



# **Trident Rainwater filters**

*For every building an effective rainwater filter*

[www.dehoust.com](http://www.dehoust.com)

*Utilize the possibilities of rainwater*



# Trident, unique filtration technology



The Trident filtration technology which GEP has developed specially for rainwater is unique and can't be compared with old-fashioned filtering materials such as woven filtration material. The Trident rainwater filters have a large effective filtration surface area. The water flows over the entire filtration surface area to ensure a high capacity and a high efficiency.

The special strips of the Trident filters are made of solid stainless steel and are placed tilted. This is to allow the water to flow through the filter. This ensures a long life span and a very high efficiency. All the Trident filters can be equipped with automatic filter nozzles in order to minimize the required maintenance and to sustain the high efficiency.



**trident**<sup>®</sup>  
Filtration technology

## Trident 150 Tankfilter



- Can be placed in tanks
- Slight drop
- High efficiency

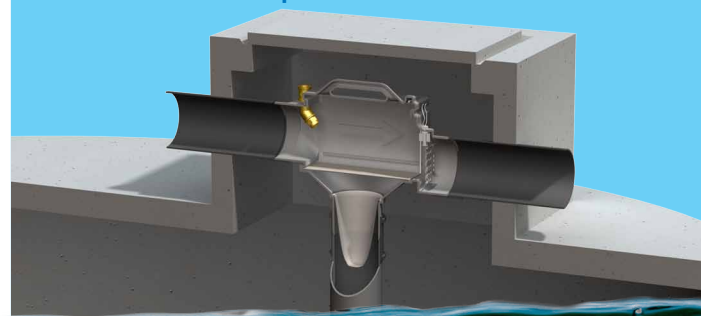


The Trident tank filters are developed to be placed in a rainwater tank or a man hole. Dirt and residual water is discharged horizontally to the overflow. The clean filtered water flows from the bottom of the filter to the rainwater tank. The Trident filter plate can be removed for cleaning. The Trident tankfilters can provide filtration for roof areas from 150m<sup>2</sup> up to 325 m<sup>2</sup>.

## Trident 325 Tankfilter



- Can be placed in tanks
- Slight drop
- High efficiency
- Fine filter is optional



## The unique Trident filtration technology by GEP

Before you can make use of rainwater in your house you have to make sure that the water is clean. That is why GEP has developed filters based on the Trident filtration technology. This technology ensures that the dirt particles in the rainwater are separated from the water before it is deposited in the tank. A Trident filter consists out of a

filtration surface which is made out of special triangle shaped strips which are placed tilted towards the flow of the water. The strips are tilted in order to squeeze the water between the strips. Dirt particles remain on the filterplate and are discharged towards the sewer. It is important to keep the filter clean

because the dirt particles can clog up the gaps of the filter. This can be done by using automatic filter nozzles. With the use of a Trident filter you have guaranteed clean rainwater with a high efficient rainwater system.

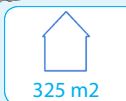


Rainwater Housing

## Trident 325

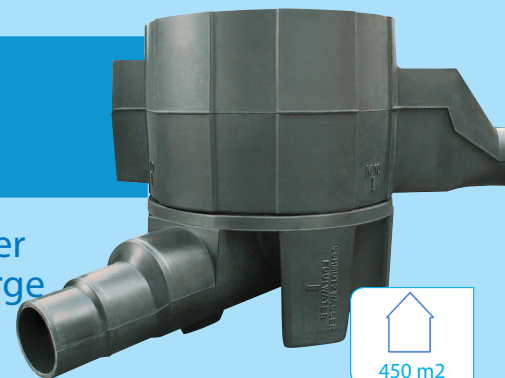


- Underground filter
- Sandcatcher included
- Slight drop
- Universal applications



The Trident 325 rainwater filter is suitable for underground installation, and can be placed in front or on top of a tank. Due to the slight drop in height the filter can also be installed at existing situations. Waste water is discharged vertically and the clean filtered water can be drained either to the left or to the right to the tank, this can be chosen. The Trident filter plate can be removed in order to be cleaned. The Trident 325 filter can provide filtration for roof areas up to 325 m<sup>2</sup>.

