PetroTool

PRODUCT / 2015

CATALOGUE

Company profile

Petro Tool Ltd is a supplier of a wide range of drilling products and performance services.

Since 2006 the company has maintained a reliable reputation as a supplier, partner and client with good background and future perspectives.

Services

• Field supervision, completion services for oil and gas production wells.

• Engineering support and field supervision for drilling directional and horizontal wells

• Engineering support and field supervision for drilling directional and horizontal wells using “Target” MWD system with EM signal

• Bit service offering drilling engineering for drilling process optimization:

• Mud service –Client oriented logistics.

• Rent and engineering supervision for Mud Motors, Bidirectional drilling jars as well as associated equipment and tools under specific requirements for size, assemblies and materials proven to operate in any drilling conditions

• Well sidetracks using specialized tools developed with in house R&D

• Engineering works & fabrication for ferrous, non-ferrous, stainless, non-magnetic, PTFE materials and spares.

• Non-destructive testing and examination of chemical oil and gas refining, explosion and fire hazardous production equipment. Field based control and testing using off-line operation tools and equipment including testing preparation (cleaning, washing)

• Manual, electrical arc, laser welding services and soldering.

Production and repair

• Rock cutting tools (fixed cutter PDC bits design and production)

• Cutting heads

• Emergency and fishing tools

• BHA components

• Varied assembly parts and units, metal constructions for any type of industries.

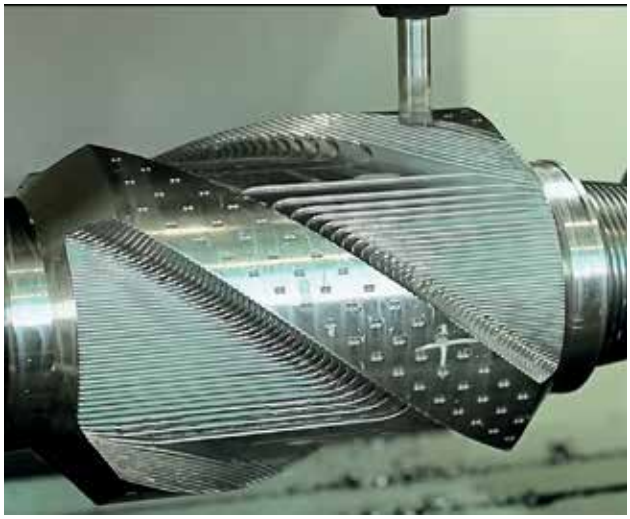
• Accomodation cabins

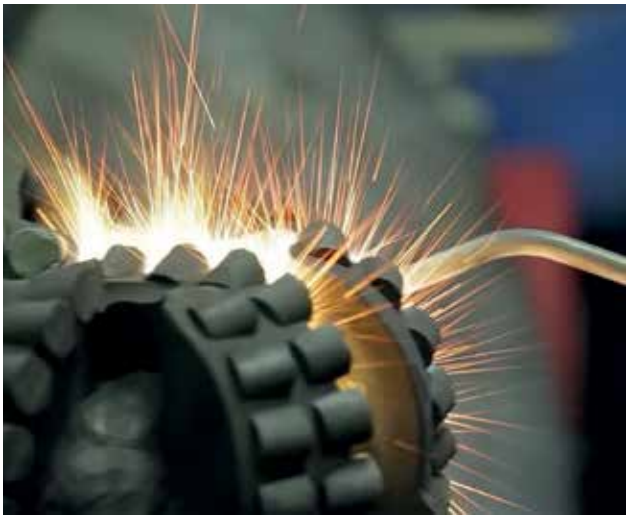
Petro Tool produces and supplies its products to Russia, Regional Countries in CIS and Foreign Markets. We provide repair and maintenance services for our own products as well as products manufactured in Russia and by foreign manufacturers as well.

The High performance of the company is supported by qualified staff with many years' experience in production management, design and services.

Petro Tool's production facilities are equipped with sophisticated production machines and tools (five-axis machining units manufactured in Germany, Japan, Switzerland), supported by design & engineering using world class computer-aided design systems (CAD) (SiemensNX, Creo company PTC).

Our Design is based on Clients technical requirements.





Our interests are not limited to markets in Russia and CIS countries, and extended throughout the world , including the Central and South- East Asia , Middle East, Africa , etc.

Petro Tool's major feature is a rapid response to the growing needs of the market, mobility and optimazitaion of available human, financial, innovation, technology and other resources to achieve goals and objectives.

With Petro Tool you have guaranteed protection of your interests and investments.

Сертификаты и дипломы

Integrated management systems certificate No РОСС RU.0001.13FK29:

GOST R ISO 9001-2008 (ISO 9001:2008),
Quality management system for design, production, sales, supply, maintenance & repair, warranty service on oilfield and drilling tools, spares, metal works and fabrication with major manufacturing engineering process.

Integrated management systems certificate No РОСС RU.0001.13FK29:

GOST R ISO 14001-2007 (ISO 14001:2008)
Environmental management system design, production, sales, supply, maintenance & repair, warranty service on oilfield and drilling tools, spares, metal works and fabrication with major manufacturing engineering process.

Integrated management systems certificate No РОСС RU.FK29.K00217:

GOST 12.0.230-2007, OHSAS 18000:2007
HSE management system for design, production, sales, supply, maintenance & repair, warranty service on oilfield and drilling tools, spares, metal works and fabrication with major manufacturing engineering process.

Quality Management System (ISO 9001:2008):

Quality Management System for design, development and production of drilling tools, core sampling, milling and other downhole equipment and tools in oil&gas industires.

License issued: American Petroleum Institute/Registration No. APIQR® 1540.

API Certificate of Registration ANSI/API Spec Q1

Quality Management System for design, development and production of drilling tools, core sampling, milling and other downhole equipment and tools in oil&gas industires.

License issued: American Petroleum Institute/Registration No. Q1-1362.

Laureate Diploma
«BASHKORTOSTAN BEST PRODUCTS»

“Petro Tool” drill string subs.

Laureate Diploma
«BASHKORTOSTAN BEST PRODUCTS»

“Petro Tool” PDC bits for drilling oil and gas wells.

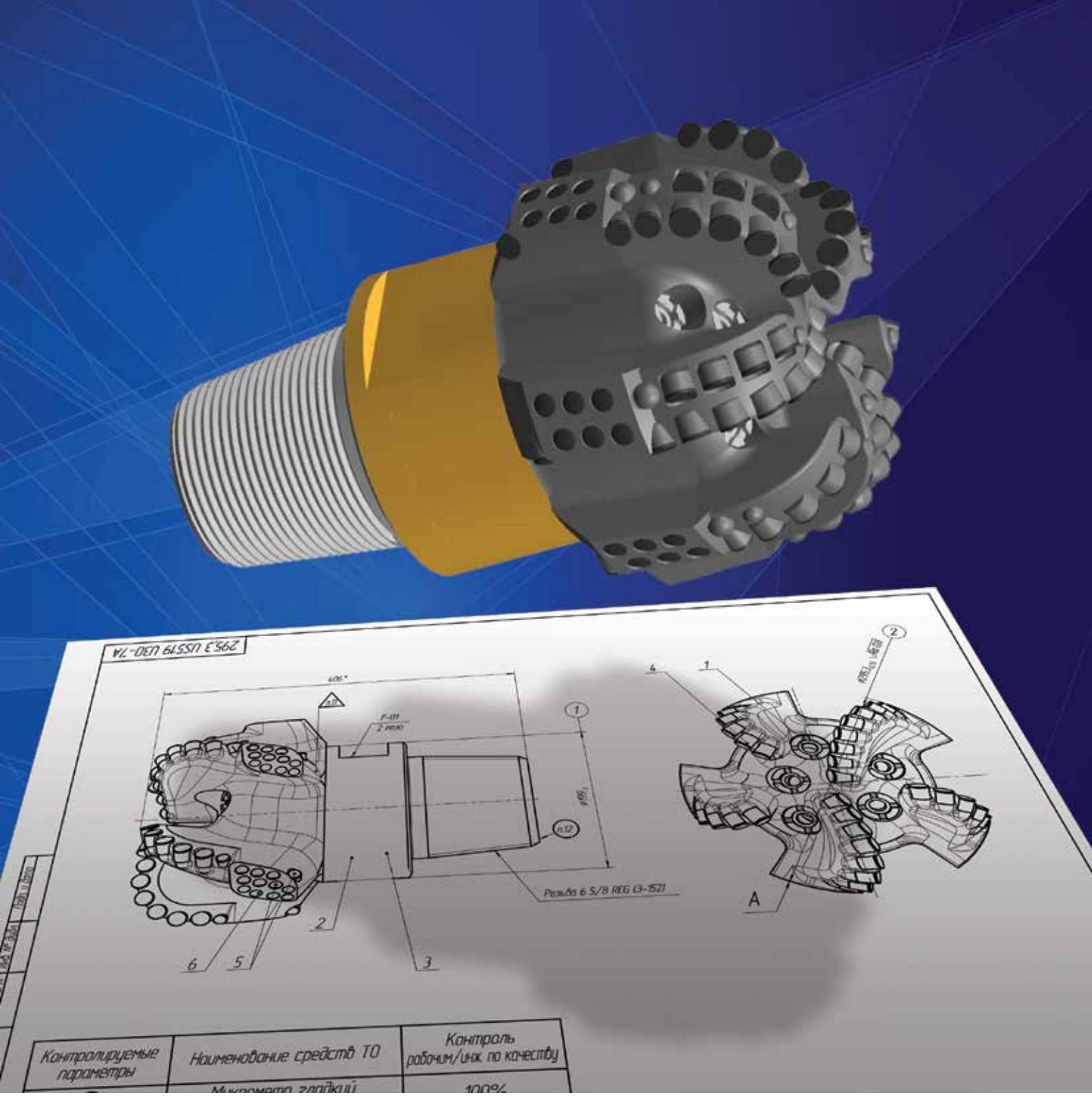
Laureate Diploma
«BASHKORTOSTAN BEST PRODUCTS»

“Petro Tool” non-destractive testing for oil&gas, chemical, explosion and fire hazardous production equipment.

Laureate Diploma
«BASHKORTOSTAN BEST PRODUCTS»

“Petro Tool” stabilizers for drilling oil and gas wells.

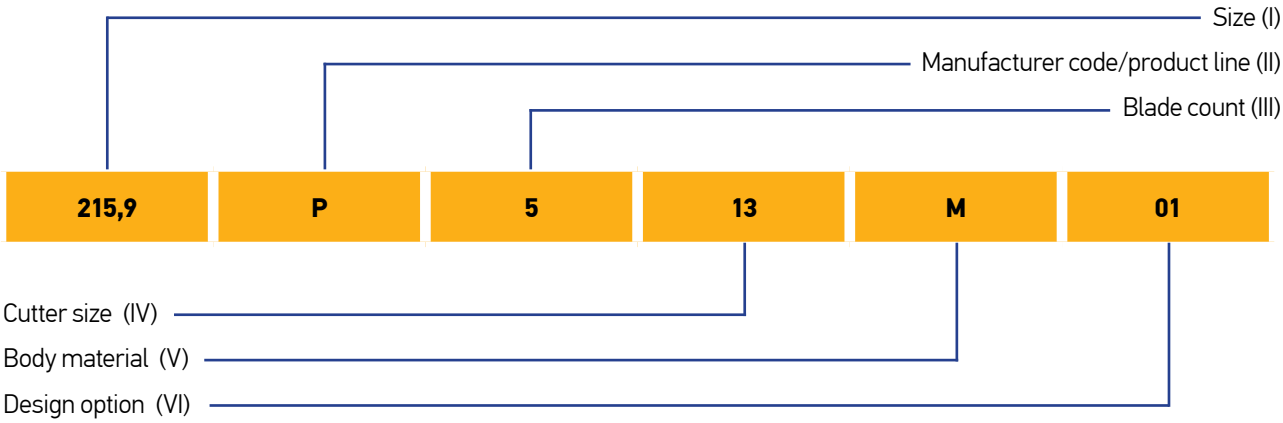

ТАМОЖЕННЫЙ СОЮЗ
СЕРТИФИКАТ СООТВЕТСТВИЯ
EAC
ТАМОЖЕННЫЙ СОЮЗ
СЕРТИФИКАТ СООТВЕТСТВИЯ
EAC
Certificate of Authority to use the Official API Monogram
License Number: 7-1-0958
UNIDRILL, JSC
14 Novosmirnovskaya Street
Izhevsk, Udmurt Republic
Russian Federation
American Petroleum Institute
API Spec 7-1
7-1-0958
The scope of this license includes the following product: PDC Bits
QMS Exclusions: Section 7.5.4, Customer Property
Effective Date: JUNE 30, 2011
Expiration Date: JUNE 30, 2014



ROCK CUTTING TOOL

Rock cutting tool

BITS DESIGNATION



I – bit nominal diameter in mm, for cutting heads (CH) inside diameter indicated as «x», for bicentric bits both diameters indicated as «x», first – inside diameter, second- reaming diameter.

II – Product line:

— P – standard matrix or steel-body bits for vertical and directional wells.
— PB – bicentric matrix or steel-body bits for drilling and reaming.
— PC – matrix or steel-body cutting heads for coring.
— PP – matrix or steel-body bits for side tracking.
— PSB – special steel-body bits with TCI cutters and/or abrasive coated cutting edges for drilling of cement/sand plugs, sections for conductor and casing and other operations.
— PNP – special steel-body bits with TCI cutters and PDC cutters used for reaming and wiper trips preventing unintentional sidetracking.

III - indicates blades quantity for bits and cutting heads.

IV – indicates dominant size of cutters for bits and cutting heads.

Size of PDC cutters:

08 - size of cutter 8,20 mm;
09 - size of cutter 9,52 mm;
11 - size of cutter 11,00 mm;
13 - size of cutter 13,44 мм;
16 - size of cutter 16,00 мм;
19 - size of cutter 19,05 мм;
22 - size of cutter 22,00 мм.

When using multiple sizes of PDC cutters the max of them is indicated.

V – Body/Cutting head material:
M - Matrix;
S - Steel.

Note: bit/cutting head body identification may omit «S».

VI - Bit/Cutting head design option.

P- Product Line Bits

P- Product line bits (US- old name) are used for drilling vertical and directional wells with with specialized BHA's.

P – PRODUCT LINE BITS								
Bit type	Size		Blade count	Cutter size max	Connection type		IADC code	Nozzles/port type and quantity
	mm	in			GOST	API		
112,9 P509 123	112,9	4 7/16	5	09	3-66	2 3/8	S233	2xNM
114,3 P509 255	114,3	4 ½	5	09	3-66	2 3/8	S233	2xNS22
118,0 P313 243	118,0	4 21/32	3	13	3-63,5	-	S233	3xNS22
120,6 P313 189	120,6	4 ¾	3	13	3-63,5	-	S233	3xNS22
123,8 P613 207	123,8	4 7/8	6	13	3-76	2 7/8	S233	2xNS22; 2xports
123,8 P513 81	123,8	4 7/8	5	13	3-76	2 7/8	S233	2xNS22; 3xports
126,0 P413 177	126,0	4 31/32	4	13	3-76	2 7/8	S233	4xNS22
126,0 P513 300	126,0	4 31/32	5	13	3-76	2 7/8	S233	5xNS22
132,0 P313 244	132,0	5 1/5	3	13	3-63,5	-	S132	3xNS22
139,7 P513 82	139,7	5 ½	5	13	3-88	3 ½	S233	5xNM
139,7 P513 82-1	139,7	5 ½	5	13	3-88	3 ½	S233	5xNS22
139,7 P613 90	139,7	5 ½	6	13	3-88	3 ½	S334	3xNS22; 3xports
139,7 P813 03	139,7	5 ½	8	13	3-88	3 ½	S333	8xports
141,0 P313 245	141,0	5 9/16	3	13	3-76	2 7/8	S233	3xNS22
142,9 P813 06	142,9	5 5/8	8	13	3-88	3 ½	S333	8xports
142,9 P613 91	142,9	5 5/8	6	13	3-88	3 ½	S233	3xNS22; 3xпорты
146,0 P513 220	146,0	5 ¾	5	13	3-88	3 ½	S233	5xNS22
149,2 P513 212	149,2	5 7/8	5	13	3-88	3 ½	S233	5xNM
152,4 P416 333	152,4	6	4	16	3-88	3 ½	S223	4xNM27
152,4 P416 345	152,4	6	4	16	3-88	3 ½	S223	6xNS22
152,4 P513 111	152,4	6	5	13	3-88	3 ½	S233	5xNS22
152,4 P613 92	152,4	6	6	13	3-88	3 ½	S233	3xNS22; 3xports
152,4 P609 183	152,4	6	6	09	3-88	3 ½	S233	4xNM
152,4 P713 163	152,4	6	7	13	3-88	3 ½	S333	7xports
152,4 P713 163-1	152,4	6	7	13	3-88	3 ½	S333	1xNM; 5xports
155,6 P416 273	155,6	6 1/8	4	16	3-88	3 ½	S223	4xNM27
155,6 P416 335	155,6	6 1/8	4	16	3-88	3 ½	S223	6xNS22
155,6 P613 93	155,6	6 1/8	6	13	3-88	3 ½	S233	3xNS22; 3xports

P – PRODUCT LINE BITS								
Bit type	Size		Blade count	Cutter size max	Connection type		IADC code	Nozzles/port type and quantity
	mm	in			GOST	API		
161,0 P313 246	161,0	6 11/32	3	13	3-76	2 7/8	S233	3xNS22
165,1 P513 254	165,1	6 ½	5	13	3-88	3 ½	S333	5xNS22
190,5 P613 11	190,5	7 ½	6	13	3-117	4 ½	S233	8xNM27
190,5 P516 86	190,5	7 ½	5	16	3-117	4 ½	S223	5xNM27
193,7 P613 323	193,7	7 5/8	6	13	3-117	4 ½	S233	8xNM27
200,0 P313 190	200,0	7 7/8	3	13	3-117	4 ½	S233	3xNM27
212,7 P613 327	212,7	8 3/8	6	13	3-117	4 ½	S233	8xNM27
215,9 P313 120	215,9	8 ½	3	13	3-117	4 ½	S233	3xNM27
215,9 P316 169	215,9	8 ½	3	16	3-117	4 ½	S123	3xNM
215,9 P416 80	215,9	8 ½	4	16	3-117	4 ½	S223	6xNM
215,9 P416 80-1	215,9	8 ½	4	16	3-117	4 ½	S223	6xNM
215,9 P416 80-2	215,9	8 ½	4	16	3-117	4 ½	S223	6xNM27
215,9 P416 312	215,9	8 ½	4	16	3-117	4 ½	S223	6xNM27
215,9 P419 17	215,9	8 ½	4	19	3-117	4 ½	S224	6xNM27
215,9 P513 13	215,9	8 ½	5	13	3-117	4 ½	S333	5xNM
215,9 P513 252	215,9	8 ½	5	13	3-117	4 ½	S434	7xNM27
215,9 P516 16	215,9	8 ½	5	16	3-117	4 ½	S223	5xNM27
215,9 P516 16-1	215,9	8 ½	5	16	3-117	4 ½	S223	7xNM27
215,9 P613 14	215,9	8 ½	6	13	3-117	4 ½	S233	8xNM27
215,9 P613 78	215,9	8 ½	6	13	3-117	4 ½	S233	8xNM27
215,9 P616 164	215,9	8 ½	6	16	3-117	4 ½	S224	6xNM
215,9 P616 18	215,9	8 ½	6	16	3-117	4 ½	S324	6xNM
215,9 P616 18-1	215,9	8 1/2	6	16	3-117	4 ½	S324	6xNM27
215,9 P616 253	215,9	8 1/2	6	16	3-117	4 ½	S233	6xNM27
215,9 P713 19	215,9	8 ½	7	13	3-117	4 ½	S334	7xNM
215,9 P713 19-1	215,9	8 ½	7	13	3-117	4 ½	S334	7xNM
215,9 P813 104	215,9	8 ½	8	13	3-117	4 ½	S334	3xNS22; 5xports
215,9 P613 308	215,9	8 ½	6	13	3-117	4 ½	S334	9xNS22
215,9 P813 285	215,9	8 ½	8	13	3-117	4 ½	S334	8xNS22
219,1 P416 22	219,1	8 5/8	4	16	3-117	4 ½	S223	6xNM
219,1 P613 237	219,1	8 5/8	6	13	3-117	4 ½	S233	6xNM27
219,1 P613 240	219,1	8 5/8	6	13	3-117	4 ½	S233	8xNM27
219,1 P613 240-1	219,1	8 5/8	6	13	3-117	4 ½	S233	8xNM27
219,1 P416 322-1	219,1	8 5/8	4	16	3-117	4 ½	S223	6xNM27
219,1 P616 238	219,1	8 5/8	6	16	3-117	4 ½	S223	6xNM27
295,3 P416 23	295,3	11 5/8	4	16	3-152	6 5/8	S223	6xNL39
220,7 P416 311	220,7	8 11/16	4	16	3-117	4 ½	S223	6xNM27
220,7 P416 322	220,7	8 11/16	4	16	3-117	4 ½	S223	6xNM27
220,7 P516 96	220,7	8 11/16	5	16	3-117	4 ½	S223	5xNM

P – PRODUCT LINE BITS								
Bit type	Size		Blade count	Cutter size max	Connection type		IADC code	Nozzles/port type and quantity
	mm	in			GOST	API		
220,7 P516 96-1	220,7	8 11/16	5	16	3-117	4 ½	S223	5xNM
220,7 P613 25	220,7	8 11/16	6	13	3-117	4 ½	S233	6xNM
220,7 P613 25-1	220,7	8 11/16	6	13	3-117	4 ½	S233	6xNM
220,7 P613 79	220,7	8 11/16	6	13	3-117	4 ½	S233	8xNM
220,7 P613 347	220,7	8 11/16	6	13	3-117	4 ½	S233	8xNM27
220,7 P616 217	220,7	8 11/16	6	16	3-117	4 ½	S223	6xNM
269,9 P416 105	269,9	10 5/8	4	16	3-152	6 5/8	S223	6xNM27
269,9 P519 351	269,9	10 5/8	5	19	3-152	6 5/8	S223	7xNM27
269,9 P616 98	269,9	10 5/8	6	16	3-152	6 5/8	S223	8xNM27
295,3 P319 192	295,3	11 5/8	3	19	3-152	6 5/8	S124	9xNM
295,3 P319 192-1	295,3	11 5/8	3	19	3-152	6 5/8	S124	9xNM
295,3 P419 166	295,3	11 5/8	4	19	3-152	6 5/8	S223	6xNL
295,3 P419 354	295,3	11 5/8	4	19	3-152	6 5/8	S223	6xNM27
295,3 P422 33	295,3	11 5/8	4	22	3-152	6 5/8	S223	6xNL
295,3 P519 30	295,3	11 5/8	5	19	3-152	6 5/8	S223	5xNL39
295,3 P519 30-2	295,3	11 5/8	5	19	3-152	6 5/8	S223	5xNL39
295,3 P519 30-3	295,3	11 5/8	5	19	3-152	6 5/8	S223	5xNL39, 2xNM27
295,3 P522 31	295,3	11 5/8	5	22	3-152	6 5/8	S223	5xNL
295,3 P522 31-1	295,3	11 5/8	5	22	3-152	6 5/8	S223	5xNL39
295,3 P616 101	295,3	11 5/8	6	16	3-152	6 5/8	S423	6xNL
295,3 P619 32	295,3	11 5/8	6	19	3-152	6 5/8	S223	6xNL
295,3 P619 32-1	295,3	11 5/8	6	19	3-152	6 5/8	S223	9xNM27
295,3 P713 328	295,3	11 5/8	7	13	3-152	6 5/8	S223	9xNM27
295,3 P813 112	295,3	11 5/8	8	13	3-152	6 5/8	S333	8xNM27
295,3 P813 251	295,3	11 5/8	8	13	3-152	6 5/8	S334	8xNM27
295,3 P913 350	295,3	11 5/8	9	13	3-152	6 5/8	S334	9xNM27
300,0 P419 108	300,0	11 13/16	4	19	3-152	6 5/8	S223	6xNL39
300,0 P519 35	300,0	11 13/16	5	19	3-152	6 5/8	S223	5xNL
311,1 P419 109	311,1	12 ¼	4	19	3-152	6 5/8	S224	6xNL
311,1 P419 356	311,1	12 ¼	4	19	3-152	6 5/8	S224	6xNM27
311,1 P516 348	311,1	12 ¼	5	16	3-152	6 5/8	S223	5xNL39
311,1 P519 36	311,1	12 ¼	5	19	3-152	6 5/8	S223	5xNL
311,1 P616 115	311,1	12 ¼	6	16	3-152	6 5/8	S423	6xNL
311,1 P713 186	311,1	12 ¼	7	13	3-152	6 5/8	S233	7xNM
311,1 P713 186-1	311,1	12 ¼	7	13	3-152	6 5/8	S334	7xNM27
311,1 P619 161	311,1	12 ¼	6	19	3-152	6 5/8	S223	6xNM27
393,7 P419 40-1	393,7	15 ½	4	19	3-177	7 5/8	S223	8xNL39
393,7 P619 39	393,7	15 ½	6	19	3-177	7 5/8	S323	8xNL39
406,4 P619 224	406,4	16	6	19	3-177	7 5/8	S224	9xNL39

