

# IDROSTAR PRO PULSE

280710



## Indications

- . Treatment of Hyperhidrosis of the hands, feet and axillae
- . Acrocyanosis with excess sweating
- . Treatment of warts and verrucae
- . Treatment of chilblains



## Contra-indications

- . Pregnancy.
- . Cardiac pacemakers and similar devices.
- . Metal orthopaedic implants and similar metal devices.

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## WARNINGS

1. The simultaneous connection of this machine with high frequency electrical equipment may result in burns at the point of contact with the electrodes and may also cause damage to the machine
2. Although the machine is electromagnetically compatible, we recommend that you do not use it in the immediate proximity (within 1 metre) of appliances that could generate significant electromagnetic fields or generate short waves, such as your TV, monitor or microwave
3. Only use the accessories recommended for use with the Idrostar pro pulse as other accessories may cause damage to the machine
4. Do not allow liquids to get into the cabinet
5. Do not dismantle your machine as there are no serviceable parts and only a qualified technician should do this
6. Do not remove hands and/or feet from baths during treatment as this will cause an unpleasant, but not dangerous, electrical surge
7. Ensure that when handling the charger your hands are not wet.



This symbol means that you must have to read this document before using the machine.



: This symbol means that you are using a BF electrical class equipment.

=== : This symbol means DC Voltage.

## SIDE EFFECTS / PRECAUTIONS

- **An unpleasant electric impulse (approximately 30V, but not dangerous) will be felt if the patient breaks the circuit during treatment by lifting a hand or foot out of the water, or changing the polarity whilst the current is on, this is much less apparent if in pulse current mode.**
- **Sensation of mild burning if the metal electrode is touched.**
- **Microbruising if the intensity of treatment is too great.**
- **Moderate hyperkerotosis if treatment sessions are too frequent.**
- **Itchiness of the treated area after treatment. Apply a good emollient or moisturiser post treatment if this occurs or hydrocortisone if extreme erythema occurs.**

## Introduction to the Idrostar Pro Pulse

The Idrostar Pro Pulse is designed for the treatment of palmar, plantar & axillary (underarm) hyperhidrosis. It can also be used for the treatment of Warts, Verrucae, Chilblains or acrocyanosis, for protocols to treat these other indications please contact STD Pharmaceutical.

The machine can treat two extremities or all four extremities at once without assistance, by using the remote current controls.

The machine can be used for treating the axillae, however you will need separate electrodes and sponge pockets which need to be ordered from STD Pharmaceutical Products Ltd, these will come with separate instructions. The axillae should NOT be treated at the same time as hands and feet.

As soon as the current exceeds 2 to 3mA, the timer (which indicates minutes run) will start running. If the machine is not used for more than 5 minutes, it will switch itself off to save battery power.

**It is important not to remove hands or feet from the baths whilst treatment is in progress. If this occurs you may feel an electrical impulse and the current will immediately drop to zero, this is felt less with the pulse current.**

The current generators are powered by 1 X LEAD BATTERY – 12V/2.2Ah

The current indicator shows the current in mA in graduations from 1 to 30, but we recommend that you do not exceed 20mA when treating hands and / or feet.

The treatment is found to be successful in approximately 85% of patients when using only tap water on the hands and feet and about 70% of patients when using tap water in the axillae.

### Treatment of Children

The treatment for hands and feet is the same as detailed later in this manual, but because the skin is thinner, the current level should not exceed 15 mA. Please seek medical advice before commencing treatment on children. In addition we advise the presence of an adult during the treatment and ensure the child has an understanding of what to expect during the treatment. For the axillae we do not recommend treating under the age of 16.

### Pulsed Current

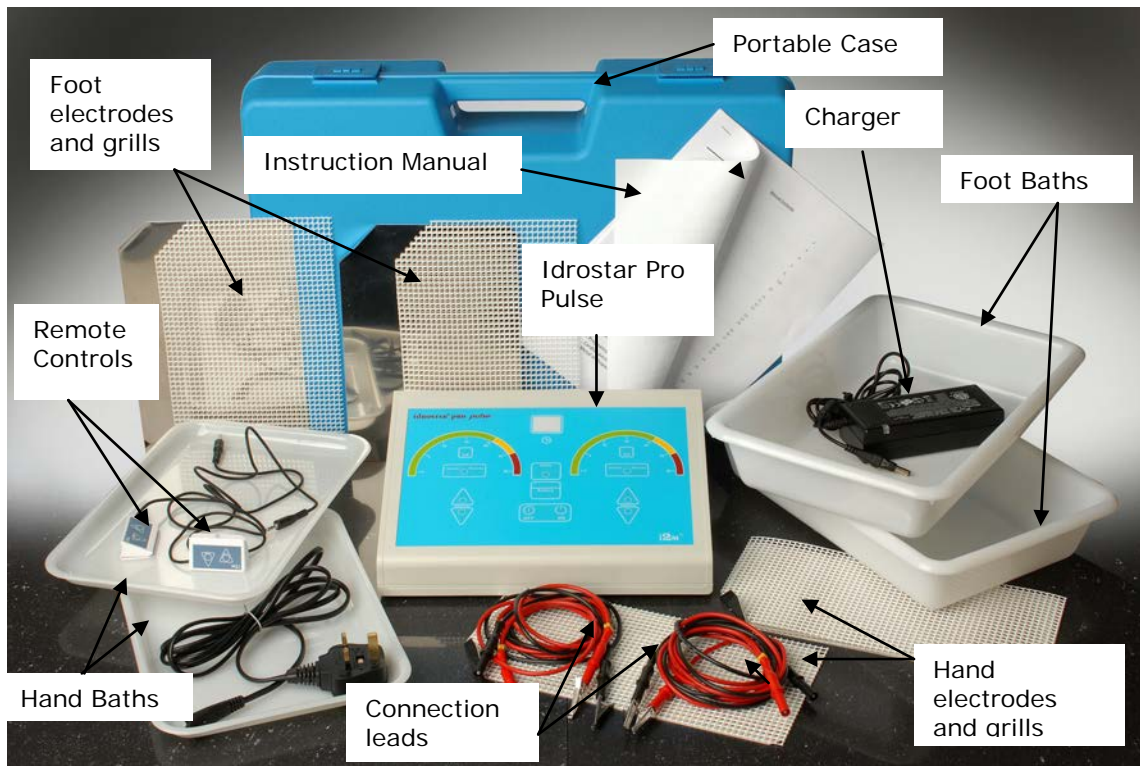
Pulsed current is ideally used for those who are sensitive to direct current and we recommend that it is always used for treatment of the axillae as sensitivity is not uncommon in this area.

