



ENGINEERING FLOW SOLUTIONS

HMS FORTIS

BOREHOLE SUBMERSIBLE PUMPS



About HMS GROUP



HMS Group being leading Russian pump manufacturer and EPC solutions provider offers state-of-the-art pumps and systems, integrated energy efficient and environment friendly solutions.

Our advanced research and development, extensive process expertise with comprehensive understanding of customers' requirements keep us consistently ahead on the Russian and CIS markets and allow us to grow and expand in international markets.

We continuously and dynamically develop our network of R & D, manufacturing and EPC facilities together with sales and service centers. Our dealers are in close proximity to major clients, so we are able to meet customer needs at short notice.

Our solutions help clients to increase productivity and operational profitability, cut costs and lower environmental impacts.

Companies of HMS Group have a long history of providing standard and engineered pumps and solutions to the following industries:

- Oil & Gas
- Nuclear & Thermal Energy
- Water Supply and Utilities
- Steel & Mining
- Chemical processing
- Industrial application
- Agriculture
- Pulp & Paper
- Food & Beverage
- Marine

We cherish our customers and proud to have among our clients Gazprom, Gazpromneft, Lukoil, Rosneft, NOVATEK, BP, Eni, Danieli, Severstal, Iraqi Ministry of Oil, Ministry of water resources of Turkmenistan, Uzbekistan, Water supply operators of Moscow, St Petersburg etc.

Our Quality Management System complies with ISO 9001:2008. Our pumps are made in accordance with internationally recognized ISO, ANSI and API standards and can be tailored to customer specifications.

HMS Fortis Pumps

HMS Fortis



Fortis borehole submersible pumps have been on the market since 1993.

Around 32% of all potable water in Russia is extracted from groundwater sources with these pumps.

They have long standing design and many years of reliable operation confirmed by a positive feedback from our customers.

With a size range from 4 to 12 inches we offer suitable pumping solutions for our customers to save energy, reduce operating costs and lower the impact on environment.

- Simple installation and operating
- Easy disassembly and assembly without special tools
- Usage of electric motors of equal diameter provides for operating pumps without cooling shrouds
- Resistant to unstable voltage



Features, Advantages, Benefits

HMS Fortis

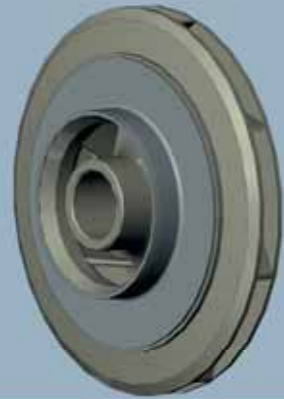


fig.1

Reliability

1. Stage casings are made of thick steel tubes for maximum structural rigidity
2. Patented design of impellers reinforced with stainless steel significantly increases pump durability (fig.1)
3. Impellers with hydraulic unloading reduce thrust force and increase durability of motor thrust bearing (fig.2)
4. Octagonal bearings with grooves for sand removal are used in pump
5. Built-in filter on the pump inlet
6. Pump and motor shafts are made of stainless steel AISI 420
7. Squirrel cage of rotor is made of copper for increased efficiency and reliability of the motors
8. Electric motors have increased length of stator and rotor to enhance their reliability and to reduce sensitivity to unstable voltage also improves cooling conditions
9. Self-aligning thrust bearing for axial load absorption
10. High temperature insulated wire (up to 100°C) is used as standard for electric motors and makes motor not sensitive to unstable voltage

Reliable design with reinforced pump and motor casing allow reducing the risk of damage during transportation and installation

