

**Operating Manual
for
Operator Panel**

**RO 2300-2500
Series**

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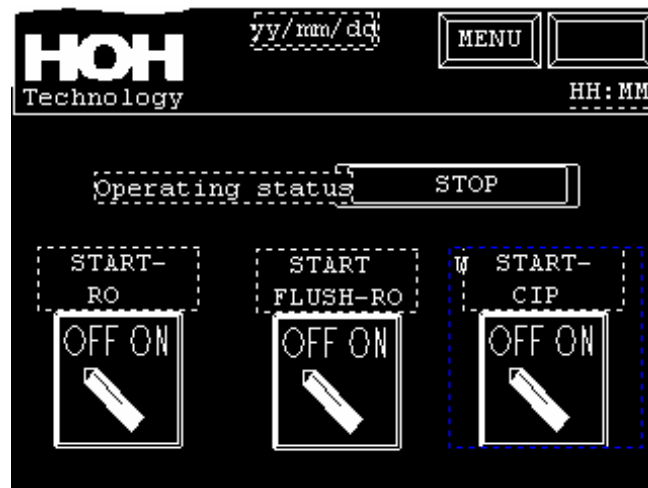
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1. Menu



- 1.1 Information in menu:
All screen displays are designed with a header stating date, time and type of plant being monitored. When an alarm occurs, the alarm text in the pushbutton in the right corner will start to flash with slow frequency.
Push **Alarm**
On the alarm side all active alarms are displayed.
Push **MENU**
And you will return to this directory.
Push **yy/mm/dd**.
to adjust date and time.

- 1.2 Functions in menu:
- Push **Operation RO** : On the operating page it is possible to start and stop operation, flush and possible CIP cleaning.
- Push **Operation setting**: In operation setting you choose settings for start-up of RO plant Automatic flush of plant.
(This display is protected by a password (see section 14.0)
- Push **Mimic**: On the mimic page is shown operation and status of valves/pumps.
- Push **Hour counter**: On the hour-counter page are shown operating hours, valve operations, starts, and CIP cleaning of RO plant.
- Push **Alarm setting**: In alarm setting you choose settings for set point and delays of alarms.
(This display is protected by a password (see section 14.0)
- Push **Language**: On the language page you may choose between different languages for the displays.
- Push **Type of plant**: On the type of plant page you can select type of plant and options.
(This display is protected by a password (see section 14.0)



2.1 Information in operation:

Buttons for start, stop of plant and start, stop manual flush. By CIP option, this option is operated from here.

When the button is activated, it changes position between off-on.

Operating status for RO plant is displayed in the fields beside the text line.

2.2 Functions in Operation:

Push OFF-ON Start-RO For start/stop of plant.

Push OFF-ON Start flush-RO For start/stop of plant flushing.

Push OFF-ON Start-CIP-RO For start/stop CIP cleaning of plant.

HOH Technology		yy/mm/dd	MENU	HH:MM
Delayed start water req.	12345.678	Sec.		
Delayed stop water req.	12345.678	Sec.		
Delayed open Y1-inlet	12345.678	Sec.		
Delayed start P1	12345.678	Sec.		
Delayed open Y2-permeate	12345.678	Sec.		
Delayed close Y3-Drain	12345.678	Sec.		
Forsinket luk Y5, Conc.	12345.678	Sec.		

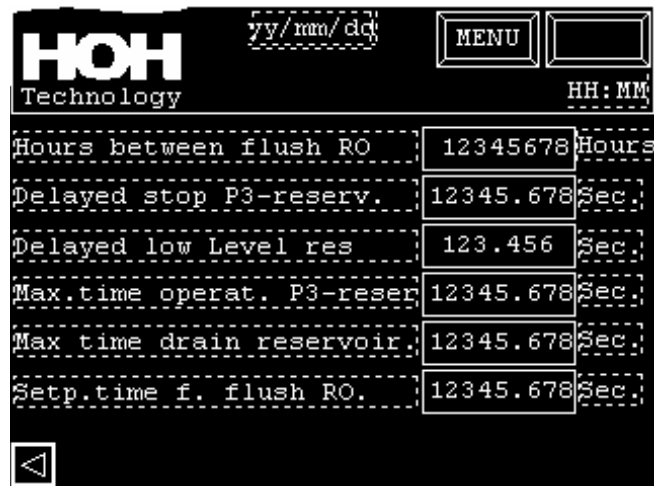
3.1 Information in Operation setting 1:
Times for delays of start-up, valve and pump operations.

