



Uralmash Oil and Gas Equipment Holding, LLC

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Uralmash Oil and Gas Equipment Holding, LLC integrate design and manufacturing capabilities in the areas of drilling equipment manufacturing and service for oil and gas industry

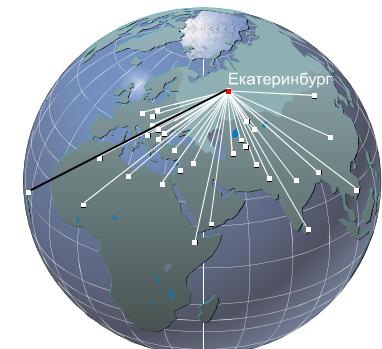


Gazprombank, OJSC is the shareholder of the company

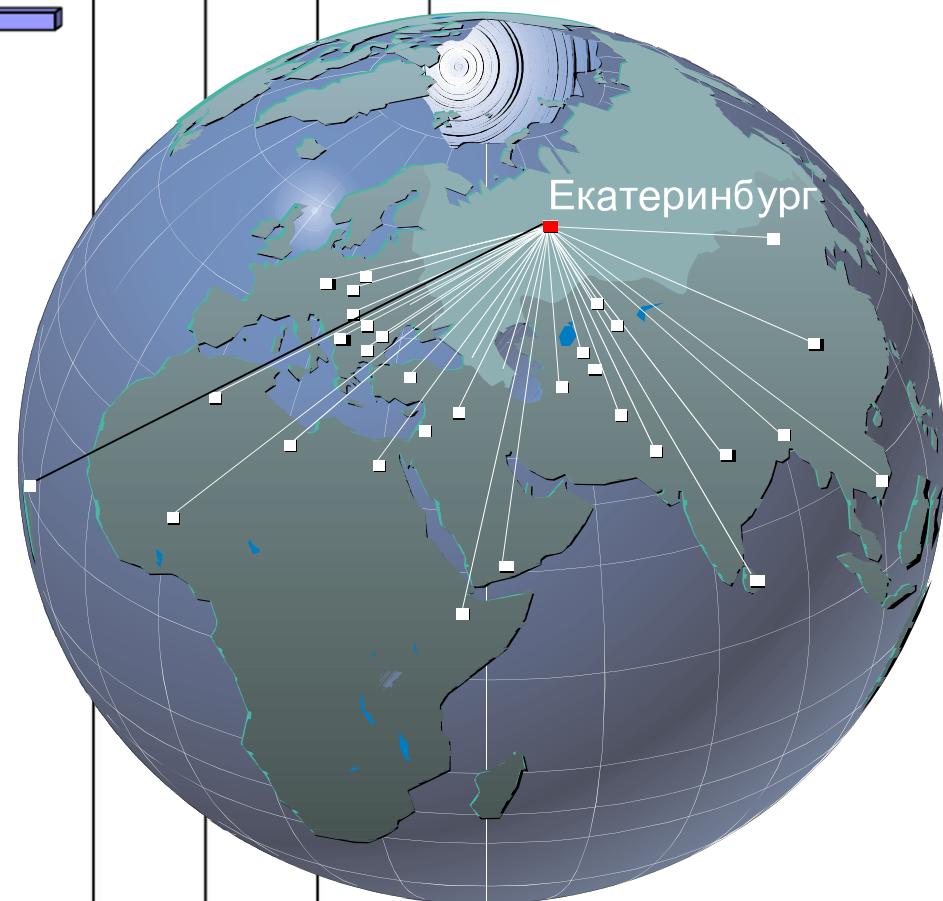
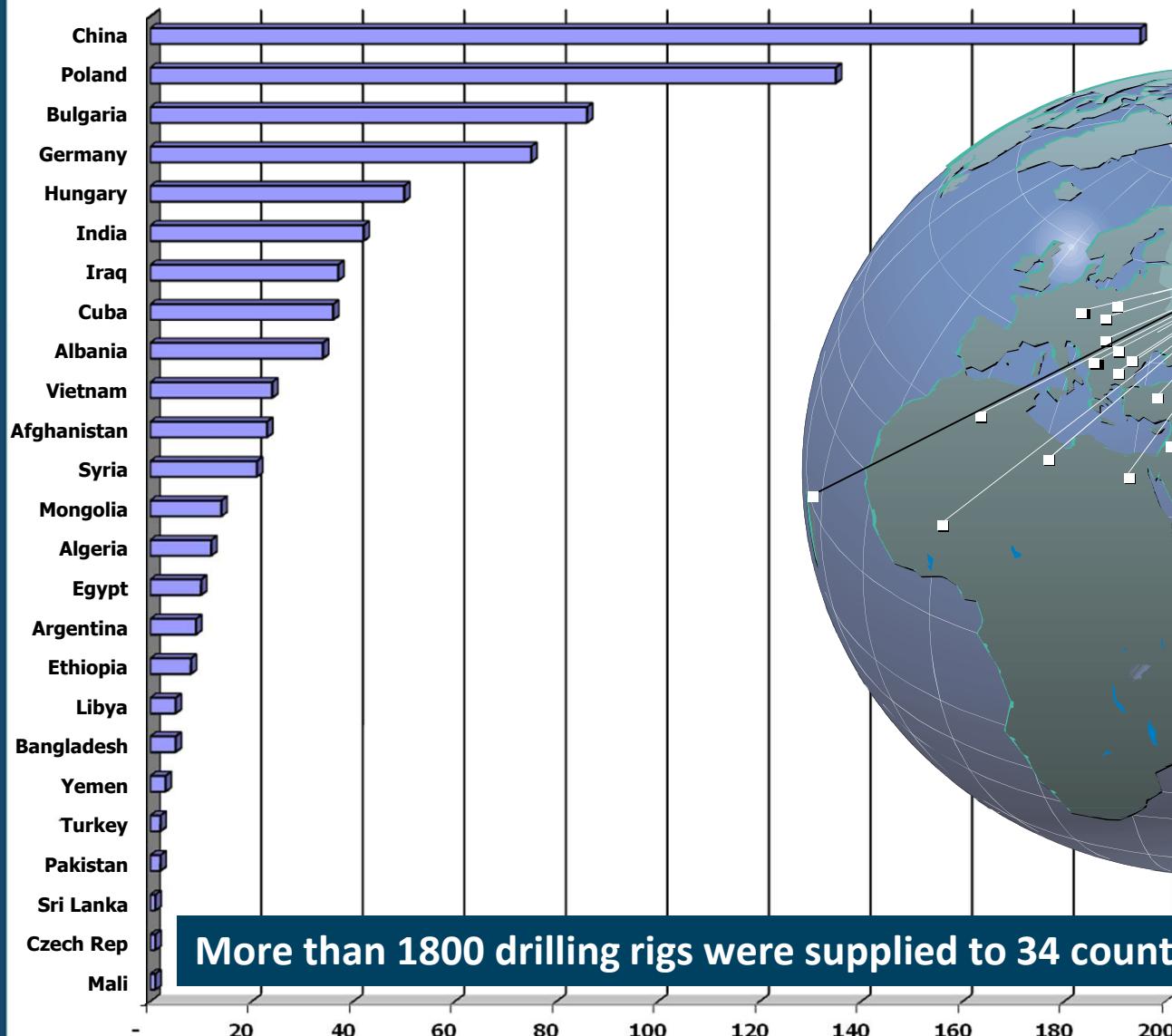


