

**Raychem** **RPG**

ENGINEERING GROWTH. PIONEERING EXCELLENCE



WORLD OF  
CUSTOMISED  
**SWITCHBOARD COMPONENTS**

Engineering Solutions for Tomorrow

## About Raychem RPG

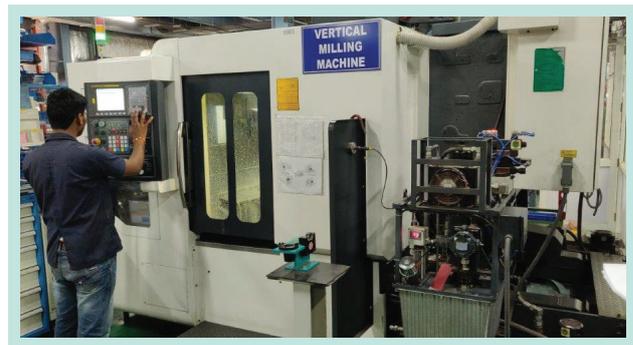
Raychem RPG (P) Ltd. was incorporated in 1989. It is a 50 : 50 Joint Venture between TE Connectivity, U.S.A. (formerly Tyco Electronics) and RPG Enterprises, India.

TE Connectivity is a US\$ 13 Billion global provider for Solutions in Network, Transportation, Consumers and Industry for over 50 years.

RPG Enterprises, an establishment of over 30 years, is one of India's fastest growing business groups with a turnover of US\$ 3 Billion. The group has more than fifteen companies managing diverse business interests in the areas of Automotive Tyres, Infrastructure, IT and Specialty (Energy, Pharmaceutical & Plantations).

Raychem RPG is involved in technologies strengthening the infrastructure segments of economy operating under following Strategic Business Units (SBU):

- Energy
- Transformers
- Oil & Gas
- International (exports)



We have a rich customer base including Original Equipment Manufacturers like Siemens Ltd, L & T, Bharat Heavy Electricals Ltd (BHEL), Schneider Electric , ABB, Hitachi, CTR & State Electricity Boards and Power Utilities such as MSEDCL, Reliance Energy Ltd., Tata Power, NDPL, CESC, KESCO, etc.

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## Fabricated Sleeved / Painted Bus Bars

**Capacity:** Produce highly complex and accurate Rectangular, Round and Hollow Busbars of Copper or Aluminium with sleeve without sleeve of various sizes.

**Material:** Electrolytic Tough Pitch (ETP) copper is used with purity of Copper to 99.90% and Electrolytic grade Aluminum is used for manufacturing Busbars.

**Size:** Width 5 to 300 mm Thickness 0.5 to 30mm

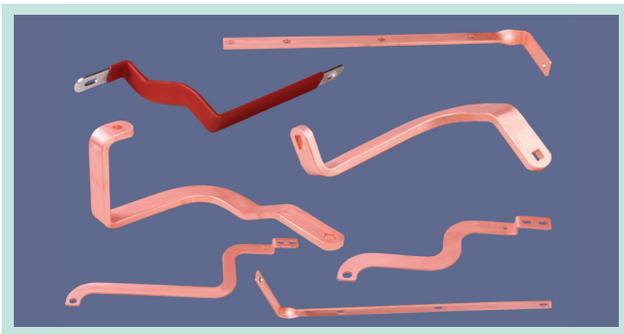
**Plating:** Tin Silver, Tin, Nickel, Nickel Chrome, Painted or Powder coated as per customer specification.

**Sleeving:** Sleeving can be done with Raychem or PVC sleeves as specified by customer. The sleeving process is carried out under controlled temperature and air flow conditions, putting to use Raychem RPG's several years of experience with insulation enhancement systems.

**Applications:** The application of bus bars include low and medium voltage switchgear, bus way systems, panel boards, switchboards, transformers and many other Electrical Equipments.



## 3D Axis Rods | Twist Bending | Machined & Forged Parts



**Capacity:** Raychem RPG offers an extensive range of Switch board components. we can produce High Precision 3 Axis Busbars/ Edge Bending /Twist Bending Busbars which are manufactured on STIERLI Bending machines with special tools . Very precise bending is possible with the integrated angle measurement. Differing material-related spring-back tolerances, as occur frequently in copper, can be compensated for automatically. This provides a high level of process reliability and high precision when bending.

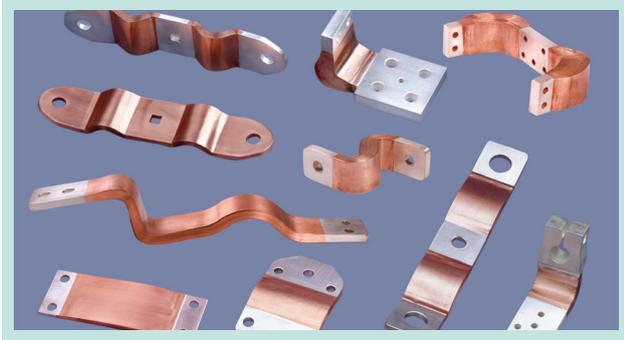
**Material:** ETP Copper and Copper Alloys, Aluminium & Brass.

**Size:** As per customer's specifications.

**Plating:** Silver, Tin or any other up to 50 micron.

**Applications:** The machined/forged parts are used in switchboards, RMU, GIS, Transformers and many other Electrical Equipments.

