

2023

SD


NEIL

Climatizadores

USE AND INSTALLATION MANUAL



CONTACT INFORMATION

 0800-222-0177

 ventas@neil.com.ar

 www.neil.com.ar

NEWLINE

DECLARATION OF CONFORMITY.....	2
UPDATED DIGITAL CONTENT.....	3
WARRANTY.....	4
TECHNICAL INFORMATION.....	5
EXPLODED VIEW.....	5
INSTALLATION SEQUENCE.....	6
PREVENTIVE MAINTENANCE.....	10
SOLUTIONS FOR LOW-PERFORMANCES.....	11
F.A.Q.....	12
WATER TANK.....	13
EXTERNAL MEASUREMENTS.....	13
DEVICE/CONTROLLER FEATURES.....	14



DECLARACIÓN DE CONFORMIDAD

COMFORT SDN S.A., con domicilio social en Av. Bicentenario N° 459, Merlo, Buenos Aires, Argentina, como fabricante de equipos enfriadores evaporativos para vehículos marca Neil.

DECLARA: Que los equipos diseñados y fabricados por COMFORT SDN S.A. bajo las especificaciones técnicas necesarias, una vez instalados en los vehículos, de acuerdo a las instrucciones de montaje que lo acompañan, cumplen con las directivas Europeas de nuevo enfoque sobre:

- a) Compatibilidad Electromagnética: 72/245/CEE, 2006/28/CE
- b) Bajo Voltaje: 72/23 EEC
- c) Otros: 2011/65/EU

Que garantizan la seguridad de personas y bienes durante su instalación y funcionamiento.

Buenos Aires, febrero de 2020

Lic. Neil Sebastian
Presidente Comfort SDN S.A.

DECLARATION OF CONFORMITY

COMFORT SDN S.A., with registered office at Av. Bicentenario N° 459, Merlo, Buenos Aires, Argentina, as a manufacturer of Neil brand evaporative cooling equipment for vehicles.

DECLARES: That the equipment designed and manufactured by COMFORT SDN S.A. under the necessary technical specifications, once installed in the vehicles, according to the accompanying assembly instructions, they comply with the new approach European directives on:

- a) Electromagnetic compatibility: 72/245/CEE, 2006/28/CE
- b) Low voltage: 72/23 EEC
- c) Others: 2011/65/EU

They guarantee the safety of people and goods during their installation and operation.

Buenos Aires, February 2020

Lic. Neil Sebastian
Presidente Comfort SDN S.A.

DICHIARAZIONE DI CONFORMITÀ

COMFORT SDN S.A., con sede legale in Av. Bicentenario N° 459, Merlo, Buenos Aires, Argentina, come produttore di apparecchiature di raffreddamento evaporativo a marchio Neil per veicoli.

DICHIARA: Che l'apparecchiatura progettata e prodotta da COMFORT SDN S.A. secondo le specifiche tecniche necessarie, una volta installati sui veicoli, secondo le istruzioni di montaggio allegate, si conformano al nuovo approccio delle direttive europee su:

- a) Compatibilità elettromagnetica: 72/245/CEE, 2006/28/CE
- b) Basso voltaggio: 72/23 EEC
- c) Altri: 2011/65/EU

Garantiscono la sicurezza di persone e merci durante l'installazione e il funzionamento.

Buenos Aires, Febbraio 2020

Lic. Neil Sebastian
Presidente Comfort SDN S.A.

DECLARAÇÃO DE CONFORMIDADE

COMFORT SDN S.A., com sede na Av. Bicentenario N° 459, Merlo, Buenos Aires, Argentina, como fabricante de equipamentos de refrigeração por evaporação para veículos da marca Neil.

DECLARA: Que o equipamento projetado e fabricado pela COMFORT SDN S.A. de acordo com as especificações técnicas necessárias, uma vez instaladas nos veículos, de acordo com as instruções de montagem que as acompanham, cumprem a nova abordagem das diretivas europeias sobre:

- a) Compatibilidade eletromagnética: 72/245/CEE, 2006/28/CE
- b) Baixa voltagem: 72/23 EEC
- c) Outras: 2011/65/EU

Eles garantem a segurança de pessoas e mercadorias durante sua instalação e operação.

Buenos Aires, febrero de 2020

Lic. Neil Sebastian
Presidente Comfort SDN S.A.

UPDATED DIGITAL CONTENT

Visit our website and find all the updated information about the installation and maintenance of your Neil Evaporative Cooler.

<https://neil.com.ar/en/technical-support/>



You can find tutorial videos about how you can install the Evaporative Cooler in our website:



Access the maintenance section in the website to diagnose and fix any technical problem:



Download the last version of the manual in the following link:



You can also find technical information about our products in other languages

Spanish



neil.com.ar

Italiano



neil.com.ar/it

Français



neil.com.ar/fr

Português



neil.com.ar/po

Deutsche



neil.com.ar/ge

WARRANTY

COMFORT SDN S.A., guarantees the devices in case of verified faulty materials or manufacture of our Evaporative Coolers

COMFORT SDN S.A., will repair or replace based on its own technical criteria, the faulty components or parts.

