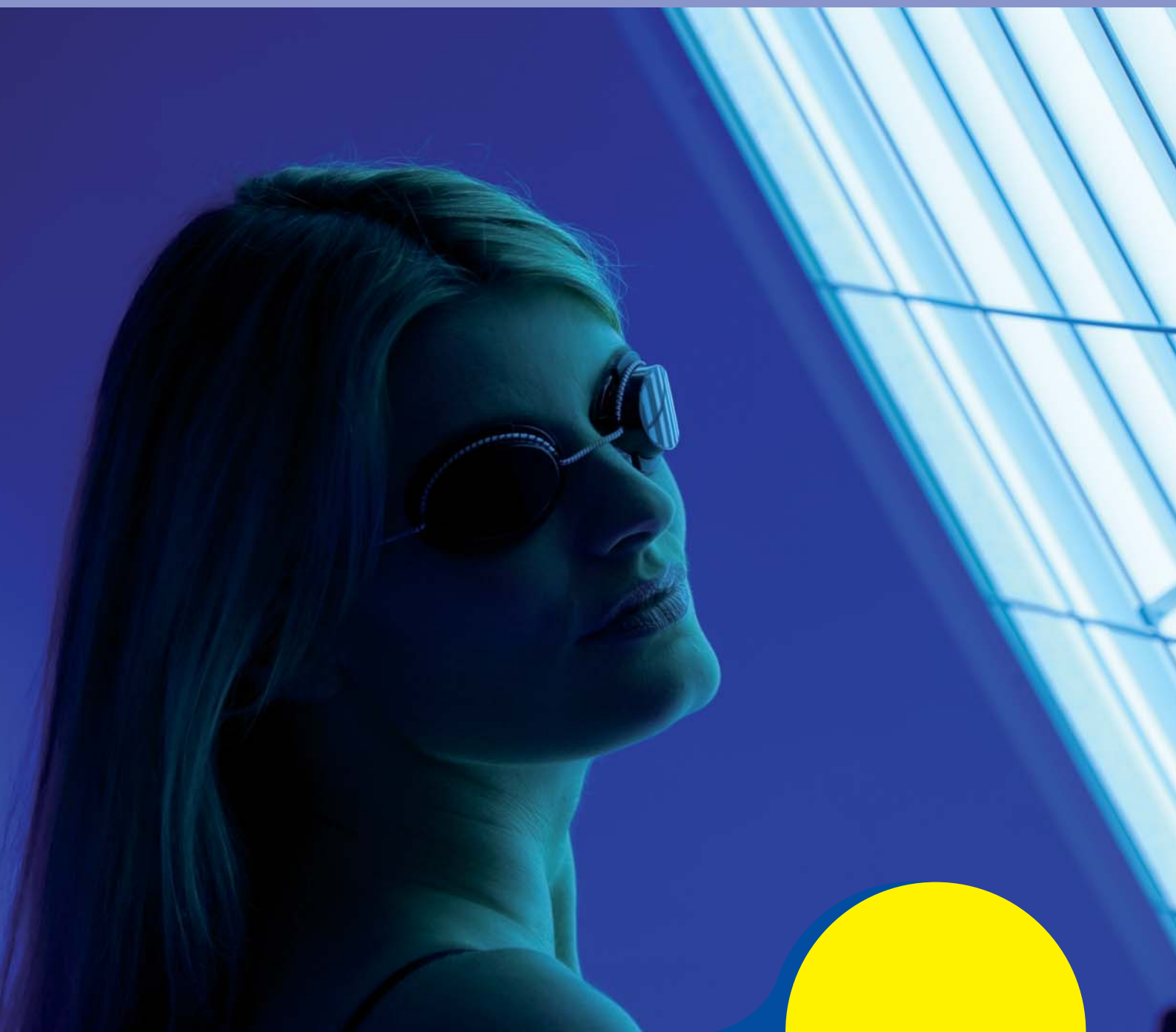


# medisun<sup>®</sup>

the new quality standard in your practice



**Schulze & Böhm**  
**medisun.de**



# 02

## History

### 20 Years of innovation



Since 20 years, we – the team at Schulze & Böhm GmbH – have distributed innovative medical technology. We developed and successfully established the first computer controlled UV booth world-wide in 1989, together with the Dermatological University Clinic of Cologne. As this product overview will show you, this was followed by many other product developments in the field of phototherapy. medisun® products excel in terms of high quality and a long service life.

The medisun® brand stands for innovation and reliable technology throughout Europe. Our extensive product range allows us to offer you nearly everything from a single provider at favourable conditions. In the future, our motivated team will continue to engage itself to offer you new products and the best service.

