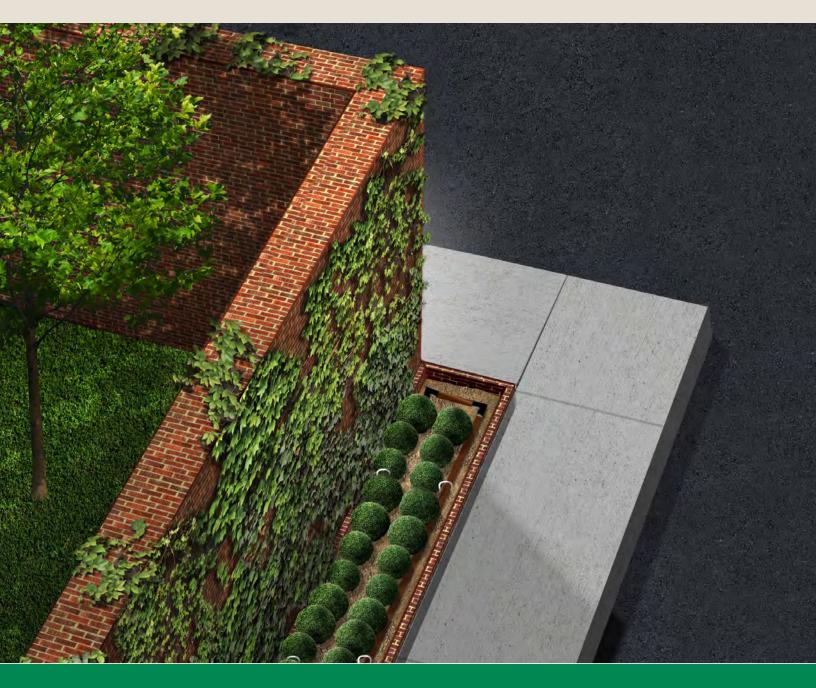


Landscape Drip Application Guide

A Practical Guide for Designing and Installing Drip Irrigation Systems



The Intelligent Use of Water™

The Efficiency of Drip, Engineered by Rain Bird[®]

The Rain Bird's low volume irrigation products were coined with the phrase "Xerigation" in the 1990's and include drip irrigation and low volume spray products. The Rain Bird Xerigation system is the most efficient way to water landscapes.

Over the last fifteen years, Rain Bird has been a leader in innovation advances that customers value. Earlier advances included the Xeri-Pop[™], the first efficient low volume spray with a spray head that retracts out of sight, the self-cleaning back flush filter that reduces maintenance by automatically flushing out debris, and the PR Series Pressure Regulating Filter that combined the regulator and filter into one component reducing the potential for leaks.

Today, Rain Bird continues the tradition of innovation with the SQ Series Nozzle and the XF Series Dripline featured below. With the broadest product line, Rain Bird's Xerigation systems can be designed to meet any site requirement providing unmatched quality, efficient water use, and ease of installation.

Featured Rain Bird® Drip Products





SQ Series Nozzle

For irrigating small areas with dense plantings, the SQ Series Nozzle is the most precise and efficient nozzle available. With built-in pressure compensation and a unique square spraying pattern, the need for overlapping is greatly reduced. This means less overspray, overwatering, and runoff than traditional nozzles. It also means you need less nozzles, dramatically reducing your costs and installation time.

XF Series Dripline (XFD/XFCV/XFS)

The XF Series Dripline is the most flexible, pressurecompensating inline emitter tubing available. Its unique material offers significantly greater flexibility, allowing tighter turns with fewer elbows for easier installation. The dual-layered tubing (brown over black) provides unmatched resistance to chemicals, UV damage and algae growth.



Control Zone Kits

Control your zones with preassembled, compact Rain Bird Control Zone Kits. Two components (valve and pressure regulating filter) are combined to create a shorter kit, when compared with the competition. This allows you to fit more control zone kits in a single valve box without cramping the work space inside the box, saving you time and money.

Benefits of Xerigation®

- Design flexibility
- Elimination of overspray and runoff
- High water efficiency
- Water is delivered at or near the plant root zone
- Plants stay healthier and live longer

It is Rain Bird's long-standing commitment to engineering and quality excellence that sets our drip irrigation products apart.

Demonstrated Water Savings

Inland Empire Utilities Agency (IEUA) Building - Chino, CA

Solution: Rain Bird developed a comprehensible irrigation system for the IEUA site, including Xerigation products.

Results: 73% less water used than a comparable facility. First public agency building to ahieve a LEED Platinum Rating.



www.rainbird.com

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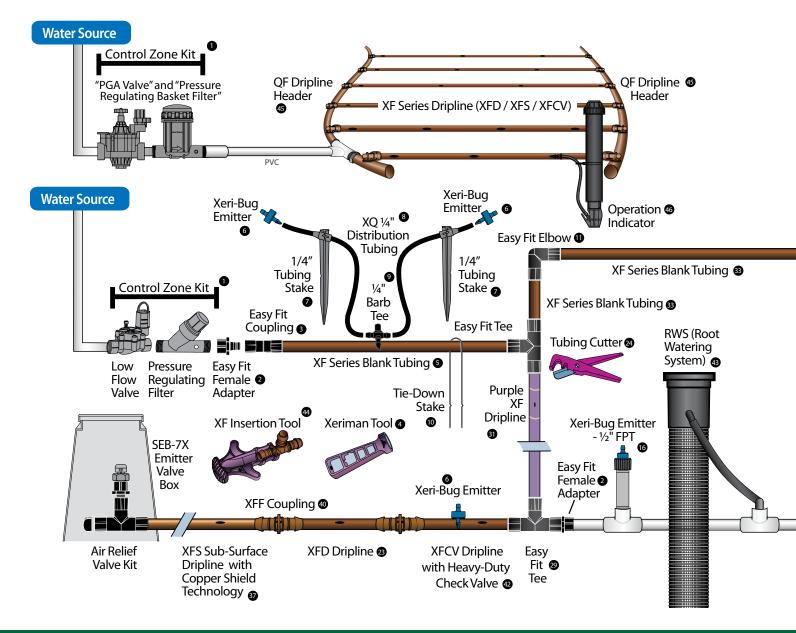


Anatomy of Xerigation[®]/ Landscape Drip System Overview

Broadest Product Line in the Industry

With over 150 products, Rain Bird has the products needed for your application. Systems can be designed to meet any site requirements and offer many exclusive Rain Bird advances including:

- Flexible XF Series dripline with advanced polymers that provide kink- resistance and reduced coil memory for easier installation
- Compact Control Zones with matched pressure regulator and filter to reduce parts, eliminate potential leak problems, and allow for fitting more Control Zones in a valve box
- Precision low volume SQ spray nozzles that offer a square wetting pattern and adjust to either 2.5' or 4' throw distances
- Point-source emitters that provide pressure compensation with a wide selection of flow rates and three inlet options (Barb, 1032 threaded, and 1/2" FPT)
- XFS dripline with Copper Shield Technology[™] for use in sub-surface applications under turf or shrub and groundcover areas. The copper chip effectively protects the emitter from root intrusion

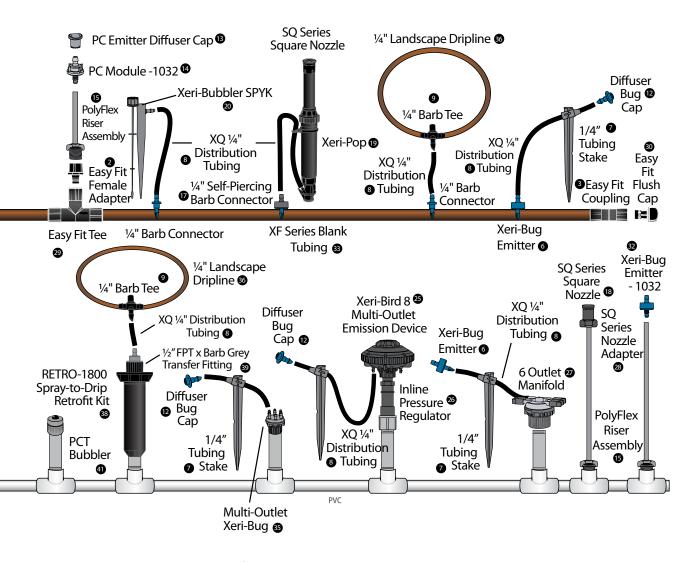


Targeted Watering with Xerigation® / Landscape Drip

Rain Bird Xerigation/Landscape Drip products are made especially for low-volume irrigation systems. By delivering water at or near the plants' root zones, Rain Bird Xerigation products offer targeted watering with the following advantages:

- Water conservation
- Greater efficiency (target each plant)
- Design flexibility; simple construction and easily expandable
- Healthier plants

- Reduced liability (e.g. no overspray, no runoff)
- Minimization of weed growth
- Cost savings



8 NOTE: Not all products listed in the Product Guide section are in the diagram above

TREES

Xeri-Bug[™] Emitters Barb Inlet x Barb Outlet

Point-source low-flow emitters for watering the root zones of plants, trees, and container plants.



(0.5 GPH)



XB-10-PC (1.0 GPH)

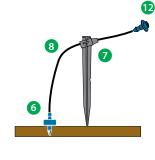


XB-20-PC (2.0 GPH)



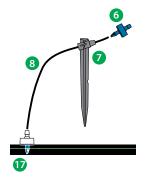
Installation Option

Using a Xeriman Tool, insert an emitter directly into drip tubing or between dripline emitters as needed.



Installation Option 2

For more precise water placement, use ¼" distribution tubing, a ¼" tubing stake, and a bug cap.



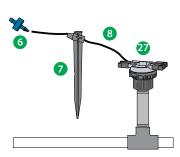
Installation Option 3

For precise water placement, a barbed connector can be punched into distribution tubing. The emitter is then placed at the end of the ¼" distribution tubing. NOTE: should the emitter become dislodged, unregulated flow will occur.



Installation Option 4

The Xeri-Bird 8 provides a centralized location for up to eight emitters. A mix of Xeri-Bug and/ or PC emitters can be used to provide the flow rates needed for different plant materials. Tentacles of ¼" distribution tubing, ¼" tubing stakes, and bug caps allow for precise water placement.



Installation Option 5

The 6 Outlet Manifold provides a centralized water distribution connection for up to six emission devices. Connect the ¼" distribution tubing to one of the outlets. Use a ¼" tubing stake to ensure precise water placement. The emitter is placed on the end of the 1/4" distribution tubing to regulate the water flow. NOTE: should the emitter become dislodged, unregulated flow will occur.

🗣 Drip Tip

When using an emitter at the end of the $14^{\prime\prime}$ distribution tubing, should the emitter become dislodged (or the $1/4^{\prime\prime}$ tubing gets cut) unregulated flow will occur.

Xeri-Bug[™] Emitters 10-32 Thread Inlet x Barb Outlet

Point-source low-flow emitters for watering the root zones of plants, trees, and container plants.



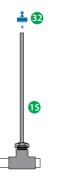




XB-05PC-1032 (0.5 GPH)

XB-10PC-1032 (1.0 GPH)

XB-20PC-1032 (2.0 GPH)



Installation Option 1

Use a 10-32 threaded emitter with a PolyFlex Riser for point-source applications in high foot traffic areas. (A pedestrian walking through a flower bed could pull up a staked emitter or otherwise cause misalignment of the ¼" distribution tubing. If they stepped on a PolyFlex Riser, the emitter would stay in place.)



Installation Option 2

The Xeri-Bird 8 provides a centralized location for up to eight emitters. A mix of Xeri-Bug and/ or PC emitters can be used to provide the flow rates needed for different plant materials. Tentacles of ¼" distribution tubing, ¼" tubing stakes, and bug caps allow for precise water placement.

Xeri-Bug[™] Emitters ¹⁄2" FPT Inlet x Barb Outlet

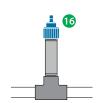
Point-source low-flow emitters for watering the root zones of plants, trees, and container plants.



XBT-10 (1.0 GPH)

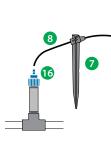
XBT-20 (2.0 GPH)

12



Installation Option 1

Use the ½" FPT inlet emitter connected to a PVC schedule 80 riser to regulate flow to plant material.



Installation Option 2

For more precise water placement, use ¼" distribution tubing, a ¼" tubing stake, and a bug cap.

TREES

Multi-Outlet Xeri-Bug™

Barb Inlet x Barb Outlet

Six outlet emitter with built-in pressure compensation. Use for watering the root zones of plants, trees, and container plants.



XB-05-6 (0.5 GPH)

XB-10-6 (1.0 GPH) XB-20-6 (2.0 GPH)



Installation Option

The Multi-Outlet Xeri-Bug provides centralized water distribution for up to six plants. All six outlets have the same flow rate. Connect the ¼" distribution tubing to one of the outlets. Use a ¼" tubing stake to ensure precise water placement. Insert a bug cap at the end of the tubing.

