

# sonoderm<sup>®</sup> device family

The ultrasound penetrates several millimetres into the skin, and delivers its effect there. Enhances the absorption of active ingredients by loosening the horn layer on the skin surface. The blood vessels dilate, the permeability of cell membrane increases, as well as metabolism and lymph flow, and the inflammation subsides. Ultrasound stimulates the collagen metabolism and fibroblasts, the removal of waste materials, the diffusion processes and the blood circulation. Ultrasound has a favourable effect on the structure of the epidermis, the tension of the fibres of connective tissues, the muscle tone and the ATP-activity of the cells.

## CDM<sup>®</sup>

During the ultrasound treatment a contact agent (e.g. a gel) provides the free way of the waves between the handpiece and the skin. Dr Derm ultrasound devices are equipped with a contact checking mechanism, which gives a warning beep if contact between the handpiece and the skin is interrupted. This is the so-called CDM<sup>®</sup> automatics, which controls the penetration of ultrasound into the skin and prevents the handpiece from heating up. The device gives a warning sound signal as well when the treatment material isn't the suitable quality and hinders the penetration of ultrasound, for example contains a lot of powder material, air-bubbles or not enough small vegetable parts, because these don't conduct the vibration of ultrasound. With the CDM<sup>®</sup>-automatics the ultrasound treatment always can be carried out with outstanding effectiveness and results.



## Real treatment time counter

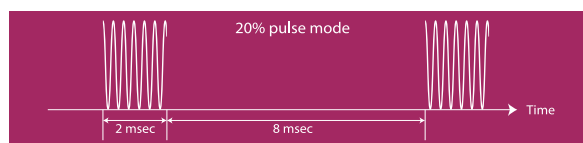
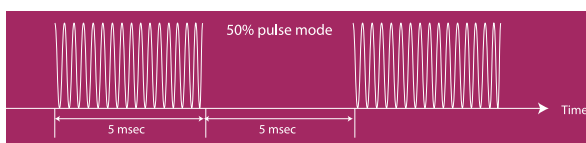


Owing to its contact checking mechanism, the Dr Derm ultrasound devices only measure the time really spent on treatment. This advanced technological solution guarantees the efficiency of the treatment and the introduction of necessary doses of active ingredients. Due to the real treatment time counter, the effects carried out on the skin, for example the stimulation of the introduction of active ingredients or the filling of the energy reservoirs of the cells will be more effective, than during those treatments that are carried out with devices that don't have any contact checking mechanism.

## Pulse mode of operation

Due to its thermal effect, continuous ultrasound heats up the tissues, that has various positive effects. During long treatment periods or when deeper layers should be treated, may be uncomfortable.

By properly selecting the modulation value, deeper layers may also be treated without heating up of the handpiece or the skin.



### 50% pulse mode:

- Moderate thermal effect
- More significant chemical effect
- Micromassage effect
- Optimal for introducing active ingredients

### 20% pulse mode:

- Strong vibration (massage) effect
- Moderate thermal effect
- Optimal for treating deeper layers of the skin

## Fountain effect

If the handpiece is turned upwards and water is poured on its surface that touches the skin, the ultrasound makes the water-molecules to move and a special effect may be observed. This is the so-called fountain effect, with which the mechanical effect of ultrasound can be demonstrated. If the handpiece emits ultrasound continuously, the “sparkling” and evaporation (cold vapour) of water should be observed in the whole surface of the handpiece.

In the case of a device with CDM®-automatics, the effect of ultrasound may be observed only when there is enough water poured on the surface. The reason for this is that the device perceives the conduction of ultrasound in the treating area, and works with the preset power only when this conduction is perfect.



Through the fountain effect the proper function of the crystal can be controlled as well. By devices the handpiece of which doesn't work adequately, the water is heated up quickly or there isn't any sparkling produced.

Our laser-ultrasound handpiece emits the light only if there is a perfect contact between the treating area and the skin, ensuring a safety treatment in this way. If water is poured onto the treating surface, by triggering the fountain effect the light sources are lit as well.\*

\* We should take care and wear protective eyewear.

