

HYDRO BOOSTER RANGE & ACCESSORIES

GRUNDFOS
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A SMART SOLUTION
FOR YOU



be
think
innovate

GRUNDFOS 

HYDRO SOLO-E

THE COMPACT PLUG-AND-PUMP SOLUTION



COMPACT, EFFICIENT AND READY-TO-GO

The Hydro Solo-E booster set is a turnkey solution that efficiently keeps a constant pressure in your system at all times. The compact solution comes with our most efficient motor – the IE5, which guarantees maximum efficiency at the lowest possible energy cost.

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AN IMPRESSIVE MIX OF TECHNOLOGY, EFFICIENCY & EASE-OF-USE

UNIQUE GRAPHICAL DISPLAY ON THE PUMP

The system is pre-programmed and tested from the factory and offers easy access to pump operation data and configuration.



PRE-PROGRAMMED FUNCTIONS THAT GIVE YOU PEACE-OF-MIND

A number of required and unique functions is pre-programmed, ensuring immediately-optimised operation and cost savings over a long system lifetime:

- CONSTANT PRESSURE CONTROL**
 Perfect water pressure regardless of consumption with energy-efficient operation and reduced water hammer
- ANTI-CAVITATION PROTECTION (FLOW LIMIT)**
 Protects pump operation outside of the recommended flow range and reduces the risk of cavitation
- DRY-RUNNING PROTECTION**
 Less risk for pump damage and lower maintenance costs
- RUNNING/ALARM RELAY OUTPUT**
 Easy and simple integration into a BMS system, for example
- FLOW ESTIMATION**
 A flow estimation algorithm in the software for Grundfos E-motors calculates flow from inlet and outlet pressure, pump speed, power and the pump curve characteristics

HYDRO SOLO-E

FEATURES



ULTRA PREMIUM EFFICIENCY IE5 MOTORS

All motors used within the range come with an IE5 International Efficiency rating, the highest energy efficiency standard for electrical motors.



LIMIT EXCEEDED ALARM

The limit exceeded function monitors a variety of different analogue input signals and provides a warning (e.g. if the discharge pressure exceeds an end-user defined limit).



REDUCED WATER HAMMER

Slow pipe filling is a feature used to slowly fill pipe work (e.g. an empty riser pipe in a high-rise building) to lessen the risk of water hammer and reduce system maintenance.



CONSTANT PRESSURE

Pump speed is continuously adjusted to match flow demand in order to maintain constant pressure at outlets. Pressure is maintained regardless of flow fluctuations.



REMOTE ACCESS

The controller communicates via the most common fieldbus protocols (optional) to provide options for remote control and monitoring.



THE FULL OVERVIEW WITH GRUNDFOS GO

Need operation information such as operating hours, power consumption and energy consumption? With Grundfos GO every system operation detail is only one click away.



ENERGY SAVING

Pump curve data is loaded to suit the specific pump model used in the system. This data is used to determine the most efficient pump speed and the required number of pumps to run, resulting in continuously optimised energy usage.



SUPERIOR MATERIALS

All wetted components are manufactured from high-grade stainless steel. The extruded manifold eliminates “dead corners” and reduces noise, friction and bacteria in pipe work.



EASY PLUG-AND PUMP INSTALLATION

A standard factory configuration means the systems is ready to pump as soon as it's switched on.

Visit the **Grundfos Product Center** to access sizing tools and a full overview of all products, specifications, performance curves and application areas. Go to product-selection.grundfos.com



