Maquet Volista Surgical Light

See better, go further

This document is intended to provide information to an international audience outside of the US.

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Maquet Volista

See better, go further

A successful surgical outcome is highly dependent upon the surgeon's ability to visualize and assess the wound.

By optimizing color rendering and minimizing colored cast shadows, Maquet Volista Surgical Lights improve patient safety and maximize the value of your lighting investment.

Putting patients first

For more than a century, Getinge and its well-known brands – such as Maquet – have put patients first. It's why we remain committed to close clinical relationships that identify real-world healthcare challenges, and address them with cost-effective, clinically relevant solutions.

As one of the world's largest medical technology companies, we have the resources to help you protect patients, proactively avoid complications, and prevent ergonomic issues that are common in medical settings.

Our comprehensive portfolio of medical technologies will support you and your patients throughout the clinical pathway, so you can deliver the best possible patient care.

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See better, go further

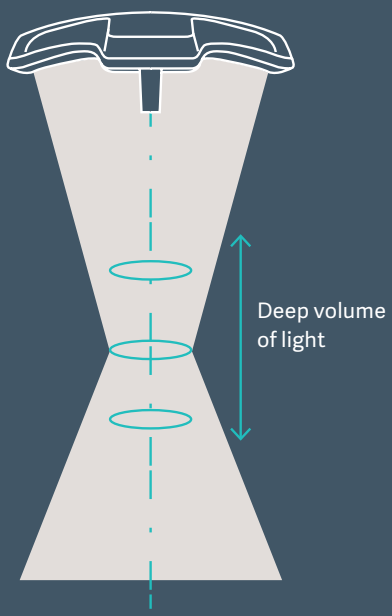
Full HD cameras
Share best practices among surgeons, or document procedures for risk management with full HD clarity

Luminance Management Device (LMD)*
Maximize useful light and minimize eye fatigue caused by glare or reflexion with the LMD

Maquet Volista 400

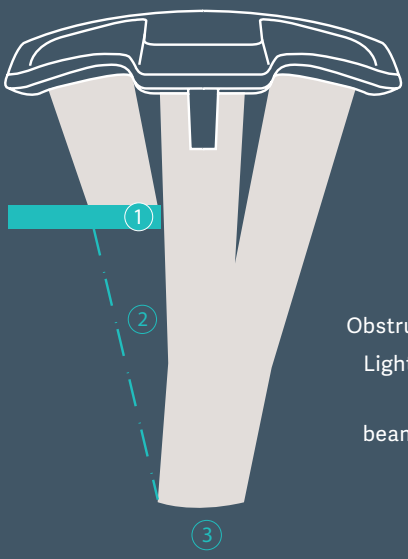
Homogenous volume of light

A homogeneous column of useful light reaches into the deepest cavities, without readjustment.
No need to reposition or manipulate the light head, the useful light is available from the surface of surgical site to the bottom of the cavity without any readjustment.



Shadow Management

Due to the shape of the light heads, a good positioning leads to a very stable usefull light.
When moving below the light heads, surgeons may block some LEDs but due to the perfect overlapping of all light sources, the light patch remains stable, homogeneous, keeping contour shadows for the needed three dimensional vision.



Obstructed light beams (1)
Light beams free zone (2)
Overlapping light beams composing the entire light patch (3)

Maquet Volista 600

Adjustable color temperature*
A patented three-level cold filter system allows for customization of color temperature to meet the needs of each surgical discipline

Automatic Illumination Management (AIM)*
AIM improves workplace comfort. Reduce heat on the surgeon's head while delivering consistent and effective illumination

* only available for Maquet Volista StandOP

Delivering consistent and effective illumination

Automatic Illumination Management (AIM)** automatically compensates for obstructions to deliver additional light from unmasked LEDs. This unique and patented system minimizes shadows and offers consistent and effective illumination, without readjustment.

