

Sales Guide

2700G Reference Pressure Gauge

(v. 1.0)



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1. Objective

Get a quick introduction to the key product features, learn about the target industries and customers, see how the 2700G compares with the competition, and learn where to find available marketing materials.

2. Introduction

The Fluke Calibration 2700G, Reference Pressure Gauge is the most accurate digital pressure test gauge on the market today. It is available in 9 different pressure ranges from 100 kPa (15 psi) up to 70 MPa (10 000 psi). The combination of the 2700G with the P5500 series of pressure comparators provides an economical means to perform accurate, high quality pressure calibrations.

The 2700G provides 0.02% FS measurement uncertainty through improved electronics and silicon based sensors that are strictly evaluated to insure the highest performance.

2.1. Key Features at-a-glance

- Accuracy: 0.02% FS (positive pressures)
- Available in 9 different pressure ranges
 - 100 kPa (15 psi)
 - 200 kPa (30 psi)
 - 700 kPa (100 psi)
 - 2 MPa (300 psi)
 - 3.5 MPa (500 psi)
 - 7 MPa (1000 psi)
 - 20 MPa (3000 psi)
 - 35 MPa (5000 psi)
 - 70 MPa (10 000 psi)
- Combine with P5500 series for complete bench top pressure calibration solution
- USB communications cable and universal power supply included standard
- ¼ NPT Male test port. ¼ BSP and M20 X 1.5 adaptors included standard
- ISO 17025 accredited calibrations available





2.2. Product Positioning

The 2700G is positioned as an economical means of performing highly accurate pressure calibrations. Digital test gauges are used for a variety of applications in a variety of industries including oil and gas, pharmaceutical, process plants, energy generation, and aerospace.

The 2700G is the most accurate round gauge on the market (in China, there are locally manufactured gauges with equivalent specifications). It bridges the gap between industrial measurement devices and calibration laboratory standards.

2.3. Summary of Value Proposition

- The 2700G is ideal for general purpose pressure calibrations in laboratory or instrument shop
- With the internal, alkaline batteries and coupled with the 700HTPK pump kits it can also be used to perform calibrations in the field
- The combination of 2700G and P5500 comparator provides a complete calibration solution that is more economical than a deadweight tester or pressure controller.
- The 2700G is capable of calibrating even the most accurate dial gauge as well as pressure transmitters, transducers, and other pressure measurement devices. With the max pressure feature, it can also be used to test pressure relief valves.

3. Target Customers and Applications

The target application for the 2700G is general pressure calibrations performed in a laboratory or instrument shop type environment. This type of calibration is performed in almost every industry we serve including oil and gas, pharmaceutical, process plants, energy generation, and aerospace. 3rd party calibration laboratories (or regional government laboratories in certain countries) are ideal customers for the 2700G due to the wide variety of devices it can calibrate. Examples of applications for the 2700G include:

- General Purpose Pressure Calibration
- Check Standard for higher end pressure calibrations
- High Accuracy pressure measurement Data Logging

3.1. Common Job Titles

- **Process manufacturers:** Quality Assurance Manager, Quality Control Inspector, Process Engineer, Validation Engineer, Compliance Manager
- **3rd party cal labs:** Metrologist, Lab Manager, Calibration Technician
- **Research & Development:** Design Engineer, Engineering Technician, Project Manager
- **Manufacturing:** Manufacturing Engineer, Asset Manager, Test Engineer, Production Manager

3.2. Workload

- Dial Gauges
- Pressure Transmitters
- Pressure Transducers
- Relief Valves

4. Key features

4.1. Measurement Units

Select from 21 different standard engineering units or 1 custom engineering unit






- | | | |
|---------------|------------------------------|------------------------------|
| • psi | • inHg @ 0 °C | • cmH ₂ O @ 4 °C |
| • Torr | • feet seawater | • mH ₂ O @ 20 °C |
| • MPa | • ftH ₂ O @ 60 °F | • mH ₂ O @ 4 °C |
| • kPa | • ftH ₂ O @ 20 °C | • inH ₂ O @ 60 °F |
| • mbar | • ftH ₂ O @ 4 °C | • inH ₂ O @ 20 °C |
| • bar | • meters seawater | • inH ₂ O @ 4 °C |
| • mmHg @ 0 °C | • cmH ₂ O @ 20 °C | • kgf/cm ² |

