NEXXT SOLUTIONS INFRASTRUCTURE

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# Wire Mesh

## Cable Management System

[Catalog]

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# Wire mesh

cable management system

## I. Introduction

Our wire mesh system is the fast and easy solution for managing light to medium-duty power, voice and data cables. Our cable tray concept--based upon performance, safety and economy-- is the system of choice by installers, for its versatility, flexibility and efficiency in meeting the demands of today's high tech cabling applications.

Nexxt Solutions NexxTray components are as strong as they are lightweight and can be used in a wide range of commercial and industrial environments. Its unique design adapts to the most complex configurations, and can be easily assembled using a minimum of manpower, hardware and installation tools.

The ease of creating fittings, routing cables under access floors or ceilings and of forming smooth curved transitions around obstacles, makes this system the simplest, most cost-effective wire mesh cable management solution available in the industry nowadays.

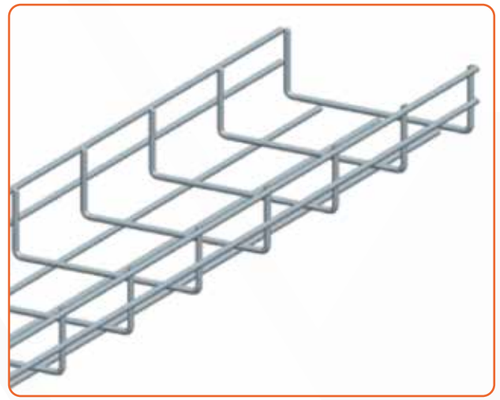
## II. Getting started

This catalog is a guide for selecting, designing and using the NexxtTray cable management system. Determine the profile, width and components required in your installation. Refer to chapters IV and V for an outline of typical tray configurations, mounting and support methods that can be implemented with this solution.



## III. Solution components

### 1. Wire mesh cable tray

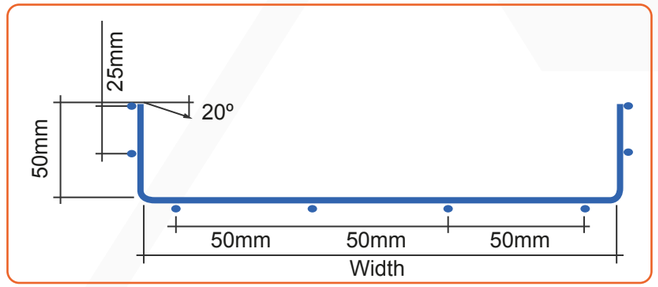


**Main features**

- Field- configurable electro-welded wire mesh
- Made of hot-dipped, galvanized steel wire, ideal for outdoor or indoor installations requiring corrosion protection
- Routes cables through unused space while keeping them accessible for easy maintenance
- Tray available in widths  of 100mm and 300mm
- 50mmx100mm grid opening
- Self-ventilated design prevents overheating and the build-up of dust and contaminants
- Chamfered side edges minimizes risk of injury for installers and damage of cables during installation
- Environmentally friendly product
- For loading data, refer to the tables on section V of this catalog

**Applications**

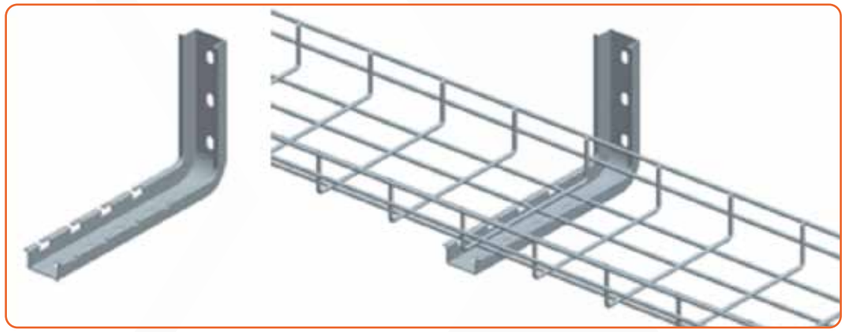
- Network cabling, wiring closets, fiber-to-desktop applications
- Overhead installations, such as suspended ceiling plenum areas
- Raised floor applications, under computer rooms
- Recommended for outdoor, marine and industrial use



