



## Uralmash Oil and Gas Equipment Holding, LLC

---

## Uralmash Oil and Gas Equipment Holding, LLC

**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

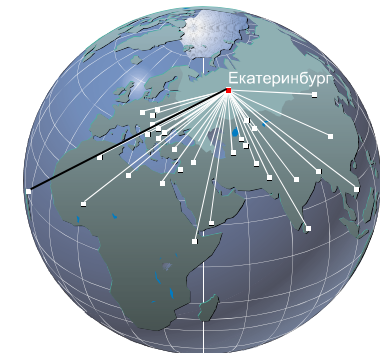


**Gazprombank, OJSC is the shareholder of the company**

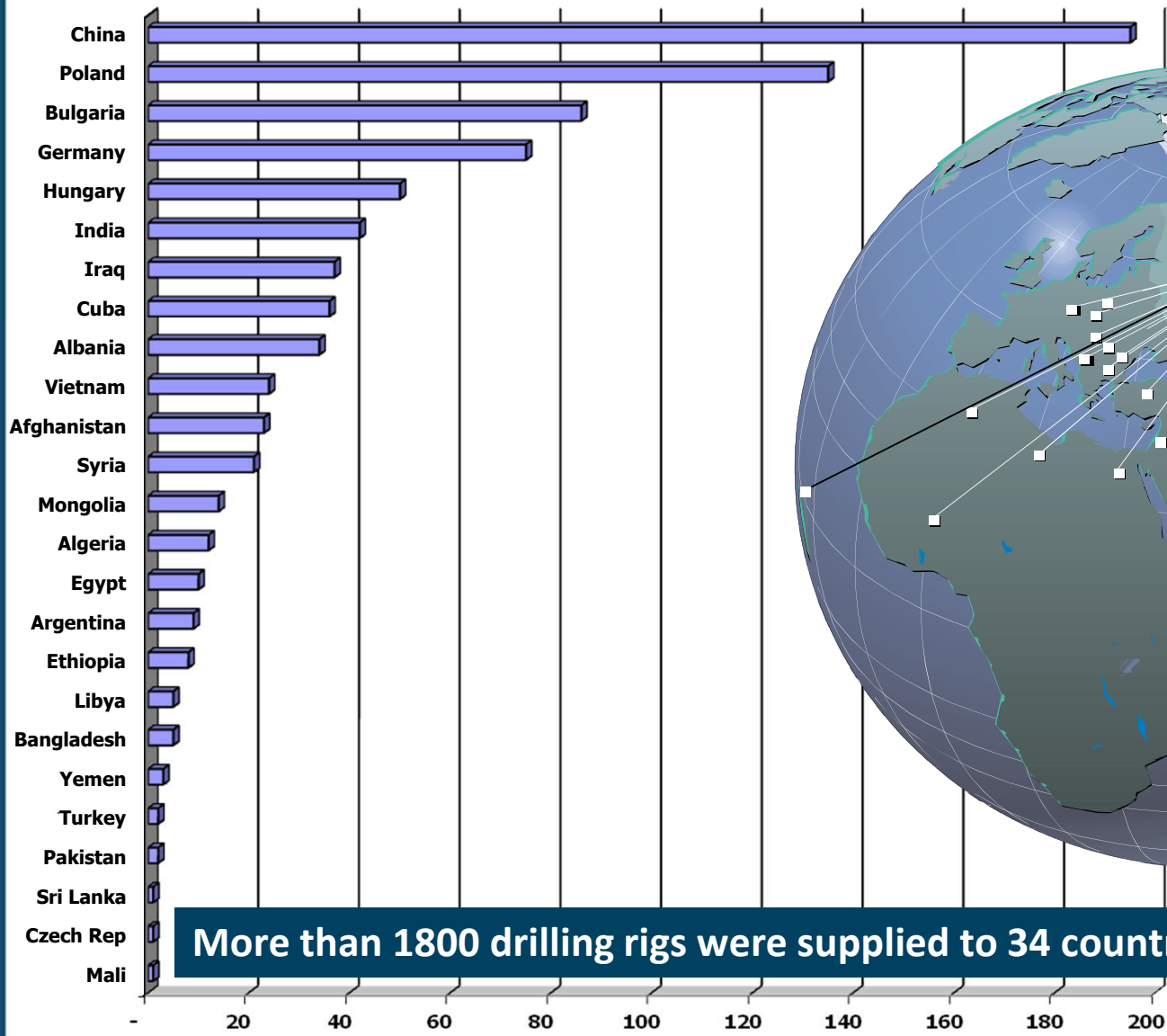


**Since 1945 organizations of holding have produced more than 15 thousand drilling rigs**

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


**Uralmash OGE Holding, LLC**   
**branch in Yekaterinburg**

## Engineering

Engineering center and managing unit for all the engineering


