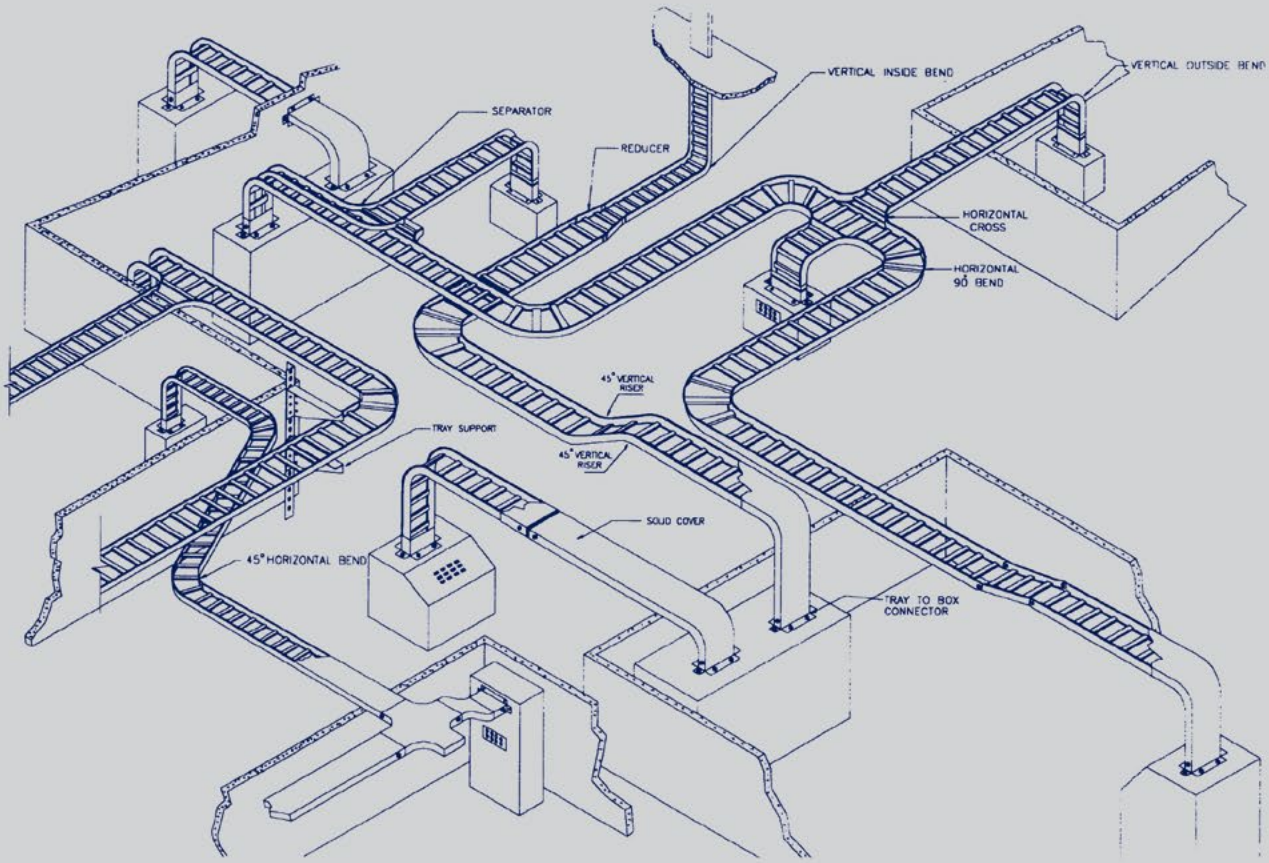
NOORSA GOSTAR NOVIN



Perfect designing

Long term economy

Easy installation & replacement

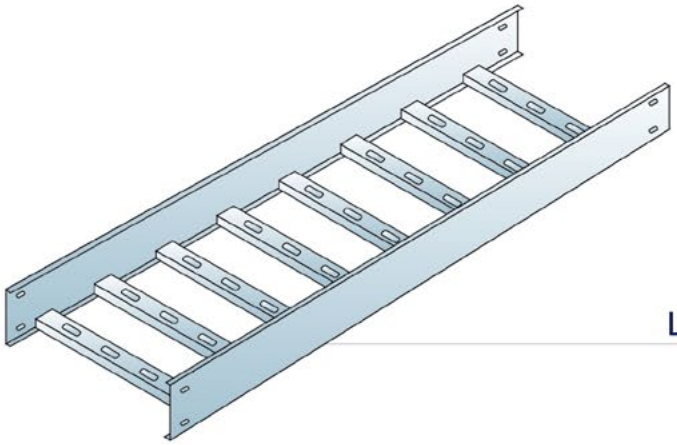
Cable trays as an engineered product

NOORSA GOSTAR NOVIN

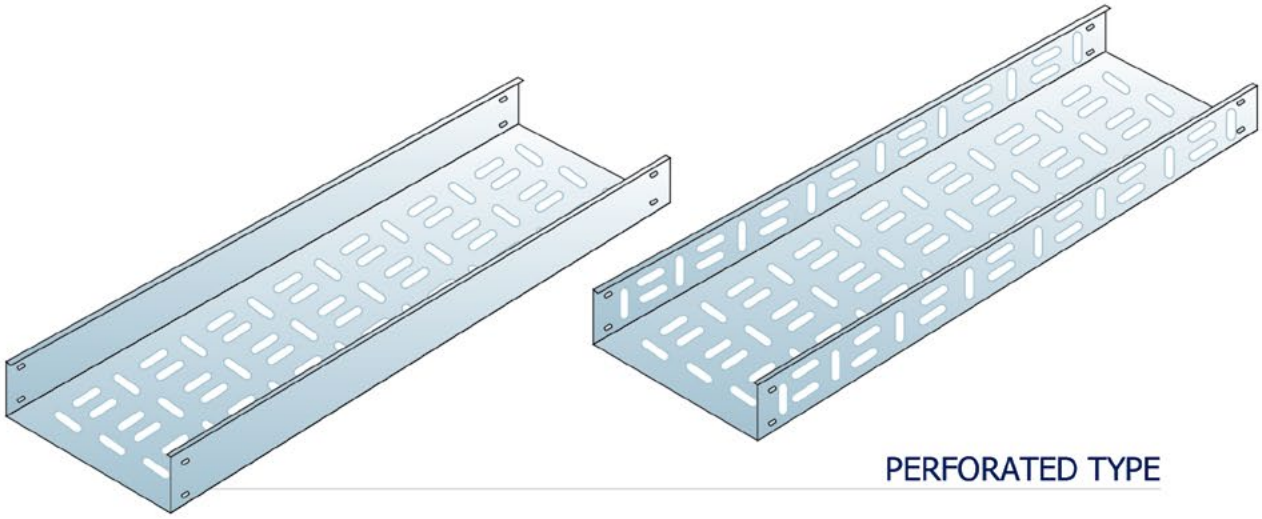
CONTENTS

TYPES OF CABLE TRAY

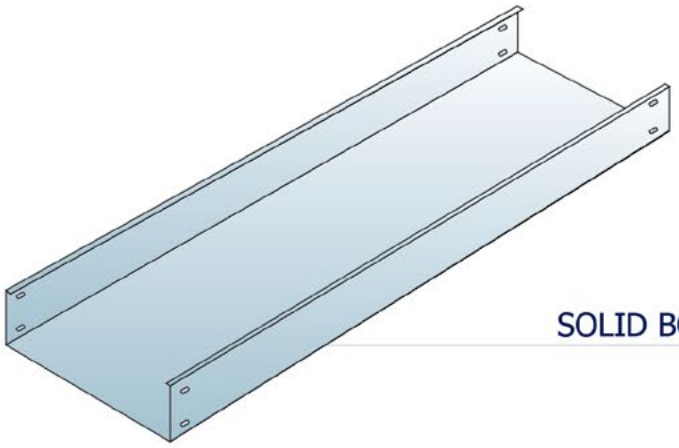
NOORSA GOSTAR NOVIN



LADDER TYPE



PERFORATED TYPE



SOLID BOTTOM TYPE

NOORSA GOSTAR NOVIN

CABLE TRAY SYSTEM

A cable tray system is an assembly of metallic cable tray sections and accessories, that forms a rigid structural system to support cables.

NEMA STANDARD 7-14-76

THE NEED FOR A CABLE TRAY SYSTEM

As technology advances, so too does the need for effective support systems. Today, plants and buildings are moving more and more towards automation. Requiring complex system of wiring and cable laying.

Old methods of cable management become obsolete under these demanding conditions.

- Regular inspections must be carried out, & faults located
- Many entry/exit points are required
- New cables may need to be installed, and old ones removed
- Ventilation, essential to power and similar cables, must be provided

Today cable trays have become a necessary part of industrial and commercial construction by offering quick, economical and flexible solutions to these problems.

Cable trays are capable of supporting all types of wiring:

- High Voltage Power Lines
- Power Distribution Cables
- Sensitive Control Wiring
- Telecommunication Wiring
- Optical Cables

ADVANTAGES OF NGN CABLE TRAYS

NGN cable tray systems are manufactured in accordance with the precise standards laid down by the National Electrical Manufacturers Association (NEMA). Thus ensuring standardisation of materials used, as well as load-bearing capacities.

NGN ENGINEERING is the only company in Pakistan to produce a complete range of cable trays as an engineered product, on a regular basis.

NGN cable tray system offer the following advantages

- Easy Installation
- Increased cable fill over other wiring method. Thereby saving material costs and installation labour
- Less space utilisation than comparable conduit or other systems
- The metal can be used as an equipment ground conductor
- Easy inspection of cables
- Easy location of faults and quick repair, without replacement of the original cable run
- Cables can be dropped out at any point without expensive boxes or fittings
- Cables can instantly be added to existing trays at a later stage

NOORSA GOSTAR NOVIN

CATALOG NUMBERING SYSTEM

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

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

CODE 1 Type of Cable Tray & Cover

LT	Ladder Type Cable Tray
PB	Perforated Cable Tray
SB	Solid Bottom Cable Tray
CS	Solid Cover
CL	Louvered Cover

CODE 2 Type of Cable Tray & Cover

S	Straight Section
E	Horizontal Elbow
I	Inside Vertical Elbow
O	Outside Vertical Elbow
T	Horizontal Tee
C	Horizontal Cross
R	Reducer

CODE 3 Width in Centimeters

[Give actual figure]

CODE 4 Nominal Depth

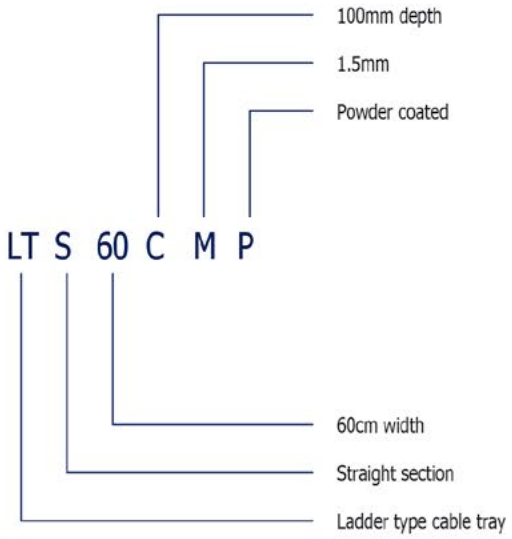
A	50mm
B	75mm
C	100mm
D	150mm

CODE 5 Sheet Metal Thickness

L	1.2mm
M	1.5mm
H	2.0mm

CODE 6 Type of Finish

P	Painied after fabrication
G	Pre galvanised GI sheet
H	Hot Dip galvanised after fabrication



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

NOORSA GOSTAR NOVIN

LADDER CABLE TRAY

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.

