

Cementing and Fracturing Units

Mobile Pumping Truck 160x32



A special truck, mobile pumping truck 160x32 is intended for pumping different liquid media while cementing wells in the process of drilling and capital repair as well as while doing other washing and squeezing jobs in oil and gas wells.

Technical specifications

Chassis	Upon request
Total weight, kg	16610
Cementing pump	Piston pump НПЦ-32
Available capacity, kWt	108
Piston stroke, mm	250
Nominal pressure, MPa	32 (40)
Maximum ideal feeding, dm ³ /s	26
Measuring tank capacity, m ³	6
Cementing tank capacity, em.3	0,25
Pilot engine	3M3 511.10/Д 144
Power rating, KWt	92/44
Torsional moment at 2000-2500 rev/min	294/222
Water pump	Centrifugal pump ЦНЦ 38-154
Pump shaft speed, rev/min	2950
Maximum feeding, dm ³ /s	10,5
Maximum pressure, MPa	1,54
Manifold piping nominal bores, mm	
- sucking	100
- forcing	50
Overall dimensions, mm	10400x2650x3200

Pumping unit with three plunger pump 300x40

It is intended for forcing technological liquids while cementing, washing out sand plugs, hydro break of layers, drilling, capital repair as well as while doing other washing and squeezing jobs in oil and gas wells. The hydraulic part of the three plunger horizontal pump can be manufactured in different ways depending on the diameter of the installed plungers (d=100, d=110, d=125, d=140).

Technical specifications

Chassis	Upon request
Power unit	Diesel drive ПД 300-10
Engine	ЯМЗ-7511.10-01
Power rating, KWt (hp)	294 (400)
Working speed of the engine crankshaft, rev/min	1600-1800
Cementing plunger pump	14Т1
Plunger diameter, mm	100
Plunger stroke, mm	160
Maximum pressure, MPa	50
Ideal feeding at maximum pressure, dm ³ /s	5,34
Working pressure, MPa	40
Ideal feeding at working pressure, dm ³ /s	6,5
Maximum ideal feeding, dm ³ /s	17,5
Measuring tank capacity, m ³	6,0
Manifold:	
Diameter of the accepting line of the pump, mm	100
Diameter of the forcing line of the pump, mm	50
Overall dimensions, no more than:	
Length, mm	9 600
Width, mm	2 500
Height, mm	2 850
Total weight, kg	19 300

Cementing and Fracturing Unit



It is intended for forcing technological liquids while cementing, washing out sand plugs, hydro break of layers, drilling, capital repair as well as while doing other washing and squeezing jobs in oil and gas wells. The hydraulic part of the triplex plunger horizontal pump can be manufactured in different ways depending on the diameter of the installed plungers (d=115, d=125).

Technical specifications

Engine for pump driving gear	Caterpillar Ч15/ЯМ3 - 7511.10
Engine Power rating, KWt (hp)	475/400
Working speed of the engine crankshaft, rev/min	2100/1900
Cementing triplex plunger pump	PET 70
Plunger diameter	115,125
Plunger stroke, mm	152
Maximum pressure, MPa	400
Maximum Ideal feeding, dm ³ /s	286/297
Ideal feeding zat working pressure, dm ³ /s	2008/1836
Measuring tank capacity, m ³	4,0
Manifold:	
Diameter of the accepting line of the pump, mm	100
Diameter of the forcing line of the pump, mm	50
Overall dimensions, no more than:	
• Length, mm	9 790
• Width, mm	2 500
• Height, mm	3 700
Total weight, kg	19 300

Cementing and Fracturing Unit ACF-700


It is intended for forcing technological liquids while cementing, washing out sand plugs, hydro break of layers, drilling, capital repair as well as while doing other washing and squeezing jobs in oil and gas wells. The hydraulic part of the triplex plunger horizontal pump can be manufactured in different ways depending on the diameter of the installed plungers (0100, 0115, 0125).

Technical specifications

Engine for pump driving gear	Caterpillar 415/ЯМ3 - 7511.10
Engine Power rating, KWt (hp)	475/400
Working speed of the engine crankshaft, rev/min	2100/1900
Cementing triplex plunger pump	PET 70
Plunger diameter	100, 115, 125
Plunger stroke, mm	152
Maximum pressure	700
Maximum Ideal feeding, dm ³ /s	150/131
Working pressure, MPa	1500/1389
Measuring tank capacity, m ³	4,0
Manifold: Diameter of the accepting line of the pump, mm Diameter of the forcing line of the pump, mm	100 50
Overall dimensions, no more than: Length, mm Width, mm Height, mm	9 790 2 500 3 700
Total weight, kg	19 300

Sandmixing mechanical and cement surge units

Sandmixing mechanical unit



It is intended for transporting dry powder-like materials, mechanically regulated feeding of these materials by screw conveyors and for preparing grouting mortars while cementing oil and gas wells.

Technical specifications

Engine	ЯМЗ-238М2 without turbo-supercharging,
Capacity, kWt/hp at 2100 min ⁻¹	176/240 (243/330)
Maximum engine torsional moment, H*m/kgs*m at 1250-1450 (1200-1400) min ⁻¹	883/90 (1225/125)
Tyres	12.00R20(320R-508)
Total weight, kg	23740 (24020)
Maximum output in preparing grouting mortar with the density of 1.85 g/cm ³ , t/h	27
Density of the prepared mortar, g/cm ³	1,2...2,4
Maximum weight of the transported material, kg - on hard surface roads - on other roads and at the lack of good roads	11500 9500
Maximum capacity with dry cement, t/h - of the charging screw conveyor - rated of the dosaging screw conveyors	15 132
Overall dimensions, mm	14000x2500x4300
Maximum speed, km/h	80

Mobile cement surge unit



It is intended for processing grouting mortar in the process of its preparation for the purpose of reaching the homogeneity of the mixture parameters throughout its volume. The unit is used in all kinds of cementing jobs which are done in drill holes. The unit design allows to use it for preparing buffer compositions and tempering liquids.

