STERDURO INDUSTRIES PVT. LTD.

Earlier known as STERLING DURO ENTERPRISE





Consulting Sales Support

We care for your needs



OUR SUPPORT SOLUTIONS

- LADDER TYPE CABLE TRAYS
- PERFORATED TYPE CABLE TRAYS
- RACEWAYS
- METSEC CHANNEL
- JUNCTION BOXES
- DISTRUBTION BOXES
- EARTHING MATERIALS
- WELDED GRATINGS
- MOTOR CONTROL CENTER PANEL
- POWER CONTROL CENTER PANEL
- PROGRAMABLE LOGIC CONTROL PANEL
- AIR HANDULING UNIT PANEL
- VARIABLE FREQUENCY DRIVE PANEL
- AUTOMATED POWER FACTOR CONTROL PANEL
- THYRISTOR SWITCHES
- ELECTRICAL CONSULTANCY
- POWER & ENERGY AUDIT
- HT & LT ELECTRICAL INSTALLATIONS

About us

STERDURO INDUSTRIES PVT. LTD. (Earlier known as STERLING DURO) was established in the year 2008 by Mr. Sajit Dileep—B. Tech. (Prod.) MBA (LBS-England). He has worked in top notch companies like Godrej & Boyce Ltd., L&T Switchgear Ltd., ABB Ltd etc. before the entrepreneurship bug got to him.

STERLING DURO started off from a small gala measuring of 200 sq. mtrs only in Vasai (East). However within a short duration due to our dedication to excellence in production and commitment to customer satisfaction our company grew exponentially. Today we operate out of a manufacturing facility measuring more than

1500 sq. mtrs., Our current manufacturing capacity is more than 150 MT per month.

We source our raw material from leading producers and ensure conformance to industry standards. Our commitment to clients goes beyond product supply. We hand hold contractors / clients during project implementation. We strive to benchmark ourselves with the latest international practices followed by our industry.

Flexible Solutions for your business needs

STERLING DURO PROVIDES A TOTAL END TO END SOLUTION. The company's main objective is the supply of quality products, with respect to:

- Practical design
- Increased durability easy and quick installation
- Reasonable cost
- Minimum delivery time

Correct design and selection of the cable tray system is critical for the optimum performance of the system, both in technical and economic terms. For that reason, this catalogue is also a guide to the best selection and use of cable support products. This way, each project's specifications will be fully met with a system of minimum purchase, installation and maintenance costs.

By following the instructions and the detailed product description of each product, engineers can easily select the correct item for each application.



INFRASTRUCTURE We have comprehensive infrastructure equipped with basic and advance equipment and machinery needed to conduct our manufacturing process. The team of qualified and experienced Engineers and technicians at STERLING DURO are dedicated to provide total customer satisfaction with zero defect product delivery on time.



QUALITY With strict adherence to international standard quality control norms we have been able to generate products that are in confirmation with the highest industry standards. By being globally accepted, we have proved our products are in confirmation with international standards and we are capable to catering global market demand.



TEST FACILITIES We have in house testing facilities for cable trays and panels. For cable trays we provide dimension test, galvanizing test as per IS:2629 and for panels we have Temp rise test facility up to 4000 Amps. Apart from routine testes like High Voltage Dielectric Strength, Insulation Test, Milivolt Drop Test in accordance with IS:8623 (Part 1) and IEC: 61439-1.



ON TIME DELIVERY Timely delivery schedule is an integral part of our working system. We strive to deliver our consignment within stipulated time period at desired

Our company endeavors to offer superlative quality products to the customers at very competitive price. We are well equipped with a motivated team comprising of Factory Manager, Engineers, Technicians, Store Keepers, Fitters, Welders, Painters and all equipped machineries and other necessary facilities. We have a competitive edge over others, owing to following features:



- Complete dedication towards work
- Very flexible and professional way of working
- Project completion in a stipulated time frame
- Ability to take quick decisions for proper progress in work
- Prompt after sales services.
- Total customer satisfaction Customization facility
- Sound infrastructure
- Moderate Workshop area



LADDER TYPE CABLE TRAYS

Solid side rail protection and system strength with smooth radius fittings and a wide selection of materials and finishes.

Type Ladder type cable trays

Models Inner bend / Outer Bend / Inner U bend / Outer U

Bend

Range of Width 100 mm to 1500 mm

Range of Span 2500 mm to 3000 mm

Sheet Thickness 1.5 mm to 3.0 mm

Rung Spacing 250mm, 300mm C/c

Range of Height 50 mm to 150 mm

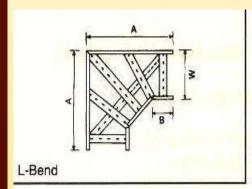
Material Mild Steel, Galvanized Iron, SS304, SS316, Aluminum

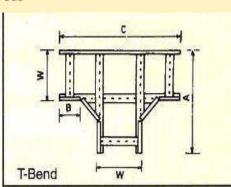
Finish Hot Dip Galvanized, Painted, Powder Coated, Elec-

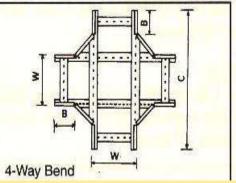
troplating

Accessories Horizontal Elbow / Vertical Elbow / Equal & Unequal

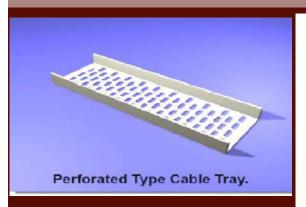
Tee/ Reducers /Cross











PERFORATED TYPE CABLE TRAYS

A job site, field adaptable support system primarily for low voltage, telecommunication and fiber optic cables.

