



Instrumentation & Calibration Experts

CALIBRATION CERTIFICATE

Submitted By: CPS (NZ) Ltd - Chris Woudenberg
38 Angle Street
Onehunga
Auckland

Report Number: CPS 1N0000

Device Details

Tag / ID Number :

Date of Test : 25 January 2017

Device Type : Digital Gauge

Date of Certificate : 26 January 2017

Manufacturer : Crystal Engineering

Test Method : CPS PTMM

Serial Number : 111111

Date of Re-Calibration : 25 January 2018

Device Range : 0 to 140 bar

This device was calibrated by comparison using CPS Calibration and reference equipment using air or water. The reference equipment used in this calibration, is traceable to SI units of measurement via NIST of the USA and CPS (NZ) Limited.

Report Number	Device Type	Serial Number	Last Calibrated	Next Calibration Due
1314781387	Piston/Cylinder	626	31/08/2011	31/01/2017

This device was calibrated in house at a temperature of 20 °C +/- 0.5 °C

This device has a resolution of 0.01 bar

No adjustments were made to this item.



All measurements reported herein have been performed in accordance with the laboratory's scope of accreditation

Tested By:

Chris Woudenberg
Authorised Signatory

cps.co.nz

Checked By:

Maria Morse

This page is page 1 of 3 for this calibration certificate.
This certificate must not be altered, or reproduced except in full.
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Results for CPS 1N0000

