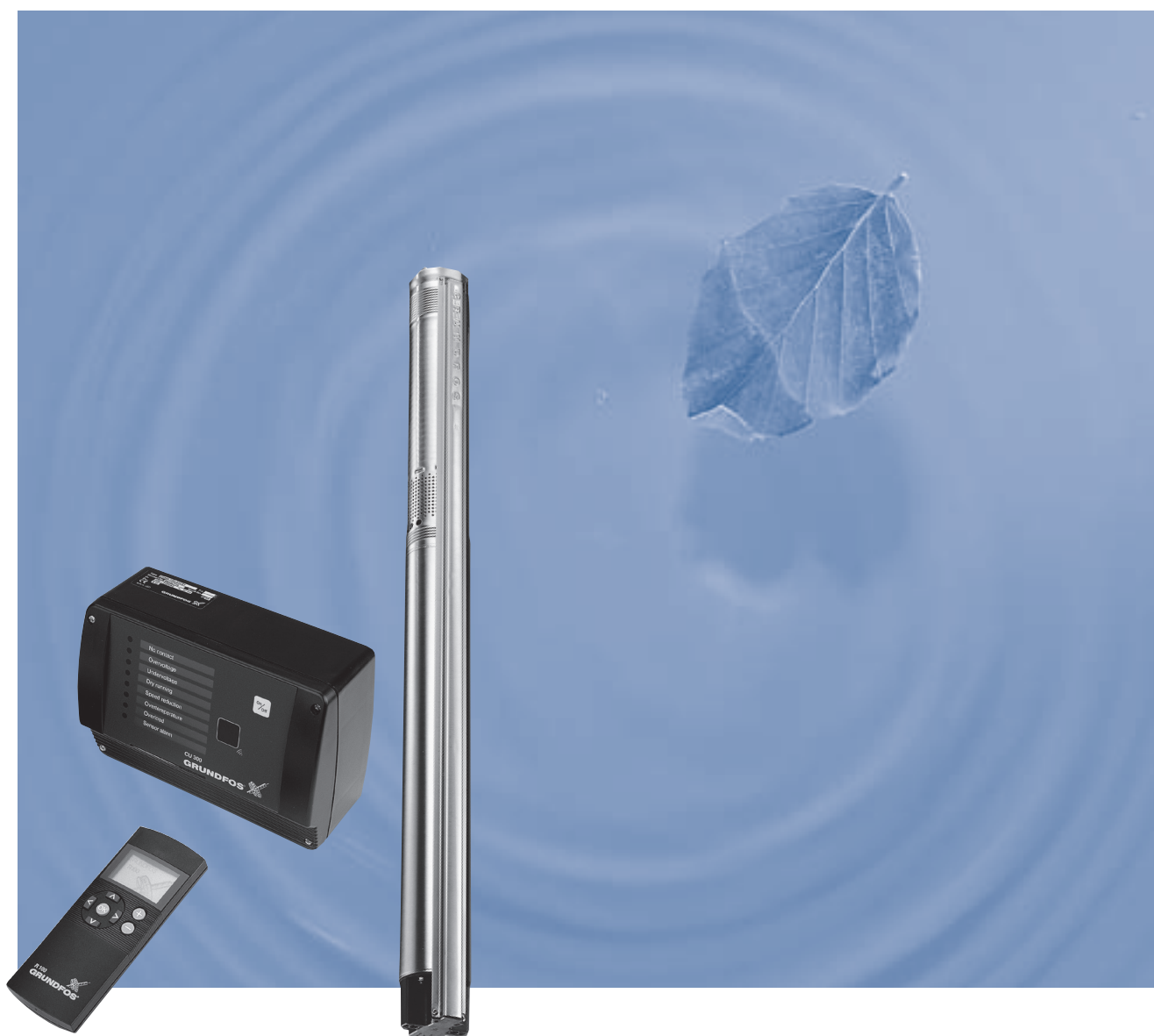


# Redi-Flo3™ and CU 300

Environmental Pumps  
60Hz





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# Features and Benefits

## Redi-Flo3 Submersible Pumps

Redi-Flo3 pumps are suitable for both continuous and intermittent operation for a variety of environmental applications including:

- Remediation
- Pollution Recovery
- Leachate Recovery
- Dewatering
- Tank Applications

### Redi-Flo3 pumps offer the following features:

- Dry-Run Protection
- High Efficiency Pump End and Motor
- High Starting Torque
- Protection Against Up-Thrust
- Soft-Start
- Over- and Under-Voltage Protection
- Overload Protection
- Over-temperature Protection
- Variable Speed
- Electronic Control and Communication

Redi-Flo3 pumps incorporate a totally new motor design. With the use of permanent-magnet technology within the motor, Redi-Flo3 pumps deliver unmatched performance. The combination of permanent-magnet motors and Grundfos' own micro frequency converter, we are now able to communicate with the pump in ways never before possible. Just a few of the features that come out of this combination are constant level control, soft-start and integrated dry-run protection. These are just a few of the many features that Redi-Flo3 pumps can offer.

Redi-Flo3 pumps use the Grundfos "Smart Motor". This permanent-magnet motor is single phase input and with a 2-wire design makes installation easy. The combination of integrated microelectronics in the pump with the optional CU300 status box and R100 at the surface allows communication with the pump through standard electrical motor power leads. No additional wires are required. This feature allows the direct use of multiple sensors, digital input and relays without adding extra control electronics and costs.

The surface CU300 status box allows communication with the "Smart Motor" through the R100 infrared remote control unit or via the CU300 PC Software Tool. This gives you the ability to monitor and setup or change your pumping system to meet the specific needs of your application.

The Redi-Flo3 can operate without the status control box much like a traditional submersible electric pump. Some communication and program functions will not be available in this configuration, but the internal motor protection features are still active.

## Pump and Motor Range

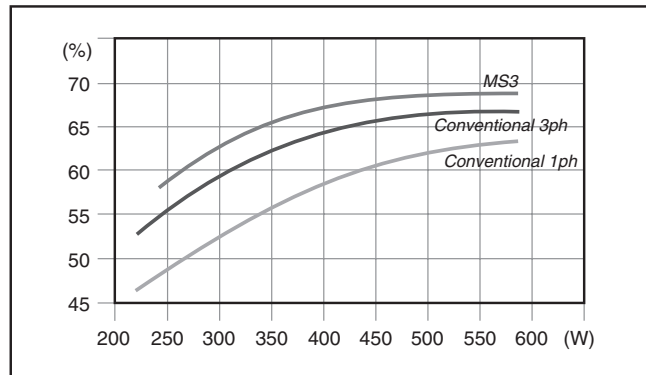
| Product            | Description                  |
|--------------------|------------------------------|
| Redi-Flo3 Pump End | 10, 22, GPM                  |
| MSE3NE Motor       | Single Phase<br>1/2 - 1.5 Hp |

## Dry-Run Protection

The Redi-Flo3 incorporates integrated Dry-Run protection. When the fluid level falls below the inlet of the pump, the pump automatically shuts off. After a programmable period of time, the pump automatically starts up again.

## High Motor Efficiency

Redi-Flo3 motors are based on a permanent magnet rotor, which produce high efficiency within a wide load range. The high and flat efficiency curve of the Permanent-Magnet (PM) motor allows for coverage of a wide power range with the same motor as compared to conventional submersible AC motors. For Redi-Flo3 pumps, this means only three motors to cover the horsepower range from 1/2 to 1.5Hp.