P – PRODUCT LINE BITS								
Bit type	Size		Blade count	Cutter size max	Connection type		IADC code	Nozzles/port type and quantity
	mm	in			GOST	API		
406,4 P619 41	406,4	16	6	19	3-177	7 5/8	S224	9xNL39
431,8 P519 260	431,8	17	5	19	3-177	7 5/8	S224	12xNM27
444,5 P519 42	444,5	17 ½	5	19	3-177	7 5/8	S224	7xNL39
444,5 P619 110	444,5	17 ½	6	19	3-177	7 5/8	S224	8xNL39
95,4 P409 229	95,4	3 ¾	4	09	3-66	2 3/8	S234	2xNM; 2xports
349,2 P519 414	349,2	13 ¾	5	19	3-152	6 5/8	S424	5xNL39
146,0 P709 415	146,0	5 ¾	7	9	3-88	3 ½	S333	7хпорты
220,7 P613 417	220,7	8 11/16	6	13	3-117	4 ½	S333	8xNM27
123,8 P513 418	123,8	4 7/8	5	13	3-76	2 7/8	S233	2xNS22; 3xports
190,5 P713 419	190,5	7 ½	7	13	3-117	4 ½	S434	7xNS22
393,7 P419 406-1	393,7	15 ½	4	19	3-177	7 5/8	S423	8xNL39
393,7 P419 406	393,7	15 ½	4	19	3-177	7 5/8	S323	8xNL39
215,9 P616 430	215,9	8 ½	6	16	3-117	4 ½	S223	6xNM27
215,9 P616 430-2	215,9	8 ½	6	16	3-117	4 ½	S223	6xNM27
215,9 P616 430-1	215,9	8 ½	6	16	3-117	4 ½	S223	6xNM27
215,9 P616 430-3	215,9	8 ½	6	16	3-117	4 ½	S223	6xNM27
406,4 P419 431	406,4	16	4	19	3-177	7 5/8	S423	8xNL39
490,0 P419 434	490,0	19 9/32	4	19	Муфта 3-171	6 5/8 FH	S423	8xNL39
311,1 P316 437	311,1	12 ¼	3	16	3-152	6 5/8	S123	3хпорты
311,1 P716 441	311,1	12 ¼	7	16	3-152	6 5/8	S423	7xNM27
215,9 P613 442	215,9	8 ½	6	13	3-117	4 ½	S333	6xNS22
215,9 P913 443	215,9	8 ½	9	13	3-117	4 ½	S433	3xNS22; 6xports
215,9 P813 447	215,9	8 ½	8	13	3-117	4 ½	S433	4xNS22; 4xports
155,6 P513 448	155,6	6 1/8	5	13	3-88	3 ½	S233	5xNS22
220,7 P613 451	220,7	8 11/16	6	13	3-117	4 ½	S333	6xNM27
155,6 P613 452	155,6	6 1/8	6	13	3-88	3 ½	S233	6xNS22
215,9 P716 396-1	215,9	8 ½	7	16	3-117	4 ½	S423	4xNS22; 7xports
215,9 P716 396-2	215,9	8 ½	7	16	3-117	4 ½	S423	11xNS22
215,9 P716 453	215,9	8 ½	7	16	3-117	4 ½	S423	11xNS22
155,6 P613 456	155,6	6 1/8	6	13	3-88	3 ½	S233	6xNS22
220,7 P516 457	220,7	8 11/16	5	16	3-117	4 ½	S323	7xNS22
142,9 P713 461	142,9	5 5/8	7	13	3-88	3 ½	S233	7xports
295,3 P519 30-8	295,3	11 5/8	5	19	3-152	6 5/8	S323	5xNL39
295,3 P519 30-9	295,3	11 5/8	5	19	3-152	6 5/8	S323	5xNL39
215,9 P516 388-1	215,9	8 ½	5	16	3-117	4 ½	S423	7xNS22
215,9 P516 388-2	215,9	8 ½	5	16	3-117	4 ½	S423	7xNS22
215,9 P516 388-3	215,9	8 ½	5	16	3-117	4 ½	S423	7xNS22
215,9 P516 388-4	215,9	8 ½	5	16	3-117	4 ½	S423	7xNS22

P – PRODUCT LINE BITS								
Bit type	Size		Blade count	Cutter size max	Connection type		IADC code	Nozzles/port type and quantity
	mm	in			GOST	API		
215,9 P613 14-1	215,9	8 ½	6	13	3-117	4 ½	S233	8xNM27
215,9 P613 14-2	215,9	8 ½	6	13	3-117	4 ½	S233	8xNM27
215,9 P613 14-3	215,9	8 ½	6	13	3-117	4 ½	S233	8xNM27
295,3 P519 365-1	295,3	11 5/8	5	19	3-152	6 5/8	S324	5xNL39
139,7 P413 04	139,7	5 ½	4	13	3-88	3 ½	S233	4xNS22
142,9 P513 83	142,9	5 5/8	5	13	3-88	3 ½	S233	5xNS22
142,9 P513 83-1	142,9	5 5/8	5	13	3-88	3 ½	S233	5xNS22
142,9 P513 395	142,9	5 5/8	5	13	3-88	3 ½	S233	2xNS22; 3xports
146,0 P613 221	146,0	5 ¾	6	13	3-88	3 ½	S233	2xNS22; 6xports
215,9 P516 218	215,9	8 ½	5	16	3-117	4 ½	S323	7xNM27
215,9 P516 388	215,9	8 ½	5	16	3-117	4 ½	S423	7xNS22
212,7 P516 362	212,7	8 3/8	5	16	3-117	4 ½	S323	7xNM27
215,9 P316 380	215,9	8 ½	3	16	3-117	4 ½	S123	3хпорты
215,9 P416 376	215,9	8 ½	4	16	3-117	4 ½	S223	6xNM27
215,9 P716 318	215,9	8 ½	7	16	3-117	4 ½	S423	9xNS22
215,9 P716 396	215,9	8 ½	7	16	3-117	4 ½	S423	11xNS22
215,9 P716 453-1	215,9	8 ½	7	16	3-117	4 ½	S423	11xNS22
219,1 P616 238-1	219,1	8 5/8	6	16	3-117	4 ½	S323	6xNM27
220,7 P416 377	220,7	8 11/16	4	16	3-117	4 ½	S223	6xNM27
220,7 P613 391	220,7	8 11/16	6	13	3-117	4 ½	S333	8xNS22
222,3 P416 368	222,3	8 ¾	4	16	3-117	4 ½	S223	6xNM27
222,3 P516 88	222,3	8 ¾	5	16	3-117	4 ½	S223	7xNM27
222,3 P613 404	222,3	8 ¾	6	13	3-117	4 ½	S333	6xNM27
295,3 P519 30-5	295,3	11 5/8	5	19	3-152	6 5/8	S323	5xNL39
295,3 P519 30-6	295,3	11 5/8	5	19	3-152	6 5/8	S323	5xNL39
295,3 P519 30-7	295,3	11 5/8	5	19	3-152	6 5/8	S323	5xNL39
295,3 P519 407	295,3	11 5/8	5	19	3-152	6 5/8	S423	7xNM27
295,3 P519 30-1	295,3	11 5/8	5	19	3-152	6 5/8	S323	5xNL39
295,3 P519 30-4	295,3	11 5/8	5	19	3-152	6 5/8	S323	5xNL39
295,3 P619 390	295,3	11 5/8	6	19	3-152	6 5/8	S323	8xNM27
311,1 P616 37	311,1	12 ¼	6	16	3-152	6 5/8	S423	6xNL39
311,1 P619 161-1	311,1	12 ¼	6	19	3-152	6 5/8	S323	6xNL39
393,7 P519 339	393,7	15 ½	5	19	3-177	7 5/8	S323	7xNL39
406,4 P619 224-1	406,4	16	6	19	3-177	7 5/8	S424	8xNL39
155,6 P613 473	155,6	6 1/8	6	13	3-88	3 ½	S233	3хпорты, 3xNS22
215,9 P616 474	215,9	8 ½	6	16	3-117	4 ½	S323	6xNS22
142,9 P613 472	142,9	5 5/8	6	13	3-88	3 ½	S233	6xNS22
215,9 P716 396-3	215,9	8 ½	7	16	3-117	4 ½	S423	11xNS22
215,9 P616 430-4	215,9	8 ½	6	16	3-117	4 ½	S223	6xNM27

P – PRODUCT LINE BITS								
Bit type	Size		Blade count	Cutter size max	Connection type		IADC code	Nozzles/port type and quantity
	mm	in			GOST	API		
220,7 P516 457-1	220,7	8 11/16	5	16	3-117	4 ½	S323	7xNS22
123,8 P513 471	123,8	4 7/8	5	13	3-76	2 7/8	S133	5xNS22
220,7 P613 451-1	220,7	8 11/16	6	13	3-117	4 ½	S333	6xNM27
295,3 P519 365-2	295,3	11 5/8	5	19	3-152	6 5/8	S324	5xNL39
215,9 P716 453-4	215,9	8 ½	7	16	3-117	4 ½	S423	11xNS22
190,5 P516 86-1	190,5	7 ½	5	16	3-117	4 ½	S223	5xNM27
215,9 P713 465	215,9	8 ½	7	13	3-117	4 ½	S433	11xNS22
215,9 P616 466	215,9	8 ½	6	16	3-117	4 ½	S434	6xNM27
142,9 P709 477	142,9	5 5/8	7	09	3-88	3 ½	S333	7xports

P – Matrix-body bits product line

Product line P matrix-body bits are used for vertical and directional wells with specialized BHA's.

P – MATRIX-BODY BITS PRODUCT LINE								
Bit type	Size		Blade count	Cutter size	Connection type		IADC code	Nozzles/port type and quantity
	mm	in			GOST	API		
149,2 P809M 145	149,2	5 7/8	8	9	3-88	3 ½	M433	2xNS22, 6xports
212,7 P713M 116	212,7	8 3/8	7	13	3-117	4 ½	M434	7xNM27
212,7 P713M 116-1	212,7	8 3/8	7	13	3-117	4 ½	M434	7xNM27
212,7 P813M 34-1	212,7	8 3/8	8	13	3-117	4 ½	M433	8xNS22
212,7 P816M 128	212,7	8 3/8	8	16	3-117	4 ½	M423	8xNS22
215,9 P516M 38	215,9	8 ½	5	16	3-117	4 ½	M233	5xNM27
215,9 P613M 77	215,9	8 ½	6	13	3-117	4 ½	M333	8xNM27
215,9 P616M 68	215,9	8 ½	6	16	3-117	4 ½	M423	6xNM27
215,9 P616M 96	215,9	8 ½	6	16	3-117	4 ½	M323	6xNM27
215,9 P616M 96-1	215,9	8 ½	6	16	3-117	4 ½	M323	6xNM27
215,9 P713M 141	215,9	8 ½	7	13	3-117	4 ½	M432	7xNM27
215,9 P713M 147	215,9	8 ½	7	13	3-117	4 ½	M433	7xNM27
215,9 P716M 69	215,9	8 ½	7	16	3-117	4 ½	M423	7xNM27
215,9 P813M 48	215,9	8 ½	8	13	3-117	4 ½	M433	8xNS22
219,1 P613M 114	219,1	8 5/8	6	13	3-117	4 ½	M333	8xNM27
220,7 P613M 151	220,7	8 11/16	6	13	3-117	4 ½	M333	8xNM27
295,3 P519M 148	295,3	11 5/8	5	19	3-152	6 5/8	M223	7xNM27
311,1 P619M 106	311,1	12 ¼	6	19	3-152	6 5/8	M323	9xNM27
311,1 P616M 107	311,1	12 ¼	6	16	3-152	6 5/8	M323	9xNM27
311,1 P713M 115	311,1	12 ¼	7	13	3-152	6 5/8	M432	7xNM27
311,1 P716M 70	311,1	12 ¼	7	16	3-152	6 5/8	M423	7xNM27
311,1 P813M 120	311,1	12 ¼	8	13	3-152	6 5/8	M434	8xNM27
311,1 P813M 152	311,1	12 ¼	8	13	3-152	6 5/8	M333	8xNM27
142,9 P513M 200	142,9	5 5/8	5	13	3-88	3 ½	M233	5xNS22
149,2 P808M 150	149,2	5 7/8	8	8	3-88	3 ½	M434	2xNS22, 6xports
161,0 P509M 156	161,0	6 11/32	5	9	3-88	3 ½	M433	5xNS22
215,9 P519M 40	215,9	8 ½	5	19	3-117	4 ½	M223	5xNM27
215,9 P616M 88	215,9	8 ½	6	16	3-117	4 ½	M223	6xNM27

P – MATRIX-BODY BITS PRODUCT LINE								
Bit type	Size		Blade count	Cutter size	Connection type		IADC code	Nozzles/port type and quantity
	mm	in			GOST	API		
215,9 P616M 155	215,9	8 ½	6	16	3-117	4 ½	M423	6xNM27
215,9 P808M 149	215,9	8 ½	8	8	3-117	4 ½	M433	8xNS22
311,1 P519M 153	311,1	12 ¼	5	19	3-152	6 5/8	M323	7xNM27
444,5 P519M 66	444,5	17 ½	5	19	3-177	7 5/8	M423	12xNM27

R – Reamer product line

R product line reamers are used for hole reaming or drilling with pilot bit.

R – REAMER PRODUCT LINE									
Blade realmer Designation	Blade count	Cutter size	Size		Connection type (bit)		Connection type		Nozzles/ port type and quantity
			mm	in	GOST	API	GOST	API	
190,0/311,2 R416	4	16	311,2	12 1/4	3-147 (male)	5 1/2 FH	3-147 (female)	5 1/2 FH	-
190,0/311,2 R416-1	4	16	311,2	12 1/4	3-133 (male)	NC 50	3-133 (female)	NC 50	-
295/510 R319	3	19	510,0	20 3/32	3-171 (male)	6 5/8 FH	3-152 (female)	6 5/8 Reg	3xNL39
295/510 R319	3	19	510,0	20 3/32	3-171 (male)	6 5/8 FH	3-171 (female)	6 5/8 FH	3xNL39
295/530 R319	3	19	530,0	20 7/8	3-171 (male)	6 5/8 FH	3-171 (female)	6 5/8 FH	3xNM27
295/550 R319	3	19	550,0	21 21/32	3-152 (female)	6 5/8 Reg	3-171 (female)	6 5/8 FH	3xNM27

PC – Cutting Heads Product Line

PC product line steel-body cutting heads (UCS- previous name) are used for coring with specialized BHA's.

PC – CUTTING HEADS PRODUCT LINE									
Cutting head designation	Size		Blade count	PDC cutter size	ID		Connection type		IADC code
	mm	in			mm	in	GOST	API	
139,7x52 PC613 43	139,7	5 ½	6	13	52	2 1/16	MK 110x6x1:8	-	S132
146,0x80 PC613 330	146,0	5 ¾	6	13	80	3 5/32	MK 119x4x1:16	-	S132
163,5x67 PC813 310	163,5	6 7/16	8	13	67	2 5/8	3-133	NC 50	S233
190,5x101,6 PC813 352	190,5	7 ½	8	13	101,6	4	Special thread	Special thread	S233
212,7x80 PC009 45	212,7	8 3/8	10	09	80	3 5/32	MK 150x6x1:8	-	S233
212,7x80 PC613 241	212,7	6 7/8	6	13	80	3 5/32	MK 150x6x1:8	-	S233
214,3x80 PC613 329	214,3	8 7/16	6	13	80	3 5/32	MK 150x6x1:8	-	S133
215,9x80 PC613 226	215,9	8 ½	6	13	80	3 5/32	MK 150x6x1:8	-	S134
158,7x67 PC813 256	158,7	6 ¼	8	13	67	2 5/8	3-133	NC 50	S133
220,7x101,6 PC613 309	220,7	8 11/16	6	13	101,6	4	Special thread	-	S233
139,7x52 PC813 314	139,7	5 ½	8	13	52	2 1/16	MK 110x6x1:8	-	S333
142,9x80 PC613 405	142,9	5 5/8	6	13	80	3 5/32	MK 119x4x1:16	-	S132
146,0x80 PC613 330-1	146,0	5 ¾	6	13	80	3 5/32	MK 119x4x1:16	-	S132
152,4x66,7 PC609 463	152,4	6	6	09	66,7	2 5/8	122T	-	S233
155,6x80 PC613 358	155,6	6 1/8	6	13	80	3 5/32	MK 119x4x1:16	-	S132
155,6x80 PC813 357	155,6	6 1/8	8	13	80	3 5/32	MK 119x4x1:16	-	S232
212,7x80 PC613 241-1	212,7	8 3/8	6	13	80	3 5/32	MK 150x6x1:8	-	S233
220,7x100 PC913 331-1	220,7	8 11/16	9	13	100	3 15/16	MK 165x6x1:8	-	S333
214,3x80 PC613 329-1	214,3	8 7/16	6	13	80	3 5/32	MK 150x6x1:8	-	S133
215,9x80 PC613 226-1	215,9	8 ½	6	13	80	3 5/32	MK 150x6x1:8	-	S134
215,9x80 PC913 444	215,9	8 ½	9	13	80	3 5/32	MK 150x6x1:8	-	S433
215,9x100 PC813 420	215,9	8 ½	8	13	100	3 15/16	3-171	6 5/8 FH	S333
215,9x100 PC913 369	215,9	8 ½	9	13	100	3 15/16	3-161	-	S433
215,9x110 PC716 449	215,9	8 ½	7	16	110	4 11/32	250 T	-	S123
219,1x80 PC613 398	219,1	8 5/8	6	13	80	3 5/32	MK 150x6x1:8	-	S233
220,7x100 PC913 331	220,7	8 11/16	9	13	100	3 15/16	MK 165x6x1:8	-	S333

PB – Bicentric Bits Product line

PB Product Line Bicentric Bits (UBS- previous name) are used for drilling and reaming of vertical and directional wells with specialized BHA's.

PB – BICETRIC BITS PRODUCT LINE										
Bit designation	Blade count	Cutter size	ID		Opening size		Connection type		IADC code	Nozzles/port type and quantity
			mm	in	mm	in	GOST	API		
112,9x130,0 PB509 124	5	09	112,9	4 7/16	130,0	5 1/8	3-66	2 3/8	S233	3xNM
139,7x165,1 PB513 194	5	13	139,7	5 ½	165,1	6 ½	3-88	3 ½	S233	6xports
152,4x175,0 PB613 195	6	13	152,4	6	175,0	6 7/8	3-88	3 ½	S233	4xNM; 3xports
215,9x250,8 PB613 125	6	13	215,9	8 ½	250,8	9 7/8	3-117	4 ½	S233	4xNM; 2xports
241,2x269,9 PB713 75	7	13	241,2	9 ½	269,9	10 5/8	3-152	6 5/8	S233	7xNM
311,1x342,9 PB713 76	7	13	311,1	12 ¼	342,9	13 ½	3-152	6 5/8	S233	9xNM
311,1x342,9 PB716 77	7	16	311,1	12 ¼	342,9	13 ½	3-152	6 5/8	S323	9xNM
118,0x132,0 PB613 306	6	13	118,0	4 21/32	132,0	5 1/5	3-76	2 7/8	S233	2xNS22; 2xports
120,6x142,9 PB613 208	6	13	120,6	4 ¾	142,9	5 5/8	3-76	2 7/8	S233	2xNS22; 3xports
215,9x238,2 PB716 445	7	16	215,9	8 ½	238,2	9 3/8	3-117	4 ½	S323	6xNS22; 1xports

PP – Product Line Bits

PP Product Line Bits (UCJS- previous name) are used for side tracking of oil and gas wells with specialized BHA's.

PP – BICETRIC BITS PRODUCT LINE								
Designation	Blade count	Cutter size	ID		Connection type		IADC code	Nozzles/port type and quantity
			mm	in	GOST	API		
165,1 PP613 265	6	13	165,1	6 ½	3-88	3 ½	S231	6xports
215,9 PP613 159	6	13	215,9	8 ½	3-117	4 ½	S431	6xports
139,7 PP613 160	6	13	139,7	5 ½	3-88	3 ½	S231	6xports
220,7 PP613 304	6	13	220,7	8 11/16	3-117	4 ½	S231	6xports
123,8 PP613 429	6	13	123,8	4 7/8	3-76	2 7/8	S231	6xports
142,9 PP613 450	6	13	142,9	5 5/8	3-88	3 ½	S231	6xports
142,9 PP913 439	9	13	142,9	5 5/8	3-88	3 ½	S231	3xports
142,9 PP613 423	6	13	142,9	5 5/8	3-88	3 ½	S231	6xports
155,6 PP613 436	6	13	155,6	6 1/8	3-88	3 ½	S231	3xports
190,5 PP613 464	6	13	190,5	7 ½	3-117	4 ½	S331	6xports
190,5 PP613 464-1	6	13	190,5	7 ½	3-117	4 ½	S331	6xports, VT
215,9 PP613 159-1	6	13	215,9	8 ½	3-117	4 ½	S431	6xports, VT
295,3 PP613 355	6	13	295,3	11,625	3-152	6,625	S431	8xNM27
155,6 PP613 436-1	6	13	155,6	6,125	3-88	3 ½	S231	3xports, VT
165,1 PP613 265-1	6	13	165,1	6 ½	3-88	3 ½	S231	6xports, VT
220,7 PP613 304-1	6	13	220,7	8 11/16	3-117	4 ½	S231	6xports, VT
295,3 PP613 355-1	6	13	295,3	11,625	3-152	6,625	S431	8xNM27, VT

UCP – Product line stabilizers

UCP product line PDC insert drill string stabilizers are used for stabilization and hole opening of well sections in soft, medium and low abrasive rocks.

UCP PRODUCT LINE PDC STABILIZERS							
Designation	Blade count	ID		Connection type (bit)		Connection type	
		mm	in	GOST	API	GOST	API
1-UCP 215,9	4	215,9	8 ½	3-147 (male)	5 ½ FH	3-133 (female)	NC 50
1-UCP 218,0	4	218,0	8 19/32	3-147 (male)	5 ½ FH	3-133 (female)	NC 50
2-UCP 215,9	4	215,9	8 ½	3-117 (female)	4 ½ Reg	3-117 (female)	4 ½ Reg
3-UCP 215,9	4	215,9	8 ½	3-117 (female)	4 ½ Reg	3-147 (female)	5 ½ FH
4-UCP 215,9	4	215,9	8 ½	3-147 (male)	5 ½ FH	3-147 (female)	5 ½ FH
5-UCP 215,9	4	215,9	8 ½	3-147 (male)	5 ½ FH	3-117 (female)	4 ½ Reg
1-UCP 295,3	4	295,3	11 5/8	3-152 (female)	6 5/8 Reg	3-152 (female)	6 5/8 Reg
1-UCP 311,1	4	311,1	12 ¼	3-152 (female)	6 5/8 Reg	3-152 (female)	6 5/8 Reg
1-UCP 145,9	4	145,9	5 ¾	3-88 (female)	3 ½ Reg	3-88 (female)	3 ½ Reg
1-UCP 151,6C	4	151,6	5 31/32	3-102 (male)	-	3-102 (female)	-
1-UCP 212,0C	4	212,0	8 11/32	3-147 (male)	5 ½ FH	3-147 (female)	5 ½ FH
1-UCP 215,9	4	215,9	8 ½	3-147 (male)	5 ½ FH	3-133 (female)	NC 50
1-UCP 218,0	4	218,0	8 19/32	3-147 (male)	5 ½ FH	3-133 (female)	NC 50
1-UCP 222,3	4	222,3	8 ¾	3-117 (female)	4 ½ Reg	3-117 (female)	4 ½ Reg
1-UCP 292,1C	4	292,1	11 ½	3-171 (male)	6 5/8 FH	3-171 (female)	6 5/8 FH
1-UCP 292,3	4	292,3	11 ½	3-152 (female)	6 5/8 Reg	3-152 (female)	6 5/8 Reg
1-UCP 295,3	4	295,3	11 5/8	3-152 (female)	6 5/8 Reg	3-152 (female)	6 5/8 Reg
1-UCP 295,3-01	4	295,3	11 5/8	3-152 (female)	6 5/8 Reg	3-152 (female)	6 5/8 Reg
1-UCP 311,1	4	311,1	12 ¼	3-152 (female)	6 5/8 Reg	3-152 (female)	6 5/8 Reg
1-UCP 311,1-01	4	311,1	12 ¼	3-152 (female)	6 5/8 Reg	3-152 (female)	6 5/8 Reg
1-UCP 490,0	6	490,0	19 9/32	3-177 (female)	7 5/8 Reg	3-177 (female)	7 5/8 Reg
1-UCP 490,0-01	6	490,0	19 9/32	3-177 (female)	7 5/8 Reg	3-177 (female)	7 5/8 Reg
2-UCP 295,3	4	295,3	11 5/8	3-133 (male)	NC 50	3-133 (female)	NC 50
2-UCP 295,3-01	4	295,3	11 5/8	3-133 (male)	NC 50	3-133 (female)	NC 50
2-UCP 393,7	6	393,7	15 ½	3-171 (female)	6 5/8 FH	3-171 (female)	6 5/8 FH
3-UCP 393,7	6	393,7	15 ½	3-177 (female)	7 5/8 Reg	3-171 (female)	6 5/8 FH
6-UCP 215,9	4	215,9	8 ½	3-117 (female)	4 ½ Reg	3-117 (female)	4 ½ Reg
7-UCP 295,3	4	295,3	11 5/8	3-152 (female)	6 5/8 Reg	3-152 (female)	6 5/8 Reg

UTC – Product line stabilizers

UTC product line insert drill string stabilizers are used for reaming and stabilization of wells in soft, medium and low abrasive rocks.

UTC PRODUCT LINE STABILIZERS							
Designation	Blade count	ID		Connection type (bit)		Connection type	
		mm	in	GOST	API	GOST	API
1-UCT 215,9C	4	215,9	8 ½	3-122 (male)	-	3-122 (female)	-
1-UCT 295,3C	4	295,3	11 5/8	3-163 (male)	-	3-163 (female)	-
2-UCT 295,3C	4	295,3	11 5/8	3-163 (male)	-	3-163 (female)	-

RR Product Line Reamers

RR Product Line Reamers are used for drilling with pilot bit and/or hole opening.

