

NOVA Energy & Automation



## Product Specifications

### 18 inch Trench Duct

Model T183560 Ferrous and Non Ferrous

03 January 2012

# Product Description

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## 1. Large Capacity Trench (Floor) Duct

Large capacity metal trench duct is commonly used to route signalling, power, data, and mechanical connections in the floor to medical imaging equipment during new construction and renovations. Trench Duct allows cable routing to be accomplished in applications where conduit is not feasible while maintaining the integrity and aesthetics of the medical imaging suite. Upgrades and maintenance to the medical imaging equipment are easy to accomplish with the removable covers and modular design of the Nova trench duct.

Steel wire ways (Ferrous Metal) are commonly used with X-ray, CT, Mammography, Linear Accelerator, and Nuclear Camera Installations.

Aluminium wire ways (Non Ferrous Metal) are commonly used inside of the MRI Magnet room.

Trench Duct can be installed in load-bearing applications flush mounted in the floor. Trench Duct is manufactured in a variety of sizes from 4 inch up to 48 inches.

Nova duct is engineered for the simplest installation. Trench duct is manufactured to the exact dimensions of the individual project which requires no field cutting or modifications.

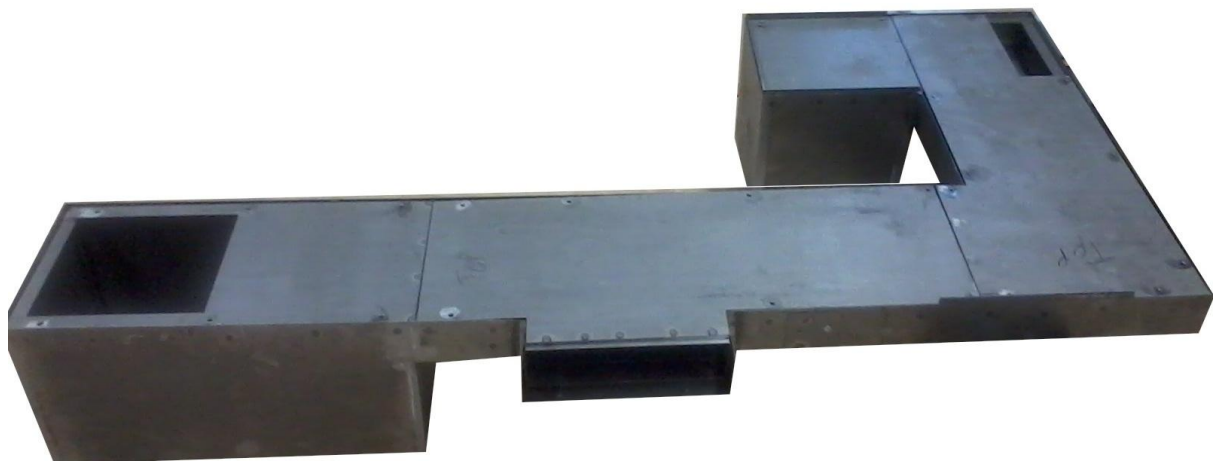


Figure 1: Trench Duct

## 2. Features/Benefits

### Features

- ETL listed to UL 870 and cUL standards to conform to NEC.
- Constructed of 14GA A36 Galvanized steel or 12GA 3003 formed Aluminium
- ¼" plated steel load bearing cover, with center supports on sizes which exceed 18"
- Painted during manufacturing to provide a clean finish to the room DuPont Imron 3.5 HG high gloss ASA-49 (Light Grey)
- Guaranteed Bill of Materials
- Auto Cad Drawings available for every project
- Superior packaging and labelling
- Continuous water tight gasket runs the entire length of the duct

