



Cable Tray

Cable Ladder



Cable Trunking

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HAI NAM

SWITCHBOARDMANUFACTURE Co., Ltd.

Hai Nam Switchboard Manufacture (HNVN) is set to revolutionise the sector with the exciting launch of brand new and entirely redesigned ranges:

■ Cable Trays

Constructed from single sheet of perforated metal. They are convenient for cables which require both a degree of protection from external damage and some ventilation.

■ Cable Ladders

Straight sections of ladder type cable trays consist of two longitudinal side rails, connected by individual transverse members, or rungs, which are welded to the side rails or bolted in case of GI trays.

This type of cable tray provides maximum ventilation to heat producing cable such as power cables.

■ Cable Trunking

Straight sections of solid bottom cable trays constructed from single sheet of metal, providing excellent protection from external damage. They are used primarily for intrumental control, communication and other non-heat producing cables.

Types of Cable Containment

Cable Tray



Cable Ladder



Cable Trunking



Hai Nam Switchboard Manufacture

produces three types of Cable Supports

- Cable Tray
- Cable Ladder
- Cable Trunking

All of these are available with a full range of fittings and accessories.

FITTINGS

Fittings are sections of cable trays which are joined to other cable trays sections for the purpose of changing the direction, elevation or width of the cable run. All fittings are available in sizes and types corresponding to the straight cable tray sections.

Elbows - Horizontal and vertical elbows enable directional and elevational changes, respectively. Horizontal Tee - These join cable tray sections in three directions at 90° angles.

Horizontal Cross - Same as "Tee" except in four directions at 90° angles.

Reducers - These join cable trays of different widths in the same plane.

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

HNVN all construction accessories to enable on site installation of cable tray systems. These include splice plate connectors, channels, clamps brackets and hangers.

SPECIFIC REQUIREMENTS

Other types of cable trays and fittings can be supplied to meet specific requirements.

All HNVN cable trays are fabricated from Prime quality Sheet.

To provide adequate protection against corrosion, three types of protection are offered

- Electro powder coating
- Pre-galvanized
- Hot dip galvanised

DIMENSIONS

HNVN cable trays are manufactured in the following standard dimensions

- Length 2.500mm & 3.000mm
- Depth 50mm, 85mm, 100mm
- Width 100mm, 150mm, 300mm, 450mm, 600mm, 750mm, 900mm

Sheet Metal Thickness

- 1.2mm for light loads
- 1.5mm for medium loads
- 2.0mm for heavy loads
- Upto 4.0mm for extra heavy loads

Elbow and Cross Radius

- 300mm (standard), 600mm & 900mm also available

LOADING CAPABILITY & SUPPORT SPAN

All HNVN cable trays are manufactured in accordance with the the requirements of International Standard IEC 61537.

Catalog Numbering System

For ease of ordering, each individual product is identified by a "Catalog Number", comprising letters and numbers.

FORMAT X X 99 X X X
CODE 1 2 3 4 5 6

CODE 1 Type of Cable Tray & Cover

T Cable Tray
 L Cable Ladder
 K Cable Trunking
 CT Cable Tray Cover

CODE2 Type of Cable Tray & Cover

S Straight Section
 T Horizontal Tee
 VT Vertical Tee
 C Horizontal Cross
 E Horizontal Elbow
 R Reducer
 RR Right Hand Reducer
 LR Left Hand Reducer
 IR Inside Vertical Risers
 OR Outside Vertical Risers

CODE 3 Width in Centimeters

[Give actual figure]

CODE 4 Nominal Depth

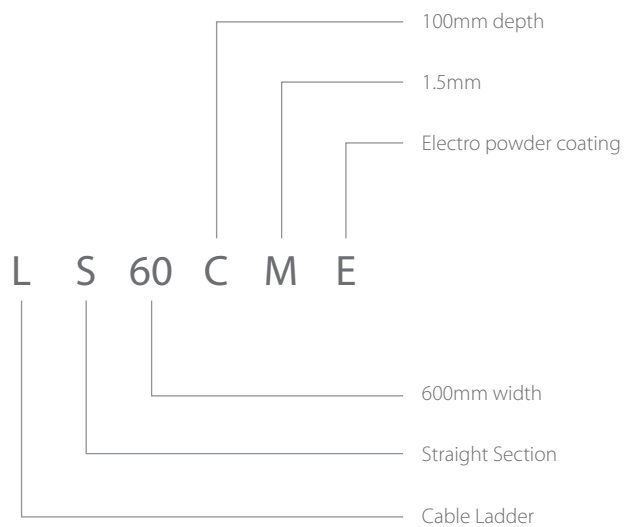
A 50mm
 B 85mm
 C 100mm
 D 150mm

CODE 5 Sheet Metal Thickness

L 1.2mm
 M 1.5mm
 H 2.0mm

CODE 6 Type of Finish

E Electro powder coating
 P Pre-galvanised
 H Hot Dip galvanised

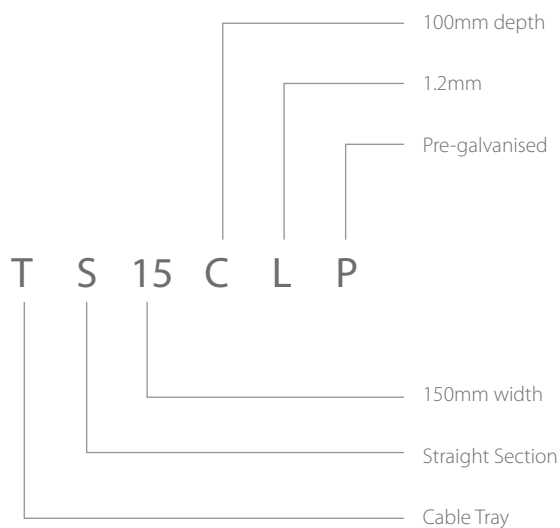


Note: Channels and other accessories have specific catalogue numbers. See relevant section.

Constructed from single sheet of perforated metal. They are convenient for cables which require both a degree of protection from external damage and some ventilation.

STRAIGHT SECTION

Example of catalog numbering system



STANDARD DIMENSIONS

- Length (**L**) 2.500mm & 3.000mm
- Depth (**D**) 50mm, 75mm, 85mm, 100mm, 150mm
- Width (**W**) 100mm, 150mm, 200mm, 300mm, 450mm, 600mm, 700mm
- Sheet Metal Thickness
 - 1.2mm for light loads (**LL**)
 - 1.5mm for medium loads (**M**)
 - 2.0mm for heavy loads (**H**)

Material:

- Prime quality GI & MS sheets.

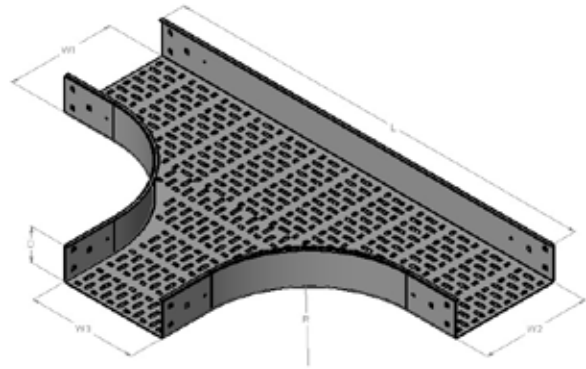
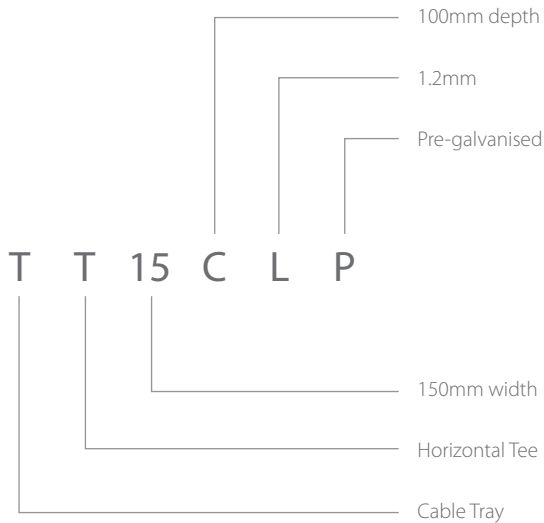
Finish (after fabrication):

- Electro powder coating (**E**)
- Pre-galvanised (**P**)
- Hot dip galvanized (**H**)

Designs other than those listed above can be manufactured to meet special requirements.

HORIZONTAL TEE

Example of catalog numbering system



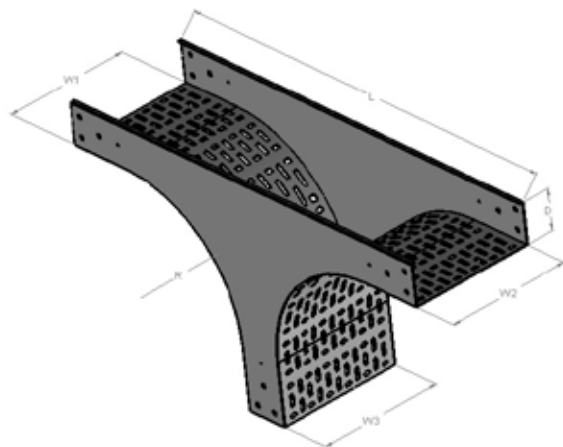
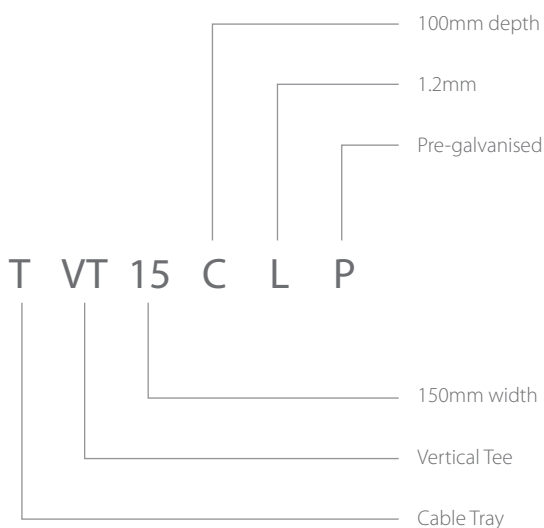
STANDARD DIMENSIONS

Radius R	300mm					
Width W (mm)	100	150	300	450	600	750
Length L (mm)	900	950	1100	1250	1400	1550
Breadth B (mm)	500	550	700	850	1000	1150

for other dimensions please contact us.

VERTICAL TEE

Example of catalog numbering system



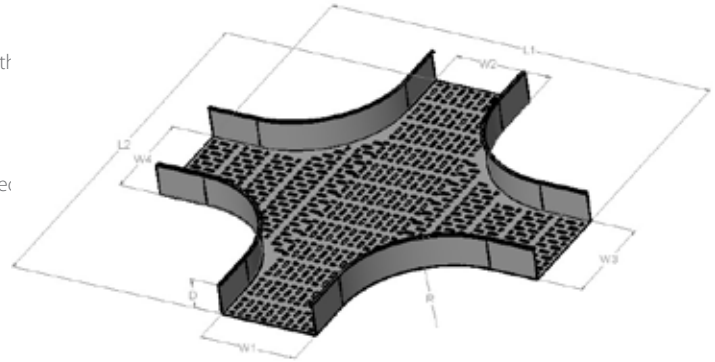
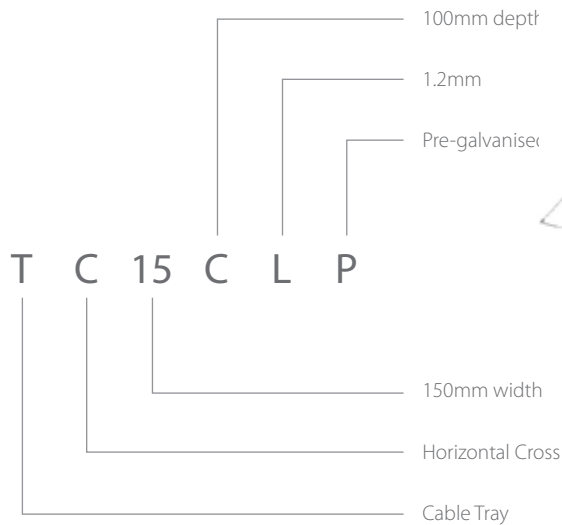
STANDARD DIMENSIONS

Radius R	300mm					
Width W (mm)	100	150	300	450	600	750
Length L (mm)	900	950	1100	1250	1400	1550
Breadth B (mm)	500	550	700	850	1000	1150

for other dimensions please contact us.

