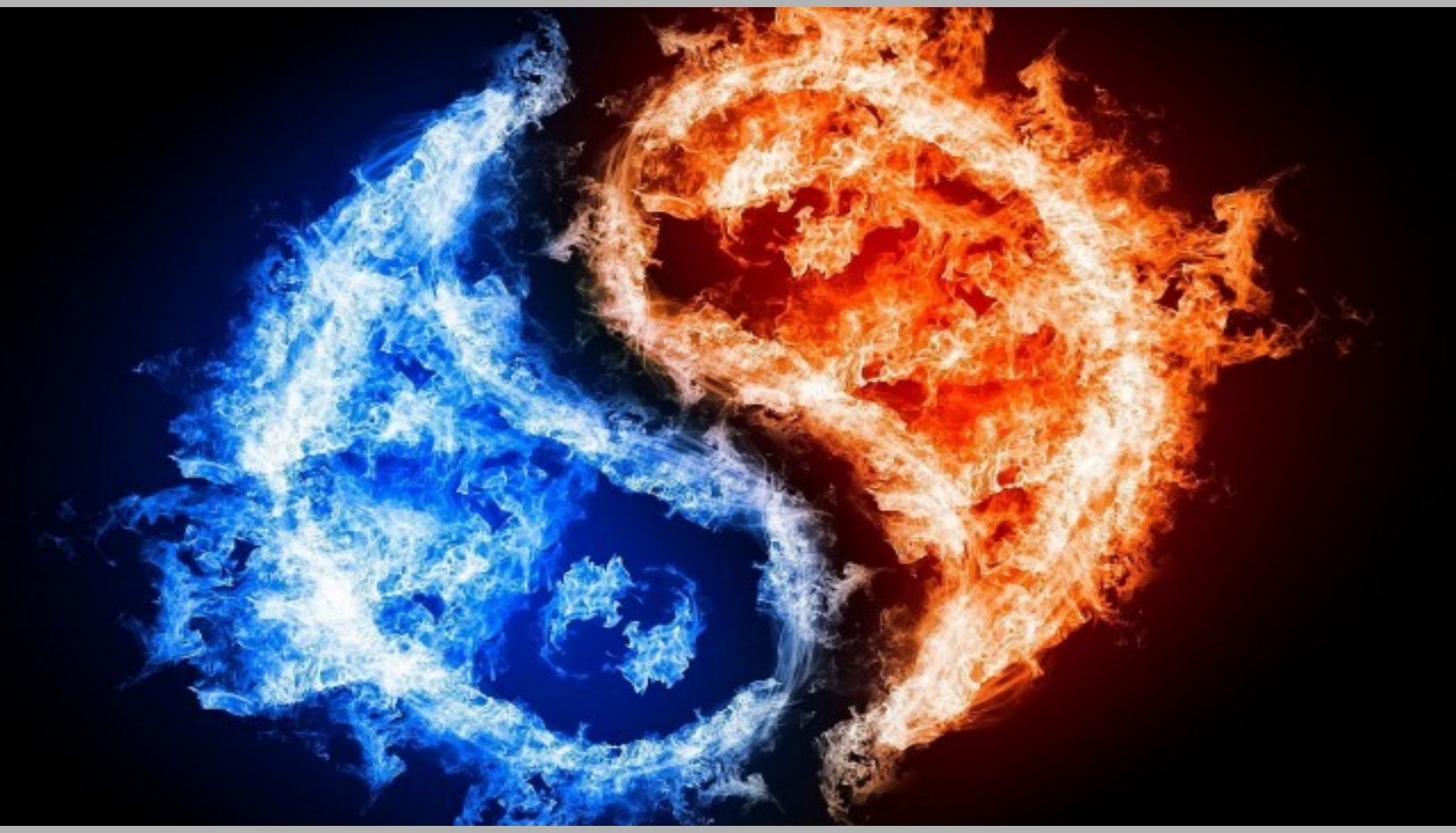
Where Fire and Ice Meet

Super Max



Welded Shell and Plate Heat Exchangers by *Tranter*

Call your *Chicago Tranter Authority*

Meters & Controls 630-279-3800
www.meterscontrols.com

The Removable Core SUPERMAX exchanger is fully accessible for inspection and/or mechanical cleaning by removing the cover plate assembly.

SUPERMAX®—For Amazing Efficiency In A Small Footprint

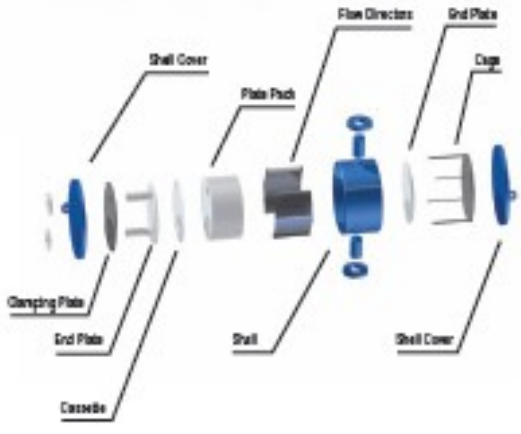
The SUPERMAX® Shell & Plate Heat Exchanger is designed for pressures to 200 barg (2900 psig) and at temperatures up to 900°C (1650°F) for standard range units. Extended range units are available for higher temperature and pressure applications.

Turbulent flow, even at low velocities, enables stable capacity regulation and minimizes fouling. In refrigeration and cryogenic service, the exchangers require a low refrigerant charge. They are also resistant to freezing because of high fluid turbulence induced by the corrugated plate pattern. SUPERMAX wide temperature/pressure ratings offer good performance with natural refrigerants such as ammonia and carbon dioxide.

