

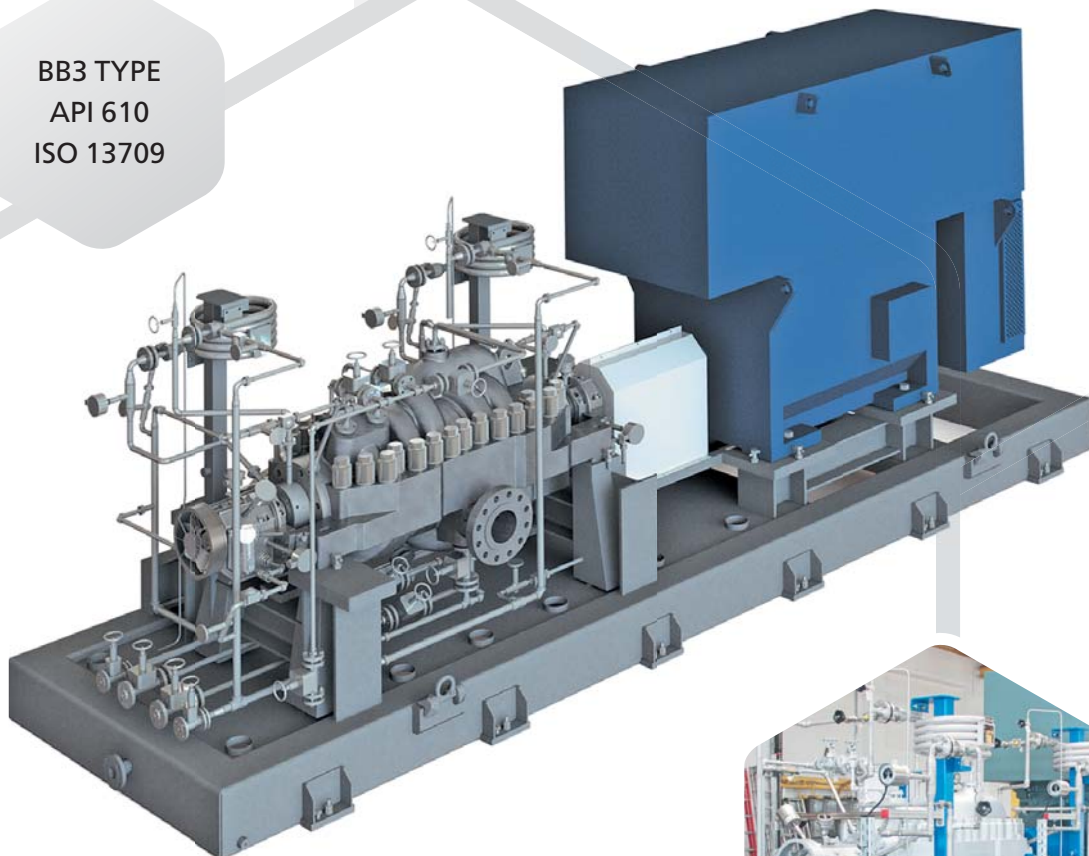


Engineering Flow Solutions

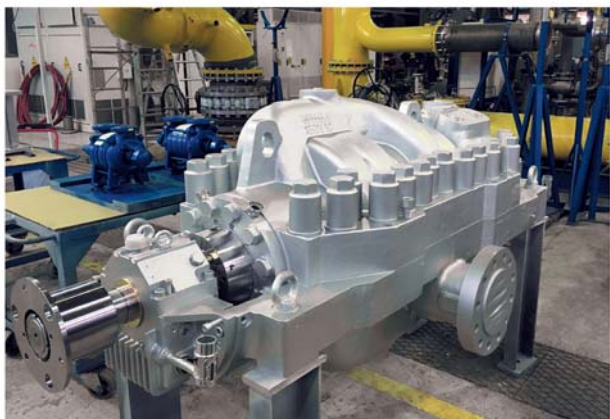
AXIALLY SPLIT MULTISTAGE BETWEEN-BEARINGS PROCESS PUMPS

AMG

BB3 TYPE
API 610
ISO 13709



AMG Axially Split Multistage Process Pumps



DESCRIPTION

The AMG series pumps application is handling oil, petroleum products, liquefied hydrocarbon gases, gas condensate, and other similar fluids. The pumps are compliant with the latest edition of ANSI / API610 (ISO 13709:2009) standard as BB3 type and produced at the manufacturing facilities of HMS Group: APOLLO Goessnitz (Germany), HMS Livgidromash (Russia), Nasos-energomash (Ukraine).

The pumping units can be equipped with a continuous condition monitoring system and sensors in accordance with API 670. It increases reliability of the units, prevents their premature failure and reduces the life cycle cost. The system enables online tracking of the pump operational parameters remotely and integrating the pump data in the client's ERP system.

