

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: F145 series

Parameter	Value	Information
Rated voltage	<b>72 kV - 145 kV</b>	
Rated current	<b>200 - 3000 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>2940 mm<sup>2</sup></b>	
Enclosure	<b>Aluminum</b>	Anticorodal. Nonflammable.
Encl. Cross section	<b>&gt;5500 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>275 kV</b>	Partial discharge level: < 5 pC @126kV
BIL Test voltage	<b>+/- 650 kV</b>	
Capacitance	<b>64 pF/m</b>	Per phase
Inductance	<b>172 nH/m</b>	1 phase. 3 Phases depend on arrangement
AC Resistance	<b>~12 μOhm/m</b>	R <sub>AC</sub> conductor + enclosure @ 50 Hz
Magnetic field	<b>&lt; 1 μT</b>	@ 1500 A in > 1 m distance
Enclosure temperature	<b>&lt; 40°C</b> <b>&lt; 65°C</b>	@ 1500 A for > 8 h without forced cooling. @ 2500 A for > 8 h without forced cooling.
Losses	<b>~12 W/m/Phase</b>	@ 1000 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: 300 mm
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; 250 kg</b>	Per transport unit
Transport length	<b>&lt; 6 m</b>	Per transport unit
Phase distance	<b>&gt;= 300 mm</b>	
Width 3ph	<b>&gt;= 900 mm</b>	Trough width for 3 phases side-by-side
Height	<b>&gt;= 500 mm</b>	Trough height for 3 phases side-by-side
Diameter 3ph	<b>&gt;= 630 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.