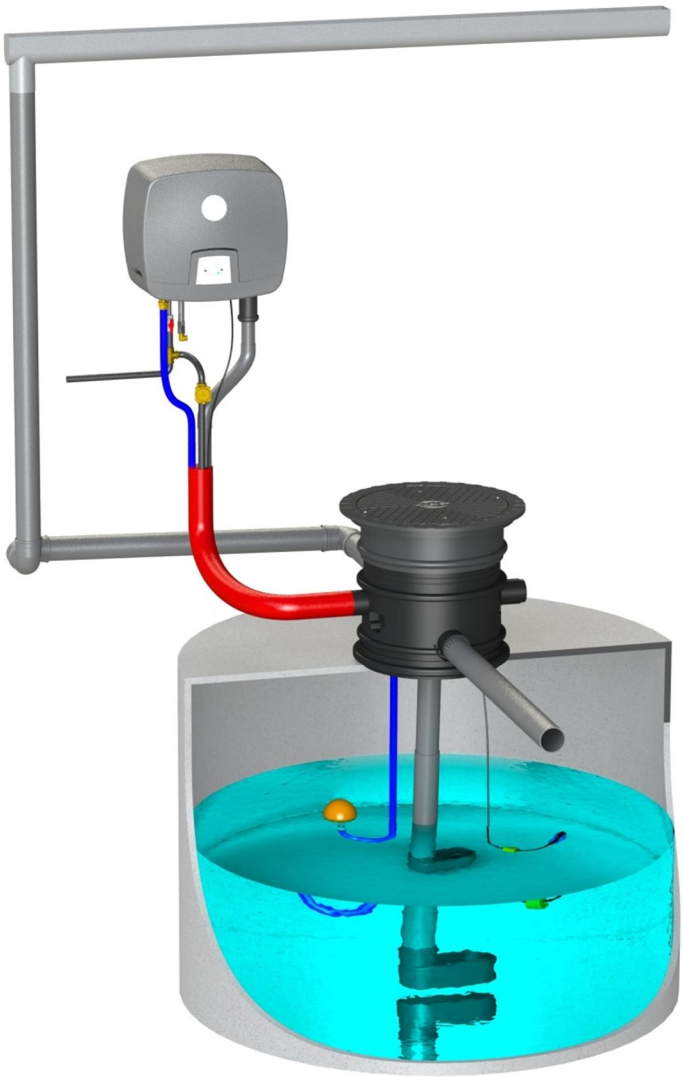
GEP Practical tip 1: The suction pipe

Hundreds of liters of precious drinking water are wasted per household for toilet flushing, washing machines and gardens every day. A professionally dimensioned rainwater harvesting system can save up to more than 50% of this drinking water requirement. Many consumers already use rainwater to reduce their drinking water consumption, but unfortunately not always efficiently, correctly or not in accordance with applicable standards and regulations.

Therefore a few practical tips from GEP, which you should pay attention to when installing a rainwater harvesting system:



Drawing 1: rainwater harvesting system with selfpriming pump.

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In practice, components and parts (rainwater tank, filter, pump, accessories, control) from different manufacturers are often combined and assembled by different (skilled) people. Lack of coordination can lead to inefficient systems that do not provide the desired benefit or fail after a short time or even do not function at all.

So make sure that you use well-matched components and parts from one supplier when planning and assembling. These so-called system providers offer everything

