

WE HAVE YOUR **SOLUTION** FOR HOT AIR...

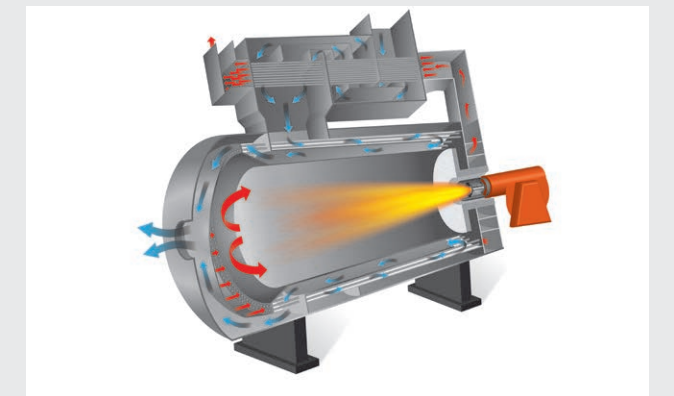
Babcock Wanson offers a complete range of purpose built Process Air Heaters for both direct and indirect air heating.



Full range of...

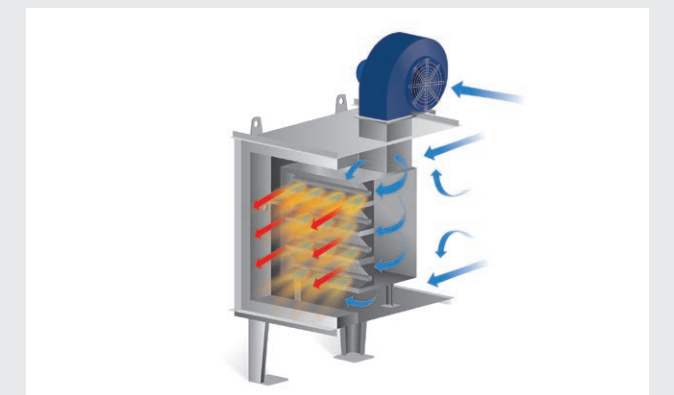
HTV-N

HTV-N is an indirect fired fresh or recirculated air heater which utilises an externally mounted process air fan. Air is heated by contact with the combustion chamber and the second pass tubes to reach the desired temperature. An optional economiser for very high efficiency operation is available. This method of operation provides effective heat transfer, reliable operation and low fuel consumption over an extended life.



MIXBLOC

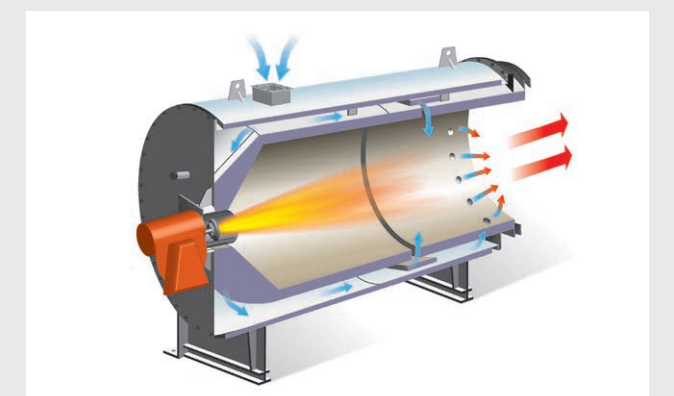
The MIXBLOC direct fired airstream heater is designed to provide high temperature air with no flue gas losses. MIXBLOC can operate using the process air flow or an independent combustion air fan. Burners are constructed from multiple "V" elements assembled in differing configurations to suit the required heat output and process ductwork design.



GASAIRBLOC

High process air temperatures are provided by the GASAIRBLOC Heater. The Heater is direct fired using either gas or liquid fuels with independent combustion air supply to achieve air discharge temperatures of up to 1200°C.

With direct heat input and no flue gas losses, the GASAIRBLOC provides very efficient operation for processes that need high temperature and can work with the clean products of combustion entrained with the heated air flow stream.



HTV-N Indirect process air heater

Output range: from 90 kW up to 7 MW

HTV-N is Babcock Wanson's range of indirect fired process air heaters constructed to provide **clean hot air at up to 350°C** and supplied complete with fully matched burner for gas, LPG or oil firing. The perfect solution where high temperature air is required for processing needs.

Using HTV-N there is no direct contact between the process air and the products of combustion. This solution is particularly suited to applications where a fixed flow of clean heated air is required for the process.

The process air flow is fixed to ensure reliable heat transfer. A fully modulating burner provides exact control of the process air discharge temperature.

Flexible operation:

- Fixed air flow for accurate control
- Air by-pass options available
- Constructions for both horizontal and vertical operation
- Each HTV-N is supplied complete with fully matched burner for gas or oil firing.

