

Name of Accreditation Program	JCSS Accreditation Program
Accreditation Identification	JCSS 0080 Calibration
Name of Conformity Assessment Body	Quality Assurance Department, Manufacturing Headquarters, NAGANO KEIKI CO., LTD.
Name of Legal Entity	NAGANO KEIKI CO., LTD. JCN 7010801008721
Inquiry Point	Measuring Instruments Quality Assurance Section TEL: +81-268-22-7535 FAX: +81-268-23-6113

*JCN: Japan Corporate Number



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Certificate of Accreditation

International Accreditation Japan (IAJapan) hereby accredits the following conformity assessment body as a calibration laboratory of Japan Calibration Service System.

Accreditation Identification: JCSS 0080 Calibration

Name of Conformity Assessment Body: Quality Assurance Department, Manufacturing Headquarters,
NAGANO KEIKI CO., LTD.

Name of Legal Entity: NAGANO KEIKI CO., LTD.

Location of Conformity Assessment Body: 1150, Akiwa, Ueda-shi, Nagano 386-8501, JAPAN

Scope of Accreditation: Pressure (as the following pages)

Accreditation Requirement: ISO/IEC 17025:2017*

* The relevant accreditation requirements described in the Accreditation Scheme Document for JCSS are also applied.

Effective Date of Accreditation: 2024-10-04

Expiry Date of Accreditation: 2028-10-03

Date of Initial Accreditation: 2005-12-26

A handwritten signature in black ink, appearing to read 'K. Horisaka'.

HORISAKA Kazuhide

Chief Executive, International Accreditation Japan (IAJapan)

National Institute of Technology and Evaluation

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- International Accreditation Japan (IAJapan) is a laboratory accreditation body which has signed MRAs of ILAC (International Laboratory Accreditation Cooperation) and APAC (Asia Pacific Accreditation Cooperation).
 - MRA requirements are, in addition to relevant international standards and guides, requirements for participation in proficiency testing programs, surveillance and reassessment, and the policy for the traceability of measurement for MRA purpose.
 - This laboratory fulfills ISO/IEC 17025:2017 General requirements for the competence of testing and calibration laboratories. This accreditation means this 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 (refer to joint ISO-ILAC-IAF Communiqué dated April 2017).
 - The latest accreditation information is publicly available on IAJapan Website as an accreditation certificate.

General Field of Calibration: Pressure

Date of Initial Accreditation of the Field: 2005-12-26

Laboratory's permanent facility/On-site Calibration: Laboratory's permanent facility

Calibration and Measurement Capabilities

Calibration Procedures# and Type of Instruments/Materials to be calibrated		Range		Expanded Uncertainty (Level of Confidence Approximately 95 %)
Pressure Gauge	Pressure Balance	Gas Absolute Pressure	From 10 kPa up to 40 kPa	2.4 Pa
			More than 40 kPa up to 60 kPa	$(0.02P + 1.8)$ Pa *1
			More than 60 kPa up to 80 kPa	$(0.02P + 2)$ Pa *1
			More than 80 kPa up to 100 kPa	$(0.02P + 2.2)$ Pa *1
			More than 100 kPa up to 350 kPa	$(0.04P + 2)$ Pa *1
		Gas Gauge Pressure	From 0.01 MPa less than 0.03 MPa	The larger one of the two 0.0032 % or 0.55 Pa
			From 0.03 MPa less than 0.1 MPa	0.0030 %
			From 0.1 MPa up to 0.35 MPa	0.0028 %
			More than 0.35 MPa less than 2 MPa	The larger one of the two 0.0038 % or 24 Pa
			From 2 MPa up to 7 MPa	0.0034 %
		Liquid Gauge Pressure	From 0.2 MPa less than 1 MPa	0.34 kPa
			From 1 MPa less than 7 MPa	The larger one of the two 0.0050 % or 0.24 kPa
			From 7 MPa up to 20 MPa	0.0044 %
			More than 20 MPa up to 100 MPa	0.0050 %
			More than 100 MPa up to 200 MPa	0.0065 %
			More than 200 MPa up to 300 MPa	0.0095 %
			More than 300 MPa up to 400 MPa	0.011 %
			More than 400 MPa up to 500 MPa	0.013 %
	Pressure Gauges (Digital Pressure Gauges)	Gas Absolute Pressure	From 5 kPa up to 40 kPa	2.8 Pa
			More than 40 kPa less than 60 kPa	3.3 Pa
			From 60 kPa up to 100 kPa	$(0.03P + 1.8)$ Pa *1
			More than 100 kPa up to 250 kPa	$(0.03P + 2)$ Pa *1
			More than 250 kPa up to 350 kPa	$(0.02P + 6)$ Pa *1
		Gas Gauge Pressure	From -80 kPa up to -0.04 MPa	15 Pa
			More than -0.04 kPa up to -0.01 MPa	16 Pa
			From 0.01 MPa up to 0.02 MPa	0.0017 kPa
			More than 0.02 MPa up to 0.05 MPa	0.0024 kPa
			More than 0.05 MPa up to 0.1 MPa	0.0034 kPa
			From 0.1 MPa up to 0.15 MPa	0.006 kPa
			More than 0.15 MPa up to 0.2 MPa	0.007 kPa
			More than 0.2 MPa up to 0.3 MPa	0.013 kPa
			More than 0.3 MPa up to 0.5 MPa	0.019 kPa
			More than 0.5 MPa up to 0.7 MPa	0.024 kPa
			More than 0.7 MPa up to 0.8 MPa	0.032 kPa
			More than 0.8 MPa up to 1 MPa	0.04 kPa
			More than 1 MPa up to 1.2 MPa	0.046 kPa
			More than 1.2 MPa up to 2 MPa	$(0.025P + 0.02)$ kPa *2
			More than 2 MPa up to 6 MPa	$(0.03P + 0.02)$ kPa *2

