

Water Storage Solutions

Installation Guide | July 2021



SIMPLY CHOOSE THE SOLUTION THAT BEST WORKS FOR YOU

SOURCE

BASIC REQUIREMENTS

USES

01

Rainwater Harvesting

The installation of a tank that is filled automatically when it rains. This will require the installation of suitable guttering and piping to transport rainwater to the tank.

- Free & unlimited water supply (when it rains)
- Store rainwater accessed from roof
- Rainwater filtered prior to entering tank
- Water suitable for irrigation, washing, topping up the pool etc.

** If used for consumption, additional filtration is required

pg 4-7



Rainwater



Tank



Gutters and Pipes



Pre-filtration



Gardening



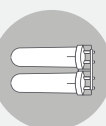
Toilet flushing



Pump



Pump to tank connector kit



** Whole-house filter



Car washing



Pool topping

02

Municipal Backup

The installation of a tank that is filled automatically when mains water is available. This water can then be utilised in the event of a cut-off from mains supply.

- Uninterrupted water supply
- Tank filled with municipal water
- Pump water from tank back into home
- Pressure sensor starts and stops pump operation

**Water is normally fit for consumption, but this may vary based on the quality of your water. If unsure, rather opt for a water filter.

pg 8-11



Municipal water



Tank



Float valve kit



Pump



Consumption



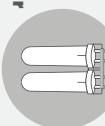
Bathing



Pump to tank connector kit



** Countertop/undersink filter



** Whole-house filter



Washing



Toilet flushing

03

Fully Integrated

The installation of a tank that is filled with both rainwater and municipal water. This water is filtered and utilised for full domestic water supply.

- Combination of both municipal backup & rainwater harvesting
- Ensures water is always available
- Tank filled with municipal water (pre-determined min. level required) and rainwater (remaining space)

pg 12-15



Municipal water



Tank



Gutters and Pipes



Pre-filtration



Consumption



Bathing



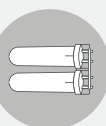
Rainwater



Pump



Pump to tank connector kit



Whole-house filter



Washing



Toilet flushing

1. RAINWATER HARVESTING

FOR A BASIC SYSTEM YOU WILL REQUIRE THE FOLLOWING:

1. Water tank

Refer to pre-installation section on *page 6* for guidelines on the correct size storage tank for your roof size.

2. Base/foundation

Refer to the installation section on *pages 6 and 7* for more detail on a suitable foundation for your water tank.

3. Pre-filtration

Improves the quality of the harvested rainwater and protects the pump. Keep in mind that the more pre-filtration options installed, the cleaner the water will be that enters into your tank.

3a. Tank Filter Screen - fitted beneath lid **3b.** Rainhead **3c.** First Flush Rainwater Diverter

4. Tank Mozzie Screen

Fitted to the outside of your overflow, or the inside/outside of your tank inlet. This accessory allows water to pass through while blocking entry for mosquitoes and other insects. **Note:** if you want to fit this accessory to the inside of your inlet, and you bought a JoJo tank prior to 2020, you will need to purchase our Full Thread 50/40mm Reducer.

5. Pipes - standard plumbing pipes in 110/80 or 75mm

Sizes and lengths will vary depending on installation and preference.

- 5a.** From beneath Rainhead to the top of the First Flush Diverter T-junction (110, 80 or 75mm)
- 5b.** For the First Flush Diverter Chamber (110mm is advised for this section)
- 5c.** From side of First Flush Diverter T-junction to the elbow (110, 80 or 75mm)
- 5d.** From elbow through lid into the tank (110, 80 or 75mm)

6. Elbow - according to pipe size

7. Pump and pump cover

When choosing a water pump, it is important to consider the water source, the application and the pressure required to ensure that the pump will meet your requirements. **To ensure all connections are visible, a pump cover was not included in this illustration, but we do recommend using a pump cover to protect your pump from the elements.** For more detail on our pump range available, visit our website.

