



 **RAMSET®**



2015 Product Catalog

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DEDICATED TO AMERICAN MADE PRODUCTS

The American Recovery and Reinvestment Act of 2009 requires that all construction materials for federal, state and local stimulus projects must be manufactured in the United States.

Ramset is unique in the world of construction tools, fasteners and sealant manufacturing. Overall, 98% of Ramset fasteners and accessories are made in the USA.

Unlike our competitors you know you are buying American made products and supporting the American economy and workers when you buy Ramset. Ramset's parent company, Illinois Tool Works (NYSE: ITW) employees more than 25,000 Americans.



Manufacturer	Tools	Fasteners
Ramset Tools:		
TrakFast	Libertyville, IL	Paris, KY
GypFast	Libertyville, IL	Paris, KY
T3SS	Libertyville, IL	Paris, KY
T3Mag	Libertyville, IL	Paris, KY
Ramset Manufacturing:		
Powder Loads Manufacturing		Oxford, MS
Gas Fuel Cells Production		Pontotoc, MS
Wedge Anchors and LDT Anchors Manufacturing		Roselle, IL
Tapcon Manufacturing		Itasca, IL
E-Z Ancor Manufacturing		Elk Grove Village, IL



The following is a sampling of government projects that have utilized the Buy American Act using Ramset products:

- Aberdeen Proving Grounds Project C4 (9 buildings)
- Fort Belvoir Hospital (6 buildings)
- Fort Bragg
- Fort Detrick Department of Army Vacancies Serviced
- Fort Meade (6 buildings)
- National Maritime Intelligent Center
- Norfolk Naval Base
- World Trade Center
- 49ers Stadium

ITW saw a challenge: how to create a portable tool that delivered the power of pneumatic tools without the hoses and compressors. In 1991, ITW Paslode conquered the challenge with the revolution of gas-powered technology. The cordless Impulse Finish Nailer delivered the power of pneumatic tools without cluttering job sites.

With the thought of Driving Jobsite Speed while creating a safer work environment, ITW Ramset built upon the Paslode technology and in 1992 introduced the TrakFast to the drywall trade. It forever changed the way the world worked. In 2003, ITW Ramset followed up on the

success of the TrakFast with the T3SS which is setting the standard for electrical and mechanical contractors.

Gas significantly lowers cost-in-place, reduces stress on the employee, and it's much quieter to use than drilling or powder actuated tools (PATs), so you can work in occupied buildings. There are times when you need the power and accuracy of our PATs—like the speed of our XT540 strip tool, or the work horse, nearly maintenance-free 721 single shot PAT. But constant use of these tools can be noisy and overly jarring on the body.



Drywall



Electrical



Mechanical

- No Licensing Required
- Fast and Easy to Use
- Quiet—No Recoil
- No Cords or Hoses
- Long Fuel Cell & Battery Life

When the conditions are right, gas is the right choice.

Problem:
"My guys work on block all day long—from electrical boxes to furring. I've tried powder tools and they blow holes in block. What makes the Ramset technology different?"

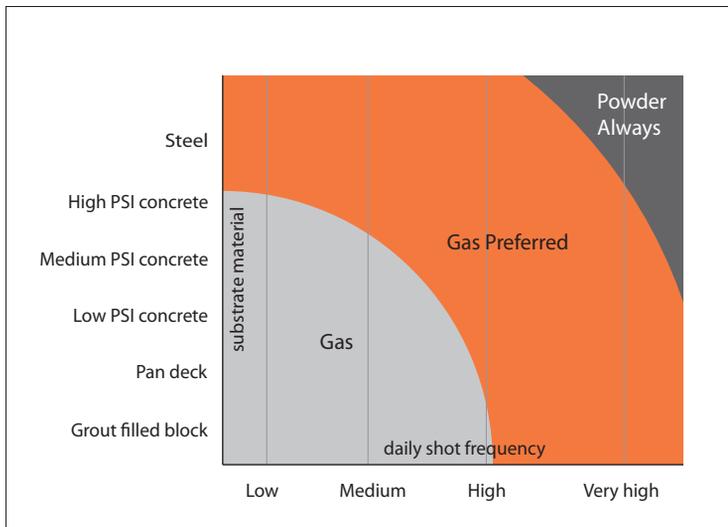
Solution:
Ramset technology has patented overdrive technology built in to every gas-powered tool. The tool works under the same principal as a combustion engine. A little gas, a little spark and a powerful shot, without the recoil associated with powder.

The industry transitions to gas technology

Problem:
"I don't want to have to re-license my guys to work with gas technology"

Solution:
Since there are no loads, there's no licensing needed. In fact, Union Trainers have begun including the Ramset Gas Tools in training classes, and students can't believe how easy the tools are to work with.

In addition, the gas powered tools are totally portable and can be used for almost all your jobs—without the worry of having unspent loads on your jobsite.

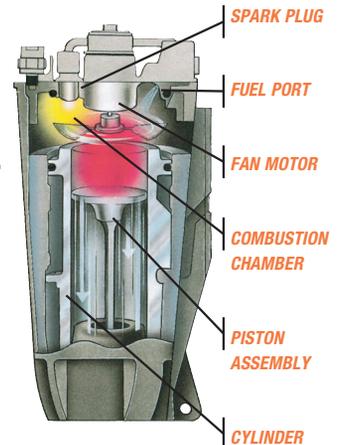


The Inside Story

The patented Ramset technology delivers precisely balanced power eliminating the damage caused by overdrive in PATs.

How it works: As the nosepiece is depressed, a rechargeable battery turns on the fan motor. In less than a second: a precise amount of fuel is injected into the combustion chamber. When the trigger is pulled, a spark creates an explosion that drives the piston into the fastener, and the fastener in the work surface. The action creates a vacuum that pulls the piston back to the start position.

In fact the technology is so precise it won't blow through a pop can.



Ramset provides the architect and engineer the following suggested language and helpful information for the purpose of fastening specifications.

Plywood to Metal Framing or Truss

Part Number PLY138

Fasteners used shall have a 0.100 nominal shank diameter with helical knurl and a length of 1-3/8-inches.



Track or Clip to Steel Beam

Part Number SP58TH (pg.34)

Fasteners used shall have a 0.300 head with a 0.150 knurled shank diameter and a length of 5/8-inches.

Part Number TE12 (pg.35)

Fasteners used shall have a 0.320 head with a 0.157 knurled shank diameter and a length of .545 inches.



Exterior Sheathing to Metal Stud

Part Number GF112 (pg.29)

Fasteners designated "GYPFAS" and have a helical knurled shank with a 1-1/2" length.



Interior Partition Track to Concrete

Part Number T3034B (pg.28)

Fasteners shall be designated T3 Type with a 0.125 nominal shank diameter and a length of 3/4 inch.



Exterior Perimeter Track to Concrete

Part Number 1510SD (pg.33)

Fasteners used shall have a 0.145 nominal shank diameter and a length of 1-1/4 inches. The fastener shall have a pre-assembled 7/8-inch washer.



Part Number TE100 (pg.35)

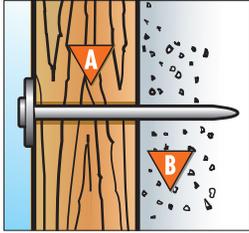
Fasteners shall be designated "True Embedment" type with a 0.320 head with a 0.157 shank and length of 1.0625 providing minimum of 1" of embedment in up to 14ga track. Fastener shall have the embedment depth of 1" stamped on head.



For assistance with specifications and/or substitutions, contact Technical Service at 800-848-5611.

SELECTING THE CORRECT FASTENER LENGTH

SELECTING THE CORRECT FASTENER LENGTH



High quality fasteners provide consistent and reliable performance in concrete, block, masonry, and steel applications. Choosing the correct fastener for the job will assure professional results.

- A** Determine thickness of material being attached.
- B** Fastener must be long enough to drive approximately 1" into concrete, cement block or penetrate thickness of steel.

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.



TYPICAL USES

	WOOD ATTACHMENT MATERIAL*	CONCRETE BASE MATERIAL		STRUCTURAL STEEL BASE	
		Commonly Used Fastener	Commonly Used Load	Commonly Used Fastener	Commonly Used Load
	2 x 4	1516SDC (2-1/2")	Yellow #4	1514SD (2") SP178 (1-7/8")	Red #5 Red #5
	3/4" Plywood for furring strip	1512 (1-1/2")	Yellow #4	1510 (1-1/4")	Yellow #4
	1/4" - 1/2"	1510 (1-1/4")	Green #3	SP34 (3/4")	Yellow #4

* Use Ramguard Pin for treated lumber.

	THIN GAGE STEEL	CONCRETE BASE MATERIAL		STRUCTURAL STEEL BASE	
		Commonly Used Fastener	Commonly Used Load	Commonly Used Fastener	Commonly Used Load
	Electrical Junction Boxes	M100BB (1")	Green #3	SP58TH (5/8")	Yellow #4
	Shelf Brackets	M100BB (1")	Green #3	SP34 (3/4")	Yellow #4
	Interior Drywall Track	1506B (3/4")	Brown #2	SP12 (1/2")	Yellow #4
	Perimeter Track	1510 (1-1/4")	Yellow #4	SP12 (1/2")	Yellow #4

NOTE: This chart is presented as a guide only. Start with the lightest load. If the fastener does not set completely, use the next higher load and repeat the process. Product suggestions may not be suitable for all types of base materials. Contact Technical Services if you have further questions.

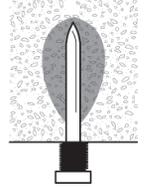
DESCRIPTION

FASTENING TO CONCRETE

As the fastener enters the concrete, extreme pressures and heat are created. This creates a bond that provides high loading strength in concrete snugly and provides tool protection.

FASTENING TO STEEL

The resilience of steel provides a clamping effect to the fastener. This combined with the tremendous heat that is created, provides a welding and clamping effect to give maximum holding power.



FASTENING PLACEMENT AND PENETRATION

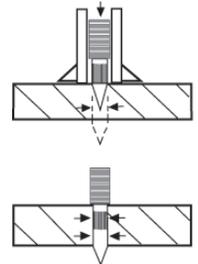
The following represents the minimum edge and spacing requirements, plus base material thickness requirements:

CONCRETE

- 1. Edge distance.** Do not fasten closer than 3 inches from the edge of concrete. If the concrete cracks, the fastener may not hold and may allow the fastener to ricochet, causing serious injury or death to the operator or bystanders.
- 2. Recommended minimum fastener spacing.** Setting fasteners too close together can cause the concrete to crack. The recommended MINIMUM DISTANCE between fastening is three (3) inches. Never attempt a fastener application too close to another previously inserted fastener to prevent the second fastener from ricocheting off the previously installed fastener. A ricochet can result in serious injury or death to the operator or bystanders.
- 3. Concrete thickness.** It is important that the concrete be at least three (3) times as thick as the fastener penetration. If the concrete is too thin, the compressive forces forming at the fastener's point can cause the free face of the concrete to break away. This creates a dangerous condition from flying concrete and/or the fastener and also results in a reduction of fastener holding power.

STEEL

- 1. Edge distance.** The recommended edge distance for a fastener to the edge of steel is 1/2 inch. Never fire the tool within 1/2 inch of the edge of a steel base material because the steel may bend or break off, allowing the fastener to ricochet, causing serious injury or death to the operator or bystanders.
- 2. Recommended minimum fastener spacing.** The recommended minimum distance between fastening is 1 inch. Never attempt a fastening application too close to another previously inserted fastener to prevent the second fastener from ricocheting off the previously installed fastener. A ricochet can result in serious injury or death to the operator or bystanders.
- 3. Steel thickness.** Do not fasten into steel base material thinner than the fastener shank diameter. Holding power will be reduced and the fastener may be over-driven, creating a dangerous situation to the operator or bystanders due to a free-flying fastener.



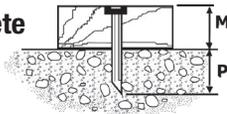
HOW TO SELECT A POWDER ACTUATED FASTENER

- **DRIVE PINS** are used to directly fasten an object (permanent installation).
- **THREADED STUDS** are used where the object fastened is to be removed or where shimming is required. The following shows how to determine shank and thread length. Required penetration is determined by load requirement (illustrated in the following examples).

Ramset fasteners may be specified by their type or catalog number to satisfy fastening requirements.