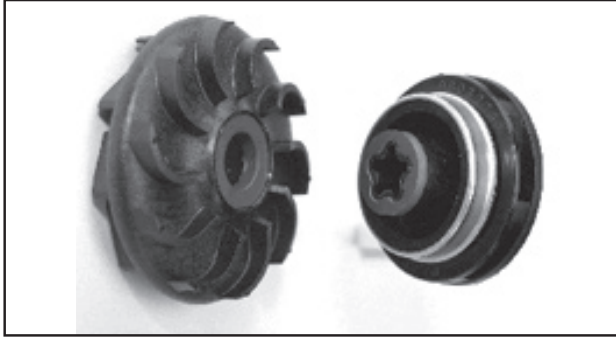


## High Pump Efficiency

The pump end components are made from Polyvinylidene Fluoride (PVDF). The pumps are designed to deliver at peak efficiency levels. Because of high pump efficiencies, overall power consumption will be reduced.

## Wear Resistance

Redi-Flo3 pump design uses “floating” impellers. Each impeller has its own tungsten carbide/ceramic bearing. This design and the environmental quality of materials make this pump an excellent choice for environmental application projects.



## Protection Against Up-Thrust

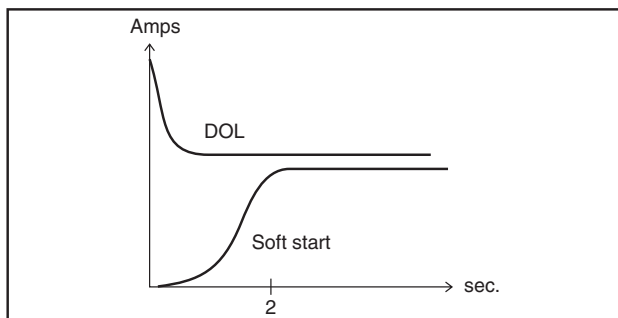
During start-up many pumps start in an up-thrust condition. To prevent damage caused by up-thrust, a top bearing has been placed in the motor to protect both the pump and the motor against up-thrust.

## Soft-Start

Redi-Flo3 have a soft-start feature possible because of the integrated electronics. Soft-start reduces the starting current and gives the pump a smooth and steady acceleration.

## High Starting Torque

Because of the permanent-magnet motor, the Redi-Flo3 pumps have excellent starting capabilities. The high locked rotor torque produced by the PM motor provides a starting torque that is 1.5 times greater than conventional submersible pump motors. Even if the voltage is low, the PM motor will still maintain a high starting torque.



## Overvoltage and Undervoltage Protection

Overvoltage and undervoltage may occur at any time, especially if you have an unstable voltage supply. The integrated protection in the Redi-Flo3 motor protects itself when voltage falls outside of permissible voltage range. The 230V pump motor will cut out if voltage falls below 150V or above 280V. The motor will automatically start when the voltage is within the permissible range. It is not necessary to have additional voltage protection.

## Overload Protection

When the pump load rises above the maximum amp level, the motor will automatically compensate and reduce the speed to maintain its maximum amp level. If the speed drops to 65% of the nominal speed, the motor will shut off.

## Overtemperature Protection

Permanent-magnet motors emit very little heat because of their high efficiency. Redi-Flo3 motors are designed with an internal circulation system to effectively cool all the internal components.

As extra protection, the electronic unit also has a built-in temperature sensor. When the temperature rises too high, the motor will automatically shut-off; when the temperature drops the motor will automatically restart.

## Variable Speed

The Redi-Flo3 “Smart” motor enables continuous variable speed control within 30%-100% (3,000-10,700 rpm). The pump can be set to operate at any duty point in the range between 30% and 100% of the pumps performance curve. The pump can be adapted to any specific requirement. The variable speed control requires the status box and R100 or potentiometer.

## Installation

Redi-Flo3 pumps can be installed vertically or horizontally (Note: the pump must not fall below the horizontal level in relation to the motor). For horizontal installations, a flow sleeve is recommended to ensure sufficient flow past the motor to provide proper cooling and prevent the unit from being buried in sand or silt.

# Applications

## Remediation/Pollution Recovery/Dewatering

Connection of a sensor such as a submersible pressure sensor enables the pump via the status control box to maintain a constant level by starting and stopping the pump based on a desired water level.

### Maintaining a Constant Water Table

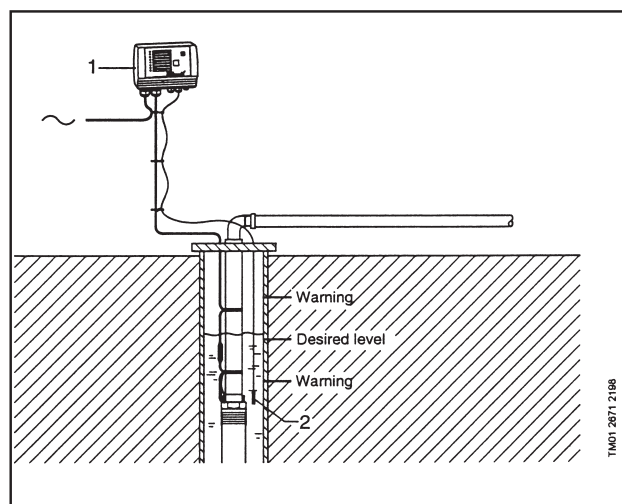
#### Introduction

By monitoring the water table and controlling the pump, the water table can be maintained at a constant level.

#### EXAMPLES OF APPLICATION:

For example maintaining a constant water table is useful in the following situations:

- When the groundwater should be kept out of a building site.
- When the salt water should be kept from penetrating a borehole with potable water.



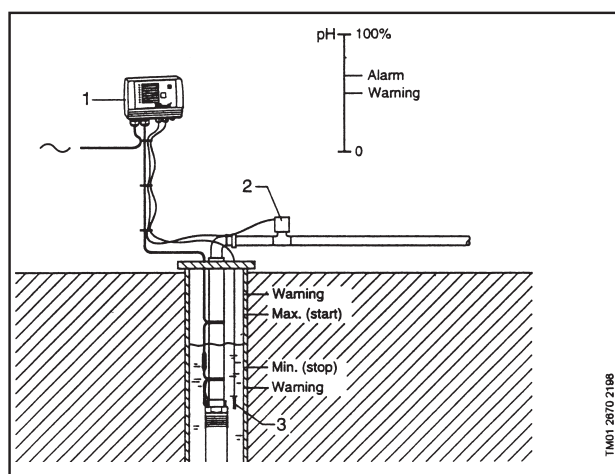
#### Description

| Pos. | Description  |
|------|--------------|
| 1    | CU300        |
| 2    | Level sensor |

### Remedial Pumping with Water Quality Monitoring

#### Introduction

By means of sensor signals it is possible to carry out remedial pumping where the water contains contamination e.g. chemicals, oils, etc.

