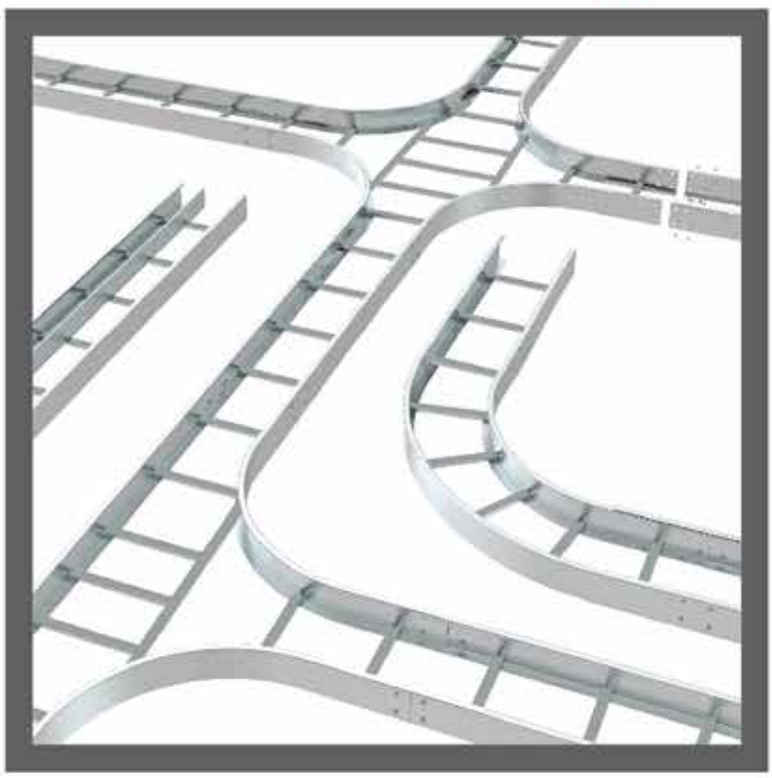
MASAR®
ENGINEERING INDUSTRIES



CABLE MANAGEMENT SYSTEM

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Introduction

Modern Aid, Successful Aim Reliability

Focusing expertise, skills and experience with a vision to deliver powerful qualitative product in traditional sheet metal field. The success of our company depends on the commitment and the efforts of every employee to offer an unmatched level of service to our customers.

Machine Technologies

As a precision sheet metal facility MASAR offers production, low cost technologies. MASAR success the latest in high tech equipment, operations are being under run by experienced Well trained employees at every level. We are electronically linked with our customers from the engineering stage to the final quality inspections prior to shipment, MASAR is as committed to Manufacture what you design and \ or select. Thus, our business is to fulfill your designated need. Give us a call and let us go to work for you.

Cable Management System

The need for a cable system

As technology develops, in accordance to that the need for effective support systems arises. Today's plants and buildings are moving more and more towards automation requiring complex system of wiring and cable reliance.

Old methods of cable management become obsolete & out dated under these demanding conditions:

- Regular inspections must be carried out for errors allocation.
- Many entry / exit points are required.
- New cable may need to be installed, and old ones previously in stalled.
- Ventilation, essential to power and similar cables has to be present as well.

Today cable trays have become a necessary part of industrial and commercial construction

Cable trays are capable of supporting all types of wiring

- High voltage power lines.
- Power distributions cables.
- Telecommunications wiring.
- Optical cables.

Advantages of Masar cable trays

Masar cable tray system offer the following Advantages:

- Easy installations
- Increased cable fill over other wiring method
- There by saving material costs and installation labour
- The metal can be used as an equipment ground conductor
- Less space utilization than other systems
- Easy inspection of cables
- Easy errors allocation & quick repair, without any replacements of cables
- Cables can instantly be added to existing trays at a later stage

NEMA Standards Publication VE 1 – 2009
Canadian Standards Association Publication CSA C22.2 No.126.1-09
Metal Cable Tray Systems

NEMA Standards Publication VE 2-2013
Cable Tray installation Guidelines

1. SCOPE

NEMA VE 2 addresses shipping, handling, storing, and installing cable tray systems and provides information on maintenance and system modi fication.

2. GENERAL WARNING !

Do not use a cable tray as a walkway, ladder, or support for people; cable tray is a mechanical support system for cables and raceways. Using cable trays as walkways can cause personal injury and can damage cable tray and installed cables.

Hazardous voltages in electrical equipment can cause severe per sonal injury or death. Safety related work practices, such as those described in NFPA 70E or CSA Z462, as well as all applicable OSHA regulations should be followed at all times.

Performance of a cable tray wiring system depends on proper installation, including supports and cables. Neglecting installation and maintenance guidelines may lead to personal injury as well as damage to property .

Installation and maintenance of cable tray wiring systems shal l be conducted only by qualified personnel. For the purposes of this guideline, a qualified person is one who is familiar with electrical construction. In addition, that person is :

a) Trained and authorized to test, energize, clear, ground, tag, and lock out circuits, in accordance with established safety practices, and

b) Trained in the proper care and use of protective equipment, such as insulated rubber gloves, hard hats, safety glasses or face shields, dust masks, and flash-resistant clothing, in accordance with established safety practices.

3. DEFINITIONS, ABBREVIATIONS, AND ACRONRMS

The following definitions, abbreviations, and acronyms appear in NEMA VE 2 or NEMA VE1

Accessory : Components used to supplement the function of a straight section or fitting, Examples include, but are not limited to, dropout, cover, conduit adapter, hold-down device, and divider.

Cable tray support span : The distance between the centerlines of supports.

Cable tray system : A section or assembly of sections, and associated fittings, forming a mechanical system used to support cables and raceways.

Channel cable tray : A fabricated structure consisting of a one - piece ventilated-or solid-bottom channel section.

Classified : indicates that a product has been evaluated to meet a specific purpose, e.g., classified as to its suitability for use as an equipment grounding conductor .

Connector : A component that joins any combination of cable tray straight sections and fittings.

NOTE : the basic types of connectors include rigid, expansion, adjustable, and reducer, The term "splice" is also used in the industry to describe a connector.

Degrees Celsius (oC)

Degrees Fahrenheit (oF)

Electromagnetic interference (EMI)

Electrostatic discharge (ESD)

Equipment grounding conductor (EGC)

Fasteners : screws, nuts, bolts, washers, rivets, spacers, pins, and other items used to connect and assemble cable tray systems.

Fill depth : The vertical interior dimension of a cable tray that is used to calculate the allowable interior cross - sectional area.

Fitting : A component that is used to change the size or direction of a cable tray system.

Hot dipped galvanized after fabrication (H.D.G.A.F.)

Horizontal cross : A fitting that joins cable trays in four directions at o90intervals in the same plane.

Horizontal elbow : A fitting that changes the direction of cable tray in the same plane

Horizontal tee : A fitting that joins cable trays in three directions at o90 intervals in the same plane.

Horizontal wye : A fitting that joins cable trays in three directions at other than o90 intervals in the same plane.

Ladder cable tray : A fabricated structure consisting of two longitudinal side rails connected by individual transverse members (rungs).

Standards

less than truckload (LTL)

radio frequency interference (RF)

reducer : A fitting that joins cable trays of different widths in the same plane .

left- hand reducer : A reducer having, when viewed from the large end, a straight side on the left.

right-hand reducer: A reducer having when viewed from the large end, a straight side on the right.

straight reducer : A reducer having two symmetrical offset sides.

single-rail cable tray : A fabricated structure consisting of a longitudinal of a longitudinal rail with transversely connected members (rungs) that project from one si de (side-supported) or both sides (center-supported), which may be single- or multi-tier.

Solid-bottom or non-ventilated cable tray: A fabricated structure consisting of a bottom without ventilation openings within integral or separate longitudinal side rails.

straight section: A length of cable tray that has no change in direction or size .

support : A component that provides a means for supporting a cable tray, including, but not limited to, cantilever bracket, trapeze, and individual rod suspension.

trough or ventilated cable tray: A fabricated structure consisting of integral or separate longitudinal rails and a bottom having openings sufficient for the passage of air and utilizing 75% or less of the plan area of the surface to support cables where the maximum open spacings between cable support surfaces of transverse elements do not exceed 100 milli meter (mm) (4 inch in) in the direction parallel to the tray side rails.

NOTES :

a) On horizontal bends only, the maximum distance between transverse elements is measured at the centerline of the bend,

b) A ladder cable tray having rung spacing such that the cable tray meets the definition described above is considered to be a ventilated cable tray.

vertical elbow : A fitting that changes the direction of cable tray to a different plane.

inside vertical elbow : A fitting that changes the direction of cable tray upward from the horizontal plane.

outside vertical elbow : A fitting that changes the direction of cable tray downward from the horizontal plane.

Vertical tee : A fitting that joins cable trays in three directions at o90 intervals in different planes.

wire mesh cable tray : A manufactured wire mesh tray consisting of steel wires welded at all intersections. Longitudinal wires located on the exterior of the tray are spaced at a maximum of 50 mm (2 in) , and transverse wires are spaced at a maximum of 100 mm (4in).

wire mesh cable tray fitting : A fitting for wire mesh cable tray systems, fabricated from wire mesh cable tray straight sections. The fitting is field- constructed and attached to the adjacent sections using splice connectors in accordance with the manufacture's .

4. RECEIVING AND UNLOADING

Cable tray is generally bundled and shipped via motor freight, export shipments that could be crated or loaded in containers. Accessories and small components are boxed and often skidded. Cable tray can be shipped via enclosed van, trailer, or flatbed trailer, Van trailers are normally used for less than truckload (LTL) shipments. This method of shipment is most common and cost effective and offers maximum protection from the weather during shipment. LTL shipments should be hand unloaded unless provisions have been made with the cable tray manufacturer for forklift unloading. Flatbed trailers are often used for full truckload shipments and when customers want side forklift unloading or sling unloading by crane.

(Special care must be exercised using slings so that cable tray is not crushed as a result of improper sling location and lifting) see Figure 1-1 and Figure 1-2

Figure 1-2 Not correct – Except when Using Extended Forks for Skidded Bundles

Small to medium size orders less than 600 meters (m) 2,000 feet (ft)) are generally shipped via common carrier, LTL in enclosed vans.

If hand unloaded, workers should wear gloves.

To prevent damage to cable tray, never pull cable tray from a truck trailer by chaining to the bottom rung and dragging cable tray out of the trailer (see figure 1-3 and Figure 1-4) .

After unloading , inventory all items immediately using the man ufacturer's packing list. Note on the bill of lading any shortage or shipping damage. That information will be necessary if filing a freight claim .

5. STORAGE

Hot dipped galvanized after fabrication (H.D.G.A.F.) steel, aluminum, and stainless steel cable tray and fiberglass or other non-metallic cable tray can be stor ed outside without cover, but should be loosely stacked, elevated off the ground, and ventilated to prevent storage stain. If appearance is important, cable tray should be stored indoors to prevent water or other foreign materials from staining or adhering to cable tray .

Mill-galvanized (see ASTMA 653) or electro-galvanized (see ASTM B633) cable tray must be protected or stored in a well-ventilated, dry location.

Bare steel cable tray should receive a protective coating as so on as possible to prevent surface rust.

PVC or painted cable tray should be protected and stored indoor s if possible . Cable tray must be protected from scratching and marring of the finish.

Small accessories should be stored to prevent loss.

Cable tray should be stored away from high-traffic areas.

Cable tray should be stacked by width and type.

Figure 1-1 Correct

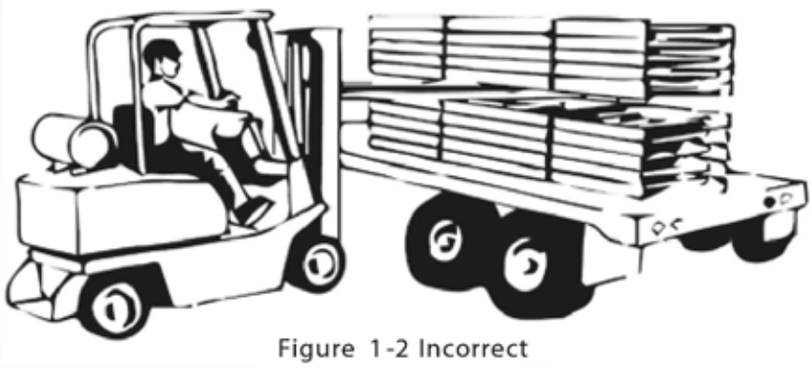


Figure 1-2 Incorrect

Figure 1-2 Not Correct-Expect when using extended forks for skidded bundles s mall to medium size orders less than 600 meters (m) (2,000 feet) are general ly shopped via if hand unloaded, workers should wear gloves To prevent damage to cable tray, never pull cable tray froma truck trailer by chaining to the bottom rung and dragging cable tray out of the trailer (see figure 3-1 and figure 4-1)

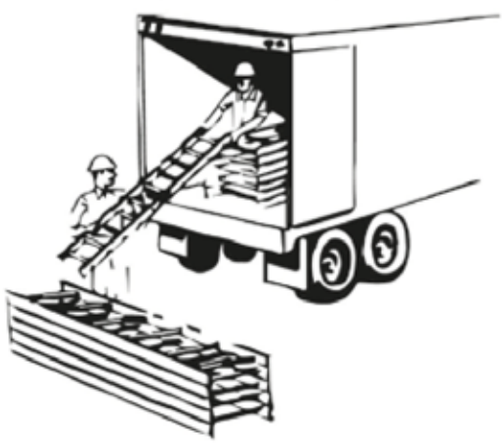


Figure 1-3 Correct

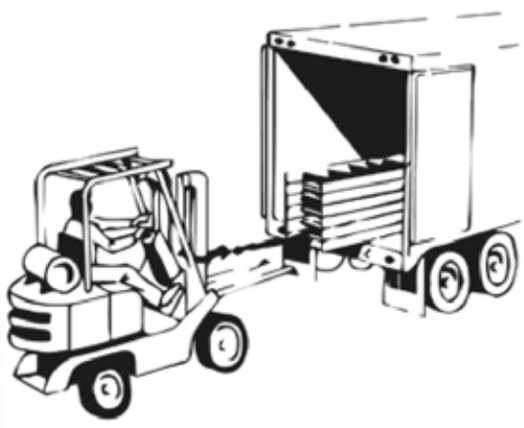


Figure 1-4 Incorrect

After unloading, inventory all items immediately using the manufacturers packing list. Note on the bill of lading any shortage or shipping damage. That information will be nesessary if filing a freight claim.

6. TYPICAL DIMENSIONS

The following items provide the typical dimensions used in the industry .
Other dimensions shall also be acceptable.
Dimensions are based on rationalized conversions.

Lengths of Straight Sections

Typical lengths, not including connectors, are :
(a) 3 m + 5 mm (10 ft + 3/16in)
(b) 3.66 m + 5mm (12 ft + 3/16 in.)
(c) 6 m + 9mm (20 ft + 5/16 in.) and
(d) 7.32 m + 9mm (24 ft + 5/16 in.).

Widths

6.2.1 for sections other than channel cable trays or wire mesh cable trays, typical widths are:
(a) 150 mm (6 in.);
(b) 225 mm (9 in);
(c) 300 mm (12 in.);
(d) 450 mm (18 in.) ;
(e) 600 mm (24 in.);
(f) 750 mm (30 in.); and
(g) 900 mm (36 in.);

NOTE - The tolerance of the widths is within + 6 mm (1/4 in.) for inside dimensions.
Overall width shall not exceed the inside width by more than 100 mm (4in.).

6.2.2 For channel cable trays, typical widths are :

(a) 75 mm (3 in,);
(b) 100 mm (4 in,); and
(c) 150 mm (6 in,).

NOTE- The tolerance of the widths is within + 6 mm (1/4 in.) for inside dimensions.

6.2.3 For wire mesh cable trays, typical widths are :

(a) 50 mm (2 in.);
(b) 100 mm (4 in.);
(c) 150 mm (6 in.);
(d) 200 mm (8 in.);
(e) 300 mm (12 in.);
(f) 400 mm (16 in.);
(g) 450 mm (18 in.);
(h) 500 mm (20 in.); and
(i) 600 mm (24 in.);

NOTE- The tolerance of the widths is within + 3 mm (1/8 in.) for inside dimensions .

Fill Depths

6.3.1 For other than channel cable trays, or wire mesh cable tr ays, typical depths for sections are :

(a) 75 mm (3 in.);

(b) 100 mm (4 in.);

(c) 125 mm (5 in.); and

(d) 150 mm (6 in.);

NOTE- The tolerance of the depths is within + 10mm (3/8). Outside depths shall not exceed inside depths by more than 30mm (1 – 114in.)

6.3.2 For channel cable trays, typical depths are 30-50 mm (4-2 /1-1 in.) for outside dimensions .

6.3.3 For wire mesh cable trays, typical depths are :

(a) 25 mm (1 in);

(b) 50 mm (2 in);

(c) 100 mm (4 in); and

(d) 150 mm (6 in).

NOTE- The tolerance of the depths is within + 10 mm (3/8 in.)

Outside depths shall not exceed inside depths by more than 30mm (1 1 – 14in.)

6.3.4 For single-rail cable trays, typical depths are:

(a) 75 mm (3 in.);

(b) 100 mm (4 in.);

(c) 125 mm (5 in.); and

(d) 150 mm (6 in.);

NOTE- The tolerance of the depths is within + 10 mm (3/8 in.)

