



Grundfos
Dedicated Controls







be
think
innovate

GRUNDFOS

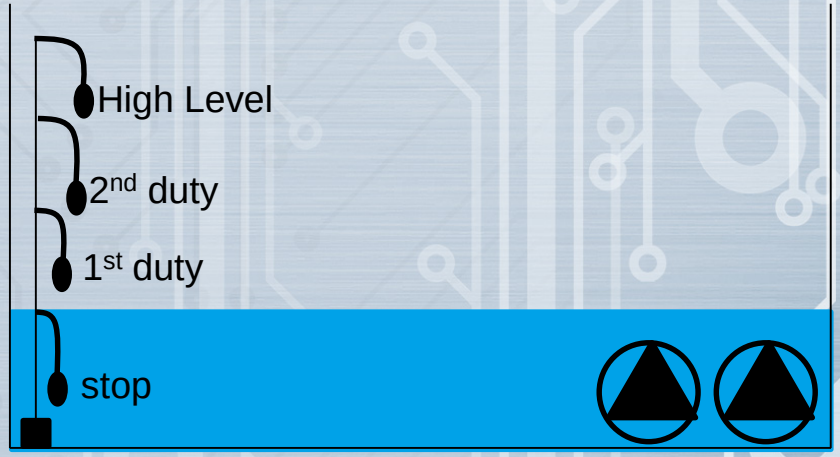
Pain Point

1. Pump Clogging
2. Retention of water within pit
3. Pump Operation
4. Layer formed within tank



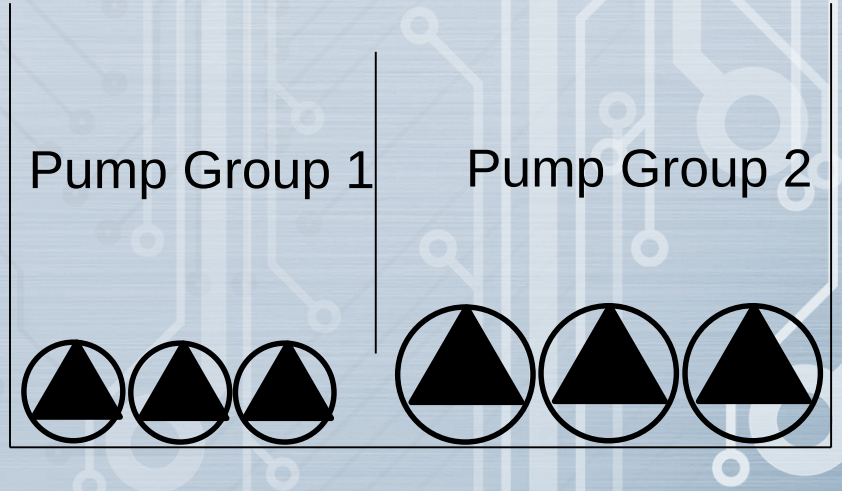
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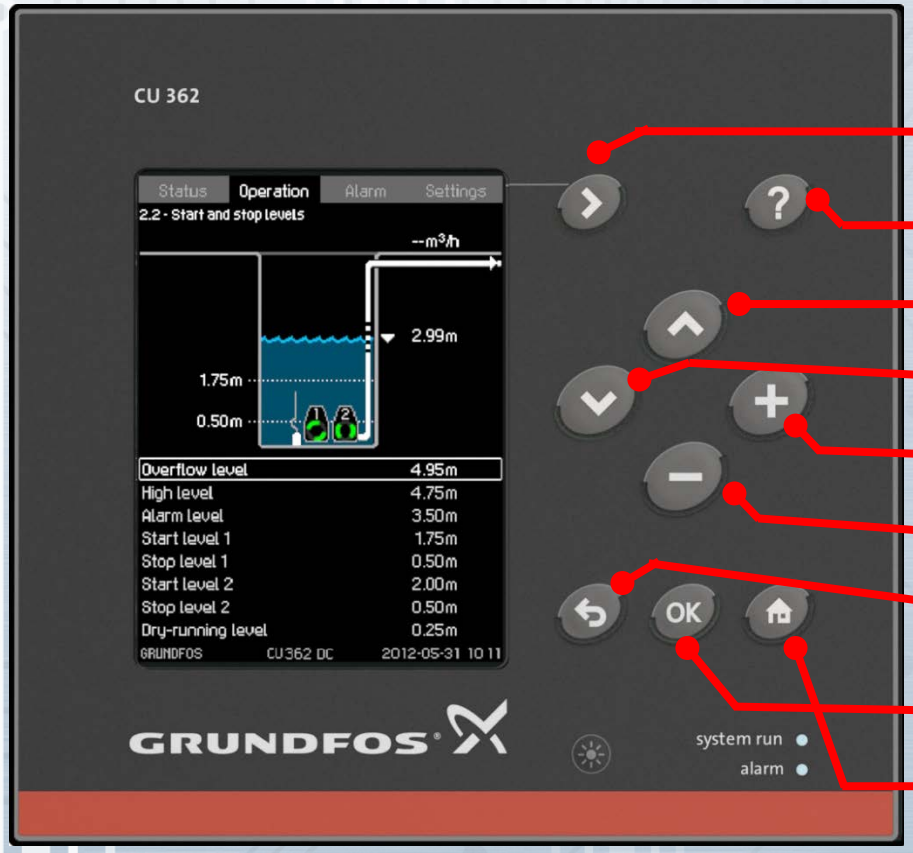
1. Pump Clogging
2. Retention of water within pit
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4. Layer formed within tank wall




