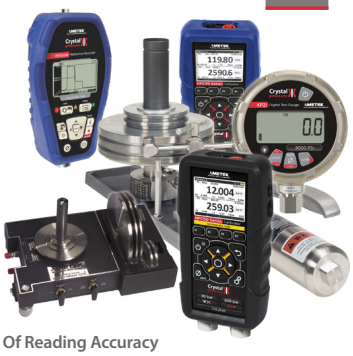
AMETEK®
TEST & CALIBRATION INSTRUMENTS

# Pressure Calibrator Overview psi



## Advantages

- Easy to Use
- Rugged Field Use Design
- Temperature Compensated
- 1-3 Year Recommended Calibration Intervals
- Record and Store Tests
- Free Calibration & Configuration Software
- Innovative Patented Technology
- ISO17025 Accredited Calibration Certificates
- Intrinsically Safe

## Handheld Pressure Calibrators

| Pressure Range | Pressure Accuracy | Vacuum Accuracy | Operating Temp. Range | IP Rating | Pressure Sensors | Pressure Connection | Datalogging | Differential Pressure | Absolute Pressure | Read Temperature | Read Electrical | 24 VDC Power Supply | Switch Test | External Pressure Module | Intrinsically Safe | Model |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Vacuum to 15 000 psi | ± 0.035% Rdg | ± 0.05% FS | -20 to 50° C | IP65 | 1 or 2 | CPF Female | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | HPC40 Series |
| Vacuum to 15 000 psi | ± 0.1% Rdg | ± 0.25% FS | -10 to 50° C | IP67 | 1 | CPF Female | ✓ | | ✓ | | | | | | ✓ | XP2i |
| Vacuum to 15 000 psi | ± 0.025% Rdg | ± 0.06% FS | -20 to 50° C | IP67 | 1 or 2 | CPF Female | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | | ✓ | nVision |
| Vacuum to 10 000 psi | ± 0.035% Rdg | ± 0.05% FS | -20 to 50° C | IP65 | 1 or 2 | CPF Female | | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | HPC50 Series |
| Vacuum to 10 000 psi | ± 0.2% Rdg | ± 0.25% FS | -10 to 50° C | IP65 | 1 | CPF Female | | | | | | | | | | m1 |
| Vacuum to 5000 psi | ± 0.05% Rdg + 0.005% FS | ± 0.25% Rdg | 0 to 50° C | — | 1 or 2 | 1/8" NPT Female | | | | | ✓ | | | | ✓ | 30 Series |
| Vacuum to 3000 psi | ± 0.25% Rdg | ± 0.5% FS | -10 to 50° C | IP65 | 1 | CPF Female | | | | | | | | | | m1M |
| Vacuum to 100 psi | ± 0.1% Rdg | ± 0.1% Rdg | -10 to 50° C | IP67 | 1 | 1/8" NPT Female | ✓ | ✓ | | | | | | | ✓ | XP2i-DP |
| **Pressure Range** | **Specifications** | | | | | | **Functions** | | | | | | | | | **Model** |

From 18 to 28° C. Typical. Plus either 0.004 or 0.01 psi. 1/4" NPT M, 1/4" BSP M, or M20 M adapter included. 1/4" NPT M and 1/4" BSP M adapters included.

