

TRUMPF | HELION®

Halogen surgical lights
a cool winner



INNOVATIONS FOR PATIENT CARE

TRUMPF



Surgical lights from TRUMPF – system solutions for every application

HELION – state-of-the-art halogen technology.

Classic halogen technology for surgical lights with an active all-round service. Developed down to the smallest detail by TRUMPF. Moderate costs with a light intensity of up to 140,000 lux. Extremely bright light, yet pleasantly cold. Reliable and versatile, just how you need it, in a range of designs with different illuminance levels – brilliant whatever the type. The perfect system addition to our ceiling pendants and operating tables.

Top technology

HELION – halogen technology in the highest perfection

Maximum lighting intensity

With minimum heat development

Complete light safety

Due to automatic bulb change

Low running costs

For an optimum cost-benefit ratio

Individual camera and video systems

Top quality that will not date

Customer-specific overall solutions

In combination with ceiling pendants – all from a single source





Optimum light – for every room, every intervention and every surgeon

Even more versatile thanks to a wide range of models.

The HELION family consists of three models in different designs – ceiling lights used singly or in a combination of two or three – mobile OR and examination lights (also battery-powered) – wall lights.

Maximum lighting intensity.

HELION L, our top model, offers 140,000 lux with a 16 cm light field diameter, minimum heat development and low running costs. For you this means clear visibility with absolute cost-effectiveness.

Brilliance in depth.

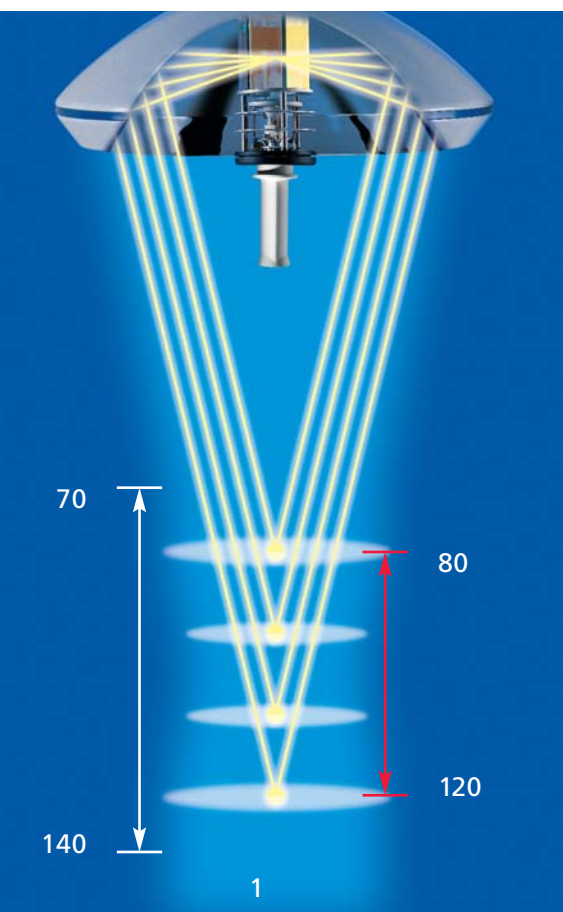
The computer-calculated aluminium parabolic reflector produces a large number of focus points on superimposed levels. This results in a multifocus column which directs homogeneous light deep into the wound. Refocusing during the operation is no longer necessary.

Seeing naturally.

HELION lights create a natural white light with a colour temperature of 4,300 K – the temperature of daylight on a bright day. In the operating room this means that colours appear natural and tissue can easily be seen in detail. As a result the surgeon and his OR team no longer suffer from vision fatigue.

Extra comfort.

