

TRONITEK LLC

Skin Care Unit

DiaDENS•Cosmo

Operating Manual





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THANK YOU FOR PURCHASING THE DiaDENS-Cosmo UNIT!

To ensure effective and safe usage of the unit,
please read carefully all sections of this manual.



1 SAFETY RULES



Please pay special attention to the information marked with this sign. This information is important for ensuring safe and effective use of the unit.



The information contained in this Operating Manual is important for your safety and for correct application and maintenance of the unit.



Operation of the unit in the vicinity of short-wave or microwave equipment may cause the output parameters of the unit to become unstable.



Avoid long-term exposure of the unit to direct sunrays at a high air temperature (over 25 °C). This may cause failure of the unit display or destroy its batteries.



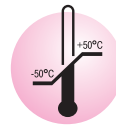
The product contains fragile components. Take care to protect it from shocks.



The unit is not waterproof. Protect it from moisture.

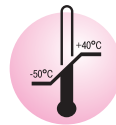


All maintenance works on the unit must be performed by skilled technicians at the manufacturer's factory.



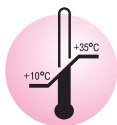
Transportation conditions:

- temperature -50 to +50 °C;
- relative air humidity 30 to 93 %;
- atmospheric pressure 70 to 106 kPa (525 to 795 mm Hg).



Storage conditions:

- temperature -50 to +40 °C;
- relative air humidity 30 to 93 %;
- atmospheric pressure 70 to 106 kPa (525 to 795 mm Hg).

**Operating conditions:**

- temperature +10 to +35 °C;
- relative air humidity 30 to 93 %;
- atmospheric pressure 70 to 106 kPa (525 to 795 mm Hg).



Warning! *If the unit was stored at the ambient temperature lower than 10 °C, before operating keep it under normal climatic conditions for at least two hours.*



Recycling: the unit packaging materials are not hazardous for the environment; they can be recycled.



Separate collection of electric and electronic equipment.



Warning! *The unit contains precious materials that may be used repeatedly after disposal with consideration of the environmental protection regulations.*



Such materials must be taken to specially designated collection and recycling facilities (please consult in the relevant services in your locality).

The use of low currents in beauty therapy is safe for people who have no health issues.

However there are a number of diseases and pathological conditions, the presence of which may restrict or preclude from the application of the unit for medical reasons.

They include:

- an implanted heart pacesetter or other implanted electronic devices;*
- idiosyncrasy to electric current;*
- epilepsy with frequent seizures;*
- fever of unknown etiology;*
- neoplasia;*
- general severe condition of a patient;*
- infectious diseases of the skin.*

If you have any of the health issues, you have to consult a physician before using the unit.



No controlled studies of the application of the unit by pregnant women have been conducted.



2 GENERAL INFORMATION

It is no secret that facial skin can lose its attractiveness due to wrinkles, pigment spots, scaling, loss of elasticity or dehydration. On the one hand, this can be caused by aging changes related to the whole body. Such changes may become evident at any age because the skin is constantly exposed to aggressive environmental factors that lead to impairment of normal circulation and therefore skin nutrition.

It becomes dry and less elastic, changes its colour and becomes wrinkled.

While we cannot stop the pace of time, modern cosmetology provides every opportunity to protect our skin and minimize the consequences of continuous exposure to the environment.

The beauty therapy effect of the unit is accounted for by the exposure of the skin to low current electric impulses (microcurrents). Microcurrent treatment restores muscular and vascular tonus, improves skin microcirculation and nutrition. This, in its turn, boosts metabolism and rejuvenates the skin. It looks fresh and radiant.



