Custom Systems
Premium Model 9483 Rack Mounted Vacuum Pump

08/2024

Applications

- Vacuum supply
- Industry (laboratory, workshop and production)
- Research and development laboratory
- End of line testing

Special features

- Oil free vacuum pump
- Automated agilent IDP-3 vacuum pump
- Pump speed of 60 l/m^3 (3.6 m/hr)
- Automatic and manual control

Model 9483 - Rack mounted vacuum pump

Description

Design:
The Model 9483 vacuum system utilizes a IDP-3 dry scroll pump for top of the line vacuum performance. The unit is mounted in an industry standard 19” rack mount chassis. A gauge and HOA switch comes standard on the front panel. There are two I/O ports (MC 1.5/2-STF-3.81)located on the rear. They allow the automatic functionality to be controlled through either powered or passive means. Additionally, an automatic pressure relief valve is also included on the supply line.

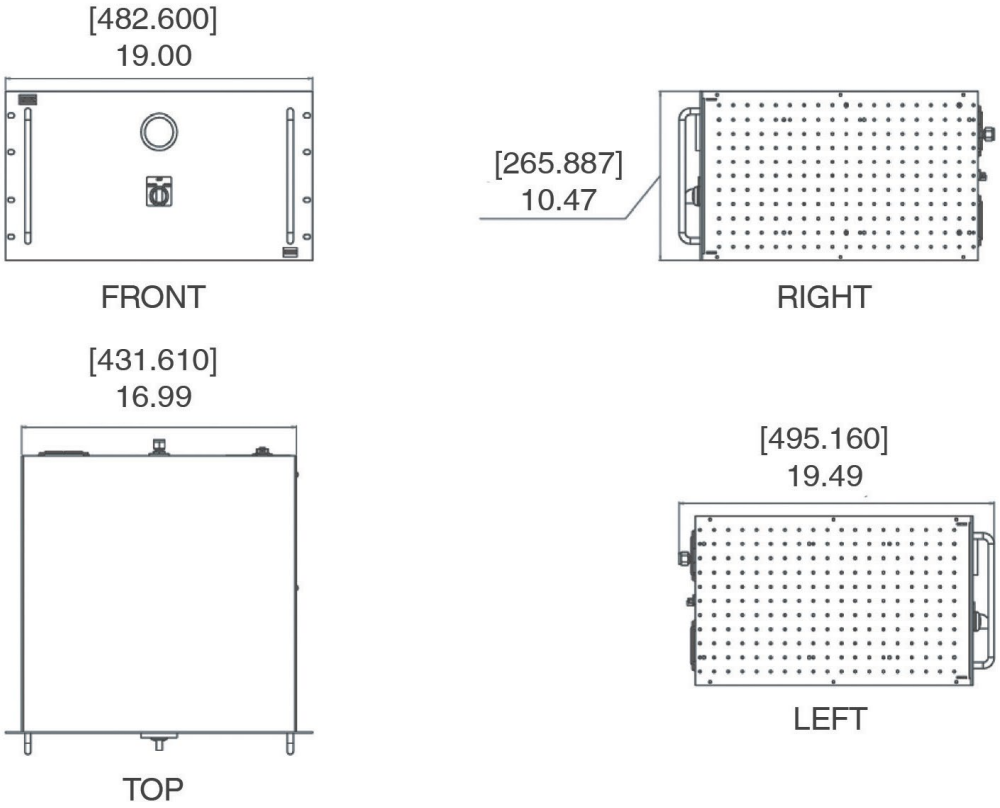
Functionality

The Model 9483 is commonly used as part of a larger rack mounted system to provide vacuum pressure. It can also be used as a standalone unit where a high performance vacuum is needed.

