Professional Rainwater Harvesting

www.wisy-water.com

Rainwater is an important component for sustainable and future-orientated water supply.

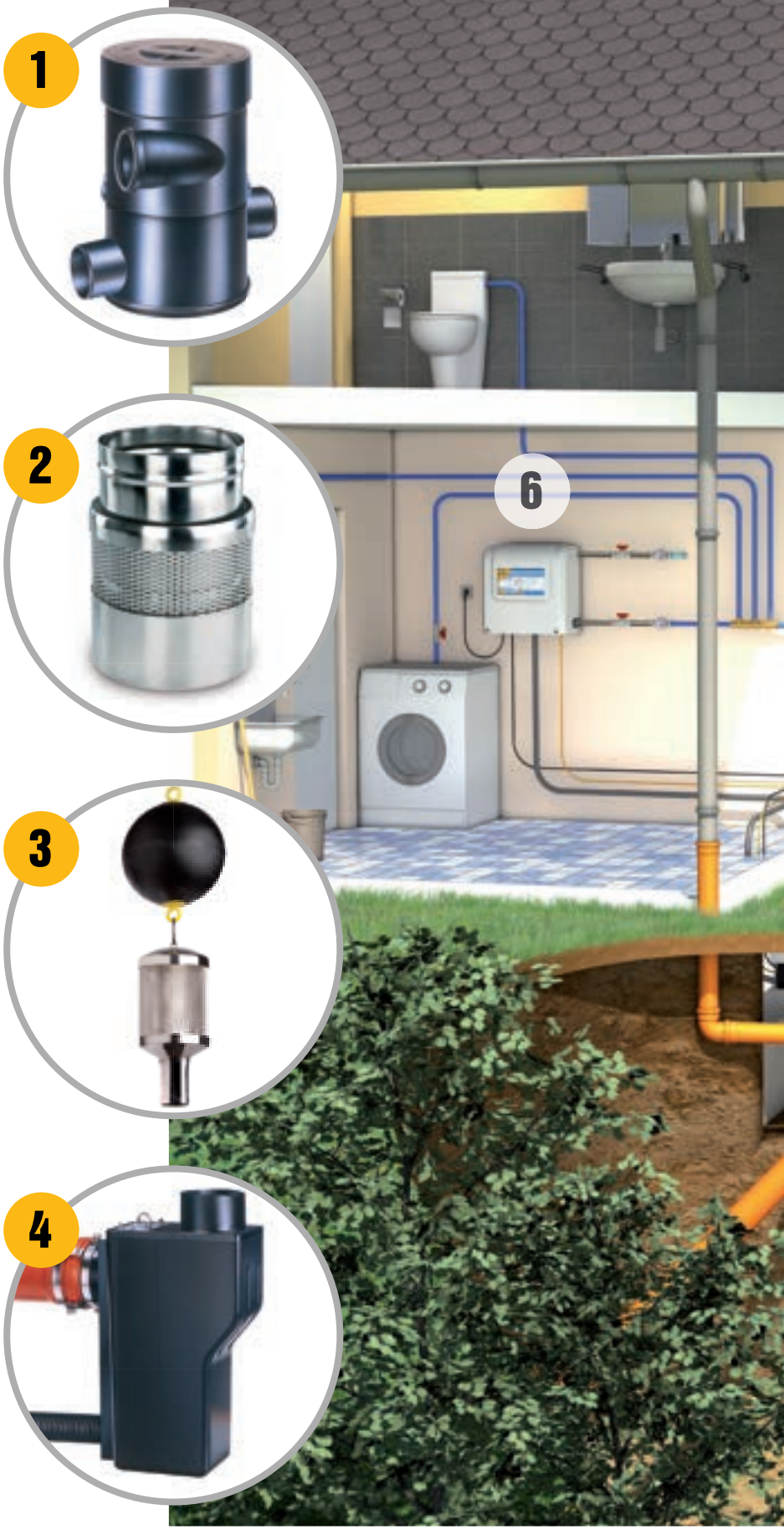
Here is a brief overview of the simple technology for filtering and storing of rainwater and its various application possibilities.

made in Germany

RAINWATER TREATMENT IN 4 STEPS

Rainwater filter

The vortex fine filter separates all particles larger than 0.28 mm and stores approx. 90 % of the filtered rainwater in the cistern. The filter insert, which is open at the bottom, is continuously cleaned by the residual water.



