



**BUILDING CODE COMPLIANCE OFFICE (BCCO)  
PRODUCT CONTROL DIVISION**

**MIAMI-DADE COUNTY, FLORIDA  
METRO-DADE FLAGLER BUILDING  
140 WEST FLAGLER STREET, SUITE 1603  
MIAMI, FLORIDA 33130-1563  
(305) 375-2901 FAX (305) 375-2908**

## **NOTICE OF ACCEPTANCE (NOA)**

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**ITW, Inc. /Division of Buildex  
1349 West Bryn Mawr Ave.  
Itasca, IL 60143**

### **SCOPE:**

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed by Miami-Dade County Product Control Division and accepted by the Board of Rules and Appeals (BORA) to be used in Miami Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The Miami-Dade County Product Control Division (In Miami Dade County) and/or the AHJ (in areas other than Miami Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. BORA reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Division that this product or material fails to meet the requirements of the applicable building code.

This product is approved as described herein, and has been designed to comply with the High Velocity Hurricane Zone of the Florida Building Code.

### **DESCRIPTION: Tapcon Masonry Fasteners.**

**APPROVAL DOCUMENT:** Drawing No.01-372, Sheets 1 of 1, titled "Tapcon Masonry Fasteners" dated 06/22/01 with last revision on 08/08/02, prepared by Knezevich & Associates, Inc., signed and sealed by V. J. Knezevich, PE, bearing the Miami-Dade County Product Control Renewal stamp with the Notice of Acceptance (NOA) number and expiration date by the Miami-Dade County Product Control Division.

### **MISSILE IMPACT RATING: None**

**LABELING:** Each unit shall bear a permanent label with the manufacturer's name or logo, city, state and following statement: "Miami-Dade County Product Control Approved", unless otherwise noted herein.

**RENEWAL** of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

**TERMINATION** of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

**ADVERTISEMENT:** The NOA 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 NOA is displayed, then it shall be done in its entirety.

**INSPECTION:** A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This NOA **renews NOA # 02-0311.03** and, consists of this page 1 as well as approval document mentioned above. The submitted documentation was reviewed by **Theodore Berman, P.E.**



**NOA No 03-0114.03  
Expiration Date: February 20, 2008  
Approval Date: March 13, 2003**

**ITW, Inc. /Division of Buildex**

**NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED**

(For File ONLY. Not part of NOA)

**A. DRAWINGS**

1. Manufacturer's die drawings and sections.
2. Drawing No. **01-372**, Sheets 1 of 1, titled "Tapcon Masonry Fasteners" dated 06/22/01 with last revision on 08/08/02, prepared by Knezevich & Associates, Inc., signed and sealed by V. J. Knezevich, PE.

**B. TESTS**

|     | Laboratory     | Test Report     | Date     | Signature         |
|-----|----------------|-----------------|----------|-------------------|
| 01. | Heti 00-4160   | ASTM E488       | 10/25/00 | H. M. Medina, PE. |
| 02. | Heti 00-4092   | ASTM E488       | 02/25/00 | H. M. Medina, PE. |
| 03. | Heti 00-4153   | ASTM E488       | 10/25/00 | H. M. Medina, PE  |
| 04. | Heti 00-4072   | ASTM E 488      | 02/25/00 | H. M. Medina, PE. |
| 05. | Heti 01-5029   | ASTM E.488      | 05/07/01 | H. M. Medina, PE. |
| 06. | Heti 01-5027   | ASTM E 488      | 05/07/01 | H. M. Medina, PE  |
| 07. | PRI 01078      | Protocol PA 114 | 08/27/01 | C. L. Thomas, PE  |
| 08. | PRI 01079      | Protocol PA 114 | 08/27/01 | C. L. Thomas, PE  |
| 09. | ARL 30291      | ASTM E488       | 01/22/02 | C. A. Hamon, PE   |
| 10. | ARL 30292      | ASTM E488       | 01/29/02 | C. A. Hamon, PE   |
| 11. | ARL 30299      | ASTM E488       | 01/30/02 | C. A. Hamon, PE   |
| 12. | ARL 30294      | ASTM E488       | 01/30/02 | C. A. Hamon, PE.  |
| 13. | Heti 01-C109   | ASTM C39        | 01/16/01 | H. M. Medina, PE  |
| 14. | MTS 25-7654-PS | Protocol PA 114 | 06/03/96 | H. M. Medina, PE  |

**C. CALCULATION**

1. None

**D. MATERIAL CERTIFICATIONS**

1. None

**E. STATEMENTS**

1. None

**F. OTHER**

1. Notice of Acceptance No. 02-0311.03 ITW, Inc. /Division of Buildex, for their "Tapcon Masonry Fasteners", approved on 9/26/02 and expiring on 2/20/03.



