USER MANUAL
SPARKULAR® Cyclone II

V1.0

2025/02/17

SHOWVEN®

Showven Technologies Co., Ltd.

Thanks for choosing SPARKULAR$^\circledR$ Cyclone II , we wish it will sparks up your show.
Please read the following manual carefully before operating this product.

△ **Safety Instructions**

\ Unauthorized repair are prohibited, it may cause serious incident.

\ SPARKULAR$^\circledR$ Cyclone II can be used in rain, but please keep it dry after use and when storing it.

\ Make sure lid of feeding hopper are well covered when use SPARKULAR$^\circledR$ Cyclone II.

\ Accidentally burning of consumable in hopper can only use sands to extinguish.

\ Consumable should keep away from moisture and stored in a dry sealed environment.

\ Check whether there is consumable aggregate in the output nozzle both before and after each show, if any, please clean it up, or it will affect the firing effect, damage machine, even cause serious incident.

\ There will be some sparks drop to ground, make sure there are no flammable objects such as carpet on the ground within the safety radius of the machine.

\ The SPARKULAR$^\circledR$ Cyclone II power supply cable maximum allowed cascade of 2pcs (220V version), exceed connecting may result in damage or even cause fire.

\ For better heat dissipation, block the air intake and air outlet is prohibited.

\ Cover the output nozzle of SPARKULAR$^\circledR$ Cyclone II is forbidden, inspect the machine before each show, making sure no objects or material will block the output nozzle.

\ Never touch the nozzle of SPARKULAR$^\circledR$ Cyclone II danger of getting burnt.

\ Never touch the sparks which shooting out from the nozzle.

Safety Distance

\ Keep audience and flammable material at a minimum distance of 3m from SPARKULAR$^\circledR$ Cyclone II.

\ Make sure sparks shoot out from SPARKULAR$^\circledR$ Cyclone II can NOT touch any objects. And keep a clearance with minimum 2m from the setting maximum effect height.

\ In windy environment, increase the safety distance according to the wind direction and speed.

\ The safety zone area shifts accordingly when machine installed in tilt position. Please increase the safety distance in the direction which machine tilt.

\ Sparks and consumables from the machine can lead to serious eye injury. Always wear safety goggles when enter the safety zone.

2m

Max. effect height
HC8200 LARGEIII: 10m
HC8200 LARGEII: 8m

3m
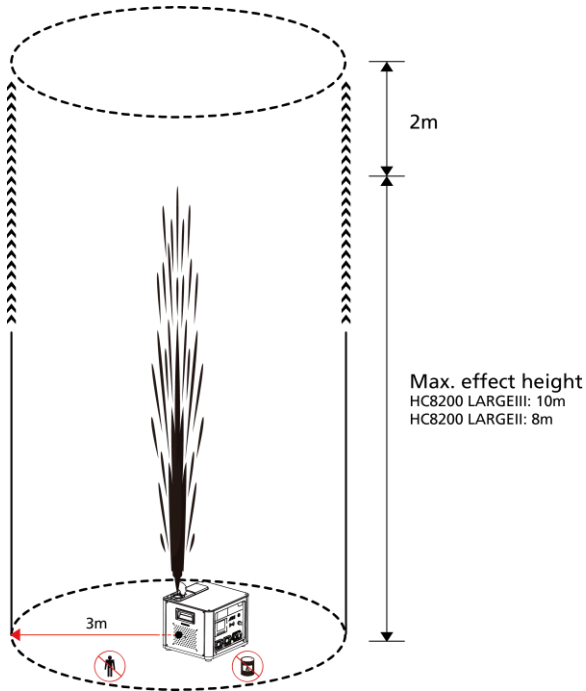
△ Description

SPARKULAR® Cyclone II is an upgrade based on SPARKULAR® Cyclone. Thanks to the new design and technologies we introduced, it is with 35% smaller on the footprint, and 40% lighter on weight (ONLY 16kg) comparing with its first generation. Besides, the output noisy is greatly decreased. It is a better option demanding professional market.