HORIZONTAL CROSS

Example of catalog numbering system



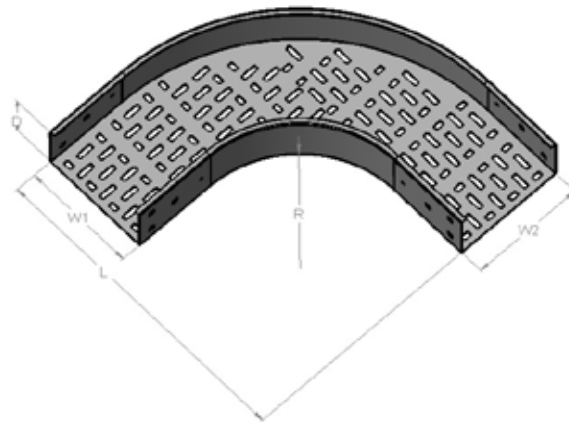
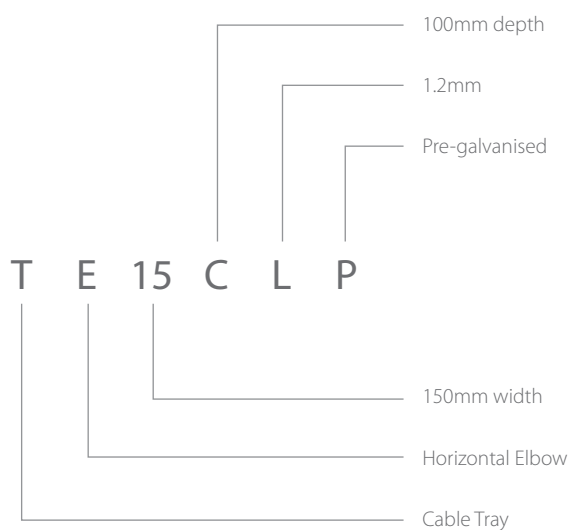
STANDARD DIMENSIONS

Radius R	300mm
Width W (mm)	100 150 300 450 600 750
Length L (mm)	900 950 110 125 1400 1550

for other dimensions please contact us.

HORIZONTAL ELBOW

Example of catalog numbering system



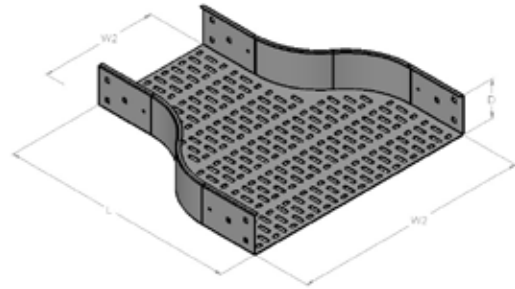
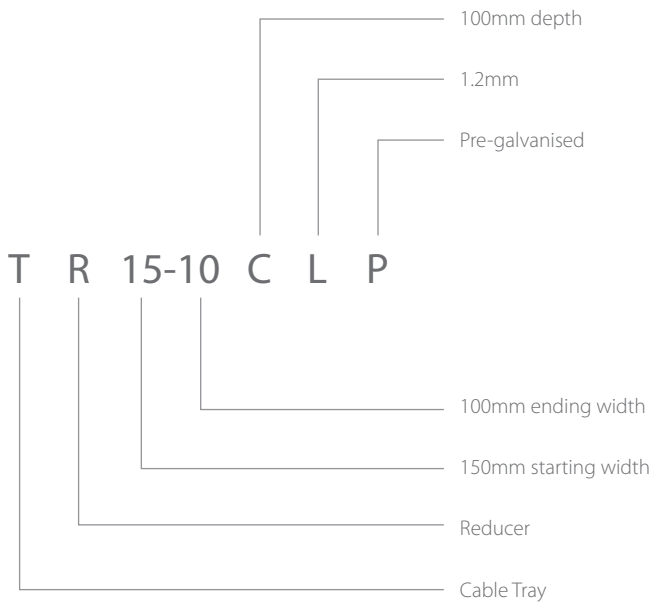
STANDARD DIMENSIONS

Radius R	300mm
Width W (mm)	100 150 300 450 600 750
Length L (mm)	900 950 110 125 1400 1550
Breadth B (mm)	500 550 700 850 1000 1150

for other dimensions please contact us.

REDUCER

Example of catalog numbering system

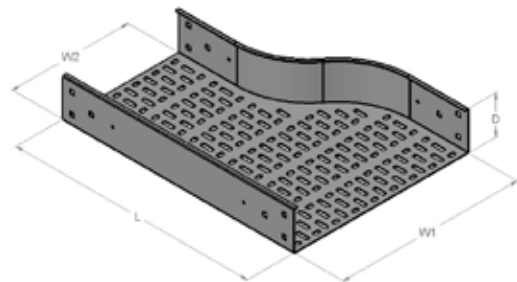
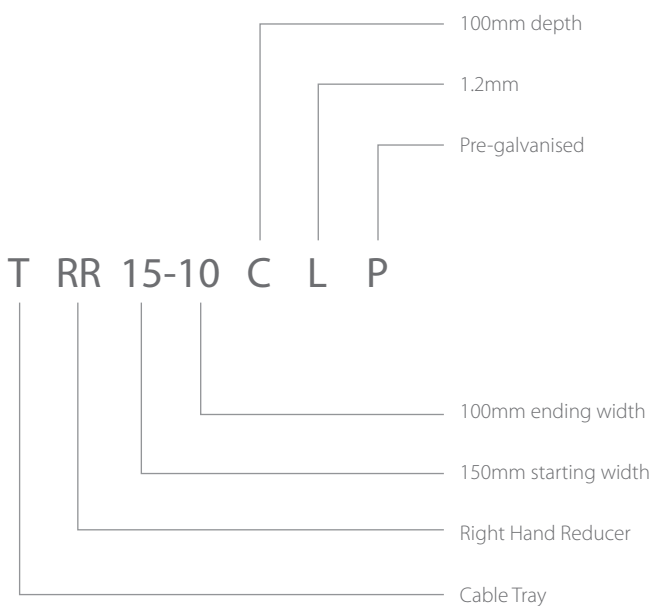


HNC a complete range of perforated bottom reducers for joining any two sizes of straight sections.

Please specify both starting and ending widths.

RIGHT HAND REDUCER

Example of catalog numbering system

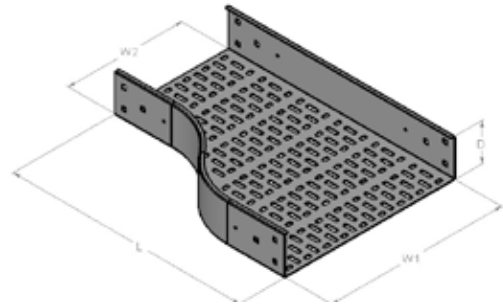
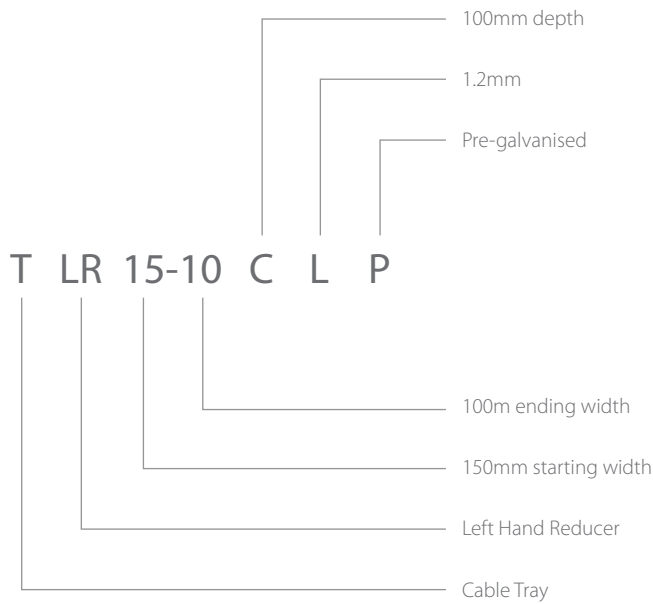


HNC a complete range of perforated bottom reducers for joining any two sizes of straight sections.

Please specify both starting and ending widths.

LEFT HAND REDUCER

Example of catalog numbering system

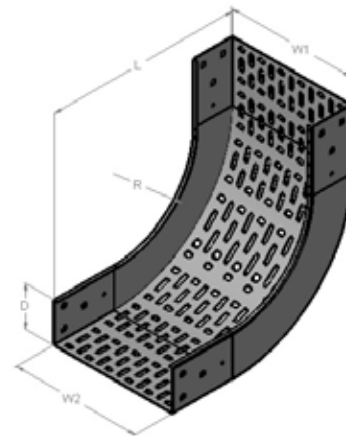
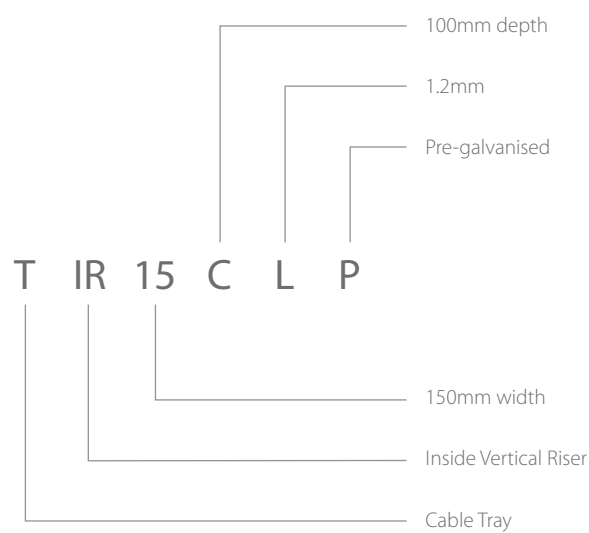


HNC a complete range of perforated bottom reducers for joining any two sizes of straight sections.

Please specify both starting and ending widths.

INSIDE VERTICAL RISERS

Example of catalog numbering system



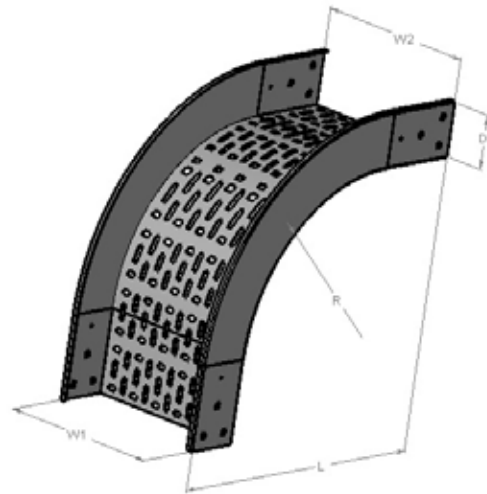
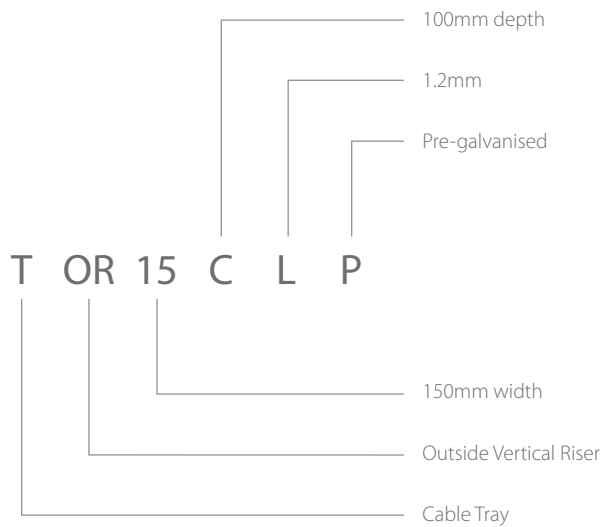
STANDARD DIMENSIONS

Bend Angle 90°

for other dimensions please contact us.

OUTSIDE VERTICAL RISERS

Example of catalog numbering system



STANDARD DIMENSIONS

Bend Angle 90°

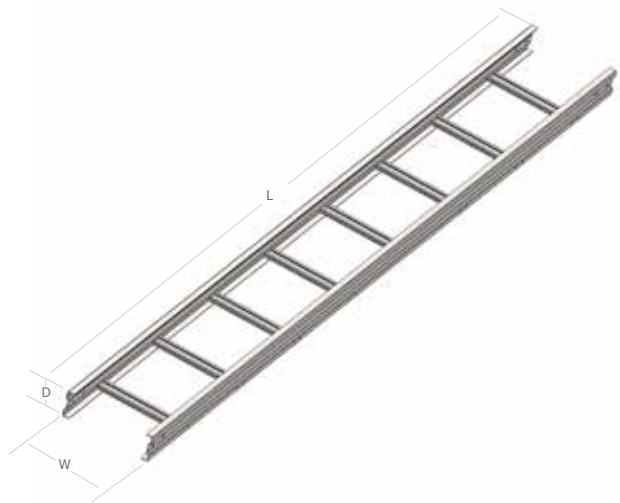
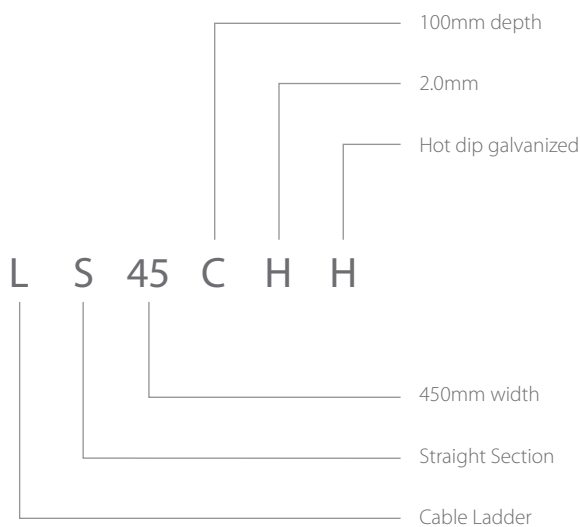
for other dimensions please contact us.

