

Site Design Considerations

Tethys H10 Hybrid Disinfector

Fundamentals

This information sheet provides instruction to what is needed while installing the Tethys H10 Disinfector.

The fundamental requirements & considerations are as follows:

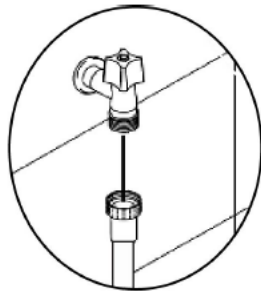
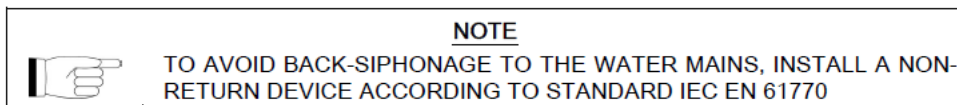
The Tethys H10 is intended only for the washing &/or thermal disinfection of re-usable surgical instruments able to resist a temperature up to at least 80°C. It is not intended for the washing of instruments having deep cavities with reduced opening (since cleaning & disinfection of the inner parts of cavities is not assured).

It is not intended for the washing of rotary or electronic instruments, unless they are explicitly indicated as suitable for washing & thermal disinfection by the manufacturer. However, there is now an optional handpiece accessory **7T-HMD** available, and when used in conjunction with the handpiece cycle option which disables the ultrasonic function, handpieces can be processed.

- The Tethys sits on a bench & plugs into a 10Amp GPO and has **COLD** water plumbed to it.
- From Dec 15th 2023, the new infection control standard (AS5369:2023) states the 'Final Rinse' water needs to meet table 7.2 substance targets. This is difficult to achieve, especially for Microbiological and Endotoxin targets. A sanitisable RO with storage tank would need to be considered for this purpose. Please contact us for more information.
- Waste water is discharged via a drainage pipe & should be plumbed into an open tundish or S bend dishwasher spigot*. Typical temperature of the drainage water is 87°C (but only 1.5 litres at this temp).
- A typical disinfection cycle uses 15 litres of water. Waste water is hot & can burn skin.
- The Tethys uses ultrasound during the washing phase.
- Cycle time varies, but is typically 36 mins.

To the Plumber

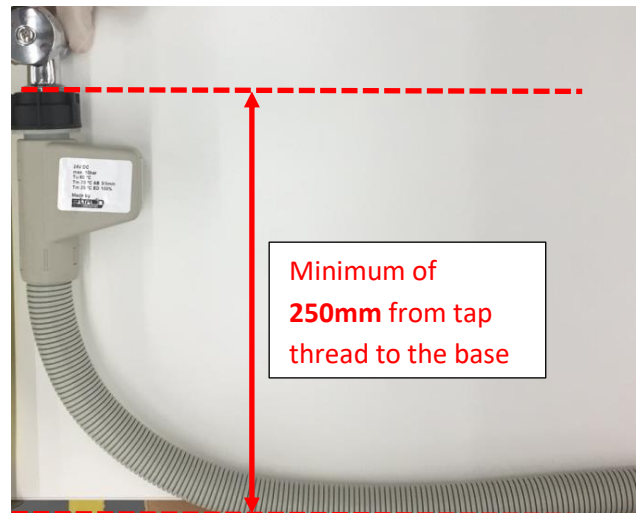
- A disinfection cycle typically consumes approximately 15 litres of water per cycle.
- The device is equipped with a water hose much like you would get on a standard dishwasher for connection to **COLD** water. A $\frac{3}{4}$ inch BSP male tap is required. An Aquastop valve is integrated to protect against water leaks.
- From Dec 15th 2023, the new infection control standard (AS5369:2023) states the 'Final Rinse' water needs to meet table 7.2 substance targets. This is difficult to achieve, especially for Microbiological and Endotoxin targets. A sanitisable RO with storage tank would need to be considered for this purpose. Please contact us for more information.