## Small handpiece

The small handpiece facilitates to perform an optimal output necessary for treating the face skin. Because of the ergonomically perfected shape and weight-distribution of the handpiece, every part of the face can be reached easily without skating over the minor details. The ultrasound emitted by the small handpiece has a minor penetration depth, considering the sensitive structure of the skin in the face and in the neckline.

# sonoderm® 2000 face

The sonoderm® 2000 device family can be bought in three different forms: the small handpiece of the sonoderm® 2000 face designed for face treatments can reach every part of the face, and the treatment programs of the device are for introducing active ingredients, treating sensitive skin, problem skin with acne, scars and wrinkles. In addition, there is a chance to store and load in a program made the user's own, completing the supply of possible programs. Afterwards it could be enlarged with a large handpiece and the eight treatment programs for body treatments.

## Face treatment programs:

### ■ SONOPHORESIS FACE

#### **Intake of active ingredients in the face**

Increases the permeability of the epidermis, thus improves the penetration of active ingredients into the deeper layers of the skin. The blood vessels dilate, thus the micro-circulation of the skin is improved.

### ■ DEEP LINES

#### **Treatment of deep wrinkles**

Stimulates the blood flow through and the activity of metabolism, thus the absorption and effectiveness of regenerating active ingredients. Through its stronger heat effect increases intensively the activity of fibroblasts.

### ■ LINES SENSITIVE

#### **Treatment of superficial wrinkles, treatment of wrinkles in sensitive skin**

Treats the sensitive skin with effects similar to those by treatment of deeper wrinkles, but in a gentler manner.

### ■ ACNE FACE

#### **Treatment of acne in the face**

By loosening the comedos makes the cleaning of the face to be easier. The ultrasound relieves the symptoms of acne through its anti-inflammatory effect.

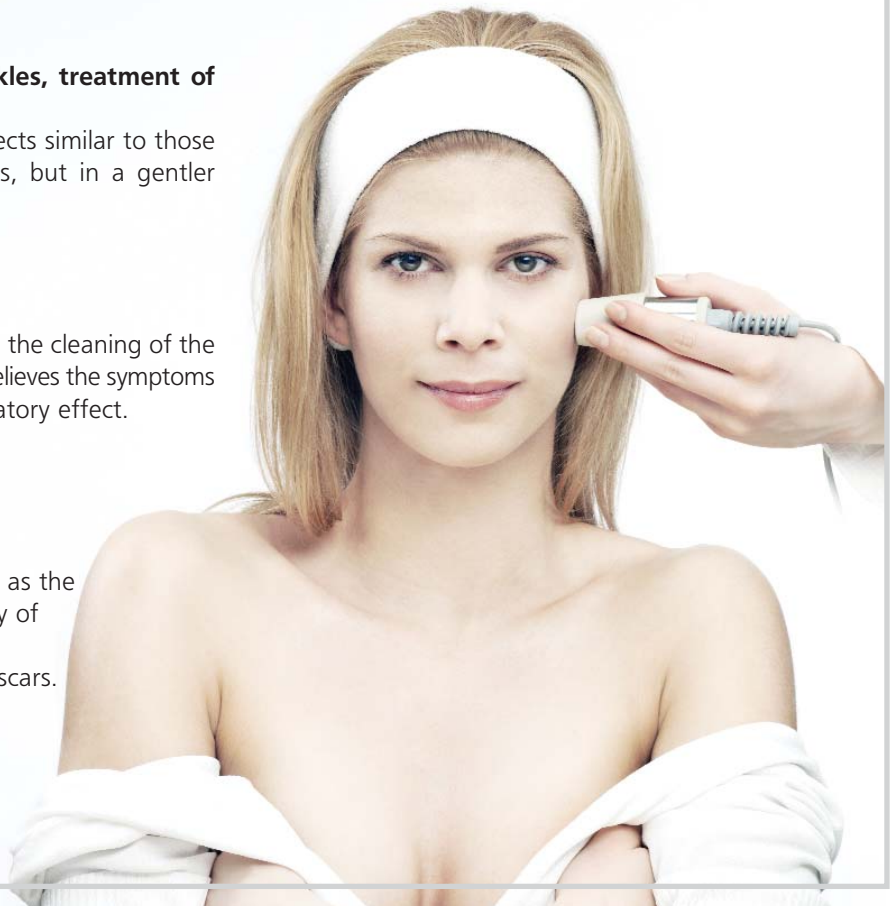
### ■ SCARS FACE

#### **Treatment of scars in the face**

Improves the micro-circulation of deeper layers of the skin, as well as the metabolism. Increases the activity of fibroblasts, thus stimulates the improvement of the structure of scars.

