

INDUSTRY RANGE



The GPC series controllers are the latest generation of a range of innovative automatic pressure controllers started by DESGRANGES & HUOT in 1984.

The Model GPC1 is a high speed controller and calibrator which integrates a silicon pressure sensor and a unique solenoid-type regulator.

This makes GPC1 a truly advanced gas-operated pressure calibration standard offering high performance measurement, speed, versatility and reliability for industrial applications.

GPC1

High Speed Pneumatic Pressure Controller and Calibrator

- High level accuracy to 0.025 %
- Ranges up to 10 MPa
- Pressure control precision to 0.004 %
- Fast generation speed down to 10 seconds
- Leak compensation ability



DH-Budenberg

SILICON PRESSURE SENSOR TECHNOLOGY

The rugged design of the controller, and the use of a very stable silicon pressure sensor, gives the GPC1 the advantage of having an extremely high tolerance to vibration.

The GPC1 has the benefit of low stabilisation times, and along with a highly sensitive measurement package, it is an ideal instrument for the detection and calibration of low level pressure variations.

DUAL PRESSURE GENERATION MODE

Uniquely, the controller enables the user to select a fast or fine pressure generation mode. For applications requiring high speed, the MAX mode allows realisation of a pressure point in less than 10 seconds. For applications requiring a finer pressure control, the "Limited" mode is able to generate and stabilise pressure within 0.004 % FS in less than 30 seconds. Fast response and minimal overshoot are both provided through a solenoid-type regulator which eliminates manual adjustments.

HIGH-LEVEL SYSTEM RELIABILITY

The GPC1 possesses extensive self-diagnostics features to quickly test key internal electronic and pneumatic parameters such as sensor, source pressure, regulator, internal leak, system leak, display, keypad, solenoid valves and program. The rugged aluminium housing ensures optimum protection of the internal sub-assemblies.

LARGE VARIETY OF FUNCTIONS

The system features several functions to enlarge the controllers operation field:

- 11 preset pressure units
- One user programmable pressure unit
- 2 user definable pressure generation and control modes: fast (MAX mode) or fine (Limited mode)
- Internal memory for 10 calibration sequences
- Ramp generation
- User adjustable stability window and stability delay parameters
- Internal pressure sensor calibration menu
- Remote or local mode operation.

MEASURING RANGES

Model	GPC1-A002	GPC1-A005	GPC1-A010	GPC1-A025	GPC1-A050	GPC1-A100
Absolute Pressure Range	0 to 370 kPa 0 to 3.7 bar 0 to 53.5 psi	0 to 620 kPa 0 to 6.2 bar 0 to 89.5 psi	0 to 1120 kPa 0 to 11.2 bar 0 to 162 psi	0 to 2.62 MPa 0 to 26.2 bar 0 to 379.5 psi	0 to 5.12 MPa 0 to 51.2 bar 0 to 742.5 psi	0 to 10.12 MPa 0 to 101.2 bar 0 to 1468 psi
Gauge Pressure Range	-100 to 250 kPa -1 to 2.5 bar -14.5 to 36 psi	-100 to 500 kPa -1 to 5 bar -14.5 to 72.5 psi	-0.1 to 1 MPa -1 to 10 bar -14.5 to 145 psi	-0.1 to 2.50 MPa -1 to 25 bar -14.5 to 362.5 psi	-0.1 to 5 MPa -1 to 50 bar -14.5 to 725 psi	-0.1 to 10 MPa -1 to 100 bar -14.5 to 1450 psi

The GPC1 reference sensor is an absolute pressure sensor. Gauge pressure measurements are obtained by zeroing the reference sensor at ambient pressure and permanently compensating for the evolutions of barometric pressure with an on-board barometer (Auto-zero function). The measurable gauge pressure range depends on the barometric pressure of the time.

METROLOGICAL SPECIFICATIONS

	Accuracy*	± 0.025% FS
Repeatability:	± 0.003% FS	Resolution: Up to 1 ppm FS
Calibration Adjustements:	Zero and span	Temperature Compensation: 15°C to 45°C
Calibration Stability:	Zero: better than 0.010% FS for 180 days (after warm-up) Span: better than 0.010% FS for 180 days (FS reading minus zero after warm-up). Zero and Span may be reset without affecting each other or the linearity.	

*The accuracy statement includes the following uncertainties in the pressure reading: repeatability, pressure hysteresis, creep, linearity, and temperature effects over the compensated range.

PRESSURE CONTROL

Control precision: ± 0.004% FS

Circuit volume: Optimally up to 500 cc (circuits with larger volumes increase the generation time)

Minimum controllable pressure

- Absolute mode: From 0.03% to 0.05% FS
- Gauge mode: 0

Stability control

- MAX mode: 15 sec after a pressure point is set for stabilisation within ± 0.01% FS
- Limited mode: Stabilisation within the dwell time

Dwell time

- MAX mode: 10 sec max between two points within 0.5% FS and FS
- Limited mode: Dwell time programmable by the user

TECHNICAL SPECIFICATIONS

Dimensions (L x W x H)	48.8 x 50 x 17.7 cm	Pressure medium	clean, dry, non-corrosive gas
Weight	22.5 kg	Operating temperature	15 to 45°C
Computer interfaces	RS232 and IEEE488	Power supply	115 - 230 VAC, 50 - 60 Hz

MODEL GPC2 CONTROLLER

The GPC2 is a simplified version of GPC1 which is aimed at being used with a DPG Digital Primary Pressure Standard to give an automatic fundamental calibration system. The DPG thus connected via the RS232C port controls the functions of the GPC2 and offers optimum characteristics of pressure generation, control and measurement. The operating specifications of this system are the same as the ones of the GPC1; the metrological specifications are those of the DPG.

For further information, please contact us.

DH-Budenberg Ltd.

PO Box 224, Woodfield Road,
Altrincham, Cheshire WA14 4FY
United Kingdom

Tel: 44 (0)161 942 4700

Fax: 44 (0)161 942 4701

Email: sales@dh-budenberg.co.uk



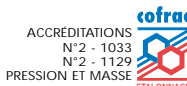
DH-Budenberg S.A.

56, rue des Ecoles, BP125
93303 Aubervilliers Cedex
France

Tel: 33 (0) 1 48 39 83 00

Fax: 33 (0) 1 48 33 65 90

Email: dhonline@desgranges.com



DH-Budenberg GmbH.

Raiffeisenstrasse 2
D-63110 Rodgau
Deutschland

Tel: 49 (0) 6106 82 940

Fax: 49 (0) 6106 82 9417

Email: kontakt@dh-budenberg.de



www.dh-budenberg.com