



Walker® Infloor Systems

AV3 Poke-Thru Series INSTALLATION INSTRUCTIONS

Installation Instruction No.: 1 003 904 – April 2004

Walker® electrical systems conform to and should be properly grounded in compliance with requirements of the current National Electrical Code or codes administered by local authorities.

All electrical products may present a possible shock or fire hazard if improperly installed or used. Walker electrical products may bear the mark as UL Listed and/or Classified and should be installed in conformance with current local and/or the National Electrical Code.

IMPORTANT: Please read all instructions before beginning.

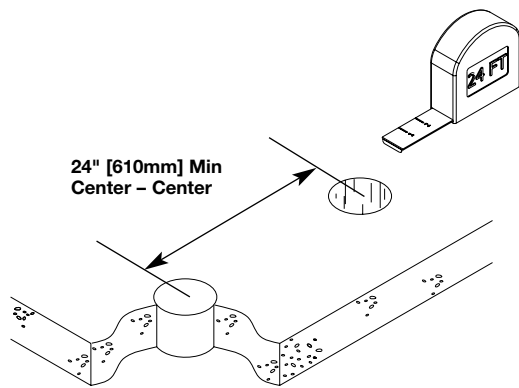
Products Covered: AV3STC, AV3ATC, AV3ARTTC, AV3CTC, AV3CR TTC, AV3SHTC, AV3ATC-LJB, AV3ARTTC-LJB, AV3ATCLJB25 & AV3ARTTCLJB25.

CAUTION DO NOT operate tile stripper or resurfacing equipment over top of covers. This may result in damage to the surface finish of the product.

Suitable for use in air handling spaces in accordance with Sec. 300-22 (C) of the National Electrical Code.

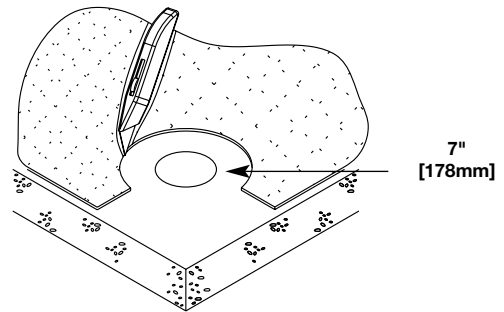
Step 1 Layout and locate position of hole(s).

CAUTION: Spacing is limited to no more than one hole per each 65 sq. ft. [6 sq. m] of floor area in each span.



CAUTION: Be certain to drill hole at least 4" [102mm] from any wall or pillar to leave enough room for Poke-Thru cover assembly.

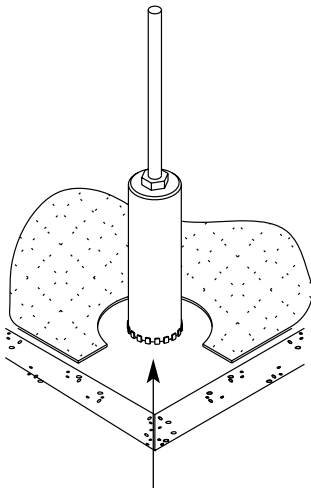
Step 2 Remove 7" dia. [178mm] section from carpet or tile. Use template provided.



CAUTION: For tile installations up to a maximum of 3/4" [19.1mm] thick.

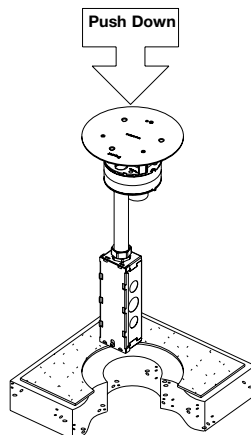
NOTE: For tile thickness greater than 3/4" [19.1mm] consult factory.

Step 3 Core drill hole.



