CABLE TRAY SPECIFICATIONS...

1. GENERAL

1.1 The perforated cable trays as specified shall be manufactured by BUILDING EQUIPMENT SERVICES SDN. BHD., 148-3, Jalan Tun Sambanthan, P.O. Box 12486, 50780 Kuala Lumpur and shall be supplied in two main categories namely:-

Trough Type and **Channel Type.**

1.2 The **trough type** shall have depths (or return flange) ranging from 50mm to 100mm and shall be used when the diameter of cable or gangs of cables exceed that of the channel type.

1.3 The **channel type** shall have depths (or return flange) ranging from 15mm to 25mm depending upon its width and shall be used when the diameter of cable or gangs of cables is within the depth of the channel type or when protection to cables is not critical or specified.

1.4 The minimum thickness of materials used shall not be less than 1.0mm and that the support brackets shall be evenly spaced to achieve maximum deflection of within 1/175 over its span.

1.5 The perforated cable trays shall be supplied evenly perforated, twice bent as in the case of the **channel type** and bent four times for the **trough type.** All joints shall be mechanically bolted with splice plates or reinforcement plates or both and to provide for longitutional adjustments.

1.6 The perforated cable trays when completed shall be smooth and free from all sharp edges. When cutting of the trays become necessary, it shall cut through the unperforated part and thereafter the cut edges shall be touched up with approved zinc rich paint.

1.7 The material used for the construction of cable trays shall be either one of the followings:-

a) Mild rolled steel sheet in accordance to JIS 3101: 1977 or JIS 3131: 1977.

b) Aluminium half hard tempered sheet in accordance to BS 1470: 1972.

c) 2B stainless steel sheet either AISI 304 or AISI 316L.

Maximum thickness of materials shall be 2.3mm thick.

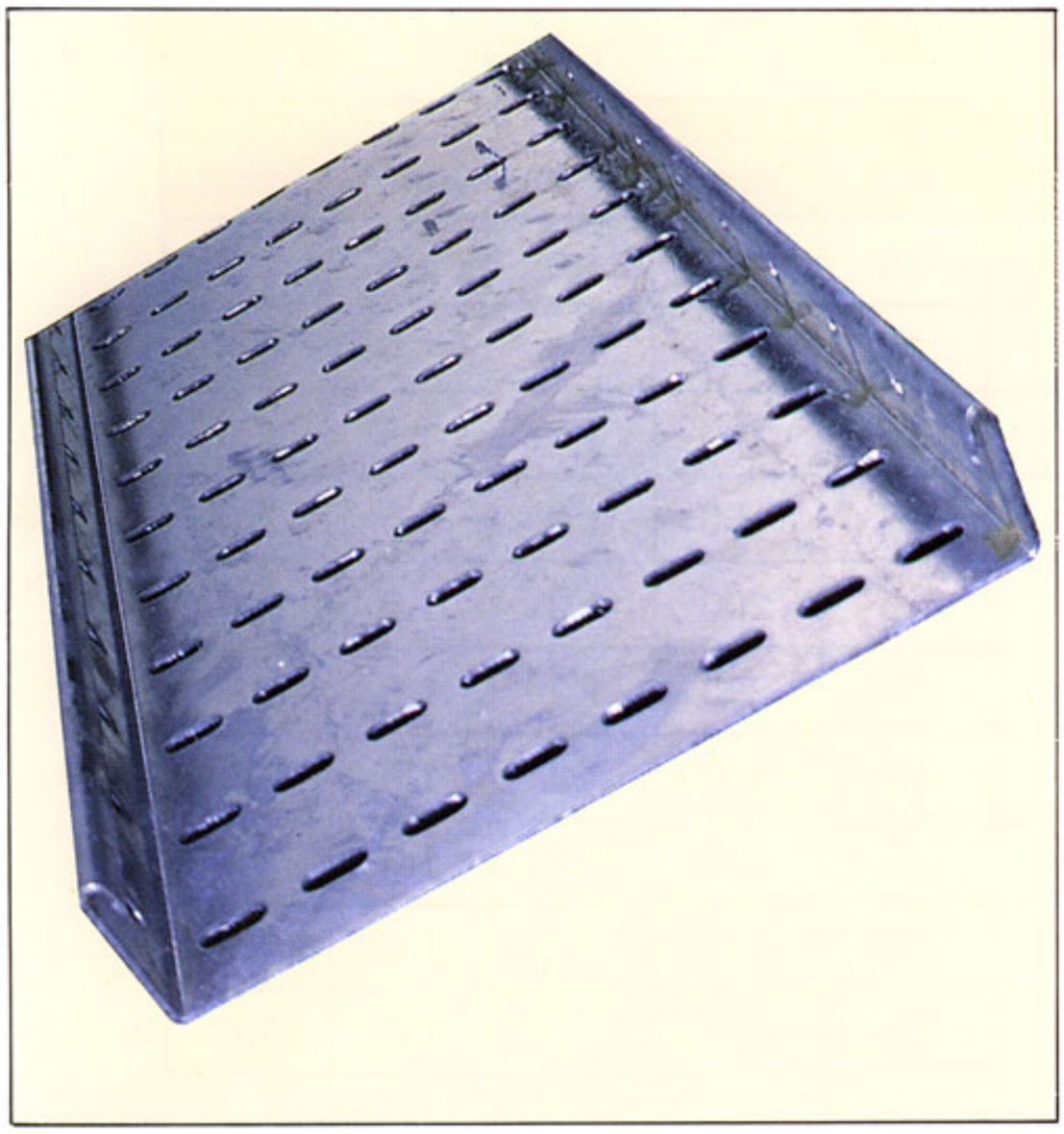
1.8 All perforations and sizes shall be in accordance to the manufacturers design corresponding to the Standard Pattern design unless otherwise specified.