**Neftegasengineering, LLC**   
**Volgograd**

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


**URBO, CJSC**   
**Yekaterinburg**

## Manufacturing of drilling equipment

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

**Plant of modular packaged units, OJSC**   
**Tyumen**

8000 t/year of welded metal structures

**Neftemash factory, OJSC**   
**Otradny**

3000 t/year of welded metal structures

**Uralmash Techservice, LLC**   
**Moscow**

## 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

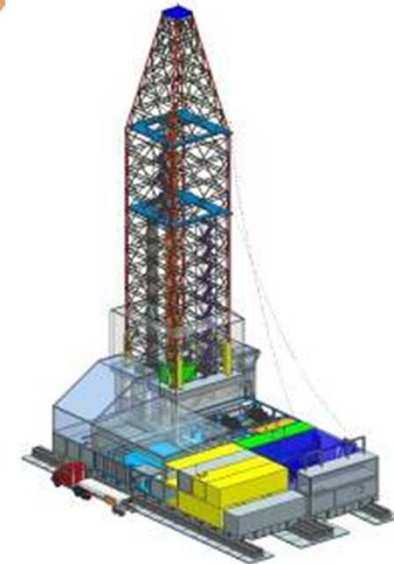
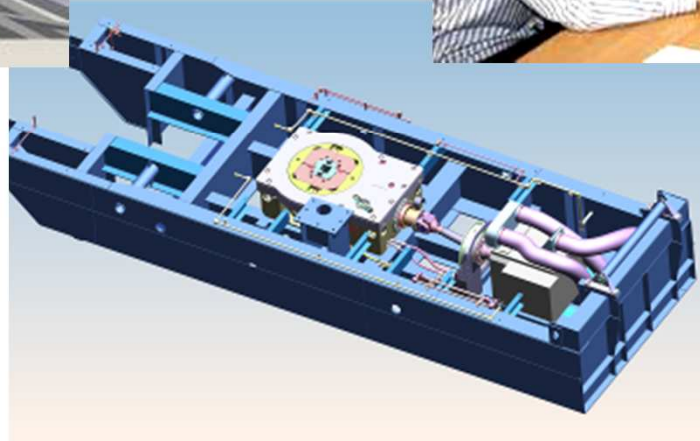
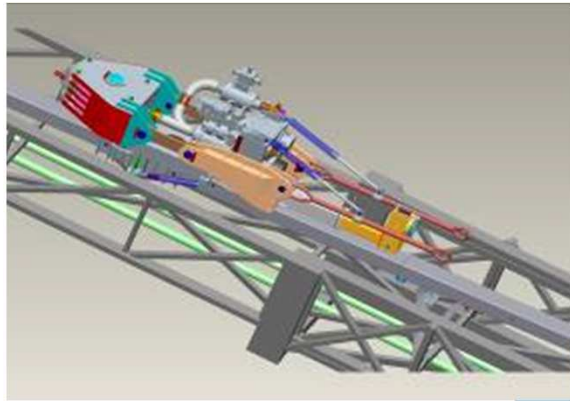




