



HANDLER

PRO TECH *ELITE*

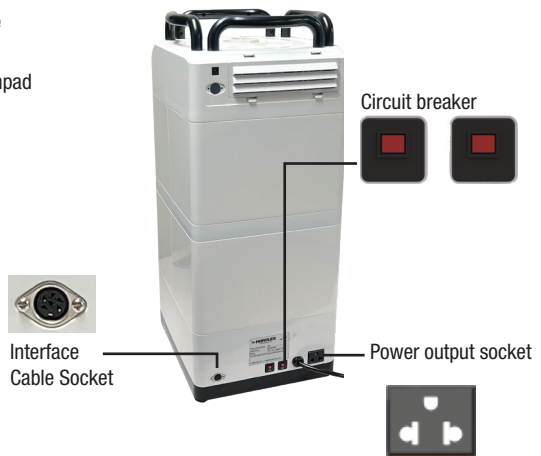


100C and 200C Users Manual

Front of Unit



Back of Unit



Specifications

Description : Extraction unit for CAM systems

Model no.: 100C and 200C

Materials : ABS, PC

Wattage : 1240W \pm 5%(230V), 1200W \pm 5%(120V)

Voltage : Single phase AC 220V-240V~, 50/60Hz
Single phase AC 100V-120V~, 50/60Hz

Current : 230V(5.2A) / 120V(10A)

Max. air flow: 3.74m³/min(ULPA filter)

Max. air pressure: 23kpa(ϕ 50)

100C Filters 1st filter(HEPA filter), 2nd filter(Cleaning filter)

200C Filters: 1st filter(HEPA filter), 2nd filter(ULPA filter, 0.1 μ m, 99.9995%), 3rd filter(Cleaning filter) Noise : approx. 55dB

Product weight : 13kg

100C size: 295(W)*330(D)*485(H)mm

200C size: 295(W)*330(D)*695(H)mm

Suction level: 1~9stage

Motor operating temperature: 0~40 °C

Storage temperature: -20~80 °C

Storage humidity: RH 20 ~80%

Setting up and Unboxing

Remove the device and all the accessories from the delivery package. The extraction unit is a free standing appliance which must not be operated in a lying position.

Position the extraction device so that:

- The exhaust vent is not blocked.
- The front of the device is easily accessible for removal of dust bag or filters.

If the extraction unit is kept in a closed cupboard, the warm exhaust air must be allowed to escape using one of the following methods:

- External exhaust air duct.
- An opening in the cupboard back side min. 250 x 120 mm, directly opposite the exhaust air outlet.
 - Distance from the cupboard back side to the wall: min 100 mm.
 - Distance from the extraction unit to the cupboard back side: max. 25 mm.
- Remove the back side of the cupboard, distance from the back of the cupboard to the wall min. 50 mm. If the warm exhaust air is passed out of the opening vent at the back of the cupboard, ensure that the warm air can escape without hindrance.

Connection to the Extraction Point

- 1 - Insert the suction hose into the suction port of top of device.
 - 2 - Connect the suction hose to the suction port of the CAM device.
- Refer to the CAM device instruction manual.



If necessary, shorten the suction hose. Caution, risk of injury!

When shortening the suction hose, please ensure that the integrated wire is cut as straight as possible. If the diameter size does not correspond, please use an adapter (optional components) to prevent a loss in suction performance.

Long suction hoses, tight bends and kinks will considerably reduce the extraction force at the extraction point. Avoid steep pitches or hanging points along the hose path.



An external exhaust air route (see Optional components) allows the extracted air to leave the laboratory. The installation details are supplied with the external exhaust air route.

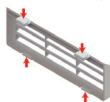
When the extraction unit is used in conjunction with an external ventilation system, a significant quantity of air is extracted from the room per hour. This can create negative pressure within the room which, when using an air dependent naked flame fed by gas, liquid or solid fuel, can cause poisonous gasses (e.g. carbon monoxide) to be drawn into the working area. It is therefore essential to ensure that the fresh air supply is sufficient and that the environmental air pressure is maintained, this should then be monitored by an authorized specialist (e.g. a certified Gas Service Engineer).

Installation of hoses for outdoor exhaust

Outdoor exhaust plate and extra hoses sold separately.



- 1 -Remove the indoor exhaust plate on the back of the product by pressing the 4 hooks on the exhaust plate with both hands.



- 2 -Attach the outdoor exhaust plate on the back of the product to the machine by pressing the 4 hooks on the exhaust plate with both hands.



- 3- If the external exhaust cover is fitted, fix the exhaust plate with 6 screws. Attach the exhaust hose to the attached outdoor exhaust plate.

