

Open AERO

Installation manual

Please read carefully and keep for subsequent consultation



FOREWORD

This manual is intended for the person who installs and commissions an ABRIBLUE slatted safety cover.

This manual must be given to the pool owner along with the safety and user instructions so that it is available for subsequent use.

The advice given in this leaflet is the result o f AS POOL's experience in manufacturing automatic covers since 1995. It will allow users to make the best use of this product which should give compete satisfaction.

Compliant with the highest requirements, our safety cover was designed to prevent children younger than 5 years old from accessing the pool when it is unrolled and locked.

The floating safety cover is not a substitute for your common sense or your responsibilities. It does not replace the vigilance of a responsible adult, which remains the essential factor in the protection of young children.

USEFUL ADDRESS

Your dealer (stamp):

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customer

10. Appendix

1. Preparing the pool

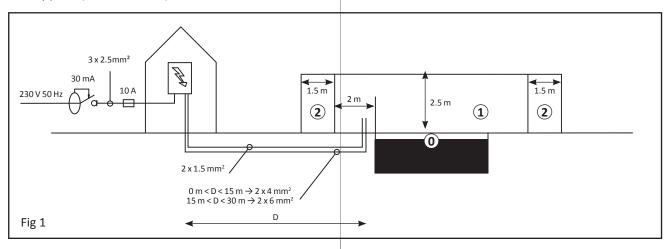
1.1 Electric connections and cable passages

1.1.1 Electric box power supply

Fig 1

Prepare a 230 V power supply using an R2V 3G2.5 mm² (or Ro2V 3G2.5 mm²) cable for the electric box, which must be installed outside volumes ①, ② and ③, and in a dry place (technical room).

Consult the current electric standards and especially the NF C15-100 standard.



1.1.2 Electrical protection

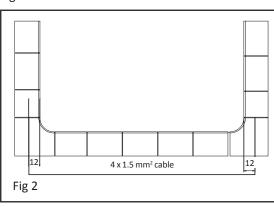
This power supply must be protected by a circuit breaker or a 10 A fuse and a 30 mA ground fault circuit breaker.

1.1.3 Sheaths

Prepare a connection protected by a sheath for the power supply between the box and the roller using 2 x 4 mm² size wire if the cable is less than 15 m long and using 2 x 6 mm² size wire if the cable is between 15 m and 30 m long. Prepare a connection protected by a sheath to couple the treatment control box between the control box and the roller using 2 x 1.5 mm² wire.

To get the mood lighting on the second roller post, prepare a connection protected by a 4x1.5mm² sheath between the two stand positions (at 12 cm from the edge of the pool in the axis alignment).

Fig 2



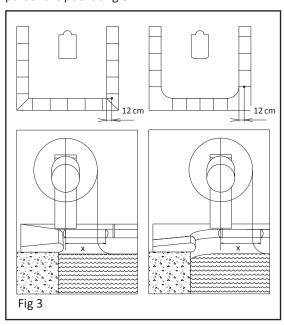
1.1.4 Cable passage

Separate cables carrying different voltages by passing them through different sheaths which are spaced in compliance with the NF C 15-100 standard.

1.1.5 Cable exit

Fig 3

Exit these cables 12 cm from the edge of the pool in the alignment of the rear coping of the pool in the case of 90° corner coping. If necessary advance them by the distance of the radius of the curved part of the pool's angle.

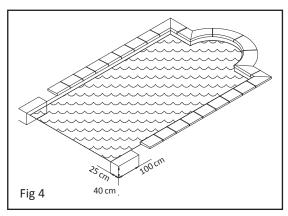


1.2 Building work

1.2.1 Concrete belt

Fig 4

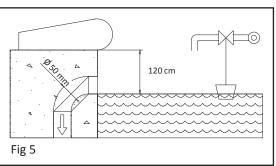
Plan a concrete belt using a 350 Kg cement per m^3 concrete mix with a size of w 25 cm x h 40 cm x l 100 cm using at least 0.10 m^3 to stabilise the fixture of the roller.



1.2.2 Overflow

Fig 5

Plan to control the water level at -12 cm below the levelling course using a \emptyset 50 mm overflow which is independent of the skimmers, and automatic filling.



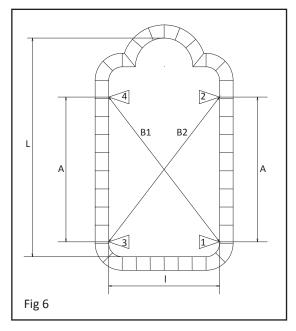
1.2.3 Skimmer

When possible, plan to place the skimmers on the pool widths and not on the lengths in order to facilitate the movement of the cover.

