



Engineering Flow Solutions

DOUBLE SUCTION PUMPS

# HMS DeLium



# HMS DELIUM DOUBLE SUCTION PUMPS



## DESCRIPTION

The HMS DeLium series is a new generation of the axially split, one-stage, between-bearings, double suction centrifugal pumps designed by the latest CFD methods and taking into account the modern requirements to power consumption, reliability and long service life.

The design of pumps and pumping units corresponds to standards ISO 9905:1994 / ISO 5509-2002 to centrifugal pumps with double-entry impellers and axially split casing.

The HMS DeLium pump series is produced at the facilities of HMS Livhydropromash (HMS Group) – one of the leading pumping equipment manufacturers in Russia and CIS.

## APPLICATION

- Water supply and HVAC systems
- Oil and gas industry
- Chemical industry and petroleum chemistry
- Thermal and nuclear power generation
- General industrial applications

## TECHNICAL DATA

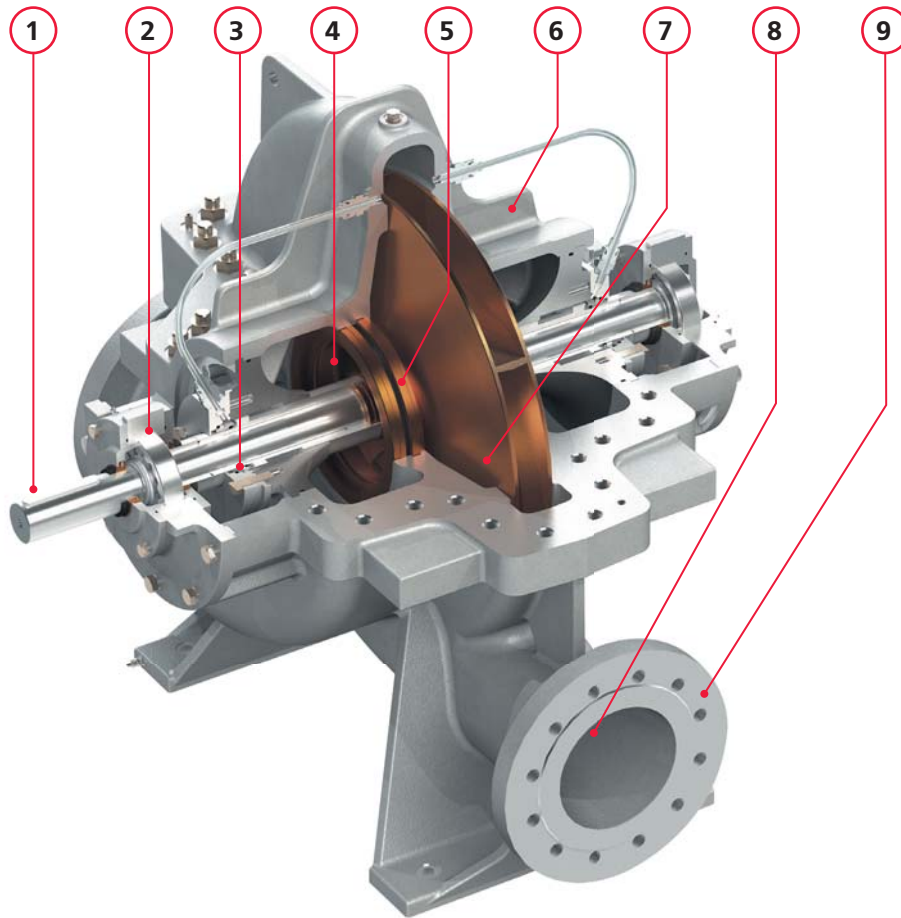
Capacity, m <sup>3</sup> /h	up to 10,000
Head, m	up to 250
Operation pressure, bar	up to 25
Fluid temperature	+150 °C

## MATERIALS

Material combinations*	Volute casing	Impeller	Casing wear ring	Impeller wear ring (optional)	Shaft
G / G	Grey Cast Iron	Grey Cast Iron	Grey Cast Iron	Grey Cast Iron	Stainless Steel
G / B	Grey Cast Iron	Bronze	Bronze	Bronze	
GG / B	Nodular Cast Iron	Bronze	Bronze	Bronze	
GG / S	Nodular Cast Iron	Stainless steel	Stainless Steel	Stainless Steel	
C / C	Carbon Steel	Carbon Steel	Carbon Steel	Carbon Steel	
C / S	Carbon Steel	Stainless steel	Stainless Steel	Stainless Steel	Duplex/ Super Duplex Steel
S / S	Stainless steel	Stainless steel	Stainless Steel	Stainless Steel	
D / D	Duplex / Super Duplex Steel	Duplex / Super Duplex Steel	Duplex / Super Duplex Steel	Duplex / Super Duplex Steel	

\* Casing and impeller material indexes: G - Grey cast iron; B - bronze; GG - nodular cast iron; S - stainless steel; C - carbon steel; D - duplex steel

