SEA

RS Calibration
Calibration and Repair Service
Serial No: 1368112/418
Cert No: 1861129
Cal Date: 24 Apr 2024
Recal Due:
UKAS CALIBRATION 0310
DPN 175 Lammas Road, Corby, Northants, NN17 9RS

Calibration Certificate
Do Not Destroy

Calibration Certificate Attached: 1861129
OD ref: 1234127597

Products Engineering rule 150mm/6in

first

IMPORTANT INFORMATION

Simply detach the label in the top right hand corner of the new front sheet and apply to your instrument as required.

RS STANDARD Calibration
RS Calibration
Calibration and Repair Service
Serial No: 2A345G02
Cert No: 123456
Cal Date: 01 May 2014
Recal Due:
DPN 175 Lammas Road, Corby, Northants, NN17 9RS

For Re-Calibration of your unit please email:

calibration.uk@rs-components.com

or call us on 01536 405545 to arrange free collection. Please quote serial number when returning.

RS Calibration

CERTIFICATE OF CALIBRATION

Issued by: RS Components Ltd

Date Issued: 24 Apr 2024 Certificate No. 1861129

0310

RS Calibration

Calibration and Repair Service

DPN 175, Lammas Rd,
Weldon Industrial Est
Corby, Northants, NN17 9RS

Tel: 01536 405545
Fax: 01536 401590

Sean Adamson

Client	TOTAL LABORATORY SERVICES LTD BLANDFORD FORUM DORSET DT11 8ST
Instrument	Products Engineering rule 150mm/6in
Serial No.	1368112/418
Client Reference	N/A
Procedure ID.	D05_1200_# Rev. P 8
Date of Calibration	24 Apr 2024

Remarks

This calibration is of a new instrument.

Uncertainties

The reported expanded uncertainties are 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.

For certificate statements of conformity see Appendix SCQAR 533
The following calibration results relate only to the items defined above.

CERTIFICATE OF CALIBRATION

UKAS Accredited Calibration Laboratory No. 0310

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Environment

Prior to calibration the rule was held within a temperature controlled environment for a period of not less than 4 hours.

The ambient temperature and relative humidity throughout the calibration were (20 ± 2) °C and (40 ± 20) %RH respectively.

Method

The scale identified below was calibrated by measuring from the edge of the rule to the first position. This first position was then used as a datum from which all other positions on that scale are referenced. Measurements were made using a horizontal length measuring machine and the results recorded in the tables below.

The calibration was performed in accordance with 73-362 / EEC Class 1.

Side One					
Top Scale					
Major Position	Nominal Length	Measured Length	Measured Deviation	Major Position Limits	Measurement Uncertainties
mm	mm	mm	mm	mm	mm
0 - 10	10	10.007	0.007	± 0.200	± 0.009
10 - 30	20	19.996	-0.004	± 0.200	± 0.009
10 - 30.5	20.5	20.500	0.000	± 0.200	± 0.009
10 - 59.5	49.5	49.500	0.000	± 0.200	± 0.009
10 - 60	50	50.002	0.002	± 0.200	± 0.009
10 - 90	80	80.002	0.002	± 0.200	± 0.009
10 - 90.5	80.5	80.499	-0.001	± 0.200	± 0.009
10 - 119.5	109.5	109.500	0.000	± 0.200	± 0.010
10 - 120	110	109.995	-0.005	± 0.200	± 0.010
10 - 150	140	139.995	-0.005	± 0.200	± 0.010
Adjacent Position	Nominal Length	Measured Length	Measured Deviation	Adjacent Position Limits	Measurement Uncertainties
mm	mm	mm	mm	mm	mm
30 - 30.5	0.5	0.504	0.004	± 0.100	± 0.009
59.5 - 60	0.5	0.502	0.002	± 0.100	± 0.009
90 - 90.5	0.5	0.497	-0.003	± 0.100	± 0.009
119.5 - 120	0.5	0.495	-0.005	± 0.100	± 0.009

