Critical Environment Control
1201 North Catalina Ave. #818
Redondo Beach, CA 90277
(310) 372-5011 **FAX** (866) 882-7457
John@ceccertify.com

Classification of Air Cleanliness

Company	Test Specification	Date of Certification
Circor Aerospace Inc 2301 Wardlow Circle Corona, CA 91720	ISO 14644-1 (2015-12-15)	July 12, 2018
	Test Area	**Next Scheduled Test**
	Cleanroom 1	July 15, 2019

Designation Criterion for Cleanrooms in this Test Area

ISO Class 7: Considered Size: 0.5 µm (352,000 particles/m3)

Facility	M^3 0.5 µm	M^3 5.0 µm	Relative Humidity	Temperature	Certification	Occupancy State
Cleanroom 1	1,246	45	65.9%	68.1	ISO Class 7	Operational

This ISO Class Certification compares the results of this test to maximum concentrations delineated in Table 1, ISO 14644-1. The number of test samples taken are pursuant to A.4.1. One sample test is taken at each test location. The cleanrom is deemed to have met the Specified ISO Class if the number of particles/cubic meter at each sample location does not exceed the limits delineated in Table 1 (A.6.2.1)

Testing was performed with a Climet Instruments Airborne Particle Counter. This instrument is calibrated at manufacturers recommended intervals. This instrument has been calibrated in accordance with ISO 10012-1 and ANSI Z540-1 (Which replaces MIL-STD-45662A). Calibration traceability to a National Measurement Standard (NMS) is established by using mono-disperse latex spheres as a calibration standard. These spheres are sized by methods traceable, by lot number, to the National Institute of Standards and Technology.

All Particle Counters have a current calibration decal and / or evidence of calibration on the instrument display. A copy of the Calibration Certificate will be provided to you on request.

Critical Environment Control certifies that the test results recorded on this document are accurate as of the time of this test. Critical Environment Control hereby certifies that the above described systems met the acceptance criterion for the Air Cleanliness Classes delineated above.

Critical Environment Control

Critical Environment Control
1201 North Catalina Ave. #818
Redondo Beach, CA 90277
(310) 372-5011 **FAX** (866) 882-7457
John@ceccertify.com

Classification of Air Cleanliness

Company
Circor Aerospace Inc
2301 Wardlow Circle
Corona, CA 91720

Test Specification
ISO 14644-1 (2015-12-15)
Test Area
Laminar Flow Bench

Date of Certification
July 12, 2018
Next Scheduled Test
July 15, 2019

Designation Criterion for Flow Benches

ISO Class 5: Considered Size: 0.5 µm (Maximun 3,520 particles/m^3)

Location	Bench #	M^3 0.5 µm	M^3 5.0 µm	Velocity	Certification
Manufacturing Area	2	424	35	70	ISO Class 5

This ISO Class Certification compares the results of this test to maximum concentrations delineated in Table 1, ISO 14644-1. The number of test samples taken are pursuant to A.4.1. One sample test is taken at each test location. The cleanrom is deemed to have met the Specified ISO Class if the number of particles/cubic meter at each sample location does not exceed the limits delineated in Table 1 (A.6.2.1)

Testing was performed with a Climet Instruments Airborne Particle Counter. This instrument is calibrated at manufacturers recommended intervals. This instrument has been calibrated in accordance with ISO 10012-1 and ANSI Z540-1 (Which replaces MIL-STD-45662A). Calibration traceability to a National Measurement Standard (NMS) is established by using mono-disperse latex spheres as a calibration standard. These spheres are sized by methods traceable, by lot number, to the National Institute of Standards and Technology.

All Particle Counters have a current calibration decal and / or evidence of calibration on the instrument display. A copy of the Calibration Certificate will be provided to you on request.

Critical Environment Control certifies that the test results recorded on this document are accurate as of the time of this test. Critical Environment Control hereby certifies that the above described systems met the acceptance criterion for the Air Cleanliness Classes delineated above.

Critical Environment Control

Critical Environment Control
Test Results

Company

Area Tested

Test Specifications

ISO Class Designation	ISO Class 7	Samples / Test Point	1
Considered Particel Size	0.5µm	Airflow Rate (Liters / Minute)	28.3
Maximum Particles / M^3	352,000	Minimum Sample (Liters)	0.057
Number of Test Points	14	Actual Sample (Liters)	28

Test Data

Date Tested:	07/12/2018	Occupancy State:	Operational
Next Test:	07/15/2019	People in Rm:	2
Time of Test:	8:13 AM	Room Size:	39 M^2

