

## Operation Manual

### ROLLERMAT

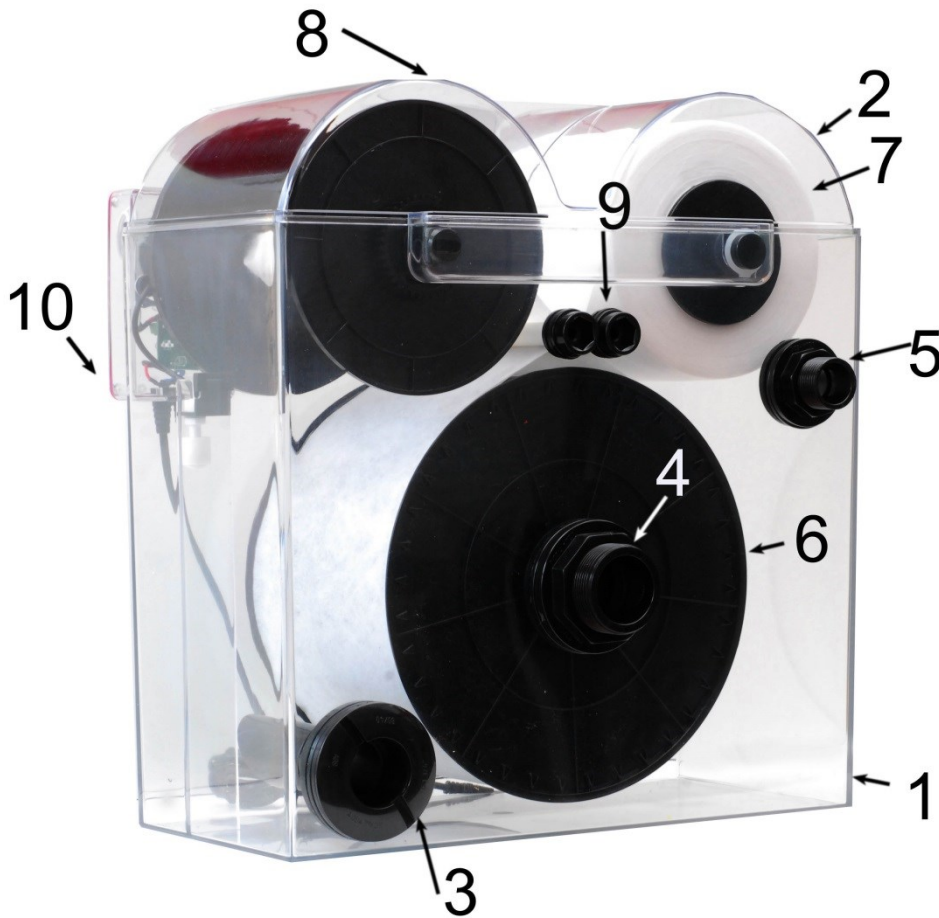


#### **Automatic mechanical filter for fresh and saltwater aquariums and garden ponds**

- Fresh and saltwater aquariums from 300 to 3000 l volume and garden ponds up to a volume of 5000 l

The Rollermat removes waste particles from the water. Biological filters and protein skimmers are workload is eased and the result is crystal clear water.

## 1. Construction



1. Filter
2. Lid
3. Water inlet
4. Water outlet
5. Overflow
6. Filter Drum
7. New Fleece Roll
8. Dirty Fleece Roll
9. Directing Rolls
10. Level Switch

## 2. Working principle

Water with waste particles passes through the filter fleece and enters into the central drum. From here it flows back into the filter sump. This results in the fleece picking up waste particles – as this happens, the flow through the fleece decreases and the water level outside of the drum rises. When the water level reaches the maximum level, a float switch actuates the fleece drive motor and the dirty fleece roll slowly rotates and a small part of fresh fleece is loaded on the drum. This results in an increased flow through the filter fleece and thus the water level drops. When the level drops sufficiently, the float switch is de activated and the motor stops. This process repeats automatically. It will take 3 – 6 months until the complete fleece is used and has to be replaced - this depends on the waste production in the system.

