



**Creating Beautiful Landscapes  
Is Easy With  
Rain Bird Drip Products**



## Drip Irrigation Made Easy

### **Table of Contents:**

---

#### **Water Supply Connections**

Pages 4-5

---

#### **Existing System Connections**

Pages 6-7

---

#### **How To Water Plants, Shrubs and Trees**

Pages 8-11

---

#### **How To Water Closely-Spaced Plantings**

Pages 12-13

---

#### **How to Water Narrow Planting Areas, Hedgerows and Vegetable Gardens**

Pages 14-15

---

#### **Fittings and Other Useful Drip Products**

Pages 16-17

---

#### **Designing Your Drip System**

Pages 18-19

---

#### **Drip Design Worksheets**

Pages 20-21

---

#### **Drawing Your Drip System**

Pages 22-23

### **Your Best Choice**

Rain Bird Drip is easy to install, it's versatile and you can add and remove drip devices as the need arises. And because it's Rain Bird, you know your system will last. So get started with confidence, knowing that changing your system is almost as simple as changing your mind.

### **Getting Started**

The first step in designing and installing your Rain Bird Drip system is determining whether you want a manual (Drip Connection Kit) or an automatic (Automatic Drip Zone Kit) system. You'll find more information about this in the section entitled "Water Supply Connections."

### **Drip Devices**

Next, you'll select the best drip devices to deliver water to your plant material. To help you make your selection, we've pictured different planting schemes in this guide and shown the recommended drip watering devices that should be used.

### **Completing the Design**

Once you've decided what type of watering devices you'll use, the information from page 17-23 will help you optimize your watering scheme and complete your design. Rain Bird Drip products are easy to use and reliable, expert advice is only a phone call away at 1-800-Rain Bird (1-800-724-6247).

## ***Drawing Your Drip System***

### Graph Chart



Graph Chart

Drip Emitters

1

XB-05A

.5 GPH



1a

XB-10A

1.0 GPH



1b

XB-20A

2.0 GPH



Xeri-Bubblers

5

SXB-180A


13 GPH



6

SXB-360A


13 GPH



9

XS-360TT

24.5 GPH



31

XS-360TS

24.5 GPH

Xeri-Sprays

7

XS-090A

31 GPH



8

XS-180A

31 GPH



9

XS-360TT

24.5 GPH



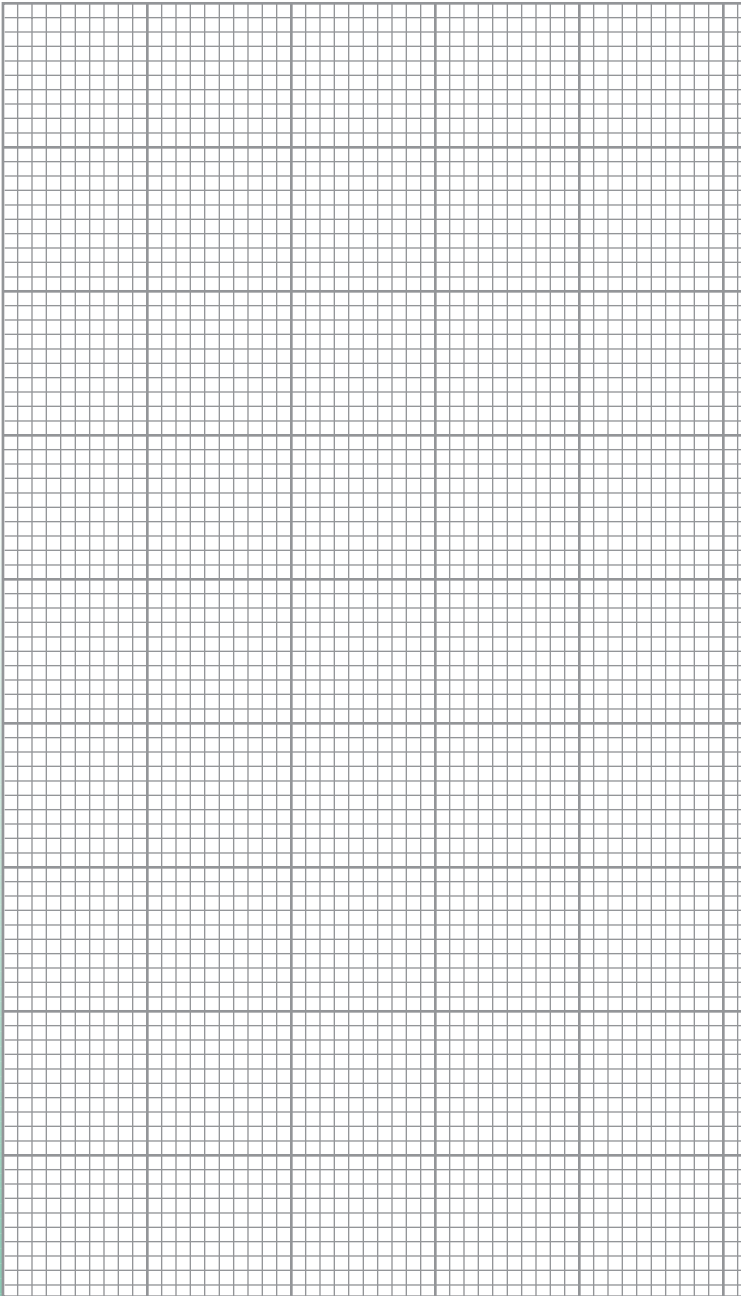
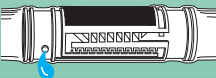
31

