



Guaranteed Effortless Control



October 21, 2019*

Drive Savers, Inc
400 Bel Marin Keys Blvd.
Novato, CA 94949

Environmental Testing was performed in the following cleanroom areas at
Drive Savers, Inc., on October 15th, 2019

AREA	CLASSIFICATION	SQ. FOOTAGE	RESULT
Cleanroom A	ISO Class 5	440	Compliant
Cleanroom B	ISO Class 5	630	Compliant

Measurements were made to determine airborne particle concentrations, airflow, velocities, and room differential air pressure.

All measurements are made in accordance with ISO 14644-1 2015, ISO 14644-2: 2015, or ISO 14644-3: 2005 applicable standards, methods, and practices currently in effect. By issuing this report, Advanced Cleanroom Microclean Corporation accepts full responsibility for the accuracy of measurements and reported results at the time the measurements are made. This report and original data on file shall remain proprietary to Drive Savers, Inc.

Measurements and data recording are made by Adriana Salvatierra.

Please feel free to call anytime if you have any questions regarding this report.

Sincerely,
ADVANCED CLEANROOM MICROCLEAR CORPORATION.

Saumolia Amisone



****This report is updated annually. Due to COVID, our security audit has been delayed. The evaluation is in process. This document will be updated as soon as possible in 2021. DriveSavers maintains the same data security processes it has had in place for the last twenty years.***

1 ACM Testing Parameters

1.1 Airborne Particle Count

PURPOSE: To measure the particle levels in the cleanroom in order to maintain compliance to ISO 14644-1:2015

INSTRUMENTATION: Discrete Particle Counter - Calibration documents on equipment used for certification are attached to the report.

PROCEDURES: Divide the Cleanroom work zone into grids of equal proportion. Place the particle counter probe into the direction of airflow at a working height of 36"-40" above floor level. Record and report data for each considered particle size for the designated classification.

Place the particle counter at the specified sampling location and set up the flow rate at 1.0 CFM for a minimum duration of one minute per location. Select the particle size threshold(s) in accordance with ISO 14644-1: 2015. The transit(sampling) tube from the sample probe inlet to the particle counter sensor should be as short as possible. For sampling of particles larger than and equal to 1 μ m, the transit tube length should not exceed the manufacturer's recommended length and diameter. This sampling procedure can be found in ISO 14644-3:2005 Annex B.

ACCEPTANCE: The average particle concentration at each sample location shall fall at or below class limit, and the total averages shall fall at or below the class limit.

1.2 Airborne Particulate Cleanliness Classes**ISO - 14644-1:2015**

CLASS	0.1 MICRON	0.2 MICRON	0.3 MICRON	0.5 MICRON	1.0 MICRON	5.0 MICRONS
ISO 1	10	-	-	-	-	-
ISO 2	100	24	10	-	-	-
ISO 3	1,000	237	102	35	-	-
ISO 4	10,000	2,370	1,020	352	83	-
ISO 5	100,000	23,700	10,200	3,520	832	-
ISO 6	1,000,000	237,000	102,000	35,200	8,320	293
ISO 7	-	-	-	352,000	83,200	2,930
ISO 8	-	-	-	3,520,000	832,000	29,300
ISO 9	-	-	-	35,200,000	8,320,000	293,000

AVERAGE, MEAN, STANDARD DEVIATION AND STANDARD ERROR:***AVERAGE PARTICLE CONCENTRATION:***

$$A = \frac{C_1 + C_2 + \dots + C_N}{N}$$

Where C_1, C_2, C_N = Individual particle counts
 N = Number of particle counts taken at each location.

MEAN OF AVERAGES:

$$M = \frac{A_1 + A_2 + \dots + A_N}{L}$$

Where A_1, A_2, \dots, A_N = Average particle concentrations at each location.
 L = Number of locations.

STANDARD DEVIATION:

$$SD = \sqrt{\frac{(A_1 - M)^2 + (A_2 - M)^2 \dots (A_N - M)^2}{L-1}}$$

Where A_1, A_2, \dots, A_N = Average particle concentrations at particular locations

M = Mean of Averages

L = Number of Locations

STANDARD ERROR:

$$SE = \frac{SD}{\sqrt{L}}$$

Where SD = Standard Deviation and L = Number of Locations

1.3 HEPA Filter Air Flow Velocity

PURPOSE: To determine the volume of air delivered through each HEPA filter and to calculate the average airflow and room air exchange rate, within the Cleanroom.