Dipl.-Ing. Andreas Schulze  
General manager

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# 04

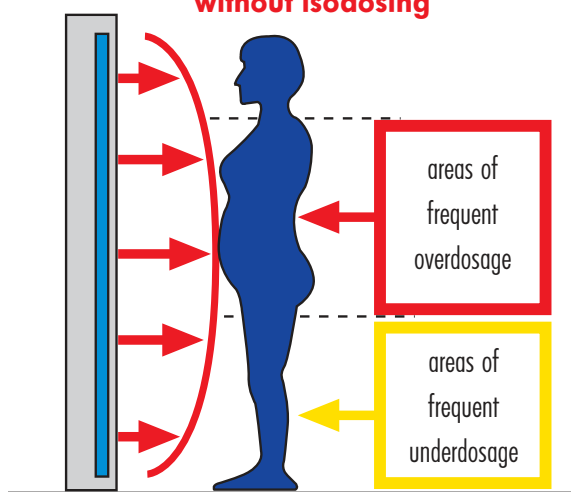
## medisun 6311 ISO Premium-High-End-Cabin



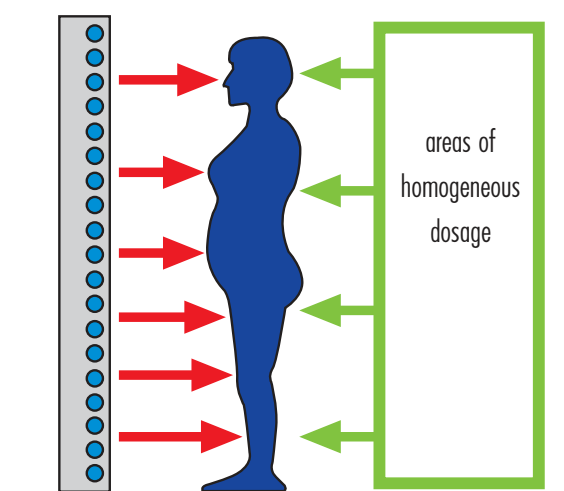
medisun® 6311 ISO sets a new high-end standard for the treatment of all UV sensitive skin disorders. The horizontal arrangement of the UVB-311nm lamps in combination with the individual computer controls for individual lamp groups enables a previously unseen dosage precision, safety and high user comfort.

This highly precise dosing procedure is called isodosing. Isodosing was developed and successfully tested by us in cooperation with the Dermatological Clinic at the University of Cologne.

### Vertical lamp arrangement - without isodosing



### Horizontal lamp arrangement makes isodosing possible



## medisun® - ISODOSING - A convincing strategy!

The major advantages of medisun® isodosing are as follows:

- the homogeneous dosing effect on the skin, independently of the patient's body stature
- no partial erythemas, therefore no pausing or reduction of the dosage required
- no more partial underdoses, therefore better therapeutic success
- multifunctional partial irradiation options for every possible skin area, MED dependent therapy plans
- Differential dosing, that is, differing dosages within one exposure process
- Treatment while sitting is possible, e.g. for older or physically disabled patients

The partial irradiation options make some additional partial irradiation devices superfluous.

This saves costs and space/ For the patient, it means a shorter duration of therapy.

### Taking the distance between the skin and the light source into account

medisun® isodosing has been used for many years in university clinics and dermatological practices and is thus far unsurpassed in the field of UV whole body therapy.

**medisun® - the new quality standard in your practice**

### Master dose and additional dose

Each patient and all signs of illness are individual and unique. The UV booth should be just as individually adjustable in order to guarantee individualised therapy. There are skin areas which are more severely, less severely or not at all affected. In customary booths with vertical tubes, it is not possible to make the required individual settings. Here, it is always necessary to perform one or more partial exposures after the whole body exposure, which is very time and work intensive and requires further irradiation units and space. The control of medisun 6311 ISO enables more individualised dosing through the controls of many individual lamp groups. For instance, you can select a master dose for all skin areas and selectively choose an additional dose for particularly affected skin areas. The intelligent computer controls nevertheless transform the specifications into an exposure process by individually calculating and controlling the exposure time for each lamp group.

### Irradiation while seated

There are patients who do not want to be irradiated while standing for various reasons, for instance because there is a physical disability or another problem. There is often neither space nor the financial framework for an additional lie-down UV bed in the dermatological practice, since economic operation would surely not be possible for this patient group. medisun 6311 ISO enables precisely dosable treatment in sitting as well. The asymmetric distances of the skin areas to the UV lamps, specifically while sitting, are taken into account. For instance, the legs are closer to the lamps in the front while sitting, but the backs of the legs are farther away from the rear lamps. The special medisun software functions guarantees that all main areas can be treated with the greatest possible precision.

### Differential dosing

With medisun 6311 ISO, you can also directly dose each lamp group differently if required.

Example of psoriasis:

Area	Appearance	Dosage
Upper body	moderately affected	300 milliJoule/cm <sup>2</sup> UVB-311
Legs, lower legs	severely affected	400 milliJoule/cm <sup>2</sup> UVB-311
Face	not affected	Lamps shut off in this area

## Partial irradiation

With medisun 6311 ISO, you can do without many customary partial irradiation units, which saves time and money. You can also perform partial irradiations with individual lamp groups by simply selecting the desired skin area and dosing as desired. The medisun operating programme automatically assigns the desired groups of lamps and automatically calculates the irradiation time.

