

# ARCTIC RIGS

Withstanding extreme environmental conditions. Superior and safe drilling performance.

## CLUSTER SLIDER™ GENERAL FEATURES

- Climate: Arctic -45°C to +40°C
- Drawworks capacities: 1,250 hp–2,000 hp
- Hook load capacities: 550,000 lbs–1,000,000 lbs / 250 t–450 t
- Drilling depth capacities: Up to 19,700 ft / up to 6,000 m
- GOST certified
- HAZOP risk assessment
- CE equipment
- Testing & commissioning



## CLUSTER SLIDER™ HR 4000

**Rating: 1,250 hp / 250 t**

**Static hook load: 550,000 lbs @10 lines / 250 t**

**Design drilling depth: 13,120 ft / 4,000 m**

## UNIQUE FEATURES

- Vertical erected mast with hydraulic cylinder for raising
- Modular box-on-box substructure
- Small footprint
- Compact rig module
- Operation on cluster and single well locations
- Dimensioned for simple rig transport over long distance
- Optional with double train units or single train unit
- Full winterization package (driller's cabin, drill floor, setback area, drilling support modules)
- Less NPT with Bentec TOP DRIVE
- Field approved equipment

# TECHNICAL DATA

## ARCTIC RIGS – CLUSTER SLIDER™ HR 4000

The Bentec CLUSTER SLIDER™ HR 4000 is a modular built, 1,250 hp ARCTIC RIG for operating in harsh, deep temperature environments.

It is designed to operate on cluster and single well locations, drilling directional wells to a measured depth of 4,000 meters. The rig and all drilling-related sub-systems are installed on a skidding track to allow skidding with a full setback and tanks. The footprint allows for smaller locations.

As per customer request the rig can be manufactured with double train units for smaller locations (drilling support module and drilling rig as single units) or with single train units (both units on one skidding track).

The modular box-on-box substructure consists of four sub-boxes and three drill floor parts with integrated drilling equipment. The substructure is fully enclosed and has a free height of 23 feet to accommodate well control equipment.

The vertical lift mast consists of four units with an A-frame; the vertical mast is lifted by a hydraulic cylinder. Optionally, it can be fully clad from the substructure up to the monkey board.

All required areas have been fully winterized and the system includes an intelligent, efficient heating & cooling system. The Bentec HEAT RECOVERY SYSTEM is available as an option to minimize fuel consumption and emissions to the atmosphere.

The rig is powered by a self-generating system and works in conjunction with a frequency converter. The power pack can be attached to the skid together with the drilling support module and/or solid control system parallel with the rig. There is an optional package for supplying power from the main power overhead network.

The equipment fitted to the rig is suitable for performance drilling. The Bentec TOP DRIVE is specially designed for rough conditions and less rig down time.

The rig is built in compliance with the rules and regulations of the Russian mining authorities. The Bentec rig is GOST certified and the rig can be operated following initial commissioning without delays for additional licensing.

Due to this modular design, this rig type can be tailored to customers' requirements.

## TECHNICAL DATA

### MAST

Manufacturer:	Bentec
System:	Vertical lift
Mast free height:	142.00 ft (43.30 m)
Mast base:	21.30 ft (6.50 m)
Hook load capacity @ 10 lines:	550,000 lbs (250 mt)
Racking capacity:	Approx. 13,120 ft (4,000 m)

### SUBSTRUCTURE

Manufacturer:	Bentec
System:	Box-on-box substructure
Height of drill floor:	28.00 ft (8.50 m)
Height underneath rotary table:	23.00 ft (7.00 m)
Rotary capacity max.:	550,000 lbs (250 t)
Setback load max.:	352,000 lbs (160 t)

### DRAWWORKS

Manufacturer:	Bentec
Type:	DW-E-250-AC-SG
Power rating:	1,250 hp (920 kW)
Drill line diameter:	1 1/4" (32 mm)
Max. line pull:	61,950 lbs (28.1 t)
Racking capacity:	Approx. 13,120 ft (4,000 m)

### IRON ROUGHNECK

Manufacturer:	Original Equipment Manufacturer Controls by Bentec
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### TOP DRIVE

Manufacturer:	Bentec
Type:	TD-350-HT
Load capacity:	350 ton / 314 t
Electric motor:	1,030 hp (758 kW)
Output torque:	46,500 ft-lbs (63,000 Nm)

### POWER GENERATION

Manufacturer:	Bentec
Engine type:	4 x CAT 3512B (or equivalent)
Generator type:	4 x CAT SR4 (or equivalent)
Emergency generator set:	1 x CAT C15 / SR4

### POWER CONTROL ROOM

Manufacturer:	Bentec
Type:	Variable frequency drive 690 V, 50 Hz

### MUD PUMPS

Manufacturer:	Bentec
Type:	2 x MP-T-1600-AC
Electric motor:	1,600 hp (1,200 kW) AC
Max. pressure:	5,000 PSI (350 bar) 7,500 PSI (500 bar) on request

### MUD TANK SYSTEM

Manufacturer:	Bentec
Type:	Rectangular tanks
Active mud volume:	As per customer specification
Reserve mud volume:	As per customer specification

### SOLIDS REMOVAL SYSTEM

Manufacturer:	Original Equipment Manufacturer
Shale shaker:	1 x triple unit
Desander:	2 x 12" cones
Desilter:	8 x 4" cones
Drilling mud degasser:	Bentec type DMD 1-250
Mud gas separator:	Bentec 48" vertical type MGS V 48