INSTRUMENTATION: A Digital Anemometer used in combination with a multi-point tube array - Calibration documents for equipment used for testing will be included in the certification reports.

PROCEDURES:

1. ISO 14644-3:2005 section B-4.3.3

Supply airflow rate calculated from filter face velocity

Evaluation of the supply airflow rate without a flowhood may be done with an anemometer downstream of each final filter. The supply airflow rate is determined from the airflow velocity multiplied by the area of exit. A curtain may be used to exclude disturbances to the unidirectional airflow.

For the number of measuring points and the calculation of supply airflow rate, refer to B.4.2.3 and B.4.2.4, respectively.

If it is impossible to divide the plane into grid cells of equal areas, the average air velocity weighted by area may be substituted.

2. ISO 14644-3:2005 section B.4.2.2

Supply airflow velocity

The airflow velocity should be measured at approximately 150 mm to 300 mm from the filter face. The number of measuring points should be sufficient to determine the supply airflow rate in cleanrooms and clean zones, and should be the square root of 10 times of area in square meters but no less than 4. At least one point should be measured for each filter outlet or fan-filter unit. A curtain may be used to exclude disturbances to the unidirectional airflow.

The measuring time at each position should be also sufficient to ensure a repeatable reading. Time-averaged values of measured velocities should be recorded for multiple locations.

3. ISO 14644-3:2005 B.4.2.4

Supply airflow rate measured by filter face velocity

The results of the airflow velocity test carried out in accordance with B.4.2.2 can be used to calculate the total supply airflow rate as follows:

$$Q = \sum(U_c \times A_c)$$

Q is the total airflow rate;

U_c is the airflow velocity at each cell centre;

A_c is the cell area which is defined as the installation area divided by the number of measuring points;

\sum is the summation for all cells.

ACCEPTANCE: The average airflow velocity or the average or total airflow volume for the cleanroom or clean zone should be within \pm of the value specified for the cleanroom or clean zone, or within other tolerance limits agreed upon by the buyer and seller.

1.4 Room Pressurization

PURPOSE: To verify that a differential pressure should be maintained between the rooms sufficient to assure airflow outward progressively from the cleanest spaces to the least clean during normal operation and during periods of temporary upsets in air balance, as when a door connecting two (2) rooms is suddenly opened.

INSTRUMENTATION: A Digital Anemometer - Calibration documents for equipment used in testing are included in certification report.

PROCEDURES: ISO 14644-3:2005 Section B.5.2 Procedure for air pressure difference test. It is advisable to confirm that the supply air volume and installation balancing are within specifications before commencing the measurement of differential pressure between rooms or between rooms and outside areas. With all doors closed, the pressure difference between the cleanroom and any surrounding environment should be measured and recorded. If the installation is subdivided into more than one cleanroom, the pressure differences between the innermost room and the next adjacent room should be measured. The measurement should be continued until the pressure difference between the last enclosure and surrounding ancillary environment and against the external environment is measured. The pressures being measured are very small and incorrect measurement techniques can easily give erroneous readings. The following should be considered:

- a) installation of permanent measuring points is recommended;
- b) take measurements as close a possible to the middle of the cleanroom and away from any supply air inlets or return air outlet devices which may influence the local pressure at the measuring point.

ACCEPTANCE: Pressurization and uniformity requirements are a matter for agreement between the buyer and the seller.