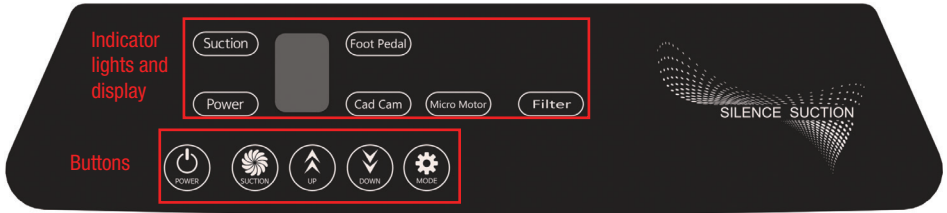
CADCAM Interface

This dust collector is a two-way interface capable of communicating with CAM devices.

Through the input/output unit, commands can be received from the dust collector or status information can be sent to the CAM device.

NOTE: The suction hose of 100C or 200C must be connected to a CAD/CAM milling machine's suction port **BEFORE setting the MODE. Also, an interface cable must be connected to both of machines and be recognized by the CAM milling machine. Refer to your CAD/CAM manual for set up instructions.**

Using The Touchpad and Operation



Waiting State: When the power is connected, the power indicator light turns red.

TURNING ON THE PRODUCT

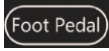


POWER ON/OFF: the dust collector switches on and off by pressing the Power button. Other buttons can be operated while the power is on. When the power is turned on, the power indicator light changes from red to white.

SELECTING MODE



MODE: there are 3 modes - Foot Pedal, CadCam, and Micro Motor.



FOOT PEDAL: **NOTE:** before mode setting, the foot switch must be connected to the device to enable mode setting.

- 1) Connect the foot switch to the 6pin circular terminal port of the foot pedal / interlocking cable socket. Suction starts only when the foot pedal is pressed, and suction stops when the foot pedal is not pressed.
- 2) When you press mode once the foot pedal indicator light will light up.



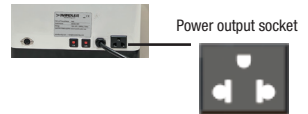
CADCAM: **NOTE:** The suction hose of 100C or 200C must be connected to a CAD/CAM milling machine's suction port **BEFORE** setting the MODE. Also, an interface cable must be connected to both of machines and be recognized by the CAM milling machine.

- 1) The dust collector is controlled by signals from the CAM milling machines. Connect the interlocking cable which has a 6pin circular terminal to the common port of Foot pedal / Interlocking cable socket.
- 2) Press MODE TWICE to turn on CadCam mode - the CadCam indicator light will light up.



MICRO MOTOR:

The dust collector is operated through a signal from the micromotor controlled device. When an external electronic device and a dust collector are connected, the dust collector stores and sets the current value of the external device.



Setting the up a micromotor: Follow the below instructions to calibrate your 200C or 100C machine with your micromotor.

- 1) Pressing the MODE BUTTON 3 TIMES. The Micromotor indicator light will light up.
- 2) Press the UP button **AND** DOWN button on the touch pad at the same time for at least 1 second. ("L" is displayed on the keypad. *L stands for LOW.)
- 3) Turn off micromotor or put it in standby mode for at least 3-5seconds. This state is a step to check the current value of the micromotor. (For example, when using a handpiece, this means that the handpiece is not activated, only the control unit is turned on.)
- 4) Press the DOWN button on the touch pad. ("H" is displayed on the touch pad. *H stands for HIGH.)
- 5) Turn on the handpiece or electronics at the RPM where the dust collector should work and let it run for 3 to 5 seconds. (This is the time to stabilize the abnormal current that appears when the device is first turned on or the time to collect and store the minimum current value.)
- 6) Press the UP button on the touchpad. (Suction speed is displayed on the touch pad and suction is activated. The setting value is saved.)
- 7) The set value is saved and tested, but if it malfunctions, reset from step 1). At this time, set the RPM at which the dust collector should operate by increasing it. If the RPM interval is narrow, it may not be possible to measure the set value.



SUCTION CONTROL



SUCTION ON/OFF: When You Press the suction button the suction indicator light turns on.



UP: A number will appear on the numeric display, of the suction UP step.



DOWN: AA number will appear on the numeric display, of the suction DOWN step.

FILTER



When this button turns on automatically, it is a filter replacement notification lamp. This alarm is triggered by measuring the pressure in the internal suction by a pneumatic sensor. Even after the filter replacement alarm, if you use it without replacement (cleaning), suction is automatically stopped with a “F” mark on the numeric display.

DUST COLLECTOR MODE ONLY



1) Insert the power plug into the building installed wall socket. Turn on the power.



2) To start suction press the Suction button.