Straight sections of ladder type cable trays consist of two longitudinal side rails, connected by individual transverse members, or rungs, which are welded to the side rails or bolted in case of GI trays.

This type of cable tray provides maximum ventilation to heat producing cable such as power cables.

STRAIGHT SECTION

Example of catalog numbering system



STANDARD DIMENSIONS

- Length (L) 2.500mm & 3.000mm
- Depth (D) 50mm, 75mm, 85mm, 100mm, 150mm
- Width (W) 100mm, 150mm, 200mm, 300mm, 450mm, 600mm, 750mm, 900mm
- Rung Spacing 300mm
- Sheet Metal Thickness
 - 1.2mm for light loads (LL)
 - 1.5mm for medium loads (M)
 - 2.0mm for heavy loads (H)

Material:

- Prime quality GI & MS sheets.

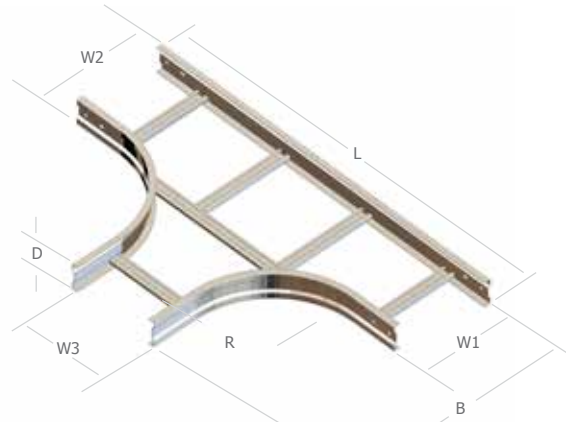
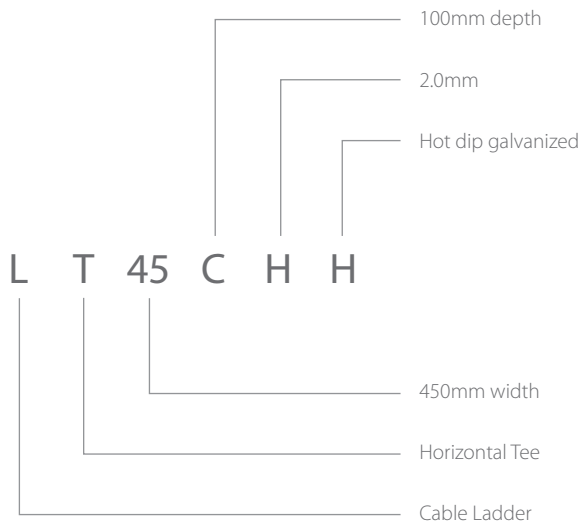
Finish (after fabrication):

- Electro powder coating (E)
- Pre-galvanised (P)
- Hot dip galvanized (H)

Designs other than those listed above can be manufactured to meet special requirements.

HORIZONTAL TEE

Example of catalog numbering system



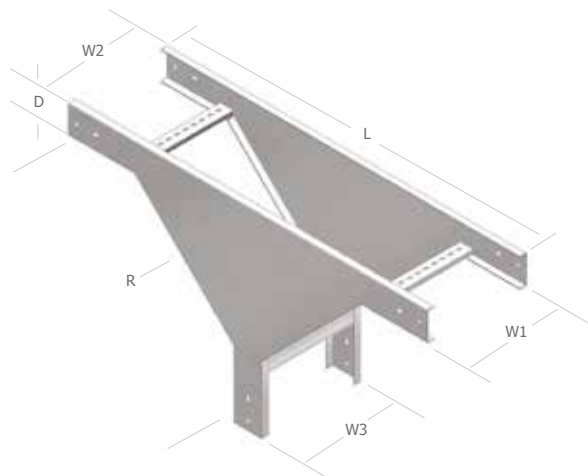
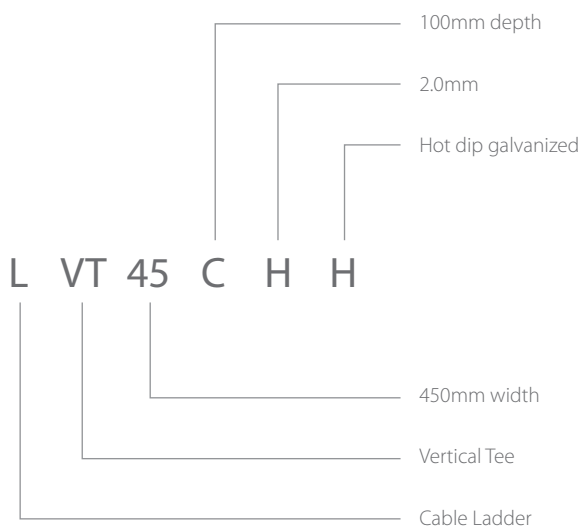
STANDARD DIMENSIONS

Radius	R	300mm							
Width	W (mm)	100	150	300	450	600	750	900	
Length	L (mm)	900	950	1100	1250	1400	1550	1700	
Breadth	B (mm)	500	550	700	850	1000	1150	1300	

for other dimensions please contact us.

VERTICAL TEE

Example of catalog numbering system



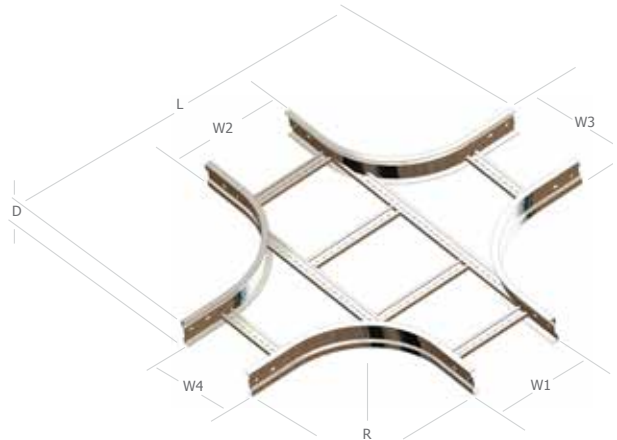
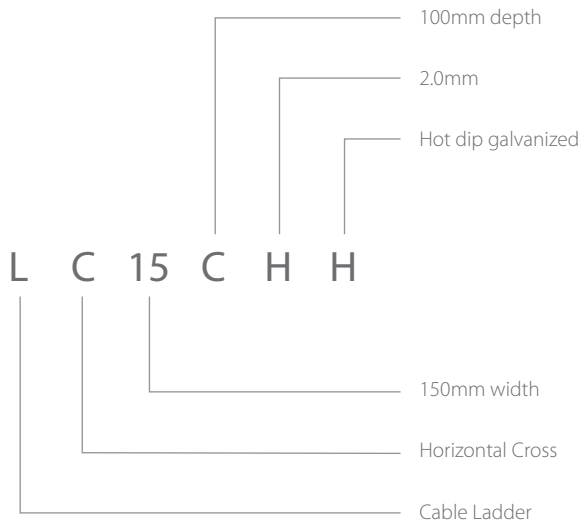
STANDARD DIMENSIONS

Radius	R	300mm							
Width	W (mm)	100	150	300	450	600	750	900	
Length	L (mm)	900	950	1100	1250	1400	1550	1700	
Breadth	B (mm)	500	550	700	850	1000	1150	1300	

for other dimensions please contact us.

HORIZONTAL CROSS

Example of catalog numbering system



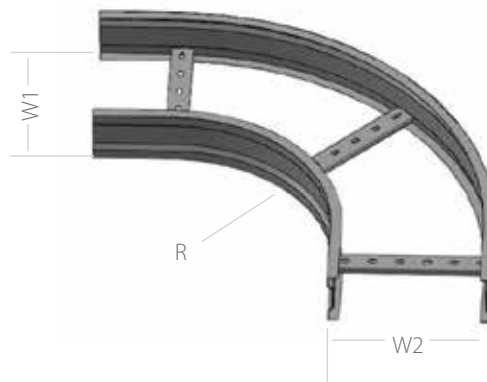
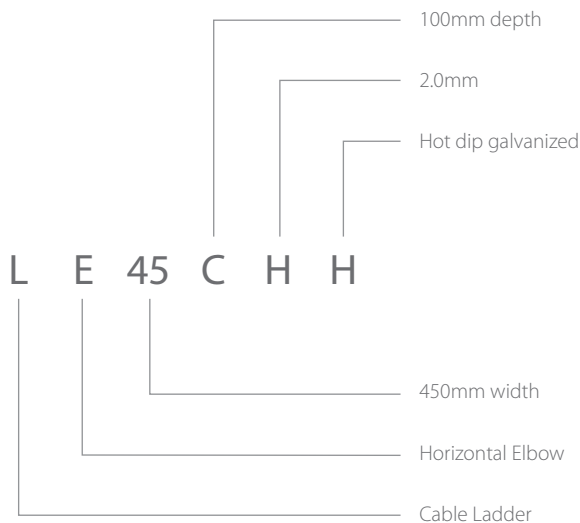
STANDARD DIMENSIONS

Radius	R	300mm					
Width	W (mm)	100	150	300	450	600	750
Length	L (mm)	900	950	1100	1250	1400	1550

for other dimensions please contact us.

HORIZONTAL ELBOW

Example of catalog numbering system



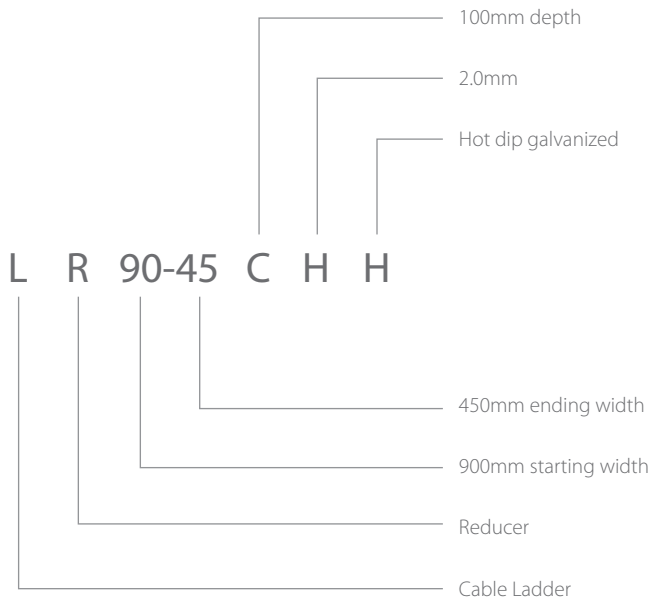
STANDARD DIMENSIONS

Radius	R	300mm						
Bend Angle		90° (30°, 45° & 60° also available)						
Width	W (mm)	100	150	300	450	600	750	900
Length	L (mm)	500	550	700	850	1000	1550	1300
Breadth	B (mm)	500	550	700	850	1000	1150	1300

for other dimensions please contact us.

REDUCER

Example of catalog numbering system

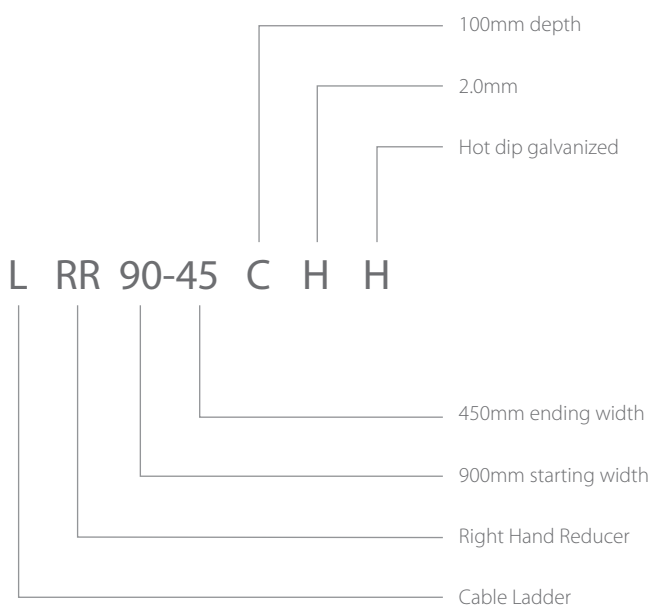


HNC a complete range of perforated bottom reducers for joining any two sizes of straight sections.