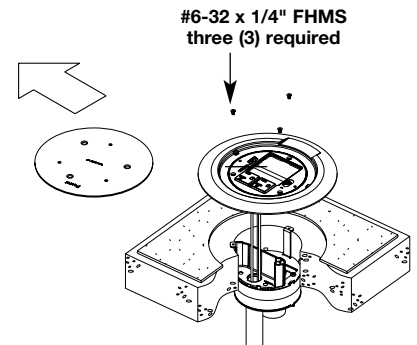
4" [102mm] Diameter Core Drill
4 1/16" [103mm] Actual Diameter

Step 4 Stem Assembly:
Catalog No. AV3STC
Insert stem into hole.



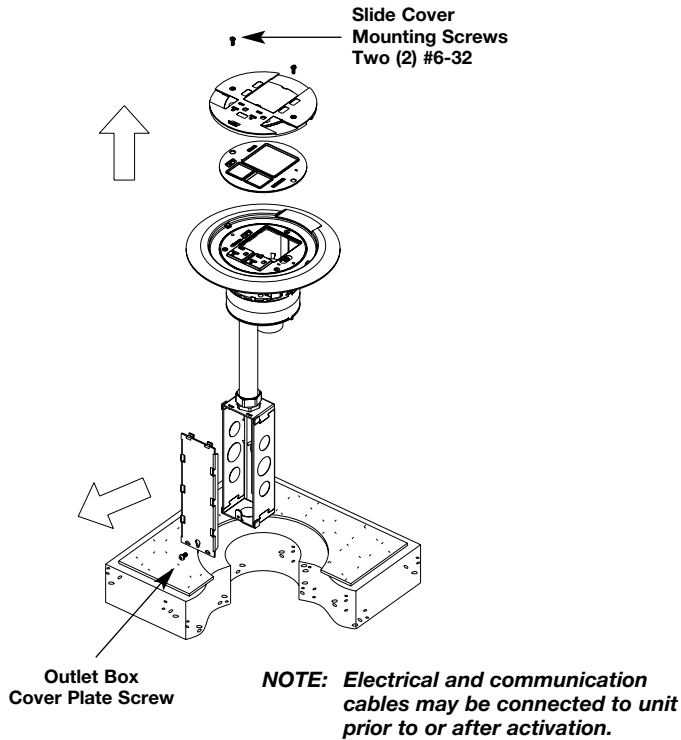
CAUTION: Poke-Thru cannot be rotated in hole after insertion into floor.

Step 5 Cover Assembly:
Catalog No. AV3CTC.
Remove disposable plate and replace with carpet/tile flange. Install with three (3) #6-32 x 1/4" [6.4mm] FHMS.

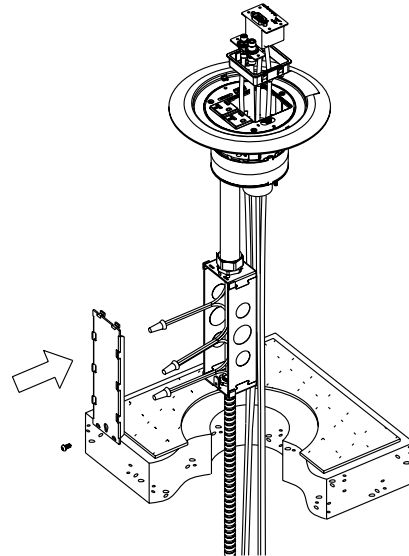


Complete Assembly:

Step 6 Wire the Poke-Thru device. (Can be completed above floor.) Refer to wiring schematic in Step 8.



Step 7 Wire the POWER and Communications circuits. (See Steps 10 & 11 for Communication Selection)



CAUTION: Poke-Thru can not be rotated in hole after inserted into the floor.

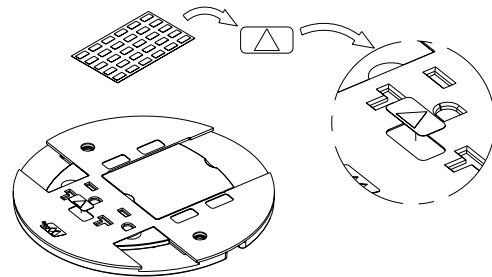
Step 8 Connect Poke-Thru conductors according to required device configuration. See schematic below.

