



## MULTI-ENERGY LABOTRON FL8000



The multi-energy microwave oven LABOTRON FL8000 is designed for use by industrial laboratories for the development of new processes.

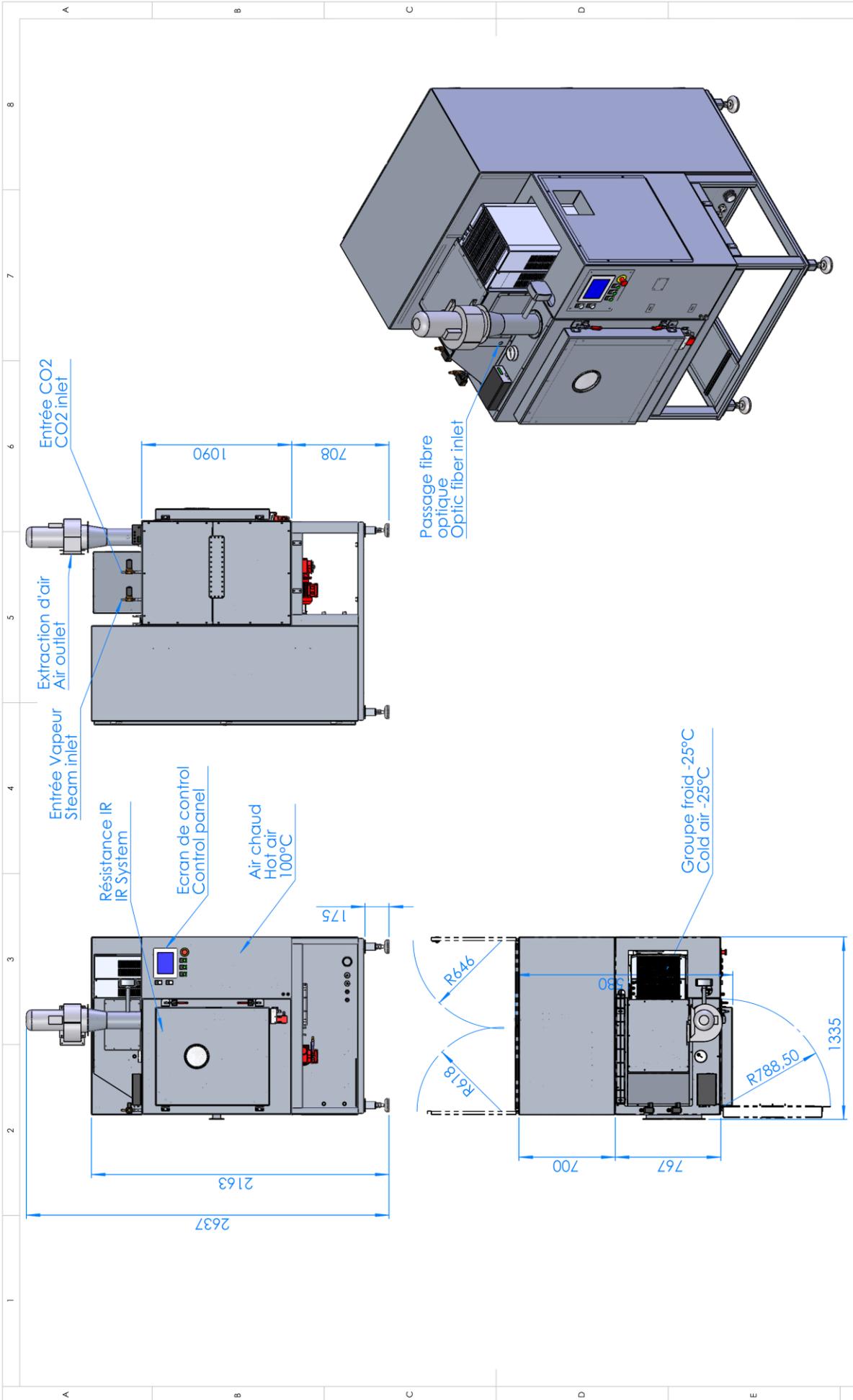
Some treatment procedures require the synergetic usage of the microwave energy to cold or hot air, infra-red, vacuum (drying), controlled atmosphere, CO<sub>2</sub> or steam; these processes require batch or continuous treatment system, continuous or pulsed microwave power etc.

