Introduction
The use of separators in Oil & Gas applications goes back to the 1920s. Based on the long-term and intense cooperation with the Oil & Gas industry, Alfa Laval separators are specially designed for the high specifications and demands of this industry.

Application
The OF 900 separator are designed and optimized for separation of solids from fluids, such as condensate, oil or water. The OF 900 can be installed both onshore and offshore, either on fixed platforms or floating vessels (FSU, FPSO etc).

Benefits
- High separation efficiency
- No air entrainment
- Simple process integration due to no gas flashing inside separator
- ATEX approved for zone 1 and zone 2 installations
- Low power consumption
- Robust and reliable design

Design
The separator consists of a machine bottom part which includes a gear drive and lubrication system. The machine top part includes the bowl, bowl casing with cooling jacket as well as outlets for separated liquids and discharged sludge. The inside of the bowl is hermetically sealed from its surroundings, by mechanical seals. The fully hermetic design prevents gas flashing inside the separator and eliminates the need for upstream degassing vessels.

The separator has intermittent solids discharge with variable volume and the solids leaves the separator via the sludge cyclone.

The separator is designed to be cleaned in place (CIP), if needed.

All metallic parts in contact with the process liquid are made of stainless steel. Gaskets and seals in contact with the product are made of Viton®.

Scope of supply
- Disc stack separator with electrical motor
- Foundation plate for mounting

Options
- Set of tools
- Service kit
- Documentation

Options
- Customer specification compliance
- Customer adapted separation system with process control equipment
- Extra service kits
- Service agreement
- Installation and start up support
Working principle
The feed enters the separator bowl from the bottom, via the drive spindle. Separation takes place between the bowl discs where the liquid phase moves towards the centre of the bowl and the solids moves towards the periphery. The separated liquid leaves the bowl through the hermetically sealed outlet in the top of the separator and is pressurized by an impeller.

The solids collected in the periphery of the bowl are discharged via the discharge ports when the sliding bowl bottom moves downwards. Discharged solids leaves the separator via the sludge cyclone.

Typical bowl drawing for a solids-ejecting separator. The details illustrated do not necessarily correspond to the separator described.

1. Inlet
2. Distributor
3. Disc stack
4. Liquid phase outlet
5. Sliding bowl bottom
6. Solids ports
7. Solids outlet from cyclone

Connections
- Feed inlet: DN 65 DIN / ANSI flanges
- Light liquid phase outlet: DN 50 DIN / ANSI flanges
- Solids outlet from cyclone: DN 200 DIN / ANSI flanges

Material data
- Bowl body: Stainless steel, SuperDuplex
- Frame top part: Stainless steel
- Frame bottom part: Cast grey iron
- Gaskets and O-rings: Viton®

Weights (approximate)
- Separator weight incl. bowl and motor: 3000 kg (6600 lbs)
- Bowl weight: 1150 kg (3300 lbs)
- Gross weight: 3700 kg (8200 lbs)
- Volume: 4.4 m³ (155 cuft)

Dimensions
- H1: Min. 3050 mm (10 ft 5/64 inch)
- H2: 2055 mm (6 ft 8 29/32 inch)
- W1: 1865 mm (6 ft 1 27/64 inch)
- W2: 1647 mm (5 ft 4 27/32 inch)

Technical data

Performance data
- Hydraulic capacity: 100 m³/h (440.3 US gpm)
- Maximum discharge capacity: 35 litre (9 gallon)
- Maximum motor power: 55 kW (74 HP)

1 Actual capacities depend on operating conditions
2 Actual capacities depend on operating conditions

How to contact Alfa Laval
Up-to-date Alfa Laval contact details for all countries are always available on our website at www.alfalaval.com