Nominal Rung Spacing on Straight Sections

Typical rung spacings are :

(a) 150 mm (6 in.);

(b) 225 mm (9 in.); and

(c) 300 mm (12 in.);

Inside Radii

Typical inside radii of curved sections are :

(a) 300 mm (12 in.);

(b) 600 mm (24 in.); and

(c) 900 mm (36 in.);

Degrees of Arc for Elbows

Typical degrees of are for elbow sections are :

(a) 30˚;

(b) 45˚;

(c) 60˚; and

(d) 90˚.

Material and Finishe

Massar manufactures three types of cable trays:

- Ladder type
- Perforated type
- Solid type

All of these are available with a full range of fixtures and accessories

System component used to join, change direction, change dimension or terminate cable tray lengths or cable ladder lengths.

All of these are available with a full range of fixtures and accessories

Fixtures:

System component used to join, change direction, change dimension or terminate cable tray lengths or cable ladder lengths.

All of these are available with a full range of fixtures and accessories

Covers :

Covers act as an additional safeguard, providing shelter from sunlight dirt accumulation and accidental contact. They also isolate cables from fires and radio frequency interference. Available in solid top or louvered top

Construction Accessories:

Other types of cable trays and fixtures can be supplied to meet specific requirements . Maser cable trays are available in these materials Aluminum, steel and stainless steel Listed below the advantages of each material type.

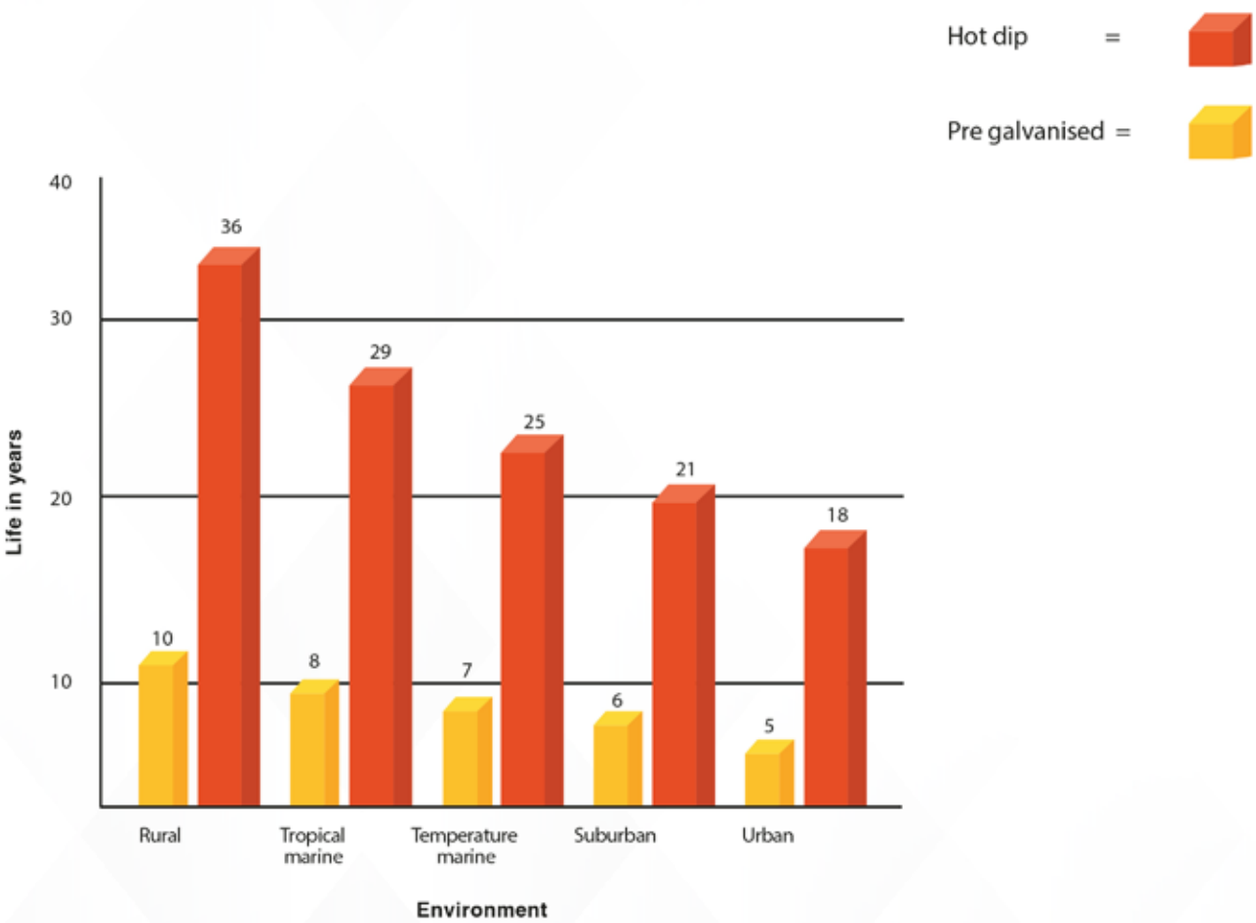
Materials	Advantages
Aluminum	- Corrosion resistance - Easy field Fabrication & installation - Excellent strength to weight ratio - Excellent grounding conductor
Steel	- Electric shielding - Finish options - Low thermal expansion - Limited deflection
Stainless Steel	- Superior corrosion resistance with stands high temperatures

Material and Finishe

All masar cable trays are manufactured from prime quality sheet. To provide adequate protection against corrosion, three types of protection are offered:

- Paint after manufacturing
- Fabricated from pre-galvanized sheets
- Hot dip galvanized after manufacturing

Service life is defined as the time of %5rusting of steel service anticipated life zinc coatings in various atmospheric environments



Catalogue Numbering System

For ease of ordering, each individual production is identified by a (catalog number) comprising Letters and numbers.

Format
Code

01	02	03	04	05	06	07	08	09

Code 1 type of cable trays, cover and Wire Mesh

CT	Perforated
CD	DUCT
CL	Ladder
WM	Wire Mesh
SC	Solid Cover
VC	Ventilated Cover

Code 2 type of Accessories

ER	Equal Reducer
RR	Right Reducer
LR	Left Reducer
ET	Equal Tee
UT	Unequal Tee
OT	Offset Tee
VT	Vertical Tee
VEO 90	Vertical Elbow 90 - out
VEI 90	Vertical Elbow 90 - in
VEO 45	Vertical Elbow 45 - out
VEO 45	Vertical Elbow 45 - in
HE 90	Horizontal Elbow 90
C	Cross

Code 3 width in mm

Code 4 Height in mm

Code 5 sheet metal thickness in mm

Code 6 Length of straight section

2m	2 meter straight
3m	3 meter straight

Code 7 type of flange

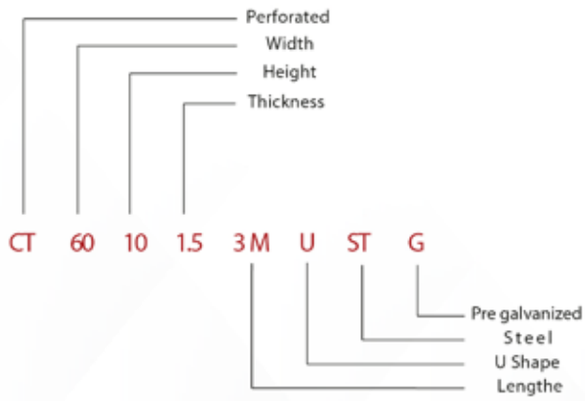
U	U Shape
ES90	SNAP ON
E70	Angle flange
ER	Return flange

Code 8 types of material

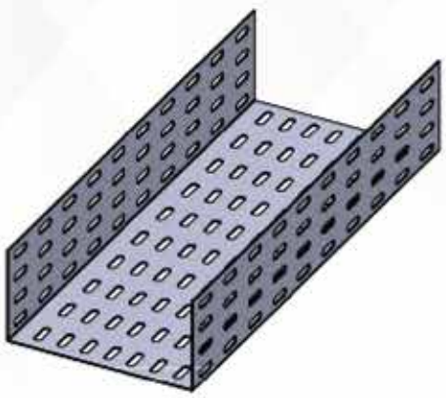
AL	Aluminum
ST	Steel
SS	Stainless steel

Code 9 type of finish

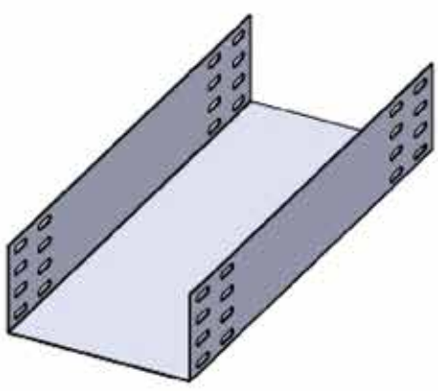
P	Paint after Fabrication
G	Pre Galvanized
H	Hot dip Galvanized



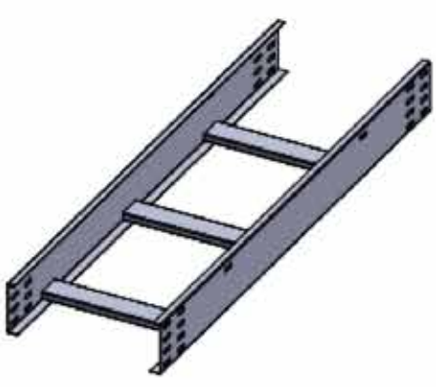
Cable Tray



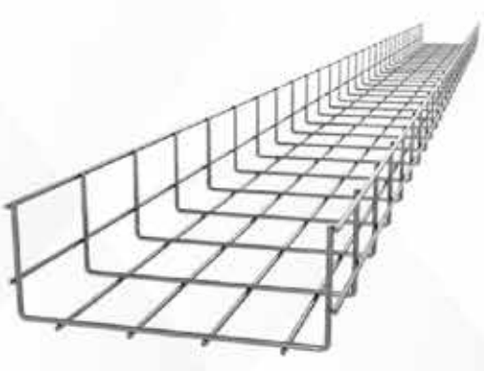
Cable Trunk



Cable Ladder

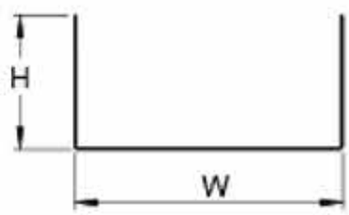


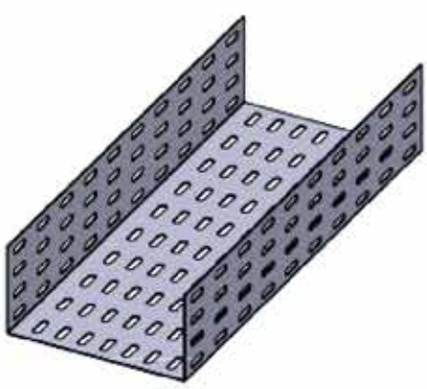
Wire Mesh Cable tray



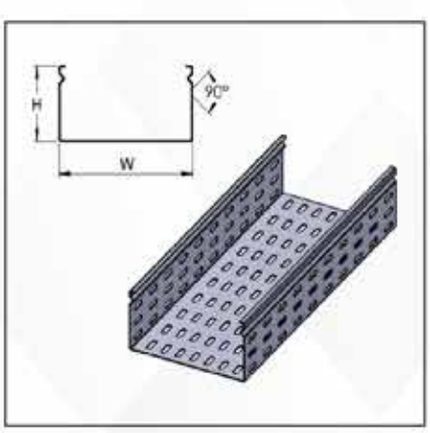
Cable Trays

Code	Height (mm)	Width (mm)	Thickness (mm)	Length (mm)	Weight (kg)
CT3-1-50-50M	50	50	1	3000	3
CT3-1.2-50-50M	50	50	1.2	3000	3.5
CT3-1.5-50-50M	50	50	1.5	3000	4.35
CT3-1-50-100M	50	100	1	3000	4
CT3-1.2-50-100M	50	100	1.2	3000	4.8
CT3-1.5-50-100M	50	100	1.5	3000	5.95
CT3-1-50-200M	50	200	1	3000	6
CT3-1.2-50-200M	50	200	1.2	3000	7.2
CT3-1.5-50-200M	50	200	1.5	3000	8.95
CT3-1-50-300M	50	300	1	3000	8
CT3-1.2-50-300M	50	300	1.2	3000	9.6
CT3-1.5-50-300M	50	300	1.5	3000	11.95
CT3-1.5-50-400M	50	400	1.5	3000	14.95
CT3-2-50-400M	50	400	2	3000	19.95
CT3-1.5-50-500M	50	500	1.5	3000	17.95
CT3-2-50-500M	50	500	2	3000	23.95
CT3-1.5-50-600M	50	600	1.5	3000	20.95
CT3-2-50-600M	50	600	2	3000	27.95
CT3-1-100-100M	100	100	1	3000	6
CT3-1.2-100-100M	100	100	1.2	3000	7.2
CT3-1.5-100-100M	100	100	1.5	3000	8.95
CT3-1-100-100M	100	200	1	3000	8
CT3-1.2-100-100M	100	200	1.2	3000	9.6
CT3-1.5-100-200M	100	200	1.5	3000	11.95
CT3-1-100-300M	100	300	1	3000	10
CT3-1.2-100-200M	100	300	1.2	3000	12
CT3-1.5-100-300M	100	300	1.5	3000	14.95
CT3-1.5-100-400M	100	400	1.5	3000	17.95
CT3-2-100-400M	100	400	2	3000	19.9
CT3-1.5-100-500M	100	500	1.5	3000	20.95
CT3-2-100-500M	100	500	2	3000	23.9
CT3-1.5-100-600M	100	600	1.5	3000	23.95
CT3-2-100-600M	100	600	2	3000	27.9

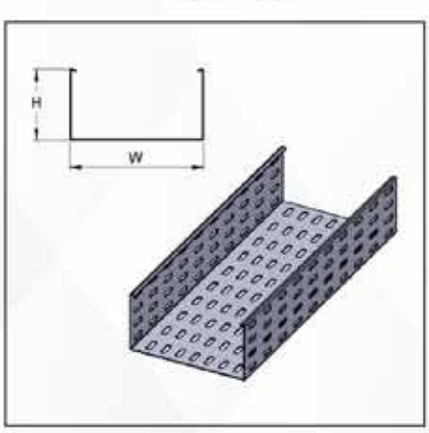




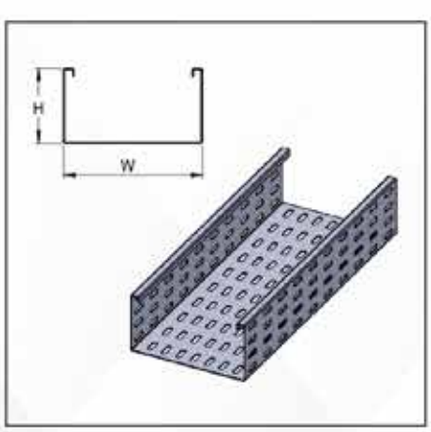
Flange Type



Snap on



Angle Flange

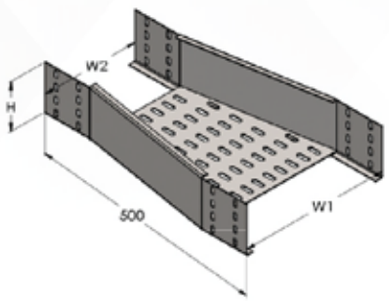


Return Flange

Cable Trays Accessories

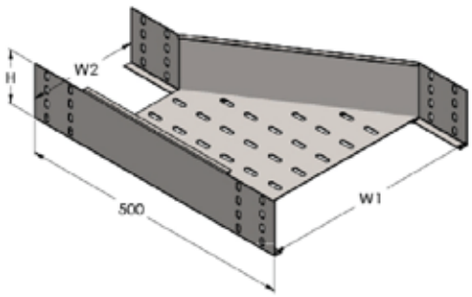
Equal Reducer

Code	Width (W1)	Width (W2)	Height (H)	Thickness (T)
CT_ER_H-W-1W2 -T	200 UP TO 900	100	50 UP TO 200	1UP TO 2
CT_ER_H-W-1W2 -T	300 UP TO 900	100 UP TO 200	50 UP TO 200	1UP TO 2
CT_ER_H-W-1W2 -T	400 UP TO 900	100 UP TO 300	50 UP TO 200	1UP TO 2
CT_ER_H-W-1W2 -T	500 UP TO 900	100 UP TO 400	50 UP TO 200	1UP TO 2
CT_ER_H-W-1W-2 T	600 UP TO 900	100 UP TO 500	50 UP TO 200	1UP TO 2
CT_ER_H-W-1W-2 T	700 UP TO 900	100 UP TO 600	50 UP TO 200	1UP TO 2
CT_ER_H-W-1W-2 T	800 UP TO 900	100 UP TO 700	50 UP TO 200	1UP TO 2



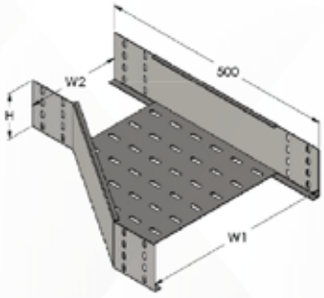
Left Reducer

Code	Width (W1)	Width (W2)	Height (H)	Thickness (T)
CT_LR_H-W-1W2 -T	200 UP TO 900	100	50 UP TO 200	1UP TO 2
CT_LR_H-W-1W2 -T	300 UP TO 900	100 UP TO 200	50 UP TO 200	1UP TO 2
CT_LR_H-W-1W2 -T	400 UP TO 900	100 UP TO 300	50 UP TO 200	1UP TO 2
CT_LR_H-W-1W2 -T	500 UP TO 900	100 UP TO 400	50 UP TO 200	1UP TO 2
CT_LR_H-W-1W-2 T	600 UP TO 900	100 UP TO 500	50 UP TO 200	1UP TO 2
CT_LR_H-W-1W-2 T	700 UP TO 900	100 UP TO 600	50 UP TO 200	1UP TO 2
CT_LR_H-W-1W-2 T	800 UP TO 900	100 UP TO 700	50 UP TO 200	1UP TO 2