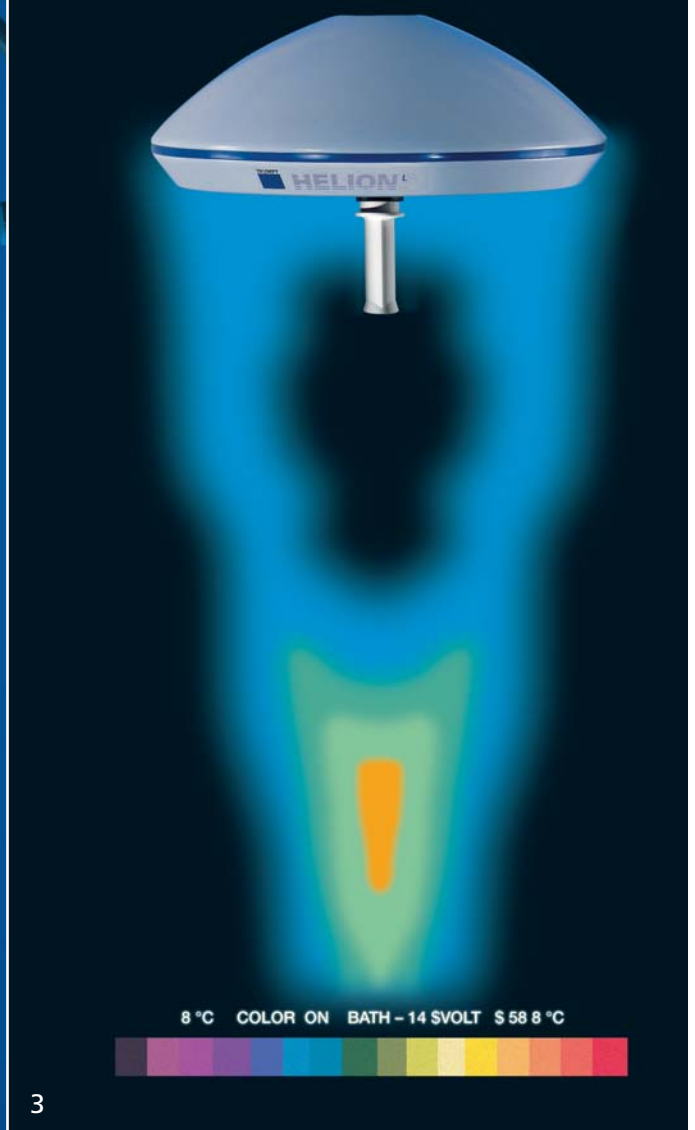
Brightness control within a wide field; on/off switch on the operating panel on the cardanic system of the light housing or on the optional operating wall panel; infinitely variable focusing over sterile handle, automatic voltage control for constant illuminance – many details to ensure optimum comfort when you are working.



1. Unsurpassed light homogeneity on surface and in depth: With multifocus column refocusing is no longer necessary.



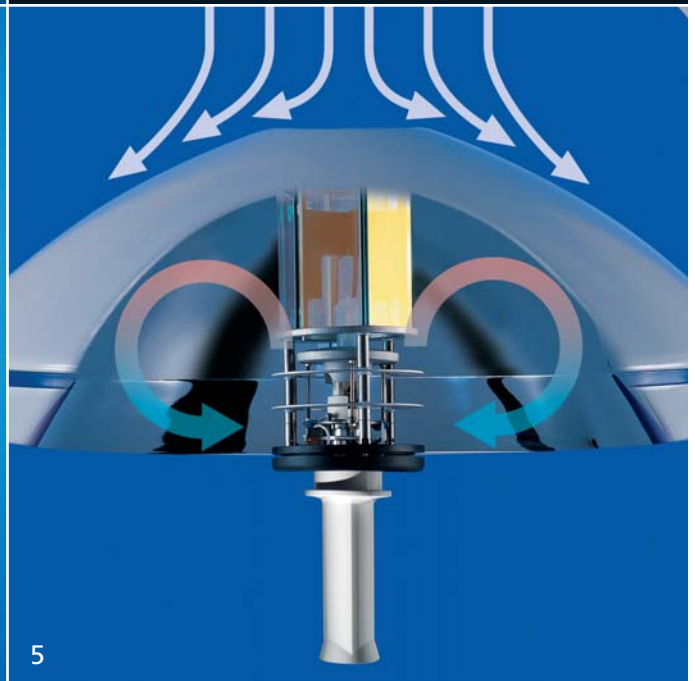
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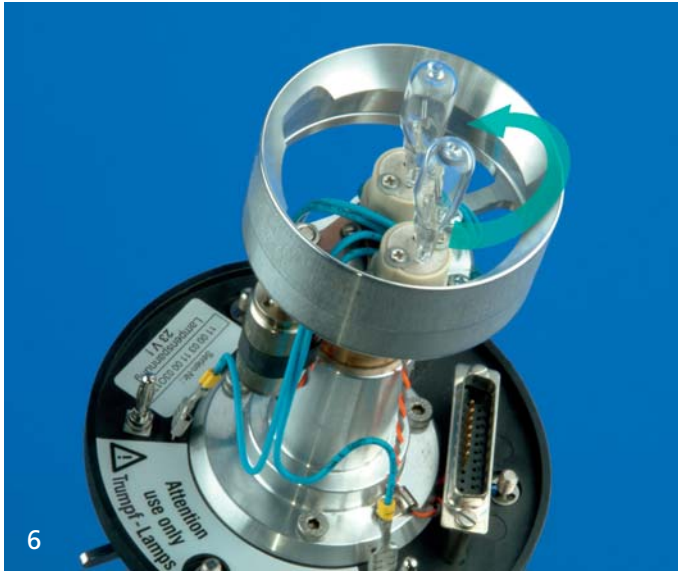