Fluids can undergo phase change on either the plate or shell side. The SUPERMAX is particularly suited to applications having a large flow imbalance, allowing higher flow rates on the shell side. The SUPERMAX can be installed horizontally or vertically; horizontal installation is recommended for condensing/evaporating/boiling applications.

Accordion-like core accommodates thermal expansion cycles

Pairs of chevron-type plates are placed back-to-back and fabricated into a cassette by full automatic perimeter welding of adjacent



SPW-55
24-in. diameter shell x 5-ft length, with a 500-plate plate pack.

Shell & Tube
18-in. diameter shell x 22-ft length.

Applications

Oil & Gas Production And Refining
- Optimization of heat recovery, cooling, condensation, dehydration and reboiling systems
- Distillation column exchangers: fractionators, hydrocrackers, recrackers and hydrogen sulfide strippers
- Waste heat recovery and feed water heating
- LPG reliquefaction

Chemical Processing And Pharmaceuticals
- Optimization of condensation, heating/cooling, mist elimination, heat recovery and reboiling systems
- Evaporation, distillation and condensation of substituted olefins and aromatics, including halogenated compounds
- Thermal processing involving mineral acids and caustics
- Viscous processing with monomers and resins
- Soaps and detergents, paints and coatings
- Mineral oil heating and cooling
- Gas cooling and drying: chlorine, hydrogen, nitrogen, carbon dioxide
- Vapor and solvent recovery

HVAC And District Heating
- Steam and hot water heaters
- Heat recovery exchangers
- High temperature interchangers
- Water/glycol-cooled oil coolers
- Discharge gas desuperheaters for heat recovery

Emissions Control Systems
- Ammonia liquor scrubber coolers
- Flue gas heat recovery banks
- Flue gas reheating banks
- Mist elimination banks

Food Processing
- Vegetable oil heating
- Waste heat recovery

Power Generation
- Low pressure feedwater heaters
- Condensate exchangers and condensate trim coolers
- Blowdown heat recovery exchangers
- Condensers and vapor condensers
- Condensate subcoolers
- Evaporators
- Molten salt to thermal fluid interchangers
- Seal water coolers
- Closed cooling loop exchangers
- Component cooling water (CCW) exchangers
- Lube oil coolers
- Gland steam condensers
- Recuperators
- Economizers
- HRSG (Heat Recovery Steam Generator) cross exchangers

Refrigeration
- Flooded evaporators with surge drum, condensers, chillers
- Liquid chillers for flooded evaporation
- Flooded evaporators with pumped refrigerant feed
- Liquid-cooled condensers
- Cascade CO_2 condensers for flooded ammonia and other refrigerants
- Thermosyphon oil coolers
- Oil coolers and condensate subcoolers for flooded evaporation

The Implications Of High Heat Transfer Rates

The illustration below depicts an actual SUPERMAX replacement for an S&T application. The significantly higher heat transfer rates of the SUPERMAX plates versus the tube bundle are responsible for the striking difference. The implications are clear: less cost for materials (stainless steel, titanium or other expensive higher alloys), simpler fabrication for shorter delivery lead times, easier installation, simpler support structures and vastly smaller footprints, especially considering dead space required to pull the S&T tube bundle for cleaning.

PHE Comparative Footprint

Model	Required Surface Area, m^2 (ft^2)	Footprint Area, m^2 (ft^2)	Dry Weight, kg (lb)
TEMA Shell & Tube	203 (2,187)	9 (100)	6,350 (14,000)
SUPERMAX (SPW-55)	56 (600)[a]	0.7 (8)	726 (1,600)

[a] Common HVAC water–water application—10°F approach.

HEAT EXCHANGERS HEAT EXCHANGERS

TRANTER
The heat transfer people

Welded PHE Fax Form

Phone No: (940) 723-7125
Fax No: (940) 723-5131
E-Mail: sales@tranter.com

Date:_____

Customer Information	
Customer:	Phone:
Attention:	Fax:
Street:	E-Mail:
City/ State/ Zip:	Project:

1. **Quote Turnaround:** ☐ Specified Turnaround_____ ☐ Std. Turnaround - 5 Business Days
2. **Formal Quote Required:** ☐ Yes ☐ No
3. **Type of Quotation** ☐ Buy ☐ Budget ☐ Design
4. **ASME Code Stamp** ☐ Yes ☐ No
5. No. of Units _____

Items marked in bold should be completed for best sizing and quickest turnaroung.

Design Conditions		Hot Side				Cold Side			
Fluid Circulated									
Total Flow Rate				Gpm				Gpm	
Specific Heat*				Btu/(lb) °F				Btu/(lb) °F	
Specific Gravity*									
Thermal Conductivity				Btu/[hr](ft)°F				Btu/[hr](ft)°F	
Viscosity* (2nd Temperature)		cp@	°F	cp@	°F	cp@	°F	cp@	°F
Temperature In				°F				°F	
Temperature Out (only one required)				°F				°F	
Pressure Drop Allowed				Psi				Psi	
Heat Exchanged									
Design Pressure*	Psig								
Test Preesure	Psig								
Design Temp*	°F								

6. ***Materials of Construction** ☐ 316SS ☐ Titanium ☐ Other

***For fluids other than water or steam, properties should be furnished.**
For batch heating please provide tank dimensions and time allowed for heat-up.

Remarks / Application Details:

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