



## INSTRUCTIONS FOR USE

Reusable convective  
warming blankets and warming mats



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# 1 The MoeckWarmingSystem®

## 1.1 Capability characteristics

With **its various product solutions, the MoeckWarmingSystem®** offers both an effective and flexible tool for optimal temperature control of adult and paediatric patients. It was developed with the aim of providing the best possible support for daily work in medical facilities with a focus on quality-oriented patient care.

Based on the use of convective air transfer, the **MoeckWarmingSystem®** consists of a hot air unit (Twinwarm range) and various models of reusable warming blankets/mats. In this process, the air generated and tempered by the hot air unit is directed via 1 to 2 flexible hoses into the interior of the connected textile product. Through the combination of carefully selected textiles and the construction principle of the warm blankets/mats patented by Moeck & Moeck, the supplied air is distributed evenly and over a large area along the patient's body contour, so that the patient is effectively tempered according to the desired setting on the warm air device.

The ceilings of the MoeckWarmingSystem® form a complete system with a wide range of applications:

- Warming blankets for temperature control from above
- Warming mats for temperature control from below with pressure relief
- and the combination of warming blankets and mats

The textile products of the **MoeckWarmingSystem®** are made up of up to 3 carefully selected technical textiles, each of which fulfils specific functions and, in combination, forms an optimally coordinated system.