## Technical specifications

| MPN | PNDWMCT1030HDG | PNDWMCT3030HDG |
|---|---|---|
| **Dimensions (HxWxL)** | 50x100x3000mm | 50x300x3000mm |
| **Wire diameter** | 4.0mm | 5.0mm |
| **Material** | Middle carbon steel (Q235B in Chinese standard) (ASTM A36, SS400) | |
| **Grid** | 50mmx100mm | |
| **Finish** | Hot-dipped galvanized (HDG) according to BS EN 1461-1999. Thickness of >60-80 microns | |
| **Standards** | UL/CSA classified as an equipment ground conductor when spliced as recommended<br>ASTM A123 - Average thickness of 2.4 mils (60 microns) to 3.2 mils (80 microns) | |
| **Quantity** | One unit | |
| **Warranty** | Two years limited | |

## 2. L-type wall bracket



## Main features

- Provides an attachment surface for mesh trays on walls
- Suitable for wires from 3.5mm to 6.0mm in diameter, and tray widths ranging from 100mm to 300mm
- Corrosion resistant hot-dipped, galvanized finish, for outdoor applications
- Ideal for heavy-duty applications
- Maximizes the use of space

## Technical specifications

| MPN | PNDWMLB10HDG | PNDWMLB30HDG |
|---|---|---|
| **Tray width supported** | 100mm | 300mm |
| **Material** | Middle carbon steel (Q235B in Chinese standard) (ASTM A36, SS400) | |
| **Finish** | Hot-dipped galvanized (HDG) according to BS EN 1461-1999. Thickness of >60-80 microns | |
| **Quantity** | One unit | |
| **Warranty** | Two years limited | |



## 3. Flat wall bracket

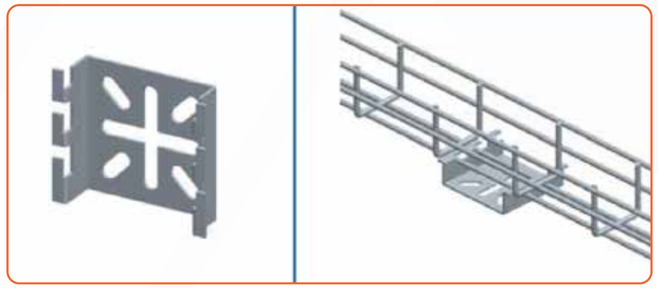
## Main features

- Provides a horizontal mounting support for mesh trays on walls
- Suitable for wires from 3.5mm to 6.0mm in diameter, and tray widths ranging from 100mm to 300mm
- Corrosion resistant hot-dipped, galvanized finish, for outdoor applications
- Ideal for heavy-duty applications
- Most secure wall bracket, locks into wires of tray
- Convenient, low-cost support

## Technical specifications

| MPN | PNDWMFB10HDG | PNDWMFB30HDG |
|---|---|---|
| **Tray width supported** | 100mm | 300mm |
| **Material** | Middle carbon steel (Q235B in Chinese standard) (ASTM A36, SS400) | |
| **Finish** | Hot-dipped galvanized (HDG) according to BS EN 1461-1999. Thickness of >60-80 microns | |
| **Quantity** | One unit | |
| **Warranty** | Two years limited | |

## 4. Vertical wall bracket



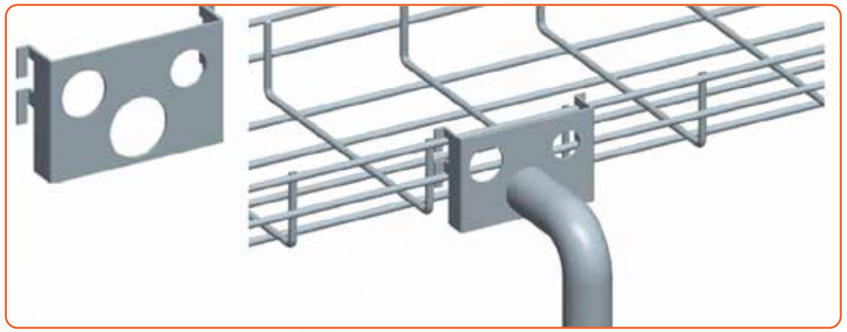
## Main features

- Provides an attachment surface for mesh trays on walls or floors, no screws required
- Its design allows the attachment of junction boxes to tray, for connections and conduit dropouts
- Specially suitable for smaller wire mesh cable trays with widths of 50mm or 100mm
- Compatible with tray wires from 3.5mm to 6.0mm in diameter
- Corrosion resistant hot-dipped, galvanized finish, for outdoor applications
- Easy to install, low-cost support

