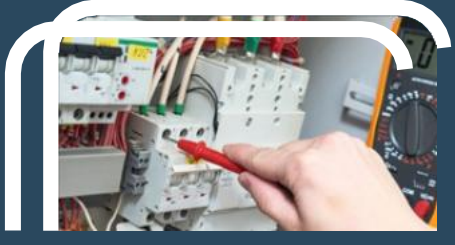
SWASTIK

ELECTRO METALS PVT LTD



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WHO WE ARE

At Swastik Electro Metals Pvt. Ltd., we are a leading manufacturer specializing in electrical panel boards and precision metal works. Established with a commitment to excellence, innovation, and quality, we have evolved into a trusted name in the industry, serving a wide range of sectors with dependable and efficient electrical solutions.

Our journey began with a singular vision: to provide high-quality, custom-engineered electrical products that meet the diverse and demanding needs of our customers. Over the years, we have expanded our capabilities, combining advanced technology with deep industry expertise to create products that stand the test of time.

INTRODUCING SWASTIK: INDUSTRIAL PANELS

As part of our growth strategy, we are proud to announce SWASTIK ELECTRO METALS PVT. LTD., a new unit focused on developing industrial control panels. This initiative allows us to leverage our engineering expertise and commitment to quality in a new domain, addressing the needs of various industries.

Vision and Mission of SWASTIK ELECTRO METALS PVT. LTD.

SWASTIK ELECTRO METALS aims to set new standards in the industrial control panel market. Our vision is to create innovative, reliable solutions that enhance operational efficiency across diverse sectors. Our mission includes:

- Advanced Technology: Implementing the latest technologies to develop control panels that improve automation and safety.
- Customization: Offering tailored solutions that cater to the specific requirements of industries such as manufacturing, energy, and logistics.
- Customer Support: Providing comprehensive support throughout the project lifecycle, from design to installation and maintenance.

Key Focus Areas

- **Engineering Excellence:** Our engineering team specializes in designing control panels that are robust, efficient, and user-friendly.
- **Quality Manufacturing:** We utilize state-of-the-art manufacturing processes to ensure our products are reliable and durable.
- **End-to-End Solutions:** We work closely with clients to deliver complete solutions that integrate seamlessly into their operations.

Conclusion

SWASTIK ELECTROMETALAL PVT LTD is poised for continued growth and innovation. We are committed to delivering high-quality solutions that enhance safety and efficiency in both Switch gears and metal industrial sectors. Join us as we embark on this new chapter, dedicated to shaping a brighter, more efficient future for all.

PRODUCTS OFFERINGS

SWASTIK ELECTRO METALS PVT. LTD. offers tailor-made power distribution & control panels designed to meet the specific requirements of our clients. Our engineering team works closely with customers to understand their unique needs, ensuring that each panel is optimized for performance, functionality, and ease of use.

◆ MEDIUM VOLTAGE (MV) PANELS

Our Medium Voltage (MV) panels are crucial for managing electrical power distribution in industrial settings where higher voltages are required. Designed for voltages typically ranging from 1 kV to 36 kV, these panels are essential for power generation, transmission, and distribution systems.

Key Features of MV Panels:

- Robust Design: Built to withstand harsh environmental conditions, our MV panels offer durability and reliability.
- Safety Mechanisms: Equipped with advanced safety features, including protective relays and circuit breakers, ensuring operational safety and minimizing risks.
- Modular Configurations: MV panels can be customized and modularized for easy maintenance and scalability, adapting to the changing needs of your operations.
- Integration Capabilities: Designed to seamlessly integrate with existing power distribution systems and automation solutions.