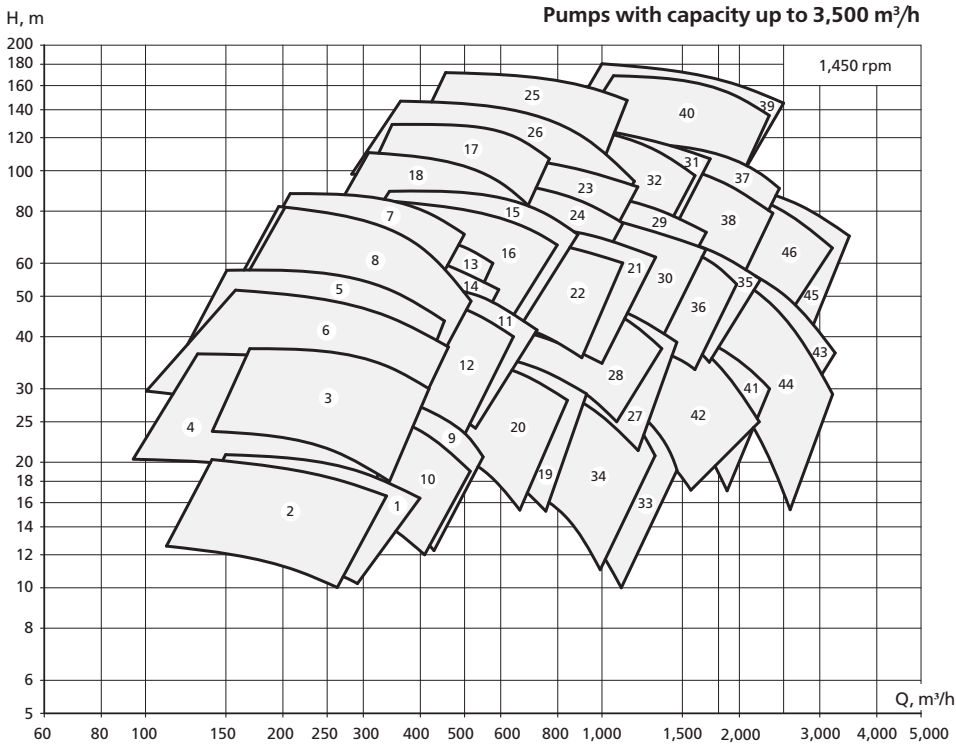
## FEATURES & ADVANTAGES



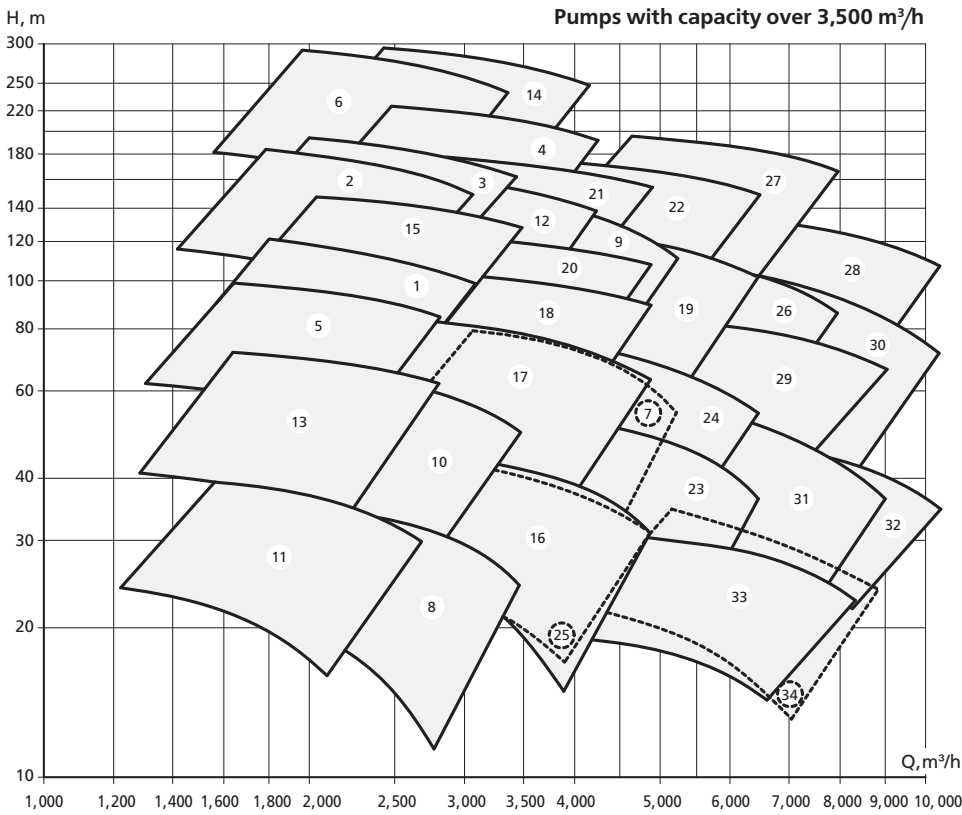
1. The shaft is completely isolated from the pumped fluid to prevent corrosion
2. The bearings come with grease or oil bath lubrication with an oil cooling system as an option. The bearings operational lifetime is over 100,000 hours. The spots for vibration and temperature sensors are provided on the bearings' housings
3. The shaft sealing options include gland seal, single-acting unbalanced mechanical seal (pressure below 16 bar), balanced mechanical seal (pressure over 16 bar) or double-acting mechanical seal of a cartridge type  
The pumps may be optionally equipped with the hydrocyclones for handling fluids with solid particles
4. A high-efficient flow path is designed using the advanced computational fluid dynamic methods  
An option of additional hydrophobic coating application on the flow path surface is available to reduce its erosive wear and increase the pump efficiency
5. The wear rings are made of the special wear-resistant material. There is an option with impeller replaceable wear rings available to simplify the pump maintenance operations
6. The self-aligning cover of the pump casing utilizes a liquid sealant to provide easy and time-saving operations of the pump assembling/disassembling
7. There are at least two interchangeable impellers available for every pump size for easy selection of a pump with necessary parameters for a customer
8. The casing with double volute reduces radial load on the pump shaft and bearings that extends their operational lifetime
9. The suction and discharge nozzles are arranged IN-LINE for their simpler connection to the pipelines