In pulsed current mode, the perception of current flow is less for the user, which therefore allows higher treatment currents for sensitive people, with equivalent therapeutic results.

# Contents

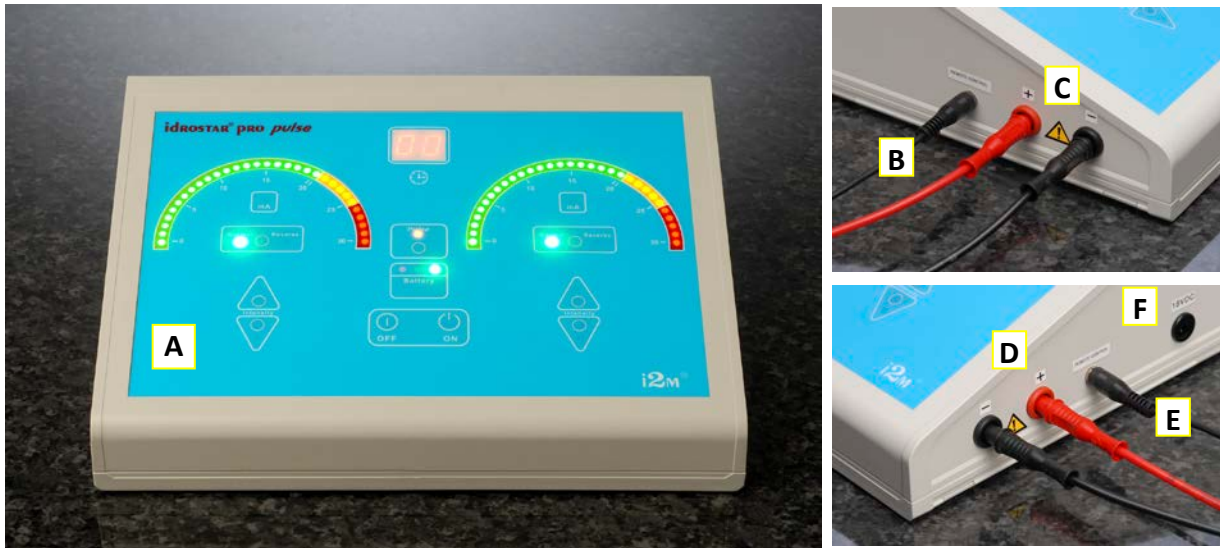
## Your Idrostar Pro Pulse is delivered with:

- 1 pair of plastic hand baths (small)
- 1 pair of stainless steel electrodes for hand baths (small)
- 1 pair of acrylic grills for hand baths
- 1 pair of plastic foot baths (large)
- 1 pair of stainless steel electrodes for foot baths (large)
- 1 pair acrylic grills for foot baths
- 1 pair of remote current controls
- 2 pairs of electrical leads with stainless steel crocodile clips
- 1 mains charger
- 1 Instruction manual