3.2 Functions in Operation setting 1:

Here you may change times of delays of start and stop of the plant on level switches.
You can insert delays for start of pump and opening/closing of valves.

Data changes:

In order to change a setting, push one of the fields. A pop-up keyboard will appear on the display screen and the new value can be entered and terminated on ENT.



- 4.1 Information in Operation setting 2:
 Time for delays of automatic flushes of the RO plant.
 Time for duration of automatic flush of RO plant.
 Delays of levels in reservoir

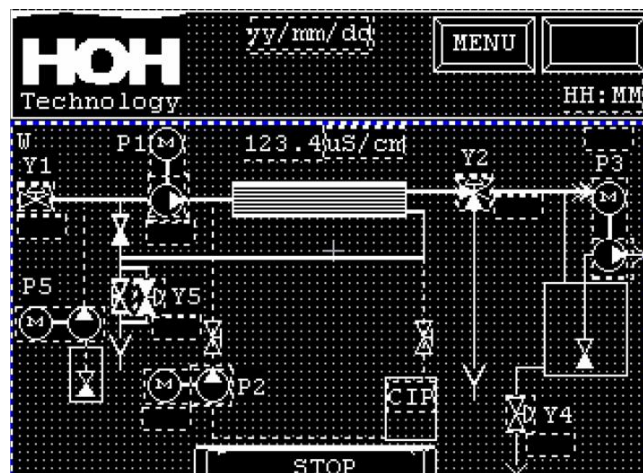
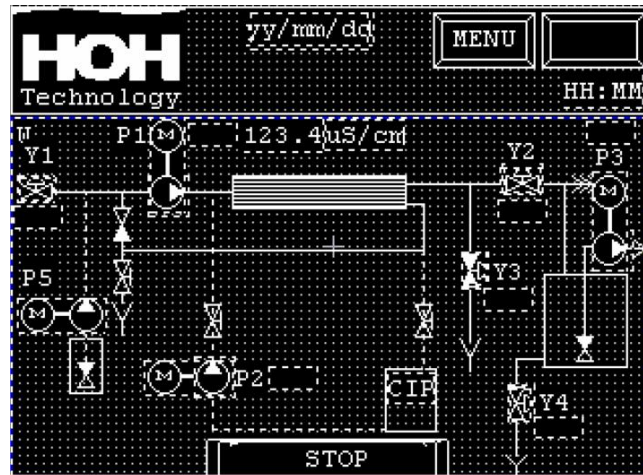
- 4.2 Functions in Operation setting 2:

Here you may change times for flush of RO plant and times for delays of levels in the reservoir (option). These times can be used for controlling the reservoir pump P3 (option).

Data changes:

In order to change a setting, push one of the fields. A pop-up keyboard will appear on the display screen, and the new value can be entered and terminated on ENT.

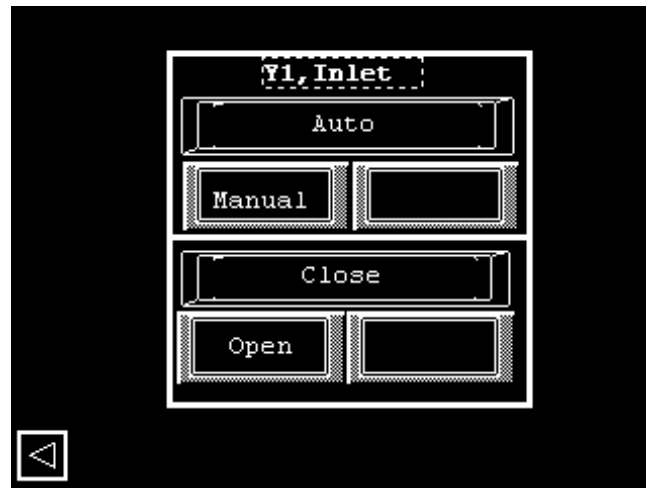
5. Mimic.



