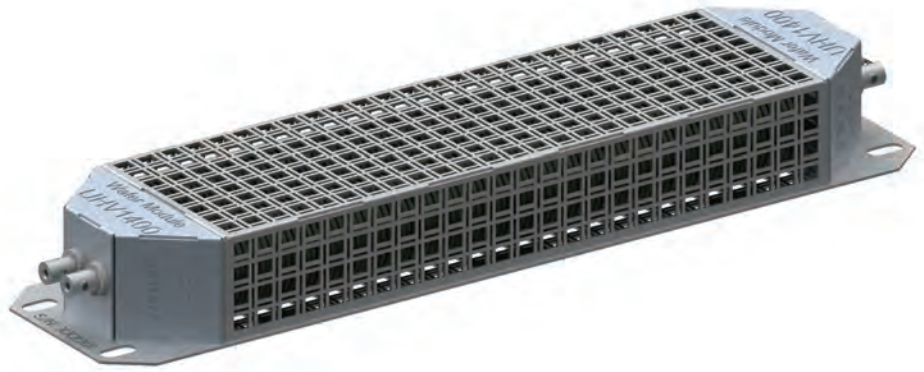


# UHV 1400 Wafer Module



## HIGHLIGHTS

### General Features

- High pumping speed for all active gases
- High sorption capacity and increased lifetime
- Constant pumping speed in UHV and XHV
- Reversible pumping of hydrogen and its isotopes
- Operation at room temperature after activation, without power
- Operation in the presence of high magnetic fields
- Oil free and vibration free
- Low weight

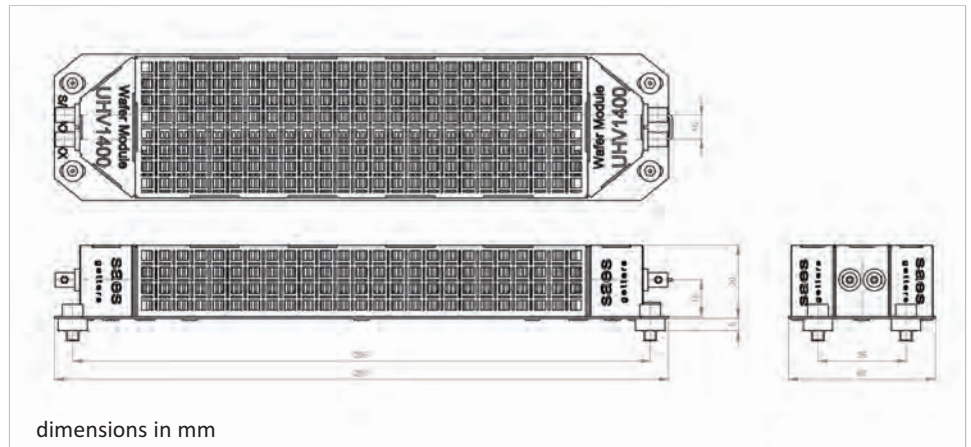
### Applications

- Improving ultimate vacuum in combination with ion, diffusion, cryogenic or turbomolecular pumps
- Surface analysis systems
- Particle accelerators, synchrotron radiation sources and related equipment
- Process pumps for vacuum devices and deposition chambers
- Thin films deposition systems
- Portable vacuum instrumentation
- Pumping, storing and releasing hydrogen isotopes
- Impurities removal in rare gas filled devices

The UHV 1400 Wafer Module is a flangeless high performance NEG pump solution suited for several UHV vacuum applications requiring the distribution of large pumping speed for H<sub>2</sub> and all the active gases (i.e., H<sub>2</sub>O, O<sub>2</sub>, N<sub>2</sub>, CO, CO<sub>2</sub>). The module consists of a stainless steel structure made of SS316L hosting two stacks of sintered Non Evaporable Getter (NEG) disks. Two built-in heaters allow for the activation of the module (550 °C for 1 hour). The NEG disks are made of the new ZAO1 getter alloy. Thanks to the flexibility of the ZAO1 technology, the benefits of NEG pumping can be extended from the high vacuum (HV) to the Ultra High Vacuum or Extreme High Vacuum (UHV-XHV) regimes. The UHV 1400 Wafer Module is able to deliver a pumping speed for H<sub>2</sub> in excess of 1400 l/s. Once activated, the module operates at room temperature without any power consumptions. The two heaters are connected in series by electrical bridge connection. The bridges can be removed in the case the two stacks of ZAO1 disks must be activated in parallel. The electrical parameters reported in the table are recommended when the modules is at least 15 cm far from the front wall. If a more screened configuration is used or several modules are installed close to each other, the electrical parameters can be evaluated.

