



OVERVIEW

With advanced microprocessor technology and state-of-the-art silicon pressure sensors, the PPC 273 series precision pressure calibrators provide a pressure calibration solution for gauges, transmitters, and switches in a wide pressure range. In a highly portable package, it can not only measure pressure precisely with a built-in pressure sensor, but can also read the current or mV produced by the transducer, and can even supply an excitation voltage to power sensors or transmitters during calibration. To reach 0.025% F. S. accuracy over ranges to 10,000 psi (700 bar) and 0.1% F. S. accuracy over range to 36,000 psi (2,500 bar), every silicon pressure sensor in gauges has been specially aged, tested and screened before assembly. PPC 273 series precision pressure calibrators are unmatched in performance and reliability.

FEATURES

- Pressure measurement uncertainty:
PPC 273-02: 0.025%FS
PPC 273-05: 0.05%FS
- Pressure ranges to 36,000 psi (2500 bar)
- Measure mA or V with 0.02% RD + 0.003%FS accuracy
- Power transmitters during test using 24V loop supply
- Pressure switch test
- Hart Communication capability
- Advanced temperature compensation
- Dual readout
- Min/Max/Hold to capture changing measurements
- Data logging
- Large, easy to read display with 6-digit resolution
- Back lighted display
- Rechargeable battery or AC adapter
- NIM traceable calibration certificate (optional)

APPLICATIONS

- Gauge calibration
- Precision pressure measurement
- Pressure transmitters calibration
- Pressure switch testing
- Safety relief valve testing
- Pressure regulator testing
- Hydraulic leak testing

SPECIFICATIONS

› Accuracy

PPC 273-02: 0.025% of full scale

PPC 273-05: 0.05% of full scale

› Gauge types

Gauge pressure

Compound Pressure

Absolute pressure

Differential pressure

Gauge Pressure ⁽¹⁾					
P/N	Pressure Range (psi)	Pressure Range (bar)	Media ⁽²⁾	Accuracy (% FS)	Burst Pressure
V15	-15	-1.0	G	0.025 (0.05)	3 X
GP2	2	0.16	G	0.05	3 X
GP5	5	0.35	G	0.025 (0.05)	3 X
GP10	10	0.7	G	0.025 (0.05)	3 X
GP15	15	1.0	G , L ⁽³⁾	0.025 (0.05)	3 X
GP30	30	2.0	G , L ⁽³⁾	0.025 (0.05)	3 X
GP50	50	3.5	G , L	0.025 (0.05)	3 X
GP100	100	7.0	G , L	0.025 (0.05)	3 X
GP300	300	20	G , L	0.025 (0.05)	3 X
GP500	500	35	G , L	0.025 (0.05)	3 X
GP1K	1000	70	G , L	0.025 (0.05)	3 X
GP3K	3000	200	G , L	0.025 (0.05)	3 X
GP5K	5000	350	G , L	0.025 (0.05)	3 X
GP10K	10000	700	G , L	0.025 (0.05)	2 X
GP15K	15000	1000	G , L	0.1	2 X
GP25K	25000	1600	G , L	0.1	1.5 X
GP30K	30000	2000	G , L	0.1	1.5 X
GP36K	36000	2500	G , L	0.1	1.5 X

Note:

[1]. Sealed gauge pressure for above 1000 psi

[2]. G=Gas, L=Liquid

[3]. 0.025% FS for gas media only



PPC 273 Series Digital Pressure Calibrators

Absolute Pressure					
P/N	Pressure Range (psi)	Pressure Range (bar)	Media	Accuracy (% FS)	Burst Pressure
AP5	5	0.35	G	0.1 (0.2)	3 X
AP10	10	0.7	G	0.1 (0.2)	3 X
AP15	15	1.0	G	0.1 (0.2)	3 X
AP30	30	2.0	G	0.1 (0.2)	3 X
AP50	50	3.5	G	0.1 (0.2)	3 X
AP100	100	7.0	G, L	0.1 (0.2)	3 X
AP300	300	20	G, L	0.1 (0.2)	3 X
AP500	500	35	G, L	0.1 (0.2)	3 X
AP1K	1000	70	G, L	0.1 (0.2)	3 X
AP3K	3000	200	G, L	0.1 (0.2)	3 X
AP5K	5000	350	G, L	0.1 (0.2)	3 X

Differential Pressure					
P/N	Pressure Range (inH ₂ O)	Pressure Range (mbar)	Media	Accuracy (% FS)	Burst Pressure
DP1	1	2.5	G	0.4	100 X
DP2	2	6.0	G	0.2	100 X
DP5	5	10	G	0.1	50 X
DP10	10	25	G	0.1	20 X
DP20	20	50	G	0.05	20 X
DP30	30	100	G	0.05	20 X