**Fig 1: Contents of the Idrostar Pro Pulse**

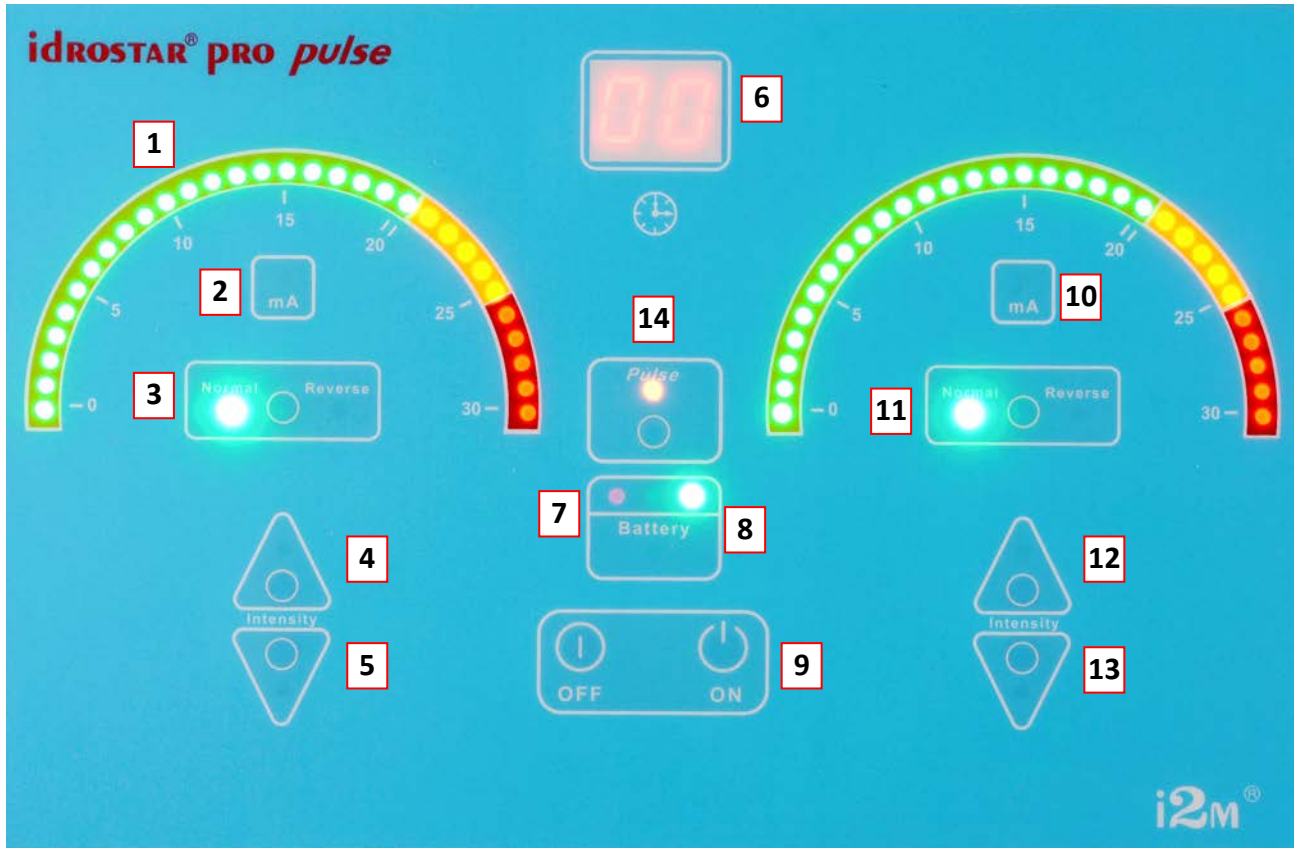
## Description of the Idrostar Pro Pulse



**Fig 2: showing the Idrostar Pro Pulse with the end views.**

- A. Main control Panel for the generators - detailed instruction for the individual controls are shown below:
- B. The remote current controls for the intensity of generator 1, - If this jack is not plugged in the intensity is controlled using the controls on the main panel.
- C. Output sockets for generator 1 (on the left hand side of the machine)– There are two sockets differentiated by Red (+) and Black (-), this is to aid when setting up the machine. So that the cables are not put into the wrong sockets, it is important to plug the red cable into the red socket and the black cable into the black socket. The polarity is changed during the treatment by the use of the polarity switch. (detailed on page 8)
- D. Two output sockets for generator 2, (on right-hand side of the machine) see comments for point C above.
- E. The remote current controls for the intensity of generator 2, see comments for point B above.
- F. Mains charger socket - The machine contains one Lead Battery – 12V/2.2Ah. (When fully charged they should last 3 treatment sessions). The machine will **NOT** work if the charger is plugged in.

## The Controls for the Idrostar Pro Pulse



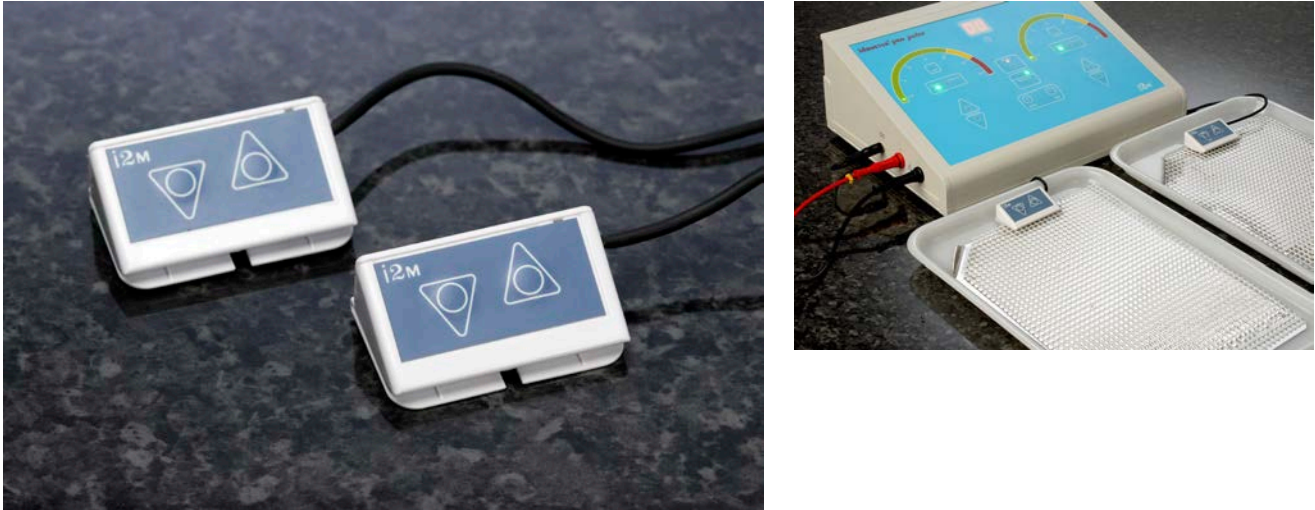
**Fig 3: showing the Idrostar Pro Pulse control panel.**