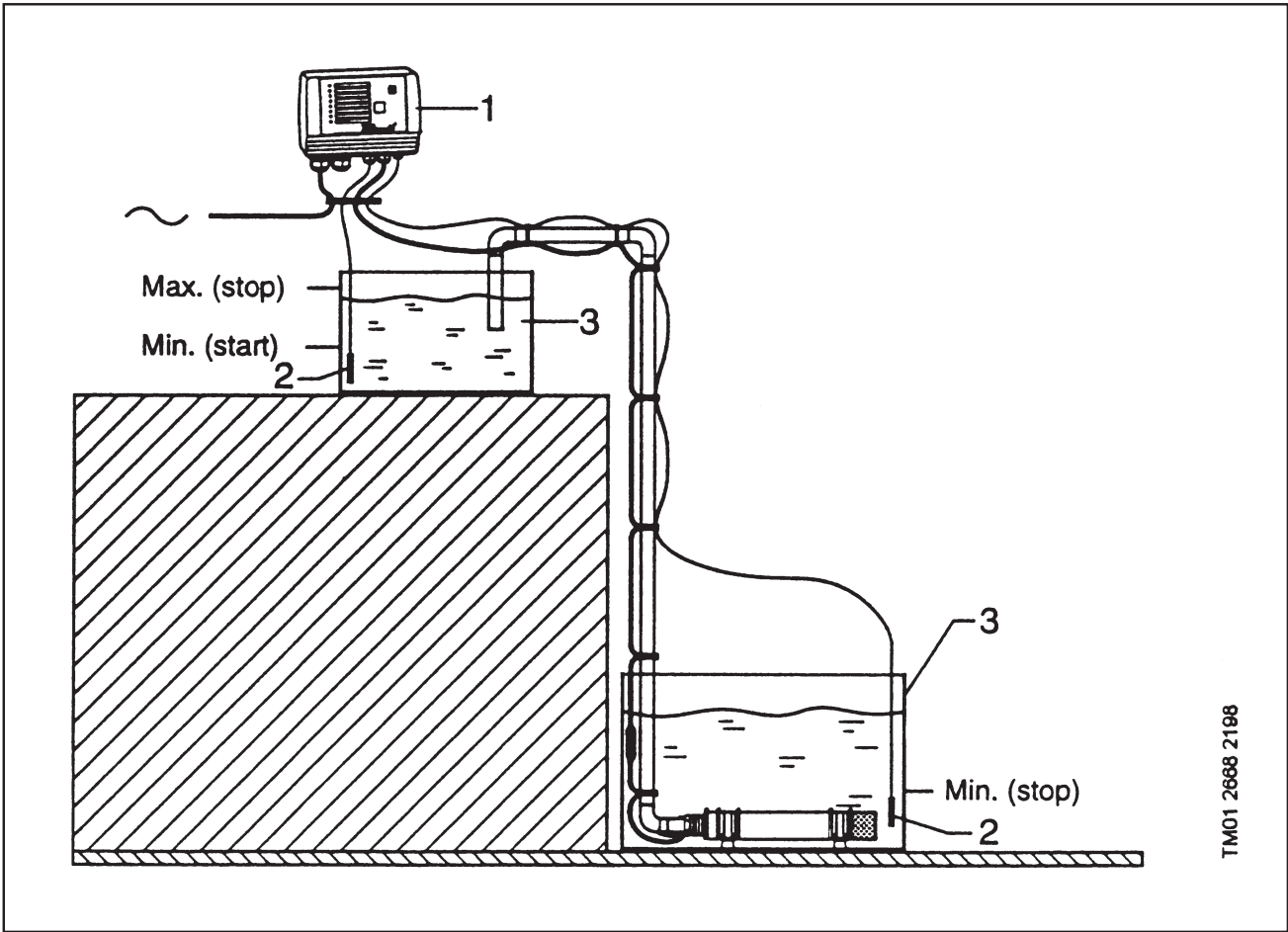


#### Description

| Pos. | Description                            |
|------|----------------------------------------|
| 1    | CU300                                  |
| 2    | pH sensor<br>Detects the water quality |
| 3    | Level sensor                           |

Pumping from One Tank to Another

Where there is a need to move water from one tank to another, the Redi-Flo3 is ideal.



Description

| Pos. | Description  |
|------|--------------|
| 1    | CU300        |
| 2    | Level sensor |
| 3    | Water tank   |

NOTE: When the Redi-Flo3 pump is installed horizontally, it is recommended that a flow sleeve be fitted. The motor must be fully submerged in the water.

Sensor 1 (tank at top)

| Level        | Description                                                                                                          |
|--------------|----------------------------------------------------------------------------------------------------------------------|
| Max. (stop)  | When the water has reached this level, the pump stops. Green indicator light in on/off-button flashes.               |
| Min. (start) | When the water has dropped to this level, the pump starts. Green indicator light in on/off-button is constantly lit. |

Sensor 2 (bottom tank)

| Level       | Description                                                     |
|-------------|-----------------------------------------------------------------|
| Min. (stop) | When water has dropped to this level, tank is empty, stop pump. |

# Status Control Box Communication

## Redi-Flo3 CU300 Status Box

The CU300 status box is a control and communication unit especially developed for the Redi-Flo3 submersible pumps.

The CU300 status box provides:

- Easy adjustment to a specific well
- Full control of Redi-Flo3 pumps
- Two-way communication with the Redi-Flo3 pumps
- Indicator lights on the front to indicate alarms
- The ability to start and stop the pump with the push of a button.

The CU300 communicates with the pump using the power leads. It is not necessary to run any extra cables between the pump and the CU300 status box.

The following alarms can be indicated by the CU300:

- No Contact
- Overvoltage
- Undervoltage
- Dry-run
- Speed Reduction
- Overtemperature
- Overload
- Sensor Alarm

The CU300 incorporates:

- External signal input for three sensors
- relay output for external alarm control
- Control according to the signals received, e.g. flow, pressure, water level and conductivity

The CU300 can communicate with the R100 infrared remote control or R100 PC software tool.

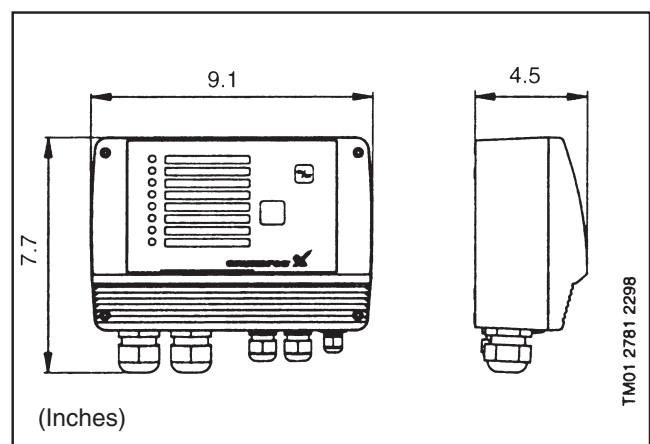
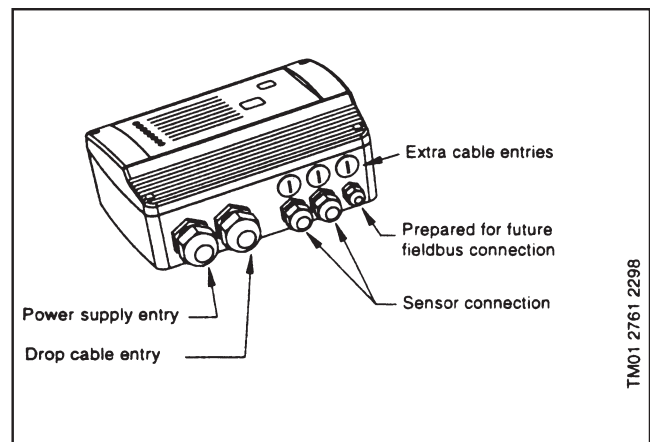
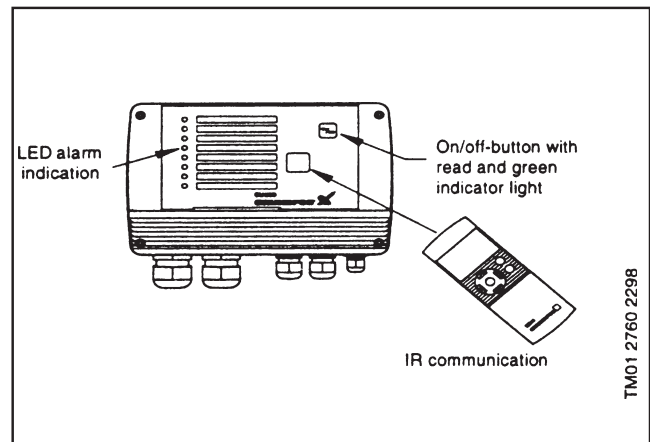
## R100 Remote Control or PC Software Tool

