

Serial number: **220000-01 onwards**



**SMARTBOT**

**AIRCLEAN  
& SERVICE**  
— SRL —

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***This manual is an integral part of the supply and must be read carefully in order to ensure correct use, in accordance with the essential safety requirements; drawn up in accordance with the provisions of the Machinery Directive 2006/42/EC, it contains the technical information necessary to correctly carry out all the procedures in safe conditions; it must be carefully stored and must accompany the SMART-BOT VIDEO INSPECTOR throughout its life, including any changes of ownership, it was made in Italian as the language of origin.***

In case of loss or deterioration, it is possible to receive a copy by requesting the company Airclean&Service S.r.l. indicating the data shown on the identification plate.

Airclean&Service S.r.l. declines all responsibility for damage caused as a result of operations not covered in this manual.

**Machines from serial number 220000-01 onwards**

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# 1. INTRODUCTION

## 1.1 Premise

AIRCLEAN&SERVICE S.r.l. congratulates you for choosing the **SMART-BOT** VIDEO INSPECTOR, the subject of this manual. Carefully read the manual and all the technical documentation supplied with the **SMART-BOT** VIDEO INSPECTOR, to operate correctly and safely.

## 1.2 General guidelines

The equipment described in these instructions has been manufactured in compliance with the laws and statutes of the European Union. Updates and regulations on the safe use of machines change over time. If the person using the equipment notices any need or possibility to improve safety at work, Air-clean&Service would be very grateful to receive such information.

1. Battery-powered SMART-BOT video inspector is built for the inspection of air ventilation ducts (HVAC systems), circular and rectangular in conditions of absence of wet or high humidity. The **SMART-BOT** video inspector must operate in conditions of no water or high humidity. It is forbidden to use the appliance for any other purpose. If you use the equipment for a purpose other than that for which it was designed, the manufacturer is not responsible for the possible consequences.
2. The appliance may only be used by personnel who have been trained in its use and who have read and understood the operation and other instructions provided by the manufacturer.
3. The persons in charge of operating the machines or equipment must become familiar with the equipment, functions and safe use of the **SMART-BOT** video inspector.

## 1.2 General guidelines

4. It is FORBIDDEN to modify or remove the safety functions that cannot be disabled while using the machine.
5. If the machine should operate abnormally or in a way that causes it to jam or impair the operation of its original operating and safety functions, the personnel responsible must stop using the machine and immediately notify their manager or dealer/manufacturer.
6. Noise level from the machine is very low (<70 dB)
7. Due to the many variables related to this type of activity, and the operation shared with other operators who can simultaneously operate on the HVAC ventilation system (the work is carried out in intervals, change of positions alternating of the team) it is therefore necessary to evaluate the exposure to vibrations (hands) or other types of risk, it is recommended to clean the Robot and the cable well with spray disinfectant (WITHOUT WATER) to avoid CROSS-CONTAMINATION.

## 1.3 Technical assistance

AIRCLEAN & Service technical assistance service is available for clarifications, maintenance interventions to be agreed upon from time to time per time or on specific request.

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## 2. MACHINE COMPOSITION

1. Transport trolley assembly
2. Electric box
3. Robot
4. Joystick with integrated LCD screen 7" cable 4 meters
5. Battery charger
6. Cable 25 meters
7. Electric box carrying handle
8. Joystick bag



### 3. SAFETY

The following instructions must be followed to ensure safe and uninterrupted operation.

- The **SMART-BOT** video inspector is a battery-powered unit. The only part to be connected to the mains supply is the charger supplied.
- The charger's electrical plug must be connected to a 230 V, 50 Hz outlet.
- The equipment must not be placed or used in locations where there is a risk of explosion.
- The equipment must not be wet.
- Beware of sharp metal sheets, sharp edges, rivets, self-drilling screws in the ductwork.
- Use only suitable ladders or scaffolding when working with the **SMART-BOT** video inspector.
- Wear a protective mask, eye protection goggles, gloves, etc. shoes according to the requirements of the workplace/work environment.

For all questions, please contact Air-clean&Service or an authorized dealer. The equipment must be protected from moisture, vibration, and shock.

## 4. TECHNICAL INFORMATION

1. Panel socket for robot cable.
2. On/off switch.
3. Panel socket for joystick cable.
4. Panel socket for battery charger.
5. Output (RCA) for external recorder.
6. LED display to view battery power.
7. Traction motor control joystick.
8. Camera Switch.
9. SD Card Recorder.
10. 7 inch LCD monitor.
11. Socket for joystick cable connection.
12. Green light indicates control unit on.



## 5. INSTALLATION

### 1. Transport

First installation and use, check all parts. Ensure that none of them have been damaged during transport. **SMART-BOT** Video Inspector must be protected from moisture and should not be stored without external protection. Please be careful when packing/unpacking the equipment.

### 2. Operating position

Position **SMART-BOT** Video Inspector safely on a stable surface. Protect the appliance from vibrations and other potential sources of damage. The permissible operating temperature is from -10°C to +35°C.

### 3. Charge the battery

The charging time is 5-6 hours; If the battery has been discharged for several days, 24-hour charging time is recommended. Red light indicates charging not OK, green light indicates charging is OK. Always recharge as soon as possible and never keep the battery discharged for a long period of time.

