



PULLOUT LOADS IN CONCRETE



Ramset fasteners may be specified by their type or catalog number to satisfy fastening requirements.

PIN SPECIFICATIONS

- | Made from AISI 1060-1065 steel. Austempered to a core hardness of 52-56 Rc
- | Typical tensile strength: 270,000 psi
- | Typical shear strength: 162,000 psi
- | STANDARD FINISHES
 - Proprietary black
 - Mechanical zinc plate to a minimum thickness of .0002 meets requirements of ASTM B695

APPROVALS/LISTINGS

- | **ICC Evaluation Service, Inc.**
 - #ER-1147 Sill Plate
 - #ESR-1799 Powder Pins & Clips
 - #ESR-2579 TrakFast Pins
 - #ESR-1955 T3 Pins
- | **City of Los Angeles**
 - #RR-22668 Powder pins
 - #RR-25264 TrakFast pins

Performance Tables

FASTENERS IN NORMAL WEIGHT CONCRETE

PART NUMBER SERIES	SHANK DIAMETER (INCH)	MINIMUM PENETRATION (INCH)	INSTALLED IN STONE AGGREGATE CONCRETE CONCRETE COMPRESSIVE STRENGTH ALLOWABLE LOAD – <i>Ultimate Load</i>							
			2000 PSI		4000 PSI		6000 PSI			
			TENSION (LBS)	SHEAR (LBS)	TENSION (LBS)	SHEAR (LBS)	TENSION (LBS)	SHEAR (LBS)	TENSION (LBS)	SHEAR (LBS)
1500/ 1600 SERIES	0.145	3/4	50 <i>655</i>	66 <i>739</i>	100 <i>511</i>	104 <i>552</i>	-----	-----	-----	-----
		1	152 <i>943</i>	166 <i>1229</i>	157 <i>937</i>	182 <i>1342</i>	-----	-----	-----	-----
		1-1/4	159 <i>1078</i>	265 <i>1665</i>	179 <i>1043</i>	267 <i>1538</i>	-----	-----	-----	-----
		1-1/2	154 <i>1450</i>	340 <i>2027</i>	209 <i>1357</i>	342 <i>1712</i>	-----	-----	-----	-----
SP	0.150	3/4	-----	-----	150 <i>803</i>	105 <i>786</i>	81 <i>493</i>	82 <i>454</i>	-----	-----
SP SERIES	.150/.180	1	154 <i>1043</i>	200 <i>1173</i>	243 <i>1307</i>	175 <i>1037</i>	189 <i>1125</i>	210 <i>1177</i>	-----	-----
		1-1/4	207 <i>1553</i>	230 <i>1636</i>	298 <i>1749</i>	218 <i>1471</i>	213 <i>1568</i>	305 <i>1780</i>	-----	-----
		1-1/2	-----	-----	384 <i>2126</i>	391 <i>1957</i>	239 <i>1886</i>	594 <i>2968</i>	-----	-----
3300 SERIES	0.180	1	196 <i>1084</i>	100 <i>1328</i>	255 <i>1504</i>	284 <i>1557</i>	-----	-----	-----	-----
		1-1/4	241 <i>1207</i>	329 <i>1710</i>	294 <i>1574</i>	373 <i>2104</i>	-----	-----	-----	-----
		1-1/2	254 <i>1601</i>	379 <i>1971</i>	419 <i>2239</i>	501 <i>2505</i>	-----	-----	-----	-----
1900	0.145	3/4	105 <i>694</i>	71 <i>458</i>	101 <i>685</i>	99 <i>627</i>	-----	-----	-----	-----
9100 STUD	0.205	1	187 <i>988</i>	212 <i>1385</i>	186 <i>1070</i>	303 <i>1618</i>	-----	-----	-----	-----
		1-1/4	262 <i>1450</i>	304 <i>1674</i>	335 <i>2161</i>	400 <i>2000</i>	-----	-----	-----	-----

Note 1: ALLOWABLE loads are shown in the **LARGE BOLD** font, *Ultimate* loads are shown in *smaller italic* font. **Note 2:** Testing conducted in accordance with ICC AC70 & ASTM E1190. **Note 3:** Safety factors are based on coefficient of variation. In accordance with ICC AC70, the safety factor will be no less than 5. **Note 4:** Values shown in concrete are for the fastener only. Connected members must be investigated separately. **Note 5:** Cyclic, fatigue, shock loads, and other design criteria may require a different safety factor. **Note 6:** Job site testing may be required to determine actual job site values. **Note 7:** Minimum edge distance is 3 inches unless otherwise approved. **Note 8:** For SI: 1 lbf = 4.448 N, 1 inch = 25.4 mm, 1 ksi = 6.89MPa
Tables converted to metric are available on our website.

Performance/
Submittal