Type Perforated type cable trays

Models Inner bend / Outer Bend / Inner U bend / Outer U

Bend

Range of Width 50 mm to 1500 mm

Range of Span 2500 mm to 3000 mm

Sheet Thickness 1.5 mm to 3.0 mm

Range of Height 50 mm to 150 mm

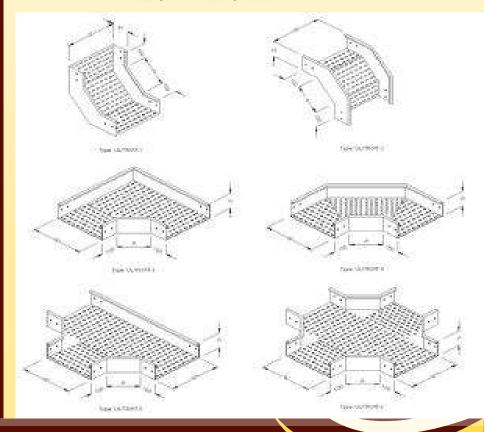
Material Mild Steel, Galvanized Iron, SS304, SS316, Aluminum

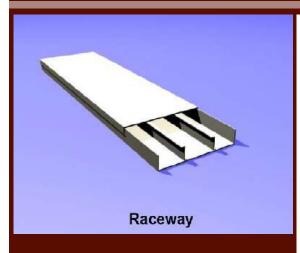
Finish Hot Dip Galvanized, Painted, Powder Coated, Elec-

troplating

Accessories Horizontal Elbow / Vertical Elbow / Equal & Unequal

Tee/ Reducers / Cross





TRUNKING / RACEWAYS TYPE CABLE

A job site filed adaptable support system primarily for underground purpose of low voltage, telecommunication and data optic fiber cables.

Type Trunking / Raceways type cable trays

Models With Partitions / Without Partitions

Range of Width 50 mm to 600 mm

Range of Span 2500 mm to 3000 mm

Sheet Thickness 1.5 mm to 2.5 mm

Range of Height 50 mm to 100 mm

Material Mild Steel, Galvanized Iron, SS304, SS316, Aluminum

Finish Hot Dip Galvanized, Painted, Powder Coated, Elec-

troplating

Accessories Horizontal Elbow / Vertical Elbow / Equal & Unequal

Tee/ Reducers / Cross



WIREMESH TYPE CABLE TRAYS

Wire mesh cable management system produced from high mechanical strength steel wires. It is produced by first welding a net, forming the channel, and then finishing after fabrication.

Type Wiremesh type cable trays

Range of Width 50 mm to 600 mm

Range of Span 2500 mm to 3000 mm

Wire Thickness 4.5 mm to 6 mm

Range of Height 25 mm to 100 mm

Material Mild Steel, Galvanized Iron, SS304, SS316, Aluminum

Finish Hot Dip Galvanized, Painted, Powder Coated, Elec-

troplating

METSEC TYPE CABLE TRAYS

This is typical arrangement and approved by Engineers India Limited (EIL) with press fit removable cover used for the installation of Lighting Fixtures.

Type Metsec type cable trays

Range of Width 50 mm to 100 mm

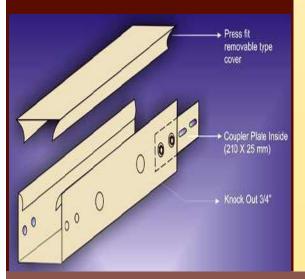
Range of Span 2500 mm

Wire Thickness 1.2 mm

Range of Height 50 mm to 100 mm

Material Mild Steel, Galvanized Iron, SS304, SS316, Aluminum

Finish Painted, Powder Coated, Electroplating





WIREMESH TYPE CABLE TRAYS

Wire mesh cable management system produced from high mechanical strength steel wires. It is produced by first welding a net, forming the channel, and then finishing after fabrication.

Type Wiremesh type cable trays

Range of Width 50 mm to 600 mm

Range of Span 2500 mm to 3000 mm

Wire Thickness 4.5 mm to 6 mm

Range of Height 25 mm to 100 mm

Material Mild Steel, Galvanized Iron, SS304, SS316, Aluminum

Finish Hot Dip Galvanized, Painted, Powder Coated, Elec-

troplating

METSEC TYPE CABLE TRAYS

This is typical arrangement and approved by Engineers India Limited (EIL) with press fit removable cover used for the installation of Lighting Fixtures.

