Ebubus established in 2010 with a registered capital of 53 million. It focuses on the core components of EV, new energy research and development, production and sales of the national high-tech enterprises. Its products include lambate busbar, EV & PHEV charging connectors, high-voltage electric vehicle connection systems, charging equipment and operation solutions, EV battery box solutions, MCU and multi-in-one integrated solutions, HV relays. Depend on strong R & D and experimental capabilities, advanced and highly efficient manufacturing capabilities. Ebubus will have to continue to provide our customers professional and innovative solutions, fast and flexible service and high quality products.
**Conductive material selection**

Laminated busbar conductor material used mainly grades of T2 copper plate or 1060 aluminum plate

<table>
<thead>
<tr>
<th>Name</th>
<th>Code</th>
<th>Density (g/cm³)</th>
<th>Electrical Conductivity</th>
<th>Thermal Conductivity</th>
<th>Electroplating</th>
</tr>
</thead>
<tbody>
<tr>
<td>紫铜 / Copper</td>
<td>T2/C11000/C1100</td>
<td>8.9g/cm³</td>
<td>98.3%IACS</td>
<td>388W/m–K</td>
<td>Tin, Nickel, Silver, Gold</td>
</tr>
<tr>
<td>铝 / Aluminum</td>
<td>1060/A1030</td>
<td>2.7g/cm³</td>
<td>62%IACS</td>
<td>243W/m–K</td>
<td>Tin, Nickel, Silver, Gold, Copper</td>
</tr>
<tr>
<td>锡锡 / Tellurium copper</td>
<td>CuTep/C14500</td>
<td>8.9g/cm³</td>
<td>85%IACS</td>
<td>355W/m–K</td>
<td>Tin, Nickel, Silver, Gold</td>
</tr>
<tr>
<td>黄铜 / Brass</td>
<td>H62/C26000</td>
<td>8.53g/cm³</td>
<td>27%IACS</td>
<td>116.7W/m–K</td>
<td>Tin, Nickel, Silver, Gold</td>
</tr>
</tbody>
</table>

**Insulation material selection**

Laminated busbars main insulation material used PET, the material of the optimal cost performance. If you have special requirements can choose other materials. FR-4 board and GPO-3 board is used as a supplementary insulation.

<table>
<thead>
<tr>
<th>Material</th>
<th>Density (g/cm³)</th>
<th>Thermal Conductivity (W/kg.k)</th>
<th>Dielectric Constant (f=60Hz)</th>
<th>Dielectric Strength (kv/mm)</th>
<th>Flame Retardanc</th>
<th>Thermal class</th>
<th>Hygroscopicity (%)/24h</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOMEX</td>
<td>0.8~1.1</td>
<td>0.143</td>
<td>2.7</td>
<td>32</td>
<td>UL94~V0</td>
<td>220</td>
<td>10</td>
</tr>
<tr>
<td>PI</td>
<td>1.42</td>
<td>0.094</td>
<td>2.8</td>
<td>173</td>
<td>UL94~V0</td>
<td>220</td>
<td>0.24</td>
</tr>
<tr>
<td>PET</td>
<td>1.38</td>
<td>0.128</td>
<td>3.8</td>
<td>120</td>
<td>UL94~V0</td>
<td>105</td>
<td>0.1~0.2</td>
</tr>
<tr>
<td>FR-4</td>
<td>1.6</td>
<td>0.24</td>
<td>4.6</td>
<td>40</td>
<td>UL94~V0</td>
<td>130</td>
<td>0.15</td>
</tr>
<tr>
<td>GPO-3</td>
<td>1.95</td>
<td>0.2</td>
<td>4.5</td>
<td>40</td>
<td>UL94~V0</td>
<td>155</td>
<td>0.2~0.4</td>
</tr>
</tbody>
</table>
Laminated busbar also known as complex busbar, is a multi-layered composite structure connected row, can be considered a distribution system highway.

