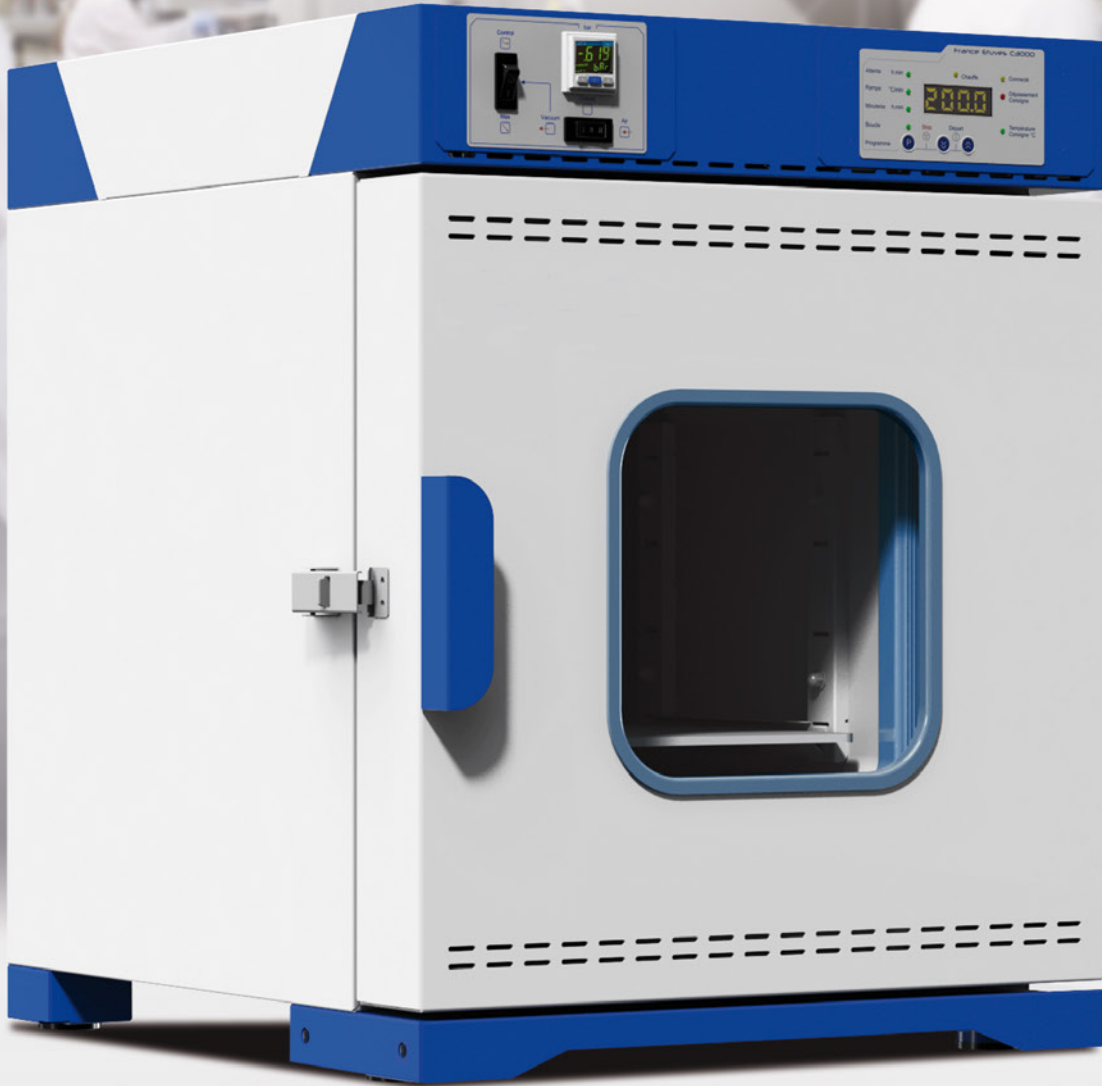


Low Vacuum Oven **LVO**

**Plasmadialm.**



VACUUM & COATING SOLUTIONS



[www.plasmadialm.com](http://www.plasmadialm.com)

**LVO RANGE**

Up to 1 mbar and 200°C

# VACUUM OVENS LVO

LVO vacuum ovens are suitable for sensitive product drying applications, outgassing, thermal treatments of oxidizable materials, quick drying of powders and granulates...

## Robust construction for lasting performances.

Exterior made of steel coated with blue and white epoxy paints.

Inner casing made of stainless steel, corrosion resistant.

Rounded corners and removable racks allow easy cleaning. Low surface temperature, low energy consumption.

## High-performance heating.

Heating is ensured by heating elements located on outer faces of the inner casing for best homogeneity.

## An accurate temperature control.

C3000 PID electronic controller. Easy to use. Precision : 0.1°C. Measurement by PT100 probe. Functions : delayed start, heating-up ramp, end cycle timer, repeat loop. Oven control possibility with a PC by a RS232 cable.