The R100 allows you to monitor the installation by reading current operating parameters, such as:

- Power Consumption
- Energy Consumption
- Number of Operating Hours

It allows you to change factory settings. A number of settings can be made, such as:

- Speed (Performance)
- Constant Pressure Control Mode
- De-watering Function
- Automatic Restart Time



# Multiple CU300 Installation Requirements

The CU300 Redi-Flo3 control panel communicates with the Redi-Flo3 motors via the pump power cable to turn the pumps on and off, set motor speed and monitor pump status. The technique used for performing this communication impresses a high frequency data signal on the pump power cable that is picked off by internal pump electronics and then decoded into command instructions. This is the reason for assigning unique numbers to each CU300 in a multiple unit installation. The unique number serves as a communication address between each CU panel/motor pair.

In situations where multiple CU300 pump power cables are run parallel in wiring trays or conduit and less than 10-12 inches apart, the possibility for undesired communication between units exists. When this occurs, intermittent or continuous NO CONTACT is typically seen. Other unexpected errors may also be seen.

There are two approaches available to eliminating the possibility of this occurring:

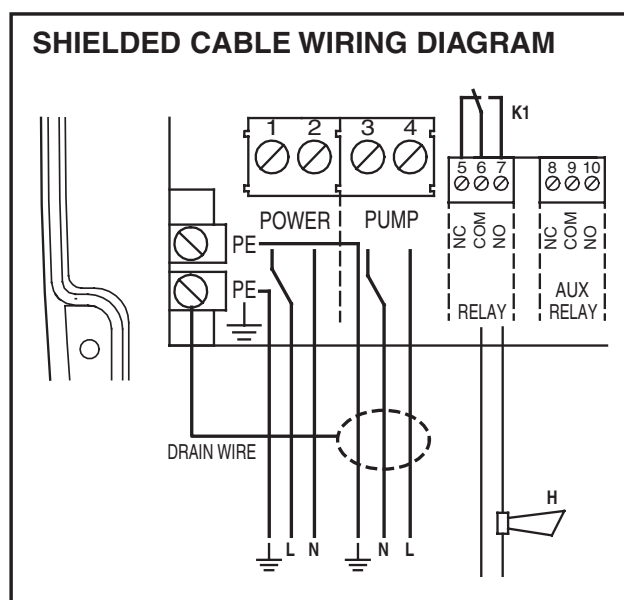
1. Physical separation of cables – maintain a minimum distance of 10-12 inches between pump power cables, and never place more than one cable in a conduit.
2. Use shielded cable – The use of shielded cable prevents cross communication between parallel cables and allows sharing of conduit and cable trays. Tie the cable shield to earth only at the CU control panel.

Suitable cables:

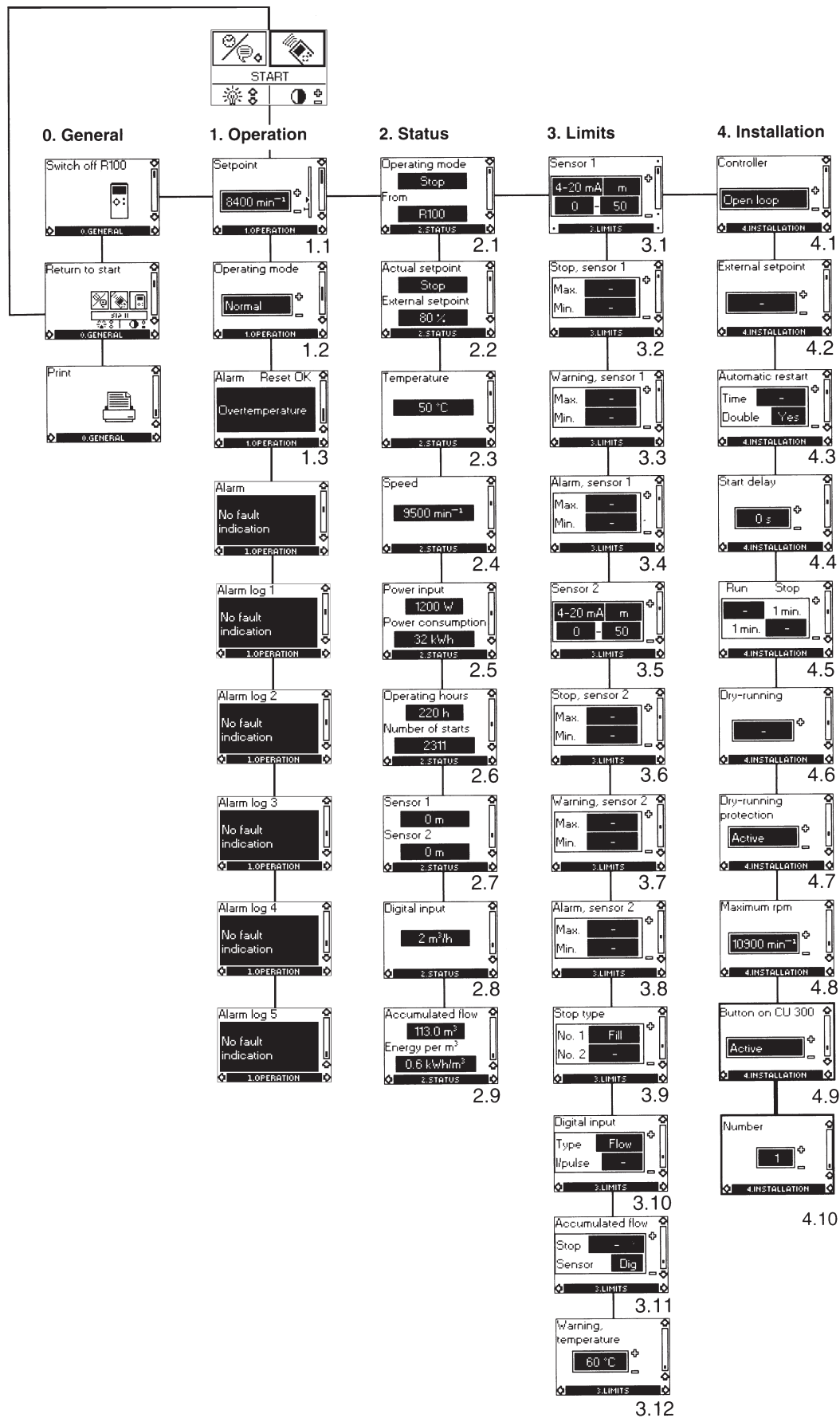
| Manf.   | Part #   | Gage |
|---------|----------|------|
| Anixter | 2A-1403S | 14   |
| Anixter | 2A-1203S | 12   |
| Anixter | 2A-1003S | 10   |

Anixter (1-800-321-1486)

In addition, Grundfos recommends applying power to only one CU panel/motor at a time while programming the CU number with the R100. This will prevent the possibility of two pumps receiving the same number assignment command.



