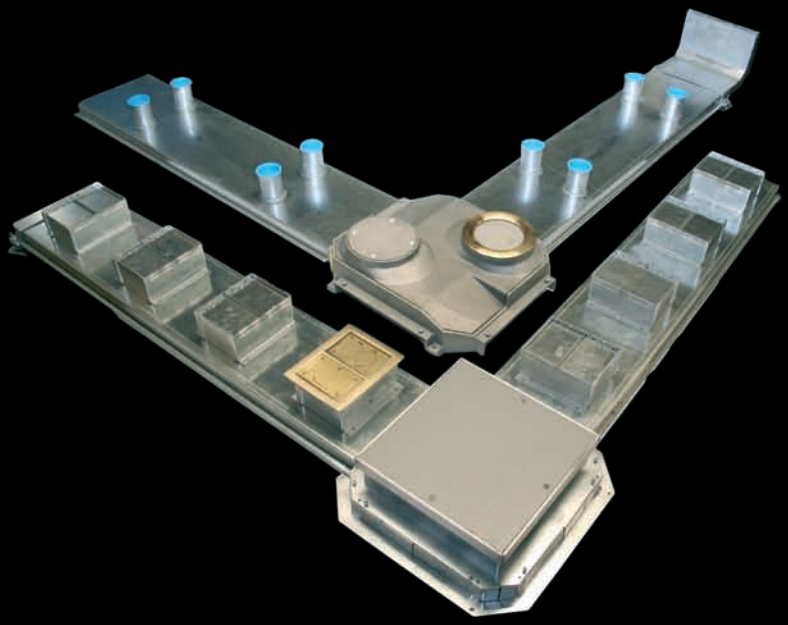
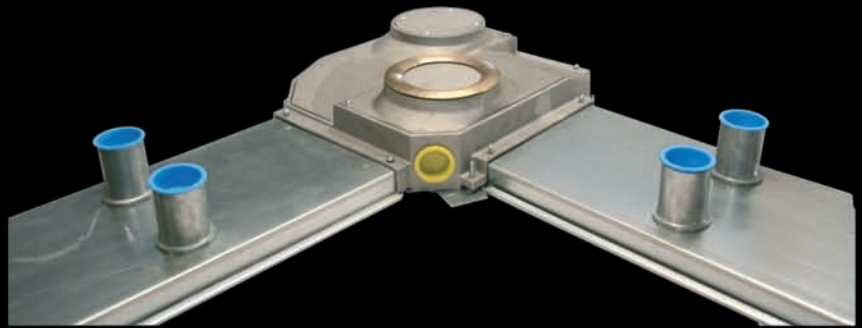
Raceway Solutions™

In-Floor Wire Management Systems

- Conventional Underfloor Duct
- Casino Duct
- Flush Activation Duct
- Trench Duct
- Wall Duct





DENNIS FILGES COMPANY, INC.

Raceway Solutions In-floor Wire Management Systems

Applications

- Commercial Buildings
- Retail Facilities
- Office Buildings
- Casinos
- Schools and Universities
- Medical Facilities including X-Ray and MRI Rooms

Features and Benefits

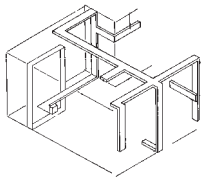
- Five Labor Saving Designs
- Systems include a complete line of accessories and fittings for design flexibility
- Unique one-piece multi-compartment duct reduces installation labor
- Package and ship by room, area, or floor
- Custom sizes available

Raceway Solutions™

Raceway Solutions™

Raceway Solutions™

Raceway Solutions™



Raceway Solutions™

The Power of Intelligent Design

Raceway Solutions Underfloor Duct Systems offer maximum flexibility in designing or building in-slab raceway systems for distribution of power, voice and data conductors. Our Conventional, Casino, Flush Activation, Trench Underfloor, and Wall Duct Systems provide a range of distinct benefits, depending on chosen application. There are many potential uses for the wide variety of products shown in this catalog. Your local representative will assist you in selecting the appropriate combination of systems for your project and provide any additional information required to help you complete your job.

Raceway Solutions™

Conventional Underfloor Duct

Multi-Compartment Conventional Duct Saves Time and Money in Your In-Slab Wire Management System

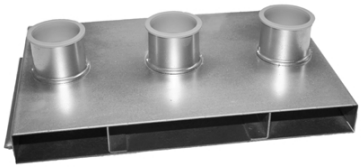
The Raceway Solutions Conventional Underfloor Duct System is an in-slab wire management product for delivering power, voice and data services to numerous point of sale locations or office workstations. The Raceway Solutions Conventional Underfloor Duct System is uniquely designed with multiple compartments, allowing unlimited design options and fantastic cost savings in labor and materials from other single-compartment systems.

Here is how Raceway Solutions Conventional Underfloor Duct works for you:

- Five designs available, providing the most complete offering in the industry.
- Multi-compartment duct, drastically reducing installation and material costs.
- Four insert heights, expanding the design options of 1", 1½", 2" and 3" sizes.
- Inclusive tile trim in the junction box, providing the installer the on-site option of using the trim or leaving it recessed.
- Combination duct couplers and supports, reducing material and labor costs using the same part for two functions.
- Meets or exceeds UL 884 specifications, assuring a fully approved system from one manufacturer.

Matched with our strong national distribution and complete technical and applications support, the Raceway Solutions Conventional Underfloor Duct system is the perfect solution for your underfloor wire management needs, and at an affordable price. As a part of our complete wire management and components offering, Raceway Solutions Conventional Underfloor Duct is perfect for:

- Supermarkets
- Retail Facilities
- Casinos
- Office Buildings
- Airports
- Institutional Facilities



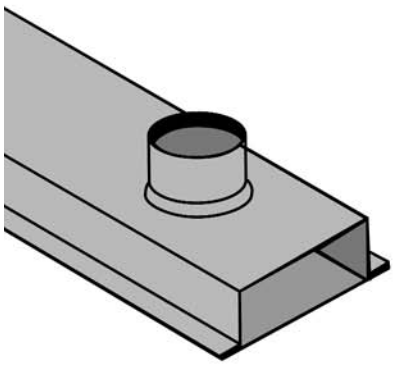
Catalog Number System

203 - 2 - 12

# of Cells	Insert Height	Insert Spacing
1 = Single Cell	B = Blank	
2 = Two Cell	1 = 1" Height	12 & 24 Standard
3 = Three Cell	15 = 1½" Height	6, 18, & 36 (optional)
4 = Four Cell	2 = 2" Height	
	3 = 3" Height	

Raceway Solutions™

Conventional Underfloor Duct

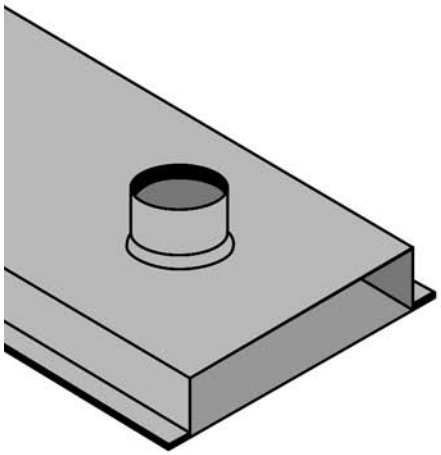


Standard Single Compartment

Standard Single Compartment Duct

Cat.No.	Duct Width	Duct Depth	Insert Spacing
201-B	3¼"	1½"	No Inserts
201-3-24	3¼"	1½"	3" High Inserts 24"o.c.
201-2-24	3¼"	1½"	2" High Inserts 24"o.c.
201-15-24	3¼"	1½"	1½" High Inserts 24" o.c.
201-1-24	3¼"	1½"	1" High Inserts 24" o.c.
201-3-12	3¼"	1½"	3" High Inserts 12" o.c.
201-2-12	3¼"	1½"	2" High Inserts 12" o.c.
201-15-12	3¼"	1½"	1½" High Inserts 12" o.c.
201-1-12	3¼"	1½"	1" High Inserts 12" o.c.

Material: 14 gauge pre-galvanized steel with 668 coating **Presets:** Die-cast zinc
UL Listing No.884

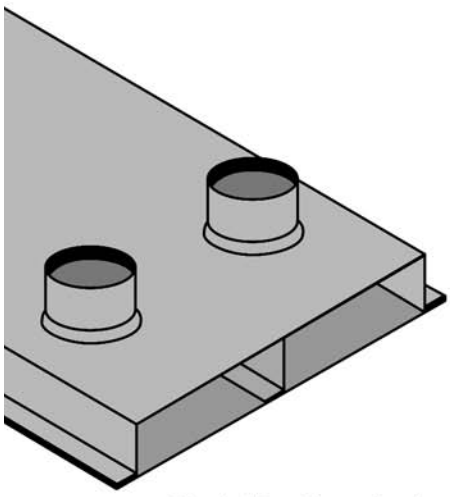


Wide Single Compartment

Wide Single Compartment Duct

Cat.No.	Duct Width	Duct Depth	Insert Spacing
201W-B	5⅞"	1½"	No Inserts
201W-3-24	5⅞"	1½"	3" High Inserts 24" o.c.
201W-2-24	5⅞"	1½"	2" High Inserts 24" o.c.
201W-15-24	5⅞"	1½"	1½" High Inserts 24" o.c.
201W-1-24	5⅞"	1½"	1" High Inserts 24" o.c.
201W-3-12	5⅞"	1½"	3" High Inserts 12" o.c.
201W-2-12	5⅞"	1½"	2" High Inserts 12" o.c.
201W-15-12	5⅞"	1½"	1½" High Inserts 12" o.c.
201W-1-12	5⅞"	1½"	1" High Inserts 12" o.c.

Material: 14 gauge pre-galvanized steel with 668 coating **Presets:** Die-cast zinc
UL Listing No.884



Standard Two Compartment

Standard Two Compartment Duct

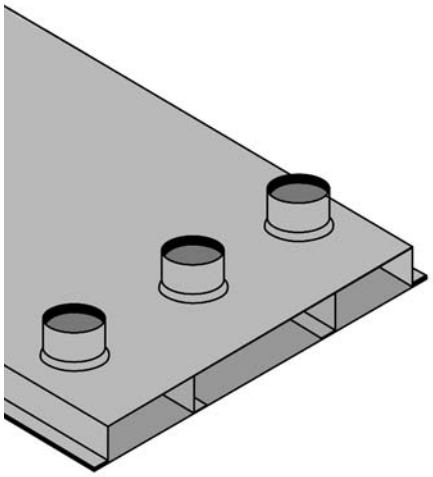
Cat.No.	Duct Width	Duct Depth	Insert Spacing	Compartment Width
202-B	10"	1½"	No Inserts	2 @ 5"
202-3-24	10"	1½"	3" High Inserts 24" o.c.	2 @ 5"
202-2-24	10"	1½"	2" High Inserts 24" o.c.	2 @ 5"
202-15-24	10"	1½"	1½" High Inserts 24" o.c.	2 @ 5"
202-1-24	10"	1½"	1" High Inserts 24" o.c.	2 @ 5"
202-3-12	10"	1½"	3" High Inserts 12" o.c.	2 @ 5"
202-2-12	10"	1½"	2" High Inserts 12" o.c.	2 @ 5"
202-15-12	10"	1½"	1½" High Inserts 12" o.c.	2 @ 5"
202-1-12	10"	1½"	1" High Inserts 12" o.c.	2 @ 5"

Material: 14 gauge pre-galvanized steel with 668 coating **Presets:** Die-cast zinc
UL Listing No.884

For different compartment spacing consult factory.

Raceway Solutions™

Conventional Underfloor Duct



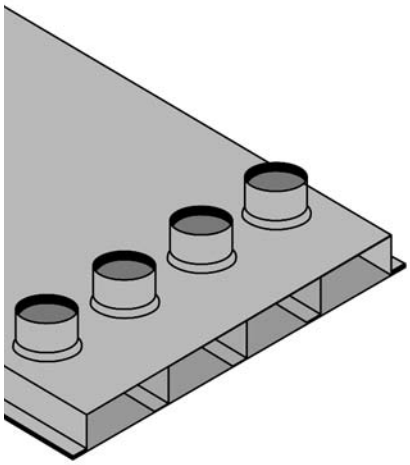
Standard Three Compartment Duct

Standard Three Compartment Duct

Cat.No.	Duct Width	Duct Depth	Insert Spacing	Compartment Width
203-B	15"	1½"	No Inserts	2 @ 4" – 1 @ 6¾"
203-3-24	15"	1½"	3" High Inserts 24" o.c.	2 @ 4" – 1 @ 6¾"
203-2-24	15"	1½"	2" High Inserts 24" o.c.	2 @ 4" – 1 @ 6¾"
203-15-24	15"	1½"	1½" High Inserts 24" o.c.	2 @ 4"– 1 @ 6¾"
203-1-24	15"	1½"	1'' High Inserts 24" o.c.	2 @ 4"– 1 @ 6¾"
203-3-12	15"	1½"	3" High Inserts 12" o.c.	2 @ 4"– 1 @ 6¾"
203-2-12	15"	1½"	2" High Inserts 12" o.c.	2 @ 4"– 1 @ 6¾"
203-15-12	15"	1½"	1½" High Inserts 12" o.c.	2 @ 4"– 1 @ 6¾"
203-1-12	15"	1½"	1" High Inserts 12" o.c.	2 @ 4"– 1 @ 6¾"

All duct standard 10' lengths.
Material: 14 gauge pre-galvanized steel with 668 coating **Presets:** Die-cast zinc
UL Listing No. 884

For different compartment spacing consult factory.

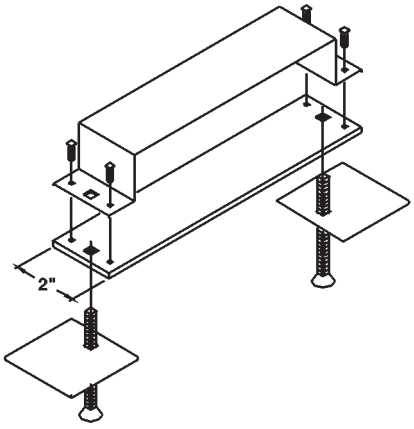


Standard Four Compartment Duct

Standard Four Compartment Duct

Cat.No.	Duct Width	Duct Depth	Insert Spacing	Compartment Width
204-B	15"	1½"	No Inserts	4 @ 3⅝"
204-3-24	15"	1½"	3" High Inserts 24" o.c.	4 @ 3⅝"
204-2-24	15"	1½"	2" High Inserts 24" o.c.	4 @ 3⅝"
204-15-24	15"	1½"	1½" High Inserts 24" o.c.	4 @ 3⅝"
204-1-24	15"	1½"	1" High Inserts 24" o.c.	4 @ 3⅝"
204-3-12	15"	1½"	3" High Inserts 12" o.c.	4 @ 3⅝"
204-2-12	15"	1½"	2" High Inserts 12" o.c.	4 @ 3⅝"
204-15-12	15"	1½"	1½" High Inserts 12" o.c.	4 @ 3⅝"
204-1-12	15"	1½"	1" High Inserts 12" o.c.	4 @ 3⅝"

All duct standard 10' lengths.
Material: 14 gauge pre-galvanized steel with 668 coating **Presets:** Die-cast zinc
UL Listing No. 884



Coupler/Supports

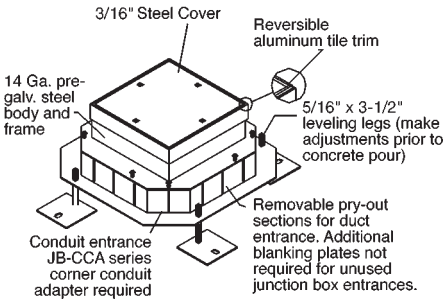
Cat.No.	Description
201-DCS	Standard Single Cell Duct
201W-DCS	Wide Single Cell Duct
202-DCS	Two Cell Duct
203-DCS	Three and Four Cell Duct

Material: 14 gauge pre-galvanized steel with 668 coating
UL Listing No. 668

Raceway Solutions duct coupler/supports provide a means of not only coupling duct sections together but also supporting the duct sections. It is recommended that a support/coupler be used every 5' of duct run.

Raceway Solutions™

Conventional Underfloor Duct



Raceway Solutions Underfloor Duct Junction Boxes offer several labor saving and design advantages. The boxes are manufactured with a concrete ring approximately ¼" higher than the corresponding duct to allow for the proper amount of concrete fill over the duct inserts. Also, the boxes are made from durable 14 ga. pre-galvanized steel and come with a reinforced 3/16" thick steel cover. In addition, our junction boxes include a built-in tile trim which can be easily removed, flipped over and reinstalled when the surrounding floor tile is installed. Our junction boxes are also manufactured with removable duct and corner entrance plugs which are easily removed for duct and corner conduit adapter entrance.

Note: Please consult factory for information about a heavy duty junction box. A heavy duty junction box with round brass access trim is also available.