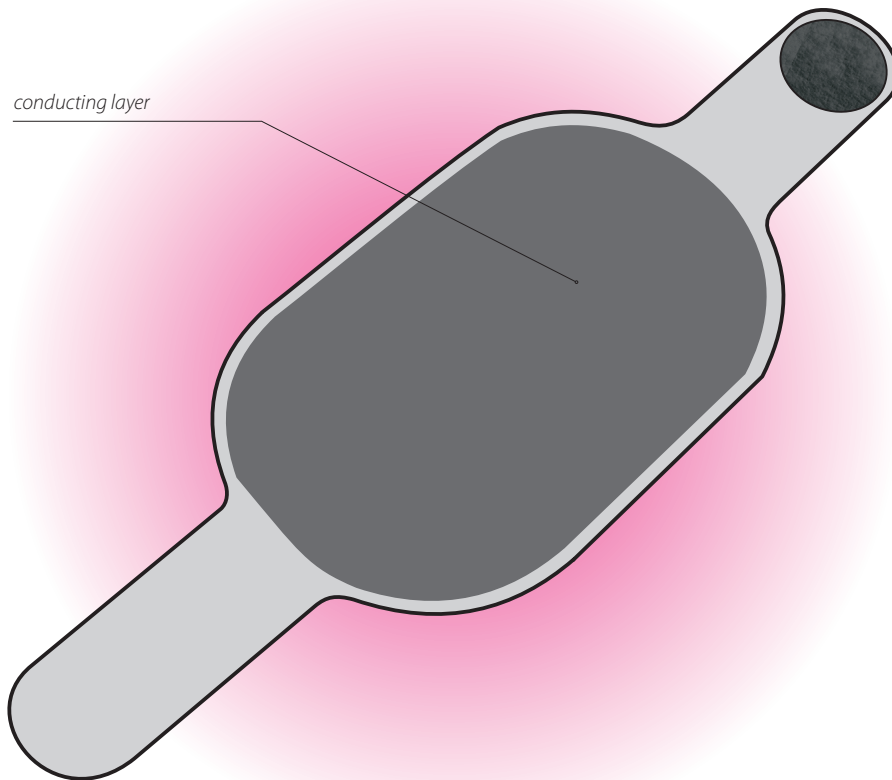
3 INTENDED USE OF THE DEVICE

The DiaDENS-Cosmo unit is designed for cosmetological treatment of the facial skin. The treatment does not require any special conditions. The unit can be used at home or at beauty salons.

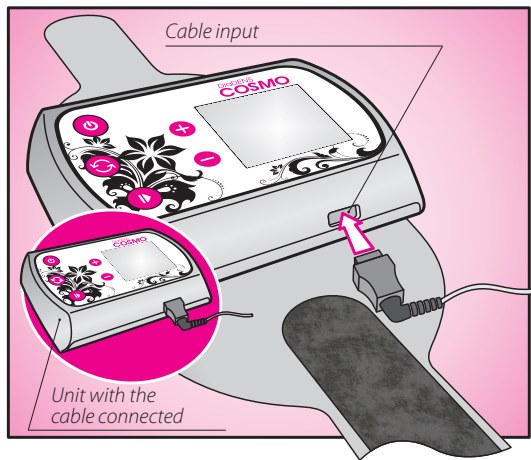
4 UNIT DESCRIPTION



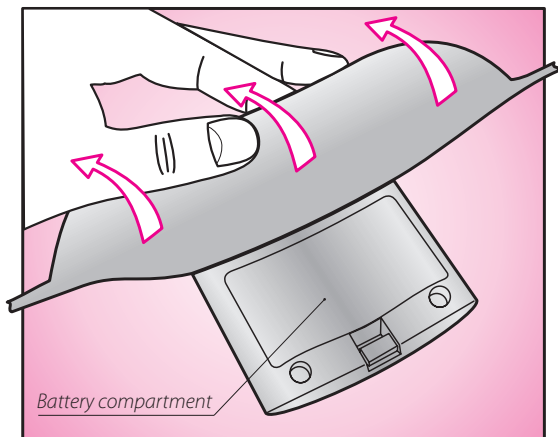
Picture 1. Arrangement of the unit. Front



Picture 2. Arrangement of the unit. Back with the conducting cuff



Picture 3. Arrangement of the unit. Cable input and unit with the cable connected



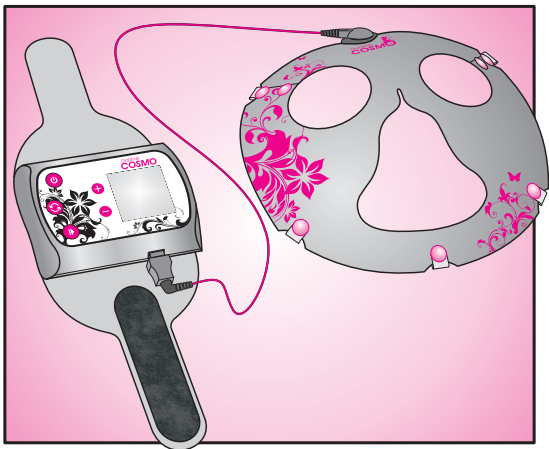
Picture 4. Arrangement of the unit. Battery compartment



Picture 5. Mask electrode



Do not connect the mask electrode to any type of device other than the DiaDENS Cosmo!