This warranty does not include the intentional or accidental damages caused by inappropriate or incorrect use, and/or by modifications in the installation instructions and/or by changes in the specific materials of the product, and/or by any other cause that is not attributable to the materials quality and/or manufacture defect mentioned. As **water pumps** durability depend on the previous maintenance made by the user (periodic cleaning of the Evaporative Cooler) they are not covered by the warranty.

Expenses outside the factory building by labor, shipping, packaging, transport or products insurance and/or its parts to repair or replace by **COMFORT SDN S.A.**, will be charged to the customer

This warranty expires automatically **2 (two) years** after the purchase.

CUSTOMER NAME:

SERIAL NUMBER OF THE EVAPORATIVE COOLER:

INSTALLATION DATE:

INSTALLED VEHICLE:

SELLER/INSTALLER:

SERIAL NUMBER

KEEP THIS MANUAL TO MAINTAIN YOUR WARRANTY COVERAGE.

The warranty must be validated by the seller and/or the customer in the following link:

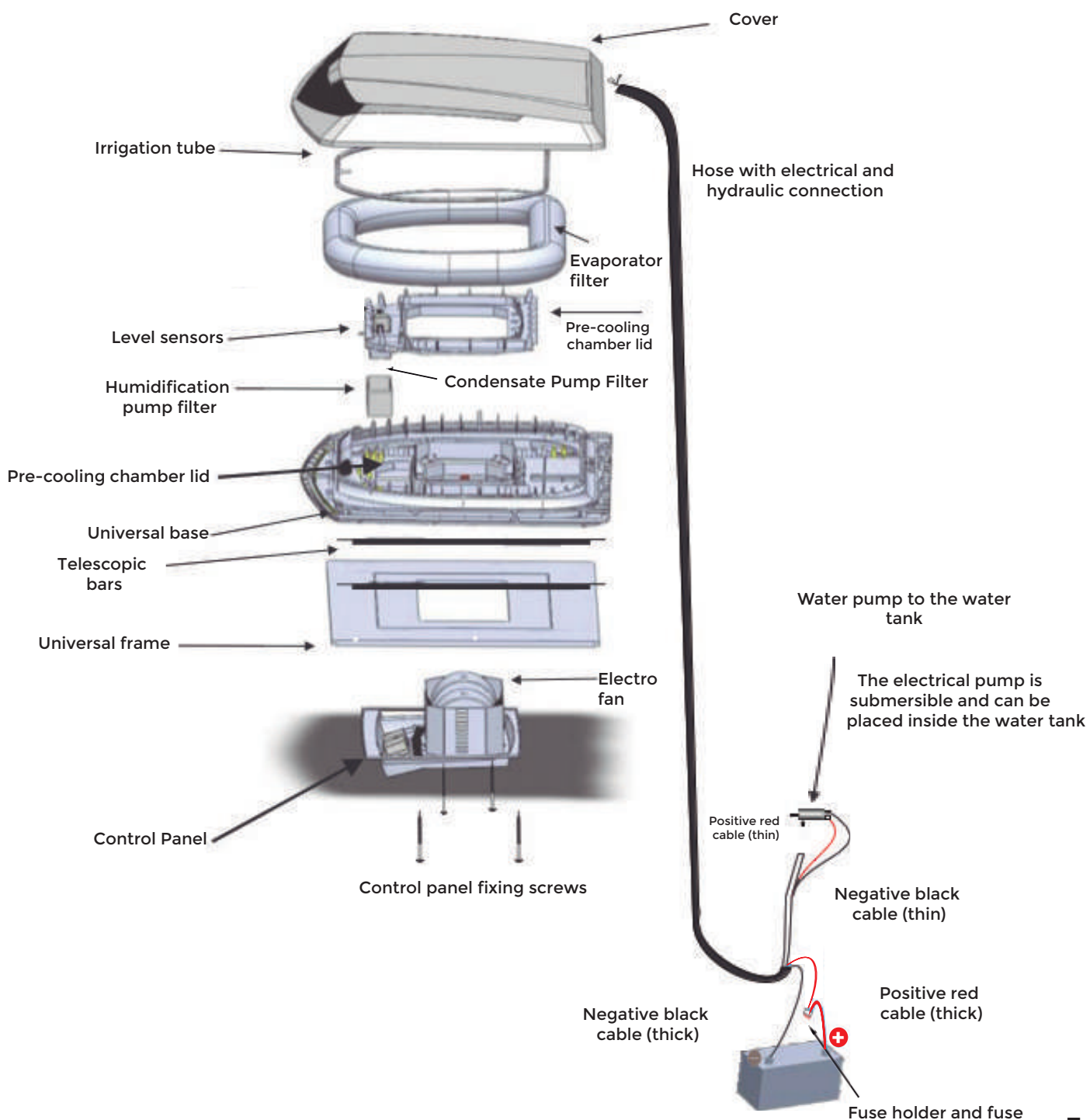
<https://neil.com.ar/en/warranty/>

USER MANUAL - CAMPER

TECHNICAL INFORMATION	
Maximum power consumption using 12 volts	7 AMPS
Maximum air flow	700 m3/h
Approx. Refrigeration capacity	1000 to 6000 BTU/h
Package dimensions and weight	820X900X210 mm - 18Kg / 32X35X10 in-39lb
Water consumption	between 1 and 3 Liters/hour

VERY IMPORTANT

Disconnect the terminals (-) and (+) from the battery when welding on the vehicle.



