

IONSTAR

Perfect Paintwork instead of Rework

WorldSkills Setup and Quick Start Guide

For professional vehicle painters using IONSTAR for the first time



Complete the normal preparation. Use IONSTAR. Coat directly afterwards.

IONSTAR neutralises electrostatic charge as the final preparation step before coating.

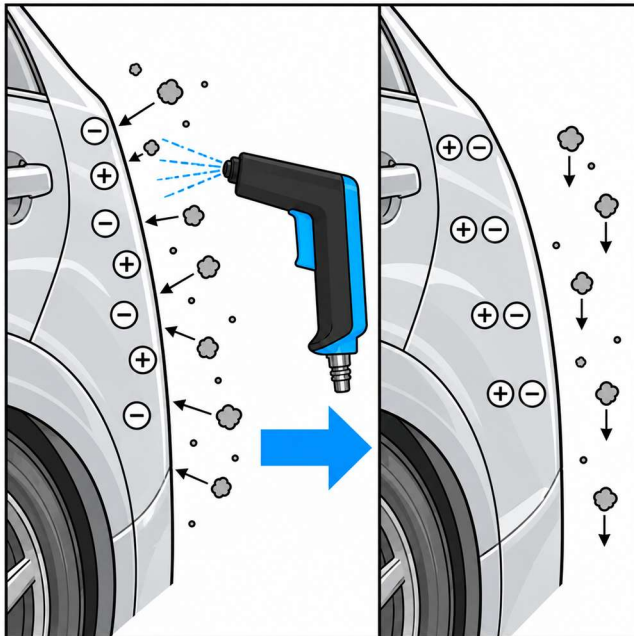
The following 16 steps show how to set up, use and store the tool correctly.



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01 Why use IONSTAR?

Electrostatic charge on a prepared vehicle surface can attract dust and other particles immediately before coating. IONSTAR neutralises this charge so particles are no longer electrostatically attracted to the panel.

- Use IONSTAR as the final preparation step before coating.
- It supports cleaner, more repeatable preparation conditions; it does not replace booth cleanliness or normal surface preparation.

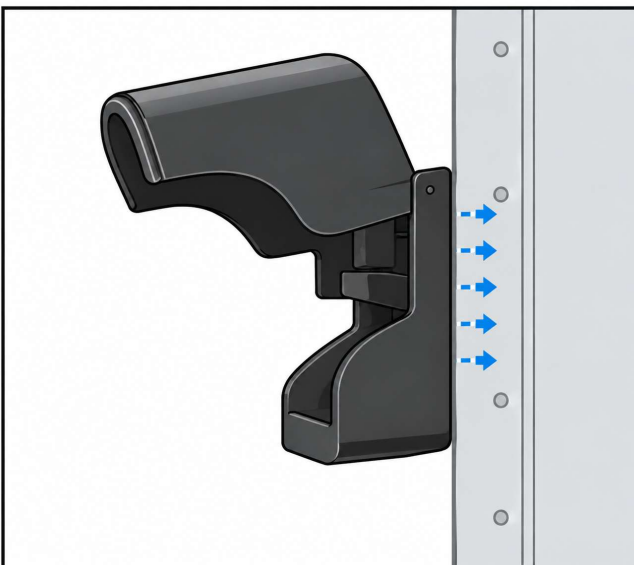
Normal preparation → IONSTAR → coating.



02 Check the equipment

Before starting, make sure the workstation has the required IONSTAR equipment and that all parts are clean, dry and undamaged.

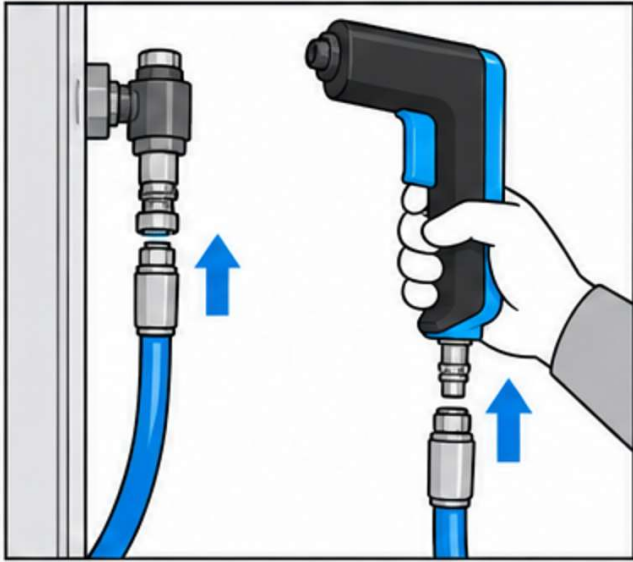
- IONSTAR
- IONSTAR wall box
- 10 m electrically conductive IONSTAR compressed-air hose
- Compressed-air supply capable of maintaining the required operating pressure and approx. 150 L/min (5.3 cfm).



