VEGAZ

Technical information

High performance tanning

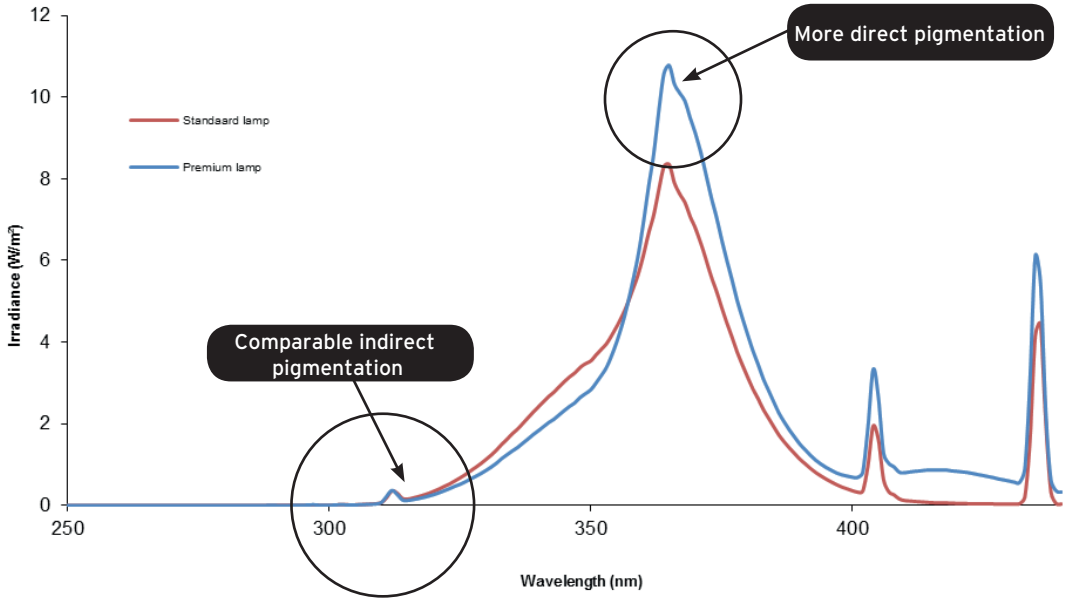
Premium by maxlight

The difference between an average sunbed and a very good one has everything to do with the direct tanning or 'browning' power. This boils down to the quality of the light sources integrated into the sunbed.

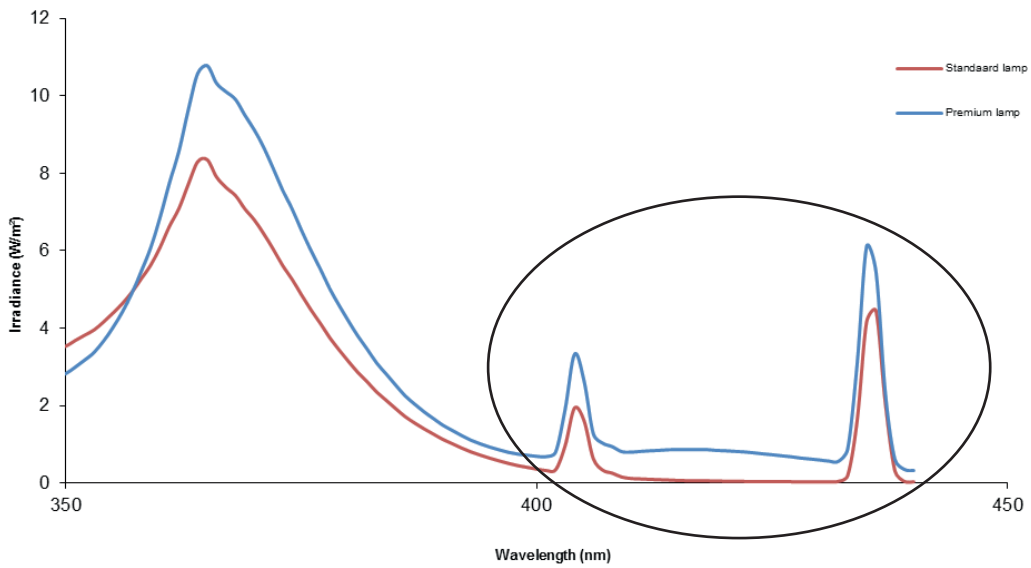
VDL Hapro has specially developed a new line of Maxlight lamps for superior tanning power with a name that says it all: PREMIUM. These are, without a doubt, the most optimal low pressure lamps currently available and technically feasible to produce.