Right Reducer

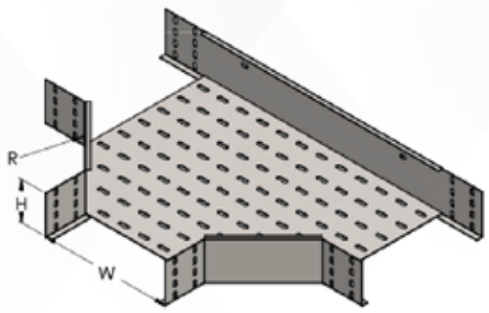
Code	Width (W1)	Width (W2)	Height (H)	Thickness (T)
CT_RR_H-W-1W2 -T	200 UP TO 900	100	50 UP TO 200	1UP TO 2
CT_RR_H-W-1W2 -T	300 UP TO 900	100 UP TO 200	50 UP TO 200	1UP TO 2
CT_RR_H-W-1W2 -T	400 UP TO 900	100 UP TO 300	50 UP TO 200	1UP TO 2
CT_RR_H-W-1W2 -T	500 UP TO 900	100 UP TO 400	50 UP TO 200	1UP TO 2
CT_RR_H-W-1W-2 T	600 UP TO 900	100 UP TO 500	50 UP TO 200	1UP TO 2
CT_RR_H-W-1W-2 T	700 UP TO 900	100 UP TO 600	50 UP TO 200	1UP TO 2
CT_RR_H-W-1W-2 T	800 UP TO 900	100 UP TO 700	50 UP TO 200	1UP TO 2



Cable Trays Accessories

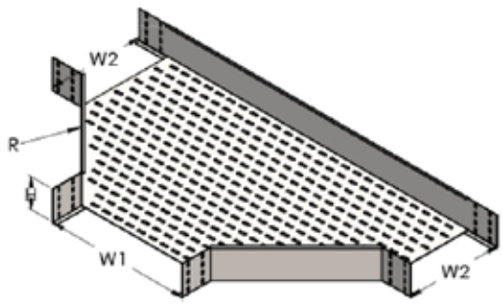
Equal Tee

Code	Width (W)	Height (H)	Thickness (T)	Radius (R)
CT_ET_1.0-100-50	50	100	1	200
CT_ET_1.0-200-50	50	200	1	200
CT_TE_1.0-300-50	50	300	1	200
CT_TE_1.5-300-100	100	300	1.5	300
CT_TE_1.5-400-100	100	400	1.5	300
CT_TE_1.5-500-100	100	500	1.5	300
CT_TE_2.0-700-200	200	700	2	600
CT_TE_2.0-800-200	200	800	2	600
CT_TE_2.0-900-200	200	900	2	600



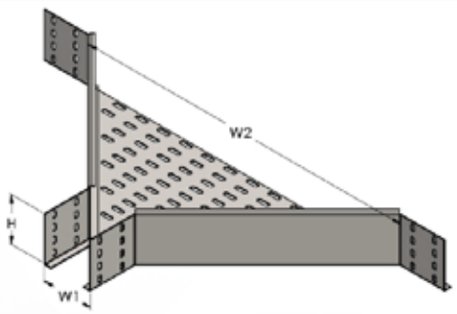
Unequal Tee

Code	Width (W_{1-1})	Height (H)	Thickness (T)	Radius (R)
CT_UT_1.0-100-50	50	100	1	200
CT_UT_1.0-200-50	50	200	1	200
CT_UT_1.0-300-50	50	300	1	200
CT_UT_1.5-300-100	100	300	1.5	300
CT_UT_1.5-400-100	100	400	1.5	300
CT_UT_1.5-500-100	100	500	1.5	300
CT_UT_2.0-700-200	200	700	2	600
CT_UT_2.0-800-200	200	800	2	600
CT_UT_2.0-900-200	200	900	2	600



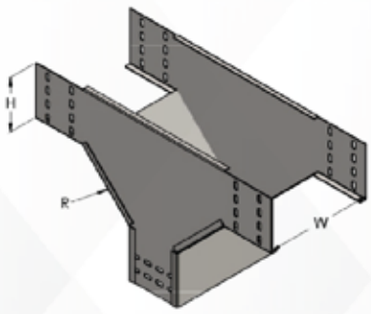
Offset Tee

Code	Width (W_1)	Width (W_2)	Height (H)	Thickness (T)
CT_OT_H-W-1W2 -T	200 UP TO 900	100	50 UP TO 200	1UP TO 2
CT_OT_H-W-1W2 -T	300 UP TO 900	100 UP TO 200	50 UP TO 200	1UP TO 2
CT_OT_H-W-1W2 -T	400 UP TO 900	100 UP TO 300	50 UP TO 200	1UP TO 2
CT_OT_H-W-1W2 -T	500 UP TO 900	100 UP TO 400	50 UP TO 200	1UP TO 2
CT_OT_H-W-1W-2 T	600 UP TO 900	100 UP TO 500	50 UP TO 200	1UP TO 2
CT_OT_H-W-1W-2 T	700 UP TO 900	100 UP TO 600	50 UP TO 200	1UP TO 2
CT_OT_H-W-1W-2 T	800 UP TO 900	100 UP TO 700	50 UP TO 200	1UP TO 2



Vertical Tee

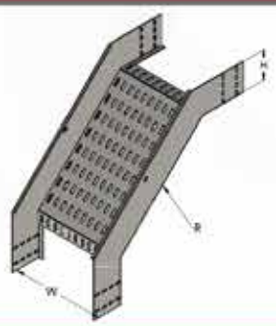
Code	Width (W)	Height (H)	Thickness (T)	Radius (R)
CT_VT_1.0-100-50	50	100	1	200
CT_VT_1.0-200-50	50	200	1	200
CT_VT_1.0-300-50	50	300	1	200
CT_VT_1.5-300-100	100	300	1.5	300
CT_VT_1.5-400-100	100	400	1.5	300
CT_VT_1.5-500-100	100	500	1.5	300
CT_VT_2.0-700-200	200	700	2	600
CT_VT_2.0-800-200	200	800	2	600
CT_VT_2.0-900-200	200	900	2	600



Cable Trays Accessories

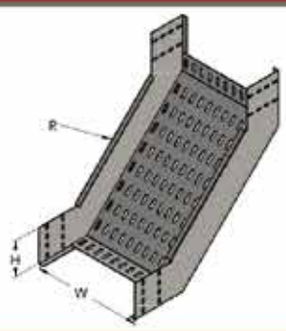
Vertical Elbow 90 - out

Code	Width (W)	Height (H)	Thickness (T)	Radius (R)
CT_VEO_1.0-100-50_90	50	100	1	200
CT_VEO_1.0-200-50_90	50	200	1	200
CT_VEO_1.0-300-50_90	50	300	1	200
CT_VEO_1.5-300-100_90	100	300	1.5	300
CT_VEO_1.5-400-100_90	100	400	1.5	300
CT_VEO_1.5-500-100_90	100	500	1.5	300
CT_VEO_2.0-700-200_90	200	700	2	600
CT_VEO_2.0-800-200_90	200	800	2	600
CT_VEO_2.0-900-200_90	200	900	2	600



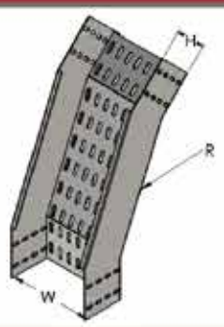
Vertical Elbow 90 - in

Code	Width (W)	Height (H)	Thickness (T)	Radius (R)
CT_VEI_1.0-100-50_90	50	100	1	200
CT_VEI_1.0-200-50_90	50	200	1	200
CT_VE_1.0-300-50_90	50	300	1	200
CT_VEI_1.5-300-100_90	100	300	1.5	300
CT_VEI_1.5-400-100_90	100	400	1.5	300
CT_VEI_1.5-500-100_90	100	500	1.5	300
CT_VEI_2.0-700-200_90	200	700	2	600
CT_VEI_2.0-800-200_90	200	800	2	600
CT_VEI_2.0-900-200_90	200	900	2	600



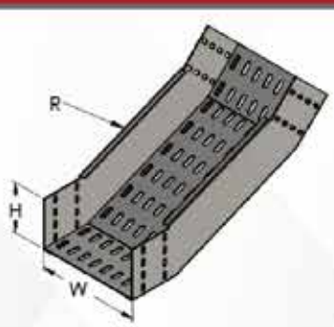
Vertical Elbow 45 - out

Code	Width (W)	Height (H)	Thickness (T)	Radius (R)
CT_VEO_1.0-100-50_45	50	100	1	200
CT_VEO_1.0-200-50_45	50	200	1	200
CT_VEO_1.0-300-50_45	50	300	1	200
CT_VEO_1.5-300-100_45	100	300	1.5	300
CT_VEO_1.5-400-100_45	100	400	1.5	300
CT_VEO_1.5-500-100_45	100	500	1.5	300
CT_VEO_2.0-700-200_45	200	700	2	600
CT_VEO_2.0-800-200_45	200	800	2	600
CT_VEO_2.0-900-200_45	200	900	2	600



Vertical Elbow 45 - in

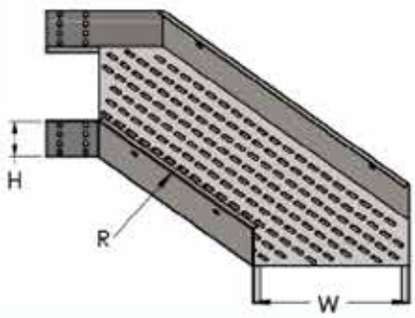
Code	Width (W)	Height (H)	Thickness (T)	Radius (R)
CT_VEI_1.0-100-50_45	50	100	1	200
CT_VEI_1.0-200-50_45	50	200	1	200
CT_VE_1.0-300-50_45	50	300	1	200
CT_VEI_1.5-300-100_45	100	300	1.5	300
CT_VEI_1.5-400-100_45	100	400	1.5	300
CT_VEI_1.5-500-100_45	100	500	1.5	300
CT_VEI_2.0-700-200_45	200	700	2	600
CT_VEI_2.0-800-200_45	200	800	2	600
CT_VEI_2.0-900-200_45	200	900	2	600



Cable Trays Accessories

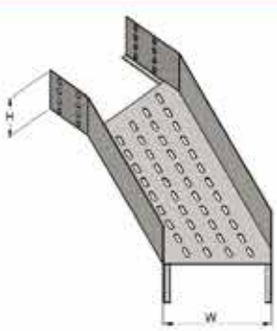
Horizontal Elbow 90

Code	Width (W)	Height (H)	Thickness (T)	Radius (R)
CT_HE_1.0-100-50_90	50	100	1	200
CT_HE_1.0-200-50_90	50	200	1	200
CT_HE_1.0-300-50_90	50	300	1	200
CT_HE_1.5-300-100_90	100	300	1.5	300
CT_HE_1.5-400-100_90	100	400	1.5	300
CT_HE_1.5-500-100_90	100	500	1.5	300
CT_HE_2.0-700-200_90	200	700	2	600
CT_HE_2.0-800-200_90	200	800	2	600
CT_HE_2.0-900-200_90	200	900	2	600



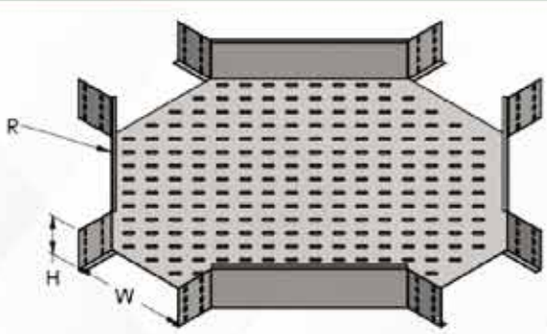
Horizontal Elbow 45

Code	Width (W)	Height (H)	Thickness (T)	Radius (R)
CT_HE_1.0-100-50_45	50	100	1	200
CT_HE_1.0-200-50_45	50	200	1	200
CT_HE_1.0-300-50_45	50	300	1	200
CT_HE_1.5-300-100_45	100	300	1.5	300
CT_HE_1.5-400-100_45	100	400	1.5	300
CT_HE_1.5-500-100_45	100	500	1.5	300
CT_HE_2.0-700-200_45	200	700	2	600
CT_HE_2.0-800-200_45	200	800	2	600
CT_HE_2.0-900-200_45	200	900	2	600



CROSS

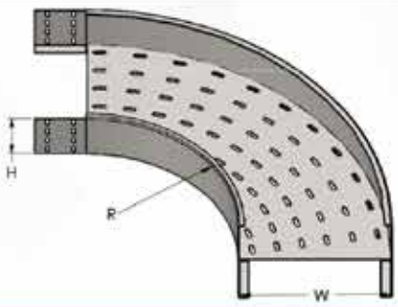
Code	Width (W)	Height (H)	Thickness (T)	Radius (R)
CT_C_1.0-100-50	50	100	1	200
CT_C_1.0-200-50	50	200	1	200
CT_C_1.0-300-50	50	300	1	200
CT_C_1.5-300-100	100	300	1.5	300
CT_C_1.5-400-100	100	400	1.5	300
CT_C_1.5-500-100	100	500	1.5	300
CT_C_2.0-700-200	200	700	2	600
CT_C_2.0-800-200	200	800	2	600
CT_C_2.0-900-200	200	900	2	600



Cable Trays Accessories

Horizontal Elbow 90 CURVED

Code	Width (W)	Height (H)	Thickness (T)	Radius (R)
CT_HE_1.0-50-50_90	50	100	1	200
CT_HE_1.0-100-50_90	50	200	1	200
CT_HE_1.0-200-50_90	50	300	1	200
CT_HE_1.5-300-100_90	100	300	1.5	300
CT_HE_1.5-400-100_90	100	400	1.5	300
CT_HE_1.5-500-100_90	100	500	1.5	300
CT_HE_2.0-700-200_90	200	700	2	600
CT_HE_2.0-800-200_90	200	800	2	600
CT_HE_2.0-900-200_90	200	900	2	600

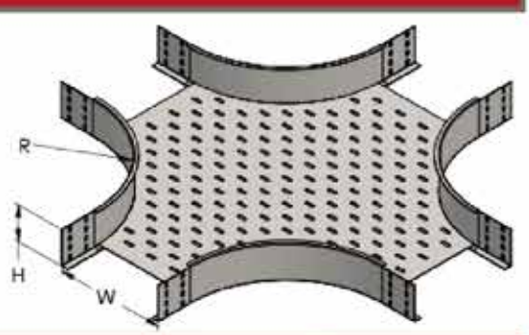


Adjustable Vertical Elbow 90

Code	Width (W)	Height (H)	Thickness (T)	Radius (R)
CT_VE_1.0-100-50_90	50	100	1	200
CT_VE_1.0-200-50_90	50	200	1	200
CT_VE_1.0-300-50_90	50	300	1	200
CT_VE_1.5-300-100_90	100	300	1.5	300
CT_VE_1.5-400-100_90	100	400	1.5	300
CT_VE_1.5-500-100_90	100	500	1.5	300
CT_VE_2.0-700-200_90	200	700	2	600
CT_VE_2.0-800-200_90	200	800	2	600
CT_VE_2.0-900-200_90	200	900	2	600

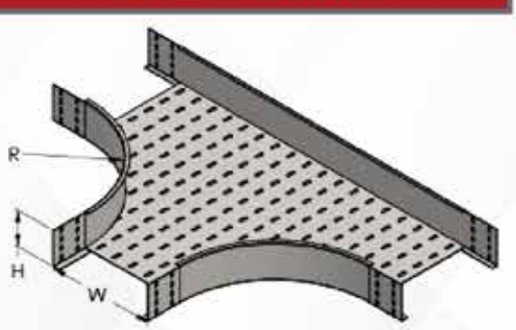
CROSS CURVED

Code	Width (W)	Height (H)	Thickness (T)	Radius (R)
CT_C_1.0-100-50	50	100	1	200
CT_C_1.0-200-50	50	200	1	200
CT_C_1.0-300-50	50	300	1	200
CT_C_1.5-300-100	100	300	1.5	300
CT_C_1.5-400-100	100	400	1.5	300
CT_C_1.5-500-100	100	500	1.5	300
CT_C_2.0-700-200	200	700	2	600
CT_C_2.0-800-200	200	800	2	600
CT_C_2.0-900-200	200	900	2	600



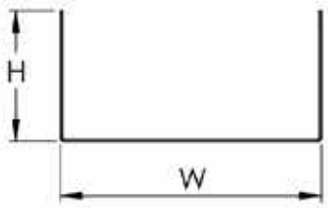
Equal Tee CURVED

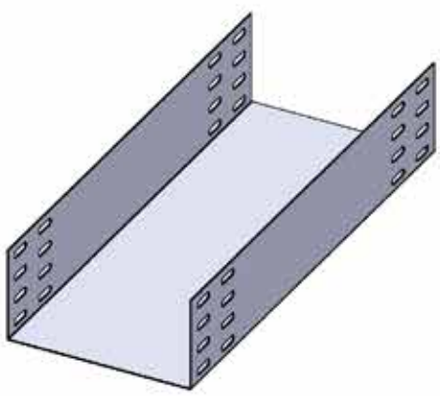
Code	Width (W)	Height (H)	Thickness (T)	Radius (R)
CT_ET_1.0-100-50	50	100	1	200
CT_ET_1.0-200-50	50	200	1	200
CT_ET_1.0-300-50	50	300	1	200
CT_ET_1.5-300-100	100	300	1.5	300
CT_ET_1.5-400-100	100	400	1.5	300
CT_ET_1.5-500-100	100	500	1.5	300
CT_ET_2.0-700-200	200	700	2	600
CT_ET_2.0-800-200	200	800	2	600
CT_ET_2.0-900-200	200	900	2	600



