

DRY ICE

SF-D80

USER MANUAL



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DISCLAIMER

Please read the manual carefully before installing and using this product. Failure to read or comply with this manual may result in injury to products and personnel, and Spark Fabrica will not be responsible for this.

This product is a professional machine, we do not assume any responsibility for accidents or losses caused by the use or maintenance of this product by personnel without professional training and permission.

If the information contained in the manual or the product specifications are changed, Spark Fabrica will not inform you further and be responsible for any errors or omissions.

Our company reserves the right to modify the user manual at any time.

PREFACE

This manual includes warning, caution and notice concerning the safe operation of equipment. These warning, caution and notice come with the following icons. Please read them carefully!

WARNING

This warning indicates a dangerous situation that may result in death or serious injury if not avoided.

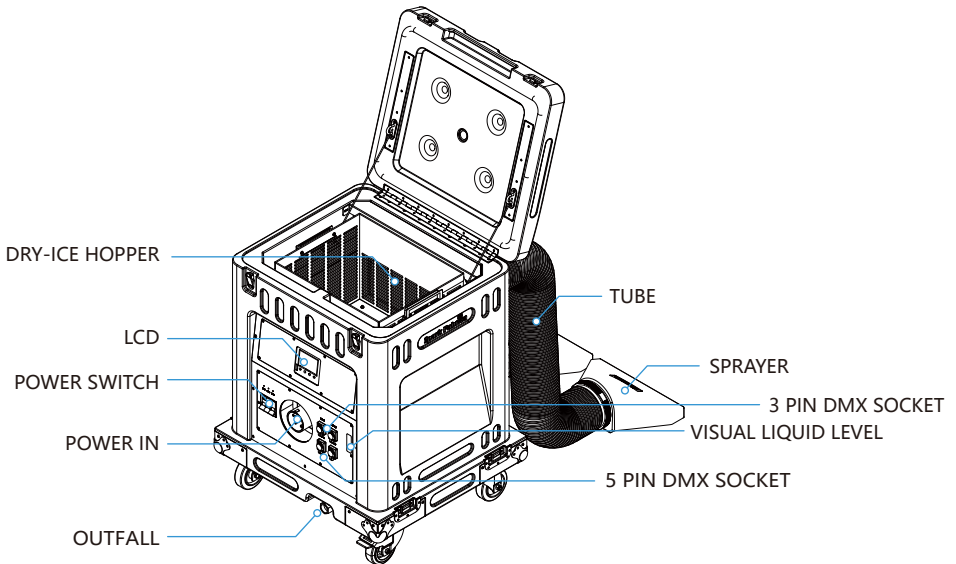
NOTICE

This means that you need to be careful.

1 PRODUCT INTRODUCTION

SF-D80 dry ice machine is made of strength composite material shell, light weight, resistant to rust, more durable. Remote control and save Dry ice! Easily control by one button-smoke output switch, more convenient operation!

1.1 PRODUCT OVERVIEW



1.2 PRODUCT ACCESSORIES

32A 5PIN Power Socket
3m DMX cable
Sprayer*2
Tube*2
Connector*4
User Manual*1

NOTICE

Open the package carefully and check to make sure the goods are in good condition.

1.3 SPARK FABRICA CONSUMABLES

Dry Ice, Water



WARNING

Only the consumables provided by Spark Fabrica are allowed to be used. Spark Fabrica shall not be liable for any damage to machines, personnel and property caused by the use of consumables not provided by the company.

2 TECHNICAL PARAMETER

Identification	Manufacture	Spark Fabrica
	Name	DRY ICE
	Model	SF-D80
Ac Power	Input Voltage& Frequency	AC 100-120V , 60HZ
		AC 220-240V , 50HZ
	Power Consumption	3000W/9000W(230V) 1600W/4800W(120V)
Technical Parameters	Dmx	3PIN / 5PIN
	Heating Time	50min (230V),70min (120V)
	Capacity	30Kg
	Tank Volume	80L
	Smoke Adjust	50%-100%
	Full Loaded Output	5min
	Maximum	400 m ²
Control	Control-protocol	DMX-512
	Dmx Channel	1
Accessory	Power In	32A 5Pin Socket
	Remote	Optional
	Dmx Cable	3m
	Sprayer	2
	Tube	2
	Connector	4
	Software Update Box	Optional
	120 Ohms Terminal Resistance	Optional
Settle		Horizontal mounting
Certificates	CE	√
	ROHS	√
Weight	Net Weight	63kg
	Gross weight	78kg
Demension	Denmension L*W*H	665mm*610mm*847mm
	1 unit flight case size	670mm*620mm*910mm
Consumables	Consumables	Dry Ice, Water

3 PRECAUTIONS FOR OPERATION

3.1 DRY ICE AND CO2

Dry ice is carbon dioxide in its solid state, reaching temperatures -87.5°C . It has the property of sublimation - direct conversion from solid to liquid.

