

Keep Your Cool With Quality Heat Exchangers For Ultra-Pure Applications



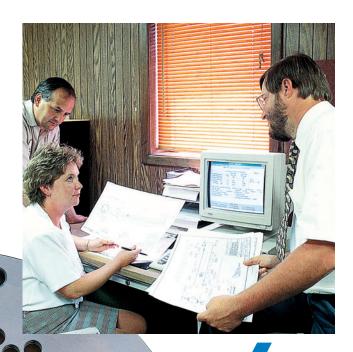
When it comes to heat exchangers, Allegheny Bradford sets the industry standard. Quality is the cornerstone of our heat exchangers from start to finish. Our engineering specialists work closely with you to custom design the most efficient, cost-effective heat exchanger for your thermal transfer requirements.

From the documentation of raw materials in compliance with ASME codes, to the precision CNC machining of tubesheets and bonnets, to final finishing, testing and documentation, Allegheny Bradford Heat Exchangers are manufactured to deliver superior performance and trouble-free operation, even in the most demanding ultra-pure processing environments.

Tailored To Your Thermal Transfer Needs

Because each application is different, we design every heat exchanger individually to meet your unique processing needs. Fabricated with precision down to the last detail, Allegheny Bradford heat exchangers feature:

- All stainless steel construction for corrosion resistance and product integrity
- Contact surfaces polished to Ra values less than 10 microinches for ultra-pure applications
- · Free-draining design to eliminate product hold-up
- Unique double tubesheet construction to prevent cross contamination of process and utility fluids
- Straight or U-Tube design







Our state-of-the-art fabrication technology uses high-pressure hydraulic expansion to seal the tubeto-tubesheet joints. This reduces the risk of roller expansion damage, as well as work-hardening effects and excessive thinning of the tubing. In addition, our proprietary integrated double tubesheet virtually eliminates tube-to-tubesheet joint stress. The result is consistent performance, reduced maintenance and extended equipment life.

Prior to shipment, every heat exchanger undergoes rigorous testing and documentation procedures that may include:

- Hydrostatic pressure testing
- Dye penetration examination
- X-ray analysis
- · Saline testing
- Computer-verified performance
- Profilometer readings of surface finish to ensure mechanical and electropolished surface finishes to less than 10 microinches Ra
- Fiber optic, borescopic tube inspection and videotaping of product contact surfaces
- ASME Code Stamping with National Board Registration



You receive complete documentation to comply with your requirements, including data reports, seismic calculations,

production drawings, material test results, and certifications of hydrotest, passivation, surface finish and electropolishing.

Expanded Facilities For Faster Response

To meet our client's growing needs, Allegheny Bradford has added new fabrication facilities and upgraded our equipment for increased capacity and



improved operational efficiency. As a result, we can meet your heat exchanger requirements faster and more costeffectively than ever before.

State-Of-The-Art Electropolishing: The Ultimate Surface Finish



Allegheny Bradford's on-site electropolishing services will deliver the ultra-smooth finish your processing demands, regardless of the design and size of your heat exchanger. Our advanced proprietary techniques are designed to increase corrosion resistance, remove contaminants, maximize passivation and reduce surface friction.

As part of our comprehensive electropolishing processes, heat exchangers undergo precision pre-cleaning, final high-purity cleaning and rinsing, and post-electropolishing protection. Because we offer this service at our own facility, we can produce the finish you need with quick turnaround and competitive pricing.

Your Single Source For Stainless Steel Equipment

When you need stainless steel components and equipment for your ultra-pure process, Allegheny Bradford Corporation delivers the quality custom heat exchangers, tanks, filter housings, pumps, valves, fittings and process skids you require - on time and on budget. For more information on our full range of products and services, call us today at 800-542-0650.

Quality Stainless Steel Equipment From The Industry Leader

For more than 25 years, Allegheny Bradford Corporation has built a reputation for quality in the design and manufacture of stainless steel shell and tube heat exchangers for pharmaceutical, biotechnology and other ultra-pure industries. As the recognized leader in the industry, we offer today's most advanced stainless steel processing technology, along with a team of dedicated professionals who are committed to providing you with products that deliver unparalleled perform-ance and dependability, along with the responsive customer service you need.

Custom Sanitary Shell & Tube Heat Exchangers



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