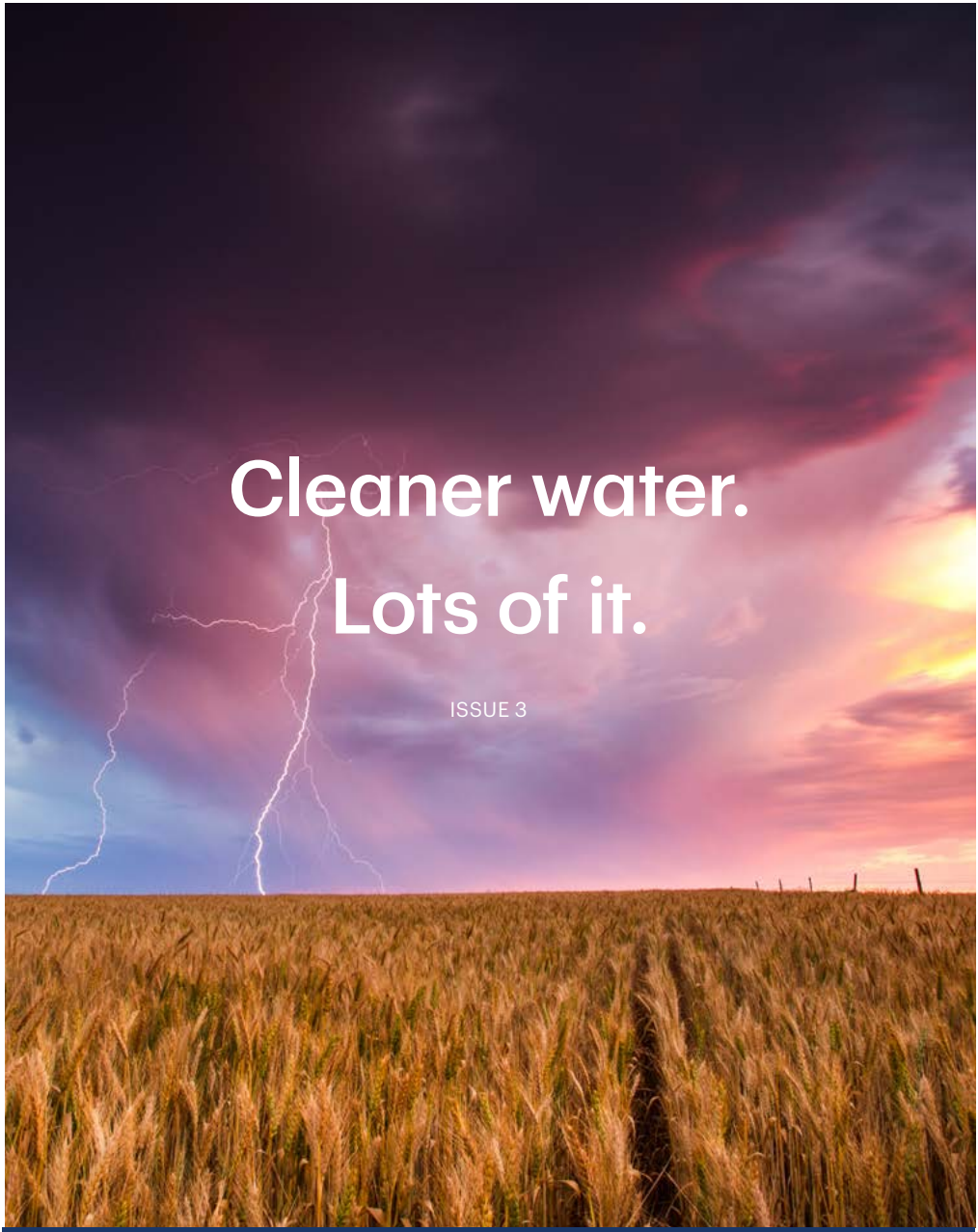
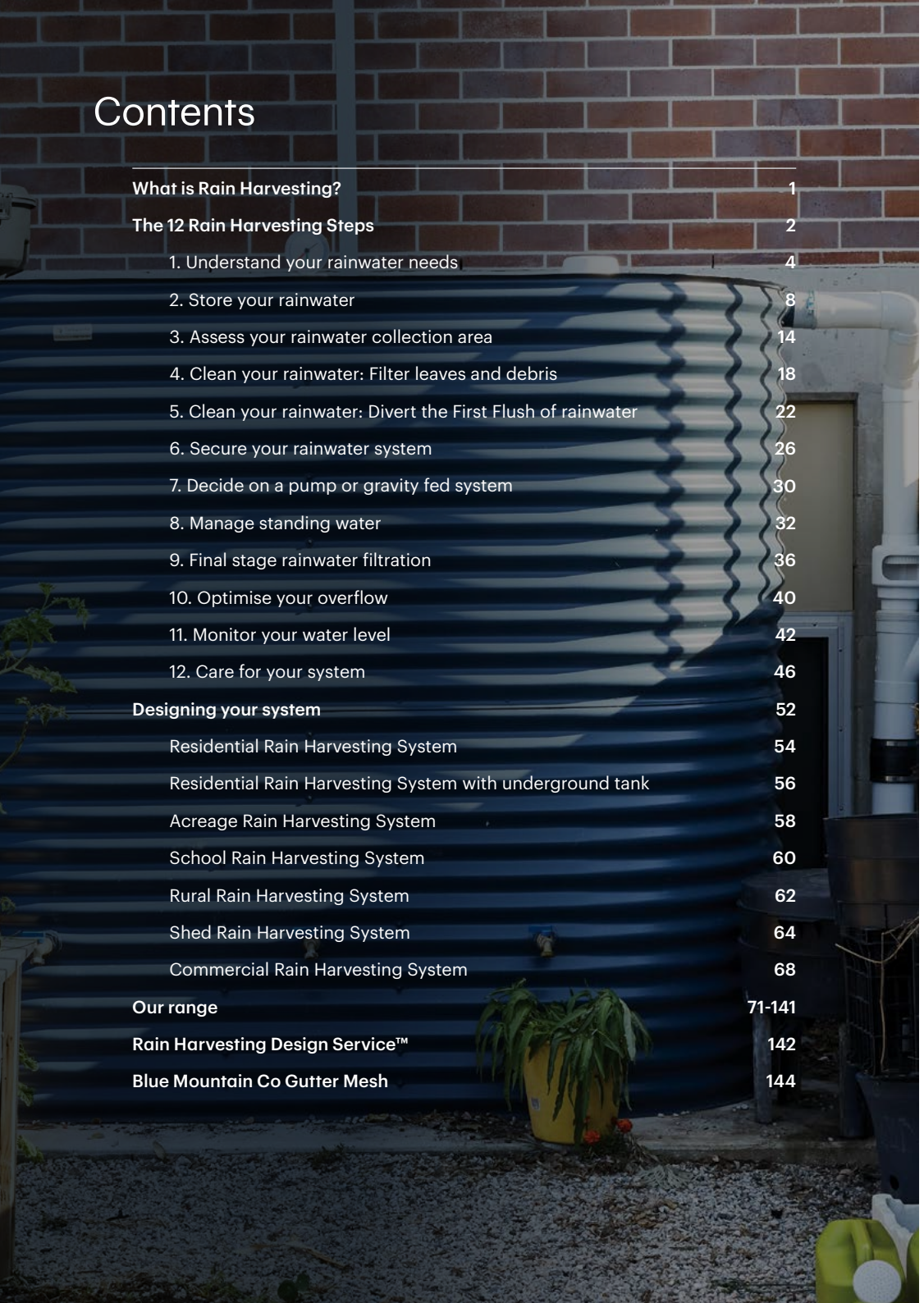


RAIN HARVESTING

by Blue Mountain Co

HANDBOOK



Contents

What is Rain Harvesting?

Collect better quality rainwater and get more of it.

A common misconception about collecting rainwater is that all you need is a tank, gutters, a few downpipes, and some rain.

However, this alone cannot be relied upon to deliver the volume and quality of water you need.

Instead, follow the 12 Steps to ensure your rainwater harvesting success. This approach has been built from over 25 years of knowledge and experience, cultivated from a devotion to the craft of rain harvesting and rigorously testing the process in the harshest environments.

The 12 Rain Harvesting Steps

Each step addresses a specific need, principle, and piece of equipment in the system so you can get the most out of it.

Whatever your needs, location, and situation, the steps will help set you up for success. While every system and set of requirements are different, understanding the thinking will help you to set up a system to suit your needs within these parameters. With forward planning, you can ensure you will continuously get a high volume of quality rainwater.

1 Understand your rainwater needs

- Calculate how much rainwater you need and how you're going to use it
- Determine your average rainfall amounts in your environment

2 Store your rainwater

- Choose the best storage vessel that has the volume for your needs
- Decide on the best location based on proximity to collection area and any inhibiting factors

3 Assess your rainwater collection area

- Audit and prepare your property, factoring in roof surface materials, overhanging trees and vegetation, gutters and flaking paint
- Replace hazardous building materials, control pests, install gutter mesh to minimise blockages

4 Clean your rainwater: Filter leaves and debris

- Keep large pieces of matter like leaves and debris out of your system by installing Leaf Eater rain heads and Maelstrom filters

5 Clean your rainwater: Divert the First Flush of rainwater

- Keep smaller pieces of fine sediment and dissolved solids out of your system by installing a First Flush Diverter

6 Secure your rainwater system

- Keep animals, insects and sunlight out with tank screens and insect proof screens.
- Prevent stormwater and groundwater backflow with an Air Gap.

7 Decide on a pump or gravity fed system

- Research and talk to specialists to find the ideal way to draw water from your tank

8 Manage standing water

- Regularly drain wet systems to prevent anaerobic fermentation, sediment resuspension and to let your tank breathe
- Block sunlight with a solar shield to prevent algae growth

9 Final stage rainwater filtration

- Decide how much filtration your tank water needs for your uses
- Remove tannins and colour for use in laundry
- Filter as much as possible if used for drinking

10 Optimise Your Overflow

- Ensure that you're plumbed into a stormwater main and have an Air Gap
- Ensure that your outlet is equal to your inlet

11 Monitor your water level

- Keep track of your tank levels, inflows and outflows
- Keep a record of data over time

12 Care for your system

- Regularly check for leaks, holes for pests to enter or build up of contaminants
- Use a pressure cleaner to clean your system
- Upgrade any parts of your system as required

1. Understand your rainwater needs

When it comes to Rain Harvesting, there are two operative words we use when determining more measurable goals - Quantity and Quality.

How you plan to use your rainwater and how much you need for that use are the cornerstones in your decision-making when building an effective rainwater harvesting system.

How much can I collect?

Since you're collecting rainwater, it is imperative to understand the seasonality of your local area and how much rainfall fluctuates throughout the year. Average rainfall data is available through your local council or the Bureau of Meteorology. With this information, you'll be able to anticipate your water position to make sure you don't get caught without.

From here, you need to establish how much water you can actually collect from these conditions.

This is dependent on the size of your roof, and how it is being directed to your tank. As a general rule of thumb, for every 1 millimetre of rainfall, you will collect 1 litre of water per square metre of the collection area. For example, if it rained 100mm in a month, you could potentially capture 13,000L from a 130m² roof.

Next, you'll need to assess if this is enough for your needs based on your water usage. If not, then we need to increase the collection area to make up for the shortfall. If you're unsure, our mass balance tool can help your calculation.

Your ability to capture water is also contingent on your capacity to store the water, which we'll address in greater detail in Step 2.

1. Understand your rainwater needs

What are you going to use your rainwater for, and how much do you need?

Specific is terrific. The clearer you are on the intended use of your rainwater, the more efficient your rain harvesting system can be. Understanding what you're going to use the water for will help to inform quality requirements and how much water you need.

To determine how much you need, simply check your recent water bill to see how much you use. Alternatively, you can get a snapshot of your water usage by using our mass balance tool.

The tool guides assess your water applications and how much water you might need to use. It addresses location and seasonality so that you can determine what your water balance is throughout the year to make sure you're not caught short.

What quality water do you need?

If you're using rainwater for irrigation and other outdoor purposes, you'll only need to do a minimum amount of work to bring it up to a moderate level. Minimal filtration is required as the key is keeping our larger debris to ensure pumps are protected and irrigation equipment can function smoothly without the risk of blockages.

For use with internal appliances, such as washing machines, and toilets - you will need to attain a higher level of water quality to minimise water colour and odour.
If you're planning on using rainwater for all purposes, especially drinking, the system will need to be designed to achieve the highest quality and best tasting water by eliminating any remaining sediment before use.

When planning your system, It's important to begin with the end goal in mind. By understanding your environment, you will be better able to understand what is feasible for your property. From there, you can purposely build the system around your usage requirements to maximise the quantity and quality of water available to you at any time. That's peace of mind.

2. Store your rainwater

Make the right choice for your property.
Choose an appropriate storage vessel for your needs.

Once you've established the quantity and quality of rainwater required to fill your needs, you need to determine the right storage vessel to ensure you have access to a consistent water supply throughout the year.

It's important to reiterate that your ability to capture water is also contingent on your capacity to store it, this is where you need to look at the makeup of your property, and the storage vessels themselves.
If you are just getting started, or only require a small amount of water, then a rain barrel or smaller tank will get the job done.

However, if a higher quantity of water is required, we have a variety of options that can help you achieve your goals.

2. Store your rainwater

Choosing the best storage vessel.

Depending on the aesthetic of your property, and the space you have available, you may opt for an above-ground tank or an in-ground tank.

First, consider the position of the tank. It could be stand-alone next to the building, under a deck, or down the side of the house. From here, you can select between above-ground or in-ground tanks, which opens up the options for locations.

In-ground tanks can help to save space at ground level, and because they tend to sit much lower than the house, it can make it much easier to have a good amount of fall from the gutter to the tank inlet. This might allow for a much larger volume tank, where an above ground tank might be limited by the height of the house.

The next step is to consider the type of material used to create your tank - this typically comes down to the aesthetic you prefer, and what is made available through local tank manufacturers. The most popular materials are concrete, steel, and plastic, all of which provide a strong, durable vessel to store your rainwater.

When it comes to shape, it's important to consider space. If your property has limited space, and tight specifications, then you may prefer to opt for a slimline tank that can hug the side of your house. However, if you have more space and flexibility - you can opt for a classic round tank, and increase your storage capacity.

Whatever your choice, it is important to note that you can connect multiple smaller tanks to increase your volume if your requirements change. This is dependent on the shape and size of your space.

2. Store your rainwater

Consider the whole system.

When connecting your roof and downpipes to your tank, there are two main systems - Dry and Wet.

Dry System

A Dry System enables water to flow directly from the roof to the tank. There are no upward sections in the pipe so water is never stored in the pipes, as they completely drain every time there is rainfall.

Dry Systems are often simpler to install with existing buildings and can be achieved by re-routing a few pipes, with minimal plumbing or groundwork required. However, depending on the roof style you have, like gabled, it might be difficult to connect a large area of the roof to the tank.

In this case, if you need to increase your collection area, then you might need to consider a wet system to set you up for more water capture.

Wet System

Wet Systems (or Charged Systems) enable you to connect much more of your building to the tank, maximising water capture. This is achieved by connecting pipes that come from the building, into the ground, and then back up to your tank. These are often easier to set up on a new site, as the pipes need to be routed underground to get back into the tank.

Once you have determined the appropriate system and storage vessel for your property, it's time to assess and prepare your roof or collection area to get the best quality rainwater.

3. Assess your rainwater collection area

Audit your roof, gutters and surrounding environment to prepare your property for rainwater collection.

When assessing your rainwater collection points, there are three main areas to consider - the roof, the gutter, and the surrounding environment.

ROOF

This step is all about setting you up for success from the main collection point. The roof plays an integral role in your rainwater system, as it is the first zone that the water comes into contact with.

You need to assess the risk for a variety of pollutants that can wash into your system.

The main factors you need to look out for are;

- Lead paint and flashings
- Flaking or corroded material
- Cracked tiles

If any of these are found during your initial inspection, it is recommended you replace or fix them before progressing with any collection.

GUTTERS

When connecting your roof and downpipes to your tank, there are two main systems - Dry and Wet.

The next area for assessment is the gutter. Similar to the roof, you need to be on the lookout for any flaking material or signs of corrosion that can lead to contaminants entering your system.

Furthermore, you need to ensure there are no opportunities for water to pool, which can cause corrosion and provide an environment for mosquitoes to breed. The primary cause of water pooling is a damaged gutter or one where the fall is not adequate to allow for sufficient water flow to the downpipe. Spray water into the gutter with a hose to assess the situation and adjust or replace gutters where required.

3. Assess your rainwater collection area

ENVIRONMENT

Once the roof and gutter are assessed and cleared, it's important to look at the surrounding environmental factors that can affect your rainwater quality and the strategy for your system.

Inspect your roof for any moss or heavy organic build up. If found, it is recommended to get the roof professionally cleaned.

If you have overhanging trees, it is important to trim them back to prevent leaf litter from landing on your roof. Alternatively, you can install gutter mesh to reduce leaf load as much as possible, while also preventing any wind-blown leaves from surrounding properties or trees from depositing and breaking down in your gutters.

This can lead to gutter damage, corrision, and blockagesif not resolved. Reducing the volume of leaves at the roof plays a huge part in reducing the debris load throughout the entire system, which means better water and less maintenance of your system.

Gutter mesh is also instrumental in preventing pests and embers from entering your gutter system and roof cavity, and further protects your property.

Once the collection area is deemed suitable to capture rainwater, you can move forward with designing your system.

