INTERNAL BAKEOUT HEATER

- **Low cost bakeout**
- **Faster than conventional heating system**
- **No external shrouds**
- **Mounted on CF35 I.D. flange for operation in ultra high vacuum range.**

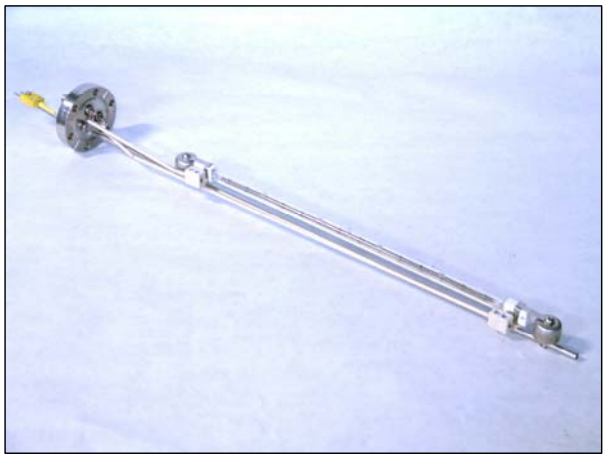

FIG. 1: Bake out heater with an IR 2000w lamp

Generality

In order to reach the UHV range of pressure, the cleanliness conditions of vacuum chambers are as important as the power of your pumping equipment; baking components and samples is a must to obtain the best performance from your system.

Description

VACUO heaters consists essentially of an infrared lamp (1000 W) mounted on a CF35 flange; electrical connection is guaranteed by a 6 pins feedthrough supplied with one JAEGER standard female plug. On demand a removable stainless steel shield, partially surrounding the lamp, is supplied; this gives you the option to irradiate the whole chamber (without shield) or to convey most of the radiation on specific parts (samples, critical components) by orientating the lamp and shield.
As comparated to more conventional baking systems, this method allows a faster and more efficient heating of the chamber: external heating requires shields around the chamber and the heaters themselves and, given the low thermal conductivity of stainless steel, is highly inefficient, causing heat dispersion and a very slow process.
On the other side, internal heaters take advantage on the propriety of stainless steel, allowing for a very fast and efficient heating without any external structure to enclose the system.
This is also shown by a comparision between the internal temperature (Fig. 2) and the external walls temperature, which seldom exceeds 100°C.