Example: Area	Appearance	Dosage
Upper body	already healed	Lamps shut off in this area
Legs, lower legs	not yet healed	600 millijoule/cm <sup>2</sup> UVB-311
Face	not affected	Lamps shut off in this area

## Dosage monitoring

medisun 6311 ISO does not permit the accidental entry of overdoses. The dosage entry is monitored with dependence on the skin type. Excessively high dosages or dosage increases are not permitted or are only possible after an additional confirmation by the operator. There is also separate monitoring for PUVA therapy, which is monitored with particular strictness due to the increased skin sensitivity. The accumulated total dosage is automatically calculated and displayed.

## Dosage precision

medisun 6311 ISO automatically takes the age related performance drop of the lamps, the distance of the skin areas to the lamps and other relevant parameters into account. One maintenance service with calibration per year is sufficient to maintain the high dosing precision.

## Special reflectors

An optimised reflector design provides the greatest possible concentration of the UV radiation on the desired skin area. The scatter radiation is minimised while the effect is increased.

Through the large selectivity of the individual lamp groups, individual skin areas can be targeted more specifically and with greater precision.

## User friendliness

Despite the numerous application functions, medisun 6311 ISO offers you absolutely simple, intuitive and safe use. Security against overdoses and confusion has the highest priority.

The automatic documentation makes it possible to print out therapy protocols and therapy plans at any time.

# 08

## medisun 2800 Innovation Professional cabin with many features



### **Technologically well developed all round system with the newest state of the art**

The extensive equipment leaves practically no wishes unfulfilled. The booth can be used both in „stand-alone“ operation with an integrated touch panel PC and by remote operation with an already existing remote PC in the reception area. The medisun® software offers the highest level of safety, treatment comfort and simplification of work.

**medisun® - the new quality standard in your practice**





**LED – ambient light with automatic colour change**

The extensive series equipment includes:

- 44 special UV lamps, UVA, UVA1, UVB-311 or combination equipment, integrated touch panel computer
- Large 10.4" colour touch screen, integrated permanent UV sensor measurement, entry of the dosage in Joule/cm<sup>2</sup>
- Comprehensive safety software, automatic documentation, remaining run time display in the interior space
- Patient accident protection, ergonomically arranged high shine reflectors, 2 holding bars for patients
- Patient ventilation, lamp ventilation system, protective glass as touch protection in front of the lamps
- Auto stop when opening the booth door, low space requirements, visual patient monitoring



# 10

## medisun 2800 PC

### Allround cabin with PC-dose-control



Scope of delivery includes:

- 28, 44, 48 or 52 special UV-lamps
- UVA, UVA1, UVB-311 or mixed configuration
- PC or MC-control
- Input of dose in J/cm<sup>2</sup>
- Comprehensive safety-software
- Automatical documentation
- High polished aluminium reflectors
- Grab handle for patients
- air-ventilation for user
- Acryl protection panel in front of lamps
- Auto-stop-function by open the door
- Less space required
- Permanent sensor measurement (on demand)

The UV booth medisun<sup>®</sup> 2800 PC is a variable and particularly economic standard booth for nearly all tasks in phototherapy. The equipment can be adapted to individual requirements and can also be upgraded at any time.

The booth can be operated both with an external control PC and with an integrated microcontroller with a Joule control. The booth can also optionally be operated by means of a remote control, e.g. from the reception area.

**medisun<sup>®</sup> - the new quality standard in your practice**



# medisun 2800 LC

## Low-Cost cabin for beginners



The UV booth medisun® 2800 LC is a compact universal booth with functional technology.

With the UVA + UVB-311 combination equipment, this system can handle most tasks in a phototherapy practice. Due to the especially low space requirements of only 1.6 m<sup>2</sup> when the door is open, this booth can also be easily installed almost anywhere at a later time.

Only a single 230 V outlet is required as a power supply. The functional Joule control has programmable dosage limits and an operating hour counter. Also available with monospectrum. The system needs no ventilator and is therefore especially quiet.



**Large amounts of therapy for little money**

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medisun SkinCheck

The fast skintest...



