



PSKOVGEOKABEL
LIMITED LIABILITY COMPANY



PRODUCTS FOR OIL AND GAS INDUSTRY

WWW.PSKOVGEOKABEL.RU



DESIGN, DEVELOPMENT, MANUFACTURE AND SUPPLY OF INDUSTRIAL PRODUCTS AND EQUIPMENT FOR OIL AND GAS COMPLEX

ABOUT THE COMPANY

Pskovgeokabel LLC belongs to the group of companies "Tekhnologiya Metallov" ("Technology of Metals").

For many years, the enterprise has been a leader in the sphere of geophysical cables production.

Today this segment of the production pattern of Pskovgeokabel LLC is just a small part of the whole.

The main line of activity of our enterprise is production of unique equipment for oil and gas industry: flexible steel-polymer pipes, high-pressure pipe systems, capillary pipelines, umbilicals, electric well heating systems, wellhead blowout prevention equipment (BOP), round-trip equipment, and equipment for operating cable products.

Innovative developments gave us an opportunity to be among the top-list enterprises solving the problems posed by the industry sector, namely offering the technologies, which allow to enhance production and transportation of hydrocarbons.

The implementation of groundbreaking technologies of Pskovgeokabel LLC is based on the symbiosis of scientific and hands-on experience; on cooperation of our specialists with scientific institutes and oil producing companies.

Among the heaviest consumers of our products are such leading Russian oil producing companies as NK "Rosneft", PJSC Gazprom, PJSC "Oil Company" Lukoil, Transneft, PJSC Surgutneftegas and others.

Today equipment produced by Pskovgeokabel LLC is exported in more than 30 countries around the world.

Quality management system of our enterprise meets all the requirements of GOST ISO 9001:2008 standard.

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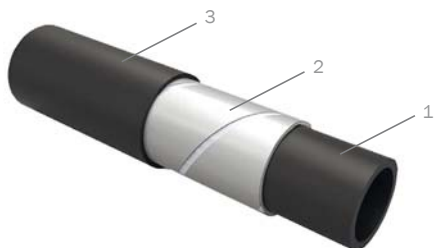
PIPELINES AND UMBILICALS

HIGH-PRESSURE PIPE SYSTEMS (FLOWLINES)

FLEXIBLE HIGH-PRESSURE PIPELINES

TU 2248-058-24118545-2015

Flexible pipelines are developed for transportation of oil products, gas, water, and other fluids under high pressure.



DESIGN:

- 1 - polymer pipe (hydraulic channel)
- 2 - armouring elements
- 3 - outer polymer sheath

TECHNICAL CHARACTERISTICS

Pipelines for operating pressure up to 40 atm.

Designation	Inner diameter	Outer diameter	Weight	Min. bend radius	Max. shipping length	Weight of max. shipping length on a reel	Operating temperature range
	mm	mm	kg/km	m	m	kg	°C
VTS 50/75-40	50	75	4200	0,75	1200	6150	-60...+60*
VTS 65/85-40	65	85	4900	0,8	1150	6750	
VTS 80/100-40	80	100	6400	0,9	1100	8150	
VTS 100/125-40	100	125	8000	1,15	700	6700	
VTS 125/155-40	125	155	13100	1,2	400	6350	
VTS 140/175-40	140	175	16300	1,6	200	4350	

Pipelines for operating pressure up to 100 atm.

Designation	Inner diameter	Outer diameter	Weight	Min. bend radius	Max. shipping length	Weight of max. shipping length on a reel	Operating temperature range
	mm	mm	kg/km	m	m	kg	°C
VTS 50/75-100	50	75	5400	0,75	1200	7600	-60...+60*
VTS 65/90-100	65	90	6400	0,8	1150	8500	
VTS 80/105-100	80	105	8100	0,9	1100	10000	
VTS 100/125-100	100	125	12300	1,15	700	9750	
VTS 125/160-100	125	160	15800	1,2	400	7450	
VTS 140/185-100	140	185	22300	1,6	200	5600	

Pipelines for operating pressure up to 180 atm.

Designation	Inner diameter	Outer diameter	Weight	Min. bend radius	Max. shipping length	Weight of max. shipping length on a reel	Operating temperature range
	mm	mm	kg/km	m	m	kg	°C
VTS 50/75-180	50	75	6500	0,75	1100	8250	-60...+60*
VTS 65/90-180	65	90	7800	0,8	1000	8900	
VTS 80/110-180	80	110	9800	0,9	1000	10900	
VTS 100/130-180	100	130	14400	1,15	700	11200	
VTS 125/165-180	125	165	21150	1,2	350	8500	
VTS 140/190-180	140	190	29500	1,6	200	7000	

* Flexible high-pressure pipelines resistant to higher temperatures can be produced upon customer's request.

FLEXIBLE HEAT-INSULATED HIGH-PRESSURE PIPELINES

TU 2248-058-24118545-2015

Flexible heat-insulated pipelines are designed for transportation of oil products, gas, water, and other fluids under high pressure in cold climatic conditions.



DESIGN:

- 1 - polymer pipe (hydraulic channel)
- 2 - armouring elements
- 3 - intermediate polymer sheath
- 4 - heat-insulating layer
- 5 - outer polymer sheath

TECHNICAL CHARACTERISTICS

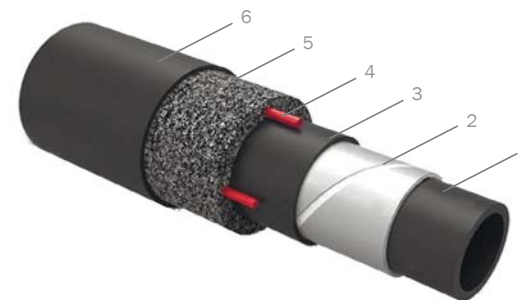
Designation	Inner diameter	Outer diameter	Weight	Min. bend radius	Max. shipping length	Weight of max. shipping length on a reel	Operating temperature range
	mm	mm	kg/km	m	m	kg	°C
VTS 50/115-40 (T)	50	115	8250	1,1	800	7600	-60...+60*
VTS 65/125-40 (T)	65	125	9100	1,15	700	7400	
VTS 80/145-40 (T)	80	145	11650	1,2	350	5100	
VTS 100/165-40 (T)	100	165	14380	1,4	300	4500	
VTS 125/190-40 (T)	125	190	22500	1,6	200	5600	
VTS 50/115-100 (T)	50	115	9450	1,1	800	8600	
VTS 65/130-100 (T)	65	130	10800	1,15	700	8600	
VTS 80/145-100 (T)	80	145	13500	1,2	350	5800	
VTS 100/165-100 (T)	100	165	18700	1,4	300	5700	
VTS 125/190-100 (T)	125	190	24600	1,6	200	6100	
VTS 50/115-180 (T)	50	115	10550	1,1	800	9500	
VTS 65/130-180 (T)	65	130	12000	1,15	700	9400	
VTS 80/150-180 (T)	80	150	15100	1,2	350	6500	
VTS 100/170-180 (T)	100	170	20900	1,4	300	6300	

* Flexible heat-insulated high-pressure pipelines resistant to higher temperatures can be produced upon customer's request.

FLEXIBLE HEAT-INSULATED HIGH-PRESSURE PIPELINES WITH ELECTRIC HEATING

TU 2248-058-24118545-2015

Flexible heat-insulated pipelines with electric heating are designed for transportation of oil products, gas, water, and other fluids under high pressure in cold climatic conditions.



