

IRRIGATION DESIGN

PLANNING GUIDE

FOR RESIDENTIAL / LIGHT COMMERCIAL
IRRIGATION SYSTEMS



HYDROFLOW

HYDROFLOW + RAIN BIRD



HYDROFLOW

CARE FOR QUALITY, WATER FOR LIFE.

Hydroflow is a wholesale distributor of plumbing, irrigation, gas, and rural water products to leading merchants across the nation. By partnering with renowned global brands, we bring you cutting-edge products and unparalleled technical support, empowering you with the highest quality solutions.

Empowering through Knowledge

At Hydroflow, we are driven by our commitment to 'Leading with Knowledge'. This core principle is ingrained in everything we do, allowing us to provide specialist technical support and literature, industry expertise, and innovative products. We believe that knowledge is power, and we strive to empower our customers through information and innovation.

Proud Partnership with Rain Bird

Hydroflow are proud to be the exclusive NZ distributor of established global brand, Rain Bird. Renowned for their unwavering commitment to quality and innovation in the irrigation industry, Rain Bird is a name synonymous with excellence. With their extensive range of products, we provide our customers the assurance of quality irrigation solutions that meet the highest standards.

Irrigation Services

Specialising in providing effective irrigation design services, Hydroflow is dedicated to staying at the forefront of industry innovation and ensuring that our customers receive only the highest quality products and service. Our team of experts are committed to delivering unrivaled solutions tailored to meet your unique needs.



THE INTELLIGENT USE OF WATER.

At Rain Bird, it is believed that it is their responsibility to develop products and technologies that use water efficiently. Their commitment also extends to education, training and services for our industry and our communities. Through innovative product development, Rain Bird is helping sustain healthier landscapes - and a healthier planet. A lush lawn or colourful garden can also be highly water efficient. Every Rain Bird product is a testament to that truth.

Innovative Conservation Technology

From water-saving nozzles to sprays with pressure regulating stems to leading-edge Smart Control Technology, Rain Bird products make the most of every drop, delivering superior results with less water. Keeping the world and your backyard beautiful. That's The Intelligent Use of Water.™

Effective and Efficient Irrigation

Starting now, you won't have to drag hoses and sprinklers around the garden. You'll get better watering coverage of your lawn, shrubs, trees and gardens, and by installing the irrigation system yourself, you'll save money and have the satisfaction of getting a job well done.

Fully Automated Irrigation System

A fully automatic Rain Bird irrigation system gives you all the convenience - just set your controller once, and the watering's done automatically on your allocated days and time of watering and even when you're away from home.

► Installing your new Rain Bird irrigation system is a breeze with this user-friendly step-by-step planner.

WHY CHOOSE RAIN BIRD PRODUCTS?

Rain Bird products are world famous for their water saving features

The best quality, performance and reliability

Peace of mind that your Rain Bird product is covered by Warranty

The very best advice from your Rain Bird distributor

AUTOMATIC IRRIGATION FOR A BEAUTIFUL LANDSCAPE WITH CONFIDENCE

An automatic irrigation system with a controlled water intake system allows you to:



Enjoy your spare time
While your automatic watering takes care of your lawn and garden.



Save water
Programmable controllers can apply water at night when evaporation is low.



Maintain the health of your landscape
By regular and controlled water supply.



Save money
Plants are watered according to their needs, without excess.



Have peace of mind
Enjoy your holiday knowing your lawn and garden are automatically maintained.



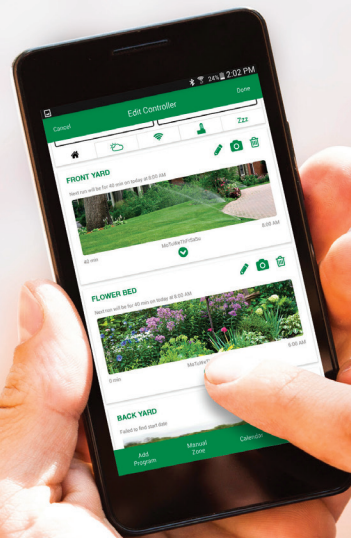
Protect the environment
All Rain Bird products are designed to use water as efficiently as possible.