Permanent Installation

To Concrete



Minimum Shank Length = Thickness of Material (M) + Required Penetration (P)

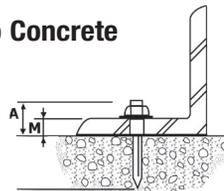
To Steel



Minimum Shank Length = Thickness of Material (M) + Thickness of Steel (T) + 1/4 Min. Point Allowance

Removable Installation

To Concrete

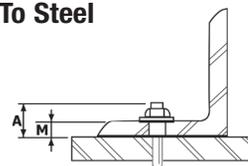


Thread Length (A) = Thickness of Material (M) + Allowance* For Nut & Washer

Shank Length = 1"

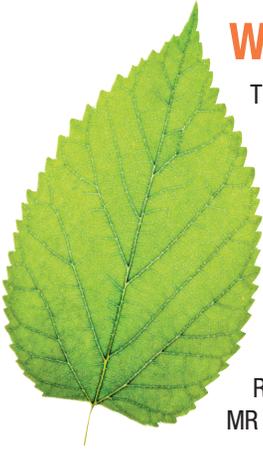
*Allowance for thickness of nut & washer = thread size (i.e. allow 1/4" for 1/4-20 thread, etc.)

To Steel



Thread Length (A) = Thickness of Material (M) + Allowance* For Nut & Washer

Shank Length = 1/2"



What is LEED?

The purpose of Leadership in Energy and Environmental Design (LEED) is to construct buildings in an energy efficient manner and reduce the buildings' energy consumption. As a result, these buildings can help conserve non-renewable energy resources; decrease dependence on foreign oil; and lower greenhouse gas emissions.

Ramset LEED Credit MR 5.1

MR 5.1 was developed with the intent to increase demand for building materials and products that are extracted and manufactured within the region, thereby supporting the use of indigenous resources and reducing the environmental impact resulting from transportation.

Ramset's pins, sealants, spring steel products, electrical accessories and anchors may meet the requirements for LEED MR 5.1 if your project falls within 500 miles of our manufacturing facilities.

How to calculate LEED MR 5.1

LEED MR Credit 5.1 is calculated on a 500 mile radius from/to distribution points. Use Google Maps to calculate the distance to your project from:

Location	Zip Code	Product
Elk Grove Village, IL	60007	E-Z Anchor
Itasca, IL	60143	Tapcon/GypFast & Fasteners
Roellse, IL	60172	Wedge & Tapcon LD Anchors
Paris, KY	40361	Powder & Gas Fasteners



Ramset Recycles

Ramset has always recognized the value of utilizing recycled materials where available.

The raw material sourced for the manufacture of Ramset pins contains approximately 10-20% mill scrap when it is converted to wire material. The plastic and casing material in our loads typically consists of 10% recycled material.

Our packaging also contains post-consumer recycled material. The paper board (inner cartons) containers are typically made from 40% recycled material; corrugated cartons typically contain 30-35% recycled material.

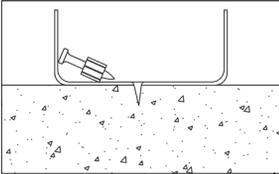
Ramset has also instituted a recycling program at its Glendale Heights facility for the batteries used in its gas powered tools.

RECYCLING



CONCRETE SYMPTOM

FASTENER DOES NOT HOLD IN BASE MATERIAL OR BASE MATERIAL SPALLS



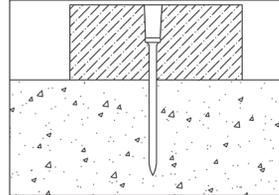
CAUSE

- High strength concrete
- Hard or large aggregate in concrete

ACTION

- Use shorter fastener
- Use PowerPoint pin
- Use load with a different power level

FASTENER PENETRATES TOO DEEP



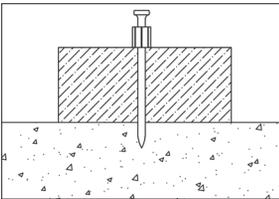
CAUSE

- Fastener too short for application
- Tool power level too high

ACTION

- Use longer fastener
- Use a lighter powder load

FASTENER DOES NOT PENETRATE DEEP ENOUGH



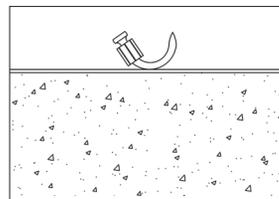
CAUSE

- Fastener too long
- Tool power level too low

ACTION

- Use shorter fastener
- Use a stronger powder load

FASTENER BENDS



CAUSE

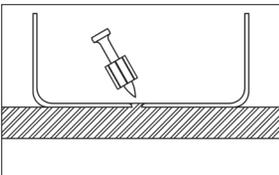
- Fastener hit large aggregate on entry
- Concrete too hard
- Fastener hit rebar just under the surface

ACTION

- Use shorter fastener
- Use PowerPoint pin
- Make sure tool is perpendicular to the work surface
- Move over 3 inches, try to fasten again

STEEL SYMPTOM

FASTENER DOES NOT PENETRATE THE SURFACE



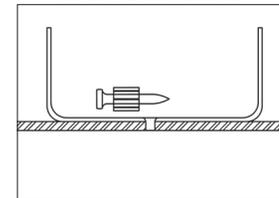
CAUSE

- Driving power too low
- Material may be too hard for forced entry fastener

ACTION

- Increase powder load level
- Use PowerPoint pin

FASTENER DOES NOT HOLD IN BASE MATERIAL



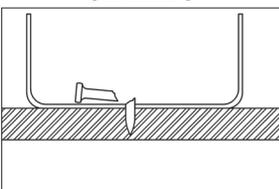
CAUSE

- Steel base material too thin

ACTION

- Use gas system tools with smaller Shank pin or Tek pin

FASTENER BREAKS OR BENDS



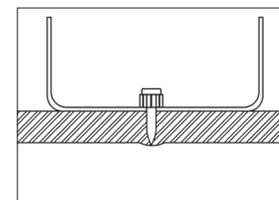
CAUSE

- Driving power is too low
- Fastener is too long
- Material may be too hard for forced entry fastener

ACTION

- Increase powder load level
- Reduce fastener length

FASTENER DOES NOT FULLY PENETRATE STEEL



CAUSE

- Driving power too low
- Steel base material too thick
- Application limit may have been reached

ACTION

- Increase powder load level
- Use PowerPoint pin

GAS POWERED TOOLS

.22 CAL SINGLE SHOT

TOOL

DESCRIPTION

TYPICAL BUILDING TRADE*



T3MAG

- 45-Pin Magazine
- One Step Fuel Injection & Eject
- Fully Automatic
- 2 Year Warranty

- ☐ Length: 18-1/2"
- ☐ Height: 15"
- ☐ Weight: 9.2 lbs.
- ☐ Maximum Pin Length: 1"

METAL FRAMING



TRAKFAST TF1200

- 42 Pin Magazine
- Fully Automatic
- 2 Year Warranty

- ☐ Length: 17.5"
- ☐ Height: 15-1/2"
- ☐ Weight: 7.9 lbs.
- ☐ Maximum Pin Length: 1-1/2"

METAL FRAMING



T3SS

- Single Shot Gas Tool
- One Step Fuel Injection & Eject
- 2 Year Warranty

- ☐ Length: 13-1/2"
- ☐ Height: 15"
- ☐ Weight: 7.0 lbs.
- ☐ Maximum Pin Length: 1-1/2"

ELECTRICAL/MECHANICAL



GYPFAST G2

- 150 Pin Coil
- Fully Automatic
- 2 Year Warranty

- Length: 15"
- Height: 15.25"
- Weight: 7.6 lbs. (with battery)
- Maximum Pin Length: 2-1/2"

EXTERIOR SHEATHING



T3IF-6

- Single Shot Gas Tool
- One Step Fuel Injection & Eject
- 2 Year Warranty

- Length: 15"
- Height: 15.25"
- Weight: 7.6 lbs. (with battery)
- Maximum Pin Length: 2-1/2"

INSULATION



721

- Single Shot
- 3 Year Warranty

- Length: 13-1/2"
- Weight: 4.3 lbs.
- Muzzle Bushing O.D.: 5/8"
- Maximum Pin Length: 1-1/2"

METAL FRAMING



MasterShot

- Single Shot
- 6 Month Warranty

- Length: 15"
- Weight: 4.4 lbs.
- Muzzle Bushing O.D.: 3/4"
- Maximum Pin Length: 3"

WOOD FRAMING

*Building trade shown as suggestions. Tools are not limited to these trades.

	TOOL	DESCRIPTION	TYPICAL BUILDING TRADE*
.25 CAL STRIP	 R25 <ul style="list-style-type: none"> Semi-Automatic 1 Year Warranty 	<ul style="list-style-type: none"> Length: 11.6" Weight: 4.3 lbs. Muzzle Bushing O.D.: 3/4" Maximum Pin Length: 1-1/2" 	WALLS & CEILINGS
	 XT540 <ul style="list-style-type: none"> Automatic Piston Return Power Adjust 3 Year Warranty 	<ul style="list-style-type: none"> Length: 19" Weight: 5.5 lbs. Muzzle Bushing O.D.: 7/8" Maximum Pin Length: 3" 	METAL FRAMING
.27 CAL STRIP TOOLS	 SA270 <ul style="list-style-type: none"> Semi-Automatic Power Adjust 3 Year Warranty 	<ul style="list-style-type: none"> Length: 15.3" Weight: 5.45 lbs. Muzzle Bushing O.D.: 5/8" Maximum Pin Length: 3" 	WOOD FRAMING
	 COBRA <ul style="list-style-type: none"> Semi-Automatic Economical 1 Year Warranty 	<ul style="list-style-type: none"> Length: 13-1/4" Weight: 4.5 lbs. Muzzle Bushing O.D.: 9/16" Maximum Pin Length: 2-1/2" (3" w/Washer) 	WOOD FRAMING
	 VIPER 4 <ul style="list-style-type: none"> Automatic Piston Return Designed Specifically for Overhead Applications 3 Year Warranty 	<ul style="list-style-type: none"> Length: 17" Weight: 4.5 lbs. Maximum Pin Length: 1-1/2" 	ACOUSTICAL/OVERHEAD

*Building trade shown as suggestions. Tools are not limited to these trades.

TO THIS BASE MATERIAL

	CONCRETE				STEEL BEAM - 3/16" to 1/2" THICK			
	FASTENER LENGTH (inches)	GAS TOOL	POWDER TOOL	POWDER LOAD	FASTENER LENGTH (inches)	GAS TOOL	POWDER TOOL	POWDER LOAD
INTERIOR NON-LOAD BEARING DRYWALL TRACK 25 - 20 GAGE	3/4	TF1200 T3MAG	R25	#3 GRN .25cal STRIP	1/2	TF1200 T3MAG	R25	#4 YEL .25cal STRIP
			721	#2 BRN .22cal SINGLE			721	#4 YEL .22cal SINGLE
			SA270	#3 GRN .27cal STRIP			SA270	#4 YEL .27cal STRIP
EXTERIOR PERIMETER DRYWALL TRACK 18 -12 GAGE	1-1/4	N.R.	SA270	#4 YEL .27cal STRIP	1/2	N.R.	SA270	#4 YEL .27cal STRIP
			XT540	#4 YEL .27cal STRIP			XT540	#4 YEL .27cal STRIP
			COBRA	#4 YEL .27cal STRIP			COBRA	#4 YEL .27cal STRIP
CLIPS or BRACKETS for STEEL FRAMING	1-1/4	N.R.	SA270	#4 YEL .27cal STRIP	1/2	N.R.	SA270	#4 YEL .27cal STRIP
			XT540	#4 YEL .27cal STRIP			XT540	#4 YEL .27cal STRIP
			COBRA	#4 YEL .27cal STRIP			COBRA	#4 YEL .27cal STRIP
2 x 4 , 2 x 6 LUMBER	2-1/2	N.R.	SA270	#4 YEL .27cal STRIP	1-7/8	N.R.	SA270	#4 YEL .27cal STRIP
			XT540	#4 YEL .27cal STRIP			XT540	#4 YEL .27cal STRIP
			COBRA	#5 RED .27cal STRIP			COBRA	#5 RED .27cal STRIP
			MasterShot	#4 YEL .22cal SINGLE			MasterShot	#4 YEL .22cal SINGLE
1/2" PLYWOOD	1-1/4	N.R.	SA270	#4 YEL .27cal STRIP	1	N.R.	SA270	#4 YEL .27cal STRIP
			COBRA	#4 YEL .27cal STRIP			COBRA	#4 YEL .27cal STRIP
			XT540	#4 YEL .27cal STRIP			XT540	#4 YEL .27cal STRIP
3/4" PLYWOOD 1 x 4, 1 x 6 WOOD	1-1/2	N.R.	SA270	#4 YEL .27cal STRIP	1-1/4	N.R.	SA270	#4 YEL .27cal STRIP
			COBRA	#4 YEL .27cal STRIP			COBRA	#4 YEL .27cal STRIP
			XT540	#4 YEL .27cal STRIP			XT540	#4 YEL .27cal STRIP
1/2" or 5/8" GYPSUM SHEATHING	-	N.R.	N.R.	N.R.	-	N.R.	N.R.	