Multi-Outlet Xeri-Bug[™] 1/2" FPT inlet x Barb Outlet

Six outlet emitter with built-in pressure compensation. Use for watering the root zones of plants, trees, and container plants.



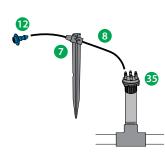
XBT-05-6 (0.5 GPH)



XBT-10-6 (1.0 GPH)

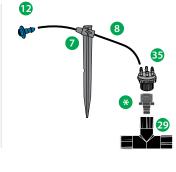


XBT-20-6 (2.0 GPH)



Installation Option

The Multi-Outlet Xeri-Bug can be mounted on a ½" schedule 80 riser to connect to PVC. It provides centralized water distribution for up to six plants. All six outlets have the same flow rate. Connect the ¼" distribution tubing to one of the outlets. Use a ¼" tubing stake to ensure precise water placement. Insert a bug cap at the end of the tubing.



Installation Option 2

Using an Easy Fit Tee and Male Adapter, the Multi-Outlet Xeri-Bug can be attached to drip tubing. It provides centralized water distribution for up to six plants. All six outlets have the same flow rate. Connect the ¼" distribution tubing to one of the outlets. Use a ¼" tubing stake to ensure precise water placement. Insert a bug cap at the end of the tubing.

6 Outlet Manifold – EMT-6XERI ¹/₂" FPT Inlet

Six outlet manifold without pressure compensation. For use with Xeri-Bug or PC Module emitters, Xeri-Pops, bubblers, and micro-sprays.



EMT-6XERI



Installation Option

The 6 Outlet Manifold provides a centralized water distribution connection for up to six emission devices. Connect ¼" distribution tubing to one of the outlets. Use a ¼" tubing stake to ensure precise water placement. The emitter is placed on the end of the ¼" distribution tubing to regulate the water flow.



Installation Option 3

To incorporate bubblers or microsprays into your drip system, connect the needed product to a multi-outlet manifold (EMT-6Xeri) via ¹/4" distribution tubing.



Installation Option 2

To incorporate spray heads into your drip system, connect the Xeri-Pop Micro-Spray to a multi-outlet manifold (EMT-6Xeri) via ¼" distribution tubing.

🕻 Drip Tip

Be concious of your run times and application rates. Mixing products connected to the EMT-6Xeri can lead to over or under watering.

Xeri-Bird[™] 8 Multi-Outlet Emission Device ¹⁄2″ FPT Inlet x Barb Outlet

The most flexible multi-outlet device. Contains eight ports that accept Xeri-Bug emitters or PC Modules for independent flows from 0.5 to 24gph.





Installation Option

The Xeri-Bird 8 provides a centralized location for up to eight emitters. A mix of Xeri-Bug emitters and/ or PC Modules can be used to provide the flow rates needed for different plant materials. Tentacles of ¼" distribution tubing, ¼" tubing stakes, and bug caps allow for precise water placement.



NOTE: Always install the emitters with the pointed or threaded end UP.

Pressure-Compensating Modules

Barb Inlet x Barb Outlet

Point-source medium-flow modules for watering larger shrubs and trees.



PC-12

(12 GPH)



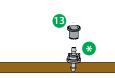
PC-18

(18 GPH)



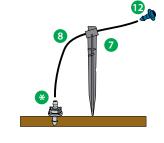


PC-24 (24 GPH)



Installation Option

Using a Xeriman Tool, insert the PC Module directly into drip tubing or between dripline emitters as needed. Use a PC Diffuser Cap to eliminate squirting.



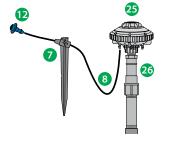
Installation Option 2

For more precise water placement, use ¼" distribution tubing, a ¼" tubing stake, and a bug cap.



Installation Option 3

For precise water placement, a barbed connector can be punched into drip tubing. The PC Module with a PC Diffuser Cap is then placed at the end of the ¼" distribution tubing. NOTE: should the emitter become dislodged, unregulated flow will occur.



Installation Option 4

The Xeri-Bird 8 provides a centralized location for up to eight emitters. A mix of Xeri-Bug emitters and/ or PC Modules can be used to provide the flow rates needed for different plant materials. Tentacles of ¼" distribution tubing, ¼" tubing stakes, and bug caps allow for precise water placement.



Installation Option

The 6 Outlet Manifold provides a centralized water distribution connection for up to six emission devices. Connect ¼" distribution tubing to one of the outlets. Use a ¼" tubing stake to ensure precise water placement. The PC Module with a PC Diffuser Cap is placed on the end of the ¼" distribution tubing to regulate the water flow. NOTE: should the emitter become dislodged, unregulated flow will occur.

🔓 Drip Tip

When using an emitter at the end of the ¼" distribution tubing, should the emitter become dislodged (or the ¼" tubing gets cut) unregulated flow will occur.

Pressure-Compensating Modules

10-32 Thread Inlet x Barb Outlet

Point-source medium-flow modules for watering larger shrubs and trees.



PC-05-1032 (5 GPH)

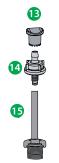


PC-07-1032

(7 GPH)



PC-10-1032 (10 GPH)



Installation Option 1

Use a 10-32 threaded emitter with a PolyFlex Riser for point-source applications in high foot traffic areas. (A pedestrian walking through a flower bed could pull up a staked emitter or otherwise cause misalignment of the ¼" distribution tubing. If they stepped on a PolyFlex Riser, the emitter would stay in place.)



Installation Option 2

The Xeri-Bird 8 provides a centralized location for up to eight emitters. A mix of Xeri-Bug emitters and/ or PC Modules can be used to provide the flow rates needed for different plant materials. Tentacles of ¼" distribution tubing, ¼" tubing stakes, and bug caps allow for precise water placement.

PC Diffuser

Use a PC Diffuser cap to eliminate squirting water when using a PC Module staked at the end of a 1/4" distribution tubing or on a PolyFlex Riser.

Rain Bird's new heavy-duty

are designed for a rugged

environment. Offered in 5 gph,

7 gph, and 10 gph models, the

bubbler style outlet and medium-

flexibility for landscape layout. Its heavy-duty design is perfect for commercial applications. The 1/2" FPT threaded inlet makes these devices ideal for installations

using a PVC pipe and schedule 80



PC-DIFF-PPL (Purple to designate non-potable water)

PCT-05 PCT-07

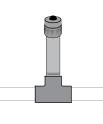
PCT-10

Installation Option

Use a PC Diffuser Cap to eliminate squirting water when using a PC Module staked at the end of ¼" distribution tubing or on a PolyFlex Riser.

Pressure Compensating Threaded Bubblers

PCT Bubblers can be mounted on a ¹/₂" schedule 80 riser to connect to PVC



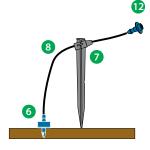
ANATOMY

SLOPES

Diffuser Bug Cap

Prevents bugs and other debris from clogging 1/4" distribution tubing.





Installation Option 1

Use a Diffuser Bug Cap at the end of ¼" distribution tubing to prevent clogging caused by bugs and other debris.

Xeri-Pop[™] Micro-Spray ¹⁄2″ FPT Inlet x Barb Outlet

Pop-up spray for low-volume irrigation. Ideal for flower beds and vandal-prone areas.





(6 inch pop-up)



XBT-1200X (12 inch pop-up)



Installation Option ²

The Xeri-Pop Micro-Spray allows you to incorporate spray heads into your drip system. Connect the Xeri-Pop Micro-Spray to drip tubing via ¼" distribution tubing and a barb connector.

Installation Option 2

Connect the Xeri-Pop Micro-Spray to a multi-outlet manifold (EMT-6Xeri) via ¼" distribution tubing.

🔓 Drip Tip

Any SQ nozzle can be swapped out for desired spray pattern. (Xeri-Pop ships with 1/2 pattern nozzle. 1/4 and and full pattern nozzles also available)



SQ Nozzle Models: • SQ QTR - Quarter Pattern • SQ HLF - Half Pattern • SQ FUL - Full Pattern

SQ Series Nozzles

The pressure compensated SQ Series is the most precise and efficient, lowvolume spray solution for irrigation of small areas. Unique edge-to-edge capability reduces the number of nozzles needed, which decreases cost and dramatically reduces installation time. Each nozzle can easily switch between a 2.5 ft. or 4 ft. throw.



Top View

Model: SQ QTR

Bottom View

Quarter Pattern Nozzle

Color: Purple

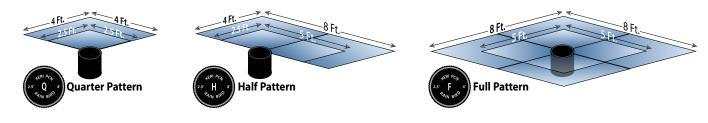


Bottom View



Full Pattern Nozzle Color: Red Model: SQ FUL

Bottom View





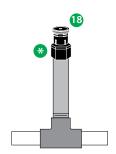
The SQ can be connected to PE or PVC via a PolyFlex Riser via the SQ ADP adapter. The SQ ADP12 is the SQ ADP adapter preassembled to a 12" PolyFlex Riser. The SQ ADP24 is the SQ ADP adapter preassembled to a 24" polyfelx riser.



The SQ can be installed on a Xeri-Pop Spray Head. The Xeri-Pop can be connected to PE or PVC. The Xeri-Pop can also be connected to drip or drip line tubing via ¼" tubing and a barb connector. NOTE: Use one of these configurations in each watering zone to provide a pop-up run indicator for your drip system.



The SQ can be installed on a Rain Bird 1800 Series Spray Head.



The SQ can be attached to a schedule 80 PVC or PE riser using a PA-8S Plastic Shrub Adapter.

TREES

🔓 Drip Tip

With a simple turn of the nozzle to the next preset stop, the SQ Series Nozzle adjusts from a 2.5 foot





Xeri-Bubblers[™] **Spike**

Emission device with adjustable flow and radius. Ideal for shrub plantings, trees, containers, and flower beds.



UXB-360-SPYK



The Xeri-Bubbler Spike combines a bubbler with a ¼" tubing stake for precise water placement. Simply connect the Xeri-Bubbler Spike to drip tubing via a barb connector. NOTE: The Xeri-Bubbler Spike comes with its own barb connector.



Connect up to six Xeri-Bubbler Spikes via ¼" distribution tubing to a multi-outlet manifold (EMT-6Xeri).

Xeri-Bubblers[™] Barb

Emission device with adjustable flow and radius. Ideal for shrub plantings, trees, containers, and flower beds.



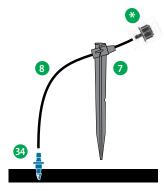
SXB-180-025



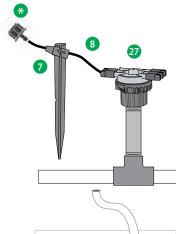
SXB-360-025



UXB-360-025



A barbed connector can be punched into distribution tubing. The Xeri-Bubbler is then placed at the end of the 1/4" distribution tubing. NOTE: should the bubbler become dislodged, unregulated flow will occur.



Connect up to six Xeri-Bubblers via 1/4" distribution tubing to a multi-outlet manifold (EMT-6Xeri). Use a ¼" tubing stake for precise watering. NOTE: should the bubbler become dislodged, unregulated flow will occur.

Use with 1/2" poly

Xeri-Bubblers™ 10-32 Thread

Emission device with adjustable flow and radius. Ideal for shrub plantings, trees, containers, and flower beds.



SXB-180-1032 Half Circle Stream Bubbler



SXB-360-1032 Full Circle Stream Bubbler



UXB-360-1032 Full Circle Umbrella Bubbler



Installation Option 1

Use a 10-32 threaded bubbler with a PolyFlex Riser for point-source applications in high foot traffic areas. (A pedestrian walking through a flower bed could pull up a staked bubbler or otherwise cause misalignment of the ¼" distribution tubing. If they stepped on a PolyFlex Riser, the bubbler would stay in place.)

Xeri-Sprays[™] and Misters 10-32 Thread

Sprays and misters with adjustable flow and radius. Ideal for ground cover, mass plantings, annual flower beds, and containers.



XS-090 Quarter Circle Spray



XS-180

Half Circle Spray



XS-360 Full Circle Spray



X-360 ADJMST Full Circle Adjustment Mister

Installation Option 1

Use a 10-32 threaded spray or mister with a PolyFlex Riser for point-source applications. Threaded emission devices on PolyFlex Risers are great for high foot traffic areas.

Xeri-Spray[™] 360° True Spray Spike

True micro-spray with full-circle fan spray pattern. Ideal for ground cover, mass plantings, annual flower beds, and containers.

