

Table 4.1 High pressure water injection and descaling Pumps (n=3000rpm)

Pump Name	Rated Flow, m ³ /hr	Head. m	Speed, rpm	Motor Rated Power. kW
CNS, CNSp (ЦНС, ЦНСп) 10-200	10	200	3000	22
CNS, CNSp (ЦНС, ЦНСп) 10-480	10	480	3000	55
CNS, CNSp (ЦНС, ЦНСп) 10-700	10	700	3000	90
CNS, CNSp (ЦНС, ЦНСп) 30-800	30	800	3000	315
CNS, CNSp (ЦНС, ЦНСп) 30-1050	30	1050	3000	315
CNS, CNSp (ЦНС, ЦНСп) 30-1422	30	1250	3000	315
CNS, CNSp (ЦНС, ЦНСп) 45-700	45	700	3000	315
CNS, CNSp (ЦНС, ЦНСп) 45-900	45	900	3000	315
CNS, CNSp (ЦНС, ЦНСп) 45-1050	45	1050	3000	500
CNS, CNSp (ЦНС, ЦНСп) 45-1150	45	1150	3000	500
CNS, CNSp (ЦНС, ЦНСп) 45-1275	45	1275	3000	500
CNS, CNSp (ЦНС, ЦНСп) 45-1422	45	1422	3000	630
CNS, CNSp (ЦНС, ЦНСп) 45-1525	45	1525	3000	630
CNS, CNSp (ЦНС, ЦНСп) 45-1650	45	1650	3000	630
CNS, CNSp (ЦНС, ЦНСп) 45-1775	45	1775	3000	800
CNS, CNSp (ЦНС, ЦНСп) 45-1900	45	1900	3000	800
CNS, CNSp (ЦНС, ЦНСп) 45-2100	45	2100	3000	800
CNS, CNSp (ЦНС, ЦНСп) 63-700	63	700	3000	500
CNS, CNSp (ЦНС, ЦНСп) 63-900	63	900	3000	500
CNS, CNSp (ЦНС, ЦНСп) 63-1050	63	1050	3000	500
CNS, CNSp (ЦНС, ЦНСп) 63-1150	63	1150	3000	500
CNS, CNSp (ЦНС, ЦНСп) 63-1275	63	1275	3000	630
CNS, CNSp (ЦНС, ЦНСп) 63-1422	63	1422	3000	630
CNS, CNSp (ЦНС, ЦНСп) 63-1525	63	1525	3000	630
CNS, CNSp (ЦНС, ЦНСп) 63-1650	63	1650	3000	800
CNS, CNSp (ЦНС, ЦНСп) 63-1775	63	1775	3000	1000
CNS, CNSp (ЦНС, ЦНСп) 63-1900	63	1900	3000	1000
CNS, CNSp (ЦНС, ЦНСп) 63-2100	63	2100	3000	800
CNS, CNSp (ЦНС, ЦНСп) 90-700	90	700	3000	500
CNS, CNSp (ЦНС, ЦНСп) 90-900	90	900	3000	500
CNS, CNSp (ЦНС, ЦНСп) 90-1050	90	1050	3000	630
CNS, CNSp (ЦНС, ЦНСп) 90-1150	90	1150	3000	630
CNS, CNSp (ЦНС, ЦНСп) 90-1275	90	1275	3000	630
CNS, CNSp (ЦНС, ЦНСп) 90-1422	90	1422	3000	800
CNS, CNSp (ЦНС, ЦНСп) 90-1525	90	1525	3000	800
CNS, CNSp (ЦНС, ЦНСп) 90-1650	90	1650	3000	800
CNS, CNSp (ЦНС, ЦНСп) 90-1775	90	1775	3000	1000
CNS, CNSp (ЦНС, ЦНСп) 90-1900	90	1900	3000	1000
CNS, CNSp (ЦНС, ЦНСп) 90-2100	90	2100	3000	1250