FASTEN THIS MATERIAL

NOTES:

- 1) This chart is presented as a guide only. Start with the lightest load available. If the fastener does not completely set, use the next higher load and repeat the process.
- 2) Product suggestions may not be suitable for all types of base materials.
- 3) N.R. is Not Recommended

POWDER FASTENER & LOAD SELECTION CHART

CONCRETE BLOCK				MORTAR JOINT (horizontal only)				LIGHT GAGE STEEL 18-12gauge			
FASTENER LENGTH (inches)	GAS TOOL	POWDER TOOL	POWDER LOAD	FASTENER LENGTH (inches)	GAS TOOL	POWDER TOOL	POWDER LOAD	FASTENER LENGTH (inches)	GAS TOOL	POWDER TOOL	POWDER LOAD
1	TF1200 T3MAG	R25	#3 GRN .25cal STRIP	1	TF1200 T3MAG	R25	#3 GRN .25cal STRIP	-	N.R.	N.R.	
		721	#2 BRN .22cal SINGLE			721	#2 BRN .22cal SINGLE				
		SA270	#2 BRN .27cal STRIP			COBRA	#3 GRN .27cal STRIP				
1	TF1200 T3MAG	SA270	#3 GRN .27cal STRIP	1	TF1200 T3MAG	SA270	#3 GRN .27cal STRIP	-	N.R.	N.R.	
		COBRA	#3 GRN .27cal STRIP			COBRA	#3 GRN .27cal STRIP				
		R25	#3 GRN .25cal STRIP			R25	#3 GRN .25cal STRIP				
1	TF1200 T3MAG	SA270	#3 GRN .27cal STRIP	1	TF1200 T3MAG	SA270	#3 GRN .27cal STRIP	-	N.R.	N.R.	
		XT540	#3 GRN .27cal STRIP			COBRA	#3 GRN .27cal STRIP				
		721	#3 GRN .22cal SINGLE			R25	#3 GRN .25cal STRIP				
2-1/2	N.R.	SA270	#4 YEL .27cal STRIP	2-1/2	N.R.	SA270	#4 YEL .27cal STRIP	-	N.R.	N.R.	
		XT540	#3 GRN .27cal STRIP			XT540	#3 GRN .27cal STRIP				
		COBRA	#4 YEL .27cal STRIP			COBRA	#4 YEL .27cal STRIP				
		MasterShot	#4 YEL .22cal SINGLE			MasterShot	#4 YEL .22cal SINGLE				
1-1/2	TF1200	SA270	#3 GRN .27cal STRIP	1-1/2	TF1200	SA270	#3 GRN .27cal STRIP	1-1/2	TF1200 G2	N.R.	
		COBRA	#3 GRN .27cal STRIP			COBRA	#3 GRN .27cal STRIP				
		MasterShot	#3 GRN .22cal SINGLE			MasterShot	#3 GRN .22cal SINGLE				
2	N.R.	SA270	#3 GRN .27cal STRIP	2	N.R.	SA270	#3 GRN .27cal STRIP	1-1/2	TF1200 G2	N.R.	
		COBRA	#3 GRN .27cal STRIP			COBRA	#3 GRN .27cal STRIP				
		XT540	#3 GRN .27cal STRIP			MasterShot	#3 GRN .22cal SINGLE				
-	N.R.	N.R.	N.R.	-	N.R.	N.R.	N.R.	1-1/2	G2	N.R.	

T3MAG



- Gas Technology
- 45-Pin Magazine
- One Step Fuel Injection
- 6 months or 10,000 shots on wearable parts
- Length: 18-1/2"
- Height: 15"
- Weight: 9.2 lbs.
- Pin Guide O.D.: .590
- Maximum Pin Length: 1"

ADVANTAGES

- Higher stick rate
- 25% more power
- Easy push down force
- Deep leg track capacity
- 45-pin magazine capability
- Fitted dust shield
- Battery charger provides constant charging even with low voltage drops
- 2 Year Warranty or 50,000 shots (6 months on wearable parts or 10,000 shots)
- No License Required

FEATURES

T3MAG Increase Your Range with Overhead Power

The Power of the T3MAG allows you to consistently shoot where no other gas tool has gone before. The .125 diameter pin is specifically engineered to work in the toughest concrete and steel where other pins cannot perform. The new T3MAG system delivers power that rivals other gas and powder systems.

FUEL CELL AND BATTERY



T3 fuel cell
Part No. T3FUEL

Replaces conventional powder loads and drives more than 1000 pins

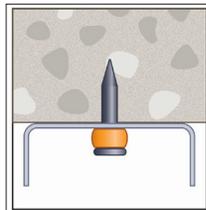


Part No. B0092

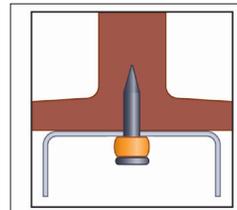
The 6-volt Ni-Cd battery can drive more than 3000 shots per charge

MOST COMMON FASTENERS

PIN #	DESCRIPTION
T3012	1/2" steel pin with T3 fuel cell
T3012S	1/2" premium steel pin with fuel cell
T3034B	3/4" concrete pin with T3 fuel cell
T3034S	3/4" step shank pin with T3 fuel cell
T3100	1" concrete pin with T3 fuel cell



Settling aggregate is the biggest reason for overhead pin failure.



With the T3's 1/2 steel pin you can even shoot into the web of steel.

Fuel injection means no additional steps of preparing a fuel cell. Click the fuel cell in place and the tool is ready to go.

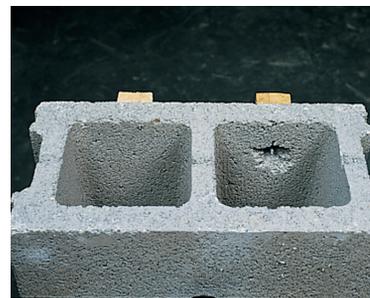


Easy battery loading. Battery rest position allows you to turn off the tool without fully removing the battery.

APPLICATIONS



The T3 has enough power to fasten into hard concrete and steel and still will not blow through hollow block.



Will not spall hollow block like powder actuated.



Perfect for hat channel applications.

TRAKFAST TF1200



- Gas Technology
- Fully Automatic
- 1-1/2" Pin Capacity
- 42 Pin Magazine Capacity
- Length: 17.5"
- Height: 15"
- Weight: 8.3 lbs.
- Maximum Capacity: 42 pins
- Maximum cycles/second: 2
- Fuel cell: 1000 shots
- Battery (charged): 3000 shots

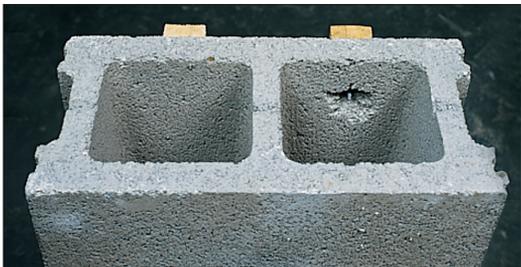
ADVANTAGES

- **SPEED:** Three to five times faster than powder tools. 42-pin magazine reduces load time.
- **EASY TO USE:** Tool automatically resets piston. No recoil, tool absorbs shock resulting in less operator fatigue.
- **NO LICENSING REQUIRED:** Unlike powder-actuated tools, no licensing is required.
- **NO CHANGING LOADS:** TrakFast uses a fuel cell, not a load. No need to inventory different colored loads
- **NARROW NOSE & PROFILE:** Allows tool to reach inside deep leg track (1-5/8" wide x 2" high).
- 2 Year Warranty (6 months on wearable parts).

FEATURES

Still the most revolutionary fastening system in the construction industry!

Since its introduction in 1991, TrakFast has been the tool of choice for both interior and exterior contractors. The TrakFast Automatic Fastening System fastens all types of track, from standard track to hat channel, deep leg, Z, and J channel. Contractors continue to report tremendous savings when using TrakFast for high production fastening. They have learned that TrakFast's actual cost in place beats all other systems. The increased speed and productivity of TrakFast allows the contractor to bid more competitively, complete the job sooner and move on to the next job. Anyone can use TrakFast—just load the pins and fire. It's that easy!



TrakFast ICC ESR-2579 is the only approval that allows you to fasten into any location on a hollow block wall and won't blow away block like a powder tool.

MOST COMMON FASTENERS

PIN #	PIN LENGTH		MOST COMMON APPLICATION
	IN.	(MM)	
FPP012S	1/2	12.7	Track to steel
FPP034B	3/4	19.1	Track to concrete

TrakFast's power comes from the battery and fuel cell

The 6-volt rechargeable Ni-CD battery can drive approximately 3000 shots per charge. The clean burning fuel cell can drive over 1000 pins and keeps the tool cleaner than powder actuated tools.

Fastening System Productivity

In the time it takes you to drive two pins with a powder tool, you can drive up to 10 pins with TrakFast!



APPLICATIONS



Track to steel



Lath attachment—using one-inch TrakFast discs and magnetic probe adapter



Furring attachment—perfect fastening every time in soft and hard base materials



Plywood attachment—using TrakFast plywood to steel pin



Track to concrete

T3SS



VERSATILE, fastens to solid concrete, hollow block, pan deck and steel.



- Gas Technology
- Single Pin Gas Tool
- Fuel Injection
- Cross Over Technology
- 2 Year Warranty (6 months on wearable parts)
- Length: 13-1/2"
- Height: 15"
- Weight: 7.0 lbs.
- Pin Guide O.D.: 1/2" Standard, 7/8" Magnetic
- Maximum Pin Length: 1-1/2"

ADVANTAGES

- Sets the standard for single-shot applications
- 5 times faster than traditional drill and anchor methods
- Replaces the need for tools like the DX35
- Reduced operator fatigue
- Reduced installation costs—up to 75%
- Quiet enough to work in tenant occupied buildings
- Removable rear foot
- Interchange nose

FEATURES

CROSSING OVER FROM POWDER TO GAS

Ramset is serious when it comes to driving job speed by creating the T3SS—the single shot tool that will help move contractors from powder to gas.

The T3SS provides the benefits of shooting a gas tool, including reduced installation time and operator fatigue for the contractor who normally shoots a muzzle loaded powder tool.

To make the T3SS the most versatile gas tool in the industry, Users can change out nosepieces to accommodate any fastening need. From metal-to-concrete, hard concrete or steel, pan deck, block and just about surface you can think of the T3SS works for you.



No more fines for unspent loads on the jobsite.

APPLICATIONS



12HSMP034 clip assembly used to secure conduit



M034 fastener used to hang HVAC Duct Strap



M100 fastener used to attach a junction box



Easy battery loading. Battery rest position allows you to turn off the tool without fully removing the battery.

FASTENER AND MAGNETIC NOSEPIECE



The optional interchangeable nosepiece (Part Number M150200) is able to shoot a variety of M series fasteners.

T3 CUP



MOST COMMON FASTENERS

PIN #	DESCRIPTION
12HSMP034	1/2" One hole strap with 3/4" pin
MP034TH	3/4" Plated pin with top hat
M100	1" Pin with gold domed washer
14THRHMP034	1/4" Threaded rod hanger

FUEL CELL AND BATTERY



T3 fuel cell
Part No. T3FUEL

Replaces conventional powder loads and drives more than 1000 pins

Fuel injection means no additional steps of preparing a fuel cell. Click the fuel cell in place and the tool is ready to go.



