

CapaciTorr® HV Pumps



HIGHLIGHTS

General Features

- > Extremely compact and low weight
- > High pumping speed for all active gases
- > High sorption capacity and lifetime
- > Constant pumping speed in UHV and XHV
- > 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

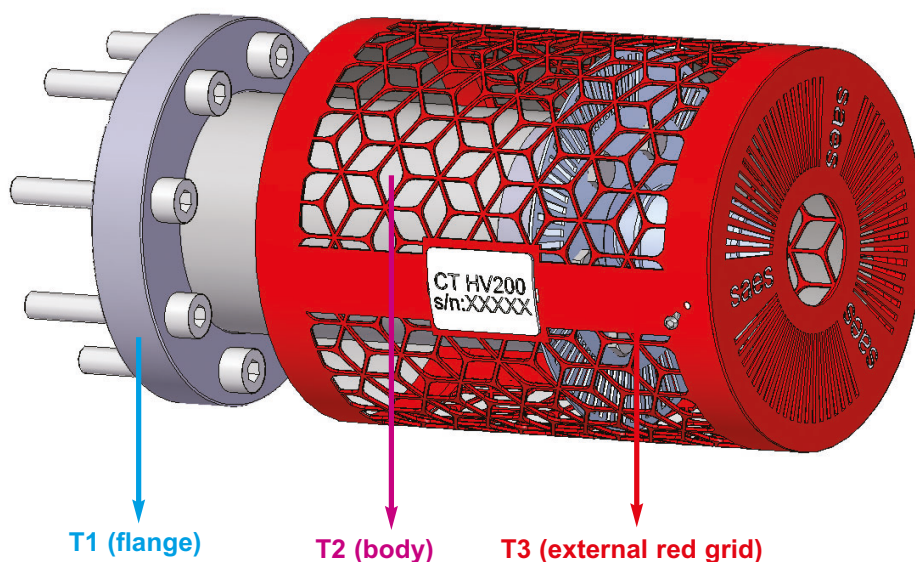
The CapaciTorr® HV pumps integrate the new ZAO® high vacuum NEG alloy specifically conceived to sorb large gas throughput at pressure levels as low as 10^{-7} Torr.

CapaciTorr HV benefits:

- > utmost capacity for all active gases
- > possibility to start the activation at low vacuum

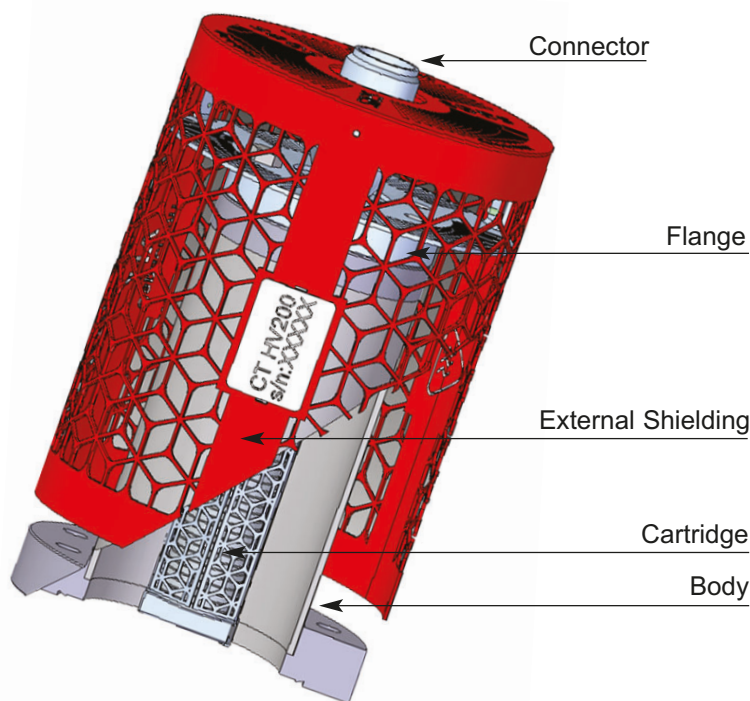
In order to exploit these benefits, the CapaciTorr HV pumps have to be operated permanently warm at around 200 °C.

All the available models feature easily replaceable NEG cartridge.



	Working T (°C)	Power (W)	T ₁ (°C)	T ₂ (°C)	T ₃ (°C)
CapaciTorr HV 200	200	8	30	40	RT
CapaciTorr HV 600	200	13.5	35	50	RT
CapaciTorr HV 1600	200	36	35	50	RT
CapaciTorr HV 2100	200	38	35	50	RT

CapaciTorr® HV Pumps



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

D.VS.176.2.24

Four CapaciTorr pumps featuring different dimensions and pumping performance are available, as reported in the tables below:

General features and dimensions

Product description	Alloy Type	Getter Mass (g)	Activation Power (W)	Working Power (W)	Nipple inlet flange	Nipple length (mm)
CapaciTorr HV 200 (CF35)	ZAO	140	52	7.5	CF35 (2.75")	245
CapaciTorr HV 200 (CF63)	ZAO	140	61	8.6	CF63 (4.5")	195
CapaciTorr HV 600	ZAO	398	126	13.5	CF100 (6")	206
CapaciTorr HV 1600	ZAO	690	368	36	CF150 (8")	258
CapaciTorr HV 2100	ZAO	1130	363	38	CF200 (10")	266

Note: The models HV 600, HV 1600 and HV 2100 are equipped with a thermocouple.

All the available pumps feature replaceable NEG cartridge (for the HV 600 the cartridge and the base flange are a single piece).

The nipple length reported in the last column is the distance between the nipple inlet and the base connector (without cable).

Pumping speed and capacity for the main gas species

Product description	Pumping Speed (l/s)					Sorption Capacity (Torr l)				
	H ₂	H ₂ O	O ₂	N ₂	CO ₂ *	H ₂	H ₂ O	O ₂	N ₂	CO ₂ *
CapaciTorr HV 200 (CF35)	105	40	32	30	25	2800	400	200	200	40
CapaciTorr HV 200 (CF63)	210	120	90	60	65	2800	400	200	200	40
CapaciTorr HV 600	600	450	380	190	260	7960	770	385	385	93
CapaciTorr HV 1600	1700	1000	800	470	620	13800	1600	800	800	160
CapaciTorr HV 2100	2100	1500	1250	625	880	22600	2600	1300	1300	260

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

The capacity values (except for H₂) are intended as the recommended absorbed quantity per run at around 200 °C, 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.

© SAES. Printed in Italy. All rights reserved. SAES®, CapaciTorr® and ZAO® are registered trademarks.

SAES reserves the right to change or modify product specifications at anytime without notice.

saes

SAES

www.saesvacuum.com

neg_technology@saes-group.com