Since 1945 organizations of holding have produced more than 15 thousand drilling rigs

More than 1800 drilling rig sets were exported to 34 countries of the world



Holding geography



More than 1800 drilling rigs were supplied to 34 countries

General information

Market share

- **60%**

Basic type of products

- **Drilling rigs**
- **Drilling equipment**
- **Drilling rigs complete units**
- **Drilling rigs engineering and design**
- **Service**
- **Upgrade**
- **Spare parts and tools**

Staff

- **around 3000**

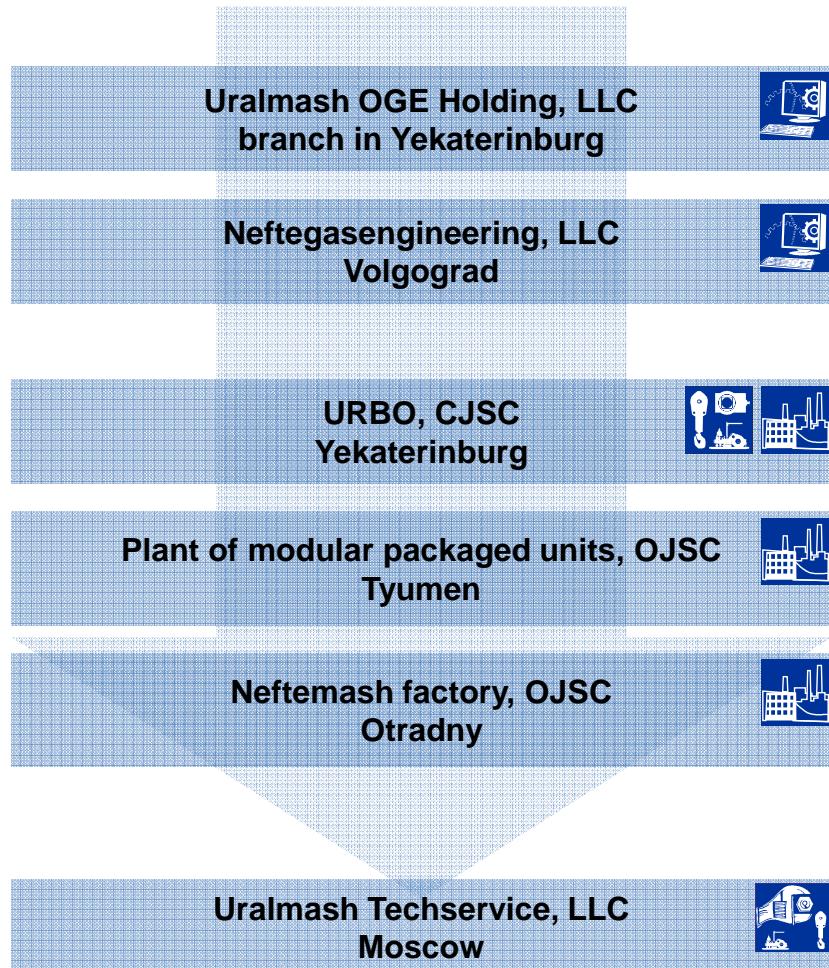
Key customers



- Leading designer and manufacturer of heavy duty drilling rigs and drilling equipment in the Russian Federation
- Progressive engineering experience in manufacturing of drilling rigs adapted for Customers' requirements
- International standards and western technologies in the process of design and ergonomics development
- Quality monitoring and integrated management
- ISO and API certification
- Equipment maintenance