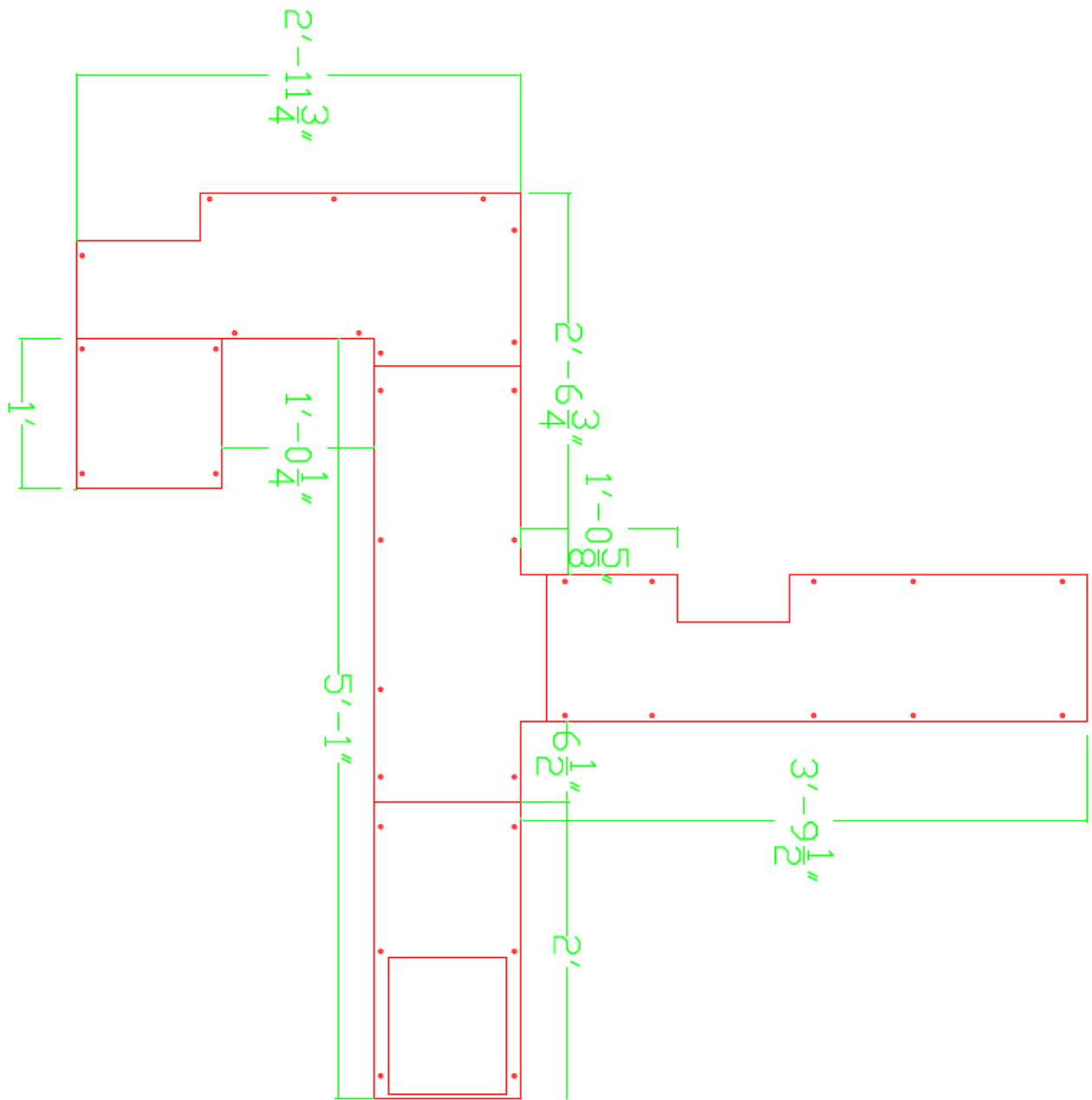
### Benefits

- Several sizes available from stock: 6"x3.5", 12"x3.5", 18"x3.5"
- Custom sizes and fittings available in 1-2 weeks
- Allows access to wiring and mechanical connections for maintenance
- Provides a standardized platform for future modifications or upgrades
- ¼" Rabbetted cover provides superior protection of cabling, and clean look during field modifications.
- Allows cable routing to be accomplished in applications where conduit is not feasible
- Engineering and customer service support throughout the project
- No Small order charge
- Packaged and labeled with project identification such as room number, wall number and configuration to assist in faster installations

### Options

- Custom Paint (please specify DuPont code)
- Custom sizes up to 48 inches wide
- Custom fittings and angles designed around the project specifications
- Lockable security Cover
- Non Ferrous for MRI Installation
- Load ratings available up to 36 ton

### 3. Auto Cad Drawings



**Figure 2: Example of Auto Cad Drawing for Trench Duct**

Auto cad drawings are created for every project and the measurements are verified in the field prior to manufacturing. The trench duct is assembled prior to shipping and all measurements are verified. The end result is a trench duct that is tested and does not require any field modifications. Installation simply requires fastening the components together and grouting the duct into the trench. A large, custom, trench duct installation can be installed in under 2 hours.

