

Model 2Z-HVS

High Vacuum Sealer with 2 heating zones (with getter activation)



Technical and design changes reserved

- For sealing of MEMS
- 2 models:
2Z-HVS-100 (6 adapters 16 mm dia.)
2Z-HVS-200 (6 adapters 42 mm dia.)
- Temperature up to 450 °C
- Top and bottom heating
- Ramp up rate up to 20 K/min (in vacuum)
- Ramp down rate up to 20 K/min (dto.)
- Horizontal automatical open/close

FEATURES

- Bottom and top heating
- Up to 4 internal gas lines
- Data logging
- Vacuum up to 10^{-6} hPa
- PID Controller
- Optical process control by 360 °

APPLICATIONS

- Sealing and thermic encapsulation of MEMS
(Micro-Electro-Mechanical Systems)
- Getter activation
(Deposition of reactive material that is placed inside a vacuum system)
- Component separation during thermal processing in 2 temperature zones

Model 2Z-HVS

- **High Vacuum Sealer for MEMS**
- **Programmable temperature profiles**
- **Record of process data**
- **Getter activation**
- **2 temperature zones**

APPLICATION

The **2Z-HVS** is a high vacuum sealing unit which allows the hermetically sealing of MEMS.

An electronic component can be processed before sealing in 2 heating zones with different temperatures up to 450°C. This allows also the getter activation. Up to 6 packages can be processed in parallel. A key feature is the automatical positioning and sealing of the parts, where both components must have the same temperature. The control of different heat-up ramp rates and /or ramp-down rates has been a huge task which was excellently solved.

PROCESS GASES

The system can be used with standard process gases, like Nitrogen, Oxygen, Forming Gas.

FLOW METER

One gas line with Flow Meter (FM-EL) (manually operated with digital display) is default, three more gas line (**Option: FM-EL**) are possible. Also a Mass Flow Controller can be chosen.

VACUUM

The system is vacuum capable of up to 10⁻⁶ hPa.

TEMPERATURE

The maximal achievable temperature is 450 °C).

TEMPERATURE DISTRIBUTION

The hot plate allows an excellent temperature distribution and homogeneity.

PROGRAMMING

The 2Z-HVS is equipped with a Eurotherm 2604 precision temperature controller which allows the programming directly on the unit or by using the USB interface and comfortable programming on a PC. It is possible to store 20 programs with 100 steps each.

COOLING

The bottom hot plate is active water cooled. For chamber housing cooling and external cooling is required (we recommend a closed loop water cooling system).

(Accessories: WC-I)

SPECIAL

The process can be watched as the process chamber is surrounded by a 360° glass cylinder.

Model 2Z-HVS

SPECIFICATION

MODEL

Heated area
Adapter (Qty)
Max. substrate size
Vacuum capability
Temperature max.

Temp. uniformity

Ramp up rate

Ramp down rate

Flow Controller

Cooling Chamber

Cooling Hot Plate

Controller

2Z-HVS-100

100 mm diameter
max. 6 pcs
16 mm dia. (max. size)
10⁻⁶ hPA (pump included)
bottom: 450 °C
top: 200 °C

20 K/min (in vacuum)

20 K/min (in vacuum)

Manual electrical Flow
Meter with digital display

Water cooled

Water cooled

2604 Eurotherm PID

2Z-HVS-200

200 mm diameter
max. 6 pcs
42 mm dia. (max. size)
10⁻⁶ hPA (pump included)
bottom: 450 °C
top: 200 °C

20 K/min (in vacuum)

20 K/min (in vacuum)

Manual electrical Flow
Meter with digital display

Water cooled

water cooled

2604 Eurotherm PID

TECHNICAL DATA

Dimension	200x500x470 mm	550 x 500 x 1060 mm
Weight	24 kg + Pump	105 kg + Pump
Installation	230V AC, 1P, 50_60Hz max. 16A, 3,2 kW	230/400 V AC, 3P, +N, 50-60 Hz, max. 3x16A, 11 kW

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OPTIONS

HVS-FM-EL	Additional gas line with manually adjustable flow meter and digital display (max. 4) (additional flow meter on request)
HVS-MFC	Additional gas line with Mass Flow controller (total: max 4 gas lines)
TC	Additional thermocouple to measure on device (plugged in chamber) for external measurement tool (max. 2)

ACCESSORIES

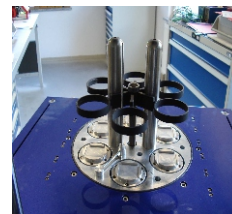
WC-I	Closed loop water cooling system (stand alone)
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Model:
2Z-HVS-100:
6 Adapters with
16mm dia each



Model:
2Z-HVS-200:
6 Adapters with
42mm dia each



Other options and accessories on request

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