1.9 The perforated cable trays shall be galvanised by hot dip process in accordance to BS729: 1971 to achieve a minimum zinc coating of 30 microns for the light duty type. Zinc coating for medium and heavy duty types shall conform to BS729: 1971 ie a) Under 2.0mm = 47 microns
b) Under 3.2mm = 65 microns
(See page 42 for details)

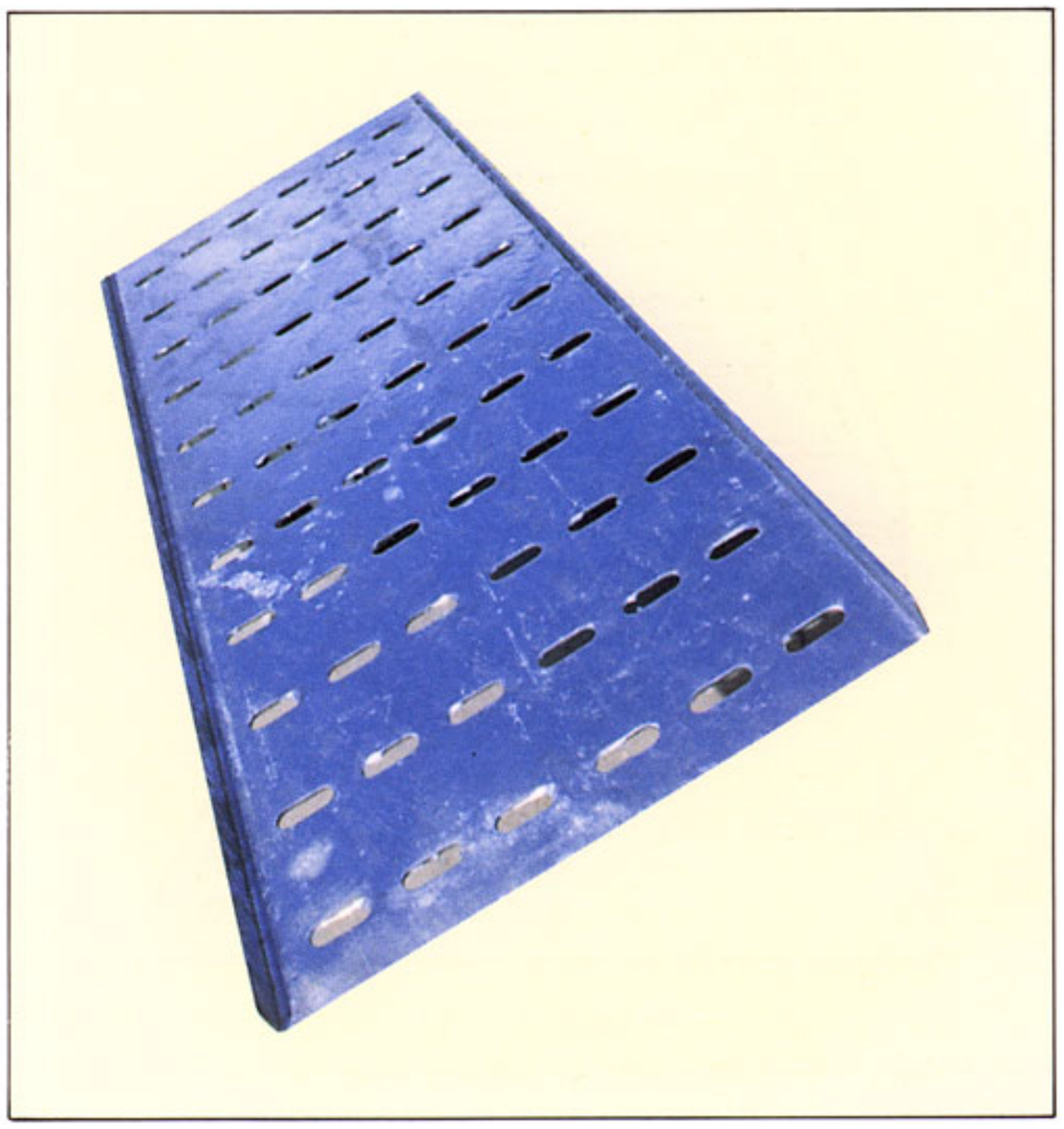
1.10 Galvanising by hot dip process shall only be carried out when the temperature of the moulden zinc is consistently maintained at between 440°C to 460°C. Double dipping into the zinc solution is not permitted.

