



Aquari™

Immersion Simulation Clinical Evidence

Proven Pressure Injury Reduction In The OR

How does it work?

Aquari™ dynamically changes the molecular density inside the surface in response to patient immersion. This creates true 3-dimensional envelopment to maintain near normal blood flow and tissue symmetry. The result? Minimize the harmful effects of tissue deformation, a major contributor to the formation of deep tissue pressure injuries.

Clinical Advantages

- A study comparing fluid immersion technology to other OR support surfaces showed Aquari maintained perfusion at a rate >6X better than the next pad.⁹ There is no comparison.
- 87% retention of perfusion using fluid immersion technology versus 16% of baseline perfusion for the standard bed.⁹
- Reducing pressure ulcers and injuries in the cardiac surgical operating room.²



Neutral Buoyancy Simulation



3-Dimensional Envelopment

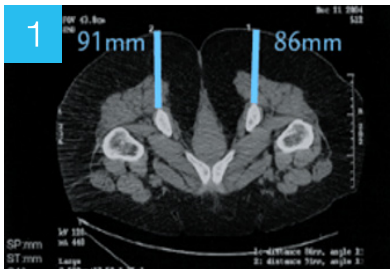


Normalizes Tissue Symmetry & Perfusion



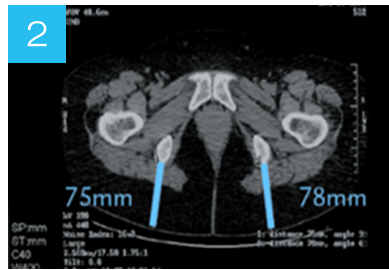
Relationships Between Tissue Strains and Pressure Injuries

Tissue strain has been shown to contribute to the development of deep tissue pressure injuries in as little as 5-10 minutes.¹ Therefore, it is essential to maintain near normal tissue symmetry. A radiological study confirms fluid immersion technology maintains near normal tissue symmetry of a supine patient over the ischial tuberosities.



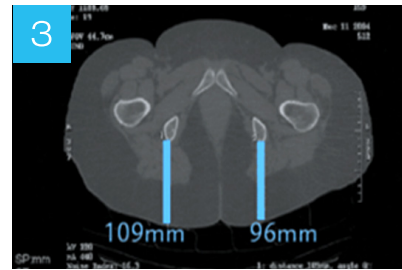
Control - Prone Position

Normal symmetry with no pressure over the ischial tuberosities.



2D Surface - Supine Position

Gluteal fold is gone in 2-D environment, note compressed tissues over the ischial tuberosities.

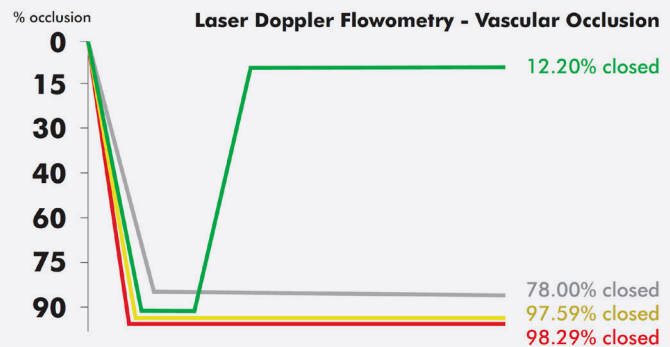


3D Surface - Supine Position with Immersion Simulation

Reappearance of gluteal fold. Compare control (1) versus supine (3). Uncompressed tissues over ischial tuberosities.

Improving Tissue Perfusion In Points Of Compression

A study by the UC San Diego and VA La Jolla Medical Center showed the effectiveness of fluid immersion being used as a tool to improve tissue perfusion in points of compression.³



- Immersion Simulation
- Fluid Gel
- Standard Foam
- Engineered Foam

Specifications & Components

Specifications

Immersion Controller

Weight	10 lbs. (5 kg)
Dimensions	11.5" (29 cm) W x 12.5" (32 cm) H x 6" (15 cm) D
Display	LED backlit 10-point multi-touch
Battery Life	Minimum: ~ 30 minutes (without AC power) Maximum: ~ 6 hours (without AC power) Recharge Time: ~ 15 hours (from fully depleted)

Hose/Tubing

Length	9 ft. (274 cm) two-line hookup
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Surface Pads

Designed for various general surgical tables.
Available for most table models including:

Skytron®
Steris®
Stryker®/Berchtold®
HillRom®/Trumpf
Maquet/Getinge

Supported Procedures

Aquari may be used for any surgical procedure performed on a general surgical table and is best suited for lengthy procedures and for patients at risk for pressure injuries.

Specialties may include, cardiovascular, vascular, plastics, urology, bariatrics, transplant, neurosurgery, gastrointestinal, orthopedic and general.

Ordering Information

REF 246AQI Aquari Immersion Controller

Aquari Surface 3-Piece Pad Sets

Includes: Head, Torso and Foot sections unless otherwise noted and Aquari Tubing Set.

Contact your Mizuho OSI account manager for ordering information and surface pad set availability.



References

1. M. Bucki, V. Luboz, A. Perrier, F. Cannard, B. Diot, et al., Body numerical phantoms for estimating soft tissue pains or injuries when interacting with shoes, seats and mattresses. Amit Gefen. Body and Tissue Phantoms in Biomedical Science and Industry Research, Springer Verlag, In press, Studies in Mechanobiology, Tissue Engineering and Biomaterial. hal-02369549
2. Virginia Capasso, PhD, ANP-BC, ACNS-BC, CWS Clinical Nurse Specialist, Institute for Patient Care Nurse Scientist, Munn Center for Nursing Research Massachusetts General Hospital
3. Effectiveness of the Biologics(tm) Dolphin Bed as a Tool to Improve Tissue Perfusion in Points of Compression. Division of Plastic Surgery, UC San Diego and VA La Jolla Medical Center, San Diego, CA. Som Kohanzadeh, MD; Andrew Breithaupt, MS; Artur Bondarchuk, MD; Dhaval Bhavsar, MD; Lars Evers, MD Kevin Broder, MD; Marek Dobke, MD; Richard Bodar, MD



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Note: Mizuho OSI is constantly improving its products. All specifications are subject to change without notice. Mizuho OSI is a Delaware Corporation.