RR PRODUCT LINE REAMERS									
Designation	Blade count	Cutter size	ID		Connection type (bit)		Connection type		Nozzles/ port type and quantity
			mm	in	GOST	API	GOST	API	
219,1x311,2 RR1013	10	13	311,2	12 ¼	3-133 (male)	NC 50	3-133 (female)	NC 50	5xNM27
219,1x311,2 RR1013-01	10	13	311,2	12 ¼	3-133 (male)	NC 50	3-133 (female)	NC 50	10xNS22

FKK – Product line tapered mill

FKK tapered mills are used for well repair works and casing section milling.

FKK PRODUCT LINE TAPERED MILL					
Designation	Blade count	Mill size		Connection type	
		mm	in	GOST	API
FKK 140,0	6	140,0	5 ½	3-102 (female)	NC 38
FKK 212,0	6	212,0	8 11/32	3-133 (female)	NC 50

F – Product line mills

PDC mills are used for drilling cement/sand plugs and can be also used for side tracking with specialized BHA's.

F - PRODUCT LINE PDC MILLS								
Designation	Blade count	Cutter size	ID		Connection type (bit)		IADC code	Nozzles/port type and quantity
			mm	in	GOST	API		
86,0 F409 470	4	09	86,0	3 3/8	3-45	1 ½ Reg	S131	4xports
'124,0 F412 486	4	12	124,0	4 7/8	3-76 (female)	2 7/8 Reg (Box)	-	4xports

SB - product line steel-body bits

SB Product line special steel-body bits are used for drilling cement/sand plugs, sections for conductor and casing.

SB - PRODUCT LINE SPECIAL STEEL-BODY BITS						
Designation	ID		Blade count	Tooth size	Connection type	
	mm	in			GOST	API
300,0 PSB3 438	300,0	11 13/16	3	-	3-152	6 5/8

PNP – Product line special steel-body bits

PNP Product line (SBC- previous name) special steel-body bits with TCI cutters and PDC cutting edges used for reaming and wiper trips preventing unintentional sidetracking.

PNP - PRODUCT LINE STEEL-BODY BITS						
Designation	ID		Blade count	Tooth size	Connection type	
	mm	in			GOST	API
142,9 PNP613 422	142,9	5 5/8	6	13	3-102	NC 38
215,9 PNP613 421	215,9	8 ½	6	13	3-133	NC 50
220,7 PNP613 372	220,7	8 2/3	6	13	3-117	4 ½
311,1 PNP616 370	311,1	12 ¼	6	16	3-152	6 5/8
215,0 PNP613 459	215,0	8 15/32	6	13	3-117	4 ½


РОССИЙСКАЯ ФЕДЕРАЦИЯ
СЕРТИФИКАТ СООТВЕТСТВИЯ

РОССИЙСКАЯ ФЕДЕРАЦИЯ
СЕРТИФИКАТ СООТВЕТСТВИЯ

РОССИЙСКАЯ ФЕДЕРАЦИЯ
СЕРТИФИКАТ СООТВЕТСТВИЯ

СИСТЕМА СЕРТИФИКАЦИИ ГОСТ Р
ФЕДЕРАЛЬНОЕ АГЕНТСТВО ПО ТЕХНИЧЕСКОМУ РЕГУЛИРОВАНИЮ И МЕТРОЛОГИИ
СЕРТИФИКАТ СООТВЕТСТВИЯ

BHA COMPONENT

Drill string subs

Subs are used to connect drill string components and drilling tools.

Subs are available in all sizes in accordance with GOST standards. Each type of subs is made with thread, both right and left-hand joints.

Each sub is grooved for marking a width of 10 mm and a depth of 6 mm on outside cylindrical surface, and the products with the left threads grooved for marking a a width of 10 mm and a depth of 1 mm.

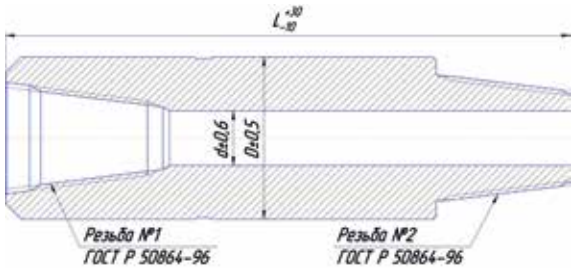
Following types of subs are available:

- C – Cross-over sub;
- B – Box sub;
- P – Pin sub.

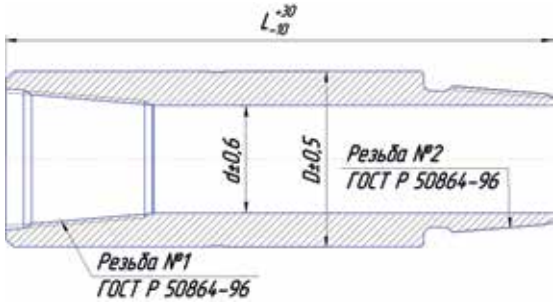
Service life – 500 cycles of make-up and break-out.

Warranty period - 6 months from date of commissioning till inspection.

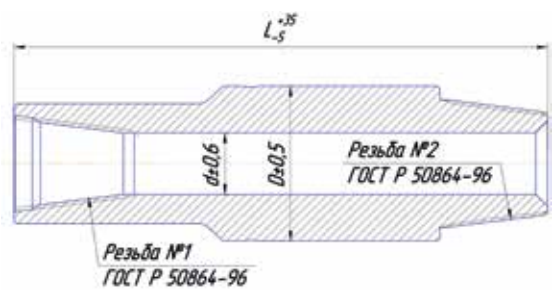
Drill string subs



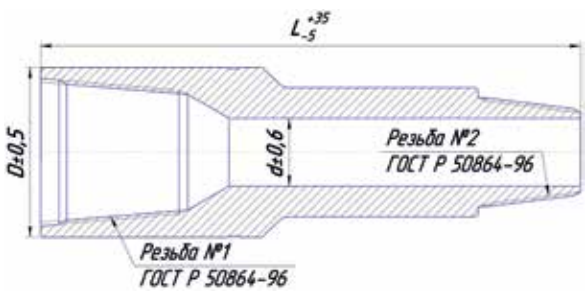
Type 1



Type 1 a



Type 2



Type 3

DRILL STRING SUBS						
№	Sub thread №1/thread №2	Type	OD, mm	ID, mm	Length,mm (+35/-5)	Weight, kg
1	C-76/88	1	113	38	395	21,9
2	C-86/66	1	108	25	356	16,9
3	C-86/73	1	108	44	356	15,4
4	C-86/76	1	108	32	369	17
5	C-86/88	1	113	38	395	20,4
6	C-88/76	1	113	32	389	25
7	C-88/88	1	113	38	395	20,7
8	C-88/121	2	146	58	500	37,8
9	C-101/88	1	118	38	420	23,5
10	C-101/102	1	120	62	437	22,2
11	C-101/117	2	140	58	500	34,8
12	C-101/121	2	146	62	497	36,5
13	C-102/88	1	120	38	430	24
14	C-102/101	1	120	62	430	20,8
15	C-102/117	2	140	58	499	34,5
16	C-102/121	2	146	78	496	30,9
17	C-108/88	3	133	38	451	27
18	C-117/117	1	140	58	463	36
19	C-117/147	2	178	78	523	55,8
20	C-121/133	1	155	80	484	42,6
21	C-121/147	2	178	80	524	55,9
22	C-122/117	1	146	58	463	37
23	C-122/117-01	1a	146	58	463	37
24	C-122/133	1	155	95	484	35,6
25	C-122/133-01	1a	155	95	484	36,5
26	C-122/147	2	178	95	524	48,2
27	C-133/101	3	155	62	495	31
28	C-133/117	3	155	58	497	40
29	C-133/122	1	155	82	484	37
30	C-133/147	2	178	101	520	46,1
31	C-133/152	2	197	89	529	63

DRILL STRING SUBS						
№	Sub thread №1/thread №2	Type	OD, mm	ID, mm	Length,mm (+35/-5)	Weight, kg
32	C-147/117	3	178	58	525	47,7
33	C-147/122	3	178	82	528	45
34	C-147/133	3	178	95	524	44
35	C-147/147	1	178	101	517	51
36	C-147/152	1	197	89	517	74
37	C-147/171	2	203	101	521	62,8
38	C-152/147	1	197	101	517	67
39	C-152/152	1	197	89	517	73,4
40	C-152/171	1	203	122	517	67,4
41	C-161/147	1	185	101	517	53
42	C-161/171	2	229	127	538	81,3
43	C-171/133	3	203	95	536	53,5
44	C-171/147	3	203	101	538	61
45	C-171/152	1	203	89	517	74,3
46	C-171/171	1	203	127	517	59,4
47	C-171/177	1	229	101	523	99
48	C-177/171	1	225	102	517	93
49	C-57/65-02	1	80	32	350	9,4
50	C-65/57-02	1	80	32	350	9,5
51	C-65/66-02	1	80	25	356	9,8
52	C-65/66-03	1	77	34	356	8,2
53	C-65/73-02	1	80	34	356	12,9
54	C-65/76-02	1	95	32	356	13,5
55	C-66/53	1	80	25	250	6,1
56	C-66/65-02	1	77	32	356	8,6
57	C-66/73-02	1	95	32	356	13,5
58	C-66/76-02	1	95	32	356	13,5
59	C-73/50-02	1a	89	26	356	11
60	C-73/65-01	1	89	26	356	11,7
61	C-73/66-02	1	89	26	356	11,7
62	C-73/76-02	1	95	32	356	13,2

DRILL STRING SUBS						
№	Sub thread №1/thread №2	Type	OD, mm	ID, mm	Length,mm (+35/-5)	Weight, kg
63	C-73/76-03	1	92	32	356	12,3
64	C-73/83-02	2	105,5	41,5/50,5	540	25
65	C-73/86-02	1	105	44	350	15,7
66	C-73/86-03	1	105	44	370	16,8
67	C-73/86-04	1	105	40	370	16,9
68	C-73/86-05	1	105	51	370	15,7
69	C-73/86-06	1	105	40	370	17,4
70	C-73/86-07	1	95	52	400	13,4
71	C-73/88-02	1	113	38	350	18,7
72	C-76/66-02	1	95	25	356	13,6
73	C-76/66-03	1	95	24	350	13,5
74	C-76/73-02	1	95	32	356	13
75	C-76/86-02	1	108	44	370	17,5
76	C-83/57-02	3a	105,5	32	500	18
77	C-83/73-02	3	105,5	34	540	25
78	C-83/83-02	1	105,5	50	540	23
79	C-83/84-02	1	105	50,5	500	20,3
80	C-83/86-02	1	105,5	50,5	540	21
81	C-83/86-03	1	120	52	400	22
82	C-83/88-02	1	108	38	500	21
83	C-83/101-02	1	118	52	430	27,4
84	C-83/102-02	1	120	52	430	27,5
85	C-84/76-02	3	102	53,2	520	21
86	C-84/83-02	2	105(-0,5)	53,2	500	20,3
87	C-84/86-02	2	105	53,2	540	22
88	C-86/65-02	1	108	32	356	17
89	C-86/83-02	1	105,5	50,5	500	24
90	C-86/83-03	1	105,5	50,5	540	
91	C-86/84-02	3	105	53,8	540	22
92	C-86/86-02	1	108	50	395	18
93	C-86/86-03	1	108	44	356	15,9

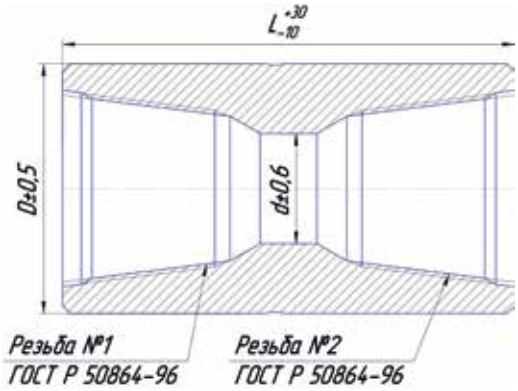
DRILL STRING SUBS						
№	Sub thread №1/thread №2	Type	OD, mm	ID, mm	Length,mm (+35/-5)	Weight, kg
94	C-86/86-04	1	108	60	395	20,2
95	C-86/86-05	1	118	44	356	18
96	C-86/86-06	1	140	44	356	27,7
97	C-86/101-02	1	120	54	500	29,8
98	C-86/102-02	1	120	54	430	25
99	C-86/102-03	1	120	54	500	30
100	C-86/102-04	1	121	54	430	25
101	C-86/102-05	1	120	52	400	23,3
102	C-86/102-06	1	120	54	420	24,4
103	C-86/117-02	2	140	54	420	29
104	C-86/133-02	2	155	54	420	36,5
105	C-86/147-02	2	178	54	450	50,7
106	C-88/76-02	1	108	32	395	18,5
107	C-88/86-02	1	113	38	420	23,3
108	C-88/102-02	1	120	54	420	25
109	C-101/83-02	3	118	50,5	470	21,5
110	C-102/65-02	3	120	26	405	15,3
111	C-102/73-02	1	120	44	405	22
112	C-102/76-02	1	120	32	405	22
113	C-102/76-03	1	121(+0,5)	30	430	25
114	C-102/83-02	1	120	50,5	430	24,4
115	C-102/86-02	1	120	52	430	22,5
116	C-102/86-03	1	120	52	400	22
117	C-102/86-04	1	120	38	430	24,5
118	C-102/86-05	1	120	51	430	22,5
119	C-102/102-02	1	120	52	430	23
120	C-102/102-03	1	120	62	430	21
121	C-102/108-02	1	133	72	540	34,2
122	C-102/122-02	1	146	72	495	47
123	C-102/133-02	1	155	72	495	49,5
124	C-108/102-02	1	133	68	540	34,4

DRILL STRING SUBS						
№	Sub thread №1/thread №2	Type	OD, mm	ID, mm	Length,mm (+35/-5)	Weight, kg
125	C-117/102-02	1	140	58	463	34,2
126	C-117/117-02	1a	140(+/-0,8)	58	300	18,7
127	C-117/117-03	1	140	58	1000	90
128	C-117/117-04	1	140	58	1500	130
129	C-117/122-02	1	155	78	485	42,3
130	C-117/122-03	1a	155	78	485	42,3
131	C-117/133-02	1	155	78	484	43,5
132	C-117/171-02	2	203	78	523	73
133	C-122/102-02	3	146	70	457	28,6
134	C-122/122-02	1	162	80	457	37,5
135	C-122/133-03	1a	155	80	484	35,6
136	C-122/133-04	1a	165	80	484	48,6
137	C-122/152-02	2	197	89	524	60
138	C-122/163-02	2	197	95	524	58,2
139	C-122/171-02	2	203	95	530	67,3
140	C-133/86-02	3	155	54	430	26,3
141	C-133/102-02	3	155	60	430	26,9
142	C-133/122-01	1a	165	80	484	44,7
143	C-133/133-02	1	170	70	500	55,8
144	C-133/133-03	1	155	65	510	47
145	C-133/133-04	1	155	80	510	42,6
146	C-133/133-05	1	162	90	510	44
147	C-133/133-06	1	168,3	90	510	49,3
148	C-133/133-07	1	155	82	484	39,2
149	C-133/133-08	1a	155	82	484	39
150	C-133/133-09	1	170	70	400	41,3
151	C-133/133-10	1	170	70	1200	159,6
152	C-133/147-02	2	178	80	520	52
153	C-133/147-03	2	178	90	520	56
154	C-133/147-04	1	178	80	540	67,1
155	C-133/147-05	1	178	80	500	60,9

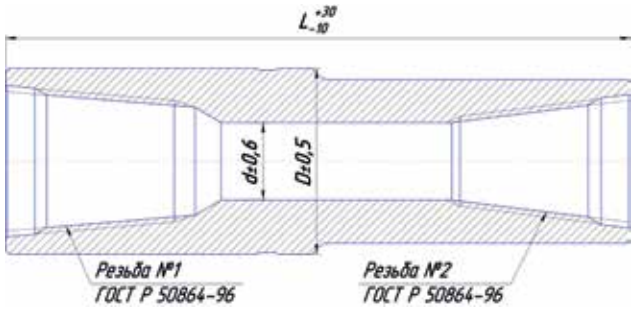
DRILL STRING SUBS						
№	Sub thread №1/thread №2	Type	OD, mm	ID, mm	Length,mm (+35/-5)	Weight, kg
156	C-133/152-02	2	197	89	629	82,5
157	C-133/152-03	2	197	80	540	78,2
158	C-133/161-02	2	203	90	550	66
159	C-133/163-02	2	197	89	550	67,3
160	C-133/171-02	1	203	91	494	81
161	C-133/171-03	2	203	100	560	71,6
162	C-133/171-04	2	203	105	560	73
163	C-133/171-05	1	203	101	532	77,5
164	C-133/171-06	2	240	101	550	91,8
165	C-133/171-07	1	203	101	632	104
166	C-133/171-08	1	229	90	450	92,6
167	C-133/177-02	2	229	101	523	75
168	C-147/102-02	3	178	58	525	62
169	C-147/117-02	3	178	58	620	65,3
170	C-147/117-03	3	178	58	620	63,2
171	C-147/133-02	3	178	91	620	60
172	C-147/133-03	3	178	80	524	51
173	C-147/133-04	1	178	80	540	61,8
174	C-147/133-05	1	178	80	500	55,5
175	C-147/133-06	1	178	80	524	59,6
176	C-147/147-02	1	178	90	634	73
177	C-147/147-03	1	195	70	526	79,8
178	C-147/152-02	1	195	80	517	75
179	C-147/152-03	1	197	89	617	93,5
180	C-147/152-04	2	197	80	540	82,5
181	C-147/163-02	1	195	101	538	70
182	C-147/171-02	2	203	90	521	74
183	C-147/171-03	2	203	101	621	89
184	C-147/171-04	2	203	80	520	78
185	C-147/177-01	1	229	101	500	100
186	C-149/133-02	3	197	95	525	56,7

DRILL STRING SUBS						
№	Sub thread №1/thread №2	Type	OD, mm	ID, mm	Length,mm (+35/-5)	Weight, kg
187	C-152/117-02	3	197	58	526	56
188	C-152/133-02	3	197	90	526	73,4
189	C-152/152-02	1	197	89	617	92,7
190	C-152/152-03	1	197	89	617	
191	C-152/152-04	1	197	80	400	51,4
192	C-152/163-02	1a	197	89	517	73
193	C-152/163-03	1	197	101	517	68,5
194	C-152/171-02	1	203	120	517	69
195	C-152/171-04	1	203	122	617	86
196	C-152/171-05	1	203	80	520	87,7
197	C-152/177-02	1	229	101	523	106
198	C-161/171-02	1	203	127	538	65,7
199	C-163/152-02	1	197	89	543	75
200	C-163/152-03	1a	197	89	543	75
201	C-163/163-02	1a	197	89	543	76
202	C-163/171-02	1	203	100	538	81
203	C-171/133-02	3	203	95	536	58
204	C-171/133-03	3	203	95	636	68
205	C-171/152-02	1	197	89	517	67
206	C-171/152-03	1	203	80	540	75,6
207	C-171/163-02	1	203	100	538	72
208	C-177/152-02	1	226	89	517	95
209	C-177/152-03	1	226	89	617	122,5
210	C-177/152-04	1a	226	89	517	95
211	C-177/152-05	3	225	80	560	100,1
212	C-177/171-02	1	225	102	617	119,5
213						
214						
215						
216						
217						

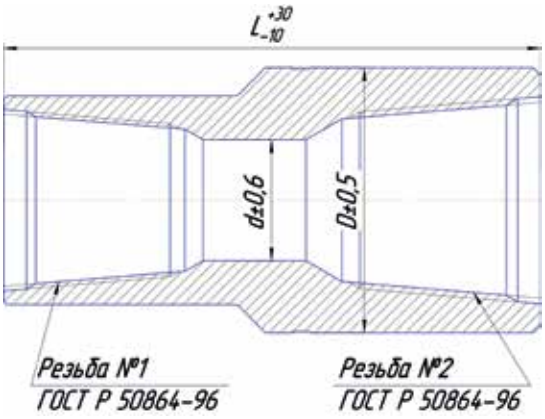
Drill string subs (box)



Type 4



Type 5



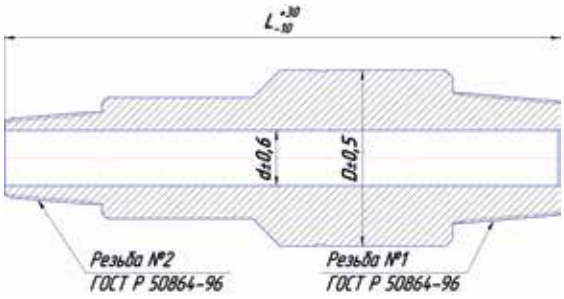
Type 5 A

DRILL STRING SUBS (BOX)						
№	Sub thread №1/ thread №2	Type	OD, mm	ID, mm	Length, mm (+35/-5)	Weight, kg
1	M-76/83 ГОСТ 7360	4	105,5	41,5	450	19
2	M-86/76 ГОСТ 7360	5	108	45	363	14,4
3	M-86/88 ГОСТ 7360	4	113	54	325	15,7
4	M-88/83 ГОСТ 7360	4	108	51,5	450	21
5	M-88/88 ГОСТ 7360	4	113	58	325	15,4
6	M-117/117 ГОСТ 7360	4	140	78	355	23,3
7	M-121/117 ГОСТ 7360	4	146	78	356	24,8
8	M-133/117 ГОСТ 7360	4	155	78	385	32,6
9	M-147/117 ГОСТ 7360	5	178	78	400	33,5
10	M-147/147 ГОСТ 7360	4	178	101	400	37,9
11	M-147/152 ГОСТ 7360	5a	197	101	391	44
12	M-152/171 ГОСТ 7360	4	229	122	400	80
13	M-161/177 ГОСТ 7360	4	225	102	400	71,7

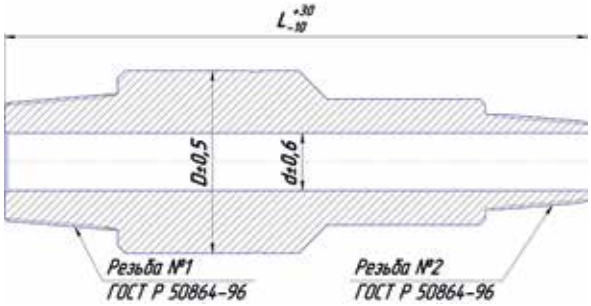
DRILL STRING SUBS (BOX)						
№	Sub thread №1/ thread №2	Type	OD, mm	ID, mm	Length, mm (+35/-5)	Weight, kg
14	M-171/171 ГОСТ 7360	4	203	127	415	50,6
15	M-171/177 ГОСТ 7360	4	229	101	415	73
16	M-57/66-02	4	86	32	350	12,2
17	M-65/65-02	4	77	34	356	5,3
18	M-65/66-02	4	77	34	356	5,4
19	M-66/66-02	4	77	34	230	5
20	M-73/73-02	4	89	34	240	7,5
21	M-76/73-02	4	92	32	250	8
22	M-76/102-02	5	121	42	390	24
23	M-88/88-02	4	113	54	280	13,8
24	M-102/88-02	4	120	52	325	18
25	M-102/88-03	4	118	50	325	16,7
26	M-102/88-04	4	127	50	325	21
27	M-102/102-02	4	120	58	325	15,2
28	M-117/102-01	4	140	58	355	26,6
29	M-117/117-02	4	140	78	1000	77,4
30	M-117/118-02	4	152	78	350	27
31	M-117/122-02	4	155(+0,8)	78	350	30,5
32	M-117/122-03	4	155(+0,8)	72	370	33,5
33	M-117/122-04	4	155(+0,8)	80(+0,5)	350	30,3
34	M-122/117-02	4	146	78	356	26,9
35	M-133/117-01	4	155	70	385	25,2
36	M-133/117-02	4	165	78	385	40
37	M-133/117-03	1	155	58	400	36
38	M-133/133-02	4	168	80	484	51,5
39	M-133/133-03	4	155	80	484	32
40	M-133/147-02	5	178	78	400	36,6
41	M-133/152-02	4	197	101	400	58,4
42	M-133/152-03	4	197	89	400	61,7
43	M-133/152-04	5a	197	90	400	44
44	M-133/152-05	5a	197	101	400	42,9
45	M-133/152-06	4	197	101	500	76
46	M-133/171-01	5a	229	90	440	67,4
47	M-133/177-02	5a	225	90	440	64,6
48	M-147/177 -02	5a	226	100(+1/-0,6)	436	21,2
49	M-147/177 -03	5a	226	100	568	105
50	M-147/177-04	5a	229	101	500	85
51	M-147/177-05	5a	226	100	568	92,5
52	M-152/117-02	5	197	78	400	43

DRILL STRING SUBS (BOX)						
№	Sub thread №1/ thread №2	Type	OD, mm	ID, mm	Length, mm (+35/-5)	Weight, kg
53	M-152/152-02	4	197	101	400	50,5
54	M-152/177-02	5a	229	101	400	76,9
55	M-161/152-02	4	203	101	400	58,4
56	M-163/152-02	4	203	110	330	46
57	M-163/152-03	4	197	89	400	56,3
58	M-163/177-02	4	226	101	517	106,3
59	M-163/177-03	4	229(+/-0,8)	101	415	82
60	M-177/86-02	5a	225	60	800	120,2
61	M-177/88-02	5a	226	54	500	76,9
62	M-177/177-02		229	101	415	81