DESIGN:

- 1 - polymer pipe (hydraulic channel)
- 2 - armouring elements
- 3 - intermediate polymer sheath
- 4 - heating elements
- 5 - heat-insulating layer
- 6 - outer polymer sheath

TECHNICAL CHARACTERISTICS

Designation	Inner diameter	Outer diameter	Weight	Min. bend radius	Max. shipping length	Weight of max. shipping length on a reel	Operating temperature range
	mm	mm	kg/km	m	m	kg	°C
VTS 50/105-40 (EP)	50	105	9450	1,1	500	5900	-60...+60*
VTS 65/115-40 (EP)	65	115	10300	1,15	450	5750	
VTS 80/135-40 (EP)	80	135	12850	1,2	350	5600	
VTS 100/160-40 (EP)	100	160	15600	1,4	300	5800	
VTS 125/190-40 (EP)	125	190	23700	1,6	200	5900	
VTS 50/110-100 (EP)	50	110	10650	1,1	500	6450	
VTS 65/120-100 (EP)	65	120	12000	1,15	450	6500	
VTS 80/140-100 (EP)	80	140	14700	1,2	350	6250	
VTS 100/165-100 (EP)	100	165	19900	1,4	300	7100	
VTS 125/190-100 (EP)	125	190	25800	1,6	200	6300	
VTS 50/110-180 (EP)	50	110	11750	1,1	450	6400	
VTS 65/120-180 (EP)	65	120	13200	1,15	450	7100	
VTS 80/140-180 (EP)	80	140	16300	1,2	350	6900	
VTS 100/165-180 (EP)	100	165	22200	1,4	300	7800	

* Flexible heat-insulated high-pressure pipelines with electric heating resistant to higher temperatures can be produced upon customer's request.

Pipelines of this type can be produced with heater power up to 50 W/min.

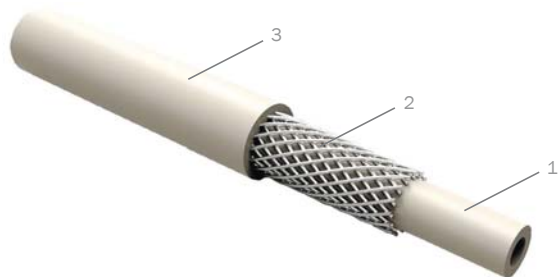
Additional equipment included into pipeline design and necessary for its assembling and connection is described in chapter "Fittings for pipelines. Equipment for fittings' installation".

CAPILLARY HIGH-PRESSURE PIPELINES

CAPILLARY HIGH-PRESSURE POLYMER PIPELINES

TU 3585-008-24118545-2006

Capillary high-pressure polymer pipelines are designed for precise chemical feeding certain well zones with minimum losses.



DESIGN:

- 1 - polymer pipe
- 2 - winds of armour
- 3 - outer polymer sheath

TECHNICAL CHARACTERISTICS

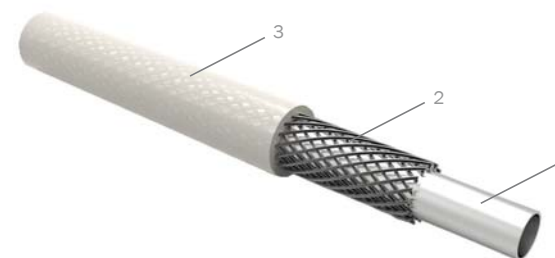
Designation	Diameter, inner/outer	Breaking load	Min. bend radius	Weight in air	Weight in water	Max. pressure, inner/outer	Max. operating temperature
	mm	kN	mm	kg/km	kg/km	MPa	°C
TG 5/15-150-25	5/15	25	300	270	135	15/20	90*
TG 7/16-150-25	7/16	25	315	320	137	15/20	
TG 8/17-150-25	8/17	25	330	340	140	15/20	

* Capillary high-pressure polymer pipelines resistant to higher temperatures can be produced upon customer's request.

CAPILLARY HIGH-PRESSURE POLYMER-METAL PIPELINES

TU 3585-008-24118545-2006

Capillary high-pressure polymer-metal pipes are designed for precise chemical feeding certain well zones with minimum losses.



DESIGN:

- 1 - stainless steel tube
- 2 - winds of armour
- 3 - outer polymer sheath

TECHNICAL CHARACTERISTICS

Designation	Diameter, inner/outer	Breaking load	Min. bend radius	Weight in air	Weight in water	Max. pressure, inner/outer	Max. operating temperature
	mm	kN	mm	kg/km	kg/km	MPa	°C
TG 4/10-500-25 MT	4/10	25	300	125	60	50/20	90*
TG 4/12-500-25 MT	4/12	25	320	185	86	50/20	
TG 5/12-500-25 MT	5/12	25	320	190	90	50/20	
TG 6/15-500-25 MT	6/15	25	350	270	125	50/20	
TG 8/18-500-25 MT	8/18	25	350	430	200	50/20	

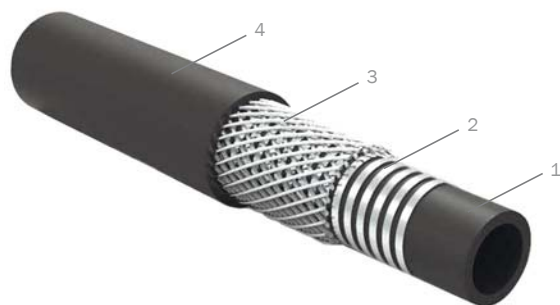
* Capillary high-pressure polymer-metal pipelines resistant to higher temperatures can be produced upon customer's request.

STEEL-POLYMER PIPES AND UMBILICALS

FLEXIBLE STEEL-POLYMER PIPES (GSPT)

TU 2248-040-24118545-2014

Flexible steel-polymer high-pressure pipes are designed for hydrocarbon extraction, well surveys, well development, and workover performances.



DESIGN:

- 1 - polymer pipe
- 2 - armouring elements
- 3 - wind of armour
- 4 - outer polymer sheath

TECHNICAL CHARACTERISTICS

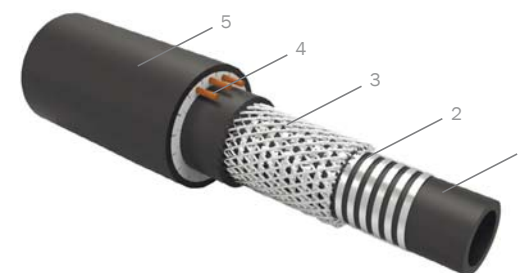
Designation	Diameter, inner/outer	Breaking load	Specific elongation	Min. bend radius	Weight in air	Weight in water	Max. pressure, inner/outer	Max. operating temperature
	mm	kN	m/km/kN	mm	kg/km	kg/km	MPa	°C
TG 10/22-200-25	10 / 22	25	0,5	440	560	260	20/10	+70*
TG 15/28-200-50	15 / 28	50	0,5	560	900	460	20/10	
TG 20/38-200-90	20 / 38	90	0,5	740	1500	700	20/10	
TG 25/44-200-140	25 / 44	140	0,3	880	2050	1000	20/10	
TG 30/50-200-140	30 / 50	140	0,3	1000	2400	1100	20/10	
TG 35/60-200-170	35 / 60	170	0,3	1160	3300	1600	20/10	
TG 40/65-200-170	40 / 65	170	0,1	1300	3600	1600	20/10	
TG 49/73-100-75	49 / 73	75	0,1	1400	3300	1450	10/10	
TG 62/89-100-115	62 / 89	115	0,1	1600	4600	1300	10/10	

* Flexible steel-polymer pipes resistant to higher temperatures can be produced upon customer's request.

UMBILICALS

TU 3585-008-24118545-2006

Umbilicals are designed for workovers, well surveys, well operations performed by means of ESP, and layers' dual completion.



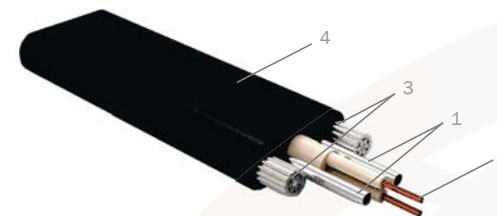
DESIGN:

- 1 - polymer pipe
- 2 - armouring elements
- 3 - winds of armour
- 4 - current conductive cores
- 5 - outer polymer sheath

TECHNICAL CHARACTERISTICS

Designation	Diameter, inner/outer	Breaking load	Min. bend radius	Max. pressure, inner/outer	Number of conductors X	Conductors' cross-section YY	Operating temperature
	mm	kN	mm	MPa	ea	mm²	°C
TG 30/75-250-120 (X×YY)	30 / 75	120	1000	25/25	3-15	3,0-16,0	-40..+80*
TG 35/80-250-130 (X×YY)	35 / 80	130	1100	25/25	3-15	3,0-16,0	
TG 40/85-250-150 (X×YY)	40 / 85	150	1200	25/25	3-15	3,0-16,0	
TG 45/90-250-170 (X×YY)	45 / 90	170	1300	25/25	3-15	3,0-16,0	
TG 50/100-250-180 (X×YY)	50 / 100	180	1300	25/25	3-15	3,0-16,0	

*Umbilicals resistant to higher temperatures can be produced upon customer's request.



