



TRATOS[®]
CAVI

CONDUCTORS FOR A MOVING WORLD

TRATOS WIND[®]



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Tn 07-10

TECHNICAL INFORMATION

	Type	TRATOS WIND
	Type designation	(N)TSCGEHXOEU
	Approvals	Based on DIN VDE 0250 Part 813
	Applications	The cables are intended for use in wind turbines with high mechanical effort in a temperature range from 40°C to +90°C. The cables can be installed free moveable, free hanging or fixed. For free hanging operation the cables are twistable. The cables are used for economical transmission of large energy rates with medium voltage. In other respects DIN VDE 0250 applies.
Electrical parameters	Rated voltage	$U_0/U = 3.6/6.0 \text{ kV to } 20/35 \text{ kV}$
	Maximum permissible operating voltage in AC systems	$U_0/U = 4.2/7.2 \text{ kV to } 24.3/42 \text{ kV}$
	Maximum permissible operating voltage in DC systems	$U_0/U = 5.4/10.8 \text{ kV to } 31.5/63 \text{ kV}$
	AC test voltage	17 kV to 50 kV over 5 min., according to DIN VDE 0250, Part 813
	Currentcarrying capacity	The values are valid for permanent operation with DC or AC with 50 up to 60 Hz at 30°C ambient temperature. (In other respects DIN VDE 0295, Part 4 applies)
Thermal parameters	Maximum permissible operating temperature of the conductor	permanent 90°C
	Ambient temperature	when in motion: 40°C when stationary: 40°C
	Shortcircuit temperature of the conductor	200°C
Mechanical parameters	Tensile load	Up to 20 N/mm ² copper cross-section
	Torsional stresses	+/-100°/m
	Minimum bending radius	See "Selection data"
Chemical parameters	Resistance to mineral oil	acc. to DIN EN 6081121 VDE 0473 Part 81121)
	Resistance to Ozone	acc. to DIN VDE 0282 Part 2, HD22.2 Test type B
	UV-resistance	acc. to ISO 49822 Method A
	Behaviour in case of fire	
	Flame propagation, single cable	acc. to DIN EN 6033221
	Smoke emission, light transmittance	acc. to DIN EN 502682
	Test for corrosive and acid gas emission	acc. to DIN EN 5026723

DESIGN FEATURES

Type	TRATOS WIND
Conductor	Electrolytic copper, tinned, finely stranded, Class 5 according to DIN VDE 0295 / IEC 60228
Insulation	Halogenfree, heat resistant insulation based on EPR
Electrical field control	Inner and outer layer of semiconductive, halogenfree rubber
Core identification	Natural colouring with black semiconductive rubber
Sheath	Halogenfree special rubber compound. Resistant to heat, cold, UV, Ozone and mineral oil. Colour black
Marking	TRATOS WIND (N)TSCGEHXOEU (number of cores) x (crosssection) (voltage) + VDE

RENEWABLE ENERGY CABLES

TRATOS WIND - (N)TSCGEHXOEU

12/20 kV to 20/35 kV

**TRATOS WIND - 12/20 kV (N)TSCGEHXOEU**

Number of cores and nominal crosssection mm ²	Conductor diameter (guidance value) mm	Overall diameter of cable (Min. value) mm	Overall diameter of cable (Max. value) mm	Bending radius (fixed installation) mm	Bending radius (free moving) mm	Net weight kg/km	Permissible tensile force N	Max. suspension length (safety factor 1) m	Currentcarrying capacity at 30°C for 1 cable A	Maximum permissible shortcircuit current (1s) kA
3x25/25	6,4	46,7	49,7	298	497	3410	2.000	59	146	3,05
3x35/35	7,6	50,6	54,6	328	546	4200	2.800	67	181	4,27
3x50/50	9,1	54,1	58,1	349	581	5060	4.000	79	227	6,10
3x70/70	10,8	58,1	62,1	373	621	6190	5.600	90	279	8,54

TRATOS WIND - 18/30 kV (N)TSCGEHXOEU

Number of cores and nominal crosssection mm ²	Conductor diameter (guidance value) mm	Overall diameter of cable (Min. value) mm	Overall diameter of cable (Max. value) mm	Bending radius (fixed installation) mm	Bending radius (free moving) mm	Net weight kg/km	Permissible tensile force N	Max. suspension length (safety factor 1) m	Currentcarrying capacity at 30°C for 1 cable A	Maximum permissible shortcircuit current (1s) kA
3x25/25	6,4	55,8	59,8	359	598	4580	2.000	44	146	3,05
3x35/35	7,6	58,6	62,6	376	626	5250	2.800	53	181	4,27
3x50/50	9,1	63,5	67,5	405	675	6390	4.000	63	227	6,10
3x70/70	10,8	67,5	71,5	429	715	7600	5.600	74	279	8,54

TRATOS WIND - 20/35 kV (N)TSCGEHXOEU

Number of cores and nominal crosssection mm ²	Conductor diameter (guidance value) mm	Overall diameter of cable (Min. value) mm	Overall diameter of cable (Max. value) mm	Bending radius (fixed installation) mm	Bending radius (free moving) mm	Net weight kg/km	Permissible tensile force N	Max. suspension length (safety factor 1) m	Currentcarrying capacity at 30°C for 1 cable A	Maximum permissible shortcircuit current (1s) kA
3x25/25	6,4	62,3	66,3	398	663	5520	2.000	36	146	3,05
3x35/35	7,6	65,2	69,2	415	692	6230	2.800	45	181	4,27
3x50/50	9,1	68,8	72,8	437	728	7210	4.000	55	227	6,10
3x70/70	10,8	74,2	78,2	469	782	8730	5.600	64	279	8,54

TRATOS CAVI S.p.A. reserves the right to make at any time and without previous notice, variations on products described in this catalogue. Moreover TRATOS CAVI S.p.A. shall not have responsibility for improper use of its electrical cables.



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