



CLEANING & MAINTENANCE MANUAL FOR SOLAR PV MODULES



Manufactured By:

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Quick guide & tour for cleaning of solar pv module



The clean module can generate more output than the uncleaned panel as much as clean module that much the performance and the lifetime will be more.



NOTE: Before cleaning please ensure that there should be no damage or breakage which can give electric shock or any serious hazards.

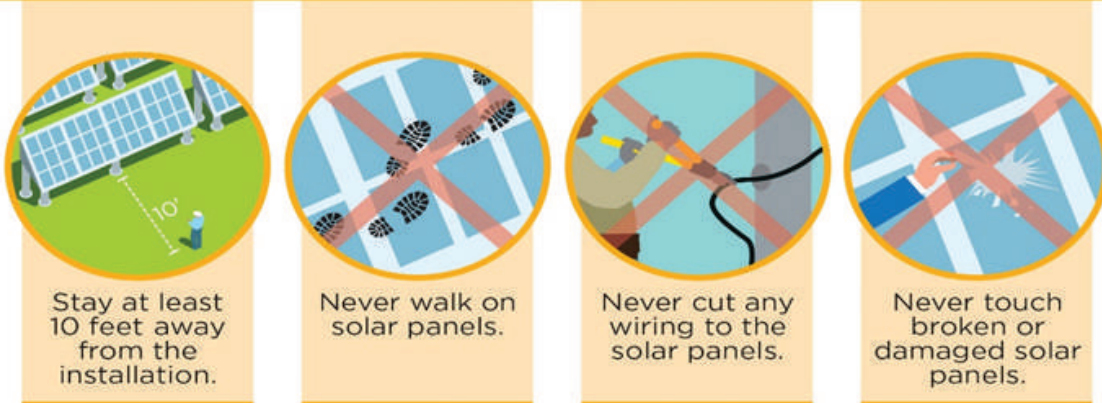
GENERAL GUIDELINES & RULES

- While cleaning the module wear safety instruments and kit.
- Damaged panels can present a lethal shock due to leakage currents.
- The risk of shock is higher when panels are wet.
- Before cleaning, thoroughly inspect panels for cracks, damage, and loose connections.
- While cleaning with the spray gun the pressure of the gun should be low.
- Don't try to step up on the panel for cleaning.
- If the panels require more cleaning effort to remove marks, use a soft sponge, micro-fiber cloth or soft brush and lightly wipe over the affected area.
- Do not use knives, blades, steel wool or other abrasive materials to clean the glass.
- When working at heights, use fall safe and personal protection measures throughout the cleaning process.

GENERAL GUIDELINES & RULES

SAFETY NEAR SOLAR

Like any other source of electricity, solar panels can pose potential hazards. Keep these safety tips in mind when you're near solar panels.



CLEANING FREQUENCY AND TIME

- Module cleaning should be done early in the morning and after sunset in the evening to prevent thermal stress and cracks on the module.
- The module cleaning in the early morning is good time for cleaning as Dew that has settled on the panels overnight that means you'll need to use less water and less energy to clean our solar panels.
- While cleaning the module the circuit should be in open mode or inverter should be not functional or operating.
- To rinse the panels, apply as much de-ionized water as required to the highest point of the panel or system until all the loose oil in and/or cleaning solution is washed-off. If soiling remains on the panels after rinsing, repeat the cleaning procedure.

Drying

The best way to dry panels is to leave them to dry naturally in the air. If for some reason this is not possible, they can alternatively be wiped dry with use of a rubber squeegee with a plastic frame on a nextension pole. Wipe the panel surface from the top to downwards to remove any residual water from the panel glass, but pay attention that any left-over grains of dirt or sand do not scratch the surface of the panel.

Avoid putting pressure on the panel surface when drying.

Congratulations, after completing this process, the panels are now clean & working at optimum efficiency again. With the right practices, cleaning solar panels should be easy and safe.



Instrument like this should be used for cleaning.

DO & DON'TS

- Don't use high-pressure water for cleaning.
- Don't use cold water when the module glass temperature is high.
- Difference in glass surface temperature and the water temperature can result in breaking of the glass.
- Don't use hot water to clean cold panel. Difference in glass surface temperature & the Water temperature can result in breaking of the glass.
- Don't clean with bare hands. Use appropriate PPE.
- Don't apply harmful chemicals for solar panel cleaning.
- Do avoid usage of tools like Knife, Blade, Wire-brush etc. for cleaning.
- Don't stand on the panels for cleaning.
- Do not wear metal accessories such as jewelry, watches etc. while cleaning the modules.