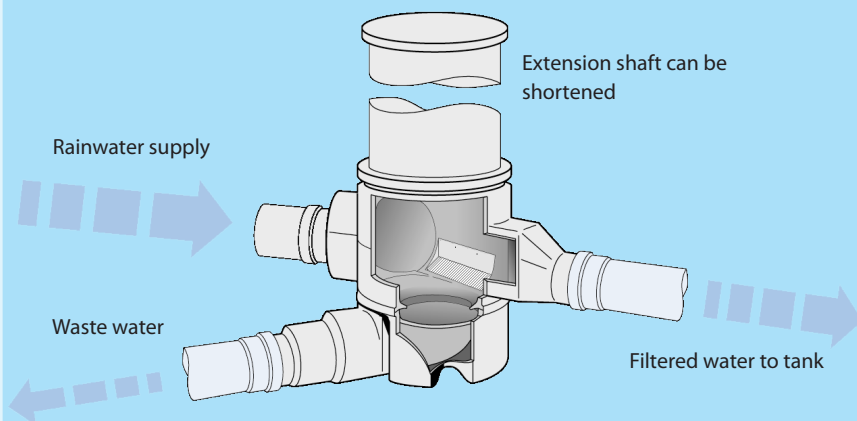
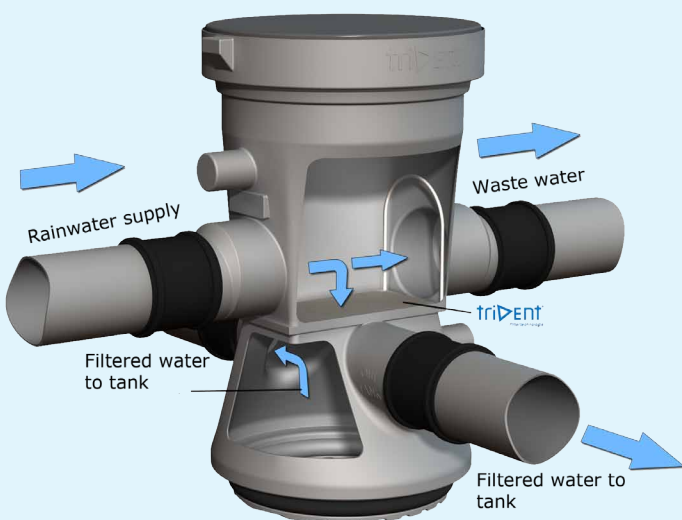
## Trident 450



- Underground filter
- Rotatable discharge
- Quick installation



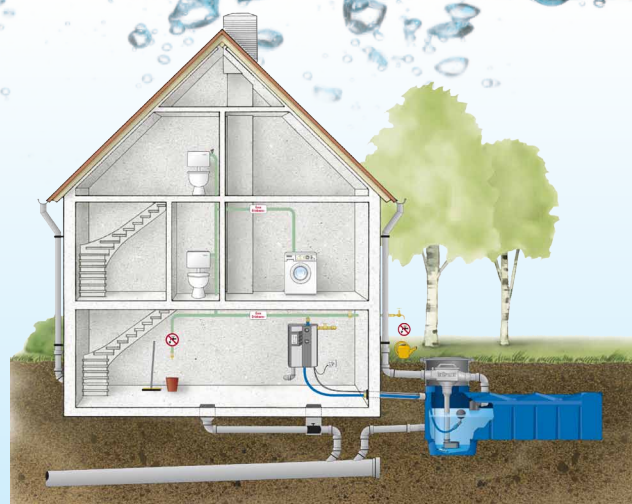
The Trident 450 rainwater filter is suitable for underground installation, and can be placed in front of a tank. Waste water is discharged via a discharging pipe which can be rotated 360 degrees to allow fast and easy installation. The clean filtered water is drained horizontally to the tank. The Trident filter plate can be removed in order to be cleaned. The Trident 450 filter can provide filtration for roof areas up to 450 m<sup>2</sup>.



