

المصنم الحديث للمنتجات الحديدية
MODERN METAL INDUSTRIES



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Introduction Letter

Cable Support Management System

Modern Metal as the ability to take up the gigantic projects in kingdom as well as overseas in GCC Countries and Middle East since 1999. We have well qualified and well equipped technical staffs which we can offer to assist customers in the correct selection of standard products.

Modern Metal manufacture and supply a full range of Cable Support System including Cable Tray, Cable Trunks, Cable Ladder, Support Channels complying with the most well known International Standards such as NEMA, IEC, for HDG as ASTM 123 or BS EN 1461.

Our Strategy for the purchase of raw material from many sourees i.e. Sabcic Unicoil in kingdom of Saudi Arabia, Al Ghuriar in U.A.E, G.I. coil material as per standard BS 2989, Hot Rolled coil material as per standard BS 1449, Cold Rolled coil material as per standard BS 2994, and Stainless Steel coils complying with BS 1449: Part 2 (304S15) AISI 304, A2. DIN, Material No. 1.430.

We have our own specification to provide the customer the quality products and excellent service according according to their requirements with the following materials specification for special applications.

Modern Matal is fully equipped with the state of the art tools and CNC and CNC roll forming machine line for fater production, also specialized labor and staff with long experience in theis product, also specialized Engineering for QA/QC and Safety department since 10 years.

Modern Metal also offers full engineering services related to support system products such as load caluclations, drawings and specifications.

Modern Metal Cable Support System is approved by the most of the Engineering design & Consulting Offices in the Kingdom and is beign used for all kinds of Projects including mega size and land mark projects as indicated in Modern metal reference list. Our commitment is to satisfy our clients with high standard products, prompt delivery and efficient services.



Selection Process

A number of basic decisions must be made before a cable tray system be specified MMICO has developed a simple six step process to guide you in the process:

1. Select Material and Finish
2. Select the Tray Load Class
3. Select the Tray Type
4. Select the Tray Size
5. Select the Fittings
6. Consider Deflection

Each step is described in detail below:

1-Select Material & Finish

METALS

MMICO, a pioneer in the development of cable trays, first made a complete study of the metals available in order to create those systems that would be unmatched in economy and strength. Inherent are the problems connected with the environment and its effect on the life of metals, including weathering and corrosion by electro-chemical and chemical attack.

Steel - Hot Dip Galvanized After Fabrication

Commercial quality steel is used for this type of coating, which is described below. This steel is either hot rolled, pickled and oiled, or cold rolled, mild carbon steel.

Steel - Mill Galvanized (Pre-Galvanized)

Where heavy zinc coating is not necessary, steel with a Continuous hot rolled zinc coating conforming to ASTM specification A653 designation G90 is used. Products made with mill galvanized steel are generally lower in cost than the same products that are hot dip galvanized after fabrication. However, see the limitations under "Finishes" below.

Stainless Steel

Stainless steel type 304 and 316 is available for most MMICO products. Complete cable tray systems can be furnished in stainless steel.

Aluminum Alloys

The principal aluminum used for Ladder, Tray side rails, rungs, and channels is extruded, copper-free alloy 6063-T6. This alloy is used for structural members where extreme stiffness and high tensile strength are mechanically required to resist high unit stresses. This is called a "magnesium alloy" Alloy 5052-H32 is used for components fabricated from sheet (except covers) such as connectors, blind ends, dropouts, etc. This is a "magnesium alloy", copper free, and very compatible with alloy 6063-T6. Alloys 3003 and 3105 are used for aluminum covers. These alloys are very compatible with alloys 6063-T6 and 5052-H32.

Finishes

Steel-Hot Dip Galvanized After Fabrication

This high-quality coating is created in a multi-step process and applied to the completed product after all fabrication and welding. First the steel is cleaned by immersing it in a caustic dip tank, then pickled, and finally washed. The article is then dipped into a molten zinc bath. All surfaces are thoroughly coated. Hot dip galvanizing after all fabrication and welding is done on MMICO products in accordance with ASTM Specification A123, or BS EN ISO 1461: 1999. This coating, applied to steel trays, provides greatest protection at lowest cost.

Mill Galvanized (Pre Galvanized)

This coating is applied onto steel sheets at the mill in accordance with ASTM Specification A653 and results in a coating thickness of 0.90 ounces per square foot total for both sides. This coating adheres tightly to the base metal at bends and compound curves. Being a hot dip coating prior to tray fabrication, and of a controlled thickness about one-third that of hot dip galvanized after fabrication, it is not generally used outdoors. It is not recommended for areas where there is a concentration of moisture and/or chemical deposits. This material gives excellent service in dry, normal, or controlled atmospheres.

Other Coatings

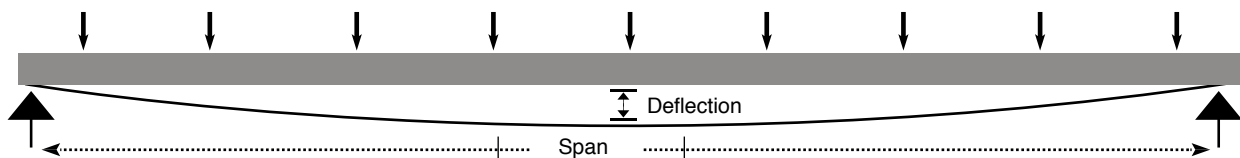
Occasionally, other highly special coatings are required such as powder coating, epoxy painting, standard painting, primer paint, and others. MMICO engineers are available for consultation on these coatings.

2- Select the Tray Class/ Load Capacity (Loading)

The standard classes of cable trays, as related to their maximum design loads and to the associated design support spacing based on a simple beam span requirement, shall be designated in accordance with Table 1. Please note the load ratings in Table 1 are those most commonly used. Other load ratings are acceptable. (according to NEMA VE-1) Costs vary between different load classes. Since labor and coupling costs are similar for a given length of tray, the heavier classes are more cost-effective on a load length basis. The designer should therefore specify the lightest class of tray compatible with the weight requirements of the cable tray.

TABLE 1 Load / Span Class Esignation

LOAD kg/m (lb/ft)		SPAN m (ft)				
		2.4 (8)	3.0 (10)	3.7 (12)	4.9 (16)	6.0 (20)
37	(25)	-	A	-	-	-
67	(45)	-	-	-	-	D
74	(50)	8A	-	12A	16A	20A
97	(65)	-	C	-	-	-
112	(75)	8B	-	12B	16B	E or 20B
149	(100)	8C	-	12C	16C	20C
179	(120)	-	D	-	-	-
299	(200)	-	E	-	-	-



Note: 8 A/B/C, 12 A/B/C, 16 A/B/C, and 20 A/B/C, are the traditional NEMA designations. A, C, D, and E are the conventional C S A designations.

2- Select the Tray Class / Load Capacity

Cable Loads : The cable load is the total weight, expressed in (Kg/m). of all the cables that will be placed in the cable tray.

Snow Loads : The additional design load from snowfall should be determined by the following formula:

Ice Loads : The Additional load design due to the ice is determined by the following formula:

$$W_i = W \times T_i \times D_i / 144$$

Where: W_i = ice load (lb/lin ear foot)

T_i = maximum ic thickness (inches).

ice thickness will vary depending on installation location.

W = width of the tray (inches)

D_i = 75 lb/ft - ice density

Wind Loads : The additional loading to be considered is the effect of the impact pressure normal to the side rail.

This loading is Determined by the following formula:

$$W_p = 0.00256 \times V \times H / 12$$

Where: W_p = loading due to the wind (li/lin ear foot)

V = wind velocity (mph)

H = Height of the side rail (inches).

Concentrated Loads:

A concentrated static load is not included in the Table 1. Some user applications may require that a given concentrated static load be imposed over and above the working load.

Such a concentrated static load represents a static weight applied on the centerline of the tray at mid span. When so

specified, the concentrated static load may be converted to an equivalent uniform load (W_e) in kilograms/ metre (pounds/linear

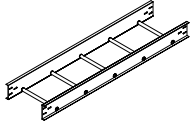
foot) using the following formula, and added to the static weight of cable in the tray:

$W_e = 2 \times$ (concentrated static load, kg (lb))

$$\frac{\text{Span length, m (ft)}}{\text{Span length, m (ft)}}$$

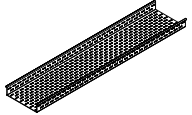
3- Select the Tray Type

Tray Type : The type of cables to be installed in the cable tray or channel will dictate the tray type needed.



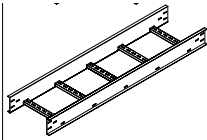
Swage Ladder :

Is a structure consisting of two side rails, connected by individual rungs and is manufactured in accordance with NEMA Standard # VE-1. rungs are fastened to the side members by swaging process.



Welded Type Ladder :

Is a prefabricated metal structure consisting of rungs, NEMA Standard VE-1. MMICO rungs are fastened to the side rails with MIG-arc-welding system.

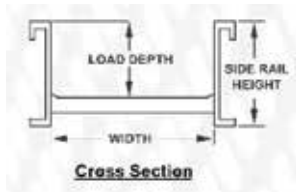


Perforated Type Cable Tray :

System is ventilated with inside & outside return flange. This Perforation makes the structure to have less weight and Provides good ventilation, thus, protecting the cable from extreme heat. This kind of system provide high quality, cost effective and reliable solution to cable distribution and installation work.

4- Select the Tray Size

Tray Size : Is essential to consider the type and quantity of cables to be installed in the cable tray or channel.

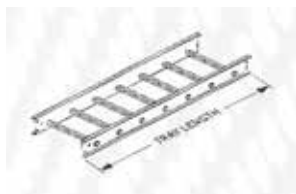


Load Depth :

Interior depth of the cable tray that is available for cable fill. Specifications for cable trays should include a specific requirement for the tray load depth. Due to design variations between different manufacturers, it is important to specify an exact load depth to ensure equal performance. Standard MMICO load depths are 3",4",5", and 6", Custom depths are available, please consult factory.

Side Rail Height :

The overall height of the cable tray side rail. In general, side rail heights for MMICO cable trays available, please consult factory for more information.



Tray Length :

The overall length of each cable tray straight section. The spacing of the cable tray supports will determine the length requirements for straight trays. The support span should not be greater than the straight section length to ensure that no more than one splice plate connection is located between supports. Standard MMICO tray lengths are 10;12;20; and 24; Custom lengths are available, please consult factory.

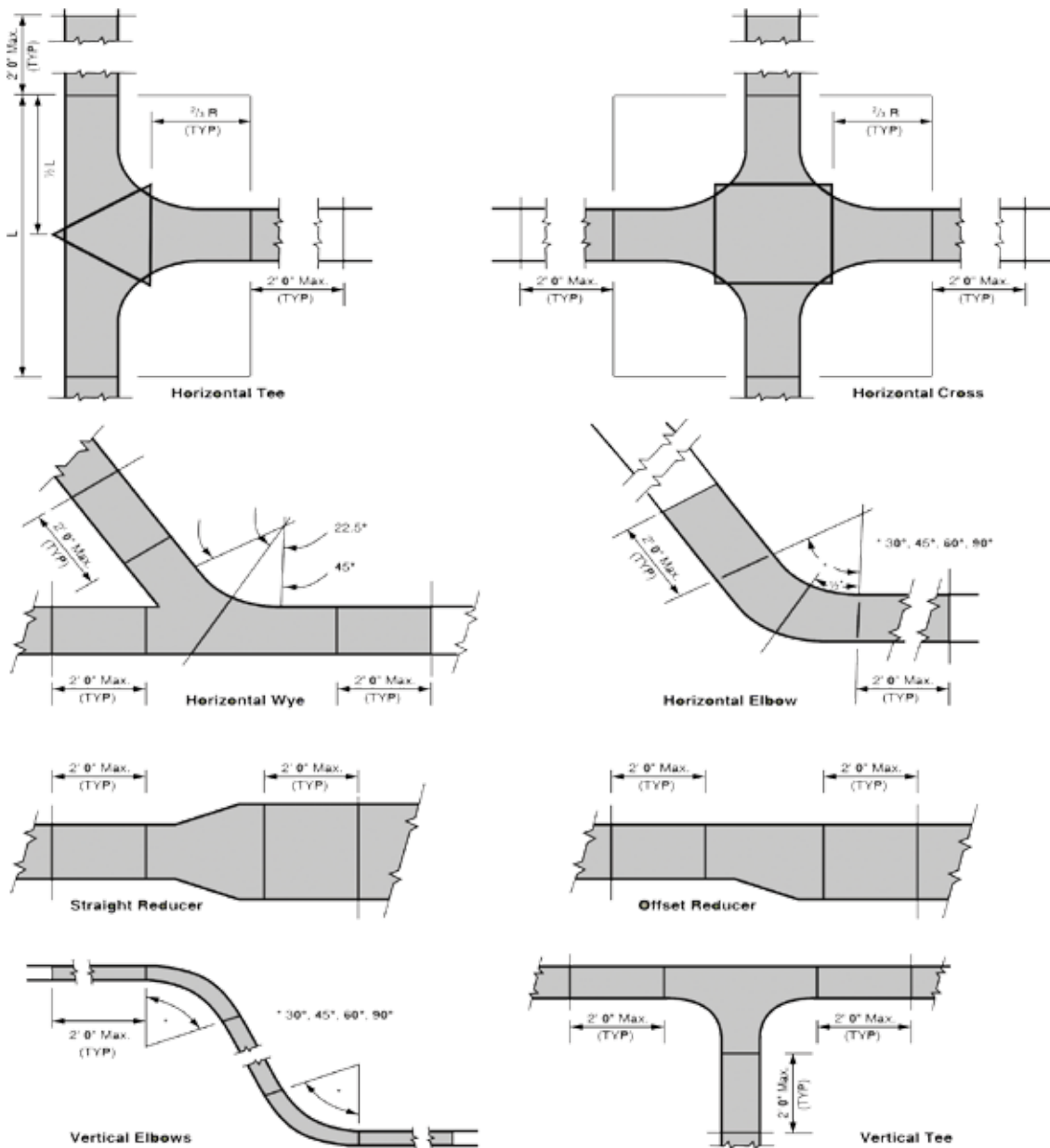
Width :

Interior width of the tray or channel that is available for cable fill. Standard widths are 6",9",12",18", 24",30", and 36" for MMICO tray and 3",4", and 6" for MMICO Channel. Non standard widths are also available.

5- Select the Fittings

Fittings are used to change the size or direction of the cable tray. The most important decision to be made in fitting design concerns radius. The radius of the bend, whether horizontal or vertical, can be 12, 24, 36 in., or even greater on a custom basis. The selection requires a compromise with the considerations being available space, minimum bending radius of cables, ease of cable pulling, and cost. The typical radius is 24 in. Fittings are also available for 30°, 45°, 60°, and 90° angles. It may be necessary to add supports to the tray at these points. Refer to NEMA VE2 Installation Guidelines for suggested support locations.

Support Locations for Fittings



6- Consider Deflection

The NEMA load test is a simple beam, uniformly distributed load test. (see Figure 1 . 2)
This type of test was initially selected because :

- * It was easiest to test.
- * It represents the worst case beam condition compared to continuous or fixed configurations. When consulting the manufacturer's catalog for deflection information, the designer must verify whether the data shown represents simple or continuous beam deflection. If continuous beam deflection is shown, the calculation factor should be given.

NEMA has one criterion for acceptance under their load test : the ability to support 150% of the rated load.

Test Load = 1.5x rated load x length

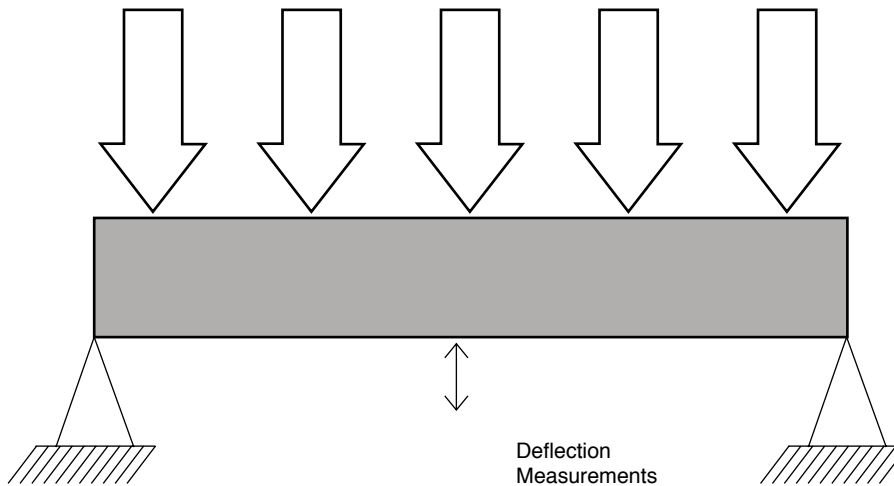


Figure 1.2

Theoretical maximum deflection for a simple beam, uniformly distributed load may be calculated as :

$$0.130 \frac{WL^4}{EI}$$

WHERE : W = Load in lb/ft
 L = Length in inches
 E Modulus of Elasticity
 I = Moment of Inertia

The maximum deflection calculation for a continuous beam of two spans with a uniformly distributed load is :

$$0.0541 \frac{WL^4}{EI}$$

A continuous beam of two spans therefore has a theoretical maximum deflection of only 42% of its simple beam deflection. As the number of spans increases, the beam behaves increasingly like a fixed beam, and the maximum deflection continues to decrease. As this occurs, the system's load carrying capability increases. sse Figure 1.3

Simple vs. Continuous Beam Deflection

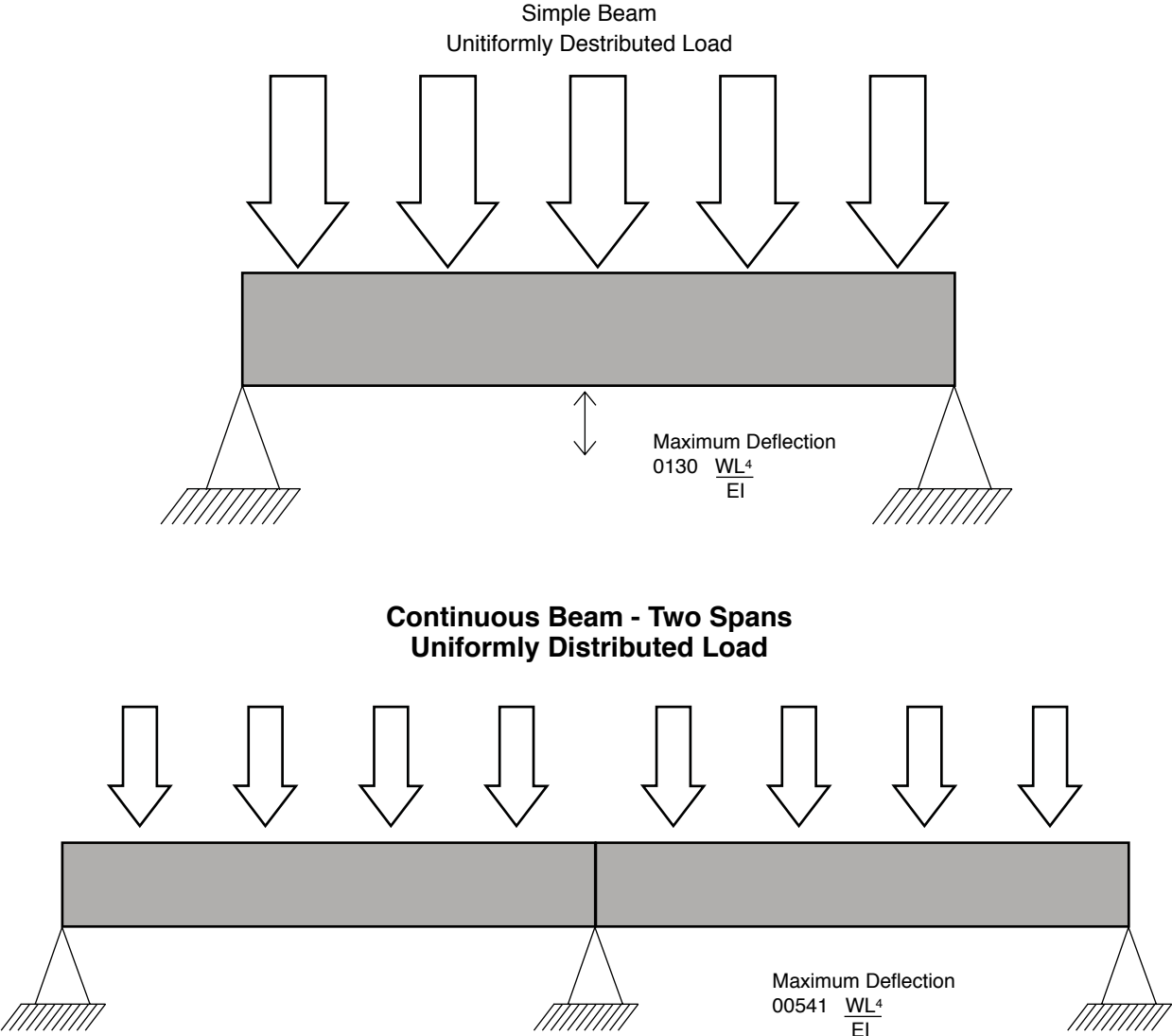
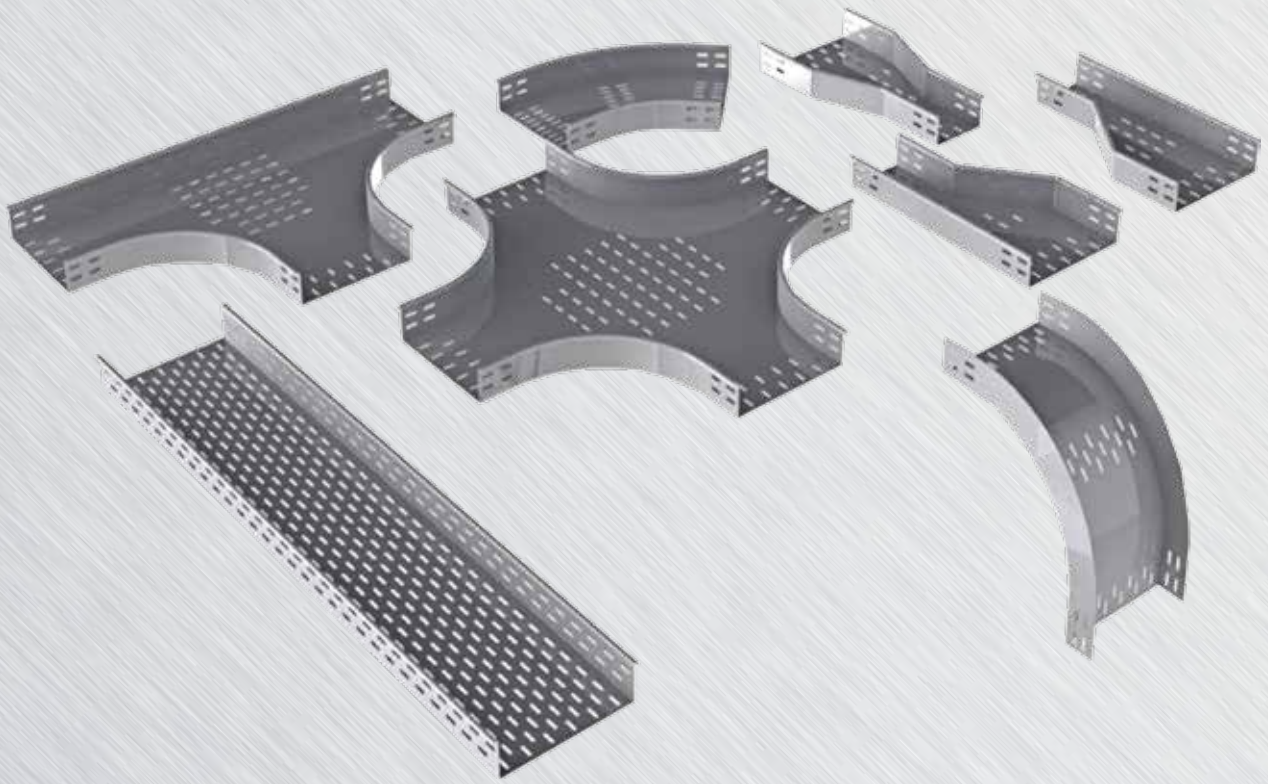
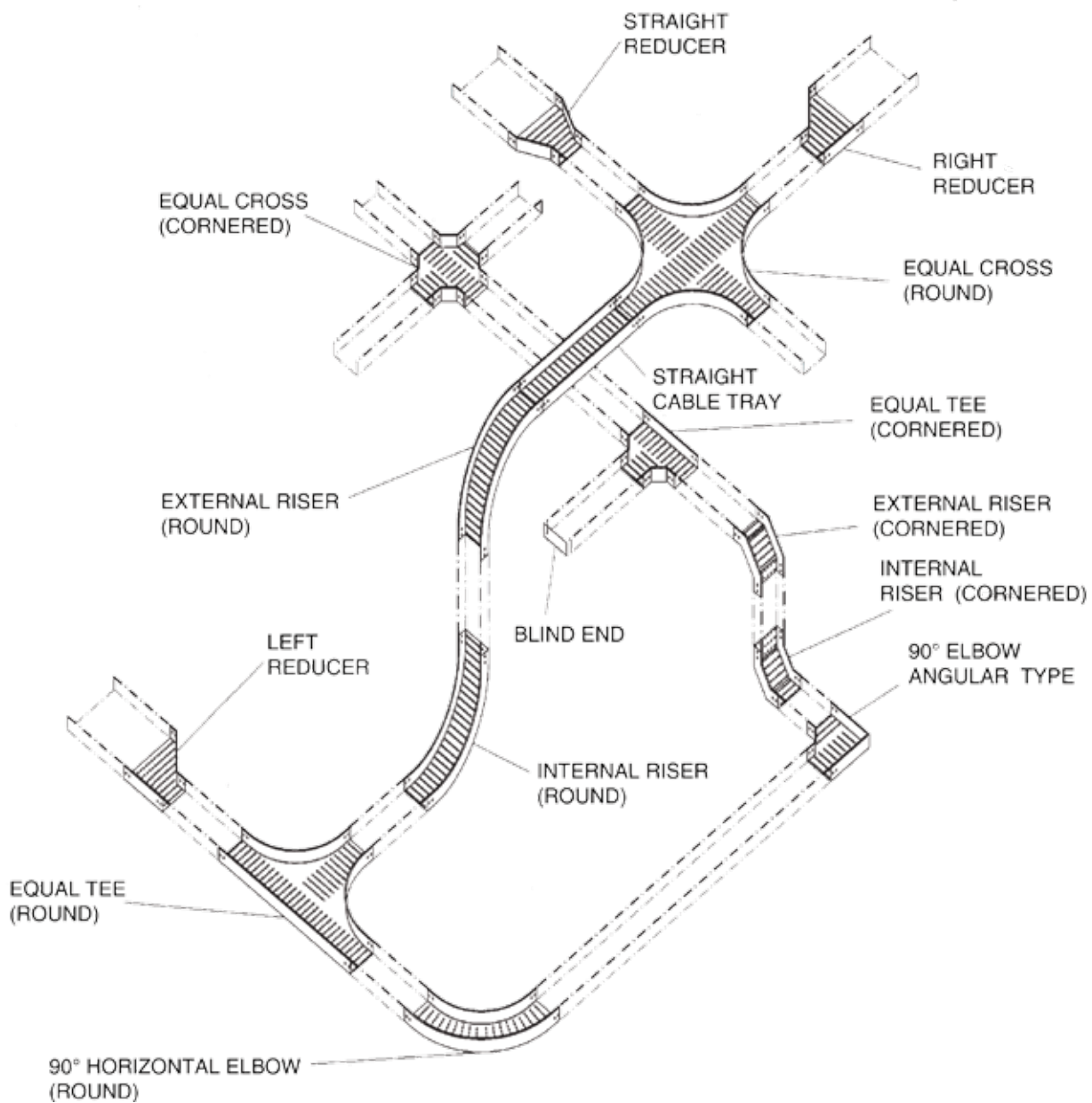