11 KV VCB PANELS

11 KV Vacuum Circuit Breaker Panel complies with the requirements of standard IEC 62271-200. Our best in class VCB panels are tested with internal arc fault protection Internal AFLR at 26.3 KA for 1 sec in all 3 chambers. SWASTIK ELECTRO METALS is leading manufacturers of VCB panels in India. Panels are built to provide exceptional resistance during premature electrical disturbances. Our unique designs ensure protection from shock, vibration

SPECIFICATION

Application	Protection & Control of TRF. Feeder
Reference Standards	IEC 62271 - 1 & 200
Operation Voltage	12 KV
Operational Current	630 A, 800 A, 1250 A, 1600 A, 2000 A, 2500 A 3100 A
Phase / Frequency	3 PH / 50 HZ
Insulation Level	28 KV rms / 75 KV Peak
Short Time Rating	20 / 26.3 / 31.5 / 40 KA For 3 Sec.
Ingress Protection	IP-4X / IP 55
Temperature Rise	85 Degree Centigrade Maximum

33 KV VCB PANELS (INDOOR)

33 KV Vacuum Circuit Breaker Panel complies with the requirements of standard IEC 62271-200. Our best in class VCB panels are tested with internal arc fault protection Internal AFLR at 31.5 KA for 1 sec in all 3 chambers. SWASTIK ELECTRO METALS is leading manufacturers of VCB panels in India. Panels are built to provide exceptional resistance during premature electrical disturbances. Our unique designs ensure protection from shock, vibration

SPECIFICATION

Application	Protection & Control of TRF. Feeder
Reference Standards	IEC 62271 - 1 & 200
Operation Voltage	36 KV
Operational Current	630 A, 800 A, 1250 A, 1600 A, 2000 A, 2500 A 3100 A
Phase / Frequency	3 PH / 50 HZ
Insulation Level	70 KV rms / 170 KV Peak
Short Time Rating	31.5 KA For 3 Sec.
Ingress Protection	IP-4X / IP 55
Temperature Rise	85 Degree Centigrade Max.

33 KV PCVCB PANELS (OUTDOOR)

Outdoor PCVCB is short form of Outdoor type Porcelain Clad VCB. It is a 3 Pole Outdoor Porcelain Breaker , which is used in Outdoor Substations and Outdoor Switchyards. This is used for Switching of Power , Majorly in India 11 KV Porcelain Clad VCB and 33 KV Porcelain Clad VCB are used. We offer in various brands like – ABB 33 KV PCVCB , Siemens 33 KV PCVCB , Siemens 40.5 KV Porcelain Clad VCB , CGL 33 KV PCVCB. In 11 KV , we offer ABB 11 KV PCVCB , CGL 11 KV PCVCB. This is offered with Wooden Packaging and GI Support Structure.

OVCB , Outdoor VCB or Porcelain Clad VCB is used in various applications like Government Substations , Private Factory Substations , Etc. The life of Such component is atleast 20-30 years if it is maintained well..

SPECIFICATION

Application	Protection of TRF. Feeder
Reference Standards	IEC 62271 - 1 & 200
Operation Voltage	36 KV
Operational Current	1600 A
Phase / Frequency	3 PH / 50 HZ
Insulation Level	70 KV rms / 170 KV Peak
Short Time Rating	31.5 KA For 3 Sec.
Ingress Protection	IP 55

CONTROL & RELAY PANEL

SWASTIK ELECTRO METALS PVT. LTD. relay panels are designed for applications requiring reliable switching and control. These panels are equipped with high-quality relays and components to ensure optimal performance. We have expertise in using electro-mechanical, Analog and digital relays in our panels. We integrate relays from popular manufacturers like Ashida, ABB, Siemens, GE, SEL. etc., The panels tailor-made based on the requirements. Based on the design and wiring terminations the panel are classified into simplex, duplex, twin feeder and triple feeder.

Our product range for both indoor and outdoor panels includes:

- Feeder protection panel for both incoming and outgoing lines
- Transformer panel covering both HV and LV side protection
- Panels for the protection of switchgear equipment on Bus Coupler

Our range of Protection Relay Panels, Control Panels and Control Desks provide optimum system solutions fulfilling the protection control requirements of Substations, generating plants, process industries, Telecommunication and Railway utilities. These are specially engineered and custom built to cater to the specific needs of the utilities and large industrial undertakings for medium and high voltage protection, control and monitoring applications.

RING MAIN UNIT (RMU)

Ring Main Unit (RMU) is a compact, enclosed and sealed type of Switchgear used for medium voltage power distribution. It is a complete Switchgear in itself. A complete Switchgear means, assembly of required switching devices, protection device as well as metering device. RMU of different voltage (mostly 12 kV and 24 kV) and current ratings are available. Indoor as well as outdoor types of Ring Main Units are available.