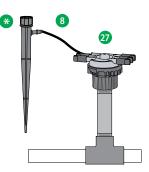


XS-360TS-SPYK



nstallation Option

The Xeri-Spray 360° True Spray Spike combines a spray head with a ¼" tubing stake for precise water placement. Simply connect the Xeri-Spray 360° True Spray Spike to drip tubing via a barb connector. NOTE: The Xeri-Spray 360° True Spray Spike comes with its own barb connector.



Installation Option 2

Connect up to six Xeri-Spray 360° True Spray Spikes via ¼" distribution tubing to a multi-outlet manifold (EMT-6Xeri).

Xeri-Spray[™] 360° True Spray Barb or 10-32 Thread

True micro-spray with full-circle fan spray pattern. Ideal for ground cover, mass plantings, annual flower beds, and containers.





XS-360TS-025

XS-360TS-1032



Installation Option

A barbed connector can be punched into drip tubing. The Xeri-Bubbler is then placed at the end of the ¼" distribution tubing. NOTE: should the bubbler become dislodged, unregulated flow will occur.



Installation Option

Connect up to six Xeri-Bubblers via ¼" distribution tubing to a multi-outlet manifold (EMT-6Xeri). Use a ¼" tubing stake for precise watering. NOTE: should the bubbler become dislodged, unregulated flow will occur.



Installation Option 3

Use a 10-32 threaded bubbler with a PolyFlex Riser for point-source applications in high foot traffic areas. (A pedestrian walking through a flower bed could pull up a staked bubbler or otherwise cause misalignment of the ¼" distribution tubing. If they stepped on a PolyFlex Riser, the bubbler would stay in place.)

Control Zone Kit Selection Guide

Rain Bird Control Zone Kits provide all the components necessary for on/off control, filtration and pressure regulation of a low-volume irrigation zone, making them simpler to order and easier to install.



TREES

Sparse Applications

Solution

Xeri-Bird 8 & Xeri-Bug Emitters on a PVC Lateral

Advantages

- Up to 60% water savings
- No overspray damage to structures, fences or windows
- Targeted watering reduces weed growth
- Manifold design allows for increase/decrease in future plant water demands



XBD-80	Xeri-Bird 8 Outlet Manifold
XB XX*	Xeri-Bug Pressure Compensating Drip Emitters (0.5 to 2.0 gph)
PRS-050-30	In-stem 30 psi Pressure Regulator
XQ-100	1/4" Distribution Tubing
TS-025	1/4″Tubing Stake
PVC Misc	PVC Laterals, Fittings, Glue
DBC-025	Diffuser Bug Cap
SEB7X	Emitter Box (optional)







XBD-80

PRS-050-30

XB XX

* Select appropriate emitter flow

TO DO LIST :

- Trench, cut and glue PVC laterals.
- □ Connect lines to water source.
- □ Thread Xeri-Bird 8 Outlet Manifold onto in-stem 30 psi Pressure Regulator, then connect to PVC tee.
- □ Attach 1/4" distribution tubing to outlets on Xeri-Bird 8 Outlet Manifold.
- □ Run 1/4" lines to sparse plantings, stake in place with a Diffuser Bug Cap on the end.
- □ Install the desired Xeri-Bug Emitter inside Xeri-Bird 8 Outlet Manifold.
- □ Use an SEB7X Emitter Box as added protection for the Xeri-Bird 8. (optional)

INSTALLATION AND MAINTENANCE TIPS:

- Flush the zone after installation and 2-4 times per year.
- Install XB Emitters in Xeri-Bird 8 Outlet Manifold with self-piercing barb or 1032 thread end up.
- Adjust watering time as seasons/weather changes.
- Leave 6" slack in 1/4" tubing in case of unexpected maintenance.

TIME: (approx.) 1 hr/20' 1 hr 5 min/Assembly 3 min/Xeri-Bird 8 8 min/Stake 2 min



Dense Applications

Solution

XFD Dripline Grid

Advantages

- Up to 60% water savings due to zero wind loss
- No runoff = reduced liability in high traffic areas
- No overspray damage to structures, fences or windows
- XFD Dripline is easy to install, resulting in labor savings

Installation

XFD-06-12	XFD Dripline .6 gph @ 12" Spacing
XCZ-100-PRF	1" Xeri Control Zone Kit
ARV050	1/2" Air Relief Valve
MDCF Series OR	Easy Fit Compression Fittings/Adapters
XFF Series	XFF Dripline 17mm Insert Fittings
TDS-050	Tie Down Stake



1/2"AIR RELIEF VALVE KIT



XFF FITTINGS

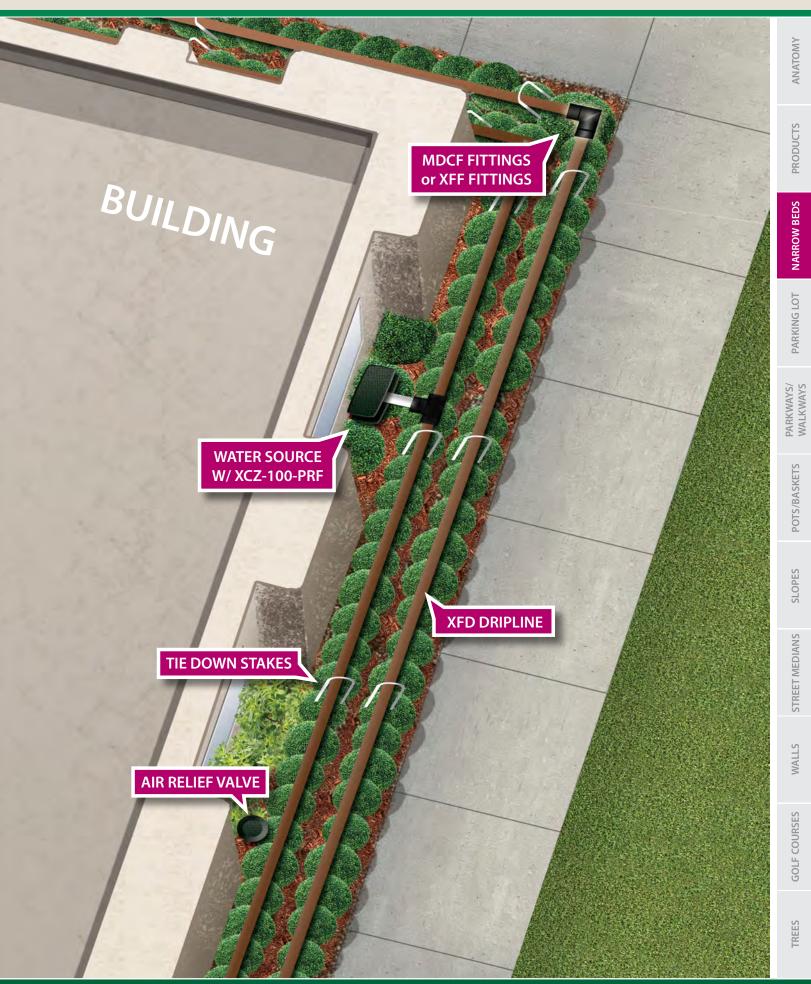
TO DO LIST :	
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- □ Assemble Control Zone Kit and connect to water source.
- □ Cut lengths of XF Dripline to build grid in planting area.
- Connect lengths of XF Dripline to Easy Fit Fittings (or XFF Dripline Fittings) to create grid.
 Add 1/2" Air Relief Valve kit to the zone.
- Connect Easy Fit Adapter to Easy Fit Tee for connection to Control Zone Kit.
- □ Stake XF Dripline grid in place and flush until clean water flows.
- Install planting material.

INSTALLATION AND MAINTENANCE TIPS:

- Flush the zone after installation and 2-4 times per year.
- Install Air Relief Valve Kit at high point in the system.
- Leave XFD Dripline coil in the sun while preparing for installation.

TIME: (approx.) 1hr 10min/50' 25 min/50' 5 min 5 min/50'



Dense Applications

Solution

SQ Series Nozzle

Advantages

- Precise square wetting pattern reducing overspray, overwatering, and runoff
- Up to 65% water savings due to efficient control of water placement with pressure compensation
- Adjustable radius or throw in one unit makes design and installation simple
- Highest distribution uniformity in the industry for short radius nozzles



SQ-XXX*	SQ Series Nozzles
PA-8S OR	Plastic Shrub Adapter for use with Schedule 80 Risers
SQ ADP	SQ PolyFlex Riser Adapter for use with PFR-FRA PolyFlex Risers
PFR-FRA	12" PolyFlex Riser with 1/2" Male Threaded Base Adapter
PVC Misc	PVC Laterals, Fittings, Glue

* Half, full, or quarter nozzles as needed for planting bed

TO DO LIST :

- Trench, cut and glue PVC laterals.
- Connect lines to water source.
- □ Thread in Schedule 80 riser, attach PA-8S Adapter and SQ Series Nozzle.
- OR Thread in PFR-FRA 12" PolyFlex Riser into PVC tee, attach SQ ADP Adapater and SO Series nozzle.

INSTALLATION AND MAINTENANCE TIPS:

- Flush the zone after installation and 2-4 times per year.
- Adjust watering time as seasons/weather changes.
- Ensure that all SQ Series Nozzles are adjusted to the appropriate throw distance.

Drip Tip

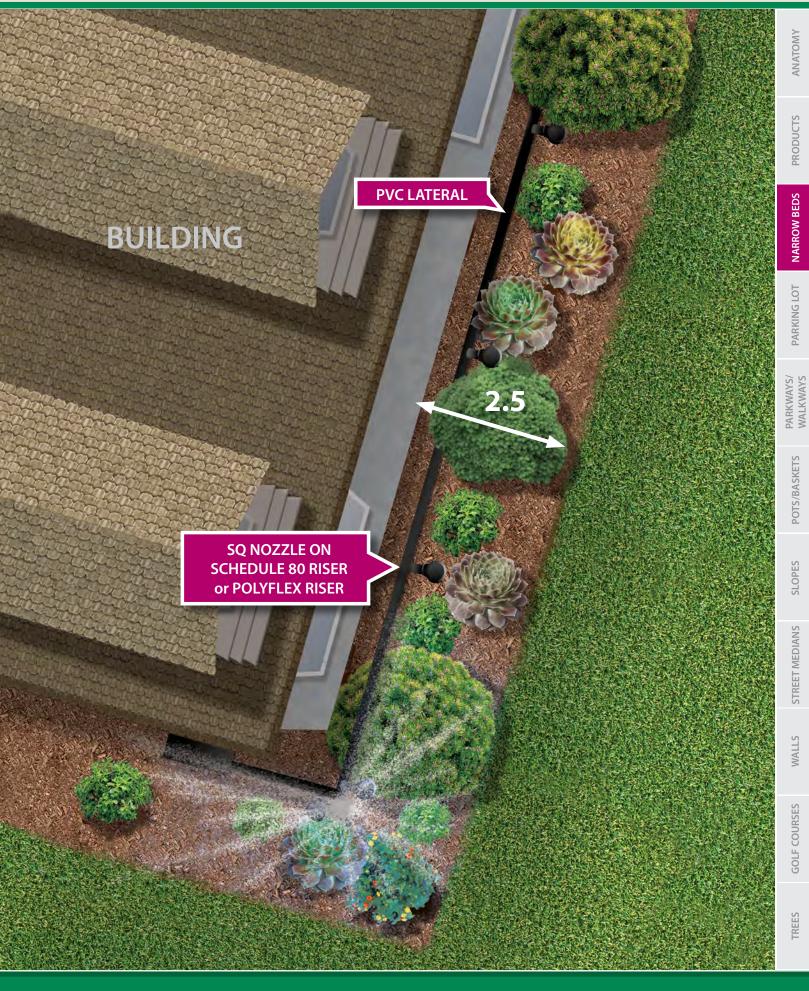
adjusted to either 2.5' or 4' throw. DO NOT mix throw settings in the same zone.

TATAL CONTRACT OF TAXABLE PARTY	

SQ NOZZLES

TIME: (approx.) 1 hr / 20' 1 hr 5 min / Assembly

5 min / Assembly



ANATOMY

PRODUCTS

NARROW BEDS

PARKING LOT

POTS/BASKETS

SLOPES

STREET MEDIANS

WALLS

GOLF COURSES

TREES

Narrow Beds Raised Beds

Solution

XFCV Dripline Grid

Advantages

- Up to 60% water savings due to zero wind loss
- Targeted watering helps reduce erosion of wall
- No runoff = reduced liability in high traffic areas
- XFCV Dripline is easy to install, resulting in labor savings



Installation

XFCV-06-12	XFCV Dripline .6 gph @ 12" spacing
MDCF Series OR	Easy Fit Compression Fittings/Adapters
XFF Series	XFF Dripline 17mm Insert Fittings
TDS-050 BEND	Tie Down Stake



XFF FITTINGS



XFCV Dripline

TO DO LIST :	TIME: (approx.)
Assemble Control Zone Kit and connect to water source.	1 hr
Cut lengths of XFCV Dripline to build grid in crib wall.	10 min/50′
Connect lengths of XF Series Dripline to Easy Fit Fittings (or XFF Dripline fittings) to create grid. Connect to Control Zone Kit.	30 min/50′
Stake XF Series Dripline grid in place and flush until clean water flows.	5 min/10′
Install planting material.	