1.3 Squaring checks

Fig 6

- 1.3.1 In order to correctly place your roller perpendicular to the pool lengths: measure the diagonals.
- 1.3.2 Make a mark (1) on the pool liner at the level of the edge opposite the cable exit.
- 1.3.3 Measure a precise length "A" of 1 m less than the length of the pool and make a mark (2), at the end of A on the pool liner.
- 1.3.4 On the opposite length make a mark (3) opposite mark (1).
- 1.3.5 Carry over the "A" measurement from (3) in order to place mark (4).
- 1.3.6 Measure the distance "B1" between (1) and (4).
- 1.3.7 Measure the distance "B2" between (2) and (3).
- 1.3.8 If B1 and B2 are equal continue with the next step, otherwise correct the position of marks(3) and (4) and start the operation again until B1 = B2.

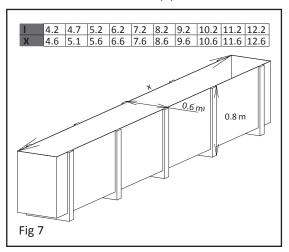


2. Delivery and Reception

2.1 Delivery

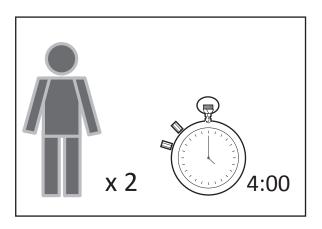
Fig 7

- 2.1.1 Plan the presence of 2 to 6 persons, or use a handling device to handle the cover. The slatted cover is delivered in a non-recoverable wooden container measuring at least 40 cm more than the width of the pool. It is heavy and fragile.
- 2.1.2 For a 4 x 8 pool, the container weighs 290 Kg and measures $4.6 \times 0.6 \times 0.8(h)$.F
- 2.1.3 or a 5 x 10 pool, the container weighs 390 Kg and measures $5.6 \times 0.6 \times 0.8(h)$.



2.2 Reception

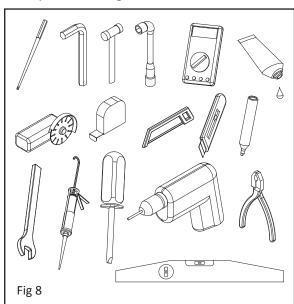
- 2.2.1 Open the container in the presence of the delivery staff and check the condition of the goods and their compliance.
- 2.2.2 Keep the original packing. If there is any damage or missing parts, write down your reserves on the transport documents (e.g.: container open on delivery). The words "subject to unpacking" alone are null and void. Send a registered letter (with acknowledgement of receipt) to the transporter within 2 days. This letter must accurately detail the damage found. Send a copy of the letter to AS POOL for information.
- 2.2.3 Store the parts in the container which should not be left in full sunlight, but should be placed in a cool place if the assembly is not carried out on the same day.
- 2.2.4 Make the inventory compared to the order.
- 2.2.5 Read the instructions completely before starting the assembly.
- 2.2.6 The installation requires 2 persons for 4 hours.



2.3 Necessary tools

Fig 8

Plan the equipment necessary for assembly: a perforator, a set of flat spanners, socket wrenches and male hex keys, a set of screwdrivers, a mallet, pliers, a spirit level, a glue gun, a cutter, a multimeter, a tape measure, a grinder, a marker and a saw.



2.4 Items in the container

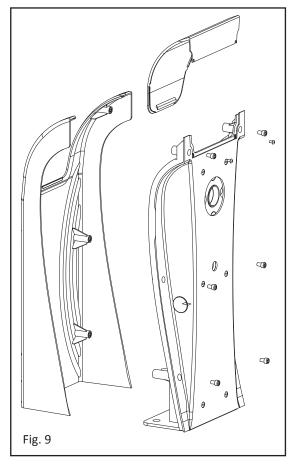
- A slatted cover
- A motorised roller shaft
- Two posts to support the shaft
- A 19 x 25 cm box
- A fixing kit
- An installation manual

3. Assembling the roller

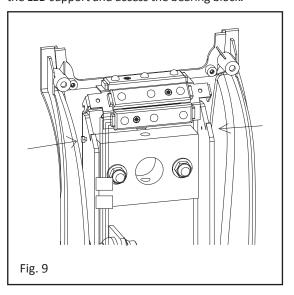
3.1 LED removal before assembling the shaft

Fig. 9

3.1.1 Remove the covers from each stand by loosening the 8 screws located at the back (fig 9).



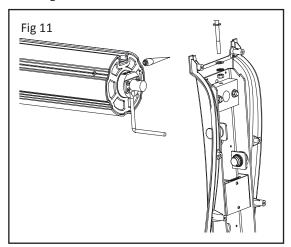
3.1.2 Slightly loosen the M4x6 TH screws to remove the LED support and access the bearing block.