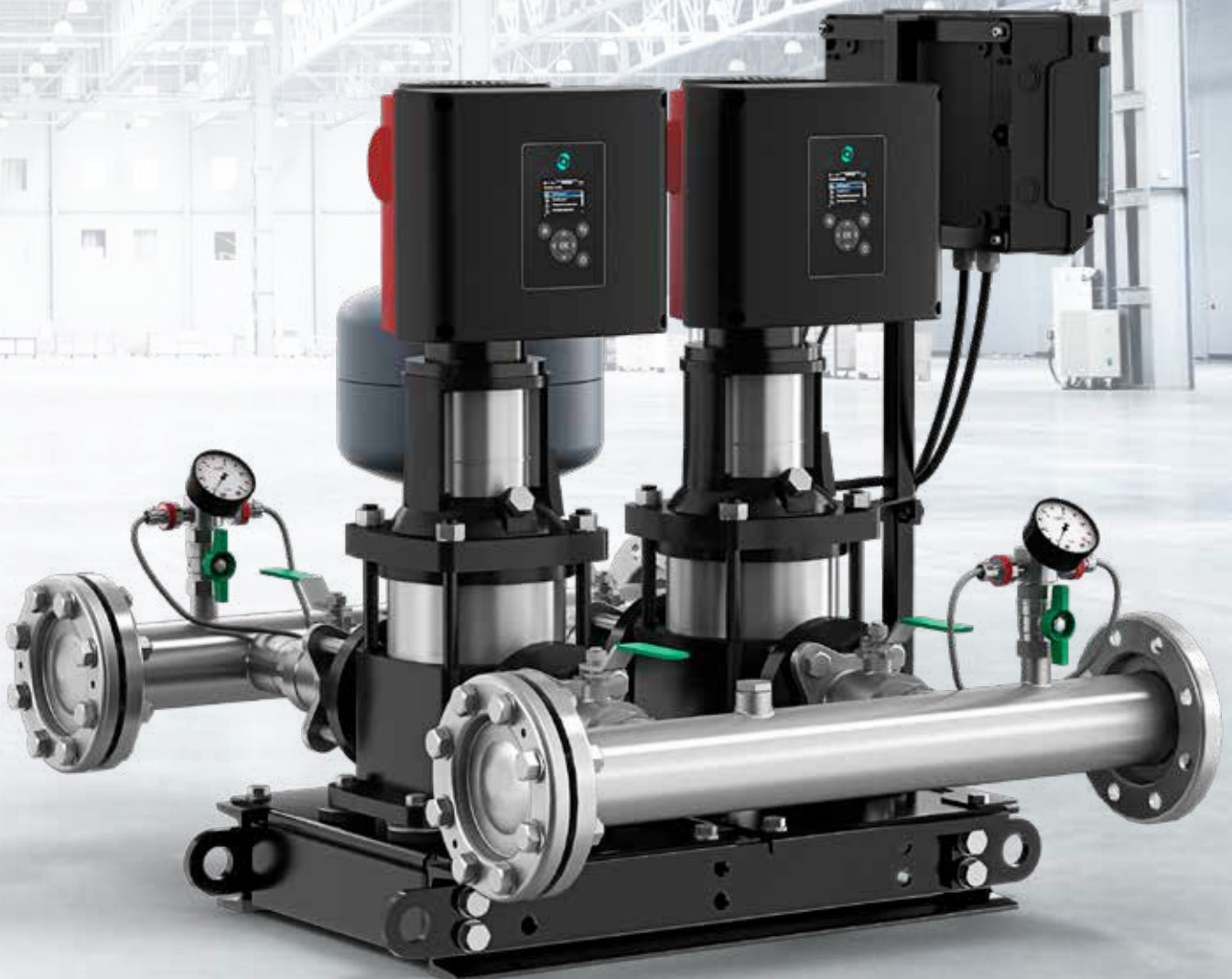
HYDRO MULTI-E

COMPACT SOLUTION WITH SYSTEM
CONTROL REDUNDANCY

PUMPS WITH BUILT-IN CONTROLS PROVIDE FULL REDUNDANCY

Unique to the Hydro Multi-E is its lack of a conventional control unit. In this intelligent booster solution, the control of the system lies within the pumps, which are able to communicate with each other. Since each pump can function as the controlling unit, there is full redundancy if a sensor or pump should fail. Together with Grundfos GO, the Multi-E presents a highly configurable and versatile booster solution.

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HYDRO MULTI-E

FEATURES



MULTI-MASTER SYSTEM CONTROL REDUNDANCY

If a sensor or master pump should fail, the next pump with a sensor automatically takes over as the controlling unit, becoming the master. Control of the system is located inside the pumps not in any external controller.



ULTRA PREMIUM EFFICIENCY IE5 MOTORS

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ENERGY SAVING

Pump curve data is loaded to suit the specific pump model used in the system. This data is used to determine the most efficient pump speed and the required number of pumps to run, resulting in continuously optimised energy usage.



REMOTE ACCESS

The controller communicates via the most common fieldbus protocols (optional) to provide options for remote control and monitoring.



EASY OPERATION

Start and stop the system, adjust set point and monitor operation easily from the control panel built onto the pump.