All competitor's lamps pale in comparison to Premium, because:

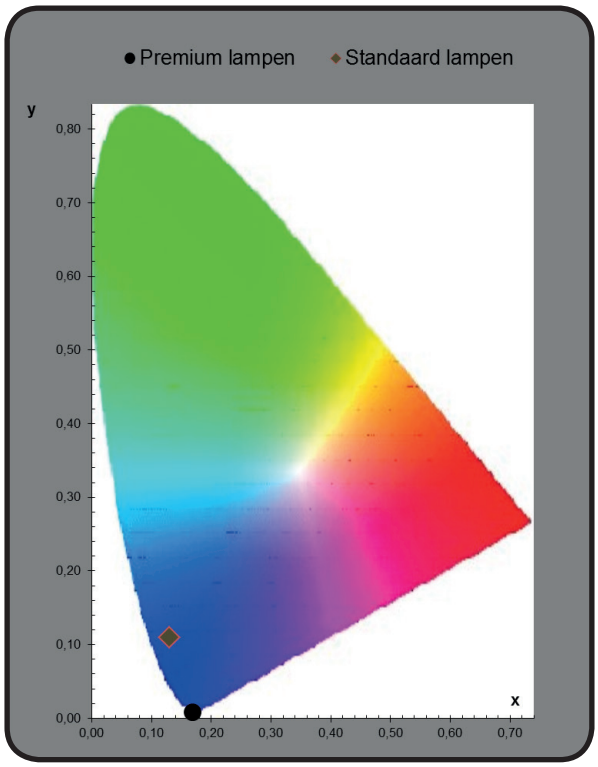
1. They generate 10-20% more direct pigmentation at a comparable level of indirect pigmentation, which results in more efficient tanning of the skin.



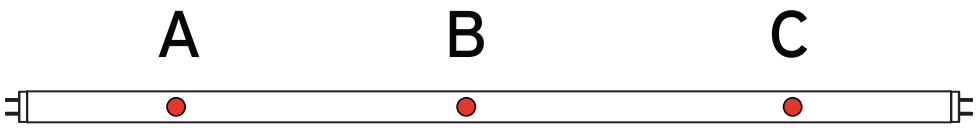
2. They use the entire UVA spectrum, also known as the long-wave portion (400-440 nm).



3. They generate a bluer colour of light through the use of special phosphors that allow the most optimal pigmentation.



4. They produce a technically superior UV balance over the entire length of the lamp.



Between the ends (A and C) the weighted UV output never exceeds 10%, and between the ends and the middle (B) of the lamp the difference never exceeds approximately 5%. This is a vast improvement in view of the fact that the differences in standard lamps are generally substantially larger.

The Premium lamps are specially designed for and can only be used with extremely efficient high frequency ballasts, of two types:

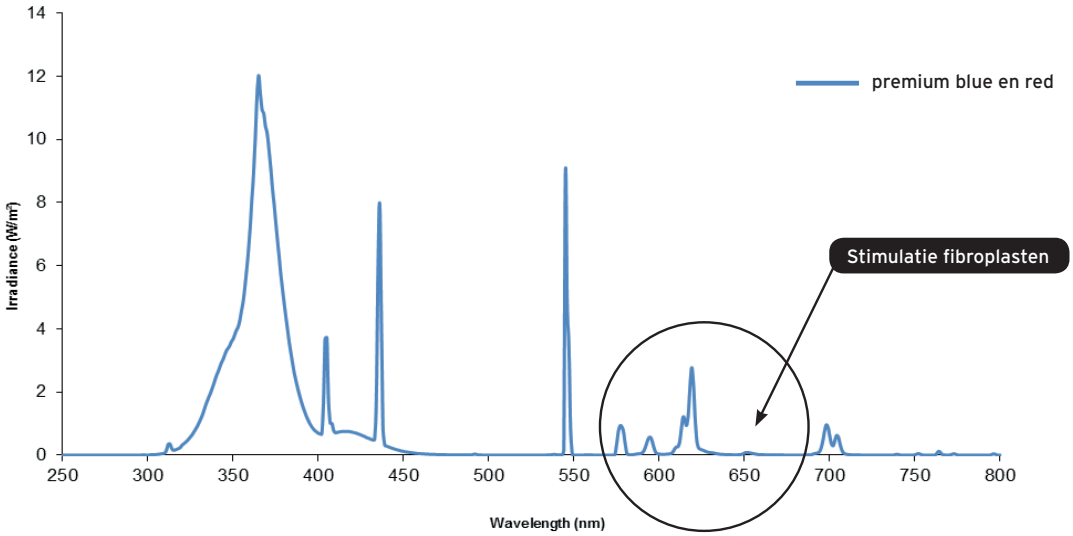
1. Balanced lamps – lamps suitable for non-adjustable HF ballasts
2. Intelligent lamps – lamps suitable for adjustable HF ballasts

