

Accessories Selection Chart



ONE HOLE CONDUIT STRAP

Used to attach conduit or armored cable to concrete.

POWERPOINT FASTENER PREASSEMBLED TO A 16 GAUGE CONDUIT STRAP. 100 PER BOX. MASTER CARTON 5 BOXES.

FITS D60, VIPER, ROCKET AND COBRA

PART NUMBER	DESCRIPTION
38HSS10	3/8" Hole strap with 1" premium pin
12HSS10	1/2" Hole strap with 1" premium pin
34HSS10	3/4" Hole strap with 1" premium pin
10HSS10	1" Hole strap with 1-1/4" premium pin

Shank diameter = .125 / .150 Head diameter = .300
38HSS10 = 18 gauge



CEILING CLIP ASSEMBLIES

Designed for suspended ceilings and other overhead applications.

PIN PREASSEMBLED TO A 14 GAUGE ANGLE CLIP. 1000 PER BOX.

FITS D60, VIPER, ROCKET AND COBRA

PART NUMBER	PIN LENGTH IN.	(MM)
SDC100	1	(25.4)
SDC125*	1-1/4	(31.8)

*Available in 100-Pack (part number SDC125C)
Shank diameter = .145 Head diameter = .300



THREADED ROD HANGER

For suspended ceilings, piping and other items using 1/4" or 3/8" threaded rod.

POWERPOINT FASTENER IS PREASSEMBLED TO A 16 GAUGE THREADED ROD HANGER. 100 PER BOX. MASTER CARTON 5 BOXES.

FITS D60, VIPER, ROCKET AND COBRA

PART NUMBER	DESCRIPTION
14TRHSS10	1/4" Rod hanger with 1" premium pin
38TRHSS10	3/8" Rod hanger with 1" premium pin

Shank diameter = .125 / .150 Head diameter = .300

THREADED STUD

For applications that require removability or where shimming is required.

1/4-20 THREADED STUD. 100 PER BOX. MASTER CARTON 10 BOXES.

FITS D60, VIPER, ROCKET AND COBRA

PART NUMBER	THREAD LENGTH IN.	(MM)	SHANK LENGTH IN.	(MM)
1623WK	3/4	(19.1)	1/2 Knurled	(12.7)
1643W	3/4	(19.1)	1	(25.4)

Shank diameter = .145
Use 1623WK for Steel Base Materials Use 1643W for Concrete Base Materials



CONDUIT CLAMP

Used to attach conduit to concrete.

POWERPOINT PIN PREASSEMBLED TO AN 18 GAUGE CONDUIT CLAMP. 50 PER BOX. MASTER CARTON 5 BOXES.

FITS VIPER

PART NUMBER	DESCRIPTION
12CCSS10L	1/2" Conduit clamp with 1" premium pin
34CCSS10L	3/4" Conduit clamp with 1" premium pin
12CCMPO34L	1/2" Conduit clamp with 3/4" plated pin
34CCMPO34L	3/4" Conduit clamp with 3/4" plated pin

Shank diameter = .125 / .150 Head diameter = .300



POWERPOINT PINS WITH CEILING CLIPS

Designed for difficult overhead applications.

PIN PREASSEMBLED TO A 14 GAUGE ANGLE CLIP. 1000 PER BOX.

FITS D60, VIPER, ROCKET AND COBRA

PART NUMBER	PIN LENGTH IN.	(MM)
SPC78	7/8	(22.2)
SPC114	1-1/4	(31.8)

Shank diameter = .150 (SPC114 = .150 / .180) Head diameter = .300



TOP HAT DRIVE PIN

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

100 PER BOX. MASTER CARTON 50 BOXES.

FITS D60, ROCKET AND COBRA

PART NUMBER	SHANK LENGTH IN.	(MM)
SP58TH	5/8	(15.9)
1906	3/4	(19.1)
1908	1	(25.4)

Shank diameter = .145 (SP58TH = .150)
Head diameter = 8mm (SP58TH = .300)



FASTENER ANGLE CLIP

General purpose 3/4" wide angle clip.

14 GAUGE ANGLE CLIP. 100 CLIPS PER BOX. MASTER CARTON 10 BOXES.

PART NUMBER	DESCRIPTION
1202CF	Angle clip (no pin) Hole diameter: 5/16" and 13/64"



Commonly Used Pins Selection Chart

ADVANTAGES

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.

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.

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

FASTENER TERMINOLOGY SUFFIX

K = Knurled B = Black SD = Washer

BLACK TRACK PINS

Designed for use in concrete and structural steel applications.

