



THERMALINE

INNOVATIVE HEAT TRANSFER SOLUTIONS

Food, Beverage, and BioPharm Applications

Thermaclip Sanitary Plates
Adhesiveless Gaskets
Sanitary Frames
Automated Frames

Milk



Juices



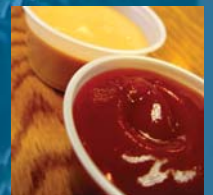
Beer



Wine



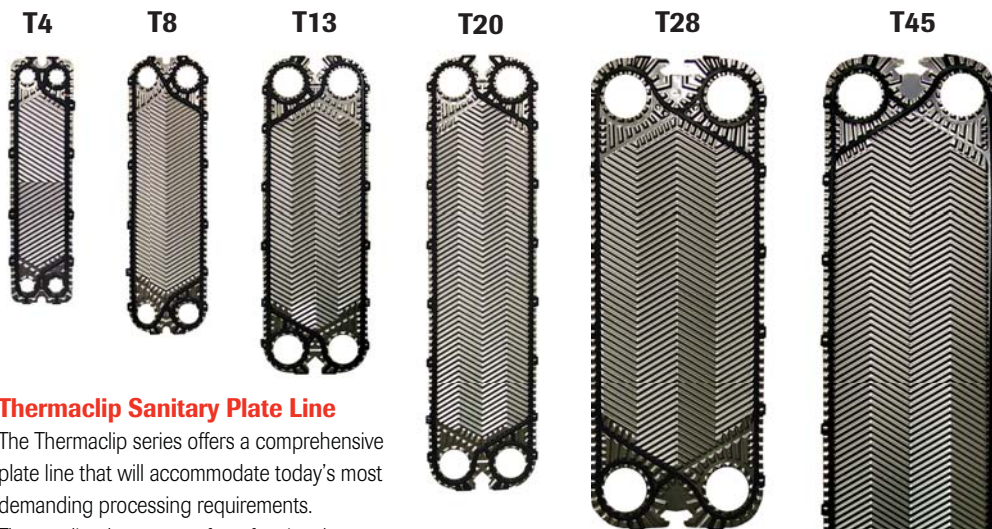
Condiments



INNOVATIVE HEAT TRANSFER SOLUTIONS

Thermaline Inc. is an innovative heat transfer solution provider for the food, beverage, and pharmaceutical industries. Processors worldwide have come to depend upon Thermaline's quality product line, solid customer support, and practical industry knowledge to meet all of their heat transfer needs.

Thermaline's relentless pursuit of operational excellence is evident in every piece of equipment we manufacture. Our passion for this achievement ultimately gives our customers the competitive edge in their industry by providing intelligent, well-informed, and energy-conscious decisions in the equipment they purchase.



Thermoclip Sanitary Plate Line

The Thermoclip series offers a comprehensive plate line that will accommodate today's most demanding processing requirements.

Thermoclip plates range from fractional surface area plates for micro flow rates to plates with excess of 6 ft² and 6" ports for high volume, the Thermoclip plate line has a solution for any application. With multiple plate patterns, corrugations, draw depths, and materials, we can optimize each unit to operate at peak efficiency, lowering the cost of ownership, but more importantly providing long-term energy savings.

- 3-A and FDA compliant
- Adhesiveless clip gasket system
- Hi Theta-, Lo Theta-, and Washboard-style corrugations
- Optimized pressure drops and efficiency
- Multi-section capable
- Standard plate material is 316 stainless steel (other materials are available upon request)

