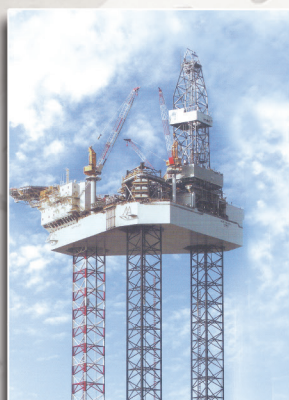




M★RAK®

Cable Support Systems



A Cable Management System from Tri-Star Industries



M*RAK is a comprehensive range of high quality Cable Support System designed specifically to satisfy the demanding needs of the Oil & Gas, Infrastructure, Power and Building industries.



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M*RAK supplied Cable Support Systems to SLNG, Singapore's first LNG terminal.



M*RAK Cable Support System, established in the 1990s, is manufactured according to ISO 9001 quality system for supply to primarily the oil and gas and power generation industries.

The M*RAK design is aimed at servicing quality conscious markets. Materials are available in Stainless 304, 316, 316L, High Silicon Steel, Carbon Steel with Hot Dipped Galvanised or Powder Coating finish and non-ferrous materials like FRP and Aluminium. M*RAK system of cable support includes strut channels, concrete insert, cantilever arms, trapeze and brackets.

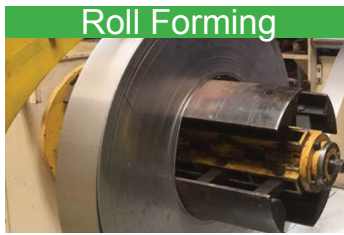
We emphasize on quality products and services, using only reliable raw materials and metal fittings on all our products. We practise stringent quality control at every stage of production, guaranteed to meet your specification and requirement and work closely with engineers and consultants to determine the most suitable system for installation.

In addition to being the first cable support system manufacturer in Malaysia to be awarded the ISO 9001, we are also the first to be accredited with ISO 9001 : 2000 certification.

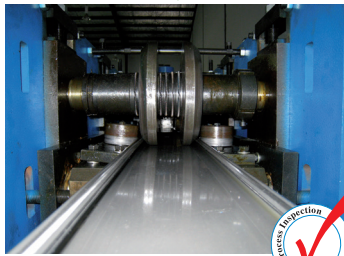
Our factories are located in Malaysia, Indonesia and China.

M*RAK cable ladders are successfully load tested and certified to NEMA VE-1 and IEC 61537 Standards. Cable trunkings are tested and certified to SS249:1981. The M*RAK range is designed to facilitate fast and easy installation of cleats and cables. No special tools are necessary.

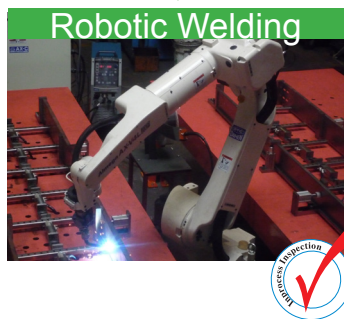




Roll Forming



Robotic Welding



We are equipped with state-of-the-art machinery and testing equipment. We roll form 6M long ladders in various profiles and our robotic welding produces high quality welding in high speed production to meet high demand of quality and delivery.

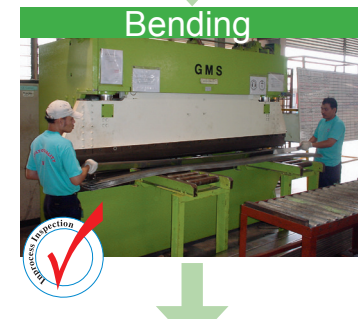
We take pride of our quality. We have spectrometer to check all in-coming materials, stringent QC and total quality management.



Shearing



Punching



Bending



Welding



QC & Testing



Packing

Stainless Steel
Passivation
Finish



Mild Steel
Hot-Dipped
Galvanised
Finish



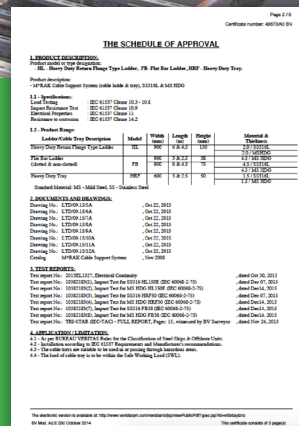
Mild Steel
Epoxy
Finish



Aluminium
Marine
Grade



Metallic Cable Ladder



Tested to conform to all International Standards

Choosing Your Cable Support Systems

Cable Tray Perforated Type

Solid and rigid, good choice for carrying smaller and dedicated cables. Weight is a concern when tray size becomes bigger.

Cable Ladder

Versatile, lighter and easy to install. Wide range of load capacity profile.

Cable Trunking

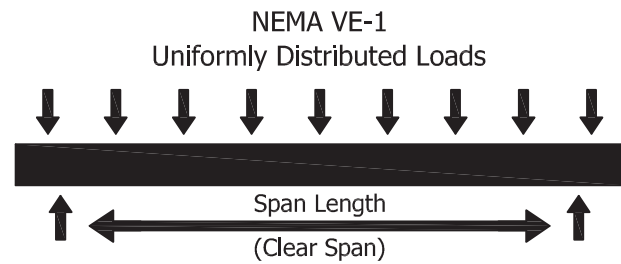
Totally enclosed, generally used indoors.

Choose a Cable Support System by your required cable load and designed support span.

NEMA Standard Classification in Table 1 shows the minimum working load with 1.5 safety factor.

Choice of Cable Support System material shall be determined by the application environment, corrosion resistance and price are facts for consideration.

Cable Support Systems are meant for supporting cables, not to used as walkways.



Working Load Lbs/ft (kg/m)	Support Span Feet (m)	Class Designation Per 3.1
50 (74.4)	8 (2.44)	8A
75 (111.6)	8 (2.44)	8B
100 (148.8)	8 (2.44)	8C
50 (74.4)	12 (3.66)	12A
75 (111.6)	12 (3.66)	12B
100 (148.8)	12 (3.66)	12C
50 (74.4)	16 (4.87)	16A
75 (111.6)	16 (4.87)	16B
100 (148.8)	16 (4.87)	16C
50 (74.4)	20 (6.09)	20A
75 (111.6)	20 (6.09)	20B
100 (148.8)	20 (6.09)	20C

Table 1

Span/Load Designation on M*RAK Cable Ladder and Tray												
Side Rail Height \ NEMA	8A	8B	8C	12A	12B	12C	16A	16B	16C	20A	20B	20C
38 mm	FB38	FB38	FB38									
50 mm	FB50	FB50	FB50									
	HRF50	HRF50	HRF50									
75 mm	CPL75	CPL75										
	CI75	CI75										
	HL75	HL75	HL75									
	FB75	FB75	FB75									
100 mm	HRF100	HRF100	HRF100									
	CPL100	CPL100	CPL100	CPL100								
	CI100	CI100	CI100	CI100								
	HL100	HL100	HL100	HL100	HL100	HL100						
125 mm	CPL125	CPL125	CPL125	CPL125	CPL125	CPL125						
	CI125	CI125	CI125	CI125	CI125	CI125						
	HL125	HL125	HL125	HL125	HL125	HL125	HL125	HL125	HL125	HL125	HL125	
150 mm	CPL150	CPL150	CPL150	CPL150	CPL150	CPL150	CPL150	CPL150	CPL150	CPL150		
	CI150	CI150	CI150	CI150	CI150	CI150	CI150	CI150	CI150	CI150		
	HL150	HL150	HL150	HL150	HL150	HL150	HL150	HL150	HL150	HL150	HL150	HL150
	AI150	AI150	AI150	AI150	AI150	AI150	AI150	AI150	AI150	AI150	AI150	AI150

Note ; Please contact manufacturer for other sizes.

Table 2

Electrical Continuity of Connections

Electrical Continuity of Connectors are verified by Resistance Test. The net resistance of the joint shall not be more than 0.00033ohm (NEMA VE1 clause 4.3)

Cable Ladder

- Versatile, lighter and easy to install. Wide range of load capacity profile.
- Choice of Cable Support System material shall be determined by the application environment, corrosion resistance and price are facts for consideration.

Material

- Hot Roll Mild Steel - JIS 3131
- Cold Roll Mild Steel - JIS 3141
- High Silicon Steel
- Stainless Steel - AISI 304, 316, 316L
- Aluminium - 5052, 6063
- Pre-Galvanised
- Electro Galvanised

Thickness

- Steel sheet (standard) 1.5mm & 2.0mm
- Flat bar (standard) 4.5mm
- Other thickness can be customise upon request

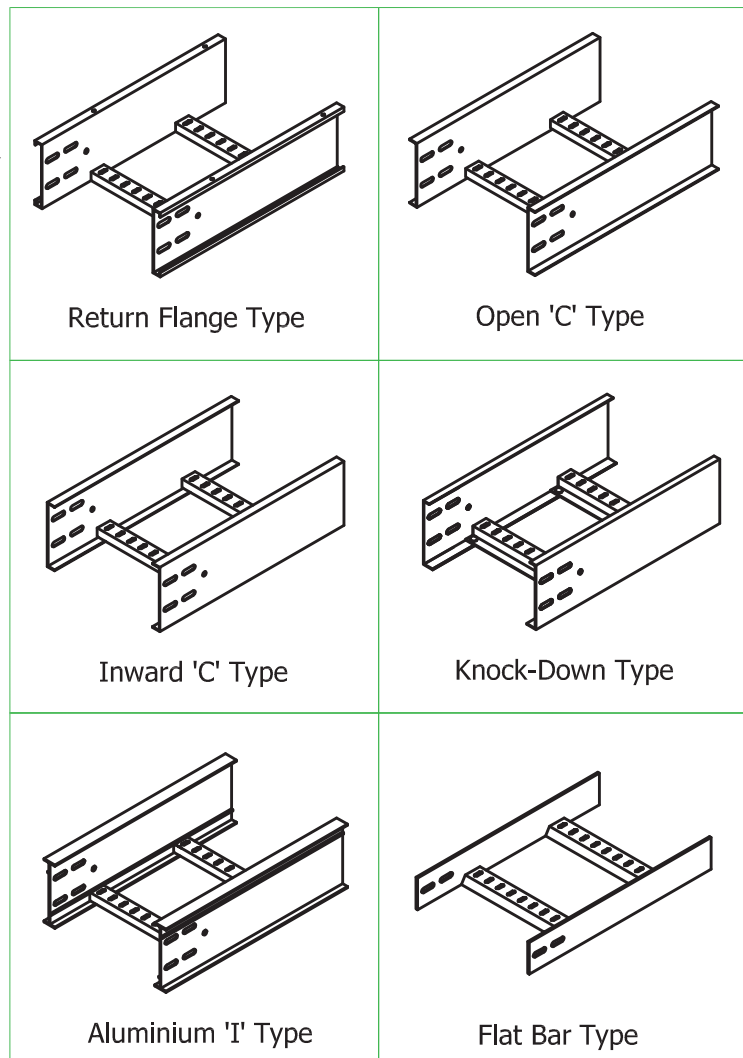
Length

- 3000mm or 6000mm

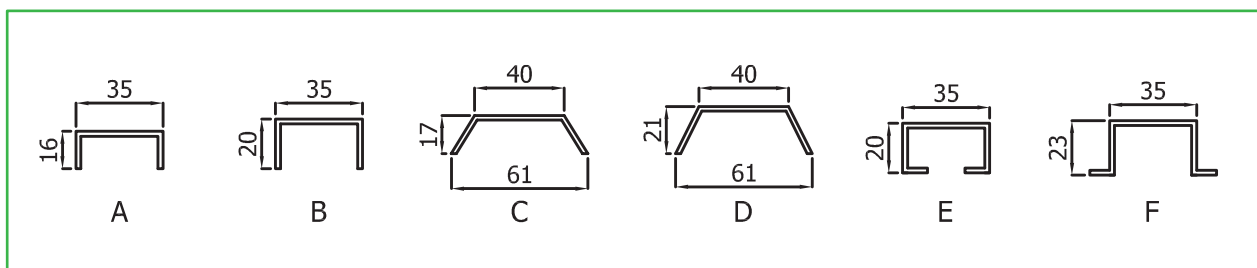
Finishing

- HDG - BS EN ISO 1461 (formally known as BS 729)
- Epoxy coating - ASTM D1654
- VCI coating

SIDE RAIL PROFILE



CROSS RUNG PROFILE



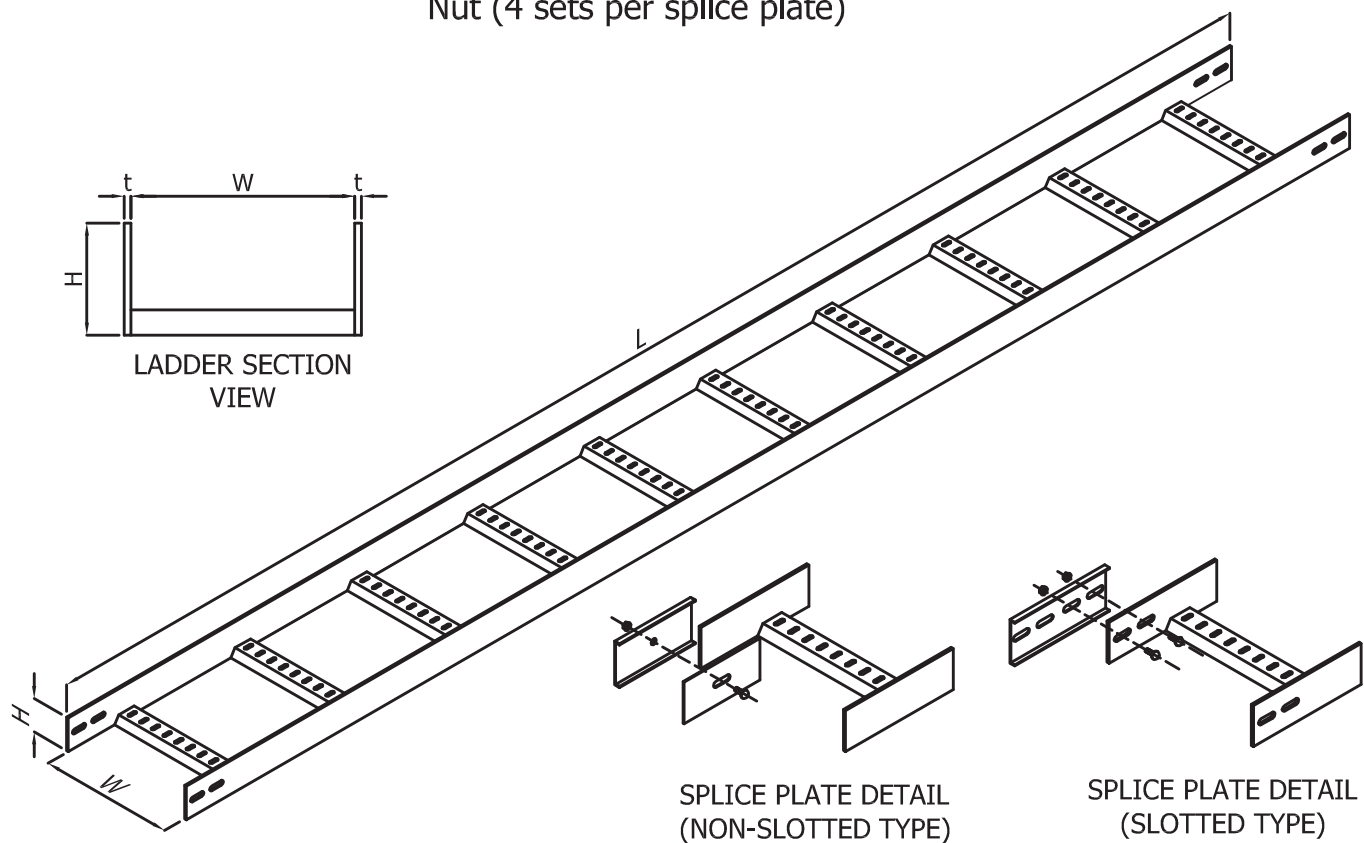
CABLE LADDER DATA

Ladder Type	Height (mm)	Span (Mtr)	Load (kg/m)		Destruction Load (kg/m)	
			MS HDG	SS316/L	MS HDG	SS316/L
Return Flange Type	150	6.0	144.53	136.18	>244.63	244.18
Open 'C' Type	150	6.0	89.96	89.96	199.77	170.57
Flat Bar Type	75	6.0	72.30	75.85	132.03	>128.98
Flat Bar Type	38	3.0	98.67	85.31	>167.73	>145.02

* Our cable ladder profiles complies with IEC61537, test type II & safety factor of 1.7

FLAT BAR TYPE CABLE LADDER

- Standard length : 3000mm
- Ladder rung type : A to E (1.5mm or 2.0mm)
- Rung spacing : 230mm or 300mm (9" or 12")
- Ladder rung slot hole : $\phi 7 \times 20\text{mm}$ or $\phi 11 \times 35\text{mm}$
- Splice plate : 1.5mm or 2.0mm thickness
- Fastener : M10x20 Carriage Bolt c/w Serrated Flange Nut (4 sets per splice plate)



Profile Type	Height, H (mm)	Width, W (mm)	Thickness, t (mm)	Material	Finishing
FB	38	100 - 900	4.5-6.0	Stainless Steel 304	VCI Coating
	50			Stainless Steel 316	
	75			Stainless Steel 316L	
	100			Mild Steel	Hot Dip Galvanised

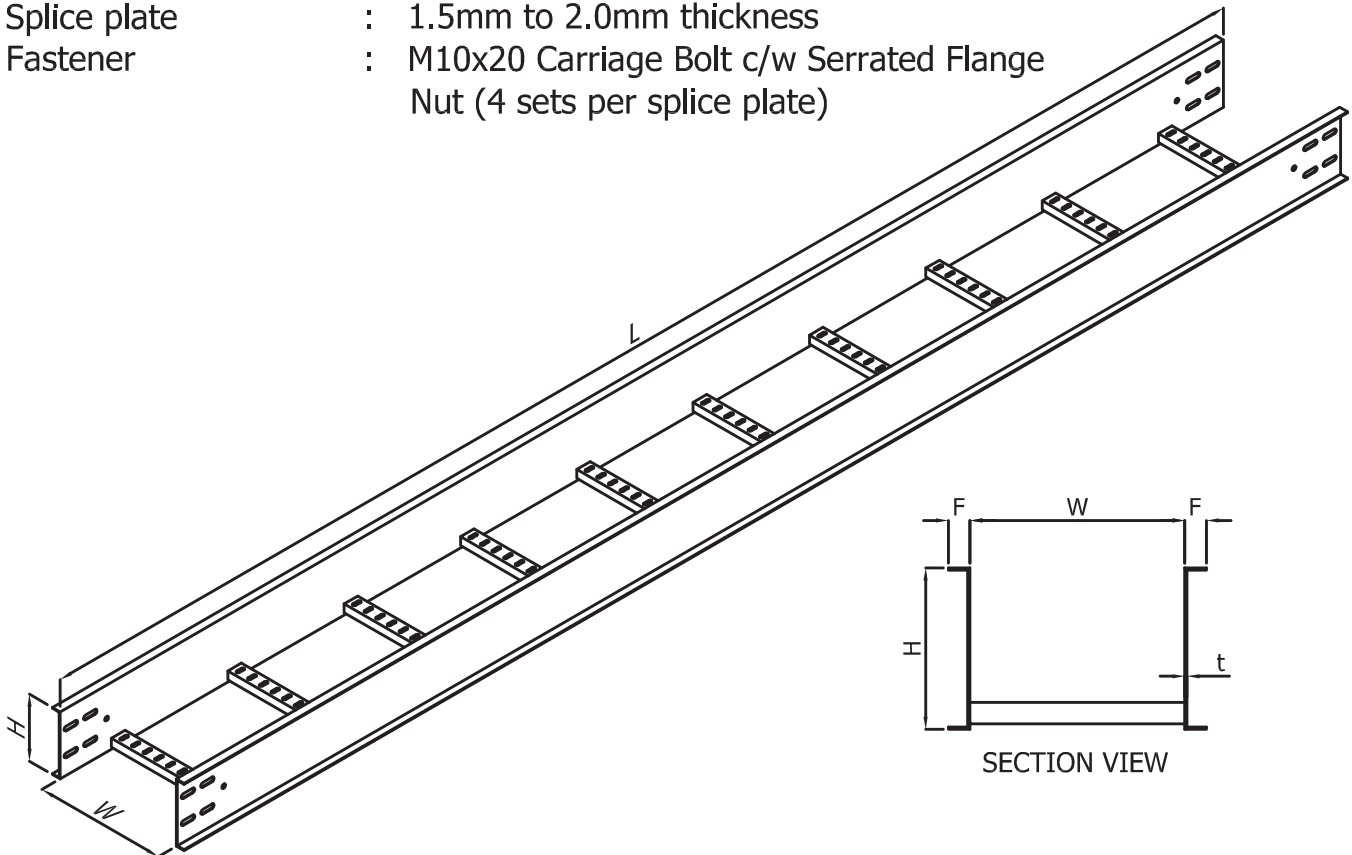
PRODUCT CODE (HOW TO ORDER)

e.g ; FB50C3/4.5/SL600/SS6

PROFILE TYPE	HEIGHT	RUNG TYPE	LENGTH	THICKNESS	LADDER TYPE	WIDTH	MATERIAL
FB	50	C	3	4.5	SL	600	SS6

OPEN 'C' TYPE CABLE LADDER

- Standard length : 3000mm or 6000mm
- Ladder rung type : A to E (1.5mm or 2.0mm)
- Rung spacing : 230mm or 300mm (9" or 12")
- Ladder rung slot hole : $\phi 7 \times 20\text{mm}$ or $\phi 11 \times 35\text{mm}$
- Splice plate : 1.5mm to 2.0mm thickness
- Fastener : M10x20 Carriage Bolt c/w Serrated Flange Nut (4 sets per splice plate)



Profile Type	Height, H (mm)	NEMA Rating	Width, W (mm)	Thickness, t (mm)	Material	Finishing
CPL	75	8AB	100 - 900	1.2 - 3.0	Stainless Steel 304	VCI Coating
	100	8ABC, 12A			Stainless Steel 316	
	125	8ABC, 12ABC			Stainless Steel 316L	
	150	8ABC, 12ABC, 16ABC, 20A			Aluminium 5052	
					Mild Steel	Hot Dip Galvanised
					High Silicon Steel	
					Pre-Galvanised	Epoxy Coating
					Electro Galvanised	

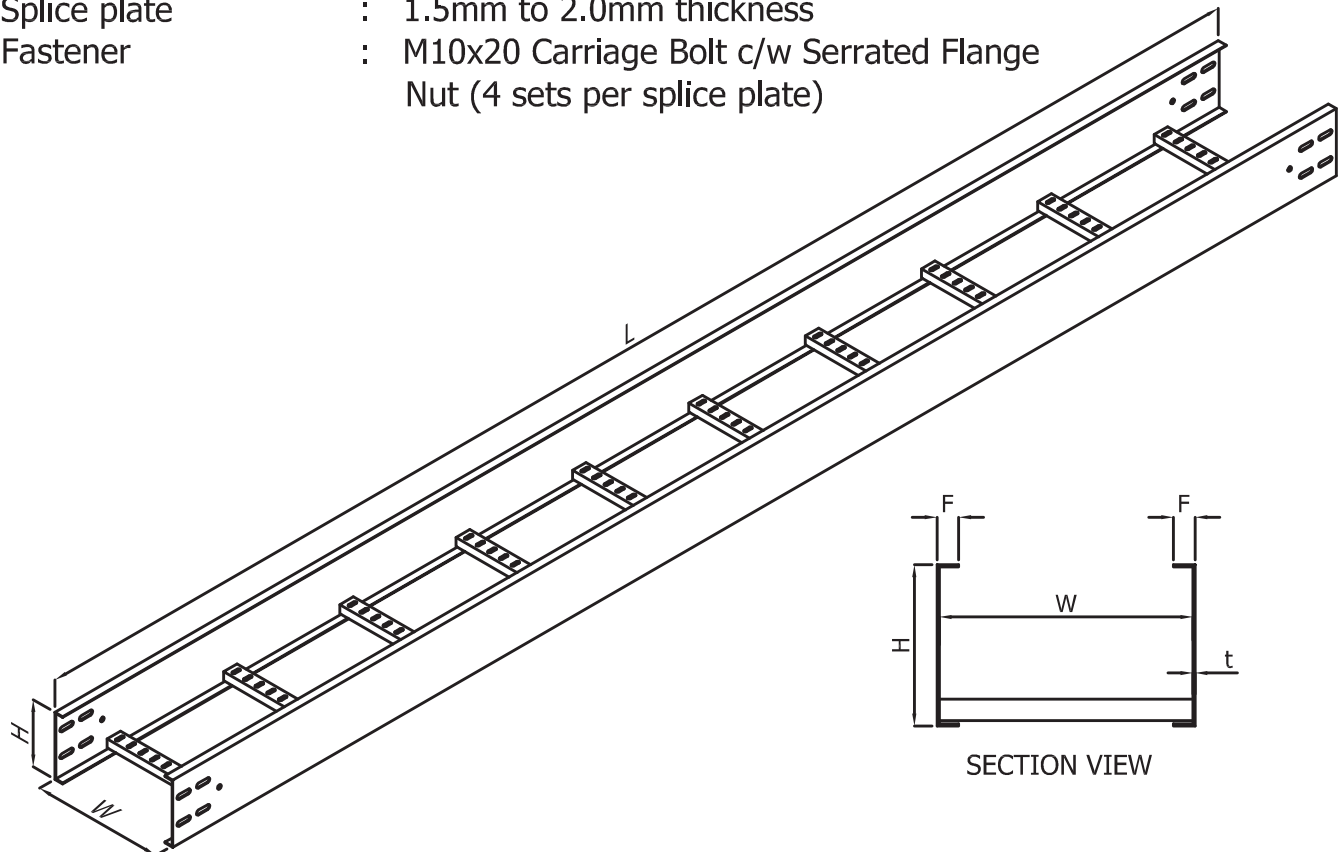
PRODUCT CODE (HOW TO ORDER)

e.g ; CPL150B3/2.0/SL900/SS4

PROFILE TYPE	HEIGHT	RUNG TYPE	LENGTH	THICKNESS	LADDER TYPE	WIDTH	MATERIAL
CPL	150	B	3	2.0	SL	900	SS4

INWARD 'C' TYPE CABLE LADDER

- Standard length : 3000mm or 6000mm
- Ladder rung type : A to E (1.5mm or 2.0mm)
- Rung spacing : 230mm or 300mm (9" or 12")
- Ladder rung slot hole : $\phi 7 \times 20\text{mm}$ or $\phi 11 \times 35\text{mm}$
- Splice plate : 1.5mm to 2.0mm thickness
- Fastener : M10x20 Carriage Bolt c/w Serrated Flange Nut (4 sets per splice plate)



Profile Type	Height, H (mm)	NEMA Rating	Width, W (mm)	Thickness, t (mm)	Material	Finishing
CI	75	8AB	100 - 900	1.2 - 3.0	Stainless Steel 304	VCI Coating
	100	8ABC, 12A			Stainless Steel 316	
	125	8ABC, 12ABC			Stainless Steel 316L	
	150	8ABC, 12ABC,			Aluminium 5052	
		16ABC, 20A			Mild Steel	Hot Dip Galvanised
					High Silicon Steel	
					Pre-Galvanised	Epoxy Coating
					Electro Galvanised	

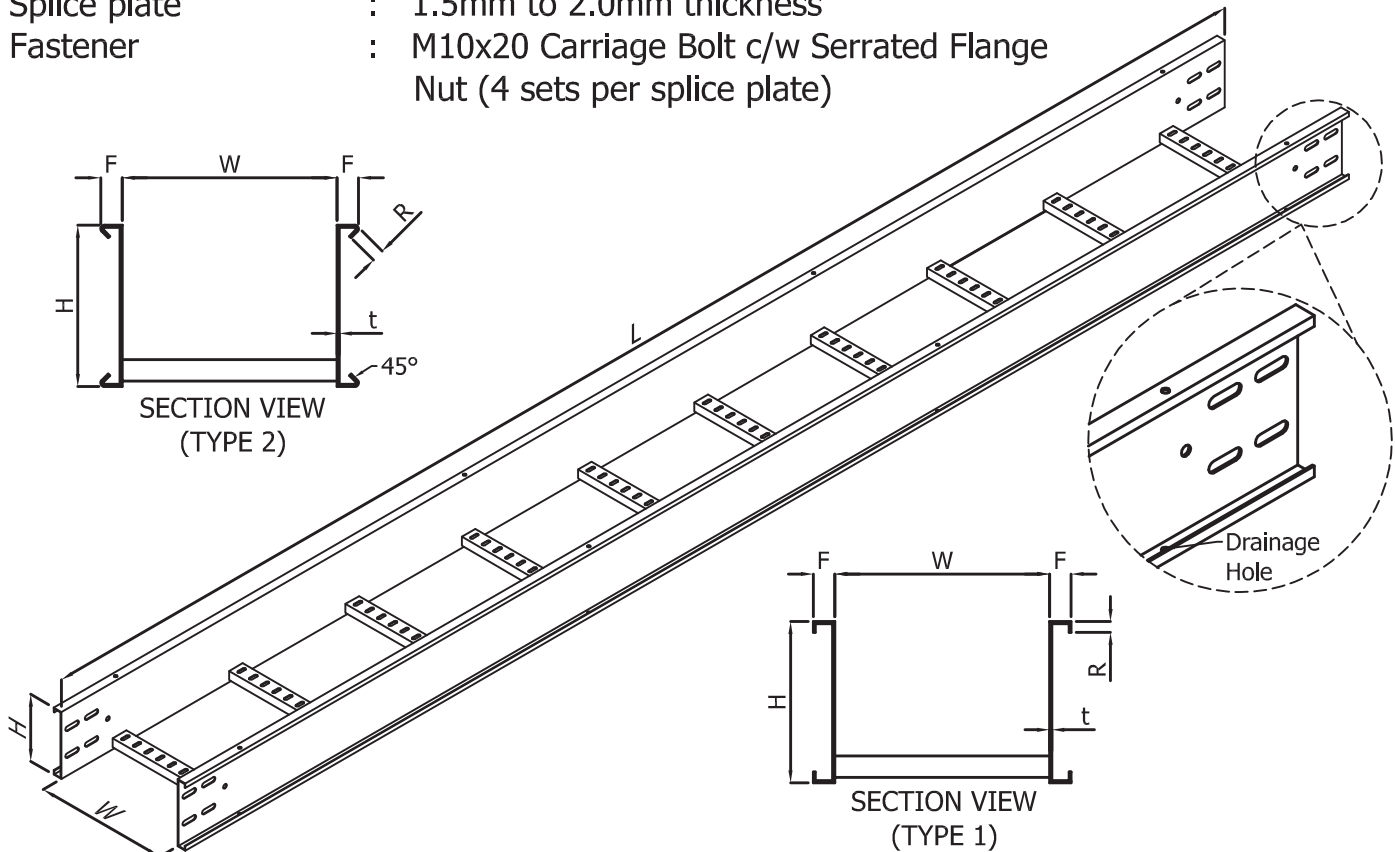
PRODUCT CODE (HOW TO ORDER)

e.g ; CI150B3/1.5/SL750/MSG

PROFILE TYPE	HEIGHT	RUNG TYPE	LENGTH	THICKNESS	LADDER TYPE	WIDTH	MATERIAL&FINISHING
CI	150	B	3	1.5	SL	750	MSG

RETURN FLANGE TYPE CABLE LADDER

- Standard length : 3000mm or 6000mm
- Ladder rung type : A to E (1.5mm or 2.0mm)
- Rung spacing : 230mm or 300mm (9" or 12")
- Ladder rung slot hole : $\phi 7 \times 20\text{mm}$ or $\phi 11 \times 35\text{mm}$
- Splice plate : 1.5mm to 2.0mm thickness
- Fastener : M10x20 Carriage Bolt c/w Serrated Flange Nut (4 sets per splice plate)