4. Clean your rainwater: Filter leaves & debris

Keep leaves and debris out of your rainwater system.

This is a crucial part of the 12 steps, as you begin to install and introduce filters that progressively improve the quality of water as it travels to to your tank.

Leaves and debris can threaten your rainwater quality and quantity. In fact, they're the root cause of many rainwater collection issues, from rainwater contamination to obstructed water flow to your tank, and almost everything in between.

An accumulation of organic matter in your pipes will negatively affect the quality of your water. As the leaves break down, they will start to make the water "go off"through the process of anaerobic fermentation – whereby microbes in the system can start to consume this organic leaf matter, which can affect the colour, smell and taste of the water.

Outside of this, leaves can contribute to clogging pipes which will prevent you from capturing water, and can cause localised damage or flooding.

Because of this, filtering leaves and debris to keep them out of your Rain Harvesting system is vital. Filtering should be used at any potential leaf and debris entry points to provide layers of protection across your Rain Harvesting system.

The easiest solution is to install a rain head with mosquito proof mesh on each downpipe - this will prevent leaves from entering the system with the added benefit of preventing mosquito ingress.

4. Clean your rainwater: Filter leaves & debris

RAIN HEADS

Rain heads are your first port of call when it comes to filtering out large debris. They come in all shapes and sizes to fit your system of choice. There are styles with angled screens that are designed to eject leaves and reduce the amount of maintenance required. Alternatively, there are bucket-style rain heads that ensure you can catch every drop of water but do require some maintenance to ensure they don't fill up with debris and overflow.

Rain heads are important for all systems. They are especially critical on wet systems and charged lines to prevent organic matter build-up in pipes, and prevent mosquitoes from entering your pipework.

TANK TOP SCREENS AND FILTERS

As an alternative to a rain head on your downpipe, you might choose to only filter leaves at your tank. You might not have much height between your gutters and your tank top, and this can make installing a rain head tricky. If this is the case, a tank screen or other tank top filter can prevent leaves from entering your tank. Keep in mind that this arrangement is better suited to dry systems where it is less likely for leaves to be sitting in pipes.

Left unchecked, leaves and debris can be the root cause of many collection issues. By simply applying this step and putting the appropriate measures in place, you can be confident your Rain Harvesting system is better prepared to give you cleaner rainwater and lots of it.

5. Clean your rainwater: Divert the First Flush of rainwater

Use first flush diversion to channel, capture, and isolate the most contaminated rainwater from your roof to divert it away from your tank.

In Step 4, the focus was to remove the larger contaminants and debris. From here, the goal is to put measures in place to further remove fine sediment, dissolved solids and any other deposition that can come from your roof surface at the start of a rainfall event.

After a period of no rainfall, debris accumulates on your roof. Once it begins to rain again, this debris will then wash into your system, unless you divert the first flush. First flush diverters play a vital part in any Rain Harvesting system, stopping dirty or hazardous particles and finer matter from flowing into your system, and contaminating your rainwater supply.

However, it doesn't need to go to waste, as you can then manually empty this water or automatically release it into stormwater or your garden.

PROTECT YOUR WATER SUPPLY FROM POLLUTANTS

The two main types of pollutants are dry deposition and wet deposition.
Dry deposition is matter which builds up on your roof over time, including dust, dirt, leaves, droppings or other animal matter. If you leave near industrial areas or even busy roads, particulates can be thrown into the air also and deposit on your roof surface.

Wet deposition is that which is pulled from the sky as it rains, hence it is 'wet'. These might include smoke, airborne pollution from industrialised areas, acid rain, and even jet fuel if you live near a flight path.

In a period of no rainfall, this dry deposition can build up over time on the collection surface or roof. Then, when it rains, this matter is washed into your system. Typically, the bulk of the matter is washed off during the early stages of the rainfall event, similar to how hosing a dirty car will remove the loose dirt. First flush diversion is when this more contaminated portion of water is directed away from your tank, before automatically switching back to your tank so you can collect the remaining rainfall.

The next step is to define how much water you should divert - to give you the optimal quality of water without diverting too much away from your tank.

5. Clean your rainwater: Divert the First Flush of rainwater

CALCULATING YOUR DIVERSION NEEDS

The volume of water we want to divert is dependent on your environmental factors and what you require from your system – so you'll need to weigh up the quantity of water you can afford to discard versus the quality you require.

As the rainfall event starts, it washes off the bulk of the dirt and debris within the first few millimetres of rainfall. This is the water we want to discard – it's the most polluted.

Then we want to start capturing the rest of the water. Most first flush diverters work automatically and can be configured to divert a certain volume of water.

First, consider if you deem your area to be a low, medium, or high level of pollution, based on your geographic location and what sort of flora or industry is around you.

A low pollution area is defined as a low-density housing area without overhanging trees, or any major transport corridors or industry. In this case, you only need to divert the first 0.25mm of rainfall, meaning if you have a 100m² catchment area, you'll be diverting the first 25 L.

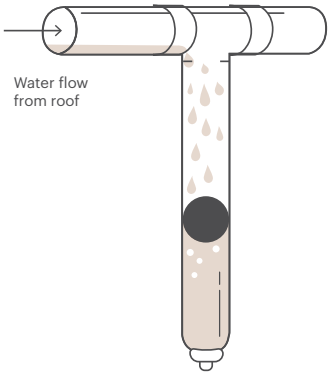
Next, if you're in a medium-populated area with major roadways and in relative proximity to industry and flight paths, but not directly under them, you would be defined as being in a moderate pollution zone. In this case, you'll divert the first 0.5mm of rainfall. So if we have the same roof of 100m² that means we'll be diverting 50L.

Lastly, if you are much closer to industry, agriculture, or have lots of overhanging trees, you'll be categorised as a high pollution zone, and will need to divert the first 1mm of rainfall or 100L for a 100m² roof.

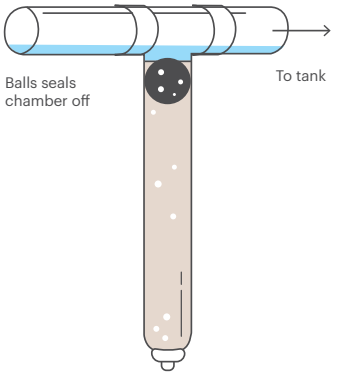
There are lots of first flush solutions depending on how much you need to divert and where you're going to put it. Some will require a small chamber to temporarily hold the first flush water before it is discarded, while others will automatically divert the water without the need for an intermediate storage vessel.

Whichever type you choose, diverting the first flush can significantly improve the quality of the rainwater you collect. It's one of the most important components of any rain harvesting system.

First flush of contaminated water is diverted into chamber



Once chamber is full, fresh water flows to tank



6. Secure your stored rainwater

By securing the entry and exit points of your system, you can keep animals, insects, sunlight and dirty water out in order to reduce hidden activity and preserve your rainwater quality.

In the previous steps, you have put the steps in place to ensure great quality water gets to your tank. This critical step focuses on the tank itself, and the tools required to ensure your water is protected and stays clean and fit for purpose.

Unwelcome intruders such as animals, insects, sunlight, stormwater and groundwater, should be kept out as they can contaminate your rainwater supply and exacerbate harmful hidden activity in your tanks and pipes.

More specifically, you'll need to secure the entry and exit points, as well as any other openings to keep potential contaminants out.

PROTECTING YOUR TANK INLET

At your inlet, the first port of call is to keep leaves, and pests from entering your tank. Tank screens are an effective tool that uses a fine mesh screen to provide another layer of filtration to keep contaminants out.

The less organic matter enters your tank – the better quality of your water. Keeping the mesh under 1mm is key in keeping mosquitoes out, however, you can use even finer mesh to eliminate even smaller hazards such as dust and silt from entering your tank.

Next, you'll need to consider options to limit the chance of algae growing in your tank inlet. Algae need organic matter and sunlight to grow. While tank screens are effective in dealing with organic matter, a solar shield or tank cover helps block the light out and protect your supply. There are a variety of options that can either mount underneath the tank screen or can be placed on top of the cover.

6. Secure your stored rainwater

SECURING YOUR TANK OVERFLOW AND OUTLETS

Once the inlet is secure, it's time to shift focus to the overflow of your tank. The goal remains the same, to ensure the tank is secure from pests and debris.

Mosquito-proof screens have specifically been designed to keep out mosquitos and other pests. It's crucial to have one mounted on your overflow pipe, whether it's directly at the tank or further down the line where it can be easily accessed. Ensure you have the ability to access it so you can clean them periodically to prevent any build-up of biofilm or small debris that can eventually creep into your system.

When you're setting the system up, you need to ensure that your overflow has the ability to handle the same flow rate of water as the pipes entering your tank. This means the overflow has to be the same size or greater than the inlet, so you're not in a situation where there is more water coming into your tank than can get out. This means that the overflow will always flow effectively during a heavy rain event.

SAFEGUARDING AGAINST BACKFLOW

If you're connected to municipal stormwater, it is important to safeguard your tank from backflow which might occur in the stormwater system. During a heavy rain even, if water is backed up in stormwater lines or in the street, it can flow back towards your tank and potentially contaminate your entire water supply.

To prevent this, it is recommended to install an air gap, which is a physical break in your tank overflow line so that it's impossible for stormwater to backflow into your tank.

Securing the water stored in your tank to prevent and limit hidden activity is central to achieving a high-quality water supply. By taking these steps to prevent animals, insects, and sunlight from entering your tank, you can ensure that you have enough of a steady supply of clean rainwater to fulfil your needs.

7. Decide on a pump or gravity fed system

Find the best way to draw water from your tank depending on what your end use is.

GRAVITY FED SYSTEM

Gravity-fed systems are suitable where you either have a lot of head height between the storage point and usage point, or in situations where you don't require high pressure, such as topping up your pool or low-pressure irrigation.

Provided you have enough head height differential, either of these situations are ideally suited to a gravity-fed system.

PUMP SYSTEM

The next option is using a pump. Pumps ensure you have the pressure you need all the time, and are less influenced by the layout of your system or property.

There are a few considerations when choosing a pump. As a primary focus, you need to understand how much water is going to be used and select the pump which has a suitable flow rate for your needs. Secondary to this, you need to ensure the pump has the right capabilities based on the height you need to pump water from, and what sort of tank you're pulling water from.

As there are many different types of pumps with different power and installation requirements, it's important to talk to a pump specialist about your needs. If you show them your system design, and discuss your needs, they will be able to assist you with choosing the correct model, and the best way to install it so you can make your system as efficient as possible.

COMBINATION

Another popular setup is to use a pump to transfer water up to a header tank. From there, it essentially becomes a gravity-fed system that can be easily directed for continued use without the pump as there is enough pressure built up. In this scenario, you can conserve power and choose when it is convenient for you to pump water up to the tank, for example when power is available or cheaper.

Each scenario has its place, just take stock of your set-up and requirements to decide which system will suit you and your property the best.

8. Manage standing water

By looking after the water sitting in your tank and pipework, you're ensured great quality water.

Collecting high-quality water is half the battle. However, if you want your rainwater supply to remain fit-for-purpose, you also need to maintain the quality of the water you've harvested. Managing your standing water within your system to prevent and limit hidden activity is central to achieving this.

Once rainwater is captured in the system, there are two areas to focus on to ensure you can maintain a high quality - the water inside the tank itself, as well as any water sitting in any pipework throughout the system.

The three main goals for this step are to prevent sediment resuspension, reduce the opportunity for algae growth, and prevent the opportunity for anaerobic fermentation to occur within pipework.

PREVENT SEDIMENT RESUSPENSION

Over time, it's natural for a layer of sediment to build up at the base of the tank. The speed at which the sediment accumulates is controlled by the level of filtration that is installed beforehand with tools such as rain heads or first flush diverters.

That said, having sediment in the base of the tank is not necessarily a bad thing as it typically will stay put on the base of the tank unless it is stirred up and resuspended. It is important to reduce the chance of this happening so it is not drawn into your water supply. The first step to preventing the resuspension of this sediment is to create a small buffer on the base of the tank, so that even when your water level is low, the sediment is not stirred up. The easiest way to create the buffer is to ensure that the outlet where you draw the water off is at least 100mm (4 inches) from the base of the tank. This layer of water helps to dissipate the load of any incoming water. Of course, when the tank is partially or completely full this is not an issue since there is a much larger buffer.

Another way to control the inflow of water into your tank is with a calmed inlet. It will change the direction of the water as it enters the tank so that it does not fall directly on the sediment layer - reducing the chance of it being stirred up even when the water level is low.

8. Manage standing water

PREVENT ALGAE GROWTH

Algae needs sunlight and nutrients to grow (since it photosynthesizes like any other plant). Tank screens and rain heads will reduce the nutrient load in the tank, but you will need a solar shield to block out the sunlight. Different sorts of solar shields block out light using different methods. Some even have integrated fins to help to disperse the flow of water into your tank to further reduce the chance of sediment resuspension.

DRAIN CHARGED SYSTEMS

Another area in your rainwater system where it's important to maintain your water quality is in your pipework. This is especially important in the case of wet or charged rainwater systems as there is more likely to be water standing in the pipes between rainfall events.

If this is not carefully monitored, your water can become poor tasting or malodourous of anaerobic fermentation. This process essentially means your water can go "off" as a result of low levels of oxygenation found within the pipework, and its interaction with organic matter.

Just like in your tank, it's normally for a small amount of organic matter to accumulate in this pipework. However, as mentioned in Step 4, it's important to minimise this, by installing rain heads prior to the system.

An easy way to reduce the chance of stagnation of this water is to periodically drain your charged lines. It is a simple and effective way to prevent standing water from contaminating the rainwater in your tank.

Depending on your location and setup - draining the lines after each rainfall event might be required, but often every few weeks or months will suffice - it depends on the debris load, the quality of water you're chasing, and the volume of water you are able to sacrifice.

You can choose to do this with a manual valve, or with an automatic version with programmed intervals. Whatever option you choose, the best practice is to install this device at the lowest part of your charged line to ensure that you're draining the full body of water.

Some or all of the elements we've described might apply to your system. Adopt the practices which will suit your system, and it will ensure your rainwater remains at its best.

9. Final stage rainwater filtration

Reduce sediment, colour, and odour from rainwater before use.

In this step, it's important to consider how you are going to apply your rainwater to its end use, and if any further filtration is required to maximise your results.

There are three main areas of use that you must consider to determine the quality you require.

IRRIGATION AND GARDEN USE

If you are primarily using your rainwater for irrigation and garden use, then you will not likely require any further filtration as your stored water will already be of suitable quality if you've taken the appropriate steps to this point.

The only other consideration would be from a maintenance perspective as some irrigation systems might be susceptible to sediment in the rainwater.

In this case, installing a sediment filter will reduce any maintenance requirements and ensure your irrigation system performs better for longer. The components of your irrigation system should specify the size to filter down to, but it is recommended to start with at least 100 microns, if not a little smaller.

9. Final stage rainwater filtration

INTERNAL APPLIANCES AND TOILETS

When using the water for internal appliances and toilets, you will need to be mindful of the flora you have around your property and the subsequent impact this can have on the water in your system. At this level of required water quality, you want to remove sediment, while minimising tannins, colours, and odours to prevent any staining to your appliances.

The most effective way to do this is with a dual-stage filtration system. The first stage removes sediment and small particles, and then the second stage filters carbon filter which specifically improves colour and odour.

SHOWERING AND DRINKING

The next stage of quality is required when using the rainwater for all purposes, including showering and drinking. In this scenario, the filter system needs to deliver the cleanest water possible.

While a dual-stage system may suffice, a triple-stage system allows you to step down the filtration level more gradually. This progressive approach will ensure each of the filters are working efficiently as part of a team, and that no filter is being overloaded. This allows your system to continue to perform more effectively over a longer period of time.

As you can see, the end use for your rainwater plays a large role in how your system is set up, and the filtration that is required is to achieve the desired result. The more diverse your needs, the more filtration is required to ensure your system is set up for success.

10. Optimise your overflow

Optimise your overflow to ensure your tank is always performing at its best, even during high rainfall events.

The overflow of your tank can often be an afterthought when setting up your system. However, it's important to select your components and configure them correctly to ensure that the overflow doesn't restrict the overall performance of your rainwater collection efforts.

The overflow is important to consider as most tanks are not designed to be filled completely or become pressurised. This means that when your tank is full, you need measures in place to allow any extra water to escape safely, especially in heavy rainfall events.

The first step in the optimal overflow function is to ensure the overflow is the same size or greater than the inlet. This ensures that when the tank becomes full in a heavy rainfall event, water can overflow from your tank as designed rather than spill from the inlet.

Additionally, your overflow should be equipped with a mosquito-proof screen to prevent pests from entering the tank. The size and type of the mesh screen will influence how often you need to maintain the unit. The bigger the screen, the less chance you have of any flow restrictions at your overflow. To keep functioning properly, you must be able to remove the screen for periodic maintenance to remove any biofilm and smaller debris.

As you can see, overflows are not to be overlooked. With just a small number of adjustments, an optimised overflow process can have the rest of your system performing at a level that will help you capture more clean water while reducing any potential wastage.

11. Monitor your water level

Record your usage to optimise your rainwater use.

USE DATA TO TRACK YOUR USAGE AND REQUIREMENTS

Being conscious about our water usage and conserving where we can is important whether you're on a centralised, municipal water supply or your own rainwater system.

The first step to understanding your usage is to track and monitor it.

If you're on a municipal water supply, your water bills inform you of how much water you use.

However, if you are solely using your rainwater system you will need to install a gauge. In this case, it's even more important to keep a close eye on your water levels so you don't get caught short in times of need.