APPLICATION

- Water injection systems
- Hydrocarbons transport via pipelines
- Oil refining and petroleum chemistry
- Gas processing and gas chemistry plants
- Boiler feed water supply at power plants

TECHNICAL DATA

Capacity, m ³ /h	20 – 3 800*
Head, m	150 – 2 400*
Working pressure, bar	up to 275
Temperature, °C	-80 ... +250
Speed, rpm	2 950*

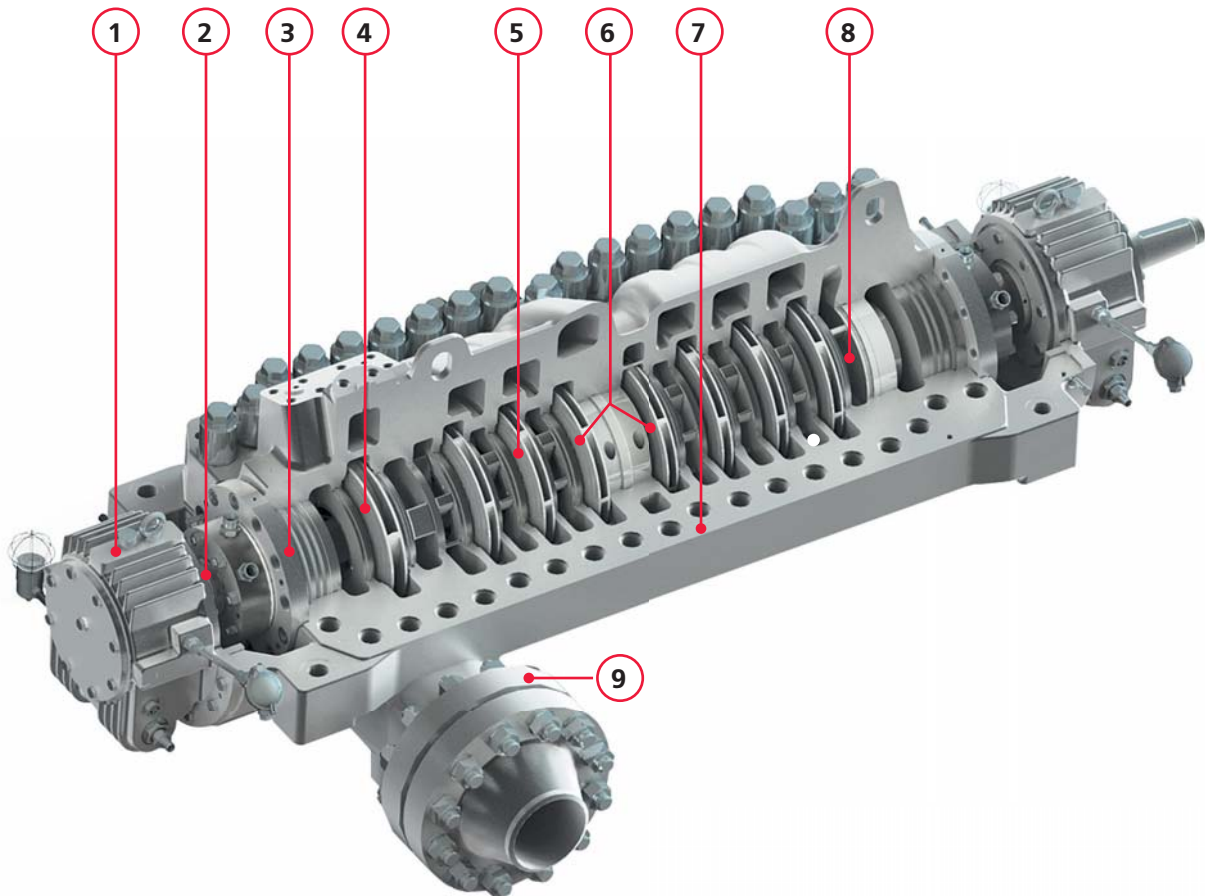
* The parameters can be increased by customer request

MATERIAL OPTIONS

	S-5	S-6	S-8	C-6	A-8	D-1	D-2
Casing	Carbon steel (WCB)	Carbon steel (WCB)	Carbon steel (WCB)	12% chromium steel	316L AUS	Duplex steel	Super duplex steel
Impellers	Carbon steel (WCB)	12% chromium steel	316L AUS	12% chromium steel	316L AUS	Duplex steel	Super duplex steel
Shaft	AISI 4140	AISI 4140	316L AUS	12% chromium steel	316 AUS	Duplex steel	Super duplex steel
Bearing housing	Carbon steel (WCB)	Carbon steel (WCB)	Carbon steel (WCB)	Carbon steel (WCB)	Carbon steel (WCB)	Carbon steel (WCB)	Carbon steel (WCB)
Wear rings	12% chromium steel	12% chromium steel	316L AUS hardened	12% chromium steel	316L AUS hardened	Duplex steel coated HVOF	Super duplex steel coated HVOF

Other special material options are available upon Customer's request.

Features & Advantages



1. The reduced axial loads on the rotor allows using the simple radial and thrust rolling bearings with oil bath lubrication and constant level oilers instead of complicated tilting pads thrust bearings with forced lubrication oil system (LOS).

High-power and high-speed pump sizes are equipped with sleeve radial bearings, tilting pads thrust bearings and LOS in accordance with API 614 requirements.

