

WAARDENBURG
MEDICAL

reddot award 2017
winner

FENNIAprize 17
GRAND PRIX

Q-Flow –
Award-winning surgical light

MERIVAARA

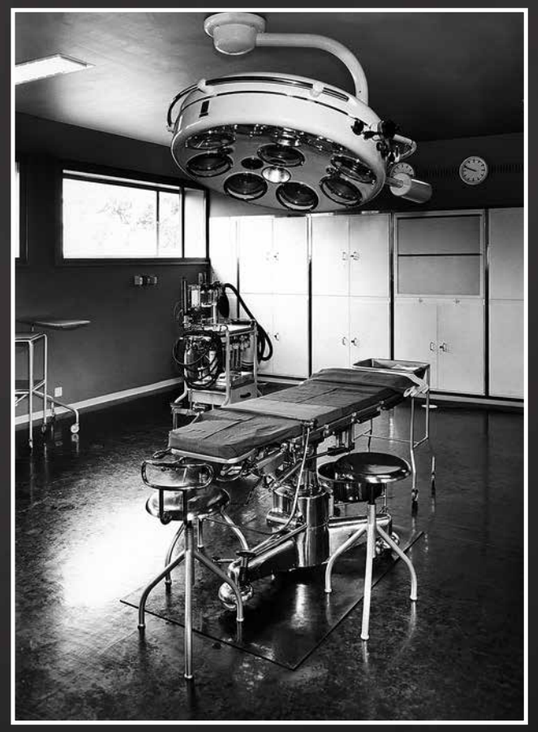
Fluent usability

Since 1901

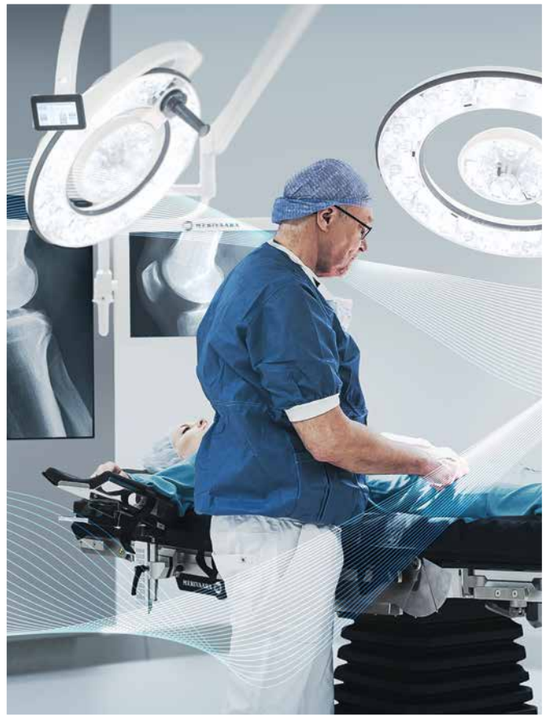
"In addition to the exquisite quality of work, we have taken the utmost interest in the functionality of the equipment. In this regard, several doctors committed to the cause have contributed their advice, based on their valuable experience."

Juho Merivaara in 1926, founder of Merivaara

DESIGN FROM FINLAND



In a modern operating room from the 1950s tables and lights were manually adjusted.



We are proud that the company's values 120 years ago were so ahead of their time that they can still today be fully applied when designing new innovative solutions for healthcare professionals. This is demonstrated by our latest award-winning products, the Q-Flow surgical light and the Smarter Practico operating table with functionality and ease of use at the heart of the design. Our user interfaces are developed together with hospital personnel so that all our products and systems can be used intuitively.

We call this Fluent Usability; operating room teams can focus on patient care, not for the management of complex technologies. Top surgeons appreciate this all over the world.



Solutions

Merivaara Solutions offer operating rooms a wide range of high-quality products, systems and services. Our solutions not only guarantee patient safety, but also provide healthcare operators with the best value for money.

When designing our solutions around the entire surgical team, it is important for us to listen to the customer's needs. This allows us to ensure that the team can implement the procedures safely, quickly and reliably. At the same time, workflow is optimized and the productivity of the entire team will increase.

Merivaara has long experience from leading and implementing projects in operating rooms. For us, keeping projects to schedule and reducing costs is extremely important.

• SURGICAL LIGHTS • EXAMINATION LIGHTS
• OPERATING TABLES • TABLE ACCESSORIES
• INTERGRATION SYSTEMS • MONITORS & MONITOR ARMS
• PENDANTS • PROJECTS • MERIVAARA SERVICES



Design optimized
for OR's air flow

Hospital associated infections (HAIs) are a highly recognized challenge in hospitals around the world. HAIs increase morbidity, mortality and length of hospital stay, adding to health care costs. More than 4 million patients in Europe and approximately 1.7 million in the US are affected annually. The prevalence of HAIs in Europe is around 7.1 %.