Fortunately, there are a variety of options available ranging from basic analogue gauges, right through to models which can connect to your mobile device, phone, or computer, enabling access to your levels in real-time from anywhere. This data will not only help you track your current levels, but analyse trends in your levels and usage over time, enabling you to forward plan, tweak your set-up, and adjust your habits when necessary.

11. Monitor your water level

CHOOSE THE RIGHT GAUGE FOR YOUR SYSTEM

Depending on the individual elements of your rainwater system, there is a range of tank gauges that might be appropriate for your needs.

SMART GAUGES

Smart gauges are designed to track your water usage day to day as well as spot seasonal trends throughout the year. They can easily connect to any of your devices so you can automatically track all your historical data, and give you a strong foundation of data to make decisions from moving forward.

ANALOGUE GAUGES

If you prefer mechanical or analogue tols, there are many gauges to choose from that will help you identify the current water level accurately. From here, you can manually record data to determine trends.

Regardless of which type you choose, having a gauge will help you stay on top of your water usage to help you get the best out of your rain harvesting system.

12. Care for your system

Inspect your system intermittently to keep it running at its best.

Over the course of these 12 steps, you've learnt how to prepare and plan to create the best rain harvesting system for your needs, but even the best rainwater collection system requires some maintenance.

Once you've set up your system, you'll need to monitor it closely after the first rainfall so you can understand how it all looks after having water run through each part of the system.

At the most basic level, you need to ensure all the elements are connected properly and the water is able to flow through the system without leaking.
It's important to understand that different elements of your system will require inspection at different intervals.

CHECK MESH FOR LEAVES AND DEBRIS

The first key areas you want to inspect are any areas that have mesh, as these are the places where leaves and debris can accumulate over time.

For rain heads, check the screens and brush off any leaves. If you have a bucket-style or covered rain head, these will require more attention as leaves cannot shed from the mesh naturally during a rainfall event.

The same goes for other areas with mesh - inspect tank screens, overflows and air gaps and backwash them or brush them if necessary.

12. Care for your system

CLEAN OUT YOUR FIRST FLUSH AND VALVES

When it comes to your first flush system, you'll want to check the outlet for any accumulation of debris. Open the unit up to check the internal strainer, pull it out, and give it a backwash. Make a note of how much debris has gathered so you can gauge how often you'll need to do this in the future.

It's a good idea to also check the release valve at this point to ensure there's no obstruction. If you've got a wet system with an automatic wet-dry valve, it will have the same sort of strainer as most first flush devices, so inspect and clean it accordingly. If you don't have an automatic valve, you'll want to periodically drain your charged lines.

From here, make your way into checking over the final stage filtration system. As this is the last element before end use, it should be checked with more regularity and switched over every six months.

As with anything in life, building good habits will ensure that it is easy to keep your rain harvesting system performing at its best. When your system is built with the right products, it will make it easier to maintain. A few minutes invested at regular intervals will go a long way to keep your system running smoothly.

While this is individual to each property, it is recommended to do periodic checks more regularly in the initial months after your installing your system, and then from there you can adapt based on your findings.

Apply the 12 Rain Harvesting Steps

1 Understand your rainwater needs

- Calculate how much rainwater you need and how you're going to use it
- Determine your average rainfall amounts in your environment

2 Store your rainwater

- Choose the best storage vessel that has the volume for your needs
- Decide on the best location based on proximity to collection area and any inhibiting factors

3 Assess your rainwater collection area

- Audit and prepare your property, factoring in roof surface materials, overhanging trees and vegetation, gutters and flaking paint
- Replace hazardous building materials, control pests, install gutter mesh to minimise blockages

4 Clean your rainwater: Filter leaves and debris

- Keep large pieces of matter like leaves and debris out of your system by installing Leaf Eater rain heads and Maelstrom filters

5 Clean your rainwater: Divert the First Flush of rainwater

- Keep smaller pieces of fine sediment and dissolved solids out of your system by installing a First Flush Diverter

6 Secure your rainwater system

- Keep animals, insects and sunlight out with tank screens and insect proof screens.
- Prevent stormwater and groundwater backflow with an Air Gap

7 Decide on a pump or gravity fed system

- Research and talk to specialists to find the ideal way to draw water from your tank

8 Manage standing water

- Regularly drain wet systems to prevent anaerobic fermentation, sediment resuspension and to let your tank breathe
- Block sunlight with a solar shield to prevent algae growth

9 Final stage rainwater filtration

- Decide how much filtration your tank water needs for your uses
- Remove tannins and colour for use in laundry
- Filter as much as possible if used for drinking

10 Optimise your overflow

- Ensure that you're plumbed into a stormwater main and have an Air Gap
- Ensure that your outlet is equal to your inlet

11 Monitor your water level

- Keep track of your tank levels, inflows and outflows
- Keep a record of data over time

12 Care for your system

- Regularly check for leaks, holes for pests to enter or build up of contaminants
- Use a pressure cleaner to clean your system
- Upgrade any parts of your system as required

Designing your system

To do this, use our standard system designs, download the Rain Harvesting System Audit or ask for the Rain Harvesting Design Service™.

Use our standard system designs

Developed by our Rain Harvesting specialists to suit a range of contexts and buildings, our collection of standard Rain Harvesting system designs can offer inspiration – or even an exact blueprint – for creating your new Rain Harvesting system or improving your existing one.

View our system designs in this handbook or visit **rainharvesting.com.au**.

Download the Rain Harvesting System Audit

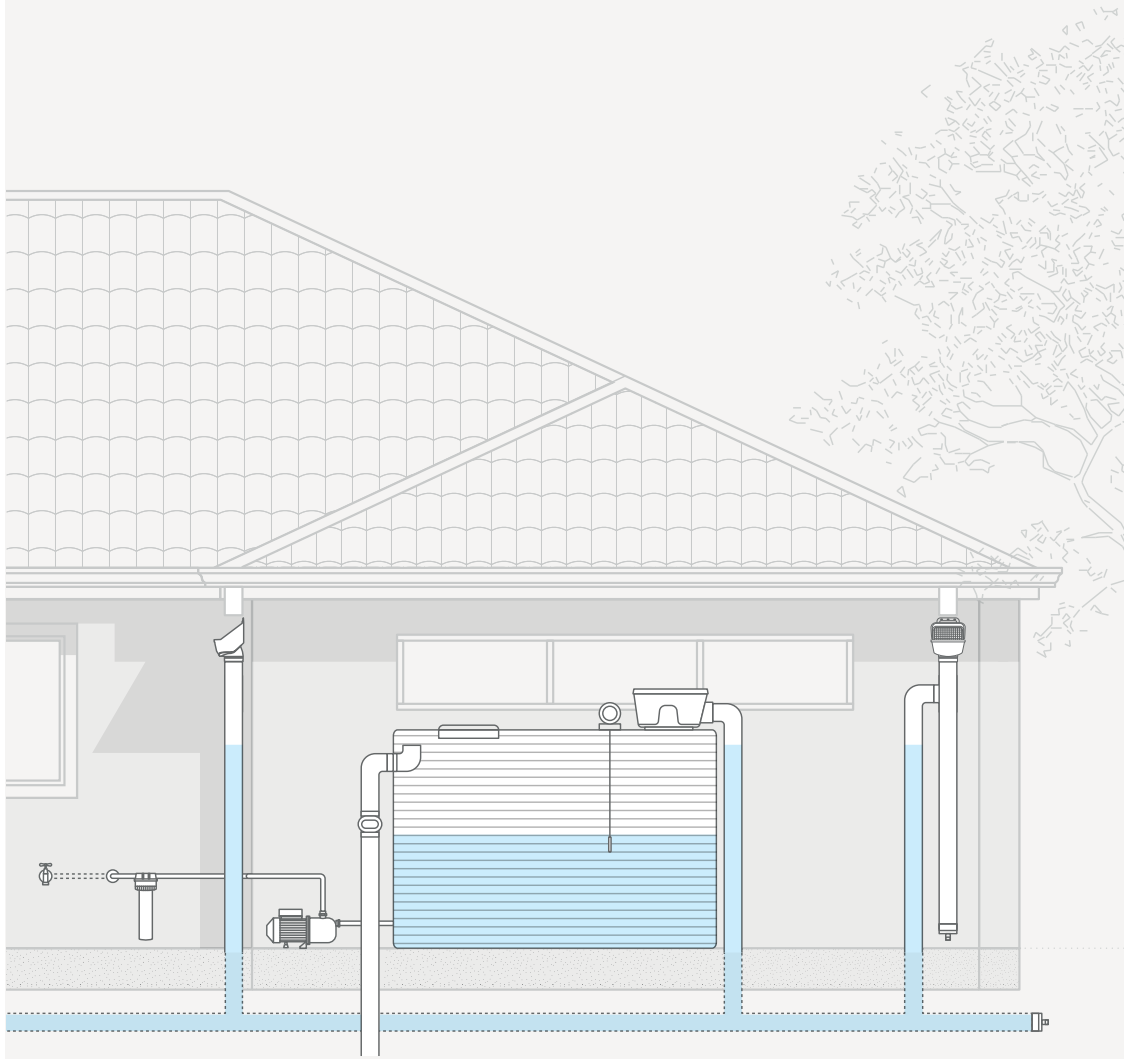
Available as a PDF download, the Rain Harvesting System Audit is a straightforward checklist that allows you to audit your existing Rain Harvesting system to identify what you can do to improve it.

Download the audit at **rainharvesting.com.au**.

Get expert assistance by using the Rain Harvesting Design Service™

Our Rain Harvesting specialists have the experience and technical knowledge necessary to help you design a Rain Harvesting system that addresses your needs and environment. This tailored, in-depth service will provide you with a comprehensive Rain Harvesting system design for your property and is available for free.

Simply visit **rainharvesting.com.au** to request your free system design or call **+61 (0)7 3248 9600**.



Residential Rain Harvesting System

1. **Understand your rainwater needs**
   - Rainwater used for garden, toilet and laundry use

2. **Storing your rainwater**
   - A small, slimline metal tank connected by a wet-system

3. **Assess your collection area**
   - Minimal overhanging trees

4. **Filter out leaves and debris**
   - Rain head
   - Maelstrom

5. **Divert the first flush**
   - First flush diverter

6. **Secure your rainwater system**
   - Air gap
   - Solar shield
   - Mosquito-proof screen

7. **Decide on a pump or gravity system**
   - A pump is required

8. **Manage standing water**
   - Air gap

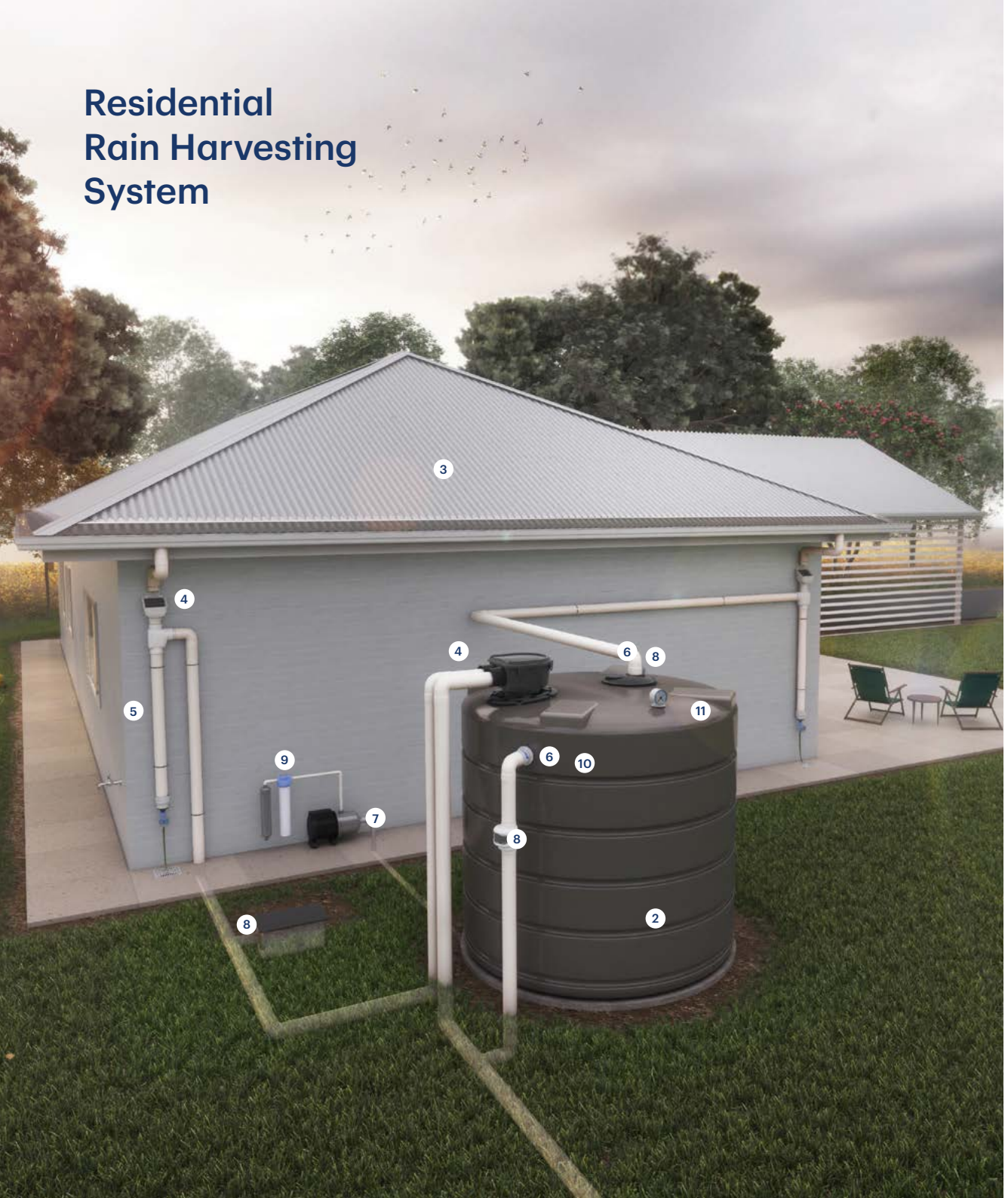
9. **Filter the final stage before use**
   - Post-tank filter

10. **Optimise your overflow**
    - Mosquito-proof screen

11. **Monitor your water level**
    - Tank level gauge

12. **Care for your system**
    - Inspect your system occasionally to keep it running at its best

Residential Rain Harvesting System



1 Understand your rainwater needs

- Rainwater used for garden, toilet and laundry use

2 Storing your rainwater

- A small, poly tank connected by both a wet and dry system

3 Assess your collection area

- Minimal overhanging trees

4 Filter out leaves and debris

- Rain head
- Maelstrom

5 Divert the first flush

- First flush diverter

6 Secure your rainwater system

- Air gap
- Tank screen
- Solar shield
- Tank screen cover
- Mosquito-proof screen

7 Decide on a pump or gravity system

- A pump is require

8 Manage standing water

- Wet-dry valve
- Solar shield
- Tank screen cover

9 Filter the final stage before use

- Post-tank filter

10 Optimise your overflow

- Mosquito-proof screen

11 Monitor your water level

- Tank level gauge

12 Care for your system

- Inspect your system occasionally to keep it running at its best

Residential Rain Harvesting System with underground tank

1 Understand your rainwater needs
- Rainwater used for all household water needs

2 Storing your rainwater
- A large, in-ground, concrete tank

3 Assess your collection area
- No directly overhanging trees, but some close-by

4 Filter out leaves and debris
- Rain head
- Maelstrom

5 Divert the first flush
- First flush diverter

6 Secure your rainwater system
- Flap valve

7 Decide on a pump or gravity system
- A pump is required

8 Manage standing water
- Flap Valve

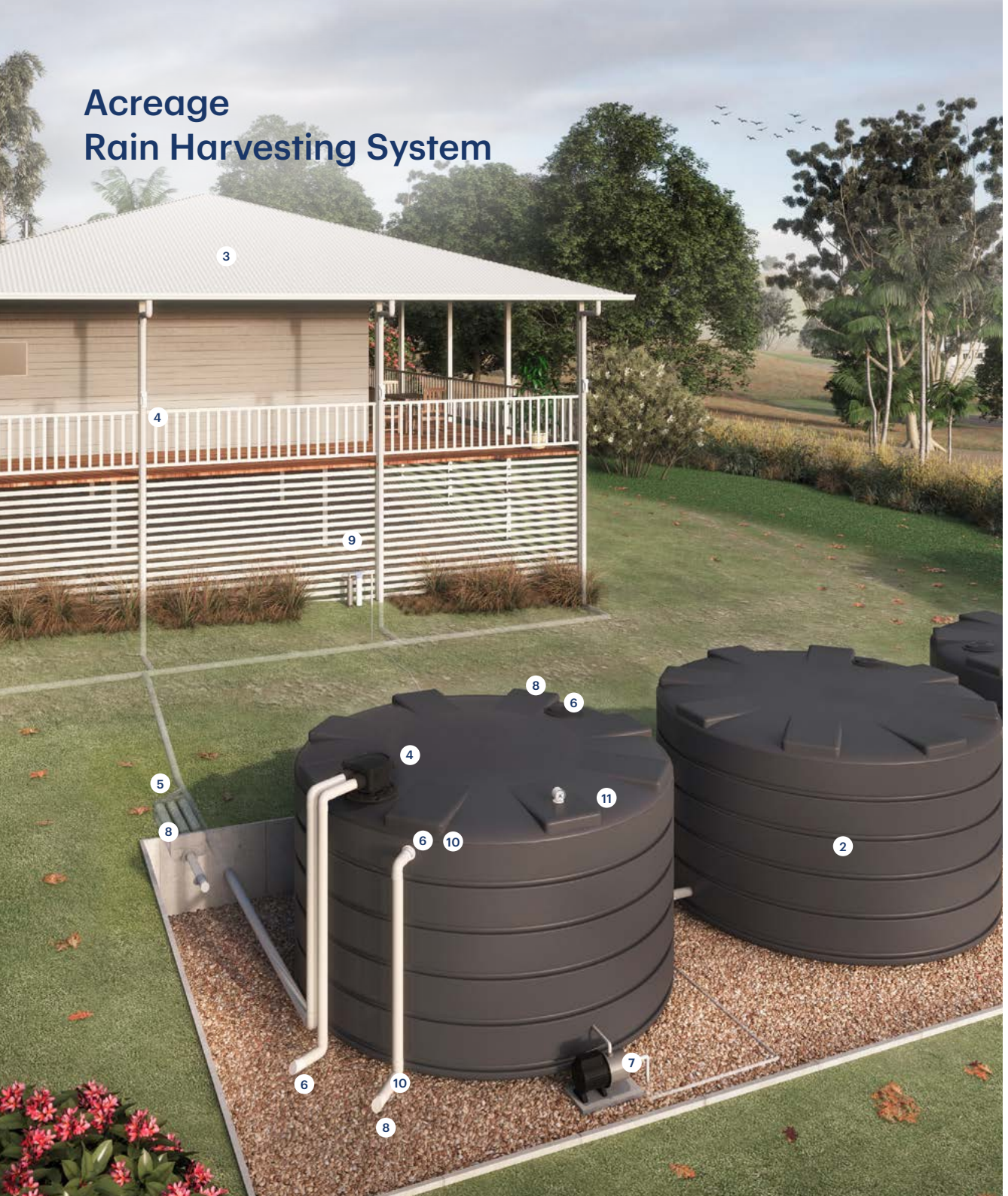
9 Filter the final stage before use
- Post-tank filter

