IT’S TIME TO DEMAND MORE

Urell Inc.
MAGNA3
Grundfos E solutions

- **Magna 3**
- **CRE-DP**
- **VLSE**
- **Hydro MPC**

**Flows (gpm):**
- Alpha: 20 GPM
- CRE-DP: 550 GPM
- VLSE: 600 GPM
- Hydro MPC: 2000 GPM

**Other Flows:**
- 4000 GPM
Magna3 Overview

- Range of Operation
- Wet-Rotor Design
- High Efficiency Motor
- Onboard Controls
- Communications
Range of Operation

- 14 Hydraulic models (11 single, 3 Twin)
- Total 37 pumps
- Cast Iron, Stainless Steel
- 1x115V (up to 1HP)
- 1x208-230V all models
- Maximum Flow to 550 GPM
- Maximum Head to 60 Feet
- Liquid Temp: 14°F (-10°C) to 230°F (+110°C)
- Water & Water/Glycol up to 50%
- Heating, DHW, Solar, Cooling & Geo
Magna3 Overview

- Range
- **Wet-rotor Design**
- High Efficiency Motor
- Onboard Controls
- Communications

Single Head

Dual Head
Wet Rotor Design

- Pump Volute
- Molded Insulation Jacket
- Impeller
- Magnet Rotor
- Rotor Can
- Stator Winding
- Motor Housing
- Motor Controls / Integrated Variable Speed Drive

Integrated Differential Pressure & Temperature Sensor
Wet Rotor Design

Maintenance Free Design...

- No noise – Less than 41dB
- No mechanical seals - No seal leaks or seal failures
- No bearing housing – No bearing failures
- No oil - No maintenance requirements
- No accessible electrical components – No risk of touching “hot” windings.
Magna3 Overview

- Range of Operation
- Wet-rotor Design
- High Efficiency ECM Motor
- Onboard Controls
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Magna3 Overview

- Range of Operation
- Wet-rotor Design
- High Efficiency Motor
- Onboard Controls
- Communications

Single Head

Dual Head
Grundfos E-Solutions “Is Bigger always better”

..\Magna 3\youtube Isolutions\IS BIGGER ALWAYS BETTER.mp4
Onboard Controls

- Integrated VFD
- Completely Programmed
- Multiple Control Modes
- Built In Communications
Built in control modes

Multiple Control Modes

- Constant pressure
- Proportional pressure
- AutoADAPT
  - FlowADAPT
- Constant temperature
- Constant differential temperature
- Constant curve
- BMS input
Constant pressure mode is suited for variable flow systems with very low pipe pressure losses, and in open systems where pipe pressure loss is subordinate to static head.

Proportional pressure mode is used in circulating systems. The pump continuously adapts its performance to the varying flow demand.

The AUTOADAPT function continuously adjusts the proportional pressure curve and automatically sets a more efficient one, without compromising comfort demands. With this factory setting, in 80% of the installations no manual adjustments are needed.
Constant temperature mode is used in variable flow systems within heating, where a constant liquid temperature at a user-defined point, is desired. The pump is in charge of the flow, and external controller for temperature regulation are made unnecessary.
Magna3 Overview

• Range of Operation
• Wet-rotor Design
• High Efficiency Motor
• Onboard Controls
• Communications

Single Head

Dual Head
Communications

Intelligent Interface
Communications

Intelligent Interface - Startup

Language
Set language with « and ». Press OK to enable.

Press « to continue.

Eesti
English US
English GB

Date Format
Use the « « keys to select the wanted date format.
Press Ok to activate.

YYYY-MM-DD
DD-MM-YYYY
MM-DD-YYYY

Start-up guide
In the following menu displays, you can make the basic settings of the pump.

Navigate between displays with « and ».

Setting of pump
By means of the « « keys select the settings you want. Press Ok to activate.

Run with AUTOADAPT
Go to Assisted pump setup
Communications

GRUNDFOS GO
INTELLIGENCE IN THE MAGNA3

› Save time with the intuitive handheld pump control
› Save and share reports easy and electronically
› Access to online replacement and sizing tools
› Everything you need – on the GO
Communications

Two-pump wireless connection

- Integrated wireless technology enables interaction between two MAGNA3 pumps
- Connection to a parallel coupled pump is quickly and easily obtained with the built-in wizard or Grundfos GO
- Two parallel coupled pumps can be controlled jointly in cascade mode, alternating mode or pump back-up mode
Grundfos E-Solutions “Communication”

- ..\Magna 3\youtube Isolutions\ARE WE SPEAKING THE SAME LANGUAGE.mp4
Analog & Digital Inputs/Outputs

- Digital Inputs
  - External start/stop
  - Forced min/max
- Relay Outputs
  - 2 signal relays
  - Alarm, Ready or Operation
- Analog Input for external sensor
CIM Module delivers the pump data to the BMS System

Communications

BMS Integration

The MAGNA3 can be seamlessly integrated to any BMS System in your facility today.
Communications

CIM Module eliminates the need for additional monitoring equipment and data point integration

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<th>Operating Mode</th>
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Magna 3 applications

Domestic Hot Water Return

Redundant Hot Water pump
Magna 3 Domestic Hot Water Return

- Built in Temperature sensor
- Set desired return water temperature on pump
Magna 3 application

- Dual Head Magna 3 Cascading pumps
Magna 3 application

- Existing End Suction
  - 6000 kWhr/a EACH
  - 12000 kWhr/a Total

- New Magna 3 circulator with onboard control logic
  - 748 kWhr/a Each
  - 1496 kWhr/a Total

Total Energy Savings 11,252 kWhr/a ($2025/ year*)
*based on $.18/kWhr
CRE-DP Vertical inline HVAC pump

- Vertical Inline Multi Stage
- Integrated MLE motor and Drive
- Small Foot print
- Reduced maintenance requirements
- Stand alone control logic or with BMS
- Proportional Differential control logic
- Flows to 600 gpm
CRE-DP Vertical Inline HVAC pump

- Redundant CRE-DP Chilled Water
CRE-DP Vertical Inline HVAC pump
Grundfos VLSE

Features and Benefits:
• All in one, integrated off-the-shelf drive, control, motor solution to capture the maximum in energy savings
• Vertical in-line mounting saves floor space
• Eliminates coupling alignment, its costs, and speeds installation
• Eliminates baseplate grouting, its cost and minimizes installation time
• Service friendly design allows rapid mechanical seal access without motor removal
• Lower weight offers installation ease
• Grundfos GO compatible

Applications:
• Chilled water
• Condensed water
• Hot water
• District Cooling/Heating Systems
• Air Conditioning
• Cooling tower
• Pressure boosting

Technical Data | VLSE
--- | ---
Flow, Q | 15 to 1500
Head, H | 15 to 350
Discharge Sizes | 1.25” to 8”
HP/Speed Range | 3 to 30 HP-3500RPM
                | 3 to 25 HP-1750RPM
Hydro MPC modular pumping system vs Modular Pumping system N+1

Traditional Built onsite
100% Redundant
Hydro MPC Modular Pumping System

Chilled Water pumps

Condenser Water pumps
Communications

Grundfos E-solutions are much more than pumps

- Temperature
- Speed
- Flow
- Power
- Head
- Energy
- BTU
- History
## Take off of Boston High Rise

### Pump ID, Location, Tag, and Duty Replacement Savings

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58,199 13,714 44,485
Thank you for your time!