CAUTION: PLEASE READ ALL CAUTIONS AND WARNINGS CAREFULLY BEFORE USE



The output power socket for the use of micromotor controller for dental LAB equipment. If you connect and use an electric device, it may cause the dust collector to fail. **Connect only if the capacity of the external electric device is less than 1 Ampere.** Be sure to check the electric capacity of the external electric device.



The dust collector is for dry dust only!
When connecting the CAM machine with the moisture and drying function, make sure that residual moisture from the CAM machine does not enter the dust collector.
Make sure the dust collector is operating in the working properly.



If the suction is frequently switched on or off via the CAM power supply, it may cause electronic damage to the CAM system as well as to the SILENCE CAM.

For remote control of the SILENCE CAM it is essential to use the provided CAM interface, together with the “CAM interface cable type” where applicable.

The electrical connection for communication with Foot pedal /the CAM device is provided by the Interface cable socket Interface cable socket and an Interface cable (see components). For information on interface cables available for the CAM device or producing an individual Interface cable for CAM interface.

Replacement Parts Available

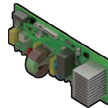
100C & 200C Accessories



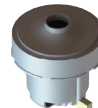
P100C-01 Bushing Main Device
100C & 200C DC



P100C-04 Cam Data Cable 100C
& 200C DC



P100C-07 Main PCB (Circuit Board)
100C & 200C DC



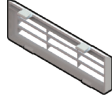
P100C-10 Vacuum Motor 100C
& 200C DC



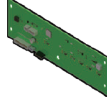
P100C-Hf Hepa Filter, 199mm For
100C & 200C DC



P100C-02 Bushing Cam Device
100C& 200C DC



P100C-05 Indoor Vent Cover Cable
100C & 200C DC



P100C-08 Touch PCB (Circuit Board)
100C & 200C DC



P100C-11 Casters, Set Of 4 100C
& 200C DC



P100C-Hs Hose, 2m W/Bushing For
100C & 200C DC



P100C-03 Bushing Exhaust 100C
& 200C DC



P100C-06 Outdoor Vent Cover Cable
100C & 200C DC



P100C-09 Touch Pad 100C &
200C DC

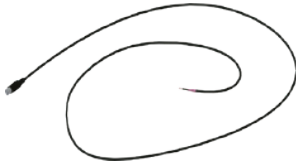


P100C-Af Air Filter For
100C & 200C DC



P100C-UF Ulpa Filter For 100C
& 200C DC

Interface Cables



The 100C and 200C comes with a Roland-B interface cable.

Imes core-C type and Amann Girrback-D type interface cables are available for purchase by contacting Handler at:
Phone: (908) 233-7796 or
Email: info@handlermfg.com

Filter Replacement

Replacing the P100C-Af Air Filter



1) Disconnect the suction hose from the machine



2) Move the locking device switch to the unlock position



4) Open the product lid by turning it counter clockwise.



5) Remove the primary circular filter attached to the lid, replace it with a new filter, and put it back on the lid.

Replacing the P100C-UF Ulpa Filter



Take out the secondary filter inside and replace it with a new filter.

Replacing the P100C-Hf Hepa Filter



The filter is accessed at the **BACK of the machine**. Take out old filter and replace it with a new filter.

Troubleshooting

Error	Possible Causes	Corrective Action
If the power does not come on.	When the contact is shorted due to the external circuit breaker operation	Line is overheated, press the circuit breaker switch after cooling the device sufficiently. If you press this switch when the device is not cool enough, the switch will not be pressed.
	If the power fuse of the main PCB is disconnected	Check the fuse on the power side of the PCB and replace it when the fuse breaks.
	Since the temperature of the power	
When the vacuum suction unit suddenly stops	Dust collector continued to be used despite the “change filter” indication	Replace the motor-side fuse on the PCB.
	When the fuse on the motor side on the main PCB is disconnected due to an overload of the power supply	Thermostat inside the motor may be overheating, check whether the device is restarted after 30 minutes.
	In case the motor does not work due to overload (temperature, electricity) operating the thermostat inside the motor	Check and replace breakers in the building.
	Defective breaker in building Check and replace filter.	Check the total power consumption of the dust collector.
When the suction power is very weak	Suction level is too low	Increases the suction level.
	Filter is clogged	Check the filter and replace if necessary.
	Blocked suction hose	Remove objects from suction hoses.
	If the suction hose is damaged	Inspect the suction hose and replace if necessary.
The filter replacement notification lighted up shortly after the filter was replaced	Filter is clogged	Check the filter, clean or replace if necessary
	Blocked suction hose	Remove objects from suction hoses.
	Defective flow sensor	In this case, professional repair of the machine is required.
If the button on the touch pad malfunctions	Temporary non-reaction and malfunction of the touch sensor in a dry environment	After removing the foreign object from the touch pad, reboot the device by unplugging it from the power outlet and plugging it in again.