## 4. Specifications

### 18 inch Trench Duct Component Quick Reference Guide

Description	Part Number	Reference
Duct Body with cover	T183560-D	Figure 3
Coupling	T1835-CP	Figure 4
6" to 18" Coupling	T0618A	Figure 5
12" to 18" Coupling	T1218A	Figure 6
Divider	W35-DV	Figure 7
End Closure	T1835-EC	Figure 8
Floor to Wall Duct Riser	T1835-R90	Figure 9
Flat 90°	T1835-F90	Figure 10
Flat 45°	T1835-F45	Figure 11
Flat T	T1835-FT	Figure 12
Flat T Tunnel	T1835-FTUN	-
Flat X	T1835-FX	Figure 13
Flat X Tunnel	T1835-FXTUN	-
Grommet Material	Grommet	Figure 14
Custom Fittings also available		

### 18 inch Trench Duct Body



Figure 3: 18 inch Trench Duct Body

<b>Model</b>	T183560-D
<b>Description</b>	18 inch trench duct body
<b>Construction</b>	14 Gauge A36 Galvanized steel (For Aluminium specify P/N AT183560-D)
<b>Cover Construction</b>	Rabbetted cover ¼" mild steel (or aluminium) rated for 200lbs/sq ft
<b>Finish</b>	DuPont Imron 3.5 HG high gloss ASA-49 (Light Grey)
<b>Grounding</b>	Grounding Lug included
<b>Fill Capacity</b>	12.6 inch <sup>2</sup>
<b>Dimensions</b>	18" W x 3.5" H x 60" L
<b>Weight</b>	
<b>Approvals</b>	ETL Listed to UL/cUL 870 file 100450372CRT-001a, NEC Article 376, NEC 517
<b>Hardware</b>	spring nuts, clips, pre-drilled holes, mounting screws, and levelling bolts included

## 18 inch Trench Duct Coupling

<b>Model</b>	T1835-CP
<b>Description</b>	18 inch steel trench duct coupling used to connect 2 sections of 18 inch duct. 1 piece needed for every splice. The coupling is welded to the outside of the first section of trench duct and is fastened to the next piece of trench duct with supplied hardware. The coupling sits .25" below finished floor level.
<b>Construction</b>	14 Gauge A36 Galvanized steel (For Aluminium please specify P/N AW1835-CP)
<b>Finish</b>	DuPont Imron 3.5 HG high gloss ASA-49 (Light Grey)
<b>Hardware</b>	Pre drilled holes and self tapping screws included
<b>Dimensions</b>	5.75" W x 3.25" H x 3.25" L
<b>Weight</b>	
<b>Approvals</b>	ETL Listed to UL/cUL 870 file 100450372CRT-001a, NEC Article 376, NEC 517



Figure 4: 18 inch Trench Duct Coupling.  
Trench Duct Body shaded green to emphasize coupling

## 6 inch to 18 inch Trench Duct Coupling

<b>Model</b>	T0618A
<b>Description</b>	6 inch steel trench duct coupling used to connect 6 inch duct to 18 inch duct. 1 piece needed for every splice.
<b>Construction</b>	14 Gauge A36 Galvanized steel (For Aluminium please specify P/N AT0618A)
<b>Finish</b>	DuPont Imron 3.5 HG high gloss ASA-49 (Light Grey)
<b>Hardware</b>	Pre drilled holes and self tapping screws included
<b>Dimensions</b>	6" W to 18"W x 3.25" H x 3.25" L
<b>Weight</b>	
<b>Approvals</b>	ETL Listed to UL/cUL 870 file 100450372CRT-001a, NEC Article 376, NEC 517

