

# CLIBOS-TR

Centrifugal fan to react, driven to transmission  
for the recirculation of hot gases

## PLUG FANS



Plug fans

# CLIBOS-TR

Centrifugal fan to react, driven to transmission for the recirculation of hot gases



## ◦ Manufacturing features

- Centrifugal transmission fan of medium pressure type plug fan.
- Insulated box made of carbon laminated steel, protected against corrosion by powder coating of anticorrosive painting. Finish C3.
- High density rock wool insulation, 145Kg/m<sup>3</sup>, thickness 150mm.
- Self-cleaning turbine and reinforced impeller of backward (reaction) high performance blades manufactured in carbon laminated steel dynamically balanced to minimize noise and vibrations. Anti-heat paint of black color.
- Transmission Assembly with protections according to ISO 13857 standard.
- High efficiency belt without maintenance.
- Heavy duty waterproof monobloc.
- Motor for continuous operation (S1) Squirrel cage standardized asynchronous IEC motor with IP-55 protection and Class F electrical insulation. Standard voltages 230/400V 60Hz for three phase motors Up to 4kW and 400/690V 60Hz for higher powers.
- Motor with legs (B3) supported on a bench.
- Maximum continuous working temperature ambient (motor): 60°C.
- Suitable for transferring gases from -40°C to 350°C continuously due to cooling impeller.

## ◦ Applications

Plug-type installation made for the recirculation of gases in:

- Ovens.
- Boilers.
- Paint booths.
- Drying of tobacco, barley, ceramic, glass and wood leaves.
- Insulated thermal cameras subjected to temperature control.
- Burners and incinerators.
- Melting furnaces.

## ◦ Under request









- Fans for special voltages.
- Motor 2 Speed.
- Manufacturing in special steels for work Up to 550°C in continuous.
- Other Insulation thicknesses (200mm).
- Inox 304.
- Inox 316.
- Sparking proof construction.
- Other sizes.
- Other motors according to customer requirements.

## ◦ Range





## ◦ Accessories

 <p><b>INT</b> Safety switch.</p>	 <p><b>SFC</b> Frequency speed controller.</p>	 <p><b>CLBI</b> Inlet for PLUG FAN in cabinet.</p>
 <p><b>LENTICHEK</b> Vibration monitoring system.</p>	 <p><b>LARIDIS</b> Automatic bearing lubricator.</p>	 <p><b>CLBC</b> Inlet for PLUG FAN in cabinet.</p>
 <p><b>AVR</b> Anti-vibration rubber block.</p>	 <p><b>AVS</b> Anti-vibration spring block.</p>	

## ◦ 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 coil.
- Lubricant reservoir: 250 cm<sup>3</sup> 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.



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## ° 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.

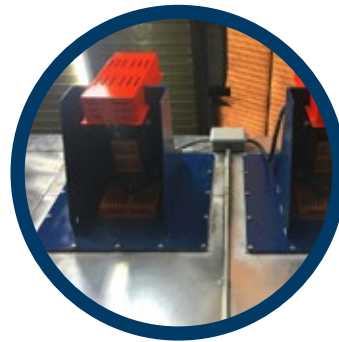
° With the CLIBOS-TR fan, thanks to the rock wool (thicknesses of 150 and 200mm) and the thermal grooves of the casing, it is generated a thermal bridge dissipating the internal temperature of the oven.



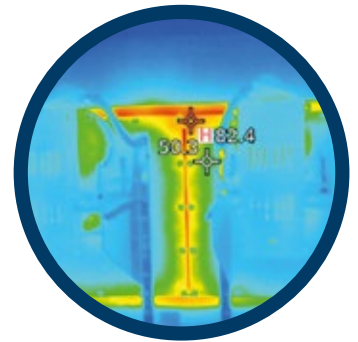
Thermal grooves

## ° 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



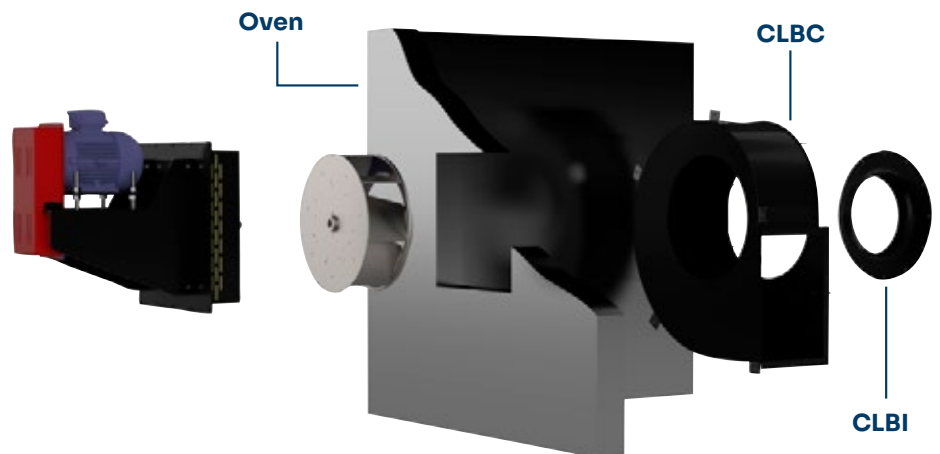
Result of thermography in the CLIBOS-TR with an operating oven

## ° 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



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