LIMIT EXCEEDED ALARM

The Limit Exceeded function monitors a variety of different analogue input signals and provides a warning (e.g. if the discharge pressure exceeds an end-user defined limit).



REDUCED WATER HAMMER

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HYDRO MPC-E

SUPERB PRESSURE CONTROL -
OPTIMAL ENERGY EFFICIENCY

THE PREMIUM CHOICE FOR ANY JOB

The Hydro MPC-E is Grundfos' premium product in the Hydro Booster portfolio. A long list of special features makes it able to handle the operational challenges of any water boosting application. Its easy BMS integration makes it the preferred choice for complex systems and highly technological buildings.

Includes CU 352 Controller and IP 602 Monitoring and Alarm Module

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HYDRO MPC-E

PREMIUM BOOSTER SETS



MANIFOLD

The stainless steel manifold is made in an extruding process that eliminates “dead corners” and efficiently reduces noise, friction and bacteria growth in the pipes. High-quality welding and finish ensure that all hygienic standards are met.

PUMP

As standard, the Hydro MPC-E features high quality Grundfos CRIE/ CRNE multistage pumps that are recognised across industry sectors. These all stainless steel pumps are renowned for their reliability, efficiency and adaptability.

MOTOR

Motors used in the standard range of Hydro MPC-E booster systems feature a built-in Variable Frequency Drive and meet IE5 efficiency standards (up to 11 kW). Motors from 15 kW comply with IE3 efficiency as a minimum. The standard variable speed booster range are suitable for operation from mains supply source of either 50 Hz or 60 Hz.



Please note that the listed variable speed packages are operating at up to 3500 rpm rated speeds, ensuring that they meet the system demand requirement without exceeding the stated motor power. If undersized motors are used, motor protection is in the form of power limit programmed in the motor software.

BOOSTER PACKAGE NOTE

Booster packages do not include RCD protection as they are designed and manufactured for commercial/ industrial use.

Should a boosting package be installed in domestic/residential environments, as defined by AS/NZS 3000:2018, it is the responsibility of the installer to ensure that AS/NZS 3000:2018 clause 2.6, as well as local work safety requirements are met.



CU 352 - THE BRAIN OF THE SYSTEM

THE CU 352 performs a complex task but installing and operating the unit could not be simpler. The installation wizard guides the installer through a series of steps until the booster system is correctly installed and commissioned. The installation process is performed by following the on-screen instructions of the control unit. When the installation is complete, the simple, user-friendly interface ensures that the day-to-day operation is equally as easy. the CU 352 controller, offers:

CONSTANT PRESSURE

The pump speed is continuously adjusted to match flow demand in order to maintain constant pressure. Pressure is maintained irrespective of flow fluctuations.

ENERGY SAVINGS

Pump curve data is loaded to suit the specific pump model used in the system. The curve data is used to determine the most efficient pump speed and the required number of pumps, resulting in continuously optimised energy consumption.

EASY OPERATION

Operate the system easily directly from the control panel on the pump. Easy set up through the CU 352 wizard that guides your initial on site installation and operational parameters.

REMOTE ACCESS

The controller communicates via the most common fieldbus protocols (optional).

100% GRUNDFOS

Every component in a Hydro booster package – from the non-return valve to the manifold – is made by Grundfos or for Grundfos and rigorously tested to Grundfos standards. This is your guarantee that all technologies involved work perfectly together. All systems are built, programmed and tested in our Adelaide ISO9002 accredited facility.

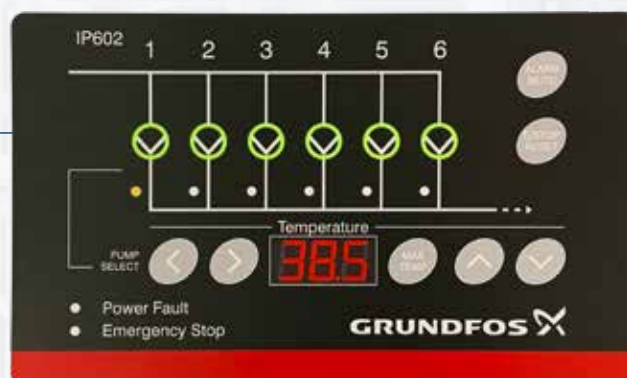
FLEXIBLE INPUT OPTIONS

The CU 352 controller controls up to six pumps and features both digital and analogue outputs. Control functions include pump start and stop, speed compensation for start-up time, forced pump changeover, dry run protection and soft pressure build-up, secondary sensor, multi-sensor, set-point ramp and non-return valve monitoring, to name a few.



