TELEDYNE HASTINGS INSTRUMENTS

REFERENCE TUBES

FEATURES

- Instant Calibration Check
- Recalibration of Hastings Gauges
- Adjusts Gauge for Any Length Cable
- Stable, Accurate, Rugged, and Reliable

Reference Tubes

Vacuum Gauge Meters/Controllers

DESIGN FEATURES

The Teledyne Hastings Instruments (THI) Reference Tube is an evacuated, sealed vacuum gauge tube accurately calibrated to precisely simulate a gauge tube at a given operating pressure. It is electrically equivalent to the metal and glass gauge tubes used with THI instruments. It permits quick and easy recalibration of THI Vacuum Gauge Indicators by merely plugging the instrument into the reference and adjusting the calibration "current set" potentiometer until the instrument reads the exact pressure noted on the reference. THI Reference Tubes are available equivalent to most THI Gauge Tubes.

APPLICATION

THI Vacuum Gauge Indicators or Controllers can be checked or recalibrated in seconds by merely plugging the gauge tube cable into the reference tube. If calibration adjustment is necessary, the "Current Set" potentiometer is adjusted until the instrument indicates the pressure marked on the reference tube. The customer now knows his instrument is correctly calibrated.

Whenever cable lengths between gauge tube and instrument are changed, some error may be introduced, requiring that the instrument be readjusted to compensate for any losses involved. By plugging the Reference Tube into the new cable and readjusting the instrument for a correct reading, this "error" is eliminated.

SELECTION

Choose the reference tube that is equivalent to the glass or metal THI Gauge Tube you are now using. The Reference Tube will be matched and sealed at a pressure falling on the lower portion of the scale and calibrated accurately at this exact pressure.

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DESIGN FEATURES (cont)

For example, if an instrument uses a DV-6M Gauge Tube, a DB-20 Reference Tube is ordered. If a customer receives a reference tube marked “at 10 mTorr”, this is the pressure to which the indicator should be adjusted when plugged into the reference tube.

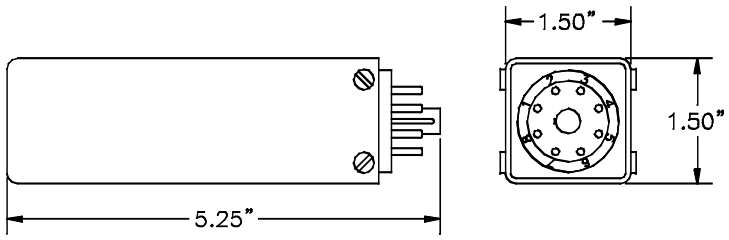
CONSTRUCTION

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

CALIBRATION

Considerable care and time are required in the manufacture to obtain the high degree of precision and stability required for the reference tube.

The THI Reference Tube maintains its calibration over long periods of time. However, for applications requiring the highest possible degree of accuracy, a periodic return of the reference tube to the factory for a check and recalibration may be desirable. An annual or semiannual check assures the customer of an accurate and reliable reference at all times.



Selection Chart

Equivalent Gauge Tube and Range*		Reference Tube	
Series	**Range**	**Model No.**	**Stock No.**
DV-4	0-20 Torr	DB-16D	55-101
DV-5	0-100 mTorr	DB-18	55-103
DV-6	0-1000 mTorr	DB-20	55-104
DV-8M	0.01-10 mTorr	DB-31	55-105
DV-23	0-5000 mTorr	DB-33	55-106
DV-24	0-50 Torr	DB-44	55-107

*For additional information, please consult PB 100A-4/05.

IMPORTANT NOTE:

These reference tubes are designed specifically for use with instruments employing THI circuitry and are NOT interchangeable with instruments using other circuitry. Connection to another manufacturer’s instrument may result in burnout.

Teledyne Hastings Instruments reserves the right to change or modify the design of its equipment without any obligation to provide notification of change or intent to change.

Your Customer Service Representative

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