## Technical specifications

| MPN | PNDWMVBHDG |
|---|---|
| **Tray width supported** | Up to 300mm |
| **Material** | Middle carbon steel (Q235B in Chinese standard) (ASTM A36, SS400) |
| **Finish** | Hot-dipped galvanized (HDG) according to BS EN 1461-1999. Thickness of >60-80 microns |
| **Quantity** | One unit |
| **Warranty** | Two years limited |

### 5. Pipe connection bracket



## Main features

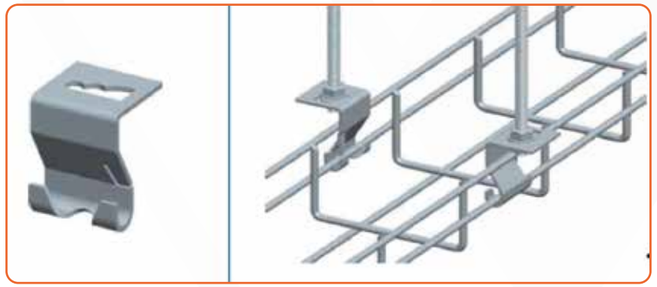
- Facilitates the installation of metal and/or PVC pipes on wire mesh trays
- Provides the connection of 31mm, 25mm and 19mm pipes
- Compatible with tray wires from 3.5mm to 6.0mm in diameter
- Corrosion resistant hot-dipped, galvanized finish, for outdoor applications
- Easy to install, low-cost support



## Technical specifications

| MPN | PNDWMPB223HDG |
|---|---|
| **Pipe diameter supported** | 31mm (1 ¼"), 25mm (1") and 19mm (3/4") |
| **Material** | Middle carbon steel (Q235B in Chinese standard) (ASTM A36, SS400) |
| **Finish** | Hot-dipped galvanized (HDG) according to BS EN 1461-1999. Thickness of >60-80 microns |
| **Quantity** | One unit |
| **Warranty** | Two years limited |

### 6. Hanging hook



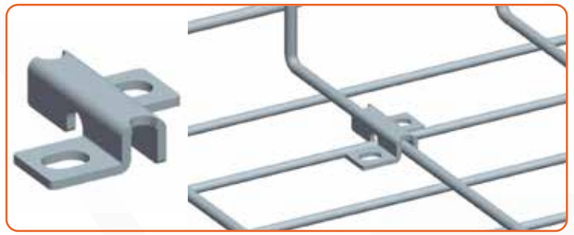
## Main features

- Provides a ceiling-mounted support as an alternative when other mounting methods are not viable
- Hangs from threaded steel rods and attaches to the side of the tray
- Suitable for wires from 3.5mm to 6.0mm in diameter, and mesh trays 300mm wide or smaller
- Corrosion resistant hot-dipped, galvanized finish, for outdoor applications
- Use in pairs for medium-duty applications
- Easy to install, low-cost support

## Technical specifications

| MPN | PNDWMHHHDG |
|---|---|
| **Tray width supported** | Up to 300mm |
| **Material** | Middle carbon steel (Q235B in Chinese standard) (ASTM A36, SS400) |
| **Finish** | Hot-dipped galvanized (HDG) according to BS EN 1461-1999. Thickness of >60-80 microns |
| **Quantity** | One unit |
| **Warranty** | Two years limited |

## 7. Vertical wall clip



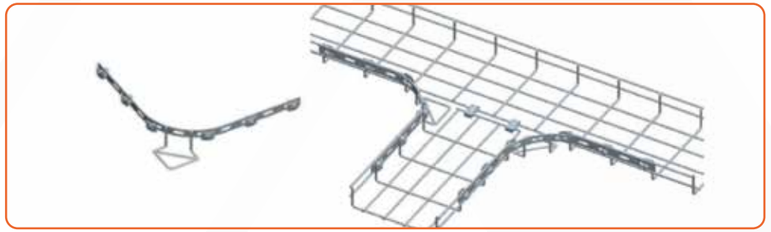
### Main features

- Provides a quick and neat connection for mesh trays directly to a wall, floor or other structure
- Suitable for wires from 4.0mm to 6.0mm in diameter
- Corrosion resistant hot-dipped, galvanized finish, for outdoor applications
- Easy to install, low-cost support

### Technical specifications

| MPN | PNDWMVCHDG |
|---|---|
| **Wire diameter supported** | 4.0mm-6.0mm |
| **Material** | Middle carbon steel (Q235B in Chinese standard) (ASTM A36, SS400) |
| **Finish** | Hot-dipped galvanized (HDG) according to BS EN 1461-1999. Thickness of >60-80 microns |
| **Quantity** | Four units per bag |
| **Warranty** | Two years limited |

