



# MEDICAL FLUID WARMERS

## OXYGEN HUMIDIFIER AND FLUID WARMER MP-24

Designed to work with oxygen humidifiers for adults and pediatric inhalation



MP-24

### FEATURES:

- Contactless warming of fluids
- Adjustment of infusion warming temperature using microprocessor's program
- Indication of warming readiness
- Simple and quick insertion of humidifier bottle
- Resistance to variety of disinfecting agents and moist cleaning
- Three-level protection against overheating
- Increases efficiency of oxygen humidifier, increasing relative importance of oxygen up to the 90%

### TECHNICAL DATA:

- Power supply: DC 24V
- Power consumption: 50 W
- Warming temperature +32 - +42°C
- 250 ml fluids warming up till 30°C temperature in 7 minutes
- Max warming up temperature +42°C
- Safety temperature +45°C
- Operating temperature: +10 - +30°C
- Heating fluid container inner diameter:
  - MP-24-2 diameter Ø 55,2 mm
  - MP-24-3 diameter Ø 54,6 mm
- Weight: 540 g
- External dimensions Ø 72 x 120 mm



## MEDICAL INFUSION FLUID WARMER MP-14

Warmers are designed for warming up of various infusion fluids to human's body temperature before these fluids access the body



MP-14

### FEATURES:

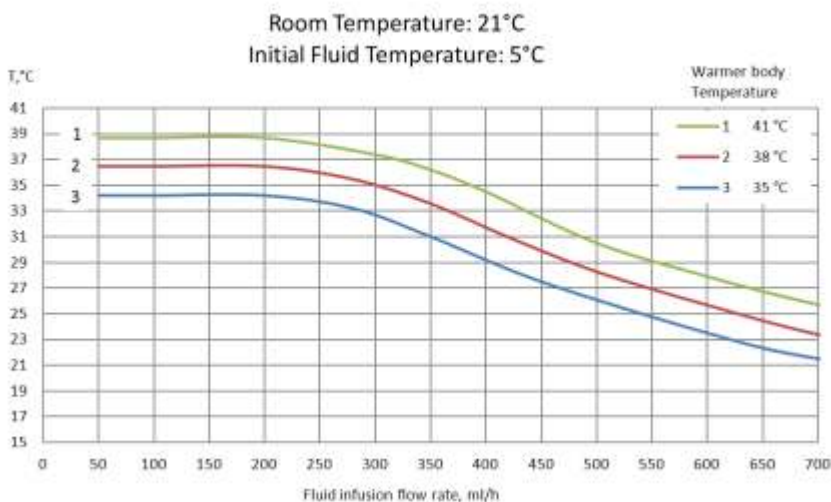
- Contactless warming of infusion fluids
- Adjustment of infusion warming temperature using microprocessor's program
- Indication of warming readiness
- Quick and easy set up for IV tube inserted directly into the warmer
- Resistance to variety of disinfecting agents and moist cleaning
- Three-level protection against overheating
- Convenient fit when used with a dripper and infusion pumps

### TECHNICAL DATA:

- Power supply: DC 24V
- Power consumption: 50W
- Working temperature's reaching in 1 min after actuation
- Heater's pipe's length 580 mm
- Maximum warming up temperature +42°C
- Safety temperature +45°C
- Operating temperature: +10 - +30°C
- Weight: 220 g
- External dimensions: 120 x 45 x17 mm



### DIAGRAM OF MEDICAL INFUSION FLUIDS



Temperature of heated fluids at the outlet of a heater, for infusion flow rates up to 5 ml/min., is lower then the set temperature by no more then 2°C

## MEDICAL INFUSION FLUID WARMER MP-16

Warmers for infusion of fluids and blood



MP-16

### FEATURES:

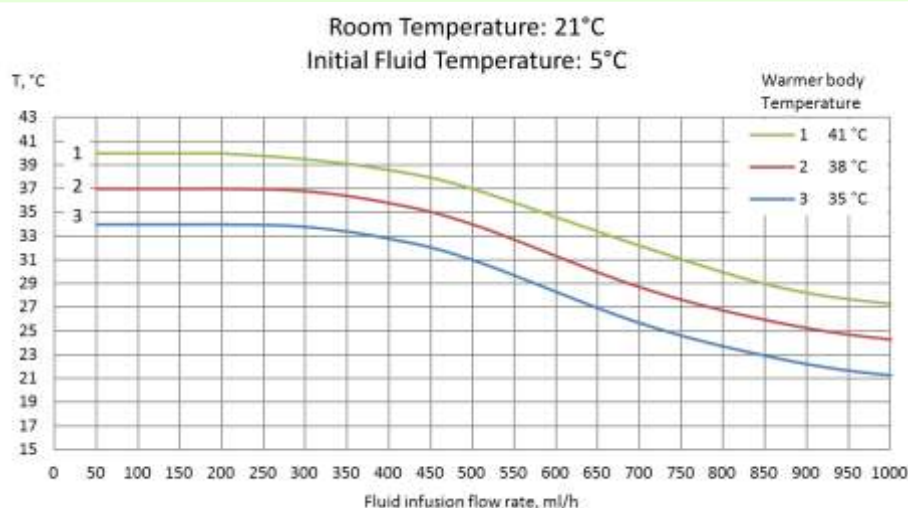
- Contactless warming of infusion fluids
- Quick and easy set up for IV tube inserted directly into the warmer
- Three-level protection against overheating
- For infusion tubes with outer diameter Ø4-5 mm
- For heating fluids and blood up to the infusion flow speed of 20 ml/min.

### TECHNICAL DATA:

- Power supply: DC 24V
- Power consumption: 50W
- Working temperature's reaching in 3 min after actuation
- Heater's pipe's length 970
- Maximum warming up temperature +42°C
- Safety temperature +45°C
- Operating temperature: +10 - +30°C
- Weight: 470 g
- External dimensions: 50 x 205 x 20 mm



### DIAGRAM OF HEATING FOR MEDICAL INFUSION FLUIDS



Temperature of heated fluids at the outlet of a heater, for infusion flow rates up to 8 ml/min., is lower then the set temperature by no more then 3°C

- Infusion warmers has integrated sound and visual alarm system
- Visual alarm contains from two individual LED indicators:
  - red LED indicator- indicates exceeding maximum temperature
  - blue LED indicator - indicates minimum temperature
- In case of failure in heating circuit of device, sound and visual alarm turns on automatically
- Sound alarm can be switched off by pressing "Standby" button approx (=1 sec)
- If there is still an unresolved fault for 12 min, sound alarm will be activated again.

### Examples of application of the heater during the infusion process



Using with infusion pump



Using with set of driper

At low speeds of flow at the outlet heater uses a special thermal protection infusion tube

## ADAPTER AC/DC FOR MEDICAL FLUID WARMERS



### TECHNICAL DATA:

- Power supply: AC 110÷250 V; 50-60 Hz
- Output power: DC 24 V; 2,5 A
- Operating temperature +5°C÷+35°C
- Power for medical devices
- IP40, Class B

2 YEARS GUARANTEE for all warmer's parts.

Warmers are designed and manufactured in accordance with directive 93/42/EEC requirements.

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