

Ramset/Red Head 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 (formerly ER-1639)
 - #ER-3618 Ladd
 - #ER-5001 TrakFast Pins
- | **City of Los Angeles**
 - #RR-22668 Powder pins
 - #RR-24279 Ladd
 - #RR-25264 TrakFast pins

Performance Tables

COLLATED GAS FASTENERS IN CONCRETE (TRAKFAST AND T2)

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)	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>	

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)	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>	58 <i>290</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: Fastener penetration is .31" minimum
- 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)
GAS ASSEMBLIES	M034, MP034TH SS034THR, 38HSMP034 12HSMP034, 34HSMP034 10HSMP034, TSMP034 12CCMP034L, 34CCMP034L	0.125	5/8	-----	-----	62 308	-----	-----	-----	-----	-----
	3/4		51 541	182 913	132 658	206 1057	166 833	251 1255	84 444	87 446	
	M034B	0.104/ .118	3/4	51 256	83 418	-----	-----	-----	-----	36 184	58 290
	14STUD	.125	5/8	91 454	-----	57 373	-----	-----	-----	-----	-----
HYBRID ASSEMBLIES	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	-----	-----
THREADED ROD ASSEMBLIES	14TRHMP034 38TRHMP034	0.125	3/4	92 458	-----	-----	-----	-----	-----	-----	-----
	14TRHSS10 38TRHSS10	0.125/ .150	3/4	150 750	-----	-----	-----	-----	-----	-----	-----

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 SI: 1 lbf = 4.448 N, 1 inch = 25.4 mm, 1 ksi = 6.89MPa

FPP034S & BB034 Fasteners are electroplated with a yellow chromate finish for improved corrosion resistance.

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>							
			11 GAGE (.119)		3/16 (.1875)		1/4 (.250)		3/8 (.375)	
			TENSION (LBS)	SHEAR (LBS)	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	215 1076
M012	0.125	SMOOTH	140 699	376 1868	256 1279	395 1977	287 1435	357 1786	255 1276 ⁷	212 1060 ⁷
FPP012S	0.103/.118	SMOOTH	-----	-----	-----	-----	148 744	157 787	166 832 ⁷	157 787 ⁷

** Fasteners shall have minimum 0.32-inch penetration when installed into 3/8-inch thick steel.

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: 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.