**Optimised phototherapy with fewer exposures.**

**Now it can be done!**

## ...helps you saving costs

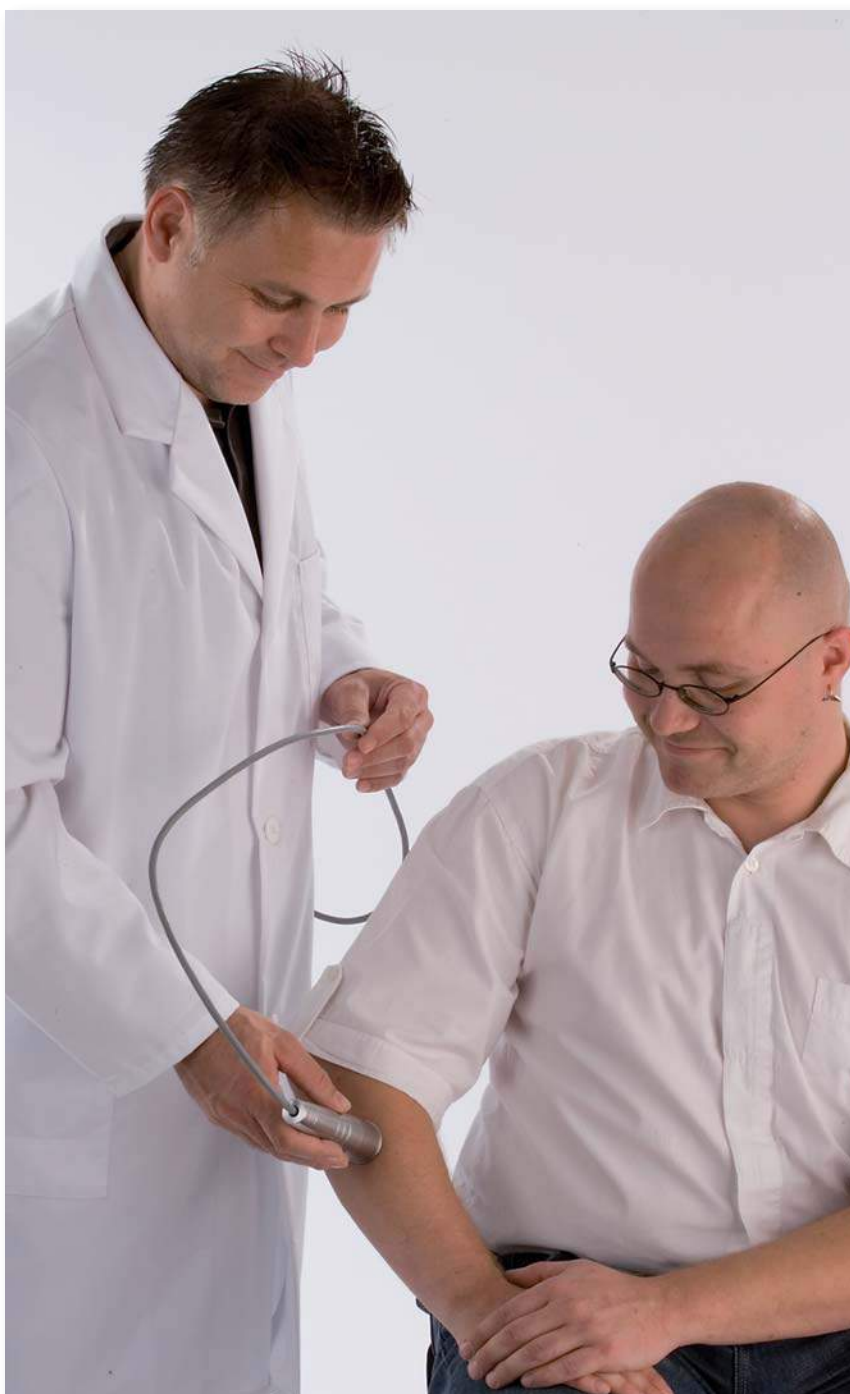
Now determine the skin type in just a few seconds. Customary "light scales" can only be read on the next day. With a special measuring procedure, medisun® SkinCheck determines the skin sensitivity – objectively and simply.

medisun® SkinCheck also permits the creation of optimised therapy plans in the mediSoft® programme. The risk of erythema can be reduced to a minimum. Exposures at too low doses, which are often ineffective, can be avoided.

In this way, less exposure leads more rapidly to the desired therapeutic success and reduces the irradiation costs.

The quick, pain and erythema free testing creates the necessary acceptance by your patients.

**medisun® SkinCheck – the new quality standard in your practice**



# medisun Hand- /foot systems

From cheap...



## medisun® - HF-54

Cost effective system in the beautifully formed housing design.



## medisun® - HF-144

Compact professional system with high performance.

## medisun® - HF-144-2

2 professional modules with height adjustable moving frame.



...to exclusive



Ergonomically angled module arrangement

### **medisun® - HF-216**

The ultimate hand / foot system with 2, 3 or 4 UV modules. In the maximum equipment with 4 modules, both the hands and the feet can be irradiated simultaneously from above and below. This saves time.

Available with a microcontroller or with touch PC controls with UVB-311 or UVA spectrum.



The medisun® HF systems are optimally suited for phototherapy of the hands and feet.

