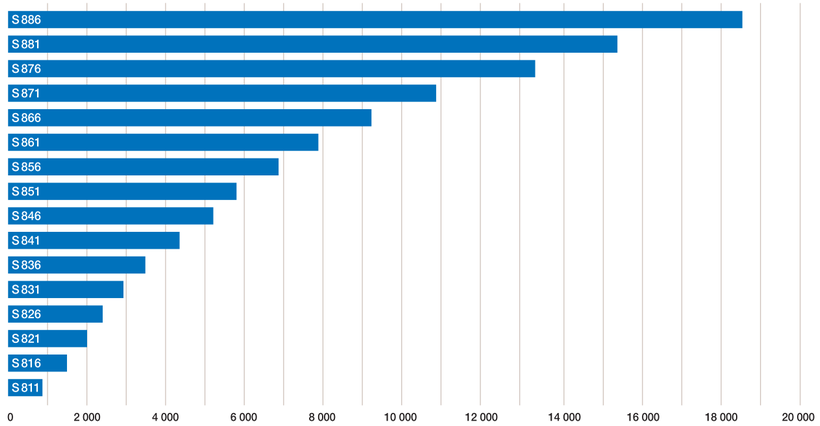
Max. Recommended Capacity Table. L/h 380 cSt/50˚C.



TECHNICAL DATA

Main supply voltage	3-phase, 220 V up to 690 V
Control voltage	1-phase, 100/110/115/230 V
Frequency	50 or 60 Hz
Control air	Min 5 bar, max 7 bar
Operating water pressure	Min 2 bar, max 6 bar

SEPARATION SYSTEM	SIZE (HEIGHT X WIDTH X LENGTH)	NET WEIGHT
SA 811/816	970 x 937 x 866	372 kg
SA 821/826	970 x 937 x 866	376 kg
SA 831/836	1059 x 948 x 939	472 kg
SA 841/846	1123 x 975 x 960	543 kg
SA 851/856	1291 x 1280 x 1127	741 kg
SA 861/866	1405 x 1306 x 1173	812 kg
SA 871/876	1526 x 1445 x 1313	1297 kg
SA 881/886	1713 x 1495 x 1411	1680 kg
SU 811/816	1245 x 1050 x 1287	501 kg
SU 821/826	1245 x 1050 x 1287	505 kg
SU 831/836	1245 x 1050 x 1360	630 kg
SU 841/846	1245 x 1050 x 1380	700 kg
SU 851/856	1407 x 1440 x 1643	1060 kg
SU 861/866	1407 x 1440 x 1674	1200 kg
SU 871/876	1585 x 1520 x 1761	1620 kg
SU 881/886	1684 x 1585 x 1812	2010 kg

Type Approved Separation
Alfa Laval can supply separators according to the requirements for Type Approved Separators set by the classification societies.
A Type Approved Separator is rated according to Certified Flow Rate (CFR), which is the flow rate at a specified separation performance.
CFR makes it possible to fairly compare different separator manufacturers.

CE **Conformity**
The mark of conformity confirms that the equipment complies with European Economics Area (EEA directives).

EMD00051EN 0406

How to contact Alfa Laval
Contact details for all countries are continually updated on our web site.
Please visit **www.alfalaval.com** to access the information direct.

S-separation systems

Cleaning systems for fuel and lubricating oils

Separator

Oil block including water transducer and valves

EPC50 control unit

Water block

Air block

Sludge outlet kit

Optional starter

SA (Separation Ancillaries) – Minimal investment. Specialized block components assembled on site to reduce your initial expense.

S-separation systems from Alfa Laval combine ease of use with low operating cost. Their compact and robust construction makes them reliable, while their innovative design means they produce only a minimum of sludge. S-separation systems are available in three delivery options.

SU (Separation Unit)
Smart investment. A factory-tested unit for quicker installation and reliable operation.

SU Module
Maximum simplicity. A module combining a Separation Unit with a heater and pump for easy operation.

Application
S-separation systems are designed to clean a wide range of fuel and lubricating oils used by diesel engines in the marine and power industries:

- Heavy fuel oils with high densities up to 1010 kg/m³ and viscosities up to 700 cSt/50°C. (Higher viscosities upon request.)
- Lubricating oils for all slow-, medium- and high-speed diesel engines.
- Distillates and light diesel oils (MDO).