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2. Avoidance of hard shadows.

3. Pleasant working temperature without drying out the wound.

4.15. Aerodynamic design and intelligent thermal current in the light head avoid turbulences.



6. Fail-safe thanks to spare bulb.



7. Smooth surfaces with powder-paint finish and disinfectant-resistant materials for perfect hygiene.

No annoying shadow.

Unlike multi-reflector light systems the large mirror reflectors of the HELION provide an enormous effective reflex surface. They ensure that obstacles are irradiated from below without any problems. The parabolic reflector prevents hard shadows – they remain contour shadows. This means that there are no black zones, and the operating area appears plastic to the deepest level.

Cold light.

Due to an integrated infrared filter, heat development underneath the light housing is strongly restricted. Under a HELION light the air around the surgeon's head only heats up by 2 °C, and max. 10 °C in the wound area.

Flawless hygiene.

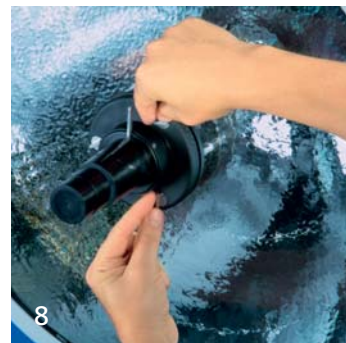
The aerodynamically designed light housing offers ideal flow characteristics and favourable thermal current system. With its flat closed form it is ideal for use under laminar flow ceilings: the air flow is only disrupted to a minimum extent. Smooth surfaces without corners and edges as well as disinfectant-resistant materials meet all demands of hygiene.

Fail-safe: the optical light system.

Permanent light safety is ensured by the halogen bulb and automatic servomotor-driven changeover to the spare bulb. An infrared filter keeps both the light and the bulb cool and provides for a pleasant colour temperature of 4,300 K.

Ergonomic operation.

HELION guarantees an unhindered workflow: simple direct positioning, cardanic suspension, stop-free mobility and absolute accuracy of position. The detachable handle provides for sterile operation.



8./9. Simple bulb change.





Communicative TV solutions for documentation, teaching and consultation



1. Complete communication solution: integrated CCD camera, TFT monitor on separate carrying arm, wall panel control.
2. Operating wall panel for controlling lights and camera.

Razor-sharp live transmissions

In the field of video technology you can select the solution you need: HELION as a complete equipment solution or combined with cameras and TV systems. When selecting the 1 CCD camera one decides according to ones requirements: a fixed-focus camera for detailed shots or a camera with remote control with 25-fold zoom, high light intensity and still image function, as well as optional automatic or manual control of image sharpness and brightness – both in the sterile handle of the light. Particularly cost-

effective: you may get your light with a camera facility – and add the TV system later.

Integration of TFT monitors.

Easy connection of TFT monitors to separate carrying arm with VESA interface.

Comfortable ergonomic operation.

Full turning capacity in all joints – remote control of all camera functions: this is convenient when using the benefits of telemedicine. Remote control is provided on the operating wall panel. The video and control signals are transmitted via a multiple slipping

