



## National Association of Testing Authorities, Australia

# SCOPE OF ACCREDITATION

### IPAC Solutions Pty Ltd

#### IPAC SOLUTIONS PTY LTD

| Accreditation Number: 15808 | Site Number: 17043 |

**Address Details:**

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**Availability:** Services available to external clients

Note: Not all of the columns of the scope of accreditation displayed include data.

The only data displayed is that deemed relevant and necessary for the clear description of the activities and services covered by the scope of accreditation.

Grey text appearing in a SoA is additional freetext providing further refinement or information on the data in the preceding line entry.

#### ISO/IEC 17025 (2005) Calibration

SERVICE	PRODUCT	DETERMINANT	TECHNIQUE	PROCEDURE	LIMITATION/RANGE
Mass - Determination of mass and calibration of weighing devices	Laboratory weighing devices	Mass	Gravimetric measurement against reference mass	EUROMET Calibration Guide 18 NMI Monograph 4 Section 6 IPAC Solutions 6-7-12-01 Calibration of a Weighing Instrument	up to 40kg
including on site calibrations					
<b>CAPABILITY</b> Including on site calibrations with Calibration and Measurement Capability of - 5 in $10^5$ or 1 mg (whichever is greater) up to 40 kg					
Mass - Determination of mass and calibration of weighing devices	Industrial weighing devices	Mass	Gravimetric measurement against reference mass	EUROMET Calibration Guide 18 NMI Monograph 4 Section 6 IPAC Solutions 6-7-12-01 Calibration of a Weighing Instrument	up to 300 kg

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including on site calibrations

### CAPABILITY

Including on site calibrations  
With Calibration and Measurement Capability of -  
1 in  $10^4$  or 100 mg (whichever is greater) up to 300 kg

Mass - Determination of mass and calibration of weighing devices	Precision laboratory balances	Mass	Gravimetric measurement against reference mass	EUROMET Calibration Guide 18 NMI Monograph 4 Section 6 IPAC Solutions 6-7-12-01 Calibration of a Weighing Instrument	1 mg to 10000g
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including on site calibrations

### CAPABILITY

Including on site calibrations  
with Calibration and Measurement Capability of -  
6  $\mu$ g from 1 mg up to and including 500 mg  
1 in  $10^6$  or 0.01 mg (whichever is greater) above 500 mg up to and including 300 g  
1 in  $10^6$  or 6 mg (whichever is greater) above 300 g up to and including 10000 g

Pressure metrology - Pressure and vacuum measuring equipment	Manometers; Pressure gauges; Pressure recorders; Pressure transducers; Vacuum gauges;	Gauge pressure	Comparison with dead weight tester; Comparison with reference instrument;	As defined in MSA Test Method 1 or 2, as appropriate. For liquid manometers as defined in in-house method 3_5_06 Master Calibration - Standard Operating Procedures for Liquid Manometers	Pneumatic instruments -100 kPa to 3500 kPa Hydraulic instruments 0 to 120 MPa
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### CAPABILITY

with Calibration and Measurement Capability of -  
Pneumatic instruments  
0.008% of reading or 1 Pa (whichever is greater) from -100 kPa to -1 kPa and 1 kPa to 3500 kPa  
1 Pa from -1 kPa to 1 kPa  
Hydraulic instruments  
0.012% of reading or 0.05 kPa (whichever is greater) from 0 to 120 MPa  
in-situ Pneumatic instruments  
1 Pa from -1 to 1 kPa  
0.03% of reading or 0.06 kPa (whichever is greater)

		Absolute pressure	Comparison with dead weight tester; Comparison	As defined in MSA Test Method 1 or 2, as appropriate.	Pneumatic instruments 1 kPa to 3500 kPa (absolute) Hydraulic instruments 500 kPa to 120
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			with reference instrument;		MPa (absolute)
<p><b>CAPABILITY</b> with Calibration and Measurement Capability of - Pneumatic Instruments 0.008% of reading or 0.020 kPa (whichever is greater) from 1 kPa to 3500 kPa (absolute) Hydraulic Instruments 0.012% of reading from 500 kPa to 120000 kPa (absolute) in-situ Pneumatic Instruments 0.03% of reading or 0.06 kPa (whichever is greater) from 1 kPa to 3500 kPa (absolute)</p>					
Pressure metrology - Pressure standards	Pressure calibrators - Non-dead weight	Gauge pressure	Comparison with dead weight tester; Comparison with reference instrument;	As defined in MSA Test Method 1	Pneumatic instruments -100 kPa to 3500 kPa Hydraulic instruments 0 to 120 MPa
<p><b>CAPABILITY</b> with Calibration and Measurement Capability of - Pneumatic instruments 0.008% of reading or 1 Pa (whichever is greater) from -100 kPa to -1 kPa and 1 kPa to 3500 kPa 1 Pa from -1 kPa to 1 kPa Hydraulic instruments 0.012% of reading or 0.05 kPa (whichever is greater)</p>					
		Absolute pressure	Comparison with dead weight tester; Comparison with reference instrument;	As defined in MSA Test Method 1 .	Pneumatic instruments 1 kPa to 3500 kPa (abs) Hydraulic instruments 500 kPa to 120 MPa (abs)
<p><b>CAPABILITY</b> with Calibration and Measurement Capability of - Pneumatic Instruments 0.008% of reading or 0.020 kPa (whichever is greater) from 1 kPa to 3500 kPa (absolute) Hydraulic Instruments 0.012% of reading from 3500 kPa to 120000 kPa (absolute) in-situ Pneumatic Instruments 0.03% of reading or 0.06 kPa (whichever is greater) from 1 kPa to 3500 kPa (absolute)</p>					
Temperature metrology - Humidity measuring equipment	Hygrometers; Relative humidity sensors;	Relative humidity (RH)	Comparison with a reference standard		
<p><b>CAPABILITY</b> including on-site calibration</p>					