One cause of contamination is uncontrolled air flow in operating rooms. Q-Flow™ is designed for an optimized air flow that allows ventilation to work properly in an operating room. Traditional surgical light heads cause air to rise in the operating area, resulting in increased particle content and an increased infection burden for the patient. Due to the optimally designed Q-Flow™, with a turbulence intensity of only 15.9 %, there is no additional particle burden created in the operating area. In addition, this also improves the working conditions for the surgical team, as it helps to keep the area clean from harmful smoke and gases.

Benefits of the Q-Flow family



1. REDUCED RISK OF INFECTION

The design of the Q-Flow light is optimized to improve air flow circulation in the operating area. This will help keep the area clean, improving working conditions for the entire surgical team and increasing patient safety. Turbulence intensity is remarkably low 15.9%, when the industry standard specifies it to be below 37.5 %.



2. PERFECT TISSUE COLOR RENDERING

The R9 value (red) of the Q-Flow light is the best in its class 98, making it perfect for the surgeon to between different tissue and vascular colors. The R13 value (skin) 98 is also excellent, which is particularly important in plastic surgery and in operations where seeing the skin accurately is important.



3. COMFORTABLE WORKING CONDITIONS

Merivaara's Dynamic Obstacle Compensation (DOC™) decreases the need to adjust the luminaire. Ergonomics and efficiency of the entire surgical team is improved significantly.

- Shadowless light in the surgical area provides optimal light in all circumstances
- Automatic light dimming reduces temperature above surgical team's heads
- Light restores original lighting conditions automatically



4. INTUITIVE TO USE

Merivaara´s patented Intueri™ system provides surgeons a possibility to adjust the dimming and the field size of the light field from the sterile area, allowing surgeons to keep their focus on the operating area. The Intuitive user interfaces of the Q-Flow touch panel and its auxiliary controllers – multifunctional remote control Merimote™ and integration system OpenOR™ – offer similar, simplified controls for the light and its camera, in multiple languages. This allows users to switch between control devices smoothly as needed.



5. ERGONOMIC CAMERA SOLUTIONS

The in-light camera unit is completely hidden behind the cover glass, leaving no obstacle in the surgeon´s peripheral view. Thanks to the central position of the camera unit, the camera can always be centered in the operating range. Wireless technology enables the suspension arms rotate a full 360 degrees, allowing surgeons to focus the camera at optimal viewing angle.



Q-Flow models

Fluent

Main features:
- Excellent optical performance
- Design optimized for air flow
- Fluent usability
- Easy to clean
- MeriMote and OpenOR compatible

Vision

Additional features:
- HD camera option
- Green ambilite
- Lightweight

Flexible viewing angles

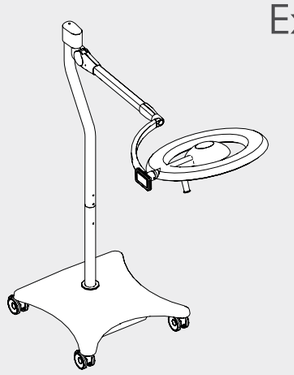
Intelligent

Additional features:
- Intueri™ Sterile user interface
- DOC™ Dynamic Obstacle compensation

Maximum comfort and ease of use

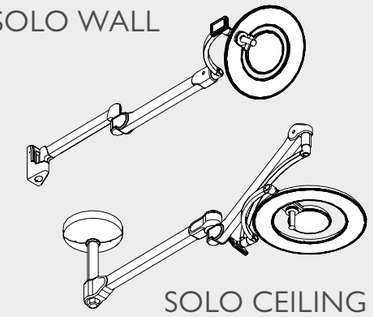
Functional simplicity

Examples of Available Arm Options

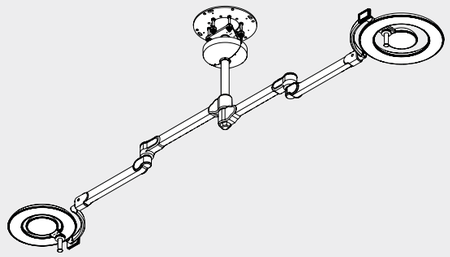


SOLO MOBILE

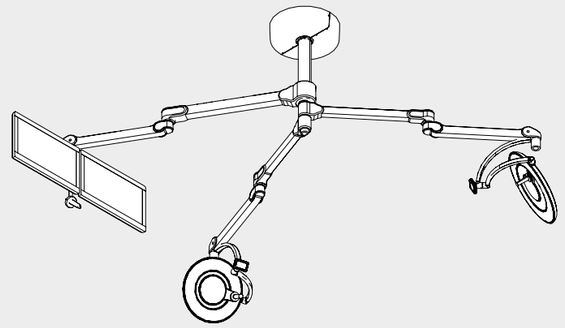
SOLO WALL



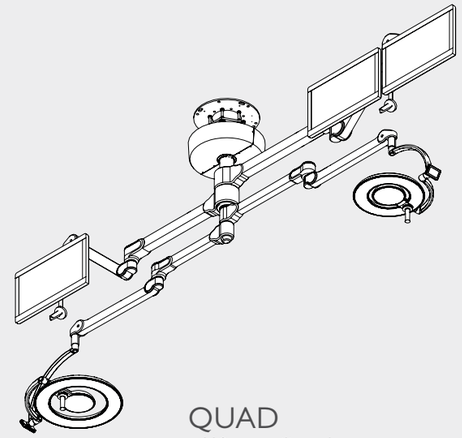
SOLO CEILING
- 50 mm, 65 mm or 110 mm ceiling tube



