CERTIFICATE OF ACCREDITATION

ANSI-ASQ National Accreditation Board

500 Montgomery Street, Suite 625, Alexandria, VA 22314, 877-344-3044

This is to certify that

Kon-Sult, Inc.
6 Birch Street
Hudson, NH 03051

has been assessed by ANAB
and meets the requirements of international standard

ISO/IEC 17025:2005

and national standard

ANSI/NCSL Z540-1-1994 (R2002)

while demonstrating technical competence in the field of

CALIBRATION

Refer to the accompanying Scope of Accreditation for information regarding the types of calibrations to which this accreditation applies.

AC-1243
Certificate Number

ANAB Approval

Certificate Valid: 11/15/2017-10/04/2018
Version No. 012 Issued: 11/15/2017

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communiqué dated April 2017).

ANSI-ASQ National Accreditation Board

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005 AND ANSI/NCSL Z540-1-1994 (R2002)

Kon-Sult, Inc.
6 Birch Street
Hudson, NH 03051
June Kopka
603-882-7464

CALIBRATION

Valid to: **October 4, 2018** Certificate Number: **AC-1243**

Length – Dimensional Metrology

Parameter / Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method and/or Equipment
Angle Blocks/Plates	Up to 90 Degrees	14 arc seconds	Electronic Amp and Sine Bar
1-2-3 Blocks Parallelism Squareness	Up to 3 in Up to 76 mm	20 µin 0.51 µm 61 µin 1.5 µm	Comparison to Gage Blocks Electonic Amp
2-4-6 Blocks Parallelism Squareness	Up to 6 in Up to 152 mm	27 µin 0.69 µm 89 µin 2.3 µm	Indi-Square
Angle Irons Parallelism Squareness	Up to 6 in Up to 152 mm	18 µin 0.5 µm 88 µin 2.2 µm	Electronic Amp Indi-Square
Parallels	Up to 12 in Up to 305 mm	36 µin 0.9 µm	Electronic Amp
Sine bars/Plates	5 in 127 mm 10 in 254 mm	24 µin 0.6 µm 35 µin 0.88 µm	Electronic Amp Gage Blocks
Vee Blocks Parallelism Squareness	Up to 5 in Up to 127 mm	31 µin 0.8 µm 77 µin 2 µm	Electronic Amp

Length – Dimensional Metrology

Parameter / Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method and/or Equipment
Protractor	Up to 90 degrees	15 arc seconds	Angle Blocks
Gage Blocks	Up to 8 in Up to 200 mm	(2 + 2*L*) µin (0.05 + 0.05*L*) µm	Master Gage Blocks Electronic Comparator
Dial / Digital Indicators [1] Resolution 0.000 05 in 0.000 1 in 0.000 5 in 0.001 in	Up to 4 in	 53.2 µin 74 µin 292 µin 580 µin	Gage Blocks
Test Indicator [1]	Up to 0.1 in Up to 0.25 mm	70 µin 1.2 µm	Gage Blocks Surface plate
Bore gages Indicator Resolution 0.000 05 in 0.000 1 in 0.000 5 in 0.001 in	Up to 12 in	 56.8 µin 75.6 µin 292 µin 580 µin	Gage Blocks
Electronic amplifiers 5 µin resolution 0.1 µm resolution	Up to 0.05 in Up to 1.3 mm	6 µin 0.15 µm	Gage Blocks Surface plate
Linear Measuring Machines	Up to 40 in	(63 + 4*L*) µin	Gage Blocks Force Gauge
Supermicrometer	Up to 11 in	35 µin	Gage Blocks Force Gauge
Micrometers [1]	Up to 40 in	(74 + 4.6*L*) µin	Gage Blocks
Depth Micrometers [1]	Up to 12 in Up to 305 mm	(61 + 2*L*) µin (1.5 + 0.05*L*) µm	Gage Blocks
Inside Micrometer	Up to 40 in Up to 1 016 mm	(48 + 2*L*) µin (1.2 + 0.05*L*) µm	Gage Blocks
Micrometer Head [1]	Up to 2 in Up to 50 mm	64 µin 1.6 µm	Gage Blocks
Height Master	Up to 40 in Up to 1 016 mm	(8 + 3*L*) µin (0.2 + 0.08*L*) µm	Gage Block, Amp
Height Gage	Up to 40 in Up to 1 016mm	(8 + 3*L*) µin (0.2 + 0.08*L*) µm	Gage Blocks
Intrimike	Up to 6 in Up to 152 mm	71 µin 1.8 µm	Master Rings

Length – Dimensional Metrology

Parameter / Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method and/or Equipment
Calipers / Verniers [1]	Up to 80 in Up to 2 030 mm	(6 + 53*L*) µin (0.15 + 1.35*L*) µm	Gage Blocks Micrometer Standards
Micrometer Standards	Up to 38 in Up to 965 mm	(121 + 3*L*) µin (3.1 + 0.08*L*) µm	Gage Blocks and Amp
Thread Plug Gages Major Diameter Pitch Diameter	 Up to 6 in Up to 150 mm	 42 µin 1.5 µm	Super Micrometer Gage Blocks Thread Measuring Wires
Plain Plug Gages	Up to 2 in Up to 50 mm	14 µin 0.36 µm	Gage Blocks Electronic Comparator
Plain Ring Gages	Up to 6 in Up to 150 mm	32 µin 0.81 µm	Gage Blocks Internal/External Comparator
Thread Ring Gages	Up to 6 in Up to 150 mm	76 µin 1.93 µm	Set Thread Plug Gages
Pin Gages	Up to 1 in Up to 25 mm	87 µin 1.5 µm	Gage Blocks Micrometer
Squares	Up to 18 in Up to 457 mm	(20 + 2*L*) µin (0.5 + 0.05*L*) µm	Amp & Probe
Levels	Up to 18 in Up to 457 mm	64 µin 1.6 µm	Gage Blocks
Surface Plates [1]	Up to 7 x 12 feet	(14 + 2*D*) µin	Electronic Levels
Feeler Gages	0.001 in to 0.06 in	72 µin	Gage Blocks Micrometer

Mass

Parameter / Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method and/or Equipment
Durometer Type A and Type D	Up to 100 Duro	0.62 Duro	Durocalibrator
Torque	(16 to 160) ozf·in (10 to 100) lbf·in (10 to 100) lbf·ft (100 to 1 000) lbf·ft	2.4 ozf·in 2.6 lbf·in 2.6 lbf·ft 12 lbf·ft	Transducers

Calibration and Measurement Capability (CMC) is expressed in terms of the measurement parameter, measurement range, expanded uncertainty of measurement and reference standard, method, and/or equipment. The expanded uncertainty of measurement is expressed as the standard uncertainty of the measurement multiplied by a coverage factor of 2 (k=2), corresponding to a confidence level of approximately 95%.

Notes:

1. On-site calibration service is available for this parameter, since on-site conditions are typically more variable than those in the laboratory, larger measurement uncertainties are expected on-site than what is reported on the accredited scope.
2. *L* is the numerical value of the nominal length of the device being measured in inches. *D* is the diagonal length in inches.
3. This scope is formatted as part of a single document including Certificate of Accreditation No. AC-1243.