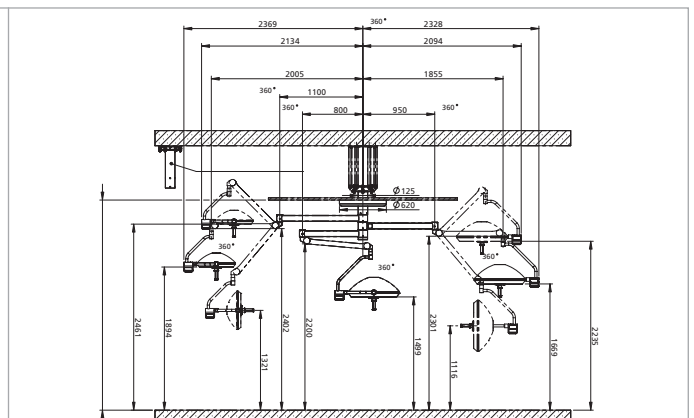
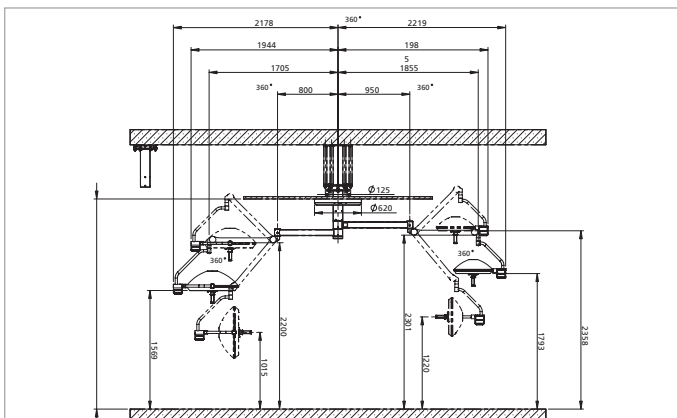
configuration – this gives your TV system excellent protection from failure.





Application-related configurations.

One can put together all kinds of different suspended light systems depending on ones individual requirements. Or one can combine a light with our ceiling pendants – and so take advantage of our service from a single source.



Type	On/off switch	Spare lamp indicator	Dimming*	Light field adjustment**	Fixed-focus camera**	Camera with remote control**	Light wall operation (optional)	Stand
HELION S	+	-	-	-	-	-	-	+
HELION M	+	+	-	+	+	+	-	+
HELION L	+	+	-	+	+	+	-	+
HELION M plus	+	+	+	+	+	+	+	+
HELION L plus	+	+	+	+	+	+	+	+

* on cardanic system of lamp
 ** on sterile handle

Technical data	HELION L	HELION M	HELION S
Central illuminance E_c at 1 m working distance	50,000 – 140,000 lux	40,000 – 90,000 lux	40,000 lux
Focusable light-field size d10 at 1 m distance	160 – 250 mm	140 – 200 mm	180 mm
Colour temperature	4,300 K	4,300 K	4,300 K
Colour reproduction index Ra	93	93	93
Modelling: residual light with tube	100 %	100 %	no norm req.
Modelling: residual light with tube and 2 screens	41 %	41 %	no norm req.
Nominal wattage	150 W	120 W	50 W
Effective bulb service life	600 – 1,000 h	600 – 1,000 h	2,000 h
Diameter of lamp housing	700 mm	500 mm	325 mm

TRUMPF

Medizin Systeme GmbH + Co. KG

Benzstrasse 26
82178 Puchheim
Germany
Telephone +49 (0) 89 / 8 09 07-0
Telefax +49 (0) 89 / 8 09 07-20
e-mail info@de.trumpf-med.com
www.trumpf-med.com

TRUMPF Medizin Systeme GmbH

Carl-Zeiss-Strasse 5
07318 Saalfeld
Germany
Telephone +49 (0) 36 71 / 5 86-0
Telefax +49 (0) 36 71 / 5 86-1 65
e-mail info@de.trumpf-med.com
www.trumpf-med.com

TRUMPF MED ITALIA s.r.l.

Via C. Battisti, 31/C
35010 Limena – PD
Italy
Telephone +39 0 49 - 8 84 38 00
Telefax +39 0 49 - 8 84 11 24
e-mail areaclienti@it.trumpf-med.com
www.it.trumpf-med.com

TRUMPF AMSA SAS

146, Bd Charcot
BP 477
63013 Clermont-Ferrand cedex 1
France
Telephone +33 (0) 4 73 19 50 50
Telefax +33 (0) 4 73 37 29 31
e-mail trumpf-amsa@trumpf-amsa.com
www.fr.trumpf-med.com

TRUMPF Medical Systems Ltd.

The Granary Pinkney Park
Malmesbury · Wiltshire · SN16 0NX
Great Britain
Telephone +44 (0) 16 66 84 10 01
Telefax +44 (0) 16 66 84 10 08
e-mail info@trumpf-med.co.uk
www.uk.trumpf-med.com

TRUMPF Medical Systems, Inc.