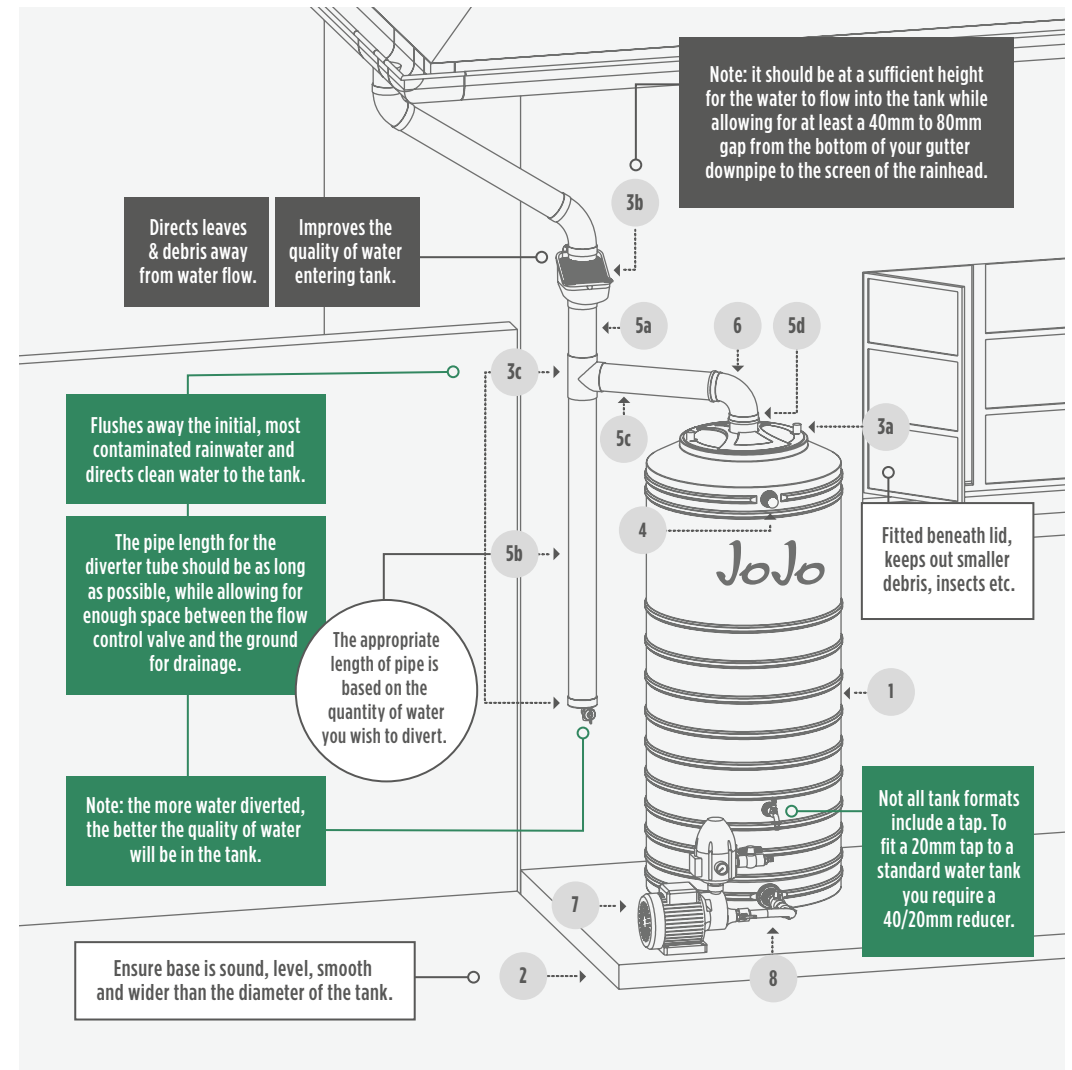
8. Pump to tank connector kit

An all-inclusive kit that permits seamless connection from the tank to both our 0.37kW and 0.75kW Booster Pumps.

*Whole-house Filter

Rainwater that is utilised for full domestic supply needs to be filtered to potable drinking water standards. Ensure that you choose a filtration system that meets these standards. It needs to be able to remove sediment, particulates and contaminants such as bacteria and other potentially harmful substances that could be present in the water. For more information on our whole-house filter visit our filtration section on our website.

SYSTEM COMPONENTS



This is an example of a basic rainwater harvesting installation. Each installation will vary based on the setup and personal preference.



1. RAINWATER HARVESTING

PRE-INSTALLATION

1. Choose a tank

Consider the rainfall in your area, your roof size and what the water will be used for.