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Range of Width 50 mm to 100 mm

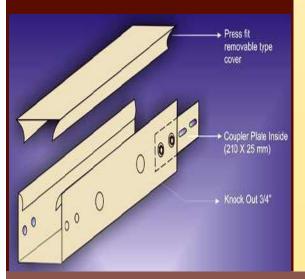
Range of Span 2500 mm

Wire Thickness 1.2 mm

Range of Height 50 mm to 100 mm

Material Mild Steel, Galvanized Iron, SS304, SS316, Aluminum

Finish Painted, Powder Coated, Electroplating



FRP / GRP Cable Tray System



STERCING OURO FRP Ladder Type & Perforated Type cable tray gives the good support to Electrical Heavy Cables & Instrument Light Cables respectively mainly in chemical Industries or any corrosive Atmosphere. The Cable trays are manufactured from the polyester resin system with Fire Retardant & Ultra Violet resistant Properties. STERCING DURO FRP Cable Trays are widely used by most of all the Chemical Industries, Oil & Gas Refineries, Paper Mills, Cement Factories & other Industries in India. STERCING OURO FRP cable Trays are easy to install & gives the maximum life other than any material in Corrosive atmosphere & due to its non-conductive property it decreases the chances of short circuit.

Advantages

Corrosion Resistance, Light in Weight, Easy to Install & replace, As it is self pigmented No need of painting, Fire Retardant & Ultra Violet (UV) Stabilized, Strength & Durability Available in all colours.

Applications

Chemical Industries, Highly Corrosive Area, Off Shore Platforms, Oil & Gas Refineries, Water Treatment Plants, Paper Industries, Power Plants

Standard type of FRP / GRP

Applicable Standards

- NEMA FG1-1993 Standard For FRP/GRP Cable Tray Loading Specifications
- IS6746:1994 Standard for Fire Retardant properties of FRP/GRP Cable Trays
- 3. IS6746 Appendix K for Low Flammability.
- 4. ASTM standards for Typical Properties of FRP/GRP Cable Trays as under ASTM D 2863 - Oxygen Index Test ASTM D 570 - Water Absorption Test ASTM D 638 - Tensile Properties ASTM D 695 - Compressive Properties ASTM D 790 - Flexural Properties ASTM D 256 - Izod Impact Strength ASTM D 149-97a - Die Electrical Strength (Axial & Radial)
- we are also following EIL Standards for EIL Projects

Coupler Plates / Connecting Plates

Coupler Plates are used to join two straight Length of the cable trays or bends by means of SS Hardware. The coupler plates are in different sizes according to sizes of the cable trays. The material of the Coupler Plates is same as cable trays material i.e. Fiberglass Reinforced Plastic (FRP).

Standard Types of FRP/GRP Cable Trays

FRP/GRP Perforated Cable Trav

Available Sizes of the Perforated Cable Tray						
Code	Cable Tray Sizes					
SIPT-2	50 x 25 x 3mm					
SIPT-2A	50 x 50 x 4mm					
SIPT-3	75 x 30 x 4mm					
SIPT-3A	75 x 40 x 4mm	Loading as per NEMA-FG1				
SIPT-4	100 x 30 x 4mm	1993 Standard				
SIPT-4A	100 x 50 x 4mm	(Special size car be develop as				
SIPT-6	150 x 50 x 4mm	per customer				
SIPT-6A	150 x 50 x 6mm	requirement)				
SIPT-8	200 x 50 x 4mm					
SIPT-10	250 x 50 x 4mm	1				
SIPT-12	300 x 50 x 4mm					

FRP/GRP Ladder Cable Tray

Size of Ladder Tray	Standard Design				
	Side Runner Channel	Rung Spacing			
150 mm Wide	75 mm/ 100 mm	300mm			
300mm Wide	75 mm/ 100 mm	300mm			
450mm Wide	100 mm	300mm			
600mm Wide	100 mm	300mm			
750mm Wide	150mm	300mm			
900mm Wide	150mm	300mm			

Note: Except the above standard sizes, cable trays can be developed as per Customer's requirement.