XS-360TS

24.5 GPH

Landscape Dripline

0.9 GPH per foot of  
Landscape Dripline



## Drip Product List

<b>1</b>	.5 GPH Emitter XB05-5PK	<b>22</b>	½" Comp Adapter 700CF1-4PK
<b>1a</b>	1 GPH Emitter XB10A-5PK	<b>23</b>	Drip Installation Tool XMT00L-1PK
<b>1b</b>	2 GPH Emitter XB20A-5PK	<b>24</b>	½" Compression Tee 700CF2-2PK
<b>2</b>	Diffuser DBC025A-5PK	<b>25</b>	½" Compression Elbow 700CF3-2PK
<b>3</b>	Goof Plugs EMAGPXA-20P	<b>26</b>	½" Compression Coupling 700CF4-2PK
<b>4</b>	Self-Piercing Barb Connector SPB025A-5PK	<b>26a</b>	Reducing Coupling 700CF5-2PK
<b>5</b>	Stream Xeri-Bubbler SXB180A-5PK	<b>27</b>	¼" Tubing Stake TS025A-5PK
<b>6</b>	Stream Xeri-Bubbler SXB360A-5PK	<b>28</b>	Pressure Regulator PSIL30X-1PK
<b>7</b>	90° Xeri-Spray XS090A-5PK	<b>29</b>	Pressure Regulator PRS050A-1PK
<b>8</b>	180° Xeri-Spray XS180A-5PK	<b>30</b>	Filter Element RBY200M-1PK
<b>9</b>	Xeri True-Spray XS360TT-5PK	<b>31</b>	Xeri True-Spray XS360TS-5PK
<b>11</b>	¼" Barb Connector BF1-10PK	<b>32</b>	Polyflex Riser/Stake PFRRSA-5PK
<b>12</b>	¼" Barb Elbow BF2-10PK	<b>33</b>	Tie-Down Stake TDS050-10PK
<b>13</b>	¼" Barb Tee BF3-10PK	<b>34</b>	Multi-Outlet Manifold XBD80-1PK
<b>14</b>	Mounting Clip MC025-10PK	<b>35</b>	Retrofit Kit RETRO-1PK
<b>15</b>	Six-Outlet Manifold EMT6XA-1PK	<b>36</b>	In-Line Filter RBY075-1PK
<b>16</b>	½" FPT x 10-32 Thread Adapter 1032ASC-2PK	<b>37</b>	Drip Tubing Cutter PPC200X-1PK
<b>17</b>	Spray Head Adapter XBA1800-2PK	<b>38</b>	¼" Drip Tubing - 50 ft DT2550-1PK
<b>18</b>	½" Comp x ¾" FHT Swivel 700CF20-1PK	<b>38a</b>	¼" Drip Tubing - 100 ft DT25100-1PK
<b>19</b>	¾" FHT x ½" MPT Adapter FHT050M-1PK	<b>40</b>	½" Drip Tubing (.6" x .7") - 50 ft XT70060005-1PK
<b>20</b>	700 Series Comp x ½" FPT Adapter 700CF50-1PK	<b>40a</b>	½" Drip Tubing (.6" x .7") - 100 ft XT70060010-1PK
<b>21</b>	Figure-8 End Closure 700CF22-2PK	<b>40c</b>	½" Drip Tubing (.6" x .7") - 500 ft XT70060050-1PK



### **Helpful Hint:**

*You can use this page to create a list of products needed.*

## Water Supply Connections

Rain Bird Drip provides a number of ways to introduce low-volume, drip irrigation to your landscape. From easy-to-install components that draw water directly from an outside faucet to automatic drip zones that allow you to schedule watering times with a battery controller or an existing sprinkler timer, Rain Bird has a drip irrigation solution for every budget.

### Simple Manual Connection

- This Drip Connection Kit makes it easy to connect your drip irrigation system directly to your faucet.
- It includes an atmospheric vacuum breaker for your faucet/hose bib (increasingly required by local plumbing codes), a combination filter/regulator [35] and the adapters [19] [20] needed to connect your drip system to your faucet/hose bib.



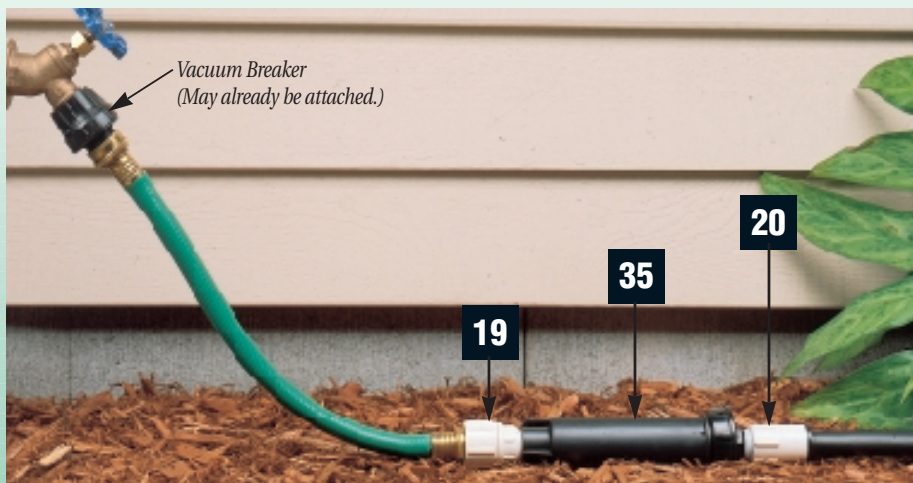
WTA-1875

#### ***Automate Your Manual Connection!***

- 3 start times per day
- Water daily or skip days
- Manual button for immediate watering
- Set timer dial to water from 30 seconds to 2 hours



*Drip Connection Kit*



Use desired length of garden hose to reach your drip tubing. Combined length of hose and drip tubing should not exceed 250 feet.



#### ***Helpful Hint:***

If system pressure exceeds 80 psi but is less than 130 psi, add a PSI-L30X [28] to your manual or professional connection.

## Calculating Your Total System Flow

In order to have a reliable drip system, it's important that your Total System Flow not exceed 240 GPH. Use the information in columns "D" and "H" from your Drip Design Worksheet (p. 20) and complete this page to determine your Total System Flow.

