



OIL AND GAS INDUSTRY PRODUCTS

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ABOUT THE COMPANY

SKT-SERVICE LLC

- 250+ units of equipment
- 4 production sites
- Research laboratory
- close cooperation with scientific institutes and operating oil companies (Rosneft, Gazprom, Lukoil, Transneft, Surgutneftegas)
- 200+ business partners

We produce:

- Flexible polymer reinforced pipelines
- Capillary pipes
- Flexible steel-polymer pipes and umbilicals
- Equipment for oil and gas services
- Welding machines and complexes
- Transformers

SKT-SERVICE LLC is a part of the leading independent industrial and metallurgical holding in Russia – Akron Holding Group of Companies.

SKT-SERVICE unites and manages the assets and production facilities of two largest enterprises – Pskovgeokabel and Pskovelektrosvar.

CABLE AND PIPELINE SYSTEMS

FLEXIBLE COMPOSITE PIPES

TU* 22.21.21-127-32990926-2022

*TU – Technical Specification (Standard)

Flexible polymer reinforced pipes are designed for transportation of oil products, gas, water and other fluids under high pressure.



DESIGN:

- 1 – polymer pipe (hydrochannel)
- 2 – reinforcing elements
- 3 – external polymer sheath

TECHNICAL SPECIFICATIONS

Name	Nominal inside diameter	Nominal outside diameter	Working pressure	Calculated weight	Min, storage radius	Min, working radius	Max, construction length	Design weight of construction length (with containers)
	mm	mm	MPa	kg/m	m	m	m	kg
KTS 50/75-6,3	50	75	6,3	4,7	0,65	0,75	1 200	6 640
KTS 50/75-10	50	75	10	5,3	0,65	0,75	1 200	7 360
KTS 50/80-20	50	80	20	7,2	0,65	0,75	800	6 760
KTS 65/90-6,3	65	90	6,3	5,6	0,70	0,80	1 150	7 490
KTS 65/90-10	65	90	10	6,3	0,70	0,80	1 150	8 295
KTS 65/90-20	65	90	20	9,3	0,70	0,80	700	7 510
KTS 80/105-6,3	80	105	6,3	7,2	0,90	1,00	1 100	9 020
KTS 80/105-10	80	105	10	8,0	0,90	1,00	1 100	9 900
KTS 80/110-20	80	110	20	12,4	0,90	1,00	650	9 130
KTS 100/125-6,3	100	125	6,3	9,0	1,00	1,15	580	6 320
KTS 100/130-10	100	130	10	12,1	1,00	1,15	540	7 634
KTS 100/130-16	100	130	16	15,3	1,00	1,15	540	9 362
KTS 125/155-6,3	125	155	6,3	12,9	1,20	1,30	340	5 486
KTS 125/160-10	125	160	10	18,1	1,20	1,30	340	7 254
KTS 125/160-16	125	160	16	23,5	1,20	1,30	340	9 090
KTS 140/180-6,3	140	180	6,3	17,5	1,40	1,60	200	4 600
KTS 140/180-10	140	180	10	24,6	1,40	1,60	200	6 020
KTS 140/185-16	140	185	16	28,0	1,40	1,60	200	6 700

Operating temperature range +60°C/-60°C

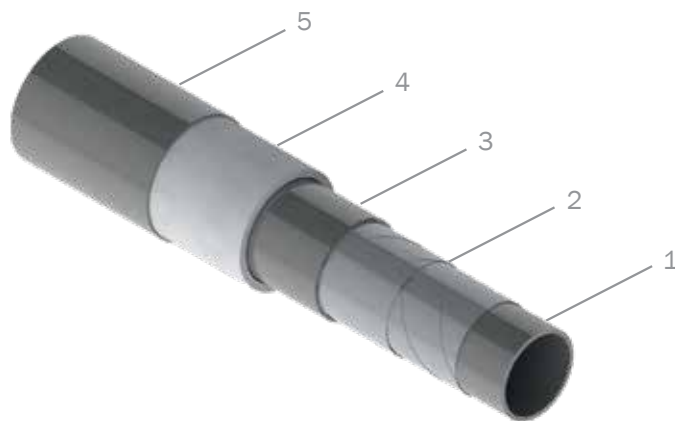
At the request of the customer, the flexible polymer reinforced pipe can be manufactured with other strength and temperature characteristics.

FLEXIBLE COMPOSITE PIPES WITH A HEAT-INSULATING LAYER

TU* 22.21.21-127-32990926-2022

*TU – Technical Specification (Standard)

Flexible polymer reinforced pipes with a heat-insulating layer are designed for transportation of oil products, gas, water and other fluids under high pressure in cold climate areas.