10 Optimise your overflow
- Mosquito-proof screen

11 Monitor your water level

12 Care for your system
- Inspect your system occasionally to keep it running at its best

Acreage
Rain Harvesting System



1 Understand your rainwater needs
- Rainwater used for all household and property water needs

2 Storing your rainwater
- Multiple round, poly tanks connected by a wet system

3 Assess your collection area
- No directly overhanging trees, but some close-by

4 Filter out leaves and debris
- Rain head
- Maelstrom

5 Divert the first flush
- First flush diverter (in-ground)

6 Secure your rainwater system
- Tank screen
- Solar shield
- Tank screen cover
- Mosquito-proof screen
- Flap valve

7 Decide on a pump or gravity system
- A pump is required

8 Manage standing water
- First flush diverter (in-ground)
- Solar shield
- Tank screen cover

9 Filter the final stage before use
- Post-tank filter

10 Optimise your overflow
- Flap valve

11 Monitor your water level
- Tank level gauge

12 Care for your system
- Inspect your system occasionally to keep it running at its best

School
Rain Harvesting Sytem

1 Understand your rainwater needs
- Rainwater used for toilets and gardens

2 Storing your rainwater
- Multiple round, poly tanks

3 Assess your collection area
- No overhanging trees

4 Filter out leaves and debris
- Rain head
- Maelstrom

5 Divert the first flush
- First flush diverter

6 Secure your rainwater system
- Tank screen
- Solar shield
- Tank screen cover
- Mosquito-proof screen
- Air gap

7 Decide on a pump or gravity system
- A pump is required

8 Manage standing water
- Air gap
- Sliding gate valve

9 Filter the final stage before use
- Post-tank filter

10 Optimise your overflow
- High-level tank overflow bend
- Mosquito-proof screen

11 Monitor your water level
- Tank level gauge

12 Care for your system
- Inspect your system occasionally to keep it running at its best

Rural
Rain Harvesting System

1 Understand your rainwater needs
- Rainwater used for all household and property needs

2 Storing your rainwater
- A large, steel tank connected by a wet system

3 Assess your collection area
- No overhanging trees

4 Filter out leaves and debris
- Rain head
- Maelstrom

5 Divert the first flush
- First flush diverter

6 Secure your rainwater system
- Tank screen
- Solar shield
- Tank screen cover
- Mosquito-proof screen
- Flap valve

7 Decide on a pump or gravity system
- A pump is required

8 Manage standing water
- Wet-dry valve

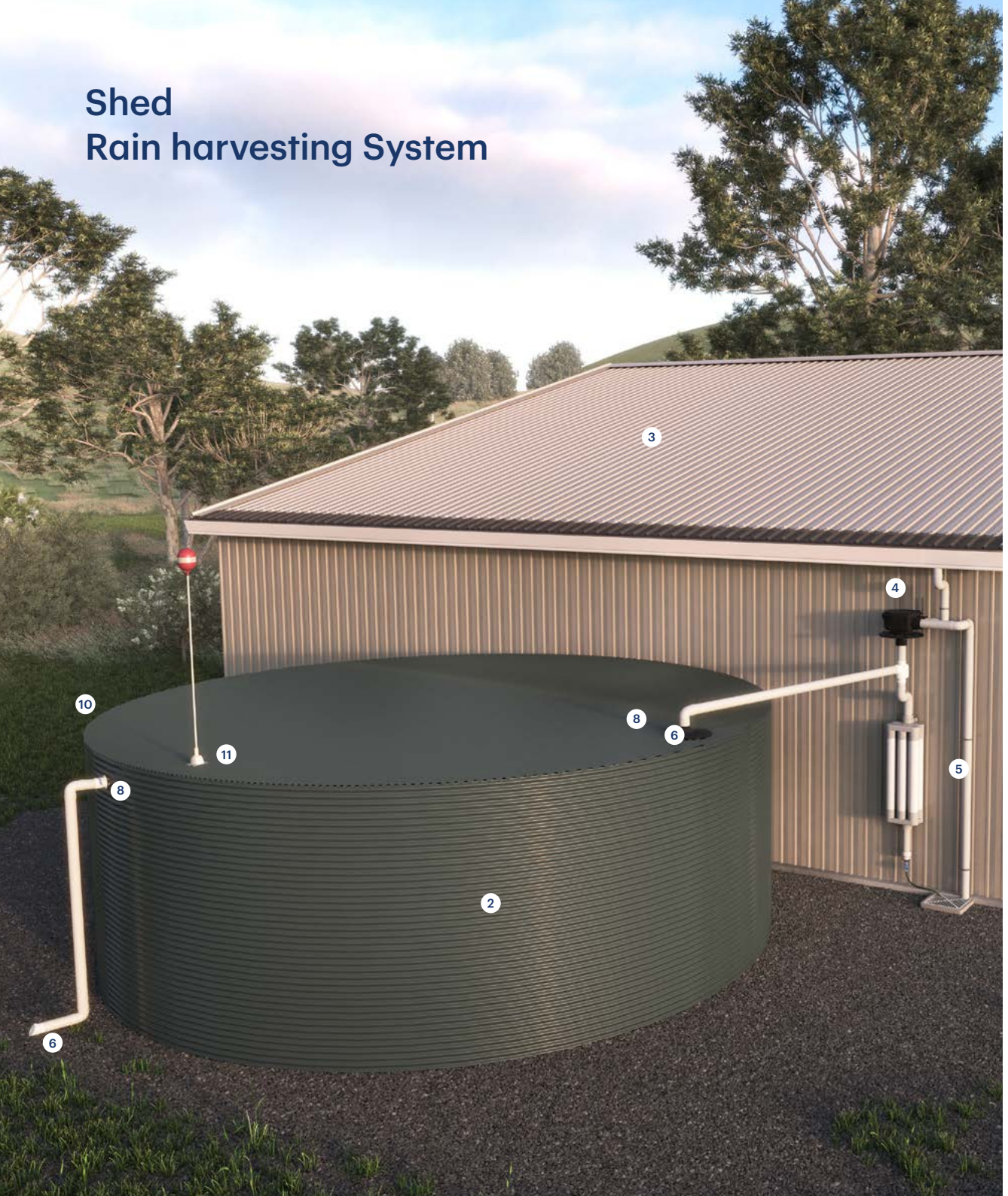
9 Filter the final stage before use
- Post-tank filter

10 Optimise your overflow
- High-level tank overflow bend
- Mosquito-proof screen

11 Monitor your water level
- Tank level gauge

12 Care for your system
- Inspect your system occasionally to keep it running at its best

Shed
Rain harvesting System



1 Understand your rainwater needs
- Rainwater used for all property needs

2 Storing your rainwater
- A large, round steel tank connected by a dry system

3 Assess your collection area
- No overhanging trees

4 Filter out leaves and debris
- Maelstrom

5 Divert the first flush
- First flush diverter

6 Secure your rainwater system
- Tank screen
- Solar shield
- Tank screen cover
- Mosquito-proof screen
- Flap valve

7 Decide on a pump or gravity system
- A pump is required

8 Manage standing water
- Solar shield
- Tank screen cover
- Mosquito-proof screen
- Flap valve

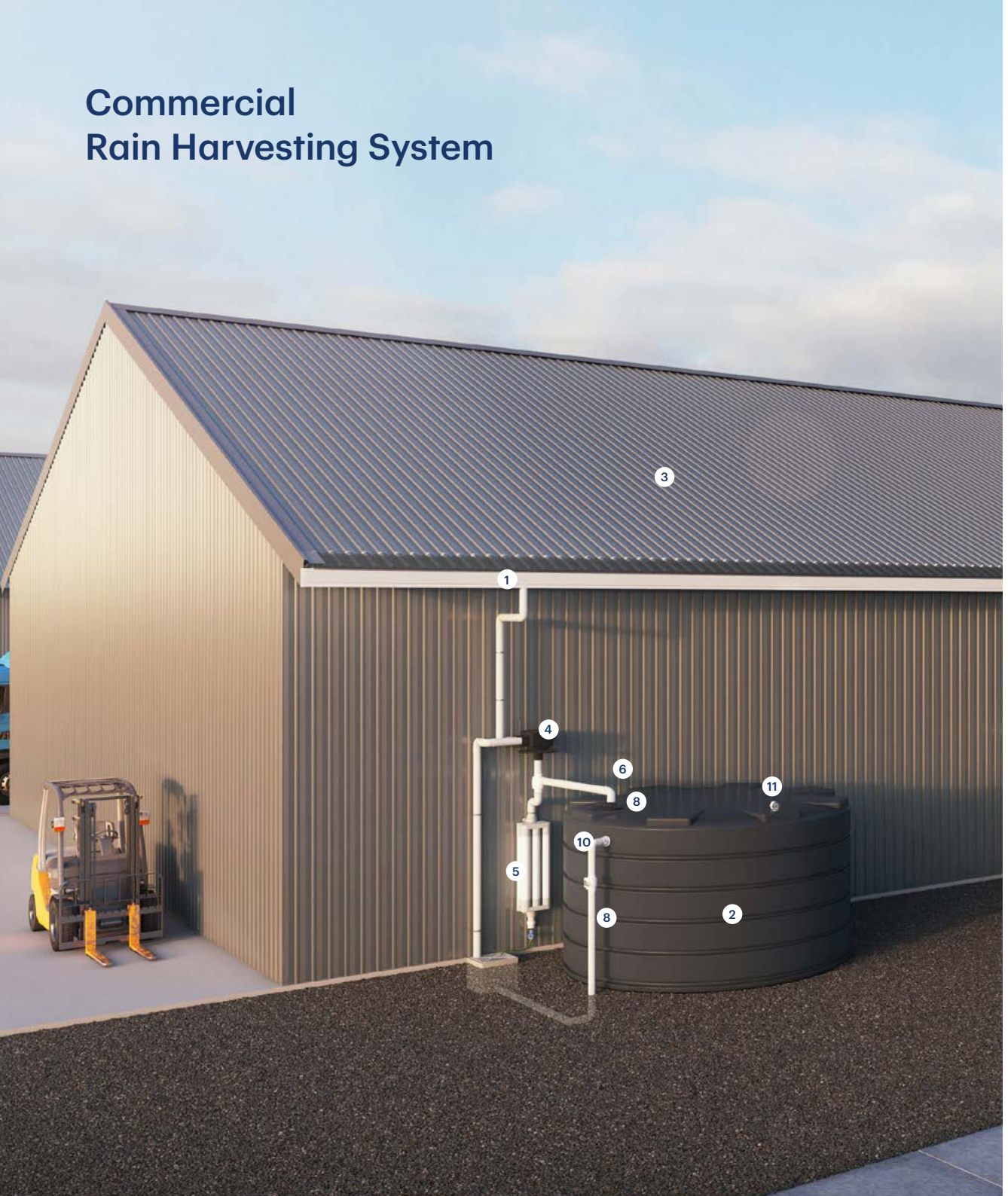
9 Filter the final stage before use

10 Optimise your overflow
- High-level tank overflow bend

11 Monitor your water level
- Tank level gauge

12 Care for your system
- Inspect your system occasionally to keep it running at its best

Commercial
Rain Harvesting System



1 Understand your rainwater needs
- Rainwater used for wash-down and toilet requirements

2 Storing your rainwater
- A large, round poly tank connected by a dry system

3 Assess your collection area
- No overhanging trees

4 Filter out leaves and debris
- Maelstrom

5 Divert the first flush
- First flush diverter

6 Secure your rainwater system
- Tank screen
- Solar shield
- Tank screen cover
- Mosquito-proof screen
- Flap valve

7 Decide on a pump or gravity system
- A pump is required

8 Manage standing water
- Air gap
- Solar shield
- Tank screen cover

9 Filter the final stage before use

10 Optimise your overflow
- High-level tank overflow bend

11 Monitor your water level
- Tank level gauge

12 Care for your system
- Inspect your system occasionally to keep it running at its best

Our range

Whatever your needs, location and situation, we have the products you need to create the ideal Rain Harvesting system for you. With more than 25 years' experience in Rain Harvesting, our extensive product range is the result of careful testing, innovation and refinement.

- Maelstrom Filter
- Rain Heads
- First Flush Diverters
- Wet/Dry Valve
- Tank Screens and Solar Shields
- Tank Overflows and Screens
- Post-Tank Filters
- Monitoring Gauges
- Rainwater Tank Accessories

Maelstrom Filter

Our revolutionary Maelstrom filter sets a new standard in pre-tank rainwater filtering. The Maelstrom's unique U-shaped filter keeps leaves and debris down to 180 microns out of your tank while significantly increasing your water catchment efficiency, even at high flow rates (96% at 10 litres per second in wet systems*).

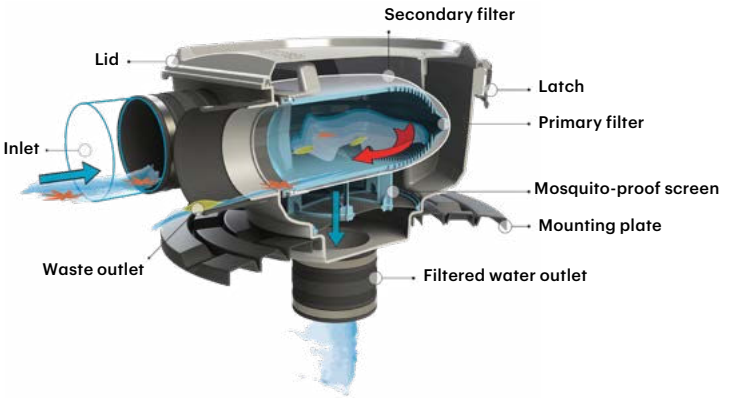
Product benefits

- A single-point rainwater filter with a ground-breaking U-shaped design
- The 180 micron filter screens particles five times smaller than a standard tank screen
- Reduces the hassle of maintenance through self-flushing
- Blocks out light that supports algae growth
- Can be installed in a variety of pre-tank locations
- Reduces the frequency and cost of tank cleaning by lowering sediment build-up
- Mounting plate fits 300mm, 400mm and 500mm tank openings, or can be used for mounting in-tank, on-wall or in a pit

APPLIES TO THESE RAIN HARVESTING STEPS

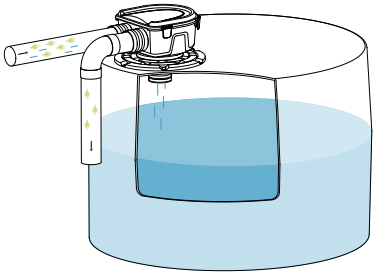
1. Understand your rainwater needs
2. Store your rainwater
3. Asses your rainwater collection area
4. Clean your rainwater: Filter leaves and debris
5. Clean your rainwater: Divert the First Flush of rainwater
6. Secure your rainwater system
7. Decide on a pump or gravity fed system
8. Manage standing water
9. Final stage rainwater filtration
10. Optimise your overflow
11. Monitor your water level
12. Care for your system

*For wet/charged system configuration with clean water flow



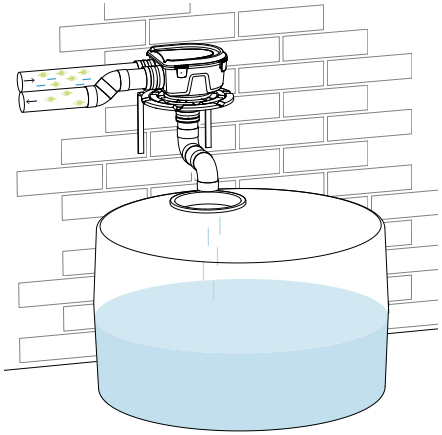
On-Tank

Maelstrom On-Tank eliminates the problem of water splashing off your tank inlet screen, especially at high flow rates. Its phenomenal water catchment efficiency (96% at 3,600 litres/hour in wet systems) gives you more water, faster, so you can take full advantage of every raindrop.



