

## CERTIFICATE OF CALIBRATION

DIGIQUARTZ MODEL: MET4A

SERIAL NUMBER(S): 155030

The Paroscientific Digiquartz Model (s) identified above has been calibrated and tested with one or more of the following primary pressure standards. All have traceability to the National Institute of Standards and Technology and to the SI.

### Bell and Howell Primary Pressure Standard

Pneumatic Absolute or Gauge Dead Weight Tester Part Number: 6-201-0001, S/N 4034 and S/N 1014

- |                                     |  |                          |  |
|-------------------------------------|--|--------------------------|--|
| <input type="checkbox"/>            | Piston/Cylinder: 6-001-0002, P2-919/C2-1523,<br>Weight Set 1: 6-002-0002<br>Range: 1.5 to 50 psi [10 to 345 kPa]<br>Accuracy: 0.010 percent of reading | <input type="checkbox"/> | Piston/Cylinder: 6-001-0001, P1-949/C1-922, Weight Set<br>2: 6-002-0002<br>Range: 0.3 to 5 psi [2 to 34 kPa]<br>Accuracy: 0.015 percent of reading |
| <input checked="" type="checkbox"/> | Piston/Cylinder: 6-001-0002, P2-652/C2-1378,<br>Weight Set 2: 6-002-0002<br>Range: 1.5 to 50 psi [10 to 345 kPa]<br>Accuracy: 0.010 percent of reading |                          |  |

### DH Primary Pressure Standard

Pneumatic Absolute or Gauge Dead Weight Tester Part Number: PG7601 S/N 161

- |                          |   |
|--------------------------|---|
| <input type="checkbox"/> | Piston/Cylinder: S/N 305, Mass Set: S/N 2052<br>Range: 0.7 to 50 psi [5 to 345 kPa] absolute mode, 0.29 to 50 psi [2 to 345 kPa] gauge mode<br>Accuracy: 0.002 percent of reading |
|--------------------------|---|

### DH Primary Pressure Standard

Pneumatic Gauge Dead Weight Tester, Model 5203, S/N 5557

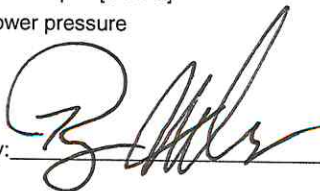
- |                          |   |
|--------------------------|---|
| <input type="checkbox"/> | Piston/Cylinder: S/N 4845, Mass Sets: S/N 2032, S/N 3293<br>Range: 20 to 1,600 psi [0.14 to 11 MPa]<br>Accuracy: 0.005 percent of reading |
|--------------------------|---|

### DH Primary Pressure Standard

Oil Operated Gauge Dead Weight Tester, Model 5306, S/N 3505

- |                          |  |
|--------------------------|--|
| <input type="checkbox"/> | Piston/Cylinder: S/N 3375, Mass Set: S/N 2032<br>Range: 40 to 20,000 psi [0.3 to 138 MPa]<br>Accuracy: 0.01 percent of reading above 200 psi [1.4 MPa]<br>or 0.02 psi [0.14 kPa] at lower pressure |
| <input type="checkbox"/> | Piston/Cylinder: S/N 3511, Mass Set: S/N 2032<br>Range: 145 to 72,500 psi [1 to 500 MPa]<br>Accuracy: 0.02 percent of reading above 725 psi [5 MPa]<br>or 0.145 psi [1 kPa] at lower pressure      |

Tested By: \_\_\_\_\_



DATE: 11/23/21



# Free Zero Adjustment Certificate

This certificate entitles the bearer to one free inspection, zero adjustment, and a new certificate of NIST traceability for all Digiquartz® absolute transducers, transmitters, portable standards, broadband meteorological measurement systems and depth sensors, with full scale pressure ranges of 500 psia or less within the first two years of shipment.

Paroscientific reserves the right to repair or replace any unit at our option. All standard 5-year limited warranty provisions apply. The warranty does not apply to abused units that have been subjected to overpressure, excessive shock, or other out-of-specification conditions.

