



Wiremold

Wiremold 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. Wiremold 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.

Walkercell® Systems INSTALLATION INSTRUCTIONS

Installation Instruction No.: PDD-880R1 – Updated March 2010

***IMPORTANT: Please read all instructions
before beginning.***

**IMPORTANT - PLEASE READ ALL INSTRUCTIONS BEFORE BEGINNING.
SAVE THESE INSTRUCTIONS FOR REFERENCE AND ADDITIONAL WORK REQUIRED
AFTER CONCRETE POUR.**

General:

Review and become familiar with all Walkercell components. **Be careful of sharp edges or burrs when handling any sheet metal parts.** All interior surfaces that can be touched by a wire shall be smooth.

Compare and coordinate the architectural and electrical drawings with the Wiremold installation drawings. Contact your local Wiremold field sales representative immediately if any dimensions or details are incorrect.

Install Walkercell and related components in accordance with Article 356 of the latest issue of the National Electrical Code. Keep material and cartons dry. Advise all trades that Walkercell is not to be used as a walkway or crosswalk.

Provide a vapor barrier when duct is installed directly on grade. This barrier prevents ground moisture from reaching the underside of the concrete slab through capillary action.

Laying Out the System:

Refer to the installation drawings to locate the position of the Headerducts and Junction Boxes. Strike a base line to correspond with the center of all runs.

Use either bench marks on walls or columns or a laser type system to level the system.

The complete header systems (including risers) should be installed before installation of the Walkercell is begun.

Installing the Headerduct:

The Headerduct is furnished with a coupling strap that creates a male/female relationship. At the electrical or communications room the Headerduct will have the male end exiting the room. Position the next piece of Headerduct by sliding the female end of the piece to be positioned onto the male end of the Headerduct exiting the room. Using the adjusting feet, secure the Headerduct to the form with nails, screws, or other suitable fasteners. Adjust to level. Secure the coupling support across the top of the Headerduct with the screws provided.

CBR-HT (Cell Boot Riser – Power):

The cell boot riser can be used for either Headerduct or Walkercell. Position the cell boot directly below the future location of the power panel. Field drill a 2 1/2" x 6" [64mm x 153mm] oval hole to fit within the cell boot. Install an H14-PSR-1.4 grommet. Pop rivet or weld the cell boot to the raceway. Install the riser sleeve and terminal bushing at the same time as installing the power panel.

CBR-LT (Cell Boot Riser – Communications):

The Cell Boot Riser for communications, installs similar to the CBR-HT with the exception that power terminates approximately 3" [76mm] to 4" [102mm] above the finished floor. When used on Walkercell, void closures must be installed to prevent entry of wet concrete during pours.

45° Vertical Elbow:

Position the 45° vertical elbow directly below the future cabinet or panel location. Attach the vertical elbow to the Headerduct, using the coupling channel centered across the top of the Headerduct and 45° vertical elbow. Use the screws provided with the coupling channel.

NOTE: The Headerduct has male and female ends. Attach the vertical elbow at the female end. Use the adjusting feet to adjust the Headerduct to its proper height. Secure the Headerduct to the form with the proper fasteners.

CBR-LHT (Cell Boot – Power and Communications):

The CBR-LHT can be used when all three services must enter from one opening. It terminates approximately 3" [76mm] to 4" [102mm] above the finished floor. The riser sleeve and terminal bushing should be installed during the installation of the power panel.

Installing Header Junction Boxes:

Junction Boxes have openings for Headerduct and may have one opening for Walkercell raceway. Adjust the Headerduct Junction Box to the correct level. The Headerduct that attaches to the junction box should be resting on the support ledge. Secure the adjusting feet to the form. Adjust the Headerduct adapters so that the adapters rest on top of the Headerduct. Secure the set screws in the side of the adapters to complete coupling the Headerduct to the Headerduct Junction Box.

