

Hivoduct «pressurized air cables» are medium voltage and high-voltage cables for electrical energy transmission. Pressurized air cables are environmentally friendly, powerful, have reduced losses, are maintenance free, and non-flammable.

## Pressurized air cable: G23 series

Parameter	Value	Information
Rated voltage	<b>170 kV - 300 kV</b>	
Rated current	<b>500 A - 4000 A</b>	
Insulation media	<b>Pressurized air</b>	N2: 80%, O2: 20 %, dry
Inside pressure	<b>&lt;= 10 bar</b>	Higher pressure for higher voltages
Conductor	<b>Aluminum</b>	High conductivity, > 28 m/Ω*mm <sup>2</sup>
Cond. Cross section	<b>&gt;= 3200 mm<sup>2</sup></b>	
Enclosure	<b>Aluminum</b>	Anticorodal. Nonflammable.
Encl. Cross section	<b>9900 mm<sup>2</sup></b>	Return current / ground connection included
Bending radius	<b>0 mm</b>	Angle pieces 90° available
Short circuit current	<b>50 kA, 1 s</b>	
AC Test voltage	<b>460 kV</b>	Partial discharge level: < 5 pC
BIL Test voltage	<b>+/- 1050 kV</b>	
Capacitance	<b>58 pF/m</b>	Per phase
Inductance	<b>190 nH/m</b>	1 phase. 3 Phases depend on arrangement
AC Resistance	<b>&lt;=12 μOhm/m</b>	R <sub>AC</sub> conductor + enclosure @ 50 Hz
Magnetic field	<b>&lt; 1 μT</b>	At 4000 A in > 2 m distance
Enclosure temperature	<b>&lt; 40°C</b> <b>&lt; 65°C</b>	@ 2500 A for > 8 h without forced cooling. @ 4000 A for > 8 h without forced cooling.
Losses	<b>~45 W/m/Phase</b>	@ 2000 A continuous current, 50 Hz
Components	<b>Straight tube</b>	Length available: 0.2 - 5m
	<b>Bushing</b>	Creepage & Flash-over distance as required
	<b>Angle 90°</b>	Phase distance: 450 mm
	<b>Length compens.</b>	Max. 80 mm length compensation
Pressurized air	<b>Festo ¼ inch</b>	One-way valve, Filling, Manometer
Contact system	<b>Spiral contacts</b>	Contacts silver plated
Transport weight	<b>&lt; 600 kg</b>	Per transport unit
Transport length	<b>&lt; 6 m</b>	Per transport unit
Phase distance	<b>&gt;= 450 mm</b>	
Width 3ph	<b>&gt;= 1350 mm</b>	Trough width for 3 phases side-by-side
Height	<b>&gt;= 600 mm</b>	Trough height for 3 phases side-by-side
Diameter 3ph	<b>&gt;= 1000 mm</b>	For 3ph in triangular arrangement in tube
Grounding	<b>As needed</b>	100 % return current in enclosure is ok
Life expectancy	<b>&gt; 40 years</b>	Expected lifetime. Maintenance free.
Reusable	<b>Yes</b>	Disassembly on each flange possible.

Pressurized air cables are best suitable for critical installations where high power, best fire protection, quick assembly and disassembly and reduced outside magnetic fields are required.

Other ratings on request.