



EXERGY

صلاحیت، ارزش، کیفیت

EXERGY

EX-ROT

ROTARY HEAT EXCHANGER

High-Efficiency Thermal Energy Recovery System

Industrial Air-to-Air Heat Recovery | Rotary Thermal Wheel Technology

مبدل حرارتی دوار

بازیابی انرژی حرارتی از هوای خروجی فرآیند

EXHAUST AIR
30°C

FRESH AIR
-5°C

SUPPLY AIR
18°C

HEAT RECOVERY
 η up to 85%



AIRFLOW



THERMAL
RECOVERY



ROTARY
WHEEL



ENERGY
SAVING



MODULAR
DESIGN

THERMAL WHEEL SECTION



Aluminum Rotor

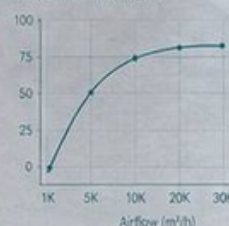
High Performance
Heat Transfer Matrix

Sealed Segment

Stainless Steel Frame

PERFORMANCE OVERVIEW

Temperature Efficiency (%)



up to
85%
Efficiency



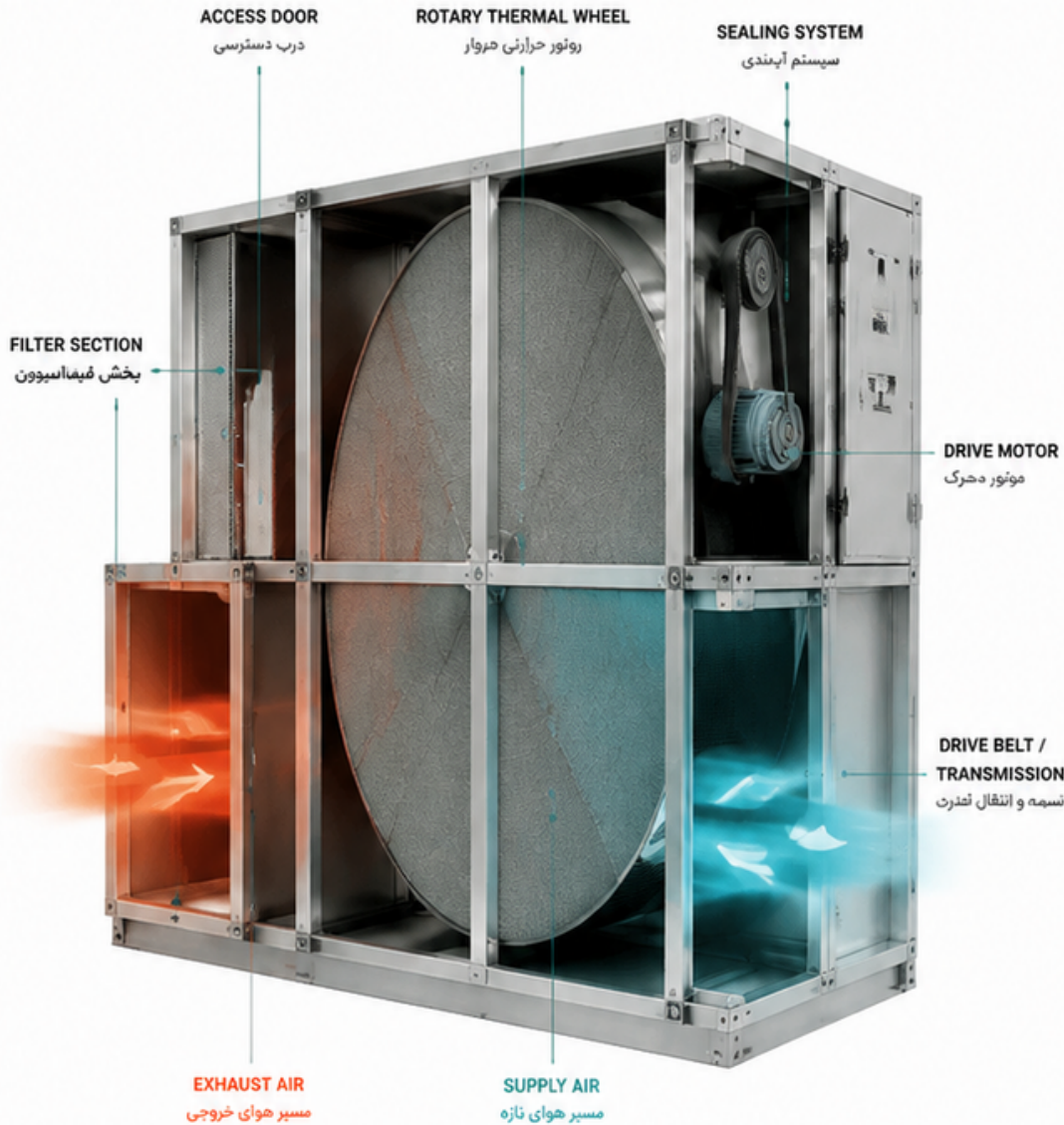
Industrial Heat Recovery Solutions



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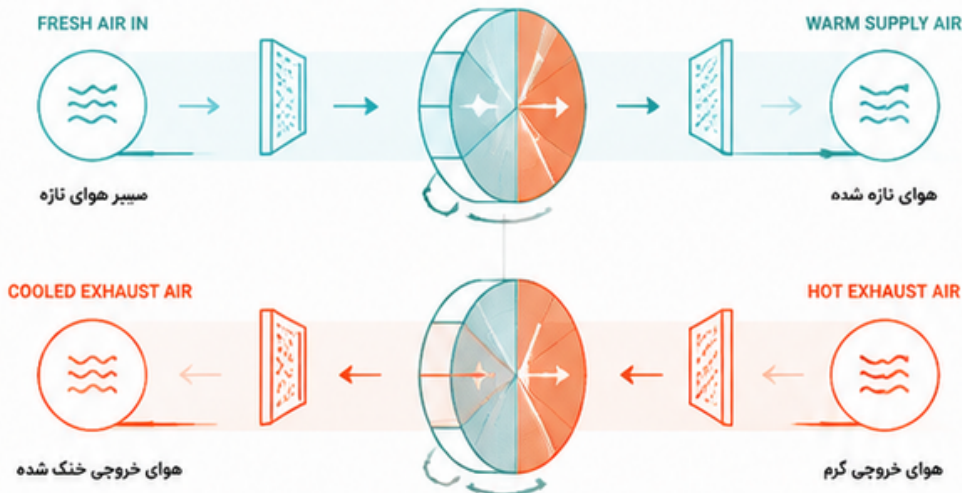
WORKING PRINCIPLE

The rotating thermal wheel continuously transfers sensible thermal energy between exhaust and supply air streams. During rotation, the heat storage matrix absorbs energy from the warm exhaust stream and releases it into the incoming fresh-air stream.

CORE TECHNOLOGY

-  Rotary Thermal Wheel
-  Continuous Heat Recovery
-  Low-Energy Drive System
-  Sealing Technology
-  Modular Housing
-  Easy Maintenance Access

AIRFLOW DIAGRAM



ENGINEERING FORMULAS

$$Q = m \times C_p \times \Delta T$$

Q : Heat Transfer (W)
 m : Mass Flow Rate (kg/s)
 C_p : Specific Heat Capacity (J/kg.K)
 ΔT : Temperature Difference (K)

$$\eta = \frac{Q_{\text{recovered}}}{Q_{\text{available}}} \times 100$$

η : Heat Recovery Efficiency (%)
 $Q_{\text{recovered}}$: Recovered Heat (W)
 $Q_{\text{available}}$: Available Heat (W)