2. The rigid stepped shaft with increased diameter eliminates the contact between rotating and stationary parts in all operating modes and loads, providing a good rotor dynamics with operating speeds below the first critical speed.
3. The connecting dimensions of the mechanical seal chambers are compliant with API 610 allowing installation of any double or single mechanical seals according to API 682.
4. The pump version with double suction impeller at the first stage is available for the systems with low NPSH value to improve the pump's cavitation characteristics.

5. The closed-type impellers, manufactured by a high-precision molding method, are dynamically and statically balanced. The impellers are fixed individually on the shaft by the shrink fit and embedded rings.

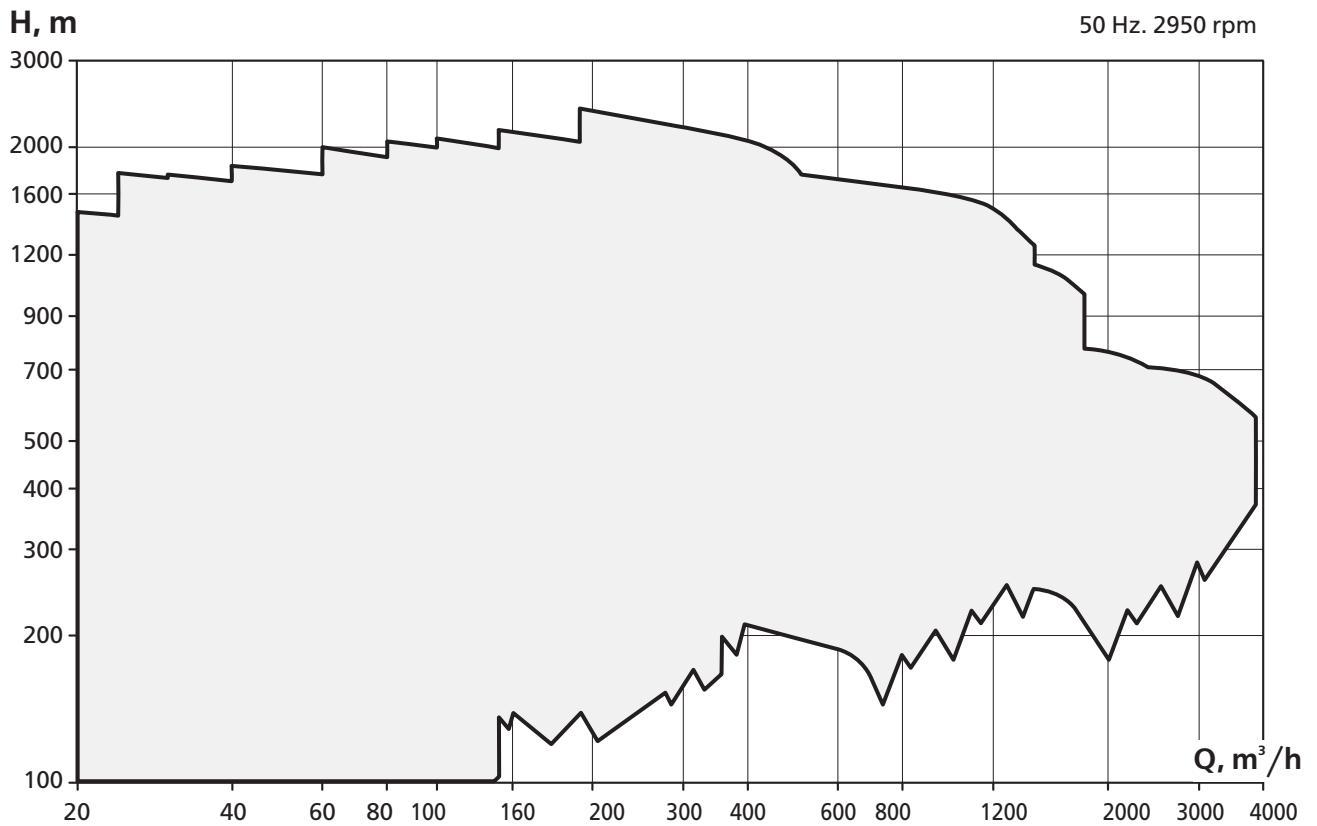
6. The «back-to-back» arranged impellers unload the rotor from axial forces within the wide operation range that significantly reduces the load applied to the bearings and extends the mean time between repairs of the pump.

7. A horizontally-split casing greatly facilitates the pump routine maintenance and repair without the pumps disconnection from the suction and discharge pipelines. The design provides easy access to the rotor for impellers and slotted seals check-up, measurement of the working gaps or rotor assembly replacement.

8. The rotor is installed in the pump casing completely assembled and does not require disassembly after balancing. This ensures a low residual imbalance and vibration of the rotor.

9. Suction, discharge and auxiliary flanges are made according to ASME, DIN EN standard (by the customer request).

PERFORMANCE RANGE



**HMS Group Moscow
International Sales Department**

Phone: + 7 (495) 730 6601
E-mail: export@hms.ru
www.grouphms.com
www.hms.biz