△ Technical Specifications

\ MODEL: BT63 (220V) / BT64 (110V)

\ DIMENSION: 348×316×290mm

\ WEIGHT: 16kg

\ VOLTAGE: AC200-240V / AC100-120V, 50/60Hz

\ WORK POWER: 1500W

\ EFFECT HEIGHT ADJUSTABLE: YES

\ EFFECT HEIGHT: 6-10m

\ HC8200 CONSUMPTION RATE: 50g/min

\ HOPPER CAPACITY: 450g

\ INTERFACE: 3-pin and 5-pin XLR, POWER IN/OUT

\ CONTROL: 2 DMX channels

\ WORK TEMP.: -20°C~50°C

△ Structure of SPARKULAR® Cyclone II
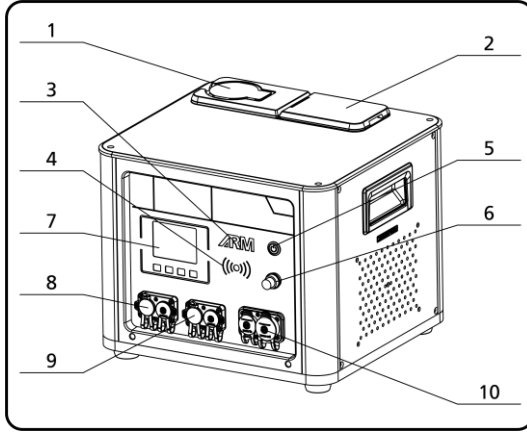
1. Output Nozzle and Output Nozzle Lid (optional part)
2. Feeding Hopper Lid
3. ARM Alarming Light
4. RFID Card Swipe Region
5. Power Switch
6. Fuse
7. LCD Screen
8. 5-PIN DMX IN / OUT
9. 3-PIN DMX IN / OUT
10. Power IN / OUT
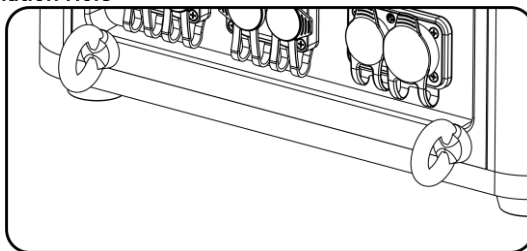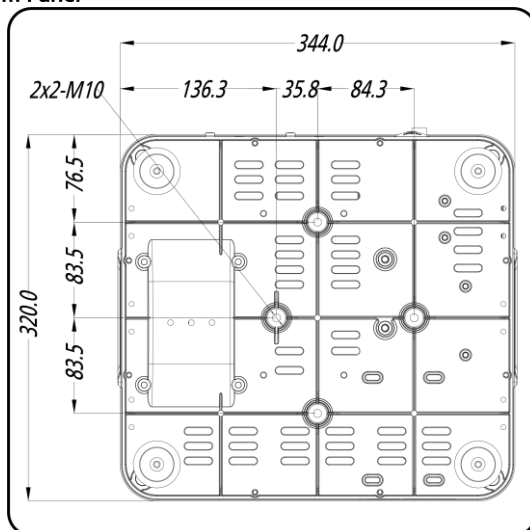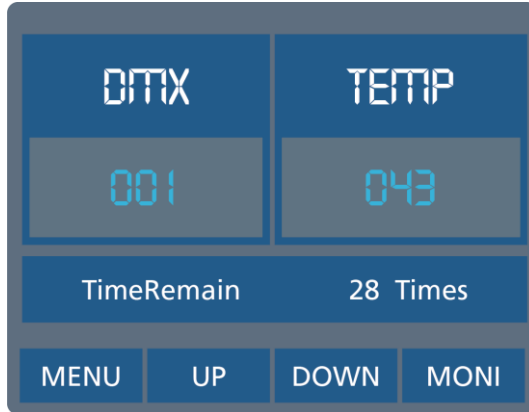
Safety Loop Installation Hole

