

NOVA Energy & Automation



Product Specifications

12 inch Trench Duct

Model T123560 Ferrous and Non Ferrous

A 3D perspective rendering of several interlocking trench duct sections. The ducts are shown in a dark blue color with a slight gradient and are arranged in a zig-zag pattern. The top and bottom surfaces are shaded in a light gray color to provide a sense of depth and perspective.

03 January 2012

Product Description

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

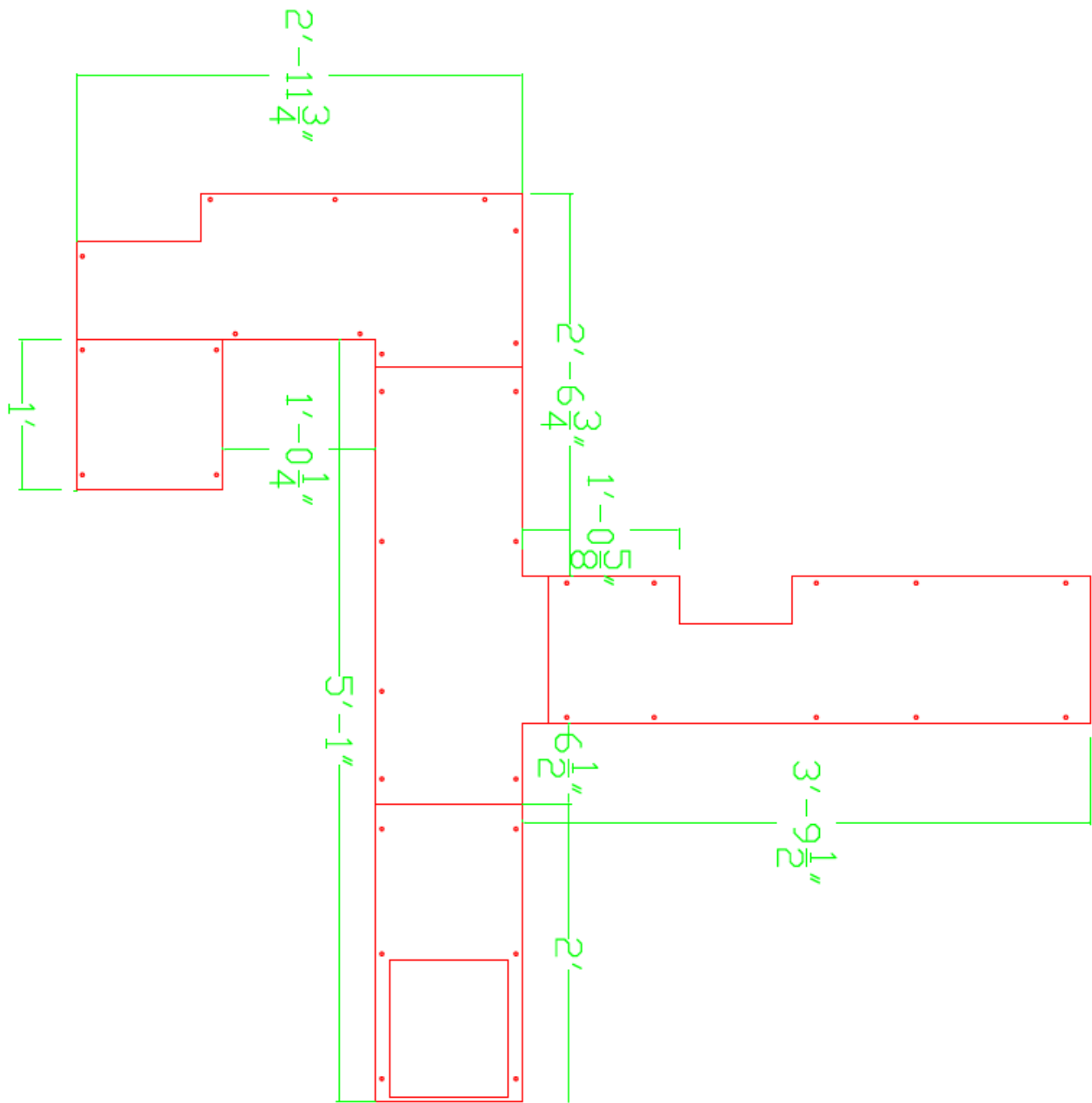


Figure 2: Example of Auto Cad Drawing for Trench Duct

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

12 inch Trench Duct Component Quick Reference Guide

Description	Part Number	Reference
Duct Body with cover	T123560-D	Figure 3
Coupling	T1235-CP	Figure 4
6" to 12" Coupling	T0612A	Figure 5
12" to 18" Coupling	T1218A	Figure 6
Divider	W35-DV	Figure 7
End Closure	T1235-EC	Figure 8
Floor to Wall Duct Riser	T1235-R90	Figure 9
Flat 90°	T1235-F90	Figure 10
Flat 45°	T1235-F45	Figure 11
Flat T	T1235-FT	Figure 12
Flat T Tunnel	T1235-FTUN	-
Flat X	T1235-FX	Figure 13
Flat X Tunnel	T1235-FXTUN	-
Grommet Material	Grommet	Figure 14
Custom Fittings also available		

12 inch Trench Duct Body



Figure 3: 6 inch Trench Duct Body

Model	T123560-D
Description	12 inch trench duct body
Construction	14 Gauge A36 Galvanized steel (For Aluminium specify P/N AT123560-D)
Cover Construction	Rabbetted cover ¼" mild steel (or aluminium) rated for 200lbs/sq ft
Finish	DuPont Imron 3.5 HG high gloss ASA-49 (Light Grey)
Grounding	Grounding Lug included
Fill Capacity	7 inch ²
Dimensions	12" W x 3.5" H x 60" L
Weight	
Approvals	ETL Listed to UL/cUL 870 file 100450372CRT-001a, NEC Article 376, NEC 517
Hardware	spring nuts, clips, pre-drilled holes, mounting screws, and levelling bolts included