## 8. Bend radius kit



### Main features

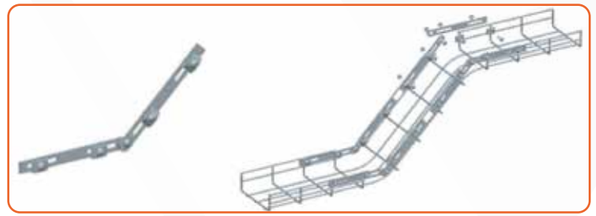
- Provides T and cross connection points for wire mesh cable trays
- Creates solid and professionally finished horizontal bends (with a radius)
- Suitable for wires from 4.0mm to 6.0mm in diameter
- Corrosion resistant hot-dipped, galvanized finish, for outdoor applications
- Easy to install, low-cost support



### Technical specifications

| MPN | PNDWMRKHDG |
|---|---|
| **Tray height supported** | 50mm |
| **Material** | Middle carbon steel (Q235B in Chinese standard) (ASTM A36, SS400) |
| **Finish** | Hot-dipped galvanized (HDG) according to BS EN 1461-1999. Thickness of >60-80 microns |
| **Package content** | 90-degree radian connector = 1 unit<br>Top of PNDWMCOBTHDG = 6 units<br>6mm×20mm bolts = 6 units<br>6mm nuts = 6 units |
| **Warranty** | Two years limited |

## 9. Adjustable bend kit



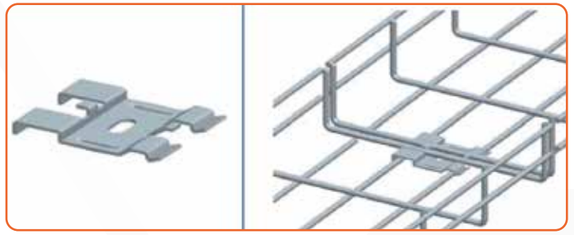
### Main features

- The kit is designed for ease of installation of field-produced bend fittings
- Creates and strengthens outside and inside bends
- Suitable for wires from 3.5mm to 6.0mm in diameter
- Corrosion resistant hot-dipped, galvanized finish, for outdoor applications
- Easy to install, low-cost support

### Technical specifications

| MPN | PNDWMAKHDG |
|---|---|
| **Wire diameter supported** | 3.5mm - 6.0mm |
| **Material** | Middle carbon steel (Q235B in Chinese standard) (ASTM A36, SS400) |
| **Finish** | Hot dipped galvanized (HDG) according to BS EN 1461-1999. Thickness of >60-80 microns |
| **Package content** | Bar =1 unit<br>Top of PNDWMCOBTHDG = 4 units<br>6mm×20mm bolts = 5 units<br>6mm nuts = 4 units |
| **Warranty** | Two years limited |

## 10. Boltless bottom coupler



### Main features

- Used to quickly connect two straight sections of wire mesh cable trays at the bottom
- Bolts and nuts are not required,  simply bend tabs inward to complete installation
- Suitable for wires from 4.0mm to 5.5mm in diameter
- Corrosion resistant hot-dipped, galvanized finish, for outdoor applications
- Fast and easy to install

### Technical specifications

| MPN | PNDWMCOBOHDG |
|---|---|
| **Wire diameter supported** | 4.0mm - 5.5mm |
| **Material** | Middle carbon steel (Q235B in Chinese standard) (ASTM A36, SS400) |
| **Finish** | Hot dipped galvanized (HDG) according to BS EN 1461-1999. Thickness of >60-80 microns |
| **Quantity** | One unit |
| **Warranty** | Two years limited |

## 11. Boltless side coupler

### Main features

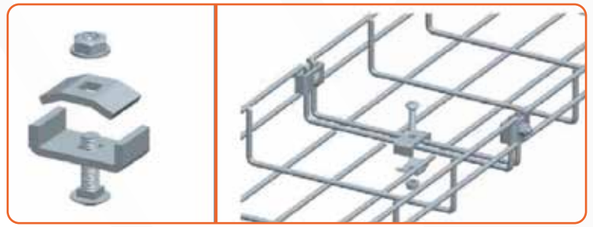
- Used to quickly connect two straight sections of wire mesh cable trays at the sides
- Bolts and nuts are not required, simply bend tabs inward to complete installation
- Suitable for wires from 4.0mm to 5.5mm in diameter
- Corrosion resistant hot-dipped, galvanized finish, for outdoor applications
- Use in pairs to join small size trays
- Fast and easy to install



