

## Q-Flow

### Merivaara's award-winning surgical lights - Q-Flow family

#### Q-Flow surgical lights reduce the risk of infection

One cause of contamination in hospitals is uncontrolled air flow in operating rooms. Traditional medical light heads cause air to rise in the operating area, which increases particle concentration and the patient's burden of infection. Watch video [Reducing risk of infection in operating rooms](#). When Merivaara's R&D started to design the Q-Flow surgical light, the starting point was how to reduce the risk of infection in operating rooms. The Q-Flow surgical light is designed so that the airflow travels optimally, the result of which ventilation works properly in the operating room. The Q-Flow surgical light has a turbulence intensity of only 15.9 % when the medical industry standard specifies it to be below 37.5 %. As the Q-Flow surgical light helps to keep the operating area clean from harmful smoke and gases, there is no additional particle burden created in the operating area which improves the working conditions of the entire surgical team. Merivaara's Q-Flow surgical light has received several **design awards** and has also received a [Design from Finland mark](#).

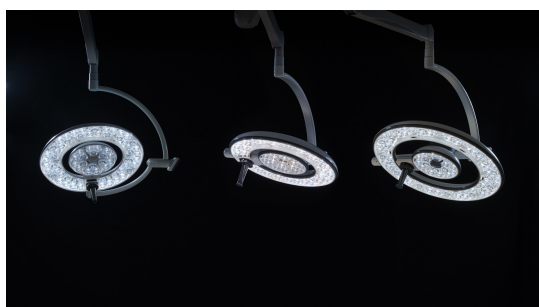




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## Q-Flow models



### 1. Fluent - Functional simplicity

**Main features:**

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

### 2. Vision - Flexible viewing angles

**Additional features:**

- Camera option
- Green ambilight
- Lightweight

### 3. Intelligent - Maximum comfort and ease of use

**Additional features:**

- Intueri™ Sterile user interface
- DOC™ Dynamic Obstacle compensation

## Benefits of the Q-Flow family

### 1. REDUCED RISK OF INFECTION IN OPERATING AREAS

The design of the Q-Flow surgical 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 only 15.9%, when the medical industry standard specifies it to be below 37.5 %.

### 2. PERFECT TISSUE COLOR RENDERING FOR PLASTIC SURGERY AND OTHER SKIN OPERATIONS

The R9 value (red) of the Q-Flow surgical light is the best in its class 98, making it perfect for the surgeon to distinguish 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. ERGONOMICAL WORKING CONDITIONS FOR ENTIRE SURGICAL TEAM

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

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

## 4. INTUITIVE SURGICAL LIGHT

Surgeons can adjust the dimming and the field size of the medical light field from the sterile area due to Merivaara's patented Intueri™ system. This allows surgeons to keep their focus on the operating area. The intuitive user interface of the Q-Flow touch panel and its auxiliary controllers – multifunctional remote control and hospital integration system – offer similar, easy-to-use controls for the Q-Flow surgical 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 of the Q-Flow surgical light is completely hidden behind the cover glass, leaving no obstacle in the surgeon's peripheral view. Thanks to the central position of the Q-Flow light's camera unit, the camera can always be centred in the operating range. Wireless technology of the Q-Flow surgical light enables the suspension arms rotate a full 360 degrees, allowing surgeons to focus the camera at optimal viewing angle.



## Technical Specifications

	6F – Fluent	4F – Fluent	6 – Vision	4 – Vision	6i – Intelligent	4i – Intelligent
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	15.9 %	<35 %	15.9 %	<35 %	15.9 %	<35 %

intensity, DIN 1946						
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
Average life time of LED	>60 000 h	>60 000 h	>60 000 h	>60 000 h	>60 000 h	>60 000 h
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	√	√	√	√	√	√
Extended autonomy	√	√	√	√	√	√
Integrated camera control (touch screen)	-	-	√	√	√	√
Wireless 4K camera	-	-	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	✓	✓	-	-	-	-
Shadowless optical system	✓	✓	✓	✓	✓	✓
Dynamic Obstacle Compensation (DOC™)	-	-	-	-	✓	✓
Product code	520210, 520220, 520222, 520230, 5204000	520210, 520220, 520222, 520230, 5204000	520210, 520220, 520222, 520230, 5204000	520210, 520220, 520222, 520230, 5204000	520210, 520220, 520222, 520230, 5204000	520210, 520220, 520222, 520230, 5204000
Manufacturer	Merivaara Corp.	Merivaara Corp.	Merivaara Corp.	Merivaara Corp.	Merivaara Corp.	Merivaara Corp.
✓ = included						
O = optional						
*) Tolerance ±3%						
**) Tolerance ±200 °K						

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