### Xeri-Bug™ Drip Emitters

Xeri-Bug Drip Emitter	Flow @ 15-50 psi (1-3 Bars)	# of Emitters	Flow
XB-05 [1]	0.5 GPH (2 l/h) x _____ = _____ GPH (l/h)		
XB-10A [1a]	1 GPH (4 l/h) x _____ = _____ GPH (l/h)		
XB-20A [1b]	2 GPH (8 l/h) x _____ = _____ GPH (l/h)		
Total Emitter Flow			= _____ GPH (l/h) ←

### Xeri-Bubblers™

Xeri-Bubbler	Flow @ 30 psi (2 Bars)	# of Xeri-Bubblers	Flow
SXB-180A [5]	13 GPH (49 l/h) x _____ = _____ GPH (l/h)		
SXB-360A [6]	13 GPH (49 l/h) x _____ = _____ GPH (l/h)		
XS-360TT [9]	24.5 GPH (95 l/h) x _____ = _____ GPH (l/h)		
XS-360TS [31]	24.5 GPH (95 l/h) x _____ = _____ GPH (l/h)		
Total Xeri-Bubbler Flow			= _____ GPH (l/h) ←

### Xeri-Sprays™

Xeri-Spray	Flow @ 30 psi (2 Bars)	# of Xeri-Sprays	Flow
XS-090A [7]	31 GPH (120 l/h) x _____ = _____ GPH (l/h)		
XS-180A [8]	31 GPH (120 l/h) x _____ = _____ GPH (l/h)		
XS-360TT [9]	24.5 GPH (95 l/h) x _____ = _____ GPH (l/h)		
XS-360TS [31]	24.5 GPH (95 l/h) x _____ = _____ GPH (l/h)		
Total Xeri-Spray Flow			= _____ GPH (l/h) ←

### Landscape Dripline

Ft. of Landscape Dripline	# of Inline Emitters	Flow per Inline Emitter	Flow
_____	= _____	x 0.9 GPH (3,5 l/h)	= _____ GPH (l/h) ←
Total System Flow			= _____ GPH (l/h) ←

Questions? 1-800-724-6247



Drip Design Worksheet

Drip Design Worksheet

Plant List			Drip Device Selection				
(A) Plant Type*	(B) Daily Water Requirement	(C) Qty of This Plant Type	(D) Drip Device Chosen	(E) Flow Rate (GPH)	(F) # of Drip Devices Per Plant	(G) Total Flow Per Plant (E) x (F)	(H) # of Devices For Plant Type (C) x (F)

\* Start with low water usage plants first, then medium, then high. Determine your Daily Watering Time in Hours as follows. From the list above, select the plant type that uses the least amount of water on a daily basis. Divide its Daily Water Requirement (B) by the Total Flow (G) being delivered to the plant by the selected drip devices. The result is the number of hours or fraction of an hour to water daily.

\* To determine run time for Xeri-Sprays or Landscape Dripline, divide calculated inches per hour by inches per day from plant water requirements on page 19.

Daily Watering Time



### Professional Connections



Automatic Drip Zone Kit

- Contains everything you need to control the flow of water to a drip irrigation system\*.
- Kit includes an Easy Rain™ Battery Controller, XBV-075 ball valve, RBY-075-200MX in-line filter, 75-DVX remote control valve, PSI-L30X pressure regulator and two  $\frac{3}{4}$ " x 1  $\frac{1}{2}$ " schedule 80 nipples.



Automatic Anti-Siphon Drip Zone Kit

- Contains everything you need to control the flow of water to a drip irrigation system in areas which allow atmospheric back-flow preventers\*.
- Kit includes an Easy Rain Battery Controller, XBV-075 ball valve, RBY-075-200MX in-line filter, 75-ASVF irrigation valve with flow control and atmospheric backflow preventer, PSI-L30X pressure regulator and two  $\frac{3}{4}$ " x 1  $\frac{1}{2}$ " schedule 80 nipples.



### Automate Your Drip Irrigation!

- Each automatic drip zone kit includes a Rain Bird Easy Rain™ controller.
- The Easy Rain controller automatically turns your drip irrigation system on and off for precise, pre-set periods of irrigation.
- Its battery-operated, single-knob control makes installation and programming easy.
- For worry-free drip irrigation, nothing's more convenient than Easy Rain.

\* Consult your local plumbing code for backflow prevention requirements.



#### Helpful Hint:

If you want to connect your drip zone to an existing controller, combine an In-Line Filter [36] and Pressure Regulator [28] with a DV valve and ball valve from underground section of store.

## Sprinkler System Conversion



### 35 RETRO

Easily converts existing spray system to water-saving drip. Filtration and pressure regulation in one convenient package. Screws onto  $\frac{1}{2}$ " riser in place of spray head. Other sprinklers may be capped off if desired.

- Great for retrofit of existing spray system
- Provides 30 psi pressure regulation
- Built-in 200-mesh filter
- $\frac{1}{2}$ " MNPT swivel outlet for serviceability
- Flow: 0.5 to 4.0 GPM (30-240 GPH)  
Pressure: 15 to 70 psi



\* These two T's handle most common sizes of drip tubing.



### 29 PRS-050A

When your pressure exceeds 50 psi, use this convenient regulator to deliver a consistent 30 psi to your drip components. Ideal for use with EMT-6XA [15] and XBD-80 [34].  $\frac{1}{2}$ " FPT x  $\frac{1}{2}$ " MPT configuration. O-ring seal permits direct burial.

### 34 XBD-80 Eight-Outlet Manifold with Easy Access, 200-Mesh Screen

- Eight independent outlets
- Built-in screen unscrews at top
- Accepts Xeri-Bug™ emitters [1, 1a, 1b] and PC Modules (0.5-24.0 GPH per port)
- Internal plugs permit shut-off by port
- O-ring base nut permits removal from riser without tangling  $\frac{1}{4}$ " tubing



**Helpful Hint:**  
Always install emitters with pointed end up as shown.

# Designing Your Drip System

## Plant Water Requirements

While it's best to ask your local nursery or the Ag Extension Department of your state University or College for plant water requirements, this chart is provided as a guideline.