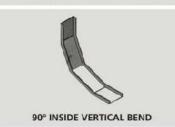
Fittings & Accessories for FRP/GRP Cable Trays

Perforated cable trays

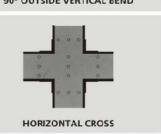












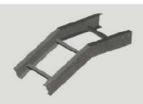
Ladder cable trays



STRAIGHT SECTION



30/45° DIRECT INSIDE BEND



30/45° DIRECT OUTSIDE BEND







90° INSIDE VERTICAL RADIUS BEND



90° HORIZONTAL DIRECT BEND



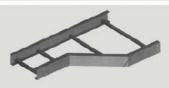
45° INSIDE VERTICAL RADIUS BEND







STRAIGHT REDUCER



HORIZONTAL RADIUS TEE

LEFT OR RIGHT REDUCER

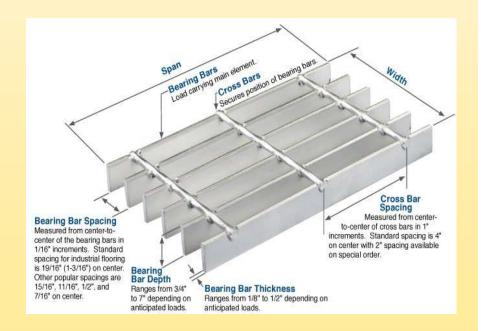
HORIZONTAL RADIUS CROSS

BAR GRATING

STERLING DURO bar grating can be defined as a series of metal bars positioned vertically, placed an equal distance apart and joined by cross members to form a rectangular or reticuline pattern. Typically manufactured from mild carbon steel, 6000 series aluminum and 300 series stainless steels, bar gratings are also available in specialty metal alloys to suit nearly any application.

BEARING BARS – The vertically positioned bars are designated as the bearing bars. These bars range in size from 3/4" x 1/8" for light pedestrian traffic to 7" x 1/2" for extreme vehicular loads. Typically, the spacing of the bearing bars is indicated in sixteenths of an inch, measured from the center of one bar to the center of the adjacent bar. This center-to-center or on center spacing ranges from 7/16" to 19/16" (1-3/16") on standard grating products. Standard gratings are also available with wider spacing providing even greater open area, but should not be specified without consulting the manufacturer. Heavy Duty grating products are commonly manufactured with bearing bar spacing ranging from 15/16" to 38/16" (2-3/8") on center.

CROSS BARS – The bars used to secure the position of the bearing bars are commonly designated as the cross bars. Cross bar profiles vary according to the method of assembly and material selected. As with bearing bars, cross bar spacing is measured as on center spacing. The customary cross bar spacing is 4" on center. On special order, 2" on center and other special spacing are also available.



THE BAR GRATING ADVANTAGE:

For more than 8 years, our bar grating has been the predominant choice among open metal flooring products. Features that make bar grating the preferred product include:

Appropriate Materials – Manufactured from carbon steel, aluminum, stainless steel and specialty alloys, bar gratings provide safe, durable and functional products for nearly all environments.

High Percentage of Open Area – Typically ranging from 50 to 80 percent, this allows for the unhindered passage of light, air and liquids, thereby reducing the costs for lighting, ventilation and fire suppression.

- **High Strength-to-Weight Ratio** Designed for maximum efficiency, metal bar gratings are capable of supporting loads ranging from light pedestrian traffic to the heaviest vehicular and aircraft loads.
- **Product Flexibility** bar grating and stair treads can be shop or field fabricated to suit the exact configuration of your applications.
- **Economy** In most cases the grating is shop fabricated to fit the contours and intricacies of each job, with the finish applied prior to arriving at the jobsite. Once anchored in place, the floor is immediately ready for service, thereby minimizing costly field labor.
- **Maintenance-Free** The high percentage of open area allows for excellent drainage and the free passing of debris, thus creating a virtually maintenance-free surface.

These features, combined with unparalleled dedication to service make Grating Pacific your clear choice for grating. Design consultation, vast inventories, complete fabrication facilities and immediate delivery are the benchmarks that have led to the success of our company. Your inquiries are warmly welcomed



Galvanized Steel Grating / Platform Grating



Steel plate by the grid load on certain flat steel bar and spacing affairs with the high pressure resistance welding machine welded together on the original plate, the cutting, incision, opening, the package-processing procedures such as customer demand from the finished product. Its characteristics: high-intensity, light structure: the grid pressure firmly welded structure to a high capacity, light structure, easy loading and other characteristics of aesthetic appearance, durability: hot-dip zinc surface treatment so as to make it a good anti-corrosion capacity, Shiny surface appearance; ventilation, lighting, heat, explosion-proof, anti-skid of good-plot dirt. Steel Grating is made by stainless or mild steel of certain sizes through the processing of grooving, lock-pressure, weld-

ing, finishing and other treatment. Industrial bar gratings can be actually made from copper, aluminum and other materials, while galvanized steel grating is the mostly used one due to its economic cost and good property.

Steel grating, with robust design and spanning abilities, is very strong and safe for the support of floors and elevated walkway. It can be used for ceiling, interior decoration, platform aisle, ventilation windows, (Wells), advertising plaque and other construction.

The advantages, specific application and features of steel grating:

Steel grating offers the following advantages compared with steel grid sheets:

Steel grating has light weight, good strength, large carrying capacity and can save materials and cost. It offers good ventilation of light and wind, a modern sense, aesthetic appearance and anti-skid safety. It is also easy to clean, easy to installation and durable for uses.