More NEG modules can be powered at the same time by series and/or parallel connection. Recommendation on the best electrical parameters and installation of the modules can be given on request.

UHV 1400 Wafer Module with thermocouple are also available.



### Ordering Information

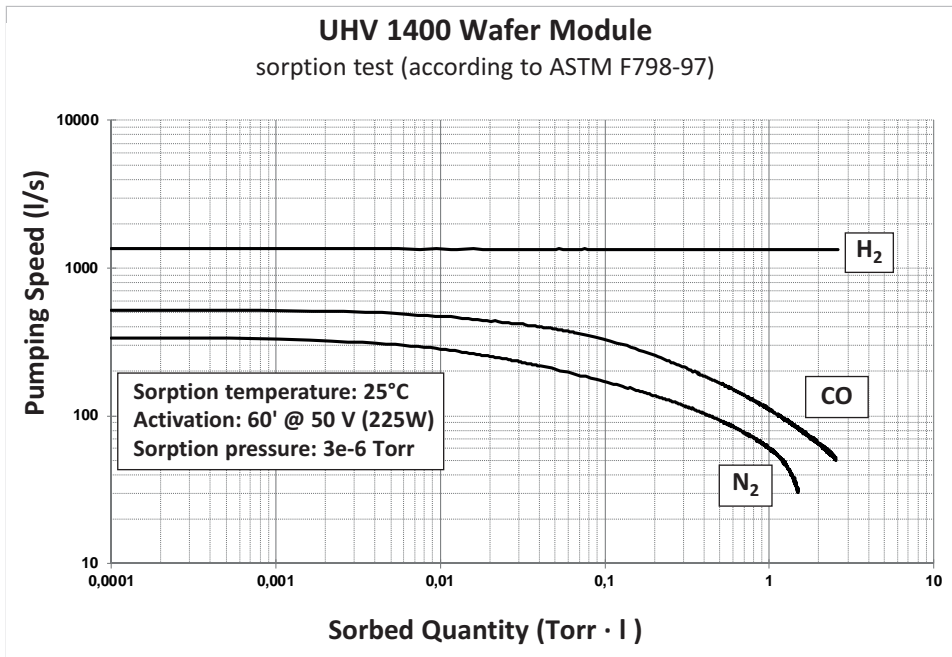
Product	Product description	Code
NEG ZAO1 modules for UHV-XHV	UHV 1400 wafer module	5H0701
Power supply	NEG POWER C1	3B0501
Output cable	OUTPUT CABLE WAFER MODULE - 3 MT	3B8003
Flange-wafer module connecting cable	WAFER MODULE KIT OF CABLES	3B8002
Flange with feedthroughs	WAFER MODULE FLANGE CF35	3B8001



# UHV 1400 Wafer Module

Typical of Module	Type of operation	Temperature	Electrical parameter
UHV 1400 WAFER MODULE	Activation	550° C	50 V (225W)
	Working	Room Temperature	No Power

The parameters must be considered in nude configuration



Alloy Type	ZAO®	
Alloy Composition	Zr V Ti Al	
Getter Mass (g)	360	
Getter Surface (cm <sup>2</sup> )	1900	
Pumping Speed (l/s)	H <sub>2</sub>	1360
	CO	510
	N <sub>2</sub>	330
Sorption Capacity (Torr·l)	H <sub>2</sub>	7200
	CO Room Temperature	2,5
	CO Total	3200
	N <sub>2</sub>	1,2

**Note:** Pumping speed data refer to the initial values with the module installed on a flat surface.  
CO and N<sub>2</sub> capacities based on speeds below 50 l/s

The SAES Group manufacturing companies are ISO9001 certified and the Italian companies are also ISO14001 certified. Full information about our certifications for each company of the Group are available on our website at: [www.saesgroup.com](http://www.saesgroup.com)

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