

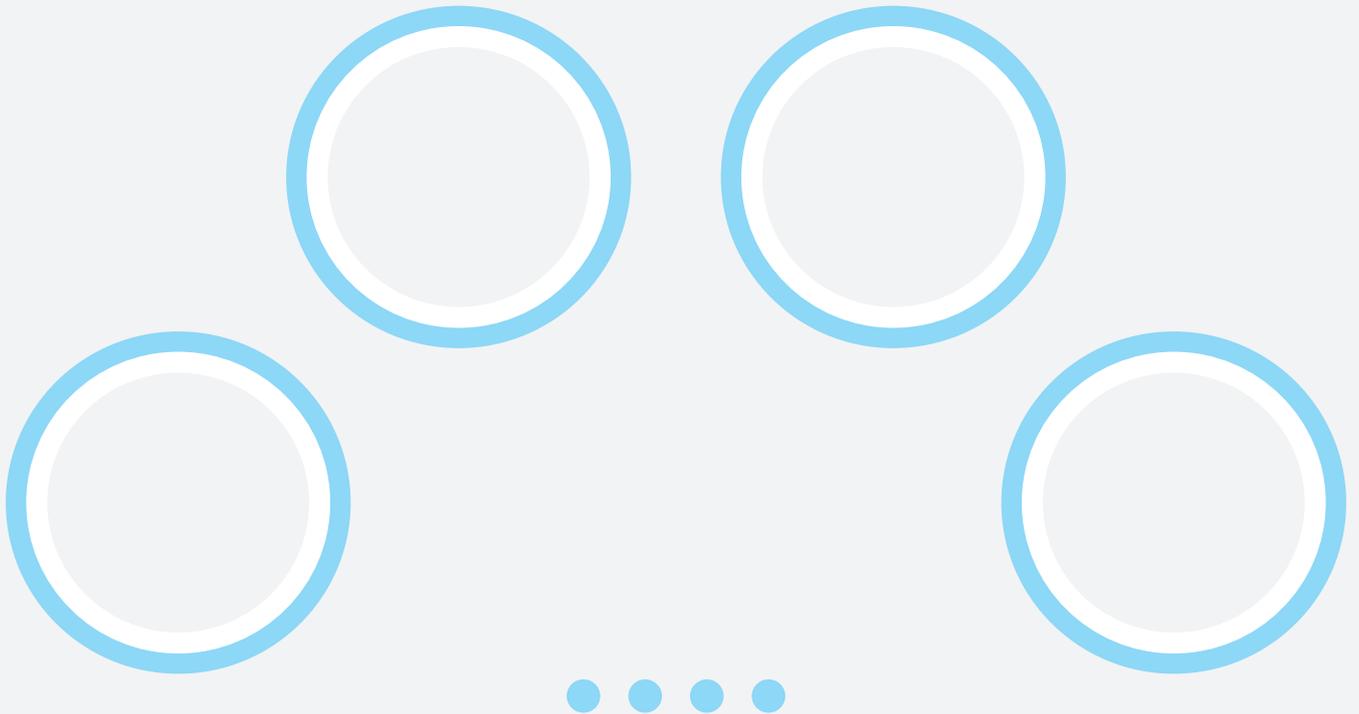


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Mahavir Industrial Corpn.

www.mahavirind.com



WINNERS NOT ONLY DREAM THEY ALSO ACT

Company Profile

Company Name	::	M/s. MAHAVIR INDUSTRIAL CORPN.
Sales Office	::	Yamuna Bhawan, 55 Ezra Street, 4th Floor, Kolkata - 700 001
Regd. Office	::	215, Old China Bazar Street, 2nd Floor, Kolkata - 700 001
Telephone	::	+91-33-2234 1693, 2235 3627
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E-mail	::	chharia@gmail.com, chharia@mahavirind.com
Website	::	www.mahavirind.com
Works	::	Domjur Road, Pipli, Jagdishpur, Howrah
Activities	::	Manufacturer and Supplier of : Earthing Materials, Cable Trays & Accessories and Transmission Line Hardwares
Products	::	Distributors for : 1. 'M-Seal' / 3M make 2. 'Best & Crompton' 3. 'SINTEX' 4. Indelec make Lighting Protection System 5. Megaseal make Epoxy Compound
Specialization	::	The Managing Partner is well experienced Electrical Engineer in this line and have worked in Project dept. of M/s. Crompton Greaves Ltd. for several years.
Partners	::	Mr. H.P. CHHARIA, B.Sc (Engg.) Mr. SANJEEV CHHARIA, B.E. (I.T.)
Contact Person	::	Mr. RAJIV CHHARIA
Sales Turnover	::	Rs. 14 Crores (approx)
Established	::	1977
Sister Concerns	::	M/s. MAHAVIR ELECTROMECH PVT. LTD. M/s. SATYAMONY ENTERPRISES Yamuna Bhawan, 55, Ezra Street, 4th Floor Kolkata - 700 001.



