



**RS Calibration**  
Calibration and Repair Service  
Serial No: 019160  
Cert No: 1792986  
Cal Date: 20 Mar 2023  
Recal Due:

0310  
DPN 175 Lammas Road, Corby, Northants, NN17 9RS

# **\*\*Calibration Certificate\*\***

## **Do Not Destroy**

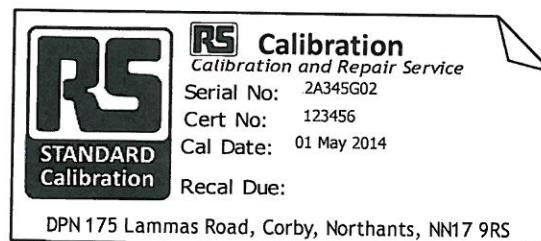
Calibration Certificate Attached: 1792986  
OD ref: 1217662782

Mitutoyo 150 mm Digital Caliper

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.



**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.**



# CERTIFICATE OF CALIBRATION

Issued by: RS Components Ltd

Date Issued: 20 Mar 2023

Certificate No. 1792986



0310

## RS Calibration

Calibration and Repair Service

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

Tel: 01536 405545

Fax: 01536 401590

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Stefan Sabadi

Client	TOTAL LABORATORY SERVICES LTD BLANDFORD FORUM DORSET DT11 8ST
Instrument	Mitutoyo 150 mm Digital Caliper
Serial No.	019160
Client Reference	N/A
Procedure ID.	D02_1150_# Rev. P3(Code: Mi)
Date of Calibration	20 Mar 2023

### Remarks

This certificate reports recorded values for the instrument 'As Received'.

### 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.

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.

# CERTIFICATE OF CALIBRATION

UKAS Accredited Calibration Laboratory No. 0310



Calibration and Repair Service

Certificate No.

1792986

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## Environment

The ambient temperature and relative humidity throughout the calibration were  $(20 \pm 2) ^\circ\text{C}$  and  $(40 \pm 20) \%RH$  respectively.

## Calibration

The instrument was held in a temperature controlled environment for a period of not less than 4 hours prior to calibration which was performed using gauge blocks, length bars and in accordance with RS Calibration procedure MLCP01. The results are compared with the tolerances specified by SCQAR532\_RS Standard Limits For Calipers.

Flatness of external faces:	0.004 mm		
Parallelism of measuring jaws:			
	Internal	0.011 mm	
		<u>At 1 mm</u>	<u>At 140 mm</u>
	External	0.013 mm	0.009 mm

No limits are applied to the above values.

Measurement uncertainties for the above values.  $\pm 0.002$  mm

## Calibration of Gauge

	Tested Size (mm)	Limits (mm)	Gauge Reading (mm)	Deviation (mm)	Measurement Uncertainty (mm)
<u>External</u>	0.00	+/- 0.02	0.00	0.00	+/- 0.012
	31.20	+/- 0.02	31.19	-0.01	+/- 0.012 #
	61.40	+/- 0.02	61.38	-0.02	+/- 0.012 #
	92.60	+/- 0.02	92.58	-0.02	+/- 0.013 #
	123.80	+/- 0.03	123.78	-0.02	+/- 0.014 #
	150.00	+/- 0.03	149.98	-0.02	+/- 0.015 #
<u>Internal</u>	50.00	+/- 0.04	50.04	0.04	+/- 0.012 #
<u>Step</u>	50.00	+/- 0.04	50.01	0.01	+/- 0.012
<u>Depth Rod</u>	50.00	+/- 0.04	50.00	0.00	+/- 0.012
<u>Zero re-check</u>				0.00	

Calibrated by: SRS

# CERTIFICATE OF CALIBRATION

UKAS Accredited Calibration Laboratory No. 0310

**RS Calibration**  
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1792986

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## **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.

## **Reported values annotated with a #**

The measured result is a conditional pass to the specification limit by a margin less than the measurement uncertainty; it is therefore not possible to state compliance based on the stated level of confidence.

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.