## Deadweight Testers

| Pressure Range | Standard Pressure Accuracy | Optional Pressure Accuracy (Rdg) | Maximum Pressure | Minimum Pressure | Minimum Increment | Pressure Connection* | Dual Piston Available | Dual Column Available | Tripod | Compatibility | Sm. Incremental Weight Sets | Hydraulic | Pneumatic | Self Contained | Self Regulating Ball Type | Included Carrying Case | Model* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10 psi to 15 000 psi | ± 0.015% Rdg | ± 0.025%, ± 0.1% | 15 000 psi | 10 psi | 5 psi | 1/4" and 1/2" NPT F | ✓ | ✓ | | ✓ | ✓ | | ✓ | | | ✓ | Type T Series |
| 10 psi to 3000 psi | ± 0.1% Rdg | ± 0.05% | 3000 psi | 10 psi | 0.1 psi | 1/4" NPT F | ✓ | | ✓ | | ✓ | | ✓ | | | ✓ | HL Series |
| 10 psi to 1500 psi | ± 0.025% Rdg | — | 1500 psi | 10 psi | 1 psi | 7/16-20 37° AN4 M | | | | | | ✓ | | ✓ | | | HK Series |
| 4 in$H_2O$ to 301 psi | ± 0.05% Rdg | ± 0.025%, ± 0.015% | 301 psi | 4 in$H_2O$ | 1 in$H_2O$ | 1/8" NPT F | | | ✓ | ✓ | | ✓ | | ✓ | | ✓ | RK Series |
| 4 in$H_2O$ to 30 psi | ± 0.05% Rdg | ± 0.025%, ± 0.015% | 30 psi | 4 in$H_2O$ | 1 in$H_2O$ | 1/4" NPT F | | | ✓ | ✓ | | ✓ | | ✓ | | ✓ | PKII Series |
| **Pressure Range** | **Specifications** (See the Data Sheets for complete specifications.) | | | | | | **Functions** | | | | | | | | | | **Model*** |

With installed adapter to 1/4 tube fitting. Not included with dual column or 0.015% accuracy. These units are supplied with bench top column mounting plate and tubing.

* CPF connections are available for all deadweight tester models.

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### Of Reading Accuracy

Our gauge accuracy is defined as "percent of reading". For example, a gauge with 0.1 percent of reading accuracy that displays 100 psi would be accurate to ± 0.1 psi at that pressure. At 50 psi, the same gauge would have an accuracy of ± 0.05 psi (twice as accurate). This versatility is why one of our gauges can replace 3 to 5 standard "of scale" rated gauges.

### Temperature Compensation

Our active temperature compensation corrects sensors for changes in temperature within our specified ranges (up to -20 to 50°C). Without temperature compensation, the additional errors can quickly overwhelm the basic specification at common working temperatures.

### Floating Ball Testers

While in operation, our pneumatic tester's ball and weights float freely, which is virtually frictionless, supported only by a thin film of air. This eliminates the necessity to rotate the weights during testing and allows the user to concentrate on the instrument calibration.

### Self-Regulating Design

The instrument's built-in flow regulator automatically adjusts the input air flow to maintain the ball and weights in a float position. The regulator also compensates for variations in pressure from the air supply. Simply add or remove weights to generate your target pressure.

### Leak-free Seal up to 10 000 psi

Our patented CPF fitting design maintains a leak-free seal up to 10 000 psi, with only finger-tightening. Improve safety with a self-venting weep hole, which alerts you, by leaking gas or test fluid, before you fully disconnect from a pressurized system. Each of our products either includes CPF fittings as standard, or can be adapted to our CPF line.

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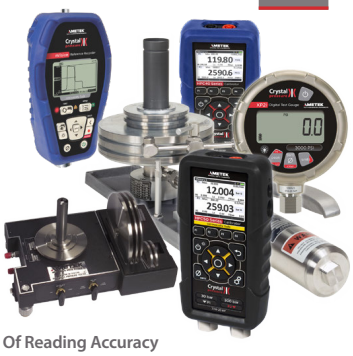
# Pressure Calibrator Overview bar



## Advantages

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## Handheld Pressure Calibrators