STANDARD DIMENSIONS

Length	2.44m (8ft) & 3.0m (10ft)
Depth	50mm, 75mm, 100mm
Width	10cm, 15cm, 30cm, 45cm, 60cm, 75cm, 90cm
Rung Spacing	300mm (1ft)
Sheet Metal Thickness	18 Gauge (1.2mm) for light loads 16 Gauge (1.5mm) for medium loads 14 Gauge (2.0mm) for heavy loads

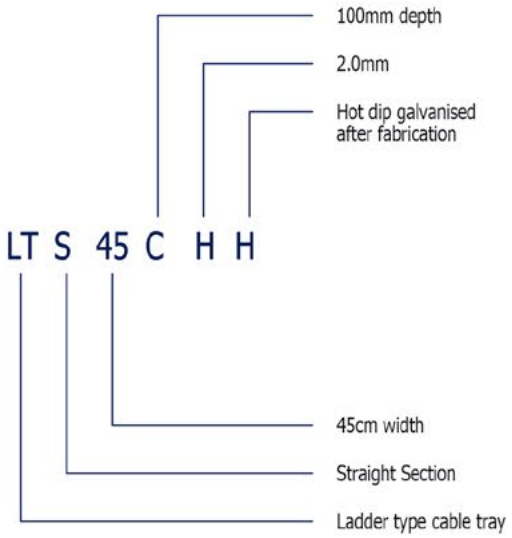
Designs other than those listed above can be manufactured to meet special requirements.

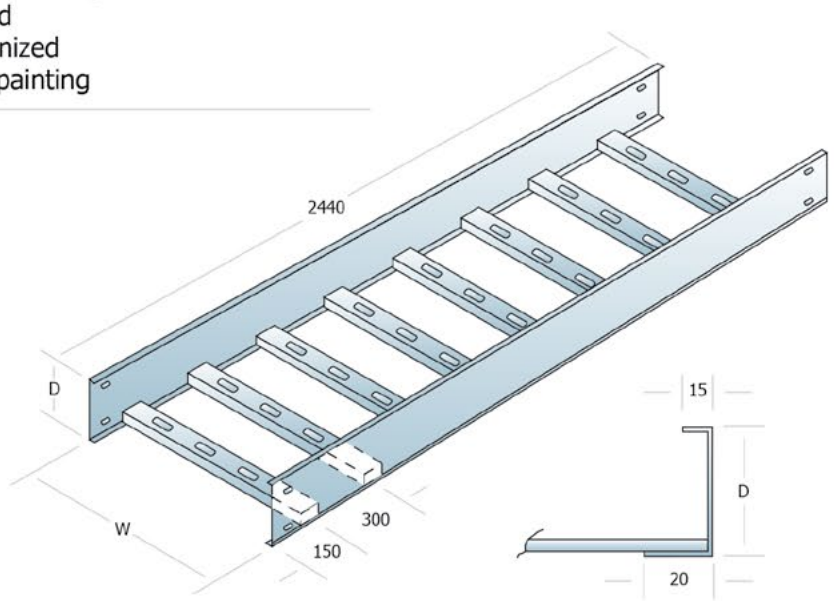
Material:
Prime quality GI & MS sheets.

Finish (after fabrication):
Pre galvanised
Hot dip galvanized
Powder coat painting

STRAIGHT SECTION

Example of catalog numbering system





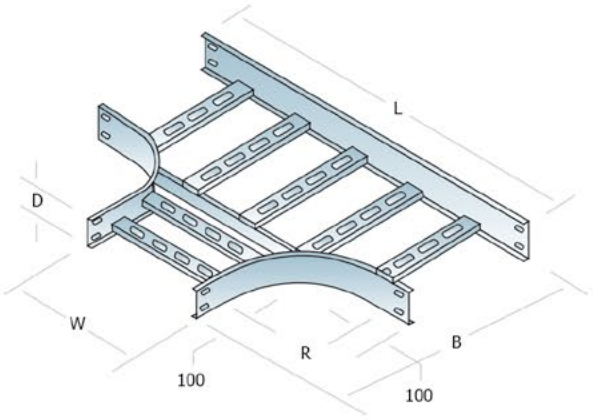
LADDER CABLE TRAY

NOORSA GOSTAR NOVIN

STANDARD DIMENSIONS

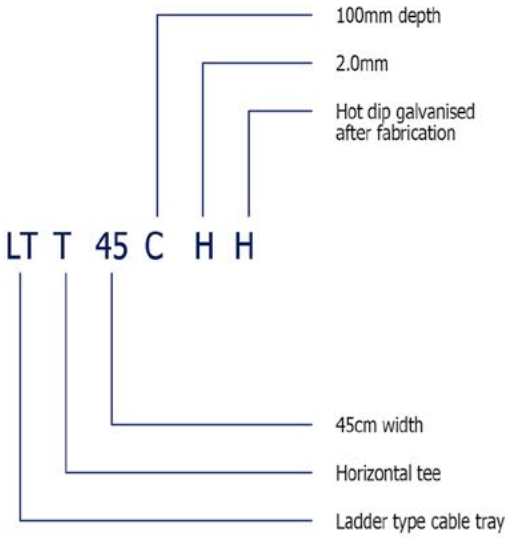
Radius	R	300mm						
Width	W (cm)	10	15	30	45	60	75	90
Length	L (cm)	90	95	110	125	140	155	170
Breadth	B (cm)	50	55	70	85	100	115	130

for other dimensions see page 73464-008



HORIZONTAL TEE

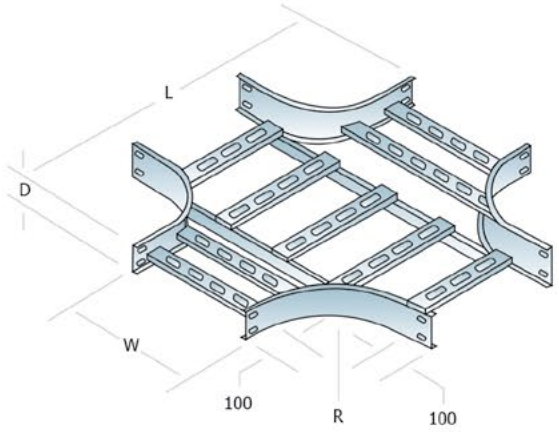
Example of catalog numbering system



STANDARD DIMENSIONS

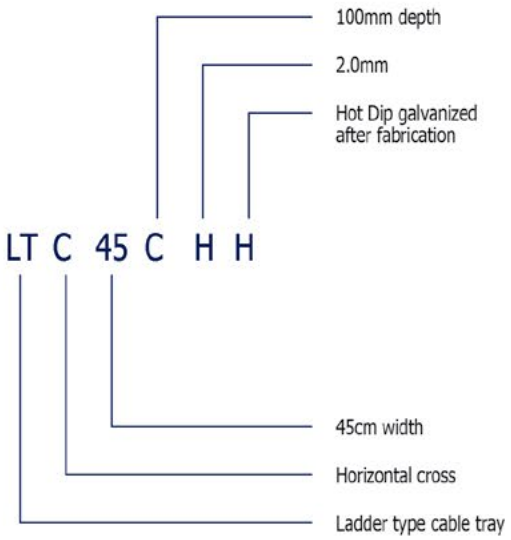
Radius	R	300mm						
Width	W (cm)	10	15	30	45	60	75	90
Length	L (cm)	90	95	110	125	140	155	170

for other dimensions see page 73464-008



HORIZONTAL CROSS

Example of catalog numbering system



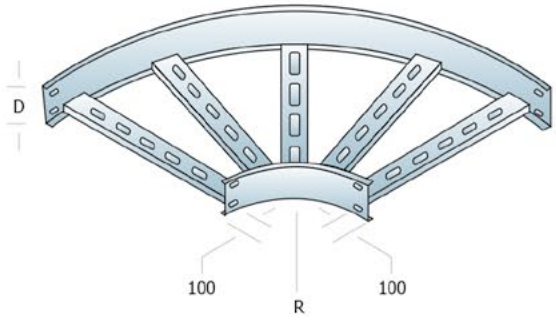
LADDER CABLE TRAY

NOORSA GOSTAR NOVIN

STANDARD DIMENSIONS

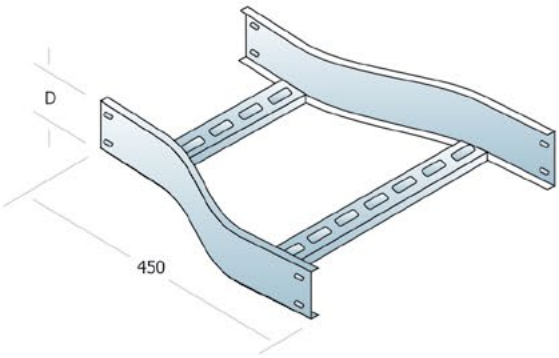
Radius R	300mm							
Bend Angle	90° (30°, 45° & 60° also available)							
Width W (cm)	10	15	30	45	60	75	90
Length L (cm)	50	55	70	85	100	115	130
Breadth B (cm)	50	55	70	85	100	115	130

for other dimensions see page 73464-008



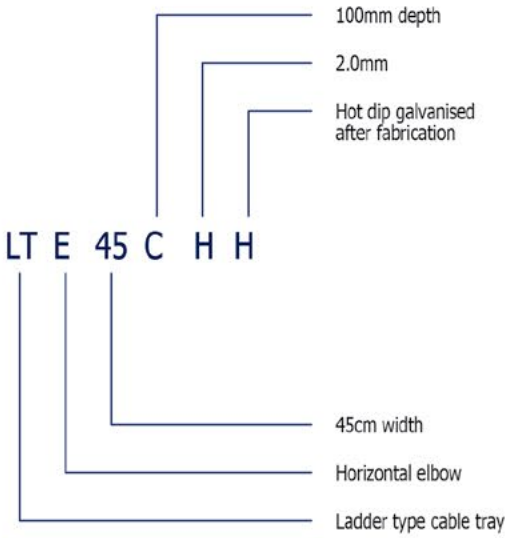
EZZI manufactures a complete range of ladder reducers for joining any two sizes of straight sections.

Please specify both starting and ending widths.