SMART THERMAL ENERGY RECOVERY

Advanced Rotary Heat Recovery for Industrial Air Systems

بازیابی هوشمند انرژی حرارتی

PERFORMANCE



AIRFLOW CAPACITY
2,000 – 85,000 m³/h



DESIGN TEMPERATURE
Up to 250 °C



HEAT RECOVERY EFFICIENCY
75 – 85 %

CONTROL TECHNOLOGY



WERO-LOGIC

- Pressure Compensation
- Stable Airflow
- Adaptive Control



ETMC

- Energy Measurement
- Thermal Performance Monitoring
- Energy Transfer Control



SEALING AIR SYSTEM



MULTI-STAGE CONFIGURATION

ENGINEERING BENEFITS



HIGH ENERGY RECOVERY

کاهش مصرف انرژی



MODULAR CONSTRUCTION

طراحی ماژولار



LOW LEAKAGE



EASY MAINTENANCE

نگهداری آسان



AUTOMATIC CLEANING



INDUSTRIAL DUTY DESIGN

کنترل هوشمند

APPLICATIONS



 Industrial Dryers



 HVAC Systems



 Process Air



 Exhaust Heat Recovery

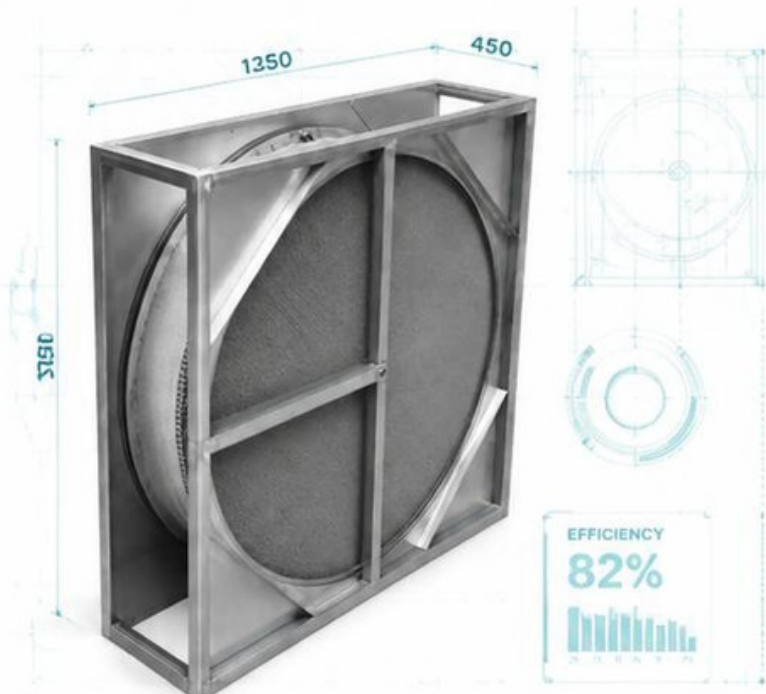
TECHNICAL SPECIFICATIONS

EX-ROT Rotary Heat Exchanger

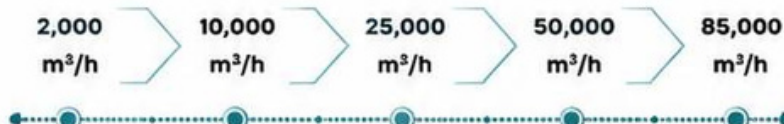
مشخصات فنی و ظرفیت های مهندسی

EX-ROT ENGINEERING RANGE

	Airflow Capacity	2,000 – 85,000 m³/h
	Design Temperature	Up to 250 °C
	Heat Recovery Efficiency	75 – 85 %
	Rotor Type	Rotary Thermal Wheel
	Configuration	Single-Stage / Multi-Stage
	Cleaning System	Automatic Cleaning System
	Cleaning Method	Hot Water / Compressed Air
	Housing	Insulated Industrial Housing
	Maintenance	Access Door Design
	Control System	WERO-LOGIC / ETMC
	Sealing	Low-Leakage Sealing System
	Application	Industrial Air & Process Heat Recovery



ENGINEERING AIRFLOW RANGE



TEMPERATURE RANGE



ENGINEERING SELECTION

Final equipment configuration is selected according to airflow rate, inlet/outlet temperature, process conditions, contamination level, pressure drop, required heat recovery performance and installation constraints.

انتخاب نهایی تجهیز بر اساس شرایط واقعی پروژه و پارامترهای فرآیندی انجام می شود

APPLICATIONS



HVAC



INDUSTRIAL DRYING



PROCESS AIR



EXHAUST HEAT RECOVERY



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مبدل های حرارتی
و سیستم های بازیابی انرژی