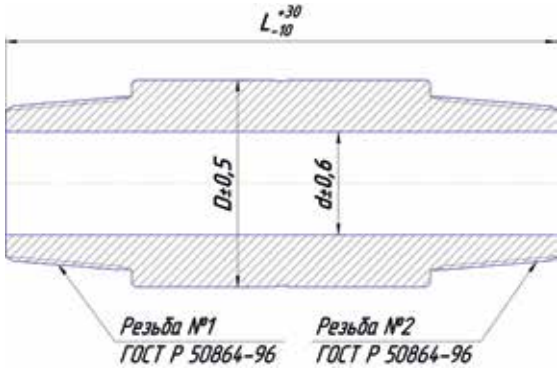
Drill string subs (pin)



Type 6



Type 7

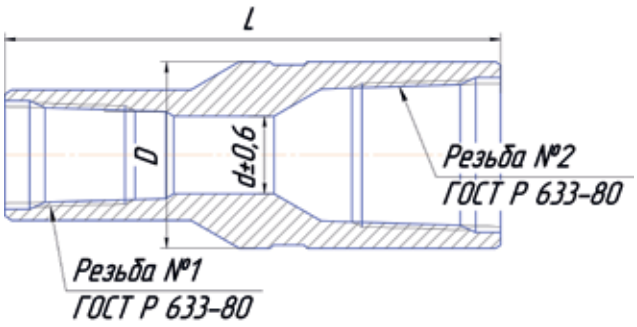


Type 8

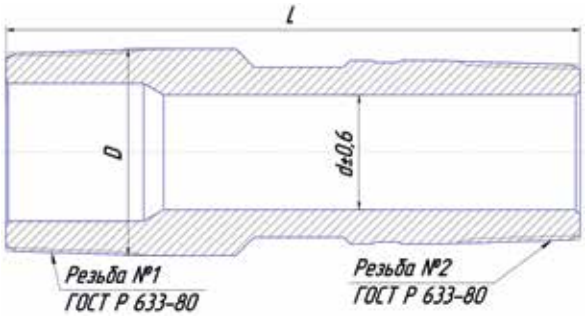
DRILL STRING SUBS (PIN)						
№	Sub thread №1/ thread №2	Type	OD, mm	ID, mm	Length, mm (+35/-5)	Weight, kg
1	H-147/147	7	178	101	550	51
2	H-147/152	7	197	89	550	70
3	H-65/65-02	7	77	34	350	7,9
4	H-66/66-03	7	77	34	350	11,3
5	H-66/66-02	7	80	25	400	7,7
6	H-76/73-02	7	92	34	450	17,5
7	H-76/76-02	7	95	32	450	27,2
8	H-76/76-03	7	95,8	30(+2)	450	17,5
9	H-76/76-04	7	92	34	450	17,5
10	H-76/86-02	7	105	32	490	23,8
11	H-76/88-02	7	113	32	470	25,2
12	H-86/73-02	7	105	32	369	16,8
13	H-86/76-02	7	105	32	369	16,2
14	H-86/88-02	7	113	52	500	23,4
15	H-86/102-02	7	120	52	500	27,9
16	H-88/88-02	7	113	52	470	21,2
17	H-102/102-02	7	121	62	500	25,3
18	H-117/102-02	7	140	52	430	78,1
19	H-117/117-02	7	140	52	430	69,4
20	H-117/152-02	8	203	52	570	33,5
21	H-133/102-02	6	155	60	550	51,8
22	H-133/102-03	8	155	62	450	84
23	H-133/133-02	7	155	58	525	77
24	H-133/133-03	7	155	82	525	66
25	H-133/133-04	7	155	95	525	52,4
26	H-133/147-02	7	178	80	550	43,8
27	H-133/161-02	8	203	85	650	35,5
28	H-133/163-02	8	197	85	650	63,8
29	H-133/171-02	8	203	95	650	83,6
30	H-133/177-02	8	225	95	670	77,9
31	H-147/117-02	6	178	52	550	66
32	H-147/163-02	7	197	101	570	78,8
33	H-152/102-02	8	195	60	550	94,5
34	H-152/108-02	6	203	64	650	64,2
35	H-152/133-02	7	197	89	555	69,5
36	H-152/152-02	7	197	90	550	65
37	H-152/163-02	7	197	89	570	84,2
38	H-152/163-03	7	197	89	517	73,4
39	H-152/171-02	7	203	89	560	74,7
40	H-171/163-02	7	203	100	570	65,2

DRILL STRING SUBS (PIN)						
№	Sub thread №1/ thread №2	Type	OD, mm	ID, mm	Length, mm (+35/-5)	Weight, kg
41	H-171/171-02	7	203	101	550	78,8
42	H-147/147	7	178	101	550	60,5
43	H-117/133-02	7	155	58	525	86,3

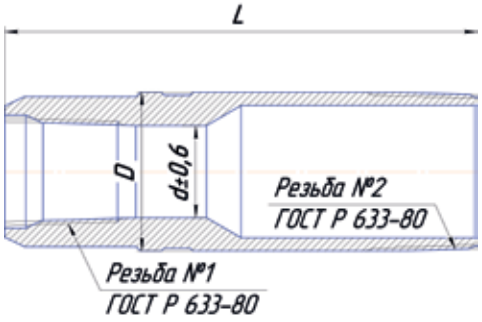
Tubing threaded subs



Type 1



Type 2

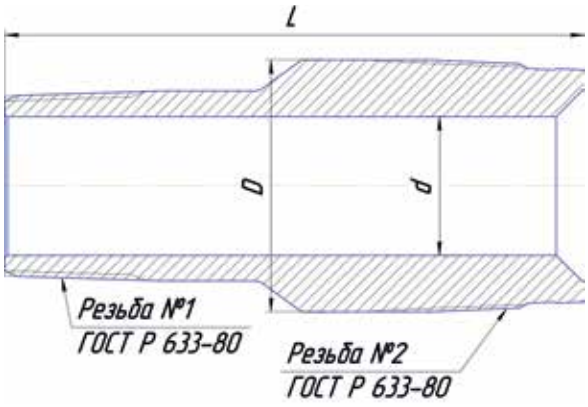


Type 3

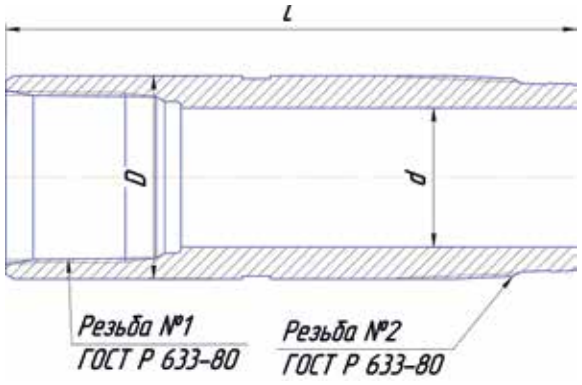
TUBING THREADED SUBS						
№	Sub thread №1/ thread №2	Type	OD, mm	ID, mm	Length, mm	Weight, kg
1	М 73НК/73НК 200	1	89	59	200	53,5
2	М 60 ГОСТ 633-80	1	73	50,3	500	16
3	М 89В «Е»	1	115,4	87,5*	150	4,2
4	М 33нк/48нк	1	60	25	160	1,5
5	М 60нк/33нк	1	73	25	200	2,5

TUBING THREADED SUBS						
№	Sub thread №1/ thread №2	Type	OD, mm	ID, mm	Length, mm	Weight, kg
6	М 60нк/48нк	1	73	36	200	2,8
7	М 73нк/33нк	1	89	25	200	3,5
8	М 73нк/48нк	1	89	36	200	4
9	М 73нк/60нк	1	89	48	200	4,1
10	М 73нкВ/73нк	1	95(-1)	60	200	4,6
11	М 89нк/73нк	1	108	60	200	5,2
12	М 89нк/73нкВ	1	108	60	250	7,7
13	М 89нкВ/73нк	1	115,4	60	250	8,1
14	Н 60нк/60нк	2	61,3	46	140	1,1
	Н 60нк/60нк	2	61,3	50,3	300	10,5
15	Н 73нкВ/73нкВ	2	78,6	59	250	4,5
16	Н 73нк/73нкВ	2	80	50	300	5,8
17	Н 73нк/89нк	2	90	50	300	7
18	Н 89нк/73нкВ	2	80	50	300	7
19	Н 102нк/114нк	2	114,3	73	300	11,5
20	П 33нк/48нк	3	60	25	160	1,3
21	П 42нкт/60нкт-01	3	60,3	35	180	1,7
22	П 48нк/73нк	3	74	36	200	3,2
23	П-60НК/60НК	3	73	41	150	2,2
24	П-60НК/60НК L1000	3	73	50,3	1000	10,9
25	П 60нк/73нк	3	73	50	200	3,1
26	П 60нк/89нк	3	91	48	250	5,8
27	П-73В-60В	3	95	49	210	4,1
28	П-73В/60нкт	3	94	50,3	190	3,2
29	П-73В/60нкт-01	3	94	50,3	200	3,1
30	П-73НК/73НК 1000	3	89	59	1000	25,3
31	П 73нк/73нкВ	3	89	60	250	5,2
32	П 73нкВ/73нкВ	3	95	60	300	7,7
33	П 73нк/89нк	3	89	60	200	4,7
34	П 73нкВ/89нк	3	95	60	250	6,8
35	73нк/89нкВ	3	95,2	60	250	5,7
36	П 89нк/89нкВ	3	108	73	250	7,3
37	П 89нкВ/89нк	3	115,4	60	250	9,4
38	П 89нк/102нк	3	108	73	250	8
39	П 89нк/114нк	3	114,3	73	250	9,3

Tubing subs



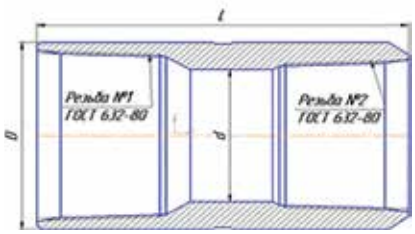
Type 1



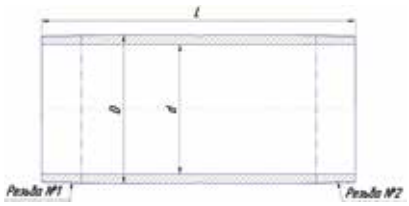
Type 2

ПЕРЕВОДНИКИ С РЕЗЬБОЙ НКМ К НАСОСНО-КОМПРЕССОРНЫМ ТРУБАМ						
№	Sub thread №1/thread №2	Type	OD, mm	ID, mm	Length, mm	Weight, kg
1	Н 89Г/60В	1	88,9	49	205	4,5
2	П-60В/89Г	2	88,9	56	205	5,4
3	П-60Г/73Г Е	2	73	50	205	3,1
4	П-60Г/89Г	2	88,9	50	205	6,1
5	П-60Г/89Г Е	2	88,9	50	205	6,1
6	П-73В/73Г	2	95	59	205	3,6
7	П-73Г/60Г Е	2	88,9	45	205	3,6
8	П-73В/89Г	2	95	70	205	4
9	П-73В/89Г Е	2	88,9	60	205	4,6
10	П-89Г/60В	2	107	49	205	4,4
11	П-89Г/60 Г М	2	107	45	205	4,4
12	П-89Г/60 Г Е	2	107	45	205	4,4
13	П-89Г/73 В	2	107	50	205	6
14	П-89Г/73 Г	2	107	59	205	4,1
15	П-89Г/73 Г Е	2	107	59	205	4,1
16	П-89Г/89В	2	107	65	205	6,3
17	П-89 НК/89 НКМ	2	108	74	800	13,5
18	П-89 НКМ/89 НК	2	108	74	800	13,5
19						
20						
21						
22						
23						
24						

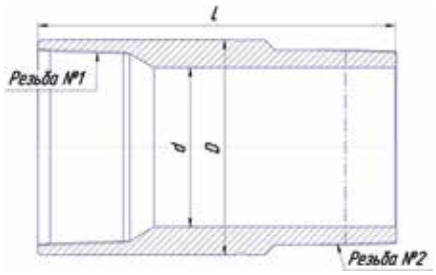
OTTM threaded subs to connect casing



Type 1



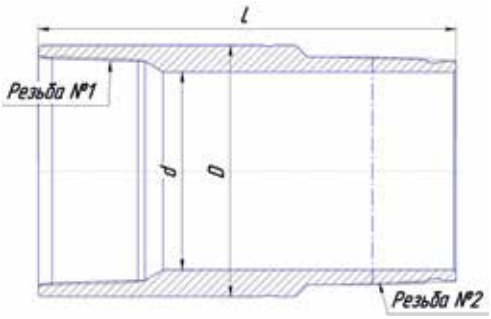
Type 2



Type 3

OTTM THREADED SUBS TO CONNECT CASING						
№	Sub thread №1/ thread №2	Type	OD (+/-0,5), mm	ID (+/-0,6), mm	Length (+/-5), mm	Weight, kg
1	М-114 ОТТМ/102 ОТТМ	1	127	90	230	8,3
2	М 168оттм/168 оттм	1	187,7	147,1	300	17,7
3	Н-168/146ОТТМ	2	168,3	116	600	41
4	Н-168/168 ОТТМ	2	168,3	116	600	55
5	Н-245/178 ОТТМ	2	244,5	160	500	40
6	fitting ОТТМ219 12,7	2	219,1	193,694	1500	96,9
7	П-146/146 ОТТМ-01	3	166	124,1	300	15
8	П-146/146 ОТТМ-02	3	166	124,1	500	30
9	П-ОТТМ 168 /146	3	187,7	116	500	44,6
10	П-168/168 ОТТМ -01	3	187,7	147,1	300	16,6
11	П-168/168 ОТТМ-02	3	187,7	147,1	500	33,3
12	П- ОТТМ168/168 -03	3	187,7	150,5	1000	16,1
13	П- ОТТМ168/168 -04	3	187,7	150,5	1000	17,1
14	П- ОТТМ168/168 -05	3	187,7	150,5	1000	14,5
15	П-245/175 ОТТМ	3	270	160	500	55,2
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

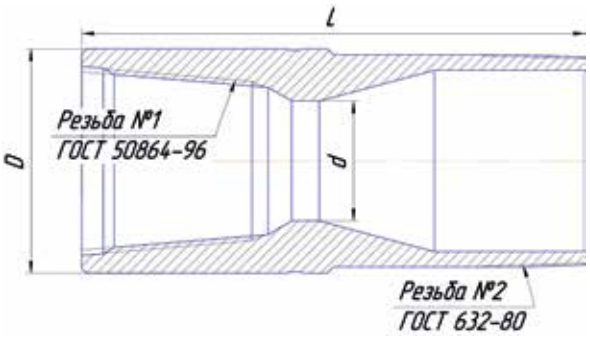
Combined subs OTTM /buttress thread



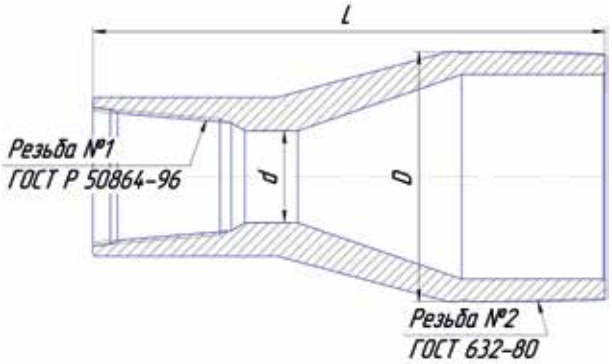
Type 1

OTTM/BUTTRESS THREAD SUBS						
№	Sub thread №1/ thread №2	Type	OD, mm	ID, mm	Length, mm	Weight, kg
1	П 168 ОТТМ/168ОТТГ	1	187,7(+/-0,5)	147,1(+/-0,5)	350(+/-1,5)	18,5
2	П245 ОТТМ/245 ОТТГ	1	269,9(+/-0,5)	212,7	450(+/-1,5)	52,8

Tool joint thread/ OTTM



Type 2A

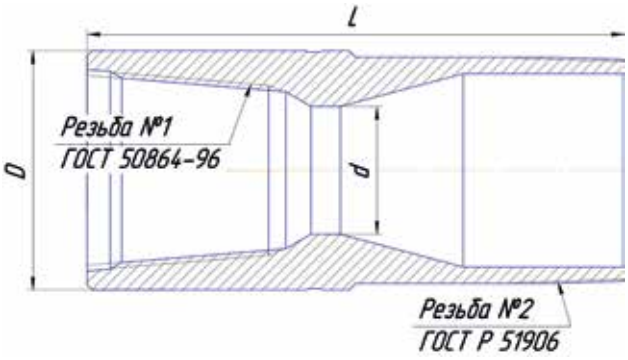


Type 2Б

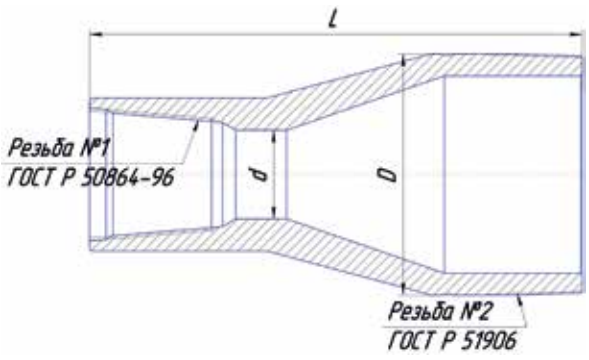
TOOL JOINT THREAD / OTTM						
№	Sub threadN°1/ thread №2	Type	OD, mm	ID, mm	Length, mm	Weight, kg
1	П З-83/102 ОТТМ	2А	105,5	60(+/-0,4)	500(+20/-10)	17,3
2	П З-83/114 ОТТМ	2Б	114,3	60(+/-0,4)	350(+20/-5)	16,6

TOOL JOINT THREAD / ОТТМ						
№	Sub thread№1 / thread №2	Type	OD, mm	ID, mm	Length, mm	Weight, kg
3	П-102 ОТТМ/3-81	2А	120(+/-0,5)	50,5	500(+20/-5)	23
4	П-102/114 ОТТМ	2А	120(+/-0,5)	62(+/-0,6)	430(+30/-10)	23,8
5	П-122/114 ОТТМ-01	2А	146(+/-0,5)	58(+/-0,5)	400(+30/-10)	17
6	П-122/146 ОТТМ	2А	152(+/-0,5)	95(+/-0,6)	400(+30/-10)	25,2
7	П-122/168 ОТТМ	2Б	168,3(+/-0,5)	95(+/-0,6)	400(+30/-10)	26,5
8	П-122/245 ОТТМ	2Б	244,5(-0,115)	80(+/-0,6)	500(+30/-10)	56,5
9	П-122/324 ОТТМ	2Б	323,9(-0,14)	80	600	84
10	П-133/146 ОТТГ	2А	155(+/-0,5)	90(+/-0,6)	400(+30/-10)	25
11	П-133/146 ОТТМ	2А	162(+/-0,5)	90(+/-0,6)	400(+30/-10)	25
12	П-133/168 ОТТМ	2А	168,3(+/-0,5)	90(+/-0,6)	500(+30/-10)	37
13	П-133/168 ОТТМ-01	2А	168,3(+/-0,5)	90(+/-0,6)	400(+30/-10)	31,5
14	П-133/168 ОТТМ-02	2А	168,3(+/-0,5)	90(+/-0,6)	500(+30/-10)	44
15	П-133/178 ОТТМ	2А	177,8(+/-0,5)	90(+/-0,6)	400(+30/-10)	38
16	П-133/219 ОТТМ	2Б	219,1(+/-0,5)	90(+/-0,6)	450(+30/-10)	37,5
17	П-133/245 ОТТМ	2Б	244,5(-0,115)	90(+/-0,6)	500(+30/-10)	53
18	П-133/245 ОТТМ-01	2Б	244,5(-0,115)	90(+/-0,6)	500(+30/-10)	63
19	П-133/245 ОТТМ-02	2Б	244,5(-0,115)	90(+/-0,6)	500(+30/-10)	65
20	П-133/324 ОТТМ	2Б	323,9(-0,14)	90(+/-0,6)	450(+30/-10)	60
21	П-133/324 ОТТМ-02	2Б	323,9(-0,14)	90(+/-0,6)	600(+30/-10)	81,2
22	П-133/324 ОТТМ-03	2Б	323,9(-0,14)	90(+/-0,6)	600(+30/-10)	92
23	П-133/324 ОТТМ-04	2Б	323,9(-0,14)	90(+/-0,6)	600(+30/-10)	103,5
24	П-133/324 ОТТМ-05	2Б	323,9(-0,14)	90(+/-0,6)	600(+30/-10)	103,5
25	П-133/324 ОТТМ-06	2Б	323,9(-0,14)	90(+/-0,6)	600(+30/-10)	98
26	П-133/324 ОТТМ-07	2Б	323,9(-0,14)	90(+/-0,6)	600(+30/-10)	95
27	П-133/340 ОТТМ	2Б	339,7(-0,14)	70(+/-0,6)	500(+30/-10)	80
28	П-147/146 ОТТМ	2А	178(+/-0,8)	101(+/-0,5)	430	36
29	П-147/146 ОТТМ-01	2А	178	95(+/-1)	400(+30/-10)	29,5
30	П-147/168 ОТТМ	2А	178(+/-0,8)	101(+/-0,5)	430	33,5
31	П-147/168 ОТТМ-01	2А	178(+/-0,5)	95(+/-0,6)	400(+30/-10)	31,5
32	П-147/245 ОТТМ	2Б	244,5(-0,29)	95(+/-1)	500(+30/-10)	63
33	П-147/324 ОТТМ	2Б	323,9(-0,6)	95(+/-1)	600(+30/-10)	86,5

Tool Joint/Butress



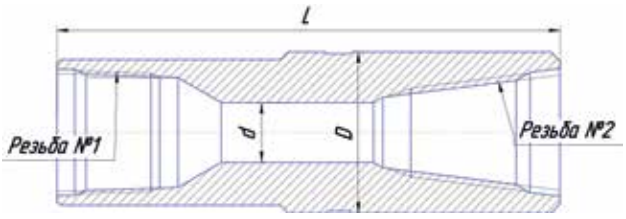
Type 3A



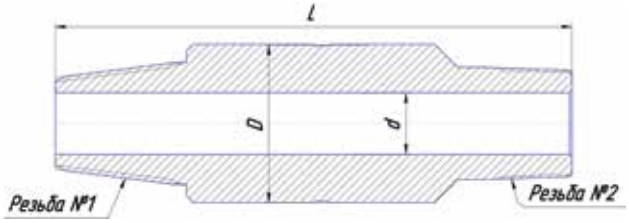
Type 3Б

TOOL JOINT / BUTRESS						
№	Sub thread №1/ thread №2	Type	OD, mm	ID, mm	Length, mm	Weight, kg
1	П-102/114 БТС	3А	120(+/-0,5)	62(+/-0,6)	430(+30/-10)	24,3
2	П-122/168 БТС	3А	168,7(+/-0,5)	90(+/-0,6)	470(+30/-10)	37,5
3	П-122/245 БТС	3Б	244,5(-0,1)	90(+/-0,6)	500(+30/-10)	50,6
4	П-133/146 БТС	3А	155(+/-0,5)	90(+/-0,6)	400(+30/-10)	24,3
5	П-133/168 БТС	3А	168,7(+/-0,5)	90(+/-0,6)	400(+30/-10)	34,5
6	П-133/168 БТС-01	3А	168,7(+/-0,5)	90(+/-0,6)	500(+30/-10)	43,7
7	П-133/178 БТС	3А	178,2(+/-0,5)	90(+/-0,6)	500(+30/-10)	53,7
8	П-133/245 БТС	3Б	244,5(-0,1)	90(+/-0,6)	500(+30/-10)	53
9	П-133/245 БТС-01	3Б	244,5(-0,1)	70(+/-0,6)	500(+30/-10)	56,4