GUARANTEED WATER SAVINGS

Controllers automatically monitor irrigation cycles, and sensors contribute to water savings by preventing irrigation systems from watering in the rain. Adding such devices can result in 25% or more in water savings.

These water savings will be achieved with a properly designed irrigation system, proper installation and regular system maintenance.

Tranquility for your garden, in agreement with the planet!



RAIN BIRD GUARANTEE

To be successful, your installation needs efficient and durable products. With 90 years of irrigation experience and as the worldwide leader, Rain Bird provides its customers with both product quality and the largest product offering in the market: spray heads, rotors, valves, 230V or battery-operated controllers, landscape drip fittings, accessories, and more!

YOUR CONTACT DETAILS

Name: _____

Address: _____

Daytime Contact Number: _____

Email address: _____

INFORMATION REQUIRED FOR DESIGN

- A scale plan/drawing of your property.
- Power supply location and controller preference.
- What you are wanting watered.
- Details of the water supply.

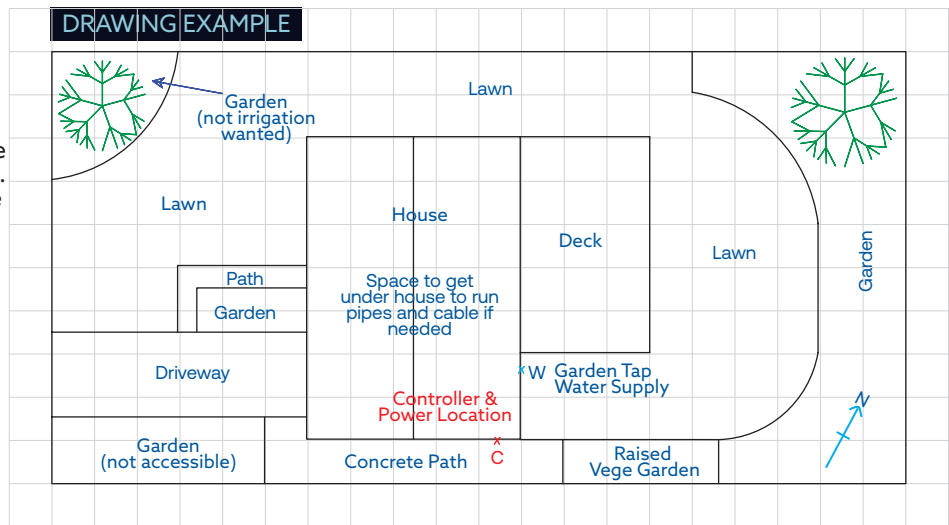
SCALE PLAN / DRAWING

The first step is to produce a scale plan/drawing of your property.

A landscape or building site plan would be ideal for this. Please ensure it has a scale or some measurements on it that show the size of the property.

Alternatively, using the included grid layout paper, draw your property, house etc to scale.

e.g.: 1 square = 1m. See example.



BOTH OF THE ABOVE OPTIONS WILL REQUIRE THE FOLLOWING NOTED ON THEM:

Areas to be irrigated - lawns, gardens, vegetables etc clearly marked.

Water supply type (pump, tap or mains tee-off) and location.

