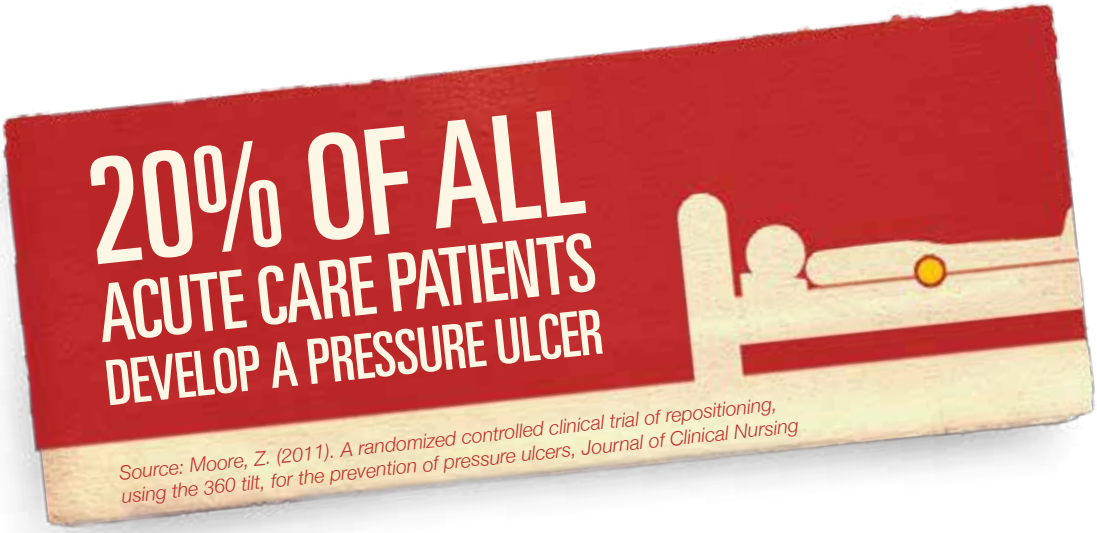
SKIN IQ
Solution Guide

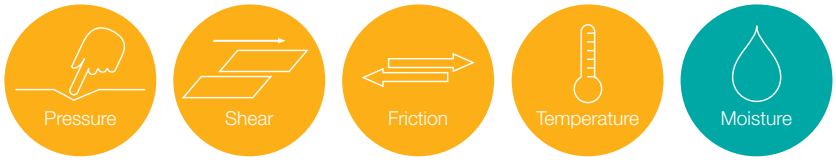
ARJOHUNTLEIGH
GETINGE GROUP



Pressure ulcers are a **global challenge for patients and caregivers**

Pressure ulcers present a global challenge to healthcare providers, causing unnecessary suffering to patients and creating a serious financial burden for healthcare facilities. Costs associated with pressure ulcers exceed $11 billion every year in the US alone.[1]

Risk factors that can lead to pressure ulcers include:[2]



Moisture

Excessive moisture on the surface of the skin reduces patient resilience to withstand pressure, shear and friction, some of the key risk factors that lead to the development of a pressure ulcer.[3]

Excessive moisture can be generated from multiple factors including:

- Perspiration due to elevated body temperature
- Fluids from incontinence
- Wound drainage
- Factors specific to a patient's clinical condition

By addressing and applying the appropriate solutions and protocols, pressure ulcers in care environments can be successfully prevented and treated.

Skin IQ™ Microclimate Management for the prevention and **treatment of pressure ulcers***

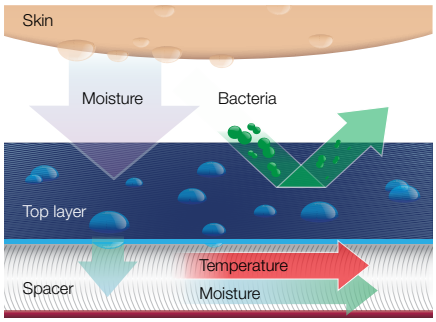
Skin IQ Microclimate Managment

The *Skin IQ* Family of products are powered mattress covers that utilize state-of-the-art Negative Airflow Technology (NAT) to continually draw away excess moisture from the skin/surface interface, for superior microclimate management.

These products can be applied to most support surfaces for effective pressure ulcer prevention and treatment.