The systems are designed for automatic operation in periodically unmanned engine rooms at sea and in automated power stations ashore. Sixteen sizes are available.

SA concept
The SA system is a non-integrated solution, delivered as a few easy-to-mount blocks (see previous page, main picture). Assembly of the SA system on site allows for reduced installation space and lowers the initial investment cost.

SU concept
The Separation Unit is a plug-and-play solution offering maximum simplicity. It combines a separator and its ancillary components, together with a control system and starter box, in a fully integrated module on a single base plate.

One or more Separation Units can be combined with heaters and pumps to form an SU Module, available in various configurations.

Double SU Module, in-line configuration
Two Separation Units on a module base with heaters, pumps and interconnecting pipework.

Operating principle

Untreated oil, heated to the correct temperature, is fed continuously to the separator for the cleaning of impurities. After centrifugal separation, cleaned oil is continuously pumped away and separated sludge and water accumulate at the bowl periphery.

The system operates on the Alcap principle. A water transducer in the clean oil outlet measures the capacitive resistance and signals changes to the EPC50 control unit. Depending on the water content, the EPC50 either opens the drain valve or expels the water through the bowl discharge ports during sludge discharge.

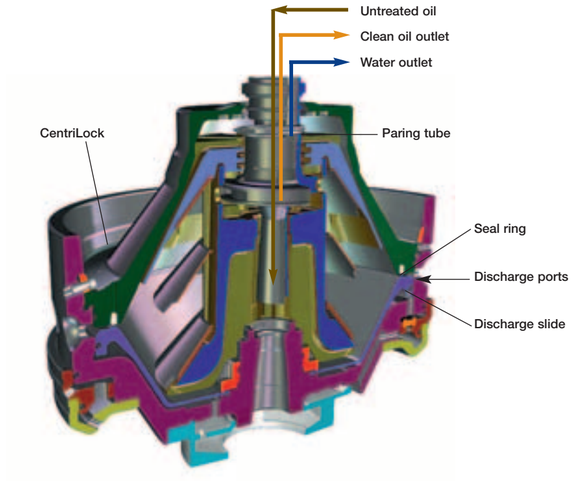
The total losses of sludge, oil and water during the discharge process are considerably less than other separator models due to bowl size, longer discharge intervals and accurate controls. The CentriShoot discharge process also makes use of a patented, flexing discharge slide, which completely eliminates metal-to-metal wear.

The separator design incorporates a sludge evacuation which is absorbed by the casing and which allows the sludge volume to be discharged to a sludge tank.

The separator is driven by an electric motor via a friction clutch and belt. The separator bowl is fixed at the top of a spindle, which is supported by bearings and special composite springs. A patented paring tube adapts itself to remove the water from the bowl and a paring disc pumps away the cleaned oil. No adjustments are necessary in the bowl, and no gravity discs are fitted.

The EPC50 control system masterminds the operation of the separation system and allows the monitoring of control and alarm functions. Clear text messages, available in several languages, indicate process parameters and alarms on the LED display.

Features and benefits



- *Pre-tested system.*
  All components and functions of the SU and SU module are tested at the factory, ensuring a perfect system and faster commissioning.

- *Alcap technology.*
  A water transducer is present in the clean oil outlet for process monitoring.

- *CentriLock.*
  The non-threaded CentriLock lock ring allows the bowl to be opened quickly without a sledgehammer. There is no wear of costly bowl parts.

- *CentriShoot.*
  The CentriShoot discharge system greatly reduces sludge volumes. It utilizes a fixed, flexing discharge slide that eliminates metal-to-metal wear.

- *High separation efficiency.*
  An optimized design ensures the best possible separation efficiency in the bowl disc stack.

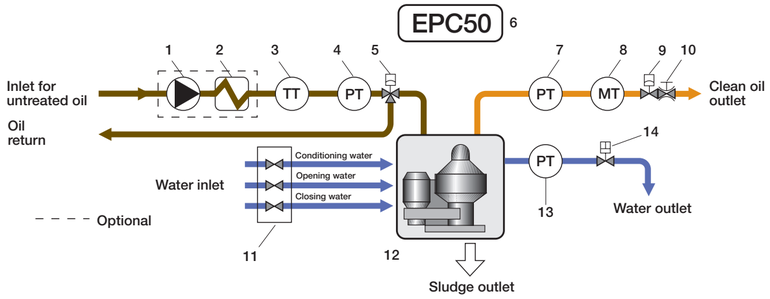
- *Remote monitoring and control.*
  Several options are available, with REMIND software included in each delivery. Network solutions using MODBUS or PROFIBUS and the operator's own software allow remote operation from a control room.

