

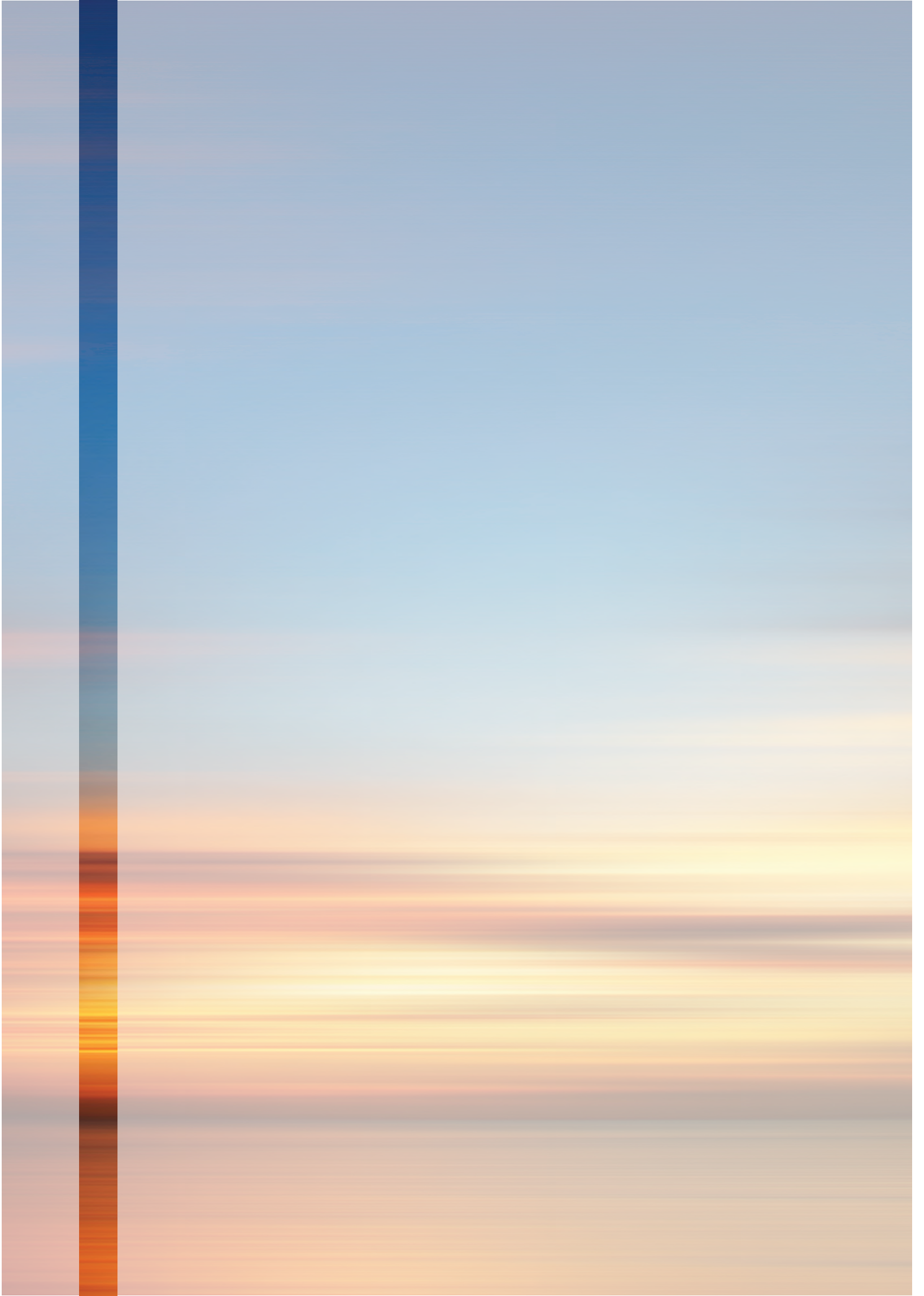


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# Hyper-Hypothermia Solutions

Technology to the next degree™





# Gentherm Medical

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Most technology companies are defined by the things they create. While Gentherm is no stranger to innovation, our goal goes beyond material creation: it is to positively impact lives around the world. Our core is thermal technology, but our vision reaches further. We listen to our customers, understand their needs and work tirelessly to develop solutions they demand and often solutions they haven't even realized they needed.

