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Calibration Experts

# ADT 762W
# Automated Hydraulic Pressure Calibrator


- **Automated pressure generation and control to 10,000 psi (700 bar)**
- **Accuracy to 0.01% FS**
- **Dual-range manual or auto select**
- **Designed for use with water**
- **Automated fluid management**
- **Control stability < 0.005% FS**
- **Portable, designed for use in the field and in the lab**
- **Control by optional external pressure modules**
- **Supports two external pressure modules**
- **Wi-Fi, LAN, Bluetooth, USB and Ethernet communication**
- **Full HART field communicator**
- **HART and PROFIBUS communication**
- **Data logging and task management**
- **Patented electric pump technology**


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# Overview

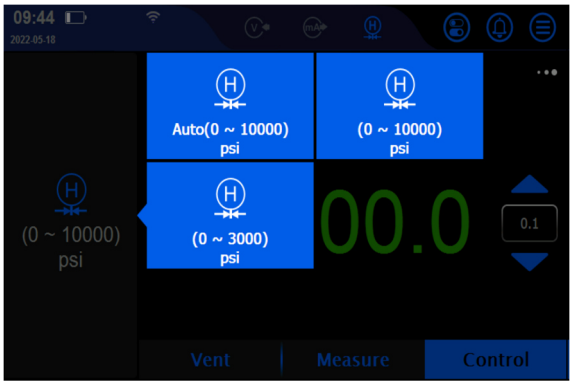
The Additel 762W Automated Pressure Calibrator provides a revolutionary turnkey solution for automated pressure calibration work up to 10,000 PSI using deionized water as the working media.

Designed for use in both the field and the laboratory, the portability and accuracy of this state-of-the-art product will quickly become the favourite go-to calibrator for lab personnel and field technicians alike.

With fully automated support for calibration of pressure transmitters, switches, dial and digital gauges and sensors, including HART/PROFIBUS devices in conjunction with a fully integrated task feature, data collection and Wi-Fi connectivity, we had our customer's needs in mind when designing our most capable pressure calibrator to date.

### Dual-Range Accuracy to 0.01% FS

The ADT762W includes the unique ability to automatically switch between different internal calibrations depending on the current control pressure of the ADT762W. Additel provides calibrations unique to each ADT762W for ranges of 0-3,000 PSI (200 Bar) and 0-10,000 PSI (700 Bar). As the calibrator is pressurized, it will automatically select the control and measurement specification based on the specific pressure range. Pressure calibration range selection can be set to "auto" mode so the calibration range is automatically selected by the ADT762W based on the set point pressure, or the calibration range can be manually selected.




### Built-in Auto-Purge Application

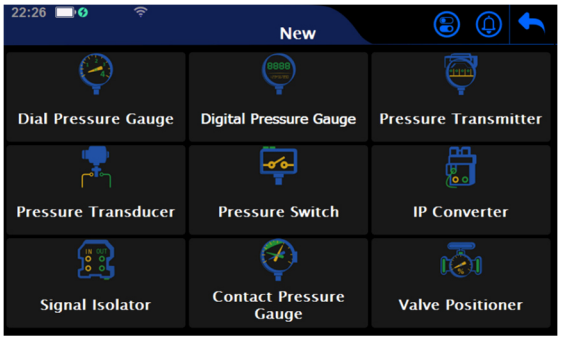
Purging hydraulic calibration systems can be challenging and time consuming. The ADT762W has been specifically designed for use with water. It comes standard with a specially designed manifold to help provide a constant positive pressure environment to mitigate concerns with contamination when using water as a medium. The integrated auto-purge system saves time, money and frustration by completely automating the removal of air from the system. With the push of a button, the ADT762W quickly manages the system purging. This helps to free up time for technicians to attend to other needs.

## Dual-Port Manifold with Automatic Fluid Extraction

When using hydraulic systems, we know that oils are a better lubricant and sustain the life of seals and components than water. But we recognize that for some applications, using oil is not an option. The ADT762W is designed to only be used with deionized water. The ADT762W has a built-in fluid management system to reduce standing water in the system which eases future maintenance requirements. The ADT762W should be used with the provided manifold which has a communication connection directly to the unit to actuate a vent valve built into the manifold. This configuration is designed to prevent contaminated fluid from returning to the base unit and manifold as it is deposited into a special waste tank on the bottom of the ADT107 manifold. This function helps ensure the longest life of the unit and reduced maintenance costs.

