

# Biocaptur

## INSTRUCTIONS MANUAL

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**ATG INGENIERIA CONSULTING 2020 S.L**



[info@atgingeneria.com](mailto:info@atgingeneria.com)



[www.biocaptur.com](http://www.biocaptur.com)



(+34) 641517153



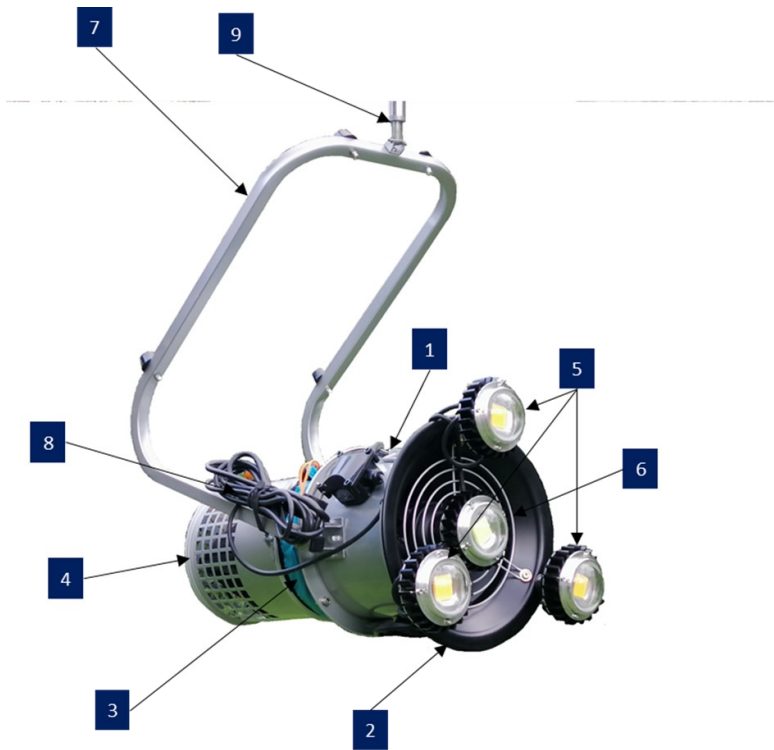


Figure 1: BIOCAPTUR S60 Optimized equipment

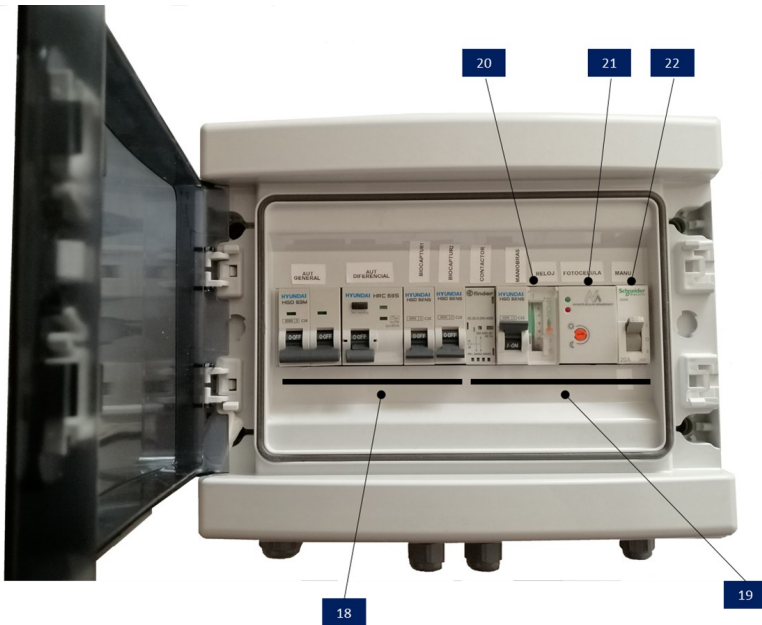


Figure 2: Protection and control panel



Figure 3: Pole attachment hook detail



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Figure 4: Detail Safety bolt of the extendable pole