INSTALLATION AND MAINTENANCE TIPS:

- Flush the zone upon installation and 2-4 times per year.
- Leave XFCV Dripline coil in the sun while preparing for installation.
- Break up watering cycles to avoid run off or pooling of water in blocks.



Combination Applications

Solution

XFD Dripline Grid with Xeri-Bug Emitters

Advantages

- Up to 60% water savings due to zero wind loss
- XFD Dripline is easy to install for labor savings
- No overspray damage to structures, fences or windows



Installation

XFD-06-12 XCZ-075-PRF	XFD Dripline .6 gph @ 12″ Spacing 3/4″ Xeri Control Zone Kit
MDCF Series OR XFF Series	Easy Fit Compression Fittings/Adapters XFF Dripline 17mm Insert Fittings
TDS-050 BEND ARV050	Tie Down Stake
XB XX*	Xeri-Bug Pressure Compensating Drip Emitters (0.5 to 2.0 gph)
DT-025	1/4" Distribution Tubing
TS-025	1/4"Tubing Stake
DCB-025	Diffuser Bug Cap





XFD

TS-025

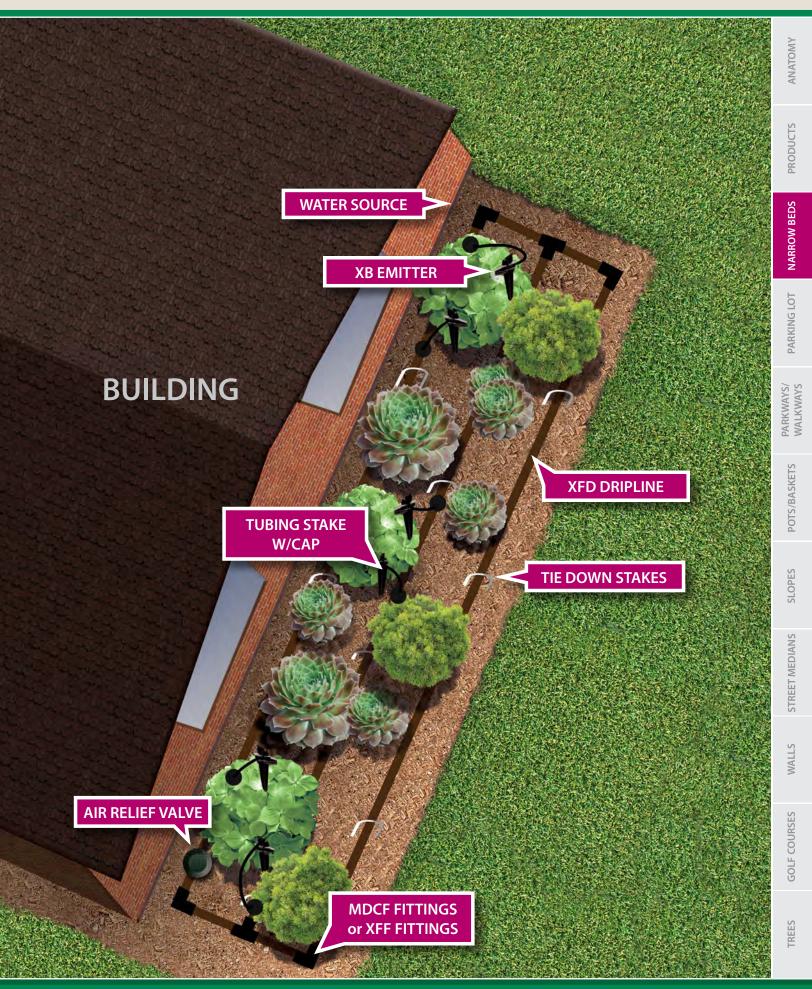
XB XX

TO DO LIST :	TIME: (approx.)
Assemble Control Zone Kit and connect to water source.	1 hr
Cut lengths of XFD Dripline to build grid in planting area.	10 min/50'
Connect lengths of XF Series Dripline to Easy Fit Fittings (or XFF Dripline fittings) to create grid, add Air Relief Valve	20 min/50′
Connect Easy Fit Adapter to Easy Fit Tee for connection to Control Zone Kit.	5 min
Stake XF Series Dripline grid in place.	5 min/10′
Punch self-piercing barb inlet of Xeri-Bug Emitters into XF Series Dripline, connect 1/4" tubing to barb outlet and run 1/4" tubing to larger plant.	8 min/Emitter
Stake tubing in place and attach Diffuser Bug Cap on the end.	3 min/Stake
Flush system until clean water flows.	2 min
Install planting material.	

INSTALLATION AND MAINTENANCE TIPS :

* Select appropriate emitter flow rate

- Supplemental Xeri-Bug Emitters are placed next to larger plants with higher water requirements.
- ۵
- Flush the zone upon installation and 2-4 times per year. Install Xeri-Bug Emitters with the Xeriman Tool (XM Tool) for 50% faster installation. ۵
- Leave XF Series Dripline coil in the sun while preparing for installation.



Narrow Planting Bed/Divider

Sparse Applications

Solution

PolyFlex Riser/Adapter with Xeri-Bug 10-32 Drip Emitters on a PVC Lateral

Advantages

- Up to 60% water savings
- No overspray damage to vehicles or parking lot
- Targeted watering reduces weed growth
- No runoff = reduced liability in high traffic areas



Installation

PFR/FRA	PolyFlex Riser/Adapter
XB XX* 10-32	Xeri-Bug Pressure Compensating Drip Emitters (0.5 to 2.0 gph) w/ 10-32 Thread
PVC Misc.	PVC Laterals, Fittings, Glue
XCZ-075-PRF	3/4" Xeri Control Zone Kit

* Select appropriate emitter flow rate





TIME: (approx.
1 hr/20'
1 hr
1 hr
5 min/Tee
5 min/PFR
2 min

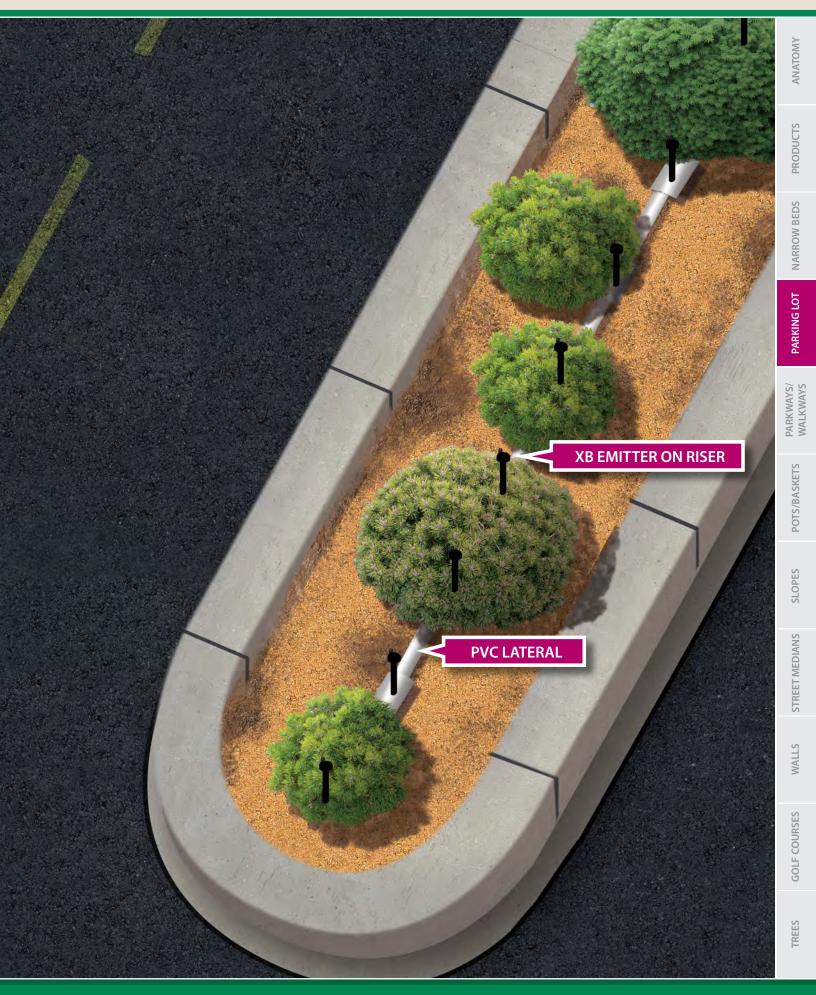
PFR-FRA

TO DO LIST :	то	DO	LIST	:
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- □ Trench, cut and glue PVC laterals.
- □ Assemble Control Zone Kit and position in valve box.
- □ Connect Control Zone to water source and laterals.
- □ Thread PolyFlex Riser/Adapter into PVC tees.
- Thread Xeri-Bug Emitter into PolyFlex Riser.
- □ Flush system until clean water flows.
- Add planting material and mulch.

INSTALLATION AND MAINTENANCE TIPS:

- Flush the zone after installation and 2-4 times per year.
- For larger trees use higher flow PC Modules and Diffuser caps to avoid wash out.
- Adjust watering time as seasons/weather changes.
- Cut PolyFlex Risers slightly above grade (before installing the Xeri-Bug Emitters) for an "invisible" installation.
- The PolyFlex Riser Adapter (FRA) is made of Marlex[®], so no Teflon[®] tape is needed.



Narrow Planting Bed/Divider

Dense & Combination Applications

Solution

XF Series Dripline Grid

Advantages

- Up to 60% water savings due to zero wind loss
- No overspray damage to vehicles
- No runoff = reduced liability in high traffic areas
- XF is easy to install, resulting in labor savings

Installation

XFD-06-12	XFD Dripline .6 gph @ 12″ Spacing
OR	
XFS-06-12	Subsurface Dripline .6 gph @ 12" Spacing
XCZ-100-PRF	1" Control Zone Kit
ARV-050	1/2" Air Relief Valve
MDCF Series OR	Easy Fit Compression Fittings/Adapters
XFF Series	XFF Dripline 17mm Insert Fittings
TDS-050	Tie Down Stake

TO DO LIST :

- □ Assemble Control Zone Kit and connect to water source. (1 hr)
- Connect Easy Fit Adapter to Easy Fit Tee for connection to Control Zone Kit. (5 min)
- Cut lengths of XF Series Dripline to build grid in planting area. (10 min/50')
- Connect lengths of XFD Dripline to Easy Fit (or XFF Insert) Fittings to create grid. Add Air Relief Valve Kit to the zone. (25 min/50')
- Stake XFD Dripline grid in place and flush until clean water flows. (5 min/10')
- Install planting material.

Solution (Combination)

SQ Series Nozzle on 1800 Spray Heads with Swing Assembly on PVC Lateral

Advantages

- Precise square wetting pattern reduces overspray, overwatering, and runoff = up to 65% water saving
- Adjustable radius in one unit makes design and installation simple
- Highest distribution uniformity in the industry for short radius nozzles

Installation

SQ–XXX*	SQ Series Nozzles
180X	1800 Series Spray Head with Desired Pop-up Height
SA-XXX	SA Series Swing Assembly
PVC Misc	PVC Laterals, Fittings, Glue

* Half, full, or quarter nozzles as needed for planting bed

TO DO LIST :

- Trench, cut and glue PVC laterals. (1 hr/20')
- Connect lines to water source. (1 hr)
- Thread 1800 Series Spray Head onto swing assembly then thread the swing assembly into the Slip x Slip x Threaded Tee PVC fitting. (5 min/Assembly)
- Cut PVC laterals and glue in Slip x Slip x Threaded Tee assembly. (5 min/Tee)
- □ Flush system until water flows clear. (As needed)
- Install SQ Series nozzles on 1800 Spray Heads.
 (2 min/Nozzle)

INSTALLATION AND MAINTENANCE TIPS :

- Flush the zone upon installation and 2-4 times per year.
- Install AR Valve Kit at high point in the system.
- Leave XF Dripline coil in the sun while preparing for installation.

INSTALLATION AND MAINTENANCE TIPS :

- Flush the zone after installation and 2-4 times per year.
- Adjust watering time as seasons/weather changes.
- Ensure that all SQ Series nozzles are adjusted to the appropriate throw distance.



