



BREW 80

Multi-purpose separation module for craft brewing



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The Alfa Laval BREW 80 is a compact plug'n play separation module with a very small footprint, which reduces the amount of floor space needed in breweries. In order to facilitate installation, start-up process and simplify subsequent operation, the BREW 80 unit is delivered as a complete fully equipped separation module ready to install. The BREW 80 separation module is an efficient solution for craft brewers becoming an environmentally friendly way to clarify beer. The design in the Brew 80 separator is based on a top feed inlet with axial hermetic outlet offering low oxygen pick up. The separator has a fixed discharge volume and delivers solids discharge volumes with great accuracy. Solid discharge is triggered by timer or control panel button.

Applications

The BREW 80 is based on solids ejecting HSS and can be used within the brewing industry for many applications. Designed for use by craft brewers, the BREW 80 separation module is particularly suitable for clarifying:

- Beer after fermentation
- Beer after maturation
- Near bright styles.

Special features of the separator bowl

The special geometry of the bowl (Fig. 1) ensures gentler acceleration for shear-sensitive agglomerates and particles (1). Combined with the special disc stack design (2), these significant improvements of the fluid dynamics lead to maximum separation efficiency, at the same time as reducing power consumption. The paring disc design and the hermetic seal (3) reduces oxygen pickup to a minimum, as well as preventing loss of volatile aromas or CO₂.

Standard design

The unit consists of a stainless steel skid fitted with a separator and all the auxiliary equipment needed for safe, efficient operation. Apart from the BREW 80 separator, the Brew 80 separation system includes:

- Feed valve that is automatically closed when not in production mode.
- Sight glasses at both inlet and outlet
- Sample valves at both inlet and outlet
- Flow meter with volumetric totalizer.
- Pressure indicator at outlet.
- Regulating valve for back pressure adjustments.
- Water tank with integrated pump for constant operating water supply.
- Solenoid valve block for addition of operating water, and solenoid valve for automatic flushing of bowl exterior.
- Fitted with cover switch and vibration sensor.
- A Variable Frequency Drive (VFD) starts and drives the separator motor. The control panel displays information about the operation, such as operating mode and time to next discharge. It also displays alarm messages. The operator's interface is straightforward and easy to understand.

All metallic parts that come in contact with the process liquid are made of high-grade stainless steel. Liquid-wetted rubber gaskets are made of food-grade nitrile rubber.

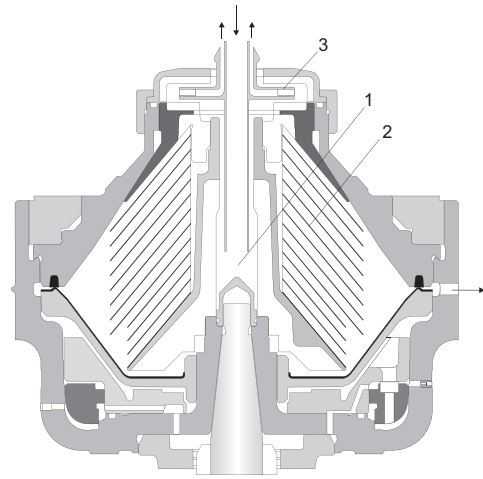


Fig. 1 Bowl principle

Options

A solids handling module can be fitted to the skid. This consists of a collecting funnel and a pump. A stand-alone feed pump can also be supplied.

Operating principles

The feed containing beer, yeast and other solids is led into the unit (Fig. 2) through connection 201 and then into the separator. The solids are collected in the periphery of the rotating bowl and are discharged at preset intervals. The solid part is discharged from the separator through a cyclone and leaves the module from connection 222, alternatively through an integrated solids pump (see options). The clarified beer is pumped out of the rotor by means of a built-in paring disc and then passes a flow meter, a pressure indicator, a sight glass and a regulating valve. The clarified beer leaves the module through connection 220.