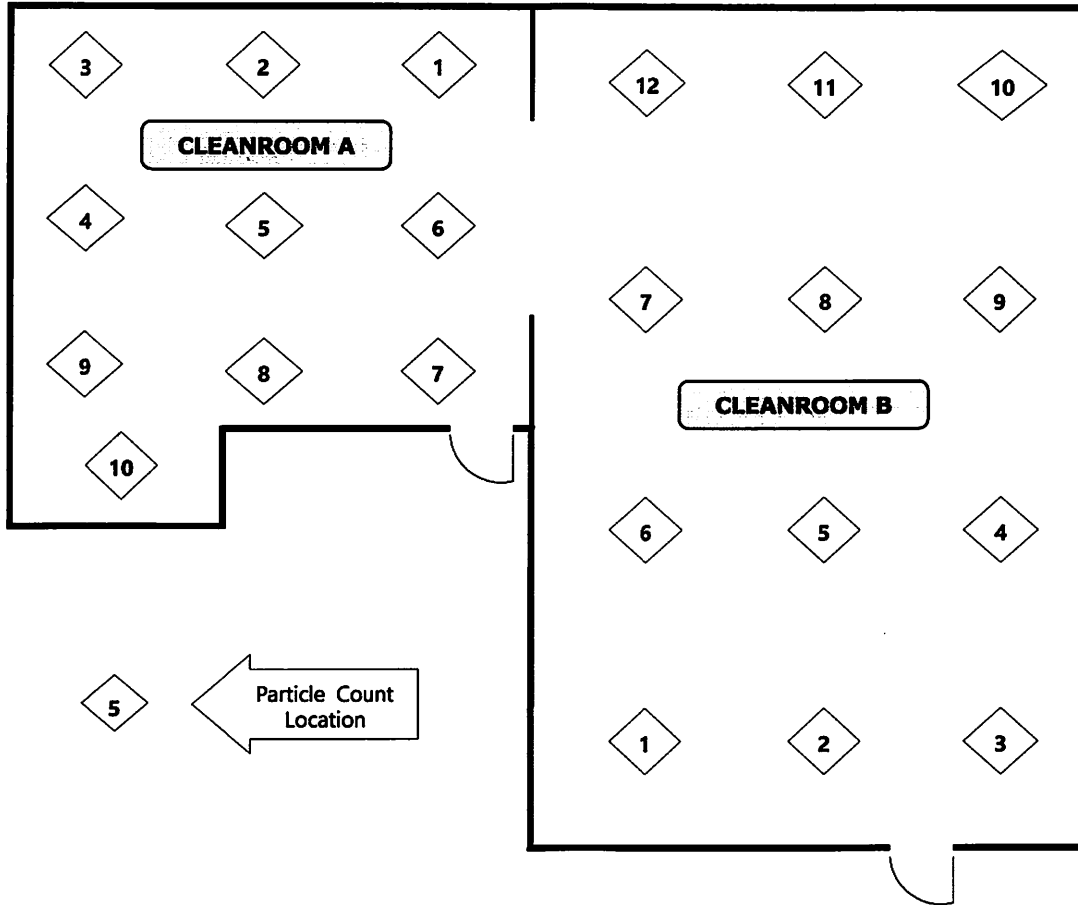
2 Equipment Calibration Summary

Type of Test	Manufacturer	Model	Serial	Cal. Due Date
<i>Non-Viable Particle Counts</i>	TSI/Alnor	9310-02	93101645002	11/14/2019
<i>Air Velocity/Volume</i>	Shortridge	ADM-860	M98485	12/07/2019
<i>Room Diff. Pressure</i>	Shortridge	ADM-860	M98485	12/07/2019
<i>Temperature & Humidity</i>	N/A	N/A	N/A	N/A
<i>Viable Air Sampling</i>	N/A	N/A	N/A	N/A

3 Report Content

Pages are organized by area. Each section may include a sketch of the Cleanroom showing particle count locations, particle count data, temperature, humidity, room air pressure and airflow data. The report sections conclude with summary data and statement of certification, followed by certificates of compliance.

CLEANROOM A & B PARTICLE COUNT SAMPLING LOCATION DIAGRAM



Initials BA Date 23 OCT 2019

CLEANROOM A AIRBORNE PARTICLE COUNT DATA

SAMPLE LOCATION (ISO Class 5)	0.5 MICRONS (Limit 3,520)	5.0 MICRONS (Limit N/A)
1	0	0
2	0	0
3	0	0
4	0	0
5	0	0
6	0	0
7	0	0
8	0	0
9	0	0
10	7	0
AVERAGE COUNT	0.7	0.0
STANDARD DEVIATION	2.2	0.0
STANDARD ERROR	0.7	0.0