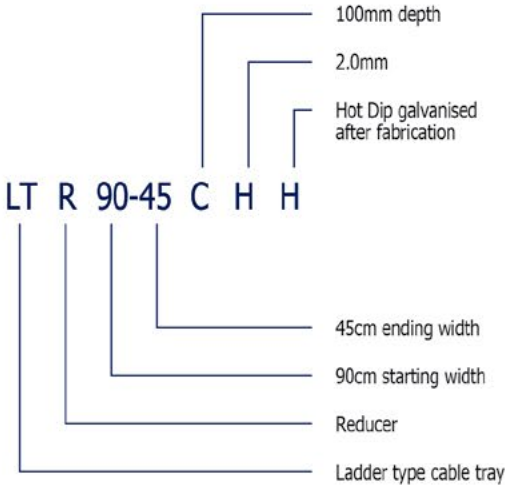
HORIZONTAL ELBOW

Example of catalog numbering system



REDUCER

Example of catalog numbering system



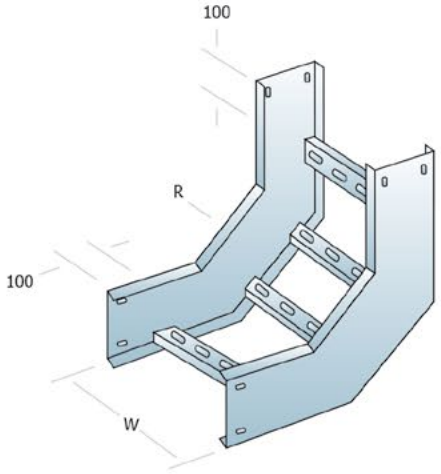
LADDER CABLE TRAY

NOORSA GOSTAR NOVIN

STANDARD DIMENSIONS

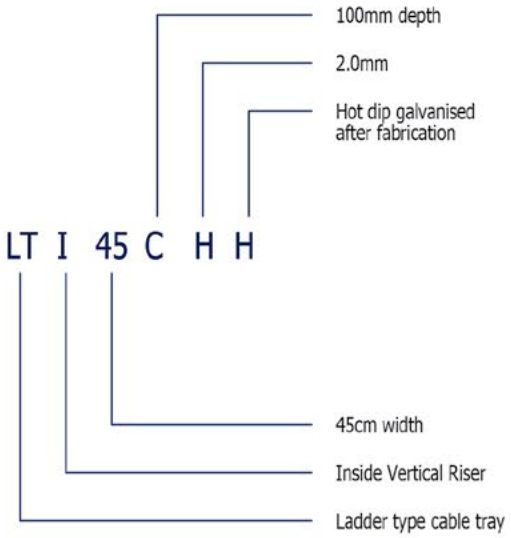
Bend Angle 90°

for other dimensions see page 73464-008



INSIDE VERTICAL RISERS

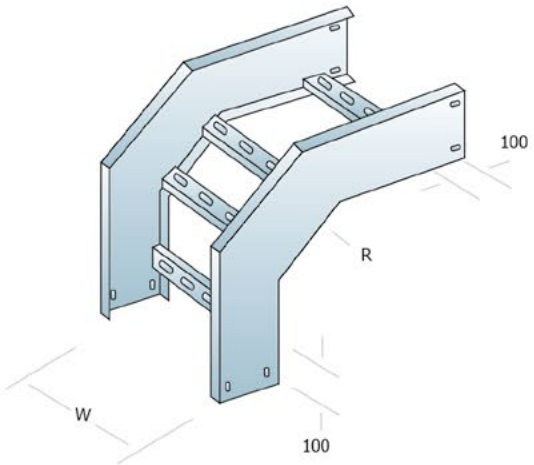
Example of catalog numbering system



STANDARD DIMENSIONS

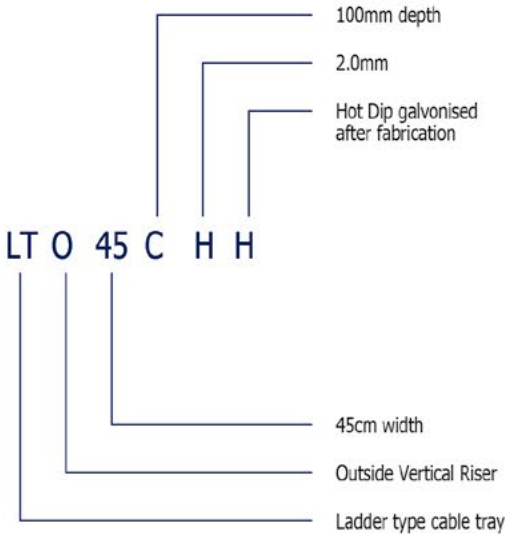
Bend Angle 90°

for other dimensions see page 73464-008



OUTSIDE VERTICAL RISERS

Example of catalog numbering system



NOORSA GOSTAR NOVIN

PERFORATED CABLE TRAY

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

STANDARD DIMENSIONS

Length	2.44m (8ft) & 3.0m (10ft)
Depth	75mm, 100mm 150mm
Width	10cm, 15cm, 30cm, 45cm, 60cm, 75cm
Sheet Metal Thickness	18 Gauge (1.2mm) for light loads 16 Gauge (1.5mm) for medium loads 14 Gauge (2.0mm) for heavy loads

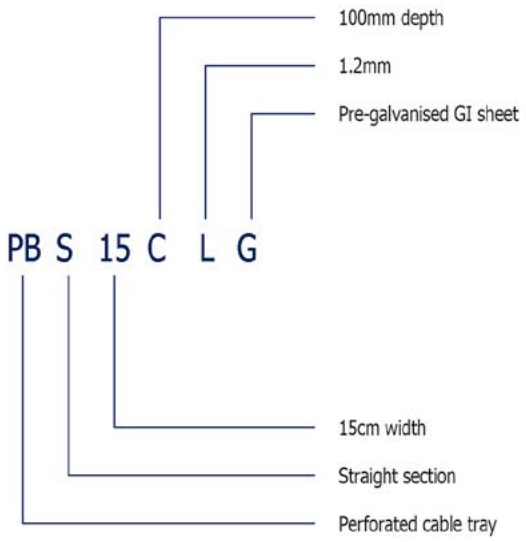
Designs other than those listed above can be manufactured to meet special requirements.

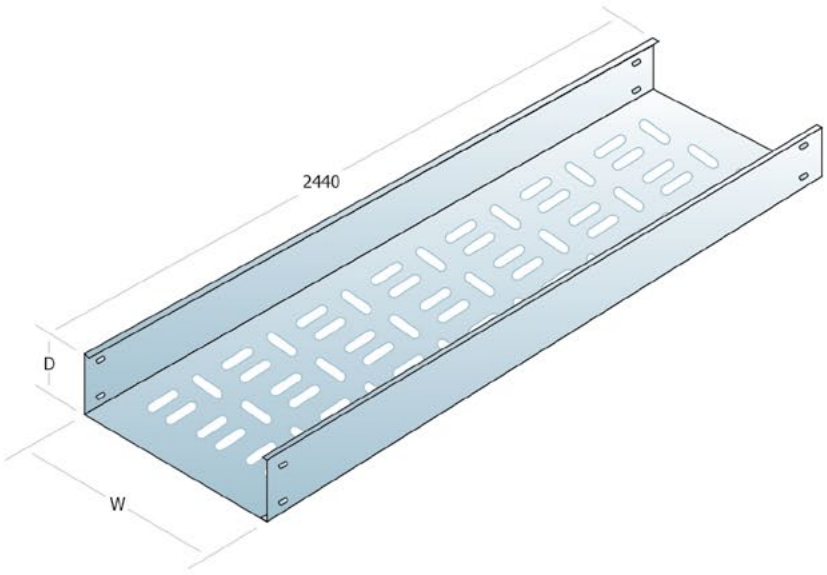
Material:
Prime quality GI & MS sheets.

Finish (after fabrication):
Pre galvanised
Hot dip galvanized
Powder coat painting

STRAIGHT SECTION

Example of catalog numbering system





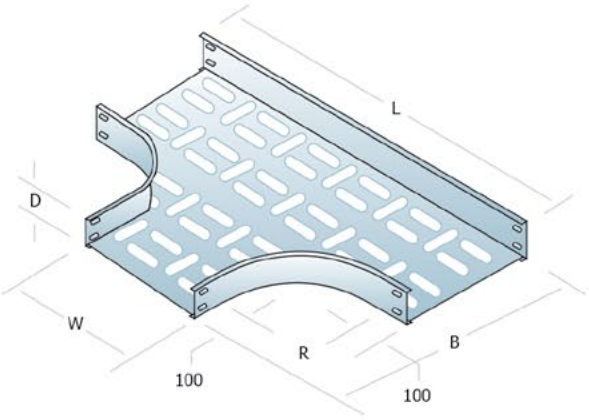
PERFORATED CABLE TRAY

NOORSA GOSTAR NOVIN

STANDARD DIMENSIONS

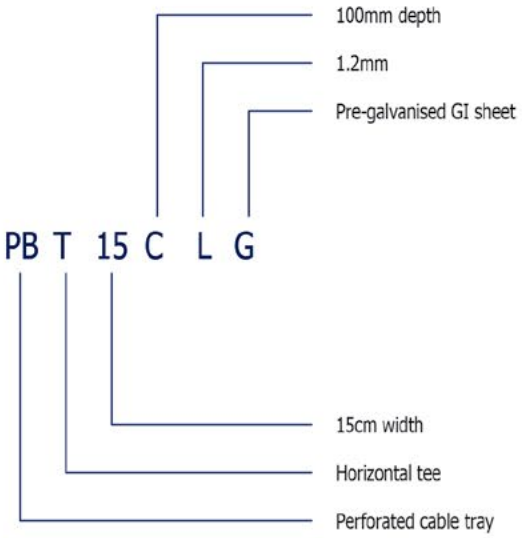
Radius	R	300mm					
Width	W (cm)	10	15	30	45	60	75
Length	L (cm)	90	95	110	125	140	155
Breadth	B (cm)	50	55	70	85	100	115

for other dimensions see page 73464-008



HORIZONTAL TEE

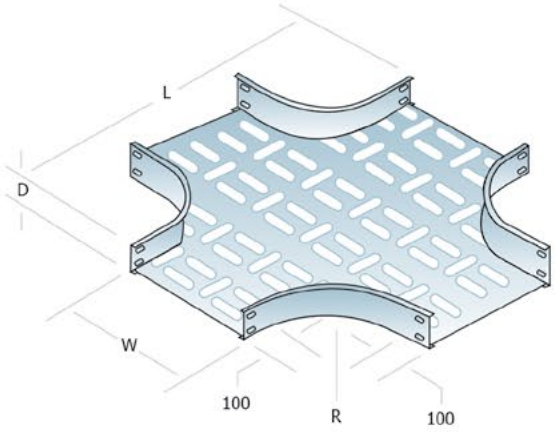
Example of catalog numbering system



STANDARD DIMENSIONS

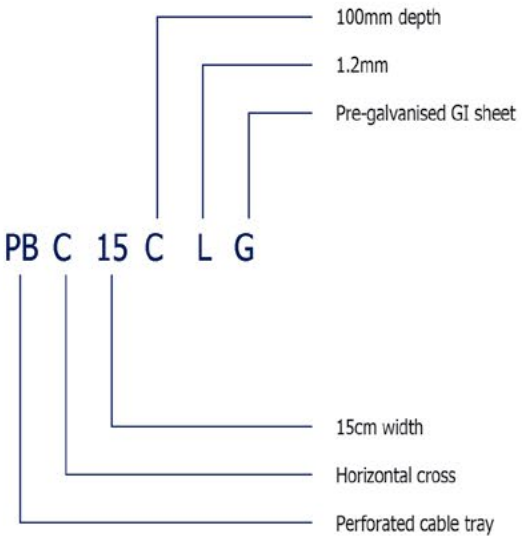
Radius	R	300mm					
Width	W (cm)	10	15	30	45	60	75
Length	L (cm)	90	95	110	125	140	155

