



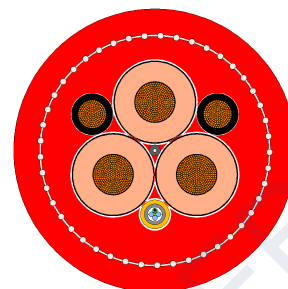
TEBAOFLEX CABLE

DATA SHEET

Mining&Industrial cable

R-(N)TSCGEWOU REELING CABLE

3.6/6 kV to 18/30 kV medium voltage reeling cable



APPLICATION

Medium voltage reeling cable for connection of large material handling machines such as excavators, dumpers and crushers in open-cast mines. Suitable for high mechanical stresses with monospiral reels and cylindrical reels, and for other heavy industrial applications.

CONSTRUCTION

Parameter	Value
Conductors	Annealed flexible stranded tin-coated or bare copper, class 5 according to IEC 60228 and HD 383
Separator	Suitable semi-conductive tape between conductor and insulation where required
Conductor screen	Semi-conductive layer
Insulation	Ethylene-propylene rubber EPR type 3GI3 according to DIN VDE 0207 part 20
Insulation screen	Semi-conductive layer, maximum resistivity 200 ohm x m
Internal sheath	Synthetic thermosetting compound type 5GM3 according to DIN VDE 0207 part 21
Anti-torsion braid	Polyamide thread braid between internal and outer sheath layers
Outer sheath	Synthetic thermosetting compound type 5GM5 or 5GM3 according to DIN VDE 0207 part 21
Outer jacket colour	Red; other colours available on request

OPERATING CHARACTERISTICS

Parameter	Value
Rated voltage U ₀ /U	3.6/6 kV; 6/10 kV; 8.7/15 kV; 12/20 kV; 18/30 kV
Temperature - mobile	-25 deg C to +90 deg C
Temperature - fixed	Down to -40 deg C
Conductor operating temperature	+90 deg C maximum
Short-circuit conductor temperature	+250 deg C
Bending radius	6 D fixed; 12 D forced guidance with reeling; 15 D forced guidance with sheaves
Mechanical performance	Excellent tear, impact and abrasion resistance; torsion stress +/-100 deg/m; tensile load up to 20 N/mm ²
Resistance	Flame retardant; UV, sunlight, ozone, moisture and oil resistant

STANDARDS AND PERFORMANCE

- DIN VDE 0250 part 813
- DIN VDE 0298 part 3 and part 4
- IEC 60228 class 5 conductors

- DIN VDE 0207 part 20 and part 21 compounds
- DIN VDE 811-2-1 oil resistance

TECHNICAL DATA

Nominal data. Source brand marking and product codes have been omitted.

Dimensions and Electrical Data (3.6/6 kV and 6/10 kV)						
Voltage kV	Cross-section	Cond. dia. mm	Overall dia. mm	Weight kg/km	R20 ohm/km	Amp. A
3.6/6	3x25+3x16/3	6.60	39.9	2414	0.795	132
3.6/6	3x25+3x25/3	6.60	39.9	2486	0.795	132
3.6/6	3x25+3x50/3	6.60	39.9	2666	0.795	132
3.6/6	3x35+3x25/3	7.30	41.5	2860	0.565	161
3.6/6	3x35+3x50/3	7.30	41.5	3042	0.565	161
3.6/6	3x50+3x25/3	9.30	45.8	3561	0.393	202
3.6/6	3x50+3x50/3	9.30	45.8	3747	0.393	202
3.6/6	3x70+3x35/3	11.10	49.1	4420	0.277	251
3.6/6	3x70+3x50/3	11.10	49.1	4688	0.277	251
3.6/6	3x95+3x50/3	13.30	56.2	5780	0.210	301
3.6/6	3x120+3x70/3	14.40	58.4	6800	0.164	351
3.6/6	3x150+3x70/3	16.30	64.5	8231	0.132	405
3.6/6	3x185+3x95/3	18.50	69.3	9711	0.108	462
3.6/6	3x240+3x120/3	19.80	72.6	11733	0.0817	540
6/10	3x25+3x25/3	6.60	41.6	2640	0.795	132
6/10	3x25+3x50/3	6.60	41.6	2821	0.795	132
6/10	3x35+3x25/3	7.30	43.2	3018	0.565	161
6/10	3x35+3x50/3	7.30	43.2	3200	0.565	161
6/10	3x50+3x25/3	9.30	47.5	3735	0.393	202
6/10	3x50+3x50/3	9.30	47.5	3922	0.393	202
6/10	3x70+3x35/3	11.10	52.6	4839	0.277	251
6/10	3x70+3x50/3	11.10	52.6	4943	0.277	251
6/10	3x95+3x50/3	13.30	58.0	5995	0.210	301
6/10	3x120+3x70/3	14.40	60.1	7023	0.164	351
6/10	3x150+3x70/3	16.30	66.2	8478	0.132	405
6/10	3x185+3x95/3	18.50	71.0	9975	0.108	462
6/10	3x240+3x120/3	19.80	76.1	12339	0.0817	540

TECHNICAL DATA

Nominal data. Source brand marking and product codes have been omitted.