DESIGN:

- 1 – polymer pipe (hydrochannel)
- 2 – reinforcing elements
- 3 – intermediate polymer sheath
- 4 – thermal insulation layer
- 5 – external polymer sheath

TECHNICAL SPECIFICATIONS

Name	Nominal inside diameter	Nominal outside diameter	Working pressure	Calculated weight	Min, storage radius	Min, working radius	Max, construction length	Design weight of construction length (with containers)
	mm	mm	MPa	kg/m	m	m	m	kg
KTS 50/105-6,3 T	50	105	6,3	7,5	0,85	0,95	930	8 075
KTS 50/105-10 T	50	105	10	8,1	0,85	0,95	930	8 633
KTS 50/110-20 T	50	110	20	10,0	0,85	0,95	800	9 100
KTS 65/120-6,3 T	65	120	6,3	8,7	0,95	1,05	710	7 277
KTS 65/120-10 T	65	120	10	9,4	0,95	1,05	710	7 774
KTS 65/120-20 T	65	120	20	12,5	0,95	1,05	680	9 600
KTS 80/135-6,3 T	80	135	6,3	10,8	1,05	1,15	510	6 608
KTS 80/135-10 T	80	135	10	11,6	1,05	1,15	510	7 016
KTS 80/140-20 T	80	140	20	16,1	1,05	1,15	370	7 057
KTS 100/155-6,3 T	100	155	6,3	13,1	1,25	1,35	230	4 113
KTS 100/160-10 T	100	160	10	16,3	1,25	1,35	230	4 849
KTS 100/160-16 T	100	160	16	19,6	1,25	1,35	230	5 608
KTS 125/185-6,3 T	125	185	6,3	17,9	1,35	1,45	200	4 680
KTS 125/190-10 T	125	190	10	23,3	1,35	1,45	200	5 760
KTS 125/195-16 T	125	195	16	28,8	1,35	1,45	180	6 284
KTS 140/210-6,3 T	140	210	6,3	23,2	1,45	1,65	80	2 956
KTS 140/210-10 T	140	210	10	30,5	1,45	1,65	80	3 540
KTS 140/215-16 T	140	215	16	33,9	1,45	1,65	80	3 812

Operating temperature range +60°C/-60°C

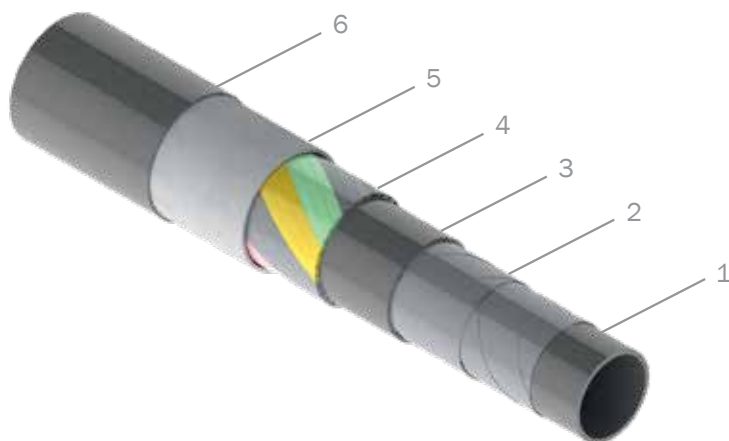
At the request of the customer, a flexible polymer reinforced pipe with a heat-insulating layer can be manufactured with other strength and temperature characteristics.

FLEXIBLE COMPOSITE PIPES WITH ELECTRIC HEATING

TU* 22.21.21-127-32990926-2022

*TU – Technical Specification (Standard)

Flexible polymer reinforced pipes with electric heating are designed for transportation of oil products, gas, water and other fluids under high pressure in cold climate areas.



DESIGN:

- 1 – polymer pipe (hydrochannel)
- 2 – reinforcing elements
- 3 – intermediate polymer sheath
- 4 – heating elements
- 5 – thermal insulation layer
- 6 – external polymer sheath