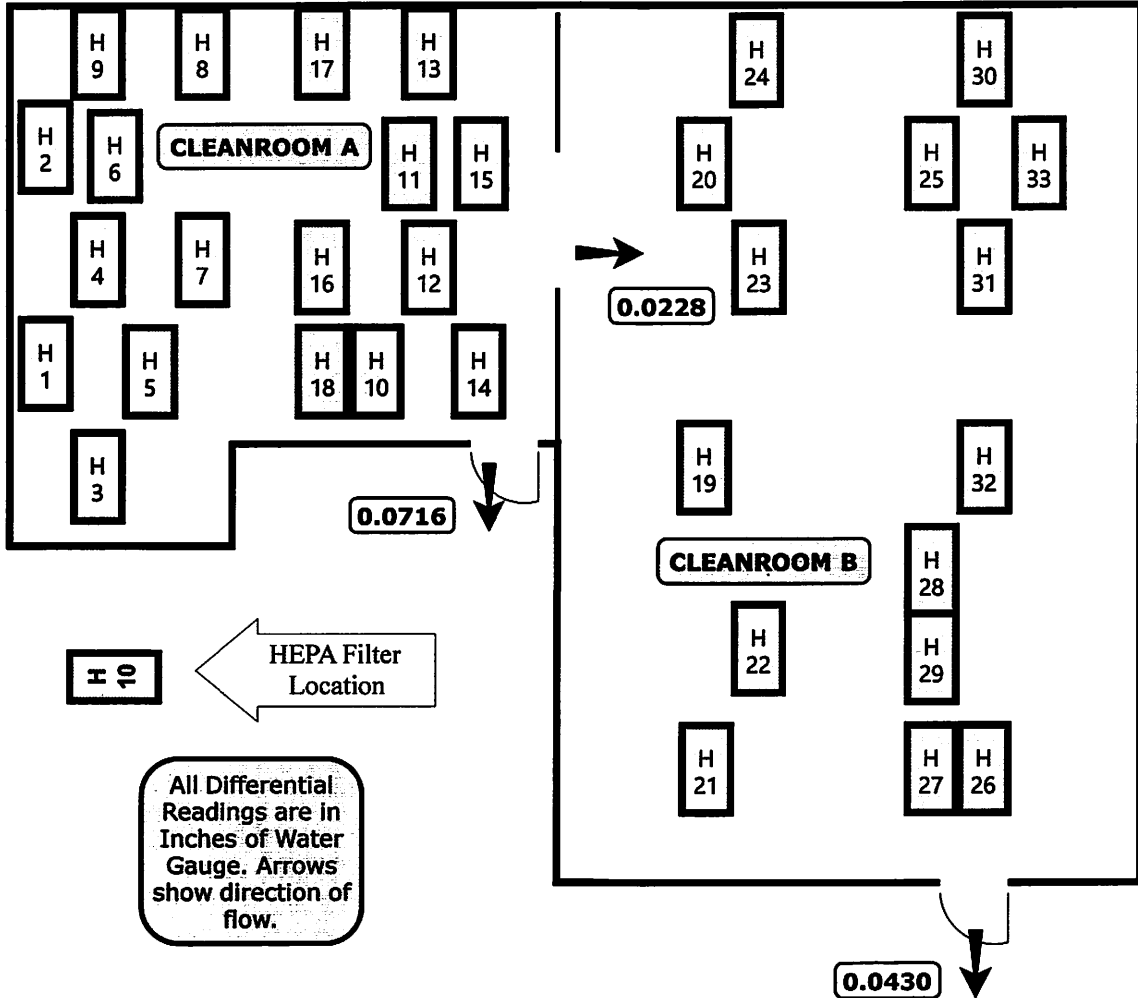
Initials BE Date 23 OCT 2019

CLEANROOM B AIRBORNE PARTICLE COUNT DATA

SAMPLE LOCATION (ISO Class 5)	0.5 MICRONS (Limit 3,520)	5.0 MICRONS (Limit N/A)
1	14	0
2	20	1
3	1	0
4	74	4
5	0	0
6	57	17
7	15	0
8	116	2
9	5	1
10	0	0
11	5	0
12	0	0
AVERAGE COUNT	25.6	2.1
STANDARD DEVIATION	37.2	4.9
STANDARD ERROR	10.7	1.4