### ■ MANUAL FACE

Your treatment program made on your own.



# sonoderm® 2000 body

Through its large handpiece the sonoderm® 2000 can effectively reach the deeper layers of the skin, and due to the larger treating area more energy may be delivered at a unit of time. All shape problems and aesthetic abnormalities of the body surface can be treated as required with the eight treatment programs. The device could be enlarged with the small handpiece and the six treatment programs for face treatment.

## Body treatment programs

### ■ SONOPHORESIS BODY

#### **Intake of active ingredients in the body**

Increases the permeability of the epidermis, thus improves the penetration of active ingredients into the deeper layers of the skin. The blood vessels dilate, thus the micro-circulation of the skin is improved.

### ■ ACNE BODY

#### **Treatment of acne in the body**

By loosening the comedos makes the cleaning of the body skin to be easier. The ultrasound moderates the symptoms of acne through its anti-inflammatory effect.

### ■ SCARS BODY

#### **Treatment of scars in the body**

Improves the micro-circulation of deeper layers of the skin, as well as the metabolism. Increases the activity of fibroblasts, thus stimulates the improvement of the structure of scars.

### ■ CELLULITE I.

#### **Treatment of milder form of the cellulite problem**

Two-phase treatment program: the first phase aims at lypolysis, thus triggers the dissolution of lipid reserves stored in the fatty cells. During the second phase an intensive massage is carried out, making the fat to leave the fatty cells and to be removed by the lymph flow. This program is to be used in the 0 and I stadium of the cellulite problem.

### ■ CELLULITE II.

#### **Treatment of more severe form of the cellulite problem**

Two-phase treatment program: the first phase aims at lypolysis, thus triggers the dissolution of lipid reserves stored in the fatty cells. During the second phase an intensive massage is carried out, making the fat to leave the fatty cells and to be removed by the lymph flow. This program is to be used in the II and III stadium of the cellulite problem.

### ■ LIPOLYSIS

#### **Fat-mobilizing**

This treatment triggers the dissolution of lipid reserves stored in the fatty cells and their removal from there.

### ■ BODY FORMER

#### **Body shaping massage**

Stimulates the blood circulation in the tissues and the removal of accumulated waste materials. Its intensive massage effect has a role in the relaxation of the muscles and the stimulation of the lymph flow.

### ■ MANUAL BODY

Your treatment program made on your own.





# sonoderm® 2000 body&face

Our ultrasound device could be bought with 14 treatment programs and two handpieces as well: it could meet all the demands of your salon already from the beginning. The programs offer treatment possibilities both for face and body treatments.

After selecting the required treatment program, the device sets automatically the proper parameters, thus you can spend all your time on the client. However, you can change the treating values as you please, and there is a chance to store and load in two programs made on your own.

## Treatment programs

The sonoderm® 2000 body & face device has all the six treatment programs for face belonging to the small handpiece of sonoderm® face and the eight automatic treatment programs for body related to the large handpiece of sonoderm® body (see these in the previous pages).

## Large handpiece

The large handpiece facilitates the output of optimal performance required for body treatments, thus we can work with high intensity on the body. The large treating area ensures more intensive effects, in addition deeper penetration as well, which has a significant role in reaching the deeper layers of the skin.