for other dimensions see page 73464-008



HORIZONTAL CROSS

Example of catalog numbering system



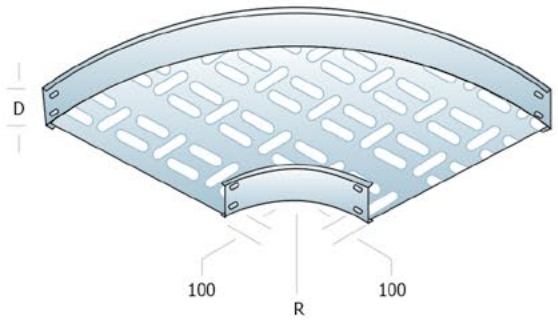
PERFORATED CABLE TRAY

NOORSA GOSTAR NOVIN

STANDARD DIMENSIONS

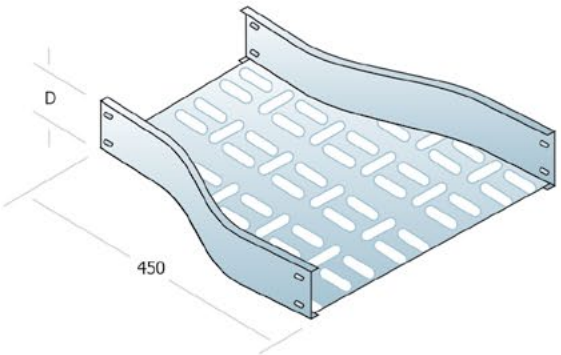
Radius R	300mm						
Bend Angle	90° (30°, 45° & 60° also available)						
Width W (cm)	10	15	30	45	60	75
Length L (cm)	50	55	70	85	100	115
Breadth B (cm)	50	55	70	85	100	115

for other dimensions see page 73464-014



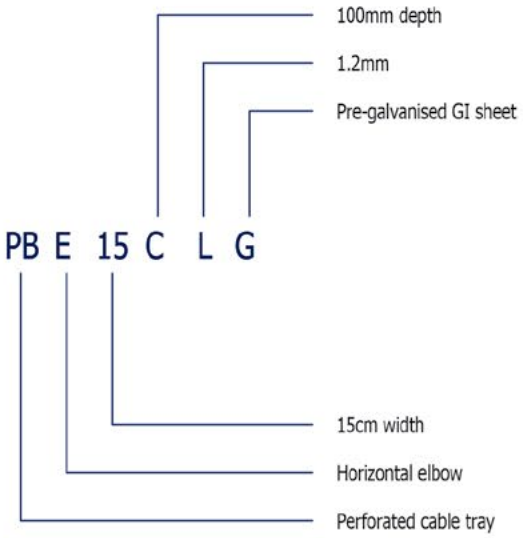
EZZI manufactures a complete range of perforated bottom reducers for joining any two sizes of straight sections.

Please specify both starting and ending widths.



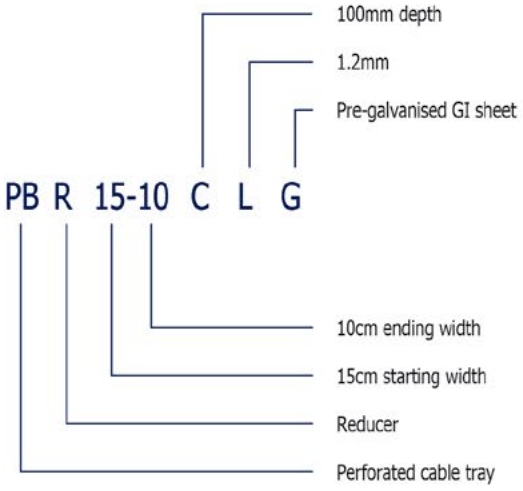
HORIZONTAL ELBOW

Example of catalog numbering system



REDUCER

Example of catalog numbering system



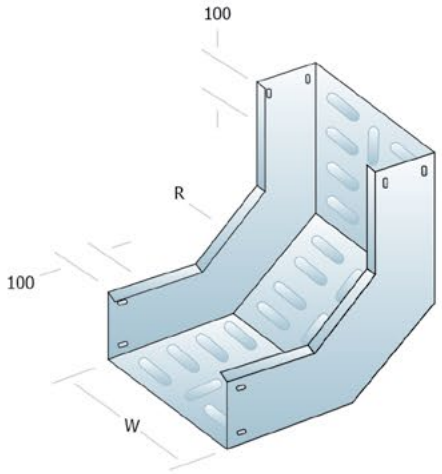
PERFORATED CABLE TRAY

NOORSA GOSTAR NOVIN

STANDARD DIMENSIONS

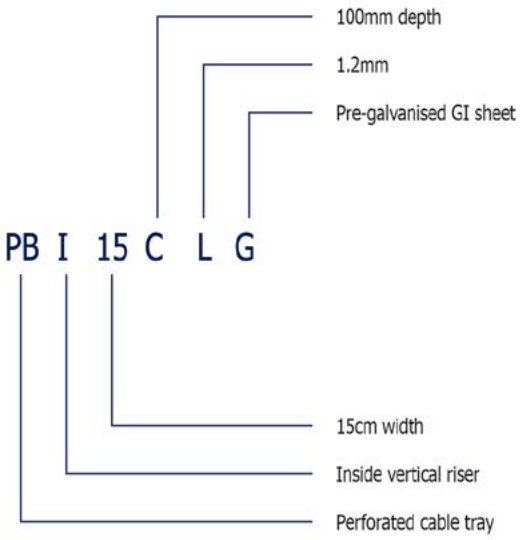
Bend Angle 90°

for other dimensions see page 73464-015



INSIDE VERTICAL RISERS

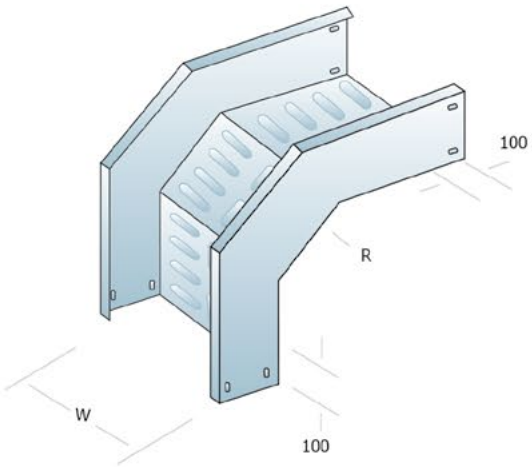
Example of catalog numbering system



STANDARD DIMENSIONS

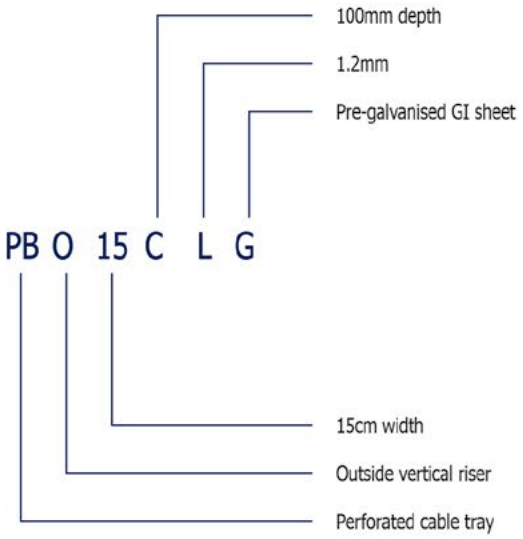
Bend Angle 90°

for other dimensions see page 73464-015



OUTSIDE VERTICAL RISERS

Example of catalog numbering system



NOORSA GOSTAR NOVIN

SOLID BOTTOM CABLE TRAY

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

STANDARD DIMENSIONS

Length	2.44m (8ft) & 3.0m (10ft)
Depth	75mm, 100mm 150mm
Width	10cm, 15cm, 30cm, 45cm, 60cm, 75cm
Sheet Metal Thickness	18 Gauge (1.2mm) for light loads 16 Gauge (1.5mm) for medium loads 14 Gauge (2.0mm) for heavy loads

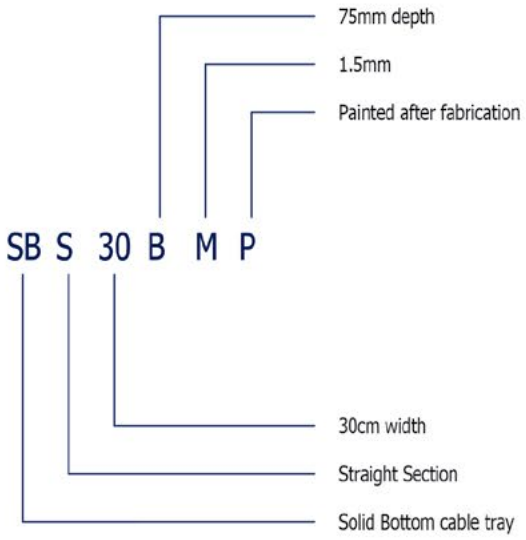
Designs other than those listed above can be manufactured to meet special requirements.

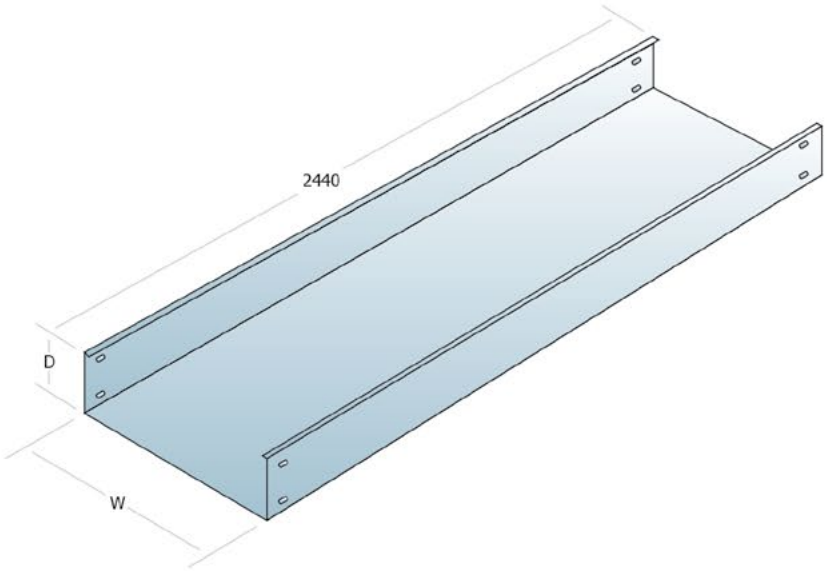
Material:
Prime quality GI & MS sheets.

