



# *i*CIP<sup>TM</sup>

## solar solutions intelligent chemical injection pump



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## INTELLIGENT CHEMICAL INJECTION PUMP

### Pump/Motor Module:

- Variable speed motor to match output requirements
- Uses years proven Texsteam packing and plunger technology
- All pumps have standard 316 SS heads
- Pump output from 2 quarts to 185 QPD (Quarts Per Day)
- Output pressure available to 5000 psi
- Pump output remains constant as pressure changes
- Continuous duty motor
- Low power consumption, high efficiency motor
- 24 month warranty on motor, pump, and electronics



### Basic Model — Solar Solutions Series 100

- Programmable-control the injection of expensive chemicals
- 4 Digit LED (Light Emitting Diode) Display with 5 Position Entry Joystick Device
- Simplistic in design — enter QPD (Quarts Per Day)-Set It And Forget It
- Lower initial cost than the other Solar Solutions Systems
- Standard limited warranty superior to others in the industry
- Program the controller to attain the desired pump output
- Multiple daily programs included, i.e., continuous, batch, or alarm driven
- Program to respond to operating conditions — low voltage, maximizing pump operation
- Program to respond to on-site conditions — pressure, temperature, tank level

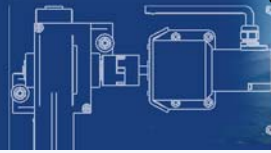
### Site Monitor Model — Solar Solutions Series 200

- Same features as Series 100
- Monitor on-site conditions
- Monitor operating data, battery charge condition, solar panel output, power consumption, pump output
- Capture site conditions of the complete system
- Data logging of alarms, events, conditions at user defined intervals



### Communications Model — Solar Solutions Series 300

- Communicate with your pumping station from remote locations
- Same features as the Series 100
- Communicate with existing communication systems via Modbus
- Remote control and modify settings
- Communication capabilities:
  - ◆ monitor ambient temperatures
  - ◆ monitor chemical tank levels
  - ◆ monitor pump flow and pressure conditions
  - ◆ monitor site equipment - security alarms
  - ◆ transmit data and alarms—tank level, security
- Remotely program the system
- Reduce costly trips to remote sites



## Communications and Data Logging — Solar Solutions Series 400

- Includes all the features available for the Solar Solutions Systems
- Incorporates Data Logging and Full Communications via Modbus

## Proven Texsteam™ Pump Reliability

- Time proven design, stainless steel head
- Wide variety of available packing materials to meet all conditions
- Oil-less utilizing permanently lubricated bearings
- Available with single or multi-head configuration



## Rugged and Robust DC Motor

- Variable speed gear motor – increase or decrease speeds according to field demand
- Brushless in design – decreases the need for periodic repairs and brush replacement
- High efficiency – results in decreased power requirements – lower amperage draw
- Longer battery life
- High torque performance – as pressure increases, pump speed remains constant
- Interface with the system controller to easily program speed and performance requirements

## Electronic Programmable Controller

- No relays – totally solid state design
- No arcing potential – safe, reliable
- Easy to program desired flow conditions, measured in Quarts/Liters per Day
- Read-only capable to see charge amps, motor amps, motor speed, pump volume
- Easy to follow menu to locate the desired location of set points and alarms
- Motor is directly interfaced with the controller to set speed depending on the desired flow rate
- Controller is housed in a NEMA 4 enclosure mounted inside the battery box – sealed box protects the controller from tampering and the elements

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### Quality Constructed Battery Enclosure

- Long lasting marine grade all aluminum exterior shell
- Features neoprene door seal, lockable security latch, louvered ventilation
- Available 1, 2, 3, or 4 battery box configuration



### Other Standard Features of All iCIP™ Solar Solutions Systems

- Two-year warranty against manufacturer's defects
- Complete systems are shipped together, pre-programmed, and ready to pump
- Program the desired settings utilizing the joystick and LED, or use a lap top, saving files in Excel or XLS format
- Utilize the power of the sun to charge the battery – emission-free and using no external electrical power
- Continuous injection provides smoother and more efficient usage and consumption of chemicals
- Utilizing programmed quantities of injection reduces and eliminates waste of expensive chemicals
- Certified and approved to **CSA** (Canadian) and **UL** (USA) standards for the complete system

### Option of User Selectable Analog and Digital Inputs and Outputs to Gather External Conditions and Operational Parameters

- Temperature
- Pressure transducer
- Tank level monitor
- Flow meter
- Motion detector



Table 1 - Head Size vs. Volume Range

Head Size	RPM Range		Volume Range		Units of Measure	Pressure Range
	Low	High	Low	High		
3/16"	3	45	1.75	26.31	Qts/Day	0 – 5000 PSI
	3	45	1.66	24.87	Ltrs/Day	0 – 5000 PSI
1/4"	3	45	3.07	46.07	Qts/Day	0 – 5000 PSI
	3	45	2.91	43.61	Ltrs/Day	0 – 5000 PSI
3/8"	5	45	11.52	103.68	Qts/Day	0 – 1500 PSI
	5	45	10.90	98.12	Ltrs/Day	0 – 1500 PSI
1/2"	5	45	20.48	184.29	Qts/Day	0 – 1000 PSI
	5	45	19.38	174.43	Ltrs/Day	0 – 1000 PSI

Consult factory for higher pressure applications.

**When You Consider All the Features and Their Related Benefits,  
Doesn't it Make Sense to Choose the iCIP™ Solar Solutions System?**



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