

CapaciTorr® D 400



HIGHLIGHTS

General Features

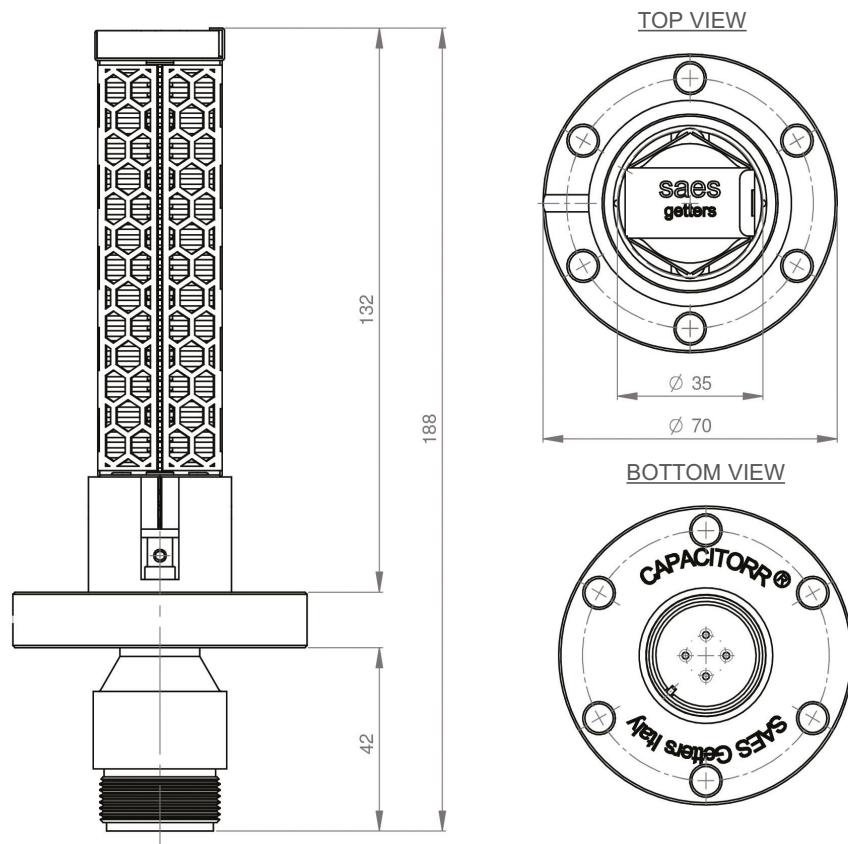
- > Extremely compact and low weight
- > High pumping speed for all active gases
- > High sorption capacity and lifetime
- > Constant pumping speed in UHV and XHV
- > Operation at room temperature without power after activation
- > Oil free and vibration free
- > Operation in presence of high magnetic 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® D 400 pump is based on high performance SAES® St 172 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 suitable connector provides easy and fast connection to the pump power supply for the activation.

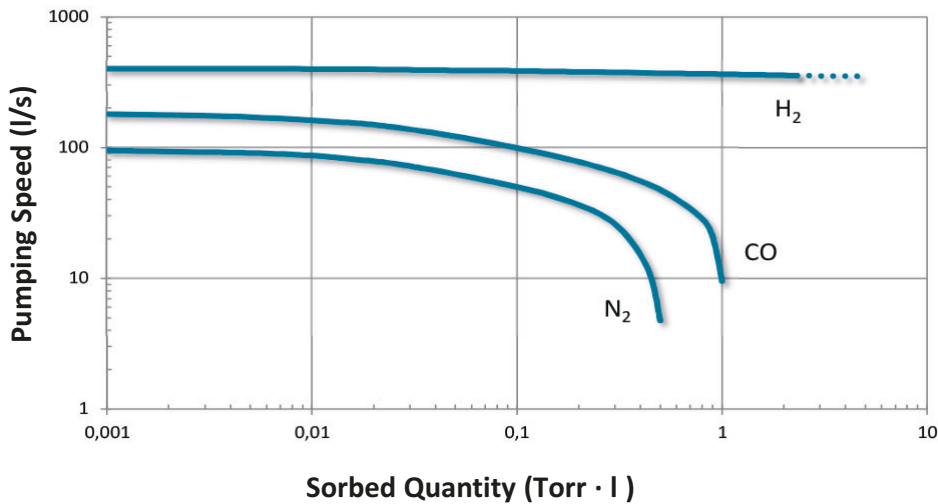
The CapaciTorr D 400 pump offers its best performance when installed directly in the vacuum system using the standard CF35 flange. Alternatively, the pump can be installed as an appendage using an optional custom-made pump body.



Dimensions in mm

CapaciTorr® D 400

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



| Typical Pump Characteristics | | CapaciTorr D 400 |
|-----------------------------------|------------------|------------------|
| Alloy Type | | St 172 |
| Alloy Composition | | Zr V Fe |
| Getter Mass (g) | | 45 |
| Getter Surface (cm ²) | | 380 |
| Activation Power (W) | | 90 |
| Pumping Speed (l/s) | H ₂ | 400 |
| | H ₂ O | 290 |
| | N ₂ | 95 |
| | CO | 180 |
| Sorption Capacity (Torr•l) | H ₂ | 450 |
| | H ₂ O | 16 |
| | N ₂ | 0.5 |
| | CO | 1 |

Note: The activation power are 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 |
| D 400 cartridge with built-in heater | C 400-2 DSK | 4H0419 |
| D 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)

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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