Diagram of Bottom Panel

△ Operation Panel

1. Keypad area:

MENU: Press enter setting interface
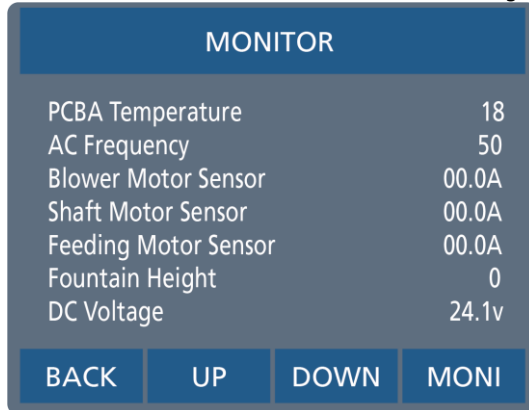
UP: Parameter up

DOWN: Parameter down

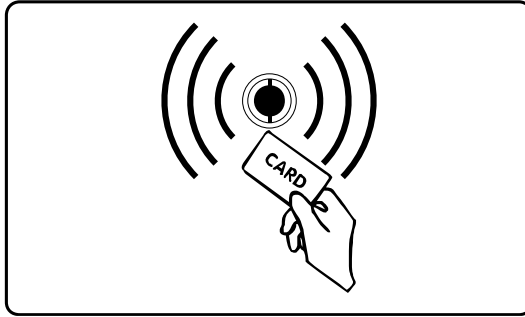**MONI:**   Status monitoring of main part inside machine

2. Monitor Interface

Press "MONI" enter monitor interface

From this interface, we can check the PCB TEMP., motors status, DC voltage etc. of machine.

3. RFID area:

RFID card come with consumable HC8200 bags, swiping card to identify parameters and types of granules. The RFID card is disposable, one card can only use one time. Each card can increase single machine 20min working time, the maximum recharge time for SPARKULAR® Cyclone II is 30min. SPARKULAR® Cyclone II any compatible with V2.0 RFID card.

4. ARM alarming light

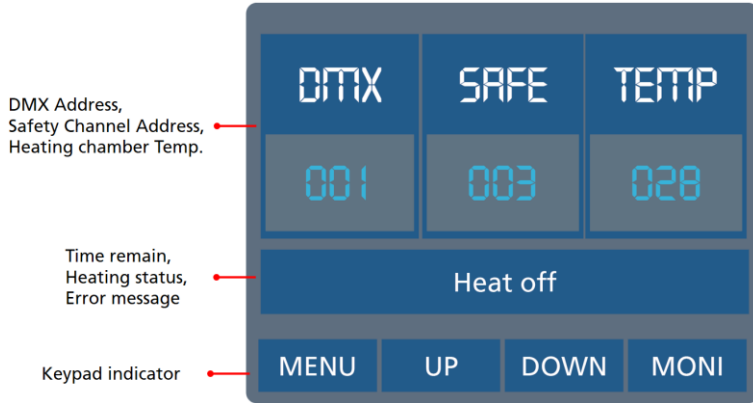**OFF:** DMX connected or wireless ON.

BLINK: DMX armed, ready for firing

ON: No DMX connection.

NOTE: you can turn off the ARM light in ADVANCED menu by switch the ARM State to OFF status.

◬ Display Interface

1. Main Interface:

DMX block: DMX address, when background color turns to RED means DMX connected.
SAFE block: appears when DMX Channel Mode is 3CH-P, when safety channel DMX value between 50-200 the background color of TEMP area turns RED from BLACK.
**TEMP. block:** Temp. of heating chamber, RED background means machine temp. reached set temp. and ready to shot. BLACK ground and display 995 means temp. sensor disconnect.