CONVENTIONAL WIRING SCHEMATIC		ISOLATED GROUND WIRING SCHEMATIC	
BLACK or HOT From branch circuit	BLACK from Poke-Thru receptacle	BLACK or HOT From branch circuit	BLACK from Poke-Thru receptacle
WHITE or NEUTRAL From branch circuit	WHITE from Poke-Thru receptacle	WHITE or NEUTRAL From branch circuit	WHITE from Poke-Thru receptacle
GREEN or GROUND From branch circuit System Ground	GREEN from Poke-Thru receptacle	ISOLATED GROUND From branch circuit	GREEN from Poke-Thru receptacle
	GREEN (jumper wire) from Poke-Thru junction box	GREEN or GROUND From branch circuit System Ground	GREEN (jumper wire) from Poke-Thru junction box

WARNING: Ground wire from junction box must be connected to system ground.

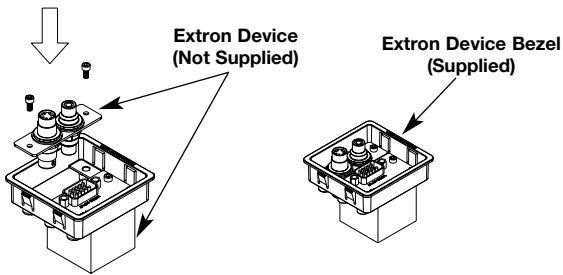
CAUTION: Receptacle mounting means not grounded. Grounding wire connection required. For isolated ground wiring, connect ground leads to a separate isolated grounding conductor. See NEC 250-146(d).

Step 9 If circuit is connected to an isolated ground, apply IG icon on receptacle slide as shown.



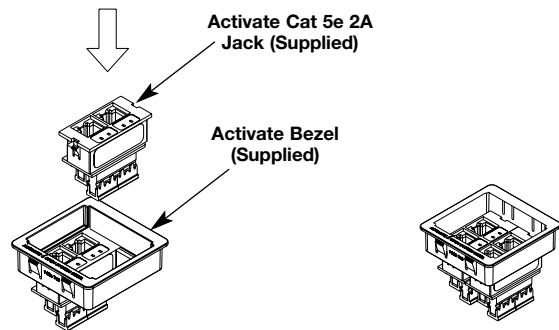
NOTE: The orange triangle shall only be placed on devices that are wired for isolated ground. See NEC 250-146(d).

Step 10 Wire and snap communication jacks in adapters as shown.

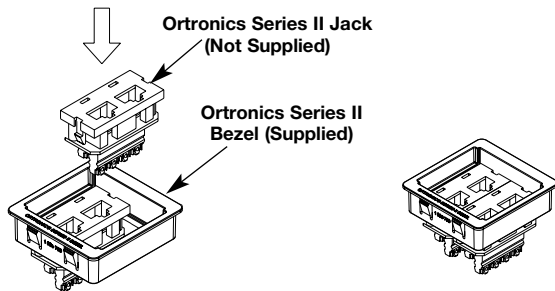


NOTE: This Bezel Accommodates (1) Single and (1) Double or (3) Single MAAPs (Mini Architectural Adapter Plates) Extron Devices.

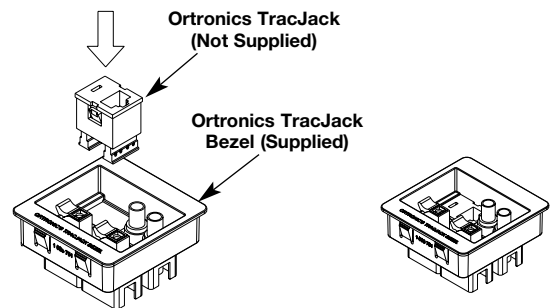
Extron Device Bezel - Supplied with AV3ATC & AV3CTC. (Extron Devices Sold Separately Through Extron Distributors Only.)