A quick calculation to use:

1mm of rain on 1m² of roof surface = 1 litre of water

Example:

Roof area of 100m² = 2500 litres in a rainfall event of 25mm

Alternatively, you can use the below size guidelines:

Roof p/m ²	Tank Size
50 - 100	750 L - 2400 L
100 - 300+	2700 L - 10 000 L

The most common mistake in unsuccessful rainwater harvesting systems is a lack of storage capacity.

2. Tank placement

Should preferably be at a downpipe, or alternatively be repositioned by use of proper piping/guttering.

3. Base/foundation options

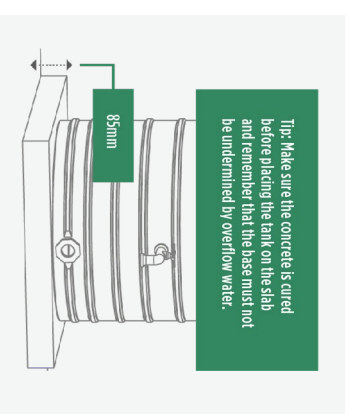
Tanks must be installed on a sound, level and smooth surface. Level paving will suffice, or a properly designed tank stand. Alternatively a concrete slab needs to be built, ideally with a concrete surface bed at least 85mm thick.

Recommended base sizes are:

Tank	Diameter	Base
750 L	760 mm	860 mm
1500 L	1410 mm	1510 mm
2400 L	1420 mm	1520 mm
2700 L	1420 mm	1520 mm
5250 L	1820 mm	1920 mm
10 000 L	2200 mm	2300 mm

INSTALLATION

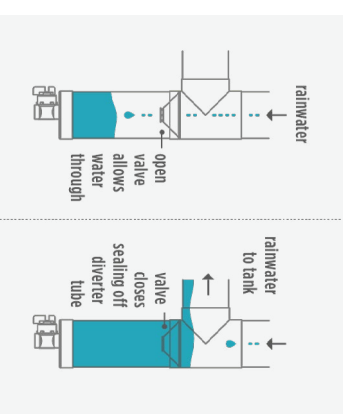
1. Base



Ensure tank is installed on a suitable base.

The base must be sound, level, smooth, free of any protrusions and at least 100mm wider than the base of the tank (refer to pre-installation).

4. First Flush Rainwater Diverter



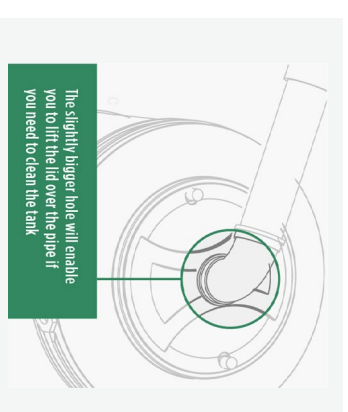
Install the first flush rainwater diverter as per instructions provided on our website (located on the product page).

2. Select pre-filtration



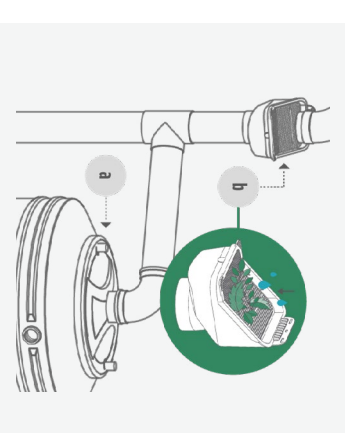
Select desired pre-filtration options. Pre-filtration will differ depending on preference and what the water will be used for.

5. Cut a hole in the tank lid



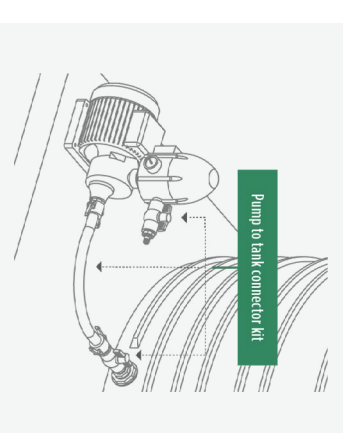
Cut a hole of 110.5mm in the middle of the lid and fit the pipe through the hole, stopping before the mesh/tank screen.

3. Tank Filter Screen/Rainhead



- Ensure the tank screen is fitted beneath the lid of the tank.
- Fit the rainhead to the downpipe (for more detail on installation of our rainhead, please refer to the product page on our website).

6. Connect your pump to your tank



Use our pump to tank connector kit to connect your Booster Pump to your water tank. Note: ensure you follow the pump installation and priming instructions as per the manual.