415 Jessen Lane
Charleston, SC 29492
USA
Telephone +1 (843) 5 34 06 06
Telefax +1 (843) 5 34 02 06
e-mail info@us.trumpf-med.com
www.us.trumpf-med.com

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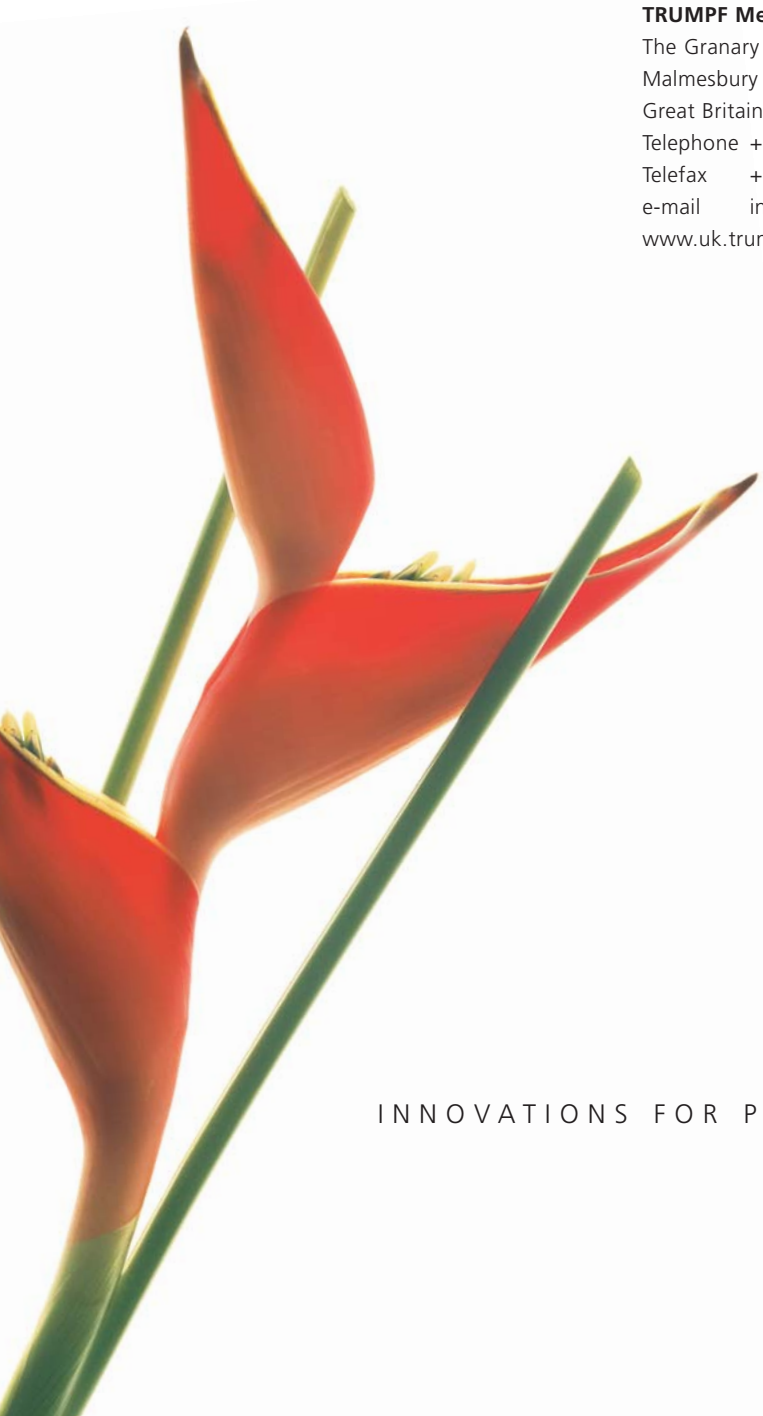
**Medizin Systeme GmbH & Co. KG
(Singapore)**

3791 Jalan Bukit Merah #09-21
Singapore 159471
Telephone +65 62 72 - 78 68
Telefax +65 62 75 - 78 68
e-mail sales@sg.trumpf-med.com
www.sg.trumpf-med.com

TRUMPF

Medical Systems Ltd.

Shanghai Representative Office
11H, Century Ba-Shi Building
398 Huai Hai Zhong Road
Shanghai 200020
P.R. China
Telephone +86 21 63 85 10 38
Telefax +86 21 63 85 16 60
e-mail info@cn.trumpf-med.com
www.trumpf-med.com



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