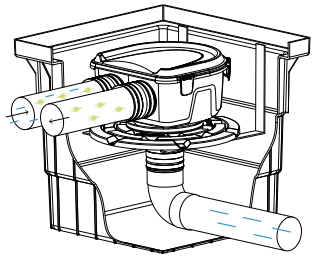
Pre-Tank

Maelstrom Pre-Tank can be mounted on your wall or at another convenient place before your tank. For dry systems, it can even be used in place of rain heads, offering centralised, super-fine filtering to keep leaves and debris out of your rainwater.



In a Pit

Maelstrom Pit allows you to filter the rainwater you harvest at one central point for easy cleaning and maintenance. This is ideal for dry Rain Harvesting systems – especially those with below-ground tanks.



Maelstrom with Shark Cage Filter

The Maelstrom with Shark Cage Filter delivers massive amounts of water to your rain barrel. The single skin Shark Cage uses super-fine filtration to block leaves and debris, keeping your water clean.

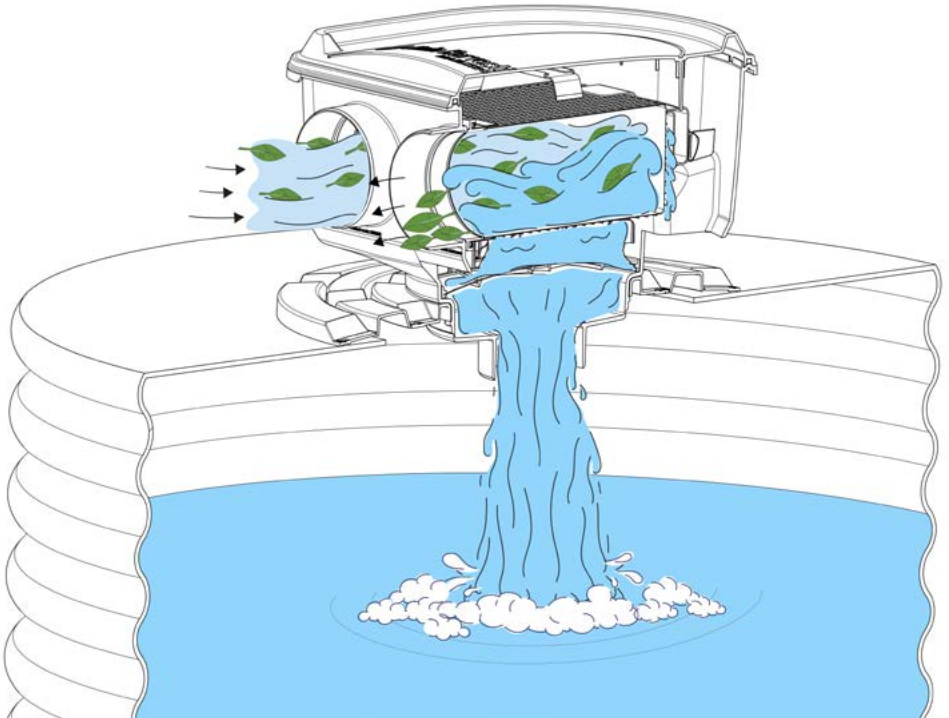
The Shark Cage Filter is the step up from a standard Maelstrom – it's incredibly easy to clean and handles higher flow rates of water – which means more water in your tank.

Product benefits

- More efficient water capture than a standard Maelstrom. More water, less waste
- The stainless steel filter cage lets huge amount of water through while preventing any debris entering your tank.
- The 180 micron filter screens particles five times smaller than a standard tank screen
- Blocks out light, which prevents algae growth
- Can be installed in a variety of pre-tank locations
- The stainless steel filter is much easier to clean than a standard Maelstrom filter
- Mounting plate fits 12", 16" and 20" tank openings, or can be used for mounting in-tank, on-wall or in a pit

APPLIES TO THESE RAIN HARVESTING STEPS

1. Understand your rainwater needs
2. Store your rainwater
3. Asses your rainwater collection area
4. **Clean your rainwater: Filter leaves and debris**
5. Clean your rainwater: Divert the First Flush of rainwater
6. Secure your rainwater system
7. Decide on a pump or gravity fed system
8. Manage standing water
9. Final stage rainwater filtration
10. Optimise your overflow
11. Monitor your water level
12. Care for your system



Maelstrom Original with Shark Cage

The Maelstrom with Shark Cage Filter builds on our original Maelstrom design, with an unmatched water catchment efficacy.

RHML02 100mm

Shark Cage for Maelstrom Original

Upgrade your standard Maelstrom to the Shark Cage Filter. Improved flow rate and ease of maintenance with the same incredibly fine filtration.

RHML03 100mm

Maelstrom Original with Plastic Cage

Maelstrom's advanced design combines super fine filtration and super-high water catchment efficiency to give you cleaner rainwater and lots of it.

RHML01 100mm

Rain Heads

Easy to install and available in a range of options to suit your needs, our signature rain heads improve the quality of the rainwater you harvest by keeping leaves, mosquitoes and other insects out of your Rain Harvesting system.

Product benefits

- Keep leaves and debris out of your pipes and tank to prevent clogging, blockages, anaerobic fermentation and tannin leaching
- Prevent the entry of mosquitoes, insects and vermin with 0.955mm stainless steel mesh screen
- Prevent mosquito intrusion to charged lines (in wet systems)
- Reduce the risk of eaves flooding by preventing downpipe blockages and backflow
- Paint to match your property's architecture

APPLIES TO THESE RAIN HARVESTING STEPS

1. Understand your rainwater needs
2. Store your rainwater
3. Asses your rainwater collection area
4. Clean your rainwater: Filter leaves and debris
5. Clean your rainwater: Divert the First Flush of rainwater
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9. Final stage rainwater filtration
10. Optimise your overflow
11. Monitor your water level
12. Care for your system

Comparison table

Product	Size (") H x W x D	Screen	Integrated cover	VH Pivot*	Outlet size/s
Leaf Eater Original	289 x 275 x 188	Double	No	No	90mm or 100mm
Leaf Eater Original with The Hood	289 x 278 x 192	Double	Yes	No	90mm
Leaf Eater Plus	289 x 275 x 188	Single	No	No	90mm or 100mm
Leaf Beater	295 x 201 x 175	Single	No	Yes	80mm / 100mm (Dual fit)
Leaf Eater Slimline	321 x 100 x 168	Single	Yes	No	80mm / 90mm (Dual fit)
Leaf Catcha Slimfit	236 x 143 x 171	Single	No	No	80mm / 65mm (Dual fit)
Leaf Eater Ultra	395 x 206 x 220	Single	Yes	Yes	80mm / 100mm (Dual fit)
Leaf Eater Advanced	242 x 194 x 168	Single	No	Yes	80mm / 100mm (Dual fit)
Leaf Eater Advanced with The Hood	242 x 194 x 168	Single	Yes	Yes	90mm
Leaf Eater Stream with The Hood	350 x 120 x 152	Single	Yes	No	80mm / 90mm (Dual fit)
Leaf Eater Stream Original	350 x 120 x 152	Single	Yes	No	80mm / 90mm (Dual fit)
Leaf Eater Stream Shield	350 x 120 x 152	Single	No	No	80mm / 90mm (Dual fit)
Leaf Catcha (Round)	220 x 280 x 185	Single	No	No	90mm / 100mm (Dual fit)
Leaf Catcha (Rectangle)	210 x 289 x 180	Single	No	No	90mm / 100mm (Dual fit)
Leaf Eater Commercial	542 x 366 x 369	Single	No	No	150mm
Leaf Eater Commercial with The Hood	567 x 367 x 369	Single	Yes	No	150mm
Leaf Eater Commercial (Zincalume)	350 x 460 x 338	Single	No	No	150mm

*Vertical and Horizontal Pivoting Outlet

Leaf Eater Original

Keeping leaves, mosquitoes and debris out of rain harvesting systems for over 17 years.

RHLE01 90mm
RHLE06 100mm

Leaf Eater Original with The Hood

This is the Leaf Eater Original with The Hood Upgrade. This rain head reduces contamination and captures more rainwater with its custom designed Hood cover and screen.

RHLE10 90mm

Leaf Eater Plus

A Leaf Eater™ Original with a Clean Shield™ screen for improved leaf shedding and even easier maintenance.

RHLE08 90mm
RHLE09 100mm

Leaf Beater

A mid-sized rain head for tighter spaces, with an outlet that swivels to suit both horizontal and vertical downpipes.

RHLB20 90mm
RHLB21 100mm

Leaf Eater Slimline

A sleek, streamlined rain head with an anti-splash cover and red overflow indicator. Ideal for decks and verandas - a stylish finish to any home.

RHSL01 90mm

Leaf Eater Ultra

A feature-packed rain head that keeps leaves and mosquitoes out of your pipes – and looks good doing it.

RHUL01 90mm
RHUL02 100mm

Leaf Eater Advanced with The Hood

This is the Leaf Eater Advanced with The Hood Upgrade. This rain head reduces contamination and captures more rainwater with its custom designed Hood cover and screen.

RHAD10 90mm

Leaf Eater Advanced

A compact mosquito-proof rain head for small spaces awkward places, with an outlet that swivels to suit both horizontal and vertical downpipes.

RHAD01 90mm
RHAD02 100mm

NEW

Leaf Eater Stream with The Hood

The Leaf Eater Stream with The Hood maximises your rainwater catchment by eliminating splashing to secure every drop. The Hood provides superb water catchment by preventing any water which may splash off the mesh screen.

RHSTR101 80mm / 100mm (Dual fit)

NEW

Leaf Eater Stream Original

With its visually striking yet unobtrusive and slender design, the Leaf Eater Stream Original delivers high water catchments with minimal maintenance.

RHSTR102 80mm / 100mm (Dual fit)

NEW

Leaf Eater Stream Shield

With its sleek and elegant design, coupled with its innovative shield covering to reduce water bounce, the Leaf Eater Stream Shield delivers high catchments of clean rainwater directly to your tank.

RHSTR103 80mm / 100mm (Dual fit)

NEW

Leaf Catcha Slimfit

A slim rain head that delivers high water catchments and keeps leaves and pests out of your rainwater system.

RHLC221 80mm / 65mm (Dual fit)

Leaf Catcha Round

A simple, bucket-style rain head ideal for easy-to-reach places that can also be used as a catchment device for tank overflows.

RHLC20 90mm / 100mm Dual fit

Leaf Catcha Rectangle

A simple, bucket-style rain head ideal for easy-to-reach places that can also be used as a catchment device for tank overflows.

RHLC01 90mm / 100mm (Dual fit)

NEW

Leaf Eater Commercial with The Hood

This commercial size rainhead handles the highest flow rate of all our models. The Hood prevents splashing which means you get massive amounts of clean water in your tank.

RHCL61 150mm

NEW

Leaf Eater Commercial

Designed for commercial applications, this PVC rain head incorporates a maintenance-friendly single screen to keep leaves, debris, pests and mosquitoes out of your rain harvesting system.

RHCL60 150mm

Commercial Rain Heads

Leaf Eater Commercial (Zincalume)

Manufactured from zincalume, this commercial rain head handles high flow rates and incorporates a maintenance friendly single screen to keep leaves, debris and mosquitoes out of your rain harvesting system.

RHCL22 150mm

Rain Head Upgrades

Leaf Eater Advanced Hood Upgrade

Keeping leaves, mosquitoes and other insects out of your downpipe while maximising the amount of rainwater collected, The Hood Upgrade reduces contamination and captures more rainwater for your Leaf Eater Advanced rain head.

RHAC10 suits RHAD200 (80mm / 100mm)

Rain Head Upgrades

Clean Shield™ Screen

Upgrade your Leaf Beater rain heads with this leaf-shedding, mosquito-proof, easy-clean replacement screen.

RHAC02 Leaf Beater Clean Shield™ Screen

Rain Head Upgrades

Leaf Eater Commercial Upgrade Screen & Hood Kit

Upgrade your Leaf Eater Commercial to capture more rainwater by minimising splashing.

RHAC11 suits RHCL60 (150mm)

Clean Shield™ Screen

Upgrade your Leaf Eater Original or Leaf Eater Plus rain heads with this leaf-shedding, mosquito-proof, easy-clean replacement screen.

RHAC01 Leaf Eater Original / Plus Clean Shield™ Screen

First Flush Diverters

Our first flush diverters play an essential role in protecting your rainwater quality. By isolating the first flush of contaminant-laden water from your roof, diverters keep organic and inorganic fine particles out of the rainwater you harvest so you enjoy the benefits of cleaner rainwater for your property.

Product benefits

- Minimise the amount of suspended and dissolved organic and inorganic fine particles entering your tank
- Reduce sediment build-up in your tank and sediment load on your post-tank pumps and filtration systems
- Protect household fixtures and appliances (i.e. washing machines, toilet cisterns, etc.) by lowering sediment and tannin deposits
- Drain wet system pipes to prevent anaerobic fermentation and tannin leaching
- Diversion volume easily custom-built through use of standard pipes
- The best way to keep fine and dissolved particles out of your tank
- Automatic reset valve drains after rainfall events
- Comes in kit form for easy installation and customisation

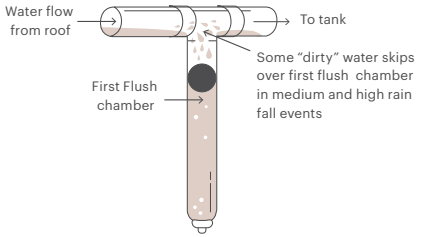
APPLIES TO THESE RAIN HARVESTING STEPS

1. Understand your rainwater needs
2. Store your rainwater
3. Asses your rainwater collection area
4. Clean your rainwater: Filter leaves and debris
5. **Clean your rainwater: Divert the First Flush of rainwater**
6. Secure your rainwater system
7. Decide on a pump or gravity fed system
8. Manage standing water
9. Final stage rainwater filtration
10. Optimise your overflow
11. Monitor your water level
12. Care for your system

How it works

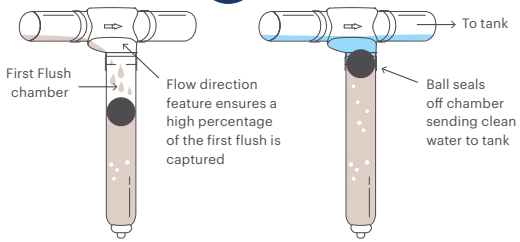
First flush diverters are installed at each downspout that supplies water to the tank, or where the downspouts enter the tank. They utilise a dependable ball and seat system. As the water level rises in the diverter chamber, the ball floats and, once the chamber is full, the ball rests on a seat inside the diverter chamber, preventing any further water from entering. The subsequent flow of water is then automatically directed along the pipe system to the tank.

Standard Tee



The standard First Flush tee allows some "dirty" water to skip over the entry to the first flush chamber in medium to high rainfall events and enter your rainwater tank.

First Flush Plus Tee NEW



The First Flush Plus Tee's patented design allows less "dirty" water to skip over or bypasses the first flush chamber. The tee incorporates a unique flow direction feature that forces fast-flowing water into the diversion chamber, preventing the dirtiest water from entering your rainwater tank. In a medium rainfall event*, four times less "dirty" water bypasses the first flush diversion chamber = 97% of the first flush is diverted.

How much water does 1m of pipe divert?		
90mm pipe	=	5.7 litres
100mm pipe	=	8.8 litres
300mm pipe	=	72.0 litres

How much water to divert

In calculating the amount of water to divert, consideration should be given to (1) the surface area of the roof, and (2) the amount of pollutant on the roof and gutters. The following factors can be used as a guide in determining the volume of water to be diverted.

POLLUTION FACTOR FOR THE ROOF	
MINIMAL POLLUTION	SUBSTANTIAL POLLUTION
DIVERT 0.5L PER M² Open field, no trees, no bird droppings, clean environment	**DIVERT 2L PER M²** Leaves and debris, bird droppings, various animal matter, e.g. dead insects, skinks, etc.

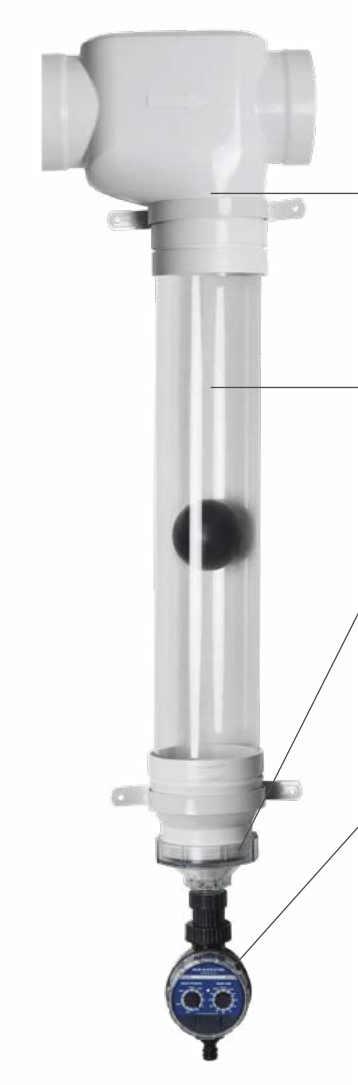
The above quantum are the results of preliminary testing. Individual site analysis and field testing is required to more accurately assess the quantum to be diverted in each individual case.