Figure 1.3

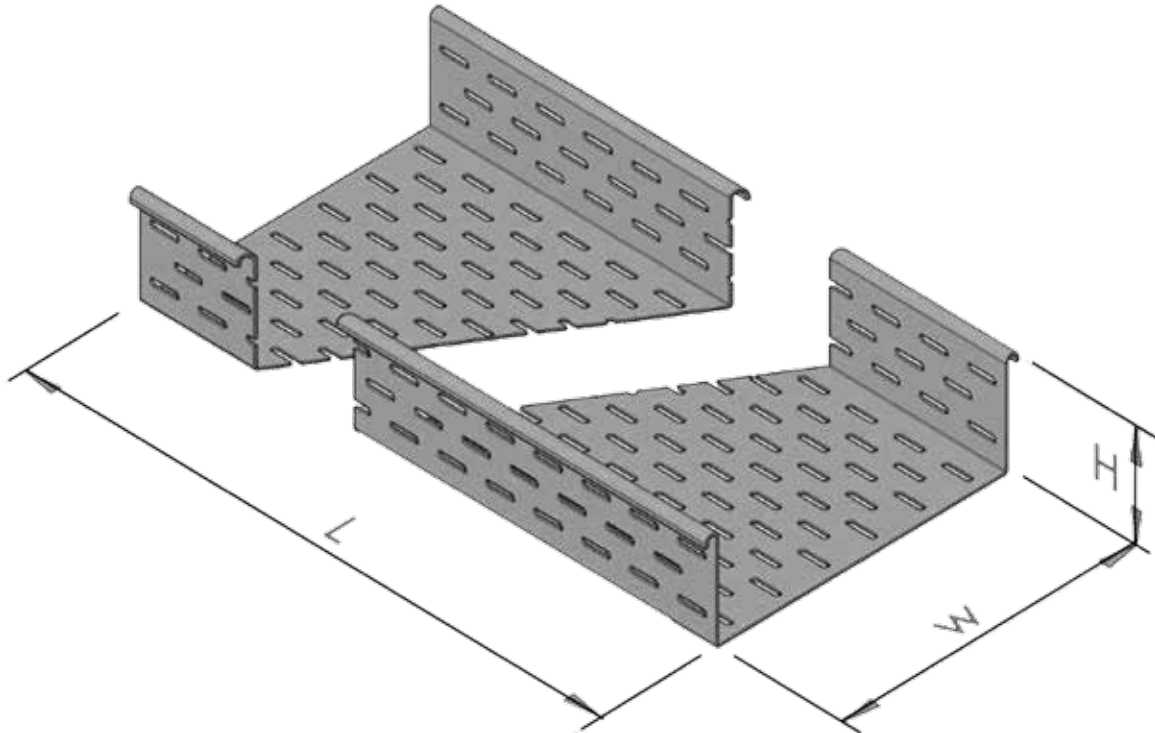


CABLE TRAY

Cable Tray Typical Layout



General Technical Information



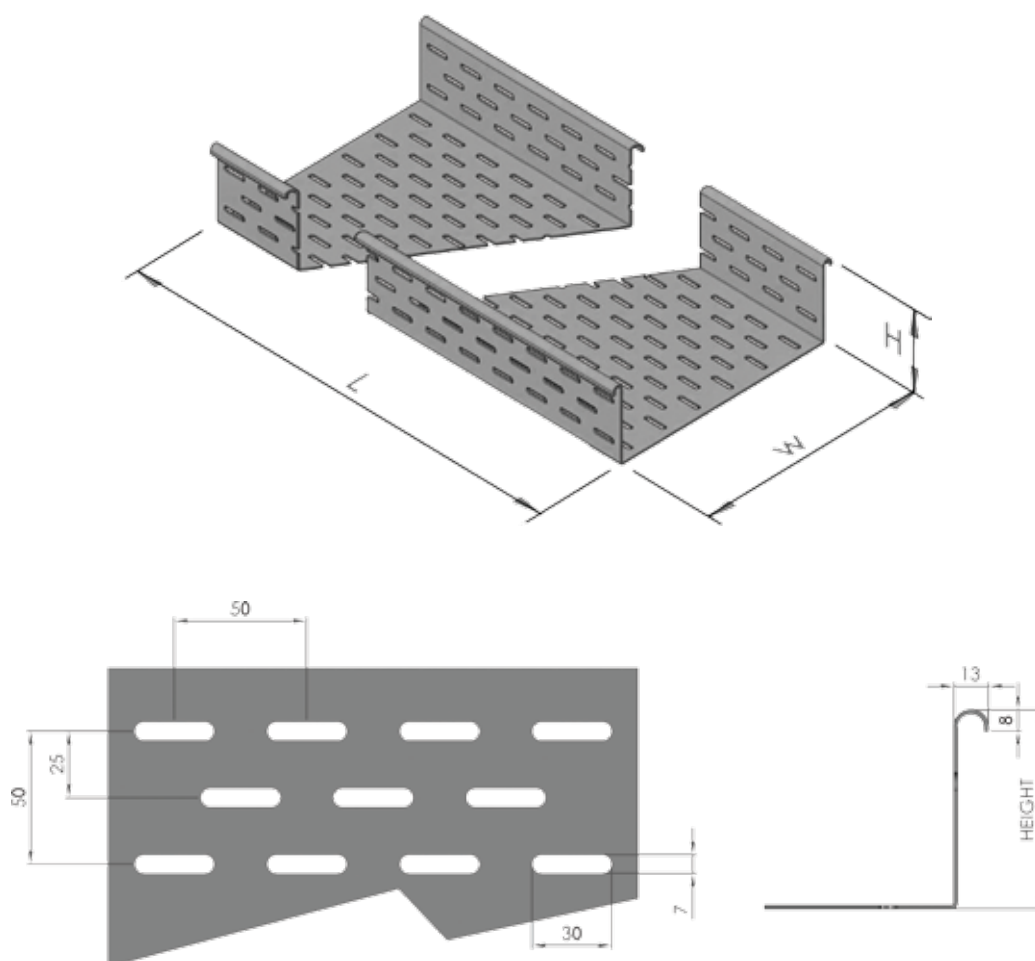
MMICO Classic perforated steel cable trays comply with the most well known standards name - VE-1, G.I to BS 2989, cold rolled to BS 2994 1976 galvanizing to BS EN ISO 1462 or ASTM 123. MMICO cable trays are provided with continuous returned flanges which helps sustain the desired cable loading.

Manufactured from a series of welded C-Channel System and Tubular pipe swaged system with standard Height of 110, 135, 160 185mm. (4.25", 5.25", 6.25", 7.25"). Side rail flanges could be inward or outward. Standard length 2.44 to 6.0 M.

COMPLIANCE STATEMENT

Modern Metal Industries Company never makes any design changes or new products. All products are being manufactured and in compliance with the SAUDI ARAMCO Engineering Standard SAES-P-104 and SAMSS and as well as other related International Standards

General Technical Information



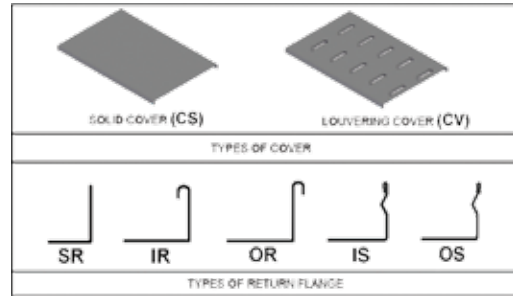
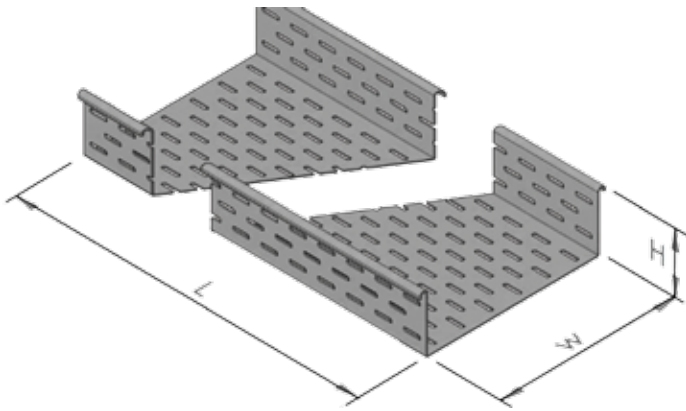
LIGHT DUTY CABLE TRAY

↔U↔ Shaped with returned flange, manufactured from 1.2 to 1.5 mm thickness perforated sheets, flanges could be inward or outward. Tray height is normally 35 & 50 standard length of 2.44 to 3.0 M.

HEAVY DUTY CABLE TRAY

↔U↔ Shaped with returned flange, manufactured from 1.5 to 2.0 mm thickness perforated sheets, flanges could be inward or outward. tray height is normally 50 to 100 mm standard length 2.44 to 3.0 M.

Cable Tray Straight



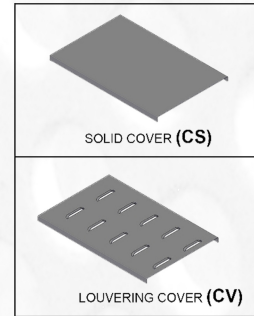
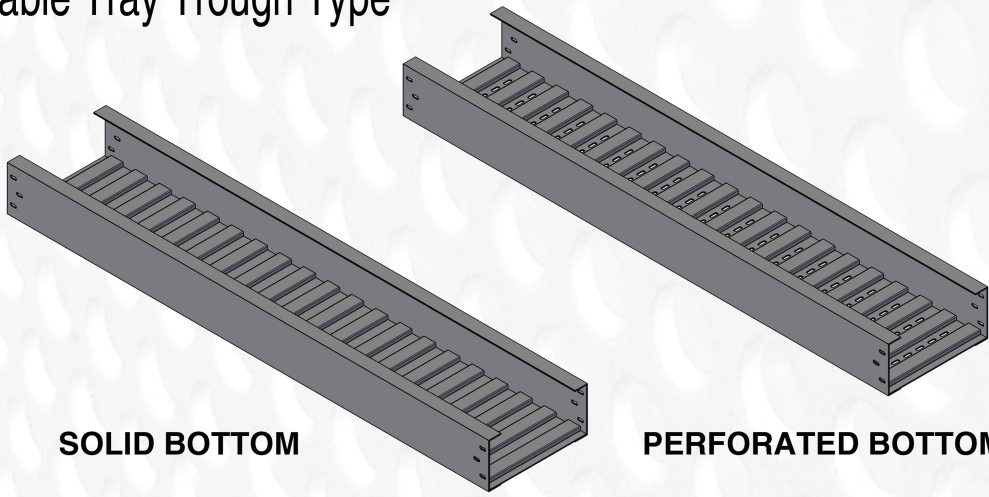
Ordering Code		CT					/	/	/	
Cable Tray	CT									
With Cover	CS	CV								
Without Cover	-									
Straight	SR									
Round Inside Return	IR									
Round Outside Return	OR									
Inside Return Flange Snap On	IS									
Outside Return Flange Snap On	OS									
Black Steel	BST									
Hot Dip Galvanized after Fabrication	HDG									
Hot Dip Galvanized and powder Coating	HDP									
Mill Galvanized	MG									
Steel Epoxy Coating	EPC									
Aluminum	AL									
Stainless Steel 304	S4									
Stainless Steel 316	S6									
Width (W) mm	50	100	150	200	300	450	600	900	1000	
Height (H) mm	50	75	85	100						
Thickness (T) mm	1.0	1.25	1.5	2.0						
Length (L) mm	2000	2440	3000							

Ordering Code Example : CTCSORHDG600/50/2.0/3000

NOTES:

- Cover fixation as per required. (For types of Fixations, see page160)
- Standard cover thickness is 1.5 mm for below 300 mm width and 2 mm for 300 mm width above.
- Special orders can be manufactured upon request.

Cable Tray Trough Type



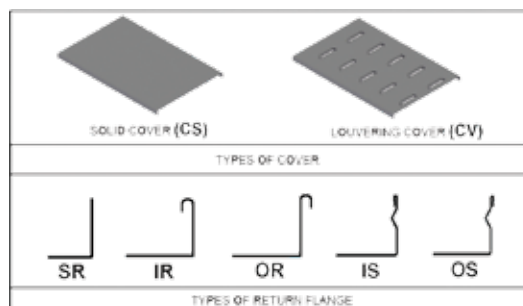
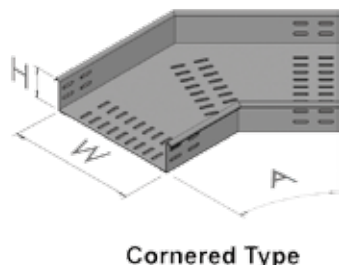
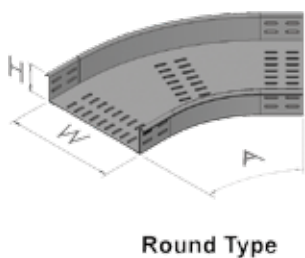
Ordering Code	CTT	SB	HDG	50	/	600	/	184	/	2.5	/	3000
Cable Tray Trough	CTT											
SolidBottom	SG											
Perforated Bottom	PB											
Black Steel	BST											
Steel hot dip Galvanized after Fabrication	HDG											
Steel hot dip galvanized and powder coating	HDP											
Mill Galvanized	MG											
Steel Epoxy coating	EPC											
Aluminum	AL											
Stainless Steel 304	S4											
Stainless Steel 316	S5											
Side Bend	22	32	50									
Width (W)	100	150	200	250	300	450	600	750	900	1000		
Height	100	125	150	184								
Thickness	2	2.5										
Length	2000	2440	3000									

Ordering Code Example : CTT-SB-HDG-50/600/184/2.5/3000

Notes:

- Standard Cover Thickness is 1.5mm for below 300mm width and 2mm for above 300mm width.
- Special orders can be manufactured upon request.

Cable Tray Horizontal Elbow



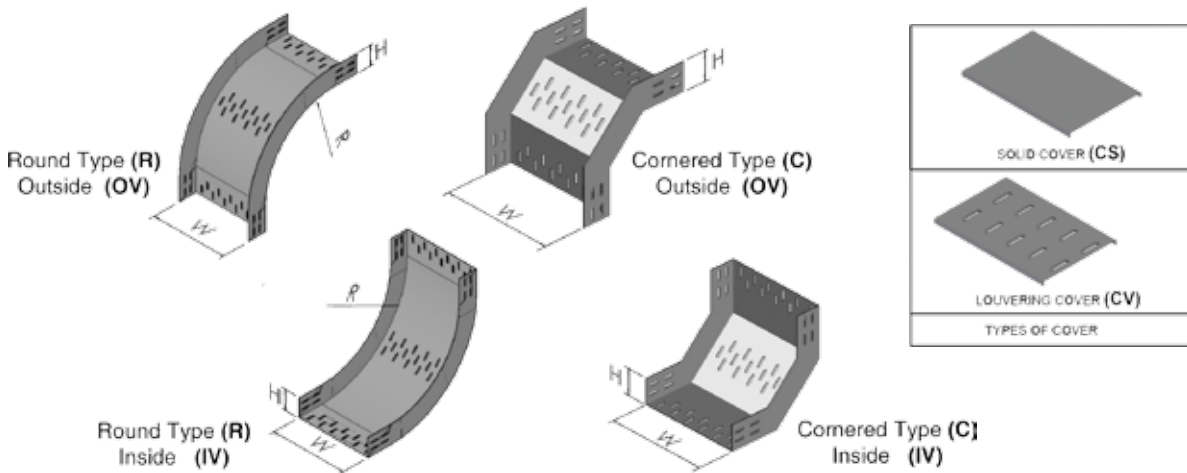
Ordering Code		CTLH					/	/	/	
Cable Tray Horizontal Elbow	CTLH									
With Cover	CS	CV								
Without Cover	-									
Angle	45°	90°								
Round Type	D									
Cornered Type 45	R									
Radius	300	600	900							
Straight		SR								
Round Inside Return		IR								
Round Outside Return		OR								
Inside Return Flange Snap On		IS								
Outside Return Flange Snap On		OS								
Black Steel		BST								
Hot Dip Galvanized after Fabrication		HDG								
Hot Dip Galvanized and powder Coating		HDP								
Mill Galvanized		MG								
Steel Epoxy Coating		EPC								
Aluminum		AL								
Stainless Steel 304		S4								
Stainless Steel 316		S6								
Width (W) mm	50	100	150	200	300	1100				
Height (H) mm	50	75	85	100						
Thickness (T) mm	1.0	1.25	1.5	2.0						

Ordering Code Example : CTLHCS45D300ORHDG200/75/1.5

NOTES:

- Cover fixation as per required.
- Standard cover thickness is 1.5 mm for below 300 mm width and 2 mm for 300 mm width above.
- Special orders can be manufactured upon request.

Cable Tray Vertical Elbow



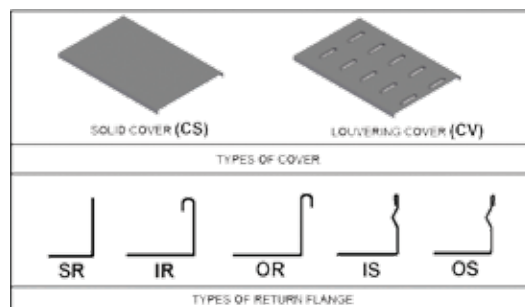
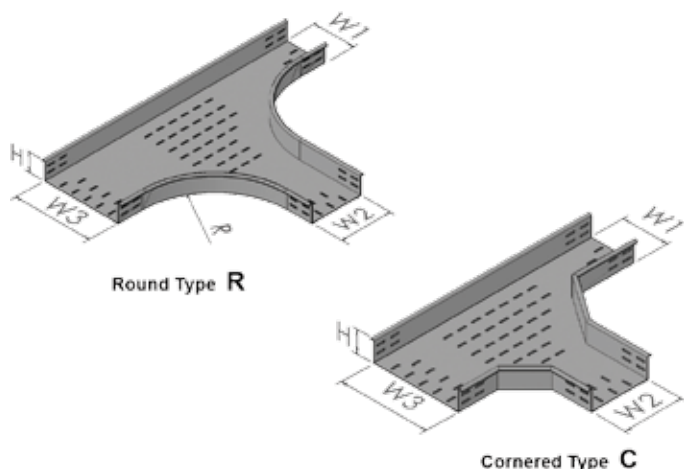
Ordering Code		CTLV					/	/	/
Cable Tray Horizontal Elbow	CTLH								
With Cover	CS	CV							
Without Cover	-								
Angle	45°	90°							
Outside Vertical Elbow	OV								
Inside Vertical Elbow	IV								
Round Type	D								
Cornered Type 45	R								
Radius	300	600	900						
Black Steel	BST								
Hot Dip Galvanized after Fabrication	HDG								
Hot Dip Galvanized and powder Coating	HDP								
Mill Galvanized	MG								
Steel Epoxy Coating	EPC								
Aluminum	AL								
Stainless Steel 304	S4								
Stainless Steel 316	S6								
Width (W) mm	50	100	150	200	300	450	600	900	1000
Height (H) mm	50	75	85	100					
Thickness (T) mm	1.0	1.25	1.5	2.0					

Ordering Code Example : CTLVCS45OVD300HDG200/75/1.5

NOTES:

- Cover fixation as per required.
- Only straight type of return flange for this fittings.
- Standard cover thickness is 1.5 mm for below 300 mm width and 2 mm for 300 mm width above.
- Special orders can be manufactured upon request.

Cable Tray Horizontal Tee



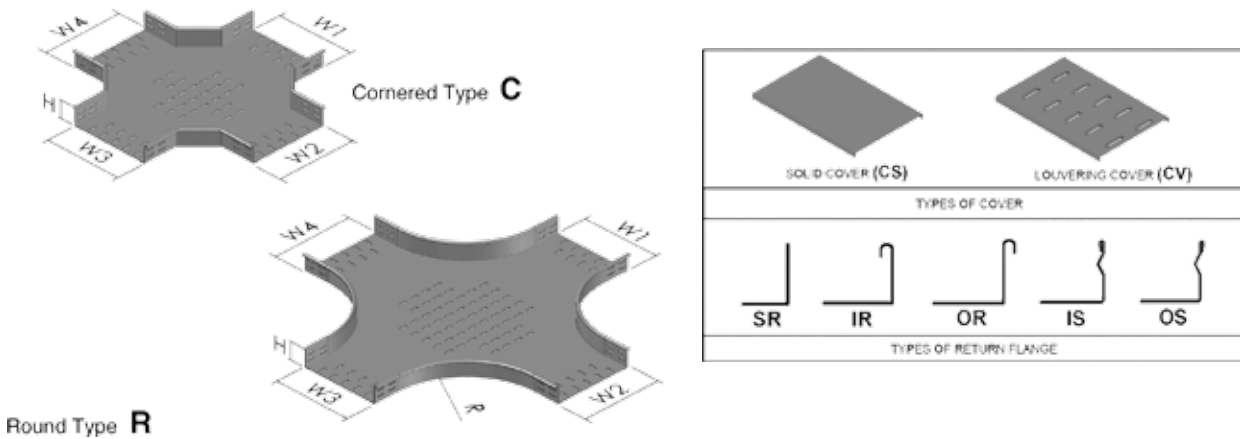
Ordering Code		CTT						/		/		/	
Cable Tray Horizontal Elbow	CTT												
With Cover	CS	CV											
Without Cover	-												
Round Type	D												
Cornered Type 45	R												
Radius	300	600	900										
Straight		SR											
Round Inside Return		IR											
Round Outside Return		OR											
Inside Return Flange Snap On		IS											
Outside Return Flange Snap On		OS											
Black Steel		BST											
Hot Dip Galvanized after Fabrication		HDG											
Hot Dip Galvanized and powder Coating		HDP											
Mill Galvanized		MG											
Steel Epoxy Coating		EPC											
Aluminum		AL											
Stainless Steel 304		S4											
Stainless Steel 316		S6											
Width (W1/W2/W3) mm	50	100	150	200	300	450	600	900	1000				
Height (H) mm	50	75	85	100									
Thickness (T) mm	1.0	1.25	1.5	2.0									

Ordering Code Example : CTTCS D300ORHDG450/300/200/100/2.0

NOTES:

- Cover fixation as per required.
- Standard cover thickness is 1.5 mm for below 300 mm width and 2 mm for 300 mm width above.
- Special orders can be manufactured upon request.

Cable Tray Horizontal Cross



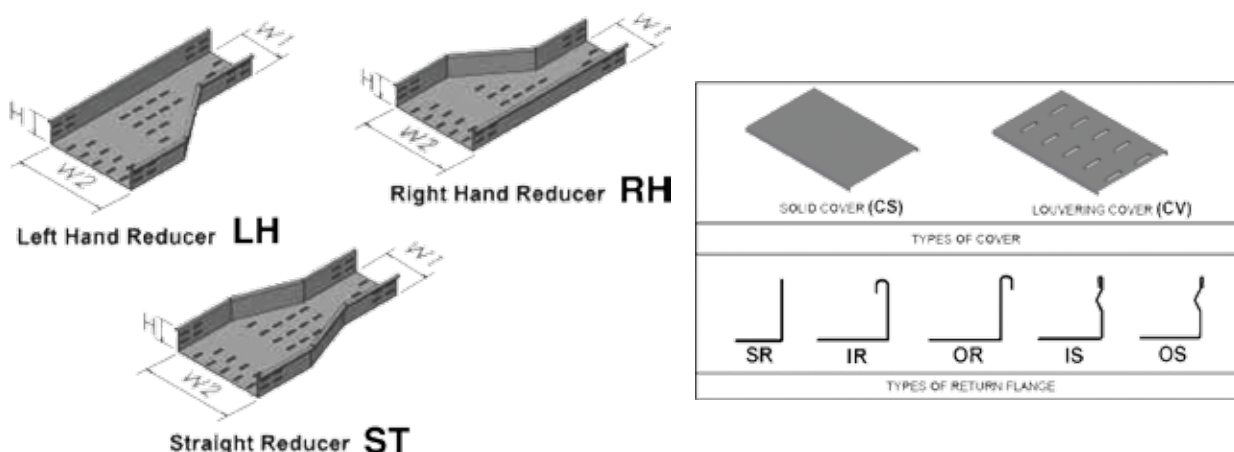
Ordering Code		CTX					/	/	/
Cable Tray Horizontal Elbow	CTX								
With Cover	CS	CV							
Without Cover	-								
Round Type	D								
Cornered Type 45	R								
Radius	300	600	900						
Straight		SR							
Round Inside Return		IR							
Round Outside Return		OR							
Inside Return Flange Snap On		IS							
Outside Return Flange Snap On		OS							
Black Steel		BST							
Hot Dip Galvanized after Fabrication		HDG							
Hot Dip Galvanized and powder Coating		HDP							
Mill Galvanized		MG							
Steel Epoxy Coating		EPC							
Aluminum		AL							
Stainless Steel 304		S4							
Stainless Steel 316		S6							
Width (W1/W2/W3/W4) mm	50	100	150	200	300	450	600	900	1000
Height (H) mm	50	75	85	100					
Thickness (T) mm	1.0	1.25	1.5	2.0					

Ordering Code Example : CTXCSD300ORHDG450/200/300/600/100/2.0

NOTES:

- Cover fixation as per required.
- Standard cover thickness is 1.5 mm for below 300 mm width and 2 mm for 300 mm width above.
- Special orders can be manufactured upon request.

Cable Tray Reducers



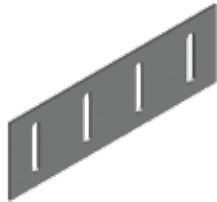
Ordering Code		CTX					/	/	/	
Cable Tray Horizontal Elbow	CTX									
With Cover	CS	CV								
Without Cover	-									
Starigth	ST									
Right Hand	RH									
Left hand	LH									
Straight	SR									
Round Inside Return	IR									
Round Outside Return	OR									
Inside Return Flonge Snap On	IS									
Oulside Return Flange Snap On	OS									
Black Steel	BST									
Hot Dip Galvanized after Fabrication	HDG									
Hot Dip Galvanized and powder Coating	HDP									
Mill Galvanized	MG									
Steel Epoxy Coating	EPC									
Aluminum	AL									
Stainless Steel 304	S4									
Stainless Steel 316	S6									
Width (W1/W2/W3/W4) mm	50	100	150	200	300	450	600	900	1000	
Helght (H) mm	50	75	85	100						
Thickness (T) mm	1.0	1.25	1.5	2.0						

Ordering Code Example : CTYCSRHORHDG600/450/100/2.0

NOTES:

- Cover fixation as per required.
- Standard cover thickness is 1.5 mm for below 300 mm width and 2 mm for 300 mm width above.
- Round type bend is not available for this fittings.
- Special orders can be manufactured upon request.