Profile Type	Height, H (mm)	NEMA Rating	Width, W (mm)	Thickness, t (mm)	Material	Finishing
HL	75	8AB	100 - 900	1.2 - 3.0	Stainless Steel 304	VCI Coating
	100	8ABC, 12ABC			Stainless Steel 316	
	125	8ABC, 12ABC, 20AB			Stainless Steel 316L	
	150	8ABC, 12ABC, 16ABC, 20ABC			Aluminium 5052	
					Mild Steel	Hot Dip Galvanised
					High Silicon Steel	
	160	8ABC, 12ABC, 16ABC, 20ABC			Pre-Galvanised	Epoxy Coating
					Electro Galvanised	

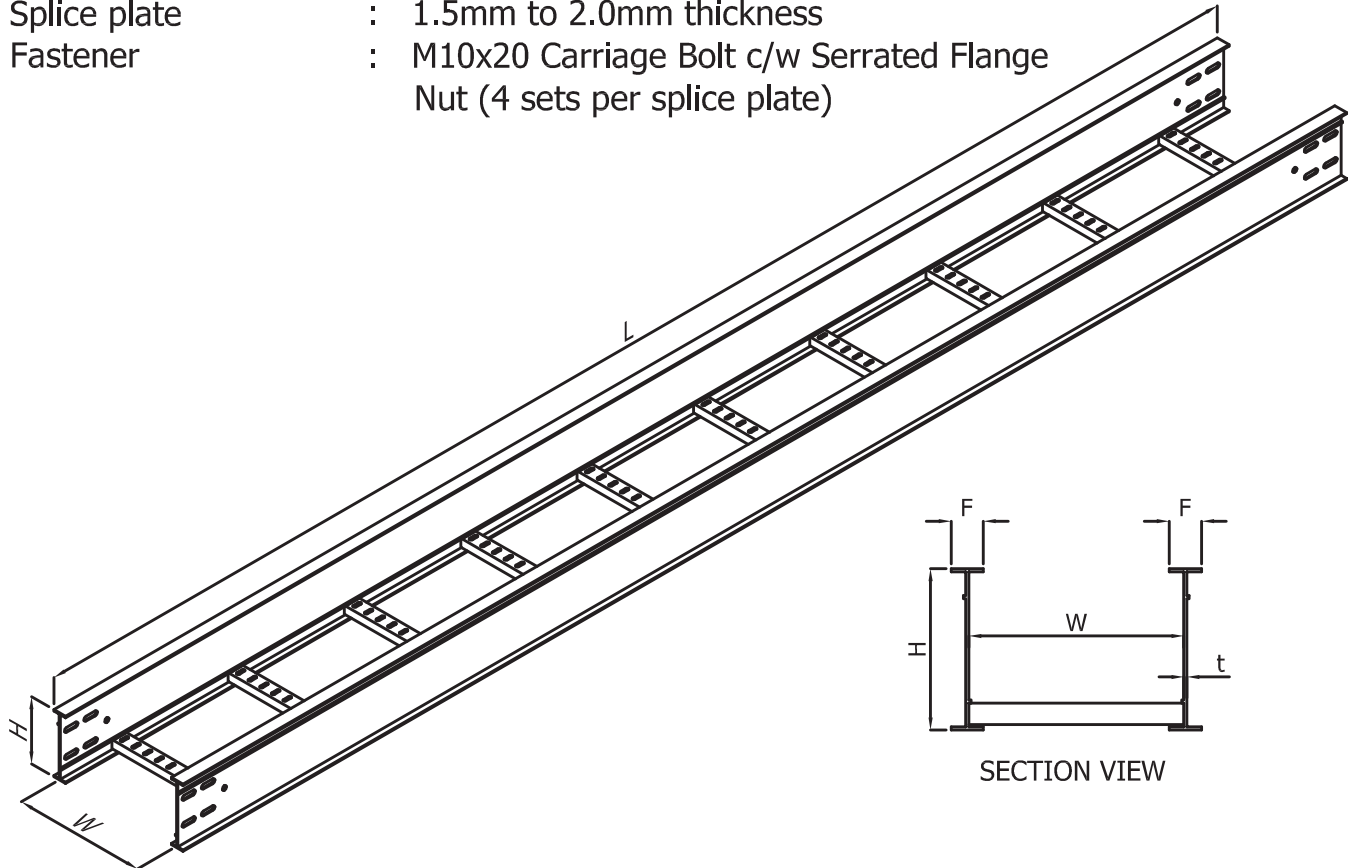
PRODUCT CODE (HOW TO ORDER)

e.g ; HL150E3/2.0/SL900/EGE

PROFILE TYPE	HEIGHT	RUNG TYPE	LENGTH	THICKNESS	LADDER TYPE	WIDTH	MATERIAL&FINISHING
HL	150	E	3	2.0	SL	900	EGE

ALUMINIUM 'I' TYPE CABLE LADDER

- Standard length : 3000mm or 6000mm
- Ladder rung type : E (2.0mm or 3.0mm)
- Rung spacing : 230mm or 300mm (9" or 12")
- Ladder rung slot hole : $\phi 7 \times 20$ mm
- Splice plate : 1.5mm to 2.0mm thickness
- Fastener : M10x20 Carriage Bolt c/w Serrated Flange Nut (4 sets per splice plate)



Profile Type	Height,H (mm)	NEMA Rating	Width,W (mm)	Thickness,t (mm)	Material
AI	100	8ABC, 12AB	100 - 900	2.0-4.0	Marine Grade 6063-T6 Aluminium
	150	8ABC, 12ABC			
		16ABC, 20AB			
	160	8ABC, 12ABC,			
		16ABC, 20ABC			
				5.0-6.0	

PRODUCT CODE (HOW TO ORDER)

e.g ; AI150E3/3.0/SL600/AL6

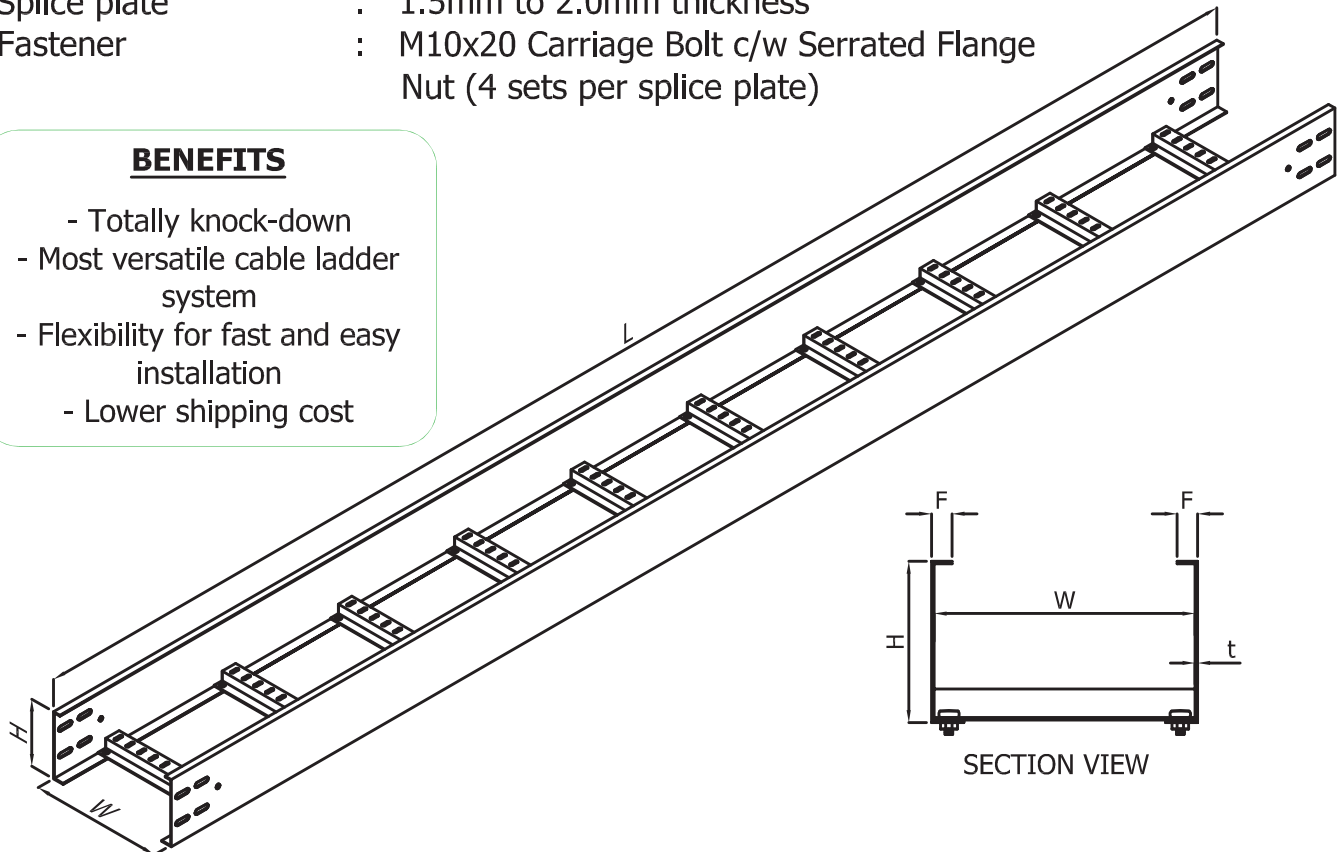
PROFILE TYPE	HEIGHT	RUNG TYPE	LENGTH	THICKNESS	LADDER TYPE	WIDTH	MATERIAL
AI	150	E	3	3.0	SL	600	AL6

KNOCK-DOWN TYPE CABLE LADDER

- Standard length : 3000mm
- Ladder rung type : F (1.5mm or 2.0mm)
- Rung spacing : 230mm or 300mm (9" or 12")
- Ladder rung slot hole : $\phi 7 \times 20\text{mm}$ or $\phi 11 \times 35\text{mm}$
- Splice plate : 1.5mm to 2.0mm thickness
- Fastener : M10x20 Carriage Bolt c/w Serrated Flange Nut (4 sets per splice plate)

BENEFITS

- Totally knock-down
- Most versatile cable ladder system
- Flexibility for fast and easy installation
- Lower shipping cost



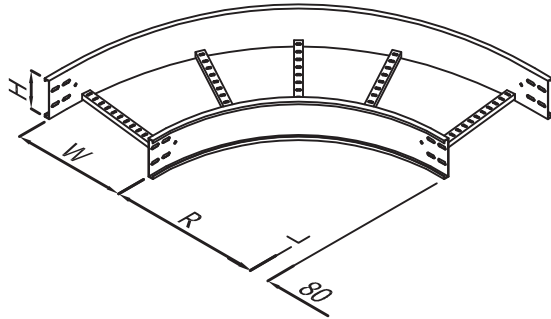
Profile Type	Height,H (mm)	Width,W (mm)	Thickness,t (mm)	Material	Finishing
KFL	75	100 - 900	1.2 - 3.0	Stainless Steel 304	VCI Coating
	100			Stainless Steel 316	
	125			Stainless Steel 316L	
	150			Aluminium 5052	
				Mild Steel	Hot Dip Galvanised
				High Silicon Steel	
				Pre-Galvanised	Epoxy Coating
				Electro Galvanised	

PRODUCT CODE (HOW TO ORDER)

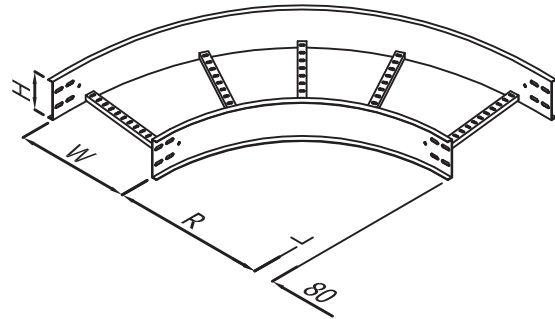
e.g ; KFL150F3/2.0/SL750/S6L

PROFILE TYPE	HEIGHT	RUNG TYPE	LENGTH	THICKNESS	LADDER TYPE	WIDTH	MATERIAL
KFL	100	F	3	2.0	SL	750	S6L

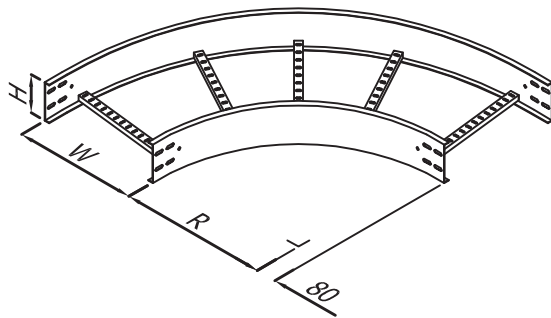
LADDER HORIZONTAL ELBOW



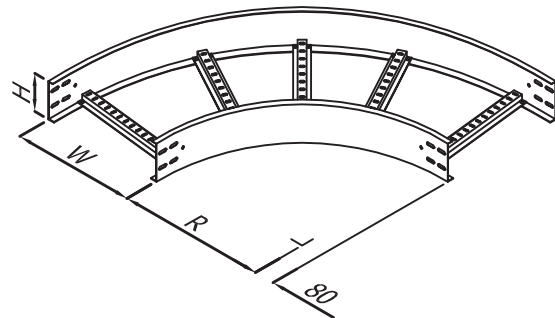
PROFILE TYPE : HL



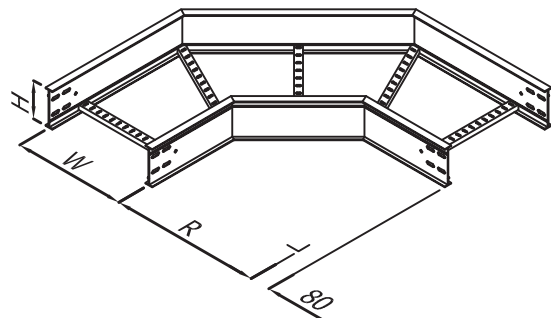
PROFILE TYPE : CPL



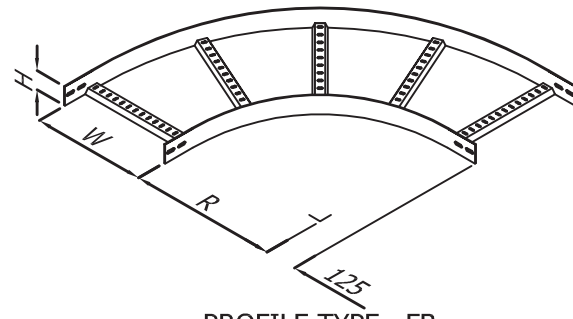
PROFILE TYPE : CI



PROFILE TYPE : KFL



PROFILE TYPE : AI



PROFILE TYPE : FB

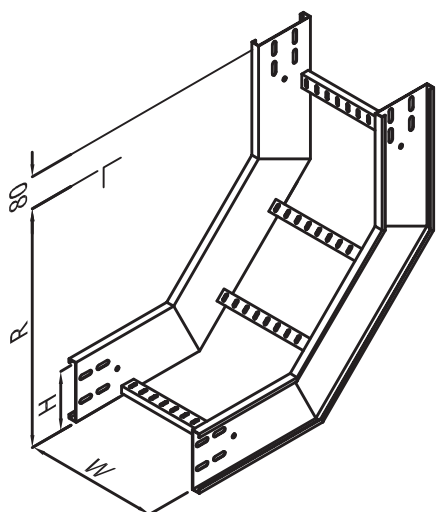
Ladder Type	Height,H (mm)	Width,W (mm)	Thickness,t (mm)	Available Degree	Radius,R (mm)
LFB	75	100 - 900	1.2 - 3.0	30°, 45°, 60°, 90°	200 - 1,200
	100				
	125				
	150				

PRODUCT CODE (HOW TO ORDER)

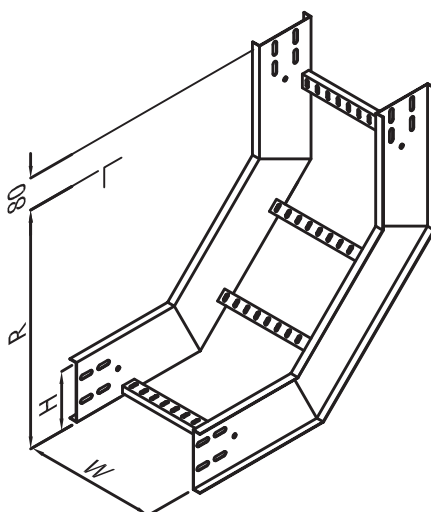
e.g ; CPL100B/2.0/LFB600/90/450/S6L

PROFILE TYPE	HEIGHT	RUNG TYPE	THICKNESS	LADDER TYPE	WIDTH	DEGREE	RADIUS	MATERIAL
CPL	100	B	2.0	LFB	600	90	450	S6L

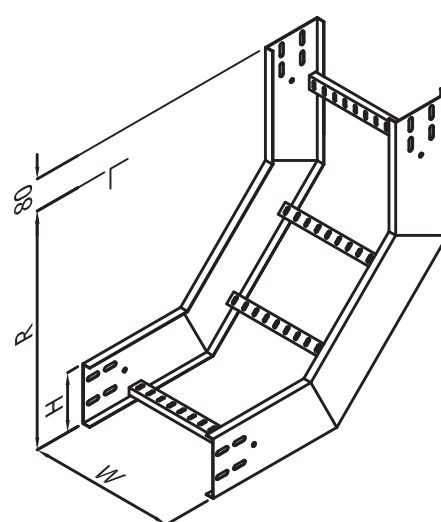
LADDER INSIDE ANGLE RISER



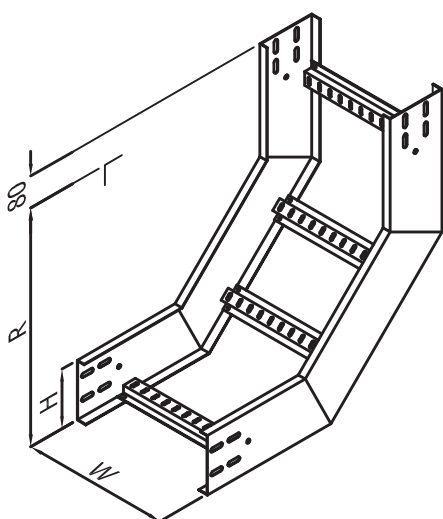
PROFILE TYPE : HL



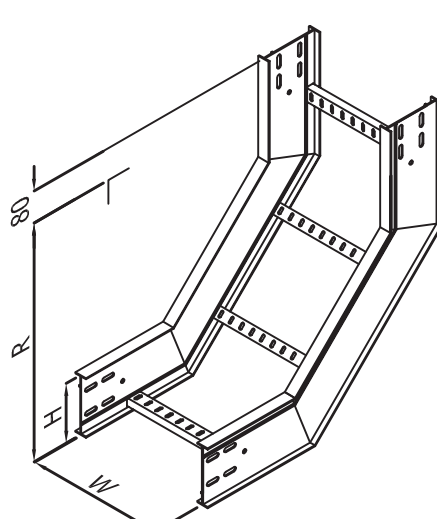
PROFILE TYPE : CPL



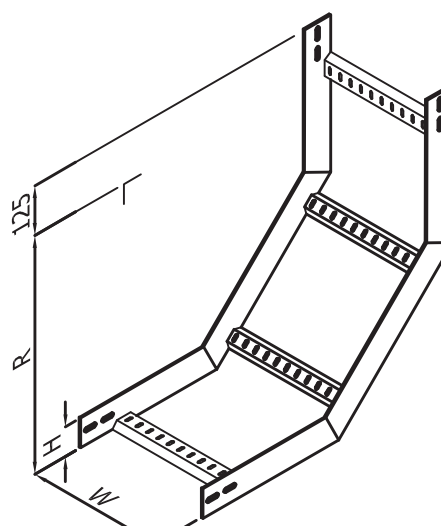
PROFILE TYPE : CI



PROFILE TYPE : KFL



PROFILE TYPE : AI



PROFILE TYPE : FB

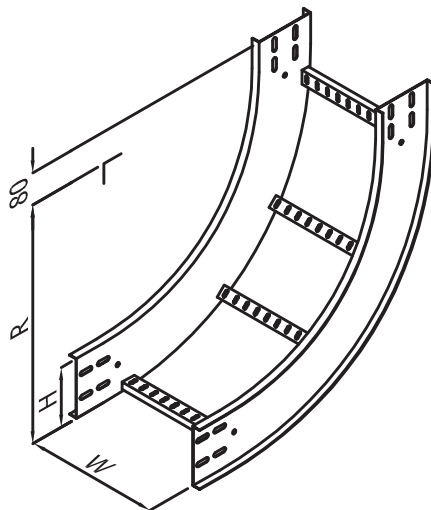
Ladder Type	Height,H (mm)	Width,W (mm)	Thickness,t (mm)	Available Degree	Radius,R (mm)
LIR	75	100 - 900	1.2 - 3.0	30°, 45°, 60°, 90°	200 - 1,200
	100				
	125				
	150				

PRODUCT CODE (HOW TO ORDER)

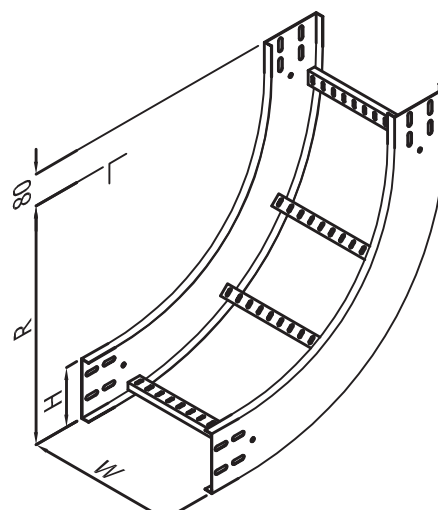
e.g ; HL150E/1.5/LIR300/90/450/GAE

PROFILE TYPE	HEIGHT	RUNG TYPE	THICKNESS	LADDER TYPE	WIDTH	DEGREE	RADIUS	MATERIAL
HL	150	E	1.5	LIR	300	90	450	GAE

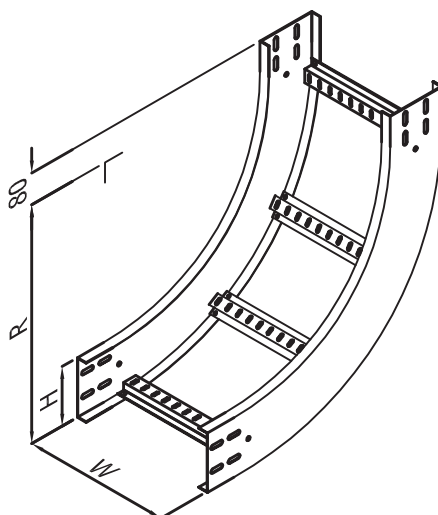
LADDER INSIDE ARC RISER



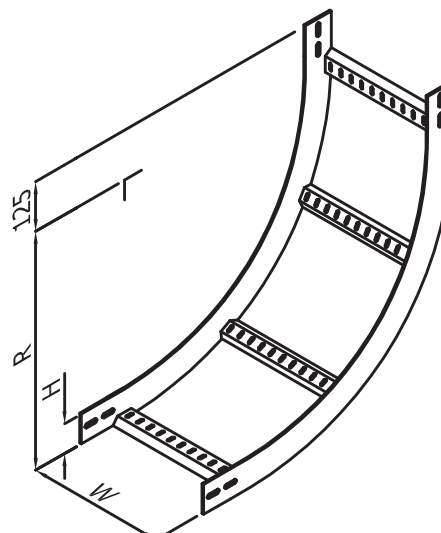
PROFILE TYPE : CPL



PROFILE TYPE : CI



PROFILE TYPE : KFL



PROFILE TYPE : FB

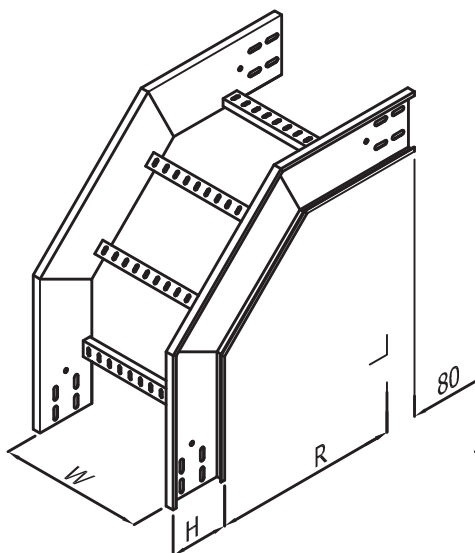
Ladder Type	Height,H (mm)	Width,W (mm)	Thickness,t (mm)	Available Degree	Radius,R (mm)
LAI	75	100 - 900	1.2 - 3.0	30°, 45°, 60°, 90°	200 - 1,200
	100				
	125				
	150				

PRODUCT CODE (HOW TO ORDER)

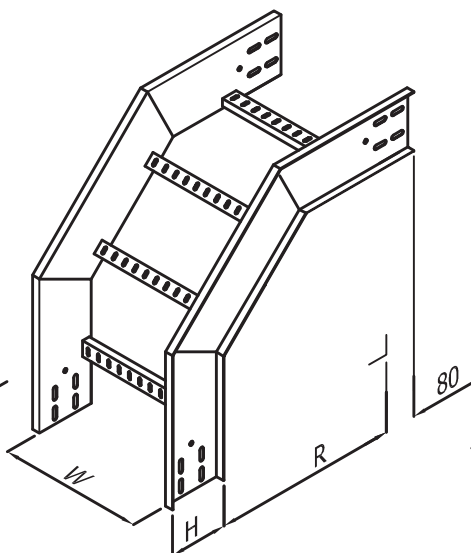
e.g ; CI100B/1.5/LAI300/90/450/EGA

PROFILE TYPE	HEIGHT	RUNG TYPE	THICKNESS	LADDER TYPE	WIDTH,W	DEGREE	RADIUS	MATERIAL
CI	100	B	1.5	LAI	300	90	450	EGA

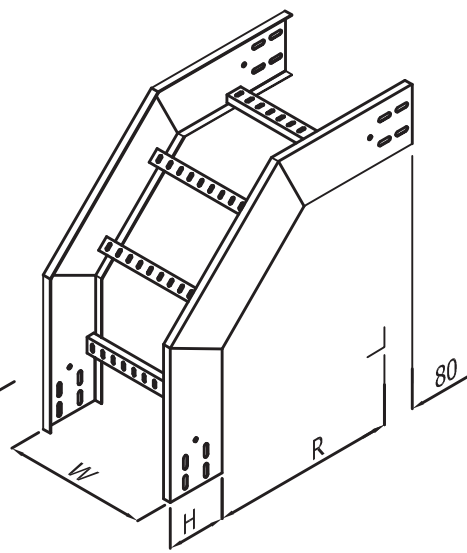
LADDER OUTSIDE ANGLE RISER



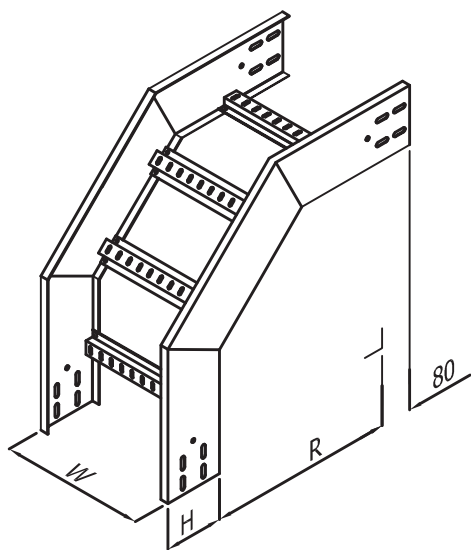
PROFILE TYPE : HL



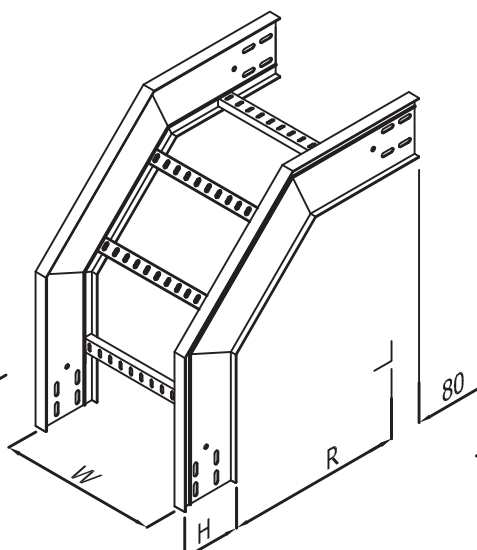
PROFILE TYPE : CPL



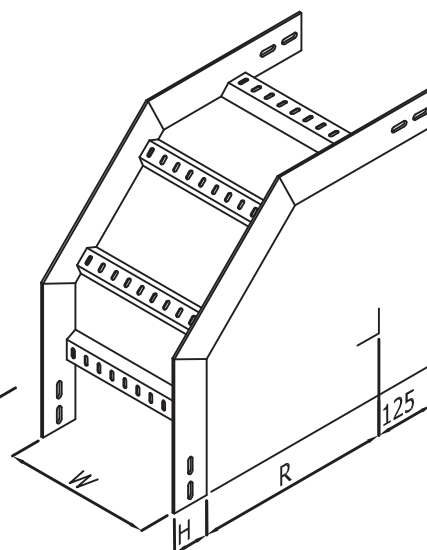
PROFILE TYPE : CI



PROFILE TYPE : KFL



PROFILE TYPE : AI



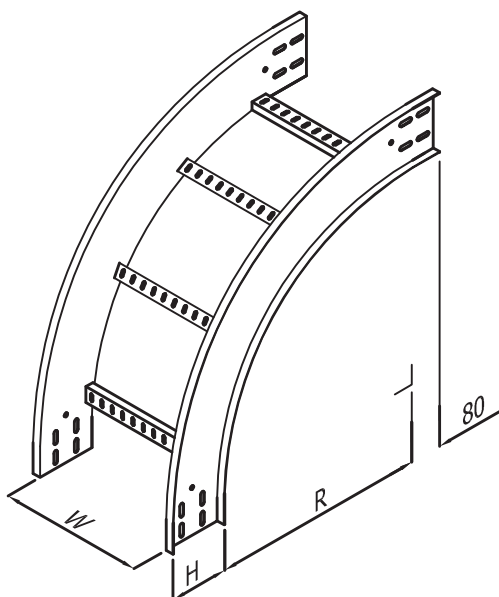
PROFILE TYPE : FB

Ladder Type	Height,H (mm)	Width,W (mm)	Thickness,t (mm)	Available Degree	Radius,R (mm)
LOR	75	100 - 900	1.2 - 3.0	30°, 45°, 60°, 90°	200 - 1,200
	100				
	125				
	150				

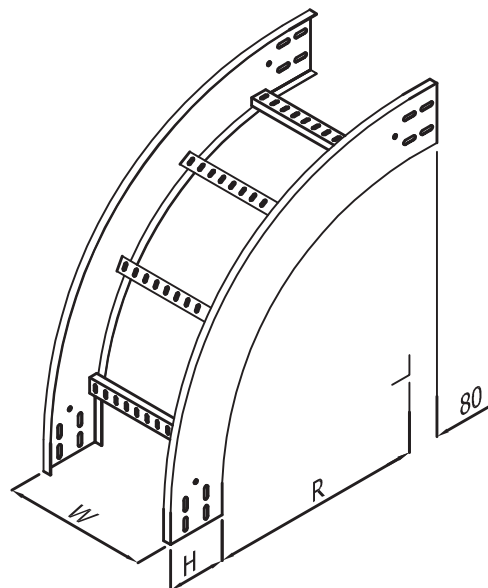
PRODUCT CODE (HOW TO ORDER)

e.g ; KFL150F/2.0/LOR300/90/600/S6L

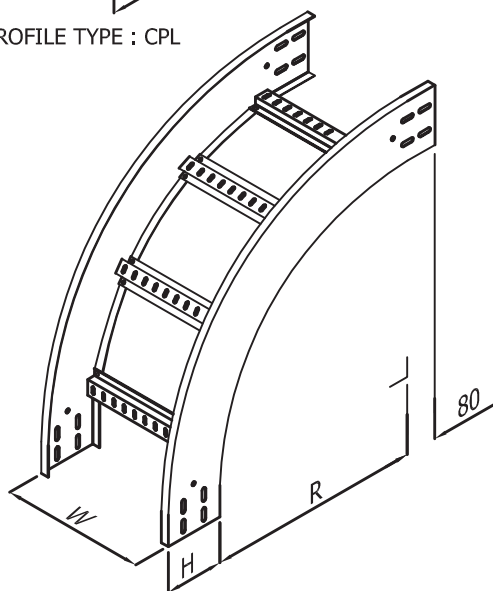
PROFILE TYPE	HEIGHT	RUNG TYPE	THICKNESS	LADDER TYPE	WIDTH,W	DEGREE	RADIUS	MATERIAL
KFL	150	F	2.0	LOR	300	90	600	S6L

LADDER OUTSIDE ARC RISER


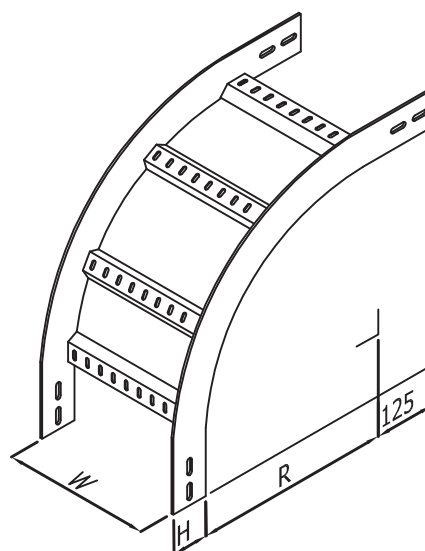
PROFILE TYPE : CPL



PROFILE TYPE : CI



PROFILE TYPE : KFL



PROFILE TYPE : FB

Ladder Type	Height,H (mm)	Width,W (mm)	Thickness,t (mm)	Available Degree	Radius,R (mm)
LAO	75	100 - 900	1.2 - 3.0	30°, 45°, 60°, 90°	200 - 1,200
	100				
	125				
	150				

PRODUCT CODE (HOW TO ORDER)

e.g ; CPL150B/1.5/LAO450/90/300/SS6

PROFILE TYPE	HEIGHT	RUNG TYPE	THICKNESS	LADDER TYPE	WIDTH,W	DEGREE	RADIUS	MATERIAL
CPL	150	B	1.5	LAO	450	90	300	SS6

LADDER FLEXIBLE INSIDE/OUTSIDE RISER

These are flexible means of coping on site with difficult installation situations. When used in conjunction with articulated bends and bendable fishplates these accessories can solve most mis-alignment problems. However, minor alignment difficulties may be overcome more simply using vertically hinged connectors.