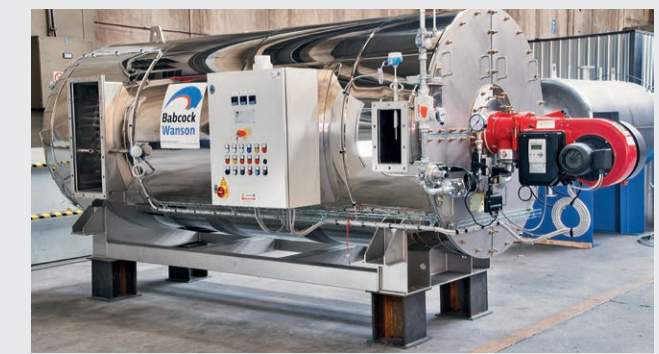
Advantages:

- Simple, high efficiency operation
- No intermediary fluid
- No pressure system requirements
- No water treatment or effluent requirements
- Minimal inspection and service requirements
- Constructed from carbon or stainless steel to the highest specification

High efficiency:

- Fully modulating burner control
- Available with heated air recirculation
- Economiser options
- Low emissions in compliance with current and projected European Norms

HTV-N are custom designed to suit the specific demands of each installation. Process air flow range between **1,000 to 100,000 kg/h with air discharge temperatures from 120 to 350°C.**



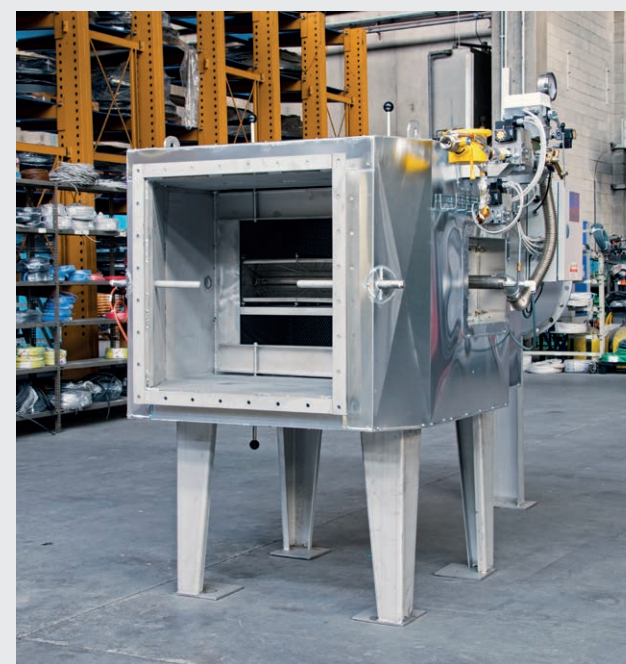
MIXBLOC Direct process air heater

Babcock Wanson's air duct type burner. Output range: from 50 kW up to 20 MW

MIXBLOC provides process air temperatures up to 800°C in standard form.

Flexible:

- Natural gas, LNG or LPG fired
- Can be installed in small spaces and to suit an existing ductwork configuration
- Air flow can be varied to 50% at maximum rate in standard form or down to 10% using a dedicated combustion air fan
- Modulating regulation allows turndown ratios of up to 20:1
- Constructed for horizontal or vertical operation and to work upstream or downstream of the process air fan under positive or negative pressure.



MIXBLOC Heater for chemical drying process

GASAIRBLOC Direct process air heater

Suited to the harshest environments where long life and ease of operation are key to success.

The GASAIRBLOC heater provides direct heated process air temperatures at **up to 900°C, with up to 1200°C operation** in special configuration.

Typical Process duties:

- Ceramics
- Rotary kilns
- Lime production
- Aggregate drying
- Insulation material manufacture
- Paint drying
- Clay, cement and brickworks. Printing, coating and laminating. Industrial abrasive manufacture. Carbon regeneration. Fertiliser production.

GASAIRBLOC is the ideal solution for harsh environments and difficult fuels. Sturdy construction makes it suitable for heavy industrial and dusty environments. A generous combustion chamber allows operation with heavy oils, with the flame developing without being disturbed by the process air. Secondary mixing with the process air flow ensures simple, reliable, operation throughout the burner modulation range.



A gas fired GASAIRBLOC ready for despatch from our works

Solutions for your application



Application - Indirect air heating

HTV-N are perfectly suited to heating process air streams with very high moisture content or entrained water vapour.

A typical high moisture content application is the drying of leafy products such as tea, herbs, spices or similar products that require quick heating to evaporate water content. HTV-N uses a high ratio of process air recirculation to reduce overall energy consumption. These specially designed heaters are fitted with additional inspection and cleaning doors, condensate drains, water resistant gaskets and utilise specialist welding procedures to reduce the risk of particulate deposits on the heating surface.



High moisture process air heating using HTV-N

Application - Direct air heating

Babcock Wanson provides specialist process air heating equipment to suit customer demand.

