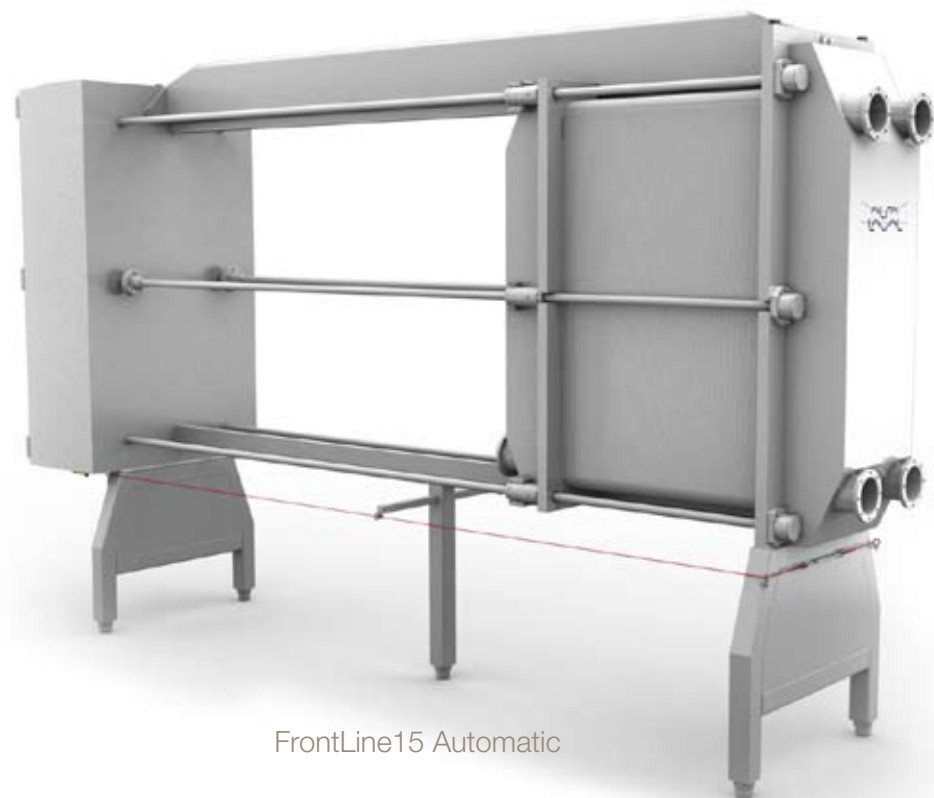


Sanitary Plate Heat Exchangers



FrontLine Series



FrontLine15 Automatic



FrontLine 8



Front Standard Plate



Front WideStream Plate



Front Gemini Plate

The FrontLine range from Alfa Laval represents the most advanced plate heat exchanger technology available for dairy, beverage and processed food applications. Designed exclusively for these demanding applications, the FrontLine range provides specific benefits to the food processor, including:

- Unique plate pattern provides even and gentle heating of sensitive food products
- Small port holes and long, narrow plates facilitate quick and easy cleaning, usually at process flows
- Integral glue-less gasket system provides for long gasket life, FDA compliant materials, high pressure operation and easy maintenance
- Frames provide for up to 290 psi operation, easy disassembly and modifications, and meet all 3A sanitary requirements

Applications

The FrontLine can handle a wide variety of products and processes. Some examples include:

- Milk and cheese milk pasteurization
- Ultra-high temperature sterilization
- Beverage and energy drink pasteurization
- Standard and pulpy juice pasteurization
- Beer wort heating and beer cooling
- Liquid egg processing
- Bottled water treatment
- Soups, sauces and starch heating
- Catsup and mustard heating and cooling
- Biotechnology culture/broth sterilization
- Pharmaceutical WFI thermal treatment

Other FrontLine Features

- Four sizes: Front6, Front8, Front10 and Front15 with plate ports and connections from 2" to 6" diameter
- With almost 10 sq. ft. surface area per plate the Front15 is the largest sanitary plate heat exchanger available
- Herringbone plate design provides initial sizing and future restreaming flexibility
- Connection plates with removeable double-corner options for maximum process flexibility

Automatic Frame Features

Alfa Laval's unique automatic opening and closing frame provides access to the heat exchanger for inspection, cleaning or service. This option features:

- A clean and simple electrical drive system using standard components
- Nuts and bearings that are readily accessible for lubrication and maintenance
- Sealed frame and pressure plates to keep the outside clean and the inside support structure dry
- Fast closing and opening speeds
- Emergency stop cord for safe single-operator operation
- Available for Front15 and Front10

Plate Options

- ClipLine for standard duties
- ClipLine WideStream for pulpy juice
- ClipLine Gemini for double-wall protection
- Standard materials include AISI 316, SMO 254, Titanium and Hastelloy

BaseLine Series



BaseLine 10

BaseLine 6

BaseLine 3

The BaseLine range offers lower cost, yet sanitary solutions for less sensitive applications.

Key Features

- Efficient heat transfer plates
- Sizes range from Base3 to Base11 featuring 1" to 4" connections
- Wide range of plate materials and options
- Glue-less gasket system offering FDA compliant materials
- Solid stainless steel frames rated to 145 psi operation
- Meets all 3A sanitary requirements
- Connection plates for multi-duty applications

Applications

- Milk and beverage processing
- Wine tempering
- Bottled water treatment
- CIP heating
- RO water

TS Steam Heater



TS6-MFMC



TS6-MFG

The Alfa Laval TS Steam Heater is designed exclusively for steam to water heating. The unique plate geometry, combined with heavy duty gaskets, makes this unit ideal for use in hot water sets and for the replacement of existing shell and tube heat exchangers.