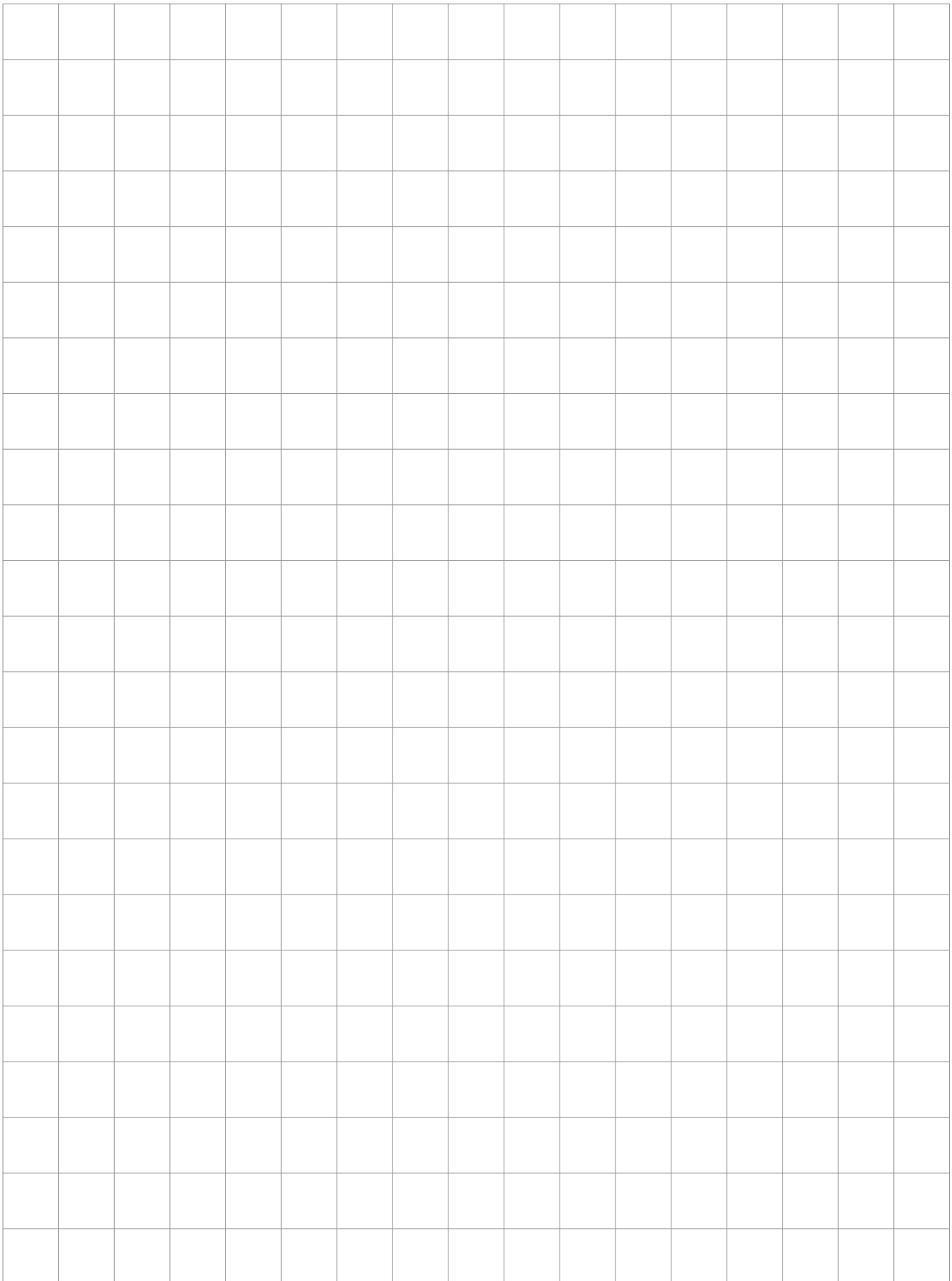
Power supply location (for powered controller) or note if battery controller preferred. Powered controllers are generally longer lasting, so if there is no power then think about having an electrician install a standard 3-pin 240V outdoor power socket.

Trees, decks, paths etc clearly marked and note whether there is under house access.

Indication of North.

SCALE PLAN / DRAWING

1 square = 1m.



WATER SUPPLY

The next step is to figure out the available water supply.

MAINS SUPPLY

If you are running the system from your mains water supply, then using the tap that you wish to have as your irrigation supply, or the tap closest to the properties mainline that you will be teeing into, do a 'bucket test' water supply test.

Grab a bucket (noting the size of the bucket, 10L is the best), have a stopwatch ready, turn your tap on full, place the bucket under the tap and time how long it takes to fill the bucket up.

NB: If you have access to a pressure gauge and isolation valve, fit them to the tap and take the bucket test at a pressure of 250kPa.

RECORD THE RESULTS HERE:

Bucket size (in Litres): _____ Time to fill bucket: _____

PUMP SYSTEM

If the system is to be run from a pump and you have an existing pump, then please note the make and model of the pump below:

Make: _____ Model: _____

If there is no pump existing, we will do a design and advise the pump requirements for the system to operate.