# R100 Menu Structure



## R100 Menu Structure for the CU300 (ref. CU300 I&O)

### 0. General

#### 1. Operation

- 1.1 Set-point setting
- 1.2 Selection of operating mode
- 1.3 Alarm indication

#### 2. Status

The indication of:

- 2.1 Actual operating mode
- 2.2 Actual and external set point
- 2.3 Actual motor temperature
- 2.4 Actual motor speed
- 2.5 Actual power input and accumulated motor power consumption.
- 2.6 Accumulated number of operating hours and accumulated number if starts.
- 2.7 Actual values of sensors 1 and 2 respectively
- 2.8 Actual values of the digital input
- 2.9 Accumulated flow, and the power used to pump 1 gal.

R100 allows you to make a number of settings:

#### 3. Limits

The setting of:

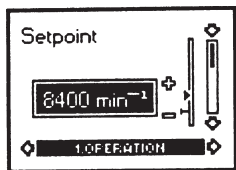
- 3.1 Sensor 1
- 3.2 Min. and max. stop limit of sensor 1
- 3.3 Min. and max. warning limit of sensor 1
- 3.4 Min. and max. alarm limit of sensor 1
- 3.5 Sensor 2
- 3.6 Min. and max. stop limit of sensor 2
- 3.7 Min. and max. warning limit of sensor 2
- 3.8 Min. and max. alarm limit of sensor 2
- 3.9 Filling or emptying
- 3.10 Setting of the function of the digital sensor connected to the digital input
- 3.11 The setting of the water quantity stop limit and the setting of the sensor to detect water quantity
- 3.12 The setting of the temperature warning limits of the motor electronics

#### 4. Installation

- 4.1 Selection of controller
- 4.2 Setting of external set-point
- 4.3 Setting of automatic restart time
- 4.4 Allocation of individual start delays
- 4.5 Setting of the stop and run times for the de-watering function
- 4.6 Setting of the value of the Dry-Run shutdown
- 4.7 Activating or deactivating the Dry-Run protection
- 4.8 Setting of the maximum motor speed
- 4.9 Activating or deactivating the on/off-button on the CU 300
- 4.10 Allocation of number where more than one CU300 is installed

## Examples of R100 displays

### Menu OPERATION



1.1

#### Set-point Setting

From the factory, the pump is set to maximum speed, 10,700 rpm. R100 allows you to reduce the pump speed by changing the setpoint. The speed can be set from 3,000–10,700 rpm, at 100 rpm intervals.

The unit of the set-point is automatically changed according to the unit of the sensor connection to sensor input no. 1 if closed loop.

EXAMPLE: Sensor input no. 1 is connected to a pressure sensor using the unit feet (ft.) and the range 0 – 200 (dependent on the actual sensor characteristics). Therefore, the set-point of display 1.1 can be set to between 0 – 200 ft.

### Menu STATUS



2.4

The displays appearing in this menu are status displays only. You cannot change settings in this menu.

#### Example

In display 2.4, the actual speed of the pump is shown.

## Accumulated Number of Operating Hours and Number of Starts



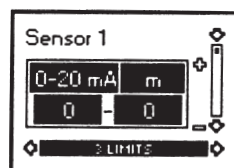
2.6

The value of operating hours and the number of starts are values accumulated from the time of installation and they cannot be reset.

Both values are stored in the motor electronics, and are kept even if the CU300 is replaced.

The number of operating hours is measured every two minutes of continuous operation, but the display value is updated every two hours.

### Menu LIMITS



3.1

#### The Setting of Sensor 1

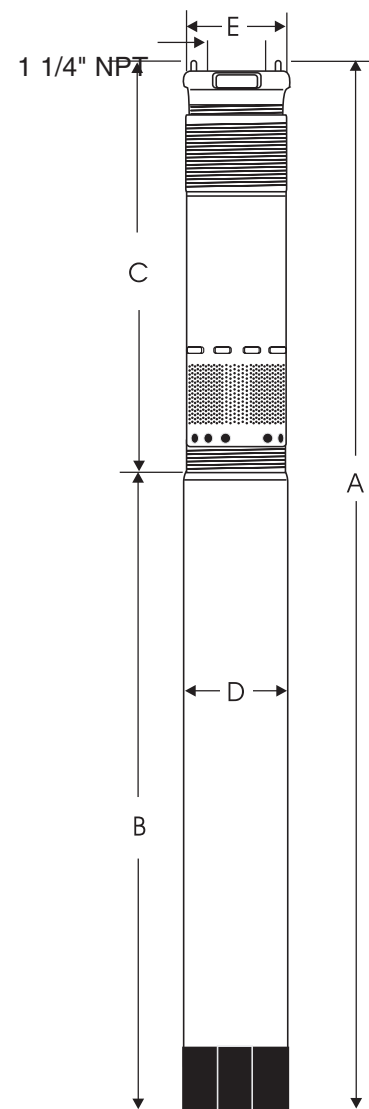
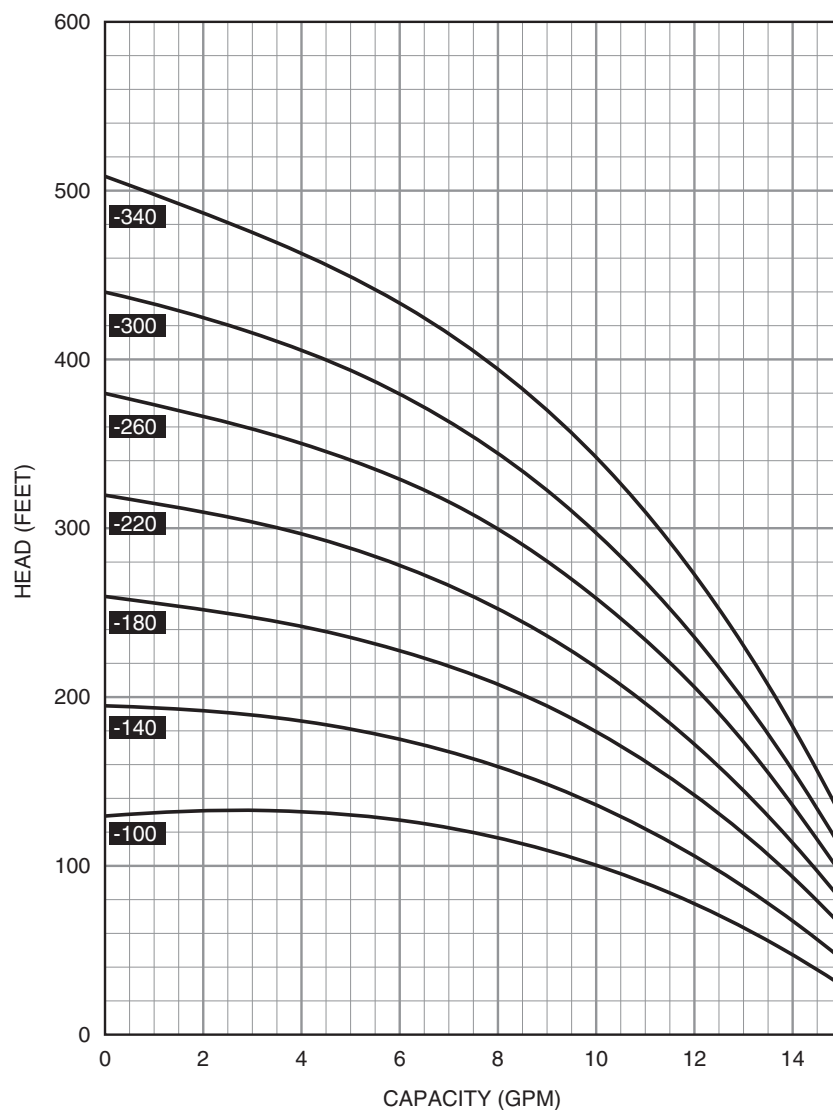
Depending on the type of sensor, the following settings can be made:

Sensor outputs:  
(not active), 0-10V, 2-10V,  
0-20mA, 4-20mA.