The water supply connection includes an 'Aqua-Stop' solenoid valve, so **the hole through the benchtop (behind the Tethys H10) to the plumbing connections underneath needs to be 80mm**

Positioning of Supply Tap

- The supply tap must be positioned near the device (the length of supplied tubing is approximately 2 metres).
- The supply tap must be located in a position accessible to the user.
- The **height** of the finished tap connection (including any NRV fitted), must be **a minimum 250mm above the floor of the cabinet** in order to fit the radius of the 'Aquastop' & tubing. See diagram:

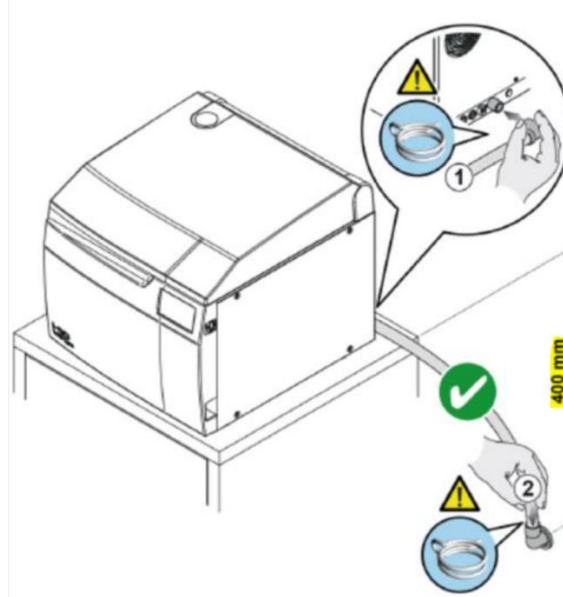


- Check the water supply pressure is between the required limits:
 - Min Pressure - **2 Bar**
 - Max Pressure - **5 Bar**

Drainage pipe of the device:

Rubber end hose fitting diameter 19-22 mm (1/2").

Try to achieve a **minimum fall of 400mm** from the base of the unit, to the tundish / P/S trap spigot location.



Important!!

- At the end of disinfection, there is **1.5 litres** of waste water at **>87°C** discharged, so the waste pipe must be properly secured.
- The waste drain point needs to be vented ie: secured into an **open tundish** (min 40mm ID) or into the **dishwasher spigot of an S/P trap**, but NOT capped or sealed above it.
- *If plumbing into a dishwasher spigot occasionally when the sink is plugged / in use, this can cause back pressure alarms on occasions, so 'best practice' is to supply an open tundish.

Examples of what **NOT** to do below.



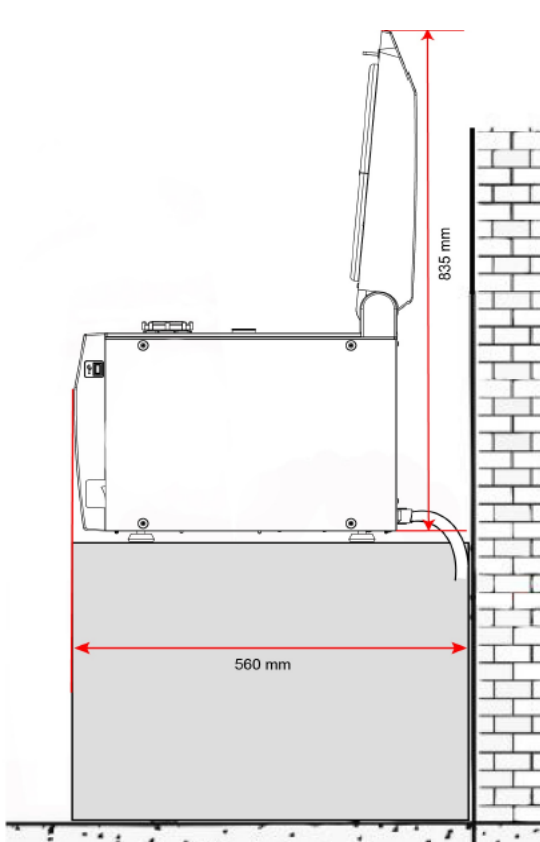
Note these tundishes have been sealed, preventing the drain pump from pumping against back pressure. This also results in phantom alarms as the machine senses pressure back from the waste system into the tub level pressure sensor

The Tethys H10 weighs approximately 46kgs, & it will be operating in a humid environment. Your bench design must take into account the weight & the need for moisture resistance materials.