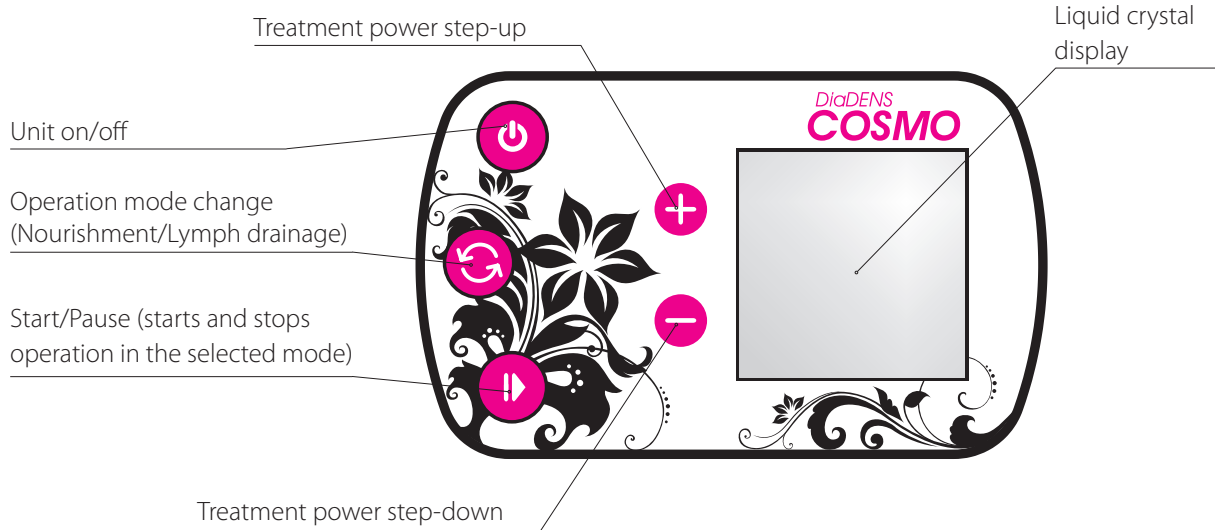


Picture 6. Beauty care unit with mask electrode connected

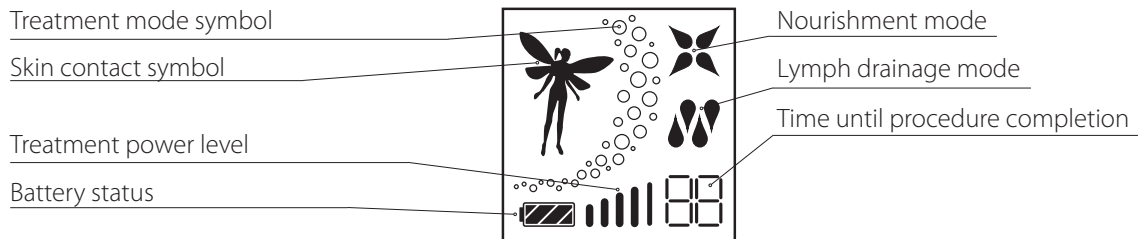


Do not connect any detachable electrodes other than the mask electrode designed for use with DiaDENS Cosmo.

Picture 7. Arrangement and purpose of the buttons on the keyboard



Picture 8. Designation of symbols on the display





5 APPLICATION INSTRUCTIONS

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5.1. No special conditions are required for the procedure

The room should be dry and warm. During the procedure the patient should be positioned comfortably, seated or lying. After the procedure it is recommended to remain relaxed for 10 – 15 minutes.

Products recommended for use with DiaDENS-Cosmo:

- DiaDENS-Cosmo series facial beauty masks;
- tissue mask to be used with physiological solution (0,9 % NaCl solution) or 1 % Karlsbad salt solution

5.2. Beauty mask allergenicity test

All DiaDENS-Cosmo series facial beauty masks are hypoallergenic. However if you are prone to allergic reactions:

- 1) apply a drop of the cosmetic solution on a small skin area close to the elbow and let it dry;
- 2) if skin redness is evident in the area where the

drop was applied within 1–2 hours, do not use this beauty mask for treatment.

5.3. Skin preparation for treatment



Make sure that before the procedure you take off all metal hairpins or decorations that were on your head.

Do not use the unit if you have conductive jewelry on as it may significantly decrease effect of the procedure.

Do not apply the unit to damaged skin or to the skin showing signs of inflammation on the face or around it.

It is very important for your safety that during treatment your facial skin should be free from makeup.

The following steps should be taken:

- 1) remove all makeup from your face, using tonic;
- 2) wash your face thoroughly with a large quantity of running water;

3) remove the remaining moisture with a towel or with dry tissue.