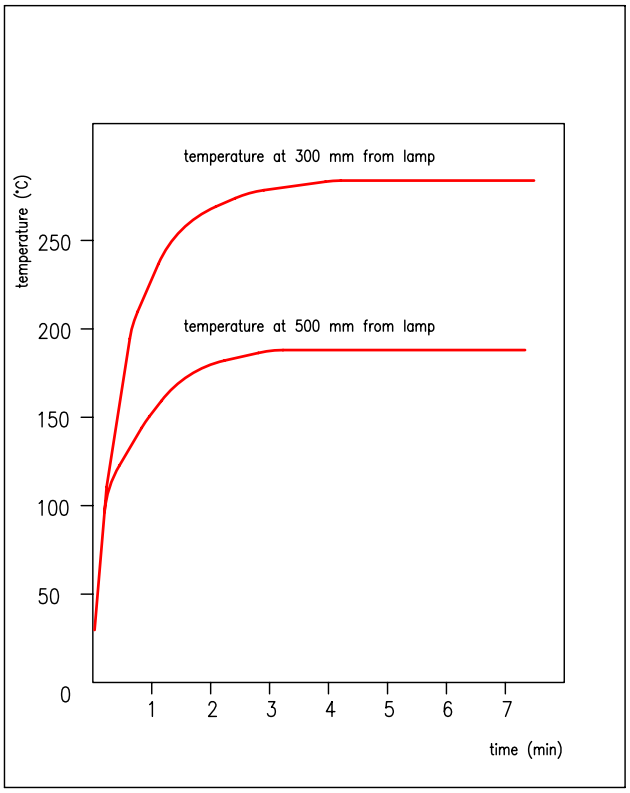

FIG. 2: Temperature rise in a chamber irradiated by a IR 1000 lamp

MODEL	ORDER CODE
IR-1000 INFRARED LAMP-CF40	**ZZ164**
POWER SUPPLY AND CONTROL	**EWTQ915**

INTERNAL BAKEOUT HEATER

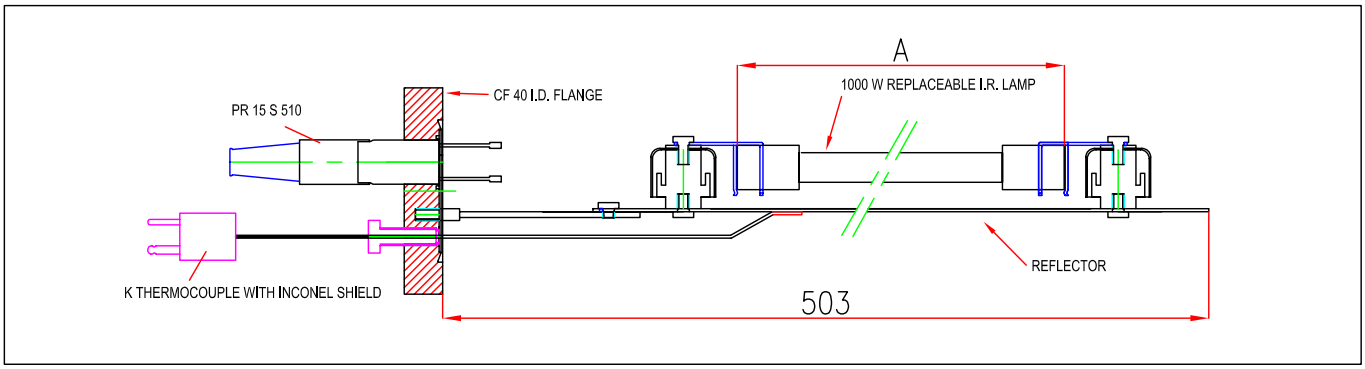

FIG. 3: IR lamp on CF40 flange

Technical Data

Model	Lamp Power	Supply Voltage	Allowed Orientation	Lamp Life (h)	Dim. A (mm)	Shipping Wt (Kg)	Order Code
IR-1000	2000 W	220 V - 50 Hz	ANY	5000	354	0.8	ZZ164

Temperature Control

When a temperature control is needed on an irradiated sample a controller with a preset is mounted with a measuring chromel/alumel termocouple. The termocouple is located as close as possible to the sample in order to test the heat adsorption and the temperature.
In the control panel (Fig. 4) is included a power supply system which allows to preset the temperature (two set points are available); PID and SMART control actions are available.

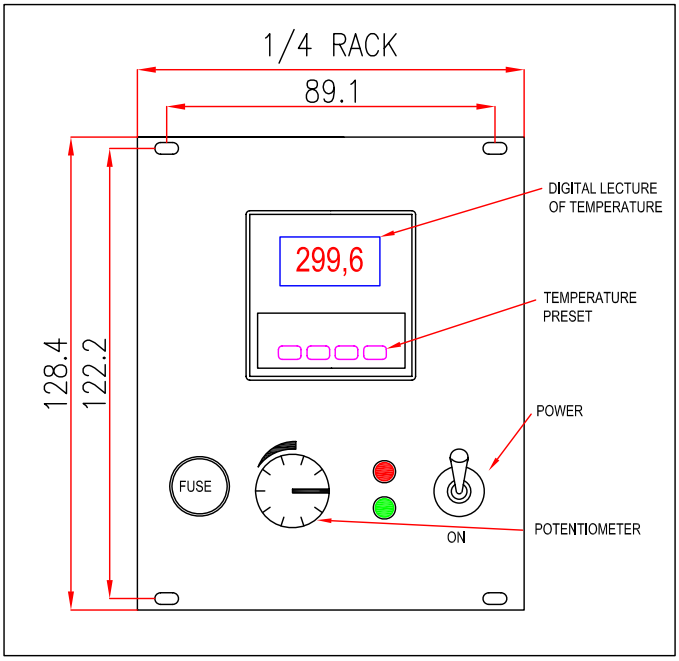

FIG. 4: Control panel

Specifications

TERMOCOUPLE	Type **L, J, K, N, T**
TEMPERATURE RANGE (°C)	0 - 999
DISPLAY	Digital
POWER SUPPLY	100V to 240V AC
ACCURACY (@ 25 °C)	+0.3% of the input
MOD.	EWTQ915

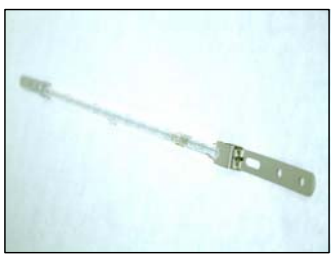

FIG. 5: Focallzed frontal furnace (without reflecting screens)

FIG. 6 : 700°C -IR sliding furnace

VACUO
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