- 1 Current indicator Generator 1: This display shows the level of current in mA that is flowing in the circuit.
- 2 Closed Circuit Light Generator 1: This light is illuminated only when the circuit is complete and a current is flowing. The circuit is only complete when the extremities are in the water baths.
- 3 Polarity indicator and switch for generator 1: This section informs the operator of the polarity. In the centre is the polarity switch. The light is illuminated either in the left of the section or right of the section depending on the polarity of the output. Normal means the red lead is the anode when in reverse the red lead becomes the cathode. Refer to the treatment protocol for the procedure to be followed.

- 4 Increase Intensity control for generator 1: The buttons 4 and 5 control the intensity for generator 1, (when either another person is present when treating hands, or if treating feet only). If the remote current controls are unplugged , then these controls are to be used to increase (button 4) and decrease (button 5) the intensity; they can also be used to override the remote current controls.  

The patient is only able to use these controls when their hands are not being treated. If the patient does not wish to use the remote current controls, whilst having their hands treated, a second person must be present to control the intensity.
- 5 Decrease Intensity control for generator 1: See 4 above.
- 6 Timer – This starts when the current in generator 1 is increased above 2-3mA. The time displayed is in minutes. After 10 minutes the display starts to flash this is to advise the user if they are treating hands only, hands and feet together or axillae that it is either time to change the polarity or finish treatment.
- 7 Battery status - the three lights in the top of this section show the status of the battery.  
Green (right-hand): batteries are between full and three quarters charged.  
Yellow (Middle): batteries are between three quarters and a quarter charged.  
Red (left-hand): less than a quarter charged and at the end of the current treatment will require charging.
- 8 Charging light – The red light below the word “battery” shows that the machine is being charged and whilst this is lit the machine will not work.
- 9 This section switches the machine ON and OFF.
- 10 Closed Circuit Light for generator 2: See comment under point 2.
- 11 Polarity indicator and switch for generator 2: See comments under point 3.
- 12 Increase Intensity control for generator 2: see comments point 4 and 5.
- 13 Decrease Intensity control for generator 2: see comments point 4 and 5.
- 14 Pulse current indicator and switch. The default setting for the machine is pulsed current. When the light is on this indicates the pulsed current is on and when the light is off it is the DC current.

## The remote current controls



**Fig 4: showing the remote current controls.**

These are placed in the hand baths and are designed so that the patient can adjust the intensity of the current themselves during treatment which means the patient can treat themselves without the need for an assistant.

These are remote controls for the buttons 4,5,12 and 13 in fig 3 page 8.

When using the remote controls it is important not to remove hands from the baths.

There are two remote controls to control each of the generators separately. When plugged into the left side of the machine (Point B Fig 2) it will control generator 1 and when plugged into the right (Point E Fig 2) it will control generator 2.

## **Operational and Treatment principles**

### **Hands and Feet Hyperhidrosis.**

The hands & feet should be placed in the water baths ensuring the water covers the affected areas.

Once the machine is switched on and the current has been increased above zero, an electrical circuit is formed. If the Normal polarity light is illuminated (Area 3 Fig 3), then the conventional current will pass down the red cable to the electrode, through the water and into the skin, through the body by the most direct route and then to the extremity in the other bath. It crosses from the skin to the electrode connected to the black lead, by passing through the water, and back to the generator.

For both the above indications it is important that the current should pass as above for a specified time period (as detailed in the protocols below) the current should then be reduced to zero and the polarity changed by using the buttons marked 3 and 11 in fig 3. Once the polarity has been changed, the conventional current will flow in the reverse direction for the specified time. The current should be set by either using the remote current controls, or the buttons on the control panel. The current should not exceed 20mA and MUST be set at a tolerable level for the patient. They will feel a tingling or 'pins and needles' type sensation at a certain level of current. Everyone has a different tolerance level. This may change both during the session and from session to session.

There may be some side effects from the treatment; these are always benign and mild and are listed on page 4.

### **Before Treatment**

- Ensure all jewellery and body piercings are removed. The current never travels above the neck, so amalgam fillings, dental braces and earrings do not pose a problem with iontophoresis.
- The skin surface to be treated must be free of all lesions (if any are present, cover with a small amount of petroleum jelly such as Vaseline).