5.4. General recommendations concerning treatment and program selection

When using the unit, please remember that the maximum effect is achieved if you a course of treatment is delivered. Its duration can be 5–6 to 10–12 procedures. The effect will become evident gradually as restoration of the skin cells takes certain time. The treatment also gives a long-term post-effect. To maintain it you will have to conduct 1 or 2 procedures a week.

Long-term continuous use of one physical factor increases tolerance to such factor and may decrease treatment effect.

That is why we do not recommend continuous use of the unit.

Besides, due to the stochastic nature of physiological processes in the human body, an insignificant number of people (maximum 2–3 %) show insufficient response or complete lack of response to the treatment (without any negative consequences).

Depending on your skin type and its initial condition, age and the objectives that you wish to achieve, various unit application schemes are possible.

You can develop them yourself or use the suggested schemes.

There are two key approaches:

- 1) a course of 6 or 12 procedures once a quarter and supporting therapy consisting of 1 or 2 procedure a week between the courses;
- 2) monthly courses including 5 or 6 procedures without supporting therapy.

5.5. Nourishment mode

This mode is recommended as a basic program for the beauty therapy course. It improves circulation in the facial skin and enhances uptake of the active components in the DiaDENS-Cosmo series facial beauty masks.

5.6. Lymph drainage mode

The lymph drainage program is used for face lift and anti-edema treatment.

We recommend to alternate it with the Nourishment program your face has a tendency to become edematous.

To conduct treatment in this mode, use the tissue mask moistened with a saline solution, for example in the physiological solution (0,9 % NaCl solution) or 1 % Karlsbad salt solution.

5.7. Mode combination during the procedure

We recommend to use one of the unit modes during the procedure. It needs to be decided separately in each case whether it makes sense to use two modes in consequence during one procedure, depending on the treatment effect and individual sensitivity of each patient.



Please adhere to the recommended treatment schemes. If you apply the unit too frequently, this may cause skin irritation.

5.8. Preparation of the unit for the procedure

Before using the unit, make sure that there are no impact marks on its case and the liquid crystal display of the unit is not damaged. Make sure that

there are no traces of foreign materials or signs of damage on the cuff electrode and on the mask electrode.



Do not use the unit if it is damaged.

Do not use the mask electrode if the conducting layer is damaged (change of colour or mechanical destruction).

5.8.1. If there are no batteries in the battery compartment, install the batteries. When installing the batteries, make sure you observe the correct polarity.

5.8.2. Before the first use, wash the cuff electrode and the mask electrode with soap solution. Wash off the remaining soap with running water. Remove the remaining moisture with dry tissue.

5.8.3. Put the mask electrode in front of you with the decorative side down.

5.8.4. Connect the cable to the mask electrode.

5.8.5. Slightly moisten the skin on the back surface of your forearm. Fix the unit on your arm, making sure that it fits tightly on your moistened skin.



If the cuff electrode does not fit tightly, you may have unpleasant sensations during the procedure.

We recommend that one mask electrode should not be shared by several users.

5.9. Procedure

5.9.1. Nourishment program



Pull one of the DiaDENS-Cosmo series masks out of the package; unfold it and smooth it out on your face.

Before use make sure that the package of each individual beauty mask is undamaged. Do not use the mask if the package is damaged.

Do not use the beauty masks that were kept in the open air for a long time or the masks that show evidence of drying.

We recommend to use the masks within 20 or 30 minutes after they are pulled out of the package.

Do not additionally moisten the beauty mask with any solution not recommended

for use with DiaDENS-Cosmo.

Warning! *Do not use any masks other than those recommended for use with the unit!*

Other masks were not tested for compatibility with the unit.

Do not use the beauty masks with an expired shelf life.

5.9.2. Lymph drainage program

Prepare a saline solution (for example 1% Karlsbad salt solution – 1 teaspoonful per 0.5 litre of water) or use a pre-mixed physiological solution (0,9 % NaCl solution). Take the tissue mask out of the package. Soak it in the saline solution and squeeze to remove extra moisture.

Smooth out the mask carefully and apply it to your face.

5.9.3. Smooth out the mask over your face in sliding movements, making sure that it fits tightly on your facial skin.

5.9.4. Fix the mask electrode over the cosmetic mask on your face. Make sure that the mask electrode is not in direct contact with the facial skin!




Warning! Do not try to fix the mask electrode so that it would be in complete contact with your face. Several contact points around the face perimeter will be sufficient.


