

PA Purifier System



Operating Instructions

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Any comments regarding possible errors and omissions or suggestions for improvement of this publication would be gratefully appreciated.

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1 Operating

1.1 Before Startup

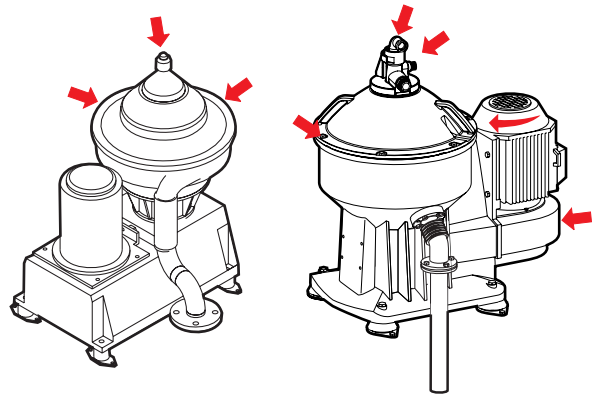
The correct gravity disc must be installed in the separator. See chapter 4.3.3 Selection of gravity disc in the Separator Manual.

- 1 Check that the separator is correctly assembled and connected to power supply of correct voltage and frequency.



Breakdown hazard

Assemble the separator completely before start. All couplings, covers, and guards must be in place and properly tightened. Non compliance may lead to breakdown.



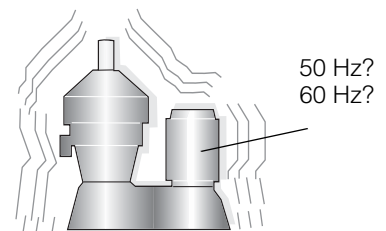
Electrical hazard

Follow local regulations for electrical installation and earthing (grounding).



Breakdown hazard

Check that the power frequency is in agreement with the machine plate. If incorrect, resulting overspeed may cause breakdown.



Use the separation system for the purpose, and within the limits, specified by Alfa Laval. Failure to do so could cause a violent breakdown.

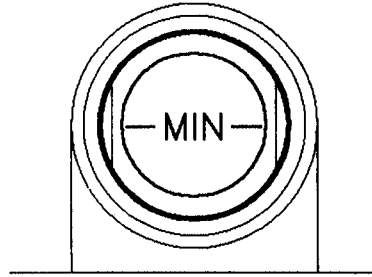
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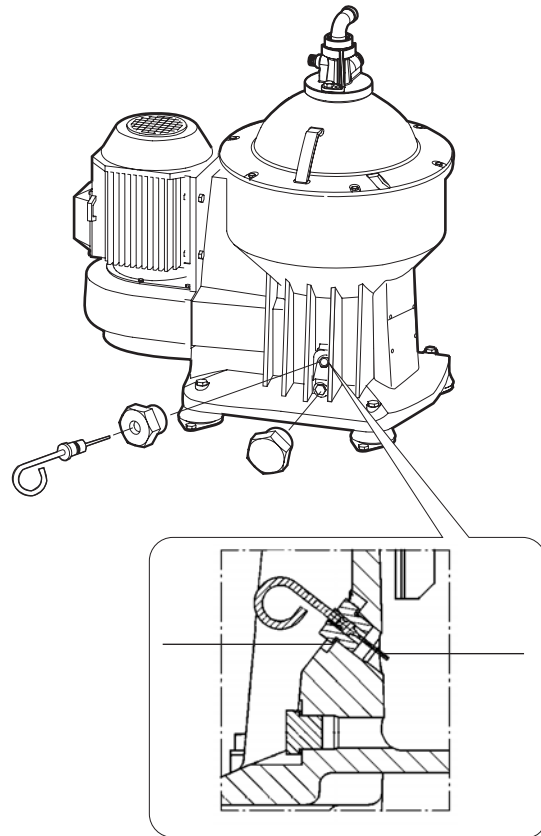
- 2** Check the oil sump level and top up if necessary.
- For P 600, P 605, P 610, and P 615:
The oil level should be slightly above middle of the sight glass.

NOTE

Too much or too little oil can damage the separator bearings.



- For P 625/P 635:
Remove the oil pin and make sure that the oil level is above the lower end of the pin.