CU 362
Status
Operation
Alarm
Settings
2.2 - Start and stop levels
--m³/h
2.99m
1.75m
0.50m
Overflow level 4.95m
High level 4.75m
Alarm level 3.50m
Start level 1 1.75m
Stop level 1 0.50m
Start level 2 2.00m
Stop level 2 0.50m
Dry-running level 0.25m
GRUNDFOS CU362 DC 2012-05-31 10 11
OK
GRUNDFOS
system run
alarm

Functions

NOTE: Buttons are only active when the green indication light is on.



- MENU
- HELP
- UP in list
- DOWN in list
- INCREASE value
- DECREASE value
- GO BACK one page
- OK (= accept)
- HOME (= return to status picture)

Effective and reliable control functions

Basic functions

- Emptying function
- 1-6 pumps controlling
- Pump grouping
- Pump alternation
- Parallel running of all pumps on individual start levels
- Pump start and stop delays
- Alarm settings



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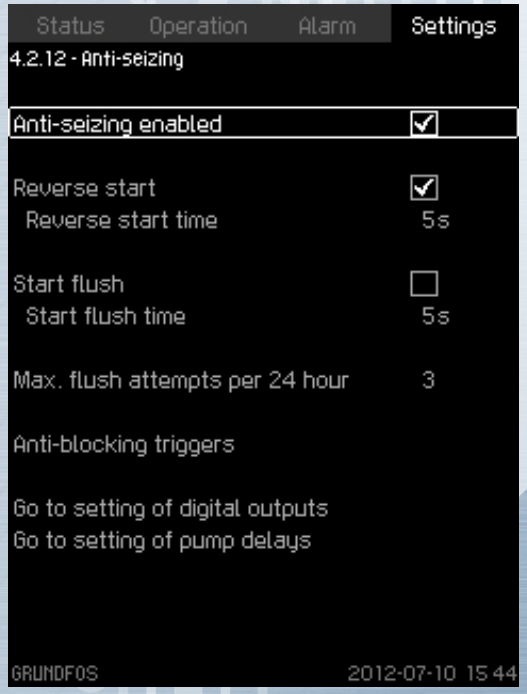
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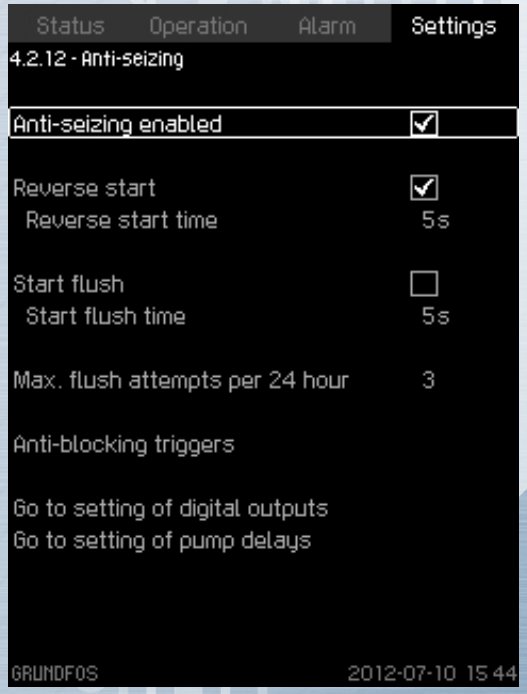
Anti Clogging