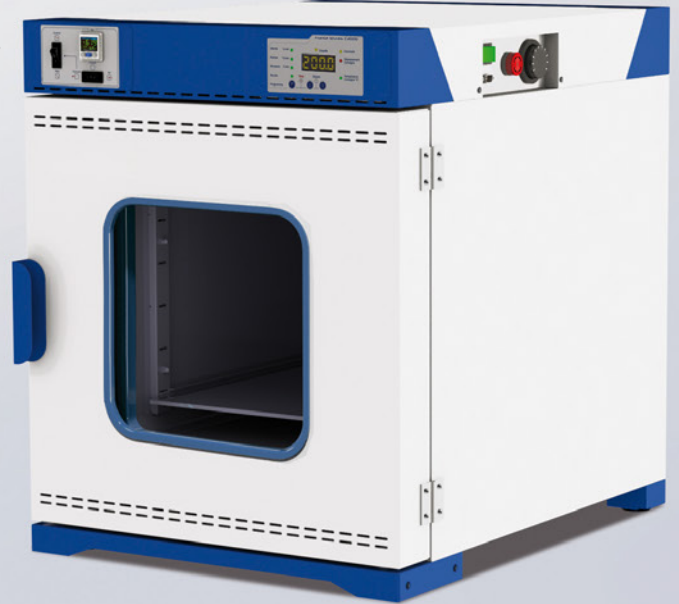


## A reliable vacuum control.

Digital display of the internal pressure from 0 to -1000 mbar. A switch allows either to reach the maximum vacuum level of your pump or to maintain a constant pressure level predefined on the vacuum controller.

## Protections for your oven and your products.

Adjustable and non-resettable mechanical thermostat (class 3.1 protection). It cuts heating and it supports the temperature control in case of failures. Visual and audible alarm.



## Easy temperature measurements !

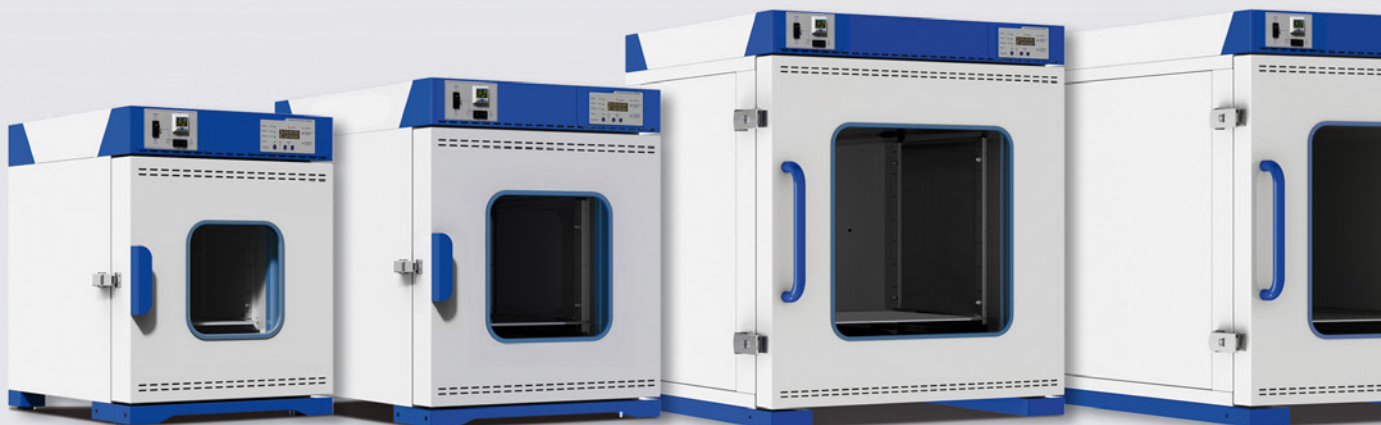
An entry port with a silicone cork allows to insert up to 4 probes.

## Comfortable loading and unloading.

1 tray provided. Aluminium tray with anti-tilting guide bars. Multiple load levels.

## An easy connection of your vacuum pump.

The electrical connection of the vacuum pump is made directly to the back of the oven. Teats allow the pumping of air and vacuum breaking (LVO020 and LVO050). From LVO120 model, pumping connector type is KF.



LVO 020

LVO 050

LVO 120

LVO 240

## OPTIONS



1 Vacuum profiler



2 Temperature profiler

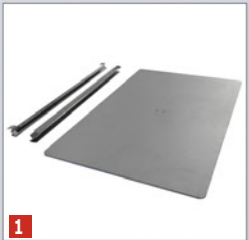


3 Temperature + vacuum profiler and recorder



4 Door gasket made of Viton

## ACCESSORIES



1 Tray with guide bars



2 Vacuum kit



3 Vacuum kit for chemical products



4 Subframe



5 Data logger with 2 channels



6 Portable paperless recorder with graphical screen



7 Thermocouple J probe

### 1 Vacuum profiler

4 programs with 16 steps each. Automatically change the vacuum level during your process.

### 2 Temperature profiler

4 programs with 16 steps each. If you need to heat at many temperatures during your process or provide progressive temperature drops.