Figure 4bis: Detail of the adapter for splicing extendable poles

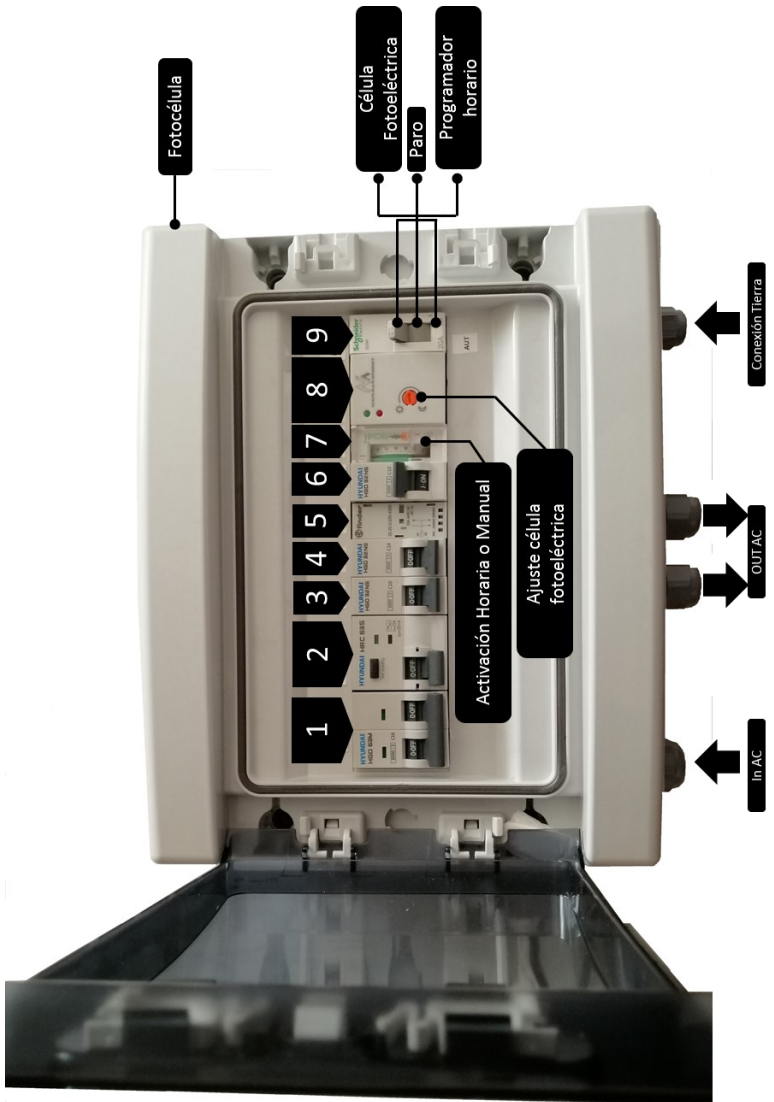


Figure 5: Electrical and maneuvering protection panel

## **TABLE OF CONTENTS:**

<b>INTRODUCTION</b>	Pág.
General recommendation.....	9
Equipment.....	10
Content.....	10
Safety recommendations.....	10
Handling and use.....	12
Description.....	12
Original accessories. Replacement material.....	13
 <b>TECHNICAL DATA</b>	
Operating Data.....	14
General Data.....	14
Installation.....	15
Put in Operation.....	16
Use and Application Protocol	16
<b>INSTALLATION / PUT IN OPERATION</b>	
<b>MAINTENANCE</b> .....	20

## INTRODUCTION

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### General recommendation

The invention relates to a system that has chosen BIOCAPTUR S60 optimized. In this manual it will find useful information and important recommendations for the handling and maintenance of the acquired equipment. We propose to read it to facilitate installation and use tasks. Saving this manual in a safe place.

The invention can be used in contact with its dispenser or to the manufacturer:

[www.atgingegneria.com](http://www.atgingegneria.com)

The following pictograms are used in these instructions



**Read only the usage instructions**



**Following the safety and health indications**



**Danger of electrical hazard**



**Recyclable. Equipment and packages**



**Recyclable electronic materials**



**European conformity marking**



**Non Ionizing Radiation hazard**



**Hand cut risk**



## **Equipment**

<b>1</b>	<b>Extractor turbine</b>
<b>2</b>	<b>Lighting display</b>
<b>3</b>	<b>Anti return gate</b>
<b>4</b>	<b>Collector housing</b>
<b>5</b>	<b>Auxiliary LED spotlights</b>
<b>6</b>	<b>Central LED spotlight</b>
<b>7</b>	<b>Device support</b>
<b>8</b>	<b>Power cable</b>
<b>9</b>	Extendable holding pole

