

# Pressure measuring instruments

For gas and water installers

testo 312-2

testo 312-3

testo 312-4



# Pressure meters for gas and water fitters

## testo 312-2

testo 312-2, fine pressure measuring instrument up to 40/200 hPa, DVGW approval, incl. alarm display, battery and calibration protocol

Part no. 0632 0313



Use the testo 312-2 fine pressure measuring instrument to check flue gas draught, differential pressure in the combustion chamber compared with ambient pressure or gas flow pressure with high resolution. Fine pressures with a resolution of 0.01 hPa can be measured in the range from 0 to 40 hPa.

DVGW approval according to TRGI for pressure settings and pressure tests on a gas boiler.

- Switchable precision range with a high resolution
- Alarm display when user-defined limit values are exceeded
- Clear display with time

## testo 312-3

testo 312-3 versatile pressure meter up to 300/600 hPa, DVGW approval, incl. alarm display, battery and calibration protocol

Part no. 0632 0314



The versatile pressure measuring instrument testo 312-3 supports load and gas-tightness tests on gas and water pipelines up to 6000 hPa (6 bar) quickly and reliably. Via the adjustable alarm, the instrument immediately issues a warning when limit values are exceeded, and the measurement results can be documented directly using the Testo printers.

- Load and gas-tightness test on gas pipes
- Pressure test on water pipes with air
- Switchable measuring range, optimum resolution
- Alarm display when user-defined limit values are exceeded
- Clear display with time

# Technical data testo 312-2 / testo 312-3

## Sensor types

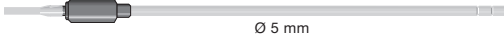
	testo 312-2		testo 312-3	
Measuring range	-40 to +40 hPa	-200 to +200 hPa	-300 to +300 hPa	-6.000 to +6.000 hPa
Accuracy $\pm 1$ digit	$\pm 0.03$ hPa (0 to +3 hPa) $\pm 1.5\%$ of m.v. (+3 to +40 hPa) $\pm 0.5$ hPa (0 ... +50 hPa) $\pm 1.5\%$ of m.v. (>50 hPa)	$\pm 0.5$ hPa (0 to +50 hPa) $\pm 1.5\%$ of m.v. (>50 hPa)	$\pm 0.5$ hPa (0 to +50 hPa) $\pm 1.5\%$ of m.v. ( $\geq 50$ hPa)	$\pm 4$ hPa (0 to +400 hPa) $\pm 2\%$ of m.v. (+400 to +2.000 hPa) $\pm 4\%$ of m.v. (+2.000 to +6.000 hPa)
Resolution	0.01 hPa	0.1 hPa	0.1 hPa	1 hPa
Overload	$\pm 1.000$ hPa		$\pm 8.000$ hPa	

## Common data

Storage temperature	-20 to +60 °C
Operating temperature	+5 to +45 °C
Battery type	9V block battery
Weight	300 g
Dimensions	215 x 68 x 47 mm
Housing material	ABS
Display	LCD, 2 lines

Other features	Measurement range can be switched from $\pm 40$ hPa to $\pm 200$ hPa Adjustment step: 0.01 hPa or 5 hPa
Alarm threshold	-0.04 hPa and 100 hPa
Alarm display:	audible and visible if limit values are reached

