Issue date: 06 April 2025
Valid Until: -

NO: SAMM 592

LABORATORY LOCATION/ CENTRAL OFFICE:	G Calibration Sdn Bhd No.19, Jalan Gemilang 10 Taman Perindustrian Cemerlang 81800 Ulu Tiram, Johor , 81800, JOHOR MALAYSIA
ACCREDITED SINCE :	06 APRIL 2025
FIELD(S) OF CALIBRATION:	DIMENSIONAL FORCE MASS PRESSURE TEMPERATURE

This laboratory has demonstrated its technical competence to operate in accordance with MS ISO/IEC 17025:2017 (ISO/IEC 17025:2017).

This laboratory's fulfillment of the requirements of ISO/IEC 17025 means the laboratory meets both the technical competence requirements and management system requirements that are necessary for it to consistently deliver technically valid test results and calibrations. The management system requirements in ISO/IEC 17025 are written in language relevant to laboratory operations and operate generally in accordance with the principles of ISO 9001 (see Joint ISO-ILAC-IAF Communiqué dated April 2017).

*** The uncertainty covered by the CMC is expressed as the expanded uncertainty corresponding to a coverage probability of approximately 95 % and have a coverage factor of k=2 unless stated otherwise.**

CENTRAL LOCATION	G Calibration Sdn Bhd No.19, Jalan Gemilang 10 Taman Perindustrian Cemerlang 81800 Ulu Tiram, Johor , 81800, Johor
FIELD(S) OF CALIBRATION :	DIMENSIONAL, FORCE, MASS, PRESSURE, HEAT & TEMPERATURE

SCOPE OF CALIBRATION : DIMENSIONAL

Instrument Calibrated/Measurement Parameter	**Range**	**Calibration and Measurement Capability Expressed as an Uncertainty (±)***	**Remarks**
(burdon Tube Type)	0 psi to 1000 psi	None	
Caliper	External measurement	None	Calibrate using
	0 mm to 300 mm	0.01 mm	gauge blocks as
	300 mm to 600 mm	0.02 mm	standards based on

Instrument Calibrated/Measurement Parameter	Range	Calibration and Measurement Capability Expressed as an Uncertainty (±)*	Remarks
	Internal measurement	None	JIS B 7507:2016
	0 mm to 300 mm	0.01 mm	Partial
	0 mm to 300 mm	None	Measuring face
	0 mm to 300 mm	None	contact error
	0 mm to 300 mm	None	Repeatability of
	0 mm to 300 mm	None	partial
	0 mm to 300 mm	None	measuring face
	0 mm to 300 mm	None	contact error
	0 mm to 300 mm	None	Parallelism of
	0 mm to 300 mm	None	jaws
	0 mm to 300 mm	None	Full measuring
	0 mm to 300 mm	None	face contact
	0 mm to 300 mm	None	error
	0 mm to 300 mm	None	Scale shift error
	Omm to 300mm	6 um	Calibrated using caliper
	Omm to 300mm	None	checker and gauge
	300mm to 600mm	None	block with reference to
	300mm to 600mm	None	JIS B 7507:2016
	Up to 300 mm 300 mm to 1000 mm 1000 mm to 2000 mm	17 um 27 um	Calibrated using Gauge Block.with reference to ISO 13385-1:2019
	0 ~ 300 mm	0.02 mm	reference to BS
	0.01 mm to 600 mm	10 um	Caliper Checker JIS B 7507
Electronic Balance	Up to 50g	0.0002 g	
	Up to 100 g	0.0004 g	
	Up to 200 g	0.001 g	
	Up to 600 g	0.002 g	
	Up to 1000 g	0.01 g	
	Up to 2000 g Up to 4000 g Up to 10000 g Up to 25000 g Up to 30000 g	0.02 g 0.04 g 04g 0.59	Calibrate using standard weights as standards based on ASTM E898- 20
	Up to 60 kg	0.02 kg	
	Up to 100 kg	0.04 kg	
	Up to 300 kg	0.05 kg	
	Up to 500 kg	0.1 kg	
	Up to 700 kg	0.2 kg	
	Up to 1200 kg	0.4kg	
	Up to 1500 kg	0.5kg	
External Micrometer	25 mm travel range	0.001 mm	Calibrate using
	25 mm travel range	None	gauge blocks as
	Frame size	None	standards based on
	Up to 100 mm	0.002 mm	JIS B 7502:2016