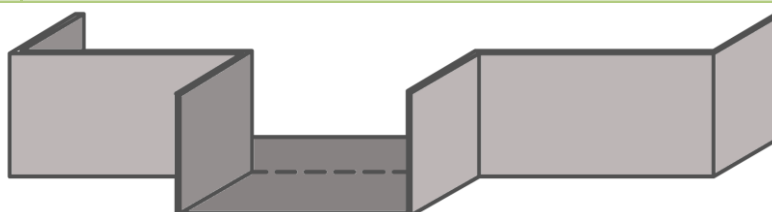


Figure 5: 6 inch to 18 inch Trench Duct Coupling

## 12 inch to 18 inch Trench Duct Coupling

<b>Model</b>	T1218A
<b>Description</b>	12 inch steel trench duct coupling used to connect 12 inch duct to 18 inch duct. 1 piece needed for every splice.
<b>Construction</b>	14 Gauge A36 Galvanized steel (For Aluminium please specify P/N AT1218A)
<b>Finish</b>	DuPont Imron 3.5 HG high gloss ASA-49 (Light Grey)
<b>Hardware</b>	Pre drilled holes and self tapping screws included
<b>Dimensions</b>	12" W to 18" W x 3.25" H x 3.25" L
<b>Weight</b>	
<b>Approvals</b>	ETL Listed to UL/cUL 870 file 100450372CRT-001a, NEC Article 376, NEC 517

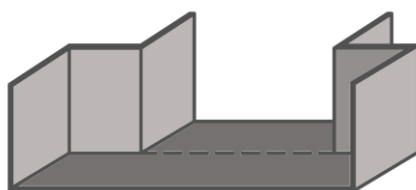


Figure 6: 12 inch to 18 inch Trench Duct Coupling

## 3.5 inch Divider

<b>Model</b>	W35-DV
<b>Description</b>	3.5 inch divider used to separate power and signalling cables inside of the duct. Used to create multiple compartments inside of 1 piece of wireway.
<b>Construction</b>	14 Gauge A36 Galvanized steel
<b>Finish</b>	DuPont Imron 3.5 HG high gloss ASA-49 (Light Grey)
<b>Hardware</b>	Pre drilled holes and mounting hardware included
<b>Dimensions</b>	3" H x 60" L
<b>Weight</b>	4.4 lbs
<b>Approvals</b>	ETL Listed to UL/cUL 870 file 100450372CRT-001a, NEC Article 376, NEC 517



Figure 7: Wire Duct Divider

## 18 inch Trench Duct End Closure

<b>Model</b>	T1835-EC
<b>Description</b>	18 inch steel trench duct end closure used to terminate wire duct
<b>Construction</b>	14 Gauge A36 Galvanized steel
<b>Finish</b>	DuPont Imron 3.5 HG high gloss ASA-49 (Light Grey)
<b>Hardware</b>	Pre drilled holes and mounting hardware included
<b>Dimensions</b>	18" W x 3.5" H x 3.5" L
<b>Weight</b>	1.25 lbs
<b>Approvals</b>	ETL Listed to UL/cUL 870 file 100450372CRT-001a, NEC Article 376, NEC 517



Figure 8: 18 inch Trench Duct End Closure

## 18 inch Trench Duct Riser

<b>Model</b>	T1835-R90
<b>Description</b>	Inside 90 degree elbow used to transition from trench duct to vertical wall duct.
<b>Construction</b>	14 Gauge A36 Galvanized steel
<b>Finish</b>	DuPont Imron 3.5 HG high gloss ASA-49 (Light Grey)
<b>Hardware</b>	
<b>Fill Capacity</b>	12.6 inch <sup>2</sup>
<b>Dimensions</b>	Duct dimensions 18" W x 3.5" H Outside Edge= 2.5" L (F) Inside Edge= 18" L (E)
<b>Weight</b>	
<b>Max Wire Gauge</b>	2/0 due to 90° bend radius of fitting, if large wire gauge is needed call for custom fitting.
<b>Approvals</b>	ETL Listed to UL/cUL 870 file 100450372CRT-001a, NEC Article 376, NEC 517



Figure 9: 18 inch Trench Duct Riser



## 18 inch Trench Duct Flat 90<sup>0</sup>

<b>Model</b>	T1835-F90
<b>Description</b>	Flat (Horizontal) 90 degree turn.
<b>Construction</b>	14 Gauge A36 Galvanized steel
<b>Cover Construction</b>	Rabbetted cover ¼" mild steel (or aluminium) rated for 200lbs/sq ft
<b>Finish</b>	DuPont Imron 3.5 HG high gloss ASA-49 (Light Grey)
<b>Hardware</b>	
<b>Fill Capacity</b>	12.6 inch <sup>2</sup>
<b>Dimensions</b>	Duct dimensions 18" W x 3.5" H Outside Edge= 20" L (F, D) Inside Edge= 2" L (A, G)
<b>Weight</b>	
<b>Max Wire Gauge</b>	2/0 due to 90 <sup>0</sup> bend radius of fitting, if large wire gauge is needed call for custom fitting
<b>Approvals</b>	ETL Listed to UL/cUL 870 file 100450372CRT-001a, NEC Article 376, NEC 517

