HIGH EFFICIENCY, LOW MAINTENANCE

New booster module range

be
think
innovate

GRUNDFOS

BOOST YOUR EFFICIENCY

The BMS hs range is a completely new range of booster modules for reverse osmosis and filtration applications which improve efficiency compared to earlier ranges. The secret is a directly coupled pump powered by a permanent magnet motor. Add to that an improved design that makes maintenance and service easier than ever, and you have a winning concept.

- High efficiency means energy savings
- Easy maintenance and alignment
- Extreme durability and reliability
- Very small footprint
- Easily integrated in any water treatment system
- Designed for high flows and pressure
- Built-in check valve

Application areas

The BMS hs is designed for use in

- Reverse Osmosis systems
- Ultra filtration systems
- Filtration systems
- Pressure boosting systems and water supply

FEATURES AND BENEFITS THE HIGHLIGHTS

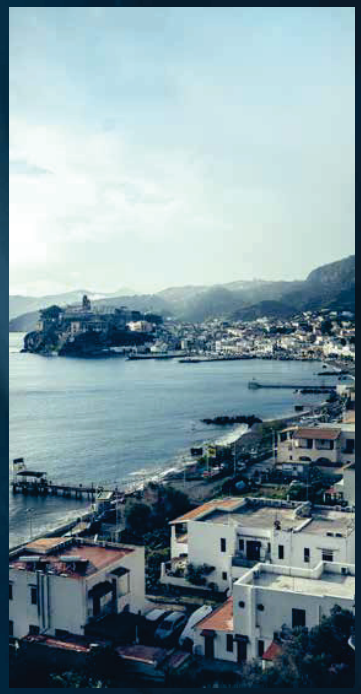
Higher efficiency

A permanent magnet motor is the secret behind the improved efficiency of the BMS hs range; hs stands for high speed to create high pressure of up to 1,199 psi (82.7 bar). And its motor has a speed range of 4,000 to 5,500 RPM. The speed of the motor is controlled by a variable frequency drive, which features an optional communication module and the possibility of various adaptions to the application. The high-speed motor also gives the BMS hs range a smaller footprint and drastically reduces the weight of the pump.

Easy maintenance

Enjoy trouble-free maintenance with the new range of BMS hs pumps. The BMS hs products offer an innovative design that provides easier than ever access to the shaft seal and thrust bearing of the pump – in fact, you only need three tools to take the pump apart. Needless to say, this reduces maintenance hassle and pump downtime.

17 & 19mm Ring/open-end spanner and 5mm Allen key



Extreme durability

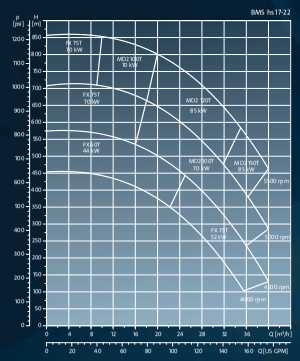
In the BMS hs range, all critical components in contact with water are made of Super Duplex Stainless Steel. That makes the pump suitable for use in seawater and brackish water applications.

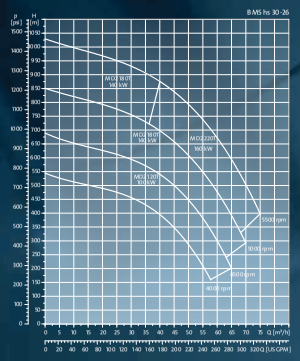
It's reliable, trust us

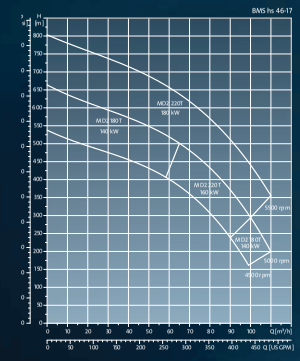
Grundfos has 25+ years of experience in designing, manufacturing and testing pumps for reverse osmosis. Every component used in the BMS hs range has been put through rigorous tests and the Grundfos brand is your guarantee of a premium quality product.

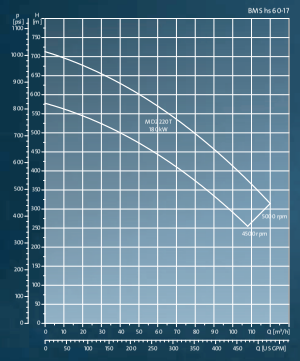
Easy selection

Enjoy a simpler selection process with the new BMS hs range. The product program has been reduced, and you can find the pump of your need easily in Grundfos WebCaps.