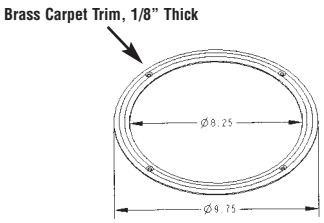
Junction Boxes

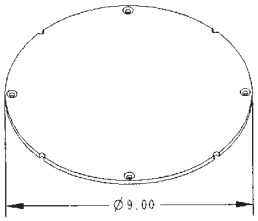
Cat. No.	Description	Inserts
201-JB-4	For Standard Single Cell Blank Duct	For 4" Afterset Only
201-JB-3	For Standard Single Cell Blank Duct	For 3" Afterset or Preset
201-JB-2	For Standard Single Cell Duct	For 2" Preset or Afterset
201-JB-15	For Standard Single Cell Duct	For 1½" Preset or Afterset
201-JB-1	For Standard Single Cell Duct	For 1" Preset or Afterset
201W-JB-4	For Wide Single Cell Blank Duct	For 4" Afterset Only
201W-JB-3	For Wide Single Cell Blank Duct	For 3" Afterset or Preset
201W-JB-2	For Wide Single Cell Duct	For 2" Preset or Afterset
201W-JB-15	For Wide Single Cell Duct	For 1½" Preset or Afterset
201W-JB-1	For Wide Single Cell Duct	For 1" Preset or Afterset
202-JB-4	For Standard Two Cell Blank Duct	For 4" Afterset Only
202-JB-3	For Standard Two Cell Blank Duct	For 3" Afterset or Preset
202-JB-2	For Standard Two Cell Duct	For 2" Preset or Afterset
202-JB-15	For Standard Two Cell Duct	For 1½" Preset or Afterset
202-JB-1	For Standard Two Cell Duct	For 1" Preset or Afterset
203-JB-4	For Standard Three Cell Blank Duct	For 4" Afterset Only
203-JB-3	For Standard Three Cell Blank Duct	For 3" Afterset or Preset
203-JB-2	For Standard Three Cell Duct	For 2" Preset or Afterset
203-JB-15	For Standard Three Cell Duct	For 1½" Preset or Afterset
203-JB-1	For Standard Three Cell Duct	For 1" Preset or Afterset
204-JB-4	For Standard Four Cell Blank Duct	For 4" Afterset Only
204-JB-3	For Standard Four Cell Blank Duct	For 3" Afterset or Preset
204-JB-2	For Standard Four Cell Duct	For 2" Preset or Afterset
204-JB-15	For Standard Four Cell Duct	For 1½" Preset or Afterset
204-JB-1	For Standard Four Cell Duct	For 1" Preset or Afterset

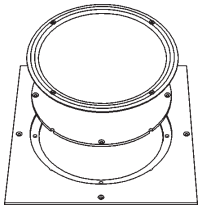
Material:14 gauge pre-galvanized steel with 668 coating
UL Listing No. 668

Round Cover Option for Junction Box

Round Cover with Brass Carpet Trim



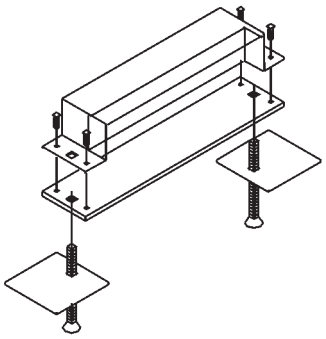




Junction Box Catalog Numbers
Carpet: 20_-JB*-RCB *=Insert Height

Raceway Solutions™

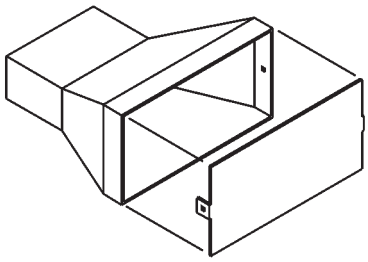
Conventional Underfloor Duct



End Cap/Supports

Cat.No.	Description
201-ECS	Standard Single Cell Duct
201W-ECS	Wide Single Cell Duct
202-ECS	Two Cell Duct
203-ECS	Three and Four Cell Duct

Raceway Solutions End Cap/Supports provide a means of supporting and closing unused duct ends.
Material: 14 gauge pre-galvanized steel with 668 coating
UL Listing No. 668

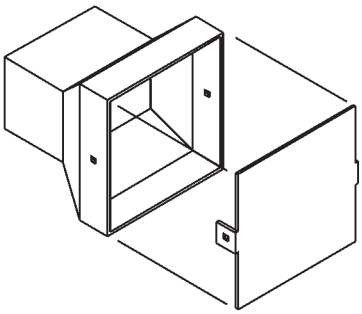


Conduit Adapters

Cat.No.	Description
201-UCA	Standard Single Cell Duct
201W-UCA	Wide Single Cell Duct
202-UCA	Two Cell Duct
203-UCA	Three Cell Duct
204-UCA	Four Cell Duct

Raceway Solutions End Conduit Adapters are provided with a removable blank cover which is field punched for the required combination of conduits. Conduit adapters for multi-compartment duct are supplied with interior barriers to maintain separation between services.

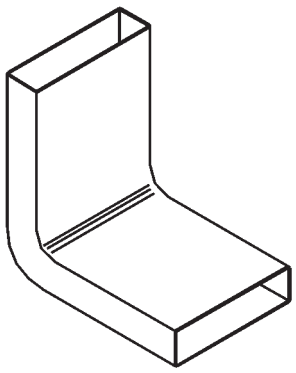
Material: 14 gauge pre-galvanized steel with 668 coating
UL Listing No. 668



Junction Box Corner Conduit Adapters

Cat.No.	Description
JB-CCA-B	With Removable Blank Cover
JB-CCA-1/2	With pre-punched ½" k.o.
JB-CCA-3/4	With pre-punched ¾" k.o.
JB-CCA-1	With pre-punched 1" k.o.
JB-CCA-1-1/2	With pre-punched 1½" k.o.
JB-CCA-2	With pre-punched 2" k.o.

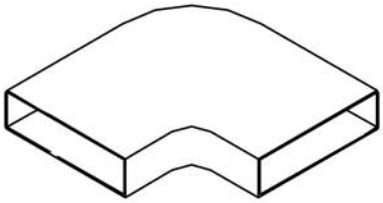
Features a 16 gauge galvanized steel removable cover that may be field punched for required conduit.
Material: 14 gauge pre-galvanized steel with 668 coating
UL Listing No. 668



Vertical Risers

Cat.No.	Description
201-VEL	Standard Single Cell Duct
201W-VEL	Wide Single Cell Duct
202-VEL	Two Cell Duct
203-VEL	Three Cell Duct
204-VEL	Four Cell Duct

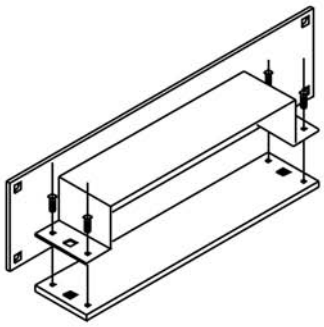
Material: 14 gauge pre-galvanized steel with 668 coating
UL Listing No. 668



Horizontal Elbows – 90 °

Cat.No.	Description
201-HB90	Standard Single Cell Duct
201W-HB90	Wide Single Cell Duct
202-HB90	Two Cell Duct
203-HB90	Three Cell Duct
204-HB90	Four Cell Duct

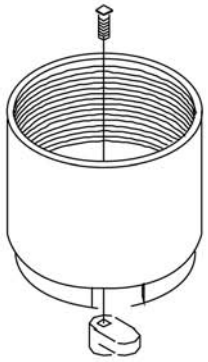
Material: 14 gauge pre-galvanized steel with 668 coating
UL Listing No. 668



Duct Cabinet Connectors

Cat.No.	Description
201-DCC	Standard Single Cell Duct
201W-DCC	Wide Single Cell Duct
202-DCC	Two Cell Duct
203-DCC	Three and Four Cell Duct

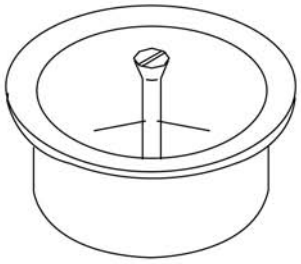
Material: 14 gauge pre-galvanized steel with 668 coating
UL Listing No. 668



Afterset Inserts – 2" IPS Thread

Cat.No.	Height
DAI-1	1"
DAI-2	2"
DAI-3	3"
DAI-4	4"

Material: Zinc die cast



Marker Caps

Cat.No.	Description
DMC-Z	Insert marker cap with zinc screw
DMC-B	Insert marker cap with brass screw

Material: 14 gauge pre-galvanized steel with 668 coating
UL Listing No. 668

Reducing Bushings

Cat.No.	Description
RB-162	2" to ¾"
RB-163	2" to 1"

Material: Steel, Zinc Plated
UL Listing No. E-1275

Service Head Fittings

Raceway Solutuions service fittings provide above-floor service for power, communications and data. A variety of service fitting designs are available.

PSF-10-DR

PSF-10 Series

- ***Brushed aluminum finish.***
- ***Low profile design.***
- ***Furnished with 1" conduit nipple.***

PSF-20-2DR

PSF-20 Series

- ***Brushed aluminum finish.***
- ***Interchangeable face plates.***
- ***Furnished with 1" conduit nipple for direct screw-threading into a floor box plate with 1" cover opening.***

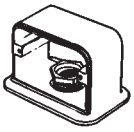
Service Fittings for Power

Cat. No.	Description	Finish	Dimensions W	D	H	Wt. (lbs.)
PSF-10-DR	Furnished with one 15 amp, 125 volt, 3-wire NEMA duplex receptacle	Brushed Aluminum	4⅜"	3"	2⅝"	1.6
PSF-10	Same as PSF-10-DR above less duplex receptacle	Brushed Aluminum	4⅜"	3"	2⅝"	1.5
PSF-20-2DR	Furnished with two back to back 15 amp, 125 volt, 3 wire NEMA duplex receptacles	Brushed Aluminum	5"	3⅜"	3"	1.38
PSF-20	Same as PSF-20-2DR less duplex receptacles	Brushed Aluminum	5"	3⅜"	3"	1.25
PSF-21	Furnished with cover plate to accommodate one 30 or 50 amp, 240 volt, 3 wire receptacle and blank cover	Brushed Aluminum	5"	3⅜"	3"	1.25

PSF-20 Series Component Parts

PSF-20-BASE	Standard above floor service fitting base only.
PSF-20-TELEDVP	Device plate for PSF-20 with 1" dia. hole.
PSF-20-DUPDVP	Device plate for PSF-20 for duplex.
PSF-20-BLDVP	Blank device plate for PSF-20.
PSF-20-DVP139	Device plate for PSF-20 with 1$^{13}/_{32}$" dia. hole.

UL Listing No. 514A



PSF-20-Base

Blank Plate PSF-20-BLDVP

Telephone Plate, 1" Hole PSF-20-TELEDVP

Single Receptacle Plate, 1.39" Hole PSF-20-DVP139

Single Receptacle Plate, 1.60" Hole PSF-20-DVP160

Duplex Receptacle Plate PSF-20-DUPDVP

CMSF-10

- ***Brushed aluminum finish***
- ***Low profile design***
- ***Furnished with 1" conduit nipple***

Service Fittings for Communications and Data

Cat. No.	Description	Finish	Dimensions W	D	H	Wt. (lbs.)
CMSF-10	¾ "x 1⅛" bushed opening for telephone or computer	Brushed Aluminum	4⅜"	3⅛"	2⅝"	1.5

UL Listing No. 514A

Conventional Underfloor Duct Specifications

Part 1 -GENERAL

1.1 SUMMARY

Work under this section includes all labor and materials which are required for the completion of infloor distribution system, as shown on drawings and as specified. The Conditions of the Contract apply to this section as fully as if repeated herein.

1.1.1 Work includes, but is not necessarily limited to the following principal items.

a.Raceway Solutions metal underfloor raceway.

b.Related accessories, to include junction boxes,supports, closures, and all other items necessary to the Raceway Solutions system.

1.2 REFERENCES: The editions of specifications and standards referenced herein, published by the following organizations, apply to the work only to the extent specified by the reference.

a. Underwriters Laboratories,Inc. (UL Standard 884)

b. National Electric Code (NFPA No. 70)

1.3 QUALITY ASSURANCE:

1.3.1 Standards:

.1 The material, products and equipment specified in this section establish a standard of quality of required function, dimension, appearance and quality to be met by any proposed substitution.

.2 The manufacturer and installer shall demonstrate a minimum of five years experience with this type of underfloor duct system.

1.4 SUBSTITUTIONS:

1.4.1 No substitution will be considered unless written request for approval has been submitted by the bidder and has been received by the Architect at least ten (10) days prior to the date for receipt of bids.

1.4.2 Each such request shall include the name of the materials or equipment for which it is to be substituted and a complete description of the proposed substitute including drawings, cuts, mock-ups, performance and test data, compliance with codes and approvals and any other information necessary for evaluation.

1.5 SUBMITTALS:

1.5.1 Manufacturer's Data: Submit manufacturer's specifications and installation instructions for each product specified. Include manufacturer's certification as may be required to show compliance with these specifications. Indicate by transmittal form that a copy of each instruction has been distributed to the installer.

1.5.2 Shop Drawings:

.1 Submit detailed drawings showing layout of all Raceway Solutions raceways, junction boxes, and accessories as necessary for the proper installation of the infloor system.

PART 2 -PRODUCTS

2.1 RACEWAY SOLUTIONS RACEWAY

2.1.1 Typical module as shown on drawings consisting of 1, 2, 3 or 4 compartment raceways.

2.1.2 Materials: Raceway Solutions duct shall be fabricated from 14 (2mm) gauge steel.

2.1.3 Capacity: Raceway Solutions 201 Series Raceway shown have outside dimensions of 3½" x 1½".
201W Series: 5⅞" x 1½"
202 Series: 10" x 1½"
203 Series: 15" x 1½"
204 Series: 15" x 1½"

2.1.4 Raceway Solutions Fabrication:

.1 The Raceway Solutions duct units shall be manufactured in maximum lengths of 10' (3048 mm).

.2 Protective Coating: The Raceway Solutions duct shall be coated for corrosion resistance.

2.1.5 Preset Inserts:

.1 Preset inserts shall be mounted 12" (304.8 mm) or 24" (609.6 mm) on center on the Raceway Solutions duct raceway.

.2 The preset inserts shall be made of zinc die cast, and shall be a minimum of 1" (25.4 mm) over top of the duct.

.3 The preset inserts will have an inside diameter of 2" (50.8) IPS capable of housing 2" (50.8 mm) conduit.

.4 The preset inserts shall have a beveled base which is expanded into the duct to form a continuous passageway.

.5 Each preset insert will have a removable cap that is recessed to receive concrete.

2.1.6 Junction Boxes:

.1 The junction boxes shall have openings in all 4 corners for conduit adapters.

.2 The junction box shall have pre-pour adjustment (vertical and angular) via 4 leveling legs.

.3 The junction box shall be supplied with integral aluminum tile trim.

.4 All duct and conduit connections shall be completely grounded via a grounding screw.

.5 Junction box shall contain inclusive tile trim.

2.2 ACTIVATIONS

2.2.1 Supply activation assemblies as requested.

2.2.2 The manufacturer shall supply the necessary pieces to transition from the 2" (50.8 mm) I.P.S. preset to the service fitting upon request.

2.2.3 Activation assemblies shall be Raceway Solutions PSF-20 series, PSF-10 series, CMSF-10 series HELP

2.2.4 Activation assemblies shall be pedestal style (as specified).

3.1 RACEWAY SOLUTIONS UNDERFLOOR DUCT INSTALLATION

3.1.1 Install distribution raceway system and accessories in accordance with the manufacturer's recommendation, installation instructions, the final installation drawings and as herein specified. Electrical module lines shall be laid out on the concrete base in each building bay and the raceway units shall be located in strict accordance with the electrical drawings in order to

maintain the electrical module spacing.
3.1.2 Place raceway system on the supporting framework and adjust to final position with proper end bearing and alignment at the butt joints before permanent fastening. All joints shall be secured with grounding screws.
3.1.3 Permanently fasten the raceway supports to the supporting framework with screws and nails. Spacing between support shall not exceed 5'-0" (1524 mm).
3.1.4 The raceway supports and the raceway distribution system shall be adjusted so the top of the presets are 1/8 (3.2 mm) inch to 3/8 (9.5 mm) inch below the screed line.
3.1.5 Marker screw caps shall be used in place of the standard insert caps at the following locations: (a) in each insert adjacent to a junction box; (b) in inserts on each side of a permanent wall, and (c) in the last insert in each run of duct.
3.1.6 Do not use the installed raceway system for working platforms or walkways.
3.1.7 After placing of concrete fill and before wiring is installed, remove debris and other foreign materials.
3.1.8 If moisture is present, remove cover plates as necessary to allow air circulation.
3.2 FIELD QUALITY CONTROL:
3.2.1 Field testing and inspection are specified in Section 01410.
3.2.2 Protection: Protect installation of floor system from damage. Do not allow equipment or heavy traffic over Raceway Solutions duct during construction period, without first installing ramps over the duct. Ramps shall be designed so that imposed loads are not transferred to Raceway Solutions duct. Replace components of the systemwhich are damaged during construction, at no cost to the Owner.
3.2.3 The installed Raceway Solutions raceway system shall be U.L. Listed Under Standard 884 and shall comply with Article 354 of the National Electric Code.
3.3 CONCRETE PLACEMENT:
3.3.1 Concrete topping shall be as indicated on the drawings and as specified under Section 03300. Concrete containing chlorides from any source shall not be placed over infloor units.
3.3.2 Before concrete placement, make a final inspection of the entire Raceway Solutions system. Any gaps in the system shall be sealed to prevent mortar or concrete from entering.
3.3.3 Reinforced concrete design shall be in accordance with American Concrete Institute Specifications for Structural Concrete for Buildings (ACI301-72) and ACI Building Code Requirements for Reinforced Concrete (ACI1318-83). 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 raceway to insure that the concrete completely fills underneath the Raceway Solutions system. However, 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 concrete strength.
3.3.4 Shrinkage and temperature reinforcement above the Raceway Solutions system shall be in accordance with ACI318-83. Care shall be taken during concrete placement and, in particular, during concrete vibration, to prevent rising of top reinforcement within the slab.
3.3.5 Contractors placing the concrete shall carefully hand finish a minimum of 24" (609.6 mm) adjacent to junction box access openings, so that the top of finished concrete and junction box access units are flush.

PART 4 -MANUFACTURER:
4.1 Acceptable Brands:
a. Raceway Solutions by Dennis Filges Co. Inc..
b.Other suppliers must submit 10 days prior for approval.

Raceway Solutions™

Conventional Underfloor Duct Specifications

	4.875 Sq.In.Compartment				
Conductor	**RHW/RHH**	**TW**	**THW**	**THWN**	**XHHW**
14	75	140	93	201	140
12	55	108	75	147	108
10	45	80	59	92	80
	5.4375 Sq.In.Compartment				
Conductor	**RHW/RHH**	**TW**	**THW**	**THWN**	**XHHW**
14	84	156	104	224	156
12	62	120	84	164	120
10	50	90	65	103	99
	6.0 Sq.In.Compartment				
Conductor	**RHW/RHH**	**TW**	**THW**	**THWN**	**XHHW**
14	92	173	115	247	173
12	68	133	92	180	133
10	55	99	72	114	99
	7.5 Sq.In.Compartment				
Conductor	**RHW/RHH**	**TW**	**THW**	**THWN**	**XHHW**
14	115	216	144	309	216
12	85	166	115	226	166
10	69	123	90	142	123
	8.8125 Sq.In.Compartment				
Conductor	**RHW/RHH**	**TW**	**THW**	**THWN**	**XHHW**
14	136	254	169	363	254
12	100	195	136	265	195
10	81	145	106	167	145
	10.125 Sq.In.Compartment				
Conductor	**RHW/RHH**	**TW**	**THW**	**THWN**	**XHHW**
14	156	291	194	418	291
12	115	224	156	305	224
10	93	167	122	192	167

Number of allowable conductors at 40% fill.

Estimating Raceway Solutions Conventional Underfloor Duct

Step 1: Determine the total number of feet of duct you'll need for your space.

Step 2: Calculate the number of pieces of duct necessary by dividing the total number of feet by 10. Always round up to the next whole number.

Example: Total length of duct = 226 feet
226'/10' = 22.6 pcs.Total number of pieces required for the job is 23.

Step 3: Determine number of junction boxes and accessories necessary for the system.

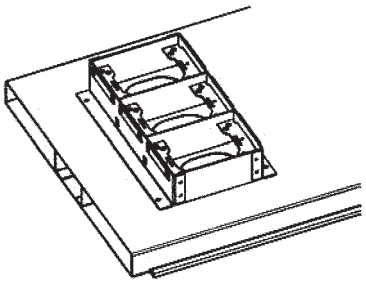
- Duct Couplers/Supports – one for every 5' of duct.
- Duct End Cap/Supports – close off unused duct ends.
- Conduit Adapters – enters either the junction box or duct end.
- Afterset inserts – used primarily with blank duct.
- Service heads – PSF - series, CMSF-series or none.