DESIGN:

- 1 - stainless steel tube
- 2 - current conductive core
- 3 - damper
- 4 - outer polymer sheath

TECHNICAL CHARACTERISTICS

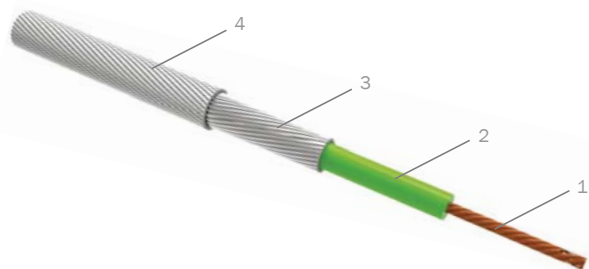
Designation	Hydraulic channel diameter	Overall dimensions	Number of hydraulic channels	Number of conductors	Weight in air	Max. pressure, outer	Conductors' cross-section	Max. operating temperature
	mm	mm	ea	ea	kg/km	MPa	mm²	°C
TG (2x0,75+2GK MT)-200	2,8	12x34	2	2	750	20	0,75/2,0	90
TG (2x0,75+2GK MT)-500	6	13x50	2	2	1100	50	0,75/2,0	

CABLE PRODUCTS

SINGLE-CONDUCTOR GEOPHYSICAL LOAD-CARRYING ARMOURED CABLE OF GENERAL PURPOSE

TU 3585-070-24118545-2016

Cable of this type is designed for lowering and withdrawal of logging devices and instruments, their power supply, and data connection between ground equipment and wellbore tools.



DESIGN:

- 1 - current conductor
- 2 - insulation of current
- 3 - 1-st wind of armour
- 4 - 2-nd wind of armour

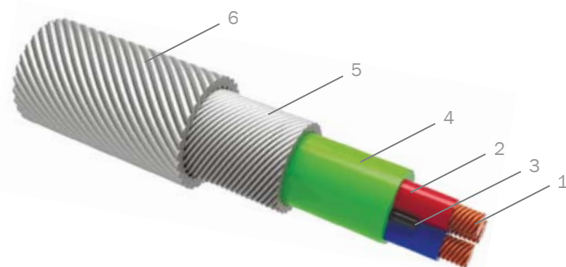
TECHNICAL CHARACTERISTICS

Designation	Conductor cross-section	Electric resistance	Breaking load, not less than	Design of armour inner/outer	Max. operating temperature	Outer cable diameter	Weight of 1 km in air
	mm ²	Ohm/km	kN	nxd(mm) / nxd(mm)	°C	mm	kg/km
KG1 1x0,2-5-150	0,2	89,1	5	12x0,36/18x0,36	150	2,6	29,3
KG1 1x0,35-10-150	0,35	57	10	12x0,5/18x0,5	150	3,6	56,0
KG1 1x0,5-18-150	0,5	40,5	18	12x0,64/18x0,64	150	4,7	92,5
KG1 1x0,5-18-200	0,5	40,5	18	12x0,64/18x0,64	200	4,7	95,4
KG1 1x0,5-18-260	0,5	40,5	18	12x0,64/18x0,64	260	4,7	95,4
KG1 1x0,75-24-150	0,75	25,5	24	12x0,75/18x0,75	150	5,5	127,1
KG1 1x0,75-24-200	0,75	25,5	24	12x0,75/18x0,75	200	5,5	131,7
KG1 1x0,75-24-260	0,75	25,5	24	12x0,75/18x0,75	260	5,5	131,7
KG1 1x0,75-30-150	0,75	25,5	30	12x0,85/18x0,85	150	6,15	161,4
KG1 1x0,75-30-200	0,75	25,5	30	12x0,85/18x0,85	200	6,15	168,7
KG1 1x0,75-30-260	0,75	25,5	30	12x0,85/18x0,85	260	6,15	168,7
KG 1x0,75-40-150	0,75	25,5	40	14x0,89/17x1,1	150	7,6	234,8
KG 1x0,75-40-200	0,75	25,5	40	14x0,89/17x1,1	200	7,6	246,2
KG 1x0,75-40-260	0,75	25,5	40	14x0,89/17x1,1	260	7,6	246,2
KG 1x0,75-55-150	0,75	25,5	55	12x1,2/18x1,2	150	8,7	317,8
KG 1x0,75-55-200	0,75	25,5	55	12x1,2/18x1,2	200	8,7	329,1
KG 1x0,75-55-260	0,75	25,5	55	12x1,2/18x1,2	260	8,7	329,1
KG1 1x1,5-24-150	1,5	13,2	24	12x0,8/18x0,8	150	5,8	147,6
KG1 1x1,5-24-200	1,5	13,2	24	12x0,8/18x0,8	200	5,8	151,9
KG1 1x1,5-24-260	1,5	13,2	24	12x0,8/18x0,8	260	5,8	151,9
KG 1x1,5-55-150	1,5	13,2	55	15x1,1/18x1,3	150	9,4	359,9
KG 1x1,5-55-200	1,5	13,2	55	15x1,1/18x1,3	200	9,4	374,7
KG 1x1,5-55-260	1,5	13,2	55	15x1,1/18x1,3	260	9,4	374,7
KG 1x1,5-70-150	1,5	13,2	70	19x1,1/22x1,3	150	11,2	468,1
KG 1x1,5-70-200	1,5	13,2	70	19x1,1/22x1,3	200	11,2	498,6
KG 1x1,5-70-260	1,5	13,2	70	19x1,1/22x1,3	260	11,2	498,6
KG 1x1,5-75-150	1,5	13,2	75	22x1,1/24x1,3	150	12,2	514,6
KG 1x1,5-75-200	1,5	13,2	75	22x1,1/24x1,3	200	12,2	555,2
KG 1x1,5-75-260	1,5	13,2	75	22x1,1/24x1,3	260	12,2	555,2
KG 1x2,0-50-150	2,0	9,97	50	12x1,1/18x1,1	150	8,05	277,1
KG 1x2,0-50-200	2,0	9,97	50	12x1,1/18x1,1	200	8,05	285,3
KG 1x2,0-50-260	2,0	9,97	50	12x1,1/18x1,1	260	8,05	285,3
KG 1x2,0-60-150	2,0	9,97	65	17x1,1/20x1,3	150	10,3	412,3
KG 1x2,0-60-200	2,0	9,97	65	17x1,1/20x1,3	200	10,3	433,3
KG 1x2,0-60-260	2,0	9,97	65	17x1,1/20x1,3	260	10,3	433,3
KG 1x2,0-70-150	2,0	9,97	70	19x1,1/22x1,25	150	10,9	439,2
KG 1x2,0-70-200	2,0	9,97	70	19x1,1/22x1,25	200	10,9	466,6
KG 1x2,0-70-260	2,0	9,97	70	19x1,1/22x1,25	260	10,9	466,6
KG 1x2,0-80-150	2,0	9,97	80	12x1,5/18x1,5	150	10,9	499,5
KG 1x2,0-80-200	2,0	9,97	80	12x1,5/18x1,5	150	10,9	515,8
KG 1x2,0-80-260	2,0	9,97	80	12x1,5/18x1,5	150	10,9	515,8

THREE-CONDUCTOR GEOPHYSICAL LOAD-CARRYING ARMOURED CABLE OF GENERAL PURPOSE

TU 3585-070-24118545-2016

Cable of this type is designed for lowering and withdrawal of logging devices and instruments, their power supply, and data connection between ground equipment and wellbore tools.



