



# Automatic Irrigation



**RAIN**  **BIRD**®



## Editorial

At Rain Bird®, we believe it is our responsibility to develop products and technologies that use water efficiently. Since 1933, we have designed products of high quality, easy to use and friendly smart water use. This document gives you the keys to the implementation of an automatic irrigation adapted to your needs and allowing a rational use of water.

### Your irrigation project in practice

You will find in the middle of this brochure, a practical document that allows you to develop your project watering in 3 steps:

- Key elements to take into account
- calculations to consider
- Your garden map

**and lastly our tips for even more savings!**



### Automatic Irrigation for a Beautiful Landscape with confidence

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

- **To keep your spare time**  
while your automatic watering takes care of your garden.
- **In order to save water**  
it is applied by a programmable controller at night when evaporation is low.
- **To maintain the health of your landscape**  
by regular and controlled water supply.
- **To help save money**  
The plants are watered according to their needs, without excess.
- **To have peace of mind**  
enjoying your holiday knowing that your garden is automatically maintained. Quality market leader deposit will multiply your peace!
- **Protect the environment**  
through the intelligent use of water. 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 my garden, in agreement with the planet!

### The Contractor Guarantee

The contractor selects the most suitable products for your project based on the configuration of your landscaped area and the available water flow and pressure.

The contractor's commitment goes beyond the design and specification of your system. He will provide installation follow-up, and if necessary, system expansion.



