

Metal Hardware Coating Cases

2024 Edition

MUSI Technology - Spray Coating Specialist

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Industry Overview

Metal hardware coating spans fasteners, hinges, lighting fixtures, hand tools, and small components - typically high-mix small-batch production with frequent color changes. MUSI delivered 24 hardware coating projects in 2024.

Sector Snapshot

Market Drivers

Export-driven hardware industry, premium architectural fittings, color customization for B2C.

Coating Challenges

Wide size range (5 mm to 1.5 m parts), high color count (12+), batch traceability.

Production Pattern

Most hardware factories run 1-2 shifts with 10-30 color changes per day.

Common Coating Challenges

Wide Size Range

Single line must handle fasteners up to architectural elements - flexible tooling.

High Color Count

Architectural and B2C hardware factories run 12+ colors daily.

Aesthetic Quality

Lighting fixtures need flawless finish on intricate geometry.

Anti-Corrosion

Outdoor hardware (garden, marine) needs salt spray 500+ hours.

Bulk Handling Efficiency

Fasteners and small parts in tumble belt.

Selected Case Studies - 2024

Fastener Tumble Blast + Powder Line

Field	Detail
Client Type	Fastener export manufacturer
Region	India
Scale	5,000 kg per shift
Equipment Delivered	Tumble belt blaster + power-and-free powder coating + 180 deg C oven
Key Results	5,000 kg/shift verified, 95% first-pass yield, salt spray 500h
Status	Operating since 2024

Lighting Fixture Quick-Color-Change Powder

Field	Detail
Client Type	Designer lighting manufacturer
Region	Italy (parts) / China (production)
Scale	12 colors per day, 2,000 fixtures/shift
Equipment Delivered	Quick-change powder booth (12 colors), PTFE-lined, automatic cleaning
Key Results	8-minute color change verified, no contamination between colors
Status	Operating since 2024

Hinge Electrocoat (CED) Line

Field	Detail
Client Type	Door/window hardware manufacturer
Region	Mexico
Scale	50,000 hinges per day
Equipment Delivered	7-stage pretreat + CED tank + electrocoat oven + topcoat option
Key Results	50,000 pcs/day verified, 1,000h salt spray, uniform coverage on geometry
Status	Operating since 2024

Hand Tool Powder Coating + Laser Marking

Field	Detail
Client Type	Tool manufacturer
Region	Turkey
Scale	3,000 tools per shift
Equipment Delivered	Hook conveyor + electrostatic powder + IR cure + inline laser marking
Key Results	Combined coating + marking, 3,000 tools/shift, 99% first-pass
Status	Operating since 2024

Garden Hardware Zinc Plating + Powder Topcoat

Field	Detail
Client Type	Garden tool exporter
Region	Vietnam
Scale	8,000 pcs per shift
Equipment Delivered	Zinc plating line + drying + powder coating
Key Results	5-year outdoor warranty achieved, single-supplier turnkey
Status	Operating since 2023

Architectural Bracket Coating - Multi-Color Quick-Change

Field	Detail
Client Type	Architectural hardware OEM
Region	UAE
Scale	4,000 brackets per shift, 15 colors
Equipment Delivered	Quick-change powder booth + cyclone+cartridge recovery, automated color rack
Key Results	15 colors with 10 minute changeover, premium B2B contract retained
Status	Operating since 2024

Benefits Delivered to Clients

Bulk Processing Efficiency

Tumble belt for fasteners delivers 5,000+ kg/shift.

Color Flexibility

Quick-change booth supports 12-15 colors per day.

Quality Assurance

>=98% first-pass yield typical.

Combined Processes

Plating + coating + marking integrated.

Aftersales

Hardware sector served by MUSI dealer network.

Compliance

RoHS, REACH, GB compliant chemistries.

Industry Key Metrics

Metric	2024 Performance Average
Projects delivered	24 hardware projects
Average shift output	3,000-5,000 pcs
Color count per line	5-15 colors typical
Average changeover time	8-15 minutes (quick)
Salt spray average	500-1,000 hours
First-pass yield	98%
Customer satisfaction	4.6 / 5.0
Geographic coverage	12 countries

Contact MUSI Technology

For inquiries, technical questions, or to request a custom quotation, please contact our sales engineering team:

Channel	Details
Sales Email	lin@coating-spray.com
Phone (Sales)	+86 181 5173 1332
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Website	https://coating-spray.com
Headquarters	Wujin Industrial Park, Changzhou City, Jiangsu Province, China
Business Hours	Monday-Saturday 08:30-18:00 (GMT+8)
Response Time	Sales inquiries within 24 hours, technical proposals within 5-7 business days

How We Engage

Step 1 - Discovery

Share workpiece specifications, target throughput, color count, facility layout, and budget. Engineers respond with technical questions within 24 hours.

Step 2 - Process Simulation

We model your line in 3D, simulate cycle time and energy consumption, and provide a baseline ROI analysis.

Step 3 - Proposal and Quotation

Detailed technical proposal with layout drawings, equipment list, payment terms, and delivery schedule.

Step 4 - Manufacturing

Custom fabrication in our 28,000 sqm facility under ISO 9001 QMS. Progress photos shared via customer portal.

Step 5 - Factory Acceptance Test

You witness or remotely observe pre-shipment testing.

Step 6 - Site Installation

MUSI engineers travel to your site for installation, commissioning, and operator training.

Step 7 - Aftersales Support

Warranty support, remote diagnostics, preventive maintenance, and spare parts supply via our global network.