Tool Joint/Tubing

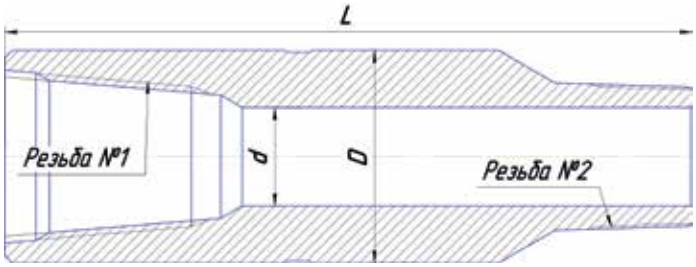


Type 4A



Type 4Б

Tool joint/Tubing

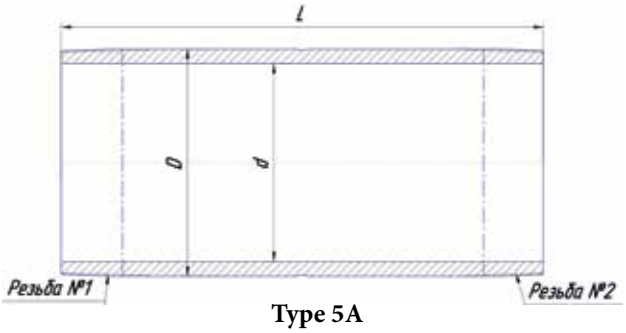


Type 4B

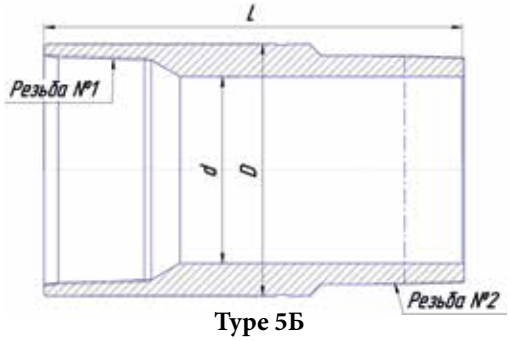
TOOL JOINT / TUBING						
№	Sub thread №1/ thread №2	Type	OD, mm	ID, mm	Length, mm	Weigth, kg
1	М-60 нкВ/З-66	4А	86	32	270(+30/-10)	12,1
2	Н -88/73В	4Б	108(+/-0,5)	44(+/-0,6)	370(+30/-10)	18
3	Н -88/73В-01	4Б	113(+/-0,5)	44(+/-0,6)	370(+30/-10)	18,5
4	Н-133/60НК (2»)	4Б	155(+/-0,5)	49(+/-0,6)	390(+30/-10)	35,6
5	Н-133/60нк	4Б	165(+/-0,5)	50,3	424(+35/-5)	36
6	П-60нкВ-З-66	4В	80	32	270(+30/-10)	12,1
7	П-73В/З-102	4В	120	49	354(+5)	17,1
8	П-73В/З-76	4В	95(+/-0,5)	35(+/-0,6)	300(+30/-10)	9,7
9	П-73В/З-86	4В	105(+/-0,8)	44(+/-0,6)	300(+30/-10)	12,3
10	П-73В/З-88	4В	113(+/-0,5)	44(+/-0,6)	370(+30/-10)	15,6
11	П-73нкт/З-73	4В	89	66(+/-0,6)	250(+5)	6,1
12	П-73нкт/З-73-01	4В	105(+/-0,5)	40(+/-0,5)	250(+/-5)	9,5
13	П-73нкт/З-73 Л-02	4В	105(+/-0,5)	40(+/-0,5)	250(+/-5)	9,5
14	П-73нкт/З-86	4В	105	66(+/-0,6)	250(+5)	9,8
15	П-73нкт/З-86-01	4В	105(+/-0,5)	50(+/-0,5)	250(+/-5)	9,1
16	П-73нкт/З-86 Л-02	4В	105(+/-0,5)	50(+/-0,5)	250(+/-5)	9,1
17	П З-83/73нкт	4В	105,5(+/-0,5)	54(+/-0,4)	350(+20/-5)	11,5
18	П З-84/73нкт	4В	102(+/-0,5)	50,8(+/-0,4)	350(+20/-5)	10,3
19	П З-86/73нкт	4В	108(+/-0,5)	54(+/-0,4)	350(+20/-5)	11,8
20	П З-86/73нкт-01	4В	108	50	350(+30/-10)	18

TOOL JOINT / TUBING						
№	Sub thread №1/ thread №2	Type	OD, mm	ID, mm	Length, mm	Weigth, kg
21	П З-86/В89	4В	108(+/-0,5)	45(+/-1)	470(+/-10)	22
22	П З-86 Л/В89 Л-01	4В	108(+/-0,5)	45(+/-1)	470(+/-10)	22
23	П З-86/нкт114	4В	103,5(+/-0,4)	54	300(+30/-10)	16
24	П З-88/В73	4В	113(+/-0,5)	44(+/-0,6)	370(+30/-10)	18,5
25	П-102/60нкВ	4В	120(+/-0,5)	38(+/-0,6)	330(+30/-10)	13,7
26	П-102/73нкВ	4В	120(+/-0,5)	60(+/-0,6)	300(+30/-10)	12
27	П-133/60нкт	4В	155(+/-0,5)	50	300(+/-5)	16
28	П-133/73 нкт	4В	155(+/-0,5)	59(+/-0,6)	325(+/-10)	19,8
29	П-133/73нкВ	4В	155(+/-0,5)	60(+/-0,6)	325(+30/-10)	20,2
30	П-З-133/89нк	4В	155(+/-0,5)	76(+/-0,6)	325(+30/-10)	18,9

OTTM/BTS Thread



Type 5A

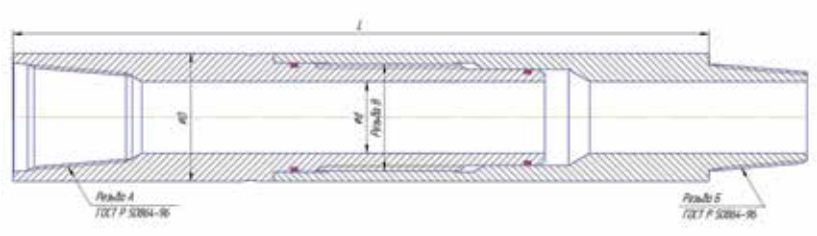


Type 5Б

OTTM/BTS THREAD						
№	Sub thread №1/thread №2	Type	OD, mm	ID, mm	Length, mm	Weigth, kg
1	Н-245 ОТТМ-245 БТС	5А	244,5(-0,29)	212,7(+/-1)	520(+/-10)	44
2	П-146 ОТТМ/146 БТС	5Б	146,1	124,7	1200(+/-10)	42,8
3	П-168 БТС/168 ОТТМ-01	5Б	187,7(+/-0,5)	147,1(+/-0,5)	350(+/-5)	18,7
4	П-168 ОТТМ/168 БТС-01	5Б	187,7(+/-0,5)	147,1(+/-0,5)	350(+/-5)	20
5	П-168 ОТТМ/168 БТС-02	5Б	187,7(+/-0,5)	147,1(+/-0,5)	600(+/-5)	40,7
6	П-178 ОТТМ/178 БТС	5Б	194,5(+/-0,5)	152,4(+/-0,5)	600(+/-5)	43,5
7	П-245 БТС/245 ОТТМ	5Б	269,9(+/-0,5)	200	450(+30/-10)	61,3
8	П-245ОТТМ/245 БТС	5Б	269,9(+/-0,5)	201	450(+30/-10)	63,7

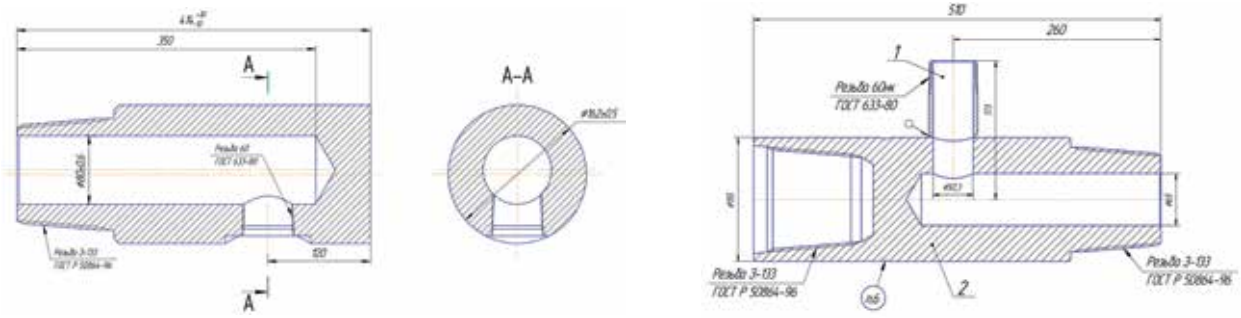
Specialty subs

Saver subs



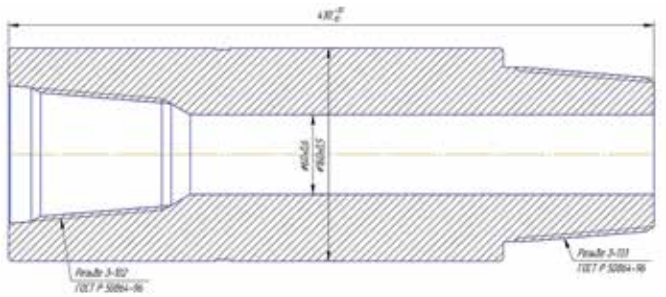
SAVER SUBS				
Saver sub	OD, mm	ID, mm	Length, mm	Weigth, kg
БРП-83	105,5	50,5	750	
БРП-86	108	54	720	
БРП-122	146,5	82	800	
БРП-133	155,5	95	800	

Dump sub



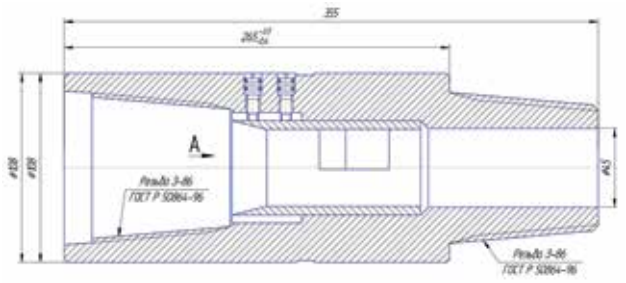
DUMP SUB				
DUMP SUB	OD, mm	ID, mm	Length, mm	Weight, kg
ПЗ-133	162 (+/-0,5)	80(+/-0,6)	414(+30/-10)	40,2
П З-133/133-sub body П З-133/60нк	155 (+/-0,5)	65(+/-0,6)	510(+30/-10)	49

Saver subs



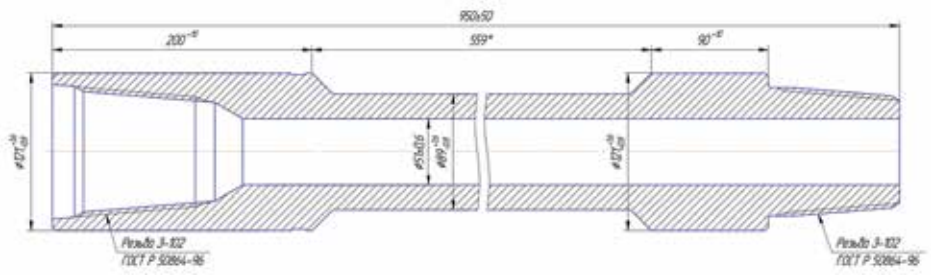
SAVER SUBS				
Saver sub	OD, mm	ID, mm	Length, mm	Weigth, kg
П-102/133	160(+/-0,5)	60(+/-0,6)	430(+30/-10)	55,3
П-102/152	205(+/-0,5)	60(+/-0,6)	430(+30/-10)	92,7
П-147/133	185(+/-0,5)	95(+/-0,6)	524(+35/-5)	60
Н-152/102	205(+/-0,5)	40(+/-0,6)	517(+35/-5)	60,5
Н-152/152	205(+/-0,5)	89(+/-0,6)	517(+35/-5)	74,1

Orienting subs



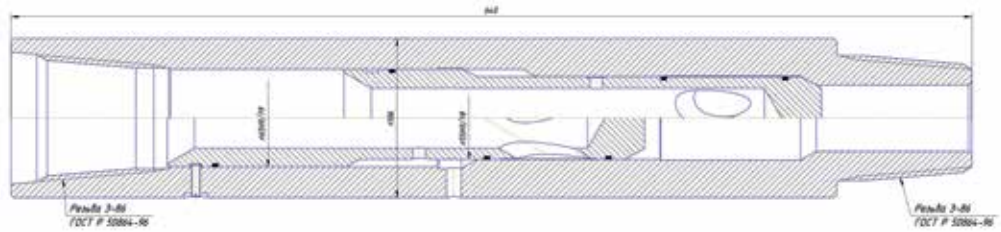
ORIENTING SUBS				
Orienting sub	OD, mm	ID, mm	Length, mm	Weight, kg
БС 146 М3 (П86/86)	108	45	355	12,5
ПО 120.3-102.000	120	54	360	21,2

Lifting subs



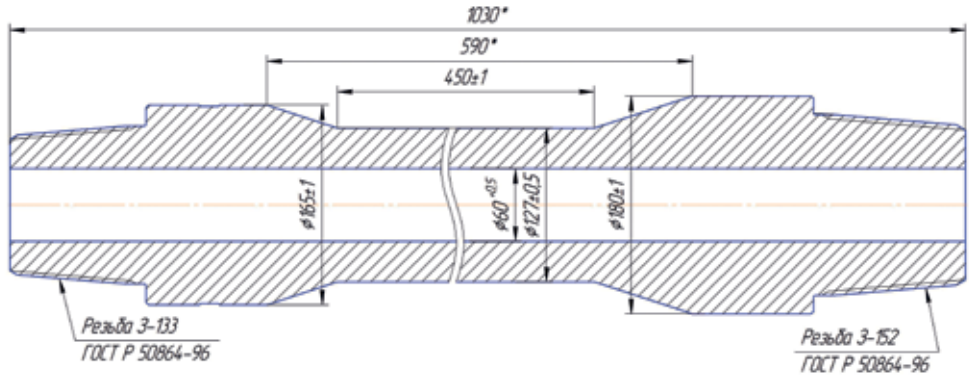
LIFTING SUBS				
Lifting sub	OD, mm	ID, mm	Length, mm	Weigth, kg
П-86/86	108(+/-0,5)	54	2000	44
П-86/86-01	108(+/-0,5)	54	3000	59
П-86/86-02	108(+/-0,5)	54	915	22
П-86/102	120(+/-0,5)	глухое	906	53
ПП-102/102-02	120(+/-0,5)	50(+/-0,6)	750(+30/-10)	31,2
ПП-102/102-03	120(+3,2)	52(+/-1)	890(+76/-25)	33
ПП-102/102-04	121(+1,6/-0,8)	51(+/-0,6)	950(+/-50)	31,2
ППН-133х580	172(+/-0,5)	74	580(+30/-10)	66
ПП-133/133-02	172(+/-0,5)	74(+/-0,6)	850(+30/-10)	87
ПП-133/133-03	162(+/-0,5)	глухое	1413	145,7
ПП-133/133-04	162(+/-0,5)	80(+/-0,6)	710(+/-5)	60
ПП-133/133-05	162(+/-0,5)	80(+/-0,6)	1000(+/-5)	74
ПП-133/133-06	172(+/-0,5)	74(+/-0,6)	850(+30/-10)	88,5
ПП-147/133-01	178(+/-0,5)	91(+/-0,6)	620(+30/-10)	60
ПП-147/133-02	178(+/-0,5)	80(+/-0,6)	715(+/-5)	62,1
ПП-147/133-03	178(+/-0,5)	80(+/-0,6)	740(+/-5)	73,1
ПП Н-147/133-02	170,5(+/-0,5)	80(+/-0,6)	850(+/-5)	85,2
ПП 147/147-04	185(+/-0,5)	80(+/-0,6)	740(+/-5)	90,3
ПП З-152	194	50	590(+30/-10)	67,5

Circulation subs



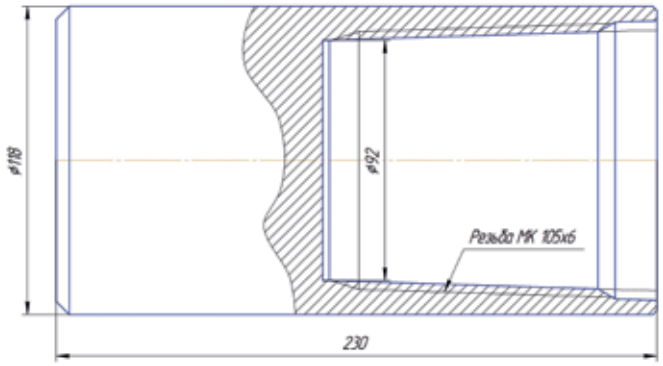
CIRCULATION SUBS				
Circulation sub	OD, mm	ID, mm	Length, mm	Weight, kg
ППМ2-106.00.001	106	44	640	31

Flow subs



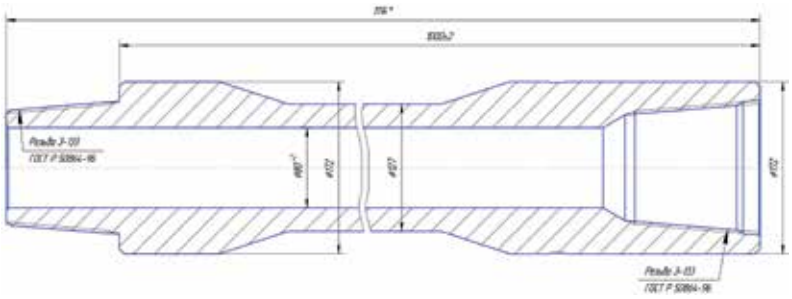
FLOW SUBS				
Flow sub	OD, mm	ID, mm	Length, mm	Weight, kg
Н-102/102 L1030	120(+/-0,5)	52(+/-0,6)	1030(+30/-10)	40
Н-152/133(ПТ 139.1952 028)	165(+/-1)	60(+0,5)	1030	105

Ball subs МК 105х6



BALL SUBS				
Ball sub	OD, mm	ID, mm	Length, mm	Weigth, kg
БС 146.10.001-01а	118	52	250	14,1
БС 146.10.002-01	118	глухое	230	12,2

Bent sub



BENT SUBS				
Bent sub	OD, mm	ID, mm	Length, mm	Weight, kg
ПГ 133/133(ППГ 127.1900 012 тис)	172	80(+2)	1114	94

Drill Stabilizers

Stabilizers are used for drilling BHA stabilization and hole opening to bit diameter as well as for stabilization the BHA in borehole and control hole deviation while drilling.

We manufacture two types of stabilizers:
- SBS – straight blade stabilizer;
- IBS – integral spiral blade stabilizer.

As per connection type with downhole equipment the following stabilizers are manufactured:
- X-over;
- female;
- male

Stabilizer blades are hardfaced using special hardfacing technology for wear resistance depending on the drilling application. Recommended maximum usage depending on drilling conditions is 200 hours.

We recommend re-dress of stabilizers based on drilling conditions and inspection of equipment to maintain conformity to relevant standards.

Spiral Blade Stabilizer

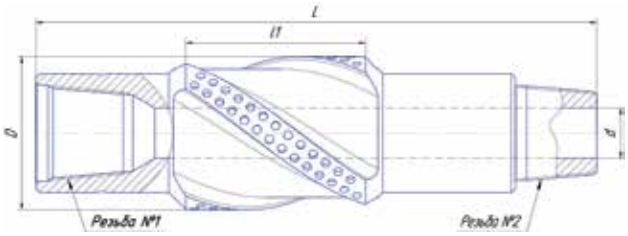


Figure. 1

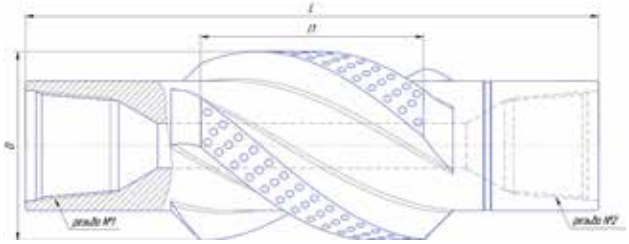


Figure. 2

SPIRAL BLADE STABILIZER										
Designation	Figure	OD, mm	Thread №1	Thread №2	Total length, mm L	Cutter length, mm, L1	ID, d	Blade count, pcs	Cutter type	Weight, kg
1КЛС-120,6-СТ	1	120,6	З-86	З-86	670	270	38	3	ВК8ВК	39
1КЛС-120,7-СТ	1	120,7	З-86	З-88	470	270	38	3	ВК8ВК	26
1КЛС-122-СТ	1	122	З-86	З-86	570	270	38	3	ВК8ВК	32,5
1КЛС-123,8-М	1	123,8	З-76	З-76	342	185	32,5	4	ВК11ВК	17
2КЛС-123,8-М	1	123,8	З-76	З-76	290	135	32,5	4	ВК11ВК	16
1КЛС-124-М	1	124	З-76	З-76	270	144	32	4	ВК11ВК	12

SPIRAL BLADE STABILIZER										
Designation	Figure	OD, mm	Thread №1	Thread №2	Total length, mm L	Cutter length, mm, L1	ID, d	Blade count, pcs	Cutter type	Weight, kg
1КЛС-125-СТ	1	125	З-76	З-76	342	144	32	4	ВК8ВК	16
1КЛС 139,7-СТ	1	139,7	з-102	З-102	400	270	58	3	ВК8ВК	32
2КЛС 139,7-СТ	1	139,7	З-86	З-86	400	271,1	38	3	ВК8ВК	30
1 КЛС-140-СТ	1	140	з-102	З-102	690	270	58	3	ВК8ВК	44
2-КЛС-140-СТ	1	140	З-88	З-88	690	270	40	3	ВК8ВК	50
1КЛС-141-СТ	1	141	З-88	З-88	605	270	40	3	ВК8ВК	37
2КЛС-141-СТ	1	141	З-86	З-86	680	270	40	3	ВК8ВК	48
1КЛС-142-М	2	142	З-88	З-88	317	200	38	3	ВК11	20
2КЛС 142-СТ	1	142	З-102	З-102	400	270	58	3	ВК8ВК	32,5
3 КЛС 142-СТ	1	142	З-102	З-102	590	270	58	3	ВК8ВК	37,5
4КЛС 142-СТ	1	142	З-88	З-88	400	231,1	38	3	ВК8ВК	25
1КЛС-142,9-СТ	1	142,9	З-88	З-88	490	271,1	38	3	ВК8ВК	28
2КЛС-142,9-СТ	1	142,9	З-88	З-88	605	270	40	3	ВК8ВК	37,5
3КЛС-142,9-СТ	1	142,9	З-86	З-86	600	271,1	38	3	ВК8ВК	37
4КЛС-142,9-СТ	1	142,9	З-102	З-102	400	270	58	3	ВК8ВК	32
5КЛС-142,9-СТ	1	142,9	З-88	З-88	400	231,1	38	3	ВК8ВК	30
1КЛС-144-М	2	144	З-88	З-88	317	200	40	3	ВК11ВК	20
1КЛС-146-СТ	1	146	З-83	З-83	540	200	41,5	3	ВК11ВК	33
2КЛС-146-СТ	1	146	З-88	З-83	540	200	41,5	3	ВК11ВК	34
1КЛС-148-СТ	1	148	З-102	З-102	690	270	58	3	ВК11ВК	46
1КЛС-149-М	1	149	З-83	З-83	400	200	41,5	3	ВК11ВК	24
2КЛС-149-СТ	1	149	З-88	З-88	540	200	40	3	ВК11ВК	35
3КЛС-149-СТ	1	149	З-102	З-102	400	270	58	3	ВК8ВК	25
1КЛС-149,2-СТ	1	149,2	З-88	З-88	540	200	40	3	ВК8ВК	35,1
1 КЛС 152-СТ	1	152	З-102	З-102	710	270	40	3	ВК8ВК	50
1КЛС-152,4-СТ	1	152,4	З-86	З-88	500	270	38	3	ВК8ВК	34
2КЛС-152,4-СТ	1	152,4	З-108	З-108	500	300	50	3	ВК8ВК	45
1 КЛС-153-СТ	1	153	З-88	З-88	300	176	38	3	ВК8ВК	19,5
1 КЛС-154-СТ	1	154	З-88	З-88	344,5	200	38	3	ВК8ВК	24
1КЛС -155-СТ	1	155	З-86	З-88	500	270	40	3	ВК8ВК	34
2КЛС -155-СТ	1	155	З-88	З-88	345,5	200	38	3	ВК8ВК	24
1КЛС-161-М	1	161	З-88	З-88	488	256,9	38	3	ВК8ВК	34
1 КЛС 189-СТ	1	189	З-117	З-117	447	225	60	3	ВК8ВК	48
2 КЛС 200-СТ	1	200	З-133	З-133	769	250	70	3	ВК8ВК	100,5
1 КЛС 203-СТ	1	203	З-133	З-133	774	250	70	3	ВК8ВК	101
1 КЛС 206-СТ	1	206	З-133	З-133	774	250	70	3	ВК8ВК	103
1 КЛС 208-СТ	1	208	З-133	З-133	774	250	70	3	ВК8ВК	102,5

SPIRAL BLADE STABILIZER										
Designation	Figure	OD, mm	Thread №1	Thread №2	Total length, mm L	Cutter length, mm, L1	ID, d	Blade count, pcs	Cutter type	Weight, kg
1 КЛС 209-СТ	1	209	З-133	З-147	670	250	70	3	ВК8ВК	100
1 КЛС 210-СТ	1	210	З-133	З-133	778	250	70	3	ВК8ВК	104,5
1КЛС-212-М	1	212	З-147	З-147	472	250	70	3	ВК8ВК	62
2КЛС-212-СТ	1	212	З-117	З-117	660	236	58	3	ВК8ВК	90
3КЛС-212-СТ	1	212	З-147	З-147	725	250	70	3	ВК8ВК	103,5
4КЛС-212-СТ	1	212	З-133	З-133	710	250	70	3	ВК8ВК	100
1КЛС-212,7-СТ	1	212,7	З-133	З-147	780	310	80	4	ВК8ВК	115
2КЛС-212,7-СТ	1	212,7	З-133	З-133	780,7	250	70	3	ВК8ВК	107
1 КЛС 213 СТ	1	213	З-117	З-117	660	236	58	3	ВК8ВК	92
1КЛС-214-М	1	214	З-147	З-147	472	250	70	3	ВК11ВК	62
2КЛС-214-СТ	1	214	З-133	З-133	782	250	70	3	ВК8ВК	107
3КЛС-214-СТ	1	214	З-117	З-117	660	236	58	3	ВК8ВК	100
4КЛС-214-СТ	1	214	З-147	З-147	627	250	70	3	ВК8ВК	87,5
1КЛС-215,5-СТ	1	215,5	З-147	З-147	660	250	70	3	ВК8ВК	95
2КЛС-215,5-СТ	1	215,5	З-117	З-117	660	250	70	3	ВК8ВК	90
1КЛС-215,9-СТ	1	215,9	З-117	З-117	525	250	70	3	ВК8ВК	82
2КЛС-215,9-СТ	1	215,9	З-117	З-117	470	230	58	3	ВК8ВК	67
3КЛС-215,9-М	1	215,9	З-117	З-117	615	236	58	3	ВК11ВК	82
4КЛС-215,9-СТ	2	215,9	З-147	З-147	490	250	70	3	ВК8ВК	98
5КЛС-215,9-СТ	1	215,9	З-147	З-147	615	250	70	3	ВК8ВК	100
6КЛС-215,9-М	1	215,9	З-147	З-147	555	236	58	3	ВК11ВК	68
7КЛС-215,9-М	1	215,9	З-117	З-117	460	236	58	3	ВК11ВК	58
8 КЛС-215,9-СТ	2	215,9	З-133	З-133	600	350	70	3	ВК8ВК	89,2
9 КЛС-215,9-СТ	1	215,9	З-133	З-133	784	250	70	3	ВК8ВК	108
10 КЛС-215,9-СТ	1	215,9	З-117	З-117	460	229	58	3	ВК8ВК	57
11КЛС-215,9-СТ	1	215,9	З-147	З-147	660	250	70	3	ВК8ВК	105
12КЛС-215,9-СТ	1	215,9	З-117	З-117	660	250	70	3	ВК8ВК	90
13КЛС-215,9-СТ	1	215,9	З-133	З-147	670	250	70	3	ВК8ВК	100
14КЛС-215,9-СТ	2	215,9	З-133	З-117	557	250	70	3	ВК8ВК	75
1КЛС-218,1-М	1	218,1	З-117	З-117	460	236	58	3	ВК11ВК	58
1 КЛС 282-СТ	1	282	З-152	З-152	900	400	80	3	ВК8ВК	212
1 КЛС 290 СТ	2	290	З-171	З-171	900	350	70	3	ВК8ВК	220
2 КЛС 290 СТ	1	290	З-152	З-152	900	400	80	3	ВК8ВК	215
1КЛС-292-СТ	1	292	З-152	З-152	1015	400	80	3	ВК8ВК	242
2КЛС-292-СТ	1	292	З-163	З-163	1028	400	80	3	ВК8ВК	240
1КЛС-293-СТ	1	293	З-171	З-171	645	350	70	3	ВК8ВК	157
2КЛС-293-СТ	2	293	З-171	З-171	900	350	70	3	ВК8ВК	220