2. Error information

Error information	Explanation
E0 System IC 0	Power supply frequency out of 40Hz – 70Hz
E0 System IC 3	Continuous use of fake card, time cleared.
E1 Blower Motor Unconnect	Blower motor unconnect or error
E1 Feeding Motor Stall	Feeding motor error
E1 Shaft Motor Stall	Shaft motor error
E2 Temp. Sensor	Temperature sensor is not connected or damaged
E3 P Temp. Over	Chassis over temperature
E4 Time Remain	Firing time is insufficient (less than 10min), please swipe RFID card
E5 K Temp. Over	Heating chamber over temperature
E6 Heat Fail	Heating fail due to heating time exceed setting heating up time, problem on heating PCB or mainboard
E7 Tip Over	Tilt sensor activated when machine slant over 45 degrees

3. Menu

Press "MENU" enter setup menu.
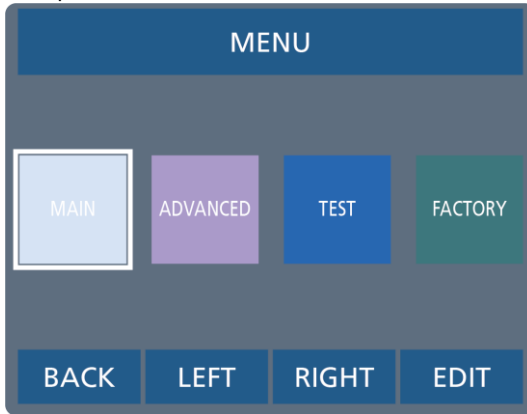
MAIN: main menu
ADVANCED: advanced menu
TEST: test menu
FACTORY: factory menu (for manufacturer use only).
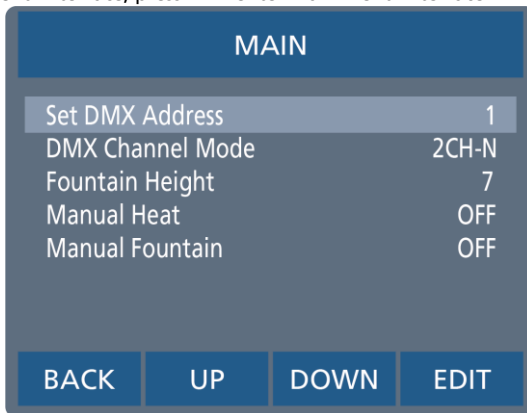**BACK:** back to main interface
LEFT: switch to left option
RIGHT: switch to right option
EDIT: edit the selected item

4. Main Menu

Choose MAIN at menu interface, press EDIT enter main menu interface.

Options	Range	Default	Explanation
Set DMX Address	1-512	1	Set DMX Address
Set Safety Address	1-512	3	Safety address under 3CH-P channel mode

DMX Channel Mode	2CH-N/3CH-P	2CH-N	2CH-N: 2 channel mode 3CH-P: 3 channel safety channel mode
Fountain Height	5-10	5	Manual firing height adjust, for test purpose.
Manual Heat	ON/OFF	OFF	Auto heating up ON/OFF
Manual Fountain	ON/OFF	OFF	Manual firing ON/OFF.

5. Advanced Menu

Choose ADVANCED at menu interface, press EDIT enter advanced menu interface
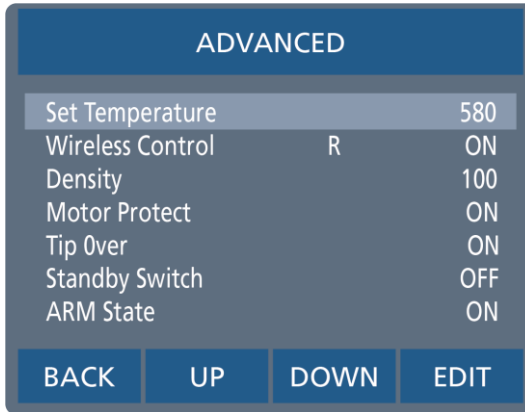