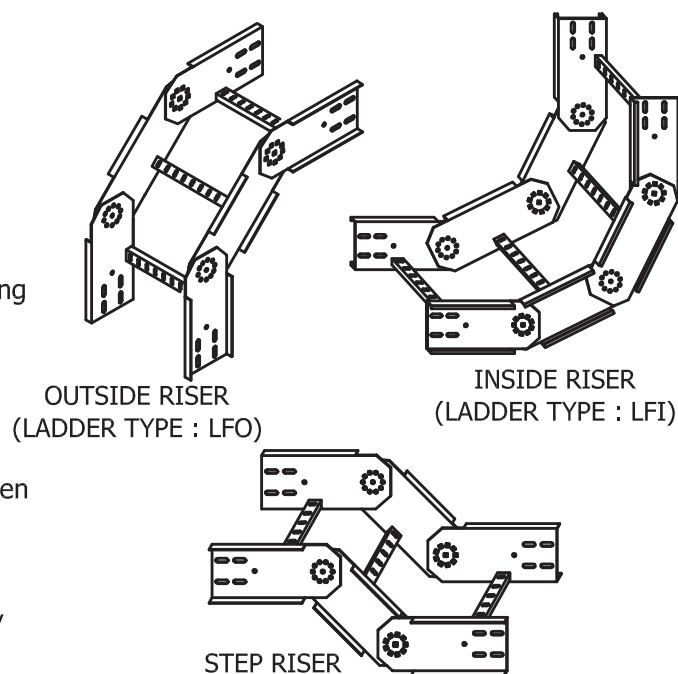
Articulated risers can be used in a number of ways depending upon the circumstances. They should always be assembled together before being lifted in situ and there are two alternative approaches to installation:

A. Using the center bolts the component can be assembled and tightened to an approximation of the required shape then installed and adjusted in situ.

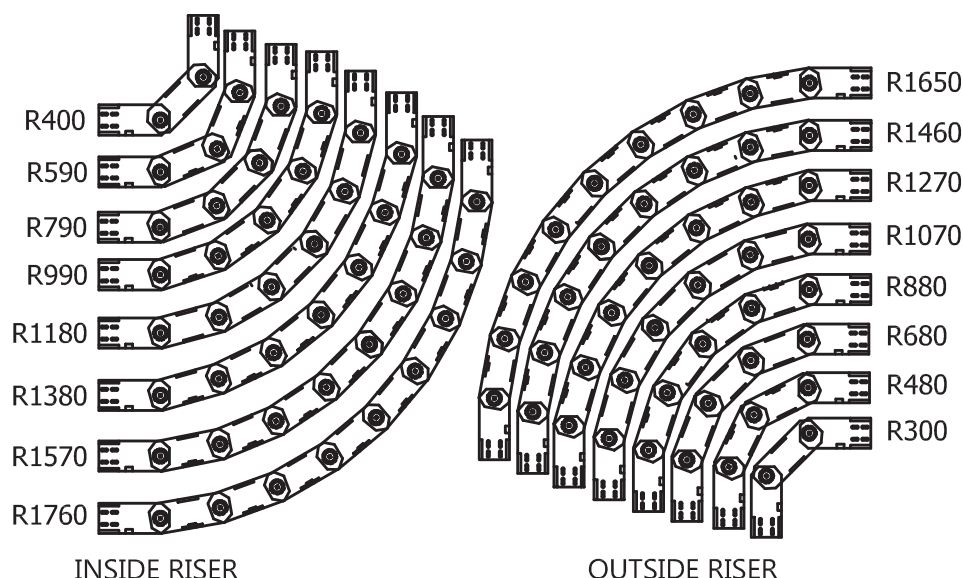
B. If the required radius is known then the various sections can be locked into predetermined positions during assembly creating a component with fixed, known radius which can then be installed.

Sets can be split to create assemblies (more vertically hinged connectors will be required) or joined together to create extra long components.

Totally flexible with angle adjustment of very 4 degree.

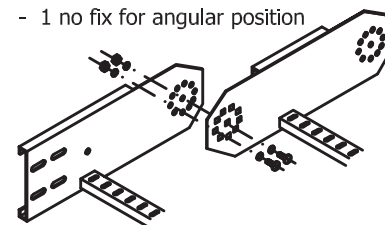


Ladder Type	Height,H (mm)	Width,W (mm)	Thickness,t (mm)	Radius,R (mm)
LFI/LFO	75	100 - 900	1.2 - 3.0	200 - 1,200
	100			
	125			
	150			



Riser Assembly

- Match the square hole with round holes in sequence
- 2 sets of M8 Pan Head Bolt/Nut/Flat Washer/Spring Washer to fix at one side
 - 1 no installed to center of the round holes
 - 1 no fix for angular position



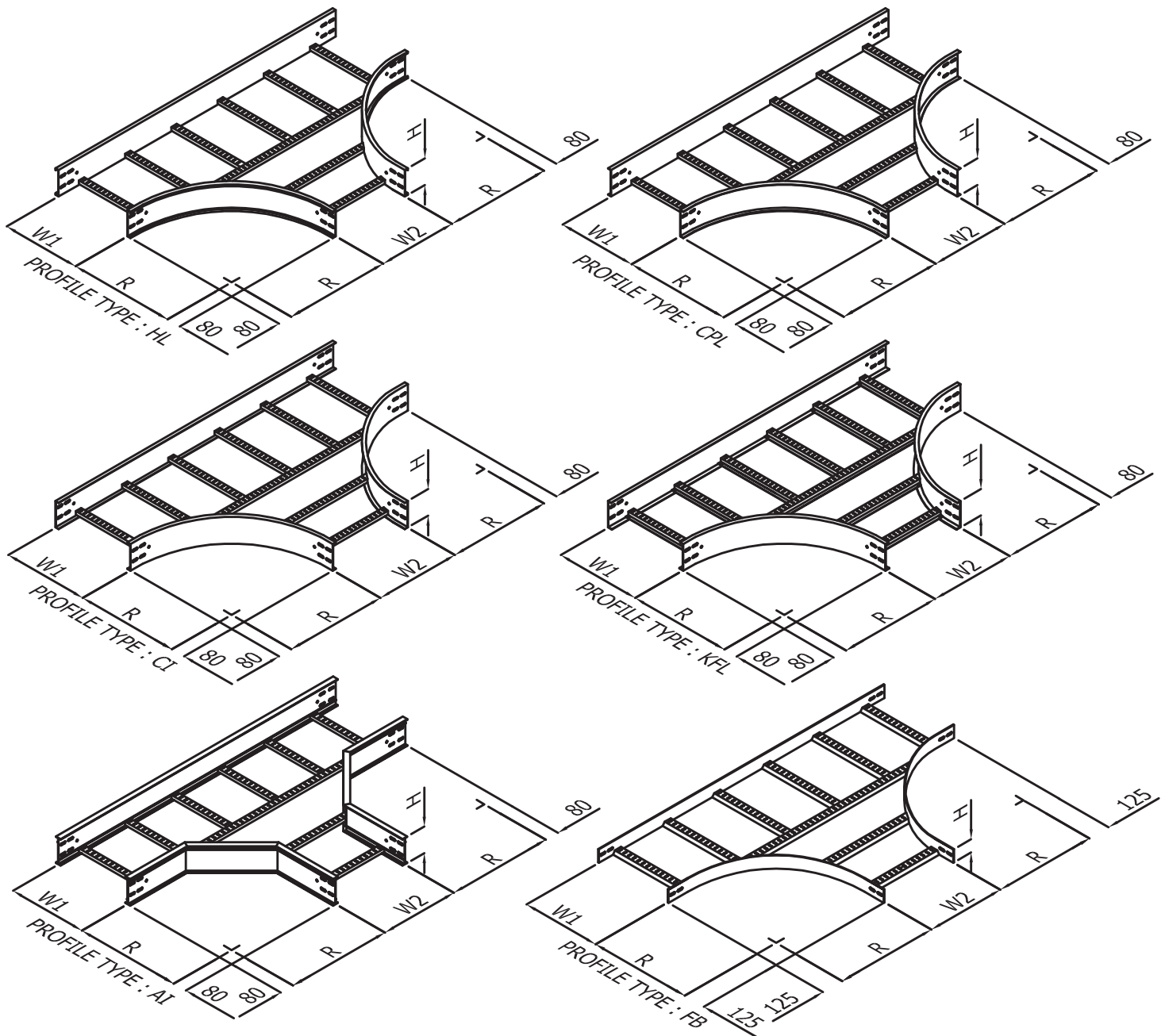
The combination of the 9 and 10 holes circles gives adjustment in steps of 4 degree

PRODUCT CODE (HOW TO ORDER)

e.g ; HL150E/2.0/LFI300/450/MSG

PROFILE TYPE	HEIGHT	RUNG TYPE	THICKNESS	LADDER TYPE	WIDTH,W	RADIUS	MATERIAL&FINISHING
HL	150	E	2.0	LFI	300	450	MSG

LADDER EQUAL/UNEQUAL TEE



Ladder Type	Height,H (mm)	Width,W1 (mm)	Width,W2 (mm)	Thickness,t (mm)	Radius,R (mm)
LET/LUT	75	100 - 900	100 - 900	1.2 - 3.0	200 - 1,200
	100				
	125				
	150				

TYPE OF TEE

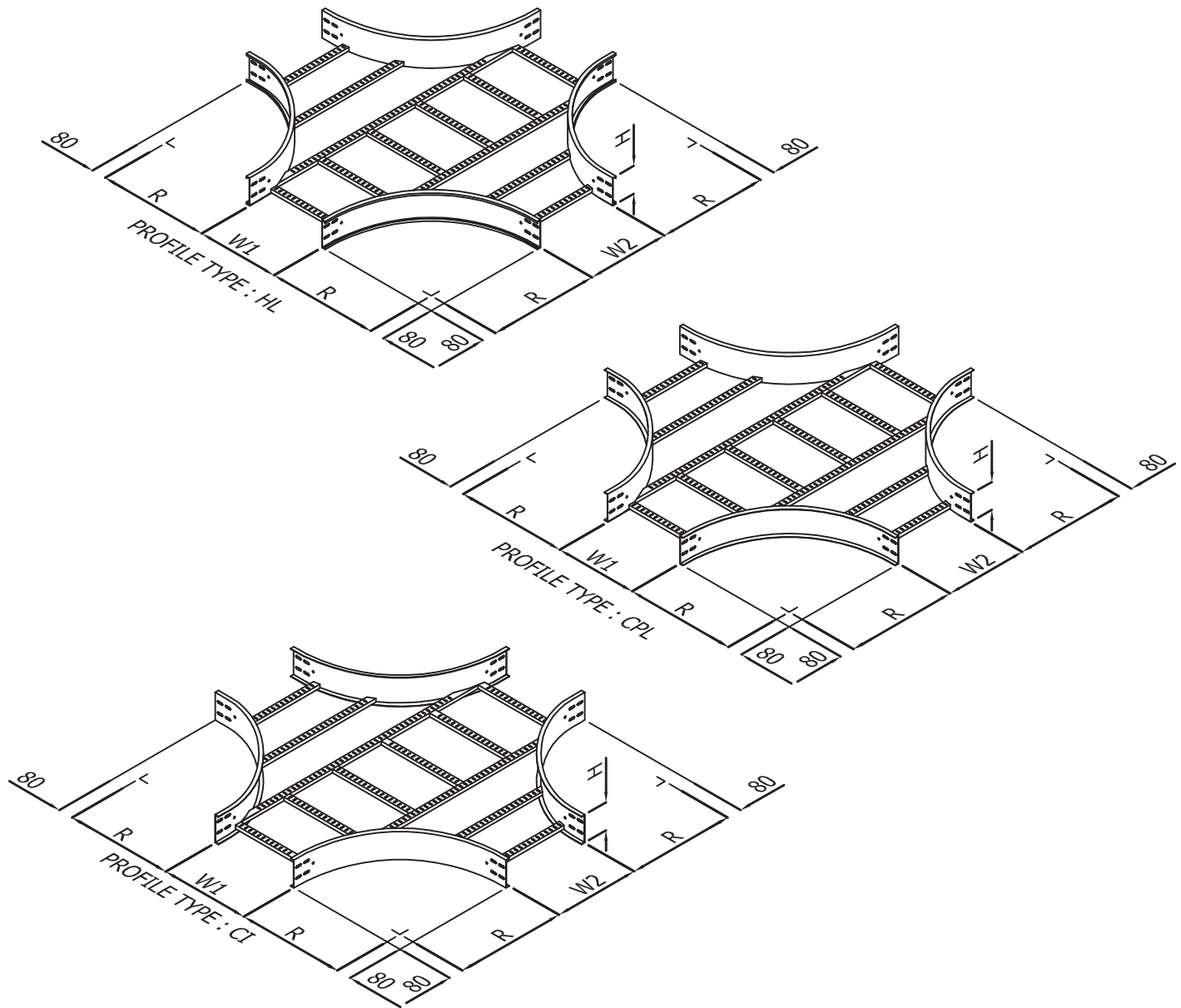
- * W1 = W2 - Equal (LET)
- * W1 ≠ W2 - Unequal (LUT)

PRODUCT CODE (HOW TO ORDER)

e.g ; KFL125F/1.5/LET600-600/450/S6L

PROFILE TYPE	HEIGHT	RUNG TYPE	THICKNESS	LADDER TYPE	WIDTH,W1	WIDTH,W2	RADIUS	MATERIAL
KFL	125	F	1.5	LET	600	600	450	S6L

LADDER EQUAL/UNEQUAL CROSSOVER



Ladder Type	Height,H (mm)	Width,W1 (mm)	Width,W2 (mm)	Thickness,t (mm)	Radius,R (mm)
LCO/LCU	75	100 - 900	100 - 900	1.2 - 3.0	200 - 1,200
	100				
	125				
	150				

TYPE OF CROSSOVER

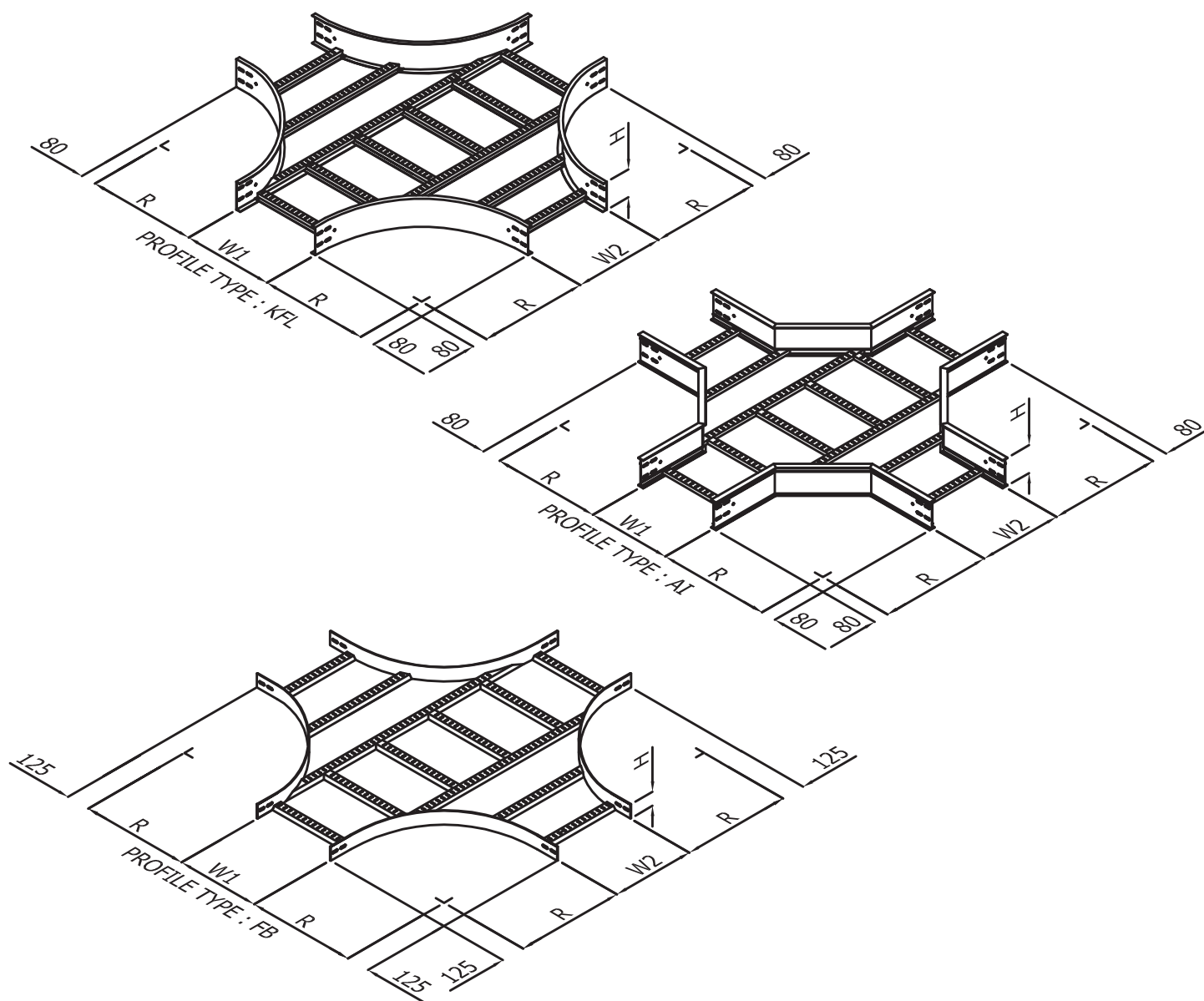
- * W1 = W2 - Equal (LCO)
- * W1 ≠ W2 - Unequal (LCU)

PRODUCT CODE (HOW TO ORDER)

e.g ; HL100E/1.5/LCU600-300/300/SS4

PROFILE TYPE	HEIGHT	RUNG TYPE	THICKNESS	LADDER TYPE	WIDTH,W1	WIDTH,W2	RADIUS	MATERIAL
HL	100	E	1.5	LCU	600	300	300	SS4

LADDER EQUAL/UNEQUAL CROSSOVER



Ladder Type	Height,H (mm)	Width,W1 (mm)	Width,W2 (mm)	Thickness,t (mm)	Radius,R (mm)
LCO/LCU	75	100 - 900	100 - 900	1.2 - 3.0	200 - 1,200
	100				
	125				
	150				

TYPE OF CROSSOVER

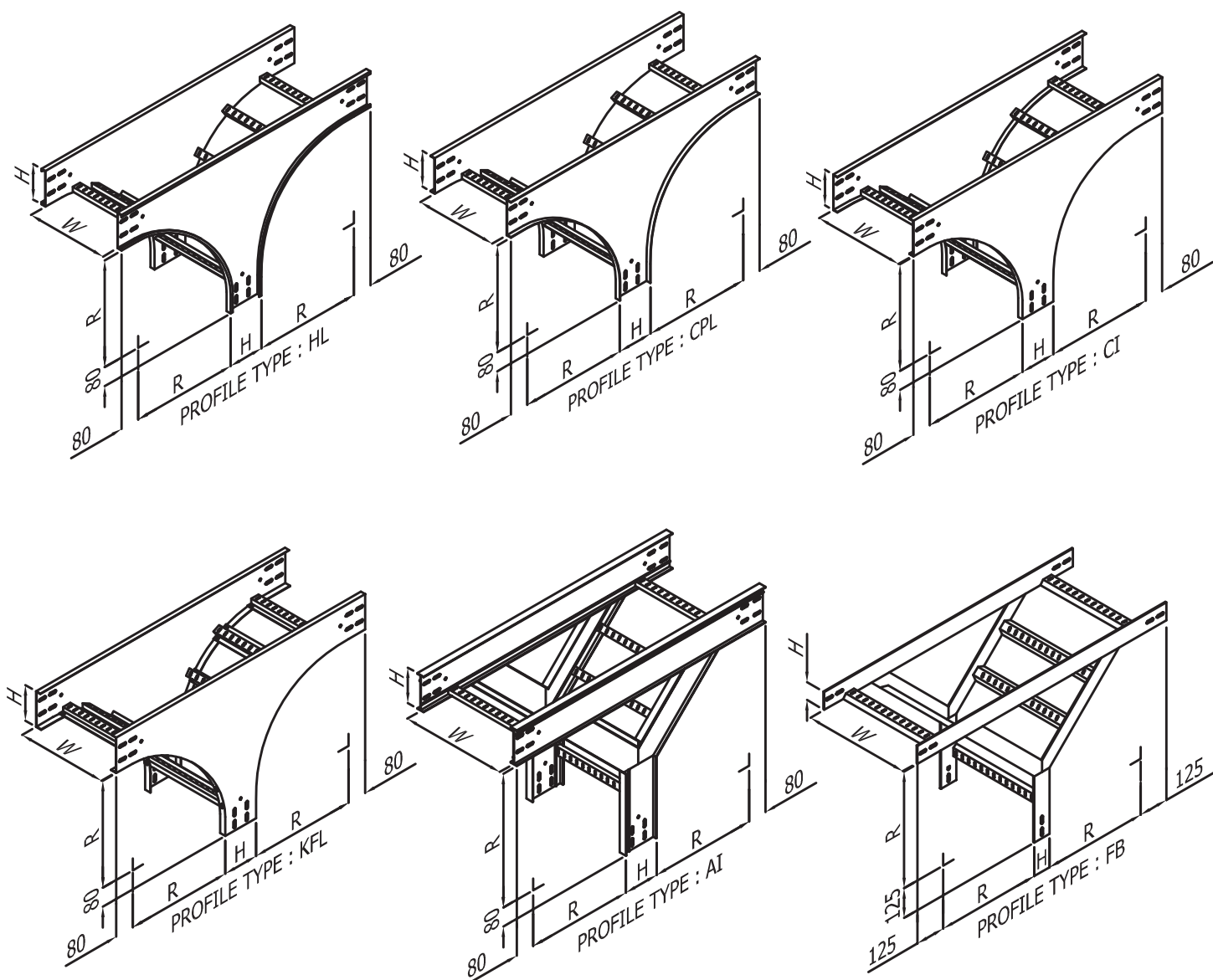
- * W1 = W2 - Equal (LCO)
- * W1 ≠ W2 - Unequal (LCU)

PRODUCT CODE (HOW TO ORDER)

e.g ; CI150B/2.0/LCO300-300/600/MSG

PROFILE TYPE	HEIGHT	RUNG TYPE	THICKNESS	LADDER TYPE	WIDTH,W1	WIDTH,W2	RADIUS	MATERIAL&FINISHING
CI	150	B	2.0	LCO	300	300	600	MSG

LADDER DESCENT TEE



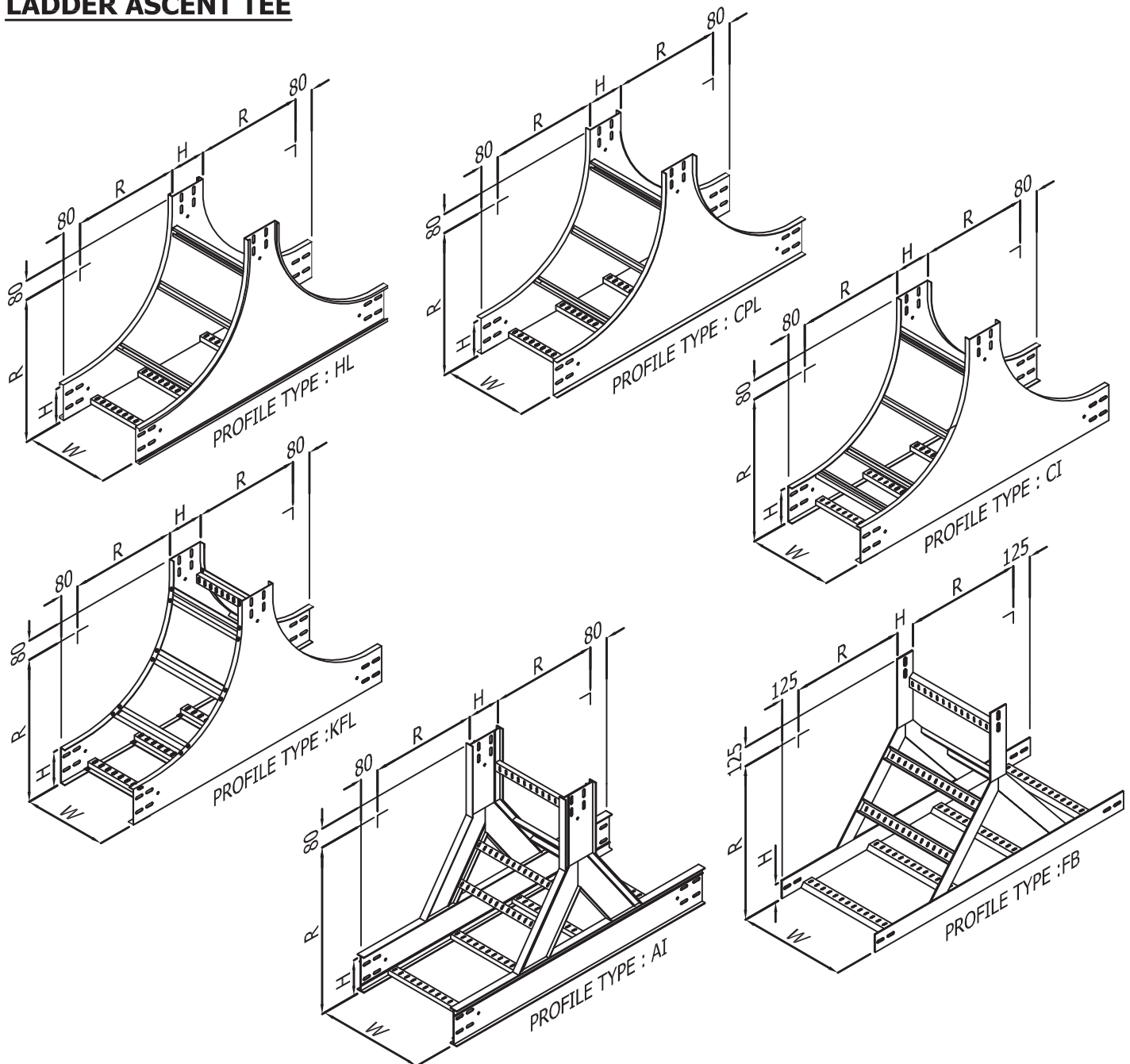
Ladder Type	Height,H (mm)	Width,W (mm)	Thickness,t (mm)	Radius,R (mm)
LDT	75	100 - 900	1.2 - 3.0	200 - 1,200
	100			
	125			
	150			

