

Enlightening Design by **ADMECO**



Lux



Surgical Lights

SWISS MADE 

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For major and minor surgery and as an examination lamp in:

- **Operating rooms**
 - **Out- / Inpatients**
 - **Emergency wards**
 - **Examination rooms**
 - **Veterinary practices**



Versatile and compact design

- Air stream optimized for laminar-flow compatibility
- Light, flexible and easy positioning
- Removable, sterilizable handles
- Easy replacement of Halogen/Xenon bulbs
- Uniform illumination accross working area
- Color correction for visual comfort
- Shadow-free in operation field
- Very sturdy construction
- Hermetically sealed

High performance

- High Lux output/intensity
- Deep cavity penetration
- Sharply focused, high intensity light pattern
- Heat reflected upwards and transmitted through the IR-transmitter
- Dimmable lights
- High lux up to 4 x 150000 lux

The comprehensive ADMECO-Lux program

Ceiling

- Individual lights 2 beams, 1-branch „SOLO“, not focusable
- Individual lights 3-6 beams, 1-branch „SOLO“, focusable
- Ceiling hanging surgical lights, 2-branches „DUO“, focusable
- Ceiling hanging surgical lights, max. 4-branches „MULTI“, focusable

Wall

- Individual lights 2 beams, not focusable
- Individual lights 3-6 beams, focusable

Mobile

- Individual lights 1-2 beams, not focusable
- Individual lights 3-5 beams, focusable
- Optional with emergency power supply (as in picture)



ADMECO-Lux 6SI in detail

IR-Transmitter

Because of the infrared permeable hud of the lamp, most of the heat is exhausted upwards.

The result is a cooler working field for the surgeons.

Diameter

The ADMECO-Lux is specially designed for laminar-flow outlets. The very small diameter of only 8cm and the stream optimized shape of the light heads are disturbing the airflow at a minimum.

Focus- / Positioning

The lamp can be positioned and focused fast and easily with the swivelling sterilizable handle.



Easily maneuverable with two centre-close joints

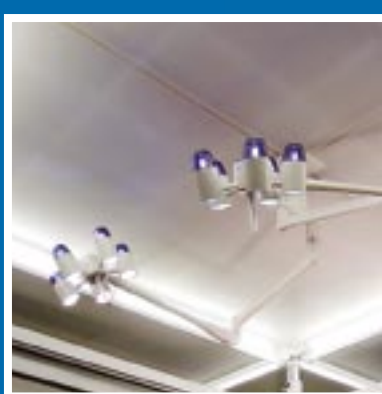
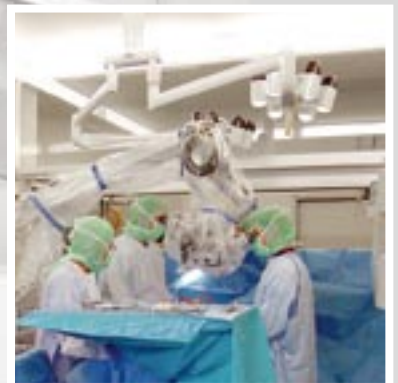


The rotation points A and B of the ADMECO-Lux OT-lights are close to the centre. This creates an extreme mobility almost comparable with a ball-joint. With fingertip light manipulation ADMECO-Lux lamps can be positioned in the appropriate angle.