## Treatment protocol

The treatment involves passing a current one way for a fixed time and then reversing the polarity for the same amount of time. The time of treatment varies depending on whether you are treating axillae (underarms), hands, hands and feet or feet only.

It is important that the treatment protocol is followed for the first phase of treatment. The first month involves seven treatments as follows:

First week - Day 1, Day 2 & Day 4. (e.g. Tues, Wed, Fri)  
Second week - Day 7 & Day 10. (e.g. Mon, Thurs)  
Third week - Day 15. (e.g. Tues)  
Fourth week - Day 22. (e.g. Tues)

It often takes 4 to 5 sessions before the patient will notice a reduction in their sweating.

After the seventh treatment session, further sessions will only be needed when the sweating restarts. **For maintenance treatments, ensure that these are commenced before hands and/or feet, or axillae become hyperhidrotic. It is best to do a maintenance session just as soon as the hands, feet and/or axillae feel clammy and are not fully sweating.** For some people this is necessary twice a week; for others, monthly sessions will be all that is required. With time, you will find that your patients are able to maintain their hyperhidrosis with frequent maintenance sessions

## Treatment times

Extremities to be Treated	Treatment Times Polarity 1	Treatment Times Polarity 2	Total
Hands only	10 mins	10 mins	20 mins
Feet Only	15 mins	15 mins	30 mins
Hands and Feet (both generators)	10 mins	10 mins	20 mins
Axillae	10 mins	10 mins	20 mins

## Treatment of hands only

### Setup

When treating hands only you will only use generator 1 and will need:

- 2 hand baths
- 2 small electrodes
- 2 small acrylic grills
- 1 Black lead with crocodile clip
- 1 Red lead with crocodile clip
- 1 remote current control if the patient is intended to control the machine themselves



The machine ideally wants setting up on a table which the patient can sit at, resting their arms comfortably on the table.



Insert the electrodes into the small baths, ensuring that the upturned corner of the electrode is placed in the upper left quadrant of the bath. Then place the acrylic grills on top of these.

Attach the remote current control to both the metal electrode and acrylic mesh ensuring the acrylic mesh is fixed into position. (If an assistant is going to control the current this is not necessary)



Plug the connection leads into the corresponding colour sockets on the left hand side of the machine.



If you are using the remote current controls then plug these in as shown.



Using the crocodile clips, attach the leads to the upturned corners of the electrodes (one clip per electrode). We recommend you attach the red lead to the left bath and the black lead to the right bath.

Once the machine is set up as in the picture below add 250mls of tap water to each bath.

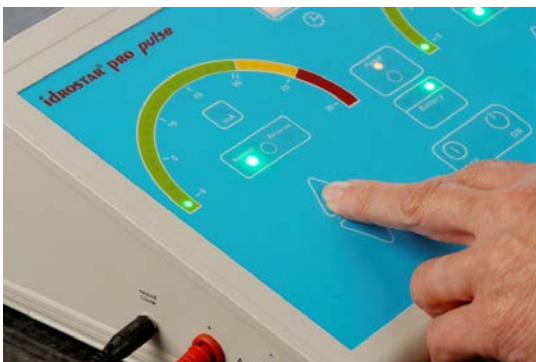
## Treatment



Switch the machine on using (button 9 Fig 3) the machine will light up.

The machine defaults to Pulsed Current and therefore to select DC current press button 14 shown in Fig 3

Place a hand in each of the baths, pressing lightly on the acrylic grills, but **avoiding contact** with the metal electrodes.



Without taking hands out of the water, increase the current slowly by either pressing the upward arrow on the remote current control in the left bath or if not using the remote current controls then the assistant should use the increase intensity control button (button 4 Fig 3) on the machine.

The current should be increased to the maximum comfortable level tolerable, but not above 20mA. A 'pins and needles' type sensation may be felt, but this should not be uncomfortable.

After 10 minutes the timer will start to flash, turn the power down by depressing the downward arrow on the remote current control or the decrease intensity control button (button 5 Fig 3) until there is no current.



Change the polarity by pressing the normal/reverse button (Button 3 Fig 3). The normal/reverse button will not work unless the power is at 0.

Restart the treatment again and after 10 minutes, turn the power down as detailed above.

The treatment is complete. Dry hands and completely dry the machine and all parts.

## Treatment of feet only

### Setup

When treating feet only, the setup is very similar to the treatment for hands only, except you use the foot baths and you will not require the remote current controls as the patients hands will be free to use the intensity controls. (Buttons 4 and 5 Fig 3)

You will only use generator 1 and will need:

- 2 foot baths
- 2 large electrodes
- 2 large acrylic grills
- 1 Black lead with crocodile clip
- 1 Red lead with crocodile clip



The machine ideally wants to be placed on a table where the patient can sit with the foot bath under the table.

Place the two foot baths on the floor, Insert the electrodes into the baths, ensuring that the upturned corner of the electrode is placed in the upper left quadrant of the bath. Then place the acrylic grills on top of these.



Plug the connection leads into the corresponding colour sockets on the left hand side of the machine.



Using the crocodile clips, attach the leads to the upturned corners of the electrodes (one clip per electrode). We recommend to connect the red lead to the left foot bath and the black lead to the right bath.

Once the machine is set up as in the picture below add 500mls of tap water to each bath.