- **Motor will operate in reverse direction**
- **Prevent motor from heating from clogging**
- **Available for motor more than 4kW**
- **Maximum attempt 3 times per 24 hour**
- **Alarm will be trigger after maximum tries**



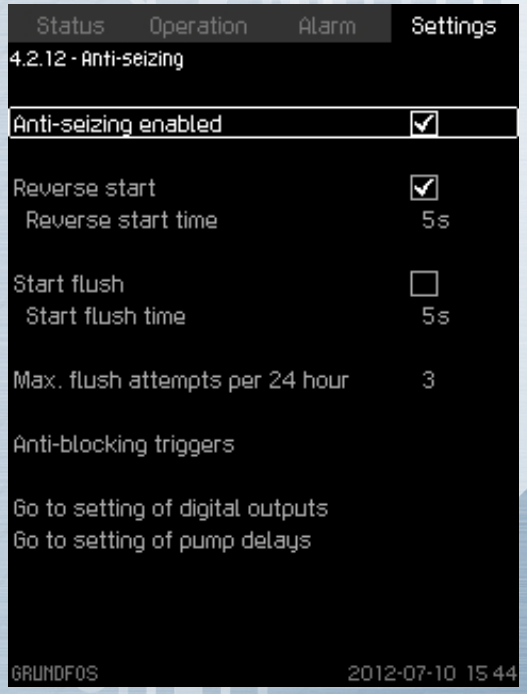
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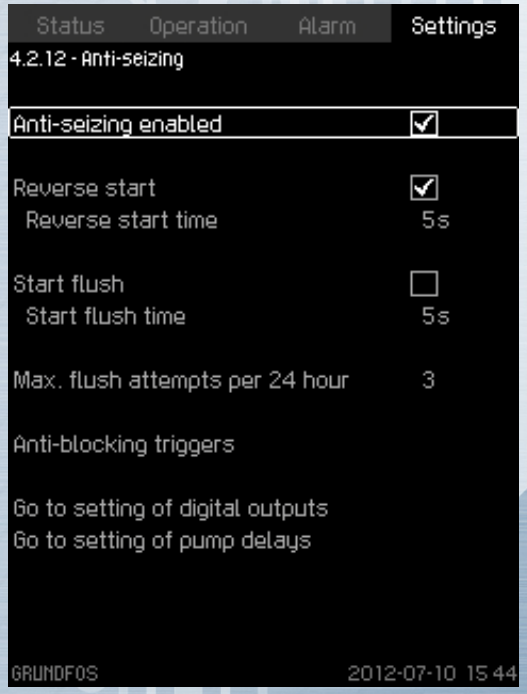
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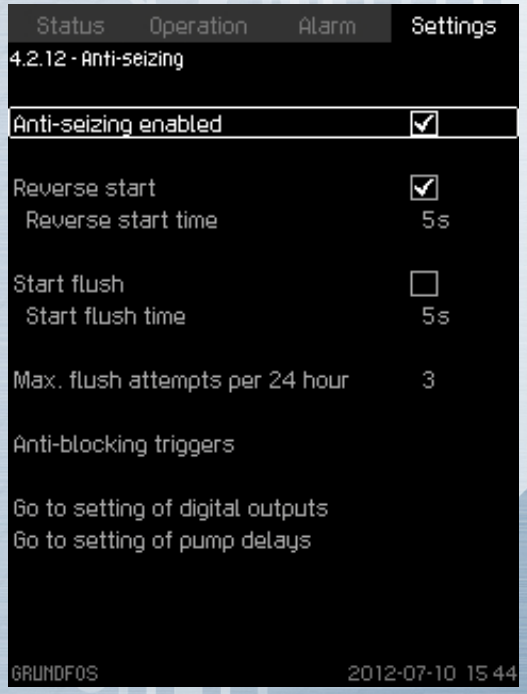
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Anti-seizing

- **Recommended to use when no inflow for a period of time**
- **Prevent mechanical seal seizing**
- **Prevent stator seizing**
- **Required Variable Frequency Drive**