TECHNICAL SPECIFICATIONS

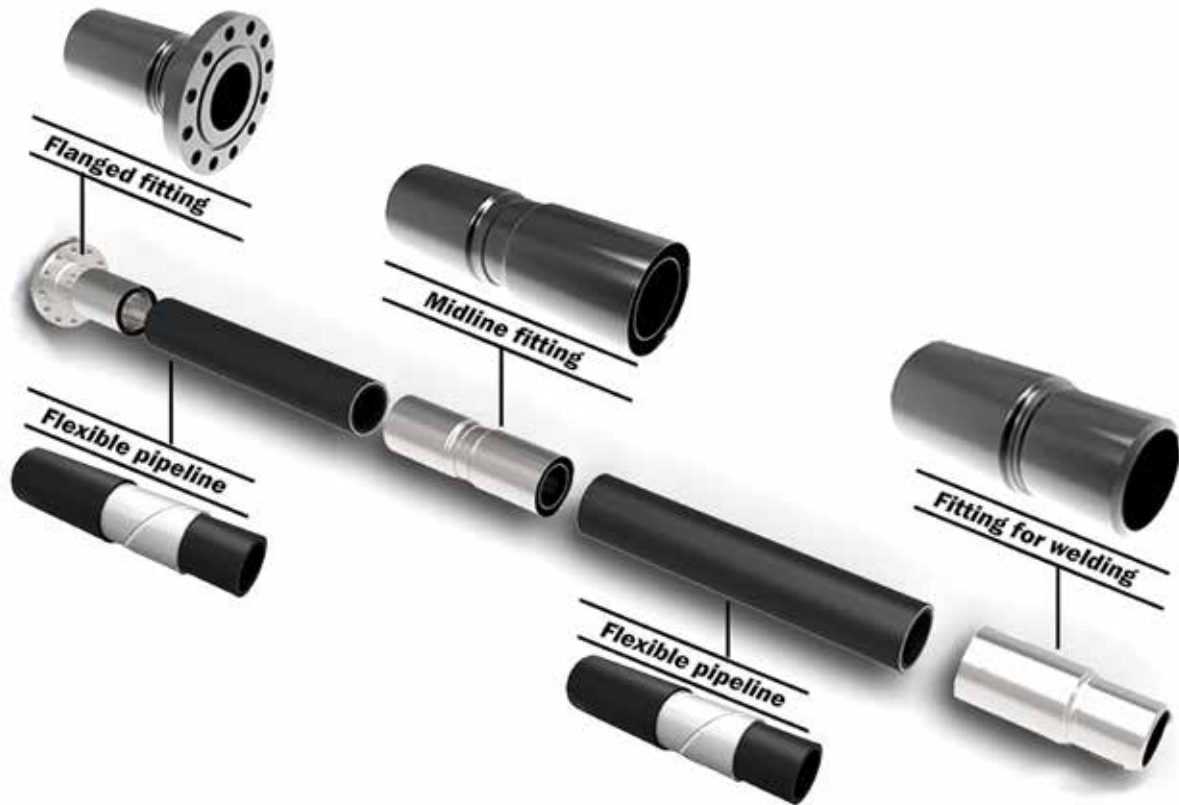
Name	Nominal inside diameter	Nominal outside diameter	Working pressure	Calculated weight	Min, storage radius	Min, working radius	Max, construction length	Design weight of construction length (with containers)
	mm	mm	MPa	kg/m	m	m	m	kg
KTS 50/105-6,3 EP	50	105	6,3	9,5	0,85	0,95	590	6 705
KTS 50/105-10 EP	50	105	10	10,7	0,85	0,95	590	7 413
KTS 50/110-20 EP	50	110	20	11,8	0,85	0,95	560	7 708
KTS 65/120-6,3 EP	65	120	6,3	10,3	0,95	1,05	530	6 559
KTS 65/120-10 EP	65	120	10	12,0	0,95	1,05	530	7 460
KTS 65/120-20 EP	65	120	20	13,2	0,95	1,05	530	8 096
KTS 80/140-6,3 EP	80	140	6,3	12,8	1,05	1,15	510	7 628
KTS 80/140-10 EP	80	140	10	14,7	1,05	1,15	510	8 597
KTS 80/145-20 EP	80	145	20	16,3	1,05	1,15	480	8 924
KTS 100/160-6,3 EP	100	160	6,3	15,6	1,25	1,35	230	4 688
KTS 100/160-10 EP	100	160	10	19,9	1,25	1,35	230	5 677
KTS 100/160-16 EP	100	160	16	22,2	1,25	1,35	230	6 206
KTS 125/190-6,3 EP	125	190	6,3	23,7	1,35	1,45	200	5 840
KTS 125/190-10 EP	125	190	10	25,5	1,35	1,45	200	6 200
KTS 125/195-16 EP	125	195	16	28,1	1,35	1,45	180	6 158
KTS 140/210-6,3 EP	140	210	6,3	31,2	1,45	1,65	80	3 596
KTS 140/215-10 EP	140	215	10	35,4	1,45	1,65	80	3 932
KTS 140/220-16 EP	140	220	16	41,5	1,45	1,65	80	4 420

Operating temperature range +60°C/-60°C

At the request of the customer, a flexible polymer reinforced pipe with electric heating can be manufactured with other strength and temperature characteristics.

FITTINGS AND INSTALLATION EQUIPMENT

Fittings are designed to connect parts of flexible polymer reinforced pipes to each other and to technological equipment.



Press machine (fitting installation equipment) is intended to install fittings for welding and flanged fittings on polymer reinforced pipes with inside nominal diameter up to 140 mm.

HYDRAULIC PRESS MACHINE



Hydraulic press for installing pipe midline, flange fittings and fittings for welding.

HYDRAULIC PRESS MACHINE



Hydraulic press for installing pipe flange fittings and pipe fittings for welding.

FITTING INSTALLATION



CABLING AND PIPELINE SYSTEM



FLEXIBLE PIPELINE EQUIPMENT

RECEIVING AND PAYOFF DEVICE

The receiving and payoff device is designed to work with cable and pipeline systems in the winding and unwinding mode.



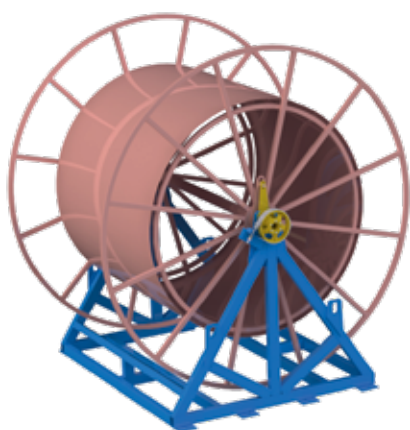
TECHNICAL SPECIFICATIONS

Parameter name	Meaning
Maximum reel diameter, mm	3 900
Maximum reel weight, kg	15 000
Maximum diameter of the flexible polymeric reinforced pipe used, mm	220
Maximum tractive effort, t	2,5
Winding speed, m/min	7,5/15

* The receiving and payoff device is powered by a diesel generator.