Compound Pressure					
P/N	Pressure Range (psi)	Pressure Range (bar)	Media	Accuracy (%FS)	Burst Pressure
CP2	±2	±0.16	G	0.05	3X
CP5	±5	±0.35	G	0.025 (0.05)	3X
CP10	±10	±0.7	G	0.025(0.05)	3X
CP15	±15	±1	G	0.025(0.05)	3X
CP30	-15 to 30	-1 to 2	G	0.025(0.05)	3X

Electrical Measurement and Source Accuracy		
	Range	Accuracy
Voltage DC	±30.0000V	± (0.02%RD+0.003%FS)
Current DC	±30.0000mA	± (0.02%RD+0.003%FS)
DC 24V	24V±0.5V max:50mA Protect at: 120mA	
Switch ^{III}	Status OPEN/CLOSED	

Note: [1] 1~12V if switch has detective voltage

Display

Description: Dual-line 6 full digit FSTN LCD with LED Backlight
 Display rate: 3.5 readings per second (Default setting)
 Numeral display height: 16.5mm (0.65")

Pressure Units

Pa, kPa, MPa, psi, bar, mbar, inH₂O, mmH₂O, inHg, mmHg

Environmental

Compensated Temperature:

14° F to 122° F (-10° C to 50° C)

Operating Temperature*:

14° F to 122° F (-10° C to 50° C)

*0.025%FS accuracy guaranteed only over the ambient temperature range of 68° F to 79° F (20° C to 26° C)

Storage Temperature: -4° F to 158° F (-20° C to 70° C)

Humidity: <95%

Media Compatibility

(0 - 30) psi: Clean dry non-corrosive gases

(50 - 36,000) psi: media compatible with 316L SS

Pressure Port

¼" NPT or BSP (≤15,000psi)

Autoclave F-250-C, 9/16" - 18 UNF female or Autoclave M-250-C, 9/16"-18 UNF male(>15,000psi)

0.156 inch (4mm) test hose (for differential pressure)

Other connections available per request

Electrical Connection

0.156 inch (4mm) sockets

Over Pressure Warning: 120%

Data Logger

Storage capacity: 30 files, 40 records per file

Mode: manual and automatic

Hourly-record: record the data every hour(Interval-record: set by user)

Power

Battery: Recharge Li-ion polymer battery

Li-Battery working time: 40 hours

Rechargeable time: 4 hours

External power: 110V/220V power adapter(DC 10V)

Enclosure

Case material: Aluminum alloy

Wetted parts: 316L SS

Dimension: 120mm diameter X 46mm depth X 184mm height

Weight: 0.7kg

Communication

RS232 (DB9/F, environmentally sealed)

Accessories (included)

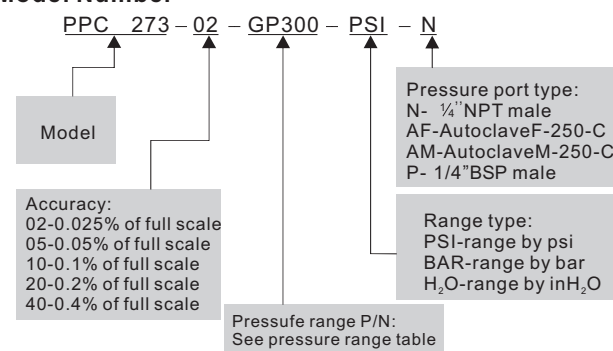
110V/220V external power adapter (DC 10V)

2 pieces 1.5-meter test leads

2 pieces 0.156 inch (4 mm) test hose (for differential pressure gauge only)

ORDERING INFORMATION

Model Number



Optional Accessories

Model Number	Description
9702	Spare rechargeable Li-ion polymer battery for 273
9814	Spare 110V/220V external power adapter (DC 10V) for PPC273 digital pressure calibrator
9902	Carrying case for digital pressure gauge (up to 4 pieces PPC273)
9021	Spare 2 pieces test leads (1.5-meter) for PPC273
9050	USB to RS232 (DB9/M) Adapter
9111	NIM traceable calibration certificate for PPC273 series gauges (≤10,000psi)
9112	NIM traceable calibration certificate for PPC273 series gauges (>10,000psi)
9500	Log software for downloading PPC273 test results stored in memory
9502	Log II real time logging and graphical software for PPC211 and PPC273

PGS series

Handheld Pressure test pump



PGS-700/PGS-1000



PGS-40



PGS-7

The Eigroup PGS pump series are a remarkable new range of hand pumps for generating vacuum, gas and hydraulic pressure from a few mbar up to 1000 bar. The pumps are the ideal tool for applying test pressures to sensors, gauges, pressure switches and any pressure device. They are a low cost solution for field and workshop use and can be supplied with the wide range of Eigroup digital pressure indicators or for OEM applications.