1000-PACK PER BOX. MASTER CARTON 5 BOXES.

FITS D60, ROCKET AND COBRA

PART NUMBER	SHANK LENGTH IN.	(MM)
1506B	3/4	(19.1)

Shank diameter = .145 Head diameter = .300

DRIVE PINS

Designed for use in concrete and structural steel applications. Fasten electrical boxes or anything flat to 1/4" steel or concrete.

100 PER BOX. MASTER CARTON 50 BOXES.

FITS D60, ROCKET AND COBRA

PART NUMBER	SHANK LENGTH IN.	(MM)
1503K	1/2 Knurled	(12.7)
1506	3/4	(19.1)
1508	1	(25.4)
1510*	1-1/4	(31.8)

Shank diameter = .145 Head diameter = .300
 * Master carton 10 boxes.

DRIVE PINS WITH WASHER

Washer increases bearing surface against the material to be fastened.



16 GAUGE METAL WASHER. 100 PER BOX. MASTER CARTON 10 BOXES.

FITS D60, ROCKET AND COBRA

PART NUMBER	SHANK LENGTH IN.	(MM)
1506SD	3/4	(19.1)
1508SD	1	(25.4)
1510SD	1-1/4	(31.8)
1512SD	1-1/2	(38.1)

Shank diameter = .145 Head diameter = .300

POWERPOINT PINS

Used for fastening into harder steel and concrete. Premium steel and hard concrete pin.



100 PER BOX. MASTER CARTON 50 BOXES.

FITS D60, ROCKET AND COBRA

PART NUMBER	SHANK LENGTH IN.	(MM)
SP12	1/2	(12.7)
SP58	5/8	(15.9)
SP34	3/4	(19.1)
SP78	7/8	(22.2)

Shank diameter = .150 Head diameter = .300

POWERPOINT STEP SHANK PINS

Used for fastening into harder steel and concrete. Premium steel and hard concrete pin.



PIN FOR FASTENING INTO HARDER STEEL AND CONCRETE. 100 PER BOX. MASTER CARTON 50 BOXES.

FITS D60, ROCKET AND COBRA

PART NUMBER	SHANK LENGTH IN.	(MM)
SP100	1	(25.4)

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

M100BB PIN

For general purpose attachments to concrete.



POWERPOINT STEP SHANK PIN PREASSEMBLED TO 1/2" WASHER. 500 PER BOX. MASTER CARTON 5 BOXES.

FITS ALL POWDER TOOLS AND SINGLE PIN GAS TOOLS

PART NUMBER	DESCRIPTION
M100BB	1" PowerPoint step shank pin with 1/2" domed washer and flute

Shank diameter = .125 / .150 Head diameter = .300



High Quality and Dependability

ITW Ramset powder loads and tools match tolerances to provide optimum power within recognized national velocity standards. Available in color-coded 10-load discs, 10-load strips and 100-load boxes.

Caution: Always test-fasten with the lowest power level for your tool. If more power is necessary, use the next highest power level until proper level and fastening is achieved. Refer to the operator's manual for more specific details. Observe all safety reminders. Tool operators must be trained and qualified as required by federal law. Failure to use properly can result in serious injury or death to users or bystanders.

Advantages Powder Guide

Power level is designated by the load level number marked on each box and by the color of the box and each powder load. As the number increases, the power level increases.

Selection Charts

RAMSET LOADS FOR LOW VELOCITY TOOLS

TOOL MODEL	PART NUMBER	POWER LEVEL	COLOR	CALIBER/TYPE	PACKAGING
D60	2D60	2	Brown	.25 Disc	all 10 disc
	3D60	3	Green	.25 Disc	10 discs/box
	4D60	4	Yellow	.25 Disc	
Cobra, Viper and Rocket	2RS27	2	Brown	.27 Strip	all 10 strip 10 strips/box
	3RS27	3	Green	.27 Strip	
	4RS27	4	Yellow	.27 Strip	
	5RS27	5	Red	.27 Strip	

RAMSET LOADS FOR HILTI TOOLS

TOOL MODEL	PART NUMBER	POWER LEVEL	COLOR	CALIBER/TYPE	PACKAGING
DX-35	3RS25	3	Green	.25 Strip	all 10 strip 10 strips/box
	4RS25	4	Yellow	.25 Strip	
	5RS25	5	Red	.25 Strip	
DX-350, DX-351 DX-36M, DX460	2RS27	2	Brown	.27 Strip	all 10 strip 10 strips/box
	3RS27	3	Green	.27 Strip	
	4RS27	4	Yellow	.27 Strip	
DX-350, DX-351 DX-36M, DX-451 DX-460	5RS27	5	Red	.27 Strip	all 10 strip 10 strips/box
	6RS27	6	Purple	.27 Strip	all 10 strip 10 strips/box
DXE37, DXE72	32CW	3	Green	.22 Single	all 100/box
	42CW	4	Yellow	.22 Single	

.25 and .27 caliber strips available in 1000 pack *1000-Pak/100 Strips/Box

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POWER LEVEL GUIDE FOR LOADS

All loads are color coded and load level numbered. As the number increases, the power level increases.

