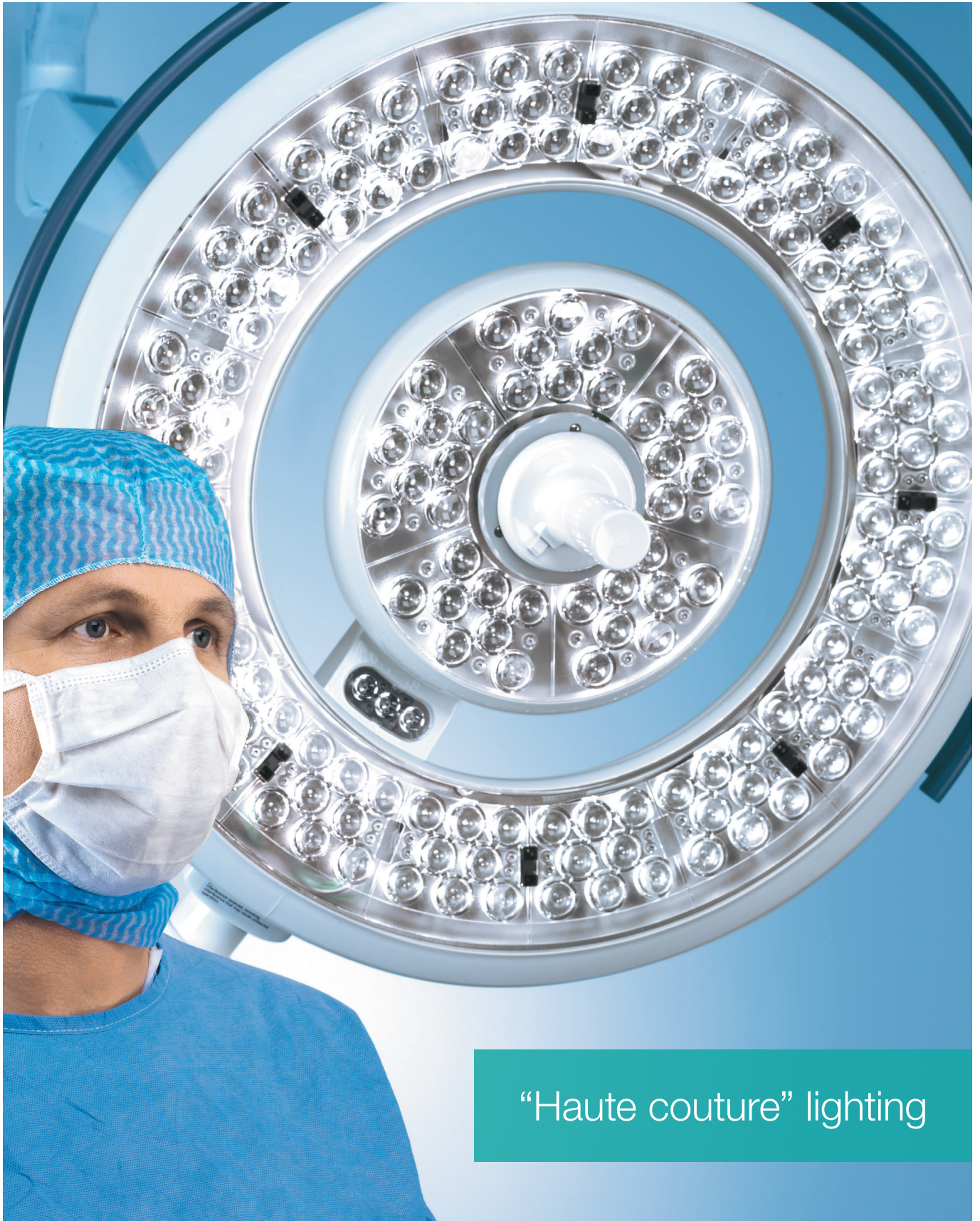


POWERLED

Operating lights

MAQUET
GETINGE GROUP



“Haute couture” lighting





POWERLED

« Haute couture » lighting

The assurance of quality: Maquet is a world-leading supplier of medical equipment for operating rooms and intensive care units. In its Surgical Workplaces, Cardiovascular and Critical Care divisions, Maquet always gives priority to the needs of healthcare staff and patients in the development of its products. For safety, efficiency and cost reduction, Maquet provides solutions to the issues facing hospitals.

