



TELEDYNE HASTINGS INSTRUMENTS
Everywhereyoulook™

HVG-2020A Vacuum Gauge

FEATURES

- Range 0.1 to 1000 Torr
- Excellent Accuracy
 $\pm(0.1\% \text{ of Reading} + 0.5 \text{ Torr})^1$
- Media isolated
 - * Wetted materials: 304 and 316 SS
- Touchscreen Display/Control Option
- USB
- 0-1 VDC, 0-5 VDC, 0-10 VDC Linear
- 0-20 mA, 4-20 mA Linear
- RS232 / RS485
- Status LEDs
- Multiple Views
 - * Pressure vs. Time Plot
 - * Bar Graph
 - * Set Point Status
- NIST Traceable Calibration
 - * Certificate/Data Sheet Option

APPLICATIONS

- Rough Vacuum Monitoring
- Semiconductor
- Laser Systems
- Chemical Research
- Air Sampling
- Central Vacuum Monitoring
- Oil Reprocessing
- Medical Research

BENEFITS

- High Accuracy
- Low Cost
- Flexible I/O
- Gas Composition Independent
- Contamination Tolerant
- Easy to Use

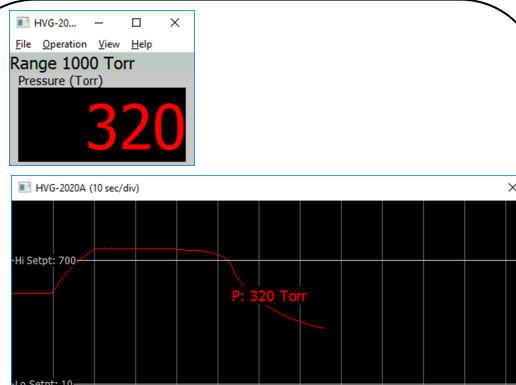
Piezo Vacuum Gauge



HVG - 2020 Vacuum Gauge



Optional Touchscreen Display



Data Logging Software



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Description

The HVG-2020A vacuum gauge from Teledyne Hastings is a media-isolated, gas composition independent, piezoresistive instrument that provides accurate pressure measurement throughout the rough vacuum region.

Unlike thermal based vacuum gauges, the HVG-2020A directly measures the pressure in the system. It does not infer the pressure by measuring the thermal conductivity of the gas. This means that the readings do not depend on the type of gas being used. For example, the instrument's reading for nitrogen will be the same as for helium or carbon dioxide at a given pressure; there is never a requirement to use a conversion factor.

Display Modes

The HVG-2020A is easy to install, and the optional display provides the user with several different views, or modes of operation. The **"Pressure versus Time"** Mode allows the user to monitor the pumpdown (or vent) of their vacuum system. In this mode, it can be possible to identify problems early and save time. Rate-of-rise can be viewed and may help to identify the presence of a chamber leak.

For users who want another method to see system pressure changes, we provide the **"Bar Graph"** Mode. As the pressure changes, the user can view both the numeric value of the pressure in the system as well as the rate of change by viewing the position of the bar.

Flexible

The HVG-2020A is very flexible and can provide both analog and digital output to easily integrate into process control. A wide variety of analog output signals may be selected (0-1 VDC, 0-5 VDC, 0-10 VDC, 0-20 mA, and 4-20 mA). This makes the HVG-2020A an excellent choice to replace more expensive capacitance manometers.

Digital output can include RS232 and RS485 via a small jack on the top of the instrument. A USB connection is also available on many models which makes connection and operation very easy. Free Windows data acquisition software for data logging is available for the HVG-2020A.

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.

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HVG-2020A Piezo Vacuum Gauge