# Products and services overview

| Key Features  | Products/Services  |   |  |                   |               |                |             |             |           |                          |              |             |           |  |           |             |           |  |
|---|--|---|--|-------------------|---------------|----------------|-------------|-------------|-----------|--------------------------|--------------|-------------|-----------|--|-----------|-------------|-----------|--|
| <p>Leading manufacturer of drilling equipment in Russia</p>   | <p><b>Drilling rigs</b></p>         | <ul style="list-style-type: none"> <li>• Design, manufacturing and supplying of various types drilling rigs with 160 to 600 metric tons capacity, engineering, maintenance and upgrading of existing equipment, service</li> <li>• Manufacturing of drilling rigs with various capacity, in accordance with customer requirements</li> <li>• Main types of manufactured drilling rigs:</li> </ul>   |  |                   |               |                |             |             |           |                          |              |             |           |  |           |             |           |  |
| <p>Supplier of drilling equipment in Russia, CIS and overseas with a good reputation</p>                              |  | <table border="1"> <thead> <tr> <th>Rig type</th> <th>Drilling depth, m</th> <th>Capacity (mt)</th> <th>Transportation</th> </tr> </thead> <tbody> <tr> <td>Mobile rigs</td> <td>Up to 3,200</td> <td>Up to 225</td> <td>powered tool frame dolly</td> </tr> <tr> <td>Cluster rigs</td> <td>Up to 6,500</td> <td>Up to 600</td> <td>Drilling rig with ability to move from well to well without rig down</td> </tr> <tr> <td>Land rigs</td> <td>Up to 8,000</td> <td>Up to 600</td> <td>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><b>Drilling equipment</b></p>  | <p><b>Crown and travelling blocks, from 200 to 600 metric tons capacity</b><br/> <b>Drawworks from 700 to 3000 h.p. capacity</b><br/> <b>Mud pumps</b><br/> <b>Mud circulating systems</b><br/> <b>Swivels, etc.</b></p>  |  |                   |               |                |             |             |           |                          |              |             |           |  |           |             |           |  |
| <p>Warranty and post warranty maintenance service of supplied equipment</p>   | <p><b>Repair \ modernization \ service</b></p>   | <p><b>Integrated upgrade</b><br/> <b>Repair of all types drilling rigs and equipment</b></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<br>(225)      |
|---|-----------------------------|-----------------|------------------------|
| Limited hook load, <i>ton*force (kN)</i>              | 160 (1600)                  | 175 (1750)      | 200-225<br>(2000-2250) |
| Drilling depth, m                                     | 2500                        | 2900            | 3200                   |
| Type of drive:  | diesel<br>(diesel-electric) | diesel-electric | diesel-electric        |
| Drawworks:  | LBU-600                     | LBU-600         | LBU-670                |
| — calculated power on input shaft, kW ( <i>h.p.</i> ) | 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**

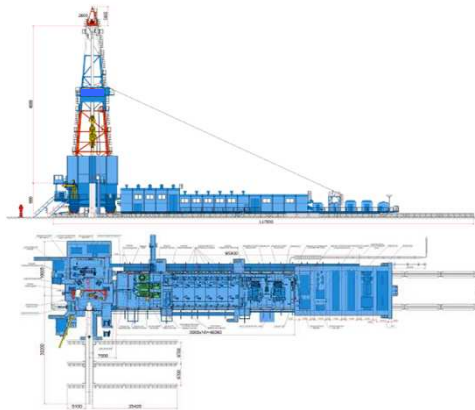


**MBU 2500/160 D**

## 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                             |
|---|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|
| <b>Limited hook load, GOST 16293, metric tons (API)</b> | 225 (270)                            | 250 (300)                            | 270 (324)                            | 320 (384)                            | 450 (540)                            |
| <b>Drilling depth, m</b>                                | 3900                                 | 4200                                 | 4500                                 | 5000                                 | 6500                                 |
| <b>Type of drive:</b>                                   | Electric variable-frequency ac-drive | Electric variable-frequency ac-drive | Electric variable-frequency ac-drive | Electric variable-frequency ac-drive | Electric variable-frequency ac-drive |
| <b>Drawworks:</b>                                       | LBU-750                              | LBU-900                              | LBU-900                              | LBU-1500                             | LBU-1500                             |
| <b>Mud pump:</b>  | 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**