Holding Structure

Uralmash OGE Holding, LLC Managing company, Moscow



Management of all Holding business units

Engineering

Engineering center and managing unit for all the engineering

Designing and manufacturing of complete drilling rigs in accordance with customer specific technical requirements

Manufacturing of drilling equipment

manufacturing and assembly of 25-30 complete drilling rigs a year

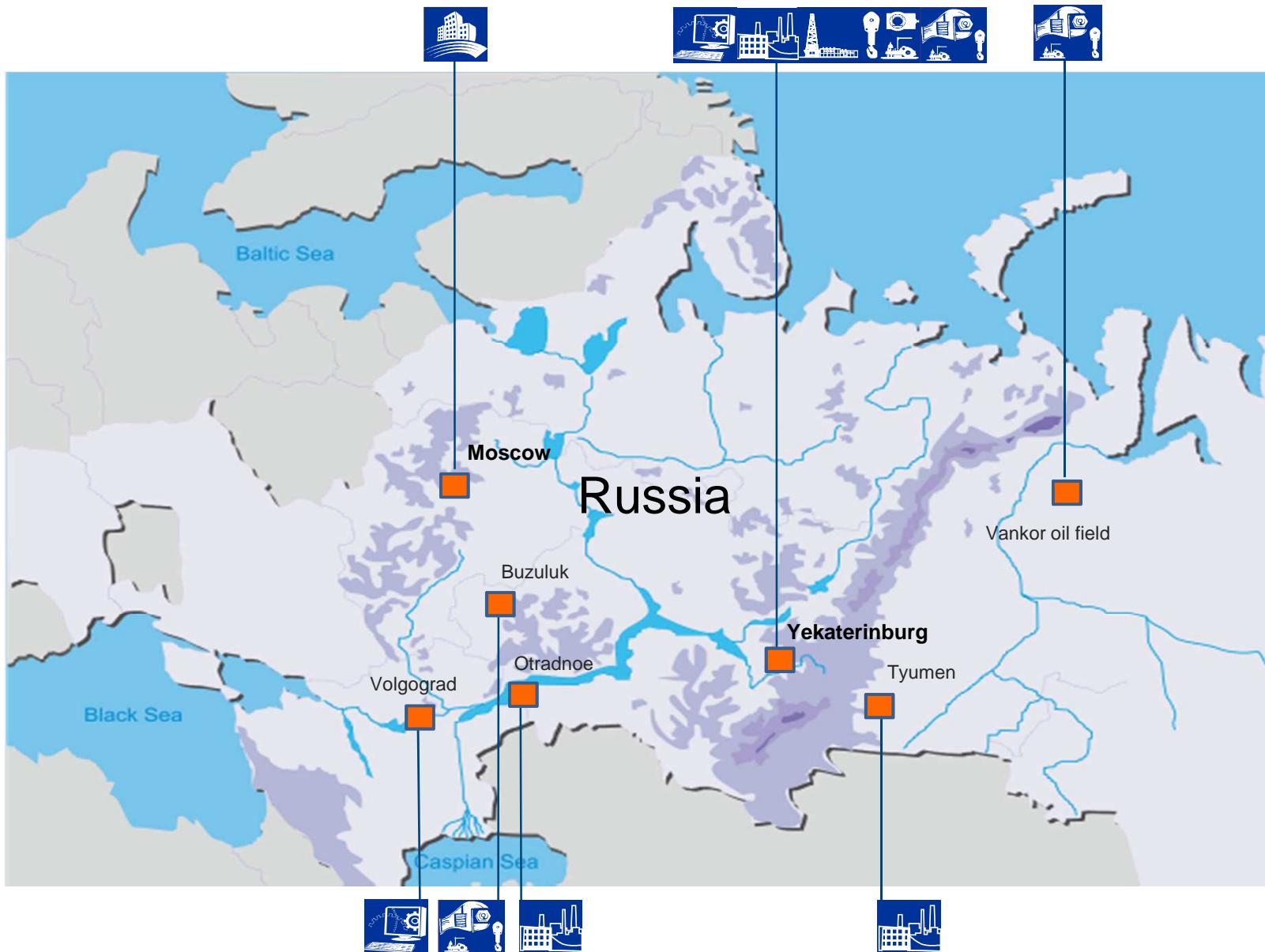
8000 t/year of welded metal structures

3000 t/year of welded metal structures

Service

Overhaul of drilling equipment, upgrade of drilling rigs and equipment, surveys and technical diagnostic of oil and gas equipment

Uralmash OGE Holding, LLC: geography of locations



Manufacturing capabilities

Manufacturing capabilities are located at three enterprises of Holding – CJSC URBO (Yekaterinburg), Plant of modular packaged units, OJSC (Tyumen), Neftemash factory, OJSC (Otradny).