Installing Junction Boxes:

Walkercell Junction Box Headers are very similar to the Header Junction Boxes except they will always have one or two openings for the Walkercell Raceway. Each Junction Box has a male and female end. Position the Junction Box by sliding the male or female end into the correct mating end of the Header Junction box or another Junction box. Secure the Junction box adjusting feet to the form. Secure the coupling channel across the top of the Headerduct with the screws provided.

Installing Junction Box End Closures: The end closure is a U-Channel that fits over the open end of the Junction box. Slide the U-Channel in place. Secure with pop rivets or welds.

Installation of Walkercell Distribution Raceway (WCR11/2, WCR2, or WCR3) to Junction Box:

At each Junction box that has an opening for Walkercell Raceway strike a baseline to correspond with the center of the Walkercell Raceway distribution run. Each raceway has a piece mark number that must correspond with the location shown on the installation drawings.

Position the first support bracket 6" [152mm] from the edge of the Junction box and a maximum of 5'-0" [1.5m] on center thereafter as you proceed away from the junction box.

The raceway access opening of the junction box is provided with a support ledge and an adapter to couple the raceway to the junction box. Adjust the adapter on the junction box so that the profile of the adapter rests on top of the raceway.

Slide the raceway in along the brackets and onto the support ledge located on the Junction box. Adjust all brackets vertically until the raceway is level.

Complete the coupling of the raceway to the junction box by securing the adapter and the set screws on each side of the adapter.

Secure the brackets to the form with suitable fasteners.

Installation of Walkercell Raceway to Walkercell Raceway:

Place a Wiremold raceway support at the center of abutting sections and a maximum of 5'-0" [1.5m] on center along the distribution run. Center the raceway sections together on the supports. Attach to the forms with suitable fasteners. Fasten the raceway sections to the support brackets with self drilling screws to secure the raceway and insure ground continuity. If grounding plates (RGP) are used, fillet weld or use suitable fasteners into subslab to electrically and mechanically tie the raceways together. Use grounding plates only at the joints. Use duct tape to seal raceway joints.

Installation of Walkercell Raceway End Closures:

Place the L-Shaped end closure over the end of the Walkercell raceway. Secure the end plate in position with pop rivets or welds.

Installation of PK Series Preset Inserts:

Orient the preset with the prepunched openings in the Walkercell raceway so that the rivet hole in the preset aligns with the rivet hole in the center channel of the Walkercell raceway. Hook the preset under the end of the prepunched holes in the raceway utilizing the two offset flanges on the preset. Slide the preset toward the hooked end until the preset rivet hole is aligned with the rivet hole in the raceway. Secure the preset to the raceway with a 3/16" [4.8mm] diameter pop rivet. Caulking around the preset is recommended if a plasticizer is used in the concrete.

22JB2510 Junction Box:

This box can be used when Walkercell is required to exit in more than two directions.

Concrete Placement and Curing:

Before concrete placement, make a final inspection of the entire Walkercell system. Any gaps in the system should be sealed to prevent mortar or concrete from entering the system. **Chloride salts such as calcium chloride shall not be used in the concrete mix.**

NOTES:

Reinforced concrete design shall be in accordance with American Concrete Institute Specifications for Structural Concrete for Buildings (ACI301-72) and ACI Building Code Requirements of Reinforced Concrete (ACI301-72) and ACI Building Code Requirements for Reinforced Concrete (ACI318-83). Concrete placement shall follow proper and accepted industry practice and be in accordance with ACI Recommended Practice for Measuring, Mixing, Transporting and Placing Concrete (ACI304-73).

Concrete must be vibrated at all headers, junction boxes, and raceways to insure that the concrete completely fills underneath the Walkercell System. **It is imperative that the concrete not be over vibrated.** Over vibration causes segregation of materials in the concrete mix which in turn leads to weakening of the concrete strength.

