P.S.I. Concrete – Low Velocity Driven Fasteners

				Penetration into Concrete (in Inches)				
Shank Diameter (in Inches)		Shank Surface	Load (lbs.)	1/2	3/4	1	1 1/4	1 1/2
1/8	.125	Smooth	Tension	210	410	660	810	—
			Shear	295	500	790	1,110	—
9/64	.143	Smooth	Tension	250	460	680	860	—
			Shear	335	565	850	1,425	—
11/64	.172	Smooth	Tension	260	510	860	900	1,200
			Shear	345	590	985	1,590	1,935

HOLDING POWER VALUES FOR FASTENERS IN STEEL

Ultimate Load Values in Steel – Low Velocity Driven Fasteners

				Steel Plate Thickness (in Inches)				
Shank Diameter (in Inches)		Shank Surface	Load (lbs.)	1/8	3/16	1/4	5/16	3/8
1/8	.125	Smooth	Tension	350	860	1,030	1,370	1,725
			Shear	1,380	1,625	1,710	1,750	1,790
9/64	.143	Smooth	Tension	510	1,200	1,500	1,810	1,950
			Shear	1,530	1,915	2,140	2,560	2,630
11/64	.172	Smooth	Tension	805	1,430	1,860	2,180	2,350
			Shear	1,730	2,000	2,810	3,110	3,200