DIVERSION FACTOR FOR A FIRST FLUSH WATER DIVERTER	
MINIMAL POLLUTION	SUBSTANTIAL POLLUTION
M² ROOF AREA X POLLUTION FACTOR = LITRES TO BE DIVERTED	
Example for a minimal polluted roof of 100m² 100 x 0.5 = 50 Litres to be diverted	**Example for a heavily polluted roof of 100m²** 100 x 2 = 200 Litres to be diverted

* 3 litres per second

First Flush Technologies

Our patented new First Flush Plus Tee, Advanced Release Valve and Rapid Exit Release Funnel all combine to take first flush diversion to the next level – delivering you cleaner rainwater and more of it with less maintenance.



First Flush Advanced
Pictured above

First Flush Plus Tee – NEW

- The specially designed, patented First Flush Plus Tee forces fast-flowing water into the diversion chamber, preventing the problem of dirty water "skipping" over the traditional T-junction gap during heavy rainfall. This helps prevent the dirtiest water from entering your tank

Customisable Chamber

- The diverter chamber is customisable, just add the appropriate pipe length to divert the required volume of first flush

Rapid Release Exit Funnel – NEW

- Incorporating a transparent, Rapid Release Exit Funnel, the Advanced Release Valve's larger aperture outlet and funnel shape draws sediment into the exit flow. This results in reduced build up and blockages plus it's transparent exit funnel allows for easy visual inspection

Advanced Release Valve – NEW

- The Advanced Release Valve is an electronic first flush diversion valve which is programmable to give you greater control over the frequency of your first flush. This allows you to determine how regularly your diversion chamber empties so you can maximise rainwater yield without compromising quality

First Flush diverters are available in kit form

First Flush Advanced

First Flush Diverters

NEW

First Flush Advanced

Incorporating our patented First Flush Plus Tee and Advanced Release Valve, the First Flush Advanced gives you cleaner rainwater and more of it with less maintenance.

WDDP20 100mm

NEW

First Flush Advanced
with Max Chamber Upgrade Kit

First Flush Advanced 90mm with the flexibility to upgrade your chamber size from 90mm to 100mm enabling you to divert maximum volume.

WDDP21 90mm

NEW

First Flush Plus

The First Flush Plus Tee's specially designed inlet solves the problem of fast-moving dirty water "skipping" over the first flush chamber, ensuring the dirtiest water does not enter your tank.

WDDP11 100mm

NEW

First Flush Plus
with Max Chamber Upgrade Kit

First Flush Plus 90mm with the flexibility to upgrade your chamber size from 90mm to 100mm enabling you to divert maximum volume.

WDDP12 90mm

First Flush Downpipe

The traditional first flush diverter for downpipe installations with customisable chamber and slow release valve.

WDDP01 90mm
WDDP02 100mm

NEW

Pipe Bracing Bracket

Used to brace two downpipes together, especially where it is not possible to use a standard wall bracket.

WDAC24 90mm
WDAC23 100mm

First Flush Diverters

First Flush In-Ground

The First Flush In-Ground drains water-filled pipes in your "wet" Rain Harvesting system to prevent anaerobic fermentation and stop fermented water contaminating the rainwater in your tank.

WDIG01 90mm/100mm (inlet only)

300mm Chamber Pipe

R0297 300mm Chamber Pipe 1.0m length
R0298 300mm Chamber Pipe 1.5m length
R0299 300mm Chamber Pipe 1.9m length

First Flush Post/Wall

Large and versatile first flush diverter which includes wall brackets for mounting on walls or posts and uses 300m pipe to create a large capacity chamber. Post/Wall Stand are available for additional support. Both the Post/Wall Stands and 300mm pipe are sold separately.

WDPW01 90mm/100mm (inlet only)
WDAC01 Steel Stand

300mm Chamber Pipe

R0297 300mm Chamber Pipe 1.0m length
R0298 300mm Chamber Pipe 1.5m length
R0299 300mm Chamber Pipe 1.9m length

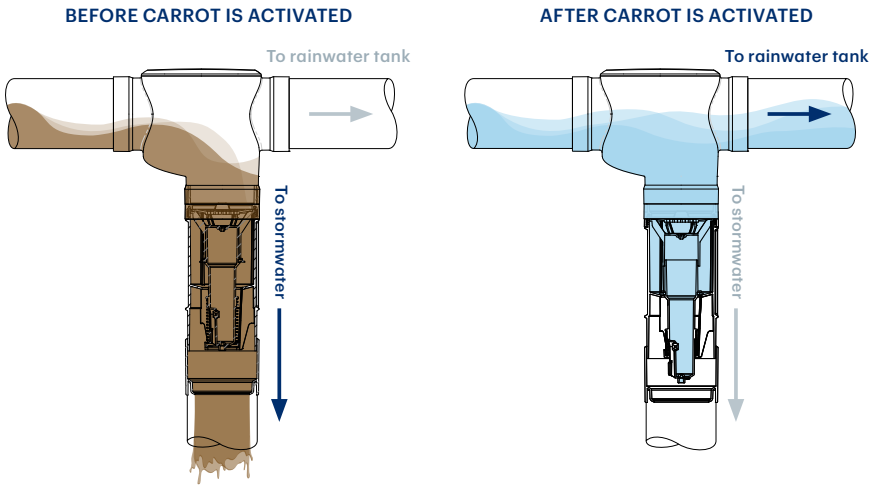
First Flush Carrot Technologies

The First Flush Carrot protects your water quality and helps you capture cleaner rainwater. The Carrot isolates the first 5 gallons of rainwater, along with the bulk of your roof's pollutants. It then sends this dirty water directly to a specially designed "carrot" shaped diversion chamber. When the chamber is full, it self-seals to let cleaner water pass through to your rain barrel. By incorporating the specially designed "The Tee", The Carrot ensures that contaminated rainwater won't jump or skip the diversion chamber. Crucial for any rain harvesting system, you can use The Carrot on any downspout or at your rain barrel.

The name the "Carrot" was taken by the unique shape of the inner mechanism. We made it orange and the name stuck!

Product benefits

- Protects your water quality so that only clean water enters your rain barrel
- Captures the first 5 gallons of any rainfall event
- Isolates and diverts contaminants from your roof
- Uses "The Tee" to ensure dirty water doesn't "skip" to avoid capture
- Self-sealing diversion chamber stores dirty water – separate from your rain barrel
- Use on any downspout or at your rain barrel



First Flush Diverters

First Flush Carrot 3"

Divert your initial roof runoff without the need for a traditional First Flush storage chamber and ensure only the cleanest water reaches your tank.

WDDP220 80mm / 100mm (Dual fit)

First Flush Carrot 4"

The same function as the 3" version but with fitment for your 4" pipework.

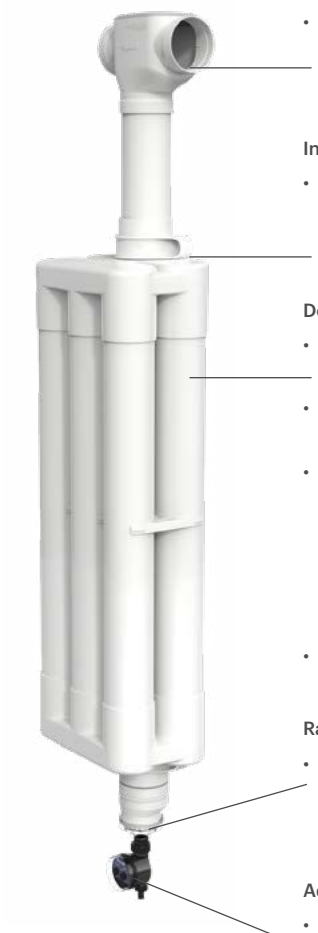
WDDP221 80mm

First Flush Delta Technologies

Large volume first flush diversion made easy.

The First Flush Delta range incorporates a revolutionary chamber design that uses 100mm pipe for simple installation and high volume diversion.

1m Delta High Volume chamber = 73 litres of diversion!



First Flush Delta Post/Wall
Pictured above

First Flush Plus Tee – NEW

- The specially designed, patented First Flush Plus Tee forces fast-flowing water into the diversion chamber, preventing the problem of dirty water "skipping" over the traditional T-junction gap during heavy rainfall.

Integrated ball and seat – NEW

- This unique design ensures that the first flush ball remains close to the seat, even in high flow events, ensuring the diverter seals as soon as the chamber is full. No more lost balls when cleaning your outlet either!

Delta High Volume Chamber – NEW

- Easily divert large volumes of first flush with the Delta High Volume Chamber
- Using multiple 100mm pipes to create the diversion chamber, the Delta's revolutionary design makes installation simple
- The Delta chamber is customizable to suit your first flush requirements

Pipe Length	Total Volume Diverted
1m	75 litres
2m	115 litres

- For larger volumes, consider the Delta manifold installation configurations (see next page)

Rapid Release Exit Funnel – NEW

- The transparent, Rapid Release Exit Funnel's larger aperture outlet and funnel shape draws sediment into the exit flow. This results in reduced build up and blockages and it's transparent exit funnel allows for easy visual inspection

Advanced Release Valve – NEW

- By allowing you to program the frequency of your first flush chamber empties, the electronic Advanced Release Valve allows you maximise rainwater yield without compromising quality

* First Flush Plus tee supplied with Delta Post/Wall only

First Flush Delta Post/Wall

A large volume first flush diverter that makes installation easy by utilising 100mm pipes for the chamber and incorporates the patented First Flush Plus tee and Advanced Release Valve to optimize first flush performance. 1m of Delta Chamber = 73 litres

WDPW10 100mm

First Flush Delta In-Ground

Divert the dirtiest water and transform your Rain Harvesting system from "wet" to "dry" with this large volume inground first flush diverter. Utilising 100mm pipes for the chamber makes installation simple and the Advanced Release Valve reduces outlet maintenance. 1m of Delta Chamber = 73 litres

WDIG10 100mm

First Flush Delta Commercial

The Delta Commercial is available to suit 150mm and 225mm downpipes, allowing you to enjoy the easy install benefits of using 100mm pipes for the first flush chamber. For larger volumes, consider the Delta manifold installation options (see next page).

WDCL15 150mm
WDCL15B 150mm (excludes Tee and Reducer)
WDCL22 225mm

DELTA DIVERSION CHAMBER CALCULATOR	
Chamber Volume in Litres	**Total Length in Millimetres**
30	185
40	374
50	564
60	753
70	942
80	1132
90	1321
100	1511
110	1700
120	1889
130	2079
140	2268
150	2458
180	3026
200	3405

NOTES
- Delta end caps were calculated to hold 14.32L each.
- 1m of 100mm UPVC pipe holds 8.8L
- For AUST 100mm pipe inserts 80mm into end caps x 6 (480mm of 100 UPVC = 4.2L)
- 14.32 - 4.2 = 10.12L/end cap

The above figure is total volume of delta end cap excluding the liquid contained within the 6x pipe chambers.

First Flush Delta
Installation Configurations

Large diversion volume requirements are easily solved with the First Flush Delta range. Each chamber can hold 115 litres within a 2m diversion chamber and by installing multiple Deltas in a series your first flush volume quickly adds up!

First Flush Delta Manifold Installation with single flush point

Installing multiple First Flush Deltas in a series makes it easy for you to divert and manage large volume first flush diversion. Connecting the First Flush Delta's outlets together allows you to use a single flush point and makes draining the first flush chamber simple. The single flush point can be easily directed or connected to one location for draining the first flush.

Delta Post/Wall pictured

First Flush Delta Manifold Installation with multiple flush points

Another installation option is to connect multiple First Flush Deltas in a series and incorporate multiple flush points. This is ideal for situations where the First Flush Deltas cannot be positioned closely next to each other and connecting the outlets is impractical. It also allows for faster first flush draining and for the first flush to be drained to multiple locations.

Delta Commerical pictured

First Flush Upgrades

Upgrade your existing First Flush diverter with the patented Advanced Release Valve to enjoy cleaner rainwater and lots of it – with less maintenance.

The Advanced Release Valve is an electronic first flush diversion valve which is programmable to give you greater control over the frequency of your first flush. This allows you to determine how regularly your diversion chamber empties so that you can maximise rainwater yield without compromising quality.

Easily retrofits to all Rain Harvesting First Flush Diverters – 90mm, 100mm, post/wall, inground, 150mm and 225mm.

NEW

Advanced Release Valve

Lets you control how regularly your diversion chamber empties, while the transparent exit funnel facilitates easy visual inspection. Can be installed to replace any existing first flush diverter outlet.

WDRV01

NEW

First Flush Primary Filter Screen

This 955 micron primary filter screen helps to keep the first flush outlet clear and reduce maintenance frequency.

WDAC22

Wet/Dry Valve

For “wet” Rain Harvesting systems, it is important to drain your charged lines after it rains to remove any water remaining in the pipes. Draining this water prevents it from being coming stagnant and discoloured due to anaerobic fermentation and tannin leaching – and most importantly, stops it from being fed into your rainwater tank at the next rainfall event.

“Wet” Rain Harvesting systems are any systems where the pipes leading to the rainwater tank hold water between rainfall events, this typically occurs when pipes leading to the rainwater tank are underground.

Product benefits

- For wet Rain Harvesting systems, the wet-dry valve makes draining charged-lines (water-filled pipes) easy
- The valve’s drain size allows for efficient draining and minimises the risk of clogging
- The wet-dry valve’s electronic auto-release timer allows you to set the frequency at which your charged lines are drained

APPLIES TO THESE RAIN HARVESTING STEPS

1. Understand your rainwater needs
2. Store your rainwater
3. Asses your rainwater collection area
4. Clean your rainwater: Filter leaves and debris
5. Clean your rainwater: Divert the First Flush of rainwater
6. Secure your rainwater system
7. Decide on a pump or gravity fed system
8. **Manage standing water**
9. Final stage rainwater filtration
10. Optimise your overflow
11. Monitor your water level
12. Care for your system

Wet / Dry Valve

Automatically drain your charged lines after it rains using our wet-dry valve and prevent problems with tannin leaching and anaerobic fermentation.

DRYV01 100mm

Downpipe Diverters

Our range of downpipe diverters help you easily divert and distribute water from your downpipes to your garden, pool or rainwater tank.

Downpipe Diverters

Our Inline and In-pipe Downpipe Diverters capture a high proportion of the water flowing through your downpipes.

The Inline variant filters leaves and debris – giving you lots of great quality rainwater.

Product benefits

- Collect up to 600 L/hour using a 12mm garden hose or up to 1200 L/hour using a high flow 32mm hose
- On/Off switch gives you control over your system
- Simple installation onto your downpipes – no glue required

APPLIES TO THESE RAIN HARVESTING STEPS

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Downpipe Diverter (Inline) Round

The Downpipe Diverter Inline captures a high proportion of the water flowing through your downpipes, while filtering leaves and debris – giving you lots of great quality rainwater.

DDIV01 90mm

Downpipe Diverter (In-pipe) Round

Uses a flexible rubber rainwater collector which suits 90mm and 100mm pipe, and a hole saw for easy installation.

DDIV02 90mm/100mm

Downpipe Diverter Hose Kit

Easily connect your Downpipe Diverter to your rain barrel. The easiest way to start collecting rain water.

DDHK01 32mm (1-1/4") hose

Rain Barrel Linking Kit

Easily connect multiple Rain Barrels together to maximise your storage. All fittings and tools included.

RBLK01 32mm (1-1/4") hose

Total Rain

The Total Rain is an all-in-one solution which combines the sleek design of the Leaf Eater Stream rain head with The Carrot First Flush Diverter. The rain head filters leaves and debris while the first flush diverter removes the most contaminated water from your roof away from your rainwater tank.

The easiest way to filter your water before it enters your tank.

Product benefits

- For wet Rain Harvesting systems, the wet-dry valve makes draining charged-lines (water-filled pipes) easy
- The valve's drain size allows for efficient draining and minimises the risk of clogging
- The wet-dry valve's electronic auto-release timer allows you to set the frequency at which your charged lines are drained

APPLIES TO THESE RAIN HARVESTING STEPS

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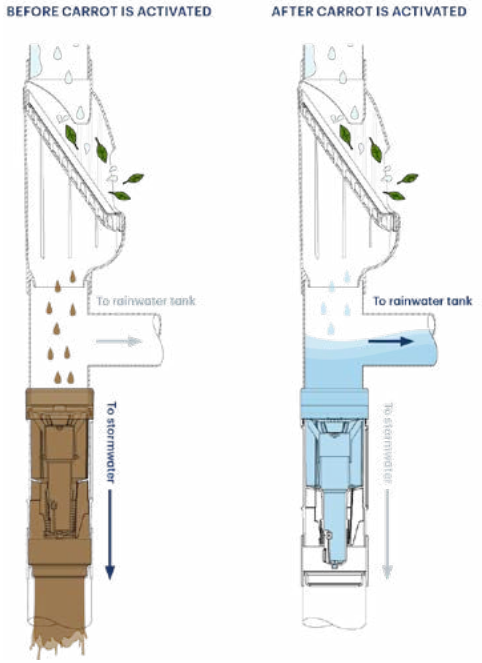

NEW

Total Rain

The easiest all in one solution for first flush diversion and removing leaves and debris from your rainwater. The quickest way to amazing quality water.

DDTR210 80mm

Water Diverters

Easily divert and distribute the water from your shower, hand basins, laundry and downpipes onto your garden with the Water Diverter.

Product benefits

- Quick and easy to install
- Appropriate for non-pressurised rainwater, stormwater and greywater applications
- Easily control flow direction with the adjustable flow direction handle
- Adjustable flow direction handle can be oriented to suit your installation

Water Diverter

Distributes the water you save.
Simple to install.