All Premium lamps naturally already have the aforementioned advantages, but as top-of-the-line option within the Intelligent lamp range we also offer a special version: the Blue and Red, which are always used together. This combination gives:

a. an ultimate balance of erythema A and B
b. high intensity, to stimulate production of endorphins
c. a stimulating effect on fibroblasts for collagen production

The PREMIUM Red is a development that should not go unnoticed. It is more than just a lamp that allows the combination of UV and fibroblast stimulation. In fact, it is the only narrow band type available on the market, and 'narrow band' means it provides superior direct pigmentation.

The ultimate effect of the combination of Blue and Red is a very pleasant tanning session, resulting in a beautiful brown colour with a touch of skin care.



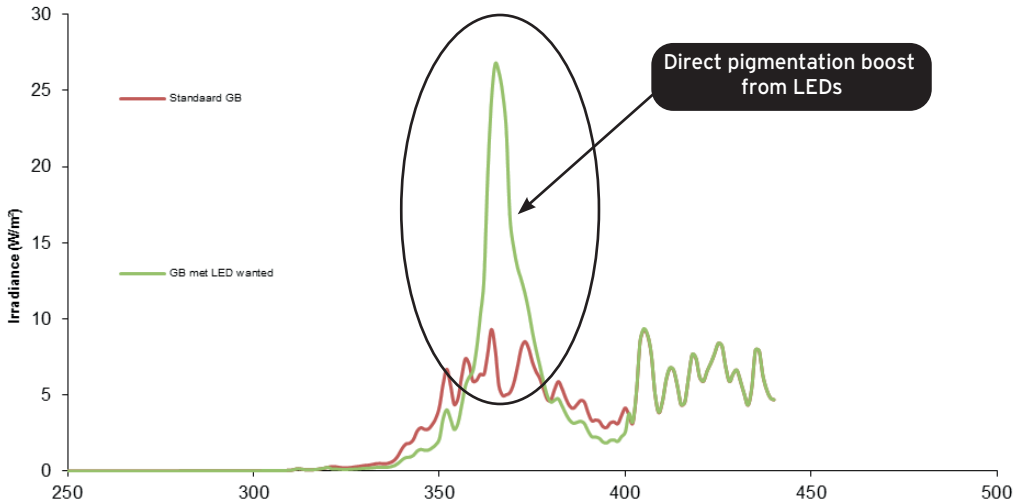
LED technology

Everyone is familiar with the traditional facial tanners that consist of an HID lamp in combination with a glass filter. There is nothing wrong with this solution for facial tanning, but as with the standard low pressure lamps it is not optimized for strong direct pigmentation. VDL Hapro has developed a new facial tanner especially for this purpose that combines the 'old' high-intensity discharge lamp and cutting edge LED technology.

The LED technology developed by Hapro boosts the spectrum emitted by a standard HID lamp with filter. It also includes red 630 nm LEDs to achieve superior tanning results, here too with a bit of extra skin care.

The advantages of LED technology are significant:

1. Expected lifespan >20,000 hours
2. Little or no emission reduction
3. No maintenance
4. Perfectly adjustable



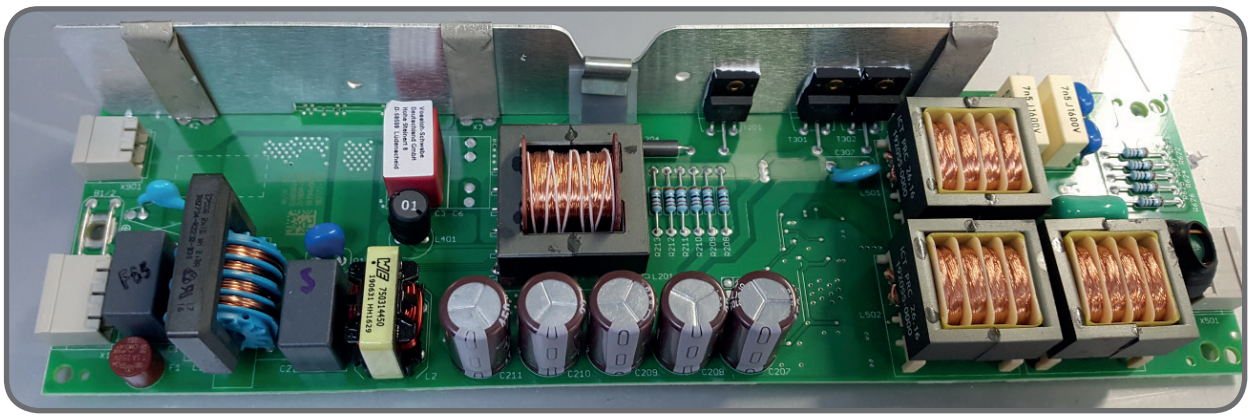
Because LEDs are adjustable, it is now also finally possible to compensate to some extent for the erythema A aging of the HID lamp (approx. 30% in 800 hours). This provides the best possible guarantee of maintaining consistent direct pigmentation from the facial tanners over time.