12 inch Trench Duct Coupling

Model	T1235-CP
Description	12 inch steel trench duct coupling used to connect 2 sections of 12 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.
Construction	14 Gauge A36 Galvanized steel (For Aluminium please specify P/N AW1235-CP)
Finish	DuPont Imron 3.5 HG high gloss ASA-49 (Light Grey)
Hardware	Pre drilled holes and self tapping screws included
Dimensions	11.75" W x 3.25" H x 3.25" L
Weight	
Approvals	ETL Listed to UL/cUL 870 file 100450372CRT-001a, NEC Article 376, NEC 517



Figure 4: 12 inch Trench Duct Coupling.
 Trench Duct Body shaded green to emphasize coupling

6 inch to 12 inch Trench Duct Coupling

Model	T0612A
Description	6 inch steel trench duct coupling used to connect 6 inch duct to 12 inch duct. 1 piece needed for every splice.
Construction	14 Gauge A36 Galvanized steel (For Aluminium please specify P/N AT0612A)
Finish	DuPont Imron 3.5 HG high gloss ASA-49 (Light Grey)
Hardware	Pre drilled holes and self tapping screws included
Dimensions	6" W to 12"W x 3.25" H x 3.25" L
Weight	
Approvals	ETL Listed to UL/cUL 870 file 100450372CRT-001a, NEC Article 376, NEC 517

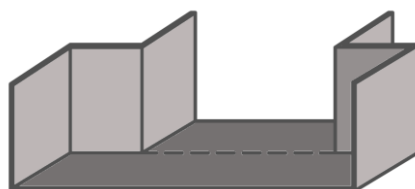


Figure 5: 6 inch to 12 inch Trench Duct Coupling

12 inch to 18 inch Trench Duct Coupling

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

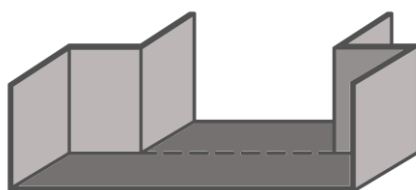


Figure 6: 12 inch to 18 inch Trench Duct Coupling

3.5 inch Divider

Model	W35-DV
Description	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.
Construction	14 Gauge A36 Galvanized steel
Finish	DuPont Imron 3.5 HG high gloss ASA-49 (Light Grey)
Hardware	Pre drilled holes and mounting hardware included
Dimensions	3" H x 60" L
Weight	4.4 lbs
Approvals	ETL Listed to UL/cUL 870 file 100450372CRT-001a, NEC Article 376, NEC 517