Power system in power distribution, Laminated busbar for conducting current of the bus to each branch, compared with the traditional wire has the following advantages:

- Flexible input and output, can be well integrated with connectors, fasteners, cable and other.
- Low resistance and good heat dissipation efficiency, lowering the temperature rise of the system.
- Low inductance, which can effectively reduce voltage spikes, protect the IGBT and other electronic components.
- Reduce system noise and battery interference / radio frequency interference.
- Compact structure, can be more reasonable spatial structure optimization.
- Convenient installation and easy to maintain.
- Durable.
Flexibar is made of specially-treated copper with high flexibility. Since it can be freely bent by hand or machine, it is easy for installation and consequently has been widely used in various power distribution cabinets home and aboard nowadays. Due to high requirement of production technique, Flexibar in China are mainly imported products with high cost. After several years improvement, the performance of our Flexibar has already met or exceeded the standard of foreign products, while our price has great advantages over them.

- Excellent insulation layer provide rattling resistance to extreme temperature, work normally between -30°C~+105°C.
- High quality flexible copper belt, ensure not only good electrical conductivity and flexibility, but also flexible installation.
- Multilayer structure, has a good bending performance in the vertical direction, and has good rigidity on the side.
- It can be connected by screw clamp and special connection clip with no hole connection, reduce resistance by contact.
Flexibar busbar
Ebusbar can provide one-stop integrated solution of design and manufacture of power battery, including plastic parts, Sheetmetal, die casting, battery case, MSD, connector, flexibar, laminated busbar and other products.

Ebusbar has a strong processing, assembly capacity, with sheet metal departments, machining departments, plastic departments, assembly departments and other departments. The company has hundreds of advanced processing equipment: Amada CNC punching machine, Amada laser machine, Amada bending machine, high molecular diffusion welding machine, 1600T die Casting Machine, CNC, 300T biaxial punching machine etc. high production efficiency, good precision.

Under the long-term technology development and accumulation, making ebusbar power battery system solutions technology continues to mature, advanced technology, and has a battery box production line, advanced technology, and has a battery box production line, reliability and economic indicators of battery power system has a clear competitive advantage.
Ebushar corporation has many years busbar、soft busbar design experience, the design of products used in various industries. Include:

- Electric vehicles
- Rail transportation
- Smart grid
- Communication base station
- Aerospace
- Renewable energy
- SVG
Applications

- Rail transportation
- Aerospace
- Smart grid
- Renewable energy
- Low Carbon
- Long life
- Fast and reliable connection
- Easy maintenance

Motor Controller Busbar: low resistance, high capacitance, long life and effective improvement of controller stability.

Capacitance Busbar: super provide electric vehicles large power drive, while start up, drive uphill, and extend the life of the battery.

Motor Busbar: Improve motor torque, effectively reduce energy loss, and achieve stable output of motor.
**Battery Busbar:** gather all battery modules into superbattery by in-line or paralleling, providing steady power for electric vehicles driving long distances.

**Wheel Hub Drive Busbar:** good cooling characteristics and low inductance can effectively reduce power loss and protect other drive components.

**Control Box Busbar:** realize effective integration of bus components, providing effective solution for dismounting and lightweight structure of the control box.
Design and engineering capabilities

We use our experience to support your company’s laminated busbar, soft busbar development. Available from pre-project participate in your company design or Optimization, To provide you with laminated busbar, soft busbar knowledge consulting, for your company to provide the best laminated busbar, soft busbar connectivity solutions. Our engineering team will provide quality services for your company, When you need direct to your company for face to face communication, To ensure smooth cooperation between the engineering department.

Sample Making

For the product ready for use, prototyping is an essential step, the company specializes in rich full team will follow up sample production process to ensure that products fully meet the requirements of your company.
Design and engineering capabilities
Test Capability

Mechanical Properties Test
- Size Test
- Tension Test
- Torque Test
- Coating Adhesion Test
- Insulating Film Stripping Test

Electricity Testing
- High Pot Test
- Insulation Resistance Test
- Temperature Rise Test
- PD Test
- Inductance Capacitance Test

Environment Test
- Damp Heat Test
- Cyclic Salt Fog Test
- Temperature Chance Test
- Tine Vibration Test
- Tree Drop Test
Detection capability
World Products Inc.®
For over 45 years, World Products Inc.® (WPI) has worked with Tier 1 automotive suppliers and has offered the highest quality products with superior technical support to the automotive industry. WPI brings additional value in today’s electric vehicle market with our award-winning customer service and a dedicated automotive sales force, while providing our customers with environmentally sound and technologically advanced products. WPI consistently delivers the highest quality products at competitive prices and we support our customers with a world-wide distribution network which assists their businesses to successfully compete in a global market.

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