



**BUILDING CODE COMPLIANCE OFFICE**  
METRO-DADE FLAGLER BUILDING  
140 WEST FLAGLER STREET, SUITE 1603  
MIAMI, FLORIDA 33130-1563  
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**CONTRACTOR LICENSING SECTION**  
(305) 375-2527 FAX (305) 375-2558

**CONTRACTOR ENFORCEMENT DIVISION**  
(305) 375-2966 FAX (305) 375-2908

**PRODUCT CONTROL DIVISION**  
(305) 375-2902 FAX (305) 372-6339

**PRODUCT CONTROL NOTICE OF ACCEPTANCE**

**ITW Ramset/Red Head**  
**1300 North Michael Drive**  
**Wood Dale ,IL 60191**

Your application for Notice of Acceptance (NOA) of:

**Trubolt Wedge Anchor**

under Chapter 8 of the Code of Miami-Dade County governing the use of Alternate Materials and Types of Construction, and completely described herein, has been recommended for acceptance by the Miami-Dade County Building Code Compliance Office (BCCO) under the conditions specified herein.

This NOA shall not be valid after the expiration date stated below. BCCO reserves the right to secure this product or material at any time from a jobsite or manufacturer's plant for quality control testing. If this product or material fails to perform in the approved manner, BCCO may revoke, modify, or suspend the use of such product or material immediately. BCCO reserves the right to revoke this approval, if it is determined by BCCO that this product or material fails to meet the requirements of the South Florida Building Code.

The expense of such testing will be incurred by the manufacturer.

**ACCEPTANCE NO.: 01-0504.12**  
**EXPIRES: 07/26/2006**

Raul Rodriguez  
Chief Product Control Division

**THIS IS THE COVERSHEET, SEE ADDITIONAL PAGES FOR SPECIFIC AND GENERAL  
CONDITIONS  
BUILDING CODE & PRODUCT REVIEW COMMITTEE**

This application for Product Approval has been reviewed by the BCCO and approved by the Building Code and Product Review Committee to be used in Miami-Dade County, Florida under the conditions set forth above.

Francisco J. Quintana, R.A.  
Director  
Miami-Dade County  
Building Code Compliance Office

**APPROVED: 07/26/2001**

**ITW Ramset/ Red Head.**

**ACCEPTANCE NO: 01-0504.12**

**APPROVED: JUL 26 2001**

**EXPIRES: JUL 26 2006**

**NOTICE OF ACCEPTANCE: SPECIFIC CONDITIONS**

**1. SCOPE**

- 1.1** This approves concrete wedge anchors as described in Section 2 of this Notice of Acceptance. They are designed to comply with the South Florida Building Code (SFBC), 1994 Edition for Miami-Dade County for the locations where the actual loads as determined by SFBC Chapter 23, do not exceed the allowable load indicated in the approved drawings.

**2. PRODUCT DESCRIPTION**

- 2.1** The **ITW Ramset/Red Head** Trubolt Wedge Anchor shall be fabricated and used in strict compliance with the following documents: Drawing No. 01-285, titled "Trubolt Wedge Anchor", prepared by ITW Ramset/Red Head dated 04/30/01 sheet 1 of 1. It bears the Miami-Dade County Product Control Approval stamp with the Notice of Acceptance number and approval date by the Miami-Dade Product Control Division. These documents shall hereinafter be referred to as the approved drawings.

**3. LIMITATIONS**

- 3.1** Allowable loads are for 3000 psi Compressive Strength Concrete conforming with ACI 301

**4. INSTALLATION**

- 4.1** The trubolt wedge anchor shall be installed in strict compliance with the installation instructions published in the ITW Ramset/Red Head Product Catalog and this NOA.

**5. LABELING**

- 5.1** Each trubolt wedge anchor shall have a mark in the head identifying the manufacturer and each box of screws shall have a permanent label with the manufacturer's name or logo, city, state and the following statement: "Miami-Dade County Product Control Approved".

**6. BUILDING PERMIT**

- 6.1** Application for Building Permit shall be accompanied by copies of the following:

- 6.1.1** This Notice of Acceptance  
**6.1.2** Duplicate copies of the approved drawings as identified in Section 2 of this Notice of Acceptance, clearly marked to show the hangers and angles selected for the proposed installation.  
**6.1.3** Any other document required by the Building Official or the SFBC in order to properly evaluate the installation of these products.