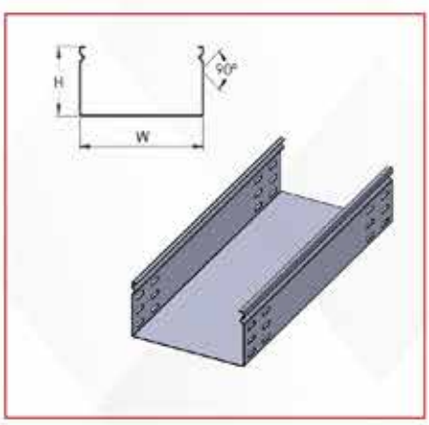
Cable Trunk

Code	Height (mm)	Width (mm)	Thickness (mm)	Length (mm)	Weight (kg)
CD3-1-50-50M	50	50	1	3000	3.4
CD3-1.2-50-50M	50	50	1.2	3000	4.08
CD3-1.5-50-50M	50	50	1.5	3000	5.1
CD3-1-50-100M	50	100	1	3000	4.6
CD3-1.2-50-100M	50	100	1.2	3000	5.5
CD3-1.5-50-100M	50	100	1.5	3000	6.85
CD3-1-50-200M	50	200	1	3000	7
CD3-1.2-50-200M	50	200	1.2	3000	8.3
CD3-1.5-50-200M	50	200	1.5	3000	10.35
CD3-1-50-300M	50	300	1	3000	9.4
CD3-1.2-50-300M	50	300	1.2	3000	11.1
CD3-1.5-50-300M	50	300	1.5	3000	13.85
CD3-1.5-50-400M	50	400	1.5	3000	17.35
CD3-2-50-400M	50	400	2	3000	23.15
CD3-1.5-50-500M	50	500	1.5	3000	20.85
CD3-2-50-500M	50	500	2	3000	27.85
CD3-1.5-50-600M	50	600	1.5	3000	24.35
CD3-2-50-600M	50	600	2	3000	32.55
CD3-1-100-100M	100	100	1	3000	6.9
CD3-1.2-100-100M	100	100	1.2	3000	8.25
CD3-1.5-100-100M	100	100	1.5	3000	10.3
CDT3-1-100-100M	100	200	1	3000	9.25
CD3-1.2-100-100M	100	200	1.2	3000	11.05
CD3-1.5-100-200M	100	200	1.5	3000	13.8
CD3-1-100-300M	100	300	1	3000	11.65
CD3-1.2-100-200M	100	300	1.2	3000	13.85
CD3-1.5-100-300M	100	300	1.5	3000	17.3
CD3-1.5-100-400M	100	400	1.5	3000	17.35
CD3-2-100-400M	100	400	2	3000	23.15
CD3-1.5-100-500M	100	500	1.5	3000	20.85
CD3-2-100-500M	100	500	2	3000	27.85
CD3-1.5-100-600M	100	600	1.5	3000	24.35
CD3-2-100-600M	100	600	2	3000	32.55

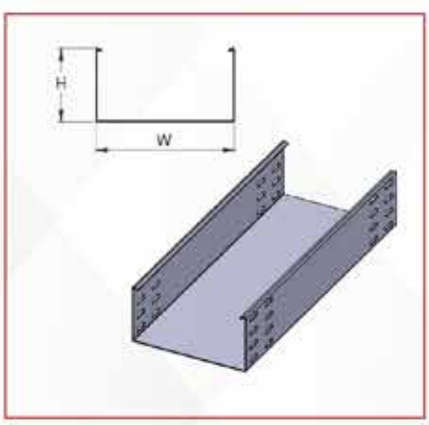




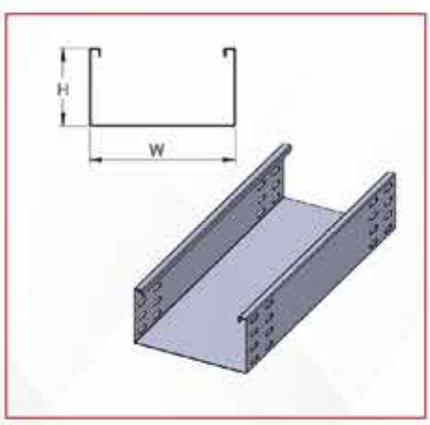
Flange type



Snap on



Angle flange

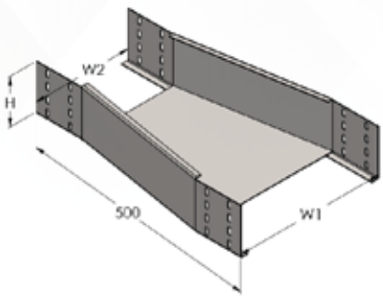


Return Flange

Cable Trunk Accessories

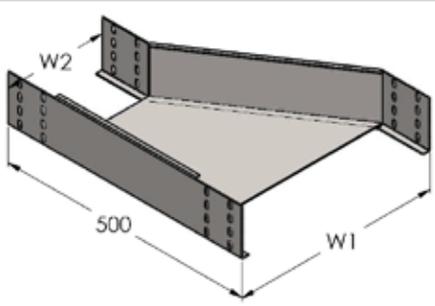
Equal Reducer

Code	Width (W1)	Width (W2)	Height (H)	Thickness (T)
CD_ER_H-W-1W2 -T	200 UP TO 900	100	50 UP TO 200	1UP TO 2
CD_ER_H-W-1W2 -T	300 UP TO 900	100 UP TO 200	50 UP TO 200	1UP TO 2
CD_ER_H-W-1W2 -T	400 UP TO 900	100 UP TO 300	50 UP TO 200	1UP TO 2
CD_ER_H-W-1W2 -T	500 UP TO 900	100 UP TO 400	50 UP TO 200	1UP TO 2
CD_ER_H-W-1W-2 T	600 UP TO 900	100 UP TO 500	50 UP TO 200	1UP TO 2
CD_ER_H-W-1W-2 T	700 UP TO 900	100 UP TO 600	50 UP TO 200	1UP TO 2
CD_ER_H-W-1W-2 T	800 UP TO 900	100 UP TO 700	50 UP TO 200	1UP TO 2



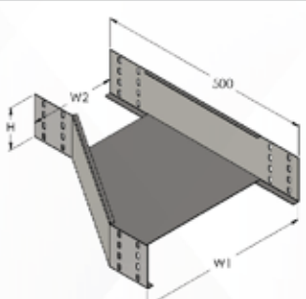
Left Reducer

Code	Width (W1)	Width (W2)	Height (H)	Thickness (T)
CD_LR_H-W-1W2 -T	200 UP TO 900	100	50 UP TO 200	1UP TO 2
CD_LR_H-W-1W2 -T	300 UP TO 900	100 UP TO 200	50 UP TO 200	1UP TO 2
CD_LR_H-W-1W2 -T	400 UP TO 900	100 UP TO 300	50 UP TO 200	1UP TO 2
CD_LR_H-W-1W2 -T	500 UP TO 900	100 UP TO 400	50 UP TO 200	1UP TO 2
CD_LR_H-W-1W-2 T	600 UP TO 900	100 UP TO 500	50 UP TO 200	1UP TO 2
CD_LR_H-W-1W-2 T	700 UP TO 900	100 UP TO 600	50 UP TO 200	1UP TO 2
CD_LR_H-W-1W-2 T	800 UP TO 900	100 UP TO 700	50 UP TO 200	1UP TO 2



Right Reducer

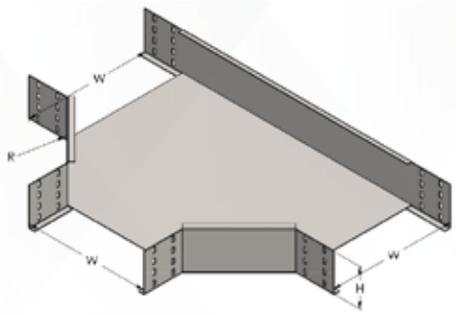
Code	Width (W1)	Width (W2)	Height (H)	Thickness (T)
CD_RR_H-W-1W2 -T	200 UP TO 900	100	50 UP TO 200	1UP TO 2
CD_RR_H-W-1W2 -T	300 UP TO 900	100 UP TO 200	50 UP TO 200	1UP TO 2
CD_RR_H-W-1W2 -T	400 UP TO 900	100 UP TO 300	50 UP TO 200	1UP TO 2
CD_RR_H-W-1W2 -T	500 UP TO 900	100 UP TO 400	50 UP TO 200	1UP TO 2
CD_RR_H-W-1W-2 T	600 UP TO 900	100 UP TO 500	50 UP TO 200	1UP TO 2
CD_RR_H-W-1W-2 T	700 UP TO 900	100 UP TO 600	50 UP TO 200	1UP TO 2
CD_RR_H-W-1W-2 T	800 UP TO 900	100 UP TO 700	50 UP TO 200	1UP TO 2



Cable Trunk Accessories

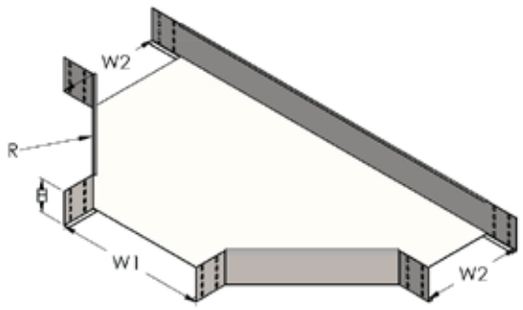
Equal Tee

Code	Width (W)	Height (H)	Thickness (T)	Radius (R)
CD_ET_1.0-100-50	50	100	1	200
CD_ET_1.0-200-50	50	200	1	200
CD_TE_1.0-300-50	50	300	1	200
CD_TE_1.5-300-100	100	300	1.5	300
CD_TE_1.5-400-100	100	400	1.5	300
CD_TE_1.5-500-100	100	500	1.5	300
CD_TE_2.0-700-200	200	700	2	600
CD_TE_2.0-800-200	200	800	2	600
CD_TE_2.0-900-200	200	900	2	600



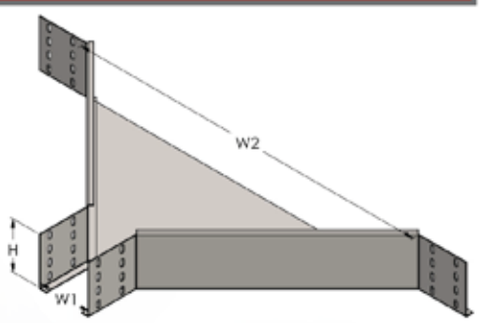
Unequal Tee

Code	Width (W_{1-1})	Height (H)	Thickness (T)	Radius (R)
CD_UT_1.0-100-50	50	100	1	200
CD_UT_1.0-200-50	50	200	1	200
CD_UT_1.0-300-50	50	300	1	200
CD_UT_1.5-300-100	100	300	1.5	300
CD_UT_1.5-400-100	100	400	1.5	300
CD_UT_1.5-500-100	100	500	1.5	300
CD_UT_2.0-700-200	200	700	2	600
CD_UT_2.0-800-200	200	800	2	600
CD_UT_2.0-900-200	200	900	2	600



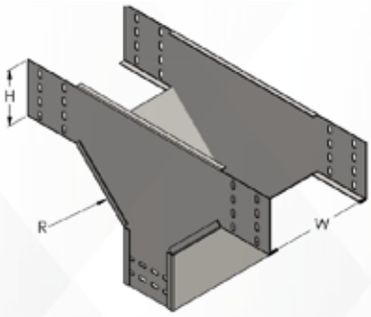
Offset Tee

Code	Width (W_1)	Width (W_2)	Height (H)	Thickness (T)
CD_OT_1.0-100-50	200 UP TO 900	100	50 UP TO 200	1UP TO 2
CD_OT_1.0-200-50	300 UP TO 900	100 UP TO 200	50 UP TO 200	1UP TO 2
CD_OT_1.0-300-50	400 UP TO 900	100 UP TO 300	50 UP TO 200	1UP TO 2
CD_OT_1.5-300-100	500 UP TO 900	100 UP TO 400	50 UP TO 200	1UP TO 2
CD_OT_1.5-400-100	600 UP TO 900	100 UP TO 500	50 UP TO 200	1UP TO 2
CD_OT_1.5-500-100	700 UP TO 900	100 UP TO 600	50 UP TO 200	1UP TO 2
CD_OT_2.0-700-200	800 UP TO 900	100 UP TO 700	50 UP TO 200	1UP TO 2



Vertical Tee

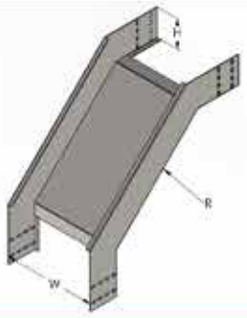
Code	Width (W)	Height (H)	Thickness (T)	Radius (R)
CD_VT_1.0-100-50	50	100	1	200
CD_VT_1.0-200-50	50	200	1	200
CD_VT_1.0-300-50	50	300	1	200
CD_VT_1.5-300-100	100	300	1.5	300
CD_VT_1.5-400-100	100	400	1.5	300
CD_VT_1.5-500-100	100	500	1.5	300
CD_VT_2.0-700-200	200	700	2	600
CD_VT_2.0-800-200	200	800	2	600
CD_VT_2.0-900-200	200	900	2	600



Cable Trunk Accessories

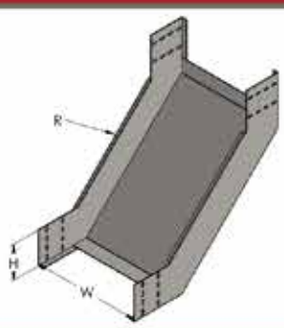
Vertical Elbow 90 - out

Code	Width (W)	Height (H)	Thickness (T)	Radius (R)
CD_VEO_1.0-100-50_90	50	100	1	200
CD_VEO_1.0-200-50_90	50	200	1	200
CD_VEO_1.0-300-50_90	50	300	1	200
CD_VEO_1.5--300-100_90	100	300	1.5	300
CD_VEO_1.5-400-100_90	100	400	1.5	300
CD_VEO_1.5-500-100_90	100	500	1.5	300
CD_VEO_2.0-700-200_90	200	700	2	600
CD_VEO_2.0-800-200_90	200	800	2	600
CD_VEO_2.0-900-200_90	200	900	2	600



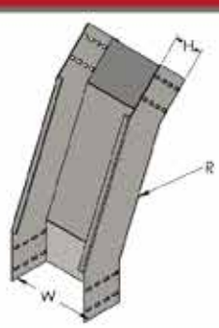
Vertical Elbow 90 - in

Code	Width (W)	Height (H)	Thickness (T)	Radius (R)
CD_VEI_1.0-100-50_90	50	100	1	200
CD_VEI_1.0-200-50_90	50	200	1	200
CD_VE_1.0-300-50_90	50	300	1	200
CD_VEI_1.5-300-100_90	100	300	1.5	300
CD_VEI_1.5-400-100_90	100	400	1.5	300
CD_VEI_1.5-500-100_90	100	500	1.5	300
CD_VEI_2.0-700-200_90	200	700	2	600
CD_VEI_2.0-800-200_90	200	800	2	600
CD_VEI_2.0-900-200_90	200	900	2	600



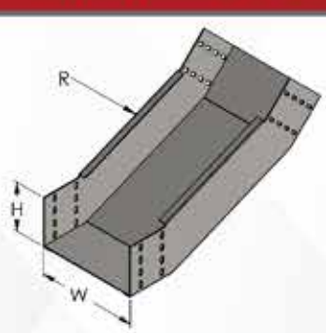
Vertical Elbow 45 - out

Code	Width (W)	Height (H)	Thickness (T)	Radius (R)
CD_VEO_1.0-100-50_45	50	100	1	200
CD_VEO_1.0-200-50_45	50	200	1	200
CD_VEO_1.0-300-50_45	50	300	1	200
CD_VEO_1.5-300-100_45	100	300	1.5	300
CD_VEO_1.5-400-100_45	100	400	1.5	300
CD_VEO_1.5-500-100_45	100	500	1.5	300
CD_VEO_2.0-700-200_45	200	700	2	600
CD_VEO_2.0-800-200_45	200	800	2	600
CD_VEO_2.0-900-200_45	200	900	2	600



Vertical Elbow 45 - in

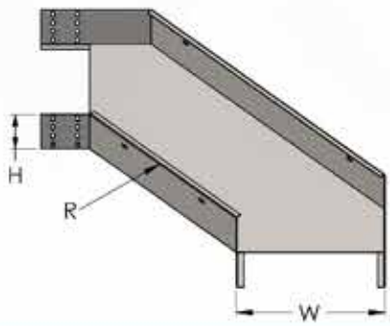
Code	Width (W)	Height (H)	Thickness (T)	Radius (R)
CD_VEI_1.0-100-50_45	50	100	1	200
CD_VEI_1.0-200-50_45	50	200	1	200
CD_VE_1.0-300-50_45	50	300	1	200
CD_VEI_1.5-300-100_45	100	300	1.5	300
CD_VEI_1.5-400-100_45	100	400	1.5	300
CD_VEI_1.5-500-100_45	100	500	1.5	300
CD_VEI_2.0-700-200_45	200	700	2	600
CD_VEI_2.0-800-200_45	200	800	2	600
CD_VEI_2.0-900-200_45	200	900	2	600



