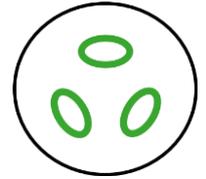


# Product Datasheet

## Busbars: 24 kV, 3150 A, 3-ph enclosed



### Executive Summary

The Hivoduct Busbars provide safe high-voltage and high-current transmission with maximum flexibility.

With non-flammable, maintenance-free pressurized air insulation, modular transport units, and a service life of more than 40 years, they combine outstanding technical performance with sustainability.

#### Key benefits at a glance:

- ✓ Suitable for high-voltage and high-current applications (24kV / 3150 A)
- ✓ Maintenance-free, non-flammable, and safe in operation
- ✓ Environmentally friendly: lowest losses, recyclable aluminum, reduced CO<sub>2</sub> footprint
- ✓ Flexibility for all layouts: zero bending radius, modular transport units
- ✓ Fast installation and disassembly without proprietary tools
- ✓ All interface options (GIS, transformer, cable terminations, air bushings)
- ✓ Lowest outside magnetic field due to enclosure grounding
- ✓ Expected service life > 40 years

### Technical Description

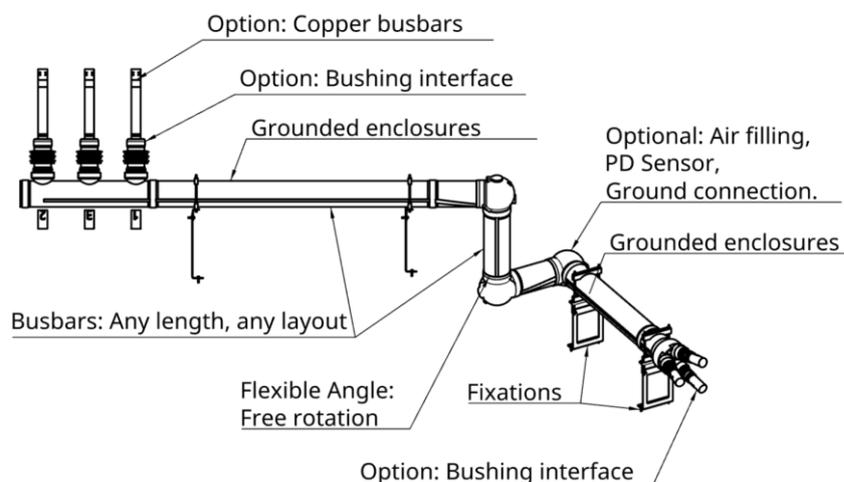
The Hivoduct Busbars form a single-phase enclosed system for reliable high-voltage and high-current transmission. They can be engineered for nearly any layout requiring a high-voltage connection inside a building, on a substation or over long distances.

The busbars can connect to all types of interfaces as specified by the application.

#### Typical interfaces:

- **Air bushings** - to connect to air-insulated busbars or overhead lines
- **Fixations** - for mechanical fixation of the busducts to wall or sealing

Layout, interfaces, and gas compartments are engineered according to customer specifications during the project phase.



## Technical Parameters

Hivoduct busbars are engineered for flexible and demanding high-voltage installations. The following parameters summarize the key electrical, mechanical, and operational characteristics of the system.

Category	Parameter	Value	Information
<b>Capacity</b>	Transmission capacity	130 MW	For a 3-phase system made of one 3-phase enclosed busducts
<b>Electrical Ratings</b>	Rated voltage	24 kV	IEC 62271-1
	Rated current	3150 A	IEC 62271-1
	Short circuit current	63 kA, 1 s	IEC 62271-1
	AC test voltage	50 kV	Partial discharge < 5 pC
	BIL test voltage	±125 kV	IEC 62271-1
	Capacitance	~100 pF/m	Each phase
	AC resistance	11 μΩ/m	-
<b>Insulation &amp; Conductor</b>	Insulation media	Pressurized air (N <sub>2</sub> 80%, O <sub>2</sub> 20%)	Dry. Filled from bottle.
	Filling pressure	10 bar	Min 9.6, Max 11.4
	Conductor material	Aluminum	High conductivity > 28 m/Ω·mm <sup>2</sup>
	Conductor size	4200 mm <sup>2</sup>	Cross section
	Contact system	Spiral contacts	Silver plated
<b>Enclosure</b>	Material	Aluminum	Non-flammable, Anticorodal
	Cross section	7300 mm <sup>2</sup>	Ground connection included
	Max enclosure temperature	< 35 K	@ 3150 A for 4 h without forced cooling
<b>Mechanical Data</b>	Transport length	< 6 m	For easy transport and handling
	Transport weight	Flexible	Depending on unit size
	Creepage/flashover	Project-specific	Bushing interface specification
<b>Assembly &amp; Shipping</b>	Shipping assembly	Modular transport units	Flange connection on-site
	Shipping pressure	<0.2 bar	Slight overpressure, topping up on-site
	Packing	Tubes stacked	Standard pallets, < 1500 kg
	Air filling connection	Festo KD 1/4	Pluggable socket
<b>Monitoring &amp; Safety</b>	Pressure indicator	Manometer	Scale 0-12 bar
	Alarm switch	< 9 bar	Potential-free, NO & NC
	Pressure monitoring	Online	Optional, GSM & cloud storage
<b>Service &amp; Sustainability</b>	Life expectancy	> 40 years	-
	Reusable materials	Aluminum	-

Other ratings and features on request.



More Information online