Pressure vs. Time Mode



Bar Graph Display Mode



USB - Easy to Connect

Specifications



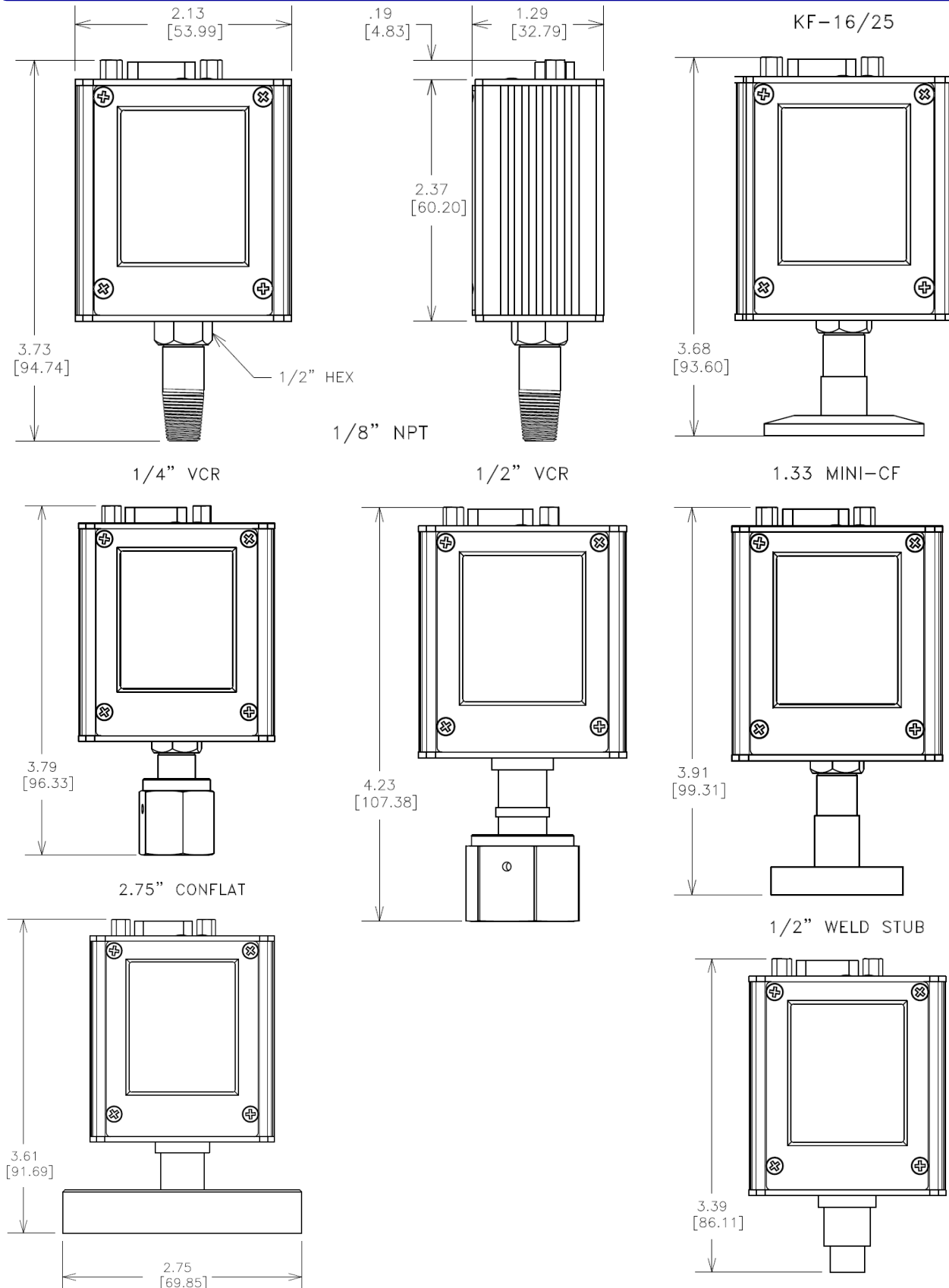
Specifications

HVG-2020A

Range	0.1 to 1000 Torr
Accuracy	$\pm(0.1\% \text{ of Reading} + 0.5 \text{ Torr})^1$
Maximum Overpressure	2000 Torr
Proof Pressure	25 psig ²
Burst Pressure	45 psig
Operating Temperature	-20 — 70°C
Warm up time ³	30 min (typical)
Warm up time ⁴	2 hr (typical)
Analog Output (voltage)	0-1 VDC, 0-5 VDC, 0-10 VDC Linear
Analog Output (current)	0-20 mA, 4-20 mA Linear
Wetted Materials	304 and 316L SS
Analog Connector	9 Pin D-sub
Digital Connector	Bayonet, 4 –conductor TRRS 3.5 mm
Input Voltage	12—36 VDC
Process Control Setpoints	Dual TTL (High & Low)
Power (With Display)	2.0 W (Max) @ 36VDC < 1.5 W (Typ) @ 24 VDC
Power (No Display)	1.8 W (Max) @ 36VDC < 1.3 W (Typ) @ 24 VDC
CE Mark	EN55011; EN61326; EN61010
RoHS Compliant	YES
Note 1:	Includes non-linearity, hysteresis, repeatability at ambient operating temperature after 2 hours warm up followed by zero adjustment.
Note 2:	The max pressure that can be applied without changing performance.
Note 3:	Warm-up time to within rated accuracy at atmosphere
Note 4:	Warm-up time for zero adjustment



Outline Drawings HVG-2020A Series



Selection Chart - HVG-2020A Series

Model Number		Analog Output	System Connection	Units	Digital Comm	Display
HVG-2020A						

Analog Output	
01	0 - 1 VDC
02	0 - 5 VDC
03	0 - 10 VDC
04	4 - 20 mA
05	0 - 20 mA

System Connection	
01	1/8" NPT
02	1/4" VCR
03	1.33" Mini-CF
04	2.75" CF
05	KF-16
06	KF-25
07	1/2" Weld Stub
08	1/2" VCR

Units	
01	Torr
02	mbar
03	kPa
04	psia
05	Bar
06	Pa
07	Atm

Digital Communication	
02	RS232 & USB
03	RS485 & USB

Display	
01	Display
02	No Display

Calibration Option
V-OPT-NIST

NIST Traceable Certificate with Data

Power Supplies & Cables



THCD-100 Single Channel Power Supply Meter

THCD-100

Includes brackets, connectors, and backshells



24 VDC Switching Power Supply

12-01-169

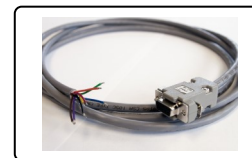
For use with HVG-2020, THCD-101, or 300 Vue
(Please specify AC Input Clip)



Connects Hastings Power Supply (15-pin) to HVG-2020 (9-pin)

CB-AF-8-HVG9M

8' Cable (~2.4m) Other lengths available



HVG-2020 Cable (9-pin) to bare leads

65-170

8' Cable (~2.4m)

CB-LDS-XXX-HV9

Other lengths available



Serial Communication Cable

CB-RS232-TRRS

RS232 Cable (9-pin "D" Female to Male TRRS)
6' Cable (~1.8m)



USB Cable

CB-USB-MICRO-B

USB-A to Micro-B
2m cable (~6.6')

For more information, contact us :

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