Side One

Maximum deviation found between any two major positions in the above table from 10mm to the maximium length.	0.007 mm
Major position limit	± 0.200 mm
Measurement Uncertainty	± 0.009 mm
Maximum deviation found between any adjacent postions.	-0.005 mm
Adjacent position limit	± 0.100 mm
Measurement Uncertainty	± 0.009 mm

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Side Two					
Top Scale					
Major Position	Nominal Length	Measured Length	Measured Deviation	Major Position Limits	Measurement Uncertainties
inches	inches	inches	inches	inches	inches
0 - 0.5	0.50000	0.5017	0.00170	± 0.008	± 0.0004
0.5 - 1.5	1.00000	1.0001	0.00010	± 0.008	± 0.0004
0.5 - 1.53125	1.03125	1.0313	0.00005	± 0.008	± 0.0004
0.5 - 2.96875	2.46875	2.4688	0.00005	± 0.008	± 0.0004
0.5 - 3.0	2.50000	2.4997	-0.00030	± 0.008	± 0.0004
0.5 - 4.5	4.00000	3.9999	-0.00010	± 0.008	± 0.0004
0.5 - 4.53125	4.03125	4.0311	-0.00015	± 0.008	± 0.0004
0.5 - 5.96875	5.46875	5.4686	-0.00015	± 0.008	± 0.0005
0.5 - 6.0	5.50000	5.5010	0.00100	± 0.008	± 0.0005
Adjacent Position	Nominal Length	Measured Length	Measured Deviation	Adjacent Position Limits	Measurement Uncertainties
inches	inches	inches	inches	inches	inches
1.5 - 1.53125	0.03125	0.03120	-0.00005	± 0.004	± 0.0004
2.96875 - 3	0.03125	0.03090	-0.00035	± 0.004	± 0.0004
4.5 - 4.53125	0.03125	0.03120	-0.00005	± 0.004	± 0.0004
5.96875 - 6	0.03125	0.03240	0.00115	± 0.004	± 0.0004

Side Two

Maximum deviation found between any two major positions in the above table from 0.5 inches to the maximum length.	0.001 3 inch
Major position limit	± 0.008 inch
Measurement Uncertainty	± 0.000 4 inch
Maximum deviation found between any adjacent postions.	0.001 1 inch
Adjacent position limit	± 0.004 inch
Measurement Uncertainty	± 0.000 4 inch

	Measured Value	Limit	Measurement Uncertainty
Squareness of datum end to side faces.	0.019 mm	N/A	± 0.005 mm

Squareness of datum end to side faces.
No limits available, measured values reported only.

CALIBRATED BY:- SEA

CERTIFICATE OF CALIBRATION

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1861129

Reported values not annotated.

The instrument passed the stated specification, due allowance having been made for the uncertainty of measurement which carries no implication regarding the long term stability of the instrument.

END OF CALIBRATION

Appendix SCQAR533 Certificate Statements of conformity

RS Components is standardising how it reports conformity across all disciplines in line with requirements within **ISO/IEC: 17025:2017**.
Where the laboratory reports a statement of conformity to a specification, guidance has been drawn on reporting structure and decision rules from ILAC document series **ILAC-G8:09/2019**.
Unless otherwise instructed by you the Customer, acceptance limits applied are derived from the manufacturers specification or applicable standard (e.g. DIN, EEC, BS etc.) or where applicable: SCQAR532_RS Standard Limits for Calipers, available on request.
The statements found on this certificate produced by RS Components Laboratory are as follow:

1) Reported values with **No Annotation**:
The instrument **passed** the stated specification, even with allowance having been made for the uncertainty of measurement, which carries no implication regarding the long-term stability of the instrument.

2) Reported values annotated with **"#"**
The measured result is a **conditional pass** to the limit but by a margin less than the measurement uncertainty, it is therefore not possible to state compliance based on the stated level of confidence.

3) Reported values annotated with **"##"**
The measured result is a **conditional fail** to the limit but by a margin less than the measurement uncertainty, it is therefore not possible to state compliance based on the stated level of confidence.

4) Reported values annotated with **"###"**
The measured result **failed** the stated specification, even with allowance having been made for the measurement uncertainty.