** Standard on Maquet Volista StandOP

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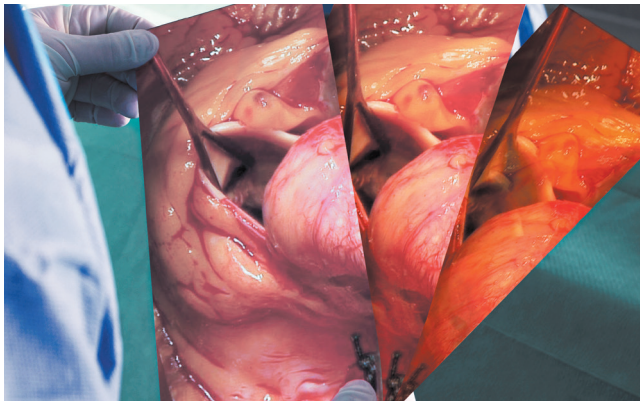
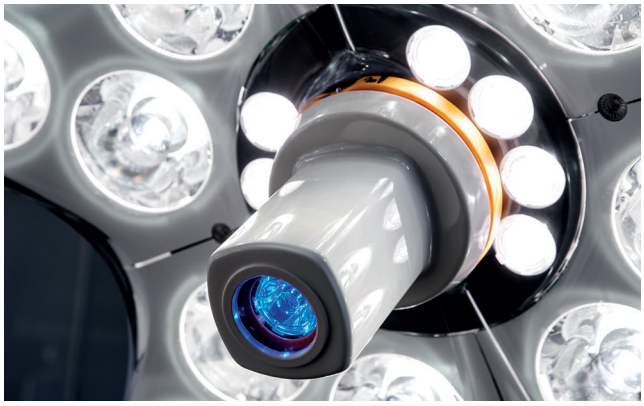
Much more than just a light

Surgery can be a high-stress job with long hours. Poor lighting can slow surgical progress and cause eye strain that can lead to fatigue-related errors. Improve outcomes for patients and staff with high-quality surgical lighting.



Choose the best-suited color temperature*

Each surgeons visualization needs are different and each step of a procedure can require different color temperatures for improved tissue recognition, Maquet Volista Surgical lights offer a possibility to adjust from 3900K to 4500K to 5100K.
Our white LEDs and patented three-level cold filter system in our Maquet Volista StandOP adapts the color temperature without colored cast shadows, offering a stable color temperature whatever the chosen settings and whatever the aging of the product. The cold filters reduce the blue peaks that LEDs emit.



LMD offers total freedom of movement without any drop in luminance.

Focus on your patient

The Luminance Management Device (LMD)* maintains optimum visual acuity and avoids difficulties in adapting to excessive variations in luminosity. Whether at the beginning or end of a procedure or from light to dark tissues, the luminance will be automatically adjusted according to your registered setting.
With LMD, there is no need to adjust the light anymore. The technology compensates to maximize useful light and also provides safety by adjusting automatically the illumination and maintaining safety levels of irradiance even when two lightheads are overlapping.

*Optional on Maquet Volista StandOP

Keep your surgical light on while performing NIR* guided-surgery

NIR fluorescence imaging is designed to address a variety of unmet clinical needs related to finding structures that need to be resected, such as sentinel lymph nodes, malignant cells, and luminal calcifications, and avoiding other structures that could cause acute or chronic morbidity, such as nerves, blood vessels, ducts, lymphatics, and normal glands[1]. Thanks to Volista VisioNIR**, the surgical staff will not be required to turn the surgical light on/off to be able to perform open surgeries using NIR fluorescence imaging systems.

Just keep the light on!

- A powerful solution to guide surgeons, secure their actions with a better hand-eye coordination when using fluorescence guided surgery.
  No need to switch between on and off lighting.
- The surgical staff can stay focused on the patient ongoing surgery. One less operation for the circulating staff .
- Uninterrupted workflow as you can keep the surgical light on during the entire procedure, no need to think about it.
- The ability to keep the OR light on provides better visibility of the operating room environment for the staff.
- Works simultaneously with the adjustable color temperature feature: while using Indocyanine Green (ICG) and NIR cameras, the surgeon can operate with the preferred color temperature. The dedicated enhancement mode improves the contrast on the screen and complies with autoflurescence.
- Keeping parameters of the OR Light like a standard mode with good color rendering, no change in shadow dilution or dimming.

One solution: one filtered light

Thanks to the patented filters' wheel developed on Maquet Volista StandOP, the light emitted from the LEDs is filtered to reduce the remaining NIR wavelengths. Surgical lights disturbing the fluorescence signal emitted is now eliminated. Maquet Volista VisioNIR and NIR guided surgery cameras can be used simultaneously inside the operating room.

*Near Infrared, **Available on Maquet Volista StandOP

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Perform surgery with safety in mind

Improving surgical safety is a goal for healthcare facilities worldwide. Maquet Volista operating lights have been developed with this goal in mind.