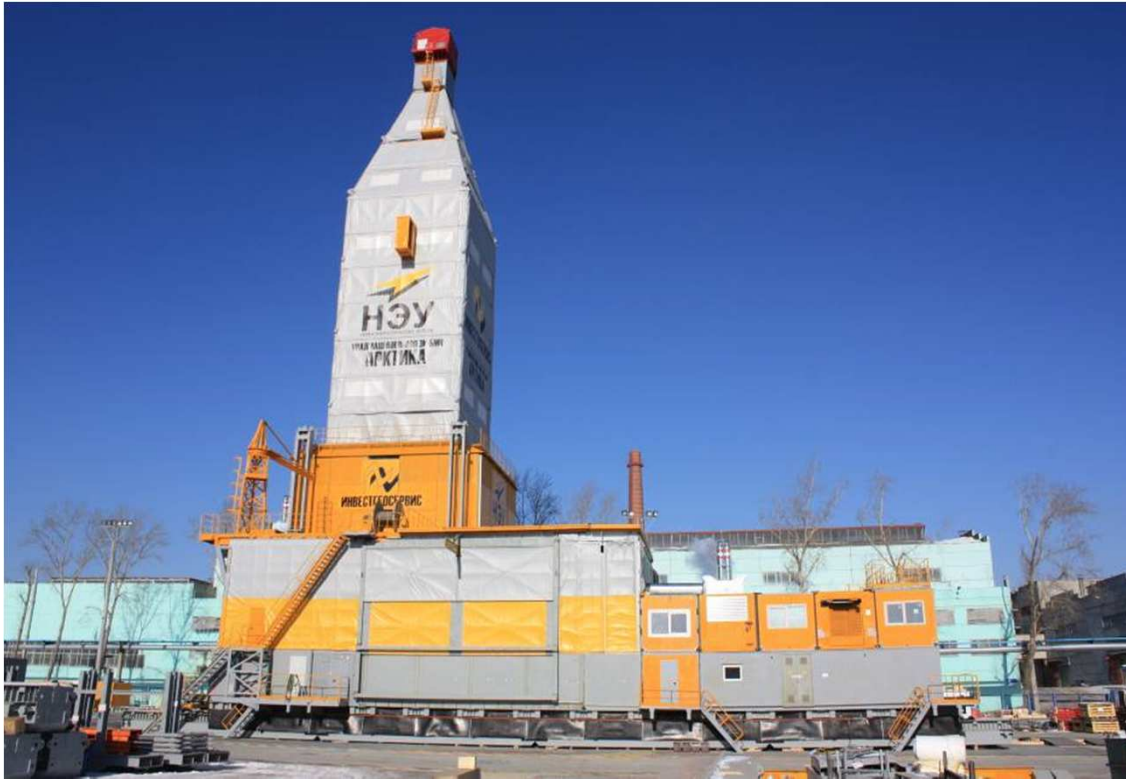


**BU 6500/450 BMCHE**



**BU 600 DER**

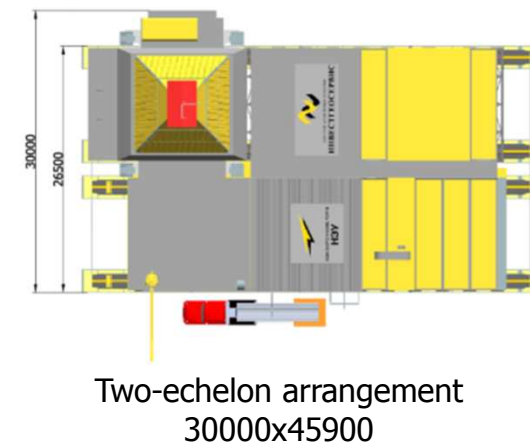
# DRILLING RIG Uralmash 6000/400 EK-BMCHE «Arktika»