Raceway Solutions™

Flush Activation Underfloor Duct

Raceway Solutions Flush Activation Underfloor Duct provides an aesthetic wire management solution for delivering power and communications services. The new flush-style inserts, which use standard floor box covers for power and data outlets, make it the ideal underfloor duct solution for office environments, retail locations, casinos, and medical facilities. Raceway Solutions Flush Activation Underfloor Duct sets the standard for fast, easy installation by incorporating a unique one-piece duct design along with integral coupler/supports.

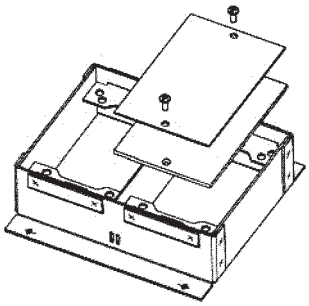
Raceway Solutions Flush Activation Underfloor Duct also sets the standard for application flexibility. The duct comes with activation inserts pre-assembled to the duct, or the inserts can be purchased separately for field installation only where you need them. Unique multi-gang inserts with removable voltage dividers provide the flexibility of installing multiple gangs of the same service at each insert location. In addition, the use of standard floor box covers enables a wide variety of power and data outlets.



Features & Benefits:

- **Available in 1-, 2-, and 3- compartment duct configurations**

  Unique one-piece duct reduces installation labor.
  Welded-in dividers create separate channels for power & communications services.



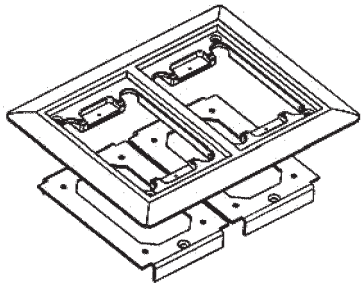
- **Unique multi-gang inserts offer application flexibility**

  Removable voltage dividers allow multiple gangs of the same service at each insert location.

  Individual gangs can be activated as needed – keeps costs down.
  Afterset inserts are available for field installation – inserts only where you need them to minimize system cost.

- **Aesthetic, flush-mounted activation trims are available for both carpet and tile applications**

  Brass, aluminum and nonmetallic trims are available.
  Tile trims have after-pour adjustability to accommodate variations in tile thickness.



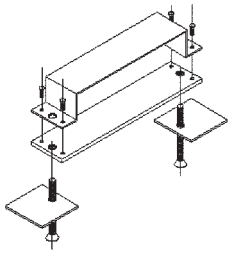
- **Activation trims accept standard Raceway Solutions Floor Box Covers**

  Brass, aluminum and nonmetallic covers are available.

  Complete cover offering accommodates a wide range of applications.

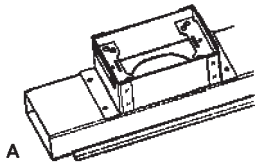
- **Combination coupler/supports simplify installation**

  Same part is used to join raceway sections together and to support/level the duct – reduces labor & material.

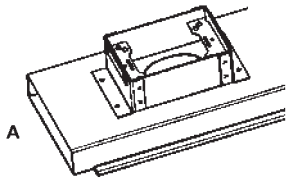


Raceway Solutions™

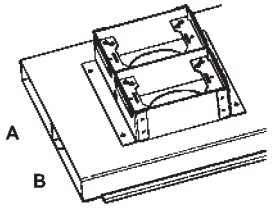
Flush Activation Underfloor Duct



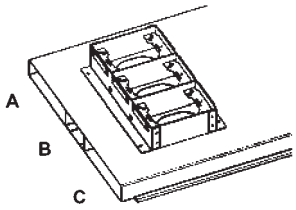
201F Series
Single Compartment



201WF Series
Wide Single Compartment



202F Series
Two Compartment



203F Series
Three Compartment

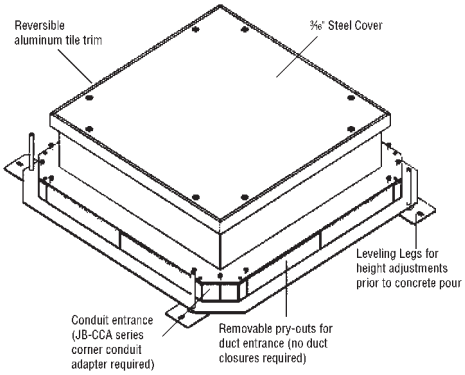
Catalog Number System

20_F	- 3 -	12
# of Cells	**Insert Height**	**Insert Spacing**
1 = Single Cell	B = Blank	
1W = Single Cell Wide	15 = 1½" Height	12 & 24 Standard
2 = Two Cell	2 = 2" Height	6, 18, & 36 (optional)
3 = Three Cell	3 = 3" Height	

Duct Sections

Cat.No.	Duct Depth	Duct Width	Compartment Width	Insert Height	Insert Spacing
201-B	1½"	3¼"	A =3¼"	(no inserts)	(no inserts)
201F-3-24	1½"	3¼"	A =3¼"	3"	24"
201F-2-24	1½"	3¼"	A =3¼"	2"	24"
201F-15-24	1½"	3¼"	A =3¼"	1½"	24"
201F-3-12	1½"	3¼"	A =3¼"	3"	12"
201F-2-12	1½"	3¼"	A =3¼"	2"	12"
201F-15-12	1½"	3¼"	A =3¼"	1½"	12"
201W-B	1½"	5⅞"	A =5⅞"	(no inserts)	(no inserts)
201WF-3-24	1½"	5⅞"	A =5⅞"	3"	24"
201WF-2-24	1½"	5⅞"	A =5⅞"	2"	24"
201WF-15-24	1½"	5⅞"	A =5⅞"	1½"	24"
201WF-3-12	1½"	5⅞"	A =5⅞"	3"	12"
201WF-2-12	1½"	5⅞"	A =5⅞"	2"	12"
201WF-15-12	1½"	5⅞"	A =5⅞"	1½"	12"
202-B	1½"	10"	A & B = 5"	(no inserts)	(no inserts)
202F-3-24	1½"	10"	A & B = 5"	3"	24"
202F-2-24	1½"	10"	A & B = 5"	2"	24"
202F-15-24	1½"	10"	A & B = 5"	1½"	24"
202F-3-12	1½"	10"	A & B = 5"	3"	12"
202F-2-12	1½"	10"	A & B = 5"	2"	12"
202F-15-12	1½"	10"	A & B = 5"	1½"	12"
203F-B	1½"	15"	A & C = 6"- B =3"	(no inserts)	(no inserts)
203F-3-24	1½"	15"	A & C = 6"- B =3"	3"	24"
203F-2-24	1½"	15"	A & C = 6"- B =3"	2"	24"
203F-15-24	1½"	15"	A & C = 6"- B =3"	1½"	24"
203F-3-12	1½"	15"	A & C = 6"- B =3"	3"	12"
203F-2-12	1½"	15"	A & C = 6"- B =3"	2"	12"
203F-15-12	1½"	15"	A & C = 6"- B =3"	1½"	12"

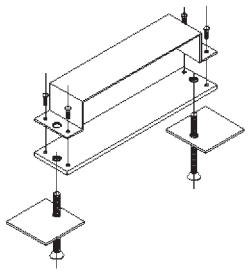
All duct sections 10' long, 14 gauge pre-galvanized steel.



Junction Boxes

Cat. No.	Description
201-JB-3	Junction box for 201 Series Duct with 3" high inserts
201-JB-2	Junction box for 201 Series Duct with 2" high inserts
201-JB-15	Junction box for 201 Series Duct with 1½" high inserts
201W-JB-3	Junction box for 201W Series Duct with 3" high inserts
201W-JB-2	Junction box for 201W Series Duct with 2" high inserts
201W-JB-15	Junction box for 201W Series Duct with 1½" high inserts
202-JB-3	Junction box for 202 Series Duct with 3" high inserts
202-JB-2	Junction box for 202 Series Duct with 2" high inserts
202-JB-15	Junction box for 202 Series Duct with 1½" high inserts
203F-JB-3	Junction box for 203F Series Duct with 3" high inserts
203F-JB-2	Junction box for 203F Series Duct with 2" high inserts
203F-JB-15	Junction box for 203F Series Duct with 1½" high inserts

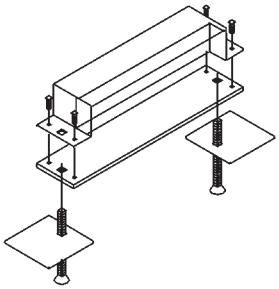
Flush Activation Underfloor Duct



Coupler/Support

Cat. No.	Description
201-DCS	Duct Coupler/Support for 201 Series Duct
201W-DCS	Duct Coupler/Support for 201W Series Duct
202-DCS	Duct Coupler/Support for 202 Series Duct
203-DCS	Duct Coupler/Support for 203F Series Duct

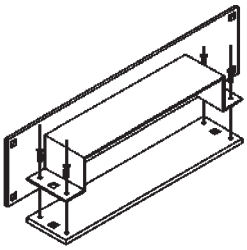
Provides means for coupling duct sections together and for supporting the duct system. It is recommended that a support/coupler be used every 5' of duct run.
Material: 14 gauge pre-galvanized steel



End Cap/Support

Cat. No.	Description
201-ECS	Duct End Cap/Support for 201 Series Duct
201W-ECS	Duct End Cap/Support for 201W Series Duct
202-ECS	Duct End Cap/Support for 202 Series Duct
203-ECS	Duct End Cap/Support for 203F Series Duct

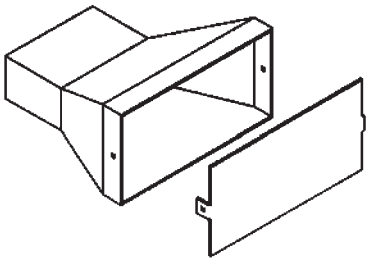
Provides means for supporting and closing off unused duct ends.
Material: 14 gauge pre-galvanized steel



Cabinet Connector

Cat. No.	Description
201-DCC	Duct Cabinet Connector for 201 Series Duct
201W-DCC	Duct Cabinet Connector for 201W Series Duct
202-DCC	Duct Cabinet Connector for 202 Series Duct
203-DCC	Duct Cabinet Connector for 203F Series Duct

Provides means for connecting duct to an electrical cabinet.
Material: 14 gauge pre-galvanized steel

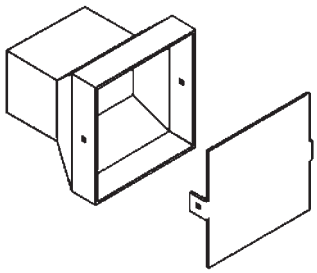


Conduit Adapter

Cat. No.	Description
201-UCA	Universal Conduit Adapter for 201 Series Duct
201W-UCA	Universal Conduit Adapter for 201W Series Duct
202-UCA	Universal Conduit Adapter for 202 Series Duct
203F-UCA	Universal Conduit Adapter for 203F Series Duct

Provides means for attaching conduit to the underfloor duct system at the junction box. The conduit adapter is inserted into a main duct entrance. The blank cover can be field-punched for the required combination of conduits.
Material: 14 gauge pre-galvanized steel

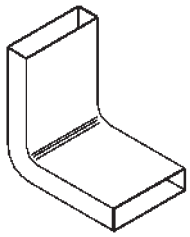
Flush Activation Underfloor Duct



Corner Conduit Adapter

Cat. No.	Description
JB-CCA-B	Corner Conduit Adapter with blank cover
JB-CCA-1/2	Corner Conduit Adapter with ½" KO
JB-CCA-3/4	Corner Conduit Adapter with ¾" KO
JB-CCA-1	Corner Conduit Adapter with 1" KO
JB-CCA-1-1/2	Corner Conduit Adapter with 1½" KO
JB-CCA-2	Corner Conduit Adapter with 2" KO

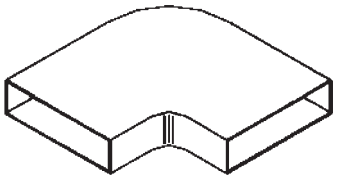
Provides means for attaching conduit to the underfloor duct system at the junction box. The corner conduit adapter is inserted into the corner conduit entrance of any size junction box.
Material: 14 gauge pre-galvanized steel



Vertical Elbow

Cat. No.	Description
201-VEL	Vertical Elbow for 201 Series Duct
201W-VEL	Vertical Elbow for 201W Series Duct
202-VEL	Vertical Elbow for 202 Series Duct
203F-VEL	Vertical Elbow for 203F Series Duct

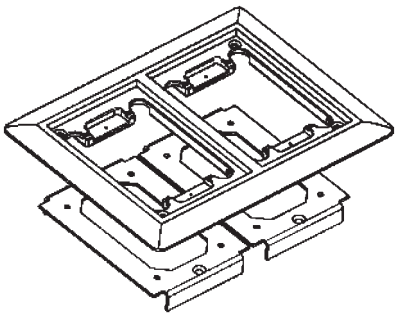
Material: 14 gauge pre-galvanized steel



Horizontal Elbow

Cat. No.	Description
201-HB90	Horizontal 90° Elbow for 201 Series Duct
201W-HB90	Horizontal 90° Elbow for 201W Series Duct
202-HB90	Horizontal 90° Elbow for 202 Series Duct
203F-HB90	Horizontal 90° Elbow for 203F Series Duct

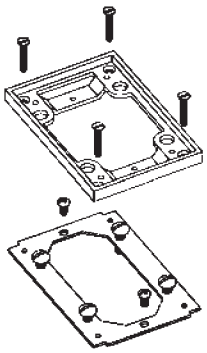
Material: 14 gauge pre-galvanized steel



Carpet Activations

Cat. No.	Description	Color
FACA-1G-AL	1-Gang Carpet Activation	Aluminum
FACA-1G-B	1-Gang Carpet Activation	Brass
FACA-1G-BGE	1-Gang Carpet Activation	Nonmetallic - Beige
FACA-1G-BLK	1-Gang Carpet Activation	Nonmetallic - Black
FACA-1G-GRY	1-Gang Carpet Activation	Nonmetallic - Gray
FACA-2G-AL	2-Gang Carpet Activation	Aluminum
FACA-2G-B	2-Gang Carpet Activation	Brass
FACA-2G-BGE	2-Gang Carpet Activation	Nonmetallic - Beige
FACA-2G-BLK	2-Gang Carpet Activation	Nonmetallic - Black
FACA-2G-GRY	2-Gang Carpet Activation	Nonmetallic - Gray
FACA-3G-AL	3-Gang Carpet Activation	Aluminum
FACA-3G-B	3-Gang Carpet Activation	Brass
FACA-3G-BGE	3-Gang Carpet Activation	Nonmetallic - Beige
FACA-3G-BLK	3-Gang Carpet Activation	Nonmetallic - Black
FACA-3G-GRY	3-Gang Carpet Activation	Nonmetallic - Gray

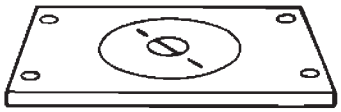
Flush Activation Underfloor Duct

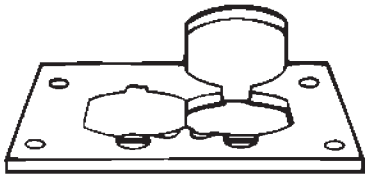


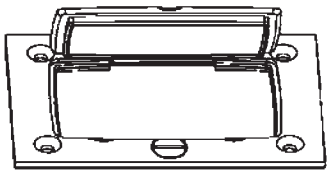
Tile Activations

Cat. No.	Description	Color
FATA-AL	Tile Activation	Aluminum
FATA-B	Tile Activation	Brass
FATA-BGE	Tile Activation	Nonmetallic - Beige
FATA-BLK	Tile Activation	Nonmetallic - Black
FATA-GRY	Tile Activation	Nonmetallic - Gray

Note: One Tile Activation is required for each gang of the insert.
Provides means for height adjustment after the concrete pour to accommodate different tile thickness.