Cable Trunk Accessories

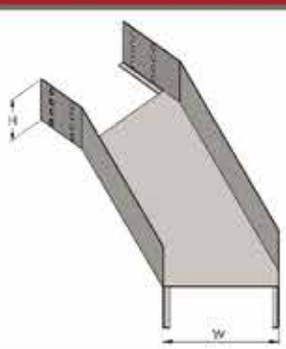
Code	Width (W)	Height (H)	Thickness (T)	Radius (R)
CD_HE_1.0-100-50_90	50	100	1	200
CD_HE_1.0-200-50_90	50	200	1	200
CD_HE_1.0-300-50_90	50	300	1	200
CD_HE_1.5-300-100_90	100	300	1.5	300
CD_HE_1.5-400-100_90	100	400	1.5	300
CD_HE_1.5-500-100_90	100	500	1.5	300
CD_HE_2.0-700-200_90	200	700	2	600
CD_HE_2.0-800-200_90	200	800	2	600
CD_HE_2.0-900-200_90	200	900	2	600

Horizontal Elbow 90



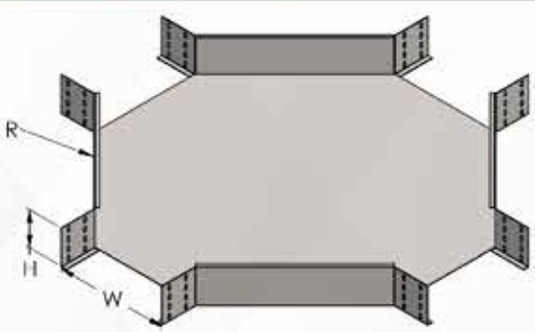
Code	Width (W)	Height (H)	Thickness (T)	Radius (R)
CD_HE_1.0-100-50_45	50	100	1	200
CD_HE_1.0-200-50_45	50	200	1	200
CD_HE_1.0-300-50_45	50	300	1	200
CD_HE_1.5-300-100_45	100	300	1.5	300
CD_HE_1.5-400-100_45	100	400	1.5	300
CD_HE_1.5-500-100_45	100	500	1.5	300
CD_HE_2.0-700-200_45	200	700	2	600
CD_HE_2.0-800-200_45	200	800	2	600
CD_HE_2.0-900-200_45	200	900	2	600

Horizontal Elbow 45



Code	Width (W)	Height (H)	Thickness (T)	Radius (R)
CD_C_1.0-100-50	50	100	1	200
CD_C_1.0-200-50	50	200	1	200
CD_C_1.0-300-50	50	300	1	200
CD_C_1.5-300-100	100	300	1.5	300
CD_C_1.5-400-100	100	400	1.5	300
CD_C_1.5-500-100	100	500	1.5	300
CD_C_2.0-700-200	200	700	2	600
CD_C_2.0-800-200	200	800	2	600
CD_C_2.0-900-200	200	900	2	600

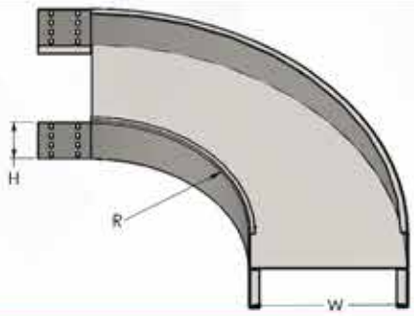
CROSS



Cable Trunk Accessories

Horizontal Elbow 90 CURVED

Code	Width (W)	Height (H)	Thickness (T)	Radius (R)
CD_HE_1.0-50-50_90	50	100	1	200
CD_HE_1.0-100-50_90	50	200	1	200
CD_HE_1.0-200-50_90	50	300	1	200
CD_HE_1.5-300-100_90	100	300	1.5	300
CD_HE_1.5-400-100_90	100	400	1.5	300
CD_HE_1.5-500-100_90	100	500	1.5	300
CD_HE_2.0-700-200_90	200	700	2	600
CD_HE_2.0-800-200_90	200	800	2	600
CD_HE_2.0-900-200_90	200	900	2	600

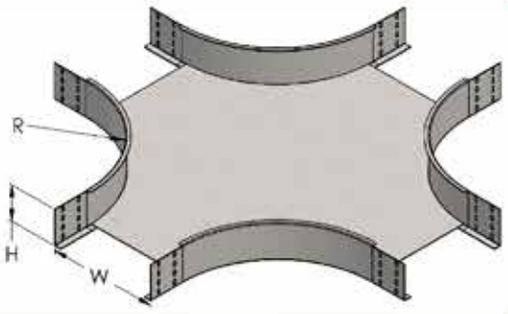


Adjustable Vertical Elbow 90

Code	Width (W)	Height (H)	Thickness (T)	Radius (R)
CD_VE_1.0-100-50_90	50	100	1	200
CD_VE_1.0-200-50_90	50	200	1	200
CD_VE_1.0-300-50_90	50	300	1	200
CD_VE_1.5-300-100_90	100	300	1.5	300
CD_VE_1.5-400-100_90	100	400	1.5	300
CD_VE_1.5-500-100_90	100	500	1.5	300
CD_VE_2.0-700-200_90	200	700	2	600
CD_VE_2.0-800-200_90	200	800	2	600
CD_VE_2.0-900-200_90	200	900	2	600

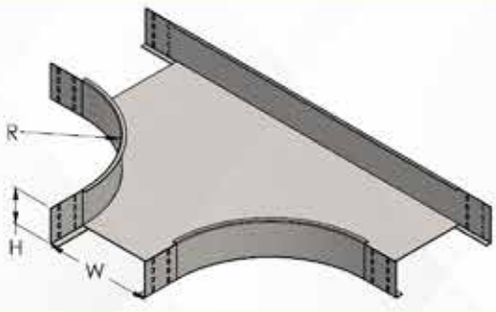
CROSS CURVED

Code	Width (W)	Height (H)	Thickness (T)	Radius (R)
CD_C_1.0-100-50	50	100	1	200
CD_C_1.0-200-50	50	200	1	200
CD_C_1.0-300-50	50	300	1	200
CD_C_1.5-300-100	100	300	1.5	300
CD_C_1.5-400-100	100	400	1.5	300
CD_C_1.5-500-100	100	500	1.5	300
CD_C_2.0-700-200	200	700	2	600
CD_C_2.0-800-200	200	800	2	600
CD_C_2.0-900-200	200	900	2	600



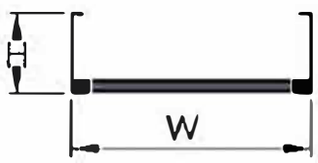
Equal Tee CURVED

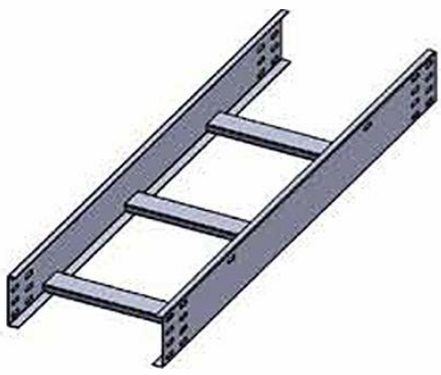
Code	Width (W)	Height (H)	Thickness (T)	Radius (R)
CD_ET_1.0-100-50	50	100	1	200
CD_ET_1.0-200-50	50	200	1	200
CD_ET_1.0-300-50	50	300	1	200
CD_ET_1.5-300-100	100	300	1.5	300
CD_ET_1.5-400-100	100	400	1.5	300
CD_ET_1.5-500-100	100	500	1.5	300
CD_ET_2.0-700-200	200	700	2	600
CD_ET_2.0-800-200	200	800	2	600
CD_ET_2.0-900-200	200	900	2	600



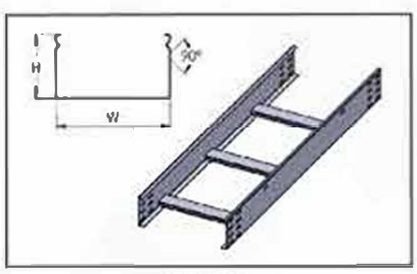
Cable Ladder

Code	Height (mm)	Width (mm)	Thickness (mm)	Length (mm)	Weight (kg)
CL3-1-50-100M	50	100	1.2	3000	5.83
CL3-1.2-50-100M	50	100	1.5	3000	7.19
CL3-1.5-50-100M	50	100	2	3000	9.36
CL3-1-50-200M	50	200	1.2	3000	6.7
CL3-1.2-50-200M	50	200	1.5	3000	8.26
CL3-1.5-50-200M	50	200	2	3000	10.75
CL3-1-50-300M	50	300	1.2	3000	7.57
CL3-1.2-50-300M	50	300	1.5	3000	9.33
CL3-1.5-50-300M	50	300	2	3000	12.14
CL3-1.5-50-400M	50	400	1.5	3000	1.4
CL3-2-50-400M	50	400	2	3000	13.53
CL3-1.5-50-500M	50	500	1.5	3000	11.47
CL3-2-50-500M	50	500	2	3000	14.92
CL3-1.5-50-600M	50	600	1.5	3000	12.92
CL3-2-50-600M	50	600	2	3000	16.31
CL3-1-100-100M	100	100	1.2	3000	8.61
CL3-1.2-100-100M	100	100	1.5	3000	1.66
CL3-1.5-100-100M	100	100	2	3000	14
CLT3-1-100-100M	100	200	1.2	3000	9.48
CL3-1.2-100-100M	100	200	1.5	3000	11.73
CL3-1.5-100-200M	100	200	2	3000	15.38
CL3-1-100-300M	100	300	1.2	3000	10.35
CL3-1.2-100-200M	100	300	1.5	3000	12.8
CL3-1.5-100-300M	100	300	2	3000	16.77
CL3-1.5-100-400M	100	400	1.5	3000	13.87
CL3-2-100-400M	100	400	2	3000	18.16
CL3-1.5-100-500M	100	500	1.5	3000	14.94
CL3-2-100-500M	100	500	2	3000	19.55
CL3-1.5-100-600M	100	600	1.5	3000	16.01
CL3-2-100-600M	100	600	2	3000	20.94

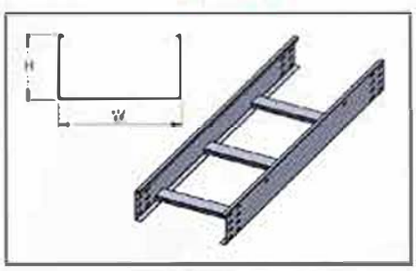




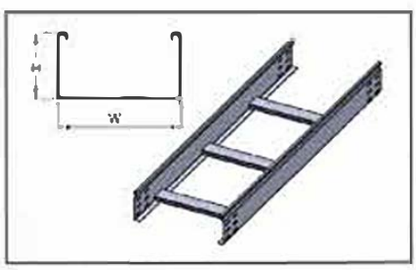
Flange type



Snap On

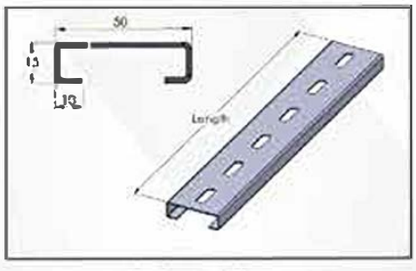


Angle Flange

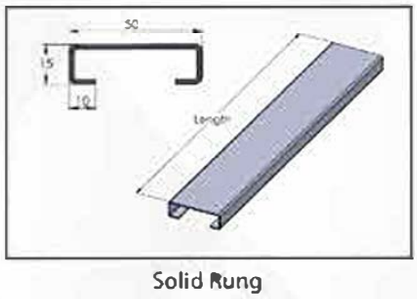


Return Flange

Rung type



Perforated Rung

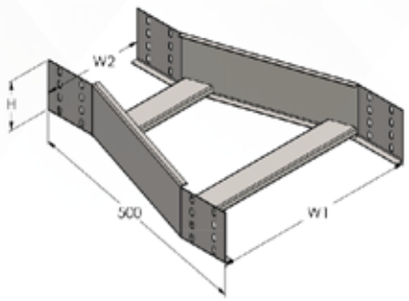


Solid Rung

Cable Ladder Accessories

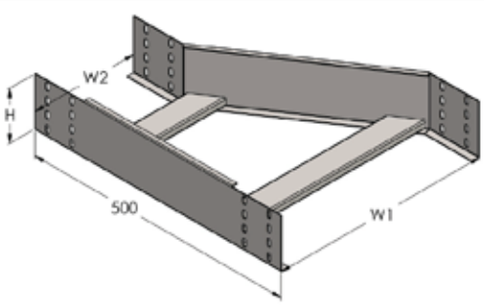
Equal Reducer

Code	Width (W١)	Width (W٢)	Height (H)	Thickness (T)
CL_ER_H-W-1W2 -T	200 UP TO 900	100	50 UP TO 200	1UP TO 2
CL_ER_H-W-1W2 -T	300 UP TO 900	100 UP TO 200	50 UP TO 200	1UP TO 2
CL_ER_H-W-1W2 -T	400 UP TO 900	100 UP TO 300	50 UP TO 200	1UP TO 2
CL_ER_H-W-1W2 -T	500 UP TO 900	100 UP TO 400	50 UP TO 200	1UP TO 2
CL_ER_H-W-1W-2 T	600 UP TO 900	100 UP TO 500	50 UP TO 200	1UP TO 2
CL_ER_H-W-1W-2 T	700 UP TO 900	100 UP TO 600	50 UP TO 200	1UP TO 2
CL_ER_H-W-1W-2 T	800 UP TO 900	100 UP TO 700	50 UP TO 200	1UP TO 2



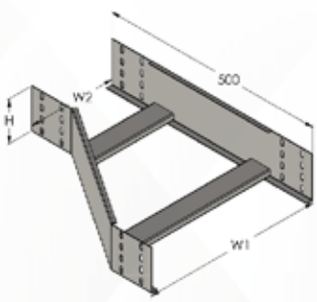
Left Reducer

Code	Width (W١)	Width (W٢)	Height (H)	Thickness (T)
CL_LR_H-W-1W2 -T	200 UP TO 900	100	50 UP TO 200	1UP TO 2
CL_LR_H-W-1W2 -T	300 UP TO 900	100 UP TO 200	50 UP TO 200	1UP TO 2
CL_LR_H-W-1W2 -T	400 UP TO 900	100 UP TO 300	50 UP TO 200	1UP TO 2
CL_LR_H-W-1W2 -T	500 UP TO 900	100 UP TO 400	50 UP TO 200	1UP TO 2
CL_LR_H-W-1W-2 T	600 UP TO 900	100 UP TO 500	50 UP TO 200	1UP TO 2
CL_LR_H-W-1W-2 T	700 UP TO 900	100 UP TO 600	50 UP TO 200	1UP TO 2
CL_LR_H-W-1W-2 T	800 UP TO 900	100 UP TO 700	50 UP TO 200	1UP TO 2



Right Reducer

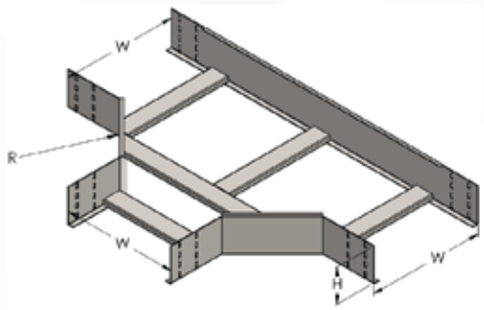
Code	Width (W١)	Width (W٢)	Height (H)	Thickness (T)
CL_RR_H-W-1W2 -T	200 UP TO 900	100	50 UP TO 200	1UP TO 2
CL_RR_H-W-1W2 -T	300 UP TO 900	100 UP TO 200	50 UP TO 200	1UP TO 2
CL_RR_H-W-1W2 -T	400 UP TO 900	100 UP TO 300	50 UP TO 200	1UP TO 2
CL_RR_H-W-1W2 -T	500 UP TO 900	100 UP TO 400	50 UP TO 200	1UP TO 2
CL_RR_H-W-1W-2 T	600 UP TO 900	100 UP TO 500	50 UP TO 200	1UP TO 2
CL_RR_H-W-1W-2 T	700 UP TO 900	100 UP TO 600	50 UP TO 200	1UP TO 2
CL_RR_H-W-1W-2 T	800 UP TO 900	100 UP TO 700	50 UP TO 200	1UP TO 2



Cable Ladder Accessories

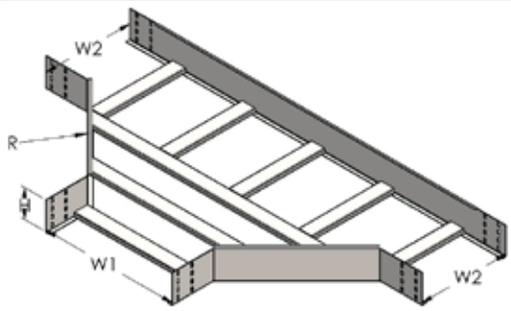
Equal Tee

Code	Width (W)	Height (H)	Thickness (T)	Radius (R)
CL_ET_1.0-100-50	50	100	1	200
CL_ET_1.0-200-50	50	200	1	200
CL_TE_1.0-300-50	50	300	1	200
CL_TE_1.5-300-100	100	300	1.5	300
CL_TE_1.5-400-100	100	400	1.5	300
CL_TE_1.5-500-100	100	500	1.5	300
CL_TE_2.0-700-200	200	700	2	600
CL_TE_2.0-800-200	200	800	2	600
CL_TE_2.0-900-200	200	900	2	600