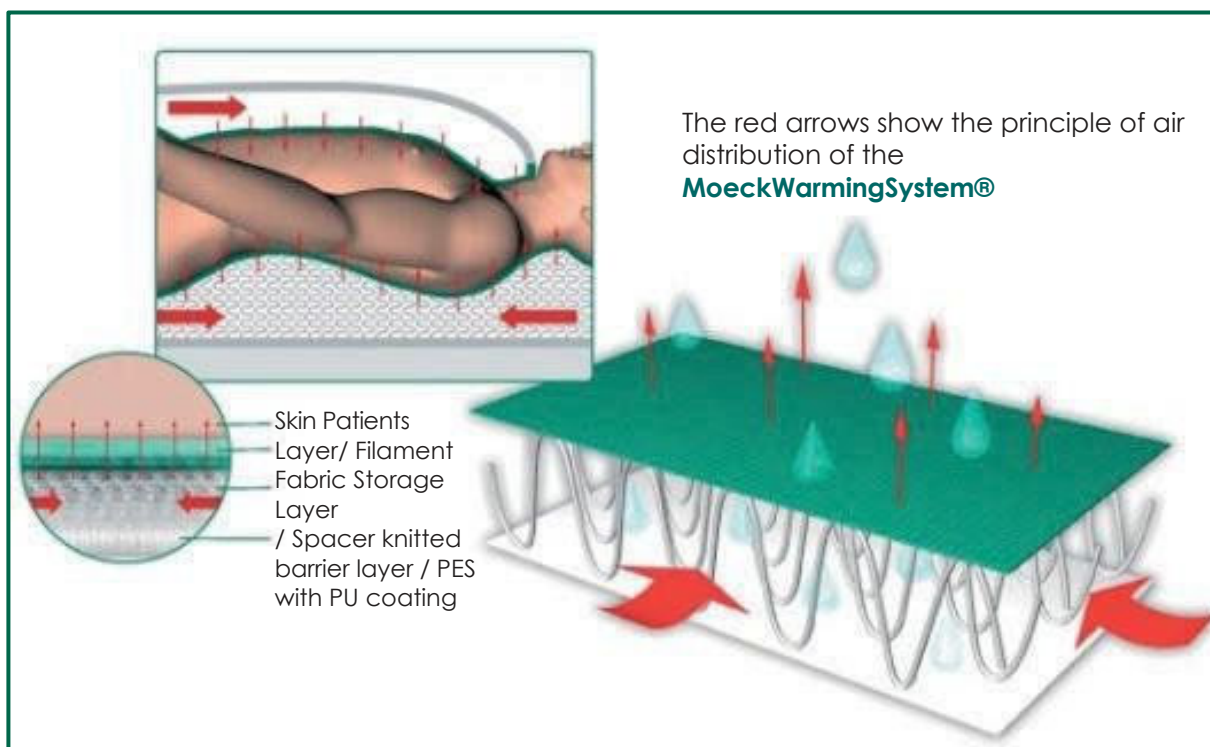


Figure A: Structure principle of the MoeckWarmingSystem®

For example, the **green side facing the patient** consists of a fine-pored filament fabric. The resulting air permeability of the polyester fabric enveloping the patient leads to a uniform air flow, which achieves ideal patient temperature control. In addition, the carbon fibers embedded in the fabric counteract static charge.

The **white side, facing away from the patient**, is also made of polyester, but has a polyurethane coating that acts as an air and liquid barrier. In this way, the heat supplied is conducted directly to the patient.

In addition, the warming underlays between the green and white sides contain a filling consisting of one or more layers of **3-dimensional (3D) spacer fabrics**. Due to its elasticity, this intermediate layer adapts ideally to the body shape and weight of the patient lying on it, thus providing balanced pressure relief and improved lying comfort. On the other hand, due to its 3-dimensional structure and coarse-pored structure, the spacer fabric has a highly efficient moisture conduction function, which helps to ensure that moisture is dissipated downwards from the patient.

All textile materials used in Moeck & Moeck warming blankets/mats are characterised by high strength, durability and X-ray transmittance and are completely latex-free.

## 1.2 Intended purpose

The MoeckWarmingSystem is an efficient and flexible tool for optimal temperature control and maintenance of the normothermic body temperature of adult and pediatric patients for surgical procedures.

The warming blankets/pads of the MoeckWarmingSystem® are intended in combination with a warm air device for temperature control of patients before, during and after surgical procedures.

## 1.3 Indications

The **MoeckWarmingSystem®** helps to maintain the body temperature of patients before, during and after surgical procedures as needed and to avoid hypothermia.

It is designed to treat both adult and paediatric patients (premature babies from 500g).

## 1.4 Contraindications

- Warming of ischemic limbs
- Warming of body parts distal to an arterial clamp
- Any application where influencing the patient's body temperature is medically contraindicated
- It should be noted that heat therapy can increase the effectiveness or supply of medicines to patients, which may cause harm to patients

## 1.5 Target patient group

- Adult patients
- paediatric patients (premature infants from 500 g)

## 1.6 Intended users

- medically trained staff

## 1.7 Compatibility

The warming blankets/mats of the MoeckWarmingSystem® may only be connected to compatible devices. In addition to the MoeckWarmingSystem® devices, they are also compatible with other medical hot air devices. More information is available on our homepage [www.moekundmoek.de](http://www.moekundmoek.de) or on request.

## 1.8 Proper use

The manufacturer assumes no responsibility for defects, poor performance or inadequate safety of the warming blankets/mats if:

- they are used outside of their intended use
- Damage occurs due to non-observance of safety and warning instructions
- the reprocessing of the warming blankets/mats is not carried out professionally (see section 3)

## 1.9 Guarantee

The warranty claim only applies to defects caused by a defect for which the manufacturer is responsible.

This warranty does not apply:

- for damage caused by improper processing, e.g. deformation of the 3D spacer fabric, delamination of the polyurethane coating of the white textile, etc.
- for obviously mechanical damage, e.g. caused by sharp/pointed objects, dewatering press, etc.