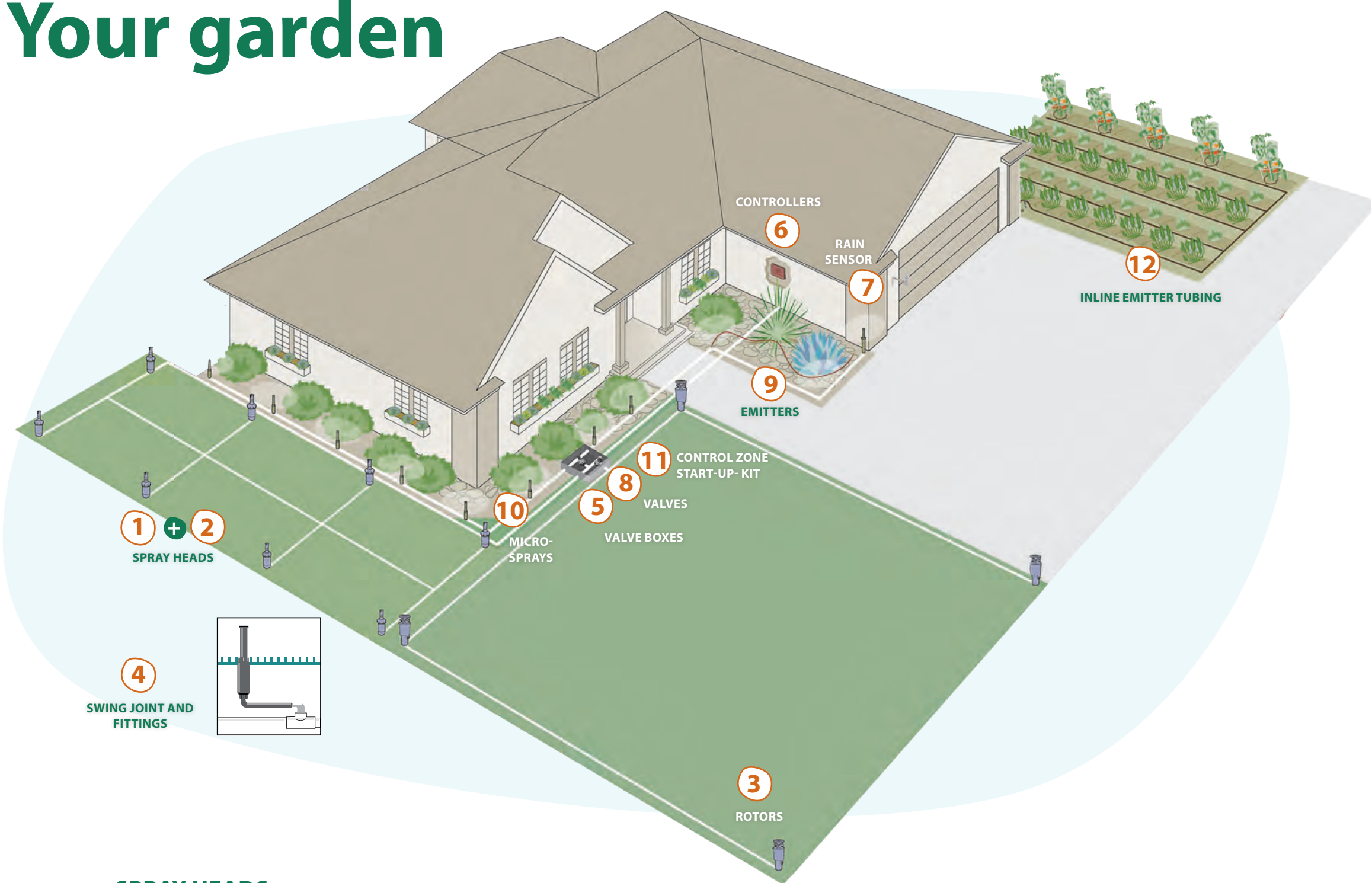
### Rain Bird Guarantee

To be successful, your installation needs efficient and durable products. With 80 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... One manufacturer, one system! You ensure compatibility between the various products.

Product details as well as technical data are available on [www.rainbird.eu](http://www.rainbird.eu)



# Your garden



## SPRAY HEADS

p 6



## ROTORS

p 7



## ACCESSORIES

p 7-8



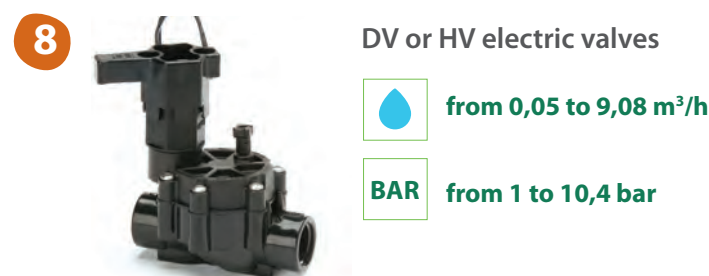
## CONTROLLERS

p 9



## VALVES

p 8



## EMITTERS

p 10



## MICRO-SPRAYS

p 10



## LOW VOLUME

p 10



Consult the Automatic Sprinkler Systems Interactive Guided Tour on our website [www.rainbird.eu](http://www.rainbird.eu) (homeowner section)



# Pop-up Spray Heads: for small areas

Pop-up spray heads are installed flush with the ground surface. Water pressure causes the nozzle to pop up and then pop down after watering is completed. Recommended for small turf and landscape areas, flower beds and shrubs.



Rotary nozzle



Fixed spray nozzle



UNI-SPRAY

+ benefits

Rain Bird quality at the best price.



1800

+ benefits

The market standard.



**Glossary:**  
**Arc:** circle portion covered by the spray of the sprinkler (0 to 360 °).

## Water-saving Tips

- Spray Heads can be equipped with SAM™, Seal-a-Matic check valves to prevent drainage at lower elevations, stopping water waste and eliminating landscape damage due to flooding and/or erosion.
- The Rotary Nozzles have efficient water distribution through rotating streams that uniformly deliver water at a low precipitation rate, significantly reducing run-off and erosion.

## Spray Head Variable Arc Nozzles (VAN)

These nozzles are ideal for watering irregularly shaped turf and shrub areas because it is easy to increase or decrease arc settings. For a better distribution uniformity, select He-VAN nozzles.



up to 5,5 m

## Rotary Nozzles for Spray Heads Beautiful irrigation that saves water

Designed to fit Rain Bird spray heads, these nozzles with multiple streams have approximately 60% lower flow than conventional spray nozzles. This feature allows more heads per zone, reducing overall system cost.



up to 7,4 m

# Pop-up Rotors: for small and medium sized areas

Water pressure causes the nozzle to pop up and then pop down after watering is completed. Rotors have adjustable arc from 40 to 360°. Recommended for small to medium-sized turf and landscape areas.



3504

+ benefits

1/2" inlet rotor, ideal for short to mid range.



from 4,6 to 10,7m



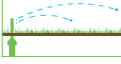
from 0,12 to 1,04 m³/h



5004/5004 plus

+ benefits

The world's best quality rotor, available with several options. 3/4" inlet.



