Precision Pressure Instrument Quick Guide

As the industry leader in technology driven precision instrumentation, the Heise® name has long been synonymous with high accuracy, quality and reliability. Heise® precision products offer practical, state-of-the-art features specifically designed to meet the demands of today’s customers. Innovations such as modular sensor design and digital output transducer technology continue to make Heise® the preferred instrument for critical pressure measurement applications.

Behind every Heise® product is a modern manufacturing facility certified to ISO 9001 with NIST traceable standards maintained in accordance with MIL-STD-45662A and ANSI/NCSL Z-540. In addition, a knowledgeable technical support staff is available to assist you, both before and after your purchase.

The following guide provides a simple overview of the Heise® product line. Visit our website at www.heise.com for detailed product information.
HEISE® Precision Pressure Instruments

**HPO SERIES PRECISION PRESSURE TRANSDUCER**

<table>
<thead>
<tr>
<th>Pressure Measurement Accuracy</th>
<th>±0.02% of span, including temperature effects within 50°F-86°F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pressure Ranges</td>
<td>5 psi to 10,000 psi*</td>
</tr>
<tr>
<td>Pressure Types</td>
<td>Gauge, compound, vacuum, absolute</td>
</tr>
<tr>
<td>Output</td>
<td>RS485, RS 232 or USB</td>
</tr>
<tr>
<td>Resolution</td>
<td>Up to one part in 50,000 (max.)</td>
</tr>
<tr>
<td>Update Rate</td>
<td>Up to 15mS</td>
</tr>
<tr>
<td>Power Requirements</td>
<td>12 to 24 Vdc, 15mA maximum</td>
</tr>
</tbody>
</table>

**FEATURES**
- LabVIEW® powered operating software available
- Up to 99 transducers on single RS232 line
- 300 Series stainless steel wetted materials and housing
- Simple ASCII command structure
- Selectable baud rate
- Selectable port speeds up to 115.2k bps
- User zero and span

**APPROVALS**
- FM

**OPTIONS**
- Bendix® PTO connector
- NEMA 4X sealed housing
- Atmospheric reference port
- Pipe or wall mounting bracket

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**DXD DIGITAL PRESSURE TRANSDUCER**

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<thead>
<tr>
<th>Pressure Measurement Accuracy</th>
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<td>5 psi to 7,000 psi</td>
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<tr>
<td>Pressure Types</td>
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<tr>
<td>Output</td>
<td>0/5 Vdc, 0/10 Vdc, –5/+5 Vdc and 4-20mA high-level output signals</td>
</tr>
<tr>
<td>Wetted Materials</td>
<td>Inconel® 718 &amp; 300 series SS. All-welded construction</td>
</tr>
<tr>
<td>Repeatability</td>
<td>±0.05% of span</td>
</tr>
<tr>
<td>Temperature Compensation</td>
<td>20°F-120°F</td>
</tr>
<tr>
<td>Response time of 3 ms</td>
<td></td>
</tr>
<tr>
<td>External zero and span</td>
<td></td>
</tr>
<tr>
<td>3-foot pigtail electrical connector</td>
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**PRECISION DIGITAL PRESSURE TEST GAUGE**

<table>
<thead>
<tr>
<th>Pressure Measurement Accuracy</th>
<th>±0.05%; 3086 – ±0.10%; 3084 – ±0.25%</th>
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**FEATURES**
- Dial size: 3", Display size: 0.66", 5 full digit
- Simple keypad layout
- Push to zero, Min/Max
- Bar graph display, Multi-lingual display
- 12 Engineering units
- Programmable damping
- Adjustable display contrast
- 100mS update rate
- Password protection

**APPROVALS**
- FM

**OPTIONS**
- Panel mount
- Carrying case
- O 2 service cleaning
- Non-standard ranges, consult factory

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**PRECISION ANALOG PRESSURE TEST GAUGE**