HW0002 50mm
HW0001 90mm

APPLIES TO THESE RAIN HARVESTING STEPS

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Tank Screen 360

With it's "deep dish" design, the Tank Screen 360 effortlessly protects your tank from pests, leaves and sunlight. The high mesh walls allow massive amounts of water to flow through these tank screens, even if leaves start to build up. We have a variety of models with different options for keeping out sunlight (to prevent algae growth), and all versions are provided with an easy fit ring which means maintenance is simple and tool-less.

Product benefits

- Mesh base and side walls allow for massive water flow through, even if leaves build up
- The Hood version prevents splashing from the top of the tank screen, giving you a full 360° of water capture area
- Hood and Solar shield versions keep out sunlight, which prevents algae growth
- Prevents mosquitoes, insects and other vermin from entering your tank
- Filters leaves and debris to keep them out of your tank
- Mosquito-proof 316 stainless steel mesh with 955-micron aperture
- Easy fit ring makes maintenance a breeze – no tools required!

APPLIES TO THESE RAIN HARVESTING STEPS

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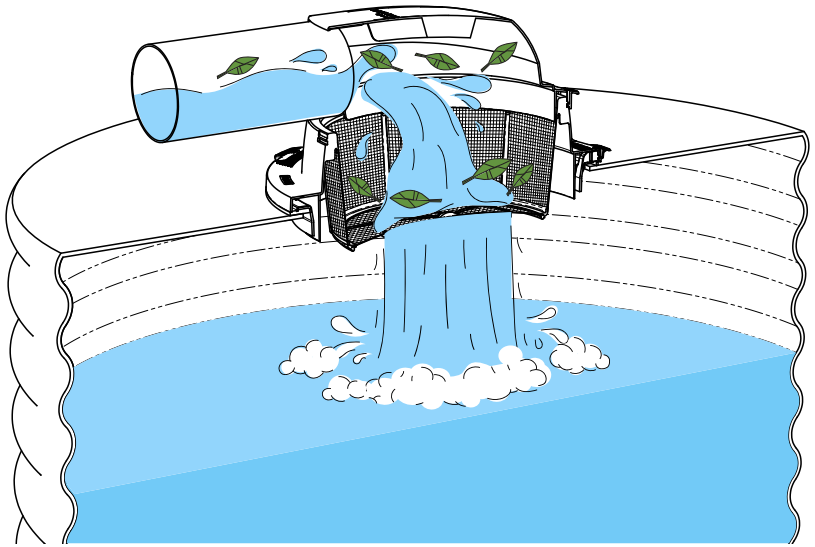

NEW

Tank Screen 360 Hood Kit with Screw Down Ring

An ultra-high flow tank screen with integrated splash and light cover.

TSEF18 400mm

NEW

Tank Screen 360 Solar Shield Kit with Screw Down Ring

An ultra-high flow tank screen to keep out debris and an integrated solar shield to prevent sunlight and calm the flow of water into your tank.

TSEF17 400mm

NEW

Tank Screen 360 with Screw Down Ring

The tank screen which can handle massive flow rates even when debris loads start to build up.

TSEF16 400mm

NEW

Tank Screen 360 Hood

The hood prevents splashing and can be fitted to any Tank Screen 360.

TSEF08 400mm

Tank Screens and Solar Shields

Available in a range of sizes, our tank screens and solar shields prevent leaves, debris, mosquitoes, vermin and sunlight from entering your rainwater tank via the tank inlet. This helps to preserve your rainwater quality by reducing nutrient loads, light and algae growth, and preventing mosquitoes from using your rainwater to breed in.

Product benefits

- Prevent mosquitoes, insects and other vermin from entering your tank
- Filter leaves and debris to keep them out of your tank
- Reduce light and algae growth in your tank
- Decreased maintenance time with easy-clean guardian
- Mutiple sizes available to suit all tank inlets
- Mosquito-proof 316 stainless steel mesh with 0.955mm aperture
- AS4020 compliant

APPLIES TO THESE RAIN HARVESTING STEPS

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Tank Screen

Mosquito-proof your tank inlets without interrupting the flow of water into your tank with our stainless steel 0.955mm aperture tank screens.

TASS20 200mm
TATS11 300mm
TATS12 400mm
TATS02 500mm

Maintenance Tray

The Maintenance Tray solves the challenge of cleaning fixed and difficult-to-reach tank inlet screens. It sits on top of these screens to become a second, removable screen with an easy-to-reach protruding handle.

TMTG01 300mm
TMTG02 400mm

Tank Covers

Prevent algae growth by keeping sunlight out of your tank without interrupting the flow of rainwater.

TASS23 300mm
TASS21 400mm
TASS22 500mm

Solar Shields

Designed to fit under your tank screen, the Solar Shield's patented design maximises the flow of rainwater into your tank while keeping sunlight out to prevent algae.

TASS24 300mm
TASS25 400mm
TASS26 500mm

400mm Easy Fit Clip-On Tank Screen System

Mosquito-proof your 400mm tank inlets without interrupting the flow of water into your tank with our 400mm Easy Fit Clip-On Tank Screen System.

No screws required. Just clip on and off for easy installation and maintenance.

This tank inlet screening system is compatible with metal rainwater tanks*, and provides fast and convenient tool-free installation and maintenance.

It is available to purchase individually or as kits.

* with a top panel thickness of 0.6mm, and an inlet hole diameter of 375mm +/-5mm

Product benefits

- Screw-less, clip-on tank screen system for your tank inlet
- Patented clip-on system allows for easy installation and maintenance. No tools required.
- Tank Inlet Ring fits into 400mm metal tank inlets and provides the base for all other system components to be clipped onto
- Secure and strong clip-on fitment
- Tank Cover Grommets provide a flexible, mosquito-proof pass through option for submersible pump power cables and pressure pipes.

APPLIES TO THESE RAIN HARVESTING STEPS

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8. Manage standing water
9. Final stage rainwater filtration
10. Optimise your overflow
11. Monitor your water level
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NEW

Easy Fit Clip-On Tank Screen (Aluminium) + Solar Shield Kit

Includes Tank Inlet Ring, Tank Screen, and Solar Shield

TSEF10 400mm

NEW

Easy Fit Tank Cover Kit

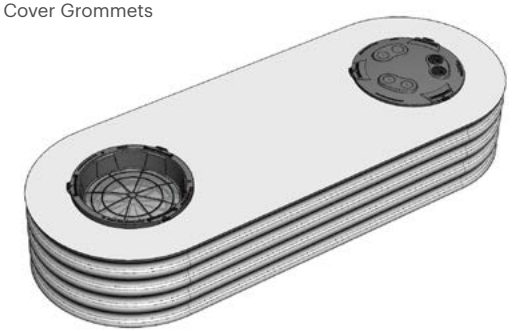
Includes Tank Inlet Ring and Tank Cover

TSEF11 400mm

NEW

Easy Fit Clip-On Tank Screen System Components

TSEF01 400mm Easy Fit Tank Inlet Ring
TSEF03 400mm Easy Fit Clip-on Tank Screen (Aluminium)
TSEF04 400mm Easy Fit Solar Shield
TSEF05 400mm Easy Fit Clip-on Tank Cover
TSEF06 44mm Easy Fit Tank Cover Grommets



Tank Overflows and Screens

Effectively manage overflowing water and make it easy to connect standard plumbing fittings to your tank with our tank overflows. All our overflows can also be paired with mosquito-proof screens or flap valves, and some are high-flow options used to increase your tank's rainwater storage capacity.

Product benefits

- Effectively manage overflowing water
- Prevent entry of mosquitoes, insects and pests into your tank
- Fit standard plumbing fittings to your tank
- High-level options to easily increase your tank's water storage capacity
- Range of sizes and types to suit different tanks and stormwater pipes
- Also available in kit form
- AS4020 compliant

APPLIES TO THESE RAIN HARVESTING STEPS

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8. Manage standing water
9. Final stage rainwater filtration
10. **Optimise your overflow**
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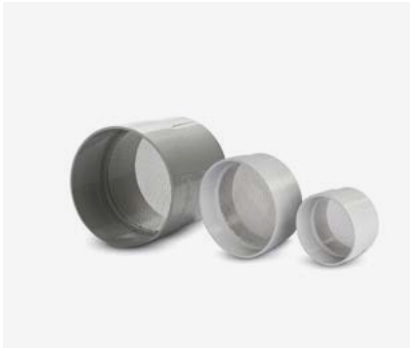
12. Care for your system

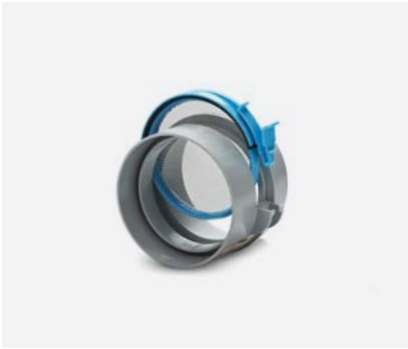
Insect-Proof Tank Overflow Screens



Mozzie Stoppa Original

With a 0.955mm mosquito-proof stainless steel screen, the Mozzie Stoppa Original protects your rainwater quality by stopping mosquitoes, larger insects and animals from getting into your tank via your tank overflow pipes.

TATO61	50mm
TATO05	90mm
TATO17	100mm



Mozzie Stoppa Easy-Clean

Protect your rainwater quality by keeping mosquitoes and other pests out of your tank with this easy-clean, spring-loaded hinge mosquito-proof outlet screen. Now available with a socket adaptor for easy installation in inline pipe situations.

TATO27	90mm	F & M
TATO28	90mm	F & M with F adaptor

Insect-Proof Tank Overflow Screens

Mozzie Stoppa Advanced

Protect your rainwater quality by keeping mosquitoes and other pests out of your tank with this Mozzie Stoppa Advanced, with an easily removable mesh screen for simple maintenance.

TATO70	90mm
TATO71	100mm
TATO72	150mm

Mozzie Stoppa Advanced Max Flow

Keep insects out of your tank with this easy to maintain tank overflow screen featuring Max Flow for unrestricted flow rates.

TATO73	90mm
TATO74	100mm

Standard Tank Overflows

Tank Overflow Corrugated

A standard tank overflow for corrugated tanks. A male outlet, it features a corrugated flange for easy installation.

TATO33 90mm
TATO34 100mm

Tank Overflow Flanged

A standard tank overflow outlet for flat-sided tanks. This outlet features a flange with provided screw holes for straightforward installation.

TATO62 50mm
TATO29 90mm
TATO37 90mm F (Slim Socket)
TATO22 100mm F (Slim Socket)
TATO38 150mm F (Slim Socket)

High Level Tank Overflows

Tank Overflow High Level

Manage your tank's overflowing water and boost your rainwater tank's capacity with a high level tank overflow.

TATO09 90mm Extra High Flanged
TATO12 90mm High Flanged
TATO18 100mm High Flanged

90° Tank Overflow Bends

90° Tank Overflow Bend

Purpose built true 90° bends designed for rainwater tank overflows.

TATO10 90mm
TATO19 100mm

Standard Tank Overflow Kits

Tank Overflow Kit

Stop mosquitoes getting in through your tank overflow with this all-parts-supplied, easy-install 50mm standard overflow kit.

TATO64 50mm

Tank Overflow Kit

Stop mosquitoes getting in through your tank overflow with this all-parts-supplied, easy-install 90mm standard overflow kit.

TATO45 90mm

Tank Overflow Kit

Stop mosquitoes getting in through your tank overflow with this all-parts-supplied, easy-install 50mm standard overflow kit.

TATO64 50mm

Tank Overflow Kit

Stop mosquitoes getting in through your tank overflow with this all-parts-supplied, easy-install 100mm standard overflow kit.

TATO24 100mm

High Level Tank Overflow Kits

KIT

Tank Overflow Kit High

Manage your tank overflow while increasing capacity by approximately 90mm and mosquito-proof your tank with this all-parts-supplied, easy-install kit.

TATO11 90mm

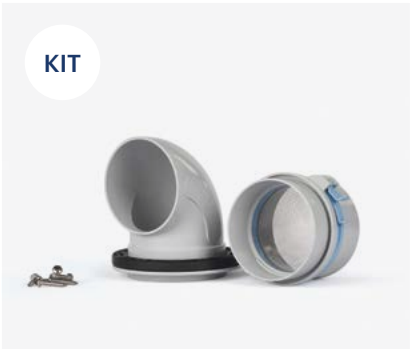
KIT

Tank Overflow Kit Extra High

Manage your tank overflow while increasing capacity by approximately 115mm and mosquito-proof your tank with this all-parts-supplied, easy-install kit.

TATO60 90mm

KIT



Tank Overflow Kit High Easy Clean

Store more rainwater by increasing your tank's capacity by approximately 90mm and mosquito-proof your tank with this easy-clean, all-parts-supplied, easy-install kit.

TATO31 90mm

KIT

Tank Overflow Kit High

Stop mosquitoes getting in through your tank overflow with this all-parts-supplied, easy-install 100mm standard overflow kit.

TATO23 100mm

Air Gaps

Air Gap

Protect your rainwater from contamination by preventing stormwater backflow – and mosquitoes – from entering your tank through your outlet pipes.

TAAG01 90mm

NEW

Air Gap

Protect your rainwater from contamination by preventing stormwater backflow – and mosquitoes – entering your tank through your outlet pipes. Includes removable insect proof screens for easy cleaning.

TAAG02 100mm

Gaskets

Rubber Gaskets

Rubber gaskets to connect pipes or overflows to rainwater tanks, and ensuring a water tight seal.

TATO63 50mm
TATO14 90mm
TATO13 100mm
TATO15 150mm

Flap Valves

Flap Valve Plain

Keep mosquitoes out of your tank outlet and pipes while allowing water to flow out unimpeded with this plastic flap valve.

TAFV03 100mm

Flap Valve Vent Screen

Keep mosquitoes and animals out of your tank outlets and pipes without restricting tank ventilation or the flow of fast - moving water.

TAFV01 50mm

Flap Valve Vent Screen

Keep mosquitoes and animals out of your tank outlets and pipes without restricting tank ventilation or the flow of fast-moving water with a flap incorporating 0.955mm stainless steel mesh.

TAFV02 90mm (Male)

Flap Valves

Flap Valve Vent Screen

Keep mosquitoes out of your tank outlets and pipes without restricting tank ventilation or the flow of fast-moving water with a flap incorporating 0.955mm stainless steel mesh.

TAFV12 90mm (Female)

Flap Valve Vent Screen

Keep mosquitoes out of your tank outlets and pipes without restricting tank ventilation or the flow of fast-moving water with a flap incorporating 0.955mm stainless steel mesh.

TAFV04 100mm

Flap Valve Vent Screen

Designed for commercial or high flow applications, this 150mm flap valve incorporates a 0.955mm stainless steel mesh screen to keep mosquitoes and other animals from entering tank outlets and pipes.

TAFV15 150mm

Post-Tank Filters

Our range of post-tank filters provide additional quality control to ensure you get cleaner rainwater for use in and around your property. By reducing colour, odour and particles in your rainwater immediately before use, they improve the quality of rainwater where it is used for drinking water and protect internal appliances, toilets and more from sediment damage and tannin stains.

Product benefits

- Ideal for a wide range of rainwater harvesting systems including whole of house, dual supply and single use
- Reduce colour, odour and sediment (down to 10 microns) in your rainwater immediately before use
- Improve the quality of rainwater where it is used as a drinking water supply by removing sediment, reducing taste, odour and colour
- Protect internal appliances (i.e. washing machines, toilets cisterns, tap ware, etc.) from sediment damage and tannin stains
- Italian made, high quality UV-resistant heavy-duty housings
- Replaceable cartridges

APPLIES TO THESE RAIN HARVESTING STEPS

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WaterMark
AS/NZS 3497
Licence No. WM-022909

Whole House Self-Cleaning Three-Stage Filtration System (Slim)

This high performance whole of house system features three-stage filtration for longer cartridge life. The self-cleaning 90 micron filter and the second stage 25 micron heavy-duty sediment filter reduces lime, scale, rust, sand and other fine sediment. The final 10 micron filtration stage reduces taste, colour, odour and chlorine.

WFRW31 10”

Whole House Self-Cleaning Two-Stage Filtration System (Slim)

Filtering down to 10 micron, this two-stage whole of house system features the self cleaning 90 micron sediment filter and second stage filtration to reduce taste, colour, odour and chlorine.

WFRW23 10”

Whole House Two-Stage Filtration System (Large)

Two-stage whole of house filtration featuring a 25 micron heavy-duty sediment filter to remove scale, lime, rust, lime, sand and other sediment and second stage filtration to reduce taste, colour, odour and chlorine down to 10 micron.

WFRW21 10”
WFRW22 20”

Triple Action Filtration System (Slim)

Filter fine sediments, colours and odours down to 10 microns for use around your property with this single stage triple action filter.

WFRW11 10”
WFRW12 20”

Triple Action Filtration System (Large)

This large capacity, single stage filter reduces fine sediments, taste, colour, odour and chlorine down to 10 microns for use around your property.

WFRW13 10″
WFRW14 20″

Multi-Action Filter Replacement Cartridge (Slim)

Activated carbon block filter which reduces taste, colour, odour and chlorine down to 10 micron.

WFRC11 10″
WFRC12 20″

Multi-Action Filter Replacement Cartridges (Large)

Large capacity, activated carbon block filter which reduces taste, colour, odour and chlorine down to 10 micron.