- calibrate pressure device
- 4 separate models
- range from Vacuum to 1000 bar
- extended kit solutions to suits different needs

The pneumatic pumps allow pressures in excess of 600 psi to be generated with just a few strokes of the pump. By changing the push-in switching valve to vacuum, the pump will generate vacuum down to nearly 96%.

The PGS 700 and PGS 1000 hydraulic test pumps work with a variety of different fluids, including water and oil to easily generate pressures up to 1000 bar (14500 psi). The pump uses a unique "switch" which allows for fast priming or filling of the test system and then switching as needed to a smaller stroke for easier generation at high pressure.

The desired pressure point can be easy tuned by using the vernier control and a precision needle vent valve allows for controlled venting.

All 4 pumps can be supplied as a bare pump or in kit form with a hard transit case, set of adaptors, seals and hose.

SELECTION GUIDE

Features	PGS-7	PGS-40	PGS-700	PGS-1000
Pneumatic pressure capability	•	•		
Vacuum capability	•	•		
Hydraulic capability			•	•
Integral fine control for accurate set point	•	•	•	•
adjustable stroke for over pressure safety		•		
Controlled pressure relief valve	•	•	•	•
Priming operation			•	•
Fluid compatible (not distilled water)			•	•
Scissor action pump		•	•	•

TECHNICAL SPECIFICATION

Parameter	PGS-7-OEM	PGS-40-OEM	PGS-700-OEM	PGS-1000-OEM
Operating pressure range	-850 mbar to 7 bar	-960 mbar to 40 bar	0 to 700 bar	0 to 1000 bar
Pressure media	air	air	liquid	liquid
Fine adjustment resolution	1 mbar	1 mbar	10 to 100 mbar	10 to 100 mbar
Ref port pressure connection	1/8" NPT (F)	3/8" BSP (F)	3/8" BSP (F)	3/8" BSP (F)
Ref port standard adaptor	1/4 BSP (F)	1/2 BSP (F)	3/8" BSP (F)	1/2" BSP (F)
Test point pressure connection	1/4 BSP (F)	1/4 BSP (F)	1/4 BSP (F)	1/4 BSP (F)
Hose extension	2 x 1 meter	1 x 1 meter	option	option
Weight	250 g	510 g	1.6 Kg	1.6 Kg

Specification are based on minimum volume

G10 series

Reference pressure gauge

A range of analogue reference gauges for the PGS pump series. All gauges are dual scale reading bar/psi and fit on the top of the PGS40/700/1000 pump by using the supplied swivel adaptor, hand tight no adaptor or spanner required.



TECHNICAL SPECIFICATION

Over pressure: 30% FS

Connection: 1/2" BSP (M)

Fine graduation

Knife pointer

G10-0060 through G10-1000 -Wetted part: AISI 316 and AISI 316L,

-Case: AISI 304, glass tempered

G10-0000 through G10-0040 -Wetted part: brass, chrome plated

-Case: AISI 304, glass normal

PRESSURE RANGES

Model	Range	Accuracy	Diameter
G10-0000	-1 to 0 bar/-30 to 0 inHG	1% FS	63 mm
G10-0002	0 to 2 bar/0 to 30 psi	1% FS	63 mm
G10-0011	0 to 11 bar/0 to 160 psi	1% FS	63 mm
G10-0025	0 to 25 bar/0 to 365 psi	1% FS	63 mm
G10-0040	0 to 40 bar/0 to 600 psi	1% FS	63 mm
G10-0060	0 to 60 bar/0 to 800 psi	0.6% FS	100 mm
G10-0100	0 to 100 bar/0 to 1400 psi	0.6% FS	100 mm
G10-0160	0 to 160 bar/0 to 2000 psi	0.6% FS	100 mm
G10-0250	0 to 250 bar/0 to 3000 psi	0.6% FS	100 mm
G10-0400	0 to 400 bar/0 to 5000 psi	0.6% FS	100 mm
G10-0600	0 to 600 bar/0 to 8000 psi	1% FS	100 mm
G10-1000	0 to 1000 bar/0 to 15000 psi	1% FS	100 mm