To provide homogeneous distribution of the LED light over the face we have developed an entirely new reflector in-house. This reflector is fully optimized to cover the entire face, without higher intensity at any point. In other words, the light is projected evenly across the entire face.

IP Control II

VDL Hapro introduced the Intelligent Power Control system in 2007. The system was a cut above in terms of energy savings, adjustability and technical ingenuity. Now, 10 years later, VDL Hapro introduces the system's successor, in which every aspect has been improved.

1. **Completely new ballast for the low-pressure lamps**

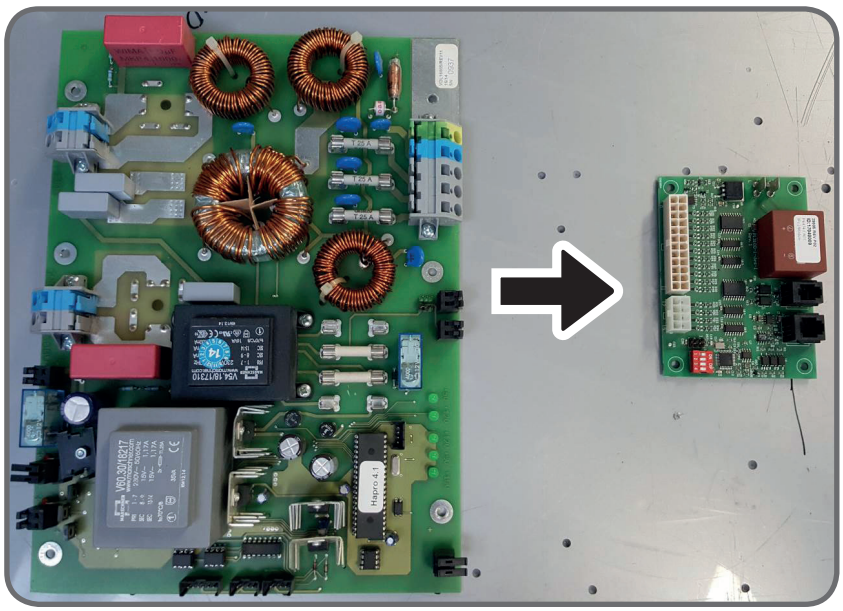


Benefits:

a. Compact
b. Perfectly adjustable
c. Proven reliability based on years of testing
d. Now just two lamps, instead of six, per ballast
e. Easy installation
f. Stable lamp emission with fluctuating mains power
g. Economical
h. Robust control communication through use of the DALI protocol

2. Control unit

Whereas the previous system made use of a large, costly control unit, the replacement uses digital circuitry and modern printed circuit board technology, making it a fraction of the size.