When dry ice is placed in hot or boiling water, it immediately reacts with the water and sublimates to release CO_2 gas, which meets the water vapor in the air to form small droplets. The CO_2 gas meets the water vapor in the air and small droplets of water form. The expanding gas and water vapor are ejected from the nozzle. Due to the low temperature and heavy weight of the CO_2 , the water vapor sinks to the floor and the water droplets in the air create a fog effect.

3.2 ENVIRONMENTAL REQUIREMENTS

NOTICE

Do not store dry ice in containers where the pressure will increasing and cause explosion.

NOTICE

Do not cover or block the sprayer during operation as pressure may build up and cause an explosion.

NOTICE

Always wear thick gloves and do not touch dry ice directly with your hands.

NOTICE

Swallowing dry ice is prohibited as it may cause serious bodily harm.

NOTICE

Before breaking dry ice, cover it with a cloth or place it in a cloth bag and wear goggles.

NOTICE

Do not use the device in a confined space and make sure the space is well ventilated before using the device.

3.3 SAFETY TIPS

NOTICE

Make sure to connect the ground wire properly to avoid electric shock.

NOTICE

Do not touch the machine when operating and heating

NOTICE

The temperature of the machine is quite high during operation and remains high for a long time after operation. It is strictly forbidden to touch. The machine should be kept at least 2 meters away from the nearest target.

NOTICE

Do not using this machine as a heating machine

NOTICE

Please remove the power before clean the machine

NOTICE

Make sure the tank is empty before transfer

3.4 INSTALLATION AND OPERATION

NOTICE

For safety reasons, we do not recommend any other installation method, please install and operate the machine in a flat position.

NOTICE

Please keep the machine dry, do not expose the machine to rain or humidity. Please do not use the machine when it is soaked with moisture and please wipe it.

NOTICE

Transferring the product from an extreme environment (e.g. cold and dry to warm and humid transition), the resulting condensation may trigger a risk of electric shock. To avoid such malfunctions, please make sure that the unit is acclimatized to its environment before connecting the power supply. Make sure that there are no flammable objects in the vicinity of the machine during operation.

NOTICE

Do not install the machine on flammable surfaces (linoleum, carpet, wood, paper, cardboard, plastic, etc.)

NOTICE

Always place the machine in a well-ventilated environment and leave at least 50 cm of space around the machine.

3.5 POWER CONNECT

NOTICE

Before turning on the power, carefully check that the voltage matches the rated voltage of the machine.

NOTICE

Make sure the machine power cord is not pinched or damaged.

NOTICE

Do not connect the machine to a dimmer controller or rheostat!

NOTICE

Do not disconnect the power supply by pulling on the power cord.

NOTICE

To eliminate unnecessary wastage and to increase the service life of the machine, completely disconnect the machine from the power source by turn off the circuit breaker to disconnect it when not in use, or by unplugging it from the power source.

3.6 OPERATION NOTICE

⚠ WARNING

Do not operate the product if you notice damage to the machine housing or cables. Immediately call an authorized technician to replace the damaged parts.

⚠ WARNING

The area in front of the nozzle will be wet when the machine is working, so please be careful with non-slip.

NOTICE

The output of the smoke brings moisture with it, so please take care to avoid using it on electrical equipment, power outlets and any place where it may cause danger.

NOTICE

Use the handle to move the machine; do not move it by the power cable or any removable parts.

NOTICE

The maximum ambient temperature is 40°C. Do not operate the machine in a hot environment.

NOTICE

Stop using the machine when visibility is less than 50 centimeters.

NOTICE

This machine does not contain any user-disassembled and self-repairing or modifying parts inside the machine. Do not attempt to repair or modify this machine on your own by untrained and unauthorized technicians as this may result in damage or malfunction.

NOTICE

In the event of a serious malfunction, discontinue use immediately.

4 SETTING AND INSTALLATION

4.1 AC POWER SUPPLY

The power supply for this product has a fixed voltage and can be AC 220 V - 240 V, 50/60 Hz, depending on the specific model. To determine the machine's power requirements (circuit breakers, power outlets, and cables), please refer to the values listed on the machine's faceplate labeling or refer to the machine's specification sheet. The values listed are average current values for the machine under normal conditions.

