



Heat exchangers exist in many forms and, as one of the world's leading companies in this field, Alfa Laval naturally has a full range.

Contact your nearest Alfa Laval sales office or go to www.alfalaval.com for further information.

Alfa Laval in brief

Alfa Laval is a leading global provider of specialized products and engineered solutions. Our equipment, systems and services are dedicated to helping customers to optimize the performance of their processes. Time and time again.

We help our customers to heat, cool, separate and transport products such as oil, water, chemicals, beverages, foodstuffs, starch and pharmaceuticals.

Our worldwide organization works closely with customers in almost 100 countries to help them stay ahead.

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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Designed to meet thermal needs

ViscoLine™ – the tubular heat exchanger range from Alfa Laval



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As one of the world's leading heat transfer specialists, Alfa Laval has a complete portfolio of state-of-the-art heat exchangers. Our range also includes tubular models under the name ViscoLine.™

Choose the right technology for the task

Beverages, viscous food and many other products often have high viscosity or contain particles of many different kinds and sizes. While plate heat exchangers are a cost-efficient solution for heating and cooling of particle free liquids or liquids with limited particle size, they normally cannot handle this type of media without clogging.

Tubular heat exchangers are the ideal solution. Designed to avoid this problem, they take over where plate heat exchangers reach their limitations.

A broad spectrum of thermal applications

Tubular heat exchangers are suitable for heating, cooling, pasteurization, UHT treatment, heat regeneration and other heat transfer duties.

Our ViscoLine models are widely used in processing, for example:

- Fruit juices, fruit mash, diced fruits, fruit purees
- Vegetable juices, tomato juice, sandwich spreads
- Egg products
- Baby foods, puddings, soups, sauces
- Jams, marmalades, chocolate sauces
- Pulps, nectars, concentrates
- Wine must, crushed and destemmed must
- Starch-related products
- Ice-related products
- Meat by-products, animal foodstuffs
- Pharmaceutical products.

The benefits of ViscoLine tubular heat exchangers:

- Hygienic design
- ViscoLine modules can be assembled on a support frame or a full frame and integrated as heat transfer unit into various modules
- Different types of ViscoLine models can be combined on the same frame
- Rebuilding/expansion is possible due to connection on media side
- Fully welded construction makes the tubes almost maintenance free
- Optimum number and size of inner tubes provides the highest possible efficiency thus ensuring low investment cost due to lower number of units needed
- Different types of connections available
- Possibility to combine ViscoLine with other types of heat exchangers to increase running time of equipment.

Main types of tubular heat exchangers

Tubular heat exchangers consist of an external shell and a single inner tube (monotube type) or a bundle of inner tubes (multitube type). There are also models with four concentric tubes (annular space type).

The numbers and diameters of the tubes used vary according to the product to be processed and the thermal application to be used.

It pays to choose ViscoLine

Once you have decided to use tubular heat exchangers in your process, why should you choose ViscoLine models from Alfa Laval?

One reason is their high thermal efficiency. ViscoLine is a range of highly efficient tubular heat exchanger types that incorporates corrugated tubes designed to increase turbulence in the flow of the fluid. This substantially increases the overall heat transfer coefficient, saving time and energy in your process.

In addition, the fully welded construction of ViscoLine heat

exchangers makes the tubes almost maintenance free, minimizing downtime and operating costs.

The ViscoLine range includes the following special types:

ViscoLine Annular Unit, VLA

Annular models are used at higher viscosity levels where it is necessary to apply heat to the product from both the inside and the outside at the same time, in order to prevent layering. In these four concentric tubes, the product flows between the second and third tube.



VLA

ViscoLine Monotube Unit, VLO

Monotube installations are most frequently used for heat-treating products that contain large particles, or have a high pulp or fibre content.



VLO

ViscoLine Multitube Unit, VLM

The multitube design is the most commonly used. Products processed in this way are of a low to medium viscosity with small particles and fibres.



VLM

ViscoLine Multitube Unit, VLR

3m long multitube for product to product heat recovery of low viscosity products with pulp and fibres.

ViscoLine CIP Unit, VLC

Heating of water or CIP solutions by means of steam, less demanding applications to process low and



VLC

average viscosity products. Products can contain fibres and small particulates. Also suitable for general heating and cooling applications, thus ideal for a range of processes.

ViscoLine heat exchangers feature a hygienic design for use in aseptic applications. They are part of a comprehensive range of fluid handling products in which the internal and external surfaces can be polished to meet individual clients' specific requirements. ViscoLine tubular heat exchangers comply with international regulations including PED.

Ideal for a range of processes

ViscoLine tubular heat exchangers are ideal for use in processes that include:

- Processing food products from low to average viscosity, with or without particulates and fibres
- Aseptic processing
- Processing heat-sensitive products
- High-purity water systems in pharmaceutical, biotech and personal care applications.



Sterilizer system SteriTherm™ VLA