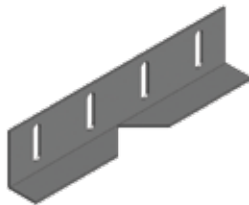
Cable Tray Accessories



Straight Joint
(CT01)



Angle Straight Connector
(CT02)



Angle Joint
(CT03)



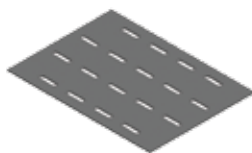
Vertical Joint
(CT04)



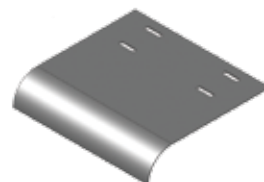
End Plate Joint
(CT05)



Reducing Connector
(CT06)



Fish Plate
(CT07)



Drop Out
(CT08)

Cable Tray Accessories



Separator Strip
(CT09)



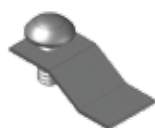
Cover Side Clamp
(CT10)



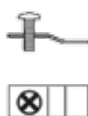
Cover Double Clamp Connector
(CT11)



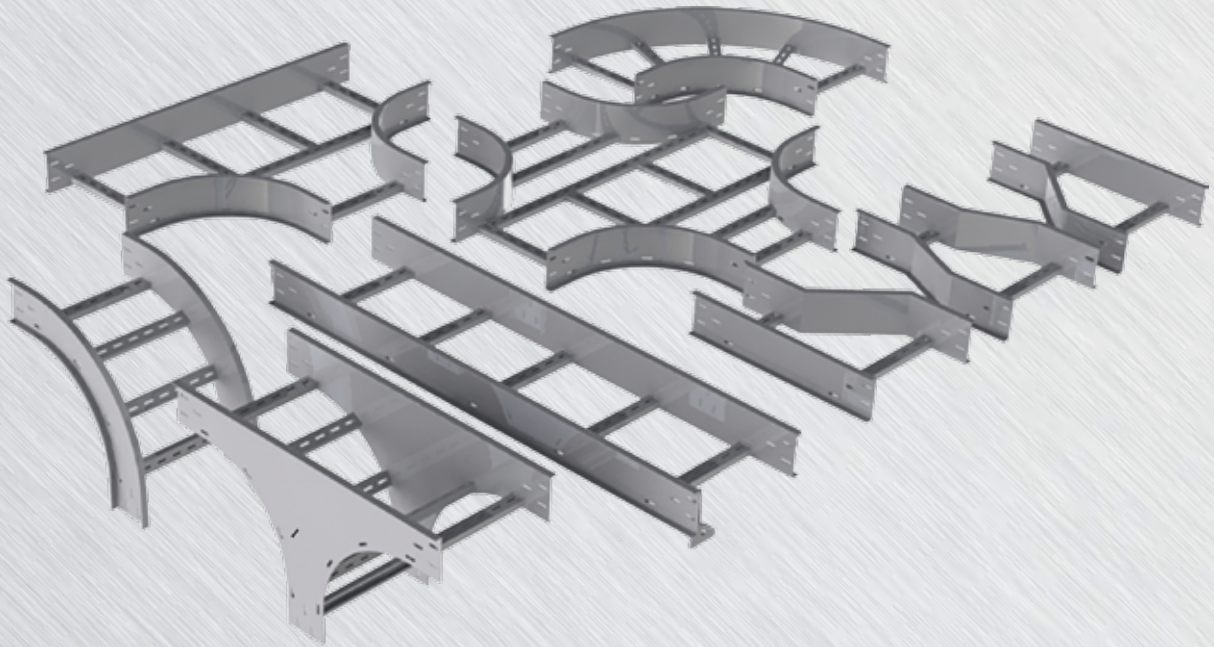
Cover Bracket
(CT12)



Cover Lock Device
(CT13)

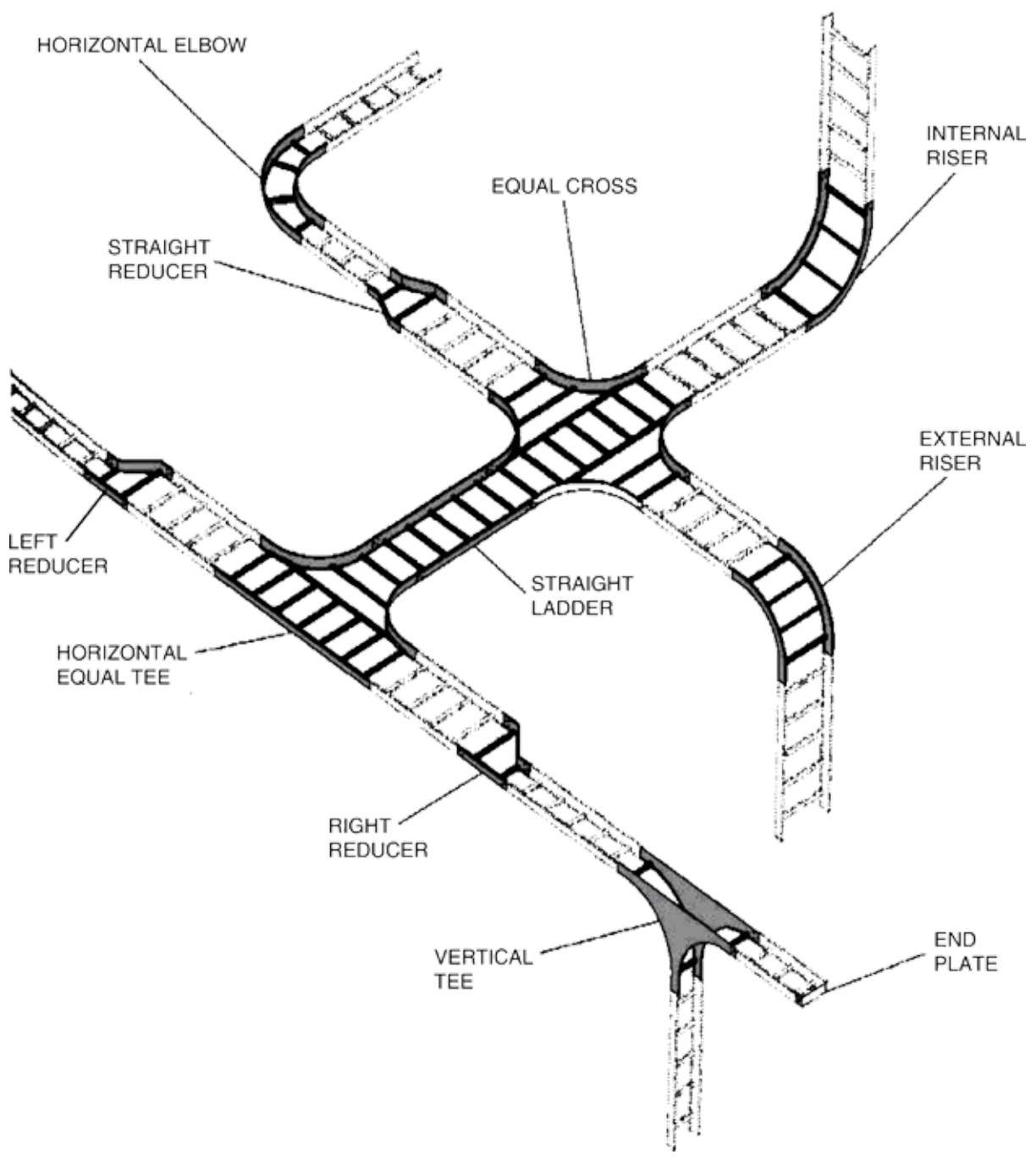


Wrap Around Cover Connector
(CT14)

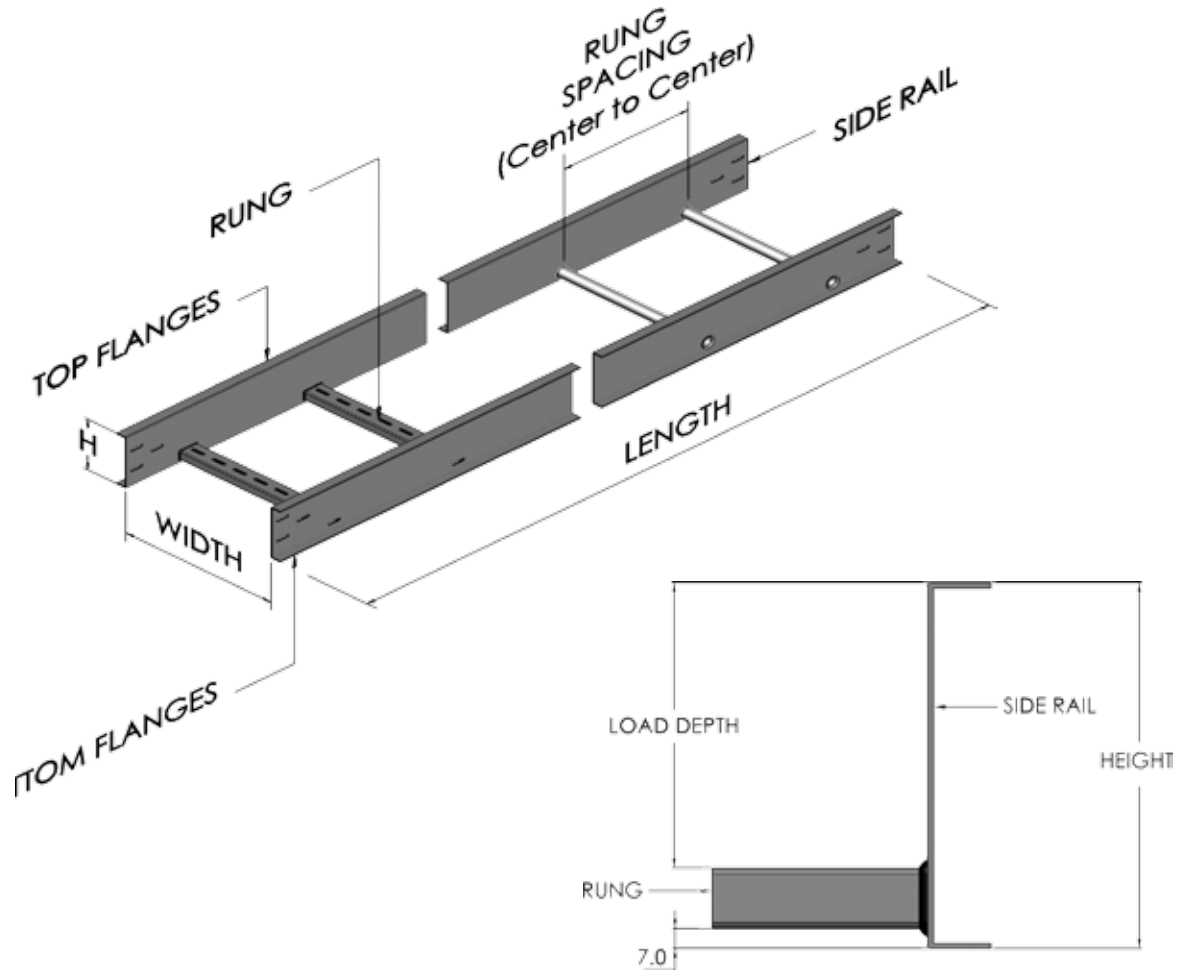


CABLE LADDER

Cable Ladder Typical Layout



General Technical Information



MMICO has a comprehensive system of cable ladders. MMICO Ladders come in two categories Tubular Swaged Type & C - Channel welded system. MMICO Cable Ladders are comply NEMA VE-1, BS EN ISO 1 461 or ASTM 123 for HDG and for Cold Rolled BS 2994 1976.

Manufactured from a series of welded C-Channel System and Tubular pipe swaged system with standard Height of 110, 135, 160 185mm. (4.25", 5.25", 6.25", 7.25"). Side rail flanges could be inward or outward. Standard length 2.44 to 6.0 M.

COMPLIANCE STATEMENT

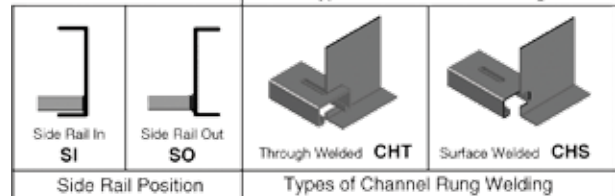
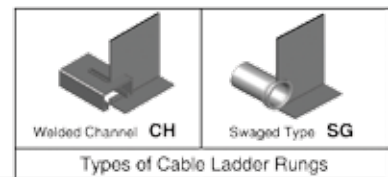
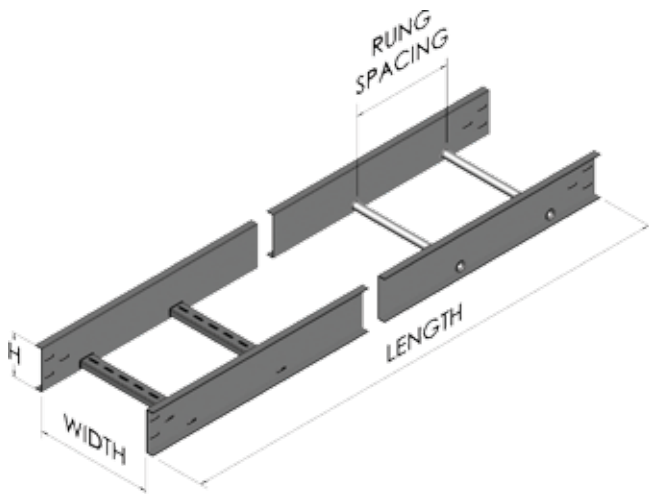
Modern Metal Industries Company never makes any design changes or new products. All products are being manufactured and in compliance with the SAUDI ARAMCO Engineering Standard SAES-P-104 and SAMSS and as well as other related International Standards.

Technical Specification - Aluminum Cable Ladder

Physical Properties, Load and Deflection Data for Aluminum Ladder						Working (Allowable) Load Capacity-Evenly Distributed Span (ft.) - Simple Beam - Safety Factor : 1.5																			
NEMA Class Load per Span	MMICO System Number	Load Depth	Height	Flange	Thickness	6Ft. (1.8M)			8Ft. (2.4M)			10Ft. (3.1M)			12Ft. (3.7M)			16Ft. (4.9M)			20Ft. (6.1M)				
						w	d	k	w	d	k	w	d	k	w	d	k	w	d	k	w	d	k		
8A	8= 8' - 0"	STSA 08A3	76	108	20.6	1.5	181	0.34	0.002	102	0.60	0.006	65	0.94	0.014	45	1.36	0.030							
		STSA 08A4	102	133	20.6	1.5	324	0.33	0.001	182	0.59	0.003	117	0.87	0.007	77	1.26	0.016							
		STSA 08A5	127	159	20.6	2.0	359	0.22	+	191	0.37	0.002	115	0.55	0.005	75	0.74	0.010							
8B	A=50 lb./ft. (74.4 kg/M)	STSA 08A6	152	184	20.6	1.5	416	0.18	+	221	0.31	0.001	133	0.87	0.003	87	0.62	0.007							
		STSA 08B3	76	108	20.6	1.5	181	0.34	0.002	102	0.60	0.006	65	0.94	0.014	45	1.36	0.030							
	B=75 lb./ft. (111.6 kg/M)	STSA 08B4	102	133	20.6	1.5	324	0.33	0.001	182	0.59	0.003	117	0.87	0.007	77	1.26	0.016							
		STSA 08B5	127	159	20.6	2.0	359	0.22	+	191	0.37	0.002	115	0.55	0.005	75	0.74	0.010							
8C	C=100 lb./ft. (148.8 kg/M)	STSA 08B6	152	184	20.6	1.5	416	0.18	+	221	0.31	0.001	133	0.87	0.003	87	0.62	0.007							
		STSA 08C3	76	108	20.6	1.5	181	0.34	0.002	102	0.60	0.006	65	0.94	0.014	45	1.36	0.030							
		STSA 08C4	102	133	20.6	1.5	324	0.33	0.001	182	0.59	0.003	117	0.87	0.007	77	1.26	0.016							
		STSA 08C5	127	159	20.6	2.0	359	0.22	+	191	0.37	0.002	115	0.55	0.005	75	0.74	0.010							
12A	50 lb./ft. (74.4 kg/M) 12' span	STSA 08C6	152	184	20.6	1.5	416	0.18	+	221	0.31	0.001	133	0.87	0.003	87	0.62	0.007							
		STSA 12A3	76	108	20.6	1.5	222	0.35	0.002	125	0.63	0.005	80	0.99	0.012	55	1.42	0.026							
		STSA 12A4	102	133	20.6	1.5	324	0.33	0.001	182	0.59	0.003	117	0.87	0.007	77	1.26	0.016							
		STSA 12A5	127	159	20.6	2.0	359	0.22	+	191	0.37	0.002	115	0.55	0.005	75	0.74	0.010							
12B	75 lb./ft. (111.6 kg/M) 12' span	STSA 12A6	152	184	20.6	1.5	416	0.18	+	221	0.31	0.001	133	0.46	0.003	87	0.62	0.007							
		STSA 12B3	76	108	20.6	2.0	354	0.45	0.001	191	0.76	0.004	117	1.14	0.010	78	1.57	0.020							
		STSA 12B4	102	133	20.6	1.5	324	0.33	0.001	182	0.59	0.003	117	0.87	0.007	77	1.26	0.016							
		STSA 12B5	127	159	20.6	2.0	359	0.22	+	191	0.37	0.002	115	0.55	0.005	75	0.74	0.010							
12C	100 lb./ft. (148.8 kg/M) 12' span	STSA 12B6	152	184	20.6	1.5	416	0.18	+	221	0.31	0.001	133	0.46	0.003	87	0.62	0.007							
		STSA 12C3	76	108	20.6	2.5	448	0.39	+	251	0.69	0.003	161	1.08	0.007	112	1.55	0.014							
		STSA 12C4	102	133	20.6	2.0	394	0.31	+	222	0.55	0.002	142	0.86	0.006	100	1.24	0.012							
		STSA 12C5	127	159	20.6	2.0	480	0.24	+	257	0.40	0.002	156	0.60	0.004	102	0.81	0.008							
16A	50 lb./ft. (74.4 kg/M) 16' span	STSA 12C6	152	184	20.6	2.5	540	0.17	+	286	0.29	0.001	172	0.43	0.003	111	0.57	0.005							
		STSA 16A3	76	108	20.6	2.5				251	0.69	0.003	161	1.08	0.007	112	1.55	0.014	51	2.26	0.044	25	2.75	0.110	
		STSA 16A4	102	133	31.75	2.5				280	0.44	0.002	186	0.69	0.004	96	0.82	0.009	51	1.36	0.027	28	1.83	0.065	
		STSA 16A5	127	159	31.75	2.0				273	0.37	0.001	155	0.51	0.003	101	0.69	0.007	51	1.10	0.022	24	1.28	0.053	
16B	75 lb./ft. (111.6 kg/M) 16' span	STSA 16A6	152	184	31.75	2.0			284	0.28	+	182	0.41	0.002	110	0.52	0.005	52	0.78	0.015	30	1.1	0.037		
		STSA 16B3	76	108	31.75	2.0				342	0.72	0.002	219	1.12	0.005	152	1.61	0.011	82	2.74	0.033	52	4.27	0.082	
		STSA 16B4	102	133	31.75	3.0				349	0.51	0.001	223	0.80	0.004	155	1.15	0.016	79	1.85	0.023	51	2.89	0.057	
		STSA 16B5	127	159	31.75	1.5				380	0.49	0.001	222	0.69	0.003	154	1.00	0.007	78	1.61	0.021	50	2.51	0.050	
16C	100 lb./ft. (148.8 kg/M) 16' span	STSA 16B6	152	184	38.1	1.5			377	0.32	+	241	0.50	0.002	149	0.64	0.004	78	1.06	0.014	50	1.65	0.033		
		STSA 16C3	76	108	31.75	2.5				444	0.71	0.002	284	0.70	0.002	188	1.53	0.008	106	2.73	0.026	65	4.07	0.063	
		STSA 16C4	102	133	31.75	2.0				525	0.55	0.001	336	0.86	0.003	233	1.24	0.005	119	2.01	0.017	76	3.14	0.041	
		STSA 16C5	127	159	44.45	2.0				481	0.41	+	308	0.64	0.002	215	0.92	0.004	121	1.63	0.013	77	2.55	0.033	
20A	50 lb./ft. (74.4 kg/M) 20' span	STSA 16C6	152	184	38.1	1.5			542	0.44	+	318	0.62	0.002	221	0.90	0.004	119	1.53	0.013	76	2.39	0.032		
		STSA 20A3	76	108	31.75	2.0									152	1.61	0.011	82	2.74	0.033	52	4.27	0.082		
		STSA 20A4	102	133	31.75	3.0									155	1.51	0.007	79	1.85	0.023	51	2.89	0.057		
		STSA 20A5	127	159	31.75	1.5									154	1.00	0.006	78	1.61	0.021	50	2.51	0.050		
20B	75 lb./ft. (111.6 kg/M) 20' span	STSA 20A6	152	184	38.1	1.5								221	0.90	0.004	119	1.53	0.013	76	2.39	0.032			
		STSA 20B3	76	108	38.1	2.0									224	1.53	0.007	120	2.59	0.022	77	4.05	0.053		
		STSA 20B4	102	133	31.75	2.0									233	1.24	0.005	119	2.01	0.017	76	3.14	0.041		
		STSA 20B5	127	159	44.45	2.0									215	0.92	0.004	121	1.63	0.013	77	2.55	0.033		
20C	100 lb./ft. (148.8 kg/M) 20' span	STSA 20B6	152	184	38.1	1.5								221	0.90	0.004	119	1.53	0.013	76	2.39	0.032			
		STSA 20C3	76	108	38.1	2.5									298	1.79	0.006	161	3.07	0.019	103	4.79	0.047		
		STSA 20C4	102	133	31.75	2.5									290	1.35	0.005	156	2.30	0.015	100	3.59	0.038		
		STSA 20C5	127	159	44.45	2.5									316	1.23	0.004	178	2.19	0.012	114	3.43	0.030		
		STSA 20C6	152	184	50	2.0								313	0.93	0.003	176	1.66	0.009	113	2.59	0.023			

to Convert 1.5 safety factor to 2.0 - Multiply w,d,k by - 75
w = Allowable working load (lbs/ft) to convert to kg/M multiply by 148
d = Deflection at midspan (inches) to convert to mm multiply by 25.4.
k = Deflection for each pound of load (inches).
+ = Deflection is less than 0001/ inch.

Cable Ladder Straight



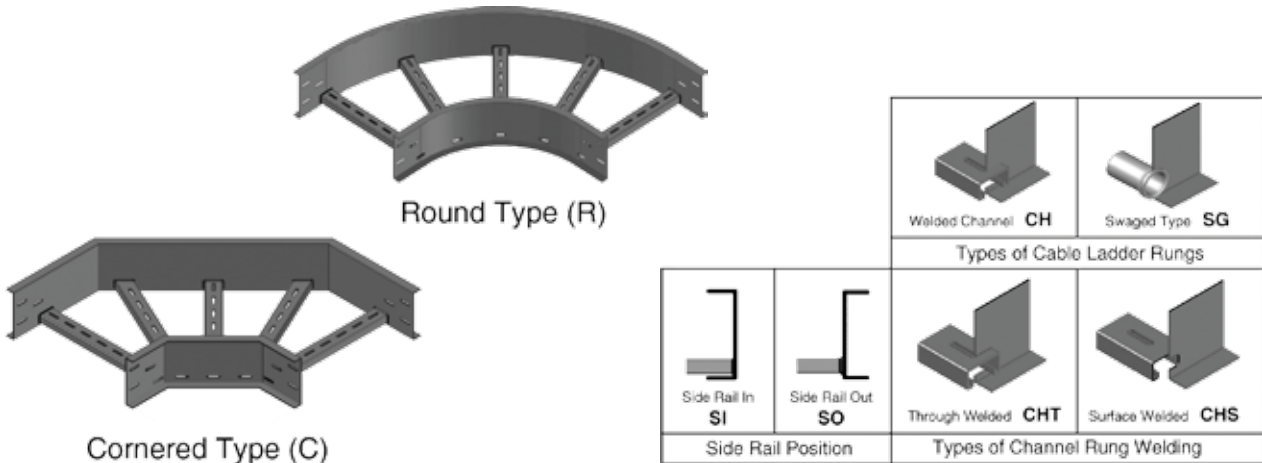
Ordering Code		CL							/	/	/	/	/
Cable Ladder	CL												
Swaged Type	SG												
Welded Channel	CHS CHT												
Side Rail In	SI												
Side Rail Out	SO												
Rung Spacing	mm	150	229	250	300								
	inches	6"	9"	10"	12"								
Black Steel		BST											
Hot Dip Galvanized after Fabrication		HDG											
Hot Dip Galvanized and powder Coating		HDP											
Mill Galvanized		MG											
Steel Epoxy Coating		EPC											
Aluminum		AL											
Stainless Steel 304		S4											
Stainless Steel 316		S6											
Width (W)	mm	100	150	200	300	450	600	750	900	1000			
	inches	4"	6"	8"	12"	18"	24"	30"	36"	40"			
Side Rail Height (H)	mm	110	125	137	150	184							
	inches	4"	5"	5.25"	6"	7.25"							
Flange Sizes	mm	21	32	38	44								
	inches	0.8"	1.25"	1.5"	1.75"								
Thickness (T)	mm	1.5	2.0	2.5									
	inches	16GA	14GA	12GA									
Length (L)	mm	2000	2440	3000									
	inches	6.5"	8"	10"									
NEMA CLASS (N)		8A	12A	16A	8B	12B	16B	8C	12C	16C			

Ordering Code Example : CLCHSSO300HDG6008/3000/2/32/125/C

NOTES:

- Standard pipe size for swaged type cable ladder is 3/4" for steel & 1" for aluminum.
- Slotted C-Channel (41x21x2 or 50x25x2) rungs will be used for welded type cable ladder.
- Special orders can be manufactured upon request.

Cable Ladder Horizontal Elbow



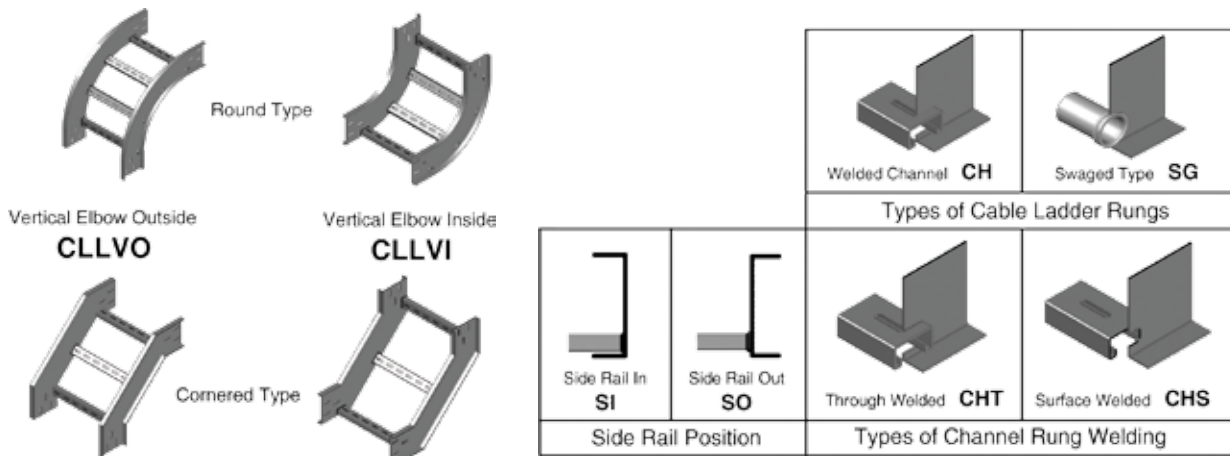
		Ordering Code		CLLH																	
Cable Ladder Horizontal Elbow		CLLH																			
Swaged Type		SG																			
Welded Channel		CHS CHT																			
Radius (R)		300 600 900																			
Angle (A)		30 45 60 90																			
Side Rail In		SI																			
Side Rail Out		SO																			
Rung Spacing		mm inches		150 6"		229 9"		250 10"		300 12"											
Black Steel		BST																			
Hot Dip Galvanized after Fabrication		HDG																			
Hot Dip Galvanized and powder Coating		HDP																			
Mill Galvanized		MG																			
Steel Epoxy Coating		EPC																			
Aluminum		AL																			
Stainless Steel 304		S4																			
Stainless Steel 316		S6																			
Width (W)		mm inches		100 4"		150 6"		200 8"		300 12"		450 18"		600 24"		750 30"		900 36"		1000 40"	
Side Rail Height (H)		mm inches		110 4"		125 5"		137 5.25"		150 6"		184 7.25"									
Flange Sizes		mm inches		21 0.8"		32 1.25"		38 1.5"		44 1.75"											
Thickness (T)		mm inches		1.5 16GA		2.0 14GA		2.5 12GA													
Round Type		R																			
Cornered Type		C																			

Ordering Code Example : CLLHCCHT300/90°SO250HD450/125/32/2/R

NOTES:

- Standard pipe size for swaged type cable ladder is 3/4" for steel & 1" for aluminum.
- Slotted C-Channel (41x21x2 or 50x25x2) rungs will be used for welded type cable ladder.
- Special orders can be manufactured upon request.