Complete drilling rigs production actual capabilities – up to 30 drilling rigs a year, in the short term – up to 50 pcs. a year.

All the produced units of the drilling equipment (pumps, swivels, derricks, hook blocks, crown blocks, drawworks, rotors) are tested under load on facility.



Drilling rigs are assembled on two check assembly sites in Yekaterinburg and one in Tyumen. Up to seven heavy drilling rigs can be assembled on the sites at the same time.



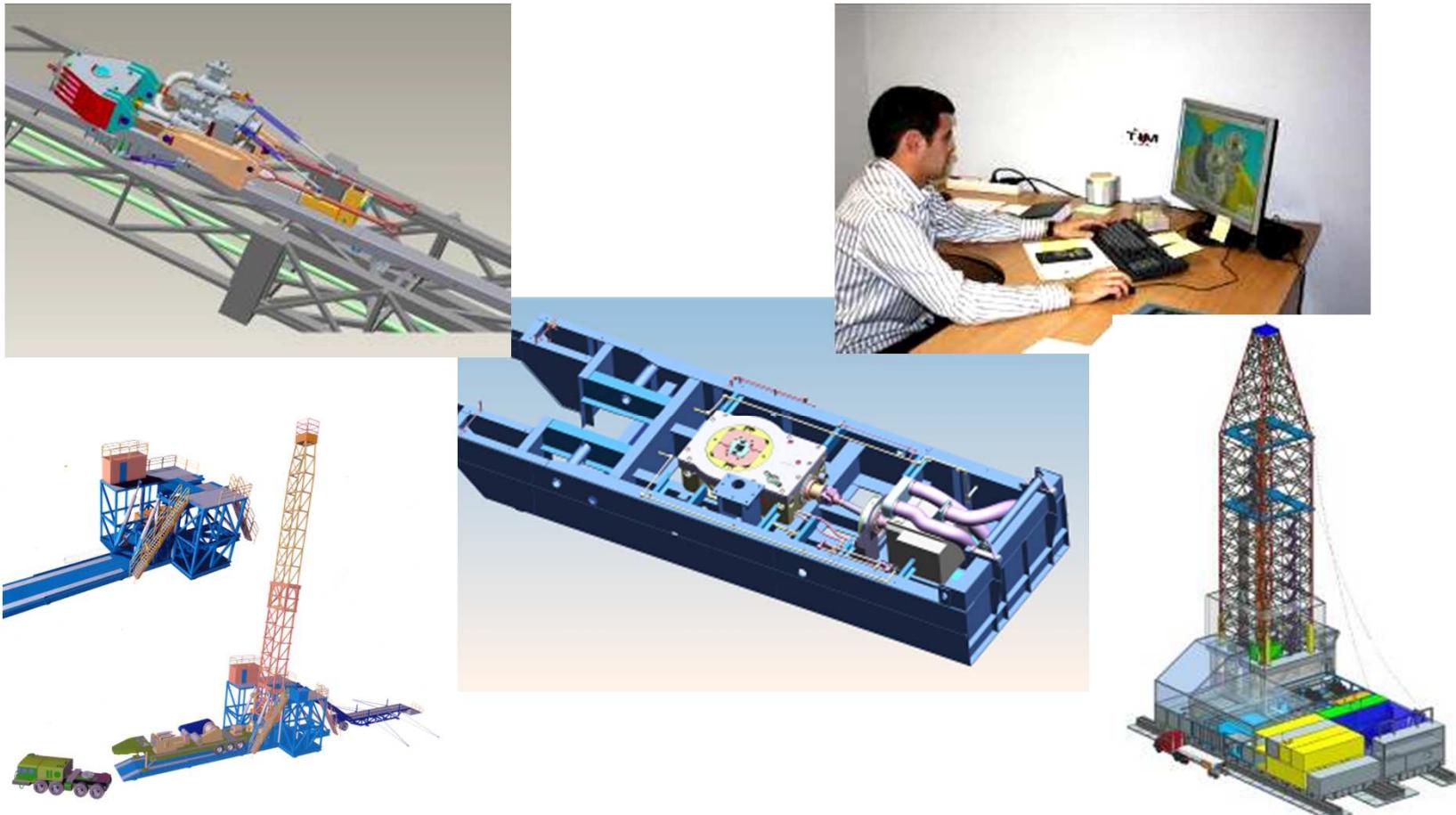
Certificates



Products and services overview

Key Features	Products/Services																
<p>Leading manufacturer of drilling equipment in Russia</p>	<p>Drilling rigs</p>  <ul style="list-style-type: none"> • Design, manufacturing and supplying of various types drilling rigs with 160 to 600 metric tons capacity, engineering, maintenance and upgrading of existing equipment, service • Manufacturing of drilling rigs with various capacity, in accordance with customer requirements <p>Main types of manufactured drilling rigs:</p>																
<p>Supplier of drilling equipment in Russia, CIS and overseas with a good reputation</p>	<table border="1"> <thead> <tr> <th data-bbox="968 572 1125 642">Rig type</th><th data-bbox="1237 572 1372 642">Drilling depth, m</th><th data-bbox="1417 572 1551 642">Capacity (mt)</th><th data-bbox="1596 572 1821 642">Transportation</th></tr> </thead> <tbody> <tr> <td data-bbox="968 652 1125 722">Mobile rigs</td><td data-bbox="1237 652 1372 722">Up to 3,200</td><td data-bbox="1417 652 1551 722">Up to 225</td><td data-bbox="1596 652 1821 722">powered tool frame dolly</td></tr> <tr> <td data-bbox="968 747 1125 817">Cluster rigs</td><td data-bbox="1237 747 1372 817">Up to 6,500</td><td data-bbox="1417 747 1551 817">Up to 600</td><td data-bbox="1596 747 1821 842">Drilling rig with ability to move from well to well without rig down</td></tr> <tr> <td data-bbox="968 868 1125 937">Land rigs</td><td data-bbox="1237 868 1372 937">Up to 8,000</td><td data-bbox="1417 868 1551 937">Up to 600</td><td data-bbox="1596 868 1821 937">Land drilling rig with limited number of transport loads</td></tr> </tbody> </table>	Rig type	Drilling depth, m	Capacity (mt)	Transportation	Mobile rigs	Up to 3,200	Up to 225	powered tool frame dolly	Cluster rigs	Up to 6,500	Up to 600	Drilling rig with ability to move from well to well without rig down	Land rigs	Up to 8,000	Up to 600	Land drilling rig with limited number of transport loads