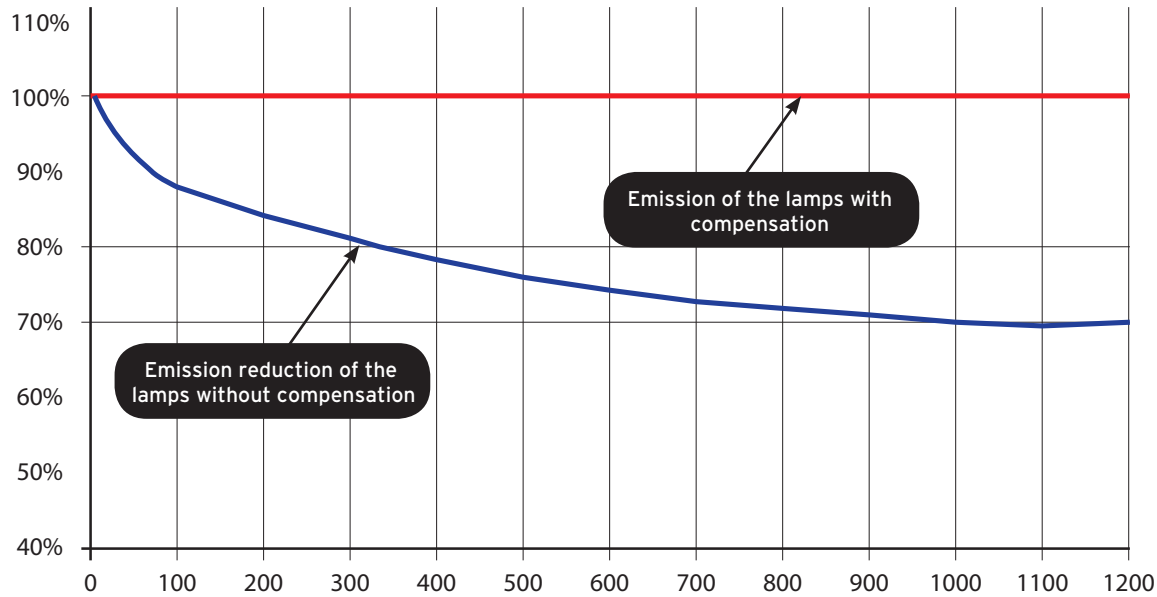
3. Modular design

Unlike the old system, thanks to the compact dimensions of both the ballasts and control unit a separate enclosure is no longer needed. The ballasts can be distributed in the bed, canopy and top unit, depending on the number of lamps. This means no more external cooling, long, thick power cables and thick control wires any more – just an efficient set-up with 'lean wiring'.

4. Each ballast adjustable separately

Whereas in the previous system regulation was only possible in two different groups, each ballast can now be controlled separately. This naturally provides tremendous advantages. We are now able to increase the power to bulbs located farther from the body and reduce power to others. In short, the technology is now so advanced that we can offer even more consistent emission distribution over the entire body.

And lamps age, too. Average values are shown in the figure below. The Intelligent Power System keeps the UV emission of the lamps stable, to the greatest extent technically possible. The system does this by feeding additional power to the lamps based on a pre-programmed curve in relation to the lifespan of the lamp.

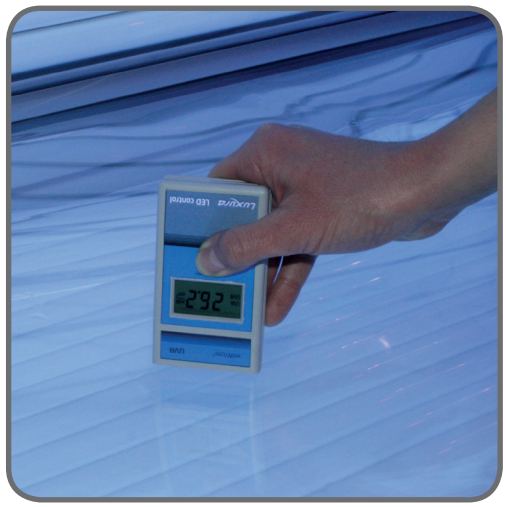


Of course, output compensation over the service life is not the only thing the system has to offer. VDL Hapro also gives you the unique possibility of compensating to a certain extent for the manufacturing tolerances of new lamps and the emission reduction of acrylic sheets. Obviously there is nothing we can do to prevent absolute aging, but this is the next best thing.

A new batch of lamps is produced and checked relative to a reference lamp, also referred to as the 'mother lamp'. Every production batch deviates somewhat from the ideal, and newly-produced lamps can vary by up to 10% compared to the mother lamp. Naturally,

this can be in the plus or minus direction. If you also take into account that the acrylic is subject to aging too, it is certainly very desirable to have a feature that allows adjustment of the emission level to a relatively small extent. You guessed it: this is exactly what we provide you.

Using the specially prepared Hapro Spectrometer it is possible to measure the emission at both the bed and the canopy (including the top unit). Of course the device only measures the total erythema, and depending on the deviation in increments of 0.3 W/m⁺ you can adjust by up to 10%.



Obviously this is a simple meter, but if you have us calibrate it regularly you will find that it works well. Important note: This meter is adjusted based on a Hapro standard and should only be used for Maxlight lamps. Ask your account manager for more details.

