

Tapcon[®]

Tapcon Anchor

Product Information and Suggested Specifications

Selection and Order Information | Installation Instructions Performance Data | Tapcon Condrive Tool Kits | Approvals and Listing

Anchors

DESCRIPTION / SUGGESTED SPECIFICATIONS







Blue Climaseal™ 410 Stainless Steel

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

Tapcon "Original"

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

CORRISION RESISTANCE

Kesternich Results (DIN 50018 2.OL) Salt Spray Test (ASTM B117)

30 Cycles - 10% or less red rust 720 Hrs 10% or less red rust

Tapcon Anchors

Hex Head Phillips Flat Head

Blue Climaseal™ provides extended corrosion protection

Also available in 410 Stainless Steel

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 predrilled hole. Excellent for wood to concrete applications

SUGGESTED SPECIFICATIONS

Self-tapping Concrete Anchors —

SPECIFIED FOR ANCHORAGE INTO CONCRETE, BRICK OR **BLOCK**

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SELECTION CHART

Tapcon Anchors with Blue Climaseal™			Diameter3/16" and 1/4" Thread FormAdvanced Threadform Technology™ Point TypeNail FinishBlue Climaseal™ All boxes of ITW Tapcon come packaged with matching carbide-tipped bit. Tapcon is packaged 100 pieces per box and 50 pieces per master carton except HW4-600 and PF4-600 (400 in master carton).					
FIXTURE THICKNESS INCHES	RECOMMENDED TAPCON LENGTH In. (mm)	PART NO. 3/16" HEX HEAD	PART NO. 1/4" HEX HEAD	PART NO. 3/16" FLAT HEAD	PART NO. 1/4" FLAT HEAD	1/4" LENGTH BITS FOR		
0" - 1/4"	1-1/4 (31.8)	HW3-114	HW4-114	PF3-114	PF4-114	3-1/2 (88.9)	7900814	7901014
1/4" - 3/4"	1-3/4 (44.5)	HW3-134	HW4-134	PF3-134	PF4-134	3-1/2 (88.9)	7900814	7901014
3/4" - 1-1/4"	2-1/4 (57.2)	HW3-214	HW4-214	PF3-214	PF4-214	4-1/2 (114.3)	7900818	7901018
1-1/4 "- 1- 3/4"	2-3/4 (69.9)	HW3-234	HW4-234	PF3-234	PF4-234	4-1/2 (114.3)	7900818	7901018
1-3/4" - 2- 1/4"	3-1/4 (82.6)	HW3-314	HW4-314	PF3-314	PF4-314	5-1/2 (139.7)	7900822	7901022
2-1/4" - 2- 3/4"	3-3/4 (95.3)	HW3-334	HW4-334	PF3-334	PF4-334	5-1/2 (139.7)	7900822	7901022
2-1/2" - 3"	4 (101.6)	HW3-400	HW4-400	PF3-400	PF4-400	5-1/2 (139.7)	7900822	7901022
3-1/2" - 4"	5 (127.0)		HW4-500		PF4-500	6-1/2 (165.1)		7901026
4-1/2" - 5"	6 (152.4)		HW4-600		PF4-600	7-1/2 (190.5)		7901030

SELECTION CHART

Tapcon 1/4" 410 Stainless Steel Anchor		Diameter				
FIXTURE THICKNESS INCHES	RECOMMENDED TAPCON LENGTH In. (mm)	PART NO. 1/4" HEX HEAD	PART NO. 1/4" FLAT HEAD	BIT LENGTH In. (mm)	STRAIGHT SHANK BITS for 1/4" TAPCON PART NO.	
0" - 1/4"	1-1/4 (31.8)	SHW4-114	SPF4-114	3-1/2 (88.9)	7901014	
1/4" - 3/4"	1-3/4 (44.5)	SHW4-134	SPF4-134	3-1/2 (88.9)	7901014	
3/4" - 1-1/4"	2-1/4 (57.2)	SHW4-214	SPF4-214	4-1/2 (114.3)	7901018	
1-1/4" - 1-3/4"	2-3/4 (69.9)	SHW4-234	SPF4-234	4-1/2 (114.3)	7901018	
1-3/4" - 2-1/4"	3-1/4 (82.6)	SHW4-314	SPF4-314	5-1/2 (139.7)	7901022	
2-1/4" - 2-3/4"	3-3/4 (95.3)	SHW4-334	SPF4-334	5-1/2 (139.7)	7901022	
2-1/2" - 3"	4 (101.6)	3459907		5-1/2 (139.7)	3100910	
3-1/4" - 4"	5 (127.0)	3460907		6-1/2 (165.1)	3102910	
4-1/4" - 5"	6 (152.4)	3461907		7-1/2 (190.5)	3461907	

SELECTION CHART

410 Stainle	Tapcon 3/16" ss Steel Anchor	Diameter3/16" Thread FormOriginal Notched Hi-Lo™ Point TypeNail Finish410 Stainless Steel with Silver Climaseal™ All boxes of ITW Tapcon come packaged with matching carbide-tipped bit. Tapcon is packaged 100 pieces per box and 500 pieces per master.				
FIXTURE THICKNESS INCHES	RECOMMENDED TAPCON LENGTH In. (mm)	PART NO. 3/16" FLAT HEAD	BIT LENGTH In. (mm)	STRAIGHT SHANK BITS for 3/16" TAPCON PART NO.		
0" - 1/4"	1-1/4 (31.8)	3434907	3-1/2 (88.9)	7900814		
1/4" - 3/4"	1-3/4 (44.5)	3418907	3-1/2 (88.9)	7900814		
3/4" - 1-1/4"	2-1/4 (57.2)	3419907	4-1/2 (114.3)	7900818		
1-1/4"- 1-3/4"	2-3/4 (69.9)	3420907	4-1/2 (114.3)	7900818		
1-3/4"- 2-1/4"	3-1/4 (82.6)	3421907	5-1/2 (139.7)	7900822		
2-1/4"- 2-3/4"	3-3/4 (95.3)	SHW4-334	5-1/2 (139.7)	7900822		