Pass & Seymour ACTIVATE Bezel and Communication Jack (Supplied with AV3ATC & AV3CTC units).

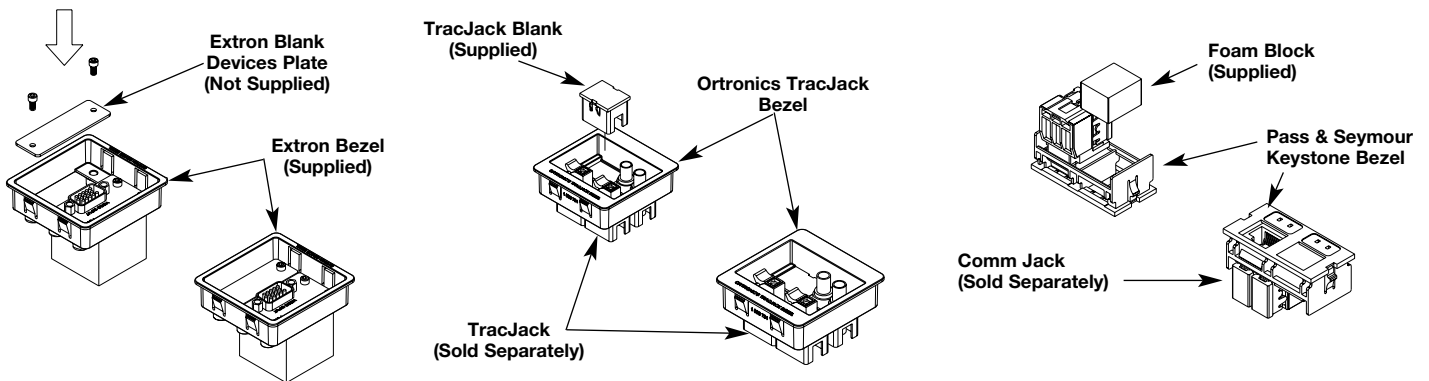


Ortronics Series II Bezel & Communication Jacks (Series II Bezel Included with AV3ARTTC and AV3CRTTC, Series II Modular Inserts Sold Separately).



Ortronics TracJack Bezel & Communication Jack (Bezel Supplied with AV3ARTTC and AV3CRTTC, TracJacks sold separately).

Step 11 Insert blanking plugs, plates or neoprene foam blocks in unused communication ports.



CAUTION: Empty communication ports must be closed off with foam blocks, TracJack blanks or Extron Single and/or Double MAAP blanks to maintain Fire Classification.

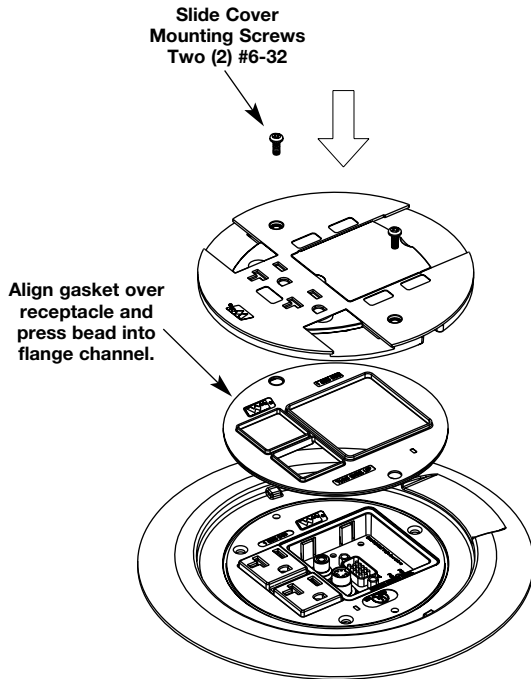
Units employing Activate or Ortronics Communication Modules:

In order to maintain UL Fire Classification, all communication modules and/or blank inserts (factory or customer supplied) must be UL Listed Communication Circuit Accessories. Modules and /or blank inserts must have a secure fit in the supplied communication brackets with no visual openings between communication modules and communication brackets. All unused openings must be sealed with the appropriate blanking plugs. Seal any openings between pass-through type cables and the bezel using the appropriate blank insert or foam plug (see step 11).