## Copper Flexible Busbars



**Rating:** Produce flexibles for current rating up to 12000A.

**Material:** ETP Grade Copper. Size: Foil width 10 to 150mm. Thickness: 0.05 to 1mm.

**Job thickness:** Upto 30mm.

**Hardness:** Soft or Half Hard.

**Plating:** Foils can be bare or tin, silver-plated as specified.

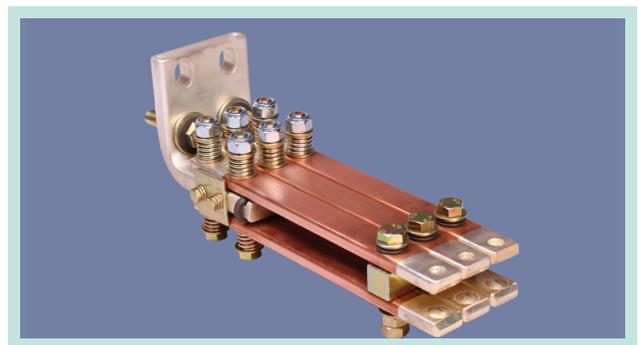
**Capacity:** Copper Flexibles busbars/ Jumpers are produced with Electro-Solidification process. Multiple layers of flat copper foils are used and assembled in a parallel or stacked format to achieve the required cross-sectional area or agreed current density. In certain circumstances flexible strand is a practical alternative. Flexible jumpers can be supplied insulated and plated. The individual laminates slide smoothly against one another allowing the flexible busbar to be easily shaped, twisted and bent to fit a wide range of panel layouts. When compared to standard round cable, flexible busbar offers space saving advantages due to a tighter bend radius and the ability to replace multiple round conductors with a single piece of flexible busbar. Modification of fewer conductors and the elimination of ring terminals can result in significant The current carrying capacity of laminated copper flexible jumper is at par with that of solid copper bus bars.

**Applications:** Air Circuit breakers, Solar Inverters, Converters UPS, Transformers.

## Contact Assemblies

Raychem RPG has developed various types of Sliding type contact assembly which can be used in draw out switchgear panels. These Sub-Assemblies, made as per stringent customer specifications and drawings. The enhanced contact pressure and low contact resistance ensure proper contact without any undue leaking in the panel. These Sub-assemblies incorporate several child parts which include copper, steel, stainless steel, brass, aluminum, plastic, hardware and springs

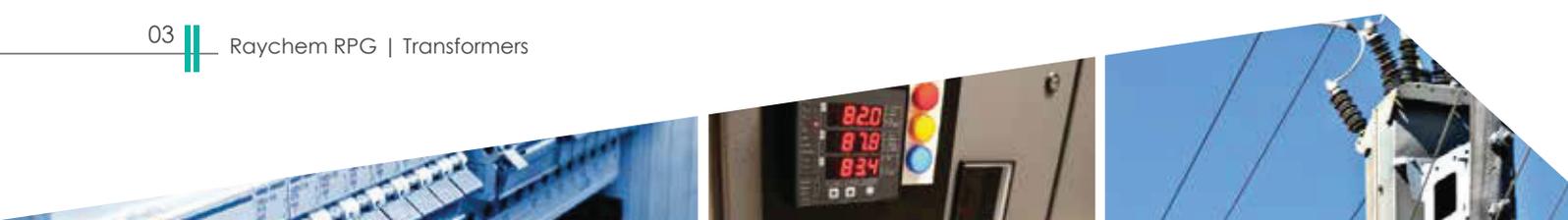
The contact pressure is maintained by specially designed guided coil springs and tested on specially designed machine, which ensures adequate contact pressure during the useful service life.



**Material:** ETP Copper

**Plating:** Silver or tin as per customer requirement

**Applications:** Air Circuit Breakers, GIS



## Profile Busbars

We are making various types of Profile busbars. These busbars are produced on Fibre optic laser machine and water jet cutting machine to get the required profile and accuracy .

Profiles Busbars can be used to reduce the weight of copper conductors in an existing product. For an existing oversized conductor, the design flexibility available to define the shape of drawn copper profiles allows the engineer to design a profile smaller without affecting those surfaces which are constrained by the presence of existing support points, or contact interfaces.

**Material:** Electrolytic Tough Pitch (ETP) copper is used for manufacturing Busbars

**Sizes:** Sheet thickness from 1 to 10mm



**Plating:** Silver ,Tin, Nickel , Nickel Chrome , Painted or Powder coated as per customer specification

**Applications:** Railway Products b. Traction panels c. MV drives

## Earthing Switch

We are making earthing switches of various ratings as per customer's designs. Earthing Switch is provided for earthing line/cable. Earthing switch can also be used for Busbar, when used in separate earthing panel. The earthing switch can carry short time current of 40kA for 1 sec with 102 kA peak. The earthing switch is also capable of making 102kA peak at 12kV (Full fault making capacity)

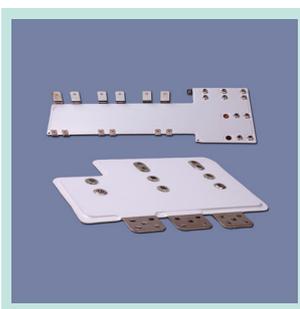
The switch operation is governed by spring and is independent of manual operation. Once the spring is released, closing operation is taken care by the spring and a very fast closing is achieved. All parts & components are made of Laser / CNC machine, thus ensuring uniform accuracy & same performers across any number of pieces supplied.



## Laminated Busbars



UPS and MV drives



Laminated Busbar is applied to implement the connection of power devices in electric and electronic products. Through the parallel and laminated structure of the positive and negative electrodes, the inductance distributed among the circuit is reduced, which helps reduce the peak reverse voltage of both ends of the power elements and lower the requirements of voltage protection and circuit absorbing. This structure is aimed at improving the reliability and stability of power devices and the circuit integration for easier repair and maintenance.

Laminated Busbar could be customized or specified according to your design or drawings. It also could be designed and developed according to your application and requirements.

**Applications:**

- A. Solar Inverters and Converters
- B. Railway Traction Products
- C. Electrical Vehicles



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