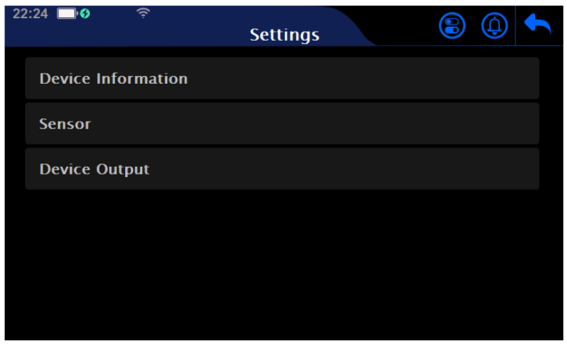
## Documented Task Feature

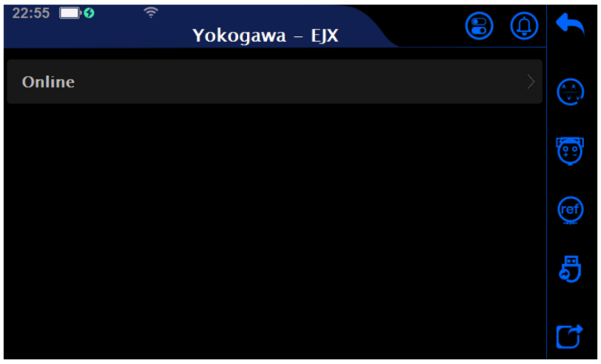
The powerful documented calibration task application allows users to quickly create and execute tasks without the need for a PC or tablet. The ADT762W automatically analyzes errors, generates test reports, while storing results locally. The Additel 762W can support up to 1000 documented tasks which can be stored and recalled at any time to help save time and money.

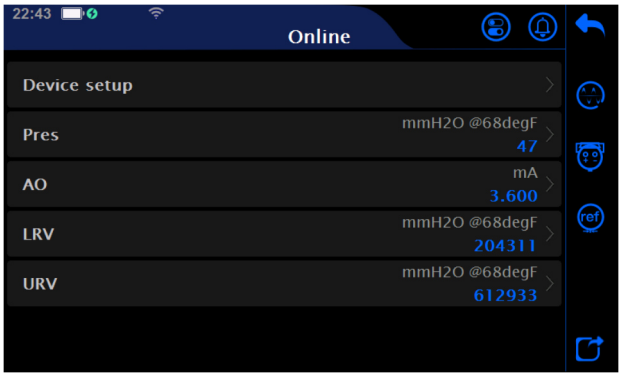



## Dual-Mode Hart Communication

HART pressure transmitters can be directly maintained and calibrated without any other equipment or tools. The ADT762W provides an automatic HART calibration mode as well as a manual mode. This dual-mode HART communication function not only provides an efficient and convenient interoperability mode for DUT, but also supports access to a fully HART capable calibrator.





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## Pressure Specifications

| Specification | ADT 762W Automated Hydraulic Pressure Calibrator | |
|---|---|---|
| **Pressure Range** | **1 - 700 bar** (15~10,000 psi) | |
| **Range Selection** | Manual 3K psi, Manual 10K psi or Auto-range | |
| **Accuracy** | 0 ~ 10,000 psi, 0.01%FS | 0 ~ 10,000 psi, 0.02%FS |
| | 0 ~ 3,000 psi, 0.01%FS | 0 ~ 3,000 psi, 0.02%FS |
| **Resolution** | 7 digits | 6 digits |
| **Measurement Units** | Pa, hPa, kPa, mPa, bar, mbar, psi, mmHg@0°C, cmHg@0°C, mHg@0°C, inHg@0°C, inH2O@4°C, mmH2O@4°C, cmH2O@4°C, mH2O@4°C, mmH2O@20°C, cmH2O@20°C, mH2O@20°C, inH2O@20°C, inH2O@68°F, kgf/cm2, mtorr, torr, lb/ft2, tsi, custom | |
| **Maximum External Load Capacity** | Max: 80 ml@700 bar, 50 ml recommend | |
| **Reservoir** | Max: 350 ml, built-in filter | |
| **Control Stability [1]** | 0.005%FS from 100 to 10,000 psi | |
| **Stability Duration** | ＞ 5 min | |
| **Pressure Module** | Built-in one module with dual range | |
| **External Control Pressure Module** | See the following "External Control Pressure Module Specification and Compatibility" table | |
| **External Measurement Pressure Module** | All ADT161 pressure modules | |