Wiremold strongly recommends the use of shrinkage and temperature reinforcement as a minimum reinforcement in slabs above the Walkercell system. Design of shrinkage and temperature reinforcement should be in accordance with ACI318-83. Care should be taken during concrete placement and, in particular, during concrete vibration, to prevent rising of top reinforcement in the slab. Use of reinforcement in the top of the slab should greatly reduce cracking of the slab at the edges of the Walkercell System. Hand troweled concrete finishing is required at all Walkercell System access openings.

Hand troweling is required 12 to 18 inches around the openings to provide a level finish with the cover plate. Concrete curing shall follow proper and accepted industry practice and be in accordance with ACI301-72. Remove the Junction Box Cover Plates and remove any moisture or condensation inside the raceway within 48 hours after the concrete pour. Severe damage can result to the galvanized coating on the raceway if water is present and the inside of the raceway is deprived of freely moving air. The inside of the raceway must remain dry at all times. Cover plates shall be cleaned of any excess moisture and concrete and reinstalled.

Typical System Components

ITEM	CATALOG NO.	DESCRIPTION
1	PKCAP	MUDCAP FOR PRESET
2	WCHD3625-60	HEADERDUCT – 36" [915MM] WIDE, 2 1/2" [64MM] DEEP, 5'-0" [1525MM] LONG
3	CBR-HT	CELL BOOT RISER 4" [102MM] X 4" [102MM] H X 6" [152MM] HIGH WITH 36" [915MM] HIGH EXTENSION AND TERMINAL BUSHING
4	CBR-LT	CELL BOOT RISER 4" [102MM] X 12" [305MM] X 6" [152MM] HIGH, SINGLE COMPARTMENT, EXTENSION SLEEVE TERMINAL BUSHING
5	WCVL3625	VERTICAL ELBOW 36" [915MM] WIDE X 2 1/2" [64MM] DEEP – STANDARD HEIGHT 36" [915MM]
6	CBR-LHT	CELL BOOT 4" [102MM] X 12" [305MM] X 6" [152MM] HIGH, THREE COMPARTMENTS, WITH 4" [102MM] X 4" [102MM] X 36" [915MM] EXTENSION AND TERMINAL BUSHING
7	2HJB362515-60	HEADER JUNCTION BOX 36" [915MM] WIDE, 2 1/2" [64MM] DEEP WITH 1 1/2" [38MM] DEEP ACCESS RING, ONE OPENING FOR 36" [915MM] X 2" [51MM] DEEP CELL
8	2JBH362515-60	JUNCTION BOX HEADER 36" [915MM] WIDE, 2 1/2" [64MM] DEEP W/1 1/2" [38MM] DEEP ACCESS RING, TWO OPENINGS FOR 2" [51MM] DEEP CELL
9	JBHEC3625	END CLOSURE FOR JUNCTION BOX HEADER 36" [915MM] WIDE X 2 1/2" [64MM] DEEP
10	WCR2-10/24	WALKERCELL RACEWAY 2" [51MM] DEEP, 10'-0" [3.05M] LONG WITH PRESET HOLES 24" [610MM] O.C.
11	RSCB-28	RACEWAY SUPPORT 1 1/2" [38MM] TO 2 7/8" [73MM] BELOW CELL
12	REC	RACEWAY END CLOSURE
13	PK250	PRESET INSERT 2 1/2" [64MM] DEEP
14	22JB2525	WALKERCELL JUNCTION BOX 24" [610MM] WIDE X 30" [762MM] LONG WITH 1 1/2" [38MM] HIGH ACCESS OPENING
16	JBHCC36	COUPLING CHANNEL FOR JUNCTION BOX HEADER 36" [915MM] WIDE
17	RGP	RACEWAY GROUND PLATE 3" [76MM] X 24" [610MM] WIDE – NOT USED IN CONJUNCTION WITH RSCB2N)
18	WCR2-10/B	WALKERCELL RACEWAY 2" [51MM] DEEP, 10'-0" [3.05M] LONG – BLANK
19	22JBC	REPLACES WALKERCELL ADAPTER WHEN THE OPENING IS NOT IN USE