Introduction

Mahavir Industrial Corporation have been manufacturing Earthing Materials and Cable Trays and Erection Hardwares since 1977, meeting stringent manufacturing and quality standards to satisfy demanding users in Steel Plants, Power Plants, Defence and other Hi-tech Industries. We have been in the relentless pursuit of excellence and specialization in the field of Earthing Materials and Cable Trays and has set itself a goal to produce items which are comparable to the best in the world.

Our dynamic outlook, perseverance technical expertise and experience has enabled us to rank among the front line companies in this field. Our Company's reputation for excellence has been built by adhering to the highest standards of business conduct and quality policy and we seek to improve upon our solid foundation. At all times, providing highest quality not only in materials, but in services too, remains our principal aim and we continuously strive towards achieving the same.

We at Mahavir believe in Innovation, keeping pace with the latest technology and in course, developing products that would best meet the needs of our customers. Our constant interaction with the buyer, consultants & the end users of the products has provided us in depth information of Customer's requirements.

The constant effort to solve the same have made us one of the most preferred brand in the field of Earthing Materials and Cable Trays.



CABLE TRAY SYSTEM

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

THE NEED FOR A CABLE TRAY SYSTEM

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

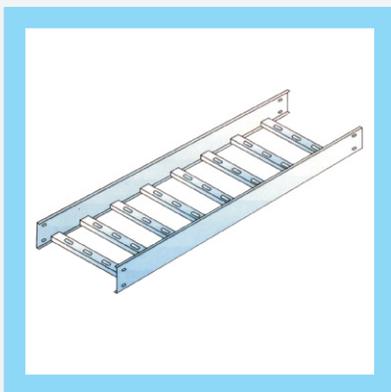
Old methods of cable management become obsolete under these demanding conditions.

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

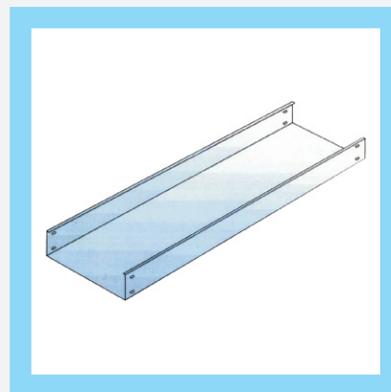
Today cable trays have become a necessary part of industrial and commercial construction by offering quick, economical and flexible solutions to these problems.

ADVANTAGES OF MAHAVIR BRAND CABLE TRAYS

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



LADDER TYPE



RACEWAY

LADDER CABLE TRAY

Ladder Type Cable trays are fabricated out of Steel Sheets conforming to I.S. 1079 : 1973 & I.S. 513 ; 1994 with a thickness of 1.6mm, 2.0mm, 2.5mm and 3mm.

From the Steel Sheets thus procured samples will be sent to the Local Testing Laboratory for Chemical analysis and Mechanical properties. Only after receipt of satisfactory Test Report from the Lab. the fabrication work will commence.

All Cable Trays are of standard lengths of 2500mm for various widths minimum being 100mm wide and 1500 mm wide. Slotted Rungs are welded to the side Runners at every 250mm interval.

MAHAVIR LADDER TYPE CABLE TRAYS : SPECS (M.S./ GI)

- | | | |
|----------------------|----|---|
| 1. Standard Length | :: | 2.5 Mtrs. |
| 2. Runner Height (H) | :: | 50mm - 150mm |
| 3. Runner Collar (C) | :: | 15mm - 25 mm |
| 4. Rung Size (S) | :: | 30mm - 50 mm |
| 5. Rung Collar | :: | 10 mm - 20 mm |
| 6. Thickness (TH) | :: | 1.6mm, 2mm, 2.5mm, 3mm |
| 7. Width | :: | 100mm - 1500 mm |
| 9. Rung Spacing | :: | 250mm interval |
| 10. Finish | :: | For M.S.: Hot Dip Galvanised, Powder Coated |
| 11. Material | :: | MS Sheet of Prime Quality |

Straight sections of ladder type cable trays consist of two longitudinal side rails, connected by individual transverse members, or rungs, which are welded to the side rails trays.

