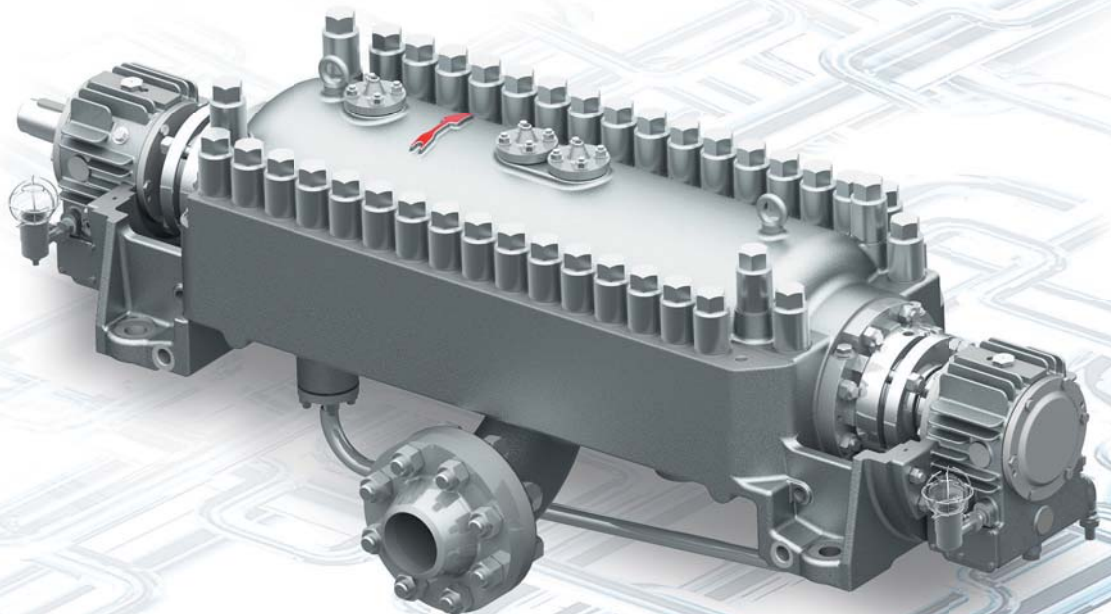




ENGINEERING FLOW SOLUTIONS

2NPS

**AXIALLY SPLIT MULTISTAGE
BETWEEN-BEARINGS
PROCESS PUMPS
BB3 TYPE, API 610**



2NPS Axially Split Multistage Process Pumps



2NPS are axially split multistage between-bearings pumps, designed for pumping of oil, petroleum products, chemically active liquids, gas condensate, liquefied hydrocarbons gases and other media applicable for this type of the pumping equipment by corrosion impact and physical properties.

This pump type is equipped with back-to-back impellers that significantly reduce axial load and extends its performance range and operational lifetime.

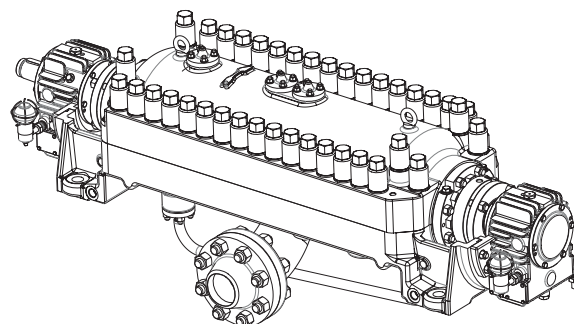
The pumps are made in various climatic versions and designed to operate outdoor and in the premises where fire or explosion hazards may exist due to the presence of flammable gases or vapors, flammable liquids, combustible dusts, or easily ignitable fibers.

The 2NPS pumps shall be driven by asynchronous or synchronous electric motors in explosion proof versions with 3000 rpm at 380 V/50 Hz.

The design of the 2NPS pumps and applicable pumping units on their base meets all requirements of API 610 (11 ed.).

Application

- Various industrial processes at refineries and petroleum chemistry plants
- Transportation of the liquid hydrocarbons via trunk and infield pipelines
- Various industrial processes at chemical and gas processing plants



The 2NPS pumps series are manufactured by the Bobruisk Machine Building Plant (HMS Group division) located in Bobruisk, Belarus. The plant is specializing in the process pumps manufacturing for oil & gas and other industrial applications.

