

CapaciTorr® Z 400



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
- > Operation at room temperature without power after activation
- > Oil free and vibration free
- > Operation in presence of high magnetic fields
- > Reversible pumping of hydrogen and its isotopes

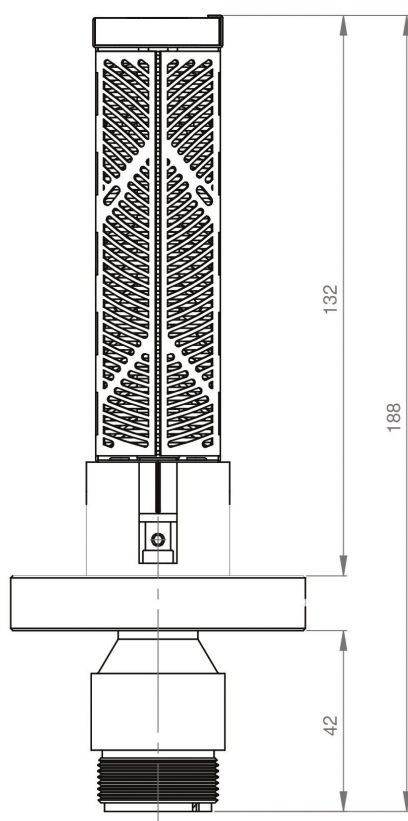
Applications

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

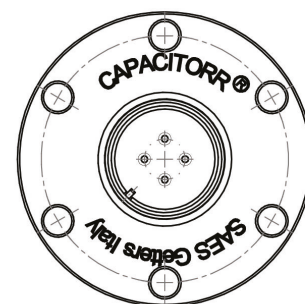
The CapaciTorr® Z 400 pump is based on high performance SAES® ZAO® sintered porous getter disks.

The getter cartridge is provided separately from the CF35 base flange, and incorporates a built-in heater that directly connects to the flange power feedthrough. A bakeable connector provides easy and fast connection to the pump power supply for the activation.

The CapaciTorr Z 400 pump offers its best performance when installed directly in the vacuum system using the standard CF 35 flange. Alternatively, the pump can be installed as an appendage using an optional custom-made pump body. The ZAO getter material provides superior pumping performance for H₂ than the St 172.



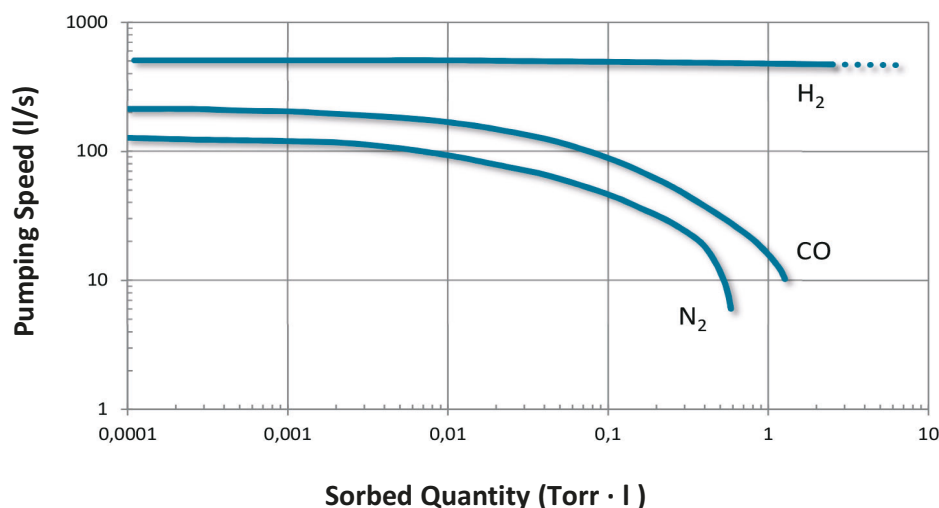
BOTTOM VIEW



Dimension in mm

CapaciTorr® Z 400

CapaciTorr® Z 400 - sorption test (according to ASTM F798-97)



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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Typical Pump Characteristics		CapaciTorr Z 400
Alloy Type		ZAO
Alloy Composition		Zr V Ti Al
Getter Mass (g)		96
Getter Surface (cm ²)		500
Activation Power (W)		87
Pumping Speed (l/s)	H ₂	500
	H ₂ O	320
	N ₂	125
	CO	210
Sorption Capacity (Torr•l)	H ₂	1920
	H ₂ O	16
	N ₂	0.6
	CO	1.2

Note: The activation power is referred to the “nude” configuration (NEG cartridge completely immersed in the vacuum chamber).

The values for H₂O are estimated.

Capacity based on speed at 5% of the initial value in nude configuration.

>100 reactivations (sorption cycles) are possible.

Ordering Information

Product	Product description	Code
Z 400 cartridge with built-in heater	CapaciTorr Z 400	4H0432
Z 400 CF35 base flange	CapaciTorr CF35	4H0402
Pump body	SPECIAL BODY CF35/CF35 L=189	4H0401
NEG Pump Power Supply	NEG POWER MINI [#]	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)

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