## Treatment



Place a foot in each of the baths, pressing lightly on the acrylic grills, but **avoiding all contact** with the metal electrodes.

Switch the machine on using (button 9 Fig 3) the machine will light up.

The machine defaults to Pulsed Current and therefore to select DC current press button 14 shown in Fig 3



Increase the current slowly by pressing the upward arrow, increase intensity control button on the machine (button 4 Fig 3).

The current should be increased to the maximum comfortable level tolerable, but not above 20mA. A 'pins and needles' type sensation may be felt, but this should not be uncomfortable.

After 15 minutes ( The timer will start to flash after ten minutes this is to advise users who are treating hands only, hands and feet together or axillae to change polarity or end treatment) , turn the power down by pressing the downward arrow intensity control button on the machine (button 5 Fig 3) until there is no current.



Change the polarity by pressing the normal/reverse button (button 3 Fig 3). The normal/reverse button will not work unless the power is at 0.

Restart the treatment again and after 15 minutes, turn the power down as detailed above.

The treatment is complete. Dry feet and completely dry the machine and all parts.

## Treatment of hands and feet

### Setup

When treating hands and feet you use both generators. By using the remote current controls the patient can treat themselves without removing their hands from the water baths. You will need:

- 2 hand baths
- 2 foot baths
- 2 small electrodes
- 2 large electrodes
- 2 small acrylic grills
- 2 large acrylic grills
- 2 Black leads with crocodile clips
- 2 Red leads with crocodile clips
- 2 remote current controls if the patient is intended to control the machine themselves



Place the small hand baths on the table in front of the machine and the large foot baths on the floor.



Insert the small electrodes into small hand baths and ensure that the upturned corner of the electrode is placed in the upper left quadrant of the bath. Then place the small acrylic grills on top of these.



Attach the remote current control to both metal electrodes ensuring that the acrylic grills are fixed into position.

Insert the electrodes and grills into the foot baths ensuring that the upturned corner of the electrode is placed in the upper left quadrant of the bath.



Plug the leads into the corresponding colour sockets on both sides of the machine.





If you are using the remote current controls then ensure they are plugged into the machine as shown.

The remote current control in the left bath should be connected to the left side of the machine



The remote current control in the right bath should be connected to the right side of the machine.



Using the crocodile clips, attach the leads to the upturned corners of the electrodes (one clip per electrode). The leads must be connected as detailed in the next picture.



The red lead on the left side of the machine should be connected to the left hand bath.

The black lead on the left side of the machine should be connected to the left foot bath.

The red lead on the right side of the machine should be connected to the right hand bath.

The black lead on the right side of the machine should be connected to the right foot bath.

**Once the machine is set up as in the picture above add 250mls of tap water to each hand bath and 500mls to each foot bath.**

## Treatment



Switch the machine on using button 9 Fig 3 the machine will light up.

The machine defaults to Pulsed Current and therefore to select DC current press button 14 shown in Fig 3

Place both hands & feet into the baths, pressing lightly on the acrylic grills, but avoiding all contact with the metal electrodes.

Without taking hands or feet out of the water, increase the current slowly by depressing the upward arrows on both remote current controls to the maximum comfortable level tolerable, A 'pins and needles' type sensation may be felt, but this should not be uncomfortable.

Do not increase above 20mA.

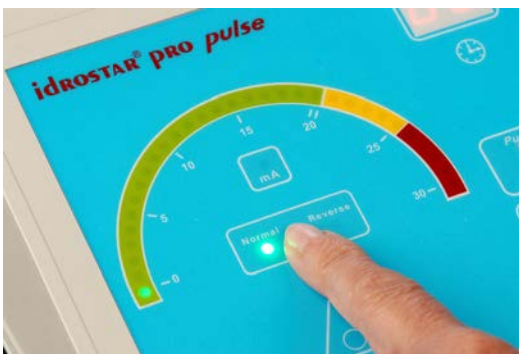
The left hand remote current controller controls the current in generator 1 and therefore the current flowing in your left hand and left foot.

The right hand remote current controller controls the current in generator 2 and therefore the current flowing in your right hand and right foot.



If the remote current controls are not being used then the assistant should use button 4 fig 3 to increase the intensity on the left side and button 12 fig 3 for the right side.

After 10 minutes the timer will start to flash, turn the power down by pressing the downward arrows either on the remote current control or on the machine (buttons 5 and 13 Fig 3) until the current reading on the dial (point 1 fig 3) is zero i.e. there are no lights showing.



Change the polarity by pressing the normal/reverse buttons on both sides of the machine. (Buttons 3 and 11 Fig 3)

Restart the treatment using the other polarity. After 10 minutes the timer will start to flash, turn the power down as detailed above.

The treatment is complete. Dry hands and feet and completely dry the machine and all parts.

## **MAINTENANCE OF THE IDROSTAR PRO PULSE**

You can clean the baths, grills and stainless steel electrodes with a diluted disinfectant or detergent. However, the machine should just be cleaned with a soft cloth, lightly moistened with water and a mild detergent. Do not use solvents to clean the machine and never immerse the machine in water.

We recommend that the Idrostar Pro Pulse is charged at the end of each day of use. A full charge should take 5 hours. There is no risk of overcharging if the 5 hours are exceeded and you may place on charge overnight. On average, a full charge will last approximately 3 sessions.