Options	Range	Default	Explanation
Set Temperature	520-620	580	Heating chamber temperature setting
Wireless Control	ON / OFF	OFF	Wireless function
Density	50-100	100	Feeding amount setting
Motor Protect	ON/OFF	ON	Motor protect function
Tip Over	ON/OFF	ON	Tilt function switch, when machine slant over 45 degree it will stop working.
Standby Switch	ON/OFF	ON	When ON, the machine can firing only when heating up was finished
Mode Selection	Factory Mode User Mode	User Mode	Factory mode is for manufacturer use only. When in Factory mode machine can`t controlled by DMX console
LCD Backlight	ON/OFF	OFF	LCD Backlight ON/OFF
Auto Clear Delay	0.1-0.9s	0.1s	Automatic clear material time setting
Key Sound	ON/OFF	OFF	Key pad sound ON/OFF switch
Key Lock	ON/OFF	OFF	Keypad lock if no operation in 30s, restart machine to enable
ARM State	ON/OFF	ON	ARM indicator light setting
Default Parameter	ON/OFF	OFF	Parameters reset to default setting

*For better performance of SPARKULAR$^{®}$ Cyclone II, please don't change the default value without permission from SHOWVEN$^{®}$.

6. Test Interface
Choose TEST at menu interface, press EDIT enter test menu interface
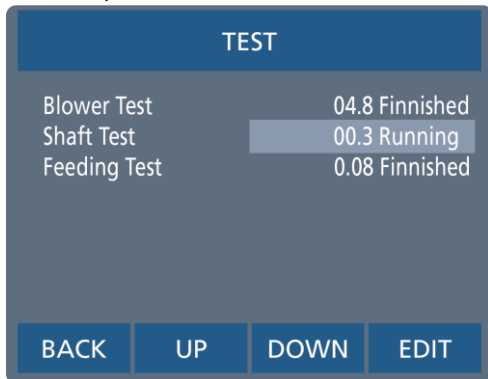
Blower Test: blower output test, testing time is 2s.
Shaft Test: Shaft motor test, testing time is 2s.
Feeding Test: Feeding motor test, testing time is 2s.
It shows Running if testing is going, shows Finished after testing finish.

7. DMX Channel Mode
SPARKULAR$^{®}$ Cyclone II have two channel mode optional.
2CH-N mode:
SPARKULAR$^{®}$ Cyclone II occupies 2 operational channels. First channel is for effect height, second channel for effect trigger and clear material etc.

Channel	Function	Value
CH1	Firing	**0~15:** Firing OFF **16-39:** Firing ON at height level 1 **40-63:** Firing ON at height level 2 **64-87:** Firing ON at height level 3 **88-111:** Firing ON at height level 4 **112-135:** Firing ON at height level 5 **136-159:** Firing ON at height level 6 **160-183:** Firing ON at height level 7 **184-207:** Firing ON at height level 8 **208-231:** Firing ON at height level 9 **232-255:** Firing ON at height level 10
CH2	Heating / Clear Material / Emergency Stop	**0-10:** Heating OFF **20-40:** Emergency Stop **60-80:** Clear Material **240-255:** Heating Up

3CH-P mode:

SPARKULAR® Cyclone II occupies 2 operational channels and a separate safety channel (this channel is independent from operational channel, can be shared with other machine).

| Channel	Function	Value
CH1	Firing	**0~15:** Firing OFF **16-39:** Firing ON at height level 1 **40-63:** Firing ON at height level 2 **64-87:** Firing ON at height level 3 **88-111:** Firing ON at height level 4 **112-135:** Firing ON at height level 5 **136-159:** Firing ON at height level 6 **160-183:** Firing ON at height level 7 **184-207:** Firing ON at height level 8 **208-231:** Firing ON at height level 9 **232-255:** Firing ON at height level 10
CH2	Heating / Clear Material / Emergency Stop	**0-10:** Heating OFF **20-40:** Emergency Stop **60-80:** Clear Material **240-255:** Heating Up
CH-Safe	Firing Enable / Disable	**0-49:** Firing Disable **50-200:** Firing Enbale **201-255:** Firing Disable

8. Wireless Control

SPARKULAR® Cyclone II can be firing wirelessly by FXmote. When use FXmote for remote control, please disconnect DMX cable connection, set machine to Wireless Control to ON status in advanced menu. Select "DEVICE" SPARKULAR on FXmore (please refer to FXmote manual), Match machine with FXmote by Press "SET" on FXmote when machine at Wireless Control interface.