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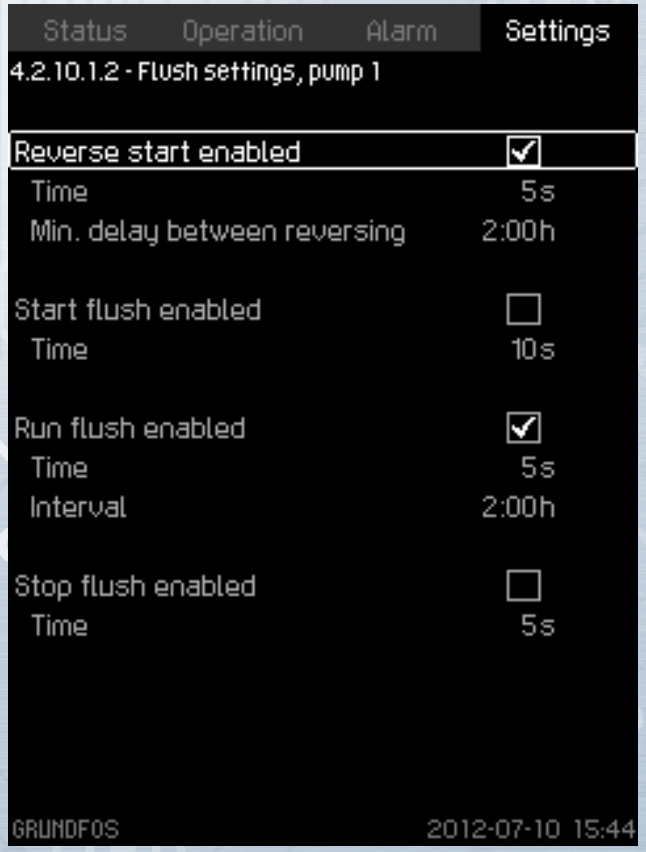


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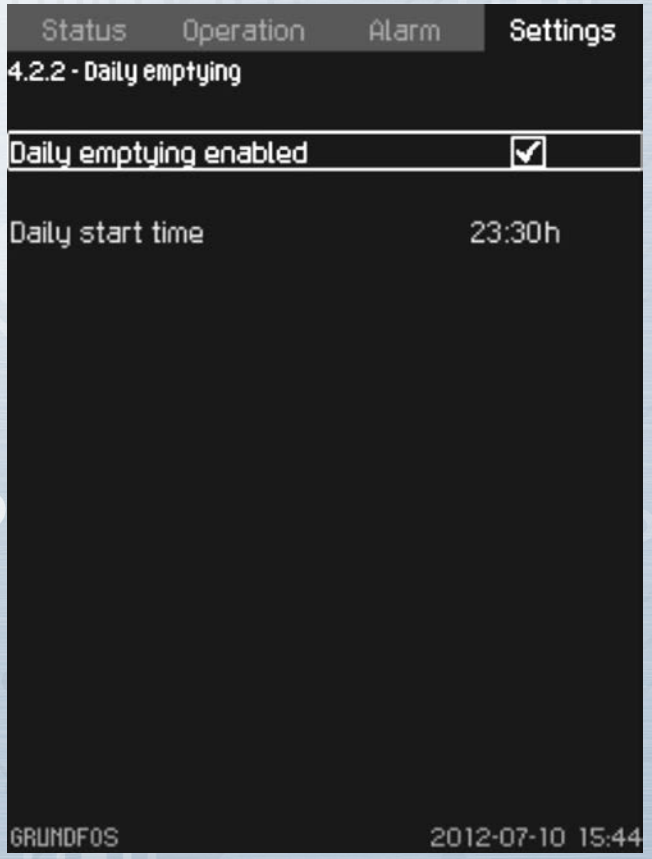
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- **Required Variable Frequency Drive**