Please specify both starting and ending widths.

RIGHT HAND REDUCER

Example of catalog numbering system

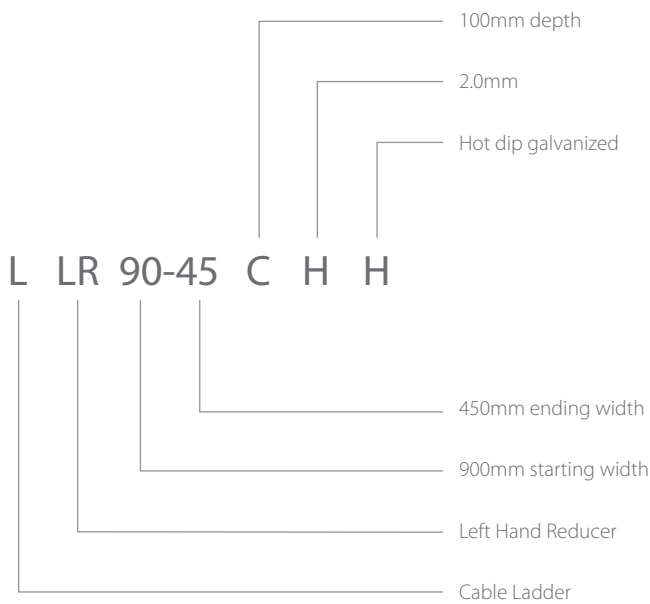


HNC a complete range of perforated bottom reducers for joining any two sizes of straight sections.

Please specify both starting and ending widths.

LEFT HAND REDUCER

Example of catalog numbering system

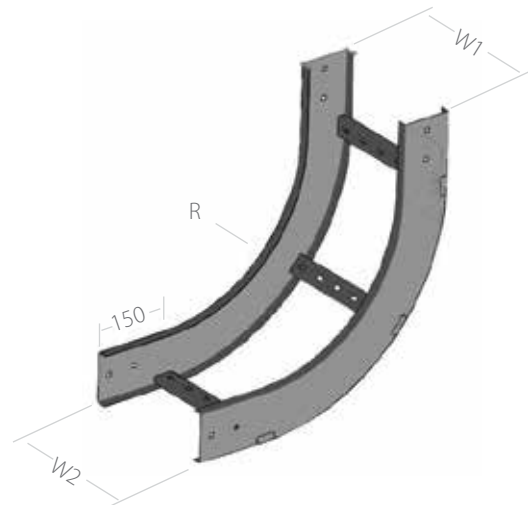
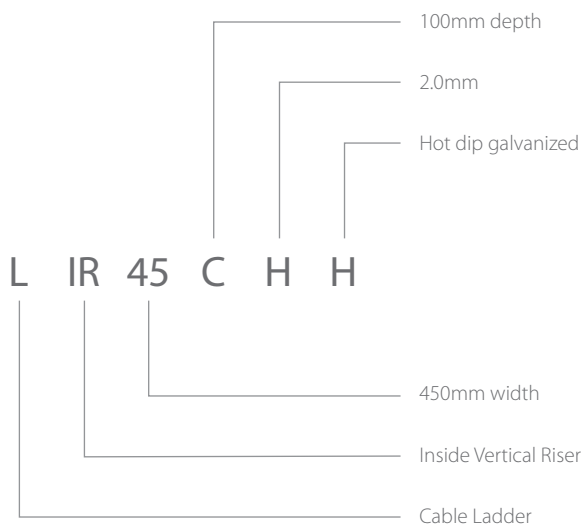


HNC a complete range of perforated bottom reducers for joining any two sizes of straight sections.

Please specify both starting and ending widths.

INSIDE VERTICAL RISERS

Example of catalog numbering system



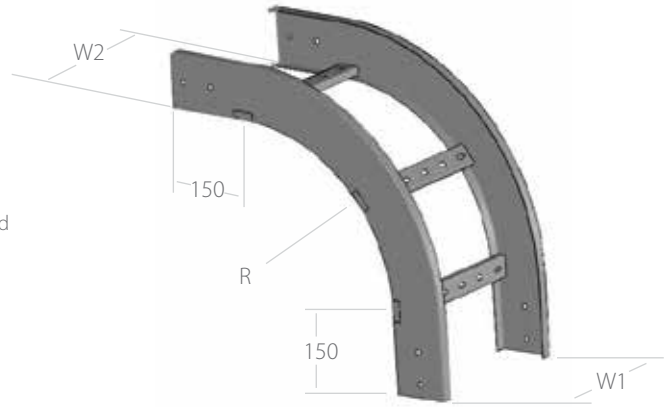
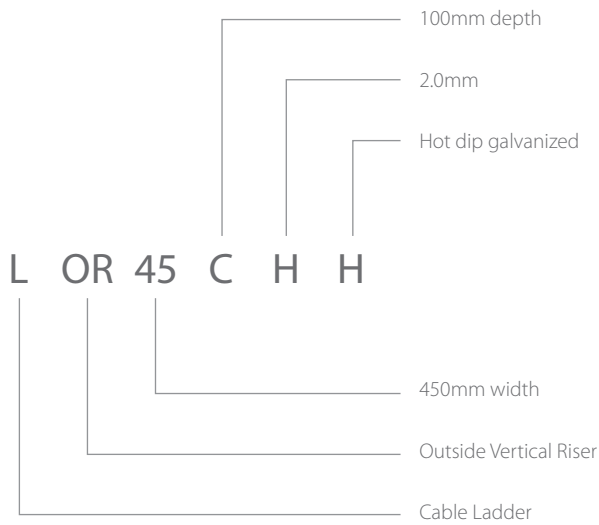
STANDARD DIMENSIONS

Bend Angle 90°

for other dimensions please contact us.

OUTSIDE VERTICAL RISERS

Example of catalog numbering system



STANDARD DIMENSIONS

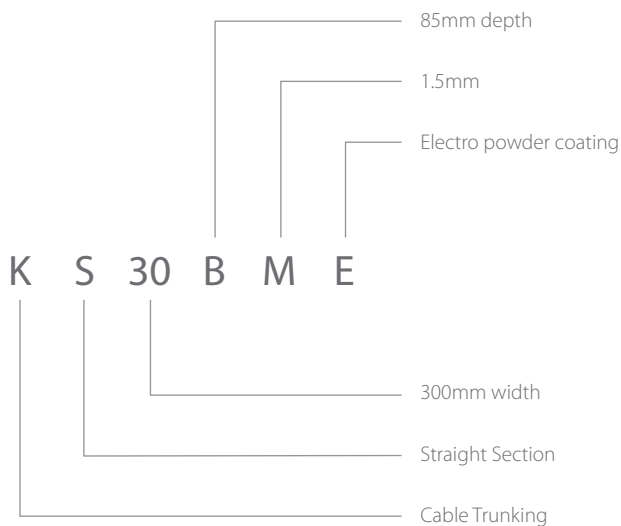
Bend Angle 90°

for other dimensions please contact us.

Straight sections of solid bottom cable trays constructed from single sheet of metal, providing excellent protection from external damage. They are used primarily for intrumental control, communication and other non-heat producing cables.

STRAIGHT SECTION

Example of catalog numbering system



STANDARD DIMENSIONS

- Length (**L**) 2.500mm & 3.000mm
- Depth (**D**) 50mm, 75mm, 85mm, 100mm, 150mm
- Width (**W**) 100mm, 150mm, 200mm, 300mm, 450mm, 600mm, 750mm
- Sheet Metal Thickness
 - 1.2mm for light loads (**LL**)
 - 1.5mm for medium loads (**M**)
 - 2.0mm for heavy loads (**H**)

Material:

- Prime quality GI & MS sheets.

Finish (after fabrication):

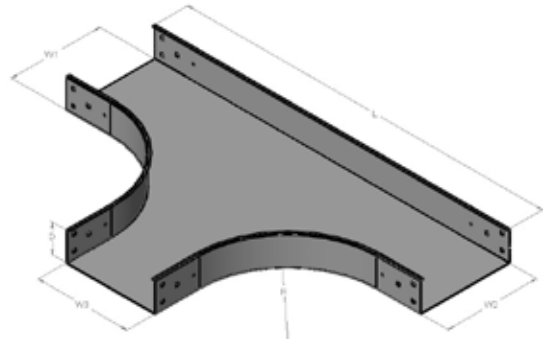
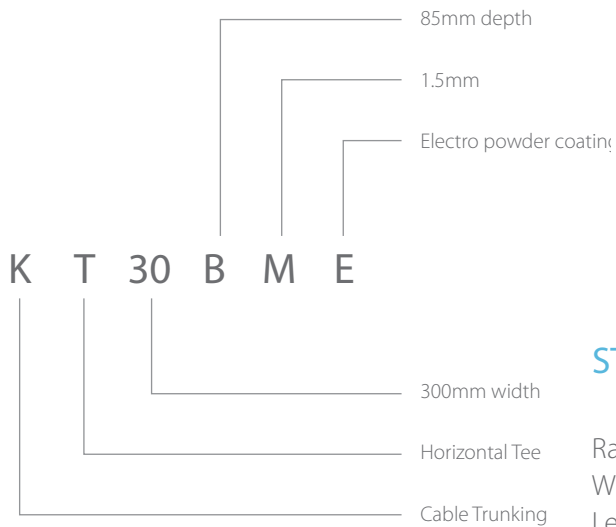
- Electro powder coating (**E**)
- Pre-galvanised (**P**)
- Hot dip galvanized (**H**)

Designs other than those listed above can be manufactured to meet special requirements.

Cable Trunking

HORIZONTAL TEE

Example of catalog numbering system



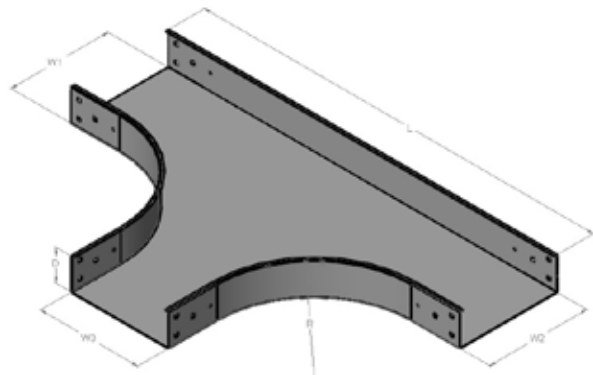
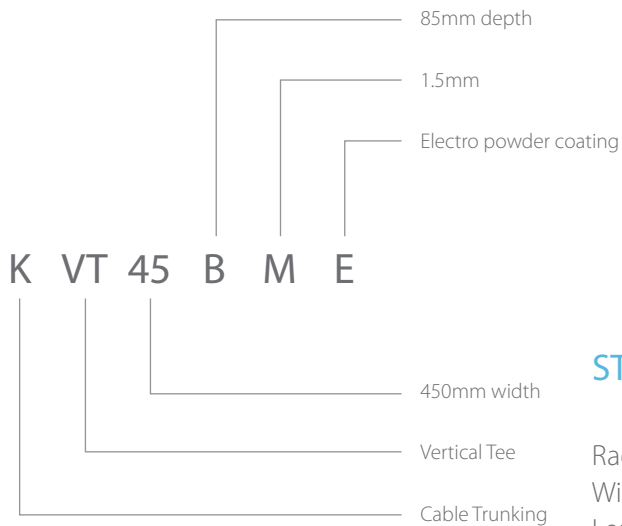
STANDARD DIMENSIONS

Radius	R	300mm							
Width	W (mm)	100	150	300	450	600	750	900	
Length	L (mm)	900	950	1100	1250	1400	1550	1700	
Breadth	B (mm)	500	550	700	850	1000	1150	1300	

for other dimensions please contact us.

