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ITW Ramset/Red Head  
1300 North Michael Drive  
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RESEARCH REPORT: RR 25264  
(CSI # 03150)

Expires: July 1, 2007

Attn: Dave Jablonski  
(630) 350-0370

**GENERAL APPROVAL** - Renewal - ITW Ramset/Red Head Trakfast Fasteners.

## **DETAILS**

ITW Ramset/Red Head Trakfast Fasteners are used for the attachment of drywall track to concrete, lightweight concrete, metal deck with lightweight concrete fill, concrete masonry units and steel. The fasteners are manufactured from steel conforming to AISI 1060 to 1065, and are austempered. The concrete and masonry fasteners have a 0.109" shank diameter, and are either black oxide finished or zinc plated. The steel fasteners have a 0.109" shank diameter, and are zinc plated. All fasteners are collated into plastic strips of 10 fasteners each.

The fasteners in collated strips are designed to be installed with an ITW Ramset/Red Head Trakfast tool in accordance with an ITW Ramset/Red Head recommendations.

The allowable shear and tension values for Trakfast Fasteners installed in concrete, lightweight concrete, metal deck with lightweight concrete fill, concrete masonry units and steel are set forth in the attached tables in this report.

### **The approval is subject to the following conditions:**

1. The allowable values listed in the tables are for the fasteners only. The connected drywall tracks shall be checked for their capacity.
2. No increase is permitted in the tabulated allowable loads for short duration loading.
3. The Trakfast Fasteners are identified by a "R" stamped into the head of the fasteners.

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4. Fasteners shall not be installed until the concrete has reached the designated compressive strength.
5. The fasteners shall be installed per the manufacturer's instructions, a copy of which shall be available at each job site.
6. Minimum concrete thickness shall be three times the fastener penetration into the concrete.

## DISCUSSION

The approval is based on load test.

Addressee to whom this Research Report is issued is responsible for providing copies of it, complete with any attachments indicated, to architects, engineers and builders using items approved herein in design or construction which must be approved by Department of Building and Safety Engineers and Inspectors.

This general approval of an equivalent alternate to the Code is only valid where an engineer and/or inspector of this Department has determined that all conditions of this approval have been met in the project in which it is to be used.

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RE: ITW Ramset/Red Head Trakfast Fasteners.

**Table A**  
**Allowable Working Values for Trakfast Fasteners Installed in Normal Weight Concrete<sup>1,2</sup>**

Shank Diameter (in.)	Minimum Embedment (in.)	Concrete Compressive Strength					
		2500 PSI		3500 PSI		4500 PSI	
		Tension (lb.)	Shear (lb.)	Tension (lb.)	Shear (lb.)	Tension (lb.)	Shear (lb.)
.109	5/8	50	65	50	75	55	85
.109	3/4	70	80	70	85	70	90

<sup>1</sup>Allowable values are for Trakfast Fasteners with black oxide or zinc plated finish .

<sup>2</sup>Fasteners shall have a minimum edge distance of 3 inches.

**Table B**  
**Allowable Working Values for Trakfast Fasteners Installed in Concrete Masonry Units<sup>1,2</sup>**

Shank Diameter (in.)	Minimum Embedment (in.)	Hollow CMU (any location)	
		Tension (lb.)	Shear (lb.)
.109	5/8	40	50

<sup>1</sup>Allowable values are for Trakfast Fasteners with zinc plated finish only.

<sup>2</sup>Fasteners shall have minimum edge distance of 3 inches.

**Table C**  
**Allowable Working Values for Trakfast Fasteners in Minimum 3500 PSI Structural Lightweight Concrete<sup>1</sup>**

Shank Diameter (in.)	Minimum Embedment (in.)	Installed in Concrete <sup>2</sup>		Installed Through Metal Deck <sup>3</sup>	
		Tension (lb.)	Shear (lb.)	Tension (lb.)	Shear (lb.)
.109	5/8	30	50	30	125
.109	3/4	75	90	40	155

<sup>1</sup>Zinc plated or black oxide finished fasteners may be used.

<sup>2</sup>Fasteners shall have minimum edge distance of 3 inches.

<sup>3</sup>Fasteners shall have minimum 1 1/8" setback from edge of lower flute.

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**Table D**  
**Allowable Working Values for Trakfast**  
**Fasteners Installed in ASTM A36 Steel<sup>1,2,3</sup>**

Fastener Type	Steel Thickness					
	3/16"		1/4"		3/8"	
	Tension (lb.)	Shear (lb.)	Tension (lb.)	Shear (lb.)	Tension (lb.)	Shear (lb.)
0.109" shank	200	315	230	305	210	215

<sup>1</sup>Fasteners shall have a minimum edge distance of ½ inch.

<sup>2</sup>Fasteners installed in 3/16 & 1/4 inch thick steel shall penetrate the steel and protrude a minimum of .16 & .10 inches respectively.

<sup>3</sup>Fasteners shall have a .32 inch minimum penetration when installed into 3/8" thick steel