PAYOFF DEVICE

The payoff device is designed to work with cable and tube systems in unwinding mode.



TECHNICAL SPECIFICATIONS

Parameter name	Meaning
Maximum reel diameter, mm	3 900
Maximum reel weight, kg	15 000

* The payoff device is equipped with a band brake for smooth winding of a flexible polymer reinforced pipe.

PIPELINE HEATING STATION

The pipeline heating station is designed to control the electric heating system of the cable and pipe system.



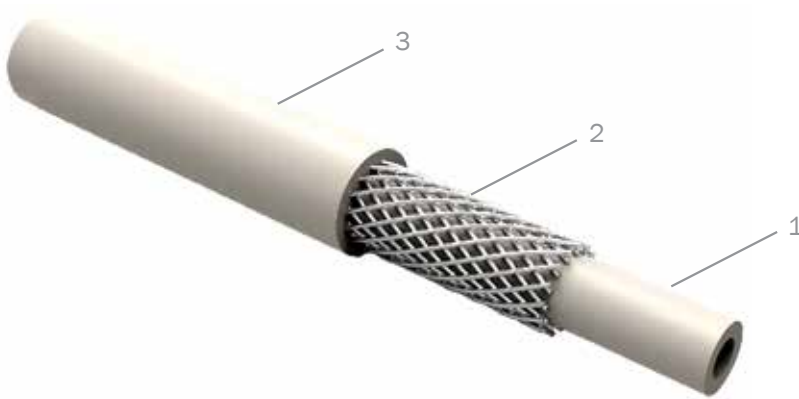
HIGH-PRESSURE CAPILLARY PIPES

CAPILLARY POLYMER PIPELINES

TU* 22.21.21-128-32990926-2022

*TU – Technical Specification (Standard)

Capillary high-pressure polymer pipelines are designed to supply chemical reagents to wells.



DESIGN:

- 1 – polymer tube
- 2 – armor layers
- 3 – external polymer sheath

TECHNICAL SPECIFICATIONS

Name	Nominal inside diameter	Nominal outside diameter	Working pressure	Breaking strength	Calculated weight	Min, bend radius	Max, operating temperature
	mm	mm	MPa	kN	kg/km	mm	°C
TG 5/15-15-20	5	15	15	20	270	300	90*
TG 7/16-15-20	7	16	15	20	280	320	
TG 8/17-15-20	8	17	15	20	290	340	
TG 5/11,5-10 MB	5	11,5	10	-	225	230	

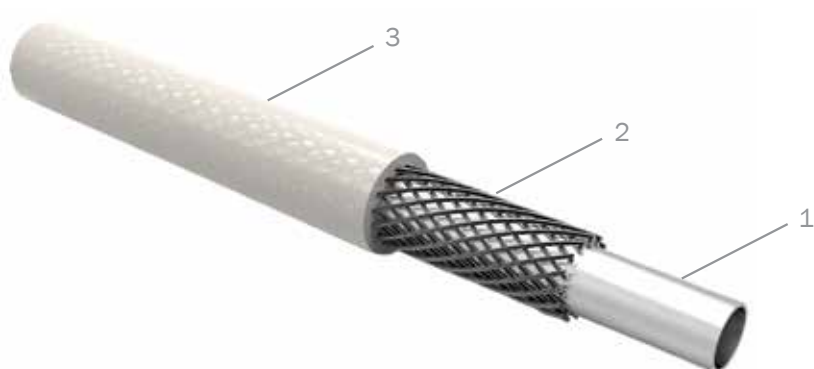
At the request of the customer, high-pressure polymer capillary pipelines can be manufactured with higher temperature resistance.

CAPILLARY POLYMER-METAL PIPELINES

TU* 22.21.21-128-32990926-2022

*TU – Technical Specification (Standard)

Capillary polymer-metal pipelines of high pressure are designed to supply chemical reagents to wells.



DESIGN:

- 1 – stainless steel tube
- 2 – armor layers
- 3 – external polymer sheath

TECHNICAL SPECIFICATIONS

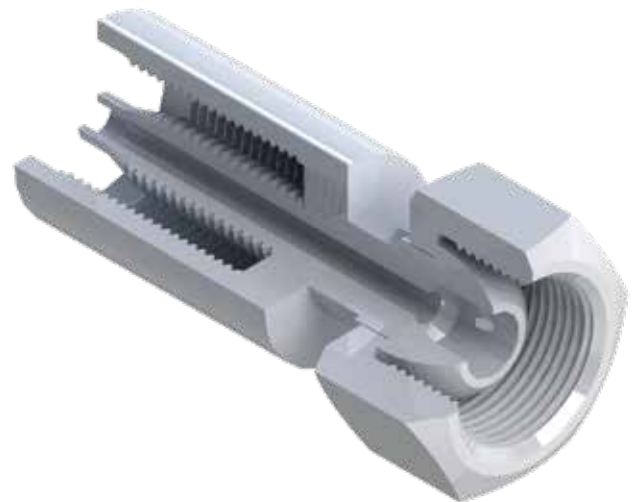
Name	Nominal inside diameter	Nominal outside diameter	Working pressure	Breaking strength	Calculated weight	Min, bend radius	Max, operating temperature
	mm	mm	MPa	kN	kg/km	mm	°C
TG 4/10-50-20 MT	3,6	10	50	20	175	200	120*
TG 4/12-50-20 MT	3,6	12	50	20	215	240	
TG 5/12-50-20 MT	4,8	12	50	20	190	240	

At the request of the customer, high-pressure polymer-metal capillary pipelines can be manufactured with higher temperature resistance.

