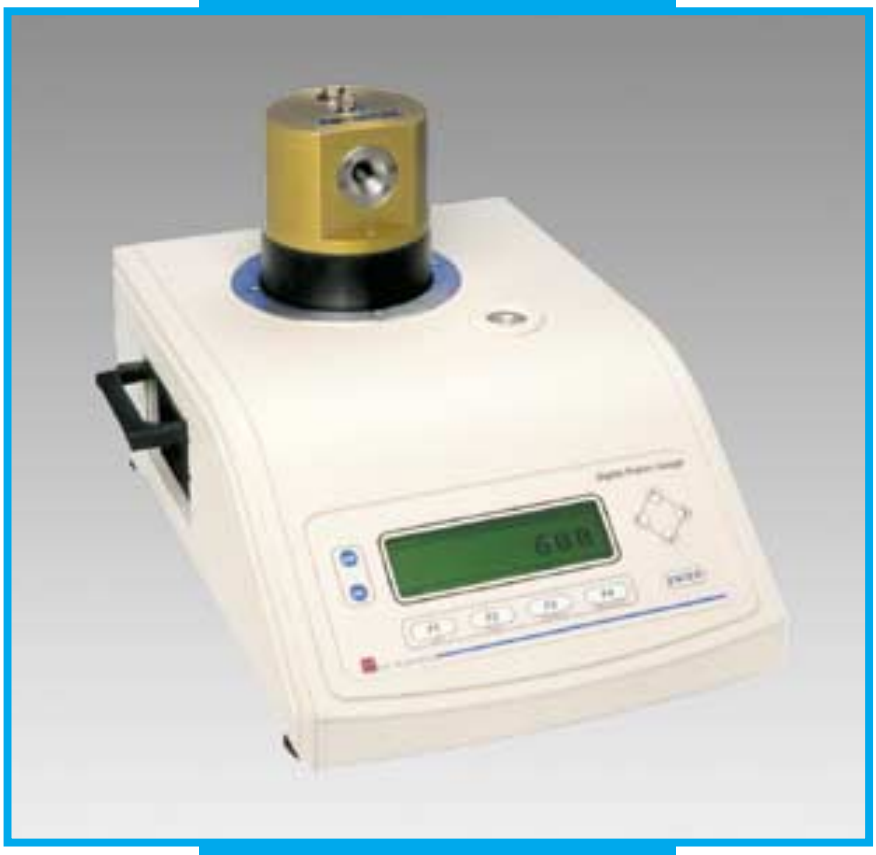
METROLOGY RANGE



# DPG5

## Digital Primary Pressure Standard

DPG5 digital primary pressure standards are built around an original concept first introduced by DESGRANGES & HUOT in the early 80's. The DPG5 technology combines a piston-cylinder assembly with an electronic dynamometer. It is the only pressure standard to associate the metrological performances of pressure balances with the convenience of digital transfer standards.

- Accuracy: 15 PPM over 3 years
- Self calibrating
- Integrated environment control sensors
- 9 gauge & absolute ranges from 5kPa to 25 MPa
- Resolution to 0.1 Pa
- Full automation capability
- Accredited calibration certificate as standard

DH·Budenberg

# UNIVERSAL PRESSURE STANDARD

The DPG5 is specifically designed for the calibration of last generation electronic pressure measuring devices such as automatic controllers, pressure calibrators, transmitters and sensors.

DPG5s are intended to be used by:
- calibration laboratories,
- instrumentation maintenance departments,
- instruments R & D and production departments.

Thanks to the measuring principle and the high-level performances of the DPG5, it can be integrated in an accredited calibration chain.

## SELF-CALIBRATION

The DPG5 is the only pressure standard to be equipped with a unique Environment Monitoring Module coupled with an Auto-Calibrating Function. The EMM™ warns the user when he must run the ACF™. The ACF™ can also be programmed to operate automatically. This new concept ensures the stability of the DGP5 so that re-calibrations only needs to take place every 3 years.

## ENVIRONMENT ADAPTABILITY

The EMM™ provides real-time environment influence compensation. Mechanical and electronic protections permanently adapt the DPG5 to external conditions. This makes it the ideal instrument for working safely in the most varied conditions, without any alterations of the measurement quality.