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## **Content:**

1. BIOCAPTUR S60 Optimized Equipment
2. Extendable holding poles (more accessories)
3. Instruction Manual
4. Protection and maneuvering electrical box.(optional one unit per farm)

## **Safety Recommendations**

1. The installation and start-up of BIOCAPTUR S60 Optimized must be carried out by trained and experienced personnel, following the current regulations for electrical installations.
2. Equipment must be properly grounded.
3. It must not be started if the equipment is not correctly fixed in its final position and connected to the electrical protection and control box.
4. Before handling the equipment, disconnect the power supply.
5. The power connector of the equipment must not be handled in any way.
6. Keep equipment protected from rain and moisture

7. BIOCAPTUR S60 Optimized should not be sprayed with liquids.
8. The equipment must be kept free of powdery environments.
9. It uses the equipment only for the purpose described in the present manual of instructions.
10. Any unnecessary exposure to UV radiation should be avoided even with eyes and skin covered.
11. The repair or manipulation of the ultraviolet light emitters must be carried out by specialized personnel.
12. Do not put your hand into the air inlet of the equipment.
13. Do not introduce objects into the air inlet of the equipment.

**DANGER!**

Danger of cutting hands. Do not put your hands in the air inlet of the turbine when it is connected to the power supply.

**WARNING!**

Read the warnings and safety instructions. Failure to follow the safety warnings and instructions can cause electric shock, fire and / or serious injury. If used incorrectly, if they are incorrectly connected or undergo any modification, it can cause damage.

**WARNING!**

Do not look directly at the LED emitters for a long time.

**WARNING!**

Do not manipulate the equipment connected to the electrical supply.

## **Handling and Use**

- \* BIOCAPTUR S60 Optimized must always be connected to the electrical supply through the electrical protection and maneuvering box supplied
- \* Do not use the equipment when the power cable or switch has some defect.
- \* Store the equipment properly when not in use for long periods of time.
- \* Do not allow the use of this equipment by personnel who are not familiar with it or who have not read the instruction manual.
- \* It is kept clean of dust and dirt the equipment.
- \* It is periodically checked for the moving parts to function correctly and there are no blockages.
- \* Check that there are no abnormal noises in your operating mode.
- \* Visually inspecting that there are no loose pieces or damaged prior to running the equipment.
- \* Never force the turning mechanism acting on the BIOCAPTUR S50 or on the BIOCAPTUR ROTARY 360° or at rest or in motion.
- \* Do not use the equipment during daylight hours so as not to affect the auxiliary and / or pollinating fauna.
- \* Keep the bearing bracket greased. (Apply consistent grease through the grease nipple).

## **Description**

BIOCAPTUR S60 Optimized is the most innovative, efficient and ecological solution for pests control in intensive agriculture. It is a high-performance equipment based on the emission of electromagnetic radiation and that uses LED technology as emitters of this radiation..

The equipment is designed to operate at night hours, activating its operation through photoelectric sensors that can be combined with hourly timers.

Their effectiveness tested in the elimination of pests combines the attractive effect of the led radiation with the aspiration of insects and their capture, all in a safe and reliable manner.

The BIOCAPTUR S60 Optimized is constituted by an led **2** lighting screen with a central LED **6** spotlight and some auxiliary **5** LED lights a helical turbine, **1** anty return gate **3** a collecting casing containing **4** the insect trap bag, The whole assembly mounted on a metal support **7** adapted to fix the equipment both on the ground and suspended.

BIOCAPTUR S60 Optimized does not have 360° rotation functionality

### **Original Accessories. Replacement material**

BIOCAPTUR S60 Optimized has the following accessories:

- Extendable holding poles (one or two). To facilitate the attachment of the equipment to the roof of the greenhouse. The poles make it possible to lift the equipment to different heights..
- Electric winch (optional). They make it easy to get on and off the equipment in an automated way.
- High Power LED Spotlight. Designed exclusively for mounting on the equipment, they have a power range of 20 to 100W.
- Biobag catch bag. Nylon mesh bag. Approximate dimensions: diameter 550mm / depth: 440mm.