PGS-7 Low Pressure Test Kits

Combined vacuum/pneumatic kit for low pressure testing includes:

- PGS-7-OEM pump
- Set of BSP or NPT adaptors (to be specified)
- Set of seals
- T pressure connection and 2 x 1 meter hose with 1/4 BSP F end
- Robust ABS transit case with customised foam and cells



SPECIFICATION

Model	Description
PGS-7-P-BSP	Low pressure test kit, BSP adaptor 1/4" BSP male to 1/8", 3/8" (F) and 1/2" BSP (M)
PGS-7-P-NPT	Low pressure test kit, NPT adaptor 1/4" BSP male to 1/8", 3/8", 1/2" and 1/4" NPT (F)

PGS-40 Pneumatic Test Kits

Combined vacuum/pneumatic kit for pressure testing includes:

- PGS-40-OEM pump
- Set of BSP or NPT adaptors (to be specified)
- Set of seals
- Pressure hose with 1/4" BSP F adaptor (1 meter)
- Robust ABS transit case with customised foam and cells



SPECIFICATION

Model	Description
PGS-40-P-BSP	Pressure test kit, BSP adaptor 1/4" BSP male to 1/8", 3/8" (F) and 1/2" BSP (M)
PGS-40-P-NPT	Pressure test kit, NPT adaptor 1/4" BSP male to 1/8", 3/8", 1/2" and 1/4" NPT (F)

PGS-700/1000 Hydraulic Test Kit

Hydraulic test kit for high pressure testing includes:

- PGS-700-OEM or PGS-1000-OEM pump
- Set of BSP or NPT adaptors
- HTH-1000-1 high pressure hose, 1 meter
- PGS700-A-G14 adaptor for HTH-1000 hose
- Set of seals
- PGS700-TC Robust ABS transit case with customised foam and cells



SPECIFICATION

Model	Description
PGS-700-H-BSP	Pressure test kit, BSP adaptor 1/4" BSP male to 1/8", 3/8" (F) and 1/2" BSP (M)
PGS-700-H-NPT	Pressure test kit, NPT adaptor 1/4" BSP male to 1/8", 3/8", 1/2" and 1/4" NPT (F)
PGS-1000-H-BSP	Pressure test kit, BSP adaptor 1/4" BSP male to 1/8", 3/8" (F) and 1/2" BSP (M)
PGS-1000-H-NPT	Pressure test kit, BSP adaptor 1/4" BSP male to 1/8", 3/8", 1/2" and 1/4" NPT (F)

Ordering Informations

Pump Model

- PGS-7-OEM:** Low pressure pump, -850 mbar to 7 bar
PGS-40-OEM: Medium pressure pump, -960 mbar to 40 bar
PGS-700-OEM: High pressure pump, 0 to 700 bar
PGS-1000-OEM: High pressure pump, 0 to 1000 bar

Pump Kits

- PGS-7-P-BSP:** Low pressure pump kit, BSP adaptors
PGS-7-P-NPT: Low pressure pump kit, NPT adaptors
PGS-40-P-BSP: Medium pressure pump kit, BSP adaptors
PGS-40-P-NPT: Medium pressure pump kit, NPT adaptors
PGS-700-H-BSP: Hydraulic test kit, BSP adaptors
PGS-700-H-NPT: Hydraulic test kit, NPT adaptors
PGS-1000-H-BSP: Hydraulic test Kit, BSP adaptors
PGS-1000-H-NPT: Hydraulic test kit, NPT adaptors

Pressure Gauges

See table for part number

Adaptors

- PGS-BSP adaptor set:** 1/4" BSP (M) to 1/8", 3/8" (F) and 1/2" BSP (M)
PGS-NPT adaptor set: 1/4" BSP (M) to 1/8", 3/8", 1/2" and 1/4" NPT (F)
PGS-A-N14I-G38A: 3/8" BSP (M) to 1/4" NPT (F) adaptor for ref port
PGS-A-G14I-G38A: 3/8" BSP (M) to 1/4" BSP (F) swivel connector for Ref port

Carrying cases

- PGS7-TC:** Robust transit case with customised cells and foam
PGS40-TC: Robust transit case with customised cells and foam
PGS700-TC: Robust transit case with customised cells and foam

High Pressure hose (PGS 700/PGS 1000 only)

- HTH-1000-1:** High pressure hose 1 meter, 1500 bar, 1/4" BSP (F)
HTH-1000-2: High pressure hose 2 meters, 1500 bar, 1/4" BSP (F)
HTH-1000-3: High pressure hose 3 meters, 1500 bar, 1/4" BSP (F)