# 2 Application

## 2.1 Safety instructions and warnings

### 2.1.1 General information

- Read these instructions for use as well as those of the hot air appliance carefully before use.  
Pay particular attention to the safety instructions.
- These instructions for use apply to all **warming blankets/mats listed in Table 1 as well as to other special designs.**
- **Always keep these instructions and those of the hot air appliance at hand!**
- Only medically trained professionals are allowed to use the warmig blankets/mats on patients.
- Any handling of the warming blankets/mats requires precise knowledge and observance of these instructions for use as well as that of the hot air unit to be used.
- If an incident occurs in direct or indirect connection with a MoeckWarmingSystem® product, immediately inform the manufacturer and the competent authority in your country and (if different) also the authority in the patient's home country.

## 2.1.2 Indications for use



### HAVE WARMING BLANKETS/MATS PREPARED BEFORE THE FIRST USE AND AFTER EACH USE

- Clean and repair the warming blankets/mats only according to the method prescribed by the manufacturer (see section 3)
- Before using the warming blankets/mats, make sure that the respective blanket/mat is not damaged:
  - Do not use blankets/mats with holes, cracks or warming damage to the polyester (green side)
  - Do not use underlays with damaged or deformed 3d spacer fabrics
  - Do not use blankets/mats with signs of delamination of the polyurethane coating of the white ceiling
- Damaged warming blankets/mats can lead to a deflection of air flows and prevent homogeneous air escape. It can also cause uneven heating and/or warming damage.
- In general, when using warming management systems of any kind, a replacement or alternative heating option should be available.

**Green side = patient side!**

### CONTRAINDICATIONS

- Ischemic limbs
- Warming of parts of the body distal to arterial pinching
- Any application in which influencing the patient's body temperature is medically contraindicated
- It should be noted that heat treatment can increase the effect of drugs in the patient, associated with possible patient risk

## 2.1.3 Precautions



- Only connect the warming blankets/mats to compatible hot air appliances.
- Constant monitoring of the patient and the device must be ensured by the responsible user.
- If the patient's vital signs become unstable, the medical staff should be informed and, if necessary, the heat treatment should be discontinued.
- The medical guidelines and hazard warnings must be observed when patient warming is applied.
- Cover unhealed wound surfaces.
- Due to the risk of suffocation, the warming blanket must not block the patient's airways!
- Do not permanently apply foils or the like between the patient's skin and the warming blanket/mat in order not to obstruct a defined air flow and uniform heating and to avoid warming damage.
- In the case of warming blankets that are applied to the patient, do not place heavy drapes or objects on top of the warming blanket. These can be used to

Obstruct airflow in the air-filled warming blanket and cause uneven heating and/orwarming damage.

- **IN THE CASE OF APPLIED RF SURGERY NEAR THE BUTTON**

Some blankets contain non-magnetic **stainless steel snaps**. If the snaps are in direct contact with the patient's skin and HF surgery is applied in the vicinity of the button, a capacitive current may flow over into the patient's body. Under unfavorable circumstances, this can lead to warming damage to the patient. As a countermeasure, we recommend folding the snap button placket outwards (full-body blanket) or covering the button with surgical tape:

## 2.1.4 Warnings



### **IN THE EVENT OF A DEVICE ALARM, CANCEL HEAT THERAPY IMMEDIATELY**

- To avoidwarming damage, switch off the hot air unit immediately in the event of an alarm. If the alarm is triggered, proceed according to the operating instructions.

### **NO OPERATION OF THE HOT AIR UNIT WITHOUT A CONNECTED Warming blankets/mats**

- The hose end of the hot air unit **MUST** always be connected to a suitable convective blanket/pad.
- Under no circumstances should the hose end of the hot air unit be loosely plugged under the heating blanket or onto the heating surface. It may still be placed under the patient's duvet/blanket. This can lead to considerable burns.
- Always follow the instructions for use of the hot air unit!

### **SPECIAL NOTES WARMING BLANKETS/MATS FOR BABY/INFANT**






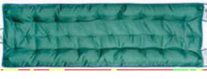
Premature babies and babies absorb the surrounding temperature more quickly.