Part No. B0092

The 6-volt Ni-Cd battery can drive more than 3000 shots per charge



VIDEO AVAILABLE

GYPFAST G2



Fully Automatic Cordless Gas Fastening System for Attaching Exterior Sheathing to Light Gauge Steel Framing

- Part No.: GYPFAST
- Fully Automatic
- 2-1/2" Pin Capacity
- Length: 15"
- Height: 15.25"
- Weight: 7.6lbs. with battery
- Lengths: 1-1/2", 2" and 2-1/2"
- Diameter: .140" Nominal
- Head Style: 5/16" dia. bugle head
- Finish: Climacoat Long Life Polymer

ADVANTAGES

- Exterior Gypsum sheathing to steel framing
- Plywood and OSB sheathing/flooring
- Fiber cement panel attachment
- Blocking
- Exterior walls
- Windows/door bucks
- Specialty exterior sheathing attachment
- Woven wire mesh or expanded metal lath to steel framing

FEATURES

- Fully automatic system with 150 nail capacity is 3-5 times faster than screwing.
- Fast set-up and tear down – insert battery, fuel cell and nail coil – eliminates need for extension cord, hoses and compressors.
- Aggressive, patented nail shank design provides high pullout performance.
- Contoured bugle head style provides high pullover (wind) resistance.
- Long life Climacoat™ finish is 10 times more corrosion resistant than electro-zinc plating.
- Woven wire mesh or expanded metal lath to steel framing
- 2 year warranty

MOST COMMON FASTENERS

PIN #	.140" DIA. KNURLED SHANK 5/16" DIA. BUGLE HEAD		MASTER CARTON	APPLICATION
	IN.	(MM)		
GF112	1-1/2	38.1	6,000 nails/ctn (40- 150 ct. coils) 6 fuel cells	Single Layer of Exterior Sheathing, Wood Furring and Blocking
GF200	2	50.8	4,800 nails/ctn (32 - 150 ct. coils) 5 fuel cells	Double Layer of Exterior Gypsum Sheathing, Wood Furring and Blocking
GF212	2-1/2	63.5	2,700 nails/ctn (18 - 150 ct. coils) 3 fuel cells	Multi-Layers of Sheathing, Wood Blocking, and Dimensional Lumber

Fuel cell
Part No. TFUEL



Battery
Part No. B0092



Plated 1" Lathing Disc
Part No. LD100



G2 Lath Probe
Part No. 100342



APPLICATIONS



Exterior Gypsum sheathing to steel framing, Plywood and OSB sheathing/flooring, Fiber cement panel attachment, Blocking Exterior walls, Windows/door bucks, Specialty exterior sheathing attachment, Woven wire mesh or expanded metal lath to steel framing.



OSB and plywood to iSPAN joists

Over a half century of leadership in powder actuated tools and fasteners

The first powder actuated tools (PATs) were used for repairing damaged ship hulls during World War I. This application continued through World War II, when the son of the original inventor, Stanley Temple, developed and implemented the technology for commercial use. In 1947, the "Tempotool" was introduced to the construction industry.

Ramset Fasteners was founded in 1948 to handle distribution and sales for the construction trades. In 1949, Ramset's accredited Operator Program was officially launched. Today this highly successful training program has instructed over 1,000,000 trades people in the safe use of PATs.

ONLINE POWDER TRAINING AND CERTIFICATION

Only properly trained and licensed operators are described in ANSI Standard A 10.3 and/or local regulations may operate powder actuated tools. ITW Ramset distributors offer complete training programs for end users. Contact your local Ramset distributor for complete details.

Ramset has designed and engineered the right powder actuated tool (PAT) for your applications. To ensure you use a PAT correctly, please take the time to review the Operator's Safety and Operating Instruction Manual packaged with each tool. These manuals are also available for download on the Ramset website.

To ensure safety on the jobsite, OSHA and ANSI require that all PAT users become trained and certified for the particular tool being used. One way Ramset enables you to receive this training is through our website training program. This innovative approach to education combines interactive web-based training techniques and online testing with immediate feedback to provide you a rich learning environment.

The course consists of approximately 30 pages of usage, safety and troubleshooting material.

Upon completion of this brief course you can take an online exam. With successful completion of the exam, you can print a certification card.

As an industry leader in powder actuated fastening systems, Ramset continues to provide the most effective and comprehensive instructor and operator training programs available.

Today, Ramset continues to bring the industry the products, service and innovation that they have come to expect from the leader in powder fastening. All geared to help contractors do their job faster, more safely and more productively.

www.ramset.com



R25



- .25 Caliber Strip Tool
- Semi-Automatic
- .25 Caliber Strip Loads: 3 (Green), 4 (Yellow), 5 (Red)
- Weight: 4.3 lbs.
- Length: 11.6"
- Maximum Pin Length: 1-1/2"
- 1 Year Warranty

ADVANTAGES

- Rugged metal housing
- Rubber cushion grip
- Popular drywall track tool
- 1 Year Warranty

MOST COMMON FASTENERS

PIN #	SHANK LENGTH		MOST COMMON APPLICATION
	IN.	(MM)	
1506B	3/4	19.0	Track to concrete
SP58TH	5/8	15.9	Track to steel

COMMON REPLACEMENT PART

- SC325207A Piston Assembly

XT540



The most powerful tool in its class

The Ramset XT540 was specifically designed for the commercial framer for heavy-duty interior & exterior applications. The XT540's combination of high power and durability make it perfect for these applications:

- Driving 1-1/4" embedment for perimeter track
- Fastening track & clips to structural steel
- Track to hard concrete
- Excellent compliment to your Ramset TrakFast program

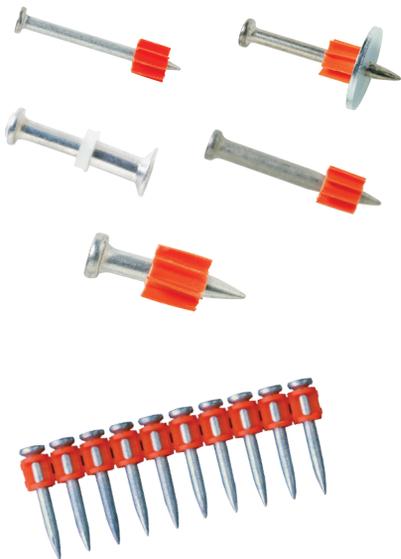
FEATURES

- .27 Caliber Strip Tool
- Automatic Piston Return
- Power Adjust
- 3" Pin Capacity
- 3 Year Warranty
- .27 Caliber Strip Loads: 3 (Green), 4 (Yellow), 5 (Red)
- Weight: 7.25 lbs.
- Length: 19"
- Muzzle Bushing O.D.: 7/8"



Durable, Reliable, Powerful, Automatic

XT540



ADVANTAGES

- Very Powerful
- Spring return front end—no manual resetting of the piston
- Power adjust—dial down 2 full load levels
- Rugged soft grip handle
- Trigger lock & hand guard to increase safety
- Low recoil
- Ergonomically balanced
- Works with Magnetic Muzzle (Part# 100227) & Lathing Discs

MOST COMMON FASTENERS

PIN #	SHANK LENGTH		MOST COMMON APPLICATION
	IN.	(MM)	
SP58TH	5/8	15.9	Track to steel
TE114	1-1/4	31.8	Track to concrete
SP114	1-1/4	31.8	Track to concrete

COMMON REPLACEMENT PARTS

- PA37037 Piston
- 100167 Piston Return Spring



XTMAG

Part No. XTMAG

Works with collated True Embedment (TE) Pins



SA270



- .27 Caliber Strip Tool
- Semi-Automatic
- Power Adjust
- .27 caliber 10-shot strip loads: 3 (Green), 4 (Yellow), 5 (Red)
- Weight: 5.45 lbs.
- Length: 15.3"
- Muzzle Bushing O.D.: 5/8"
- Maximum Pin Length: 3" straight pin
- 3 Year Warranty

ADVANTAGES

- Very Powerful
- Excellent balance—easy to use all day long
- Rubber grip on front barrel—eliminates pinched fingers and hands
- Twist lock front end—easy to clean
- Rugged polyamide housing—reduces heat transfer and maximizes operator comfort
- Soft, recoil-absorbing handle—for increased operator comfort

MOST COMMON FASTENERS

PIN #	SHANK LENGTH		MOST COMMON APPLICATION
	IN.	(MM)	
1516SDC (washed)	2-1/2	63.5	2" x 4" to concrete
1524SDP(washed)	3	76.2	2" x 4" to concrete
SP58TH	5/8	15.9	Track to steel

COMMON REPLACEMENT PART

- 27833 Piston with Ring

COBRA



- .27 Caliber Strip Tool
- Semi-Automatic
- Economical
- .27 caliber 10-shot strip loads: 3 (Green), 4 (Yellow), 5 (Red)
- Weight: 5.0 lbs.
- Length: 13-1/4"
- Muzzle Bushing O.D.: 9/16"
- Maximum Pin Length: 2-1/2" (3" w/washer)

ADVANTAGES

- Semi-automatic .27-caliber tool — uses strip loads
- Padded recoil-absorbing handle—for greater operator comfort
- Fastens up to 3" standard Ramset drive pins and threaded studs—ideal for general construction applications
- 1 Year Warranty

MOST COMMON FASTENERS

PIN #	SHANK LENGTH		MOST COMMON APPLICATION
	IN.	(MM)	
1524SDP (washed)	3	76.2	2" x 4" concrete
1524SDC (washed)	2-1/2	63.5	2" x 4" concrete
1506B	3/4	19.1	Drywall track to concrete

COMMON REPLACEMENT PART

- SC301200A Piston and Ring

VIPER4



- .27 Caliber Strip Tool
- Semi-Automatic
- Designed Specifically for Overhead Applications
- 3 Year Warranty
- .27 caliber 10-shot strip loads: 3 (Green), 4 (Yellow), 5 (Red)
- Weight: 4.9 lbs.
- Length: 17.25"
- Maximum Pin Length: 1-1/2"

ADVANTAGES

- Automatic load advance: Load is advanced consistently each time the Viper is fired.
- Automatic Piston return: No time spent manually resetting or cycling the tool. Allows you to work faster.
- Overdrive Protection: Heavy duty buffer system prevents front end damage caused by piston overdrive —especially through sprayed-on insulation.
- Open Front-end design: Completely redesigned open-ended muzzle keeps your tool cleaner longer.
- Simplified Barrel Retention Collar: No tools are required for assembly or disassembly.
- Stable Steel Collar: The VIPER4 screws securely into the end of the extension pole with the steel collar ensuring a more durable and rigid connection.



TOOL/POLE CONNECTION

The new poles have an internal rod, when activated by pushing on the pole sleeve triggers the new VIPER4.

FASTENERS

- **ELECTRICAL PIN/CLIP ASSEMBLIES**
Preassembled Pin & Clips for some of the most common electrical applications increase jobsite speed for the electrician.
- **STANDARD PIN/CLIP ASSEMBLIES**
SDC Fasteners are designed with special dimples on the angle clips which act as a shim and assure a snug fit between the structural member and the clip.
- **POWERPOINT® PIN/CLIP ASSEMBLIES**
SPC Fasteners are assembled with the patented technology of PowerPoint pins for penetration in hard concrete and steel. The uniform shape and finish of the engineered tip results in more consistent performance in your toughest situations.



VIDEO AVAILABLE

PART NUMBER	DESCRIPTION
V4-3	3' Pole
V4-6	6' Pole
V4-8	8' Pole
V4-EXT	3' Extension (no trigger)

*Telescoping poles are NOT available for the VIPER4.

MOST COMMON FASTENERS

PIN #	SHANK LENGTH		MOST COMMON APPLICATION
	IN.	(MM)	
14TRHSS10	1	25.4	Threaded Rod Hanger
SDC125	1-1/4	31.8	Ceiling Clip
SPC114	1-1/4	31.8	Ceiling Clip

COMMON REPLACEMENT PART

- MVP140 Piston



The VIPER4 screws solidly onto a pole for high reach and secure operation for ceiling applications.

The Viper was engineered specifically for overhead applications.