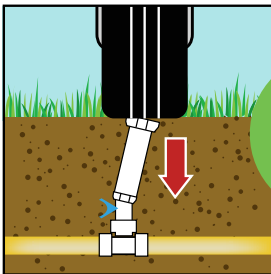
from 7,6 to 15,2m



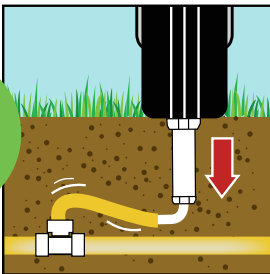
from 0,17 to 2,19 m³/h

## Accessories: Swing joint and fittings

A flexible swing joint assembly is ideal for rotor or spray head installations which may be exposed to car traffic or turf maintenance equipment. The assembly absorbs impact exerted on the underground rotor or spray head.



Installation on riser



Installation with SPX Flex and Fittings

## Water-saving Tips

- Rain Curtain™ Technology ensures superior water distribution for greener grass.
- All rotors with SAM™, Seal-a-Matic check valves prevent drainage from heads at lower elevations, stopping water waste and eliminating landscape damage due to flooding and/or erosion.



# Valves

Operated by a controller, electric valves open and allow the water supply to sprinklers or drip line.




## Low Flow Valve

DV DRIP - Low Flow



**+ benefits**  
Specifically designed for drip irrigation systems.

-  **from 0,045 to 1,136 m³/h**
- BAR** **from 1,0 to 10,3 bar**



## Valve boxes

They protect installed irrigation valves and battery controllers and allow easy access for maintenance and adjustment.

## Valves

DV and HV electric valves are ideal for residential installations. Available with 24V solenoid (for 230V controller) or with 9V solenoid (for battery powered controller).

DV




**+ benefits**  
The market standard.

HV



**+ benefits**  
Rain Bird quality at the best price.

-  **from 0,045 to 9,08 m³/h**
- BAR** **from 1,0 to 10,4 bars**

# Controllers

## 230 V Controllers

The controller tells the valves to open or close, turning the sprinklers on or off.

ESP-RZX



**+ benefits**  
Available in 4,6,8 stations versions.

ESP-Me



**+ benefits**  
Number of zones expandable from 4 to 22 stations.

## Water Timers

Very easy to program, these water timer is screwed onto an outdoor tap to automate low volume irrigation.

1ZEHTMR



**+ benefits**  
Ideal for balconies or small gardens.

## Rain Shutoff Devices

Electronic rain shutoff devices are indispensable in all automatic irrigation systems for residential use. They monitor rainfall or freeze levels and automatically override the controller to prevent unnecessary irrigation.

WR2 Rain Freeze sensor



RSD-Bex Rain sensor



SMRT-Y Soil moisture sensor



## Battery-powered Controllers

These battery-powered controllers are the ideal solution on sites where no AC power supply is available. They are 100% waterproof and fully submersible.

WP series

WP1



WP6



**+ benefits**  
Can be installed in a valve box.

WPX series



**+ benefits**  
Can be installed in a valve box.  
Create common program schedules in three easy steps.  
The LCD screen shows all of the programming for each zone at the same time.

## Designed for water saving

- Water budget** allows easy irrigation program adjustments to match seasonal needs.
- Rain delay**  
In the event of a prolonged rain, you can easily suspend the irrigation schedule using "Rain Delay" feature which enables system to stay off for a specified period with an auto-restart.
- Easy and customizable programming**  
All Rain Bird controllers simplify conservation through a variety of flexible programming features.



# Low Volume

Specially designed components deliver precise amounts of water directly to plants' root zones. Low volume (drip) irrigation is recommended for watering flower beds, hedges, planters, shrubbery, vegetable gardens and ground cover. The Rain Bird «Low Volume Irrigation» line makes sense wherever water conservation is an issue. Low volume irrigation not only saves time and energy. It also helps save our planet's most precious resource: [water](#).

## Control Zone Start-up Kit 1



The prepackaged 3 in 1 kit includes a filter, a pressure regulator and a low flow electric valve (DV Drip).

- +benefits**
- Provides all of the components necessary for on/off control, filtration, and pressure regulation in a single package, making them easy to install.