Material Options

Wet parts materials			
Carbon steel	13% chromium steel	Austenitic stainless steel	Duplex steel
Pumped media temperature, °C			
-30 ... +200	0 ... +200	-80 ... +200	-50 ... +200

2NPS Axially Split Multistage Process Pumps

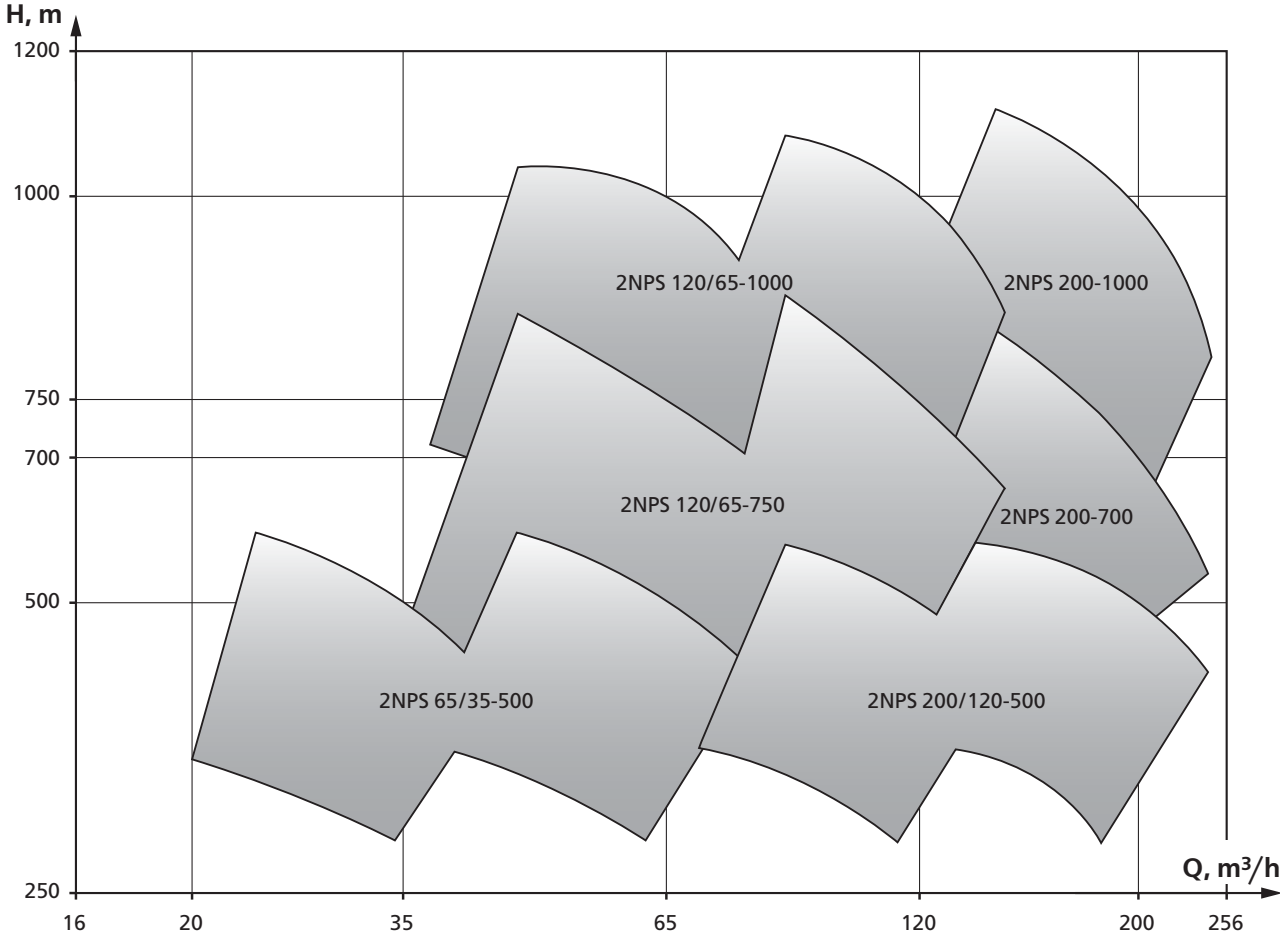


Technical Data