Figure 7: Wire Duct Divider

12 inch Trench Duct End Closure

Model	T1235-EC
Description	12 inch steel wall duct end closure used to terminate wire duct
Construction	14 Gauge A36 Galvanized steel
Finish	DuPont Imron 3.5 HG high gloss ASA-49 (Light Grey)
Hardware	Pre drilled holes and mounting hardware included
Dimensions	12" W x 3.5" H x 3.5" L
Weight	1.25 lbs
Approvals	ETL Listed to UL/cUL 870 file 100450372CRT-001a, NEC Article 376, NEC 517



Figure 8: 6 inch Trench Duct End Closure

12 inch Trench Duct Riser

Model	T1235-R90
Description	Inside 90 degree elbow used to transition from trench duct to vertical wall duct.
Construction	14 Gauge A36 Galvanized steel
Finish	DuPont Imron 3.5 HG high gloss ASA-49 (Light Grey)
Hardware	
Fill Capacity	7 inch ²
Dimensions	Duct dimensions 12" W x 3.5" H Outside Edge= 2.5" L (F) Inside Edge= 12" L (E)
Weight	
Max Wire Gauge	2/0 due to 90° bend radius of fitting, if large wire gauge is needed call for custom fitting.
Approvals	ETL Listed to UL/cUL 870 file 100450372CRT-001a, NEC Article 376, NEC 517



Figure 9: 12 inch Trench Duct Riser

12 inch Trench Duct Flat 90⁰

Model	T1235-F90
Description	Flat (Horizontal) 90 degree turn.
Construction	14 Gauge A36 Galvanized steel
Cover Construction	Rabbetted cover ¼" mild steel (or aluminium) rated for 200lbs/sq ft
Finish	DuPont Imron 3.5 HG high gloss ASA-49 (Light Grey)
Hardware	
Fill Capacity	7 inch ²
Dimensions	Duct dimensions 12" W x 3.5" H Outside Edge= 14" L (F, D) Inside Edge= 2" L (A, G)
Weight	
Max Wire Gauge	2/0 due to 90 ⁰ bend radius of fitting, if large wire gauge is needed call for custom fitting
Approvals	ETL Listed to UL/cUL 870 file 100450372CRT-001a, NEC Article 376, NEC 517

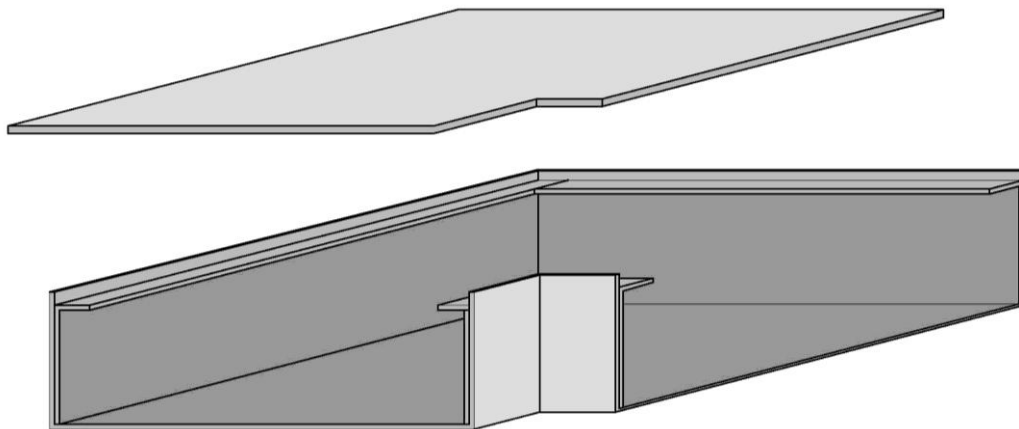


Figure 10: 12 inch Trench Duct Flat 90⁰

12 inch Trench Duct Flat 45⁰

Model	T1235-F45
Description	Flat (Horizontal) 45 degree turn.
Construction	14 Gauge A36 Galvanized steel
Cover Construction	Rabbetted cover ¼" mild steel (or aluminium) rated for 200lbs/sq ft
Finish	DuPont Imron 3.5 HG high gloss ASA-49 (Light Grey)
Hardware	
Fill Capacity	7 inch ²
Dimensions	Duct dimensions 12" W x 3.5" H Outside Edge= 14" L (F, D) Inside Edge= 2" L (A, G)
Weight	
Max Wire Gauge	Not Applicable- Bending Radius does not exceed 45 ⁰
Approvals	ETL Listed to UL/cUL 870 file 100450372CRT-001a, NEC Article 376, NEC 517