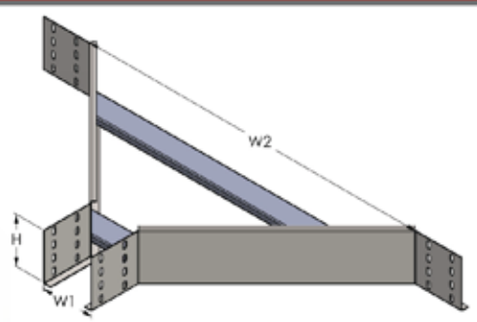
Unequal Tee

Code	Width (W)	Height (H)	Thickness (T)	Radius (R)
CL_UT_1.0-100-50	50	100	1	200
CL_UT_1.0-200-50	50	200	1	200
CL_UT_1.0-300-50	50	300	1	200
CL_UT_1.5-300-100	100	300	1.5	300
CL_UT_1.5-400-100	100	400	1.5	300
CL_UT_1.5-500-100	100	500	1.5	300
CL_UT_2.0-700-200	200	700	2	600
CL_UT_2.0-800-200	200	800	2	600
CL_UT_2.0-900-200	200	900	2	600



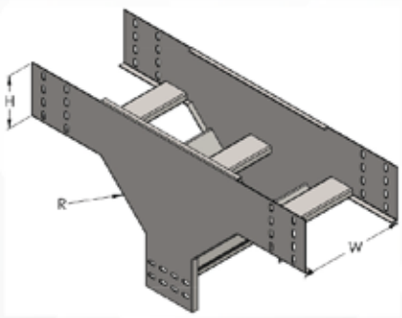
Offset Tee

Code	Width (W1)	Width (W2)	Height (H)	Thickness (T)
CL_OT_1.0-100-50	200 UP TO 900	100	50 UP TO 200	1UP TO 2
CL_OT_1.0-200-50	300 UP TO 900	100 UP TO 200	50 UP TO 200	1UP TO 2
CL_OT_1.0-300-50	400 UP TO 900	100 UP TO 300	50 UP TO 200	1UP TO 2
CL_OT_1.5-300-100	500 UP TO 900	100 UP TO 400	50 UP TO 200	1UP TO 2
CL_OT_1.5-400-100	600 UP TO 900	100 UP TO 500	50 UP TO 200	1UP TO 2
CL_OT_1.5-500-100	700 UP TO 900	100 UP TO 600	50 UP TO 200	1UP TO 2
CL_OT_2.0-700-200	800 UP TO 900	100 UP TO 700	50 UP TO 200	1UP TO 2



Vertical Tee

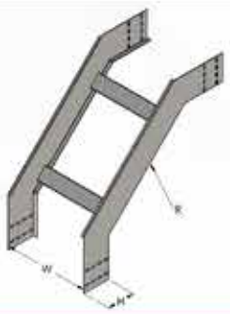
Code	Width (W)	Height (H)	Thickness (T)	Radius (R)
CL_VT_1.0-100-50	50	100	1	200
CL_VT_1.0-200-50	50	200	1	200
CL_VT_1.0-300-50	50	300	1	200
CL_VT_1.5-300-100	100	300	1.5	300
CL_VT_1.5-400-100	100	400	1.5	300
CL_VT_1.5-500-100	100	500	1.5	300
CL_VT_2.0-700-200	200	700	2	600
CL_VT_2.0-800-200	200	800	2	600
CL_VT_2.0-900-200	200	900	2	600



Cable Ladder Accessories

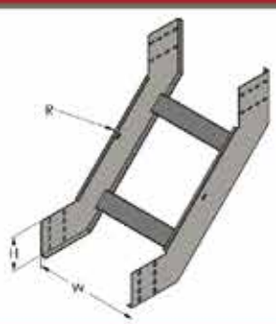
Code	Width (W)	Height (H)	Thickness (T)	Radius (R)
CL_VEO_1.0-100-50_90	50	100	1	200
CL_VEO_1.0-200-50_90	50	200	1	200
CL_VEO_1.0-300-50_90	50	300	1	200
CL_VEO_1.5–300-100_90	100	300	1.5	300
CL_VEO_1.5-400-100_90	100	400	1.5	300
CL_VEO_1.5-500-100_90	100	500	1.5	300
CL_VEO_2.0-700-200_90	200	700	2	600
CL_VEO_2.0-800-200_90	200	800	2	600
CL_VEO_2.0-900-200_90	200	900	2	600

Vertical Elbow 90 - out



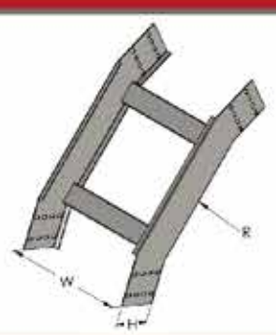
Code	Width (W)	Height (H)	Thickness (T)	Radius (R)
CL_VEI_1.0-100-50_90	50	100	1	200
CL_VEI_1.0-200-50_90	50	200	1	200
CL_VE_1.0-300-50_90	50	300	1	200
CL_VEI_1.5-300-100_90	100	300	1.5	300
CL_VEI_1.5-400-100_90	100	400	1.5	300
CL_VEI_1.5-500-100_90	100	500	1.5	300
CL_VEI_2.0-700-200_90	200	700	2	600
CL_VEI_2.0-800-200_90	200	800	2	600
CL_VEI_2.0-900-200_90	200	900	2	600

Vertical Elbow 90 - in



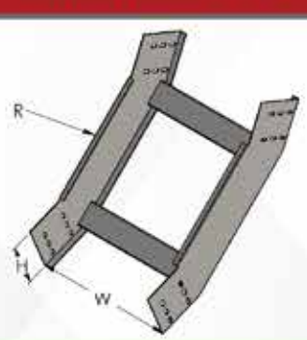
Code	Width (W)	Height (H)	Thickness (T)	Radius (R)
CL_VEO_1.0-100-50_45	50	100	1	200
CL_VEO_1.0-200-50_45	50	200	1	200
CL_VEO_1.0-300-50_45	50	300	1	200
CL_VEO_1.5-300-100_45	100	300	1.5	300
CL_VEO_1.5-400-100_45	100	400	1.5	300
CL_VEO_1.5-500-100_45	100	500	1.5	300
CL_VEO_2.0-700-200_45	200	700	2	600
CL_VEO_2.0-800-200_45	200	800	2	600
CL_VEO_2.0-900-200_45	200	900	2	600

Vertical Elbow 45 - out



Code	Width (W)	Height (H)	Thickness (T)	Radius (R)
CL_VEI_1.0-100-50_45	50	100	1	200
CL_VEI_1.0-200-50_45	50	200	1	200
CL_VE_1.0-300-50_45	50	300	1	200
CL_VEI_1.5-300-100_45	100	300	1.5	300
CL_VEI_1.5-400-100_45	100	400	1.5	300
CL_VEI_1.5-500-100_45	100	500	1.5	300
CL_VEI_2.0-700-200_45	200	700	2	600
CL_VEI_2.0-800-200_45	200	800	2	600
CL_VEI_2.0-900-200_45	200	900	2	600

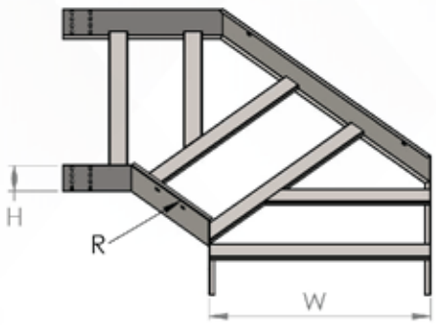
Vertical Elbow 45 - in



Cable Ladder Accessories

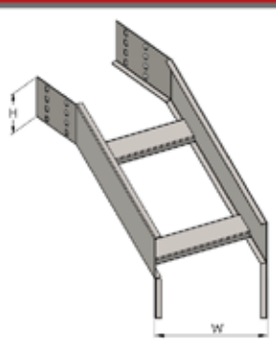
Horizontal Elbow 90

Code	Width (W)	Height (H)	Thickness (T)	Radius (R)
CL_HE_1.0-100-50_90	50	100	1	200
CL_HE_1.0-200-50_90	50	200	1	200
CL_HE_1.0-300-50_90	50	300	1	200
CL_HE_1.5-300-100_90	100	300	1.5	300
CL_HE_1.5-400-100_90	100	400	1.5	300
CL_HE_1.5-500-100_90	100	500	1.5	300
CL_HE_2.0-700-200_90	200	700	2	600
CL_HE_2.0-800-200_90	200	800	2	600
CL_HE_2.0-900-200_90	200	900	2	600



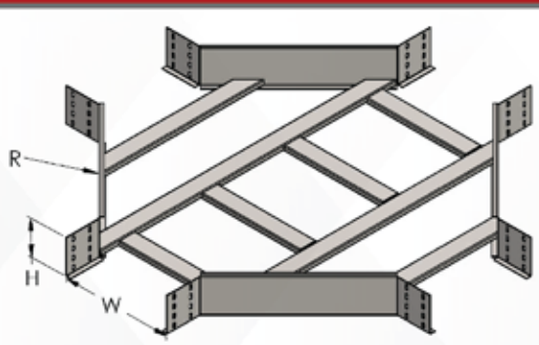
Horizontal Elbow 45

Code	Width (W)	Height (H)	Thickness (T)	Radius (R)
CL_HE_1.0-100-50_45	50	100	1	200
CL_HE_1.0-200-50_45	50	200	1	200
CL_HE_1.0-300-50_45	50	300	1	200
CL_HE_1.5-300-100_45	100	300	1.5	300
CL_HE_1.5-400-100_45	100	400	1.5	300
CL_HE_1.5-500-100_45	100	500	1.5	300
CL_HE_2.0-700-200_45	200	700	2	600
CL_HE_2.0-800-200_45	200	800	2	600
CL_HE_2.0-900-200_45	200	900	2	600



CROSS

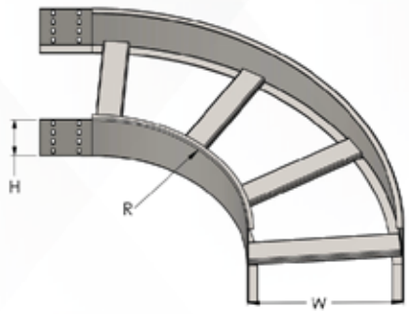
Code	Width (W)	Height (H)	Thickness (T)	Radius (R)
CL_C_1.0-100-50	50	100	1	200
CL_C_1.0-200-50	50	200	1	200
CL_C_1.0-300-50	50	300	1	200
CL_C_1.5-300-100	100	300	1.5	300
CL_C_1.5-400-100	100	400	1.5	300
CL_C_1.5-500-100	100	500	1.5	300
CL_C_2.0-700-200	200	700	2	600
CL_C_2.0-800-200	200	800	2	600
CL_C_2.0-900-200	200	900	2	600



Cable Ladder Accessories

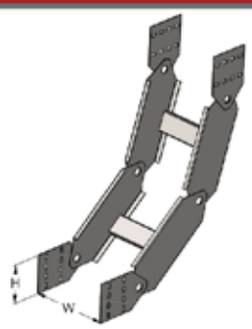
Horizontal Elbow 90 CURVED

Code	Width (W)	Height (H)	Thickness (T)	Radius (R)
CL_HE_1.0-50-50_90	50	100	1	200
CL_HE_1.0-100-50_90	50	200	1	200
CL_HE_1.0-200-50_90	50	300	1	200
CL_HE_1.5-300-100_90	100	300	1.5	300
CL_HE_1.5-400-100_90	100	400	1.5	300
CL_HE_1.5-500-100_90	100	500	1.5	300
CL_HE_2.0-700-200_90	200	700	2	600
CL_HE_2.0-800-200_90	200	800	2	600
CL_HE_2.0-900-200_90	200	900	2	600



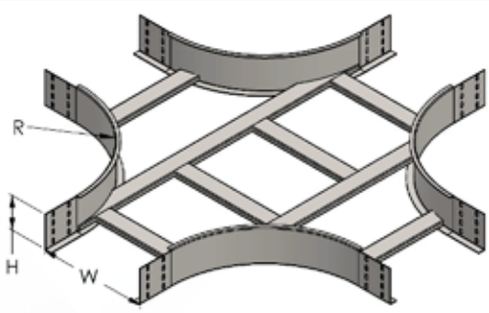
Adjustable Vertical Elbow 90

Code	Width (W)	Height (H)	Thickness (T)	Radius (R)
CL_VE_1.0-100-50_90	50	100	1	200
CL_VE_1.0-200-50_90	50	200	1	200
CL_VE_1.0-300-50_90	50	300	1	200
CL_VE_1.5-300-100_90	100	300	1.5	300
CL_VE_1.5-400-100_90	100	400	1.5	300
CL_VE_1.5-500-100_90	100	500	1.5	300
CL_VE_2.0-700-200_90	200	700	2	600
CL_VE_2.0-800-200_90	200	800	2	600
CL_VE_2.0-900-200_90	200	900	2	600



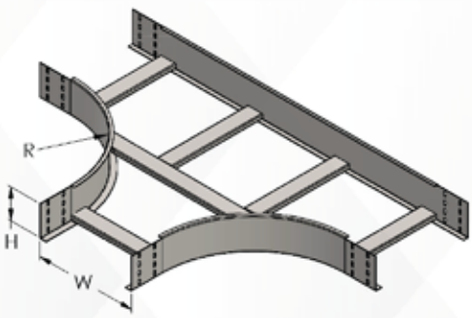
CROSS CURVED

Code	Width (W)	Height (H)	Thickness (T)	Radius (R)
CL_C_1.0-100-50	50	100	1	200
CL_C_1.0-200-50	50	200	1	200
CL_C_1.0-300-50	50	300	1	200
CL_C_1.5-300-100	100	300	1.5	300
CL_C_1.5-400-100	100	400	1.5	300
CL_C_1.5-500-100	100	500	1.5	300
CL_C_2.0-700-200	200	700	2	600
CL_C_2.0-800-200	200	800	2	600
CL_C_2.0-900-200	200	900	2	600

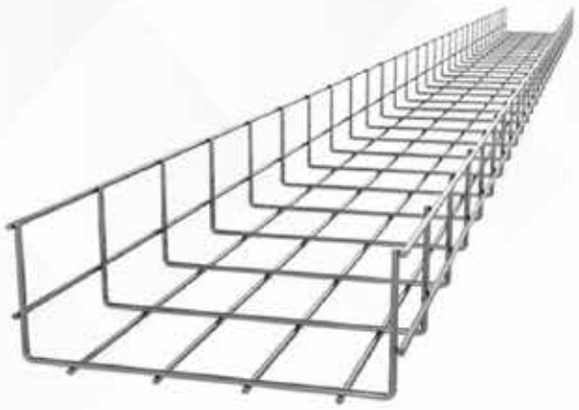


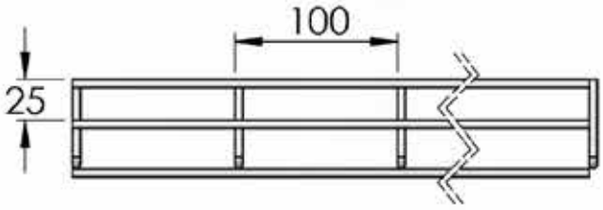
Equal Tee CURVED

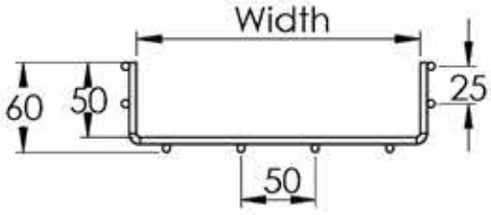
Code	Width (W)	Height (H)	Thickness (T)	Radius (R)
CL_ET_1.0-100-50	50	100	1	200
CL_ET_1.0-200-50	50	200	1	200
CL_ET_1.0-300-50	50	300	1	200
CL_ET_1.5-300-100	100	300	1.5	300
CL_ET_1.5-400-100	100	400	1.5	300
CL_ET_1.5-500-100	100	500	1.5	300
CL_ET_2.0-700-200	200	700	2	600
CL_ET_2.0-800-200	200	800	2	600
CL_ET_2.0-900-200	200	900	2	600