PERFORATED CABLE TRAYS

The Perforated Cable Tray Systems supplied by Building Equipment Services Sdn. Bhd. are classified into 2 distinctive types, the load bearing and non-load bearing cable trays. In order to achieve certain amount of loading capabilities, the sides or the return flange of the trays need to be increased.



Special perforated cable tray, load bearing type with return flange of 50mm, 75mm and 100mm (trough type)



Standard perforated cable tray, non-loading bearing type with return flange ranging from 15mm to 25mm (channel type)

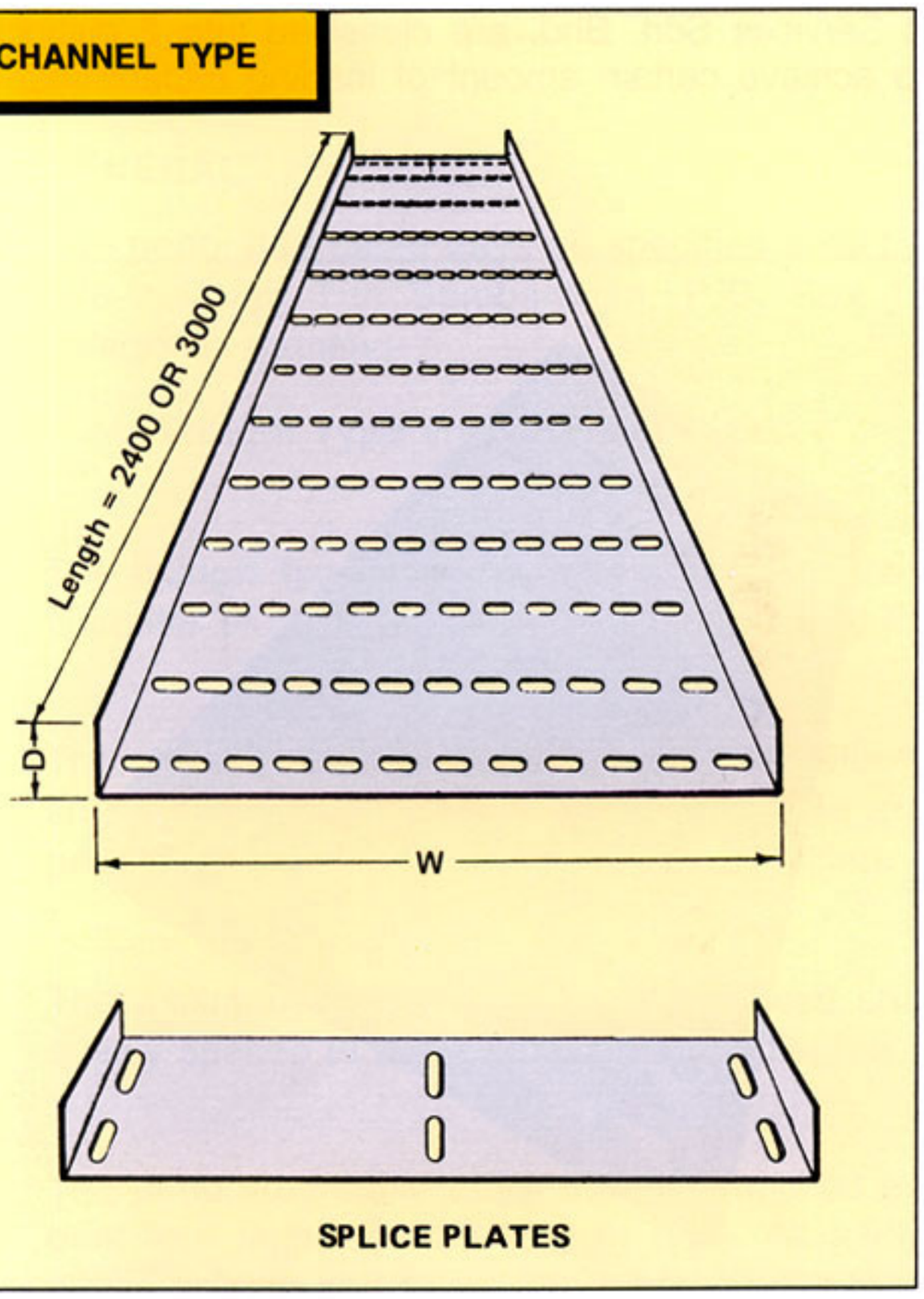
The common return flange for the **trough type** are 50mm, 75mm and 100mm in compliance with the guidelines as set by NEMA.