- *No water tank.*
  No tank is needed to supply operating water, which saves materials and installation costs.

- *Longer service intervals.*
  Planned maintenance is performed less often and spare parts consumption is reduced. This creates lower operating costs.

- *Same design for fuels and lubricating oils.*
  Operators have one type of system for operation, maintenance and spare parts.

System layout.



1. Feed pump
2. Heater
3. Temperature transmitter
4. Pressure transmitter, oil
5. Pneumatically controlled change-over valve
6. Control unit
7. Pressure transmitter, oil
8. Water transducer
9. Pneumatically controlled shut-off valve
10. Regulating valve
11. Solenoid valve block, water
12. Separator
13. Pressure transmitter, water
14. Drain valve

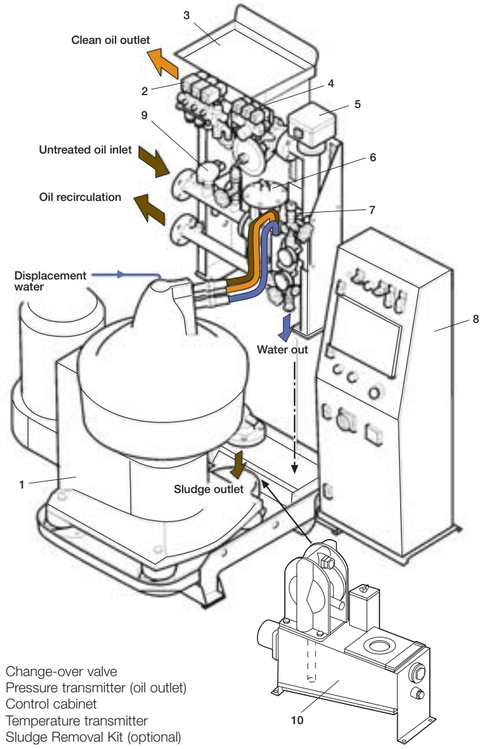
Optional equipment

S-separation systems can be complemented with the following equipment:

- Starter. (Included in SU)
- Heater board in EPC50 for control of heater.
- Vibration sensor kit.
- Feed pump.
- Remote operation kit.
- Separator lifting tool.
- Sludge outlet butterfly valve kit.
- Heater.

Sludge Removal Kit - SU

The SU can be complemented with a Sludge Removal Kit. This optional system pumps sludge to the main sludge holding tank via a small, intermediate tank. It eliminates the need for a sludge tank under the separator, thereby creating material and installation savings.



SU schematic system layout diagram.

1. Separator
2. Operating water solenoid block
3. Service shelf
4. Operating air solenoid block
5. Water transducer
6. Change-over valve
7. Pressure transmitter (oil outlet)
8. Control cabinet
9. Temperature transmitter
10. Sludge Removal Kit (optional)

Operations

Preventive maintenance procedures are quick and simple with the help of a compression tool. The patented CentriLock lock ring is removed using only an Allen key, instead of the conventional lock ring spanner and sledgehammer.

- Maintenance intervals:
  – Inspection Service every 4000 h or 6 months.
  – Overhaul Service every 12000 h or 18 months.

- Service spares kits contain all necessary spare parts for each service and tips for maintenance in checkpoints:
  – Inspection Kit with O-rings and seals for separator bowl.
  – Overhaul Kit with parts for drive system, belt, bearings and pads. Also contains an Inspection Kit.
  – Support Kit with strategic spares to back up operation and maintenance.

- System Manual includes detailed information in electronic or printed format:
  – Installation Instructions.
  – Operating Instructions.
  – Alarms & Fault Finding.
  – Service & Spare Parts.

- Commissioning and technical service is available from all Alfa Laval offices to start up the system and to advise about operation and maintenance.

- Training in all aspects of oil treatment, fresh water generation and cooling is available.

- All services are incorporated into specially tailored Nonstop Performance packages. Details are available from local Alfa Laval offices.