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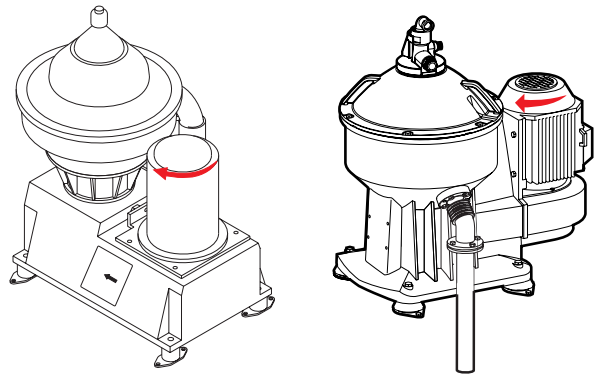
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Rotation Direction

Check the rotation of the bowl by doing a quick start/stop. The motor fan must rotate in a clockwise direction.



If power cable polarity has been reversed, the separator will rotate in reverse, and vital rotating parts can loosen.

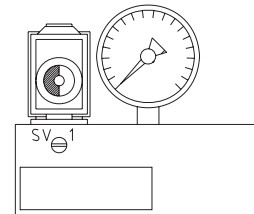


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Air Valve Block (PA 600, 610)

Use the pressure gauge situated in the air valve block to check that the air supply is correct.

See the *Installation System Reference* booklet.



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1.2 Operator Panel

General principle

The 'Enter' button is used to:

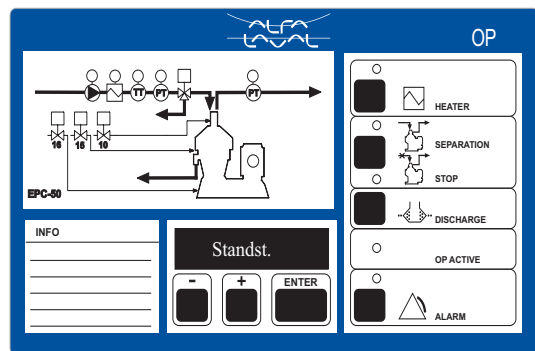
- enter into a parameter list
- enter into a parameter
- accept/store a new parameter value.

The '+' or the '-' buttons are used to change the value flashing in the display window.

Process parameters

Set the process parameters to suit the installation as follows:

- 1** Push 'Enter'. Parameter no. 1 in the process parameter list is displayed.
You have now come to the process parameter list. Go through the list and set parameters.
- 2** When the parameters have been set, 'End I/O' (flashing) shows. Push '+'. 'Standst.' is now displayed.

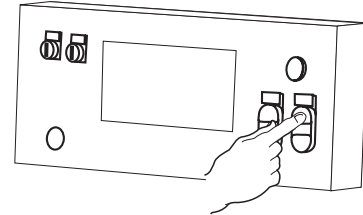


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1.3 Startup

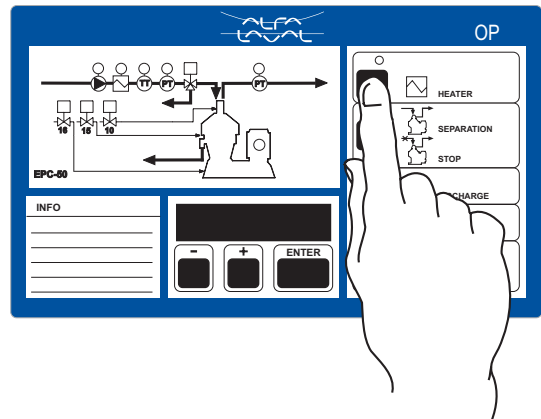
Before startup make sure that all the main supply valves for air, oil, and water are open. Open heating media supply valve if applicable. Switch on the power supplies. Make sure the control selection switch is in the manual position.

- 1 Start the oil feed pump.



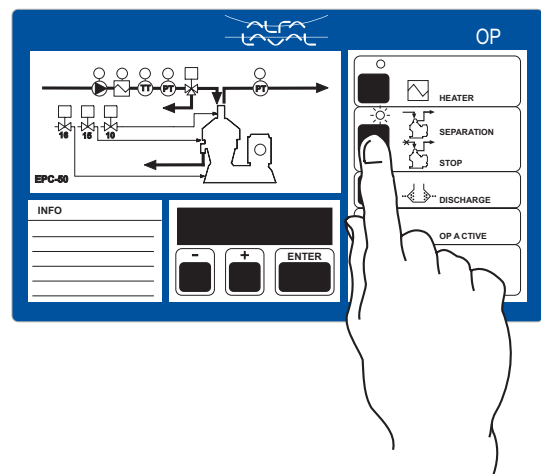
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- 2 If necessary, vent air from the heater through the relief valve (if applicable). Switch on the heater. (if applicable).