VERTICAL TEE

Example of catalog numbering system



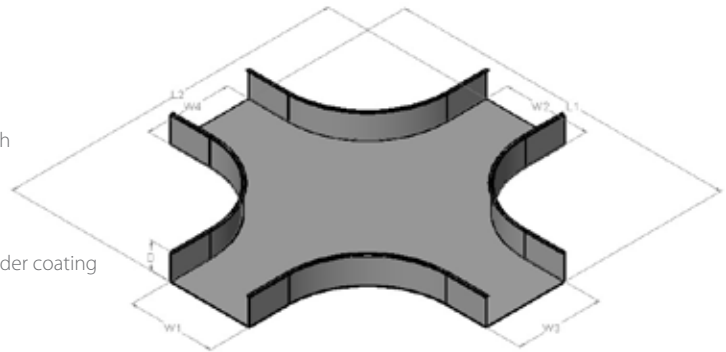
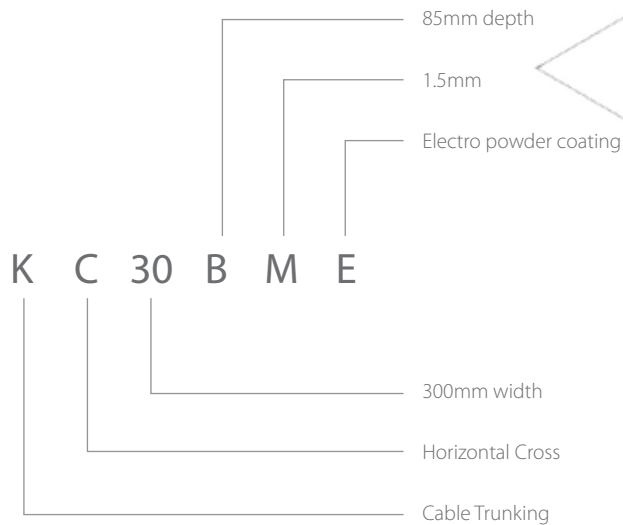
STANDARD DIMENSIONS

Radius	R	300mm							
Width	W (mm)	100	150	300	450	600	750	900	
Length	L (mm)	900	950	1100	1250	1400	1550	1700	
Breadth	B (mm)	500	550	700	850	1000	1150	1300	

for other dimensions please contact us.

HORIZONTAL CROSS

Example of catalog numbering system



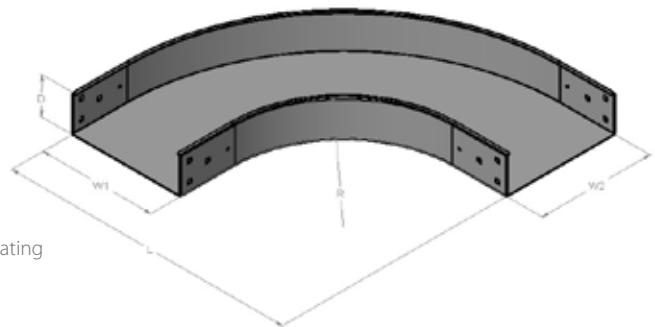
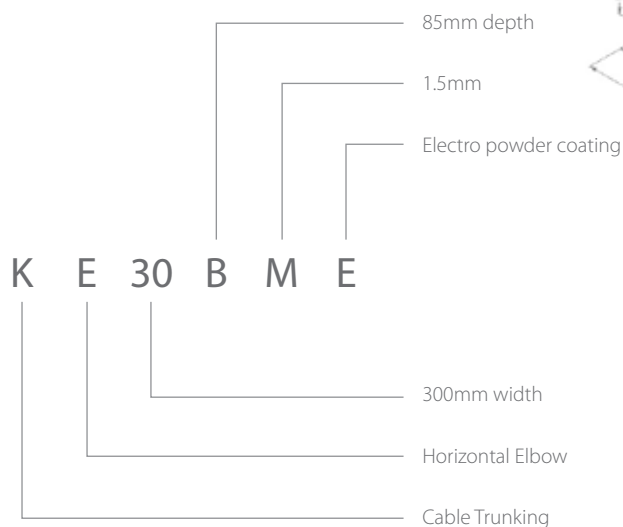
STANDARD DIMENSIONS

Radius R	300mm
Width W (mm)	100 150 300 450 600 750
Length L (mm)	900 950 1100 1250 1400 1550

for other dimensions please contact us.

HORIZONTAL ELBOW

Example of catalog numbering system



STANDARD DIMENSIONS

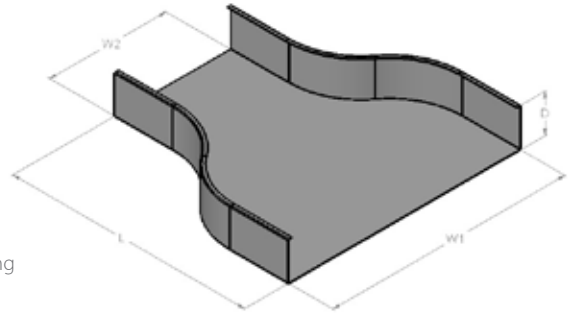
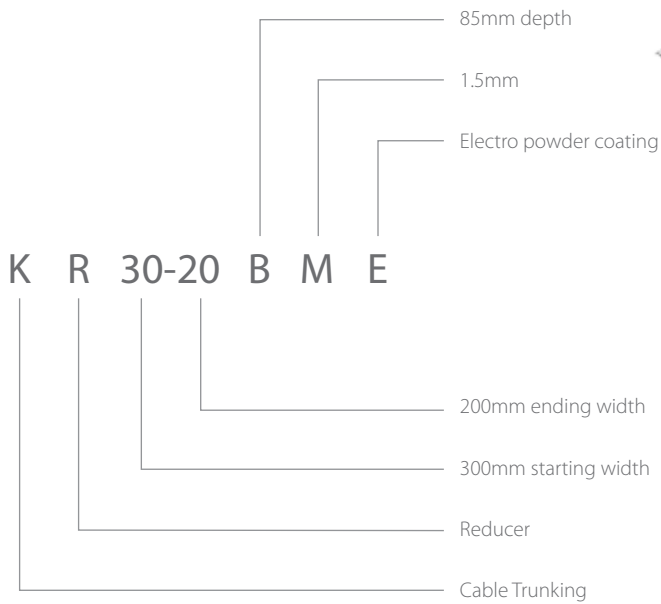
Radius R	300mm
Bend Angle	90° (30°, 45° & 60° also available)
Width W (mm)	100 150 300 450 600 750 900
Length L (mm)	500 550 700 850 1000 1550 1300
Breadth B (mm)	500 550 700 850 1000 1150 1300

for other dimensions please contact us.

Cable Trunking

REDUCER

Example of catalog numbering system

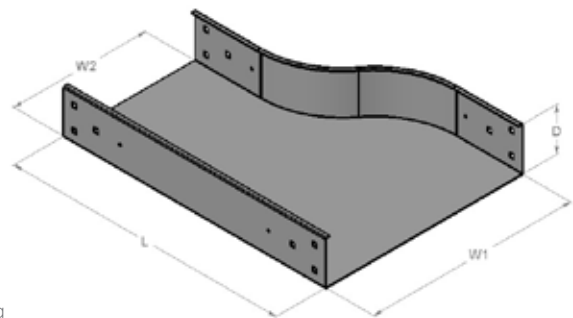
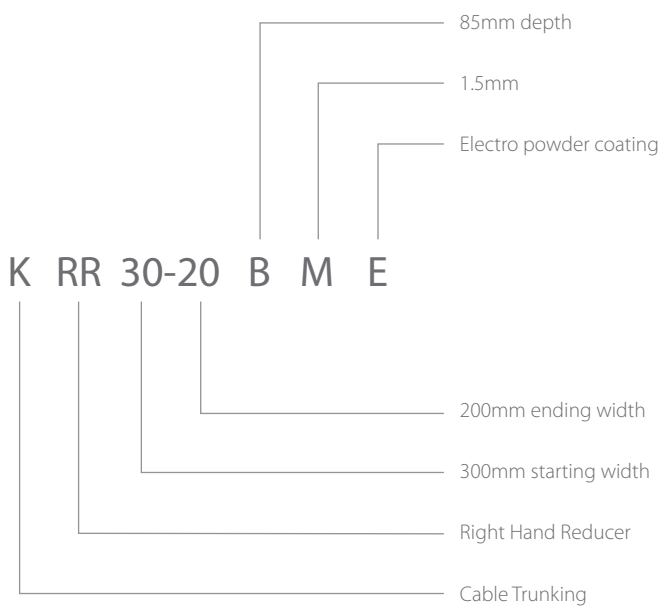


HNC a complete range of perforated bottom reducers for joining any two sizes of straight sections.

Please specify both starting and ending widths.

RIGHT HAND REDUCER

Example of catalog numbering system

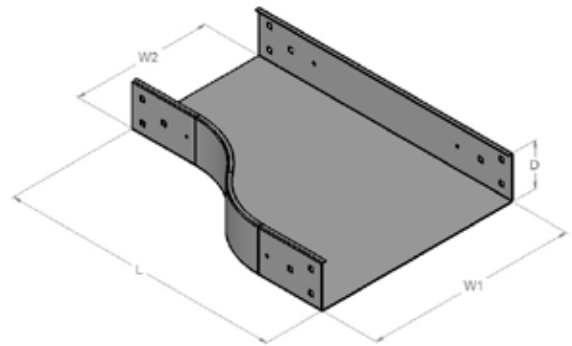
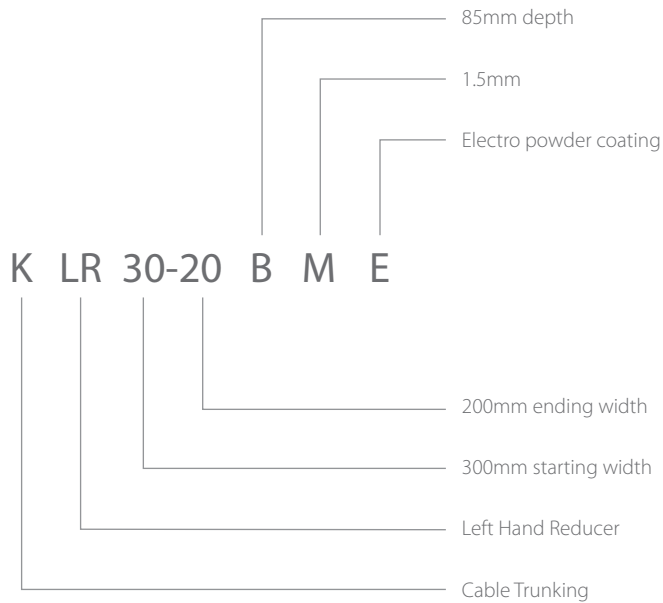


HNC a complete range of perforated bottom reducers for joining any two sizes of straight sections.

Please specify both starting and ending widths.

LEFT HAND REDUCER

Example of catalog numbering system

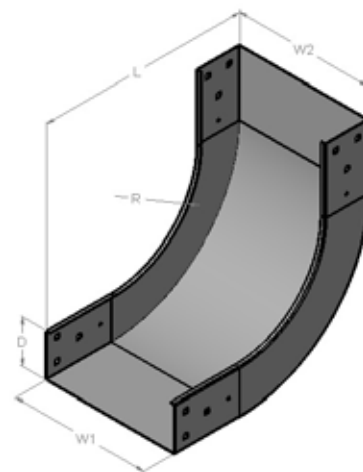
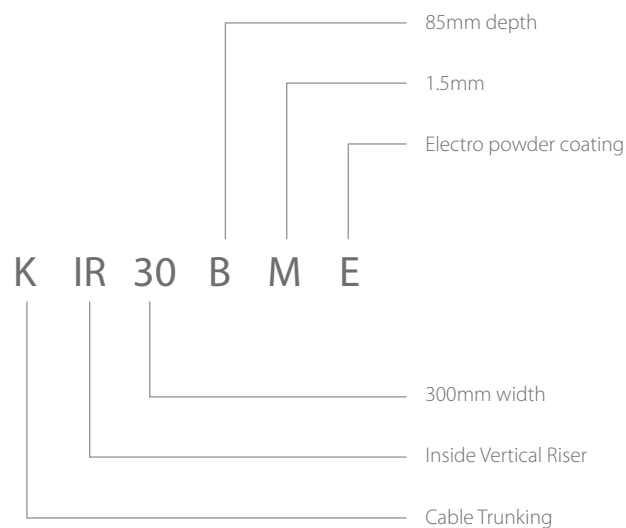


HNC a complete range of perforated bottom reducers for joining any two sizes of straight sections.

Please specify both starting and ending widths.

INSIDE VERTICAL RISERS

Example of catalog numbering system



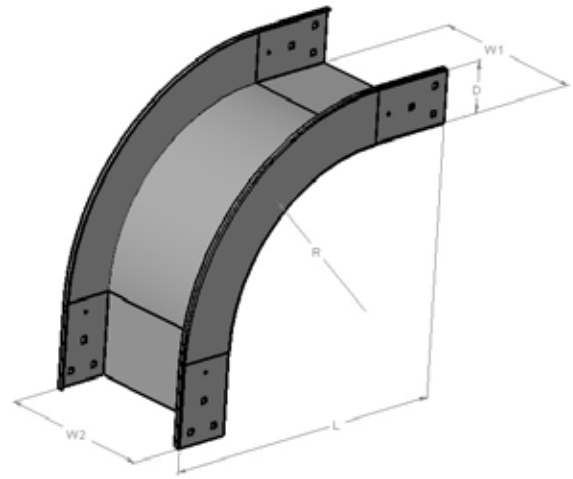
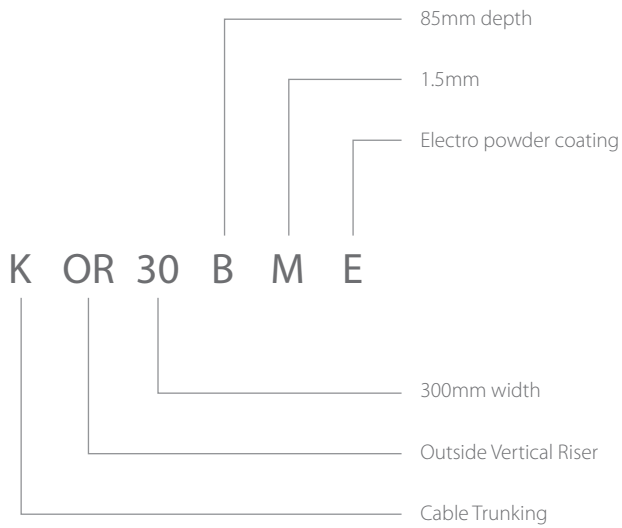
STANDARD DIMENSIONS

Bend Angle 90°

for other dimensions please contact us.

