Cold Jet
the force of nature

AERO 2

PCS®60

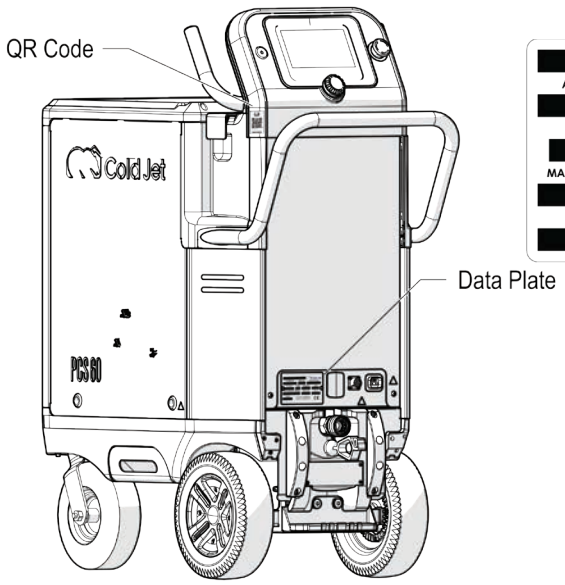
Operator Manual

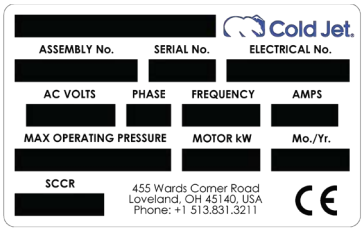
Contents


Cold Jet®
the force of nature

System Identification

Locate the data plate for this machine and record the information provided in the spaces below. To view documentation for your machine, scan the QR code:





ASSEMBLY No. _____

SERIAL No. _____

ELECTRICAL No. _____

AC VOLTS _____

PHASE _____

FREQUENCY _____

AMPS _____

MAX OPERATION PRESSURE _____

MOTOR KW _____

Mo./Yr. _____

SCCR _____

Supplier Responsible for the Equipment:

Cold Jet, LLC
455 Wards Corner Road
Loveland, Ohio 45140 USA
Phone: +1-800-777-9101
Website: www.coldjet.com


Cold Jet®
the force of nature

Introduction

About This Manual

This manual should be kept with the machine and be readily accessible to machine operators and maintenance personnel.

This manual contains information on the safety, transportation, operation, and maintenance of this machine.

The graphics used in this manual may show machine details that may be different than the actual machine. Components of the machine may have been removed for illustrative purposes or the continuing improvement of the machine's design may cause changes that are not included in this publication.

The owner of this machine is responsible for verifying the operator of this machine is properly trained and understands the contents of this manual.

About The PCS 60

This machine combines patented technology in a lightweight and compact design that gives the operator unparalleled control for dry ice cleaning and other applications.

- The Advanced Air-Flow System reduces pressure loss as the air flows straight through the system which also decreases sublimation and loss of the dry ice particles.
- The Blast Pressure Control System can be regulated digitally from the 7" HMI color screen on the control panel or certain applicators.
- The Sure Flow System with Dynamic Agitation is designed to keep warm air, moisture, and debris out of the hopper while keeping the dry ice flowing. The level of dry ice in the hopper can be monitored from the HMI screen of the control panel or certain applicators.
- The Advanced Direct Drive Feeding System is a two-stage feeding system that improves feed rate consistency and maximizes dry ice particle integrity.
- The Particle Control System (PCS) allows the operator to control the size of dry ice particles being blasted from 0.3 mm micro-particles to 3.0 mm pellets. The PCS is designed to precision-cut dry ice pellets into diamond-shaped particles.

Environmental Impact

Dry ice is a safe, clean, and non-toxic medium approved by the EPA, USDA, and FDA. The dry ice used in this machine is made from reclaimed CO_2 generated from other industrial processes.


Cold Jet®
the force of nature

Safety

General Safety Guidelines

This machine is designed to comply with international design standards and the European Machinery Directives. Therefore, using the machine does not pose a risk to the operator when the instructions in this manual are followed carefully. However, certain precautions must be followed during its use. To understand all the necessary precautions, the machine operator must read the entire manual before operating or performing maintenance on the machine.

Operation and maintenance should only be performed by authorized and trained personnel. Below are some basic safety guidelines:

- Follow local governing codes to ensure a minimum standard of safety.
- Wear protective gloves, eye protection, and hearing protection.
- Operate the machine in a well-ventilated work area.
- Follow the prescribed maintenance schedule (see "Maintenance" on page <?>).
- Start up and shut down the machine according to the instructions in this manual.
- Do not operate a machine that is damaged or in disrepair.
- Do not store objects on top of machine hopper.