Managing moisture and temperature

Excess moisture is passed via an evaporative effect through the vapor permeable, antimicrobial containing top layer and into the middle layer spacer material. The top layer also serves as a barrier to fluid and bacteria.[4]

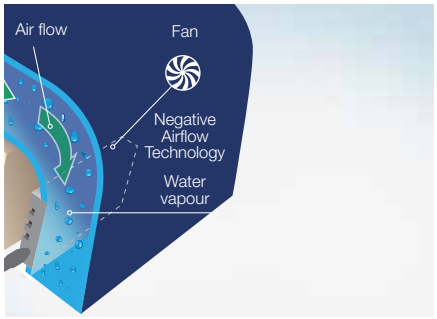


Negative Airflow Technology

NAT pulls moisture vapor that passes through the top layer into the middle layer's open construction spacer material with a vacuum effect.

Negative Airflow Technology provides:

- improved laminar airflow that eliminates surface billowing seen with standard air pumps
- increased air velocity beneath the patient for maximal moisture control.



*Skin IQ™ is indicated for use in conjunction with a pressure redistribution surface in order to aid in the prevention and treatment of skin breakdown and pressure ulcers (stages I-IV) for patients who require microclimate management of the skin.

The Skin IQ family addresses your **clinical & safety needs**

The ArjoHuntleigh *Skin IQ* family of products are the only skin integrity solutions that utilize negative airflow technology to enable advanced microclimate management by better controlling excess moisture and heat at the patients' skin/surface interface, thereby optimizing pressure ulcer management which can lead to improved clinical outcomes, risk mitigation and improved workflow.

Prevention and treatment of pressure ulcers – a never event

Effective moisture and temperature control
Skin IQ reduces and regulates temperature at the skin/mattress interface, reducing the risk of excess moisture and preventing tissue breakdown.

Reduced shear and friction
By managing interface temperature, *Skin IQ* reduces friction and shear for effective pressure ulcer prevention and treatment.

Increased patient safety

Low height profile supports fall prevention initiatives.

Increased patient comfort

With noise reduction technology and a height profile that does not affect pressure redistribution surface performance[5], Skin IQ improves patient comfort.

Adaptability

Skin IQ products are designed for compatibility with most pressure redistribution mattresses on the market today.

Versatility

Skin IQ is available in multiple versions to fit your facilitie's needs: Disposable, Reusable or Bariatric.

Improved workflow

Skin IQ is easy to attach and remove for an improved workflow.

Effective odor control

Skin IQ significantly reduces odor compared to the same surface without airflow[6].

NATIONAL PRESSURE ULCER ADVISORY PANEL

The National Pressure Ulcer Advisory Panel recommends that support surfaces be used as a part of a total program of prevention and treatment. Patients should be provided a support surface that is properly matched to their individual needs for pressure redistribution, sheer reduction, and microclimate control.[21]

Skin IQ **Family features**

	Skin IQ MCM
Vapor Permeable Top Layer facilitates removal of excess patient moisture, serves as a barrier to fluid and bacteria[4] and provides a smooth surface for reduction of friction and shear[7]	●
Negative Airflow Technology continuously draws moisture away from the skin surface and helps manage skin temperature	●
Excellent Moisture Vapor Transmission Rate (MVTR) that is significantly greater than the average 79.2 g/m^2/hr of conventional powered air surfaces surfaces[8,9]	●
Purchasable, Single Patient Use coverlet to help address concerns with cross contamination	●
Multiple Patient Use coverlet capable of being disinfected between patients via either laundry or wipedown	
Purchasable, Single Patient Use coverlet to help address concerns with cross contamination for use in patients weighing up to 1000 lbs (454 kg).	

Skin IQ MCM, 365 and 1000

Electrical

All - Voltage 100 - 240 VAC
All - Frequency 50/60 Hz
Skin IQ MCM & 1000 - Ampere Rating 0.5A
Skin IQ 365 - Ampere Rating 0.3A

Max. Electrical Leakage

All - (100 uA at 115 VAC 60Hz) and (200 uA at 230 VAC 50Hz)
Skin IQ MCM & 1000 - Power Cord Length 6 M (19.69 ft)
Skin IQ 365 - Power Cord Length 6.1 M (20.0 ft)

Environmental Conditions

Operation

Skin IQ MCM & 1000 - Temperature Range 14°C (57.2°F) to 35°C (95°F)
Skin IQ 365 - Temperature Range 0°C (32°F) to 40°C (104°F)

Transport/Storage

Skin IQ MCM & 1000 - Temperature Range -29°C (20.2°F) to 60°C (140°F)
Skin IQ 365 - Temperature Range -29°C (-20.2°F) to 75°C (167°F)

Product information

Max. safe working load 227 kg (500 lbs).
Recommended duration of use for single patient is not more than 60 days for patients 172.37 kg (380 lbs).
Duration of use for patients weighing 172.37 kg (380 lbs) - 227 kg (500 lbs) is not to exceed more than 30 days.
Moisture Vapor Transfer Rate (MVTR) 130 (g/m^2)/hr)[10].