Test Point	28.3 L 0.5µm	M^3 0.5µm		28 L 5.0µm	M^3 5.0µm	RH	Temperature F^o
1	27	953	Pass	3	106	66%	69
2	55	1,942	Pass	5	177	67%	69
3	20	706	Pass	0	0	68%	69
4	15	530	Pass	1	35	68%	69
5	27	953	Pass	2	71	66%	69
6	13	459	Pass	1	35	62%	69
7	4	141	Pass	0	0	61%	69
8	70	2,471	Pass	3	106	63%	67
9	73	2,577	Pass	0	0	66%	67
10	27	953	Pass	1	35	70%	69
11	55	1,942	Pass	1	35	71%	68
12	39	1,377	Pass	0	0	70%	68
13	21	741	Pass	0	0	68%	64
14	48	1,694	Pass	1	35	57%	68

Test Results

0.5µm M^3 Average	5.0µm M^3 Average	RH	Temperature F^0	Certification	Occupancy State
1,246	45	66%	68	ISO Class 7	Operational

Critical Environment Control
Test Results

Test Specifications

ISO Class Designation	ISO Class 5	Samples / Test Point	1
Considered Particel Siz	0.5µm	Airflow Rate (Liters / Minute)	28.3
Maximum Particles / M^3	3,520	Minimum Sample Volume, (Liters	5.682
Number of Test Points	2	Actual Sample Volume, (Liters)	28.3

Test Data

Date Tested: 07/12/2018 Next Test: 07/15/2019

Bench #

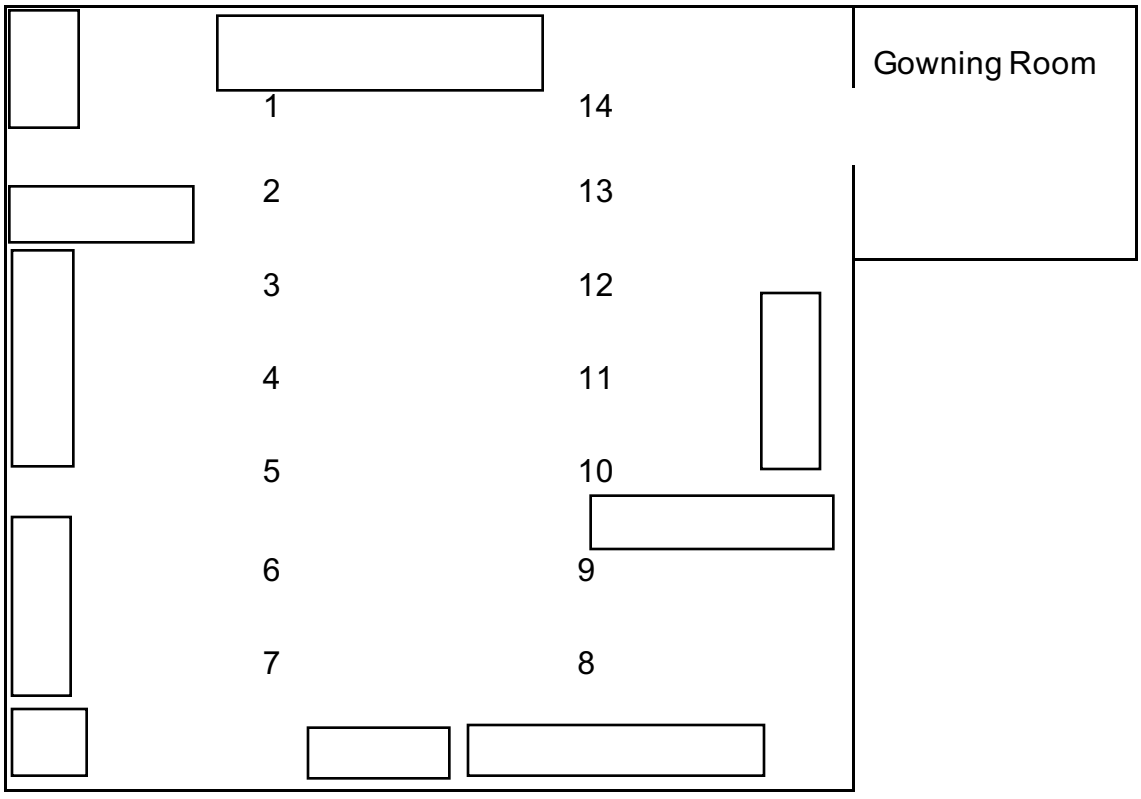
Test Point	28.3 L 0.5µm	M^3 0.5µm		28 L 5.0µm	M^3 5.0µm	Velocity
1	18	635	***Pass***	0	0	70
2	6	212	***Pass***	2	71	70

Test Results

0.5µm M^3 Average	5.0µm M^3 Average	Velocity FPM	Certification
424	35	70	ISO Class 5

Critical Environment Control

Particle Count Location Map



Circor Aerospace Inc
2301 Wardlow Circle
Corona, CA 91718

Reference: CR #1