Smoothing inlet

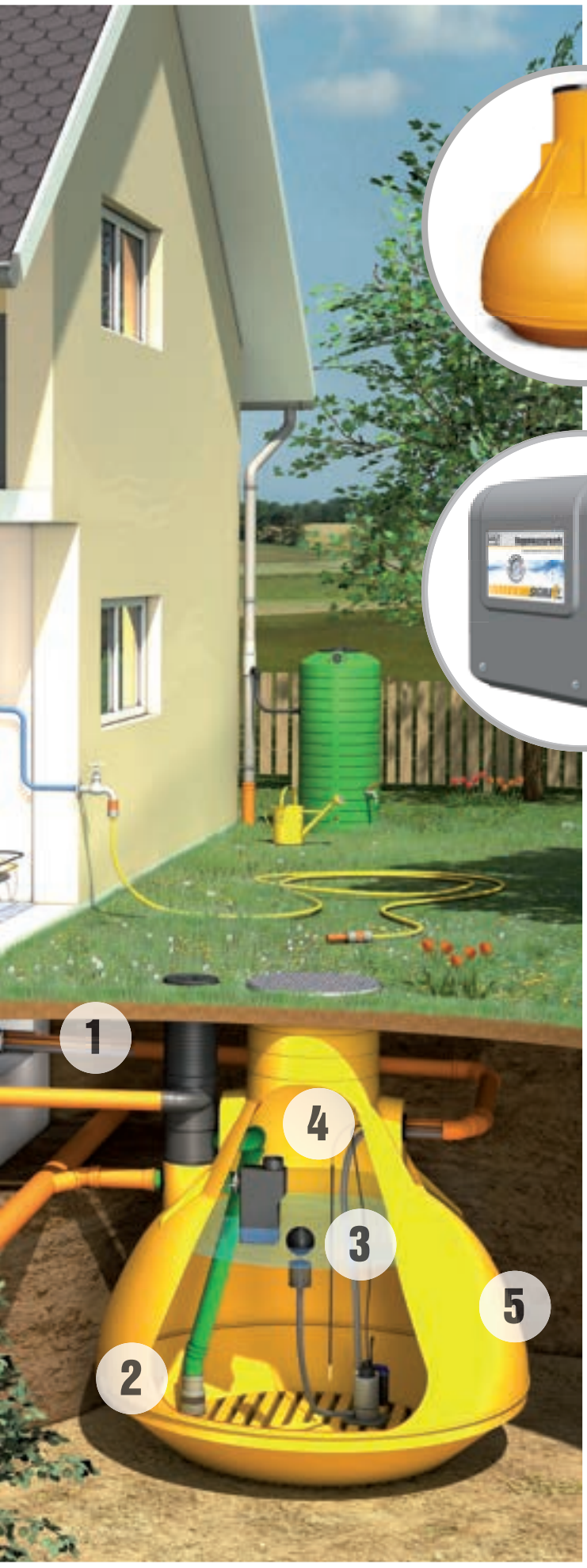
The smoothing inlet carefully distributes the fresh water in the cistern without stirring up sediments. Thus, stored water always remains clear.

Floating suction filter

In the cleanest area of the cistern, about 20 cm below the water surface, the clear rainwater is taken in.

Overflow siphon

The top layer of water regularly flushes into the overflow siphon. This prevents a barrier layer on the water surface. The oxygen exchange between air and water remains optimal.



5 Rainwater cistern

The cistern is used for storage of rainwater and enables further cleaning by sedimentation and flotation. The size is determined by the amount of precipitation, roof area and water demand.

6 Rainwater unit

The rainwater unit controls the function of the system and ensures permanent water supply. This includes:

Pumping rainwater

The pump provides the required line pressure and delivers the rainwater to the points of use. For larger systems, multiple pumping systems are also used.

Topping up water

The free water outlet is the connection to the public water network. It is used to replenish tap water if the rainwater storage tank is empty. The design is according to DIN EN Standards.

Measuring water-level

Sensors monitor the water level in the cistern and measure the pressure and flow in the pipes.

Controlling system

The control unit monitors the system 24/7 and switches pumps and solenoid valves. The unit is energy efficient even in stand-by mode.

Toilet Flushing

Since rainwater is free of calcium or magnesium, limescale does not form in the toilet. The toilet stays clean longer and the flush seal remains intact in the long term.

Laundry

Health experts confirm that washing with rainwater is completely hygienic. No special washing machines are needed for this purpose.

It is also softer than tap water. This is easy on the washing machine, less detergent can be used and softeners are not needed at all.

