

**multimed - otoscillo** ®

*professional*

Electrical irrigation device for **the auditory canal**  
with **pulsating** irrigation jet.

Automatic back stop and **disposable nozzles**.

**Operating instructions**

## ***Important notes***

**The operating instructions of this irrigation device for the auditory canal have to be available for each user and have to be read attentively before use!**

Plug in device only into a properly installed wall-socket, do not use an extension cable or a multi-socket table-type model.

At the safety transformer there is an alternating voltage of 220 V.

Operating mode with low voltage at a maximum of 15 V.

Do not put up device in immediate proximity to a washbasin.

For safety reasons the device does not have a power switch.

Therefore it is absolutely necessary to remove the plug from the power outlet immediately after use!

**The power cord has to be checked for damage before each use!**

If there is any damage donot use device.

Fill water container exclusively with clean drinking water taken directly from the water pipe.

Use device only with a full water container!

Continuous operating time up to a maximum of 12 minutes.

For disinfection of the device only use a disinfectant for instrument disinfection which is aldehyde-free and approved for the medical sector according to manufacturer's instructions.

Do not use flammable and volatile disinfectants!

## ***Function and use***

The irrigation device generates - with constant pump capacity and pulsation frequency - a dynamic water jet pressure which can be varied infinitely from 1- 6 with a mechanically adjustable water intake controller.

Instrument setting 1- 4 for irrigation of the auditory canal,  
**instrument setting 5 - 6 only for cleaning the device!**

**The device may only be used as an irrigation device for the auditory canal and only by authorized persons!**

Authorized persons are medical doctors and their medically instructed qualified employees as well as examined nurses in outpatient and inpatient departments according to medical orders and instructions.

## **1. Installation and putting into operation**

Ideally the device is positioned on a work surface not in immediate vicinity of a wash basin.

The patients sit with their back to the work surface close to the device on a locked chair, possibly with armrests - no mobile step-stool! Laterally and in front of the patient should be enough room so that the person carrying out the irrigation sitting on a mobile step-stool can go around the patient easily.

### **1) Filling in water**

Remove water container upwards and fill it with body warm water. Take only the water container to the tap and not the entire device. An automatic valve in the water container prevents leakage during transport.

If the water container is hard to remove from the device, the black sealing ring at the bottom of the water container has to be lubricated with petroleum jelly (Vaseline®) and a cotton swab.

The use of the otoscillo®Temp-Test-Card is absolutely advisable, as tests have shown that the subjective temperature perception at the finger or radial pulse in many cases is subject to such wide variations; that very often it is not possible to determine sufficiently exactly the body temperature of the water.

### **2) Attach handle for disposable nozzle**

Put attachment and handle together and press until it engages. Attachment and handle should be put together easily. If there is any sluggishness, lubricate the black sealing ring at the bottom inside with a cotton swab and petroleum jelly (Vaseline®)