FXmote is not standard configuration, if you need to order please contact SHOWVEN sales.

△ **Operation Guide**

1. Install SPARKULAR® Cyclone II

a) Horizontal installation is preferred for SPARKULAR$\circledR$ Cyclone II. If need to installed SPARKULAR$\circledR$ II in angles, please turn the Tip over to OFF status first, maximum firing angle is 45 ° and can only be angled to the right side as below picture.

b) Make sure the machine is securely installed to avoid tipping.

c) The safety zone area shifts accordingly when machine installed in tilt position. Please increase the safety distance in the direction which machine tilt.

d) Check carefully the output nozzle of each machine, make sure the output nozzle is in good shape and there is no powder aggregate.
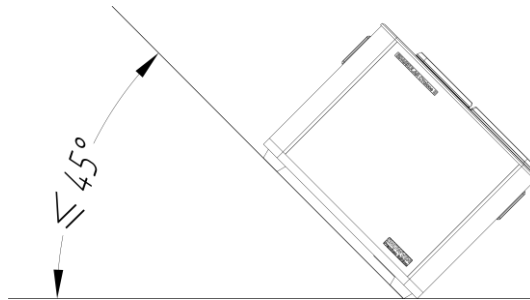
2. Fill SPARKULAR® Cyclone II

a) Open powder bags and fill the feeding hopper. Hopper capacity of SPARKULAR$\circledR$ Cyclone II is 450g.

b) Choose correct consumable according to the application scenario.

c) Please be noted that there may sparks or remains fall to the ground. Make sure no flammable material on ground in the safety zone.

d) Maximum effect height: HC8200 LARGE III is 10m

e) Make sure the lid of hopper is locked tight after filling.

3. Connect Power / DMX cable

a) Connect a power cable to the POWER IN socket of SPARKULAR$\circledR$ Cyclone II. Connect the other end of power cable to the power source. Make sure power supply in consistent with the rated voltage of the equipment, and the socket must well grounded.

b) If connect machine in sequence, please connect a power link cable to the POWER OUT of previous machine, connect the other end of the power link cable to POWER IN of the next machine.

c) The SPARKULAR$\circledR$ II power supply cable maximum allowed cascade is 2 units (220V version), 110V version machine please connect to puwer source directly. Do not connect exceed units to a single electrical circuit.

d) Power ON all SPARKULAR$\circledR$ Cyclone II.

e) Assign DMX address for each unit of SPARKULAR$^\circledR$ Cyclone II. If use SHOWVEN host controller or FXcommander to control the machine please allocate a unique DMX address for each unit of machine.
If use FXmote to control SPARKULAR$^\circledR$ Cyclone II wirelessly, please set machine to wireless ON status and match machine with FXmote. For DMX cable control please execute below operations (f to h).

f) Connect a DMX cable to the DMX IN socket of first unit of SPARKULAR$^\circledR$ Cyclone II, connect the male connector end of DMX cable to your DMX controller (FXcommander, HOST CONTROLLER, light console etc).

g) Connect a DMX cable to the DMX OUT of previous machine, and the other end of to the DMX IN of next machine. Connect all devices in series in this way.

h) Suggest to plug in a DMX terminator into the DMX OUT in last unit of machine to improve signal reliability. Signal amplifier is required for long distance (>200m) DMX signal transmission.