Plant (Mature Canopy Diameter)	Water Required Per Day (Avg.)		
	Cool Climate	Warm/Humid Climate	Hot/Arid Climate
Small Shrub (3 ft/91 cm)	0.3 G (1.2 l)	0.5 G (1.9 l)	0.8 G (3.1 l)
Large Shrub (5 ft/1.52 m)	0.7 G (2.7 l)	1.4 G (5.4 l)	2.1 G (8.1 l)
Small Tree (10 ft/3.05 m)	2.7 G (10.3 l)	5.4 G (20.5 l)	8.1 G (30.8 l)
Large Tree (20 ft/6.10 m)	10.9 G (42.2 l)	21.7 G (84.1 l)	32.6 G (126.3 l)
Ground Cover	.1 in/day (0.25 cm/day)	.1 in/day (0.25 cm/day)	.2 in/day (.5 cm/day)
Bedding Plants	.1 in/day (0.25 cm/day)	.1 in/day (0.25 cm/day)	.2 in/day (.5 cm/day)
Container (small)	0.2 G (0.8 l)	0.3 G (1.2 l)	0.4 G (1.6 l)
Container (large)	0.3 G (1.2 l)	0.4 G (1.6 l)	0.6 G (2.3 l)

To determine inches/hr of water applied by Landscape Dripline use the following formula:			
	$\frac{18.24}{\text{inches between rows of Landscape Dripline}}$	=	_____ inches per hour of water applied
To determine inches/hr of water applied by Xeri-Sprays:			
	$\frac{7960.1}{\text{inches between rows of Xeri-Sprays}} \times \frac{\text{average inches between Xeri-Sprays}}{\text{inches between rows of Xeri-Sprays}}$	=	_____ inches per hour of water applied

## Professional Watering Guidelines

**240 GPH or 4 GPM** (900 l/h or 15 l/m)  
Maximum flow recommended through 1/2" drip tubing **[40]**, **[40a]** or **[40c]**.

**250 Feet** (75 m)  
Maximum length of 1/2" drip tubing **[40]**, **[40a]** or **[40c]** that can be run directly from the water supply to and through your watering area.

**Questions? 1-800-724-6247**

## Design Process Overview

Drip design is basically about estimating the daily water requirements of your plants and then choosing the best drip devices to deliver the required water efficiently. You can use the table on page 19 to estimate your plant water requirements or, when possible, ask your local nursery or call the Ag Extension Department at your state University or College. Your Rain Bird drip system is easy to modify, so proceed with confidence.

### Step 1: Creating Your Plant List

On page 20, group your plant material by approximate water usage. Most professionals group plants into one of three categories: High Water Use, Medium Water Use and Low Water Use. For example, most trees, palms, annuals and color would fall into the “high” group. Roses, shrubs and individual plants would fall into the “medium” group. Plants that are native to your area and do well without much supplemental watering once they are established would fall into the “low” group category. Whenever possible, use a separate drip line to water your trees.

### Step 2: Selecting Your Drip Devices

Review pages 8 to 15 and use that information to select the drip device best suited to each of your plants. Note the drip devices you select and their maximum flow rates on the Drip Design Worksheet on page 20. Then, follow the instructions on page 21 to determine the “Total System Flow” for your drip irrigation system.



*Landscape Dripline shown with supplemental emitter installed at end of 1/4" tubing.*

## Existing System Connections

### Adapters for 1/2" Risers and Rain Bird Spray Heads



*Before: Brass Shrub Spray*

#### 16 10-32ASC

- Threads onto any 1/2" NPT riser
- Accepts any Xeri-Bubbler™ [5, 6] or Xeri-Spray™ [7, 8, 9]
- Includes 200-mesh, in-riser screen (SR050-200X)



*After: SXB-360A Stream Xeri-Bubbler*

#### 17 XBA-1800 Adapter

- Threads onto any Rain Bird spray head or shrub adapter
- Accepts any Stream Xeri-Bubbler [5, 6] or Xeri-Spray [7, 8, 9]
- 200-mesh, under-adapter screen included (1800SC-200X)



#### 38 1/4" Drip Tubing-50 ft DT2550-1PK

#### 38a 1/4" Drip Tubing-100 ft DT25100-1PK

- UV-resistant for long-term reliability
- Extends emitter outlets to desirable location
- Fits over barbed outlet ports and 1/4" barbs



#### 40 1/2" Drip Tubing (.6" x .7") - 50 ft XT70060005-1PK

#### 40a 1/2" Drip Tubing (.6" x .7") - 100 ft XT70060010-1PK

#### 40c 1/2" Drip Tubing (.6" x .7") - 500 ft XT70060050-1PK

- Thick-walled flexible drip tubing
- Resists kinks and damage
- UV-resistant for long-term reliability



#### 15 EMT-6XA Six-Outlet Manifold

- Economical
- Uses 1/4" distribution tubing to deliver water directly to plant root zone
- Install desired emission device; Xeri-Bug™ emitter [1, 1a, 1b], Stream Xeri-Bubbler [5, 6] or Xeri-Spray [7, 8, 9] at end of each 1/4" tubing line
- Optional installation on 1/2" elbow as shown above allows 1/4" tubing to run parallel to the ground



**Questions? 1-800-724-6247**



Emitters: The Most Efficient Way To Water

Rain Bird Xeri-Bug™ drip emitters put the water right where it's needed—at the plants' root zones. For long-term reliability, use Tubing Stakes [27] and Diffuser Bug Caps [2] with your Xeri-Bug emitters as shown. Place under mulch for maximum water savings or just above the mulch if you want to see the water. For best results, do not bury emitters underground.





For 1/4" tubing length ≤ 5 feet (1.5 m)



For 1/4" tubing length > 5 feet (1.5 m)

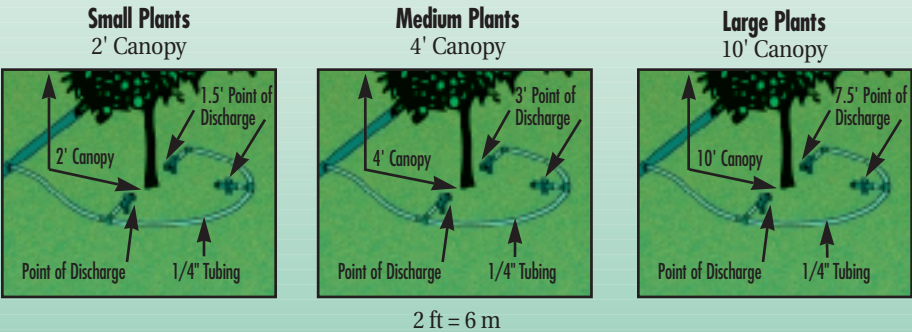
Choosing The Right Emitter


	Emitter		Best In
1	1/2" GPH (2 l/h)		Clay Soils
1a	1 GPH (4 l/h)		Loamy Soils
1b	2 GPH (8 l/h)		Sandy Soils



**Helpful Hint:**  
If runoff occurs, split your watering time into 2 or 3 shorter cycles. This will allow the water time to soak in.