Reverse Start

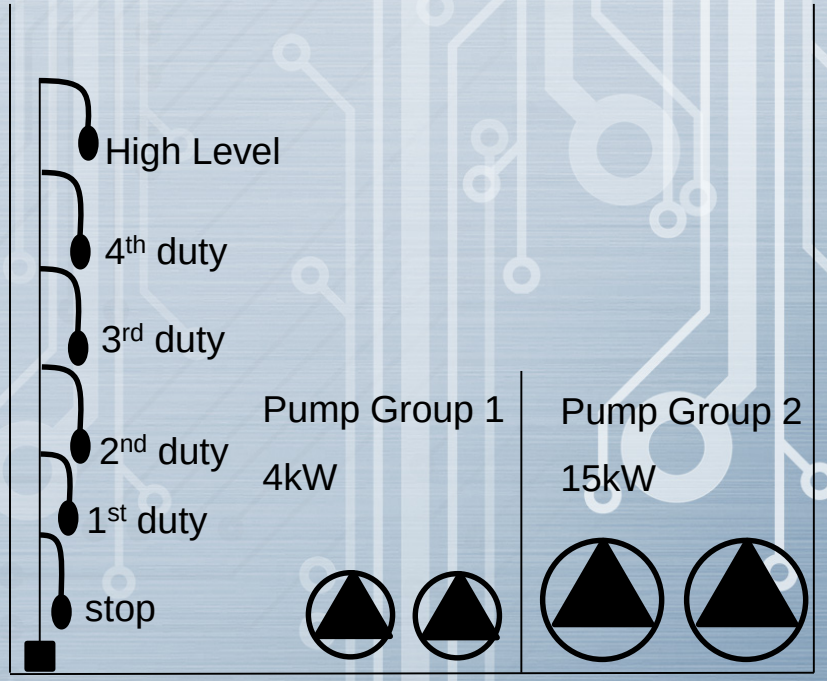


Daily emptying



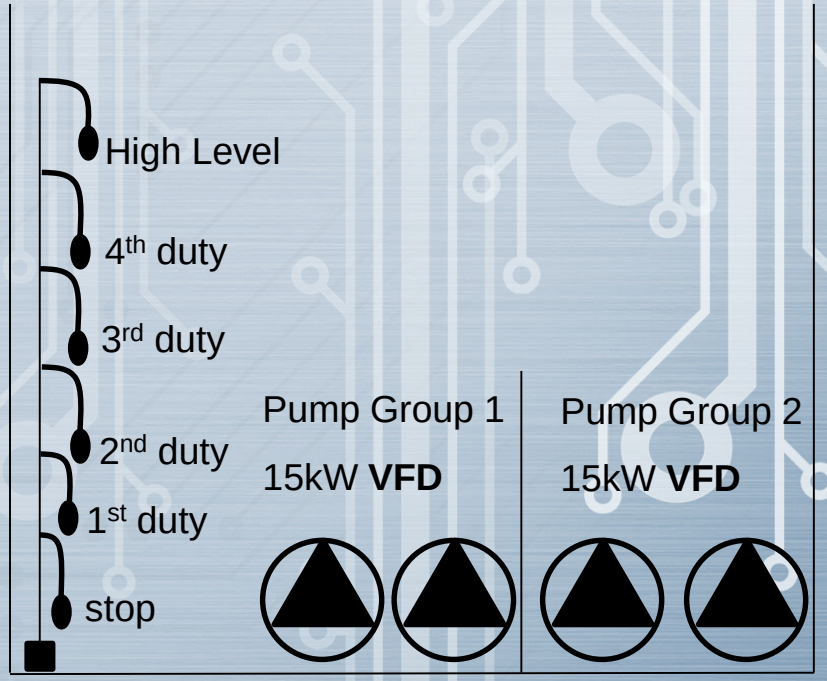
Pump Operation

Inflow	Action
Normal (1st Duty Pump)	1 pump in Group 1 operates
Higher level (2nd Duty Pump)	2 pumps in Group 1 operates
Higher level (3rd Duty Pump)	2 pumps in Group 1 stops. 1 pump in Group 2 operates
Highest level (4th Duty Pump)	2 pumps in Group 2 operates