721



- .22 Caliber Single Shot Tool
- Single Shot
- 3 Year Warranty
- .22 caliber, single-shot loads: 2 (Brown), 3 (Green), 4 (Yellow)
- Weight: 4.3 lbs.
- Length: 13-1/2"
- Muzzle Bushing O.D.: 5/8"
- Maximum Pin Length: 1-1/2"

ADVANTAGES

- Rugged metal housing—holds up for years
- Low recoil—reduces operator fatigue on large jobs
- Simple to clean—saves on labor costs
- Rubber cushion grip—for maximum operator comfort
- Only two moving parts to clean—easy maintenance; saves time
- Narrow 5/8" muzzle bushing—for easy access in tight fastening areas
- Automatic cartridge ejection system—increases operator speed and productivity

MOST COMMON FASTENERS

PIN #	SHANK LENGTH		MOST COMMON APPLICATION
	IN.	(MM)	
1506B	3/4	19.1	Track to concrete
M100BB	1	25.4	Track to concrete
SP58TH	5/8	15.9	Track to steel

COMMON REPLACEMENT PART

- 33657 Piston Ring Assembly

MASTERSHOT



2" x 4" to concrete slab

Track to floor

- .22 Single Shot Tool
- Trigger Operated Powder Actuate Tool
- 6 Month Warranty
- Uses standard .22 caliber single shot powder loads: 2 (Brown), 3 (Green), 4 (Yellow)
- Weight: 4.4 lbs.
- Length: 15"
- Muzzle Bushing O.D.: 3/4"
- Maximum Pin Length: 3"

ADVANTAGES

- Designed for frequent use providing professional fastening results in a variety of concrete, masonry or steel applications
- The MasterShot is a traditional trigger operated tool
- Ergonomic design for operator comfort
- Positive barrel and load retention prevents barrel from opening freely, allowing easy horizontal and overhead fastening
- Powder load automatically ejects after each use
- Quiet operation

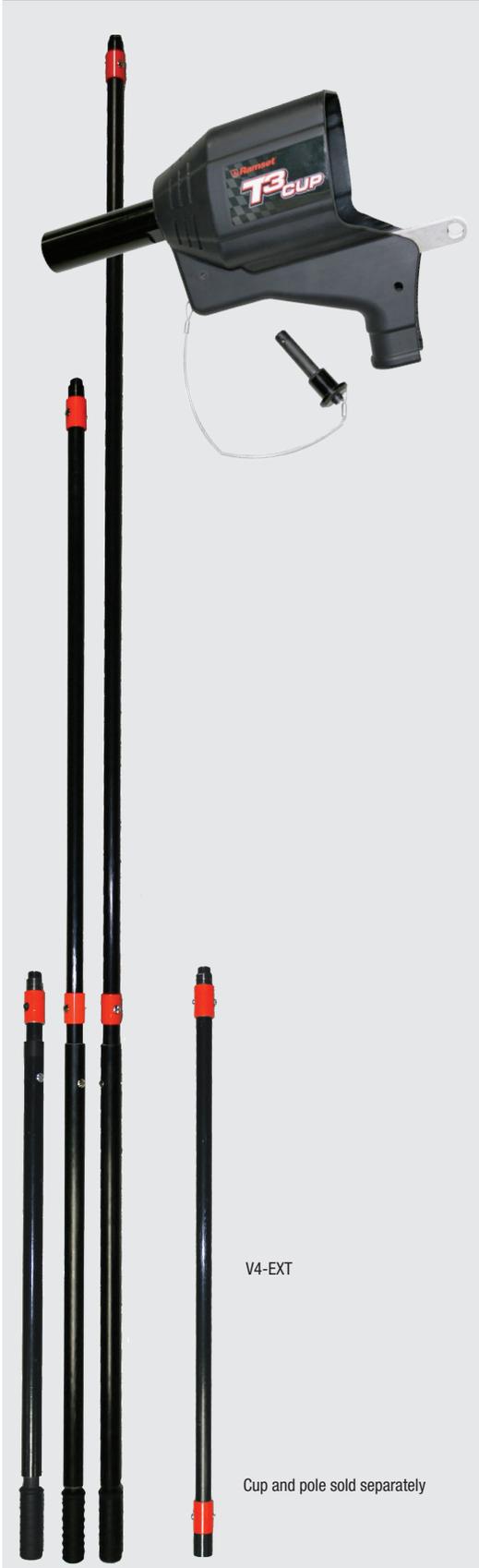
MOST COMMON FASTENERS

PIN #	SHANK LENGTH		MOST COMMON APPLICATION
	IN.	(MM)	
1524SDP (washed)	3	76.2	2" x 4" to concrete
1516SDC (washed)	2-1/2	63.5	2" x 4" to concrete
1506B	3/4	19.1	Drywall to concrete

COMMON REPLACEMENT PART

- 235320 Piston

T3 CUP



ADVANTAGES

- Faster way to put the T3ss on a pole
- Works with the T3ss Gas Tool and updated VIPER4 Poles
- Sturdy design
- No hose clamps required: Simple to assemble
- 1 Year warranty on nominal wear and tear

Extend Your Reach!

New ergonomic design balances the tool directly over the pole for a lightweight feel

EASY TO ASSEMBLE



Uses VIPER4 pole system:

Works with four newly designed Ramset poles for greater ease and accuracy.

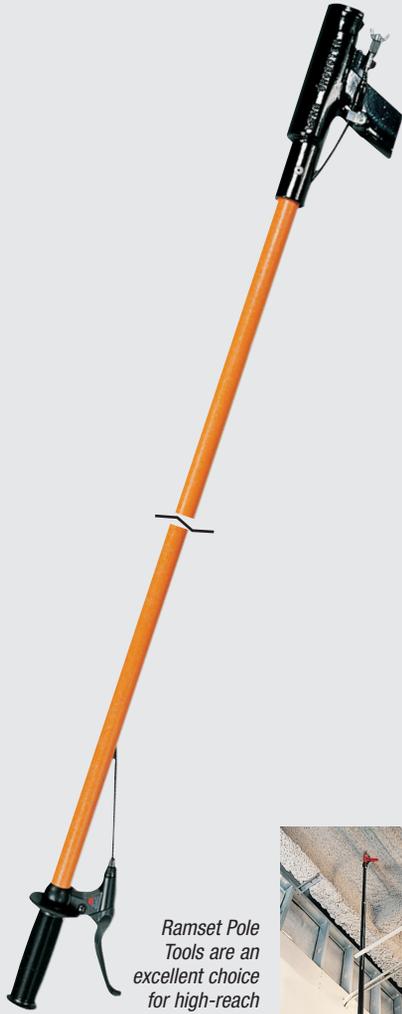


TOOL/POLE CONNECTION

The new poles have an internal rod, when activated by pushing on the pole sleeve triggers the new VIPER4.

PART NUMBER	DESCRIPTION
V4-3	3' Pole
V4-6	6' Pole
V4-8	8' Pole
V4-EXT	3' Extension (no trigger)

EXTENSION POLES



Ramset Pole Tools are an excellent choice for high-reach fastening applications.



Fast, easy installation from floor level eliminates lift baskets, scaffolds and ladders.

ADVANTAGES

- Eliminates scaffolding or ladders
- Uses existing powder tools
- Rubber "motorcycle" grip for operator comfort and to reduce recoil level
- Delrin™ coupler on cable makes pole di-electric
- Nyloc™ nuts keep your adjustment fixed solidly on the trigger bar
- Top-quality hand lever
- Lightweight cast aluminum housing fits tool snugly and provides tool protection
- Trigger bar adjusts easily for individual tools

POLES FOR RAMSET AND HILTI® TOOLS

PART #	LENGTH
PTSEMI6	6'
PTSEMI8	8'



FITS: RAMSET D60, SA270, D45A, Rocket, Cobra, **HILTI** DX36
 Hilti® is a registered trademark of Hilti, Corp.



POLES FOR OLDER MODEL VIPER TOOLS

PART #	LENGTH
VPOL6	6'
VPOL8	8'
TVPOL612	6'-12' Telescoping
TVPOL618	6'-18' Telescoping

POLES FOR RAMSET VIPER4

PART #	LENGTH
V4-3	3'
V4-6	6'
V4-8	8'
V4-EXT	3' Extension (no trigger)



V4-EXT

TOOL CLEANING KIT

- Wood Handle Wire Brush
- Round Wire Brushes:
Small, medium, large
- Package of 10 Scrubs:
Hand and tool cleaners



Part No. PATCK
Cleaning Kit
Qty: 1



Part No. TFUEL
Fuel Cell-TrackFast (TF1100, TF1200)
Gypfast, G2 Qty: 12



Part No. T3FUEL
Fuel Cell-T3SS & T3MAG
Qty: 12 (6-2 packs)



Part No. 7505012
Battery-TF1100
Qty: 1



Part No. B0092
Battery-T3SS & T3MAG,
TF1200, G2, Insulfast
Qty: 1



Part No. 405176
Battery-GYPFAST
Qty: 1



Part No. B0022
Battery Charger Kit
TF1100, TF1200, T3SS, T3MAG, G2, Insulfast
Qty: 1



Part No. B0021
Replacement Wall Plug for
B0022 Charger
Qty: 1



Part No. 7505142
Battery Charger Kit
Gypfast
Qty: 1



Part No. LD100
Plated 1" Lathing Disc 22g
Qty: 1,000 per box
Works with all magnetic probes



Part No. 100227
Magnetic Muzzle for XT540
Qty: 1



Part No. 100018
Disc Holding Probe
(for TF1100 One Piece Nose)
Qty: 1



Part No. 100041LA
Disc Holding Probe
(for TF1200 Probe)
Qty: 1



Part No. M150200
Magnetic nose Piece
(for T3SS)
Qty: 1



Part No. B0237
Disc Probe
(T3MAG)
Qty: 1



Part No. 2761910
Gas Mag Probe
(GYPFast)
Qty: 1



Part No. 100342
G2 Lath Probe
Qty: 1

For other service parts, please contact Tool Repair and Parts at 800-634-7373 or www.ramsetrepair.com

Ramset Collated Gas Tool Fasteners are specifically engineered for optimal performance in Ramset Gas Power Tools using fastener magazines.

SELECTION CHART



T3MAG FUEL/PIN PACK
1000 PINS AND 1 FUEL CELL PER BOX



Larger .125 shank diameter offers improved success rate (15 pin strip)

PART NUMBER	PIN LENGTH		DESCRIPTION
	IN.	(MM)	
T3012	1/2	(12.7)	1/2" steel pin with T3 fuel cell
T3012S	1/2	(12.7)	1/2" premium steel pin with T3 fuel cell
T3034B	3/4	(19.1)	3/4" concrete pin with T3 fuel cell
T3034S*	3/4	(19.1)	3/4" step shank pin with T3 fuel cell
T3100	1	(25.4)	1" concrete pin with T3 fuel cell

Shank diameter = .125 *Shank diameter= .104/.125
Head diameter = .250

Sold in master cartons of 5000 minimum. Cartons cannot be split.



TRAKFAST STANDARD FUEL/PIN PACK
1000 PINS AND 1 FUEL CELL PER BOX



For high volume, repetitive fastenings to concrete and steel such as drywall track to concrete

PART NUMBER	PIN LENGTH		DESCRIPTION
	IN.	(MM)	
FPP012	1/2	(12.7)	1/2" Plated steel pin
FPP012S*	1/2	(12.7)	1/2" Premium Plated step shank pin
FPP034B	3/4	(19.1)	3/4" Black pin
FPP034S*	3/4	(19.1)	3/4" Premium Plated step shank pin
FPP100	1	(25.4)	1" Plated pin
FPP114	1-1/4	(31.8)	1-1/4" Plated Pin

Shank diameter = .109 *Shank diameter = .104/.118
Head diameter = .250

Sold in master cartons of 5000 minimum. Cartons cannot be split.

TRAKFAST BREAKAWAY STRIP FUEL/PIN PACK
1000 PINS AND 1 FUEL CELL PER BOX



Collation designed to breakaway on impact. For high volume, repetitive fastenings to concrete such as wood furring to concrete

PART NUMBER	PIN LENGTH		DESCRIPTION
	IN.	(MM)	
FPP034T	3/4	(19.1)	3/4" Plated pin
FPP100T	1	(25.4)	1" Plated pin
FPP114T	1-1/4	(31.8)	1-1/4" Plated Pin
FPP112T	1-1/2	(38.1)	1-1/2" Plated Pin
PLY138	1-3/8	(34.9)	1-3/8" Plated Pin (Knurled)

Shank diameter = .109
Head diameter = .250

Sold in master cartons of 5000 minimum. Cartons cannot be split.



TRAKFAST PLYWOOD PIN (PART NO. PLY138)

FOR ATTACHING PLYWOOD TO METAL STUDS



1000 pins and 1 fuel cell per box



- Fastener Length: 1-3/8"
- Shank Diameter: .100 dia. (before knurl)
- Head Diameter: .250
- Helical Knurled Shank
- Mechanical Zinc Plated
- Can Be Used With:
Wood Sheathings: 3/8", 1/2", 5/8", 3/4"
Steel Stud Gauges: 16, 18, 20

ADVANTAGES

VS SCREWS

- 3 - 5 times faster than screw installation. No worrying about electrical cords.

STRIP

- Collation strip breaks away upon impact, allowing the head of the pin to recess into the wood for a nice, clean look
- 10-pin strips transfer easily from the operator's pouch to the TrakFast tool, eliminating waste

VS AIR SYSTEMS

- No set-up and tear down time. No hassling with compressors or hoses.

PINS

- Hardened steel pin ensures a clean penetration of the fastener — no dimpling of the stud
- Knurled helical shank gives the fastener superior holding values
- Zinc plated for corrosion resistance

Sold in master cartons of 5000.



