



FIBERGLASS CABLE MANAGEMENT SYSTEMS



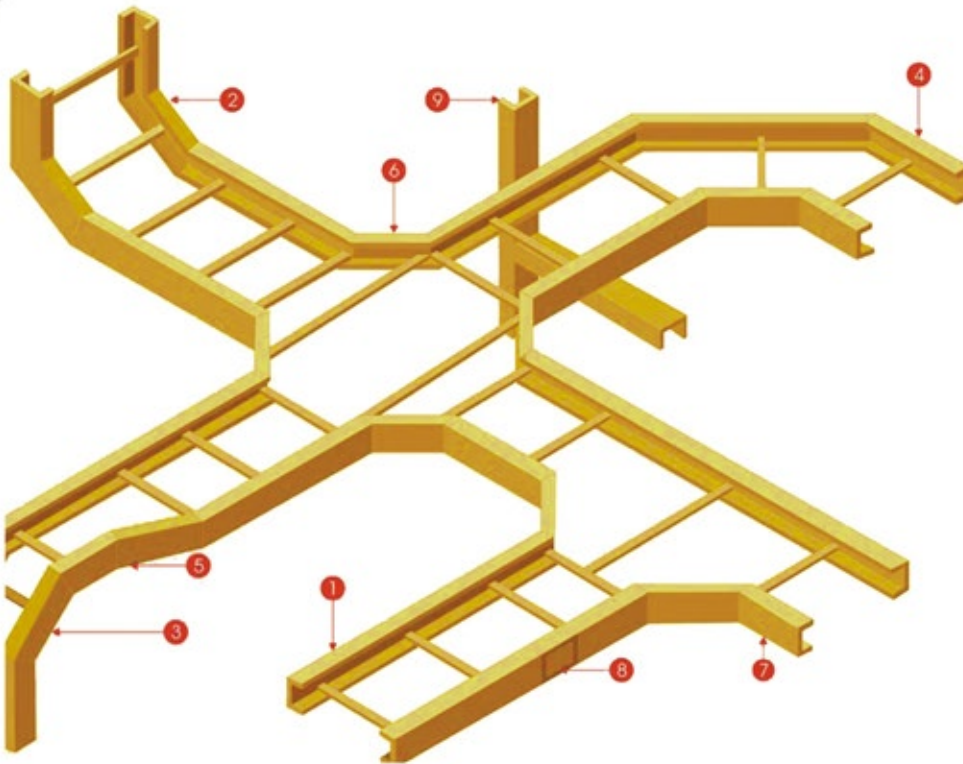
www.aeroncomposite.com



CABLE MANAGEMENT SYSTEMS

AERON

Composites are gaining more popularity than the traditional materials due to their several benefits and durable performance in challenging environments. In the area of cable management, AERON can offer a versatile range of solutions, from standard product range to customer-tailored solutions.



Fiberglass Cable Tray Assembly System

1	Straight Run
2	90° Inside Vertical Bend
3	90° Outside Vertical Bend
4	90° Horizontal Bend
5	Left Hand Reducer
6	Horizontal Cross
7	Horizontal Tee
8	Splice Plate For Joining

THE SUPERIOR FEATURES OF AERON COMPOSITE CABLE TRAYS

- Corrosion free
- High load carrying capacity even with long spans
- Light weight, easy to install
- Electrically insulating
- Complete system
- Fire Resistance
- Accessibility for future
- Space efficiency
- Versatile
- UV stabilities

Quality & Consistency

Aeron product performance is consistent and reliable as all the products go through comprehensive programs of quality control in a world-class testing laboratory.

Engineering & Design Assistance

All engineering and design assistance for your project will be handled by our highly qualified and experienced staff. With our wide exposure we would be able to tackle a unique design problem that you face.

AutoCAD, PDMS

Aeron can help you in design process not only with AutoCAD details but also the cable tray offering is available in PDMS.

Specification Assistance

The most important phase for the success of a composite cable management solution is the specification phase. Our experience of installations in a wide variety of difficult environments can help you specify the best resin system and the correct structural properties that are long lasting and low on acquisition cost.

