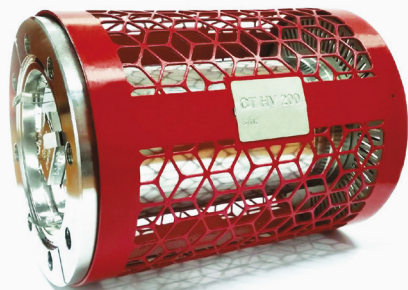


CapaciTorr® HV 200



HIGHLIGHTS

General Features

- > Extremely compact and low weight
- > High pumping speed for all active gases
- > High sorption capacity and lifetime
- > Constant pumping speed in HV and UHV
- > Oil free and vibration free
- > Operation in presence of high magnetic fields
- > Reversible pumping of hydrogen and its isotopes
- > Fast pumpdown after air venting and without baking
- > Capable of coping with large air leaks
- > Suitable for viton-sealed systems

Applications

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

The CapaciTorr® HV 200 pump is based on high performance SAES® ZAO® sintered porous getter disks. The pump provides high pumping performance in the high vacuum (HV) regime (i.e. 10^{-7} - 10^{-9} Torr range) for all the getterable gases like H₂, N₂, H₂O, CO/CO₂ and O₂.

In order to exploit its high capacity, the getter cartridge must be operated permanently warm, at moderate temperature (≈ 200 °C).

Thanks to the extremely high gas sorption capacity, the pump can cope with large air leakages or sudden gas burst typical of high vacuum systems.

The use of the pump in UHV range is also possible, by operating the getter cartridge at room temperature.

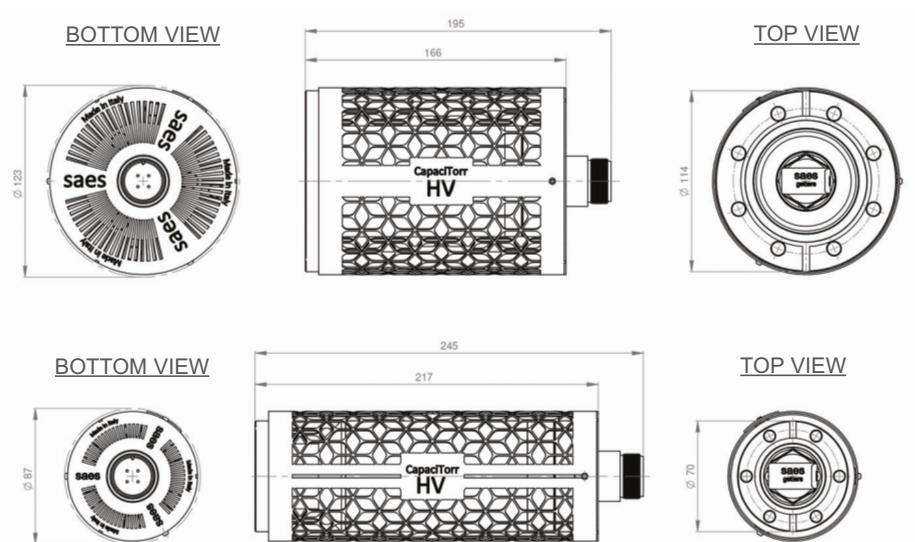
The CapaciTorr HV 200 consists of:

- > an external housing with CF63 or CF35 connecting flange;
- > a NEG cartridge incorporating the ZAO sintered disks, and a built-in heater that directly connects to the flange power feedthrough.

The NEG cartridge is very durable and designed for prolonged operation.

Once exhausted, it can be easily replaced.

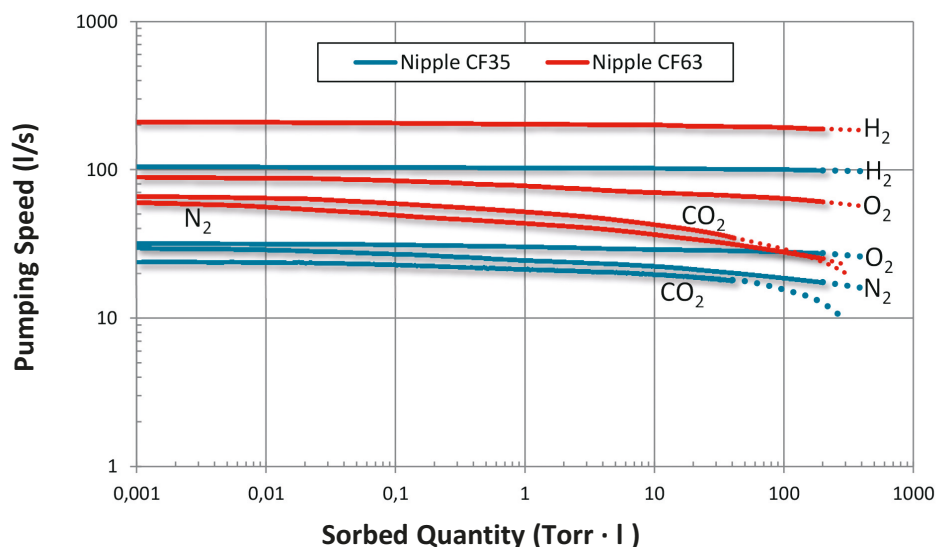
A bakeable connector provides easy and fast connection to the pump power supply to activate and power the NEG cartridge.



Dimensions in mm

CapaciTorr® HV 200

CapaciTorr® HV 200 - sorption test (according to ASTM F798-97)



Typical Pump Characteristics		CapaciTorr HV 200 on CF35	CapaciTorr HV 200 on CF63
Alloy Type		ZAO	
Alloy Composition		Zr V Ti Al	
Getter Mass (g)		140	
Getter Surface (cm ²)		432	
Activation Power (W)		52	61
Working Power (W)		7.5	8.6
Pumping Speed (l/s) @ 200 °C	H ₂	105	210
	H ₂ O	40	120
	O ₂	32	90
	N ₂	30	60
	CO ₂ *	25	65
Sorption Capacity (Torr·l)	H ₂	2800	
	H ₂ O Single cycle at 200 °C	400	
	O ₂ Single cycle at 200 °C	200	
	N ₂ Single cycle at 200 °C	200	
	CO ₂ *Single cycle at 200 °C	40	
Number of sorption cycles		>20 cycles	

Note: Pumping speed data refer to the initial values measured at pump inlet.

The "Single cycle" capacity is intended as the recommended absorbed quantity per run allowing to perform more than 20 sorption cycles. In case of operation under lower gas loads or at RT, the pump can be reactivated 100 times or more.

The values for H₂O are estimated.

(*) The values for CO can be assumed very similar to those reported for CO₂.

Ordering Information

Product	Product description	Code
CapaciTorr HV 200 pump on CF63	CAPACITORR HV 200	5H0156
CapaciTorr HV 200 pump on CF35	CAPACITORR HV 200 CF35	5H0159
HV 200 replacement cartridge	C 200 HV	4H0495
Power supply	NEG POWER MIN ^(#)	3B0110
Output Cable	NEG cable 4P10A 3MT ^(**) ^(§)	3B0601

(#) Other NEG POWER models which can simultaneously activate up to four pumps are available

(**) Other length cables are available on request

(§) Bakeable cables up to 250 °C, and radiation resistant (1000 Mrad)

The SAES manufacturing companies are ISO9001 certified, the Asian and 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

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