Steel grating products are designed and manufactured for various industrial and civil constructions in city road, gardens, yard, airport, railway and industrial engineering, and they offer the following the features:

- Aesthetic outlook: Simple lines and silver appearance meeting the modern trend.
- The best drainage: Leakage area of 83.3 percent, more than twice of cast iron products.
- Hot-dip galvanized treatment: Good rust-proof property, maintenance-free replacement.
- Anti-theft design: The cover and the frame is joint with hinge offering security, safety and open convenience.
- Savings investments: Large-span. Less lost for heavy load compared with cast iron products. Cost can be saved for the risk of being stolen or crushing one if cast iron is uses.
- **High strength:** The strength and the toughness are much higher than cast iron. Can be used for terminals, airport and other large-span and heavy loading condition.
- **Specifications:** More specifications and sizes optional for meeting various environment, load, span, sizes and shapes.

Surface Treatment:

• Steel grating untreated: Allowing quicker delivery to customers whom fabricate and galvanize the grating on their own.

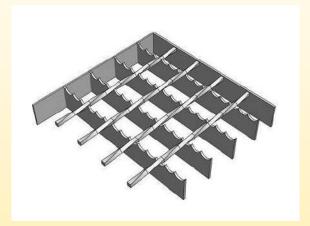
Galvanized: Hot Dip Galvanizing can give a hygienic and clean maintenance free bright finish.

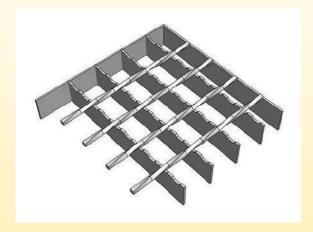
Welded Steel Grating for Stair Treads, Walk Way, Platform and Various Floor

Welded steel grating is one of the most commonly used steel grating, also called metal open bar grating. Welded steel grating is made of carbon steel or stainless steel. Welded steel grating has anti-slip surface, corrosion resistance, good drainage function, high strength and load capacity. So it is widely used as walkway, stair, fence, shelf, ceiling and floor in many places.

Specifications:

- Material: carbon steel and stainless steel.
- Surface treatment: galvanized, mill finished, painted, powder coated, etc.
- Surface type: standard plain surface, serrated surface.
- Bearing bar type: plain bearing bar and serrated bearing bar.
- Standard pitch of cross bar: 50 mm & 100 mm.





Features:

High strength and load capacity.

Anti-slip surface.

Corrosion resistance.

Good drainage function.

Easy to install and maintain.

Applications of welded steel grating:

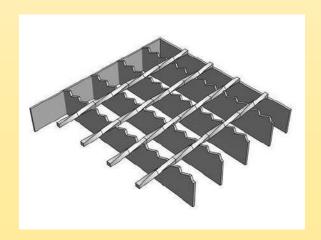
Platform services in industrial and energy construction.

Walkway of bridges and transitions.

Shelf of factory and supermarket.

Ceiling of factory, house and hall.

Gully and well cover of street and huge yard.



FIRP About Abundance File Paper DOWNCONDUCTOR BIDANASTER ESC Ant Servinal Copyen Tape Copyen Tape Lightning Strike Faceder (LSR-1)

One phase secondary distribution of transformer Live wire Fault Current Neutral wire Fault Current

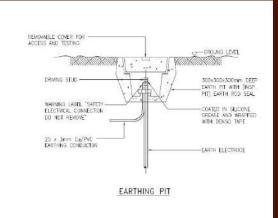
EARTHING & LIGHTING PROTECTION

STERDURO INDUSTRIES PVT. LTD. an ISO certified and approved vendor, has proven to be the ideal choice in providing effective, efficient and reliable solutions in Earthing and Lighting. Since inspection of the company it has been providing technical, logistical and sales support. STERDURO INDUSTRIES PVT. LTD. examines every step in the manufacturing process and applies strict procedures to ensure the highest possible quality in every product. An R&D team has been put in place to offer installers and engineers innovative products that combine reliability, safety and value. With manufacturing facilities to cope with the high demand on Earthing and Lighting. STERDURO INDUSTRIES PVT. LTD. is setting the pace in product innovation, quality control and timely delivery. We value our pride in the trust and satisfaction earned from our esteemed customers which positioned us as a leader as we persist on providing the utmost level of quality.

WHY IS LIGHTNING PROTECTION IMPORTANT?

Lightning is a natural flow of static electricity between the sky and the ground. It strikes buildings, structures, trees, livestock and persons in all parts of the world. Although it rarely occurs in some areas, it is a severely destructive hazard whose destructive force is beyond human scale. The damage from lightning comes from electrocution, human burns, burning buildings, explosions, melted or damaged electrical equipment and stresses on electrical equipment that are responsible for failures. An effective earthing system is a fundamental requirement of any modern structure or system for operational and/ or safety reasons. Without such a system, the safety of a structure, the equipment contained within it and its occupants is compromised. In order to preserve resources and human lives a reliable lightning protection system must be set in place and must be taken into account during the planning stage of any project. A reliable lightning protection system intercepts lightning strikes and attempts to guide the static electic flow down a chosen path, slightly away from the people, structures and electrical equipment. It provides means to carry electric currents into the earth under normal and fault conditions without exceeding any operating and equipment limits or adversely affecting continuity of service and assure that a person in the vicinity of grounded facilities is not exposed to the danger of critical electric shock.