## ABSOLUTE PRESSURE MEASUREMENT

The DPG5 is fitted with a communication port especially aimed at interfacing with a digital barometer. The barometer measures the atmospheric pressure which is automatically added to the DPG5 gauge pressure reading.

This system enables a quick and safe calibration for absolute pressure instruments.

## USER FRIENDLINESS

The user interface has a large graphic screen displaying clear messages and function keys and short cuts giving easy access to the menus.

Passwords protect sensitive information in order to meet Quality Assurance requirements.

# WIDE DIVERSITY OF RANGES

Ranges can be exchanged within seconds to configure the DPG5 to any calibration application.

## PRESSURE RANGES

| Designation | Range | | Resolution | |
|---|---|---|---|---|
| DPG5-G01B | 0 to 50 kPa | *(0 to 500 mbar, 0 to 7.25 psi)* | 0.1 Pa | *(0.001 mbar, 0.0000145 psi)* |
| DPG5-G02B | 0 to 100 kPa | *(0 to 1000 mbar, 0 to 14.50 psi)* | 0.2 Pa | *(0.002 mbar, 0.000029 psi)* |
| DPG5-G05B | 0 to 250 kPa | *(0 to 2.5 bar, 0 to 36 psi)* | 0.5 Pa | *(0.005 mbar, 0.0000725 psi)* |
| DGP5-G1B | 0 to 0.5 MPa | *(0 to 5 bar, 0 to 72 psi)* | 1 Pa | *(0.01 mbar, 0.000145 psi)* |
| DPG5-G2B | 0 to 1 MPa | *(0 to 10 bar, 0 to 145 psi)* | 2 Pa | *(0.02 mbar, 0.00029 psi)* |
| DGP5-G5B | 0 to 2.5 MPa | *(0 to 25 bar, 0 to 363 psi)* | 5 Pa | *(0.05 mbar, 0.00072 psi)* |
| DGP5-G10B | 0 to 5 MPa | *(0 to 50 bar, 0 to 725 psi)* | 10 Pa | *(0.1 mbar, 0.00145 psi)* |
| DGP5-G20B | 0 to 10 MPa | *(0 to 100 bar, 0 to 1450 psi)* | 20 Pa | *(0.2 mbar, 0.00290 psi)* |
| DGP5-G50B | 25 MPa | *(0 to 250 bar, 3626 psi)* | 50 Pa | *(0.5 mbar, 0.00725 psi)* |

## METROLOGICAL SPECIFICATIONS

Accuracy*over 3 years: 15 PPM FS

| | | | |
|---|---|---|---|
| Repeatability | 1 $10^{-5}$ FS | Bias** | 1.0 $10^{-5}$ FS |
| Hysteresis | 0.2 $10^{-5}$ FS | Linearity | 0.3 $10^{-5}$ FS |
| Resolution | 0.2 $10^{-5}$ FS | Long term stability | 0.7 $10^{-5}$ RDG |

*The above figures are expressed at the one standard deviation.*
** The Accuracy statement is defined as the root-sum-of-squares of repeatability, hysteresis, linearity and stability figures.*
*** Bias is also refered to as Maximum Deviation between the standard and the DPG5.*

## TECHNICAL SPECIFICATIONS

| | | | |
|---|---|---|---|
| Dimensions (LxWxH) | 45 x 30 x 16 cm | Barometer interface | RS232C |
| Maximum overpressure | 150 % FS | Computer interface | RS232C |
| Sampling rate | 0.5 seconds | Power supply | 110-240 VAC, 50-60 Hz |
| Measuring fluid | Dry & clean gas | Power consumption | 20 VA |

For further information, please refer to our technical documentation n°97101 GB


**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

0138

**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

ACCRÉDITATIONS
N°2 - 1033
N°2 - 1129
PRESSION ET MASSE
ETALONNAGE

**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


*Doc. N°97100 GB - 08/2001 - We reserve the right to alter specification without prior notice - IMP. METAS S.A. - 95110 SANNOIS*