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<td>12 psi to 100,000 psi</td>
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<tr>
<td>Pressure Types</td>
<td>Gauge, compound, vacuum, absolute</td>
</tr>
<tr>
<td>Features</td>
<td>Single and dual revolution gauges</td>
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<tr>
<td></td>
<td>Solid front aluminum case with stainless steel pressure relief back for operator safety</td>
</tr>
<tr>
<td></td>
<td>Dial sizes available in 6&quot;, 8”, 12”, and 16”</td>
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**OPTIONS**
- Custom scales and ranges
- Peak load indication
- Automatic thermal compensation
- Slotted movement link

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HEISE® Precision Pressure Instruments

PTE-2 MODULAR HANDHELD CALIBRATOR

- Pressure Measurement Accuracy: ±0.025, 0.05 and 0.1% of span
- Pressure Ranges: 0.25 H2O to 10,000 psi
- Pressure Types: Gauge, compound, vacuum, absolute and differential

ST-2H MODULAR INDICATOR SYSTEM

- Pressure Measurement Accuracy: ±0.025, 0.05 and 0.1% of span
- Pressure Ranges: 0.25 H2O to 10,000 psi
- Pressure Types: Gauge, compound, vacuum, absolute and differential

PM DIGITAL PRESSURE & TEMPERATURE INDICATOR

- Pressure Measurement Accuracy: ±0.025, 0.05 and 0.1% of span
- Pressure Ranges: 0.25 H2O to 10,000 psi
- Pressure Types: Gauge, compound, vacuum, absolute and differential

SERIES 9 DIGITAL PRESSURE INDICATOR

- Pressure Measurement Accuracy: ±0.035 and 0.07% of span
- Pressure Ranges: 50 H2O to 20,000 psi
- Pressure Types: Gauge, compound, vacuum, absolute and differential

**TEMPERATURE MEASUREMENT**

- Supports most common RTD-type temperature probes and thermocouples
- Standard Features:
  - Two sensor module bays for interchangeable HM2 modules
  - Can display two simultaneous pressure and one electronic reading
  - Large LCD display (1.5” x 2.5”) with backlight
  - NIST traceable certificate of calibration
  - Data logging (manual/automatic); stores up to 16,000 records
  - SD memory card
  - USB serial interface
  - On-board 24 Vdc loop power supply
  - Trip detection for switches
  - Percent error function
  - Operates on four AA batteries or USB with universal AC adapter
  - NIST traceable certificate of calibration
  - Agency Approvals (with modules): CE (EM/RFI); FCC (CFR47); UL 61010-1
  - Optional intrinsically safe approvals (FM, ATEX, CSA)

**PHYSICAL CHARACTERISTICS**

- Power: (4) AA Batteries or USB
- Battery Life: 40 hours
- Weight: Base Unit: 4 lb; Sensors: 0.5 lb

*Consult specifications sheet for detailed accuracy information
Resolution 1 part in 60,000
## HAND OPERATED PUMPS

**DPPV-KIT**  
Combination Pressure and Vacuum pump, +125 psi to -23 inHg vacuum. Convert from Pressure to Vacuum by rotating a knob.  
The DPPV is a rugged lightweight combination pressure and vacuum pump. The unique design allows the user to convert from pressure to vacuum by simply twisting a knob.

**DCAP-KIT**  
Pneumatic hand pump  
The DCAP is a rugged all metal pneumatic hand pump capable of generating up to 650 psi (45 bar). This portable device is ideal for field pressure calibration operations.

**QTHP-KIT**  
Hydraulic Hand Pump  
The QTHP is a portable hydraulic hand operated pump capable of generating up to 5000 psi (345 bar) using liquid media including water, alcohol, oils and hydraulic fluids.

All kits include  
Pump, two 3’ pressure hoses, ¼ NPT Male and ¼ NPT male adaptors

## HVC VOLUMETRIC PRESSURE CONTROLLER

**CONTROL RESOLUTION**  
0.00025 psi for HVC-1000  
0.0005 psi for HVC-3000

Generates moderate levels of positive pressure and vacuum  
Sets pressure up to 1,000 or 3,000 psi  
Extremely fine control of both pressure and vacuum  
Built-in pressure balance valve for ease of operation  
Panel or bench mountable

**OPTIONS**  
- Bench mounting bracket