Figure 1

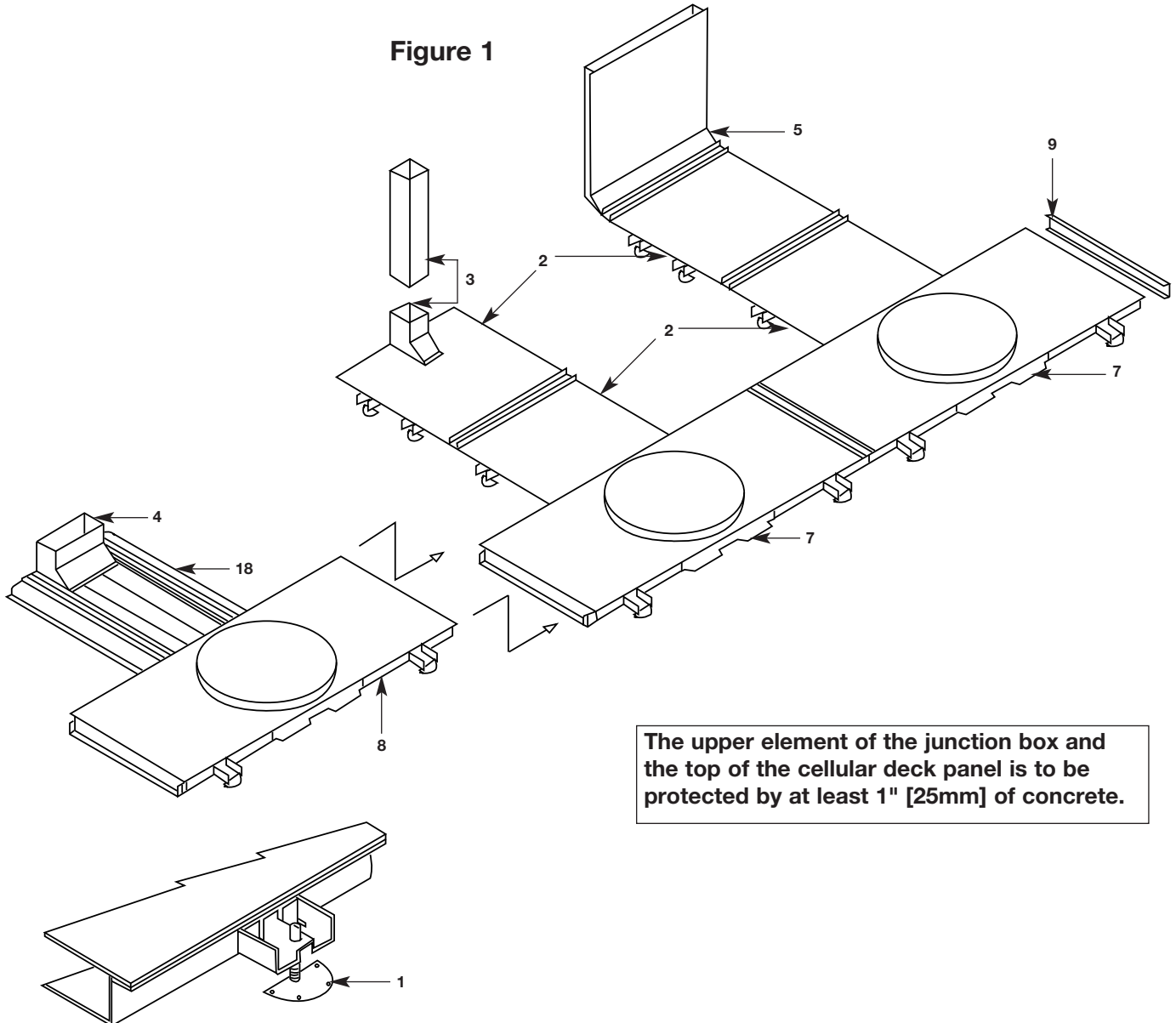
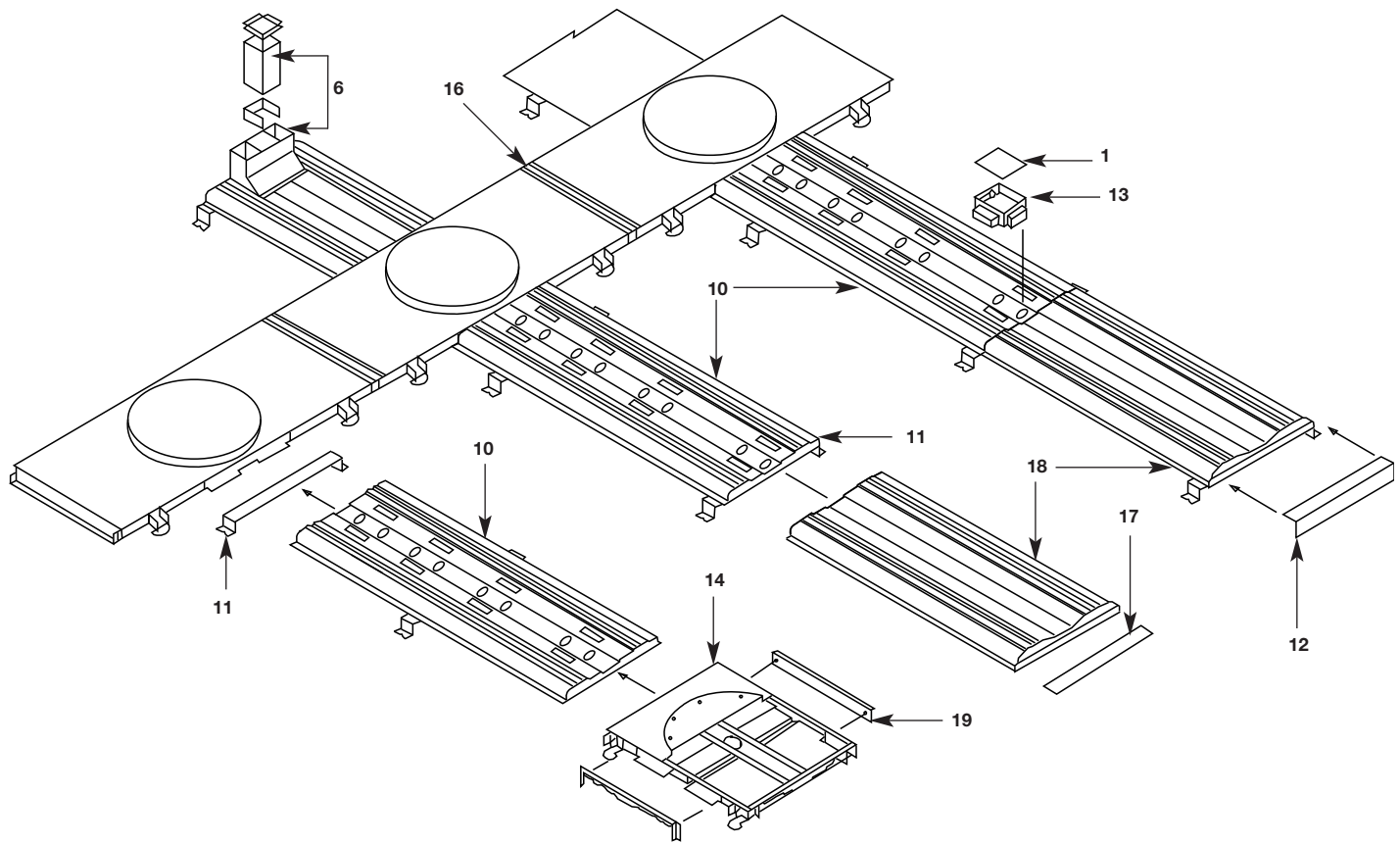


Figure 2



The upper element of the junction box and the top of the cellular deck panel is to be protected by at least 1" [25mm] of concrete.



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