Setting range unit: M3/h,  
m, %, gpm, ft.

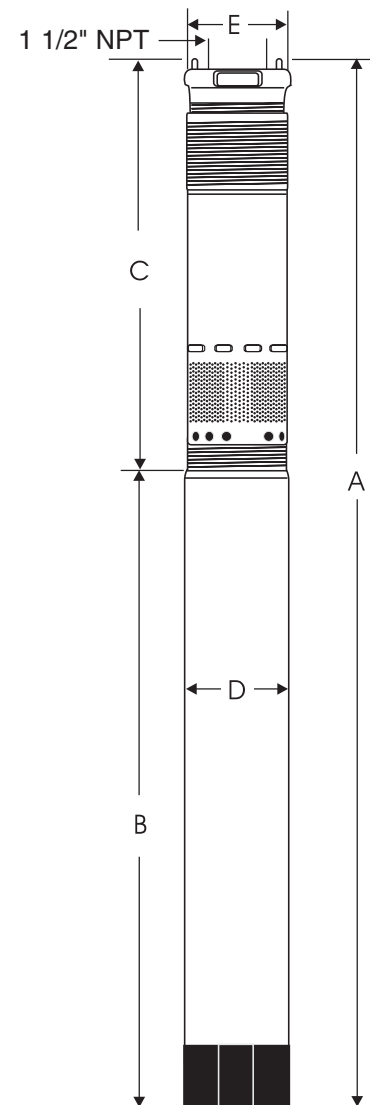
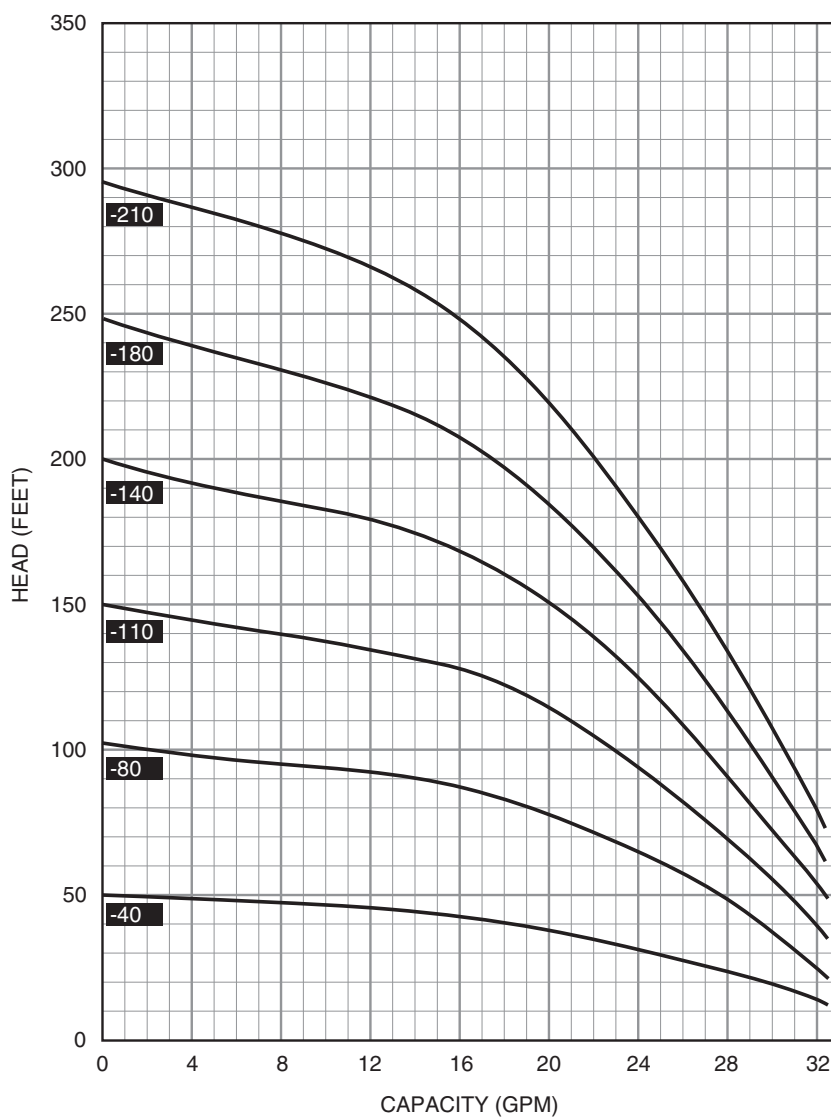
| Model #         | HP  | Size | Disch.<br>Size | Dimensions in Inches |      |      |     |     | Approx.<br>Ship Wt.<br>(pounds) |
|-----------------|-----|------|----------------|----------------------|------|------|-----|-----|---------------------------------|
|                 |     |      |                | A                    | B    | C    | D   | E   |                                 |
| 10Redi-Flo3-100 | 1/2 | 3"   | 1 1/4" NPT     | 30.4                 | 19.8 | 10.6 | 2.6 | 2.9 | 12                              |
| 10Redi-Flo3-140 | 1/2 | 3"   | 1 1/4" NPT     | 30.4                 | 19.8 | 10.6 | 2.6 | 2.9 | 12                              |
| 10Redi-Flo3-180 | 3/4 | 3"   | 1 1/4" NPT     | 31.5                 | 19.8 | 11.6 | 2.6 | 2.9 | 13                              |
| 10Redi-Flo3-220 | 3/4 | 3"   | 1 1/4" NPT     | 33.6                 | 19.8 | 13.7 | 2.6 | 2.9 | 13                              |
| 10Redi-Flo3-260 | 1   | 3"   | 1 1/4" NPT     | 35.0                 | 21.3 | 13.7 | 2.6 | 2.9 | 16                              |
| 10Redi-Flo3-300 | 1   | 3"   | 1 1/4" NPT     | 36.1                 | 21.3 | 14.8 | 2.6 | 2.9 | 16                              |
| 10Redi-Flo3-340 | 1   | 3"   | 1 1/4" NPT     | 38.2                 | 21.3 | 16.9 | 2.6 | 2.9 | 16                              |