5.1 Information in Mimic:

- Measuring of conductivity during regeneration (*if installed*).
- Operating status of plant
- Operating status of valves and pumps.
- Pumps change colour. (black = stopped, white = operating)
- Valves change colour. (black = closed, white = open.)

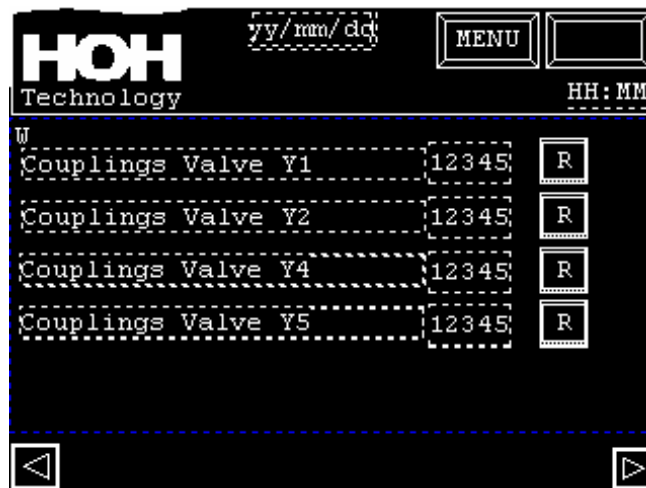
By pushing a valve or pump you get an option for manual service of components. This option is protected by a password.



You must change to manual to make service active. The plant must be stopped in order to be able to operate the buttons.


When you return to Operation setting, all components change back to Auto. Plant must be stopped for manual service.

6 Hour counters 1



6.1 Information in Counters 1:
Number of couplings on the automatic valves of the plant.

6.2 Functions in "Counters":

Push the  button to reset the coupling counters of the valve. This function is protected by password (See section 14.0)

Push  to proceed to next page.

7. Counters 2

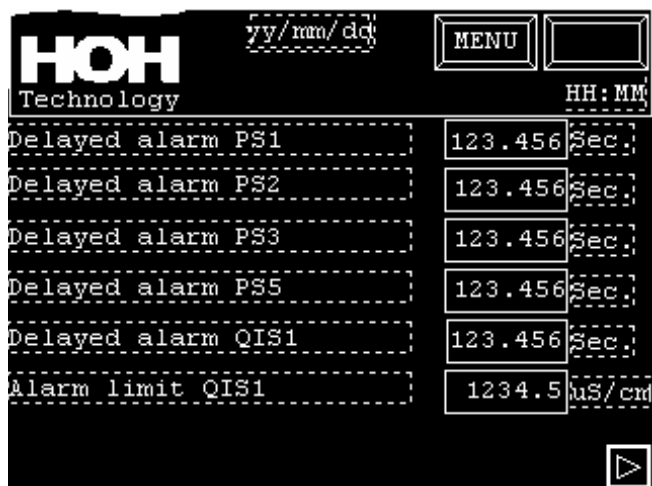
Counter Name	Value	Unit
Hour counter oprt. RO	12345	Hours
hour counter Oprt P1	12345	Hours
Hour counter Oprt. P2	12345	Hours
Hour counter CIPclean	12345	Hours
Hour counter since CIP-cl	12345	Hours
Hour counter Oprt. P3	12345	Hours

7.1 Information in Counters 2:

- Hour counter for operation RO.
- Hour counter for operation P1.
- Hour counter for operation P2.
- Hour counter for operation CIP cleaning.
- Hour counter since latest CIP cleaning. (Can be reset by starting a CIP cleaning).
- Hour counter for operation P3.