SPIRAL BLADE STABILIZER										
Designation	Figure	OD, mm	Thread №1	Thread №2	Total length, mm L	Cutter length, mm, L1	ID, d	Blade count, pcs	Cutter type	Weight, kg
3КЛС-293-СТ	1	293	З-152	З-152	900	400	80	3	ВК8ВК	215
1 КЛС 295-СТ	1	295	З-171	З-171	900	350	70	3	ВК8ВК	220,5
1КЛС-295,3-СТ	2	295,3	З-171	З-171	645	350	70	3	ВК8ВК	167
2КЛС-295,3-СТ	1	295,3	З-171	З-171	770	350	70	3	ВК8ВК	200
3КЛС-295,3-М	2	295,3	З-152	З-152	700	404	70	3	ВК11ВК	170
4КЛС-295,3-М	1	295,3	З-152	З-152	636	340	70	3	ВК11ВК	160
5КЛС-295,3-СТ	1	295,3	З-152	З-152	900	400	80	3	ВК8ВК	220
1КЛС-310,2-СТ	1	310,2	З-147	З-147	650	296,8	70	3	ВК11ВК	193,5
1КЛС-311-СТ	1	311	З-133	З-133	650	300	90	3	ВК8ВК	140,5
1КЛС311,1-М	1	311,1	З-152	З-152	647	300	70	3	ВК8ВК	142
1 КЛС 380-СТ	2	380	З-163	З-163	1000	300	80	4	ВК8ВК	360
1КЛС-390-СТ	2	390	З-171	З-171	750	450	70	3	ВК8ВК	338
2КЛС-390-СТ	1	390	З-171	З-171	1000	300	80	4	ВК8ВК	370
1 КЛС 392-СТ	1	392	З-152	З-152	1015	300	80	4	ВК8ВК	350
2 КЛС 392-СТ	1	392	З-163	З-163	1028	300	80	4	ВК8ВК	352
1КЛС-393,7-СТ	2	393,7	З-152	З-177	830	480	70	3	ВК11ВК	390
2КЛС-393,7-СТ	1	393,7	З-177	З-177	890	480	70	3	ВК8ВК	420
1КЛС-406,2-М	1	406,2	З-177	З-152	(797)750	420	(70)90	3	ВК11ВК	330
1КЛС-490-СТ	2	490	З-171	З-171	1200	528,5	70	3	ВК8ВК	567

Straight blade stabilizer

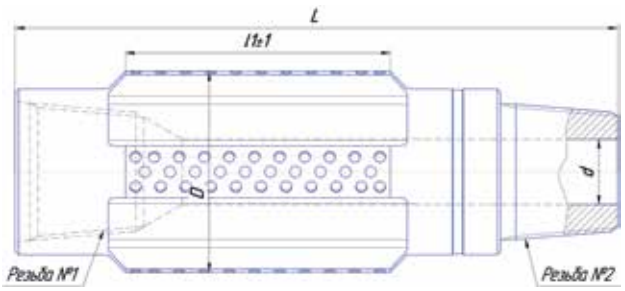


Figure. 1

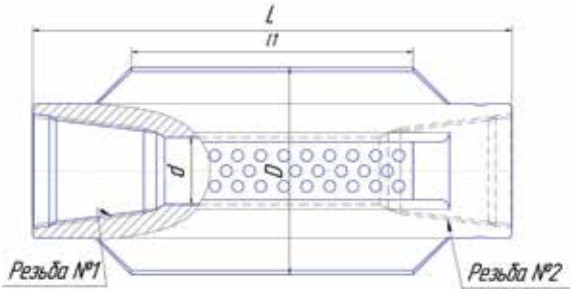


Figure. 2

SPIRAL BLADE STABILIZERS										
Designation	Figure	OD,mm	Thread №1	Thread №2	Length,mm L	Cutting length, l1	ID,mm	Blade count	Cutter type	Weight, kg
1КП-139-СТ	1	139	З-102	З-102	550	292	58	4	Г 54 ТУ	35
1КП-140-СТ	1	140	З-86	З-86	551	292	40	4	Г 54 ТУ	39
2КП-140-СТ	2	140	З-88	З-102	520	292	58		Г 54 ТУ	33
1КП-142,9-СТ	1	142,9	З-88	З-88	551	292	40	4	Г54 ВК8ВК ТУ	39,5
2КП-142,9-СТ	1	142,9	З-102	З-102	551	292	60	4	Г54 ВК8ВК ТУ	36
3КП-142,9-СТ	1	142,9	З-102	З-102	625	290	58	4	Г54 ВК8ВК ТУ	39,5
1КП-208-СТ	1	208	З-133	З-133	556	300	70	4	Г54 ВК8ВК ТУ	78
1КП-210-СТ	1	210	З-133	З-147	570	322	70	4	Г54 ВК8ВК ТУ	85
1КП-211-СТ	1	211	З-133	З-147	570	322	70	4	Г54 ВК8ВК ТУ	88
1КП-212-СТ	1	212	З-117	З-117	660	252	58	4	Г54 ВК8ВК ТУ	84
2 кп 212-ст	1	212	З-117	З-117	660	252	58	4	Г54 ВК8ВК ТУ	84
3 кп 212-ст	1	212	З-133	З-133	660	252	70	4	Г54 ВК8ВК ТУ	80
1КП-213-СТ	1	213	З-133	З-147	570	317	70	4	Г54 ВК8ВК ТУ	86,5
2КП-213-СТ	1	213	З-117	З-117	570	286	58	4	Г54 ВК8ВК ТУ	84
3КП-213-СТ	1	213	З-117	З-117	660	252	58	4	Г54 ВК8ВК ТУ	84
1КП-214-СТ	1	214	З-117	З-117	660	252	58	4	Г54 ВК8ВК ТУ	84
1КП-215-СТ	1	215	З-117	З-117	570	286	58	4	Г54 ВК8ВК ТУ	84
2КП-215-СТ	1	215	З-117	З-117	552	285	58	4	Г54 ВК8ВК ТУ	71,5
3КП-215-СТ	1	215	З-147	З-147	660	252	58	4	Г54 ВК8ВК ТУ	85
4КП-215-СТ	1	215	З-117	З-117	660	252	58	4	Г54 ВК8ВК ТУ	85
1КП 215,5-СТ	1	215,5	З-147	З-147	660	252	58	4	Г54 ВК8ВК ТУ	85
2КП 215,5-СТ	1	215,5	З-117	З-117	660	252	58	4	Г54 ВК8ВК ТУ	85
1КП-215,9-СТ(М)	2	215,9	З-117	З-117	397	250	58	3	Г54 ВК8ВК ТУ	47
2КП-215,9-СТ(М)	2	215,9	З-117	З-117	397	250	58	4	Г54 ВК8ВК ТУ	45
3КП-215,9-СТ	1	215,9	З-147	З-147	650	285	70	4	Г54 ВК11ВК ТУ	94

SPIRAL BLADE STABILIZERS										
Designation	Figure	OD,mm	Thread №1	Thread №2	Length,mm L	Cutting length, l1	ID,mm	Blade count	Cutter type	Weight, kg
4КП-215,9-СТ	2	215,9	З-117	З-117	500	369,1	58	4	Г54 ВК11ВК ТУ	67
5КП-215,9	2	215,9	З-117	З-117	500	294,1	70	4	Г54 ВК11ВК ТУ	62
6КП-215,9 СТ	1	215,9	З-147	З-147	660	252	58	4	Г54 ВК8ВК ТУ	85
1КП-220,7-СТ	1	220,7	З-133	З-133	650	280	70	4	Г54 ВК8ВК ТУ	90
1КП-290-СТ	1	290	З-133	З-152	765	480	70	4	Г54 ВК8ВК ТУ	206
1КП-292-СТ	1	292	З-152	З-152	1080	404	70	4	Г54 ВК8ВК ТУ	280
2КП-292-СТ	1	292	З-171	З-171	1100	404	90	4	Г54 ВК11ВК ТУ	260
1КП-295,3-СТ	1	295,3	З-171	З-171	1100	404	90	4	Г54 ВК11ВК ТУ	262
2КП-295,3-СТ	1	295,3	З-171	З-133	1100	480	90	4	Г54 ВК11ВК ТУ	278
3КП-295,3-СТК	2	295,3	З-152	З-152	775	312	90	4	Г54 ВК11ВК ТУ	183,5
4КП-295,3-СТК	2	295,3	З-133	З-152	775	312	90	4	Г54 ВК11ВК ТУ	193,6
1КП-390-СТ	1	390	З-171	З-171	980	458	90	4	Г54 ВК8ВК ТУ	315
2КП-390-СТ	1	390	З-152	З-152	900	300	90	4	Г54 ВК8ВК ТУ	260
1КП-490-СТ (welded blades)	2	312	З-171	З-171	980	536	90	4	Г2516 GOST 880	495

Straight blade stabilizers -reamers, Spiral blade stabilizers -reamers

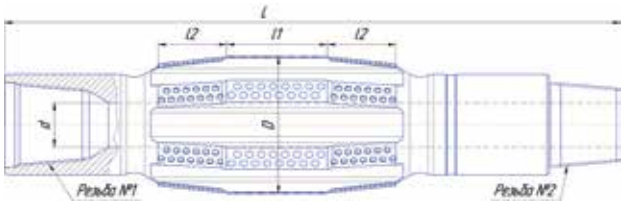


Figure 1

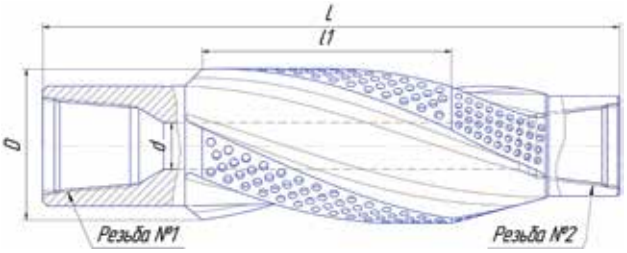


Figure 2

STRAIGHT BLADE AND SPIRAL BLADE STABILIZERS-REAMERS

Designation	Figure №	Cutting	Reaming D, mm	Thread №1	Thread №2	Total length, L	Cutting length,mm, l1	Reaming length,mm, l2	ID,мм, d	Blade count, pc	Cutters, pc/type	Weight, kg
1КРп-120-СТ	1	120		3-86	3-86	795	155	66,5	38	4	ВК	40
1КРп-123,8-СТ	1	123,8		3-86	3-86	795	155	66,5	38	4	ВК	41,5
1КРп-141-СТ	1	141		3-88	3-88	835	155	121	40	4	ВК	50
2КРп-141-СТ	1	141		3-102	3-102	840	155	84	58	4	ВК	50,8
1КРп-142,9-СТ	1	142,9		3-102	3-102	840	155	80	58	4	ВК	52
1КРп-214-СТ	1	214		3-133	3-133	980	160	109,3	70	6	ВК	129
1КРп-215,9-СТ	1	215,9		3-133	3-133	980	160	109,3	70	6	ВК	130
1КРп-295,3-СТ	1	295,3		3-171	3-133	1080	200	120	70	6	ВК	253,5
1КРп-304-316-СТ	1	316	304	3-152	3-152	1090	200	120	100	6	ВК	284
1 КРЛС-215,9-311-СТ	2	311	215,9	3-133	3-117	980	350	207	80	3	ВК	200
1 КРЛС-158-215,9	2	215,9	158	3-133	3-117	810	350	132,3	80	3	ВК	103

Spiral Blade Centralizers

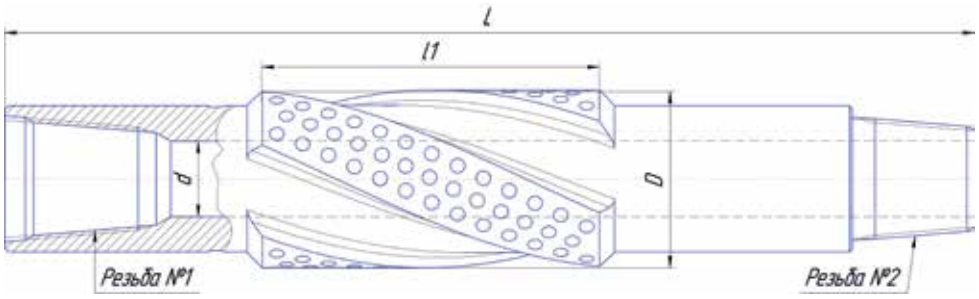


Figure №1 (x-over)

SPIRAL BLADE CENTRALIZERS										
New designation	Figure №	Thread №1	Thread №2	OD	ID	Cutter length, L1	Blade count pcs.	length, L, mm	Cutter, pcs	Weigth, kg
1ЦЛС-144 СТ	1	З-102	З-102	144	60	280	3	800	ВК	54,2
1ЦЛС-146 СТ	1	З-102	З-102	146	60	280	3	800	ВК	56,2
2ЦЛС-146 СТ	1	З-102	З-102	146	60	278	3	615	ВК	140
1ЦЛС-149 СТ	1	З-102	З-102	149	60	280	3	800	ВК	60,5
1ЦЛС-151 СТ	1	З-102	З-102	151	60	278	3	800	ВК	62,5
1ЦЛС-151,6 СТ	1	З-102	З-102	151,6	60	284,4	3	917	ВК	70
1ЦЛС-152 СТ	1	З-102	З-102	152	60	280	3	800	ВК	62,5
1ЦЛС-152,4 СТ	1	З-102	З-102	152,4	60	280	3	800	ВК	62,5
1 ЦЛС 153-СТ	1	З-102	З-102	153	62	162	3	300	ВК	23
1ЦЛС-154-СТ	1	З-102	З-102	154	60	280	3	917	ВК	63
1ЦЛС-154,6 СТ	1	З-102	З-102	154,6	60	280	3	800	ВК	63,5
1ЦЛС-155 СТ	1	З-102	З-102	155	60	280	3	917	ВК	63
1ЦЛС-200 СТ	1	З-133	З-133	200	71,5	320	3	1175	ВК	166,13
1ЦЛС-208 СТ	1	З-133	З-133	208	70	250	3	980	ВК	125,8
1ЦЛС- 210СТ	1	З-133	З-133	210	70	400	3	980	ВК	140
2ЦЛС- 210СТ	1	З-133	З-133	210	70	250	3	980	ВК	127,5
1ЦЛС-212,7 СТ	1	З-133	З-133	212,7	70	400	3	980	ВК	140
1ЦЛС-215 СТ	1	З-133	З-133	215	70	400	3	980	ВК	140
1ЦЛС- 217 СТ	1	З-133	З-133	217	70	400	3	980	ВК	140
2ЦЛС-217 СТ	1	З-133	З-133	217	70	250	3	980	ВК	133
1ЦЛС-219 СТ	1	З-133	З-133	219	70	250	3	980	ВК	134,5
1ЦЛС-219,7 СТ	1	З-133	З-133	219,7	70	250	3	980	ВК	135
1ЦЛС-220,7 СТ	1	З-133	З-133	220,7	70	250	3	980	ВК	136

Straight blade centralizers

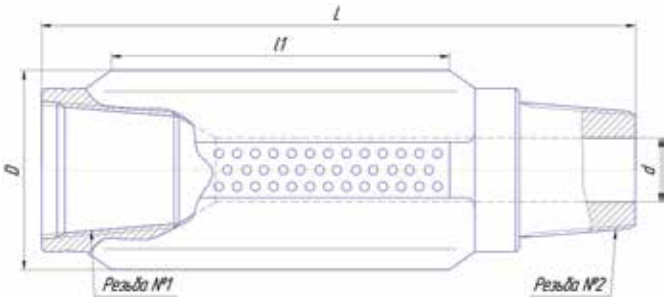


Figure. 1 (box-pin)

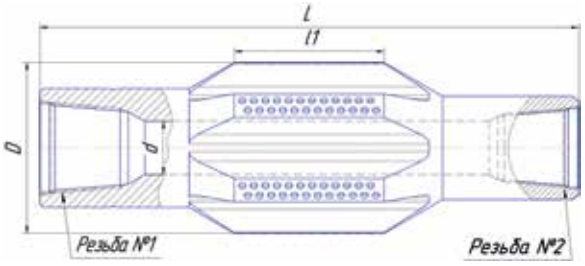


Figure. 2 (box-box)

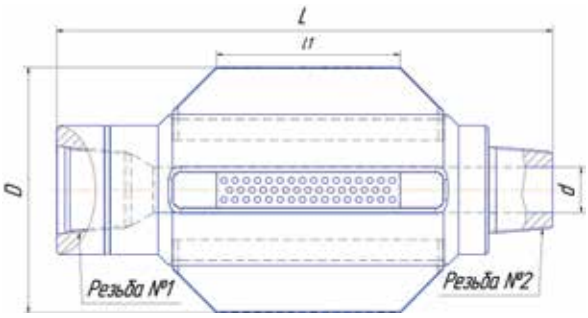
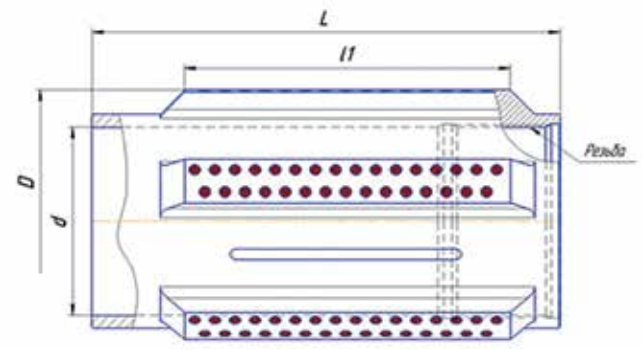


Figure. 3 (welded blade)

STRAIGTH BLADE CENTRALIZER									
DESIGNATION	Figure	Thread №1	Thread №2	OD, mm	ID, mm	Cutting length, mm l1	Total length, mm L	Cutters, pc	Weigth, kg
1ЦП-140-СТ	1	З-102	З-88	140	40	268	800	ВК	58,55
1ЦП-141-СТ	1	З-102	З-88	141	40	268	800	ВК	60
1ЦП 145-СТ	1	З-102	З-102	145	60	267	800	ВК	50,5
1ЦП-146-СТ	1	З-102	З-102	146	60	267	800	ВК	51,2
1ЦП-151-СТ	1	З-102	З-102	151	60	267	800	ВК	53,5
1ЦП-152-СТ	1	З-102	З-102	152	60	296	570	ВК	60
2ЦП-152-СТ	1	З-102	З-102	152	60	200	337	ВК	27,6
1ЦП-153-СТ	1	З-102	З-102	153	60	165	300	ВК	23
2ЦП-153-СТ	1	З-102	З-102	153	60	165	300	ВК	23
3ЦП-153	1	З-102	З-102	153	60	200	338	ВК	22
1ЦП-154-СТ	1	З-102	З-102	154	60	200	339	ВК	20,6
1ЦП-185-СТ	1	З-133	З-133	185	70	250	473	ВК	40
1ЦП-210-СТ	1	З-133	З-147	210	70	376	622	ВК	98
2ЦП-210-СТ	1	З-147	З-147	210	70	322	570	ВК	88,5
1ЦП-212-СТ	1	З-133	З-147	212	70	370	650	ВК	103

STRAIGTH BLADE CENTRALIZER									
DESIGNATION	Figure	Thread №1	Thread №2	OD, mm	ID, mm	Cutting length, mm l1	Total length, mm L	Cutters, pc	Weigth, kg
2ЦП-212-СТ	1	З-147	З-147	212	70	370	650	ВК	67
1ЦП-212,7	1	З-147	З-147	212,7	70	370	650	ВК	67
1ЦП-213-СТ	1	З-122	З-122	213	70	366	915	ВК	134,5
2ЦП-213-СТ	1	З-147	З-147	213	58	370	650	ВК	100
1ЦП-214-СТ	1	З-147	З-147	214	58	370	650	ВК	100
2ЦП-214-СТ	1	З-133	З-147	214	70	370	650	ВК	105
3ЦП-214-СТ	1	З-117	З-117	214	58	370	650	ВК	100
1ЦП-215-СТ	1	З-133	З-147	215	70	370	650	ВК	100
2ЦП-215-СТ	1	З-147	З-147	215	70	370	650	ВК	100
3ЦП-215-СТ	1	З-133	З-117	215	58	368	650	ВК	67
1ЦП-215,9-СТ	1	З-147	З-147	215,9	58	370	650	ВК	100
2ЦП-215,9-СТ	1	З-117	З-117	215,9	58	370	650	ВК	100
1ЦП-217,1-СТ	1	З-147	З-147	217,1	70	370	650	ВК	67
1ЦП-219-СТ	1	З-117	З-117	219	58	320	650	ВК	67
1ЦП-275-СТ	1	З-171	З-171	275	90	400	776	ВК	186
1ЦП-280-СТ	1	З-171	З-171	280	90	400	776	ВК	186
1ЦП-285-СТ	2	З-152	З-133	285	88	250	900	ВК	186
1ЦП-290-СТ	1	З-147	З-152	290	90	273,75	640	ВК	185,6
2ЦП-290СТ	1	З-171	З-152	290	90	273,75	640	ВК	185,6
3ЦП-290-СТ	1	З-171	З-152	290	90	370	750	ВК	181
1ЦП-292-СТ	1	З-152	З-152	292	70	370	750	ВК	117,3
1ЦП-385-СТ	3	З-171	З-152	389	100	235,9	750	ВК	243,6
1ЦП-390-СТ	3	З-151	З-171	390	100	235,9	750	ВК	243,6
1ЦП-405,4-СТ	3	З-147	З-147	405,2	90	313,8	750	ВК	310
1ЦП-406,2-СТ	3	З-177	З-152	406,2	90	313,8	750	ВК	181
1ЦП-485-СТ	3	З-147	З-171	485	70	363	980	ВК	490
2ЦП-485-СТ	3	З-171	З-171	485	90	363	980	ВК	490

Downhole motor straight blade centralizer



MUD MOTOR STRAIGHT BLADE STABILIZER								
Designation	Thread	OD, mm	ID, mm	Cutting length, mm l1	Blade count	Total length, L	Cutter, type	Weight, kg
1ЦПВЗД214	М180х6	214	174	300	6		Г54	23
1ЦПВЗД285	8,25-4 STUB ACME	285	205	357	5	508	Г55	56
2ЦПВЗД285	8,25-4 STUB ACME	285	205	350	5	620	Г56	77
3ЦПВЗД285	М211х6(спец)	285	200,5	350	5	620	Г57	77
1ЦПВЗД385	8,25-4 STUB ACME	385	205	356,5	6	508	Г58	141
2ЦПВЗД385	8,25-4 STUB ACME	385	205	300	5	645	Г59	140

Oat straight blade centralizer

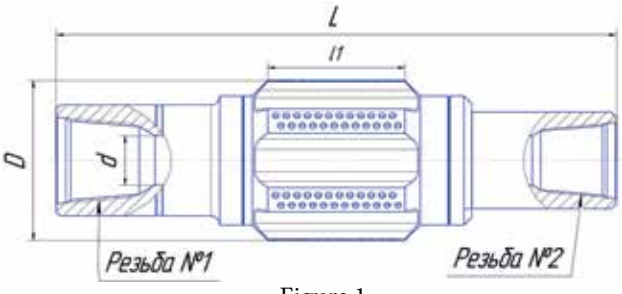


Figure 1

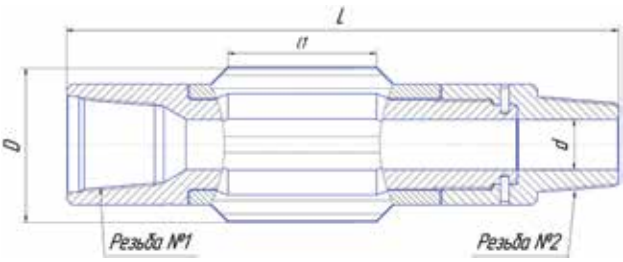
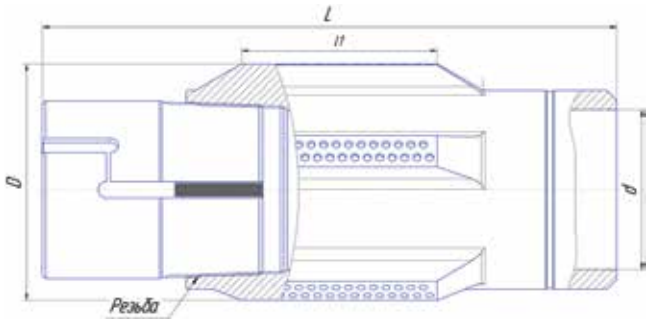


Figure 2

FLOAT STRAIGHT BLADE CENTRALIZER										
Designation	Figure	Thread №1	Thread №2	OD, mm	ID, mm	Cutting length, l1	Blade count	Length, L	Cutter type	Weight, kg
1ЦПП-215,9	2	З-133м	З-133н	215,9	70	350	6	911	ВК8ВК	135
1ЦПП-280	1	З-133м	З-133м	280	88	214	6	1000	ВК8ВК	217
1ЦПП-285	1	З-152м	З-133м	285	88	245	6	1000	ВК8ВК	221,21
1ЦПП-285-01	1	З-152м	З-133м	285	88	204,7	6	1000	ВК8ВК	221,21
1ЦПП-290	1	З-152м	З-133м	290	88	350	6	1015	ВК8ВК	245
1ЦПП-385	1	З-152м	З-133м	385	88	145	6	1000	ВК8ВК	261

Retractable centralizer



RETRACTABLE CENTRALIZER									
Designation	Connection, body &collet	OD, mm	ID , mm	Cutting length, l1	Blade count	Length , L	Cutter type	Weight, kg	Notes
1ЦДП385/240 СТ	МК 265х6х1:16	385	242	400	6	750	Г54	217	
ЦДП 393,7/240 СТ	МК 265х6х1:16	393,7	242	400	6	750	Г55	253	

Petro Tool Downhole Motor Operation Department provides rental, engineering and technological support for downhole motors, bidirectional drilling jars, oscillators and related equipment: lifting subs, lifting tubes, safety clamps, and chain spiders.