CONNECTING ELEMENTS FOR HIGH-PRESSURE CAPILLARY PIPELINES

END CONNECTION ELEMENT

End connecting elements are designed to connect the capillary pipeline to the spray bar valve, dosing station, input device, etc.



REPAIR CONNECTION ELEMENT

Repair connecting elements are designed to connect two capillary pipelines.



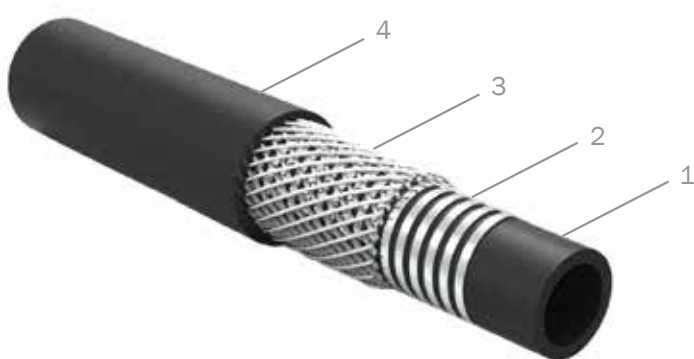
STEEL-POLYMER PIPES AND UMBILICALS

FLEXIBLE STEEL-POLYMER PIPES

TU* 22.21.21-128-32990926-2022

*TU – Technical Specification (Standard)

Flexible high-pressure steel-polymer pipes are designed for production, exploration, development and well workover operations.



DESIGN:

- 1 – polymer pipe
- 2 – reinforcing element
- 3 – armor layer
- 4 – external polymer sheath

TECHNICAL SPECIFICATIONS

Name	Nominal inside diameter	Nominal outside diameter	Working pressure	Breaking strength	Calculated weight	Min, bend radius	Max, operating temperature
	mm	mm	MPa	kN	kg/km	mm	°C
TG 15/28-20-50	15	28	20	50	1 000	560	+70*
TG 20/38-20-90	20	38	20	90	1 580	760	
TG 25/44-20-140	25	44	20	140	2 100	880	
TG 49/73-20-120	49	73	20	120	3 350	1 460	

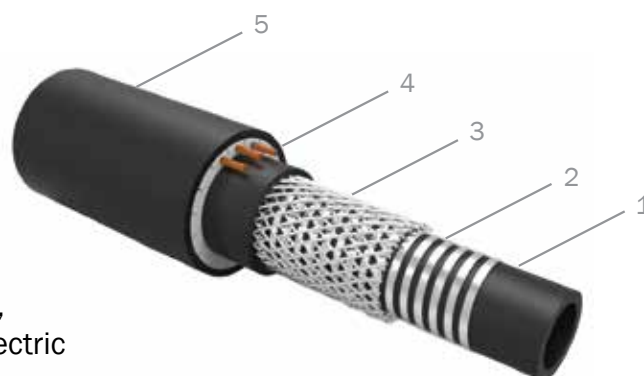
At the request of the customer, flexible high-pressure steel-polymer pipes can be manufactured with higher temperature resistance.

UMBILICALS

TU* 22.21.21-128-32990926-2021

*TU – Technical Specification (Standard)

UMBILICALS are designed for wells repair and study, operation of wells by installations of submersible electric centrifugal pumps.



DESIGN:

- 1 – polymer pipe
- 2 – reinforcing elements
- 3 – armor layers
- 4 – conductors
- 5 – external polymer sheath

Parameter name	Meaning
Nominal inside diameter, mm	up to 50
Operating pressure, MPa	up to 20
Breaking strength, kN	up to 300
Maximum operating temperature, °C	up to 70

CONNECTING ELEMENTS AND EQUIPMENT FOR STEEL-POLYMER PIPES AND UMBILICALS

END CONNECTING ELEMENT

End connecting elements are designed to connect a flexible steel-polymer pipe or umbilical to a downhole tool, a submersible electric centrifugal pump, an auxiliary tool.



INJECTOR

Injector is designed for lowering and lifting flexible steel-polymer pipes into oil and gas wells.

