

# Ritter® AquaBottleSystem

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## 1 General Guidelines

Produced according to DIN EN ISO 9001  
and in consideration of DIN EN 46001,  
of MPG and the directive 93/42 EWG  
CE 0482

This device is according to the EN 1717 / DIN 1988-4

*Please read this manual carefully!*

We can only accept responsibility for the safety properties of our equipment if installation, maintenance, repair and modifications are carried out by our technical staff or by a person explicitly authorized by us.

Further, the equipment has to be correctly handled according to our operating instructions.

In case of failure, structural parts effecting the security of the device are to be replaced by original parts only.

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## 2 Reference for the disinfection of a dental unit

Through the intended use of the Ritter® AquaBottle System it is possible, to de-contaminate the internal water lines of your dental unit in regular intervals.

For the water disinfection procedure, use only **RiTron** liquid, as only in through the use of the intended product that disinfection of the water lines in proper form is assured.

Please take care of the following items:



- ?? During the disinfection procedure, with **RiTron** liquid, the heating of the TopJet syringe (Dentist and assistant side) must be deactivated. For further information take a look into the manual of the dental unit. *Applies to Contact models only.*
- ?? After every successful cleaning, residual **RiTron** liquid has to be completely rinsed out of the System. This can be recognized with the reduction of the blue water discoloration. Not until clear water is coming out of the instruments and the cup filler, the flushing can be finalized!
- ?? For an optimum effect, the disinfection liquid should be left in the dental unit lines over a period of 24h or longer (e.g. over vacation in the water conduits)
- ?? The blue **RiTron** Liquid should only be filled in the designated container.



- ?? Make sure that before every flushing procedure enough **RiTron** is in the bottle, because if not, air will be suctioned and there for the pipes will not be completely filled with the disinfection liquid. Only complete **RiTron** filled pipes will be cleaned thoroughly and reliably.

Note also that air pockets in the waterlines caused by not using enough **RiTron** liquid, will lead to an uncontrolled squirting of the liquid at the water terminals (e.g if you operate the cup filler) until the air has been completely purged

- ?? The procedure of disinfection is subject to the fundamental regulations for hygiene in dental practice (Wearing of protection gloves, protection glasses and so on.)

### 3 Filling of the bottle

The filling of the bottle by following these steps (see fig.1):

- ?? Put rocker lever to **OFF**, screw the empty bottle out of the holder and fill it the dispenser bottle with **RiTron** Liquid.
- ?? Screw the filled bottle back into the (1) holder (screw not too tightly)
- ?? Put rocker lever to **ON**.

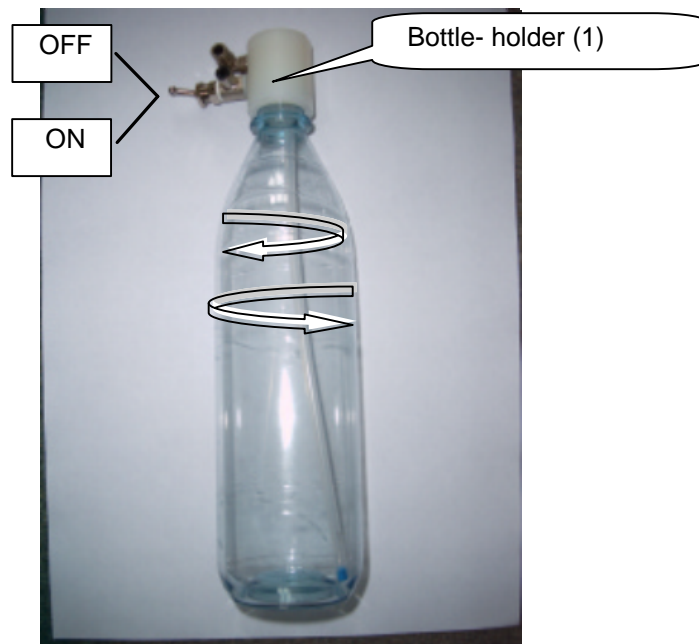


Figure 1



The filled bottle is only hand-screwed back into the holder. After switching on the rocker lever the bottle gets under pressure. This is indicated through the audible noise of the inflowing air.

**The bottle is under pressure (approx. 2-3,8 bar depending on the unit type)!**

**Do not manipulate the bottle with sharp objects!**

The unit is now prepared for the cleaning with **RiTron**.

## 4 Execution of disinfection.

At the end of every working week, or before a duration of several idle days **RiTron** Liquid is to be filled into every water line. Please take care that the bottle is filled with enough **RiTron** Liquid

For one dis-infection operation, 300 - 750 ml **RiTron** is needed depending on the unit type.

Each water line has to be flushed as long as blue **RiTron** Liquid visibly rinse out.

4.1 Switch all instruments to maximal rate of flow.



**Important:** The heating of the TopJet-syringe (dentist- and assistant side) is absolutely necessary to deactivate, because the heating will be damaged when the bottle system is not in operation by this oversight. More information is available in the manual of the dental unit!