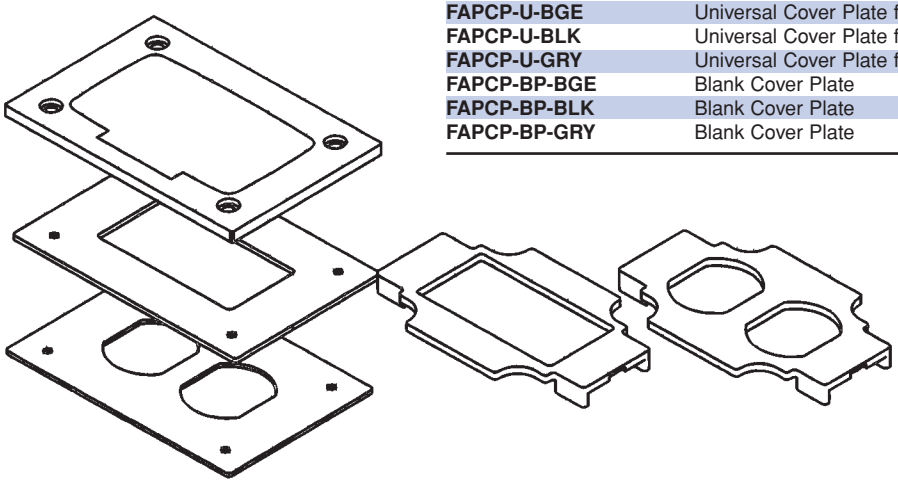


Metallic Covers

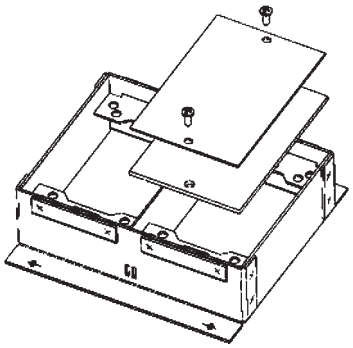
Cat. No.	Description	Color
FA-MCP-1/2-B	Cover Plate w/ ½" NPS Plug	Brass
FA-MCP-1/2-AL	Cover Plate w/ ½" NPS Plug	Aluminum
FA-MCP-3/4-B	Cover Plate w/ ¾" NPS Plug	Brass
FA-MCP-3/4-AL	Cover Plate w/ ¾" NPS Plug	Aluminum
FA-MCP-1-B	Cover Plate w/ 1" NPS Plug	Brass
FA-MCP-1-AL	Cover Plate w/ 1" NPS Plug	Aluminum
FA-MCP-1-1/4-B	Cover Plate w/ 1¼" NPS Plug	Brass
FA-MCP-1-1/4-AL	Cover Plate w/ 1¼" NPS Plug	Aluminum
FA-MCP-2-B	Cover Plate w/ 2" UN plug	Brass
FA-MCP-2-AL	Cover Plate w/ 2" UN plug	Aluminum
FA-MCP-1/2-2-B	Cover Plate w/ 2" UN & ½" NPS plugs	Brass
FA-MCP-1/2-2-AL	Cover Plate w/ 2" UN & ½" NPS plugs	Aluminum
FA-MCP-3/4-2-B	Cover Plate w/ 2" UN & ¾" NPS plug	Brass
FA-MCP-3/4-2-AL	Cover Plate w/ 2" UN & ¾" NPS plug	Aluminum
FA-MCP-2-5/8-B	Cover Plate w/ 2⅝" UN plug	Brass
FA-MCP-2-5/8-AL	Cover Plate w/ 2⅝" UN plug	Aluminum
FA-MCP-DP-B	Cover Plate w/ Two 1 7/16" Plugs for Duplex	Brass
FA-MCP-DP-AL	Cover Plate w/ Two 1 7/16" Plugs for Duplex	Aluminum
FA-MCP-FDP-B	Cover Plate w/ Two Flip Lids for Duplex	Brass
FA-MCP-FDP-AL	Cover Plate w/ Two Flip Lids for Duplex	Aluminum
FA-MCP-GFCI-B	Cover Plate w/ One Flip Lid for GFCI	Brass

Nonmetallic Covers

Cat. No.	Description	Color
FAPCP-U-BGE	Universal Cover Plate for Duplex &GFCI	Beige
FAPCP-U-BLK	Universal Cover Plate for Duplex &GFCI	Black
FAPCP-U-GRY	Universal Cover Plate for Duplex &GFCI	Gray
FAPCP-BP-BGE	Blank Cover Plate	Beige
FAPCP-BP-BLK	Blank Cover Plate	Black
FAPCP-BP-GRY	Blank Cover Plate	Gray



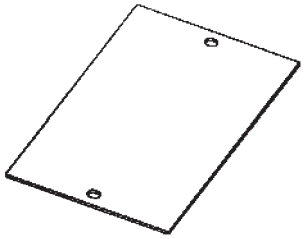
Flush Activation Underfloor Duct



Afterset Inserts

Cat. No.	Description	Insert Height
DAIFA-1G-3	1-Gang Afterset Insert	3"
DAIFA-1G-2	1-Gang Afterset Insert	2"
DAIFA-1G-15	1-Gang Afterset Insert	1½"
DAIFA-2G-3	2-Gang Afterset Insert	3"
DAIFA-2G-2	2-Gang Afterset Insert	2"
DAIFA-2G-15	2-Gang Afterset Insert	1½"
DAIFA-3G-3	3-Gang Afterset Insert	3"
DAIFA-3G-2	3-Gang Afterset Insert	2"
DAIFA-3G-15	3-Gang Afterset Insert	1½"

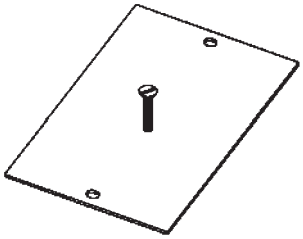
Provides means to add activation inserts in the field after installation of the duct.
Material: 14 gauge pre-galvanized steel



Compartment Cover

Cat. No.	Description
FAD-CC	Compartment Cover

Provides means to cover the opening in the duct which provides access compartment wiring. Wiring from a different compartment can then be routed into the gang and activated (used when multiple outlets of the same service are required at the same insert location).
Material: 18 gauge pre-galvanized steel



Marker Caps

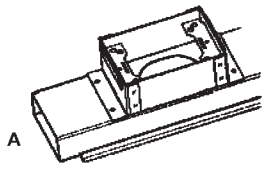
Cat. No.	Description
FAD-MC-Z	Insert Marker Cap with Zinc Screw
FAD-MC-B	Insert Marker Cap with Brass Screw

Raceway Solutions™

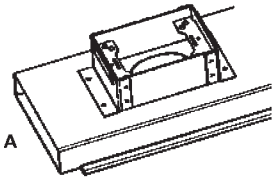
Flush Activation Underfloor Duct

Wirefill Chart

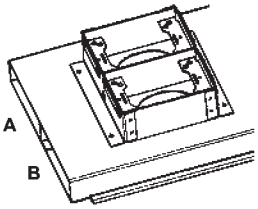
				201	201W	202		203F		
				CHANNEL A	CHANNEL A	CHANNEL A	CHANNEL B	CHANNEL A	CHANNEL B	CHANNEL C
CHANNEL CROSS SECTIONAL AREA (SQUARE INCHES):				**4.38**	**7.78**	**6.60**	**6.60**	**5.90**	**4.07**	**5.90**
COAX CABLES	RG6 /u	DIA. = 0.270"	40% FILL	30	54	46	46	41	28	41
	RG11 /u	DIA. = 0.405"	40% FILL	13	24	20	20	18	12	18
	RG58 /u	DIA. = 0.193"	40% FILL	60	106	90	90	80	55	80
	RG59 /u	DIA. = 0.242"	40% FILL	38	67	57	57	51	35	51
	RG62A /u	DIA. = 0.242"	40% FILL	38	67	57	57	51	35	51
LAN CABLES	CAT5,4 pr. UNSHIELDED	DIA. = 0.250"	40% FILL	35	63	53	53	48	33	48
FIBER OPTIC CABLES 62.5 /125 um	2 STRAND	DIA. = 0.175"	40% FILL	73	129	110	110	98	67	98
	4 STRAND	DIA. = 0.175"	40% FILL	73	129	110	110	98	67	98
	6 STRAND	DIA. = 0.210"	40% FILL	50	89	76	76	68	47	68
SIGNAL CABLES	18 AWG	DIA. = 0.066"	40% FILL	515	915	776	776	694	478	694
	20 AWG	DIA. = 0.057"	40% FILL	700	1240	1050	1050	944	650	944
	22 AWG	DIA. = 0.050"	40% FILL	922	1630	1380	1380	1240	856	1240
	24 AWG	DIA. = 0.044"	40% FILL	1160	2070	1760	1760	1570	1080	1570
POWER (THHN)	10 AWG	DIA. = 0.164"	40% FILL	83	147	125	125	111	77	111
	12 AWG	DIA. = 0.130"	40% FILL	132	235	200	200	178	123	178
	14 AWG	DIA. = 0.111"	40% FILL	182	324	275	275	245	169	245



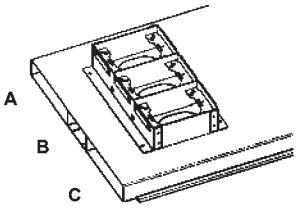
201 Series
Single Compartment



201W Series
Wide Single Compartment



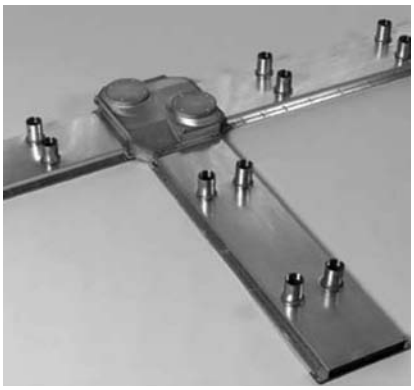
202 Series
Two Compartment



203F Series
Three Compartment

Raceway Solutions™

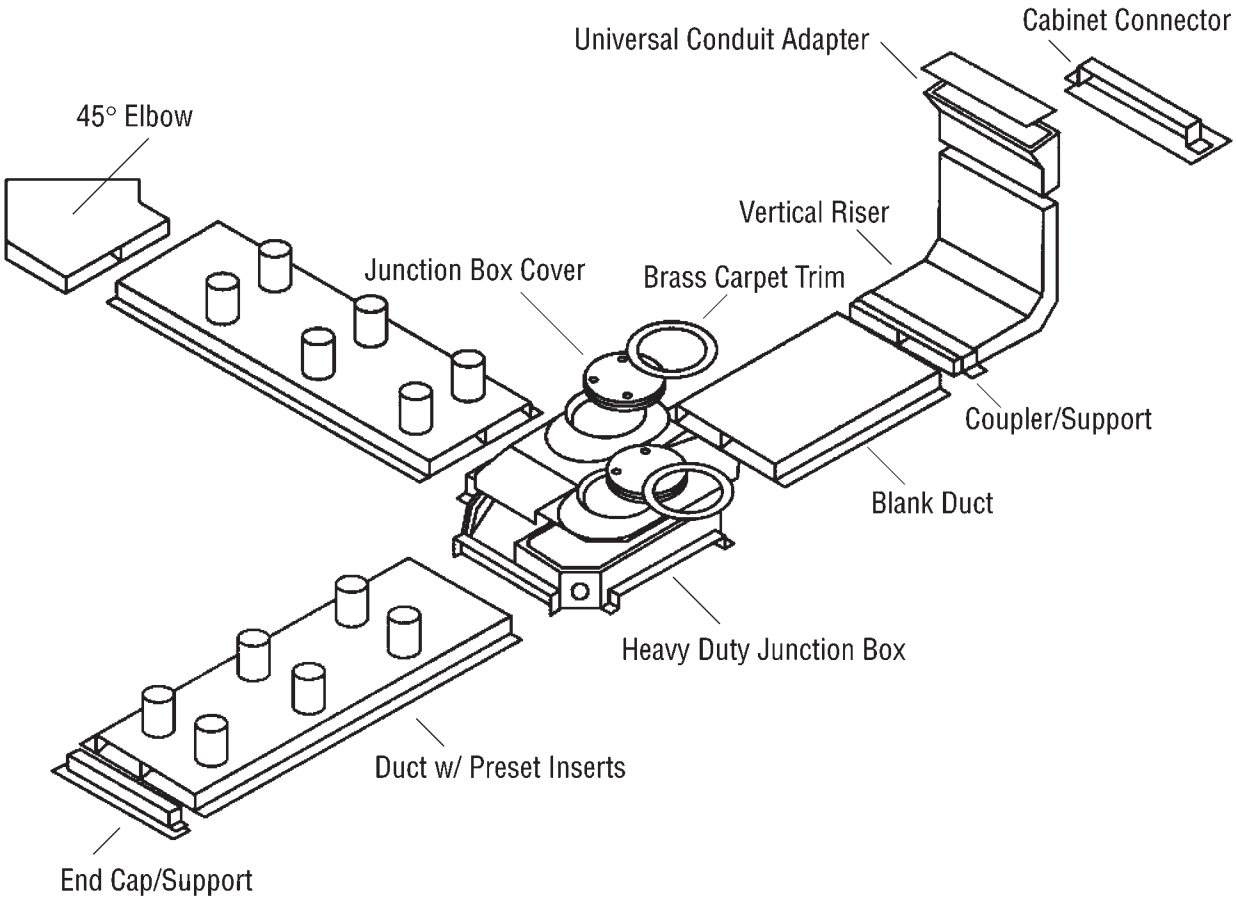
Casino Underfloor Duct



Features & Benefits

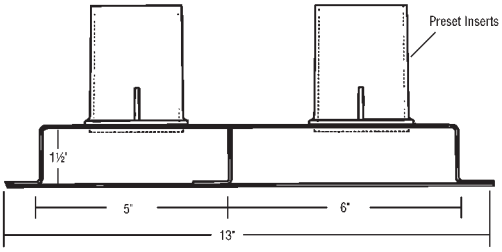
- Heavy Duty cast aluminum junction box meets the high load requirements of a casino environment (50,000 pound uniform load rating).
- Two-compartment duct provides separation of power and voice/data.
- Junction box provides individual covers for access to power and voice/data compartments.
- Attractive brass carpet trims are available for the junction box covers.
- One-piece duct configuration simplifies assembly and leveling for reduced installation costs.
- System includes a complete line of accessories and fittings for design flexibility.
- System meets the requirements of UL 884.

Typical Casino Duct System Layout



Raceway Solutions™

Casino Underfloor Duct

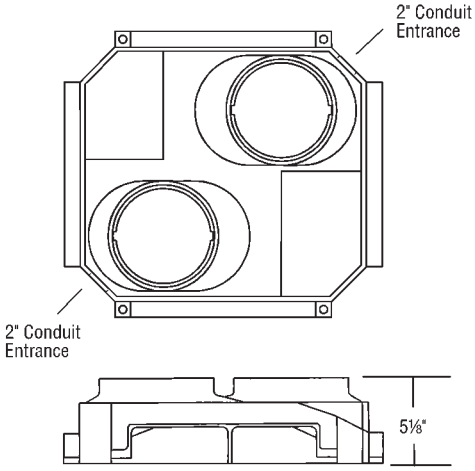


CD-3-24

Duct Sections

Cat. No.	Description
CD-B	Blank duct 10' section
CD-3-12	Duct w/ 3" presets 12" on center
CD-3-24	Duct w/ 3" presets 24" on center

NOTE: Consult factory for Casino Duct with Flush Activations.

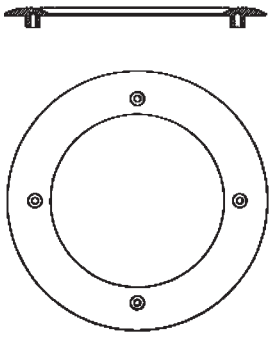


CD-3JB

Junction Box

Cat. No.	Description
CD-3JB	Heavy-duty cast aluminum junction box, 2 compartment.

NOTE: Consult factory for other junction box options.

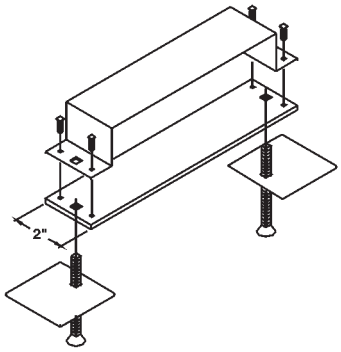


CD-CTB

Brass Carpet Trim

Cat. No.	Description
CD-CTB	Brass trim ring for junction box lids.

Casino Underfloor Duct

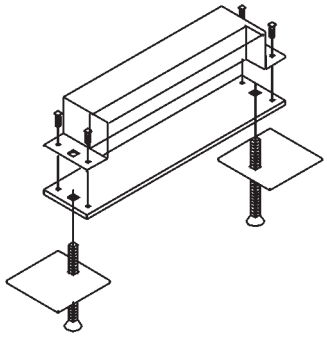


Coupler/Supports

Cat. No.	Description
CD-CS	For Casino Duct

Material: 14 gauge pre-galvanized steel with 668 coating
UL Listing No. 668

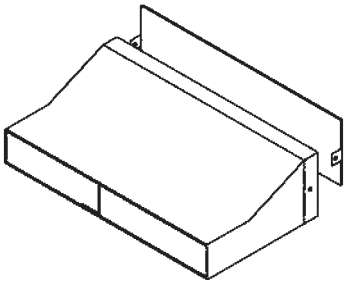
Raceway Solutions duct coupler/supports provide a means of not only coupling duct sections together but also supporting the duct sections. It is recommended that a support/coupler be used every 5'of duct run.



End Cap/Support

Cat. No.	Description
CD-ES	For Casino Duct

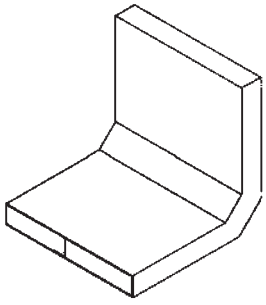
Raceway Solutions End Cap/Supports provide a means of supporting and closing unused duct ends.
Material: 14 gauge pre-galvanized steel with 668 coating
UL Listing No. 668



Conduit Adapter

Cat. No.	Description
CD-UCA	For Casino Duct

Raceway Solutions End Conduit Adapters are provided with a removable blank cover which is field punched for the required combination of conduits. Conduit adapters for multi-compartment duct are supplied with interior barriers to maintain separation between services.
Material: 14 gauge pre-galvanized steel with 668 coating
UL Listing No. 668

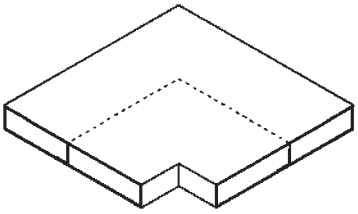


Verticle Riser

Cat. No.	Description
CD-VEL	For Casino Duct

Material: 14 gauge pre-galvanized steel with 668 coating
UL Listing No. 668

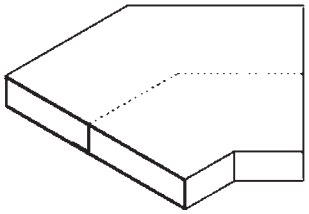
Casino Underfloor Duct



Horizontal Elbow – 90°

Cat. No.	Description
CD-HB90	For Casino Duct

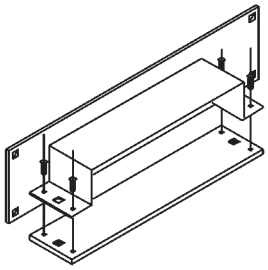
Material: 14 gauge pre-galvanized steel with 668 coating
UL Listing No. 668



Horizontal Elbow – 45°

Cat. No.	Description
CD-HB45L	45° Elbow Left
CD-HB45R	45° Elbow Right

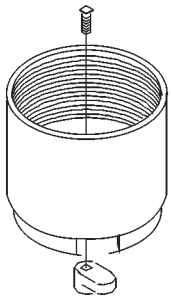
Material: 14 gauge pre-galvanized steel with 668 coating
UL Listing No. 668



Duct Cabinet Connector

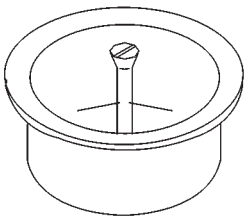
Cat. No.	Description
CD-CC	For Casino Duct

Material: 14 gauge pre-galvanized steel with 668 coating
UL Listing No. 668



Afterset Insert – 2" IPS Thread

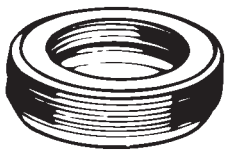
Cat. No.	Description
DAI-3	3"



Marker Caps

Cat. No.	Description
DMC-Z	Insert marker cap with zinc screw
DMC-B	Insert marker cap with brass screw

Material: 14 gauge pre-galvanized steel with 668 coating
UL Listing No. 668



Reducing Bushings

Cat. No.	Description
RB-162	2" to ¾"
RB-163	2" to 1"

Material: Steel, Zinc Plated
UL Listing No. E-1275

Service Head Fittings

Raceway Solutions service fittings provide above-floor service for power, communications and data. A variety of service fitting designs are available.

