

3M™ Ranger™ Irrigation Fluid Warming System



High Performance
Low Maintenance
Irrigation Fluid Warmer



3M Infection Prevention Solutions

Innovation
On A Mission



Anesthetized patients can't regulate their temperature, allowing core body temperature to drop rapidly when exposed to the cold environment of the OR and other factors.¹ The cold fluid used for irrigation can make the task of keeping patients normothermic even more challenging.¹

A better solution for safe, effective warming

Why Warm Irrigation Fluid? It Just Makes Sense.

Like other surgical patients, urology patients who receive general or regional anesthesia are vulnerable to the effects of redistribution temperature drop and potential inadvertent hypothermia. However, because these procedures are often performed in older patients, they are also at higher risk of perioperative complications.²

If inadequately warmed, irrigation fluids can exacerbate drops in temperature.³ In addition, many urological operations are performed under regional anesthesia, which has been shown to desensitize the body's thermoregulatory response to hypothermia⁴ and its adverse effects.

Research has demonstrated benefits from the use of warmed irrigation fluids^{1,5,6} and more surgeons are choosing to warm the irrigation fluids used in various urological, gynecological and orthopedic procedures.

The 3M™ Ranger™ Irrigation Advantage

Easy: Ranger irrigation warming offers an intuitive, easy-to-use solution for high-volume, high-performance surgical irrigation fluid warming in a compact, space-saving design.

Real-time warming: Unlike traditional warming cabinets where warming ends when fluid is removed, the Ranger system initiates warming as the fluid is being delivered to the patient. You have true control of fluid temperature, eliminating the potential cool down of fluid bags removed from the cabinet sometimes hours earlier.

No overheating: There is no risk of overheating the fluid because the Ranger system's dry heat technology monitors fluid temperature four times each second, adjusting as needed to maintain a 41°C set point. The result: fast, accurate heat control.

Dry heat – not water bath: The Ranger system uses dry heat technology; avoiding the potential for nosocomial pathogens that may be associated with water bath-based warmers.^{7,8} Water in water bath warmers has long been identified as a potential source of gram-negative bacilli.⁷

A Proven Track Record for Warming Fluid

Building on the high performance, low maintenance design of the 3M™ Ranger™ blood/fluid warming system, the Ranger irrigation system is a clear choice for simple, yet effective irrigation fluid warming.



A Better Solution: Safe, Effective Warming

ECRI has received numerous inquiries about safe, effective temperature settings from warming cabinets used with cotton blankets and solutions.

ECRI has investigated incidents in which patients received burns because warmers were too hot.⁹ ECRI now recommends that warming cabinet temperatures are limited to 43°C and never changed. Temperatures above 43°C unnecessarily increase the risks of burns while providing no added clinical benefits.

The Association of Perioperative Registered Nurses (AORN) recommends scrub personnel monitor the temperature of irrigation fluids. Common practice is to have the scrub person estimate fluid temperature by placing a gloved hand into the fluid basin.¹⁰

The Ranger irrigation system provides a safe, effective way for surgeons to ensure that the temperature of the irrigation fluid is consistent when delivered to the patient. No fluctuations from overheating or cooling, and no dependence on someone else's subjective determination of temperature.

Additional Ranger irrigation fluid warming benefits:

- Quickly adapts to changes in flow rates: 0 to 865mL/min.
- Latex-free disposable sets for use during surgery and/or post-surgical irrigation.
- Accommodates continuous bladder irrigation post-TURP.
- Simple-to-use disposable warming sets.
- Dry heat system; no messy water baths to maintain.
- Easy-to-use cleaning tool makes maintenance quick and simple.
- Universal pole clamp fits standard I.V. poles and two-inch square irrigation poles.

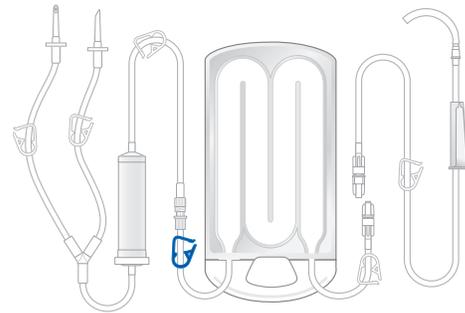
To learn more about the remarkable Ranger irrigation fluid warming system, please contact your 3M Patient Warming representative or call Customer Service at 1-800-733-7775



Irrigation Warming Unit Model 24700

Set point temperature: 41°C
 Alarms: Over-temperature primary set point: 48°C
 Over-temperature secondary set point: 50°C
 Under-temperature set point: 33°C

Power: 100-120 VAC
 Weight: 7 lbs, 7 oz
 Dimensions: 7.5" W x 4.5" H x 10" D



Irrigation Fluid Warming Set Model 24750

Flow rates: 0-865 mL/min (with bag hung 100 cm above scope under gravity flow)
 Components: Double spike set, heat exchanger, patient line with scope attachment (patient line is contained within its own sterile packaging for use within the sterile field)
 Priming volume: 308 mL

Patient line length: 213 cm
 Pressure: Up to 300 mmHg
 Material: Latex-free
 Case quantity: 10 disposable sets/case
 Sterile: EtO
 Use: Single use only

References:

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