Grundfos is a full line supplier of pressure booster systems for use in water supply, industry and irrigation. Whether supplying water in a hotel, office building, hospital or multi-storey apartment house, or whether industrial processes or irrigation are concerned, Grundfos has the system which ensures a reliable water supply at a high level of comfort. For any such application Grundfos recommends the Hydro 2000 booster series, where four different types of systems are available.

### Type Performance range Data Benefits

<table>
<thead>
<tr>
<th>Type</th>
<th>Performance range</th>
<th>Data</th>
<th>Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ME</td>
<td>Flow: max. 256 m³/h Head: max. 150 m Pump size: 0.37 – 7.5 kW Number of pumps: 2 – 4</td>
<td>Flow: Head: Pump size: Number of pumps: 2 – 4</td>
<td>All pumps are variable speed</td>
</tr>
<tr>
<td>ME5</td>
<td>Flow: max. 256 m³/h Head: max. 150 m Pump size: 0.37 – 75 kW Number of pumps: 2 – 4</td>
<td>Flow: Head: Pump size: Number of pumps: 2 – 4</td>
<td>One pump is variable speed</td>
</tr>
<tr>
<td>MF</td>
<td>Flow: max. 540 m³/h Head: max. 150 m Pump size: 0.37 – 30 kW Number of pumps: 2 – 6</td>
<td>Flow: Head: Pump size: Number of pumps: 2 – 6</td>
<td>One pump is variable speed via external frequency converter</td>
</tr>
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</tr>
</tbody>
</table>

### General data:
- Liquid temperature: 0°C – 70°C
- Operating pressure: max. 16 bar

### Other booster families
In addition to the Hydro 2000 booster range Grundfos also offers other booster types such as Hydro 1000 and Hydro 2000 Solo E. Please contact Grundfos for further information.

- **Titanium booster in fishing port**
  A perfect example of a successful application under highly difficult conditions is a landing station at a Portuguese fishing port. The fishing port is a busy place during the day and the cleaning of the fish – as well as the fishing gear – must take place immediately. Only seawater is suited for this purpose, and the pump system must be capable of providing a constant pressure, 24 hours a day, 52 weeks a year. The Grundfos Hydro 2000 with CR/CRE titanium pumps is able to withstand the aggressive seawater and to maintain the required constant pressure through automatic pressure control.

- **Custom-built Hydro 2000 boosters**
  When an application requires special solutions, the Grundfos Hydro 2000 can be customised through a wide range of options and accessories.

#### CR/CRE pumps
Through a combination of motor size, type of shaft seal, pump materials and bearing system, the CR/CRE pumps in the Hydro 2000 booster system can be customised to cope with a multitude of difficult media or to suit unusual or difficult applications. For particularly corrosive media such as seawater, a titanium solution is available.

#### Manifold and base frame
As standard, the Hydro 2000 is supplied with a stainless steel manifold and base frame to meet requirements of durability and maintenance. Other types of material are available to meet specific requirements relating to surroundings and media.

#### Control and accessories
External control can be provided via bus communication. The Grundfos Gateway G100 allows for communication with a variety of management systems. Efficient dry-running protection can be provided by using the advanced Grundfos LiqTec™ level sensor.

A host of other variants and special solutions are available to cater for difficult or unusual applications. Consult your Grundfos representative for further details.
Grundfos booster systems provide ultimate adaptability

Grundfos offers a comprehensive range of booster systems designed for applications in water supply, industry, and irrigation. Adaptability is the keyword behind the Grundfos systems. Each model has been designed to meet specific capacity requirements, and each is based on a method of control, which will satisfy all operational demands, while providing optimum comfort.

The variety of pumps and the choice of components, which can be made available, guarantee a reliable supply and energy-efficient operation. The systems are supplied ready for operation, and all components are assembled and thoroughly tested by Grundfos.

The Grundfos Hydro 2000 booster systems are suitable for a wide range of applications:

Water supply, pressure boosting
- Mains water supply systems for waterworks and distribution networks.
- Pressure booster systems for multi-storey buildings, hotels, office buildings, hospitals, schools and other large building complexes.

Industrial applications
- Water supply and pressure booster systems for the food industry.
- Water treatment and filtration systems.
- Systems for the petro-chemical, pharmaceutical and metal industries where shock and pressure boosting plays an important part in the processes.

Irrigation
- Irrigation of golf courses, sports fields, etc.
- Greenhouses, nurseries, vineyards, etc.

Other
- Swimming baths, water world, etc.
- Fountains.