DESIGN:

- 1 - current conductor
- 2 - polymer insulation
- 3 - interphase filler
- 4 - inner polymer sheath
- 5 - 1-st wind of armour
- 6 - 2-nd wind of armour

TECHNICAL CHARACTERISTICS

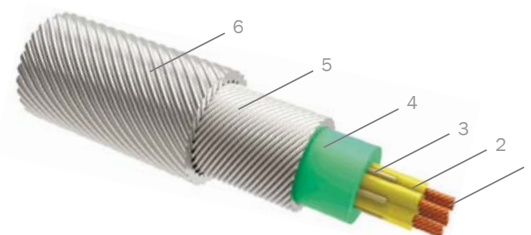
Designation	Conductor cross-section	Electric resistance	Breaking load, not less than	Design of armour inner/outer	Max. operating temperature	Outer cable diameter	Weight of 1 km in air
	mm ²	Ohm/km	kN	nxd(mm) / nxd(mm)	°C	mm	kg/km
KG 3x0,12-18-150	0,12	165,3	18	12x0,64/18x0,64	150	4,7	93,5
KG 3x0,12-24-150	0,12	165,3	18	12x0,8/18x0,8	150	5,8	139,8
KGI 3x0,2-30-150	0,2	89,1	30	12x0,85/18x0,85	150	6,25	160,6
KGI 3x0,2-30-200	0,2	89,1	30	12x0,85/18x0,85	200	6,25	184,6
KGI 3x0,35-24-150	0,35	57	24	12x0,8/18x0,8	150	5,8	150,2
KGI 3x0,35-24-200	0,35	57	24	12x0,8/18x0,8	200	5,8	153,9
KGI 3x0,5-40-150	0,5	40,5	40	19x0,8/19x1,1	150	8,4	283,8
KGI 3x0,5-40-200	0,5	40,5	40	19x0,8/19x1,1	200	8,4	292,7
KGI 3x0,5-40-260	0,5	40,5	40	19x0,8/19x1,1	260	8,4	292,7
KG 3x0,35-55-150	0,35	57	55	14x1,1/17x1,3	150	8,9	333,5
KG 3x0,35-55-200	0,35	57	55	14x1,1/17x1,3	200	8,9	337,3
KG 3x0,35-55-260	0,35	57	55	14x1,1/17x1,3	260	8,9	337,3
KG 3x0,75-60-150	0,75	25,5	60	17x1,1/20x1,3	150	10,3	431,7
KG 3x0,75-60-200	0,75	25,5	60	17x1,1/20x1,3	200	10,3	444,2
KG 3x0,75-60-260	0,75	25,5	60	17x1,1/20x1,3	260	10,3	444,2
KG 3x0,75-70-150	0,75	25,5	70	19x1,1/22x1,25	150	10,9	462,2
KG 3x0,75-70-200	0,75	25,5	70	19x1,1/22x1,25	200	10,9	479,3
KG 3x0,75-70-260	0,75	25,5	70	19x1,1/22x1,25	260	10,9	479,3
KG 3x0,75-98-150	0,75	25,5	98	18x1,3/24x1,3	150	12,0	565,4
KG 3x0,75-98-200	0,75	25,5	98	18x1,3/24x1,3	200	12,0	585,1
KG 3x0,75-98-260	0,75	25,5	98	18x1,3/24x1,3	260	12,0	585,1

KG 3x1,5-70-150	1,5	9,97	70	19x1,1/22x1,25	150	10,9	477,3
KG 3x1,5-70-200	1,5	9,97	70	19x1,1/22x1,25	200	10,9	491,3
KG 3x1,5-70-260	1,5	9,97	70	19x1,1/22x1,25	260	10,9	491,3
KG 3x1,5-98-150	1,5	9,97	98	18x1,3/24x1,3	150	12,0	580,5
KG 3x1,5-98-200	1,5	9,97	98	18x1,3/24x1,3	200	12,0	598,1
KG 3x1,5-98-260	1,5	9,97	98	18x1,3/24x1,3	260	12,0	598,1

SEVEN-CONDUCTOR GEOPHYSICAL LOAD-CARRYING ARMOURED CABLE OF GENERAL PURPOSE

TU 3585-070-24118545-2016

Cable of this type is designed for lowering and withdrawal of logging devices and instruments, their power supply, and data connection between ground equipment and wellbore tools.



DESIGN:

- 1 - current conductor
- 2 - polymer insulation
- 3 - interphase filler
- 4 - inner polymer sheath
- 5 - 1-st wind of armour
- 6 - 2-nd wind of armour

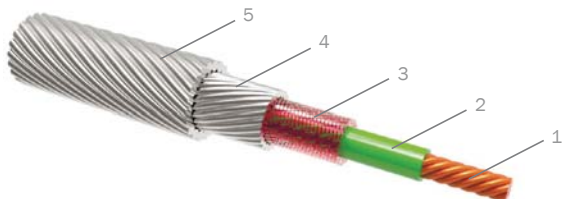
TECHNICAL CHARACTERISTICS

Designation	Conductor cross-section	Electric resistance	Breaking load, not less than	Design of armour inner/outer	Max. operating temperature	Outer cable diameter	Weight of 1 km in air
	mm ²	Ohm/km	kN	nxd(mm) / nxd(mm)	°C	mm	kg/km
KG 7x0,2-40-150	0,2	89,1	55	19x0,8/19x1,1	150	9,4	283,5
KG 7x0,35-55-150	0,35	57	55	18x0,95/18x1,3	150	9,4	370,5
KG 7x0,35-55-200	0,25	57	55	18x0,95/18x1,3	200	9,4	381,1
KG 7x0,5-60-150	0,5	40,5	60	22x0,89/24x1,1	150	10,4	402,3
KG 7x0,5-60-200	0,5	40,5	60	22x0,89/24x1,1	200	10,4	422,2
KG 7x0,5-60-260	0,5	40,5	60	22x0,89/24x1,1	260	10,4	422,2
KG 7x0,5-70-150	0,5	40,5	70	19x1,1/22x1,25	150	10,9	472,1
KG 7x0,5-70-200	0,5	40,5	70	19x1,1/22x1,25	200	10,9	492,0
KG 7x0,5-70-260	0,5	40,5	70	19x1,1/22x1,25	260	10,9	492,0
KG 7x0,75-75-150	0,75	25,5	75	22x1,1/24x1,3	150	12,2	573,4
KG 7x0,75-75-200	0,75	25,5	75	22x1,1/24x1,3	200	12,2	601,4
KG 7x0,75-75-260	0,75	25,5	75	22x1,1/24x1,3	260	12,2	601,4
KG 7x1,5-100-150	1,5	13,2	100	22x1,3/24x1,55	150	14,5	813,5
KG 7x1,5-100-200	1,5	13,2	100	22x1,3/24x1,55	200	14,5	859,2
KG 7x1,5-100-260	1,5	13,2	100	22x1,3/24x1,55	260	14,5	859,2

GEOPHYSICAL LOAD-CARRYING ARMoured COAXIAL CABLE

TU 3585-070-24118545-2016

Cable of this type is designed for lowering and withdrawal of logging devices and instruments, their power supply, and data connection between ground equipment and wellbore tools.



DESIGN:

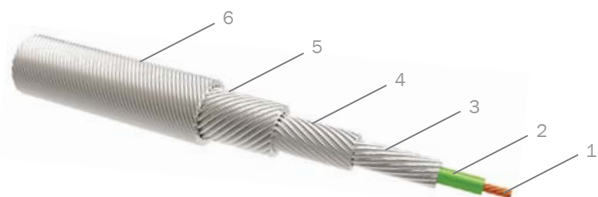
- 1 - current conductor
- 2 - polymer insulation
- 3 - screen + bonding film
- 4 - 1-st wind of armour
- 5 - 2-nd wind of armour

TECHNICAL CHARACTERISTICS

Designation	Cross-section of the central conductor	Electric resistance of the central conductor	Cross-section of the screening conductor	Electric resistance of the screening conductor	Characteristic impedance	Breaking load, not less than	Cable diameter	Weight of 1 km
	mm ²	Ohm/km	mm ²	Ohm/km	Ohm	kN	mm	kg/km
KG1K×0,35-50-150	0,35	57,0	0,35	59,5	40	50	8,7	310
KG1K×0,5-55-150	0,5	40,5	0,5	39,0	40	55	9,3	353
KG1K×1,0-55-150	1,0	19,8	1,5	11,6	40	55	10,25	391
KG1K×1,5-55-150	1,5	13,2	1,5	11,6	30	55	10,25	395
KG1K×2,0-70-150	2,0	9,97	2,0	9,97	40	70	11,4	453
KGP 1-150	2,0	9,97	3,5	6,5	50	150	16,5	921
KGP 1-190	4,0	4,89	4,0	4,89	50	190	20,0	1226