Drawing on its expertise in surgical lights, operating tables, ceiling service units and multimedia solutions, Maquet focuses on standards, quality and innovation to provide optimal solutions for patients and healthcare staff. Maquet has applied its experience of lighting to enhance the POWERLED range and facilitate your surgical procedures every day. A light that is intuitively easy to use, that generates no shadows or overheating, that is dependable, ergonomic and elegant, ideally suited to your needs, *“to the extent that we often forget that it’s there while we operate”*, as a surgeon explained recently.

POWERLED

Just see

Building on years of experience and research, the new POWERLED now features the latest technical innovations to provide even better illumination performance and comfort for its users. Everything has been designed to enable the medical team to focus exclusively on the surgical operation,

without needing to worry about the lighting or spend time adjusting it. The volume of light produced by POWERLED ensures that illumination in the deepest cavities is identical to that on the surface without needing to readjust the lighthead. This volume corresponds to a permanent focus.



Experience comfort with the AIM system

Maquet's philosophy is to make light useful. The loss of illumination when certain LEDs are obstructed is automatically compensated by the AIM system (Automatic Illumination Management). *"Of course, you need to work beneath the lighthead, so our policy is not to bombard you with light to the point of blinding you, but to control illumination intelligently and usefully".*



"The light is simply perfect"



POWERLED

...Effective and constant illumination



No matter where you stand underneath the lighthead, the rounded, symmetrical shape of the lighthead and the large number of light sources ensure that you always have the same quality and quantity of illumination. This is because all the LEDs contribute to the entire light field. Taking this uniformity still further, POWERLED also ensures that the illumination remains constant over

time and guarantees the same visibility no matter how long your surgical procedure takes. The FSP system (Flux Stability Programme) applies an automatic compensation, cancelling out the drop in intensity that is inherent to LED technology and maintaining constant illumination levels. Light levels will not fluctuate or decrease while you operate, guaranteeing optimal working conditions in all circumstances.

Be prepared for the unexpected

A “boost” function, offering spare capacity, is also available to deal with any complications. Unnecessary under normal circumstances, you can boost the light intensity if conditions dictate.

POWERLED

Work confidently...

POWERLED guarantees the surgical team a dependable environment in which they can operate confidently, concentrating on the safety of the patient and medical personnel. To achieve this, illumination levels are intentionally optimised to 110,000 lux (comparable to the illumination provided by direct sunlight in summer) in order to alleviate eye strain and avoid even temporary blinding. It has been scientifically proven* that prolonged exposure to more intense light can lead to eyesight problems.

* Jordan G, Mollon JD (1997), "Adaptation of colour vision to sunlight." *Nature* 386(6621):135-6

Reality preserved

POWERLED was one of the first lighthoods to use white LEDs, the only LEDs capable of rendering natural and faithful colours. As a result, there are no coloured cast shadows that could hamper interpretation and diagnosis.



“For optimal patient protection, nothing must be allowed to disturb the surgical environment or impede the medical team’s capacity to operate”



POWERLED

...In total safety



POWERLED gives you the best possible solutions for operating conditions and patient protection. POWERLED is perfectly adapted to its environment: its smooth surfaces and “cool flow” design make it an ideal choice, totally compatible with laminar flows and conducive to perfectly sterile conditions.

Protect your patients

POWERLED fully complies with the requirements of the IEC standard, guaranteeing total safety for you and your patients. The irradiance, i.e. the radiation received per unit area, is strictly less than 500 W/m^2 . This guarantees that the light does not dry out tissue even in the most sensitive patients. You can operate in total confidence, with no additional uncontrolled risk.