Emitter Placement For Best Results





**Helpful Hint:**  
Use multiple emitter discharge points placed three-quarters of the way from the trunk to the outer canopy of the plant as shown above. Space emitters equally apart as follows: 2 – 180°; 3 – 120°; 4 – 90°; etc. This watering scheme maximizes the efficiency of your drip system.

## Fittings and Other Useful Drip Products

### Fittings and Helpful Hints

To ensure optimum performance and installation ease, we recommend the following guidelines:

#### Water Supply Connections

- Use an appropriate back-flow prevention device approved by local plumbing codes.
- Use a 200-mesh filter, even with city water.
- If pressure exceeds 50 psi, use a 30 psi pressure regulator.

#### Design Considerations

- Don't exceed 240 GPH (gallons per hour) or 4 GPM (gallons per minute) through  $\frac{1}{2}$ " drip tubing.
- Don't run  $\frac{1}{2}$ " drip tubing [40] more than 250 feet in any one direction.
- Use two or more emitters when watering large plants, shrubs and trees. Space equally from one another in a circle three-fourths of the way between the trunk of the plant and the outermost canopy of the plant.
- Don't run more than five feet of  $\frac{1}{4}$ " tubing [38] from the end of any pressure-compensating Xeri-Bug™ [1, 1a, 1b] emitter.

- When your  $\frac{1}{4}$ " distribution tubing run is more than five feet, but less than 15 feet, insert the SPB-025A [4] into the  $\frac{1}{2}$ " drip tubing [40] and install Xeri-Bug emitters, Xeri-Sprays™ and Xeri-Bubblers™ at the end of the  $\frac{1}{4}$ " tubing [38].

#### Installation Tips

- Use metal or plastic tubing stakes to anchor drip tubing in the ground.
- Use compression tees, elbows and couplings for leak-free connections on your  $\frac{1}{2}$ " drip tubing.
- Flush drip line thoroughly before installing any emission devices, then install a Figure-8 end closure [21] at the end of the drip line.
- Use pressure-compensating emitters for convenient, even watering throughout the entire length of tubing.
- Don't forget to use stakes (TS-025A [27]) and Diffuser Caps (DBC-025A) at the end of  $\frac{1}{4}$ " tubing [38] whenever you use a pressure-compensating Xeri-Bug emitter [1, 1a, 1b].

- Verify flow from all emission devices before you mulch over the planting area with bark nuggets. Mulch conserves water, insulates soil and hides tubing. Always install Diffuser Caps (DBC-025A [2]) when using shredded mulch.

- Don't mismatch compression fittings with the outer diameter of the drip tubing. Use the table below to ensure leak-free connections.

#### Maintenance Tips

- When using city water, annual filter inspection is typically sufficient provided you have flushed your drip line during installation.
- When using non-city water, check your filter after the first month of operation. How dirty the filter is after one month will help you determine how often you should clean your filter in the future.

O.D. Inch	Color Code of Compression Ends	Tubing
.620 - .630	Green	Landscape Dripline
.680/.700	Black	Drip Tubing

**Questions? 1-800-724-6247**

## Fittings and Other Useful Drip Products



11 1/4" Barb Connector for [38] 1/4" tubing



12 1/4" Barb Elbow for [38] 1/4" tubing



13 1/4" Barb Tee for [38] 1/4" tubing



14 Mounting Clip holds [38] 1/4" tubing when attached to wood surface



18 Threads onto outside faucet or hose; accepts [40] 1/2" drip tubing (.7" O.D.)



19 Converts garden hose threads to 1/2" MPT threads



20 Adapts drip tubing (.7" O.D.) to 1/2" FPT threads



21 Figure-8 End Closure used to close the end of drip tubing line



22 Glues into 1/2" slip PVC fitting; accepts [40] 1/2" drip tubing (.7" O.D.)



24 Compression Tee accepts [40] 1/2" drip tubing (.7" O.D.)



25 Compression Elbow accepts [40] 1/2" drip tubing (.7" O.D.)



26 Compression Coupling accepts [40] 1/2" drip tubing (.7" O.D.)



28 3/4" In-line 30 psi pressure regulator



30 200-mesh replacement filter

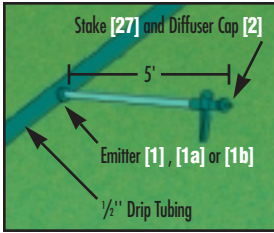


36 3/4" In-line "Y" filter with 200-mesh screen

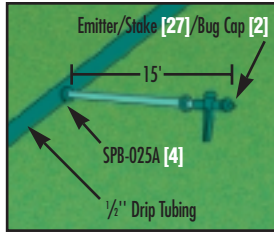


# How To Water Plants, Shrubs and Trees

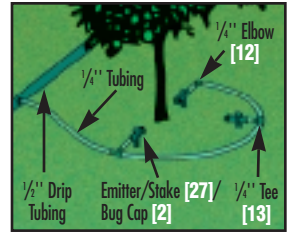
## Installation Tips



5 ft max = 1.5 m of 1/4" tubing [38]



15 ft max = 4.5 m



1/4" tubing max flow = 40 GPH @ 30 psi



### Helpful Hint:

Use 1/4" Tees [13] to feed multiple emitters [1]/[1a]/[1b] from one 1/4" line. Use 1/4" Tubing Stake [27] and Diffuser Bug Cap [2] as shown for long-term reliability.