Intended Use

This dust collector is designed for use with dental milling machines to collect dry dust generated during commercial construction. The intended use includes compliance with the operating, maintenance and maintenance instructions specified by the manufacturer.

Improper use

- Materials that promote fire are hot, flammable, red, ignite or explode should not be collected by the device.
- Do not aspirate water, liquids or solutions.
- The device should not be used for personal use at home. Any use other than those specified in these instructions is considered improper and indicates improper use of the device.
- The manufacturer is not responsible for any damage caused by improper use.
- Only parts and accessories provided or approved by Handler may be used for this product.
- Use of third-party parts or accessories may adversely affect the safety of the device, increase the risk of serious injury, and cause damage to the environment or the device itself.

Safe operation

The device may only be operated:

- Indoors
 - Up to an altitude of 2,000 m above sea level.
 - At an ambient temperature of between 5 - 40 °C [41 - 104 °F] *).
 - At a maximum relative humidity of 80 % at 31 °C [87.8 °F], dropping to a linear of up to 50 % relative humidity at 40 °C [104 °F] *).
 - Under contamination level 2 conditions.
 - Under over-voltage category II conditions.
- *Between 5 - 30 °C [41 - 86 °F] the device can be operated at a relative humidity of up to 80 %. At temperatures between 31 - 40 °C [87.8 - 104 °F] the humidity must decrease proportionally in order to ensure operational readiness (e.g. at 35°C [95 °F] = 65 % humidity, at 40 °C [104 °F] = 50 % humidity). The device may not be operated at temperatures above 40 °C [104 °F].

Ambient Conditions for Storage and Transport For storage and transport the following specifications to ambient conditions apply:

- Ambient temperature - 20 – + 60 °C [- 4 – + 140 °F].
- Maximum relative humidity 80 %

Authorized Persons

Operation and maintenance of the device may only be performed by qualified personnel.

Minors and pregnant women may only operate and service the device if they are wearing appropriate protective gear, in particular if the device is being used to extract hazardous materials.

Any repairs not specifically described in these operating instructions may only be carried out by a qualified electrician.

HANDLER

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handlerrmfg.com

Hazard and Warning Information -General Information

- If the device is not used in compliance with the supplied instructions, the safety of the device can no longer be guaranteed.
- The device may only be operated using a mains cable with the country-specific plug system.
- Any necessary alterations must be carried out by a qualified electrician.
- The device may only be operated if the information on the identification plate conforms to the specifications of your local mains power supply.
- The device may only be plugged into outlets which are connected to the protective conductor system.
- The mains plug must be easily accessible.
- Disconnect the device from the mains before carrying out work on the electrical parts.
- Check connection cables (such as power supply cords), tubes and housing (i.e. the touch-pad) regularly for damage (i.e. kinks, cracks and porosity) or signs of ageing. Devices with damaged connection cables, tubes or housing parts or other defects must not be operated!
- Defective devices must be put out of service immediately. Remove the mains plug and ensure the device is not used. Send the device for repair!
- When connecting to a CAM system, please observe the CAM device instructions for use and comply with their safety precautions.
- Please observe the national regulations and permitted exposure to dust in a working environment. Please ask the "National Institute for Occupational Safety and Health" or other responsible authority.
- Always refer to the relevant safety data sheets, when extracting hazardous materials.
- Always wear protective gear, when extracting hazardous materials.
- It is necessary to wear suitable personal protective equipment when emptying the dust filter or cleaning, depending on the type of extracted material.
- When disposing of the extracted material or used filter, please observe the local specifications and accident prevention regulations!
- Make sure the cover of dust collector is fully closed during operation.
- Do not operate without a suction hose.
- Do not extract easily flammable, explosive gasses or fumes.
- The following dry dust must not be suctioned into the device.
 - Wood
 - Titanium
 - Titanium-aluminum
 - Light metals and light metal alloys (e.g. aluminum, magnesium).
- Do not extract hot materials.
- Do not extract liquids.
- If the extraction unit is used to suction hazardous materials, appropriate personal protective gear must be worn and steps must be taken to ensure that the exhaust air is properly ventilated.
- Dispose of extracted material according to local statutory regulations.

Please retain your proof of purchase for warranty repairs.

Repair Services

Authorized repair service is available. **You must email Handler at customerservice@blackstoneind.com to obtain the Return Merchandise Authorization number before returning the item.** Our customer service department will quickly and easily guide you through the process.