Mud pumps NB

Pumps of NB type – horizontal, two-cylinder, double-acting, driven, with built-in gear reducer.
The pumps are intended for delivery of the fluid into the wells when carrying out exploratory and development drilling and other oilfield operations, as well as for pumping non-aggressive fluids.
The pneumatic compensator in the injection line provides the regular flow fluctuation and pump output fluid delivery.
Owing to their high reliability, easy operation and maintenance the pumps of NB type are of great demand among the customers.
The plant produces more than 30 classes and designs of NB pumps, characterized by the capacity, the position of the pulley, the gage and by the construction of the coupling.
The required operation mode for pressure and volumetric supply is freely set by removing the liners and changing the number of piston strokes.

Delivery

On customers› request the pumps of NB type can be optionally supplied with the pullers of valve seats and liners.
The plant provides the customers with the spare parts to the pumps and performs overhaul under the production technology.

NB-32, NB-50, NB-80 Mud pumps

The pumps are intended for injection of washer fluids (water, sludge) into the well when carrying out oil and gas exploratory and structure drilling.
The pumps are widely used for pumping various non-aggressive fluids at the enterprises of food, chemical and construction industries.

Technical characteristics

Parameters	NB-32, NB-50	NB-80
Piston stroke, mm	160	200
Main shaft rotation frequency (max), rpm	413 (110 double strokes)	428 (110 double strokes)
Vacuum gage suction lift, m	3	
Diameter of suction/discharge connections, mm	113/55	
Overall dimensions, max, mm	1860x1000x1330	1915x1020x1215
Weight, max, kg	1180	1385

Main designs of pumps

Version No.	NB-32	NB-50	NB-80	Version
01				RH pulley
02				LH pulley
03				Pneumatic coupling and pulley, RH
04				Pneumatic coupling and pulley, LH
05				Friction coupling and pulley, RH
06				Friction coupling and pulley, LH
07			-	RH pulley, side location of pressure gage
08		-	-	LH pulley, side location of pressure gage
09		-	-	Pneumatic coupling and pulley, RH, side location of pressure gage
10		-	-	Pneumatic coupling and pulley, LH, side location of pressure gage
11		-	-	Pneumatic coupling and pulley, RH, side location of pressure gage
12		-	-	Pneumatic coupling and pulley, LH, side location of pressure gage

Pressure and volumetric capacity of pumps (with 110 piston double strokes)

Pump designation (type)	Useful power, kW	Diameter of changeable liners, mm	Volumetric pump capacity dm³/sec (m³/h)	Maximum pressure, MPa
NB-32	32	80	5,2(18,7)	6,2
		90	6,7 (24,1)	4,8
		100	8,5 (30,6)	3,8
		110	10,4(37,4),	3,1
NB-50	50	90	6,7 (24,1)	7,5
		100	8,5 (30,6)	5,9
		110	10,4(37,4)	4,8
		120	12,5(45]	4,0
NB-80	80	80	6,5(23,4)	12,3
		90	8,4(30,2)	9,5
		100	10,6(38,2)	7,6
		110	13,0(46,8)	6,2
		120	15,7(56,5)	5,1

Mud pump NB-125IZh

Application:

- injection of washer fluid when drilling oil and gas wells;
- injection of fluid media during flushing and squeezing operations when carrying out wells overhaul;
- injection of water in the reservoir bed to intensify production of oil;
- pumping of various non-aggressive fluids, including watery oil.

The pumps are equipped with components of advanced reliability:

- rods, with chromium-nickel alloy hardening of the working section. The coating has low friction factor, enhanced corrosion resistance;
- Rubber-fluoroplastic sealing of the pistons and the rod ensures low wear of the liners and the rod and provides long and reliable pump operation.

Technical characteristics

Parameters	Value
Useful power, kW	125
Piston stroke, mm	250
Main shaft rotation frequency (max), rpm	Up to 511 (100 double strokes)
Vacuum gage suction lift, m	3
Connecting nipples: - discharge - suction, mm	 external thread, tubing 60 flange D(int.)100 mm

Versions of NB-125Izh

Version number	Version	Overall dimensions, mm	Weight, kg
NB-125 Izh -27	Without pulley and frame	2610x890x1960	2810
NB-125 Izh -28	With pulley, without frame	2610x980x1960	3170
NB-125 Izh -29	With pulley, on frame	2610x980x2010	3260
NB-125 Izh -30	With pulley, discharge flanges, without frame	2610x980x1960	3190

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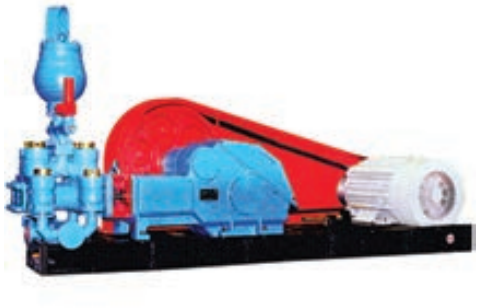
Pressure and volumetric capacity of a pump depending on liner diameter and number of piston double strokes

Diameter of changeable liners, mm	Pressure, MPa /capacity, dm^3/s (m^3/h)	
	66 double strokes	100 double strokes
90	20,5/6,1 (22,0)	13,4/9,3 (33,5)
100	16,0/7,8 (28,1)	10,6/11,8 (42,5)
115	11,8/10,6 (38,2)	7,8/16,0 (57,6)
127	9,5/13,1 (47,2)	6,3/19,8 (71,3)

Mud pumps with electric drive



Mud pumps can be equipped with electric drive. NB-32, NB-50, NB-125Izh pumps are delivered being aggregate, with electric drive, on a frame.

In NB-125IZh Mud pump, versions 68 and 69, an electric motor is located at pump frame, thus decreasing its weight and overall dimensions (for pumps with electric motor up to 30 kW). In NB-125IZh mud pump, version 848.01, a monitoring and control cabinet with variable frequency driver is installed which allows adjustment of engine shaft rotation frequency from 300 to 1200 rpm.

The delivery set covers:

- mud pump with pulley (NB-32, NB-50, NB-80, NB-125IZh);
- electric motor (design, power, rotation frequency are specified by operation conditions, required pressure and volumetric capacity of the pump);
- v-belt transmission, covered with protective housing;
- frame;
- power electric cabinet and control panel (on the customer›s request);
- monitoring and control cabinet with variable frequency driver (for NB-125IZh pump).

Piston mud pump NBT-375

This pump is Intended for injection of working fluids during drilling, developing, flushing and squeezing of oil and gas wells.

Technical characteristics

Parameters	Value
Pump power, kW (hp)	375 (500)
Piston stroke, mm	200
Overall dimensions, max, mm	2465x1216x1334
Weight, max, kg	4000

Pressure and volumetric capacity of a pump

Modification designation	Piston diameter, mm	Max pressure, MPa/capacity, l/s	Max theoretical capacity, l/s, at 160 rpm
NBT-375x40(L)	100	40/9,38	12,56
NBT -375x32(L)	115	32/11,72	16,62
NBT -375x25(L)	127	25/15,0	20,23
NBT -375x20(L)	140	20/18,75	24,64