**medisun® - the new quality standard in your practice**

## The new network-compatible...



mediSoft was developed by our software engineers in cooperation with dermatologists to optimise the safety and work processes in phototherapy. Operation is possible in a specialised and ergonomic manner at the respective workstations, such as the reception area and the physician's office. Together with medisun SkinCheck, the skin type can be objectively measured and entered. Various integrated forms ensure documented verification of success – e.g. for PASI and SCORAD scores.

MEDISOFT offers safe and comfortable operation and ensures automatic and comprehensive documentation of therapy. Individual or standardised therapy plans can be created and brought up for each indication. For this purpose, there is a differentiation into 6 skin types, and all important parameters such as the starting and maximum dosage, increase rate, treatment days and many more are adjusted.





...user software

### mediSoft - Highlights

- Dosage entry monitoring
- therapy plans
- skin differentiation
- patient database
- GDT interface
- simple operation
- pressure protocols
- skin type measurement
- therapy monitoring
- Network link
- remote operation

### Cost reduction through efficiency



# 18

## medisun Blue

### Innovative acne therapy



#### **medisun Blue 1200 (professional)**

The professional version medisun Blue 1200 with two ergonomically arranged reflector emitters guarantees an even dosage in the facial area.

The treatment, which is very pleasant for patients, enriches the treatment offerings of your practice.



### **medisun Blue 600 (home)**

New studies were able to prove that intensive selective blue light shows very good success in acne therapy. medisun® Blue provides an entirely new kind of high performance lamp.

The space saving system excels with easy handling and relatively short exposure times.



# 20

## medisun Dynalux 700 New convenient PDT



### **What is photodynamic therapy?**

Photodynamic therapy - PDT for short – is a form of cancer therapy which uses light. Herein, a special photosensitiser is enriched in the tumour tissues and then irradiated with a specific wavelength of visible light. The combination of the light and the photosensitiser generates a cell toxin which destroys the tumour cells.

For instance, PDT is suitable for the treatment of actinic keratosis in the face and on the head as well as superficial and nodular basal cell carcinomas. Continuous increases of these illnesses are currently being observed. The affected skin areas receive photodynamic treatment twice at an interval of 7 days. After removing scales and crusts, the cream is thinly applied and placed under airtight occlusion for a specific time period. After a

few hours, the active substance has mainly collected in the pathologically changed skin cells. In several steps, the ALA (amino laevulanic acid) produces the body's own protoporphyrin IX (PP9) which acts as a strong photosensitiser.

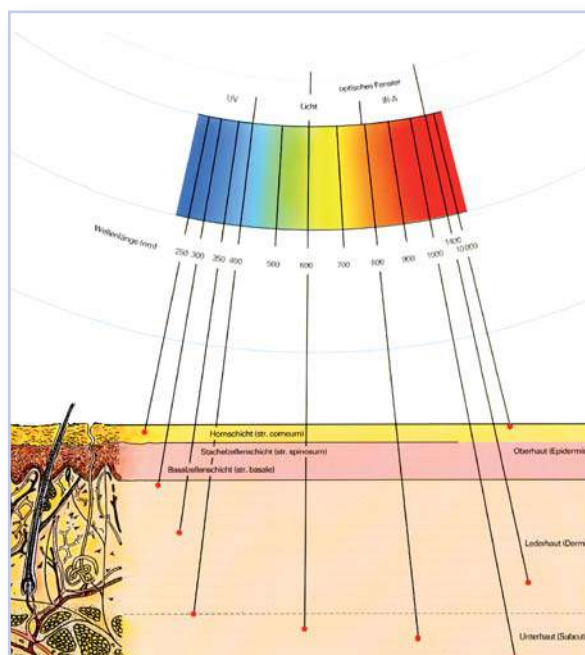
This is then used in the subsequent red light irradiation, which lasts up to 30 minutes. The (pre-)cancerous tissues is consequently destroyed through necrosis and/or apoptosis. The success of the treatment should be checked after 3 months. Most of the known photosensitisers were tested in various studies in combination with red light in the range of 630 nm with very good results.

### Important – the optimal combination

The combination of the cream/gel and the light is decisive for therapeutic success. Good results are obtained with red light with wavelengths around 630 nm. The surrounding healthy skin is barely affected.

### Good cosmetic effect and better tolerability.

PDT convinces through the effectiveness of the procedure and the good cosmetic effects. The scar formation which is common from other procedures practically does not occur in PDT. PDT is also generally far less painful than many other procedures.



Depth of penetration by the light into the skin

The red light of the Dynalux 700 with wavelengths from 580 to 780 nm penetrates approx. 3 to 4 mm deep.

It is generally a very safe method with few side effects to remove skin changes which would otherwise require surgical removal.

# 22

## medisun Dynalux 700 New convenient PDT

### PDT-System Dynalux 700

Dynalux 700 was developed specifically for treatment with specialised photosensitisers. Together with a special parabolic reflector and two high quality optical filters, a high performance halogen lamp produces selective red light radiation with a high energy density. The IR filter technology generates a largely "cold" red light and therefore reduces warming of the irradiated skin.