IP 602 - EASY VISUAL MONITORING

The IP 602 pump monitoring panel now comes as a standard inclusion to the Hydro MPC - CU 352 package, providing an array of visual and audible notifications on pump operating status, protection features and alarms, all from the same front panel as the CU 352.



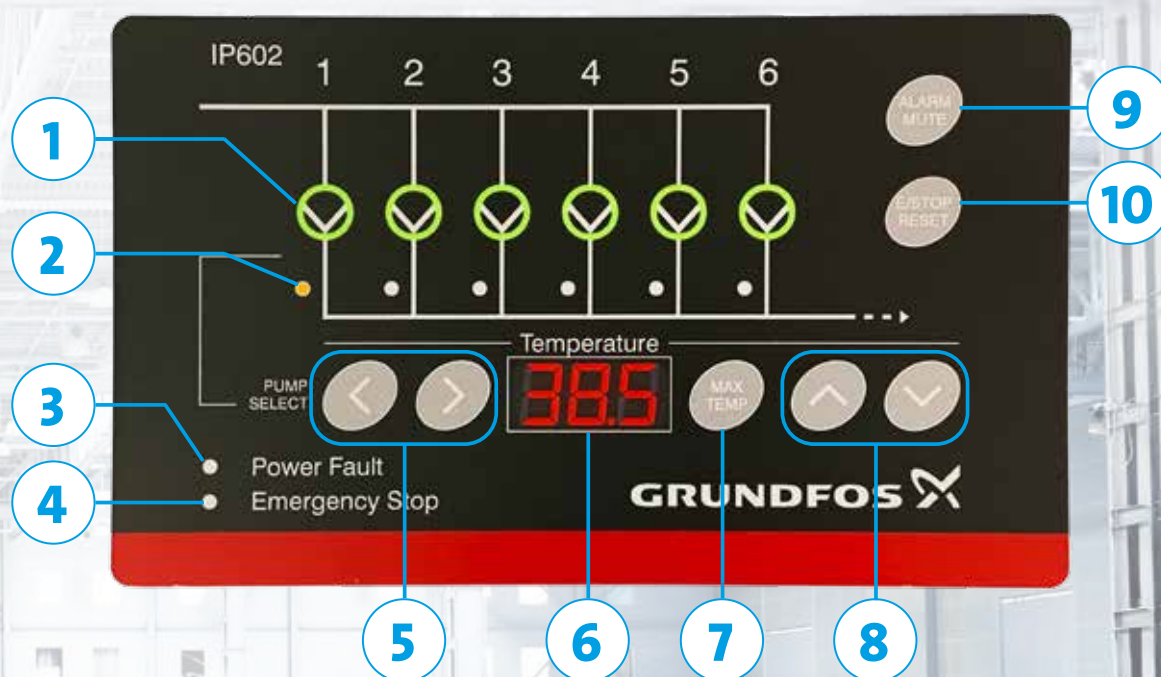
The IP 602 also has the ability to add optional inputs over the standard inclusions, such as: phase failure monitoring, liquid and motor temperature monitoring, integrated alarm mute button, integrated alarm reset button and externally mounted visual/audible alarm, for monitoring at a distance.

Function	Benefit	Availability	
Individual pump run indicator LED (Green Rotating)	Easy status view - without the need to navigate CU 352	S	
Individual pump ready/ standby indication LED (green static)	Easy status view - without the need to navigate CU 352	S	
Individual pump fault indication LED (red static)	Easy status view - without the need to navigate CU 352	S	
System fault indication LED (red static)	Easy status view - system fault indicator	S	
Common fault reset button	No need to navigate through CU 352 menus for fault re-setting	S	
Panel door mounted Emergency stop push button, E-stop activation LED (red)	Quick emergency system shut down for superior system and operator safety	S	
Buttons to cycle through individual pump liquid temperature, LED indicator (amber) for selected pump	Easy navigation, no need for additional buttons or temperature displays -No additional cutting or drilling required	S	
Buttons to set individual pump liquid trip points	Easy navigation with no need for additional buttons or temperature displays - No additional cutting or drilling required	S	
Inclusion of audible alarm mute button	Ability to mute the audible while work is being carried out to correct the fault	S	
Ready to incorporate incoming supply phase failure protection, system stop in case of fault and LED (red) fault indication. * Requires additional phase failure relay module	Additional asset safeguard, phase failure relay module may be factory fitted or as a kit for on site installation - no additional cutting or drilling required		O
Pump liquid temperature display with facility to set trip temperature to stop individual pumps in case of liquid over temperature. * Requires additional pump temperature sensor kit to be fitted and wired	Additional protection for individual pumps. Controller ready to have temperature sensor kits fitted in factory or onsite - No additional cutting or drilling required		O
Integrated facility to connect visual and audible alarm output device. * Audible / visual panel mount alarm available as a kit	Being able to see and hear system alarms from a distance. Controller ready to have alarm kit fitted in factory or onsite - No additional cutting or drilling required		O