Finish (after fabrication):
Pre galvanised
Hot dip galvanized
Powder coat painting

STRAIGHT SECTION

Example of catalog numbering system



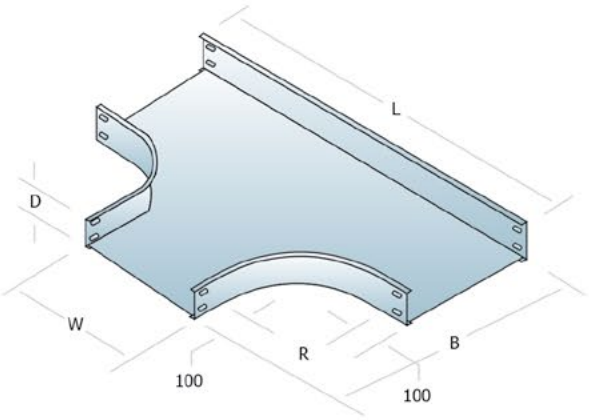


SOLID BOTTOM CABLE TRAY

STANDARD DIMENSIONS

Radius	R	300mm					
Width	W (cm)	10	15	30	45	60	75
Length	L (cm)	90	95	110	125	140	155
Breadth	B (cm)	50	55	70	85	100	115

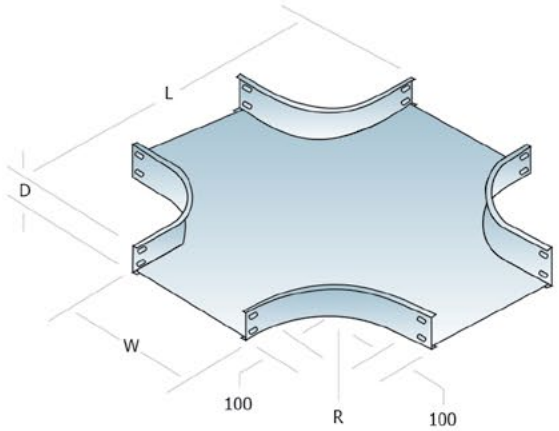
for other dimensions see page 73464-012



STANDARD DIMENSIONS

Radius	R	300mm					
Width	W (cm)	10	15	30	45	60	75
Length	L (cm)	90	95	110	125	140	155

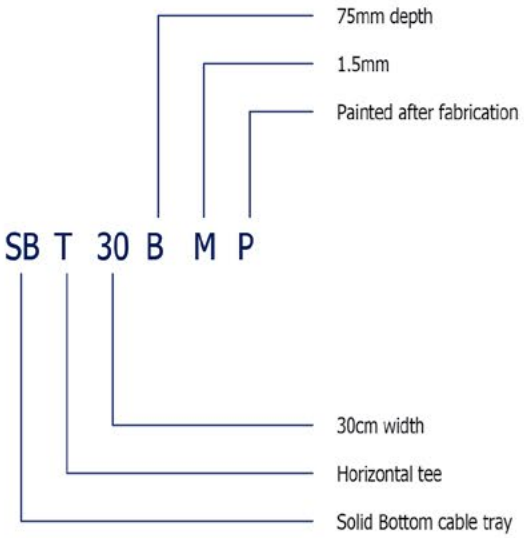
for other dimensions see page 73464-012



NOORSA GOSTAR NOVIN

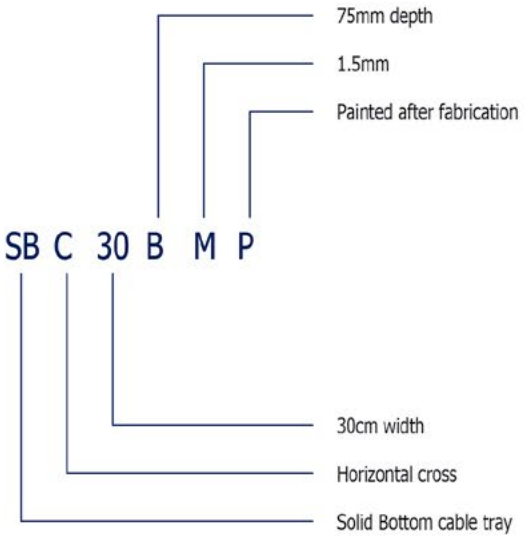
HORIZONTAL TEE

Example of catalog numbering system



HORIZONTAL CROSS

Example of catalog numbering system



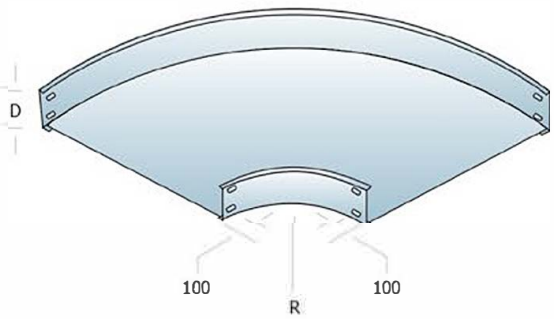
SOLID BOTTOM CABLE TRAY

NOORSA GOSTAR NOVIN

STANDARD DIMENSIONS

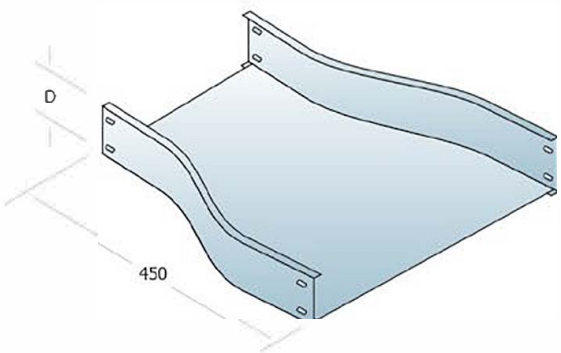
Radius R	300mm						
Bend Angle	90°						
Width W (cm)	10	15	30	45	60	75
Length L (cm)	50	55	70	85	100	115
Breadth B (cm)	50	55	70	85	100	115

for other dimensions see page 73464-013



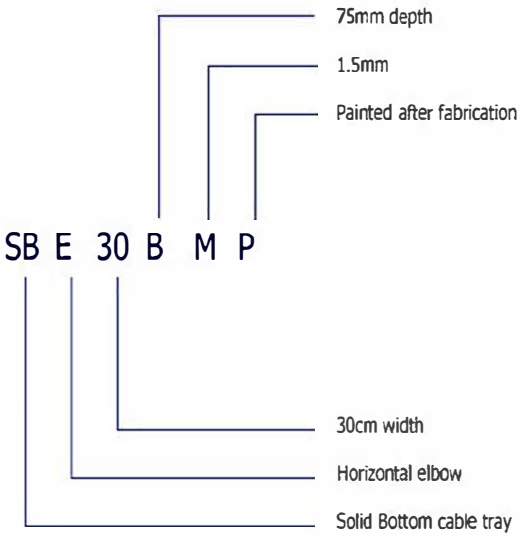
NGN GROUP manufactures a complete range of solid bottom reducers for joining any two sizes of straight sections.

Please specify both starting and ending widths.



