

# SW-D650

## SPARK FOUNTAIN MACHINE

### USER MANUAL

Please read this manual carefully before operating this product.



## Safety



### Warnings and precautions

This sign is to alert the user to the hazard and to provide important information for the user to operate the cold spark machine safely and effectively.

A security statement is as following:

Warning: This warning alerts you to hazardous or potentially hazardous operations and has given a description of the hazard and neglected the consequences.



### Eye Protection

Eye protection warning sign is to remind you of protecting the eyes during the machine operation.



### Injury Voltages

Warning: if the device and controller has dangerous voltage when it working, there is a risk of electric shock.

Do not open or remove (adjust) any parts of the device and controller, only professional engineer can do this.



### Moisture proof warning

Warning: The operator should keep the cold spark machine and controller in dry environment, do not use it in rain and snow.

## Cleaning

After the performance, you'd better to check whether there is any nodulation in the spray port, if yes, it's need to be cleaned up, the nodulation will affect the spray effect and even damage the cold spark machine.

keeps the workings of the units clean and tidy and must always be done prior to them being transported. The remaining material in the hopper of the device should be poured out and stored in a dry and sealed environment.

## 1: Product parameters

Working Height	1-5M
Working Temperature	-10°C-50°C
Heating Power	650w 6A (110V Version) 650w 3A (220V Version)
Fuse	110V/10A, 220V/6A
Interface	Double DMX input, Double AC power
N.W.	6.3kg
Size	205*205*190mm
Max. connections	Max. 6PCS
Warranty	1 year

## 2: DMX Operation

- 1) International standard control signal: DMX 512
- 2) The device uses two channels (channel 1: control preheat and emergency stop channel2: control spray height)
- 3) Spray height adjustable
- 4) Overheating can be intelligently protected
- 5) The digital display of the cold spark machine shows that F1-F5 corresponds to the 1-5-position spray height gear position respectively
- 6) When the green light of ready is always on,the spray effect is best

## Operation panel



- READY:** Green light      Flash indicates that the system is ready for work, and the steady light indicates that the system could work now
- DMX:** Blue light      Flash indicates DMX signal, while no display is signal disconnected
- FAULT:** Yellow light      It is on when there is an error
- HEAT:** Red light      Steady light when it's heated

- △ : Means increasing DMX address code, long press makes it increased fast
- ▽ : Means decreasing DMX address code, long press makes it decreased fast

## Remote control function:



1: Short press the red button, when the display shows"FFF",it means the machine has connected to remote control, long press the red button, when the display shows"OFF",it means the machine has disconnected from the remote control.

2: "ON"button : turn on pre-heat, "OFF"button: turn off pre-heat

3: "1/2/3"button: working height, "1"=F1; "2"=F2; "3"=F3

4: "E-stop"button: emergency stop

5: "Clear Powder"button: Please press it to clear the remains in the pipe in case of remains being stuck. Press "OFF" to stop this process.

6: Turning off: please press the red button for 3seconds.

**Note:** if you need to control machines in groups by remote control, you need to power on all the machines in group A,all other machines are turned off,then press the red button on the A remote control until the first group of machines displays "FFF"; the next, the machines in Group B are all power on, press the red button on the B remote control until the B group machine displays "FFF", and so on. This is the A remote control group A, B remote control group B.

### **3: DMX512 signal control:**

When using the DMX512 signal control mode, the signals between devices are connected in parallel, so it is best to use twisted-pair shielded cables when connecting multiple devices. Each device is connected via the DMX signal socket (cassette) INPUT and OUTPUT on the device. The 3-pin XLRXL connector terminals of the connected device must correspond to each other. When connecting device signals, it is recommended to use the DMX signal terminator to avoid signal reflection and damage signal control.

When the DMX console is successfully connected to the machine, the DMX signal light (blue) on the machine flashes; the first channel (240-255) pre-heat function can be turned on, the HEAT light (red) lights up, and the temperature Rise will be displayed on the machine screen; when the heating is completed, the screen will display the DMX channel, and the READY lamp (green) will change from blinking to steady state, indicating that the spray is ready, and the spray height can be controlled through the second channel.