Theodore Berman, P.E.

Deputy Director, Product Control Division

NOA No 03-0114.03

Expiration Date: February 20, 2008

Approval Date: March 13, 2003

# ITW BUILDEX TAPCON

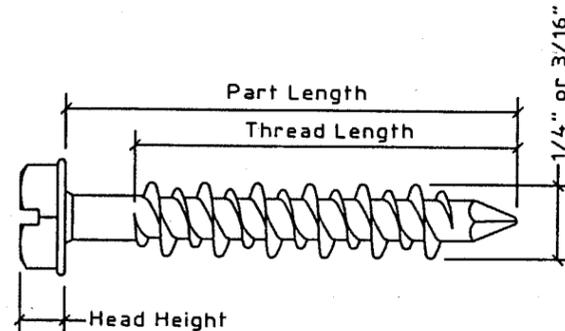
## DESCRIPTION

ITW BUILDEX TAPCON ANCHORS ARE MANUFACTURED FROM HEAT TREATED STEEL AND HAVE AN ALTERNATING HIGH LOW THREAD FORM. THESE ANCHORS HAVE BEEN TESTED FOR CORROSION RESISTANCE ACCORDING TO PA114.

ITW BUILDEX TAPCON ANCHORS ARE ALSO MANUFACTURED WITH ULTRASHIELD OR WHITE ULTRASHIELD CORROSION RESISTANT COATINGS IN ACCORDANCE WITH ASTM G85 AND MIAMI-DADE COUNTY PROTOCOL TAS-144, E.

## NOTES:

- ANCHOR INSTALLATION SHALL BE MADE IN ACCORDANCE WITH ITW BUILDEX PUBLISHED INSTALLATION INSTRUCTIONS IN THE PRODUCT & RESOURCE BOOK AND THIS MIAMI-DADE COUNTY, FLORIDA B.C.C.O. NOTICE OF ACCEPTANCE.
- CONCRETE WILL CONFORM TO AMERICAN CONCRETE INSTITUTE MANUAL OF CONCRETE PRACTICE ACI 301.
- HOLLOW AND GROUT FILLED CONCRETE BLOCKS SHALL CONFORM TO ASTM C-90.
- REFERENCE HURRICANE ENGINEERING & TESTING INC. TEST REPORTS:  
 HETI 00 4072 DATED 02/25/00  
 HETI 00 4153 DATED 10/25/00  
 HETI 00 4160 DATED 10/25/00  
 HETI 00 4092 DATED 02/25/00  
 HETI 01 5027 DATED 05/07/01  
 HETI 01 5029 DATED 05/07/01  
 AND PRI ASPHALT TECHNOLOGIES, INC. TEST REPORTS:  
 PRI01079 DATED 08/27/01  
 PRI01078 DATED 08/27/01  
 AND APPLIED RESEARCH LABORATORIES TEST REPORTS:  
 ARL-30291 DATED 01/22/02  
 ARL-30292 DATED 01/29/02  
 ARL-30299 DATED 01/30/02  
 ARL-30294 DATED 01/30/02