03 Mount the wall box

The IONSTAR wall box attaches magnetically using its flat rear surface. Position it on a suitable metal surface close to the work area, where the IONSTAR can be reached easily.

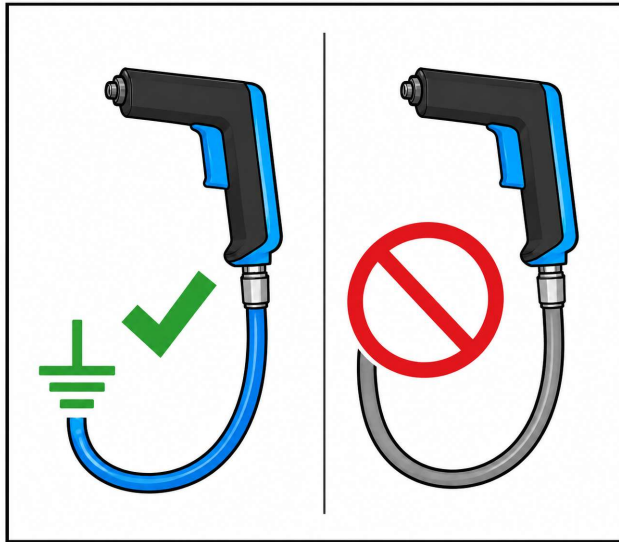
- The hose should reach the work area without strain.
- The box protects the IONSTAR from overspray, dust and dirt when stored.
- The wall box is not part of the grounding system.



04 Connect the hose

Connect the conductive hose to the compressed-air supply and to the IONSTAR. Make sure both couplings are fully engaged before use.

- The standard European hose configuration uses an NW 7.4 mm coupling.
- Regional coupling configurations may differ. Any alternative connection must remain suitable for compressed air and preserve electrical conductivity.

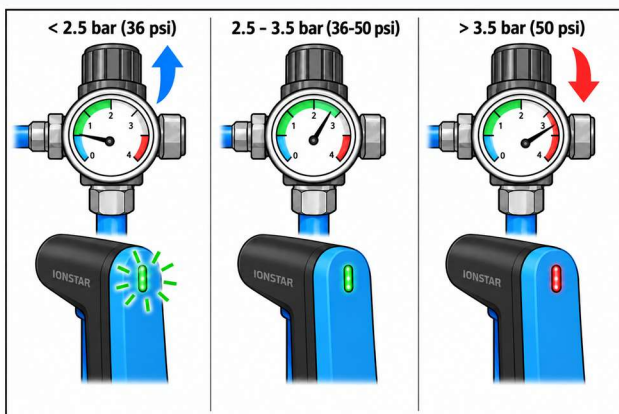


05 Use the conductive hose

The electrically conductive IONSTAR hose is essential because grounding takes place through the compressed-air hose.

- Use the supplied conductive IONSTAR hose.
- Do not substitute an ordinary non-conductive air hose.

Conductive hose = correct grounding path.



06 Set the pressure and check the LED

Press and hold the trigger while checking the operating pressure and the LED indication.

- Below 2.5 bar / 36 psi: green LED flashes. Increase the pressure.
- 2.5-3.5 bar / 36-50 psi: steady green LED. Correct operating range.
- Above 3.5 bar / 50 psi: steady red LED and laser off. Reduce the pressure.
- More pressure does not produce more ionisation.

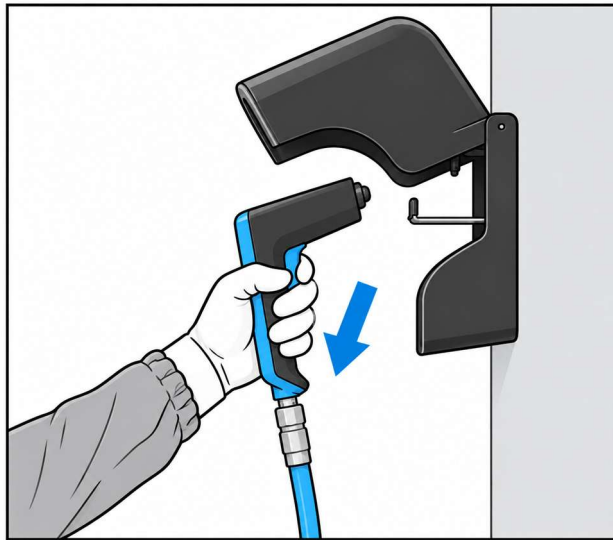
Operate only at 2.5-3.5 bar (36-50 psi).



