Ramset
DRIVING JOBSITE SPEED

POWDER FASTENERS

DESCRIPTION

We maintain only the highest standards in the materials, production techniques and quality control measures used to manufacture our fasteners, assuring consistent, optimum quality in every fastener.

ADVANTAGES

BLACK PINS

The special black coating improves pin penetration into difficult base material (i.e. hard concrete). We offer this black coating on all of our fasteners manufactured for the attachment of drywall track and channel to concrete and steel.

PINS

ITW Ramset powder actuated fasteners are specifically fabricated to meet the exacting requirements of toughness and durability that enable them to penetrate dense concrete and structural quality steel.

FASTENER TERMINOLOGY SUFFIX

K = Knurled
B = Black
E = Ramguard
X = Collated
SD = Washer
C = 100 count
M = 1000 count

Plated Drive Pins

Designed for use in concrete and structural steel applications. 100 per box.

PART NUMBER	SHANK LENGTH IN. (MM)	BOX QTY	ROCKET	XT540	SA270/ TS750P	RA27	COBRA	D45/ D45A	D60	721	RS22/ HD22	DX 351	DX 36	DX 350	DX 460	DX A40	DX A41	DX 35	DX E72
1503K	1/2 Knurled (12.7)	50	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
1506	3/4 (19.1)	12	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
1508	1 (25.4)	12	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
1510	1-1/4 (31.8)	10	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
1512	1-1/2 (38.1)	12	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
1514	2 (50.8)	8	■	■	■		■	■	■		■		■	■	■		■		■
1516	2-1/2 (63.5)	8		■	■		■				■		■	■	■		■		■
1524	3 (76.2)	6		■	■						■								

Shank diameter = .145 Head diameter = .300

Plated Drive Pins (25 Packs)

Designed for use in concrete and structural steel applications.

PART NUMBER	SHANK LENGTH IN. (MM)	BOX QTY	MASTER CASE QTY	ROCKET	XT540	SA270/ TS750P	RA27	COBRA	D45/ D45A	D60	721	RS22/ HD22	DX 351	DX 36	DX 350	DX 460	DX A40	DX A41	DX 35	DX E72
R50122	1-1/2 (38.1)	25	125	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
R50124	2 (50.8)	25	125	■	■	■		■	■	■		■		■	■	■		■		■
R50126	2-1/2 (63.5)	25	125		■	■		■				■		■	■	■		■		■
R50128	Multi Pack	200	1,000																	

Shank diameter = .145 Head diameter = .300

Plated Drive Pins with 7/8" Washer

Washer increases bearing surface against the material to be fastened. 100 per box. 16 gage metal washer.

PART NUMBER	SHANK LENGTH IN. (MM)	BOX QTY	ROCKET	XT540	SA270/ TS750P	RA27	COBRA	D45/ D45A	D60	721	RS22/ HD22	DX 351	DX 36	DX 350	DX 460	DX A40	DX A41	DX 35	DX E72
1508SD	1 (25.4)	10	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
1510SD	1-1/4 (31.8)	10	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
1512SD	1-1/2 (38.1)	10	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
1516SDC	2-1/2 (63.5)	6	■	■	■		■	■	■		■		■	■	■		■		■
1524SDP*	3 (76.2)	6		■	■		■				■				■		■		■

Shank diameter = .145 Head diameter = .300 * Square washer indicates 3" pin has been installed.

Powder Fasteners

PowerPoint Step Shank Pins

Used for fastening into hard concrete and steel. Premium hard concrete and steel pin. 100 per box.

PART NUMBER	SHANK LENGTH IN. (MM)	BOX QTY	ROCKET	XT540	SA270/ TS750P	RA 27	COBRA	D45/ D45A	D60	721	RS22/ HD22	DX 351	DX 36	DX 350	DX 460	DX A40	DX A41	DX 35	DX E72
SP12*	1/2 (12.7)	12	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
SP178	1-7/8 (47.6)	10	■		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■

Shank diameter = .150/.180 Head diameter = .300 * Shank diameter = .145, Regular PowerPoint pin without Step Shank.

Top Hat Drive Pins

Increases bearing surface against material to be fastened for improved attachment to inconsistent base materials. 100 per box.

