

# Power Infuser®

Controlled IV Boluses. Hands-free Fluid Resuscitation.



**ZOLL**®

## Controlled IV Boluses

Tested and Approved for Flight by the US Military

The ZOLL® Power Infuser® offers an unprecedented level of control over fluid administration to help you adhere to your protocols.

## Hands-free Fluid Resuscitation

Automated boluses, air elimination, occlusion detection, one-way valves, long battery life, and quick set up combine to give you a helping hand when you need it.

The first portable electronic pump designed specifically for fluid resuscitation.

- Infuse an automated 250 ml bolus in 2.5 minutes without elevating or pressurizing the IV bag.
- Adjust continuous flow rates from 0.2 to 6 liters per hour.
- Lay the IV bag down to simplify transport; membranes in the crystalloid/colloid cartridge remove air from the line.
- The pump runs for up to eight hours on six AAA batteries.
- Designed to withstand the rigors of the EMS environment; developed for the battlefield in cooperation with the Walter Reed Army Institute of Research.
- Blood cartridge also available for controlled delivery of whole blood and pRBCs.



## Power Infuser Specifications

### Pump

*Bolus Setting:* 250 ml in 2.5 minutes

*Continuous Flow Rate Settings:* 0.2, 1, 2, 4, and 6 liters/hr

*Accuracy:* ±15%

*Pump Type:* Shuttle mechanism (patent no. 5,577,891)

*Free Flow:* Allowed if fluid source is above patient

*Retrograde Flow:* Prevented by valves

*Alarms:* Air in line (after filter in crystalloid/colloid cartridge), downstream occlusion, low battery

*Air Alarm Trigger:* Bubble of approximately 20 µl or larger

*Occlusion Alarm Trigger:* Approximately 20 PSIG (1000 mm Hg)

*Power Source:* 6 AAA batteries or 12-15 V DC adapter

*Typical Battery Life at 6 lph:* Approximately 8 hours

*Weight of Pump with Batteries:* 330 grams

*Dimensions:* 9.8 x 7.0 x 5.0 cm

NOTE: The above specifications hold under normal operating conditions; defined as: IV bag positioned at patient level; IV set and cartridge properly primed and cleared of air bubbles; 18 in. long IV tubing (provided) is the only segment between pump and peripheral IV catheter of recommended size (18 gauge for saline); compatible fluids used.

### Crystalloid and Colloid Cartridge and IV Set

*Compatible Fluids:* Crystalloid or colloid IV fluids

*Incompatible Fluids:* Medications, blood products and non-ionic fluids

*Priming Volume, Cartridge:* 7 ml

*Priming Volume, Cartridge and 18 in. Segment:* 10 ml

*Inlet Connector:* Female luer

*Outlet Connector:* Male locking luer

*Air Elimination Method:* Hydrophilic filter and hydrophobic vent combination

*Filter Pore Size:* 1.2 microns

*Weight:* 30 grams

*Dimensions:* 4.6 x 9.7 x 1.3 cm

### Blood Cartridge and IV Set

*Compatible Fluids:* Whole blood, RBCs, crystalloid or colloid IV fluids

*Incompatible Fluids:* Medications and non-ionic fluids

*Priming Volume, Cartridge:* 7 ml

*Priming Volume, Cartridge and 18 in. Segment:* 10 ml

*Inlet Connector:* Female luer

*Outlet Connector:* Male locking luer

*Air Elimination Method:* None (use IV set with drip chamber and blood screen)

*Weight:* 30 grams

*Dimensions:* 4.6 x 9.7 x 1.3 cm

### Environment

*Operating Temperature:* 0°C to 49°C

*Storage Temperature:* -46°C to 71°C

*Humidity:* 10% to 95%

*Vibration:* MIL-STD-810F

*Electromagnetic Compatibility (EMC):* MIL-STD-461E, CISPR 11, Class B

*Radiated Immunity:* IEC 61000-4-3

*Electrostatic Discharge:* IEC 61000-4-2

*Conducted Susceptibility:* IEC 61000-4-6

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