NOTICE

Always connect the machine to a protected circuit. Make sure the machine is connected to a grounded power plug to avoid electric shock or fire.

NOTICE

Never connect the machine to a varistor (variable resistor) or dimmer controller circuit, even if the varistor or dimmer controller channel is only used as a 0 or 100% switch.

4.2 CONNECT MACHINE

The SF-D80 supports 3-pin or 5-pin connections to a DMX console, allowing it to be plugged into the same console as other DMX-enabled devices and controlled separately. This manual covers the operational connections and configuration of the DMX.

Connect the power and DMX cable

- Connect the first machine's power plug.
- Connect the other machines in series with the power cable
- Connect the other machines in series with DMX connection cable.
- Connect DMX512 console

5 INSTALLATION

For safety reasons, we do not recommend any other way of installation. Please install and operate the machine on a flat location and ensure that there is enough space for ventilation, configuration and maintenance.

NOTICE

Make sure that the structure or surface on which the machine is mounted can support the weight of the machine (see "Product Parameters").

NOTICE

When installing the machine, please make sure that the machine and cables are kept away from people and vehicles.

6 MACHINE OPERATION

6.1 PREPARATION

NOTICE

After confirming that the machine and its accessories are intact, place it on a flat surface.

NOTICE

The body is designed with a liquid level window with LED lighting, which can visually observe the height of the water level in the tank, in addition, there is a liquid level sensor inside the machine, which can detect when the water level is too low and then stop working automatically to protect it, at the same time prompting the low water level on the LCD display.

NOTICE

With the power off, open the top lid of the tank to fill water to the recommended level. The water tank capacity is 80L.

NOTICE

Plug the power cord into a grounded outlet. Double-check the voltage specification before applying power.

NOTICE

Turn on the power switch, the machine has three heating modes: single power supply, double power supply, triple power supply heating. If use a single power supply to heat up, the power is 3000W. If use double power supply to heat up (main and auxiliary power supply), the power is 6000W. If use triple power supply to heat up, the power is 9000W. Regardless of the operating mode, the main power supply must be powered for the machine to operate properly. Using a 9000W electric heater, the heating time to optimum operating temperature is approximately 50 minutes.

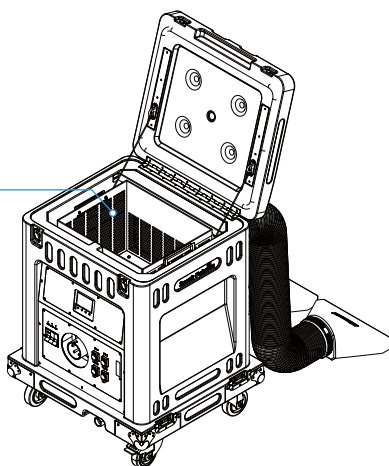
NOTICE

Open the top lid and add no more than 30 kg of dry ice to the dry ice hopper and close the lid tightly. For the best effect, dry ice should only be added to the dry ice hopper before the machine is used.

NOTICE

The SF-D80 offers dry ice storage: even when the machine is heated, dry ice can be stored for up to several hours or more. For ideal effects, please place the dry ice in the built-in hopper; do not remove the dry ice hopper at this time to avoid serious personal injury.

Dry Ice hopper



6.2 MENU SETTING

Settings	Temperature	30°C-80°C
	DMX Address	1-512
	Safety Address	OFF/500-512
	Smoke Volume	50%-100%
	Internal	0-200s
	Duration	0-200s
Advanced	Language	中文 /ENGLISH
	LCD BackLight	ON/OFF
	Level Protection	ON/OFF
	Restore Defaults	ON/OFF
Information	SF-D80-20240829	CNFFFFFFxxxxxxxxxx

6.3 KEY AND LED LIGHTS INSTRUCTIONS

READY

Device Readiness Indication: Flashing indicates it is heating up but has not yet reached the set temperature. Always-on light indicates that the machine's chip temperature has reached the sparking requirement .

DMX

DMX Input Mode Indicator, this lamp blinks to indicate that a DMX signal is being received - fast blinking

ERR

When there is a problem with the machine, the light is always on and the LCD screen displays an error message.

HEAT

Power indicator and heating indicator, the always-on light indicates that heating is in progress.



MENU

Menu button, short press to enter menu setting.