## Easy Installation With XM-TOOL



Insert emitter into 1/2" drip tubing



Attach 1/4" tubing to outlet barb



Insert 1/4" tubing thru stake



Insert diffuser bug cap into 1/4" tubing



Push stake into ground at base of plant

23

**XM-TOOL**



- Position emitter on the XM-TOOL [23]



- Remove Xeri-Bug emitters [1, 1a, 1b] from drip tubing quickly, cleanly and without leaving gaping holes



- EMA-GPXA [3] goof plugs easily insert into drip tubing hole with XM-TOOL [23]

37

**PPC-200X**

Cut your drip tubing cleanly and conveniently with Rain Bird's purple tubing cutters

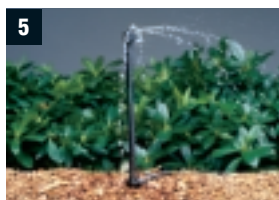


**Questions? 1-800-724-6247**

## Visible And Easily Adjustable Drip Watering

Use Rain Bird Xeri-Bubblers™ when you want to make your drip system visible and when you need on-the-spot adjustments. They're also ideal if your water supply is from a well, pond or stream with high mineral content. Xeri-Bubblers unthread easily for quick cleaning.

### SXB-180A



- Half-circle operation
- 5 gentle streams
- Turn outer cap to adjust flow/radius from full on to full off

### SXB-360A



- Full-circle operation
- 8 gentle streams
- Turn outer cap to adjust flow/radius from full on to full off

### XS-360TS



- Adjusted to low flow, this Xeri-Spray™ can turn into an umbrella bubbler
- Turn outer cap to adjust the flow/radius to desired flow

## Choosing The Right Xeri-Bubbler

### Xeri-Bubbler

### Best In

- 5** Max 13 GPH/2' Radius @ 30 psi  
Max 49 l/h/0.6 m Radius @ 2 Bars



Loamy and Sandy Soils

- 6** Max 13 GPH/1 1/2' Radius @ 30 psi  
Max 49 l/h/0.4 m Radius @ 2 Bars



Loamy and Sandy Soils

- 31** Max 24.5 GPH/6.7' Radius @ 30 psi  
**9** Max 95 l/h/2 m Radius @ 2 Bars



Loamy and Sandy Soils



### Helpful Hint:

*If runoff occurs, split your watering time into 2 or 3 shorter cycles. This will allow the water time to soak in.*



### Helpful Hint:

*These devices are well-suited for container use.*



### Helpful Hints:

- 1) Use up to three 1/4" (8 mm) Tees [13] to feed up to three Xeri-Bubblers from one 1/4" line.
- 2) Install the SPB-025A [4] with the XM-TOOL [23] the same way you would install an emitter. (See pg. 9)
- 3) Limit 1/4" tubing [38] lengths to no more than 15'. Maximum flow through 1/4" tubing must not exceed 40 GPH @ 30 psi.

## How To Water Narrow Planting Areas, Hedgerows and Vegetable Gardens

### Landscape Dripline Waters Hedgerows Conveniently

- Use the tees and elbows in the Landscape Dripline Kit to loop the Landscape Dripline around the hedgerow for optimum results.
- Connect the end of this loop to the beginning of the loop with an elbow and a tee. Professionals use this method to ensure long-term reliability.
- For hedgerows that are longer than 25', link two or more kits together. Follow these guidelines based on your water pressure at the start of your Landscape Dripline run.
  - 35 psi – 200 feet maximum
  - 45 psi – 230 feet maximum
  - 60\* psi – 260 feet maximum



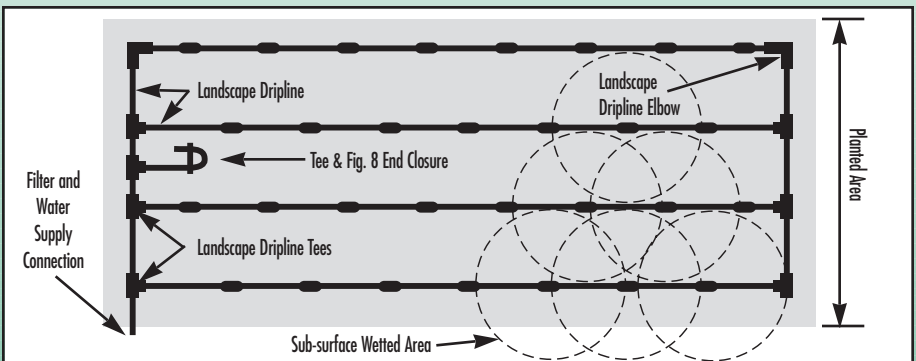
### Landscape Dripline for Vegetable Gardens

Landscape Dripline is great for vegetable gardens because it delivers an even amount of water to the entire vegetable garden. In addition, extra Rain Bird emitters can be inserted directly into the Landscape Dripline if you have certain plantings that need extra water. Simply install your Landscape Dripline as shown in the diagram below.

### Adapting A Landscape Dripline Grid To Larger Planting Areas

Landscape Dripline can also be used to water larger planting areas using the grid approach. Simply use the spacing between the Dripline rows suggested in the table at right.

Spacing Between Landscape Dripline Rows	Best In
12"	Sandy Soil
18"	Loamy Soil
24"	Clay Soil



\*When pressure exceeds 45 psi, clamps must be used to secure the Landscape Dripline tubing to the Landscape Dripline fittings.

**Questions? 1-800-724-6247**

## Superior Alternative to Soaker Hose

Landscape Dripline waters evenly from beginning to end, won't clog and connects easily to your garden hose or faucet. Use it to water narrow planting areas, hedgerows or vegetable gardens. You can even insert extra Rain Bird emitters ([1], [1a], [1b]) into Landscape Dripline to deliver more water to larger plants or to containers located several feet away from your installation.

- Individual emitters are pre-installed into Landscape Dripline
- Each inline emitter delivers 0.9 GPH (gallons per hour)
- Operating pressure: 8-60 psi
- Clog-resistant



## Landscape Dripline Connects Easily To Your Garden Hose

Everything you need to connect Landscape Dripline to your garden hose is included in the Landscape Dripline Kit Model LDK-50X – including 50' of Rain Bird Landscape Dripline. This tubing can be installed permanently in the area to be watered and then connected to your hose whenever watering is desired.