Dimensions and Electrical Data (8.7/15 kV)						
Voltage kV	Cross-section	Cond. dia. mm	Overall dia. mm	Weight kg/km	R20 ohm/km	Amp. A
6/10	3x300+3x150/3	23.80	84.1	15031	0.0654	620
8.7/15	3x25+3x25/3	6.60	45.1	2972	0.795	138
8.7/15	3x25+3x50/3	6.60	45.1	3153	0.795	138
8.7/15	3x35+3x25/3	7.30	46.7	3363	0.565	173
8.7/15	3x35+3x50/3	7.30	46.7	3544	0.565	173
8.7/15	3x50+3x25/3	9.30	52.8	4338	0.393	216
8.7/15	3x50+3x50/3	9.30	52.8	4525	0.393	216
8.7/15	3x70+3x35/3	11.10	56.0	5249	0.277	265
8.7/15	3x70+3x50/3	11.10	56.0	5359	0.277	265
8.7/15	3x95+3x50/3	13.30	63.2	6723	0.210	320
8.7/15	3x120+3x70/3	14.40	65.4	7777	0.164	370
8.7/15	3x150+3x70/3	16.30	69.7	8997	0.132	428
8.7/15	3x185+3x95/3	18.50	76.2	10860	0.108	489
8.7/15	3x240+3x120/3	19.80	79.6	12934	0.0817	574

TECHNICAL DATA

Nominal data. Source brand marking and product codes have been omitted.

Dimensions and Electrical Data (12/20 kV and 18/30 kV)						
Voltage kV	Cross-section	Cond. dia. mm	Overall dia. mm	Weight kg/km	R20 ohm/km	Amp. A
12/20	3x25+3x25/3	6.60	48.1	3282	0.795	138
12/20	3x25+3x50/3	6.60	48.1	3469	0.795	138
12/20	3x35+3x25/3	7.30	51.5	3905	0.565	173
12/20	3x35+3x50/3	7.30	51.5	4091	0.565	173
12/20	3x50+3x25/3	9.30	55.8	4707	0.393	216
12/20	3x50+3x50/3	9.30	55.8	4888	0.393	216
12/20	3x70+3x35/3	11.10	59.0	5632	0.277	265
12/20	3x70+3x50/3	11.10	59.0	5743	0.277	265
12/20	3x95+3x50/3	13.30	66.2	7155	0.210	320
12/20	3x120+3x70/3	14.40	68.4	8230	0.164	370
12/20	3x150+3x70/3	16.30	72.7	9471	0.132	428
12/20	3x185+3x95/3	18.50	79.2	11377	0.108	489
12/20	3x240+3x120/3	19.80	82.6	13474	0.0817	574
18/30	3x25+3x25/3	6.60	57.6	3945	0.795	138
18/30	3x25+3x50/3	6.60	57.6	4125	0.795	138
18/30	3x35+3x25/3	7.30	59.3	4367	0.565	173
18/30	3x35+3x50/3	7.30	59.3	4554	0.565	173
18/30	3x50+3x25/3	9.30	65.4	5199	0.393	216
18/30	3x50+3x50/3	9.30	65.4	5386	0.393	216
18/30	3x70+3x35/3	11.10	68.6	6437	0.277	265
18/30	3x70+3x50/3	11.10	68.6	6547	0.277	265
18/30	3x95+3x50/3	13.30	75.8	7744	0.210	320
18/30	3x120+3x70/3	14.40	77.9	8897	0.164	370
18/30	3x150+3x70/3	16.30	82.3	10453	0.132	428
18/30	3x185+3x95/3	18.50	88.8	12078	0.108	489
18/30	3x240+3x120/3	19.80	92.1	14584	0.0817	574

TECHNICAL DATA

PHYSICAL PARAMETERS

Parameter	Value
Insulation tensile strength	min. 6 N/mm ²
Insulation elongation at break	min. 200%
Insulation ageing in air oven	135 deg C, 168 h; change TS +/-30%, EB +/-30%
Internal sheath tensile strength	min. 10 N/mm ²
Internal sheath elongation	min. 300%
Internal sheath ageing	100 deg C, 168 h; TS +/-30%, EB +/-40%; oil ageing 100 deg C, 24 h, TS and EB +/-40%
Outer sheath tensile strength	min. 15 N/mm ²
Outer sheath elongation	min. 300%
Outer sheath ageing	100 deg C, 168 h; TS +/-30%, EB +/-40%; oil ageing 100 deg C, 24 h, TS and EB +/-40%
Outer sheath tear resistance	min. 30 N/mm

ELECTRICAL PARAMETERS

Parameter	Value
Current carrying capacity	According to DIN VDE 0298 part 4
Ambient conversion factor	20 deg C: 1.09; 25 deg C: 1.05; 30 deg C: 1.00; 35 deg C: 0.92; 40 deg C: 0.88; 45 deg C: 0.83; 50 deg C: 0.78
Voltage test	Between power, earth conductors and screen according to DIN VDE 0250 part 813
Partial discharge	max. 40 pC according to DIN VDE 0250 part 813

THERMAL AND CHEMICAL PARAMETERS

Parameter	Value
Ambient temperature - fixed	+80 deg C / -40 deg C
Ambient temperature - mobile	+60 deg C / -25 deg C
Maximum conductor operating temperature	+90 deg C
Short-circuit conductor temperature	+250 deg C
Resistance to oil	DIN VDE part 811-2-1 p.10
Weather resistance	Resistant to ozone, UV and moisture

Values are nominal. Cable dimensions may vary due to manufacturing tolerances.

CERTIFICATIONS



TEBAOFLEX CABLE