Reducing Surgical Site infections

Hospital-acquired infections delay patient recovery and place additional strain on the healthcare system. The Maquet Volista Surgical Light was developed to minimize the risk of cross-contamination to improve patient outcomes.

Easy-clean paint

The special coating paint minimizes bacterial adhesion and facilitates manual cleaning to prevent germ spread.

Touch control panel

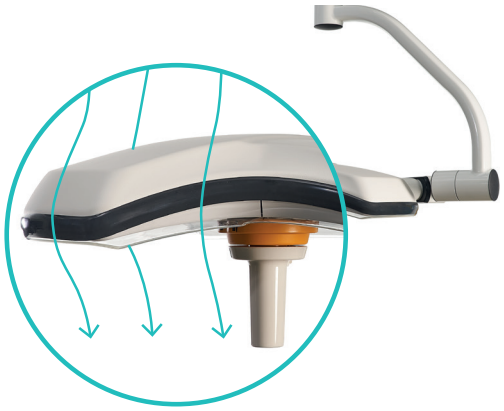
A smooth touch keypad is easy to clean, preventing cross-contamination to keep patients safer.

Improving intraoperative visibility

With an optimal color rendering of Ra 95, Maquet Volista gives surgeons a clear vision of the surgical site by delivering a natural and faithful color rendering.

Optimal visibility for minimally invasive surgery

Maquet Volista offers green ambient lighting at the center of the light head to minimize glare on monitors during MIS. The ambient light provides enough illumination to help surgical staff move safely in the darkened OR.



X- and Y-shaped lightheads

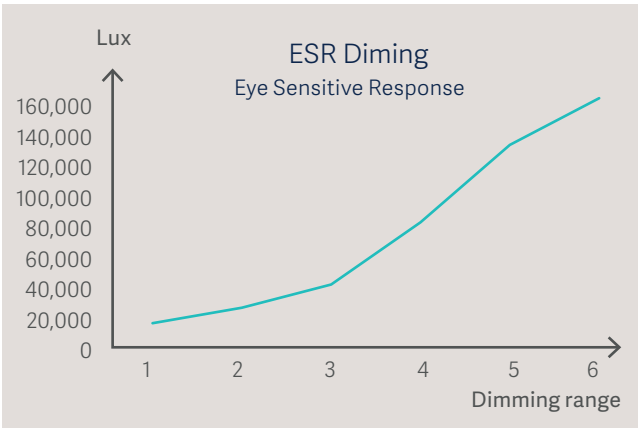
Ensure compatibility with laminar flow ceiling systems to prevent the spread of airborne bacteria.

Stable illumination

LEDs can lose up to 20% of their intensity after just two hours. With the Flux Stability Program (FSP), smart electronics increase the current to maintain consistent light output throughout the procedure.

Dimming sensitivity

With dimming following human eye sensitivity per Fechner's law, each dimming step is seen by human eyes with the same amount of light difference, in order to provide a smooth and adapted range of illumination.



Safe irradiance

Protect delicate patient tissues by minimizing radiant energy at the surgical site. In nominal illuminance, two lightheads can be safely overlapped*.
The boost function notifies the medical staff by a blinking LEDs that the amount of light used can potentially damage or desiccate tissues if two light patches are overlapped. The goal is to always provide the right information to surgeons in order to operate in total awareness and safety for the patient.

* based on the IEC 60601-2-41 standard

Fully adjustable to meet each surgeon's needs

With Maquet Volista, it's simple to adjust the light to the surgeon's specifications. From positioning to intensity, all elements of the lighting experience can be easily modified.

Tilt handle: autonomy for sterile team

The optional "tilt" handle lets sterile staff adjust the light patch diameter during surgery.

- No assistance from the circulating nurse
- Available as sterilizable handle, which can be easily cleaned in Getinge Washer-Disinfectors

Touch control panel: control at any time

All main functions can be controlled from the panel.

- On / Off
- Standard lighting or ambient lighting and dimming
- Adjustment of the light patch diameter
- Zoom when a camera is installed
- Warning and battery indicators (for Battery Backup systems only)

Wall control panel

Centralized information can be accessed and controlled from the wall panel.