Initials BE Date 23 OCT 2019

CLEANROOM A & B HEPA FILTER LOCATION DIAGRAM



Initials BE Date 23 Oct 2019

CLEANROOM A VELOCITY COUNT DATA

HEPA FILTER #	VELOCITY #1	VELOCITY #2	AVERAGE VELOCITY
1	81	95	88
2	67	95	81
3	100	130	115
4	101	120	111
5	137	130	134
6	117	128	123
7	131	138	135
8	126	93	110
9	125	79	102
10	108	134	121
11	125	130	128
12	133	136	135
13	138	85	112
14	137	138	138
15	135	136	136
16	0	0	0
17	127	117	122
18	120	112	116
AVERAGE AIRFLOW VELOCITY (fpm)			111.2
STANDARD DEVIATION			32.0
TOTAL AIR SUPPLIED (cfm)			13,813.8
APPROXIMATE ROOM VOLUME			3,740
THEORETICAL AIR CHANGES PER HOUR			221.6

Initials BE Date 23 OCT 2019

CLEANROOM A CERTIFICATE OF COMPLIANCE

Test Mode: Operational

Airflow Type: Non-Unidirectional

Test Date: 10/15/2019

Next Test Date: 10/2020

Class:

ISO 14644-1: 5 Limit at 0.5 μm = 3,520

CLEANROOM A Meets the Requirements Per ISO 14644-1 Class 5, at 0.5 μm
Particle Size.

Initials *bc* Date 23 Oct 2019

CLEANROOM B VELOCITY COUNT DATA

HEPA FILTER #	VELOCITY #1	VELOCITY #2	AVERAGE VELOCITY
19	128	127	128
20	144	115	130
22	138	133	136
23	127	130	129
24	123	102	113
25	107	135	121
26	110	102	106
27	125	131	128
28	128	139	134
29	117	131	124
30	155	160	158
31	92	127	110
32	122	133	128
33	127	132	130
AVERAGE AIRFLOW VELOCITY (fpm)			125.6
STANDARD DEVIATION			12.5
TOTAL AIR SUPPLIED (cfm)			12,999.6
APPROXIMATE ROOM VOLUME			5,355
THEORETICAL AIR CHANGES PER HOUR			145.7

Initials BE Date 23 OCT 2019

CLEANROOM B CERTIFICATE OF COMPLIANCE

Test Mode: Operational
Airflow Type: Non-Unidirectional
Test Date: 10/15/2019
Next Test Date: 10/2020

Class:
ISO 14644-1: 5 Limit at 0.5 μm = 3,520
CLEANROOM B Meet the Requirements Per ISO 14644-1 Class 5,
at 0.5 μm Particle Size.

Initials BCE Date 23 OCT 2019



CERTIFICATE OF CALIBRATION

TSI Incorporated, 500 Cardigan Road, Shoreview, MN 55126 USA
Tel: 1-800-874-2811 1-651-490-2811 Fax: 1-651-490-3824 <http://www.tsi.com>

ENVIRONMENT CONDITION		
TEMPERATURE	74.1 (23.4)	°F (°C)
RELATIVE HUMIDITY	25	%RH
BAROMETRIC PRESSURE	29.25 (990.5)	inHg (hPa)

MODEL	9310-02
SERIAL NUMBER	93101645002
CUSTOMER INST ID	

<input type="checkbox"/> AS LEFT	<input checked="" type="checkbox"/> IN TOLERANCE
<input checked="" type="checkbox"/> AS FOUND	<input type="checkbox"/> OUT OF TOLERANCE

AEROtrak CALIBRATION KIT			
MEASUREMENT VARIABLE	SYSTEM ID	DATE LAST CALIBRATED	CALIBRATION DUE DATE
7201-02F	E004434	10-02-2018	04-30-2019
FLOW METER	E005682	05-15-2018	05-31-2019

PARTICLE STANDARDS				
PARTICLE SIZE	STANDARD UNCERTAINTY	STANDARD DEVIATION	LOT NO.	EXPIRATION DATE
0.303 µm	0.003 µm	0.0047 µm	174664	10/31/2019
0.508 µm	0.004 µm	0.0085 µm	185892	6/30/2020
0.994 µm	0.0075 µm	0.010 µm	193291	1/31/2021
2.92 µm	0.015 µm	0.03 µm	181443	2/28/2020
5.020 µm	0.015 µm	0.06 µm	179268	1/31/2020
9.850 µm	0.03 µm	0.13 µm	196944	4/30/2021