The cable trays systems are manufactured from quality rolled steel sheets and come in two finishes:

a) Hot dipped galvanised finish in accordance to BS729: 1971
b) Epoxy paint finish (available on request only).

STANDARD PATTERN CABLE TRAYS

CHANNEL TYPE

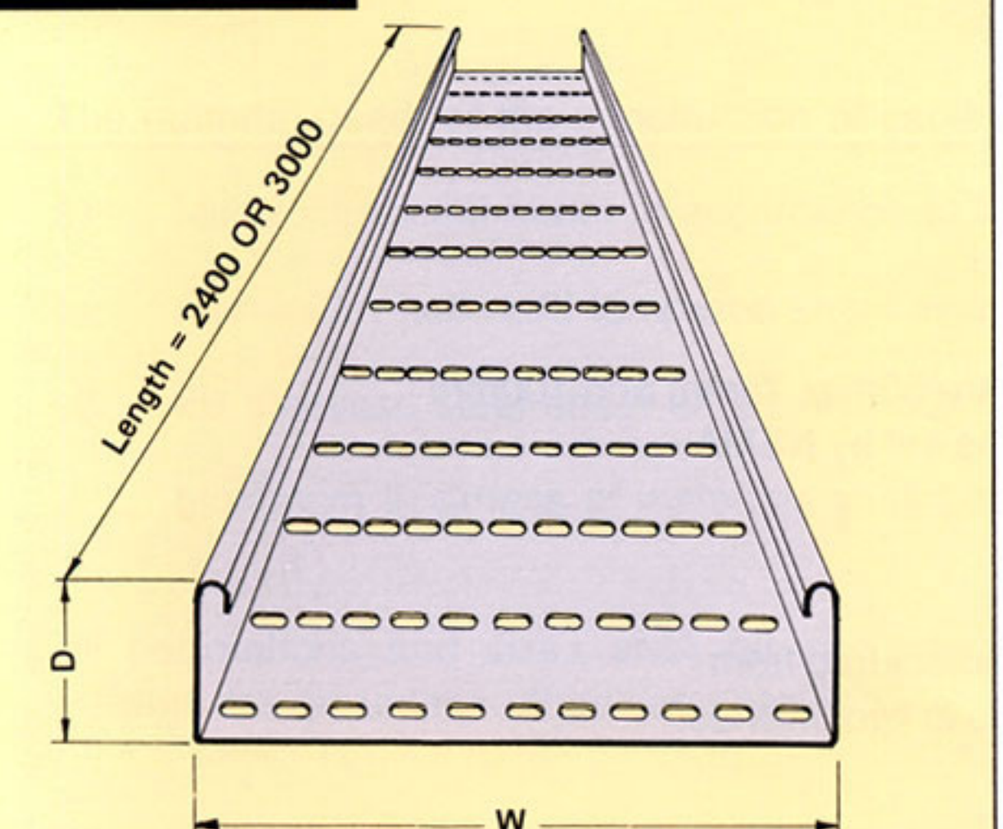


SPLICE PLATES

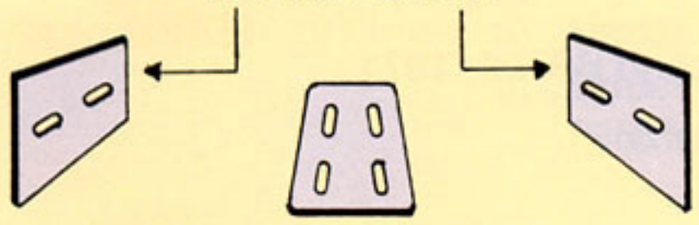
STANDARD PERFORATED CABLE TRAY CHANNEL TYPE (Straight Section)

PART NO.	D (mm)	W (mm)	t (mm) LIGHT DUTY	t (mm) MEDIUM DUTY	t (mm) HEAVY DUTY
SCT 5	15	50	1.0	1.5	2.0
SCT 8	15	75	1.0	1.5	2.0
SCT 10	15	100	1.0	1.5	2.0
SCT 15	15	150	1.0	1.5	2.0
SCT 20	15	200	1.2	1.5	2.0
SCT 25	20	250	1.2	1.5	2.0
SCT 30	20	300	1.2	1.6	2.0