What is the storage capacity of your tank/s? _____ L

How is the tank topped up? Mains Supply Bore

If it is mains supply, please note if it goes directly into the tank or goes to an existing pump where it switches automatically between the pump and mains supply. Please do a bucket test on the mains supply as explained above.

If it is topped up via a bore, please provide bore details. Ideally, if you can supply a bore log would be great. Otherwise, we will need pump make and model, depth of pump, static water level and draw down level or a bucket test (as described above) taken from the bore outlet or where it goes into the tank.

PRODUCT SPECIFICATION

What type of controller do you want to use? Battery Mains Powered

Do you want to monitor/operate the controller when away from the property? Yes No

If yes, is there WiFi connection available? Yes No

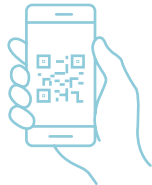
A rain switch/sensor is recommended, we will include one in the system unless you tick 'No'. No

Are the properties lawns soil or sand based? Soil Sand

Is the property flat or does it slope? Flat Sloped

WOULD YOU PREFER A DIGITAL FORM?

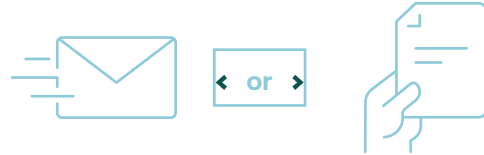
Please visit www.hydroflow.co.nz/resources/hydroflow-irrigation or scan the QR code below to download a digital version of this form.



◀ [Scan Here](#)

PLEASE COMPLETE AND RETURN YOUR FORM

Once you have completed your form, you can either:



Email your Form

Scan and email your completed form to

Return by Hand

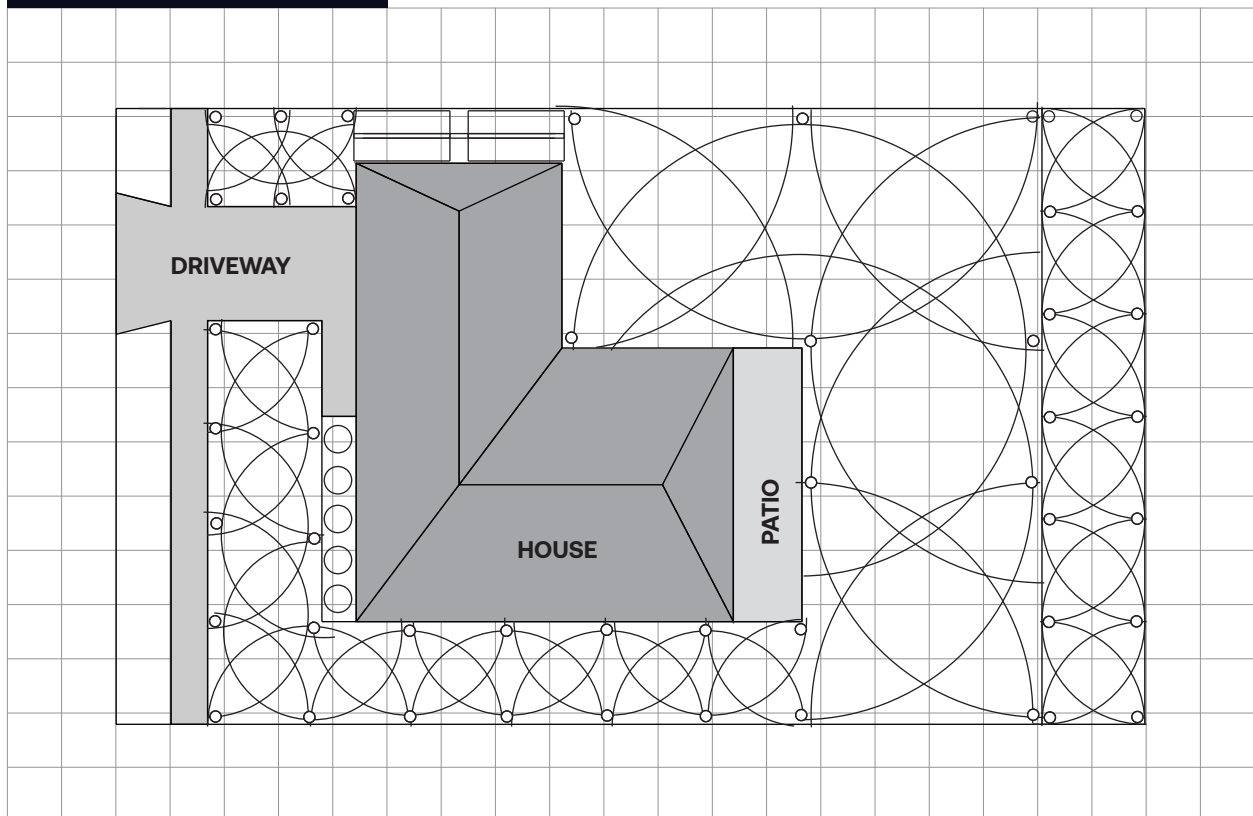
Return your completed form to the supplier who provided you with it.