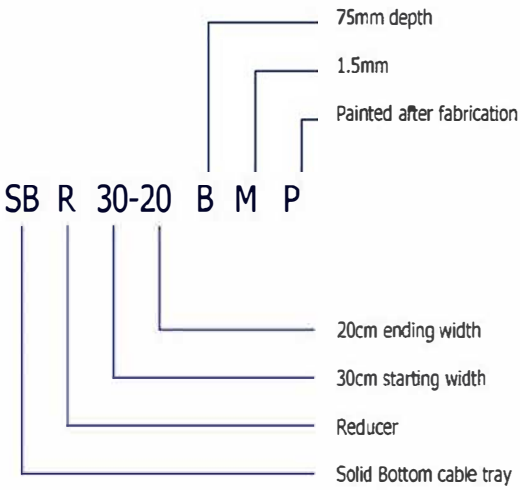
HORIZONTAL ELBOW

Example of catalog numbering system



REDUCER

Example of catalog numbering system



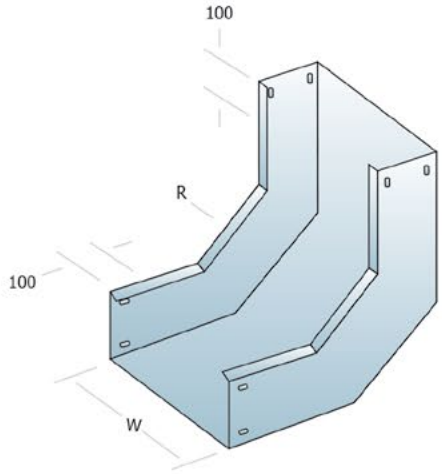
SOLID BOTTOM CABLE TRAY

NOORSA GOSTAR NOVIN

STANDARD DIMENSIONS

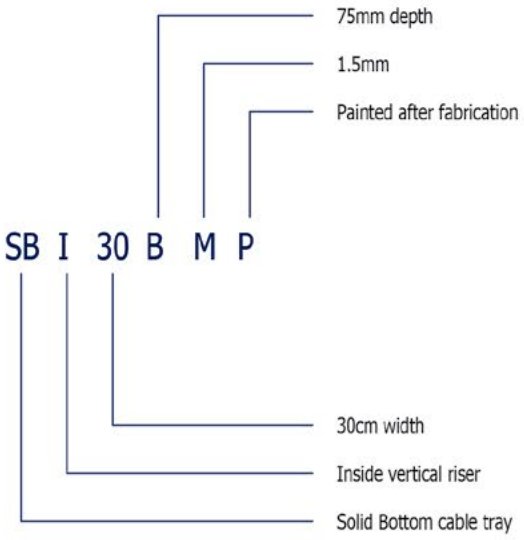
Bend Angle 90°

for other dimensions see page 73464-014



INSIDE VERTICAL RISERS

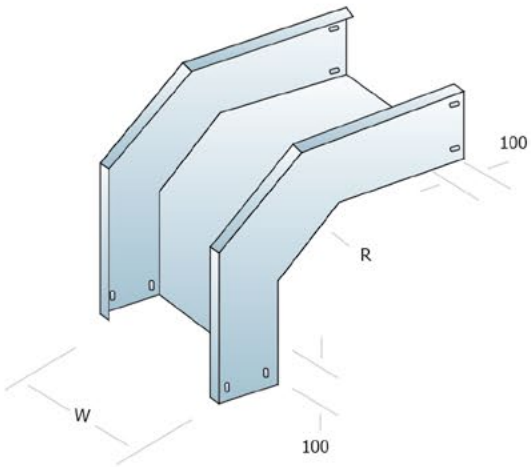
Example of catalog numbering system



STANDARD DIMENSIONS

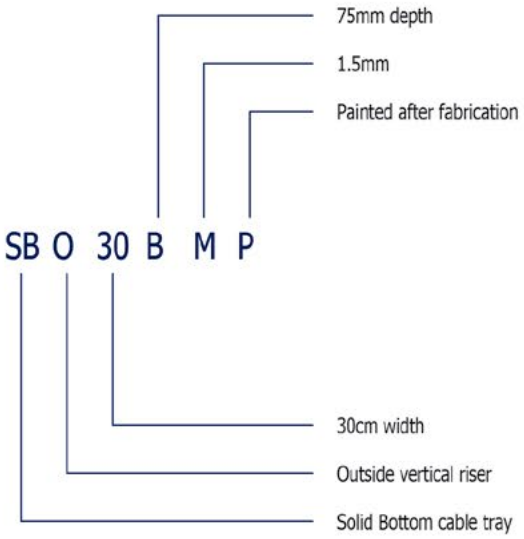
Bend Angle 90°

for other dimensions see page 73464-014



OUTSIDE VERTICAL RISERS

Example of catalog numbering system



CABLE TRAY COVERS

NOORSA GOSTAR NOVIN

STANDARD DIMENSIONS

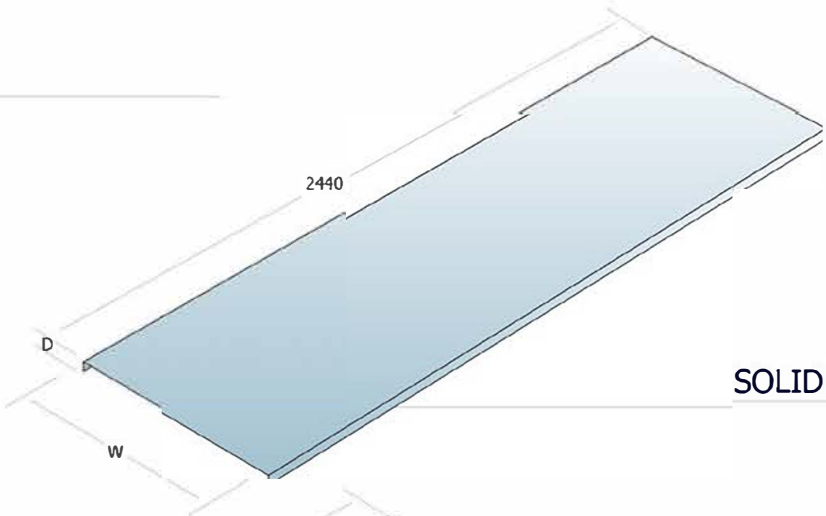
Length	2.44m (8ft) & 3.0m (10ft)
Depth	10mm
Width	10cm, 15cm, 30cm, 45cm, 60cm, 75cm, 90cm
Sheet Metal Thickness	18 Gauge (1.0mm) 16 Gauge (1.5mm) 14 Gauge (2.0mm)

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

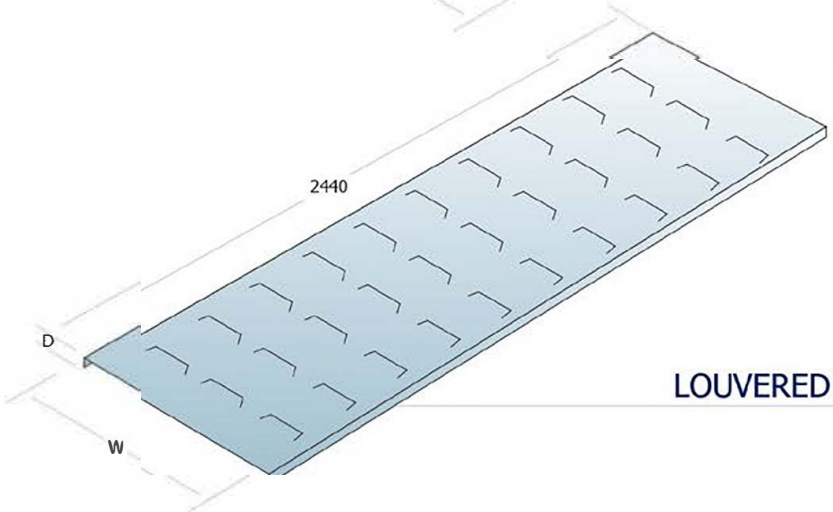
Material:
Prime quality GI & MS sheets.

Finish (after fabrication):
Pre galvanised
Hot dip galvanized
Powder coat painting

STRAIGHT SECTION



SOLID TOP



LOUVERED TOP

73464-018

CABLE TRAY ACCESSORIES

NOORSA GOSTAR NOVIN

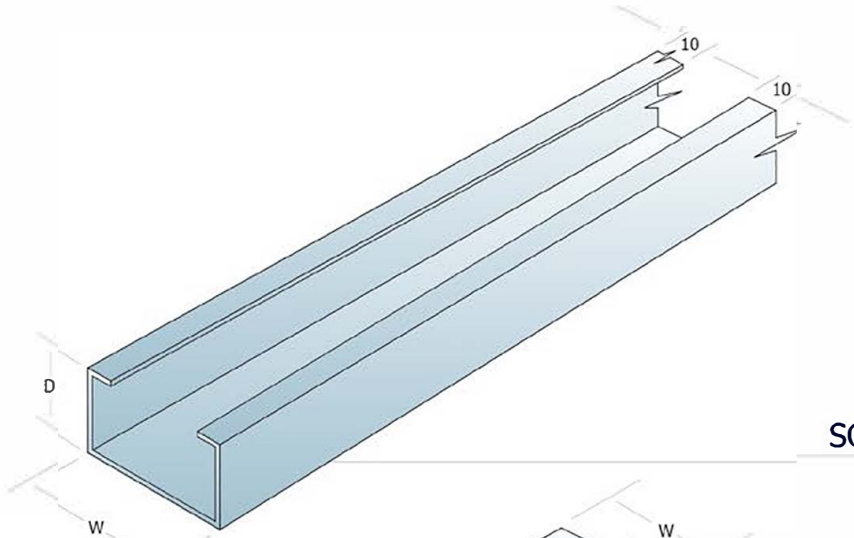
STANDARD DIMENSIONS

Length	2.44m (8ft) & 3.0m (10ft)
Depth	42mm
Width	42mm
Sheet Metal Thickness	12 Gauge (2or2.5or3mm)

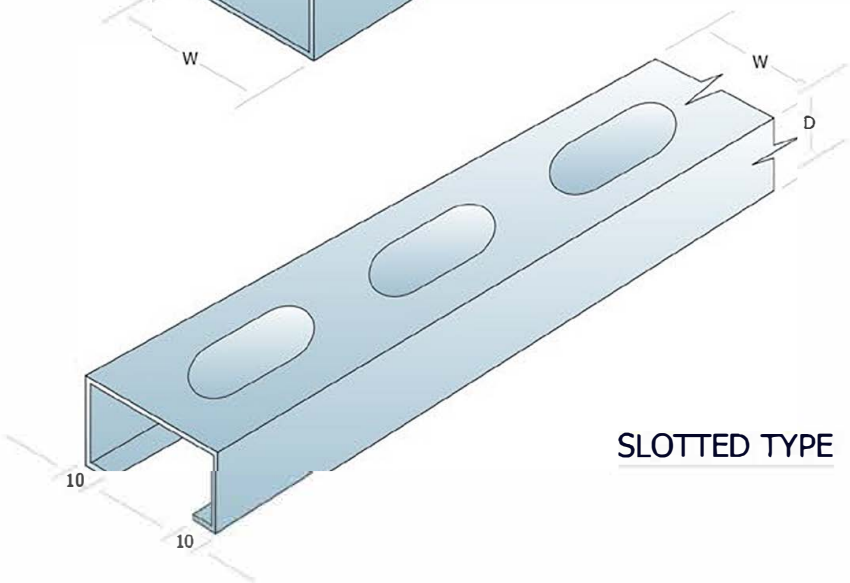
Finish (after fabrication):
- Pre galvanised
- Hot dip galvanized
- Powder coat painting

CHANNEL

Channels are available in solid bottom and slotted type



SOLID TYPE



SLOTTED TYPE

CABLE TRAY ACCESSORIES

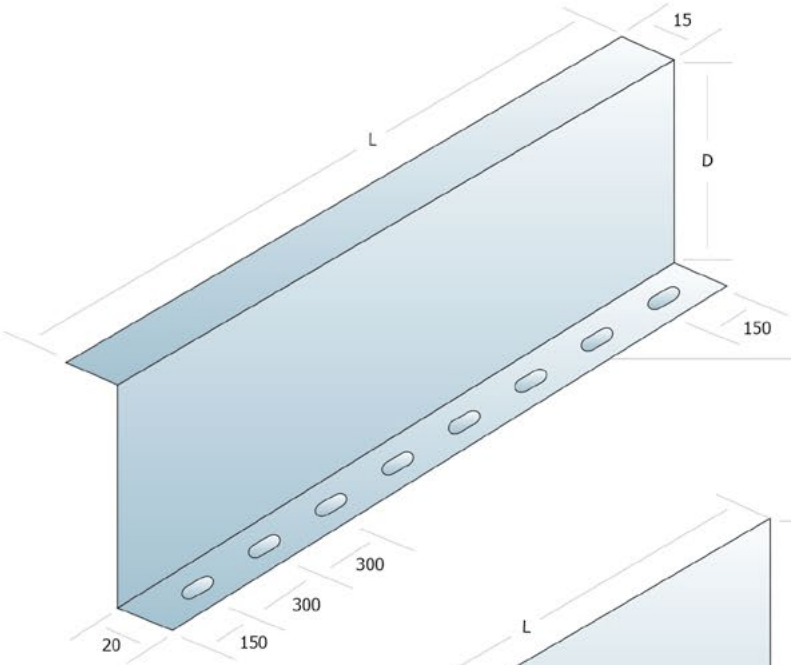
NOORSA GOSTAR NOVIN

STANDARD DIMENSIONS

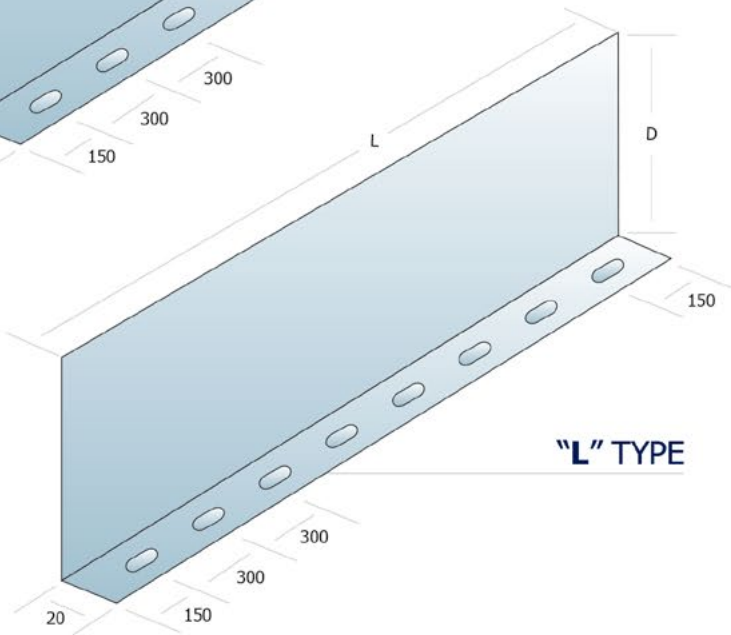
Length	2.44m (8ft) & 3.0m (10ft)
Depth	According to tray depth
Sheet Metal Thickness	18 Gauge (1.2mm) 16 Gauge (1.5mm) 14 Gauge (2.0mm)

Finish (after fabrication):
- Pre galvanised
- Hot dip galvanized
- Powder coat painting