GEOPHYSICAL LOAD-CARRYING ARMoured CABLE FOR WELL SWABBING

TU 3585-070-24118545-2016



DESIGN:

- 1 - current conductor
- 2 - polymer insulation
- 3 - 1-st wind of armour
- 4 - 2-nd wind of armour
- 5 - 3-rd wind of armour
- 6 - 4-th wind of armour

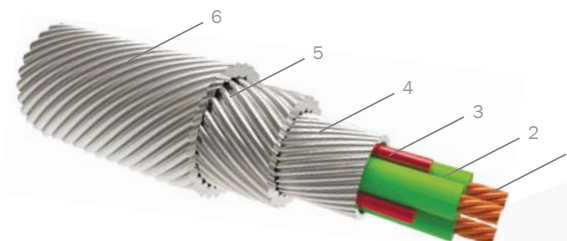
TECHNICAL CHARACTERISTICS

Designation	Number of conductors	Conductor cross-section	Electric resistance	Breaking load, not less than	Armour design inner/outer	Max. operating temperature	Outer cable diameter	Weight of 1 km in air
	ea	mm ²	Ohm/km	kN	nxd(mm) / nxd(mm) nxd(mm) / nxd(mm)	°C	mm	kg/km
KGSv 1x0,75-70-150-4	1	0,75	25,5	70	12x0,75/18x0,75 17x1,1/23x1,1	150	10,0	460
KGSv 1x0,75-90-150-4	1	0,75	25,5	90	12x0,87/18x0,87 17x1,2/23x1,2	150	11,15	565,9
KGSv 1x0,75-150-150-4	1	0,75	25,5	150	12x1,2/18x1,2 22x1,3/24x1,55	150	14,4	930
KGSv 1x1,5-70-150-4	1	1,5	13,2	70	12x0,87/18x0,87 19x1,1/24x1,1	150	10,75	504,5

REINFORCED GEOPHYSICAL LOAD-CARRYING ARMoured CABLE OF GENERAL PURPOSE

TU 3585-070-24118545-2016

Cable of this type is designed for lowering and withdrawal of logging devices and instruments, their power supply, and data connection between ground equipment and wellbore tools.



DESIGN:

- 1 - current conductor
- 2 - polymer insulation
- 3 - interphase filler
- 4 - 1-st wind of armour
- 5 - 2-nd wind of armour
- 6 - 3-rd wind of armour

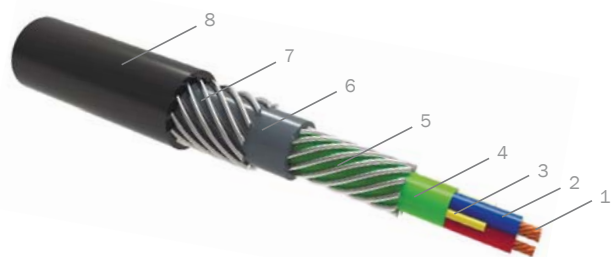
TECHNICAL CHARACTERISTICS

Designation	Number of conductors	Conductor cross-section	Electric resistance	Breaking load, not less than	Armour design inner/outer	Max. operating temperature	Outer cable diameter	Weight of 1 km in air
	ea	mm ²	Ohm/km	kN	nxd(mm) / nxd(mm) nxd(mm) / nxd(mm)	°C	mm	kg/km
KG 1x2,0-200-150-4	1	2,0	9,97	200	16x1,1/22x1,1 20x1,55/26x1,55	150	15,6	1165
KG 3x0,75-110-150-3	3	0,75	25,5	110	16x1,1/20x1,2/ 23x1,35	150	12,3	630
KG 3x0,75-120-150-3	3	0,75	25,5	120	17x1,1/20x1,3/ 24x1,35	150	13,2	715
KG 3x0,75-200-150-4	3	0,75	25,5	200	16x1,1/22x1,1 20x1,55/26x1,55	150	15,6	1159

GEOPHYSICAL LOAD-CARRYING CABLE WITH ARMOURED SHEATH

TU 3585-070-24118545-2016

Cable of this type is designed for lowering and withdrawal of logging devices and instruments, their power supply, and data connection between ground equipment and wellbore tools in wells with corrosive environment.



DESIGN:

- 1 - current conductor
- 2 - polymer insulation
- 3 - interphase filler
- 4 - 1-st intermediate polymer sheath
- 5 - 1-st wind of armour
- 6 - 2-nd intermediate polymer sheath
- 7 - 2-nd wind of armour
- 8 - outer polymer sheath

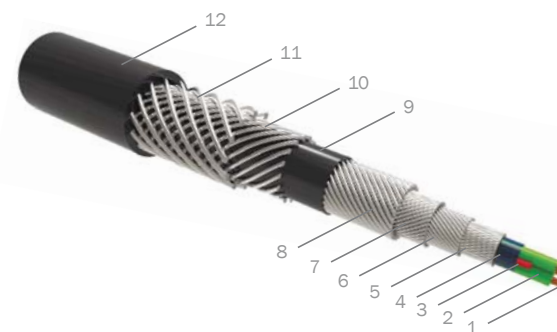
TECHNICAL CHARACTERISTICS

Designation	Number of conductors	Conductor cross-section	Electric resistance	Breaking load, not less than	Design of armour inner/outer	Max. operating temperature	Outer cable diameter	Weight of 1 km in air
	ea	mm ²	Ohm/km	kN	nxd(mm) / nxd(mm)	°C	mm	kg/km
KG 1x0,5-5-90 Oa	1	0,5	40,5	4	6x0,75	90	5,2	45,3
KG 1x0,75-20-90 Oa	1	0,75	25,5	20	12x0,75/12x0,75	90	7,8	131,9
KG 1x0,75-55-90 Oa	1	0,75	25,5	55	12x1,1/18x1,1/14x0,87	90	12,5	400,3
KG 1x1,5-55-90 Oa	1	1,5	13,2	55	12x1,1/18x1,1/14x0,87	90	12,5	411,4
KG Cв 1x0,75-80-90 Oa	1	0,75	25,5	80	12x1,1/18x1,1/14x0,87/17x0,87	90	14,7	518,9
KG 3x0,12-6-90 Oa	3	0,12	165,3	6	8x0,75	90	6,5	62,5
KG 3x0,12-10-90 Oa	3	0,12	165,3	10	6x0,75/9x0,75	90	8,0	102,7
KG 3x0,2-6-90 Oa	3	0,2	89,1	6	8x0,75	90	6,5	63,1
KG 3x0,2-10-90 Oa	3	0,2	89,1	10	6x0,75/9x0,75	90	8,0	103,9
KG 3x0,5-35-90 Oa	3	0,5	40,5	35	12x0,87/15x0,87	90	10,4	212,4
KG 3x0,75-55-90 Oa	3	0,75	25,5	55	11x1,3/12x1,3	90	14,7	416,6
KG 3x0,75-70-90 Oa	3	0,75	25,5	70	11x1,5/12x1,5	90	14,7	492,2
KG 4x0,12-6-90 Oa	4	0,12	165,3	6	6x0,85	90	6,5	63,6
KG 4x1,5-55-90 Oa	4	1,5	13,2	55	11x1,3/12x1,3	90	15,5	473,9
KG 7x0,75-55-90 Oa	7	0,75	25,5	55	11x1,3/12x1,3	90	15,5	460,8

RIGID GEOPHYSICAL LOAD-CARRYING ARMoured CABLE FOR EXPLORATION OF INCLINED AND HORIZONTAL WELLS

TU 3585-070-24118545-2016

Cable of this type is designed for lowering and withdrawal of logging devices and instruments, their power supply, and data connection between ground equipment and wellbore tools, for exploration of inclined and horizontal wells.



