

TELEDYNE HASTINGS INSTRUMENTS

DIGITAL VT VACUUM GAUGE METERS

VT SERIES

FEATURES

- Low Cost
- Operates Hastings Instruments' Most Popular Gauge Tubes
- Compatible with Calibration Reference Tubes
- Ranges:
DV-6 (1 – 999 mTorr)
DV-4 (0.1 – 20 Torr)
- Bright, Easy-to-Read Digital Display
- Supplied with Flexible Power Converter Module
- Easy Installation and Operation
- CE Compliant: EN61326

APPLICATIONS

Processes Requiring Accurate Vacuum Measurement & Control:

- Glove Boxes
- Cryogenics
- Vacuum Furnaces
- Pharmaceutical Production
- Freeze Drying
- Agricultural Processes
- Air Conditioning
- Thermal Food Containers
- Plasma Coating
- Refrigeration (HVAC)
- Accelerators
- Appliance Manufacturing



Digital VT



Gauge Tubes



Calibration Reference Tubes

DESIGN FEATURES

The Teledyne Hastings Instruments (THI) Digital VT is a digital readout version of the successful VT-Series "Hastings Gauge" which has generated loyal customers for over 50 years. A reputation has been built on exceptional stability, accuracy, and reliability under the most demanding conditions.

A precision A/D converter along with a microprocessor are used to measure the thermocouple vacuum gauge tube's signal output, convert the measurement to a pressure reading employing the gauge tube's well-defined output/pressure function, and display the result.

The Digital VT Vacuum Gauge Meter is available for two of THI's most popular gauge tube families: the DV-6 and the DV-4. The DV-6 range is 1-999 mTorr. The DV-4 range is 0.1-20 Torr. The Digital VT-Series Vacuum Gauges feature long life and minimal maintenance.

These instruments utilize THI's rugged but sensitive noble metal thermocouple vacuum gauge tubes that are designed specifically for each range. Tubes are matched and interchangeable without calibration adjustments. They are compensated for temperature and rate of temperature change and are corrosion resistant.

Easy Setup

The Digital VT includes two convenient front panel controls. The first is a simple push button which is used at atmospheric pressure to set the "span" of the tube curve. The other is an adjustment pot which can be used to set the "zero" of the gauge for generating accurate readings.

Note: The Digital VT is ready for use "out of the box." Adjustments to the zero and span are necessary only for higher accuracy performance.

DIGITAL VT

Gauge Tube Reference

DV-4

DV-6

Pressure Measurement Range



DESIGN FEATURES (cont)

Installation Accessories

THI offers a complete line of system attachments that permit easy maintenance for contaminated operations. Gauge tubes are offered with various system fittings to match almost any system requirement. Additionally, THI's complete line of quick disconnect attachments allows customers to install these special fittings and easily replace sensors without vacuum sealant or Teflon® tape. For particularly dirty systems, Hastings offers a particle drop-out trap containing a series of nine separate baffles which prevent solid contaminants from having a direct path to the sensor's thermopile.

DV-6S: New DV-6 Tube For Severe Environments

THI has developed a new gauge tube (DV-6S) which is specifically designed for outdoor use on cryogenic tanks including railcar and tanker truck applications. In addition to the Digital VT, the gauge tube is compatible with the handheld HPM-4/6 and the analog VT-6.

The DV-6S is supplied with a protective cap. The o-ring-sealed cap protects the gauge tube pins from moisture, thus significantly reducing corrosion. A metal lanyard prevents cap loss. The tube is provided with a standard 1/8" NPT fitting; however, special fitting requests can often be met.

Calibration Reference Tubes

THI Reference Tubes employ the same Hastings metal thermopiles used in all Hastings Vacuum Gauge Tubes. The thermopile is sealed in a glass capsule that has been evacuated, baked, outgassed, and then aged to ensure long-term stability. The sealed capsule is then housed in a protective metal shell to provide a rugged, trouble-free assembly.

Once assembled, the reference gauge tube is accurately calibrated to precisely simulate a gauge tube at a given operating pressure. It provides quick and easy instrument recalibration by merely plugging the instrument and adjusting the zero potentiometer until the display reads the exact pressure noted on the reference tube.

SPECIFICATIONS

DIGITAL VT VACUUM METER

Input Power Requirements	4.5–5.3 volts DC, 155 ma With included power converter ¹ 90–240 VAC, 47–63 Hz, 2 watt
Package	1/8 DIN
Outputs	Display only
Display	3-digit green LED
Operating Temperature	5–50°C
Connector	6-pin terminal block
Cables	6-ft power cable and 8-ft sensor cable included. Sensor cable lengths up to 100 ft. are available. Contact factory.
Weight (approx.)	7 oz (200 gms)
Electrical Noise Immunity	ENC 61010 Class A and IEC 61326-1: Section 6.2 Complies with IEC 61010-1 (Safety requirements for measurement, control, and laboratory use.)

¹ AC input plugs for various international standards are available.