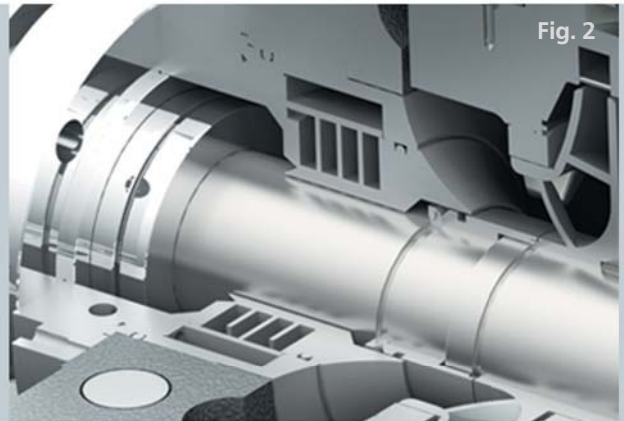
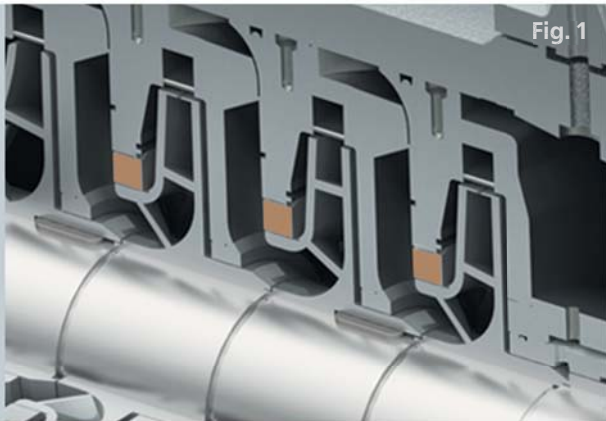
- Capacity: 20 – 240 m³/h
- Head: 300 – 1150 m
- Motor power: 110 – 800 kW

Sealing Options

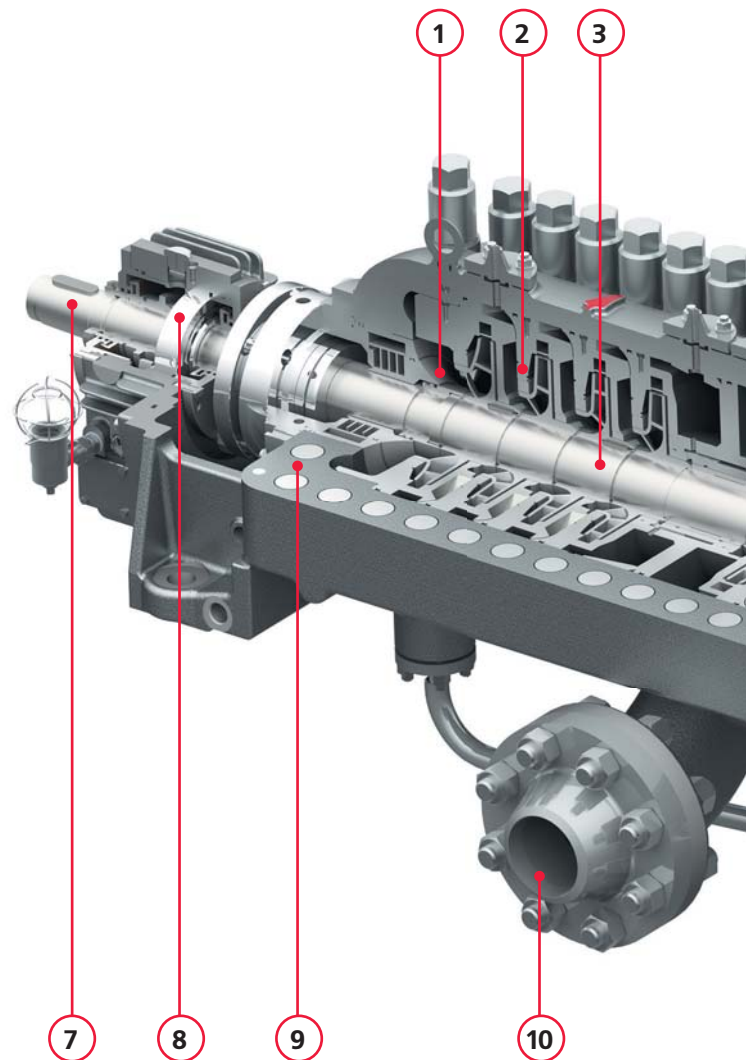
- Single or double mechanical seals
- Optional cooling jacket for stuffing box



