



CALTECH SERVICE CO LTD

Unit 5 Poplar Industrial Estate
Moor Lane, Witton
Birmingham, B6 7AD.

Tel: 0121 331 4445 / Fax: 0121 331 4447



0816

CERTIFICATE OF CALIBRATION

Issued by : CALTECH SERVICE CO LTD

Date of Issue : 09/08/2016

Date of Calibration : 25/07/2016

Certificate Number : CT 4741 - 1

Customer Details

Name: Ramcare
Address: MacDermid Autotype Ltd
Grove Road
Wantage
Oxfordshire
OX12 7BZ

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Approved Signatory

Name:

Signature:

Customer Equipment

Description: Mechanical Pressure Gauge
Range : 200 psi
Pressure Scale : psi
Serial Number : EC 131
Manufacturer : Darenth
Diameter : 50 mm
Nominal Range : 200 psi
Calibrated Range : 200 psi
Lowest Division : 50 psi
Calibration Medium : Air
Order Number : PO/6375

Document Number CSD PG 04 - Iss 06

This certificate is issued in accordance with the laboratory accreditation requirements of the United Kingdom Accreditation Service. It provides traceability of measurement to the SI system of units and/or to units of measurement realised at the National Physical Laboratory or other recognised national metrology institutes. This certificate may not be reproduced other than in full, except with the prior written approval of the issuing laboratory

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UKAS Accredited Calibration Laboratory No. 0816

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Method Used

Caltech work instruction number CSD WI PG 01 was applied

The unit under test (UUT) was allowed to stabilise for at least 4 hours in the calibration area and conditions were maintained at 20.0 C +/- 4.0 C prior to calibration test.

The UUT was calibrated by comparison with a UKAS calibrated pressure System.

Results

The table below indicates the applied value of pressure that was used, the indicated value of the Unit under test and the resulting error

RISING PRESSURE

APPLIED PRESSURE Ap	INDICATED PRESSURE Ip	ERROR E
0	0	0.0
50	47.7	-2.3
100	98.6	-1.4
150	149.1	-0.9
200	198.5	-1.5

FALLING PRESSURE

APPLIED PRESSURE Ap	INDICATED PRESSURE Ip	ERROR E
200	198.5	-1.5
150	148.9	-1.1
100	97.1	-2.9
50	46.5	-3.5
0	0	0.0

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The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor $k = 2$, providing a level of confidence of approximately 95%. The uncertainty evaluation has been carried out in accordance with UKAS requirements.

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Comments

1. Error $E = (A_p - I_p) U$
2. **Best measurement capability = 44kPa + 1/5th lowest readable division of UUT**
3. The end user must determine long term drift and uncertainty under conditions of use
4. The measured uncertainty stated includes the observed performance of the unit under test during the calibration

Calibration Engineer

Steven Robinson

NOTES

The gauge was mounted in a vertical position on the comparator with the process connection downward

The datum level of the gauge was taken as the connection point on the comparator

Should the SI unit of pressure be different to the gauge under test then a scaling factor is recorded. The conversion factors can be obtained from BS350 Part 1:2004

The uncertainties reported refer to measured values only; no account is taken of the instruments ability to maintain its calibration.

Document Number CSD PG 04 - Iss 06

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