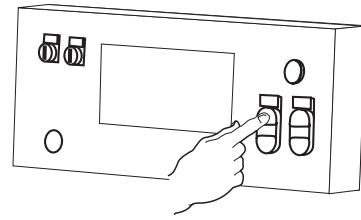
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- 3 Press the process start/stop button



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4 Start the separator.



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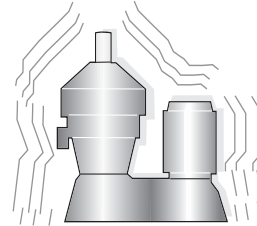
5 Listen and observe.

Vibration may occur during start up, when passing critical speeds. This is normal and should pass without danger.

If vibration increases, or continues at full speed, press the emergency stop button and stand clear until the vibration stops.

The cause of vibration must be determined and corrected before starting again!

See the *Alarms and Fault Finding* booklet.



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Breakdown hazard

Always observe the separator during start-up after assembly. If strong vibration occurs, stop by using the Emergency Stop button and evacuate the room.

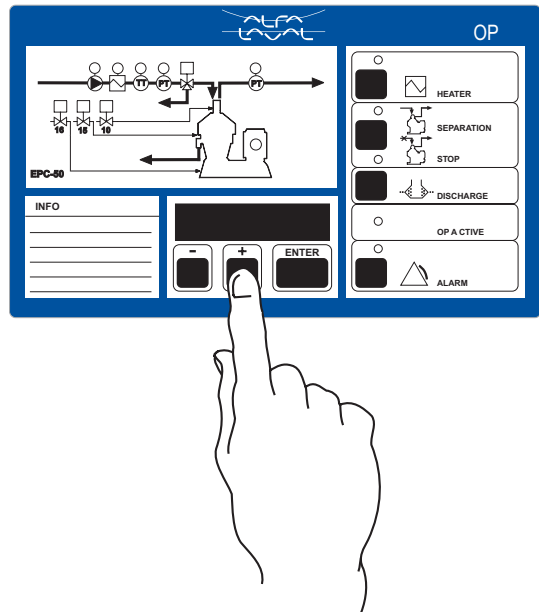


If the system is equipped with a vibration sensor, and has control of heater and feed pump, the Auto Start can be used.

6 Ensure that the separator is at full speed (see ammeter on starter). 'Start.' is shown on the display.

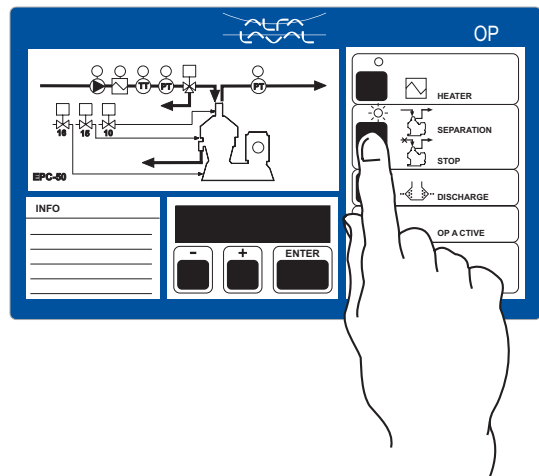
7 Check the oil feed temperature by pressing the '+' button twice.

8 Wait until the oil feed temperature is correct:
 Heavy fuel mode 98 °C
 Lube oil mode 95 °C (trunk engines), or 90 °C (cross-head engines)
 Diesel oil mode 40 °C



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9 When 'Standby' is shown on the display, and the oil is at the correct temperature, press the process start/stop button on the operator panel to start the separation process.



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1.4 During operation

Operator panel information

Observe the operator panel information:

- Heater operation LED lit (green)
- Separator system operation LED lit (green)
- Activated valve LED lit (green)

During normal operation, the time to next sludge discharge is shown on the right hand side of the display.

Any alarm is indicated on the display. For further information see the *Alarms and Fault Finding* booklet.