07 Complete the normal surface preparation

Complete the required refinishing preparation before using IONSTAR. IONSTAR is the final preparation step, not a replacement for the normal process.

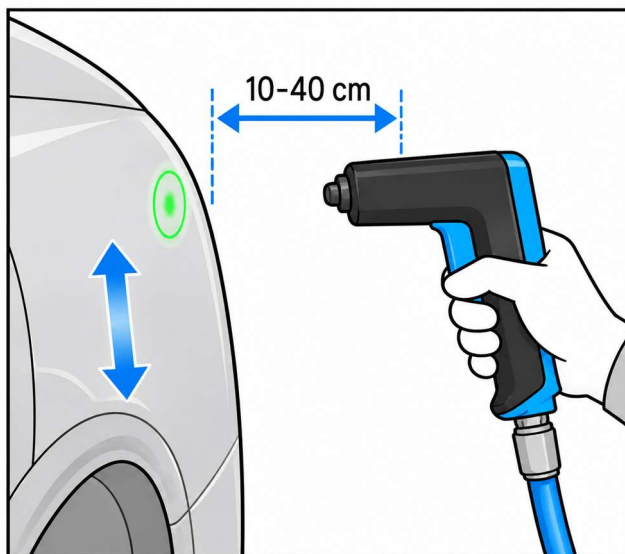
- Complete sanding, cleaning, degreasing, masking and tack wiping as required.
- Use the tack cloth before IONSTAR treatment.
- Once IONSTAR treatment has started, do not return to wiping unless necessary; if you do, repeat IONSTAR treatment afterwards.



08 Remove the IONSTAR from the wall box

When the workpiece is fully prepared, remove the IONSTAR from the wall box. The conductive hose can remain connected and ready for use.

- Take the tool out in a controlled movement without pulling on the hose or couplings.
- Keep the wall box accessible so the tool can be returned immediately after use.

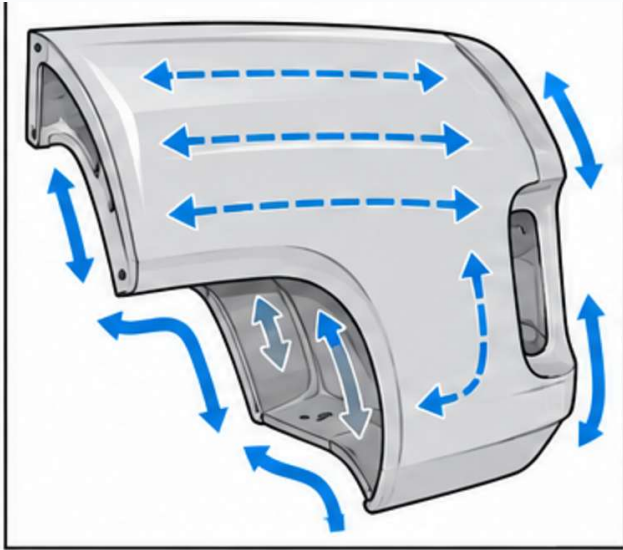


09 Keep the correct working distance

Hold the IONSTAR approximately 10-40 cm from the workpiece. Press the trigger and move the tool smoothly across the surface, similar to a controlled spray-gun pass.

- The laser shows the working area and helps guide coverage.
- The laser is a guidance feature only; it does not create the ionisation or measure remaining surface charge.
- Do not look directly into the Class 2 laser beam.

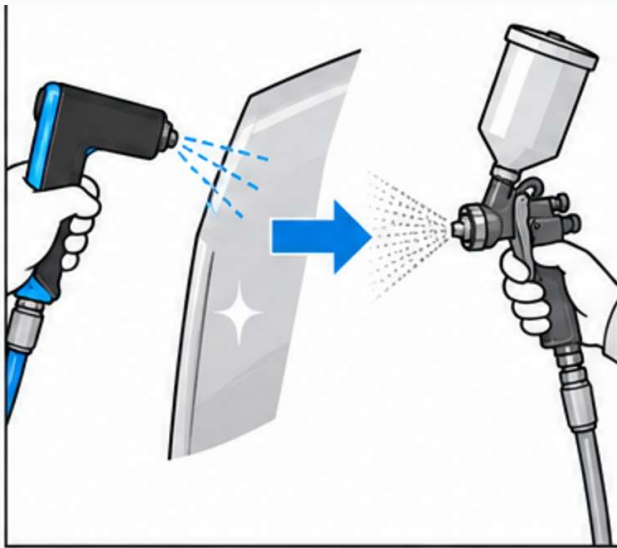
Working distance: 10-40 cm.



10 Cover the complete workpiece

Treat the complete area that will be coated. Move swiftly and evenly and make sure no sections are missed. One thorough pass is normally sufficient when coverage is complete.