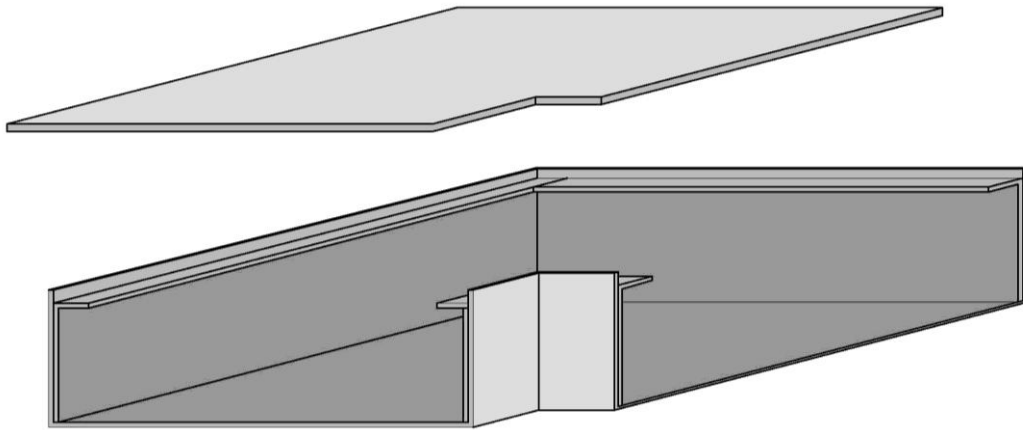


Figure 10: 18 inch Trench Duct Flat 90<sup>0</sup>

## 18 inch Trench Duct Flat 45<sup>0</sup>

<b>Model</b>	T1835-F45
<b>Description</b>	Flat (Horizontal) 45 degree turn.
<b>Construction</b>	14 Gauge A36 Galvanized steel
<b>Cover Construction</b>	Rabbetted cover ¼" mild steel (or aluminium) rated for 200lbs/sq ft
<b>Finish</b>	DuPont Imron 3.5 HG high gloss ASA-49 (Light Grey)
<b>Hardware</b>	
<b>Fill Capacity</b>	12.6 inch <sup>2</sup>
<b>Dimensions</b>	Duct dimensions 18" W x 3.5" H Outside Edge= 20" L (F, D) Inside Edge= 2" L (A, G)
<b>Weight</b>	
<b>Max Wire Gauge</b>	Not Applicable- Bending Radius does not exceed 45 <sup>0</sup>
<b>Approvals</b>	ETL Listed to UL/cUL 870 file 100450372CRT-001a, NEC Article 376, NEC 517

