# HIGH TEMPERATURE FANS

THERMAL INGENUITY SINCE 1943

## A RESPONSIVE, RELIABLE RESOURCE FOR REPLACEMENT FANS AND COMPONENTS

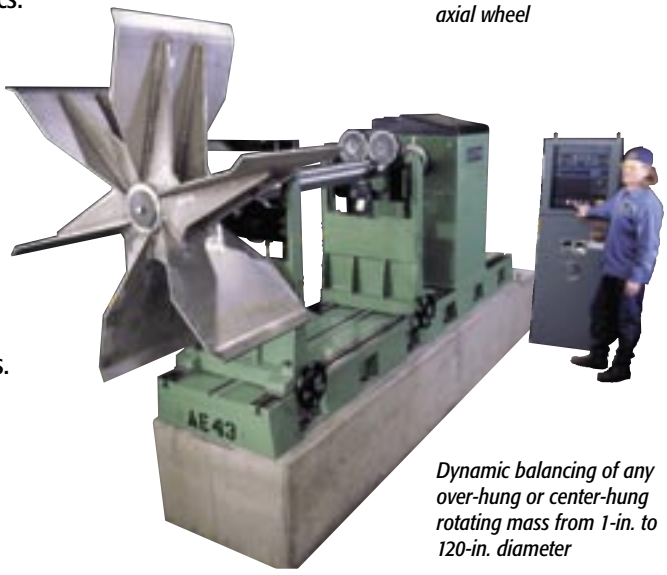
When your process fan goes down, you lose big. Alloy Engineering can get your fan up and running fast, and keep it running, with a minimum of maintenance and downtime.

For over 60 years, The Alloy Engineering Company has been an innovative, global designer and fabricator of high-temperature, corrosion-resistant alloy products. We are alloy selection specialists and can analyze your hostile process environment and choose the best materials to deliver long, trouble-free service.

Our engineering staff has particular expertise in high-temperature bearing selection and shaft-support-system design – elements particularly vulnerable to extreme temperatures and system dynamics. You can count on Alloy Engineering fans and components to deliver many times the life of the units they replace.

In an emergency, we can quickly refurbish a fan from our in-house stock of critical components. On a programmed basis, we work with customers to proactively anticipate on-going needs with factory-stocked replacement fans and components. With just-in-time delivery, customer inventory stocks and costs are minimized.

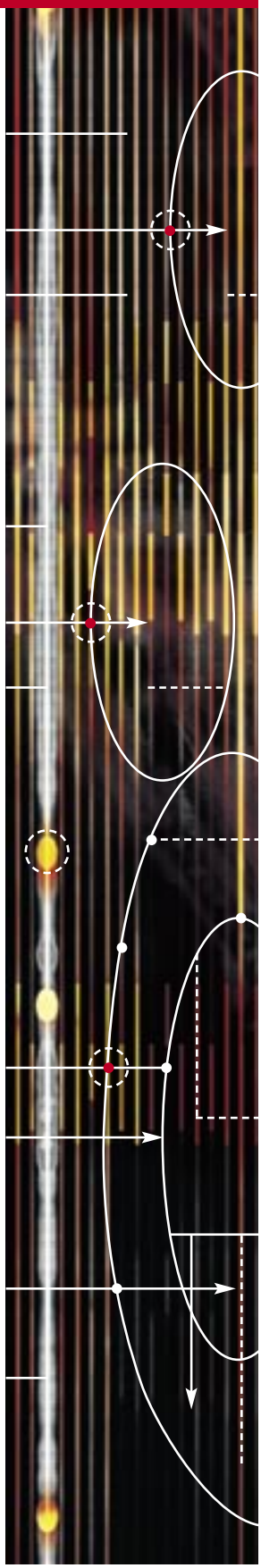
*FA10-54 10-blade axial wheel*




*Dynamic balancing of any over-hung or center-hung rotating mass from 1-in. to 120-in. diameter*

*FAR10-66 10-blade axial wheel*

Alloy Engineering



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**We go far beyond** simply replacing or refurbishing a failed fan or component with a duplicate design. Our engineers are available to work with customers to analyze equipment failures and suggest remedial steps to prevent a recurrence. We will suggest the most cost-effective approach – repair, replace, rebuild, or redesign – to refurbishing your fan.

