HiFlux Filtration A/S

Professional SELF-CLEANING Filter solutions

Auto-line© Self-cleaning filters
MLR-E - Melt cheese filter

The Auto-line® MLR-E filter is designed specifically for the filtration of hot and highly viscous melt, re-work or processed cheese.

The filtration capacity of the filter is in the range of 500—3500 kg/h, depending on the cheese type and the viscosity.

The filter design is CIP-friendly with a minimum of dead space, ensuring that the filter is easily cleaned between batches. The result is reliable food safety while avoiding manual cleaning and reducing labor costs. All media contact surfaces on the filter housing are polished to max. Ra 0.8 µm as standard, providing superior finish. The filter is used when an automatic continuous cleaning process is required. As the oversize impurities are concentrated in the filter until it is drained away while the filter is still in operation, the loss of saleable product due to draining is minimal. Drainage of the filter takes place through a bottom valve which can be controlled individually (manual or automatic operation).

The filtration principle is based on a filter element, with the dirt particles being retained on the inside surface of the element. The filter is driven by a gear-motor that rotates a scraper system inside the element. A number of knives scrape the surface of the filter element leading the dirt particles into the drain chamber in the bottom of the filter. In order to prevent bridging (blocking) in the drain chamber, the scraper system is equipped with an agitator at the bottom end.

The benefit of the constant scraping is, that the filter can handle large amounts of dirt. The flow through the filter is continuous during scraping which means that the filter can work continuously and the flow is not interrupted.

In the design of the filter importance has been attached to making the construction robust and reliable. By limiting the number of moving components, wear and maintenance requirements are minimized. The simple construction makes the filter very easy to service hence there is no need for external service assistance or special tools.

For easy access to the inside of the filter housing, the filter is equipped with a lifting device that enables easy removal of the filter cover and motor assembly.

CE ATEX PED ISO 9001

Capacity: 12 - 47 m3/h
Filtration: 30 - 2000 µm
Pressure: 16 bar

- **Removes unwanted particles**
  High operational reliability.
- **Continuous flow process**
  Self-cleaning application.
- **Ensures the quality**
  Food safety at the customers.
- **Eliminates downtime**
  Optimizing earnings.
- **Savings on running costs**
  Purchase and exchanging filter bags is no longer needed

The melt cheese filter features a laser bore filter element with accurate filtration in the range of 50 to 300 micron.

The laser bore filter element is able to retain hard and soft/ gelly particles, as well as fibers.

To operate in the viscous cheese the filter element is designed for a differential pressure of up to 7 bar over the filter.

All media contact surfaces in the filter housing are polished to max. Ra 0.8 µm as standard, preventing bacteria buildup.

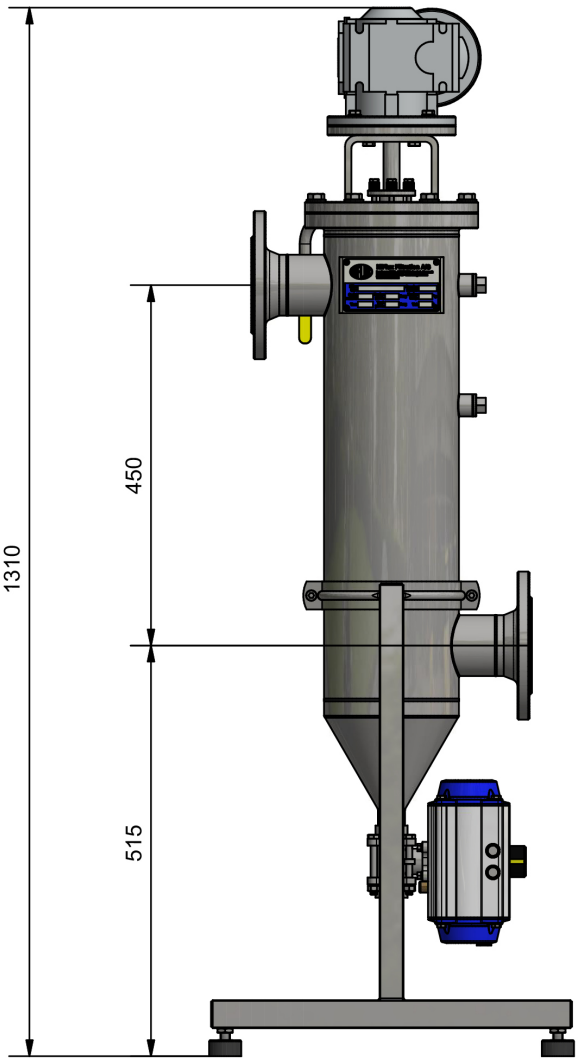
4 channel scraper arm with agitator for melt cheese.

Auto-line© Automatic Filters - MLR-E

Product specifications

HiFlux Auto-line filters are manufactured of stainless acid-resistent steel.The filter meets current standards and norms for pressure vessels, complies with the Machinery directive and can be CE labelled.

The filter is available ready for installation, complete with electronic controller and automatic drainvalve.



Capacity	500-3500 kg. melt cheese per hour
Filter vessel and element	EN 1.4404 steel
Design pressure	10 bar (16)
Test pressure	According to EN 13445
Max differential pressure:	3-7 bar
Max working temperature:	150°C (Fluid grp. 2 and vapor pre. < 0,5 bar)
Volume:	15,0 liters
Weight:	60 kg
Power supply (for R-E version):	3 x 230/400V, 50 Hz
Air supply (for R-P version):	5-7 bar, filtered
Flange connection:	DN65 EN1092-1/11
Drain:	Rp2
Drain chamber volume:	0,9 litres
Filtration:	30-50-100-150-200-300-500-1000 micron

*Customized solutions can be manufactured upon request.

Capacity (at a viscosity of 1 cSt and as a pressure filter)

Diff. pressure	Strainer area cm²	30*	50*	100*	150*	200*	300*	500*	1000*	2000*
0,05	1.500	12	14	22	24	24	24	24	24	?
0,10	1.500	15	18	28	31	31	31	31	31	?
0,15	1.500	19	23	36	37	39	39	39	39	?
0,20	1.500	24	27	44	45	47	47	47	47	?

*) Capacity in different filtration rates m³/ h/ µm

The filter should only be installed as a pressure filter in systems which have a positive overpressure (the surroundings must be taken into consideration).

All Auto-line filters are standardly produced according to the pressure equipment directive 2014/68/EU article 4, section 3. The filters can be delivered with approval according to category I, II, III or IV. The Auto-line filters complies with the Machinery directive 2006/42/EC. Auto-line filters can be delivered with approval for use in explosive atmospheres (Equipment-category 2, zone 1) according to directive 2014/34/EU.