Our expertise in thermal technology continues to open doors for us. We solve technology problems that include improving energy system performance, intelligent software and more. After nearly 50 years, we could simply list all our accomplishments, acquisitions and breakthroughs, rather we prefer to focus on how all that enables the future. Such as how our global reach and industry-leading manufacturing

capabilities give us opportunities to innovate, test and perfect. Or how our focus on unique, in-vehicle thermal solutions is a gateway to understanding customers worldwide. That's just scratching the surface of how our more than 13,000 employees in 13 countries help to create thermal energy solutions every day.

We manufacture a full line of cold therapy and heat therapy products that regulate a patient's body temperature during and after surgery. Our line of medical products includes temperature management solutions for both heating and cooling therapies along with a complete line of warming blankets and cooling blankets for body temperature regulation and hyper-hypothermia treatment.

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# GENTHERM Worldwide

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## **NORTH AMERICA**

USA: *Northville, MI*  
World Headquarters, Sales  
and Technical Support

USA: *Del Rio, TX*  
Warehouse

USA: *Cincinnati, OH*  
Medical, Production

Canada: *Burlington, ON*  
Engineering, R&D

Mexico: *Acuña, Celaya*  
Production



## EUROPE

Germany: *Odelzhausen*  
European Headquarters, R&D,  
Customer Service Center

Hungary: *Pilisszentiván*  
Application Engineering,  
Production

Ukraine: *Vynohradiv*  
Production

Macedonia: *Prilep*  
Production

Malta: *Ta'Xbiex*  
Customer Service Center

United Kingdom:  
*West Midlands, Coventry*  
Sales and Technical Support

## ASIA

China: *Langfang*  
Asian Headquarters, R&D,  
Production, Customer Service Center

China: *Shanghai*  
Customer Service Center, Electronics  
Development

China: *Shenzhen*  
Electronics Production

Japan: *Tokyo*  
Sales and Technical Support

South Korea: *Anyang, Asan, Ulsan*  
Sales and Technical Support

Vietnam: *Ha'Nam*  
Production



# Hyper-Hypothermia Systems

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- Blanketrol® III
- Kool-Kit®
- Kool-Kit® Neonate
- Maxi-Therm®
- Maxi-Therm® Lite
- PlastiPad®
- Staff Vest
- Head Wrap

Targeted Temperature Management takes temperature management to the next degree by providing precise temperatures. We understand the importance of cooling quickly and accurately.

Our whole body hypothermia system provides an effective alternative to traditional patient cooling techniques. This revolutionary system combines our Head Wrap, Patient Vest, and Lower Body Blanket for a non-invasive whole body hypothermia system. This method of cooling the patient allows for early therapy that is fast, reliable and cost-effective.

A healthy body maintains its temperature, and a rise and fall in body temperature indicates a change in bodily function. For instance, high temperature could be an indication of an infection. Abnormally low temperature or hypothermia can lead to numerous complications. Temperature management products aid in the regulation and maintenance of normal body temperature in operating rooms, recovery rooms, intensive care units and other areas of hospitals throughout the world.





WATER

95

PATIENT

77.77

MANUAL CONTROL

TEMP SET

C/F

SILENCE ALARM

TEST INDICATORS

AUTO CONTROL

GRADIENT 10C

GRADIENT VARIABLE

SMART

MONITOR ONLY

CSZ  
A SCIENTIFIC COMPANY

Gradient Variable

**BLANKETROL III**

Hyper-Hypothermia

ON

OFF



# Blanketrol® III

## NEXT LEVEL TARGETED TEMPERATURE MANAGEMENT

The Blanketrol® III hyper-hypothermia system offers simple programmable body temperature regulation while still keeping the control in the hands of the caregiver. Its innovative Gradient Technology minimizes fluctuations in water temperature and maintains a stable patient temperature. It can be utilized in both the cooling and heating mode, allowing for rapid or gradual patient temperature management control.