### Technical details

#### Output parameters of the ultrasound:

In pulse mode of operation:

0 - 2,0 W/cm<sup>2</sup>

In continuous mode of operation:

0 - 1,5 W/cm<sup>2</sup>

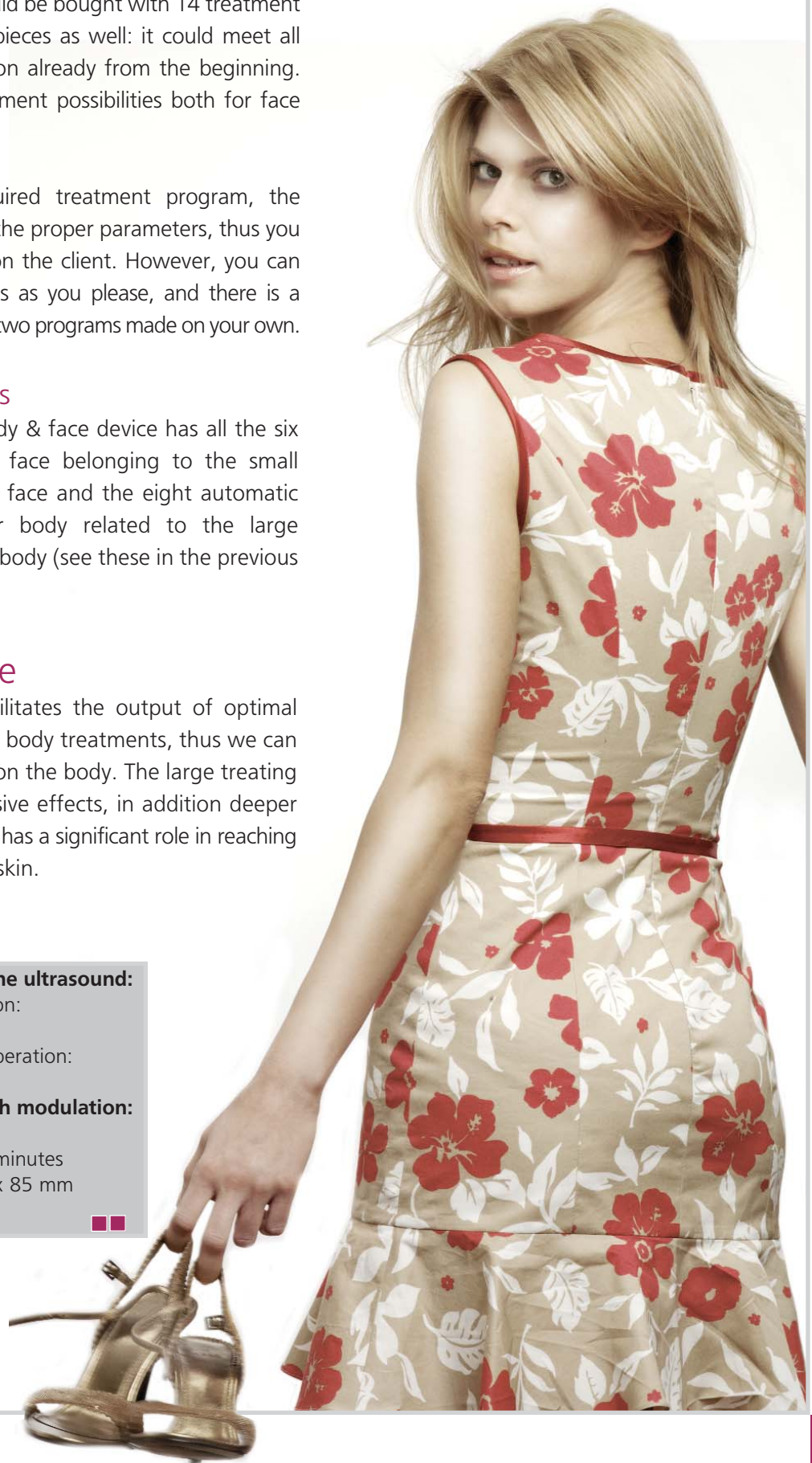
#### Modes of operation with modulation:

10% - 100%

**Treatment time:** 0 - 30 minutes

**Dimensions:** 230 x 200 x 85 mm

**Weight:** 2 kg



# sonoderm<sup>®</sup>XXL

## Laser-ultrasonic handpiece<sup>®</sup>

The R&D group of Dr Derm devices had decided to design a revolutionary new handpiece. As a result of a long designing work, an ultrasound handpiece has been designed, which is combined with red-coloured phototherapy semiconductors and an optical source of light with laser.