The nourishing mask conducts impulses up to the distance of 6 to 8 cm of each point of contact with the mask electrode.

5.9.5. Connect the cable of the mask electrode to the unit.

5.9.6. Switch on the unit, using the  button.

5.9.7. Select the required mode — Nourishment of Lymph Drainage — using the  button.


5.9.8. Press the  button to start the procedure.

5.9.9. Gradually increase the power by pressing the  button until you feel a slight tingling or vibration under the mask electrode or under the cuff on your arm.



Different people may have significantly different electric stimulation sensitivity, and some people may not feel anything at the maximum power.

This is not a defect of the unit and does not decrease effect of the procedure.

If you have any unpleasant sensations after the power is increases, use the  button to reduce the treatment power to a comfortable level.

Do not conduct treatment at an uncomfortable or intolerable power level!

5.9.10. Upon completion of the procedure, the unit will sound an alarm and stop the treatment.

5.9.11. Take the mask electrode off your face, after which remove the beauty mask.



The beauty mask is disposable and may not be used repeatedly.

5.9.12. Take the unit off your arm. Disconnect the cable from the mask electrode and from the unit. Be careful when pulling the plug out of the unit: hold the plug tightly, do not shake it loose or bend it.

5.9.13. Remove the remaining parts of the beauty mask from your face, using warm running water.

5.10. Obligatory maintenance of the mask electrode

Immediately after the procedure, remove the remaining cosmetic solution from the mask electrode, using running water with soap.

Careful cleaning of the mask electrode carefully after the procedure ensures safety of further procedures and significantly increases the lifetime of the mask electrode.

The manufacturer recommends to replace the mask electrode after 60 applications.



Warning! Store the mask electrode dry!

Make sure that the cosmetic solution does not dry on the mask electrode.



Clean the mask electrode immediately after each procedure.

Do not continue using the mask electrode if it was not treated and show green oxidation marks!

Clean the mask electrode and the conducting layer of the cuff carefully after each use. The lack of adequate cleaning may cause allergic reactions of cross-infection if several people use the unit.



In case of idiosyncrasy, if you observe aggravation of the patient's condition during the procedure or skin irritation after the procedure, stop the treatment and promptly consult a physician.



6 CONTENTS OF THE BOX

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The box contains the following parts:

Name	Quantity (pieces)
DiaDENS Cosmo unit with a cuff electrode	1
Mask electrode*	1
Cable*	1
Moisturizing and cleaning* DiaDENS Cosmo beauty mask	6
Cuff extender	1
Operating manual	1
Battery	2
Consumer package	1

The box may additionally contain test samples of other beauty mask tested by the manufacturer.

** Additional accessories and consumables (mask electrodes, cables, beauty masks, tissue masks) are not included in the scope of supply and are available separately.*

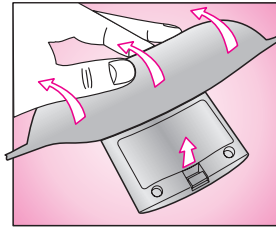
7 MAINTENANCE AND BATTERY REPLACEMENT

7.1. Maintenance should include the following operations:

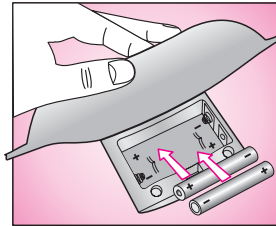
- 1) External inspection of the unit. Make sure that there are no impact marks on the unit as this may lead to its incorrect operation.
- 2) Clean the conducting surface of the cuff and the conducting surface of the mask electrode before and after use of the unit. The lack of adequate cleaning may cause allergic reactions or skin infection, especially in case of use of the unit by several patients. Use soap and running water for cleaning.

7.2. If the unit will not be used for a long period of time (more than 3 days), remove the batteries from the battery compartment. This will prevent their early discharge.

7.3. If the battery indicator on the LCD starts flashing, replace the batteries. To do this:



- 1) unfold the cuff with care on the side of the the battery compartment and remove its cover; remove the used batteries;



- 2) take out the old batteries and install the new ones, making sure that the polarity is correct*.

* Use only the batteries deigned for this unit – LR6/AA type, rated voltage 1.5V.



8 TROUBLESHOOTING

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The table below describes the situations that may be interpreted as fault and can be remedied without external help. In case of other defects

contact the manufacturer's representative (see Section 11); do not try to remedy them.