OUTSIDE VERTICAL RISERS

Example of catalog numbering system



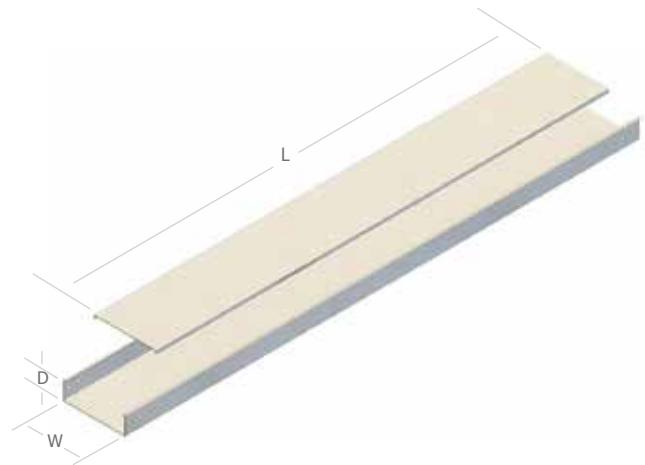
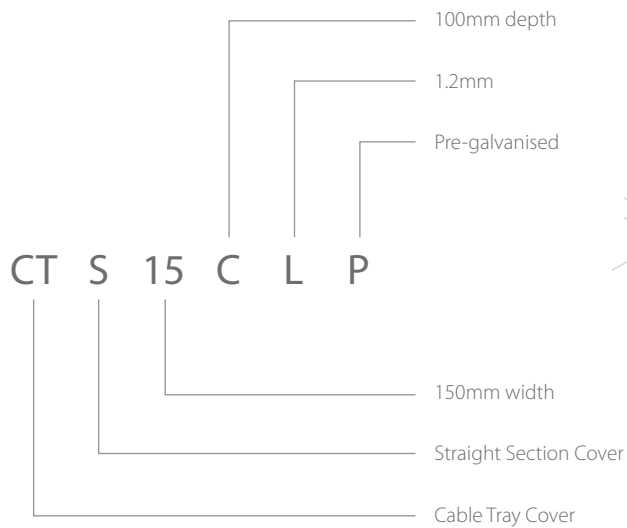
STANDARD DIMENSIONS

Bend Angle 90°

for other dimensions please contact us.

STRAIGHT SECTION

Example of catalog numbering system



STANDARD DIMENSIONS

- Length (L) 2.500mm & 3.000mm
- Depth (D) 15mm
- Width (W) 100mm, 150mm, 200mm, 300mm, 450mm, 600mm, 750mm, 900mm
- Sheet Metal Thickness 1.2mm (LL)
1.5mm (M)
2.0mm (H)

Material:

- Prime quality GI & MS sheets.

Finish (after fabrication):

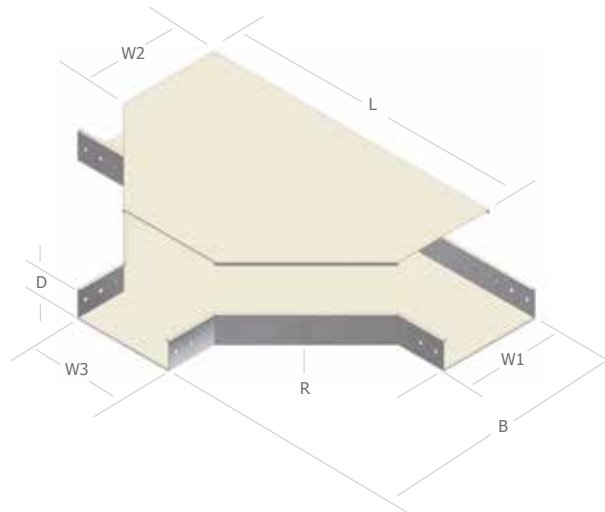
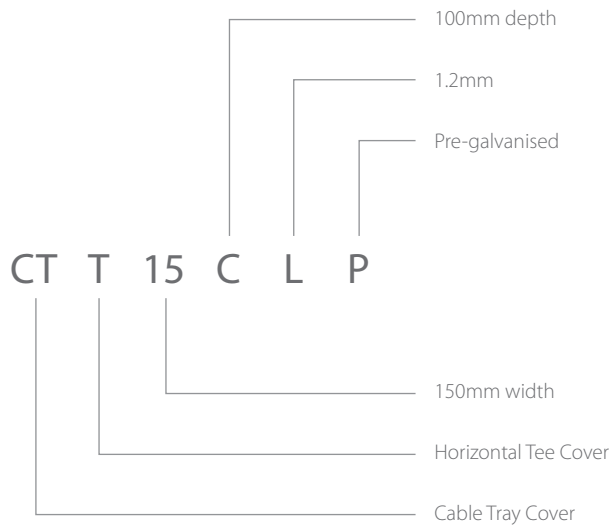
- Electro powder coating (E)
- Pre-galvanised (P)
- Hot dip galvanized (H)

Designs other than those listed above can be manufactured to meet special requirements.

Cable Tray Covers

HORIZONTAL TEE

Example of catalog numbering system



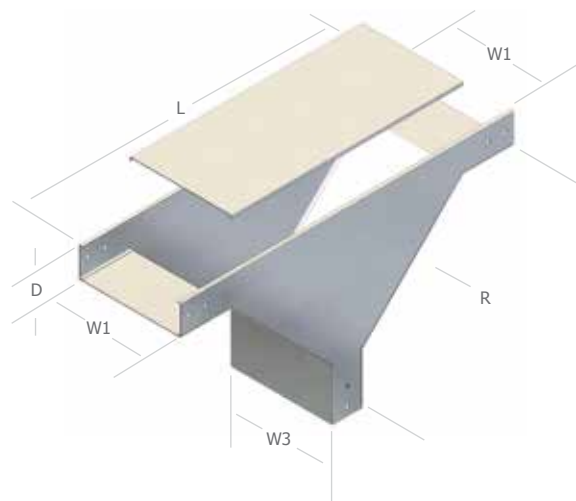
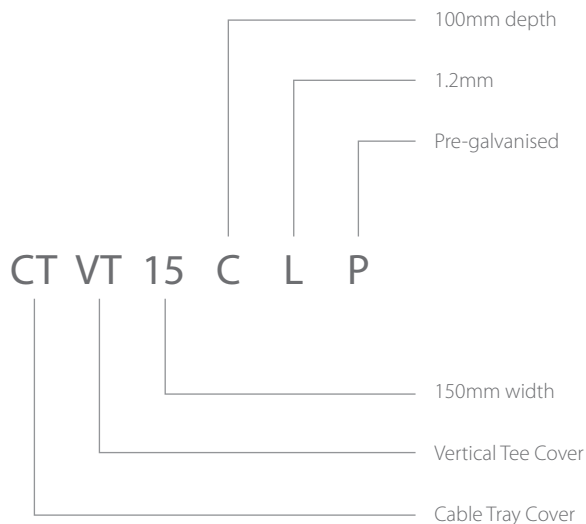
STANDARD DIMENSIONS

Radius	R	300mm					
Width	W (mm)	100	150	300	450	600	750
Length	L (mm)	900	950	1100	1250	1400	1550
Breadth	B (mm)	500	550	700	850	1000	1150

for other dimensions please contact us.

VERTICAL TEE

Example of catalog numbering system



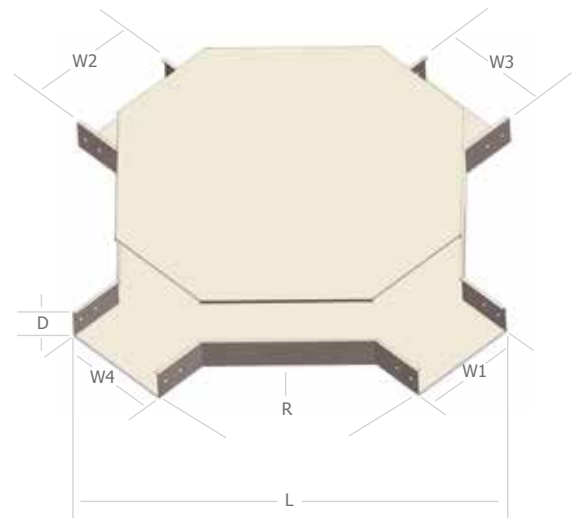
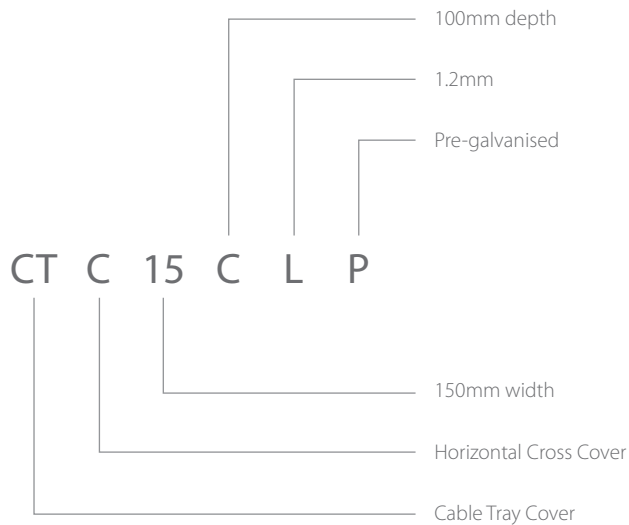
STANDARD DIMENSIONS

Radius	R	300mm					
Width	W (mm)	100	150	300	450	600	750
Length	L (mm)	900	950	1100	1250	1400	1550
Breadth	B (mm)	500	550	700	850	1000	1150

for other dimensions please contact us.

HORIZONTAL CROSS

Example of catalog numbering system



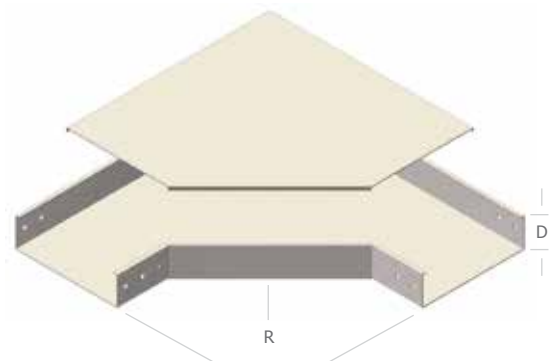
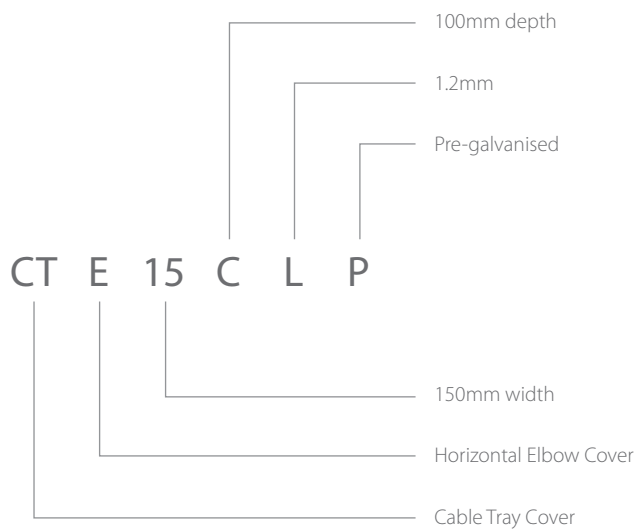
STANDARD DIMENSIONS

Radius	R	300mm					
Width	W (mm)	100	150	300	450	600	750
Length	L (mm)	900	950	1100	1250	1400	1550

for other dimensions please contact us.

