

AMR-200 MANUFACTURING COST ANALYSIS

AMR-200 MANUFACTURING COST ANALYSIS

CONFIDENTIAL AND PROPRIETARY

NaviFloor Robotics, Inc.

Document Reference: MCA-2024-001

Date: January 11, 2024

1. EXECUTIVE SUMMARY

This Manufacturing Cost Analysis details the component-level costs, assembly requirements, and total manufacturing expenses for the AMR-200 autonomous mobile robot.

robot platform. This document is confidential and proprietary to NaviFloor Robotics, Inc. ("Company") and is subject to the terms of the Confidentiality Agreement dated [DATE].

2. PRODUCT SPECIFICATIONS

-

1. The AMR-200 autonomous mobile robot consists of:

-

Proprietary terrain-mapping navigation system

-

Dual LiDAR sensor arrays

-

Multi-surface adaptive drive system

-

On-board computing module

-

Power management system

-

Safety compliance systems

-

2. Manufacturing Classification: Class II Industrial Automation Equipment

-

3. Production Location: Fremont, California Manufacturing Facility

-

4. Annual Production Target: 1,200 units

3. DIRECT MATERIAL COSTS

- - 3 -

1. Core Components

-

Navigation Computer Module: \$2,850/unit

-

LiDAR Sensor Array (2x): \$1,975/unit

-

Motor Assembly: \$1,450/unit

-

Battery System: \$895/unit

-

Chassis Components: \$725/unit

-

Electronic Control Units: \$685/unit

- - 4 -

2. Secondary Components

-

Wiring Harness: \$245/unit

-

Sensor Integration Kit: \$385/unit

-

Safety Systems: \$425/unit

-

Mounting Hardware: \$165/unit

-

3. Total Direct Material Cost Per Unit: \$9,800

4. LABOR COSTS

- - 5 -

1. Direct Assembly Labor

-

Primary Assembly: 12.5 hours @ \$45/hour

-

Quality Control: 3.5 hours @ \$52/hour

-

System Integration: 4.0 hours @ \$65/hour

-

Testing & Calibration: 3.0 hours @ \$58/hour

-

2. Total Direct Labor Cost Per Unit: \$1,186

5. OVERHEAD ALLOCATION

- - 6 -

1. Manufacturing Overhead

-

Facility Costs: \$425/unit

-

Equipment Depreciation: \$385/unit

-

Utilities: \$145/unit

-

Quality Management Systems: \$195/unit

-

Production Support: \$275/unit

-

2. Total Overhead Cost Per Unit: \$1,425

6. COST ANALYSIS SUMMARY

-

1. Total Manufacturing Cost Per Unit

-

Direct Materials: \$9,800

-

Direct Labor: \$1,186

-

Overhead: \$1,425

-

Total Cost Per Unit: \$12,411

-

2. Cost Reduction Initiatives

- - 8 -

Component sourcing optimization: projected 8% savings

-

Assembly automation improvements: projected 12% labor reduction

-

Supply chain consolidation: projected 5% logistics savings

7. QUALITY CONTROL PROVISIONS

-

1. Each AMR-200 unit undergoes:

-

Component-level testing

-

System integration verification

- - 9 -

Performance validation

-

Safety compliance certification

-

Customer acceptance testing

-

2. Quality-related costs are included in the overhead allocation.

8. DISCLAIMERS AND LIMITATIONS

-

1. This analysis is based on current market conditions and may be subject to

-

2. Cost projections assume minimum order quantities and existing supplier a

-

3. Prices are in USD and exclude shipping, taxes, and customs duties.

-

4. This analysis is valid for 90 days from the date of this document.

9. CONFIDENTIALITY

This document contains confidential and proprietary information of NaviFlo
Robotics, Inc. Unauthorized disclosure, reproduction, or distribution is
strictly prohibited and may result in legal action.

10. AUTHENTICATION

PREPARED AND AUTHENTICATED BY:

James Wilson

Chief Financial Officer

NaviFloor Robotics, Inc.

Date: January 11, 2024

Elena Kovacs, Ph.D.

Chief Research Officer

NaviFloor Robotics, Inc.

Date: January 11, 2024

[DOCUMENT END]