2. MUNICIPAL BACKUP

FOR A BASIC SYSTEM YOU WILL REQUIRE THE FOLLOWING:

1. Water tank

Refer to pre-installation on page 10 for guidelines on the correct size tank for the amount of backup water you require.

2. Base/foundation

Refer to the installation section on pages 10 and 11 for more detail on a suitable foundation for your water tank.

3. Pump and pump cover

When choosing a water pump, it is important to consider the water source, the application and the pressure required to ensure that the pump will meet your requirements. **To ensure all connections are visible, a pump cover was not included in this illustration, but we do recommend using a pump cover to protect your pump from the elements.** For more detail on our pump range available, visit our website.

4. Pump to tank connector kit

An all-inclusive kit that permits seamless connection from the tank to both our 0.37KW and 0.75KW Booster Pumps. **Important:** if our pump to tank connector is not used for connection from your tank to your pump, you will require 25mm diameter (minimum) pipe for this connection, as well as a gate/ball valve between your tank and your pump to isolate the water supply as and when needed.

5. Pipes

Assumed 3/4 inch galvanized pipes

5a. 20 mm diameter (minimum)

- from pump to house, to tie into mains.

5b. Supply tank with municipal feed to float valve at the top of tank.

6. Elbows

Sizes according to pipes and quantity according to installation/setup.

7. Float Valve Kit

Allows for effortless filling of a JoJo tank with an automatic shut-off. This can be manually done with a hose, or for a more permanent solution (like the one in our illustration), you can connect it to your plumbing line.

8. Ball valve/s

To isolate components and better manage the system. **Note:** it is advised to use these between your municipal feed and your tank, your tank and your pump, as well as your pump and the feed into your house.

9. Non-return valves

To ensure no back pressure to the main supply.

*Filtration

Option 1 - Undersink or Countertop Filter (placed inside at one tap for drinking purposes).

Option 2 - Whole-house Filter (placed outside to filter all the water used in your house).

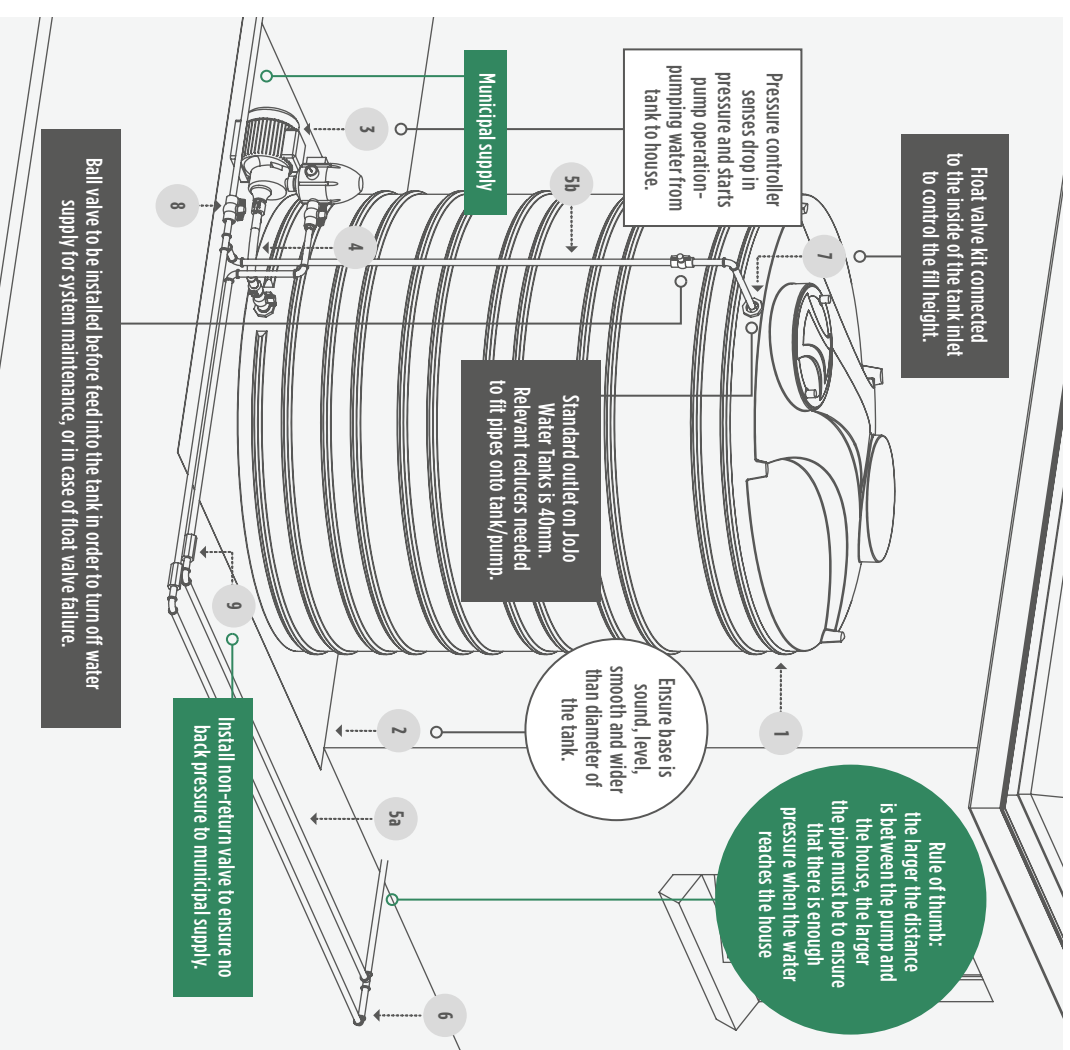
Treated municipal water is adequate for household use, but can require additional filtration depending on the quality. If you are unsure of the quality of water, we advise using a filter to remove any potentially harmful contaminants before using the water for drinking or cooking. For more information on our filtration range visit our website.