DUO
- 65 mm or 110 mm ceiling tube



TRIO
- 110 mm ceiling tube



QUAD
- 110 mm ceiling tube

Our solutions for Q-Flow



OpenOR integration system

OpenOR enables you to connect all video and audio sources, medical devices, and room functions to be displayed on monitors or info screens. OpenOR can also control lights, tables, ventilation and blinds, and it communicates with hospital information systems (HIS) and building management systems (BMS).



Video transfer solutions

We can offer complete solutions for transferring live video stream from the Q-Flow lamp camera to other devices in the hospital.



Monitors & Monitor arms

Merivaara offers customized monitor arms for medical monitor mounting.

Accessories



Disposable sterile light handle cover

A43460601 (Set of 200 units)



Sterilizable Handle

A4328090l Kit for Q-Flow Lamp Head (10 handles)



MERIMOTE

5202691 Remote control unit with wall mounting kit
MULTIFUNCTIONAL REMOTE FOR Q-FLOW SYSTEMS
- 2-way wireless control for all Q-Flow lamp heads
- Full in-light camera control
- Synchronized control of several lamp heads simultaneously



Wireless HD Camera Set

5202823
SUPERB HIGH-DEFINITION IMAGE QUALITY WITH OPTIMIZED ERGONOMICS
- Fully recessed camera unit with rotation possibility
- Centralized positioning, always focused on to the surgical site
- Integrated camera control panel on the lamp head



Display protectors

Provides additional impact protection to your valuable arm mounted medical grade monitors. Optically fully transparent surface reduces glare for optimal image visibility and prevents scratches. Can be removed, cleaned and reapplied. Easy to clean and maintain. Installed at our factory prior to shipment.

Technical Specifications

	FLUENT ***		VISION		INTELLIGENT	
	6F	**4F**	**6**	**4**	**6i**	**4i**
Max illumination @ 1.0 m	160 klux	140 klux	160 klux	140 klux	160 klux	140 klux
Color rendering index (Ra)*	98	98	98	98	98	98
Red color rendering index (R9)*	98	98	98	98	98	98
“Skin color” rendering index (R13)*	98	98	98	98	98	98
Turbulence intensity, DIN 1946	15.9 %	<35 %	15.9 %	<35 %	15.9 %	<35 %
Variable color temperatures (K)**	3700 / 4400 / 5100	3700 / 4400 / 5100	3700 / 4400 / 5100	3700 / 4400 / 5100	3700 / 4400 / 5100	3700 / 4400 / 5100
Depth of illumination (L1+L2) @ 60 %	1200 mm	690 mm	1200 mm	690 mm	1200 mm	690 mm
Depth of illumination (L1+L2) @ 20 %	1800 mm	1500 mm	1800 mm	1500 mm	1800 mm	1500 mm
Light field diameter	200–370 mm	200–320 mm	200–370 mm	200–320 mm	200–370 mm	200–320 mm
Integrated dimming	10–100 %	10–100 %	10–100 %	10–100 %	10–100 %	10–100 %
Number of LEDs	90	69	90	69	90	69
External dimensions (diameter)	700 mm	560 mm	700 mm	560 mm	700 mm	560 mm
Lamp weight	16 kg	13 kg	16 kg	13 kg	16 kg	13 kg
Ambilite	White	White	Green	Green	Green	Green
Touch panel control	√	√	√	√	√	√
OpenOR™ compatible	√	√	√	√	√	√
MeriMote™ compatible	√	√	√	√	√	√
Extented autonomy	√	√	√	√	√	√
Integrated camera control (touch screen)	-	-	√	√	√	√
Wireless full HD camera (1080p60)	-	-	O	O	O	O
Detachable sterilizable handle	√	√	√	√	√	√
Disposable sterile handle cover	O	O	O	O	O	O
Intuitive Sterile Surgeon Control (Intueri™)	-	-	-	-	√	√
Fluent Sterile Surgeon Control	√	√	-	-	-	-
Dynamic Obstacle Compensation (DOC™)	-	-	-	-	√	√

√ = included
O = optional

*) Tolerance ±3%
**) Tolerance ±200 °K
***) CE mark pending

All values are measured in test laboratory conditions EN 60601-2-41

MERIVAARA

Health Technology with a Human Touch

Made in Finland with respect for our unique nature.



MERIVAARA CORP.

Lahti, Finland, Tel. +358 3 3394 611,
merivaara@merivaara.com www.merivaara.com

WAARDENBURG MEDICAL

Dorpsstraat 8a
4181 BN Waardenburg

www.waardenburgmedical.com
info@waardenburgmedical.com

+31(0) 418 651 078
+31(0) 61066 2894

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