

Initial commissioning/ backflushing of a natural pool with TECO Filter System

After completion of construction of the natural pool, the filling water is contaminated by various dirt on the construction site or by filling the secondary filter or bedding in the riparian zone, therefore, the following rules must be observed.

- - The filter technology has to be flushed back immediately after completion / filling of the natural pool and put into operation.
- - In the time from completion to normal operation, the pool can already be used for bathing.
- - Fluctuations in water quality during the first 2-3 weeks are not uncommon.



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**More than 1000 natural pools have already been built with the
patented TECO filter system from Austria.**

Backflushing of TECO filters

Backflushing is essential for the functionality of the natural pool. Below, the steps are shown in a simple manner. To understand the function, please read the description carefully.

- **Before** the pump is the suctionside, **after** the pump is the pressureside, in each case a 3-way ball cock is mounted. With these ball cocks, the flow direction of the natural pool water is regulated during backflushing.

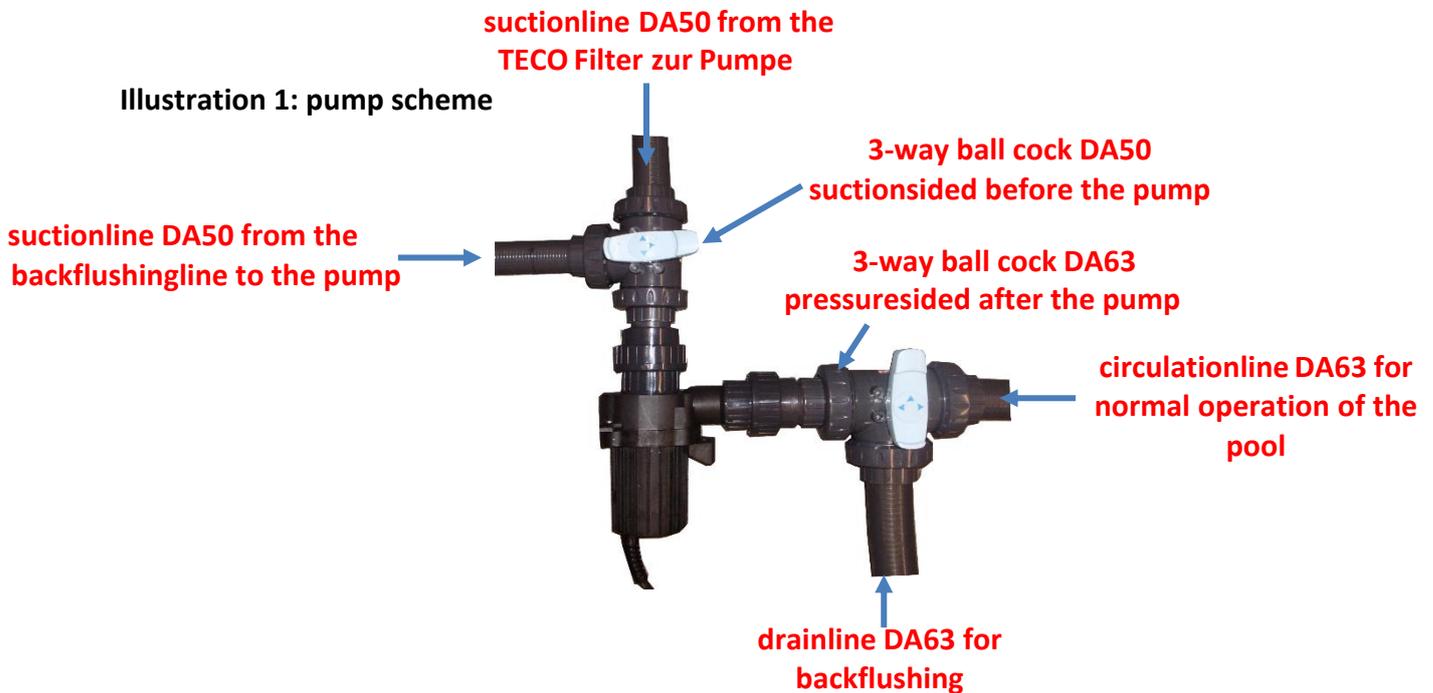
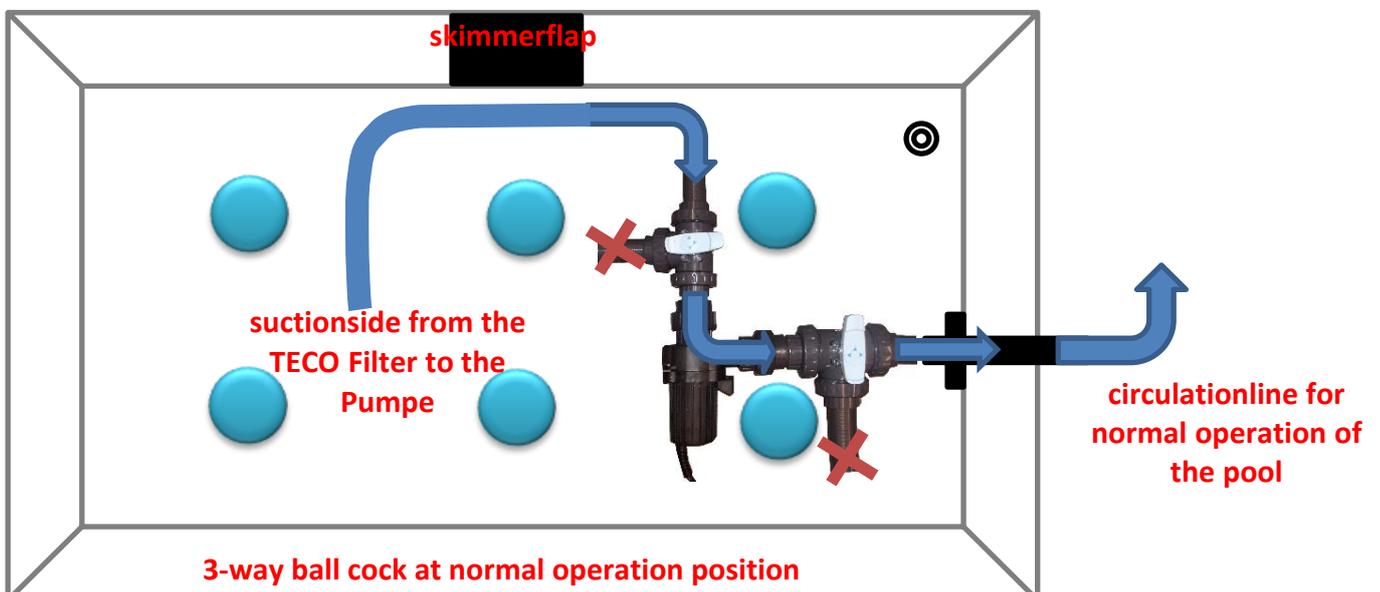


