

# CERTIFICATE OF CALIBRATION

ISSUED BY AVON-DYNAMIC CALIBRATION

DATE OF ISSUE: 22 May 2024

CERTIFICATE NUMBER: K875975



0199



CALIBRATE MEASURE INNOVATE

Approved Signatory:

S. Tregaskes

For: WESTERN TOOLING  
SERVICES LIMITED  
BRISTOL  
BS5 8AN

<u>Temperature:</u>	20° C ± 1° C	<u>Date of Calibration:</u>	22 May 2024
<u>I.D Number:</u>	3250		
<u>Description:</u>	A used set of Gauge Blocks	<u>Set Size:</u>	11
<u>Set Grade:</u>	1	<u>Material:</u>	Tungsten carbide
<u>Specification:</u>	BS EN ISO 3650:1999		

Report: The above set of gauge blocks was calibrated by the measurement of five points, one at the centre and then each corner of the gauge block. All measurement points are tested against the relevant limit deviation of length and variation.  
The gauge blocks have been calibrated using ADC2867 gauge block comparator with K grade reference standards of the same material as the gauge block being calibrated. Steel, K grade gauge blocks have coefficient of linear expansion of 10.67 parts / million / ° C and Tungsten Carbide, K grade gauge blocks have a coefficient of linear expansion of 4.23 parts / million / ° C.  
The central point deviation from nominal and a status of each gauge block compared to the overall set grade can be found on page 3.

## Decision Rule :

Conformity / Non-Conformity statements are based on simple acceptance rule (ILAC-G8:09/2019) where, Acceptance Limit (AL) equals Tolerance Limit (TL). Provided that the Tolerance Uncertainty Ratio (TUR) ≥1:1.

## Acceptance Key:

"not satisf" - Indicates that the result(s) exceed the tolerance limits of the stated specification."satisf", indicates the result(s) fall within the tolerance limits of the stated specification.

## Laboratory Standards Used:

Gauge block set M122 No. ADC1616 1022 - 1024 Certificate number: K711515  
M11 M11 No. ADC3491 - 0524 - 0527 Certificate number: K879064

## Comments:

## **Page 1 of 3**

The results stated on this certificate relate only to the equipment calibrated.

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

This certificate is issued in accordance with 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 prior written approval of the issuing laboratory.

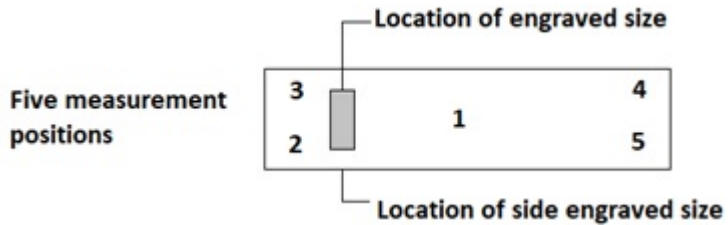
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## Measurement Positions:



## Uncertainties of Measurement

Greater than (mm)	Up to and including (mm)	Uncertainty of measurement ( $\mu\text{m}$ )
0.5	10	0.08
10	25	0.10
30	50	0.12
60	75	0.15
80	100	0.18

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Size mm	Deviation µm	Status
3.1000	-0.03	satisf.
6.5000	0.01	satisf.
9.7000	0.10	satisf.
12.5000	-0.19	satisf.
15.8000	0.22	satisf.
19.0000	-0.06	satisf.
21.9000	0.17	satisf.
25.0000	-0.09	satisf.
50.0000	0.24	satisf.
75.0000	0.30	satisf.
100.0000	0.36	satisf.

- End of Report -

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