4.2. Menu Functions

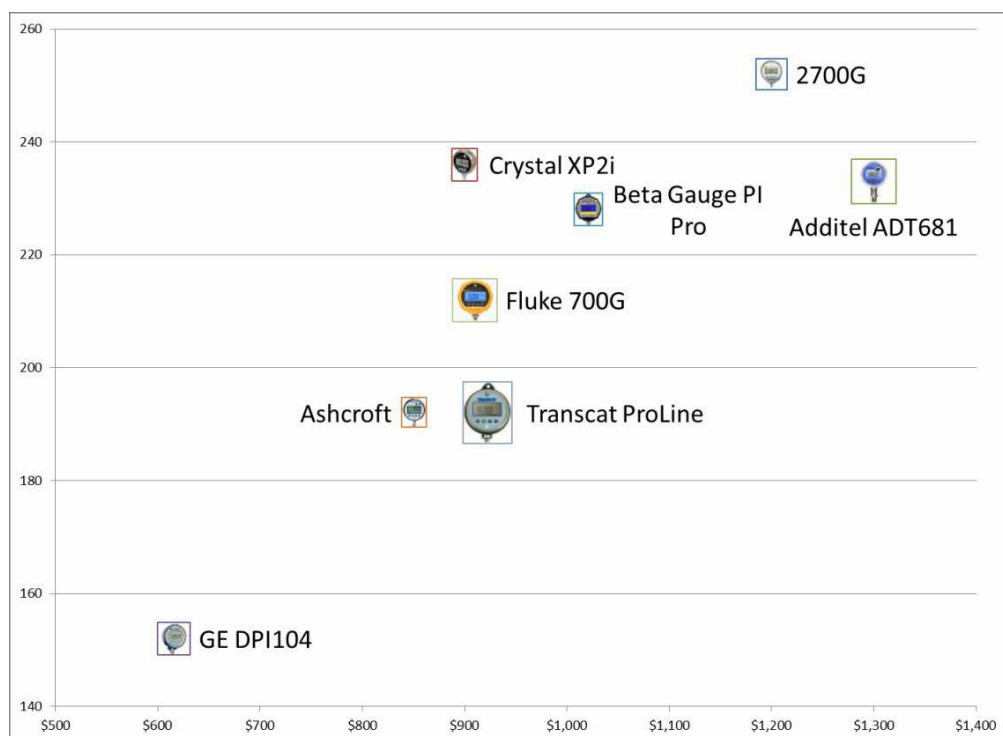
- Zero Function – Zeroes the pressure reading
- Configurable auto-off time interval (can also be disabled)
- Damping – Smooth readings from pulsating pressure sources
- Sample Rate – Select number of samples that are taken per second (maximum rate is 10 per second)
- Tare – Set a constant offset value that is then subtracted from the measured pressure
- Function Lock – Allows the settings of all parameters to be locked unless a password is entered
- Bar graph to visually show pressure applied
- Display with Back light

5. Competitive comparison

5.1. Key specs/feature comparison

	Competitive Comparison					
		Accuracy	Calibrated Temperature Range	Operating Temperature Range	Communication	Intrinsically Safe
2700G		0.02% FS	18 to 28 °C	0 to 50 °C	USB - Cable Included	no
700G		0.05% FS	0 to 50 °C	0 to 50 °C	RS-232 - Cable Extra	yes
Crystal XP2i		0.1% Rdg	-10 to 50 °C	-10 to 50 °C	RS-232	yes
Druck DPI 104		0.05% FS	-10 to 50 °C	-10 to 50 °C	RS-232 - Cable Extra	available
Additel 681		0.025% FS	20 to 26 °C	-10 to 50 °C	RS-232	available

5.2. Price vs. Performance



5.3. How the 2700G wins

5.3.1. Best Accuracy

The 2700G provides the best measurement uncertainty in its class. Most all other competitors are only 0.05% FS, whereas the 2700G is 0.02% FS. The Crystal XP2i is 0.1% reading from 20% to 100% of the range, meaning that the XP2i meets the same specification from 0 to 20%, the 2700G surpasses it over the majority of the range.