This certificate is valid for:

Serial Number: 155030

Date Printed: 11/23/2021

Part Number: 1564-301

Sales Order Number: 37950

Model Number: MET4A

Expiration Date: November 2023

## Instructions

1. Notify Paroscientific Service Department at (425) 883-8700 or [support@paroscientific.com](mailto:support@paroscientific.com) to indicate that you would like to return your instrument for your "Free Zero Adjustment".
2. Please package the unit carefully to avoid damage during shipment. Include a contact name, phone and fax numbers, and complete return address. This certificate must accompany the instrument in order to exercise your free service.
3. You are responsible for any freight and/or duty charges when returning your instrument. Our goal is to provide a 7 day turn-around after receipt of your instrument. Paroscientific will pay return shipping costs.



**Paroscientific, Inc**

**Digiquartz® Pressure Instrumentation**

4500 148th Ave. N.E. Redmond, WA 98052

Tel: (425) 883-8700 Fax: (425) 867-5407

Website: [www.paroscientific.com](http://www.paroscientific.com)

Email: [support@paroscientific.com](mailto:support@paroscientific.com)

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**Paroscientific, Inc.**  
**Pressure Instrument Configuration**

**SN: 155030** Part Number: 1564-301 Model: MET4A Port:  
 Calibration Date: 23-Nov-21 Report No: 24988 Technician: RM  
 Pressure Range: 500 to 1100 hpa Temperature Range: -40 to 60 deg C

Customer: R/V Sikuliaq, Seward Marine Center Report Date: 23-Nov-21  
 Address : 201 Railway AVE PO Box 730 Sales Order: 37950  
 Seward, AK 99664 USA S/R Number :

Configuration		Calibration Coefficients	
BL: 0	PT: N	U0: 5.803374	µsec
BR: 9600	QD: -	Y1: -3968.637	deg C / µsec
DD: -	QO: -	Y2: -11756.84	deg C / µsec <sup>2</sup>
DL: 0	SL: 0	Y3: 0	deg C / µsec <sup>3</sup>
DM: 0	SN: 155030	C1: 97.99536	psi
DO: 0	ST: 10	C2: 5.105974	psi / µsec
DP: 6	SU: 0	C3: -66.60543	psi / µsec <sup>2</sup>
ID: 01	TI: 666	D1: 0.0306493	
IM: -	TR: 952	D2: 0.0000000	
LL: -	TU: 0	T1: 27.68529	µsec
LH: -	UF: 1.000000	T2: 0.647786	µsec / µsec
MC: Y	UL: 0	T3: 20.80113	µsec / µsec <sup>2</sup>
MD: 0	UM: user	T4: 0	µsec / µsec <sup>3</sup>
MN: MET4A	UN: 3	T5: 0.000	µsec / µsec <sup>4</sup>
OP: -	US: 0	TC: 0.6781689	
PF: 1.103161	VR: M3.10	PA: 0.0000000	
PI: 666	ZI: 0	PM: 1.0000000	
PL: 19.00000	ZS: 0		
PO: 0	ZL: 0		
PR: 238	ZV: .000000		
PS: 0			

Met4/Met4A Coefficients		
GD: 0	JC: .0000000	LN: 0
GT: 0	JD: .0	LO: 00:00:00
PC: -	JE: 0	LT: .0000000
HY: 2	JF: .0	LW: 0
H1: 20409170	JG: 0	PX: 3
S1: 1.000000	JJ: 0	
S2: 1.000000	JK: 0	
Z1: 0	JS: .0	
Z2: 0	JU: 0	

Paroscientific, Inc.  
 4500 148th Ave. N.E. Redmond, WA 98052  
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 Web: <http://www.paroscientific.com>  
 Email: [support@paroscientific.com](mailto:support@paroscientific.com)

Prepared by



Technology

## CERTIFICATE OF CONFORMANCE

CUSTOMER: R/V SIKULIAQ, SEWARD MARINE CNTR.