| Pressure Range | Pressure Accuracy | Vacuum Accuracy | Operating Temp. Range | IP Rating | Pressure Sensors | Pressure Connection | Datalogging | Differential Pressure | Absolute Pressure | Read Temperature | Read Electrical | 24 VDC Power Supply | Switch Test | External Pressure Module | Intrinsically Safe | Model |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Vacuum to 1000 bar | ± 0.035% Rdg | ± 0.05% FS | -20 to 50° C | IP65 | 1 or 2 | CPF Female | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | HPC40 Series |
| Vacuum to 1000 bar | ± 0.1% Rdg | ± 0.25% FS | -10 to 50° C | IP67 | 1 | CPF Female | ✓ | | ✓ | | | | | | ✓ | XP2i |
| Vacuum to 1000 bar | ± 0.025% Rdg | ± 0.06% FS | -20 to 50° C | IP67 | 1 or 2 | CPF Female | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | | ✓ | nVision |
| Vacuum to 700 bar | ± 0.035% Rdg | ± 0.05% FS | -20 to 50° C | IP65 | 1 or 2 | CPF Female | | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | HPC50 Series |
| Vacuum to 700 bar | ± 0.2% Rdg | ± 0.25% FS | -10 to 50° C | IP65 | 1 | CPF Female | | | | | | | | | | m1 |
| Vacuum to 300 bar | ± 0.05% Rdg + 0.005% FS | ± 0.25% Rdg | 0 to 50° C | — | 1 or 2 | 1/8" NPT Female | | | | ✓ | | | | | ✓ | 30 Series |
| Vacuum to 200 bar | ± 0.25% Rdg | ± 0.5% FS | -10 to 50° C | IP65 | 1 | CPF Female | | | | | | | | | | m1M |
| Vacuum to 7 bar | ± 0.1% Rdg | ± 0.1% Rdg | -10 to 50° C | IP67 | 1 | 1/8" NPT Female | ✓ | ✓ | | | | | | | ✓ | XP2i-DP |
| Pressure Range | Specifications | | | | | | Functions | | | | | | | | | Model |

From 18 to 28° C. Typical. Plus either 0.0003 or 0.001 bar. 1/4" NPT M, 1/4" BSP M, or M20 M adapter included. 1/4" NPT M and 1/4" BSP M adapters included.

## Deadweight Testers

| Pressure Range | Standard Pressure Accuracy | Optional Pressure Accuracy (Rdg) | Maximum Pressure | Minimum Pressure | Minimum Increment | Pressure Connection* | Dual Piston Available | Dual Column Available | Tripod | Compatibility | Sm. Incremental Weight Sets | Hydraulic | Pneumatic | Self Contained | Self Regulating Ball Type | Included Carrying Case | Model * |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 bar to 1000 bar | ± 0.015% Rdg | ± 0.025%, ± 0.1% | 15 000 psi | 10 psi | 5 psi | 1/4" and 1/2" NPT F | ✓ | ✓ | | ✓ | ✓ | | ✓ | | | ✓ | Type T Series |
| 1 bar to 225 bar | ± 0.1% Rdg | ± 0.05% | 3000 psi | 10 psi | 0.1 psi | 1/4" NPT F | ✓ | | ✓ | | ✓ | | ✓ | | | ✓ | HL Series |
| 0.5 bar to 100 bar | ± 0.025% Rdg | — | 1500 psi | 10 psi | 1 psi | 7/16-20 37° AN4 M | | | | | | ✓ | | ✓ | | | HK Series |
| 10 mbar to 20 bar | ± 0.05% Rdg | ± 0.025%, ± 0.015% | 301 psi | 4 in$H_2O$ | 1 in$H_2O$ | 1/8" NPT F | | | ✓ | ✓ | | ✓ | | ✓ | | ✓ | RK Series |
| 10 mbar to 2 bar | ± 0.05% Rdg | ± 0.025%, ± 0.015% | 30 psi | 4 in$H_2O$ | 1 in$H_2O$ | 1/4" NPT F | | | ✓ | ✓ | | ✓ | | ✓ | | ✓ | PKII Series |
| Pressure Range | Specifications (See the Data Sheets for complete specifications.) | | | | | | Functions | | | | | | | | | | Model * |

With installed adapter to 1/4 tube fitting. Not included with dual column or 0.015% accuracy. These units are supplied with bench top column mounting plate and tubing.

* CPF connections are available for all deadweight tester models.

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### Of Reading Accuracy

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### Temperature Compensation

Our active temperature compensation corrects sensors for changes in temperature within our specified ranges (up to -20 to 50°C). Without temperature compensation, the additional errors can quickly overwhelm the basic specification at common working temperatures.

### Floating Ball Testers

While in operation, our pneumatic tester's ball and weights float freely, which is virtually frictionless, supported only by a thin film of air. This eliminates the necessity to rotate the weights during testing and allows the user to concentrate on the instrument calibration.

### Self-Regulating Design

The instrument's built-in flow regulator automatically adjusts the input air flow to maintain the ball and weights in a float position. The regulator also compensates for variations in pressure from the air supply. Simply add or remove weights to generate your target pressure.