- **Warming at a maximum of 40° C, the VITAL SIGNS of the little patient MUST BE CONSTANTLY MONITORED!**
- **Never leave children unattended during heat treatment!**

### **SECURING THE PATIENT AGAINST SLIPPING/SLIPPING**

- When usingwarming pads, there is a risk of the patient slipping or slipping, especially when the operating table is tilted.

## 2.2 Overview of the MoeckWarmingSystem® warming blankets/mats

Product Image	Product Name & Type No.	Size*(LxW) & Weight	Hose connection options	Product
<b>Warming Blankets – temperature control from above</b>				
	<b>Upper Body Blanket (OKD)</b> 894	193 x 70 cm headboard 57 x 16 cm approx. 440 g	● ●	✓ with integrated active head temperature control
	<b>Full Body Blanket (GKD)</b> 895	196 x 128 cm approx. 710 g	● ● ●	✓ divisible in the upper third by means of press stud placket
	<b>Lower Body Blanket (UKD)</b> 897	115 x 118 cm approx. 400 g	●	✓ can also be used as a full-length blanket for babies and toddlers
	<b>Multi I</b> 908	180 x 94 cm Cutout 36 x 55cm approx. 520 g	● ●	✓ Full-body blanket with operating window
<b>Warming mats – temperature control from below with pressure relief</b>				
	<b>Baby / Infant (BKK)</b> 902	130 x 52 cm grand piano 96 x 49 cm approx. 890 g	● ● ● ●	<ul style="list-style-type: none"> <li>✓ with side wings &amp; hood</li> <li>✓ can be folded to incubator size</li> <li>✓ can be converted into a kind of 'sleeping bag' by folding down the blanket</li> <li>✓ size of the 'sleeping bag' by Side snap button plackets can be varied</li> </ul>
	<b>Universal II (Uni II)</b> 906	204 x 64 cm approx. 1960 g	● ● ●	<ul style="list-style-type: none"> <li>✓ Temperature control &amp; pressure-relieving bearing over the entire operating table surface</li> <li>✓ supports easier reburial of the patient</li> </ul>







	<b>Universal III (Uni III)</b> 910	115 x 64 cm approx. 1200 g	● ● ● ●	<ul style="list-style-type: none"> <li>✓ Temperature control &amp; pressure-relieving storage on 60% of the operating table surface</li> <li>✓ with integrated filament fabric hood for shoulder &amp; headgear</li> <li>✓ ideal for the gynaecological operating table</li> </ul>
	<b>Light II</b> 912	204 x 64 cm Approx. 1000 g	● ●	<ul style="list-style-type: none"> <li>✓ Temperature control from below</li> <li>✓ Pressure-relieving positioning in the area of the head and shoulders</li> </ul>
<b>Warming blankets and mats – temperature control from above and below with pressure relief</b>				
	<b>Adult II (EW II)</b> 904	Top 70 x 170 cm Bottom 115 x 64 cm approx. 1540 g	● ● ● ●	<ul style="list-style-type: none"> <li>✓ with integrated upper body cover</li> <li>✓ Temperature control &amp; pressure-relieving storage on 60% of the operating table surface</li> <li>✓ Upper body cover in the chest area &amp; at the head opening divisible by press stud plackets</li> </ul>
	<b>Infant/Cardio (KKC)</b> 909	Thoracic tubes 48 x 19 cm (L x W) Bottom 86 x 74 cm (L x W) 590 g	● ● ●	<ul style="list-style-type: none"> <li>✓ ideal for the cardiac catheterization table</li> <li>✓ with side knitted rollers to prevent liquid leakage on the sides</li> <li>✓ with perforation of the lying surface for fluid drainage</li> </ul>

Table 1: Overview of the MoeckWarmingSystem® warming blankets/mats

\* Since the textile products shrink during the first processing cycles, the dimensions of the usable area (excluding hose connections) after repeated processing are given here. In addition, a tolerance value of  $\pm 2$  cm is used as a basis for the measurements.