- Include edges, curves and recesses.
- Include door frames, flanges, beads and masked transition areas.
- Do not hold the IONSTAR unnecessarily over one point or repeatedly treat the same area.



11 Coat directly afterwards

Once the surface has been treated, proceed directly to the next coating step. This keeps the process simple and reduces the opportunity for handling or environmental conditions to change the surface state.

- Observe the coating manufacturer's process and required flash-off times.
- IONSTAR does not replace or shorten specified flash-off times.

IONSTAR → coat directly afterwards.

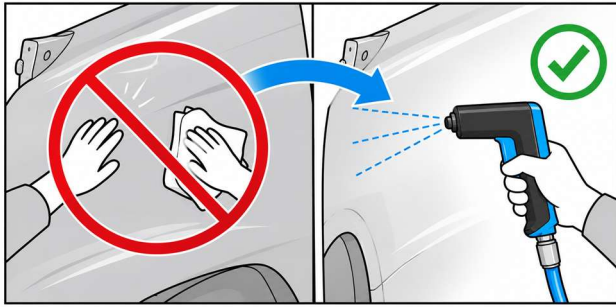


12 Do not touch or wipe after treatment

After IONSTAR treatment, do not touch the prepared surface and do not wipe it with a cloth or tack rag. Contact can reintroduce electrostatic charge and contamination.

- Keep hands, cloths and tack rags away from the treated surface.
- Avoid any unnecessary preparation step after ionisation.

After IONSTAR: no touching, no wiping.

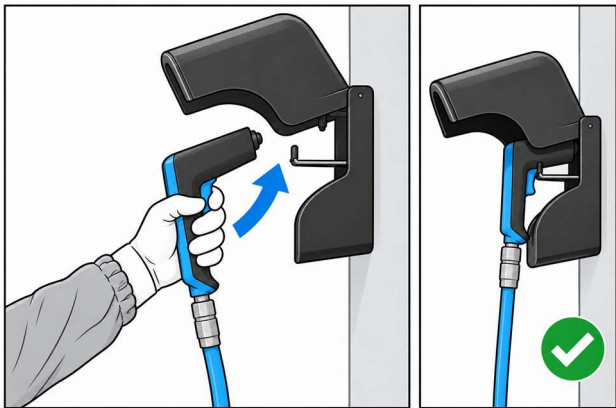


13 If contact occurs, treat again

If the surface is touched, wiped or otherwise handled after ionisation, repeat the IONSTAR treatment on the affected area before coating.

- Complete any necessary corrective preparation first.
- Then use IONSTAR again as the final step before coating.

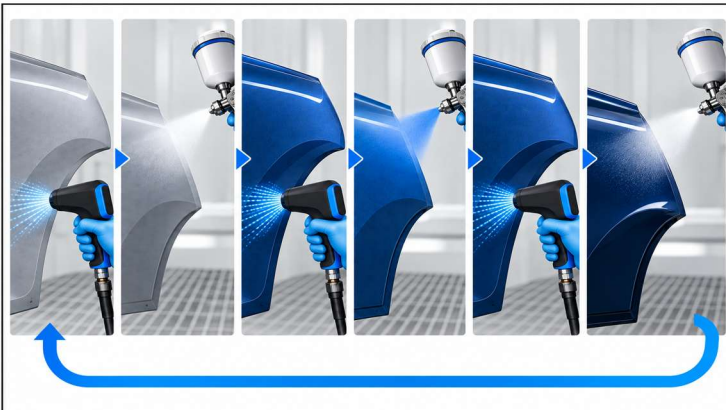
Touched or wiped? IONSTAR again.



14 Return IONSTAR to the wall box

After use, release the trigger and return the IONSTAR to its wall box. When airflow stops, energy generation and ionisation stop.

- Keep the tool clean, dry and protected from overspray and damage.
- The conductive hose may remain connected when the workstation is set up for continued use.
- Check the hose, couplings and device condition regularly.



15 Use IONSTAR before every coating step

IONSTAR is not only used before the first coat. Use it again immediately before each subsequent coating step where the refinishing process permits it.

- Use IONSTAR before the first coating application.
- Use it again before the colour/basecoat stage.
- Use it again before clearcoat.
- Always observe the specified coating process and flash-off times between stages.

Every coating step: IONSTAR immediately before coating.



16 Stop use if something is wrong

Take the IONSTAR out of operation immediately if the device or connection is not in proper condition.

- Stop if the IONSTAR becomes wet.
- Stop if the device, hose or coupling is visibly damaged.
- Stop if arcing, flashover or unexpected behaviour occurs.
- Do not open, modify or attempt to repair the IONSTAR. Report the unit to the designated WorldSkills technical contact or authorised Herrmann Innovations service route.