DESIGN:

- 1 - current conductor
- 2 - polymer insulation
- 3 - interphase filler
- 4 - inner polymer sheath
- 5 - 1-st wind of armour
- 6 - 2-nd wind of armour
- 7 - 3-rd wind of armour
- 8 - 4-th wind of armour
- 9 - 2-nd inner polymer sheath
- 10 - 5-th wind of armour
- 11 - 6-th wind of armour
- 12 - outer polymer sheath

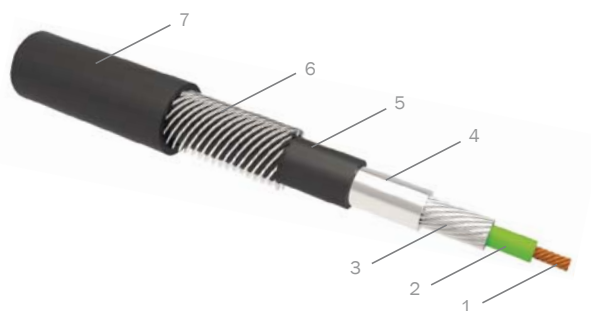
TECHNICAL CHARACTERISTICS

Designation	Breaking load, not less than		Outer cable diameter		Weight of 1 km	
	Load-carrying part	Load-pushing part	Load-carrying part	Load-pushing part	Load-carrying part	Load-pushing part
	kN	kN	mm	mm	kg/km	kg/km
KG 3-10,2/26-90 Oa	60	200	10,2	26	400	1400
KG 3-13/25-90 Oa	120	230	13	25	800	1950
KG 3-13/30-90 Oa	120	230	13,5	30	760	2000
KG 3-13/34-90 Oa	120	230	13,5	34	760	2150
KG 3-14/28-90 Oa	150	230	14	28	805	1645
KG 3-16/25-90 Oa	100	230	16,5	25	660	1530
KG 3-16/28-90 Oa	100	230	16,5	28	660	1680
KG 3-16/30-90 Oa	160	230	16,6	30	1200	1500
KG 3-16/35-90 Oa	160	250	16,6	35	1170	2740
KG 3-16/32-90 Oa	160	230	16	32	1200	2550
KG 3-16/34-90 Oa	160	230	16,6	34	1170	2420
KG 3-38-90 Oa	150		38		830	
KG 3x0,75-150-90 Oa	150		22		1130	

ELECTRIC CABLE FOR TELEMETRY MEASUREMENTS

MANUFACTURED IN ACCORD WITH AN INDIVIDUAL TECHNICAL SPECIFICATION OF A CUSTOMER

Electric cable is designed for telemetry measurements at surveys performed in oil and gas wells.



DESIGN:

- 1 - current conductor
- 2 - polymer insulation
- 3 - 1-st wind of armour
- 4 - steel tube
- 5 - intermediate polymer sheath
- 6 - 2-nd wind of armour
- 7 - outer polymer sheath

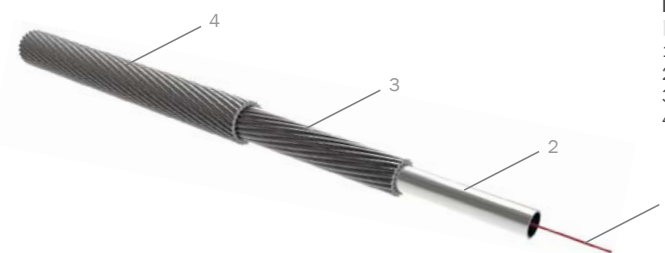
TECHNICAL CHARACTERISTICS

Designation	Number of conductors	Conductor cross-section	Electric resistance	Breaking load, not less than	Max. operating temperature	Outer cable diameter	Weight of 1 km in air
	ea	mm ²	Ohm/km	kN	°C	mm	kg/km
KGmt 1x0,35-150	1	0,35	57,0	1,2	150	2,0	17
KGt 1x0,35-10-125 O	1	0,35	57,0	10	125	7,0	164,1
KGmt 1x0,75-150	1	0,75	25,5	6	150	4,0	70
KGmt 1x0,75-10-150 O	1	0,75	25,5	10	150	7,1	109
VPmt 2x0,5-125	2	0,5	40,5	3,5	125	4,0	45,8
VPmt 2x0,5-90 Oa	2	0,5	40,5	3,5	90	7,0	72,5
VPmt 2x0,5-125 Oa	2	0,5	40,5	3,5	125	7,0	77,5
KG 2mt 1x0,35-150	1	0,35	57,0	1,5	150	2,0	22

OPTICAL CABLE FOR TELEMETRY MEASUREMENTS

MANUFACTURED IN ACCORD WITH AN INDIVIDUAL TECHNICAL SPECIFICATION OF A CUSTOMER

Optical cable is designed for telemetry measurements at surveys performed in oil and gas wells.



DESIGN:

- 1 - optical fiber
- 2 - steel tube
- 3 - 1-st wind of armour
- 4 - 2-nd wind of armour

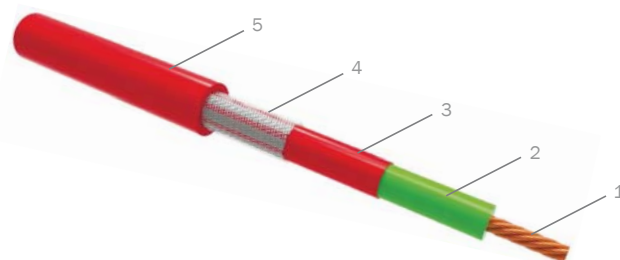
TECHNICAL CHARACTERISTICS

Designation	Number of fibers	Breaking load, not less than	Max. operating temperature	Outer cable diameter	Weight of 1 km in air
	ea	kN	°C	mm	kg/km
KG mtbp 1x1E-350	1	40	350	7,4	265
KG mtbp 1x2E-350	2	40	350	7,4	265
KG 2mtbp 2E-80	2	40	80	7,2	215
KG mtbp 4E-80	4	40	80	7,2	215
KG mtbp 8E-80	8	45	80	7,8	286
OK 2,8-2E-80	2	10	80	6,2	157

HEATING CABLE FOR ELECTRIC HEATING SYSTEMS APPLIED TO FACILITIES OF OIL AND GAS INDUSTRY

TU 3558-001-36253509-2011

Heating cable for electric heating systems is designed for application at facilities of oil and gas industry.



DESIGN:

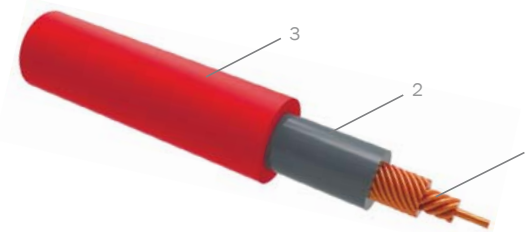
- 1 - current conductor
- 2 - polymer insulation
- 3 - barrier insulation
- 4 - screen
- 5 - outer polymer sheath

TECHNICAL CHARACTERISTICS

Designation	Conductor cross-section	Nominal outer diameter	Design weight of cable, not over	Max. temperature of heating	Rated electric resistance of conductor	Max. voltage of AC (DC) of a conductor	Let-go current (max. allowable current)
	mm ²	mm	kg/km	°C	Ohm/km	V	A
KnMnNbFe-1,0-1000-200	1,0	5,33	83,0	200	17,8	660 (1000)	38
KnMnNbFe-1,0-1000-260	1,0	5,33	83,0	260	17,8	660 (1000)	38
KnMnNbFe-1,5-1000-200	1,5	5,63	62,4	200	11,7	660 (1000)	48
KnMnNbFe-1,5-1000-260	1,5	5,63	62,4	260	11,7	660 (1000)	48
KnMnNbFe-2,0-1000-200	2,0	5,93	102,7	200	9,5	660 (1000)	54
KnMnNbFe-2,0-1000-260	2,0	5,93	102,7	260	9,5	660 (1000)	54
KnMnNbFe-2,5-1000-200	2,5	6,08	108,5	200	7,2	660 (1000)	62
KnMnNbFe-2,5-1000-260	2,5	6,08	108,5	260	7,2	660 (1000)	62
KnMnNbFe-3,0-1000-200	3,0	6,33	132,8	200	6,1	660 (1000)	68
KnMnNbFe-3,0-1000-260	3,0	6,33	132,8	260	6,1	660 (1000)	68
KnMnNbFe-4,0-1000-200	4,0	6,63	145,5	200	4,4	660 (1000)	79
KnMnNbFe-4,0-1000-260	4,0	6,63	145,5	260	4,4	660 (1000)	79
KnMnNbFe-6,0-1000-200	6,0	7,59	178,8	200	2,9	660 (1000)	98
KnMnNbFe-6,0-1000-260	6,0	7,59	178,8	260	2,9	660 (1000)	98
KnMnNbFe-10,0-1000-200	10,0	8,13	224,0	200	1,87	660 (1000)	123
KnMnNbFe-10,0-1000-260	10,0	8,13	224,0	260	1,87	660 (1000)	123

TU 3558-001-36253509-2011

Heating cable for electric heating systems is designed for application at facilities of oil and gas industry.