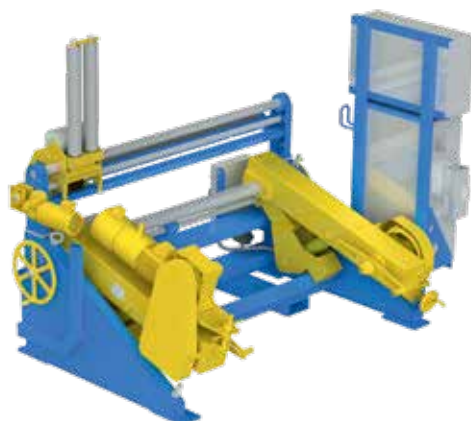


TECHNICAL SPECIFICATIONS

Parameter name	Meaning	
Bollard pull, kN	50	150
Speed, m/h	up to 1500	
Min, operating temperature, °C	-40	
Overall dimensions LxHxB, mm	1260x1770x1040	1500x2000x1600
Drive type	hydraulic	

RECEIVING AND PAYOFF DEVICE

Receiving and payoff device is designed for receiving and arranging flexible steel-polymer pipes on the reel and for smooth return of flexible steel-polymer pipes from the reel.



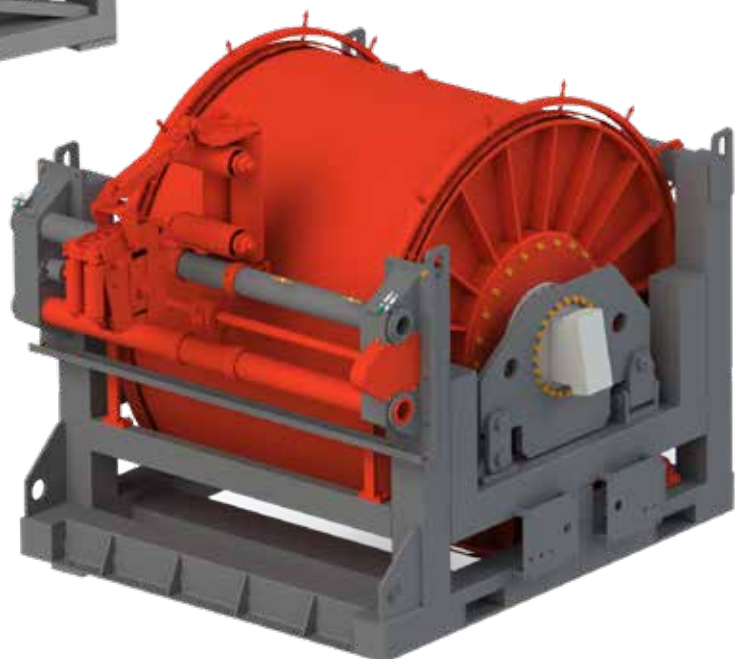
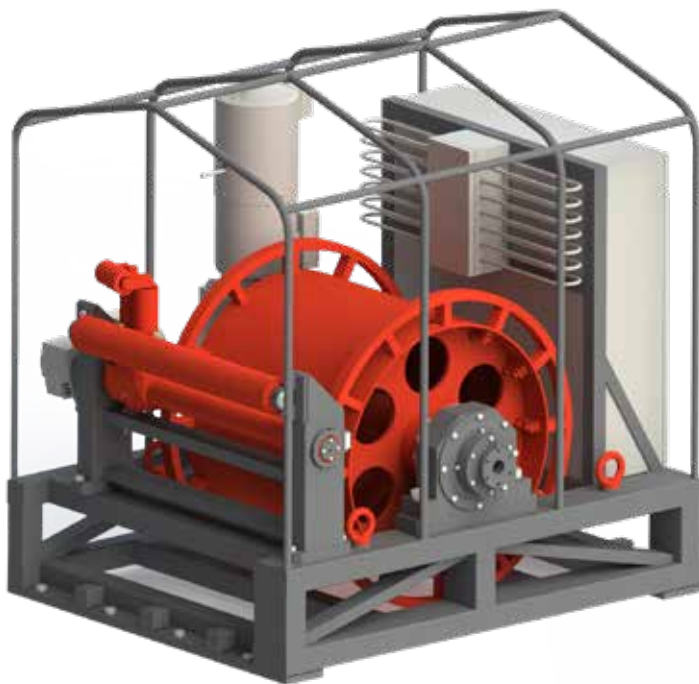
TECHNICAL SPECIFICATIONS

Parameter name	Meaning
Load capacity on reel 36, t	15
Received reel diameters, m	0,8...3,6
Maximum wireline pull, N	3000
Winding speed at diameter, m/min	100
Received GSPT diameter, mm	15...90
Drives type	hydraulic or electric