The system is moveable and space saving and excels in terms of good functionality and easy operation. The large version has a large irradiation area of approx. 200 cm<sup>2</sup>, while the small version reaches 50 cm<sup>2</sup>. The modular construction alternatively makes it possible to expand to other modules with alternative spectrums or other irradiation areas later as needed. The use of Dynalux 700 is currently being experimentally tested with other changeable colour filters for other treatments, e.g. for the treatment of warts. Dynalux systems are also available with wall or table mounts.

Excellent price /  
performance ratio

**medisun®** – the new quality standard in  
your practice



# medisun Dynalux 70

## Photodynamic diagnostics



The practical wood light rod Dynalux 700 enables rapid fluorescence diagnoses.

# 24

## medisun 24000 UVA1

### Cortisone free neurodermitis therapy

Neurodermitis is a skin disorder which is characterised by eczema, itching and very dry skin. In the Federal Republic, approx. 3.5 to 5 million people are affected, and the frequency is rising. The illness often means immense psychological strain for the affected persons. Therefore topical corticoids are often prescribed for rapid relief; however these are often problematic in long term use.

UVA1 therapy, which has been examined in many studies, has meanwhile successfully established itself as a cortisone free therapy.







The medisun<sup>®</sup> UVA1 bed, one of the most sold UVA1 systems ever, is being used successfully since 10 years, in many university clinics in Germany as well as internationally. In approx. 80 % of patients, UVA1 therapy shows very good results without the use of additional medications. There are practically no side effects, and it was thus far not possible to prove an elevated risk of skin cancer.

The medisun<sup>®</sup> system was continuously further developed and excels through modern computer software with many safety and monitoring functions, simple operation and extensive documentation. The requirements by the German Dermatological Association for a UVA1 unit are fulfilled.

**medisun<sup>®</sup> – the new quality standard in  
your practice**



medisun<sup>®</sup> XENIA

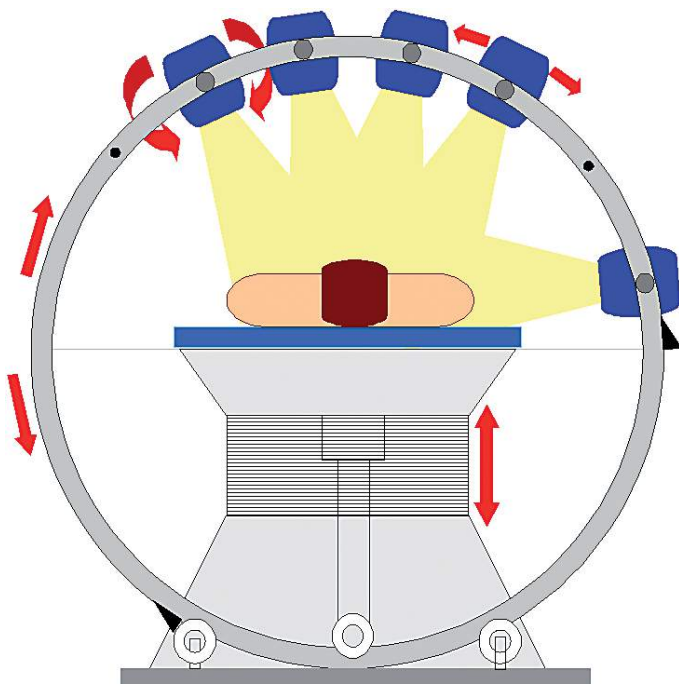
## The combined UVA1 / PUVA bed...

The new UV therapy bed medisun<sup>®</sup> XENIA has energy saving, high-efficiency lamp technology. This makes it possible to considerably lower energy operating costs. Unlike customary UVA1 beds with high pressure lamps, medisun<sup>®</sup> XENIA requires no warm up time to reach the full lamp energy. Only in this way is it possible to perform PUVA treatments with high dosing precision despite high UV intensity. The medisun<sup>®</sup> computer controls permit precise by-the-second dosing. Partial irradiations are also possible without problems. medisun XENIA only requires approximately one third of the energy of corresponding conventional UVA beds.

medisun<sup>®</sup> XENIA does not need the otherwise common and costly exhaust systems. The trend setting ergonomic design of medisun XENIA enables various lamp module variations with consistently good homogeneity.