PRODUCT CODE (HOW TO ORDER)

e.g ; FB75C/4.5/LDT300/450/MSG

PROFILE TYPE	HEIGHT	RUNG TYPE	THICKNESS	LADDER TYPE	WIDTH,W	RADIUS	MATERIAL
FB	75	C	4.5	LDT	300	450	MSG

LADDER ASCENT TEE



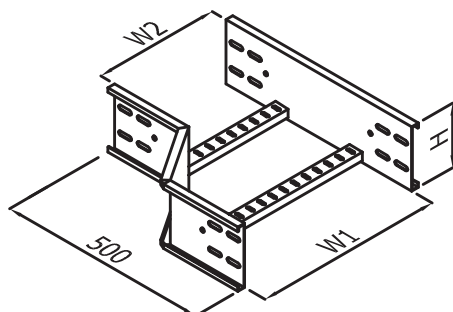
Ladder Type	Height,H (mm)	Width,W (mm)	Thickness,t (mm)	Radius,R (mm)
LAT	75	100 - 900	1.2 - 3.0	200 - 1,200
	100			
	125			
	150			

PRODUCT CODE (HOW TO ORDER)

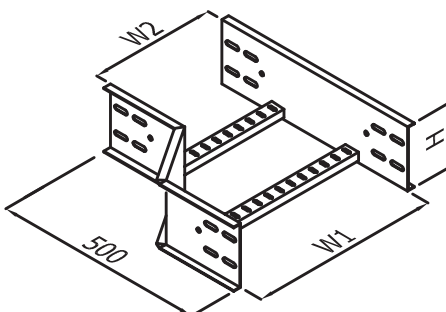
e.g ; CPL150B/1.5/LAT300/300/SS4

PROFILE TYPE	HEIGHT	RUNG TYPE	THICKNESS	LADDER TYPE	WIDTH,W1	RADIUS	MATERIAL
CPL	150	B	1.5	LAT	300	300	SS4

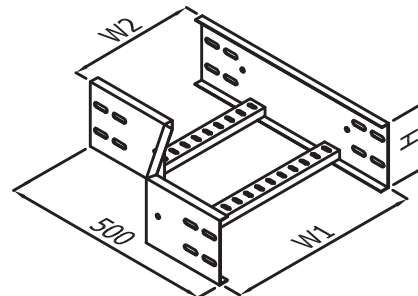
LADDER LEFT HAND REDUCER



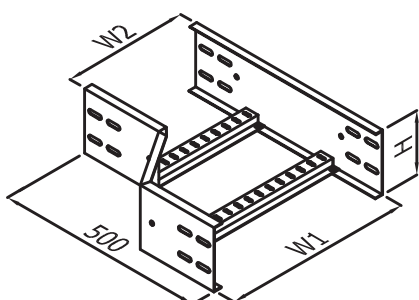
PROFILE TYPE : HL



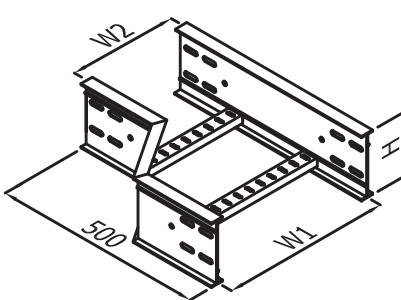
PROFILE TYPE : CPL



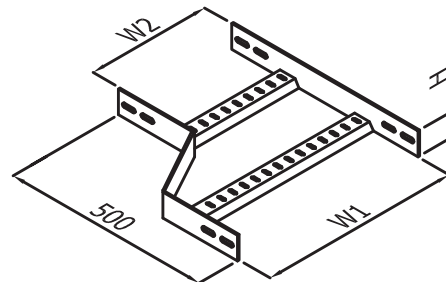
PROFILE TYPE : CI



PROFILE TYPE : KFL



PROFILE TYPE : AI



PROFILE TYPE : FB

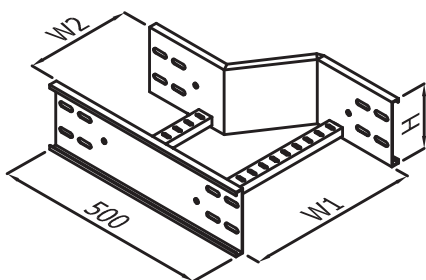
Ladder Type	Height,H (mm)	Width,W1 (mm)	Width,W2 (mm)	Thickness,t (mm)
LLR	75	100 - 900	100 - 900	1.2 - 3.0
	100			
	125			
	150			

PRODUCT CODE (HOW TO ORDER)

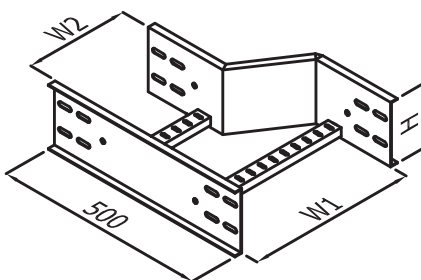
e.g ; CI150B/1.5/LLR300-150/GAE

PROFILE TYPE	HEIGHT	RUNG TYPE	THICKNESS	LADDER TYPE	WIDTH,W1	WIDTH,W2	MATERIAL
CI	150	B	1.5	LLR	300	150	GAE

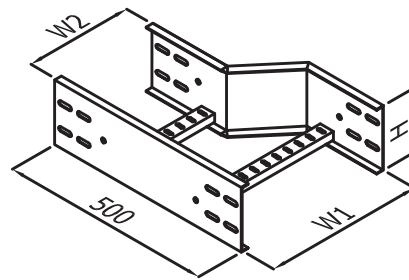
LADDER RIGHT HAND REDUCER



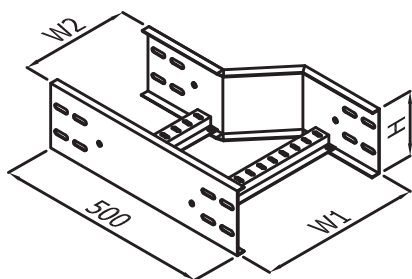
PROFILE TYPE : HL



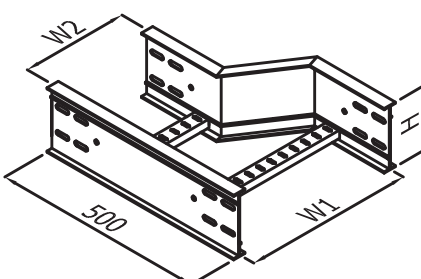
PROFILE TYPE : CPL



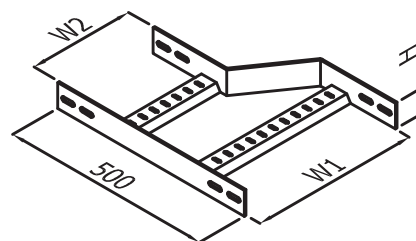
PROFILE TYPE : CI



PROFILE TYPE : KFL



PROFILE TYPE : AI



PROFILE TYPE : FB

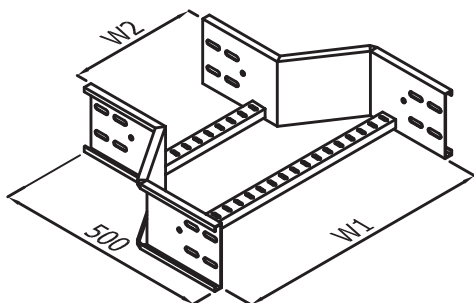
Ladder Type	Height,H (mm)	Width,W1 (mm)	Width,W2 (mm)	Thickness,t (mm)
LRR	75	100 - 900	100 - 900	1.2 - 3.0
	100			
	125			
	150			

PRODUCT CODE (HOW TO ORDER)

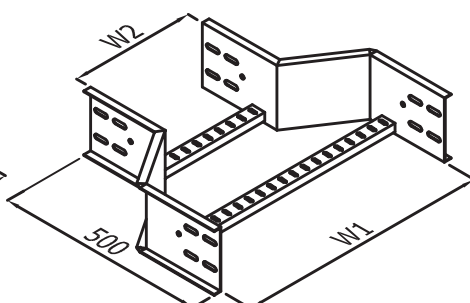
e.g ; KFL100F/1.5/LRR200-100/SS4

PROFILE TYPE	HEIGHT	RUNG TYPE	THICKNESS	LADDER TYPE	WIDTH,W1	WIDTH,W2	MATERIAL
KFL	100	F	1.5	LRR	200	100	SS4

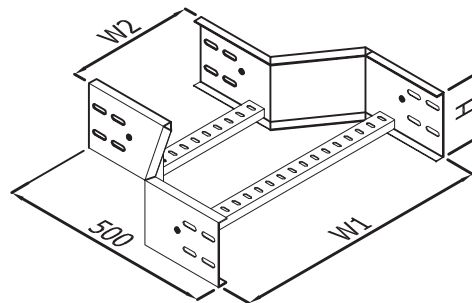
LADDER CONCENTRIC REDUCER



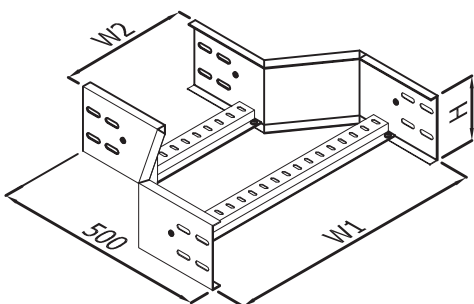
PROFILE TYPE : HL



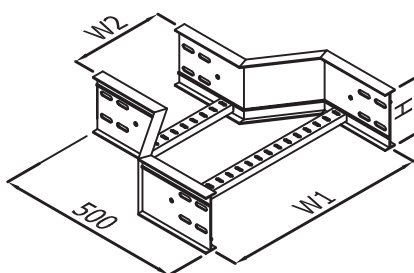
PROFILE TYPE : CPL



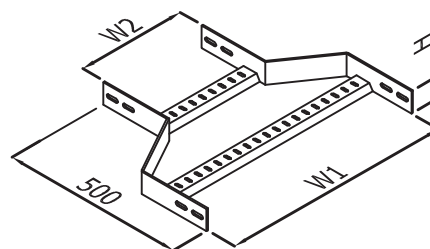
PROFILE TYPE : CI



PROFILE TYPE : KFL



PROFILE TYPE : AI



PROFILE TYPE : FB

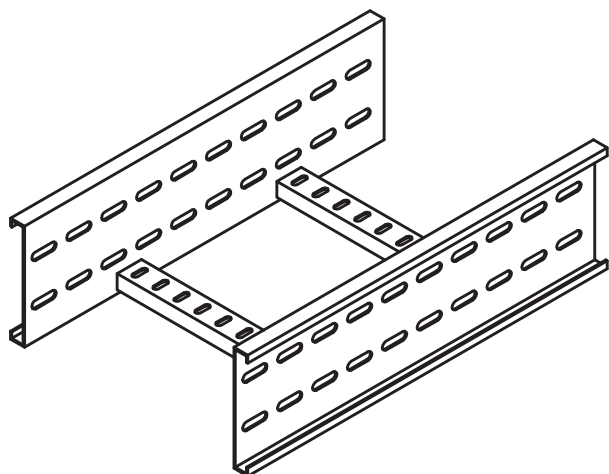
Ladder Type	Height,H (mm)	Width,W1 (mm)	Width,W2 (mm)	Thickness,t (mm)
LCR	75	100 - 900	100 - 900	1.2 - 3.0
	100			
	125			
	150			

PRODUCT CODE (HOW TO ORDER)

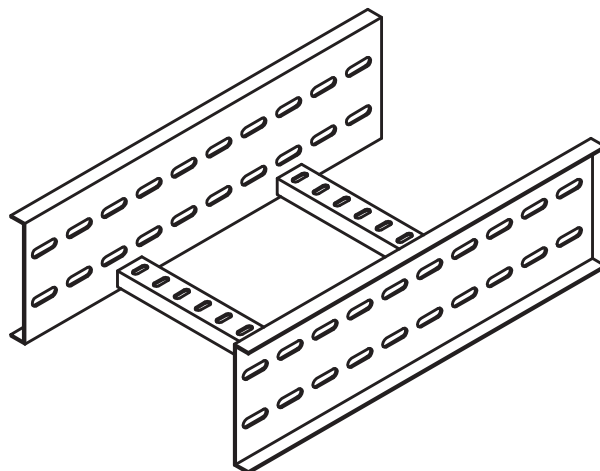
e.g ; HL150E/2.0/LCR600-450/MSG

PROFILE TYPE	HEIGHT	RUNG TYPE	THICKNESS	LADDER TYPE	WIDTH,W1	WIDTH,W2	MATERIAL
HL	150	E	2.0	LCR	600	450	MSG

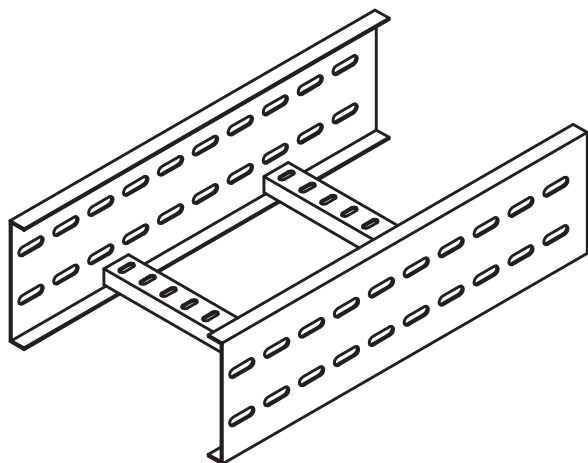
SLOTTED LADDER TYPE (OPTIONAL)



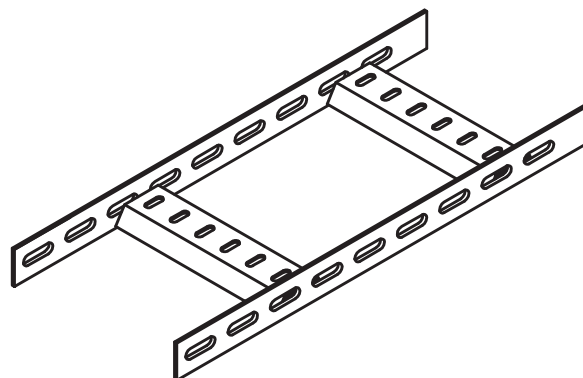
PROFILE TYPE : HL



PROFILE TYPE : CPL



PROFILE TYPE : CI



PROFILE TYPE : FB

Profile Type	Height,H (mm)	NEMA Rating	Width,W (mm)	Thickness,t (mm)	Material	Finishing
HL, CPL, CI, FB	75	8AB	100 - 900	1.2 - 3.0	Stainless Steel 304	VCI Coating
	100	8ABC, 12A			Stainless Steel 316	
	125	8ABC, 12ABC			Stainless Steel 316L	
	150	8ABC, 12ABC, 16ABC, 20A			Aluminium 5052	
					Mild Steel	Hot Dip Galvanised
					High Silicon Steel	
					Pre-Galvanised	Epoxy Coating
					Electro Galvanised	

PRODUCT CODE (HOW TO ORDER)

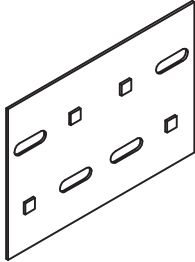
e.g ; CPL150B3/2.0/SL900/SS4

PROFILE TYPE	HEIGHT	RUNG TYPE	LENGTH	THICKNESS	LADDER TYPE	WIDTH	MATERIAL
CPL	150	B	3	2.0	SL	900	SS4

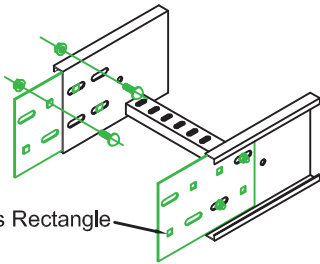
LADDER ACCESSORIES

Ladder Straight Splice Plate
Code: LSP-1

1



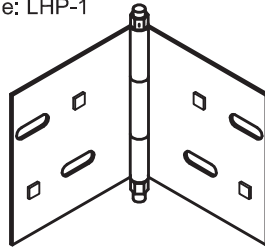
Fastener: 4 sets of M10x20 Carriage Bolt & Serrated Flange Nut



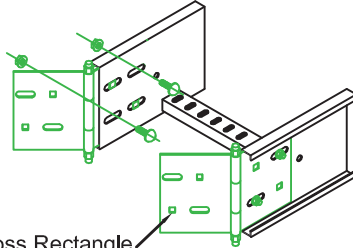
Emboss Rectangle

Ladder Horizontal Adjustable Splice Plate
Code: LHP-1

2



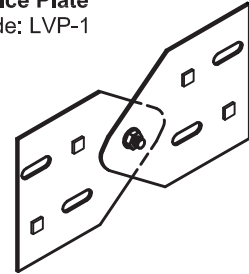
Fastener: 4 sets of M10x20 Carriage Bolt & Serrated Flange Nut



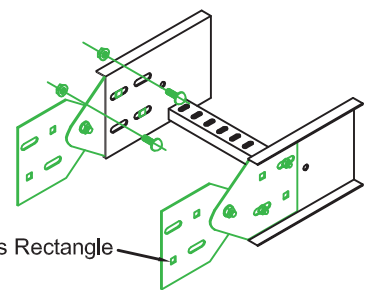
Emboss Rectangle

Ladder Vertical Adjustable Splice Plate
Code: LVP-1

3



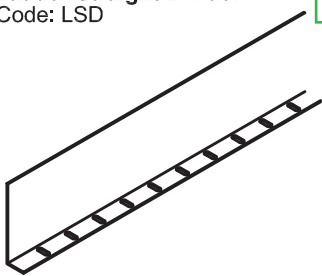
Fastener: 4 sets of M10x20 Carriage Bolt & Serrated Flange Nut



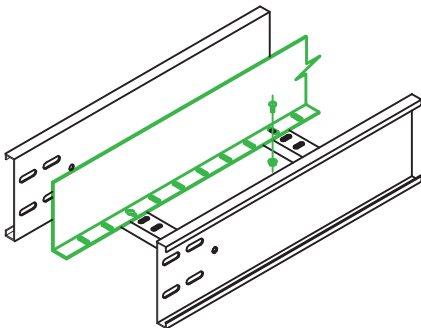
Emboss Rectangle

Ladder Straight Divider
Code: LSD

4

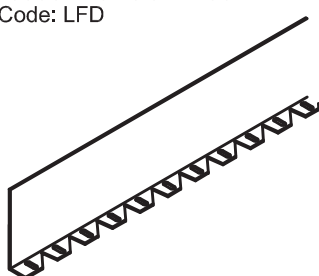


Fastener: 2 sets of M6x16 Pan Head Bolt & Serrated Flange Nut

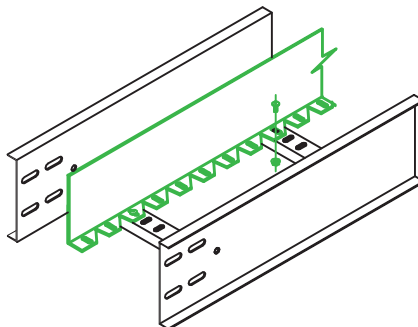


Ladder Flexible Divider
Code: LFD

5

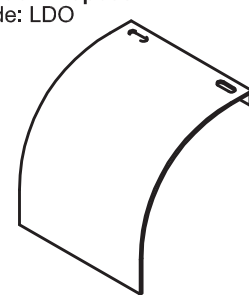


Fastener: 2 sets of M6x16 Pan Head Bolt & Serrated Flange Nut

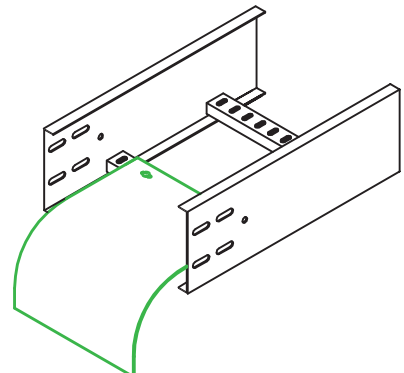


Ladder Dropout
Code: LDO

6



Fastener: 2 sets of M6x16 Pan Head Bolt & Serrated Flange Nut



PRODUCT CODE (HOW TO ORDER)

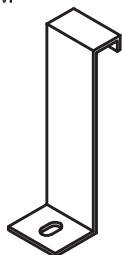
e.g ; CI150/1.5/LSP/S6L

PROFILE TYPE	HEIGHT	THICKNESS	ITEM CODE	MATERIAL
CI	150	1.5	LSP	S6L

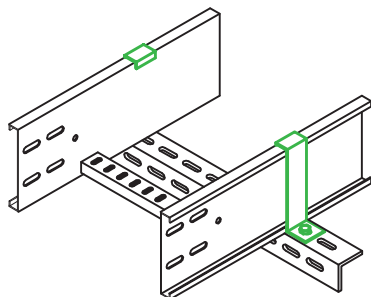
LADDER ACCESSORIES

Ladder Hold Down Clamp
Code: LHM

7

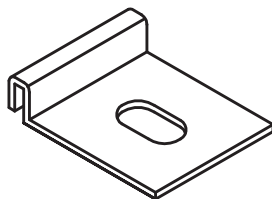


Fastener: 1 set of M10x30 Hex Bolt & Serrated Flange Nut

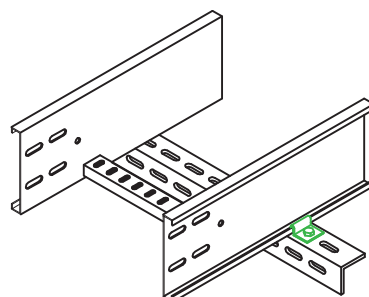


Ladder Hold Down U Clip
(for HL 90° Flange)
Code: LHU

8

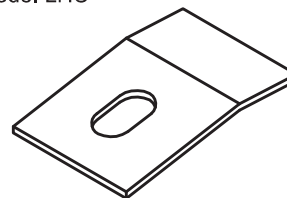


Fastener: 1 set of M10x30 Hex Bolt & Serrated Flange Nut

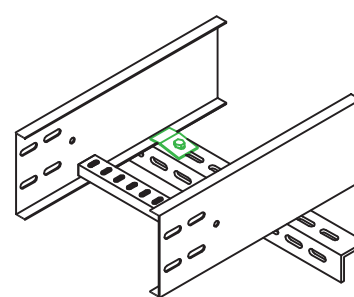


Ladder Hold Down Clip
(for 'C' Profile Ladder)
Code: LHC

9

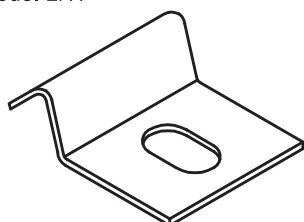


Fastener: 1 set of M10x30 Hex Bolt & Serrated Flange Nut

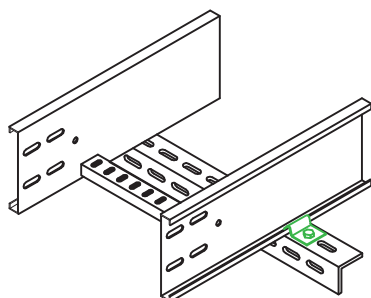


Ladder Hold Down V-Clip
(for HL 45° Flange)
Code: LHV

10

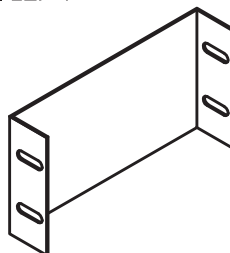


Fastener: 1 set of M10x30 Hex Bolt & Serrated Flange Nut

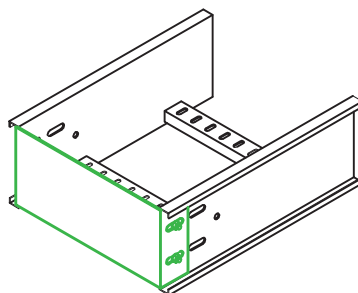


Ladder End Plate
Code: LEP-1

11

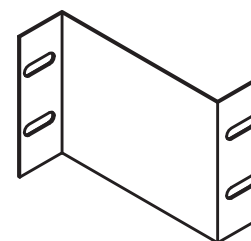


Fastener: 4 sets of M10x20 Carriage Bolt & Serrated Flange Nut

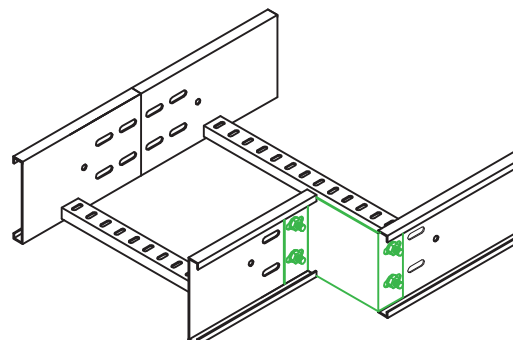


Ladder Reducer Plate
Code: LRP-1

12



Fastener: 4 set of M10x20 Carriage Bolt & Serrated Flange Nut



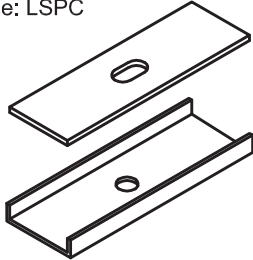
PRODUCT CODE (HOW TO ORDER)

e.g ; HL150/2.0/LHM/MSG

PROFILE TYPE	HEIGHT	THICKNESS	ITEM CODE	MATERIAL
HL	150	2.0	LHM	MSG

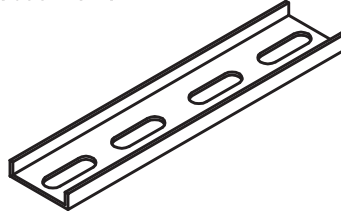
LADDER ACCESSORIES

**Ladder Splice Plate (C Type)
(for FB-Non Slotted)** 13
Code: LSPC



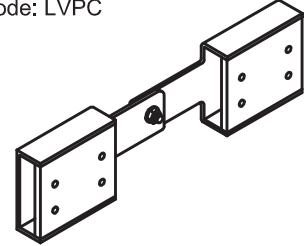
Fastener: 1 set of M10x20 Carriage Bolt & Serrated Flange Nut

**Ladder Splice Plate (C Type)
(for FB-Slotted)** 14
Code: LSPC2

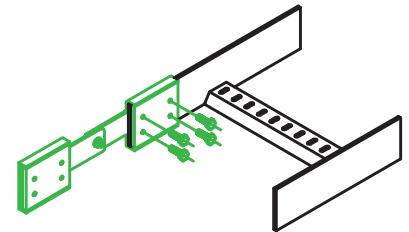
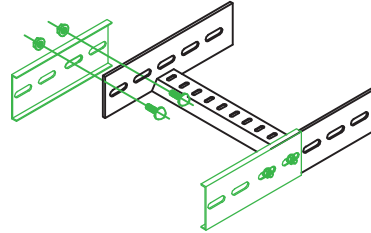
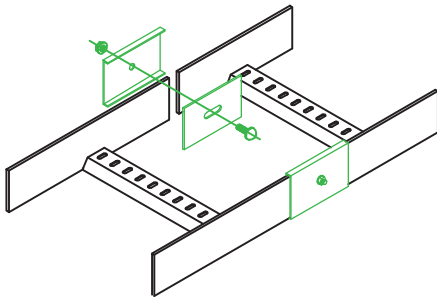


Fastener: 4 set of M10x20 Carriage Bolt & Serrated Flange Nut

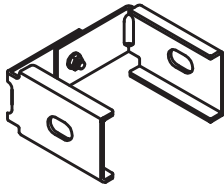
**Ladder Vertical Adjustable
Splice Plate (for FB-Non
Slotted)** 15
Code: LVPC



Fastener: 8 set of M6x20 Hex Bolt



**Ladder Horizontal Adjustable
Splice Plate - Without Hinges** 16
(for FB-Slotted)
Code: LHP2



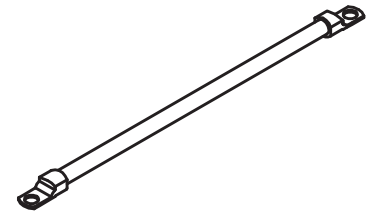
Fastener: 2 set of M10x20 Carriage Bolt & Serrated Flange Nut

**Earth Bonding Jumper
(Material : Wire Braided)** 17
Code: LBJ16

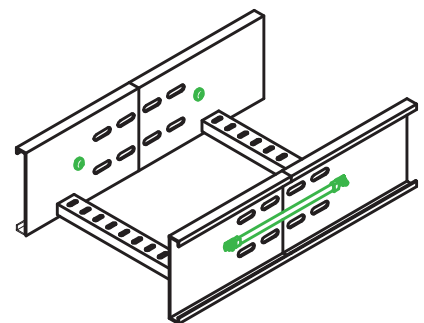
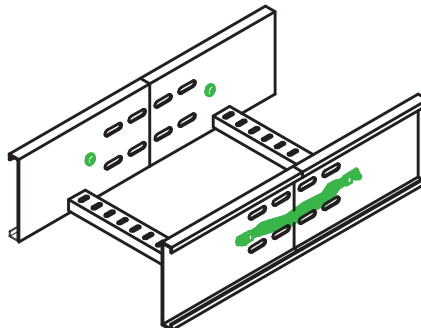
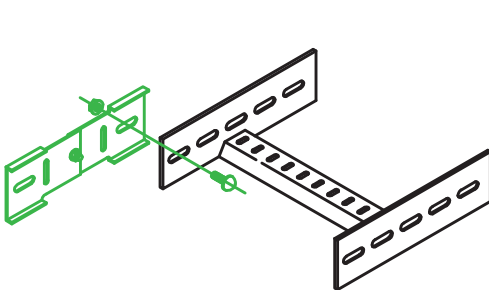


Fastener: 2 pcs of M8x20 Pan Head Bolt & Serrated Flange Nut

**Earth Bonding Jumper
(Material : Green/Yellow
PVC)** 18
Code: LBJ16



Fastener: 2 pcs of M8x20 Pan Head Bolt & Serrated Flange Nut



PRODUCT CODE (HOW TO ORDER)

e.g ; CPL150/1.5/LSPC2/SS6

PROFILE TYPE	HEIGHT	THICKNESS	ITEM CODE	MATERIAL
CPL	150	1.5	LSPC2	SS6

LADDER ACCESSORIES

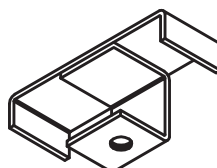
ladder Edge Protector
Code: LPR

19

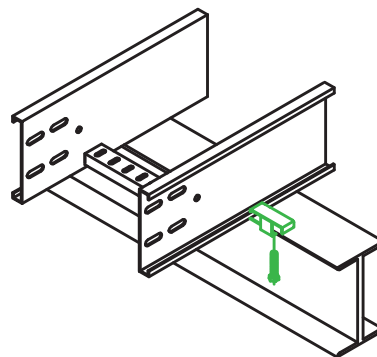
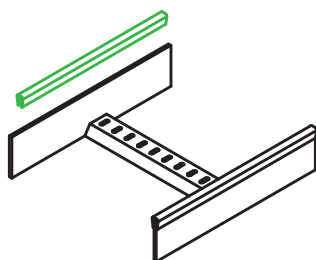