Ring Main Unit comprises of one incomer feeder and one or more outgoing feeder. The incomer feeder is either Vacuum Circuit Breaker or SF6 Circuit Breaker with associated Disconnect Switch and Earth Switch. This incomer feeder is given with the provision of bushing protruding from the enclosure of RMU for supply cable connection.

PACKAGE SUB-STATION (PSS) OR COMPACT SUB-STATION (CSS)

SWASTIK offers Compact Substation (CSS) or Package Substation (PSS) which is a combined unit that consist of HT Switchgear (RMU or VCB) , Transformer , LV Switchgear Panel consisting of MCCB or ACB along with all Interconnections i.e. , HT Cable , LT Busduct , Earthing Arrangements.
Voltage Class 22kV and 33kV also available.

These days, the need for electrical power is growing quickly. That could be fulfilled by the power generating substations. You will find various types of power generating substations such as:

- Hydro-electric
- Atomic and
- Thermal

Based on the accessibility of various sources, substations are building at various locations. However, such locations might not be nearer to load centers. The power usage could be achieved by the load center. Therefore, it is vital to transmitting power from the substation to load center locations. Long and high transmission networks are necessary for this function.

Take note that compact substation is divided into three compartments.

- Transformer distribution compartment
- Low voltage distribution compartment
- High voltage distribution compartment

Each of them has different parts:
Bear in mind that the compact substation designs are dependent on the need.
For Transformer Distribution Compartment, there is:

- low voltage inlet switchgear
- low voltage outlet switchgear
- low voltage compensation switchgear

CSS is a prefabricated substation, factory-designed, tested and ready-to-install and is fully compliant with IEC 62271-202 (IEC 61330). Our compact substations are engineered to the highest possible standards for personnel safety and aesthetics, designed to help solve problems of footprint and space limitations experienced within dense urban load centers. The incomer as well as outgoing feeders are enclosed in an SF6 environment as to make the design compact. Compatible instrument for monitoring of SF6 gas pressure is mounted on the Ring Main Unit, RMU to monitor the gas pressure. SWASTIK CSS has the highest installation base in India. In distribution system, RMU is widely used as it is a complete package and only needs installation and cable connection. Everything else is within the package. This greatly reduces the commissioning time.

- **LOW VOLTAGE (LV) PANELS**

Our Low Voltage (LV/LT) panels are crucial for managing electrical power distribution in industrial settings where higher voltages are required. Designed for voltages typically ranging from 230V to 690V, these panels are essential for control and power distribution systems. There are different types of LV panels that dedicated functions. Here are a few to explore:

- Power Control Center (PCC)
- Motor Control Centres (MCC)
- Main and Lighting Distribution Boards (MDB / LDB)
- Variable Frequency Drives Panel (VFD Panels)
- Automatic Power Factor Controller Panel (APFC)
- PLC & Automation Panels
- AMF & DG Synchronization Panel
- BMK, Junction Box & Receptalces
- Feeder Pillars
- Rising Mains & Bus Ducts

POWER CONTROL CENTER (PCC)

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

Key Features of LV Panels:

- Robust Design: Built to withstand harsh environmental conditions, our LV panels offer durability and reliability.
- Safety Mechanisms: Equipped with advanced safety features, including protective relays and circuit breakers, ensuring operational safety and minimizing risks.
- Modular Configurations: LV panels can be customized and modularized for easy maintenance and scalability, adapting to the changing needs of your operations.
- Integration Capabilities: Designed to seamlessly integrate with existing power distribution systems and automation solutions.

