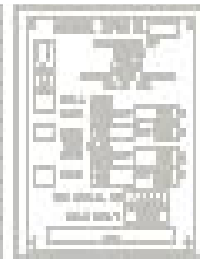
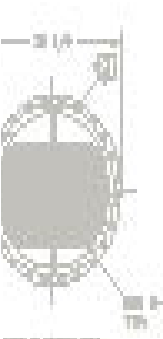
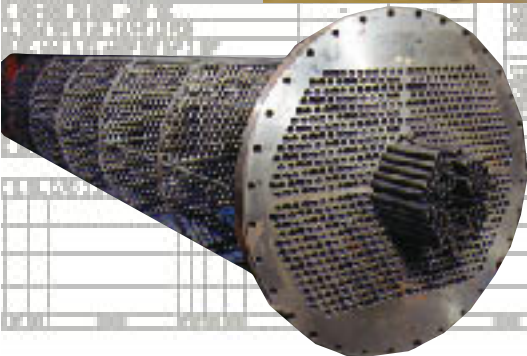


Process and Refrigeration Heat Exchangers



- 1. THE DESIGNER SHALL BE RESPONSIBLE FOR THE DESIGN OF THE HEAT EXCHANGER.
- 2. THE DESIGNER SHALL BE RESPONSIBLE FOR THE DESIGN OF THE HEAT EXCHANGER.
- 3. THE DESIGNER SHALL BE RESPONSIBLE FOR THE DESIGN OF THE HEAT EXCHANGER.
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- 9. THE DESIGNER SHALL BE RESPONSIBLE FOR THE DESIGN OF THE HEAT EXCHANGER.
- 10. THE DESIGNER SHALL BE RESPONSIBLE FOR THE DESIGN OF THE HEAT EXCHANGER.

REFRIGERATION DIVISION
GEA

REVISIONS
DATE
BY

History

Since 1949, FES has lead the industry with custom engineered systems and equipment, which is clearly on the leading edge of low temperature refrigeration technology. In 1998, FES added manufacturing of custom designed *Shell and Tube Heat Exchangers*. When you see the name FES on a shell and tube heat exchanger, you can be assured it's the best in the industry. FES strives for engineering excellence by utilizing technologically advanced software for both thermal and mechanical design.

FES has personnel with many years of experience in heat exchanger technology. We can design and fabricate heat exchangers for refrigeration, as well as other process requirements, like food, chemical, paper and pulp, and the pharmaceutical industry.



Size and Weight Limitations

Diameter: 4" to 60"

Length: up to 40'

Weight: up to 100,000 Lbs.

Materials: Carbon Steel, 3 1/2% Ni Steel, 304/316 Stainless Steel, Sandvik SAF 2205, Copper, 90/10 Cu-Ni, Admiralty Brass, Titanium.

Standards: TEMA, CRN, API.

Certifications: ASME "U Stamp, ASME "R" Stamp, ISO 9001 Certified, PR China Safety Quality License.