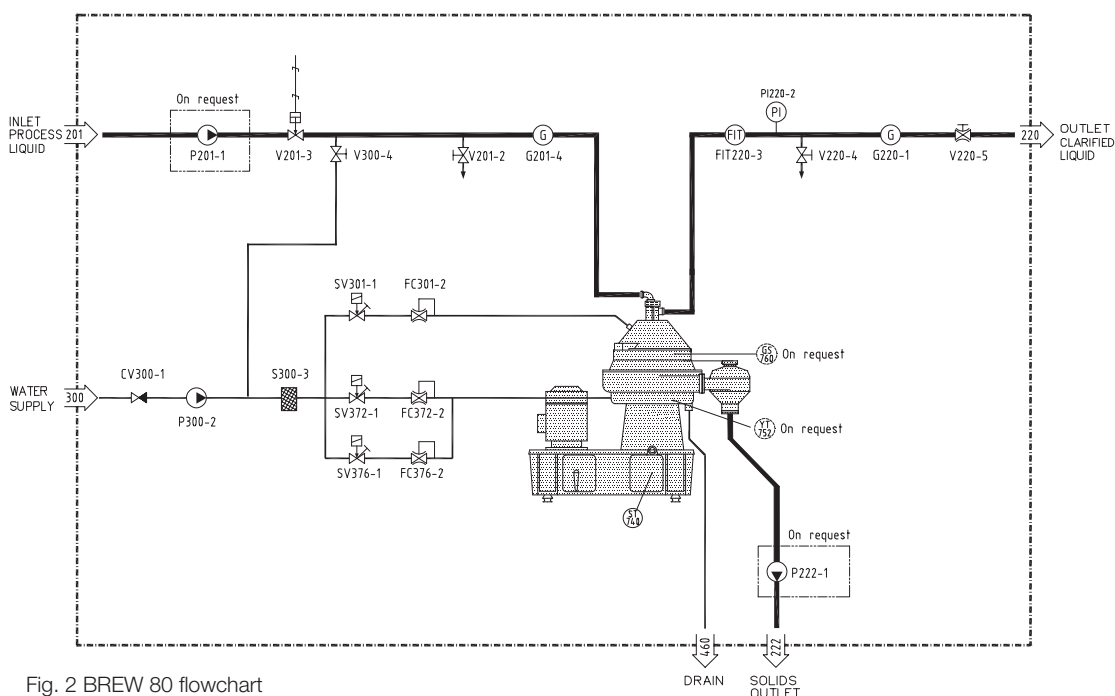


Fig. 2 BREW 80 flowchart

Technical specification

Beer capacity	up to 50 hl/h
Hydraulic capacity	90 hl/l (76 US barrels/h) ¹⁾
Solids discharge volume	2.1 litres (0.55 gal)
Feed temperature range	0–100 °C (32–212 °F)
Bowl speed	8,400 rpm
Feed pressure required	0–200 kPa (29 psi)
Outlet pressure available	0–700 kPa (102 psi)
Sound pressure	81 dB(A)
Separator motor	11 kW
Feed pump motor (optional)	2.2 kW
Solids pump motor (optional)	0.86 kW
Recommended fuse at 400V (460V, 60Hz)	25 amp (40 amp)

¹⁾ Actual capacity depends on particle sizes, densities, viscosity and require degree of separation

²⁾ According to ISO 4871

Connections

Product inlet, outlet	TC or NW32 acc to DIN11851
Water	Hose nipple 19 mm (1.5 inch TC)
Solids cyclone	Hose 101 mm
Solids pump (optional)	NW25 acc to DIN11851

Utilities consumption

Power consumption (separator)	10.1 kW at 8 m ³ /h
Water consumption	up to 48 l/h (0.2 US gpm)
Required water pressure for separator	3.5 bar (50 psi)

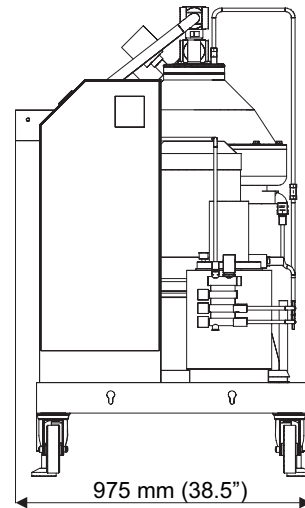
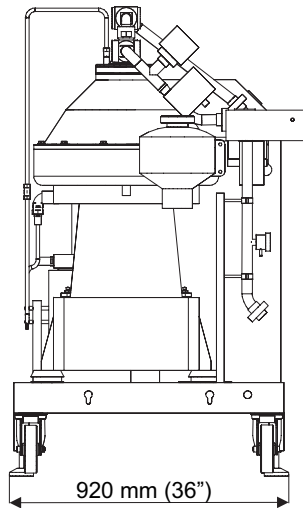
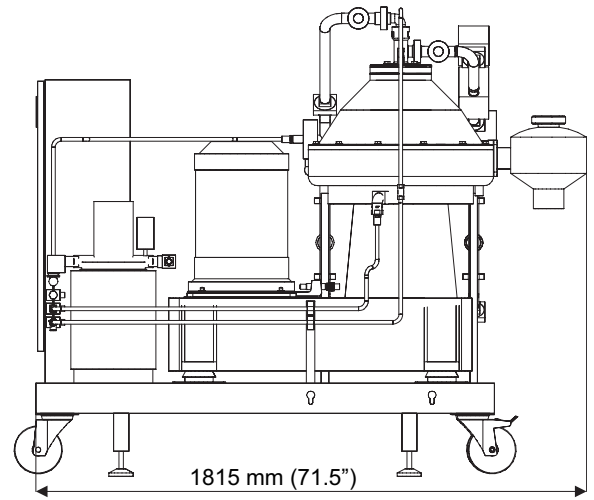
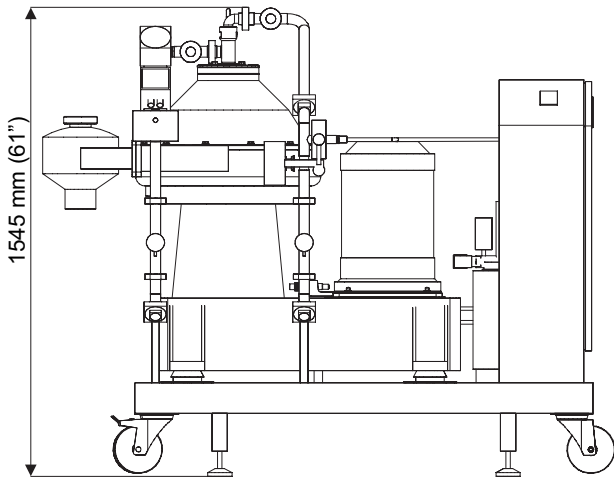
Material data

Bowl body	s.s. 1.4501 UNS S32760
Bowl hood, lock ring and distributor	s.s. 1.4462 UNS S31803
Solids cover and frame hood	s.s. 1.4401 UNS 31600
In and outlet parts	s.s. 1.4401 UNS 31600
Frame bottom part	Cast grey iron
Piping	s.s. 1.4407 UNS S30400
Gaskets and O-rings	Nitrile rubber

Shipping data (approximate)

Complete module incl. bowl & motor (net)	830 kg (1,830 lbs)
Gross weight	1,025 kg (2,260 lbs)
Volume	3.8 m ³ (134 ft ³)

Dimensions



PFT00570EN 1303

Alfa Laval reserves the right to change specifications without prior notification.

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

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