INSTALLATION SEQUENCE

PREPARING THE VEHICLE ROOF

You can find tutorial videos about how to correctly cut the roof and also download the “roof cutting template” in the following link:

<https://neil.com.ar/en/installation-tutorials/>

A- ROOFS WITHOUT SUNROOFS:

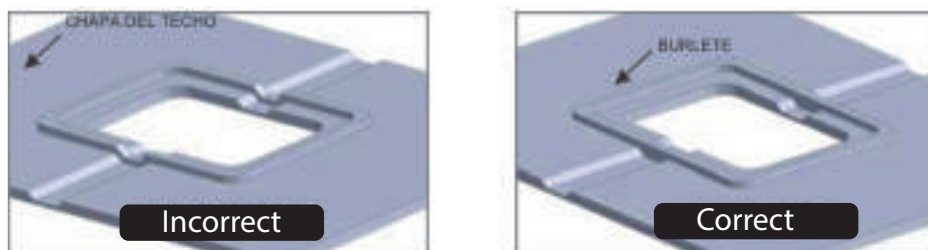
When a choice is possible on where to perforate the roof, it is recommended to do it on the driver seat line, as air distribution is optimal here. (IT IS ALWAYS MORE EFFECTIVE TO GET COOL AIR FROM THE FRONT).

After defining the best spot, perforate a hole of 430 mm x 310 mm, forming the radius with 30 mm radius. Then bend the metal upwards to give rigidity. (Approximately height 10mm all around the perimeter).



Put the weatherstrip all around the rectangular hole of 600 mm x 400 mm, taking care that the upper surface be in a horizontal plane to obtain the right sustain of the base of the Evaporative Cooler and prevent water and air from getting into the cabin.

In case of a roof with gutters, they must be filled with a rubber or thin weatherstrip. Once the roof is leveled, the self-adhesive weatherstrip included in the package must be installed.



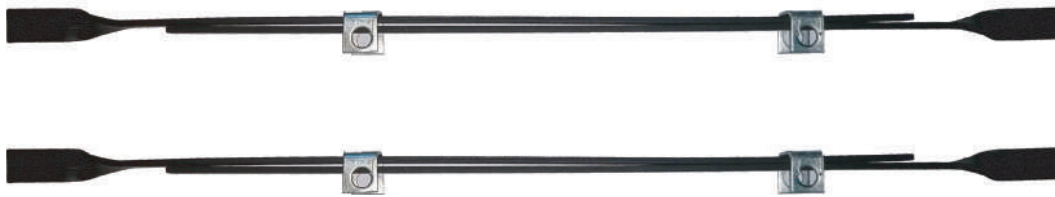
Place the neutral siliconized sealant on the weatherstrip and in the internal perimeter before placing the device.

USER MANUAL - CAMPER

B- ROOF WITH SUNROOF:

- Remove the sunroof
- If the sunroof frame doesn't have a weatherstrip, put one all around the perimeter to obtain the correct support for the device base.
- Put neutral siliconized sealant on the weatherstrip before placing the device.

UNIVERSAL TELESCOPIC SUPPORT BARS: PARTS OF EACH ROD



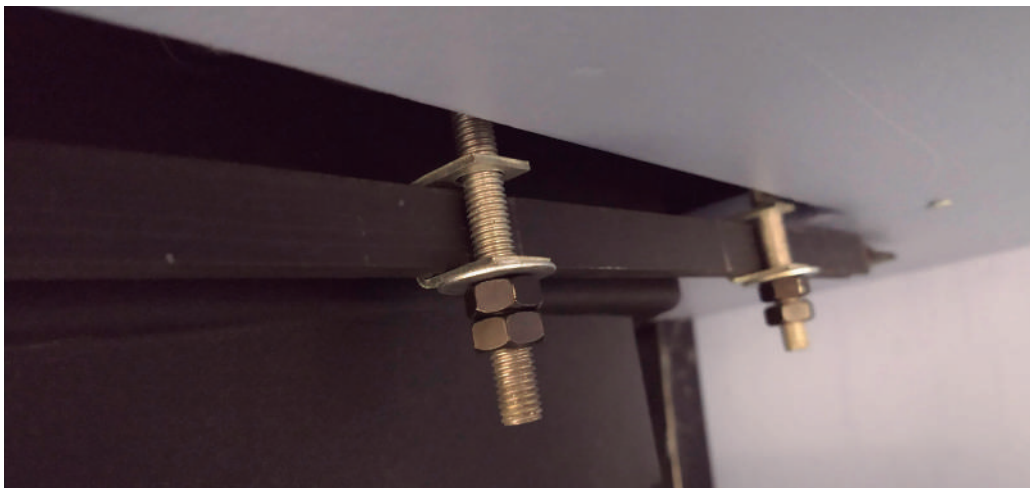
ADJUST THE DEVICE TO THE ROOF

You can find tutorial videos about how to correctly adjust the Neil Evaporative Cooler in the following link:

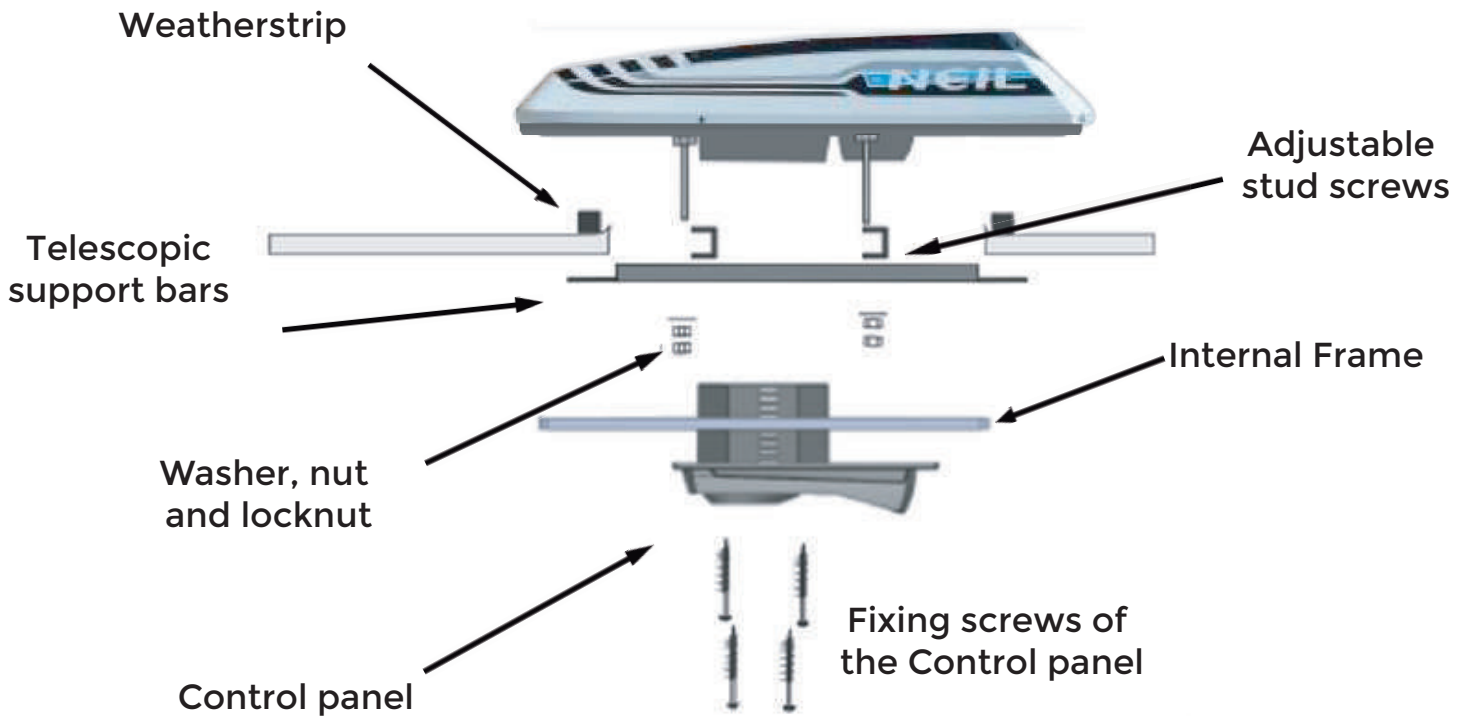
<https://neil.com.ar/en/installation-tutorials/>

Set the device in the roof hole, center it and adjust the telescopic support bars as shown in the following image:

The 4 stud screw must be adjusted in a cross and even way until making sure the weatherstrip starts being pressed against the base, preventing water and air from entering.



USER MANUAL - CAMPER



FRAME AND CONTROL PANEL SETUP

IF NEEDED, THE DEVICE CAN BE INSTALLED WITH THE FRONT PART FACING THE BACK OF THE VEHICLE

With the Evaporative Cooler firmly adjusted to the roof, place the external frame and the control panel. Before adjusting all the control panel screws, the electrical connection with its corresponding fuses must be correctly connected. In case of an internal hose installation, the electrical and hydraulic connection must be installed before adjusting the screws.