Dimensions for Tethys H10
(Including requirements for ventilation)

Allowing space to both sides of the unit is good practice. **Allowing a minimum of 60mm between the rear of the disinfectant & the wall is essential** as this is where the waste heat dissipates & where the water hose connects.

Please note, the Tethys has an upwards opening door & when fully opened the **height is 835mm** so it is **essential there is enough space between the bench & any overhead cupboards**. Below are actual unit dimensions & installation dimensions that include an allowance for clearance to the sides, rear & above the unit.



The (cold) water supply connection includes an 'Aqua-Stop' solenoid valve, so **the hole through the benchtop (behind the Tethys H10) to the plumbing connections underneath needs to be 80mm**

Unit Dimensions

Height – 430mm

Width – 470mm

Depth – 500mm

Installation Dimensions

Height (With door open) – 835mm

Width – 600mm

Installation Depth – 560mm

240 Volt Power

- The Tethys H10 requires a standard **single phase 10amp supply GPO**, protected by an appropriately rated standard **30mA RCD** (not 10mA RCD).
- It is able to be plugged into an Ethernet network, **so where possible a LAN wall socket should be installed** to maximise the features of the Tethys.

General Requirements

Salt reservoir

The thermo-disinfector is equipped with an inner salt reservoir, used for regeneration of ion exchange resins contained in the integrated water softening system.

At the first use after installation it is necessary to fill completely the reservoir with water, then with salt.

Unscrew the salt reservoir plug, insert the supplied funnel and slowly pour the salt up to the appearance of the salt at the plug level. Check that the maximum reservoir filling level is not exceeded. At the end of the operation screw the plug in its seat and wait for about 10 minutes until the salt is dissolved.

SOFTENING SALT

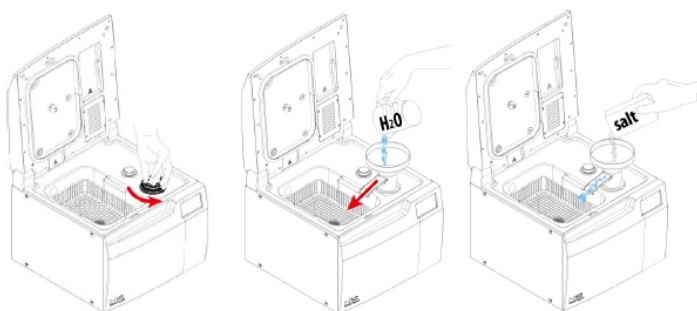
ONLY use 'Water Softening Salt' which is water-washed and impurity free

9T-SALT06 Water Softening Salt 1kg - PK 6

WARNING



USE NON-IODIZED COARSE SALT OR SALT FOR DISHWASHERS. AT THE END OF THE FILLING OPERATION RINSE THE SURFACE WITH CLEAN WATER AND REMOVE ALL TRACES OF SALT AND WATER FROM THE SURFACE USING A CLOTH OR ABSORBENT PAPER.



WARNING



POSITION SALT FILLING FUNNEL SO THAT GUTTER IS FACING INSIDE THE CHAMBER IN ORDER TO PREVENT WATER FROM BEING SPILLED ON THE SURFACE.

Detergent Reservoir

The thermo-disinfector is equipped with an inner reservoir for detergent to fill before the use.

Remove the reservoir plug and insert the supplied funnel.

Fill the supplied container and slowly pour the detergent.

Visually check that the maximum reservoir filling level is not exceeded.

At the end of the operation refit the detergent reservoir plug.