If the Idrostar Pro Pulse is not going to be used for more than 1 month, we recommend that it is fully charged before storage and should be recharged once a month or so for an hour, to keep the battery in optimum condition.

### **Battery Maintenance**

For obvious safety reasons, the Idrostar Pro Pulse is independent of mains current.

If you wish to check the charge of the batteries at any time, turn on the machine and the 3 warning lights will be able to tell you at what level the battery is charged.

Green light indicates that the battery is fully charged

Yellow light indicates that the battery is half charged

Red light indicates that the battery needs to be recharged

When the red light is lit, an audible warning alarm sounds, which suggests that the battery should be recharged very soon. If the audible alarm sounds when treatment is in progress, continue with treatment, as the alarm threshold is calculated to enable a treatment session to be completed.

We recommend that the machine is fully charged before the first use

### **To recharge the battery**



Plug the lead of the mains charger into the Idrostar Pro on the right hand side of the machine and then place the plug into the mains socket. When switched on, the mains red light will come on. This red light will turn off when fully charged.

**Do not handle the power supply or mains supply with wet hands.**

# **INFORMATION FOR PATIENTS AND MEDICAL STAFF**

## **Frequently asked questions**

**Q Why not design an Iontophoresis machines with automatic polarity?**

A Because the results are not as good. Sufferers of hyperhidrosis tolerate the passage of Iontophoresis current differently. Our protocol recommends 2, 10 or 15 minute phases. During the 1<sup>st</sup> phase, the current tolerated may only be a few milliamps, while for others it may be the maximum intensity. During the 2<sup>nd</sup> phase, the intensity applied will not necessarily be the same. It must be possible to make adjustments at any time to avoid pain or burning. An automatic system will never be able to deliver these adjustments

Some people will have strong and sometimes unpleasant sensations at low current levels, while others will feel virtually nothing. What is important is the quantity of the current passing. For an adult, an ideal treatment current should be between 15 and 20mA, but this is not tolerable by many and good results can still be obtained at much lower current levels.

**Q Is it risky to exceed the recommended treatment time?**

A No. There is no major risk and it can, on occasions be advantageous to increase the treatment time in stubborn cases. 20 minutes of treatment time is the average guide and we recommend that you do this initially.

**Q I have had an operation which has left me with metal components in my body. Is this a contra-indication?**

A If the metal component is not in the current's path, it is not a contra-indication. For example, if you have a hip prosthesis and you only treat the hands, the current path does not involve the prosthesis. However, if you treat the feet, it would be a contra-indication.

**Q Is an IUD a contra-indication?**

A Although there are no current studies on the long-term effects of Iontophoresis when used with IUD's; no immediate side effects have been reported and there is no risk to women's health. The effectiveness of an IUD cannot be guaranteed with or without Iontophoresis. We recommend more regular gynaecological checks when receiving Iontophoresis. If a copper coil is in situ, then we do not recommend Iontophoresis for the feet.

**Q When I am undergoing treatment, I hardly feel anything; yet the indicator shows that the circuit is complete, is this normal?**

A The perception of current flow is highly variable from one person to another. Some people will have a strong and unpleasant sensation at a low current, while others will feel virtually nothing.

**Q When should maintenance sessions be carried out?**

A Once the original treatment protocol has been completed, we recommend that maintenance sessions be carried out as and when necessary. However, it is important to carry out another session just as soon as the sweating starts to return and not to wait until full hyperhidrosis is present again. If it has been left too long and full sweating has returned, we recommend that you wait for at least a month after the last session and then carry out the full treatment protocol of 7 sessions over a 4 week period again.

**Q I have been treating myself for several years and everything was fine. But for some reason the treatment is not as effective as it was.**

A You cannot become resistant to this treatment. However, if a maintenance session is carried out too late, it will not be as effective. Please see previous point.

**Q How much water should I put in the trays?**

A The water only serves to conduct the current and it is not advisable to put in too much water. We recommend 250mls to each hand bath and 500mls to each foot bath, or just enough to cover the area of sweating.

**Q When I do a treatment my skin goes red above the water level. Am I risking burns?**

A This redness is due to the vasodilation of the skin blood vessels. It is quite common and is of no consequence.

**Q If I press the button on my Iontophoresis machine and the current does not increase, what is happening?**

A The intensity does not increase on the indicator if the electrical circuit is not complete. Check that all leads are properly connected and that you are in the correct treatment position.

**If you would like information on other treatments for Hyperhidrosis; please contact the Hyperhidrosis Support Group:**

**[www.hyperhidrosis.uk.org](http://www.hyperhidrosis.uk.org) or email: [info@hyperhidrosis.co.uk](mailto:info@hyperhidrosis.co.uk)**

# GUARANTEE

The manufacturers of your machine, (i2m) guarantee that this product is free of faults at the time of purchase and is covered by guarantee for 2 years from the date of purchase.

If a fault occurs during the guarantee period, the manufacturer will take responsibility under the following conditions:

1. The guarantee will only be valid on production of the original invoice with the following details–
  - a) Name of the purchaser
  - b) Name, address and stamp of the distributor
  - c) Model name and serial number
  - d) Date of the purchase

i2ma reserve the right to refuse this guarantee if all, or part of these details are missing or modified after the original purchase.