## 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

| 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 <sup>3</sup>        | 493,5       |



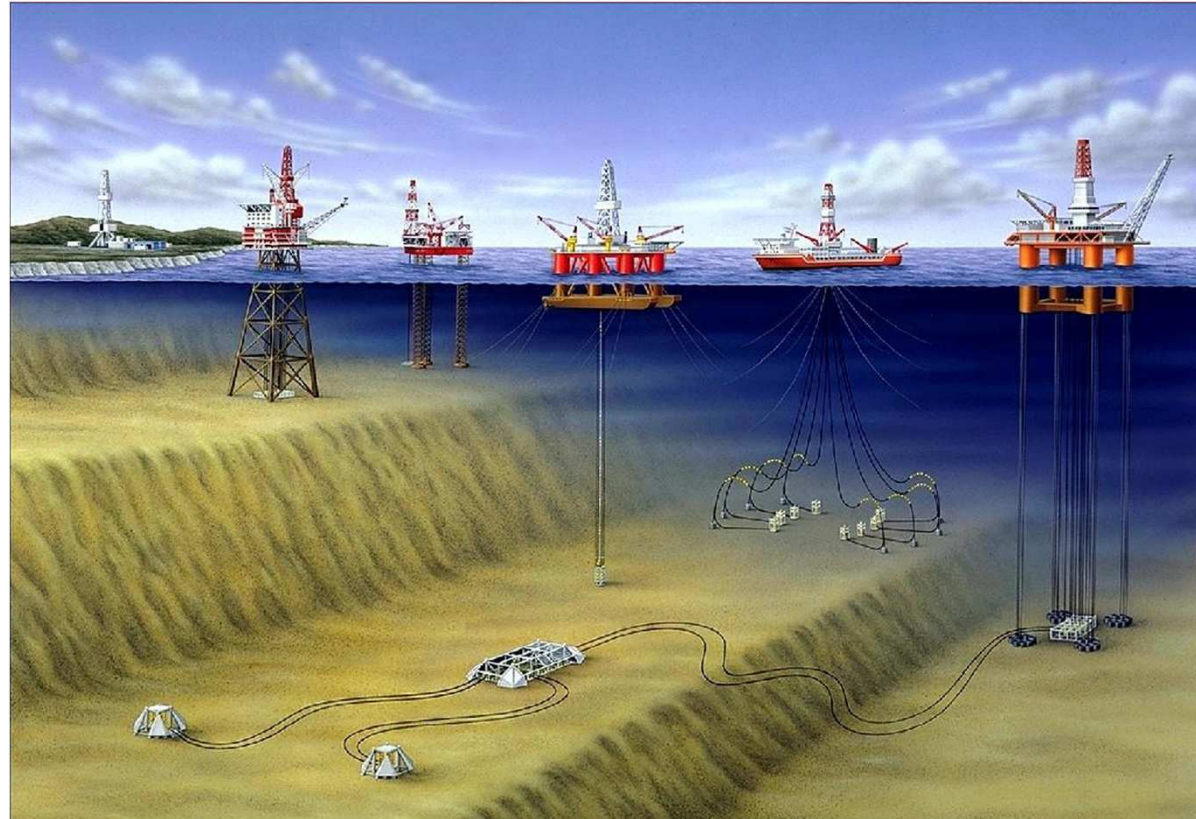


## Offshore equipment

**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



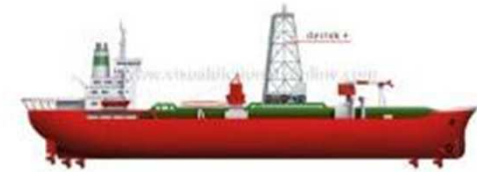
## Potential fields of application of Holding equipment