SPECIFICATION

Application	Power control and distribution
Reference Standards	IEC 61439 - 1 & 2
Operation Voltage	690V
Operational Current	Up to 6300A
Phase / Frequency	3 PH / 50 HZ
Insulation Level	2.5KV
Short Time Rating	30/50/85KA rms/Sec.
Ingress Protection	IP-42 / IP-54
Material of Busbar	Copper / Aluminium
Temperature Rise	85 Degree Centigrade Maximum

MOTOR CONTROL CENTER (MCC)

Motor Control Center (MCC) is an assembly that controls several or all-electric motors centrally. There are multiple enclosed sections and a common power bus. Each section has a combination starter, which consists of a motor starter, fuses or circuit breakers, and a power disconnect. It is also possible to equip a motor control center with push buttons, indicator lights, variable-frequency drives, programmable logic controllers, and metering equipment. In some buildings, it may be combined with the electrical service entrance.

Typically, Motor Control Centers can be found in large industrial or commercial buildings containing a lot of electrical motors that must be controlled centrally, such as an electrical room or mechanical room.

Key Features of LV Panels:

- Robust Design: Built to withstand harsh environmental conditions, our LV panels offer durability and reliability.
- Safety Mechanisms: Equipped with advanced safety features, including protective relays and circuit breakers, ensuring operational safety and minimizing risks.
- Modular Configurations: LV panels can be customized and modularized for easy maintenance and scalability, adapting to the changing needs of your operations.
- Integration Capabilities: Designed to seamlessly integrate with existing power distribution systems and automation solutions.

SPECIFICATION

Application	Motor Control & Protection
Reference Standards	IEC 61439 - 1 & 2
Operation Voltage	690V
Operational Current	Up to 4000A
Phase / Frequency	3 PH / 50 HZ
Insulation Level	2.5KV
Short Time Rating	30/50/85KA rms/Sec.
Ingress Protection	IP-42 / IP-54
Material of Busbar	Copper / Aluminium
Temperature Rise	85 Degree Centigrade Maximum

APFC PANEL

PLC & AUTOMATION PANEL

AMF & AUTO CHANGE OVER PANEL

FLOOR GRATING

Generally steel grating, also known as bar grating or metal grating, is an open grid assembly of metal bars, in which the bearing bars, running in one direction, are spaced by rigid attachment to cross bars running perpendicular to them or by bent connecting bars extending between them, which is designed to hold heavy loads with minimal weight. It is widely used as floors, mezzanines, stair treads, fencing, trench covers and maintenance platforms in factories, workshops, motor rooms, trolley channels, heavy loading areas, boiler equipment and heavy equipment areas, etc.

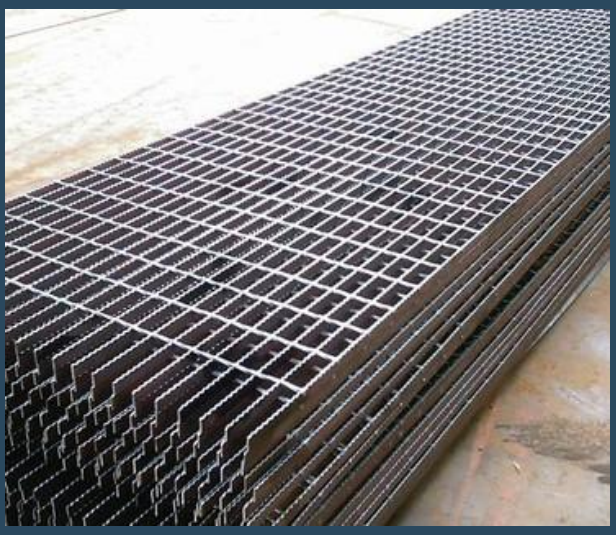
Some specific gratings we manufacture are as under -

- Standard Steel Grating
- Galvanized Steel Grating
- Painted Steel Bar Grating
- Welded Steel Grating
- Aluminum Grating
- Stainless Steel Grating

STANDARD GRATING

The Standard steel grating, commonly refers to welded steel grating in large sizes. Easy fabrication and high loads structure is widely used as steel grating platform, walkway, bridge decking and flooring.

- Standard gratings are typically available in 6m x 1m or 20′ x 3′ panels.
- They can be produced with almost any combination of pitch size. Most commonly this is 41mm x 100mm or 30mm x 100mm.
- Load bearing bars of width 20mm to 100mm and thickness 2mm to 10mm can be used. Bars can be plain or with a serrated edge finish of various depths.
- Panels are available self-color or with a galvanized coating to international standards.



