



Alfa Laval CH 20

Skid-mounted disc stack separation system for industrial use

Introduction

The use of separators in different chemical applications goes back to the beginning of the 1900s. Based on the long-term cooperation with various chemical industries, Alfa Laval separators are specially designed for the requirements and demands of this industry.

Application

CH 20 separator is designed and optimized for:

- Petrochemical
- Minerals
- Pulp and paper
- Green chemical applications
- Pharmaceuticals

Benefits

- High separation efficiency
- Small footprint – easy to install and start up
- Gentle treatment of the process liquid
- Low power consumption
- Complete system handling both process and utility requirements
- Plug-and-play installation
- Flexible installation possibilities
- Robust and reliable design

Design

The system consists of a 4-size separator, a valve module with valves and components for routing of product and utilities in and out from the separator, as well as control and starter cabinet.

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 PTFE/Graphite material.

The separation system is prepared for completely automated Cleaning in Place (CIP).

Available in following executions:

- Solid-liquid separation
- Liquid-liquid separation
- Liquid-liquid-solid separation

Available for installation in safe area and zone 2.



Scope of supply

- Disc stack separator with process liquid module
- Main process valves of type ball valve
- Automatic counter pressure valve
- Flow meter of volumetric type
- Main motor starter with VFD
- Control panel with EPC-60 PLC incl HMI
- Local push button box on skid for operation of centrifuge
- Solids receiving unit:
 - Consists of a collection device and a pump to remove discharged solids

Options

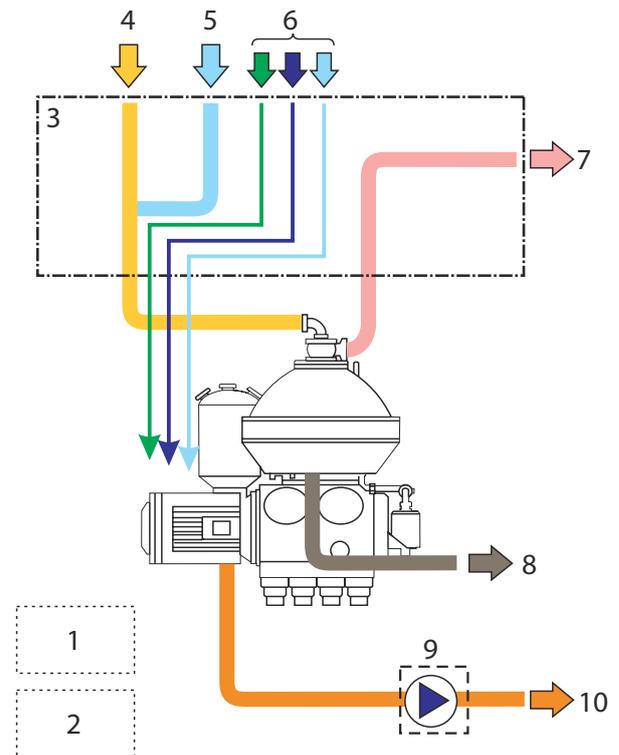
- Factory Acceptance Test
- UL or CSA versions available on request

Working principle

The product enters and leaves the separator via the valve module. The flow rate and the counter pressure in the outlet of the separator are controlled by the process and service liquid module.

Discharge of solids from the separator bowl is triggered either by a timer or a manual control. The discharged solids are pumped away by the optional solids receiving unit.

The valve module also controls the utility liquids for the separator's discharge system, for flushing and CIP.



1. Control cabinet
2. Main motor starter and VFD
3. Process and service liquid module
4. Product inlet
5. Standby/Safety water
6. Utilities
7. Outlet(s) of product(s)
8. Drain for separator
9. Solids receiving unit
10. Outlet of discharged solids

Technical data

Performance data

Hydraulic capacity ¹	4 000 l/h (17,6 US gpm)
Maximum motor power	3 kW (4 HP)

¹ Actual capacities depend on operating conditions

Connections

Inlet	DN15 / DN25 ASME B16.5/DIN EN 1092-1 Flange
Outlet	DN15 / DN25 ASME B16.5/DIN EN 1092-1 Flange

Material data

Piping	ISO 1127, AISI 316L
Customer connection	ANSI B16,5/DIN EN 1092-1 Flange
Gaskets in system	PTFE / Graphite product wetted parts
Pipe frame	AISI 304

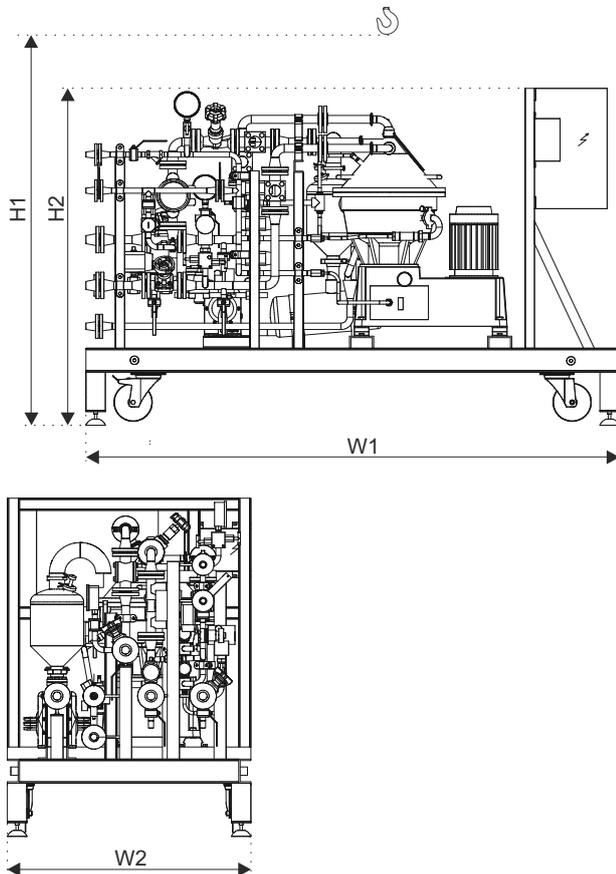
Weights data (approximate)

System weight incl. bowl and motor	460 kg (1014 lbs)
Bowl weight	37 kg (81,6 lbs)

Dimensions

H1 (min. lifting height)	1600 mm (5 ft 3 inch)
H2	1400 mm (4 ft 7 1/8 inch)
W1	2200 mm (7 ft 2 5/8 inch)
W2	1000 mm (3 ft 3 3/8 inch)

Dimensional drawing



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