Always start with the lightest load. If the fastener does not set completely, use the next higher load and repeat the process.



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
- All clips are electroplated zinc with yellow cromate and meet ASTM B633 requirements

APPROVALS/LISTINGS

- ICC Evaluation Service, Inc.
#ESR-1955 T3 Fasteners

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	
34CLIP	0.104/ .125	5/8	62 310	-----	-----	106 528	-----	-----	44 220	-----	-----	-----
38HSMP034, 12HSMP034 34HSMP034, 10HSMP034 114HSMP034, 14TRHMP034 38TRHMP034, TSHMP034 12CCMP034L, 34CCMP034L	0.104/ .125	5/8	60 357	117 587	107 533	191 957	54 269	230 1150	71 357	123 613		
M100BB, 38HSS10 12HSS10, 34HSS10 10HSS10, TSHSS10 12CCSS10L, 34CCSS10L 14TRHSS10, 38TRHSS10	0.125/ .150	3/4	107 559	213 1067	161 803	248 1240	96 478	231 1156	102 512	166 831		

* ESR-1955 pin specs apply. **Note 1:** ALLOWABLE loads are shown in the **LARGE BOLD** font, *Ultimate* loads are shown in *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:** Jobsite testing may be required to determine actual jobsite 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>									
			11 Gauge (.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)		
M012	0.104/.118	SMOOTH	-----	-----	-----	-----	-----	-----	148 744	157 787	166 832	157 787

** 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 *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:** Jobsite testing may be required to determine actual jobsite 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 inch minimum. **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.

POWDER ACTUATED FASTENING



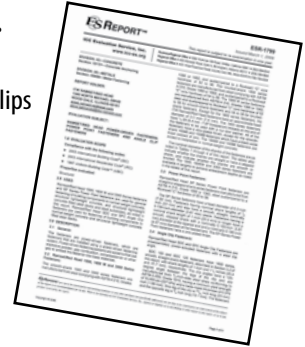
Ramset fasteners may be specified by their types or catalog numbers to satisfy fastening requirements.

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.**
#ER1147 Sill Plate
#ESR-1799 Powder Pins and Clips (formerly ER-1639)
- | **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 – <i>Ultimate Load</i>											
			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	<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>	----	----	----	----
SP	0.150	3/4	----	----	----	----	150	<i>803</i>	105	<i>786</i>	81	<i>493</i>	82	<i>454</i>
SP STEP SHANK	.150/.180	1	154	<i>1043</i>	200	<i>1173</i>	243	<i>1307</i>	175	<i>1037</i>	189	<i>1125</i>	210	<i>1177</i>
		1-1/4	207	<i>1553</i>	230	<i>1636</i>	298	<i>1749</i>	218	<i>1471</i>	213	<i>1568</i>	305	<i>1780</i>
		1-1/2	----	----	----	----	384	<i>2126</i>	391	<i>1957</i>	239	<i>1886</i>	594	<i>2968</i>
9100 STUD	0.205	1	187	<i>988</i>	212	<i>1385</i>	186	<i>1070</i>	303	<i>1618</i>	----	----	----	----
		1-1/4	262	<i>1450</i>	304	<i>1674</i>	335	<i>2161</i>	400	<i>2000</i>	----	----	----	----

Note 1: ALLOWABLE loads are shown in the **LARGE BOLD** font, *Ultimate* loads are shown in *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:** Jobsite testing may be required to determine actual jobsite 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. Tables converted to metric are available on our website.

FASTENERS IN LIGHTWEIGHT 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	
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>
SP STEP SHANK	.150/.180	1	119	<i>593</i>	336	<i>1679</i>	226	<i>1129</i>	250	<i>1249</i>
		1-1/4	175	<i>957</i>	372	<i>1860</i>	329	<i>1644</i>	377	<i>1885</i>
		1-1/2	179	<i>1055</i>	426	<i>2128</i>	406	<i>2030</i>	380	<i>1900</i>

Note 1: ALLOWABLE loads are shown in the **LARGE BOLD** font, *Ultimate* loads are shown in *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:** Jobsite testing may be required to determine actual jobsite values. **Note 7:** 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.