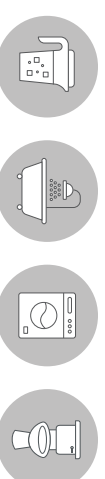
It is advised to make use of a plumber/professional installer as it is required to tie into the buildings main water supply line. To find a JoJo installer in your area, visit our website.

www.jojo.co.za

SYSTEM COMPONENTS



This is an example of a basic municipal backup installation. Each installation will vary based on the setup and personal preference.



2. MUNICIPAL BACKUP

PRE-INSTALLATION

1. Choose a tank

How to estimate what size tank would be sufficient for municipal backup:

People	1	2	3	4	5
Litres p/day	150	300	450	600	750

Size of tank = litres p/day X total days backup required
i.e. 4 x people (600L) X 3 days = 1800L

2. Tank placement

Should be placed where municipal supply can be intercepted, before entering the house.

3. Base/foundation options

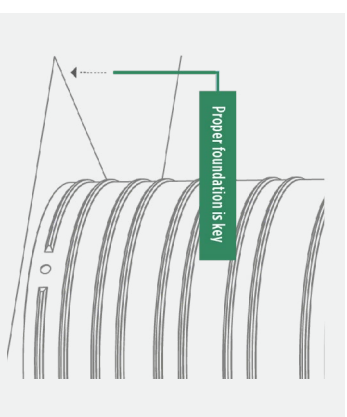
Tanks must be installed on a sound, level and smooth surface. Level paving will suffice, or a properly designed tank stand. Alternatively a concrete slab needs to be built, ideally with a concrete surface bed at least 85mm thick.

Recommended base sizes are:

Tank	Diameter	Base
750 L	760 mm	860 mm
1500 L	1410 mm	1510 mm
2400 L	1420 mm	1520 mm
2700 L	1420 mm	1520 mm
5250 L	1820 mm	1920 mm
10 000 L	2200 mm	2300 mm

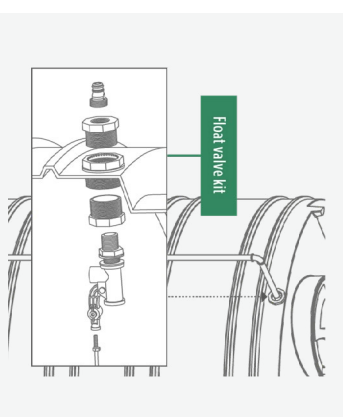
INSTALLATION

1. Base



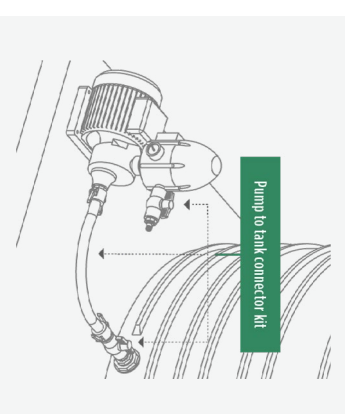
Ensure tank is installed on a suitable base. The base must be sound, level, smooth, free of any protrusions and at least 100mm wider than the base of the tank (refer to pre-installation).