  
\_\_\_\_\_  
Candido Font, PE, Sr. Product Control Examiner  
Product Control Division

**ITW Ramset/ Red Head.**

**ACCEPTANCE NO: 01-0504.12**

**APPROVED: JUL 26 2001**

**EXPIRES: JUL 26 2006**

**NOTICE OF ACCEPTANCE STANDARD CONDITIONS**

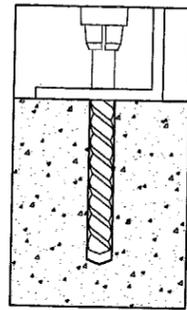
1. Renewal of this Acceptance (approval) shall be considered after a renewal application has been filed and the original submitted documentation, including test-supporting data, engineering documents, are no older than eight (8) years.
2. Any and all approved products shall be permanently labeled with the manufacturer's name, city, state, and the following statement: "Miami-Dade County Product Control Approved", or as specifically stated in the specific conditions of this Acceptance.
3. Renewals of Acceptance will not be considered if:
  - a) There has been a change in the South Florida Building Code affecting the evaluation of this product and the product is not in compliance with the code changes;
  - b) The product is no longer the same product (identical) as the one originally approved;
  - c) If the Acceptance holder has not complied with all the requirements of this acceptance, including the correct installation of the product;
  - d) The engineer who originally prepared, signed and sealed the required documentation initially submitted is no longer practicing the engineering profession.
4. Any revision or change in the materials, use, and/or manufacture of the product or process shall automatically be cause for termination of this Acceptance, unless prior written approval has been requested (through the filing of a revision application with appropriate fee) and granted by this office.
5. Any of the following shall also be grounds for removal of this Acceptance:
  - a) Unsatisfactory performance of this product or process.
  - b) Misuse of this Acceptance as an endorsement of any product, for sales, advertising or any other purpose.
6. The Notice of Acceptance number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the Notice of Acceptance is displayed, then it shall be done in its entirety.
7. A copy of this Acceptance as well as approved drawings and other documents, where it applies, shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at all time. The engineer need not reseal the copies.
8. Failure to comply with any section of this Acceptance shall be cause for termination and removal of Acceptance.
9. This Notice of Acceptance consists of pages 1, 2 and this last page 3.



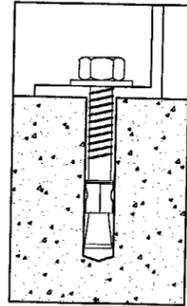
Candido Font, PE, Sr. Product Control Examiner  
Product Control Division

**END OF THIS ACCEPTANCE**

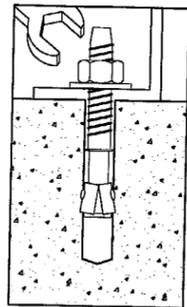
# TRUBOLT WEDGE ANCHOR



1. USING A BIT WHOSE DIAMETER EQUALS THE ANCHOR DIAMETER, DRILL HOLE TO ANY DEPTH EXCEEDING THE MINIMUM EMBEDMENT. CLEAN HOLE.



2. ASSEMBLE ANCHOR WITH NUT AND WASHER SO THAT THE TOP OF THE NUT IS FLUSH WITH THE TOP OF THE ANCHOR. DRIVE ANCHOR THROUGH MATERIAL TO BE FASTENED SO THAT NUT AND WASHER ARE FLUSH WITH SURFACE OF MATERIAL.



3. EXPAND ANCHOR BY TIGHTENING NUT 3 TO 5 TURNS, OR TO THE SPECIFIC TORQUE REQUIREMENT (SEE TABLE 1).

FIGURE 3 (INSTALLATION STEPS)  
N.T.S.

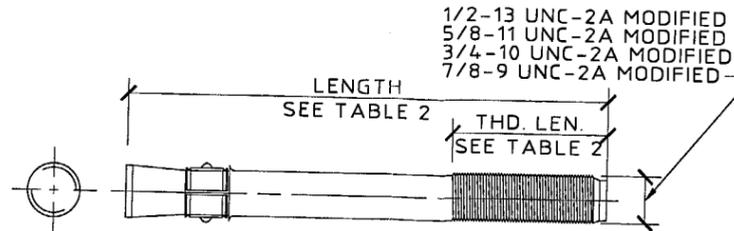


FIGURE 1  
N.T.S.