### Technical specifications

| MPN | PNDWMCOSIHDG |
|---|---|
| **Wire diameter supported** | 4.0mm - 5.5mm |
| **Material** | Middle carbon steel (Q235B in Chinese standard) (ASTM A36, SS400) |
| **Finish** | Hot dipped galvanized (HDG) according to BS EN 1461-1999. Thickness of >60-80 microns |
| **Quantity** | One unit |
| **Warranty** | Two years limited |

## 12. Bolted coupler



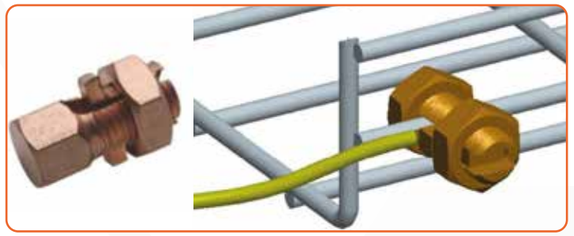
### Main features

- Creates a solid connection between two straight sections of wire mesh cable trays
- A minimum of three couplers are required for fastening each connection point
- It consists of one M6 bolt, one M6 flange nut and two flange washer washer sets
- Suitable for wires from 4.0mm to 6.0mm in diameter
- Corrosion resistant hot-dipped, galvanized finish, for outdoor applications
- Fast and easy to install

### Technical specifications

| MPN | PNDWMCOBTHDG |
|---|---|
| **Wire diameter supported** | 4.0mm to 6.0mm |
| **Material** | Middle carbon steel (Q235B in Chinese standard) (ASTM A36, SS400) |
| **Finish** | Hot-dipped galvanized (HDG) according to BS EN 1461-1999. Thickness of >60-80 microns |
| **Package content** | Top flange washer = 4 units<br>Bottom flange washer = 4 units<br>6mm bolt = 4 units<br>Flange nut = 4 units |
| **Warranty** | Two years limited |

## 13. Copper alloy split bolt



### Main features

- Made from high strength, corrosion resistant copper alloy
- Ensures maximum conductivity and lower resistance in splices, also helps achieve proper earth ground at terminations and electrical connections
- Suitable for wires from 3.5mm to 6.0mm in diameter
- Versatile split bolt, supports two copper conductors

### Technical specifications

| MPN | PNDWMSBCO |
|---|---|
| **Wire diameter supported** | 3.5mm -6.0mm |
| **Material** | Copper alloy |
| **Quantity** | Five units |
| **Warranty** | Two years limited |

## 14. Ceiling rod kit

### Main features

- 10mm threaded rod for overhead mounting configurations
- Designed to suspend tray from center or sides
- Use anchor bolt and nuts to secure tray in place
- Corrosion resistant, electroplated zinc finish
- Suitable for all tray widths



### Technical specifications

| MPN | PNDWMCK1018EZ |
|---|---|
| **Tray size supported** | All tray widths |
| **Material** | Middle carbon steel (Q235B in Chinese standard) (ASTM A36, SS400) |
| **Finish** | Electroplated zinc (EZ) according to BS EN Electroplated zinc (EZ). Thickness of >60-80 microns |
| **Package content** | 10mmx1830mm rod = 1 unit<br>10mmx40mm drop-in anchor bolt= 1 unit<br>10mm flange nut = 1 unit<br>10mm nut = 1 unit |
| **Warranty** | Two years limited |

## 15. Wall anchor kit

Tools required:
17mm nut driver

### Main features

- Compatible with tray brackets most commonly used in wire mesh installations
- It consists of a drop-in anchor bolt, a 10mmx25mm bolt and washers
- It requires a 17mm nut or combination wrench
- Corrosion resistant, elecroplated zinc

### Technical specifications

| MPN | PNDWMWK1040EZ |
|---|---|
| **Tray size supported** | All tray widths |
| **Material** | Middle carbon steel (Q235B in Chinese standard) (ASTM A36, SS400) |
| **Finish** | Electroplated zinc (EZ) |
| **Package content** | 10mm x 40mm drop-in anchor bolt = 4 units<br>10mm x 25mm bolt = 4 units<br>10mm flat washer = 4 units<br>10mm spring washer = 4 units |
| **Warranty** | Two years limited |