4. Plumbing - municipal feed to tank



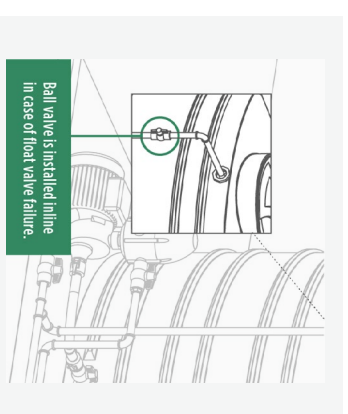
Supply the tank with municipal feed to float valve kit at the top of the tank. Ensure a ball valve is installed between the municipal feed and the float valve to shut-off feed as and when required.

2. Plumbing - tank to pump



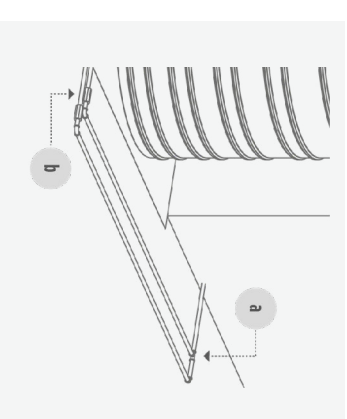
Use our all-inclusive pump to tank connector kit to connect your tank to your pump. Connect the pump to the electrical main supply (refer to pump manual for detailed guidelines).

5. Fill the tank



Ensure that the ball valve is open and fill the tank from municipal supply. When full, the float valve will close the water supply and when it drops it will open and allow the tank to be filled.

3. Plumbing - pump to house



- Use minimum 20mm pipe from pump to cut into mains (where possible).
- Install non-return valves between pump and mains, as well as the house and mains to ensure no back pressure to mains and pump.

6. Recommendation

You can circulate the water by:

- a Washing your car
- b Filling up the pool
- c Watering the garden

Use the water to get the level down inside your tank, and afterwards fill it up with fresh municipal water.

It is recommended that the water is run once every two weeks to rotate the water and ensure system functions properly.

3. FULLY INTEGRATED

FOR A BASIC SYSTEM YOU WILL REQUIRE THE FOLLOWING:

1. Tank

Refer to pre-installation on *page 14* for guidelines on the correct size tank for a fully integrated solution.

2. Base/foundation

Refer to the installation section on *pages 14 and 15* for more detail on a suitable foundation for your water tank.

3. Pre-filtration

- 3a. Tank Filter Screen - fitted beneath the lid
- 3b. Rainhead
- 3c. First Flush Rainwater Diverter

4. Pump and pump cover

When choosing a water pump, it is important to consider the water source, the application and the pressure required to ensure that the pump will meet your requirements. **To ensure all connections are visible, a pump cover was not included in this illustration, but we do recommend using a pump cover to protect your pump from the elements.**

For more detail on our pump range available, visit our booster pump section on our website.

5. Pump to tank connector kit

An all-inclusive kit that permits seamless connection from the tank to both our 0.37kW and 0.75kW VSD Booster Pumps.

Important: if our pump to tank connector is not used for connection from your tank to your pump, you will require 25mm diameter (minimum) pipe for this connection, as well as a gate/ball valve between your tank and your pump to isolate the water supply as and when needed.

6. Pipes - standard PVC pipes in 110, 80 or 75mm

For more detail and size guidelines refer to *page 4* in the *rainwater harvesting section*.

7. Pipes - for municipal backup connection

For more detail refer to *page 8* in the *municipal backup section*.

8. Elbows

- 8a. 110, 80 or 75mm depending on pipe sizes
- 8b. Sizes according to pipes

9. Ball valves

To isolate components and manage the system.