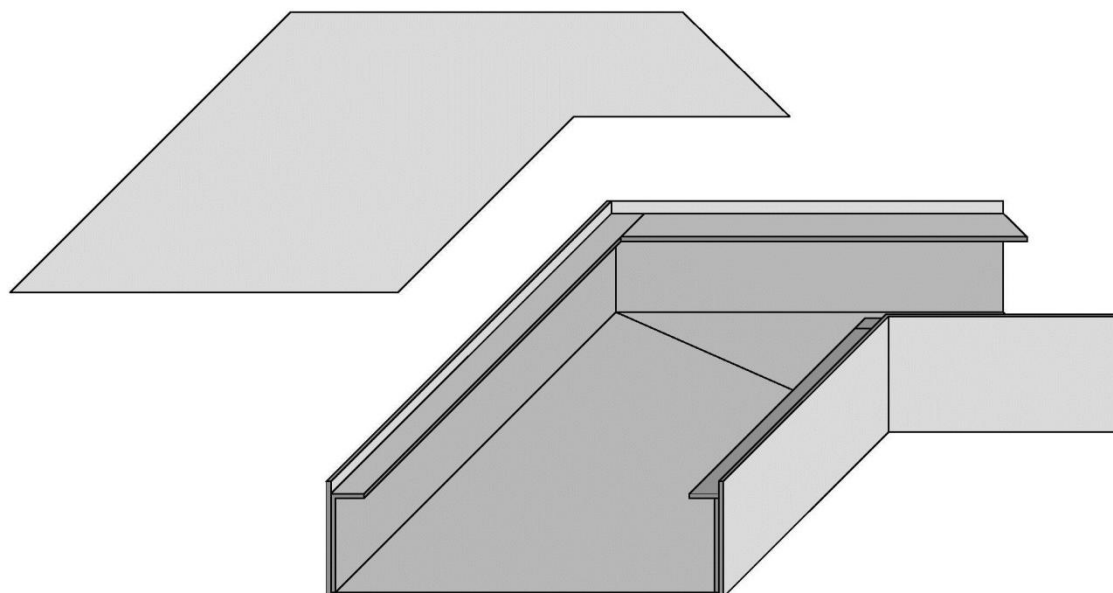


Figure 11: 18 inch Trench Duct Flat 45<sup>0</sup>

## 18 inch Trench Duct Flat T

<b>Model</b>	T1835-FT
<b>Description</b>	Trench Duct Flat T intersection.
<b>Construction</b>	14 Gauge A36 Galvanized steel
<b>Cover Construction</b>	Rabbetted cover ¼" mild steel (or aluminium) rated for 200lbs/sq ft
<b>Finish</b>	DuPont Imron 3.5 HG high gloss ASA-49 (Light Grey)
<b>Hardware</b>	
<b>Fill Capacity</b>	12.6 inch <sup>2</sup>
<b>Dimensions</b>	Duct dimensions 18" W x 3.5" H Long Edge= 22" L (D)
<b>Weight</b>	
<b>Max Wire Gauge</b>	2/0 due to 90° bend radius of fitting, if large wire gauge is needed call for custom fitting
<b>Approvals</b>	ETL Listed to UL/cUL 870 file 100450372CRT-001a, NEC Article 376, NEC 517
<b>Optional Fittings</b>	Divider Tunnel W1835-FTun

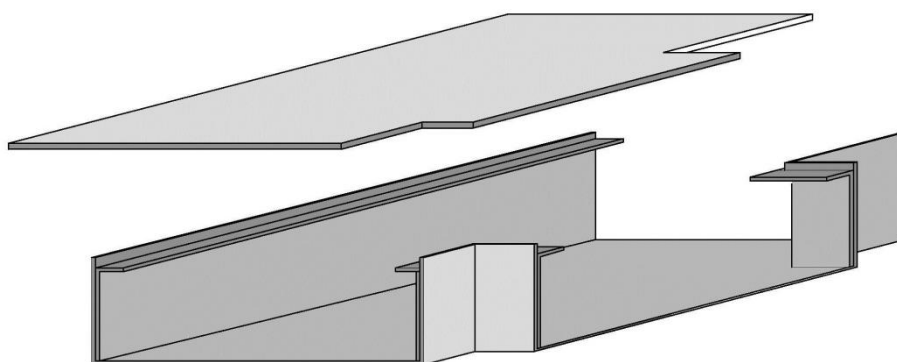


Figure 12: 18 inch Trench Duct Flat T

## 18 inch Trench Duct Flat X

<b>Model</b>	T1835-FX
<b>Description</b>	Trench Duct Flat X intersection.
<b>Construction</b>	14 Gauge A36 Galvanized steel
<b>Cover Construction</b>	Rabbetted cover ¼" mild steel (or aluminium) rated for 200lbs/sq ft
<b>Finish</b>	DuPont Imron 3.5 HG high gloss ASA-49 (Light Grey)
<b>Hardware</b>	
<b>Fill Capacity</b>	12.6 inch <sup>2</sup>
<b>Dimensions</b>	Duct dimensions 18" W x 3.5" H Long Edge= 22" L (D)
<b>Weight</b>	
<b>Max Wire Gauge</b>	2/0 due to 90° bend radius of fitting, if large wire gauge is needed call for custom fitting
<b>Approvals</b>	ETL Listed to UL/cUL 870 file 100450372CRT-001a, NEC Article 376, NEC 517
<b>Optional Fittings</b>	Divider Tunnel W1835-FXTun