3/16" OR 1/4" TAPCON HEAD STYLES

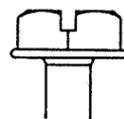
410 STAINLESS STEEL HEAD MARKINGS



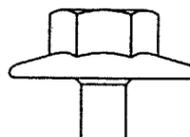
CARBON STEEL HEAD MARKINGS



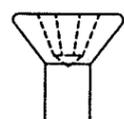
SLOTTED HEX WASHER HEAD



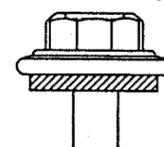
MAXI-SET HEX WASHER HEAD



PHILLIPS FLAT HEAD



SCOTS STAINLESS STEEL HEAD WITH WASHER



## 3/16" DIA. TAPCON

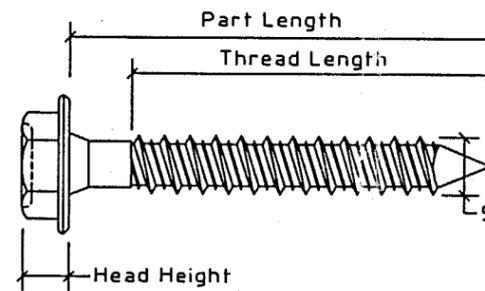
- FOR 3/16" TAPCON, PILOT HOLE DIAMETER SHALL BE 0.171" AND DRILLED 1/4" LONGER THAN THE NECESSARY EMBEDMENT.
- ALLOWABLE LOADS ARE BASED ON ULTIMATE TEST LOAD DIVIDED BY 4.
- RECOMMENDED CENTER TO CENTER DISTANCE OF 2-1/4" IS REQUIRED FOR 100% EFFICIENCY AND 1-1/8" FOR 50% EFFICIENCY.

## 1/4" DIA. TAPCON

- FOR ALL 1/4" TAPCON, PILOT HOLE DIAMETER SHALL BE 0.200" AND DRILLED 1/4" LONGER THAN THE NECESSARY EMBEDMENT.
- ALLOWABLE LOADS ARE BASED ON ULTIMATE TEST LOAD DIVIDED BY 4.
- RECOMMENDED CENTER TO CENTER DISTANCE OF 3" IS REQUIRED FOR 100% EFFICIENCY AND 1-1/2" FOR 50% EFFICIENCY.

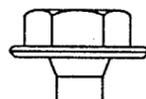
## 5/16" (XL) TAPCON

- PILOT HOLE DIAMETER SHALL BE 0.263" AND DRILLED 1/4" LONGER THAN THE NECESSARY EMBEDMENT.
- ALLOWABLE LOADS ARE BASED ON ULTIMATE TEST LOAD DIVIDED BY 4.
- RECOMMENDED CENTER TO CENTER DISTANCE OF 3-3/4" IS REQUIRED FOR 100% EFFICIENCY AND 1-7/8" FOR 50% EFFICIENCY.
- EMBEDMENT IS THROUGH 1-1/4" FACE SHELL OF HOLLOW BLOCK.
- WOOD BUCK IS LOCATED BETWEEN CONCRETE AND SIDE MEMBER.



5/16" (XL) TAPCON HEAD STYLES

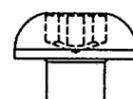
HEX WASHER HEAD



FLAT HEAD



BUTTON HEAD



| 1/4" DIAMETER<br>410 STAINLESS STEEL TAPCON<br>ALLOWABLE LOADS (lbs.) |               |       |         |       |
|---|---------------|-------|---------|-------|
| MIN. 3192 P.S.I. CONCRETE   |               |       |         |       |
| EMBEDMENT   | EDGE DISTANCE |       |         |       |
|   | 1"            |       | 2-1/2"  |       |
|   | TENSION       | SHEAR | TENSION | SHEAR |
| 1"  | 166           | 148   | 166     | 275   |
| 1-3/4"  | 466           | 189   | 547     | 472   |
| HOLLOW BLOCK  |               |       |         |       |
| EMBEDMENT   | EDGE DISTANCE |       |         |       |
|   | 1"            |       | 2-1/2"  |       |
|   | TENSION       | SHEAR | TENSION | SHEAR |
| 1-1/4"  | 148           | 107   | 160     | 279   |

| 3/16" DIAMETER<br>CARBON STEEL TAPCON<br>ALLOWABLE LOADS (lbs.) |               |       |         |       |
|---|---------------|-------|---------|-------|
| MIN. 3192 P.S.I. CONCRETE                                       |               |       |         |       |
| EMBEDMENT   | EDGE DISTANCE |       |         |       |
|   | 1-1/8"        |       | 2-5/8"  |       |
|   | TENSION       | SHEAR | TENSION | SHEAR |
| 1"  | 128           | 147   | 128     | 157   |
| 1-3/4"  | 354           | 160   | 354     | 229   |
| HOLLOW BLOCK  |               |       |         |       |
| EMBEDMENT   | EDGE DISTANCE |       |         |       |
|   | 1-1/8"        |       | 2-5/8"  |       |
|   | TENSION       | SHEAR | TENSION | SHEAR |
| 1-1/4"  | 94            | 112   | 99      | 197   |

| 5/16" DIAMETER (XL)<br>CARBON STEEL TAPCON<br>ALLOWABLE LOADS (lbs.) |               |       |
|--|---------------|-------|
| GROUT FILLED BLOCK   |               |       |
| EMBEDMENT  | EDGE DISTANCE |       |
|  | 4"            |       |
|  | TENSION       | SHEAR |
| 1-3/4"   | 487           | 706   |
| 2-1/4"   | 942           | 785   |
| HOLLOW BLOCK   |               |       |
| EMBEDMENT  | EDGE DISTANCE |       |
|  | 4"            |       |
|  | TENSION       | SHEAR |
| 1-3/4"   | 261           | 570   |