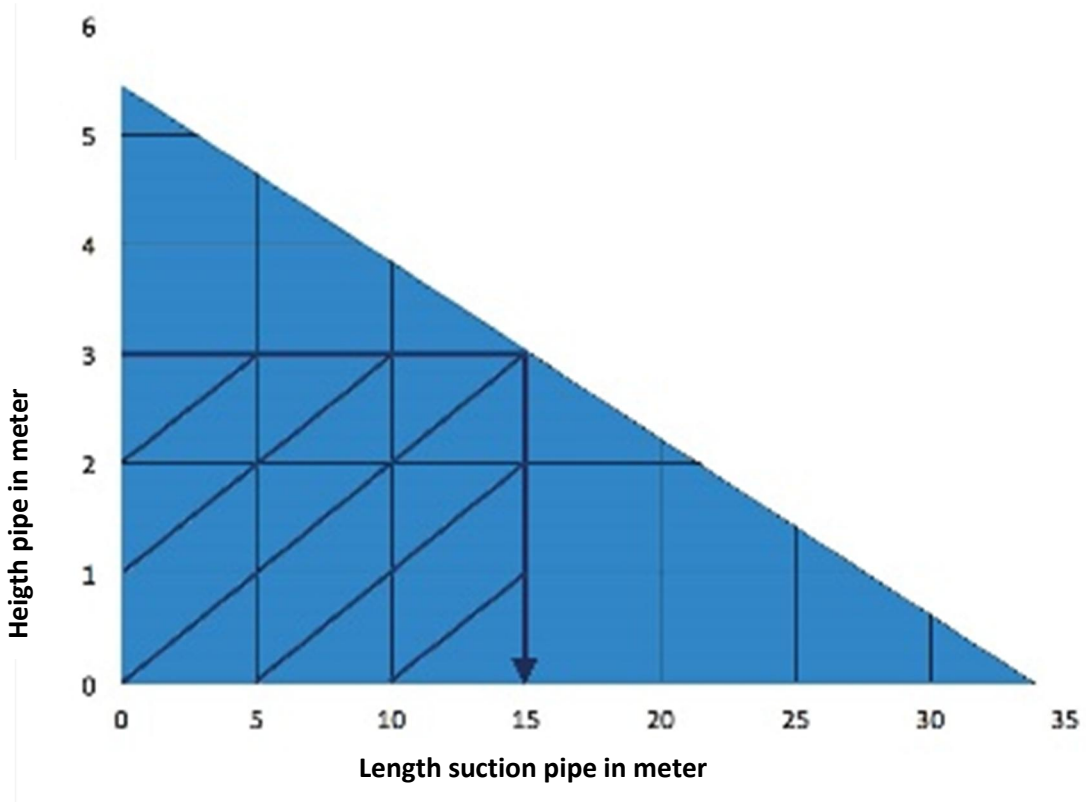
from filters to tanks and pumps, and they offer expert service and are happy to advise you on the design and dimensioning of the system.