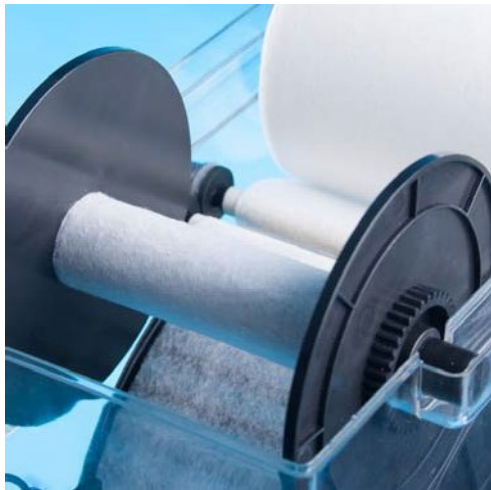


The Fleece is very fine. Even the smallest particles are removed. The dirt is filtered out of the system, before it is metabolized biologically. This eases the workload of biofilters and the protein skimmers.

The pores of the fleece are even fine enough to retain many protozoa, like fish parasites in fresh and saltwater. They cannot pass through the fleece.

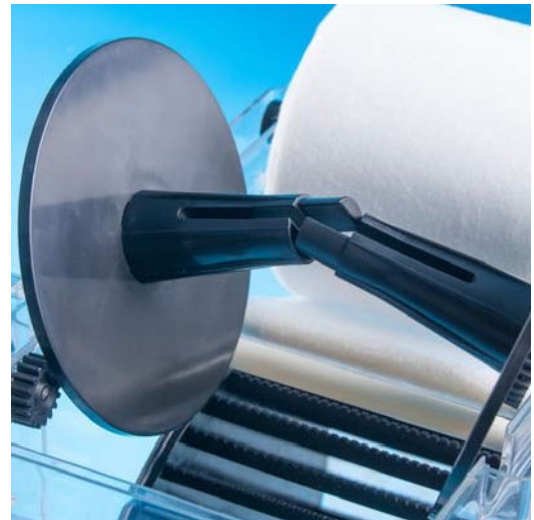
### 3. Features of the Rolleramat:

- Efficient mechanical filtration by fine filter fleece
- Automatic transport of the fleece.
- The rolls are easy to change, up to 100 m length.
- The roll is 15 cm wide, for flow rates up to 2700l/h, depending on the water quality.
- Minimum power uptake. Average below 0.1w.
- 12V voltage – low safe voltage



The fleece is transported from the releasing roll to the accepting roll. The rolls are driven by gear wheels .

If the accepting roll is full – or the releasing roll empty, it can be taken out of the filter easily. Both parts can be separated and the fleece can be discarded .Inserting a new fleece roll.



Care must be taken when replacing the fleece roll – please ensure the O-rings on the left and right side of the new roll are mounted in the correct way - see the arrow on the figure at the left. These O – rings prevent the roll from turning freely - this keeps the fleece always taut.

The fleece is directed from the fresh roll over the first directing roll (see item 9). The end of the fleece can now be fixed to the drum (by a tape) or just pressed into the drum. The drum is rotated carefully anti clockwise until the fleece can be reached

from the other side.

Now, it is directed over the second directing roll and fixed on the accepting roll. This can be done with tape as well. If the accepting roll is in place and the transformer is plugged into the mains, the level switch can be lifted lightly by hand. The motor starts and the fleece is pulled taut.

#### 4. Warning

When initially installing, the RollerMat will slowly increase the internal volume until filled to the normal operating level – this will require approximately 20 litres of water. Please make sure you have enough water to add to your aquarium/pond to replace this water (not ATO water! - disable any ATO device until the RollerMat is filled to the bottom of the float switch).

During normal operation, the increase in water volume required to trigger the float switch and advance the filter fleece, is only around 1 litre (when roll advances, this additional 1 litre is then returned to the aquarium/pond). Therefore the impact on salinity/ATO operation is insignificant on tank sizes of 300 litres or more. On tanks volumes below this, the salinity/water level may be impacted and the RollerMat is not recommended.

