

# Centrifugal pump NC-R1

The centrifugal pump NC-R1 is designed for pumping various liquids:

- abrasive hydraulic fluids (clay and gravel solutions, a mixture of water with sand, ore, etc.);
  - Washing solution used in wells drilling;
  - domestic and industrial wastewater;
  - spent washing solution in a hydrocyclone plant for cleaning from drill cuttings;
  - cement slurries.



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#### Technical characteristics:

Labeling	Capacity, Max., kW	Pressure, Max., Atm.	Flow rate, Max., I/c (m3/hr)	Inlet/outlet hole diameter, mm	Weight, kg
NC-76R1 (4x3)	56	9.7	48 (173)	100/76	65
NC-100R1 (5x4)	37	5.5	75 (270)	123/100	70
NC-127R1 (6x5)	75	6.8	90 (324)	152/127	100
NC-152R1 (8x6)	90	8.2	150 (540)	203/152	230
NC-203R1 (10x8)	140	6.4	250 (900)	245/203	270
NC-254R1 (12x10)	154	7.4	315 (1134)	304/254	300

## Benefits of the centrifugal pump NC-R1:

- ease of maintenance;
- light weight;
- compactness;
- extreme strength;
- requires minimal installation space;
- steel casting of all parts;
- the impeller is made of steel 20X13Л;
- increased wear resistance of the pump parts;
- horizontal or vertical arrangement;
- all-purpose, modular design that allows the Customer to purchase only those parts that are necessary for repair;
- the possibility of changing the direction of rotation due to a simple installation of the impeller, respective rotation direction and scroll turning (only the impeller changes, the remaining parts remain the same).

### Additional options for centrifugal pumps:

- right or left version (see Fig.3.);
- flushing holes, bolt cap for cleaning the scroll when working with cement slurry;
- centrifugal pump version for pumping cement slurries (with a density of up to 2500 kg/3);
  - increased impeller hardness of up to 65-69 HRC.
  - key or splined connection to the shaft;
  - elastic coupling;
  - various positioning rams;
  - electrical, diesel, hydraulic drive;
  - flanged pipelines or pipelines for welding, shut-off valves;
  - back-flow valve for self-feeding.



The centrifugal pump HU-R1 is used in the oil and gas industry for auxiliary operations when pumping cement slurries, drilling mud, bottoms solution, and also as a transfer pump to the main drilling pumps.

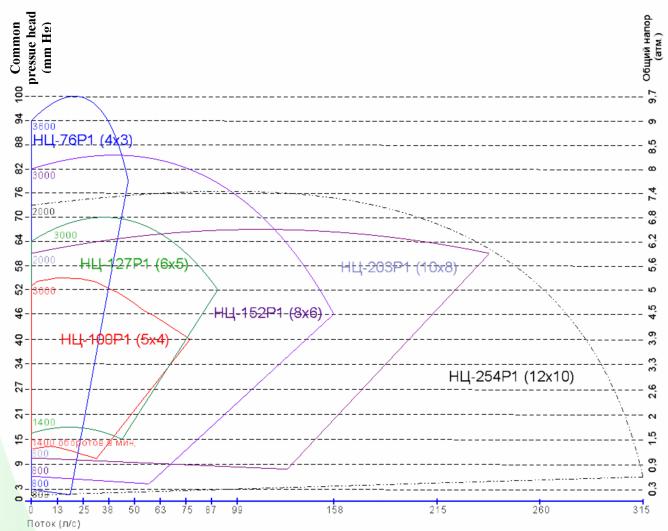


Figure 1 - Graphs of specifications for centrifugal pumps

# Centrifugal pump NC-100R1 (5x4)

Pumped medium specifications;

- hydraulic fluid density up to 2500 kg/m<sup>3</sup>;
- temperature from +5 to +55 C°;
- content of solids particles up to 60%;
- the maximum value of solid particles is not more than 20 mm;
- opened impeller (see Fig. 2);
- possible version with a four-lobe impeller for pumping solids up to 35 mm.





Figure 2 - Pump impeller

Centrifugal pump NC-100R1 (5x4) produced by RosNefteGazInstrument is a small and compact machine for high-pressure feeding of piston triplex pumps serving the wells. The pump is specially designed for pumping abrasive mixtures (bottoms solutions) and cement slurries. In pump production modern CNC equipment is used. Our centrifugal pumps can be used in various industries.

