

Tapcon®
 Concrete and
 Masonry Anchors

THE ORIGINAL
Tapcon®



Blue Climaseal™

410 Stainless Steel

CORROSION RESISTANCE

Kesternich Results (DIN 40018 2.0L)

30 Cycles - 10% or less rust

Salt Spray Results (ASTM B117)

720 Hrs - 10% or less rust

DESCRIPTION/SUGGESTED SPECIFICATIONS

Tapcon Anchors —

SPECIFIED FOR ANCHORAGE INTO CONCRETE, BRICK OR BLOCK



The “original masonry” anchor that cuts its own threads into concrete, brick, or block. Maximum performance is achieved because the Tapcon Anchor, the Condrive Installation Tool, and the carbide-tipped Tapcon Drill Bits are designed to work as a system. It is essential to use the Condrive tool and the correct drill bit to assure consistent anchor performance.

ADVANTAGES

- Works in all masonry base materials.
- Fast and easy—3 anchors per minute.
- No hole spotting or inserts required.
- Removable.
- Slotted hex and phillips flat head styles.
- Extended corrosion protection—Blue Climaseal™.
- Available in 410 Stainless Steel.

Tapcon Anchors



Blue Climaseal™ provides extended corrosion protection

Available in 410 Stainless Steel (see photo on left)

Hex Head style on Tapcon Anchors is available for majority of fixture anchoring needs

Phillips Flat Head style is available when flush seating is necessary in countersink applications

Advanced Threadform cuts into concrete and masonry for reduced installation torque and increased pullout performance

Lengths of Tapcon Anchors range from 1-1/4" to 4" in 3/16" and up to 6" in 1/4" diameters.

Nail-Type Point guides the anchor into the pre-drilled hole. Excellent for wood to concrete applications

Tapcon® is a registered trademark of Buildex, a division of Illinois Tool Works, Inc.

Limitations: Not recommend for installation by impact drivers. Contact DMI for MSDS information

Sales are done through DMI registered distributor network only.

Please contact 855-800-8878 to find a registered distributor or email distributors@directmetalsinc.com



APPLICATIONS



The Tapcon Anchor is especially well suited for window and door frames because it performs well in block, is available in a flat head style, and is fast to install.

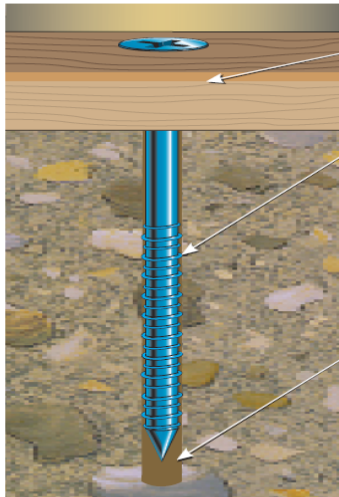


Many horizontal or "wall" applications are attached with Tapcon Anchor because it is removable and works well in block and brick.



The picture shows the Condrive 1000 Installation Kit in action. The kit makes for fast and easy change over from drill bit to driver and controls the driving torque to prevent thread stripping and head snapping in hard base materials.

FEATURES



Fixture Thickness—determine the fixture thickness to be anchored

Anchor Embedment—with a minimum recommended embedment of 1", the correct Tapcon anchor choice can be made. Hole depth must be a minimum 1/4" deeper than the anchor embedment to allow for displaced material

Hole Diameter—proper hole diameter is very important to insure consistent performance and maximum pullout strength. 3/16" anchors require 5/32" diameter bits, and 1/4" anchors require 3/16" diameter bits

APPROVAL/LISTINGS

Blue Climaseal™

ICC Evaluation Service, Inc. – ESR-1671
 ICC Evaluation Service, Inc. – ESR-2202
 Miami-Dade County – NOA #12-0816.06
 Florida Building Code

410 Stainless Steel

Miami-Dade County – NOA #12-0816.06
 Florida Building Code

For the most current approvals/listings visit: www.itw-redhead.com

INSTALLATION STEPS

Read installation instructions before using!



WARNING:

If there are any questions concerning proper installation, applications or appropriate use of this product, please call our Technical Services Department at 1-800-848-5611. Failure to follow these instructions can result in serious personal injury.

1. **Select proper fastener – diameter / head style / length.**
 - a) Use selection chart to choose proper length.
2. **Drill Hole – use selection chart to determine drill bit length and depth of hole.**
 - a) Choose appropriate drill of Tapcon Anchor.
 - b) Drill hole minimum 1/4" deeper than Tapcon Anchor to be embedded.

Minimum anchor embedment: 1"

Maximum anchor embedment: 1-3/4"

3. **Drive Anchor.**



WARNING:

Failure to wear safety glasses with side shields can result in serious personal injury. Always wear ANSI compliant eye protection (ANSI Z87.1-2003).



WARNING:

Using the wrong size drill bit will affect performance values and may cause failure.