GYPFAST / G2 FASTENERS

PART NO.	FASTENER DESCRIPTION .140" DIA. KNURLED SHANK 5/16" DIA. BUGLE HEAD	MASTER CARTON QUANTITY	MASTER CARTON WEIGHT	APPLICATIONS
GF112	1-1/2" (38mm)	6,000 nails/ctn (40 - 150 ct. coils) 6 fuel cells	37 lbs.	Single Layer of Exterior Sheathing, Wood Furring and Blocking
GF200	2" (51mm)	4,800 nails/ctn (32 - 150 ct. coils) 5 fuel cells	38 lbs.	Double Layer of Exterior Gypsum Sheathing, Wood Furring and Blocking
GF212	2-1/2" (64mm)	2,700 nails/ctn (18 - 150 ct. coils) 3 fuel cells	26 lbs.	Multi-Layers of Sheathing, Wood Blocking, and Dimensional Lumber



Corrosion Resistance:

CLIMACOAT LONG LIFE POLYMER

Salt Spray Results (ASTM B117)

Driven: 1560 hours, 10% or less red rust

UnDriven: 3240 hours, 10% or less red rust

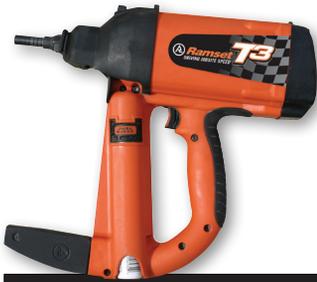
CLIMACOAT COATING ALLOWS FOR USE IN:

- Exterior applications
- Treated Lumber
- Treated Plywood
- Fire Resistant Plywood
- 20g to 14g applications

GAS TOOL FASTENERS

(Pre-assembled, Single-Shot)

The fasteners are designed for use in
Ramset T3SS Single-Shot Gas Tool



SELECTION CHART

THREADED ROD HANGER

For suspended ceilings, piping and other items using 1/4" or 3/8" threaded rod. Fastener is pre-assembled to a 16 gage threaded rod hanger. 100 per jar.



PART NUMBER	DESCRIPTION	Master Carton Quantity
14TRHMP034	1/4" Rod hanger with 3/4" plated pin	
38TRHMP034	3/8" Rod hanger with 3/4" plated pin	

Shank diameter = .104/.125 Head diameter = .300

ONE HOLE STRAP

Used to attach EMT conduit or armored cable to concrete. Fastener pre-assembled to a 16 gage conduit strap. 100 per jar, 3/8" 200 per jar.



PART NUMBER	DESCRIPTION	Master Carton Quantity
38HSMP034*	3/8" Hole strap with 3/4" plated pin 	
12HSMP034	1/2" Hole strap with 3/4" plated pin	
34HSMP034	3/4" Hole strap with 3/4" plated pin	
10HSMP034	1" Hole strap with 3/4" plated pin	

Shank diameter = .104/.125 Head diameter = .300 *38HSMP034 = 18 gage, 200 per jar

CONDUIT CLAMP

Used to attach conduit to concrete. Pin pre-assembled to an 18 gage conduit strap. 1/2" 50 per jar and 3/4" 25 per jar.



PART NUMBER	DESCRIPTION	Master Carton Quantity
12CCMP034L	1/2" Conduit clamp with 3/4" plated pin	
34CCMP034L	3/4" Conduit clamp with 3/4" plated pin	

Shank diameter = .104/.125 Head diameter = .300

CEILING CLIP ASSEMBLY

Pre-assembled Ceiling Clip. Plated 14 gage clip. 100 per jar.



PART NUMBER	DESCRIPTION	Master Carton Quantity
34CLIP	3/4" wide angle clip w/ 3/4" length pin	

Shank diameter = .104/.125 Head diameter = .300

AVAILABLE IN CONVENIENT JARS!



The new durable plastic containers mean less waste on the jobsite, or in the back of a truck. Their wide-mouth design makes it easy to grab what you need.



Each T3SS gas accessory and pin label provides vital holding value information—taking away the guess work.

The fasteners are designed for use in
Ramset T3SS Single-Shot Gas Tool



SELECTION CHART

TIE STRAP HOLDER

Used to install temporary lighting and secure low voltage cable to concrete, uses a standard cable tie up to 3/8" in width. Fastener is pre-assembled to a 22 gage tie strap holder. 50 per jar.



PART NUMBER	DESCRIPTION	Master Carton Quantity
TSHMP034	Tie strap holder with 3/4" plated pin	

Shank diameter = .104/.125 Head diameter = .300

MECHANICAL PIN WITH WASHER

Used for the attachment of light gage metal to concrete and steel such as HVAC duct strap to concrete. Plated pin pre-assembled to a 1/2" domed washer. 200 per jar, 1" 100 per jar.



PART NUMBER	DESCRIPTION	Master Carton Quantity
M012	1/2" Plated step pin with dome washer	
M034	3/4" Plated pin with domed washer	
M034BB	3/4" Premium step pin with domed washer	
M100	1" Plated pin with domed washer	

Shank diameter = .125, Step Pin .104/.118 Head diameter = .300 (M012 = .250)
 *Will fit R150 & T3SS with optional work contact element, P/N: M150200

MUST USE WITH MAGNETIC WORK CONTACT ELEMENT (M150200)

1/4-20 THREADED STUD

Used to attach electrical components to concrete where removability of the component is required. Plated threaded stud. 200 per jar.



PART NUMBER	DESCRIPTION	SHANK LENGTH	Master Carton Quantity
14STUD	1/2"	5/8"	

NOT MADE IN USA

Shank diameter = .125

TOP HAT PIN

Used for general purpose fastening to concrete.
 Plated pin with top hat. 200 per jar.



PART NUMBER	DESCRIPTION	Master Carton Quantity
MPO34TH	3/4" Plated pin with top hat	

Shank diameter = .125 Head diameter = .300

BRIDLE RING

Pre-Assembled 2" Bridle Ring supports low voltage, data com, signal, and control cables
 50 per box.



PART NUMBER	DESCRIPTION	Master Carton Quantity
BR2	2" Bridal ring	

Shank diameter = .125



ADVANTAGES

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. All Ramset fasteners with .300 head will fit into tools with 8mm barrels.

SELECTION CHART

HYBRID PIN

For general purpose attachments to concrete.
 PowerPoint step shank pin pre-assembled to 1/2" washer. 500 per jar.

	PART NUMBER	DESCRIPTION	ALL POWDER TOOLS	Master Carton Quantity
	M100BB	1" PowerPoint step shank pin with 1/2" domed washer & flute	•	

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

ONE HOLE CONDUIT STRAP

Used to attach EMT conduit or armored cable to concrete.
 PowerPoint fastener pre-assembled to a 16 gage conduit strap. 100 per box.

	PART NUMBER	DESCRIPTION	ALL POWDER TOOLS	Master Carton Quantity
	38HSS10*	3/8" Hole strap with w/1 premium pin	• (except SA270 and Cobra)	
	12HSS10	1/2" Hole strap with w/1 premium pin	•	
	34HSS10	3/4" Hole strap with w/1 premium pin	•	
	10HSS10	1" Hole strap with w/1-1/4" premium pin	•	

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

38HSS10 = 18 gage

* Does not work with SA270 Tool

THREADED ROD HANGER

For suspended ceilings, piping, and other items using 1/4" or 3/8" threaded rod.
 PowerPoint fastener pre-assembled to a 16 gage threaded rod hanger. 100 per box.

 	PART NUMBER	DESCRIPTION	ALL POWDER TOOLS	Master Carton Quantity
	14TRHSS10	1/4" Rod hanger w/1" premium pin	•	
	38TRHSS10	3/8" Rod hanger w/1" premium pin	•	

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

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.

FASTENER TERMINOLOGY SUFFIX

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

SELECTION CHART

BLACK TRACK PINS

Designed for use in concrete and structural steel applications. Available in 100-pack or 1000-pack per box.



PART NUMBER	SHANK LENGTH		721/ R25	ROCKET	D60/ D45A	SA270	XT540	COBRA	MASTERSHOT/ RS22
	IN.	(MM)							
1506B	3/4	(19.1)	•	•	•	•	•	•	•

Shank diameter = .145 Head diameter = .300

PLATED PINS

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



PART NUMBER	SHANK LENGTH		721/ R25	ROCKET	D60/ D45A	SA270	XT540	COBRA	MASTERSHOT/ RS22
	IN.	(MM)							
1503K	1/2 Knurled	(12.7)	•	•	•	•	•	•	•
1506	3/4	(19.1)	•	•	•	•	•	•	•
1508	1	(25.4)	•	•	•	•	•	•	•
1510	1-1/4	(31.8)	•	•	•	•	•	•	•
1512	1-1/2	(38.1)	•	•	•	•	•	•	•
1514	2	(50.8)		•	•	•	•	•	•
1516	2-1/2	(63.5)				•	•	•	•
1524	3	(76.2)				•	•		•

Shank diameter = .145 Head diameter = .300

WASHERED PINS

Washer increases bearing surface against the material to be fastened. 100 per box. 16 gage metal washer. 7/8" diameter washer.



PART NUMBER	SHANK LENGTH		721/ R25	ROCKET	D60/ D45A	SA270	XT540	COBRA	MASTERSHOT/ RS22
	IN.	(MM)							
1506SD	3/4	(19.1)	•	•	•	•	•	•	•
1508SD	1	(25.4)	•	•	•	•	•	•	•
1510SD	1-1/4	(31.8)	•	•	•	•	•	•	•
1512SD	1-1/2	(38.1)	•	•	•	•	•	•	•
1514SD	2	(50.8)	•	•	•	•	•	•	•
1516SDC	2-1/2	(63.5)		•	•	•	•	•	•
1524SDP*	3	(76.2)				•	•	•	•

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

RAMGUARD PINS

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



PART NUMBER	SHANK LENGTH		721/ R25	D60/D45A	ROCKET/ SA270	XT540	COBRA	MASTERSHOT/ RS22
	IN.	(MM)						
1516SDE	2-1/2	(63.5)			•	•	•	•
1524SDE*	3	(76.2)		•	•	•	•	•

Shank diameter = .145 Head diameter = .300 *Square washer indicates 3" pin has been installed * 1500 Series Coated with RamGuard

SELECTION CHART

POWERPOINT PINS

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

	PART NUMBER	SHANK LENGTH		721/ R25	ROCKET	D60/ D45A	SA270	XT540	COBRA	MASTERSHOT/ RS22
		IN.	(MM)							
	SP12	1/2	(12.7)	•	•	•	•	•	•	•
	SP58	5/8	(15.9)	•	•	•	•	•	•	•
	SP34	3/4	(19.1)	•	•	•	•	•	•	•

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. (M100BB 500 per jar)

	PART NUMBER	SHANK LENGTH		721/ R25	ROCKET	D60/ D45A	SA270	XT540	COBRA	MASTERSHOT/ RS22
		IN.	(MM)							
	M100BB	1	(25.4)	•	•	•	•	•	•	•
	SP100	1	(25.4)	•	•	•	•	•	•	•
	SP114	1-1/4	(31.8)	•	•	•	•	•	•	•
	SP178	1-7/8	(47.6)	•	•	•	•	•	•	•

Shank diameter = .150/.180 Head diameter = .300
 M100BB shank diameter = .125/.150 with 1/2" washer

POWERPOINT TOP HAT PIN

Used for general purpose fastening to concrete.

Plated pin with top hat. 100 per box.

	PART NUMBER	SHANK LENGTH		721/ R25	ROCKET	D60/ D45A	SA270	XT540	COBRA	MASTERSHOT/ RS22
		IN.	(MM)							
	SP58TH	5/8"		•	•	•	•	•	•	•

Shank diameter = .150 Head diameter = .300

TRUE EMBEDMENT PINS

The Ramset .157 True Embedment Pin is sized to provide you with True Embedment depths in track up to 14 gauge. Sized a 1/16" longer than nominal length to provide a True Embedment. 100 per box.