Rig type	Drilling depth, m	Capacity (mt)	Transportation														
Mobile rigs	Up to 3,200	Up to 225	powered tool frame dolly														
Cluster rigs	Up to 6,500	Up to 600	Drilling rig with ability to move from well to well without rig down														
Land rigs	Up to 8,000	Up to 600	Land drilling rig with limited number of transport loads														
<p>Professional engineering. Unique possibility to manufacture equipment in accordance with customer requirements</p>	<p>Drilling equipment</p>  <p>Crown and travelling blocks, from 200 to 600 metric tons capacity Drawworks from 700 to 3000 h.p. capacity Mud pumps Mud circulating systems Swivels, etc.</p>																
<p>Extensive manufacturing capabilities with substantial potential for increase of output production</p>	<p>Repair\ modernization \ service</p> <p>Integrated upgrade Repair of all types drilling rigs and equipment</p>																

Drilling equipment engineering



The state-of-art software used in the design process:

- **3D design system Siemens NX, SolidEdge**
- **system of electrotechnical design «EPLAN Electric»**
- **CAD software «Intermech»: Search, CadMech, AVS**
- **engineering analysis software NX CAE**

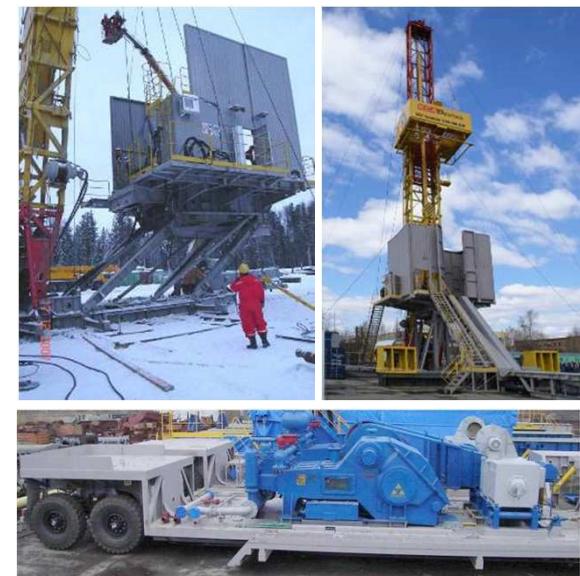
Features of modern Uralmash drilling rigs

- Rigs are of block-modular construction design, transportation is provided by small blocks on trailers and by unit's assembly on the general transport
- Drilling rigs are equipped with electric variable-frequency AC-drive
- Power supply of main AC electric motors are performed through complete modular SCR unit with gensets or power HI-lines
- Rigs are completed with driller's cabin with ventilation and air conditioning systems
- Rigs are equipped with one- or two-speed drawworks
- Rigs design allows to minimize negative environmental impact

Mobile drilling rigs

Constructional features:

- **block-modular construction design**
- **build-in transportation equipment for using existing tracs**
- **build-in labour saving devices**
- **maximum simplified assembling procedure**
- **one-speed drawworks allows work without gear shifting**
- **electric variable-frequency AC-drive and programmed control**
- **driller's cabin**
- **possibility to use TD systems**
- **modern four-stage mud circulating system**
- **allows to drill some wells without moving mud cleaning and circulating modules**