-

Decrease Parameter, button for decreasing the set value or switching modes OFF/ON.

+

Increase Parameter, button for increasing the set value or switching modes OFF/ON.

TIMER MODE - slow blinking

MANUAL MODE - solid on

TIMER: Timed Injection Key

MANUAL: Continuous Jet Key

STOP: Stop key

ENTER

Save button for saving the change after setting.

6.4 MANUAL CONTROL BUTTONS AND OPERATIONS

There is a manual control button on the panel of the body, when the machine water temperature reaches 25 °C, the machine can work, then press the "MANUAL" key to manually control the output working state, and then press the "STOP" key to stop the output.

Set Interval 10s, and Duration 2s, then it will start spraying for 2 seconds, then stop for 10 seconds, then spray for 2 seconds, and so on.

In the main interface, press the "TIMER" key to enter the spraying state, and press the "STOP" key to stop spraying.

NOTICE

This manual control mode takes effect only when the DMX control is disconnected.

6.5 DMX CONTROL MODE AND OPERATION

Set the machine to DMX mode and control it by the DMX controller.

- Connect the machine to a suitable power outlet.
- Turn on the machine.
- Connect the DMX output of the DMX controller to the DMX input socket on the machine via the DMX cable.

6.51 DMX PARAMETERS

The SF-D80 has 1 DMX channel and can be used with either 3Pin or 5Pin for data connection. Setting the DMX start address in the DMX channel range of 001 - 512 allows to control up to 512 units of 1-channel machines.

CHANNEL	FUNCTION	VALUE	DESCRIPTION
1	SMOKE OUTPUT	0-10	OFF
		11-40	50% Smoke output
		41-80	60% Smoke output
		81-120	70% Smoke output
		121-160	80% Smoke output
		161-200	90% Smoke output
		201-255	100% Smoke output

NOTICE

When setting the DMX starting address, need to consider the number of channels occupied by the DMX mode currently set by the machine. If the starting address is set too high, some channels may not be controlled.

NOTICE

In DMX mode, each machine responds to DMX controller with its own unique starting address. Machines with the same starting address will be synchronized.

NOTICE

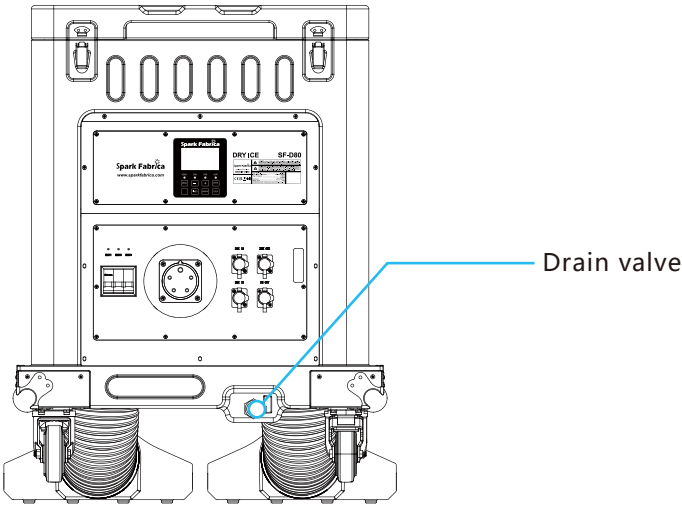
After the machine is connected to the DMX signal, the screen always shows the DMX start address, which can be set and modified at any time by pressing + and -.

7 MACHINE MAINTENANCE

After each performance, the cleaning and maintenance are essential to extend the work life of the machine:

NOTICE

After use, please wait for the machine and the remaining water in the tank to cool down completely, and then pour out the cooled remaining water through the drain valve of the machine.



8 TROUBLESHOOTING

ERROR MESSAGE	DESCRIPTION	SOLUTION
E0 Voltage Error	Voltage Problem	Stop and report the error
E1 Low water level	Water level below minimum level	Stop and report the error
E2 Temperature sensor error	Temperature sensor faulty or not connected	Stop and report the error
E5 Temp OverHeat	Water temperature exceeds safe temperature	Stop and report the error
E6 Heating failure	Heating not completed	Warning indication, non-stop

*Invoice and warranty card are necessary when applying for maintenance service from SPARK FABRICA.

WARRANTY CARD

Product Name:		Serial No:	
Purchase Date:			
Tel:			
Address:			
Info.Feedback About The Problem:			
Actual Problem:			
Maintenance Detail:			
Service Engineer:		Service Date:	



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