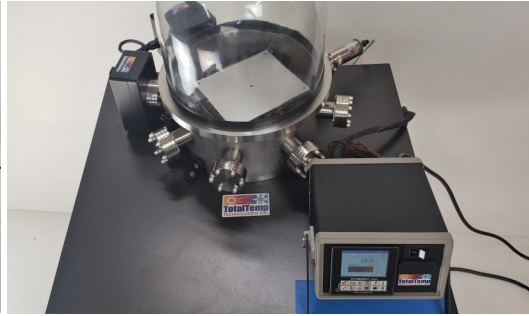




PRODUCT DATA SHEET

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

| | | |
|------------------------------------------|---------------------------------------|---------------------------------------------|
| Surface Dimensions / Area | 12 x 12 inch (30.5 x 30.5 cm) | 144 Sq. Inches (929 Sq.cm) |
| Surface Material / Finish | 6061 Aluminum | No Finish or coating |
| External Dimensions / Max. Height | Cart 30 x 28 x 30 Inches (L x W x H) | With Bell Jar Approx. 49 Inches overall |
| Chassis Material / Finish | Steel Cart / Stainless Steel Chamber | Powder Coat / Mechanically Polished |
| Approximate Weight | 385 lbs. (175 kg) | Packed with a <u>Synergy Nano</u> on Pallet |
| Ultimate Pressure | 1x10-6 Torr | Pump Speed 290 Liters Per Second |
| Temperature Range | -65 to 175°C | Extended Range and Hot Only available |
| Heating Rate | 6 - 30 °C/Min Wattages Varies | Wattage can be specified |
| Cooling Rate | 8 - 30°C/Min | Coolant can be specified |
| Temperature Controller Options | <u>Synergy Nano</u> Color Touchscreen | <u>Watlow PM6</u> 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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Phone: 888.712.2228



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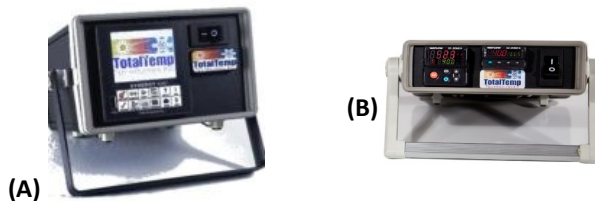
3630 Hancock Ste. A
San Diego, CA 92110

Revision 0 August 9th, 2023

Controller Options and Accessories

The (A) Synergy Nano Benchtop 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. [More on the Synergy Nano](#)

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



Dry Nitrogen Purge

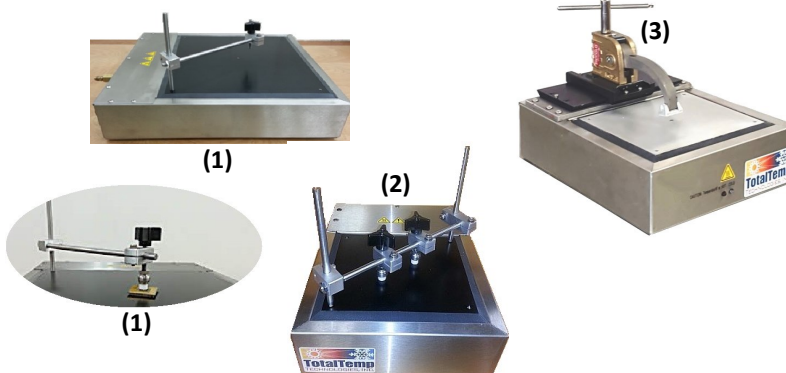
Probing Covers, especially when used with purge systems keeps condensation and frost from accumulating on the surfaces of the DUT (Device Under Test) at cold temperatures. Purging is also used to prevent oxidation of metals surfaces at high temperatures. Lastly the cover greatly reduces the gradient effects caused by room temperature. Low ESD and other options are available.



Dry Nitrogen Purge Regulator with Flowmeter

Clamps & Adapter Plates

We supply (1)light, (2)medium and (3)heavy duty clamping systems to increase thermal conductivity by applying downward force. Lower wattages and less extreme temperature do not require heavy clamping forces. The more wattage and temperature differential, the more clamping force is required. Platforms can also be directly drilled in many locations or an adapter plate can be secured on top of the platform by using the standard hole pattern.



Coolant Delivery Hoses & Exhaust

Liquid Nitrogen and Liquid Carbon Dioxide require different hose configurations. We offer many options for L-N₂ & L-CO₂ applications. Exhaust options the SQM and flexible hoses for venting are also available.



14-0010 Super Quiet Muffler (SQM)

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

Temperature Sensors & Loggers

RTDs & Thermocouples

Sensors are available for extended temperature ranges or for Space Simulation Applications



28-00101 Data logger

16-Channel Temperature Monitor

Thermocouples, daisy chain up to four of these 16-Channel monitors together and

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