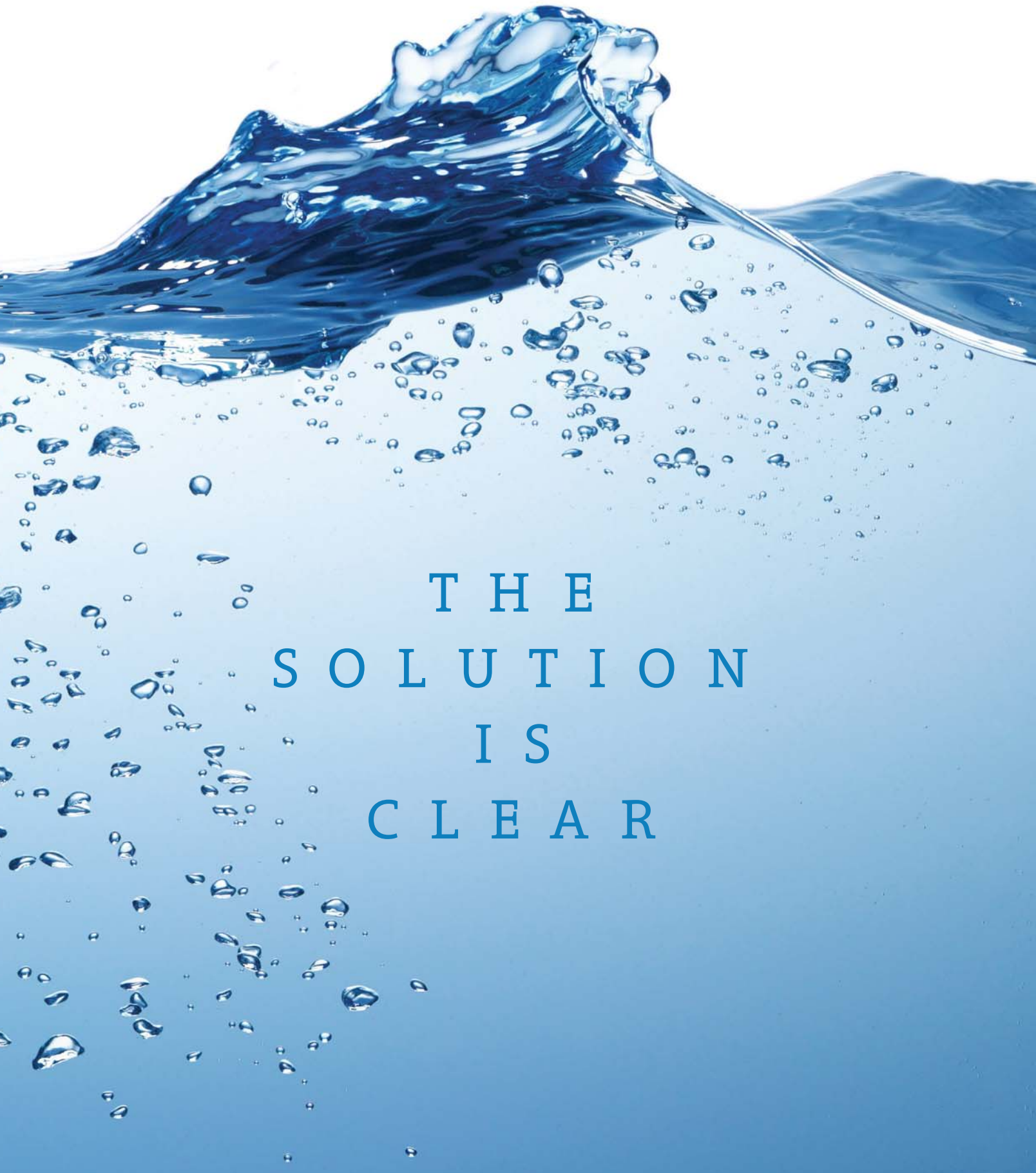


# DERAGGER<sup>®</sup> PRO

PUMP CONTROL SIMPLIFIED



THE  
SOLUTION  
IS  
CLEAR

# DERAGGER<sup>®</sup> PRO

PUMP CONTROL SIMPLIFIED

The DERAGGER PRO is a cost-effective and user-friendly pump station controller, which delivers unrivalled anti-ragging technology and comprehensive diagnostics that make manual fault-finding a thing of the past. It ensures **uninterrupted operation** of pumping stations, even when failures occur elsewhere in the pumping system. The device is fully configurable through a high-resolution, colour, touch screen HMI.