#### 5. Set Up

Aquarium: The RollerMat must be positioned so that the water outlet (which must not be reduced below the 40mm)) can return water to the aquarium by gravity.

The RollerMat can be placed into the filter sump below the aquarium. Alternatively, it can be placed above the water level, so that the purified water can flow freely back into the aquarium.

Garden pond: The **RollerMat** is placed above the water level and is supplied with water by a pump. The purified water flows freely back into the pond.

#### 6. Connection

Water inlet	40 mm tank union/glue fitting
Water outlet	40 mm tank union/glue fitting
overflow	25 mm tank union/glue fitting

##### Water inlet

##### 1. Water inlet by Gravity

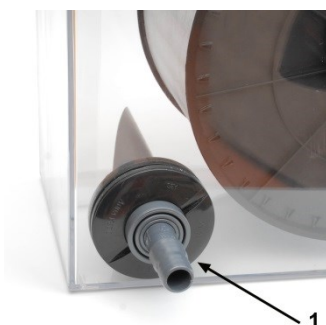


If operated by gravity, the RollerMat is placed below the aquarium or below the water level of the pond in the filter sump.

From the overflow chamber of the aquarium or from the skimmer of the pond a pipe with a diameter of 40 mm is connected to the water inlet of the RollerMat (1).

It is important, that the 40 mm pipe is just pressed into the tank union. If it is glued, it the RollerMat cannot be disassembled for maintenance.

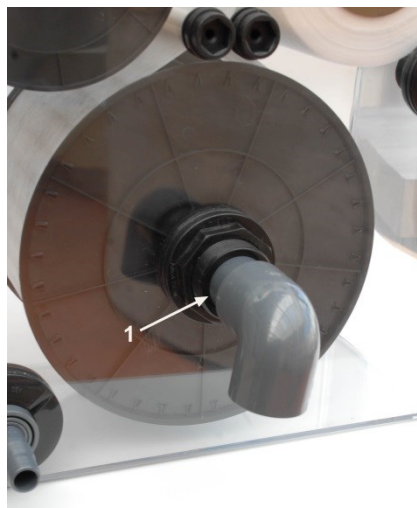
##### 2. Water inlet by pump pressure.



If the RollerMat is supplied with water by a pump, the maximum flow is 2700l/h (e.g. River 2700). The water inlet has to be reduced by a reduction fitting to a 3/4" hose connector. This connections should be glued.

The RollerMat is placed above the water level of the aquarium or pond. The water flows back by gravity into the aquarium or the pond.

## Water outlet

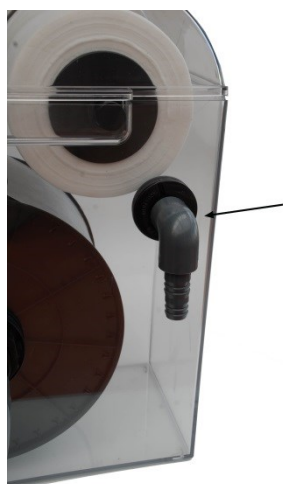


The water outlet may not be reduced. A 40 mm PVC pipe should be pressed into the tank union. From here a PVC pipe can be directed to the filter sump or pond. The pipe should not be glued into the tank union. If it is glued, the Rolleramat cannot be disassembled.

Alternatively a 40 mm hose fitting can be pressed into the tank union and a hose may be directed to the pond or aquarium.

In any case, the water must flow freely away from the outlet. Neither a PVC pipe nor a flexible hose may be directed higher than the outlet of the Rolleramat.

## Overflow



The emergency overflow is a 25 mm tank union. Here, you can press in a 25 mm PVC pipe. From here the pipe is directed downwards in a free flow pipe. Alternatively a 25 mm hose connection can be pressed into the tank union and a hose can be directed to the pond or aquarium.