The Evaporative Cooler must NOT be installed with a negative tilt



MOTORHOMES

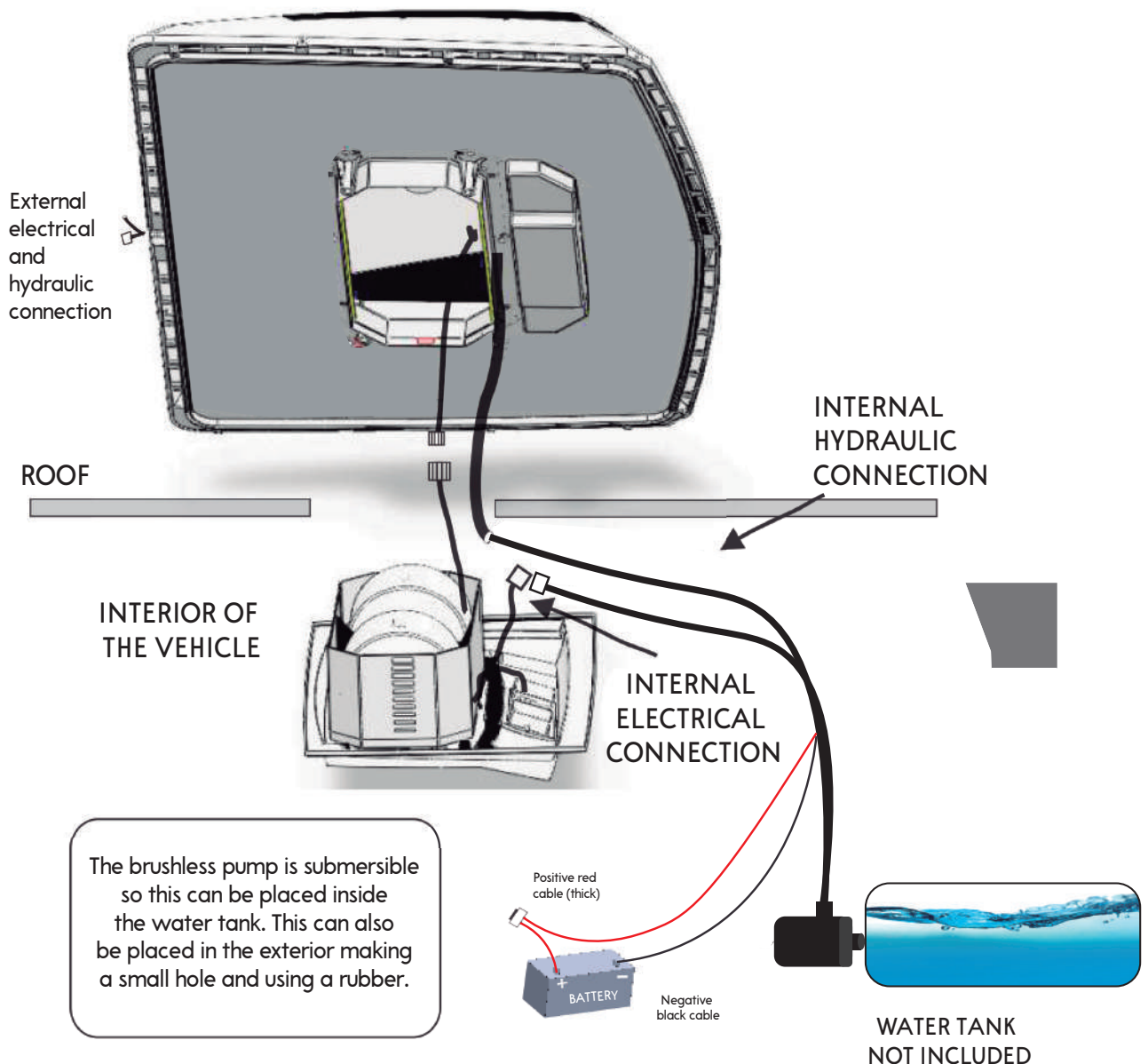
INSTALLATION WITH INTERNAL HOSE

You can find detailed information and tutorial videos about how to install the Evaporative Cooler in a Motor-home in the following link:

<https://neil.com.ar/en/installation-tutorials/>

In vehicles where the water tank is placed inside the cabin, or a pre-existing water tank is used, it is recommended to use an internal electrical and hydraulic connection.

ALL THE EVAPORATIVE COOLERS INCLUDE BOTH OPTIONS OF CONNECTION (external and internal)



PREVENTIVE MAINTENANCE

Detailed information about your Evaporative Cooler maintenance can be found in the following link:

<https://neil.com.ar/en/maintenance/>

Every **300 hours of use** it is recommended to do the following maintenance procedure:

- 1 - Remove the white cover, taking out screws on the sides.
- 2 - The irrigation tube placed in the filter holder basket must have all its holes unblocked. Compressed air can be used to remove any obstruction from the "T" shape.
- 3- Remove the evaporator filter and rinse it with plenty of water. Every 900 hours of use, replace it with a new one.
- 4- Remove the pre-cooling chamber lid (adjusted with screws) and clean the **SENSORS** and the condensate pump filter or replace it.
- 5- Check the functioning of the condensate pump as follow:
 - a . Turn on the device with the fan at its minimum speed.
 - b . Activate the pre-cooling system (Button 10).
 - c . When the condensate pump is working, the quantity of water that comes out of the irrigation tube must be able to fill an equivalent of a cup of coffee (100 ml).
 - d . If the water volume is less than 100 ml, replace the condensate pump for a new one of equal voltage.
- 6- Reassemble all the pieces in their original place.

BEFORE TURNING OFF THE DEVICE AND KEEP IT WITHOUT USING IT FOR A LONG TIME, IT IS RECOMMENDED TO LET IT WORK FOR 3 HOURS WITHOUT THE PRE-COOLING SYSTEM IN ORDER TO DRY THE FILTER AND AVOID UNPLEASANT ODOURS.

¿WHAT TO DO WHEN THE NEIL EVAPORATIVE COOLER LOWERS ITS PERFORMANCE?

Detailed information about how to fix performance problems of the Evaporative Cooler can be found in the following link:

<https://neil.com.ar/en/maintenance/>

Basic components and operation Check-List

1- ELECTRONIC BOARD

Make sure that the pre-cooling button “10” (see page 14) is activated, and that there is not a blinking light (lack of water). If the button “10” (see page 14) is blinking and the water tank still has water left, check the water pump and the water hose.