HORIZONTAL ELBOW

Example of catalog numbering system



STANDARD DIMENSIONS

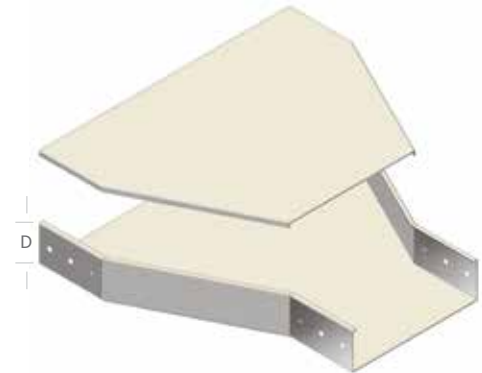
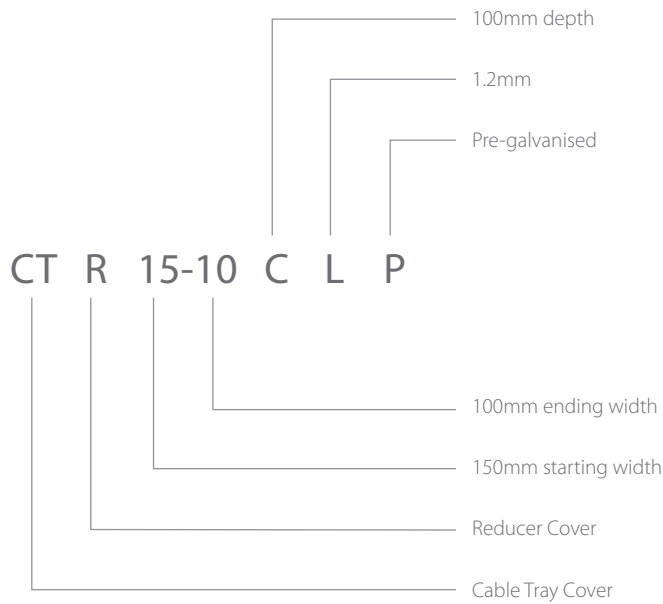
Radius	R	300mm					
Bend Angle 90° (30°, 45° & 60° also available)							
Width	W (mm)	100	150	300	450	600	750
Length	L (mm)	500	550	700	850	1000	1550
Breadth	B (mm)	500	550	700	850	1000	1150

for other dimensions please contact us.

Cable Tray Covers

REDUCER

Example of catalog numbering system

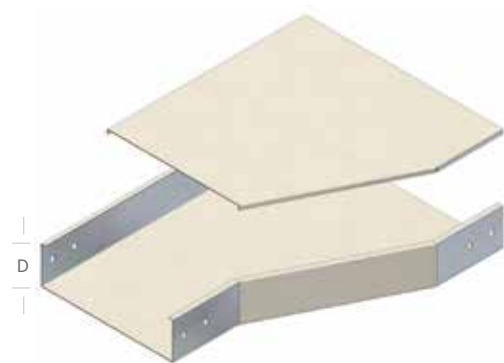
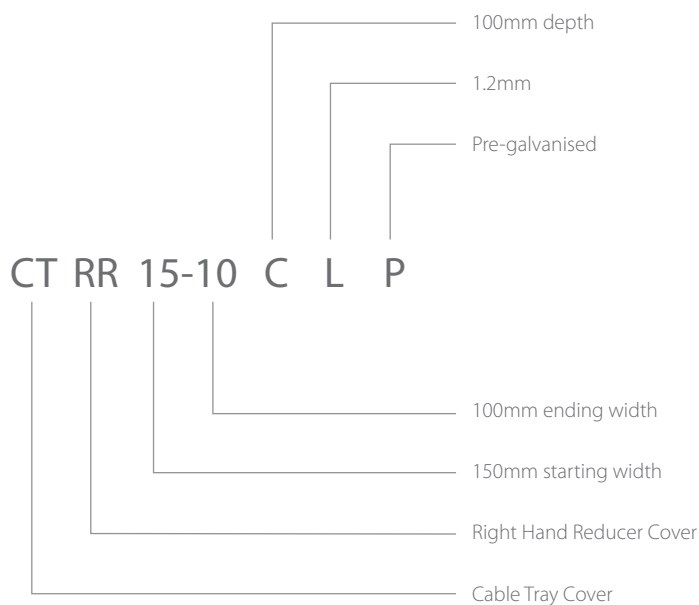


HNC a complete range of perforated bottom reducers for joining any two sizes of straight sections.

Please specify both starting and ending widths.

RIGHT HAND REDUCER

Example of catalog numbering system

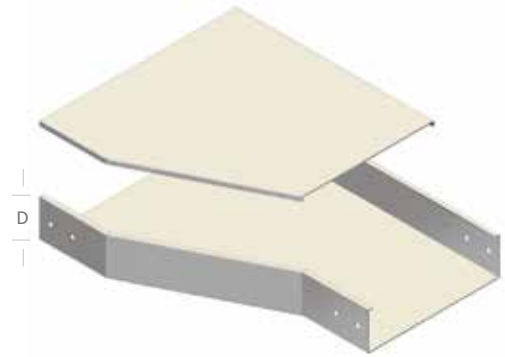
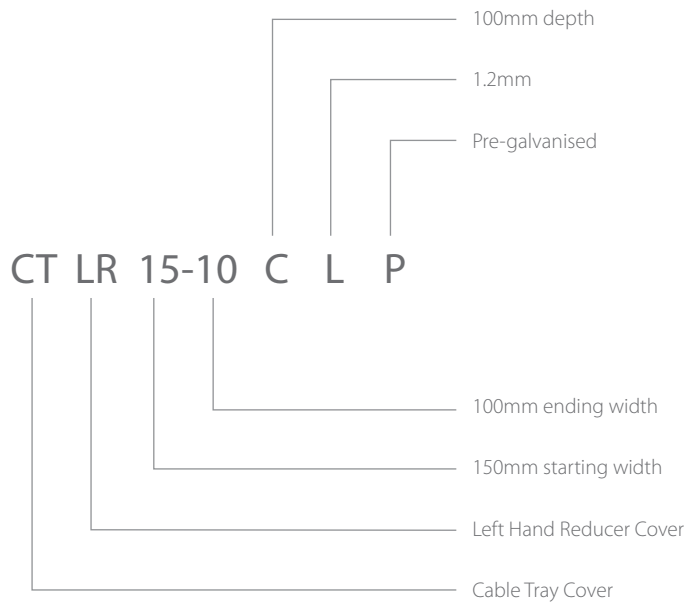


HNC a complete range of perforated bottom reducers for joining any two sizes of straight sections.

Please specify both starting and ending widths.

LEFT HAND REDUCER

Example of catalog numbering system

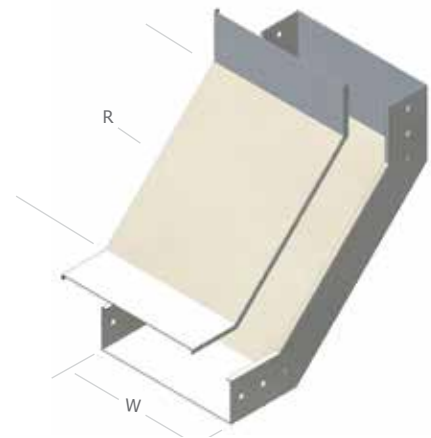
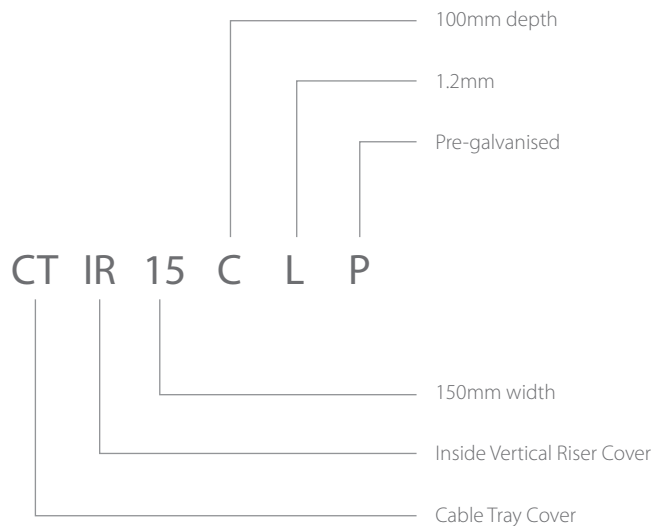


HNC a complete range of perforated bottom reducers for joining any two sizes of straight sections.

Please specify both starting and ending widths.

INSIDE VERTICAL RISERS

Example of catalog numbering system



STANDARD DIMENSIONS

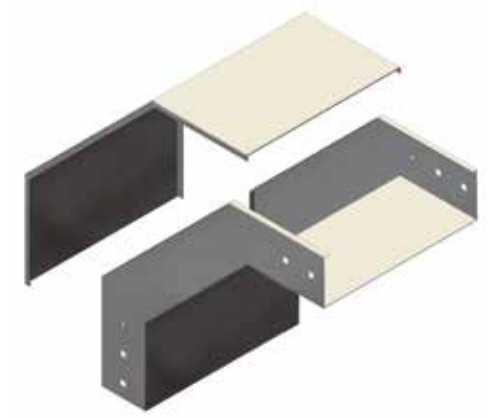
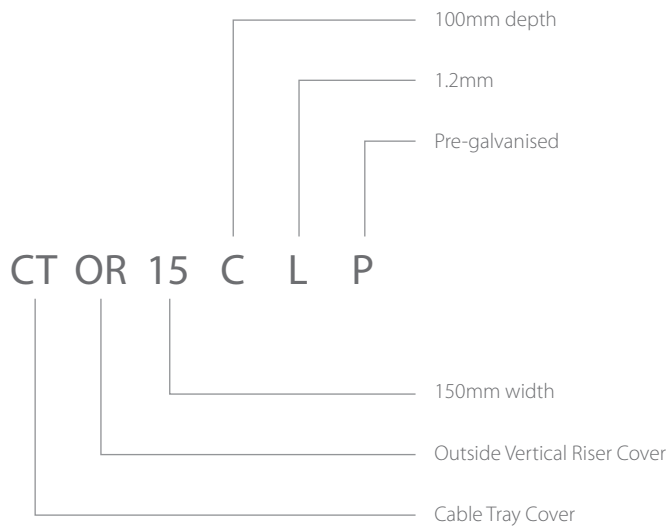
Bend Angle 90°

for other dimensions please contact us.

Cable Tray Covers

OUTSIDE VERTICAL RISERS

Example of catalog numbering system



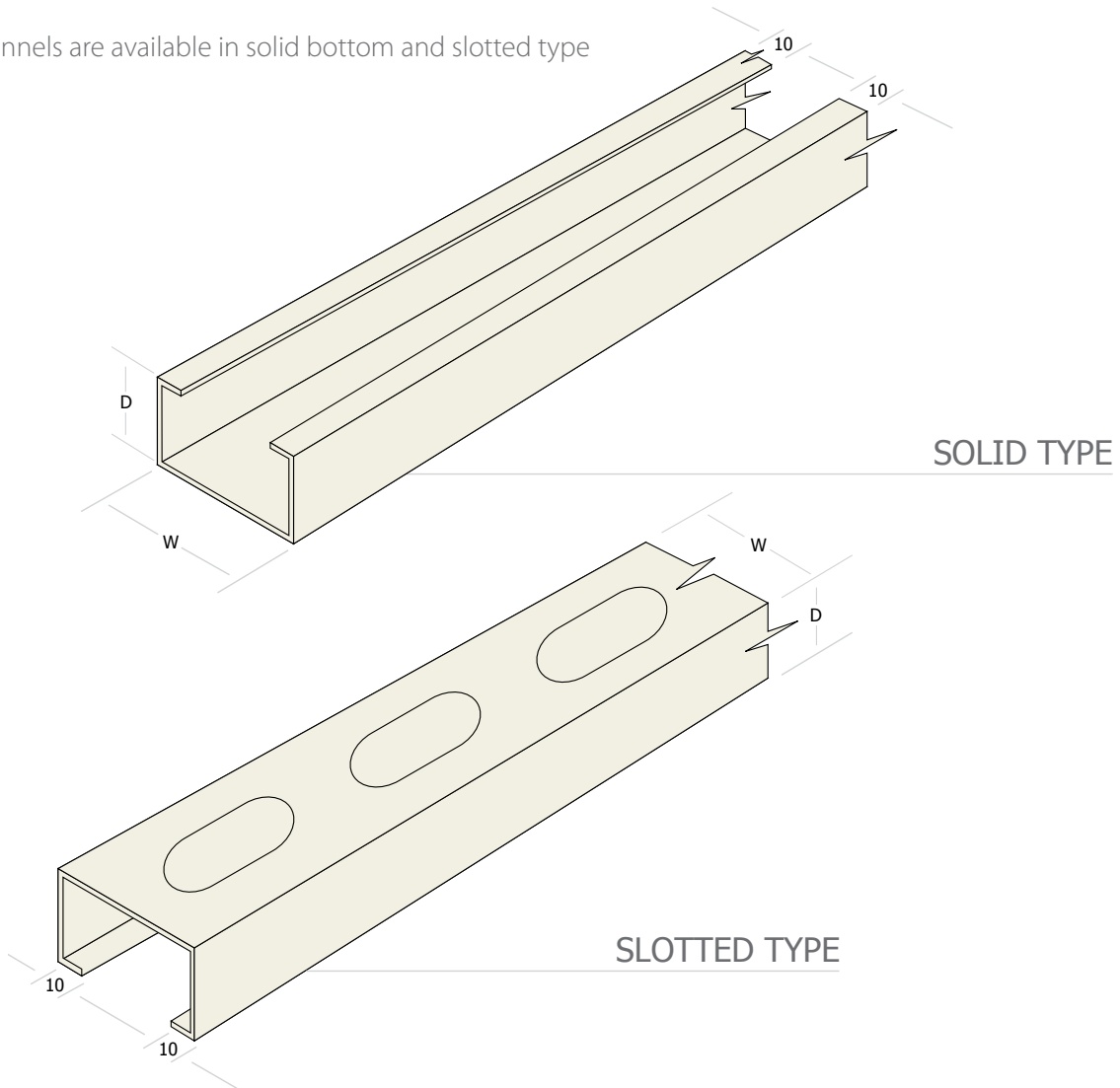
STANDARD DIMENSIONS

Bend Angle 90°

for other dimensions please contact us.