INDUSTRY SEGMENTS

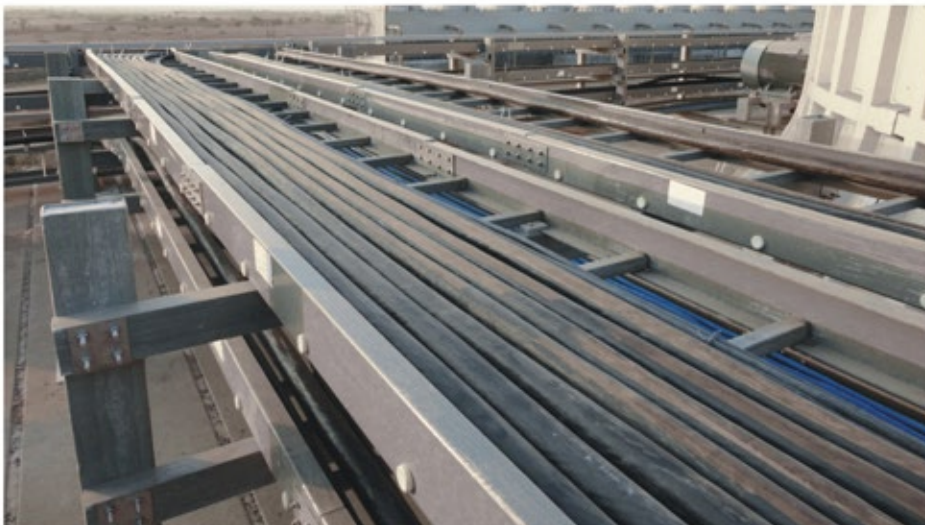
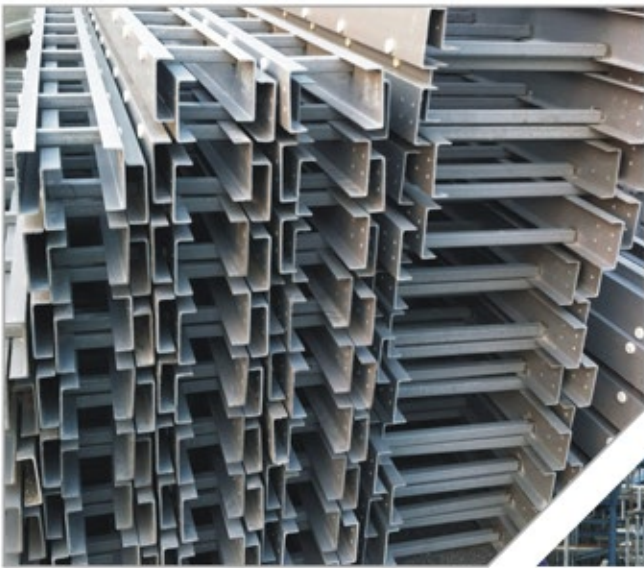
- | Off Shore Oil Platforms | Cooling Towers
- | Chemicals Plants | Refineries | Electroplating Industry
- | Effluent Treatment Plants | Food & Drug Industries
- | Power Plants | Architectural Application | Paper Industries
- | Electronic Equipments | Telecommunication Industry
- | and many more...



CABLE MANAGEMENT SYSTEMS

Fiberglass Cable Tray System

Fibreglass Reinforced plastics (FRP) are increasingly being considered as a superior material of construction in many fields. FRP has proved immensely beneficial in a wide range of industrial applications due to the following salient features



THE FIBERGLASS ADVANTAGES

As compared to galvanized Steel

- Corrosion resistance coating not required.
- No risk of injury.
- Resistant to salt water, sulfur, chlorine or basis environments.

As compared to aluminum

- No electrolytic corrosion due to contact of two metals in humid environment.
- Much more longer life span in basic chlorine or halogen atmosphere.

As compared to Stainless Steel

- Absence of corrosion under tension (mechanical).
- Recommended in chlorine environment.