### **ATTENTION**

Use only the specified original accessories. Use of recommended non-original accessories may lead to equipment malfunction and risk of injury.

All the material described in the accessories section is included as replacement material.

## TECHNICAL DATA

### Operating data

<b>BIOCAPTUR S50 STATIC</b>	
Voltage (V) / frequency (Hz)	220 / 50
Current (A)	0,6
Maximum Power (W)	140
Rotation speed (r.p.m)	2650
Air flow (m <sup>3</sup> /h)	7500
Noise level (dB)	< 56

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### General data

<b>BIOCAPTUR S50 STATIC</b>	
Dimensions: $\phi$ x Length (mm)	415 x 590
Approximate weight (Kg)	7
Type of extractor	Axial
Number of blades	5

## INSTALLATION / PUT IN OPERATION

### Installation

The steps to follow in the equipment installation process are:

1. Choose the correct location of the protection and control panel, the location must be in an accessible place and in the center of the farm, and from this box we will connect the BIOCAPTUR equipment .
2. Choose the correct location for the BIOCAPTUR equipment taking into account its radius of action (approximately 3500 m2).
3. Fix the protection and control panel (by means of the included flanges), to a pole of the structure and connect the input and output power supply connections (make sure to carry out these actions without electrical voltage).
4. Install an ground pike near the panel and after fixing the corresponding connection, connect it to the terminal assigned in the protection and control panel. (see figure 5)

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#### **DANGER!**

Before the connection is made to the electrical network, the installation is provided with shields according to RGBT in vigor and that they function correctly.

5. Fix the extension pole or the electric winch to the structure through the fixing hook (see figure 3). It is important to ensure its correct fixation.
6. Position the BIOCAPTUR equipment, fixing it to the extension pole or electric winch using the corresponding pin.



#### **WARNING!**

IT IS VERY IMPORTANT NOT TO FORCE IN ANY CASE THE AXIS OF THE BIOCAPTUR ROTARY 360° EQUIPMENT BY MANUALLY ROTATING THE BIOCAPTUR EQUIPMENT .

7. Making sure that there is no tension in the cable connection that will feed the BIOCAPTUR equipment, we will connect the male-female quick connector of the BIOCAPTUR equipment and the BIOCAPTUR ROTARY 360° equipment (align the green triangles of both connectors)
8. Making sure that there is no voltage in the cable connection that will feed the BIOCAPTUR equipment, we will connect it to the accessible 3-pole female quick connector.

Making sure that there is no voltage in the cable connection that will feed the BIOCAPTUR equipment, we will connect it to the accessible 3-pole female quick connector.

### Put in operation

1. Making sure that the supply voltage is available at the input connection, we will activate the electrical protections in the protection and control panel, starting from left to right ((1) general circuit breaker for cut-off and (2) differential protection). **(see figure 5)**
2. Activate the circuit breaker for maneuvering position (6). **(see figure 5)**
3. Choose the operating mode to activate the BIOCAPTUR equipment by acting on the position selector (9) **(see figure 5)**. Lever up we select the activation by solar cell, in the central position without activation, lever down we activate time control. The solar cell activation system is factory-adjusted, we can adjust its sensitivity by acting on the adjustment potentiometer of the position module (8). If we opt for time control, we will act on the 24-hour time control relay position (7) **(see figure 5)**, adjusting the current time and establishing the desired time intervals. If we want to activate it in time control we will take the tab to clock mode, if we want to activate it permanently we take the tab to manual mode.
4. Select the clock operating mode and acting on the time switch we select the manual mode.
5. Activate the voltage output protections to the BIOCAPTUR equipment, BIOCAPTUR circuit breaker protection 1-3 position (3) and BIOCAPTUR circuit breaker protection 2-4 position (4).

### Use and Application Protocol:

There are three different protocols for the control of Tuta Absoluta with BIOCAP-TUR S60 Optimized that have been successfully tested, depending on the phase of the Crop Status.