Compatibility

The *Skin IQ* MCM is designed to fit on a pressure redistribution surface that is 203.2 cm-213.4 cm (80 - 84”) long by 88.9-91.4 cm (35 - 36”) wide by 17.8-20.3 cm (7-8 in) high.
Consult product labeling for the pressure redistribution surface and / or bed frame for compatibility.

Additional weight limitations may apply.

Skin IQ 365	Skin IQ 1000
●	●
●	●
●	●
●	
	●

Product information
Max. safe working load 227 kg (500 lbs).
Useful life of this product is one year or 35 laundry cycles, whichever comes first.
Moisture Vapor Transfer Rate (MVTR) 171 (g/m^2)/hr)[11].

Compatibility
Skin IQ 365 is designed to fit on a pressure redistribution surface that is 203.2 cm - 213.4 cm (80 - 84”) long by 88.9 - 91.4 cm (35 - 36”) wide by 17.8 cm (7”) high.
Consult product labeling for the pressure redistribution surface and / or bed frame for compatibility.

Additional weight limitations may apply.

Product information
Max. safe working load 453.59 kg (1000 lb).
Recommended duration of use for single patient is not more than 60 days for patients 453.59 kg (1000 lb).
Moisture Vapor Transfer Rate (MVTR) 165 (g/m^2)/hr)[12].

Compatibility
Skin IQ 1000 is designed to fit on a pressure redistribution surface that is 203.2 cm - 213.4 cm (80 - 84”) long by 121.9 cm (48 in) wide by 17.8 cm (7”) high.
Consult product labeling for the pressure redistribution surface and / or bed frame for compatibility.

Additional weight limitations may apply.

The clinically proven, **standard of care**

Outstanding Moisture Vapor Transmission Rate

Compared with currently available LAL surfaces, the *Skin IQ* Coverlet provides the highest MVTR and the most temperature reduction.[9*]

High Moisture Removal For Reduced Skin Maceeration

Bench studies show that the *Skin IQ* Coverlet removes 3.8 times more moisture at the skin/mattress interface than the same mattress without the *Skin IQ* Coverlet[13], which may help reduce the incidence of periwound maceration.[14,15]

Reduces Temperature at Skin/Mattress Interface

Bench studies show that the *Skin IQ* Coverlet reduces temperature at the skin/mattress interface by more than 1°C in 45 minutes.[9] This translates to a 10% reduction in tissue metabolism rate.[16]

Reduces Shear and Friction

The *Skin IQ* Coverlet top layer material reduces shear and friction to help prevent and treat pressure ulcers.[17]

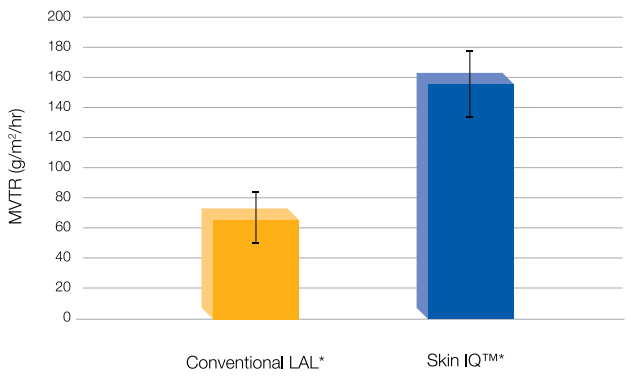
Helps Control Odor

Bench studies show that the *Skin IQ* Coverlet significantly reduces odor at the skin/mattress interface when compared to the same surface without airflow.[6]

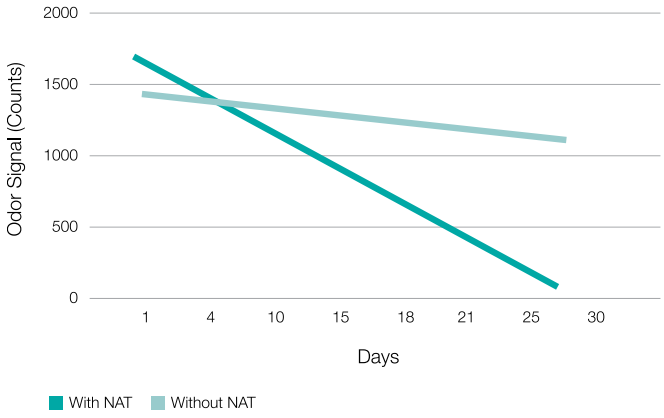
Doesn't Diminish Pressure Redistribution Effectiveness