Instrument Calibrated/Measurement Parameter	**Range**	**Calibration and Measurement Capability Expressed as an Uncertainty (±)***	**Remarks**
	100 mm to 150 mm	0.003 mm	Full surface e
	150 mm to 200 mm	0.004 mm	contact error
	200 mm to 250 mm	0.005 mm	Flatness e
	250 mm to 300 mm	0.006 mm	Parallelism e
	325 mm to 350 mm	0.007 mm	
	350 mm to 400 mm	0.008 mm	
	400 mm to 500 mm	0.010 mm	Note: Standard rod
	400 mm to 500 mm	None	to be provided if the
	400 mm to 500 mm	None	measurement range
	400 mm to 500 mm	None	is > 25 mm
	25 mm 25 mm spindle travel for 50 mm to 100 mm 100 mm to 175 mm frame	1.0 um 1.5 um 2.0 um	Measurement of instrument error, and parallelism and flatness of measuring faces reference to JIS B7502:2016. Setting rod must be provided by customer.
	Up to 100 mm 100 mm to 275 mm	None	Calibrated by using gauge block as standards based on JIS B 7502:2016
	0~ 25mm	0.002 mm	Gauge Block reference to ISO
	100 mm to 150 mm frame (25 mm traverse)	None	Calibrated using Gauge Block according to
	100 mm to 150 mm frame (25 mm traverse)	None	ISO 3611:2010
	Up to 1 inch	0.0003 inch	
	1 inch to 6 inch frame (1 inch traverse)	0.0003 inch	
	Up to 50 mm	0.003 mm	
	50 mm to 150 mm	0.004 mm	Calibrated using Gauge
Force Gauge / Tension	0.5 kgf to 1 kgf	0.002 kgf	standard weight and
Gauge	1 kgf to 3 kgf	0.005 kgf	poise weights.
	3 kgf to 50 kgf	0.01 kof	Calibrations may be
	50 kgf to 100 kgf	0.1 kof	given in other units
	50 kgf to 100 kgf	None	by conversion from
	50 kgf to 100 kgf	None	SI units.
Instrument	None	None	
	None	None	
	None	None	
	100 kHz to 26.5 GHz	None	

Instrument Calibrated/Measurement Parameter	**Range**	**Calibration and Measurement Capability Expressed as an Uncertainty (±)***	**Remarks**
	None	None	
	None	None	
	None	None	
	0.03 to 0.33 mA	None	
	1.0 to 33 mV	None	
	None	None	
	100 yA	None	HP 3458A
	None	None	
	None	None	
	None	None	Measuring
Instruments	1000 psi to 3000 psi	1 psi	weight tester as
	3000 psi to 5000 psi	2 psi	standards based on
	3000 psi to 5000 psi	None	DKD-R 6-1
	3000 psi to 5000 psi	None	sequence A, C
	0 psi to 1000 psi	None	sequence A, C
	20 Hz to 18 GHz	None	
	None	None	
	None	None	
	None	None	
	10 KN to 50 KN	0.2 kN	
	None	None	
	1.2 MHz to 2.000 MHz	None	
Measuring Instruments	2 bar to 20 bar	0.01 bar	digital pressure test
	2 bar to 20 bar	0.01 bar	Calibration using
	None	None	
	None	None	
	None	None	
	Measuring Instruments	None	
	0 mV to 329 mV	0.08 mV /V	
	0.33 V to 3.29 V	0.06	
	3.29 V to	0.06	
	Measuring Instruments	None	
	Measuring Instruments	12mQ/Q	
	10 Q to 100 Q	§.8mQ/Q	
	Measuring Instruments	None	
Pneumatic Pressure	0 bar to 2 bar	0.001 bar	Calibration using
	0 bar to 2 bar	0.001 bar	
Pressure Measuring	15 psi to 1000 psi	0.3 psi	Calibrate using dead
	0 psi to 1000 psi	5 psi	standards based on DKD-R 6-1
	0 to 16000 psi	0.03 % of reading	Calibrated using
	None	None	Calibrated using

