

[www.bryair.com](http://www.bryair.com)

## High Temperature Wheel



**Save upto 75% Sensible Energy from  
Waste Exhaust Air**

**Bry-Air**<sup>®</sup>  
**BryXchange**

# BryXchange—Air To Air Rotary Heat Exchanger For Industrial And Process Air Exhaust

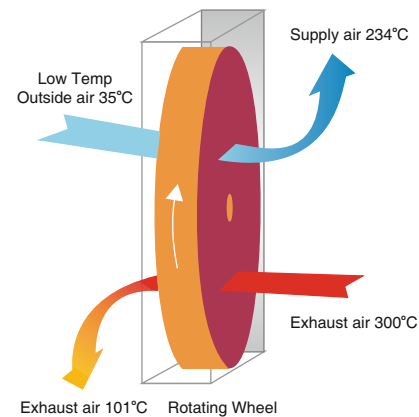
Considerable amount of flue gases/hot air are generated from boilers, kilns, ovens and furnaces. These flue gases/hot air are at significantly high temperature. Generally, a part of the flue gases/hot air goes waste and is dumped in to the environment without recovering energy from it which could be reused for some useful purposes like preheating of air, heating water, etc. This recovered heat energy can save a lot of primary fuel and reduce operating cost of running boilers, kilns, ovens and furnaces. Many times this recovered energy cost is just enough to pay back the cost of recovery equipment in few months only. This waste heat could be recovered with great efficiency, up to 75%, with Bry-Air's BryXchange.

## Trusted and Reliable for Industrial and Process Air Applications

Bry-Air's BryXchange is an air-to-air rotary heat exchanger, which recovers sensible energy from high temperature exhaust air. Considerable high temperature air is generated in kilns, ovens, furnaces etc, which generally goes waste. Through BryXchange, this sensible waste energy can be recovered from the exhaust air and transferred to low temperature supply air with an efficiency of upto 75%.

## Principle of Working

BryXchange rotor is installed between high temperature exhaust air and supply air stream. As the rotor slowly rotates, sensible heat of high temperature exhaust air is carried over by the rotor to the low temperature supply air.

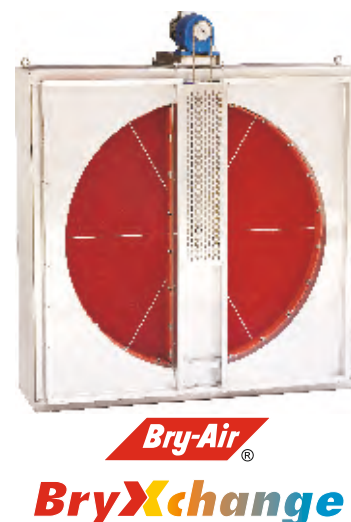


## Design and Structure of BryXchange

The BryXchange rotor has a fluted media, fabricated with material having a high heat carrying capacity, which rotates between two side-by-side ducts: one a low temperature supply air duct, the other a high temperature exhaust air duct. The axis of the rotor is located parallel to, and on the partition between the two ducts.

## BryXchange Advantages

- Higher energy recovery
- Lower electric energy costs
- Compact unit design results in less weight
- Temperature control
- Considerable primary fuel saved



## Under High Efficiency and Reliability

- Stainless steel, double walled, insulated casing
  - Sectorized wheel for ease of installation and maintenance
  - Designed for very slow rotational speed of around 8-10 RPM
  - Manual cleaning system for media cleaning
  - Heat-stabilised external bearings with teflon gasket
  - Smooth surface to ensure minimum vertical runout
  - The rotor is made of alternate flat and corrugated foil of very uniform pitch and height
  - Rotor depth 200mm
  - Substrate stainless steel or special alloy steel foil
  - Split casing for larger sizes
- Optional: Automatic cleaning system on request.

Some examples of waste heat temperatures released from typical industrial processes

Type of Device	Temperature °C
Steam boiler exhausts	230-480
Gas turbine exhausts	370-540
Reciprocating engine exhausts	315-600
Heat treating furnaces	425 - 650
Drying and baking ovens	230 - 600
Catalytic crackers	425 - 650
Annealing furnace cooling systems	425 - 650

**BryXchange** recovers energy from high temperature exhaust air upto 75% efficiency.

## Application Industries



Textile Industry



Automobile Paint Booth



Film Manufacturing

Ensuring Optimum Energy Efficiency For Industrial Processes Generating Up To 500°C Exhaust Air Temperature



### Manufacturing Facilities



### R&D and Test Labs



Bry-Air, the leader in dehumidification...worldwide, is a global solution provider for humidity control, moisture removal, product drying, gas phase filtration and plastics auxiliaries. Bry-Air Dehumidifiers are designed to meet the most stringent moisture/humidity control needs and are available from compact models to very complex engineered systems. The Airgineers at Bry-Air have several years of application engineering experience and are trained to provide solutions in moisture and humidity control for varied industrial applications. A Pahwa Group company, Bry-Air Asia has 2 state-of-the-art manufacturing facilities in India and fully owned subsidiaries in Malaysia, China, Switzerland and Brazil and an associate plant in USA, supported by a worldwide sales and service network. With installations in over 80 countries in almost every industry, Bry-Air touches your life round the clock!



Innovation in technology and business processes is the driving philosophy of the Pahwa Group. The Group has filed 12 international patents in the last 5 years in energy smart technologies related to air engineering. The Group has 1400+ employees in 6 continents and 11 manufacturing plants. Bry-Air is one of the flagship companies of the Pahwa Group.

### Bry-Air Product Range

- **Dehumidifiers** for humidity control and moisture removal
- **Gas Phase Filtration Systems** for removal of corrosive and odorous gases
- **Plastics Auxiliaries** for Drying, Conveying and Blending
- **High Temperature Wheel for Waste Heat Recovery**
- **Adsorption Chiller** for Energysmart Cooling using Waste Heat

Write to us for free site evaluation and to discuss the solution with our **AIRGINEERS** at [bryairmarketing@pahwa.com](mailto:bryairmarketing@pahwa.com)



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