# PARTNER

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for power and energy industries





SOP-Metal Oy has provided to the power and energy sectors high-quality design and manufacturing services from components to assemblies since 1993. You find further information about our products and services from this brochure and from our homepage: www.sop-metal.fi

We are specialized in busbars and other work that requires a high level of material expertise. Thanks to our modern machinery and professional staff, we manage both efficient serial production and unique custom-made pieces. Our flexible production facilities enable manufacturing from components to assemblies on a fast schedule.







## FLEXIBLE BUSBARS

In addition to rigid busbars, we are specialized in manufacturing flexible busbars. Flexible busbars are manufactured using a patented method from tin-copper strip, which makes the busbar easy to install and also improves its durability in demanding conditions. For example, challenges caused by thermal expansion or vibration are better managed with flexible busbars.

In addition to the busbars needed for power transmission, we manufacture components from electrically insulating materials according to the customer's plans.

#### Components for transformers and electric motors







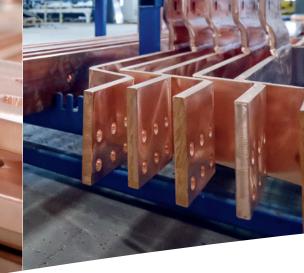


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CORE PRODUCTION

FOR ASSEMBLY

SOP-Metal has a comprehensive selection of copper sheets and bars in stock.



## COPPER BUSBARS

Copper is the most common material used in busbars due to its good electrical conductivity. We manufacture copper busbars in different models according to the customer's needs. Often the busbar has a flat profile. Then the surface area of the sheath is as large as possible in relation to the material used, which is important in terms of both electrical conductivity and heat dissipation. Other formats are also used for some applications, if they facilitate the implementation of the solution.

Dimensios mm	Paint	Painted Clear					Area mm <sup>2</sup>
	I O	II O	 0	I O	II O	III O	0
20x5	319	560	728	274	500	690	99
30x5	447	760	944	379	672	896	149
20x10	497	924	1320	427	825	1180	199
40x5	573	952	1140	482	836	1090	199
50x5	697	1140	1330	583	994	1260	249
30x10	676	1200	1670	573	1060	1480	299
40x10	850	1470	2000	715	1290	1770	399
50x10	1020	1720	2320	852	1510	2040	499
60x10	1180	1960	2610	985	1720	2300	599
80x10	1500	2410	3170	1240	2110	2790	799
100x10	1810	2850	3720	1490	2480	3260	999
120x10	2110	3280	4270	1740	2860	3740	1200
160x10	2700	4130	5360	2220	3590	4680	1600

#### COPPER (E-CU F30), 56.0M/ΩMM2, DIN 43671

## ALUMINUM BUSBARS

Aluminum busbar is a good option due to its lightness, but its electrical conductivity is not as good as that of copper.

When planning the solution, the amount of aluminum should be taken into account, which, compared to copper, increases the size of the busbar and the space needed to install the product. SOP-Metal is a professional in the versatile processing of copper, aluminum and steel alloys.

#### ALUMINIUM (E-AIMGSI-T6), 31.9M/ΩMM2, DIN 43670

Dimensios mm	Painted			Clear			Area mm²
	I O	II O	III O	I O	II O	III O	0
20x5	240	420	535	200	370	505	99
30x5	335	570	695	275	495	650	149
20x10	370	690	1000	310	605	885	199
30x10	505	900	1260	420	780	1130	299
40x10	640	1115	1560	526	970	1380	399
50x10	770	1320	1830	630	1140	1615	499
60x10	895	1520	2075	730	1310	1830	599
80x10	1150	1890	2510	930	1620	2245	799
100x10	1400	2250	2935	1125	1935	2630	999
120x10	1630	2590	3340	1315	2230	3020	1200
100x15	1700	2750	3520	1370	2360	3040	1500
160x10	2090	3265	4135	1675	2785	3765	1600
120x15	1970	3130	4000	1585	2690	3445	1800

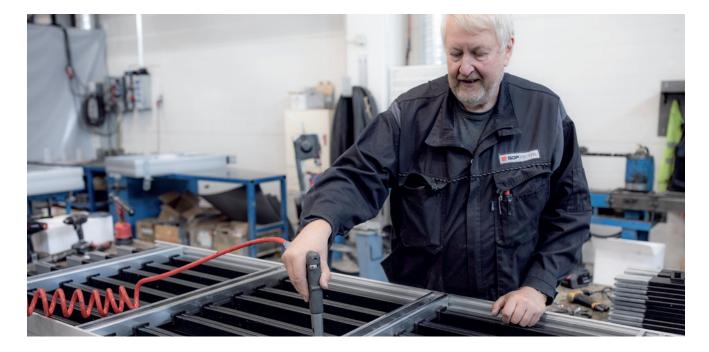


In addition to part manufacturing, the customer has the opportunity to choose the assembly to the desired level of readiness - for example to be delivered directly to the customer's own production line from our factory.

Surface treatment options for busbars include e.g. tinning, silvering and painting. The products can be insulated with, for example, heat shrink tubes and equipped with the necessary connection parts. In addition to the components manufactured by SOP-Metal, the customer can supply the wanted parts for the assembly, or we can obtain them from a third party on behalf of the customer.

#### EXAMPLES OF THE PRODUCTS WE MANUFACTURE:

- MDY Busduct
- Distribution cabinets
- Other electrotechnical products and metal structures



## SUBCONTRACT-ING SERVICES

SOP-Metal has decades of experience in cutting and processing various materials. In addition, we have an extensive network of partners for, among other things, various surface treatments and installations.

- Welding, soldering
- Punching, drilling, threading
- Turning, milling, grinding
- Bending
- Water cutting
- Laser cutting
- Assemblies
- Surface treatments, installations, etc.
- Storage, shelf service (local)

#### CONTACT US AND ASK MORE ABOUT OUR VERSATILE SERVICES!

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#### Precision competence from Vamial

✓ Welding and sheet metal work ✓ Machine mechanics and maintenance ✓ Machining

Vamia also provides certification for welding personnel and procedures.