Cable Ladder Vertical Elbow



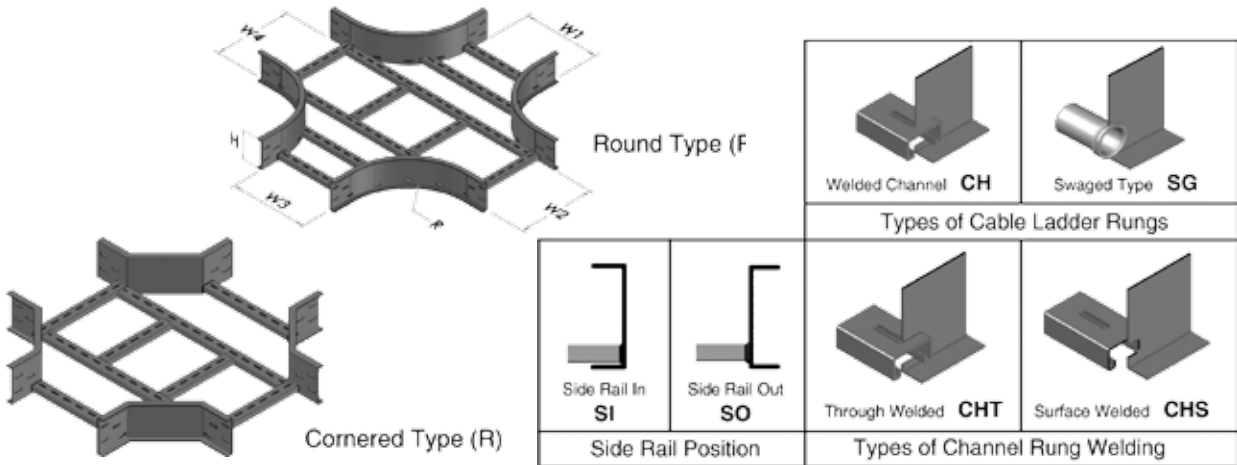
Ordering Code		CLLV			/					/	/	/	/
Cable Ladder Vertical Elbow	CLLV												
Swaged Type	SG												
Welded Channel	CHS	CHT											
Radius (R)	300	600	900										
Angle (A)	30	45	60	90									
Side Rail In	SI												
Side Rail Out	SO												
Rung Spacing	mm	150	229	250	300								
	inches	6"	9"	10"	12"								
Black Steel	BST												
Hot Dip Galvanized after Fabrication	HDG												
Hot Dip Galvanized and powder Coating	HDP												
Mill Galvanized	MG												
Steel Epoxy Coating	EPC												
Aluminum	AL												
Stainless Steel 304	S4												
Stainless Steel 316	S6												
Width (W)	mm	100	150	200	300	450	600	750	900	1000			
	inches	4"	6"	8"	12"	18"	24"	30"	36"	40"			
Side Rail Height (H)	mm	110	125	137	150	184							
	inches	4"	5"	5.25"	6"	7.25"							
Flange Sizes	mm	21	32	38	44								
	inches	0.8"	1.25"	1.5"	1.75"								
Thickness (T)	mm	1.5	2.0	2.5									
	inches	16GA	14GA	12GA									
Round Type	R												

Ordering Code Example : CLLVOCHT300/90SO250HDG450/125/32/R

NOTES:

- Standard pipe size for swaged type cable ladder is 3/4" for steel & 1" for aluminum.
- Slotted C-Channel (41x21x2 or 50x25x2) rungs will be used for welded type cable ladder.
- Special orders can be manufactured upon request.

Cable Ladder Horizontal Cross



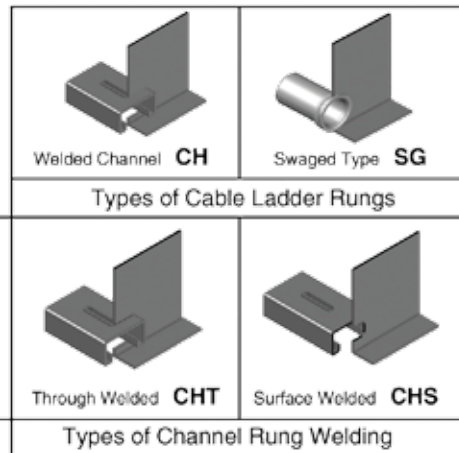
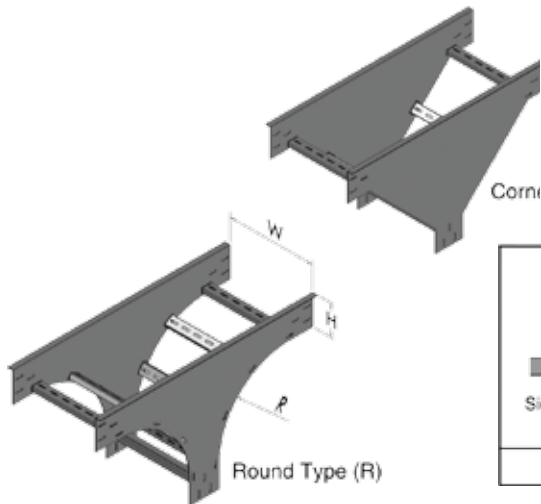
Ordering Code		CLX						/	/	/	/
Cable Ladder Horizontal Cross	CLX										
Swaged Type	SG										
Welded Channel	CHS	CHT									
Side Rail In	SI										
Side Rail Out	SO										
Black Steel	BST										
Hot Dip Galvanized after Fabrication	HDG										
Hot Dip Galvanized and powder Coating	HDP										
Mill Galvanized	MG										
Steel Epoxy Coating	EPC										
Aluminum	AL										
Stainless Steel 304	S4										
Stainless Steel 316	S6										
Width (W)	mm	100	150	200	300	450	600	750	900	1000	
	inches	4"	6"	8"	12"	18"	24"	30"	36"	40"	
Side Rail Height (H)	mm	110	125	137	150	184					
	inches	4"	5"	5.25"	6"	7.25"					
Flange Sizes	mm	21	32	38	44						
	inches	0.8"	1.25"	1.5"	1.75"						
Thickness (T)	mm	1.5	2.0	2.5							
	inches	16GA	14GA	12GA							
Round Type	R										
Cornered Type	C										

Ordering Code Example : CLTHSGSI600HD300/200/300/110/21/2/R

NOTES:

- Standard pipe size for swaged type cable ladder is 3/4" for steel & 1" for aluminum.
- Slotted C-Channel (41x21x2 or 50x25x2) rungs will be used for welded type cable ladder.
- Special orders can be manufactured upon request.

Cable Ladder Vertical Tee



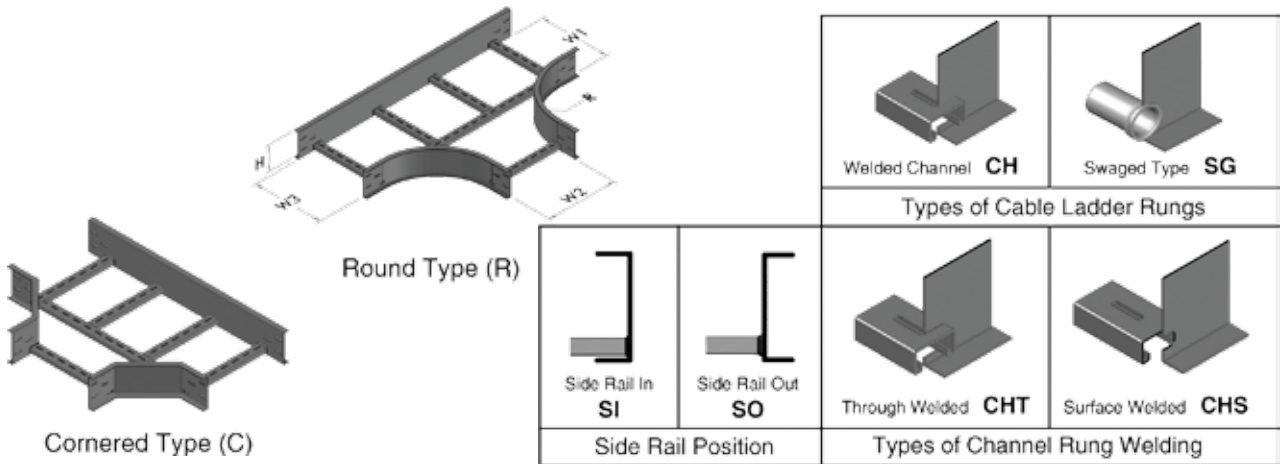
Ordering Code		CLTV						/	/	/	/
Cable Ladder Vertical Tee	CLTV										
Swaged Type	SG										
Welded Channel	CHS	CHT									
Side Rail In	SI										
Side Rail Out	SO										
Black Steel	BST										
Hot Dip Galvanized after Fabrication	HDG										
Hot Dip Galvanized and powder Coating	HDP										
Mill Galvanized	MG										
Steel Epoxy Coating	EPC										
Aluminum	AL										
Stainless Steel 304	S4										
Stainless Steel 316	S6										
Width (W)	mm	100	150	200	300	450	600	750	900	1000	
	inches	4"	6"	8"	12"	18"	24"	30"	36"	40"	
Side Rail Height (H)	mm	110	125	137	150	184					
	inches	4"	5"	5.25"	6"	7.25"					
Flange Sizes	mm	21	32	38	44						
	inches	0.8"	1.25"	1.5"	1.75"						
Thickness (T)	mm	1.5	2.0	2.5							
	inches	16GA	14GA	12GA							
Round Type	R										
Cornered Type	C										

Ordering Code Example : CLTVSGSI600HDP300/200/300/110/21/2/R

NOTES:

- Standard pipe size for swaged type cable ladder is 3/4" for steel & 1" for aluminum.
- Slotted C-Channel (41x21x2 or 50x25x2) rungs will be used for welded type cable ladder.
- Special orders can be manufactured upon request.

Cable Ladder Horizontal Tee



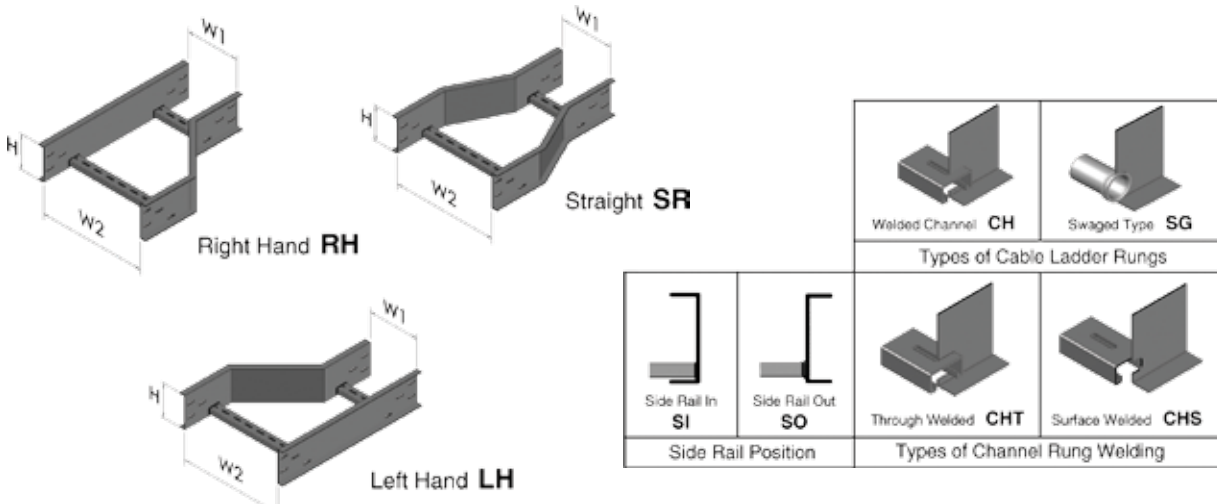
Ordering Code		CLTH						/		/	/	/
Cable Ladder Vertical Tee	CLTH											
Swaged Type	SG											
Welded Channel	CHS	CHT										
Side Rail In	SI											
Side Rail Out	SO											
Black Steel	BST											
Hot Dip Galvanized after Fabrication	HDG											
Hot Dip Galvanized and powder Coating	HDP											
Mill Galvanized	MG											
Steel Epoxy Coating	EPC											
Aluminum	AL											
Stainless Steel 304	S4											
Stainless Steel 316	S6											
Width (W)	mm	100	150	200	300	450	600	750	900	1000		
	inches	4"	6"	8"	12"	18"	24"	30"	36"	40"		
Side Rail Height (H)	mm	110	125	137	150	184						
	inches	4"	5"	5.25"	6"	7.25"						
Flange Sizes	mm	21	32	38	44							
	inches	0.8"	1.25"	1.5"	1.75"							
Thickness (T)	mm	1.5	2.0	2.5								
	inches	16GA	14GA	12GA								
Round Type	R											
Cornered Type	C											

Ordering Code Example : CLXSGSO300HDG450/300/500/200/125/32/2/R

NOTES:

- Standard pipe size for swaged type cable ladder is 3/4" for steel & 1" for aluminum.
- Slotted C-Channel (41x21x2 or 50x25x2) rungs will be used for welded type cable ladder.
- Special orders can be manufactured upon request.

Cable Ladder Reducers



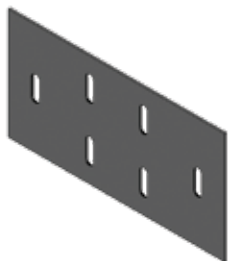
Ordering Code		CLY						/	/	/	/
Cable Ladder Reducer	CLY										
Swaged Type	SG										
Welded Channel	CHS	CHT									
Swaged Type	SG										
Welded Channel	CHS										
Straight	SR										
Right Hand	RH										
Left Hand	LH										
Black Steel	BST										
Hot Dip Galvanized after Fabrication	HDG										
Hot Dip Galvanized and powder Coating	HDP										
Mill Galvanized	MG										
Steel Epoxy Coating	EPC										
Aluminum	AL										
Stainless Steel 304	S4										
Stainless Steel 316	S6										
Width (W)	mm	100	150	200	300	450	600	750	900	1000	
	inches	4"	6"	8"	12"	18"	24"	30"	36"	40"	
Side Rail Height (H)	mm	110	125	137	150	184					
	inches	4"	5"	5.25"	6"	7.25"					
Flange Sizes	mm	21	32	38	44						
	inches	0.8"	1.25"	1.5"	1.75"						
Thickness (T)	mm	1.5	2.0	2.5							
	inches	16GA	14GA	12GA							

Ordering Code Example : CLYCHTSORHHDG450/200/125/38/2

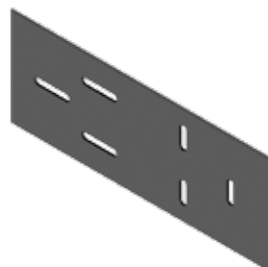
NOTES:

- Standard pipe size for swaged type cable ladder is 3/4" for steel & 1" for aluminum.
- Slotted C-Channel (41x21x2 or 50x25x2) rungs will be used for welded type cable ladder.
- Special orders can be manufactured upon request.

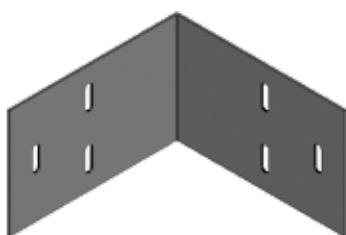
Cable Ladder Accessories



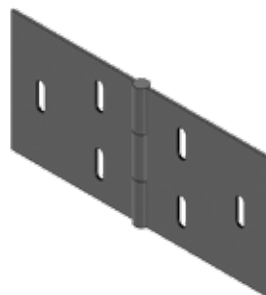
Straight Connector
(CL01)



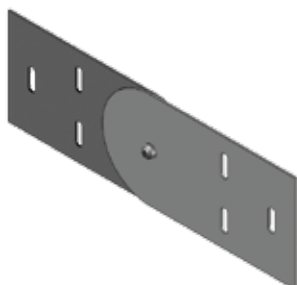
Expansion Connector
(CL02)



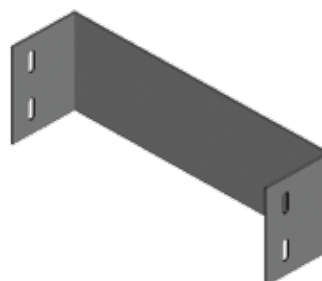
Angle Connector
(CL03)



Adjustable Horizontal Joint
(CL04)



Adjustable Vertical Joint
(CL05)

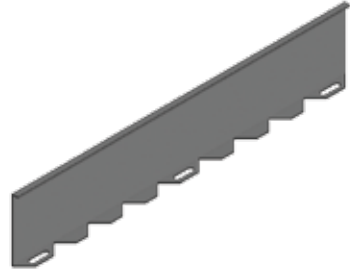


Blind End Plate
(CL06)

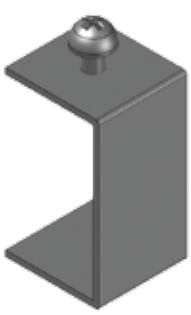
Cable Ladder Accessories



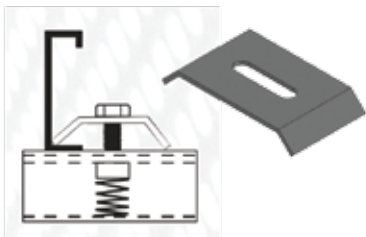
Barrier Strip Straight
(CL07)



Barrier Strip Horizontal Fitting
(CL08)



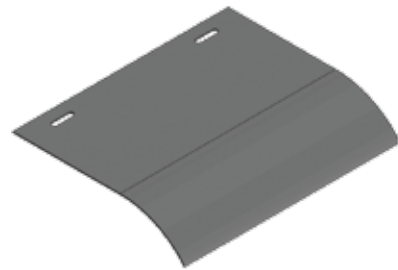
Side Clamp
(CL09)



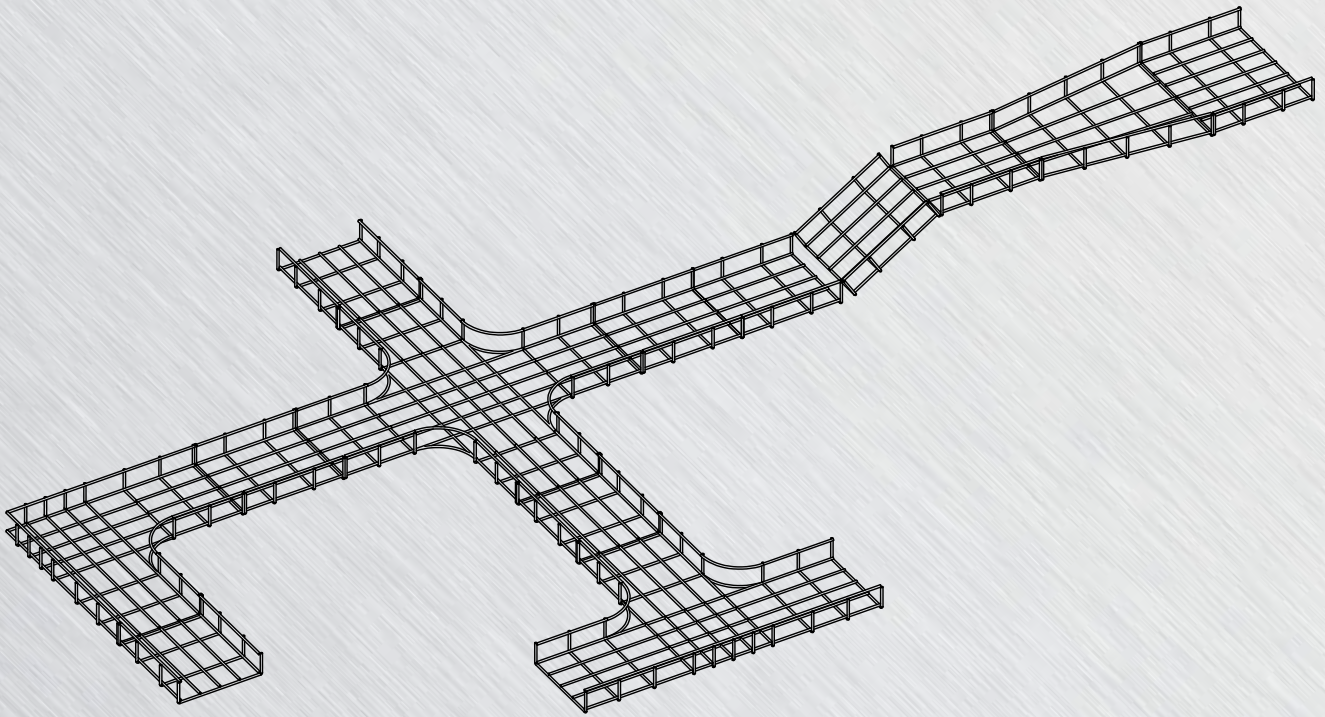
Hold Down Clamp
(CL10)



Bonding Jumper
(CL11)

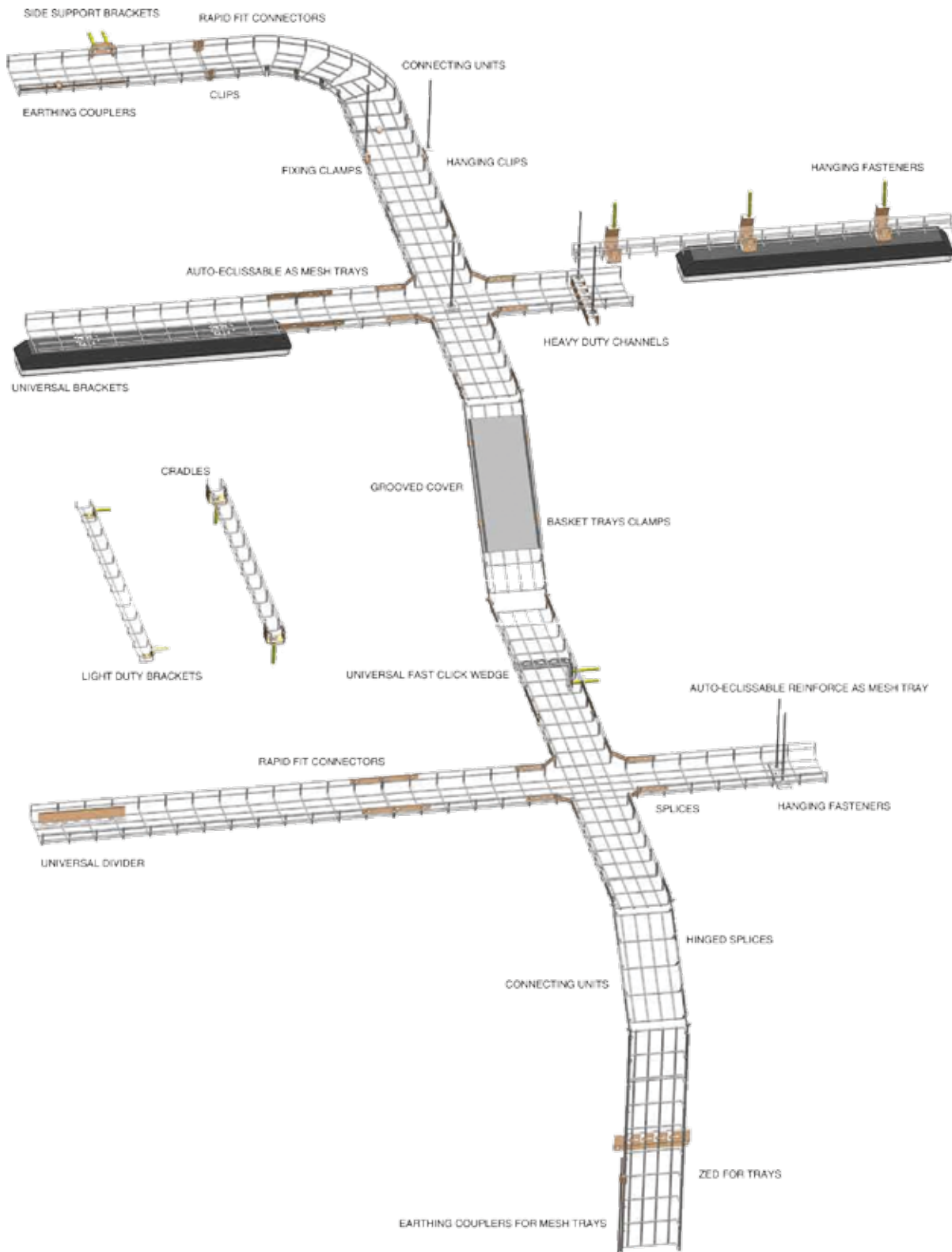


Drop Out Plate
(CL12)

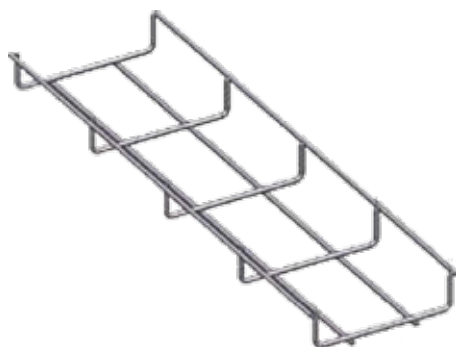


CABLE TRAY BASKET TYPE

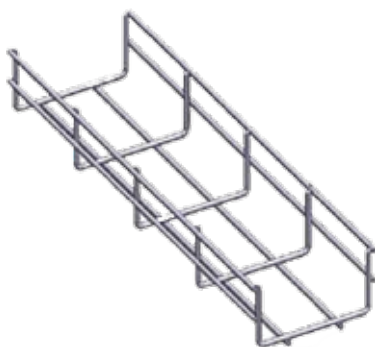
Layout



Basket Trays



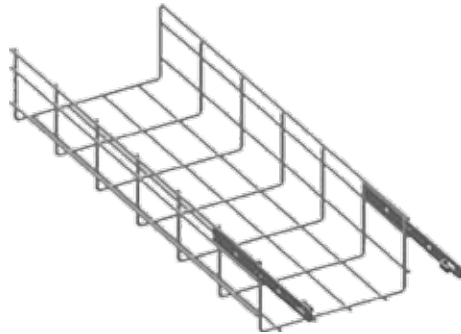
MMB1 Height 30	Pre-Galvanized	HDG		SS304
	Width mm	Code	Code	Code
MMB1-50	50	GI05	HG05	SS05
MMB1-100	100	GI10	HG10	SS10
MMB1-150	150	GI15	HG15	SS15
MMB1-200	200	GI20	HG20	SS20
MMB1-300	300	GI30	HG30	SS30



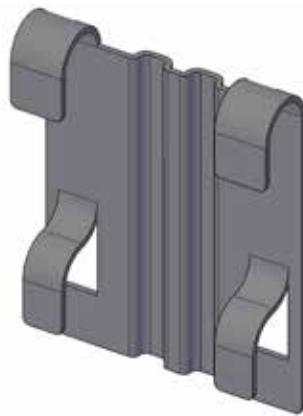
MMB2 Height 50	Pre-Galvanized	HDG		SS304
	Width mm	Code	Code	Code
MMB2-50	50	GI05	HG05	SS05
MMB2-100	100	GI10	HG10	SS10
MMB2-150	150	GI15	HG15	SS15
MMB2-200	200	GI20	HG20	SS20
MMB2-250	250	GI25	HG25	SS25
MMB2-300	300	GI30	HG30	SS30
MMB2-400	400	GI40	HG450	SS40
MMB2-500	500	GI50	HG50	SS50
MMB2-600	600	GI60	HG60	SS60

* **Note:** Stainless Steel 316 are available upon request.