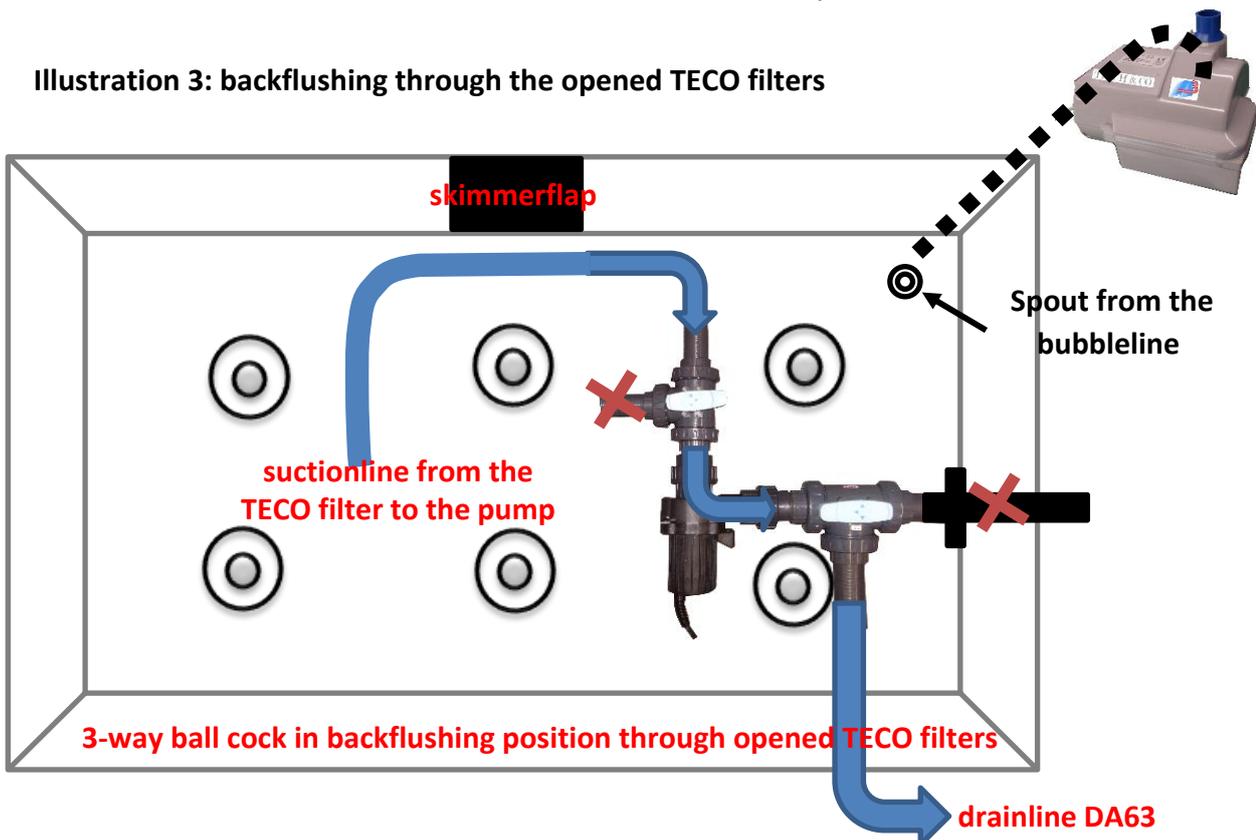
Illustration 2: Normaloperation



Procedure of backflushing

- Switch off filter pump
- Remove leaves and suchlike from the skimmerpool using e.g. a landing net
- Seal the skimmerflap poolsided with a closing cap
- Remove the covers and bodies from the TECO filters
- Turn the 3-way ball cock (DA63) **after** the pump for 90 °
-> the flow into the circulationline is blocked and the drainline is opened (see Illustration 3)
- Connect bubble pump to the bubbleline
- Activate the bubble pump and let it run for 3-4 minutes
-> most of the developed biofilm and the contamination in the secondary filter are driven by the rapidly rising air to the water surface in the skimmerpool
- Put the filter pump back into operation (keep the bubble pump running)
- Through the open TECO filter, the turbid, fluidized water is sucked in and discharged via the drainline - do not return it to the water in the natural pool!
Most of the contamination of the secondary filter can be removed!
To speed up the backflushing process, you can use a pond vacuum cleaner or similar. If necessary, insert the suctionline into an open TECO filter up to the filter bottom and use it to vacuum and drain the water.
- Since no water can flow through the closed skimmerflap, the water level falls.
-> After a few minutes the teco filter and the secondary filter will be visible.