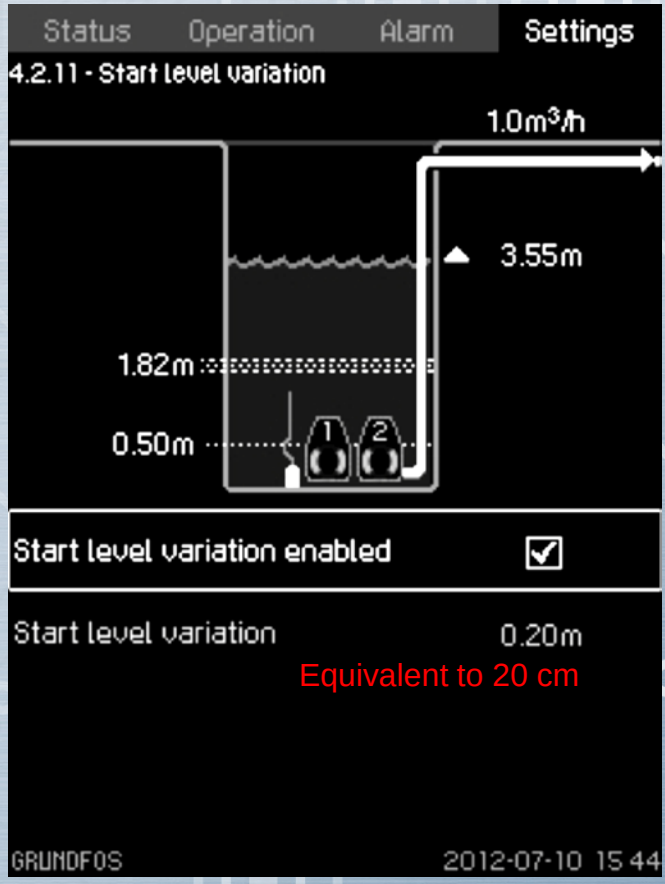
Pump Operation

Inflow	Action
Normal (1st Duty Pump)	1 pump in Group 1 operates
Higher level (2nd Duty Pump)	1 pumps in Group 2 operates
Higher level (3rd Duty Pump)	Additional 1 pump in Group 1 operates
Highest level (4th Duty Pump)	2 pumps in Group 1 operates 2 pumps in Group 2 operates



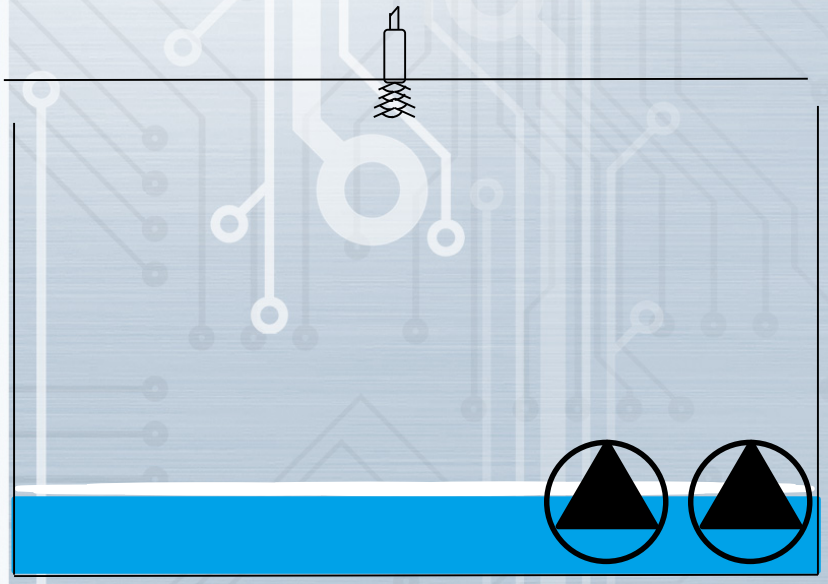
Start Level Variation

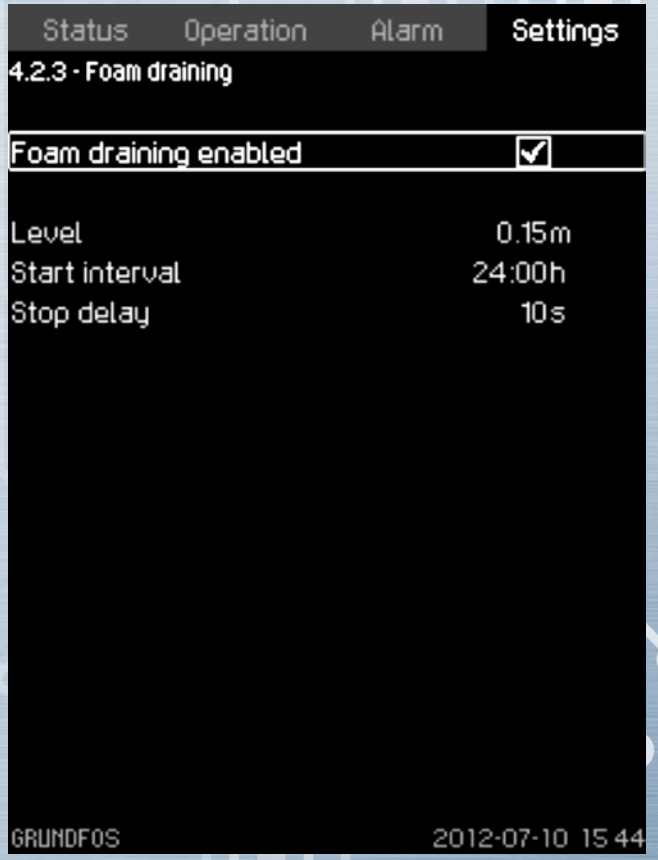
- **Reduce sedimentation around tank inner wall**
- **Reduce grease forming around tank inner wall**



