

Controlled re-warming mode

The **CritiCool** thermoregulation system is used to control body temperature compensating and overcoming the physiological thermoregulation.

Patients may tend to increase body temperature due to shivering or infection and may lose heat due to failure of the physiological regulatory system or due to cold environment.

The actual body core temperature of a patient treated with the **CritiCool** will depend on the balance between body reaction and device water temperature.

The **CritiCool** thermoregulation system will increase the garment water temperature when the *CORE* temperature is below *SET-POINT* or decrease water temperature when body *CORE* temperature is above *SET-POINT*.

Controlled Re-warming

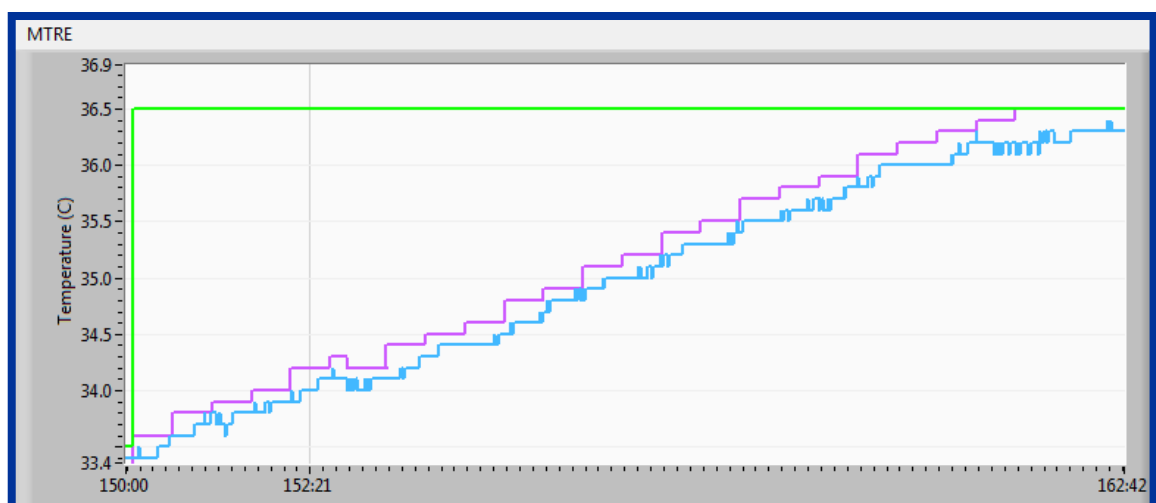
Cooling therapy is composed of three phase:

- Cooling to mild hypothermia (32.0C -34.0 C) – Induction phase
- Stable mild Hypothermia period (12 to 72 hours) - Maintenance
- Re-warming

A gradual and slow re-warming can be achieved manually, by manual change of the *SET-POINT* or by the automatic controlled re-warming mode of the **CritiCool**.

Controlled Re-warming

1. Controlled Re-warming rate in the CritiCool Neonatal mode is aimed to increase *CORE* temperature in 0.4C per hour.
2. Controlled Re-warming rate in the CritiCool Adult mode is aimed to increase *CORE* temperature in 0.2C per hour.
3. If due to the physiological body temperature control the target is not achieved within the selected interval, or if the body reaches a temperature above the target, the CritiCool system will compensate for the differences by either cooling or warming in attempt to reach the full re-warming process according to patient type re-warming rate.
4. The CritiCool control mechanism checks body temperature versus *SET-POINT* temperature every 30/60 minutes and will increase the re-warming if the *CORE* temperature has not reached the *SET-POINT*, or reduce the re-warming rate (or even cool) if *CORE* temperature is above *SET-POINT*.
5. A gradual increase of core temperature is achieved by the above mechanism.



Legend:

Blue: *CORE*, Violet: 'Virtual' Set Point, Green: Target Temp



Controlled Re-warming *Guidelines*

- A. Automated Controlled Re-Warming is by no means replaces the need for constant monitoring of the patient .
- B. Adults patients who raise body temperature due to their medical condition (infections, edema, ect.) should be re-warmed manually, as well as non sedated and non paralyzed patients.
- C. Start the controlled re-warming only when the patient temperature is **stable**.
- D. Whenever patient temperature is not stable use the manual mode.
- E. Core temperature reading resolution is 0.1C.
 - a.(i.e. 33.5C is indicating **33.50C – 33.59C**).
- F. Expect similar temperature fluctuations during the controlled re-warming to the experienced during the cooling mode.