[1] Control Stability is based on the range selection or external module


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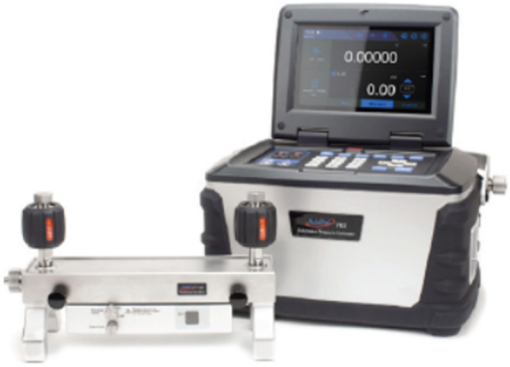
## Electrical Specifications

| Specification | Range | Resolution | Accuracy | Note |
|---|---|---|---|---|
| **mA Measure** | -25 to 25 mA | 0.1 µA | ± (0.008%RD + 1.0 µA) | Impedance <10 Ω |
| | -50 to 50 mA | 0,1 µA | ± (0.008%RD + 2.0 µA) | |
| **V Measure** | 1300 to 300 mV | 1 µV | ± (0.008%RD + 6 µV) | Impedance <1 GΩ |
| **V Measure (Auto-ranging** | -5 to 5 V | 20 µV | ± (0.008%RD + 100 µV)) | Impedance >1 MΩ |
| | -12 to 12 V | 100 µV | ± (0.008%RD + 320 µV) | |
| | -30 to 30 V | 100 µV | ± (0.008%RD + 600 µV) | |
| **Loop Power Source** | 24 V | N/A | ±1 V | 50 mA (Max Loading) |
| **mA Source** | 0 to 2.5 mA or 2.5 to 25 mA | 0-2.5 mA: 0.05µA 0-25 mA:0.5µA | 0-2.5 mA: 0.008%RD + 0.2 µA 0-25 mA: 0.008%RD + 1.0 µA | 20 mA @ 1kΩ |
| **Power Source** | 16 to 30 V | 1 V | ±1 V | 70 mA (Max Loading) |
| **V Source** | 0 to 16 V | 0.25 mV | 0.008%RD + 500 µV | |
| **Pressure Switch** | Mechanical Switch, Live Mechanical Switch, NPN Switch, PNP Switch | N/A | N/A | Response time<10 ms. If the switch is live, voltage range will be (3-30) V |
| **T Temperature Compensation** | 18 °C to 28°C | | | |
| **Temperature Coefficient** | Outside of 18 °C to 28 °C: <± 0.0005%RD + 0.00005%FS/°C | | | |
| **Fe Misuse Protection** | Up to 30 V on any two sockets | | | |
| **Pressure Switch Test** | • | | | |
| **HART/PROFIBUS PA** | • | | | |