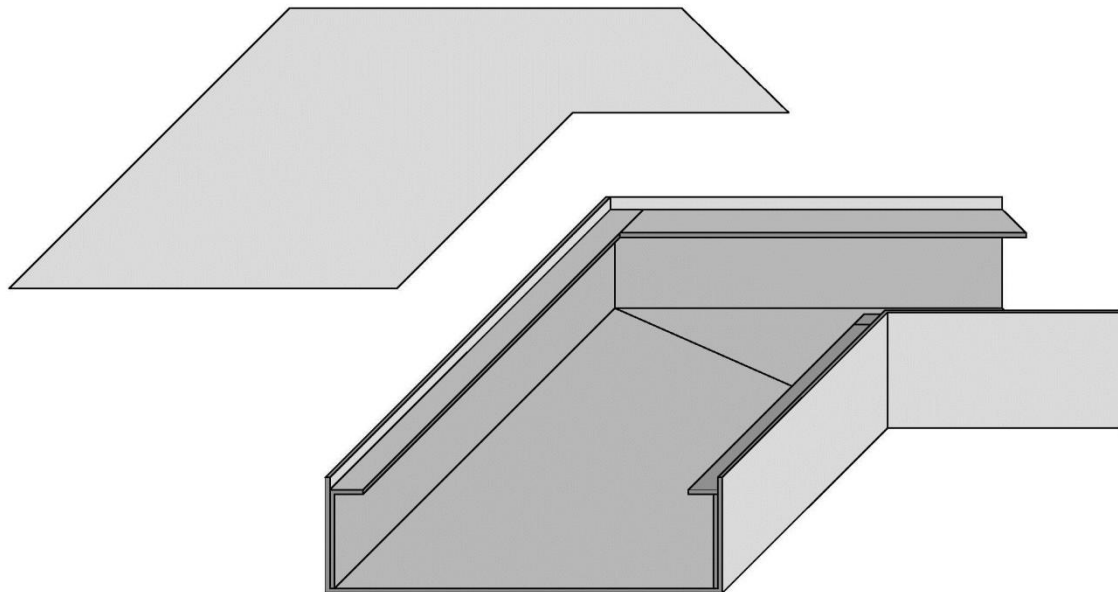


Figure 11: 12 inch Trench Duct Flat 45⁰

12 inch Trench Duct Flat T

Model	T1235-FT
Description	Trench Duct Flat T intersection.
Construction	14 Gauge A36 Galvanized steel
Cover Construction	Rabbetted cover ¼" mild steel (or aluminium) rated for 200lbs/sq ft
Finish	DuPont Imron 3.5 HG high gloss ASA-49 (Light Grey)
Hardware	
Fill Capacity	7 inch ²
Dimensions	Duct dimensions 12" W x 3.5" H Long Edge= 16" L (D)
Weight	
Max Wire Gauge	2/0 due to 90° bend radius of fitting, if large wire gauge is needed call for custom fitting
Approvals	ETL Listed to UL/cUL 870 file 100450372CRT-001a, NEC Article 376, NEC 517
Optional Fittings	Divider Tunnel W1235-FTun

