
OPERATING MANUAL:

**MEDICAL
IRRIGATION
K PUMP**

Manufactured for:

**K.M.I
3185 Palisades Dr
Corona CA 92880-9432 USA
1-866-412-7867**

Model No.

1000-0031

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NOTE: PRIOR TO PROCEEDING PLEASE READ "SAFETY PRECAUTIONS" and ICON DEFINITIONS"

SAFETY PRECAUTIONS



MEDICAL EQUIPMENT WITH RESPECT TO ELECTRICAL SHOCK, FIRE, MECHANICAL AND OTHER SPECIFIED HAZARDS ONLY IN ACCORDANCE WITH UL 2601-1, AND CAN/CSA C22.2 NO. 601.1



ELECTRICAL SHOCK HAZARD. DO NOT REMOVE COVER. Refer servicing to qualified service personnel.



RISK OF FIRE, DO NOT REPLACE FUSES. Refer servicing to qualified service personnel.



EXPLOSION RISK if used in the presence of a flammable anesthetic mixture with air or with oxygen or nitrous oxide.

ICON DEFINITIONS



ATTENTION: Consult accompanying documents



Type BF equipment



Alternating current



Fuse symbol



OFF



ON (Power: connected to Mains)

FWD

Forward (Clockwise rotation)

REV

Reverse (Counterclockwise rotation)

GENERAL DESCRIPTION

This Medical Irrigation Pump is designed with a user selectable Mains power input module and an Easy-Load® pump head with safety interlock. The pump head safety interlock is enabled when the pump head cam lever is opened; exposing the pump head rollers.

Power On/Off switch is located on the rear panel with a "power on" green LED indicator on the front panel.

Motor control is PWM circuitry with indirect velocity feedback for load/line regulation and speed control.

Pump speed (flow rate) is set by a user adjustable single turn potentiometer located on the front panel.

Remote Drive "On/Off operation is available through an air actuated foot switch.

SETUP AND OPERATION

1. Lift pump head lever to the up position to allow loading of the peristaltic tubing/tubing section.
Peristaltic tubing/ tubing specifications:
Material: Silicone
Sizes: $\frac{3}{16}$ " I.D x $\frac{3}{8}$ " O.D or $\frac{1}{4}$ " I.D x $\frac{7}{16}$ " O.D
2. Place tubing on roller section ensuring flow direction is from left to right as facing the unit.
3. Lower pump head lever to the down (closed) position and lock in place.
4. Secure tubing by locking the tubing retainers in place. Press in tubing retainer tabs on the side of the pump head and lower until tubing is secured.
5. Connect foot switch to ports located on the front of the pump.
6. Select desired rotation of pump head. ie: FWD (Forward) for irrigation; REV (Reverse) for removal.
7. Turn power to the medical irrigation pump ON.
8. Select desired pneumatic foot switch to be used.
9. Depress foot switch operation to start the pumps operation, depress again to discontinue pump operation.
10. Adjust flow rate with the 1-turn potentiometer speed control.
Note: rotating dial clockwise (CW) will increase flow rate, counter clockwise (CCW) will decrease flow rate. Dial indicator numbers are relative and do not indicate a specific flow rate. Flow rate must be empirically correlated to dial indicator problem.

TECHNICAL DESCRIPTION

Drive Speed Range:	10-600 rpm
Maximum Torque:	50 oz. in.
Flow Rate:	Up to 1000 mL/min. depending upon tubing and pump speed
Mode of Operation:	Continuous (Forward or Reverse)
Rated Input Voltage:	110/ 120 VAC, 220/ 240VAC (qualified service technician selectable)
Rated Input Frequency:	50/60Hz
Mains Power Input Fusing:	(2) T 1.0A/250V for 110/120 VAC input power selection. (2) T 0.6A/250V for 220/240 VAC input power selection. Fusing replaceable by qualified service technician.
Mains Power Connection:	IEC 320, Use only cordage terminated in HOSPITAL GRADE plugs to insure power grounding.
Speed Regulation:	
Line:	+/- 2%
Load:	+/- 1%
Temperature Drift:	+/- 10%
Humidity (non-condensing):	10% to 90%
Operating Temperature:	0° to 40°C
Storage Temperature:	-45° to 60°C
Atmospheric Pressure Range:	500Hpa to 1060hPa
Protection against shock:	Class I, Type BF
Enclosure rating:	Ordinary equipment
Chemical Resistance:	All materials will withstand mild disinfectant solution or cleaning solvents.
Display:	Green LED
Remote:	Foot switch with 10 ft. PVC hose, air actuated.
Dimensions: (L x W x H):	219.1 x 190.5 x 114.3 mm (8 ⁵ / ₈ in x 7 ¹ / ₂ in x 4 ¹ / ₂ in)
Weight:	4.08 kg (9.0 pounds)
Pollution Degree:	Pollution Degree 2 per IEC 664 (Indoor usage – lab, office)
Installation Category:	Installation Category II per IEC 664 (Local level – appliances, portable equipment etc.)

TROUBLESHOOTING



CAUTION: SHOCK HAZARD! DO NOT REMOVE COVER.

High voltage exists and is accessible in the Medical Irrigation Pump.

1. Power ON indicator does not illuminate.
 - a. Verify power cord is inserted in Pumps power entry module.
 - b. Verify power entry module power switch is in the ON position.
 - c. Verify Mains power circuit breaker is ON.
 - d. If (a), (b), (c) verify OK and power ON indicator remains off, return Pump to manufacture for servicing.
2. Pump does not RUN, power ON indicator is illuminated.
 - a. Verify tubing is loaded properly and that the pump head lever is latched by pushing down on it.
 - b. Verify pump head screws are securely tightened.
 - c. Verify FWD/ REV switch in the FWD or REV position, not center position which is OFF.
 - d. If (a), (b) and (c) verify OK, return Pump to manufacture for servicing.
3. Pump runs in the wrong direction.
 - a. Verify FWD/ REV switch is in the desired position.

MAINTENANCE/ CLEANING

Disconnect Medical Irrigation Pump from the power mains.

1. Wipe down outside of pump and pump head with a mild sanitizing solution and dry. DO NOT IMMERSE PUMP in liquid or use excessive liquid.
2. Verify ground wire condition in power cord.

SERVICING

No user repairable parts available. Refer all servicing to the manufacture.

NOTES . . .