Tapcon SDS Bits

PART NUMBER	DESCRIPTION
790059	7" (SDS Rotohammer Bits for use with 3/16" Tapcon)
7901060	5" (SDS Rotohammer Bits for use with 1/4" Tapcon)
7901059	7" (SDS Rotohammer Bits for use with 1/4" Tapcon)



PERFORMANCE TABLE

		Tapcon Anchors	Ultimate	Tension a	nd Shear	Values (Lbs/kN) i	n Concre	te
ANCHOR DIA.	MIN. DEPTH OF	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)	
In. (mm)	In. (mm)	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)	1,360 (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)

PERFORMANCE TABLE

	Tapcon Anchors	Ultimate Tension	and Shear Va	lues (Lbs/kN) in	Hollow Block	
ANCHOR	ANCHOR	LIGHTWEIGHT	BLOCK	MEDIUM WEIGHT BLOCK		
DIA. In. (mm)	In. (mm)	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.

PERFORMANCE TABLE

	Tapcon Anchors	Allowable Edge and Spacing Distances						
PARAMETER	ANCHOR	NORMAL WEIGHT CONCRETE			CONCRETE MASONRY UNITS (CMU)			
	DIA.	FULL	REDUCED	LOAD	FULL	REDUCED	LOAD	
	In. (mm)	CAPACITY	CAPACITY	REDUCTION	CAPACITY	CAPACITY	REDUCTION	
		(Critical Distance Inches	(Minimal Distance Inches)	FACTOR	(Critical Distance Inches)	(Minimal Distance Inches)	FACTOR	
Spacing Between	3/16	3	1-1/2	0.73	3	1-1/2	1.00	
Anchors - Tension	1/4	4	2	0.66	4	2	0.84	
Spacing Between	3/16	3	1-1/2	0.83	3	1-1/2	1.00	
Anchors - Shear	1/4	4	2	0.82	4	2	0.81	
Edge Distance -	3/16	1-7/8	1	0.83	4	2	0.91	
Tension	1/4	2-1/2	1-1/4	0.82	4	2	0.88	
Edge Distance -	3/16	2-1/4	1-1/8	0.70	4	2	0.93	
Shear	1/4	3	1-1/2	0.59	4	2	0.80	
For SI: 1 inch = 25.4 n	nm							



Tapcon® Condrive 1000 Tool Kit and Starter Kit

Installation

Tool Kit



Condrive 1000 - Part No. C1000



Tapcon Starter Kit - Part No. 7904050

DESCRIPTION / SUGGESTED SPECIFICATIONS

Condrive 1000 Installation Tool —

SPECIFIED FOR ANCHORAGE INTO CONCRETE, BRICK OR BLOCK

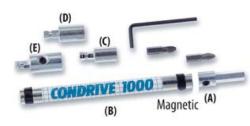
The key to Tapcon's fast and easy installation is the multi-purpose Condrive Installation Tool. The drive sleeve along with the hex head and phillips sockets provide the installer with the flexibility necessary for the complete variety of Tapcon applications (tool does not include drill bit).

Condrive® 1000 - A multi-purpose tool designed for installation of Tapcon hex head and Phillips flat head and up to 3-3/4" long. If driving hex head Tapcon, driver will automatically disengage. The Condrive 1000 has a reusable plastic case.

Condrive Tools are designed to specifically install Tapcon Anchors and to fit standard hammer drills.

ADVANTAGES

- Fast change from drilling to driving
- Eliminates need to change out chuck and bits
- Eliminates need for two tools
- Special nut driver is recessed for torque control to reduce head breakage



Condrive 10	000 Spare Parts		
PART NO.	DESCRIPTION	QTY/WT	
(A) 7901001	Drill Adapter	1/.06	
(B) 7901002	Sleeve	1/.01	
7901003	Black Band	1/.02	
7901004	5/32" Ball Bearing	1/.02	
(C) 7901006	3/16" Socket	1/.04	
(D) 7901007	1/4" Socket	1/.05	
7901008	#2 Phillips bit for 3/16" anchor	1/.10	
7901009	#3 Phillips bit for 1/4" anchor	1/.12	
(E) 7901010	Phillips Socket	1/.44	
7902006	Set Screw	1/.02	
7902008	1/16" Ball Bearing	1/.02	
7902010	1/8" Hex Key	1/.10	

APPLICATIONS



This picture shows the Condrive 1000 Installation tool in action. The tool 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.



Tapcon Starter Kit

Starter Kit

Part Number: 7904050

Kit Contains:

- 1 Box HW4-114 (includes 1 drill bit)
- 1 Box HW4-134 (includes 1 drill bit)
- 1 Condrive 1000

INSTALLATION GUIDELINES

Using the Condrive 1000®

PREPARATION:

- 1. Place drill adapter into 3/8" or 1/2" chuck of hammer drill. Tighten chuck.
- Place correct Tapcon® drill bit in drill adapter and tighten set screw.
- 3. Add socket matching anchor type to end of sleeve.



DRILL:

1. Drill hole 1/4" deeper than depth of embedment. Tapcon® anchor requires a minimum embedment of 1".

DRIVE:

- 2. Slide Condrive® sleeve over drill bit and snap into drill adapter.
- 3. Insert anchor in the end of the sleeve, position fixture to be fastened, and drive the Tapcon® anchor into the predrilled hole.

Tool automatically disengages when Hex head anchor is set.