7.2 Functions in "Counters":

None.



8.1 Information in Alarm.setting:
Delays of alarms and set point for conductivity.

8.2 Functions in Alarm setting:

Adjustment of times by delay of alarms and set point for conductivity in operation.

Data changes:

In order to change a setting, push a field. A pop-up keyboard will appear on the display, and the new value can be entered and terminated on ENT.

9. Type of plant

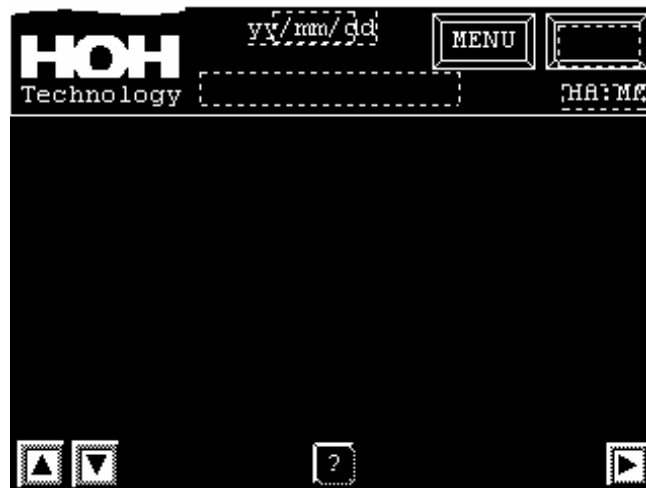


9.1 Information in Type of plant:
RO type and selection of option.

9.2 Functions in "Type of plant":

Push on the button for the desired plant. The selected RO plant is shown in the display on the left.

10. Alarm log:



10.1 Information in Alarm log:

This display with alarm-log appears when pressing the Alarm button in the top right corner. If an alarm occurs on the plant, the alarm button will begin to blink. The alarm will be shown with date and time for occurrence of alarm. When the alarm is reset on the alarm button, the alarm text disappears and the alarm button returns to standard text.

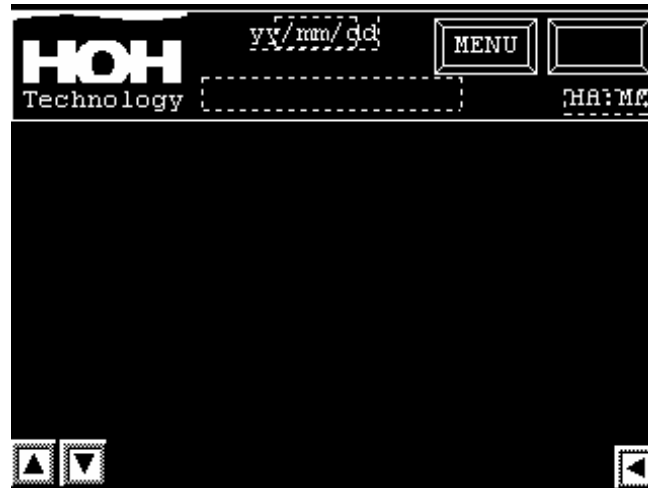
10.2 Functions in Alarm log:

At the left side of the display there are two buttons which are used to step up and down in the alarm display.

In the middle of the display there is a button which changes to the display with an explanation of the individual alarms.

At the right side of the display there is a button for changing the alarm history.

