

Blood & Infusion Warmer



TF 1



Warm blood and infusions to protect patient from hypothermia in operating theatre, in intensive care or in other environment where need transfusions therapy. **TF-I BLOOD WARMER** is suitable for all kinds infusions & transfusions applications in various hospital departments.

It's dry flow heating method, efficiently, safely and absolutely economically in daily use. Using TF-I BLOOD WARMER means no longer require warming blood in advance while doing infusions or transfusions. Blood products can be kept in the refrigerator until they are needed.

Technical Data:

Power Voltage: AC 220V
Frequency: 50Hz
In put power: $\leq 300W$
Overtemperature safety cut-off : 43
Overtemperature alarm: visual and acoustic
Undertemperature alarm: visual and acoustic
Temperature control: 30 to 42
Temperature rang: Free setting of temperature from 30°C to 42°C in 0.5°C increments
Duty: continuous (24 hours a day)
Preheat time: <2 min
Protection class: Class I, B
Dimension mm: 290 x 200 x 248
Weight: 2.5 KG

Applications:

Operating theatre, Intensive Care, Massive Transfusions demand... and so on.

Running Require:

- Temperature Rang: -10 ~ 40
- Relative Humidity: $\leq 70\%$
- Power: AC 220+10% V
- Frequency: 50+2% Hz

Components of BLOOD WARMER

- Adopt advanced heating plate, heating rapid, uniformity & efficient
- Optimized warming circuit with fluid temperature sensor
- A Grade heater sensor
- Dry heating, extracorporeal heating system.
- Microprocessor-controlled, Digital control for accurate temperature
- Simultaneous warming of multiple transfusions/infusions
- Permanent running self-tests
- Easy to read display, to operate, portable
- High efficiency and rapid temperature rising: the transfused liquid can reach to the required temperature within 10 seconds.
- Safe and reliable: unique alarming mechanism for exceeding temperature; multilevel power cutting mechanism.

The Extension Line (blood tube)

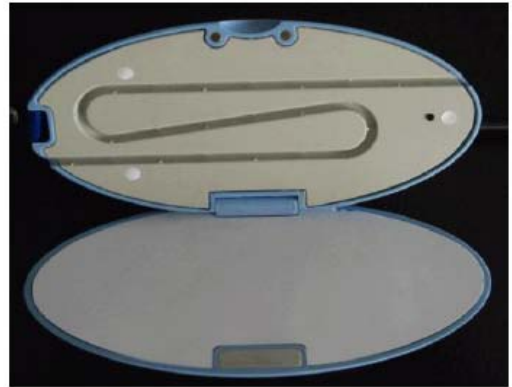
Disposable extension line is suitable for all applications of infusions & transfusions. Other warmer system require expensive & special disposable blood bag, which cause high cost & inconveniency. TF-I BLOOD WARMER use general medical grade PVC extension line. It's easy to purchase from marketplace.



Portable Blood & Fluid Warmer (IN-LINE)



TF 2



Technical Data:

Power Voltage: AC 110V or 220V
Frequency: 50Hz
In put power: =<100W
Overtemperature safety cut-off : 43
Overtemperature alarm: visual and acoustic
Undertemperature alarm: visual and acoustic
Temperature control: 30 to 42
Duty: continuous (24 hours a day)
Preheat time: <2 min
Protection class: Class I, B
Weight: < 600 g

Applications:

In small clinic or for Veterinary Surgery.....

Running Require:

- Temperature Rang: -10 ~ 40
- Relative Humidity: ≤70%
- Power: A.C. 110V±11V or A.C. 220V±22V
- Frequency: 60Hz±1Hz or 50Hz±1Hz
- Suitable speed of infusion liquid: 40~80 drops/min

---Low temperature transfusion may slow down the metabolism of the body, and it is easy to cause syndrome of hypodynamia, ague, spasm of blood vessel muscle, arthrosis ache and stomachache

---Low temperature transfusion slows down the medicine metabolic speed and affects anti-infection ability of the body..

---Low temperature transfusion may cause blood platelet function disordered, coagulation activity damaged and blood viscosity increased. Test proves that once the temperature declines by 1 degree, blood viscosity increases by 2%- 3%.

---After low temperature transfusion, oxygen consumption and carbon dioxide creation declines, myocardial ischemia may occur to the patients with coronary heart disease because arterial oxygenation declines. Symptoms, such as, sleepiness, clumsiness, metal disorder, easy agitation, slowing down or even stopping of breath and heartbeat will occur to some patients.

--- Low temperature transfusion affects the cardiovascular function, leading to the heart rate, and cardiac output declined, systemic vascular resistance and central venous pressure increased,. The symptoms of heart rate abnormal, ventricular vibration and sinus arrest occur as well.

--- Low temperature transfusion restrains pulmonary vascular contraction, increases pulmonary vascular resistance and reduces renal blood flow. It damages urine concentration and dilution function, which significantly affects breath and renal function.

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