

Energy and Water Conservation at Olympus Surgical Technologies

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Driven to DiscoverSM



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Company Background

OLYMPUS

- **Olympus Surgical Technologies of America**
 - Medical device manufacturer
 - Known for their cameras
 - Located in Brooklyn Park
- **Approx. 350 Employees**
- **180,000 sq ft**
- **Headquartered in Japan**
 - Manufactures in Europe, Asia, North America



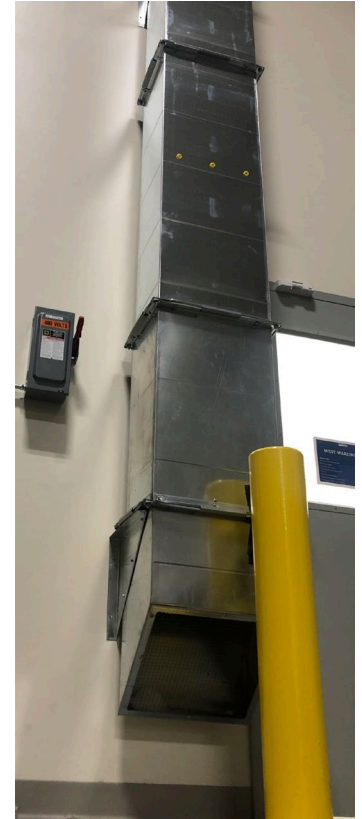
Incentives to Change

- **Carbon neutrality by 2030**
 - EIS (Energy Information Systems) team founded in 2017
- **ISO 14001 Certification**
 - Environmental Management Systems
 - Olympus Global wishes to adopt more energy efficiency technologies
- **Intern Project Goals**
 - Water conservation
 - Energy efficiency



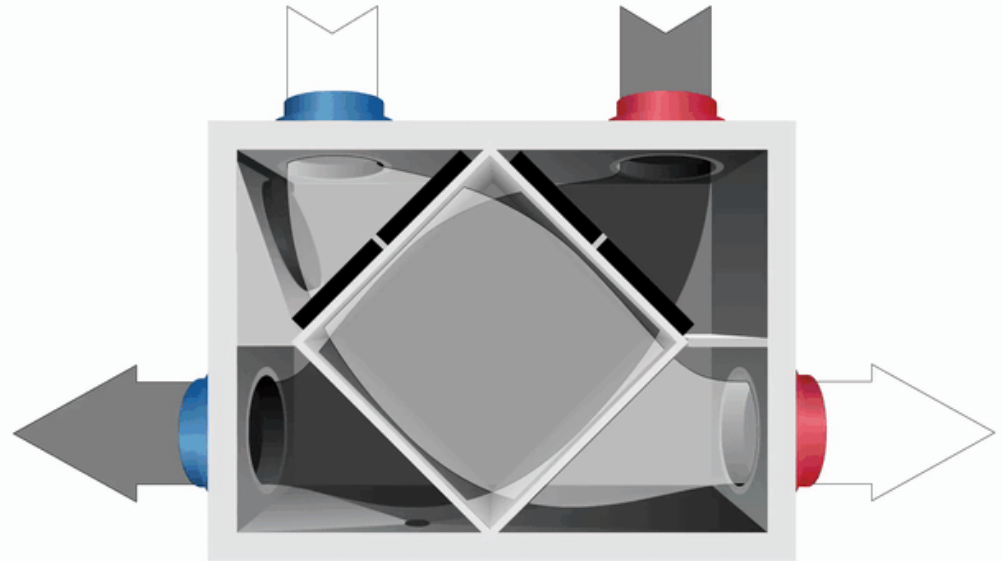
Energy Efficiency: Warehouse HVAC

- Product sterilized with EtO (Ethylene Oxide) offsite
- Delivered to warehouse for storage
- Ventilation system runs to ensure EtO levels follow OSHA guidelines
- Large energy savings opportunity



Energy Efficiency: New ERV Systems

- Installing Energy Recovery Ventilators in the warehouse
- Air-to-Air heat exchanger
- Captures already warm/cold air and pass it by a heat exchange plate
- \$30,000 savings
- 280,000 kWh/yr



Platinum Air Core Technologies, 2023

Compressed Air System

- **Repaired 54 air leaks**

- Set up trainings and annual audit work orders for leaks
- \$22,000 in savings
- 200,000 kWh/yr

- **Created a plan to lower system pressure (135 psi to 105 psi)**

- System is running at a high pressure for only one machine
- \$7,000 in savings
- 64,000 kWh/yr



Irrigation Optimization

- **Installed a new rain sensor**
 - Deactivates system when it's raining outside
- **Reduced run times by 33%**
 - Cycles reduced from 30 mins to 20 mins
 - 34 Zones affected
- **980,000 gallons saved**
- **Weekly grounds check to prevent water waste from leaks (as pictured)**



Solutions

Recommendation	Annual reduction	Total cost	Annual savings	Payback period	Status
Install Warehouse ERVs	280,000 kWh	\$140,000	\$30,000	4.8 years	Planned
Repair Air Leaks	200,000 kWh	\$200	\$22,000	Instant	Implemented
Reduce Air Pressure	64,000 kWh	\$300	\$7,000	Instant	Planned
Shut off Equipment	36,000 kWh	\$0	\$4,000	Instant	Partially Implemented
Water Softener Optimization	22,000 lbs. Salt 5,000 gallons	\$10,000	\$4,000	2.5 years	Planned
Optimize Irrigation	980,000 gallons	\$100	\$4,400	Instant	Implemented
Reroute RO Water	240,000 gallons	\$25,000	\$12,000	2 years	Investigating

Personal Benefits

- **Project Management**
 - Hands on experience
- **Networking opportunities**
- **Experience communicating and coordinating with technicians and engineers**
- **Generated innovative ideas and put them into practice**

