

COMFORT THAT MOVES WITH YOU



INSPIRE ROOF EVAPORATIVE AIR COOLER

# Installation Manual



[WWW.RUDOLPH.SK/RESFRIAR](http://WWW.RUDOLPH.SK/RESFRIAR)

**RUDOLPH**  
Powered by **resfriar**

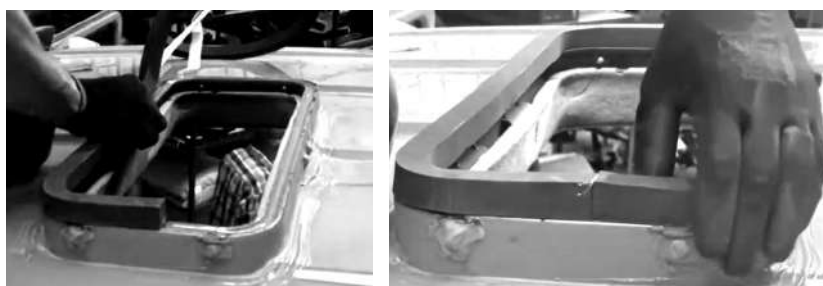
# Installation Manual

**WARNING:** Installation steps may vary between different vehicle models. The information provided here is intended only as general guidance to assist installation.

Always consult the vehicle's manual before carrying out any modification or installation.

## 1. If the vehicle has a hatch or sunroof – Remove the hatch or sunroof

- a) Remove the hatch and/or sunroof from the vehicle. This process can change according to the vehicle model.
- b) Clean the bonding area – Wipe the contact surface with a cloth moistened with alcohol to remove dust and grease.
- c) Apply the sealing gasket – Peel off the adhesive backing while pressing the gasket onto the edge of the opening. Position the joint along one side, not at the front or rear, to minimize the risk of water ingress.
- d) Trim excess gasket – Cut off any surplus material with a utility knife.
- e) Bond the joint – glue the gasket ends together with Loctite® (or a similar instant adhesive).



## 2. Vehicle without a hatch or sunroof – Cutting an opening for the complete unit

- a) Mark and cut – Trace a rectangle 520 mm × 400 mm on the roof and cut it out with a jigsaw. Always wear appropriate PPE and use fall-protection when working at height.
- b) Deburr – Remove any sharp edges or burrs from the cut-out to prevent injury and ensure a smooth seal.
- c) Level uneven roofs – If the roof panel is not perfectly flat, apply an auxiliary seal (automotive body sealant or silicone) to fill gaps and create a level surface.
- d) Clean the bonding area – Wipe the contact surface with a cloth moistened with alcohol to remove dust and grease.
- e) Apply the sealing gasket – Peel off the adhesive backing while pressing the gasket onto the edge of the opening. Position the joint along one side, not at the front or rear, to minimize the risk of water ingress.
- f) Trim excess gasket – Cut off any surplus material with a utility knife.
- g) Bond the joint – glue the gasket ends together with Loctite® (or a similar instant adhesive).



# Installation Manual

## 3. Vehicle without a hatch or sunroof – Cutting an opening for the ceiling panel

- a) Mark and cut – Lay out a rectangle 350 mm × 400 mm on the roof and cut it with a jigsaw. This method also requires drilling the screw holes: use a drill to make the bolt holes, then seat the cooler in place. Always wear appropriate PPE and use fall-protection when working at height.
- b) Deburr – Remove any sharp edges or burrs from the cut-out to prevent injury and ensure a smooth seal.
- c) Level uneven roofs – If the roof panel is not perfectly flat, apply an auxiliary sealant (automotive body sealant or silicone) to fill gaps and create a level surface.
- d) Clean the bonding area – Wipe the contact surface with a cloth dampened with alcohol to remove dust and grease.
- e) Apply the sealing gasket – Peel off the adhesive backing while pressing the gasket onto the edge of the opening. Position the joint along one side—never at the front or rear—to minimize the risk of water ingress.
- f) Trim excess gasket – Cut off any surplus material with a utility knife.
- g) Bond the joint – Glue the gasket ends together with Loctite® (or a similar instant adhesive).

## 4. Seating the cooler

- a) Insert the cooler into the opening.
- b) With the unit in place, center it relative to the hatch, sunroof, or roof cut-out.

## 5. Installing and tightening the mounting brackets

- a) From inside the vehicle, fit the mounting brackets onto the cooler's studs one at a time to make installation easier.
- b) Slide on the washers and thread the nuts. Tighten the nuts in a criss-cross, alternating pattern, applying pressure.  
Do not fully tighten one nut before starting on the others. Continue until the cooler base sits uniformly against the sealing gasket.
- c) With the cooler firmly secured to the roof, you can proceed to the electrical wiring.

## 6. Electrical installation

**Note:** Three wiring options are available. Choose the method that best suits your vehicle, always following the vehicle-manufacturer's electrical manual.