*Heavy-duty filter assures clog-free performance.*



*Landscape Dripline attaches easily to your garden hose.*



*Landscape Dripline stakes snap onto tubing and hold it securely in place.*

## Landscape Dripline Waters Narrow Planting Area Efficiently

- Landscape Dripline keeps water right where you want it – in the narrow planting bed.
- Landscape Dripline won't overspray onto windows, walls or walkways.
- Landscape Dripline even works great under mulch to maximize your water savings.



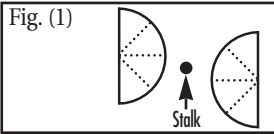
### **Helpful Hint:**

*If unwanted runoff occurs, split your watering time into two or three shorter cycles. The total watering time should be at least as long as the single watering time. These shorter cycles provide time for the water to soak in.*

## Xeri-Bubbler Placement For Best Results

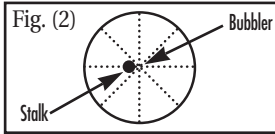
Xeri-Bubblers [5], [6] and the XS-360TS [31], adjusted to perform like an umbrella bubbler, should be installed so that the wetting pattern covers as much of the area underneath the canopy of the plant as possible.

## Placement for 1/2 Circle Xeri-Bubblers



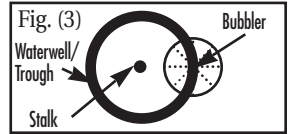
**Fig. (1)** Place two SXB-180A Xeri-Bubblers [5] three quarters of the distance from stalk to canopy as shown.

## Placement for Full Circle Xeri-Bubblers



**Fig. (2)** Install one SXB-360A Xeri-Bubbler [6] or one XS-360TS [31] close to the stalk as shown.

### Placement for use with waterwells/troughs

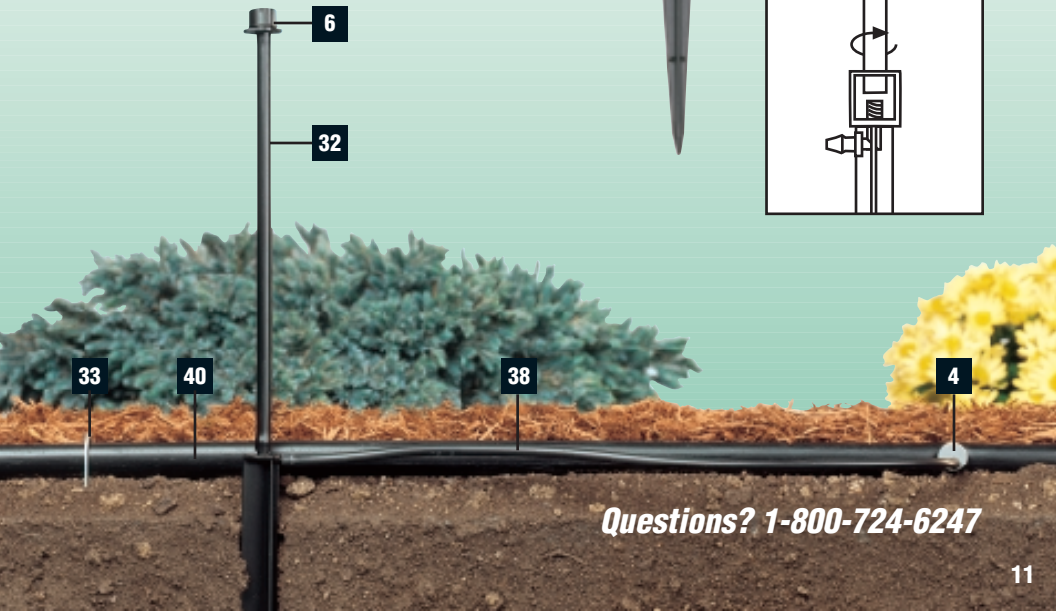
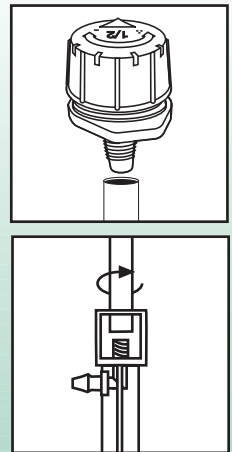
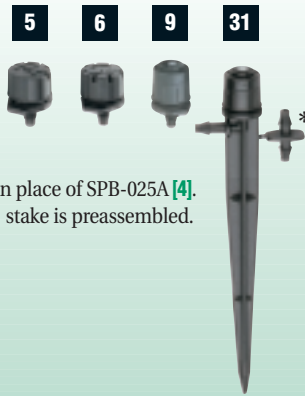


**Fig. (3)** Install one SXB-360A Xeri-Bubbler [6] or one XS-360TS [31] in the trough as shown. Adjust to capture water in trough.

## Xeri-Bubbler Installation Tips

A Xeri-Bubbler [5]/[6] is designed to thread onto the flexible riser that is part of the Riser Stake Assembly [32]. The PPC-200X [37] pipe cutters allow you to easily cut the 12" riser to the desired height.

\* This 1/4" barb can be pulled off and used in place of SPB-025A [4].  
No riser stake assembly [32] required as 5" stake is preassembled.



**Questions? 1-800-724-6247**

## Closely-Spaced Plantings

Use Rain Bird Xeri-Sprays™ when you need to water closely-spaced plants with similar water requirements. This includes ground cover and annual color where drip watering each individual plant would be impractical and very time consuming.