TECHNICAL INFORMATION

The toughest materials

- All wet end components are Super Duplex and 904L Stainless Steel suitable for use in seawater and brackish water applications
- The shaft seal is made from carbon/silicon carbide, especially designed for high pressure
- The thrust bearing material is ceramic and carbon
- Pump bearings and seal rings are made of NBR rubber

Built-in thrust bearing

The BMS hs range has a built-in thrust bearing that absorbs the axial thrust from the pump. The thrust bearing arrangement and pump bearings are water lubricated, and all materials used are tested and well known, ensuring maximum durability.

INNOVATIVE FREQUENCY CONVERTER

An innovative and intelligent variable frequency drive controls the speed of the permanent magnet motor in the BMS hs. This unique VFD has advanced possibilities for communication and features the following functionalities:

- Self test at start up
- Overload protection while running
- Auto ramp up/down
- Plug and play, configured from factory
- Online log on
- Inputs/Outputs - 6 digital and/or analog

BMSX:

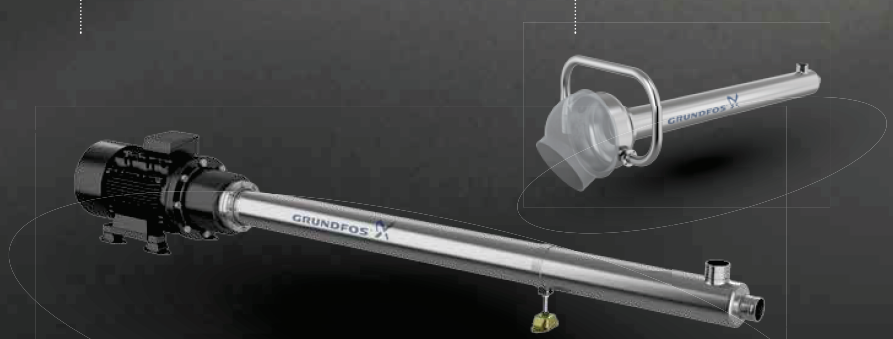
UNBEATABLE HIGH EFFICIENCY BOOSTER SYSTEM

The new Grundfos BMSX pump system has a unique design dedicated to seawater and brackish water desalination. The BMSX system consists of a BMS hs pump, a BMS hp pump and an isobaric pressure exchanger with an efficiency up to 97%.

- Capable of delivering 52,972 ft³/day (1,500m³/day) with an energy consumption starting as low as 0.076 Hph/ft³ (2 kwh/m³) of produced water
- Features components made of Super Duplex Stainless Steel, polymer and ceramic, which makes it extremely resistant to its operating environment
- Super efficient and highly dependable regardless of the application
- Compact design and a very small footprint
- Corrosion resistant material: The pump is 904L with critical components as Super Duplex Stainless steel

How does it work?

- The BMSX system consists of a BMS hs (high speed) pump, a BMS hp (high inlet pressure) pump and an isobaric pressure exchanger
- The BMS hs pump creates the needed flow and design pressure through the membranes of the system
- However, only 40% of the energy needed is generated by the actual pump; the remaining 60% is provided by the pressure exchanger which converts energy from the brine into an energy source used to create the needed pressure
- This is what makes it possible to reach the incredible efficiency of up to 97% in the pressure exchanger
- The pressure loss in the exchanger is equalized by the BMS hp and the Variable Frequency Drive that maintain the desired pressure for the entire reverse osmosis process



BMST:

BOOSTER SYSTEM - TURBINE INCLUDED

The BMST booster systems consist of a BMS hs and a Pelton turbine. This power pack makes it possible to deliver the same performance as with a standard centrifugal pump, and to save up to 35% of the pump's total power consumption. BMST booster systems are suitable for desalination plants.

- Corrosion resistant material: The pump is 904L with critical components as Super Duplex Stainless steel
- Capable of handling aggressive liquids such as brackish water and seawater
- Easy to integrate into skid mounted systems

The BMS hs/BMS hp/BMST/BMSX booster modules offer highly efficient, reliable and low maintenance boosting for the following application areas:

- Reverse Osmosis systems
- Ultra filtration systems
- Filtration systems
- Pressure boosting systems and water supply

Find the pump you need at **www.grundfos.us**

L-BMS-SL-01 02/14 (US)

GRUNDFOS Kansas City
17100 West 118th Terrace
Olathe, Kansas 66061
Phone: (913) 227-3400
Fax: (913) 227-3500

GRUNDFOS Canada
2941 Brighton Road
Oakville, Ontario
L6H 6C9
Phone: (905) 829-9533
Fax: (905) 829-9512

GRUNDFOS Mexico
Boulevard TLC No. 15
Parque Industrial Stiva Aeropuerto
C.P. 66600 Apodaca, N.L. Mexico
Phone: 011-52-81-8144 4000
Fax: 011-52-81-8144 4010

www.grundfos.us

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