SEPARATION SYSTEM SIZE
(HEIGHT X WIDTH X LENGTH)

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 1761 1620 kg
SU 871/876 1585 x 1520 x 1761 1620 kg
SU 881/886 1684 x 1585 x 1812 2010 kg

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
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SU 871/876 1585 x 1520 x 1761 1620 kg
SU 881/886 1684 x 1585 x 1812 2010 kg

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.

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. S-atlas sizes are available.

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

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Type Approved Separation
Alfa Laval can supply separators according to the classification rules 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.

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

S-separation systems
Cleaning systems for fuel and lubricating oils

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.

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.

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

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

Double SU Module, in-line configuration
Two Separation Units on a module base with heaters, pumps and interconnecting pipework.
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.
- High separation efficiency: An optimised 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 PROFBUS and the operator’s own software allow remote operation from a control room.
- 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. Operations have one type of oil system for operation, maintenance and spare parts.

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 LED display. The separator is driven by an electric motor via a friction clutch and belt. The separator bowl is fixed at intervals and accurate controls. The CentriShoot separator models due to bowl size, longer discharge process are considerably less than other separator models.

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, that 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 masters 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.

Optional equipment
- S-separation systems can be complemented with the following equipment:
  - Starter (Included in SU)
  - Heater board in EPC50
  - 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.

Operations
Preventive maintenance procedures are quick and simple with the help of a commissioning 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 6 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, ball, bearings and pads.
    - Optional Inspection Kit.
    - Support Kit with strategic spares to back-up operation and maintenance.

- 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 Nontrop Performance packages. Details are available from local Alfa Laval offices.