2- WATER PUMP

Make sure that the water tank pump is not burned or that its turbin is not loose (it can make noise and still not pump water). Also control that the electrical connection is not sulfated.

3- WATER HOSE

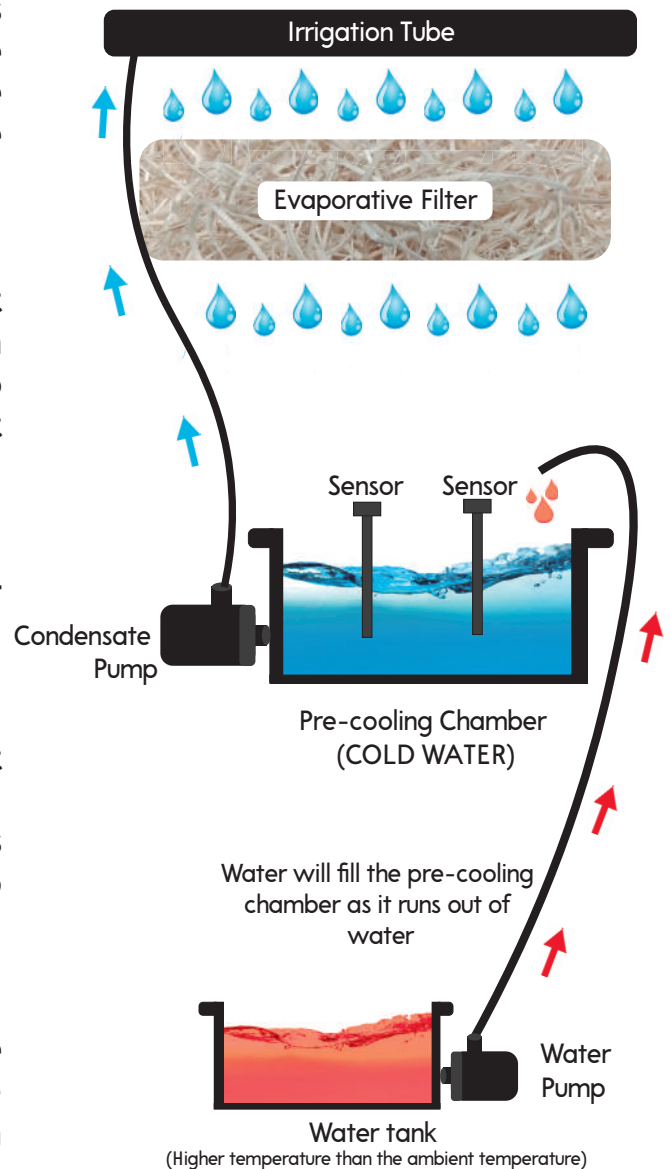
Make sure that the hose is not pinched or blocked.

4- CONDENSATE PUMP

Make sure that the condensate pump is not burned or that the turbine is not loose. Control that the irrigation tube has all its holes unblocked and that the filter is damp along its length.

5- DIRECT AUTOMATIC SYSTEM

If the previous 4 items are checked and the Evaporative Cooler is still not working correctly (can't cool the air as usual) program the electronic board in direct automatic system mode, so the device will keep cooling elementally until checked by the technical service of the NEIL EVAPORATIVE COOLERS. (See “Electronic board”).



F.A.Q

How much does an Evaporative Cooler cool?

The performance of an Evaporative Cooler depends on the ambient temperature and the relative humidity. There is a table in our website with information about the relationship between the outlet air temperature from the device, the humidity and the ambient temperature

<https://neil.com.ar/en/how-does-it-work/>

Does an Evaporative Cooler cool as an air conditioner?

The air conditioner only cools with the vehicle engine running or with a generator set. This causes:

- Higher fuel consumption by losing power when moving.
- Environmental contamination by combustion gases coming from the exhaust.
- Disturbing noises from the engine or the generator set.
- It is not recommended to let the engine regulate the air conditioner while running as this can cause premature wear.

The Evaporative Cooler works in both running and parked vehicles. Its operation is only electrical and consumes only water.

How many degrees can it cool down?

Evaporative Coolers work as they evaporate water. The temperature decrease depends on the climate (at a higher temperature and a lower humidity, the cooling is greater). It can decrease on average 10°C in warm climates and relatively humid; and 20°C in warm but dry climates.

Can I regulate the temperature?

In an air conditioner one can regulate the temperature. In an evaporative cooler the outlet air temperature depends on the climate conditions.

Does it work in hot climates?

As a general rule, at a higher ambient temperature the humidity is lower so the evaporative coolers will have a higher water evaporation capacity and the cooling will be greater. 2200 BTU are estimated per liter evaporated per hour.

Is it more productive if I put ice in the water?

In the case of the NEIL Evaporative Cooler, thanks to its pre-cooling system (patented), the water temperature doesn't affect the outlet air temperature, and it is not necessary to add ice to the water to lower the temperature (as in other coolers).

Does it moisturize the air?

