

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
Electro zinc nickel to a minimum thickness of .0002 meets the requirements of ASTM F1941

APPROVALS/LISTINGS

- **ICC Evaluation Service, Inc.**
#ESR-2690 Sill Plate
#ESR-1799 Powder Pins & Clips



FASTENERS IN NORMAL WEIGHT CONCRETE

PART NUMBER SERIES	SHANK DIA (INCH)	MINIMUM PENETRATION (INCH)	INSTALLED IN SOLID CONCRETE CONCRETE COMPRESSIVE STRENGTH ALLOWABLE LOAD - <i>Ultimate Load</i>					
			2,000 PSI		4,000 PSI		6,000 PSI	
			TENSION (LBS)	SHEAR (LBS)	TENSION (LBS)	SHEAR (LBS)	TENSION (LBS)	SHEAR (LBS)
1500 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>	— —	— —

FASTENERS IN LIGHT WEIGHT CONCRETE

PART NUMBER SERIES	SHANK DIA (INCH)	MINIMUM PENETRATION (INCH)	ALLOWABLE WORKING VALUES INSTALLED IN 3,000 PSI LIGHTWEIGHT CONCRETE ALLOWABLE LOAD - <i>Ultimate Load</i>			
			3,000 PSI LIGHTWEIGHT W/DECKING		3,000 PSI LIGHTWEIGHT	
			LOWER FLUTE TENSION	LOWER FLUTE SHEAR	TENSION	SHEAR
1500 SERIES	0.145	3/4	76 <i>395</i>	260 <i>1409</i>	167 <i>837</i>	179 <i>894</i>
		1	134 <i>668</i>	265 <i>1505</i>	200 <i>998</i>	228 <i>1141</i>
		1-1/4	157 <i>784</i>	269 <i>1344</i>	333 <i>1664</i>	400 <i>2090</i>
		1-1/2	233 <i>1163</i>	346 <i>1728</i>	391 <i>1957</i>	410 <i>2050</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 Sl: 1 lbf = 4.448 N, 1 inch = 25.4 mm, 1 ksi = 6.89MPa

FASTENERS IN STEEL

PART NUMBER SERIES	SHANK DIA (INCH)	TYPE OF SHANK	INSTALLED IN A36 STRUCTURAL STEEL-STEEL THICKNESS (INCHES) ALLOWABLE LOAD - <i>Ultimate Load</i>									
			3/16		1/4		3/8		1/2		≥ 3/4	
			TENSION (LBS)	SHEAR (LBS)	TENSION (LBS)	SHEAR (LBS)	TENSION (LBS)	SHEAR (LBS)	TENSION (LBS)	SHEAR (LBS)	TENSION (LBS)	SHEAR (LBS)
1500	0.145	SMOOTH	81 <i>790</i>	373 <i>2039</i>	181 <i>1269</i>	273 <i>1642</i>	397 <i>2169</i>	489 <i>2771</i>	243 <i>1328⁸</i>	277 <i>1514⁸</i>	— —	— —
		KNURLED	296 <i>1633</i>	636 <i>3516</i>	584 <i>3384</i>	659 <i>3822</i>	680 <i>3755</i>	730 <i>4030</i>	253 <i>1459⁸</i>	293 <i>1632⁸</i>	— —	— —

PART NUMBER SERIES	SHANK DIA (INCH)	TYPE OF SHANK	INSTALLED IN A572 GRADE 50 STRUCTURAL STEEL-STEEL THICKNESS (INCHES) ALLOWABLE LOAD - <i>Ultimate Load</i>									
			3/16		1/4		3/8		1/2		≥ 3/4	
			TENSION (LBS)	SHEAR (LBS)	TENSION (LBS)	SHEAR (LBS)	TENSION (LBS)	SHEAR (LBS)	TENSION (LBS)	SHEAR (LBS)	TENSION (LBS)	SHEAR (LBS)
1500	0.145	SMOOTH	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —
		KNURLED	260 <i>1609</i>	499 <i>3182</i>	579 <i>3411</i>	725 <i>4272</i>	383 <i>2216⁷</i>	595 <i>3431⁷</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:** Cyclic, fatigue, shock loads, and other design criteria may require a different safety factor. **Note 5:** Job site testing may be required to determine actual job site values. **Note 6:** Values shown are for fasteners that have the entire pointed end of the fastener driven through the steel plate; except as noted below. **Note 7:** Fastener penetration is 3/8" minimum. **Note 8:** Fastener penetration is 7/16" minimum. **Note 9:** Fastener penetration is 1/2" minimum. **Note 10:** For Sl: 1 lbf = 4.448 N, 1 inch = 25.4 mm, 1 ksi = 6.89MPa.

FASTENERS IN NORMAL/LIGHT WEIGHT CONCRETE / STEEL