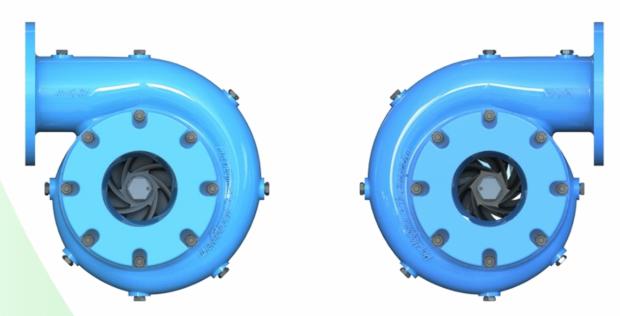


Figure 3 - Centrifugal pump NC-100R1 (5x4) of the right and left version

Centrifugal pump NC-100R1 (5x4) consists of (Fig.4): 1 - pillar, 2 - scroll, 3 - inlet nozzle, 4 - stopper, 5 - cover, 6 - nut, 7 - shaft, 8 - rolling bearings, 9 - plane bearings, 10 - seal, 11 - impeller, 12 - bolt, 13 - discs, 14 - bolt cap, 15 - glass.



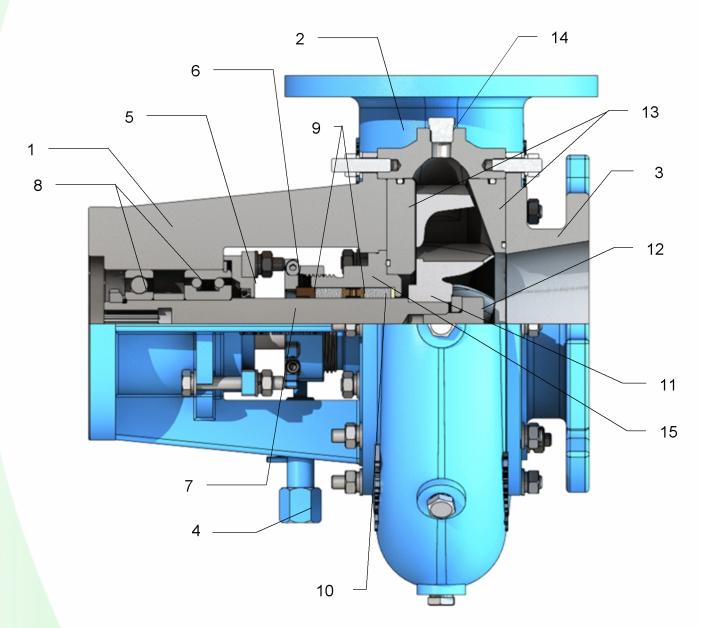


Figure 4 – Centrifugal pump NC-100R1 (5x4)



Labeling	L,mm	H,mm	B,mm	D, GOST 6111-52	A,m m	C,m m	F,m m
NC-76R1 (4x3)	375	380	400	К 3/8"	127	108	168
NC-100R1 (5x4)	375	400	450		153	110	169
NC-127R1 (6x5)	500	400	500		179	116	181
NC-127R1 (8x6)	580	580	520		215	175	220
NC-203R1 (10x8)	650	680	700	· К 1/2"	250	180	260
NC-254R1 (12x10)	700	700	800		276	183	283

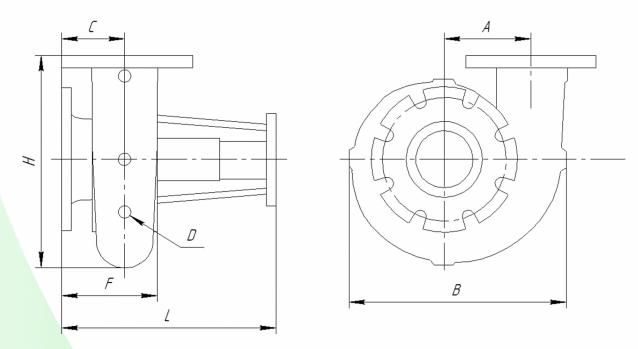


Figure 5 - Basic dimensions of centrifugal pumps NC-R1

# The centrifugal pump NC-254R1 (12x10)

Our largest centrifugal pump with high flow rate can be configured at the factory for your needs. It is available with various options. The pump is extremely durable, requires minimal installation space. The layout in horizontal and vertical versions is possible. Dynamically closed impeller models are designed for moving abrasive, slurry solutions.

Centrifugal pumps NC-100R1 (5x4) produced by RosNefteGazInstrument has worked successfully in our mixing surge plans USO-20R1-09 and USO-20R1-12 for recirculation and dispensing the cement slurry to the pump unit.





Figure 6 - Mixing surge plant USO-20R1-12



Figure 7 - Mixing surge plant USO-20R1-09