All equipment and tools are maintained on Petro Tool facilities and supported with necessary documentation.

Единая система оценки соответствия в области промышленной, экологической безопасности, безопасности в энергетике и строительстве

СВИДЕТЕЛЬСТВО ОБ АТТЕСТАЦИИ
НЕЗАВИСИМЫЙ ОРГАН ПО АТТЕСТАЦИИ ЛАБОРАТОРИЙ НЕРАЗРУШАЮЩЕГО КОНТРОЛЯ ООО "ТЕХСЕРВИС"

СВИДЕТЕЛЬСТВО ОБ АТТЕСТАЦИИ
№ 01А110076

УДОСТОВЕРЯЕТ
Лаборатория неразрушающего контроля
ООО «ПетроТул»

УДОВЛЕТВОРЯЕТ
требованиям Системы неразрушающего контроля

Дата регистрации 26 сентября 2014 г.
Действительно до 26 сентября 2017 г.

Без приложения не действительно
(приложение на 2-х листах)

Руководитель НОАЛ
ООО "Техсервис"

11601-(1)-91

Единая система оценки соответствия в области промышленной, экологической безопасности, безопасности в энергетике и строительстве

ПРИЛОЖЕНИЕ
К СВИДЕТЕЛЬСТВУ ОБ АТТЕСТАЦИИ
№ 01А110076 от 26 сентября 2014г.

УДОСТОВЕРЯЕТ
Лаборатория неразрушающего контроля
ООО «ПЕТРОТУЛ»

На 2-х листах

III. Виды деятельности:

УСЛОВИЕ ДЕЙСТВИЯ СВИДЕТЕЛЬСТВА:

Руководитель НОАЛ
ООО "Техсервис"

11601-(2)-195

Единая система оценки соответствия в области промышленной, экологической безопасности, безопасности в энергетике и строительстве

ПРИЛОЖЕНИЕ
К СВИДЕТЕЛЬСТВУ ОБ АТТЕСТАЦИИ
№ 01А110076 от 26 сентября 2014г.

УДОСТОВЕРЯЕТ
Лаборатория неразрушающего контроля
ООО «ПЕТРОТУЛ»

На 2-х листах Лист 1

ОБЛАСТЬ АТТЕСТАЦИИ *

I. Наименование оборудования (объектов):

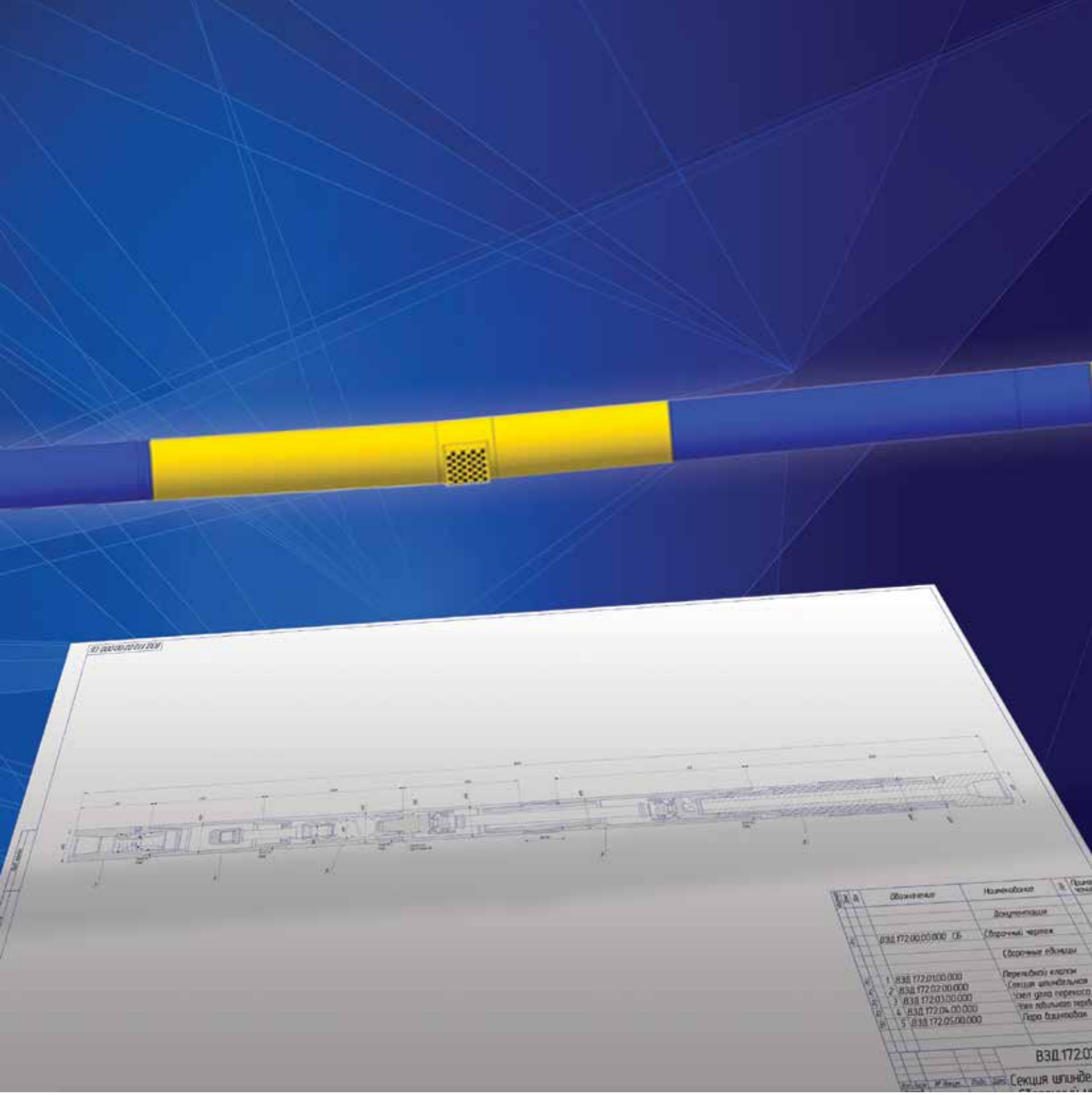
6. Оборудование нефтяной и газовой промышленности:
6.1. Оборудование для бурения скважин.
6.2. Оборудование для эксплуатации скважин.
6.3. Оборудование для освоения и ремонта скважин.
6.4. Оборудование газонефтеперекачивающих станций.
6.5. Газонефтепродуктопроводы.
6.6. Резервуары для нефти и нефтепродуктов.
8. Оборудование взрывопожароопасных и химически опасных производств:
8.1. Оборудование химических, нефтехимических и нефтеперерабатывающих производств, работающее под давлением до 16 МПа.
8.12. Технологические трубопроводы, трубопроводы пара и горячей воды.

II. Виды (методы) неразрушающего контроля и диагностики:

2. Ультразвуковой:
2.1. Ультразвуковая дефектоскопия.
2.2. Ультразвуковая толщинометрия.
4. Магнитный:
4.1. Магнитопорошковый.
6. Проникающими веществами:
6.1. Капиллярный.
11. Визуальный и измерительный.

Руководитель НОАЛ
ООО "Техсервис"

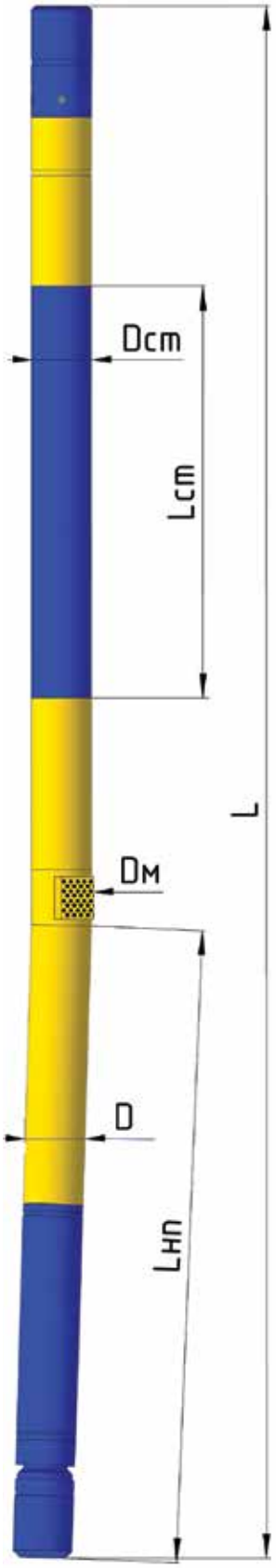
11601-(2)-194



DOWNHOLE MOTORS

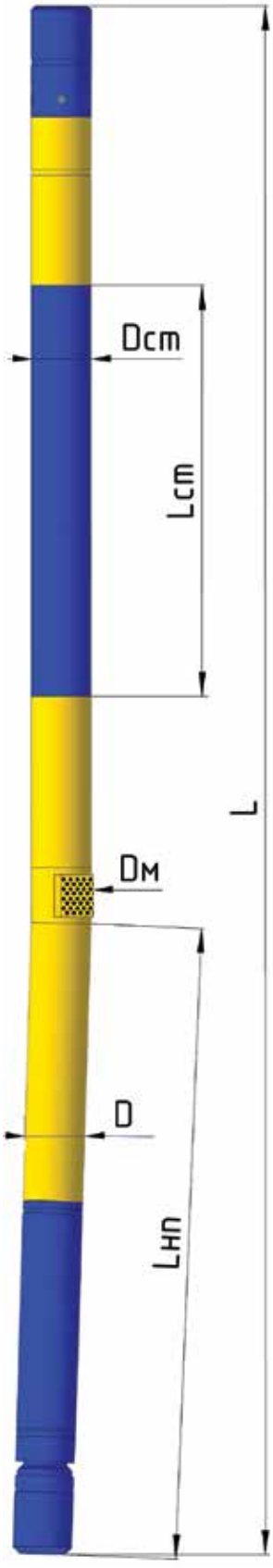
Downhole motor 102

TECHNICAL SPECIFICATIONS	7LZ102x7.0-III-K
Bit shaft outside diameter D, mm	102
Stator outside diameter Dст, mm	102
Control sleeve outside diameter Dм, mm	104
Motor length L, mm	4720
Stator length Lст, mm	2570
Weight, kg	160
Bit size range, mm	117,5-152,4
Bit box connection	3-76
Drilling tool connection size	3-76
Max load, кН (тс)	60 (6)
Bend between sections, grd.	0-4
Bit to bend Lнп, mm	1120
Stator alternate length, mm	2400
Lobe configuration, Zp/Zст	7x8
Flow rate, l/s	6-14
Speed, rpm	116-270
Differential pressure, atm.	5-25
Torque, kNм	1,36-2,38
Differential pressure (Full load), atm.	70
Power, KW.	33,6



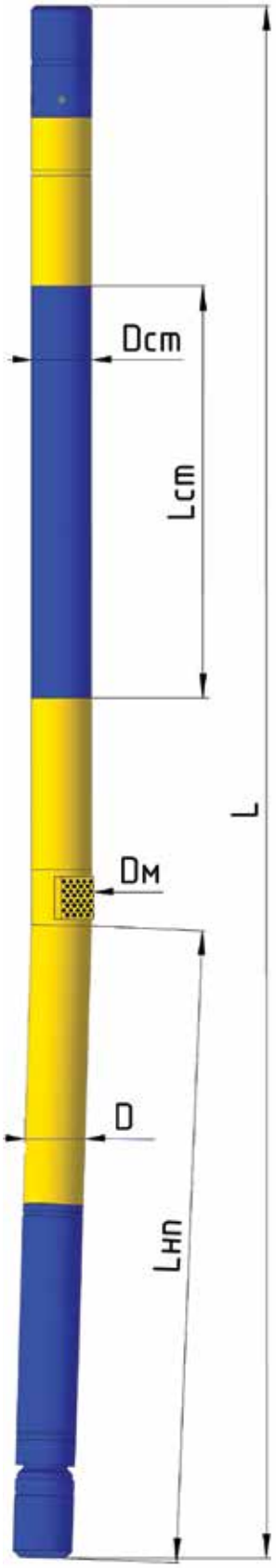
Downhole motor 120

TECHNICAL SPECIFICATIONS	5LZ120X7-V-K
Bit shaft outside diameter D, mm	120
Stator outside diameter Dст, mm	120
Control sleeve outside diameter Dм, mm	133
Motor length L, mm	5835
Stator length Lст, mm	3350
Weight, kg	350
Bit size range, mm	142-200
Bit box connection	3-88
Drilling tool connection size	3-88
Max load, кН (тс)	85 (8,5)
Bend between sections, grd.	0-3
Bit to bend Lнп, mm	1405
Stator alternate length, mm	3200
Lobe configuration, Zp/Zст	5x6
Flow rate, l/s	8-16
Speed, rpm	110-220
Differential pressure, atm.	10-40
Torque, kNм	2,3-4
Differential pressure (Full load), atm.	70
Power, KW.	37,2



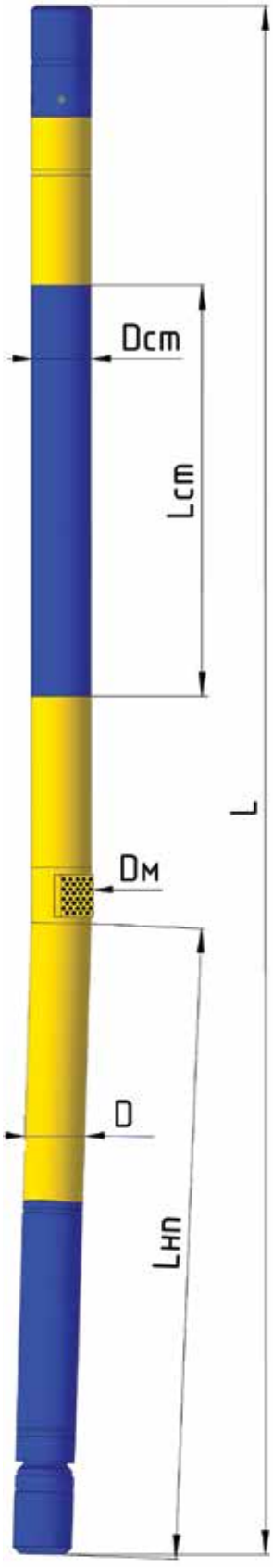
Downhole motor 120

TECHNICAL SPECIFICATIONS	7LZ120x7-IV-K
Bit shaft outside diameter D, mm	120
Stator outside diameter Dст, mm	120
Control sleeve outside diameter Dм, mm	133
Motor length L, mm	7250
Stator length Lст, mm	4750
Weight, kg	355
Bit size range, mm	142-200
Bit box connection	3-88
Drilling tool connection size	3-88
Max load, кН (тс)	85 (8,5)
Bend between sections, grd.	0-3
Bit to bend Lнп, mm	1395
Stator alternate length, mm	4680
Lobe configuration, Zp/Zст	7x8
Flow rate, l/s	8-16
Speed, rpm	75-150
Differential pressure, atm.	10-40
Torque, kNм	2,7-4,9
Differential pressure (Full load), atm.	70
Power, KW.	61



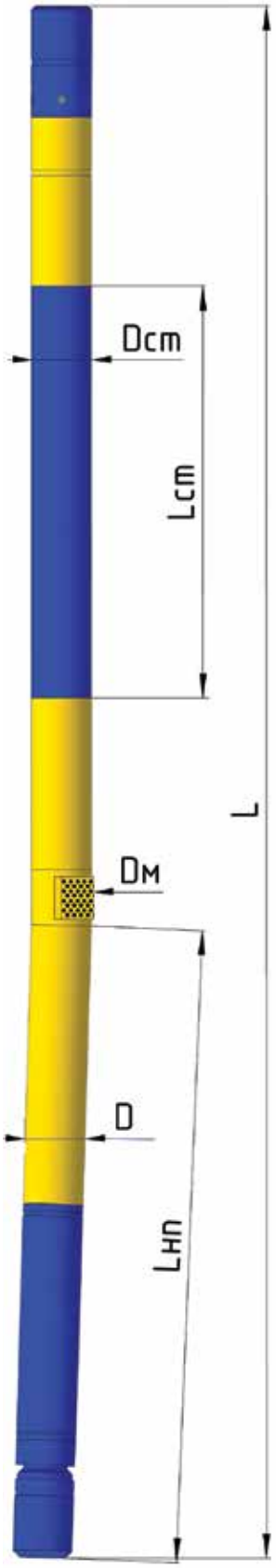
Downhole motor 150

TECHNICAL SPECIFICATIONS	5LZ150x7.0-IV-DW
Bit shaft outside diameter D, mm	153
Stator outside diameter Dст, mm	153
Control sleeve outside diameter Dм, mm	159
Motor length L, mm	6970
Stator length Lст, mm	3980
Weight, kg	633
Bit size range, mm	171,5-222,2
Bit box connection	3-117
Drilling tool connection size	3-117
Max load, кН (тс)	120 (12)
Bend between sections, grd.	0-3
Bit to bend Lнп, mm	1705
Stator alternate length, mm	3800
Lobe configuration, Zp/Zст	5x6
Flow rate, l/s	12-23
Speed, rpm	85-165
Differential pressure, atm.	5-25
Torque, kNм	3,6-6,3
Differential pressure (Full load), atm.	70
Power, KW.	74



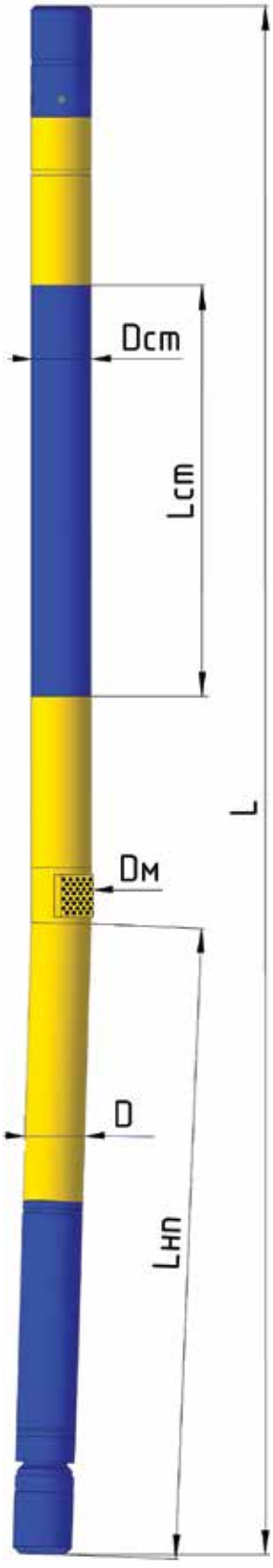
Downhole motor 165

TECHNICAL SPECIFICATIONS	7LZ165x7-V-K
Bit shaft outside diameter D, mm	167
Stator outside diameter Dст, mm	165
Control sleeve outside diameter Dм, mm	172,5
Motor length L, mm	8220
Stator length Lст, mm	5055
Weight, kg	1034
Bit size range, mm	212,7-250,8
Bit box connection	3-117
Drilling tool connection size	3-133
Max load, кН (тс)	160 (16)
Bend between sections, grd.	0-3
Bit to bend Lнп, mm	1765
Stator alternate length, mm	4800
Lobe configuration, Zp/Zст	7x8
Flow rate, l/s	21,5-38
Speed, rpm	90-160
Differential pressure, atm.	10-40
Torque, kNм	7,4-13,32
Differential pressure (Full load), atm.	70
Power, KW.	152



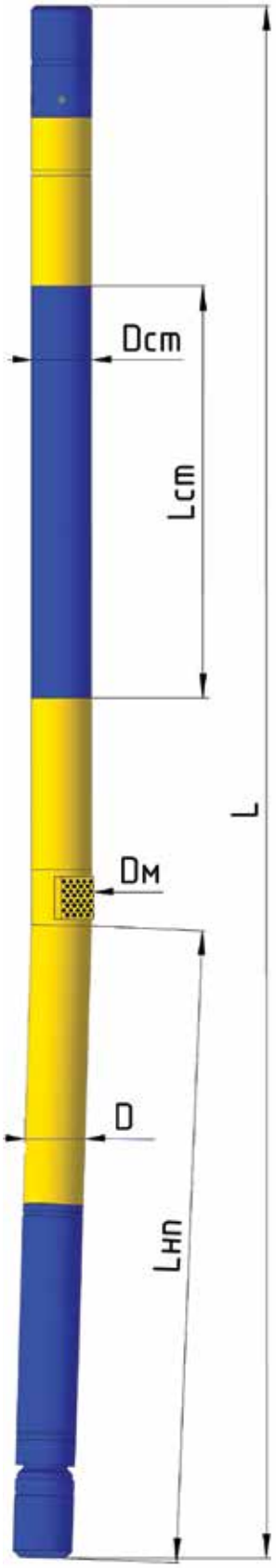
Downhole motor 172

TECHNICAL SPECIFICATIONS	4LZ172x7-VII-K
Bit shaft outside diameter D, mm	174
Stator outside diameter Dст, mm	174
Control sleeve outside diameter Dм, mm	178
Motor length L, mm	8167
Stator length Lст, mm	4960
Weight, kg	1161
Bit size range, mm	212,7-250,8
Bit box connection	3-117
Drilling tool connection size	3-133
Max load, кН (тс)	170 (17)
Bend between sections, grd.	0-3
Bit to bend Lнп, mm	1830
Stator alternate length, mm	4750
Lobe configuration, Zp/Zст	4x5
Flow rate, l/s	18-35
Speed, rpm	180-260
Differential pressure, atm.	10-40
Torque, kNм	7,9-10,9
Differential pressure (Full load), atm.	70
Power, KW.	180



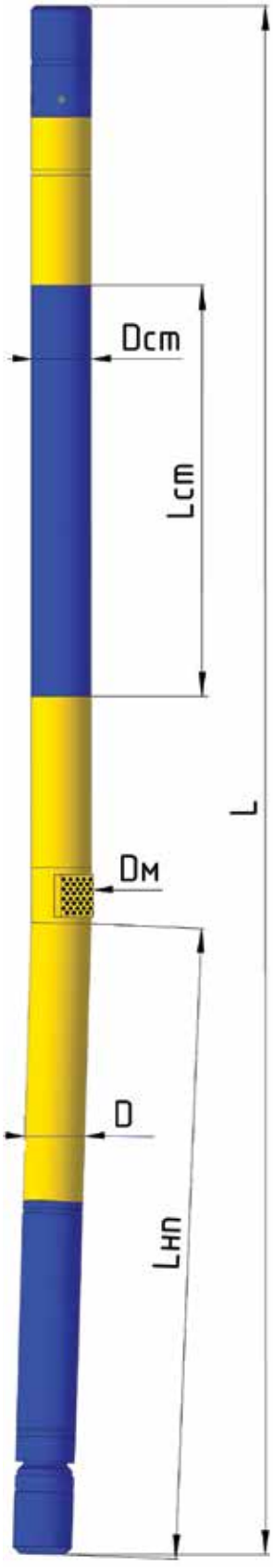
Downhole motor 172

TECHNICAL SPECIFICATIONS	4LZ172x7-VII-K
Bit shaft outside diameter D, mm	174
Stator outside diameter Dст, mm	174
Control sleeve outside diameter Dм, mm	178
Motor length L, mm	8900
Stator length Lст, mm	4960
Weight, kg	1185
Bit size range, mm	212,7-250,8
Bit box connection	3-117
Drilling tool connection size	3-133
Max load, кН (тс)	220 (22)
Bend between sections, grd.	0-3
Bit to bend Lнп, mm	2550
Stator alternate length, mm	4750
Lobe configuration, Zp/Zст	4x5
Flow rate, l/s	18-35
Speed, rpm	180-260
Differential pressure, atm.	10-40
Torque, kNм	7,9-10,9
Differential pressure (Full load), atm.	70
Power, KW.	180