### Leak-free Seal up to 700 bar

Our patented CPF fitting design maintains a leak-free seal up to 700 bar, with only finger-tightening. Improve safety with a self-venting weep hole, which alerts you, by leaking gas or test fluid, before you fully disconnect from a pressurized system. Each of our products either includes CPF fittings as standard, or can be adapted to our CPF line.

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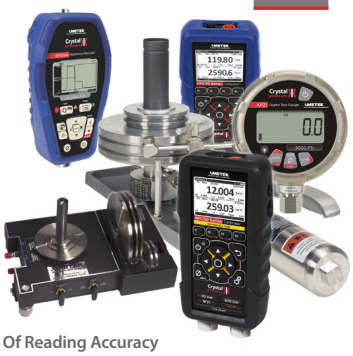
# Pressure Calibrator Overview kPa



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| Vacuum to 100 MPa | ± 0.035% Rdg | ± 0.05% FS | -20 to 50° C | IP65 | 1 or 2 | CPF Female | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | HPC40 Series |
| Vacuum to 100 MPa | ± 0.1% Rdg | ± 0.25% FS | -10 to 50° C | IP67 | 1 | CPF Female | ✓ | | ✓ | | | | | | ✓ | XP2i |
| Vacuum to 100 MPa | ± 0.025% Rdg | ± 0.06% FS | -20 to 50° C | IP67 | 1 or 2 | CPF Female | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | | ✓ | nVision |
| Vacuum to 70 MPa | ± 0.035% Rdg | ± 0.05% FS | -20 to 50° C | IP65 | 1 or 2 | CPF Female | | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | HPC50 Series |
| Vacuum to 70 MPa | ± 0.2% Rdg | ± 0.25% FS | -10 to 50° C | IP65 | 1 | CPF Female | | | | | | | | | | m1 |
| Vacuum to 30 MPa | ± 0.05% Rdg + 0.005% FS | ± 0.25% Rdg | 0 to 50° C | — | 1 or 2 | 1/8" NPT Female | | | | ✓ | | | | | ✓ | 30 Series |
| Vacuum to 20 MPa | ± 0.25% Rdg | ± 0.5% FS | -10 to 50° C | IP65 | 1 | CPF Female | | | | | | | | | | m1M |
| Vacuum to 700 kPa | ± 0.1% Rdg | ± 0.1% Rdg | -10 to 50° C | IP67 | 1 | 1/8" NPT Female | ✓ | ✓ | | | | | | | ✓ | XP2i-DP |
| Pressure Range | Specifications | | | | | | Functions | | | | | | | | | Model |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 100 kPa to 100 MPa | ± 0.015% Rdg | ± 0.025%, ± 0.1% | 15 000 psi | 10 psi | 5 psi | 1/4" and 1/2" NPT F | ✓ | ✓ | | ✓ | ✓ | | ✓ | | ✓ | Type T Series |
| 100 kPa to 22.5 MPa | ± 0.1% Rdg | ± 0.05% | 3000 psi | 10 psi | 0.1 psi | 1/4" NPT F | ✓ | | ✓ | | ✓ | | ✓ | | ✓ | HL Series |
| 50 kPa to 10 000 kPa | ± 0.025% Rdg | — | 1500 psi | 10 psi | 1 psi | 7/16-20 37° AN4 M | | | | | | ✓ | | ✓ | | HK Series |
| 1 kPa to 2011 kPa | ± 0.05% Rdg | ± 0.025%, ± 0.015% | 301 psi | 4 in$H_2O$ | 1 in$H_2O$ | 1/8" NPT F | | | ✓ | ✓ | | ✓ | | ✓ | ✓ | RK Series |
| 1 kPa to 200 kPa | ± 0.05% Rdg | ± 0.025%, ± 0.015% | 30 psi | 4 in$H_2O$ | 1 in$H_2O$ | 1/4" NPT F | | | ✓ | ✓ | | ✓ | | ✓ | ✓ | PKII Series |
| Pressure Range | Specifications (See the Data Sheets for complete specifications.) | | | | | | Functions | | | | | | | | | Model* |

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