Parameter	2500/160	2900/175	3200/200 (225)
Limited hook load, ton*force (kN)	160 (1600)	175 (1750)	200-225 (2000-2250)
Drilling depth, m	2500	2900	3200
Type of drive:	diesel (diesel-electric)	diesel-electric	diesel-electric
Drawworks:	LBU-600	LBU-600	LBU-670
— calculated power on input shaft, kW (h.p.)	550 (750)	600 (810)	670 (910)
Mud pump:	UNBT-600	UNBT-600	UNBT-600
— power, kW	600	600	600

Mobile drilling rigs



MBU 2900/175 ER-P



MBU 3200/200 DER

2500/160 DP-BM



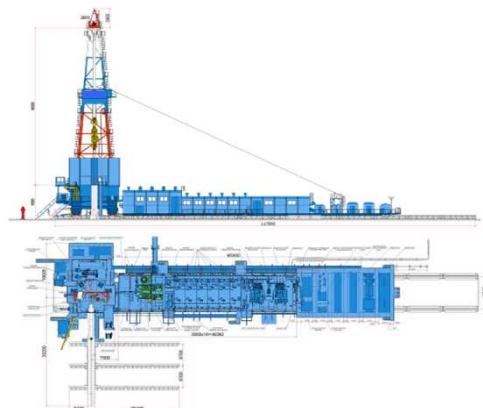
MBU 2500/160 D



Cluster drilling rigs

Rig design is predetermined by pad drilling at marsh areas and lack of roads. Pad drilling allows significantly reduce costs related to rig up, wellsite engineering and access roads to the oilfield because during drilling process rig moves from well to well without rig down. Pad Drilling rig design allows to move drilling equipment from one well to another.

Parameters	3900/225	4200/250	4500/270	5000/320	6500/450
Limited hook load, GOST 16293, metric tons (API)	225 (270)	250 (300)	270 (324)	320 (384)	450 (540)
Drilling depth, m	3900	4200	4500	5000	6500
Type of drive:	Electric variable-frequency ac-drive				
Drawworks:	LBU-750	LBU-900	LBU-900	LBU-1500	LBU-1500
Mud pump:	UNBT-950 A2	UNBT-1180 L	UNBT-950 L	UNBT-950 L	UNBT-1180 L



