



## Technical proposal

### UC-320R1-02 Cementing plant

The plant is intended for cementing, crimping and carrying out preflush and overflush operations in oil and gas wells.

Table 1.

Indicants	UC-320R1-02
NPC-32 Cementing pump	Double-piston
- piston stroke, mm	0,82 ft / 250 mm
- maximum pressure, PSI (atm)	4703 (320)
- full pump flow, l/sec	23.4
- diameter of pistons in a kit	100 (14 l/s; 4820 PSI; 328 atm)
Handling medium	Liquid media used in cementing and preflush and overflush operations
Plant dimension, max.	
- Length	30,55 ft / 9310 mm
- Width	8,2 ft / 2500 mm
- Height	11,48 ft / 3500 mm
Chassis KAMAZ 43118*:	
- labeling	43118-3027-46
- engine model	KAMAZ 740.662-300(E-4)
- engine capacity, l/s	300
- wheel arrangement	6x6
- power take-off device (for KAMAZ)	MP 24-4208010-05
Manifold cross-section diameter	
- receiving	3 18/16" / 100 mm
- pumping	2" / 50 mm
- pipe connection	Using swinging elbows
- high pressure cranes, brand	KSH-QRC2"

### Work description.

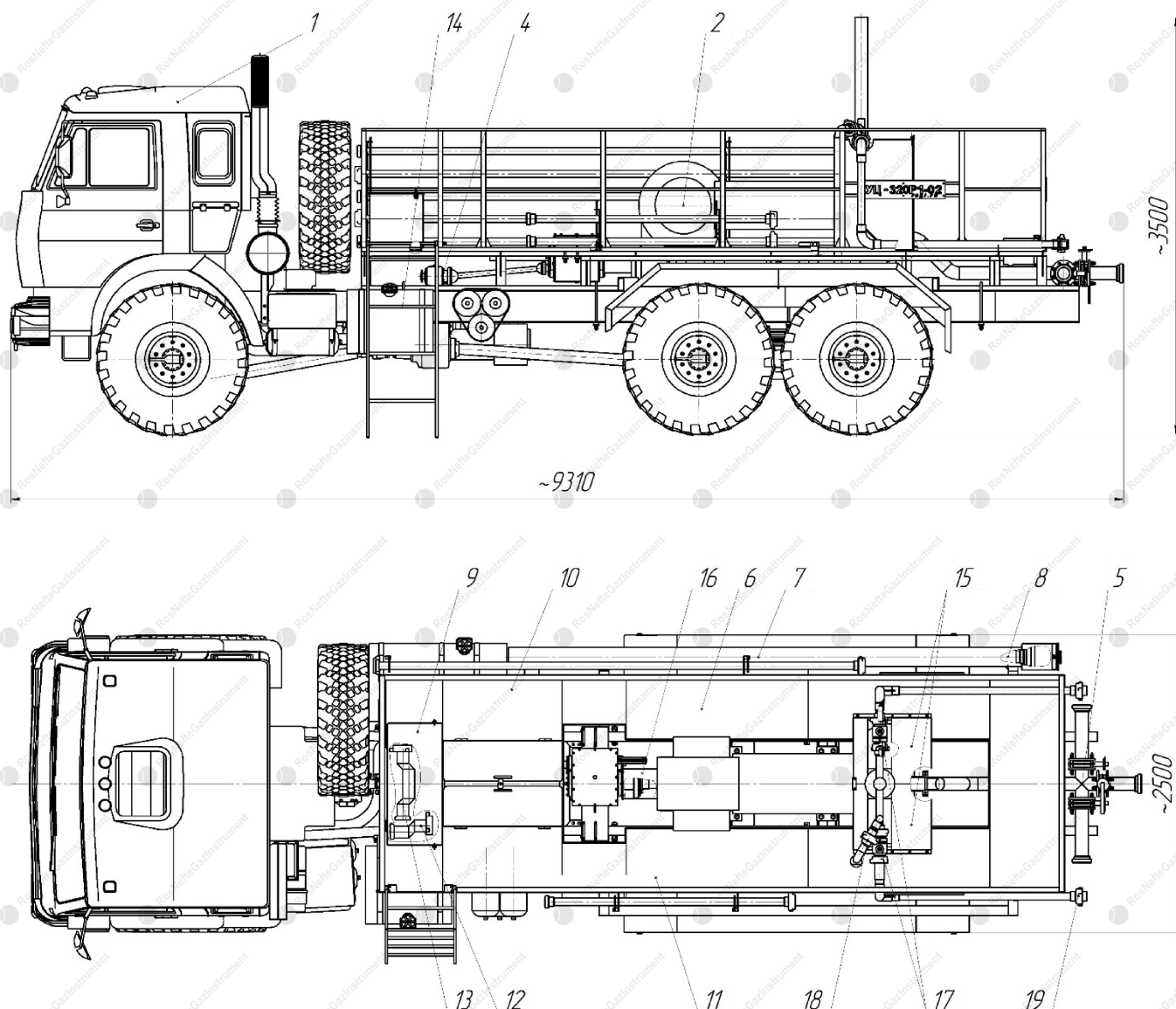
The plant consists of (Fig. 1) KAMAZ 43118 chassis 1, NPC-32 cementing pump 2, power take-off device 4, manifold 5. In platform 6, NPC-32 pump 2 is fastened together with case 7, in which an inlet hose 8 is kept, also an instrument case 9, a pipeline 4-m 10 and 2-m 11, and disappearing stairs 14. Instrument case 9 includes EP 9905 P40MPa swinging elbows 12, ЭП 9906 P40MPa double swinging elbows 13, as well as a spare parts kit.

The fluid end of pump NPC-32 is protected by casings 15. Cardan drive to NPC-32 pump closes with protection cover 16.

The pressure pipeline of the plant consists of KSH-QRC2" cranes 17, degasser line 18, and QRC2" quick erect connection 19 connected by means of pumping and compression pipes GOST 633-80.

NPC-32 pump, item 2 (Fig. 2) ) is driven by the automobile engine through the power take-off device 4 by means of the spider shaft. Speed change in cementing pump shaft rotation, when its working pattern changes, is made by gear shifting in the speed-change gearbox of the chassis and fuel input alteration.

\*Tolling chassis, the plant geared towards Ural chassis can be manufactured (see Table 2).



**Fig. 1 UC-320R1-02 Cementing plant.**

NPC-32 pump suction line allows fetching the liquid both from the outer liquid source, and from the cement tank, usually installed on the ground right or left of the unit, with the aid of the installed slide gates. Manifold is maintained by the operator manually.

The plant is equipped with an inlet corrugated hose 100 mm in diameter and 4 m in length. There is a sleeve nut on one end of the house, connected to the pump suction line, while on the other end there is a perforated inlet nozzle, which is merged into the cement tank during cementing. The plant is also equipped with an auxiliary pipeline with a total length of 24 m, consisting of pipes and swinging elbows (6 pcs.) that are kept in the instrument case, while being in transit condition.

**Table 2 - Complementary options of UC-320R1-02.**

Labeling	Drawing	Position	To include in the set
Installation on Ural 4320-1916-60(70) chassis with the reinforced Additional Power Take-Off Box			<input type="checkbox"/>