Units employing Extron Devices:

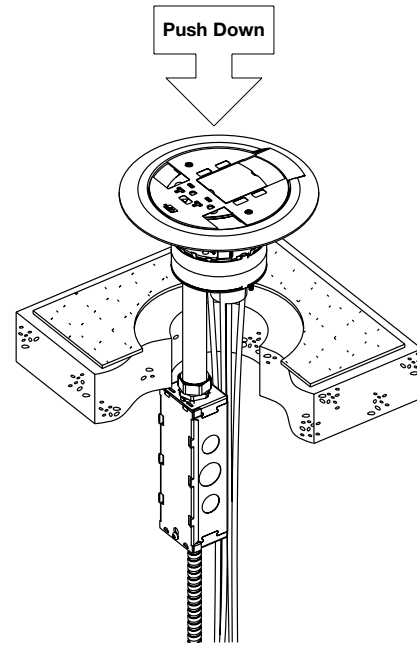
In order to maintain UL Fire Classification, all Extron devices must have a secure fit in the supplied device mounting bezel with no visual openings between the devices and the mounting bezel. Total weight of all devices (excluding device mounting bezel) must not exceed 4 ounces (113.4 grams). All unused openings must be sealed with the appropriate blank plate (see step 11).

Step 12 Attach slide cover with two (2) #6 screws.



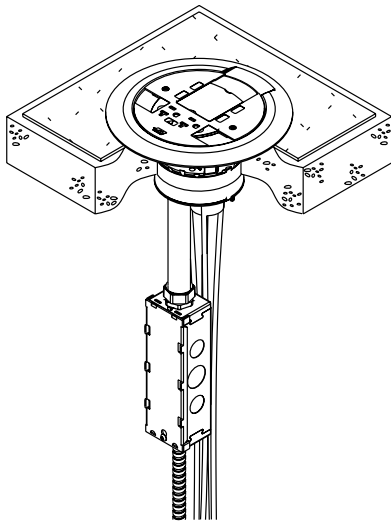
CAUTION: Gasket must be set in place to provide scrub water seal.

Step 13 Push Poke-Thru unit into concrete to complete installation.



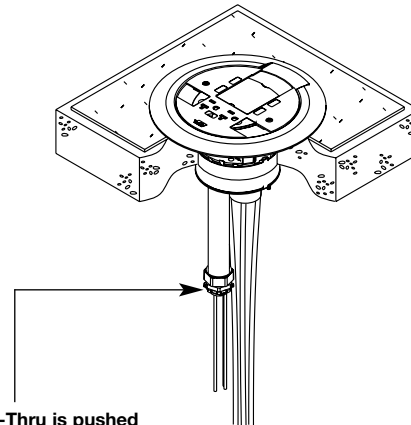
CAUTION: Poke-Thru cannot be rotated in hole after inserted into floor.

Step 14 Installation complete.



AV3 Poke-Thru Less Junction Box
Cat. Nos. AV3ATC-LJB, AV3ARTTC-LJB,
AV3ATCLJB25, and AV3ARTTCLJB25
(Applies to installations in the City of Chicago or other locations where local codes require the use of EMT Compression fittings, and a junction box suitable for use in environmental air spaces.)

Step 15 Follow steps 1 through 13 for installation.



Once Poke-Thru is pushed into the Cored Hole, from below, install an EMT Compression Fitting (Not Supplied) and Junction Box (Not Supplied) to the Conduit System. Complete installation per NEC and Local Codes.