SEPERATOR



"Z" TYPE



"L" TYPE

CABLE TRAY ACCESSORIES

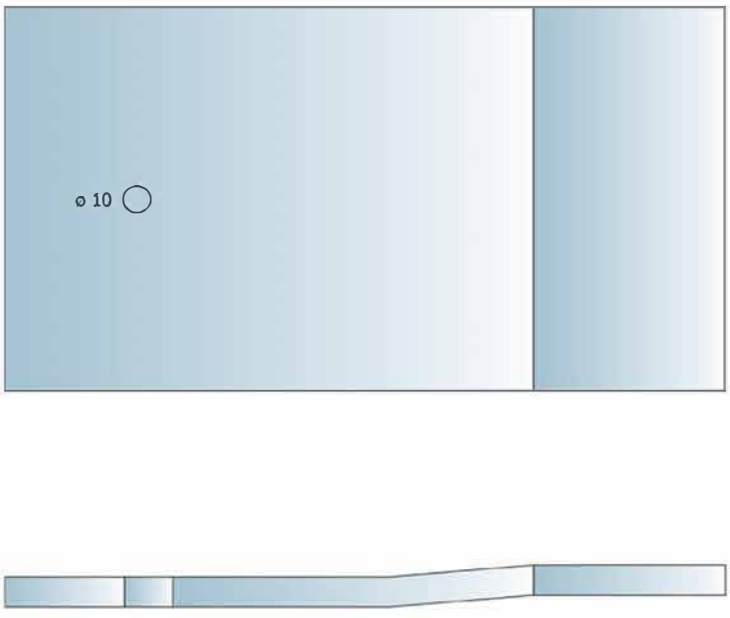
NOORSA GOSTAR NOVIN

STANDARD DIMENSIONS

Length	60mm
Width	40mm
Sheet Metal Thickness	10 Gauge (2.0mm)

Finish (after fabrication):
- Pre galvanised
- Hot dip galvanized
- Powder coat painting

SIDE RAIL CLAMP
(for ladder cable tray)



CABLE TRAY ACCESSORIES

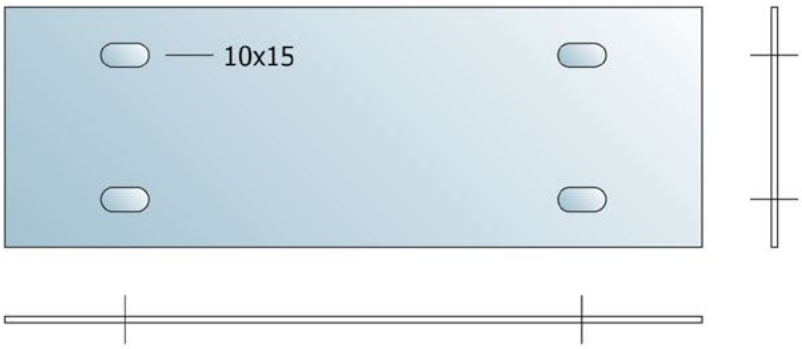
NOORSA GOSTAR NOVIN

STANDARD DIMENSIONS

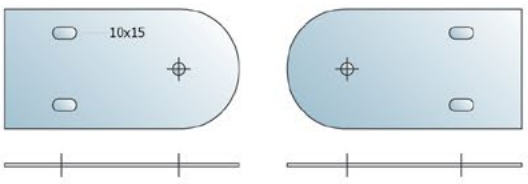
Length	200mm
Depth	According to tray depth
Sheet Metal Thickness	Asper tray thickness

Finish (after fabrication):
- Pre galvanised
- Hot dip galvanized
- Powder coat painting

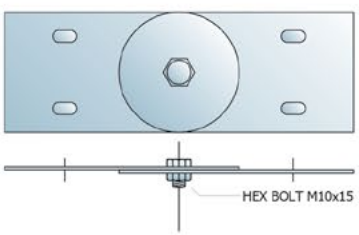
JOINING PLATE

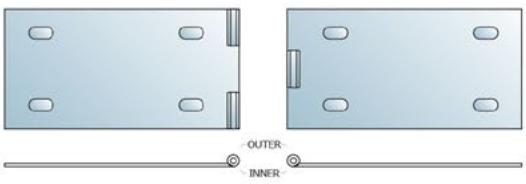


RECTILINEAR JOINT



VERTICAL HINGED JOINT





HORIZONTAL HINGED JOINT

CABLE TRAY ACCESSORIES

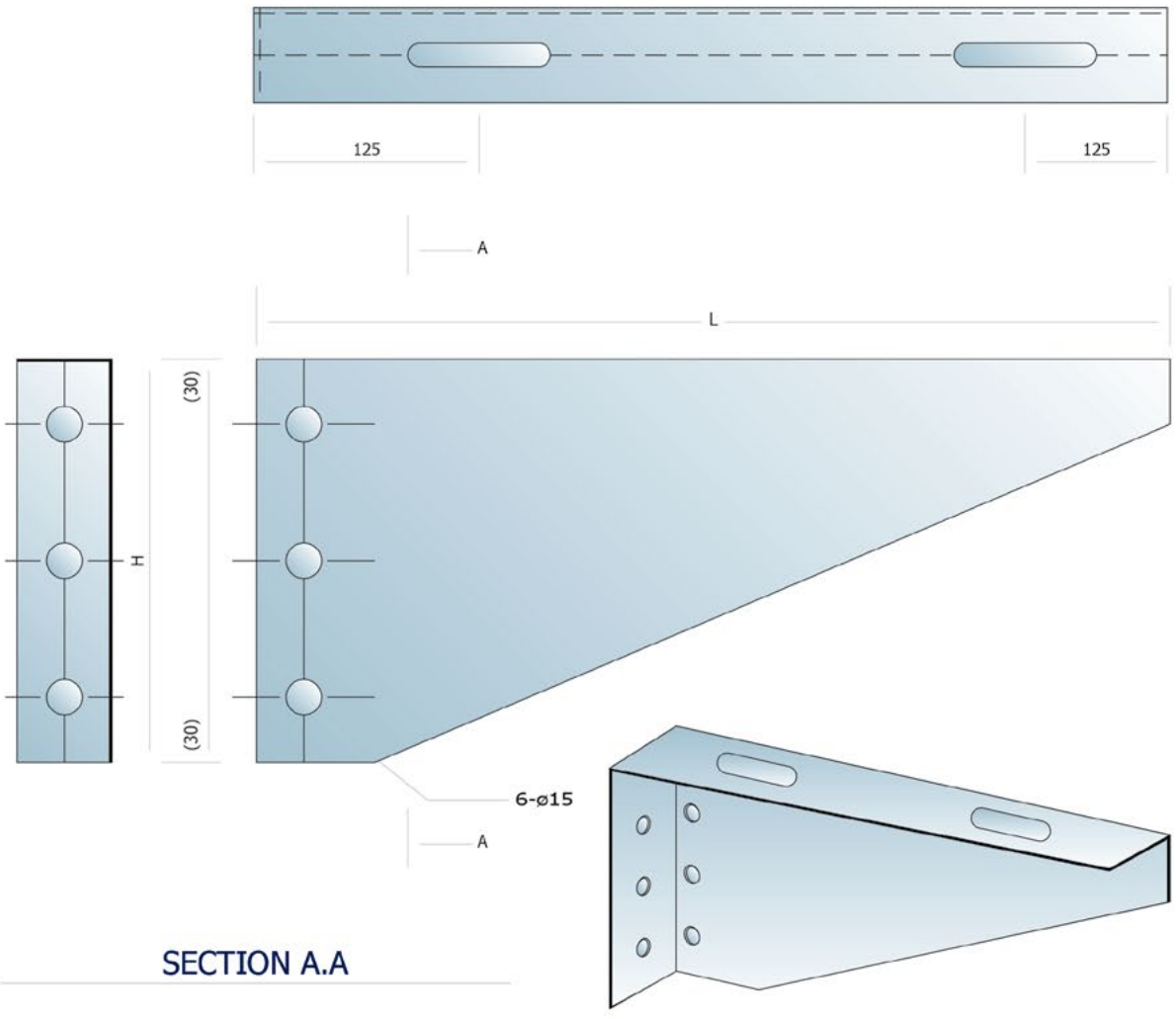
NOORSA GOSTAR NOVIN

STANDARD DIMENSIONS

Length	200mm to 1000mm
Height	140mm, 180mm
Sheet Metal Thickness	14, 12 & 10 Gauge (2.0, 2.5 & 3.2mm)

Finish (after fabrication):
- Pre galvanised (GI)
- Hot dip galvanized
- Powder coat painting

BRACKET



SECTION A.A

FOR HEAVY LOAD

ISOMETRIC VIEW

CABLE TRAY ACCESSORIES

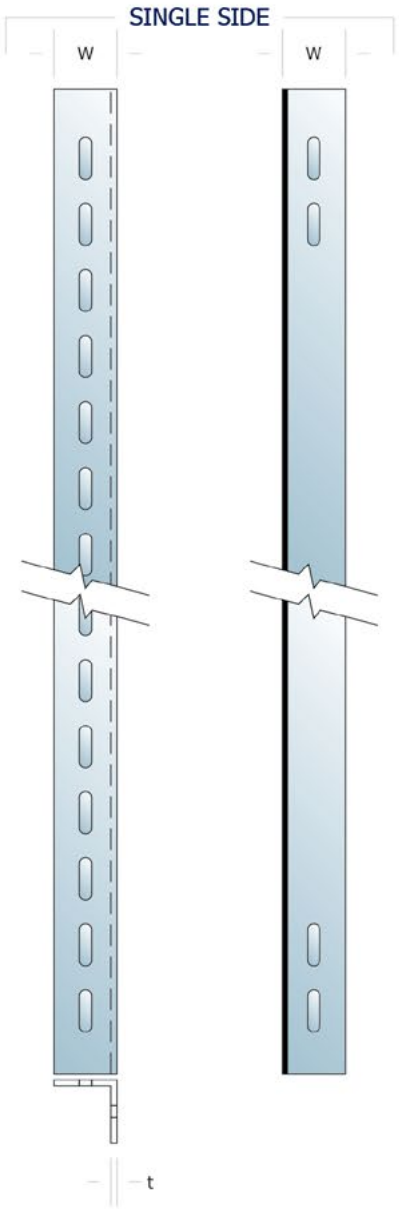
NOORSA GOSTAR NOVIN

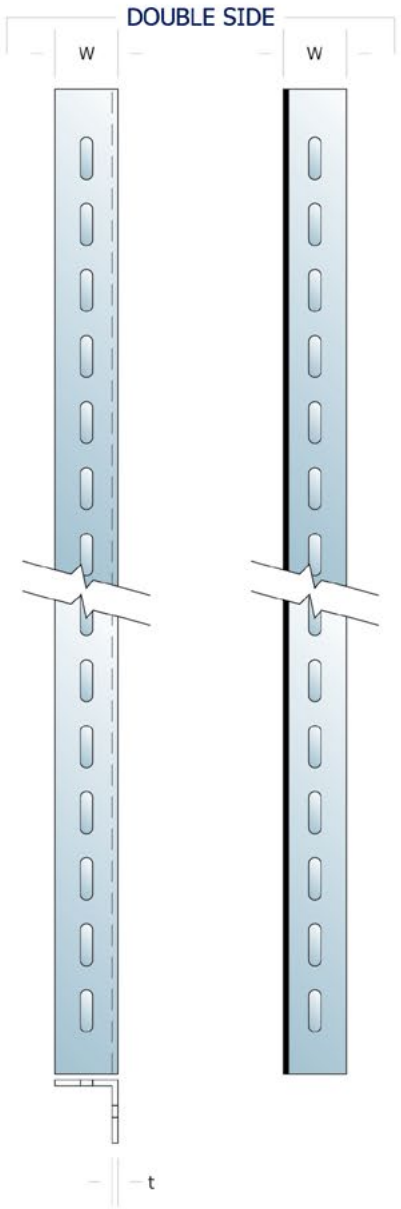
STANDARD DIMENSIONS

Length	600mm to 6000mm
Standard size of Angle Iron	50mm x 50mm, 75mm x 50mm 65mm x 65mm, 75mm x 75mm
Thickness	4mm to 9mm