## 16. Wire and bolt cutter

### Main features

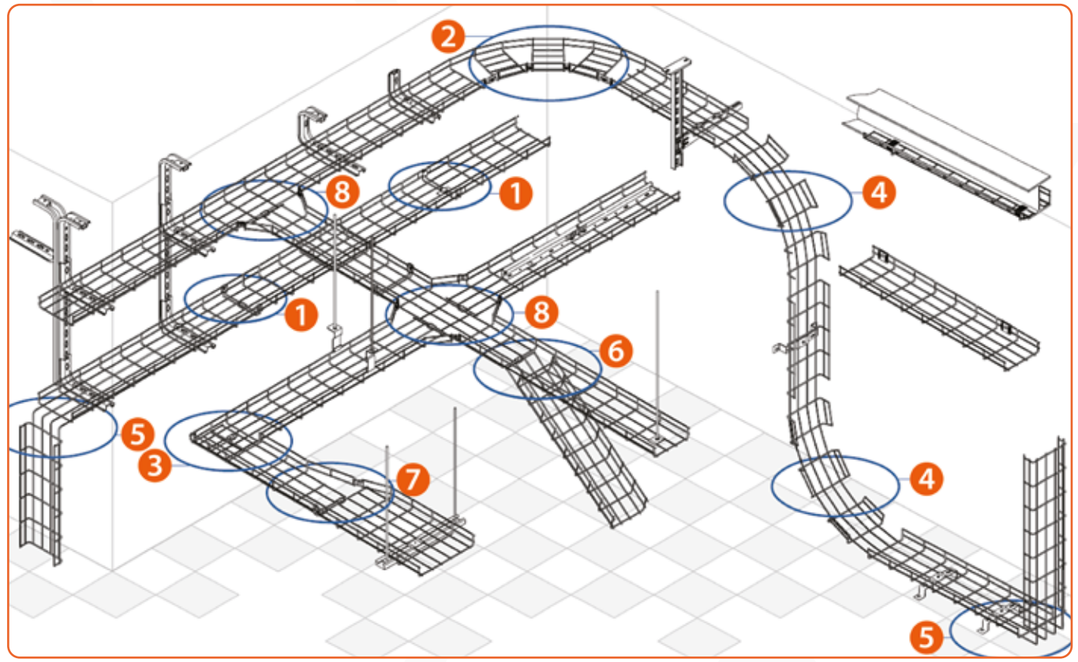
- Use this quality  tool to cut cable baskets to measure on the job site
- Blades made of chrome molybdenum steel
- Jaws hardened and tempered to 60° HRC
- Cuts can be made on any finish, width or depth mesh tray
- Reduces waste  material, since cut trays can be reused

### Technical specifications

| MPN | PTKWMHS |
|---|---|
| **Tool type** | Wire and bolt cutter |
| **Material** | Chrome molybdenum tempered steel to 60° HRC |
| **Max. cutting load** | 61kg |
| **Max. cutting capacity** | 6.0mm |
| **Quantity** | One unit |
| **Warranty** | Two years limited |

## IV. Configurations methods

- NexxtTray management system offers great flexibility by adapting quickly and cost-efficiently to changing specifications and project requirements.
- Extremely versatile, allows multiple configuration to be achieved using a length of tray and a wire cutter.
- The diagram below outlines frequently used configurations and support methods in structured cabling system installations.



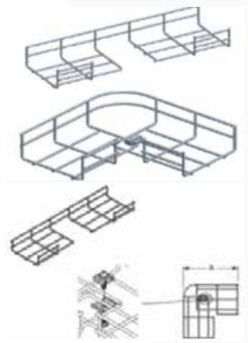
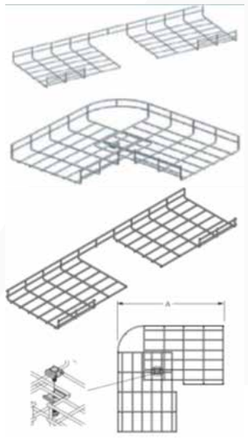

1. Connection of straight sections
2. Horizontal bend with a radius
3. Horizontal angled bend (without a radius)
4. Vertical bend with a radius
5. Vertical angled bend (without a radius)
6. Vertical drop
7. Reduction/Expansion of tray widths
8. Horizontal cross or tee junction

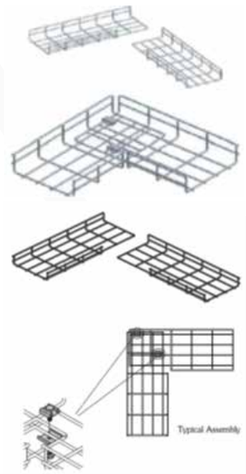
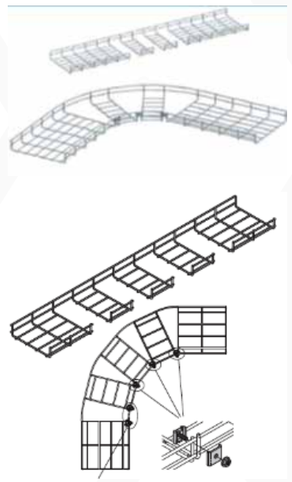
# V. Wire mesh assembly guide