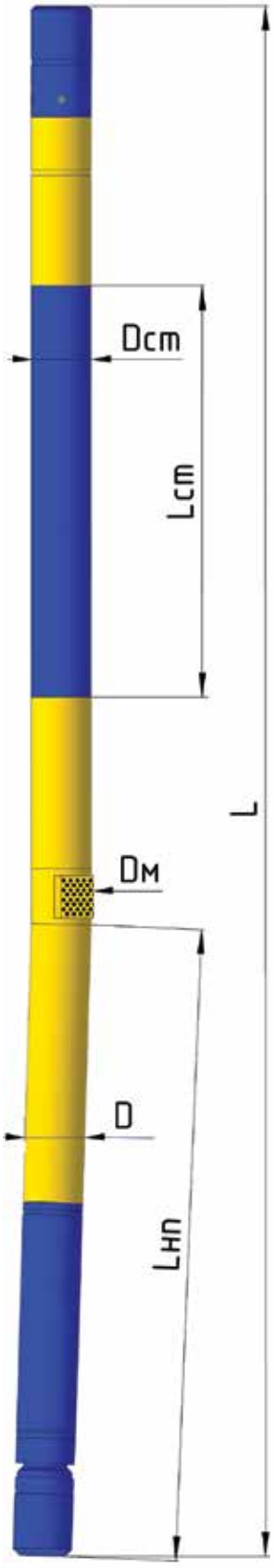
Downhole motor 172

TECHNICAL SPECIFICATIONS	7LZ172x7.0-VII
Bit shaft outside diameter D, mm	174
Stator outside diameter Dст, mm	174
Control sleeve outside diameter Dм, mm	178
Motor length L, mm	8995
Stator length Lст, mm	5560
Weight, kg	1231
Bit size range, mm	212,7-250,8
Bit box connection	3-117
Drilling tool connection size	3-133
Max load, кН (тс)	220 (22)
Bend between sections, grd.	0-3
Bit to bend Lнп, mm	2550
Stator alternate length, mm	5300
Lobe configuration, Zp/Zст	7x8
Flow rate, l/s	25-36
Speed, rpm	100-144
Differential pressure, atm.	10-48
Torque, kNм	9,5-16,65
Differential pressure (Full load), atm.	70
Power, KW.	182



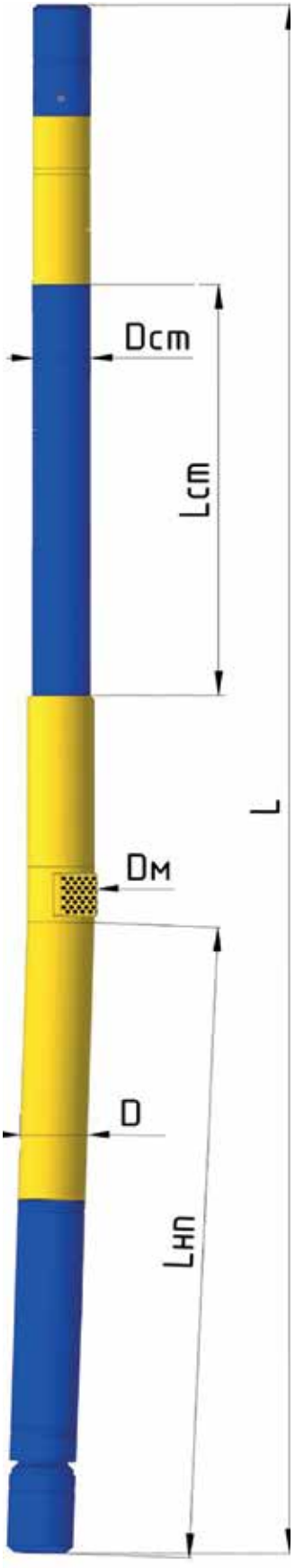
Downhole motor 172

TECHNICAL SPECIFICATIONS	H7LZ172x7.0-V
Bit shaft outside diameter D, mm	174
Stator outside diameter Dст, mm	174
Control sleeve outside diameter Dм, mm	178
Motor length L, mm	8153
Stator length Lст, mm	4940
Weight, kg	1137
Bit size range, mm	212,7-250,8
Bit box connection	3-117
Drilling tool connection size	3-133
Max load, кН (тс)	220 (22)
Bend between sections, grd.	0-3
Bit to bend Lнп, mm	2550
Stator alternate length, mm	4800
Lobe configuration, Zp/Zст	7x8
Flow rate, l/s	25-36
Speed, rpm	100-144
Differential pressure, atm.	10-60
Torque, kNм	11,8-21,24
Differential pressure (Full load), atm.	70
Power, KW.	216



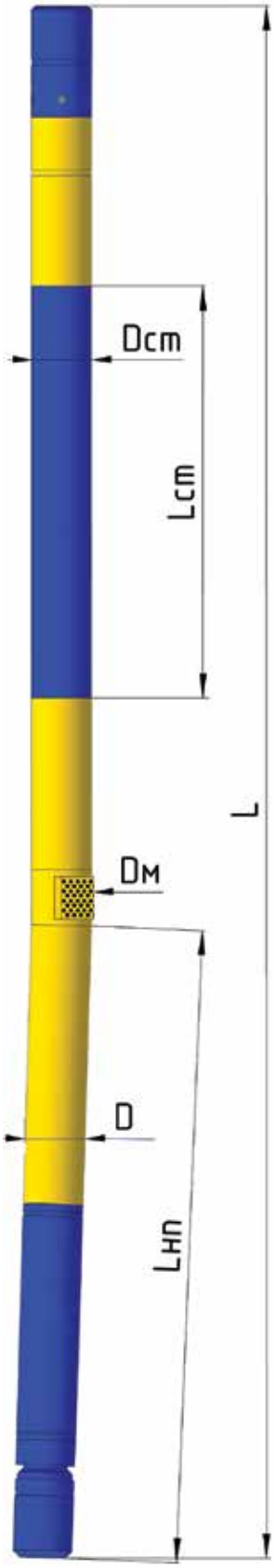
Downhole motor 197/244

TECHNICAL SPECIFICATIONS	5LZ197x7.0-V(II)
Bit shaft outside diameter D, mm	244
Stator outside diameter Dст, mm	197
Control sleeve outside diameter Dм, mm	248
Motor length L, mm	9962
Stator length Lст, mm	5903
Weight, kg	1918
Bit size range, mm	311-444
Bit box connection	3-152
Drilling tool connection size	3-147
Max load, кН (тс)	270 (27)
Bend between sections, grd.	0-3
Bit to bend Lнп, mm	2549
Stator alternate length, mm	5700
Lobe configuration, Zp/Zст	5x6
Flow rate, l/s	30-50
Speed, rpm	90-160
Differential pressure, atm.	10-40
Torque, kNм	10-18
Differential pressure (Full load), atm.	70
Power, KW.	310



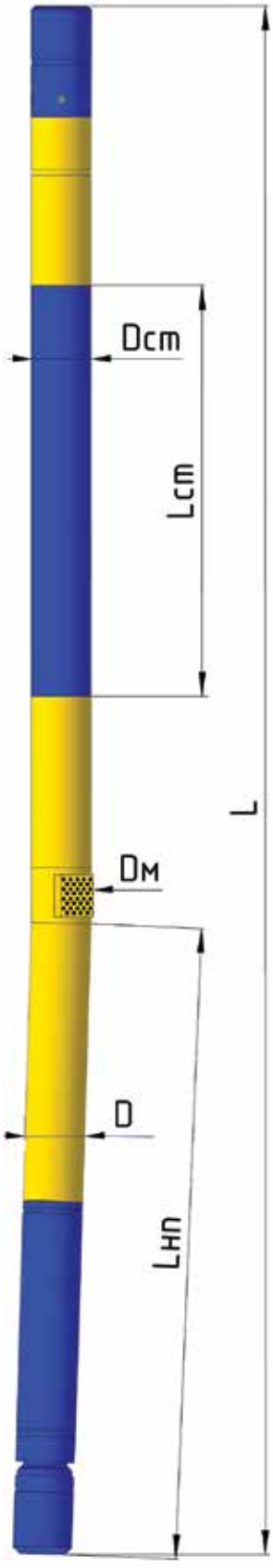
Downhole motor 203

TECHNICAL SPECIFICATIONS	5LZ203x7.0-V
Bit shaft outside diameter D, mm	203
Stator outside diameter Dст, mm	203
Control sleeve outside diameter Dм, mm	198
Motor length L, mm	8390
Stator length Lст, mm	4793
Weight, kg	1615
Bit size range, mm	250,8-311,2
Bit box connection	3-152
Drilling tool connection size	3-147
Max load, кН (тс)	250 (25)
Bend between sections, grd.	0-3
Bit to bend Lнп, mm	2261
Stator alternate length, mm	4650
Lobe configuration, Zp/Zст	5x6
Flow rate, l/s	25-40
Speed, rpm	100-160
Differential pressure, atm.	10-40
Torque, kNм	7,8-14,04
Differential pressure (Full load), atm.	70
Power, KW.	180



Downhole motor 244

TECHNICAL SPECIFICATIONS	3LZ244x7-VI-K
Bit shaft outside diameter D, mm	244
Stator outside diameter Dст, mm	244
Control sleeve outside diameter Dм, mm	248
Motor length L, mm	10070
Stator length Lст, mm	5810
Weight, kg	2520
Bit size range, mm	295-445
Bit box connection	3-152
Drilling tool connection size	3-152
Max load, кН (тс)	270 (27)
Bend between sections, grd.	0-3
Bit to bend Lнп, mm	2470
Stator alternate length, mm	5700
Lobe configuration, Zp/Zст	3x4
Flow rate, l/s	32-76
Speed, rpm	110-265
Differential pressure, atm.	10-50
Torque, kNм	14,78-22,17
Differential pressure (Full load), atm.	70
Power, KW.	310



ЗИП К ВЗД

Rotor adapter

Flow valve plunger

Flow valve seat

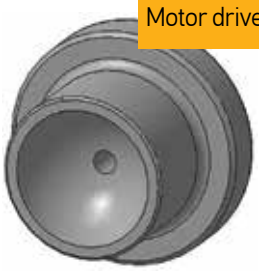
Motor valve seat

Motor spindle adaptor

Motor 120 Bushing

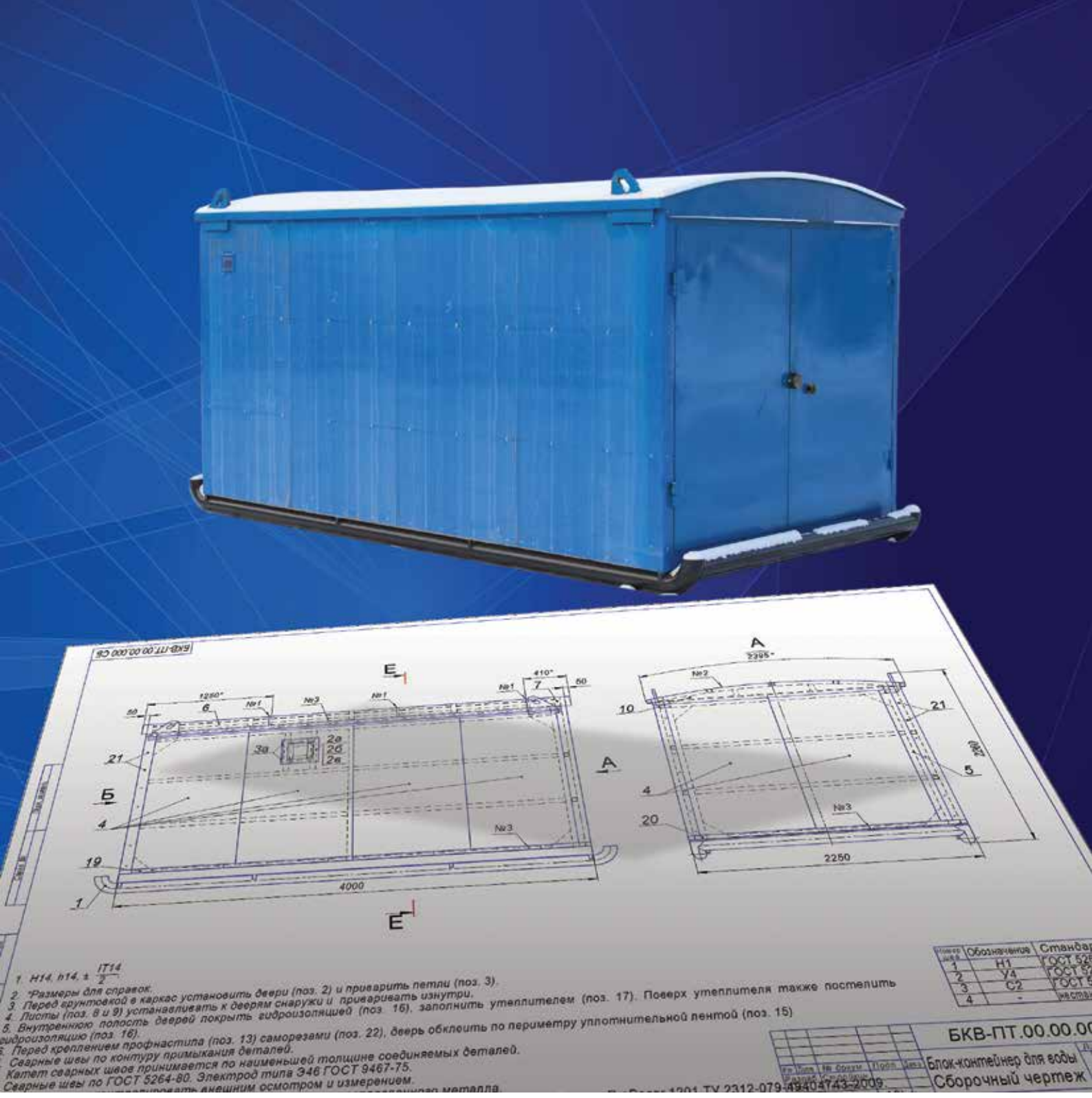
Motor valve

Motor driveshaft heel



Connecting rod

Rotor fishing pin



RIG ASSEMBLY

WCU -3,0 (Water Container Unit)

SPECIFICATION

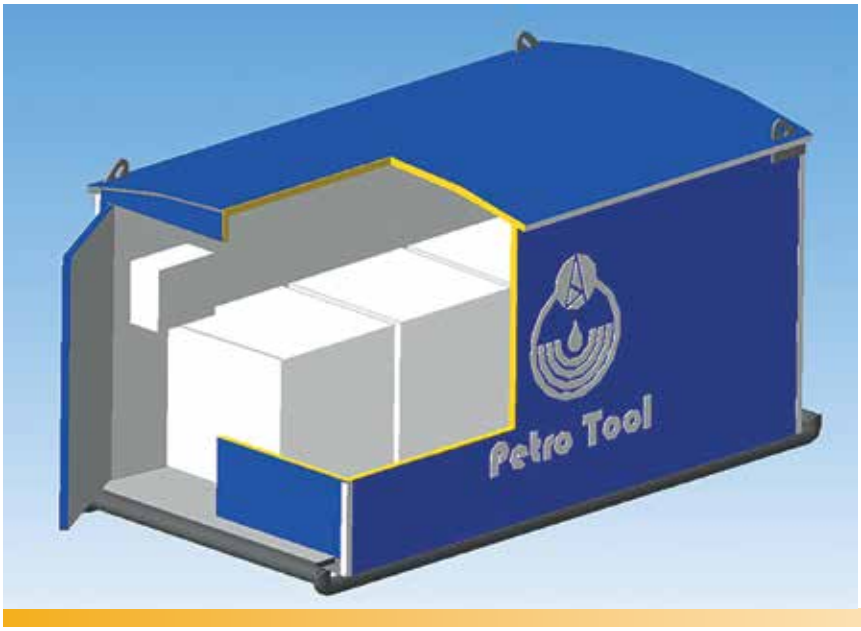
Allowed stored media:	Drink water
Quantity:	3 tanks
Total capacity of the tanks:	3 m^3
Working temperature in WCU room	At least +5 ^{0}C
Power supply:	220 V
Frequency:	50 Hz
Working temperature range:	– 40 ^{0}C ... + 40 ^{0}C
Room Category on Explosion and Fire Hazard	D
Dimensions, limited to (LxWxH):	4450x2250x2260 mm
Weight of dry WCU, not more than:	3500 kg

DESCRIPTION

WCU is a mobile heated unit containing a Eurocube type tanks for storing the water. The WCU is designed for drinking water storage on rig sites. Special hose windows in walls designed to minimize heat losses when filling the water.

Electrical power heating enables to operate in a wide temperature range -40°C to +40°C. As the WCU does not need any footing it can be placed as close to a consumer as possible. Water pumping provided by rotary type pump. All you need to operate the WCU is a flat platform and power supply of 220V.

EXTERIOR



CCU-3,4/7-2 (Compressor Container Unit)

SPECIFICATION

Compressor name:	ДЭН-11 ШР
Quantity:	2 compressors
Operation mode:	Ready to operate
Operation environment:	Open Air
Working pressure:	0,7±0.05 MPa
Capacity:	3,4 (1,7+1,7 reserve) m3/min
Working temperature range p:	– 40 ^{0}C ... + 40 ^{0}C
Working temperature in WCU room:	At least +5 0C
Power supply:	380 V
Frequency:	50 Hz
Room Category on Explosion and Fire Hazard:	D
Dimensions, limited to (LxWxH):	4450x2250x2260 mm
Weight, limited to:	5000kg

DESCRIPTION

CCU comprises of mobile compressor stations designed to supply flow processes of drilling rigs with compressed air.

Both - electrical heating and ventilation systems - enable to operate in a wide temperture range from -40°C to +40°C. As the Unit does not need any footing it can be placed as close to a consumer as possible, which helps to minimize losses of pressure within the line, thus reducing related costs.

All you need to operate the CCU - are a flat platform and power supply of 380V.

EXTERIOR

Insulated container V=8 m^3 (Water Container Unit)

SPECIFICATION

Allowed content:	Process water
Flask Capacity :	8 m^3
Inside material:	Steel 09Г2С
Heat insulating material:	Mineral wool
Heating method:	Using the water steam which moves along heating spiral inside the flask
Climate conditions:	For regions having moderate climate,placement category 1 according to State Standards GOST 15150-69
Temperature range:	– 40^{0}C ... + 40^{0}C
Dimensions , limited to (LxWxH):	5600x2100x2120 mm
Weight of the empty flask, not more than:	4000kg

DESCRIPTION

Insulated container is a mobile unit designated for process water storage on rig sites. To maintain positive temperature of the water inside the container it is equipped with a heating spiral. Water steam moves along the heating spiral and heats the flask from outside.

Insulated container is made of Steel Sheet PN 09Г2С , 10 mm thick, insulated by mineral wool and sheathed with zinc-coated sheets. Insulated container includes an insulated cistern which is densely placed on the sled-type frame.

For easy strapping and shipping of the insulated container upon a transpoting vehicle its frame has strapping devices.

The complete set includes: Insulated container, Sleds, Access Hatch, Access Ladder and Heat Spiral.

Insulated container does not need special footing and it can be placed as close to a consumer as possible..

EXTERIOR

Utility lines tray

SPECIFICATION

Cross Section Size (WxH):	600x200 mm
Heat Instulating Material:	Mineral Wool
Climate conditions	For regions having moderate climate, placement category is 1, according to St.Stand. GOST 15150-69
Operation temperature range:	– 40 ^{0}C ... + 40 ^{0}C
Cross Section Dimensions (WxH):	700x450 mm
Length	Customized (agreed with a customer)

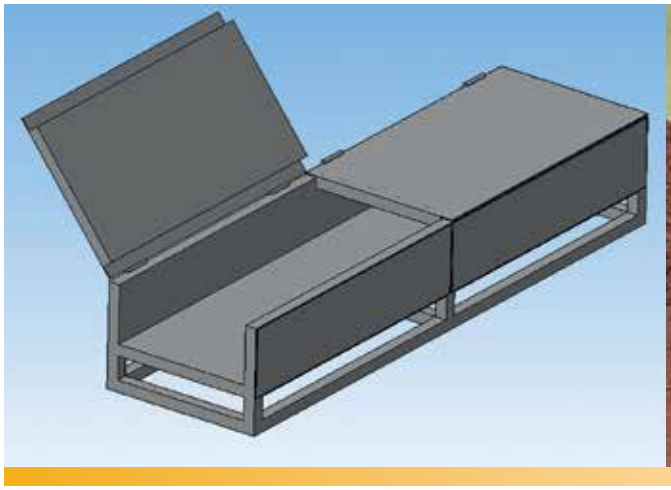
DESCRIPTION

Utility lines trays are designed for placing of various lines into the boxes' heated chamber in view to protect them from exposure. These may process water, steam, compressed air, down stream lines.

Inside chambers of the tray are insulated with mineral wool and sheathed with zinc-coated sheets.

For easy placing and access to lines there are hatches along the length of boxes. Hatches are also insulated from inside.

EXTERIOR



Cable rack

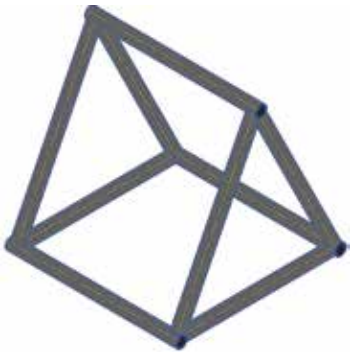
DESCRIPTION

Rod is welded to main pipe to support cable. Four pipes below serve as support.

APPLICATION

Safe placement for cables and wires.

Catwalk



DESCRIPTION

Welded pipes design.

APPLICATION

Support for communication lines.

Pallet

DESCRIPTION

Road pallet is a robust construction consisting of a steel frame and multi-layer softwood floor specialy treated to reduce dote and wear.

APPLICATION

Installed and bonded together pallets form one pallet system and evenly distributes the weight of the rig on the well sites.

ADVANTAGES

The use of road pallets does not lead to the destruction of topsoil during the operation and does not require any restoring after demobilization of rigs in terms of protection of soil and land resources.

Slotted filter

APPLICATION

Designed to clean the mud from solids above downhole motors in order to prevent its failure, as well as to prevent intrusion of foreign materials to motor while changing the drill tool or equipment: dirt, scale, and so on.

Kelly-hole adaptor

APPLICATION

Used to guide Kelly joint to Kelly-hole when drill pipe connection.

Mud box

APPLICATION

Designed to collect and bypass the oil, contaminated formation water, drill fluid and other solutions from the wellhead when pulling tubing and drill pipes, for the repair of oil and gas wells.

IADC Dull bit grading

Cutting structure				Bearing seals	Gauge	Other dull char	Reason pulled
Inner	Outer	Dull Char	Location				
1	2	3	4	5	6	7	8

Inner cutting structure (1) (all inner rows)
(inner 2/3 radius for fixed cutter bits.)

Outer cutting structure (2) (gauge rows only)
(1/3 outer radius for fixed cutter bits.) In columns 1 and 2 a linear scale of 0-8 is used to describe the condition of the cutting structure according to the following guidelines for cpecific bit types:

Steel toothed bits
Measure of lost tooth height due to abrasion and/or damage
0 – no loss of tooth height
8 – total loss of tooth

Insert bits
Measure total cutting structure reduction of lost, worn, and/or broken inserts
0 – no lost worn and/or broken inserts
8 – lost, worn and/or broket all the cutting structure

Fixed cutter bits
Measure lost, worn and/or broken cutting structure
0 – no lost, worn and/or broken cutting structure
8 – lost, worn and/or broket all the cutting structure

Location (4)
Roller cone
N – nose row
M – middle row
G – gauge row
A – all rows

Cone
№ 1 2 3
Fixed cutter
C – Cone
N – Nose
T – Taper
S – Shoulder
G – Gauge
A – All areas

Gauge (6)
rounded to 1/16
1 in – in gauge
1 – 1/16 " out of gauge
2- 2/16"out of gauge
4-4/16 " out of gauge

Other dull characteristics (7)
Refer to column 3 codes

Reasons bit was pulled or run completed (8)
BHA – Change bottomhole
DMF – Downhole motor failure
DTF – Downhole tool failure
DSF – Drill string failure
DST – Drill stem test
DP – Drill plug
CM – Condition mud
CP – Core point
FM – Formation change
HP – Hole problems
LIH – Lost in hole
HR – Hours on bit
LOG – Run Logs
PP – Pump pressure
PR – Penetration rate
RIG – Rig repair
TD – Total depth/casing depth
TW – Twist off
TQ – Torque
WC – Weather conditions

Dull characteristics (3)
(use only cutting structure related codes)
BC† – Broken cone
BF – Bond failure
BT – Broken teeth/cutters
BU – Balled up bit
CC † – Cracked cone
CD † – Cone dragged
CI – Cone interference
CR – Cored
CT – Chipped teeth/cutters ER – Erosion
FC – Flat crested wear
HC – Heat cheking
JD – Junk damage
LC † – Lost cone
LN – Lost nozzle
LT – Lost teeth/cutter
OC – Off centre wear
PB – Pinched bit
PN – Plugged nozzle/flow by area
RG – Rounded gauge
RO – Ring out
SD – Shirttail damage
SS – Self sharpening wear
TR – Cone tracking
WO – Wash out
WT – Worn teeth/cutters
NO – No dull characteristics

† Show cone # or #'s under location 4

Bearings and seals (5)
Non sealed bearings
A linear scale estimating bearing life is used.
0 – no life used
8 – bearing life used 100%

Sealed bearings
E – seals effective
F – seals failed
N – not able to grade
X – Fixed cutter bit

Content

Petro Tool

SALES AND MARKETING:

www.petrotool.ru
sb@petrotool.ru
8-927-237-35-17
8 (34767) 6-02-50