## Emitters 2



Self-regulating and self-piercing Rain Bird emitters allow 2-68 liters / h flow for precise watering of beds, shrubs and trees.

- +benefits**
- Pressure with compensating emitters with 3 flow rates (2,4 and 8 l/h). Emitters with self-piercing barbs, making them the easiest to install.

## Micro-sprays 3



Micro-sprays are ideal for watering flowerbeds, plant cover and potted plants.

- +benefits**
- Adjust flow/radius by turning integral ball valve.

### Water-saving Tips

- By placing water only where it is needed, drip products do not waste water on open spaces between plants in sparse planting applications. Water evaporation is also reduced.
- The use of drip products eliminates overspray onto buildings, walkways and roads.

# Low Volume

## Inline Emitter Tubing 4



The inline emitter tubing is ideal for irrigating any rows of vegetation, hedges, trees, shrubbery and ground cover. It is available in surface or sub-surface version.



- 1,6 or 2,3 l/h
- BAR from 0,6 to 4,1 bars

### +benefits

- Flexible**  
Provides industry leading flexibility for fast and easy installation.
- Durable**  
Resistant to chemicals, UV damage and algae growth.
- Reliable**  
Clog-resistant, water will keep flowing to your plant material.

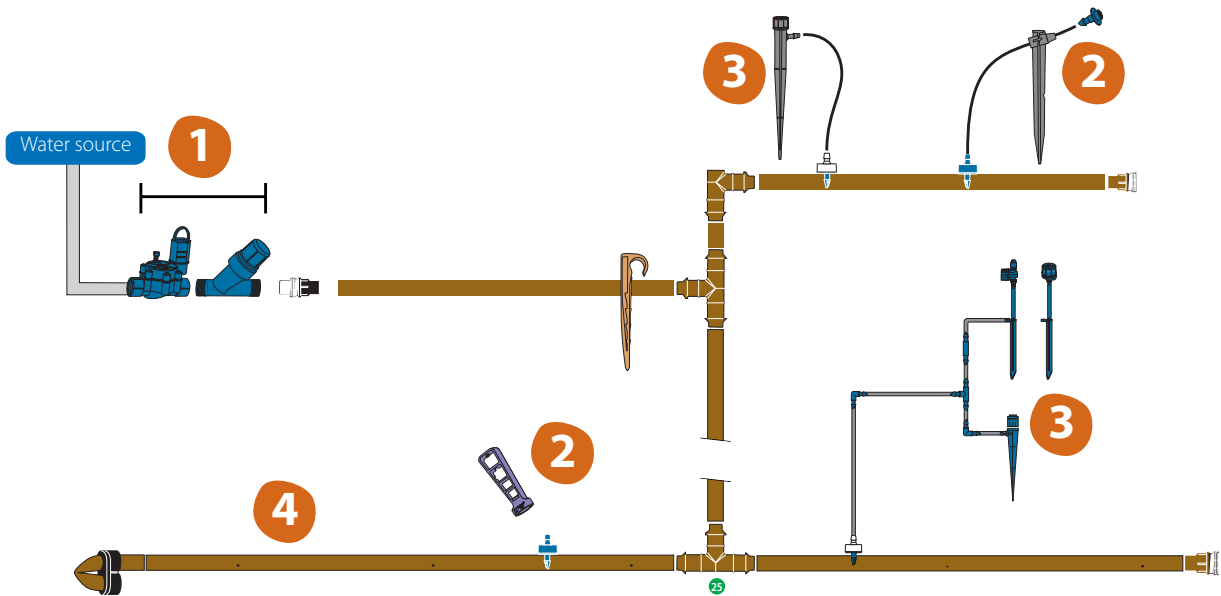
## Two best solutions



- XF Dripline**  
**Where is it used?**
- Shrub and groundcover beds
  - Seasonal color beds
  - Curved landscapes
  - Small confined areas
  - Areas where overspray is undesirable such as buildings, windows, and fences
  - Narrow landscapes
  - Areas affected by wind and evaporation



- XF Sub Surface**  
**Where is it used?**
- Narrow turf areas
  - Large turf areas
  - Sub-surface shrub and ground cover areas
  - Near buildings
  - Adjacent to parking lots
  - Small, confined areas
  - Athletic Fields
  - Green roofs