PSF-10-DR

PSF-10 Series

- ***Brushed aluminum finish.***
- ***Low profile design.***
- ***Furnished with 1" conduit nipple.***

PSF-20-DR

PSF-20 Series

- ***Brushed aluminum finish.***
- ***Interchangeable face plates.***
- ***Furnished with 1" conduit nipple for direct screw-threading into a floor box plate with 1" cover opening.***

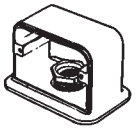
Service Fittings for Power

Cat. No.	Description	Finish	Dimensions W	D	H	Wt. (lbs.)
PSF-10-DR	Furnished with one 15 amp, 125 volt, 3-wire NEMA duplex receptacle	Brushed Aluminum	4⅜"	3"	2⅝"	1.6
PSF-10	Same as PSF-10-DR above less duplex receptacle	Brushed Aluminum	4⅜"	3"	2⅝"	1.5
PSF-20-2DR	Furnished with two back to back 15 amp,125 volt, 3 wire NEMA duplex receptacles	Brushed Aluminum	5"	3⅜"	3"	1.38
PSF-20	Same as PSF-20-2DR less duplex receptacles	Brushed Aluminum	5"	3⅜"	3"	1.25
PSF-21	Furnished with cover plate to accommodate one 30 or 50 amp, 240 volt, 3 wire receptacle and blank cover	Brushed Aluminum	5"	3⅜"	3"	1.25

SFH-20 Series Component Parts

PSF-20-BASE	Standard above floor service fitting base only.
PSF-20-TELEDVP	Device plate for PSF-20 with 1" dia. hole.
PSF-20-DUPDVP	Device plate for PSF-20 for duplex.
PSF-20-BLDVP	Blank device plate for PSF-20.
PSF-20-DVP139	Device plate for PSF-20 with $1^{13}/_{32}$" dia. hole.

UL Listing No.514A



PSF-20-Base

Blank Plate PSF-20-BLDVP

Telephone Plate, 1" Hole PSF-20-TELEDVP

Single Receptacle Plate, 1.39" Hole PSF-20-DVP139

Single Receptacle Plate, 1.60" Hole PSF-20-DVP160

Duplex Receptacle Plate PSF-20-DUPDVP

CMSF-10

- ***Brushed aluminum finish.***
- ***Low profile design.***
- ***Furnished with 1" conduit nipple.***

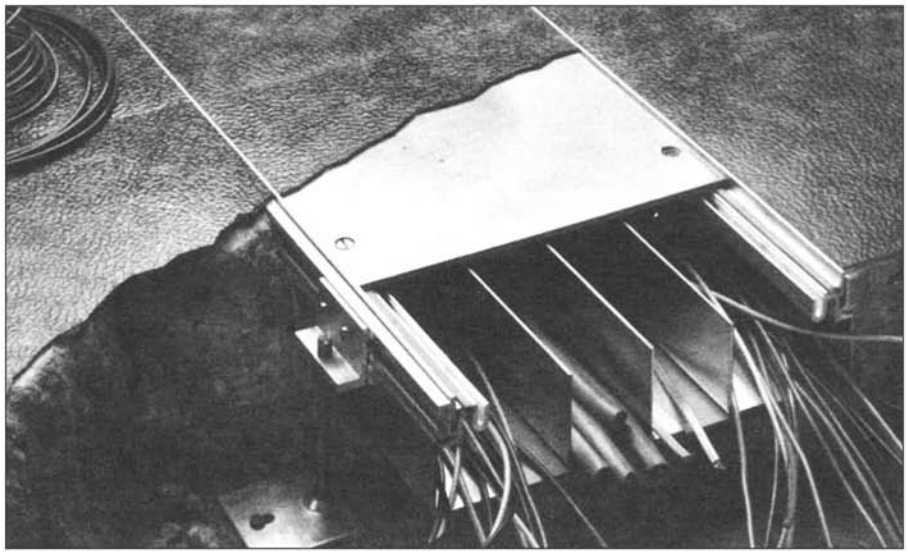
Service Fittings for Communications and Data

Cat. No.	Description	Finish	Dimensions W	D	H	Wt. (lbs.)
CMSF-10	¾"x 1⅛" bushed opening for telephone or computer	Brushed Aluminum	4⅜"	3⅛"	2⅝"	1.5

UL Listing No.514A

Raceway Solutions™

Trench Duct



Features

- High Capacity Duct
- 14 gauge galvanized steel
- Aluminum trim frame
- Total Adjustability
- Standard 3/16" steel cover plate
- Threaded groove track
- Feeds Wall Duct systems
- UL Listed No. 884

Applications

- Commercial Buildings
- Retail Outlets
- Office Buildings
- Schools, Universities
- Shopping Centers

A High-Capacity Trench System for In-Floor Wire Management

The Raceway Solutions Trench System is an in-floor wire management system that meets today's high-capacity wiring needs that require multiple circuit separation. This system provides the raceways for which power, telecommunication and electronic circuitry can be supplied to multiple point-of-sale checkout counters, particularly those where a scanner is used or may be proposed.

Because of its ability to protect dedicated power circuits to computers as well as distribute general power in the same system, it is ideal for use in all data processing centers. Ample additional capacity for electronic, telecommunications and local area network circuitry is available.

Multiple Compartments Provide More Capacity Than Conventional Ducts

The Raceway Solutions trench system provides more capacity than conventional conduits and ducts. It features a single, high-capacity duct with four compartments for easy placement of additional wiring.

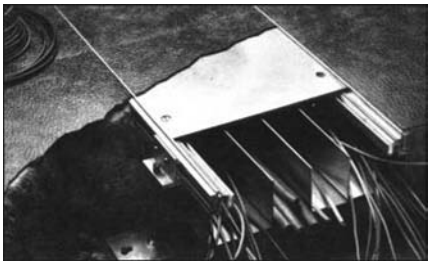
Its open-top design allows wiring to be laid in the duct instead of being pulled, eliminating the need for junction boxes. Wiring can be run directly from the top of the duct to the outlet stations, eliminating service fittings that protrude above the floor.

Removable covers are 3/16" thick and lock into the track of the trench preventing deflection under heavy loads.

Removable covers allow free access to wiring and can be placed anywhere along the duct for easy wire exit relocation.

Raceway Solutions™

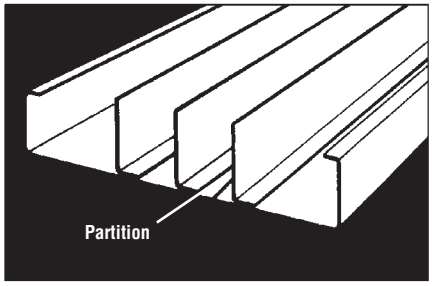
Trench Duct



Duct Frame

Duct frame includes fixed metal partitions that create multiple compartments in the duct. This feature permits a single duct to distribute power, electronics and communications. Duct with fewer partitions is available to meet your specifications and can be located in strategic places to meet special distribution requirements.

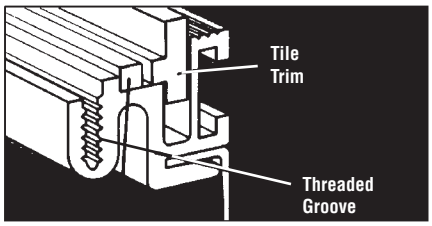
The duct frame is available in a variety of sizes. The frame is of 14 gauge galvanized steel and is supplied in standard 6' lengths. It can be cut to length which increases field flexibility and eliminates the need for ordering specialty fabricated material.



Track

The track of the structural assembly integrates the base aluminum profile with the tile trim, extruded rubber strip, and the duct support assembly. The track also provides the screed line for the concrete.

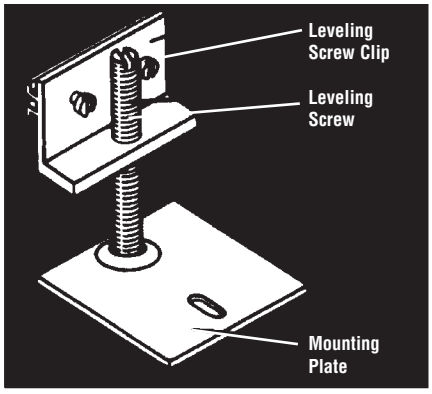
- The aluminum profile accepts and holds the duct frame, rubber cushion, and cover plate screws in addition to supporting the cover plate; it also acts as a runner for the leveling screw clips.



- The aluminum tile trim provides a finished edge for the tile, assists in cutting, and can be reversed when the trim is not required; can be reversed when carpet is used
- The extruded rubber gasket acts as a cushion, sound dampener and moisture barrier between the cover plate and the duct; meets U.L. moptight requirements

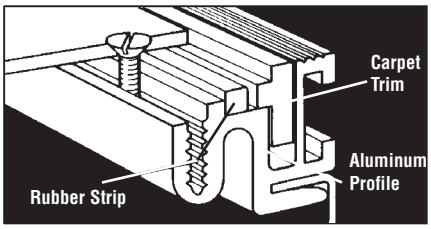
Duct Support Assembly

The unique duct support assembly provides one time leveling capability and acts as a splice for duct sections. The assembly consists of the leveling screw clip, mounting plate, and leveling screws, and is independent of the final support of the duct.



Leveling screw allows for 1" adjustment.

- The leveling screw clip integrates with the track and provides full adjustment along the length of the duct; it also acts as the splice for duct sections
- The heavy gauge mounting plate fastens duct to metal deck,rough slab,or wood/metal forms prior to pouring concrete; it adjusts to meet most floor and installation requirements.
- The leveling screws provide vertical adjustment of the duct prior to concrete pour; this allows the duct to be leveled to the screed line so only one pour is required



Cover

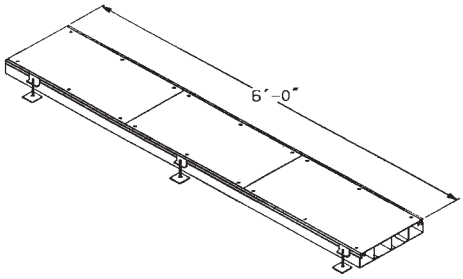
The cover plates for the Raceway Solutions Trench Duct are horizontally adjustable to any point along the duct. The 3/16" thick cover plates come in standard 24" lengths — three are provided per 6' duct section. A 1/4" thick cover plate is also available as a customer option.

A special threaded groove on the track accepts the cover plate screws at any point along the duct, providing the cover unlimited adjustment. This special design relieves the installer from matching the duct frame sections with the covers, eliminating field cutting in most instances. This can substantially reduce installation and maintenance costs.

The cable exit may be installed on an exit fitting cover allowing cable to be easily pulled out and activated. The cable exit is reversible to provide accessibility from either direction. The standard cover plates may be removed and exit fitting covers installed for the cable exit.

Raceway Solutions™

Trench Duct



Raceway Solutions Trench Duct is manufactured in 6 foot lengths complete with three leveling feet on each side (OK/F-2-1/2), three cover plates 24" long (OKC) and three cover joint protectors (OK/DSD). The leveling feet (screw clips) permit 1" of vertical adjustment and act as section couplers. Additional vertical adjustment is available on order by increasing the length of the screw in the OK/F.

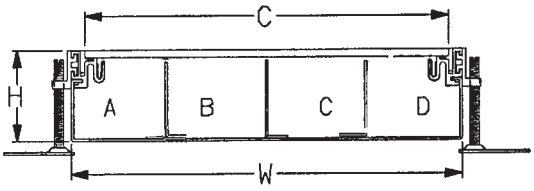
NOTE: All vertical adjustment should be made before the concrete is poured.

Duct Sections

Cat. No.	Cover Width (c)	Outside Dimensions (in.) H	W	Compartment Area (sq.in.) A	B	C	D	Cell Width (in.) A	B	C	D
Four Compartment											
OKA/B12-4C	12	2½	12⅞	6.6	6.6	6.6	6.6	3.15	3.15	3.15	3.15
Three Compartment											
OKA/B9-3C	9	2½	9⅞	6.7	6.7	6.7	—	3.2	3.2	3.2	—
OKA/B12-3C	12	2½	12⅞	8.8	8.8	8.8	—	4.2	4.2	4.2	—
OKA/C12-3C	12	3	12⅞	10.9	10.9	10.9	—	4.2	4.2	4.2	—

UL Listing No. 884

Catalog Number System



OKA / B 12 4C - AL 1/4

Trench Product
OKA–Trench
OKB–Pull Box
OKC–Exit Cover
OKE–End Cap
OKL–Horizontal L
OKR–Vertical Riser
OKT–"T" Junction Box
OKX–"X" Junction Box

Depth
½" Increments
A = 2"
B = 2½"
C = 3"
D = 3½"
E = 4"
J = 6"
N = 8"
*Other Depths Available

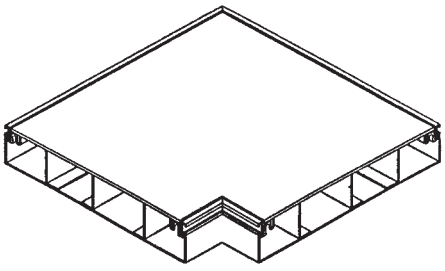
Width
9, 12, 18, & 24 Standard
(Other Widths Available)

Number of Compartments
1C = 1 Compartment
2C = 2 Compartment
3C = 3 Compartment
4C = 4 Compartment

Aluminum (optional)

¼" Thick Cover Plate (optional)

Note: *Other depths and widths are available. Please consult factory for details. Also available in Aluminum.



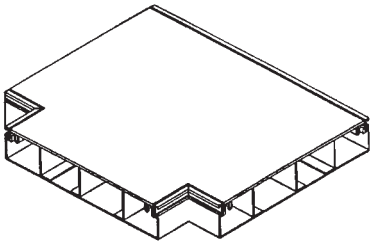
Manufactured with a single cover and matching compartments to form a 90° Horizontal L.

Horizontal L Fitting

Cat. No.	Associated Trench	Outside Cover Dimension	No.of Compartments
OKL/B9-3C	OKA/B9-3C	12" x 12"	3
OKL/B12-4C	OKA/B12-4C	15" x 15"	4
OKL/C12-3C	OKA/C12-3C	15" x 15"	3
OKL/B12-3C	OKA/B12-3C	15" x 15"	3

Note: Table only an example of available sizes. Please refer to above for catalog number system.

Trench Duct

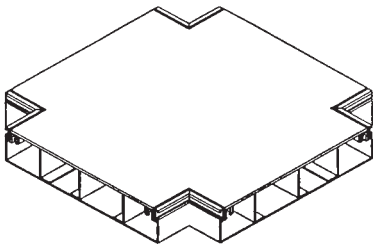


Manufactured with internal partitions and crossovers to isolate power and communication.

Single Level "T " Junction Fitting

Cat. No.	Cover Dimensions	Associated Trench
OKT/B9-3C	15" x 12"	OKA/B9-3C
OKT/B12-4C	18" x 15"	OKA/B12-4C
OKT/B12-3C	18" x 15"	OKA/B12-3C
OKT/C12-3C	18" x 15"	OKA/C12-3C

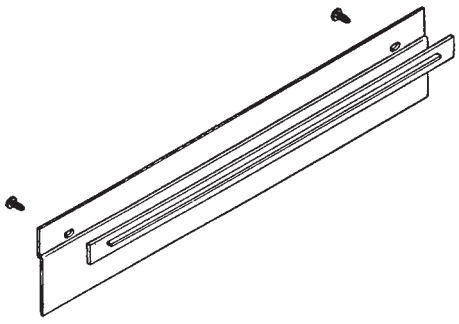
Note: Table only an example of available sizes. Please refer to page 26 for catalog number system.



Manufactured with internal partitions and crossovers to isolate power and communication.

Single Level "X " Junction Fitting

Cat. No.	Cover Dimensions	Associated Trench
OKX/B9-3C	15" x 15"	OKA/B9-3C
OKX/B12-4C	18" x 18"	OKA/B12-4C
OKX/B12-3C	18" x 18"	OKA/B12-3C
OKX/C12-3C	18" x 18"	OKA/C12-3C



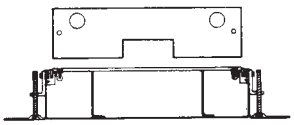
Fits over end of trench run to close trench and prevent foreign material from entering. End cap may be drilled to accept conduit.

End Cap

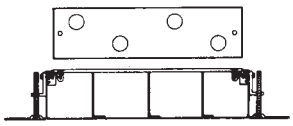
Cat. No.	Width	Maximum Conduit	Depth
OKE/B9	10"	1¼"	2 9/16"
OKE/B12	13"	1¼"	2 9/16"
OKE/C12	13"	2"	3 1/16"

Trench Duct

Type A



Type C

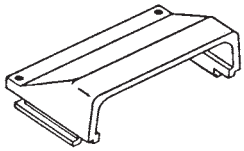


Designed to provide exit and feed for Raceway Solutions Trench Duct trench. Conduit openings are provided for power and communication exit or feed using conventional fittings or service fittings. Cable exit cap (OKSK) is for communication cable only. Exit fittings cover may be spaced anywhere along the length of the trench. All exit fitting covers are 6" long.

Exit Covers

Cat. No.	Conduit Hole Size	Trench Width
OKC/9-3/4A	3/4 "	9"
OKC/12-3/4A	3/4 "	12"
OKC/9-3/4C	3/4 "	9"
OKC/12-3/4C	3/4 "	12"

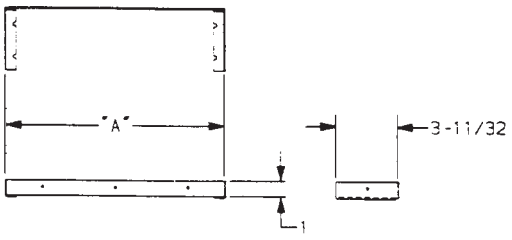
Note: Table only an example of available sizes. Please refer to page 26 for catalog number system.

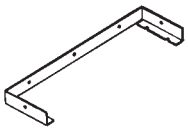


Fits opening on Exit Cover. Provides outlet for communication cable. Debris barrier included. Cable Exit Cap constructed from die cast aluminum. For use with Type A exit covers only.

Cable Exit Cap

Cat. No.	Description
OKSK	Cable Exit Cap





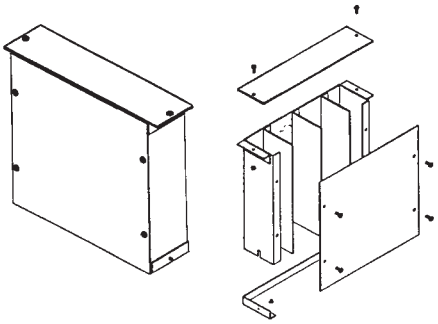
Trench to Wallduct Adapter

Cat. No.	A
OWV/D12	11⅞"
OWV/D18	17⅞"

Screws included.

Material: 14 gauge pre-galvanized steel.
UL Listing No. E116245

Trench Duct

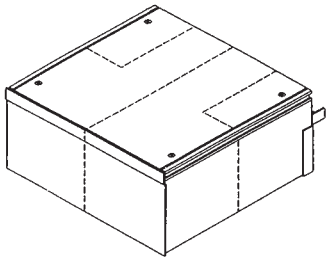


Manufactured to mount on trench in place of cover.Partitioned to separate cells and flanged to attach to pull box. Removable front cover and top cover. Standard height above finish floor —12 inches. Standard depth —3½" inches.

