
Astor 20 Colony Counter User's Manual



Distribué par :

Z.A de Gesvrine - 4 rue Képler - B.P.4125
44241 La Chapelle-sur-Erdre Cedex - France
t. : +33 (0)2 40 93 53 53 | f. : +33 (0)2 40 93 41 00
commercial@humeau.com



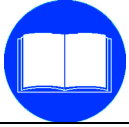
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WARNINGS



Carefully read this User Guide before using the equipment.



This manual is an integral part of the product and must be conserved for future consultation.

In it you can find important information regarding safety of use and maintenance.

Read the instructions contained in this manual carefully before installation, use and before processing any operation of adjustment or maintenance.



This equipment has been realized for the counting of bacteria and mould colonies grown in Petri dishes.



Every use which differs from the description above, will be considered as “improper use” and will invalidate the warranty.



Even if this device is provided with protections, its use without following the described procedures could produce a wrong working and damages on the equipment.



The manufacturer is not liable for damages to people or things caused by improper use of the equipment and / or not respect of the laws, regulations and instructions described below.

SYMBOLS USED IN THIS MANUAL



Carefully read the instructions contained in the manual before using the equipment.



Every action performed on the equipment must comply with the indications described in the manual.



Suggestions and clarifications for a better functioning and a correct interpretation of the information contained in the manual.



Presence of danger: injuries may occur. Please follow the instructions contained in the related paragraph.



Presence of danger: electrical shock may occur. Please follow the instructions contained in the related paragraph.

FEATURES

MECHANICAL FEATURES

Features	Description
Dimensions of Petri dishes	Up to 90 mm diameter (adapter included) 110 mm
Dimensions (l x p x h)	225 x 215 x 88 mm
Weight	1,2 Kg

ELECTRICAL FEATURES

Features	Description
Power supply	12 V _{DC}
Power adapter	INPUT: 110 V _{AC} – 240 V _{AC} , 1,6 A Max OUTPUT: +12 V _{DC} , 3 A
Max. variability of the tension	±10% of the nominal tension
Transitory overload	II
Absorption	2 W
Display	Digital with 8 digits
Light source	LED
Battery	CR2477 type

CLIMATIC FEATURES, STORAGE, PACKAGING AND USE

Features	Description
Working temperature range	from 5° to 36°C
Relative humidity	max. 80% for temperatures up to 31°C, with a linear decrease up to 50% at a temperature of 40°C.
Pollution degree	2
IP protection grade	20

ELECTRICAL CONNECTION

Avoid placing the equipment near heating sources or windows hit by sunlight.



According to European laws, the equipment must be connected to a grounded plug. The manufacturer will not be responsible for possible damages to people or things, if caused by a lack of compliance with this rule. In case your electric socket is not compatible with the plug of the equipment, make it replaced with an adequate one by competent technicians. Avoid the use of multiple adapters or additional cables.

MATERIAL SUPPLIED

The equipment always comes with the following material:

Code	Description	Quantity
PLXRDT.67175	Colony counter adapter	1
--	Power adapter	1
--	Power cable	1

INSTALLATION

1. Connect the power supply to the colony counter.
2. Connect the power supply to the electrical socket.
3. Press the main switch located on the upper right side of the equipment. The translucent backlit plate holder will light up automatically.
4. The display is always on, as it is battery operated (the battery lasts about 3 years).

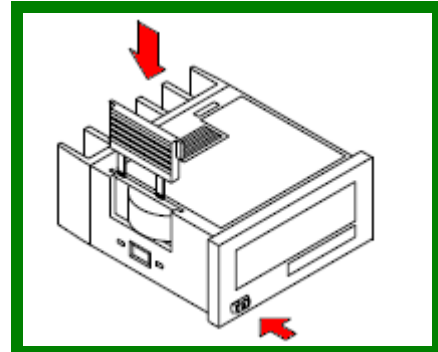
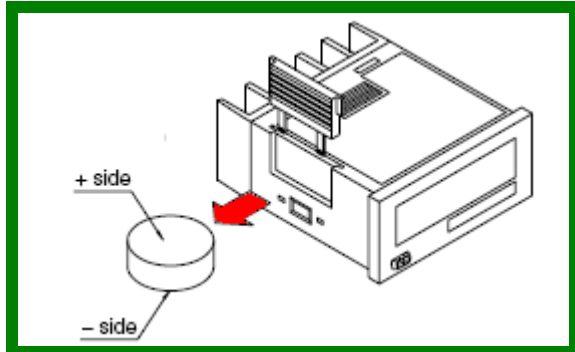
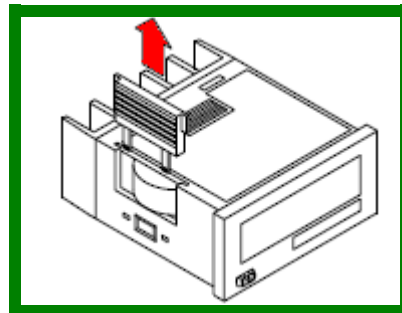
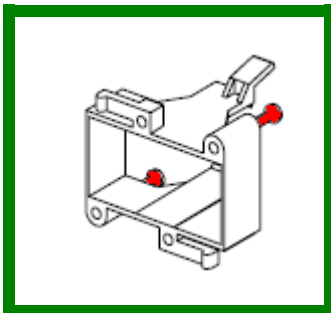
USAGE