Ladder Double Hold Clamp
Code: LHD

20



Fastener: 1 pc of M8x40 Hex Bolt

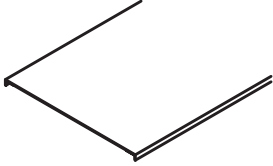
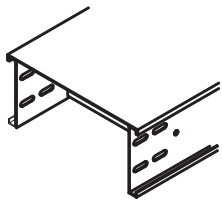
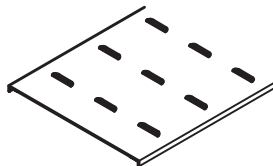
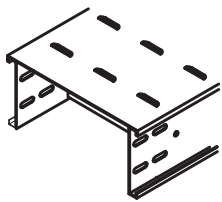
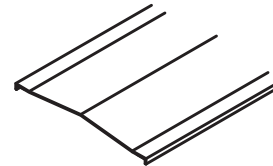
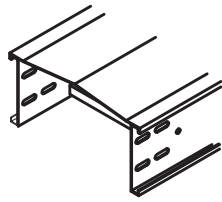
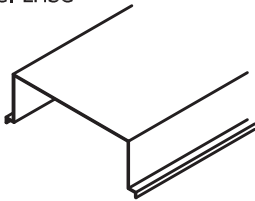
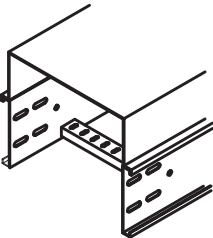


PRODUCT CODE (HOW TO ORDER)

e.g ; CPL150/2.0/LHD/GAE

PROFILE TYPE	HEIGHT	THICKNESS	ITEM CODE	MATERIAL&FINISHING
CPL	150	2.0	LHD	GAE

LADDER COVER

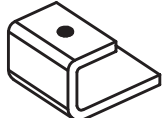
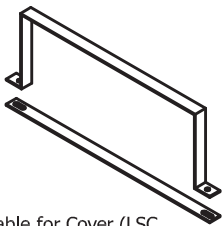
Ladder Solid Cover Code: LSC  Fastener: 4 sets of Cover Clip c/w M6x20 Hex Bolt 	Ladder Ventilated Cover Code: LVC  Fastener: 4 sets of Cover Clip c/w M6x20 Hex Bolt 	Ladder Solid Peak Type Cover Code: LPC  Fastener: 4 sets of Cover Clip c/w M6x20 Hex Bolt 	Ladder Solid Hat Type Cover Code: LHSC  Fastener: 4 sets of Cover Clamp c/w M6x20 Hex Bolt 
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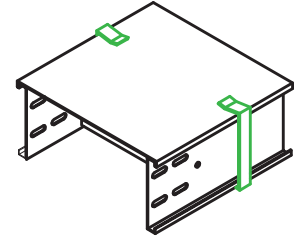
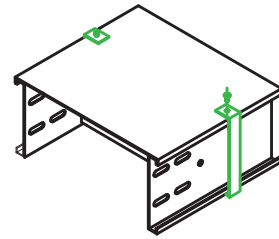
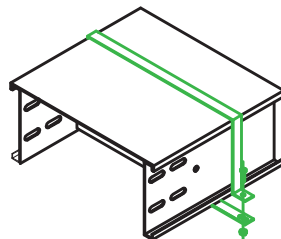
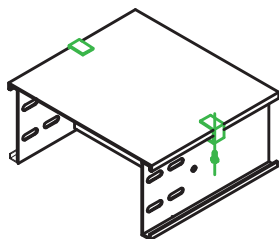
PRODUCT CODE (HOW TO ORDER)

e.g ; HL150/1.5/LSC300/3000/SS4

PROFILE TYPE	HEIGHT	THICKNESS	ITEM CODE	WIDTH	LENGTH	MATERIAL
HL	150	1.5	LSC	300	3000	SS4

LADDER ACCESSORIES FOR COVER

Ladder Cover Clip Code: LCC  ** Suitable for Cover (LSC,LVC & LPC) Fastener: 1 pc of M6x20 Hex Bolt	1 Ladder Cover Clamp Code: LCL  ** Suitable for Cover (LSC, LVC & LHSC) Fastener: 2 sets of M6x20 Hex Bolt & Serrated Flange Nut	2 Ladder Cover Clip Code: LCC1  ** Suitable for Cover (LSC, LVC & LPC) Fastener: 1 pc of M6x10 Hex Bolt	3 Ladder Cover Clip Code: LCC2  ** Suitable for Cover (LSC, LVC & LPC)	4
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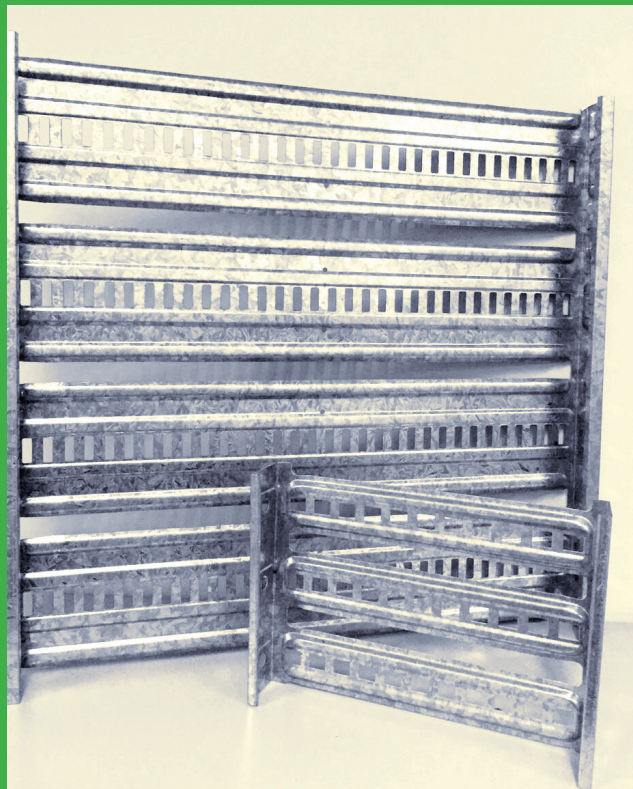


PRODUCT CODE (HOW TO ORDER)

e.g ; HL150/2.0/LCC1/SS6

PROFILE TYPE	HEIGHT	THICKNESS	ITEM CODE	MATERIAL
HL	150	2.0	LCC1	SS6

Corrugated Trough Tray Systems



Cable Tray

- Light duty.
- Good appearance.
- Light and convenience installation.
- No welding needed

Material

- Pre-Galvanised

Thickness

- Steel sheet (standard) 0.7mm

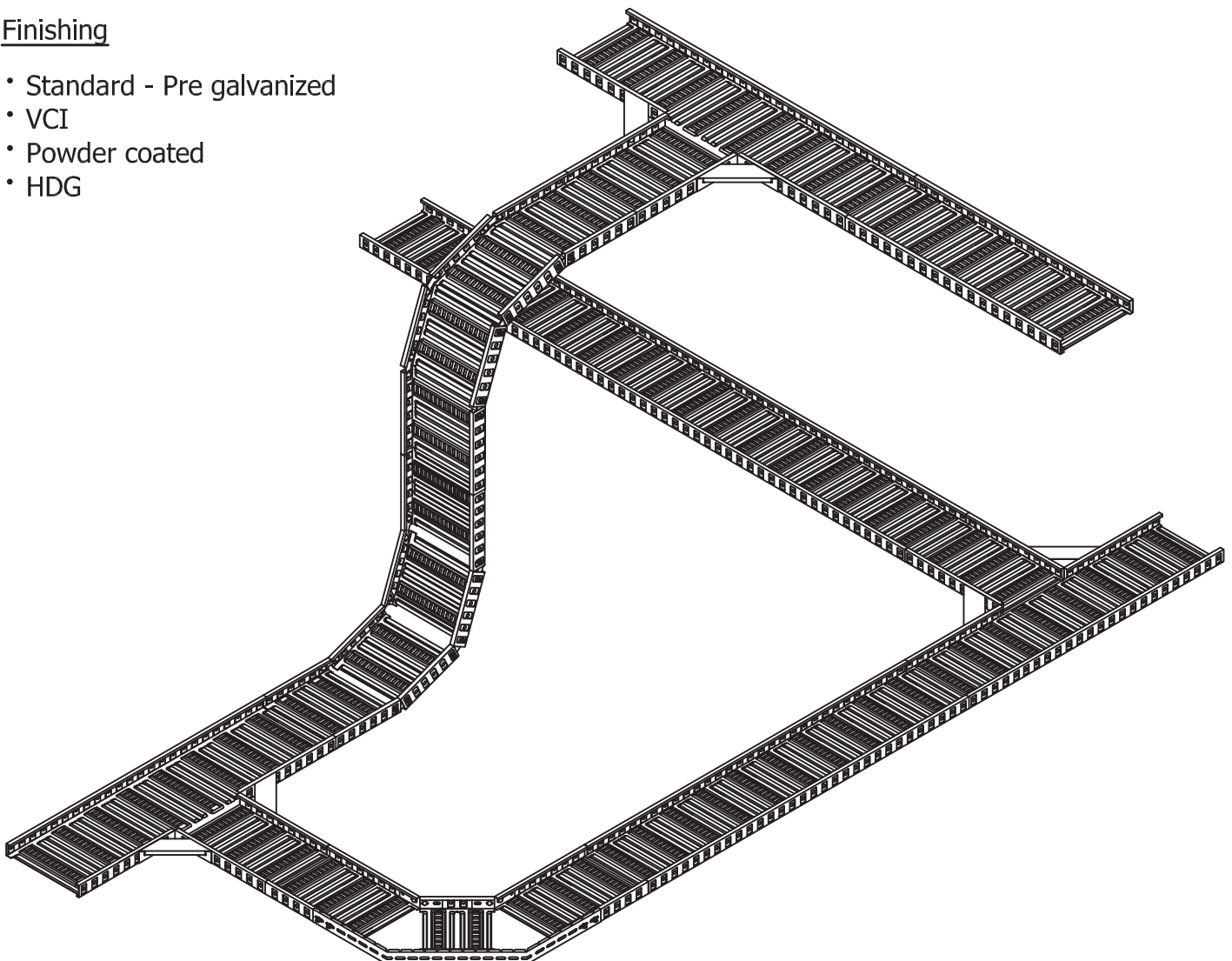
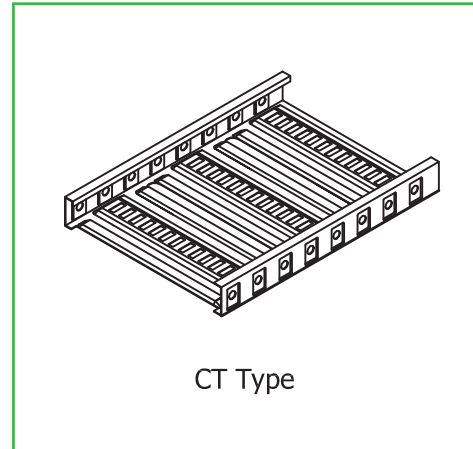
Length

- 3000mm

Finishing

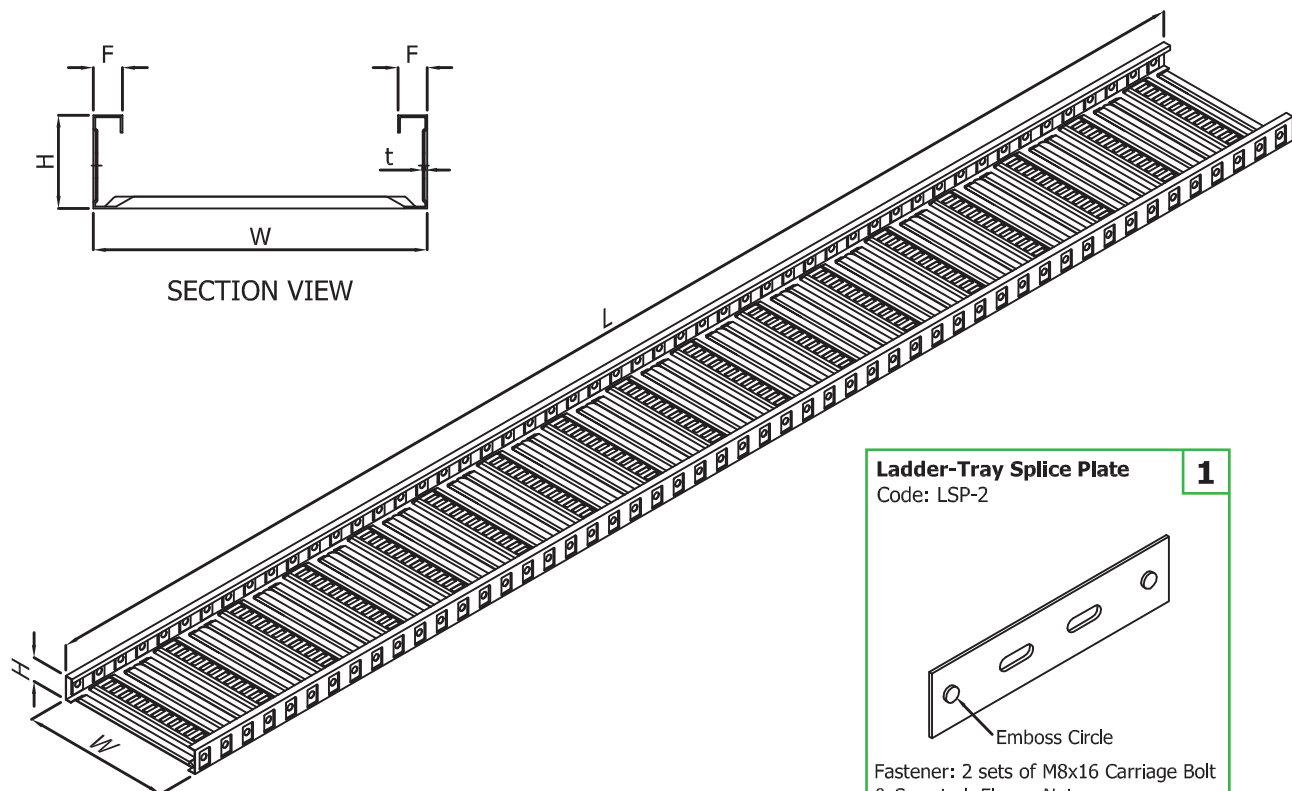
- Standard - Pre galvanized
- VCI
- Powder coated
- HDG

TRAY PROFILE



CT TYPE CABLE TRAY

- Length : 3000mm
- Dimension of slot : 9x24mm
- Coupler : 2.0mm (thickness)
- Fastener : M8x16 Carriage Bolt c/w Serrated Flange Nut (2 sets per coupler)



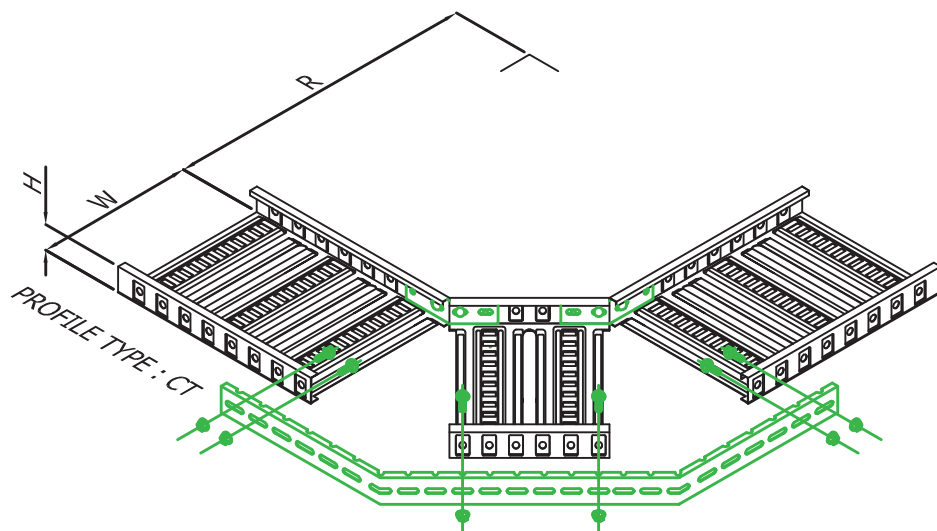
Profile Type	Height,H (mm)	Width,W (mm)	Thickness,t (mm)	Material
CT	48	150	0.7	Pre-Galvanised
		300		
		450		
		600		

PRODUCT CODE (HOW TO ORDER)

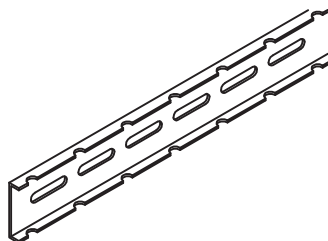
e.g ; CT48/0.7/ST170/3000/GAE

PROFILE TYPE	HEIGHT	THICKNESS	TRAY TYPE	WIDTH	LENGTH	MATERIAL
CT	48	0.7	ST	150	3000	GAE

TRAY HORIZONTAL ELBOW



Tray Radius Plate



Fastener: 6 sets of M8x16 Carriage Bolt
& Serrated Flange Nut

Tray Type	Profile Type	Height,H (mm)	Width,W (mm)	Thickness,t (mm)	Available Degree	Radius,R (mm)
TFB	CT	48	150	0.7	30°, 45°, 60°, 90°	200 - 600
			300			
			450			
			600			

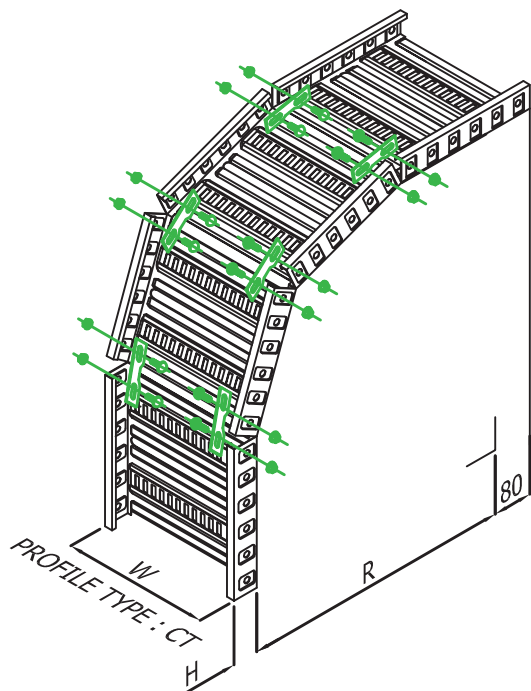
PRODUCT CODE (HOW TO ORDER)

e.g ; CT48/0.7/TFB470/90/450/GAE

PROFILE TYPE	HEIGHT	THICKNESS	TRAY TYPE	WIDTH	DEGREE	RADIUS	MATERIAL
CT	48	0.7	TFB	450	90	450	GAE

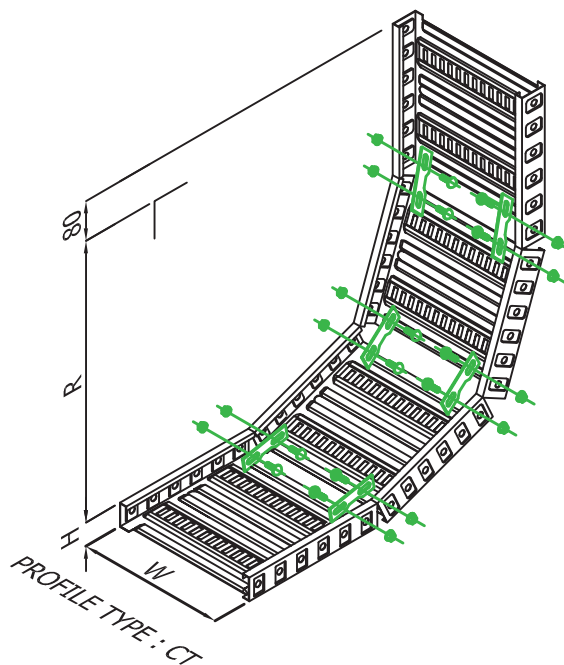
TRAY OUTSIDE ANGLE RISER

(TRAY TYPE : TOR)

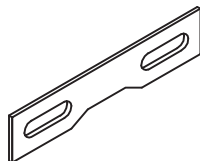


TRAY INSIDE ANGLE RISER

(TRAY TYPE : TIR)



Tray Riser Link



Fastener: 2 sets of M8x16 Carriage Bolt & Serrated Flange Nut

Tray Type	Profile Type	Height,H (mm)	Width,W (mm)	Thickness,t (mm)	Available Degree	Radius,R (mm)
TOR/TIR	CT	48	150	0.7	30°, 45°, 60°, 90°	200 - 600
			300			
			450			
			600			

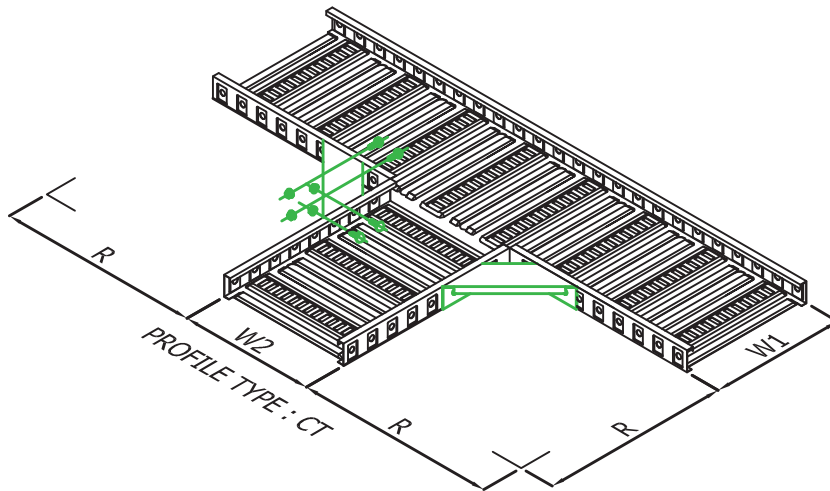
PRODUCT CODE (HOW TO ORDER)

e.g ; CT48/0.7/TOR170/90/450/GAE

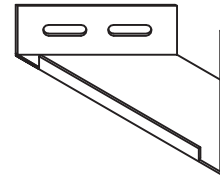
PROFILE TYPE	HEIGHT	THICKNESS	TRAY TYPE	WIDTH	DEGREE	RADIUS	MATERIAL
CT	48	0.7	TOR	150	90	450	GAE

TRAY EQUAL/UNEQUAL TEE

(TRAY TYPE : TET/TUT)



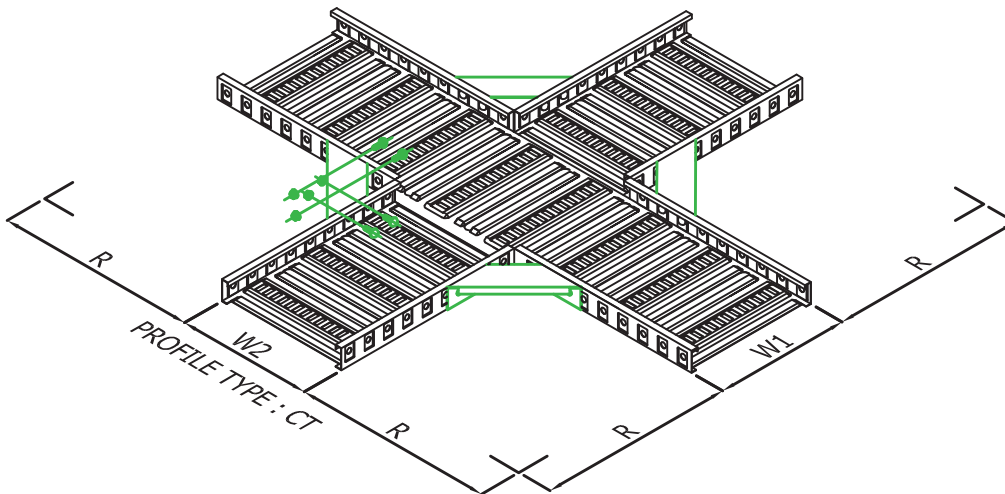
Tray Tee Cross Bracket



Fastener: 4 sets of M8x16 Carriage Bolt & Serrated Flange Nut

TRAY EQUAL/UNEQUAL CROSSOVER

(TRAY TYPE : TCO/TCU)



TYPE OF TEE

- * $W1 = W2$ - Equal (TET)
- * $W1 \neq W2$ - Unequal (TUT)

TYPE OF CROSSOVER

- * $W1 = W2$ - Equal (TCO)
- * $W1 \neq W2$ - Unequal (TCU)

Tray Type	Profile Type	Height, H (mm)	Width, W1 (mm)	Width, W2 (mm)	Thickness, t (mm)	Radius, R (mm)
TET/TUT TCO/TCU	CT	48	150	150	0.7	200 - 600
			300	300		
			450	450		
			600	600		

PRODUCT CODE (HOW TO ORDER)

e.g ; CT48/0.7/TET320-320/200/GAE

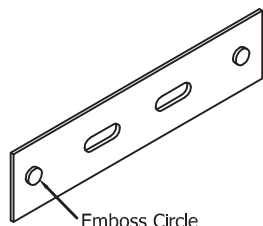
PROFILE TYPE	HEIGHT	THICKNESS	TRAY TYPE	WIDTH, W1	WIDTH, W2	RADIUS	MATERIAL
CT	48	0.7	TET	300	300	200	GAE

TRAY ACCESSORIES

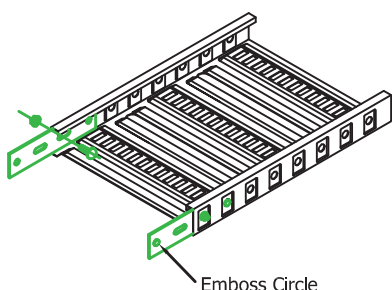
Tray Splice Plate

Code: TSP-1

1



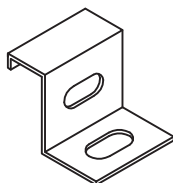
Fastener: 2 sets of M8x16 Carriage Bolt & Serrated Flange Nut



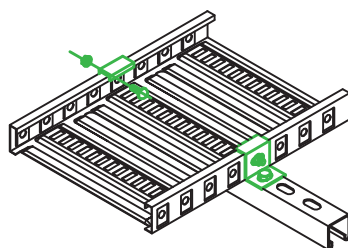
Tray Hold Down Clip

Code: THC-1

2



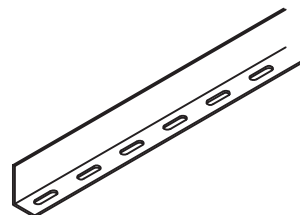
Fastener: 1 set of M8x16 Carriage Bolt & Serrated Flange Nut & 1 set of M10x30 Hex Bolt & Serrated Flange Nut



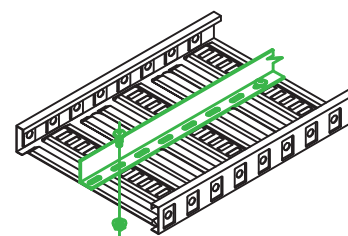
Tray Straight Divider

Code: TSD-1

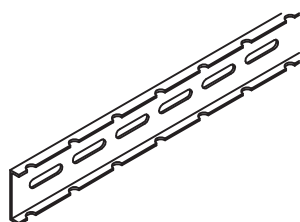
3



Fastener: 2 sets of M8x16 Carriage Bolt & Serrated Flange Nut

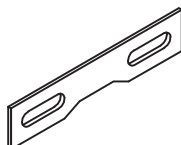


Tray Radius Plate



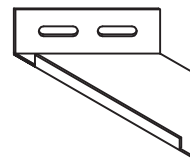
Fastener: 6 sets of M8x16 Carriage Bolt & Serrated Flange Nut

Tray Riser Link



Fastener: 2 sets of M8x16 Carriage Bolt & Serrated Flange Nut

Tray Tee Cross Bracket



Fastener: 4 sets of M8x16 Carriage Bolt & Serrated Flange Nut

PRODUCT CODE (HOW TO ORDER)

e.g ; CT48/2.0/TSP-1/GAE

PROFILE TYPE	HEIGHT	THICKNESS	ITEM CODE	MATERIAL
CT	48	2.0	TSP-1	GAE

Metallic Cable Tray



Cable Tray

- Versatile, lighter and easy to install. Wide range of load capacity profile.
- Choice of Cable Support System material shall be determined by the application environment, corrosion resistance and price are facts for consideration.

