

# ENVIRONMENTAL CONTROL STANDARDS FOR MANUFACTURING

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NaviFloor Robotics, Inc.

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### 1. PURPOSE AND SCOPE

1. This Environmental Control Standards document ("Standards") establishes the minimum environmental requirements for all manufacturing facilities.
2. These Standards apply to all Company manufacturing facilities, including but not limited to:

## **2. DEFINITIONS**

1. "Controlled Environment" means any area within Company facilities
2. "Environmental Parameters" include temperature, humidity, particu
3. "Critical Components" refers to LiDAR sensors, depth-sensing arra

## **3. ENVIRONMENTAL CONTROL REQUIREMENTS**

1. Temperature Control
  - a) Assembly Areas: 20 C ± 2 C (68 F ± 3.6 F)
  - b) Testing Facilities: 22 C ± 1 C (71.6 F ± 1.8 F)
  - c) Component Storage: 18 C to 24 C (64.4 F to 75.2 F)

## 2. Humidity Control

- a) Assembly Areas: 45% ± 5% RH
- b) Testing Facilities: 40% ± 3% RH
- c) Component Storage: 30% to 50% RH

## 3. Particulate Control

- a) Clean Room Classification: ISO Class 7 (10,000)
- b) Maximum Particle Counts:

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0.5 m: 352,000 particles/m

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5.0 m: 2,930 particles/m

## 4. Static Control

- a) ESD-protected workstations required for all electronic component h

- b) Maximum allowable static discharge: 100V
- c) Mandatory use of ESD wrist straps and conductive flooring

## **4. MONITORING AND DOCUMENTATION**

### **1. Environmental Parameter Monitoring**

- a) Continuous monitoring via calibrated environmental sensors
- b) Data logging at 5-minute intervals
- c) Monthly calibration of all monitoring equipment

### **2. Documentation Requirements**

- a) Daily environmental parameter logs
- b) Weekly compliance reports
- c) Monthly calibration certificates

- d) Quarterly trend analysis reports

## **5. COMPLIANCE AND CORRECTIVE ACTIONS**

### **1. Parameter Deviation Response**

- a) Immediate notification to facility manager for out-of-spec conditions
- b) Production halt if parameters exceed critical thresholds
- c) Documentation of all deviation incidents

### **2. Corrective Action Procedures**

- a) Investigation of root cause
- b) Implementation of corrective measures
- c) Verification of effectiveness
- d) Documentation of actions taken

## **6. TRAINING AND CERTIFICATION**

### **1. Required Training**

- a) Initial environmental control training for all manufacturing personnel
- b) Annual refresher training
- c) Specific training for environmental monitoring staff

### **2. Certification Requirements**

- a) Environmental control system operators
- b) Monitoring equipment calibration personnel
- c) Clean room supervisors

## **7. AUDIT AND REVIEW**

#### 1. Internal Audits

- a) Quarterly environmental control audits
- b) Monthly compliance reviews
- c) Documentation review and verification

#### 2. External Audits

- a) Annual third-party certification
- b) Regulatory compliance verification
- c) ISO 14001 conformity assessment

## **8. RESPONSIBILITY AND AUTHORITY**

- 1. The Director of Manufacturing Operations shall have primary responsibility for the implementation and maintenance of the Environmental Control System.
- 2. The Environmental Control Manager shall oversee daily monitoring and reporting of environmental control activities.

3. The Quality Assurance Department shall conduct regular audits and

## **9. AMENDMENTS AND UPDATES**

1. These Standards shall be reviewed annually and updated as neces

- a) Regulatory requirements
- b) Manufacturing processes
- c) Technology advances
- d) Industry best practices

## **10. APPROVAL AND EXECUTION**

APPROVED AND ADOPTED this 15th day of January, 2024.

NAVIFLOOR ROBOTICS, INC.



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