## 6. Technical data

Power supply motor	12V, 50/60Hz , 4 Watts
Transformer	230V/50 Hz
Water inlet	D 40 glue connection, 1 ¼" thread
Water outlet	D 40 glue connection, 1 ¼" thread
overflow	D 25 glue connection, 1 " thread
Width of the fleece roll	15 cm
Maximum water level, if placed in a filter sump	12,5 cm above the bottom of the Rolleramat
Dimensions (L x W x H)	42 x 25 x 45 cm

## 7. Accessories: Spare fleece rolls

Article number: 3051100171 spare roll Aquarium "Fine", 40g/m<sup>2</sup>, 45m long

Article number: 3051100172 spare roll Pond "Standard", 20g/m<sup>2</sup>, 90m long

## 9. Failures

The fleece is not transported. This may have different reasons:

- The fleece is not lying straight on the drum; there is a gap between fleece and drum. Unfiltered water can pass through this gap. The water level inside of the Rollermat will not rise high enough to touch the level switch. Action: tear the fleece straight and set up the Rollermat straight (water balance)
- The motor turns, however the fleece is not transported. The gear wheel on the shaft of the motor does not turn. Reason: The gear wheel is broken and has to be changed. It is only pressed on the shaft and can be removed by hand or with the help of a lever.
- The motor does not turn although the water level in the Rollermat is above the level switch and already flows through the emergency overflow. This may have different reasons:
  - If the red LED in the electric compartment is off, the transformer or the PCB are broken.
  - The red LED is on, however the motor does not react on the level switch. In this case either the motor or the level switch are broken. If the motor is broken, the electric compartment should be warm, because the motor tries to turn. If the level switch is broken, the compartment will be cold, because the motor is not switched on.
  - All parts can be changed easily.

## 10. Warranty

Should any defect in material or workmanship be found within 12 months of the date of purchase, Theiling GmbH undertakes to repair or, at our option, replace the defective part free of charge— always provided the product has been installed correctly, is used for the purpose that was intended by us, is used in accordance with the operating instructions and is returned to us carriage paid. The warranty term is not applicable on the all consumable products. Proof of Purchase is required by presentation of an original invoice or receipt indicating the dealer's name, the model number and date of purchase, or a Guarantee Card if appropriate. This warranty may not apply if any model or production number has been altered, deleted or removed, unauthorized persons or organisations have executed repairs, modifications or alterations, or damage is caused by accident, misuse or neglect. We regret we are unable to accept any liability for any consequential loss. Please note that the product is not defective under the terms of this warranty where the product, or any of its component parts, was not originally designed and / or manufactured for the market in which it is used. These statements do not affect your statutory rights as a customer. If your Theiling GmbH product does not appear to be working correctly or appears to be defective, please contact your dealer in the first instance. Before calling your dealer, please ensure you have read and understood the operating instructions. If you have any questions your dealer cannot answer, please contact us. Our policy is one of continual technical improvement and we reserve the right to modify and adjust the specification of our products without prior notification.

## Spare parts list

	art no	name
	<b>3051100180</b>	lid
	<b>3051100181</b>	Roll (delivering)
	<b>3051100182</b>	Roll ((receiving)
	<b>3051100183</b>	Direction roll for fleece
	<b>3051100184</b>	Drum
	<b>3051100185</b>	Rung for the drum
	<b>3051100186</b>	Screw
	<b>3051100187</b>	Nut
	<b>3051100203</b>	Square ring
	<b>3051100204</b>	washer
	<b>3051100205</b>	Tank Union 25 mm (overflow)
	<b>3051100206</b>	Tank Union (40mm) for inlet and outlet

	art no	/name
	<b>3051100207</b>	Deckel Elektro-modul Lid for electric module
	<b>3051100208</b>	Screws for the lid
	<b>3051100209</b>	Sealing for the lid
	<b>3051100174</b>	Motor
	<b>3051100188</b>	Gear wheel
	<b>3051100189</b>	Sealing for motor
	<b>3051100178</b>	Level switch
	<b>3051100190</b>	Sealing for level switch
	<b>3051100200</b>	Holder for level switch
	<b>3051100201</b>	Circuit plate
	<b>3051100202</b>	Connection cable
	<b>3051100177</b>	Transformer