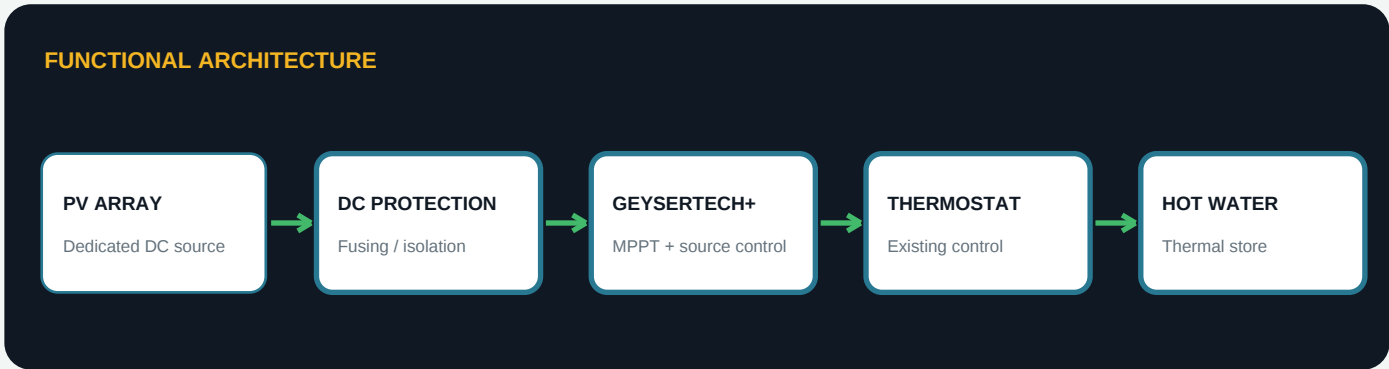


GEYSERTECH+ PV WATER HEATING

TECHNICAL SYSTEM OVERVIEW

Direct PV water heating for standard electric geysers, with optional AC backup or fully off-grid operation.



OPERATING PRINCIPLES

DIRECT PV INPUT

Dedicated PV modules feed the controller; a household inverter is not required.

MPPT CONTROL

The controller tracks available PV power and supplies the resistive geyser load.

THERMAL STORAGE

No battery is required: generated energy is stored as heat in the geyser.

SOURCE PRIORITY

When AC is made available it has priority; restrict AC to scheduled top-up windows.

LOAD COMPATIBILITY

Standard resistive element and thermostat can generally remain after inspection.

OFF-GRID MODE

AC can be omitted. DC protection, isolation and normal earthing remain required.

THREE CL ELECTRICAL OPTIONS

Budget Micro Kit | Micro LV for limited roof space | iX SMART Wi-Fi for advanced control and monitoring.

ELECTRICAL SELECTION

CONTROLLER RANGE & APPLICATION ENVELOPE

Select by cylinder size, element rating, PV operating range and required control mode.

CL ELECTRICAL OFFERING	GEYSER	ELEMENT	PV INPUT / MPPT	CONTROL
Budget - Micro GSU Plus Kit	50-150 L	2-3 kW	90-200 Vmp ideal 120-200	Included DB timer
Option 2 - Pi2R Micro LV	50-200 L	2-4 kW	50-150 Vmp	Timer / display / off-grid
Smart - Pi2R iX SMART Wi-Fi	50-300 L	2-4 kW	90-325 Vmp MPPT 120-325	Touchscreen + Wi-Fi

iX SMART TECHNICAL SNAPSHOT

PV / MPPT

Built-in MPPT; up to 15 A stated output. Confirm array current and voltage limits.

AC INPUT

200-240 Vac. AC has priority when available; schedule intended top-up windows.

CURRENT LIMIT

14 A internal current limiter stated on the current iX product page.

ENCLOSURE

180 x 125 x 45 mm; 750 g; IP30. Mount in a dry, protected position.

CERTIFICATION

Manufacturer lists IEC 61326-1, IEC 60730-1 and NRCS RCC 2405050.

SMART OPTION

Separate AC/DC settings, scheduling and data; Wi-Fi option for remote access.

PV STRING DESIGN - HOLD POINT

Check module Vmp, Voc and current at project temperature extremes. Keep controller, element and array within every published limit. Do not select panel quantity from wattage alone.

TECHNICAL REQUIREMENTS

INSTALLATION & COMMISSIONING

Essential electrical checks for the selected GeyserTECH+ installation.

1 PV ARRAY

Confirm module Vmp, temperature-corrected Voc and Isc against controller limits. Verify series string polarity before connection.

2 DC PROTECTION

Provide correctly rated DC conductors, appropriate fusing and isolation, compliant terminations, mechanical protection and PV earthing.

3 AC SUPPLY

Where backup is used, connect 200-240 Vac through the required isolation and timer/display control. AC availability overrides solar.

4 GEYSER LOAD

Verify cylinder size, element rating, thermostat compatibility and terminal condition. Repair overheating or loose connections.

5 CONTROLLER

Mount the IP30 controller in a dry, protected position with suitable access and clearances. Follow terminal labelling and polarity.

6 SMART DISPLAY

For iX SMART, install the temperature probe and communications cable; configure separate AC/DC temperatures and AC time windows.

COMMISSIONING CHECKS

- Record PV open-circuit voltage and polarity before energising the controller.
- Verify protective devices, isolation, earth continuity, cable support and labels.
- Confirm solar heating indication and thermostat switching at the geyser.
- Where fitted, test AC top-up operation and confirm the programmed time window.
- For iX SMART, verify probe reading, AC/DC setpoints, display communication and Wi-Fi access.

IMPORTANT

Install only to the current GeyserTECH+ manual, product labelling, applicable requirements and the approved electrical design.