With biofeedback from the patient through esophageal or rectal temperature probes, the Blanketrol® III monitors patient temperature every 2 seconds and adjusts temperature in minutes to maintain the patient's target temperature. The Gradient features offered in the Blanketrol® III can control how much temperature change is in the water which can help with overshoot. The SMART mode works as a "back-up" to provide the needed temperature gradient as correlated to the patient temperature.





## BENEFITS & FEATURES

- Programmable & Pre-set variable Gradient Temperature selection
- SMART mode
- May be used in a variety of departments within hospital/medical clinic
- Data Export Software is available
- Three (3) hose connections
- User-friendly interface
- High Flow Rate for tight temperature control
- Ability to pre-condition the water



## SPECIFICATIONS

**Model #:** 233

**Sizes:** 100v, 115v, 230v

<b>Dimensions</b>	17" W x 17" D x 37.5" H (43.2 cm x 43.2 cm x 95.3 cm)
<b>Weight</b>	Empty: 131 lbs. (59.4 kg)   Full: 147 lbs. (67 kg)
<b>Fluid Temperature Range - Manual</b>	4°C - 42°C (39.2°F - 107.6°F)
<b>Patient Temperature Range - Point Range</b>	30°C - 40°C (86°F - 104°F)
<b>Reservoir capacity</b>	2 Gallons (7.5 Liters)
<b>Flow Rate</b>	42 gph (115v); 36 gph (230v)
<b>Heater</b>	800 watts
<b>Probe Type</b>	400 series

# Kool-Kit®

## FULL BODY COOLING SYSTEM

The Kool-Kit® when combined with the Blanketrol® III is a full body cooling system for applications designed to induce hypothermia and provide normothermia.

It contains three high quality cooling blankets and wraps; the head wrap, vest, and lower body blanket. The self sealing hoses keep water from spilling when disconnecting the blankets.

The random flow design of the blankets/wraps ensures that the therapy will be constantly delivered regardless of the patient's positioning. This high quality coverage allows for therapy to be provided to major vasculature for accurate temperature change.



## BENEFITS & FEATURES

- Can cover a wide range of patients
- Each piece is fully adjustable, allowing for easy access to the skin
- cooling can be initiated within minutes and set to a tenth of a degree
- No Adhesive or cumbersome wrapping

## PRODUCT DESCRIPTIONS

<b>Model #900</b>	Head Wrap, Patient Vest, Lower Body Blanket
<b>Model #910</b>	Head Wrap, Lower Body Blanket
<b>Model #920</b>	Patient Vest, Lower Body Blanket
<b>Model #930 - Large Kool-Kit®</b>	Head Wrap, Patient Vest, Full Body Blanket

\*MUST PURCHASE THREE (3) CONNECTING HOSES (CAT #286) TO RUN KOOL-KIT® WITH THE BLANKETROL® III

# Kool-Kit<sup>®</sup> Neonate

## INFANT/NEONATE COOLING SYSTEM

The Kool-Kit<sup>®</sup> Neonate and Blanketrol<sup>®</sup> III were designed with the understanding that precision and accuracy are particularly important during the cooling, maintaining and re-warming stages of infants.

The Variable Gradient Technology of the Blanketrol III empowers the caregiver to provide therapy that reduces the risk of overshoot when cooling and warming.