5.3.2. Robustness

The 2700G enclosure is made from a zinc alloy, proving both lightweight and robust compared to the thin, plastic enclosure of some of the competitors (GE DPI 104).

5.3.3. Reliability

The 2700G is provided by Fluke Calibration, the recognized experts in pressure metrology. The gauge has been thoroughly tested to insure that it will meet its specification.

7. Specifications

2700G Specifications	
Accuracy (positive pressures)	0.02% FS
Accuracy (negative pressures)	0.05% FS
Media Compatibility – ranges 30 psi (200 kPa) and below	Any clean, dry non-corrosive gas
Media Compatibility – ranges 100 psi (700 kPa) to 1000 psi (7 MPa)	Any liquids or gases compatible with 316 stainless steel
Media Compatibility – ranges above 1000 psi (7 MPa)	Any non-flammable, non-toxic, non-explosive, non-oxidizing liquid or gas compatible with 316 stainless steel
Calibrated Temperature Range	18 to 28 °C
Operating Temperature Range	0 to 50 °C (additional error of 0.003 %FS/°C outside the calibrated temperature range)
Pressure Connection	1/4" NPT Male
Housing/Weight	Cast ZNAl/0.56 kg (1.22 lb)
Display	5-1/2 digits, 16.53 mm (0.65 in) high 20-segment bar graph, 0 to 100 %
Power	Three AA alkaline batteries (or powered through the USB interface)
Battery Life (typical)	75 hours

8. Ordering information

ITEM #	NOUN	DESCRIPTION
4152258	2700G-BG100K	REFERENCE PRESSURE GAUGE BG100K
4152264	2700G-BG200K	REFERENCE PRESSURE GAUGE BG200K
4152273	2700G-BG700K	REFERENCE PRESSURE GAUGE BG700K
4152286	2700G-BG2M	REFERENCE PRESSURE GAUGE BG2M
4152299	2700G-BG3.5M	REFERENCE PRESSURE GAUGE BG3.5M
4152300	2700G-BG7M	REFERENCE PRESSURE GAUGE BG7M
4152317	2700G-G20M	REFERENCE PRESSURE GAUGE G20M
4152321	2700G-G35M	REFERENCE PRESSURE GAUGE G25M
4152339	2700G-G70M	REFERENCE PRESSURE GAUGE G70M
4334015	2700G-BG100K/C	REFERENCE PRESSURE GAUGE BG100K W/ACCREDITATION
4334026	2700G-BG200K/C	REFERENCE PRESSURE GAUGE BG200K W/ACCREDITATION
4334032	2700G-BG700K/C	REFERENCE PRESSURE GAUGE BG700K W/ACCREDITATION
4334044	2700G-BG2M/C	REFERENCE PRESSURE GAUGE BG2M W/ACCREDITATION
4334059	2700G-BG3.5M/C	REFERENCE PRESSURE GAUGE BG3.5M W/ACCREDITATION
4334067	2700G-BG7M/C	REFERENCE PRESSURE GAUGE BG7M W/ACCREDITATION
4334071	2700G-G20M/C	REFERENCE PRESSURE GAUGE G20M W/ACCREDITATION
4334080	2700G-G35M/C	REFERENCE PRESSURE GAUGE G25M W/ACCREDITATION
4334098	2700G-G70M/C	REFERENCE PRESSURE GAUGE G70M W/ACCREDITATION
4341589	P5510-2700G-1	P5510 Pneumatic Calibrator, 2 MPa (300 psi), 1 gauge
4341592	P5510-2700G-3	P5510 Pneumatic Calibrator, 2 MPa (300 psi), 3 gauges
4341605	P5513-2700G-1	P5513 Pneumatic Calibrator, 20 MPa (3000 psi), 1 gauge
4341610	P5513-2700G-3	P5513 Pneumatic Calibrator, 20 MPa (3000 psi), 3 gauges