10. Non-return valves

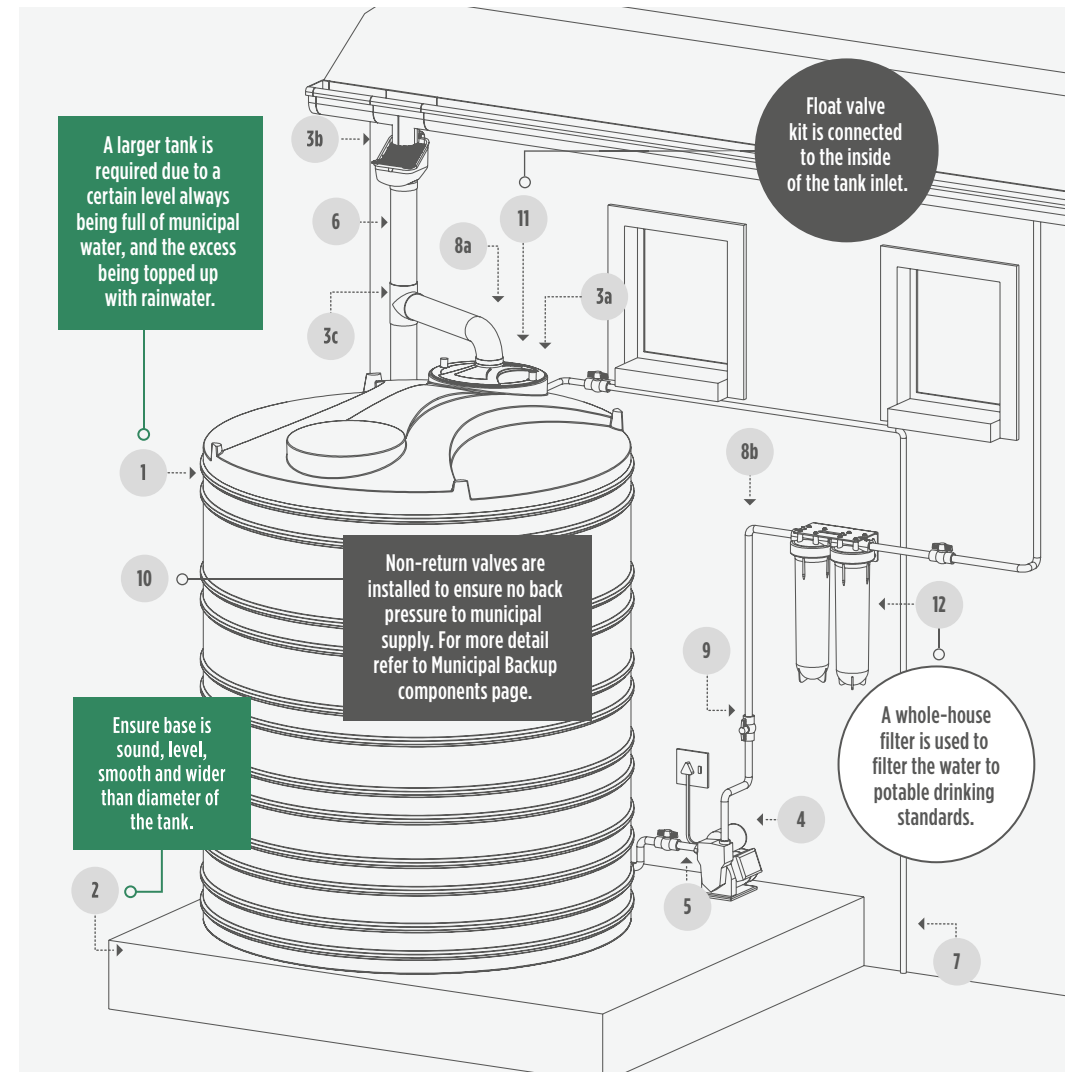
To control the fill height of the tank.

12. Filtration

Rainwater that is utilised for full domestic supply needs to be filtered to potable drinking water standards. It needs to be able to remove sediment, particulates and contaminants such as bacteria and any other potentially harmful substances that could be present in the water.

Refer to our website for our filtration range available, as well as detailed installation instructions for each product.

SYSTEM COMPONENTS



This is an example of a basic fully integrated installation. Each installation will vary based on the setup and personal preference.



It is advised to make use of a licensed plumber/professional installer as it is required to tie into the buildings main water supply line. To find a JoJo Installer in your area, visit our website.



3. FULLY INTEGRATED

PRE-INSTALLATION

1. Choose a tank

Size tank required for fully integrated = rainwater harvesting calculation + municipal backup calculation.

