

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—Class 5 Type 1

## APPROVALS/LISTINGS

- ICC Evaluation Service, Inc.**  
#ESR-2690 Sill Plate  
#ESR-1799 Powder Pins & Clips
- City of Los Angeles**  
#RR-22668 Powder pins



## 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)
SP SERIES	0.150	3/4	.....	.....	<b>150</b> <i>803</i>	<b>105</b> <i>786</i>	<b>81</b> <i>493</i>	<b>82</b> <i>454</i>
SP SERIES	.150/.180	1	<b>154</b> <i>1043</i>	<b>200</b> <i>1173</i>	<b>243</b> <i>1307</i>	<b>175</b> <i>1037</i>	<b>189</b> <i>1125</i>	<b>210</b> <i>1177</i>
		1-1/4	<b>207</b> <i>1553</i>	<b>230</b> <i>1636</i>	<b>298</b> <i>1749</i>	<b>218</b> <i>1471</i>	<b>213</b> <i>1568</i>	<b>305</b> <i>1780</i>
		1-1/2	.....	.....	<b>384</b> <i>2126</i>	<b>391</b> <i>1957</i>	<b>239</b> <i>1886</i>	<b>594</b> <i>2968</i>

## FASTENERS IN LIGHT WEIGHT CONCRETE

PART NUMBER SERIES	SHANK DIAMETER (INCH)	MINIMUM PENETRATION (INCH)	ALLOWABLE WORKING VALUES INSTALLED IN 3000 PSI LIGHTWEIGHT CONCRETE ALLOWABLE LOAD - <i>Ultimate Load</i>			
			3000 PSI LIGHTWEIGHT W/DECKING		3000 PSI LIGHTWEIGHT	
			LOWER FLUTE TENSION	LOWER FLUTE SHEAR	TENSION	SHEAR
SP SERIES	.150/.180	1	<b>119</b> <i>593</i>	<b>336</b> <i>1679</i>	<b>226</b> <i>1129</i>	<b>250</b> <i>1249</i>
		1-1/4	<b>175</b> <i>957</i>	<b>372</b> <i>1860</i>	<b>329</b> <i>1644</i>	<b>377</b> <i>1885</i>
		1-1/2	<b>179</b> <i>1055</i>	<b>426</b> <i>2128</i>	<b>406</b> <i>2030</i>	<b>380</b> <i>1900</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:** For SI: 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)
SP SERIES	0.150	SMOOTH	<b>385</b> <i>2107</i>	<b>662</b> <i>3618</i>	<b>445</b> <i>2549</i>	<b>477</b> <i>2736</i>	<b>393*</b> <i>2145</i>	<b>574</b> <i>3137</i>	<b>948</b> <i>5180</i>	<b>597</b> <i>3500</i>	<b>234</b> <i>1244</i> <sup>8</sup>	<b>356</b> <i>1895</i> <sup>8</sup>

  

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)
SP SERIES	0.150	SMOOTH	<b>356</b> <i>2123</i>	<b>569</b> <i>3394</i>	<b>554</b> <i>3232</i>	<b>637</b> <i>3710</i>	<b>604</b> <i>3447</i>	<b>602</b> <i>3437</i>	<b>814</b> <i>4473</i> <sup>9</sup>	<b>820</b> <i>4503</i> <sup>9</sup>	<b>243</b> <i>1362</i> <sup>8</sup>	<b>381</b> <i>2141</i> <sup>8</sup>

**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 fastenings 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 SI: 1 lbf = 4.448 N, 1 inch = 25.4 mm, 1 ksi = 6.89MPa. \* Partial penetration = .28