This type of cable tray provides maximum ventilation to heat producing cable such as power cables.

STANDARD DIMENSIONS

Length 2.5 mtrs, Depth 50 mm, - 100 m, Width 100mm - 1000m, Rung Spacing 250 mm

Sheet Metal Thickness

16 swg (1.6 mm) for light loads, 14 swg (2.0 mm) for medium loads, 10 swg (3.0 mm) for heavy loads

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

Material : Prime quality G.I. & MS sheets.

Finish (after fabrication) : Pre galvanized, Hot dip galvanized, Powder coating.

HORIZONTAL TEE STANDARD DIMENSIONS

Radius (mm)	300	450	600	900			
Width W (cm)	10	15	30	45	60	75	90
Length L (cm)	90	95	110	125	140	155	170
Breadth B (cm)	50	55	70	85	100	115	130
Degree	30°	45°	60°	90°			

LADDER ACCESSORIES

MAHAVIR manufactures three types of cable trays

- Ladder Type - Made of Sheet
- Perforated Type - Made of Angle & Flat
- Solid Bottom Type

All of these are available with a full range of fittings and accessories.

FITTINGS

Fittings are sections of cable trays which are joined to other cable trays sections for the purpose of changing the direction, elevation or width of the cable run. All fittings are available in sizes and types corresponding to the straight cable tray sections.

Elbows - Horizontal and vertical elbows enable directional and elevation changes, respectively.

Horizontal Tee - These join cable tray sections in three directions at 90° angles.

Horizontal Cross - Same as "Tee" except in four directions at 90° angles.

Reducers - These join cable trays of different widths in the same plane.

COVERS

Covers act as an additional safeguard, providing shelter from sunlight dirt accumulation and accidental contact. They also isolate cables from fires and radio frequency interference.

CONSTRUCTION ACCESSORIES

MAHAVIR manufactures all construction accessories to enable on site installation of cable tray systems. These include splice plate connectors, channels, clamps brackets and hangers.

SPECIFIC REQUIREMENTS

Other types of cable trays and fittings can be supplied to meet specific requirements.

All MAHAVIR cable trays are fabricated from Prime Quality Sheet.

To provide adequate protection against corrosion, three types of protection are offered

- Painted after fabrication
- Fabricated from pre-galvanized (GI) sheets
- Hot dip galvanized after fabrication

DIMENSIONS

MAHAVIR cable trays are manufactured in the following standard dimensions

Length 2.5 mtrs.

Depth 15mm - 100mm

Width 10 cm, 15 cm, 30 cm, 45 cm, 60 cm
75 cm, 90 cm

Sheet Metal Thickness

16 Gauge (1.6 mm) for light loads

14 Gauge (2.0 mm) for medium loads

Upto 3.0 mm for heavy loads

Elbow and Cross Radius

300 mm (standard), 600 mm &

900 mm also available

LOADING CAPABILITY & SUPPORT SPAN

All MAHAVIR cable trays are manufactured in accordance with the ISI standard. Thus they meet and/or exceed the loading capability of comparable cable trays.

ANGLE LADDER

Ladder Type Cable Trays are fabricated of M.S. Angles conforming to I.S. 2062; 1992. M.S. Angles are used as Runners and M.S. Flats as Rungs. Rung spacing is 250mm for 2500mm Length Cable Trays and 300mm for 3000mm Lengths. Rungs can be provided single / double, as per the customers' choice ; Double Rungs are provided with a gap of 10mm, for clamping the cables.

MAHAVIR ANGULAR LADDER TYPE CABLE TRAY :

1. Length (L) :: 2.5 Mtrs./3 Mtrs.
2. Widths (W) :: 150mm - 300mm - 450mm - 600mm - 1000mm
(or as per customers)
3. Runners (R) :: 50mm x 50mm x 6mm - 65mm x 65mm x 6mm
4. Rungs :: 25mm x 3mm - 25mm x 6mm - 32mm x 6mm
5. Rung spacing :: 250mm, 300mm interval (double rung for bolting as per customers).
6. Finish :: Hot Dip Galvanised, Painted (colour as per your choice), Powder coated, epoxy painted.

