

SHURFLO®

SHURFLO 9300 SERIES - SOLAR POWERED SUBMERSIBLE PUMP

SHURFLO 902-100, 902-200 - LINEAR CURRENT BOOSTER PUMP CONTROLLERS



OPTIMIZE THE PERFORMANCE OF YOUR SOLAR SUBMERSIBLE PUMP

- SHURFLO's 9300 Series Pumps are backed by 45 years of research and engineering experience.
- Solar-powered submersible pump suitable for wells with a 4 inch diameter or larger.
- SHURFLO LCB pump controllers are high quality DC power converters designed to interface between a DC solar pump and DC power source like solar panels.
- Their main function is to maximize the daily output of water while providing protection for the pump.
- The solid state controller will protect the pump systems and give trouble-free service for many years.
- When used in a solar pumping system, directly connected to solar power, it will protect the pump from over-voltage and over-current conditions and will also provide current boosting in low sunshine conditions.
- Model 902-100 gives basic protection and can also be connected to a remote float switch at the reservoir to turn the pump on and off as required.
- Model 902-200 model has same functionality as 902-100 but is also equipped with sensors, wiring harness and internal circuitry to monitor water levels underground and react to level changes in the well and a manual on-off switch.

FEATURES & BENEFITS

9300 Series

- Strong Construction, yet lightweight at 2.7kg
- Corrosion-proof housing with stainless-steel fasteners
- Dry Running capability without pump damage
- Internal Bypass Feature for pump protection
- Long-life, 12 or 24 VDC Operation
- Easily repaired in the field
- State of the art solid diaphragm

POWER CONNECTOR:

- Unique water-tight gland connector
- Stops water wicking and prevents potential condensation
- Quick Disconnect – No splicing necessary

902-100 Linear current booster (LCB)

- Operates on 24 VDC
- Increases daily water output up to 30%
- System starts pumping earlier in the morning
- Systems stops pumping later in the evening
- Protects pump from low or high voltage conditions
- Terminals for float switch
- 5 Amp Max

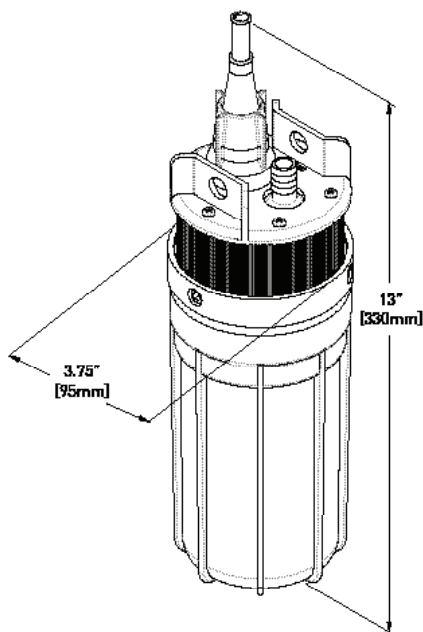
902-200 Includes all features of 902-100 plus:

- Switch selectable for 12 VDC or 24 VDC
- Pump On / Off switch
- Water tight enclosure and cable inlets
- Includes water level monitor made with probes and 90m (300 ft.) cables
- 7 Amp Max
- Mounting bracket