- Access to lighthead and camera settings
- Lighthead synchronization
- Presets for storing favorites by surgeon or specialty
- Assistance with preventive maintenance, including backup
- Power supply testing
- Self-diagnostics

Maquet Satelite Anchoring System

The number of OR technologies and tools is growing exponentially each year, yet only a finite amount of space exists near the patient.

Hospitals need a hygienic, cost-effective, long-term solution that can precisely position the lights, monitors and cameras of today, but with enough versatility to accommodate the technologies of tomorrow.

Maquet Satelite allows equipment to be positioned within reach of the surgeon, concealing wires and cables to improve safety and hygiene. Equipment can be easily added, removed and upgraded to meet future requirements.

Optimized workflows

- A central mounting hub delivers electrical and networking connectivity
- There are no exposed wires or cables to interfere with workflows
- An ergonomic design ensures that vital equipment is within reach
- Tailored solutions are available for all surgical specialties

Your multimedia center

- Mount and network cameras of all types
- Route full HD signals
- Access patient records, MRI, video, and radiographic images at the surgical site
- A large internal diameter accommodates the larger bundles required for advanced integration and multimedia applications

Modular and easily upgradeable

- A simple design streamlines upgrades and limits downtime
- A versatile tri-mount design allows equipment to be added or exchanged as technologies evolve, reducing future construction costs
- Compatible with all Maquet Surgical Lights, cameras, and flat screen holders

The hygienic solution

- Satelite is designed not to obstruct high air flow systems thereby minimizing turbulence over the surgical site
- Sleek and rounded surfaces are easy to clean and disinfect

Maquet Volista

Product range

Getinge products streamline data management, improving access and efficiency to help you make better clinical decisions.

Multimedia equipment

Single / Double[1] Getinge Flat Screen Holder
With the flat screen holder, one or two flat screens can be mounted where they're most needed – close to the surgeon.

Full HD cameras
HD images and videos can be shared instantly and with no visible latency. Share best practices among surgeons, or document procedures for risk management with full HD clarity.

Full HD cameras (wired[2] and wireless)

LMD[2]

Quick Lock System
The tool-free system allows full HD cameras and the LMD system to be quickly and easily connected and disconnected to be moved between surgical suites. The Quick Lock System minimizes the setup time between procedures, and maximizes use of cameras throughout the surgical suite.

1 Available only via Satelite equipment
2 Available only on Volista StandOP

Control Panels

Intuitive touchscreen interface

Touchscreen

Capacitive wall keypad[3]

Lighthead keypad

Suspension arms

Maquet SB suspension[3] : affordable suspension system that is lightweight and flexible.

Maquet SA suspension[4]: increased load limits and designed for HD wired video camera (optional).

Maquet Satelite System[5]: versatile and open for future requirements.

Maquet Rolite: mobile system, available wherever and whenever you want.

3 Available only with Volista Access
4 Available only with Volista StandOP
5 Available with both Volista Access and StandOP (3rd cupola only possible with Volista StandOP)

Maquet Volista

Technical data

Optical characteristics	Maquet Volista StandOP		Maquet Volista Access	
Lighthead	400	600	400	600
Illumination (lx)	160,000		160,000	
Dimming range (%)	6 steps with eye sensitivity response		6 steps with eye sensitivity response	
Light patch diameter (cm / inch)	20–25 / 7.9–9.8		20–25 / 7.9–9.8	
Depth of illumination at 60% (cm / inch)	50 / 19.7		50 / 19.7	
Color temperature (K)	Fixed: 3,900 Adjustable: (3 levels) 3,900–4,500–5,100		Fixed: 4,300	
Volista VisioNIR Suitable with NIR cameras	In option		n/a	
Color rendering index (Ra)	95		95	
Irradiance at nominal illuminance (W/m²)	< 500		< 500	
LED life time (h)	> 60,000*		> 60,000*	
Ambient light	Available		Available	