## Accessories testo 312-2 / testo 312-3

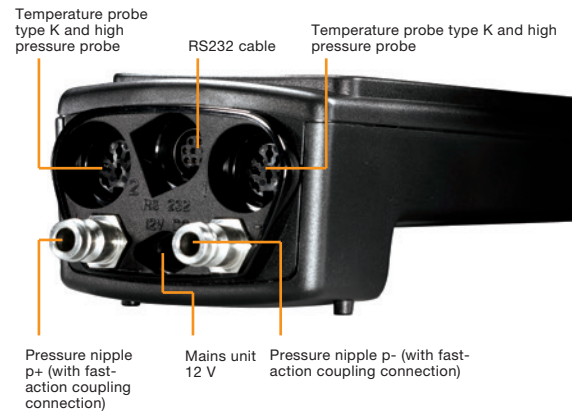
Probes		Part no.
Pressure set with flue draught probe, consisting of: 2 x silicone hoses Ø 4 mm and Ø 6 mm respectively, 4 mm and 6 mm T-piece, connection piece		0554 3150
<b>Printer and accessories</b>		
Testo fast printer IrDA with wireless infrared interface; 1 roll thermal paper; 4 AA batteries		0554 0549
External fast charger for 1-4 AA rech. batteries, incl. 4 Ni-MH rech. batteries with individual cell charging and charge control display, incl. impulse trickle charging, integrated discharge function, with built-in international mains plug, 100-240 V, 300 mA, 50/60 Hz		0554 0610
Spare thermal paper for printer, permanent ink, permanent ink		0554 0568
<b>Additional accessories and spare parts</b>		
9V rech. battery for instrument		0515 0025
Recharger for 9V rechargeable battery, for external recharging of 0515 0025 battery		0554 0025
Pressure drop test set 200mbar, incl. manual bulb pump, hoses, T-fitting w/ valve, conical test stopper 1/2		0554 3153
Test pump for creating test pressure		0554 3157
Single-pipe counter cap, connects test fittings to pipe		0554 3156
Conical test stop 1/2" (19 - 32mm)		0554 3151
Conical test stop 3/4" (24 - 44 mm)		0554 3155
High-pressure stage stop 3/8 and 3/4; to connect test set to gas pipe		0554 3163
High-pressure stage stop 1/2 and 1; to connect test set to gas pipe		0554 3164
<b>Transport and Protection</b>		
testo 312 / testo 315 TopSafe; protection case with bench stand; protects instrument from dirt and impact , protects instrument from dirt and impact		0516 0443
Case, for secure storage of measuring instrument		0516 0191
<b>Calibration certificates</b>		
ISO calibration certificate pressure, differential pressure; 5 points distributed over meas. range		0520 0005
DAkkS calibration certificate/pressure, diff. and pos. pressure; 6 meas. points distributed over meas. range (>0.6% of fsv)		0520 0225

## Recommended set testo 312-2

### **The complete maintenance set with documentation**

- Pressure measuring instrument up to 40/200 hPa (Part no. 0632 0313)
- testo 312 / testo 315 TopSafe; protection case with bench stand; protects instrument from dirt and impact (Part no. 0516 0443)
- Pressure set with flue draught probe (Part no. 0554 3150)
- Pressure set (Part no. 0632 0316)
- testo 316-1 TopSafe; protection case, incl. stand, protects from dirt and impact (Part no. 0516 0189)
- Testo fast printer (Part no. 0554 0549)
- Case (Part no. 0516 0191)

# Fulfilling all measurement tasks on gas heating systems and on gas and water pipes.



With the electronic differential pressure gauge testo 312-4, fine pressure measurements can be carried out quickly and reliably when checking the resting pressure and flow pressure of gas, and when setting the correct jet pressure on gas burners and boilers.

Tests on newly installed gas pipes (load and gas-tightness tests), or on pipes already in use (serviceability tests) can also be carried out quickly and in accordance with the law. Time and money can be saved in customer service when checking the gas pressure regulator, thanks to the automatic measurement value recording over several hours by testo 312-4 (max. 25,000 measurement values). The simultaneous recording of pressure and temperature allows the detection of unusual pressure fluctuations which are graphically analyzed by the Easyheat PC software, and can thus be easily explained to the customer.

Load tests and leakproofness tests on drinking water and waste water pipes can be carried out without complications using the handy high-pressure probe. The external probe provides protection for the instrument from water and high pressures.