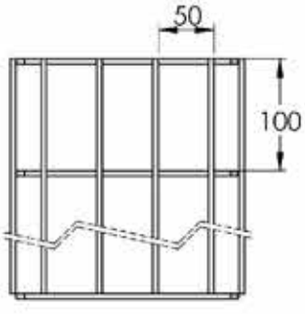


Wire Mesh Cable Tray

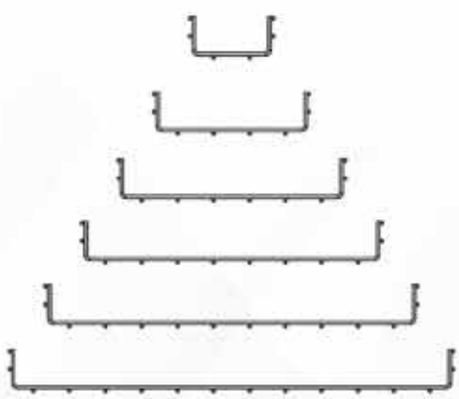






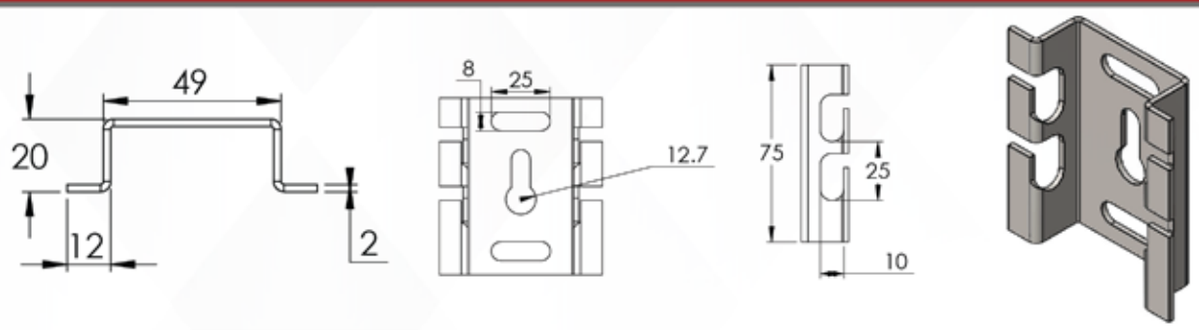


Code	Width (W)	Height (H)	Length (mm)	Thickness (mm)
WM3-50-100-M	100	50	3000	4 AND 5
WM3-50-150-M	150	50	3000	4 AND 5
WM3-50-200-M	200	50	3000	4 AND 5
WM3-50-300-M	300	50	3000	4 AND 5
WM3-50-400-M	400	50	3000	4 AND 5
WM3-50-500-M	500	50	3000	4 AND 5
WM3-50-600-M	600	50	3000	4 AND 5
WM3-100-100-M	100	100	3000	4 AND 5
WM3-100-150-M	150	100	3000	4 AND 5
WM3-100-200-M	200	100	3000	4 AND 5
WM3-100-300-M	300	100	3000	4 AND 5
WM3-100-400-M	400	100	3000	4 AND 5
WM3-100-500-M	500	100	3000	4 AND 5
WM3-100-600-M	600	100	3000	4 AND 5

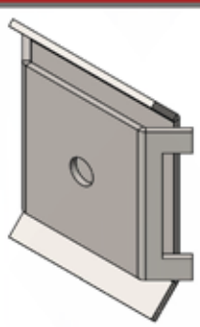


Wire Mesh Cable Tray Accessories

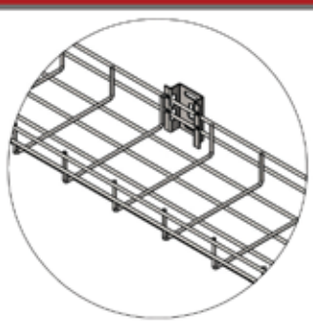
Mesh Wall Clamp



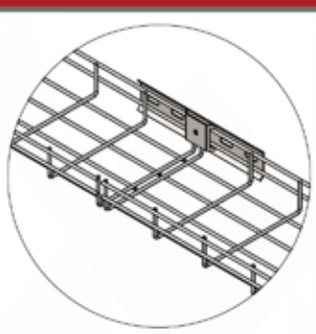
MESH Joint 2 Assembly



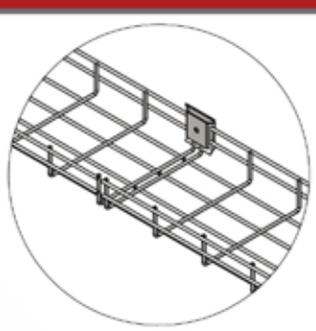
Mesh Cable Tray With Wall Clamp



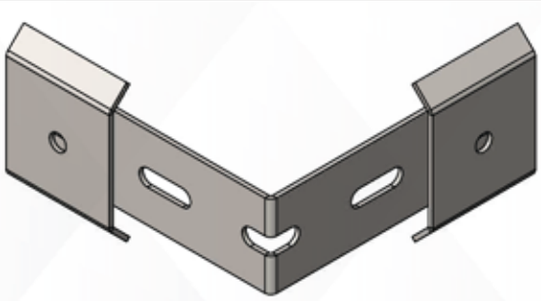
Mesh Cable Tray With Joint 1



Mesh Cable Tray With Joint 2

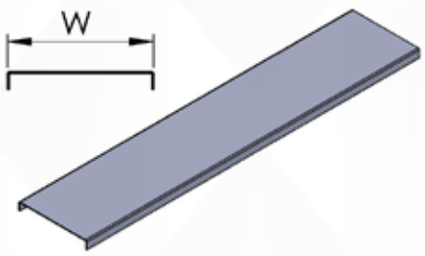
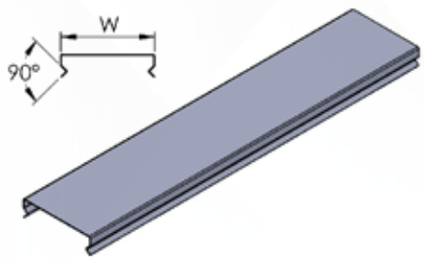


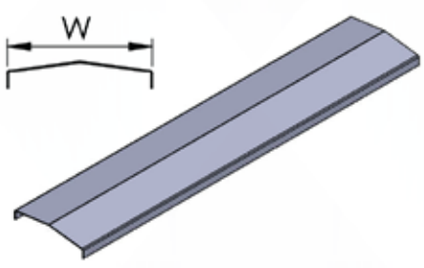
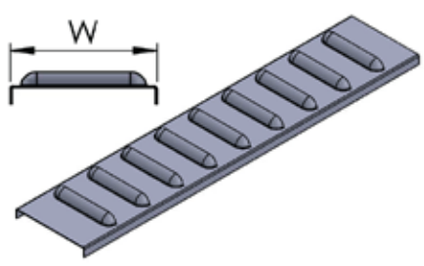
Angel Joint Assembly



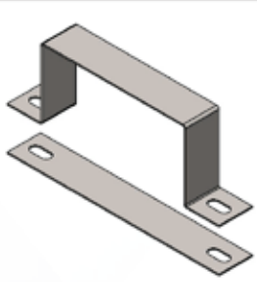
Accessories

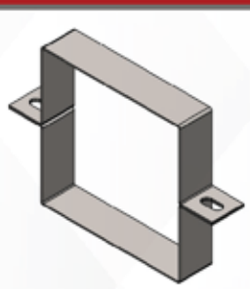
Covers

Cover Normal	Cover Snap on
	

Cover Pyramid	Cover Ventilated
	

Cover Clamp

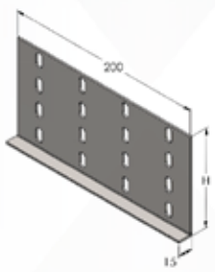
Cover Clamp	Two Part Cover Clamp 1
	

Two Part Cover Clamp 2


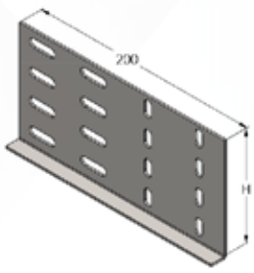
Accessories

Joining Plate

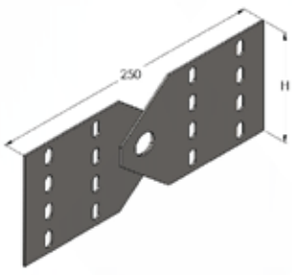
Normal Joint



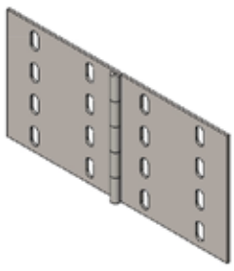
Expansion Joint



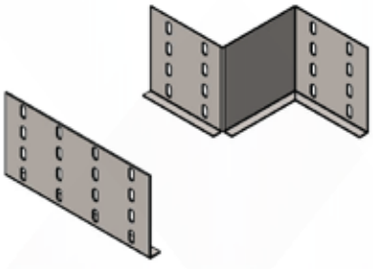
Adjustable Vertical Joint



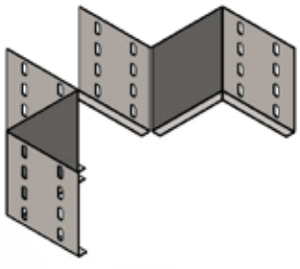
Adjustable Joint



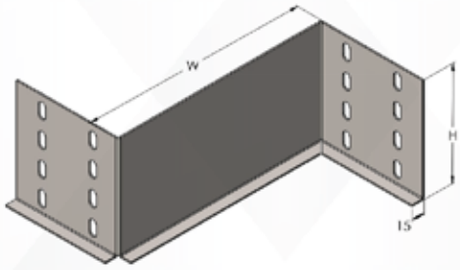
Reducer Joint



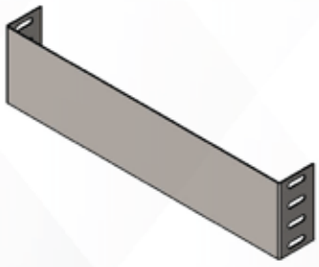
Center Reducer Joint



Z Joint



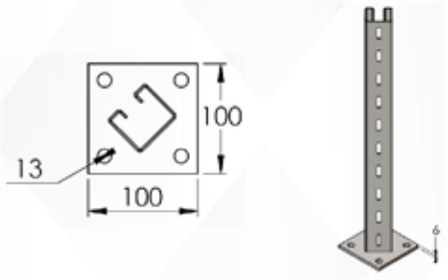
End Plate



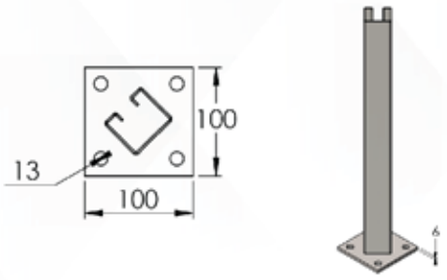
Accessories

Base Plate

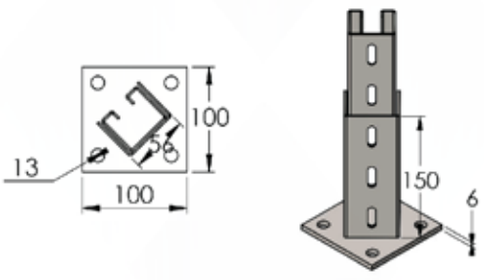
Base plate for single channel perforated