Specs

Production Facility



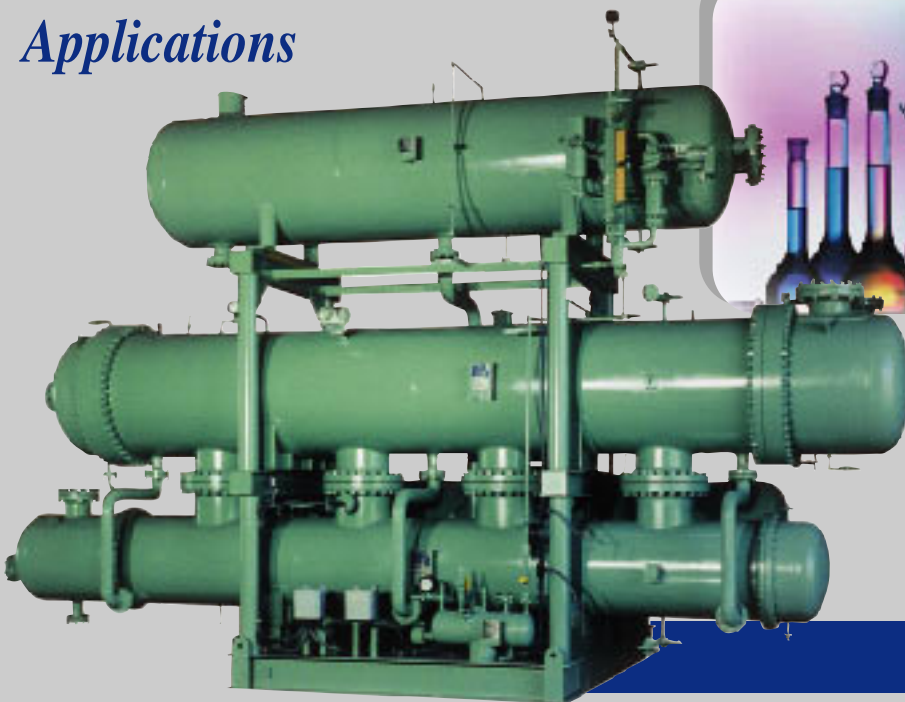


Processes

- Machining
- Welding
- Plate Rolls
- Plate Burning
- Blasting
- Painting



Applications



Evaporators

- Flooded
- Thermosiphon

Condensers

- Water Cooled
- Cascade

- Fixed Tube Sheet (E, X Shells)
- Single/Double Tube Sheet
- Kettle Reboilers
- U-Tube Design

Features

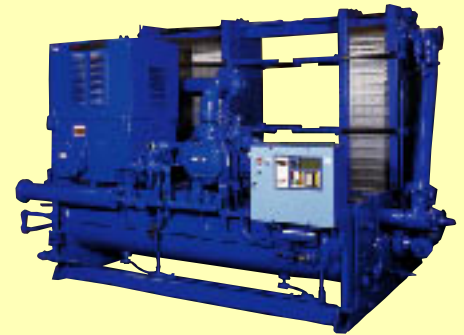
Capabilities

| | |
|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Plate Burning: | CNC Plasma - ESAB Avenger 1 with 12' x 25' table CNC Oxy-Fuel Semi-Automatic Oxy-Fuel Manual Oxy-Fuel |
| Welding: | Wire Feed Mig-Multiple Units Wire Feed Flux-Cored Arc Welding - Multiple Units Submerged Arc Welding on Manipulators - 3 Units Tig Welding - Multiple Units Automatic Rig Tube to Tubesheet, 0.625" Diameter through 1.5" Diameter Welding Positioners - Multiple Units up to 6000 Lbs. Turning Roll Sets - Multiple Units up to 30 Tons |
| Plate Rolls: | 3/4" Thick by 13' Long |
| Machining: | Quickmill CNC Gantry Mill/Drill, 96" x 180" Bullard Cutmaster, 72" Swing by 60" Height Radial Drill Presses Engine Lathes Various Mills, Grinders, Etc. |
| Blasting: | 22'W x 24'H x 40'L Recirculated Shot Blast Booth Access by High Capacity Carts In-house, State-of-the-Art |
| Painting: | 20'W x 20'H x 42'L Booth with Heated Atmosphere Access by High Capacity Carts In-house, State-of-the-Art 13'W x 13'H x 16'L Booth with 5 Ton Crane Access |

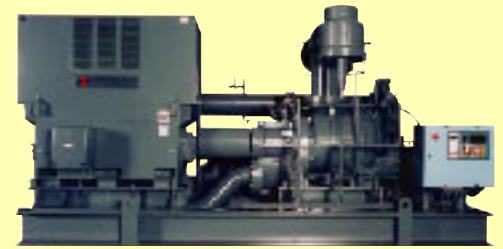
Other Products



Centrifugal Compressor Driveline Package.



Chiller with Plate/Frame Heat Exchanger.



Screw Compressor Driveline with 2000 HP Motor.

FES' corporate offices and production facilities are based in York, Pennsylvania, as well as parts, service, and repair centers located in Stockton, CA and Houston, TX. We provide high quality and fast turnaround from design to production. Whether you are planning a completely new project, or modernizing existing facilities, FES can handle all of your refrigeration requirements promptly, efficiently, and economically.