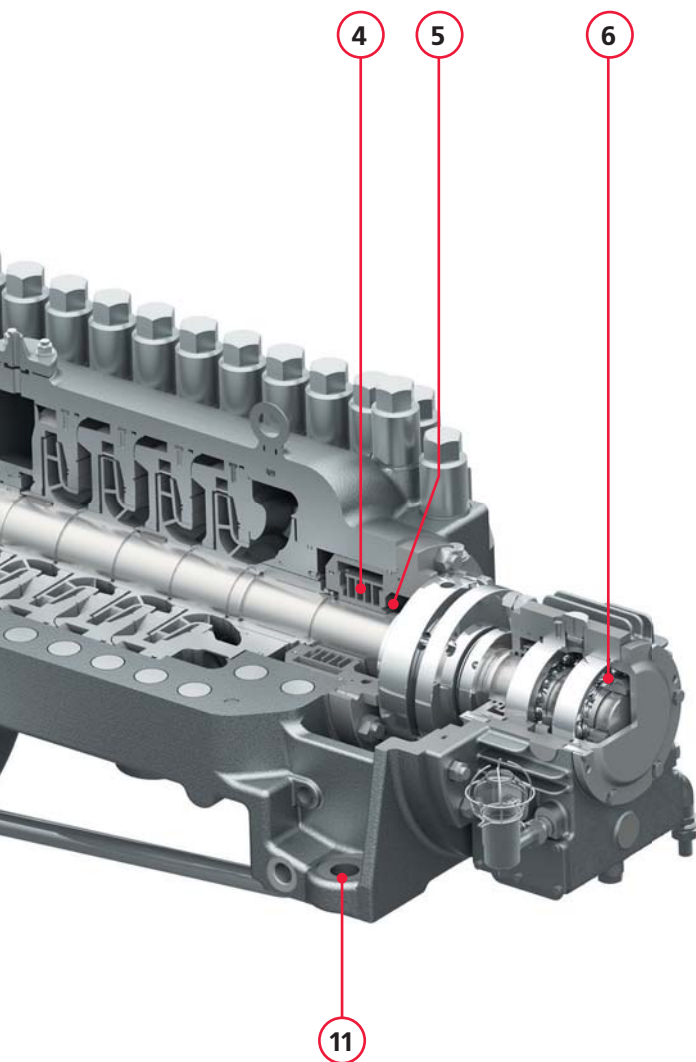
Design Features & Advantages



1. Energy-efficient flow path ensures high performance, low NPSH and minimal vibration of the rotor.
2. Replaceable wearing rings of the hard alloy materials significantly extend the operational lifetime of the rotor and stator wearable parts (Fig. 1).
3. Rigid stepped shaft with increased diameter eliminates contact between rotating and fixed parts in all operational modes and extends the service life of mechanical seals and bearings.
4. Thermal barriers prevents the mechanical seals and bearings from overheating in pumping of high-temperature liquids (Fig. 2).
5. Mechanical seals installation chambers are fully compliant with API 682 and API 610. (Fig. 3).
6. Efficient lubrication and cooling system for bearings ensures their long service life (Fig. 4).
7. Pump and motor are connected with a reliable steel membrane coupling for low vibration and requiring no maintenance.



2NPS Axially Split Multistage Process Pumps



8. Bearings housings are rigidly fixed in the casing for quick and reliable alignment of rotor and stator for easy maintenance.

9. Horizontal split is hermetically sealed by a high-reliable metal-to-metal leakless sealing.

10. Suction and discharge nozzles are designed in accordance with GOST/DIN/ANSI/ISO for a rated pressure of 200 bar.

11. Special mount of the pump on a rigid welded base plate ensures its free movement at temperature expansion.

Use of replaceable impellers and diffusers as well as variable number of stages in the same casing significantly extends the capacity range and pressure head with keeping high performance.