POWERLED

Point & shoot



With its ergonomic handles, the lightweight lighthead is easy to grasp and manoeuvre, enabling you to position the POWERLED perfectly before each operation. The considerable light volume generated and the continually focused illumination ensure that there is no need for further adjustment. The surgical staff can be sure that they will always see clearly, optimising their concentration on the procedure. With intuitive, clear and simple controls, POWERLED is easy to adjust, making it a discreet companion to guide you safely and surely.



“In its simplicity, it remains an essential device to guide surgical actions.”



POWERLED

A solution for your specific needs

There is no such thing as a typical operating theatre or a standard configuration. With this in mind, POWERLED can be adapted completely to any environment. Three sizes of lighthead are available: PWD 300, PWD 500 and PWD 700, offering an extensive choice of combinations to meet the needs of different surgical applications. A standard or HD video option is also available for the PWD 500 and PWD

700 lighthead. A range of suspension arms, from 850 to 1,600 mm, is also available, for perfect integration particularly in hybrid operating suites, theatres with low ceilings or fitted with laminar flow systems up to 3,600 × 3,600 mm. For every constraint, the POWERLED offers a solution. All the elements of the system can be consolidated and managed easily with the OR INTEGRATION software tools.



Anticipate the future with SATELITE®

Adapting to your future needs is one of the objectives of SATELITE, the only anchor point available for combinations of up to four elements. By investing in this system today, the technical changes of tomorrow will be possible at a lower cost and with less operating theatre downtime.



An extra dimension for students

Bringing 3D into the operating theatre revolutionises video conferences, cross-disciplinary cooperation, research and learning. ORCHIDE 3D®, the first 3D high definition medical camera, offers more realistic viewing for optimal understanding and easier learning.

POWERLED

Meeting all requirements

Suspension arms



Conventional anchor system



SATELITE® system



S Suspension



Wall-mounted suspension



ROLITE®



ROLITE Classic®

Lightheads



Single or double fork POWERLED 700



Single or double fork POWERLED 500



Single or double fork POWERLED 300

Multimedia equipment



Single flat screen



Double flat screen



ORCHIDE® HD camera



ORCHIDE 3D® HD

POWERLED

Performance that doesn't cost the earth



Maquet is actively committed to a sustainable development policy

that will respect and preserve our environment. Our aim is to implement processes and use technologies that have a low impact on the environment and ecosystems. A number of tangible actions in the design, development and manufacturing of POWERLED reflect this approach. Ninety percent of POWERLED is made from aluminium, a material that can be recycled indefinitely, reducing the usage of raw materials. The compact packaging reduces the amount of materials and waste, and optimised transport keeps CO₂ emissions to a minimum.

The use of LED light sources cuts energy consumption considerably, and makes further savings through their long service life and minimal maintenance costs.

POWERLED embodies GETINGE's environmental policy, which aims to minimise the environmental impact of its products by using sustainable resources for product development and manufacturing processes.

Technical data

Optical and photometric specifications	POWERLED 700	POWERLED 500	POWERLED 300
Illumination (lx)	> 110,000	> 110,000	> 110,000
Boost function	160,000	160,000	160,000
AIM™ function*	Yes	No	No
Field diameter** (cm/inch)	26/10.2	24/9.4	17/6.7
Depth of the volume of light L1 + L2 (cm/inch)	120/47.2	120/47.2	100/39.4
Colour rendering index (CRI) (Ra)	95	95	95
Colour temperature (K)	3,800	3,800	3,800
Radiating energy (average) (mW/m ² .lx)	3.6	3.6	3.6

Ambient lighting specifications	POWERLED 700	POWERLED 500	POWERLED 300
Illumination (lx)	< 500	< 500	< 500

Electrical and mechanical specifications	POWERLED 700	POWERLED 500	POWERLED 300
Lighthouse power consumption (W)	185	140	60
Service life (h)	> 60,000	> 60,000	> 60,000

* AIM : Patent EP 143 39 98, granted on 05/11/2005

** Field diameter given for 10% of central illumination 1 m under the cupola. All values measured according to IEC 60601-2-41.

Maquet S.A.S. Quality System is certified according to:
ISO 9001:2008
NF EN ISO 13485:2012
NF EN ISO 14001:2004

MAQUET
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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, interventional cardiology and intensive care.