Enlightening Design

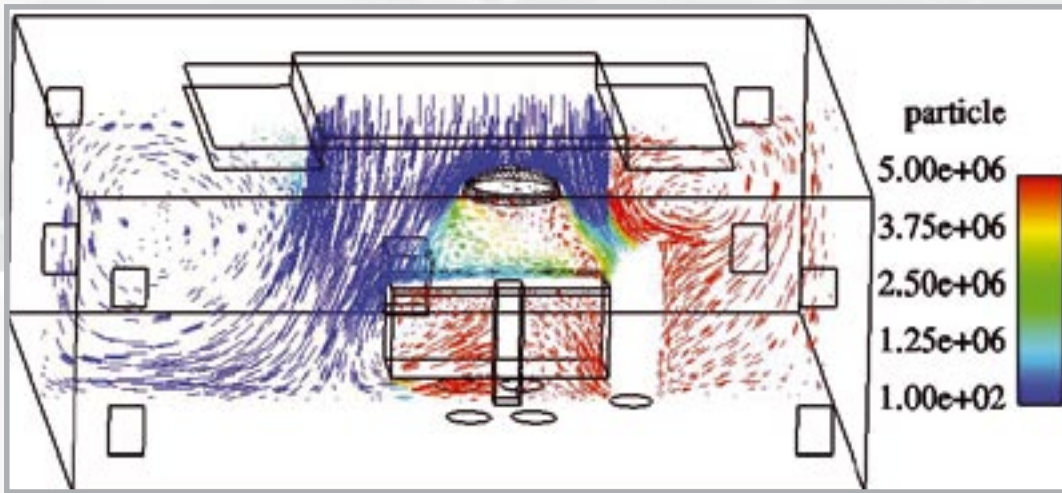
- ***Innovative***
- ***High Quality***
- ***High Performance***



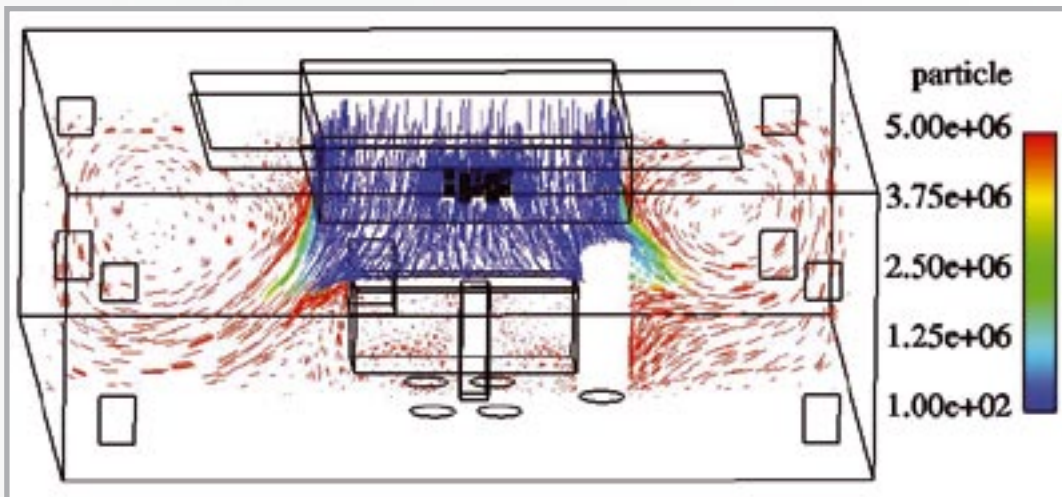
Airborne particle concentration control for an operating room

Authors: Air & Climate Group, Dr. Dipl.-Ing. ETH Alfred Moser, Dr. Yunlong Liu, ETH Zürich

“The standard case is from a real situation except that persons around the table are represented by the dummies. The 6-lamp light and the big light are all placed in the same position, the big light is a dish-shaped light with a diameter of about 0.9m (CFD* 1), the 6-lamp light is made up of six 0.08m-diameter small lamps (CFD 2).”



CFD 1: standard large dish shaped lamp



CFD 2: 6-lamp light (ADMECO 6SI)

“The large lamp will disturb the flow field so much that the particle concentration above the table is seriously affected. CFD 1 shows the airflow vectors in the center plane of the table. It is obvious that this large lamp is not suitable to be placed between the air supply inlet and the operating table.”

* CFD = Computational Fluid Dynamics

Surgical light with color video system



The system includes:

- Color video camera integrated into a casing which can be attached to an ADMECO-Lux surgical light or a separate arm. (ADMECO-Lux models 3SI, 4SI and 5SI) .
- Control unit incl. interference filter

Color video camera

The color video system designed to accompany the ADMECO-Lux surgical lights needs no additional, visible cables. The system is optically integrated into the light design. The video camera is built into a casing which is then fastened to the ADMECO-Lux surgical light or to an independent arm.

By means of the sterilisable handle, the camera can be turned within the casing and the image position corrected as necessary. The system is simple to install and easy to maintain.