Babcock Wanson has developed specialist process air heaters for a number of applications, including the ceramic industry, which have moved from liquid fuels to more environmentally friendly fuels such as syngas produced by the gasification of biomass. We also offer a range of burners in our process air heaters designed to operate with very low calorific value gases (4000-6000 MJ/Nm³).

This solution is particularly suited to countries where a natural gas infrastructure may not be available.



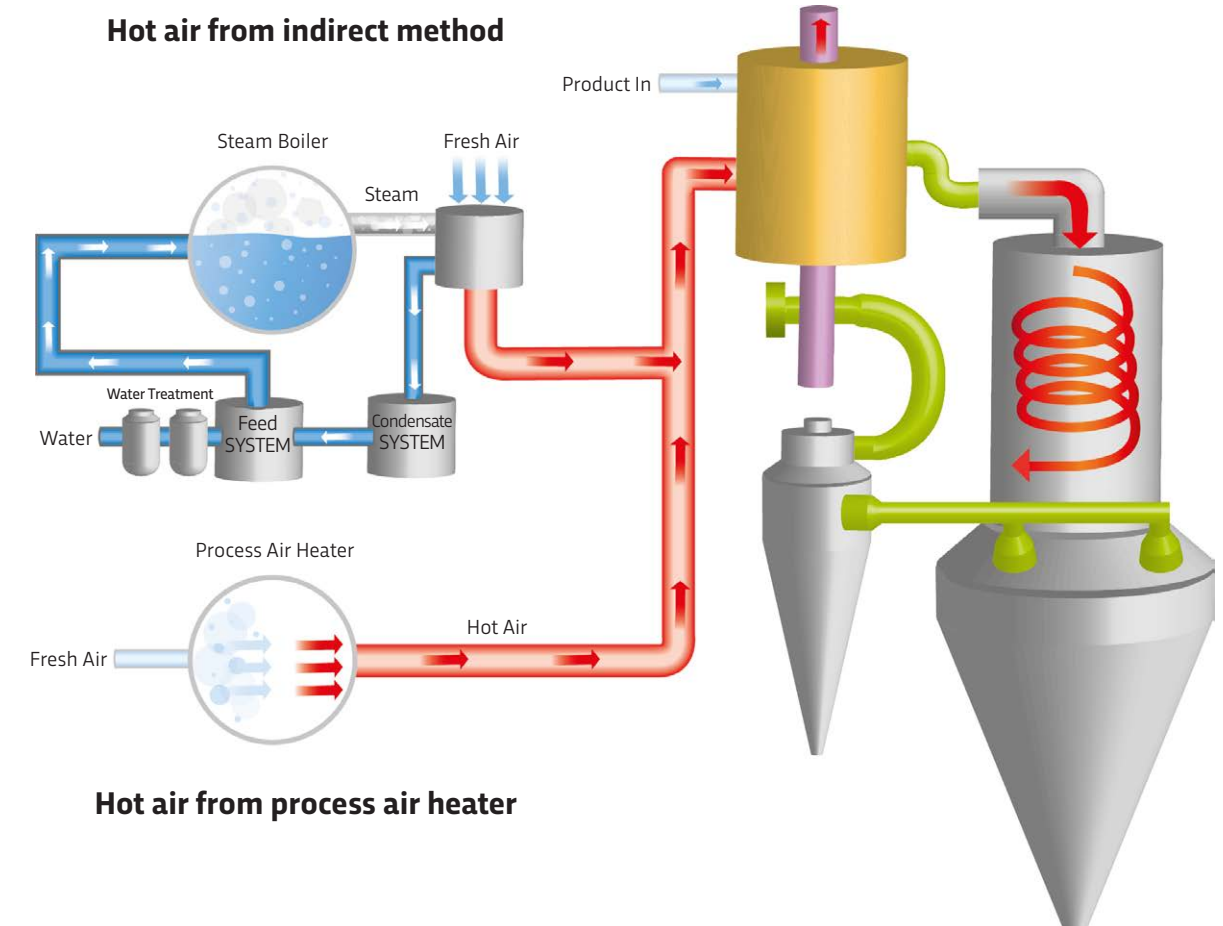
MIXBLOC ready for installation

Special application HTV-N for Drying

The Babcock Wanson HTV-N Process Air Heating solution simplifies and reduces the total cost of installation and operation when compared to traditional indirect heating methods. Particularly when planning new installations, the reduced space demand and ease of operation greatly reduces overall cost and normal operating maintenance demand. HTV-N offers a simple method of providing clean, accurately controlled, heated air for food, milk and other liquid drying applications.

Direct production of hot process air:

- No intermediate fluid
- No water treatment
- No steam vent or drains
- Smaller footprint
- Simpler installation
- No special operator certification
- Simple operation
- Faster start-up
- Reduced inspection requirements
- Equal or higher efficiency
- Lower risk (no pressure vessel)



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