CO_2 Safety

This machine uses dry ice (CO_2 in solid form). The temperature of dry ice is -109°F (-78.9°C). Avoid coming into direct contact with dry ice as it may cause severe tissue damage.

Study the material safety data sheet (MSDS) of dry ice (CO_2) supplied with the delivery of dry ice and follow all the recommendations and guidelines listed therein.

Operate the blaster in a well-ventilated work area with continuous CO_2 -level monitoring. The effects of CO_2 are entirely independent of the effects of oxygen deficiency. Therefore, CO_2 concentrations at 3-5% causes headaches, fast breathing and discomfort while higher concentrations may cause unconsciousness, suffocation or respiratory arrest. The legal exposure limit set by OSHA is a 0.5% average over an 8-hour workday and the acute (15 minute) exposure limit set is 3.0%.

Always use a CO_2 monitoring/alarm system when working with machinery that emits CO_2 in a confined room/space.

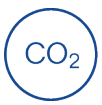
Electrostatic Discharge

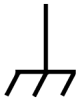
Dry ice blasting may create electrostatic discharges. This machine is fitted with effective electrostatic dischargers to prevent injury or damage. Also, the machine must be plugged into a properly grounded electrical outlet.

It is recommended to avoid operating the machine near explosive or flammable material. Also, use a plastic shovel when handling dry ice to eliminate any electrostatic discharge.

Safety Labels

The symbols used on the machine were developed by the International Organization for Standardization (ISO) and are defined below. These symbols may include yellow warnings triangles, blue mandatory action circles, or red prohibited action circles.

Symbol	Definition
	General Warning
	Cold Temperature Warning
	Pressurized Material Ejection Hazards
	Electrostatic Discharge Warning
	Asphyxiation Warning
	Hand Crushing Warning
	Wear protective gloves.
	Wear hearing protection.
	Wear eye protection.
	Read operator and maintenance manual.
	Do not operate without Safeguard Grate/guard in place.
	No foreign objects allowed inside machine.
	CO_2 is in use.

Symbol	Definition
	Protective Earth/Ground
	Frame/Chassis Terminal

There may be other safety labels or warning signs on the machine that contain additional information regarding potential safety hazards not explained in this manual. Operators and maintenance personnel should familiarize themselves with these safety labels and warning signs.

Replace any safety labels or warning signs if they become damaged, missing, or illegible.

Cautions and Warnings

Please review the following cautions and warnings before operating or performing maintenance on the machine.

CAUTION Read the instructions before using the machine. Only qualified personnel should operate the PCS 60.

WARNING Ensure adequate ventilation when operating this equipment to prevent the build-up of carbon dioxide gas. If used indoors or other confined space, a CO_2 detector should be used to monitor for excessive unsafe levels of CO_2 gas, and provide a suitable warning. The legal exposure limit set by OSHA is a 0.5% average over an 8-hour workday.

WARNING Ensure that expended dry ice pellet emissions are not in the vicinity of air ventilation.

WARNING This machine has been designed for use with 3mm dry ice pellets recommended by Cold Jet. The use of other cleaning agents or chemicals may adversely affect the safety of the machine.

WARNING High pressure blast streams can be dangerous if subject to misuse. The blast stream must never be directed at persons, live electrical equipment or the machine itself.

WARNING Do not use the machine within range of persons unless they wear the personal protective equipment. (PPE)

WARNING Do not direct the blast stream against yourself or others in order to clean clothes or foot-wear.

WARNING High pressure cleaners shall not be used by children or untrained personnel.

WARNING High pressure hoses, fittings and couplings are important for the safety of the machine. Use only hoses, fittings and couplings recommended by Cold Jet.

WARNING To ensure machine safety, use only original spare parts from Cold Jet or approved by Cold Jet.

WARNING The applicator and applicator hose contain electrical connections. Do not immerse in water.

WARNING Do not use the machine if a supply cord or important parts of the machine are damaged, e.g. safety devices, high pressure hoses, applicator.

WARNING Inadequate extension cords can be dangerous. If an extension cord is used, it shall be suitable for the environment in which it is used, if used outdoors the connection has to be kept dry and off the ground. It is recommended that this is accomplished by means of a cord reel which keeps the socket at least 2.4 inches (60 mm) above the ground.

WARNING Always switch off the main disconnecting switch, or unplug the blaster power cord when leaving the machine unattended.

PCS 60 Components