**Note:** Weights include pump ends with motors



| Model #         | HP    | Size | Disch.<br>Size | Dimensions in Inches |      |      |     |     | Approx.<br>Ship Wt.<br>(pounds) |
|-----------------|-------|------|----------------|----------------------|------|------|-----|-----|---------------------------------|
|                 |       |      |                | A                    | B    | C    | D   | E   |                                 |
| 22Redi-Flo3-40  | 1/2   | 3"   | 1 1/2" NPT     | 30.4                 | 19.8 | 10.6 | 2.6 | 2.9 | 12                              |
| 22Redi-Flo3-80  | 1/2   | 3"   | 1 1/2" NPT     | 30.4                 | 19.8 | 10.6 | 2.6 | 2.9 | 12                              |
| 22Redi-Flo3-110 | 3/4   | 3"   | 1 1/2" NPT     | 31.5                 | 19.8 | 11.6 | 2.6 | 2.9 | 13                              |
| 22Redi-Flo3-140 | 3/4   | 3"   | 1 1/2" NPT     | 33.6                 | 19.8 | 13.7 | 2.6 | 2.9 | 13                              |
| 22Redi-Flo3-180 | 1     | 3"   | 1 1/2" NPT     | 38.2                 | 21.3 | 16.9 | 2.6 | 2.9 | 16                              |
| 22Redi-Flo3-210 | 1 1/2 | 3"   | 1 1/2" NPT     | 38.2                 | 21.3 | 16.9 | 2.6 | 2.9 | 16                              |

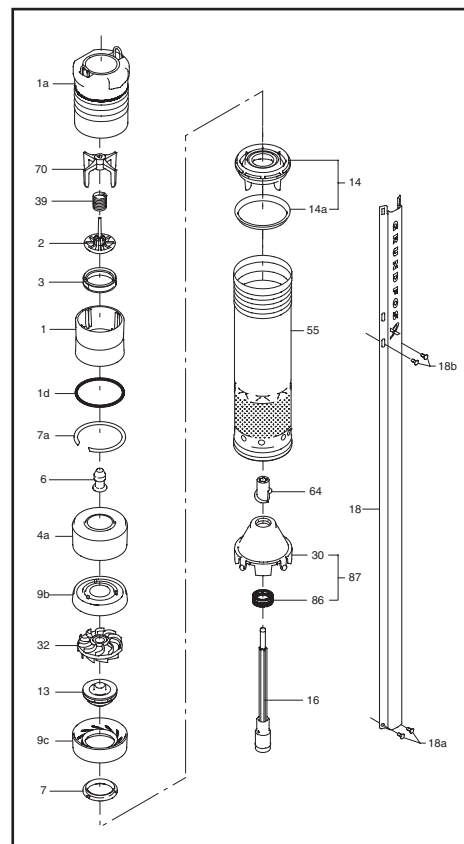
Note: Weights include pump ends with motors



# Redi-Flo3 Technical Specifications

## MATERIAL SPECIFICATION – REDI-FLO3 PUMP END

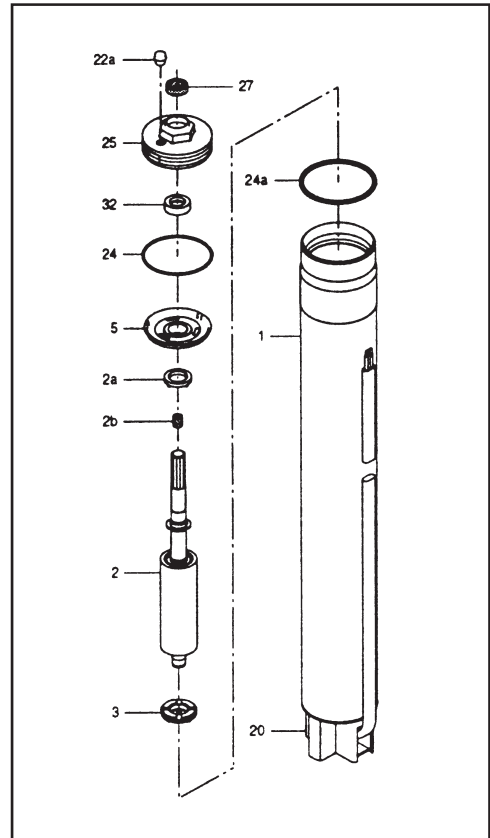
| Pos.  | Component                            | Material                          | DIN W.<br>Nr. | AISI  |
|-------|--------------------------------------|-----------------------------------|---------------|-------|
| 1     | Valve Casing                         | PVDF                              |               |       |
| 1a    | Discharge Chamber                    | Stainless Steel                   | 1.4401        | 316   |
| 1d    | O-Ring                               | FPM Rubber                        |               |       |
| 2     | Valve Cone                           | PVDF                              |               |       |
| 3     | Valve Seat                           | FPM Rubber                        |               |       |
| 9b    | Top Chamber                          | PVDF                              |               |       |
| 4a    | Empty Chamber                        | PVDF                              |               |       |
| 6     | Top Bearing                          | FPM Rubber                        |               |       |
| 7     | Neck Ring                            | PVDF                              |               |       |
| 7a    | Lock Ring                            | Stainless Steel                   | 1.4401        | 316   |
| 32    | Guide Vanes                          | PVDF                              |               |       |
| 9c    | Bottom Chamber                       | PVDF                              |               |       |
| 13    | Impeller w/ tungsten carbide bearing | PVDF                              |               |       |
| 14    | Suction Interconnector               | PVDF                              |               |       |
| 14a   | Ring                                 | Stainless Steel                   | 1.4401        | 316   |
| 16    | Shaft w/<br>coupling                 | Stainless Steel<br>Sintered Steel | 1.4401        | 316   |
| 18    | Cable Guard                          | Stainless Steel                   | 1.4401        | 316   |
| 18a-b | Cable Guard Screws                   | Stainless Steel                   | 1.4401        | 316   |
| 30    | Pressure Equalization Cone           | PVDF                              |               |       |
| 39    | Valve Spring                         | Stainless Steel                   | 1.4406        | 316LN |
| 55    | Pump Sleeve                          | Stainless Steel                   | 1.4401        | 316   |
| 70    | Valve Guide                          | PVDF                              |               |       |
| 64    | Priming Screw                        | PVDF                              |               |       |
| 86    | Lip Seal Ring                        | FPM Rubber                        |               |       |



# Redi-Flo3 Technical Specifications

## MATERIAL SPECIFICATION – REDI-FLO3 PUMP MOTOR

| Pos. | Component              | Material                     | DIN W. Nr. | AISI |
|------|------------------------|------------------------------|------------|------|
| 1    | Stator                 | Stainless Steel              | 1.4401     | 316  |
| 2    | Rotor                  | Stainless Steel              | 1.4401     | 316  |
| 2a   | Stop Ring              | PP                           |            |      |
| 2b   | Filter                 | Polyester                    |            |      |
| 3    | Thrust Bearing         | Carbon                       |            |      |
| 5    | Radial Bearing         | Ceramic/<br>tungsten carbide |            |      |
| 20   | Motor Cable<br>w/ plug | Tefzel                       |            |      |
|      |                        | PVDF                         |            |      |
| 22a  | Filling Plug           | FPM Rubber                   |            |      |
| 24   | O-Ring                 | FPM Rubber                   |            |      |
| 24a  | O-Ring                 | FPM Rubber                   |            |      |
| 25   | Top Cover              | PPS                          |            |      |
| 27   | Filter                 | Polyester                    |            |      |
| 32   | Shaft Seal             | FPM Rubber                   |            |      |
|      | Motor Liquid           | SML-2                        |            |      |