PERFORATED CABLE TRAY

MAHAVIR PERFORATED CABLE TRAY SPECS : (M.S. & ALUMINIUM)

1. Standard Length :: 2.5 Mtrs.
2. Tray Width (W) :: 50mm - 1000mm
3. Tray Height (H) :: 15mm - 100 mm
4. Tray Collar (C) :: 15mm, 20mm, 25mm
6. Tray thickness (TH) :: 1.6mm, 2.00mm, 2.5mm, 3mm
7. Types of Raw Material :: Mild Steel, Aluminium
8. Finish :: Hot Dip Galvanised - Electro Plated - Powder coated - Epoxy coated, Enamel Painted - Aluminium Painted.

PERFORATED TRAY ACCESSORIES

RACEWAY / COVER

Straight sections of Raceway constructed from single sheet of metal, providing degree of protection from external damage. They are used primarily for instrumental control, communication and other non-heat producing cables.

STANDARD DIMENSIONS

Length	2.5 mtrs.
Depth of cover	50mm - 100 mm
Width	50mm - 100 mm
Sheet Metal Thickness	1.6mm / 2.0mm / 2.5mm / 3.0mm

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

Material :

MS Sheet of Prime Quality Aluminium

Finish (after fabrication) :

Pre galvanized

Hot dip galvanized

Powder Coated

STRAIGHT SECTION STANDARD DIMENSIONS

Length	2.5 mtrs.
Depth	10mm - 50mm
Width	50mm - 1000mm
Run Spacing	250 mtrs.
Sheet Metal Thickness	16 swg (1.6 mm) for light loads 14 swg (2.0 mm) for medium loads 10 swg (3.0 mm) for heavy loads

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

Material :

Prime quality GI & MS sheets.

Finish (after fabrication) :

Pre galvanized

Hot dip galvanized

Powder Coating

EARTH ELECTROMODE

Why must we have earth electrodes ?

The principle of earthing is to consider the general mass of earth as a reference (zero) potential. Thus, everything connected directly to it will be at this zero potential, or above it by the amount of the volt drop in the connection system (for example, the volt drop in a protective conductor carrying fault current). The purpose of the earth electrode is to connect to the general mass of earth.

With the increasing use of underground supplies and of protective multiple earthing (PME) it is becoming more common for the consumer to be provided with an earth terminal rather than having to make contact with earth using an earth electrode.

Length	2.5 to 6.0 Mtrs
Dia	25mm NB to 100mm NB
Thickness of Pipe	As per IS : 1239

TREFOIL CLAMPS

Mahavir manufactures premium quality Trefoil Clamps. These trefoil clamps are made from finest quality raw material to ensure international standards of quality blended with durability. Molded Trefoil Clamps, offered by us, are extensively used in high voltage single core cables with high current rating. Cast Aluminium Trefoil Clamps, provided by us, are useful in laying single core cables in trefoil touching formation that helps in maintaining magnetic symmetry. Furthermore, our company is widely renowned as one the prominent Trefoil Clamps Suppliers.

Purpose of Trefoil Clamps

Trefoil Clamps find usage in applications of high voltage single core cables where the current rating is high and 3 core cables are not available. Widely appreciated for laying single core cables, Trefoil helps in maintaining magnetic symmetry, thereby avoiding electro magnetic heating and loss of current. It nullifies the induced magnetic field of high voltage power cable. The Trefoil Clamps provides protection of power and control cables from the lightning discharges and establishing easy cable circulation paths.

Application

Trefoil Clamps are suitable for supporting Single Core PVC/ HRPVC, XLPE, XLPE Insulated Aluminium, Un- Armoured, Earth And Un Earth Power Cables from 1.1 Kv to 132 KV Grade. 3 Phase A.C. Circuits in trefoil formation are used in Generation Stations, Sub-Stations, Thermal Power Stations, Switchgear Plants, Industrial Installation, Terminal Kits, and Straight through Jointing Kits etc. These can be used for indoor or outdoor for vertical or horizontal running cables inside trenches or on racks / galleries.

Types (Material of Construction)

M.O.C. Die-Cast Aluminium

M.O.C. Aluminum Strips

Sizes

Sizes are depending upon the overall dimensions of the Cables, Normally trefoil clamps are used for single core cables.