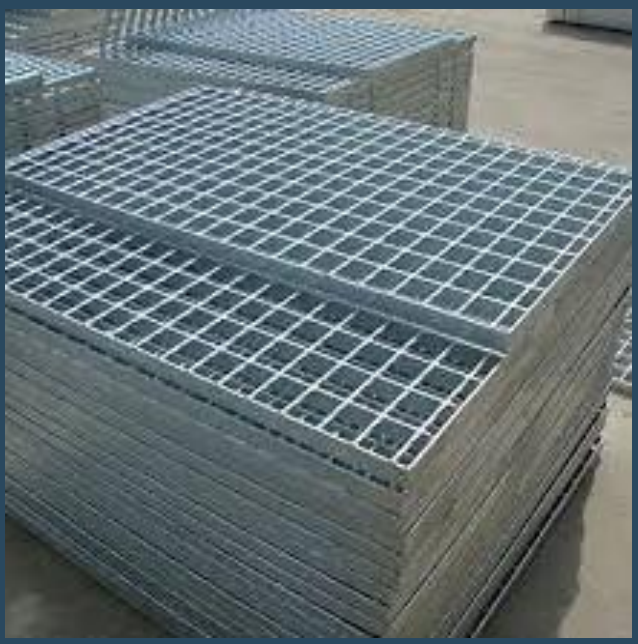
GALVANIZED STEEL GRATING

Galvanized steel grating is widely used in offshore oil rig platforms, refineries, walkways and many other industries.

Galvanized steel grating is also written as galvanized iron grating, due to historical naming conventions where the term "iron" was often used to describe various types of steel products.

Hot Dip Galvanized, serrated to BS 4592, Size 19ft x 3ft.

Rectangular pattern with hexagonal or square twisted cross bars.



- Size of bearing bars: 40mm x 5mm serrated.
- Spacing between bearing bars: 30mm, connected together with 8mm hexagonal twisted rod every 100mm.
- Top surface of bearing bars shall be serrated.
- Grating panels shall be hot dip galvanized of minimum 460GM/M ^ 2.
- Pitch of cross bars: 50mm.
- Grating suitable for Max. SPAN 67" for 1/4" deflection under uniform working load of 6.6 KN/M ^ 2.
- The grating bar shall be closed end.
- Common grating dimensions: 1" x 1/8" x 36" x 24"

PAINTED STEEL BAR GRATING

Painted steel bar grating is a product that undergoes painting treatment on the surface of steel grating. This treatment can prevent oxidation of the steel grating and extend its service life while providing a variety of color options. It has low manufacturing costs, moderate rust resistance, and is suitable for occasions with less strict requirements for humidity and corrosion.

Painted Steel Grating enjoys following characteristics:

- High Strength, Light Structure: The solid grid pressure welding structure enable the painted steel bar gratings high load bearing, light structure and easy lifting.
- Anti-corrosion surface;
- Beautiful surface;
- Rust resisting, snow resisting, easy to maintain a clean surface.
- Colour - Black, red, white, blue, gray and other colors

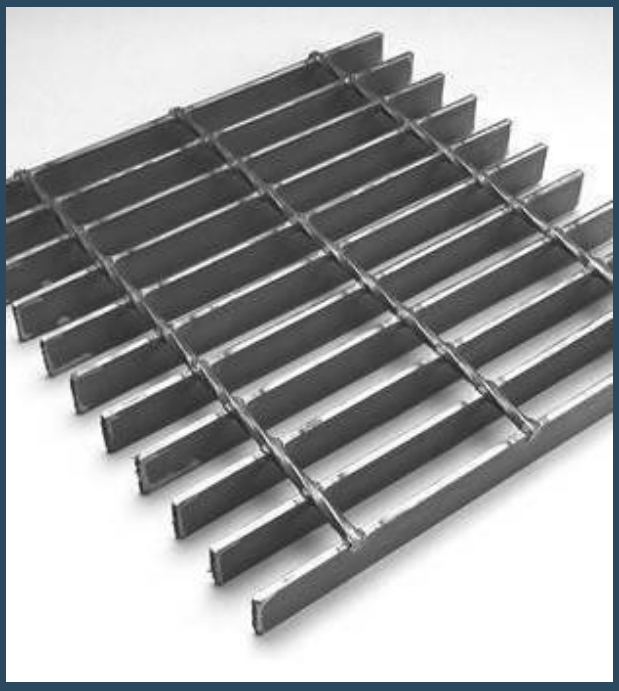
WELDED STEEL GRATING

Welded bar grating is an economical design ideal for most industrial applications. It is manufactured by forge welding rectangular bearing bars and drawn cross bars creating a positive fused connection providing years of service under the most demanding conditions.