Instrument Calibrated/Measurement Parameter	**Range**	**Calibration and Measurement Capability Expressed as an Uncertainty (±)***	**Remarks**
	-500Pa to +500Pa2Pa -500Pa to +500Pa	-500Pa to +500Pa	Calibration by
	None	None	
	Up to 600 bar	None	on 837-1:1998, BS
	None	None	
	None	None	
Pt100	-100 °C to 800 °C	0.6 °C	
	-100 °C to 800 °C	0.6 °C	
	-200 °C to 650 °C	0.1 °C	
	-200 °C to 850 °C	0.08 °C	
	-200 °C to 650 °C	0.1 °C	
Push Pull Gauge / Digital	0 kgf to 0.5 kgf	0.001 kgf	Calibrate using
Standard Weight	1g	0.04 mg	
	29	0.05 mg	
	5g	0.06 mg	
	10g	0.07 mg	
	20g	0.09 mg	Calibrate using
	50g	0.10 mg	reference standard
	100g	0.17 mg	weight by
	200 g	0.4 mg	comparison method
	500 g	0.002 g	according to ABBA
	1kg	0.006 g	weighing scheme
	2kg	0.02 g	
	5 kg	0.03 g	
	10 kg	0.2g	
	20 kg	04g	
	2kg 5 kg 10 kg 20 kg 25 kg	0.2g	Calibrated by using standard weights and weighing comparator
	2kg 5 kg 10 kg 20 kg 25 kg	0.2g	Calibrated by using standard weights and weighing comparator
Temperature Indicating	None	None	
	to 400 °C	1.2°C	Comparison with
	None	None	
	-200 °C to0 °C	0.25 °C	calibrator.
Type E	-100 °C to 990 °C	1.0°C	Calibrated by
	-100 °C to 990 °C	1.0°C	Calibrated by
	-250 °C to 1000 °C	0.32 °C	
	-250 °C to 1000 °C	0.32 °C	
	-250 °C to 1000 °C	0.80 °C	
	-250 °C to 1000 °C	1.6 °C	

Instrument Calibrated/Measurement Parameter	Range	Calibration and Measurement Capability Expressed as an Uncertainty (±)*	Remarks
	-250 °C to 1000 °C	0.74 °C	By Electrical Simulation Using Temperature Calibrator and ITS 90 Tables
	-250 °C to 1000 °C	1.5°C	By Electrical Measurement Using Temperature Calibrator and ITS 90 Tables
	-250 °C to 1000 °C	1.0°C	By Electrical Simulation Using Temperature Calibrator and ITS 90 Tables
Type J	-100 °C to 1100 °C	0.9°C	
	-100 °C to 1100 °C	0.9°C	
	-210 °C to 1200 °C	0.32 °C	
	-210 °C to 1200 °C	0.32 °C	
	-210 °C to 1200 °C	0.41 °C	
	-210 °C to 1200 °C	0.73 °C	
	-210 °C to 1200 °C	0.47 °C	By Electrical Simulation Using Temperature Calibrator and ITS 90 Tables
	-210 °C to 1200 °C	0.77 °C	By Electrical Measurement Using Temperature Calibrator and ITS 90 Tables
	-210 °C to 1200 °C	0.84 °C	By Electrical Simulation Using Temperature Calibrator and ITS 90 Tables
Type K	-100 °C to 1300 °C	1.0°C	
	-100 °C to 1300 °C	1.0°C	
	-210 °C to 1370 °C	0.47 °C	
	-210 °C to 1370 °C	0.47 °C	
	-210 °C to 1370 °C	0.56 °C	calibrator.
	-210 °C to 1370 °C	0.87 °C	calibrator.