Main components

Grundfos CR/CRE pumps
The booster systems are based on the latest generation of the world-renowned Grundfos CR/CRE multistage centrifugal pumps. The durable CR/CRE pumps guarantee high efficiency with state-of-the-art efficiency. The CR/CRE pumps are unmatched in efficiency and reliability. A high wearing, wear-free end seal facilitates sensing and minimal down-time.

The CRE pumps used for the booster systems can be equipped with Grundfos’ own frequency converter-controlled motors and thus provide the alternative in pumping technology available on the market today.

Control 2000
Advanced control with straightforward operation is characteristic of the Grundfos controller range. The Hydro 2000 booster can be controlled either via a frequency converter installed in the Hydro 2000 control cabinet controlling the fixed speed CR pumps, or Grundfos CRE pumps with a frequency converter built into the motor. The result is perfect control with minimal pressure fluctuations.

The controller unit has all the parameters necessary to ensure optimal comfort and low operating costs. Constant pressure, pump priority and bus communication are just some of the features available.

Sturdy construction
The booster systems are constructed as compact units on a base frame. The pumps are fitted with optimised intake and discharge manifolds, including all necessary shut-off and non-return valves.

The pressure transmitter fitted to the system ensures instant control. The stainless steel frame and manifolds, apart from being corrosion-resistant, ensure water quality and cleanliness.

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Grundfos booster systems are of a thoroughly tested design. All main components are manufactured by Grundfos, which guarantees optimum performance under all circumstances.

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The Grundfos booster systems are used in water supply systems for waterworks and mains pressure boosting as well as pressure boosting in multi-storey buildings such as hotels, schools and other large building complexes.

Reliability of supply

The Grundfos Hydro 2000 pressure booster system provides outstanding reliability and efficiency second to none. In the event of pump failure the supply is ensured by the remaining parallel connected pumps, or by the operation of stand by pumps(s).

The system is constantly monitored by a control unit, which will stop the system if necessary, and signal the relevant alarm. The variable speed systems minimise the risk of water hammer and subsequent pipe damage.

Operating costs

The Hydro 2000 cascade control ensures that only the necessary number of pumps is in operation at any one time. Operation control based on constant pressure with pulsless compensation generates substantial power savings. In addition, a back-up stop function ensures that the system is automatically put on stand-by by zero water demand.

Comfort

The constant pressure control with pulsless compensation ensures user comfort, regardless of variations in consumption. The ensuing lower pressure will result in reduced loss of water through leakage in the distribution circuit. Hygiene is ensured through extensive use of stainless steel.

Water plays an extremely important role in many industrial processes. The need for constant pressure, often under conditions with great fluctuations in flow, places great demands on the pressure booster system.

Reliability

Reliability with the possibility of constant monitoring is essential in modern industry; a breakdown can have serious implications. The Grundfos Hydro 2000 system with parallel-connected pumps and standby pumps with bus communication is the ideal choice as a pressure booster system for any industrial application.

Large and rapid flow variations place great demands on the system controller, but this too is dealt with effectively by means of the Hydro 2000 closed-loop control.

Automatic start/stop of the system, remote control of setpoint and a timer program are some of the many functions, which make the Hydro 2000 system ideally suited to industry.

Low operating costs

As a result of the variety of models, which make up the Grundfos Hydro 2000 range, the installation of expensive systems is no longer a thing of the past. Featuring pulsless compensation and alternative setpoints for eight reduction, the Hydro 2000 system allows industry to considerably reduce energy consumption in these two important areas.

The design of all Hydro 2000 systems feature loose flanges and the possibility of pipe connection from either side. This makes the systems easy to install and very user-friendly. Two very important considerations when choosing a pressure booster solution.
The maintenance of green areas like golf courses, sports grounds or parks usually requires irrigation, especially during the hottest months of the year. With a view to minimizing water consumption and adapting the system to the application concerned, the irrigation system must be as suitable as possible and easy to operate.

Reliability

Depending on the climatic conditions and time of year, the consumption pattern in an irrigation system is liable to vary. The Grundfos Hydro 2000 offers automatic monitoring of preset maximum and minimum levels. In case of pressure drop as a result, for instance, of a pipe burst the system will automatically shut down.

Bus communication allows for central monitoring and control of the system.

Correct pressure

An irrigation system for large areas will often entail a need for separate pressure zones. The required pressure may vary depending on the areas being irrigated. When a Hydro 2000 system is being used, the pressure setpoint can be centrally confirmed by a control unit.

There are no special requirements as regards the location for installation—the compact design and construction of the systems facilitate installation almost anywhere.

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