Welded Bar Grating is available in type “W” Welded Steel or type “WS” Welded Stainless Steel. It is available with bearing bar spacing ranging from 19/16″ (1-3/16″) to 7/16″ on center and with cross bars at either 4″ or 2″ on center. Welded Bar Grating is available with the standard plain or optional serrated surface.

Heavy-duty forge welded gratings can be provided for many construction and industrial applications:

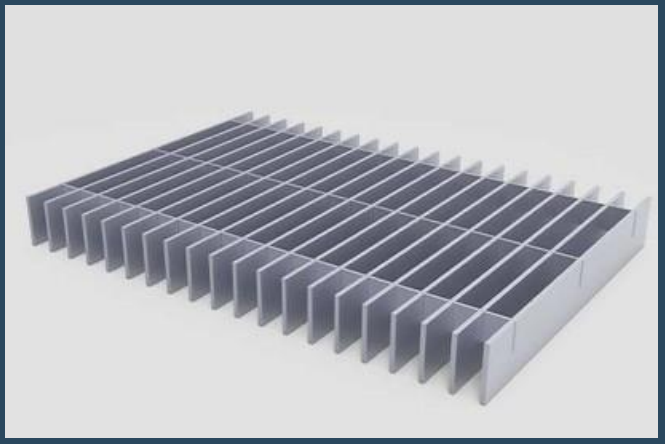
- Reinforcement materials of sites, roads, squares and other buildings.
- Welded steel modules for structures in buildings that are susceptible to pressurized tops.
- Material for tensile and shear reinforcement modules for concrete beams and columns with shear hooks and other parts.
- Used as various flooring for industrial trucks, stair treads and various floorings.
- Used in seaport, airport, and other public facilities.



ALUMINIUM GRATING

Aluminum grating are generally available in four types: swaged rectangular aluminum grating, swaged I-bar aluminum grating, swaged flush-top aluminum grating, and dovetail pressure locked aluminum grating.

Aluminum grating is designed to be a high-strength, low-weight product that uses an I-bar or rectangular bearing bar with cross rods hydraulically swaged under high pressure. Aluminum Swage Locked Bar Grating offers a rigid, virtually maintenance-free flooring product for tread safety plates and strut safety plates.



Similar to steel grating, aluminum grating can be pressure locked as an alternative to swage locked.

Lightweight Aluminium bearer bars incorporating aluminium adjustable height brackets and slip resistance.

Major application of aluminium grating:

- Industrial Flooring
- Marine and Offshore Platforms
- Ventilation and Drainage Systems
- Architectural and Aesthetic Features
- Walkways and Catwalks
- Ramps and Loading Areas
- Wastewater Treatment Plants
- Mining and Quarry Operations

STAINLESS STEEL GRATING

Our strongest and most economical stainless product, type WS gratings are made by forge welding rectangular bearing bars and drawn cross bars. The welding process provides a positive fused intersection providing years of service under the most demanding conditions.

Type WS stainless gratings are available in 19 space (1-3/16”), 15 space (15/16”), and 11 space (11/16”) bearing bar centers. Standard cross bar spacing is 4” on center with optional 2” spacing available.

Stainless steel grating is regarded as industrial grade bar grating, which is extremely strong, durable and corrosive resistant for all load bearing applications and is primarily used for pedestrian and light vehicle traffic.

- Material: stainless steel 304, 304L, 316, 316L.
- Finish: mill finish, commercial clean and electro polished.
- Bearing bar spacing: ranging from 1-3/16" to 11/16".
- Cross bar spacing: 2" or 4" on center.

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