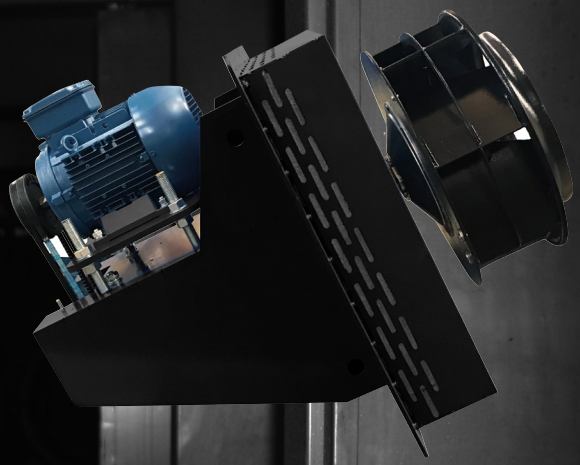
Clibos-TR

Belt driven centrifugal fan with backward impeller for recirculation of hot gases or high temperature applications, Storm brand by Casals Ventilación.



Plug fan type installation for the recirculation of hot gases in:

- *Ovens*
- *Boilers*
- *Paint booths*
- *Dryers of: tobacco, barley, ceramics, glass, wood*
- *Isolated thermal cameras subjected to a temperature control*
- *Burners and incinerators*
- *Melting furnaces*

MANUFACTURING FEATURES

- Belt driven centrifugal medium pressure fan, type plug fan.
- Insulated casing made of carbon laminated steel, protected against corrosion with black heat-resistant paint coating. Finish C4.
- Thermal insulation with high density rock wool, 90Kg / m3, thickness 150mm and 200mm.
- Self-cleaning and reinforced impeller with high-performance backward (reaction) blades made of carbon laminated steel dynamically balanced to minimize noise and vibrations. Black colour heat-resistant painting.
- Transmission assembly with protections according to ISO 13857 standard.
- High efficiency belt without maintenance.
- Heavy duty bearings.
- IE3 motor for continuous operation (S1). Squirrel cage standardized asynchronous IEC motor with IP-55 protection and class F electrical insulation. Standard voltages 230 / 400V 50 or 60Hz for three-phase motors up to 4kW and 400 / 690V 50 or 60Hz for higher powers.
- Motor support (B3) on a bench.
- Maximum continuous working temperature: environment 60ºC.
- Suitable for transferring gases from -40ºC to 350ºC continuously.

COMPETITIVE ADVANTAGES

- Compact: optimized design to take up as little space as possible.
- Easy access for cleaning and maintenance.
- High efficiency impeller: static efficiency of 74%.
- Robustness ideal for heavy duty applications.
- High efficiency belt without maintenance.
- Heavy duty bearings.
- Wide range: from size 310 to 800.

UNDER REQUEST

- Fans for special voltages.
- 2 speed motor.
- Non-sparking construction.
- Manufacture in special steels for work up to 550ºC in continuous.
- Other insulation thicknesses.
- Other construction sizes.
- Configuration for vertical operation.
- Protection against corrosion C5.
- Inox 304.
- Inox 316.
- Other motors according to customer requirements.

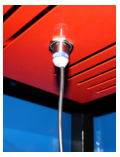
ACCESSORIES

- Frecuency speed controller (SFC)
- Inlet (CLBI)
- Safety switch (INT)
- Automatic bearing greaser
- Vibration monitoring system
- ATEX switch (INT ATEX)
- Rotation speed monitor
- Scroll (CLBC)

CLBC

CLBI

Automatic bearing greaser



Rotation speed monitor

Vibration monitoring system

SFC

INT ATEX

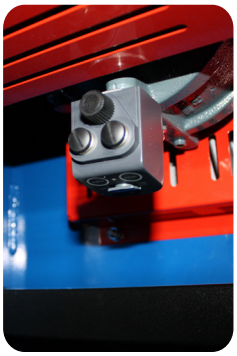
INT

Automatic bearing greaser

- Two outlets with independently adjustable lubrication intervals.
- Easy integration into machine operation.
- Simplification of the maintenance process.
- Metering quantities independent of the ambient temperature.
- Measurement of back pressure up to the lubrication point.
- Power supply: 24V DC or battery.
- Lubricant reservoir: 250 cm^3 cartridge.
- Wide operating temperature range: –20°C to +70°C.
- Optional activation using an external control unit.
- Monitoring of motor running and filling level.
- Good price/performance ratio.