2. This product cannot be considered defective in material or manufacture if it has been adapted or changed to conform to the technical or security standards of any country other than that for which it was designed.
3. This guarantee will not cover –
  - a) The repair or replacement of parts worn by normal use
  - b) The cost and risk of transport to or from the place of repair
  - c) Damage to this product resulting from abuse or misuse, in particular, but not exclusively to:
    - i) Negligence or fault by the user (used contrary to instructions or design, dropping, breakage or accidental cracking)
    - ii) Installation or use of this product contrary to the technical or security standards that apply in the country of use
    - iii) Repairs by non-agreed personnel
    - iv) Accidents, natural disasters or all other causes out of control of i2m, in particular, but not exclusively due to lightning, flooding, fire, public disturbance or battery damage to machine
4. This guarantee in no way limits the rights of the customer under the national laws in force. In the absence of such national laws, this guarantee, or its use within the EU, will be the sole and exclusive legal recourse of the customer and i2m will not be held responsible for damage whether directly or indirectly resulting from failure to abide by the above conditions.

Please note that during the duration of the guarantee, we advise you to keep the original packaging should you need it to return the machine to:

**STD Pharmaceutical Products Ltd, Plough Lane, Hereford, HR4 0EL,  
England**

**TEL: 01432 373555. FAX: 01432 371314.  
EMAIL: [info@stdpharm.co.uk](mailto:info@stdpharm.co.uk)**

## TECHNICAL SPECIFICATIONS

- Type of device: IDROSTAR PRO PULSE.
- Electrical classification: LF device.
- Supply voltage: 12 V nominal.
- Internal fuse protection.
- Envisaged operating conditions: below 75% relative humidity, operating temperature +5°C to 35°C.
- Storage conditions: relative humidity below 75%, temperature –40°C to +65°C.
- Power source: 1 x lead battery, 12 V/2.2Ah.
- Totally independent from the mains (battery), also electrically insulated from the power source.
- Output current:  $\approx$  2 x 30 V with 1000 ohms max.
- Output current graduated from 0 to 30 mA.
- Wave shape in pulsed current: mono polar rectangular, frequency 7kHz  $\pm$  10%. Pulsation duration 60 $\mu$ s  $\pm$  10%
- Duration of operation in continuous service: 60 minutes.
- Device switches off automatically if it is left on by accident.
- Visual indication of the battery's state of charge.
- Automatic battery charge control
- An audible alarm is emitted if the battery needs to be recharged; however if a session is in progress, it may be completed.
- The device cannot be used while the battery is being charged (device connected to mains).
- Built-in timer indicates the minutes.
- Large LED indicators, precision + or – 2ma.
- Device managed by microcontroller.
- Manual controls for increasing and decreasing the current on the front panel, or on separate keypads used directly from the hand trays.
- LEXAN waterproof front panel.
- Device supplied complete with instructions, four ergonomic trays, four safety leads (1.5 m) with polarities marked (wart/verruca treatment), four stainless steel crocodile clips, four stainless steel electrodes, four high-density polyethylene plastic grilles, two separate keypads for hand trays, charger model: GS1010 OHMERON primary: 100-240 VAC, secondary: 18 VDC / 2.2A max.
- Dimensions of ABS iontophoresis central unit (L x l x h): 300 x 200 x 100 mm.
- Dimensions of hand trays (L x l x h): 280 x 145 x 32 mm.
- Dimensions of foot trays (L x l x h): 355 x 145 x 52 mm.
- Cardboard packaging (L x l x h): 520 x 370 x 125 mm.
- Gross weight 6 kg.
- Device conforms to standards CEI 601-1 / CEI 601-2-10 / CEI601-1-2 / EN55011 / CEI801-3 / CEI801-2.
- Device guaranteed for 2 years, parts and labour.

We recommend that you keep the original packaging at least for the guarantee period, in case you need to return the device. This device should always be returned with its charger, while the accessories should be retained to avoid damage during transport.

Device manufactured in EU  1014

Laboratoires I2M 16 bis, fossé saint julien  
BP200  
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Sarl company with capital of 16 000 Euros  
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[www.i2m-labs.com](http://www.i2m-labs.com) and [www.transpiration.biz](http://www.transpiration.biz)

Information concerning waste disposal intended for users of electrical and electronic devices (household appliances).



If this symbol is shown on the products and/or accompanying documents, this means that the electrical and electronic devices must not be disposed of together with household refuse.

For these products to be treated, recovered and recycled appropriately, send them to designated collection points where they may be deposited free of charge. In some countries, products may be returned to the local retailer if an equivalent product is purchased.

By disposing of this product correctly, you will contribute to preserving vital resources and to preventing the possible negative effects on the environment and on human health that might otherwise arise.

To find the nearest collection point, please contact your local authorities.

In accordance with national legislation, sanctions may be applied if this waste is disposed of incorrectly.

#### **Professional users in the European Union**

To find out more about the disposal of electrical and electronic devices, contact your retailer or supplier.

#### **Information on waste disposal in countries which are not in the European Union**

This symbol is only recognised in the European Union.

If you wish to dispose of this product, please contact the local authorities or your retailer to find out the disposal procedure to be followed.