

## USER'S MANUAL

# INFUSION SYSTEM

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**20-6000-00 (110V)**

**20-6005-00 (220V)**



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**WELLS**  
JOHNSON

## **GENERAL DESCRIPTION**

The infusion pump unit incorporates an enclosed, brushless DC (BLDC) motor that has a long working life and permanent lubrication. The gearbox was removed for increased efficiency and extremely quiet operation. It requires no maintenance for the lifetime of the motor. The motor driver takes advantage of a high performance DSP processor designed for 3-phase sine-wave brushless DC motor speed regulation. Power ON/OFF is achieved using the switch located on the back of the unit, and the motor speed adjustment is accomplished with a single-turn potentiometer switch located on the front panel.

## **SPECIFICATIONS**

Item number	20-6000-00 (110V) 20-6005-00 (220V)
Weight	11 lbs.
Dimensions	7.25" x 12.5" x 6.25"
Power	100 to 240 VAC, 50/60 Hz
Drive	single direction
Motor	0 to 1050 rpm +/- 100 (load dependent)
Maximum Vacuum	24" HG
Maximum Head Pressure	
Continuous	25 psi
Intermittent	40 psi @ max speed and outlet occlusion
Peristaltic Pump	
Maximum Flow Rate	1300 ml/min. (with specified tubing)

## **CHECKLIST**

The infusion pump system consists of the following ten (10) basic components:

- Pump Controller (unit)
- Pump Head
- Power Cord
- Pneumatic Foot Switch
- Infusion Tubing (5 pieces)
- Black Aluminum Handles (2)
- Infusion Cannulas (2)
- Spinal Needles (3)
- IV Bag Stand
- User's Manual

***Items being returned must be carefully packed to prevent damage in shipment, and insured against possible damage or loss. Wells Johnson Company will not be responsible for damage resulting from careless or insufficient packing.***

***\*NOTE: Products with an expired warranty will be repaired for a nominal charge.\****

## **COMPONENT DESCRIPTION**

### **PUMP HEAD**

#### **LOADING**

Sterile solution may be pumped through Infusion Tubing using the following technique to load the pump head:

1. Spike Bag
2. Clamp Tubing
3. Rotate the pump head lever counter clockwise to open the pump head.
4. Insert the enlarged center section of the infusion tubing into the pump head opening over the rollers. The flow direction should be from left to right as notes on the pump head.
5. Rotate the pump head lever clockwise to close the pump head and clamp the tubing.

### **PNEUMATIC FOOT SWITCH**

The foot switch tubing is connected to either port located on the side of the pump.

### **INFUSION TUBING**

Use sterile Infusion Tubing only. Manufacturer suggest only using approved Wells Johnson tubing- please refer to parts list. This tubing is precision-extruded and optically inspected to insure top performance with the pump head. Other commercial tubing may not meet, or perform, to specifications.

**Warning: Infusion tubing sterile, single-use and not intended to be reused under any circumstances to prevent cross-contamination.**

***\*NOTE: Refer to the section on the pump head for installation.\****

### **BLACK ALUMINUM HANDLES**

Black Aluminum Handles are designed to accept infusion tubing via luer lock connection. Standard luer lock needles or infusion cannulas are connected to the handle via conventional luer lock. The Black Aluminum Handle may be gassed, autoclaved, or soaked.

### **INFUSION NEEDLES**

The infusion technique is based on using large volumes of a very dilute concentration of local anesthetic, which produces extremely efficient anesthesia, while minimizing blood loss.

All infiltration needles (or cannulas) are manufactured from surgical grade stainless steel with luer lock fittings (specify length and diameter when ordering).

### **IV BAG STAND**

Place the IV Stand into the bracket located on back of pump. The stand is uni-directional and will go into place when hooks are centered over the pump.

***\*Caution: Make sure stand is inserted all the way into bracket (1-3/4") before attaching solution bags.\****

## SET UP AND OPERATION

The variable speed drive provides ease of operation. Place pump on stable surface. After installing the tubing in the pump head (refer to the "Pump Head" section), connect the power cord to an acceptable power outlet. Adjust the speed control knob to the desired speed. ***The foot switch must be activated for pump to operate.***

NOTE: The numbers under the speed control knob are for reference only. If the direction of flow needs to be changed, reverse the intake and discharge sides of the tubing.

The pump control unit and the pump head remain outside of the sterile operating field. The peristaltic type pump head assures the sterile fluids remain within the tubing, never allowing direct contact with either the pump head or the pump control unit.

***\*Caution: To prevent air infusion, always prime tubing prior to administering any fluid to patient.\****

### PARTS LIST:

Item	Part #
Infusion Pump (110V)	20-6000-00
Infusion Pump (220V)	20-6005-00
Power Cord (110v)	18-2820-00
Power Cord (220v)	20-5101-11
Infusion Pump Head, single	18-4102-00
Pneumatic Footswitch	20-6010-01
IV Bag Stand	18-4200-00
Multi Hole Infusion Cannulas (specify size)	20-1218-00
3-Hole Spatula Infusion Cannulas (specify size)	20-1223-00
Spiral Infusion Cannulas (specify size)	20-1243-00
Multi Hole 12 Infusion Cannulas (specify size)	20-1252-00
Open Ended Infusion Cannulas (specify size)	20-1257-00
Black Aluminum Infusion Handle	16-5181-00
Spinal Needles; sterile, disposable	
18g x 6" (1 ea.)	24-6002-00
25g x 3" (1 ea.)	24-6003-00
20g x 3.5" (1 ea.)	24-6004-00
CB Infiltration Tubing; sterile, disposable, single-use, single spike	24-6008-00
"Y" Infiltration Tubing; sterile, disposable, single-use, dual spike	24-6009-00
Large Bore Infiltration Tubing; sterile, disposable, single-use, single spike	24-6028-00
"YLB" Infiltration Tubing; sterile, disposable, single-use, dual spike	24-6029-00

## ***TROUBLE SHOOTING***

The two black buttons under the lever can be pushed inward allowing it to slide up or down to adjust the tubing size.

Sliding button upward loosens pump head grip on the infusion tubing. Tubing will have a tendency to “walk”, or bunch-up, in the pump head if the buttons are adjusted too high.

Adjusting the button downward tightens the pump head grip on the tubing. Adjusting the buttons too far toward the bottom of their excursions may restrict the flow rate.

NOTE: Adjustment of the buttons 3 ‘clicks’ from the top of their excursion provides an optimum setting between flow and grip.

## ***MAINTENANCE***

Maintenance-Free unit.

Do not submerge.

Clean with hospital grade cleaning agent.

## ***TECHNICAL ASSISTANCE***

Technical assistance may be obtained by contacting the Wells Johnson Company Customer Service Department at 800-528-1597 or local 520-298-6069

The Wells Johnson Company reserves the right to make improvements in design, construction, and appearance of our products without notice.

***Caution: Federal law restricts this device to sale by or on the order of a physician.***

### **WARRANTY**

- *The Wells Johnson Company will void warranty on any products indicating negligence, or noncompliance with operation maintenance instructions.*
- *Products are warranted against defect in material and workmanship for a period of five (5) years from date of purchase. If repair or adjustment is necessary, and are not the result of abuse or misuse, please return, freight prepaid, and correction will be performed without charge.*
- *All returns require prior authorization from the Wells Johnson Quality Assurance Department.*

**For technical assistance call  
Customer Service or Technical Support:**

**520-298-6069**

**800-528-1597**

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