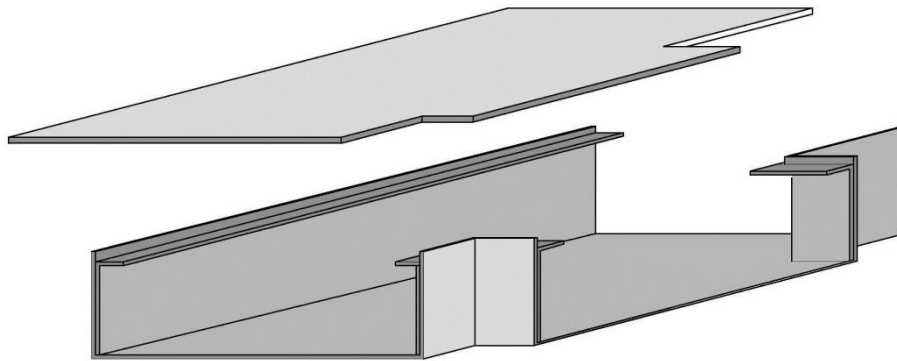


Figure 12: 12 inch Trench Duct Flat T

12 inch Trench Duct Flat X

Model	T1235-FX
Description	Trench Duct Flat X intersection.
Construction	14 Gauge A36 Galvanized steel
Cover Construction	Rabbetted cover ¼” mild steel (or aluminium) rated for 200lbs/sq ft
Finish	DuPont Imron 3.5 HG high gloss ASA-49 (Light Grey)
Hardware	
Fill Capacity	7 inch ²
Dimensions	Duct dimensions 12” W x 3.5” H Long Edge= 16” L (D)
Weight	
Max Wire Gauge	2/0 due to 90° bend radius of fitting, if large wire gauge is needed call for custom fitting
Approvals	ETL Listed to UL/cUL 870 file 100450372CRT-001a, NEC Article 376, NEC 517
Optional Fittings	Divider Tunnel W1235-FXTun

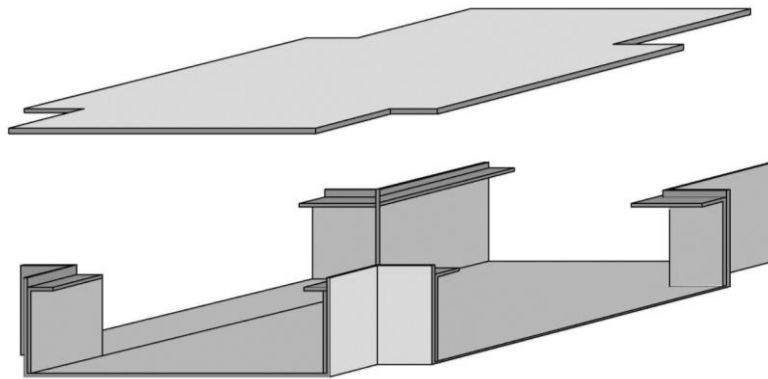


Figure 13: 12 inch Trench Duct Flat X

Grommet Material

Model	Grommet
Description	Rubber reinforced with an aluminium insert used to protect the cabling when field modifications have been made to the wire duct.
Dimensions	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.

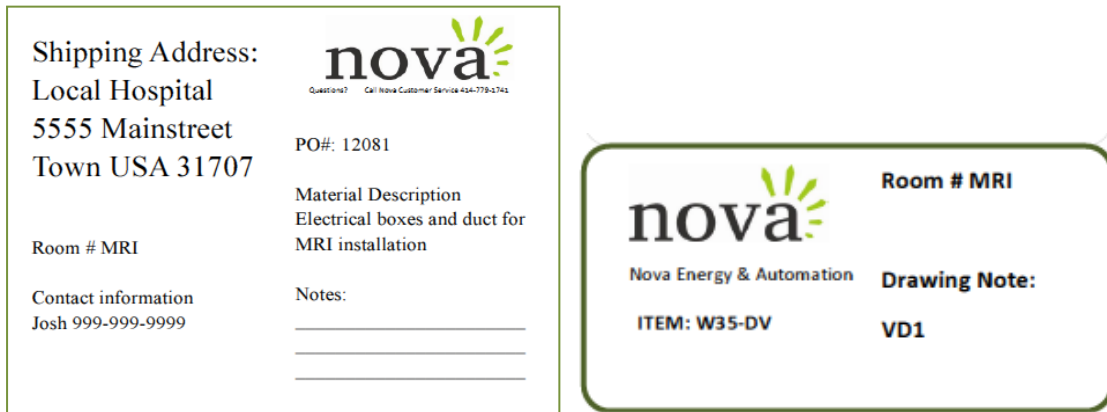


Figure 16: Sample Labels (Pallet and Component)

6. Product Service and Technical Assistance

Nova Automation, LLC
2722 N. Avondale Blvd
Milwaukee WI 53210
PH# 262-309-2950
Website: www.NovaAutomation.net

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 _____