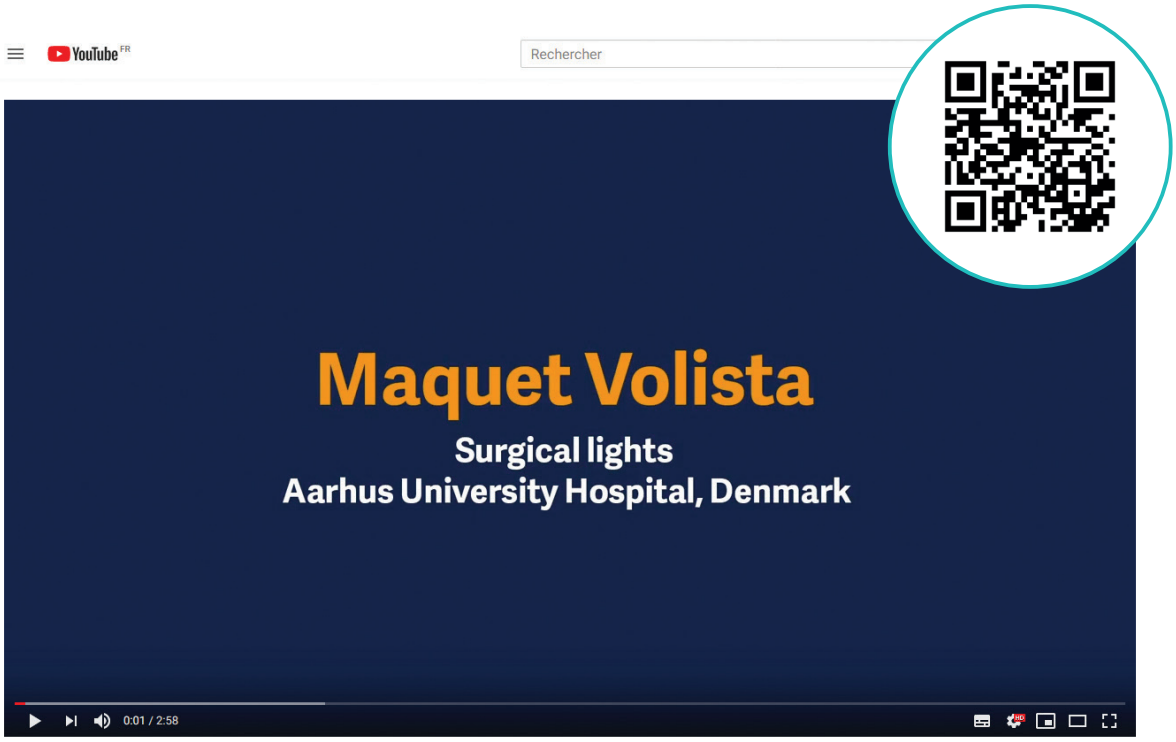
Shadow dilution	Maquet Volista StandOP**		Maquet Volista Access	
Lighthead	400	600	400	600
With two masks	50%	58%	45%	50%
With one lateral mask	77%	86%	71%	75%
Additional options	AIM, LMD		no	

Full HD cameras	Wired***	Wireless
Signal system	1080i / 1080p	1080p
Number of pixels (megapixels)	2.12	2.12
Zoom range	Zoom 42x	Zoom 42x
Video signal outputs	2 x 3G - SDI	HDMI 1.4

* In nominal mode
** With LMD (Luminance Management Device) and AIM (Automatic Illumination Management)
*** Only on Volista StandOP

Customer testimonial

Discover how Maquet Volista has improved Aarhus University Hospital (Denmark)'s surgical procedures: https://www.youtube.com/watch?v=U9A7ZBNiYAo



Getinge 360° Services

– caring for those who care

Getinge offers services and expertise to improve workflows, equipment uptime, staff and patient satisfaction. Getinge provides 360-degree services – centered around your specific needs – to improve efficiency and create value throughout the entire chain of delivering healthcare. We offer you to combine your services requirements with Getinge and ensure higher quality of care, increased patient safety, equipment uptime, staff satisfaction, and optimized use of resources.

To support you in the best possible way, we offer healthcare services from every angle. Through business value creation and financial solutions, to planning and design of workflows, project implementation, staff training, digital support solutions, and equipment uptime and preventive maintenance services. All coordinated and aligned for your operational and financial goals.

References

[1] Image-Guided Surgery using Invisible Near-Infrared Light: fundamentals of Clinical Translation, S. Gioux and al. Mol Imaging. 2010 October; 9(5): 237-255

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With a firm belief that every person and community should have access to the best possible care, Getinge provides hospitals and life science institutions with products and solutions aiming to improve clinical results and optimize workflows. The offering includes products and solutions for intensive care, cardiovascular procedures, operating rooms, sterile reprocessing and life science. Getinge employs over 10,000 people worldwide and the products are sold in more than 135 countries.

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