●= supported



## General Specifications

| Specification | Description |
|---|---|
| **User Interface** | Color touch screen and/or keypad operation |
| **Display** | 7” TFT touch screen 800 x 480 color |
| **Enclosure IP Rating** | IP31 |
| **Power** | Dedicated lithium battery or power adapter |
| **Battery** | Rechargeable Li-Ion battery, typically 12 hours of operation, less than 5 hours recharge |
| **Weight** | 12.8 kg ( 28 lbs) without media |
| **Media** | Deionized water |
| **Size** | 300 x 220 x 192 mm(11.81 x 8.66 x 7.56 in) |
| **Communications** | USB, LAN, Bluetooth, Wi-Fi and Ethernet |
| **HART Communicator** | Read, configure and calibrate HART devices – DD files updated periodically |
| **Data Storage** | >8 GB |
| **Data Logging** | Up to 1,000,000 readings (data and time stamped) |
| **Task Documentation** | Up to 1000 tasks can be stored with data |
| **Automation Functions** | Switch test, auto step, leak test |
| **Multi Lingual Interface** | English, German, French, Italian, Spanish, Portuguese, Chinese, Japanese and Russian |
| **Pump Life** | > 1,000,000 cycles |
| **Environmental Specifications** | Operating temperature: 0°C to 50°C (32 °F to 122 °F) |
| | Storage temperature: -20°C to 60°C ( -4 °F to 120 °F) |
| | Humidity: <90%, non-condensing |
| **Certification** | ISO17025 accredited certificate of calibration with NIST-traceable data |
| **Compliance** | CE |
| **Software Compatibility** | ACal, Additel Land and Additel Link for access via mobile application |
| **Warranty** | 1 year |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## Ordering information

ADT762W — 01 — GP10K — N

**Accuracy:**
01 = 0.01% of full span
02 = 0.02% of full span

**Pressure port type:**
N - 1/4 NPT female
N2 - 1/2 NPT female
B - 1/4 BSP female
B2 - 1/2 BSP female
M - M20X1.5 female



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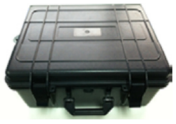
## Accessories (included)

| Model number | Quantity | Picture |
|---|---|---|
| **9022**<br>**Test Leads** | 2 sets<br>(4 pcs) |  |
| **USB Cable** | 1pc |  |
| **9725**<br>**Chargeable Li-ion battery** | 1 pc |  |
| **9818**<br>**110V/220V external Power adapter** | 1 pc |  |
| **Funnel** | 1 pc |  |
| **ADT100-762 Hose**<br>**High Pressure Hose** | 1 pc |  |
| **ADT100-762-SSTUBE**<br>**Stainless steel high pressure hose** | 1 pc |  |
| **ADT107-X-KIT**<br>**(dual ports manifold, and zero return**<br>**communication cable)** | 1 pc |  |
| **Small accessory case**<br>**(for cables and adaptors)** | 1 pc |  |
| **Transportation cap** | 1 pc |  |
| **9907-762**<br>**Carrying case** | 1 pc |  |
| **O rings for liquid storage tank**<br>**3.5*1.2-NBR70** | 5 pcs |  |
| **O rings for right angle connectors**<br>**5*1.5-NBR70** | 5 pcs |  |
| **9060**<br>**(Pressure module**<br>**connection cable)** | 1 pc |  |

## Optional Accessories

| Model Number | Description | Picture |
|---|---|---|
| **ADT 161** | Pressure modules<br>see pg. 6 |  |

## External Control Pressure Module Specification and Compatibility

| Model | Pressure Range | | Accuracy[1] | Pressure Type | Media |
|---|---|---|---|---|---|
| | (psi) | (bar) | | | |
| ADT161-01-GPXX<br>for 0.01%FS | 1,000 | 70 | 0.01% FS | Gauge | Gas, Liquid |
| | 1,500 | 100 | 0.01% FS | Gauge | Gas, Liquid |
| | 2,000 | 140 | 0.01% FS | Gauge | Gas, Liquid |
| | 3,000 | 200 | 0.01% FS | Gauge | Gas, Liquid |
| | 5,000 | 350 | 0.01% FS | Gauge | Gas, Liquid |
| | 10,000 | 700 | 0.01% FS | Gauge | Gas, Liquid |
| ADT161-02-GPXX<br>for 0.02%FS | 1,000 | 70 | 0.02% FS | Gauge | Gas, Liquid |
| | 1,500 | 100 | 0.02% FS | Gauge | Gas, Liquid |
| | 2,000 | 140 | 0.02% FS | Gauge | Gas, Liquid |
| | 3,000 | 200 | 0.02% FS | Gauge | Gas, Liquid |
| | 5,000 | 350 | 0.02% FS | Gauge | Gas, Liquid |
| | 10,000 | 700 | 0.02% FS | Gauge | Gas, Liquid |

# Your Notes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