Possible faults and remedies

Problem	Possible cause
When the unit is turned on, alarm sounds and the unit switches off automatically	Replace the batteries. Make sure that the polarity is correct (see 7.3). If after installation of the new batteries the unit will not switch on or sounds an alarm and switches off automatically, contact a representative of the company (see Section 11)
The unit does not start treatment (no skin contact symbol)	<ol style="list-style-type: none">1. Make sure that the cuff electrode is in tight contact with the forearm skin; moisten the skin under the cuff electrode.2. Check the connection of the connection cable to the input in the unit case.3. Make sure that the response part of the cable is tightly connected to the mask electrode.4. If you are using a tissue mask, make sure that it is sufficiently moistened with the saline solution. If you still cannot see the contact symbol on the energized unit, contact a representative of the company (see Section 11).

9 TECHNICAL PARAMETERS

9.1. Maximum consumption current (at supply voltage $3,0 \pm 0,1$ V):

- in the treatment mode — max. 300 mA;
- in de-energized condition — max. 10 μ A;

9.2. Weight without batteries — max 300 g.

9.3. Dimensions — max. 300x100x35 mm.

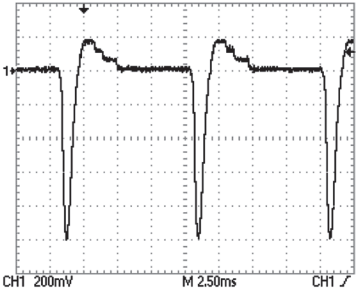
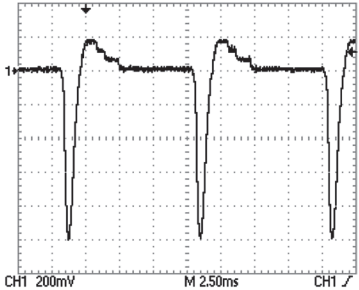
9.4. The unit turns off automatically if not used for more than 1,5 min.

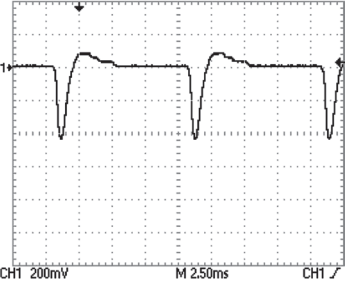
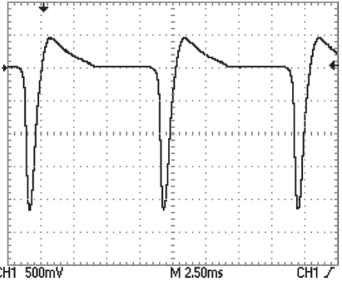
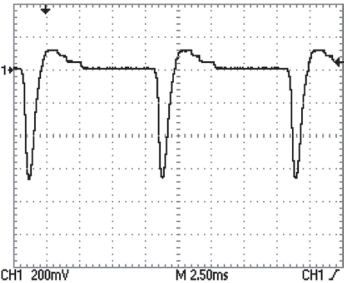
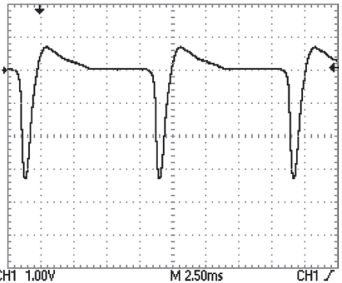
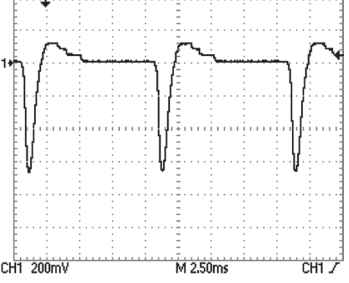
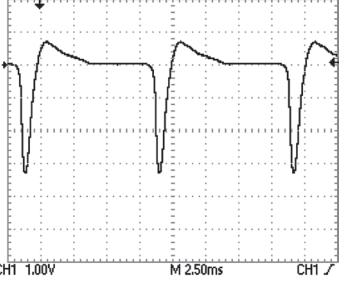
9.5. Stimulation impulse frequency in the Nourishment mode: 100 ± 30 Hz;