Pressure mapping testing shows that the *Skin IQ* Coverlet does not diminish the pressure redistribution properties of the underlying mattress.[5]

Moisture Vapor Transmission Rate



Odor Reduction at 30 Days



*Surfaces tested include: Encompass® AccuMax Quantum™, SenTech™ STAGE IV® 2000, Gaymar® SPRPlus® III, Stryker® Impression®, Hill-Rom® TotalCare® P500,Hill-Rom® Envision®, Hill-Rom® cuCair®, and Skin IQ™ MCM. A control plastic sheet was used on all surfaces.

Case study[18*]

Patient:
78-year-old male with head and neck cancer.

Diagnosis:
Patient suffered from dysphagia and incontinence resulting in skin breakdown and a high risk of pressure ulceration.

Initial skin breakdown

Initial treatment with Skin IQ:
The patient was placed on a *Skin IQ* Coverlet on a pressure redistribution mattress at admission and remained on the Skin IQ Coverlet for 27 days with follow-up at day 30.

Progress, discharge and follow-up:
Skin breakdown was resolved and patient was discharged.

Follow-up at day 30

Case study[18*]

Patient:
A 54-year-old African -American female with human immunodeficiency virus (HIV) presented with a complaint of a clogged tracheostomy.

Diagnosis:
The patient had acute renal insufficiency along with Methicillin-sensitive Staphylococcus aureus (MSSA) pneumonia.

Initial skin breakdown

Initial treatment with Skin IQ:
The patient was placed on the *Skin IQ* Coverlet in conjunction with a pressure redistribution mattress and remained on the *Skin IQ* Coverlet for two weeks.

Progress, discharge and follow-up:
Skin breakdown resolved and patient was discharged to acute rehabilitation.

2 weeks post Skin IQ Coverlet

"The introduction of recent microclimate (MCM) technology into this facility has the potential to decrease rental costs while treating and preventing pressure ulcers and moisture-related breakdown."

Jean deLeon, MD Director Wound Care Clinic Baylor Specialty Hospital, Dallas, TX, USA

"...*Skin IQ* can simplify surface selections, expedite therapy (stored on each unit) while providing outstanding clinical results."

Rose Raizman, CNS, Director Surgical Program, Ropuge Valley Health System, Toronto, Ontario, Canada

*All concomitant treatments remained constant before and after Skin IQ™ use

The cost efficient, environmentally **friendly solution**

Pressure ulcers represent a major financial strain for healthcare providers. Pressure ulcer costs include extended patient stays, expensive treatment, and the draining of valuable caregiving resources.

The introduction of *Skin IQ* to your facility can facilitate a reduction of needless cost associated with:

- Inceased length of patient stay
- Adverse events such as patient falls and entrapment
- Patient readmissions
- Treatment requirements

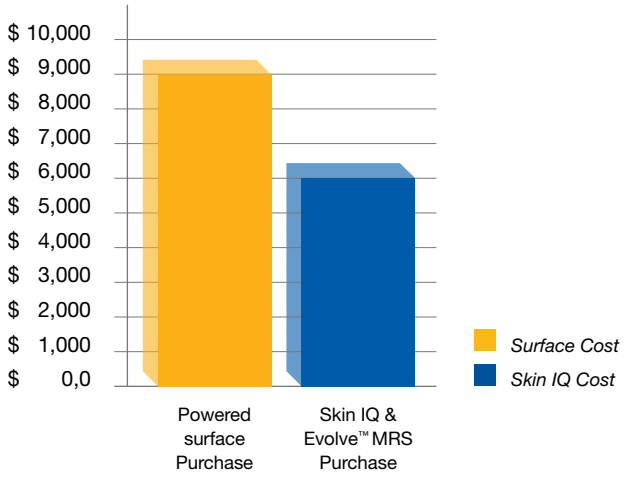
Skin IQ can offer a cost effective and comprehensive pressure ulcer prevention and treatment alternative particularly when compared with powered air surfaces.

Skin IQ use can also help reduce indirect costs for facilities.