Protocol	Action	Cultivation cycle	Description
I	Preventive	Preplantation	<ul style="list-style-type: none"> <li>• Operation of Biocaptur prior to planting at night, especially at dawn and dusk</li> </ul>
II	Preventive Corrective	Total	<ul style="list-style-type: none"> <li>• Capture control to ensure disinsection</li> <li>• Operation of Biocaptur prior to planting at night, especially at dawn and dusk.</li> <li>• Controlled daytime operation when working on plantations</li> <li>• Leave plant reservoirs in the closest area of the Biocaptur equipment.</li> </ul>
III	Preventive Corrective	Postharvest	<ul style="list-style-type: none"> <li>• Pile up the plant waste in the closest area of the Biocaptur equipment.</li> <li>• Day and night operation.</li> </ul>



- Locate the BIOCAPTUR S60 Optimized in highly visible spaces, preferably service corridors.



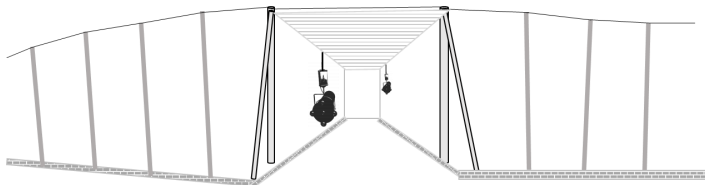
**Photo 1: Placing the BIOCAPTUR S60 Optimized equipment in a corridor inside a greenhouse**

- The device has an approximate range of 3500 m<sup>2</sup> with a radius of action of approximately 28 m. If we use several devices distribute them equally and preferably with visibility between them. (See figures 7 and 9)

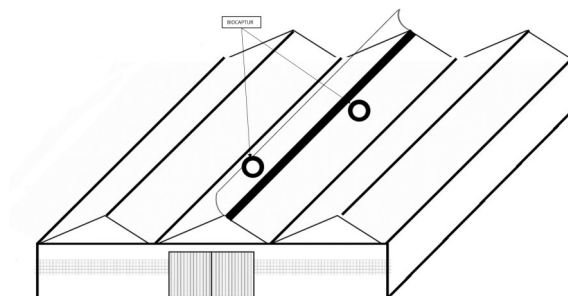


**WARNING!**

**THE TRANSFER OF EQUIPMENT MAY CAUSE DAMAGE THAT AFFECTS THE CORRECT OPERATION.**



**Figure 7: Placement of (2) equipment in corridor inside a greenhouse**



**Figure 8:** Placement of (2) equipment in the service corridor inside the greenhouse

- The distance from the ground of the BIOCAPTUR equipment must be between 0.20 m to 1.5 m, this height depending on the phenological development of the plantation. It is not recommended to place the equipment above the plantation.
- To improve the capture effectiveness of the BIOCAPTUR equipment, it is advisable to clean dry leaves and unproductive stems, so that the light rays have the best visibility from a distance.
- Do not use chemical pest attractants unless they are placed near the BIOCAPTUR equipment.
- Do not use chemical pest attractants unless they are placed near the BIOCAPTUR equipment.
- BIOCAPTUR must be in operation before the crops are planted in preventive mode (Protocol 2), adjusting the operating hours to the hours of sunrise and sunset preferably. If the catches increase, increase its period of operation progressively.

VERY IMPORTANT! Once the agricultural season is over, it is recommended:

- ⇒ Keep part of the plantation close to the BIOCAPTUR equipment as a decoy, monitoring the catches and it is advisable to maintain its operation until the presence of the pest is not observed.
- ⇒ Keep the equipment in post-harvest operation with the doors of the farms closed until we detect the presence of plague.

## **MAINTENANCE**

- \* Clean the equipment regularly, paying special attention to the optics of the LED spotlights.
- \* **Wash the BioBag every three days with few catches and daily if there are many catches.**
- \* Change the biobag when it is very dirty or damaged.
- \* Clean with a cloth damp in neutral soapy water.



### **WARNING!**

Only carry out equipment repairs by specialized technical personnel and with original spare parts

- \* Check periodically that the fixings are correct.

## **WARRANTY**

The warranty period is 1 year from the date of purchase. Save the purchase invoice and in case of exercising this guarantee, contact your distributor by phone or email. This warranty is valid for the first purchaser only and is not transferable. The warranty coverage is only applicable to manufacturing problems and material failure.

The warranty will be terminated by improper or improper use of the equipment, interventions on the equipment by unauthorized technical assistance personnel.

The right to make technical modifications to improve the device/s is reserved.

**Equipment approved for use in ecological agriculture by  
CAAE**