Foaming

- **Drain out all the foam**
- **Reduce foam sticking to tank inner wall**



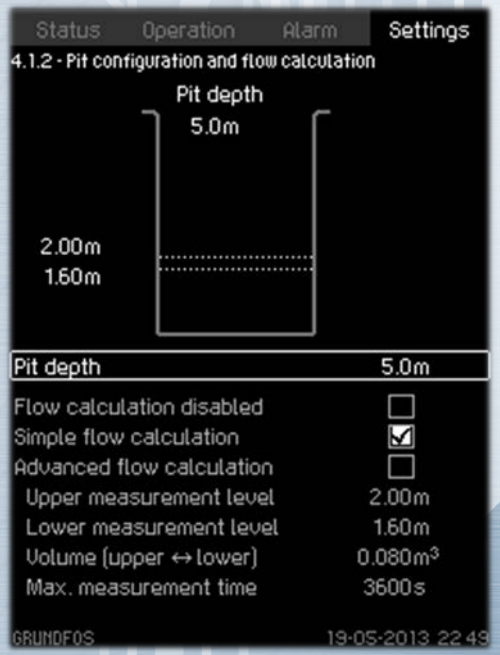


Simple flow calculation

Simple flow calculation offers a fast and simple estimate of the flow trough the pit, with only a few parameters.

- Upper measurement level
- Lower measurement level
- volume between upper and lower level
- Maximum measurement time
- No sensors needed

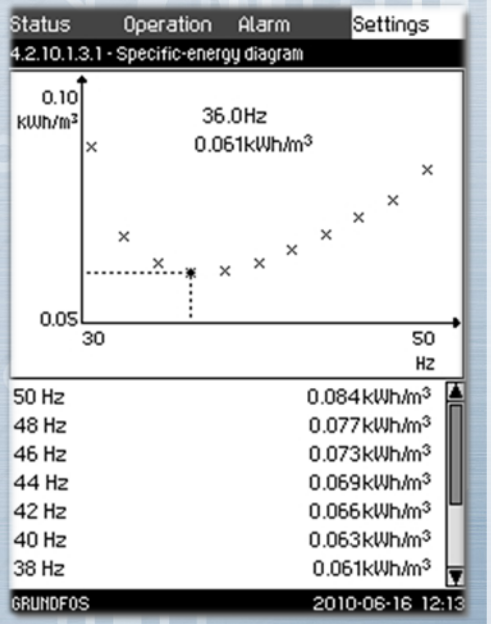
Flow is measured by calculating the time between upper level and lower level, and the volume entered.



Automatic Energy Optimization

Enable the learning function
- after a number of cycles the pump system will capture the optimal duty point of the pump and operate at that speed.

- Use either a flowmeter or advanced flow calculation
- Use VFD to get power
- Advanced flow calculation requires a pressure transmitter



Automatic Energy Optimization will:

- Continuously operate the pump at optimal duty point
- Continuously monitoring system behavior to ensure pump is at optimal duty point
- During peak period, controller will be operating at required duty point without restriction