CABLE EQUIPMENT

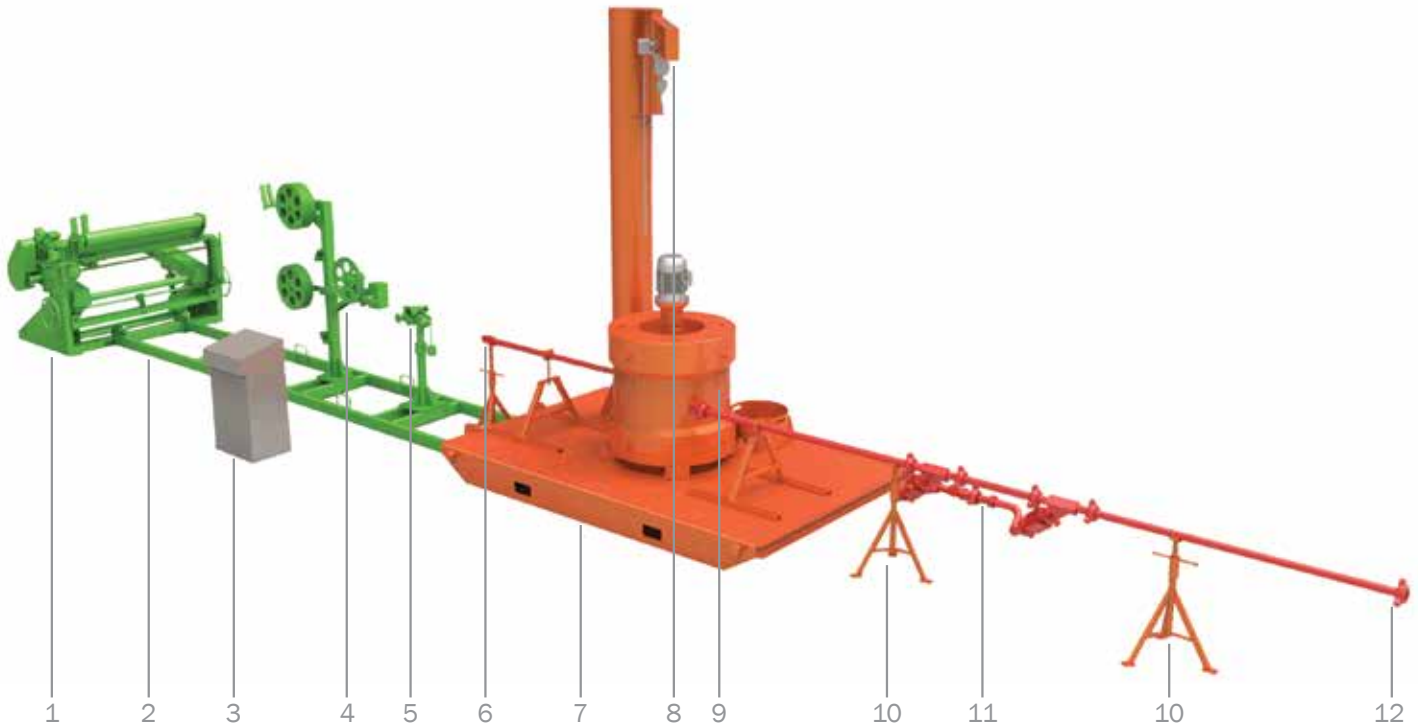
WINCHES

The winches are designed to perform various works on lifting and lowering cables, towed systems designed for working in oil and gas wells, and for conducting research and development works with the help of technical devices attached to the cable. There are two types of winches: open and closed.



CABLE REFILL LINE

The line is designed for refilling geophysical cables into coiled tubing pipe and umbilicals of various diameters wound on reels



DESIGN:

- 1 – receiving and payoff device
- 2 – equipment mounting frame
- 3 – remote control
- 4 – compensator
- 5 – meter counter
- 6 – sealing head
- 7 – platform
- 8 – hand hoist
- 9 – cable retainer
- 10 – support racks
- 11 – manifold unit
- 12 – pipe connection on the reel



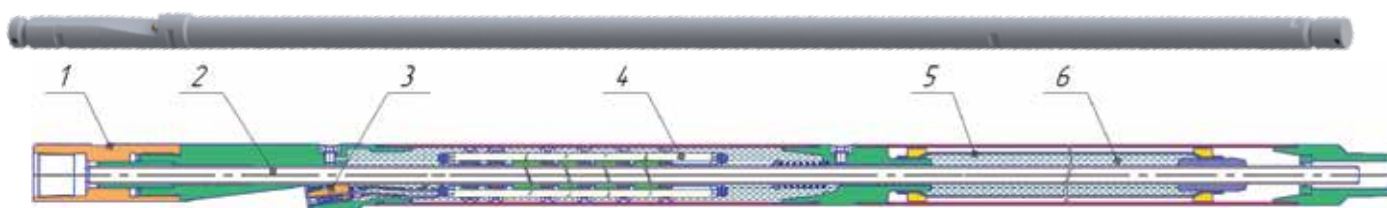
TECHNICAL SPECIFICATIONS

Parameter name	Meaning
Operating pressure, MPa	70
Cable reloading speed, m/min	up to 50
Liquid consumption, m3/h	up to 45
Stocked cable length, km	up to 5
Drives type	electrical
Working environment	water

EQUIPMENT AND CABLES FOR WELLS HEATING

DOWNHOLE STATIONARY ELECTRIC HEATER

The heater is used to transfer heat from the heating elements through the coolant to the bottom-hole zone and the borehole fluid passing through the internal hydraulic channel in the pipe.