3.2 Fitting the shaft onto the posts

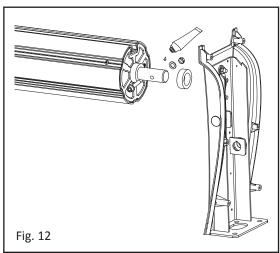
Fig 11

- 3.2.1 Lubricate the motor and bearing block parts using a silicone-based grease.
- 3.2.2 Assemble the motorised tube to the post on the motor side by inserting the motor end into the white shaft bearing taking care to place the motor cable exit towards the ground and the end of run adjustment screws towards the sky.
- 3.2.3 Pin the motor end fitting to the roller shaft bearing block using the M8x80 bolt and tightening the nut onto the washers under the roller shaft bearing block.
- 3.2.4 Pass the white motor cable through the pre-drilled hole half way up the post to connect it inside the support.
- 3.2.5 Uncoupling the roller involves freeing the cable and unpinning the M8x80 bolt while accompanying the unrolling.



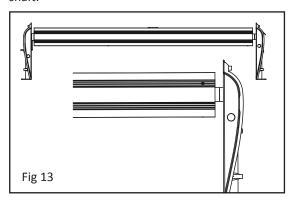
3.2.6 Fig 12

Assemble the motorised tube to the post at the opposite end to the motor by inserting the bearing block shaft into the roller shaft bearing taking care to place the spacer washer between the roller shaft and the post. Then bolt the shaft inside the post.



3.2.7 Fig 13

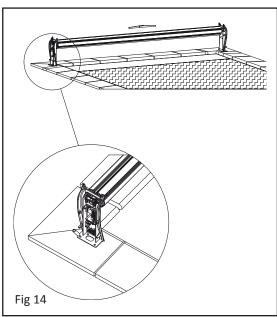
Make sure that the posts are placed against the shaft.



3.3 Placing the roller on the pool

- 3.3.1 Check that the shaft and the posts are level (horizontally and squared) and that the rolling tube is centred on the line formed by 1 and 3 (see Fig. 3 and Fig. 6).
- 3.3.2 Fig 14

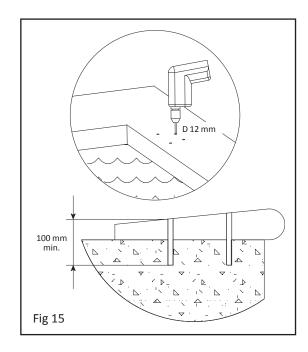
Identify the drill hole positions through the stand.



3.4 Preparing the fixtures

Fig 15

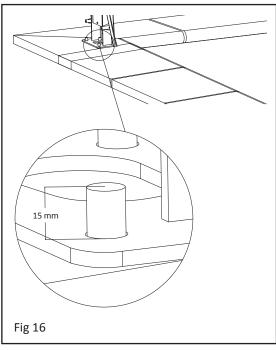
- 3.4.1 Drill 12 mm diameter holes penetrating the concrete belt by 100 to 120 mm.
- 3.4.2 Blow clean the drill holes.



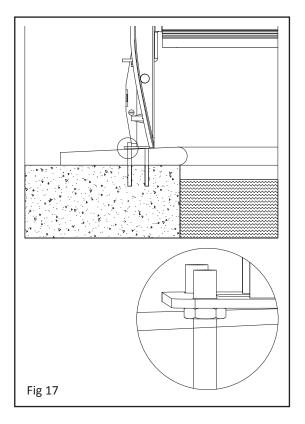
3.5 Fixture to the ground

Fig 16

Prepare the threaded rods for attaching the stands to the ground letting them protrude from 15 mm to a maximum of 20 mm from the stand's horizontal surface.



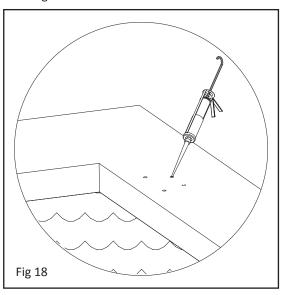
If the coping is not horizontal, use the supplied flat nuts to position the stand level (see figure 17).



3.6 Sealing the threaded rods

Fig 18

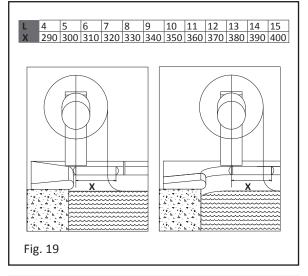
- 3.6.1 Press the chemical sealing cartridge until an even mixture is obtained.
- 3.6.2 Inject a dose of one sealing graduation into each drilled hole and place the threaded rods as you go.
- 3.6.3 Respect the drying time indicated on the cartridge.