FIGURE 2  
EXPOSED END OF THE ANCHOR IS STAMPED TO IDENTIFY ANCHOR LENGTH. STAMPINGS SHOULD BE PRESERVED DURING INSTALLATION FOR ANY SUBSEQUENT EMBEDMENT VERIFICATION. (SEE TABLE 2)

ALLOWABLE LOADS MIN. 3000 P.S.I. CONCRETE						
ANCHOR DIAMETER (IN)	INSTALLATION TORQUE (FT-LBS)	EMBED. (IN)	EDGE DIST (IN)	ANCHOR SPACING (IN)	ALLOWABLE TENSION (LB)	ALLOWABLE SHEAR (LB)
1/2	55	2-1/4	3-15/16	7-7/8	1,209	1,190 ✓
5/8	90	2-3/4	4-13/16	9-5/8	1,776	1,780 ✓
3/4	175	3-1/4	5-11/16	11-3/8	2,694	2,980 ✓
7/8	250	3-3/4	6-9/16	13-1/8	3,019	3,718 ✓

REDUCED LOADS BASED ON REDUCED EDGE DISTANCE MIN. 3000 P.S.I. CONCRETE				
ANCHOR DIAMETER (IN)	EDGE DIST. (IN.)		TENSION (LB)	SHEAR (LB)
	TENSION	SHEAR		
1/2	2	2-9/16	786 ✓	714 /
5/8	2-7/16	3-1/8	1,154 ✓	1,068 ✓
3/4	2-7/8	3-3/4	1,751 ✓	1,788 ✓
7/8	3-5/16	4-5/16	1,962 ✓	2,231 ✓

## GENERAL NOTES:

- THIS ANCHOR IS IN ACCORDANCE WITH THE SOUTH FLORIDA BUILDING CODE (S.F.B.C.) 1994 EDITION FOR MIAMI-DADE COUNTY, FLORIDA.
- THE TRUBOLT WEDGE ANCHOR IS A WEDGE TYPE EXPANSION ANCHOR WHICH FEATURES A TYPE 18-8 STAINLESS STEEL SPLIT EXPANSION RING AND A THREADED STUD BOLT BODY AND INTEGRAL CONE EXPANDER. NUT AND WASHER. ANCHOR BODIES ARE MADE OF CARBON STEEL (PLATED OR HOT-DIPPED GALVANIZED).
- ANCHOR INSTALLATION SHALL BE MADE IN ACCORDANCE WITH THE ITW RAMSET/RED HEAD INSTALLATION INSTRUCTIONS AND THIS MIAMI-DADE COUNTY, FLORIDA B.C.C.O. NOTICE OF ACCEPTANCE.
- ALLOWABLE LOAD EQUALS THE ULTIMATE LOAD DIVIDED BY FOUR.
- MINIMUM EDGE DISTANCES AND SPACINGS FOR 100% OF ALLOWABLE LOAD ARE SHOWN IN TABLE 1.
- LINEAR INTERPOLATION MAY BE USED FOR INTERMEDIATE VALUES BETWEEN TABLES 1, 3, AND 4 BY A PROFESSIONAL ENGINEER ONLY.
- THE LENGTH OF THE ANCHOR IS INDICATED BY THE LENGTH ID HEAD STAMP. SEE FIGURE 2 AND TABLE 2.
- REFERENCE APPLIED RESEARCH LABORATORIES TEST REPORTS 29985 AND 30154.
- CONCRETE SHALL CONFORM TO AMERICAN CONCRETE INSTITUTE MANUAL OF CONCRETE PRACTICE, ACI 301.

