

# Energy Efficiency Upgrades & Services

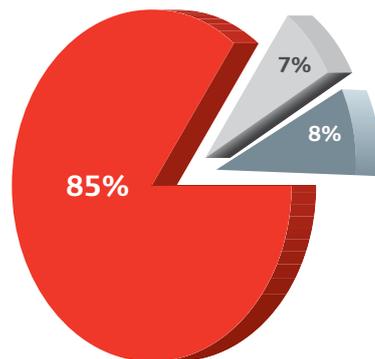
For Centrifugal Air Compressors

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## Reducing Energy Use Makes a Big Impact

Up to 85% of the cost to operate your air compressor is allocated to energy consumption. By analyzing and properly maintaining an efficient compressed air system, as well as selecting the right set of upgrade solutions, energy costs can be reduced as much as 20%—resulting in a positive impact on your company's bottom line.

Owners of compressed air systems need to be aware that although they may not notice any energy efficiency issues, there still may be an opportunity for saving money and reducing operating costs. Only by looking at your entire compressed air system, will you have the opportunity to achieve greater efficiency and be in a position to lower your cost of ownership.



■ Power Cost ■ Installation Cost ■ O&M Cost

## Performance Services: Maximize Your Return on Inspection

Whether your goal is to increase productivity, decrease waste, optimize efficiency, or plan for the future, our Performance Services program will provide recommendations that will transform your compressed air system performance, leading to cost savings and enhanced reliability.

### Our Performance Services include:



**Electronic Assessments** to analyze compressor performance, energy use and air flow based on current air consumption requirements



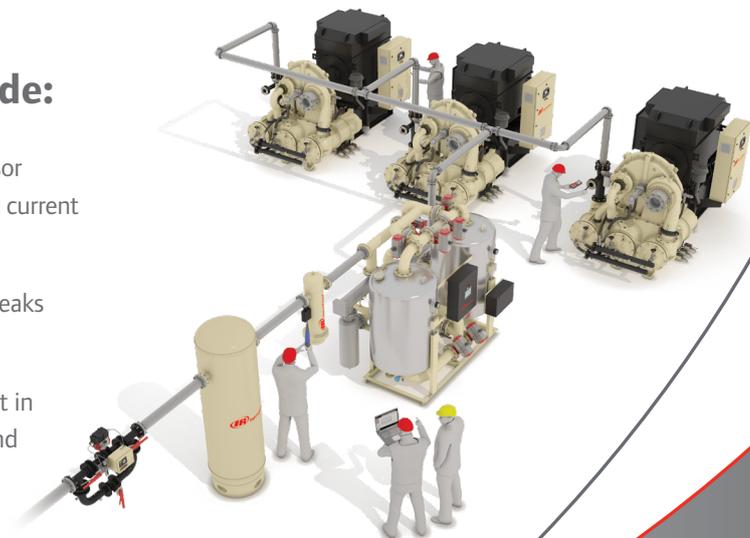
**Air Leak Assessments** that identify and tag leaks to determine air loss impact



**Customized System Assessments** that result in recommendations for cost savings, reliability and productivity based on return on investment



**Centrifugal Capability Test** that will show compressor health compared to its design to ensure peak operation



Make informed decisions throughout your entire facility through Performance Services assessments

## Component Upgrades—Inlet Guide Vanes

Want to save up to 7-11% in energy use? Install an Inlet Guide Vanes (IGV) system upgrade instead of traditional inlet butterfly valves and watch your savings increase. By making this switch, you will see benefits across the entire turndown range, regardless of seasonal temperature fluctuations.



### How They Save Energy

- Move in a whirling motion so inlet air flows in the same direction as the impeller, reducing work input
- Positioned close to the impeller inducer to maximize performance
- Throttling capabilities allow for start-up in high-static load situations
- Realize power savings at reduced flow or on days colder than the design temperature

## Performance Re-rates and Enhancements

Keep your system perfectly matched up with the actual compressed air needs with our aerodynamic re-rates and enhancements. Our years of experience gives us the knowledge on how to design and size systems for optimal operational efficiency. Typical upgrades include refurbishing or replacing:

- Impellers
- Bearings
- Diffusers
- Shaft
- Seals
- Couplings



## Remember, it's About More than Just the Compressor

It's about choosing a trusted partner who has the experience, expertise and array of products and services that can help optimize energy use over the entire lifecycle of your compressed air system. Visit our website or call your local Ingersoll Rand representative today to learn all about our comprehensive energy efficiency upgrades and services.



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