NOTE

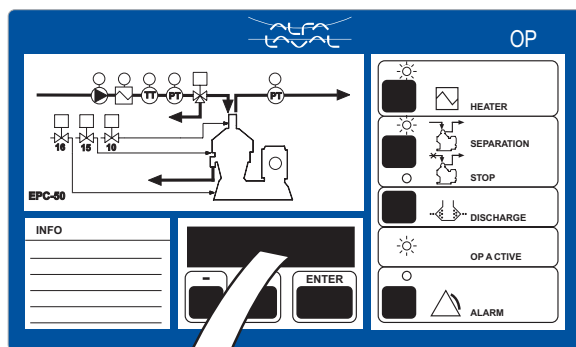
Regularly check connections. Tighten if necessary.

NOTE

The values displayed in the examples below are not recommendations.

More operational information may be read as required, by pressing the '+' button repeatedly.

To return to normal display, i.e. the trigger value, and time to next sludge discharge, continue pressing the '+' button.



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<p>1 Oil feed temperature. For the correct separation temperature see the <i>Installation System Reference</i> booklet.</p>	<p>TT1 98 °C</p>
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P00361RA

<p>2 Oil pressure, oil inlet</p>	<p>PT1 1.4</p>
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P00361QA

<p>3 Oil pressure, oil outlet</p>	<p>PT4 1.4</p>
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<p>4 Accumulated operating time in hours</p>	<p>Run time 5 hours</p>
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Noise hazard

Use ear protection if noise levels are high.



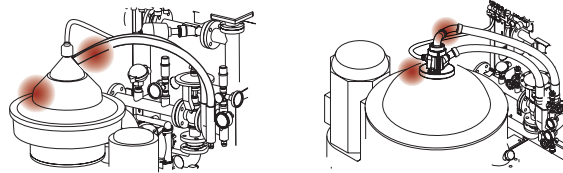
Breakdown hazard

Never reset an alarm without first finding and remedying the cause.



Burn hazard

Avoid contact with hot surfaces. Process pipes, various machine surfaces, and processed liquid can be hot and cause burns.



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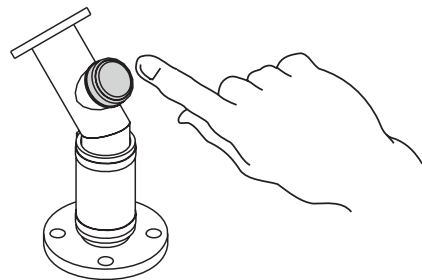
Slip hazard

Check all connections for leakage.
Oil leakage may make the floor slippery.



Burn hazard

To prevent hot water, oil or steam from splashing, make sure that the inspection plug on the discharge pipe is in place.
Use safety goggles when removing the plug.



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Make sure that the hose clamps are fully tightened.

1.5 Stop

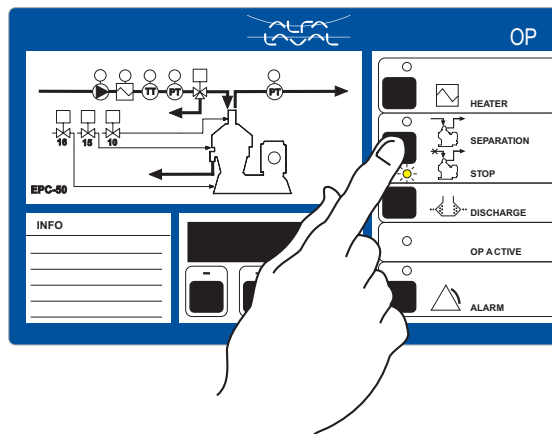
To stop the system:

- 1 Stop the system by pushing the process start/stop button on the operator panel.

A sludge discharge is initiated.

The yellow LED for separator stop sequence starts to flash.

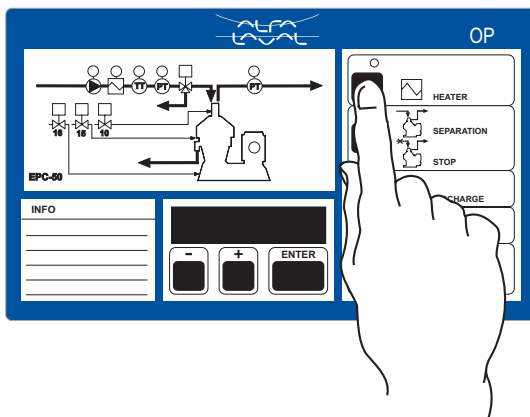
The stop sequence LED changes to steady yellow, and the green LED for separation system operation goes out, when the sludge discharge is completed.