PART NO.	ANCHOR DIAMETER & DRILL BIT SIZE (THREADS PER INCH)	LENGTH (IN)	HEAD STAMP	THREAD LENGTH (IN)
WS-1226 (G)	1/2"-13	2-3/4	C	1-1/4
WS-1236		3-3/4	E	2-1/4
WS-1242 (G)		4-1/4	F	2-3/4
WS-1244		4-1/2	G	3
WS-1254 (G)	5/8"-11	5-1/2	I	3
WS-1270 (G)		7	L	4-1/2
WS-5834 (G)		3-1/2	E	1-3/4
WS-5842		4-1/4	F	2-1/2
WS-5850		5	H	3-1/4
WS-5860 (G)		6	J	3-1/2
WS-5870		7	L	4-1/2
WS-5884	3/4"-10	8-1/2	O	3-1/2
WS-58100		10	R	1-3/4
WS-3442		4-1/4	F	1-3/4
WS-3446 (G)		4-3/4	G	2-1/4
WS-3454 (G)		5-1/2	I	3
WS-3462		6-1/4	J	3-3/4
WS-3470		7	L	4-1/2
WS-3484 (G)	7/8"-9	8-1/2	O	3-1/2
WS-34100		10	R	1-3/4
WS-34120		12	T	1-3/4
WS-7860		6	J	2-1/2
WS-7880	8	N	2-1/2	
WS-78100	10	R	2-1/2	

(G) INDICATES ANCHOR IS AVAILABLE WITH HOT DIPPED GALVANIZING IN ADDITION TO ZINC PLATING.

REDUCED LOADS BASED ON REDUCED CENTER TO CENTER SPACING MIN. 3000 P.S.I. CONCRETE			
ANCHOR DIAMETER (IN)	ANCHOR SPACING (IN)	REDUCED TENSION (LB)	REDUCED SHEAR (LB)
1/2	3-15/16	846 ✓	476 ✓
5/8	4-13/16	1,243 ✓	712 ✓
3/4	5-11/16	1,886 ✓	1,192 ✓
7/8	6-9/16	2,113 ✓	1,487 ✓

APPROVED AS COMPLIED WITH THE SOUTH FLORIDA BUILDING CODE  
DATE **JUL 26 2001**  
BY   
PRODUCT CONTROL DIVISION  
BUILDING CODE COMPLIANCE OFFICE  
ACCEPTANCE NO. **01-0504.12**



**KNEZEVICH & ASSOCIATES, INC.**  
CONSULTING ENGINEERS • PRODUCT TESTING  
1280 N. UNIVERSITY DRIVE, SUITE 180 • FORT LAUDERDALE, FL 33322  
TEL: (954) 382-2800 • FAX: (954) 382-2888 • FLORIDA COA #3205  
WEBSITE: WWW.KNEZEVICH.COM • E-MAIL: KA@KNEZEVICH.COM  
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TRUBOLT WEDGE ANCHOR

ITW RAMSET / RED HEAD

1300 NORTH MICHAEL DRIVE  
WOOD DALE, ILLINOIS 60191  
(630) 350-0370 (800) 899-7890

V.J. KNEZEVICH  
PROFESSIONAL ENGINEER  
FL License No:  
PE 6010983

**JUN 21 2001**

NO.	DATE	BY	DESCRIPTION
1	06/21/01	AS	COUNTY COMMENTS

date 04/30/01  
scale AS NOTED  
design by AS  
checked by VJK

drawing no.  
**01-285**  
sheet 1 of 1

ITW Ramset/ Red Head.

ACCEPTANCE NO: 01-0504.12

APPROVED: JUL 26 2001

EXPIRES: JUL 26 2006

**NOTICE OF ACCEPTANCE: SPECIFIC CONDITIONS**  
(For File ONLY. Not part of NOA)

**A DRAWINGS:**

1. Drawings prepared by ITW Ramset/Red Head, titled "Trubolt Wedge Anchor"; Drawing No. 01-285, dated 04/30/01, sheet 1 of 1, signed and sealed by V. J. Knezevich, PE.

**B TEST:**

Laboratory No.	Test.	Date.	Signature
1. ARL 29985	ICBO AC01	07/28/99	C. A. Hamon, PE.
2. ARL 30154	PA 114-Appx E	01/10/01	C. A. Hamon, PE.
3.			

**C CALCULATIONS:**

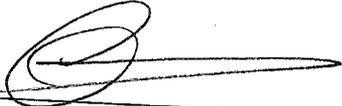
N/A

**D MATERIAL CERTIFICATIONS:**

1. Evaluation Report No. ER-1372 of ITW Ramset/Red Head anchors reissued 03/01/00, sheets 1 through 7, without signature.

**E STATEMENTS:**

1. Code compliance letter issued by Knezevich & Associates, Inc. on 04/27/01, signed and sealed by V/ J. Knezevich, PE.

  
Candido Font, PE, Sr. Product Control Examiner  
Product Control Division