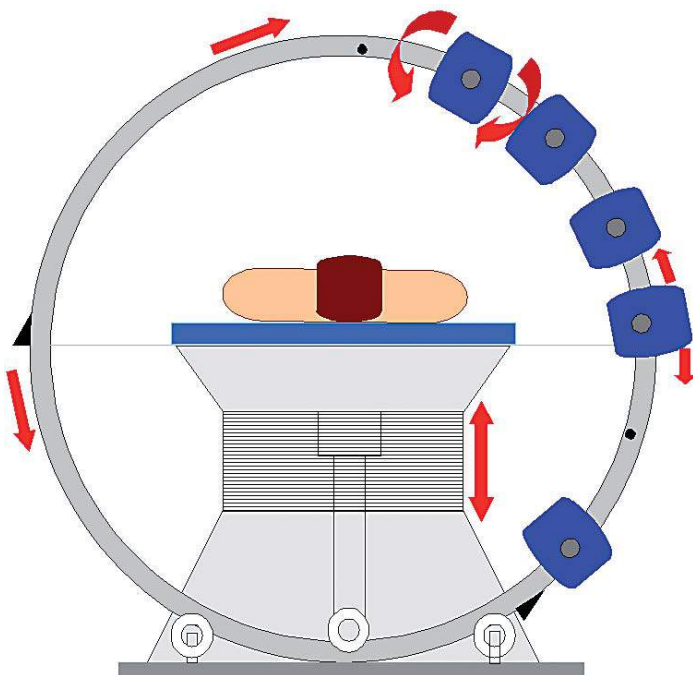
Due to the high variability of the medisun<sup>®</sup> XENIA lamp module, any desired UV intensity can be reached. Due to the efficient technology, the investment costs are also pleasingly low. The low structural height and the space saving rotation mechanism of the lamp top permit installation in nearly all rooms. The patient can see through between the lamp modules, so that there is no feeling of restriction.

## ...with new high-tech lamp technology



Optimal economy is guaranteed by the fact that medisun XENIA can be used both for UVA1 and for PUVA therapy.

- Energy saving lamp technology
- no warm up time for lamps
- by-the-second dosing precision
- Also suitable for PUVA therapy
- trend setting design
- no costly exhaust system required
- Variable modular system



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## medisun 700 Elegance Exclusive mirror design...



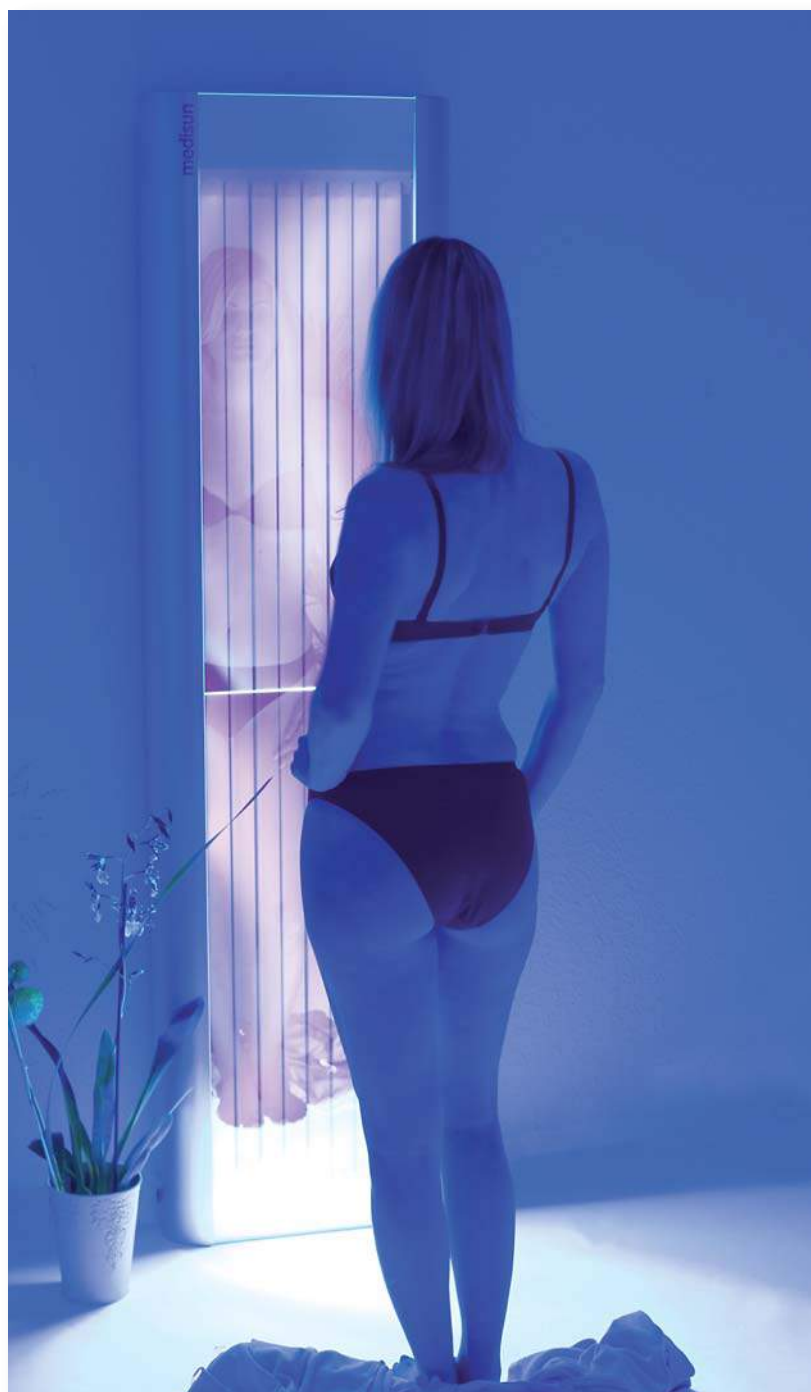
Whether it is for therapy in a practice or for use at home, this elegant mirror fits into every room.