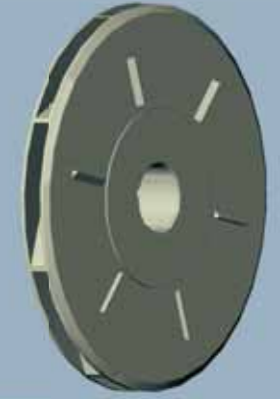
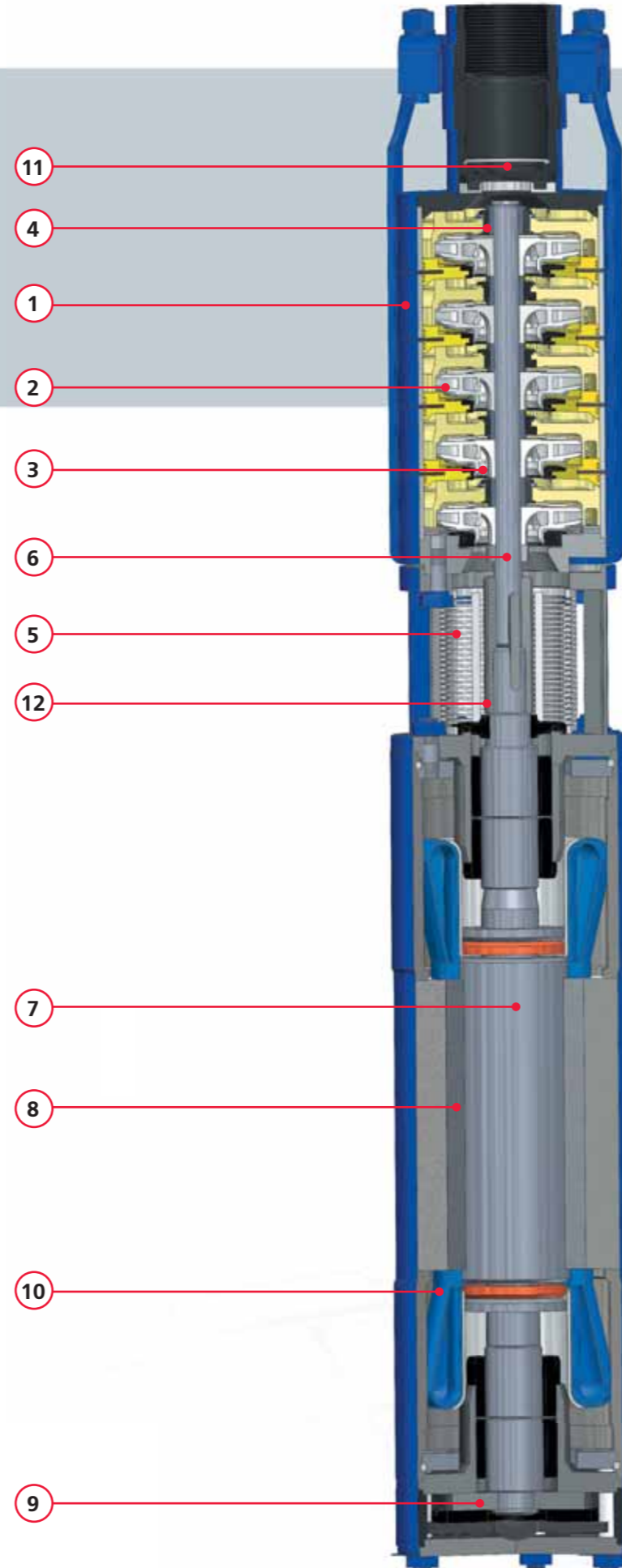


fig.2

Easy to Install/Operate

11. Built-in non-return valve

Electric motor is water-filled so there is no need in using special liquids to fill

Filling system allows automatically fill motor with water after installation in well

No need in control liquid filling and risk of dry running excluded

The range of electric motors has been designed to have the same diameters with pump. Thus there is no need in cooling shrouds; plus it allows reduce additional costs, improving cooling conditions and efficiency. Range for 8" begins with 15 kW, for 10" – with 30kW

Low Costs of Servicing

12. Keyed coupling is used to connect pump and electric motor for increase of reliability and ease of assembling

Pumps and electric motors have fewer parts with extensive interchangeability

Easy disassembly and assembly without special tools

Technical Data

HMS Fortis



Design and Material Combinations

FRS 4

Maximum diameter - 95 mm

Encapsulated electric motors

Impeller and diffuser are made of polycarbonate

Stainlesssteel casing –AISI 321

FRS 5

Maximum diameter - 120 mm

Impellers and diffusers are made of high-quality glass fiber reinforced plastic

Patented design of impellers reinforced with stainless steel

FRS 6

Maximum diameter - 144 mm

Impellers and diffusers are made of high-quality glass fiber reinforced plastic

Patented design of impellers reinforced with stainless steel

FRS 8

Maximum diameter - 186 mm

Impellers and diffusers are made of high-quality glass fiber reinforced plastic

Patented design of impellers reinforced with high-quality stainless steel

Version with impellers made of stainless steel AISI 321

FRS 10

Maximum diameter - 235 mm

Impellers and diffusers are made of stainless steel AISI 321

FRS 12

Maximum diameter - 281 mm

Impellers and diffusers are made of stainless steel AISI 321

Operating Parameters

- Capacity with a broad range from 1.5 to 270 m³/h
- Head up to 400 m
- Motor power – up to 130 kW