DETERGENT

ONLY the below Detergents have been validated for use on the Tethys H10 / H10+

9T-TCLE04 TethyClean - Box of 4 x 3L

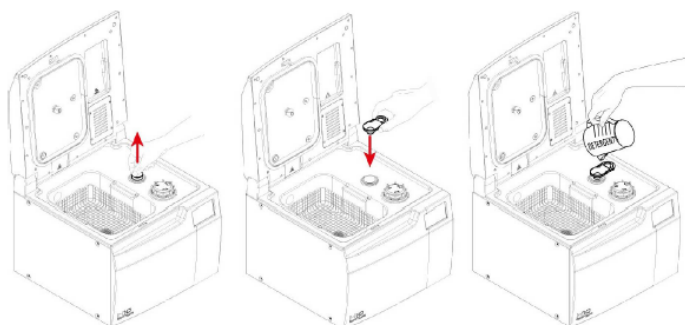
OR

9T-MEDF Mediclean Forte 5L

WARNING



WEAR PROTECTIVE GLOVES. IN CASE OF EXCESSIVE FILLING, REMOVE ANY TRACES OF DETERGENT FROM THE CHAMBER SURFACE USING A CLOTH OR ABSORBENT PAPER.



WARNING



AT THE FIRST FILLING IT IS POSSIBLE THAT DETERGENT AUTONOMY IS LOWER THAN STANDARD BECAUSE THE SUPPLY CIRCUIT MUST BE COMPLETELY FILLED.

To The Salesperson

The below are some final checks for the salesperson

The unit comes with 1x 3L bottle of TethyClean detergent and 1x KG of softening salt, so you should offer extra consumables with the sale so they don't run out.

- ☐ Have you remembered to offer **9T-TCLE04** TethyClean Detergent - Box of 4 x 3L ?
- ☐ Have you remembered to offer **9T-SALT06** Water Softening Salt 1kg - PK 6 ?

The ADA Guidelines for Infection prevention and control (5th Ed 2024) states a soil test in 'at least once per day'. Other peak body associations may require more frequent testing.

- ☐ Have you checked to see if the customer has a soil test kit? **9S-WTSTAR** Soil Test Starter Kit (1xPCD & 100xCEI soil tests)?

Many non-surgical stainless-steel instruments will rust, tarnish or corrode if their *Instructions For Use (IFU)* states to avoid pH extremes and thus these should continue to be cleaned manually.

- ☐ Have you discussed with the customer to carefully check the IFU of all instruments they wish to be cleaned in the WD to ensure they are suitable for a WD process of high and low pH chemicals?






Discussion with customer about hollow and rotary instruments

- ☐ In accordance with ISO15883-2:2006(E) 8a), the 'supplier' **shall** request from the purchaser "...whether.... receivers and connectors for hollow devices and/or powered devices need to be installed and in what numbers and locations".
- ☐ The washing of rotary or electronic instruments must have the approval from the instrument manufacturer as to their suitability of being washed and thermally disinfected.

The Tethys H10+ has a handpiece accessory and special non-ultrasound cycle option to clean and disinfect hollow rotating instruments **7T-HMD** *Tethys 10+ HMD Handpiece Support*

- ☐ From Dec 15th 2023, the new infection control standard (AS5369:2023) states the 'Final Rinse' water (for manual cleaning or automatic washers) needs to meet table 7.2 substance targets. This is difficult to achieve, especially for Microbiological and Endotoxin targets. A sanitisable RO with storage tank would need to be considered for this purpose. Please contact us for more information

Accessories available for purchase on next page

Accessories Available for Purchase		
7T-0009	Tethys Salt Funnel - The machine comes with a funnel	
7T-0010	Stainless Steel Tray - The machine comes with 2x trays. More can be ordered to allow chairside loading in multiple treatment rooms	
7T-0011	Stainless Steel Tray Holder - The machine comes with 1x tray holder. More can be ordered to allow for chairside loading and safe transfer between treatment rooms and the steri room	
7T-0013	Instrument holder in Silicon rubber - The machine comes with 1x set of instrument holders. More can be ordered to allow chairside loading in multiple rooms	
7T-0066	Drill Box Assembly for Tethys H10 - The machine comes with 1x drill box	
7T-HMD	Tethys 10+ HMD Handpiece Support - Optional Accessory if cleaning and disinfection of handpieces is desired (using the special non ultrasonic cycle option).	