SCT 40	20	400	1.2	1.6	2.0
SCT 45	25	450	1.2	1.6	2.0
SCT 60	25	600	1.2	1.6	2.0

TROUGH TYPE



SPLICE PLATES



REINFORCED PLATE

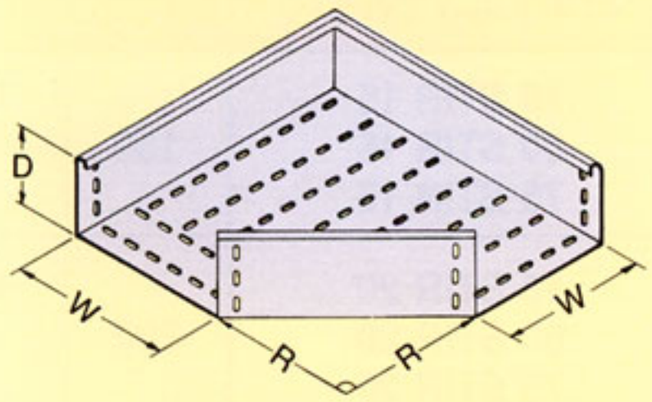
SPECIAL PERFORATED CABLE TRAY TROUGH TYPE (Straight Section)

PART NO.	D	W	t LIGHT DUTY	t MEDIUM DUTY	t HEAVY DUTY	No. SPLICE PLATE REQUIREMENT	No. REINFORCEMENT PLATE REQUIREMENT
10 ST 15 50 ST 15 75 ST 15	100 50 75	150	1.0	1.5	2.0	2	1
10 ST 20 50 ST 20 75 ST 20	100 50 75	200	1.0	1.5	2.0	2	1
10 ST 30 50 ST 30 75 ST 30	100 50 75	300	1.2	1.6	2.0	2	1
10 ST 40 50 ST 40 75 ST 40	100 50 75	400	1.2	1.6	2.0	2	2
10 ST 45 50 ST 45 75 ST 45	100 50 75	450	1.2	1.6	2.0	2	2
10 ST 60 50 ST 60 75 ST 60	100 50 75	600	1.2	1.6	2.0	2	2