PART NUMBER	SHANK LENGTH IN. (MM)	BOX QTY	MASTER CASE QTY	ROCKET	XT540	SA270/ TS750P	RA27	COBRA	D45/ D45A	D60	721	RS22/ HD22	DX 351	DX 36	DX 350	DX 460	DX A40	DX A41	DX 35	DX E72
SP58TH	5/8 (15.9)	50	5,000	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■

Shank diameter SP58TH and SP34TH = .150 1906 and 1908 = .145 Head diameter = .300

Ramguard Pins

Coated to improve corrosion resistance in treated lumber and other applications. 100 per box.

PART NUMBER	SHANK LENGTH IN. (MM)	BOX QTY	MASTER CASE QTY	ROCKET	XT540	SA270/ TS750P	COBRA	D45/ D45A	D60	721	RS22/ HD22	DX 351	DX 36	DX 350	DX 460	DX A40	DX A41	DX 35	DX E72
1516E	2-1/2 (63.5)	8	800		■	■	■				■		■	■	■		■		■
1524SDE*	3 (76.2)	6	600		■	■	■				■				■		■		■

Shank diameter = .145 * .150/.180 Head diameter = .300

Fastener Ceiling Clips

14 gage angle clip. 100 clips per box.

PART NUMBER	DESCRIPTION
1202CF	Angle clip (no pin)

Hole diameter: 5/16" & 14/64"

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POWDER PERFORMANCE/SUBMITTAL

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 finishe
- Proprietary black
- Mechanical zinc plate to a minimum thickness of .0002 meets requirements of ASTM B695

APPROVALS/LISTING

ICC Evaluation Service, Inc.

#ER-1147 Sill Plate
#ESR-1799 Powder Pins & Clips

City of Los Angeles

#RR-22668 Powder 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** – *Ultimate Load*											
			2000 PSI				4000 PSI				6000 PSI			
			TENSION (LBS)		SHEAR (LBS)		TENSION (LBS)		SHEAR (LBS)		TENSION (LBS)		SHEAR (LBS)	
1500/ 1600 SERIES	0.145	3/4	**50**	*655*	**66**	*739*	**100**	*511*	**104**	*552*	-----	-----	-----	-----
		1	**152**	*943*	**166**	*1229*	**157**	*937*	**182**	*1342*	-----	-----	-----	-----
		1-1/4	**159**	*1078*	**265**	*1665*	**179**	*1043*	**267**	*1538*	-----	-----	-----	-----
		1-1/2	**154**	*1450*	**340**	*2027*	**209**	*1357*	**342**	*1712*	-----	-----	-----	-----
SP	0.150	3/4	-----	-----	-----	-----	**150**	*803*	**105**	*786*	**81**	*493*	**82**	*454*
SP SERIES	.150/.180	1	**154**	*1043*	**200**	*1173*	**243**	*1307*	**175**	*1037*	**189**	*1125*	**210**	*1177*
		1-1/4	**207**	*1553*	**230**	*1636*	**298**	*1749*	**218**	*1471*	**213**	*1568*	**305**	*1780*
		1-1/2	-----	-----	-----	-----	**384**	*2126*	**391**	*1957*	**239**	*1886*	**594**	*2968*
3300 SERIES	0.180	1	**196**	*1084*	**100**	*1328*	**255**	*1504*	**284**	*1557*	-----	-----	-----	-----
		1-1/4	**241**	*1207*	**329**	*1710*	**294**	*1574*	**373**	*2104*	-----	-----	-----	-----
		1-1/2	**254**	*1601*	**379**	*1971*	**419**	*2239*	**501**	*2505*	-----	-----	-----	-----
1900	0.145	3/4	**105**	*694*	**71**	*458*	**101**	*685*	**99**	*627*	-----	-----	-----	-----
9100 STUD	0.205	1	**187**	*988*	**212**	*1385*	**186**	*1070*	**303**	*1618*	-----	-----	-----	-----
		1-1/4	**262**	*1450*	**304**	*1674*	**335**	*2161*	**400**	*2000*	-----	-----	-----	-----