5. Control electronics integrated into the sunbed's bus system
The new Intelligent Power Control system no longer operates stand-alone and is fully functional within the device's digital bus system. This allows better monitoring, and it is now possible to access this system through the My Luxura portal. More about this later.

6. Parameters adjustable from the control panel.
Previously, a special IPc manual control was necessary to reset the system when installing new lamps and filters, or even to just see the hours of operation. Now the entire system can be operated and accessed via the intelligent control panel. Hour counters and many other useful settings are easily accessible in this way.

Climate control

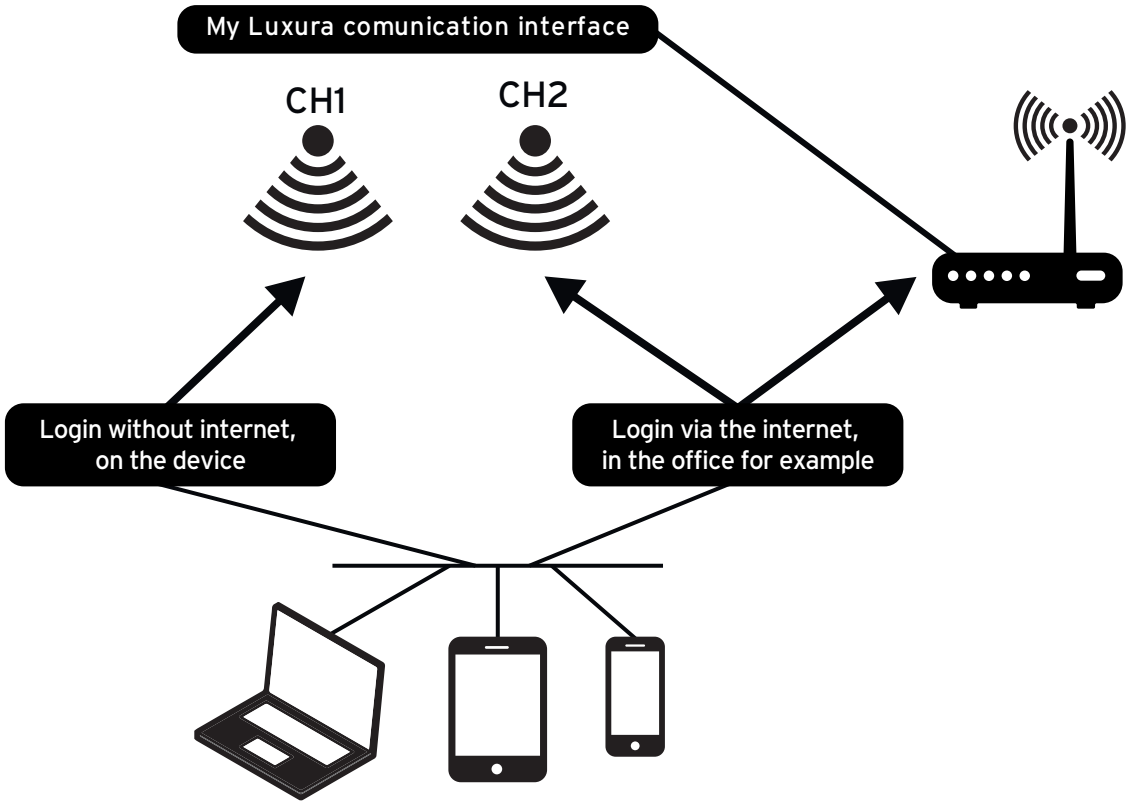
For those who really feel it is too cool with the air conditioning at maximum yet too warm with the air conditioning off, there is the climate control. Now you have the freedom to do things like set the temperature a little higher at the beginning of the session set and reduce the temperature as the sunbed heats up.

My Luxura (communication interface)

VDL Hapro has developed a multifunctional communication interface. Perfect for the person who performs service, for example, or for the owner who wants to have a quick look at how his or her device(s) are performing in all the studios.

You can see at a glance how many hours the machines have been in operation and whether there are any fault notifications. All issues relevant to the device are logged and can be read out and expressed as statistics either at the device or remotely.

To make this possible you get a small module, mounted the device, with two Wi-Fi channels and a LAN connection.



You can login with and without internet. Without internet this must done in the vicinity of the device, by the service man for example, and over the internet this can, of course, be done from anywhere on this wonderful planet!

A new website has been created for use over the internet: www.myluxura.com

Ask one of our account managers to explain this website in more detail. You will be amazed by the functionality and the indisputable usefulness of My Luxura.

www/vdlhapro.com/luxura

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