TSI does hereby certify that the calibration performed on the above described instrument meets the requirements of ISO 21501-4. TSI does hereby certify that the above described instrument conforms to the original manufacturer's specification (not applicable to As Found data) and has been calibrated using standards whose accuracies are traceable to the United States National Institute of Standards and Technology (NIST) or has been verified with respect to instrumentation whose accuracy is traceable to NIST, or is derived from accepted values of physical constants. TSI is registered to ISO-9001:2015.

Charles Traore
VERIFIED

November 14, 2018
DATE



CERTIFICATE OF CALIBRATION

TSI Incorporated, 500 Cardigan Road, Shoreview, MN 55126 USA
 Tel: 1-800-874-2811 1-651-490-2811 Fax: 1-651-490-3824 http://www.tsi.com

SIZE CALIBRATION AND VERIFICATION OF SIZE SETTING

NOMINAL PARTICLE SIZE	GAIN STAGE	PREVIOUS DIGITAL CUTPOINT	AS FOUND DIGITAL CUTPOINT	MEASURED PARTICLE SIZE	SIZE ERROR	ALLOWABLE RANGE	PASS/FAIL	EXPANDED UNCERTAINTY
0.3 µm	A	130	130	0.30 µm	0.0%	± 10%	Pass	4.1%
0.5 µm	A	1012	1012	0.50 µm	0.0%	± 10%	Pass	3.9%
1 µm	A	3180	3180	1.00 µm	0.0%	± 10%	Pass	3.9%
3 µm	B	1370	1370	3.00 µm	0.0%	± 10%	Pass	3.7%
5 µm	B	3582	3582	5.00 µm	0.0%	± 10%	Pass	3.6%
10 µm	B	12000	12000	10.00 µm	0.0%	± 10%	Pass	3.6%

COUNTING EFFICIENCY

PARTICLE SIZE	ACTUAL	ALLOWABLE RANGE	PASS/FAIL
0.3 µm	54%	50% ± 20%	Pass
0.5 µm	95%	100% ± 10%	Pass

SIZE RESOLUTION

PARTICLE SIZE	MEASURED	ALLOWABLE RANGE	PASS/FAIL
0.5 µm	5.7%	≤15%	Pass

FALSE COUNT RATE

SAMPLE TIME (MIN)	SAMPLED (L)	MEASURED COUNTS (#)	CONCENTRATION (#/M ³)	95% UCL (#/M ³)	ALLOWABLE RANGE (#/M ³)	PASS/FAIL
30	849	0	0.00	3.5	≤7.1	Pass

SAMPLING FLOW RATE (L/MIN)

NOMINAL	ACTUAL	ERROR	ALLOWABLE RANGE	PASS/FAIL
28.3	28.3	0.0%	± 5%	Pass

SAMPLING TIME †

MEASURED	ALLOWABLE RANGE	PASS/FAIL
< ± 0.1%	± 1%	Pass

RESPONSE RATE †

MEASURED	ALLOWABLE RANGE	PASS/FAIL
0.0006%	≤ 0.5%	Pass

MAXIMUM PARTICLE CONCENTRATION †

29000000 #/m³ @10% Coincidence Loss

† Tested and verified during product development



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Tel: 1-800-874-2811 1-651-490-2811 Fax: 1-651-490-3824 http://www.tsi.com

ENVIRONMENT CONDITION		
TEMPERATURE	74.1 (23.4)	°F (°C)
RELATIVE HUMIDITY	25	%RH
BAROMETRIC PRESSURE	29.25 (990.5)	inHg (hPa)

MODEL	9310-02
SERIAL NUMBER	93101645002
CUSTOMER INST ID	

<input checked="" type="checkbox"/> AS LEFT	<input checked="" type="checkbox"/> IN TOLERANCE
<input type="checkbox"/> AS FOUND	<input type="checkbox"/> OUT OF TOLERANCE

AEROTrak CALIBRATION KIT			
MEASUREMENT VARIABLE	SYSTEM ID	DATE LAST CALIBRATED	CALIBRATION DUE DATE
7201-02F	E004434	10-02-2018	04-30-2019
FLOW METER	E005682	05-15-2018	05-31-2019