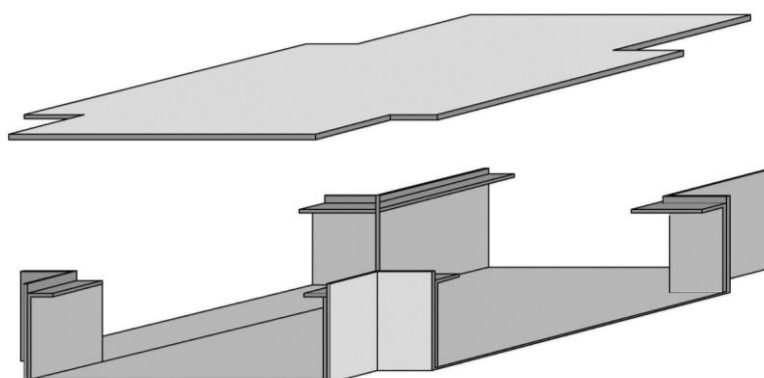


Figure 13: 18 inch Trench Duct Flat X

## Grommet Material

<b>Model</b>	Grommet
<b>Description</b>	Rubber reinforced with an aluminium insert used to protect the cabling when field modifications have been made to the wire duct.
<b>Dimensions</b>	20' L x .5" H



Figure 14: Grommet Material

## 5. Packaging

Materials are packaged with the information necessary to expedite the delivery to the correct person, in the correct room, and in the correct location. All items are individually labelled with Drawing reference notes.

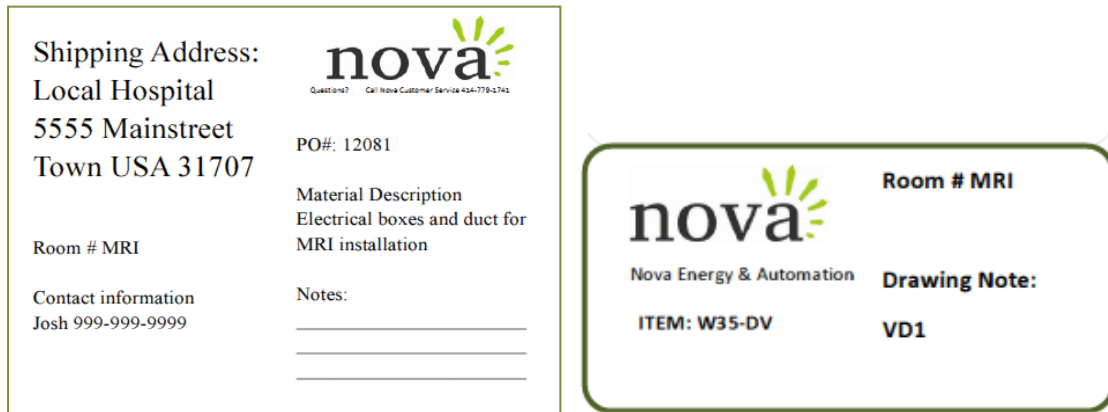


Figure 16: Sample Labels (Pallet and Component)

## 6. Product Service and Technical Assistance

Nova Automation, LLC  
2722 N. Avondale Blvd  
Milwaukee WI 53210  
PH# 262-309-2950  
Website: [www.NovaAutomation.net](http://www.NovaAutomation.net)

## 7. Warranty

This limited warranty set forth below is given by Nova Automation (“Seller”) with respect to the electrical equipment (“Product”) packaged with this limited warranty. The Product, when delivered to you in new condition in its original packaging, is warranted against defects in materials or workmanship as follows: For a period of three (3) years from the date of original purchase, defective parts or a defective Product returned to a Seller, or its authorized service providers, as applicable, and proven to be defective upon inspection, will be repaired, or exchanged for a new Product, as determined by the Seller, or the authorized service provider.

This limited warranty covers all defects encountered in normal use of the Product, and does not apply in the following cases: Loss of or damage to the Product due to abuse, mishandling, alteration, accident, electrical current fluctuations, failure to follow operating, maintenance or environmental instructions prescribed by Seller, failure to follow Sellers installation instructions, or service performed by someone other than Seller or its authorized service provider.

Nova assumes no responsibility for labor or freight costs incurred in connection with the installation, removal, or replacement of products determined to be defective or any consequential or incidental damages arising from the use of the product. Nova Automations entire liability on any claim of loss or damage resulting from a defective product is limited to the replacement of the product.

WARRANTY IS VOID IF PRODUCT IS NOT USED FOR THE PURPOSE FOR WHICH IT WAS MANUFACTURED.

## 8. Approvals

**Prepared By** \_\_\_\_\_

([Job Title])

This document requires the following approvals

**Approved By** \_\_\_\_\_

([Job Title])

\_\_\_\_\_

([Job Title])

**Approval Date** \_\_\_\_\_