Vibration monitoring system

- Record and analysis of vibration measurement signals
- Record of temperature signals
- Evaluation of the input signals
- Selective permanent control as a function of frequency
- Integration of up to three signals connected simultaneously
- Output switching and status sampling via LED
- Admission inputs of additional signals for integration into a main system



Rotation speed monitor

- 2 in 1 inductive detector: sensor and evaluation of rotation speed
- Multiple evaluation of rotating and linear movements
- Reliable, non-contact monitoring of low rotation speeds
- Switching output and pulse output
- Simple adjustment of the switching point
- Direct connection to a PLC
- Compact housing
- Minimization of installation costs

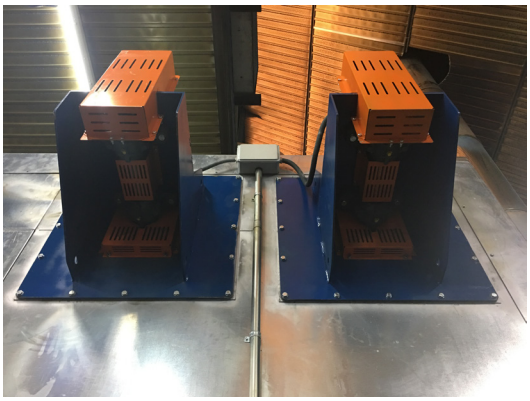
INSTALLATION EXAMPLE

One of the most typical high temperature applications for CLIBOS-TR is the paint booth. This type of installation has an oven for drying the paint once it is applied on the product.
With the CLIBOS-TR fan, thanks to the rock wool (thicknesses of 150 and 200mm) and the thermal grooves of the casing, it is generated a thermal bridge dissipating the internal temperature of the oven.

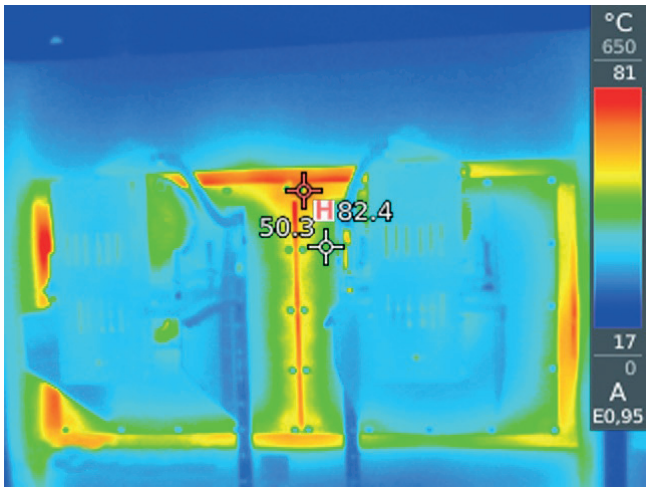
Thermal grooves

THERMOGRAPHIC STUDY

From two CLIBOS-TR installed in a paint-booth oven, we perform a thermography that shows us how the internal and external temperature ranges of the oven differ substantially thanks to the insulation set.



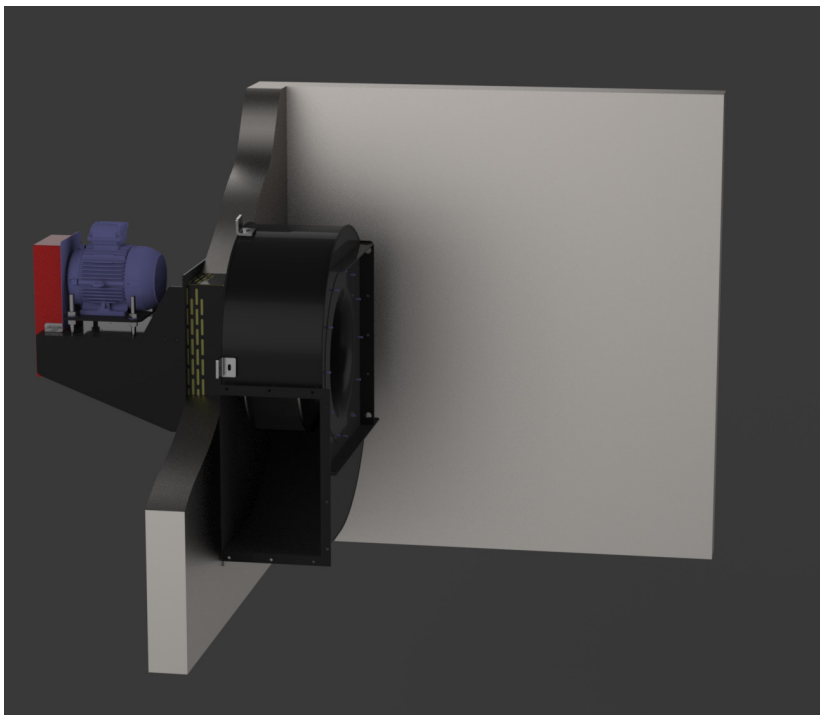
CLIBOS-TR installed in a paint booth oven