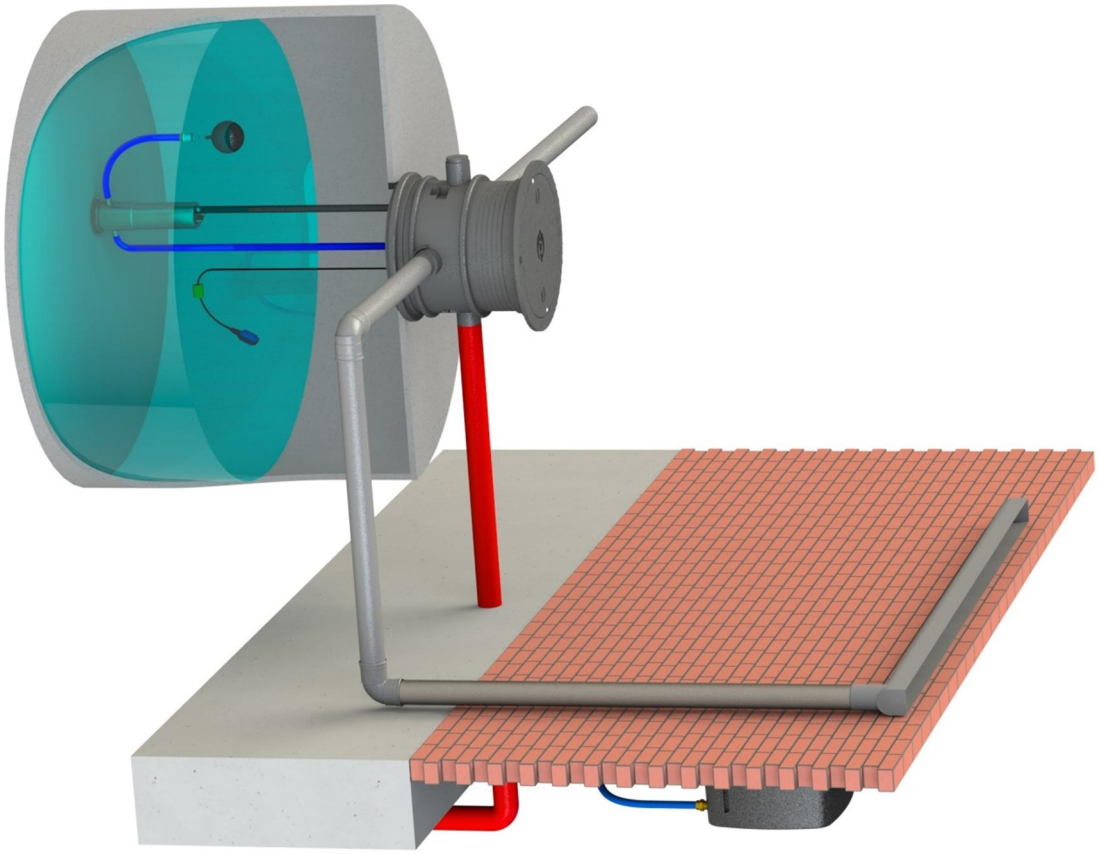
The length of the suction pipe

A common mistake with a rainwater harvesting system is the installation of the suction pipe, which means that it is too long or too thin. Even if the rainwater pump succeeds in sucking rainwater out of the rainwater tank and pumping it to the consumers, excessive wear and excessive pump noise can occur in the case of a too long or thin pipe. In that case it is advisable to equip the rainwater pump in question with an additional supply pump or to provide the rainwater system with a submersible pump in the rainwater tank.

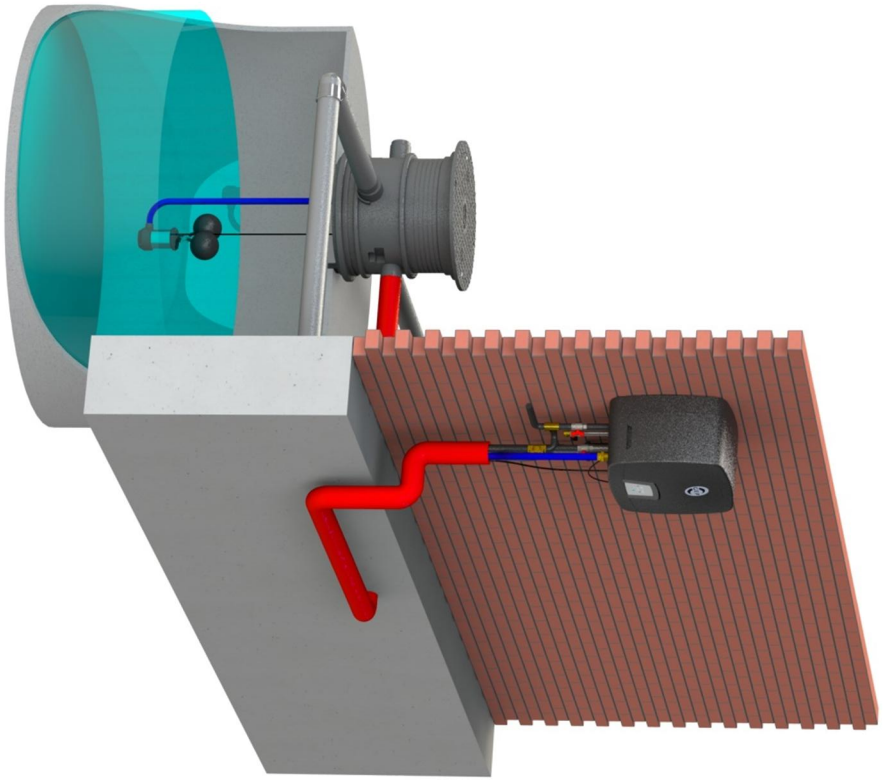
It is therefore of the utmost importance to pay attention to the length and diameter of the suction pipe. As standard, we use 25 mm (1 ") for the diameter. The maximum length depends on the height. The characteristic below gives an indication of whether the rainwater system is well dimensioned. If the operating point falls within the blue shaded area, the rainwater system will work properly. If it falls outside, a supply pump or submersible pump is desirable. See drawings 3 and 4.

Characteristic Suction pipe





Drawing 3: rainwater harvesting system with submersible pump.



Drawing 2: rainwater harvesting system with extra supply pump.