Basket Trays/ Accessories



MMB3 Height 110	Pre-Galvanized	HDG		SS304
	Width mm	Code	Code	Code
MM3-100	100	GI10	HG10	SS10
MM3-100	200	GI20	HG20	SS20



M-ER	Pre-Galvanized	HDG	SS304
	Code	Code	Code
	GI850	HG250	SS650

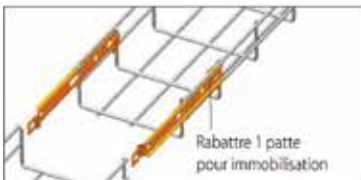


* **Note:** Stainless Steel 316 are available upon request.

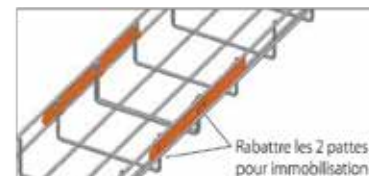
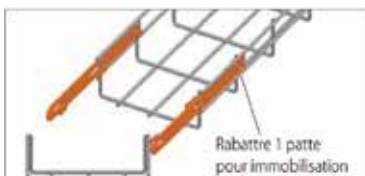
Basket Trays Accessories



	Pre-Galvanized	HDG	SS304
	Code	Code	Code
M-ECR	GI851	HG251	SS651



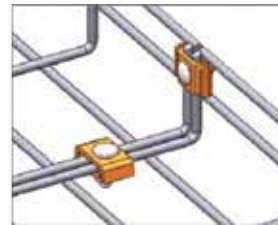
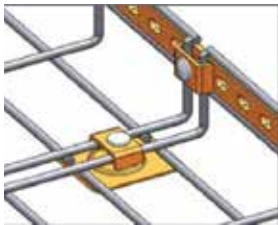
	Pre-Galvanized	HDG	SS304
	Code	Code	Code
M-ECR	GI852	HG252	SS652



Basket Trays Accessories



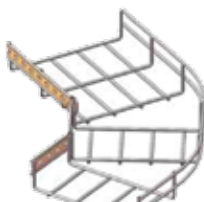
	Pre-Galvanized	HDG	SS304
	Code	Code	Code
MM-CL20	GI850002	HG250002	SS650002
MM-CL30	GI850003	HG250003	SS650003
MM-CL40	GI850004	HG250004	SS650004
MM-B6X20	GI850004	HG250004	SS650004

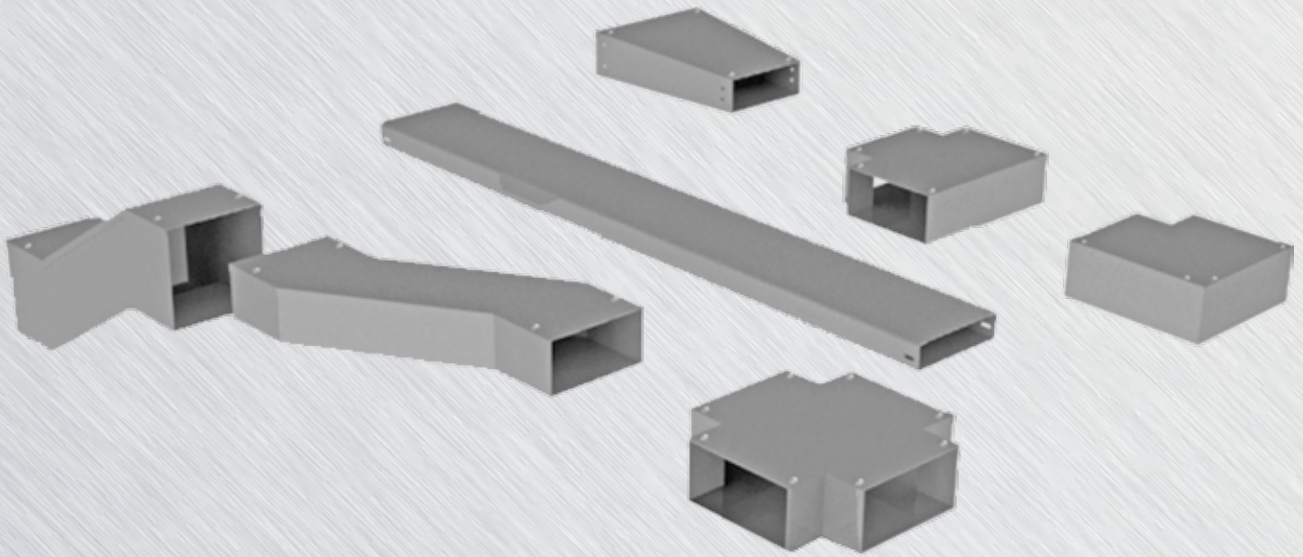


	Pre-Galvanized	HDG	SS304
	Code	Code	Code
MM-KIT-CL20	GI850010	HG250010	SS650010



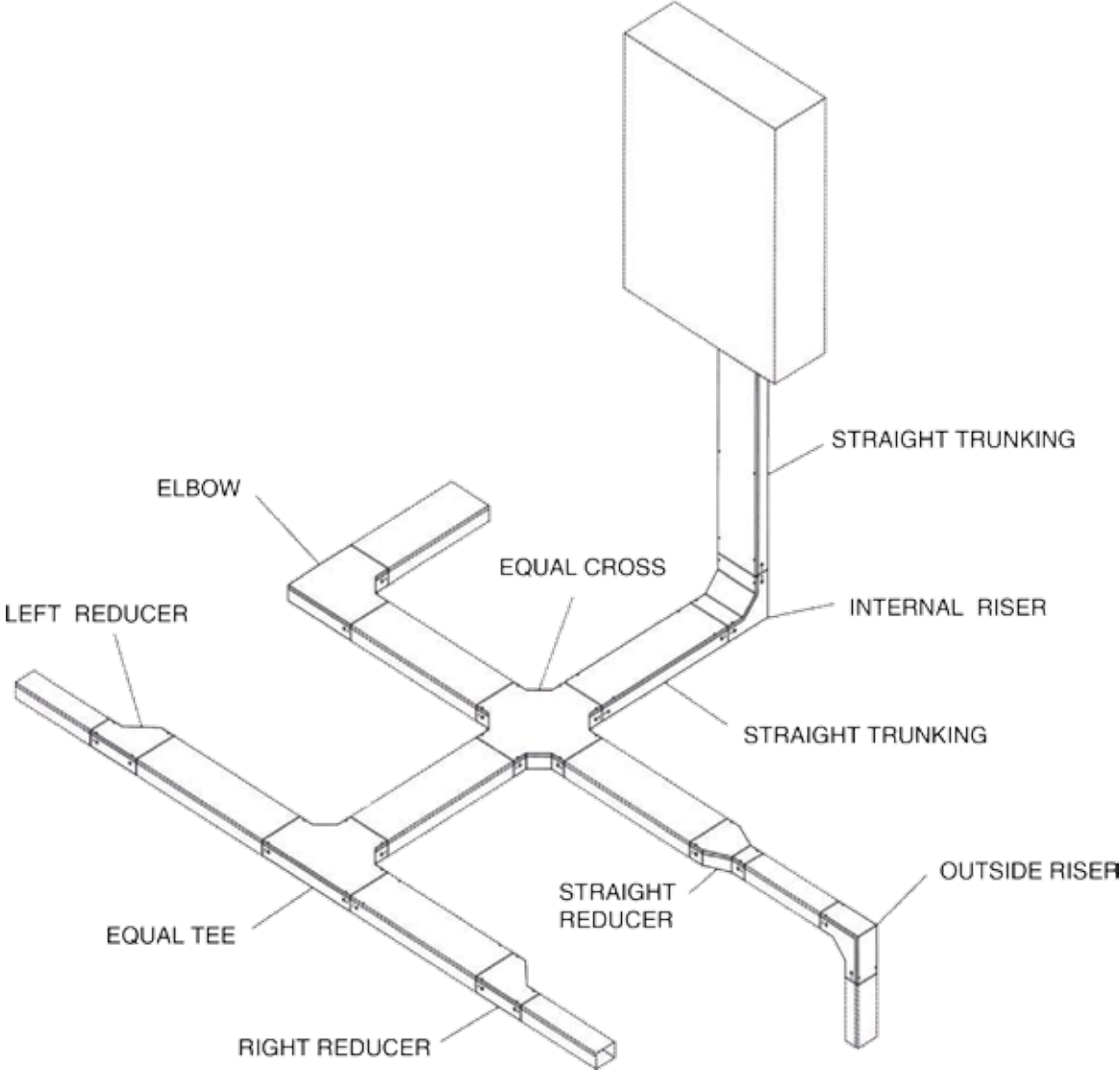
	Pre-Galvanized	HDG	SS304
	Code	Code	Code
MM-CL275	GI850005	HG250005	SS650005
MM-CL1100	GI850006	HG250006	SS650006



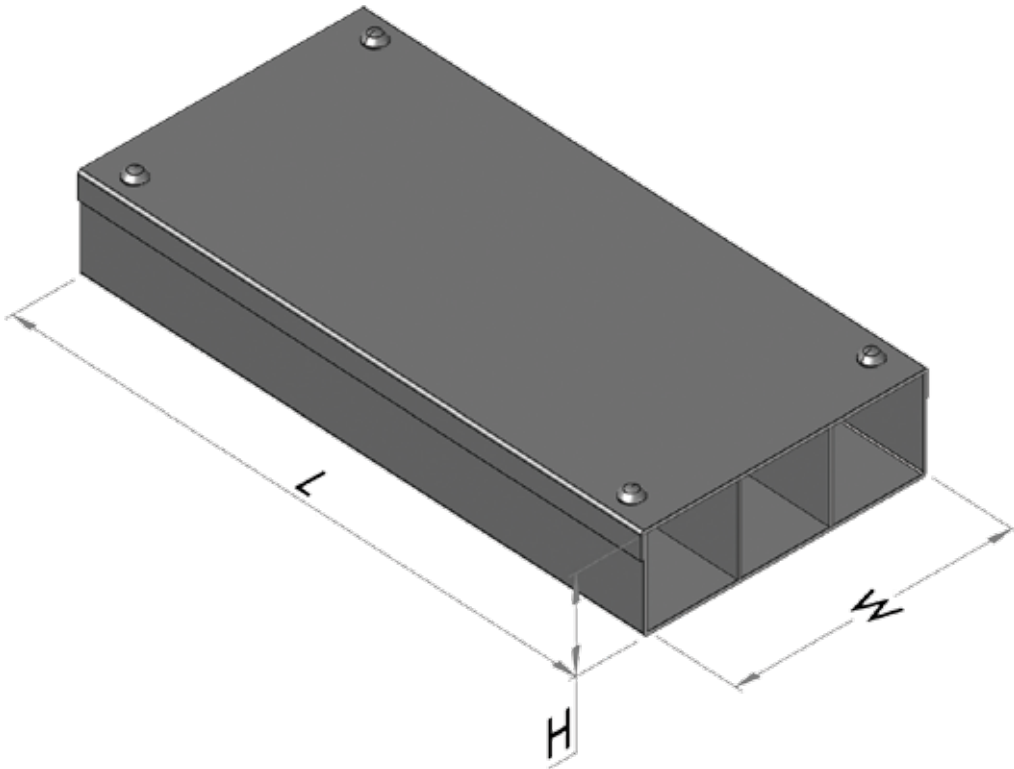


CABLE DUCT (TRUNKING)

Cable Duct Typical Layout



General Technical Information



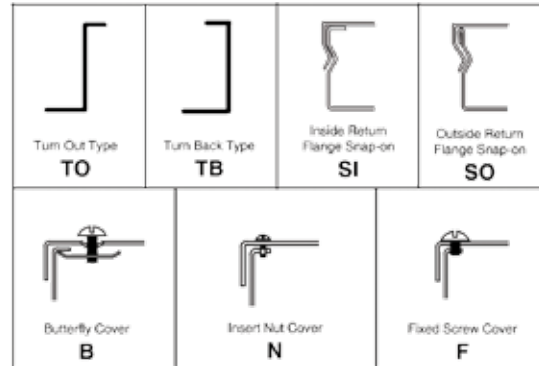
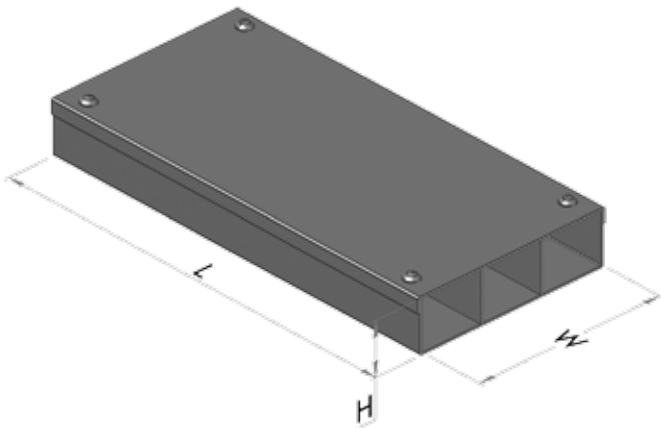
MMICO Cable Duct (Trunking) offers the widest range of measurements with or without dividing straps. A wide range of accessories and fittings complies with BS 4678.

MMICo Standard accessories for Cable Duct (trunking) cover a wide consisting of elbows, tees, angles and others using manufactured steel G.I or HDG. MMICo accessories are supplied with removable covers. Complies with BS 4678 .

COMPLIANCE STATEMENT

Modern Metal Industries Company never makes any design changes or new products. All products are being manufactured and in compliance with the SAUDI ARAMCO Engineering Standard SAES-P-104 and SAMSS and as well as other related International Standards.

Cable Duct (Trunking)



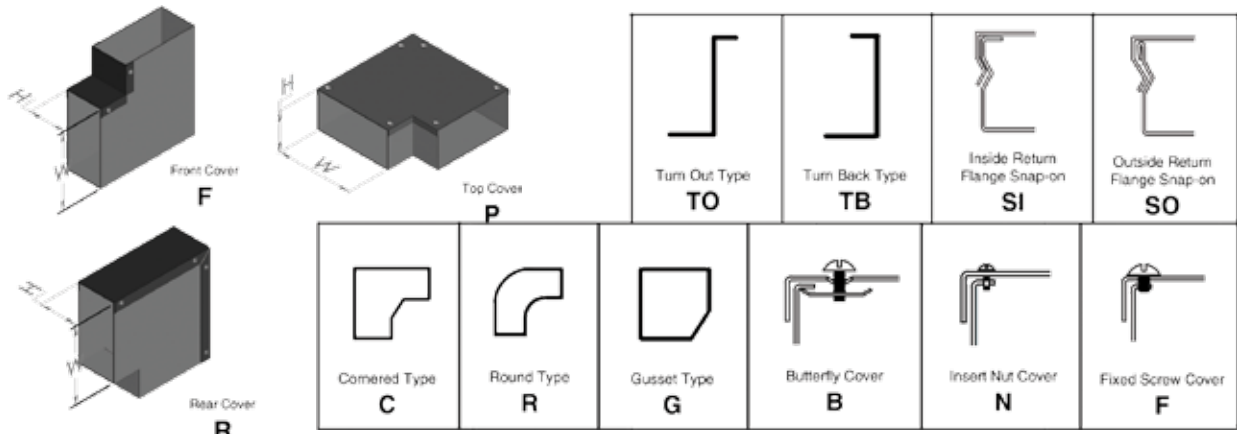
Ordering Code		CD					/	/	/	
Cable Duct	CD									
Compartment	1	2	3							
Turn Out Type				TO						
Turn Back Type				TB						
Inside Return Flange Snap - on				SI						
Outside Return Flange Snap - on				SO						
Butterfly Cover				B						
Insert Nut Cover				N						
Fixed Screw Cover				F						
Black Steel				BST						
Hot Dip Galvanized after Fabrication				HDG						
Hot Dip Galvanized and powder Coating				HDP						
Mill Galvanized				MG						
Steel Epoxy Coating				EPC						
Aluminum				AL						
Stainless Steel 304				S4						
Stainless Steel 316				S6						
Width (W) mm	50	100	150	200	300	450	600	900	1000	
Height (H) mm	50	100	150	200						
Thickness (T) mm	1.0	1.25	1.5	2.0						
Length (L) mm	1000	2440	3000							

Ordering Code Example : CD2TBBHDG500/100/1.5/2440

NOTES:

- Waterproof type specifications upon request, turn out type with seal will be used for water proof type duct.
- Special orders can be manufactured upon request.

Cable Duct Elbows



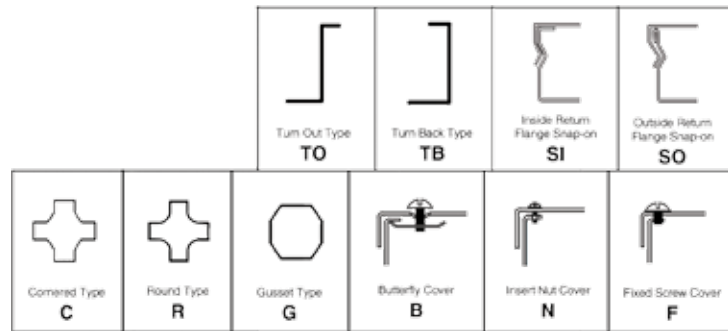
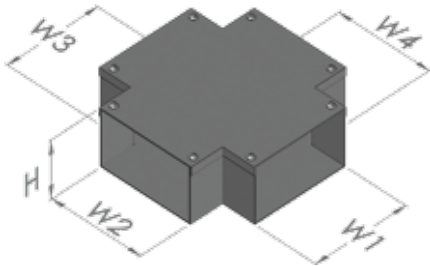
Ordering Code		CDL											/	/	
Cable Duct Elbow	CDL														
Compartment	1	2	3												
Top Cover	P														
Front Cover	F														
Rear Cover	R														
Angle	45	60	90												
Corner Type	C														
Round Type	R														
Gusset Type	G														
Radius (R)	120	200													
Turn Out Type										TO					
Turn Back Type										TB					
Inside Return Flange Snap - on											SI				
Outside Return Flange Snap - on											SO				
Butierfly Cover	B														
Insert Nut Cover	N														
Fixed Screw Cover	F														
Black Steel															BST
Hot Dip Galvanized after Fabrication															HDG
Hot Dip Galvanized and powder Coating															HDP
Mill Galvanized															MG
Steel Epoxy Coating															EPC
Aluminum															AL
Stainless Steel 304															S4
Stainless Steel 316															S6
Width (W) mm	100	150	200	300	450	600	750	900	1000						
Helght (H) mm	50	100	150	200											
Thickness (T) mm	1.0	1.25	1.5	2.0											

Ordering Code Example : CDL1P90R200TOBHDG200/150/2.0

NOTES:

- Waterproof type specifications upon request, turn out type with seal will be used for water proof type duct.
- Special orders can be manufactured upon request.

Cable Duct Cross



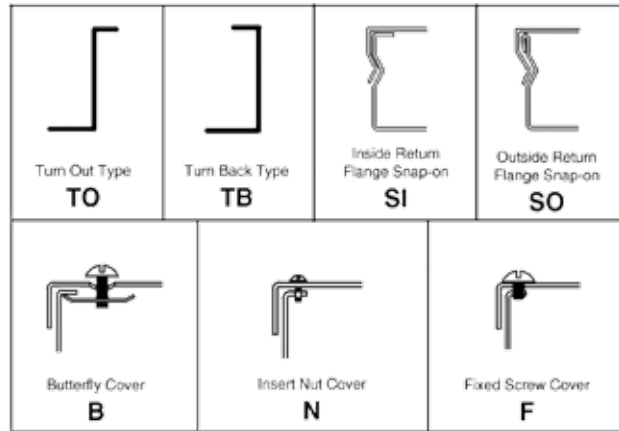
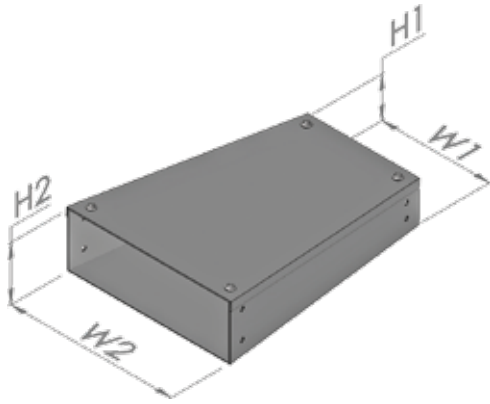
Ordering Code		CDX								/	/	/	/
Cable Duct Elbow	CDX												
Compartment	1	2	3										
Corner Type	C												
Round Type	R												
Gusset Type	G												
Radius (R)	150	200											
Turn Out Type				TO									
Turn Back Type				TB									
Inside Return Flange Snap - on				SI									
Outside Return Flange Snap - on				SO									
Butierfly Cover	B												
Insert Nut Cover	N												
Fixed Screw Cover	F												
Black Steel				BST									
Hot Dip Galvanized after Fabrication				HDG									
Hot Dip Galvanized and powder Coating				HDP									
Mill Galvanized				MG									
Steel Epoxy Coating				EPC									
Aluminum				AL									
Stainless Steel 304				S4									
Stainless Steel 316				S6									
Width (W1,W2,W3,W4) mm	100	150	200	300	450	600	750	900	1000				
Height (H) mm	50	100	150	200									
Thickness (T) mm	1.0	1.25	1.5	2.0									

Ordering Code Example : CDX1C150TBNHDG200/300/200/50/1.25

NOTES:

- Waterproof type specifications upon request, turn out type with seal will be used for water proof type duct.
- Special orders can be manufactured upon request.

Cable Duct Reducers



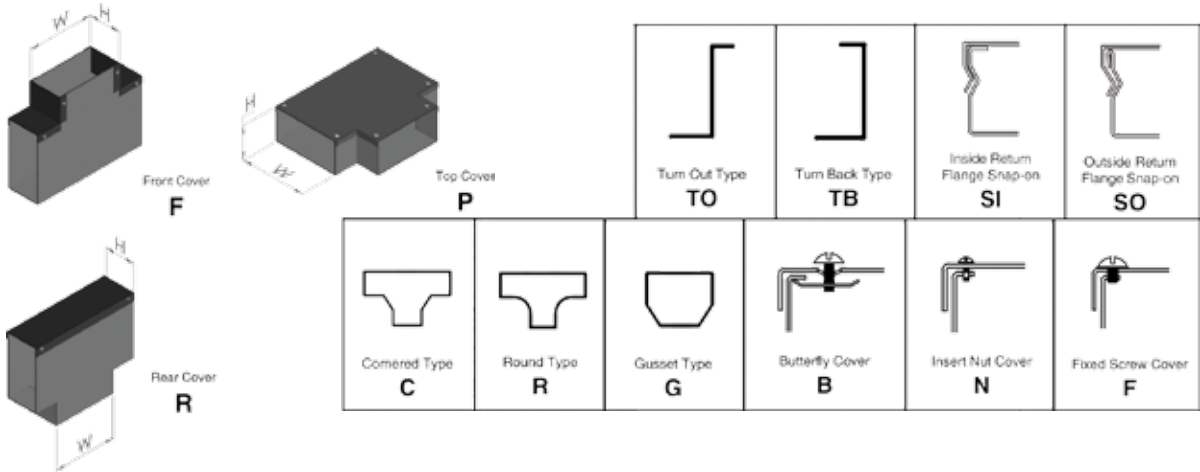
Ordering Code		CDY					/	/	/	/
Cable Duct Elbow	CDY									
Compartment	1 2 3									
Turn Out Type	TO									
Turn Back Type	TB									
Inside Return Flange Snap - on	SI									
Outside Return Flange Snap - on	SO									
Butierfly Cover	B									
Insert Nut Cover	N									
Fixed Screw Cover	F									
Black Steel	BST									
Hot Dip Galvanized after Fabrication	HDG									
Hot Dip Galvanized and powder Coating	HDP									
Mill Galvanized	MG									
Steel Epoxy Coating	EPC									
Aluminum	AL									
Stainless Steel 304	S4									
Stainless Steel 316	S6									
Width (W1,W2,W3,W4) mm	100 150 200 300 450 600 750 900 1000									
Height (H) mm	50 100 150 200									
Thickness (T) mm	1.0 1.25 1.5 2.0									

Ordering Code Example : CDY2TONHDG150/300/50/100/1.5

NOTES:

- Waterproof type specifications upon request, turn out type with seal will be used for water proof type duct.
- Special orders can be manufactured upon request.

Cable Duct Tee



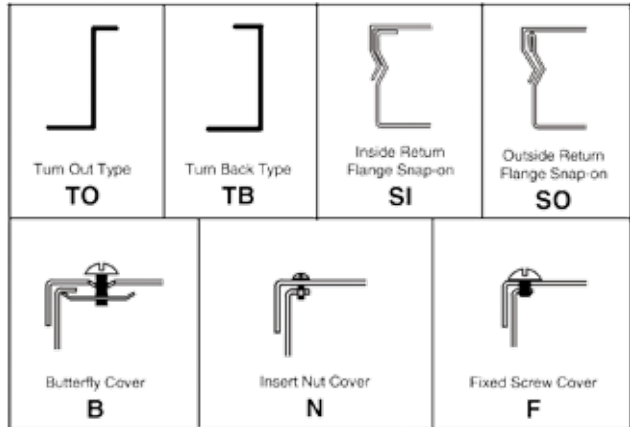
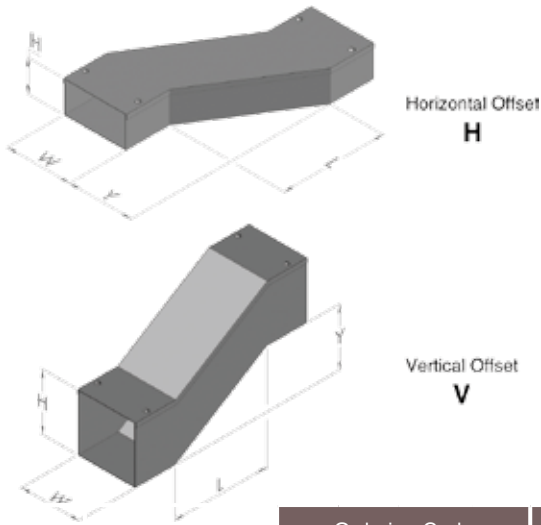
Ordering Code		CDT								/	/	/	/
Cable Duct Elbow	CDT												
Compartment	1	2	3										
Top Cover	P												
Front Cover	F												
Rear Cover	R												
Radius (R)	150	200											
Corner Type	C												
Round Type	R												
Gusset Type	G												
Turn Out Type	TO												
Turn Back Type	TB												
Inside Return Flange Snap - on	SI												
Outside Return Flange Snap - on	SO												
Butierfly Cover	B												
Insert Nut Cover	N												
Fixed Screw Cover	F												
Black Steel	BST												
Hot Dip Galvanized after Fabrication	HDG												
Hot Dip Galvanized and powder Coating	HDP												
Mill Galvanized	MG												
Steel Epoxy Coating	EPC												
Aluminum	AL												
Stainless Steel 304	S4												
Stainless Steel 316	S6												
Width (W) mm	100	150	200	300	450	600	750	900	1000				
Height (H) mm	50	100	150	200									
Thickness (T) mm	1.0	1.25	1.5	2.0									

Ordering Code Example : CDT1P200CTOBHDG150/300/200/50/1.25

OTES:

- Waterproof type specifications upon request, turn out type with seal will be used for water proof type duct.
- Special orders can be manufactured upon request.