PARTICLE STANDARDS				
PARTICLE SIZE	STANDARD UNCERTAINTY	STANDARD DEVIATION	LOT NO.	EXPIRATION DATE
0.303 µm	0.003 µm	0.0047 µm	174664	10/31/2019
0.508 µm	0.004 µm	0.0085 µm	185892	6/30/2020
0.994 µm	0.0075 µm	0.010 µm	193291	1/31/2021
2.92 µm	0.015 µm	0.03 µm	181443	2/28/2020
5.020 µm	0.015 µm	0.06 µm	179268	1/31/2020
9.850 µm	0.03 µm	0.13 µm	196944	4/30/2021

TSI does hereby certify that the calibration performed on the above described instrument meets the requirements of ISO 21501-4. TSI does hereby certify that the above described instrument conforms to the original manufacturer's specification (not applicable to As Found data) and has been calibrated using standards whose accuracies are traceable to the United States National Institute of Standards and Technology (NIST) or has been verified with respect to instrumentation whose accuracy is traceable to NIST, or is derived from accepted values of physical constants. TSI is registered to ISO-9001:2015.

Charles Travers
CALIBRATED

November 14, 2018
DATE



CERTIFICATE OF CALIBRATION

TSI Incorporated, 500 Cardigan Road, Shoreview, MN 55126 USA
 Tel: 1-800-874-2811 1-651-490-2811 Fax: 1-651-490-3824 <http://www.tsi.com>

SIZE CALIBRATION AND VERIFICATION OF SIZE SETTING

NOMINAL PARTICLE SIZE	GAIN STAGE	DIGITAL CUTPOINT	EXPANDED UNCERTAINTY
0.3 μm	A	130	4.1%
0.5 μm	A	1012	3.9%
1 μm	A	3180	3.9%
3 μm	B	1370	3.7%
5 μm	B	3582	3.6%
10 μm	B	12000	3.6%

COUNTING EFFICIENCY

PARTICLE SIZE	ACTUAL	ALLOWABLE RANGE	PASS/FAIL
0.3 μm	54%	50% \pm 20%	Pass
0.5 μm	95%	100% \pm 10%	Pass

SIZE RESOLUTION

PARTICLE SIZE	MEASURED	ALLOWABLE RANGE	PASS/FAIL
0.5 μm	5.7%	\leq 15%	Pass

FALSE COUNT RATE

SAMPLE TIME (MIN)	SAMPLED (L)	MEASURED COUNTS (#)	CONCENTRATION ($\#/M^3$)	95% UCL ($\#/M^3$)	ALLOWABLE RANGE ($\#/M^3$)	PASS/FAIL
30	849	0	0.00	3.5	\leq 7.1	Pass

SAMPLING FLOW RATE (L/MIN)

NOMINAL	ACTUAL	ERROR	ALLOWABLE RANGE	PASS/FAIL
28.3	28.3	0.0 %	\pm 5%	Pass

SAMPLING TIME †

MEASURED	ALLOWABLE RANGE	PASS/FAIL
$< \pm$ 0.1%	\pm 1%	Pass

RESPONSE RATE †

MEASURED	ALLOWABLE RANGE	PASS/FAIL
0.0006%	\leq 0.5%	Pass

MAXIMUM PARTICLE CONCENTRATION †

29000000 $\#/m^3$ @10% Coincidence Loss

† Tested and verified during product development

CALIBRATION INTERVAL

CALIBRATION DATE	EXPIRATION DATE
November 14, 2018	November 14, 2019

PME Services, Inc.

1584 N. Batavia Suite 1
Orange, CA 92867
Phone: (714) 418-1444

Calibration Report



ACM (9519)

3250 S. Susan St. Suite A
Santa Ana, CA 92704

Asset Number: 1716701
Manufacturer: Shortridge Instruments Inc
Model Number: ADM-860
Description: Airdata Multimeter
Serial Number: M98485
Cal. Procedure: 33K6-4-1769-1
PO Number: PO

Ambient Temperature: 69° F
Ambient Humidity: 42% RH
Condition As Found: In Tolerance
Condition As Left: In Tolerance - No Adjustment
Calibration Date: 12/07/2018
Calibration Due Date: 12/07/2019
Calibration Interval: 12 Months

Remarks:

Calibrated by Dick Munns Company.