11. Alarm history:



11.1 Information in Alarm history:

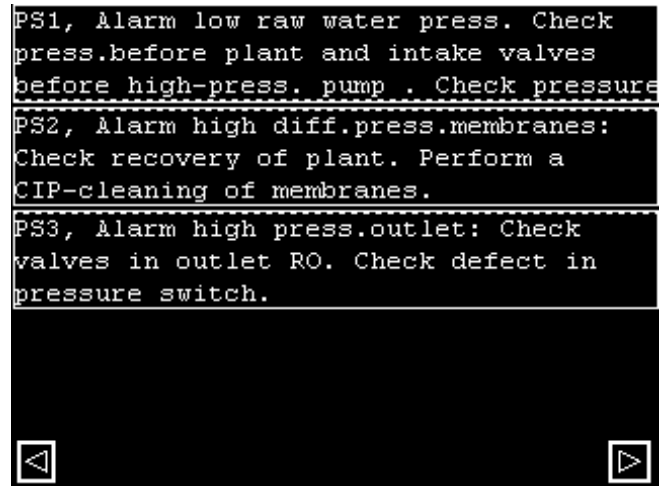
In this display you see the latest 128 alarms with date and time for occurrence of the alarm. When more than 128 alarms have occurred, the oldest alarms will be deleted.

11.2 Functions in Alarm log:

At the left side of the display there are two buttons; these are used to step up and down in the alarm display.

At the right side of the display there is a button for changing the alarm log.

12. Alarm help:



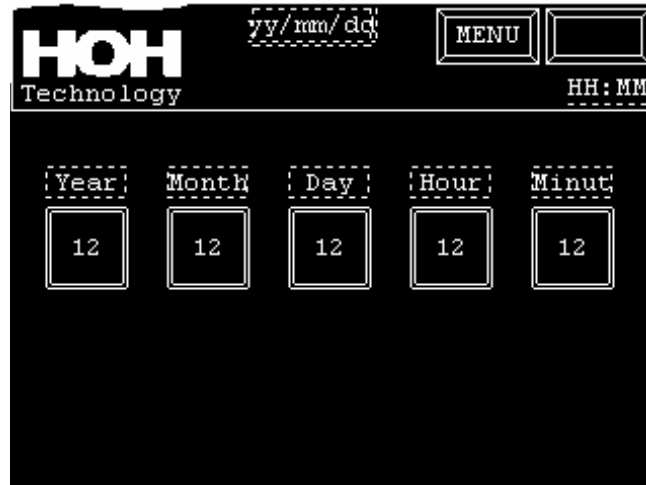
12.1 Information in Alarm help:

In this display is given an explanation and help to rectify the alarms.

12.2 Functions in Alarm help:

At the left side of the display there is a button. This button is used to step back to the alarm log.

13. **Date/time:**



13.1 Information in Date/time:

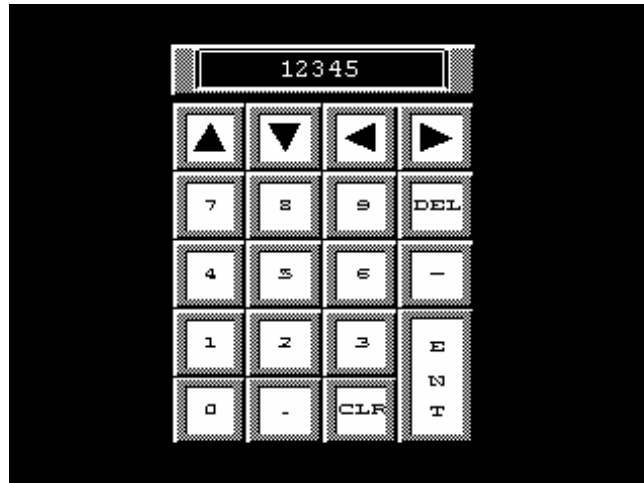
Date and time in operator panel.

13.2 Functions in Date/time:

Date and time are adjusted by pushing the individual button, entering the new value, and terminating by pushing ENT.

14

Password:



14.1

Information in Password:

The Password display will appear automatically if you select a password-protected display.

If you insert correct password, the desired display will appear.

If the correct password is not entered within 10 seconds, the display will automatically change back to Menu.

14.2

Functions in Password:

Data entering:

Enter the correct password and push ENT.

14.3

Password:

Password can be given by contacting:

HOH Watertechnology A/S

Tel.: +45 43600500

Process department.