Cable Duct Offset



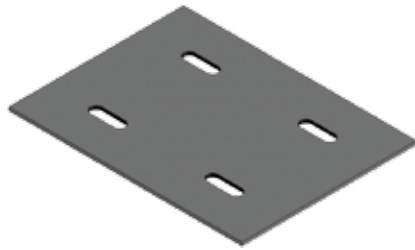
Ordering Code		CDO						/	/	/	/
Cable Duct Elbow	CDO										
Vertical Offset	V										
Horizontal Offset	H										
Compartment	1 2 3										
Turn Out Type	TO										
Turn Back Type	TB										
Inside Return Flange Snap - on	SI										
Outside Return Flange Snap - on	SO										
Butierfly Cover	B										
Insert Nut Cover	N										
Fixed Screw Cover	F										
Black Steel	BST										
Hot Dip Galvanized after Fabrication	HDG										
Hot Dip Galvanized and powder Coating	HDP										
Mill Galvanized	MG										
Steel Epoxy Coating	EPC										
Aluminum	AL										
Stainless Steel 304	S4										
Stainless Steel 316	S6										
Width (W) mm	100 150 200 300 450 600 750 900 1000										
Offset Distance (Y) mm	(Specity)										
Offset Length (L) mm	(Specity)										
Helght (H) mm	50 100 150 200										
Thickness (T) mm	1.0 1.25 1.5 2.0										

Ordering Code Example : CDOH1TOBHHDG300/200/300/100/2.0

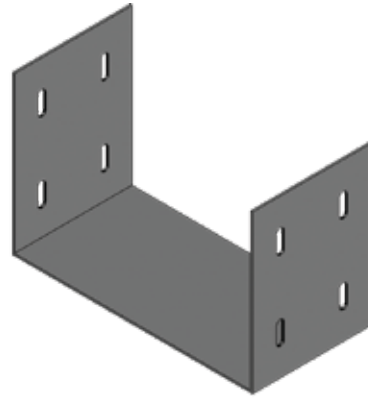
OTES:

- Waterproof type specifications upon request, turn out type with seal will be used for water proof type duct.
- Special orders can be manufactured upon request.

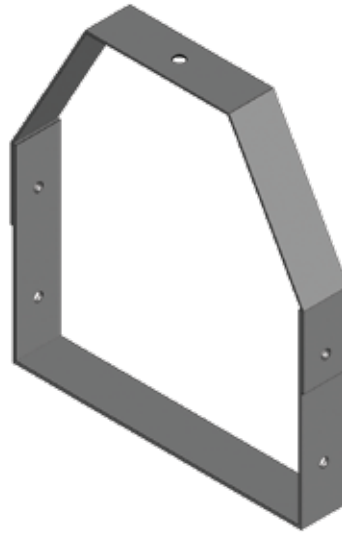
Cable Trunking Accessories



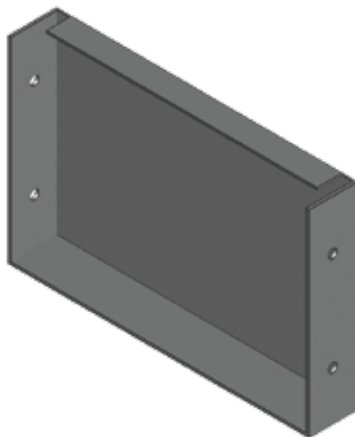
Straight Connector
(CD01)



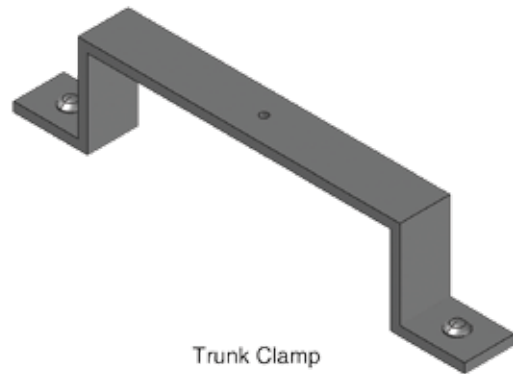
U-Connector
(CD02)



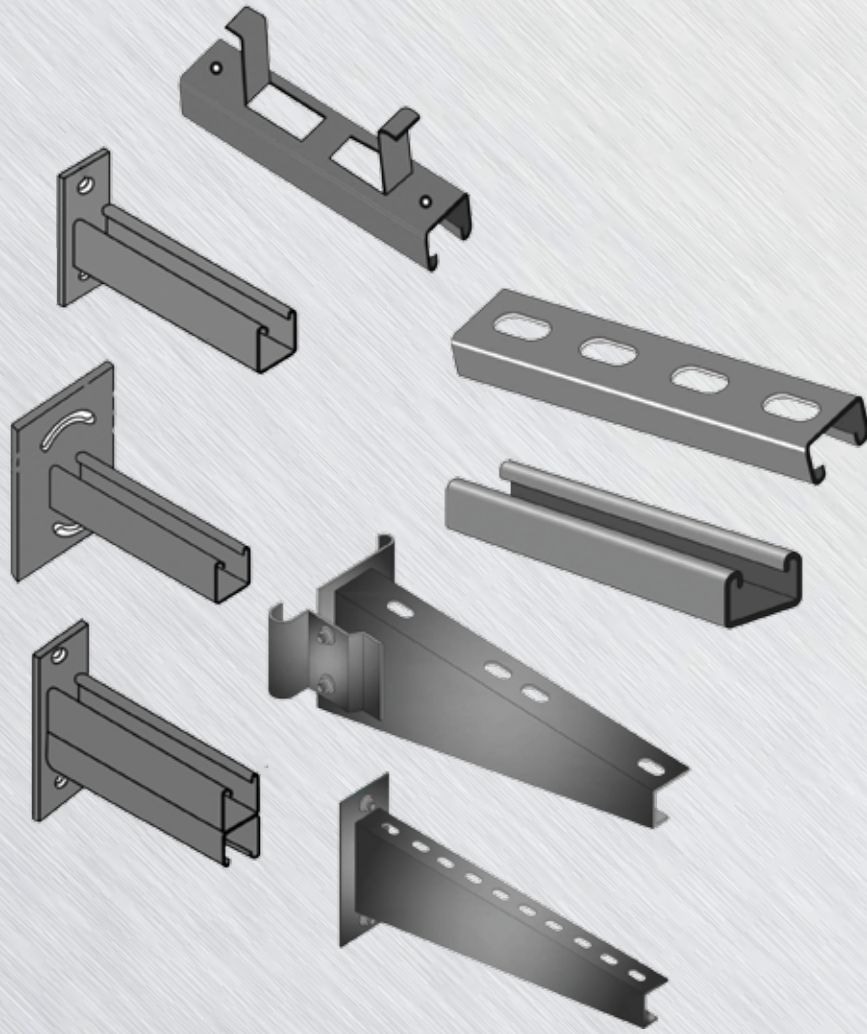
Trunk Hanger Clamp
(CD03)



End Plate
(CD04)

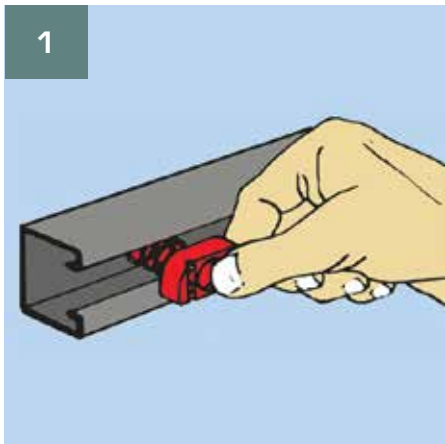


Trunk Clamp
(CD05)

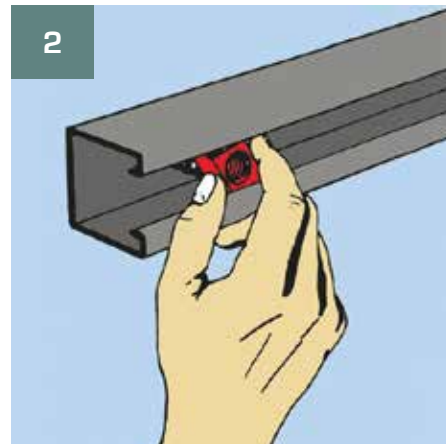


CHANNELS & SUPPORTS SYSTEM

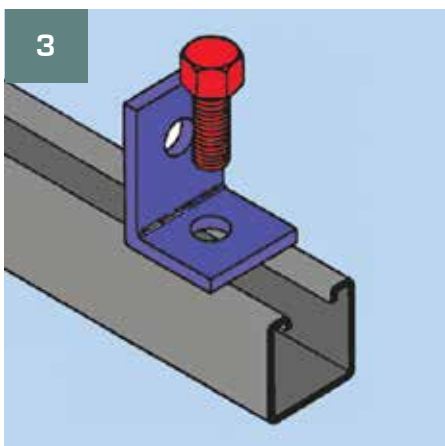
General Technical Information



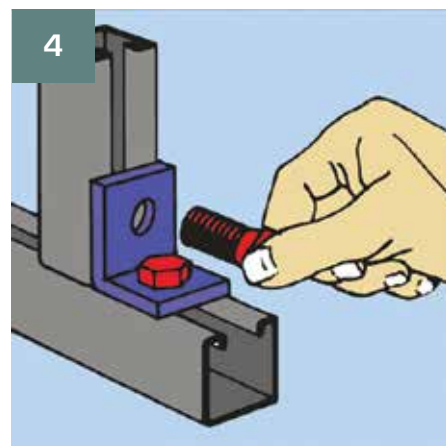
Strong, Fast, Economical and Adjustable
Insert the spring nut anywhere along the continuous channel. The rounded nut ends permit easy insertion.



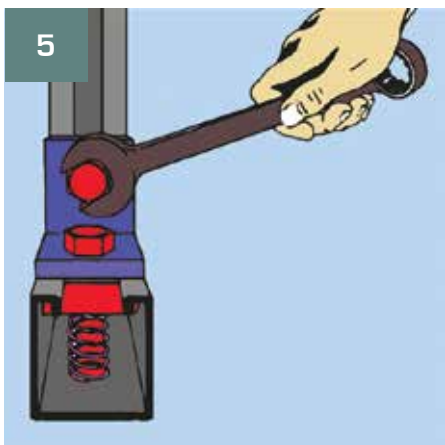
A 90° clockwise turn aligns the grooves in the nut with the inturned edges of the channel. Fittings can be placed anywhere along the channel opening, permitting complete freedom of adjustment. The need for drilling holes is eliminated.



Insert the bolt through the fitting and into the spring nut, (see illustration 5 for end view showing the nut in place)



Additional channel sections can now be bolted to the fitting already in place by following procedure described in steps 1-3.

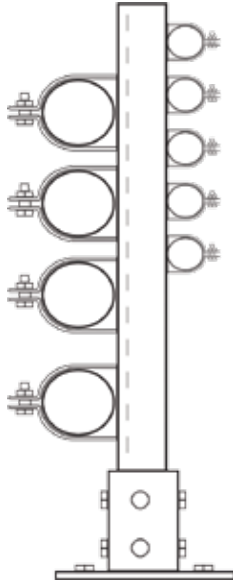


Tightening with a wrench locks the serrated teeth of the nut into the inturned edges of the channel, to complete a strong, vise-like connection.

<input checked="" type="checkbox"/>	100%	Adjustable
<input checked="" type="checkbox"/>	100%	Reusable
<input checked="" type="checkbox"/>	No	Welding
<input checked="" type="checkbox"/>	No	Drilling
<input checked="" type="checkbox"/>	No	Special Tools

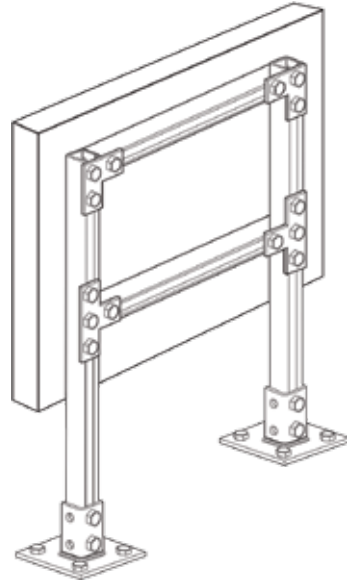
General Technical Information

Utility Stands



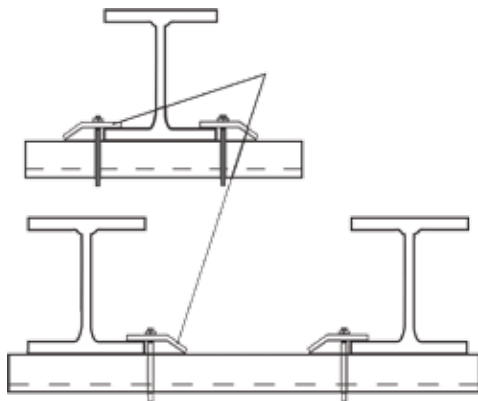
Strut can be configured into functional equipment service stands.

Panel Supports



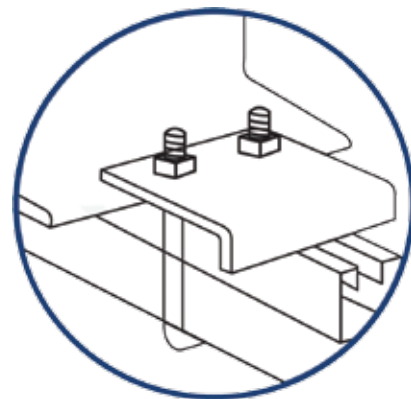
Panel supports can be configured into a variety of support applications and attached to existing structurals for stationary or overhead mounting of panel boards, electronics machinery, HVSC, etc.

Suspended Support Configuration



Clamps fit many beam types including; I-Beam, and T-Bar constructions.

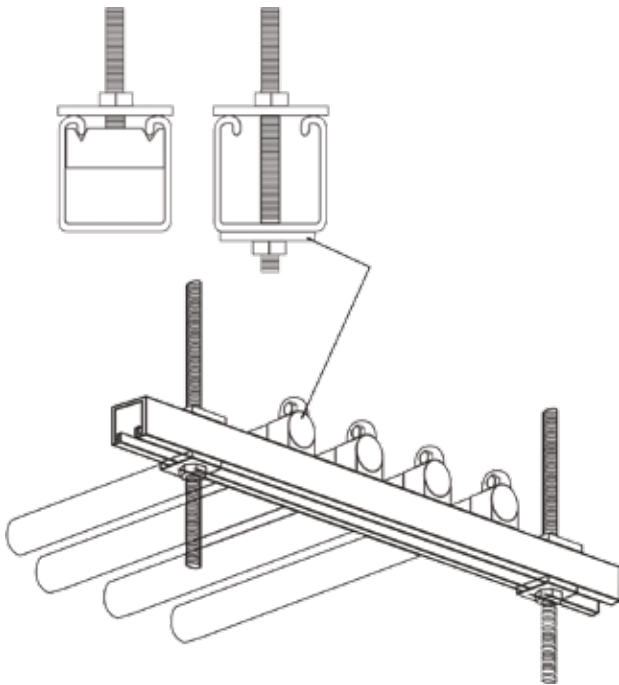
Beam Clamp Support



Beam Clamp Supports can be attached to various sized widths of "I-Beams" flange thicknesses.

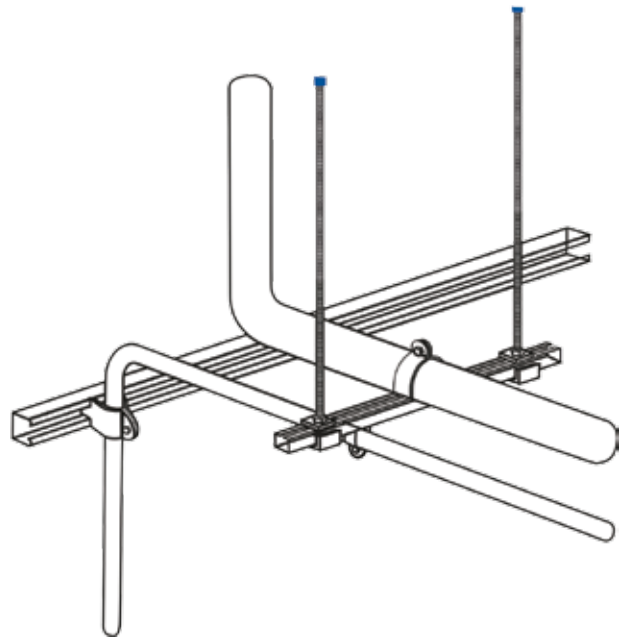
General Technical Information

Hanging



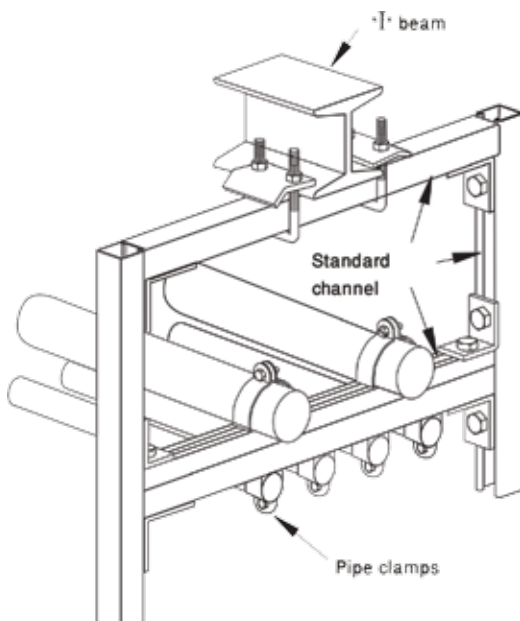
Overhead hanging schemes provide field flexibility

Complex Made Easy

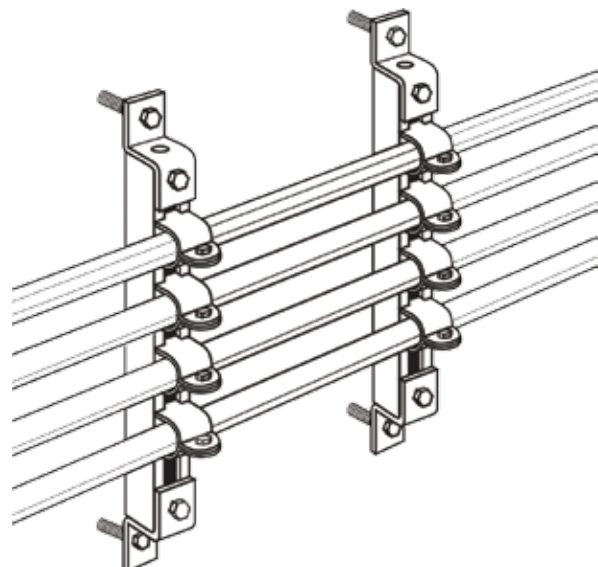


Strut systems make 90° turns a simple adjustment from plane to plane.

Pipe Support



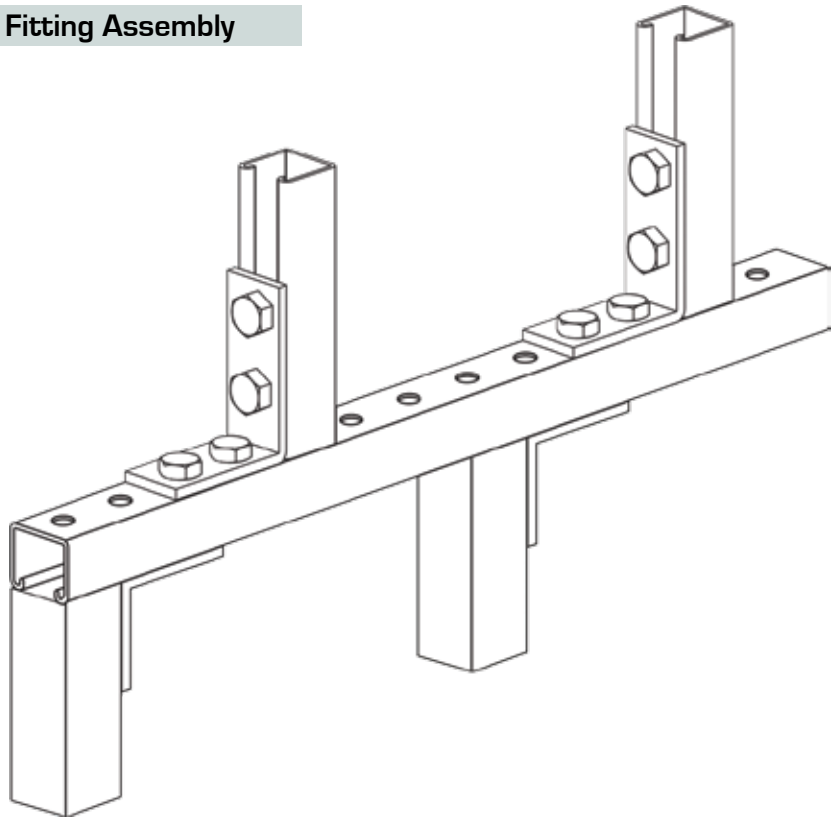
Wall Mount Configuration



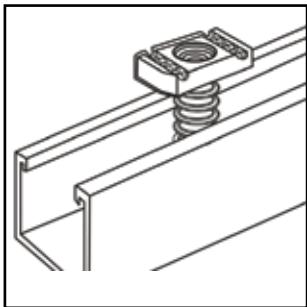
General Technical Information

Standard Channel & Fitting Assembly

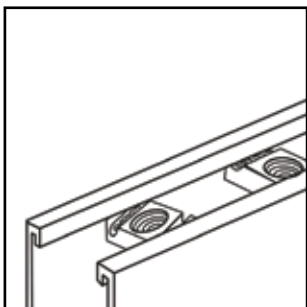
The factory punched holes in channel allow fittings to be attached to either side.



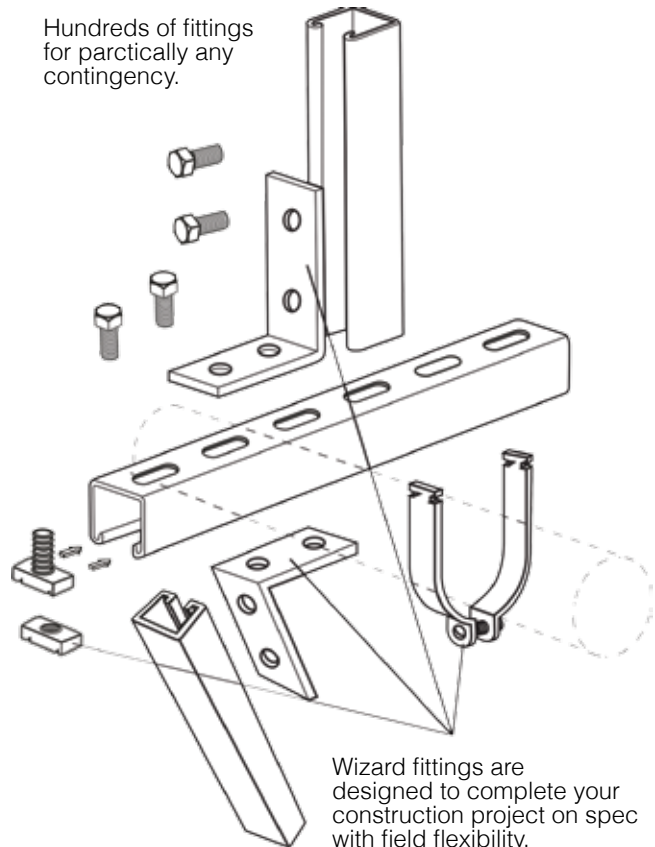
Suspended Support Configuration



Radiused corner spring nuts insert and turn easily.



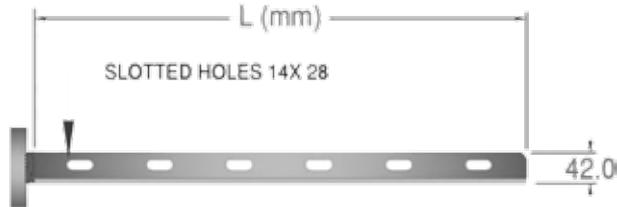
Case hardened nut teeth grip the channel's inner edge.



Hundreds of fittings for practically any contingency.

Wizard fittings are designed to complete your construction project on spec with field flexibility.

Support System - Brackets



Beam Mounted Bracket **BB**



Wall Mounted Bracket **BW**

Bracket		Ordering Code									
	BW BB										
Black Steel	BST										
Hot Dip Galvanized after Fabrication	HDG										
Hot Dip Galvanized and powder Coating	HDP										
Mill Galvanized	MG										
Steel Epoxy Coating	EPC										
Aluminum	AL										
Stainless Steel 304	S4										
Stainless Steel 316	S6										
Thickness (T) mm	1.5 - 6.0										
Width (W) mm	60 110 160 210 310 460 610 910 1010										

Ordering Code Example : BBHDG2.5/600

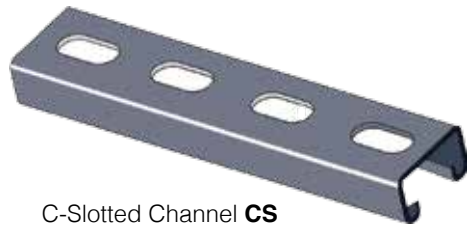
NOTES:

- Support Bracket length = Cable Tray Width + 10 mm.
- Special orders can be manufactured upon request.

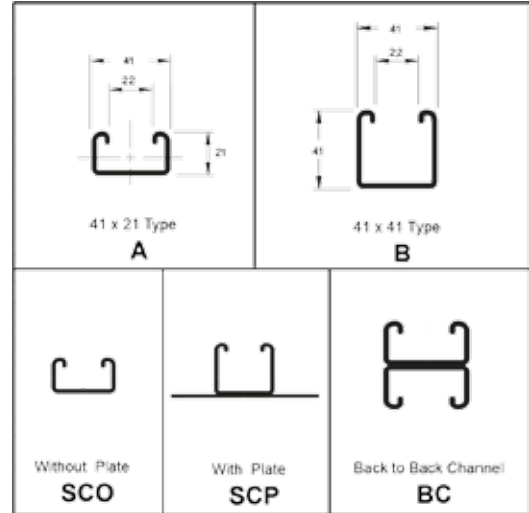
Support System - C-Channels



C-Plain Channel **CP**



C-Slotted Channel **CS**



Ordering Code

C-Channel CP CS

(41x21) Type A

(41x21) Type B

Single Channel SCO SCP

Back to Back Channel BC

Black Steel BST

Hot Dip Galvanized after Fabrication HDG

Hot Dip Galvanized and powder Coating HDP

Mill Galvanized MG

Steel Epoxy Coating EPC

Aluminum AL

Stainless Steel 304 S4

Stainless Steel 316 S6

Thickness (T) mm 1.5 2.0 2.5

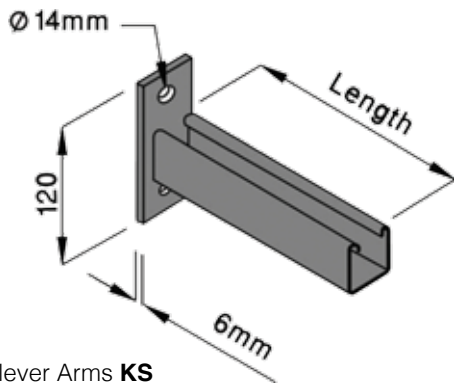
Length (L) mm 200 - 6000

Ordering Code Example : CPASCOHDG2.0/1500

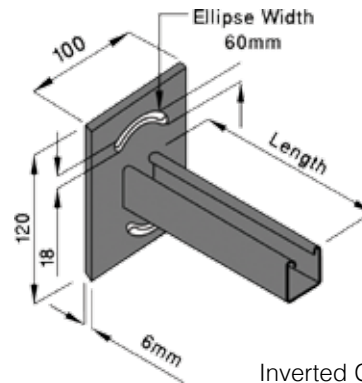
NOTES:

- Special orders can be manufactured upon request.