## The intelligent IRM-Technology by GEP

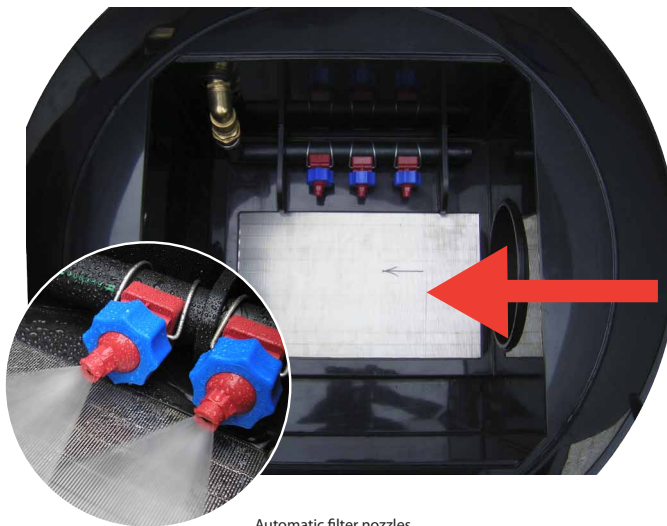
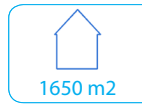
GEP was the first to develop a rainwater system which made use of the IRM technology. IRM or 'Intelligent Rainwater Management' allows the pump to automatically switch to tap water once the rainwater is running low. In other words, if the rainwater tank is empty the system does not pump up expensive tap water to fill up the tank.

The IRM control system automatically make use of tap water without filling up the tank. After a rainshower the system automatically switches to rainwater. An IRM-rainwater system allows you to save money and guarantees a higher reliability and safety. IRM systems are Belgaqua and KIWA certified.



## Trident 1650

- High efficiency
- Low weight
- Practical installation
- Groundwater resistant
- Provided with filter nozzles



Automatic filter nozzles

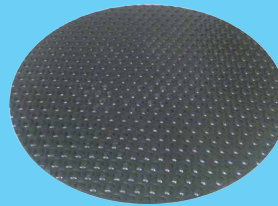
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Filtration technology

## Installation

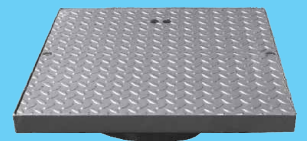
The Trident 1650 filter can be placed underground. The filter has to be leveled when placed in order to be fully effective. The cleaning nozzles are adjustable and are to be installed at the pressure side of the rainwater. (Behind the KIWA certified intermission.) The cleaning nozzles can be equipped with a timer to automate the entire cleaning process.

## Covers

The Trident 1650 filter can be supplied with a range of 3 covers. The first is the pedestrian duty cover (class A) and is made out of PE Plastic. The second cover is the car duty cover (class B) and is made out of galvanized steel. The third cover is the heavy traffic/truckload cover (class D) and is made out of cast iron and concrete. The class B and D are placed telescopically over the circular shaft in order to place the cover equal to ground level. All 3 covers are optional.



Class A PE Plastic



Class B Galvanized Steel



Class D Cast iron and concrete

## Why does the Trident rainwater filter have such a long lifespan and such high performance?

- Trident filter grids are made of high quality massive stainless steel.
- A very smooth dirt resistant surface is created by electrolytic polishing.
- Trident filters have an 'independent flow filter surface'.
- Trident filters have a large filter surface.
- Trident filters have tilted lamellae which enlarge the efficiency per square cm.
- Triangle shaped lamellae don't clog up fast.
- Dirt is drained off when the tank is full.
- Trident filters are (optional) expandable with automatic cleaning nozzles.





