UNITEMP
Universal Temperature Processes

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

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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 excellent 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 choosen.

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 homogenity.

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.
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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 zylinder.

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SPECIFICATION

MODEL	2Z-HVS-100	2Z-HVS-200
Heated area	100 mm diameter	200 mm diameter
Adapter (Qty)	max. 6 pcs	max. 6 pcs
Max. substrate size	16 mm dia. (max. size)	42 mm dia. (max. size)
Vacuum capability	10^{-6} hPA (pump included)	10^{-6} hPA (pump included)
Temperature max.	bottom: 450 °C top: 200 °C	bottom: 450 °C top: 200 °C
Temp. unifomity	_____ ____	_____
Ramp up rate	20 K/min (in vacuum)	20 K/min (in vacuum)
Ramp down rate	20 K/min (in vacuum)	20 K/min (in vacuum)
Flow Controller	Manual electrical Flow Meter with digital display	Manual electrical Flow Meter with digital display
Cooling Chamber	Water cooled	Water cooled
Cooling Hot Plate	Water cooled	water cooled
Controller	2604 Eurotherm PID	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

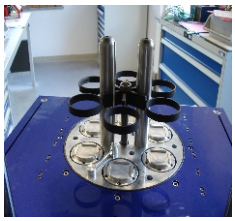
HVS-FM-EL	Additional gas line with manually adjustable flow meter and digital display (max. 4) (additional flow meter on request)
HVS-MFC	Additional gas line wtih Mass Flow controller (total: max 4 gas lines)
TC	Additional thermocouple to measure on device (plugged in chamber) for external measurement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

ACCESSORIES

WC-I	Closed loop water cooling system (stand alone)

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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