SEE NOTE 4

| 1/4" DIAMETER<br>CARBON STEEL TAPCON<br>ALLOWABLE LOADS (lbs.) |               |       |         |       |
|--|---------------|-------|---------|-------|
| MIN. 3192 P.S.I. CONCRETE                                      |               |       |         |       |
| EMBEDMENT  | EDGE DISTANCE |       |         |       |
|  | 1"            |       | 2-1/2"  |       |
|  | TENSION       | SHEAR | TENSION | SHEAR |
| 1"   | 209           | 115   | 212     | 297   |
| 1-3/4"   | 510           | 115   | 575     | 384   |
| HOLLOW BLOCK   |               |       |         |       |
| EMBEDMENT  | EDGE DISTANCE |       |         |       |
|  | 1"            |       | 2-1/2"  |       |
|  | TENSION       | SHEAR | TENSION | SHEAR |
| 1-1/4"   | 117           | 94    | 195     | 264   |

| 5/16" DIAMETER (XL)<br>CARBON STEEL TAPCON<br>ALLOWABLE LOADS (lbs.) |               |       |         |       |         |       |
|--|---------------|-------|---------|-------|---------|-------|
| MIN. 2899 P.S.I. CONCRETE  |               |       |         |       |         |       |
| EMBEDMENT  | EDGE DISTANCE |       |         |       |         |       |
|  | 1-9/16"       |       | 2-3/16" |       | 3-1/8"  |       |
|  | TENSION       | SHEAR | TENSION | SHEAR | TENSION | SHEAR |
| 1-1/4"   | 262           | 333   | 301     | 431   | 301     | 543   |
| 1-3/4"   | 505           | 382   | 563     | 626   | 583     | 627   |
| 2-1/4"   | 713           | 489   | 780     | 812   | 788     | 852   |

| 5/16" DIAMETER (XL)<br>CARBON STEEL TAPCON<br>ALLOWABLE LOADS (lbs.) |               |
|--|---------------|
| 2 x WOOD BUCK (G=0.36)   |               |
| EMBEDMENT INTO 3000 P.S.I. CONCRETE                                  | EDGE DISTANCE |
|  | 1-3/4"        |

SEE NOTE 5

PRODUCT REVISED as complying with the Florida Building Code  
 Acceptance No. 02-031103  
 Expiration Date 02/20/03  
 By *[Signature]*  
 Miami Dade Product Control Division



**KNEZEVICH & ASSOCIATES, INC.**  
 CONSULTING ENGINEERS - PRODUCT TESTING  
 1260 N. UNIVERSITY DRIVE, SUITE 180 • FORT LAUDERDALE, FL 33322  
 TEL: (954) 382-2800 • FAX: (954) 382-2989 • FLORIDA C.O.A. #3205  
 WEBSITE: WWW.KNEZEVICH.COM • E-MAIL: K@KNEZEVICH.COM  
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**TAPCON MASONRY FASTENERS**  
**Buildex**  
 Buildex Division of Illinois Tool Works Inc.  
 1349 West Bryn Mawr Avenue Itasca, IL 60143  
 630.595.3500

**V.J. KNEZEVICH**  
 PROFESSIONAL ENGINEER  
 FL License No. PE 0010923

*[Signature]*  
 AUG 09 2002

| NO. | DATE     | BY | DESCRIPTION      |
|-----|----------|----|------------------|
| 1   | 08/23/01 | AS | NOTE ADDED       |
| 2   | 09/27/01 | AS | GENERAL REVISION |
| 3   | 12/14/01 | AS | COUNTY COMMENTS  |
| 4   | 05/27/02 | AS | COUNTY COMMENTS  |
| 5   | 08/08/02 | AS | COUNTY COMMENTS  |

date 06/22/01  
 scale AS NOTED  
 design by AS  
 checked by VJK  
 drawing no. 01-372  
 sheet 1 of 1