



## ROTARY RETORTS

Alloy Engineering has developed and designed batch rotary retorts and continuous rotary retorts for high-temperature applications since 1995. Unlike the OEM cast retorts we replace, our retorts use a proven fabricated design which often provides a longer service life. Our continuous retorts feature a continuous weld from the charge end to the discharge end on both sides of the internal flight.

### Features:

- Weigh less and heat up faster for shorter cycle times
- Rotary retort service life at properly controlled temperatures lasts from 2.5 to over 5 years
- Wrought material assures a smooth interior surface to eliminate surface eruptions
- Ductile wrought materials (low carbon content and tight grain structure) result in greater resistance to thermal fatigue
- Includes rotary washer drums, draw furnace drums and rotary feeder drums

### Optional Equipment/Accessories:

- Drive sprocket assembly
- Support rings
- Seal rings
- Support rolls
- Drop chutes and hoods
- Gas inlet tubes
- Front and rear support wheels
- Front and rear spacing discs
- Bearing wheels and brackets

## OUR FABRICATED ROTARY RETORTS:

- Faster heat up time
- Shorter and more cycles
- Less temperature differential reduces thermal stresses
- No pattern costs or restrictions
- Better ductility to resist thermal fatigue or shock
- Fabricated retorts can be repaired or rebuilt, replacing only the damaged section

**Reduced Maintenance • Longer Life • Lower Life-Cycle Cost**

**Alloy Engineering**

844 Thacker Street, Berea, OH 44017 Phone 440.243.6800 Fax 440.243.6489  
Email [sales@alloyengineering.com](mailto:sales@alloyengineering.com) or visit [alloyengineering.com](http://alloyengineering.com)



## ALLOY ENGINEERING

- Extensive experience in all stainless and high nickel alloys
- Custom fabrications
- Welded to ASME/AWS specifications
- Testing to verify quality including dye-penetrant, pressure testing, x-ray and UT.
- Our ASME-CE's will provide recommendations for longer product life

### Quality and Certifications

- ASME Section I S-Stamp
- ASME Section VIII, Div. I U-Stamp
- NBIC R-Stamp
- AWS - CWI and AWS-SCWI Welding Inspectors
- Level II and ASNT TC-1A Certified NDE Inspectors
- In-House Visual, Helium Leak Test, PT, MT, PMI, and Phased Array UT
- RT, UT, Ferrite by Certified Vendors
- Fan Vibration Testing, Balancing and Shaft Run-out

### Engineering and Design

- PV Elite (ASME Code Calculations)
- Finite Element Analysis (FEA)
- Fan Design
- SolidWorks 3D
- HTRI for the Thermal Rating of Heat Exchangers

### Welding

- Welders Qualified to ASME Section IX and AWS D1.1
- SAW
- GTAW
- GMAW
- FCAW
- PAW
- Manipulators
- Robotic Manipulator-SAW, GMAW
- Strip Cladding Weld Overlays

### Fabrication and Prep

- Forming and Corrugation Tooling
- Edge Prep Beveler
- Plasma Table
- Ironworker Hole Puncher
- Bentech 15T Tube/Pipe/Rod Bender
- Shear - 10' Capacity
- Press Brakes to 1,000T/24' Bed/180" Throat
- Plate Rolls - 10' Width/ 1" Thickness (Larger Capacity Available)
- Fan Balancing Machine
- Fan Vibration Testing and Analysis
- Blasting and Painting In-House to Specification

### Machining

- CNC Horizontal Boring Mill 168" Capacity
- Large Turning 84" Ø x 37' OAL
- CNC Lathe 80" Ø x 14' OAL
- Vertical Turning Lathes up to 110" Capacity x 66" H
- Milling Machines, Drill Presses, Grinders
- Saws
- Pipe End Machining

### Lifting Capacity

- 50,000 LBS in House
- 20' Under Hook
- 20' Shipping Doors

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