Narrow Planting Bed/Divider

Combination Applications

Solution

XF Series Dripline Grid with Xeri-Bug Emitters

Advantages

- Up to 60% water savings due to zero wind loss
- No over spray damage to vehicles or parking lot
- XF Series Dripline is easy to install for labor savings



Installation

XFD-06-12 XCZ-075-PRF ARV050	XF Series Dripline .6 gph @ 12" Spacing 3/4" Xeri Control Zone Kit ½" Air Relief Valve	
MDCF Series	Easy Fit Compression Fittings/Adapters	
OR		
XFF Series	XFF Dripline 17mm Insert Fittings	
TDS-050	Tie Down Stake	
XB XX*	Xeri-Bug Pressure Compensating	
	Drip Emitters (0.5 to 2.0 gph)	
XQ-100	1/4" Distribution Tubing	
TS-025	1/4"Tubing Stake	
DCB-025	Diffuser Bug Cap	
* Select appropriate emitter flow rate and barbed connection		



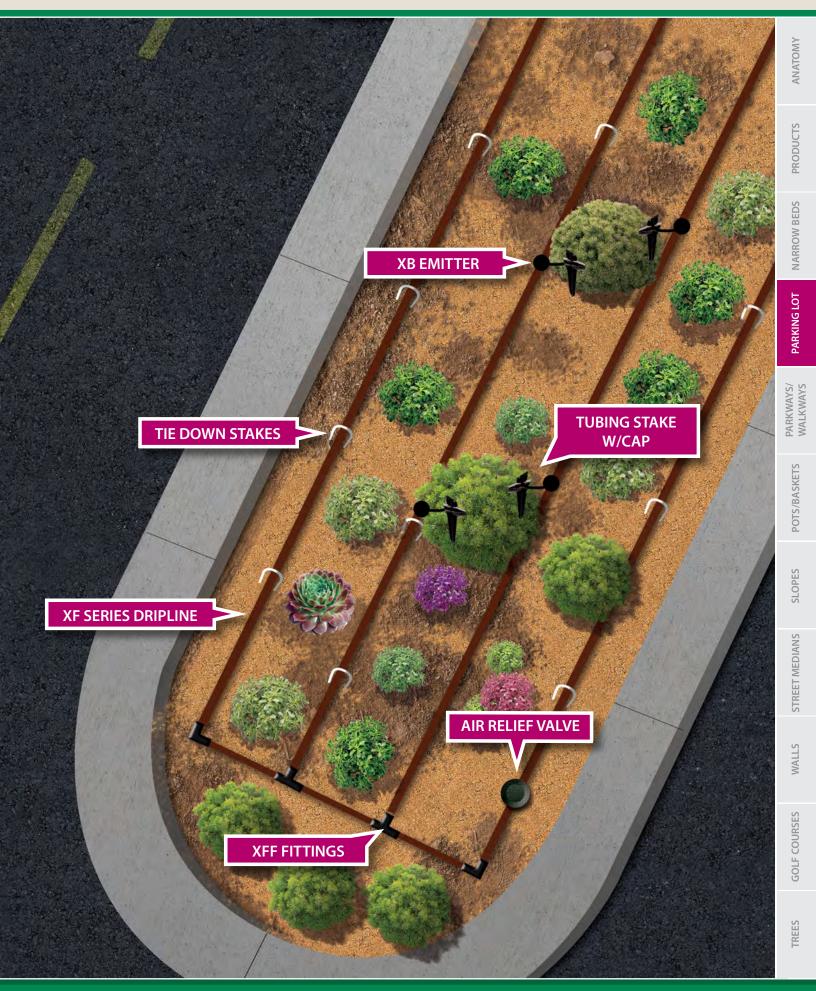
025	

1/2" Air Relief Valve

TO DO LIST :	TIME: (approx.)
Assemble Control Zone Kit and connect to water source.	1 hr
Connect Easy Fit Adapter to Easy Fit Tee for connection to Control Zone Kit.	5 min
Cut lengths of XF Series Dripline to build grid in planting area.	10 min/50'
Connect lengths of XF Series Dripline to Easy Fit (or XFF Insert) Fittings to create grid. Add 1/2" Air	20 min/50'
Relief Valve Kit to the zone.	5 min/10'
Stake XF Series Dripline grid in place.	5 min/Emitter
Punch self-piercing barb inlet of Xeri-Bug Emitters into XF Series Dripline,	5 mm/Emiller
connect 1/4" tubing to barb outlet and run 1/4" tubing to larger plant.	5 min/Stake
Stake 1/4" tubing in place and attach bug cap on the end.	
Flush system until clean water flows.	2 min
Install planting material.	

INSTALLATION AND MAINTENANCE TIPS:

- Supplemental Xeri-Bug Emitters are placed next to larger plants with higher water requirements.
- ۵ Flush the zone upon installation and 2-4 times per year.
- Install 1/2" Air Relief Valve Kit at high point in the system. ۵
- Install Xeri-Bug Emitters with the Xeriman Tool (XM Tool) for 50% faster installation. ۵
- Leave XF Series Dripline coil in the sun while preparing for installation.



Parkway and Walkways

Dense Applications

Solution

Xeri-Pops & SQ Series Nozzles on a Poly Tubing Lateral

Advantages

- Precise square wetting pattern reduces overspray, overwatering, and runoff
- Up to 65% water savings due to efficient control of water placement with pressure compensation
- Adjustable radius in one unit makes design and installation simple
- Highest distribution uniformity in the industry for short radius nozzles

Installation

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* Half, full, or quarter nozzles as needed for planting bed





XP-400X



SQ NOZZLES

TO-DO LIST:

- Trench beds (2-6 inches deep), cut and lay out Xeri Black Stripe Poly Tubing.
- Punch 1/4" Self Piercing Barb Connector into Xeri Black Stripe Poly Tubing laterals. Attach 1/4" tubing to outlet barb and run 1/4" tubing to edge of bed.
- □ Connect 1/4" tubing to inlet barb on Xeri-Pop. Dig small hole (4" wide x pop up depth) for Xeri-Pop.
- Determine desired watering pattern and pick appropriate SQ Series Nozzle.
- Drop Xeri-Pop into hole so the cap is at grade. Fill in dirt around Xeri-Pop so the body is supported in the soil and exit port for nozzle is in the correct position.
- □ Flush lines until clean water flows and install planting material.

30 min/50' 10 min/20'

TIME: (approx.)

15 min/ Xeri-Pop 5 min/Nozzle 3 min/Nozzle

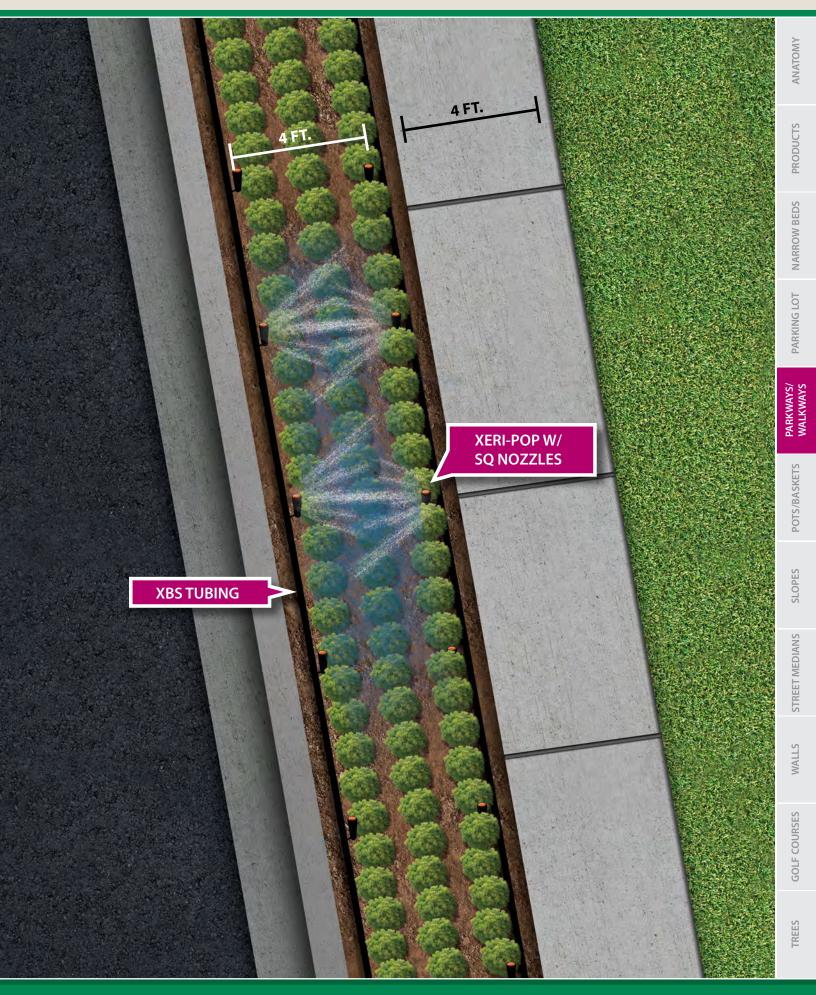
10 min/ Xeri-Pop 2 min

INSTALLATION AND MAINTENANCE TIPS :

- For seasonal replanting, lift Xeri-Pops out of ground and lay aside.
- Do not disconnect the 1/4" tubing.
- After replanting, reinstall the Xeri-Pops in the planting area.
- Operate Xeri-Pops at 40 psi for optimal performance.

🗣 Drip Tip

With a simple turn of the nozzle to the next preset stop, the SQ Series Nozzle adjusts from a 2.5' throw to a 4' throw. All nozzles in the same zone must be adjusted to the same throw.



Patio Pots on Separate Zone

Page 1 of 3

Solution

OPTION A: PVC Tubing with Xeri-Bird 8 & Xeri-Bug Emitters **OPTION B: PVC Tubing with 6 Outlet Manifold &** 1/4" Landscape Dripline Loop

Advantages

- Up to 60% water savings
- Xeri-Bird 8 Manifold with PRS offers pressure regulation, filtration and controlled watering to multiple pots
- · Manifold allows for increase/decrease in future plant requirements

Installation

Option A	
XBD-80	Xeri-Bird 8 Outlet Manifold
XB XX*	Xeri-Bug Pressure Compensating Drip Emitters (0.5 to 2.0 gph)
PRS-050	In-stem 30 psi Pressure Regulator
XQ-100	1/4" Distribution Tubing
TS-025	1/4" Tubing Stake
DCB-025	Diffuser Bug Cap
PVC Misc.	PVC Laterals, Fittings, Glue

* Select appropriate emitter flow rate

TO-DO LIST:

Trench (as needed), cut and glue PVC laterals.	1 hr/20′
Connect lines to water source.	1 hr
Thread Xeri-Bird 8 Outlet Manifold onto in-stem 30 psi Pressure Regulator and connect to PVC tee.	5 min
Attach 1/4" distribution tubing to outlets on manifold.	2 min/ XBD-80
Run 1/4" lines to Pots, stake in place with a bug cap on the end.	8 min/ Pot

Install the desired Drip Emitter inside manifold.*

* Emitter varies by location (0.5 to 2.0 gph)

INSTALLATION AND MAINTENANCE TIPS:

- Flush the zone after installation and 2-4 times per year.
- Adjust watering time as seasons/weather changes.