The HMS DeLium pumps have excellent suction capability (low net positive suction head, NPSH)  
A high degree of the main parts unification for different pumps sizes significantly reduces the cost of maintenance

# PERFORMANCE RANGE



- |                |                |
|----------------|----------------|
| 1 - D125-250A  | 24 - D200-560B |
| 2 - D125-250B  | 25 - D200-660A |
| 3 - D125-320A  | 26 - D200-660B |
| 4 - D125-320B  | 27 - D250-400A |
| 5 - D125-400A  | 28 - D250-400B |
| 6 - D125-400B  | 29 - D250-510A |
| 7 - D125-480A  | 30 - D250-510B |
| 8 - D125-480B  | 31 - D250-630A |
| 9 - D150-290A  | 32 - D250-630B |
| 10 - D150-290B | 33 - D300-340A |
| 11 - D150-380A | 34 - D300-340B |
| 12 - D150-380B | 35 - D300-460A |
| 13 - D150-450A | 36 - D300-460B |
| 14 - D150-450B | 37 - D300-580A |
| 15 - D200-500A | 38 - D300-580B |
| 16 - D200-500B | 39 - D300-720A |
| 17 - D150-560A | 40 - D300-720B |
| 18 - D150-560B | 41 - D350-390A |
| 19 - D200-340A | 42 - D350-390B |
| 20 - D200-340B | 43 - D350-450A |
| 21 - D200-450A | 44 - D350-450B |
| 22 - D200-450B | 45 - D350-530A |
| 23 - D200-560A | 46 - D350-530B |



- |                              |                              |
|------------------------------|------------------------------|
| 1 - D350-580<br>(1 485 rpm)  | 18 - D500-825<br>(985 rpm)   |
| 2 - D350-700<br>(1 485 rpm)  | 19 - D500-875A<br>(985 rpm)  |
| 3 - D350-725<br>(1 485 rpm)  | 20 - D500-875B<br>(985 rpm)  |
| 4 - D350-800<br>(1 485 rpm)  | 21 - D500-1050<br>(985 rpm)  |
| 5 - D350-800<br>(985 rpm)    | 22 - D500-1070<br>(985 rpm)  |
| 6 - D350-850<br>(1 485 rpm)  | 23 - D600-635<br>(985 rpm)   |
| 7 - D400-520<br>(1 485 rpm)  | 24 - D600-720<br>(985 rpm)   |
| 8 - D400-520<br>(985 rpm)    | 25 - D600-720<br>(745 rpm)   |
| 9 - D400-660<br>(1 485 rpm)  | 26 - D600-870<br>(985 rpm)   |
| 10 - D400-660<br>(985 rpm)   | 27 - D600-1135<br>(985 rpm)  |
| 11 - D400-660<br>(745 rpm)   | 28 - D700-1000A<br>(985 rpm) |
| 12 - D400-700<br>(1 485 rpm) | 29 - D700-1000B<br>(745 rpm) |
| 13 - D400-700<br>(985 rpm)   | 30 - D700-850A<br>(985 rpm)  |
| 14 - D400-880<br>(1 485 rpm) | 31 - D700-850B<br>(745 rpm)  |
| 15 - D400-990<br>(985 rpm)   | 32 - D700-780<br>(745 rpm)   |
| 16 - D500-580<br>(985 rpm)   | 33 - D700-780<br>(595 rpm)   |
| 17 - D500-735<br>(985 rpm)   | 34 - D700-700<br>(745 rpm)   |

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