### ***3) Attach disposable nozzle***

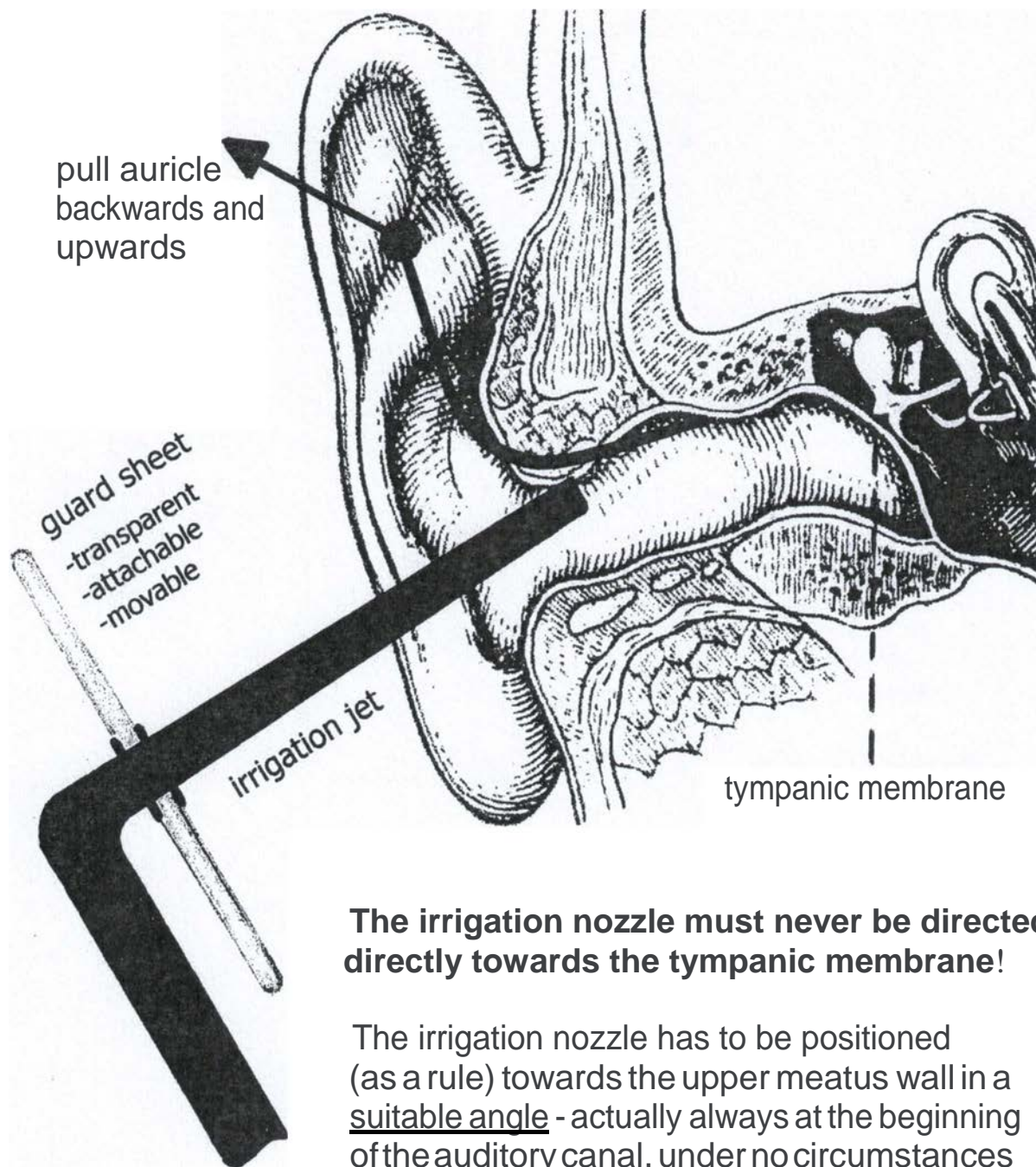
Use illustrated instructions for handling of disposable nozzles which are part of these operating instructions and which you can find in each package of disposable nozzles.

### ***4) Quick filling of tube system***

Lower handle shortly below device level before switching on device for the first time. This serves for a quick filling of the tube system.

**Put handle always back into the handle mounting of the device!**

## 2. Positioning of the irrigation nozzle



**The irrigation nozzle must never be directed directly towards the tympanic membrane!**

The irrigation nozzle has to be positioned (as a rule) towards the upper meatus wall in a suitable angle - actually always at the beginning of the auditory canal, under no circumstances deeper into the auditory canal! (see illustration)

In order to get an optimal water circulation, the positioning angle at the meatus wall should however be so flat that the irrigation jet gets along the meatus wall. Position softly the tip of the nozzle with its side!

Turn handle approximately horizontally - square bend correspondingly upwards! Always pay attention that - especially with close auditory canals - the meatus will not be blocked by the irrigation nozzle!

Draining away of the irrigation water has to be ensured!

Pulling at the outer ear widens the opening of the meatus and smoothens the auditory canal a little bit. (see illustration)

This favors the draining away of the irrigation water.



### **3. Adjusting pressure**

A general adjustment of the pressure valid for all irrigations cannot be given as this depends, among other things, on the prevailing conditions in the auditory canal, the sensitivity of the patient and not least on the irrigation technique of the doctor.

In order not to have a too high static pressure in the auditory canal because of the pump capacity, particular attention must be given to an unimpeded drainage of the rinsing water from the auditory canal. This applies to all settings of the irrigation jet.

**It is necessary - without any exception** - to get an impression of the range of the pressure by means of the finger pulp test before the irrigation!

Put the irrigation jet towards the finger pulp of the middle finger with different pressure levels which are infinitely variable.