The AV3TC Series Poke-Thru Devices are UL Listed and Classified to U.S. and Canadian safety standards to the following conditions:

The AV3STC Poke-Thru stem with the AV3CTC service head fitting, the AV3ATC factory assembled Poke-Thru device, and the AV3APTC abandonment fitting are for use with 1, 1-1/2, or 2 hr rated unprotected reinforced concrete floors and 1, 1-1/2 or 2 hr rated floors employing unprotected steel floor units and concrete topping (D900-Series Designs), or concrete floors with suspended ceilings. (Fire resistive designs with suspended ceilings should have provisions for accessibility in the ceiling area below the Poke-Thru fittings).

The assembled Poke-Thru stem and service fitting or the abandonment fittings will not reduce the ratings of the floor assembly when the thickness and type of concrete (required for the specific rating) are within the specified limits and the fittings are installed as specified:

1. – **Spacing** – Minimum of 2’ [610mm] OC and not more than one unit per 65 sq ft [6 sq. m] of floor area in each span.
2. – **Concrete** – Minimum thickness of structural concrete topping of 2 1/4 in.[57mm] over metal deck or a minimum 3 in. thick reinforced concrete slab. Unit weight of concrete to be 110 to 155 pcf.
3. – **Installation** – Mounted in a 4 in. diameter core-drilled hole in concrete per installation instructions accompanying the fittings or abandonment fittings. For use with power circuits, data and/or telephone cables as tabulated below:

POKE-THRU FITTING TYPE	SERVICE FITTING TYPE	POWER CONDUCTORS (A)	COMMUNICATION CONDUCTORS (B)
AV3ATC series	-	3 (.01536 sq in.) [9.909mm ²]	38 (.01900 sq. in.) [12.259mm ²]
AV3STC series	AV3CTC series	3 (.01536 sq. in.) [9.909mm ²]	38 (.01900 sq. in.) [12.259mm ²]

The “TC” suffix letters indicate that device may be installed on tile or carpet covered concrete floors. All catalog numbers may have an “RT” suffix to indicate units supplied with Ortronics, Inc. communication modules and accessories. The “LJB” suffix letters indicate units supplied without a junction box. The “25” suffix numbers indicate units supplied with 25 foot receptacle leads.

- (A) Maximum number of No. 12 AWG Type THHN conductors in power compartment of Poke-Thru fitting.
- (B) Maximum number of 22 AWG conductors in low-voltage compartment of Poke-Thru fitting (4 pair cables have 8 conductors). When conductors larger than No. 22 AWG are used, the aggregate cross-sectional area of the copper conductors shall not exceed the aggregate cross-sectional area of the 22 AWG conductors permitted in the low-voltage compartment.

COPPER CROSS SECTIONAL AREA OF COMMONLY USED CONDUCTORS	
Size	Solid
#24	.00032 sq. in. [.20645mm ²]
#22	.00050 sq. in. [.32258mm ²]
#14	.00323 sq. in. [2.08386mm ²]
#12	.00512 sq. in. [3.30321mm ²]
#10	.00815 sq. in. [5.25805mm ²]
# 8	.01296 sq. in. [8.36127mm ²]