CNS, CNSp (ЦНС, ЦНСп) 120-750	120	700	3000	800
CNS, CNSp (ЦНС, ЦНСп) 120-900	120	900	3000	1000
CNS, CNSp (ЦНС, ЦНСп) 120-1050	120	1050	3000	1000
CNS, CNSp (ЦНС, ЦНСп) 120-1150	120	1150	3000	1000
CNS, CNSp (ЦНС, ЦНСп) 120-1275	120	1275	3000	1000
CNS, CNSp (ЦНС, ЦНСп) 120-1422	120	1422	3000	1250
CNS, CNSp (ЦНС, ЦНСп) 120-1525	120	1525	3000	1250
CNS, CNSp (ЦНС, ЦНСп) 120-1650	120	1650	3000	1600
CNS, CNSp (ЦНС, ЦНСп) 120-1775	120	1775	3000	1600
CNS, CNSp (ЦНС, ЦНСп) 120-1900	120	1900	3000	1600
CNS, CNSp (ЦНС, ЦНСп) 120-2100	120	2100	3000	1600
CNS, CNSp (ЦНС, ЦНСп) 180-700	180	700	3000	800
CNS, CNSp (ЦНС, ЦНСп) 180-900	180	900	3000	800
CNS, CNSp (ЦНС, ЦНСп) 180-1050	180	1050	3000	800
CNS, CNSp (ЦНС, ЦНСп) 180-1150	180	1150	3000	1000
CNS, CNSp (ЦНС, ЦНСп) 180-1275	180	1275	3000	1000
CNS, CNSp (ЦНС, ЦНСп) 180-1422	180	1422	3000	1250
CNS, CNSp (ЦНС, ЦНСп) 180-1525	180	1525	3000	1250
CNS, CNSp (ЦНС, ЦНСп) 180-1650	180	1650	3000	1600
CNS, CNSp (ЦНС, ЦНСп) 180-1775	180	1775	3000	1600
CNS, CNSp (ЦНС, ЦНСп) 180-1900	180	1900	3000	1600
CNS, CNSp (ЦНС, ЦНСп) 180-2100	180	2100	3000	2000
CNS, CNSp (ЦНС, ЦНСп) 200-2050	200	2050	3000	2000
CNS, CNSp (ЦНС, ЦНСп) 200-2200	200	2200	3000	2000
CNS, CNSp (ЦНС, ЦНСп) 240-700	240	700	3000	800
CNS, CNSp (ЦНС, ЦНСп) 240-900	240	900	3000	1000
CNS, CNSp (ЦНС, ЦНСп) 240-1050	240	1050	3000	1000
CNS, CNSp (ЦНС, ЦНСп) 240-1150	240	1150	3000	1250
CNS, CNSp (ЦНС, ЦНСп) 240-1275	240	1275	3000	1250
CNS, CNSp (ЦНС, ЦНСп) 240-1422	240	1422	3000	1250
CNS, CNSp (ЦНС, ЦНСп) 240-1525	240	1525	3000	1600
CNS, CNSp (ЦНС, ЦНСп) 240-1650	240	1650	3000	1600
CNS, CNSp (ЦНС, ЦНСп) 240-1775	240	1775	3000	1600
CNS, CNSp (ЦНС, ЦНСп) 240-1900	240	1900	3000	2000
CNS, CNSp (ЦНС, ЦНСп) 240-2100	240	2100	3000	2000
CNS, CNSp (ЦНС, ЦНСп) 315-700	315	700	3000	1250
CNS, CNSp (ЦНС, ЦНСп) 315-900	315	900	3000	1250
CNS, CNSp (ЦНС, ЦНСп) 315-1050	315	1050	3000	1250
CNS, CNSp (ЦНС, ЦНСп) 315-1150	315	1150	3000	1600
CNS, CNSp (ЦНС, ЦНСп) 315-1275	315	1275	3000	1600
CNS, CNSp (ЦНС, ЦНСп) 315-1422	315	1422	3000	2000
CNS, CNSp (ЦНС, ЦНСп) 315-1525	315	1525	3000	2000
CNS, CNSp (ЦНС, ЦНСп) 315-1650	315	1650	3000	2000
CNS, CNSp (ЦНС, ЦНСп) 315-1775	315	1775	3000	2500
CNS, CNSp (ЦНС, ЦНСп) 315-1900	315	1900	3000	2500
CNS, CNSp (ЦНС, ЦНСп) 315-2100	315	2100	3000	2500
CNS, CNSp (ЦНС, ЦНСп) 500-1050	500	1050	3000	2500
CNS, CNSp (ЦНС, ЦНСп) 500-1422	500	1422	3000	3150
CNS, CNSp (ЦНС, ЦНСп) 500-1900	500	1900	3000	4000
CNS, CNSp (ЦНС, ЦНСп) 630-1050	630	1050	3000	2500
CNS, CNSp (ЦНС, ЦНСп) 630-1422	630	1422	3000	3150
CNS, CNSp (ЦНС, ЦНСп) 630-1900	630	1900	3000	4000