The instrument, which can be used for face and body treatments as well, has inherited all the advantages of our ultrasound devices. The handpiece controls continuously the contact with the skin, and allows to emit the ultrasound only if the whole treating area touches the skin. It controls the quality of the products applied on the skin as well, and when there is a treating material that the ultrasound can't go through, makes a warning sound signal.

The Continuous Dosis Monitoring (CDM<sup>®</sup>) developed by us makes even the operation of the source of laser light to be safety, as it lightens only if there is a perfect contact between the handpiece and the skin.

The pre-programmed treatments make unnecessary the setting of the different treating parameters, thus after selecting the name of the required program, the device carries out automatically even the rejuvenation with ultrasound and laser that would seem to be really complicated.



## Triple effect

The soft lasers have triple biological effect: bio-stimulation of the skin cells, pain-relieving, and anti-inflammatory effect.

The bio-stimulation with laser results in faster replacing of the cells of the epidermis by shortening the duration of the cell-cycle. Increases the level of ATP, the energy-reserving compound of the cells, thus ensures energy reserves for the metabolic processes. It stimulates the ionization of the liquids in- and outside of the cells, causing bio-polarization in this way, which improves the replacement of the cells, the refreshing of the epidermis.

All these result in faster healing process and reducing of oedema, after all improving the arterio-venous and the lymphatic micro-circulation. The pain-relieving effect is based first of all on the stimulation of formation of endogen analgesic (endorphin). The anti-inflammatory effect is due to the fact that the laser intervenes in the process of the synthesis of prostaglands, which play a main role in the formation of inflammation, blocking it through an enzyme.



## Wrinkles and pimples

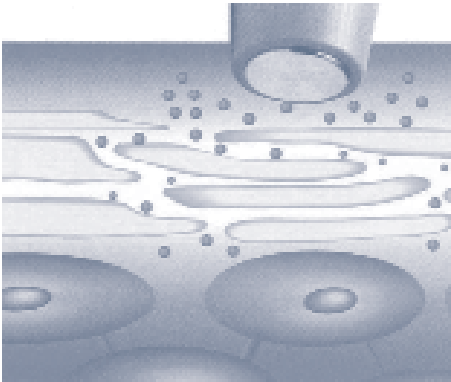
The bio-stimulation with laser fills up the energy reservoirs of the tired, aging skin, stimulating the regeneration of the skin surface in this way. The laser improves significantly the regeneration of the skin surface, and the quick reduction of oedema or skin reddening created during the cosmetic treatments.

The threefold effect of the laser therapy holds out complex advantageous for skin with acne: the bio-stimulation helps the scars to heal and the waste materials to remove; the pain-relieving effect reduces the subjective inconveniences, and the anti-inflammatory effect is beneficial for the inflamed nodules evolving during that the acne is present.

The simultaneously used ultrasound improves the regeneration of collagen fibres, thus helps the healing without scars. Makes the face cleaning to be easier by loosening up the comedos, in addition, by increasing the absorption ability of the skin, helps the active ingredients applied on the skin during the treatment to penetrate more effectively. As a result of these facts, the synergy of laser and ultrasound has such beneficial effects that haven't been experienced till now and results in the spectacular improvement of the condition of skin with acne.



## 15 treatment programs with the Laser-ultrasound handpiece®



### ■ US DEEP LINES

#### **Treatment of deep lines with ultrasound**

Increases the blood flow through and the activity of metabolism, thus the absorption and effectiveness of regenerating active ingredients. Through its stronger heat effect increases intensively the fibroblast activity.

### ■ US-L DEEP LINES

#### **Treatment of deep lines with ultrasound and laser**

The bio-stimulating effects of red light and laser in synergy with ultrasound improve significantly the condition of aging skin, making it more flexible and smoother.

### ■ US-L LIFTING

#### **Lifting program with laser and ultrasound**

Through the joint collagen-strengthening and fibroblast-stimulating effect of ultrasound and laser, a successful lifting treatment could be carried out.