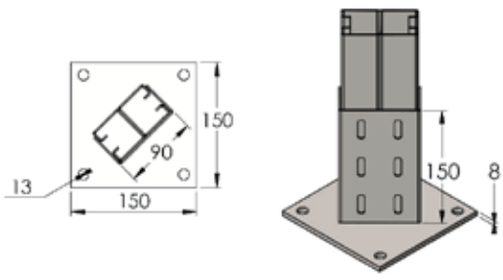
Base plate for single channel Solid



Base plate for single channel

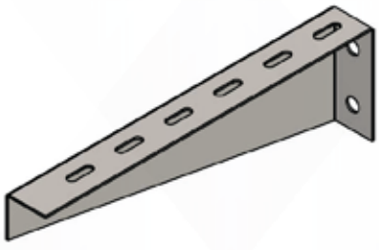


Base plate for double channel

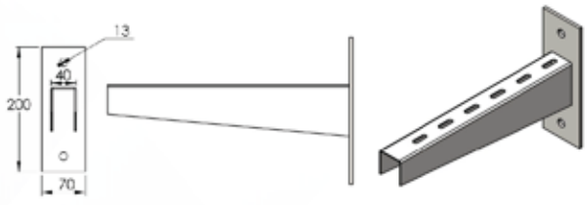


Bracket

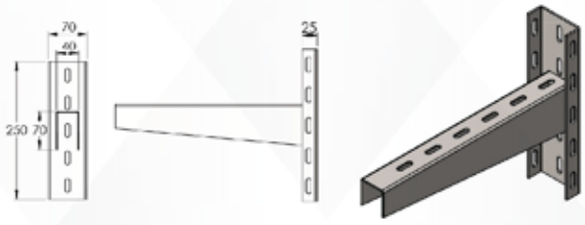
Bracket



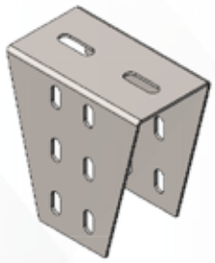
Bracket With Plate



U Channel Bracket



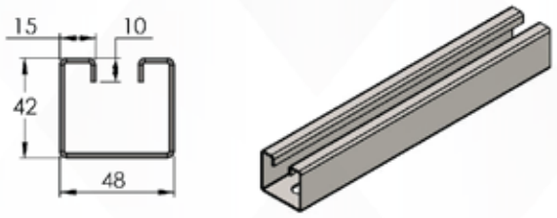
U Head Plate



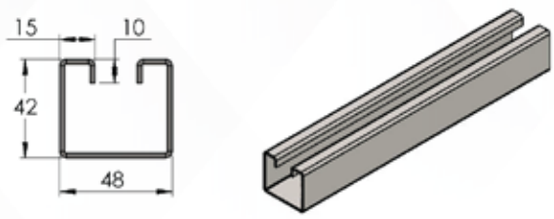
Accessories

Supporting Channel

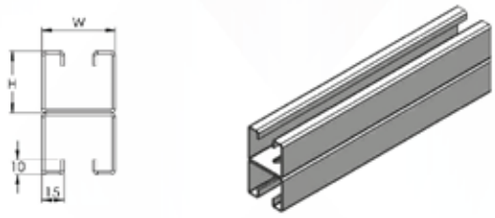
UNISTRUT Perforated



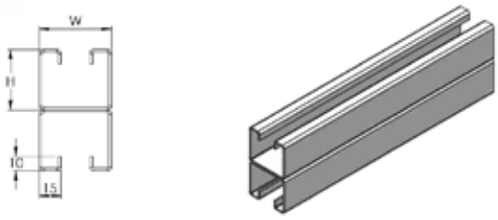
UNISTRUT Solid



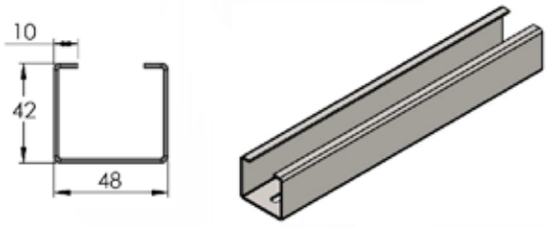
Double Unistrut Perforated



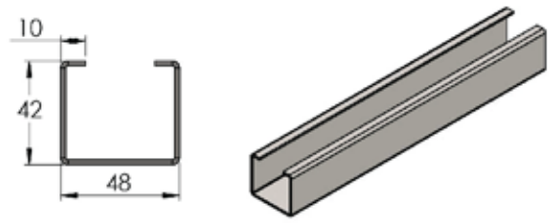
Double Unistrut Solid



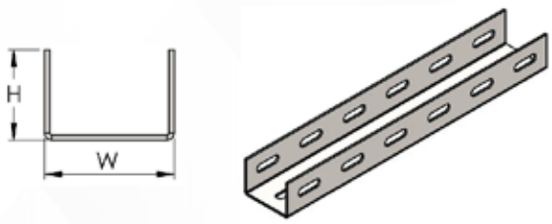
Channel Perforated



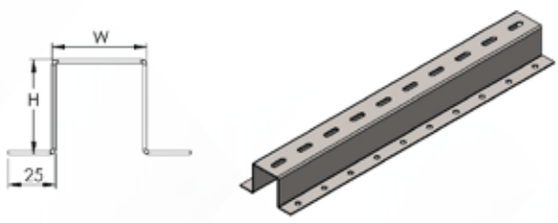
C Channel Solid



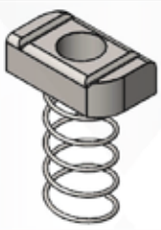
U Channel Perforated



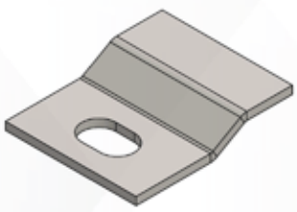
OMEGA Perforated



Spring Nut

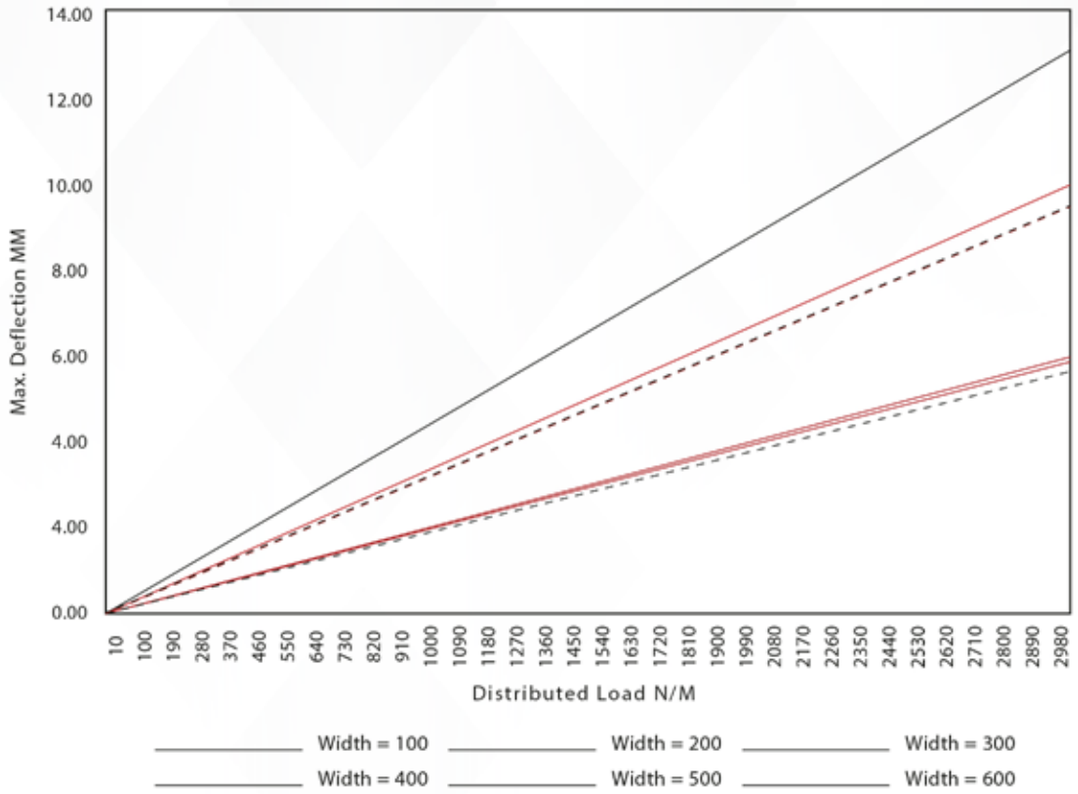


Hold Down Clamp



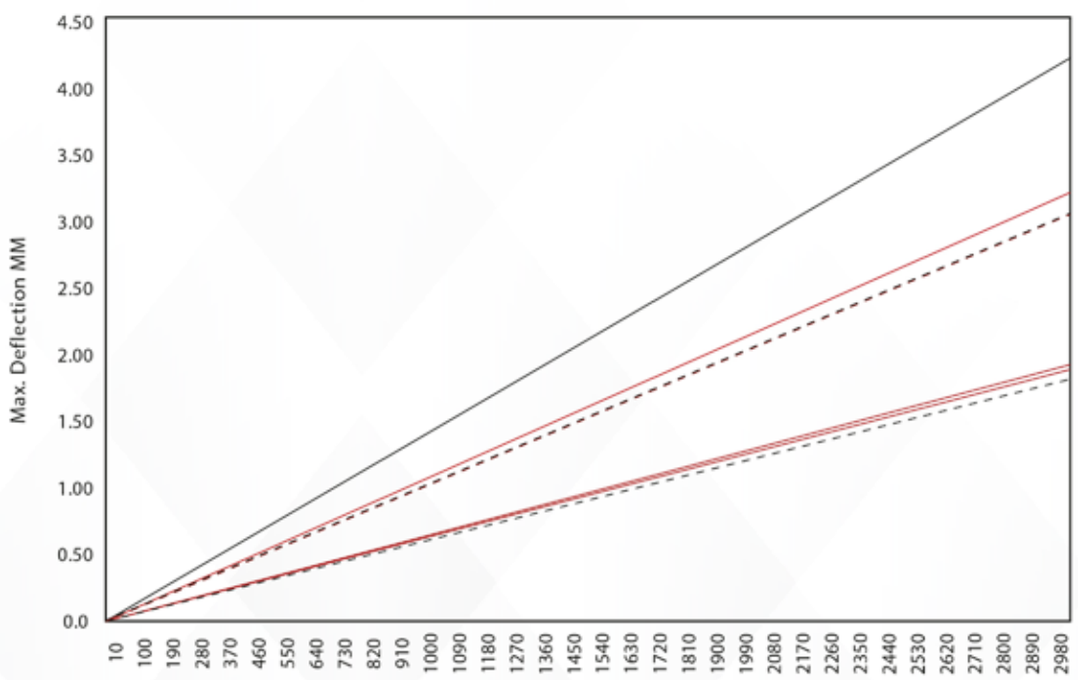
Technical Data

Normal Tray Height 50 mm



Width = 100 Width = 200 Width = 300
Width = 400 Width = 500 Width = 600

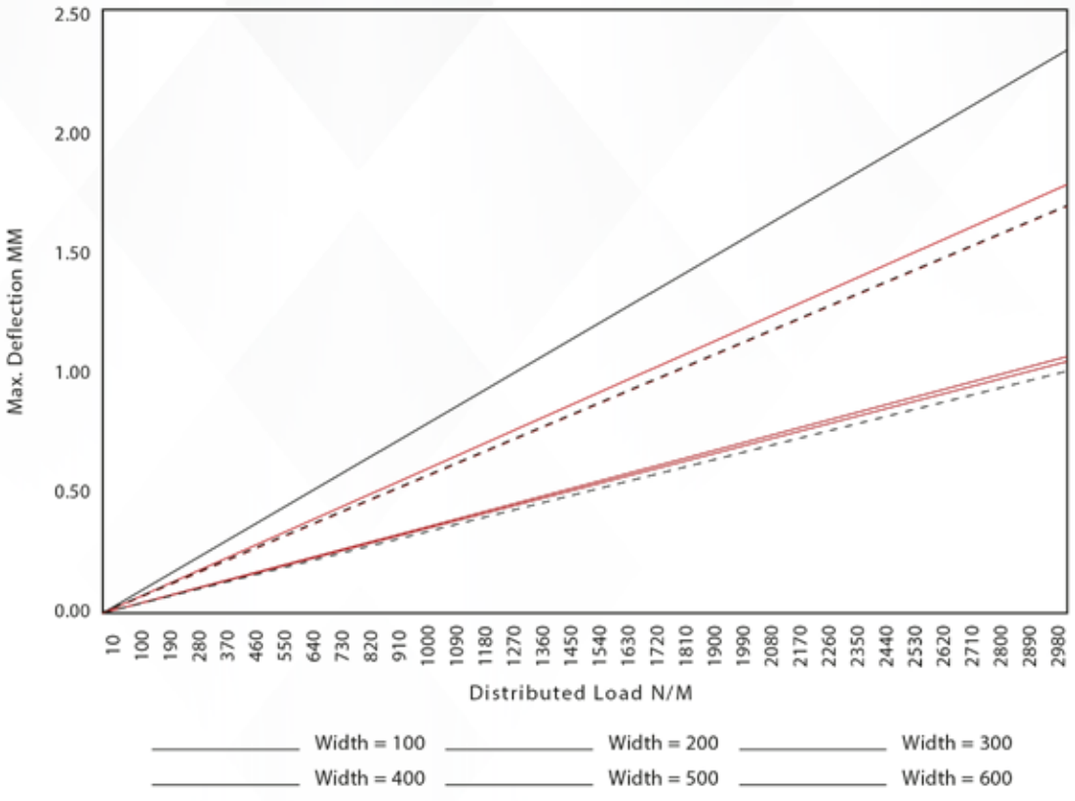
Normal Tray Height 75 mm



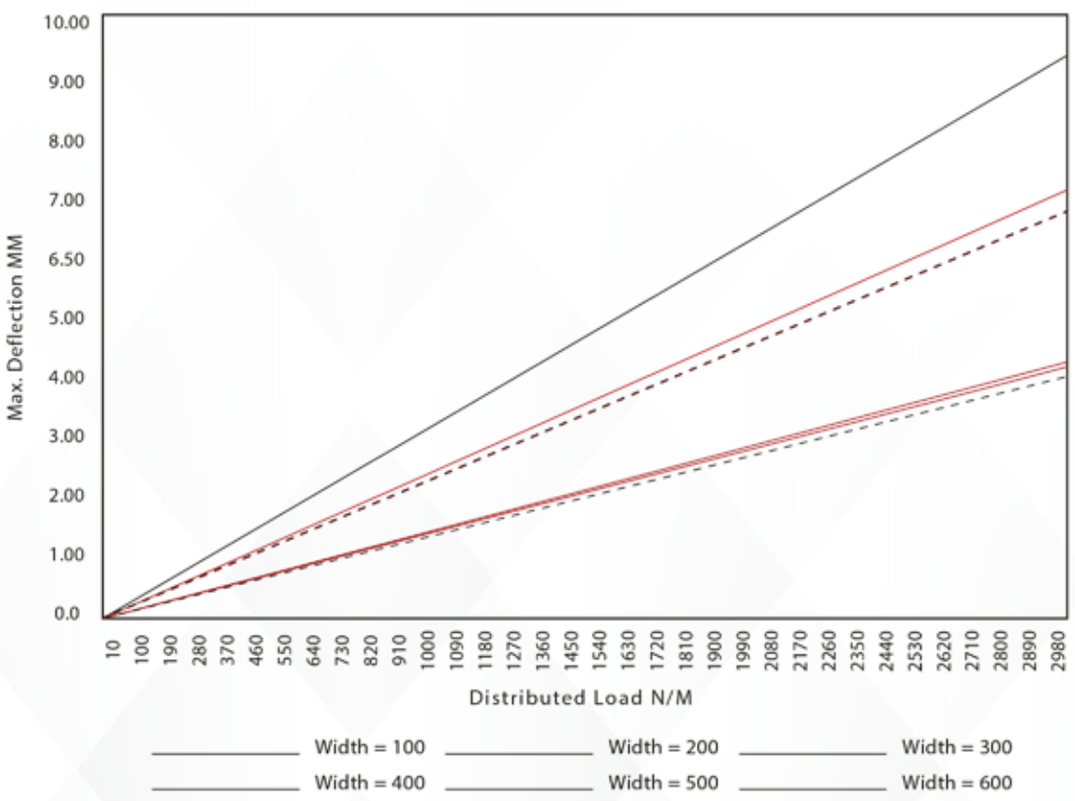
Width = 100 Width = 200 Width = 300
Width = 400 Width = 500 Width = 600

Technical Data

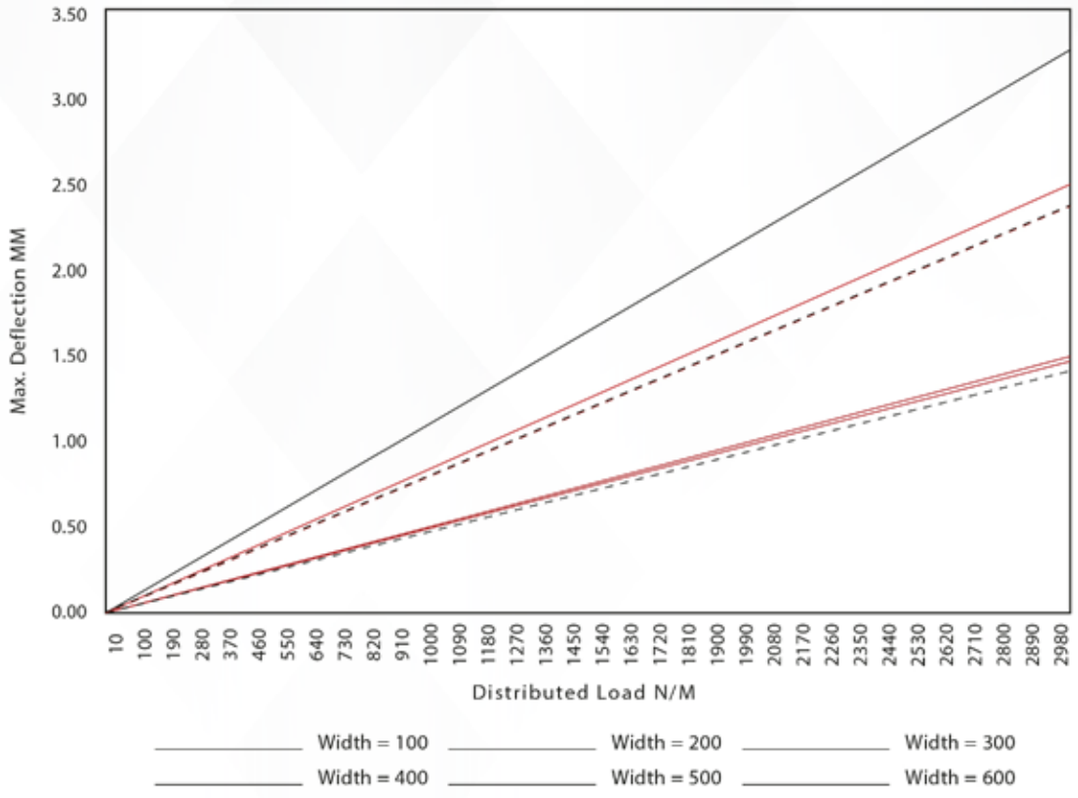
Normal Tray Height 100 mm



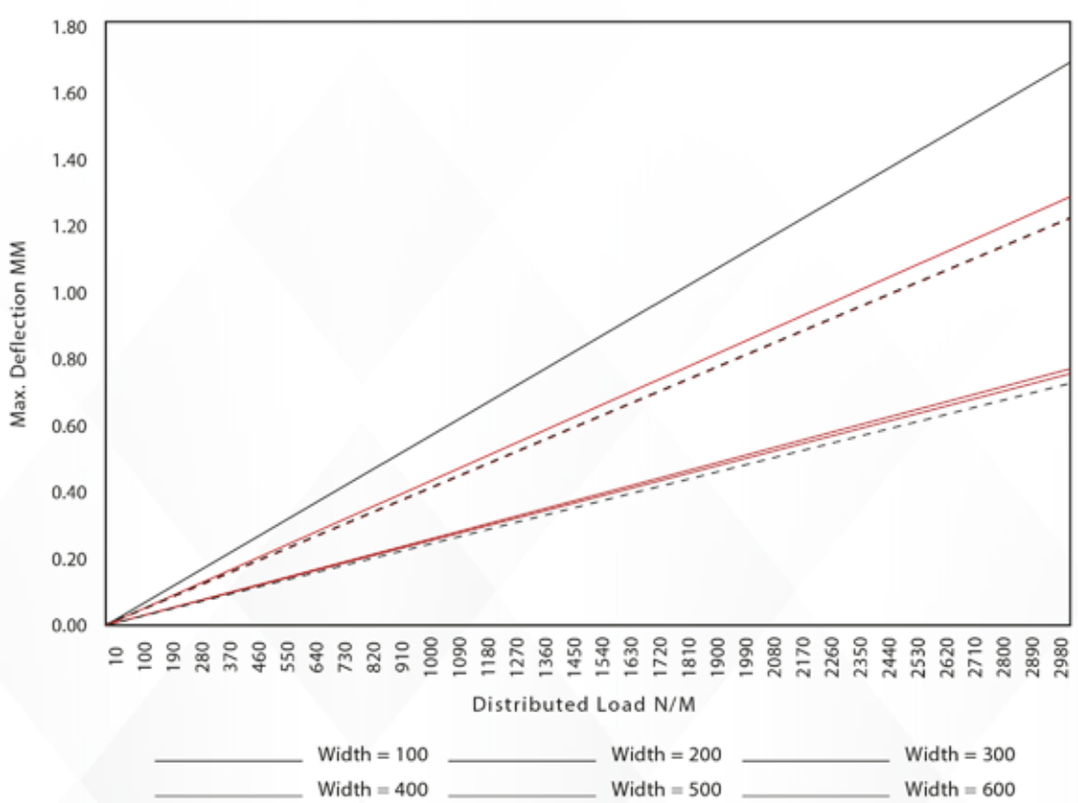
Flanged Tray Height 50 mm



Flanged Tray Height 75 mm



Flanged Tray Height 100 mm

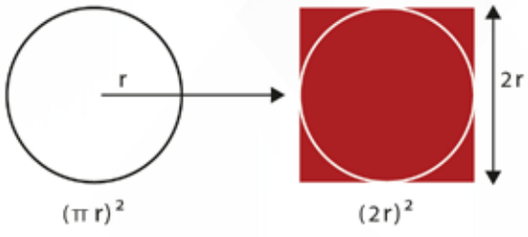


Technical Data

Selection of cable support systems

The following way can be followed up as being practical in selection of trays of ladders depending on cables to be used.

-1 For calculation of cross sectionl area of the cable use (2r ^{2}) formula instead of r2
-2 Find out total cross-section by calculating all cabls.
-3 leave %20 resevation allowance from viewpoint of forming gro und to supplements.
-4 Select appropriate cable support system from the following t able.
-5 Select nearest large value to your total cross-section while making your selection.



Cable Trays

Tray Width (mm)	Tray height (mm)				
	50	75	100	125	150
50	2500	.....	.....	.....	.....
100	3500	6000	8500	.....	.....
150	5250	9000	12750	16500	.....
200	7000	12000	17000	22000	27000
250	8750		21250	27500	33750
300	10500	18000	25500	33000	40500
350	12250	21000	29750	38500	47250
400	14000	24000	34000	44000	54000
450	15750	27000	38250	49500	60750
500	17500	30000	42500	55000	67500
600	21000	36000	51000	66000	81000
700	24500	42000	59500	77000	94500
800	28000	48000	68000	88000	108000

Cable Ladder

Tray Width (mm)	Tray height (mm)				
	50	75	100	125	150
50	2500	.....	.....	.....	.....
100	3500	6000	8500	.....	.....
150	5250	9000	12750	16500	.....
200	7000	12000	17000	22000	27000
250	8750		21250	27500	33750
300	10500	18000	25500	33000	40500
350	12250	21000	29750	38500	47250
400	14000	24000	34000	44000	54000
450	15750	27000	38250	49500	60750
500	17500	30000	42500	55000	67500
600	21000	36000	51000	66000	81000
700	24500	42000	59500	77000	94500
800	28000	48000	68000	88000	108000

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