Vertical Riser Fitting

Cat. No.	Associated Trench	No.of Compartments	D	W	H
OKR/D9-3C	OKA/B9-3C	3	3½"	9"	12"
OKR/D12-4C	OKA/B12-4C	4	3½"	12"	12"
OKR/D12-3C	OKA/B12-3C OKA/C12-3C	3	3½"	12"	12"

Note: Table only an example of available sizes. Please refer to page 26 for catalog number system.

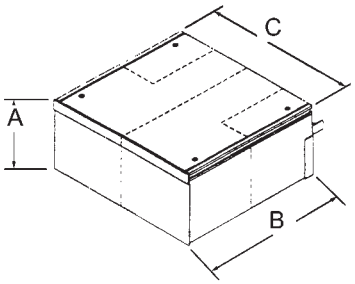


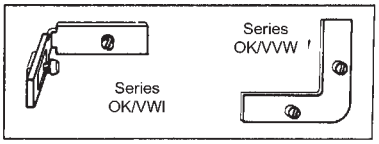
Manufactured to attach to trench section replacing end cap. Divided into compartment as shown.Additional depth permits attachment of larger conduit. Will accept up to 4" conduit. Box is field punched.

Pull Box

Cat. No.	Associated Trench	Dimensions A	B	C
OKB/B9-3C	OKA/B9-3C	6"	12"	9"
OKB/B12-4C	OKA/B12-4C	6"	12"	12"
OKB/B12-3C	OKA/B12-3C	6"	12"	12"
OKB/C12-3C	OKA/C12-3C	6"	12"	12"

UL Listing No. 884





Accessories to join trench sections for field fabrication of horizontal and vertical assemblies.

Fastening Angles

Cat. No.	Description
OK/VWI	Horizontal Angle
OK/VVW	Vertical Angle

Specifications

Raceway Solution Trench Duct has been designed to offer the most complete in-floor wire management system for computer terminals. The particular use for retail store checkout counters using scanners has been selected for this catalog. Its potential capacity, unlimited point-of-delivery, and wire compartmentalization provide flexibility for current requirements as well as future needs.

Raceway Solution Trench Duct may be specified for stores that are being retrofitted for the use of scanners as well as new stores.

The specifier should consider the following:

1. The two outer compartments for the 12" size (2½" deep) have 6.6 in^2 wiring capacity. (This provides greater capacity than 2½" conduit). Two power compartments are offered:

- One for computer dedicated circuits
- One for general purpose power

2. The outer compartments should be chosen for the power since runs of conduit can be tapped off the sides of the duct (¾" and 1") to specially placed floor boxes or stubbed out of the concrete to provide power at locations to the left or right of the trench.

3. The inside compartments of the four compartment 12" wide duct (OKA/B12-4C) each have 6.6 in^2 wiring capacity in a cross-sectional area that is 3.0" x 2¼" on sides. The largest electronic connector can pass through this area and exit with ease. One of these can be designated for computer cables and the other for intercommunication or telephone. Depending on the sensitivity of the system, these two compartments may be used interchangeably.

4. Covers may be adjusted to any location as well as the exit fitting covers. Therefore, predetermination of exit locations is not required and future access to the wiring at any location is available.

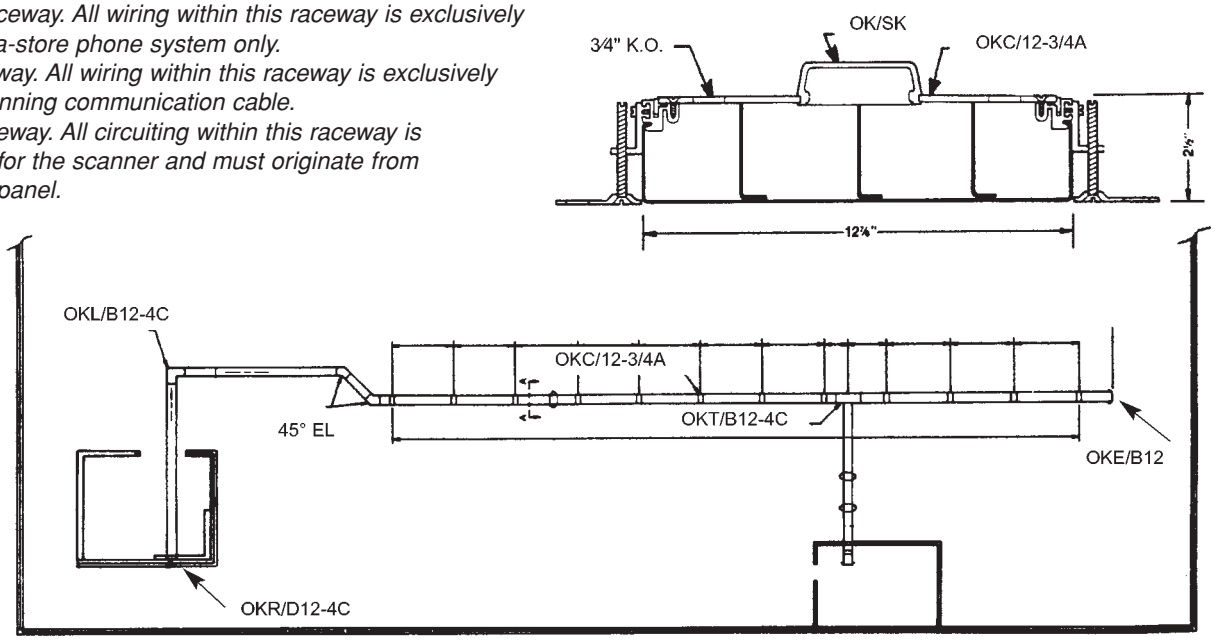
5. To feed the computer location or checkout counter, service fittings with receptacles may be used or the exit fitting cover hard wired to the point of delivery. For example, flexible metallic conduit or liquidtight conduit may be used between the exit fitting cover and a utility box with a receptacle directly under the counter.

6. Cable exit caps may be used for computer, telephone, or intercommunication cables. In certain cases, armored or other approved cable may be permitted with the cable exit cap.

Raceway Solutions™

Trench Duct Installation Instructions

A. First raceway. Circuiting within this raceway shall not originate or in any way be connected or routed through dedicated panel.
B Second raceway. All wiring within this raceway is exclusively for the intra-store phone system only.
C. Third raceway. All wiring within this raceway is exclusively for the scanning communication cable.
D. Fourth raceway. All circuiting within this raceway is dedicated for the scanner and must originate from dedicated panel.



Store Layout Example —Checkout Counter

Material

1.1 General inspection of shipment.
1.1.1 Inspect all parts for visible damage.
1.1.2 Determine that the proper number of parts were received. Notify factory immediately if a discrepancy is found.
1.1.3 If shop drawings were provided, installer must familiarize himself with all details.
1.1.3.1 Installer must compare shop drawings with actual jobsite conditions.
1.2 Inspection of Trench Components.
1.2.1 Examine trench for proper number and placement of partitions.
1.2.2 If trench is factory marked, confirm markings.
1.2.3 Do not remove covers from trench. Covers remain on trench during pour.

Before Pour

2.1 General Jobsite Conditions.
2.1.1 Determine a reference point for the start of assembly work. This includes an elevation mark as well as horizontal placement. Confirm by shop drawings when available.
2.1.2 Clear the site of obstructions so installer has a clear working area.
2.1.3 If installation is on grade, prepare the grade and check specifications for type of footing.
Note: It is useful to install a rough slab the length of the run. The slab should be 24" wide and poured 2½" to 3½" below the finished floor screed. This will assure fast installation and assure accuracy of positioning.
2.2 Installation Sequence of Trench.
2.2.1 Position trench section being careful of location of the power compartment. (See Store Layout Example above.)
2.2.2 Install and assemble duct to trench if required. (see Part 3.2.6) Refer to installation shop drawings.
2.2.3 Couple trench sections. (See Part 3.2).
2.2.4 Carefully align the trench as shown on the plans.
2.2.5 Fasten the support feet securely to the concrete form, structure or grade.
2.2.6 Install end caps as required.

Part 3 —Assembly of Components
3.1 General Assembly Requirements
3.1.1 The power compartment of trench must match and be as shown on the plans.
3.1.2 Continuity of ground must be assured in all metal parts.
3.2 Trench Components.
3.2.1 Do not remove covers before pour.
3.2.2 Trench sections are coupled using coupling clip furnished on the aluminum profile at the end of the trench. Clip may be part of the support assembly.
3.2.3 Check match of internal partition before completing couple.
3.2.4 Set screws on trench coupling clip must be tightened to assure continuity of ground.
3.2.5 If rough slab is not available (see 2.1.3 Note) special care must be taken to assure support of mounting feet and protect against movement during pour.
3.2.6 Junction fittings to adapt trench to underfloor raceway do not require rough slab (see 2.1.3 Note) but must be secure.
3.2.7 Underfloor raceway requires concrete around supports (couplers) and under raceway.
3.2.8 Tape underfloor raceway if ingress of concrete could occur.
3.2.9 Field modification of trench.
3.2.9.1 Where necessary trench can be cut on the jobsite. For this purpose, bandsaws, hacksaws, or cutting wheels can be used.
3.2.9.2 When field cutting, do not remove cover to assure a proper finished joint.
3.2.9.3 Horizontal Ell 's or offsets may be field fabricated by cutting equal angles from each of the pieces to be joined.
a. 45° cuts from axis of trench join to make a 90° horizontal offset.
b. 22½° cuts join to make a 45° horizontal offset.
c. Partitions must match.
d. Use OK/VWI to join pieces.
3.2.9.4 A vertical Ell may be field fabricated using a section of trench cut to desired height and OK/VVW fastening angles used to join sections.

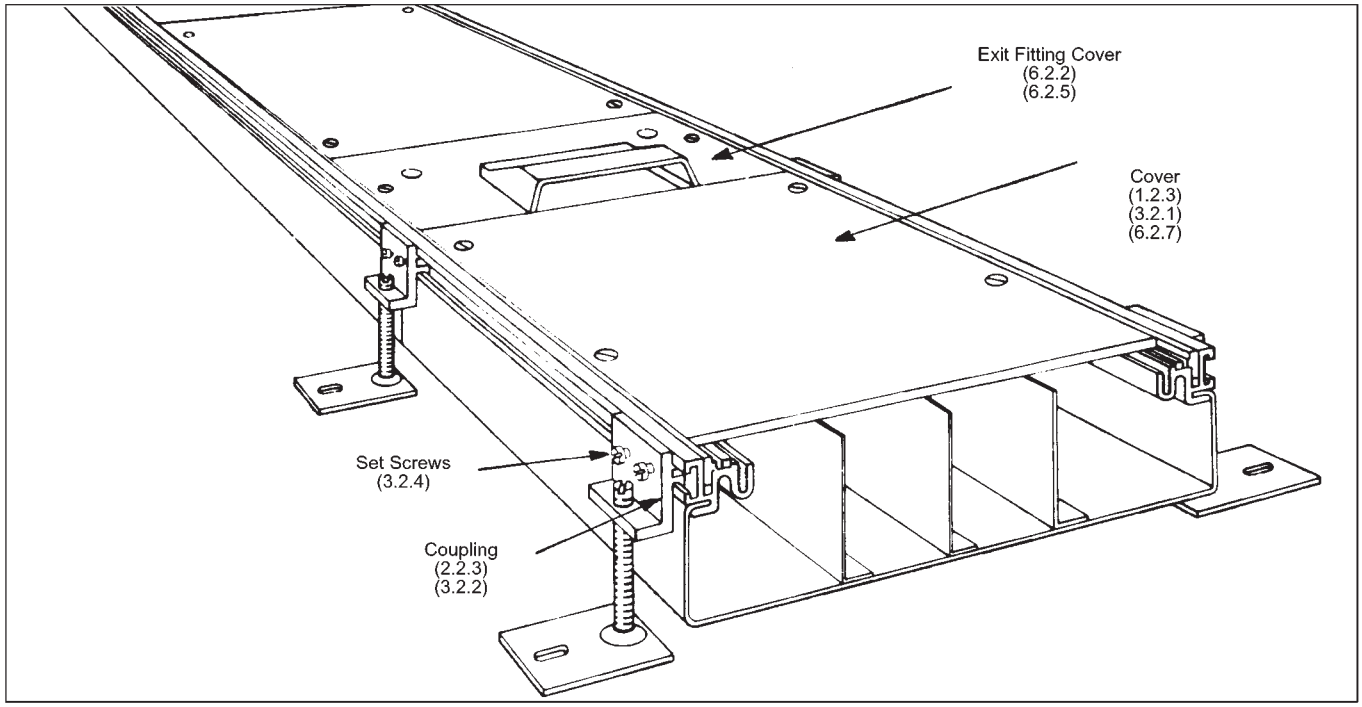
Part 4 —Securing,Elevating and Leveling System Prior to Pour
4.1 General. The top of the system must be at screed level. Specifically this includes the trench covers.
4.1.1 When elevating and leveling system use laser level, electronic level, transit, conventional level, or any approved system.
4.2 Leveling Trench.
4.2.1 Turn leveling screws of the trench support assembly to bring the cover of the trench to screed.
4.2.2 Level the trench in one direction to prevent distortion of system.

Part 5 —During and After Pour
5.1 General Considerations
5.1.1 Check installation for security, location and elevation.
CAUTION: The covers of the system serve as the screed line. They must be protected from accidental movement before and during pour. Correcting components for elevation after concrete has set requires extensive labor.
5.1.2 If concrete mix is especially thin (fluid), gaps and openings in the system should be sealed with duct tape or other approved method.
5.1.3 For aggregate greater than ¼ inch, concrete flow around components must be assured.
5.2 Trench Components.
5.2.1 Covers of trench serve as guide for pouring concrete the level of the finished floor.
5.2.2 Concrete must be inserted under trench by shovel or trowel.
5.2.3 Hand screed to top of trench.
5.2.4 The concrete must adhere tightly to the trench edges.
5.2.5 The covers of the trench must be exposed when the concrete floor is finished.
5.2.6 Remove sufficient covers to allow ventilation after concrete is set.

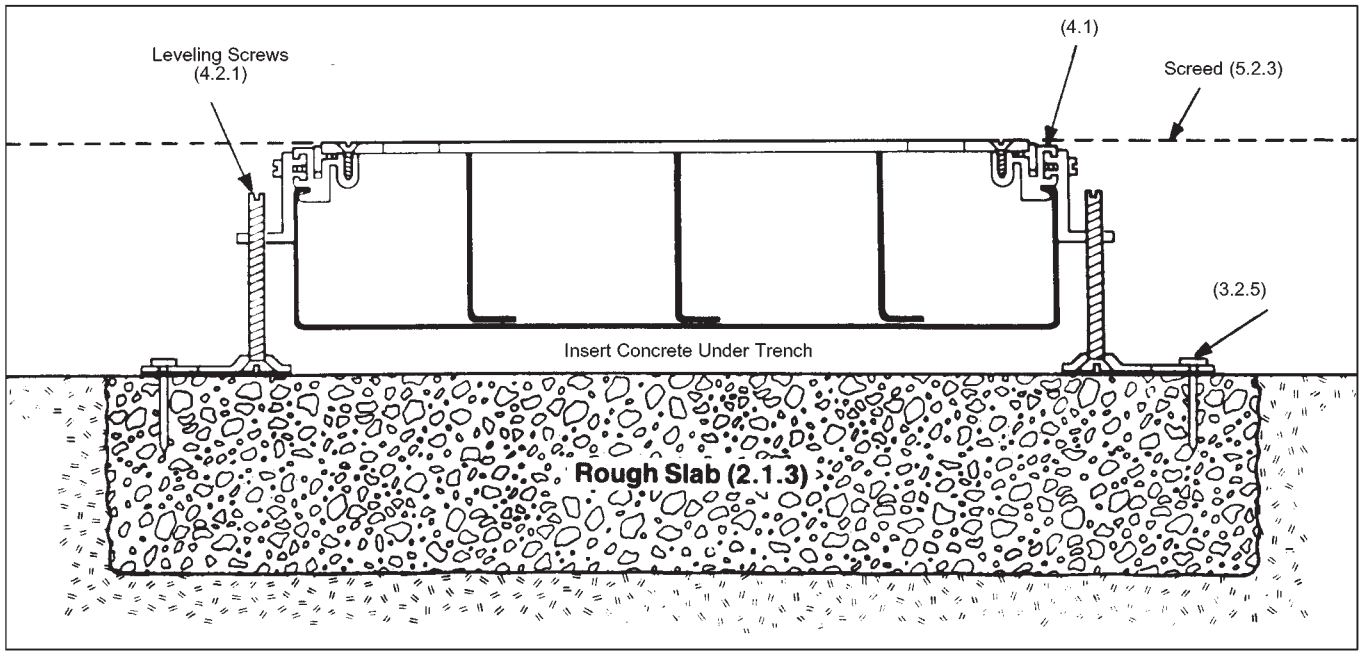
Part 6 —Activation
6.1 Activation Sequence.
6.1.1 Correct any variation in concrete pour along edges of trench.
6.1.2 Remove covers from trench, and inspect installation.
6.2 Activating Trench.
6.2.1 Upon removing covers 6.1.2, lay the covers beside the trench in their relative position.
6.2.2 Where exit fitting covers or other trench exit fittings are required, lay them beside the trench in their relative position.
6.2.3 If floor finish is not to be interrupted by tile trim to establish continuity of floor cover, tile trim is to remain in shipping position. Do not elevate.
6.2.4 Lay the required wiring in the trench.
6.2.5 Mount the exit fitting covers or other trench exit fittings on trench at proper location.
6.2.6 Install cover joint protectors. OK/DSD.
6.2.7 Install standard covers. Covers may be adjusted or cut if required to complete enclosure.
6.2.8 Remove cover adjacent to exit fittings to complete wiring.
6.2.9 Lay floor covering. Take care to assure level floor over trench. Use floor patch if necessary.
6.2.9.1 If tile trim is used, adhesion between outer tile and tile trim must be assured and tile on covers accurately positioned.