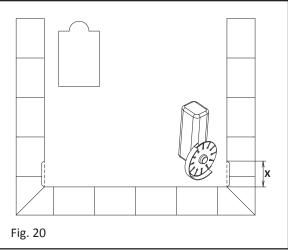


3.7 Cutting the pool coping

Fig 19 and 20

Cut the ends of the pool coping elements (if they overhang the pool) for a length "x" depending on the length of the pool "L" inorder to allow the slats to move from the roller shaft to the pool.





3.8 Adjusting and tightening the posts

3.8.1 Fig 21

Mount the lower M10 nuts (for the level adjustment if the coping is sloping or rounded) on the posts, then the flat washers and the M10 nuts in that order.

3.8.2 Fig 17

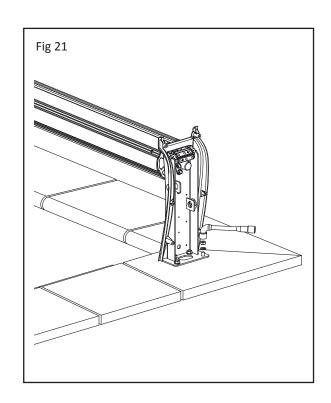
Adjust the verticality of the posts and the horizontality of the tube using the lower nuts.

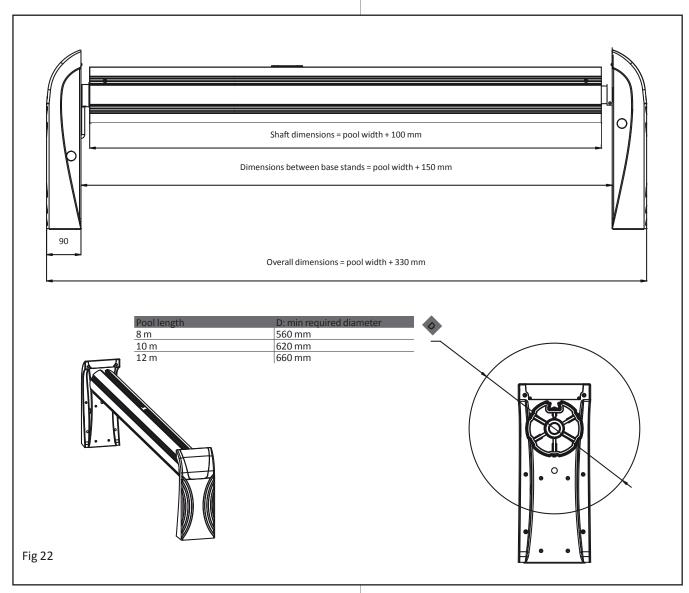
3.8.3 Fig 21

Tighten using a torque wrench set at 40 Nm. Be careful not to damage the electronic board.

3.9 Final overall dimensions of the pool cover

Fig 22





4. Electric connections

See electric diagram appendix. Have the electric connections made by a qualified technician in compliance with current standards.

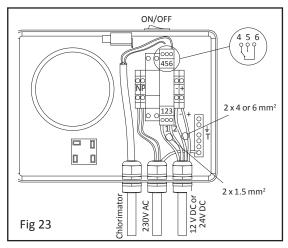
Fix the transformer box in the technical room.

Voir annexe schéma électrique

4.1 Box

Fig 23

- 4.1.1 Connect the 230 V power supply cable in the electric box to the terminal marked "T" for the earth, "P" for the phase and "N" for the neutral.
- 4.1.2 Connect the 2 power wires from the connection cable $(2 \times 4 \text{ mm}^2 \text{ or } 2 \times 6 \text{ mm}^2)$ inside the control box to the "+" and "-" terminals.
- 4.1.3 Treatment box coupling function: Connect the connecting cable (2 x 1.5 mm²) from screw terminals 1 and 2 to the motor stand, respectively to terminals 1 and 3 of the control box. Connect the cable from the treatment control box to terminals 4 (NC) and 6 (COM) or 5 (NO) and 6 (COM) depending on the device contact type.



4.2 Motor

Fig 24

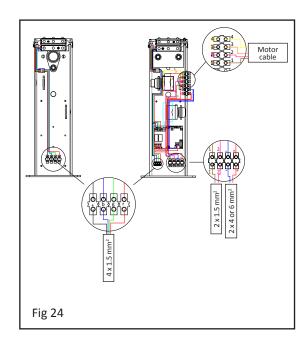
Connect the motor cable wires numbered 1, 2, 3 and 4 to the screw terminals numbered 1, 2, 3 and 4. Remember to refit wires 1 and 2 to the screw terminal to return the data for water treatment.