4341622	P5514-2700G-1	P5514 Hydraulic Calibrator, 70 MPa (10 000 psi), 1 gauge
4341631	P5514-2700G-3	P5514 Hydraulic Calibrator, 70 MPa (10 000 psi), 3 gauges
4341646	P5515-2700G-1	P5515 Hydraulic Calibrator, 70 MPa (10 000 psi), 1 gauge
4341654	P5515-2700G-3	P5515 Hydraulic Calibrator, 70 MPa (10 000 psi), 3 gauges
4341668	P5510-2700G-1/C	P5510 Pneumatic Calibrator, 2 MPa (300 psi), 1 gauge Accredited
4341679	P5510-2700G-3/C	P5510 Pneumatic Calibrator, 2 MPa (300 psi), 3 gauges Accredited
4341687	P5513-2700G-1/C	P5513 Pneumatic Calibrator, 20 MPa (3000 psi), 1 gauge Accredited
4341693	P5513-2700G-3/C	P5513 Pneumatic Calibrator, 20 MPa (3000 psi), 3 gauges Accredited
4341717	P5514-2700G-1/C	P5514 Hydraulic Calibrator, 70 MPa (10 000 psi), 1 gauge Accredited
4341721	P5514-2700G-3/C	P5514 Hydraulic Calibrator, 70 MPa (10 000 psi), 3 gauges Accredited
4341739	P5515-2700G-1/C	P5515 Hydraulic Calibrator, 70 MPa (10 000 psi), 1 gauge Accredited
4341742	P5515-2700G-3/C	P5515 Hydraulic Calibrator, 70 MPa (10 000 psi), 3 gauges Accredited
4341756	P5510/14-2700G-6	P5510/P5514 Pressure Calibrator, with 6 gauges
4341763	P5510/15-2700G-6	P5510/P5515 Pressure Calibrator, with 6 gauges
4341774	P5510/14-2700G-4	P5510/P5514 Pressure Calibrator, with 4 gauges
4341788	P5510/15-2700G-4	P5510/P5515 Pressure Calibrator, with 4 gauges
4341795	P5510/14-2700G-6/C	P5510/P5514 Pressure Calibrator, with 6 gauges Accredited
4341808	P5510/15-2700G-6/C	P5510/P5515 Pressure Calibrator, with 6 gauges Accredited
4341813	P5510/14-2700G-4/C	P5510/P5514 Pressure Calibrator, with 4 gauges Accredited
4341824	P5510/15-2700G-4/C	P5510/P5515 Pressure Calibrator, with 4 gauges Accredited

9. Standard equipment included with each 2700G

Name	Quantity
2700G Gauge	1
Manual on CD-ROM in 14 languages	1
Printed Manual in English	1
Calibration Certificate showing traceability	1
1/4 NPT female to 1/4 BSP male adapter	1
1/4 NPT female to M20X1.5 adapter	1
Universal ac power supply	1
USB communications cable	1

10. Sales and Marketing Materials

Sales and marketing materials are available at: <http://eu.flukecal.com/2700G-Launch-EU>.

11. FAQ

Ref#	Question	Answer
1	Is the 2700G Intrinsically Safe (ATEX certified)?	No. For applications that require ATEX certification, we recommend the Fluke 700G.
2	Can the 2700G be used beyond the specified full scale pressure?	For each range, there is a “proof pressure” rating. This is the highest pressure the gauge can be used to without affecting the calibration. It is not recommended for the gauge to be continually used above the full scale pressure.
3	Does the 2700G require any special adapters to connect to the P5500 comparators?	No. The 2700G has a 1/4 NPT test port. The P5500 comparators ship with an extra 1/4” NPT adaptor so that they can be used with the 2700G without purchasing any additional adaptors.
4	Is the 2700G available in any ranges other than those listed?	No. The nine ranges specified are all that are available at this time. If an application requires a range different than those given, please let the business unit know so that it can be included in future development.