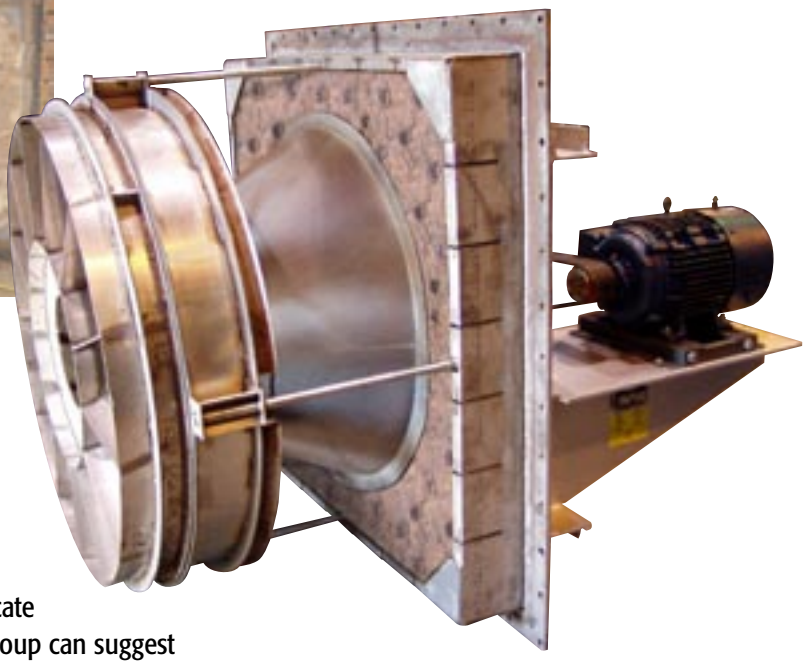
We pioneered the development of rolling, forming, and welding techniques to ensure the highest quality, most durable high-temperature fabrications available, anywhere. Close liaison before, during, and after a sale ensures maximum long-term uptime and productivity.

## Repair:

**Customer-supplied fan wheel and/or shaft**

- Clean with high-pressure wash/sandblast
- Inspect for cracks
- Reweld
- Replace or reshape blades
- Straighten shaft
- Metal-spray rebuild of worn shaft sections
- Balance to ISO specifications

## BEFORE AFTER



When a fan is sent to Alloy Engineering for refurbishing, customers may choose to replace worn or damaged parts with duplicate components, or our engineering group can suggest upgrades to boost performance and extend life. We stock frequently replaced components, such as damaged diffusers and shrouds, to minimize downtime.

## Replace:

**Complete fan replacement to OEM performance**

- Build to customer drawings or field measurements
- CAD documentation
- Build complete new unit
- Supply as drop-in replacement
- Balance to ISO specifications
- Match all fittings and connections
- Full-speed test run
- Certified vibration analysis

## Rebuild:

**Plug or housing rebuilt with new-unit warranty**

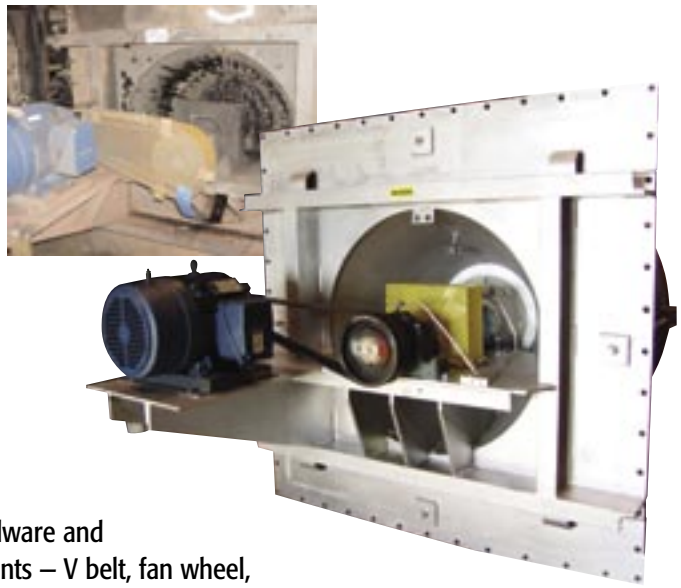
- Clean with high-pressure wash/sandblast
- Repaint as specified
- Repair or replace: fan wheel, seals, shaft, cooling wheel, insulation
- Replace bearings
- Reassemble
- Balance to ISO specifications
- Full-speed test run
- Certified vibration analysis

## Redesign:

**New design to improve performance and durability**

- Inspection
- Metallurgical analysis
- Critical-speed shaft analysis
- Materials specification for improved performance
- Bearings specification for improved performance
- CAD documentation for future replacement
- Balance to ISO specifications
- Full-speed test run
- Certified vibration analysis

## BEFORE AFTER BEFORE AFTER



We routinely clean and repaint all salvageable, undamaged hardware and replace compacted or damaged insulation. All rotating components – V belt, fan wheel, shaft, bearings, and motor – are inspected and replaced if necessary. Our engineering staff can suggest bearing upgrades for longer life. A fan refurbished by Alloy Engineering looks new and performs as well as, or better than, when originally installed.

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*Alloy Engineering's 42,000 sq-ft manufacturing facility houses cutting, forming, welding, positioning, and quality-control equipment. With this equipment, our experienced, highly trained manufacturing team produces products with consistently high quality that meet, or exceed, customer requirements.*

**SINCE 1943,** The Alloy Engineering Company has pioneered the design and manufacture of high-quality, alloy equipment for furnace and high-temperature and corrosive industrial applications. Our high-temperature fan capability complements this traditional product offering and provides customers with the synergistic technical and economic advantages of single vendor servicing with the industry's leader.

Contact one of our highly trained, experienced sales engineers and application specialists, or call, or visit our web site – **www.alloyengineering.com** – to discover how Alloy Engineering can raise your productivity and lower costs.

Alloy Engineering

*Designers and Manufacturers of Heat and Corrosion Resistant Metal Products*

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