Calibration Performed By:			Quality Reviewer:	
Brown, Brandy M <i>BB</i>	Metrologist	714-418-1444	<i>[Signature]</i>	12/18/18
Name	Title	Phone	Name	Date

All instruments used in this calibration are traceable to the International System of Unit (SI), through a recognized National Metrology Institute (NMI) such as the National Institute of Standards and Technology (NIST), a natural physical constant, or ratiometric techniques, and were performed in accordance with ISO17025:2005. This Report may not be reproduced, except in full, without written permission of PME Services, Inc. The results stated in this certificate relate only to the item(s) calibrated.



CERTIFICATE OF CALIBRATION

CUSTOMER:	PRECISION MEASUREMENT EQUIPMENT : ORANGE, CA	CALIBRATION DATE:	12/07/2018
PO NUMBER:	B5397-7897	CALIBRATION DUE:	12/07/2019
INST. MANUFACTURER:	SHORTRIDGE	PROCEDURE:	NAVAIR 17-20MG-02
INST. DESCRIPTION:	AIR DATA MULTIMETER	CALIBRATION FLUID:	AIR @ 14.7 PSI 70°F
MODEL NUMBER:	ADM 860	RECEIVED CONDITIONS:	WITHIN MFG SPECS
SERIAL NUMBER:	M98485	LEFT CONDITIONS:	WITHIN MFG SPECS
RATED UNCERTAINTY:	SEE NOTES**	AMBIENT CONDITIONS:	759mmHGA 48% RH 70°F
UNCERTAINTY GIVEN:	± 0.796% RD K=2	CERTIFICATE FILE #:	452601.2018
NOTES:	VEL: ± 3% RD + ±7 FT/MIN PRESS: ± 2% RD; ± .01" H2O VEL ±3% + ±7 FT/MIN TEMP: ± 0.5 °F		

CALIBRATED WITH DMC ACCESORIES

AIRFOIL	DM STD	GRID	DM STD.	ADM 860	DM STD.
INDICATED	ACTUAL	INDICATED	ACTUAL	INDICATED	ACTUAL
FT/MIN	FT/MIN	FT/MIN	FT/MIN	"H2O	"H2O
108	109	81	81	0.00	0.000
512	513	105	106	5.11	5.114
1035	1038	239	241	10.48	10.490
1486	1494	518	522	20.33	20.364
2571	2588	1066	1075	40.81	40.940
4996	5037	1492	1508	60.15	60.403
	UUT IND.	DM STD.	UUT	DM STD	
	PITOT	ACTUAL	IND.	ACTUAL	
	FT/MIN	FT/MIN	°F	°F	
	2591	2606	70.1	70.4	
	6138	6182	99.3	99.6	

STANDARDS USED:

A220: 12" WIND TUNNEL 0 - 8000 FPM CMC ± .203% RD TRACE# 1520423238	DUE	05/23/2019
A24: HART SCIENTIFIC TEMP. STANDARD ± .024 F TRACE# 1520423238	DUE	03/07/2019
A321: CEC PRESSURE STD. 0 - 600 PSI ± .011% RD TRACE# 1520349429 1519224431	DUE	04/02/2019

All instruments used in the performance of the shown calibration have traceability to the National Institute of Standards and Technology (NIST). The uncertainty ratio between the calibration standards (DM.STD.) used and the unit under test (UUT) is a minimum of 4:1, unless otherwise noted. Calibration has been performed per the shown procedure number, in accordance with ISO 10012:2003, ISO 17025:2005, ANSI/NCSL-Z-540.3, and/or MIL-STD-45662A. Test methods: API2530-92 & ASME MFC-3M-1989.

Dick Munns Company • 11133 Winners Circle • Los Alamitos, CA 90720
Phone (714) 827-1215

This Calibration Certificate shall not be reproduced, except in full, without approval by DICK MUNN'S COMPANY. The data shown applies only to the instrument being calibrated and under the stated conditions of calibration.

Date:

Approved By:

Calibration Technician:

12/7/2018

D.C.