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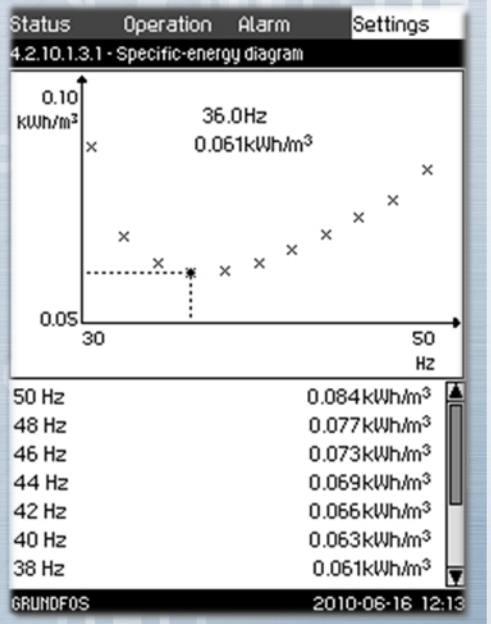
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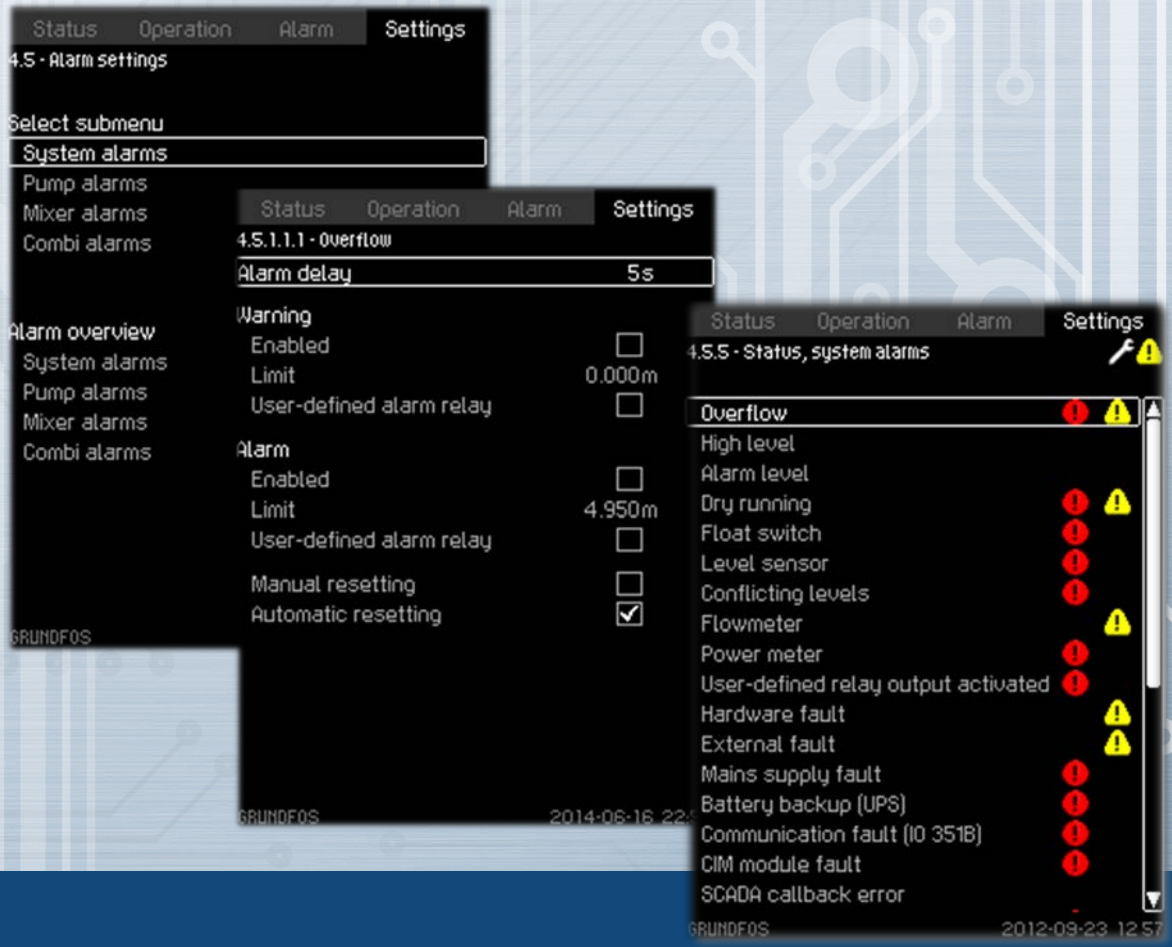
Energy Saving



Alarm settings

Dedicated Controls allow for various alarms and warnings

- 33 system alarms
- 25 pump alarms for each pump (total 150 for 6 pumps)
- in total 183 different alarms



Thank you for your time and attention!