CHANNEL

Channels are available in solid bottom and slotted type



STANDARD DIMENSIONS

- Length (L) 2.500mm & 3.000mm
- Depth (D) 42mm
- Width (W) 42mm
- Sheet Metal Thickness 2.5mm

Material:

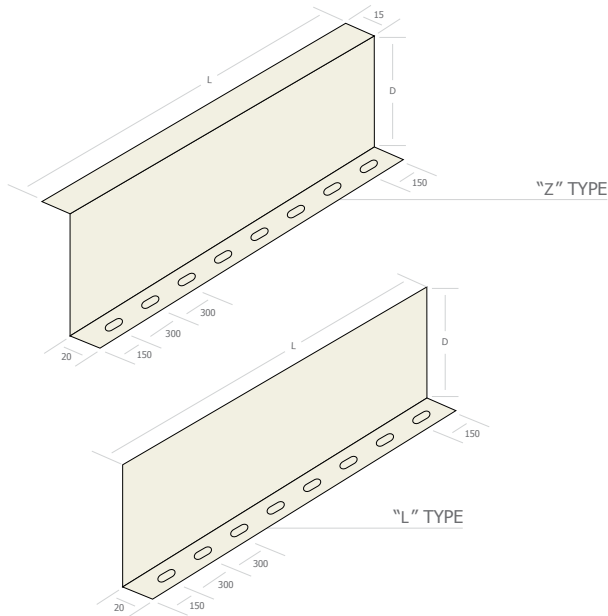
- Prime quality GI & MS sheets.

Finish (after fabrication):

- Electro powder coating (E)
- Pre-galvanised (P)
- Hot dip galvanized (H)

Designs other than those listed above can be manufactured to meet special requirements.

SEPERATOR



STANDARD DIMENSIONS

- Length (L) 2.500mm & 3.000mm
- Depth (D) According to tray depth
- Sheet Metal Thickness 1.2mm (LL)
1.5mm (M)
2.0mm (H)

Finish (after fabrication):

- Electro powder coating (E)
- Pre-galvanized (P)
- Hot dip galvanized (H)

SIDE RAIL CLAMP

(for ladder cable tray)



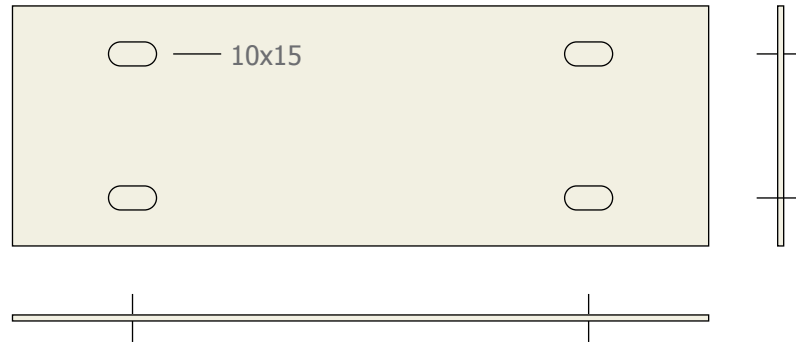
STANDARD DIMENSIONS

- Length (L) 60mm
- Width (W) 40mm
- Sheet Metal Thickness 3.0mm

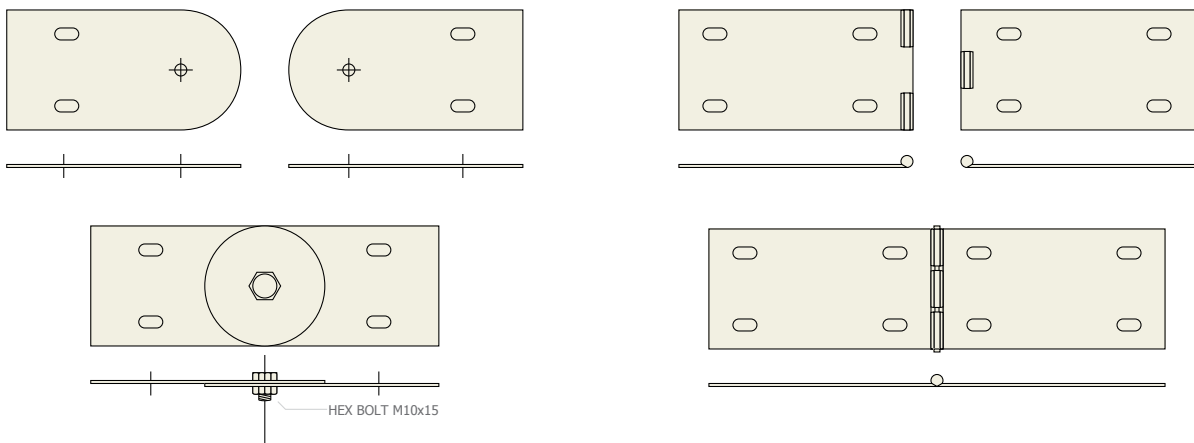
Finish (after fabrication):

- Electro powder coating (E)
- Pre-galvanized (P)
- Hot dip galvanized (H)

JOINING PLATE



RECTILINEAR JOINT



VERTICAL HINGED JOINT

HORIZONTAL HINGED JOINT

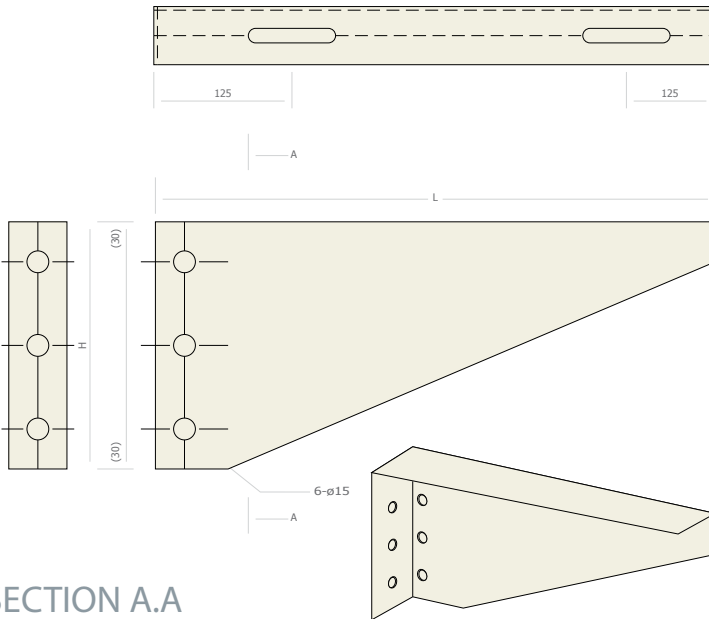
STANDARD DIMENSIONS

- Length (L) 200mm
- Depth (D) According to tray depth
- Sheet Metal Thickness Asper tray thickness

Finish (after fabrication):

- Electro powder coating (E)
- Pre-galvanised (P)
- Hot dip galvanized (H)

BRACKET



SECTION A.A

FOR HEAVY LOAD
ISOMETRIC VIEW

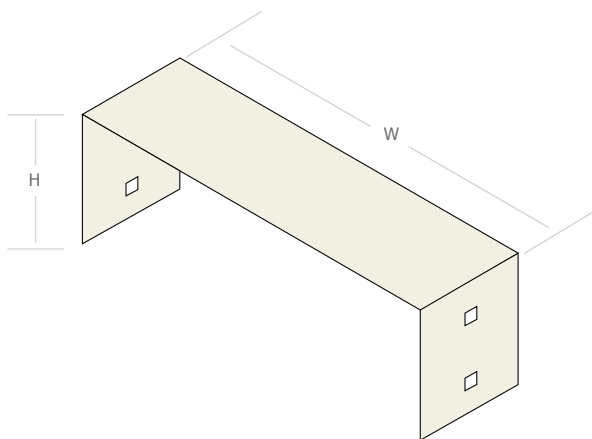
STANDARD DIMENSIONS

- Length (L) 200mm to 1.000mm
- Height 140mm, 180mm
- Sheet Metal Thickness 2.0mm
3.2mm

Finish (after fabrication):

- Electro powder coating (E)
- Pre-galvanised (P)
- Hot dip galvanized (H)

END CAP



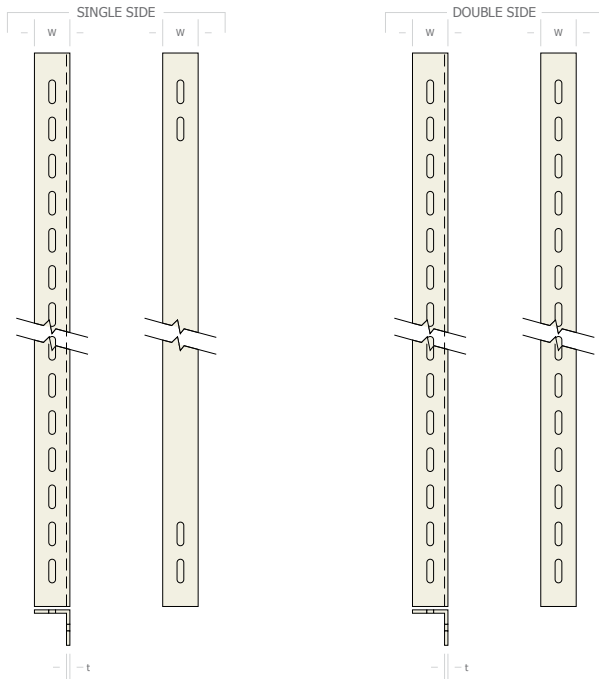
STANDARD DIMENSIONS

- Length (L) 200mm to 1.000mm
- Height 85mm to 300mm
- Sheet Metal Thickness 1.2mm to 3.2mm

Finish (after fabrication):

- Electro powder coating (E)
- Pre-galvanised (P)
- Hot dip galvanized (H)

HANGER POST



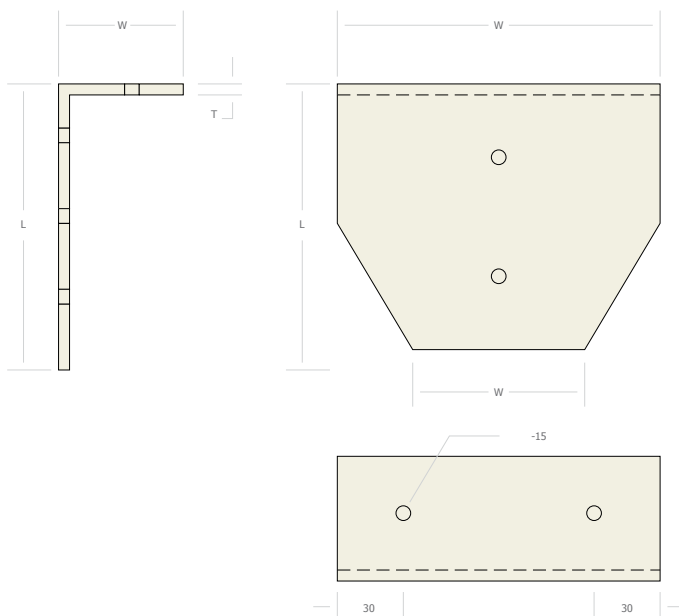
STANDARD DIMENSIONS

- Length (L) 600mm to 6.000mm
- Standard size of
 - Angle Iron 2.0mm
 - 3.2mm
- Thickness 4mm to 9mm

Finish (after fabrication):

- Electro powder coating (E)
- Hot dip galvanized (H)

HEAD PLATE



STANDARD DIMENSIONS

- Length (L) 130mm
- Width (W) 150mm
- Sheet Metal Thickness 6mm & 8mm

Finish (after fabrication):

- Electro powder coating (E)
- Hot dip galvanized (H)

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