	PART NUMBER	PIN LENGTH		EMBEDMENT LENGTH		721/ R25	VIPER	D60	ROCKET/ SA270	D45A	COBRA	XT540
		IN.	(MM)	IN.	(MM)							
	TE12	0.545	(13.8)	1/2	(25.4)	•	•		•	•	•	•
	TE34	13/16	(20.6)	3/4	(31.8)	•	•		•	•	•	•
	TE100	1-1/16	(27)	1	(25.4)	•	•		•	•	•	•
	TE114	1-5/16	(33.3)	1-1/4	(31.8)	•	•		•	•	•	•
	TE112	1-9/16	(39.7)	1-1/2	(38.1)	•	•		•	•	•	•

Shank diameter = .157 Head diameter = .320

10-Pin Collated Stips for the XT540 with XT MAG

PART NUMBER	PIN LENGTH		EMBEDMENT LENGTH	
	IN.	(MM)	IN.	(MM)
TE12XT	0.545	(13.8)	1/2	(25.4)
TE34XT	13/16	(20.6)	3/4	(31.8)
TE100XT	1-1/16	(27)	1	(25.4)
TE114XT	1-5/16	(33.3)	1-1/4	(31.8)



SELECTION CHART

CEILING CLIP ASSEMBLIES



Designed for suspending ceilings and other overhead applications. Pin preassembled to a Zinc Plated 14 gage 45° clip. 1000 per box.

PART NUMBER	PIN LENGTH		721	VIPER	D60	ROCKET/SA270	D45A	COBRA	XT540
	IN.	(MM)							
SDC100	1	(25.4)	•	•	•	•	•	•	•
SDC125*	1-1/4	(31.8)	•	•	•	•	•	•	•

*Available in 100-Pack (P/N: SDC125C) Shank diameter = .145 Head diameter = .300 Hole Dia: .330"

PREMIUM PINS WITH CEILING CLIPS



Designed for difficult overhead applications. Pin preassembled to a 14 gage angle clip. 1000 per box

PART NUMBER	PIN LENGTH		721	VIPER	D60	ROCKET/SA270	D45A	COBRA	XT540
	IN.	(MM)							
SPC78	7/8	(22.2)	•	•	•	•	•	•	•
SPC114	1-1/4	(31.8)	•	•	•	•	•	•	•
TEC100	1-1/16	(27)	•	•		•	•	•	•

Shank diameter = .150 (SPC114 = .150/.180) (TEC100 = .157) Head diameter = .300

FASTENER ANGLE CLIP



General purpose 3/4" wide angle clip. 14 gage angle clip. 100 clips per box.

PART NUMBER	DESCRIPTION
1202CF	Angle clip (no pin)

Hole diameter: 5/16" & 13/64"

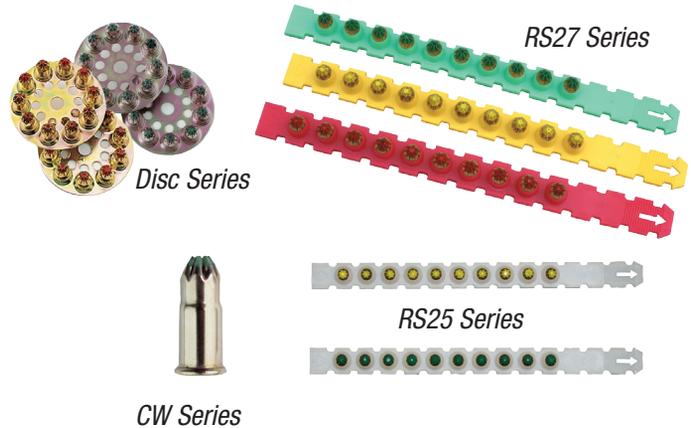
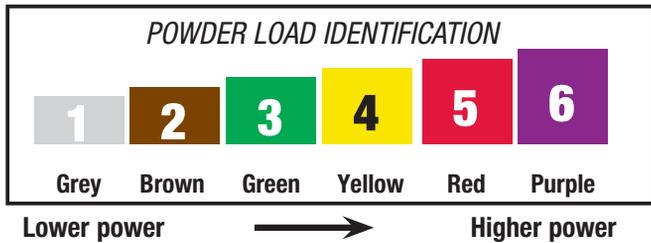
High Quality and Dependability

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 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; also by the color of the box and each powder load. As the number increases, the power level increases.



SELECTION CHART

RAMSET LOADS FOR LOW VELOCITY TOOLS

PART NUMBER	POWER LEVEL	COLOR	CALIBER/TYPE	PACKAGING	COMPATIBLE TOOLS	
					RAMSET	OTHERS
3D60 4D60	3 4	Green Yellow	.25 Disc .25 Disc	all 10 shot disc 10 discs/box	D60, D45A and AutoFast	
5D45	5	Red	.25 Disc	10 shot discs/box	D45A and AutoFast	
3RS25 4RS25 5RS25	3 4 5	Green Yellow Red	.25 Strip .25 Strip .25 Strip	all 10 shot strip 10 strips/box	R25	DX-35
22CW 32CW 42CW	2 3 4	Brown Green Yellow	.22 Single .22 Single .22 Single	all 100/box	721, M70, RS22, HD22, Mastershot	DXE37, DXE72
3RS27	3	Green	.27 Strip	all 10 shot strip 10 strips/box	SA270, Cobra, Viper, Rocket and XT540	DX-350, DX-351, DX-36M, DX460
4RS27	4	Yellow	.27 Strip	all 10 shot strip 10 strips/box		
5RS27	5	Red	.27 Strip	all 10 shot strip 10 strips/box		DX-350, DX-351, DX-36M, DX-451, DX460
6RS27	6	Purple	.27 Strip	all 10 shot strip 10 strips/box		DX-451, DX-460

6.8/11 = .27 Cal
6.3/11 = .25 Cal
5.6/16 = .22 Cal

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 I
- Electroplated zinc with yellow chromate
- Ramguard

APPROVALS/LISTINGS

- **ICC Evaluation Service, Inc.**
#ESR-2579 TrakFast Pins #ESR-1955 T3 Fasteners
- **City of Los Angeles**
#RR-25739 T3 pins #RR-25264 TrakFast pins


Collated Gas Fasteners in Concrete (TrakFast 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>

			2000 PSI		4000 PSI		6000 PSI	
			TENSION (LBS)	SHEAR (LBS)	TENSION (LBS)	SHEAR (LBS)	TENSION (LBS)	SHEAR (LBS)
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>	.....	.....
T3 Step Shank	0.104/0.125	5/8	.....	.....	60 <i>357</i>	117 <i>587</i>	107 <i>533</i>	191 <i>957</i>

PART NUMBER SERIES	SHANK DIAMETER (INCH)	MINIMUM PENETRATION (INCH)	INSTALLED IN LIGHTWEIGHT CONCRETE / DECK / BLOCK 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>	100 <i>756</i>	40 <i>330</i>	235 <i>1248</i>	.....	.....
FPP - Step Shank	0.104/0.118	3/4	.....	.....	.....	.....	36 <i>184</i>	58 <i>290</i>
T3 Straight Shank	0.125	5/8	84 <i>418</i>	108 <i>540</i>	72 <i>361</i>	242 <i>1210</i>	20 <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>	.....	.....
T3 Step Shank	0.104/0.125	5/8	.....	.....	54 <i>269</i>	230 <i>1150</i>	71 <i>357</i>	123 <i>613</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.

Fastener Assemblies 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 Light weight 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	84 446		
14STUD	0.125	5/8	91 454	.....	57 373	.....	.....	.....	.....	.....
M034BB	0.104/.118	5/8	51 256	83 418	.....	.....	.....	.....	36 184	58 290
34 CLIP	0.104/.125	5/8	62 310	.....	106 528	.....	44 220	.....	.....	.....
GAS ASSEMBLIES 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		
		3/4	107 559	213 1067	161 803	248 1240	96 478	231 1156	102 512	166 831		
		5/8	60 357	117 587	107 533	191 957	54 269	230 1150	71 357	123 613		
		3/4	107 559	213 1067	161 803	248 1240	96 478	231 1156	102 512	166 831		
POWDER ASSEMBLIES M100BB, 38HSS10 12HSS10, 34HSS10 10HSS10, 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 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 SI: 1 lbf = 4.448 N, 1 inch = 25.4 mm, 1 ksi = 6.89MPa. **Note 9:** 20 ga metal deck.

Gas Fasteners in Steel

PART NUMBER	SHANK DIAMETER (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	195 1047	292 1570	223 1220	278 1526	181 1048 ⁷	186 1076 ⁷
M012 FPP012S	0.104/0.118	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
T3012S	0.125	TAPER SMOOTH	183 958	332 1660	237 1184	356 1782	189 943 ¹⁰	392 1960 ⁷
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

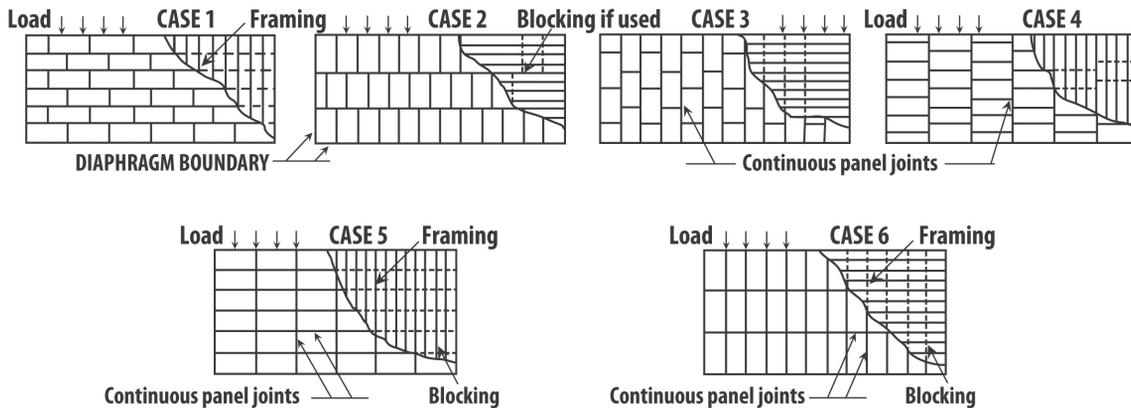
Note 1: ALLOWABLE loads are shown in the **LARGE BOLD** font, *Ultimate* loads are shown in *smaller italic* font. **Note 2:** Testing conducted in accordance with ICC AC70 & ASTM E1190. **Note 3:** Safety factors are based on coefficient of variation. In accordance with ICC AC70, the safety factor will 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:** Fastener penetration is .25" minimum. **Note 11:** For SI: 1 lbf = 4.448 N, 1 inch = 25.4 mm, 1 ksi = 6.89MPa

PLY138 TrakFast Plywood to Steel Pin Performance Tables

ALLOWABLE SHEAR FOR WIND OR SEISMIC FORCES IN POUNDS PER FOOT FOR HORIZONTAL PLYWOOD DIAPHRAGMS WITH STEEL FRAMING

PLYWOOD GRADE	MINIMUM STEEL GAGE 4, 6	MINIMUM PANEL THICKNESS (Inches)	BLOCKED DIAPHRAGM PIN SPACING (Inches) ^{5, 6} Pin spacing at diaphragm boundaries (all cases), at continuous panel edges parallel to load (cases 3 & 4) and at the panel edges (cases 5 & 6) ALLOWABLE LOAD				UNBLOCKED DIAPHRAGM PIN SPACING (Inches) ^{5, 6} Pins spaced 6 inches max. at supported edges	
			6	4	2-1/2	2	Case 1 (no unblocked edges or continuous joints parallel to load)	All other configurations (cases 2, 3, 4, 5 & 6)
			Pin spacing at other panel edges					
			6	6	4	3		
Structural 1	20	7/16	185	280	420	475	185	140
	16	15/32	205	305	460	520	205	150
Grades other than Structural 1	20	7/16	165	250	380	430	165	125
	16	15/32	185	275	415	470	185	140

Note 1: These values are for short-time loads due to wind or earthquake and shall be reduced by 25 percent for normal loading. **Note 2:** The pin shall be long enough to penetrate through the thickness of the steel a minimum of 1/4 inch. **Note 3:** Minimum width of framing is 1-1/2 inches. **Note 4:** These shear values also apply to framing made of thicker steel. **Note 5:** Spacing of fasteners along intermediate framing members is 12 inches on center. **Note 6:** The minimum panel edge distance is 3/8 inch. **Note 7:** Values shown reflect a 5:1 safety factor. **Note 8:** For SI: 1 lbf = 4.448 N, 1 inch = 25.4 mm, 1 ksi = 6.89MPa



Note: Framing is permitted to be oriented in either direction for diaphragms, provided sheathing is designed for vertical loading.