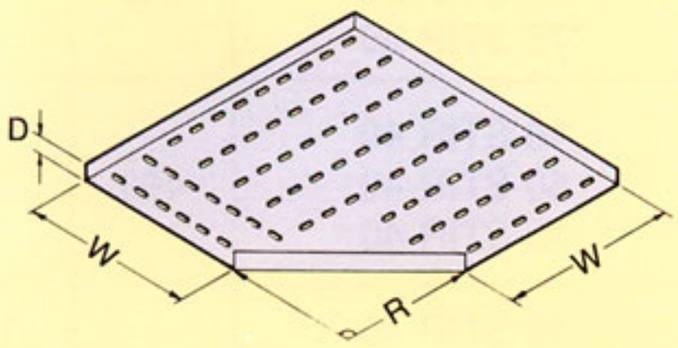
CABLE TRAY ACCESSORIES

HORIZONTAL ELBOW

Radius = 200mm



(TROUGH TYPE)



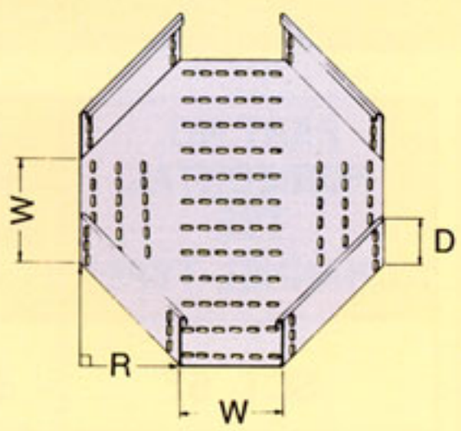
(CHANNEL TYPE)

PART NO. HORIZONTAL ELBOW (TROUGH TYPE)	W (mm)	D (mm)
10 STE 15 50 STE 15 75 STE 15	150	100 50 75
10 STE 20 50 STE 20 75 STE 20	200	100 50 75
10 STE 30 50 STE 30 75 STE 30	300	100 50 75
10 STE 40 50 STE 40 75 STE 40	400	100 50 75
10 STE 45 50 STE 45 75 STE 45	450	100 50 75
10 STE 60 50 STE 60 75 STE 50	600	100 50 75

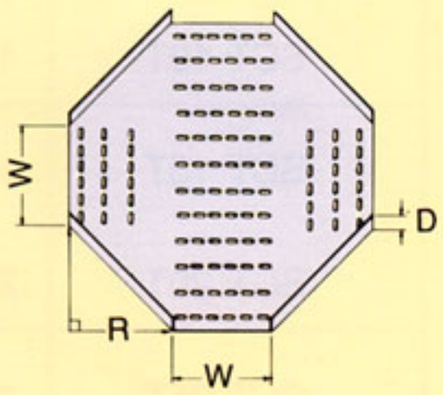
PART NO. HORIZONTAL ELBOW (CHANNEL TYPE)	W (mm)	D (mm)
SCT 5 EL	50	15
SCT 8 EL SCT 10 EL	75 100	15 15
SCT 15 EL SCT 20 EL	150 200	15 15
SCT 25 EL SCT 30 EL	250 300	20 20
SCT 40 EL SCT 45 EL	400 450	20 25
SCT 60 EL	600	25

HORIZONTAL CROSS

Radius = 200mm



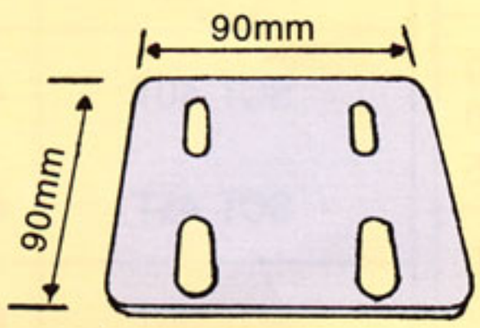
(TROUGH TYPE)



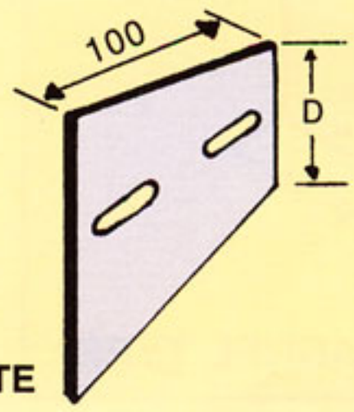
(CHANNEL TYPE)