Key Features

- Sturdy, high pressure frames
- Sizes range from TS6 to TS20 with connections from 3" to 8" diameter
- Easy to modify by adding or removing plates to accommodate future process changes
- Extremely compact, small footprint
- ASME coded painted frame
- 3A compliant stainless steel frame

Applications

- Hot water sets for pasteurizers
- Shell and tube replacement
- CIP solution heating

Utility Heat Exchangers



M15-MFG



M10-BWFL



Brazed

Alfa Nova

M-Line

Key Features

- Efficient heat transfer plates
- Sizes range from M3 to M30
- Connections from 1" to 12" diameter
- ASME coded to 300 psi

Applications

- Potable water
- Glycol and chilled water tempering

Semi-Welded

Key Features

- Welded plate pairs eliminate field gasket on refrigerant side
- Wide range of sizes
- Separate O-ring gasket on refrigerant side
- ASME coded to 300 psi

Applications

- Glycol and water chilling utilizing NH₃ or Freon
- Replacement of shell and tube chillers

Brazed / Alfa Nova

Key Features

- Low cost, compact and highly efficient
- High temperature and pressure operation
- Brazed uses copper as sealing agent, eliminating gaskets
- Alfa Nova is of solid stainless steel construction

Applications

- Glycol and water chilling
- Hot water heating
- CIP heating (Alfa Nova)

Application Guide

Series (Prefix)	FrontLine (Front)				BaseLine (Base)						TS		MLine (M)						Semi-Welded				Copper Brazed (CB)				Alfa Nova (AN)						
Size/Type	6	8	10	15	3	6 B	6M	10B	10M	11	6M	20M	3	6B	6M	10B	10M	15B	15M	M6B	M10B	MK15	T20	14-77	200	300	400	27	52	76			
Dairy																																	
Milk Cooling	•	•	•	•	•		•		•	•																							
Milk/cream pasteurization	•	•	•	•			•		•																								
Cultured milk cooling	•	•	•	•			•																										
Whey pasteurization	•	•	•	•			•		•																								
Ice cream pasteurization	•	•	•	•			•																										
Beverages																																	
Juices, drinks, wine	•	•	•	•	•	•	•	•	•	•											•	•	•	•									
Juice with pulp/fibres	•	•	•	•																													
Brewery																																	
Wort cooling	•	•	•	•	•		•		•																								
Beer cooling	•	•	•	•	•	•	•	•	•	•											•	•	•	•									
Beer pasteurization	•	•	•	•																													
Other food																																	
Low viscous	•	•	•	•	•		•		•				•		•		•																
High viscous	•	•	•	•																													
Vegetable oil	•	•	•	•	•	•	•	•	•	•			•	•	•	•	•	•	•	•													
Pharmaceutical																																	
Pre-heating water for WFI					•	•	•	•	•	•	•	•	•	•			•																
In-line heater					•		•						•	•		•																	
Utilities																																	
Water heating/cooling					•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•					•	•	•	•	•	•	•	•	
Glycol cooling					•	•	•	•	•	•			•	•	•	•	•	•	•	•					•	•	•	•	•	•	•	•	
Refrigeration																					•	•	•	•	•	•	•	•	•	•	•	•	
CIP heating	•	•	•	•	•	•	•	•	•	•	•	•	•		•		•																

PHE Specification Guide

Series (Prefix)	FrontLine (Front)				BaseLine (Base)						TS		MLine (M)						Semi-Welded				Copper Brazed (CB)				Alfa Nova (AN)							
Size/Type	6	8	10	15	3	6 B	6M	10B	10M	11	6M	20M	3	6B	6M	10B	10M	15B	15M	M6B	M10B	MK15	T20	14-77	200	300	400	27	52	76				
Frames																																		
Stainless Steel	•	•	•	•	•	•	•	•	•	•	•					•	•																	
Painted											•	•	•	•	•	•	•	•	•	•	•	•	•											
Max Pressure 145 psi	•		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•											
Max Pressure 230 psi		•		•												•	•																	
Max Pressure > 300 psi	•	•	•								•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		
Auto Open			•	•			•																											
Sanitary Connections	•	•	•	•	•	•	•	•	•	•	•		•	•	•	•	•																	
Plates																																		
Widestream	•	•																																
Gemini	•	•	•				•																											
SMO 254	•	•	•	•	•	•	•	•	•		•	•	•	•	•	•	•	•	•	•														
C276			•	•									•								•	•	•	•										
Titanium	•	•			•	•	•	•	•		•	•	•	•	•	•	•	•	•	•														
Regulatory																																		
FDA Gaskets	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•														
3A Approval	•	•	•	•	•	•	•	•	•	•	•					•	•																	
ASME											•	•	•	•	•	•	•	•	•	•	•	•	•									•	•	•
UL																								•	•	•	•	•	•	•	•	•		

Inquiry check list

- Flow rates
- Allowable pressure drops
- Temperature program
- Percent heat recovery
- Physical properties
- Frame finish
- Regulation demands

Parts and service check list

- Model number
- 10 digit manufacturing number
- Product and process parameters
- Last service date
- Plate count or "A" dimension
- Gasket material

Contact

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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, foodstuff, starch and pharmaceuticals. Our worldwide organization works closely with customers in almost 100 countries to help them stay ahead.