Our Earthing and Lightning System provide a dependable structure to protect resources from such hazards. We offer a products made from highly conductive materials and with high resistance to corrosion to achieve a sustainable "connection" to earth



Earthing & lightning protection solutions

There are many benefits of coming for earthing and lightning analysis: –

- Specialist advice from our fully qualified technical team, which focuses on earthing and lightning protection
- Active contribution to national and harmonised /international standards ensures our engineers remain at the forefront of new developments in earthing and lightning protection.
- Designs that comply with all relevant standards national and international
- Our responsibility for providing a design that is safe
- Experience and the software to provide an 'optimum' design one that doesn't use more material than is necessary saving your money.
- Manufacturing experience and expertise utilizing our knowledge of the products available to provide a tailored design that can be installed using the most appropriate and up-to-date products.

Soil resistivity surveys A comprehensive soil resistivity survey is key to creating an effective earthing system, as inadequate or erroneous soil resistivity readings are likely to result in a flawed design. Our site surveys take multiple accurate soil resistivity readings at various depths across the site. As these results form the basis of the whole earthing design, the experience of our engineers is critical in ensuring correct implementation of the test data.

Analysis & earthing design Using the latest computer aided design & modelling software we can produce detailed or budgetary earth electrode and lightning protection system designs, in compliance with recognised standards and whatever the complexity of system required.

Full earthing analysis uses state-of-the-art software to determine the step and touch voltages, earth potential rise and fall, and hot/cold site classification of the site generated by the initial design. Earth resistance measurement

Earth resistance measurement is essential to accurately determine that the installed earthing system meets the anticipated criteria laid out in the initial design. Our technicians ensure all measurements are correctly taken and interpreted, so that the true resistance of the earthing system can be accurately determined and verified.



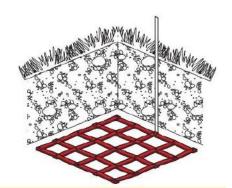
Earthing & lightning protection solutions

Structural lightning protection

From STERDURO INDUSTRIES PVT. LTD. air termination systems including air rods and strike plates to capture lightning strikes, through to our comprehensive range of down conductors and lightning protection components which channel lightning energy safely to a Furse earth termination network.

- Air termination systems
- Lightning protection conductors
- Conductor clips, clamps and holdfasts
- Bimetallic connection components







A combination of STERDURO INDUSTRIES PVT. LTD. earth electrodes, soil conditioning, conductors and equipotential bonding bars provide an effective, low resistance dissipation from the lightning protection system to earth.

- Earth rods and conductor systems
- Mechanical earth clamps and bonds
- Soil conditioning agents
- Earth bars and equipotential bonding



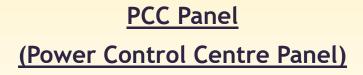


MCC Panel

(Motor Control Centre Panel)

MCC panel is designed to meet a specific requirement of controlling electric motor. All the working parameters of an electric motor are taken into account while designing MCC (Motor controller center). An automated or manual control are fitted onto the MCC panel to stop or start a motor, to regulate speed, to have reverse or forward alternation, to regulate the power and to prevent the electric motor from the hazards of overloads.

We are instrumental in offering a wide range of MCC Panels that are highly demanded in the market for a variety of power distribution processes. Owing to their excellent performance and minimum maintenance, our products are widely demanded in various industries like chemical refineries, pharmaceuticals, textiles, construction, paper and others.





PCC panel is again a power distribution board to control the power supplied to HT motors, MCC panels and transformers which play vital role in any electrical control system. PCC panels are widely used in refineries, chemical plants, dairies, refrigeration plant, pharmaceuticals and plastic industry. Usually PCC panel is having modular construction with cable inlet is on either top or bottom of the structure.

We manufacture and distribute PCC panels which are used for attaining maximum and efficient electric power utilization. Our range of PCC panels is widely used in power distribution in various process and production industries. PCC panels supplied by us come with a facility to be extended in future to meet the requirement.



VFD Panel

(Variable Frequency Drive Panel)

VFD - Variable frequency drive panel is used to control the rotating speed of AC electric motor by controlling the intensity of electric power provided to the motor. The working of these VFD panels needs to go through speed variations so during their manufacturing they undergo tests on various parameters. The VFD panels are widely used in tube mills, paper mills, extruder plants, rolling Mills, cable industry and CTL Lines. They are even installed in hospitals and big business houses.

We are manufacturing and supplying a diverse range of VFD panels which is designed using advanced technology. These are available in various dimensions and standard sizes as per the clients' specifications. We are offering these VFD panels in various specifications and are effectively used in various industrial applications.