WHAT HAPPENS NEXT?

With the information that is gathered, an irrigation design plan and parts list will be produced, which will be priced by your preferred supplier.

This plan will be provided without a key until the order or purchase of products is confirmed. Once confirmed, we will provide a keyed plan.

SPRINKLER LAYOUT EXAMPLE



BASIC COMPONENTS

A Rain Bird sprinkler system includes three basic components that deliver water to your lawn and garden. Each component has a specific function and is designed for your landscape's diverse watering needs.

1 Controller

This is the brain of the system. The controller automatically opens and closes valves according to a preset schedule. Rain Bird controllers have easy-to-set programs to help you efficiently manage seasonal adjustments. Rain Bird also has sensors that signal the controller to shut off the system when it rains.

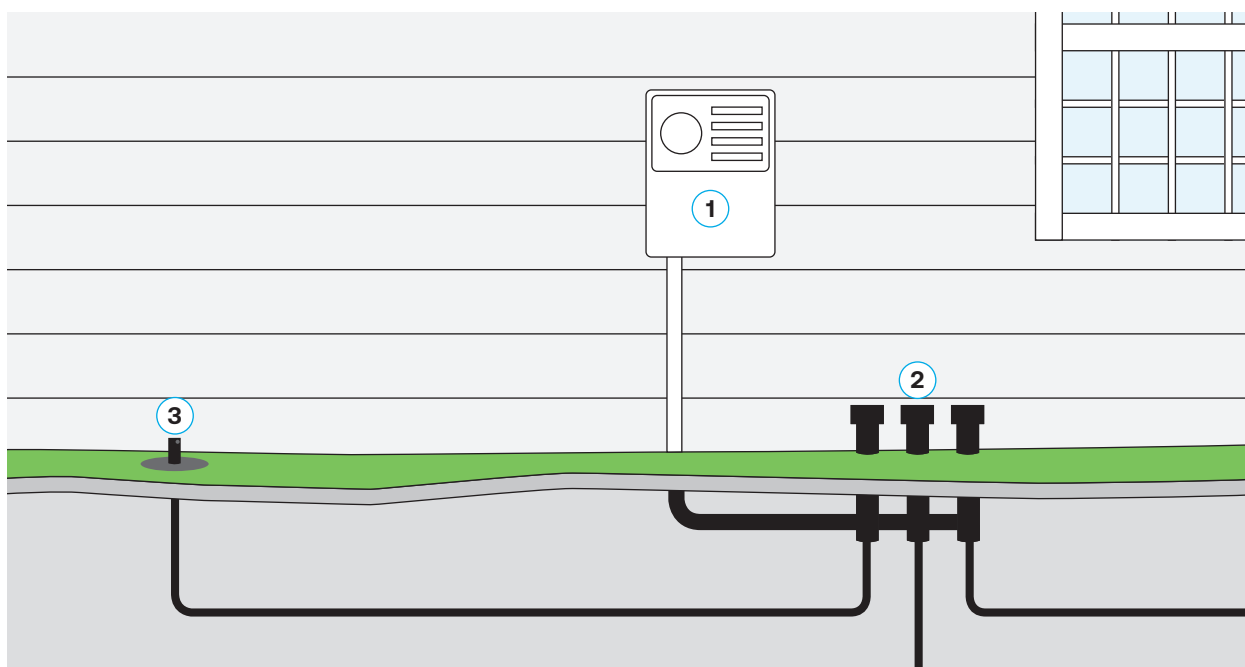
2 Valves

A valve is like a faucet. Valves respond to commands from the controller. When valves receive a signal to open, water flows to the sprinklers. When they receive another signal to close, the flow of water stops. You can be worry-free knowing Rain Bird valves are the most durable in the industry.