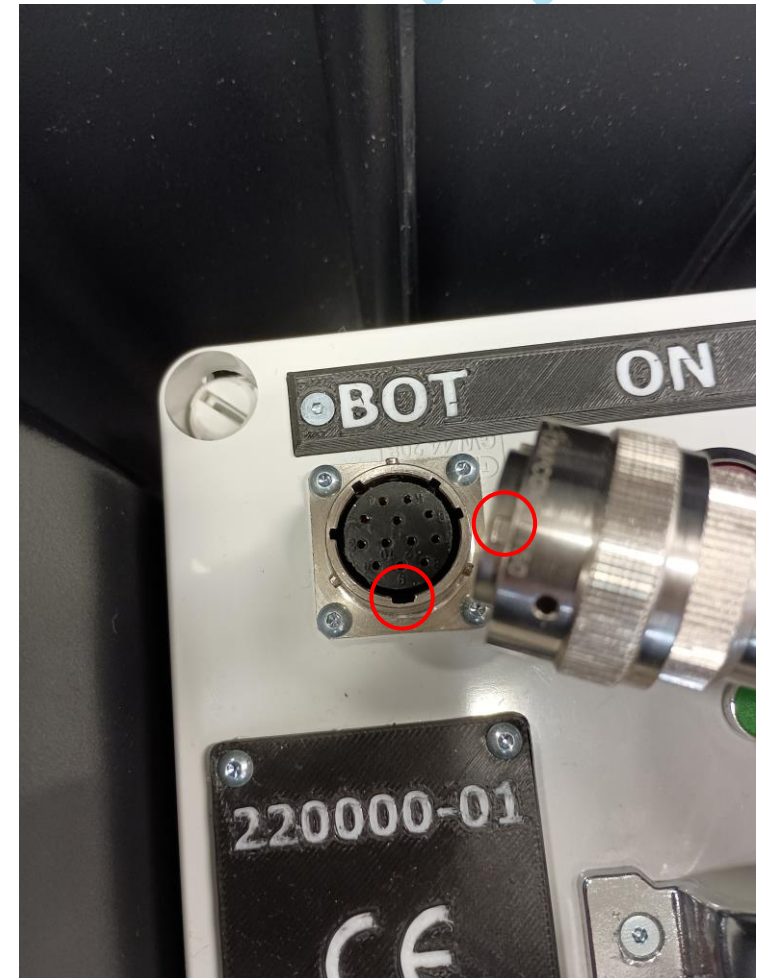
### 4. Cables connection

Connect the joystick cable plug to the panel socket in the "JOYSTICK" control unit, connect the male plug of the 25 meters cable to the panel socket in the "BOT" control unit and the female plug of the 25 meters cable to the panel socket in the robot.

***The connection of the connectors must be corresponding with the two large notches on each part, once inserted simply turn the ring nut clockwise until the "click".***

### 5. Turn on the power

Press the ON switch, once in operation the green indicator light will come on.



## 6. OPERATIONAL FUNCTIONS

Once the various cables have been connected, turn on the machine using the ON/OFF button. Guide the robot with your thumb finger on the joystick (7) and direct the robot following its movements with the front and rear cameras, on the right side of the joystick is positioned the switch switch (8) of the two-position cameras; front camera top position, rear camera bottom position (camera center position off).

- **Video recording**

There are multiple ways to make video recordings

- 1) MINI DVR integrated into the joystick (record on SD card)

**When red LED is lit steadily it means that the DVR is working, press the REC button to start recording and the red LED will start flashing; to stop recording, press the REC button again and the red LED will stop flashing.**

- 2) External DVR on request (record on SD card)

Connect the yellow cable to the REC socket



## 7. MAINTENANCE

- ***ALWAYS recharge the battery as soon as possible and never keep the battery discharged for an extended period of time***
- ***When winding the cable after use, try to remove all the twist that may occur on the cable; It is advisable to completely stretch the cable along its entire length and wind it progressively, avoiding the formation of knots or badly made bends.***
- ***When winding the cord after use, wipe it with a soft cloth (microfiber, cotton, fabric, or similar) moistened with a disinfectant detergent.***
- ***Clean the control panel and other parts with a soft, not too damp cloth.***
- ***Check all connection plugs, cables that are not loose or for any damage.***

### **SPARE PARTS**

To order spare parts, you must fill out the form on the next page, otherwise always specify:

- Customer name and identification data;
- Order number (or protocol);
- Identification data of the **SMART-BOT** VIDEO INSPECTOR (Serial number);
- Part number and component designation;
- Quantity to order.

## 8. TAKING IT OUT OF SERVICE

Decommissioning means the **SMART-BOT** VIDEO INSPECTOR in non-operational conditions for an extended period of time

- Disconnect the electrical power supply

***If you store the SMART-BOT VIDEO INSPECTOR for long periods of inactivity, we recommend that you protect it with waterproof material.***

In the event of prolonged parking of the **SMART-BOT** video inspector not in normal use, it is recommended not to expose it to atmospheric agents, this would cause serious damage to many of its electrical components.

Store the **SMART-BOT** Video Inspector indoors under environmental conditions within the following values:

- Temperature: -10/+35 °C;
- Relative Humidity 90% Max.;
- Closed and sheltered from atmospheric agents.

***Values other than those indicated above can seriously damage the components.***

## Declaration of conformity

Manufacturer Name: Air Clean&service S.r.l.  
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### SMART-BOT Video Inspector

**Serial number: From 220000-01 onwards**

You hereby declare, under your own responsibility, that the  
The machinery referred to in this document complies with the  
requirements of the following directives:

- EU Machinery Directive MD 2006/42/EC
- EU Low Voltage Directive LVD 200695/EC
- EU Electromagnetic Compatibility Directive EMC 2004/108/EC
- EU Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment ROHS 2002/95/EC

Source that harmonizes standards:

- EMC: EN 55014 Electromagnetic compatibility
- Part 2: Technical principles
- EN 60204-1:2007 Safety of Machinery: Electrical equipment of machines, General Requirements

Additional information: none

The product meets the requirements for the CE mark

The Technical Manager  
Roberto Ragazzi