### XS-090A



- Quarter-circle operation
- Turn knob to adjust flow/radius from full on to full off

### XS-180A



- Half-circle operation
- Turn knob to adjust flow/radius from full on to full off

### XS-360TT



- Full-circle operation
- Turn outer cap to adjust flow/radius from full on to full off

## Choosing The Right Xeri-Spray

### Xeri-Spray

### Best In

- 7** Max 31 GPH/10.3' Radius @ 30 psi  
Max 120 l/h/3,2 m Radius @ 2 Bars



Any Type  
of Soil

- 8** Max 31 GPH/10.6' Radius @ 30 psi  
Max 49 l/h/3,2 m Radius @ 2 Bars



Any Type  
of Soil

- 31** Max 24.5 GPH/6.7' Radius @ 30 psi  
**9** Max 95 l/h/2 m Radius @ 2 Bars



Any Type  
of Soil



#### Helpful Hint:

*If runoff occurs, split your watering time into 2 or 3 shorter cycles. This will allow the water time to soak in.*



#### Helpful Hint:

*These devices are also well-suited for container use.*



#### Helpful Hint:

*The watering requirements for young trees greatly increase over time (1-5 years). By using a separate watering line for trees, you can increase watering as the tree grows without overwatering other plants that would have been on the same irrigation line.*



## How To Water Closely-Spaced Plantings

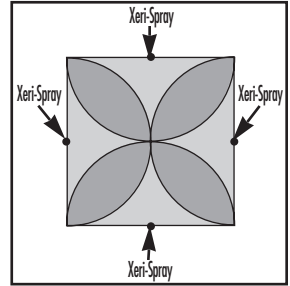
### Xeri-Spray Placement For Best Results

Xeri-Sprays [7]/[8]/[9]/[31] should be installed so that their spray patterns overlap completely. This head-to-head pattern provides the most effective coverage while saving water at the same time.



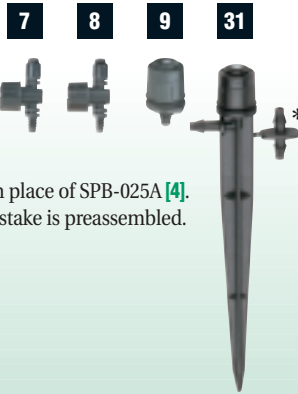
#### Helpful Hint:

*Reducing the radius of a Xeri-Spray reduces the flow proportionally. Designing your system based on maximum flows provides greater watering flexibility later.*

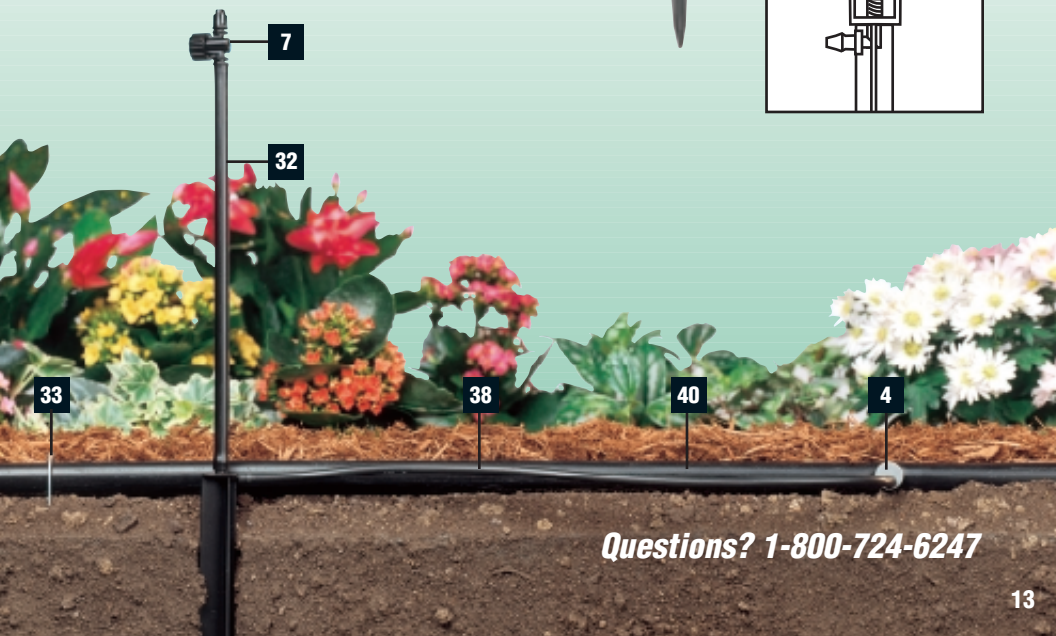
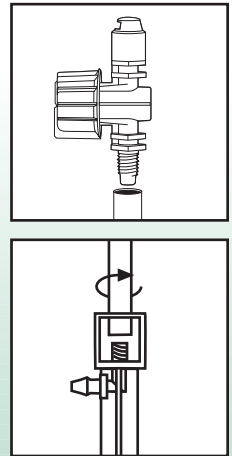


### Xeri-Spray Installation Tips

A Xeri-Spray [7]/[8]/[9] is designed to thread onto the flexible riser included with each Riser Stake Assembly [32]. The PPC-200X [37] pipe cutters allow you to easily cut the 12" riser to the desired height.

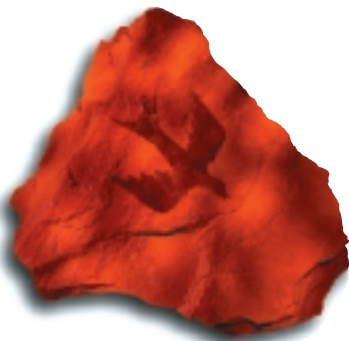


\* This 1/4" barb can be pulled off and used in place of SPB-025A [4]. No riser stake assembly [32] required as 5" stake is preassembled.



Questions? 1-800-724-6247

### Our commitment to managing natural resources is legendary.



An ancient Indian legend tells of a terrible drought that befell the land hundreds of years ago. Crops withered and the watering holes dried up. For a generation there was no relief. Everyone but the children gave up hope. Then, one day, a great bird overheard the children's simple, urgent prayers. The bird flew to the heavens and returned with the long-awaited, life-giving rain. The bird-like appearance of the efficient impact sprinkler, which the company founders introduced to the world in 1935, prompted them to name their new company after the great rain bird of Indian legend. And so the modern Rain Bird legend was born.

Since our dramatic entrance into the market more than 60 years ago, Rain Bird has grown into the largest manufacturer of irrigation systems in the world. Quality products. Water-saving solutions. Worldwide service and support. At every step, our focus has been to manage and conserve our planet's most valuable, natural resource—water. Rain Bird. Because every drop counts.



**Rain Bird Sales, Inc.**

970 West Sierra Madre Avenue  
Azusa, CA 91702  
1-800-724-6247

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