3 Sprinklers

The sprinklers distribute water. Rain Bird offers a complete line of sprinklers designed to be efficient, durable and reliable. Listed below are four categories of sprinklers or water emission devices.

AUTOMATIC SPRINKLER SYSTEM DIAGRAM



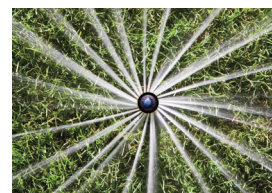
Sprays are installed in small to medium size lawn areas, around curbs and sidewalks, or around flowerbeds and shrubs. Hassle-free performance is a reason Rain Bird sprays are number one in the market.



Drip Irrigation, low-volume drip is used to efficiently water individual trees, flowerbeds, potted containers or other non-grass areas. Drip irrigation delivers water directly to the root zone, which helps plants thrive and reduces water loss due to evaporation.

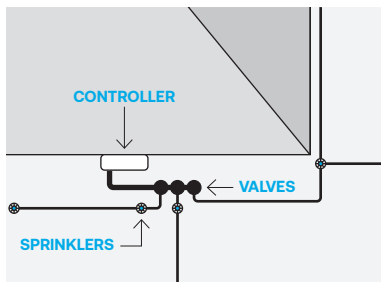


Rotors provide precise, even coverage for larger landscape areas. Rain Bird rotors are expertly designed to be reliable and water-efficient.

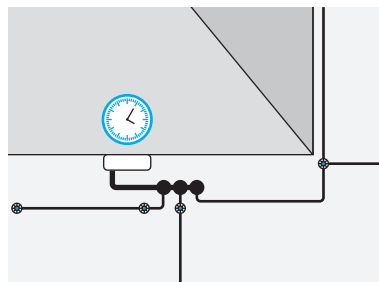


Rotary Nozzles fit on spray heads but they work like rotors. They deliver water at a lower precipitation rate than a spray, which makes them ideal for slopes or areas where erosion is a consideration.

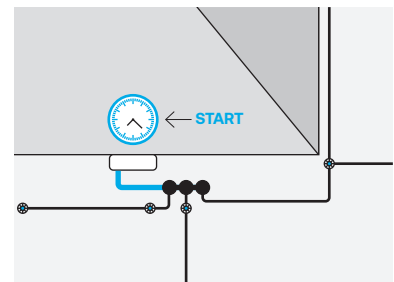
HOW IT WORKS



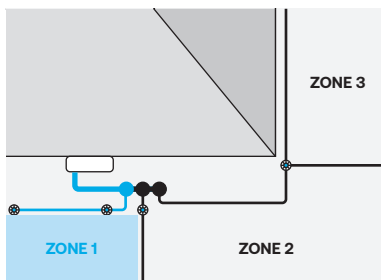
These basic Rain Bird automatic sprinkler system components efficiently and reliably work together, so you can relax and start enjoying your landscape.



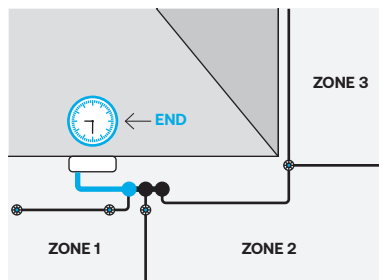
The controller stores the watering schedule.



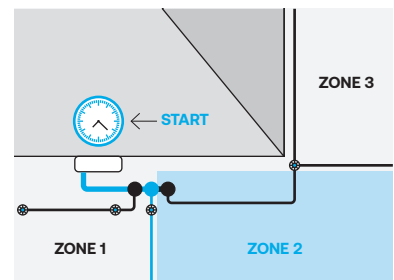
When the controller reaches a scheduled start time, a signal is sent to open one of the valves.