Option B	
EMT-6XERI	6 Outlet Manifold
XQ-100	1/4" Distribution Tubing
XBF-3TEE	1/4" Barb Tee
LDQ-08-06-100	1/4" Landscape Dripline
PVC Misc.	PVC Laterals, Fittings, Glue

TO-DO LIST:

TIME A:

2 min

Op EM

Trench (as needed), cut and glue PVC laterals.	1 hr/20′
Connect lines to water source.	1 hr

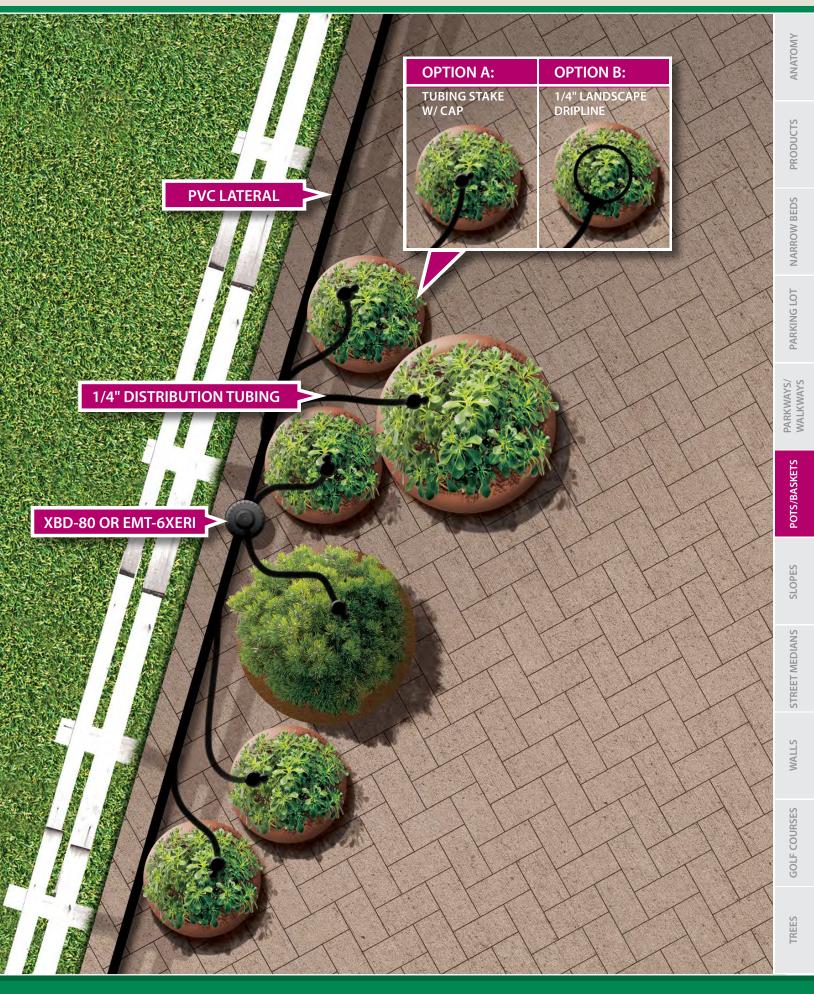
- □ Thread 6 Outlet Manifold onto riser, then connect to PVC tee.
- □ Attach 1/4" distribution tubing to outlets on manifold.
- □ Run 1/4" lines to pots and connect tubing 8 min/Pot to barb tee. Then run 1/4" Landscape Dripline in a circle inside the pot and connect both ends to the barb tee.

TIME B:

2 min/

2 min

EMT-6Xeri



Patio Pots on Separate Zone

Page 2 of 3

Solution

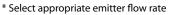
Poly Tubing Lateral with Multi-Outlet Xeri-Bug

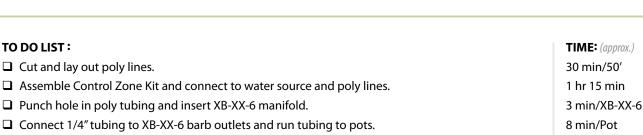
Advantages

- Up to 60% water savings
- Poly tubing flexible for odd shaped areas
- Multi-Outlet Xeri-Bug ensures even watering to multiple pots

Installation

XCZ-075-PRF	3/4" Xeri Control Zone Kit
XB-XX-6*	Multi-Outlet Xeri-Bug (6 Outlet PC Manifold w/ Barb Inlet)
XBS	Xeri Black Stripe Poly Tubing
XQ-100	1/4" Distribution Tubing
TS-025	1/4"Tubing Stake
DCB-025	Diffuser Bug Cap





□ Stake in place with a bug cap on the end.

INSTALLATION AND MAINTENANCE TIPS :

• For invisible installation, run 1/4" tubing through the drain hole in the bottom of the pot prior to adding plant material.

🗣 Drip Tip

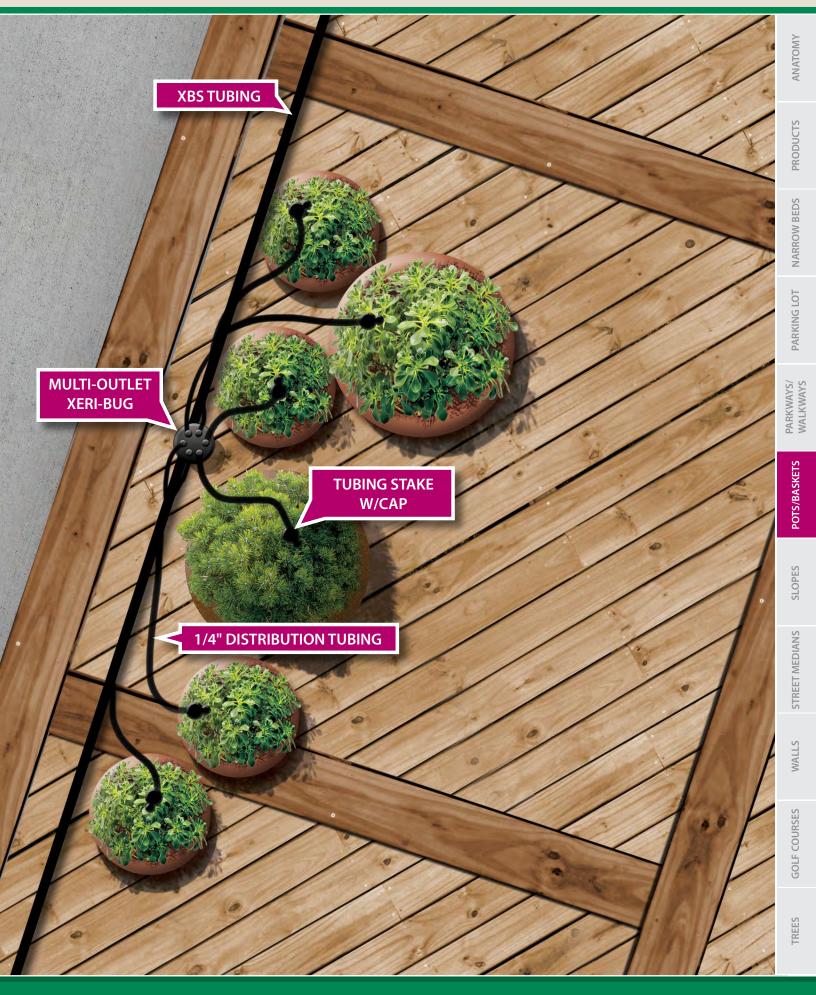
Do not run 1/4" tubing more than 5'-8' from the XB emitter device._____





3 min/Pot

Application Guide



Patio Pots on Separate Zone

Page 3 of 3

Solution

OPTION A: Poly Tubing Lateral with Xeri-Bug Barb Emitters OPTION B: Poly Tubing Lateral with 1/4" Landscape Dripline Loop

Advantages

- Up to 60% water savings
- Poly tubing flexible for odd shaped areas
- Xeri-Bug Emitters can accommodate the watering needs of a variety of potted plants



Installation

Option A			Option B		
XCZ-075-PRF	3/4" Xeri Control Zone Kit		XCZ-075-PRF	3/4" Xeri Control Zon	e Kit
XBS	Xeri Black Stripe Pol	y Tubing	XBS	Xeri Black Stripe Poly	Tubing
XQ-100	1/4" Distribution Tub		XQ-100	1/4" Distribution Tubi	ng
XB XX*	Xeri-Bug Pressure Compensating Drip Emitters (0.5 to 2.0 gph)		XBF1CONN XBF 3TEE	1/4″ Barb Connector 1/4″ Barb Tee	
TS-025	1/4"Tubing Stake		LDQ-08-06-050	1/4" Landscape Dripli	ne
DCB-025	Diffuser Bug Cap			i, i zanascape bripi	
* Select appropriate emi	itter flow rate				
TO-DO LIST:		TIME A:	TO-DO LIST:		TIME B:
Cut and lay out p	oly lines.	30 min/50′	Cut and lay out po	ly lines.	30 min/50'
Assemble Control to water source a	l Zone Kit and connect nd poly lines.	1 hr 15 min	Assemble Control to water source an	Zone Kit and connect Id poly lines.	1 hr 15 min
to connect poly l	tters' self-piercing barb ateral tubing with 1/4" s. Run 1/4" distribution	8 min/Pot	connect 1/4" distri connector, run 1/4 connect tubing to	barb tee. Then create	8 min/Pot
Connect distribution Stake with a bug		3 min/Pot		/4" Landscape Dripline e pot and connect both ee.	

INSTALLATION AND MAINTENANCE TIPS:

• Do not run 1/4" tubing more than 5'-8' from the XB emitter device.



Hanging Baskets

Solution

OPTION A: Poly Tubing Lateral with Xeri-Bug Emitters OPTION B: Poly Tubing Lateral with 1/4" Landscape Dripline Loop

Advantages

- Up to 60% water savings
- Targeted watering in baskets
- Eliminates hand watering
- Connect to irrigation timer for consistent automatic watering

Installation

Option A

XCZ-075-PRF	3/4" Control Zone with 40 psi Pressure Regulator
XBS	Xeri Black Stripe Poly Tubing
XB XX*	Xeri-Bug Pressure Compensating
	Drip Emitters (0.5 to 2.0 gph)
XQ-100	1/4" Distribution Tubing
XM Tool	XM Installation Tool
Electrical Staples	1/2" Metal Staples
TS-025	1/4"Tubing Stake
DCB-025	Diffuser Bug Cap

* Select appropriate emitter flow rate and barbed connection

TO-DO LIST:	TIME A:
Assemble Control Zone Kit at water source and connect poly tube laterals to edge of structure.	1 hr
Elbow poly lateral in vertical line up structure to eaves Staple poly lateral to structure.	40 min/50'
Staple poly lateral along underside of eaves.	30 min/50′
Use XM Tool to punch Xeri-Bug Emitters into poly lateral above baskets.	10 min/ Basket
Connect short length of 1/4" tubing to Xeri-Bug Emitters and stake in basket. Add bug caps to ends of 1/4" lines.	8 min/Basket



Option B

XCZ-075-PRF	3/4" Xeri Control Zone Kit
XBS	Xeri Black Stripe Poly Tubing
XQ-100	1/4" Distribution Tubing
XBF1CONN	1/4" Barb Connector
XBF 3TEE	1/4" Barb Tee
LDQ-08-06-100	1/4" Landscape Dripline

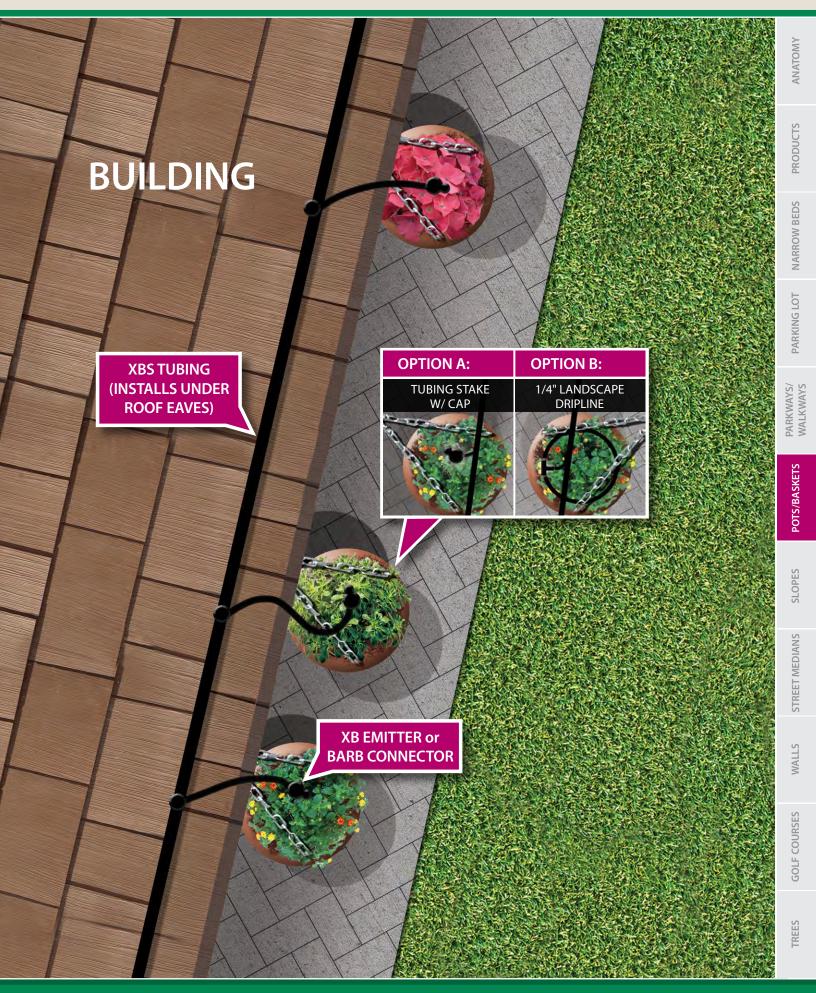
TO-DO LIST:

Assemble Control Zone Kit at water source and connect poly tube laterals to edge of structure.	1 hr
Elbow poly lateral in vertical line up structure to eaves. Staple poly lateral to structure.	40 min/50'
Staple poly lateral along underside of eaves.	30 min/50'
Use XM Tool to punch 1/4" barb connector into poly lateral above baskets.	10 min/ Basket
Insert 1/4" barb connector into poly line, connect 1/4" distribution tubing to barb connector, run 1/4" lines to baskets and connect tubing to barb tee. Then create loop by running 1/4" Landscape Dripline in a circle inside the basket and connect both ends to the barb tee.	8 min/Basket

INSTALLATION AND MAINTENANCE TIPS :

- Flush the zone after installation and 2-4 times per year.
- Use XM Tool for faster installation of Xeri-Bug Emitters and 1/4" barb connectors.
- Break up watering cycles to avoid excess drainage.