DESIGN:

- 1 - current conductor
- 2 - polymer insulation
- 3 - outer polymer sheath

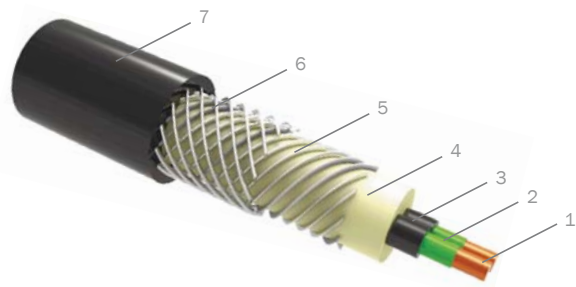
TECHNICAL CHARACTERISTICS

Designation	Conductor cross-section	Nominal outer diameter	Design weight of cable, not over	Max. temperature of heating	Rated electric resistance of conductor	Max. voltage of AC (DC) of a conductor
	mm ²	mm	kg/km	°C	Ohm/km	B
KnMNF-16,0-1000-200	16,0	9,25	278,7	200	1,24	1000
KnMNF-16,0-1000-260	16,0	9,25	278,7	260	1,24	1000
KnMNF-25,0-1000-200	25,0	10,6	376,7	200	0,79	1000
KnMNF-25,0-1000-260	25,0	10,6	376,7	260	0,79	1000
KnMNF-35,0-1000-200	35,0	11,95	490,6	200	0,56	1000
KnMNF-35,0-1000-260	35,0	11,95	490,6	260	0,56	1000
KnMNF-50,0-1000-200	50,0	13,6	651,2	200	0,40	1000
KnMNF-50,0-1000-260	50,0	13,6	651,2	260	0,40	1000
KnMNF-16,0-3000-200	16,0	10,65	332,8	200	1,24	3000
KnMNF-16,0-3000-260	16,0	10,65	332,8	260	1,24	3000
KnMNF-25,0-3000-200	25,0	12,0	437,5	200	0,79	3000
KnMNF-25,0-3000-260	25,0	12,0	437,5	260	0,79	3000
KnMNF-35,0-3000-200	35,0	13,35	557,9	200	0,56	3000
KnMNF-35,0-3000-260	35,0	13,35	557,9	260	0,56	3000
KnMNF-50,0-3000-200	50,0	15,0	726,5	200	0,40	3000
KnMNF-50,0-3000-260	50,0	15,0	726,5	260	0,40	3000
KnMNF-16,0-6000-200	16,0	12,85	433,0	200	1,24	6000
KnMNF-16,0-6000-260	16,0	12,85	433,0	260	1,24	6000
KnMNF-25,0-6000-200	25,0	14,2	548,2	200	0,79	6000
KnMNF-25,0-6000-260	25,0	14,2	548,2	260	0,79	6000
KnMNF-35,0-6000-200	35,0	15,55	679,1	200	0,56	6000
KnMNF-35,0-6000-260	35,0	15,55	679,1	260	0,56	6000
KnMNF-50,0-6000-200	50,0	17,2	860,6	200	0,40	6000
KnMNF-50,0-6000-260	50,0	17,2	860,6	260	0,40	6000

GEOPHYSICAL LOAD-CARRYING ARMoured CABLE OF CIRCULAR CROSS-SECTION FOR HEAT LOSSES COMPENSATION DEVICES (HEATING)

TU 3585-002-24118545-2004

Cable of this type is designed for heat losses compensation devices in oil wells.



DESIGN:

- 1 - current conductor
- 2 - 1-st layer of polymer insulation
- 3 - 2-nd layer of polymer insulation
- 4 - inner polymer sheath
- 5 - 1-st wind of armour
- 6 - 2-nd wind of armour
- 7 - outer polymer sheath

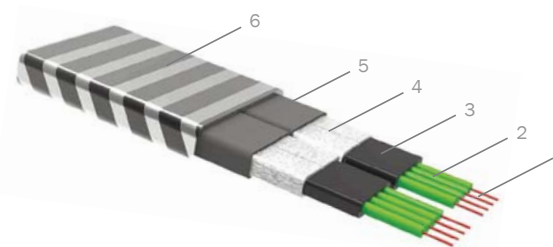
TECHNICAL CHARACTERISTICS

Designation	Conductor cross-section	Conductor material	Nominal outer diameter	Design weight of cable, not over	Max. operating temperature	Cable breaking load, not less than	Rated electric resistance of conductor	Let-go current (max. allowable current)
	mm ²		mm	kg/km	°C	kN	Ohm/km	A
KGnMP 12/2x1,5-50-90 Oa	1,5	Copper	25,3	900	90	50	12,2	120
KGnMP 12/2x2,0-50-90 Oa	2,0	Copper	25,3	872	90	50	10,9	125
KGnMP 2x12-50-90 Oa	12,0	Copper	22,0	814	90	50	0,6	175
KGnAP 2x16-50-90 Oa	16,0	Aluminium	25,0	725	90	50	3,5	140
KGnAP 2x25-50-90 Oa	25,0	Aluminium	25,0	745	90	50	2,8	140
KGnAP 2x35-50-90 Oa	35,0	Aluminium	28,1	1010	90	50	0,8	140
KGnAP 2x50-50-90 Oa	50,0	Aluminium	27,0	1340	90	50	0,6	230
KGnAP 12/2x2,4-50-90 Oa	2,4	Aluminium	27,0	938	90	50	4,3	120
KGnAP 14/2x2,0-50-90 Oa	2,0	Aluminium	27,0	936	90	50	4,3	120
KGnAP 14/2x2,9-50-110 Oa	2,9	Aluminium	31,0	1123	110	50	3,1	125
KGnAP 12/2x2,4-50-90 Oa	2,4	Aluminium	27,0	938	90	50	4,3	120
KGnAP 14/2x2,0-50-90 Oa	2,0	Aluminium	27,0	936	90	50	4,3	120
KGnAP 14/2x2,9-50-110 Oa	2,9	Aluminium	31,0	1123	110	50	3,1	125

GEOPHYSICAL LOAD-CARRYING ARMoured CABLE (FLAT) FOR HEAT LOSSES COMPENSATION DEVICES (HEATING)

TU 3585-002-24118545-2004

Cable of this type is designed for heat losses compensation devices in oil wells.



DESIGN:

- 1 - current conductor
- 2 - 1-st layer of polymer insulation
- 3 - 2-nd layer of polymer insulation
- 4 - aluminium tape
- 5 - cable bedding
- 6 - armour

TECHNICAL CHARACTERISTICS

Designation	Conductor cross-section	Conductor material	Nominal cable sizes	Design weight of cable, not over	Max. operating temperature	Cable breaking load, not less than	Rated electric resistance of conductor	Let-go current (max. allowable current)
	mm ²		mm	kg/km	°C	kN	Ohm/km	A
KnPASP 3x8,0-90	8,0	Aluminium	13x35	915	90	-	3,2	70
KnPMSP 3x12,0-90	12,0	Copper	13x35	1251	90	-	1,65	110
KnPASP 3x14,0-90	14,0	Aluminium	13x35	1025	90	-	2,0	100
KnPMSP (8/2x2,0)-90-50	2,0	Copper	11x41	868	90	50	9,5	120
KnPMSP (8/2x2,0)-90	2,0	Copper	12x35	1048	90	-	9,5	120
KnPASP (8/2x2,5)-90	2,5	Aluminium	12x35	960	90	-	9,5	120
KnPASP (8/2x3,1)-90	3,1	Aluminium	13x40	1240	90	-	9,6	120
KnPASP (8/2x4,1)-90	4,1	Aluminium	13,3x42	1200	90	-	7,2	120
KnPSSP (9/3x2,3)-90	2,3	Steel	12x46,5	1375	90	-	29,0	30



EQUIPMENT

ASSOCIATED EQUIPMENT FOR GSPT (FLEXIBLE STEEL- POLYMER PIPE) AND UMBILICAL OPERATION

CONCENTRIC TUBING (KLK) BASED ON GSPT (FLEXIBLE STEEL-POLYMER PIPE)

THE SET OF EQUIPMENT INCLUDES:

- injector;
- pay off-take up unit;
- blowout prevention equipment;
- 4-section preventer.