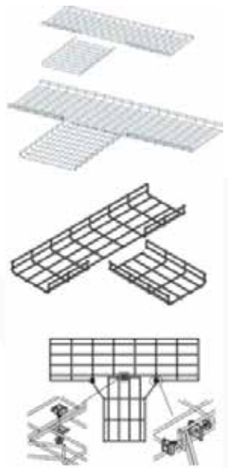
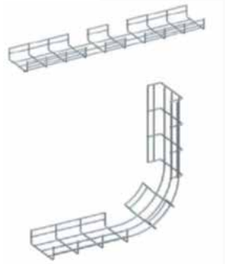
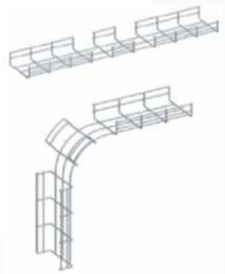
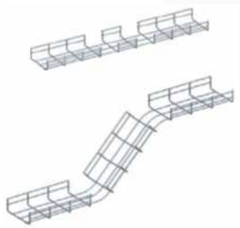
Our wire mesh tray products can be bent and shaped into a variety of configurations in order to route cable runs according to the requirements of each particular installation.

Horizontal bends, junctions, vertical risers, reductions and expansions can be fabricated using our wire cutter tool to remove sections of tray, and bending it to your specifications, right in the field. The tray is then secured in position with the hardware and fasteners that this line offers.

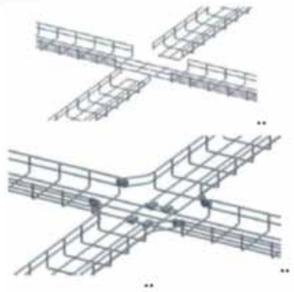
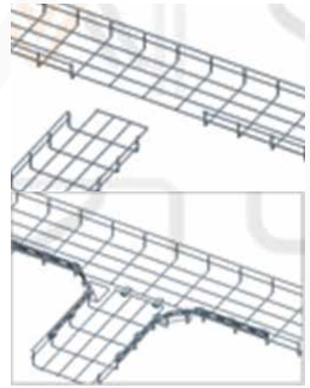
Rather than letting cable trays dictate the cabling layout, installers can have the flexibility to customize the route exactly as needed using the diagrams included below as reference.

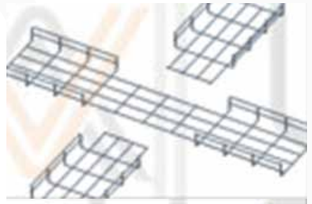
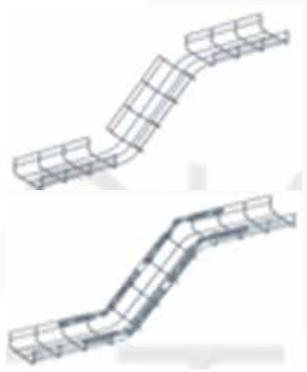
| Shape type | Width (mm) | Assembly | Required accessories |
|---|---|---|---|
| 90° horizontal bend (short radius) | 100 |  | 1 bolted coupler PNDWMCOBTHDG  |
| 90° horizontal bend (short radius) | 300 |  | 1 bolted coupler PNDWMCOBTHDG  |

| Shape type | Width (mm) | Assembly | Required accessories |
|---|---|---|---|
| 90° horizontal bend from two straight sections | 100 and 300 |   | 2 bolted couplers PNDWMCOBTHDG  |
| 90° horizontal bend (long radius) | 100 to 300 |  | For 100mm width trays, remove 2 segments and use 1 bolted coupler PNDWMCOBTHDG  For 300mm width trays, remove 6 segments and use 2 bolted couplers PNDWMCOBTHDG  |

| Shape type | Width (mm) | Assembly | Required accessories |
|---|---|---|---|
| Horizontal tee | 100 to 300 |  | For 100mm width trays, use 2 bolted couplers PNDWMCOBTHDG  For 300mm width trays use 4 bolted couplers PNDWMCOBTHDG  |
| Vertical inside bend | 100 to 300 |  | |
| Vertical outside bend | 100 to 300 |  | |
| Vertical inside and outside bends | 100 to 300 |  | |