Performance Tables

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)	TENSION (LBS)	SHEAR (LBS)	
1500/1600	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>1328</i> ⁸	277 <i>1514</i> ⁸	----	----
		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>1459</i> ⁸	293 <i>1632</i> ⁸	----	----
SP	0.150	SMOOTH	385 <i>2107</i>	662 <i>3618</i>	445 <i>2549</i>	477 <i>2736</i>	393 <i>2145</i>	574 <i>3137</i>	948 <i>5180</i>	597 <i>3500</i>	234 <i>1244</i> ⁸	356 <i>1895</i> ⁸

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)	TENSION (LBS)	SHEAR (LBS)	
1500/1600	0.145	SMOOTH	----	----	----	----	----	----	----	----	----	----
		KNURLED	260 <i>1609</i>	499 <i>3182</i>	579 <i>3411</i>	725 <i>4272</i>	383 <i>2216</i> ⁷	595 <i>3431</i> ⁷	----	----	----	----
SP	0.150	SMOOTH	356 <i>2123</i>	569 <i>3394</i>	554 <i>3232</i>	637 <i>3710</i>	604 <i>3447</i>	602 <i>3437</i>	814 <i>4473</i> ⁹	820 <i>4503</i> ⁹	243 <i>1362</i> ⁸	381 <i>2141</i> ⁸

Note 1: ALLOWABLE loads are shown in the **LARGE BOLD** font, *Ultimate* loads are shown in *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:** Jobsite testing may be required to determine actual jobsite 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 inch minimum. **Note 8:** Fastener penetration is 7/16 inch minimum. **Note 9:** Fastener penetration is 1/2 inch minimum. **Note 10:** 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.

ANGLE CLIP IN CONCRETE

PART NUMBER SERIES	SHANK DIAMETER (INCH)	MINIMUM PENETRATION (INCH)	INSTALLED IN STONE AGGREGATE CONCRETE CONCRETE COMPRESSIVE STRENGTH ALLOWABLE LOAD – <i>Ultimate Load</i>								
			4000 PSI			6000 PSI					
			TENSION (LBS)	SHEAR (LBS)	OBLIQUE (LBS)	TENSION (LBS)	SHEAR (LBS)	OBLIQUE (LBS)	TENSION (LBS)	SHEAR (LBS)	OBLIQUE (LBS)
SDC100 SDC125	0.145	7/8	115 <i>575</i>	120 <i>1014</i>	145 <i>726</i>	----	----	----	----	----	----
SDC125	0.145	1-1/8	130 <i>744</i>	167 <i>1090</i>	205 <i>1032</i>	----	----	----	----	----	----
SPC78	0.150	3/4	155 <i>897</i>	188 <i>1050</i>	----	150 <i>788</i>	153 <i>949</i>	140 <i>769</i>			
SPC114	.150/.180	1-1/8	127 <i>811</i>	226 <i>1130</i>	181 <i>904</i>	169 <i>853</i>	300 <i>1500</i>	223 <i>1114</i>			

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 WITH METAL DECKING				
			LOWER FLUTE TENSION (LBS)	LOWER FLUTE SHEAR (LBS)	LOWER FLUTE OBLIQUE (LBS)	UPPER FLUTE TENSION (LBS)	UPPER FLUTE SHEAR (LBS)
SDC100	0.145	7/8	67 <i>335</i>	237 <i>1186</i>	90 <i>448</i>	104 <i>571</i>	310 <i>1678</i>
SDC125	0.145	1-1/8	94 <i>471</i>	276 <i>1378</i>	119 <i>596</i>	106 <i>528</i>	319 <i>1597</i>
SPC78	0.150	3/4	59 <i>293</i>	202 <i>1109</i>	65 <i>323</i>	84 <i>419</i>	324 <i>1622</i>
SPC114	150/.180	1-1/8	157 <i>786</i>	272 <i>1358</i>	153 <i>766</i>	180 <i>899</i>	334 <i>1673</i>

Note 1: ALLOWABLE loads are shown in the **LARGE BOLD** font, *Ultimate* loads are shown in *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 clip assembly 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:** Jobsite testing may be required to determine actual jobsite 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. Tables converted to metric are available on our website.

POWDER ACTUATED FASTENING