## BENEFITS & FEATURES

- Provides necessary disposables in one convenient package
- Easy to set-up
- Can provide tight temperature control with the Blanketrol<sup>®</sup> III
- Includes Blanket, Mittens, Booties, and Esophageal/Rectal Temperature Probe
- Mittens/Booties allow more family contact without compromising patient temperature
- Self-sealing/insulated blanket hose

## PRODUCT DESCRIPTION

### Model #950

Lower Body Blanket, Esophageal/Rectal Temperature Probe, white Booties, set of pink Mittens & set of blue Mittens

\*MUST PURCHASE CONNECTING HOSE (CAT #286) TO RUN KOOL-KIT<sup>®</sup> NEONATE WITH THE BLANKETROL<sup>®</sup> III

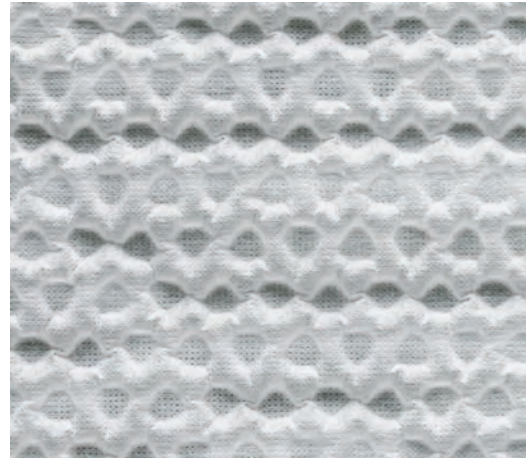


# Maxi-Therm<sup>®</sup> Lite

## SINGLE USE, HYPER-HYPOTHERMIA BLANKETS

Our Maxi-Therm<sup>®</sup> Lite hyper-hypothermia blankets have a strong bonded pattern resulting in a long lasting seal during usage.

The random flow pattern of the blankets allows water to flow freely without a set path. This allows the blanket to fill quickly and deliver continuous therapy to the patient even if the blanket is folded.



## BENEFITS & FEATURES

- Durable and lightweight
- May be used over or under the patient
- Can be used for heating or cooling the patient
- Soft, comfortable material covers both sides of the blanket
- No need for extra cover sheets
- Random flow pattern allows for even temperature distribution
- Self-sealing connections



## SPECIFICATIONS

<b>Model #876</b>	25" x 64" (63.5 cm x 162.6 cm)
<b>Model #874</b>	25" x 33" (63.5 cm x 83.8 cm)
<b>Model #873</b>	12.5" x 18" (31.8 cm x 45.7 cm)