Trench Duct Specifications

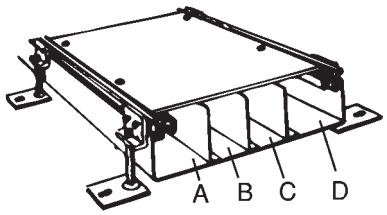
Components



Trench Position Prior to Pour



Trench Duct Wirefill Capacity



OKA/B12-4C

Dimensions – Trench Duct

	A	B	C	D	Total
OKA/B12-4C	6.6	6.6	6.6	6.6	26.4
OKA/B12-3C	8.8	8.8	8.8	—	26.4
OKA/B9-3C	6.7	6.7	6.7	—	20.1

	3.4 Sq.In.Compartment				
Conductor	**RHW/RHH**	**TW**	**THW**	**THWN**	**XHHW**
14	41	100	66	156	103
12	35	79	53	116	81
10	29	61	43	73	62
8	16	28	22	36	29
6	10	16	16	26	21

	5.0 Sq.In.Compartment				
Conductor	**RHW/RHH**	**TW**	**THW**	**THWN**	**XHHW**
14	61	148	97	229	152
12	52	116	79	170	119
10	43	90	64	108	92
8	23	42	33	53	43
6	16	24	24	38	32

	5.4 Sq.In.Compartment				
Conductor	**RHW/RHH**	**TW**	**THW**	**THWN**	**XHHW**
14	66	160	104	248	164
12	56	125	85	184	129
10	46	97	69	117	100
8	25	45	36	57	47
6	17	26	26	41	34

	7.8 Sq.In.Compartment				
Conductor	**RHW/RHH**	**TW**	**THW**	**THHN/THWN**	**XHHW**
14	95	231	151	358	238
12	81	181	123	266	186
10	67	140	100	169	144
8	36	66	52	83	68
6	25	38	38	60	49

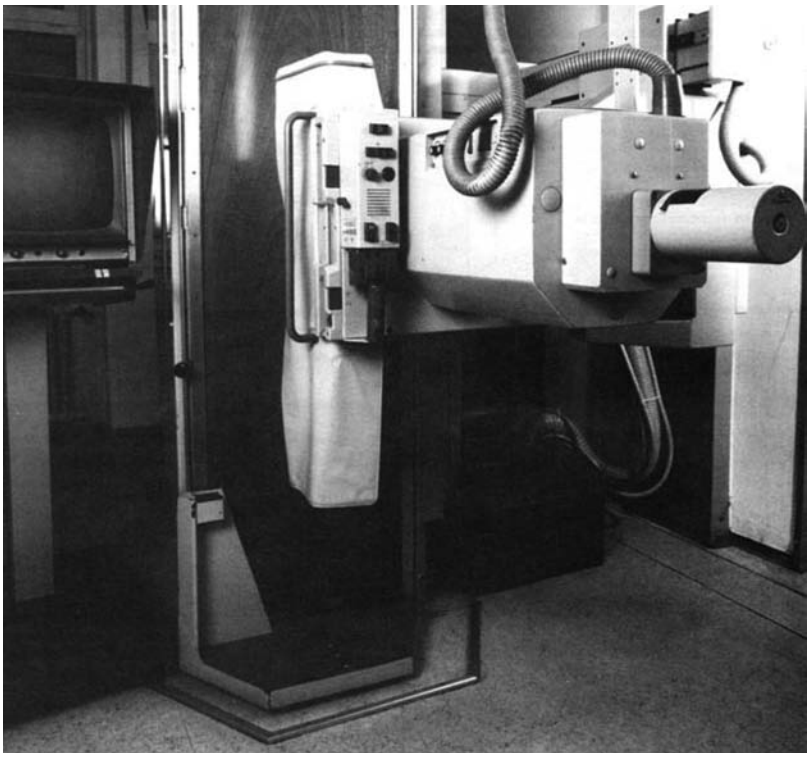
	9.2 Sq.In.Compartment				
Conductor	**RHW/RHH**	**TW**	**THW**	**THHN/THWN**	**XHHW**
14	112	272	178	422	280
12	95	213	146	314	220
10	80	165	118	200	170
8	43	78	61	98	80
6	29	44	44	70	58

	13.7 Sq.In.Compartment				
Conductor	**RHW/RHH**	**TW**	**THW**	**THHN/THWN**	**XHHW**
14	167	405	266	629	418
12	142	318	217	468	328
10	119	246	176	297	253
8	64	116	91	146	120
6	44	66	66	105	87

	15.7 Sq.In.Compartment				
Conductor	**RHW/RHH**	**TW**	**THW**	**THHN/THWN**	**XHHW**
14	192	465	304	721	479
12	163	365	249	536	376
10	136	282	201	341	290
8	74	133	105	168	137
6	50	76	76	121	100

Raceway Solutions™

Wall Duct



Flush or Surface Mounted Wiring System for X-Ray Rooms

Wall Duct is a steel raceway, approved by U.L. for the enclosure of wiring to X-ray machines in medical applications. The system provides complete lay-in wiring capability in order to accomodate the large cables and connectors used in today's installations.

Wall Duct, when used in combination with floor trench, provides protection for X-ray room wiring from control consoles to X-ray machines to power supplies to remote locations.

Wall Duct is available in either flush or surface mount and a combination will usually be required on any job. Vertical runs in the walls are usually flush mounted with horizontal runs on walls and all duct in ceiling plenum being surface type.

Catalog Number System

OWA / D 12 S AL

Wall Duct Product
OWA–Wall Duct
OWB–Adapter
OWC–Coupling
OWD–Reducer Coupling
OWE–End Closure
OWF–Cabinet Connector
OWH–Horizontal Elbow
OWI–Internal Elbow
OWL–External Elbow
OWP–Partition
OWR–Vertical Riser
OWT–"T" Unit
OWV–Trench to Wall Duct Adapter
OWX–"X" Unit

Depth
½" Increments
A = 2"
B = 2½"
C = 3"
D = 3½" Standard
E = 4"

J = 6"

N = 8"

*Other Depths Available

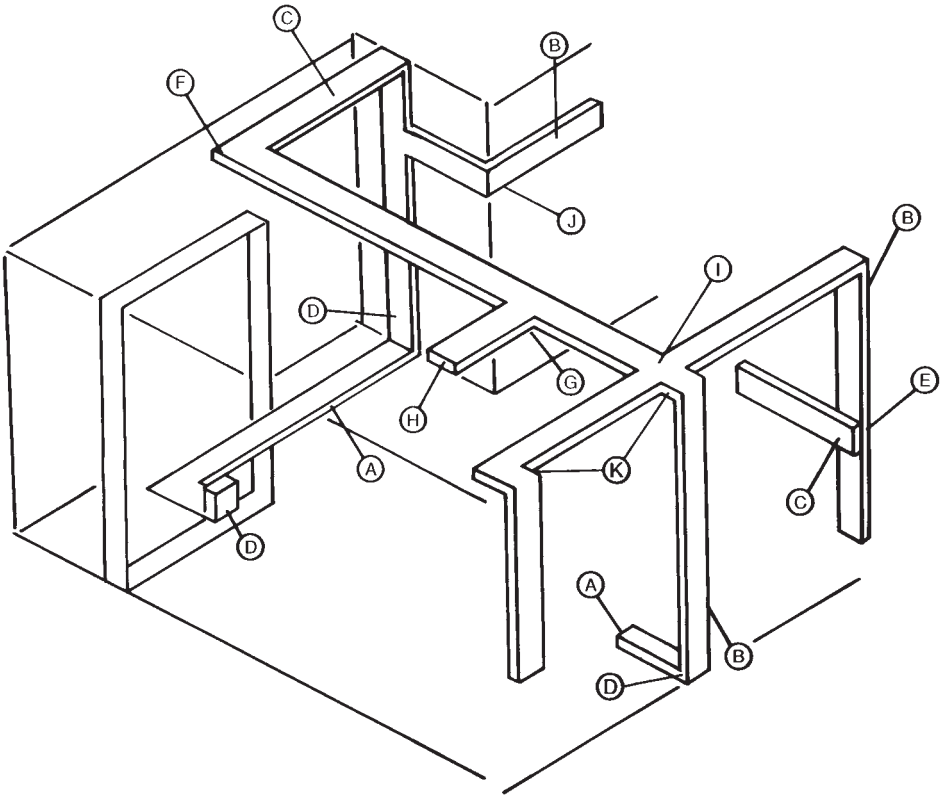
Width
6, 10, 12, & 18
Standard

*Other Widths Available

Cover Style
"S"–Surface
"F"–Flush

Aluminum (optional)

Wall Duct



Wall and Ceiling Duct Description

Wall Duct is manufactured of 14 gauge steel. Bodies are pre-galvanized G90-U and covers are dip painted. The covers may be field painted to match room interiors. Straight bodies are 5'0" long with two 30" coverplates.
Wall Duct is U.L. Listed under File Number: E116245

A. OKA/B12-3C—Trench 12" wide, 2½" deep, 3 compartment.See page 27.

B. OWA/D12F—Wall Duct -12" wide, 3½" deep, flush mounted. See page 37.

C. OWA/D12S—Wall Duct -12" wide, 3½" deep, surface mounted. See page 37.

D. OWR/D12F—Wall Duct Riser -12" wide, 3½" deep, flush mounted. See page 41.

E. OWB/D12-12—Wall Duct Flush to Surface Adapter -12" wide, 3½" deep flush mounted. See page 37.

F. OWH/D12S—Wall Duct 90° Horizontal Elbow -12" wide, 3½" deep, surface mounted. See page 39.

G. OWT/D12S—Wall Duct "T " Unit - 12" wide, 3½" deep, surface mounted. See page 42.

H. OWE/D12S—Wall Duct End Closure -12" wide, 3½" deep, surface mounted. See page 38.

I. OWX/D12S—Wall Duct "X " Unit - 12" wide, 3½" deep, surface mounted. See page 43.

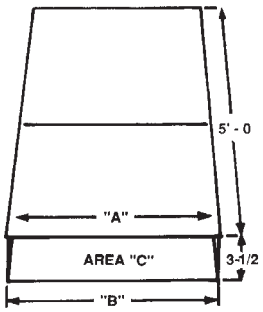
J. OWL/D12F—Wall Duct External Elbow -12" wide, 3½" deep, flush mounted. See page 40.

K. OWI/D12F—Wall Duct Internal Elbow -12" wide, 3½" deep, flush mounted. See page 39.

L. OWA/D18S—Wall Duct —18" wide, 3½" deep, surface mounted. See page 37.

M. OWA/D18F—Wall Duct —18" wide, 3½" deep, flush mounted. See page 37.

Wall Duct



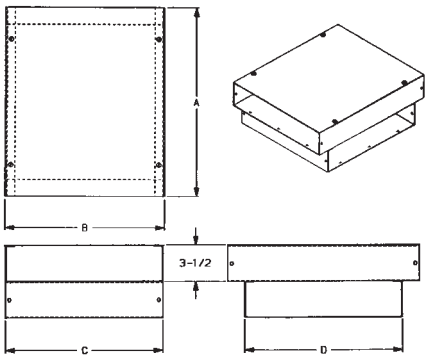
12" or 18" wide x 3½" deep x 60" long body with two 30" long coverplates. Each piece includes one coupling (Cat. No. OWC/D12 or OWC/D18) and necessary screws.

Wall and Ceiling Duct

Cat. No.	"A" Cover Width	"B" Body Width	"C" Area
OWA/D12S	12"	11 13/16"	39 sq.in.
OWA/D18S	18"	17 13/16"	59 sq.in.
OWA/D12F	14"	11 13/16"	39 sq.in.
OWA/D18F	20"	17 13/16"	59 sq.in.

May be field cut to required length. See installation instructions.
Material: 14 gauge pre-galvanized steel. Also available in aluminum. (consult factory)
UL Listing No. E116245

Note: Table only an example of available sizes. Other lengths, depths & widths are available. Please refer to page 35 for catalog number system.

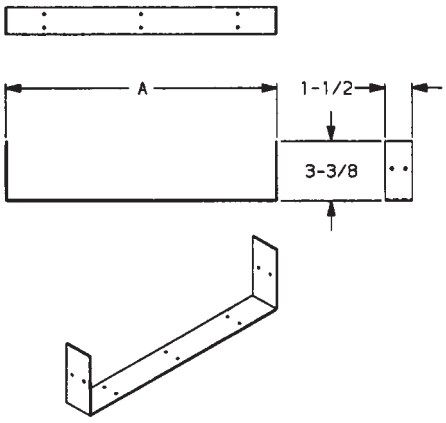


To transition from surface raceway to flush delivery.

Flush to Surface Adapter

Cat. No.	A	B	C	D
OWB/D12-12	15"	12"	11 13/16"	11 13/16"
OWB/D12-18	15"	18"	17 13/16"	11 13/16"
OWB/D18-12	21"	12"	11 13/16"	17 13/16"
OWB/D18-18	21"	18"	17 13/16"	17 13/16"

Includes two couplings.
Material: 14 gauge pre-galvanized steel.
UL Listing No. E116245



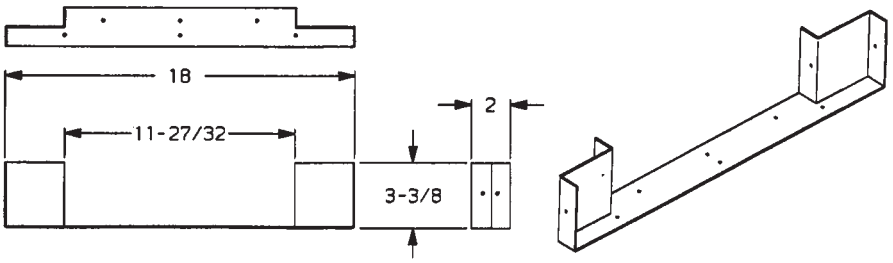
Coupling

Cat. No.	A
OWC/D12	12"
OWC/D18	18"

Screws included.

Material: 14 gauge pre-galvanized steel.
UL Listing No. E116245

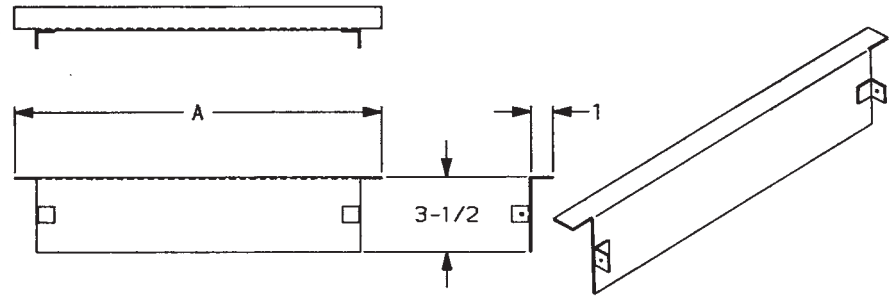
Wall Duct



Reducer Coupling

Cat. No.	Description
OWD/D	Reduce from 18" to 12" duct

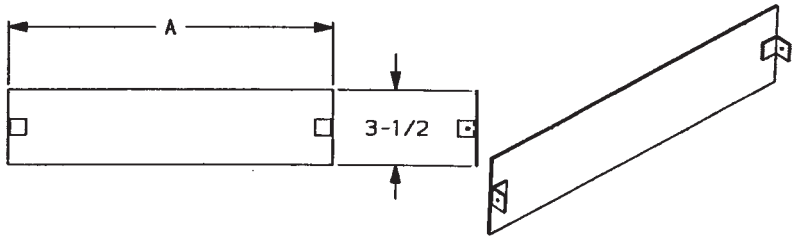
Screws included.
Material: 14 gauge pre-galvanized steel.
UL Listing No. E116245



Flush End Closure

Cat. No.	A
OWE/D12F	14"
OWE/D18F	20"

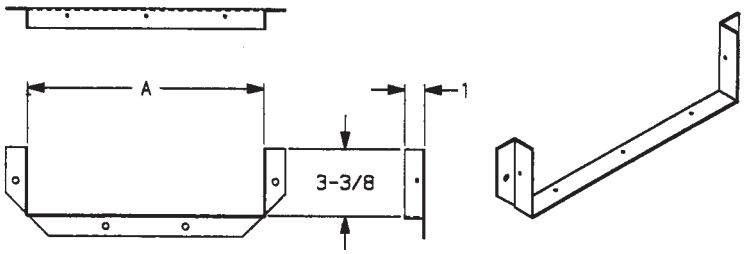
Screws included.
Material: 14 gauge pre-galvanized steel.
UL Listing No. E116245



Surface End Closure

Cat. No.	A
OWE/D12S	12"
OWE/D18S	18"

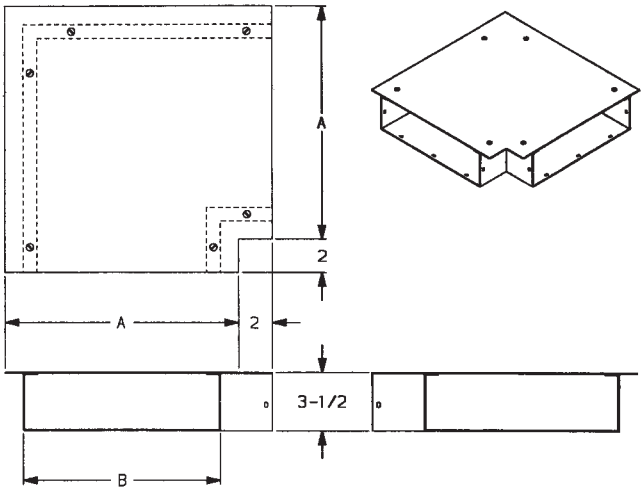
Screws included.
Material: 14 gauge pre-galvanized steel.
UL Listing No. E116245



Cabinet Connector

Cat. No.	A
OWF/D12	11⅞"
OWF/D18	17⅞"

Material: 14 gauge pre-galvanized steel.
UL Listing No. E116245



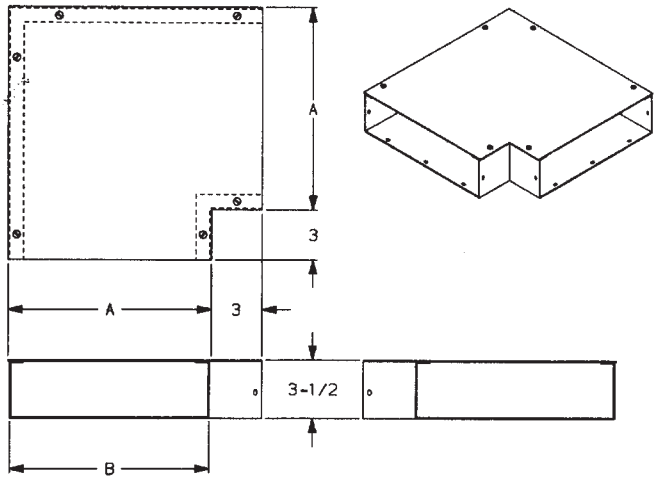
Flush 90 °

Horizontal Elbow

Cat. No.	A	B
OWH/D12F	14"	11 13/16"
OWH/D18F	20"	17 13/16"

Includes one coupling.

Material: 14 gauge pre-galvanized steel.
UL Listing No. E116245



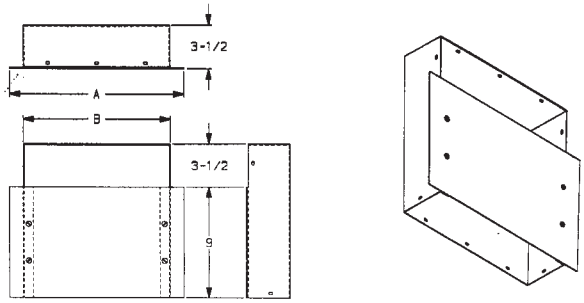
Surface 90 °

Horizontal Elbow

Cat. No.	A	B
OWH/D12S	12"	11 13/16"
OWH/D18S	18"	17 13/16"

Includes one coupling.

