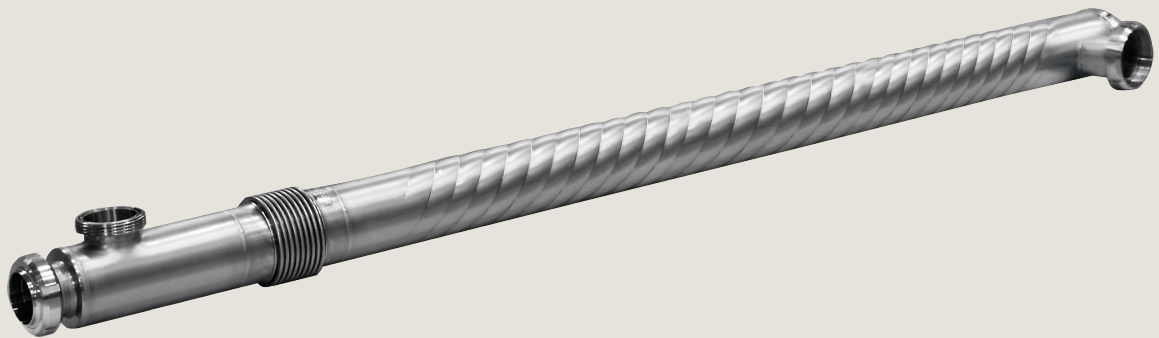


Alfa Laval ViscoLine™ monotube unit

The tubular heat exchanger series from Alfa Laval



Introduction

The ViscoLine Monotube hygienic tube-in-tube heat exchanger is ideally suited for the heating, cooling and pasteurization of products with low and average viscosity, and products that contain fibers and big particulates.

Applications

ViscoLine Monotube heat exchangers are used for grape mash, diced tomato, diced vegetable and diced fruits and also sauces and soups that contain big particles.

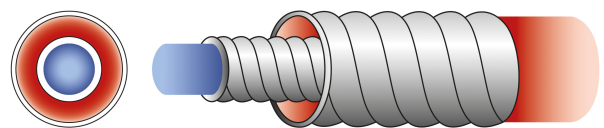
Benefits

- Maintenance free
- High working pressures
- High working temperatures
- Easy to expand
- Easy to inspect and clean.

Design

The ViscoLine Monotube heat exchanger consists of a single tube mounted inside an outer shell tube. The product medium flows inside this tube, and the service medium around it. It is a fully welded construction with a bellow on shell tube to absorb

thermal expansion. ViscoLine Monotube modules are normally connected in series and mounted on support frame or full frame.



Working principles

The product medium inside the tube flows in counter current to the service medium. The product tube is corrugated or it can be smooth. The shell tube is always corrugated.

Options

- Protection sheets
- Thermal insulation
- Video inspection
- X-Rays measurements & certificates
- NDT testing & certificates
- Frame angled for self-drainage.

Configuration

VLO 51/76-6-316L/304-C

VLO	ViscoLine Monotube
51	Outer diameter of product tubes
76	Outer diameter of service shell
6.0 ¹	Module length (m)
AISI316L	Material product side (tube)
AISI304	Material service side (shell)
C	Corrugated inner tubes
S	Smooth inner tubes

¹ Also available in 3 meter length

Technical data

The Viscoline Monotube Unit is designed for a pressure of 15 bar (217 PSI) on the product side (tube) and 10 bar (145 PSI) on the service side (shell), depending on the connections. The unit can, however, accommodate higher pressure ratings, depending on component thickness as connection type.

Connections available for both product side (tube) and service side (shell) include: SMS, DIN 11851, DIN 11864, Tri-Clamps, Flange and other on request.

The ViscoLine Monotube unit complies with the European Pressure Equipment Directive (PED 2014/68/EU), and is entitled to bear the CE mark. Where the CE mark is not required, Viscoline would be manufactured according to Sound Engineering Practice (SEP) and Good Manufacturing Practise (GMP, EC 2023/2006). Other design codes are available as well such as ASME VIII Div.1 and others would be on request like SELO's China Manufacturer License (SELO approval).

It is designed to operate at a temperature of 190°C (374 °F) although higher temperatures are also met.

All units can be provided with an expansion joint to absorb thermal expansion stress.

Material ¹	
Product side (tubes)	Stainless steel AISI 316L
Service side (shell)	Stainless steel AISI 304 or AISI 316L (optional)
Frame	Stainless steel AISI 304
Gaskets	NBR, EPDM, FKM, PTFE and others on request.

¹ Other material available on request such as SAF 2205, SAF 2507 for inner tubes, tube sheet and bends

The ViscoLine heat exchanger can be manufactured with different surface finish and can be electropolished if required.

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200000108-1-EN-GB

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