### 2.3 Positioning of the patient on the warming blanket/mat

Please note the respective instructions:

### 2.3.1 Upper Body Blanket - OKD

Type-No. 894



**Green side = patient side!**



#### Positioning:

- Place the warming blanket over the patient with the white material facing up and the green filament fabric facing down .
- Fully unfold thewarming blanket, spread it over the patient and, if necessary, carefully insert the sides under the patient.
- Attach the warming blanket around the arm supports of the operating table with the help of the snap fasteners.

#### Particularities:

- 2 hose connection options
- Head hose for active head temperature control
- Particularly popular for intraoperative areas with short to medium-long durations



Storage example

Securing the patient against slipping/slipping

### 2.3.2 Full Body Blanket - GKD

Type-No. 895



**Green side = patient side!**



#### Positioning:

- Place the warming blanket over the patient with the white material facing up and the green filament fabric facing down.
- Fully unfold the warming blanket, spread it over the patient and, if necessary, carefully insert the sides under the patient.

#### Particularities:

- 3 hose connection options
- Divisible in the upper third by an integrated snap button placket
- Particularly popular for pre- and post-operative areas



Storage examples

Securing the patient against slipping/slipping

### 2.3.3 Lower Body Blanket - UKD

Type-No. 897



**Green side = patient side!**



#### Positioning:

- Place the warming blanket over the patient with the white material facing up and the green filament fabric facing down.
- Fully unfold the warming blanket, spread it over the patient and, if necessary, carefully insert the sides under the patient.

#### Particularities:

- 1 hose connection option
- Particularly popular for short surgical procedures in the upper thorax
- Also ideal for all-body temperature control of babies and toddlers



Storage example

Securing the patient against slipping/slipping

### 2.3.4 Multi I Blanket

Type-No. 908



**Green side = patient side!**



#### Positioning:

- Place the warming blanket over the patient with the white material facing up and the green filament fabric facing down
- Fully unfold the warming blanket, spread it over the patient and, if necessary, carefully insert the sides under the patient.

#### Particularities:

- 2 Hose connection option
- The large operating window (36 cm x 55 cm) allows the surgeon access to the patient
- The additional opening in the neck area increases the flexibility of the possible applications
- The blanket is particularly popular for operations in the abdominal area, spine, hip and pelvis



Storage examples

Securing the patient against slipping/slipping



### 2.3.5 Baby/Infant Mat - BKK

Type-No. 902



**Green side = patient side!**



#### Positioning:

- Use the warming pad under the patient: spread the blanket on the operating table with the white underside down, position the patient on the green top.

#### Particularities:

- Hose connection options
- With integrated, pressure-relieving bearing layer
- integrated hood and side wings to cover the head and abdominal area for additional protection against cooling
- can be folded to incubator size
- can be converted into a size-adjustable 'sleeping bag' by means of side snap button plackets



Storage examples

Securing the patient against slipping/slipping

### 2.3.6 Universal II Mat- UNI II

Type-No. 906



Green side = patient side!



#### Positioning:

- Use the warming mat under the patient: spread the blanket on the operating table with the white underside down, position the patient on the green top.

#### Particularities:

- 3 hose connection options
- Temperature control and pressure-relieving positioning over the entire operating table surface
- Additional heel mat by simply folding the warming mat at the foot end



Storage examples  
Securing the patient against

### 2.3.7 Universal III Mat– UNI III

Type-No. 910



**Green side = patient side!**



#### Positioning:

- Use the warming mat under the patient: spread the mat on the operating table with the white underside down, position the patient on the green top.
- Cover the head and shoulders with the filament fabric hood if necessary.

#### Particularities:

- 4 hose connection options
- Temperature control and pressure-relieving storage on approx. 60% of the operating table surface
- Particularly popular for short to medium-length gynecological, urological and surgical surgeries



Storage examples

Securing the patient against slipping/slipping



### 2.3.8 Light II Mat

Type-No. 912



**Green side = patient side!**



- **Positioning:**
- Use the warming mat under the patient: spread the mat on the operating table with the white side down, position the patient on the green side.