S- Standard inclusion O - Available as option

IP 602 - USER QUICK GUIDE

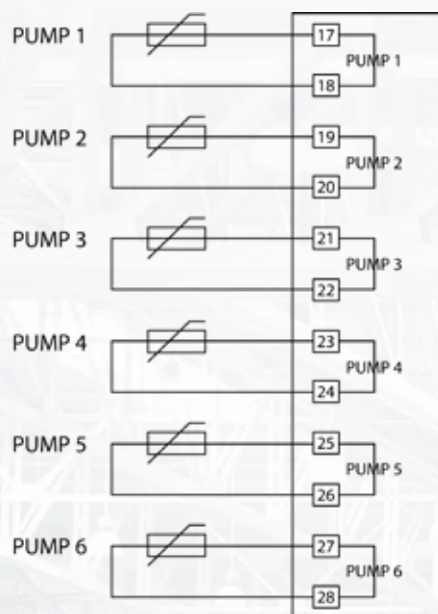
This user quick guide is to be used in conjunction with the control panel wiring diagram. Setting changes, additional device connections shall only be carried out by suitably qualified personnel to avoid injury and/or system damage.



IP 602 Interface Overview

- | | |
|------------------------------------|--|
| 1. Pump status indicators: | Red = Fault; Green = Ready; Green Rotating = Running |
| 2. Selected pump indicator: | Amber |
| 3. Power fault indicator: | Red |
| 4. Emergency stop indicator: | Red |
| 5. Push button to select pump: | Left or Right |
| 6. Temperature display: | <i>Optional kit required to enable function</i> |
| 7. Max Temperature setting button: | <i>Optional kit required to enable function</i> |
| 8. Buttons to set Max Temperature: | <i>Optional kit required to enable function</i> |
| 9. Alarm mute button: | <i>Optional kit required to enable function</i> |
| 10. Emergency stop reset button: | <i>Optional kit required to enable function</i> |

NTC Temperature Sensor Connection



CONNECTING NTC TEMPERATURE SENSORS

It is a requirement to have pump liquid temperature sensors (NTC) fitted to each pump and connected to the IP 602 printed circuit board inside the control panel before pump liquid temperature can be displayed and maximum temperature protection set.

SETTING MAXIMUM TEMPERATURE PROTECTION*

Press and hold Max Temp button, use up/down buttons to set required maximum limit temperature, release Max Temp button once desired value has been set. This process sets the identical maximum temperature limit for all connected pumps.

Typical maximum temperature setting for water pumping applications is 50°C. Once a pump has been stopped due to exceeding the set temperature limit, electrically isolate the pump, identify the cause and corrected before reinstating pump for operation.

SETTING MAXIMUM TEMPERATURE PROTECTION*

Press and hold Max Temp button, use up/down buttons to set required maximum limit temperature, release Max Temp button once desired value has been set. This process sets the identical maximum temperature limit for all connected pumps.

VIEWING INDIVIDUAL PUMP LIQUID TEMPERATURE*

Use < > buttons to cycle to the required pump. The selected pump is identified by the amber indicator below the pump symbol. Actual liquid temperature for selected pump is displayed. (Pumps without NTC temperature sensor connected will display 888)

RESETTING AUDIBLE ALARM

Pressing the Alarm Mute button will mute the audible alarm signal, it does not automatically reset any alarm. Cause of alarm must be identified and addressed.

RESETTING EMERGENCY STOP ALARM

Prior to resetting an Emergency Stop Alarm, it must be ensured that the cause prompting the E-Stop button being pressed must be identified and the emergency situations being rectified. Only once it is safe to do so must the E-Stop push button(s) be un-latched. To reset the Emergency Stop Alarm, press the E/Stop Reset button for the system to resume normal operation.

