



# Alfa Laval OF 900

## Disc stack separator for oil & gas applications

### 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



- Set of tools
- Service kit
- Documentation

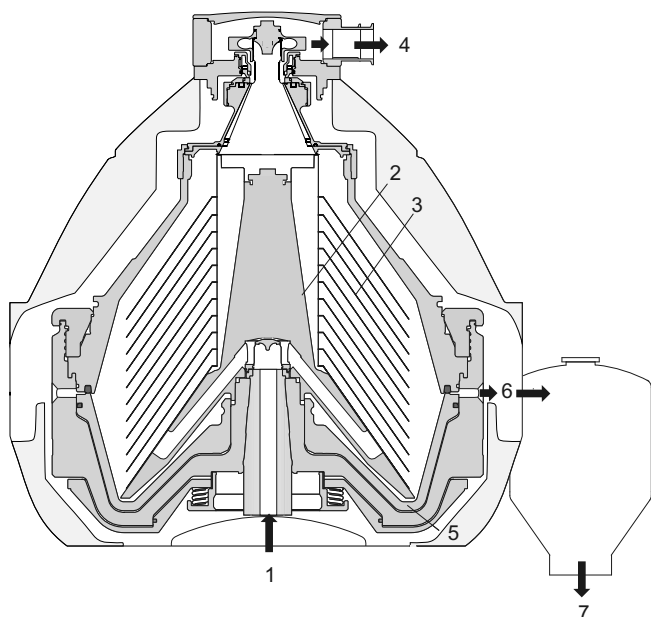
### Options

- 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

## Technical data

### Performance data

Hydraulic capacity <sup>1</sup>	100 m <sup>3</sup> /h (440,3 US gpm)
Maximum discharge capacity <sup>2</sup>	35 litre (9 gallon)
Maximum motor power	55 kW (74 HP)

<sup>1</sup> Actual capacities depend on operating conditions

<sup>2</sup> Actual capacities depend on operating conditions

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## 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

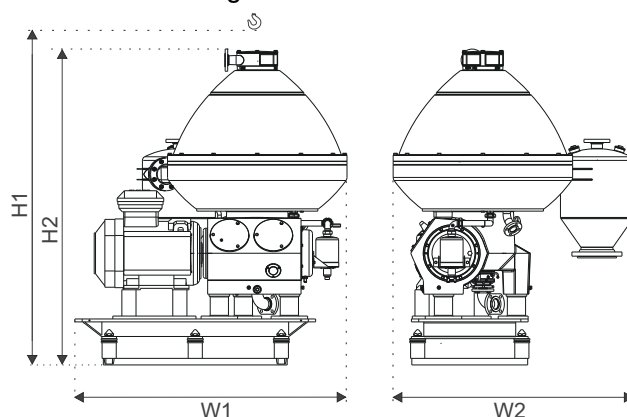
## Material data

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	4,4m <sup>3</sup> (155 cuft)

## Dimensional drawing



## 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)