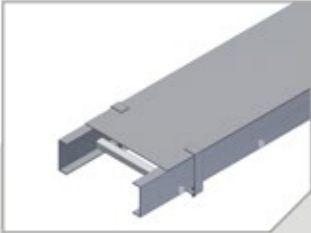
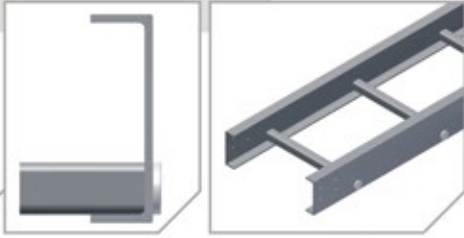
As Compared to Metals

- No earthing required.
- Resistance to corrosion contributes to reduce the life cycle costs (LCC) of installations.
- No requirement for electric continuity test.
- Will not deform under impact.
- Easy to work (Cut, drill) at site and id much easier to move and place because is it light weight.





LADDER TYPE CABLE TRAY



Nomenclature For Ladder Type Cable Tray

Example : ACL - P - 12 - 40 - S - 150 - Y

Cable Tray Type	Resin Type	Width	Height	Rung Type	Rung Spacing	STD Length
ACL	P-Polyester	06-150mm	20-50	S-Normal*	A-150mm	X-1M
Ladder Type	V-Vinylester	12-300mm	30-75	M-Marine	B-250mm	Y-3M*
		18-450mm	40-100		C-300mm*	
		24-600mm	60-150		D-450mm	
		30-750mm	80-200			
		36-900mm				

* Standard Size

Heavy Duty Cable Tray With I-beam Side Rail (Available In 100 & 150 mm Height)

Nomenclature For Ladder Type Cable Tray Fitting

Example : ACL - 90 - VIB - W - H - R

Cable Tray Type	Angle	Type	Width	Height	Radius
ACL	30°	HB-Horizontal Bend	06-150mm	20-50	300
Ladder Type	45°	HT-Horizontal Tee	12-300mm	30-75	450
	60°	HX-Horizontal Cross	18-450mm	40-100	600
	90°	VIB-Vertical Inside Bend	24-600mm	60-150	900
	#	VOB-Vertical Outside Bend	30-750mm	80-200	Direct
		VT-Vertical Tee	36-900mm		
		VTU-Vertical Tee, Up			
		RR-Right Reducer			
		LR-Left Reducer			
		SR-Straight Reducer			

Nomenclature system includes each system with their respective side rail height, flange width, channel thickness etc. All cable trays are available in Polyester, Vinyl ester, Antistatic and halogen-free resin. Rung connections are made with a mechanical and chemical lock.

