OPERATIONS DOCUMENT 379

STANDARD OPERATING PROCEDURES FOR AUTONOMOUS MOBILE ROBOT DEPLOYMENT AND MAINTENANCE

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1. PURPOSE AND SCOPE

1. This Operations Document ("Document") establishes binding operational procedures and protocols for the deployment, maintenance, and decommissioning of Polar Dynamics Robotics, Inc. ("Company") autonomous mobile robots ("AMRs") in temperature-controlled environments.

2. This Document applies to all Company personnel involved in AMR operations, including but not limited to field technicians, deployment specialists, maintenance engineers, and operational supervisors.

2. DEFINITIONS

1. "IceNav System" means the Company's proprietary cold-environment navigation and operation platform.

2. "Critical Operating Temperature" means any ambient temperature below -30 C (-22 F).

3. "Deployment Zone" means any customer facility where Company AMRs are installed and operational.

4. "Thermal Management Protocol" or "TMP" means the Company's standardized procedures for maintaining optimal AMR operating temperatures.

3. DEPLOYMENT PROCEDURES

1. Pre-Deployment Assessment

a) Conduct comprehensive site survey including thermal mapping

b) Verify facility compliance with Company's Technical Specification Document 284

c) Document all thermal transition zones and temperature gradients

d) Validate IceNav System compatibility with facility layout

2. Installation Requirements

a) Follow Company's Cold Environment Installation Protocol (CEIP-2023)

b) Calibrate thermal sensors according to Specification Sheet 47-B

c) Install redundant emergency stop systems at prescribed intervals

d) Verify charging station thermal management systems

4. MAINTENANCE PROTOCOLS

1. Scheduled Maintenance

a) Perform weekly diagnostic scans of IceNav System

b) Conduct monthly actuator stress tests

c) Calibrate thermal management systems quarterly

d) Replace cold-environment lubricants per Schedule A

2. Emergency Maintenance

a) Response time requirements per Service Level Agreement

b) Emergency shutdown procedures per Safety Protocol 89-C

c) Thermal event response procedures per Emergency Response Plan

5. SAFETY AND COMPLIANCE

1. All maintenance and deployment activities shall comply with:

a) OSHA regulations for automated industrial equipment

b) Company's Cold Environment Safety Standards

c) Customer facility safety requirements

d) Applicable state and federal regulations

2. Required Safety Equipment

a) Cold-environment personal protective equipment

b) Emergency override devices

c) Thermal monitoring equipment

d) Safety certification documentation

6. QUALITY CONTROL

1. Performance Monitoring

a) Daily operational metrics collection

b) Weekly performance analysis

c) Monthly efficiency reporting

d) Quarterly system optimization

2. Documentation Requirements

a) Maintenance logs

b) Incident reports

c) Performance data

d) Compliance certificates

7. LIABILITY AND INDEMNIFICATION

1. The Company shall not be liable for:

a) Unauthorized modifications to AMR systems

b) Operation outside specified parameters

c) Failure to follow maintenance schedules

d) Damage resulting from facility conditions outside specifications

2. Customer shall indemnify Company for:

a) Unauthorized access to AMR systems

b) Violations of operating procedures

c) Failure to maintain facility conditions

d) Non-compliance with safety protocols

8. CONFIDENTIALITY

1. All technical specifications, procedures, and protocols contained herein are confidential and proprietary to Polar Dynamics Robotics, Inc.

2. Disclosure of this information to unauthorized parties is strictly prohibited.

9. AMENDMENTS AND UPDATES

1. This Document may be amended by the Company's Operations Department with approval from Legal and Engineering.

2. Updates will be distributed electronically to all relevant personnel.

EXECUTION

IN WITNESS WHEREOF, the undersigned acknowledges and agrees to comply with all procedures and protocols set forth in this Document.

POLAR DYNAMICS ROBOTICS, INC.

By:

Name: Sarah Nordstrom

Title: Chief Operating Officer

Date:

APPROVED BY:

Dr. James Barrett

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