WFRC13 10″
WFRC14 20″

Triple Action GAC Filter Replacement Cartridge (Slim)

10 micron polypropylene and granular activated carbon filter which reduces fine sediment, chlorine, taste and odour.

WFRC21 10″
WFRC22 20″

Triple Action Filter Replacement Cartridge (Slim)

Pleated 15 micron filtration cartridges which reduces sediment, colour and odour.

WFRW03 10″
WFRW04 20″

Heavy-duty Sediment Replacement Cartridge (Slim)

25 micron polypropylene, heavy-duty sediment filter which reduces scale, lime, rust, sand and other fine sediment.

WFRC31 10″
WFRC32 20″

Heavy-duty Sediment Replacement Cartridge (Large)

25 micron polypropylene, heavy-duty sediment filter which reduces scale, lime, rust, sand and other fine sediment.

WFRC33 10″
WFRC34 20″

Tank Level Gauges

Our tank level gauges make it easy to monitor your rainwater tank level. Easy-to-read screens and reliable technology help you better understand your water consumption and take control of your water use.

Standard Tank Gauge

Accurately monitor your rainwater supply with this easy-to-read, tank-top water level indicator.

Product benefits

- Measure stored water at a glance
- Easy-to-read dial face with Empty and Full indicators
- No batteries or wiring required
- Utilises a reliable float system
- Suitable for all existing and new tanks
- Suitable for all vented tanks above- and below-ground up to 2.5 metres (100 inches) in height
- Able to be securely installed on a wide variety of tank shapes (dome-topped, flat, peaked)
- UV-resistant

APPLIES TO THESE RAIN HARVESTING STEPS

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Tank Gauge

Monitor your rainwater supply with this easy-to-read, tank-top water level indicator.

TATG02

Tank Gauge Plus
Powered by Sigfox®

Monitor your rainwater level, inflows and usage from the top of your tank or your mobile device.

Product benefits

- Know your water tank levels in real-time. Track your tank volume, in flows and out flows with automatic updates every ten minutes
- Monitor one or multiple tanks with the one app
- Uses Bluetooth® and Sigfox® technology
- Review historical data for the day, week, month or year, and view your data in % and litres or gallons
- Easy to install in all shapes and types of water tanks up to 4m in height
- Large, easy-to-read dial face works even without batteries
- UV protected and weather resistant for harsh outdoor conditions
- Low power usage for up to two-year battery life

APPLIES TO THESE RAIN HARVESTING STEPS

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COMING SOON

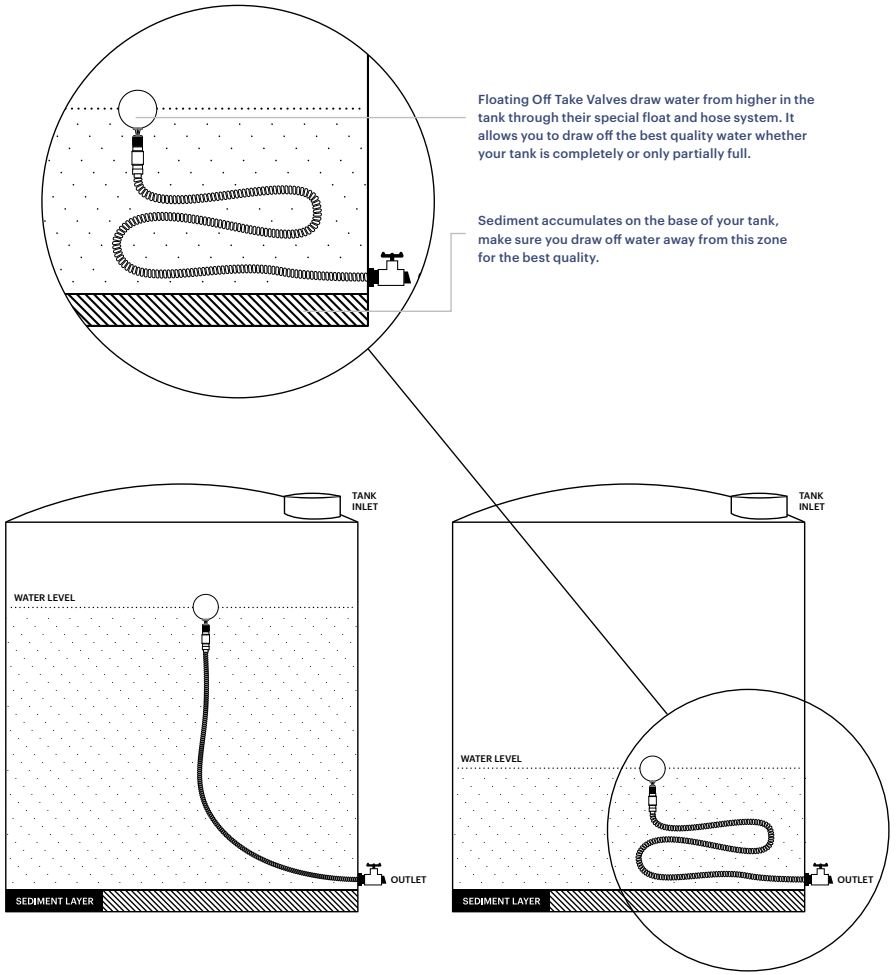
Tank Gauge Plus Powered by Sigfox®

Monitor your rainwater level, inflows and usage from the top of your tank or your mobile device.

COMING SOON

Sediment Management

Blue Mountain Co provides a range of products to help manage the sediment in your tank. Whether it's preventing the resuspension of sediments or managing how you draw water off from your tank, there is a solution to help you get the best outcome and the cleanest water.



NEW

Calmed Inlet

Calms the flow of water entering your rainwater tank.

CALM01 100mm

Floating Off Take Valve

Improves the quality of water delivered to your home by ensuring that only the cleanest water is drawn from your tank.

FOTV01 25mm

Auto tank Vacuums

KIT

Auto Tank Vacuums Flat wall

Suitable for installation on flat wall tanks.

TAVK03 90mm

Rainwater Tank Accessories

Our range of rainwater tank accessories help you finish building a rainwater harvesting system that delivers cleaner rainwater and lots of it.

- Vent Cowls
- Auto Tank Vacuums
- Floating Off Take Valve
- Gutter Outlets
- Sliding Gate Valves
- The Plug 3-in-1

Vent Cowls

Improve ventilation in your rainwater tank to increase your water's oxygen content and prevent stagnation with our vent cowls range.

Product benefits

- Improve ventilation and oxygen circulation in your rainwater tank
- Increase oxygen content in stored rainwater to prevent stagnation
- Promote more efficient water flow
- Mosquito-proof 0.955mm aperture stainless vent screen

APPLIES TO THESE RAIN HARVESTING STEPS

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Vent Cowl

Mosquito-proof and designed for easy installation onto pipe.

TAVC03 50mm
TAVC01 100mm

Vent Cowl Weatherproof

Mosquito-proof, with a removable cap to prevent the entry of sunlight that promotes algae growth and a flange for easy installation.

TAVC10 50mm
TAVC11 100mm

Auto Tank Vacuums

Automatically remove sediment from the bottom of your tank to improve your rainwater quality and prevent sediment resuspension with our auto tank vacuums.

Product benefits

- Automatically vacuums the sediment off the bottom of the tank in the area of the outtake pipe every time the tank overflows – clean the base of your tank without sacrificing stored water
- Customise your pipe length to suit your tank height
- Improve stored rainwater quality
- In kit form for easy installation

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KIT

Auto Tank Vacuum Concrete

Suitable for installation on concrete tanks.

TAVK02 90mm

KIT

Auto Tank Vacuum Flat wall

Suitable for installation on flat wall tanks.

TAVK03 90mm

Gutter Outlets

Extend the life of your gutters and improve water flow with these easy-to-install below-the-gutter gutter outlets.

Product benefits

- Reduce snags and water pooling around the gutter outlet
- Reduced gutter corrosion associated with water pooling
- Reduce opportunities for mosquitoes to breed
- Attach to multiple gutter shapes and downpipe sizes
- Paint to match your downpipes or gutters

APPLIES TO THESE RAIN HARVESTING STEPS

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Gutter Outlet Round

GSGO01 75mm
GSGO03 90mm F
GSGO04 90mm M
GSGO09 100mm

Gutter Outlet Half Round

GSGO05 90mm
GSGO06 100mm

Gutter Outlet Rectangular

GSGO07 100 x 50mm
GSGO08 100 x 75mm

Sliding Gate Valves

Versatile in their application, the Sliding Gate Valves fit into 90mm or 100mm pipes and allow water flow to be shut off.

Product benefits

- Suitable for low pressure applications (sealing pressure rated to 210kPa)
- Manufactured from UV stabilised uPVC with stainless steel hardware.
- Can be used as a wet system drain valve on rain harvesting systems.
- Suitable for drainage applications.
- Ergonomically designed handle, allowing for easy opening and closing.
- Compact and robust design.

APPLIES TO THESE RAIN HARVESTING STEPS

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Sliding Gate Valve

- Drain charged lines
- Low pressure applications
- Sealing pressure – 210kPa

HW0902 90mm Stormwater pipe
Plastic Paddle

Sliding Gate Valve

- Drain charged lines
- Low pressure applications
- Sealing pressure – 210kPa

HW0921 100mm DWV & Stormwater pipe
Plastic Paddle

Sliding Gate Valve

- Close off water mid-flow
- Mid-flow closing pressure – 60kPa
- Sealing pressure – 210kPa

HW0903 90mm Stormwater pipe
Stainless Steel Paddle

Sliding Gate Valve

- Close off water mid-flow
- Mid-flow closing pressure – 60kPa
- Sealing pressure – 210kPa

HW0923 100mm DWV & Stormwater pipe
Stainless Steel Paddle

Sliding Gate Valve

- Close off water mid-flow
- Mid-flow closing pressure – 60kPa
- Sealing pressure – 210kPa

HW0924 100mm Pressure Pipe
Stainless Steel Paddle

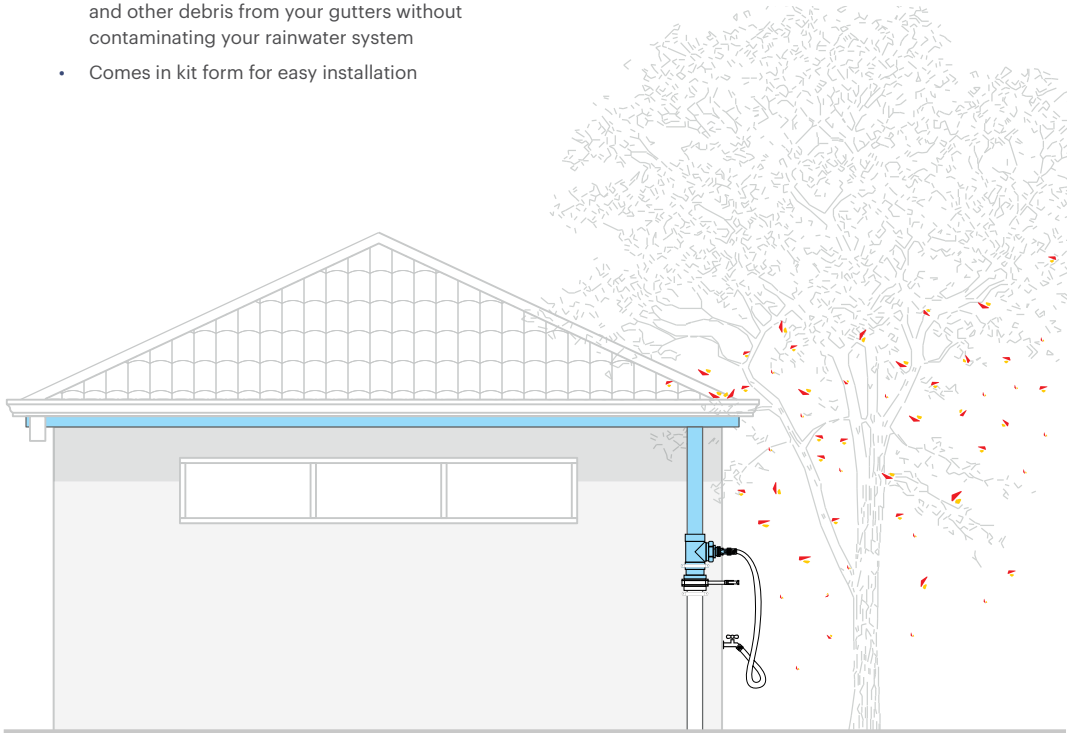
Fire Plug

Improve your home's defences against bushfire and ember attack with the help of the Fire Plug by allowing you to quickly fill your gutters with water.

By allowing you to quickly fill your gutters with water, the fire plug helps defend your home against bushfire and ember attack. Your gutters are strengthened to better withstand high temperatures and the water also prevents embers from setting leaves or debris in your gutters alight.

Product benefits

- Used as a fire safety device to fill your gutters with water to defend your property during a bushfire and ember attack
- Quick hose connection allows you to divert rainwater for use in your pool or garden
- Hose your roof to conveniently flush leaves and other debris from your gutters without contaminating your rainwater system
- Comes in kit form for easy installation



The Plug 3-in-1

The all-in-one fire plug, gutter cleaner and rainwater diverter.

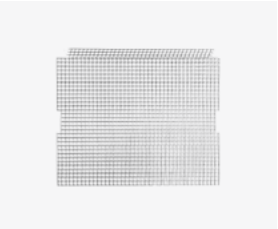
GSFP02 90mm

Spare Parts

Maelstrom
Primary Filter
K0806

Maelstrom
Secondary Filter Bag
K0815

Leaf Catcha (Rectangular)
Screen
S137



Leaf Eater Original
Primary Screen
Q0011

Leaf Eater Original
Secondary Screen
S135

Leaf Eater Original
Plastic Clip Set
K0605

First Flush Diverter
Sealing Ball (Black)
K0014

First Flush Diverter
Slow Release Valves (Red)
K0002

First Flush Diverter
Slow Release Valves (Black)
K0376

First Flush Diverter
Plastic Filter Screen
K0036

First Flush Diverter
90mm Threaded Socket
K0009

First Flush Diverter
90mm Threaded End Cap
K0012

First Flush Diverter
300mm Chamber End Cap
K0018

First Flush Diverter
Hose Connector
K0049

Rain Harvesting Design Service™

Improve your existing rain harvesting system or design a new one with the help of our Rain Harvesting experts and our free system design service

Why should you do it

Our Rain Harvesting specialists have the experience and technical knowledge necessary to help you design a Rain Harvesting system that delivers cleaner rainwater and lots of it.

This tailored, in-depth service will provide you with a comprehensive Rain Harvesting system design for your property and is available for free.

What's involved

Simply complete the online Rain Harvesting Design Service form which captures your needs and system requirements. Share as much information as you have available and don't be concerned if you can't answer all the questions. Our Rain Harvesting experts are also available on **(07) 3248 9600** to discuss your system and any special requirements you have.

What you'll receive

Our Rain Harvesting experts will review your system and needs to determine your optimum Rain Harvesting design. Your design will be documented in a comprehensive report that includes all the information you need to install and maintain your system.

Simply visit **rainharvesting.com.au** to request your free system design or call **+61 (0)7 3248 9600**.

Blue Mountain Co
GUTTER MESH

Gutter mesh can be installed over your gutters to help keep leaves, vegetation and pests out of your Rain Harvesting system. This reduces opportunities for animal-borne contamination, sediment build-up and leached tannins, limits fuel for anaerobic fermentation and prevents blockages so you can collect better quality water and more of it.

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Sold in all-inclusive kits for easier installation, our extensive range includes gutter mesh made from both aluminium and steel. By providing you with more choice and with a range of different apertures (hole sizes), we make it easier to match the right mesh to your property so you enjoy greater peace of mind and years of hassle-free gutters.

2mm Steel

4mm Steel

5.4mm Steel

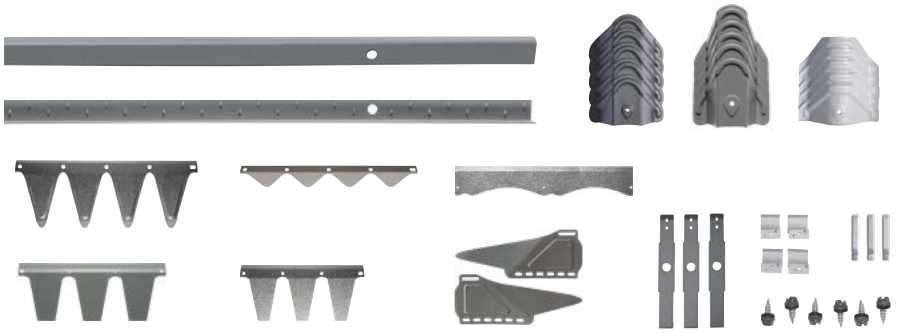
2mm Aluminium

4mm Aluminium Ultra

4mm Aluminium

COMPONENTRY

The unique suite of componentry developed by Blue Mountain Co is the reason our gutter mesh can be fitted to an array of roof types.



To find the product that's right for you, use our simple online tool – MeshMatcher™ **meshmatcher.com.au** or **call +61 (0)7 3248 9600**.

The 4 Pillars of Rain Harvesting System Design outline a process for creating the right Rain Harvesting system for you, or for improving your existing one. No matter where you live or what you use your rainwater for, these pillars will empower you to design a Rain Harvesting system that delivers cleaner rainwater and lots of it for use in and around your property.

Visit rainharvesting.com.au or contact us +61 (0)7 3248 9600 for more information and expert assistance to design your Rain Harvesting system.

RAIN HARVESTING

by Blue Mountain Co

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9 317118 090627