

# Climate is comfort!

Heat and humidity management are the key to comfort in body near environments.

- SWEATOR – Simulation technology thermoregulation
- Measurement Services
- Technology Sales
- Consulting and Project Management

**SWEATOR TORSO**  
INSIDE HUMIDITY [WWW.SWEATOR.DE](http://WWW.SWEATOR.DE)



AUTOMOTIVE SEATING



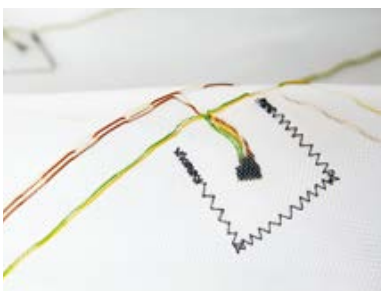
SLEEP

## SWEATOR – Humidity and heat simulation in human/object interfaces

**Human thermoregulation is an interaction between heat and humidity. The developing microclimate is crucial for the comfort, performance, and recreation of the human organism in virtually every circumstance of daily life. And humidity plays a fundamental role.**



Out of a cooperation between the University for Applied Sciences Munich, c.russ-NETCONSULT, and the Institute for Applied Ergonomics the SWEATOR microclimate simulation has been developed ready to go into production. SWEATOR is a static and quantitatively reproducible source for humidity and heat which can simulate thermoregulation processes with virtually every test body shape. With SWEATOR we offer a powerful simulation technology which enables a broad number of R&D departments, scientific institutions as well as test and certification centers to determine textile technical or apparel physiological key figures – easy to handle and highly reproducible.



*THG BodyView and SleepView – various textile layers become climatically measurable and visible.*

Depending on the test body shape the SWEATOR-technology offers the non-destructive determination of climatic key figures. Besides the quantification of heat and humidity retention rates valid comfort statements can be conducted without the necessity of complex occupant testing.

In connection with THG AreaView microclimate visualization and measurement technology SWEATOR offers professional climate tracking in various textile layers at the same time. Due to this SWEATOR allows to investigate the thermodynamic attributes of single textiles, whole textile systems and furthermore ready-made clothing.



This draws your interest? We would be pleased to inform you in detail.





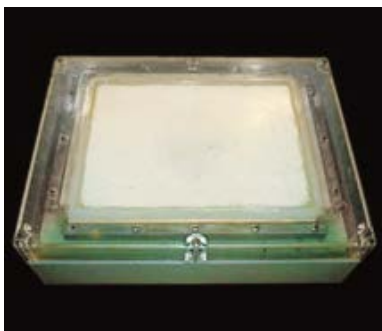
TEXTILES / PROTECTION CLOTHING



HEAD PROTECTION / SPORTS / OUTDOOR

## SWEATOR – ergonomically accurate simulation of human thermoregulation

The following devices of SWEATOR are available today:



### SWEATOR SKIN

The SWEATOR´s perspiration simulation sets focus on the delivery of water vapor like a human being in a passive physical state and does not directly produce wetness. The basic model SKIN allows the examination or comparison of textile patterns and textile systems like used in ready-made clothing. SKIN has a climate field of 20 x 30 cm. Patterns are mounted on or laid on and are penetrated with a static amount of heat and humidity in measurement mode.



### SWEATOR TORSO

Especially for the field of bedding and laying systems the SWEATOR-TORSO has been developed. It contains two independently controllable heat and humidity sources for its back and front. The anatomically designed surfaces and aligned weight distribution offer realistic test situations for mattresses, comforters, bedding and more. The TORSO is also available with back or front only. In connection with THG SleepView and THG BodyView a complete sleep system can be climatically tracked and categorized.