Material: 14 gauge pre-galvanized steel.
UL Listing No. E116245



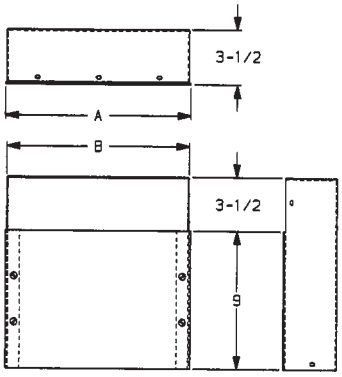
Flush Internal Elbow

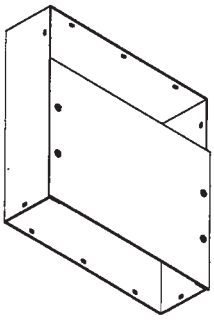
Cat. No.	A	B
OWI/D12F	14"	11 13/16"
OWI/D18F	20"	17 13/16"

Includes one coupling.

Material: 14 gauge pre-galvanized steel.
UL Listing No. E116245

Wall Duct



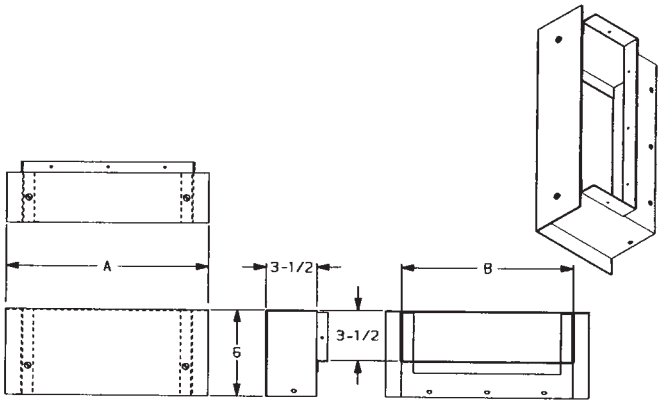


Surface Internal Elbow

Cat. No.	A	B
OWI/D12S	12"	11 13/16"
OWI/D18S	18"	17 13/16"

Includes one coupling.

Material: 14 gauge pre-galvanized steel.
UL Listing No. E116245

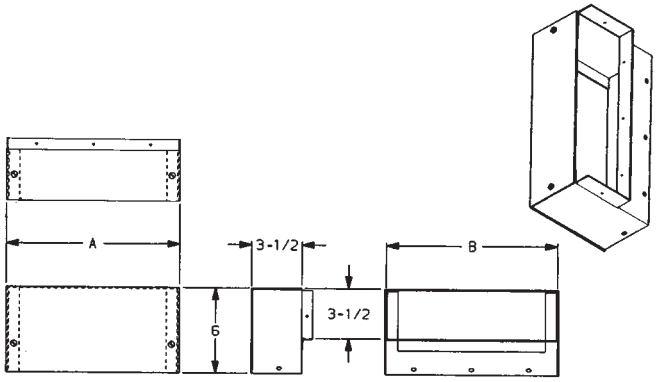


Flush External Elbow

Cat. No.	A	B
OWL/D12F	14"	11 13/16"
OWL/D18F	20"	17 13/16"

Includes one coupling.

Material: 14 gauge pre-galvanized steel.
UL Listing No. E116245



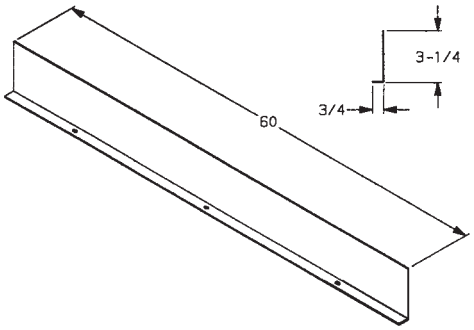
Surface External Elbow

Cat. No.	A	B
OWL/D12S	12"	11 13/16"
OWL/D18S	18"	17 13/16"

Includes one coupling.

Material: 14 gauge pre-galvanized steel.
UL Listing No. E116245

Wall Duct

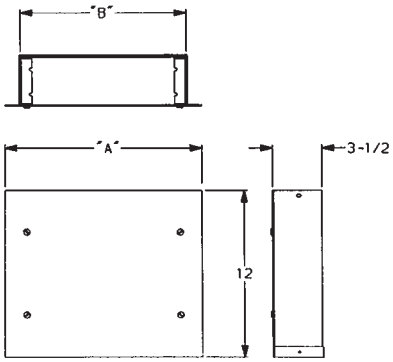


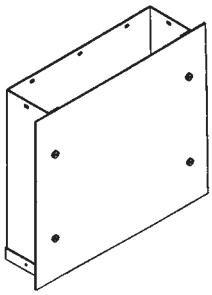
Partition

Cat. No.	Description
OWP/D	Internal duct partition

Screws included.

Material: 14 gauge pre-galvanized steel.
UL Listing No. E116245

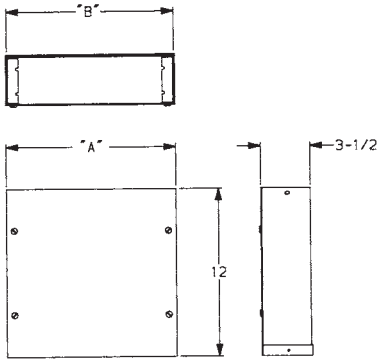


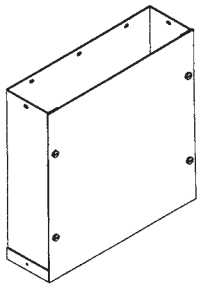


Flush Vertical Riser

Cat.No.	A	B
OWR/D12F	14"	11 13/16"
OWR/D18F	20"	17 13/16"

Includes one coupling.
Material: 14 gauge pre-galvanized steel.
UL Listing No. E116245





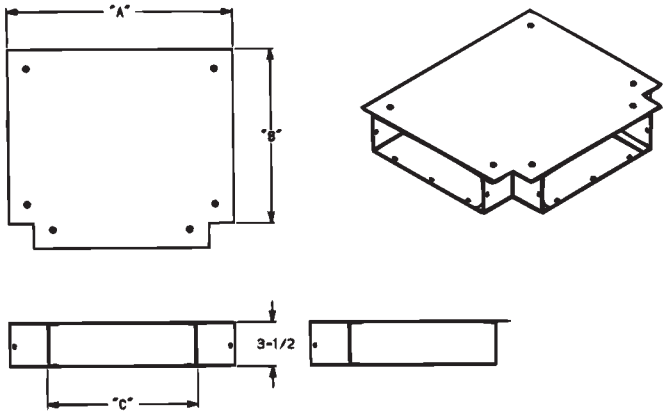
Surface Vertical Riser

Cat. No.	A	B
OWR/D12S	12"	11 13/16"
OWR/D18S	18"	17 13/16"

Includes one coupling.

Material: 14 gauge pre-galvanized steel.
UL Listing No. E116245

Wall Duct

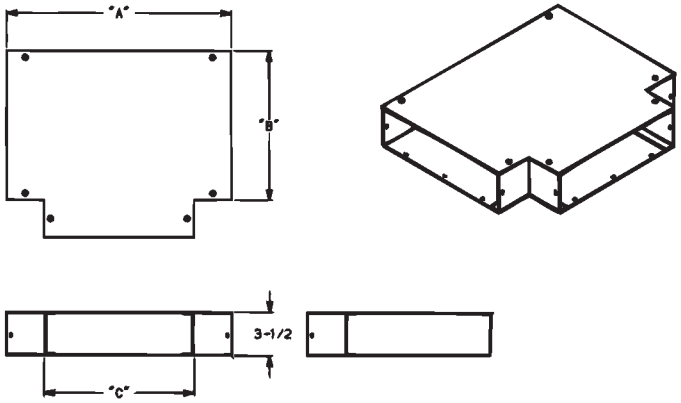


Flush "T " Unit

Cat. No.	A	B	C
OWT/D12F	18"	14"	11 13/16"
OWT/D18F	24"	20"	17 13/16"

Includes one coupling.

Material: 14 gauge pre-galvanized steel.
UL Listing No. E116245

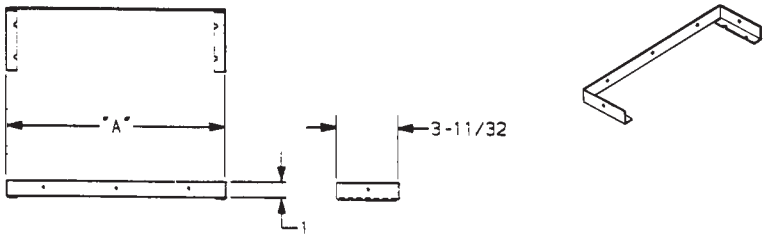


Surface "T " Unit

Cat. No.	A	B	C
OWT/D12S	18"	12"	11 13/16"
OWT/D18S	24"	18"	17 13/16"

Includes one coupling.

Material: 14 gauge pre-galvanized steel.
UL Listing No. E116245



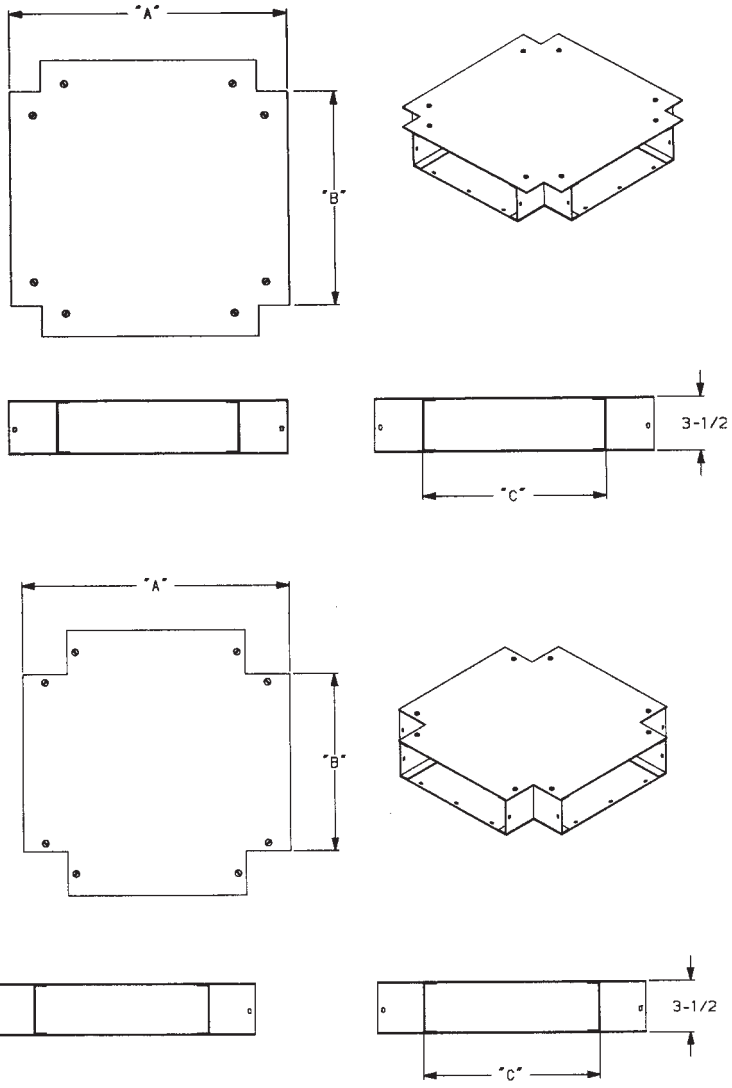
Trench to Wallduct Adapter

Cat. No.	A
OWV/D12	11 7/8"
OWV/D18	17 7/8"

Screws included.

Material: 14 gauge pre-galvanized steel.
UL Listing No. E116245

Wall Duct



Flush "X" Unit

Cat. No.	A	B	C
OWX/D12F	18"	14"	11 13/16"
OWX/D18F	24"	20"	17 13/16"

Includes two couplings.

Material: 14 gauge pre-galvanized steel.
UL Listing No. E116245

Surface "X" Unit

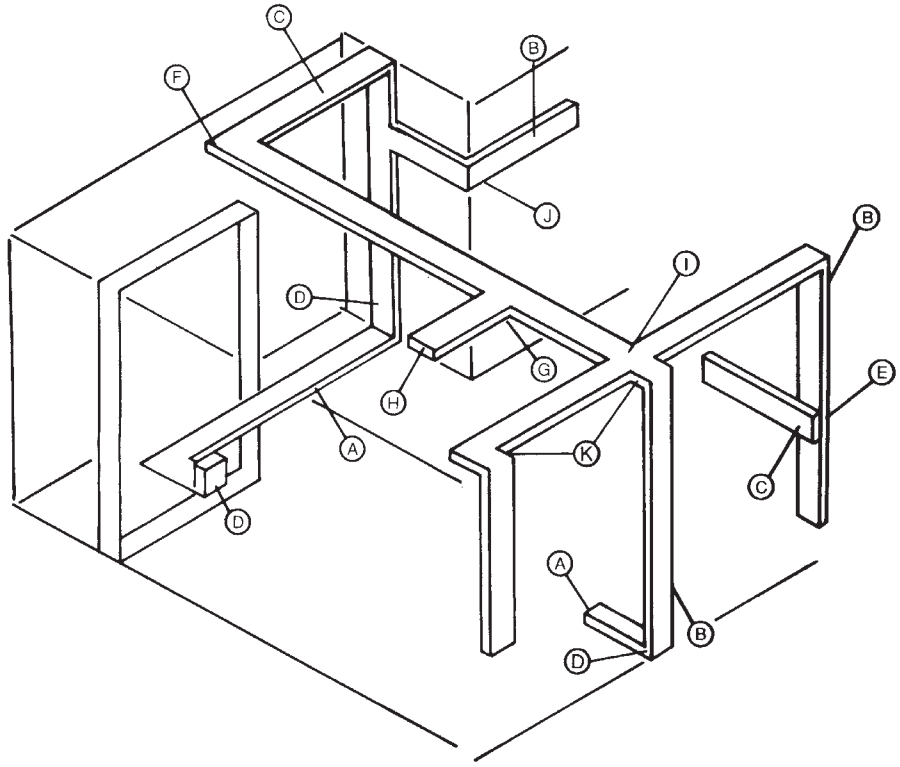
Cat. No.	A	B	C
OWX/D12S	18"	12"	11 13/16"
OWX/D18S	24"	18"	17 13/16"

Includes two couplings.

Material: 14 gauge pre-galvanized steel.
UL Listing No. E116245

Raceway Solutions™

Wall Duct Installation Instructions



A. OKA/B12-3C—Trench
B. OWA/D12F—Wall Duct
C. OWA/D12S—Wall Duct
D. OWR/D12F—Wall Duct Riser
E. OWB/D12-12—Wall Duct Flush to Surface Adapter
F. OWH/D12S—Wall Duct 90° Horizontal Elbow
G. OWT/D12S—Wall Duct "T " Unit
H. OWE/D12S—Wall Duct End Closure
I. OWX/D12S—Wall Duct "X " Unit
J. OWL/D12F—Wall Duct External Elbow
K. OWI/D12F—Wall Duct Internal Elbow
L. OWA/D18S—Wall Duct
M. OWA/D18F—Wall Duct

Electrical contractor shall review the installation drawings provided and become familiar with all components used. Wall Duct must be installed and used in accordance with National Electrical Code Articles 300 and 660. Derating of power conductors as explained in note 8 of Tables 310-16 and 310-19 of the National Electrical Code shall govern. The maximum wire fill shall not exceed 40% of the interior cross sectional area of the Wall Duct. In all cases, local codes shall govern installation and use of this product.

Wall Duct may be mounted with screws through the sides or back. Screw must be installed so the head of the screw is inside the Wall Duct body. Exposed threads are not permitted on the inside of raceway. Overhead run of Wall Duct may be mounted directly to structural members or hung via trapeze. All hardware for mounting is by others, not Raceway Solutions.

All Wall Duct shall be installed, minus coverplates, before any wiring is placed in any portion of system. Wall Duct and fittings are to be assembled, minus coverplates, using the couplings and screws (8 x ¼ PHST-AB) provided. The screws are to be installed from the inside of the bodies.

When necessary to field cut a straight length to suit conditions, the coupling holes must be field drilled. Use the coupling as a template for proper hole placement. Do not enlarge diameter of coupling holes when field drilling duct body coupling holes.

Pull boxes to be furnished by others.

Field install accessories such as partitions, etc. by match drilling $\frac{5}{32}$" diameter holes in the duct body using holes in item as template, and installing self-tapping screws provided with each item.

All above data per NEC, Chapter 9, Table 1.

Wall Duct Wire Fill Capacity

	39 Sq. In. Compartment				
Conductor	**RHW/RHH**	**TW**	**THW**	**THWN**	**XHHW**
14	600	1122	746	1608	1122
12	442	862	600	1173	862
10	357	642	468	739	642
	59 Sq. In. Compartment				
Conductor	**RHW/RHH**	**TW**	**THW**	**THWN**	**XHHW**
14	908	1698	1129	2433	1698
12	669	1304	908	1774	1304
10	540	971	709	1118	971

Number of allowable conductors at 40% fill.

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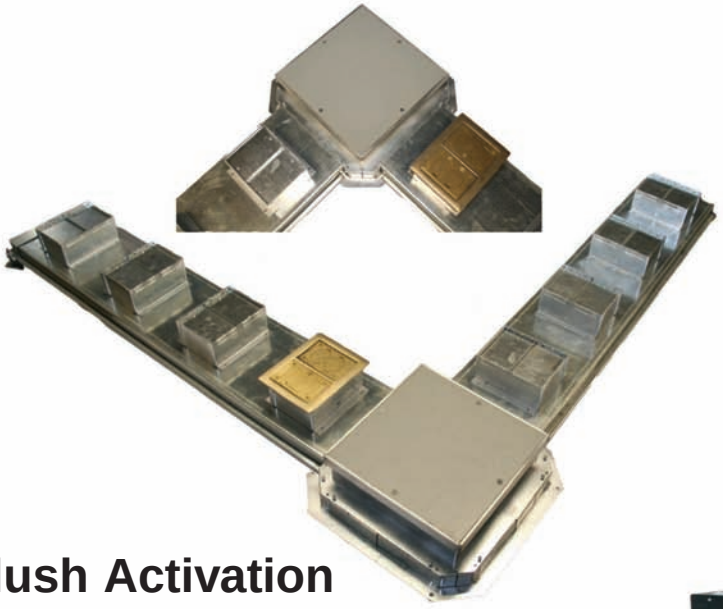
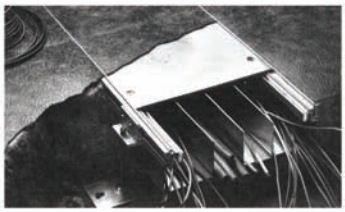
Conventional Underfloor Duct



Flush Activation Underfloor Duct

Casino Duct



Trench and Hospital Wall Duct

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