Material

- Hot Roll Mild Steel - JIS 3131
- Cold Roll Mild Steel - JIS 3141
- High Silicon Steel
- Stainless Steel - AISI 304, 316, 316L
- Pre-Galvanised
- Electro Galvanised

Thickness

- Steel sheet (standard) 1.5mm & 2.0mm
- Other thickness can be customise upon request

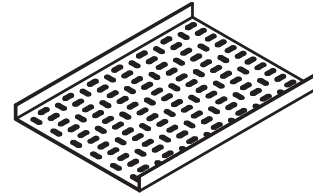
Length

- 2438mm or 3000mm

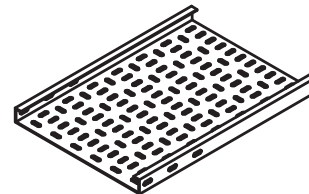
Finishing

- HDG - BS EN ISO 1461 (formally known as BS 729)
- Epoxy coating - ASTM D1654
- VCI coating

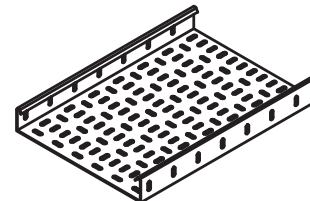
TRAY PROFILE



Light Duty Type



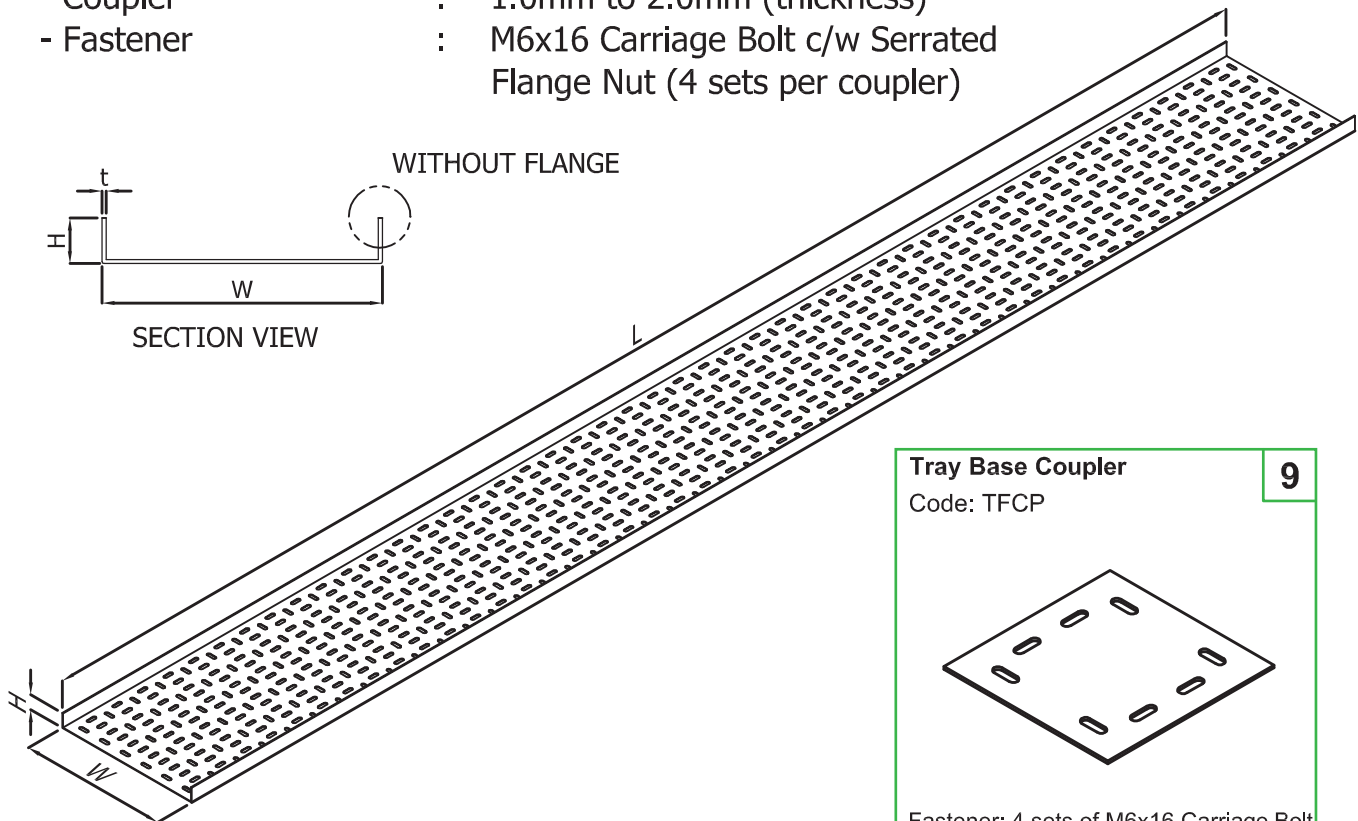
Medium Duty Type



Heavy Duty Type

LIGHT DUTY TYPE CABLE TRAY

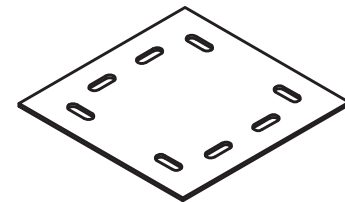
- Length : 2438mm or 3000mm
- Dimension of slot : $\phi 7 \times 20$ mm
- Coupler : 1.0mm to 2.0mm (thickness)
- Fastener : M6x16 Carriage Bolt c/w Serrated Flange Nut (4 sets per coupler)



Tray Base Coupler

Code: TFCP

9



Fastener: 4 sets of M6x16 Carriage Bolt & Serrated Flange Nut

Profile Type	Height,H (mm)	Width,W (mm)	Thickness,t (mm)	Material	Finishing
NRF	13	50 - 600	1.0 - 2.0	Stainless Steel 304	VCI Coating
	15			Stainless Steel 316	
	20			Stainless Steel 316L	
				Aluminium 5052	
				Mild Steel	Hot Dip Galvanised
				High Silicon Steel	
				Pre-Galvanised	Epoxy Coating
				Electro Galvanised	

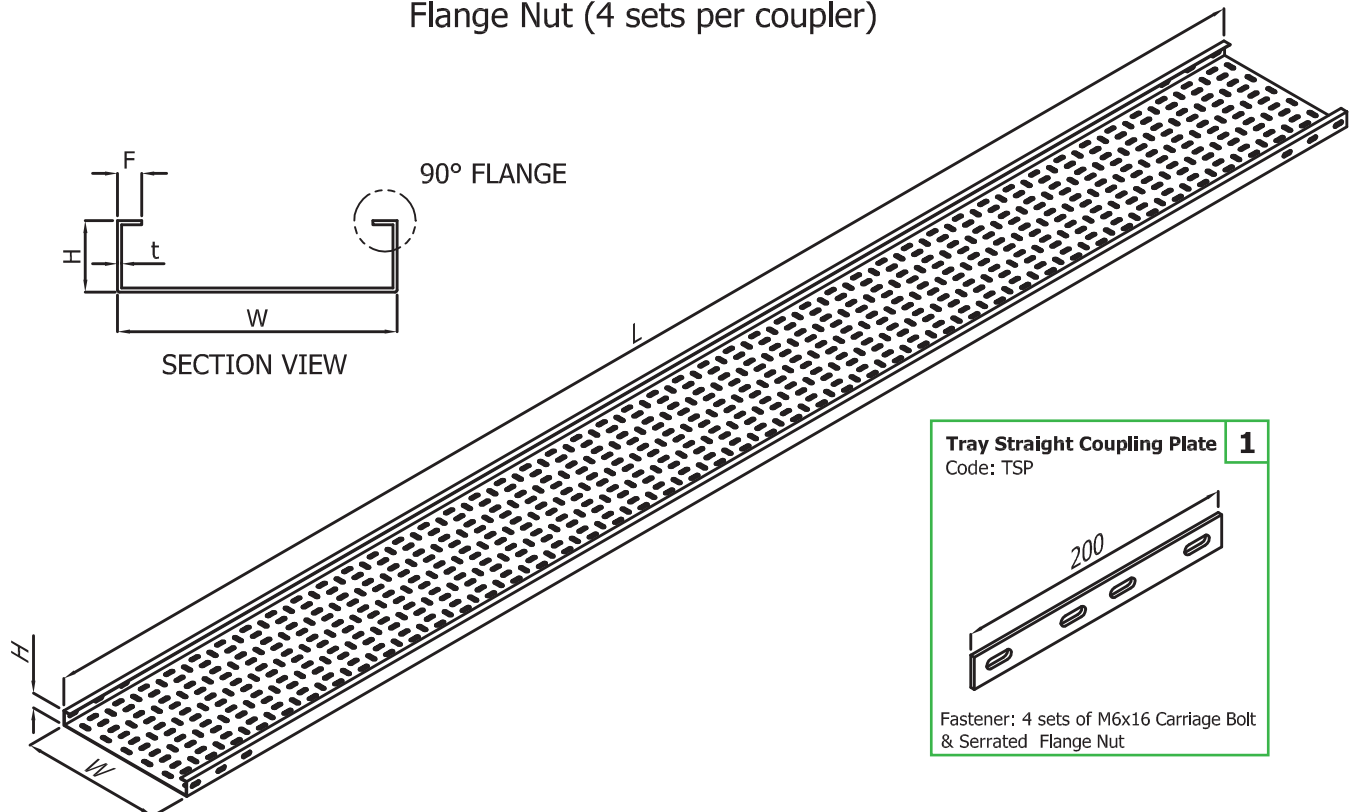
PRODUCT CODE (HOW TO ORDER)

e.g ; NRF15/1.5/ST150/3000/MSG

PROFILE TYPE	HEIGHT	THICKNESS	TRAY TYPE	WIDTH	LENGTH	MATERIAL&FINISHING
NRF	15	1.5	ST	150	3000	MSG

MEDIUM DUTY TYPE CABLE TRAY

- Length : 2438mm or 3000mm
- Dimension of slot : $\phi 7 \times 20$ mm
- Coupler : 1.5mm to 2.0mm (thickness)
- Fastener : M6x16 Carriage Bolt c/w Serrated Flange Nut (4 sets per coupler)



Profile Type	Height,H (mm)	Width,W (mm)	Thickness,t (mm)	Material	Finishing
MRF	25	50 - 600	1.0 - 2.0	Stainless Steel 304	VCI Coating
	30			Stainless Steel 316	
	40			Stainless Steel 316L	
				Aluminium 5052	
				Mild Steel	Hot Dip Galvanised
				High Silicon Steel	
				Pre-Galvanised	Epoxy Coating
				Electro Galvanised	

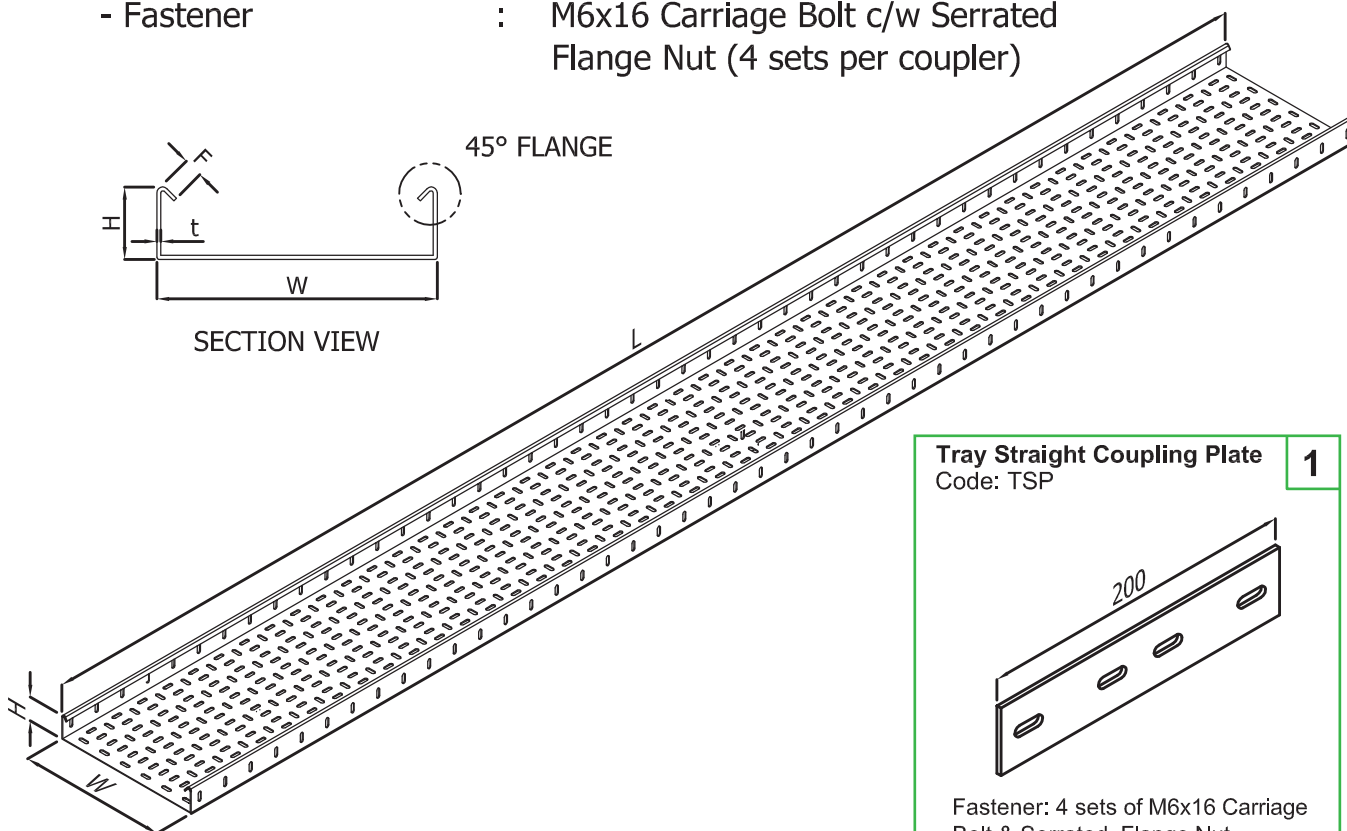
PRODUCT CODE (HOW TO ORDER)

e.g ; MRF25/1.5/ST300/3000/SS4

PROFILE TYPE	HEIGHT	THICKNESS	TRAY TYPE	WIDTH	LENGTH	MATERIAL
MRF	25	1.5	ST	300	3000	SS4

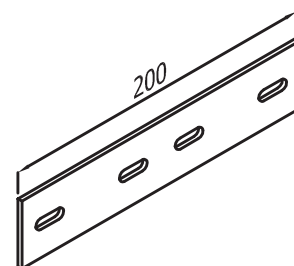
HEAVY DUTY TYPE CABLE TRAY

- Length : 2438mm or 3000mm
- Dimension of slot : $\phi 7 \times 20 \text{mm}$
- Coupler : 1.5mm to 2.0mm (thickness)
- Fastener : M6x16 Carriage Bolt c/w Serrated Flange Nut (4 sets per coupler)



Tray Straight Coupling Plate
Code: TSP

1



Fastener: 4 sets of M6x16 Carriage Bolt & Serrated Flange Nut

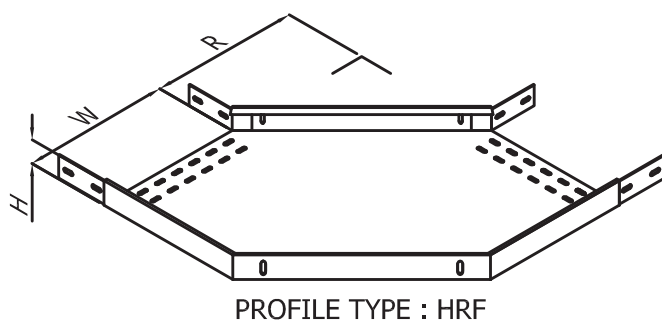
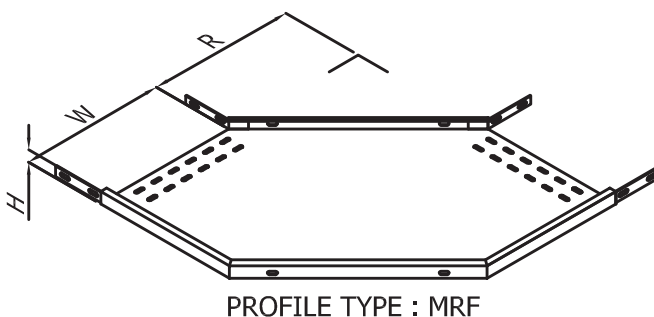
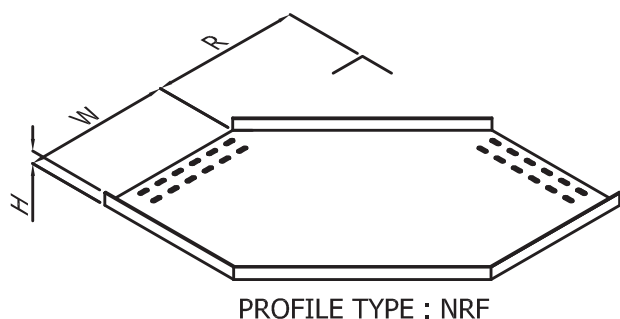
Profile Type	Height,H (mm)	Width,W (mm)	Thickness,t (mm)	Material	Finishing
HRF	50	50 - 600	1.5 - 2.0	Stainless Steel 304	VCI Coating
	100			Stainless Steel 316	
				Stainless Steel 316L	
				Aluminium 5052	Hot Dip Galvanised
				Mild Steel	
				High Silicon Steel	
				Pre-Galvanised	Epoxy Coating
				Electro Galvanised	

PRODUCT CODE (HOW TO ORDER)

e.g ; HRF50/2.0/ST450/3000/SS6

PROFILE TYPE	HEIGHT	THICKNESS	TRAY TYPE	WIDTH	LENGTH	MATERIAL
HRF	50	2.0	ST	450	3000	SS6

TRAY HORIZONTAL ELBOW



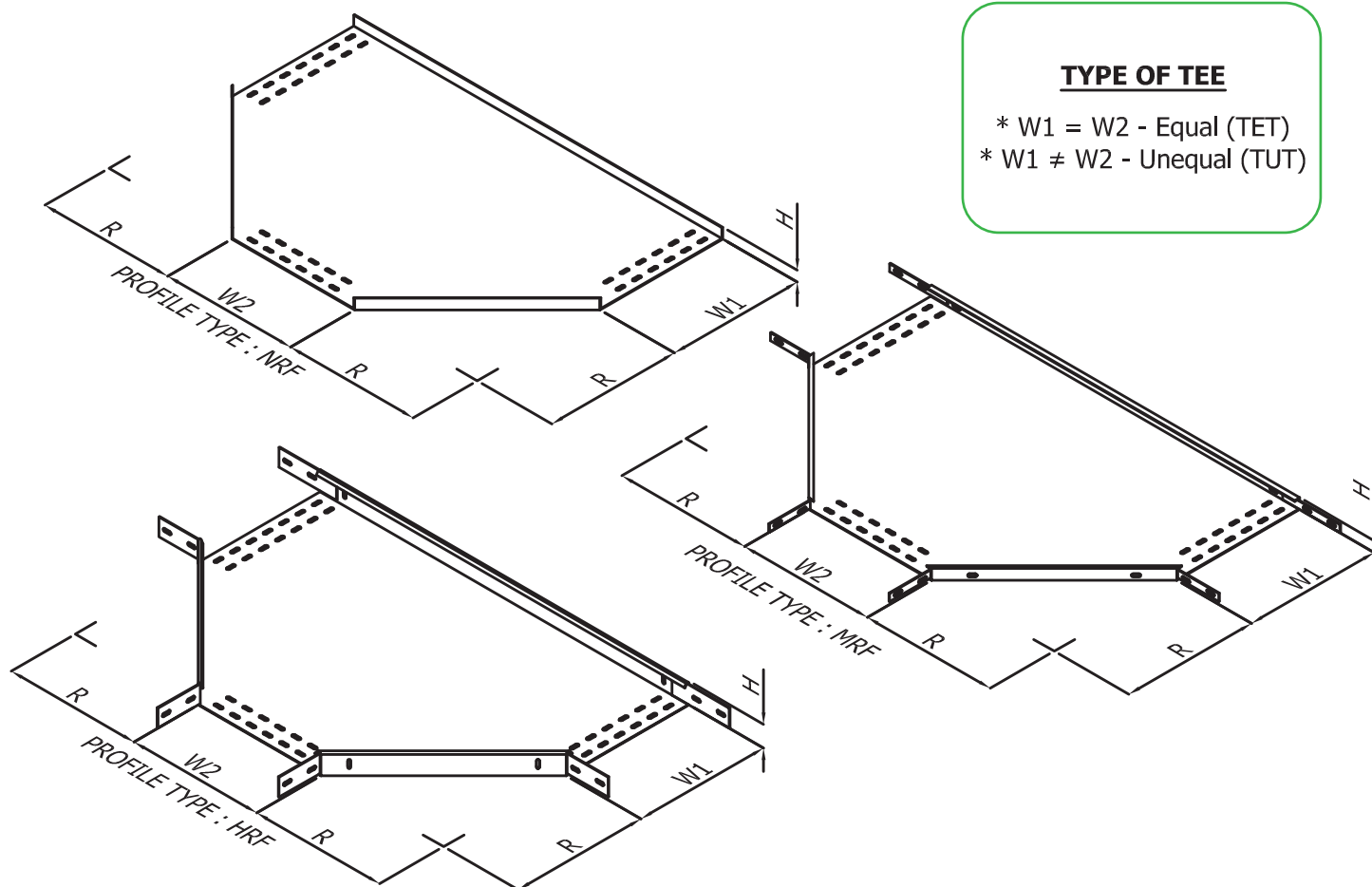
Tray Type	Profile Type	Height,H (mm)	Width,W (mm)	Thickness,t (mm)	Available Degree	Radius,R (mm)
TFB	NRF	13	50 - 600	1.0 - 2.0	30°, 45°, 60°, 90°	100 - 600
		15				
		20				
	MRF	25				
		30				
		40				
	HRF	50	50 - 600	1.5 - 2.0		
		100				

PRODUCT CODE (HOW TO ORDER)

e.g ; HRF100/2.0/TFB300/90/450/S6L

PROFILE TYPE	HEIGHT	THICKNESS	TRAY TYPE	WIDTH	DEGREE	RADIUS	MATERIAL
HRF	100	2.0	TFB	300	90	450	S6L

TRAY EQUAL/UNEQUAL TEE



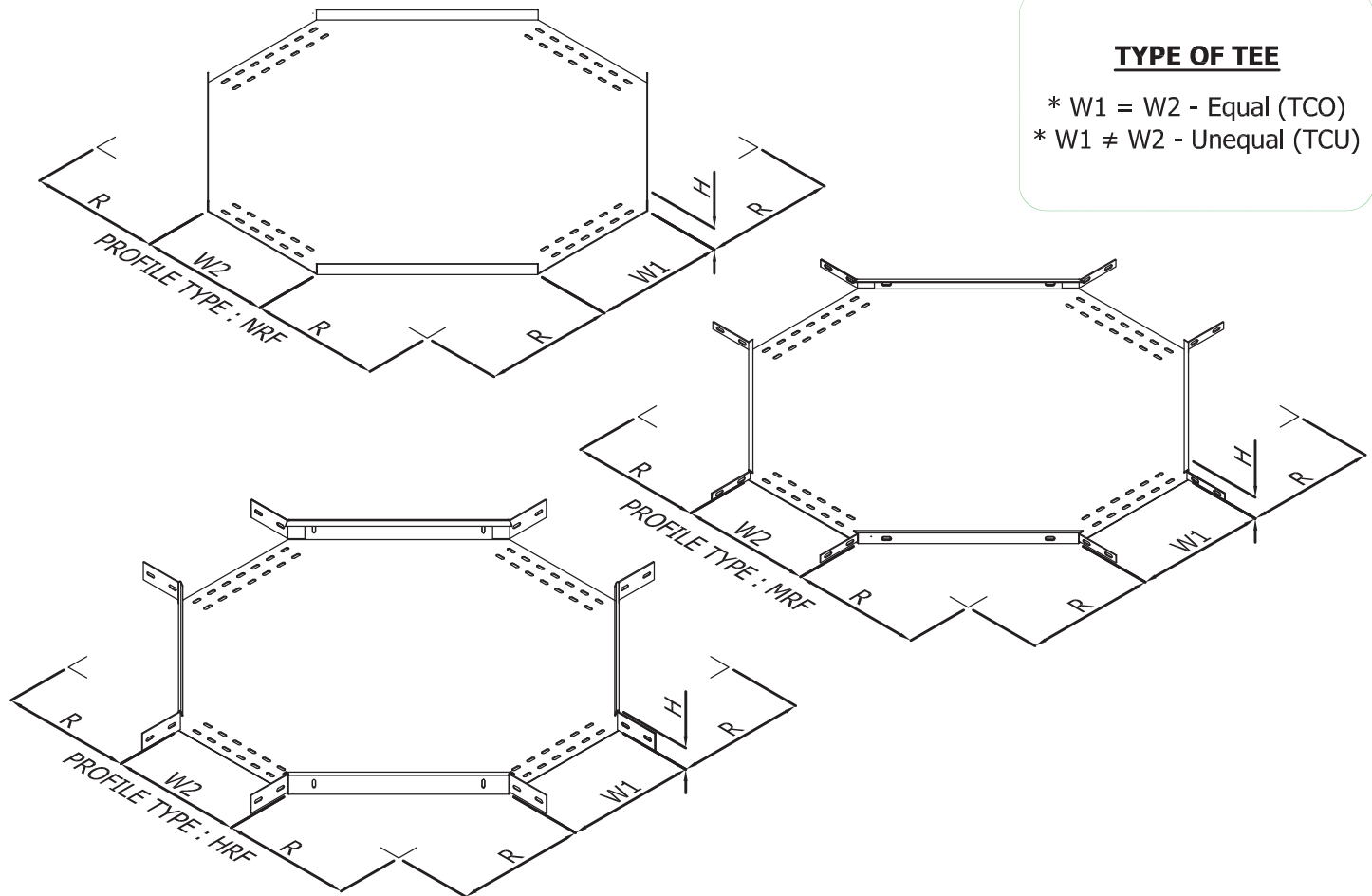
Tray Type	Profile Type	Height,H (mm)	Width,W1 (mm)	Width,W2 (mm)	Thickness,t (mm)	Radius,R (mm)
TET/TUT	NRF	13	50 - 600	50 - 600	1.0 - 2.0	100 - 600
		15				
		20				
	MRF	25				
		30				
		40				
	HRF	50	50 - 600	50 - 600	1.5 - 2.0	
		100				

PRODUCT CODE (HOW TO ORDER)

e.g ; HRF50/1.5/TUT300-150/300/SS4

PROFILE TYPE	HEIGHT	THICKNESS	TRAY TYPE	WIDTH,W1	WIDTH,W2	RADIUS	MATERIAL
HRF	50	1.5	TUT	300	150	300	SS4

TRAY EQUAL/UNEQUAL CROSSOVER



TYPE OF TEE

- * W1 = W2 - Equal (TCO)
- * W1 ≠ W2 - Unequal (TCU)

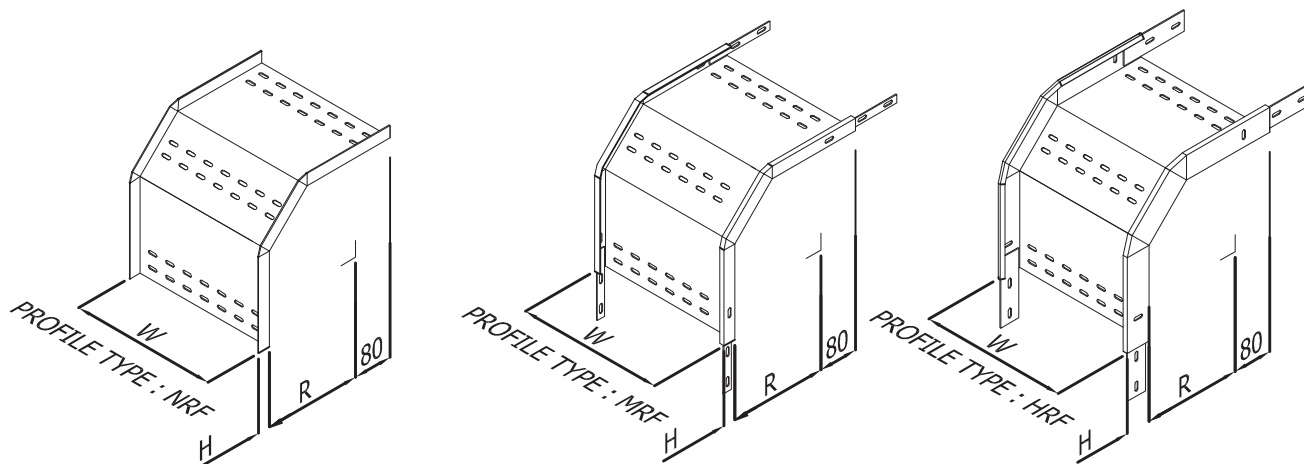
Tray Type	Profile Type	Height,H (mm)	Width,W1 (mm)	Width,W2 (mm)	Thickness,t (mm)	Radius,R (mm)
TCO/TCU	NRF	13	50 - 600	100 - 600	1.0 - 2.0	100 - 600
		15				
		20				
	MRF	25				
		30				
		40				
	HRF	50	50 - 600	100 - 600	1.5 - 2.0	
		100				

PRODUCT CODE (HOW TO ORDER)

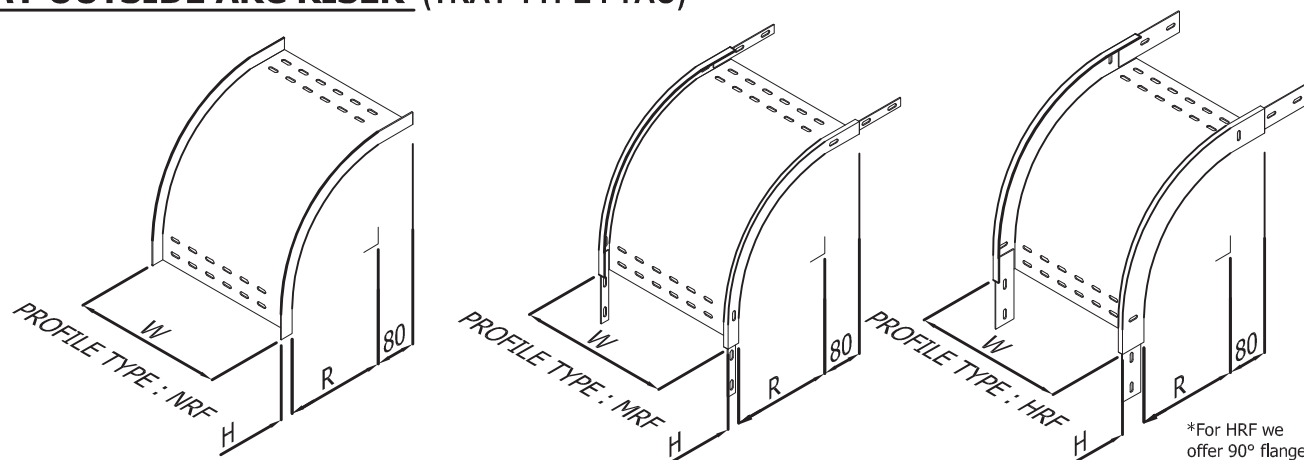
e.g ; MRF20/1.5/TCU200-150/200/S6L

PROFILE TYPE	HEIGHT	THICKNESS	TRAY TYPE	WIDTH,W1	WIDTH,W2	RADIUS	MATERIAL
MRF	20	1.5	TCU	200	150	200	S6L

TRAY OUTSIDE ANGLE RISER (TRAY TYPE : TOR)



TRAY OUTSIDE ARC RISER (TRAY TYPE : TAO)



*For HRF we offer 90° flange

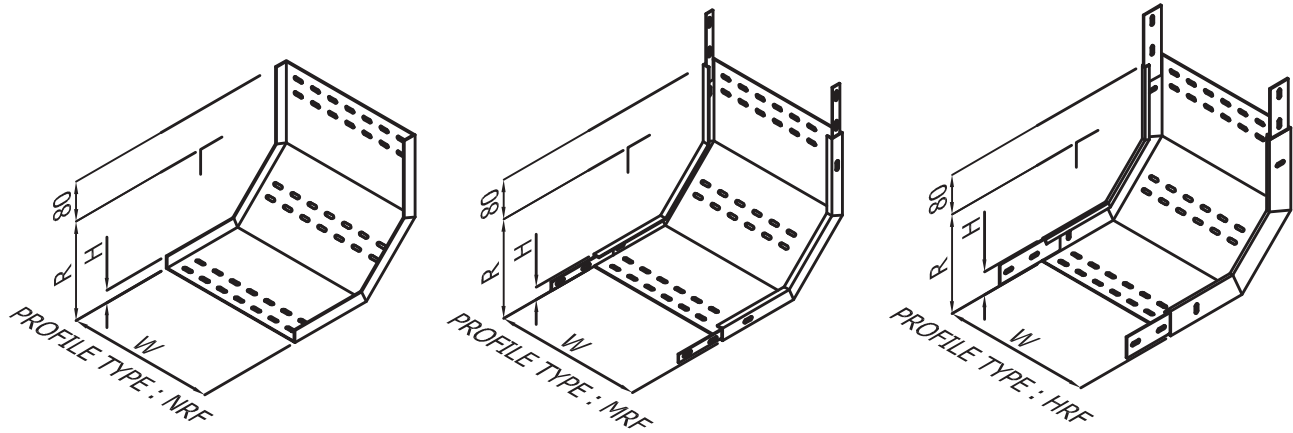
Tray Type	Profile Type	Height,H (mm)	Width,W (mm)	Thickness,t (mm)	Available Degree	Radius,R (mm)
TOR/TAO	NRF	13	50 - 600	1.0 - 2.0	30°, 45°, 60°, 90°	100 - 600
		15				
		20				
	MRF	25				
		30				
		40				
	HRF	50	50 - 600	1.5 - 2.0		
		100				

