



# PRODUCT DATA SHEET

## VmSD144-N



Above images represent typical design

THERMAL PLATFORM VACUUM CHAMBER USED FOR PRECISION TEST (TVAC System)

INCLUDES: Complete Turbo Cart with vacuum release valve and 5 User Ports

### DESCRIPTION

TVAC systems increase understanding of how components and materials respond in a Space Simulated Environments

### PRODUCT INFORMATION

<b>Surface Dimensions / Area</b>	12 x 12 inch (30.5 x 30.5 cm)	144 Sq. Inches (929 Sq.cm)
<b>Surface Material / Finish</b>	6061 Aluminum	No Finish or coating
<b>External Dimensions / Max. Height</b>	Cart 30 x 28 x 30 Inches (L x W x H)	With Bell Jar Approx. 49 Inches overall
<b>Chassis Material / Finish</b>	Steel Cart / Stainless Steel Chamber	Powder Coat / Mechanically Polished
<b>Approximate Weight</b>	385 lbs. (175 kg)	Packed with a <u>Synergy Nano</u> on Pallet
<b>Ultimate Pressure</b>	1x10-6 Torr	Pump Speed 290 Liters Per Second
<b>Temperature Range</b>	-65 to 175°C	Extended Range and Hot Only available
<b>Heating Rate</b>	6 - 30 °C/Min Wattages Varies	Wattage can be specified
<b>Cooling Rate</b>	8 - 30°C/Min	Coolant can be specified
<b>Temperature Controller Options</b>	<a href="#">Synergy Nano</a> Color Touchscreen	<a href="#">Watlow PM6</a> Alternate Economy Model

### FACILITY REQUIREMENT

Power requirements may vary. Most common heater arrangement requires a dedicated 120 Volt 15 Amp circuit.

Coolant: Cryogenic gas suppliers in your area can supply either Nitrogen and Carbon Dioxide to your facility.

**High Pressure (HP) L-N2 75-125 psi is the Standard Coolant**

Low Pressure (LP) L-N2 Pressure below 30 PSI Available Upon Request for improved performance on bulk systems

High Pressure L-CO2 Pressure 900 PSI Available Upon Request recommended for infrequent cooling requirements

Low Pressure L-CO2 Pressure below 300 PSI Available Upon Request for improved performance on bulk systems or Dewars

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## Space Simulation Options, Accessories & Replacement Parts



Pyrex Bell Jar



Bell Jar Cage

L Gasket for Bar Jar Seal



Vacuum Rated Grease



Copper O Rings & Related Hardware



Ultra High Vacuum CF Flanged Feed Thru with



28-00101 Data logger with 16 Channel Type T Thermocouple Temperature Sensors



Custom Vacuum Capable **SD49**  
6.5" x 7.5" Usable Surface

There are Five Other  
Sizes Available

Greatly reduces the noise level of coolant being spent by a Thermal Platform



14-0010 Super Quiet Muffler (SQM)

Comes with six feet of exhaust hose



Coolant Delivery Hoses For Use With Cryogenic Fluids Pressure Relief Valve for added safety

## Temperature Controller Choices

(A) Synergy Nano Benchtop Programmable Temperature Controller has a Color LCD touch screen Easy to use, easy to read with graphing capability, logging, multi sensor, multi conditional outputs, comm ready, GPIB Upgradeable and free drivers available

(B) Watlow PM6 is a very robust, economical temperature controller

More on TotalTemp [Technology Controllers](#) and [Controller Accessories](#)



(A)



(B)

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