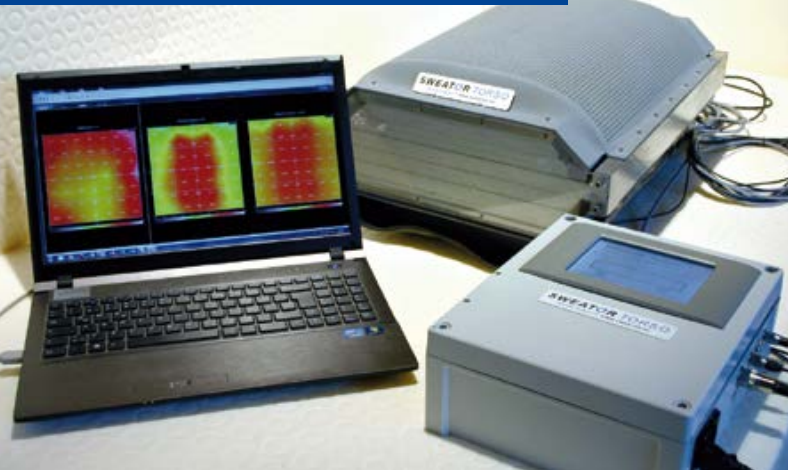


### SWEATOR FOOT

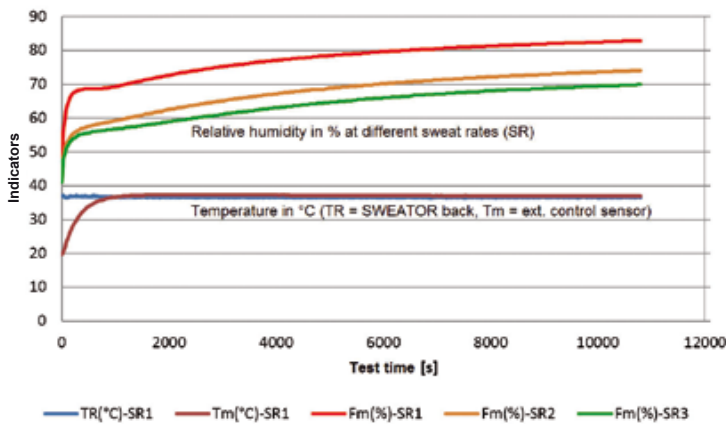
For the analysis and optimization in foot work the SWEATOR-FOOT has successfully been in operation for years. Like the TORSO also FOOT offers a special perforation which has been copied from the human anatomy and results in locally diverse sweat rate output.

Other forms which can be realized in a timely manner are SWEATOR-HEAD and SWEATOR-HAND. Further forms on request.

**SWEATOR-TORSO WITH SCU3 CONTROL UNIT ON THG AREAVIEW 2D CLIMATE VISUALIZATION**



**Humidity levels and sweat rates**  
SR1=23g/h, SR2=14,5g/h, SR3=12,5g/h



**We support our customers with the analysis, enhancement and effective marketing of their climate relevant products.**

**Our portfolio:**

- Sales of measurement and simulation technology for microclimate
- Measurement Services and product comparison
- Test Services with occupants in real life environments
- SWEATOR simulation testing in lab environments
- Sales/Marketing training for customers
- Consulting and Project Management for climate comfort aspects

**Where we are active:**

- Automotive Seating
- Sleep
- Textiles, ready-made clothing
- Protection clothing, head protection
- Outdoor, Sports

As well as further fields of application around space and microclimate.

**GENERAL TECHNICAL SPECIFICATIONS**

Control: Closed touchscreen panel with PC-connectivity for data transmission

Power supply: 100-240 Vac, 50-60 Hz, 2A

Heat supply: max up to 100 W per unit (infinitely variable)

Sweat rate: max 0.15 l/m<sup>2</sup>\*h  
(= 2.5 l daily human sweat rate)

Sweat dynamic: adjustable through perforation and source temperature

Water tempering: PT 1000 temperature sensor

T/RH control surface: THG AreaView compatible sensor

Protection class: IP 54, internal FT-protection switch, CE

Test body size: based on application and shape



in Kooperation mit



**INSTITUT FÜR ANGEWANDTE UND ERGONOMIE**  
**PROF. DR. KURZ UND DR. HOCKE**

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