#### 4: DMX Channel mode

The system occupies 2 channels

The First Chanel	Function	Digital Tube Display
0-10	Pre-heat turn off	
11-239	Emergency stop	E57
221-239	Pre-heat turn on	CLE
240-255	Pre-heat ON	Temperature DMX address
The Second Chanel	Function	
0-15	Turn off	OFF
16-95	Spark Height 1	F1
96-175	Spark Height 2	F2
176-255	Spark Height 3	F3

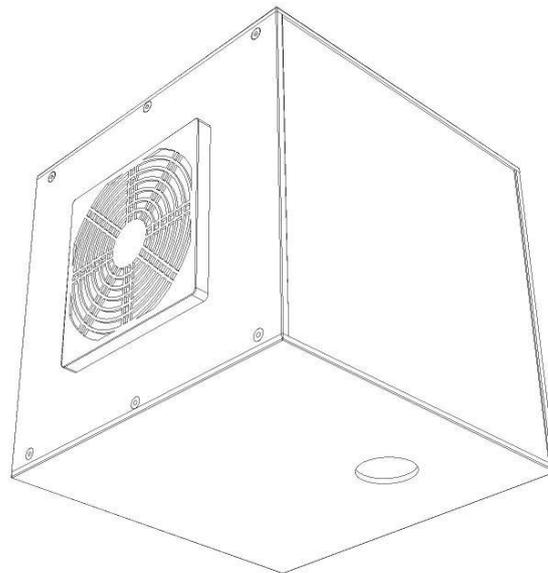
#### 5: Fault light (yellow) display and processing method

Display content	Fault causes	Solution
E01	Heating failure	1: Check if the heat dissipation of the heating plate is normal. 2: Replace the heating plate.
E02	Heating is not controlled	1: Replace the heating plate
E03	The internal temperature of the machine is extremely high	1: Check the cooling fan, 2: stop heating and spray, restart after 10 minutes.
E04	The fan does not work	1: Check if there is any foreign matter falling in the spray port, 2: Replace the fan motor
E05	The sensor is broken	1: Check sensor socket, 2: replace sensor

**Note:** when the fault light is on, you need to restart the machine until the fault light turns off the machine to work properly.

## 6: Consumables considerations

- 1) If the consumables are accidentally ignited, they can only be covered with sand, and the air is isolated until it is extinguished. Do not use water.
- 2) Consumables should be kept in a dry and sealed environment to prevent moisture.
- 3) The consumables are classified as:
  - Small consumables: the spray height is 1.0-3.0 m (error 0.5 m), and the spattering point is not lost.
  - Medium Consumables: The spray height is 2-4 meters (0.5 m error), and the spot is rarely dropped.
  - Large consumables: The spray height is 2-5 meters (0.5 m error), and the sprayed spot has dropped ground.
- 4) If you find that the spray is less, it may be due to insufficient supplies, please add consumables.



## 7: Clear material

- 1) After use, please turn the cold spark machine to pour off the remaining material and store it in a dry sealed container.
- 2) After draining the remaining material, heat it again and spray it until no spark is ejected, so as to clear the remaining material of the machine. In case it will affect the next spray effect, or even damage the fuselage. (Note: problems caused by improper cleaning will not be covered by the free warranty)

## **8: Warning and safety matters**

- 1) Do not spray more than 30 seconds each time. If the continuous spraying time is too long, the internal temperature will rise sharply and cause permanent damage. After a single long-time spray, you should pay attention to the next spray after a short pause.
- 2) When the machine continues to spray for more than 30 seconds, it will automatically close. If it needs to continue, the spray function can be triggered again.
- 3) The power of a single standard cold spark machine (the sprayer is connected to the power cord) can only be connected to a maximum of 6 machines. If the connection is too much, it will cause damage or fire.
- 4) If there is no spark discharge in the spray port, if the powder inside the cartridge is enough, the gear may be stuck. The preheating should be turned off, the gear should be turned loose manually until the gear rotates smoothly, and then the cartridge is dumped. The powder inside heats the spray, sprays the residual powder inside the pipe, and then adds the powder to heat and spray again. If the problem is not solved, contact the after-sales.
- 5) When the spray is finished, do not immediately turn off the power. The heating should be turned off, and the heat-dissipating fan should take out the hot air inside the machine when the power is turned on. Otherwise, the internal heat is quickly transmitted to the surface of the casing.
- 6) The operator should be 3-5 meters away from the cold spark machine.
- 7) Make sure the device is off before feeding.
- 8) If the consumables are accidentally ignited, please use the sand to extinguish, do not use water.
- 9) Store consumables in a cool, dry, sealed environment.
- 10) Damage caused by improper use or human factors is not covered by the warranty.
- 11) The final interpretation right belongs to our company.



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