4.3 Connection between the stand and the control box

In the post, connect the power wires (2 x 4 or 6 mm^2) to the screw terminals marked "+" and "-" respecting the polarity.

4.4 Connection between the 2 stands

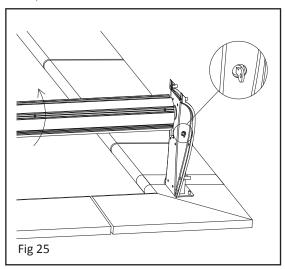
Connect the 4x1.5mm² wires on the screw terminal with the black (+), blue (b)green (g) and red (r) wires for the double mood lighting and reconnect the wires in the opposite post using the same marks to connect to the screw terminals.



4.5 Roller rotation test

Fig 25

Turn on the control box and test the tube rotation direction in both directions using the key (remove the closing cap beforehand). The slats should roll by passing over the roller shaft. If the movement does not correspond to the correct direction, invert wires 1 and 2.



4.6 Programming

Setting

- In "single press" mode, pressing the open or close key causes the slatted cover to move. To stop it, press one of the Stop opening or closure keys, otherwise it will stop at the motor limit switches.
- In "continuous press "mode, the keys must be kept pressed down for the cover to move. Releasing the key will stop the movement.

There are 3 operating modes with 3 viewing LEDs on this receiver:

- Led 1 (green) default mode: continuous press for closure, single press for opening (compliant with the standard).
- Led 2 (orange) mode: single press mode for closure, single press mode for opening

CAUTION: this mode is PROHIBITED in France.

- Led 3 (red) mode: continuous press for closure and opening.
- Switching between modes: Press the PRG2 button until the 3 LEDs all flash at the same time. Then scroll through the modes by pressing PRG2. The LED flashes on the selected mode. Exit the mode by pressing PRG2 for a long time until the LED stays on without flashing.

4.7 Assembly finalisation

Fig 26

4.7.1 Check the 4 digit code for your slatted cover noted on the manual (visible on the electronic board in the stand) if the Open Aero app is used. The 4 digit code noted on the electronic board in the motor stand is the reference. Fix the front cover using the M5x8 CHC screws (Grease the ends of the threads).

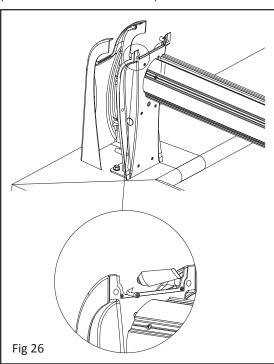
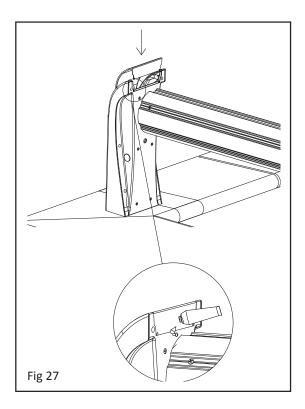


Fig 27

- 4.7.2 Vertically slide the upper diffuser cover onto the stand.
- 4.7.3 Fix the cover using the M3x6 TRHC screws (Grease the ends of the threads).



4.8 Installing and commissioning the Open Aero app.

Warning never use the manual controls and remote controls (using the app) at the same time

4.8.1 Compatible devices

- Apple[®] IPhone[®] smartphones running iOS 10 or later operating systems.
- Other smartphones running Android® OS 5 or later operating systems.
- Any terminal that has the above operating systems.

4.8.2 Installing the Open Aero app

- Download the "Open Aero" app from App Store or Google play.
- The links can be obtained directly using the QR codes on the manual cover page and on the control box.

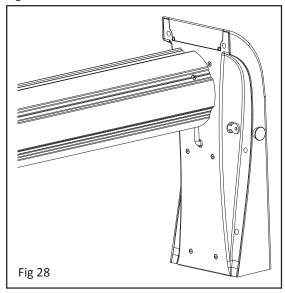
4.8.3 Commissioning the Open Aero app

- Make sure the control box is powered on
- Make sure that bluetooth and geolocation are enabled on your smartphone or other terminal.
- Launch the app and follow the instructions.
- To pair the phone with the slatted cover, enter its 4 digit code but only the first time (The code is on the manual cover page and on the electronic board in the stand).