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



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



Drill ships can be used for drilling in any deep water

## 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**

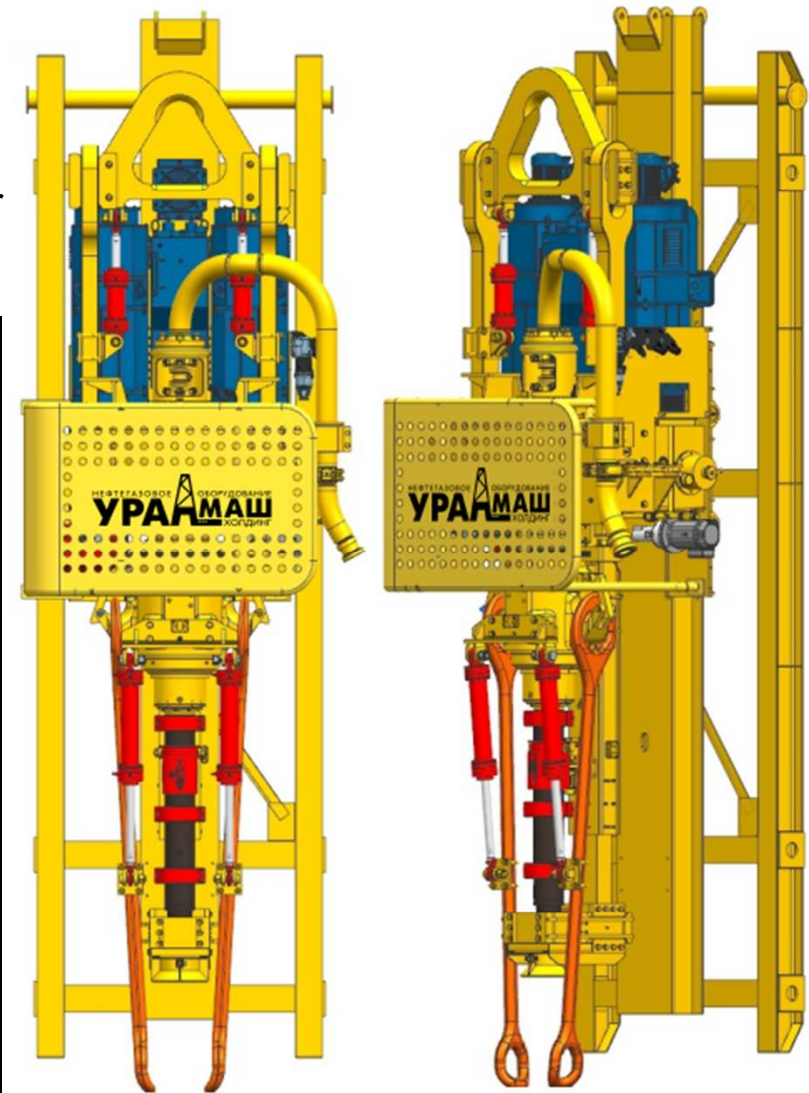




## Top drive system SVP 320 EChR

- **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;<br>140<br>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!

Uralmash Oil and Gas Equipment LLC  
117036, 21/4 Prospekt 60-letiya Oktyabrya, Moscow, Russia  
Phone.: +7(495) 783-05-67  
Fax: +7(495) 783-05-68  
E-mail: [info@uralmash-ngo.com](mailto:info@uralmash-ngo.com)

Branch Uralmash Oil and Gas Equipment LLC in Yekaterinburg  
620012 Pervoy Pyatiletki square, Yekaterinburg, Russia  
Phone.: +7(343) 270-10-00  
Fax: +7(343) 270-10-01  
E-mail: [rig@uralmash.ru](mailto:rig@uralmash.ru), [rig@urbo.su](mailto:rig@urbo.su)