- Gas-tightness and serviceability test by pressure drop on gas pipes according to DVGW-TRGI 2008
- Load test on gas pipes according to DVGW-TRGI 2008 with the help of the high pressure probe
- Checking the regulator by recording the measurement values over a defined period
- Checking the gas connection pressure and gas flow pressure as well as setting the jet pressure on gas burners and boilers
- Pressure tests on drinking water pipes with water using the high-pressure probe according to DIN 1988 (TRWI) as well as with air according to the ZVSHK information sheet
- Pressure test on waste water pipes according to DIN EN 1610 using the high pressure probe

# Technical data testo 312-4

**Sensor types**

	Pressure (internal sensor in the testo 312-4)	Pressure (via high-pressure probe)	Temperature (via external temperature probe Type K)
Measuring range	0 to 200 hPa	0 to 25 bar	dependent on probe type used
Accuracy ±1 digit	±0.03 hPa (0 to +3 hPa) ±1.5% of m.v. (+3.1 to +40 hPa) ±2 hPa or ±1% of fsv (+41 to +200 hPa)	±0.6% of fsv (0 to 10 bar) ±0.6% of fsv (>10 to 25 bar)	±0.4 °C (-100 to +200 °C) ±1 °C (remaining range)
Resolution	0.01 hPa	10 hPa	0.01 °C

**General technical data**

PC software	Easyheat
Interface for printer	infrared
Interface for PC	RS 232
Measurement data store	Approx. 25.000 readings

Weight	Approx. 600 g
Dimensions	219 x 68 x 50 mm
Measurement rate	auto 1 s to 24 h fast 0.04 s

## Set testo 312-4

**Basic set testo 312-4**

testo 312-4 differential pressure gauge  
testo 312-4 hose set  
balloon pump with release screw  
conical test plug 1/2  
conical test plug 3/4  
testo fast printer  
pressure set for gas pressure measurements in heating systems  
system case

Part no. 0563 1327



Illustration may differ from original

**High-pressure set testo 312-4**

testo 312-4 differential pressure gauge  
testo 312-4 hose set  
balloon pump with release screw  
conical test plug 1/2  
conical test plug 3/4  
testo fast printer  
pressure set for gas pressure measurements on heating systems  
high-pressure plug 3/8 und 3/4  
high-pressure plug 1/2 and 1  
high-pressure probe 1 up to 25 bar  
system case

Part no. 0563 1328



Illustration may differ from original

## Accessories testo 312-4

Accessories for measuring instrument testo 312-4	Part no.	
Pressure set for gas pressure measurement on heating systems	0554 0449	
testo 312-4 hose set	0554 3172	
9V rech. battery for instrument	0515 0025	
Desk-top power supply with international connection options	0554 1143	
TopSafe (protection case)	0516 0446	
easyheat PC analysis software, shows measurement in form of diagrams, tables and manages customer data.	0554 3332	
RS232 cable	0409 0178	
Testo fast printer IrDA with wireless infrared interface; 1 roll thermal paper; 4 AA batteries	0554 0549	
Spare thermal paper for printer, permanent ink	0554 0568	
Instrument case (height: 130 mm) for instrument, probes and accessories	0516 3300	
testo 316-1 electronic gas leak detector with flexible probe and battery	0632 0316	
testo 316-1 TopSafe; protection case, incl. stand, protects from dirt and impact	0516 0189	
testo 316-2 testo 316-2 electronic gas leak detector with flexible measurement probe, mains charger and earphones	0632 3162	
testo 316-Ex testo 316-EX, electronic gas leak detector with EX-protection, incl. batteries, cases, Allen key and calibration protocol	0632 0336	
Balloon pump with release valve	0554 3173	
Conical test stop 1/2" (19 - 32mm)	0554 3151	
Conical test stop 3/4" (24 - 44 mm)	0554 3155	
Single-pipe counter cap, connects test fittings to pipe	0554 3156	
Test pump for creating test pressure	0554 3157	
High-pressure probe up to 25 bar	0638 1748	
High-pressure stage stop 3/8 and 3/4; to connect test set to gas pipe	0554 3163	
High-pressure stage stop 1/2 and 1; to connect test set to gas pipe	0554 3164	
Very fast reaction surface probe	0604 0194	
Connection cable, length 1.5 m, for probes with plug-in heads	0430 0143	