PART NO. HORIZONTAL CROSS (TROUGH TYPE)	W (mm)	D (mm)
10 STX 15 50 STX 15 75 STX 15	150	100 50 75
10 STX 20 50 STX 20 75 STX 20	200	100 50 75
10 STX 30 50 STX 30 75 STX 30	300	100 50 75
10 STX 40 50 STX 40 75 STX 40	400	100 50 75
10 STX 45 50 STX 45 75 STX 45	450	100 50 75
10 STX 60 50 STX 60 75 STX 50	600	100 50 75

PART NO. HORIZONTAL CROSS (CHANNEL TYPE)	W (mm)	D (mm)
SCT 5 X	50	15
SCT 8 X SCT 10 X	75 100	15 15
SCT 15 X SCT 20 X	150 200	15 15
SCT 25 X SCT 30 X	250 300	20 20
SCT 40 X SCT 45 X	400 450	20 25
SCT 60 X	600	25



REINFORCEMENT PLATE



SPLICE PLATE

PART NO.	D (mm)
10 STSP	100
50 STSP	50
75 STSP	70

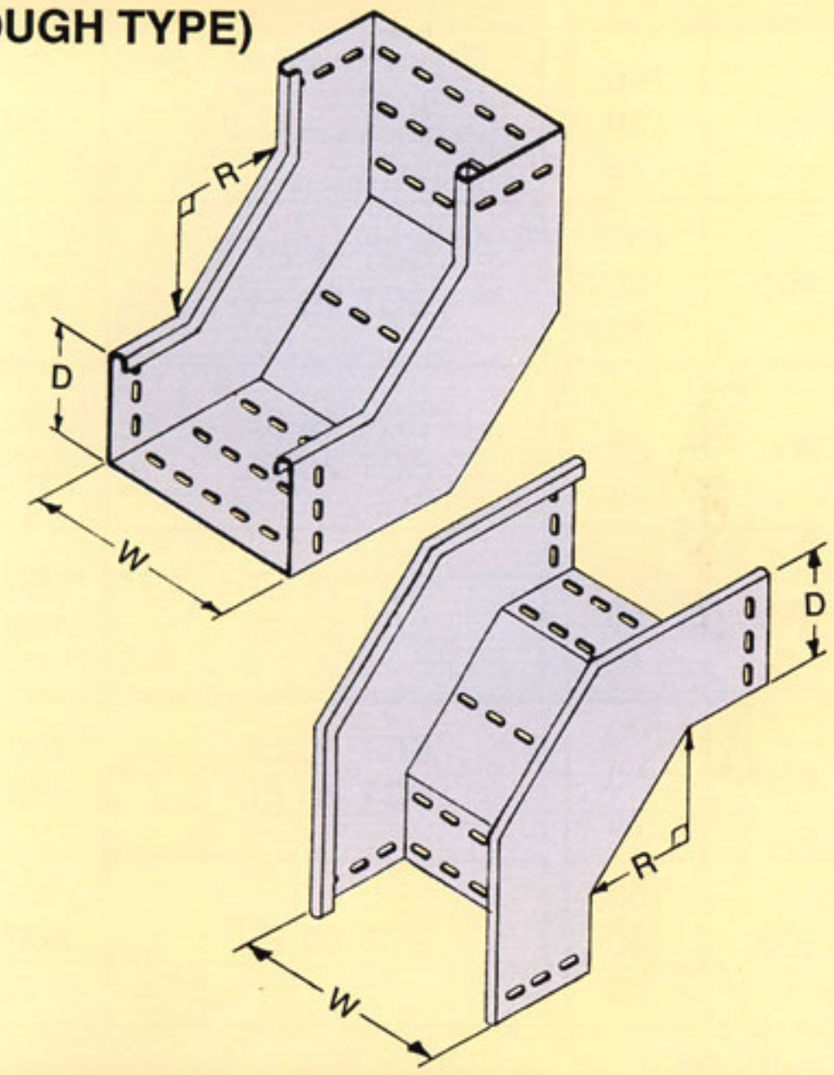
D Means Nominal Depth

CABLE TRAY ACCESSORIES

INTERNAL VERTICAL RISER

Radius = 200mm

(TROUGH TYPE)