Technical specifications

Engine	ЯМЗ-238 ДЕ without turbo-supercharging, ЯМЗ-238 ДЕ with turbo-supercharging
Capacity, kWt/hp at 2100 min-i	176/240 (243/330)
Maximum engine torsional moment, H*m/kgs*m at 1250-1450 (1200-1400) min-»	883/90(1225/125)
Tyres	12.00R20(320R-508)
Equipped unit weight, kg	13420 (13720)
Limiting tank capacity, m3	16
Maximum density of the equalized mortar, g/cm3	2,5
Assumed mortar density fluctuation, g/cm3	0,01
Maximum feeding of the original grouting mortar into the unit, cmVs	44
Drilling mud batch volume, m3	5...15
Drive of the shafts with helical blades	Via the power takeoff, drive shaft and chain gear
Overall dimensions, mm	9650x2500x3360
Maximum speed, km/h	80

Thermo-generated systems

Unit УПП-1600/100, УПП-2500/100



The commercial steamer УПП on the chassis of the go-anywhere vehicle is intended for de-waxing well bottom zone, piping, tanks, armature and other oil field equipment with high pressure saturated steam, as well as for heating and washing the equipment.

Technical specifications

Engine	ЯМЗ-238М2 without turbo - supercharging, (ЯМЗ-238 ДЕ) with turbo-supercharging
Capacity, kWt/hp at 2100 min	176/240 (243/330)
Maximum engine torsional moment, H*m/kgs*m at 1250-1450 (1200-1400)	883/90 (1225/125)
Weight at most	21000
Productivity of steam, kg/h	1600
Operating pressure, MPa	0,6 - 10
Maximum steam temperature, °C	310
Fuel for steam boiler	Diesel
Steam pressure, MPa	9,81
Necessary time for receiving steam, min	20
Overall dimensions, mm	8776x2500x3560

Well dewaxing aggregate

The well dewaxing aggregate АДПМ - 12/150 on the chassis KrAZ is intended for well dewaxing with hot oil at the ambient temperature of -40°C to +40°C.

Technical specifications

Engine	740.1 B-260 (ЯМЗ-238 ДЕ)
Capacity, kWt/hp at 2100 (2000) miiv1	191/260 (245/330)
Total weight, kg	14300 (14600)
Oil productivity, m3/h	12
Operating pressure, MPa	16
Oil heating temperature, °C	150
Fuel for the heater	Diesel
Working time in off-line mode with the full fuel tank, h	7,5
Overall dimensions, mm	9520x2500x3450

Well development and repair unit AK-60



The unit AK-60n is intended for the development and repair (including capital repair) of the oil and gas wells up to 3000 m deep, located as a well cluster or separately. It allows doing drilling jobs 1600 m deep. The load-carrying capacity of 80 tons allows liquidating emergency situations at repairing wells doing without units of higher capacity. The unit is designed for work in areas with cold and moderate climate (working temperature is up to -45°C, storage temperature is up to -55°C).

Technical specifications

Nominal capacity, kN (t)	600 (60)
Maximum capacity (at breakdown elimination), kN (t)	800 (80)
Winch drive capacity, kWt	165,4
Rate of rise, m/s	0,21 - 1,60
Mast height from the ground to the crown block shaft, m	20
Clearing hole of the drilling rotary table, mm	360
Table opening P-165, mm	165
Static load on the rotary table, kN (ts)	800 (80)
Capacity of the rotary with the hydro drive, kWt	80
Rotation frequency, rev/min	20 - 100
Overall dimensions in over-the-road position, mm	16,5x3,2x4,5
Mounted unit total weight, t	34,2

The Unit AK-60 can be completed with blowout preventer; the system of preparing, storage and purifying of the drilling mud; pumping equipment for pumping mortar.

The Unit Ak-60 meets the requirements of the safety system in oil and gas industries.

Well underground and capital repair unit 20.1 (coiled tubing unit)

It is intended for performing technological and repair-and-renewal operations at oil, gas and gaseous condensate wells without killing them using a steel long-length flush-joint pipe. It can perform such operations as abandonment of wax sediment, hydrate and sand blocks; processing the bottom hole formation zone; doing geophysical research; installing cement bridging; doing job in insulating layers and others.

Technical specifications

Length of the coiled tubing string 0 38.1 mm (RF, USA)	2500 m
Length of the coiled tubing string 0 33.5 mm (RF)	3500m
Length of the coiled tubing string 0 32 mm (USA)	3600 m
Length of the coiled tubing string 0 25 mm (USA) (for work on the hole clearance of the string)	4000 m
Nominal pulling force	120 kN
Top-trolley beam	КрА3-63221 (6x6)
Engine make	ЯМ3-7511
Engine power, h.p.	400
Maximum pressure on the well head, MPa	35
Feeding speed of the long-length tube, m/s	0,01...0,6
Maximum height of the Christmas tree on the well, m	4,5
Overall dimensions, mm, no more than:	10700
- Length	2500
Total weight, kg, at most	31200
Cargo moment of the equipment setter, tm	16

For contacts

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