TIME B:



Slopes Sparse Applications

Solution

Xeri-Bird 8 & Xeri-Bug Emitters on a PVC Lateral

Advantages

- Up to 65% water savings
- Xeri-Bird 8 manifold with PRS offers pressure regulation, filtration and controlled watering to multiple plants
- Manifold allows for increase/decrease in future plant water demands

Installation

XBD-80	Xeri-Bird 8 Outlet Manifold
XB XX*	Xeri-Bug Pressure Compensating Drip Emitters (0.5 to 2.0 gph)
PRS-050-30	In-stem 30 psi Pressure Regulator
XQ-100	1/4" Distribution Tubing
TS-025	1/4"Tubing Stake
DCB-025	Diffuser Bug Caps
PVC Misc.	PVC Laterals, Fittings, Glue
SEB7X	Emitter Box (optional)

* Select appropriate emitter flow rate and barbed or threaded connection

TO DO LIST :

- □ Trench, cut and glue PVC laterals.
- Connect lines to water source.
- □ Thread Xeri-Bird 8 Outlet Manifold onto in-stem 30 psi Pressure Regulator, then connect to PVC tee.
- □ Attach 1/4" distribution tubing to outlets on Xeri-Bird 8 Outlet Manifold.
- □ Run 1/4" lines to plants, stake in place with a Diffuser Bug Cap on the end.
- □ Install the desired Xeri-Bug Emitter inside Xeri-Bird 8 Outlet Manifold.
- Use and SEB7X Emitter Box as added protection for the Xeri-Bird 8. (optional)

INSTALLATION AND MAINTENANCE TIPS :

- Flush the zone after installation and 2-4 times per year.
- Install Xeri-Bug Emitters in Xeri-Bird 8 Outlet Manifold with selfpiercing barb or threaded end up.
- Leave 6" slack in 1/4" tubing next to manifold in case of unexpected maintenance.







PRS-050-30

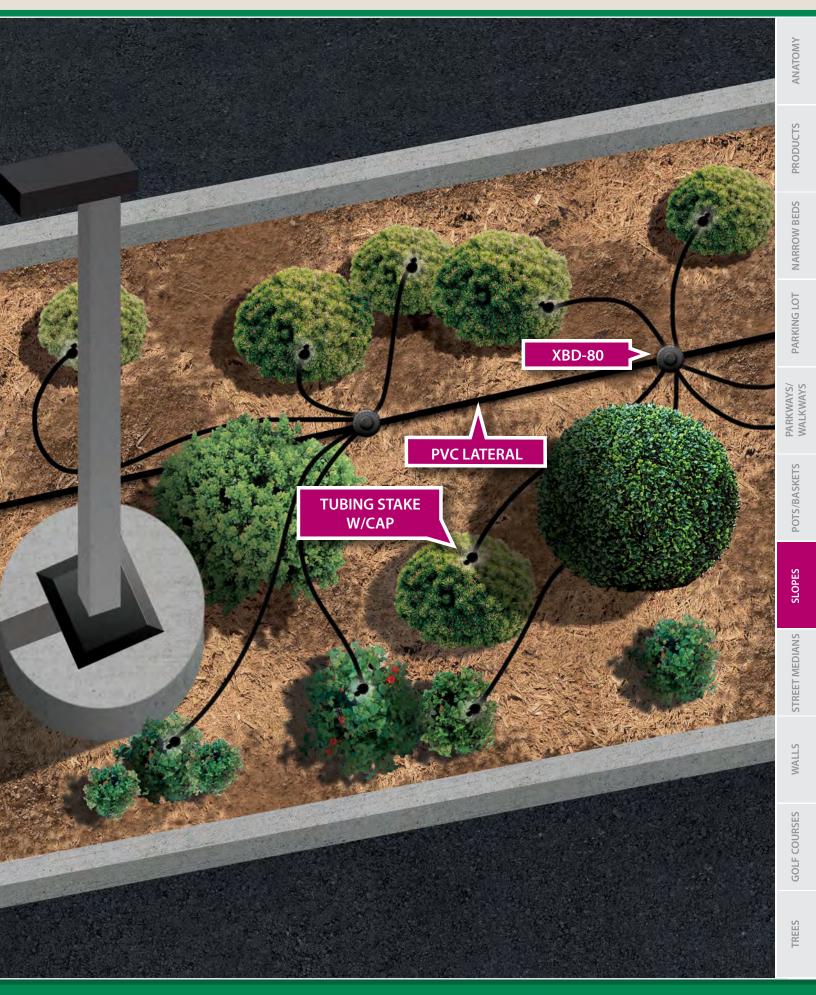
XB XX

TIME: (approx.) 1 hr/20' 1 hr 5 min/Assembly 3 min/XBD-80 8 min/Stake 2 min

🖣 Drip Tip

Do not run 1/4" tubing more than 5'-8' from the XBD-80.

www.rainbird.com



Slopes **Dense or Combination Applications**

Solution

XF Series Dripline Grid with Xeri-Bug Emitters

Advantages

- Up to 60% water savings due to zero wind loss
- Low maintenance results in labor savings
- No runoff = reduced liability in high traffic areas
- XF Dripline is easy to install, resulting in labor savings

Installation

XCZ-100-PRF1" Xeri Control Zone KitARV050½" Air Relief ValveMDCF SeriesEasy Fit Compression Fittings/AdaptersORXF Dripline 17mm Insert FittingsXB XX*Xeri-Bug Pressure Compensating Drip Emitters (0.5 to 2.0 gph)	XFCV-06-12	XFCV Dripline w/Heavy-Duty Check Valve (.6 gph @ 12" Spacing)
ARV050½" Air Relief ValveMDCF SeriesEasy Fit Compression Fittings/AdaptersORXFF SeriesXF Dripline 17mm Insert FittingsXB XX*Xeri-Bug Pressure Compensating Drip Emitters (0.5 to 2.0 gph)XQ-1001/4" Distribution TubingTS-0251/4"Tubing StakeTDS-050Tie Down Stake		(.0 gpi @ 12 spacing)
MDCF Series OR XFF SeriesEasy Fit Compression Fittings/Adapters OR XF Dripline 17mm Insert FittingsXB XX*XF Dripline 17mm Insert FittingsXB XX*Xeri-Bug Pressure Compensating Drip Emitters (0.5 to 2.0 gph)XQ-1001/4" Distribution TubingTS-0251/4" Tubing StakeTDS-050Tie Down Stake	XCZ-100-PRF	1" Xeri Control Zone Kit
OR XFF SeriesXF Dripline 17mm Insert FittingsXB XX*Xeri-Bug Pressure Compensating Drip Emitters (0.5 to 2.0 gph)XQ-1001/4" Distribution TubingTS-0251/4" Tubing StakeTDS-050Tie Down Stake	ARV050	½" Air Relief Valve
XB XX*Xeri-Bug Pressure Compensating Drip Emitters (0.5 to 2.0 gph)XQ-1001/4" Distribution TubingTS-0251/4"Tubing StakeTDS-050Tie Down Stake		Easy Fit Compression Fittings/Adapters
XQ-1001/4" Distribution TubingTS-0251/4" Tubing StakeTDS-050Tie Down Stake	XFF Series	XF Dripline 17mm Insert Fittings
TS-0251/4"Tubing StakeTDS-050Tie Down Stake	XB XX*	5 1 5
TDS-050 Tie Down Stake	XQ-100	1/4" Distribution Tubing
	TS-025	1/4"Tubing Stake
XM Tool Xeriman Installation Tool	TDS-050	Tie Down Stake
	XM Tool	Xeriman Installation Tool
DCB-025 Diffuser Bug Cap	DCB-025	Diffuser Bug Cap



1/2" Air Relief Valve



XFF FITTINGS

* Select appropriate emitter flow rate

TO DO LIST :

TO DO LIST :	TIME: (approx.)
Assemble Control Zone Kit and connect to water source.	1 hr
Connect Easy Fit Adapter to Easy Fit Tee for connection to Control Zone Kit.	5 min
Cut lengths of XF Series Dripline to assemble grid in planting area.	10 min/50'
Connect lengths of XF Series Dripline to Easy Fit Fittings (or use XF Dripline fittings) to create grid. Add 1/2" Air Relief Valve Kit to the zone.	25 min/50'
Insert Xeri-Bug Emitters into XF Series Dripline to provide supplemental watering for larger plants.	3 min/Emitter
Stake XF Series Dripline grid in place and flush until clean water flows.	5 min/10'
Install planting material.	

- **INSTALLATION AND MAINTENANCE TIPS:**
- Supplemental Xeri-Bug Emitters are placed next to larger plants with higher water requirements.
- Flush the zone upon installation and 2-4 times per year.
- Install 1/2" Air Relief Valve Kit at high point in the system.
- Leave XF Series Dripline coil in the sun while preparing for installation.
- Use the Xeriman Tool to install the emitters into XF Series Dripline.



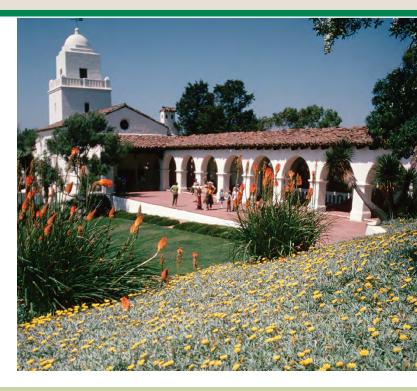
Slopes Combination Applications

Solution

XFCV Dripline Grid with Xeri-Bug Emitters

Advantages

- Up to 60% water savings due to zero wind loss
- · Low maintenance results in labor savings
- XF Dripline is easy to install, resulting in labor savings



Installation

XFCV-06-12	XF Series Dripline .6 gph @ 12" Spacing
XCZ-100-PRF	1" Xeri Control Zone Kit
MDCF Series OR	Easy Fit Compression Fittings/Adapters
XFF Series	XFF Dripline 17mm Insert Fittings
XQ-100	1/4" Distribution Tubing
TS-025	1/4"Tubing Stake
TDS-050	Tie Down Stake
DCB-025	Diffuser Bug Cap



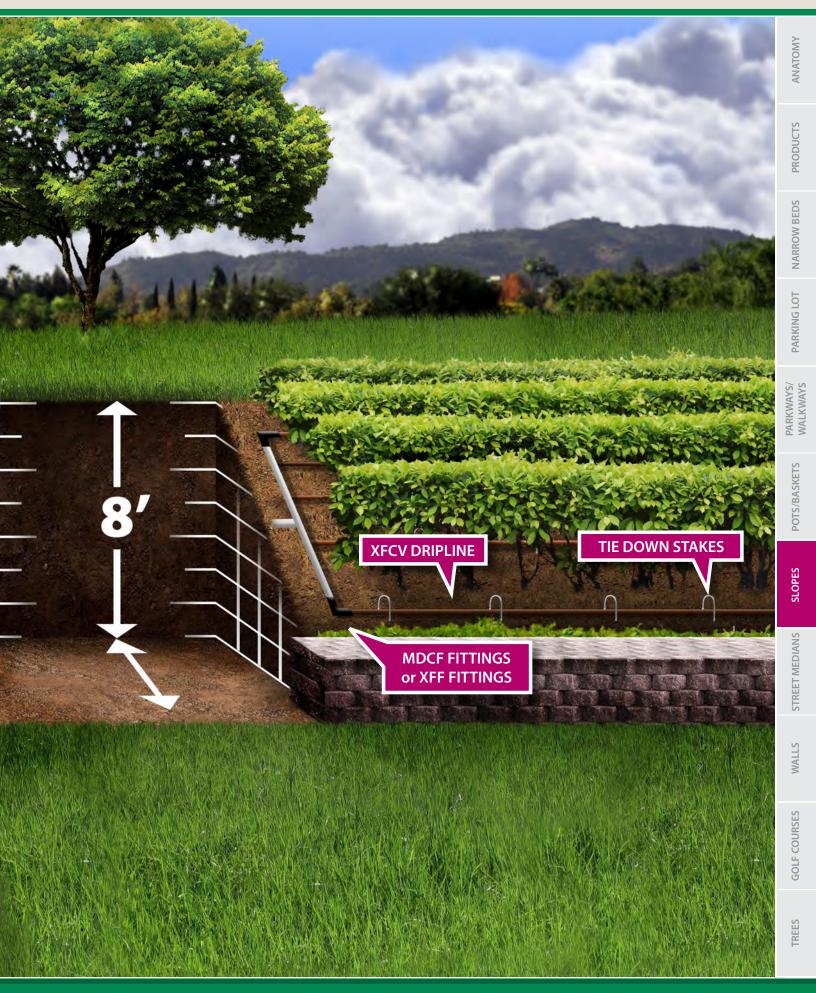
XFCV

TO DO LIST : TIME: (approx.) Assemble Control Zone Kit and connect to water source. 1 hr Connect Easy Fit adapter to Easy Fit Tee for connection to Control Zone Kit. 5 min/XCZ **u** Cut lengths of XF Series Dripline to assemble grid in planting area. 10 min/50' Use MDCF Fittings (or XFF Dripline fittings) to create grid and stake in place. Insert Xeri-Bug 1 hr 30 min Emitters into XF Series Dripline for supplemental watering. 8 min/Stake Connect 1/4" tubing to Xeri-Bug Emitters, run lines and stake next to larger plants. □ Flush zones until clean water flows. 2 min □ Install planting material.