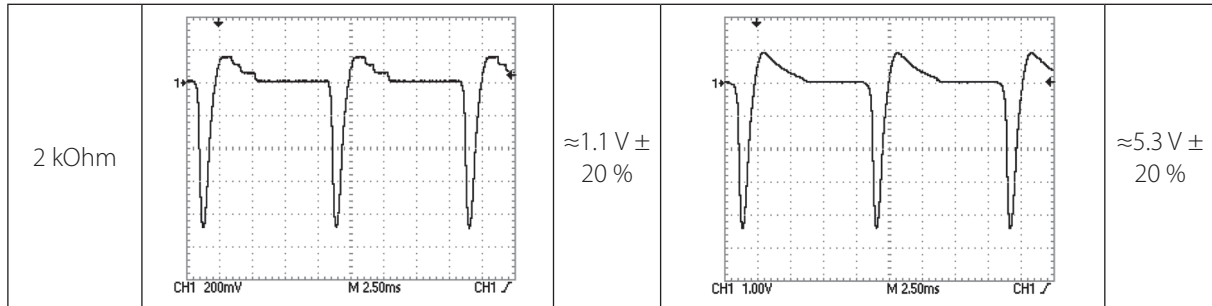
9.6. Stimulation impulse frequency in the Lymph mode — 100 ± 30 Hz and 50 ± 15 Hz;

9.7. Treatment duration 15 ± 1 min.

9.8. Relation between the impulse waveform and the load resistance at the minimum and maximum power level. Mode Lymph drainage:

Load resistance	Power level: Min		Power level: Full	
	Waveform	V _{P-P}	Waveform	V _{P-P}
Free output		≈ 1.2 V ± 20 %		≈ 1.2 V ± 20 %

200 Ohm	 <p>CH1 200mV M 2.50ms CH1 /</p>	$\approx 0.5\text{V} \pm 20\%$	 <p>CH1 500mV M 2.50ms CH1 /</p>	$\approx 2.5\text{V} \pm 20\%$
500 Ohm	 <p>CH1 200mV M 2.50ms CH1 /</p>	$\approx 0.77\text{V} \pm 20\%$ $E_{\text{pulse}} \approx 0.92\ \mu\text{J}$	 <p>CH1 1.00V M 2.50ms CH1 /</p>	$\approx 4\text{V} \pm 20\%$ $E_{\text{pulse}} \approx 25\ \mu\text{J}$
1 kOhm	 <p>CH1 200mV M 2.50ms CH1 /</p>	$\approx 0.9\text{V} \pm 20\%$	 <p>CH1 1.00V M 2.50ms CH1 /</p>	$\approx 4.7\text{V} \pm 20\%$



9.9. Effective current — I_{eff} for load resistance

500 Ohm:

Mode	Power level: Min	Power level: Full
Lymph drainage	$I_{\text{eff}} = 0,43 \text{ mA}$	$I_{\text{eff}} = 2,22 \text{ mA}$



10 THE MANUFACTURER GUARANTEES

10.1. The Manufacturer guarantees conformity of the electrostimulation unit to device specification, provided that the user adheres to the operation, transportation and storage conditions.

10.2. Lifetime of the unit is 5 years.

If the operating instructions are followed, the lifetime may be much longer than the officially established one.

10.3. Warranty operation term — 24 months of the date of sale.

Warranty operation term of the accessories (mask electrode and cable) — 1 month of the date of sale.

The Seller (Manufacturer) or any company acting as such under the contract with it shall not be liable for defects if they have occurred after the transfer of the unit to the user due to:

1) failure of the user to observe the transportation, storage, maintenance and operation rules provided for by this Manual;

2) mechanical damage;
3) third parties' actions;
4) circumstances of force majeure.

10.4. The warranty does not cover the units with destroyed factory seals.

10.5. In case of failure of the unit or its defect during the effective term of the warranty and if the owner discovers that certain components are missing, the owner of the unit shall send to the manufacturer or his representative a repair (replacement) request stating his full name, address and telephone number and containing a short description of the defect and the conditions in which and the date when it was discovered.




11 MANUFACTURER'S ADDRESS

TRONITEK LLC

Academika Postovskogo St. 15,
Ekaterinburg 620146, Russia
Tel.: +7 (343) 267-23-30
<http://www.denascorp.ru>
e-mail: corp@denascorp.ru

Official Representative in the European Union:

DENAS-CZ Ltd.
Na Výhledě 886/3A, 36017
Karlovy Vary
Tschechische Republik
Tel./Fax:+420 353 549 285
E-Mail: denas.cz@seznam.cz



12 CONTACTS

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If you have any questions regarding the operation of the unit, purchase of the consumables etc., you may contact:

Distributor:

Full name

Telephone

Website:

www.denascorp.ru

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ТАЛОН НА ГАРАНТИЙНЫЙ РЕМОНТ
WARRANTY MAINTENANCE FORM
GARANTIEREPARATURSCHEIN