4.9 Use in manual mode

Warning never use the manual controls and remote controls (using the app) at the same time

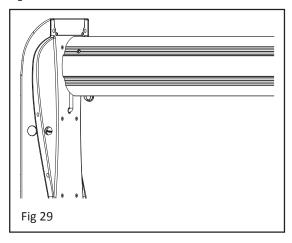
Fig 28



4.9.1 Slatted cover

- Remove the cap to access the key-operated switch
- Insert the key and turn it to open or close the slatted cover

Fig 29



4.9.2 Mood lighting

- Remove the cap to access the push button
- Press the button to turn the mood lighting on or off (By default the mood lighting will be white)

4.10 Uncoupling

- 4.10.1 Turn off the control box.
- 4.10.2 Block the rotation of the shaft while keeping the slats rolled around.

- 4.10.3 Remove the upper cover and the front cover on the motor side. Disconnect wires 1, 2, 3 and 4 of the motor cable to slide it completely towards the roller shaft, remove the support with the LEDs and the locking screw present in the white Technyl bearing.
- 4.10.4 Manually accompany the unrolling of the cover, making sure that the motor cable does not get entangled.
- 4.10.5 Lock the safety mechanisms.

When commissioning the roller, a new adjustment of the motor limit switches will be needed.

5. Assembling the slats

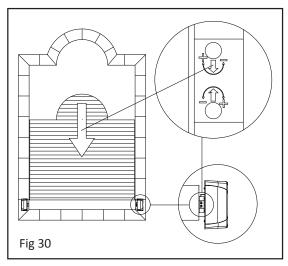
Please refer to the "Slat cover" instructions.

6. Limit switch adjustments

6.1 End of unrolling

Fig 30

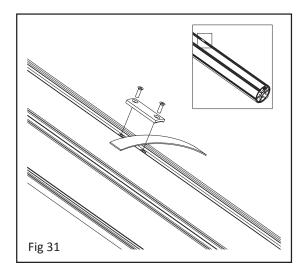
- 6.1.1 Find the 2 end of run adjustment screws on the motor located between the post and the roller tube by pivoting the end of run cover.
- 6.1.2 The screw on the pool deck side adjusts the end of unrolling stop. Using the key switch, rotate the motorised tube in the unrolling direction until the motor stops automatically. (This is the end of run position).



6.2 Fixing the apron to the shaft

Fig 31

6.2.1 Slide the black strap fixtures onto the shaft opposite the fixture straps which are on the slats and then fix the straps between the black 30 x 80 fixtures by tightening the screws. Check that the gaps around the cover in the pool are evenly spaced on either side as soon as the rolling starts. Correct the position of the strap fixtures if the spacing is not even.



6.3 Adjustment of the end of rolling stop

Use the key-operated switch to roll in the cover: if the gear motor stops by itself before the entire cover has been rolled in, adjust this using the adjustment screw on the pool side by turning it clockwise to lengthen the run using the supplied blue hex key.

- If the entire cover is rolled in before the gear motor stops, unroll 1 m, then adjust the run using the adjustment screw on the pool side by turning it anti-clockwise to reduce the run, then begin the rolling limit switch adjustment from the beginning.

7. Test guide for malfunctions

The following list has been drawn up in order to help diagnose and correct malfunctions that may occur during installation. This guide is exclusively for the professional authorised to install the cover in order to maintain the validity of the guarantee. If, after having followed these instructions, the cause of the malfunction has not been found, the professional must contact the cover retailer or manufacturer.

Read completely before carrying out the operations. Refer to figures 21 and 22.

Turn the switch on the box to Off or "0" before each connection, disconnection operation.

Respecting the poles between the power box and the roller is important because the rotation of the motor depends on wires 1 and 2 of the motor cable and not directly the box "+" and "-". Check the condition and the correct tightening of the electric connections.

7.1 Box checks

- 7.1.1 Refer to the 24V voltage indicated on the diagram and the box transformer.
- 7.1.2 Check that the fuse and the thermal circuit breaker are in working order.
- 7.1.3 Disconnect the 2 wires connecting the box to the roller motor from the "+" and "-" terminals.
- 7.1.4 Turn the switch on the control box to On or "1"
- 7.1.5 Step by step, measure the presence of the indicated voltage on the circuit at the following terminals:
- 7.1.6 Electric box power supply test: 230 V AC (Alternating) on terminals "P" and "N" of the control box to which the 230 V is connected
- 7.1.7 Transformer test:. 24 V AC on output from the transformer, in the plugs that connect to the square rectifier on the terminals diagonally opposite and marked AC
- 7.1.8 Rectifier test: 24 V DC (Direct Current) on the square rectifier: the "+" terminal is perpendicular to the other 3 terminals. The "-" terminal is diagonally opposite.
- 7.1.9 Thermal circuit breaker test: 24 V DC on the terminals marked "+" and "-" at the connecting cable connections.
- 7.1.10 If a voltage is not present or of a different value, check again making sure that the multimeter tips are in contact with the terminals and that your multimeter is calibrated and on the correct measurement position. No voltage or a voltage different from the required voltage for the step means that the tested component is no longer in working order. Replace it or request its return to AS POOL for analysis. If the voltage is correct the box is in perfect working order.