Each valve controls a group of sprinklers. Each group is called a zone or station. When the valve receives the controller's signal to open, water flows to the sprinklers installed in that zone.



At the end of the scheduled watering time, the controller signals the valve to close, which shuts off the water flowing to the sprinklers.



This process is repeated according to the watering schedule stored in the controller.



INSTALLATION TIPS

When it comes to installing your irrigation system, these tips will ensure a smooth and effective process.

▶ **Pegs**

Pegs are useful to mark locations of sprinklers and a string line will assist in keeping trenches straight. Trenching shovels or trenching machines can be hired to make trenching easier.

▶ **Assemble Screw Fittings**

Assemble fittings which screw together. Screw sprinklers to swing joints and then screw to tee or elbow. Screw threaded fittings into solenoid valves (thread seal tape should be used on all threads except where the swing joints screws into the sprinkler). Place these fittings alongside trenches where they are to be installed.

▶ **Trenches**

Dig trenches 100 - 150mm deep, putting any sod on one side and any dirt or soil on the other side of the trench. Ensure that when trenching that all telephone wires, gas and water lines are avoided.

▶ **Pipe**

Pin the pipe into the trench to avoid it working it's way to the surface.

▶ **Pop-up Sprinkler Installation**

When installing pop-up sprinklers, they are installed just below the surface. This avoids damage from lawn mowers. Pin the swing arm near the base of the sprinkler to reduce sprinkler movement and hand pack soil around the sprinkler body. Once all pipe work, cable and sprinklers are in place, flush the system so all dirt is removed. Check mainline for leaks, then install sprinkler nozzles.

▶ **Controller Installation**

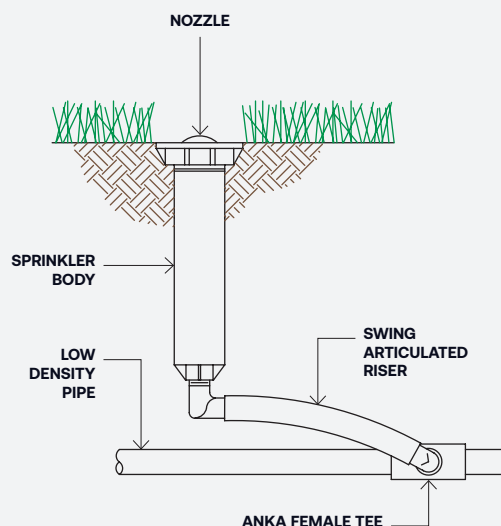
Rain Bird controllers have a 3-pin plug for easy connection to power. Low voltage wire as specified on the irrigation design is used for solenoid operation. This is run in the trenches to solenoids from controller. One wire is used from each valve to terminals on controller and the other wire is used as a common wire and is looped in series to each valve and then to a common terminal on controller. See image to right.

▶ **Valves**

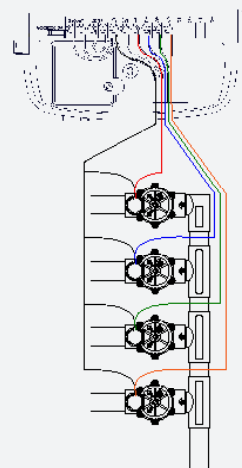
Open each valve and check for leaks and proper coverage. If satisfactory, cover valves with valve box, fill in trenches and replace sod.

Now you can sit back and relax and watch your garden grow while being watered automatically with your Rain Bird irrigation system.

SPRINKLER INSTALLATION EXAMPLE



CONTROLLER INSTALLATION EXAMPLE



THANK YOU FOR CHOOSING HYDROFLOW + RAIN BIRD

**Sit back, relax, and enjoy your
beautifully maintained lawn and garden
with our fully automated irrigation
system.**

NB: This document is intended for information gathering of what is needed to produce an irrigation design for your property. An irrigation design will be produced from the information on/in this document. No responsibility will be taken for an irrigation design that does not work should the information we are given be incorrect.