Safety Information and Operator Responsibility Guide For I-Mark Machines

Safety Information and Operator Responsibility

SAFETY IS EVERYONE'S RESPONSIBILITY

IF YOU ARE UNSURE — STOP. ASK. DO NOT PROCEED.

This equipment is designed for industrial marking applications only. Improper installation, operation, maintenance, or modification may result in personal injury, equipment damage, or improper marking results, and will void Columbia Marking Tools responsibility and warranty. Safe operation is the sole responsibility of the user and/or employer.

Failure to comply with safety guidelines may void warranties, service agreements, and manufacturer responsibility.

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1. General Safety Requirements

Only trained and authorized personnel may install, operate, service, or maintain this equipment. Operators must read and understand this manual in its entirety before use.

Follow all local, regional, and national safety regulations, including workplace safety standards and lockout/tagout procedures where applicable.

Do not operate the system if it appears damaged, malfunctioning, or improperly configured.

2. Electrical Safety

ELECTRIC SHOCK HAZARD

The I-Mark controller and associated equipment contain hazardous voltages that can cause severe injury or death.

- Disconnect and lockout/tagout all power sources before maintenance or inspection
- Only qualified electricians or trained service personnel may access electrical enclosures
- Ensure proper grounding per local electrical codes
- Do not operate equipment in wet or damp environments
- Do not expose equipment to rain or moisture
- Do not handle electrical components with wet hands
- Inspect power cords and cables before each use; replace damaged cords immediately

3. Mechanical Safety

MOVING PARTS HAZARD

Marking systems contain moving components that can pinch, crush, or entangle.

- Keep hands, fingers, hair, loose clothing, and jewelry clear of all moving parts
- Never reach into the marking area during operation
- Never place hands between the marking head and workpiece or near moving axes
- Ensure all guards, covers, and protective devices are installed and functional

- Do not bypass limit switches or safety interlocks
- Allow moving parts to come to a complete stop before approaching
- Use tools for positioning and adjustment—not hands

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4. Pneumatic Safety (If Applicable)

HIGH PRESSURE AIR HAZARD

- Verify air pressure matches manufacturer specifications; do not exceed maximum rated pressure
- Disconnect and bleed air pressure before maintenance
- Never point compressed air at yourself or others
- Wear eye protection to prevent injury from airborne debris
- Inspect air lines and fittings regularly; replace damaged components immediately

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5. Personal Protective Equipment (PPE)

Operators and nearby personnel must always wear appropriate PPE during operation:

- Safety glasses with side shields (ANSI Z87.1 compliant)
- Hearing protection when required by noise levels
- Safety shoes if required by facility
- Close-fitting clothing; remove all jewelry; tie back long hair
- Protective gloves

Additional PPE may be required based on facility-specific hazards.

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6. Work Area Safety

- Keep the work area clean, well-lit, and uncluttered
- Maintain adequate clearance around the machine
- Clearly mark restricted and operating zones
- Do not allow untrained personnel in the operating area
- Secure all workpieces and fixtures before marking
- Keep floors free of oil, grease, and trip hazards
- Provide ventilation if marking produces fumes or particulates

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7. Operational Safety

Before Each Use:

1. Inspect the marking stylus for wear or damage
2. Verify all guards and safety devices are installed
3. Confirm emergency stop devices function correctly
4. Secure the workpiece and clear the operating area
5. Confirm required PPE is worn
6. Perform a trial run with the marking pin retracted
7. Verify marking limits and travel boundaries

During Operation:

- Stay alert and attentive
- Do not operate if tired, distracted, or under the influence of substances
- Never leave the machine unattended

- Stop immediately if abnormal noise or behavior occurs
- Be prepared to activate the Abort function

After Operation:

- Allow cycle completion
- Wait for full stop of motion
- Remove workpiece safely
- Inspect for damage or issues

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8. Emergency Stop and Abort Function

All CMT marking systems are equipped with an ABORT function.

- Identify the Abort button before operation
- Activation immediately halts motion
- Test abort function at the beginning of each shift; verify immediate stoppage
- Document testing per facility requirements

Reset Procedure:

1. Resolve the cause of activation
2. Reset the machine to correct state
3. Press Home
4. Verify normal operation with a trial run

If an unsafe condition is observed, immediately stop operation and secure the system before investigating.

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9. Maintenance Safety

LOCKOUT/TAGOUT REQUIRED

Before maintenance:

1. Notify affected personnel
2. Shut down the machine
3. Disconnect all energy sources
4. Apply lockout/tagout devices
5. Verify energy isolation
6. Release stored energy

Maintenance Rules:

- Only qualified personnel may perform maintenance
- Use CMT-approved replacement parts only
- Do not modify equipment without written authorization
- Follow specified service intervals; maintain service records
- Inspect safety devices after maintenance
- Replace worn or damaged parts immediately
- Do not operate equipment requiring repair

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10. Fire Safety

- Know fire extinguisher locations
- Use the correct extinguisher for electrical fires
- Disconnect power before fighting electrical fires

- Evacuate if fire cannot be controlled

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11. Training Requirements

ONLY TRAINED AND AUTHORIZED PERSONNEL MAY OPERATE THIS EQUIPMENT.

Training must include:

- In-depth review of this Safety Section
- Supervised hands-on operation
- Emergency procedures
- Lockout/tagout procedures
- Facility-specific safety rules
- PPE requirements

After completion, written training acknowledgment must be signed off by supervisor and the newly trained employee.

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12. Modifications and Unauthorized Use

Do not modify hardware, software, firmware, or safety systems without written authorization from the manufacturer. Unauthorized modifications or use outside the intended purpose may result in unsafe operation and will void all warranties and manufacturer responsibility.

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13. Manufacturer Disclaimer and Limitation of Liability

Columbia Marking Tools (CMT):

- Does not guarantee elimination of all hazards

- Assumes no responsibility for injury or damage caused by:
    - Improper use or installation
    - Failure to follow instructions
    - Unauthorized modifications
    - Inadequate training
    - Poor maintenance
    - Non-approved parts
    - Disabled safety devices
    - Facility safety violations
    - Uncontrollable events

CMT's total liability shall not exceed the total purchase price of the equipment.

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14. Operator Acknowledgment

I HAVE READ AND UNDERSTAND THE SAFETY INSTRUCTIONS AND AGREE TO:

- Operate only after proper training
- Wear required PPE
- Follow all safety procedures
- Keep safety devices functional
- Report hazards immediately
- Never bypass safety systems