The equipment is mobile. It can be densely placed and transported on the truck platform.



INJECTOR

Injector is designed for deployment of flexible steel-polymer pipes in oil and gas wells and their further withdrawing.



TECHNICAL CHARACTERISTICS

Parameter	Value	
Tractive effort, kN	50	150
Speed, m/h	up to 1500	
Min. operating temperature, °C	-40	
Overall dimensions LxHxB, mm	1260x1770x1040	1500x2000x1600
Drive type	Remote hydraulic	

PAY OFF-TAKE UP UNIT

Pay off-take up unit is designed for receiving and ordered laying of a steel-polymer pipe on a reel, as well as its even pay-off from the reel.



TECHNICAL CHARACTERISTICS

Parameter	Value
Carrying capacity on reel # 36, t	15
Diameters of received reels, m	0,8...3,6
Max. tractive effort, N	3000
Speed of winding, m/min	100
Diameter of received pipe, mm	15...90
Drive type	Hydraulic or electric

BLOWOUT PREVENTION EQUIPMENT

DOUBLE-SECTION SEALER

Sealer is designed for sealing wellheads and preventing blowouts and wild flowings at exploration, development and exploitation of oil and gas wells by means of flexible steel-polymer pipe.

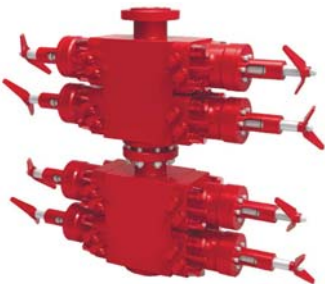


TECHNICAL CHARACTERISTICS

Parameter	Value
Bore diameter, mm	up to 100
Diameter of sealed pipes, mm	15...90
Operating pressure, MPa	25
Temperature of operating environment, not over °C	100
Control	Remote hydraulic, manual

4-SECTION PREVENTER

Preventer is designed for sealing wellheads to prevent oil and gas showings and wild flowings at well exploration, workovers, and development of oil and gas wells by means of flexible steel-polymer pipe.



TECHNICAL CHARACTERISTICS

Parameter	Value
Bore diameter, mm	up to 100
Diameter of sealed pipes, mm	15...90
Operating pressure, MPa	25
Temperature of operating environment, not over °C	100
Control	Remote hydraulic, manual

ASSOCIATED EQUIPMENT FOR HEATING CABLE OPERATION

WELL HEATING UNIT UPS

TU 3434-001-24112545-2004

Control station UPS is designed for monitoring and control of the heating process performed by:

- heating cables;
- well heaters;
- systems for pipe heating.

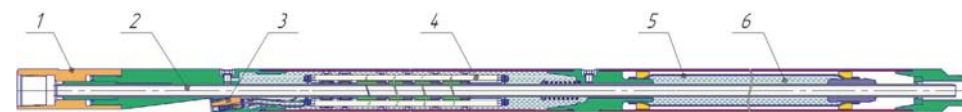


TECHNICAL CHARACTERISTICS

Designation	UPS 150-00-80-MKM	UPS 150-07-100-MKM	UPS 250-8-250-KT	UPS 50-07-40-MKM
Subject to control	Heating cable	Heating cable	Pipeline heating	Well electric heaters
Supply voltage, V	3/380	3/380	3/380	3/380
Voltage of step-up transformer, V	-	611	960	611
Power frequency, Hz	50	50	50	50
Power, kW	80	100	250	40
Max. voltage of direct current efficiency, V	500	900	~3x950	900
Max. current of output, A	150	150	170	50
Max. temperature of the subject to control, °C	100	100	100	180
Min. discreteness of temperature setting, °C	1	1	1	1
Type of temperature sensors	TSM-50, TSP-100	TSM-50, TSP-100	TSP-1000	TSP-2000
Overall dimensions, mm	500x600x1700	500x600x1700	500x600x1700	500x600x1700
Weight, kg	200	200	200	200

STATIONARY ELECTRIC WELL HEATERS

Stationary electric well heaters are designed for compensation of heat losses in oil wells.



DESIGN:

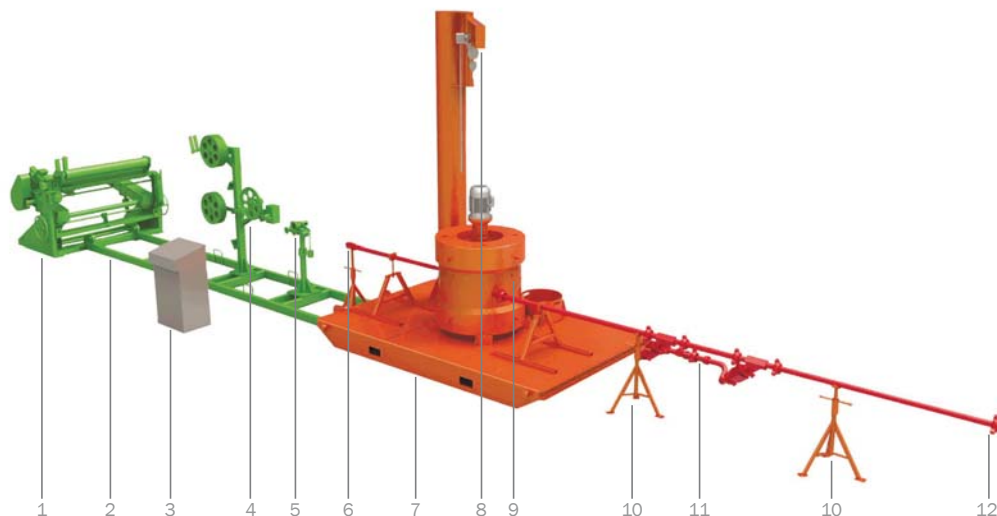
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|-----------------------------|----------------------|-------------------------|
| 1 - housing | 3 - cable entry | 5 - hydraulic damper |
| 2 - inner hydraulic channel | 4 - heating elements | 6 - heat-transfer agent |

TECHNICAL CHARACTERISTICS

Designation	SNT(n)-45	SNT(n)-35	SNT(n)-20	SNT(n)-20U	SNT(n)-15
Rated power, kW	45±8	35±8	20±5	20±5	15±2
Outer diameter, mm	112	120	120	112	80
Length of a heater, mm	10000	4500	4500	4500	5200
Rated pressure, MPa	30	30	30	30	30
Power voltage, V	790	820	790	790	820
Max. temperature, °C	180	180	180	180	180
Diameter of hydraulic channel, mm	-	24	24	-	-

CABLE REEVING LINE

The line is designed for reeving logging cables in polymer armoured pipes or coiled tubings of different diameters wound on reels.



DESIGN:

- | | | |
|----------------------------------|-------------------|---|
| 1 - pay off-take up | 5 - meter counter | 9 - reeving cable unit |
| 2 - frame for equipment fixation | 6 - sealing head | 10 - support stands |
| 3 - control panel | 7 - platform | 11 - manifold block |
| 4 - compensator | 8 - manual hoist | 12 - point of connection to a reeled pipe |

TECHNICAL CHARACTERISTICS

Parameter	Value
Operating pressure, MPa	70
Speed of cable reeving, m/min	up to 50
Fluid consumption, m³/h	up to 45
Length of reeved cable, km	up to 5
Type of drive	electric
Operating environment	water



FITTINGS FOR FLEXIBLE PIPELINES. EQUIPMENT FOR FITTINGS INSTALLATION

Fittings can be installed in both plant and field conditions. Fittings installation is performed with the help of hydraulic press PG.



STANDARTS AND LICENSES



FOR NOTES



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