\*MUST PURCHASE CONNECTING HOSE (CAT #286) TO RUN BLANKET WITH GENTHERM EQUIPMENT

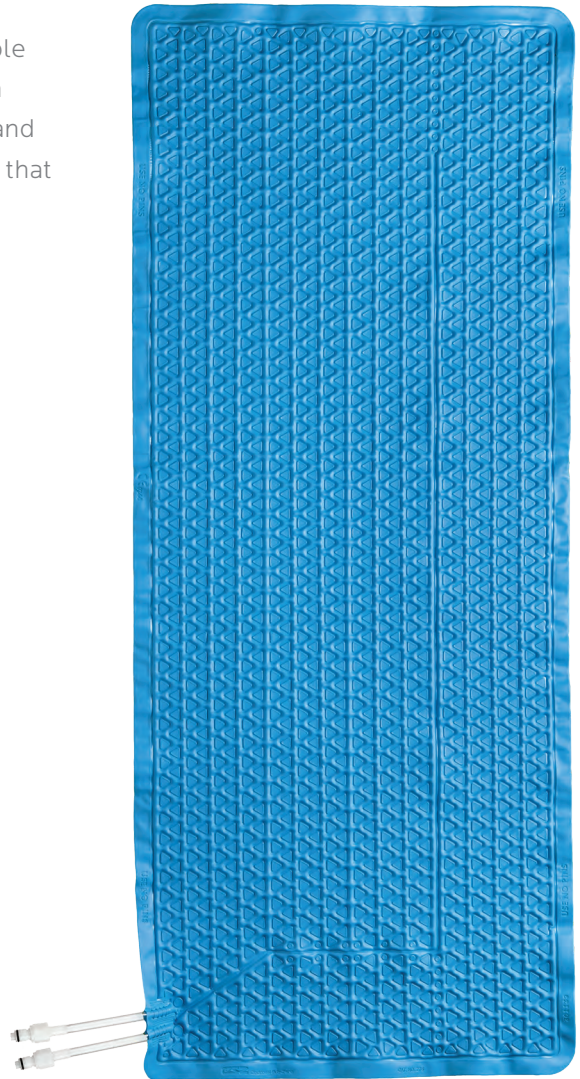
# Maxi-Therm®

## SINGLE PATIENT USE, HYPER-HYPOTHERMIA BLANKETS

Our Maxi-Therm® hyper-hypothermia blankets have a durable construction to withstand rigorous use. They have a random flow design which results in even temperature distribution and excellent heating and cooling rates. They were designed so that the blanket can be filled with the patient in place.

### BENEFITS & FEATURES

- Easy to clean and apply to the patient
- Provides heating or cooling of the patient
- May be placed underneath or on top of the patient
- Durable materials help the blanket to last throughout the patients stay
- Self-sealing connections
- Quick disconnect without clamps



### SPECIFICATIONS

<b>Model #276</b>	24" x 60" (61 cm x 152.4 cm)
<b>Model #274</b>	22" x 30" (55.9 cm x 76.2 cm)
<b>Model #273</b>	12" x 18" (30.5 cm x 45.7 cm)

\*MUST PURCHASE CONNECTING HOSE (CAT #286) TO RUN BLANKET WITH GENTHERM EQUIPMENT

# PlastiPad®

## HYPER-HYPOTHERMIA WATER BLANKETS

The PlastiPad® is a reusable water blanket that is durable and convenient. These blankets have a non-porous surface that is easy to clean off blood, soil, and/or debris.

The PlastiPad blanket utilizes a random flow pattern for uniform distribution of water, yielding fast and efficient circulation throughout the entire blanket to provide effective patient therapy.

Offered with and without an attached hose for convenience.



## BENEFITS & FEATURES

- Can be used for heating or cooling of the patient
- Quick set-up time
- Easy to clean between patients
- Available with permanently attached hoses and in a variety of sizes
- Constructed of durable urethane material

## SPECIFICATIONS

<b>Model #196</b>	24" x 60" (61 cm x 152.4 cm) Not available in Europe
<b>Model #196 CPC</b>	24" x 60" (61 cm x 152.4 cm) CPC connectors (Requires 2186 connecting hose)
<b>Model #195 N</b>	20" x 60" (50.8 cm x 152.4 cm) Requires 286 connecting hose
<b>Model #194</b>	22" x 30" (55.9 cm x 76.2 cm)
<b>Model #194 CPC</b>	22" x 30" (55.9 cm x 76.2 cm) CPC connectors (Requires 286 connecting hose)
<b>Model #193</b>	12" x 18" (30.5 cm x 45.7 cm)
<b>Model #193 CPC</b>	12" x 18" (30.5 cm x 45.7 cm) CPC connectors for Micro-Temp LT
<b>Model #186</b>	9' (2.7 m) Blanket Extension hose with couplings



# Head Wrap

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## INNOVATIVE METHOD OF COOLING FOR THE HEAD

Our Head Wrap is an innovative method of cooling for the head. It was developed to provide uninterrupted therapy throughout a variety of procedures. It offers a non-invasive method of controlling core body temperature. It is an alternative to ice or ice packs and its versatile design provides therapy in a wide variety of clinical situations.

## BENEFITS & FEATURES

- Unique design allows for easy access to the head and neck area
- Head cooling is a useful adjunct treatment to whole body hypothermia in regulating temperature
- Helps maintain normothermia
- One size fits most
- Adjustable velcro straps
- Soft material for patient comfort



## SPECIFICATIONS

**Model #600**

25" x 64" (63.5 cm x 162.6 cm)

\*MUST PURCHASE CONNECTING HOSE (CAT #286) TO RUN HEAD WRAP WITH GENTHERM EQUIPMENT

# Staff Vest

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## COOLING FOR YOUR SURGEON AND STAFF

The Staff Cooling Vest helps keep the surgical team comfortable throughout a procedure and is designed to circulate water evenly and effectively without the mess of ice. With the Blanketrol® III, surgeons and their staff can pre-condition and control the water temperature to stay cool throughout their procedures.