(Programmable Logic Control Panel)

PLC panel are designed to control electrical power supply using programmable Control Logic Processor. The processor fitted into the panel structure is connected through wires with reed switches, push buttons and proximity detectors to its input cards. And the same processor is also connected to motor contactors, indication lights and control relays which are the output field devices through wires.

PLC panels are commonly called automation panels and are widely used in industrial automation process, commissioning and processing unit. Small to big manufacturing units use these PLC panels to control the production line. PLC panels are also popular in automobile and electronics manufacturing units. Keeping in mind the need of industries, we have fabricated a range of high quality PLC Panels





RTPFC Panel

(Real Time Power Factor Consumption)

The Profit Master is a unique power factor correction system using

Thyristor switching designed as per international standard to suit the

Indian environment.

The standard features are:

1. Switching Time: 40 to 60 ms.

2. Accurate control of power factor with fast measuring and switching circuits with no time delay.

3. Capacitor : AL-Zinc Metalised Poly-Propylene (MPP) type, Self Healing with Over Pressure Disconnection device.

4. Display: All parameters on LCD/ LED

5. Control: Single Phase / Three Phase

6. Compensation Basis: Selectable

7. Measurement: 3-phase 3 wires

8. Measurement Range: 415/440 V direct

- 9. Measurement parameters: Voltage, Current, Capacitor Current, Power Factor, Load Reactive Power, Active Power, Capacitive Power, Capacitance etc.
- 10. Auto Detection of capacitor steps
- 11. Alarm Output for fault / low PF / system limit.
- 12. Smooth and surge-less capacitor switching, allowing unlimited switching operations
- 13. Suitable for equipment generating Harmonics within the ISS limits.
- 14. Simple and quick installation.



Thyristor Switches

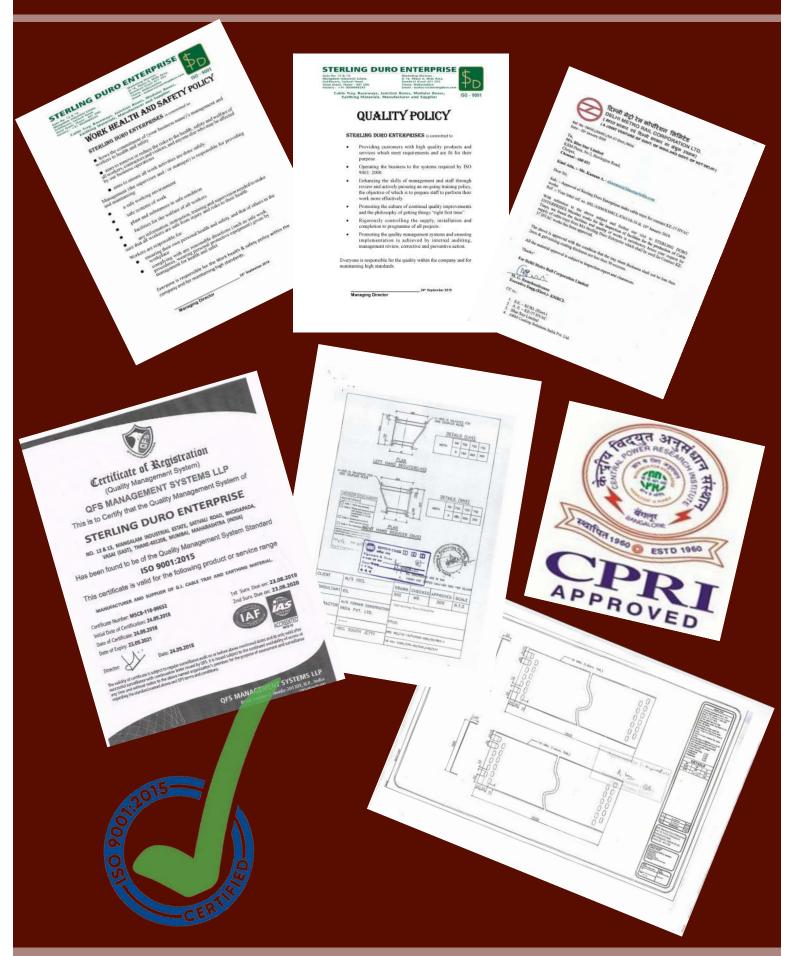
ADVANTAGES OF THYRISTORED SOLID STATE SWITCHING

- No inrush current due to precise auto zero current search logic.
- No current or voltage surge. The transformer never subjected to short circuit current so life of the transformer increase.
- No over consumption.
- Smooth and instant disconnection of capacitor units. The capacitor bank unit remains in useful operational service with maximum uptime.
- Solid state device are designed to work at low voltage also.
- Compensation at low voltage is possible. The point of capacitor switching is controlled and hence life of the capacitor unit and switching unit is maximized.
- Small steps facilitate close compensation of power factor.