CNS, CNSp (ЦНC, ЦНCII) 720-1050	720	1050	3000	2500
CNS, CNSp (ЦНC, ЦНCII) 720-1422	720	1422	3000	3150
CNS, CNSp (ЦНC, ЦНCII) 720-1900	720	1900	3000	4000
CNS, CNSp (ЦНC, ЦНCII) 360-2000	360	2000	3000	3150
CNS, CNSp (ЦНC, ЦНCII) 300-1800	300	1800	3000	3150
CNS, CNSp (ЦНC, ЦНCII) 360-2000	250	2370	3000	2500
CNS, CNSp (ЦНC, ЦНCII) 360-2000	341	1891	3000	3150
CNS, CNSp (ЦНC, ЦНCII) 500-1900	567	2000	3000	5000
CNS, CNSp (ЦНC, ЦНCII) 500-1900-1	800	1390	3000	5000
CNS, CNSp (ЦНC, ЦНCII) 630-1700	630	1700	3000	4000

High pressure water injection and descaling Pumps (n=3000rpm)

Designed for creating high pressure (up to 250 bar) in various technological and production systems. They have become most widespread in systems of artificial pressure increase (PPD) during oil production in oil fields, where they are used to pump water into oil-bearing formations. They are also used to beat down scale with water at rolling mills of metallurgical plants (combinations).

CNS pumps – centrifugal, horizontal, multi-stage, single-body, ring-sectional type, in-series arrangement of flow part.

CNSp pump - with back-to-back impeller arrangement that makes an axial thrust balancing device unnecessary in the pump design and significantly improves the reliability of pump operation. The residual axial thrust is absorbed by a thrust bearing.

The pump rotor is carried by the medium-lubricated plain bearings. Shaft sealing: soft packed glands (C) or mechanical seals (T). The suction nozzle horizontally sideward, the discharge nozzle vertically to the top.

According to the dimensions of the connecting pipes and installation on the foundation (frame), all pumps of the group (CNS 45, CNS 63, CNS 90, CNS 120, CNS 180, CNS 240) are unified with pumps of the CNS 180 type in all relevant constructions.

Design by materials

Ordinary (general service) version

Handled media: clean water and oil-field produced waters free from hydrogen sulfide.

Corrosion-resistant material construction

Handled media in case of corrosion-resisting and wear- and corrosion-resisting constructions: aggressive sewage and formation oil-field produced waters including those that contain hydrogen sulfide.

Duplex steel construction

Handled media in case of duplex steel construction: aggressive sewage and formation and cenomanian oil-field produced waters including those that contain hydrogen sulfide (H₂S up to 400mg/l).

The Manufacturer shall select appropriate material construction according to handled medium characteristics specified by the Purchaser.