- 4.3 Pull off turbines and handpieces. (see operating manuals of manufacturer).
- 4.4 Pull off the connector of the hydro-colloid outlet (if existing) and connect to cuspidor drain to the cuspidor bowl with the supplied connector and the hose.
- 4.5 Most suitable start with operating the cup filler. 3 times filling (if connected).
- 4.6 With activated water control every single instrument are to be operated by the dentist's element console or foot controller.
- 4.7 If a flushing system of the suction hoses or the automatic separation system is connected, it's enough to let every hose suck air for about 60 seconds.
- 4.8 *External devices (like e.g. Air-Flow, if existing at the unit) are also to be flushed! As a matter of principle all external connectors have to be flushed!*  
(a needed plug-type connector with hose, for filling the external device, has to be ordered from the manufacturer or your dealer.)

- 4.9 Afterwards switch off the unit with the main switch of the unit to position **OFF**. The Bottle will get un-pressured, and prior to use again can be filled up with fresh water and 1% RiTren.

Example for dose:

Volume of bottle: 1,5 l Water  $\approx$  15ml **RiTren** of dose cup admitting.



**Important:** In any case all connected lines are to be flushed, even when they were not used in the last week. Standing water is the ideal condition for a progeny of germs!

## 5 Restarting of the dental unit

At the beginning of a new working week, or after a duration of several days, the blue **RiTren** Liquid is to be flushing out of the system. Every water line has to be flushed until clear water is rinsing out.

Follow the steps:

- 5.1 Fill the bottle with fresh water and 1% RiTren, screw it into the holder and main switch of the unit to position **ON** to switch on the dental unit.
- 5.2 Activate the cuspidor and let it flush for about 2 minutes, this lets the stagnating water of the house installation rinse out.
- 5.3 Operate cup filler about 8 times. The solution emitted can be used immediately afterward to flush the suction lines. This also acts as an indicator of suction line performance.



Pull off the instruments before starting to flush the hoses, otherwise detached residues can plug the nozzles.

- 5.4 Flush every instrument hose for about 2 minutes, preferably one after the other.
- 5.5 *External devices, and external water connectors have to be flushed too!*
- 5.6 As soon as clear water rinses out the end of the water terminals, turbines and handpieces can be reconnected.

At reconnecting external devices take care that the connectors are disinfected to reduce the risk of new contamination by the quick connector.

- 5.7 The dispensing bottle has now to be filled up with fresh drinking water for normal operating. Add 15ml **RiTren** (= 1 Dose cup) for the 1,5 l bottle.
- 5.8 If you can see foam at the turbine spray during treatment, reduce **RiTren** solution down to 7,5ml **RiTren** : 1,5 l water depending on the water quality.

**Your dental unit is now ready for working.**

For your own control, the weekly disinfection with **RiTron** can be entered in the enclosed hygiene form.



Hint:  
The water outlet of the cup filler has to be categorically cleaned in regular intervals.

## 6 Technical data / Source of errors

Technical data:	
Input pressure of the device	<b>1,5 to 3,8 bar (depending on the unit type)</b>
<b>PET-bottle</b>	Only water with <b>RiTren</b> , or ready-made <b>RiTron</b> is allowed.
Filling volume:	<b>max. 1,5 Liter</b>
Max.fill pressure:	<b>5 bar (cracking pressure &gt;10 bar at 20° C)</b>

### Source of errors:

*The bottle doesn't get under pressure, and no dis-infection liquid comes out of the instruments!*

- ?? Proof the right position of the bottle in the bottle holder.
- ?? There is a leakage in the pressure line ✗ Inform your technician
- ?? Operate the rocker lever again, if needed, screw the bottle further into the holder. (Attention, only hand-screw bottle into position)

*During dis-infection **RiTron Liquid is spilled!***

- ?? Clean the parts with normal disinfection liquid.  
Take care that the parts are resistant against the disinfection liquid.

*Only little blue **RiTron** or water comes out of the instruments!*

At flushing with disinfection liquid:

- ?? The air pressure is too low, so the bottle is not reaching the necessary pressure. (Take care of limits!)

At flushing with water:

- ?? You forgot to pull off the instruments before flushing the lines. Residues (Biofilm) of the lines are plugging the outlet ducts of the instruments.



## 7 Spare parts

Description	Order No.
Bottle holder (incl. 1,5l PET-bottle)	<b>F1321-028</b>
Replacement bottle 1,5l	<b>F32509</b>
Alternative Bottle sizes:	
Replacement bottle 1,0l	<b>F32510</b>
Replacement bottle 0,5l	<b>F32511</b>

## 8 Consumable material

Product	Order No.
<b>RiTron</b> 5 litre bottle (included in delivery!)	<b>U3910</b>
<b>RiTren</b> 1 litre bottle with dosage cup (included in delivery)	<b>U3911</b>