PURCHASE ORDER: PO552547 REV 1

DIGIQUARTZ MODEL: MET4A

PART NUMBER: 1564-301

SERIAL NUMBER(S): 155030

*PAROSCIENTIFIC INCORPORATED certifies that the part(s) identified above complies with the requirements of the above order and has been manufactured in accordance with engineering drawings, material and process specifications, testing procedures, and applicable specification drawing of Paroscientific Incorporated. The Digiquartz model(s) identified has been calibrated and tested over the specified pressure and temperature range and meets the requirements of the applicable specification drawing. Primary pressure, temperature standards and transfer standards used at Paroscientific Incorporated for calibration and testing have traceability to the National Institute of Standards and Technology and to the SI through recognized national measurement institutes, ratiometric techniques or natural physical constraints and are regularly checked and calibrated according to Paroscientific QA Procedure Q8521, Inspection Test and Measurement Equipment, in accordance with the requirements of ISO 9001:2015.*



AUTHORIZED SIGNATURE

Charles Stellmon, Quality Assurance Manager

11/23/21

DATE



Precision Pressure Instrumentation

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CERTIFICATION OF TRACEABILITY  
TO  
The SI and  
NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY

*Primary pressure and temperature standards used in the calibration and testing of Paroscientific DigiQuartz Models have traceability to the National Institute of Standards and Technology and to the SI through the following documentation.*

Bell and Howell Primary Pressure Standard:

Bell and Howell, Model 6-201-0001, Piston/Cylinder P2-919/C2-1523 via DH Calibration Report No. 15441, 16653 and 1500190591 traceable to NIST. Weight Set 1, P/N 6-002-0002, via DH Calibration Report No. 14481, 16654, 1284473284 and 1500190311 traceable to NIST. Weight Set 2, P/N 6-002-0002, via DH Calibration Report No. 31227, 39628, 68390, 1317389777, 1500156263, 1500195122 and 1500238176-1 traceable to NIST. Piston/Cylinder P2-652/C2-1378 via DH Instruments Calibration Report No. 31226, 39627, 68389, 1317739617, 1500156259, 1500195119 and 1500238176 traceable to NIST. Piston/Cylinder P1-231/C1-384 via DH Instruments Calibration Report No. 13170 and 1284475131 traceable to NIST. Piston/Cylinder P/N 6-201, No. P1-949/C1-922, via DH Instruments Calibration Report 17176 and 17445, traceable to NIST.

DH Primary Pressure Standard, Oil Operated Gauge:

DH Instruments, Model 5306, Piston/Cylinder S/N 3375, via DH Calibration Certificate Report No. 32354, 45306, 66563, 1305698573, 1500163455 and 1500217726 traceable to NIST and to the SI. Piston/Cylinder 3511 via DH Calibration Report No. 32353, 45307, 66562, 1305625084, 1500163363 and 1500217811 traceable to NIST and to the SI. Mass Set S/N 2032 via DH Calibration Report No. 45305, 45308, 1305538925, 1305530461, 150016339, 1500163394 and 1500217685 traceable to NIST and to the SI.

DH Primary Pressure Standard, Pneumatic Operated Gauge:

DH Instruments, Model 5203, Piston/Cylinder S/N 4845, via DH Calibration Certificate No. 38275, 1300177141, 1500162809 and 1500217494 traceable to NIST and to the SI. Mass Set S/N 2032/3293 via DH Calibration Certificate No. 45305, 1300200369, 1500162832 and 1500217766 traceable to NIST and to the SI.

DH Primary Pressure Standard, Pneumatic Operated Gauge:

DH instruments, Model PG7601 via DH Instruments Calibration No. 69127, 1500172365 and 1500278487 traceable to NIST. Piston/Cylinder S/N 305 via DH Instruments Calibration No. 69125, 1500172367, 1500278543 traceable to NIST. DH Instruments 35 kg Mass Set No. 2052 and Bell No. 261A via DH Instruments Calibration Report No. 69126, 69124, 1500172362, 1500172363, 1500277884 and 1500277905 traceable to NIST.

Hygroclip S3 MET4/4A Part number 1560-XXX and 1561-XXX:

Humidity and Temperature calibrations are traceable to NIST through Rotronic Instrument Corporation; 160 E. Main Street, Huntington, NY 11743.

Hygroclip HC2-S3 MET4/4A Part number 1563-XXX and 1564-XXX Swiss Calibration Service (SCS)

Humidity and Temperature calibrations are traceable to SCS through Rotronic AG Grindelstrasse 6 8303 Bassersdorf Phone: 044-838-1111 E-mail: info@rotronic.ch



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