

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
 - Electroplated zinc with yellow chromate

APPROVALS/LISTINGS

ICC Evaluation Service, Inc.

- #ER-1147 Sill Plate
- #ESR-1799 Powder Pins & Clips
- #ER-3618 Ladd
- #ER-5001 TrakFast Pins
- #ESR-1955 T3 Fasteners

City of Los Angeles

- #RR-22668 Powder pins
- #RR-24279 Ladd
- #RR-25264 TrakFast pins

COLLATED GAS FASTENERS IN CONCRETE (TRAKFAST, T2 AND T3)

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		3000 PSI		4000 PSI	
			TENSION (LBS)	SHEAR (LBS)	TENSION (LBS)	SHEAR (LBS)	TENSION (LBS)	SHEAR (LBS)
FPP - Straight Shank	0.109	5/8	60 <i>434</i>	55 <i>546</i>	55 <i>453</i>	75 <i>615</i>	55 <i>472</i>	95 <i>685</i>
		3/4	60 <i>595</i>	80 <i>650</i>	55 <i>583</i>	95 <i>699</i>	55 <i>571</i>	115 <i>749</i>
FPP - Step Shank	0.104/0.118	3/4	-----	-----	-----	-----	51 <i>256</i>	83 <i>418</i>
T3 Straight Shank	0.125	5/8	83 <i>414</i>	109 <i>611</i>	-----	-----	78 <i>426</i>	80 <i>574</i>
		3/4	107 <i>541</i>	156 <i>855</i>	-----	-----	104 <i>593</i>	195 <i>977</i>

PART NUMBER SERIES	SHANK DIAMETER (INCH)	MINIMUM PENETRATION (INCH)	INSTALLED IN STONE AGGREGATE CONCRETE CONCRETE COMPRESSIVE STRENGTH ALLOWABLE LOAD – <i>Ultimate Load</i>					
			3000 PSI LIGHT WEIGHT CONCRETE		3000 PSI LIGHT WEIGHT CONCRETE WITH METAL DECK		HOLLOW CONCRETE MASONRY UNITS (CMU) ANY LOCATION	
			TENSION (LBS)	SHEAR (LBS)	TENSION (LBS)	SHEAR (LBS)	TENSION (LBS)	SHEAR (LBS)
FPP - Straight Shank	0.109	5/8	35 <i>234</i>	55 <i>403</i>	30 <i>239</i>	205 <i>1025</i>	35 <i>347</i>	50 <i>435</i>
		3/4	80 <i>630</i>	115 <i>756</i>	40 <i>330</i>	100 <i>1284</i>	-----	-----
FPP - Step Shank	0.104/0.118	3/4	-----	-----	-----	-----	36 <i>184</i>	34 <i>264</i>
T3 Straight Shank	0.125	5/8	84 <i>418</i>	108 <i>540</i>	72 <i>361</i>	242 <i>1210</i>	20⁹ <i>243</i>	34 <i>264</i>
		3/4	108 <i>540</i>	173 <i>864</i>	93 <i>470</i>	288 <i>1442</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 in concrete is 3 inches unless otherwise approved. **Note 8:** For SI: 1 lbf = 4.448 N, 1 inch = 25.4 mm, 1 ksi = 6.89MPa. **Note 9:** T3 straight shank allowable tension value in face shell of hollow CMU is 133 lbs. Tables converted to metric are available on our website.

Performance Tables FASTENERS IN CONCRETE

FASTENER PART NUMBER	SHANK DIA. (INCH)	MINIMUM PENETRATION (INCH)	INSTALLED IN STONE AGGREGATE CONCRETE CONCRETE COMPRESSIVE STRENGTH ALLOWABLE LOAD – <i>Ultimate Load</i>						HOLLOW BLOCK Grade N, Type 1			
			4000 PSI		6000 PSI		3000 PSI Lightweight LOWER FLUTE		FACE SHELL Min 1-1/4" face thickness			
			TENSION (LBS)	SHEAR (LBS)	TENSION (LBS)	SHEAR (LBS)	TENSION (LBS)	SHEAR (LBS)	TENSION (LBS)	SHEAR (LBS)		
MP034TH*, M034* M100*, BR2*	0.125	5/8	78 426	80 574	62 308	----	----	72 361	242 1210	133 691	----	----
		3/4	104 593	195 977	132 658	206 1057	93 470	288 1442	84 444	87 446		
14STUD	0.125	5/8	91 454	----	----	57 373	----	----	----	----	----	----
M034BB	0.104/.118	3/4	51 256	83 418	----	----	----	----	----	36 184	58 290	
38HSMP034, 12HSMP034 34HSMP034, 10HSMP034 114HSMP034, 14TRHMP034 38TRHMP034, TSHMP034 12CCMP034L, 34CCMP034L	0.104/.125	3/4	51 256	83 418	----	----	----	----	----	36 184	58 290	
M100BB, 38HSS10 12HSS10, 34HSS10 10HSS10, TSHSS10 12CCSS10L, 34CCSS10L	0.125/.150	3/4	196 982	204 1021	219 1096	150 809	116 581	170 851	----	----	----	----
14TRHSS10, 38TRHSS10	0.125/.150	3/4	150 750	----	----	----	----	----	----	----	----	----

* ESR-1955 pin data applies. **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 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. In hollow block applications, no more than one fastener per cell. **Note 8:** For Sl: 1 lbf = 4.448 N, 1 inch = 25.4 mm, 1 ksi = 6.89MPa.
 Tables converted to metric are available on our website.

GAS FASTENERS IN STEEL

PART NUMBER	SHANK DIA. (INCH)	TYPE OF SHANK	INSTALLED IN A36 STRUCTURAL STEEL STEEL THICKNESS INCHES ALLOWABLE LOAD – <i>Ultimate Load</i>					
			3/16 (.1875)		1/4 (.250)		3/8 (.375)	
			TENSION (LBS)	SHEAR (LBS)	TENSION (LBS)	SHEAR (LBS)	TENSION (LBS)	SHEAR (LBS)
FPP012	0.109	SMOOTH	200 1047	315 1570	230 1220	305 1526	210 1048 ⁷	215 1076 ⁷
M012 FPP012S	0.104/.118	SMOOTH	----	----	148 744	157 787	166 832 ⁷	157 787 ⁷
T3012	0.125	SMOOTH	63 676	162 1356	239 1285	211 1417	113 914 ⁸	197 1327 ⁸
INSTALLED IN ASTM A 572 GRADE 50 STEEL STEEL THICKNESS INCHES								
T3012	0.125	SMOOTH	103 733	222 1682	147 950	119 973	147 856 ⁹	112 1014 ⁹

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 .31" minimum. **Note 8:** Fastener penetration is .29" minimum. **Note 9:** Fastener penetration is .27" minimum. **Note 10:** For Sl: 1 lbf = 4.448 N, 1 inch = 25.4 mm, 1 ksi = 6.89MPa
 Tables converted to metric are available on our website.