Illustration 3: backflushing through the opened TECO filters

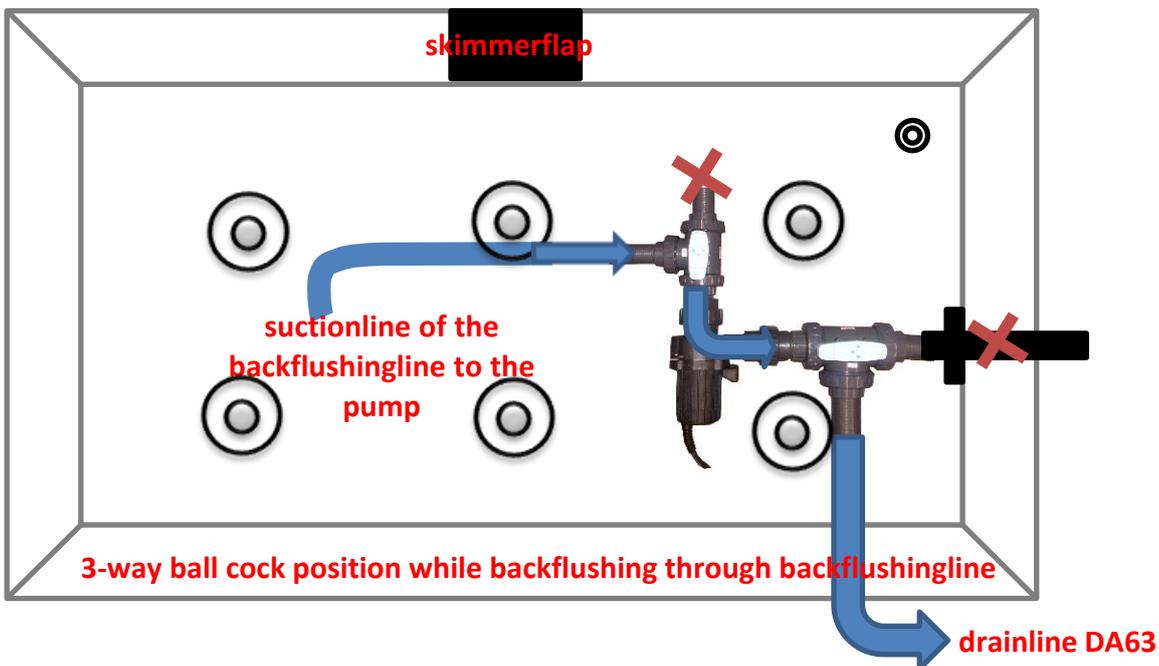


- Once the water level has dropped about 5cm below the TECO filter top edge (see illustration 3a) the DA50 3-way ball cock **in front** of the pump has to be quickly turned (in one go!) for 90° to stop the suction through the TECO filters and activate the backflushingline (see Illustration 4).
- Bubble pump is switched off!

Illustration 3a: Backflushing through the TECO filters until the top edge is reached ...



Illustration 4: Backflushing through the backflushingline



- The **first** backflushing is finished when no water runs out of the drainline. Switch off the pump immediately to avoid it from running dry.
- Since some water remains in the skimmerpool after the first backflushing, the process **has to be repeated for a second time!**
- Therefor turn the 3-way balls cock **before** the pump back in the position that takes the suction through the TECO filters as shown on illustration 3.
- By carefully removing the closing cap the skimmer pool is **filled a second time** and the backflushing process can be repeated. Seal the closing cap again before starting the **second backflushing process!**
- During backflushing the filter bodies can be handwashed.
- The **second** backflushing is completed when no water runs out of the drainline. Switch off the pump immediately to avoid it from running dry.
- Put the washed filterbodies back into the TECO filters.
- Close the TECO filters using their covers.
- By carefully opening the closing cap again, the skimmerpool will be filled.
- Release the skimmerflap completely.
- Return teh 3-way ball cock to it's normal operation position (see illustration 2!)
- Switch on the filters -> The natural pool is backflushed and can go back into normal operation
- The bathing operation doesn't need to be interrupted during the backflushing.
- Time required for backflushing: about 60 minutes!

**Backflushing (+bubbling) during first commissioning
(the water is contaminated by the dirt produced during
the construction)**



Bubble pump



**backflushing (+bubbling) during
bathing season**

Care and maintenance of the natural pool before the bathing season

Before the bathing season begins and the filter in the natural pool goes into operation, an annual service is necessary. These activities are essential for trouble-free operation.

- backflushing the natural pool (-> Backflushing TECO filters)
- Cleaning the natural pool using a vakuu cleaner or suchlike.
- put in some **TECO Natur**

Care and maintenance of the natural pool during the bathing season

The care of a natural pool is all together very low
But there are a few things that have to be considered ...

- Once a week, the skimmerpool has to be checked for subjects of contamination.
If necessary, remove the materials flooded in through the skimmerflap from the natural pool.
- Take out a filterbody once a month and check for changes.
- Any dead plants should be removed.
- Sediment deposits in the natural pool should be sucked off if available, in concrete basins it is recommended to use a pond robot every once a week.
- The pumps must be checked regularly for their operation.
- Foreign entry into the natural pool is to be avoided. (For example, lawn fertilizer, surface water over the pond edge in the natural pool or water from potted plants which are placed on bars, terraces or similar).
- The cleaning and backflushing interval of the filter is provided in normal use after about 90 days (in case of excessive load may be slightly earlier).
- Due to the special nutrient crystals of **TECO Natur**, which is added to the natural pool at the beginning of the bathing season and at the end of July, the filter biology is additionally promoted and ensures a stable biofilm structure.
(TECO Nature is included in the delivery of the filters for the first bathing season). It is recommended to use the nutrient crystals every year.

Care and maintenance of the natural pool after the bathing season

At the end of the bathing season, following steps have to done:

- - Switch off the filter pump
- - Remove filterbodies and wash them
- - If present remove leaves lying in the natural pool
- - If necessary, vacuum clean the natural pool
- - Install foliage protection net if necessary
- - Install ice-pressure pads if necessary