Irrigation

Rain is the best water supply for gardens, green spaces and sports facilities. If the water is stored cleanly, plants can be watered sufficiently even during periods without rainfall.

Advantage: Sprinklers, garden sprayers and nozzles remain free of limescale deposits and irrigation equipment lasts longer.

Horse and livestock farming

Whether for watering livestock, caring for animals or cleaning of stables and machinery - rainwater has many applications in the rearing of animals.

What‘s more, rainwater leaves no deposits in drinking troughs and supply lines. The clogging of nozzles due to limescale is ruled out and descaling systems are not required.

Cleaning

Rainwater is perfect for cleaning in the household, cars and machines or buildings. Since it does not contain lime, less cleaning agent is needed for cleaning.

It is particularly enjoyable when cleaning windows: rainwater dries without leaving any residue. Thus, all surfaces are guaranteed to remain streak-free.

Process Water

There is a high demand for water in industry.

Whether for humidification or cleaning, as cooling water, drilling fluid or transport medium: Rainwater is perfectly suited for a numerous of industrial applications.

Air Conditioning

For the cooling of buildings by air conditioning systems, the use of rainwater is ideally suited.

In particular, due to the low content of minerals, significant advantages can be achieved in adiabatic exhaust air cooling compared to the use of tap water.

Extinguishing Water

Rainwater can be retained as extinguishing water and represents therefore an important component of a holistic fire protection and safety concept.

Extinguishing water is retained in a central storage tank. The rainwater is then directed to one or more extinguishing water extraction points as needed.

Sheraton Hotel
Kuala Lumpur

With a height of 126 meters and over 33 floors, the Sheraton Hotel towers above the skyline of Kuala Lumpur (Malaysia).

Completed in 2017, the hotel incorporates three WISY vortex fine filters WFF 300 to filter the rainwater, which is used to irrigate the indoor and outdoor greenery.

Mt. Fuji Tollstation
Hakone, Japan

Six FS filter collectors collect the rainwater, which is stored in a battery of 16 pcs. of 1000 litre containers.

This supplies the motorway service station which is connected to the toll station with water

Maracaña Stadion
Rio de Janeiro

18 WISY vortex fine filters WFF 300 provide clean rainwater for lawn irrigation and for the toilet facility in the Maracanã Stadium in Rio de Janeiro (Brazil).

Among other things, the stadium was the venue for the 2014 World Cup soccer final, from which the German team emerged as the winner.

Google HQ
New York

Six pressure-tight WISY vortex fine filters WFF 300 Stainless Steel filter the rainwater falling on the roof surface of the new Google headquarters in New York (USA).

Former St. John´s Terminal is converted into a 70 meter high Office complex with 1.3 million square meters floor area. Rainwater is used for the irrigation of the lush indoor aud wall greenery, as well as the roof garden.

THE LIGHT CITY
Penang, Malaysia

The Light Collection is a beautiful, award-winning construction project located directly on the coast of the Malaysian island of Penang.

The prestigious project, which attracted investors from all over the world, includes a total of three WISY vortex fine filters WFF 300 and 40 WISY vortex fine filters WFF 150 for efficient filtration of rainwater.

Eiffel Palace
Budapest, Ungarn

The historic building was modernised in 2014. A rainwater harvesting system with the WISY vortex fine filter WFF 300 and the Maxima rainwater unit supplies the public toilets and is used to irrigate the indoor plants.

The building has been awarded LEED Gold and BREEAM certification.

More than 500,000 rainwater filters from WISY are in use worldwide. They save precious drinking water or provide clean water, where is none at all. Together they are filtering 42 million m³ of rainwater annually. That's more than all residents of Berlin use in the same time to flush their toilets and equals 1,332 litres per second!

Comparative figures:
WISY rainwater filters worldwide: more than 500,000 pieces Realistic combined capacity for rainwater, taking the connectable roof area for each filter into account: more than 42 million m³ of rainwater per year Inhabitants of Berlin (2012): 3,36 million Average need of toilet flush water per inhabitant in Germany: 34 litres/day or 12.4 m³/year

YOUR SPECIALIST FOR

PROFESSIONAL RAINWATER HARVESTING

WISY is Co-Founder of the modern Rainwater Harvesting.
Since 1989, we produce high quality products in Germany
to turn rainwater into a decentralized water resource.
For all applications from family house to football stadium,
from garden shed to Shopping Mall.

- Unique filtration technique
- Highest quality - Made in Germany
- Global presence in over 40 countries
- Proven technology since 1989

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