

Solution Spotlight: Capturing Savings with Heat-Recovering Compressors

Written by MT Staff

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Energy costs represent 82% of the expense of compressor ownership. At least that was the case until Sullair launched its energy-efficient single-stage, 7500 S-energy® Series with Energy Efficiency System (EES) heat recovery. These lubricated rotary screw air compressors are available both as constant speed and variable speed drive models, 100 (75 kW) horsepower with capacities of 369 to 493 acfm and pressures from 100 to 175 psig.

The combination of the S-energy® Series energy-saving features has proven especially effective in reducing total life cycle costs. Contributing to the energy savings is Sullair's time-tested air-end design with the low-restriction inlet valve, low-pressure-drop air-fluid separation system that prevents energy loss, and a high efficiency fan.

Additional energy savings are achieved with optional Variable Speed Drive (VSD) compressors that provide the flexibility to vary both capacity and pressure to match system demand. On models with Variable Capacity Control (VCC), Sullair's variable displacement air-end matches system pressure to plant demand. Part load capacity and efficiency can produce additional

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energy savings up to 17%.

Multiplying energy savings/maximizing ROI

With the EES, the heat of compression is recovered and converted into recirculating air for comfort heating in plants or pre-heated air for boilers or processes. By bringing in a continuous flow of outside air, the EES provides positive make-up air to virtually eliminate negative pressure in the plant. When not required, heat is rejected to the outdoors.

Annual energy savings for just the EES may reach \$10,993.00. This 100 hp compressor generates 1,649,000 BTUs per year. Calculations are based on climate conditions for Chicago, IL and natural gas at \$0.50/therm (subject to market fluctuations). Payback period is 7 months as a result of the energy savings.

Maintenance-friendly designs

According to the manufacturer, these 7500 S-energy® Series compressors also are among the most reliable and maintenance-friendly compressors in the marketplace. Their package designs meet the need for a small footprint and their enclosures allow routine maintenance of consumable items to be performed from the same side of the compressor. The units' simplified, concise WS Microprocessor Control System provides critical operating information. A Windows-based PC can be used to remotely monitor, upgrade the software and set-up system changes. **MT**

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