PRODUCT CODE (HOW TO ORDER)

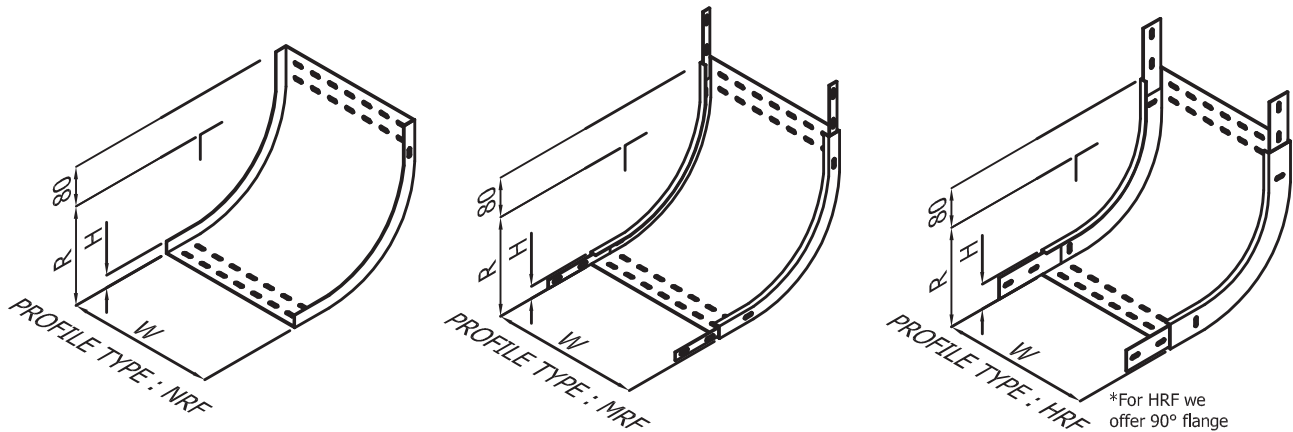
e.g ; HRF100/2.0/TOR300/90/450/S6L

PROFILE TYPE	HEIGHT	THICKNESS	TRAY TYPE	WIDTH	DEGREE	RADIUS	MATERIAL
HRF	100	2.0	TOR	300	90	450	S6L

TRAY INSIDE ANGLE RISER (TRAY TYPE : TIR)



TRAY INSIDE ARC RISER (TRAY TYPE : TAI)



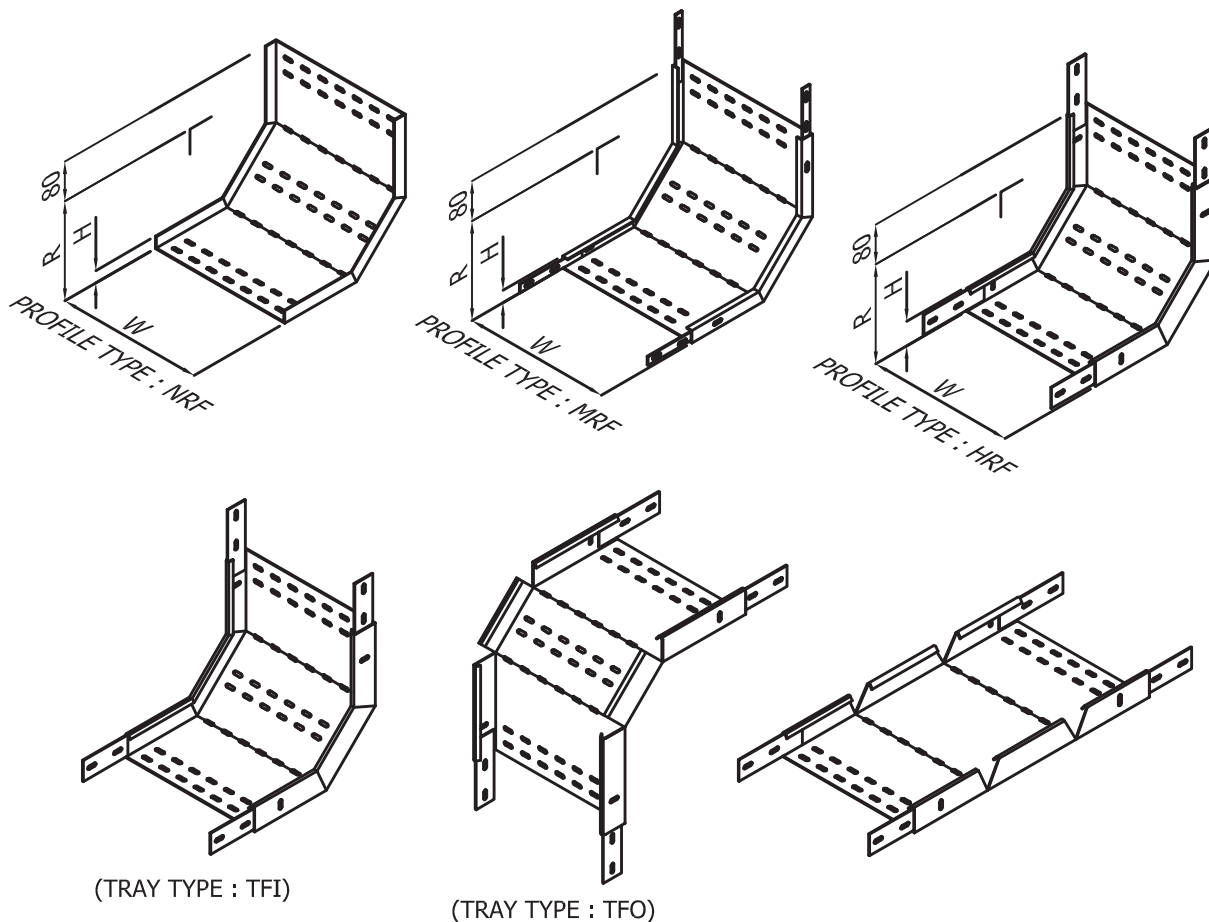
Tray Type	Profile Type	Height,H (mm)	Width,W (mm)	Thickness,t (mm)	Available Degree	Radius,R (mm)
TIR/TAI	NRF	13	50 - 600	1.0 - 2.0	30°, 45°, 60°, 90°	100 - 600
		15				
		20				
	MRF	25				
		30				
		40				
	HRF	50	50 - 600	1.5 - 2.0		
		100				

PRODUCT CODE (HOW TO ORDER)

e.g ; NRF30/1.2/TIR100/90/200/SS4

PROFILE TYPE	HEIGHT	THICKNESS	TRAY TYPE	WIDTH	DEGREE	RADIUS	MATERIAL
NRF	30	1.2	TIR	100	90	200	SS4

TRAY FLEXIBLE INSIDE/OUTSIDE RISER



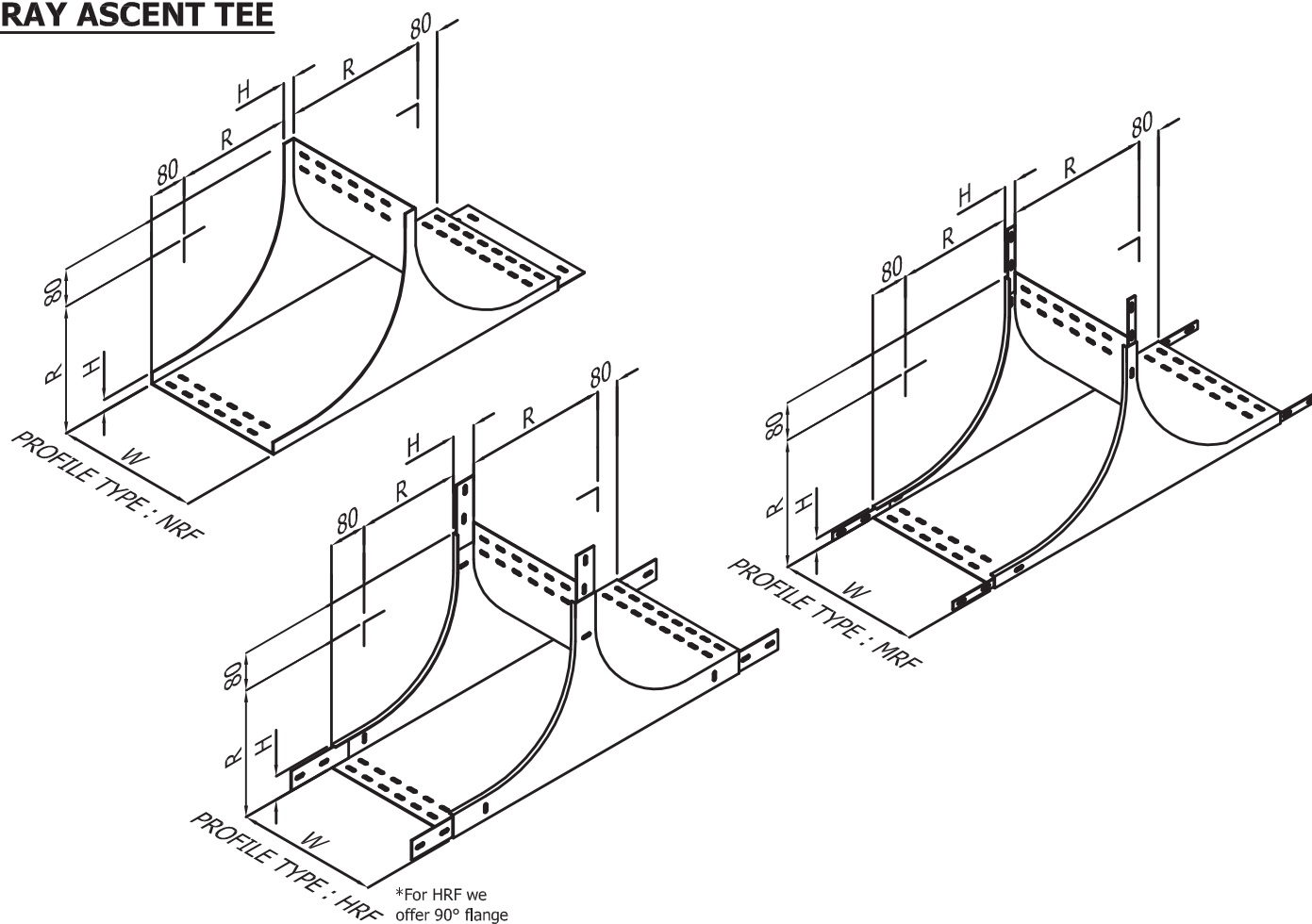
Tray Type	Profile Type	Height,H (mm)	Width,W (mm)	Thickness,t (mm)	Radius,R (mm)
TFI/TFO	NRF	13	50 - 600	1.0 - 2.0	100 - 600
		15			
		20			
	MRF	25			
		30			
		40			
	HRF	50	50 - 600	1.5 - 2.0	
		100			

PRODUCT CODE (HOW TO ORDER)

e.g ; HRF50/1.5/TFI300/300/S6L

PROFILE TYPE	HEIGHT	THICKNESS	TRAY TYPE	WIDTH	RADIUS	MATERIAL
HRF	50	1.5	TFI	300	300	S6L

TRAY ASCENT TEE



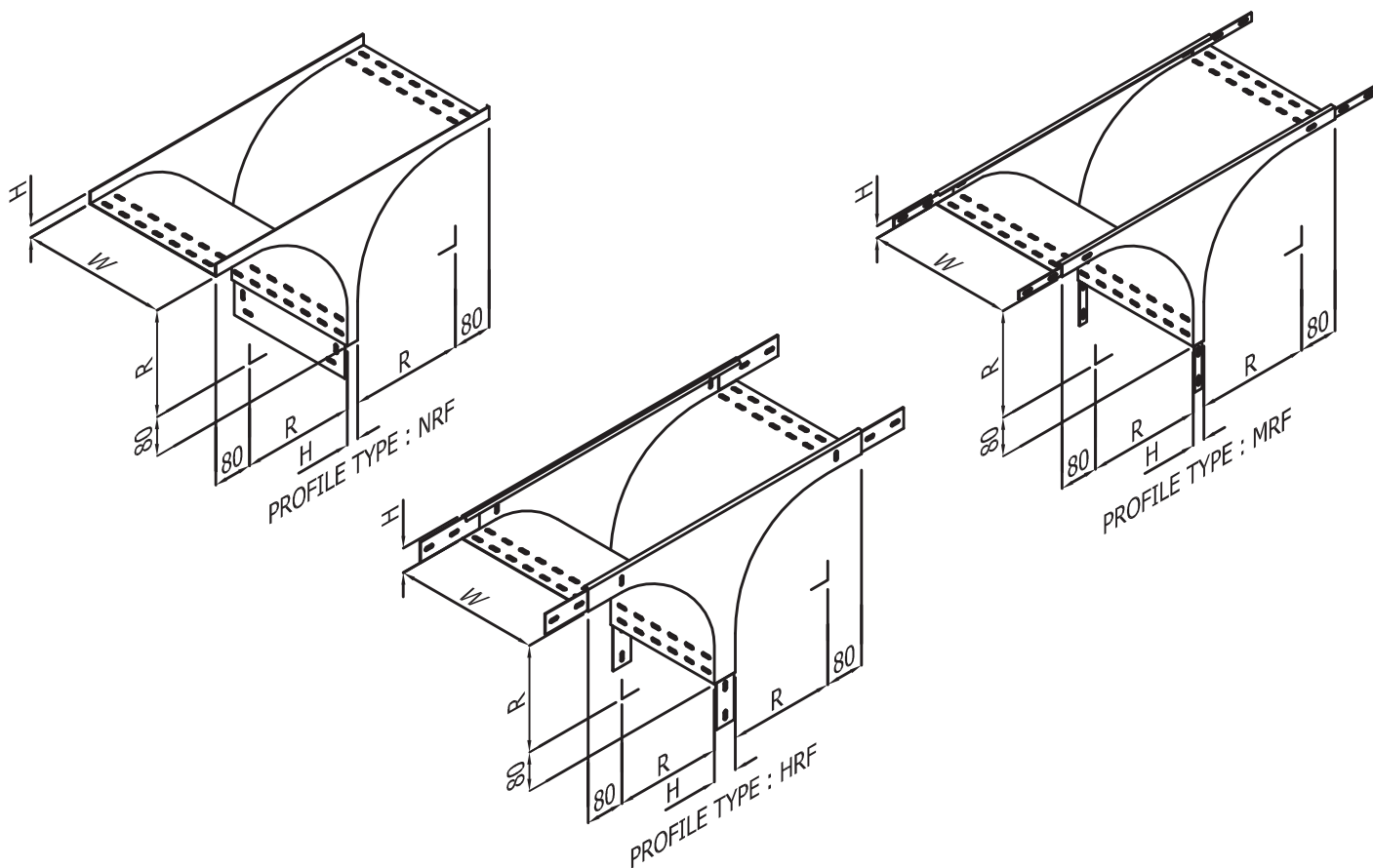
Tray Type	Profile Type	Height,H (mm)	Width,W (mm)	Thickness,t (mm)	Radius,R (mm)
TAT	NRF	13	50 - 600	1.0 - 2.0	100 - 600
		15			
		20			
	MRF	25			
		30			
		40			
	HRF	50	50 - 600	1.5 - 2.0	
		100			

PRODUCT CODE (HOW TO ORDER)

e.g ; HRF50/1.5/TAT300/300/S6L

PROFILE TYPE	HEIGHT	THICKNESS	TRAY TYPE	WIDTH	RADIUS	MATERIAL
HRF	50	1.5	TAT	300	300	S6L

TRAY DESCENT TEE



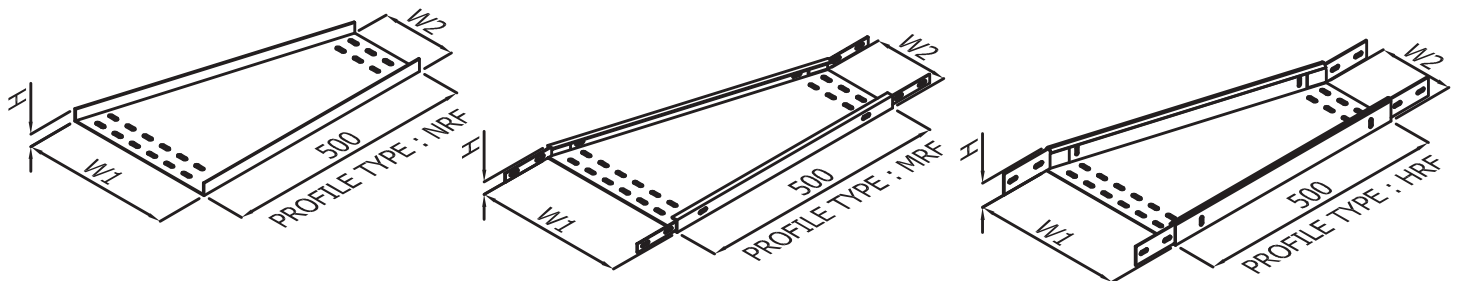
Tray Type	Profile Type	Height,H (mm)	Width,W (mm)	Thickness,t (mm)	Radius,R (mm)
TDT	NRF	13	50 - 600	1.0 - 2.0	100 - 600
		15			
		20			
	MRF	25			
		30			
		40			
	HRF	50	50 - 600	1.5 - 2.0	
		100			

PRODUCT CODE (HOW TO ORDER)

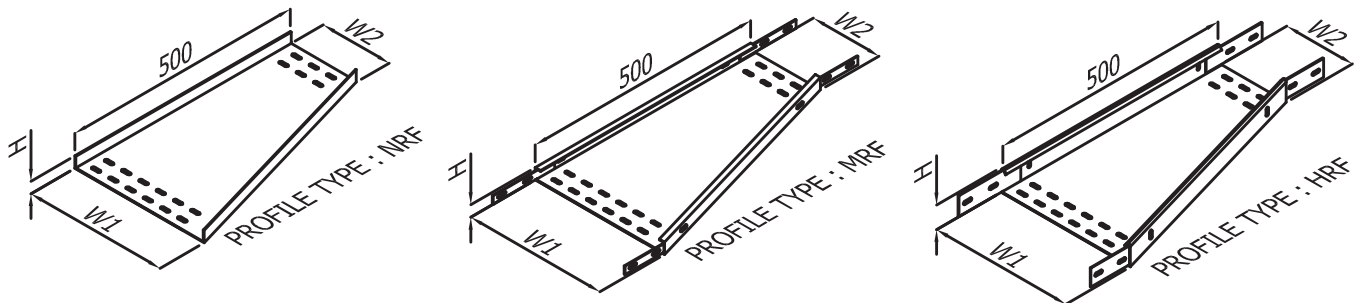
e.g ; HRF50/1.5/TDT300/300/S6L

PROFILE TYPE	HEIGHT	THICKNESS	TRAY TYPE	WIDTH	RADIUS	MATERIAL
HRF	50	1.5	TDT	300	300	S6L

TRAY LEFT HAND REDUCER (TRAY TYPE : TLR)



TRAY RIGHT HAND REDUCER (TRAY TYPE : TRR)



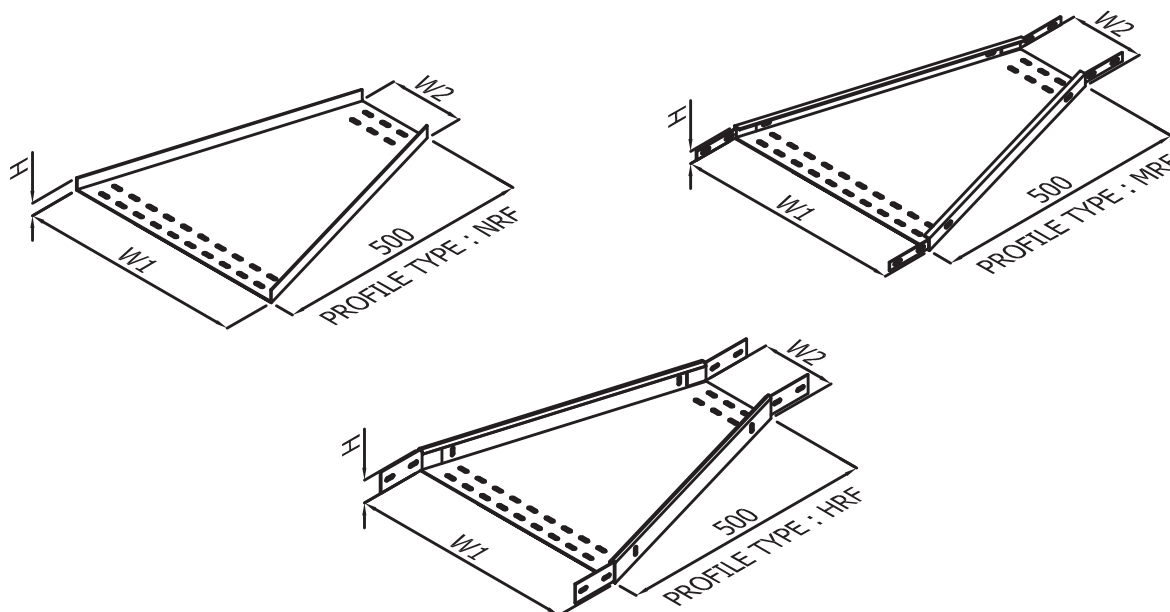
Tray Type	Profile Type	Height,H (mm)	Width,W1 (mm)	Width,W2 (mm)	Thickness,t (mm)
TLR/TRR	NRF	13	50 - 600	50 - 600	1.0 - 2.0
		15			
		20			
	MRF	25			
		30			
		40			
	HRF	50	50 - 600	50 - 600	1.5 - 2.0
		100			

PRODUCT CODE (HOW TO ORDER)

e.g ; HRF50/1.5/TLR300-150/MSG

PROFILE TYPE	HEIGHT	THICKNESS	TRAY TYPE	WIDTH,W1	WIDTH,W2	MATERIAL&FINISHING
HRF	50	1.5	TLR	300	150	MSG

TRAY CONCENTRIC REDUCER (TRAY TYPE : TCR)



Tray Type	Profile Type	Height,H (mm)	Width,W1 (mm)	Width,W2 (mm)	Thickness,t (mm)
TCR	NRF	13	50 - 600	50 - 600	1.0 - 2.0
		15			
		20			
	MRF	25			
		30			
		40			
	HRF	50	50 - 600	50 - 600	1.5 - 2.0
		100			

PRODUCT CODE (HOW TO ORDER)

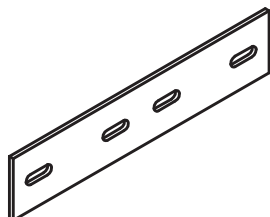
e.g ; HRF50/1.5/TCR300-150/S6L

PROFILE TYPE	HEIGHT	THICKNESS	TRAY TYPE	WIDTH,W1	WIDTH,W2	MATERIAL
HRF	50	1.5	TCR	300	150	S6L

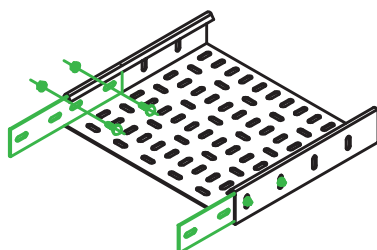
TRAY ACCESSORIES

Tray Straight Coupling Plate
Code: TSP

1

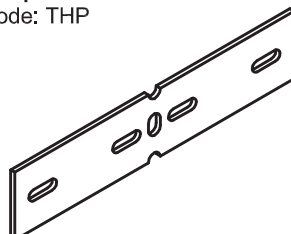


Fastener: 4 sets of M6x16 Carriage Bolt & Serrated Flange Nut

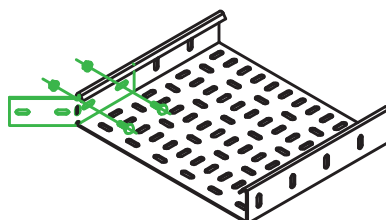


Tray Horizontal Adjustable Coupler
Code: THP

2

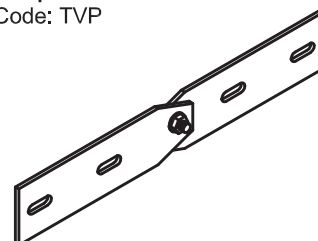


Fastener: 4 sets of M6x16 Carriage Bolt & Serrated Flange Nut

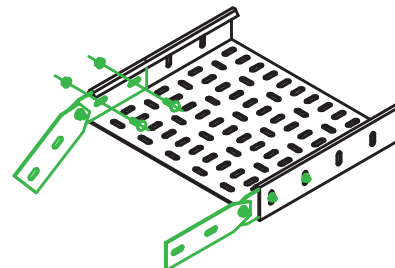


Tray Vertical Adjustable Coupler
Code: TVP

3

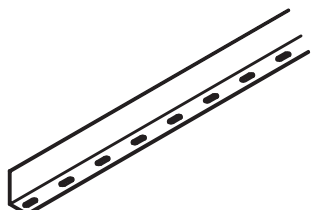


Fastener: 4 sets of M6x16 Carriage Bolt & Serrated Flange Nut

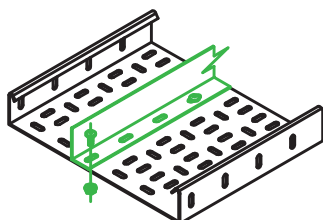


Tray Straight Divider
Code: TSD

4

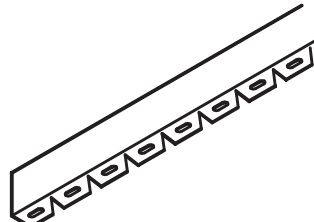


Fastener: 2 sets of M6x16 Pan Head Bolt & Serrated Flange Nut

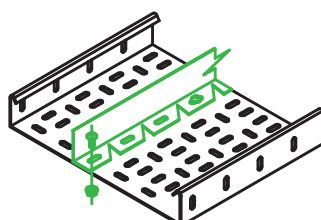


Tray Flexible Divider
Code: TFD

5

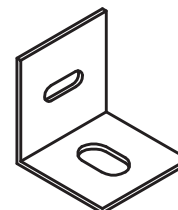


Fastener: 2 sets of M6x16 Pan Head Bolt & Serrated Flange Nut

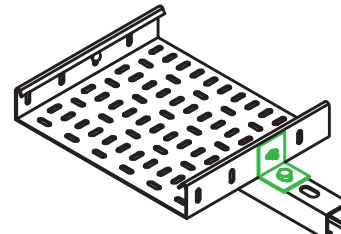


Tray Hold Down Clip
Code: THC

6



Fastener: 1 set of M6x16 Carriage Bolt & Serrated Flange Nut & 1 set of M10x30 Hex Bolt & Serrated Flange Nut



PRODUCT CODE (HOW TO ORDER)

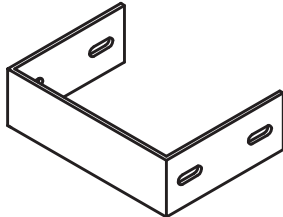
e.g ; HRF100/1.5/TSP/SS4

PROFILE TYPE	HEIGHT	THICKNESS	ITEM CODE	MATERIAL
HRF	100	1.5	TSP	SS4

TRAY ACCESSORIES

Tray End Plate
Code: TEP

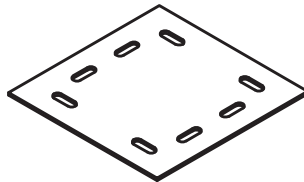
7



Fastener: 4 sets of M6x16 Carriage Bolt & Serrated Flange Nut

Tray Base Coupler
Code: TFCP

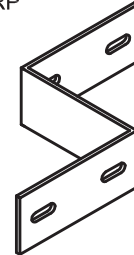
8



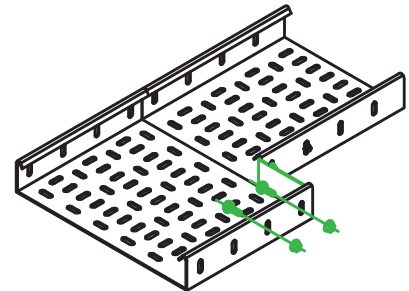
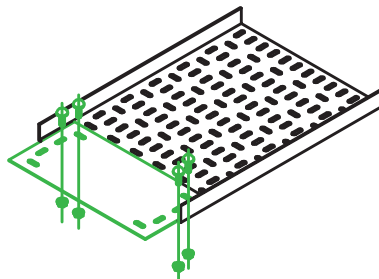
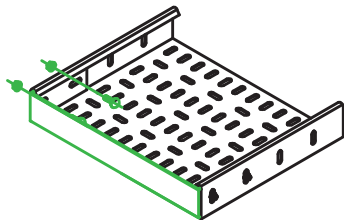
Fastener: 4 sets of M6x16 Carriage Bolt & Serrated Flange Nut

Tray Reducer Plate
Code: TRP

9

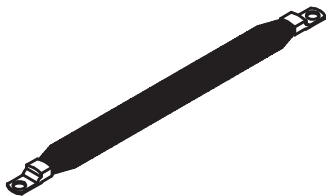


Fastener: 4 sets of M6x16 Carriage Bolt & Serrated Flange Nut



Earth Bonding Jumper
(Material : Wire Braided)
Code: TBJ16

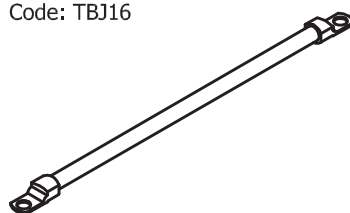
10



Fastener: 2 sets of M6x16 Pan Head Bolt & Serrated Flange Nut

Earth Bonding Jumper
(Material : Green/Yellow PVC)
Code: TBJ16

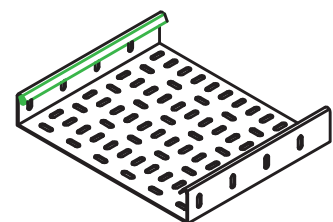
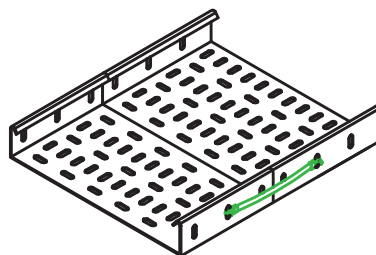
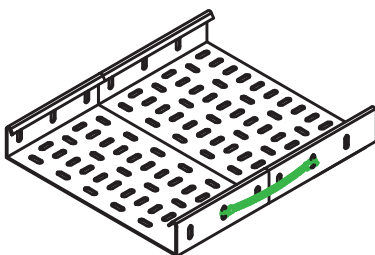
11



Fastener: 2 sets of M6x16 Pan Head Bolt & Serrated Flange Nut

Earth Edge Protector
Code: TPR

12



PRODUCT CODE (HOW TO ORDER)