CALIBRATION RESULTS RUN 1

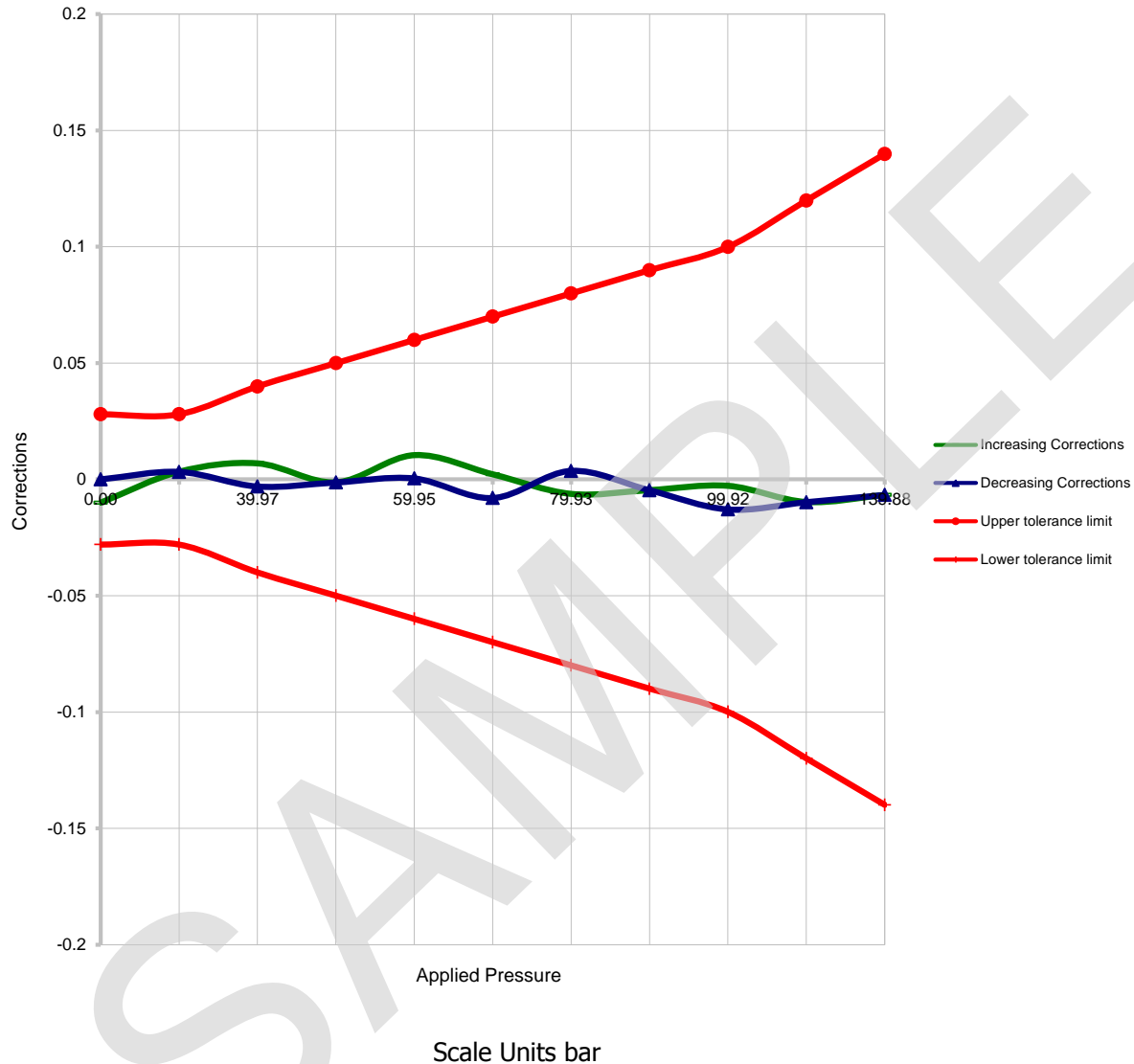
Scale Units : bar

<u>INCREASING PRESSURES</u>					<u>DECREASING PRESSURES</u>				
Ref	DUT	Correction	%RDG Error	Uc k=2	Ref	DUT	Correction	%RDG Error	Uc k=2
0.00	0.01	-0.01	0.00		139.88	139.89	-0.01	0.00	0.01
19.98	19.98	0.00	-0.02	0.01	119.90	119.91	-0.01	0.01	0.01
39.97	39.96	0.01	-0.02	0.01	99.92	99.93	-0.01	0.01	0.01
49.96	49.96	0.00	0.00	0.01	89.93	89.93	0.00	0.01	0.01
59.95	59.94	0.01	-0.02	0.01	79.93	79.93	0.00	0.00	0.01
69.94	69.94	0.00	0.00	0.01	69.94	69.95	-0.01	0.01	0.01
79.93	79.94	-0.01	0.01	0.01	59.95	59.95	0.00	0.00	0.01
89.93	89.93	0.00	0.01	0.01	49.96	49.96	0.00	0.00	0.01
99.92	99.92	0.00	0.00	0.01	39.97	39.97	0.00	0.01	0.01
119.90	119.91	-0.01	0.01	0.01	19.98	19.98	0.00	-0.02	0.01
139.88	139.89	-0.01	0.00	0.01	0.00	0.00	0.00	0.00	

CALIBRATION RESULTS RUN 2

Scale Units : bar

<u>INCREASING PRESSURES</u>					<u>DECREASING PRESSURES</u>				
Ref	DUT	Correction	%RDG Error	Uc k=2	Ref	DUT	Correction	%RDG Error	Uc k=2
0.00	0.00	0.00			139.88	139.89	-0.01	0.01	0.01
19.98	19.98	0.00	-0.02	0.01	119.90	119.91	-0.01	0.01	0.01
39.97	39.97	0.00	0.01	0.01	99.92	99.93	-0.01	0.01	0.01
49.96	49.95	0.01	-0.02	0.01	89.92	89.93	-0.01	0.01	0.01
59.95	59.95	0.00	0.00	0.01	79.93	79.93	0.00	0.00	0.01
69.94	69.94	0.00	0.00	0.01	69.94	69.94	0.00	0.00	0.01
79.93	79.94	-0.01	0.01	0.01	59.95	59.95	0.00	0.00	0.01
89.93	89.93	0.00	0.01	0.01	49.96	49.96	0.00	0.00	0.01
99.92	99.92	0.00	0.00	0.01	39.97	39.97	0.00	0.01	0.01
119.90	119.92	-0.02	0.02	0.01	19.98	19.99	-0.01	0.03	0.01
139.88	139.89	-0.01	0.01	0.01	0.00	0.01	-0.01	0.00	



The red tolerance lines is the manufacturers maximum allowable error for this XP2i.
 ^ The error is the difference in reading between our reference and this XP2i gauge.

This XP2i complies with its Crystal Engineering manufactured accuracy specification, which is defined as +/- 0.02 % Span or 0.1 % Rdg between 28 bar and 140 bar. The above expanded uncertainties (Uc) were calculated using a coverage factor k = 2.0 and define an interval estimated to have a 95% level of confidence. The above pressure readings were taken via the RS 232/USB port automatically, using a DH Instruments Piston Gauge. Fluke Report number 1314781387. Approximately 4 readings per second per point were taken, these readings were averaged, over 60 seconds to give the (DUT) results for this item.