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PERFORMANCE

24 VDC 9300 SUBMERSIBLE PUMP FLOW CHART PRODUCES
820-1170 GALLONS (3110-4428 LITERS) PER DAY

| TOTAL VERTICAL LIFT | | FLOW RATE PER HOUR | | SOLAR ARRAY SIZE* | CURRENT |
|---------------------|--------|--------------------|--------|-------------------|---------|
| FEET | METERS | GALLONS | LITERS | WATTS | AMPS |
| 20 | 6.1 | 117 | 443 | 58 | 1.5 |
| 40 | 12.2 | 114 | 432 | 65 | 1.7 |
| 60 | 18.3 | 109 | 413 | 78 | 2.1 |
| 80 | 24.4 | 106 | 401 | 89 | 2.4 |
| 100 | 30.5 | 103 | 390 | 99 | 2.6 |
| 120 | 36.6 | 101 | 382 | 104 | 2.8 |
| 140 | 42.7 | 99 | 375 | 115 | 3.1 |
| 160 | 48.8 | 98 | 371 | 123 | 3.3 |
| 180 | 54.9 | 93 | 352 | 135 | 3.6 |
| 200 | 61 | 91 | 345 | 141 | 3.8 |
| 230 | 70.1 | 82 | 310 | 155 | 4.1 |

* Minimum total power rating
NOTE: Use of an LCB (Linear Current Booster) is required for optimum performance. Minimum total power rating shows minimum array watts required to perform as shown.
12VDC operation reduces output flow and array requirement by half.

TECHNICAL CHARACTERISTICS

| | |
|---------------------|--------------------------------------------------------------|
| MODEL NUMBERS | 9325-083-101 (CE certified) |
| PUMP DESIGN | Positive Displacement 3 Chamber Diaphragm Pump |
| CAM | 3.0 Degree |
| MOTOR | Permanent Magnet, Thermally Protected |
| VOLTAGE | 24 VDC Nominal |
| AMPS | 4.0 Maximum |
| INTERNAL BYPASS | 105-110 PSI Max. [7.2-7.5 BARS] |
| MAXIMUM LIFT | 230 Feet Maximum [70 m] |
| MAXIMUM SUBMERSION | 100 Feet Maximum [30 m] |
| OUTLET PORT | ½" [12.7mm] Barbed Fitting for ½" [12.7mm] I.D. Tubing |
| INLET | 50 Mesh Stainless Steel screen |
| MATERIALS | High Strength Engineered Plastics, Stainless Steel Fasteners |
| TYPICAL APPLICATION | Potable Water Well Pump |
| NET WEIGHT | 6 LBS. [2.7 kg] |

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TYPICAL APPLICATIONS

- | Irrigation
- | Livestock watering
- | Remote homes and cabins
- | Village well
- | Pond management
- | Islands

SCHEMATICS

| H1 = Discharge head = vertical distance in feet / meters from ground level to level of water in elevated storage tank

| H2 = Water level = vertical distance in feet / meters from level of water in well when pumping up to ground level