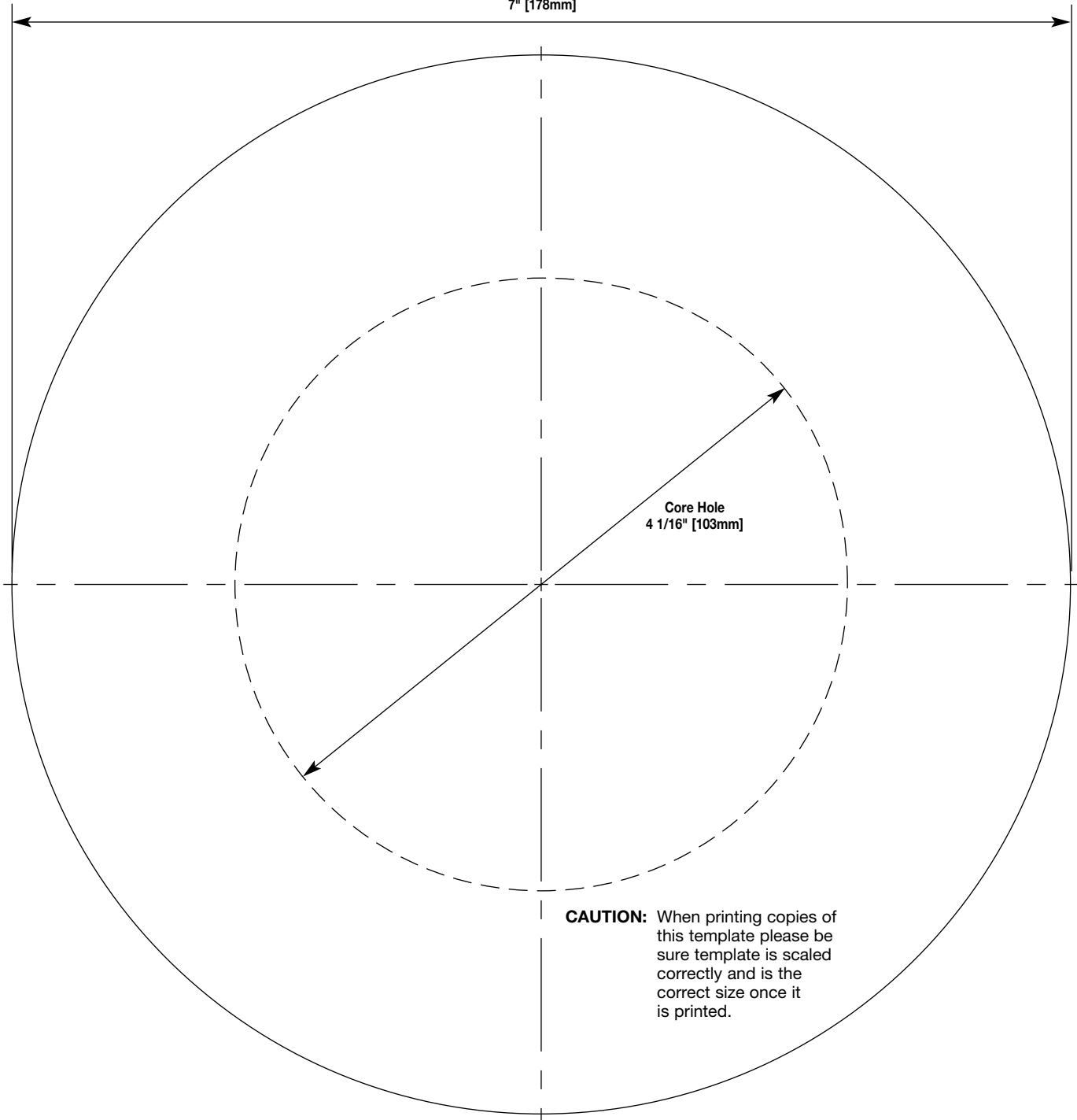
NOTE: Use above values for solid or stranded conductors.

FLOOR COVERINGS: The Poke-Thru device is fire rated for carpet or wood covered floors, tile floor coverings up to 3/4” [19.1mm] maximum thickness, and linoleum floor coverings up to a maximum 1/8” [3.2mm] thickness. For other floor coverings not listed above, consult factory.

CAUTION: Receptacle supplied with this Poke-Thru is not suitable for direct field wiring. Contact manufacturer for replacement. Field modifications will void UL Listing and Classification. Replacement receptacle is limited to this manufacturers’ Cat. No. RC37REC or RC37REC-25.

Carpet Cutout Template

Carpet Cutout
7" [178mm]



CAUTION: When printing copies of this template please be sure template is scaled correctly and is the correct size once it is printed.



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