			More than 6 MPa up to 7 MPa	0.24 kPa *2
		Differential Pressure	From -150 kPa less than -130 kPa	16 Pa *3
			From -130 kPa less than -100 kPa	$(0.04P - 0.4)$ Pa *3 *4
			From -100 kPa less than -60 kPa	$(0.02P + 1.8)$ Pa *3 *4
			From -60 kPa less than -25 kPa	$(0.02P + 1.6)$ Pa *3 *4
			From -25 kPa less than -10 kPa	$(0.02P + 1.3)$ Pa *3 *4
			From -10 kPa less than -6 kPa	$(0.02P + 0.18)$ Pa *3 *4
			From -6 kPa less than -2.5 kPa	$(0.02P + 0.16)$ Pa *3 *4
			From -2.5 kPa less than -1 kPa	0.18 Pa *3
			From -1000 Pa less than -500 Pa	0.085 Pa *3
			From -500 Pa up to -5 Pa	0.08 Pa *3
			From 5 Pa up to 500 Pa	0.08 Pa *3
			More than 500 Pa up to 1000 Pa	0.085 Pa *3
			More than 1 kPa up to 2.5 kPa	0.18 Pa *3
			More than 2.5 kPa up to 6 kPa	$(0.02P + 0.16)$ Pa *3 *4
			More than 6 kPa up to 10 kPa	$(0.02P + 0.18)$ Pa *3 *4
			More than 10 kPa up to 25 kPa	$(0.02P + 1.3)$ Pa *3 *4
			More than 25 kPa up to 60 kPa	$(0.02P + 1.6)$ Pa *3 *4
			More than 60 kPa up to 100 kPa	$(0.02P + 1.8)$ Pa *3 *4
			More than 100 kPa up to 130 kPa	$(0.04P - 0.4)$ Pa *3 *4
			More than 130 kPa up to 200 kPa	16 Pa *3
		Liquid Gauge Pressure	From 1 MPa up to 2 MPa	$(0.02P + 0.22)$ kPa *2
			More than 2 MPa up to 4 MPa	0.26 kPa
			More than 4 MPa up to 6 MPa	$(0.02P + 0.2)$ kPa *2
			More than 6 MPa up to 7 MPa	0.36 kPa
			More than 7 MPa up to 8 MPa	0.46 kPa
			More than 8 MPa up to 18 MPa	$(0.05P + 0.05)$ kPa *2
			More than 18 MPa up to 20 MPa	1 kPa
			More than 20 MPa up to 25 MPa	$(0.04P + 0.4)$ kPa *2
			More than 25 MPa up to 30 MPa	$(0.06P - 0.1)$ kPa *2
			More than 30 MPa up to 50 MPa	$(0.06P - 0.2)$ kPa *2
			More than 50 MPa up to 70 MPa	$(0.06P - 0.4)$ kPa *2
			More than 70 MPa up to 90 MPa	$(0.06P - 0.6)$ kPa *2
			More than 90 MPa up to 160 MPa	$(0.075P - 2)$ kPa *2
			More than 160 MPa up to 200 MPa	$(0.1P - 6)$ kPa *2
			More than 200 MPa up to 400 MPa	$(0.16P - 16)$ kPa *2
			More than 400 MPa up to 500 MPa	$(0.2P - 35)$ kPa *2
	Mechanical Type Pressure Gauges	Gas Absolute Pressure	From 5 kPa up to 100 kPa	25 Pa
			More than 100 kPa up to 350 kPa	65 Pa
		Gas Gauge Pressure	From -80 kPa up to -10 kPa	24 Pa
			From 10 kPa up to 0.1 MPa	12 Pa
			More than 0.1 MPa up to 0.2 MPa	24 Pa
			More than 0.2 MPa up to 0.4 MPa	60 Pa
			More than 0.4 MPa up to 1 MPa	0.12 kPa
			More than 1 MPa up to 2 MPa	0.24 kPa

			More than 2 MPa up to 3.5 MPa	0.6 kPa
			More than 3.5 MPa up to 7 MPa	2.6 kPa
		Differential Pressure	From -0.2 MPa less than -0.15 MPa	46 Pa *3
			From -0.15 MPa less than -0.1 MPa	44 Pa *3
			From -0.1 MPa less than -0.06 MPa	22 Pa *3
			From -0.06 MPa up to -0.01 MPa	20 Pa *3
			From 0.01 MPa up to 0.06 MPa	20 Pa *3
			More than 0.06 MPa up to 0.1 MPa	22 Pa *3
			More than 0.1 MPa up to 0.15 MPa	44 Pa *3
			More than 0.15 MPa up to 0.2 MPa	46 Pa *3
		Liquid Gauge Pressure	From 1 MPa up to 3.5 MPa	0.65 kPa
			More than 3.5 MPa up to 5 MPa	1.1 kPa
			More than 5 MPa up to 10 MPa	2.2 kPa
			More than 10 MPa up to 25 MPa	6.0 kPa
			More than 25 MPa up to 35 MPa	6.5 kPa
			More than 35 MPa up to 50 MPa	12 kPa
			More than 50 MPa up to 70 MPa	13 kPa
			More than 70 MPa up to 100 MPa	32 kPa
			More than 100 MPa up to 200 MPa	60 kPa
			More than 200 MPa up to 500 MPa	130 kPa

#All Calibration Procedures are in-house procedures developed by this laboratory.

*1: P is calibration pressure. (kPa)

*2: P is calibration pressure. (MPa)

*3: Line Pressure is from 95 kPa abs up to 150 kPa abs.

*4: P is the absolute value of calibration pressure. (kPa)