ALLOWABLE WITHDRAWAL LOADS IN POUNDS PER FASTENER DUE TO WIND OR SEISMIC FORCES FOR PLYWOOD AND LUMBER ATTACHED TO STEEL FRAMING 1, 2, 3, 4

PIN DIAMETER (Inches)	MINIMUM STEEL THICKNESS (Gage or Inches)	MINIMUM THICKNESS OF PLYWOOD (Inches) ALLOWABLE LOAD			
		3/8	7/16	15/32	19/32
0.100	22	15	15	.....	.....
0.100	20	20	25	25	25
0.100	18	30	35	40	40
0.100	16	40	45	60	60

Note 1: Plywood shall be Structural 1 rated. For other grades, values shall be reduced by 10 percent. **Note 2:** These values are for loads due to wind or earthquake and shall be reduced by 25 percent for other applications. **Note 3:** Minimum panel edge distance is 3/8 inch. **Note 4:** The pin shall be long enough to penetrate through the metal a minimum of 1/4 inch. **Note 5:** Values shown reflect a 8:1 safety factor. **Note 6:** For SI: 1 lbf = 4.448 N, 1 inch = 25.4 mm, 1 ksi = 6.89MPa

PLY138 TrakFast Plywood to Steel Pin Performance Tables

ALLOWABLE SHEAR FOR WIND FORCES IN POUNDS PER FOOT FOR PLYWOOD SHEAR WALLS WITH STEEL FRAMING

PLYWOOD GRADE	MINIMUM STEEL GAGE ⁵	MINIMUM PANEL THICKNESS (Inches)	PIN SPACING, ALL PANEL EDGES (Inches)			
			ALLOWABLE LOAD			
			6	4	3	2
Structural 1	22	3/8 ⁶	120	180	240	305
	22	7/16 ⁶	130	195	260	330
	22	15/32	145	215	290	365
	20	3/8 ⁶	155	235	310	395
	20	7/16 ⁶	170	255	340	435
Grades other than Structural 1	22	3/8 ⁶	110	165	215	275
	22	7/16 ⁶	120	175	235	300
	22	15/32	130	195	260	330
	20	3/8 ⁶	140	210	280	360
	20	7/16 ⁶	155	230	310	390
	20	15/32	185	275	370	470

Note 1: Values are for loads imposed by wind and shall be reduced by 25 percent for normal loading. **Note 2:** The pin shall be long enough to penetrate through the metal framing a minimum of 1/4 inch. **Note 3:** The minimum panel edge distance for pin placement is 3/8 inch. **Note 4:** Spacing of fasteners along intermediate framing members is 6 inches on center for 3/8 inch and 7/16 inch panels when studs are 24 inches on center and 12 inches on center when studs are 16 inches on center. For other panel thickness, spacing along intermediate framing members is 12 inches from center. **Note 5:** Framing to be spaced 24 inches on center or closer except as provided in Footnote 6. **Note 6:** The values for 3/8-inch and 7/16-inch panels may be increased by 20 percent and 10 percent, respectively, for framing spaced 16 inches on center. **Note 7:** Values shown reflect a 5:1 safety factor. **Note 8:** For SI: 1 lbf = 4.448 N, 1 inch = 25.4 mm, 1 ksi = 6.89MPa

ALLOWABLE LATERAL LOADS IN POUNDS PER FASTENER DUE TO WIND OR SEISMIC FORCES FOR STRUCTURAL¹ PLYWOOD AND LUMBER ATTACHED TO STEEL FRAMING^{1, 2, 3, 4, 6}

PIN DIAMETER (INCHES)	MINIMUM PANEL THICKNESS (Inches)	MINIMUM THICKNESS OF PLYWOOD (Inches)					
		ALLOWABLE LOAD					
		3/8	7/16	15/32	19/32	23/32	1-1/8
0.100	22	80	80	80	80	80	80
0.100	20	105	105	115	115	115	115
0.100	16	105	105	115	170	170	170

Note 1: Plywood shall be Structural 1 rated. For other grades, values shall be reduced by 10 percent. **Note 2:** These values are for loads due to wind or earthquake and shall be reduced by 25 percent for other applications. **Note 3:** Minimum panel edge distance for placement is 1 inch from the fastener to the sheathing edge measured in the direction of the load and 3/8 inch measured perpendicular to the direction of the load. **Note 4:** The pin shall be long enough to penetrate through the metal a minimum of 1/4 inch. **Note 5:** Values for 16 gage also apply to 14 gage. **Note 6:** The above values apply to groups of at least five fasteners. For fewer fasteners in a group, use one-half of the tabulated value. **Note 7:** Values shown reflect a 5:1 safety factor. **Note 8:** For SI: 1 lbf = 4.448 N, 1 inch = 25.4 mm, 1 ksi = 6.89MPa

GypFast fasteners for the attachment of gypsum sheathing to light gage steel framing

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**
Mechanical zinc plate to a minimum thickness of .0002 meets requirements of ASTM B695
Climacoat

APPROVALS/LISTINGS

- ICC Evaluation Service, Inc.**
#ESR-2174 GypFast Gypsum Sheathing
#ER-5380 GypFast Plywood Sheathing
- City of Los Angeles**
#RR-25638 GypFast



Allowable Negative Loads Using Ramset GypFast Fasteners

SHEATHING TYPE	MINIMUM STEEL STUD GAGE	MAXIMUM STEEL STUD SPACING (IN)	FASTENER SPACING (IN)	ALLOWABLE NEGATIVE LOAD (PSF)
1/2" GP DensGlass Gold Exterior Sheathing	20g to 12g	24	8	6
		16	8	8
5/8" GP DensGlass Gold Fireguard Type X Sheathing	20g to 12g	24	8	24
		16	8	32
1/2" USG Sheetrock Brand Sheathing	20g to 12g	24	8	12
		16	8	16
5/8" USG Sheetrock Brand Fire Code Type X Sheathing	20g to 12g	24	8	18
		16	8	24
1/2" USG Fiberock Brand Aquatough	20g to 12g	24	8	30
		16	8	40
5/8" USG Securock Glass-Mat Sheathing	18g	16	8	35
5/8" CertainTeed GlasRoc Sheathing Type X	18g	24	8	20
5/8" CertainTeed GlasRoc Sheathing Type X	16g	24	8	18
National Gypsum e2XP Extended Exposure Sheathing	18g	16	8	39

Note 1: Tested in accordance with ASTM E330. **Note 2:** Values shown reflect a 3:1 safety factor. **Note 3:** The fasteners must be driven to a depth at which the shank pierces the steel, such that the tip protrudes from the base metal a minimum of 1/2-inch. **Note 4:** Tabulated values do not allow any overdriving of fasteners into sheathing.

CORROSION DATA ASTM B117 SALT SPRAY

GF112		S-12 SELF DRILL SCREW
1560 hours (10% Red Rust)	Driven	
3240 Hours (10% Red Rust)	UnDriven	24 Hours (5% Red Rust)

GypFast Fastener has Climacoat Long Life Polymer Coating; S-12 Screw has .0002" Electro zinc and Clear Chromate.

GypFast fasteners for the attachment of plywood sheathing to light gage steel framing
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**
 Mechanical zinc plate to a minimum thickness of .0002 meets requirements of ASTM B695
 Climacoat

APPROVALS/LISTINGS

- **ICC Evaluation Service, Inc.**
 #ESR-2174 GypFast Gypsum Sheathing
 #ER-5380 GypFast Plywood Sheathing
- **City of Los Angeles**
 #RR-25638 GypFast

Allowable Withdrawl and Lateral Loads for a GypFast Fastener Used to Attach Structural Plywood Panels to Steel Framing Members ^{1,2,3}

MINIMUM STEEL THICKNESS (gage) ⁴	MINIMUM THICKNESS OF STRUCTURAL PANELS				MINIMUM THICKNESS OF STRUCTURAL PANELS			
	3/8 Inch	15/32 Inch	19/32 Inch	23/32 Inch	3/8 Inch	15/32 Inch	19/32 Inch	23/32 Inch
	WITHDRAWAL LOADS (POUNDS)				LATERAL LOADS (POUNDS)			
14	90	90	95	120	135	160	190	215
16	90	90	90	110	135	160	165	185
18	90	90	90	90	135	160	160	160
20	70	70	70	70	110	130	130	130
22	50	50	50	50	110	110	110	110

For SI: 1 Inch = 25.4 mm, 1 Pound = 4.448 N.

¹ Tabulated values are for loads due to wind or earthquake, and must be reduced by 25 percent for other applications.

² Tabulated values allow for no more than 20 percent of the fasteners to be overdriven more than 1/16 inch.

³ Minimum edge distance and spacing are 3/8 inch and 3 inches, respectively.

⁴ Section 2.2.3 describes minimum base-material thicknesses associated with gages.

Allowable Shear for Wind Forces for Structural Plywood Shear Walls Attached to Light Gage Steel Studs with GypFast Fasteners^{1,2,3} (pounds per foot)

PANEL TYPE	MINIMUM PANEL THICKNESS	FRAMING		FASTENER SPACING ^{4,5} (INCHES ON CENTER)			
		MINIMUM GAGE ⁶	SPACING (INCHES ON CENTER)	6	4	3	2
Structural I or Rated Sheathing and Siding	3/8	22	16	180	270	360	459
	3/8		24	144	216	288	367
	15/32		16 or 24	170	255	340	433
	3/8	20	16	180	270	360	459
	3/8		24	144	216	288	367
	15/32		16 or 24	208	313	417	531
	3/8	18	16	214	321	428	546
	3/8		24	171	257	342	437
	15/32		16 or 24	253	380	506	645
	19/32		16 or 24	259	389	518	661
	23/32		16 or 24	259	389	518	661
	19/32		16 or 24	266	399	532	679
	3/8	16	16 or 24	296	445	593	756
	23/32		16 or 24	304	456	608	776
	19/32		16 or 24	345	517	690	879

For SI: 1 Inch = 25.4 mm, 1 Pound/Linear Foot = 0.0146 N/mm.

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

Ramguard

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)
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 SERIES	0.150	3/4	.....	.....	150 <i>803</i>	105 <i>786</i>	81 <i>493</i>	82 <i>454</i>
SP SERIES	.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>
1900 SERIES	0.145	3/4	105 <i>694</i>	71 <i>458</i>	101 <i>685</i>	99 <i>627</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 is 3 inches unless otherwise approved. **Note 8:** For SI: 1 lbf = 4.448 N, 1 inch = 25.4 mm, 1 ksi = 6.89MPa

INSTALLED IN CONCRETE - CONCRETE COMPRESSIVE STRENGTH

PART NUMBER SERIES	SHANK DIA	EMBED	4000psi Normal Wt		6000psi Normal Wt		3000 Lt Wt on W Deck Lower Flute	
			Tension	Shear	Tension	Shear	Tension	Shear
TE SERIES	0.157	3/4	71	137	109	142	106	265
		1	278	216	214	400	152	327
		1-1/4	377	317	415	349	164	330
		1-1/2	242	479	-----	-----	238	448
TEC100 90° Ceiling Clip	0.157	7/8	207	-----	-----	-----	88	-----

Notes:
1) Fasteners tested to ASTM E1190 & ICC-ES AC70 (March 1, 2010)

2) Allowable loads are shown

3) Allowable loads and safety factors are based on coefficient of variation in accordance with ICC AC70, the safety factor will be no less than 5
4) Values shown for steel base materials have the pointed end of the fastener driven through the steel plate

INSTALLED IN A36 STRUCTURAL STEEL

PART NUMBER SERIES	SHANK DIA	SHANK TYPE	3/16		1/4		3/8		1/2	
			Tension	Shear	Tension	Shear	Tension	Shear	Tension	Shear
TE SERIES	0.157	KNURLED	323	606	562	673	934	820	603	766

INSTALLED IN A572-GR50 STRUCTURAL STEEL

PART NUMBER SERIES	SHANK DIA	SHANK TYPE	3/16		1/4		3/8		1/2	
			Tension	Shear	Tension	Shear	Tension	Shear	Tension	Shear
TE SERIES	0.157	KNURLED	442	676	630	662	760	725	582	532

Fastener 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)	
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 SERIES	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)	
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 SERIES	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 *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

Fastener 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 SERIES	.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 *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



SDC



SPC + TEC

Angle Clip in Concrete

PART NUMBER SERIES	SHANK DIAMETER (INCH)	MINIMUM PENETRATION (INCH)	INSTALLED IN NORMAL WEIGHT CONCRETE CONCRETE COMPRESSIVE STRENGTH ALLOWABLE LAOD - <i>Ultimate Load</i>						
			4000 PSI			6000 PSI			
			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>	
TEC100	0.157	7/8	207	.....	.....	.....	.....	.....

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 SDC125	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>
TEC100	0.157	7/8	88	.....	.....	.....	.....

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 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:** 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. **Note 9:** Metal deck is 20g. Ceiling clips = ASTM A653



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