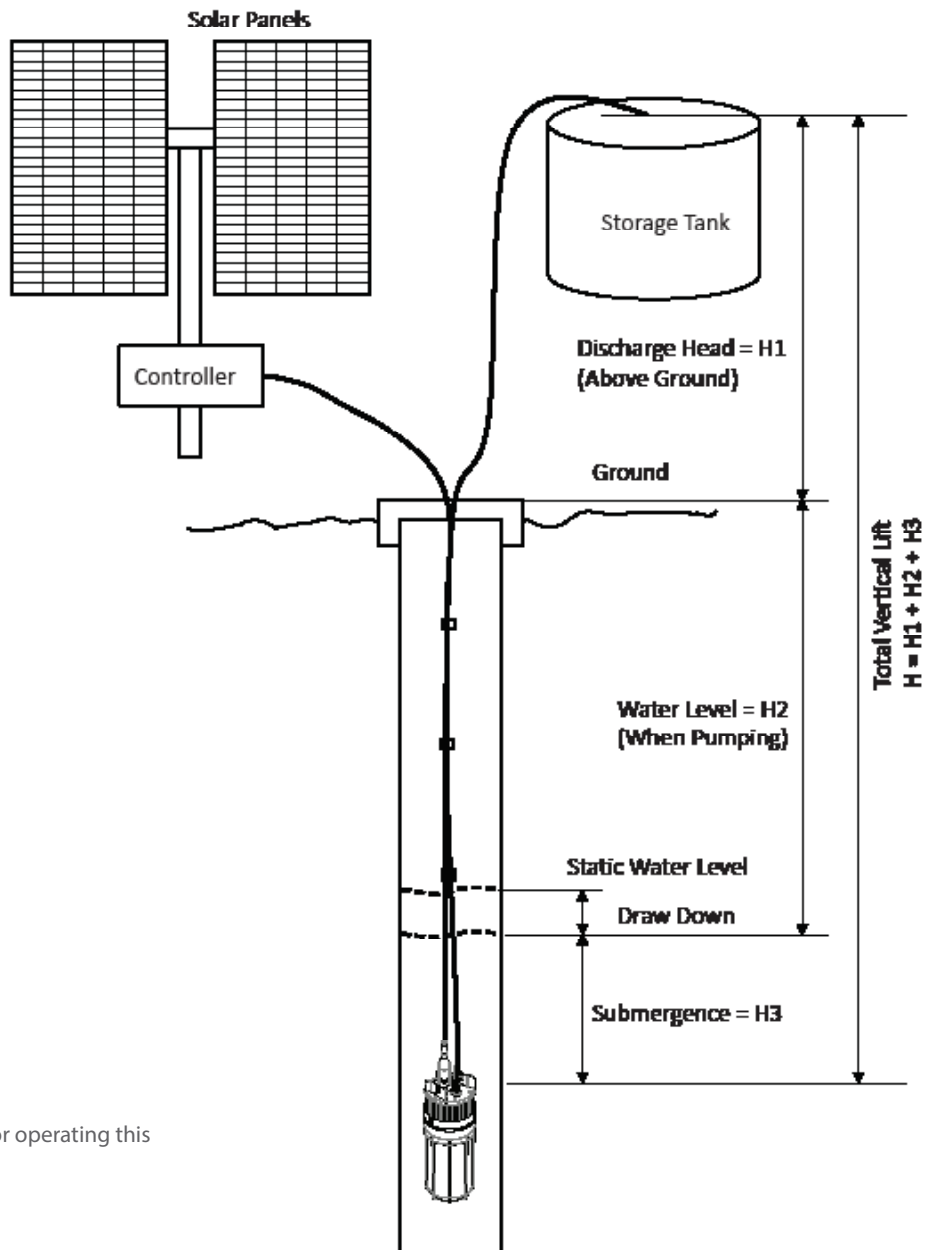
| H3 = Submergence = vertical distance in feet / meters from level of water in well when pumping, to pump position in well (do not exceed 100 ft. / 30 m)

| $H = H1 + H2 + H3$ = Total vertical lift (do not exceed 230 ft. / 70 m)

| Drawdown = vertical distance in feet / meters from static water level to water level when pumping

IMPORTANT NOTE

- | Refer to owners manual before connecting or operating this product for suitability.
- | Please read these instructions completely
- | Not intended to be used for chemical transfer



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SPECIFICATIONS

| MODELS | 902-100 | 902-200 |
|----------------------------------------------|----------------|-----------------------------------------|
| OPERATING VOLTAGE | 24VDC | 12VDC OR 24 VDC (switch-selectable) |
| MAXIMUM INPUT VOLTAGE | 45VDC | 45VDC |
| START VOLTAGE OF THE PV PUMP SYSTEM | 25VDC ± 2% | 18-32VDC - adjustable (set to 24 volts) |
| SHUT-DOWN VOLTAGE | 28VDC | 28VDC |
| MAX. POWER CONSUMPTION OF THE PV PUMP SYSTEM | 150 Watts | 150 Watts |
| MAX. OUTPUT CURRENT | 5 Amps | 7 Amps |
| POWER CONSUMPTION | 25 mA | 25 mA |
| FUSE* | 10 Amps | 10 Amps |
| AMBIENT TEMPERATURE | -10° to + 45°C | -10° to + 45°C |
| OVER-TEMPERATURE SHUT-DOWN | 80°C | 80°C |
| SHORT CIRCUIT PROTECTION | Yes | Yes |

* Required for battery installation (not included)

TYPICAL 902-200 INSTALLATIONS