Taking into account the higher sensitivity of the auditory canal, with this test you get a good idea of how to adjust the pressure of the dynamic irrigation jet. Irrigations of the auditory canal only with the device settings 1 - 4!

The pulsation of the irrigation jet has the effect of a cerumen detachment even with a relatively low pressure of the irrigation jet. This, however, requires the correct positioning of the irrigation nozzle to get an optimal water circulation in the auditory canal.

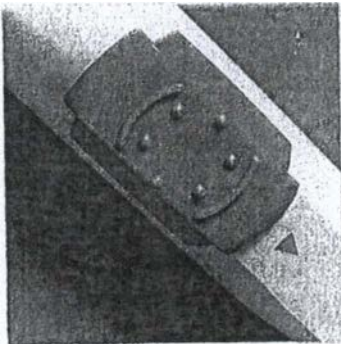
Positioning of the irrigation nozzle.

*For an irrigation with the proven, tried and tested otoscillo®-technique not the pressure is decisive but the pulsating water flow.*

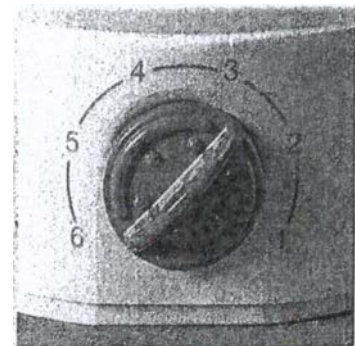
The recommended pressure level for an adult with a normal auditory canal is setting 2 for the important test irrigation (flow rate about 200 ml/min.) and settings 3 - max. 4 for the main irrigation (flow rate between 300 - 450 ml/min.)

## Caution!

**The settings 5- 6 are exclusively for cleaning and maintenance of the device!> maintenance**



Water-stop switch integrated in the handle



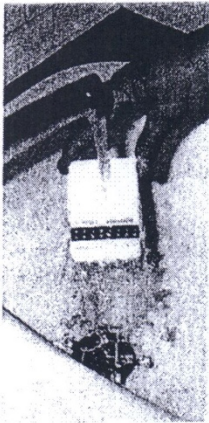
pressure regulation infinitely variable

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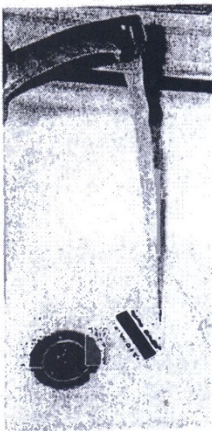
#### 4. Water temperature

**An irrigation of the auditory canal may only be performed with body-warm water!**



With the otoscillo® Temp-Test-Card there is a simple and efficient tool to regulate objectively the water temperature and to control permanently the water temperature in the water container as only few degrees below body temperature can lead to considerable problems for a lot of patients.

*a) regulating water to body temperature*



Hold Temp-Test-Card into water jet or put at the bottom of the sink and direct the water jet onto it (see illustration above and in the middle). As soon as the indicator is **green** at 38 degrees Celsius and it remains so for 2 – 3 seconds, fill the container.

The measured temperature is shown in **green**. The temperature level below the current level changes to **blue**, the one above to **brown**.

If there is no range in green but only in brown and immediately below in blue the current temperature is an intermediate value.

The special indicator shows changes in temperature with a response time of 0.5 seconds!



*a) Permanent monitoring of water temperature*

After filling the container, you hang the Temp-Test-Card at the back of the container so that the indicator is under water. The temperature can now be seen permanently with a precision of  $\pm 1$  degree Celsius. (see illustration below).

This is especially important if the irrigation is not carried out immediately after filling the container

## **5. Irrigation of the auditory canal**

### **a) Otoscopy**

Before the irrigation an otoscopy of the auditory canal is absolutely necessary. In case of a tympanic-membrane perforation and/or an inflammatory process in the auditory canal an irrigation is contraindicated. An otoscopy also shows the amount, position and texture of the cerumen.

### **b) Anamnesis**

The patient should be asked whether he/she has ever suffered from otorrhea, whether water in the auditory canal has caused pains or whether former irrigations of the auditory canal have already caused problems.

### **c) Cerumen-remover**

The use of cerumen-removers is helpful. You can also use simple and pure olive oil.