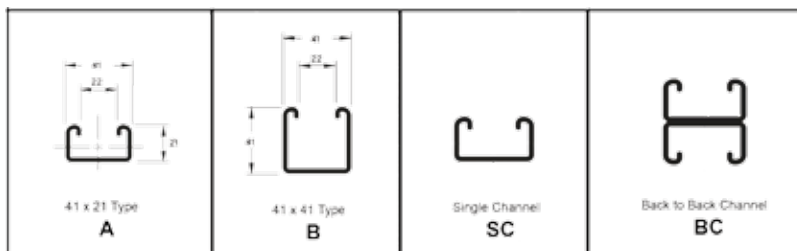
Support System - Cantilever Arms



Single Cantilever Arms **KS**



Inverted Cantilever **KI**



		Ordering Code									
Cantilever Arms	KS	KI									/
(41x21) Type	A										
(41x21) Type	B										
Single Channel	SC										
Back to Back Channel	BC										
Black Steel	BST										
Hot Dip Galvanized after Fabrication	HDG										
Hot Dip Galvanized and powder Coating	HDP										
Mill Galvanized	MG										
Steel Epoxy Coating	EPC										
Aluminum	AL										
Stainless Steel 304	S4										
Stainless Steel 316	S6										
Thickness (T) mm	1.5	2.0	2.5								
Length (L) mm	69	110	160	210	310	460	610	910	1010		

Ordering Code Example : KSABCHDG2.0/1500

NOTES:

- Support Bracket length = Cable Tray Width + 10 mm.
- Special orders can be manufactured upon request.

Support System - C-Channel Loading Data

41 x 21 C-CHANNEL

Span or Column Unsupported Height in mm	Uniform Load at 175/ N/mm Stress kg	Deflection in mm at 175/ N/ mm	Uniform Load at Max. Deflec. of 1/1200 th. Span. kg	Uniform Load at Max. Deflec. of 1/360 th. Span. kg	Max. Load of Column loaded @ Centroid kg	Max. Load of Column loaded @ Slot face kg
250	553	0.45	-	-	3993	1042
500	276	1.81	-	212	3379	995
750	184	4.07	169	94	2198	859
1000	138	7.24	95	53	1353	690
1250	110	1132	61	33	896	548
1500	92	1630	42	23	(634)	(437)
1750	79	22.19	31	-	(471)	(353)
2000	69	28.99	23	-	-	-

41 x 21 C-CHANNEL SLOTTED

Span or Column Unsupported Height in mm	Uniform Load at 175/ N/mm Stress kg	Deflection in mm at 175/ N/ mm	Uniform Load at Max. Deflec. of 1/1200 th. Span. kg	Uniform Load at Max. Deflec. of 1/360 th. Span. kg	Max. Load of Column loaded @ Centroid kg	Max. Load of Column loaded @ Slot face kg
250	558	0.50	-	-	-	-
500	254	2.01	-	174	-	-
750	169	4.54	139	77	-	-
1000	127	8.07	78	43	-	-
1250	101	12.61	50	27	-	-
1500	84	18.17	34	-	-	-
1750	72	24.73	25	-	-	-
2000	63	32.30	-	-	-	-

41 x 41 C-CHANNEL

Span or Column Unsupported Height in mm	Uniform Load at 175/ N/mm Stress kg	Deflection in mm at 175/ N/ mm	Uniform Load at Max. Deflec. of 1/1200 th. Span. kg	Uniform Load at Max. Deflec. of 1/360 th. Span. kg	Max. Load of Column loaded @ Centroid kg	Max. Load of Column loaded @ Slot face kg
250	1769	0.23	-	-	5869	1693
500	884	0.95	-	-	5379	1650
750	589	2.15	-	571	4479	1554
1000	442	3.82	-	321	3373	1395
1250	535	5.97	-	205	2556	1232
1500	294	8.60	257	142	2020	1093
1750	252	11.70	188	104	1656	976
2000	221	15.29	144	80	1395	879
2250	169	19.35	114	63	1198	797
2500	176	23.89	92	51	1044	725
2750	160	28.91	76	42	(919)	(663)
3000	147	34.40	64	35	(816)	(607)

41 x 41 C-CHANNEL SLOTTED

Span or Column Unsupported Height in mm	Uniform Load at 175/ N/mm Stress kg	Deflection in mm at 175/ N/ mm	Uniform Load at Max. Deflec. of 1/1200 th. Span. kg	Uniform Load at Max. Deflec. of 1/360 th. Span. kg	Max. Load of Column loaded @ Centroid kg	Max. Load of Column loaded @ Slot face kg
250	1638	0.27	-	-	5351	1660
500	819	1.05	-	-	5100	1635
750	546	2.35	-	483	4412	1557
1000	409	4.18	-	271	3284	1389
1250	327	6.54	313	174	2436	1211
1500	273	241	217	120	1899	1062
1750	234	12.81	159	88	1546	941
2000	204	16.73	122	67	1297	843
2250	182	21.18	96	53	1113	761
2500	163	26.15	78	43	970	691
2750	148	31.64	64	35	(588)	(631)
3000	136	37.65	54	30	(761)	(578)

Support System - C-Channel Loading Data

41 x 21 BACK C-CHANNEL

Span or Column Unsupported Height in mm	Uniform Load at 175/ N/mm Stress kg	Deflection in mm at 175/ N/ mm	Uniform Load at Max. Deflec. of 1/1200 th. Span. kg	Uniform Load at Max. Deflec. of 1/360 th. Span. kg	Max. Load of Column loaded @ Centroid kg	Max. Load of Column loaded @ Slot face kg
250	1558	0.26	-	-	8228	1834
500	779	1.07	-	-	7740	1809
750	519	2.42	-	446	6865	1756
1000	389	4.30	-	251	5367	1639
1250	311	6.72	289	160	3882	1468
1500	259	9.68	201	111	2838	1289
1750	222	13.18	147	82	2143	1123
2000	194	17.21	113	62	(1668)	(779)
2250	173	21.79	89	49	(1334)	(852)
2500	155	26.90	72	40	(1090)	(745)
2750	141	32.55	59	33	(906)	(655)
3000	129	38.73	50	27	-	-

41 x 41 BACK TO BACK C-CHANNEL

Span or Column Unsupported Height in mm	Uniform Load at 175/ N/mm Stress kg	Deflection in mm at 175/ N/ mm	Uniform Load at Max. Deflec. of 1/1200 th. Span. kg	Uniform Load at Max. Deflec. of 1/360 th. Span. kg	Max. Load of Column loaded @ Centroid kg	Max. Load of Column loaded @ Slot face kg
250	-	-	-	-	119952	2880
500	-	-	-	-	11682	2864
750	1670	1.21	-	-	11186	2833
1000	1253	2.15	-	-	10451	2783
1250	1002	3.36	-	-	9305	2695
1500	835	4.84	-	718	7790	2551
1750	716	6.59	-	527	6293	2367
2000	626	8.61	-	404	5068	2170
2250	556	10.89	-	319	4127	1977
2500	501	13.45	456	258	3410	1796
2750	455	16.27	384	213	2858	1630
3000	417	19.37	323	179	(2427)	(1480)

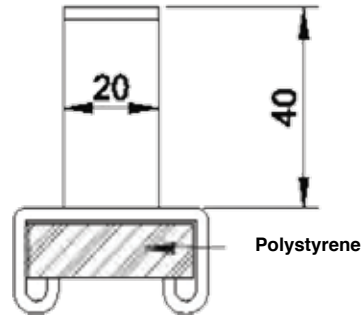
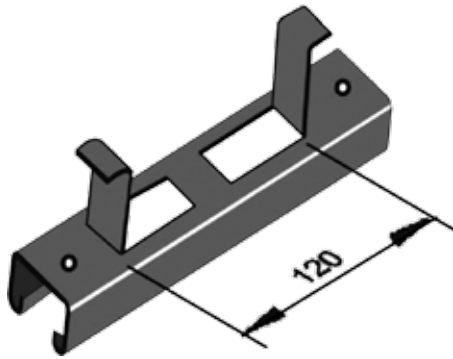
41 x 41 (3x) BACK TO BACK C-CHANNEL

Span or Column Unsupported Height in mm	Uniform Load at 175/ N/mm Stress kg	Deflection in mm at 175/ N/ mm	Uniform Load at Max. Deflec. of 1/1200 th. Span. kg	Uniform Load at Max. Deflec. of 1/360 th. Span. kg	Max. Load of Column loaded @ Centroid kg	Max. Load of Column loaded @ Slot face kg
250	-	-	-	-	16677	4151
500	-	-	-	-	16154	4118
750	-	-	-	-	15093	4045
1000	-	-	-	-	13151	3891
1250	-	-	-	-	10586	3631
1500	-	-	-	-	8175	3297
1750	1586	4.33	-	-	6353	2955
2000	1387	5.66	-	1361	5007	2627
2250	1233	7.16	-	1075	4024	2328
2500	1110	8.84	-	871	3293	2063
2750	1009	10.70	-	720	2744	1833
3000	925	12.74	-	605	(2325)	(1636)

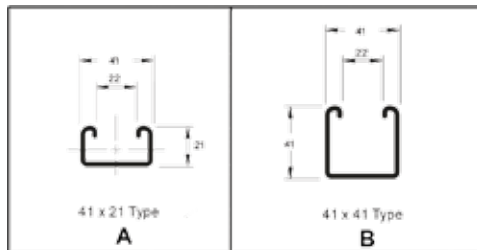
41 x 41 C-CHANNEL WITH PLATE

Span or Column Unsupported Height in mm	Uniform Load at 175/ N/mm Stress kg	Deflection in mm at 175/ N/ mm	Uniform Load at Max. Deflec. of 1/1200 th. Span. kg	Uniform Load at Max. Deflec. of 1/360 th. Span. kg	Max. Load of Column loaded @ Centroid kg	Max. Load of Column loaded @ Slot face kg
250	1292	0.17	-	-	-	-
500	1096	0.69	-	-	-	-
750	730	1.55	-	-	-	-
1000	548	2.77	-	-	-	-
1250	438	4.33	-	351	-	-
1500	365	6.23	-	244	-	-
1750	313	84.8	-	179	-	-
2000	274	11.08	247	137	-	-
2250	243	14.03	195	108	-	-
2500	219	17.32	158	87	-	-
2750	199	20.96	130	72	-	-
3000	182	24.94	109	61	-	-

Support System - Concrete Insert C-Channel



C-Channel Concrete Insert **UCI**



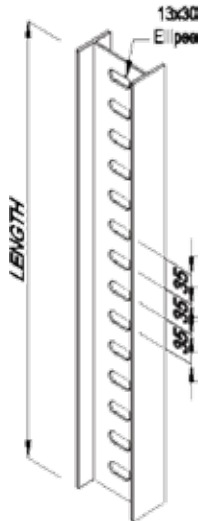
		Ordering Code				/
Cantilever Arms	KS KI					
(41x21) Type	A					
(41x41) Type	B					
Black Steel	BST					
Hot Dip Galvanized after Fabrication	HDG					
Hot Dip Galvanized and powder Coating	HDP					
Mill Galvanized	MG					
Steel Epoxy Coating	EPC					
Aluminum	AL					
Stainless Steel 304	S4					
Stainless Steel 316	S6					
Thickness (T) mm	1.5 2.0 2.5					
Length (L) mm	1000 - 6000					

Ordering Code Example : UCIBHDG1.5/1500

NOTES:

- Support Bracket length = Cable Tray Width + 10 mm.
- Special orders can be manufactured upon request.

Support System - I-Support



I-SUPPORT IS

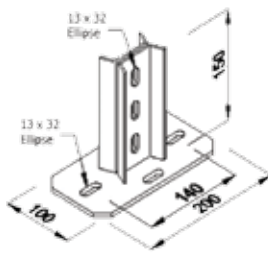
I - Support		IS		
Black Steel	BST			
Hot Dip Galvanized after Fabrication	HDG			
Hot Dip Galvanized and powder Coating	HDP			
Mill Galvanized	MG			
Steel Epoxy Coating	EPC			
Aluminum	AL			
Stainless Steel 304	S4			
Stainless Steel 316	S6			
Length (L) mm	1000 - 6000			

Ordering Code Example : IS HDG 3000

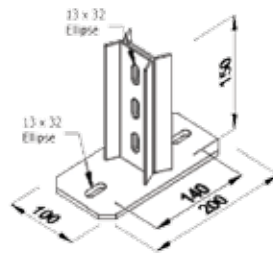
* I-Support thickness as per Standard.

NOTES:

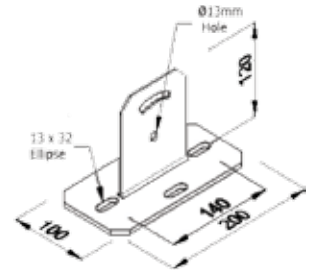
- Support Bracket length = Cable Tray Width + 10 mm.
- Special orders can be manufactured upon request.



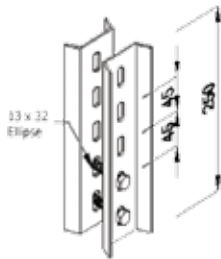
Code: IS 01



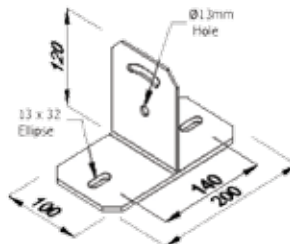
Code: IS 02



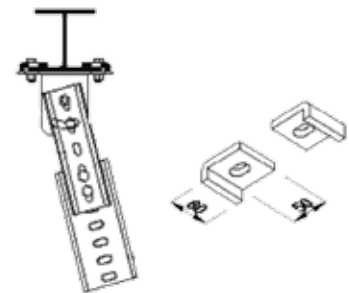
Code: IS 03



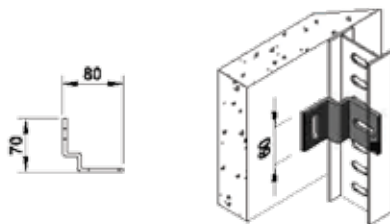
Code: IS 04



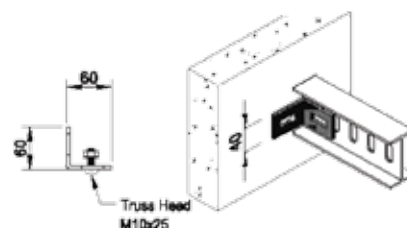
Code: IS 05



Code: IS 06

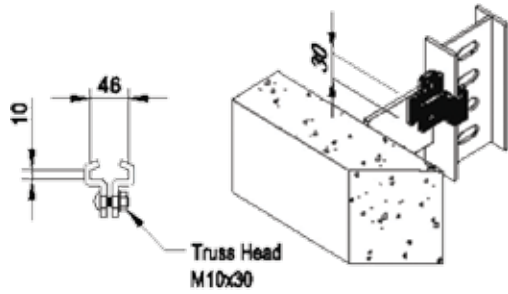


Code: IS 07

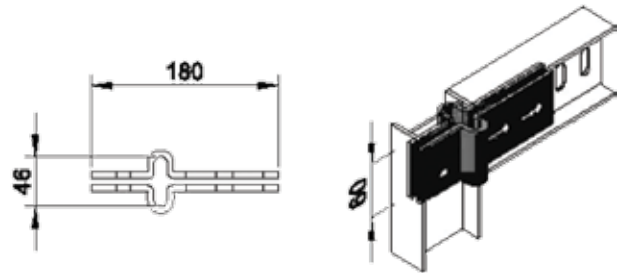


Code: IS 08

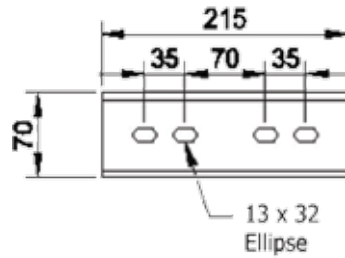
Support System - I-Support



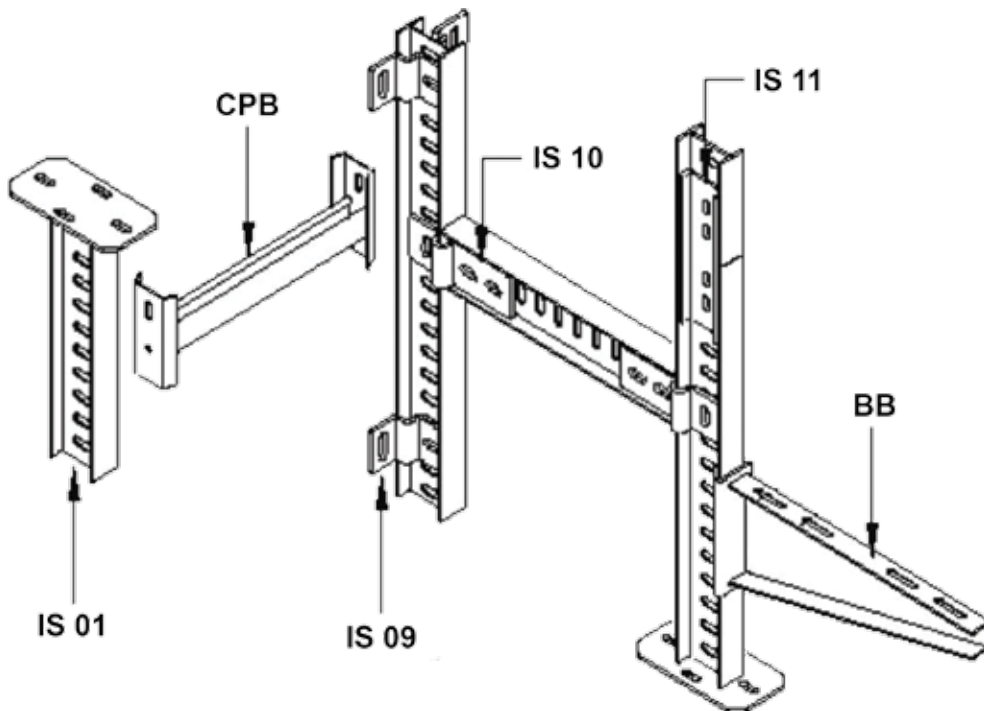
CODE: **IS 09**



CODE: **IS 10**



CODE: **IS 11**

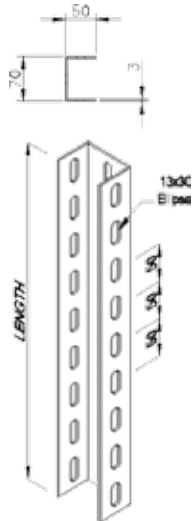


APPLICATION

NOTES:

- Support Bracket length = Cable Tray Width + 10 mm.

Support System - U-Support



I-SUPPORT US

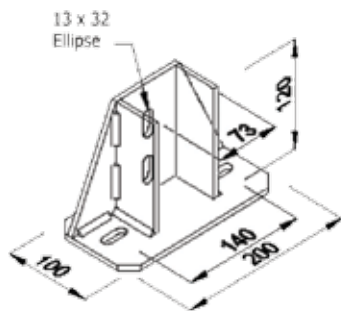
Ordering Code US

I - Support	US
Black Steel	BST
Hot Dip Galvanized after Fabrication	HDG
Hot Dip Galvanized and powder Coating	HDP
Mill Galvanized	MG
Steel Epoxy Coating	EPC
Aluminum	AL
Stainless Steel 304	S4
Stainless Steel 316	S6
Length (L) mm	1000 - 6000

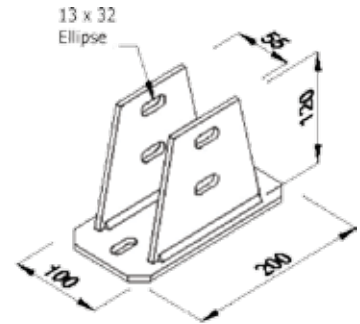
Ordering Code Example : US HDG 3000 * I-Support thickness as per Standard.

NOTES:

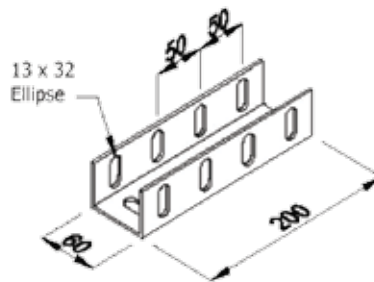
- Special orders can be manufactured upon request.



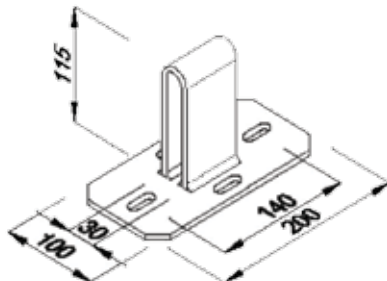
CODE: **US 01**



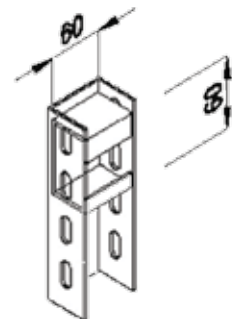
CODE: **US 02**



CODE: **US 03**

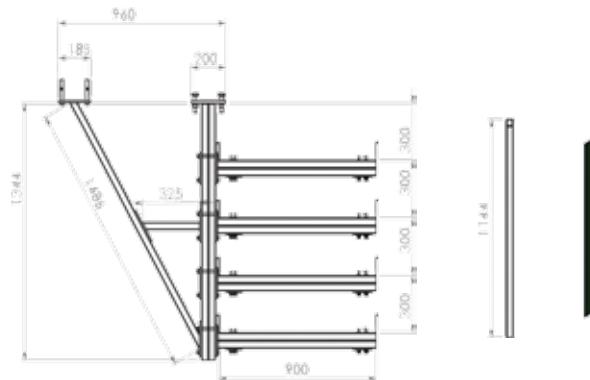
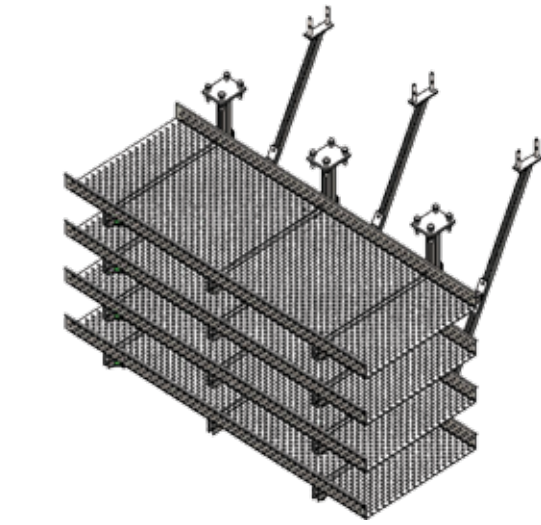
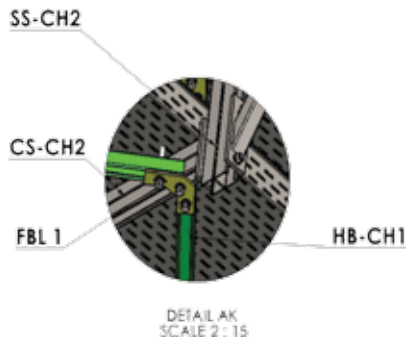
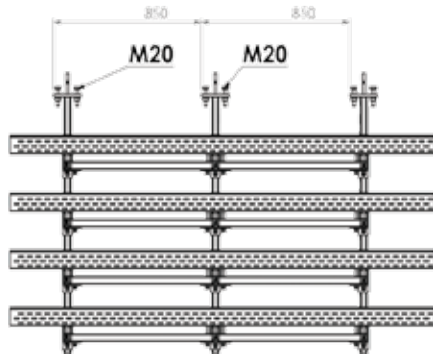
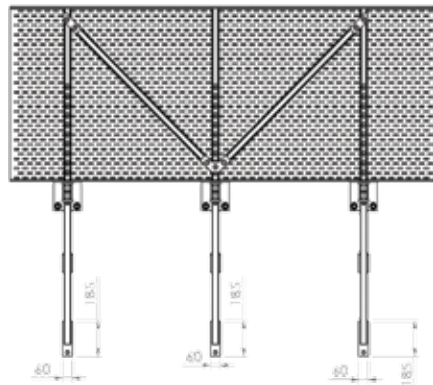


CODE: **US 04**

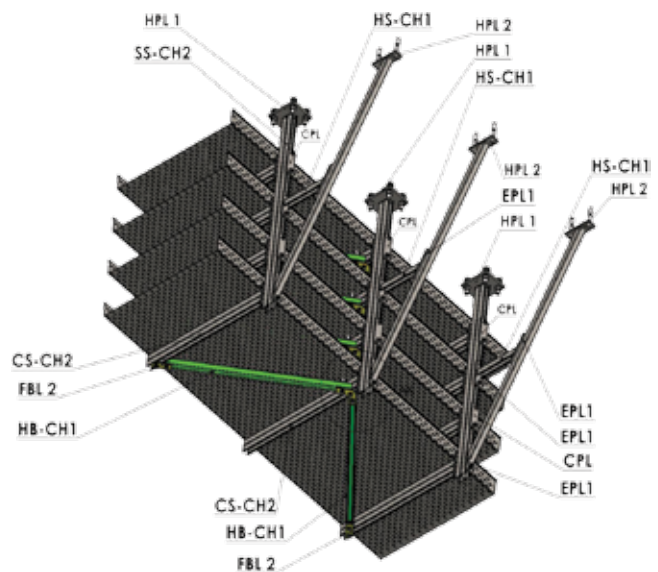


CODE: **US 05**

Support System - C-Channel wth Bracket

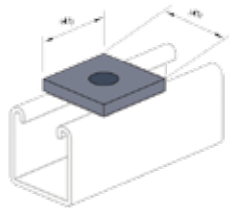


CODE OF ITEM	DESCRIPTION
CS-CH2	CANTILEVER SUPPORT 41 X 41 X 2.5 C-CHANNEL BACK-TO-BACK
SS-CH2	SUSPENDED SUPPORT 41 X 41 X 2.5 C-CHANNEL BACK-TO-BACK
HB-CH1	HORIZONTAL BRACING 41 X 41 X 2.5 C-CHANNEL
VB-CH1	VERTICAL BRACING 41 X 41 X 2.5 C-CHANNEL
HS-CH1	HORIZONTAL SUPPORT 41 X 41 X 2.5
EPL1	END PLATE 185 X 60 X 12
HPL1	HEAD PLATE 200X 175 X 16
HPL2	HEAD PLATE 185 X 60 X 16
CPL	COVER PLATE 185 X 60 X 12
FPL1	FIXING PLATE 175 X 90 X 6
FPL2	FIXING PLATE 125 X 41 X 6