Local distributor: \_\_\_\_\_



**Rain Bird Europe SNC**

900, rue Ampère, B.P. 72 000  
13 792 Aix-en-Provence Cedex 3  
FRANCE  
Tel : (33) 4 42 24 44 61  
Fax : (33) 4 42 24 24 72  
rbe@rainbird.eu - www.rainbird.eu



**Rain Bird Sverige AB**

c/o Matrisen  
Nordenskiöldsgatan 6  
211 19 Malmö  
SWEDEN  
Tel : (46) 42 25 04 80  
rbs@rainbird.eu - www.rainbird.se



**Rain Bird Deutschland GmbH**

Königstraße 10c  
70173 Stuttgart  
DEUTSCHLAND  
Tel: +49 (0)711 222 54 158  
Fax: +49 (0)711 222 54 200  
rbd@rainbird.eu



**Rain Bird France SNC**

900, rue Ampère, B.P. 72 000  
13 792 Aix-en-Provence Cedex 3  
FRANCE  
Tel : (33) 4 42 24 44 61  
Fax : (33) 4 42 24 24 72  
rbf@rainbird.eu - www.rainbird.fr



**Rain Bird iberica S.A.**

Polígono Ind. Pinares Llanos  
c/ Carpinteros, 12, 2º C  
28 670 Villaviciosa de Odón, Madrid  
ESPAÑA  
Tel : (34) 91 632 48 10  
Fax : (34) 91 632 46 45  
rbib@rainbird.eu - www.rainbird.es  
Portugal@rainbird.eu - www.rainbird.pt



**Rain Bird Turkey**

Çamlık Mh. Dinç Sokak Sk. No.4 D:59-60  
34774 Ümraniye, İstanbul  
TÜRKİYE  
Tel: (90) 216 443 75 23  
Fax: (90) 216 461 74 52  
rbt@rainbird.eu - www.rainbird.com.tr

[www.rainbird.eu](http://www.rainbird.eu)



## Your irrigation project

This memo will help you develop your irrigation map, taking into account all the parameters of your project.

### Step 1

#### Determine the characteristics of your water supply

##### Measure the pressure of your installation

Expressed in bar, it is measured using a pressure gauge connected to your water inlet faucet. If you do not have a pressure gauge, ask the water company\* to indicate the water pressure or ask your professional contractor for help.

To operate correctly your installation must have at least 2,5 bar. If your pressure exceeds 5 bar a pressure reducer is necessary.

##### Calculate the flow of your installation

Expressed in cubic meters per hour ( $\text{m}^3/\text{h}$ ), you will find it on your water bill. You can also check it yourself: fill a 10-liter bucket with water, by using the nearest tap to the irrigation connection and check how long it takes to fill the bucket (in seconds). Your professional contractor can also calculate the flow for you. To operate correctly your installation must have a minimum flow of  $1,5 \text{ m}^3/\text{h}$ .

*\*If you use a pump, refer to the technical note which indicates the pressure and the flow available..*

#### Glossary:

**Pressure :** force exerted by water on a given surface

**Flow :** quantity of water provided during a given time

#### CALCULATION OF THE FLOW

$$\frac{\text{Contents (liters)}}{\text{Time (seconds)}} \times 3,6 = \text{flow in } \text{m}^3/\text{h}$$

In our example, we fill the bucket with 10 liters in 12 seconds.  
Using the formula above:  $10/12 \times 3,6 = 3 \text{ m}^3/\text{hours}$



## Information needed to draw the map of your garden

Fill out the form below.

Name: .....

Address: .....

Phone: .....

Project presented on: .....

Project completion scheduled for: .....

PRESSURE: BAR  
FLOW: m<sup>3</sup>/h

### • Cold Climate (my system might freeze during winter time)?

☐ Yes ☐ No

### • What is the water source?

☐ Mains water  
☐ Borehole Depth: \_\_\_\_ m  
☐ Water Well Depth: \_\_\_\_ m

**Important:** Please clearly indicate the water source location in your map

### • Pipe Type and sizing?

Pipe Diameter: \_\_\_\_ mm (external diameter)

☐ LD PE (soft black plastic)  
☐ Copper  
☐ Steel  
☐ PVC (hard grey plastic)  
☐ Other

### • What Type of controller do you want to use?

☐ 230/24V controller (power available) ☐ 9V battery-powered controller (power not available)