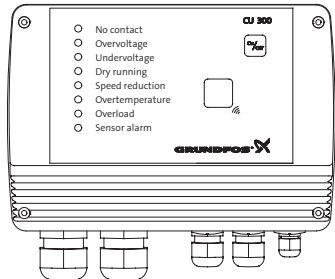


# Redi-Flo3 Technical Data

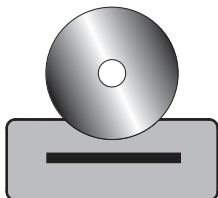
| ELECTRIC                                                                                              |                                                                                                                                                                                                                      |
|-------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Supply Voltage:                                                                                       | 1x200-240V +6%/-10%, 50/60 Hz, PE<br>1x100-115V                                                                                                                                                                      |
| Operation via Generator:                                                                              | As a minimum, the generator output must be equal to the motor P1[KW] +10%                                                                                                                                            |
| Starting Current:                                                                                     | The motor starting current is equal to the highest value stated on the motor nameplate                                                                                                                               |
| Starting:                                                                                             | Soft-start                                                                                                                                                                                                           |
| Run-up Time:                                                                                          | Maximum: 2 seconds                                                                                                                                                                                                   |
| Motor Protection:                                                                                     | The motor is protected against:<br>Dry running, overvoltage, undervoltage, overload, overtemperature                                                                                                                 |
| Power Factor:                                                                                         | PF=1                                                                                                                                                                                                                 |
| Service Factor:                                                                                       | 0.5[Hp]-1.85 @ 115V/230V<br>0.75[Hp]-2.05 @ 230V<br>1.0[Hp]-2.25 @ 230V<br>1.5[Hp]-1.65 @ 230V                                                                                                                       |
| Motor Cable:                                                                                          | 3 Wire, Tefzel Cable Kit                                                                                                                                                                                             |
| Motor Liquid:                                                                                         | Type SML 2                                                                                                                                                                                                           |
| pH Values:                                                                                            | 2-13                                                                                                                                                                                                                 |
| Liquid Temperature:                                                                                   | The temperature of the pumped liquid should not exceed 104°F.                                                                                                                                                        |
| Note: If liquids with a viscosity higher than that of water are to be pumped, please contact GRUNDFOS |                                                                                                                                                                                                                      |
| Minimum Ambient Temperature:                                                                          | 4° F                                                                                                                                                                                                                 |
| Maximum Ambient Temperature:                                                                          | +140° F                                                                                                                                                                                                              |
| Frost Protection:                                                                                     | If the pump is to be stored after use, it must be stored in a frost-free location or it must be ensured that the motor liquid is frost-proof. Otherwise motor must be stored without being filled with motor liquid. |
| OPERATING CONDITIONS                                                                                  |                                                                                                                                                                                                                      |
| Minimum Ambient Fluid Temperature:                                                                    | 32° F                                                                                                                                                                                                                |
| Maximum Ambient Fluid Temperature:                                                                    | +104° F                                                                                                                                                                                                              |
| APPROXIMATE DIMENSIONS AND WEIGHT                                                                     |                                                                                                                                                                                                                      |
| <b>Motor Dimensions (MSE - NE 3):</b>                                                                 |                                                                                                                                                                                                                      |
| 0.33-0.50A[Hp]                                                                                        | 20.9" length x 2.68" diameter                                                                                                                                                                                        |
| 0.50-0.75B[Hp]                                                                                        | 20.9" length x 2.68" diameter                                                                                                                                                                                        |
| 1.0-1.5C[Hp]                                                                                          | 22.3" length x 2.68" diameter                                                                                                                                                                                        |
| Pump Diameter, incl. cable guard:                                                                     | 2.91"                                                                                                                                                                                                                |
| <b>Motor Weights (MSE - NE 3):</b>                                                                    |                                                                                                                                                                                                                      |
| 0.33-0.50A[Hp]                                                                                        | 6.0 lbs                                                                                                                                                                                                              |
| 0.50-0.75B[Hp]                                                                                        | 7.1 lbs                                                                                                                                                                                                              |
| 1.0-1.5C[Hp]                                                                                          | 8.2 lb                                                                                                                                                                                                               |
| <b>Pump End Dimensions:</b>                                                                           |                                                                                                                                                                                                                      |
| Pump Diameter:                                                                                        | 2.68"                                                                                                                                                                                                                |
| Pump Diameter, incl. cable guard:                                                                     | 2.91"                                                                                                                                                                                                                |
| <b>Pump End Dimensions (min. and max.):</b>                                                           |                                                                                                                                                                                                                      |
| 10 Redi-Flo3                                                                                          | 10.6" to 16.9"                                                                                                                                                                                                       |
| 22 Redi-Flo3                                                                                          | 10.6" to 16.9"                                                                                                                                                                                                       |
| <b>Pump End Weights (min. and max.):</b>                                                              |                                                                                                                                                                                                                      |
| All                                                                                                   | 2.2 lbs to 3.5 lbs                                                                                                                                                                                                   |
| Well Diameter (minimum):                                                                              | 3"                                                                                                                                                                                                                   |
| Installation Depth (maximum):                                                                         | 500 feet, below static water level                                                                                                                                                                                   |

# Redi-Flo3 Accessories

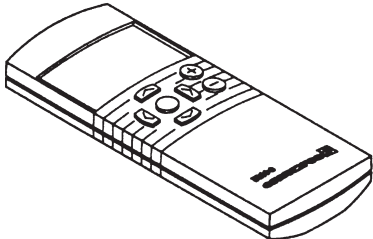
## CU300 Status Box

| Description                                                                                                                                                                                                                                                                                                                            | Product no. |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| CU300 Status Box                                                                                                                                                                                                                                                                                                                       | 96422776    |
|  <p>CU 300</p> <ul style="list-style-type: none"> <li>No contact</li> <li>Overvoltage</li> <li>Undervoltage</li> <li>Dry running</li> <li>Speed reduction</li> <li>Overtemperature</li> <li>Overload</li> <li>Sensor alarm</li> </ul> <p>GRUNDFOS</p> |             |

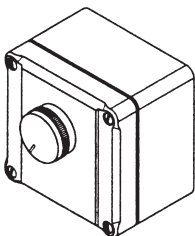
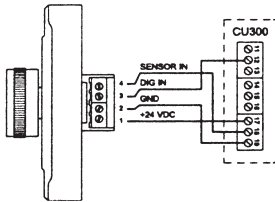
## CU 300 PC Tool Software

| Description                                                                         | Product no. |
|-------------------------------------------------------------------------------------|-------------|
| CU 300 PC Tool Software                                                             | 96432875    |
|  |             |

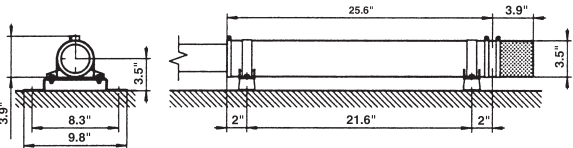
## R100 Remote Control

| Description                                                                                              | Product no. |
|----------------------------------------------------------------------------------------------------------|-------------|
| The R100 is used for wireless infrared communication with the CU300                                      | 625333      |
|  <p>TM00 8367 2796</p> |             |

## Potentiometer

| Description                                                                                                                                                                                                     | Version                                                | Product no. |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|-------------|
| External potentiometer with cabinet for wall mounting.<br>Screened cables, 4-wire cable, max. length of cable: 100m                                                                                             | Grundfos potentiometer, SPP1<br>Enclosure class: IP 55 | 655468      |
|   <p>TM00 2604 4793 - TM01 3291 3798</p> |                                                        |             |

## Redi-Flo3 - Flow Sleeve

| Description          | Product no. |  <p>TM01 3292 3798</p> |
|----------------------|-------------|------------------------------------------------------------------------------------------------------------|
| Flow Sleeve Complete | 96037505    |                                                                                                            |











|                |           |
|----------------|-----------|
| L-RF-TL-014    | Rev. 5/06 |
| PRINTED IN USA |           |

Subject to alterations.

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