DESIGN:

1 – body
2 – internal hydrochannel

3 – cable entry
4 – heating elements

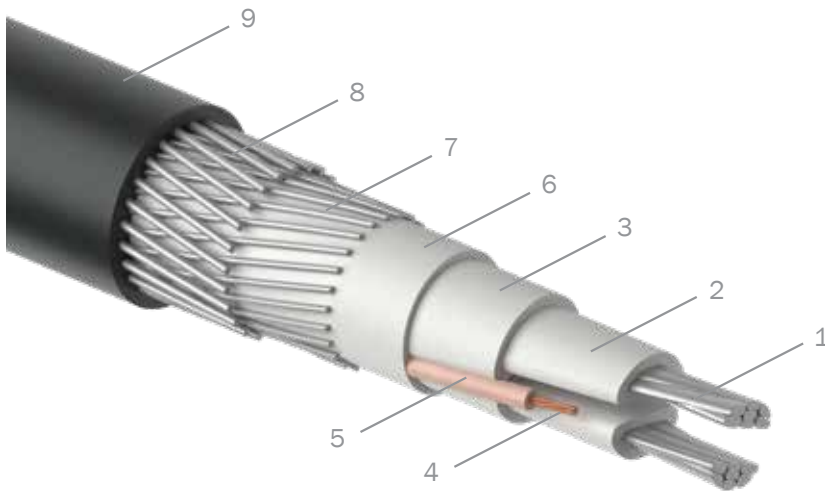
5 – hydraulic compensator
6 – coolant

TECHNICAL SPECIFICATIONS

Parameters	SNT - 35
Rated power, kW	35±5
Outer diameter, mm	120
Heater length, mm	4530
Nominal pressure, MPa	30
Supply voltage, V	680
Maximum temperature, °C	180
Diameter of hydraulic channel, mm	24

ROUND CROSS-SECTION GEOPHYSICAL LOAD-CARRYING ARMORED CABLE FOR HEAT LOSS COMPENSATION DEVICES (HEATING CABLE)

The cable is designed for electric heating of oil wells.



DESIGN:

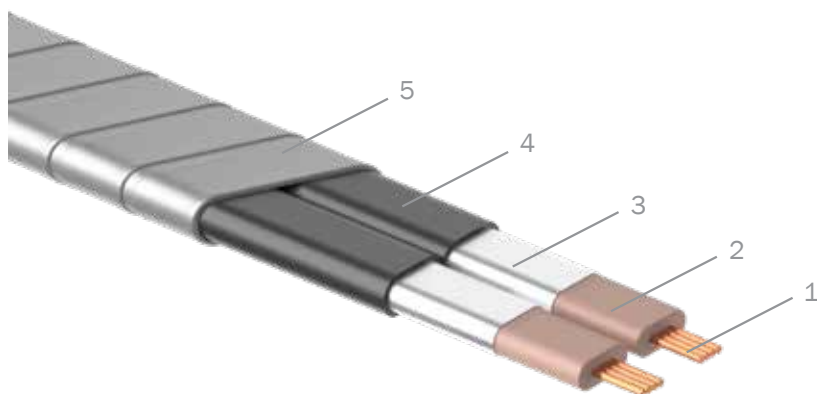
- 1 – conductor of heating elements
- 2 – polymer insulation
- 3 – intermediate polymer sheath
- 4 – current-carrying conductor
- 5 – current-carrying conductor insulation
- 6 – intermediate polymer sheath
- 7 – first armor layer
- 8 – second armor layer
- 9 – outer polymer sheath

TECHNICAL SPECIFICATIONS

Name	Core cross-section	Core material	Nominal outside diameter	Estimated cable weight, no more	Maximum operating temperature	Cable breaking strength, not less	Rated electrical resistance of the core	Maximum permissible current
	mm ²		mm	kg/km	°C	kN	Ohm/km	A
KGnMP 2x12-50-90 0a	12,0	Aluminum	22,0	814	90	50	0,6	120
KGnAP 2x16-50-90 0a	16,0	Aluminum	25,0	725	90	50	3,5	120
KGnAP 2x22-50-90 0a	22,0	Aluminum	25,0	745	90	50	2,8	120
KGnAP 2x25-50-90 0a	25,0	Aluminum	25,0	745	90	50	2,8	120

GEOPHYSICAL ARMORED FLAT CABLE FOR HEAT LOSS COMPENSATION DEVICES (HEATING CABLE)

The cable is designed for electric heating of oil wells



DESIGN:

- 1 – conductor
- 2 – layer of polymer insulation
- 3 – aluminum strip
- 4 – polymer sheath
- 5 – armor

TECHNICAL SPECIFICATIONS

Name	Core cross-section	Core material	Nominal outside diameter	Estimated cable weight, no more	Maximum operating temperature	Cable breaking strength, not less	Rated electrical resistance of the core	Maximum permissible current
	mm ²		mm	kg/km	°C	kN	ohm/km	A
KnPASP 3x8,0-90	8,0	Aluminum	13x35	915	90	-	3,2	70
KnPMSP 3x12,0-90	12,0	Copper	13x35	1 251	90	-	1,65	110
KnPASP 3x14,0-90	14,0	Aluminum	13x35	1 025	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	1 048	90	-	9,5	120
KnPASP (8/2x2,5) -90	2,5	Aluminum	12x35	960	90	-	9,5	120
KnPASP (8/2x3,1) -90	3,1	Aluminum	13x40	1 240	90	-	9,6	120
KnPASP (8/2x4,1) -90	4,1	Aluminum	13,3x42	1 200	90	-	7,2	120
KnPSSP (9/3x2,3) -90	2,3	Steel	12x46,5	1 375	90	-	29,0	30

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