Our LABOTRON FL8000 offers the possibility of combining various techniques with continuous control and/or measurement of several parameters such as temperature, moisture, energy, product weight etc.

The possibilities of our LABOTRON are only limited by your imagination!

## MAIN FEATURES

<b>Microwave generator</b>	4 generators, each adjustable up to 2 kW, frequency 2450 MHz, total variable power up to 8000 W. To obtain good homogeneity even with thick products, the microwave generators are installed on the top and at the bottom of the applicator. Measurement of the reflected power is available on each generator.
<b>Microwave cavity</b>	Stainless steel, internal size 670 x 670 mm, walls insulated with mineral wool, door with ¼ wave choke + silicone joint, manual opening and locking, air-proof and wave-proof window.
<b>Turn table</b>	Diameter 500 mm, maximum load 20 kg, alternate rotation.
<b>Air extraction</b>	Stainless steel fan with adjustable air for the air flow extracted from the cavity.
<b><u>Option</u>: hot air</b>	Regulation of the air entering the cavity up to 100° C (3 kW).
<b><u>Option</u>: thermometer with max. 4 optical fibres</b>	4-channel thermometer with 4 off x 2 m long optical fibers, allowing product measurement during treatment up to 4 points; the temperature values are displayed on the user interface.
<b><u>Option</u>: steam</b>	Controlled solenoid valve, steam generator not supplied, connection G 1/4", moisture measurement of outgoing air.
<b><u>Option</u>: CO<sub>2</sub></b>	Driving of a solenoid valve for CO <sub>2</sub> control (connection G 1/4").
<b><u>Option</u>: vacuum</b>	Possible treatment in a vacuum bell placed on the turn table, vacuum pump supplied (installed under the oven), vacuum connection through hollow port.
<b><u>Option</u>: infra-red (IR)</b>	4 kW infra-red resistor, Cs 5.9 W/cm <sup>2</sup>
<b><u>Option</u>: cold air</b>	Cooling of the air inside the cavity in closed circuit, cooling capacity 790 W, temperature adjustable up to -25° C.
<b><u>Option</u>: water cooling</b>	Water cooling system operating in close-water circuit.
<b>Display &amp; control Human Machine Interface (HMI)</b>	Control via an 8" colour touch screen, with display of all parameters, multilingual. Plotting of up to 8 parameters vs. time using a compact flash card: microwave power, reflected power, moisture of outgoing air, temperature of ingoing air, 4 temperatures through optical fibres. 2 operating modes for microwaves: <ul style="list-style-type: none"> <li>• Normal mode - power with timer</li> <li>• Process mode - possibility of up to 6 temperature/time steps.</li> </ul> Control of techniques compatibility through screen page: simultaneous hot and cold air, vacuum and hot air... Output via USB and Ethernet.
<b>Weight &amp; Dimensions</b>	650 kg; for dimensions see drawing on page 3. A single electric cabinet integrating all the components is adjoining the oven.
<b>Mains</b>	3 x 400 V + earth; mains: 14 kW + 3 kW for hot air, 4 kW for infrared.



MATERIE :		TRAITEMENT :	
REPRODUCTION INTERDITE - DROITS RESERVES		LABOTRON FL 8000	
FORMAT: A3		DESIGN NO. 3253-COM	
ECHELLE: 1:25		WEIGHT: 824,98	
		12. Porte du GRAND LYON 01 707 NEYRON Cedex - FRANCE tél: 04 72 01 81 60 fax: 04 72 01 81 79	
INDEXE	DATE	DESSINE	VERIFIE
A	15/01-10	BDE	APPROUVE
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