DERAGGER® PRO

PUMP CONTROL SIMPLIFIED



INTELLIGENT EFFICIENCY

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The DERAGGER® PRO pump station controller 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.





KEY DERAGGER® PRO PUMP STATION CONTROLLER BENEFITS

- **Provides real-time anti-ragging via DERAGGER II® anti-ragging devices patented technology, reducing the need for reactive callout charges.**
- **Simplifies control panels. It dispenses with requirements for the selector switches, push buttons, lamps etc.**
- **Connects up to 16 DERAGGER II® anti-ragging devices 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 failures in one part of the system.**
- **Easily commissioned through colour touch screen HMI.**
- **No external programming software required. Flow meters and level instruments are easily added through the HMI. Users simply set the parameters rather than program the unit.**
- **Increases energy efficiency and reduces costs through such apps as Seasonal Time of Day.**
- **Provides complete diagnostics, eliminating need for manual fault-finding.**
- **The DERAGGER® PRO pump station controller automatically ensures electricity costs reduced by up to 48%. It also automatically ensures the most cost-efficient pumps are used.**



Technical Characteristics In Brief

Size:
Width 285mm
Height 189mm
Depth 48.9mm

Mounting:
272mm wide x 176mm high

Supply voltage:
24Vdc

Display:
10.1" TFT 16.2M Colours
1200 x 800
Capacitive Touch Screen

Communications:
Modbus RTU 485
Ethernet TCP/IP

Fault Output:
Watchdog pulse

Easy Configuration

- **Straightforward set up – no software engineer required**
- **Complete configuration, through quickly accessible menus, of all devices, 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**
- **Full back up of all parameters + DERAGGER II® anti-ragger parameters to local storage + external USB stick**
- **Full export to USB of all statistics + trends in , CVS format**

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.
- **Full Alarm Logging**
  Notifies of trips and failures, eliminating need for manual fault diagnostics.
- **Derived Flow Metering**
  Calculates incoming 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 innovative and dependable technology of the **DERAGGER® PRO** pump station controller 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** pump station controller 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** pump station controller 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 or TCP/IP.

What our clients say

'Since this station was upgraded to the DERAGGER® PRO pump station controller 18 months ago there have been no blockages, in the past this station would have needed manual intervention due to blockages at least once a week.

I have found the DERAGGER® PRO pump station controller panel very easy to use. If any fault does occur the controller is very easy to interact with, all faults are easy to read, understand and reset.

The pump information in regards to run times, starts, amps and levels etc.… I have found very useful with my weekly checks. This allows me to see the station run history on a very easy to read chart.

On a closing note I would like to add the service and support received from Clearwater Controls has been excellent, we have had full use of a 24 hour support service since the product has been installed.'

Stuart Dickie, Scottish Water
Waste Water Pumping Station Operator
Stuart.dickie@scottishwater.co.uk

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CLEARWATER CONTROLS

Clearwater Controls,
Morley House, West Mains Industrial Estate,
Falkirk Road, Grangemouth, Scotland FK3 8YE

t. 01324 485 557
e. info@clearwatercontrols.co.uk

www.clearwatercontrols.co.uk

The DERAGGER®PRO pump station controller has multiple methods to protect the pumps via DERAGGER II. These can be easily enabled to alarm or trip the device.

These include:

- **Thermal protection - IEC609471 thermal overload**
- **Over and Under Current**
- **Over and Under Voltage**
- **Phase Failure**
- **Phase Imbalance**
- **Frequency out of range**



1 module, 4 starters

Display	Pixels	1200 x 800
Gorilla glass	Display Technology	10.1" TFT
	Colour	16.2M
	Back light	LED - 50,000 hour life
Keypad Touch Screen	Numeric keys	Pop-up keypad
Controller		Quad core CPU
	Memory Card Slot	Yes (up to 32GB)
I/O Support	Remote IO	Optional
Serial Communications	Total Active Ports	2 ports
	Comms medium	1 x 2 wire Modbus RTU RS485 1 x 2 wire Modbus RTU RS232 1 x Ethernet Modbus TCP RJ45 2 USB port
General Specification	Height (mm)	189mm
	Width (mm)	285mm
	Depth (mm)	48.9mm
	Weight (kg)	1.2KG
	Environmental	0-50'C (non condensing)
	Washdown Applications	Designed for IP65 (NEMA 4X)
	Supply	9~36V DC

Interface

The DERAGGER®PRO pump station controller has an intelligent modular interface that 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 100 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**
- **Draw down time**

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