

DESIGNED AND BUILT IN-HOUSE

PV DC Impressed Current Controller

A solar-powered DC rectifier for impressed current cathodic protection. It places a regulated current source on the asset itself — no utility service, no meter, no trench to a panel — and holds the structure at the –850 mV criterion on a 200 W module and a lithium battery.

SIZES	MAX OUTPUT	ENCLOSURE	BUILT
3	24V·22A	NEMA 4X	In-house



POST-MOUNTED UNIT – 550,000 GAL BOLTED TANK, ELOY AZ

Output sizes

SMALL 12 V · 5 A Water storage tanks and short pipe runs.	MEDIUM – MOST INSTALLED 12 V · 10 A Medium to large water tanks and medium-scale underground pipe.	LARGE 24 V · 22 A Large tanks and extensive pipeline networks needing driving voltage.
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Output limits are held in the controller as over-voltage and over-current protection, so a unit cannot be driven past its rating in the field. Sizing follows the design calculation – surface area, coating condition and current density.

Specification

Output	12 V 5 A · 12 V 10 A · up to 24 V 22 A
Regulation	Constant voltage or constant current, set at the panel
Protection	Over-voltage and over-current limits; fused solar, main and RMU circuits
Enclosure	Stainless steel, NEMA 4X, padlockable, –40°F to 140°F
PV module	200 W high-efficiency monocrystalline, 41.8" × 20.9", south facing
Storage	12 V 100 Ah LiFePO4, integral BMS, 7,000+ cycles at 100% DOD
Test points	Volts, reference cell, structure, shunt – on the door
Output wiring	#10 THHN pair in 3/4" liquid-tight; 18 ga 3C shielded structure sense

On the panel

- **Digital output meter.** Volts, amps and watts live, with V-SET and I-SET adjustment.
- **Three isolators.** Solar, Main Power and RMU switch independently.
- **Fused throughout.** Each circuit carries its own fuse at the panel.
- **Metering test points.** Structure-to-soil and instant-off readings without breaking into the wiring.
- **Legible thresholds.** Output below 0.50 V or 0.01 A is printed on the door as the call-us condition.

Mounting

- **Post-mounted.** 3" concrete-filled galvanised post, set 3 ft below grade and anchored in concrete; cabinet at 5'-6", module above and south facing.
- **Or tank-mounted.** Module and cabinet on a single rail across the roof, or on the shell, where the structure allows.
- **Per NEC.** Drawings stamped by a NACE-certified CP Specialist.

Remote monitoring

- **Cellular by default.** Reports over the cell network with a 24/7 web interface.
- **Satellite where there is no cell.** Same reporting on genuinely isolated sites.
- **Compliance measurements.** Dedicated analog channels for rectifier voltage and current.
- **Alarm on failure.** Notification when output drops, not at the next annual survey.
- **Independently powered.** Battery, AC or DC, surge-resistant, own isolator on the panel.
- **Ships commissioned.** Output set against structure-to-soil potentials, instant-off recorded.

In service

100,000 gal welded steel reservoir — new ICCP system	Buckeye, AZ
550,000 gal bolted steel tank — new ICCP system	Eloy, AZ
175,000 gal welded tank — CP upgrade, RMU added	Pauma Valley, CA
210,000 gal new bolted tank — design-build	Vail Lake, CA
Four bolted campus reservoirs — new ICCP, monthly check programme	Mountain View, CA
Two coastal reservoirs — tank rehabilitation	Del Mar, CA
Country club storage tanks — new ICCP system	Borrego Springs, CA
New sewer force main — pipeline CP, solar submittal approved	Elk Grove, CA
Municipal reservoir, Tank 1 — new ICCP system	American Canyon, CA
Municipal plant tank — new ICCP system	American Canyon, CA

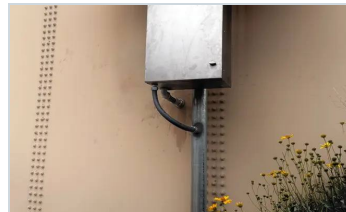
In the field



Roof-mounted module, welded reservoir — Pauma Valley CA



Panel and cabinet on the tank shell — Eloy AZ



Shell-mounted unit — Borrego Springs CA



Pole-mounted, new force main — Elk Grove CA

Ordering

Send the asset type, dimensions, coating condition and whether there is power at the site. We return the current requirement, controller size, module and battery selection, and a price — including the anode ground bed where the whole system is needed. Every system ships with stamped design drawings, an installation and commission report, and an ICCP operations and maintenance manual.

Specifications subject to change as the product develops. Prices quoted per project.