Calculation for Rainwater Harvesting

1mm of rain on 1m² of roof surface = 1 litre of water

Example:

Roof area of 100m² = 2500 litres in a rainfall event of 25mm

Alternatively, you can use the below size guidelines:

Roof p/m ²	Tank Size
50 - 100	750 L - 2400 L
100 - 300+	2700 L - 10 000 L

Calculation for Municipal Backup

People	1	2	3	4	5
Litres p/day	150	300	450	600	750

Size of tank = litres p/day X total days back up required
i.e. 4 x people (600L) X 3 days = 1800L

2. Tank placement

Will depend on space available plus access to suitable guttering/downpipes and main incoming water supply line.

3. Base/foundation options

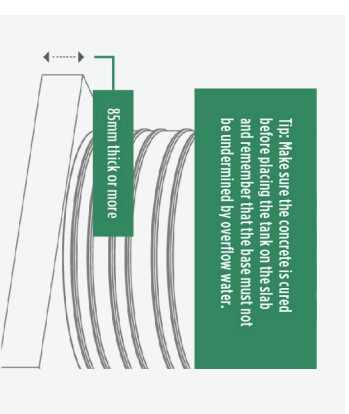
Tanks must be installed on a sound, level and smooth surface. Level paving will suffice, or a properly designed tank stand. Alternatively a concrete slab needs to be built, ideally with a concrete surface bed at least 85mm thick.

Recommended base sizes are:

Tank	Diameter	Base
5250 L	1820 mm	1920 mm
10 000 L	2200 mm	2300 mm

INSTALLATION

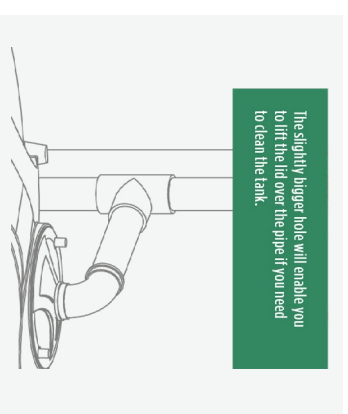
1. Base



Ensure tank is installed on a suitable base.

The base must be sound, level, smooth, free of any protrusions and at least 100mm wider than the base of the tank (refer to pre-installation).

4. Cut a hole in the lid



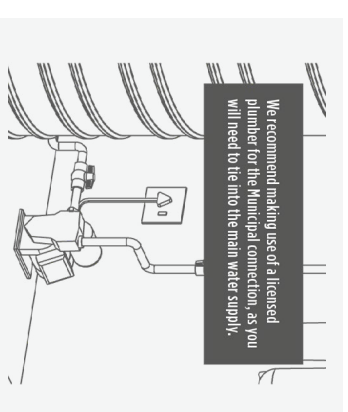
Cut a hole of 110.5mm in the middle of the lid and fit the pipe through the hole, stopping before the tank filter screen.

2. Select pre-filtration



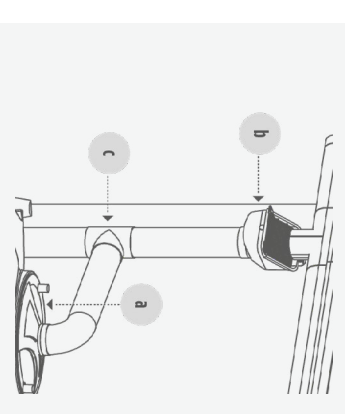
Select desired pre-filtration options. Pre-filtration will differ depending on preference and what the water will be used for.

5. Plumber's instructions



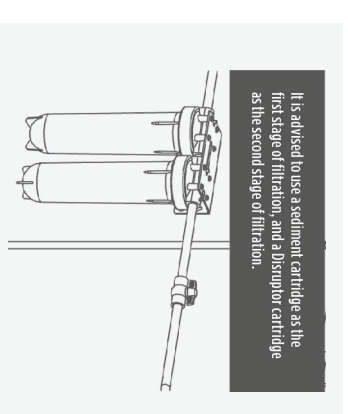
For detailed plumbing instructions please refer to steps 2 to 5 on *Municipal Backup Installation pages 10 and 11.*

3. Install pre-filtration



Install desired pre-filtration. For detailed instructions refer to steps 3 to 4 on *Rainwater Harvesting Installation pages 6 and 7.*

6. Install filtration unit



Install a Whole-house Filter with a Disruptor cartridge between the pump and the house to ensure your water is safe for consumption.