THYRISTOR SWITCH MODULE (TSM) - 5 TO 150 KVAR

MULTIPLYING FACTOR MULTIPLYING FACTOR (For calculating the sizes of capacitor for power factor improvement)

INITIAL	REQUIRED POWER FACTOR												
POWER FACTOR	0.80	0.85	0.90	0.91	0.92	0.93	0.94	0.95	0.96	0.97	0.98	0.99	UNITY
R													
0.65	0.419	0.549	0.685	0.713	0.74	0.744	0.806	0.84	0.877	0.918	0.997	1.	1.
0.66	0.338	0.518	0.654	0.682	0.709	0.743	0.775	0.809	0.846	0.887	0.935	0.995	1.
0.67	0.358	0.488	0.524	0.652	0.679	0.713	0.745	0.779	0.816	0.857	0.905	0.965	t.
0.68	0.328	0.458	0.595	0.623	0.65	0.684	0.716	0.74	0.786	0.827	0.875	0.935	1.
0.69	0.299	0.429	0.565	0.593	0.62	0.654	0.686	0.72	0.757	0.798	0.854	0.906	1.
0.70	0.270	0.400	0.536	0.564	0.591	0.625	0.657	0.691	0.728	0.769	0.817	0.877	1.020
0.71	0.242	0.372	0.508	0.536	0.563	0.597	0.629	0.663	0.7	0.741	0.789	0.84	0.992
0.72	0.214	0.344	0.48	0.507	0.534	0.568	0.600	0.635	0.672	0.713	0.761	0.821	0.964
0.73	0.186	0.316	0.452	0.48	0.507	0.541	0.573	0.607	0.644	0.685	0.733	0.793	0.936
0.74	0.159	0.289	0.425	0.453	0.48	0.514	0.546	0.58	0.617	0.658	0.706	0.766	0.909
0.75	0.132	0.262	0.398	0.426	0.453	0.487	0.519	0.553	0.590	0.631	0.679	0.739	0.882
0.76	0.105	0.235	0.37	0.399	0.426	0.46	0.492	0.526	0.563	0.604	0.652	0,712	0.855
0.77	0.079	0.209	0.345	0.373	0.4	0.434	0.466	0.500	0.537	0.578	0.626	0.686	0.829
0.78	0.052	0.182	0.318	0.347	0.374	0.408	0.44	0.473	0.51	0.551	0.599	0.659	0.802
0.79	0.026	0.156	0.292	0.32	0.347	0.381	0.413	0.447	0.484	0.525	0.573	0.633	0.776
0.80	8	0.130	0.226	0.294	0.321	0.355	0.387	0.421	0.458	0.499	0.547	0.607	0.750
0.81	8	0.104	0.240	0.268	0.295	0.329	0.361	0.395	0.432	0.473	0.521	0.581	0.724
0.82	-	0.078	0.214	0.242	0.269	0.303	0.335	0.369	0.406	0.447	0.405	0.555	0.698
0.83	-	0.052	0.188	0.216	0.243	0.277	0.309	0.343	0.380	0.421	0.460	0.529	0.672
0.84	-	0.026	0.162	0.19	0.217	0.251	0.283	0.317	0.354	0.396	0.443	0.503	0.646
0.85	3	<u> 18</u>	0.136	0.164	0.191	0.225	0.257	0.291	0.328	0.369	0.417	0.477	0.620
0.86		8	0.109	0.140	0.167	0.198	0.230	0.264	0.301	0.342	0.390	0.450	0.593
0.87	-	¥3	0.083	0.114	0.141	0.172	0.204	0.238	0.275	0.316	0.364	0.424	0.567
0.88	-	(i)	0.056	0.085	0.112	0.143	0.175	0.211	0.248	0.289	0.337	0.397	0.540
0.89	-	-0	0.028	0.059	0.086	0.117	0.149	0.183	0.22	0.261	0.309	0.369	0.512
0.90	-	-	-	0.031	0.058	0.089	0.121	0.155	0.192	0.233	0.281	0.341	0.484
0.91	-	-:	ea i	-	0.027	0.058	0.090	0.127	0.164	0.205	0.253	0.313	0.456
0.92			-)	-	-	0.031	0.063	0.097	0.134	0.175	0.223	0.283	0.428
0.93		170	-	-	-	-	0.032	0.066	0.108	0.144	0.192	0.252	0.395
0.94			-	-		-	~	0.034	0.071	0.112	0.160	0.220	0.363
0.95		-	-6		-	-	*	-	0.037	0.078	0.126	0.186	0.329
0.96	2	25	-	2	₫	-	-	2	-	0.041	0.089	0.149	0.292
0.97	-	3	-	-	-	-	-	-	-:	-	0.048	0.108	0.251
0.98		*	+	-	-	-	-	+	-	-		0.06	0.203
0.99	-	80	40	-	-	-	-	-	+:		-	*	0.143



























































To discuss how Sterling Duro Enterprise might be of service to your organization or for more technical details please contact us:



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