Custom Size Available On Request

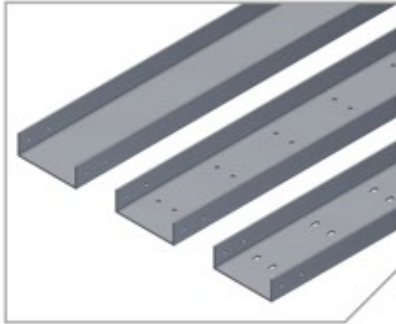
#-For Reducers

CABLE TRAY FITTINGS



CHANNEL / PERFORATED TYPE CABLE TRAY

CHANNEL / DUCT TYPE CABLE TRAY*

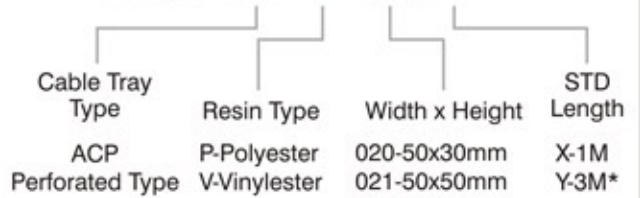


FLANGED TYPE CABLE TRAY



Nomenclature For Perforated Type Cable Tray

Example : ACP - P - 060 - Y



FITTING SELECTION GUIDE

Nomenclature For Perforated Type Cable Tray Fitting

Example : ACL - 90 - VIB - C - R

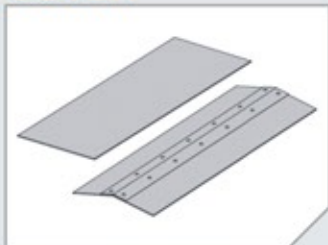
Cable Tray Type	Angle	Type	C=Width x Height		Radius
ACP	30°	HB-Horizontal Bend	020-50x30mm	080-200x50mm	300
Perforated Type	45°	HT-Horizontal Tee	021-50x50mm	081-200x100mm	450
	60°	HX-Horizontal Cross	022-50x25mm	120-300x50mm	600
	90°	VIB-Vertical Inside Bend	030-75x25mm	040RF-100x100mm	900
	#	VOB-Vertical Outside Bend	031-75x30mm	060RF-150x100mm	Direct
		VT-Vertical Tee	032-75x50mm	080RF-200x100mm	
		VTU-Vertical Tee, Up	040-100x30mm	120RF-300x100mm	
		RR-Right Reducer	041-100x50mm	160RF-400x100mm	
		LR-Left Reducer	060-150x50mm	200RF-500x100mm	
		SR-Straight Reducer			

Custom Size Available On Request

#-For Reducers

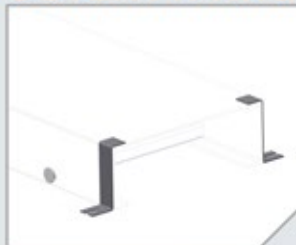
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COVER

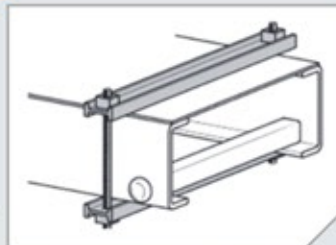


Flat cover & Peaked cover

COVER FITTINGS



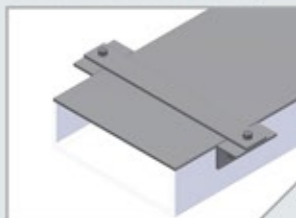
Standard Cover Clamp



Heavy Duty Cover Clamp



Flanged / Box Cover



Cover Fitting Perforated Cable Tray

Quantity of Standard Cover Clamps Required

Straight Section 3000mm.....	4 pcs.
Straight Section 6000mm.....	6 pcs.
Horizontal/Vertical Bends.....	4 pcs.
Tees.....	6 pcs.
Crosses.....	8 pcs.

Note : When using the Heavy Duty Cover Clamp, only one-half the number of clamps stated above is required.

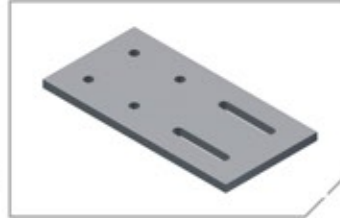


ACCESSORIES

AERON offers a full line of accessories for our electrical products including cable tray covers, divider strips, drop outs, blind ends, adapters, hold-down clips, marine rungs, strut rungs and a wide variety of stainless steel or FRP cable tray fasteners appropriate for any application.



