

# 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.



## Technical Characteristics In Brief

### Viewable Size:

Height 5 7/16  
Width 7 9/16

### Mounting:

Height 6 59/64  
Width 10 45/64

### Supply voltage:

24Vdc

### Display:

10.1" TFT 16.2M colors  
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 DERAGGER II™ anti-ragging 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-ragging device 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.
- **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.
- **Full Alarm Logging**  
Notifies of trips and failures, eliminating need for manual fault diagnostics.

## KEY DERAGGER PRO™ PUMP STATION CONTROLLER BENEFITS

- **Provides real-time anti-ragging via DERAGGER II's™ anti-ragging device 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.**
- **Electricity costs reduced by up to 48% - in conjunction with the DERAGGER II™ anti-ragging device technology, the DERAGGER PRO™ pump station controller automatically ensures the most cost-efficient pumps are used.**

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™** anti-ragging device, 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.

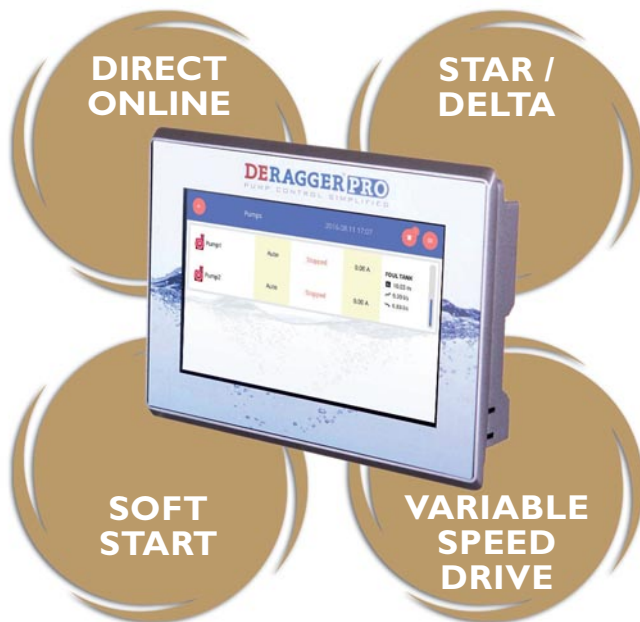
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The DERAGGER PRO™ pump station controller has multiple methods to protect the pumps. These can be easily enabled to alarm or trip the device.

These include:

- **Thermal protection - IEC60947-1 thermal overload**
- **Over and Under Current**
- **Over and Under Voltage**
- **Phase Failure**
- **Phase Imbalance**
- **Frequency out of range**



**1 module, 4 starters**

<b>Display</b>	Pixels	1200 x 800	
	Gorilla glass	Display Technology	10.1" TFT
	Color		16.2M
	Back light	LED - 50,000 hour life	
<b>Keypad Touch Screen</b>	Numeric keys	Pop-up keypad	
<b>Controller</b>		Quad core CPU	
	Memory Card Slot	Yes (up to 32GB)	
<b>I/O Support</b>	Remote IO	Optional	
<b>Serial Communications</b>	Available Ports	1x RS232 1x RS485 1x Ethernet	
	Comms medium	2 x 2 wire Modbus RTU RS485 1 x 2 wire Modbus RTU RS232 2 x Ethernet Modbus TCP RJ45 2 USB port	
<b>General Specification</b>	Height (inches)	7 7/16	
	Width (inches)	11 7/32	
	Depth (inches)	1 59/64	
	Weight (lbs)	2.65	
	Environmental	32 - 122 °F (Non condensing)	
	Washdown Applications	Designed for IP65 (NEMA 4X)	
	Supply	9.36Vdc-12.8	

## Interface

The DERAGGER PRO's™ pump station controller 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**
- **Draw down time**