EXTERNAL VERTICAL RISER

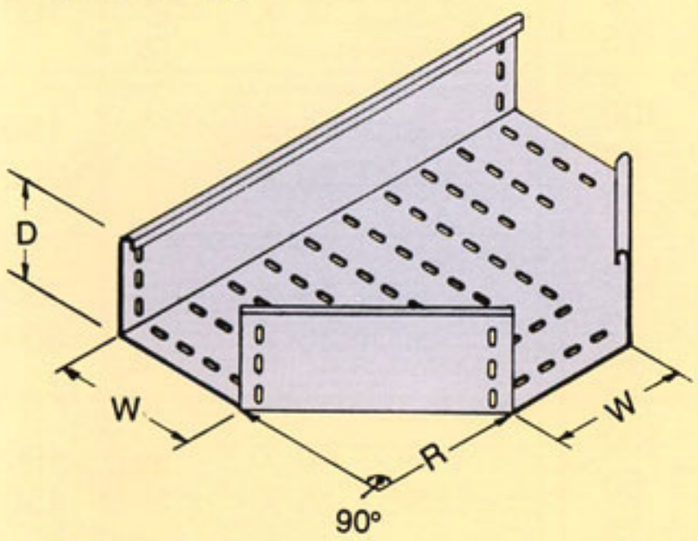
Radius = 200mm

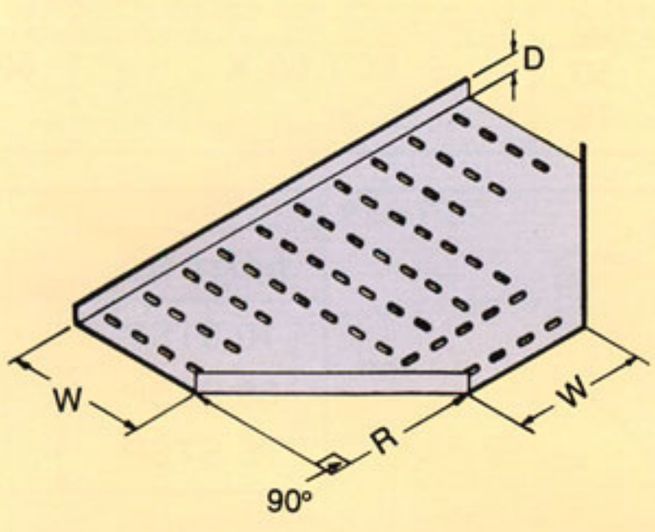
PART NO. EXTERNAL VERTICAL RISER (TROUGH TYPE)	PART NO. INTERNAL VERTICAL RISER (TROUGH TYPE)	W (mm)	D (mm)
10 STOR 15 50 STOR 15 75 STOR 15	10 STIR 15 50 STIR 15 75 STIR 15	150	100 50 75
10 STOR 20 50 STOR 20 75 STOR 20	10 STIR 20 50 STIR 20 75 STIR 20	200	100 50 75
10 STOR 30 50 STOR 30 75 STOR 30	10 STIR 30 50 STIR 30 75 STIR 30	300	100 50 75
10 STOR 40 50 STOR 40 75 STOR 40	10 STIR 40 50 STIR 40 75 STIR 40	400	100 50 75
10 STOR 45 50 STOR 45 75 STOR 45	10 STIR 45 50 STIR 45 75 STIR 45	450	100 50 75
10 STOR 60 50 STOR 60 75 STOR 60	10 STIR 60 50 STIR 60 75 STIR 60	600	100 50 75

HORIZONTAL TEE

Radius = 200mm

(TROUGH TYPE)





(CHANNEL TYPE)

PART NO. HORIZONTAL TEE (TROUGH TYPE)	W (mm)	D (mm)
10 STT 15 50 STT 15 75 STT 15	150	100 50 75
10 STT 20 50 STT 20 75 STT 20	200	100 50 75
10 STT 30 50 STT 30 75 STT 30	300	100 50 75
10 STT 40 50 STT 40 75 STT 40	400	100 50 75
10 STT 45 50 STT 45 75 STT 45	450	100 50 75
10 STT 60 50 STT 60 75 STT 60	600	100 50 75

PART NO. HORIZONTAL TEE (CHANNEL TYPE)	W (mm)	D (mm)
SCT 5T	50	15
SCT 8T	75	15
SCT 10T	100	15
SCT 15T	150	15
SCT 20T	200	15
SCT 25T	250	20
SCT 30T	300	20
SCT 40T	400	20
SCT 45T	450	25
SCT 60T	600	25