7.2 Checking the power supply cable between the electric box and the roller motor

- 7.2.1 Reconnect the cable that supplies the roller in the electric box and disconnect it from the roller post at its entry from the screw terminals marked "+" and "-".
- 7.2.2 Step by step, check for the presence of the indicated voltage on the following terminals:
- 7.2.3 Connecting cable test: 24 V DC in the box at the terminals marked "+" and "-" where the connecting cable is connected. The 24 V DC on the terminals for the 2 wires arriving at the post. If the voltage is below 22 V, this voltage will not be sufficient for the correct operation of the motor.
- 7.2.4 If the voltage is nil or a different value, this means that your cable is defective, cut, damaged

or has the wrong resistance, or it is located near a cable with different voltage that interferes with its operation. Replace the cable. Make a temporary connection using another cable directly between the electric box and the motor to carry out new tests.

7.3 Checking the key switch

- 7.3.1 Use the continuity measurement of your multimeter to check that the contacts (NO) located behind the switch close one after the other when the key is turned first in one direction and then in the other.
- 7.3.2 On the screw terminals marked +, -, 1, 2, 3,4,
- 7.3.3 Measure 24 V DC between the "+" and "-",
- 7.3.4 Measure 24 V DC between the 3 and 4,
- 7.3.5 Measure 24 V DC between the 3 and 1 when the key is turned in one direction
- 7.3.6 Measure 24 V DC between the 3 and 2 when the key is turned in the other direction

7.4 Direct motor check

- 7.4.1 Take 2 screw terminals
- 7.4.2 Connect the 24 V DC to one screw terminal and the "-" (0) to the 2nd screw terminal.
- 7.4.3 Take the motor cable and connect wire 4 to the "+" and wire 3 to the "-". The direction of polarity is important.
- 7.4.4 Place wire 1 in contact with wire 4 (24 V): the motor should turn in the one direction.
- 7.4.5 Remove wire 1
- 7.4.6 Place wire 2 in contact with wire 4 (24 V): the motor should turn in the other direction.
- 7.4.7 Inverting wires 1 and 2 inverts the rotational direction of the motor.
- 7.4.8 If, after these tests, the motor will still not run, this indicates a motor defect. This can be the result of a power surge due to a thunder storm, a faulty connection, or a defective component. Replace it or request its return to AS POOL for analysis.

7.5 Checking the electronic board and communications

- 7.5.1 Power on the control box and check that the
- 7.5.2 board is powered on.
- 7.5.3 Check that the "led1" indicator on the electronic board is on.
- 7.5.4 Measure 24 V on the "+" and "-" terminals of the electronic board.
 - Check that the Bluetooth LED is flashing blue (if the LED flashes twice the electronic board is paired to a terminal)

- Check that the orange relay LEDs light when opening and closing using the app.
- Powering off the control box cuts the bluetooth signal and allows the electronic board to be reinitialised at all times.
- Check the board electric connections using the attached drawings.
- Check the following terminal blocks:
- "TCTC" wires 1 and 2 on the T terminals and C terminals connected to + wires.
- "BP" is connected to the push button.
- "+WBGR" check that the wires are the same colours as the LEDs (terminal W should be free).

