

PDR-OPS-036 COLD STORAGE FACILITY LAYOUT STANDARDS

PDR-OPS-036 COLD STORAGE FACILITY LA

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Document Classification: CONFIDENTIAL

Document Owner: Operations Department

1. PURPOSE AND SCOPE

1. This document establishes the mandatory facility layout standards .
2. These standards apply to all facilities utilizing PDR's BlueCore(TM)

2. DEFINITIONS

1. "Cold Storage Environment" means any controlled temperature space.
2. "Navigation Zone" means designated pathways and operational areas.
3. "Charging Station" means PDR-approved cold-resistant charging infrastructure.
4. "Safety Perimeter" means the minimum required clearance around equipment.

3. FACILITY LAYOUT REQUIREMENTS

1. ****Navigation Zone Specifications****
 - a) Minimum aisle width: 2.4 meters (8 feet)
 - b) Minimum ceiling height: 3.6 meters (12 feet)

- c) Floor surface: Non-slip, crack-free concrete with maximum 2% grade
- d) Navigation zone markings: High-contrast, retroreflective material conforming to PDR specification PS-201

2. ****Charging Station Requirements****

- a) Minimum spacing between stations: 1.8 meters (6 feet)
- b) Power requirements: 480V, 3-phase dedicated circuit
- c) Emergency shutoff access: Within 3 meters of each station
- d) Temperature monitoring sensors: PDR-approved model TS-450 or equivalent

3. ****Safety Perimeter Standards****

- a) Human workspace separation: Minimum 1.2 meters (4 feet)
- b) Emergency exit clearance: 2.4 meters (8 feet)
- c) Visual barriers: PDR-approved high-visibility markers at 3-meter intervals

4. ENVIRONMENTAL CONTROLS

1. **Temperature Monitoring**

- a) Maximum temperature variation: 2 C
- b) Temperature sensors: Minimum one per 500 square meters
- c) Monitoring system integration with PDR BlueCore(TM) platform

2. **Humidity Control**

- a) Relative humidity range: 45-65%
- b) Anti-condensation measures on all electrical components
- c) Moisture barriers at facility entry/exit points

5. SAFETY AND COMPLIANCE

1. ****Emergency Systems****

- a) Emergency stop buttons: Maximum 15 meters apart
- b) Audio/visual warning systems at zone intersections
- c) Backup power for critical systems: Minimum 30 minutes

2. ****Regulatory Compliance****

- a) OSHA cold storage workplace standards
- b) FDA food storage requirements (where applicable)
- c) Local building codes and safety regulations

6. IMPLEMENTATION AND VERIFICATION

- 1. Facility layout modifications must be reviewed and approved by PD
- 2. Pre-operation verification checklist must be completed and signed by

3. Quarterly compliance audits required for continued warranty coverage

7. MAINTENANCE AND UPDATES

1. Layout standards must be reviewed annually and updated as needed
2. Facility modifications affecting robot operations require minimum 30
3. Emergency modifications must be approved by PDR technical support

8. DISCLAIMER AND LIABILITY

1. These standards represent minimum requirements. Additional safety
2. Compliance with these standards does not guarantee safety or performance

3. PDR reserves the right to modify these standards without prior notice.

9. DOCUMENT CONTROL

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APPROVAL

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