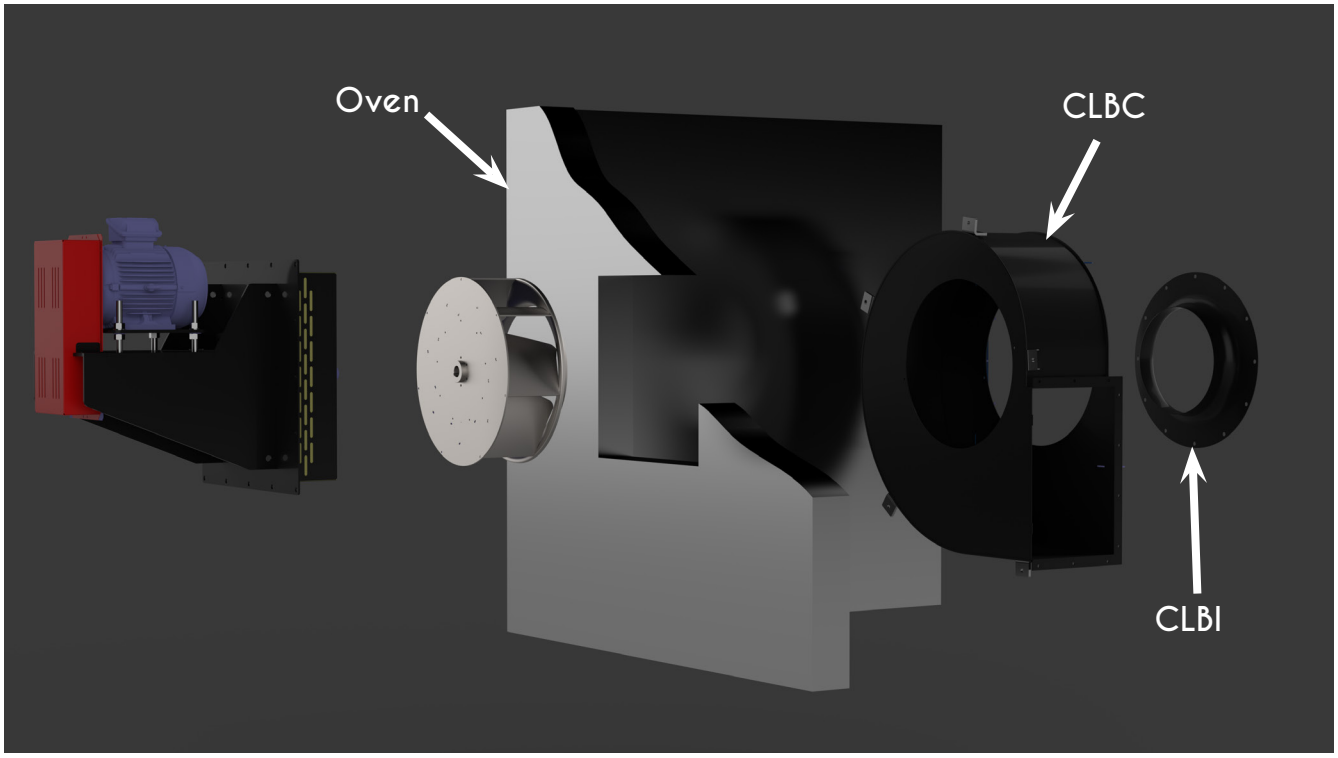
Result of thermography in the CLIBOS-TR with an operating oven

SCROLL INSTALLATION

It may be the case that the installation of the oven of the paint booth does not have a plenum and / or needs a higher pressure than provided by the fan which is moving the air. In this case, we would add the CLBC accessory (scroll) with its corresponding suction cone, the CLBI.



Section of the installation in an oven



Spare parts of CLIBOS-TR