

INDUSTRIAL PROCESS AND



ENERGY RECOVERY SYSTEMS

LABORATORY & FUME EXHAUST



ENERGY RECOVERY SYSTEMS





Overview Product Offerings

Twin City Fan & Blower (TCF) is proud to announce our new line of energy recovery systems for fume exhaust applications. By combining our line of high efficiency fume exhaust fans with the latest in energy recovery technology, TCF can greatly reduce your energy consumption and carbon footprint while simultaneously increasing your bottom line. Our energy recovery plenums are available in endless configurations to match your specific needs.

Standard Features

- Stainless steel (SS) inner floor and wall liner
- Walls utilizing injected foam insulation for better energy efficiency
- 4" Merv 8 pre-filters with side access and SS frames
- · Coated steel outer casing
- 125 MPH windload rating (without the need for guy wires)
- Integrated drain system for water mitigation from fan and plenum system
- · Aluminum fins with stainless steel coil casing
- Easy use access doors

Optional Accessories

- Heat exchanger bypass mode
- · Custom coatings
- Special materials of construction
- Fiberglass wall insulation

Energy Recovery Options Are Available On The Models Below





Model TVIFE



Model

OIFE



Models TFE & QFE

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Cost Savings with Energy Recovery



The system shown utilizes three size 402 model TVIFE fans with two fans running and one on stand-by. The run-around, or closed loop, energy recovery system consists of two heat exchangers, a transfer medium, typically of water and ethylene glycol, and a pump to circulate the transfer medium between the heat exchangers. One heat exchanger is located in the laboratory exhaust plenum box. The other is located in the building's make-up air unit.

TCF's energy recovery systems are designed to extract energy from the conditioned air exiting the laboratory and return the captured energy back into the make-up air unit before it re-enters the building. Energy recovery systems can also be used to pre-cool incoming supply air by removing the heat from the incoming airstream and sending it to the exhaust system.

Operating Conditions:

- 74,400 CFM of exhaust air
- Operating at 248 hours per month
- Building's air temperature: 75 °F

Energy Costs:

- \$6.50 per dekatherm

Environmental Conditions:

- Winter: -7.6 °F*
- Summer: 88 °F*

Energy Recovered:

- Winter: 1,762,070 BTU's per hour / \$2840.46 per month
- Summer: 363,151 BTU's per hour / \$585.25 per month

Payback Period:

- Less Than 5 Years

*Based on ASHRAE 1% climate data for Minneapolis/St. Paul International Airport

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INDUSTRIAL PROCESS AND COMMERCIAL VENTILATION SYSTEMS

CENTRIFUGAL FANS | UTILITY SETS | PLENUM & PLUG FANS | INLINE CENTRIFUGAL FANS MIXED FLOW FANS | TUBEAXIAL & VANEAXIAL FANS | PROPELLER WALL FANS | PROPELLER ROOF VENTILATORS CENTRIFUGAL ROOF & WALL EXHAUSTERS | CEILING VENTILATORS | GRAVITY VENTILATORS | DUCT BLOWERS RADIAL BLADED FANS | RADIAL TIP FANS | HIGH EFFICIENCY INDUSTRIAL FANS | PRESSURE BLOWERS LABORATORY EXHAUST FANS | FILTERED SUPPLY FANS | MANCOOLERS | FIBERGLASS FANS | CUSTOM FANS



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