

Bake-out oven for cylinders

VBO/08

The easiest way to reduce cylinder
inner moistures and gas contaminations



Safety system

The door can be opened from inside, in order to avoid the operator entrapment. It is equipped with a safety switch, activated when it is open.

In order to protect the cylinders from over-temperature, a digital thermo-controller is installed on the electrical panel board, together with a temperature probe installed inside the cabin.

The lamp indicates any possible working anomalies.

The roof panel protects the cylinders from over-pressure inside the oven.

Applications

The bake-out oven allows to warm up to 70°C n° 8 cylinders at the same time. Once connected by flexible hoses to an internal manifold, the cylinders are subject to several cycles of vent, vacuum and rinsing with inert gas (Nitrogen). In this way, the residual moisture (and gas contaminations) are reduced at the lowest level.

Description

> Cabin

The oven cabin is made by steel panels, assembled to minimise the heat losses. Internal panels are zinc plated, while the external ones are painted. The thermal insulation is made by mineral wool 100-mm thick with glass-fibre seal. The ceiling panel is provided with a device in order to vent the internal overpressure.

The door is a single swing with closure and safety micro-switch allowing to stop the oven in case of unintended opening. The floor of the oven is made by a 3 mm zinc plated steel.

> Heating

Heating is made by electrical battery with low specific load resistances in order to increase working life.

A resistance battery is installed in the air recirculation dedicated room and is reachable from inside the oven for checking and maintenance. Heating temperature is controlled by a digital thermo-controller installed in the electrical panel board and a temperature probe installed inside the oven.

> Air circulation

Air recirculation is assured by an electrical fan especially designed for high temperature service.

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ELECTRICAL PANEL AND THERMOREGULATION

- ° Electrical panel: made of painted steel, IP55, installed on board
- ° Electrical device: main supply 400 V 50-60 Hz, buttons and lamps on panel at 24V
- ° Thermoregulation: digital display with PT100 probe
- ° Temperature alarm: digital display with PT100 probe

VACUUM, PURGE AND VENT CIRCUIT

Vacuum is made by an electrical vacuum pump with nominal flow-rate of 100 Nm³/h and 0,5 mbar residual pressure. The electric motor power is 2,2 kW. The vacuum pump is suitable for Oxygen service (BAM certified) filled with inert oil "Fomblin" type. The pump is equipped with a safety device protection from the overpressure, an oil barrel and a solenoid valve. The pipe manifolds are made of stainless steel and connected to the cylinders by flexible hoses made of braided PTFE stainless steel. Each flex hose is equipped with a terminal connection for the cylinder valve. Each flex hose is equipped with a quick coupling connector, especially designed for vacuum service, on the manifold side. The quick coupling allows to disconnect the flexible hoses, before positioning the cylinders in row and connecting it again to the manifold, when the cylinders are on place. Outside the cabin, 3 x DN10 manual valves (Oxygen service) are installed allowing to vent residual pressure from the cylinders, to rinse the cylinders by inert gas, and vacuumize them. Vent, purge and vacuum cycles are made manually.



TECHNICAL SPECIFICATIONS

- o Max capacity: 8 cylinders of 50 litres
- o Max dimension cylinders: Ø230 mm / h1850 mm
- o Power supply: 400 Volt, 50/60 Hz
- o Heating: 1 resistances battery with high heat exchange
- o Heating power: 10 kW
- o Total power: 12 kW
- o Vacuum pump power: 2,2 kW
- o Mini. service temperature: Ambient temperature
- o Max service temperature: 80 °C
- o Max vacuum level pump: 5*10⁻³ mbar
- o Max vacuum level circuit: 5*10⁻² mbar
- o Manifold valves: DN10
- o Flex hoses: DN6, PTFE S.S. braided
- o Max pressure vacuum circuit: 1,5 bar
- o Extractor flow rate: 300 Nm³/h
- o Installation: In workshop or under a protected canopy
- o Dimension (door open): 3402x2621x2700 mm (LxIxh)
- o Approx weight: 1 ton



> PER MAGGIORI INFORMAZIONI:
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