### 3 Temperature + vacuum profiler and recorder

Allows the creation of temperature and vacuum programs. It records the values measured for vacuum and temperature and setpoint values. 2 additional temperature probes can be added (probes not included). Data recovery via USB or RJ45 port.

### 4 Door gasket made of Viton

Replacement of the silicone door gasket by a gasket made of Viton (limited to 200°C).

### 1 Aluminium tray with guide bars

Max distributed loading 30 kg. With 2 anti-tilting guide bars.

### 2 Vacuum kit up to 1 mbar

Oil sealed vacuum pump with 1 m flexible hose and oil filter.

### 3 Vacuum kit 10 mbar

For chemical products. Diaphragm vacuum pump with flexible hose.

### 4 Subframe (except LVO320 and LVO512)

Elevates the oven for a better loading comfort. Safety glass in the front. Clever storage of the vacuum pump inside.

- subframe with height adjustable feet
- subframe with castors (2 with brakes)
- subframe with height adjustable feet (especially for LVO320 and LVO512).

### 5 Data logger with 2 channel

Saves the temperatures measured by 2 mobile sensors.

### Software for data logger with 2 channels

Can set data logger and retrieve stored data on a PC.

### 6 Portable paperless recorder

Color graphical display for real monitoring of temperature changes. With USB and RJ45 plugs, and 4 connectors for mobile sensors.

### 7 Thermocouple J probe

Stainless steel. Length of 2m. With plug and silicone cork to be placed in entry port DN16.



LVO 320

LVO 512

## TECHNICAL DATA

|   | LVO020                              | LVO050         | LVO120         | LVO240         | LVO320           | LVO512          |
|---|-------------------------------------|----------------|----------------|----------------|------------------|-----------------|
| Working volume (L)                            | 20                                  | 51             | 110            | 220            | 316              | 512             |
| <b>SIZES</b>                                  |                                     |                |                |                |                  |                 |
| Internal width (mm)                           | 250                                 | 320            | 470            | 470            | 650              | 800             |
| Internal depth (mm)                           | 320                                 | 500            | 500            | 1000           | 750              | 800             |
| Internal height (mm)                          | 250                                 | 320            | 470            | 470            | 650              | 800             |
| External width* (mm)                          | 510                                 | 580            | 810            | 810            | 992              | 1130            |
| External depth* (mm)                          | 575                                 | 751            | 844            | 1347           | 1094             | 1228            |
| External height* (mm)                         | 610                                 | 680            | 890            | 890            | 1120             | 1270            |
| External height* with subframe (mm)           | 1405                                | 1475           | 1655           | 1655           |                  |                 |
| Weight, empty (kg)                            | 60                                  | 85             | 170            | 235            | 315              | 420             |
| <b>PERFORMANCES</b>                           |                                     |                |                |                |                  |                 |
| Temperature range (°C)                        | Ambiant + 20°C up to 200°C          |                |                |                |                  |                 |
| Temperature fluctuation (+/- °C)              | < 0.2                               |                |                |                |                  |                 |
| Vacuum range (mbar)                           | from 0 to -1000 (relative pressure) |                |                |                |                  |                 |
| Sensor type                                   | Piezo                               |                |                |                |                  |                 |
| Vacuum control accuracy** (%)                 | +/- 2                               |                |                |                |                  |                 |
| Pumping connector                             | Nipple-Hose Ø7                      | Nipple-Hose Ø7 | DN16 KF        | DN16 KF        | DN25 KF          | DN25 KF         |
| Vacuum breaking connection                    | Nipple-Hose Ø4                      | Nipple-Hose Ø4 | Nipple-Hose Ø7 | Nipple-Hose Ø7 | Nipple-Hose Ø7   | Nipple-Hose Ø13 |
| <b>ELECTRICAL DATA</b>                        |                                     |                |                |                |                  |                 |
| Heating power (W)                             | 800                                 | 1200           | 2400           | 3600           | 6000             | 9000            |
| Electrical supply                             | 230V ~1P 50/60Hz                    |                |                |                | 400V ~3P +N 50Hz |                 |
| Amperage connection (A)                       | 16                                  | 16             | 16             | 20             | 16               | 20              |
| <b>LOADING TRAYS</b>                          |                                     |                |                |                |                  |                 |
| Number of trays provided / max. in the oven   | 1 / 4                               | 1 / 5          | 1 / 8          | 1 / 8          | 1 / 11           | 1 / 15          |
| Trays sizes (LxP) (mm)                        | 224x280                             | 294x460        | 444x460        | 444x960        | 624x710          | 772x760         |
| Trays sizes (working surface) (LxP) (mm)      | 216x280                             | 285x460        | 436x460        | 436x960        | 614x710          | 768x760         |
| Max. weight on a tray / max. in the oven (kg) | 30 / 60                             | 30 / 60        | 30 / 90        | 30 / 90        | 30 / 120         | 30 / 200        |

\* Some options may change the oven's sizes  
 \*\* According to the characteristics of the associated vacuum pump

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