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with Calibration and Measurement Capability of -

### Temperature

Calibration of temperature sensors for RH sensors 0.23 °C at 5 °C

0.16 °C at 10 °C

0.08 °C at 20 °C

0.08 °C at 30 °C

0.11 °C at 40 °C

0.18 °C at 50 °C

0.24 °C at 60 °C

### Relative Humidity

Calibration of relative humidity sensors

all values are in % relative humidity

	5 %	10 %	20 %	30 %	40 %	50 %	60 %	70 %	80 %	90 %	95 %
5 °C	-	0.50	0.50	0.70	0.80	1.00	1.20	1.30	1.50	1.60	-
15 °C	0.40	0.50	0.60	0.60	0.65	0.70	0.80	0.85	0.95	1.00	1.05
21 °C	0.50	0.50	0.55	0.60	0.70	0.75	0.80	0.85	0.95	1.00	1.00
25 °C	0.50	0.50	0.55	0.65	0.70	0.75	0.80	0.85	0.95	1.00	1.05
44 °C	0.45	0.50	0.55	0.65	0.65	0.75	0.80	0.85	0.95	1.00	1.05
60 °C	-	0.50	0.50	0.60	0.70	0.80	0.90	1.00	1.20	1.20 (at 88 % RH)	-

Temperature metrology - Temperature measuring equipment	Digital temperature measuring systems	Temperature	Measurement against reference standard		In the laboratory from -90°C to 250°C On site calibration from -90°C to 250°C
including on site calibrations					

### **CAPABILITY**

with Calibration and Measurement Capability of -

#### In the laboratory

0.02°C from -90°C to below -20°C

0.015°C from -20°C to below 100°C

0.02°C from 100°C to below 150°C

0.05°C from 150°C to 250°C

0.005°C at 0°C

#### On site calibration

0.03°C from -90°C to below 150°C

0.05°C from 150°C to 250°C

0.01°C at 0°C

Temperature metrology - Verification of controlled enclosures	Environmental chambers - Temperature; Freezers; Incubators; Ovens;	Spatial uniformity; Temperature;	Direct temperature measurement	AS2853-1986 and IPAC in-house method 4_7_84_02_Temp Lab SOP - Temperature Controlled Enclosure	-90°C to 150 °C



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including on  
site  
calibrations

### CAPABILITY

with Calibration and Measurement Capability of -  
including on-site calibrations

Freezers, ovens, environmental chambers

0.5 °C from -90°C to 150 °C

Incubators 0.3 °C from 0 °C to 50 °C (thermistor sensors)

0.5 °C from 0 °C to 150 °C (thermocouple sensors)

Temperature  
metrology -  
Verification of  
controlled  
enclosures

Medical  
refrigeration  
equipment

Spatial  
uniformity;  
Temperature;

Direct  
temperature  
measurement

AS2853-1986 and  
IPAC in-house  
method  
4\_7\_84\_02\_Temp  
Lab SOP -  
Temperature  
Controlled Enclosure  
Six-monthly tasks  
and annual tasks by  
the methods of  
AS3864.2 clauses  
3.6 and 3.7  
excluding clause  
3.6.4 and IPAC in-  
house method  
4\_7\_84\_15\_Temp  
Lab SOP – Medical  
Spatial temperature  
distribution  
verification by the  
methods of  
AS3864.2 clause 3.8  
and IPAC in-house  
method  
4\_7\_84\_15\_Temp  
Lab SOP – Medical

-90 °C to 25 °C

including on  
site  
calibrations

### CAPABILITY

with Calibration and Measurement Capability of -  
including on-site calibrations

0.3 °C from -90 °C to 25 °C (thermistor sensors)

0.5 °C from -80 °C to 25 °C (thermocouple sensors)

Six-monthly tasks and annual tasks

0.1 °C from -90 °C to 25 °C

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----- END OF SCOPE -----