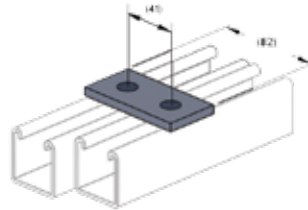


4 LAYER C-CHANNEL W/BRACKET FOR CABLE TRAY 900

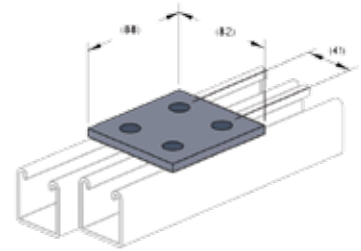
Support System - Accessories



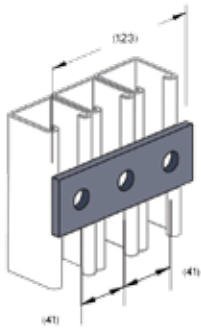
CAC 01



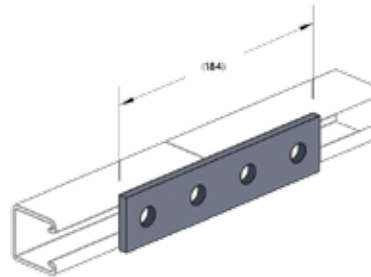
CAC 02



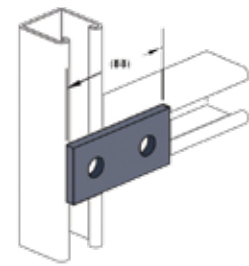
CAC 03



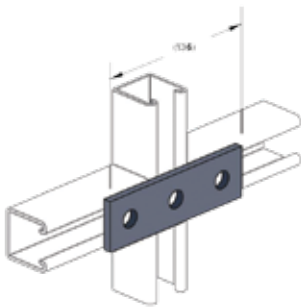
CAC 04



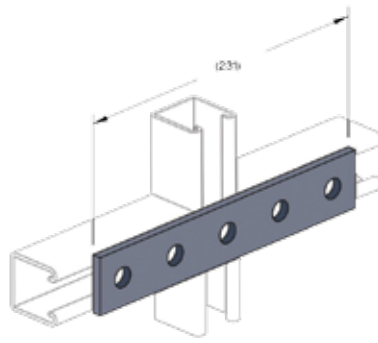
CAC 05



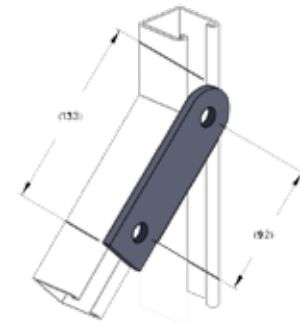
CAC 06



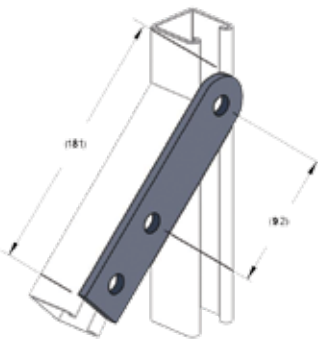
CAC 07



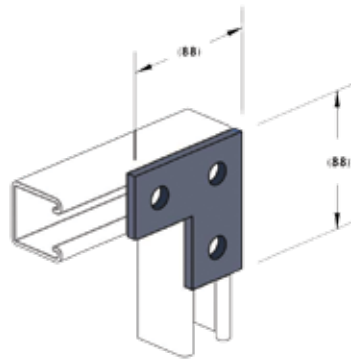
CAC 08



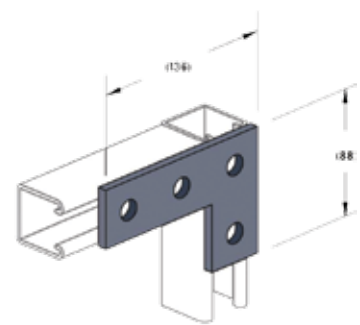
CAC 09



CAC 10

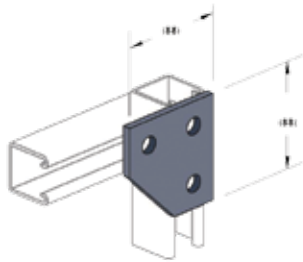


CAC 11

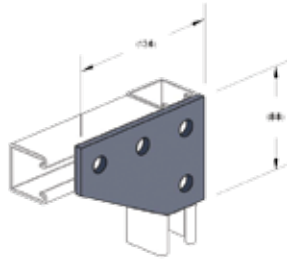


CAC 12

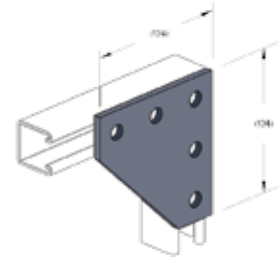
Support System - Accessories



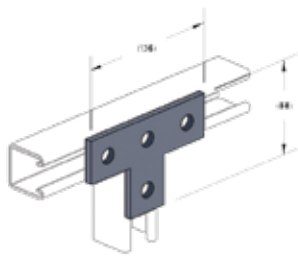
CAC 13



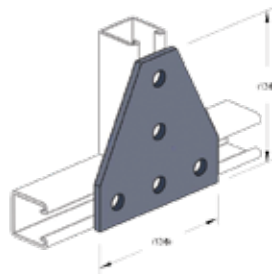
CAC 14



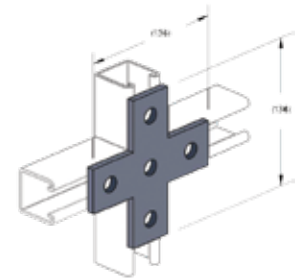
CAC 15



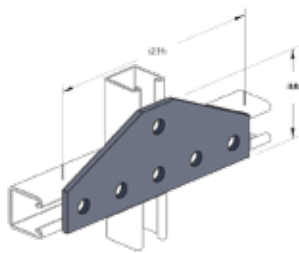
CAC 16



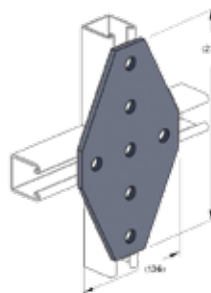
CAC 17



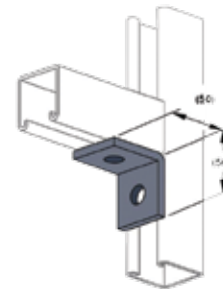
CAC 18



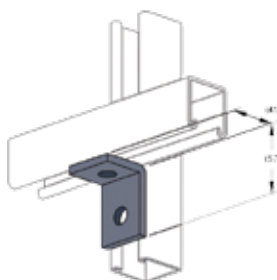
CAC 19



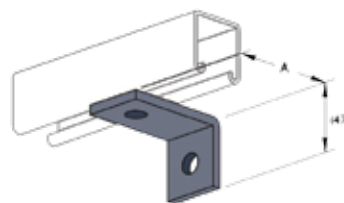
CAC 20



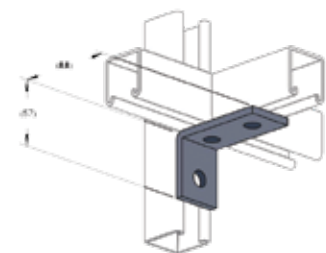
CAC 21



CAC 22

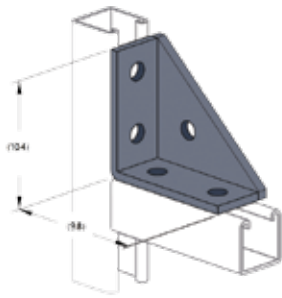


CAC 23

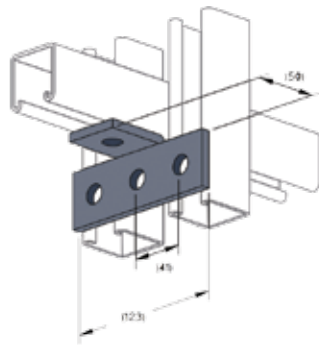


CAC 24

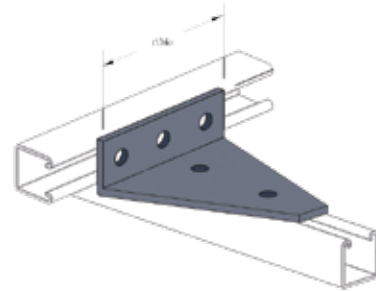
Support System - Accessories



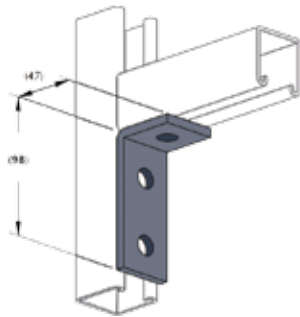
CAC 25



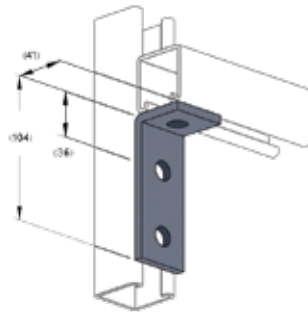
CAC 26



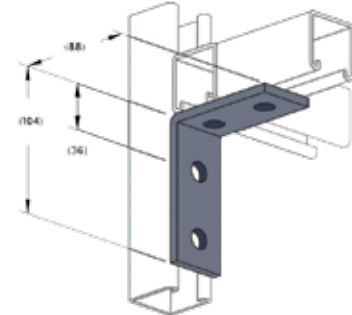
CAC 27



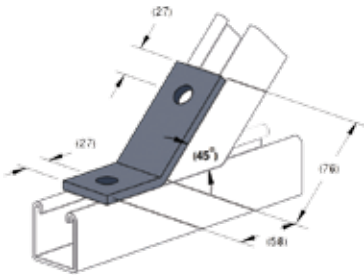
CAC 28



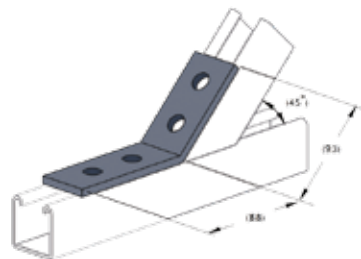
CAC 29



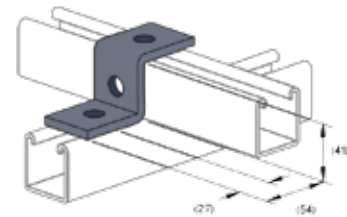
CAC 30



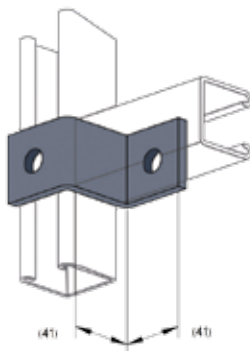
CAC 31



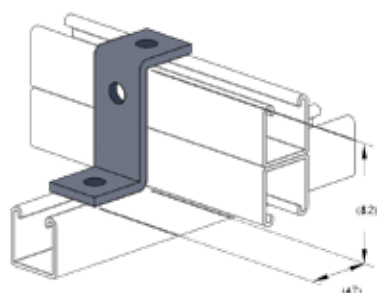
CAC 32



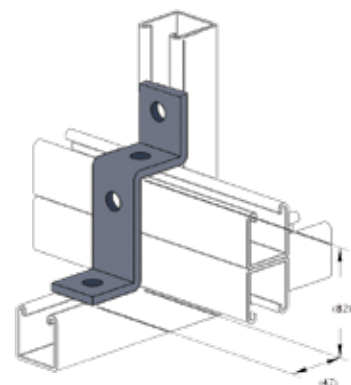
CAC 33



CAC 34

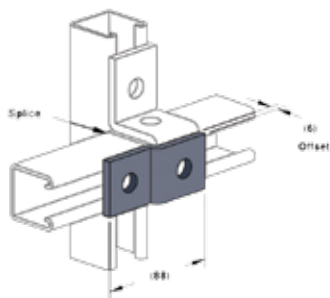


CAC 35

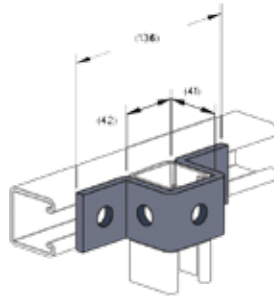


CAC 36

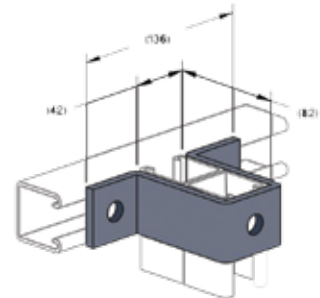
Support System - Accessories



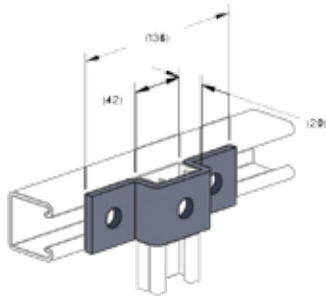
CAC 37



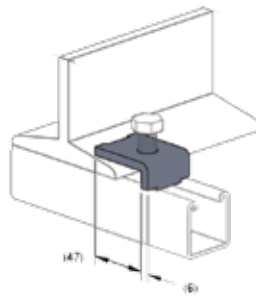
CAC 38



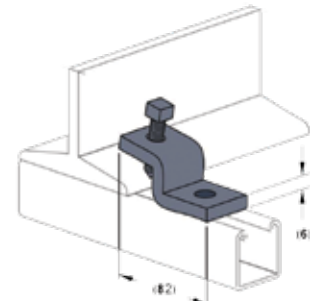
CAC 39



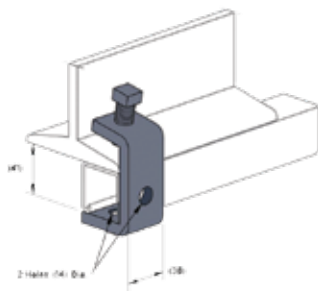
CAC 40



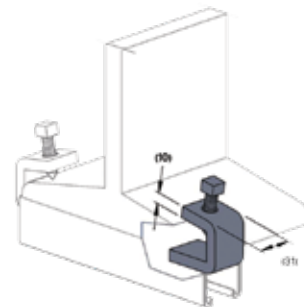
CAC 41



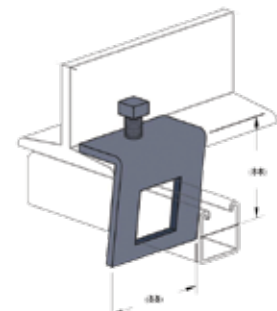
CAC 42



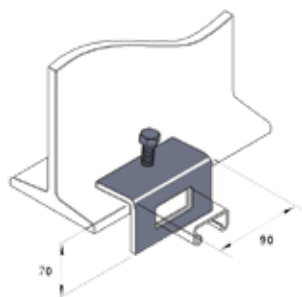
CAC 43



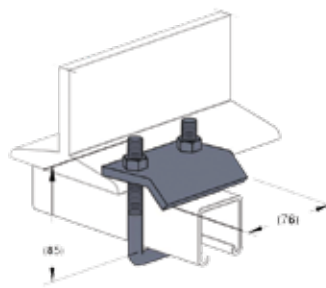
CAC 44



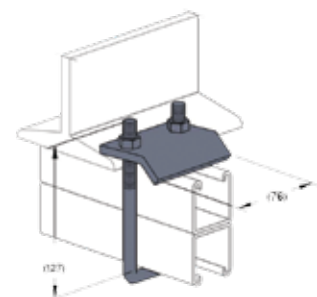
CAC 45



CAC 46

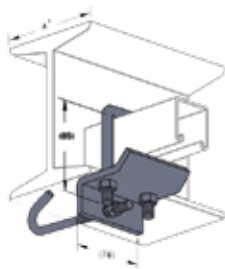


CAC 47

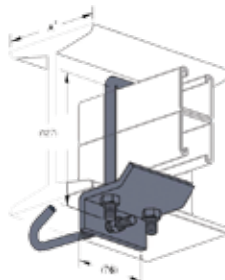


CAC 48

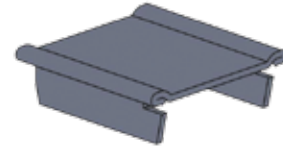
Support System - Accessories



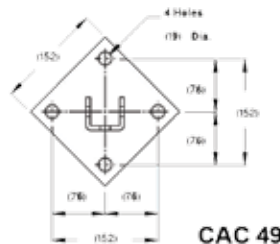
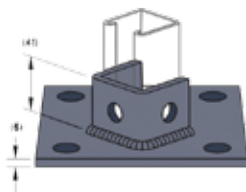
CAC 46



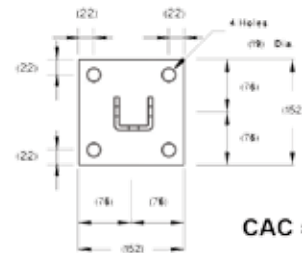
CAC 47



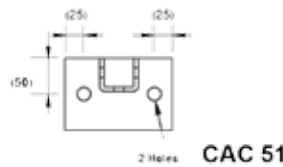
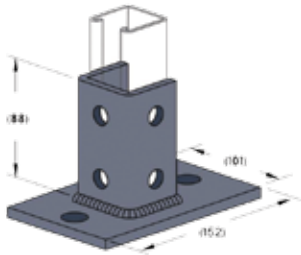
CAC 48



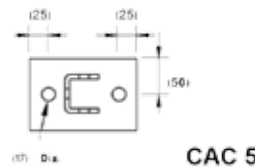
CAC 49



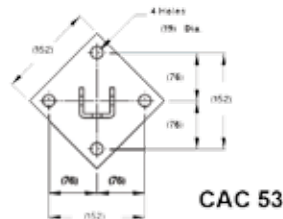
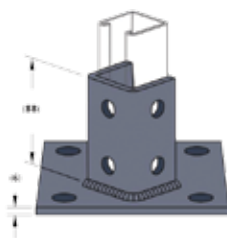
CAC 50



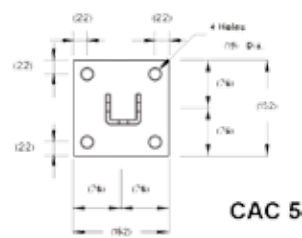
CAC 51



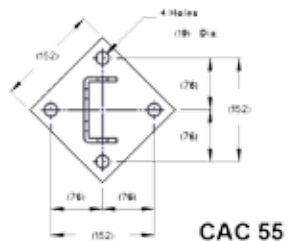
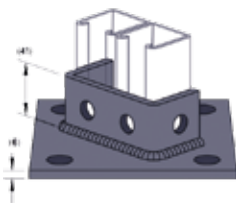
CAC 52



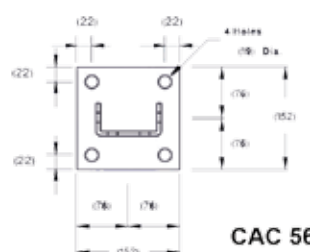
CAC 53



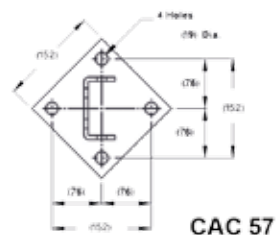
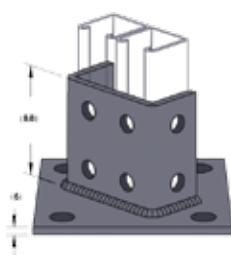
CAC 54



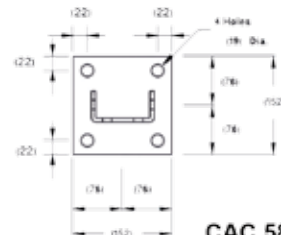
CAC 55



CAC 56

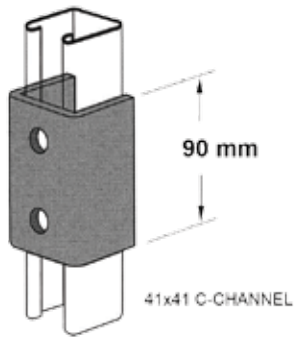


CAC 57

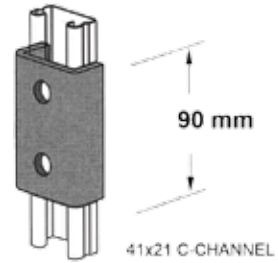


CAC 58

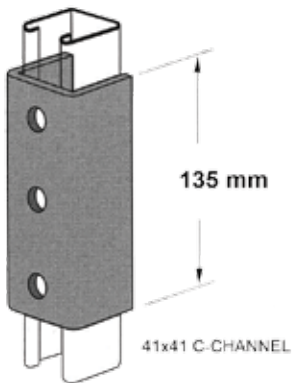
Support System - Accessories



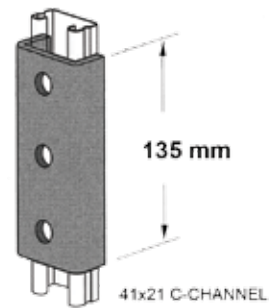
CAC 58



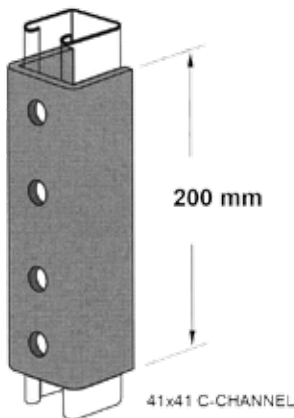
CAC 59



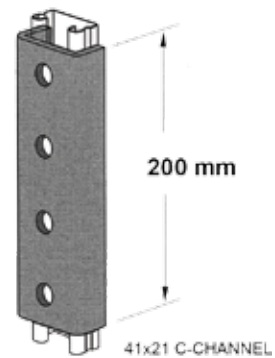
CAC 59



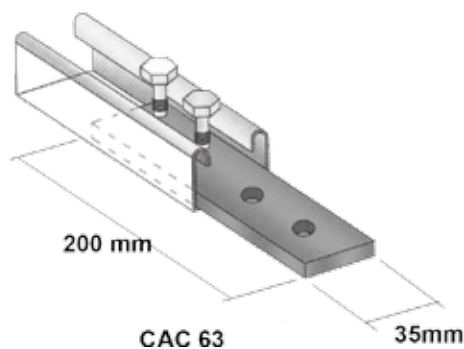
CAC 60



CAC 61

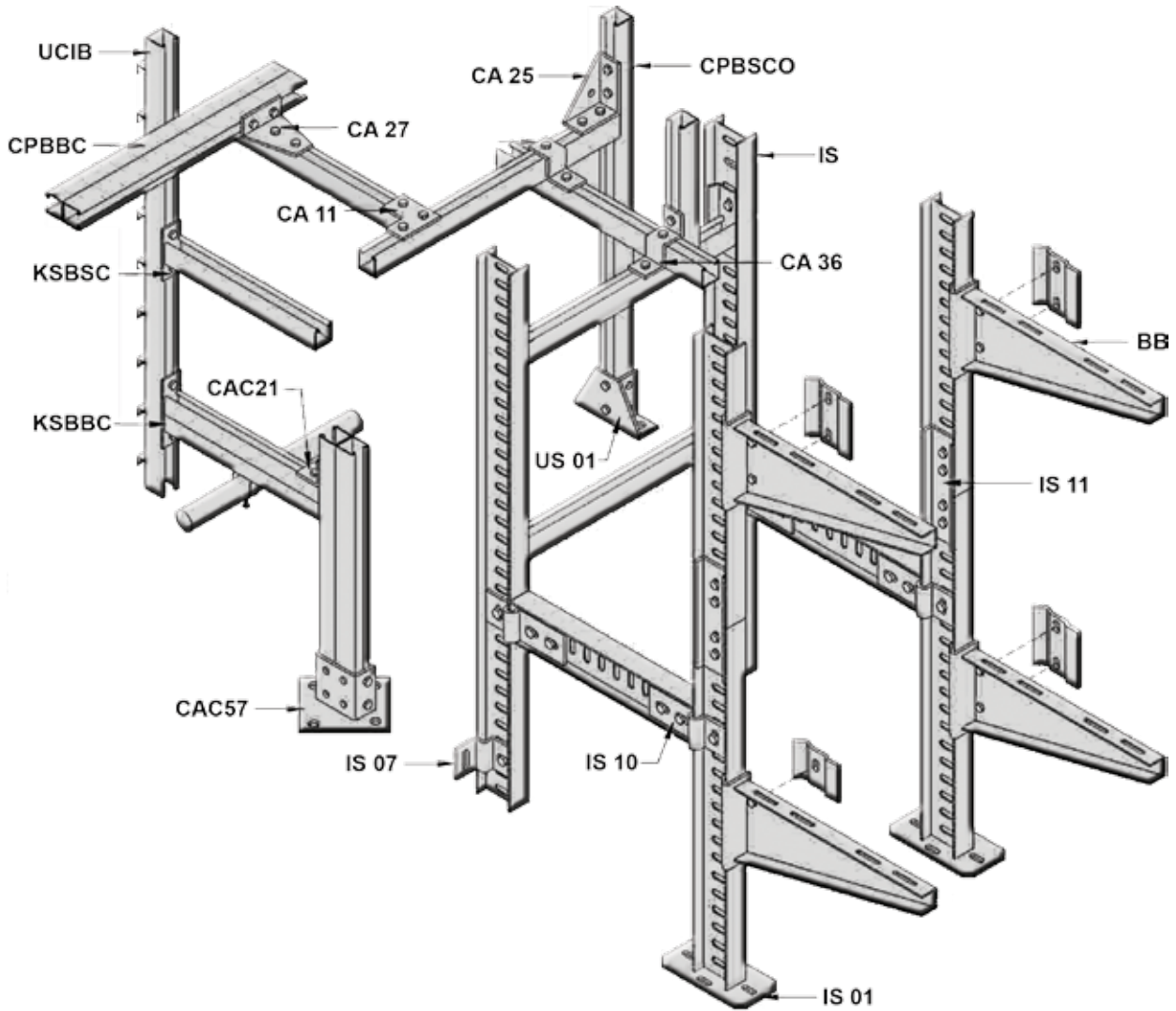


CAC 62



CAC 63

Support System-Channel & Supports Application



INSERT ...



CONNECT ...



TIGHTEN ...



Accessories - Fastening Hardware



THEADED RODS
(TR)

		Ordering Code			
Threaded Rod	TR	TR			
Elctro - Galvanized	EG				
Hot Dip Galvanized	HDG				
Stainless Steel 304	S4				
Stainless Steel 316	S6				
Sizes (mm)		6	8	10	12



STUD CONNECTORS
(SC)

		Ordering Code			
Stud Connector	SC	SC			
Elctro - Galvanized	EG				
Hot Dip Galvanized	HDG				
Sizes (mm)		6	8	10	12

BOLTS



HEXAGONAL BOLTS
(B1)

		Ordering Code			
Hexagonal Bolt	BH				
Stud Head Bolt	BR				
Elctro - Galvanized	EG				
Hot Dip Galvanized	HDG				
Stainless Steel 304	S4				
Stainless Steel 316	S6				



ROUND HEAD BOLTS
(B2)

Sizes (mm)	6x16	6x20	6x25	6x30	6x40	6x50
	8x20	8x30	8x40	8x50		
	10x25	10x35	10x50	10x60		
	12x30	12x40	12x50	12x75		

Accessories - Fastening Hardware



SHORT SPRING NUTE
(SN2)



LONG SPRING NUTS
(SN1)



PLAIN SPRING NUTS
(SN3)



HEXAGONAL NUTS
(HN)



SQUARE NUTS
(SN)

Ordering Code

Short Spring Nuts	SNS
Long Spring Nuts	SNL
Plain Spring Nuts	SNP

Sizes (mm)	6	8	10	12
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Ordering Code

Hexagonal Nuts	HN
Electro - Galvanized	EG
Hot Dip Galvanized	HDG
Stainless Steel 304	S4
Stainless Steel 316	S6

Sizes (mm)	6	8	10	12
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Ordering Code

Square Nuts	SN
Electro - Galvanized	EG
Hot Dip Galvanized	HDG
Stainless Steel 304	S4
Stainless Steel 316	S6

Sizes (mm)	6	8	10	12
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Accessories - Fastening Hardware



FLAT WASHERS
(FW)

		Ordering Code			
Flat Wahers	FW	FW			
Elctro - Galvanized	EG				
Hot Dip Galvanized	HDG				
Stainless Steel 304	S4				
Stainless Steel 316	S6				
Sizes (mm)		6	8	10	12



SPRING WASHERS
(SW)

		Ordering Code			
Spring Washers	SW	SW			
Elctro - Galvanized	EG				
Hot Dip Galvanized	HDG				
Stainless Steel 304	S4				
Stainless Steel 316	S6				
Sizes (mm)		6	8	10	12



UNIFIX
(UFX)

		Ordering Code			
Unifix	UFX	UFX			
Elctro - Galvanized	EG				
Hot Dip Galvanized	HDG				
Sizes (mm)		6	8	10	12