Absolutely NOT. The cooling process is produced thanks to the moisture absorption capacity of the external air. This process takes place inside the Evaporative Cooler, when the air is ejected by the nozzles, it starts losing humidity as it moves away from them, this leads to a normal humidity rate inside the vehicle. According to research studies, high welfare conditions, performance and attention in human beings are given between 18°C and 27°C with ambient relative humidity between 40% and 60%; these conditions are given by the NEIL Evaporative Coolers.

Can I use air fresheners or scents in the water?

We only recommend using 3 drops of bleach per liter of water.

Can I use a 220v to 12v converter as a power source?

Yes, this must provide at least 10 amps for 12 volts and 5 amps for 24 volts.

Can 12 volts devices be installed in a 24 volts vehicle battery?

No, because this leads to an imbalance in the battery charge.

Does the Evaporative Cooler start cooling as soon as it is turned on?

The device will take a time to cool until the evaporative filter is totally damp.

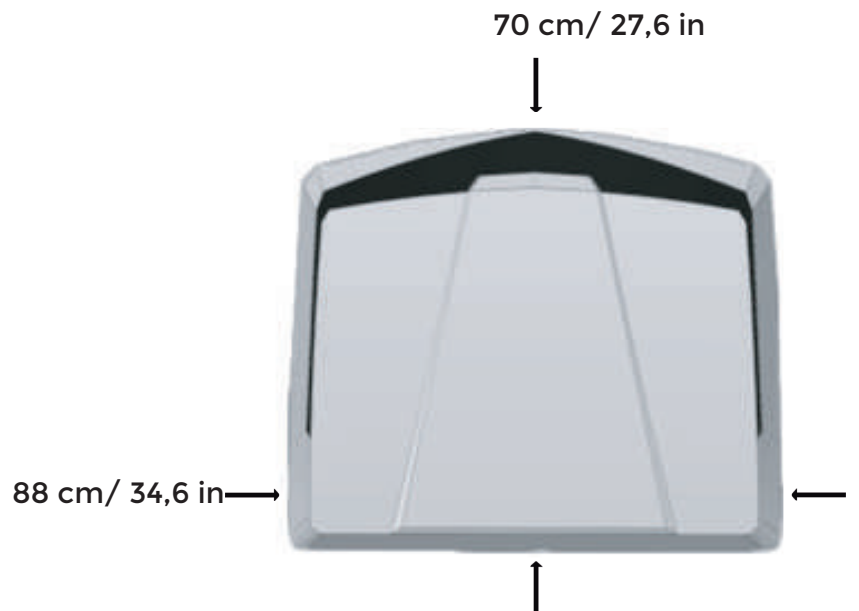
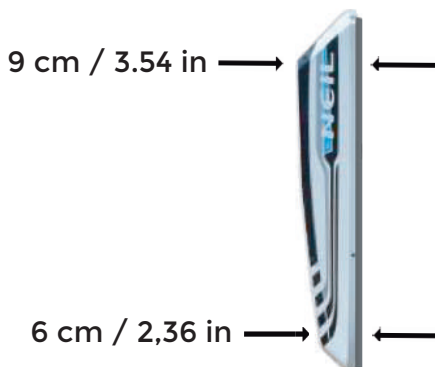
WATER TANK

The pre-cooling system admits any water tank placed in any part of the vehicle (below the level of the Evaporative Cooler in any position (horizontally or vertically)).

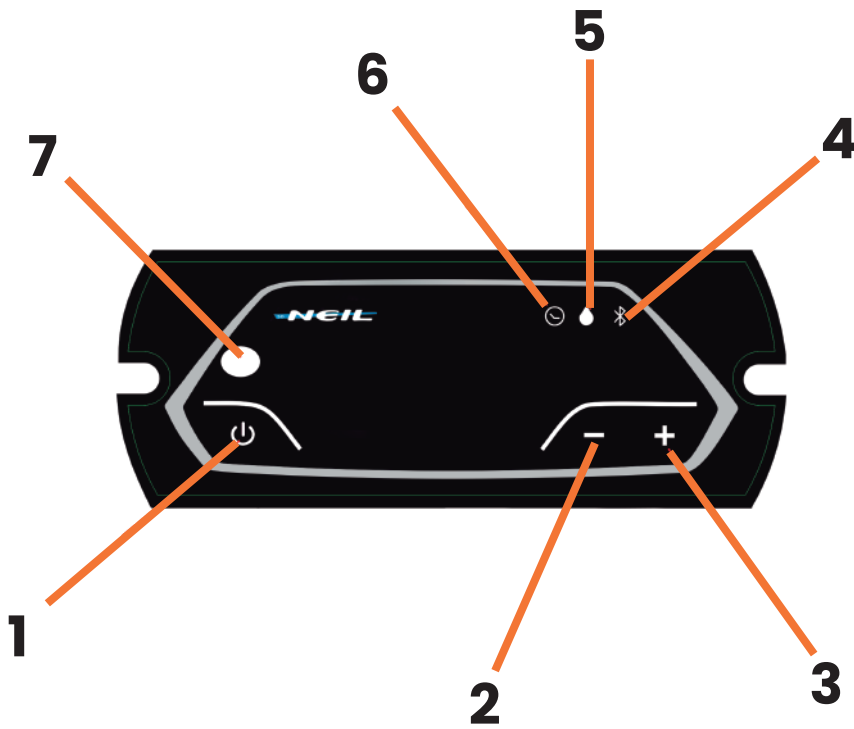
In MOTORHOMES the pre-existing water tank can be used for the Evaporative Cooler