## BENEFITS & FEATURES

- May be used to warm or cool members of the surgical team
- Sterile gowns and/or lead vest may be worn on top of the Staff Vest
- One size fits most staff members
- Adjustable velcro straps
- Can be connected to Gentherm equipment below the sterile field
- Lightweight and permanently attached hoses
- Single use for 3 surgeries a day for 5 days

\*NOT AVAILABLE FOR PURCHASE IN EUROPE



## PRODUCT DESCRIPTION

**Model #300**

One size fits most

\*MUST PURCHASE CONNECTING HOSE (CAT #286) TO RUN STAFF VEST WITH GENTHERM EQUIPMENT





# GENTHERM - Growth & Transformation

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## AUTOMOTIVE

In a market of constant competition with years-long production cycles and ever-changing customer preferences, having a trusted partner in Gentherm and our global R&D has proven to be a great benefit to our many automotive colleagues. We offer a complete portfolio of products to deliver personal thermal comfort and energy savings across all vehicle segments and powertrains.

## MICROCLIMATE SOLUTIONS

ClimateSense™ is the tip of the iceberg. This Gentherm invention providing energy efficiency and perfect thermal comfort in one, intelligent, integrated system is ready for the future, today. Combine that with our recent development: a next-generation personalized passenger thermal solution, tailored to the autonomous, electrified, and ridesharing ecosystem of the future. It becomes easier to see how we bring the right temperatures to the right people at the right times.



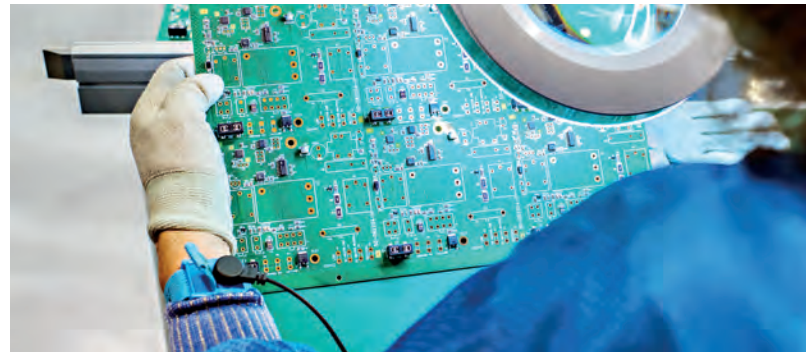
## BATTERY THERMAL MANAGEMENT

Multiple OEMs. Multiple electrical standards. Multiple mechanical standards. Only Gentherm can satisfy all their battery thermal management needs. Pioneering efforts have enabled us to improve functionality, design flexibility and packaging optimization to deliver precise battery pack temperature control with nearly silent operation.



## MEDICAL

This isn't about a global patient thermal management market growing by leaps and bounds. This also isn't about revenue growth. Gentherm belongs in the world of medical devices because the world of medical devices - and more importantly, the patients they help care for - needs Gentherm. The aging population is requiring more healthcare, increasing the adoption of patient thermoregulation products and therapies in developing markets and continued patient care and clinician workflow. Those people deserve the best possible care and we plan to provide it.



## ELECTRONICS

At Gentherm, we focus our growth on a concerted, years-long plan that puts our customers first. And everything we plan to do gets its underpinning from our electrons and software systems. That growth centers on core automotive climate and comfort growth, introducing an innovative micro-climate solution, driving battery thermal management and expanding patient thermal solutions.

Technology to the next degree™

[www.gentherm.com](http://www.gentherm.com)

CLINICAL 24/7 SUPPORT: 1.513.460.2038  
TECHNICAL 24/7 SUPPORT: 1.888.437.5608