#### Particularities:

- 2 hose connection options
- Temperature control from below over the entire operating table surface
- Pressure-relieving positioning only in the area of the head and shoulders
- This warming mat provides unrestricted access to the patient



Storage example

Securing the patient against slipping/slipping

### 2.3.9 Adults II Mat- EW II

Type-No. 904



Green side = patient !



#### Positioning:

- Use the warming mat under the patient: spread the mat on the operating table with the white underside down, position the patient on the green top.
- Place the integrated upper body blanket over the patient as needed.

#### Particularities:

- 4 hose connection options
- Upper body cover in the chest area and at the head opening can be divided by press stud plackets
- Particularly popular for medium to long gynecological, urological and surgical surgeries



Storage examples

Securing the patient against slipping/slipping

### 2.3.10 Infant Cardio Mat – KKC

Type-No. 909



**Green side = patient side!**



#### Positioning:

- Use the warming mat under the patient: spread the mat on the operating table with the white underside down, position the patient on the green top.
- Side wings can either be used to fix the heating mat on the operating table or simply fold it down.
- Place thoracic tubes over the patient if necessary.

#### Particularities:

- 3 hose connection options
- Specially designed for the cardiac catheterization table: has side knitted rollers to prevent fluid leakage and a perforated lying surface for fluid drainage
- Use of the thoracic tubes to control the temperature of the lower extremities when rotating the heat mat by 180°



Storage examples

Securing the patient against slipping/slipping

## 2.4 Instructions on connecting warming blankets and warming mats to the air warming device

1. The hose of the heater must be inserted into one of the open connection openings of the warming blanket/mat.

Push the end of the hose so far behind the Velcro fastener that it cannot slip out.

Squeeze the Velcro fastener so that the rest of the opening is closed and use it to secure the tube.

2. Make sure that the airflow is not obstructed by a kinked hose.
3. Then switch on and operate the hot air unit according to the instructions for use.



Figure B: Connection to the warming blanket/mat

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**Note:** The best results are achieved with the **MoeckWarmingSystem®** hot air units of the **TWINWARM series** if you use the two upper air connections on the adult II, Uni II and Uni III and supply them with both hoses.

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## 3 Reprocessing



















Reconditioning and repair of the textile products of the **MoeckWarmingSystem®** must only be carried out according to the method prescribed by the manufacturer (WD4712de - Washing and Patch Instructions, sold separately) and in accordance with local laws and hygiene guidelines for laundry disinfection in washing machines.

The warming blankets/mats of the **MoeckWarmingSystem®** are designed in such a way that they can be used and reprocessed at least 50 times.

## 4 Disposal

The disposal of used warming blankets/mats is carried out by your contractual partner for the treatment, or its partner companies. If processing or repair is not possible, a professional, documented disposal is carried out there.

## 5 Symbol definitions

 <p>Medical device</p>	 <p>Wash gently at max. 70° C</p>
 <p>CE marking</p>	 <p>Bleaching only with oxygen</p>
 <p>Consult the instructions for use or consult the electronic instructions for use</p>	 <p>Tumble dry at a higher temperature.</p>
 <p>Observe the maximum temperature of 40°C when warming babies</p>	 <p>Do not iron</p>
 <p>Contains no natural rubber latex</p>	 <p>Gentle cleaning with perchloroethylene</p>
 <p>Serial number</p>	 <p>Manufacturer</p>
 <p>Product barcode with serial number</p>	 <p>Catalogue number</p>
 <p>Warnings</p>	 <p>Date of manufacture</p>
 <p>Caution</p>	 <p>Indications for use</p>
<p>General information</p>	





## CONTACT



## Manufacturer Information

### Contact



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