Comprehensive Plate Line

Model No.	Area Per Plate Ft ² (m ²)	Max Design Pressure PSI	Max. Conn. in. O.D.	Approximate Frame Dimensions Tie-Bolt Style in. (mm)			Approximate Weights lbs. (kg)		
				W	H	L Max.	Frame		
							Min.	Max.	Plate & Gasket
T4	.46 (.04)	200	1.5	7 (178)	26 (660)	29 (737)	75 (34)	95 (43)	0.63 (.29)
T8	.81 (.07)	200	2	11 (279)	32 (813)	34 (864)	215 (97)	290 (132)	1.84 (.83)
T13	1.40 (.13)	200	2	13 (330)	40 (1016)	46 (1168)	315 (142)	520 (236)	2.58 (1.17)
T20	2.15 (.19)	200	3	13 (330)	50 (1270)	46 (1168)	350 (159)	600 (272)	2.85 (1.29)
T28	3.01 (.27)	200	4	20 (508)	61 (1549)	100 (2540)	875 (395)	1800 (816)	4.34 (1.97)
T45	4.84 (.45)	200	4	20 (508)	80 (2032)	144 (3700)	1000 (454)	1900 (861)	6.98 (3.17)

Performance Guaranteed

Thermaline Inc. is dedicated to providing the customer with quality plate heat exchangers and systems that offer optimum performance. Each heat exchanger carries our trademark Performance Guarantee and is individually designed, certified, and tested prior to delivery.

Thermoclip Adhesiveless Gaskets

Thermoclip gaskets are designed to withstand the rigors of extended processing times and the harsh chemical wash of a CIP system. Over-the-plate clip gasket system allows for easy field removal and replacement of the gasket. Heavy duty clips ensure the gasket stays in place during handling and assembly.

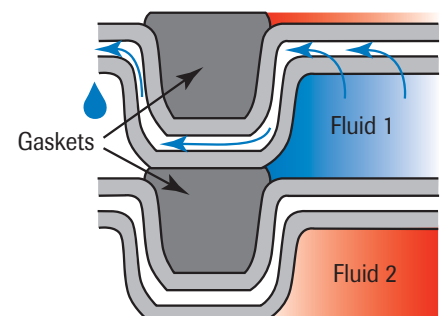
- 3-A and FDA compliant
- Available in Nitrile, EPDM, and Viton
- Operating temperatures up to 350°F



Double Wall Plates

Thermaline's double wall plate technology provides added security of an additional safety barrier. If a pinhole or crack develops in a plate, the fluid is forced to leak into the atmosphere rather than into the other fluid stream.

- Eliminates product and media intermixing
- Leaks are vented externally, allowing the operator to quickly identify a problem
- Laser-welded port area





Sanitary Frames

Thermaline offers a durable tie-bolt style frame line with a focus on sanitary design, simplicity, and dependability. Most frames are precision machined from solid 300 series stainless steel. High pressure frames are carbon steel clad with 300 series stainless steel and seal welded. We also offer an economical epoxy-painted carbon steel option.

- Available in PMO high port
- 304 or 316 stainless steel product contact surfaces
- Sanitary S-line, I-line, NPT, or flange connections

Real World Testing Facilities

Application of our products to our customer's specific needs often requires practical testing using real world parameters. Our experienced staff of application engineers and their extensive testing facilities stand ready to help. Test process concepts by means of a thorough theoretical study, using computer analysis and in-depth knowledge of process technologies.