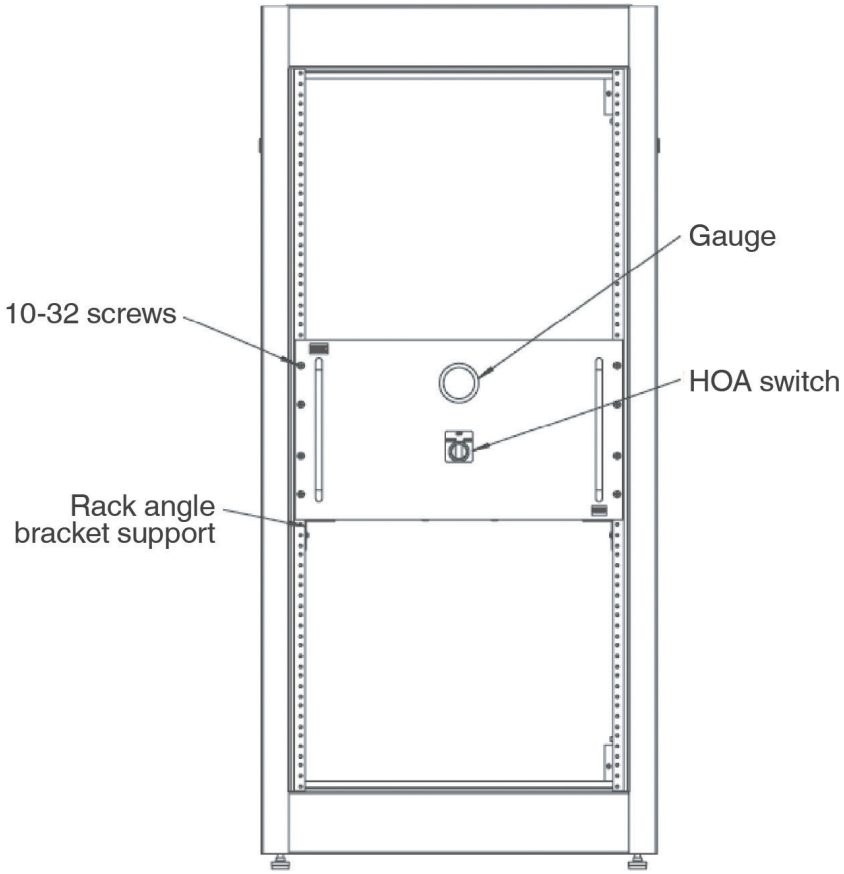
Specifications
Model 9483

Basic instrument- Model 9483	
Peak pumping speed	
60 Hz	60 l/m, 3.6m^3/hr, 2.1 cfm
50 Hz	50 l/m, 3.0m^3/hr, 1.8cfm
Rated current consumption	6 amps
Ultimate pressure	2.5 x 10^-1 torr (3.3 x 10^-1 mbar, 33 Pa)
Maximum inlet pressure	1 atmosphere (1.0 bar, 101 kPA)
Maximum outlet pressure	1.4 atmospheres (1.4 bar, 142 kPa)
Ambient operating temperature	5 to 40 ° C
Storage temperature	-20 to 60 °C
Supply power	100-120VAC/200-240VAC 50/60Hz
Leak rate	<1 x 10^-6 std-cc/sec helium
Noise level (per ISO 11201)	55 dB(A)
Fittings	3/8" stainless vacuum port
Relief valve	Relief valve is mounted internally.
Dimensions	L 19.51" [495.55mm] x W 19" [482.60mm] x H 10.47" [265.89mm]
Weight	18.14 kg (40 lb)

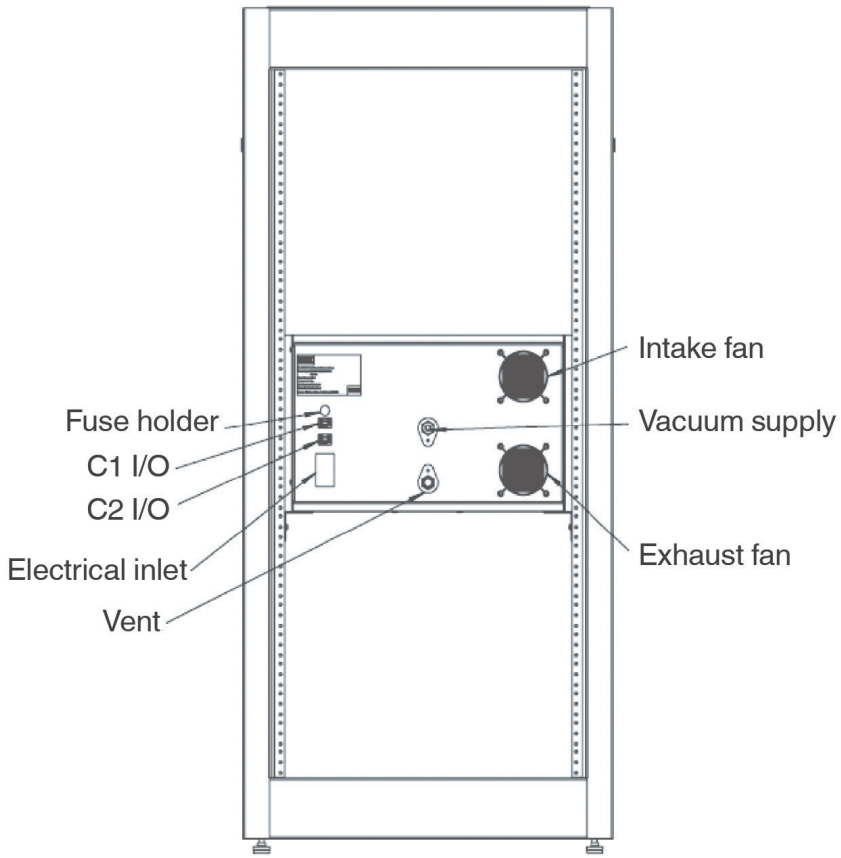
Dimensions: inches [millimeters]