Instrument Calibrated/Measurement Parameter	Range	Calibration and Measurement Capability Expressed as an Uncertainty (±)*	Remarks
	-200 °C to 1370°C	0.67 °C	By Electrical Simulation Using Temperature Calibrator and ITS 90 Tables
	-200 °C to 1370 °C	0.93 °C	By Electrical Measurement Using Temperature Calibrator and ITS 90 Tables
	-200 °C to 1370°C	0.96 °C	By Electrical Simulation Using Temperature Calibrator and ITS 90 Tables
Type R	to 1700 °C	2°C	
	to 1700 °C	2°C	
	0 °C to 500 °C 500 °C to 1760 °C	0.69 °C 0.47 °C	By electrical simulation using calibrator and reference table ITS 90 Calibrate by electrical measurement using Calibrator (Fluke: 5522A)
	0 °C to 500 °C 500 °C to 1760 °C	0.67 °C 0.47 °C	By electrical simulation using calibrator and reference table ITS 90 Calibrate by electrical measurement using Calibrator (Fluke: 5500A)
	-20 °C to 1760 °C	None	
	-20 °C to 1760 °C	0.7 °C	
	-20 °C to 1760 °C	None	
	-20 °C to 1760 °C	None	
	0 °C to 1750 °C	1.5°C	By Electrical Simulation Using Temperature Calibrator and ITS 90 Tables

Instrument Calibrated/Measurement Parameter	Range	Calibration and Measurement Capability Expressed as an Uncertainty (±)*	Remarks
	0 °C to 1750 °C	2.8 °C	By Electrical Measurement Using Temperature Calibrator and ITS 90 Tables
	0 °C to 1750 °C	1.7°C	By Electrical Simulation Using Temperature Calibrator and ITS 90 Tables
Type S	to 1700 °C	2°C	calibrator
	to 1700 °C	2°C	calibrator
	-20 °C to 1760 °C	0.5 °C	
	-20 °C to 1760 °C	0.5 °C	
	-20 °C to 1760 °C	None	
	-20 °C to 1760 °C	2.7°C	
	0 °C to 1750 °C	1.5°C	By Electrical Simulation Using Temperature Calibrator and ITS 90 Tables
	0 °C to 1750 °C	2.8 °C	By Electrical Measurement Using Temperature Calibrator and ITS 90 Tables
	0 °C to 1750 °C	1.6°C	By Electrical Simulation Using Temperature Calibrator and ITS 90 Tables
Type T	-100 °C to 390 °C	1.0°C	electrical simulation using temperature
	-100 °C to 390 °C	1.0°C	electrical simulation using temperature
	-250 °C to 400 °C	0.7 °C	
	-250 °C to 400 °C	None	
	-250 °C to 400 °C	1.2°C	
	-250 °C to 400 °C	2.0°C	
	-200 °C to -100 °C -100 °C to 400 °C	0.2 °C 0.1 °C	By electrical measurement using multimeter
	-200 °C to -100 °C -100 °C to 400 °C	0.6 °C 0.3 °C	By electrical simulation using calibrator

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Instrument Calibrated/Measurement Parameter	**Range**	**Calibration and Measurement Capability Expressed as an Uncertainty (±)***	**Remarks**
	-200 °C to -100 °C -100 °C to 400 °C	0.6 °C 0.3 °C	By electrical simulation using calibrator
	-200 °C to -100 °C -100 °C to 400 °C	0.6 °C 0.3 °C	By electrical simulation using calibrator
	-250 °C to 400 °C	1.1°C	By Electrical Simulation Using Temperature Calibrator and ITS 90 Tables
	-250 °C to 400 °C	2.0 °C	By Electrical Measurement Using Temperature Calibrator and ITS 90 Tables
	-250 °C to 400 °C	1.3°C	By Electrical Simulation Using Temperature Calibrator and ITS 90 Tables
Vacuum Instruments	-1 bar to 0 bar	0.005 bar	gauges as standards based on
	-1 bar to 0 bar	None	DKD-R 6-1
	-1 bar to 0 bar	None	sequence A, C
	-1 bar to 0 bar	0.005 bar	digital pressure test gauges as

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SCOPE OF CALIBRATION : FORCE

Instrument Calibrated/Measurement Parameter	Range	Calibration and Measurement Capability Expressed as an Uncertainty (±)*	Remarks

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SCOPE OF CALIBRATION : MASS

Instrument Calibrated/Measurement Parameter	Range	Calibration and Measurement Capability Expressed as an Uncertainty (±)*	Remarks

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SCOPE OF CALIBRATION : PRESSURE

Instrument Calibrated/Measurement Parameter	Range	Calibration and Measurement Capability Expressed as an Uncertainty (±)*	Remarks

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SCOPE OF CALIBRATION : TEMPERATURE

Instrument Calibrated/Measurement Parameter	Range	Calibration and Measurement Capability Expressed as an Uncertainty (±)*	Remarks