### ■ US SENSITIVE

#### **Treatment of superficial wrinkles, treatment of wrinkles in sensitive skin with ultrasound**

Rejuvenation program with effects similar to those in the case of treatment of deeper lines, but treats the sensitive skin with a milder performance.

### ■ US SONOPHORESIS

#### **Intake of active ingredients with ultrasound**

The mechanical effect of the ultrasound increases the permeability of the epidermis, thus improves the penetration of active ingredients into the deeper layers of the skin. Through its heat effect dilates the blood vessels, thus improves the micro-circulation of the skin and the effectiveness of the introduced active ingredients.

### ■ US PROBLEM SKIN

#### **Treatment of acne with ultrasound**

By loosening the comedos makes the cleaning of the face to be easier. The ultrasound relieves the symptoms of acne through its anti-inflammatory effect.

### ■ US-L PROBLEM SKIN

#### **Treatment of acne with ultrasound and laser**

By loosening the comedos makes the cleaning of the face to be easier. Through the synergic anti-inflammatory effect of ultrasound and laser, the symptoms of acne are relieved. The laser helps the skin injuries healing quickly and without scars.

### ■ US SCARS FACE

#### **Treatment of scars in the face with ultrasound**

Improves the micro-circulation of deeper layers of the skin, as well as the metabolism. Increases the activity of fibroblasts, thus stimulates the improvement of the structure of the scars.

### ■ US-L DEEP SCARS

#### **Treatment of deep scars with ultrasound and laser**

In addition to the micro-circulation and metabolic processes, increases the fibroblast activity as well, thus stimulating the improvement of the structure of the scars. The intensive photo-biostimulating effect of the laser makes the structure of the skin to be rebuilt.



### ■ US MELASMA

#### **Treatment of pigmentation irregularities with ultrasound**

The beneficial effect of the ultrasound is used for the bleaching of diffuse pigmentation irregularities.

### ■ US-L MELASMA

#### **Treatment of pigmentation irregularities with ultrasound and laser**

The synergic effect of the ultrasound and the laser aims at the bleaching of pigmentation irregularities.

### ■ US-L BODY STRIAS

#### **Treatment of striae with ultrasound and laser**

We utilize the bio-stimulating effect of the laser and the lypolising and collagen regenerating effect of the ultrasound in the area of striae and stretchmarks.

### ■ US-L STIMULATION 1

Bio-stimulation with laser-ultrasound (1. level).

### ■ US-L STIMULATION 2

Bio-stimulation with laser-ultrasound (2. level).

### ■ US-L STIMULATION 3

Bio-stimulation with laser-ultrasound (3. level).





## Sono-CoolAir® the new ultrasonic handpiece for body treatments

It's an old observation that lypolysis during body treatments is the most effective if the handpiece heats up the tissues through the continuous emission of ultrasound, thus improving the release of lipids accumulated in the fatty cells.

The only difficulty is that as an effect of continuous ultrasound not only the deeper layers of the skin but its surface is heated up as well, thus could cause uncomfortable sensation of heat, maybe undesirable damaging of the epidermis.

In order to prevent from this, the ultrasound had been made fractional till now, certainly reducing the effectiveness of the treatment by this.

We have been working on the development of ultrasound devices for more than ten years now, and in addition to improve the effectiveness, we have been working continuously to increase the patient protection and the comfort of the treatment. The automatic treatment programs, the CDM® contact checking mechanism and the Real treatment time counter work for achieving these objectives.

During the R&D period of the new sonoderm® XXL device we looked for a technical solution that could prevent from the excess heating up of the epidermis when deeper layers of the skin were treated with high intensity.

The sonoderm® XXL treats the skin in a really gentle manner, as cools actively the epidermis during the ultrasound treatment. The device controls continuously the temperature of the treating area, and changes the intensity of cooling from moment to moment according to this.

The cooling down of the skin surface causes the formation of heat - similar to the function of a fridge. The skin surface could be cooled down effectively only if the created heat is conducted. In the inside of the Sono-CoolAir® handpiece a tiny fan ensures perfect heat conduction, thus the skin can be prevented from damaging even at higher ultrasound performance.