SPECIFICATIONS

WITH HASTINGS GAUGE TUBE

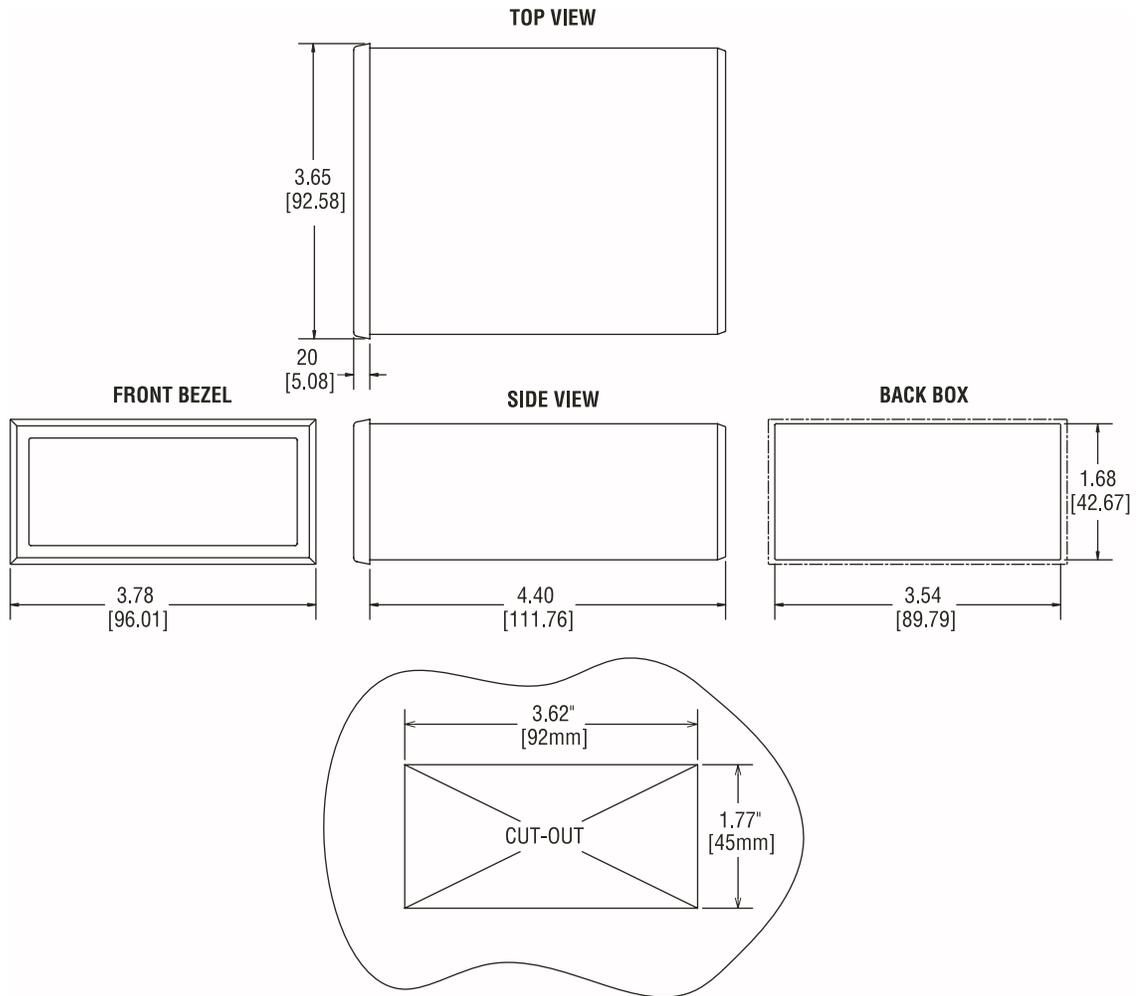
Typical Accuracy²	VT-6 ± (15% of reading + 1 mTorr) VT-4 ± (30% of reading + 0.02 Torr)
Range	VT-6 1–999 mTorr VT-4 0.1–20 Torr
Temperature Coefficient	VT-6 ± (1% of reading + 0.2 mTorr)/°C VT-4 ± (1% of reading + 2 mTorr)/°C

² Nitrogen @ 22°C only

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Digital VT



Selection Chart

Each Digital VT is shipped with one 6-ft power and one 8-ft gauge tube cable. Sensors and extension cables are sold separately.

Meters

Stock No.	Description	Range
55-288DV4	Digital VT-4	20 T
55-288DV6	Digital VT-6	999 mT

Power Supply Electrical Connectors

Stock No.	Description	
12-01-165	UK Service	
12-01-164	European Service	

Sensor & Reference Tubes

Standard Tube 1/8" NPT	DV-6M (Yellow)	DV-4D (Purple)
Ruggedized Tube 1/8" NPT	DV-6R	DV-4R
KF-16	DV-6M-KF-16	DV-4D-KF-16
KF-25	DV-6M-KF-25	DV-4D-KF-25
VCR	DV-6M-VCR	DV-4D-VCR
Glass 3/8" O.D.	DV-20	—
Mini Conflat™	DV-6R-CF	—
Stainless Steel 1/8" NPT	DV-36	DV-34
Stainless Steel smooth ends	DV-36 smooth	DV-34 smooth
Reference Tube	DB-20	DB-16D

Your Customer Service Representative



TELEDYNE INSTRUMENTS

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