Front panel features



Rear panel features



Theory of operation

As previously stated, the Model 9483 is a rack mounted vacuum pump. When operating, gases are pumped from the 3/8 tube connector vacuum supply indicated on the rear panel layout. These gases are then expelled through the rear panel vent. When turned off, an internal N.O. solenoid valve opens and atmospheric air enters through the solenoid. The vacuum pressure of the system can be observed from the front-facing gauge.

There are additional functionality and safety features included. An internal pressure relief valve is in line with the vacuum supply to protect from unintentional return pressure. Two I/O points facilitate automatic operation, for more information refer to the section below.

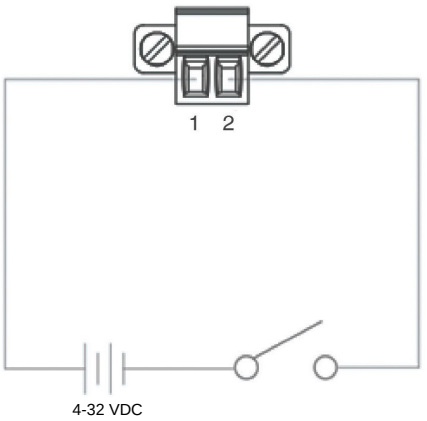
HOA switch operation

Hand (H):
When the HOA switch is flipped to the Hand(H) state the machine will turn on. The machine will remain on until the state of the switch is changed.

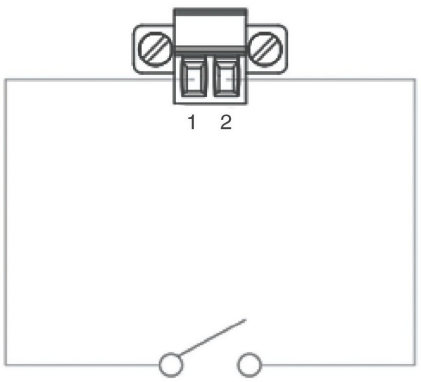
Off (O):
When the HOA switch is flipped to the Off(O) state the machine will turn off. The internal N.O. solenoid will pull in atmosphere.

Automatic(A):
When the HOA switch is flipped to the Automatic(A) state the machine can be controlled by I/O input. Depending on the I/O input, the machine will either turn on or off. When not in the Automatic(A) state all I/O input will be ignored.

C1(I/O):
The C1 I/O port is intended to be used with an incoming DC signal within the range of 4 – 32 volts. A high signal will cause the machine to turn on and a low signal will cause it to turn off. This allows for automated computer control. Directly shorting C1 to ground is not recommended and may cause electrical damage



C2(I/O):
The C2 I/O port is intended to be used as a passive interrupt system. When there is a short between the C2's terminals the machine will turn on and when there is a disconnect the machine will turn off. This allows for the wiring of an external passive switch. Operating both C1 and C2 simultaneously is not advised



Mensor
201 Barnes Drive
San Marcos, TX 78666
Tel. (512) 396-4200
Fax (512) 396-1820
sales@mensor.com
www.mensor.com