### **d) Irrigation test**

A short irrigation test is carried out with an almost pressureless irrigation jet (level 2). Herewith the sensitivity of the patient can be tested and at the same time he/she gets used to the irrigation. Appropriate reactions of the patient can indicate e. g. a tympanic-membrane perforation which could not be seen by means of otoscopy!

### **e) Main irrigation**

Normally the irrigation is carried out at level 3-4 under observance of the chapters water temperature/adjusting of the pressure/positioning of the irrigation nozzle. The main irrigation should not be longer as about 15 seconds. If the patient does not feel well • stop immediately!

During the Irrigation process you should not increase the pressure.

Observation of the irrigation water can indicate the success of the irrigation.

If the irrigation does not show the expected results DO NOT try to get the results by means of higher pressure or going deeper into the auditory canal. There are cerumen and auditory canals which cannot be treated by means of irrigation even with the objectively certified efficiency of this device and the polished technique of the user!

## **6. Hygiene - Recommendations**

**Before irrigation of the auditory canal** rinse the system for about 10 seconds with setting 5 - 6, with disposable nozzle.

After that reduce setting to the irrigation flow required for the following irrigation.

**After irrigation** put handle back into handle mounting and first of all take care of patient.

The back stop prevents the drop of the water column in the tube system as well as the entering of particles of the rinsing water into the tube system and thus its contamination.

Immediately after having taken care of the patient, empty the water container except for a water level about as thick as a finger in the container or if there was not any water left in the container, fill it with cold water - about as thick as a finger .

Now you put about the same amount of wine vinegar 5 % (normal **vinegar** you use for salad - no chemical vinegar like vinegar concentrate) into the water container and thus you have an acid concentration of about 2 - 3 %. Now rinse the system - at the same setting as the irrigation before until the water container is almost empty. Remove water container and empty it. Remove guard sheet and disposable nozzle. Lower the handle below device level and allow water to drain. Dry water container with lint-free paper. Pull out plug and clean device and handle with the paper which is soaked with the vinegar water from cleaning the container.

Now you have a concentration of vinegar in the system which is sufficient to prevent effectively the formation of germs as well as limescale.

On water pump and electronics of device if used properly and according to intended purpose.



**CE** 93/42/EWG

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**Producer Service mulimed - otoscillo®**

**CE**

In EU countries by sending directly to the producer:

**SCHNEIDER medical technology**

Hundham 14 \* D-83122 Samerberg

**GERMANY**



**SCHNEIDER medical technology**  
Hundham 14 \* D-83122 Samerberg

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## **mulimed - otoscillo®** *professional*

### handling of **disposable nozzles**

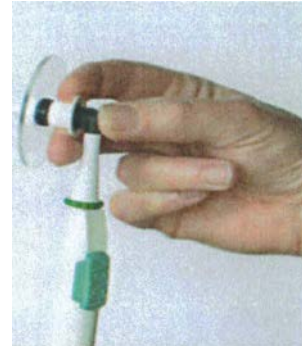
Compared to disinfecting it is more economic, **cheaper**, hygienically safer concerning infection protection and more environmentally friendly to use a new, clean disposable nozzle for each patient.

#### **Attach**



Always! hold at the black bend of the attachment of the handle, not the handle itself! Attachment has to be rotatable well at the coloured ring. If there is any sluggishness remove attachment from handle and lubricate attachment cone at the thickened part with Vaseline ®

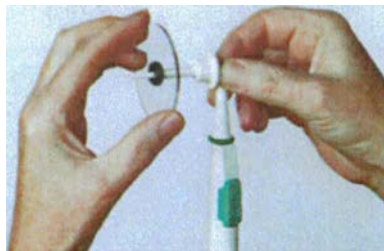
#### **Remove**



Pull back release ring. Remove guard sheet with disposable nozzle. Take nozzle at clean end and dispose it. Guard sheet can be cleaned with hot water.



Attach disposable nozzle up to the stop. Locks automatically.



Attach guard sheet up to the stop at the release ring. If there is any sluggishness lubricate nozzle with Vaseline ®. Do not work without guard sheet !

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disp. nozzles 100 pieces  
item no. 60820

guard sheet for disposable  
nozzles  
item no. 60840

Handle attachment for  
disposable nozzles with  
integrated, automatic  
back stop  
item no. 60860

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