Cluster drilling rigs

BU 2500/160 ESK-BMCHE



BU 6500/450 ECHERK-BM



BU 4200/250 EK-BMCHE



BU 5000/320 ESK-BMCHE



BU 6000/400 EK-BMCHE



BU 5000/320 EK-BMCHE



BU 5000/320 EK-BMCHE-E



Land drilling rigs



BU 5000/320 BMCHE

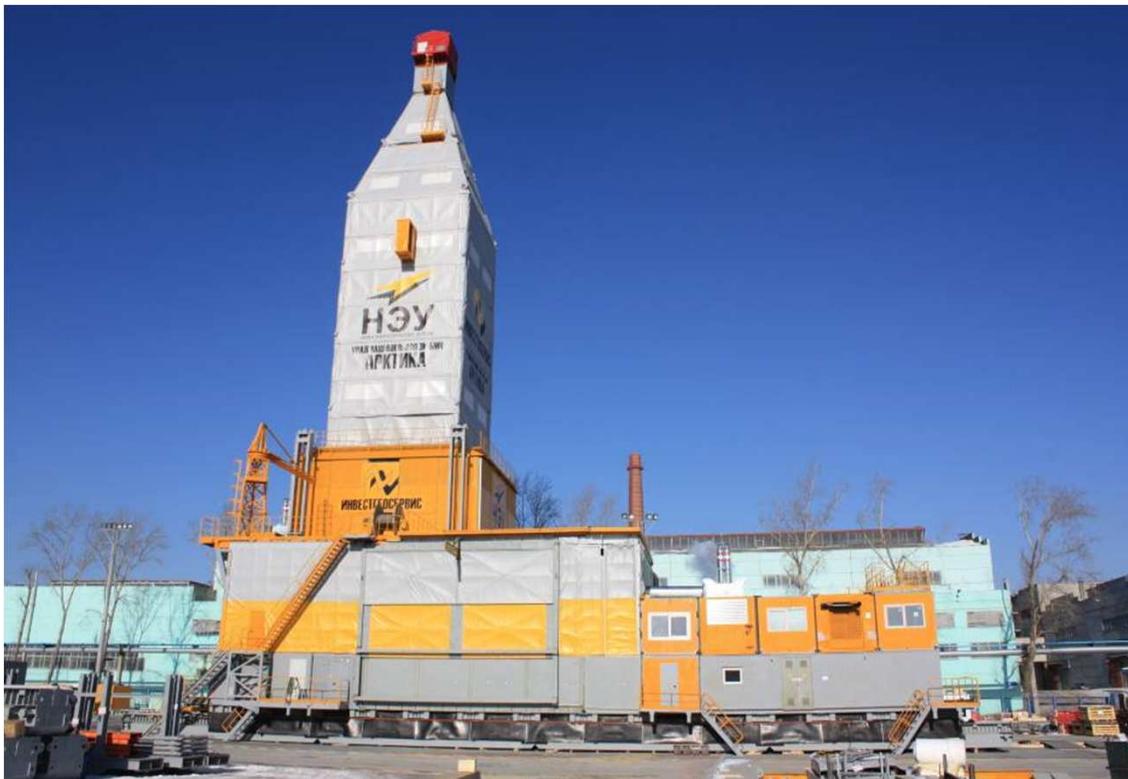


BU 6500/450 BMCHE



BU 600 DER

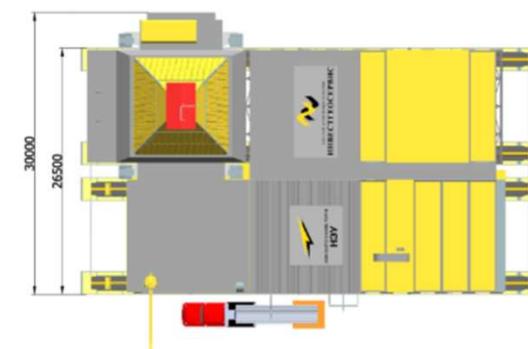
DRILLING RIG Uralmash 6000/400 EK-BMCHE «Arktika»



Characteristics	Units of measurements	Value
Limited hook load, GOST 16293-89	kN (ton-force)	4000 (400)
Maximum static hook load API		4800 (480)
Drilling depth	m	6000
Drawworks input power	kW (h.p.)	1500 (2200)
Mud pump power	kW	1180
Mud circulation system total volume	m ³	493,5

Newest drilling rig 2012 design

Drilling rig Uralmash 6000/400 EK-BMCHE with electric variable-frequency AC-drive with digital control system block-modular construction with two-echelon arrangement of blocks



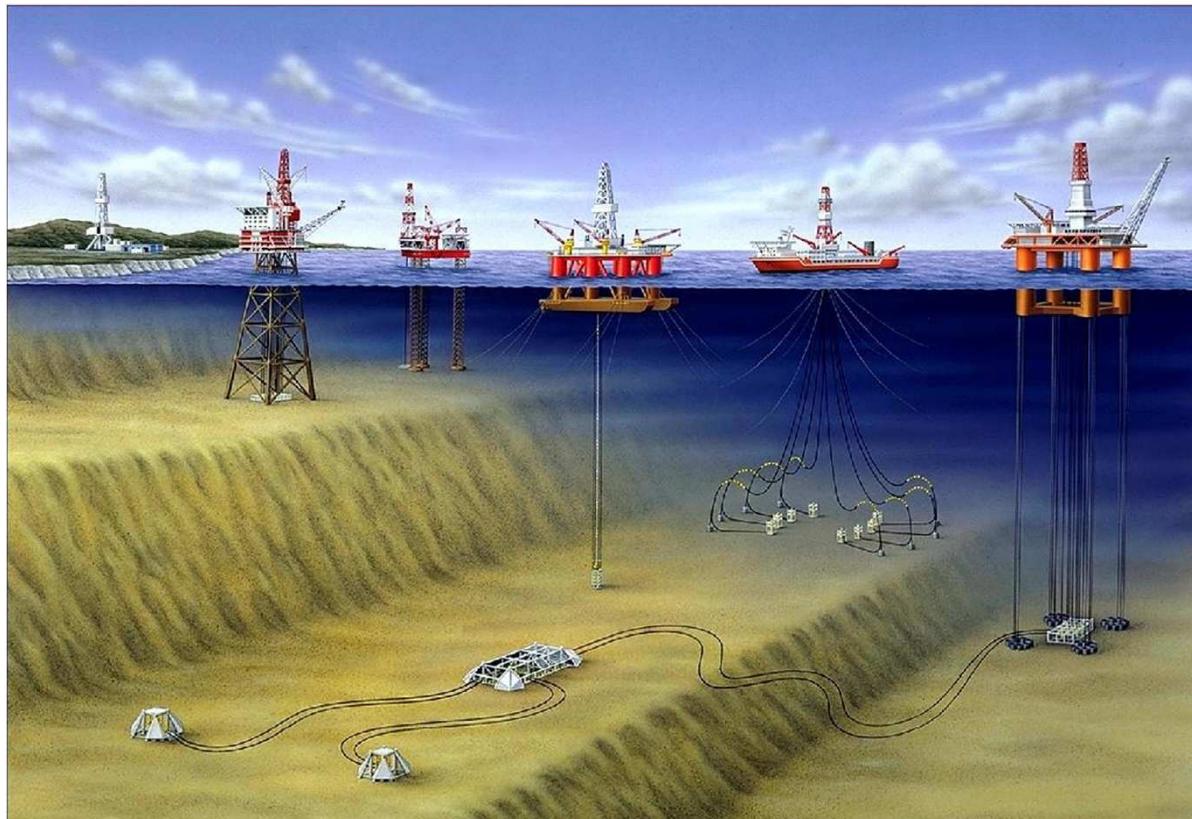
Two-echelon arrangement
30000x45900

Offshore equipment

Uralmash Oil and Gas Equipment Holding designs and manufactures drilling equipment and complete drilling rig sets for offshore platforms

Drilling equipment and drilling rig sets are manufactured for:

- stationary (fixed platforms)
- jack-up platforms (jack-ups)
- semi-submersible platforms (semi)
- drilling ships