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- 2 If an external heater is used, stop the heater on the operator panel.

Close the heating medium supply and outlet valves (if applicable).

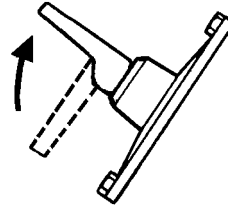


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- 3 Wait until the oil feed temperature starts to drop. Read the temperature by pressing the '+' button.

- 4 When the oil feed temperature has started to drop, the feed pump will be stopped automatically if controlled from the control unit. If the pump starter is independently controlled, stop manually.

5 When the separator motor has stopped, apply the brake, if any.



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6 Wait until the separator has come to a complete standstill (after about 20 minutes).



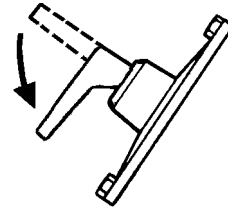
Breakdown hazard

Stop the separator by means of the control unit, and not by turning off the motor.



Never attempt to clean the bowl by manual discharge in connection with stop.

7 Release the brake, if any.



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1.6 Emergency Stop

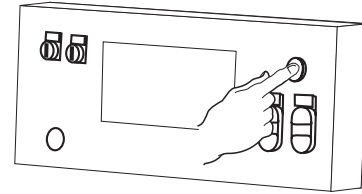
If an emergency situation occurs, press the emergency stop button and evacuate the room. Do not return until the separator has come to a complete standstill.



Disintegration hazard

If unusually strong vibration occurs, press the Emergency Stop button and evacuate the room

Do not enter the room after an emergency stop while the separator is still rotating.



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1.7 After Emergency Stop

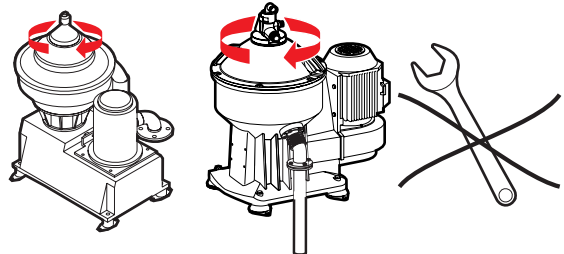
Separator standstill

Dismantling work must not be started before all rotating parts have come to a complete standstill.



Entrapment hazard

Make sure that rotating parts have come to a complete standstill before starting any dismantling work.



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Avoid accidental start



Entrapment hazard

To avoid accidental start, switch off and lock power supply before starting any dismantling work.
 Make sure that separator has come to a complete standstill before starting any dismantling work

See the *Alarms and Fault Finding* booklet for emergency procedures.

Remedy the cause

The cause of the emergency must be remedied before attempting to restart the separator.

If the cause is not found, an overhaul must be performed on the separator, and all moving parts thoroughly checked



Disintegration hazard

Do not start the separator after an emergency stop without first remedying the cause of the emergency.
 Make sure that the bowl is clean before restart.

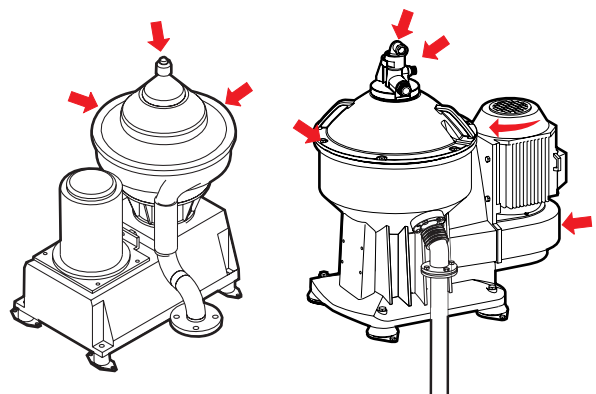
Separator reassembled

The separator must be fully reassembled with all covers and guards in place and tightened before unlocking the power supply and starting the system.



Breakdown hazard

Assemble the separator completely before restart. All couplings, covers, and guards must be in place and properly tightened. Non compliance may lead to breakdown.



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