## 10 treatment programs with the Sono-CoolAir® handpiece

### ■ US-C SONOPHORESIS

#### **Intake of active ingredients with ultrasound**

Increases the permeability of the epidermis, thus improves the penetration of active ingredients into the deeper layers of the skin.

### ■ US-C CALMING

#### **Calming treatment of the skin with ultrasound and cooling**

The vessel-contracting, anti-inflammatory and pain-relieving effect of the cooling soothes the irritated areas, while active ingredients with calming effect are introduced into the skin with the help of ultrasound.

### ■ US-C PROBLEM SKIN

#### **Treatment of problem skin with ultrasound and cooling**

The ultrasound relieves the inflammations, loosens up the comedos and regenerates the collagen fibres, while the cooling has a soothing effect and increases the sensation of comfort.

### ■ US-C LYMPHATIC

#### **Stimulation of lymph flow with ultrasound and cooling.**

The cooling reduces the oedema, and the ultrasound, as an external lymphatic heart, makes the lymph in the lymphatic system to move.

### ■ US-C CELLULITE 0.

#### **Treatment of evolving form of the cellulite problem with ultrasound and cooling**

Two-phase treatment program: the first phase aims at lypolysis, thus triggers the dissolution of lipid reserves stored in the fatty cells. During the second phase an intensive massage is carried out, making the fat to leave the fatty cells and to be removed by the lymph flow.

The cooling reduces the heating effect of ultrasound and reduces oedema, which is one of the main reasons for the evolving of the cellulite problem. This program is to be used in the 0 stadium of the cellulite problem.

### ■ US-C CELLULITE I.

#### **Treatment of milder form of the cellulite problem**

Two-phase treatment program: the first phase aims at lypolysis, thus triggers the dissolution of lipid reserves stored in the fatty cells. During the second phase an intensive massage is carried out, making the fat to leave the fatty cells and to be removed by the lymph flow.

The cooling reduces the heating effect of ultrasound and reduces oedema, which is one of the main reasons for the developing of the cellulite problem. This program is to be used in the I stadium of the cellulite problem.

## ■ US-C CELLULITE II.

### **Treatment of middle severe form of the cellulite problem**

Two-phase treatment program: the first phase aims at lypolisis, thus triggers the dissolution of lipid reserves stored in the fatty cells. During the second phase an intensive massage is carried out, making the fat to leave the fatty cells and to be removed by the lymph flow.

The cooling reduces the heating effect of ultrasound and reduces oedema, which is one of the main reasons for the developing of the cellulite problem. This program is to be used in the II stadium of the cellulite problem.

## ■ US-C CELLULITE III.

### **Treatment of severe form of the cellulite problem**

Two-phase treatment program: the first phase aims at lypolisis, thus triggers the dissolution of lipid reserves stored in the fatty cells. During the second phase an intensive massage is carried out, making the fat to leave the fatty cells and to be removed by the lymph flow.

The cooling reduces the heating effect of ultrasound and reduces oedema, which is one of the main reasons for the developing of the cellulite problem. This program is to be used in the III stadium of the cellulite problem.

## ■ US-C LIPOLYSIS

### **Fat mobilizing**

This treatment triggers the dissolution of lipid reserves stored in the fatty cells and their removal from there. The cooling reduces the heating effect of ultrasound and reduces oedema.

## ■ US-C BODY FORMER

### **Body shaping massage**

Stimulates the blood circulation in the tissues and the removal of accumulated waste materials. Its intensive massage effect has a role in the relaxing of the muscles and the stimulating of the lymph flow. The cooling has an anti-inflammatory, antiphlogistic and soothing effect.

### Technical details

#### **Output parameters of the ultrasound:**

In pulse mode of operation:

0 - 3,0 W/cm<sup>2</sup>

In continuous mode of operation:

0 - 2 W/cm<sup>2</sup>

#### **Modes of operation with modulation:**

10% - 100%

**Treatment time:** 1 - 30 minutes

**Dimensions:** 255 x 245 x 140 mm

**Weight:** 3 kg