Potential fields of application of Holding equipment



For Arctic and Sakhalin island offshore development all the three types can be used: stationary (fixed platforms), semi-submersible platforms (semi) and jack-ups



Drill ships can be used for drilling in any deep water

Stationary (fixed platforms) and semi-submersible platforms (semi) are used in the Caspian and Black sea

Equipment units and spare parts



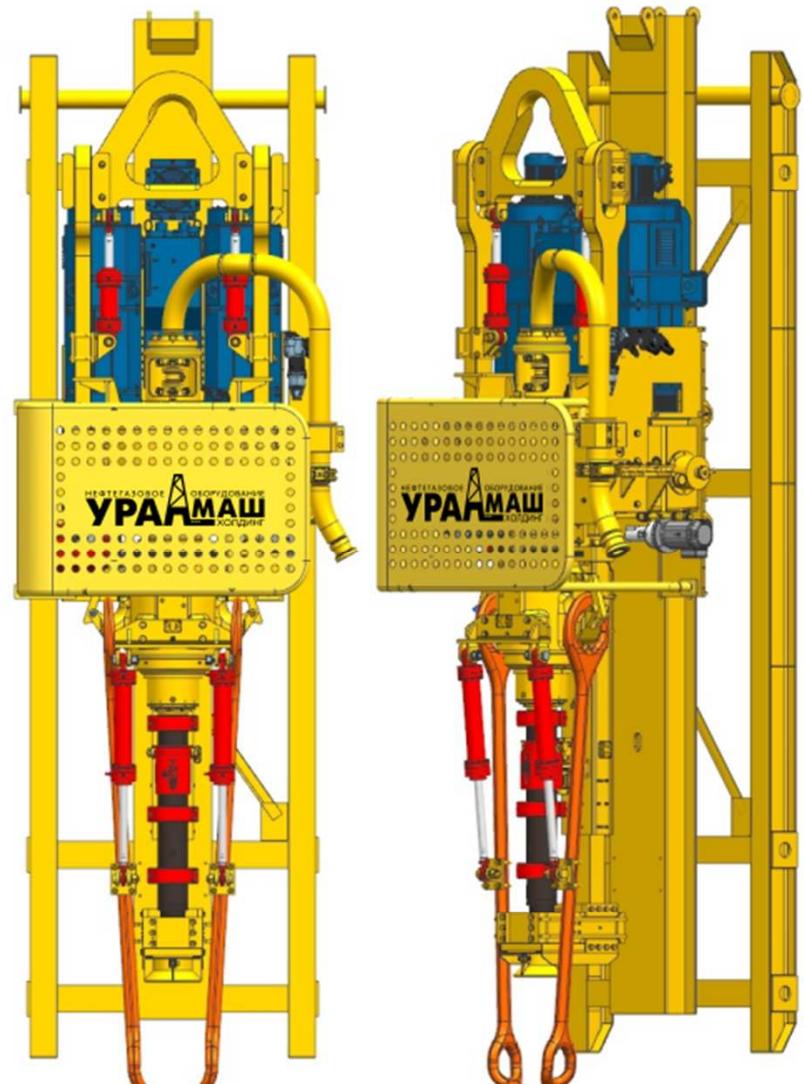
- **Drilling rig derricks and masts** from 160 to 500 metric tons capacity
 - Masts (A-frame, H-frame, four-support, open front)
 - Derricks
- **Mud pumps** duplex (UNB) and triplex (UNBT), with L-shape and direct flow fluid end, 600 to 1600 kW
- **Drawworks** with gearing transmission hoisting capacity from 160 to 500 metric tons and with chain transmission hoisting capacity from 200 to 320 metric tons
- **Swivels, hook blocks, crown blocks** 160-500 metric tons capacity
- **Rotary tables**, 700 to 1260 mm opening
- **Mud circulation equipment systems**



Top drive system SVP 320 EChR

- **Top** drive system SVP 320 EChR with VFD) is designed for drilling oil and gas wells
- **TDS** can operate in macroclimatic areas with cold and moderate climate UHL, category 1 as per GOST 15150-69 (-45°C...+40°C).

	Parameter	Value
1	Load capacity, kN (ton-force)	3200 (320)
2	Main drive type	VFD
3	Power, kW	2 x 300
5	Gear box ratio	11,35:1
6	Maximum RPM	211
7	Torque, N*m:	
	- Maximum continues torque	54
	- Break-out torque	80
8	Pipe clamp drill pipes outer diameter range	DP: 89; 102; 114; 127; 140 DC: 146; 178; 203
9	Weight, kg	14500



Major maintenance services

- Maintenance service of mechanical own manufactured equipment
- Maintenance service of SCR, ACS
- Warranty maintenance service of equipment
- Technical maintenance of field operated drilling rigs
- Maintenance and emergency repair of drilling equipment in the regions. Repair and hydraulic pressure testing of blowout preventers
- Complete overhaul of equipment
- Supervising installation, assembling and setting up of new equipment
- Re-installation and setting up of installed equipment
- Training for drilling companies staff to operate and maintain modern Russian drilling equipment
- Upgrading
- Supply necessary materials and technical resources using system of regional warehouses within complex service projects





Thanks for your attention!

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