Наименование / Name / Bezeichnung: ДиаДЭНС-Космо / DiaDENS-Cosmo / DiaDENS-Cosmo

Серийный номер изделия / Product serial number / Seriennummer des Produktes _____

Дата изготовления / Date manufactured / Herstellungsdatum _____

Дата покупки / Date purchased / Kaufdatum _____

Владелец / Owner / Eigentümer _____

Адрес / Address / Adresse _____

Телефон / Telephone / Telefon _____ домашний / home / privat
_____ рабочий work/Geschäftlich

Дата отправки в ремонт / Date device sent for maintenance / Versanddatum im Garantiefall _____

Причина отправки в ремонт / Please explain the reason why device was sent for maintenance / Grund für die
Einsendung zur Reparatur _____

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Отметка о ремонте / Note of completed maintenance / Reparaturvermerk _____

Подпись должностного лица предприятия, ответственного за приемку после ремонта / Signature of the authorized person in the company responsible for acceptance after maintenance / Unterschrift des firmeneigenen Prüfers nach der Reparatur _____

Изделие проверено, претензий к комплектации, внешнему виду не имею. / The device was tested; I have no claims as to the completeness of the device in accordance with scope of delivery and the appearance of the device. / Das Produkt wurde überprüft, ich habe keinerlei Beanstandungen hinsichtlich der Vollständigkeit des Sets und des äußeren Zustandes.

Подпись покупателя / Signature of the buyer / Unterschrift des Käufers _____

Дата получения / Date received / Empfangsdatum _____

Гарантия на отремонтированное изделие составляет 6 месяцев с момента получения изделия из ремонта. Если гарантийный срок с момента приобретения изделия составляет более 6 месяцев, то гарантия исчисляется по большему сроку. Также гарантийный срок увеличивается на время нахождения изделия в ремонте.

The warranty period for the device after maintenance is 6 months of the date the device was received from the service centre. If the warranty period is more than 6 months of the date of purchase of the device, the warranty period shall be calculated based on a longer period. The period of maintenance of the device at the maintenance centre is also added to the warranty period.

Garantiezeit für die reparierte Ware beträgt 6 Monate ab dem Empfangsdatum der Ware von der Reparatur. Im Falle einer Garantiezeit, die mehr als 6 Monate beträgt, so geht man von der längere Garantiezeit aus. Garantiezeit verlängert sich grundsätzlich um die Reparaturzeit.

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СВИДЕТЕЛЬСТВО О ПРИЕМКЕ / ACCEPTANCE CERTIFICATE / ABNAHMEBESCHEINIGUNG

Аппарат косметологический ДиаДЭНС-Космо соответствует спецификации и признан годным для эксплуатации. / The DiaDENS-Cosmo beauty care unit is in conformity with device specification and was found serviceable. / Das kosmetologische Gerät DiaDENS-Cosmo entspricht der Spezifikation und wird für betriebstauglich befunden.

Заводской номер / Factory ID / Betriebsnummer:

Дата изготовления / Manufacture date / Herstellungsdatum:

Отметка о приемке:

Acceptance note:

Abnahmevermerk:

Подпись продавца:

Signature of the seller:

Unterschrift des Verkäufers: _____

Дата продажи:

Date of sale:

Verkaufsdatum: _____

С условиями гарантии ознакомлен, изделие проверено, претензий к комплектации, внешнему виду не имею. I am aware of the warranty terms and conditions; the device was tested; I have no claims as to the completeness of the device in accordance with scope of delivery and the appearance of the device.

Über die Garantiebedingungen bin ich in Kenntnis gesetzt worden. Das Gerät wurde überprüft und ich habe keinerlei Beanstandungen hinsichtlich der Vollständigkeit des Sets und seines äußeren Zustandes.

Подпись покупателя

Signature of the buyer

Unterschrift des Käufers _____

Date

Datum:

Datum: _____

Внимательно осматривайте аппарат при покупке! Дефекты корпуса или дисплея (царапины, трещины, сколы) не являются гарантийными случаями. Аппараты с такими дефектами обмену, ремонту или возврату по гарантии не подлежат.

Please carefully inspect the unit at the time of purchase! Defects of the body or the screen (scratches, cracks, splits) are not covered by the warranty.

Devices with such defects shall not be exchanged, accepted for maintenance or returned.

Bitte untersuchen Sie das Gerät beim Kauf genau! Schäden an Gehäuse oder Display (Kratzer, Risse, Brüche) stellen keine Garantiefälle dar. Für Geräte mit derartigen Schäden besteht keinerlei Garantieanspruch auf Umtausch, Reparatur oder Rückgabe.