4. Activate SPARKULAR$^\circledR$ Cyclone II by swipe RFID card

a) Swipe an RFID card. SPARKULAR$^\circledR$ Cyclone II shows time remain if read successfully. SPARKULAR$^\circledR$ Cyclone II report E4 when remaining time is less than 10 minutes. SPARKULAR Cyclone II only compatible with V2.0 RFID card.

b) Please note each RFID card come with 200g package HC8200 can increase single machine 20min working time, the maximum recharge time for SPARKULAR$^\circledR$ Cyclone II is 30min, when time remain reached 30min, it can't recharge anymore RFID card.

5. Programming and Firing

a) Programming SPARKULAR$^\circledR$ Cyclone II, set the firing height, firing sequences etc.

b) Heating up, it takes around 5min, it varies according to the voltage and environment temperature.

c) Make sure the prescribed safety zone is clear.

d) Suggest to clear material before firing.

e) Firing. In order to prevent overheat in the heating chamber and protect machine, the maximum continuous firing time for SPARKULAR$^\circledR$ Cyclone II is 30s.

f) The operator should always have a clear view of the device, so that he/she can stop the show immediately when there is danger.

g) Clear material for SPARKULAR$^\circledR$ Cyclone II for 5s after show, clear material will remove the remaining particles from heating chamber. For angled installation, please elongate clear material time.

6. Turn Off and clean up

a) Power off SPARKULAR® Cyclone II, allow SPARKULAR® Cyclone II to cool down.

b) Disconnect all POWER and DMX cables.

c) Empty the remaining HC8200 in hopper, and store the remaining HC8200 in a dry sealed bottle for next time use. Never touch the output nozzle of SPARKULAR® Cyclone II when empty the hopper. DANGER OF GET BURNT!

d) Operators can use handheld vacuum cleaner to empty the feeding hopper. Do make sure the machine was cool down when clean it. Do NOT use high-power vacuum cleaners to avoid hot consumables being sucked into the vacuum cleaner from the heating chamber and cause fire.

e) Clean the surroundings to remove powder residues.

⚠ Nozzle Output Lid Installation

Install nozzle output lid when use machine in rainy weather.
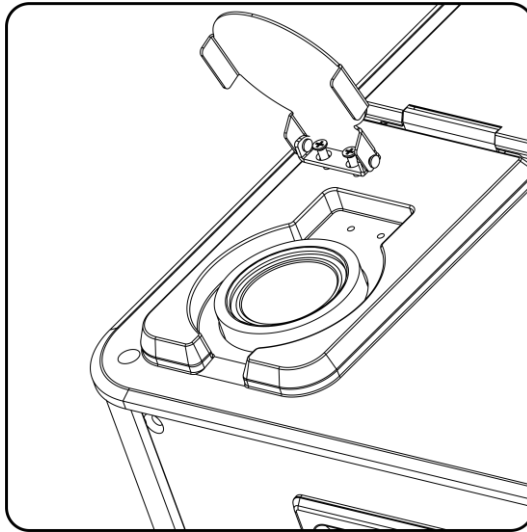
⚠ Maintenance

a) Empty the feeding hopper before shipment of machine.

b) Empty the feeding hopper if long time not use, for high humidity environment we suggest to empty feeding hopper after each show.

c) Clear material both before and after the show.

△ Warranty Instructions

\ Sincere thanks for your choosing our products, you will receive quality service from us

\ The product warranty period is one year. If there are any quality problems within 7 days after shipping out from our factory, we can exchange a brand new same model machine for you

\ We will offer free of charge maintenance service for machines which with hardware malfunction (except for the instrument damage caused by human factors) in warranty period. Please don't repair machine without factory permission

Below situations NOT included in warranty service:

\ Damage caused by use other type of consumable which is not originally from SHOWVEN®.

\ Damage caused by improper transportation, usage, management, and maintenance, or damage caused by human factors;

\ Disassemble, modify or repair products without permission;

\ Damage caused by external reasons (lightning strike, power supply etc.)

\ Damage caused by improper installation or use;

For product damage not included in warranty range, we can provide paid service.
Invoice is necessary when applying for maintenance service from SHOWVEN®.

SHOWVEN®