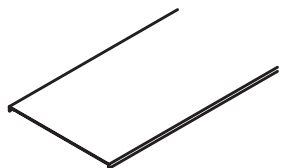
e.g ; HRF50/1.5/TEP150/SS6

PROFILE TYPE	HEIGHT	THICKNESS	ITEM CODE	WIDTH,W	MATERIAL
HRF	50	1.5	TEP	150	SS6

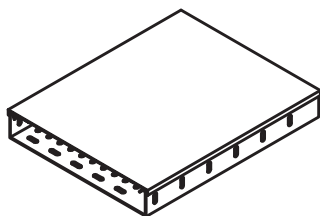
TRAY COVER

Tray Solid Cover

Code: TSC

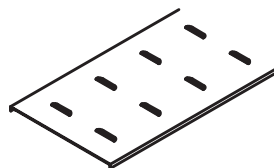


Fastener: 4 sets of Cover Clip c/w M6x16 Carriage Bolt & Serrated Flange Nut

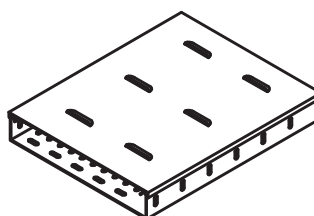


Tray Ventilated Cover

Code: TVC



Fastener: 4 sets of Cover Clip c/w M6x16 Carriage Bolt & Serrated Flange Nut



PRODUCT CODE (HOW TO ORDER)

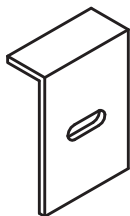
e.g ; HRF100/1.5/TVC450/3000/SS6

PROFILE TYPE	HEIGHT	THICKNESS	ITEM CODE	WIDTH	LENGTH	MATERIAL
HRF	100	1.5	TVC	450	3000	SS6

TRAY ACCESSORIES FOR COVER

Tray Cover Clip

Code: TCC

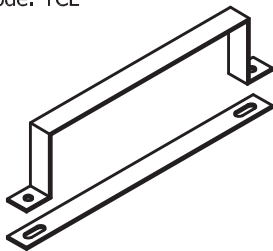


Fastener: 1 set of M6x16 Carriage Bolt & Serrated Flange Nut

1

Tray Cover Clamp

Code: TCL

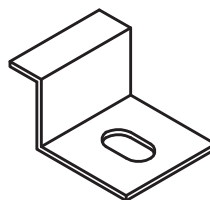


Fastener: 2 sets of M6x20 Hex Bolt & Serrated Flange Nut

2

Tray Cover Hold Down Clip

Code: TCC2



Fastener: 1 set of M10x30 Hex Bolt & Serrated Flange Nut

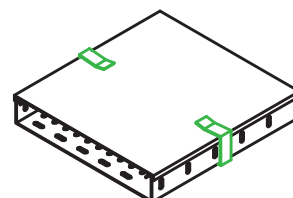
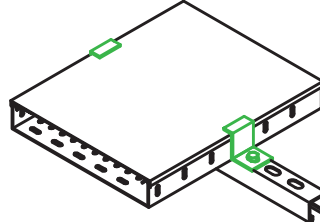
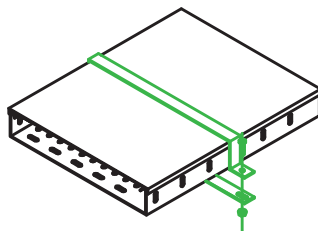
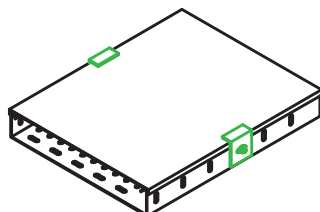
3

Tray Cover Clip

Code: TCC1



4



PRODUCT CODE (HOW TO ORDER)

e.g ; HRF50/1.2/TCC/SS6

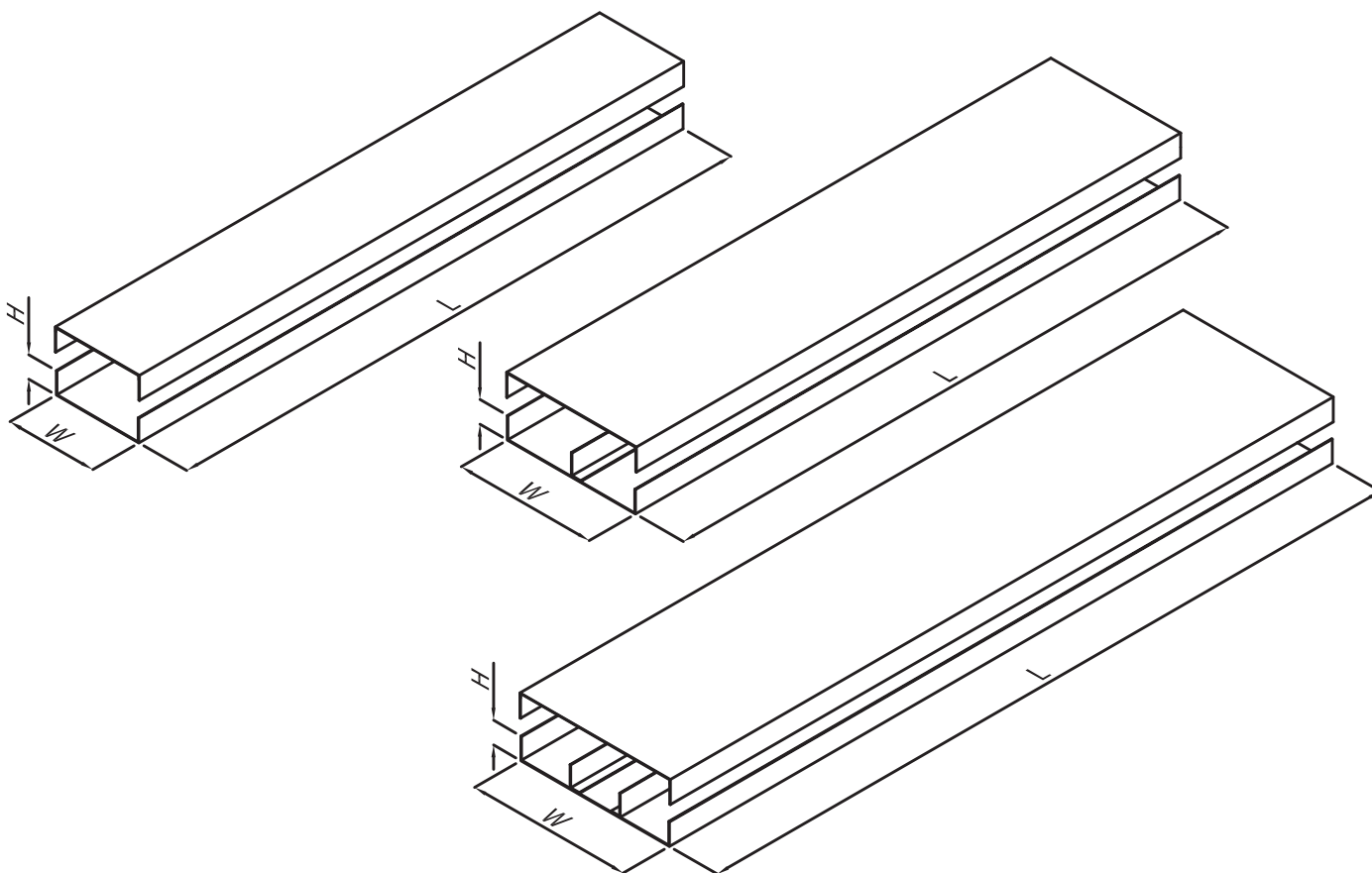
PROFILE TYPE	HEIGHT	THICKNESS	ITEM CODE	MATERIAL
HRF	50	1.2	TCC	SS6

Cable Trunking & Ducting Systems



UNDERFLOOR DUCTING SYSTEM

- Length : 1500mm, 2438mm or 3000mm
- Dimension of slot : $\phi 7 \times 20$ mm
- Coupler : 1.0mm to 2.0mm (thickness)
- Fastener : M6x16 Carriage Bolt c/w Serrated Flange Nut (2 sets per coupler)



Profile Type	Height,H (mm)	Width,W (mm)	Thickness,t (mm)	Material
UD	25	50 - 375	1.0 - 2.0	Pre-Galvanised
	32			Electro Galvanised

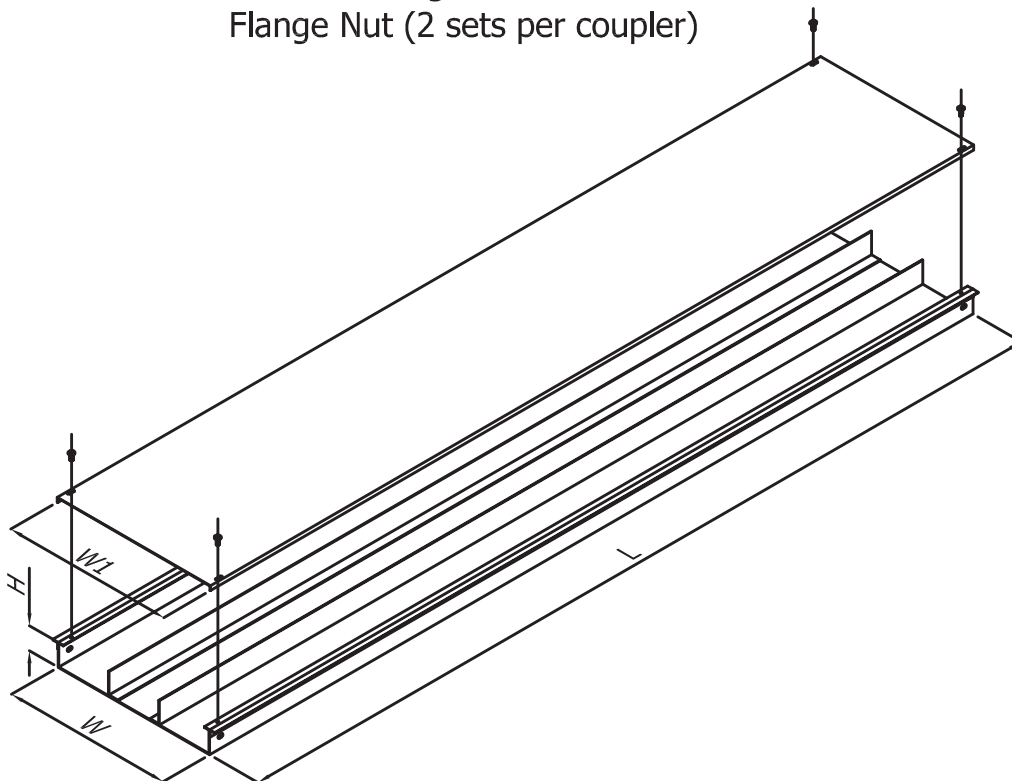
PRODUCT CODE (HOW TO ORDER)

e.g ; UD25/1.5/DST50/3000/SS6

PROFILE TYPE	HEIGHT	THICKNESS	TRUNKING TYPE	WIDTH	LENGTH	MATERIAL
UD	25	1.5	DST	50	3000	SS6

FLUSHFLOOR TRUNKING SYSTEM

- Length : 1500mm, 2438mm or 3000mm
- Dimension of slot : $\phi 7 \times 20$ mm
- Coupler : 1.0mm to 2.0mm (thickness)
- Fastener : M6x16 Carriage Bolt c/w Serrated Flange Nut (2 sets per coupler)



Profile Type	Height, H (mm)	Width, W (mm)	Thickness, t (mm)	Material	Finishing
FT	28	155 - 405	1.0 - 2.0	Stainless Steel 304	VCI Coating
	60			Stainless Steel 316	
				Stainless Steel 316L	
				Aluminium 5052	
				Mild Steel	Hot Dip Galvanised
				High Silicon Steel	
				Pre-Galvanised	Epoxy Coating
				Electro Galvanised	

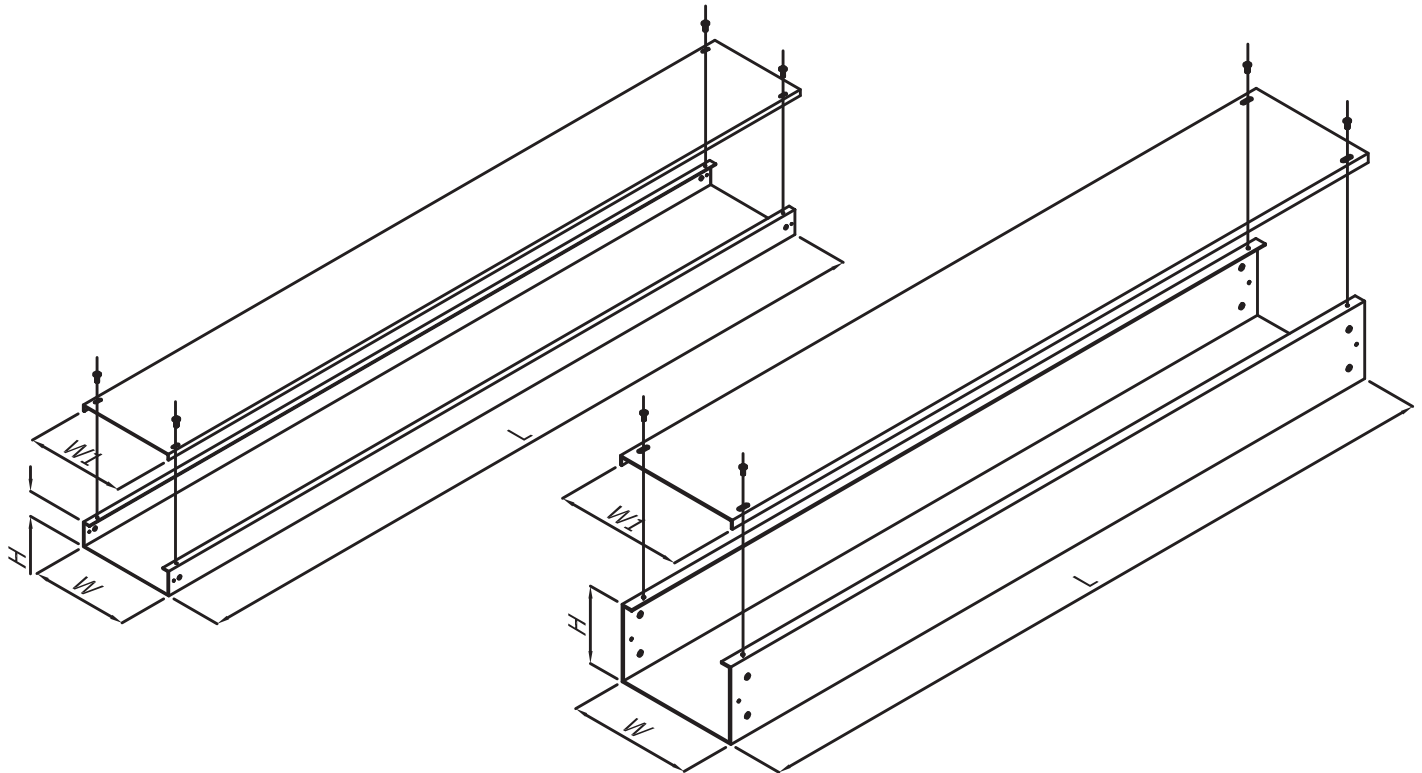
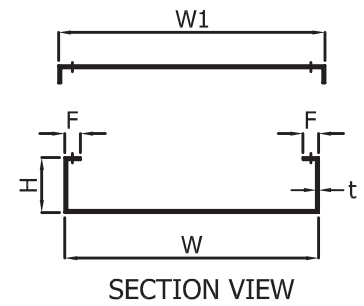
PRODUCT CODE (HOW TO ORDER)

e.g ; FT28/1.5/TST300/3000/GAE

PROFILE TYPE	HEIGHT	THICKNESS	TRUNKING TYPE	WIDTH	LENGTH	MATERIAL
FT	28	1.5	TST	300	3000	GAE

CABLE TRUNKING

- Length : 2438mm or 3000mm
- Dimension of slot : $\phi 7 \times 20$ mm
- Coupler : 1.0mm to 2.0mm (thickness)
- Fastener : M6x16 Carriage Bolt c/w Serrated Flange Nut (4 sets per coupler)



Profile Type	Height, H (mm)	Width, W (mm)	Thickness, t (mm)	Material	Finishing
NP	50	50 - 900	1.0 - 2.0	Stainless Steel 304	VCI Coating
	75			Stainless Steel 316	
	100			Stainless Steel 316L	
	150			Aluminium 5052	
	300			Mild Steel	Hot Dip Galvanised
				High Silicon Steel	
				Pre-Galvanised	Epoxy Coating
				Electro Galvanised	

PRODUCT CODE (HOW TO ORDER)

e.g ; NP50/1.5/TST300/3000/SS4

PROFILE TYPE	HEIGHT	THICKNESS	TRAY TYPE	WIDTH	LENGTH	MATERIAL
NP	50	1.5	TST	300	3000	SS4

* our cable trunking complies with SS249 standard and are Tuv Sud PSB certified

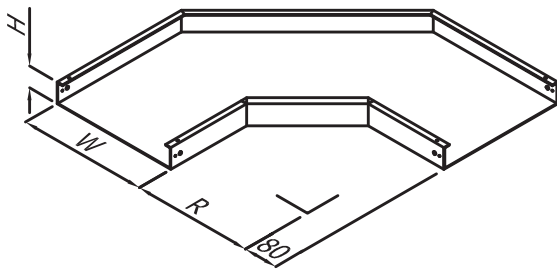
M*RAK CABLE TRUNKING

Sizes body and cover thickness and preferred lengths

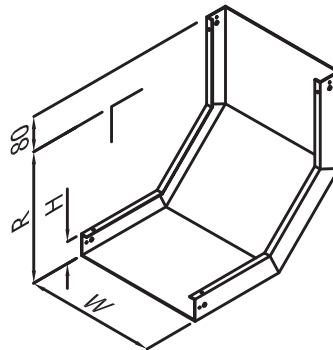
Nominal size (external) (mm)	Nominal thickness of body material (mm)	Nominal thickness of cover material (mm)
50 x 25	1.0	1.0
50 x 50	1.0	1.0
75 x 50	1.2	1.2
100 x 50	1.2	1.2
100 x 75	1.2	1.2
100 x 100	1.4	1.2
125 x 50	1.4	1.2
150 x 50	1.4	1.2
150 x 75	1.4	1.2
150 x 100	1.4	1.2
150 x 150	1.4	1.2
175 x 50	1.4	1.2
200 x 50	1.6	1.4
150 x 75	1.6	1.4
200 x 100	1.6	1.4
200 x 150	1.6	1.4
225 x 50	1.6	1.4
250 x 50	1.6	1.4
275 x 50	1.6	1.4
300 x 50	1.6	1.4
300 x 75	1.6	1.4
300 x 100	1.6	1.4
300 x 150	1.6	1.4
300 x 300	1.6	1.4
350 x 50	1.6	1.4
375 x 75	1.6	1.4

Preferred length 3.0M, minimum 2.0M, maximum 3.0M
Partition devices, nominal thickness - 1.0mm (for depth of 75mm and below)
- 1.2mm (for depth greater than 75mm)
Tolerance on nominal thickness is $\pm 7.5\%$

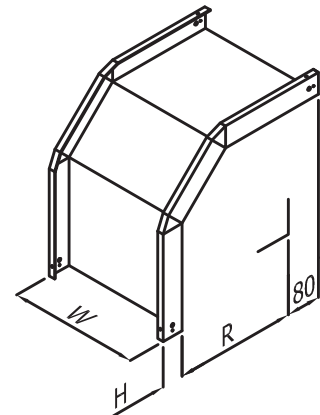
TRUNKING FITTINGS



TRUNKING HORIZONTAL ELBOW



TRUNKING INSIDE ANGLE RISER

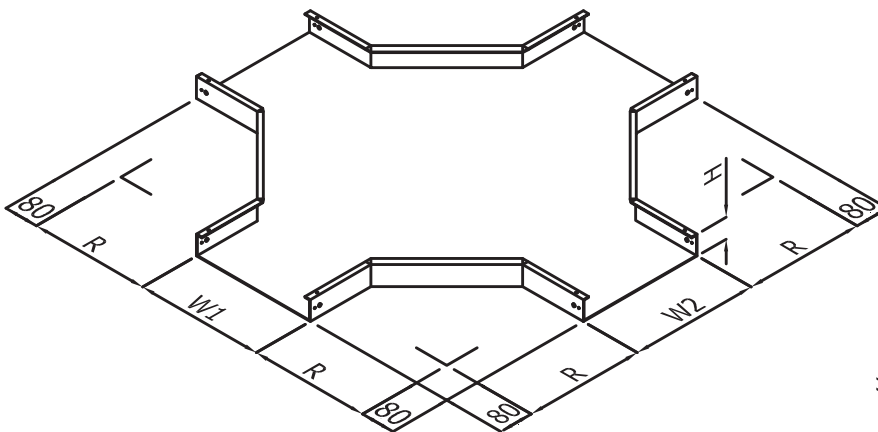


TRUNKING OUTSIDE ANGLE RISER

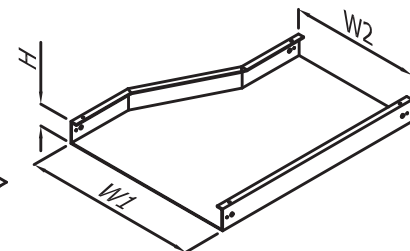
PRODUCT CODE (HOW TO ORDER)

e.g ; NP50/2.0/DFB600/90/300/MSG

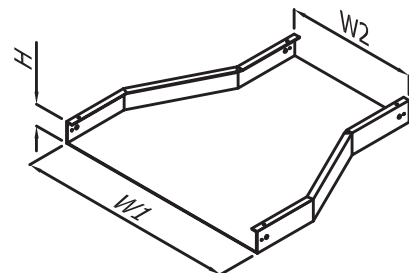
PROFILE TYPE	HEIGHT	THICKNESS	TRAY TYPE	WIDTH	DEGREE	RADIUS	MATERIAL&FINISHING
NP	50	2.0	DFB	600	90	300	MSG



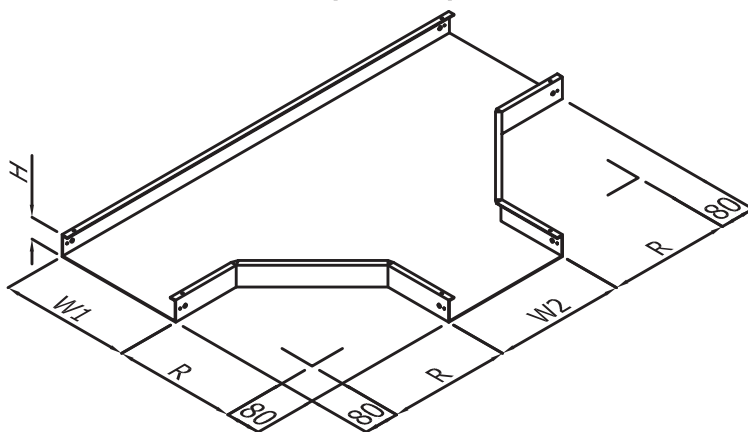
TRUNKING EQUAL/UNEQUAL CROSSOVER



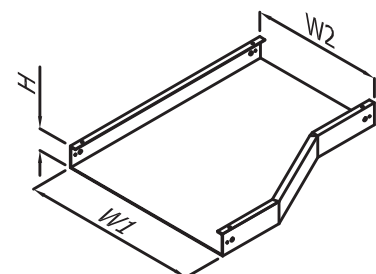
TRUNKING LEFT HAND REDUCER



TRUNKING CONCENTRIC REDUCER



TRUNKING EQUAL/UNEQUAL TEE



TRUNKING RIGHT HAND REDUCER

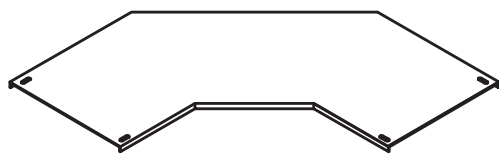
PRODUCT CODE (HOW TO ORDER)

e.g ; NP100/1.5/DET450-450/300/SS4

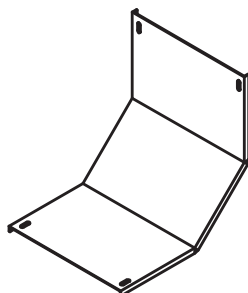
PROFILE TYPE	HEIGHT	THICKNESS	TRAY TYPE	WIDTH, W1	WIDTH, W2	RADIUS**	MATERIAL
NP	100	1.5	DET	450	450	300	SS4

**FOR CROSSOVER & TEE ONLY

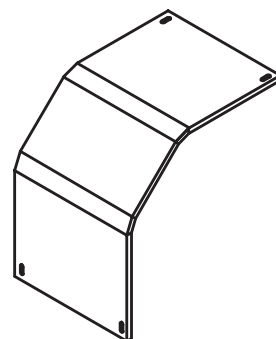
TRUNKING COVER FOR FITTINGS



TRUNKING HORIZONTAL
ELBOW COVER



TRUNKING INSIDE ANGLE
RISER COVER

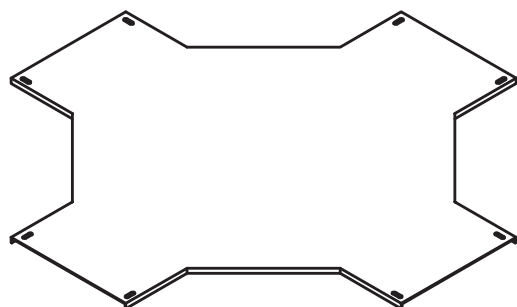


TRUNKING OUTSIDE ANGLE
RISER COVER

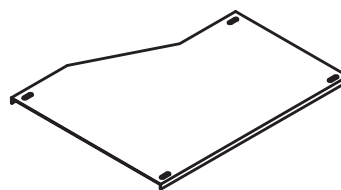
PRODUCT CODE (HOW TO ORDER)

e.g ; NP50/1.5/DFBC600/90/300/MSG

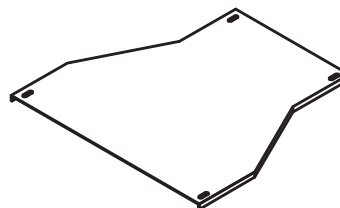
PROFILE TYPE	HEIGHT	THICKNESS	TRAY TYPE	WIDTH	DEGREE	RADIUS	MATERIAL&FINISHING
NP	50	1.5	DFBC	600	90	300	MSG



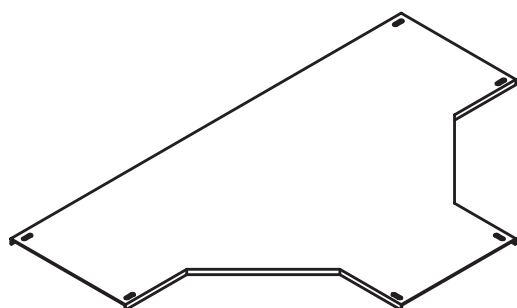
TRUNKING EQUAL/UNEQUAL CROSSOVER COVER



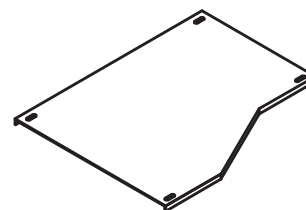
TRUNKING LEFT HAND REDUCER COVER



TRUNKING CONCENTRIC REDUCER COVER



TRUNKING EQUAL/UNEQUAL TEE



TRUNKING RIGHT HAND REDUCER COVER

PRODUCT CODE (HOW TO ORDER)

e.g ; NP75/1.5/DETC450-450/300/SS4

PROFILE TYPE	HEIGHT	THICKNESS	TRAY TYPE	WIDTH,W1	WIDTH,W2	RADIUS**	MATERIAL
NP	75	1.5	DETC	450	450	300	SS4

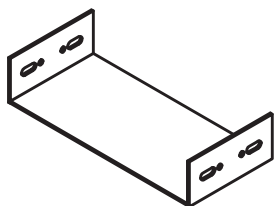
**FOR CROSSOVER & TEE ONLY

TRUNKING ACCESSORIES

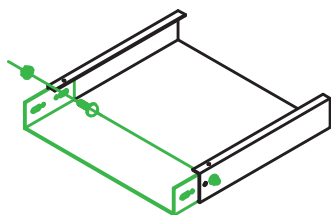
Trunking U Shape Coupler

Code: DUCP

1



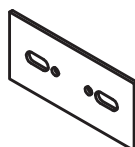
Fastener: 4 sets of M6x16 Carriage Bolt & Serrated Flange Nut



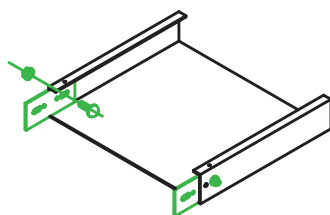
Trunking Joint Coupler

Code: DSP

2



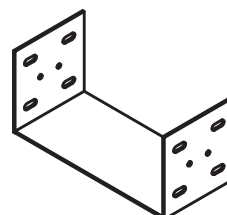
Fastener: 2 sets of M6x16 Carriage Bolt & Serrated Flange Nut



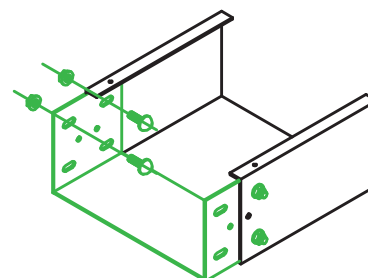
Trunking U Shape Coupler

Code: DUCP-1

3



Fastener: 8 sets of M6x16 Carriage Bolt & Serrated Flange Nut



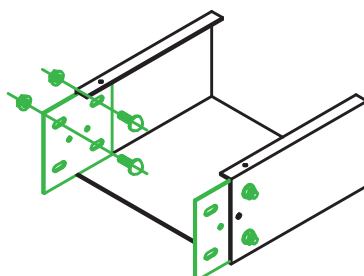
Trunking Joint Coupler

Code: DSP-1

4



Fastener: 4 sets of M6x16 Carriage Bolt & Serrated Flange Nut



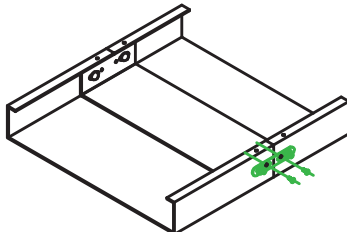
Copper Link

Code: D-LINK

5



Fastener: 2 sets of M4 Self Tapping Screw



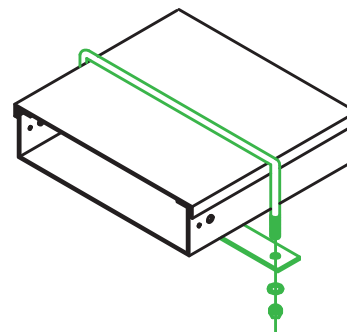
Trunking Cover Clamp c/w U-Bolt & Flat Bar

Code: DCL

6



Fastener: 2 sets of Hex Nut & Flat Washer



PRODUCT CODE (HOW TO ORDER)

e.g ; NP50/1.5/DUCP150/EGE

PROFILE TYPE	HEIGHT	THICKNESS	ITEM CODE	WIDTH	MATERIAL&FINISHING
NP	50	1.5	DUCP	150	EGE