Rainwater  
Housing

## Trident 2.000 - 10.000

- Slight drop
- Provided with filter nozzles
- Prefab installation possible
- Optional automatic timed filter cleaning



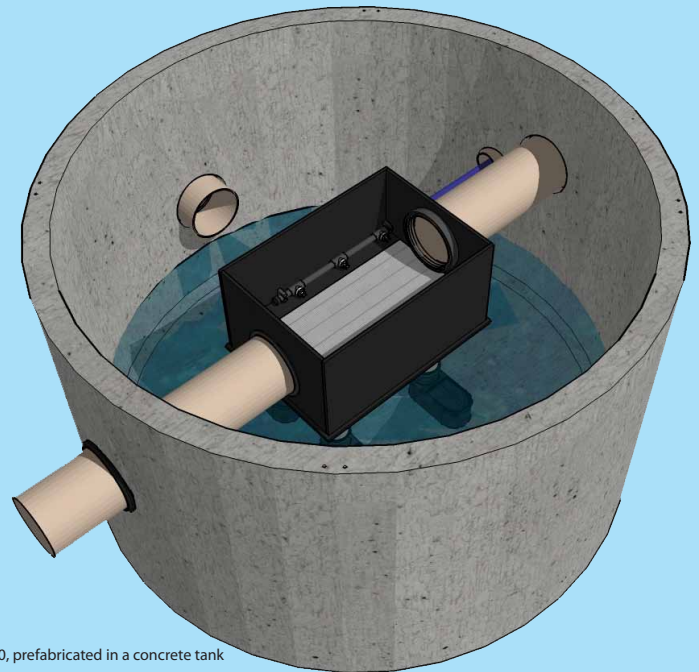
The Trident 10.000 filter is developed for filtration of rainwater. The filter can be placed inside a tank, or in case of large rainwater tanks in front of the tank.

Dirt particles clog up the openings of the filter over, therefore the Trident 10.000 is standard equipped with filter nozzles to prevent this from happening. After all a dirty filters lowers the amount of rainwater that enters the tank and thus lowering the efficiency.

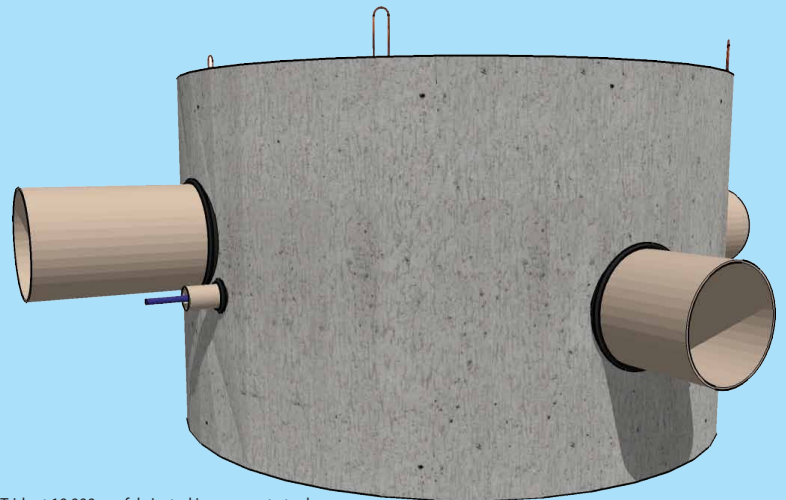
The filter nozzles can be optimized with timers to allow cleaning on a regular basis.



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Trident 2.000, prefabricated in a concrete tank



Trident 10.000, prefabricated in a concrete tank

## Functional principle of Trident Filter

This commercial Trident filter has been developed to be used in medium to large size rainwater harvesting systems. The highly efficient filtration process via horizontal stainless steel filter grid with optimised profile ensures maximum rainwater collection rate and filter efficiency, passive self-cleaning and optimal nonpotable water quality in the rainwater storage tank. This produces precious,

hygienic and soft rainwater for gardens, washing machines, toilet supply as well as for numerous industrial and commercial applications, e.g. water for cooling towers, car/lorry washing or other process water where rainwater usage is clearly of advantage. Leaves and the majority of particles are retained on the grid until the self-cleaning process starts. The construction and the dimensions of

the grid make a high collection rate of up to 99% possible. Self-cleaning: The filter grid should be preferred located below the maximum water level of the tank. If the tank overflows, the filter will be under water and the floatable dirt will be transferred into the drainage system. The nozzles allows easy and automatic cleaning of the filtergrid.