Standard Splice Plates



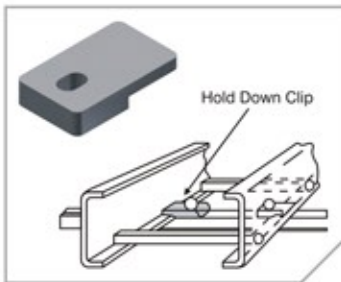
Expansion Splice Plates



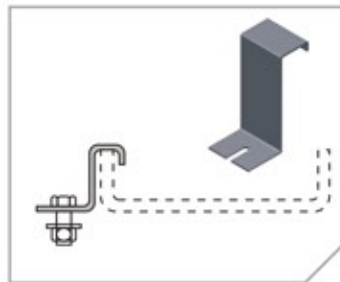
Vertical Adjustable Splice Plates



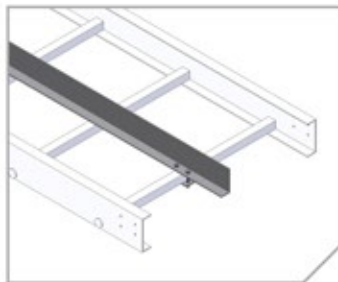
Vertical Adjustable Splice Plates



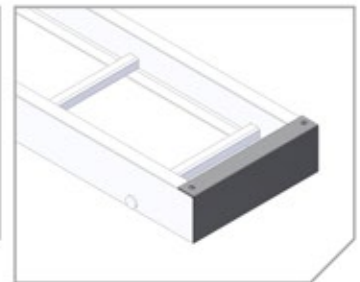
Hold Down Clip



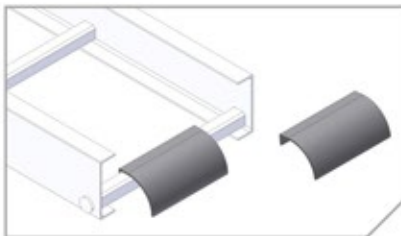
Channel Hold Down Clamp



Divider Strip



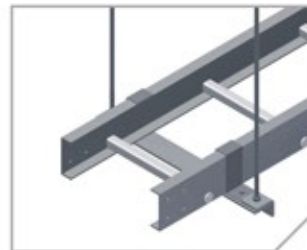
Blind Plate



Ladder Drop-out
Specially-designed Ladder Drop-Outs provide a rounded surface with adequate radius to protect cable as it exits from the tray, preventing damage to insulation.

SUPPORT SYSTEMS

Wall Mounted, Ceiling Hanged & Floor Mounted.



WORKING LOAD CAPACITY

The working load capacity represents the ability of a fiberglass cable tray to support the static weight of cables. It is equivalent to destructive load capacity, with minimum safety factor of 1.5

Width of Cable Tray	Side Rail	Load Kg/Mtr. For Support span 2.0 Mtr.
150mm	75	35
300mm	75	65
450mm	100	85
600mm	100	95
750mm	100	125
900mm	150	155

Concentrated Static Load is 70 Kg. at the centre of the span.

As per NEMA Loading standards :

Load	Lb./ft.	Kgs/Mtr.	Side Rail	Load Class
A	50	74	75	8A
B	75	111	100	8C, 12C, 16A
C	100	148	150	12C, 16B, 20A, 20C

Support span : 8, 10, 12 are in Feet

EFFECT OF TEMPERATURE

Strength properties of fiberglass are reduced when continuously exposed to elevated temperatures. Working loads shall be reduced based on the following:

Temp. in °F	75	100	125	150	175	200
Approx. % of Strength	100	90	78	68	60	52

Properties	Test Methods	Unit/Value	Longitudinal	Transverse
Tensile Strength	ASTM D638	MPa	206.8	48.2
Flexural Strength	ASTM D790	MPa	206.8	68.9
Izod impact	ASTM D256	J/mm	1.33	0.21
Barcol Hardness	ASTM D2583	-	45	45
Shear Strength	ASTM D2344	MPa	31	-
Density	ASTM D792	g/cc	2	-
Coefficient of Thermal Expansion	ASTM D696	10 ⁻⁶ mm/mm/°C	8	-
Water Absorption (24 Hours)	ASTM D570	% Max	0.45	-
Dielectric Strength	ASTM D149	kv/in	35	-
Flammability Classification	UL 94	-	VO	-

STANDARDS

- » IS 6746 -1994 Specs for Unsaturated Polyester Resin System for Low Pressure Fiber Reinforced Plastics
- » NEMA FG-1 1984-1993 (Current Issue) Specification for Fiberglass Tray System – Loading Characteristics
- » IS 6746 Appendix – K/UL 94 Flame Retardant (Low Flammability/v0)

INSTALLATION GUIDELINES

The installation of AERON Cable Tray should be made in compliance with the standards set forth by the National Electric Code and NEMA Publications FG-1 (current issue). Avoid excessive pressure when sawing, drilling, and routing, etc. Use carbide-tipped drill bits and saw blades for extended tool life. The use of lubricant during machining is not recommended. To avoid chipping of material at cut edges, secure cable tray and fittings properly during field cut operations. Follow label instructions carefully. A combination of mechanical fasteners and adhesives make the strongest most reliable connections.