Control unit incl. interference filter

The control unit of the color video camera allows you to adjust the iris, zoom, focus and white balance.

A green LED by the auto-iris, auto-focus or white balance buttons lights up when the function is activated.

Color video system technical data

Camera	1/4" CCD-Chip Sony (10x zoom)
Scanning rate	2:1
Pixel	752 (H) x 582 (V)
Horizontal frequency	15652 Hz
Image frequency	50 Hz
Auto shutter	1/3 - 1/10000 s; 20 steps
Minimum light	4 lux
Fuse (electronic)	400 mA T (230V)
Focusing range zoom lens	4.2 to 42 mm
White balance	automatic
Fitting	in a casing suitable for the ADMECO-Lux surgical light

Control unit technical data

TV standard	PAL (alternatively NTSC)
Resolution	> 460 (H) TV Lines x > 400 (V); TV Lines
Signal output	FBAS, Y/C (S-VHS, Hi8)
Video output	yes
Power supply	230V, 50-60 Hz
Humidity	< 90% rF
Ambient temperature	0°C to +50°C

(Right to change specifications reserved)

Technical data

Focusable surgical lights



criteria	model	6SI	5SI	4SI	3SI
Illumination intensity at 1m in lux		≈ 150'000	≈ 125'000	≈ 100'000	≈ 75'000
Field size at 1m in cm (inches)		18 - 27 (7.1 - 10.6)	18 - 27 (7.1 - 10.6)	18 - 27 (7.1 - 10.6)	18 - 27 (7.1 - 10.6)
Color temperature (K)		≈ 4'300 K ± 300 K	≈ 4'300 K ± 300 K	≈ 4'300 K ± 300 K	≈ 4'300 K ± 300 K
Working distance in cm (inches)		70 - 200 (27 - 79)	70 - 200 (27 - 79)	70 - 200 (27 - 79)	70 - 200 (27 - 79)
Color rendering index		93	93	93	93
Focal length in cm (inches)		60 (23.6)	60 (23.6)	60 (23.6)	60 (23.6)
Temperature increase in wound area at 100 000 lux and 1m in C° (F)		10 (50)	10 (50)	10 (50)	10 (50)
Focus adjustable by sterilizable handle		yes	yes	yes	yes
Easy positioning by sterilizable handle		yes	yes	yes	yes
Dimmer with continuous light regulation		yes	yes	yes	yes
Support		cardanic	cardanic	cardanic	cardanic
Number of light heads and bulbs for each model		6	5	4	3
Electric power (Watt)		300	250	200	150
Diameter of one beam in cm (inches)		8 (3.1)	8 (3.1)	8 (3.1)	8 (3.1)
Diameter of light heads circle in cm (inches) (External diameter of the surgical light)		40 (15.7)	40 (15.7)	39 (15.4)	39 (15.4)
Flow obstructing surface in cm ²		380	330	280	230
Laminar-flow Index (Leenemann)		5.2	4.6	4	3.4
Weight in kg (lbs)		5.2 (11.4)	4.6 (10.1)	4.0 (8.8)	3.4 (7.5)

Standard for all models:

- In - depth illumination > 0.9 (according to British Standard 4533 Section 103.2 1986)
- Average lifetime of bulbs at max. voltage 22.8V: 1000 hours
- Each light head is equipped with 2 O-rings as a water- and dust-tight seal
- Bulbs: Special Halogen/Xenon bulbs 50 Watt, 22.8 Volt with integrated dichroic (cool light) reflector
(1 SIFF: Halogen/Xenon bulb 25 Watt, 13.8 Volt with integrated dichroic (cool light) reflector)
- Each light head is equipped with 2 lenses, an interferential and a color correction filter
- Ceiling support tube diameter 50 - 95mm to optimize the laminar-flow surface

(Right to change specifications reserved)