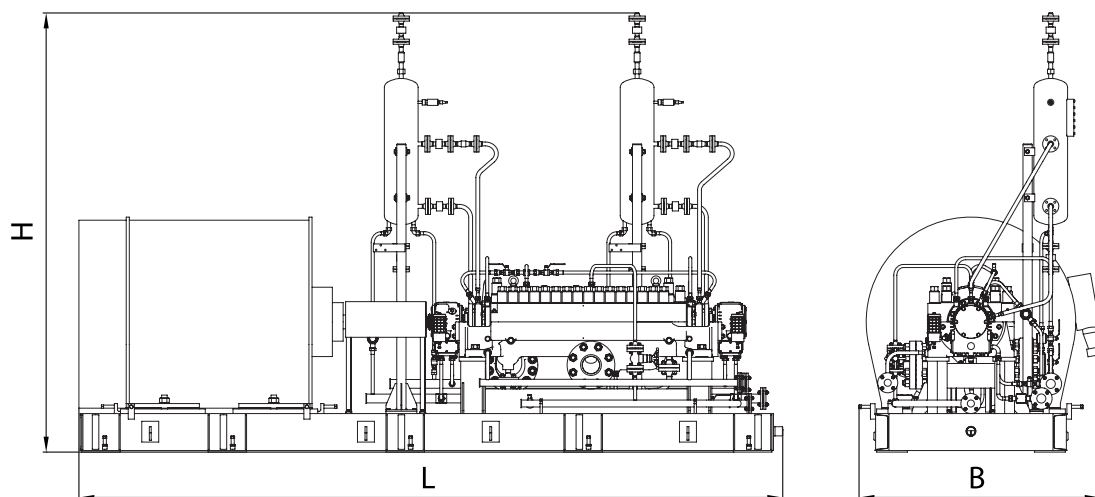
Various construction material options provides pump operation with various liquids.

Reliable pump design ensures smooth operation in areas with seismicity of up to 9 on a MSK-64 scale.

2NPS Axially Split Multistage Process Pumps



Overall Dimensions



Model	Dimensions LxBxH, mm	Pump weight, kg
2NPS 65/35-500	3595 x 1175 x 2750	1200
2NPS 120/65-750	4280 x 1385 x 2850	2080
2NPS 120/65-1000	4630 x 1470 x 2850	2350
2NPS 200/120-500	4140 x 1295 x 2850	1750
2NPS 200-700	4570 x 1295 x 2850	1950
2NPS 200-1000	4970 x 1380 x 2920	2250

Scope of Supply

- Pump with seals and counter flanges
- Electric motor
- In-skid piping
- Coupling with guard
- Baseplate
- Adjustment bolts with plates
- Control instruments
- Set of spare parts
- Operation manuals and documentation

HMS GROUP for Oil & Gas



Key Facts & Figures

HMS Group is the leading Russian manufacturer of pumps, compressors, modular and process equipment, provider of integrated solutions for oil & gas, nuclear & thermal energy, water & utilities.

The HMS Group incorporates engineering and manufacturing affiliate companies located in Russia, Belarus, Ukraine and Germany currently employing over 15 600 people.

Research & Development

The R&D infrastructure is represented by the six centrally managed R&D centers in Russia and the CIS with the latest engineering software and simulation methods including 3D modeling. Following the Quality Management System complied with ISO 9001:2012 the pumps for oil & gas applications are manufactured in accordance with international and national industrial standards as ISO, API, DIN, NORSOK, ANSI, ASME, GOST and also can be tailored to the customer specification.

International Sales & Projects

HMS Group's international branches and representative offices are located in Italy, Iraq, UAE, Turkmenistan and Uzbekistan.

HMS Group has considerable experience in supply, commissioning and after sales service of equipment in Europe, Iraq, Indonesia, India, China, USA and other countries as well as EPC projects in Russia and abroad.

Engineering, Manufacturing and Service Competencies In Oil & Gas

Upstream Pumps

- water injection
- multiphase
- oil pipeline infield transportation
- primary oil processing
- auxiliary systems

Midstream Pumps

- trunk pipeline
- booster
- leaks removal

Downstream Pumps

- main processes
- auxiliary systems

Compressors

- compressors
- gas compression systems
- complete compressor stations

Oil & Gas Field Equipment

- modularized cluster pump stations
- oil and water treatment units
- associated gas cleaning units
- oil, gas, and water metering units
- tanks and pressure vessels

HYDROMASHSERVICE – is an integrated commercial and engineering company of the HMS Group. The company supplies the equipment manufactured by the Group's divisions and implements the integrated projects in Russia and abroad.

HYDROMASHSERVICE is an integrated commercial and engineering company of HMS Group.

We are looking for experienced dealers & distributors to sell products and services of HMS Group.

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