Head Styles

3/16" diameter has a 1/4" slotted hex washer head (HWH)

1/4" diameter has a 5/16" slotted hex washer head (HWH)



3/16" diameter uses a #2 phillips flat head (PFH)

1/4" diameter uses a #3 phillips flat head (PFH)



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PERFORMANCE TABLE

Tapcon® Anchors

Ultimate Tension and Shear Values (Lbs/kN) in Concrete

| ANCHOR DIA. In. (mm) | MIN. DEPTH OF EMBEDMENT In. (mm) | f'c = 2000 PSI (13.8 MPa) | | f'c = 3000 PSI (20.7 MPa) | | f'c = 4000 PSI (27.6 MPa) | | f'c = 5000 PSI (34.5 MPa) | |
|-------------------------|-------------------------------------|---------------------------|--------------------|---------------------------|--------------------|---------------------------|--------------------|---------------------------|--------------------|
| | | TENSION Lbs. (kN) | SHEAR Lbs. (kN) | TENSION Lbs. (kN) | SHEAR Lbs. (kN) | TENSION Lbs. (kN) | SHEAR Lbs. (kN) | TENSION Lbs. (kN) | SHEAR Lbs. (kN) |
| 3/16 (4.8) | 1 (25.4) | 600 (2.7) | 720 (3.2) | 625 (2.8) | 720 (3.2) | 650 (2.9) | 720 (3.2) | 800 (3.6) | 860 (3.8) |
| | 1-1/4 (31.8) | 845 (3.7) | 720 (3.2) | 858 (3.8) | 720 (3.2) | 870 (3.9) | 720 (3.2) | 1,010 (4.5) | 860 (3.8) |
| | 1-1/2 (38.1) | 1,090 (4.8) | 860 (3.8) | 1,090 (4.8) | 860 (3.8) | 1,090 (4.8) | 860 (3.8) | 1,220 (5.4) | 860 (3.8) |
| | 1-3/4 (44.5) | 1,450 (6.5) | 870 (3.9) | 1,455 (6.5) | 870 (3.9) | 1,460 (6.5) | 990 (4.4) | 1,730 (7.7) | 990 (4.4) |
| 1/4 (6.4) | 1 (25.4) | 750 (3.3) | 900 (4.0) | 775 (3.4) | 900 (4.0) | 800 (3.6) | 1,360 (6.1) | 950 (4.2) | 1,440 (6.4) |
| | 1-1/4 (31.8) | 1,050 (4.7) | 900 (4.0) | 1,160 (5.2) | 900 (4.0) | 1,270 (5.6) | 1,360 (6.1) | 1,515 (6.7) | 1,440 (6.4) |
| | 1-1/2 (38.1) | 1,380 (6.1) | 1,200 (5.3) | 1,600 (7.2) | 1,200 (5.3) | 1,820 (8.1) | 1,380 (6.1) | 2,170 (9.7) | 1,670 (7.4) |
| | 1-3/4 (44.5) | 2,020 (9.0) | 1,670 (7.4) | 2,200 (9.8) | 1,670 (7.4) | 2,380 (10.6) | 1,670 (7.4) | 2,770 (12.3) | 1,670 (7.4) |

Safe working loads for single installation under static loading should not exceed 25% of the ultimate load capacity.

PERFORMANCE TABLES

Tapcon® Anchors

Ultimate Tension and Shear Values (Lbs/kN) in Hollow Block

| ANCHOR DIA. In. (mm) | ANCHOR EMBEDMENT In. (mm) | LIGHTWEIGHT BLOCK | | MEDIUM WEIGHT BLOCK | |
|-------------------------|------------------------------|----------------------|--------------------|----------------------|--------------------|
| | | TENSION Lbs. (kN) | SHEAR Lbs. (kN) | TENSION Lbs. (kN) | SHEAR Lbs. (kN) |
| 3/16 (4.8) | 1 (25.4) | 220 (1.0) | 400 (1.8) | 340 (1.5) | 730 (3.2) |
| 1/4 (6.4) | 1 (25.4) | 250 (1.1) | 620 (2.8) | 500 (2.2) | 1,000 (4.4) |

Safe working loads for single installation under static loading should not exceed 25% of the ultimate load capacity.

NOTE: 3/16" Tapcon requires 5/32" bit, 1/4" Tapcon requires 3/16" bit.