*** Installation of relevant option kit required to enable functionality**

A NUMBER OF ACCESSORIES ARE AVAILABLE FOR THE GRUNDFOS HYDRO BOOSTER RANGE

FIELDBUS COMMUNICATION INTERFACES

The Grundfos fieldbus concept is the ideal solution for complete control of pumps and pump systems. The Communication Interface Module (CIM) enables data communication via open and interoperable networks.

Protocol	Name	PN
LON	CIM 100	96824797
Profibus DP	CIM 150	96824793
Modbus RTU	CIM 200	96824796
GSM/GRPS	CIM 250	96824795
GRM*	CIM 270	96898815
BACnet	CIM 300	96893770
PROFITNET IO MODBUS TCP BACnet IP GRM*IP	CIM 500	98301408

*Grundfos Remote Management



GRUNDFOS GO - MOBILE PUMP CONTROL

Designed to save time and effort for the pump owner, Grundfos GO is the most comprehensive platform for mobile pump control on the market, offering intuitive, handheld assistance and access to Grundfos online tools, saving valuable time in reporting and data collection.

Grundfos GO Remote Variant	PN
Grundfos MI 204	98424092
Grundfos MI 204 kit	98612711
Grundfos MI 301	98046408



GRUNDFOS GO

WORK SMARTER ON THE GO

A WORLD OF DATA IN THE PALM OF YOUR HAND

Grundfos GO is the market's most comprehensive platform for mobile pump control and pump selection. With that in your hand you are ready to save valuable time on everything from commissioning, data collection and reporting to sizing and replacement. On the go.

KNOWHOW ON THE GO

Grundfos GO lets you bring along a world of product knowhow on the go. With the mobile platform in your hand you have immediate access to:

- Online sizing tools
- Replacement tools
- Extensive product catalogue
- Documentation

REMOTE PUMP CONTROL

The intuitive Grundfos GO equals complete control of every aspect of pump performance. You get live data feed directly onto your smart phone, allowing you to monitor duty points, power consumption, speed and temperature of the pumps. Additional benefits include:

- On-site generation of PDF reports that can be signed and sent live, including photo documentation to avoid wrong matches and misunderstanding
- Simple alteration of configuration parameters via the intuitive interface – pump by pump or in groups using the time-saving clone function
- Easy-to-understand alarms without any incomprehensible error codes.



WHO WE ARE & WHAT WE DO

Grundfos Pumps Pty Ltd are an Australian leader in the supply of pumps and pump systems for domestic, commercial building services and process industry applications, as well as being a major supplier to the water supply and treatment industries and provider of packaged pump sets.

We are part of the Grundfos Group that employ 19,000 people in sales and production roles in 83 companies worldwide. Founded in Denmark in 1945, the Group now has an annual turnover of 3.5 billion Euro and produces 17 million pumps per year.

Grundfos have been in the Australia since 1980, and moved to our current premises in Adelaide in 1972. We employ 120+ staff who are engaged in supporting the sales and marketing effort and who geographically cover Australia and New Zealand.

Our business head office is in Adelaide with regional sales offices located in Sydney, Brisbane, Melbourne and Perth. Grundfos has its local production and assembly facility attached to the Australian head office in Adelaide, South Australia.



EFFICIENT, SUSTAINABLE PRODUCTS

At Grundfos we constantly strive to make our products more user-friendly and reliable as well as focussing on their energy-saving potential and efficiency. This is so that both users and the environment can benefit from their improvement. Grundfos pumps are equipped with ultramodern electronics, allowing them to regulate their output according to the system needs. This not only ensures convenience for the user, but also saves a great deal of energy.

RESEARCH AND DEVELOPMENT

In order to maintain its leading position, Grundfos places a great deal of emphasis on customer feedback and research for product development; this means customers are consulted when new products are being developed or when established products are being improved.

In-house research and development makes use of the latest technology within the pump industry, as does collaborating with universities and higher education institutions in search of new and better solutions for the design and function of the products.

CORPORATE VALUES

The Grundfos Group has strong corporate values. These include sustainability, openness, trustworthiness, responsibility, and also on partnership with clients, suppliers and the whole of society around us, with a focus on humanity that concerns our own employees as well as the many millions who benefit from water that is procured, utilised and removed as wastewater with the help of Grundfos pumps.