EXTERNAL MEASUREMENTS OF THE CAMPER MODEL



CONNECT CONTROLLER



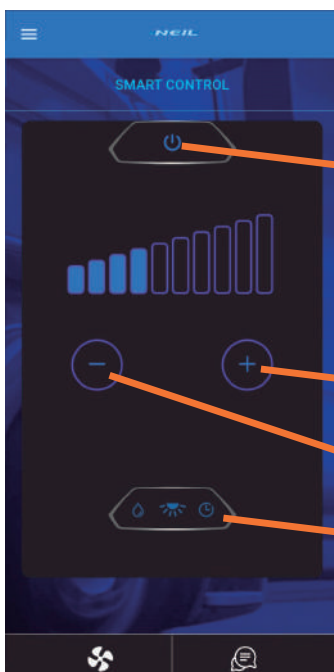
- 1. On/Off
- 2. low air speed
- 3. Increase Airspeed
- 4. Bluetooth connection indicator
- 5. Lack of water indicator
- 6. Timmer On Indicator
- 7. Remote Sensor

The Connect controller allows you to control the functionalities of the evaporative cooler from an APP that must be downloaded to your cell phone, by scanning the following QR code or by going to the web:



neil.com.ar/app

WHAT FUNCTIONS DOES THE APP OFFER ME?



- ON/OFF
- INCREASE AIR SPEED
- AIR SPEED DECREASES
- GO TO THE SECOND SCREEN




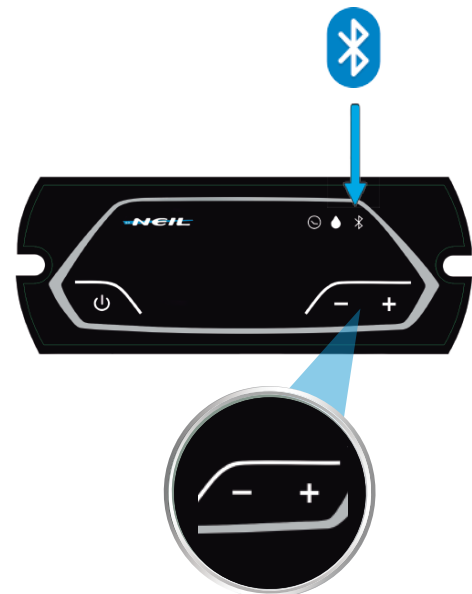
- ACTIVATE/DEACTIVATE COLD MODE
- TIMER
- GO BACK TO THE PRINCIPAL SCREEN

HOW TO PAIR THE APP WITH THE NEIL EVAPORATIVE COOLER

1 Download and Install Neil's APP on your cell phone.
neil.com.ar/app

2 Complete the form with your data

3 On your cell phone make sure you have bluetooth activated. On the dashboard, with the evaporative cooler turned off, press the + and - buttons at the same time for 5 seconds, you will see that the command starts  blinking.



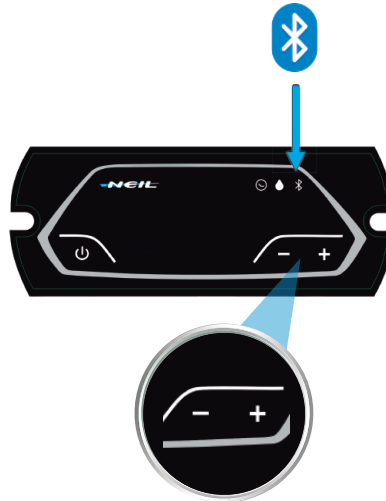
4 When the evaporative cooler appears on the screen, press "Connect"

5 On the main screen, you can turn the evaporative cooler on and off and increase or decrease the air speed. Pressing the icon below will access more functions.

CONNECTION PROBLEMS (APP-EVAPORATIVE COOLER)?

Problem_01:

When you hold down the (+) and (-) buttons on the command, the bluetooth logo does NOT start blinking.



Solution:

- 1. Make sure the evaporative cooler is turned off (NEIL logo should NOT be illuminated)*
- 2. Turn off Bluetooth on your phone and any other phones you have previously used to connect to the evaporative cooler.*
- 3. Again press and hold the (+) and (-) buttons at the same time for 5 seconds. You should see the bluetooth logo begin to blink.*
- 4. Turn Bluetooth on your phone back on and try connecting again.*

Problem 2: The bluetooth icon flashes on the controller, but the evaporative cooler does NOT appear in the App.

- 1. Make sure your phone's bluetooth is turned on.*
- 2. Uninstall and reinstall the App, making sure that when installing it you accept all the permissions that are requested.*
- 3. Try again to pair the APP with the evaporative cooler.*

If it still doesn't work, try the following:

- 1. Hold down the Neil APP icon (on your cell phone) select "Info. of the application", in the window that opens, go to the bottom of everything and press "Clear Data" (it may vary slightly depending on the version of Android used).*
- 2. Uninstall the APP*
- 3. Re-install the app and try again.*