Tapcon® Anchors

Allowable Edge and Spacing Distances

| PARAMETER | ANCHOR DIA. In. (mm) | NORMAL WEIGHT CONCRETE | | | CONCRETE MASONRY UNITS (CMU) | | |
|--------------------------------------|-------------------------|--|--|--------------------------|--|--|--------------------------|
| | | FULL CAPACITY (Critical Distance Inches) | REDUCED CAPACITY (Minimal Distance Inches) | LOAD REDUCTION FACTOR | FULL CAPACITY (Critical Distance Inches) | REDUCED CAPACITY (Minimal Distance Inches) | LOAD REDUCTION FACTOR |
| Spacing Between Anchors - Tension | 3/16 | 3 | 1-1/2 | 0.73 | 3 | 1-1/2 | 1.00 |
| | 1/4 | 4 | 2 | 0.66 | 4 | 2 | 0.84 |
| Spacing Between Anchors - Shear | 3/16 | 3 | 1-1/2 | 0.83 | 3 | 1-1/2 | 1.00 |
| | 1/4 | 4 | 2 | 0.82 | 4 | 2 | 0.81 |
| Edge Distance - Tension | 3/16 | 1-7/8 | 1 | 0.83 | 4 | 2 | 0.91 |
| | 1/4 | 2-1/2 | 1-1/4 | 0.82 | 4 | 2 | 0.88 |
| Edge Distance -Shear | 3/16 | 2-1/4 | 1-1/8 | 0.70 | 4 | 2 | 0.93 |
| | 1/4 | 3 | 1-1/2 | 0.59 | 4 | 2 | 0.80 |

For SI: 1 inch = 25.4 mm

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TAPCON™, THE ORIGINAL BLUE MASONRY SCREW HEX HEAD

The original masonry anchor that cuts threads into concrete, brick or hollow block. Popular uses include: Securing fixtures to masonry and block walls, or concrete flooring. Made in the U.S.A.

Maximum performance is achieved from the advanced thread form technology when the Tapcon™ Anchor, the Condrive installation tool, and the carbide-tipped Tapcon™ drill bits are used as a system. Available with painted heads.

Fast and easy - 3 anchors per minute. No hole spotting or insert required. Removable, slotted hex head with extended corrosion protection from the Blue Climaseal™ coating. Miami-Dade Approved.



| Sizes | Qty/Box | Qty/Ctn | Part# |
|----------------|---------|---------|-------------|
| 3/16" x 1-1/4" | 100 | 500 | DMIT3139407 |
| 3/16" x 1-3/4" | 100 | 500 | DMIT3141407 |
| 3/16" x 2-1/4" | 100 | 500 | DMIT3143407 |
| 3/16" x 2-3/4" | 100 | 500 | DMIT3145407 |
| 3/16" x 3-1/4" | 100 | 500 | DMIT3147407 |
| 3/16" x 3-3/4" | 100 | 500 | DMIT3149407 |
| 3/16" x 4" | 100 | 500 | DMIT3151407 |
| 1/4" x 1-1/4" | 100 | 500 | DMIT3153407 |
| 1/4" x 1-3/4" | 100 | 500 | DMIT3155407 |
| 1/4" x 2-1/4" | 100 | 500 | DMIT3177407 |
| 1/4" x 2-3/4" | 100 | 500 | DMIT3159407 |
| 1/4" x 3-1/4" | 100 | 500 | DMIT3161407 |
| 1/4" x 3-3/4" | 100 | 500 | DMIT3163407 |
| 1/4" x 4" | 100 | 500 | DMIT3165407 |
| 1/4" x 5" | 100 | 500 | DMIT3167407 |
| 1/4" x 6" | 100 | 100 | DMIT3205407 |

Part #'s above come with one drill bit per box, also available in bulk packaging. Made in the U.S.A.

TAPCON™, THE ORIGINAL BLUE MASONRY SCREW PHILLIPS HEAD

The original masonry anchor with a Phillips drive countersink head that cuts threads into concrete, brick or hollow block. Popular uses include: Wood headers and furring strips to masonry, HVAC strapping to masonry, plywood backer boards to masonry, and exterior insulation systems to masonry. Made in the U.S.A.



| Sizes | Qty/Box | Qty/Ctn | Part# |
|----------------|---------|---------|-------------|
| 3/16" x 1-1/4" | 100 | 500 | DMIT3169407 |
| 3/16" x 1-3/4" | 100 | 500 | DMIT3171407 |
| 3/16" x 2-1/4" | 100 | 500 | DMIT3173407 |
| 3/16" x 2-3/4" | 100 | 500 | DMIT3175407 |
| 3/16" x 3-1/4" | 100 | 500 | DMIT3177407 |
| 3/16" x 3-3/4" | 100 | 500 | DMIT3194407 |
| 3/16" x 4" | 100 | 500 | DMIT3181407 |
| 1/4" x 1-1/4" | 100 | 500 | DMIT3183407 |
| 1/4" x 1-3/4" | 100 | 500 | DMIT3185407 |
| 1/4" x 2-1/4" | 100 | 500 | DMIT3187407 |
| 1/4" x 2-3/4" | 100 | 500 | DMIT3189407 |
| 1/4" x 3-1/4" | 100 | 500 | DMIT3191407 |
| 1/4" x 3-3/4" | 100 | 500 | DMIT3193407 |
| 1/4" x 4" | 100 | 500 | DMIT3195407 |
| 1/4" x 5" | 100 | 500 | DMIT3197407 |
| 1/4" x 6" | 100 | 100 | DMIT3203407 |

Fast and easy - 3 anchors per minute. No hole spotting or insert required. Removable, Phillips flat head with extended corrosion protection from the Blue Climaseal coating. Miami - Dade Approved.

Part #'s above come with one drill bit per box, also available in bulk packaging. Made in the U.S.A.

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