Non focusable surgical lights



criteria	model	2SIFF	1SIFF
Illumination intensity at 1m in lux		≈ 50'000	≈ 25'000 (0.8 m)
Field size at 1m in cm (inches)		20 (7.8)	20 (7.8)
Color temperature (K)		≈ 4'300 K ± 300 K	≈ 4'300 K ± 300 K
Working distance in cm (inches)		70 - 120 (27 - 47)	70 - 120 (27 - 47)
Color rendering index		93	93
Focal length in cm (inches)		60 (23.6)	60 (23.6)
Temperature increase in wound area at 100 000 lux and 1m in C° (F)		10 (50)	10 (50)
Focus adjustable by sterilizable handle		no	no
Easy positioning by sterilizable handle		yes	yes
Dimmer with continuous light regulation		yes	yes
Support		cardanic	no
Number of light heads and bulbs for each model		2	1
Electric power (Watt)		100	25
Line voltage		22.8	13.8
Diameter of one beam in cm (inches)		8 (3.1)	8 (3.1)
Diameter of lights heads circle in cm (inches) (External-diameter of the surgical light)		28 (11)	8 (3.1)
Flow obstructing surface in cm ²		130	50
Laminar-flow Index (Leenemann)		7.4	5.2
Weight in kg (lbs)		2.4 (5.4)	0.8 (1.8)

Worldwide references

We deliver ADMECO-Lux surgical lights to satisfied customers all over the world:



Switzerland:

Kreisspital Freiamt Muri	3 x 5SI/5SI	6 x 2SIFF-D
Klinik Permanence Bern	2 x 5SI/5SI	
Lindenhof Spital Bern	1 x 6SI/6SI	1 x 6SI mobile
Ars Medica Clinic Gravesano	2 x 6SI/6SI	
Hôpital Cantonal Fribourg	2 x 6SI/6SI	2 x 4SI
	11 x 2SIFF-D	2 x 3SIFF/3SIFF
GZO Spital Wetzikon	4 x 6SI/6SI/5SI	1 x 5SI/5SI
	7 x 2SIFF-D	2 x 3SI-D



Germany:

St. Josef Krankenhaus Moers	2 x 6SI/3SI	1 x 6SI/6SI
Universitätsklinik Freiburg	4 x 6SI/5SI	
Klinik Fleetinsel Hamburg	1 x 5SI/5SIC	
Städt. Kliniken Frankfurt	5 x 4SI/4SI/4SI	
Marienhospital Steinfurt	3 x 6SI/6SI	
Ev. Krankenhaus Seelow	2 x 6SI/4SI	1 x 2SIFF



Italy:

Tor Vergata Roma	6 x 6SI/6SI	
Luigi Palazzolo Bergamo	1 x 6SI/5SI-D	
Casa di Cura Columbus Roma	2 x 6SI/6SI	
Ospedale Le Torrette Ancona	14 x 6SI/5SI	4 x 6SI/6SI/5SI
Casa di Cura Regina Albano L.	4 x 6SI/5SI	
Ospedale Fl. del Ponte Varese	2 x 6SI/6SI	6 x 6SI



Scandinavia:

Hospital Ringkøbing	1 x 6SI/5SI	
Kobenhavens Sygehus Herlev	2 x 6SI/6SI	
Landssygehuset Tórshavn	5 x 6SI/5SI	2 x 4SI/4SI
Private Hospital Trondheim	1 x 6SI/5SI	
Middlefart Hospital	1 x 6SI/5SI	1 x 4SI
Ortopediska Huset Stockholm	1 x 5SI/5SI/5SI	



Russia:

St. Petersburg	3 x 6SI/3SI
Nizneartovsk Hospital	4 x 6SI/3SI
Surgut Hospital	8 x 6SI/3SI
Hospital Novosibirsk	12 x 5SI/3SI
Zentral Bank Klinik Moskau	1 x 6SI/3SI

... and many more ...

ADMECO AG

Turbistrasse 17
CH-6281 Hochdorf
Switzerland

phone 0041 41 914 70 30

fax 0041 41 910 61 19

email info@admeco.ch

web www.admeco.com



ADMECO-Lux® 5SI

**Compact surgical light systems,
specially optimized for laminar-flow ceilings**

Air & Climate , ETH Zürich: Airborne particle concentration control for an operating room:

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It is obvious that a large lamp is not suitable to be placed between an air supply inlet and an operating table.”:

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Designed and made in Switzerland by

ADMECO™