**Important:** Please clearly indicate the controller location in your map

### • Location of electric valves:

☐ Outside (in a valve box) ☐ Garage / technical premises

**Important:** Please clearly indicate the location of the electric valves in your map

### Comments:

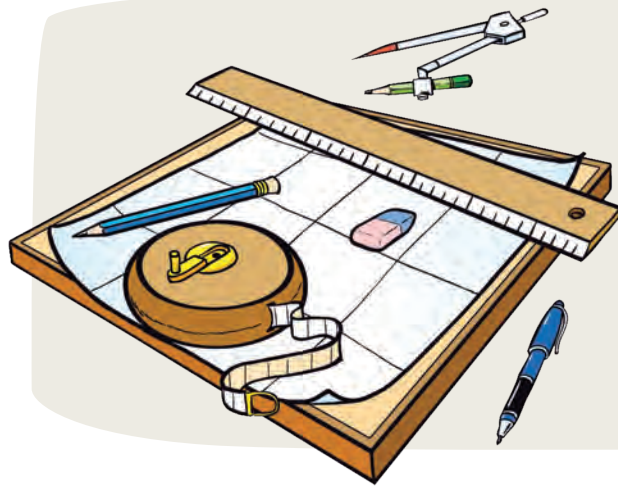
.....  
.....  
.....  
.....  
.....



# Step 3

## Your irrigation project

### Your garden project



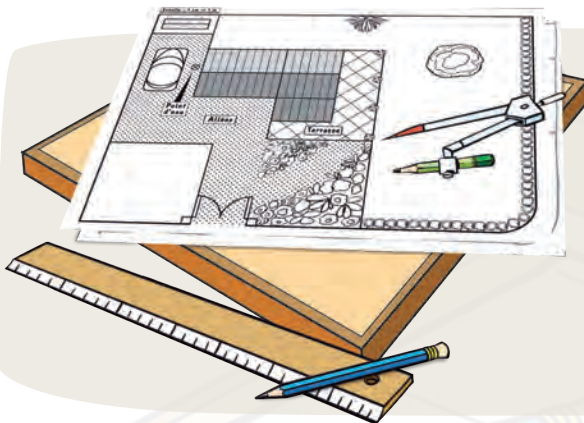
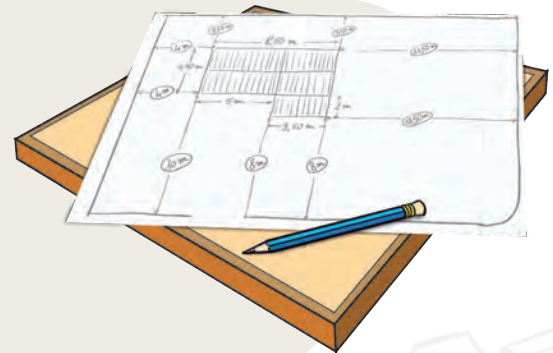
#### Draw a map of your garden

You will need:

- a sheet of paper
- a tape measure
- a compass
- a pencil
- a felt-tip pen
- a ruler
- an eraser

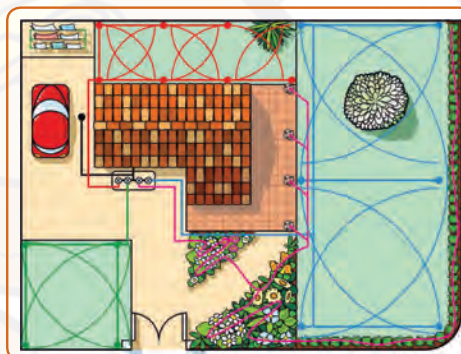
**Start the map of your garden** by locating the house and the property line.

- Draw the sidewalks, terraces, sheds, etc... using an angle of the house as a reference point.
- Indicate those areas which are to be watered & which are not to be watered.
- Also indicate the location of trees, shrubs, hedges and flower beds.



**After carefully completing the map, copy it on to the enclosed sheet of graph paper.**

**To get a professional design of your irrigation system, bring your garden map to your dealer.**



*Example of an installation design.*



# Your garden map

● Water source    ⌚ Controller    ✕ Valves

**Zones:**    1: Turf    3: Areas not to be watered  
              2: Bed of flowers and hedges    4: Building