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

Powder Performance/Submittal

PERFORMANCE TABLES

Fasteners in Steel

PART NUMBER SERIES	SHANK DIA. (INCH)	TYPE OF SHANK	INSTALLED IN A36 STRUCTURAL STEEL–STEEL THICKNESS (INCHES) **ALLOWABLE LOAD** – *Ultimate Load*									
			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/ 1600	0.145	SMOOTH	**81** *790*	**373** *2039*	**181** *1269*	**273** *1642*	**397** *2169*	**489** *2771*	**243** *1328*[8]	**277** *1514*[8]	---- ----	---- ----
		KNURLED	**296** *1633*	**636** *3516*	**584** *3384*	**659** *3822*	**680** *3755*	**730** *4030*	**253** *1459*[8]	**293** *1632*[8]	---- ----	---- ----
SP	0.150	SMOOTH	**385** *2107*	**662** *3618*	**445** *2549*	**477** *2736*	**393** *2145*	**574** *3137*	**948** *5180*	**597** *3500*	**234** *1244*[8]	**356** *1895*[8]
3300	0.180	SMOOTH	**281** *1536*	**580** *3169*	**385** *2212*	**507** *2931*	**460** *2631*	**644** *3518*	**641** *3499*	**684** *3739*	---- ----	---- ----
9100	0.205	KNURLED	**160** *1469*	**931** *5084*	**350** *3115*	**617** *3542*	**843** *4605*	**803** *4391*	**565** *3086*[9]	**547** *3373*[9]	---- ----	---- ----

PART NUMBER SERIES	SHANK DIA. (INCH)	TYPE OF SHANK	INSTALLED IN A572 GRADE 50 STRUCTURAL STEEL–STEEL THICKNESS (INCHES) **ALLOWABLE LOAD** – *Ultimate Load*									
			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/ 1600	0.145	SMOOTH	---- ----	---- ----	---- ----	---- ----	---- ----	---- ----	---- ----	---- ----	---- ----	---- ----
		KNURLED	**260** *1609*	**499** *3182*	**579** *3411*	**725** *4272*	**383** *2216*[7]	**595** *3431*[7]	---- ----	---- ----	---- ----	---- ----
SP	0.150	SMOOTH	**356** *2123*	**569** *3394*	**554** *3232*	**637** *3710*	**604** *3447*	**602** *3437*	**814** *4473*[9]	**820** *4503*[9]	**243** *1362*[8]	**381** *2141*[8]
3300	0.180	SMOOTH	---- ----	---- ----	---- ----	---- ----	---- ----	---- ----	---- ----	---- ----	---- ----	---- ----
9100	0.205	KNURLED	**365** *2175*	**903** *5385*	**697** *4061*	**907** *5285*	**155** *842*[7]	**376** *2143*[7]	---- ----	---- ----	---- ----	---- ----

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

Fasteners in Lightweight Concrete

PART NUMBER SERIES	SHANK DIAMETER (INCH)	MINIMUM PENETRATION (INCH)	ALLOWABLE WORKING VALUES INSTALLED IN 3000 PSI LIGHTWEIGHT CONCRETE **ALLOWABLE LOAD** – *Ultimate Load*					
			3000 PSI LIGHTWEIGHT W/DECKING				3000 PSI LIGHTWEIGHT	
			LOWER FLUTE TENSION		LOWER FLUTE SHEAR		TENSION	SHEAR
1500 SERIES	0.145	3/4	**76** *395*		**260** *1409*		**167** *837*	**179** *894*
		1	**134** *668*		**265** *1505*		**200** *998*	**228** *1141*
		1-1/4	**157** *784*		**269** *1344*		**333** *1664*	**400** *2090*
		1-1/2	**233** *1163*		**346** *1728*		**391** *1957*	**410** *2050*
SP SERIES	.150/.180	1	**119** *593*		**336** *1679*		**226** *1129*	**250** *1249*
		1-1/4	**175** *957*		**372** *1860*		**329** *1644*	**377** *1885*
		1-1/2	**179** *1055*		**426** *2128*		**406** *2030*	**380** *1900*
9100 SERIES	0.205	3/4	**70** *351*		**277** *1386*		----- -----	----- -----
		1	**112** *559*		**378** *1891*		----- -----	----- -----
		1-1/4	**118** *689*		----- -----		----- -----	----- -----

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