8. Checks

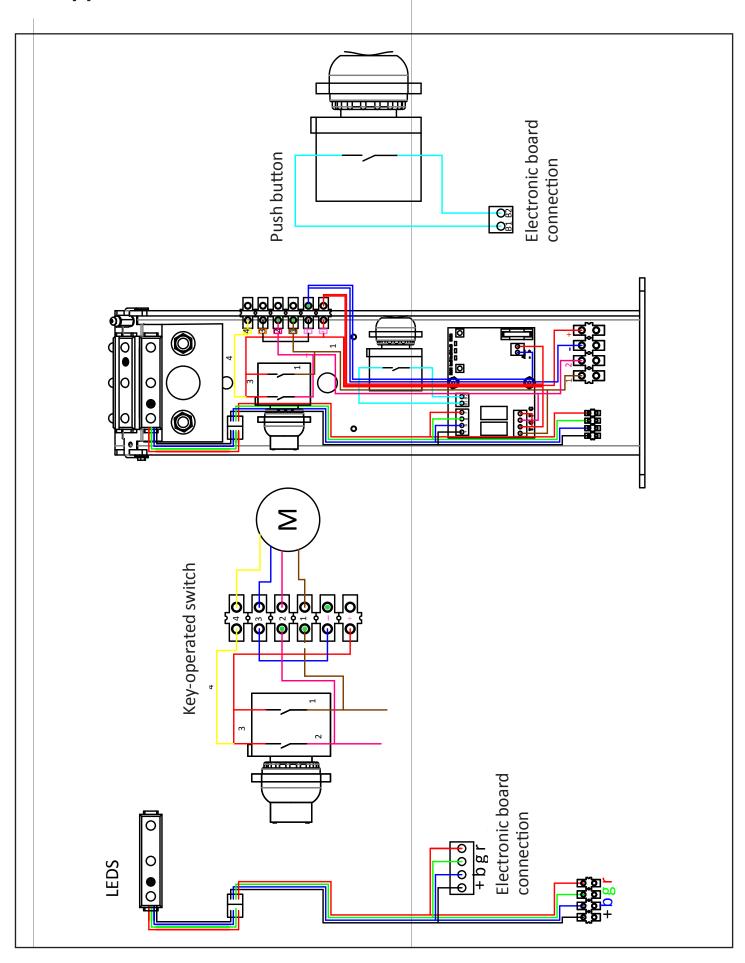
Check the following points relating to the NF P 90-308 standard and check that the cover operates correctly:

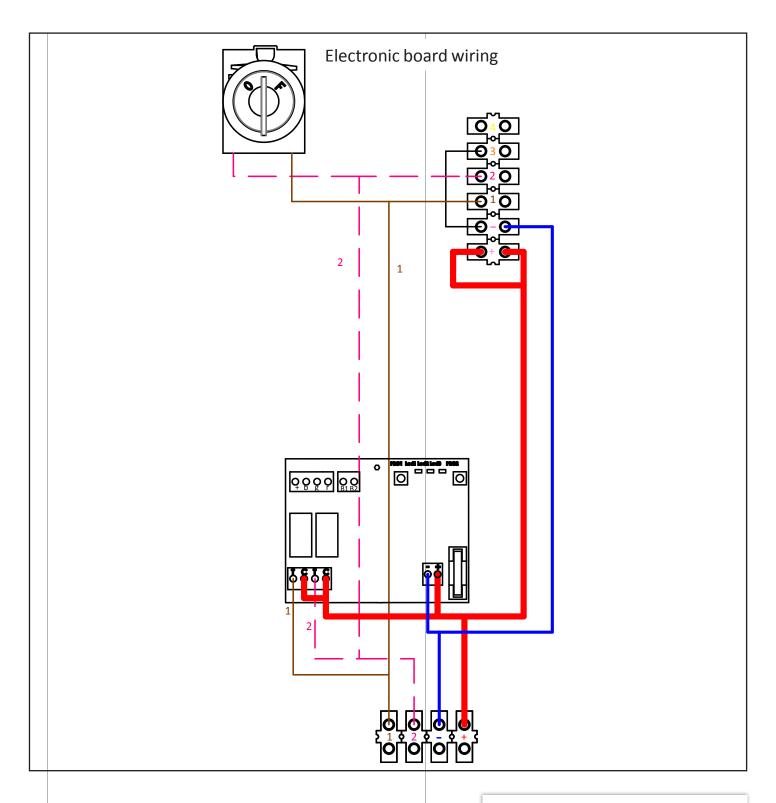
- When turning the key-operated switch for the slatted cover, the entire pool is visible and it is possible to check that there are no bathers in the pool when closing it. The unrolling operation stops when the key is released. The key can be removed from the control box.
- The cover rolls and unrolls correctly.
- The safety mechanisms are easily handled for the recommended water levels and are sufficient (number and position). Check that they are locked when the installation is complete
- The gaps along the length between the cover slats and the pool wall are less than 7 cm and the cover does not rub "abnormally" against the wall.
- The voltage powering the slatted cover is less than 30 V DC.
- The site is cleaned after installation of the slatted cover and the packaging and waste is removed.

9. Receipt of the slatted cover by the end customer

- The installer explains the operation of the ABRIBLUE slatted cover to the end user and informs them of the safety, usage, upkeep and winterisation recommendations.
- They give them the slatted cover instructions: "Installation instructions" and "Safety instructions and user guide for the automatic slatted cover".
- They demonstrate the use of the slatted cover and show its functional limits.
- The installer and end user fill in and sign the guarantee form attesting to the compliance of the installation, the receipt of the documents for the slatted cover and the information given to the end user

10. Appendix





Product: Open AERO Company: AS POOL

Address: Zac de la Rouvelière

F-72700 SPAY- LE MANS

Phone.: +33 (0)811 901 331 Fax +33 (0)243 479 850

contact@abriblue.com www.abriblue.com