Service Conditions

- Electric motor protection – IPx68
- Starts per hour: ≤20
- Starting method – direct on-line (DOL)
- Max. temperature of water: +25°C (77°F)
- Nominal voltage: 50 Hz 3 x 400 V;
- Allowed voltage tolerance -15...+10%
- Synchronous rotation speed: 3000 rpm
- Min. cooling flow rate – 0.2 m/s

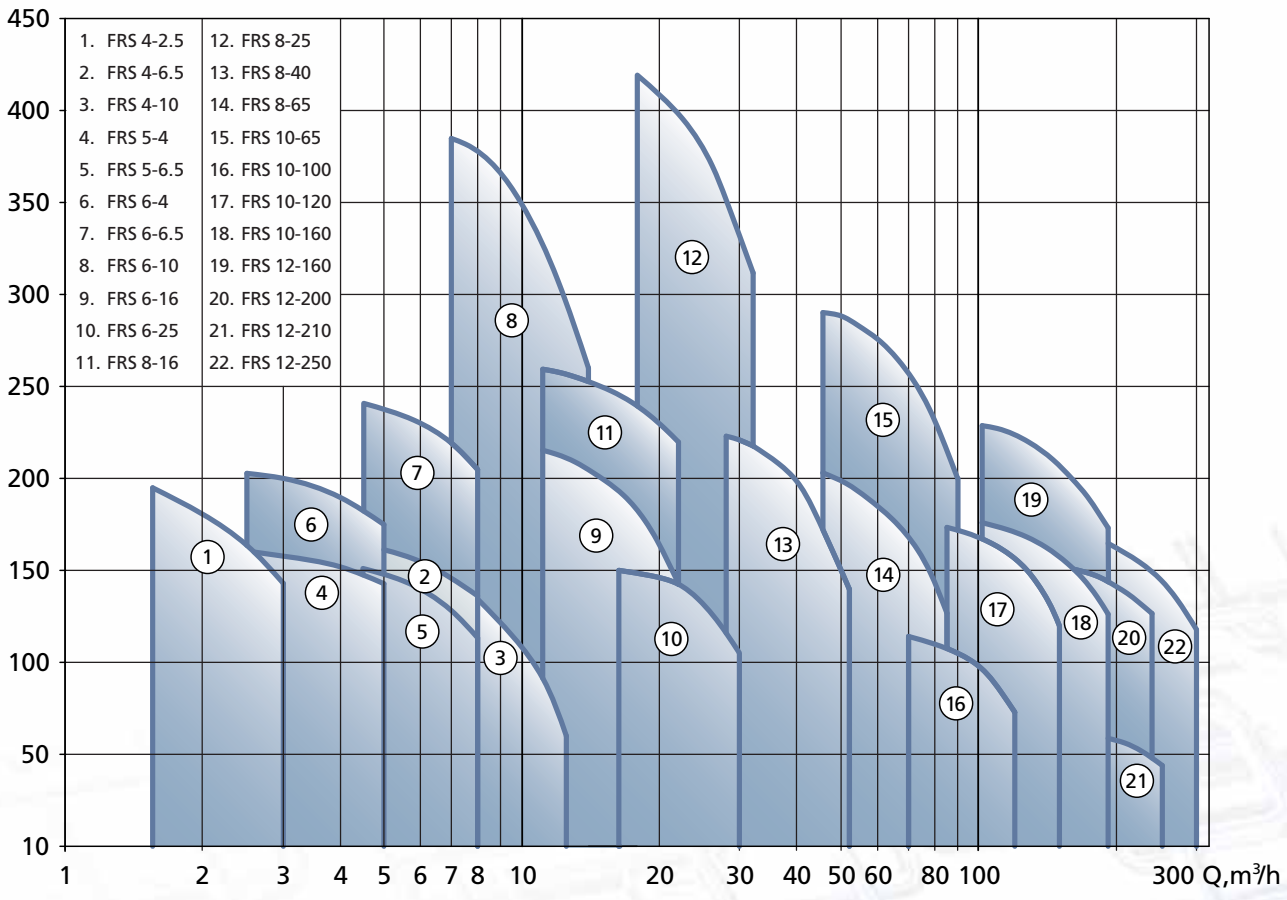
Technical Data

HMS Fortis



Performance Range

H, m



Pump Type Key FRS 4 2,5
 Fortis diameter,mm capacity, m³/h

Become our Partner

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

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