1. Verify that the value on the display corresponds to "0" and reset it if necessary by pressing the Reset key.
2. Place an upturned Petri dish on the backlit plate holder; if needed, use the plate adapter to fix the plate steadily.
3. Count the colonies by marking them on the Petri dish with any marking pen.
4. The equipment bases its enumeration ability on pressure sensors located under the backlit plate holder, so that Astor 20 automatically increases the counting after every single pressure of the marking pen on the Petri dish. Every count is confirmed by an acoustic signal.
5. After counting, read the result on the display.
6. Reset the display before starting a new count.

BATTERY REPLACEMENT

For the battery replacement proceed as follows:

1. Remove the fixing screws underneath the equipment.
2. Remove the screws that fix the electronic counter.
3. Remove the battery cover from the case.
4. Remove the battery from the side of the case. The battery will come loose if you put the battery side face down and gently shake the unit.
5. Before inserting, wipe clean the surface of the battery.
6. Insert the battery paying attention that the + and – sides are in the proper position.
7. After replacing the battery return the battery cover to the case. Check that the hook of the battery cover is properly engaged.
8. Before any use press the “Reset” key on the front.
9. Fix the electronic counter to the case verifying its tightness.
10. Close the equipment.



FRONT PANEL



N.	Description
1	Counter
2	Reset key
3	Main switch
4	Adapter
5	Backlit plate holder

TECHNICAL ASSISTANCE

In case the equipment does not work please check that:

1. the plug of the equipment has been correctly placed in the electric socket;
2. the plug of the power supply has been correctly placed in the equipment;
3. the main automatic switch of the laboratory is not in OFF position;
4. an electric black-out is not occurring;
5. the equipment controls are in the correct position;



If the problem does not disappear, please contact the Service Department of your local Astori distributor.



In case you may need technical assistance, please communicate the model and the serial number of the equipment.

CLEANING



Turn the equipment off and always unplug it before starting any cleaning operation.

Do not use water but use a damp cloth instead.
Use a neutral all-purpose cleaner.
Do not clean the equipment using aggressive detergents or alcohol.

ACCESSORIES

Code	Description	Quantity
66131	Accessory benchtop lens with lamp on an adjustable arm	1

WARRANTY



The warranty period lasts 12 months starting from the date stated on the Packing List and it covers manufacturing faults only.

It does not cover: malfunctionings, damages or faults appeared after the warranty terms or resulting from an improper use of the equipment; from negligence or carelessness; from wrong installation or wrong maintenance; from technical assistance carried out by unauthorized personnel; from transport or corrosion damages; from the use of not original replacement parts.

Warranty will be instantly invalidated in the event that the serial number of the product is found to be modified or cancelled.

Warranty does not cover damages originated by overvoltages caused by the electrical net which the equipment is connected to.

Should you send the equipment, the use of the original Astori package or a strong box filled with styrofoam is mandatory.

DOCUMENT VALIDITY



ASTORI TECNICA reserves the right to review and modify this document without any notice.

Note: any variation will not affect the respect of the directives.



These images have an explicative purpose only and they may differ from reality.

DISPOSAL



The symbol of the crossed garbage collector indicates that the product at the end of its useful life should be collected separately from normal garbage.

The user will give the equipment, at the end of its usage, to centers for collection of electronic and electrotechnical garbages according to rules and laws.

The proper collection of the disused equipment, the recycling, treatment and disposal contribute to avoid possible negative effects on the environment and human health and encourage the recycling of the materials that compose the equipment.

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