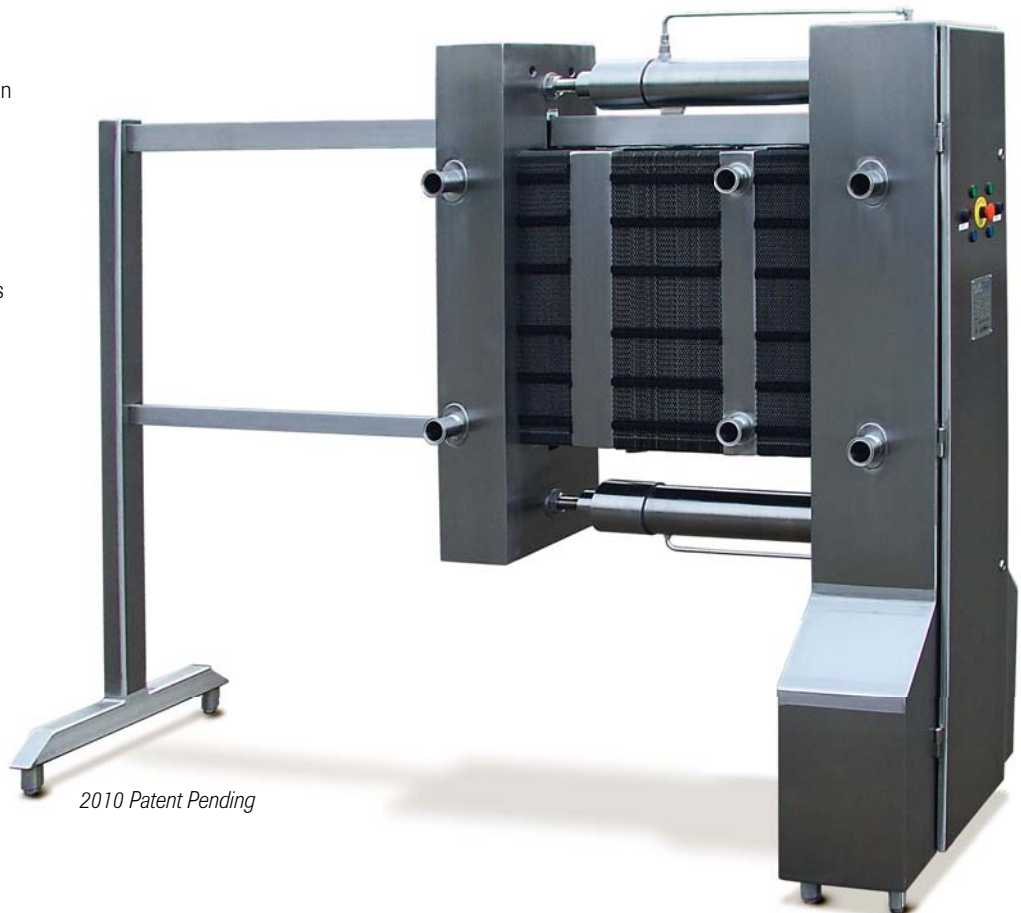
Automated Frames

Thermaline has unleashed the power of innovation and automation to make your processing days safer and easier. Thermaline's new EZ series frames set new standards in heat exchanger automation for tomorrow's food and beverage processors.

- Fully-automated and semi-automated frames
- Simple and dependable operation
- Reduces downtime for cleaning and inspection
- Promotes plant personnel safety

Upgrade your existing PHE frame to the new EZ automated frame. The EZ frame is sold separately to accommodate your existing plate pack. Thermaline can easily adapt semi- or fully-automated frames to fit the plate that you are currently using.

- Enjoy the benefits of the automation
- Re-use existing plate pack



2010 Patent Pending

Additional Thermaline Products



Thermaline Floating Series Corrugated Tubular Heat Exchangers

Thermaline offers a complete line of tubular heat exchangers, corrugated to maximize heat transfer efficiency. Our Floating Series boasts an innovative floating tube design to minimize material fatigue and eliminate cross-contamination issues.

- Meet or exceed 3-A tubular heat exchanger design requirements
- Duofloat Sanitary corrugated floating double-tube heat exchanger
- Trifloat Sanitary corrugated floating triple-tube heat exchanger
- Multifloat Sanitary corrugated floating multi-tube heat exchanger
- Possible media and product leaks are vented to atmosphere
- Direct and indirect regeneration



Thermaline Reconditioning Service

Thermaline can clean, inspect, and re-gasket your plates like new. Our reconditioning facility runs 24 hours a day to keep your plant up and running smoothly.

- Factory-certified plate reconditioning
- Using only high quality OEM replacement gaskets
- Proactive preventative maintenance programs
- Comprehensive on-site heat exchanger service and repair
- Servicing all makes and models

Hot Water Sets

- Full range of models from 25 gpm to 750 gpm
- Turns steam into clean hot water for product or process heating
- Full controls package available or integrate with your process controls



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