| Shape type | Width (mm) | Assembly | Required accessories |
|---|---|---|---|
| Cross joint | 100 to 300 |  | For 100mm width trays, use 4 bolted couplers PNDWMCOBTHDG  For 300mm width trays, use 8 bolted couplers PNDWMCOBTHDG  |
| T connection with bend radius | 100 to 300 |  | For 100mm width trays use 1 Bolted coupler PNDWMCOBTHDG and 2 bend radius kits PNDWMRKHDG  For 300mm width trays, use 2 bolted couplers PNDWMCOBTHDG and 2 bend radius kits PNDWMRKHDG  |

| Shape type | Width (mm) | Assembly | Required accessories |
|---|---|---|---|
| Cross joint with bend radius | 100 and 300 |   | For 100mm width trays, use 2 bolted couplers PNDWMCOBTHDG and 4 bend radius kits PNDWMRKHDG  For 300mm width trays, use 4 bolted couplers PNDWMCOBTHDG and 4 bend radius kits PNDWMRKHDG  |
| Vertical inside and outside bends, with a radius | 100 to 300 |  | For any tray width, use 4 adjustable bend kits PNDWMAKHDG  |



# VI. Grounding, loading and testing information

## Grounding

Statement for all UL Classified products:

This product is classified by Underwriters Laboratories, Inc. as to its suitability as an equipment grounding conductor only. 556E

Most sizes of Nexxttray are UL Classified to serve as an Equipment Ground Conductor. The ground path can be achieved in one of two ways listed on page 3:

1. Use the recommended quantity of UL Classified splices to connect sections and at places where the tray is cut.
2. Run an appropriately sized ground wire alongside the tray and attach it to each tray section and on both sides of a cut in the tray. (This method is recommended by NEMA VE-2 Installation Manual.)

## Load and fill chart

| 50mm height wire mesh cable tray | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NEXXT tray | Height | | Width | | Length | | Diameter | Weight | Support span / Loading capacity* lb/ft (max) | | | | Cable fill (50% fill) ** | | |
| MPN | mm | inch | mm | inch | mm | ft | mm | kg/each | 5'-0" | 6'-0" | 7'-0" | 8'-0" | Actual area inside tray (In2) | Number of Cat.5E cables*** | Number of Cat.6 cables*** |
| PNDWMCT1030HDG | 50 | 2 | 100 | 4 | 300 | 10 | 4 | 3.77 | 52 | 43 | 35 | 27 | 8.2 | 118 | 83 |
| PNDWMCT3030HDG | 50 | 2 | 300 | 12 | 300 | 10 | 4 | 6.57 | 68 | 47 | 35 | 27 | 23.9 | 345 | 243 |

*Published load chart has not been tested with Nexxttray splice.

**Nexxttray fill capacity is based on NEC allowable fill of 50%. The NEC rule requires that the cable cross-sectional areas together may not exceed 50% of the tray area (width x depth = fill). Cables will nearly completely fill the cable tray when reaching the 50% cable fill, due to empty space between the surfaces of the cables. TIA recommends 40% fill ratio. NEXXT-tray loads shown in the loading chart will not be exceeded at 50% fill.

***CAT 5e 4-pr non-plenum approximated at .21 in. diameter, CAT 6 4-pr non-plenum approximated at .25 in. diameter. Actual diameters vary by cable manufacturer.

## Testing information

Welding Strength ,Test for wire mesh cable tray in a Lab environment of 23 +/- 2°C, 50 +/- 5% RH

Test speed: 5mm/min

Test result (Maximum broken force): 1166N

Test for SWL of cable tray lengths mounted in the horizontal plane running horizontally on a single span installation, using test method BS EN 61537:2007 Clause 10.4

Test conducted: BS EN 61537:2007 Cable management – Cable tray systems and cable ladder systems Clause 10.4 Test for SWL of cable tray lengths mounted in the horizontal plane running horizontally on a single span installation

| Test condition | Requirement | Result | Verdict |
|---|---|---|---|
| **Load at SWL** | The practical mid-span deflection does not exceed 1/100th of the span | 9.65mm | P |
| | The transverse deflection does not exceed 1/20th of the width of the sample | 3.54mm | P |
| | The sample still ensures reliable support to any cable | The sample still ensures reliable support to any cable | P |
| **Load increased at 1.7 times SWL** | The sample shall sustain the increased loading without collapsing | The sample shall sustain the increased loading without collapsing | P |
| **Remark** | Nominal dimension: 300 x 50 x 5 x 1200 (width x height x thickness x length; unit: mm) Test span: 1000mm SWL: 941kN/m | | |