# Installation Manual

## 6.1. Method 1 – Direct connection to the battery

- a) Route the harness – Feed the cooler's power cable behind the cab and secure it with the self-adhesive clips provided in the fitting kit.
- b) Cab tilt access – Tilt the cab for easier access to the battery terminals (if applicable).



- c) Make the connections – Attach the red wire to the battery's positive (+) post and the black wire to the negative (-) post. Ensure the ring terminals are firmly crimped and seated.

**Warning:** Always disconnect the battery terminal before tilting the cab to avoid overstressing the cable and causing it to break.

## 6.2. Method 2 – Connection at the front electrical junction box

- a) Route the harness – Run the power cable behind the cab and secure it with the self-adhesive clips supplied in the fitting kit.
- b) Tilt the cab to gain access underneath.
- c) Lead the cable forward – Follow the vehicle's chassis rail all the way to the front electrical junction box.
- d) Remove the plastic cover from the junction box (if fitted).
- e) Make the connections – Fasten the red wire to the positive (+) post and the black wire to the negative (-) post. Ensure the ring terminals are firmly crimped and fully seated.

## 6.3. Method 3 – Connection to leads near the hatch opening

- a) Some vehicles provide pre-wired 12 V (or 24 V) supply leads behind the head-liner, next to the hatch or sunroof opening.
- b) Locate the factory power leads under the head-liner.
- c) Connect the cooler harness – red wire to the factory positive (+) lead, black wire to the factory negative (-) lead.

**Note:** Not all vehicles are equipped with these pre-wired leads. Verify availability in the vehicle's body-builder manual.



# Installation Manual

## 7. Finishing frame

With the cooler securely mounted and the power leads connected, fit the interior finishing frame. Fasten it from inside the cab using the screws supplied in the fitting kit.

## 8. Water-supply installation and tank set-up

The Inspire can operate with either the internal tank or an external tank (vertical mounting).

### 8.1. Internal tank system

- a) Fit the fill/vent manifold and hoses – Route the inlet and outlet hoses from the cooler to a convenient fill point, securing them with the self-adhesive clips and band clamps supplied in the hose-installation kit.
- b) Fill the tank – Remove both plugs, attach a hose to the port marked INLET and fill until water runs from the port marked OUTLET (tank full).

**Note:** The supply hose must deliver adequate pressure; otherwise, the tank will not fill completely. Always remove both plugs during filling.

### 8.2 External tank system (vertical mounting)

Set the mounting position before routing hoses.

#### 8.2.1. Vertical tank on the ladder

- a) Loosen the ladder-step bolts, position the tank on the inside of the ladder—between the cab and the ladder frame—and secure it to the ladder with the support brackets.
- b) Check the hose length; trim any excess to prevent sags or water pockets.
- c) Secure the injection hose to the pump outlet on the tank with a band clamp.
- d) Connect the pump wires (white and grey).
- e) Connect the water-level-sensor wires (blue and purple).
- f) Attach the return hose to the large spigot at the top of the tank and secure it with a band clamp.
- g) Remove the filler cap and fill the tank with clean drinking water.

**Note:** One hose is labeled “RETURN.” Do not swap the hoses—incorrect routing will cause malfunction.

# Installation Manual

## 8.2.2. Vertical tank mounted on a support bracket

- a) Select and mark the mounting location. The cab panel must be drilled to install threaded rivet-nuts, which will hold the tank support using band clamps.
- b) Drill the marked holes with an 8 mm bit and a drill/driver.
- c) Using a rivet-nut tool, insert and crimp the rivet-nuts firmly in the holes.
- d) Fit the support brackets to the installed rivet-nuts.



- e)
- f) Secure the tank to the brackets with the supplied band clamps.
- g) Check hose length and trim any excess to prevent sags or water pockets, which could obstruct the return flow.
- h) Fix the injection hose to the pump outlet on the tank and secure it with a band clamp.
- i) Connect the pump wires (white and grey).
- j) Connect the water-level-sensor wires (blue and purple) located next to the injection pump.
- k) Attach the return hose to the larger spigot at the top of the tank and secure it with a band clamp.
- l) Remove the filler cap and fill the tank with clean drinking water using a hose or suitable container.

**Note:** One hose is labeled "RETURN." Do not swap the hoses—incorrect routing will cause malfunction.



# Installation Manual

## 9. Final Thoughts

Following the steps in this guide is key to ensuring proper performance, safety and product lifespan.

**Please read all instructions carefully before starting any work.**

Only qualified personnel should install, operate or service this equipment, using the correct tools and methods. Not following the instructions may void the warranty and cause injury or damage.

**If you have any questions, feel free to contact our service team:**

Email: [service@rudolph.sk](mailto:service@rudolph.sk)

Phone / WhatsApp: +421 948 662 058