Finish (after fabrication):
- Hot dip galvanized
- Powder coat painting

HANGER POST





CABLE TRAY ACCESSORIES

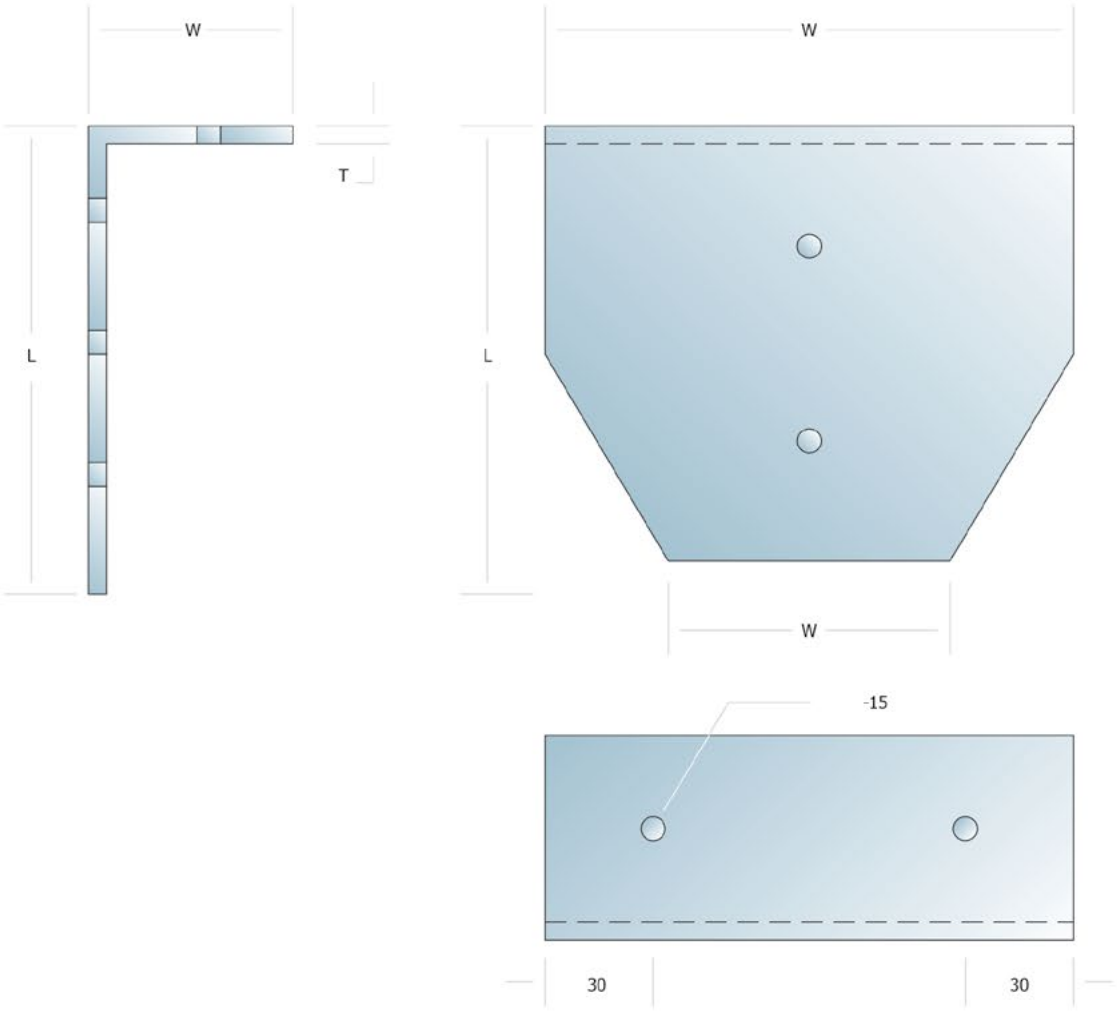
NOORSA GOSTAR NOVIN

STANDARD DIMENSIONS

Length	130mm
Width	150mm
Sheet Metal Thickness	6mm & 8mm

Finish (after fabrication):
- Hot dip galvanized
- Powder coat painting

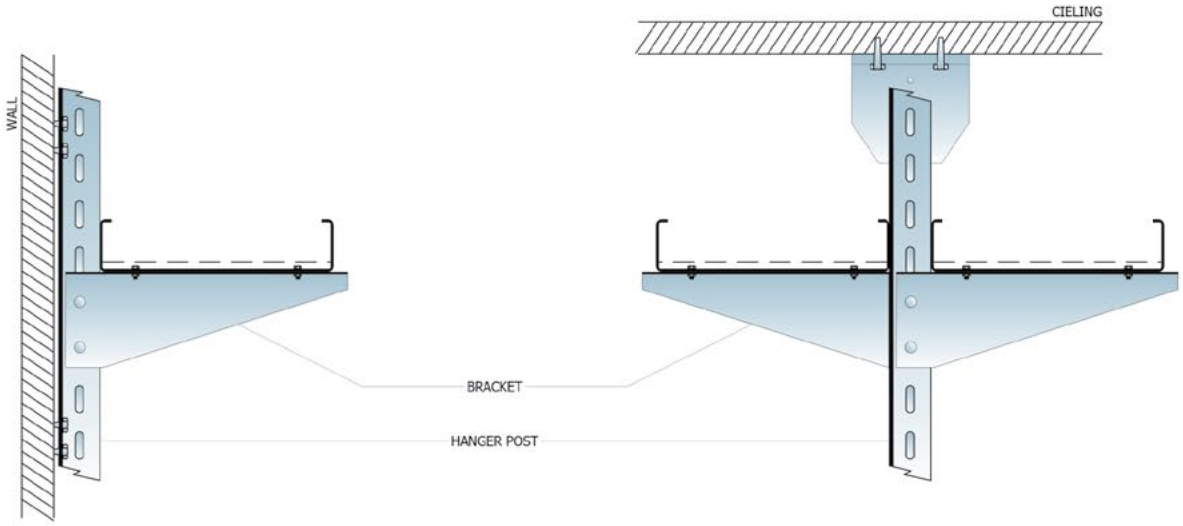
HEAD PLATE



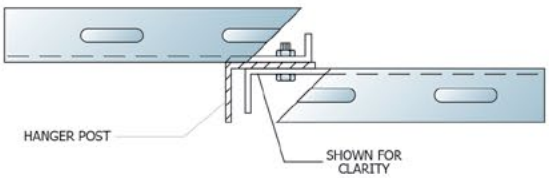
APPLICATION

NOORSA GOSTAR NOVIN

TYPICAL SUPPORT HANGER POST



PLAN
SINGLE SIDED ARRANGEMENT

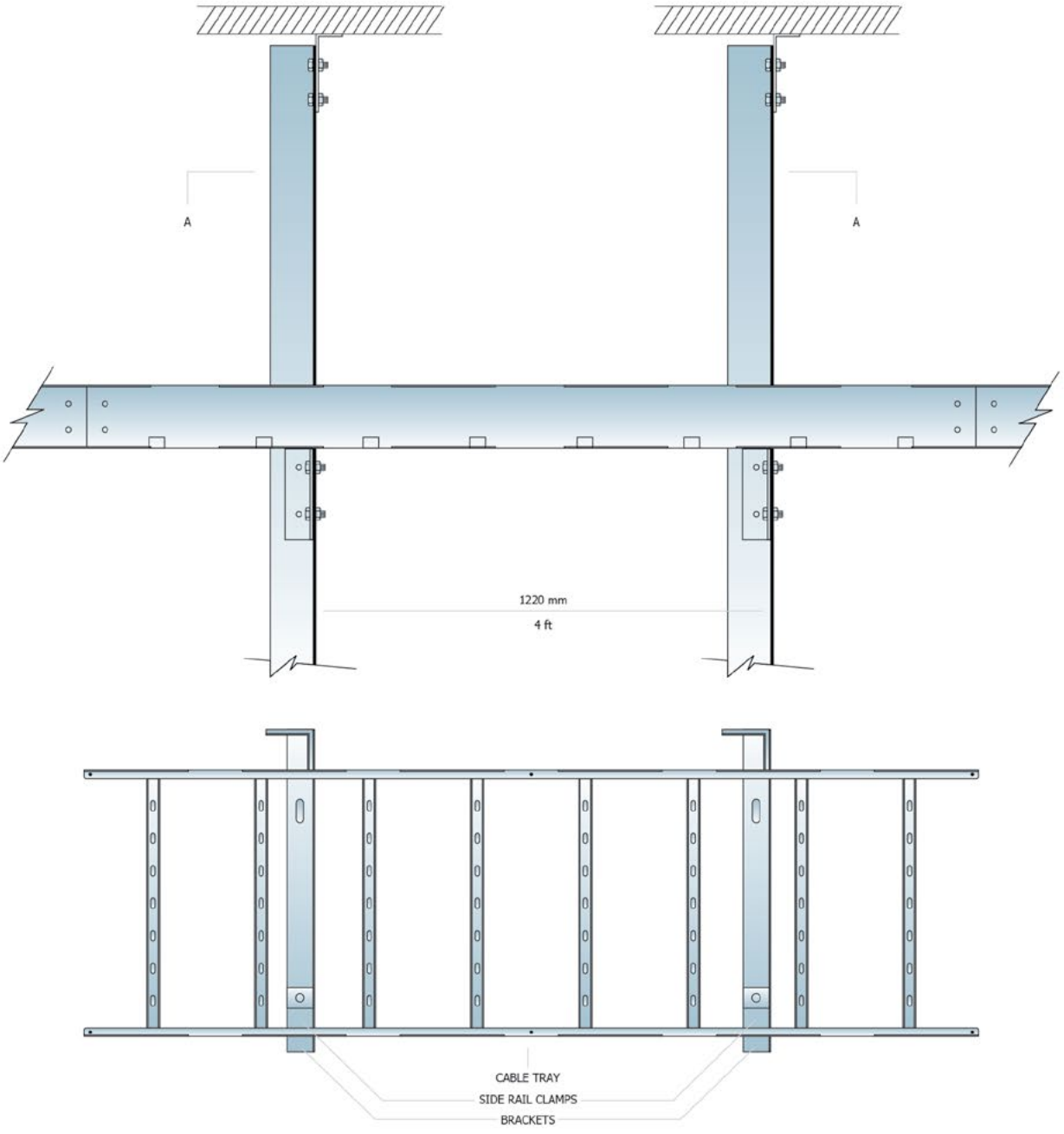


PLAN
DOUBLE SIDED ARRANGEMENT

APPLICATION

NOORSA GOSTAR NOVIN

HORIZONTAL SPACING OF HANGER POST



SECTION A.A

APPLICATION

NOORSA GOSTAR NOVIN

TYPICAL CABLE TRAY SUPPORT