Simply hang it on the wall, and you're done.

Available in natural aluminium or black anodised.

## ...and whole body therapeutic unit in one piece

Therapy for all UV sensitive  
skin disorders with 8 high  
performance lamps.



# 30

## medisun 700

### Inexpensive whole body therapy



The universal UV floodler for practice and home therapy can be used while lying, standing or sitting. With the moveable frame, the lamp top can be rotated by 180 degrees. The electronic time control enables precise dosing with automatic shutoff at the end of the irradiation. Available in the UVA and UVB-311 versions.

# medisun Psori-Comb

## Treatment of scalp and small skin areas

Simple and effective therapy with the medisun psori comb. The light unit ergonomically lies in the hand and convinces with its high UV intensity. The unit can also be used without the comb for partial irradiation of small areas. The transparent acrylic cover protects the user against UV scatter radiation. Short exposure times enable time saving application.



The medisun psori comb is delivered in the practical plastic case with UV protective goggles and an exposure timer.

# 32

## medisun GS10 / PS20 Hyperhidrosis therapy...



Approximately 1 % of the population suffer from excessive sweating of the hands, feet or armpits. medisun® therapy against hyperhidrosis is a treatment procedure which has been scientifically recognised since many years and produces normally dry skin in 98% of cases without medications or surgical interventions. medisun® hyperhidrosis therapy is absolutely harmless and nearly free of pain and side effects when it is performed correctly.





## ...with innovative pulsed current iontophoresis



With sophisticated safety concepts such as the protective function against electrical shock (pasture fence effect) and the intelligent immersion monitoring with excess therapy protection function, the medisun therapy units offer you user friendliness at the highest level. The medisun therapy units excel in terms of their simple operation and maximum reliability with the highest effectiveness.



Treatment takes place with hand and foot baths or, for the therapy of armpits, face or neck/back, using special sponge applicators through which a weak DC or pulsing current flows. The current intensity can be individually adapted and is limited to a maximum intensity.



## medisun SAD

## Well established light therapy



The treatment of winter depression is probably the best known application of light therapy. However light therapy can also provide gentle and rapid relief for sleep disturbances, PMS and other problems.

The user sits in front of the light therapy unit for one half to one hour every day. Through the units' high irradiation intensities of 10 000 Lux, high success quotas are reached. The light is harmless to the eyes and skin, since the UV shares are filtered out. As compared to medicamentous treatment, therapeutic success can be guaranteed – and is almost completely free of side effects. The beautifully formed, easily operated medisun SAD units are available in two performance variants.



# medisun Relax

## Elegant treatment couch



### **The fully electric treatment couch which leaves no wishes unfulfilled**

The couch can be adjusted to a completely horizontal position. The electrical height adjustment and the electrical adjustment of the head and foot sections takes place using the hand operated switch.

The high quality, approx. 11 cm thick cushioning of the couch is very soft and therefore very comfortable to lie on. The couch has a very smooth, easy-care and high quality soft cushioned cover. The armrests can be folded up.

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# medisun Dynamic Light

## Intelligent practice lighting with elegant design



Daylight – the form of light in which we feel best – never stays the same.

Its irradiation intensity and light colour change in the course of the day and in the course of the seasons, influencing our feelings, our mood and our performance.



## Dynamic light increases the performance of your employees and your patients' sensation of wellness

It has been shown that the dynamics of daylight have a stimulating and inspiring effect. This knowledge was consistently implemented in our dynamic light solutions for practice rooms and offices.

Electronically controlled colour temperature and brightness adjustments as well as all-round shading,

are only some of the innovative characteristics of the medisun lamp systems. Detailed information and advice is available from us.



### medisun quality management on the spot

As a matter of course our engineers do UV-measurements and calibrations of your therapy equipment at your practice.



# medisun Service and accessories

## **medisun UV-measurement systems**

We offer programmable Meters for UV-measurements and calibration, which allow measurements of 10 different spectrums.

For more sophisticated measurements we recommend our medisun spectrometer.

## **medisun UV-lamps**

We carry a large assortment of UV-lamps, especially for medical use.

Always good value for money.

## **Comprehensive range of accessories**

UV-protection-goggles

PC-hardware

disinfectants

and further more

# medisun<sup>®</sup>

the new quality standard in your practice

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