Aeron Composite Pvt. Ltd.

WARNING :

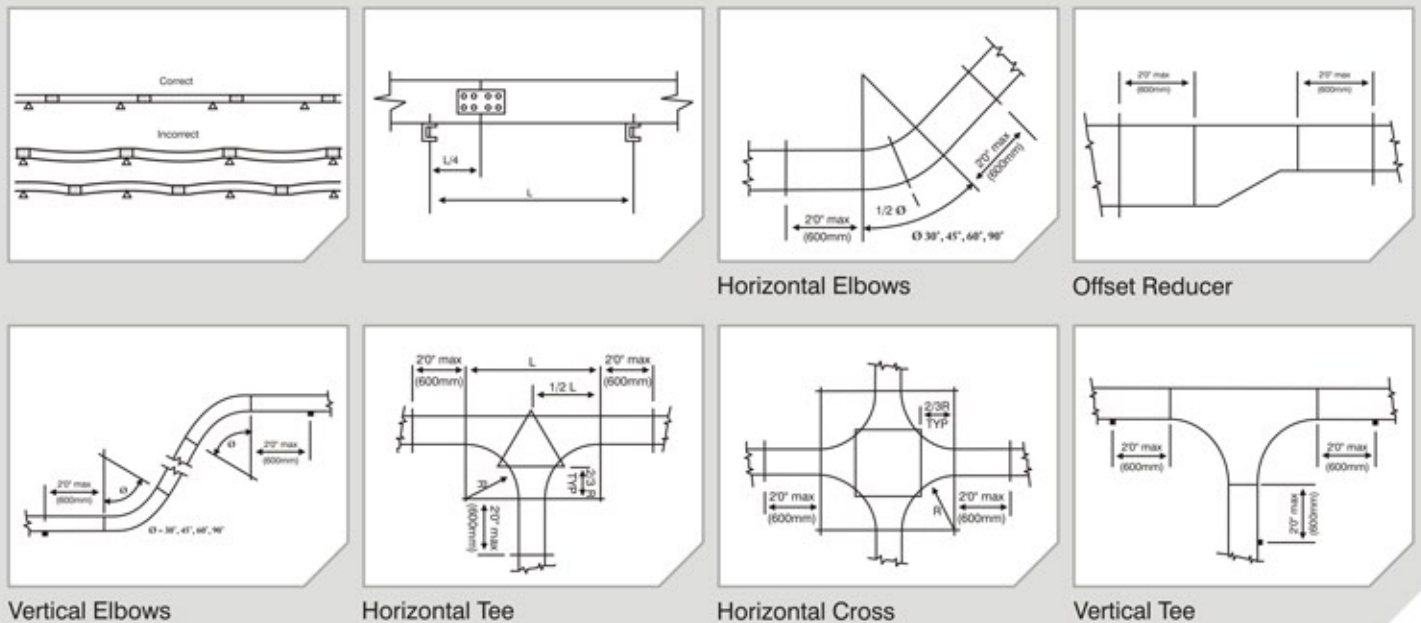
- ✦ NOT TO BE USED AS WALKWAY, LADDER OR SUPPORT FOR PERSONNEL.
- ✦ TO BE USED ONLY AS A MECHANICAL SUPPORT FOR CABLE AND TUBING.

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THE COMPOSITE EXPERT...

SUPPORT RECOMMENDATION AS PER NEMA STANDARD

As Per Nema FG1, Splice Plate Is Recommended To Be Located At ¼ Of The Span From The Support, Where The Bending Moment Is Zero.





Fiberglass Cable Tray



Fiberglass Structural Profiles



Fiberglass Ladder



Trefoil Clamp



Fiberglass Handrails



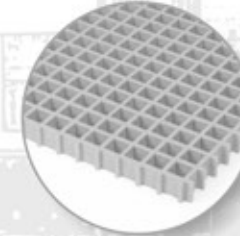
Fiberglass Pultruded Gratings



Fiberglass Canopy



Fiberglass Fencing



Fiberglass Molded Gratings



Fiberglass Poles & Mast



THE COMPOSITE EXPERT...

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