## Technical Characteristics In Brief

<b>Size:</b> Width 186.1mm Height 143.6mm Depth 88mm	<b>Display:</b> 7" TFT 32,000 Colours 800 x 480 Resistive Touch Screen
<b>Mounting:</b> TS 35 Din Rail or panel mount	<b>Communications:</b> Modbus RTU 485 Ethernet TCP/IP
<b>Supply voltage:</b> 24Vdc	<b>Fault Output:</b> Watchdog pulse

## Easy Configuration

- Straightforward set up – no software engineer required
- Complete configuration, through quickly accessible menus, of all Deragger IIs, VSDs and/or external peripherals
- Overview page for every pump, displaying status/control capabilities and giving access to configuration areas for the pumps and all associated parameters
- Start-stop levels can be set individually or per group for each pump and group
- Added security achieved through customisable levels of access for individual users
- IEC ladder logic editor to add custom features if required

## Features

- **Anti-ragging**  
Eliminates blockages before they form. Monitors real-time power characteristics of pump and compares these with characteristics at the time of commissioning in order to detect when pump is ragging up.
- **Derived Flow Metering**  
Calculates incoming and outgoing flow by calculating volume change in the well from the level instrument.
- **Pump Station Trends**  
Trends include Level, Flow, Current and Power Consumption. These are available for each pump.

The Deragger Pro has multiple methods to protect the pumps. These can be easily enabled to alarm or trip the device.

These include:

- **Thermal protection - IEC60947 thermal overload**
- **Over and Under Current**
- **Over and Under Voltage**
- **Phase Failure**
- **Phase Imbalance**
- **Frequency out of range**



<b>Display</b>	Pixels	800 x 480
	Display Technology	7" TFT 32,000 Colours
	Colour	65,535
	Back light	LED - 50,000 hour life
<b>Keypad Touch Screen</b>	Numeric keys	Pop-up keypad
<b>Controller</b>	Logic Scan Rate	0.013 ms/k
	Memory Card Slot	Yes (up to 32GB)
	Expansion software	Advanced Ladder Logic
<b>I/O Support</b>	Built In I/O	Optional
<b>Serial Communications</b>	Total Active Ports	2 ports
	Comms medium	Modbus RTU, Profibus DP, Ethernet TCP/IP
<b>General Specification</b>	Height (mm)	143.6
	Width (mm)	186.1
	Depth (mm)	88
	Weight (kg)	0.751
	Environmental	-10 to 60 c
	Washdown Applications	Designed for IP65 (NEMA 4X)
	Supply	10-30Vdc - 170mA

## Interface

The Deragger Pro's intelligent modular interface provides at-a-glance information for the following:

- **Level**
- **Pump mode**
- **Pump availability**
- **Detailed fault information**
- **Date/time of each fault occurring and clearing**
- **3-phase supply status**
- **Fault and event history (up to 50,000 records, or millions of records with SD card)**
- **Accumulators (starts, hours, faults, etc.)**
- **Pump efficiency (requires energy monitoring, motor protection and flow enabled)**
- **Status of a communications link**
- **Duration to Overflow**

THE MULTI-AWARD WINNING PATENTED DERAGGER II represents a truly cost efficient and powerful solution to pump ragging.

THE SOLUTION IS CLEAR

The innovative and dependable technology of the **DERAGGER PRO** delivers cost savings and a range of other benefits that make it a desirable alternative to a PLC.



### Uninterrupted Operation

By spreading intelligence between multiple devices, the **Deragger Pro** ensures continued operation of pumping stations even if one part of the overall pumping system fails.

If the ultrasonic fails, for example, a high level float switch will be triggered in the well to start a timed pumping operation. Or if one pump fails, the **Deragger Pro** will automatically switch pumps.

Since the level setpoints are also stored in the Deragger II, pump operation will start automatically in the event of a screen failure.

In addition, the assurance of telemetry communication comes via a separate dedicated Modbus RTU network.

### Cost Benefits

**Eliminates need for expensive external programming software**

- Flow meters and level instruments are easily added through the HMI. Users simply set the parameters rather than program the unit.

**Dispenses with requirement for selector switches, push buttons, lamps, meters, etc.**

- The Deragger Pro screen simplifies control panels.

**Avoids expensive reactive callout charges**

- Maintains pumping operations in the event of failure in the system. Provides real-time anti-ragging via Deragger II's patented technology.

**Electricity costs are reduced by up to 48%**

- In conjunction with the Deragger II technology, the Deragger Pro automatically ensures the most cost-efficient pumps are used.



### KEY DERAGGER PRO BENEFITS

- Provides intelligent modular interface for Deragger II and supported accessories
- Connects up to 6 Deragger IIs or supported VSDs, with all combinations of Duty/Assist/Standby required
- Suitable for all pumps
- Modbus RTU communications
- Ensures continued operation of pumping station in event of failure in one part of the system
- Easily commissioned through colour touch screen HMI
- No external programming software required
- Increases energy efficiency and reduces costs through such apps as Seasonal Time of Day
- Provides complete diagnostics, eliminating need for manual fault-finding
- Ensures pumps run at maximum efficiency