Increase in indirect annual savings from reduced:

- Pressure ulcer incidence
- Patient infections
- Patient falls
- Patient length of stay
- Power consumption
- Labor costs
- Use of creams/emollients, dressings/pads
- Readmission rate

Surface Purchase Option



Based on average sales price and equitable life of product

Less energy

Skin IQ saves over $30 in electrical costs per hospital bed per year, consumes 83% less coal, and emits 83% less greenhouse gases from power generation.[19,20]

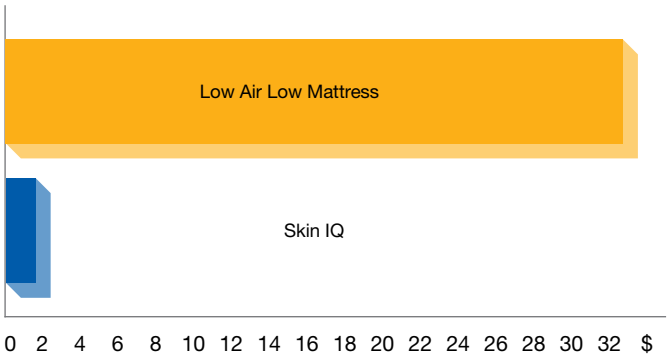
In addition to a low carbon footprint, *Skin IQ* is also:

- Latex free
- PVC free
- DEHP free
- Mercury free

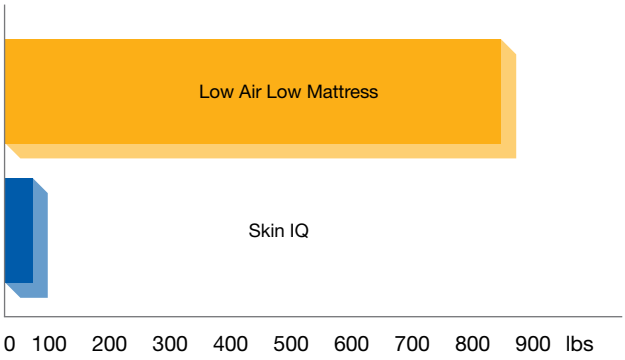
> "...Selection of an appropriate support surface should take into consideration factors such as the individual's level of mobility within the bed, his/her comfort, the need for microclimate control, and the place and circumstances of care provision."

The National Pressure Ulcer Advisory Pane &
EPUAP Pressure Ulcer Prevention Quick Reference Guide

Energy cost comparison[19]



CO_2 Gas emission comparison[20]



01.TSS.0057.1.GB-INT.1.AHG • August 2014

References:

1. Reddy M et al. JAMA. 2006;296(8):974-984.
2. Reger S et al. Ostomy Wound Manage. 2007;53:50-58.
3. Clark M, Romanelli M, Reger S, et al. London: Wounds International, 2010.3
4. ArjoHuntleigh data on file.
5. ArjoHuntleigh data on file.
6. ArjoHuntleigh data on file.
7. ArjoHuntleigh data on file.
8. Reger S et al. Arch Phys Med Rehabil. 2001;82(5):597-603.
9. ArjoHuntleigh data on file.
10. ArjoHuntleigh data on file.
11. ArjoHuntleigh data on file.
12. ArjoHuntleigh data on file.
13. ArjoHuntleigh data on file.
14. ArjoHuntleigh data on file
15. Bergstrom N et al. Nurs Res. 1987;36(4):205-210
16. Flam E and Raab L. European Pressure Ulcer Advisory Panel, Aberdeen, Scotland. May 5-7, 2005. Available at: http://www.epuap.org/aberdeen/page3.htm
17. ArjoHuntleigh data on file.
18. Case studies courtesy of Jean De Leon, MD, Medical Director, Baylor Specialty Hospital.
19. ArjoHuntleigh data on file.
20. ArjoHuntleigh data on file.
21. European Pressure Ulcer Advisory Panel, National Pressure Ulcer Advisory Panel. Prevention and treatment of pressure ulcers: quick reference guide. Washington, DC: National Pressure Ulcer Advisory Panel; 2000 Jan.

ARJOHUNTLEIGH
GETINGE GROUP

ArjoHuntleigh AB, Hans Michelsensgatan 10, SE-211 20 Malmö, Sweden Phone: +46 (0) 10 335 45 00

www.ArjoHuntleigh.com

GETINGE GROUP

GETINGE GROUP is a leading global provider of products and systems that contribute to quality enhancement and cost efficiency within healthcare and life sciences. We operate under the three brands of **ArjoHuntleigh**, **GETINGE** and **MAQUET**. **ArjoHuntleigh** focuses on patient mobility and wound management solutions. **GETINGE** provides solutions for infection control within healthcare and contamination prevention within life sciences. **MAQUET** specializes in solutions, therapies and products for surgical interventions and intensive care.