INSTALLATION AND MAINTENANCE TIPS:

* Select appropriate emitter flow rate

- Supplemental Xeri-Bug Emitters or Pressure Compensating Modules can be placed next to larger plants with higher water requirements.
- Flush the zone upon installation and 2-4 times per year.
- Leave XF Series Dripline coil in the sun while preparing for installation.



Street Medians Sparse Applications

Solution

PolyFlex Riser/Adapter & Xeri-Bug Emitters on PVC Lateral

Advantages

- Up to 60% water savings due to zero wind loss
- Targeted watering at plants reduces weed growth
- Pressure Compensating Emitters available from 0.5 to 24 gph for a variety of plant watering needs



Installation

PFR/FRA	PolyFlex Riser/Adapter
XB XX* 10-32	Xeri-Bug Pressure Compensating Drip Emitters (0.5 to 2.0 gph) w 10-32 Thread
PVC Misc.	PVC Laterals, Fittings, Glue

* Select appropriate emitter flow rate



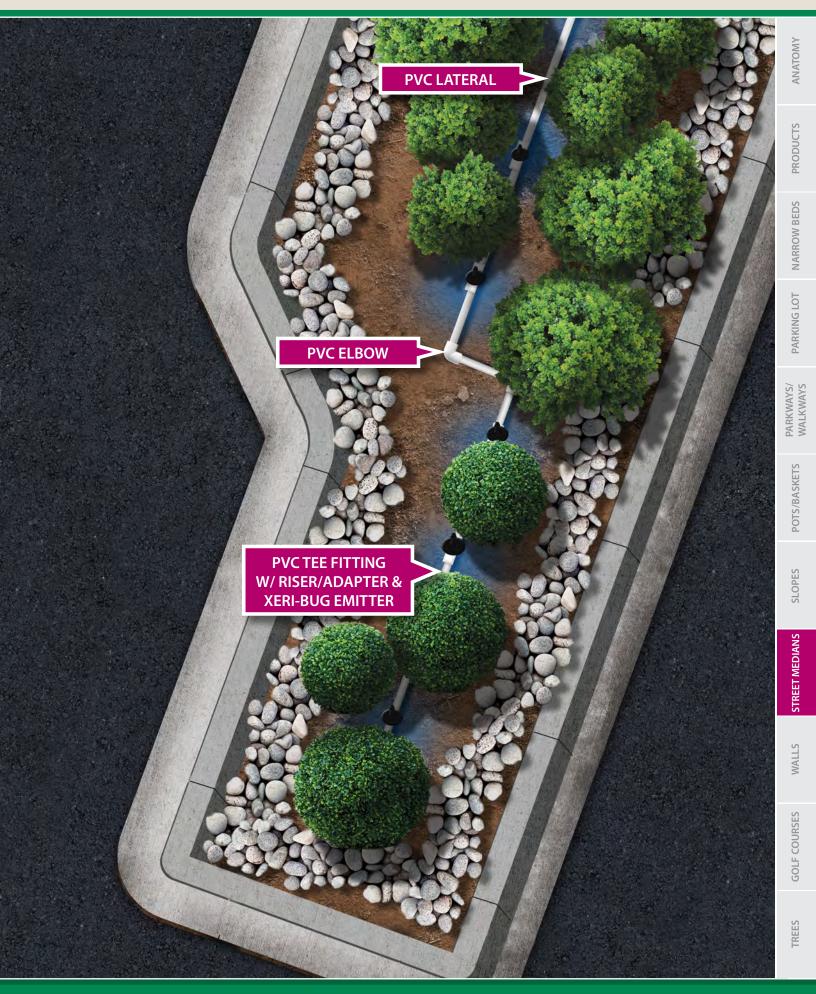


XB XX 10-32

TO DO LIST :	TIME: (approx.)
Trench, cut and glue PVC laterals.	1 hr
Assemble Control Zone Kit and connect to water source and laterals.	1 hr
Thread PFR/FRA into PVC Tee fitting.	3 min/Tee
Thread Xeri-Bug Emitter into PolyFlex Riser.	2 min/PFR
Flush system until clean water flows.	2 min
Add planting material and mulch.	

INSTALLATION AND MAINTENANCE TIPS:

- Flush the zone after installation and 2-4 times per year.
- For larger trees use higher flow Pressure Compensating Modules and Diffuser Caps to avoid wash out.
- Adjust watering time as seasons/weather changes.
- Cut PolyFlex Risers slightly above grade (before installing the Xeri-Bug Emitters) for an "invisible" installation.
- PolyFlex Adapter (FRA) is made of Marlex[®] so no Teflon[®] tape is needed.



Street Medians Dense Applications

Solution

XF Series Dripline Grid

Advantages

- Up to 60% water savings due to zero wind loss
- No overspray damage to roadways and vehicles
- No runoff = reduced liability in high traffic areas
- XF Dripline is easy to install, resulting in labor savings

Installation

XFD-06-12	XF Series Dripline .6 gph @ 12" Spacing
XCZ-100-PRF	1″ Xeri Control Zone Kit
ARV050	1/2" Air Relief Valve Kit
MDCF Series OR	Easy Fit Compression Fittings/Adapters
XFF Series	XFF Dripline 17mm Insert Fittings
TDS-050 BEND	Tie Down Stake
PVC Misc.	PVC Laterals and Fittings
XP600X	Xeri-Pop (optional)
SQ QTR	SQ Series Nozzle (optional)



XFD



XFF FITTINGS

TO DO LIST :	TIME: (approx.)
Assemble Control Zone Kit and connect to water source.	1 hr
Cut lengths of XF Series Dripline to build grid in planting area.	10 min/50′
Connect lengths of XF Series Dripline to Easy Fit Fittings (or XF Dripline 17mm fittings) to create grid (add Air Relief Valve Kit to the zone and connect to Control Zone Kit).	25 min/50′
Stake XF Series Dripline grid in place and flush until clean water flows.	5 min/10'
Install planting material.	

INSTALLATION AND MAINTENANCE TIPS:

- Flush the zone upon installation and 2-4 times per year.
- Install 1/2" Air Relief Valve Kit at high point in the system.
- Leave XF Series Dripline coil in the sun while preparing for installation.
- Use XFS Series Dripline to protect against root intrusion

🎙 Drip Tip

Add a Xeri-Bubbler Xeri-Pop with an XPCN Series Nozzle to the line nearest Control Zone/Valve box as an indicator for maintenance crews.



Street Medians Dense Applications

Solution

SQ Series Nozzle on 1800 Spray Heads with Swing Assembly on PVC Lateral

Advantages

- Precise square wetting pattern reduces overspray, overwatering, and runoff
- Up to 65% water savings due to efficient control of water placement with pressure compensation
- Adjustable radius in one unit makes design and installation simple
- Highest distribution uniformity in the industry for short radius nozzles

Installation

SQ–XXX*	SQ Series Nozzles
18XX	1800 Series Spray Head with Desired Pop-up Height
SA-XXX	SA Series Swing Assembly
PVC Misc	PVC Laterals, Fittings, Glue

* Half, full, or quarter nozzles as needed for planting bed



1806

SQ NOZZLES

1 hr

TIME: (*approx.*) 1 hr/20'

5 min/Assembly

5 min/Tee

As needed 2 min/Nozzle

TO DO LIST :

- □ Trench, cut, and glue PVC laterals.
- □ Connect lines to water source.
- □ Thread 1800 Series Spray Head onto swing assembly then thread the swing assembly into the Slip x Slip x Threaded Tee PVC fitting.
- **Cut PVC laterals and glue in Slip x Slip x Threaded Tee assembly.**
- □ Flush system until water flows clear.
- □ Install SQ Series nozzles on 1800 Spray Heads.

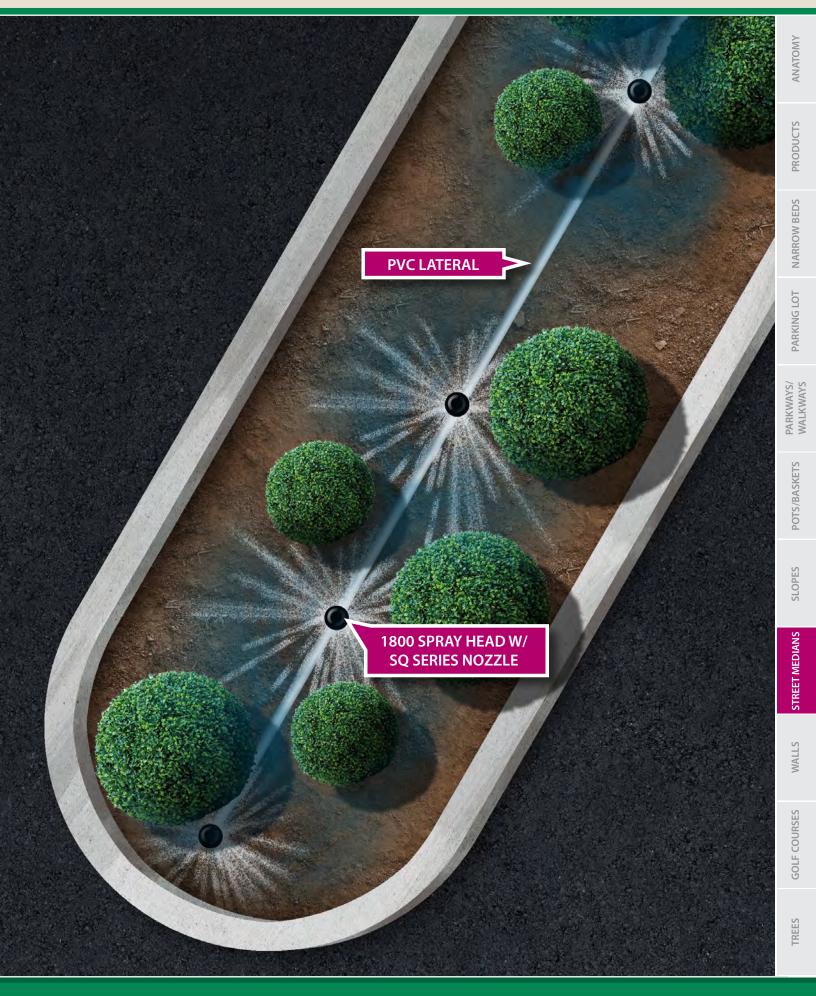
INSTALLATION AND MAINTENANCE TIPS :

- Flush the zone after installation and 2-4 times per year.
- Adjust watering time as seasons/weather changes.
- Ensure that all SQ Series Nozzles are adjusted to the appropriate throw distance.

🚺 Drip Tip

With a simple turn of the nozzle to the next preset stop, the SQ Series Nozzle adjusts from a 2.5' throw to a 4' throw. All nozzles in the same zone must be adjusted to the same throw.





Street Medians Combination Applications

Solution

XF Series Dripline Grid with Xeri-Bug Emitters

Advantages

- Up to 60% water savings due to zero wind loss
- No overspray damage to roadways and vehicles
- No runoff = reduced liability in high traffic areas
- · Low maintenance results in labor savings
- XF Dripline is easy to install, resulting in labor savings

Installation

XFD-06-12	XF Series Dripline .6 gph @ 12" Spacing
XCZ-100-PRF	1″ Xeri Control Zone Kit
ARV050	1/2" Air Relief Valve
XFF Series	XF Dripline 17mm Insert Fittings
XB XX*	Xeri-Bug Pressure Compensating
	Drip Emitters (0.5 to 2.0 gph)
XQ-100	1/4" Distribution Tubing
TS-025	1/4"Tubing Stake
TDS-050	Tie Down Stake
DCB-025	Diffuser Bug Cap



XFD



XFF FITTINGS

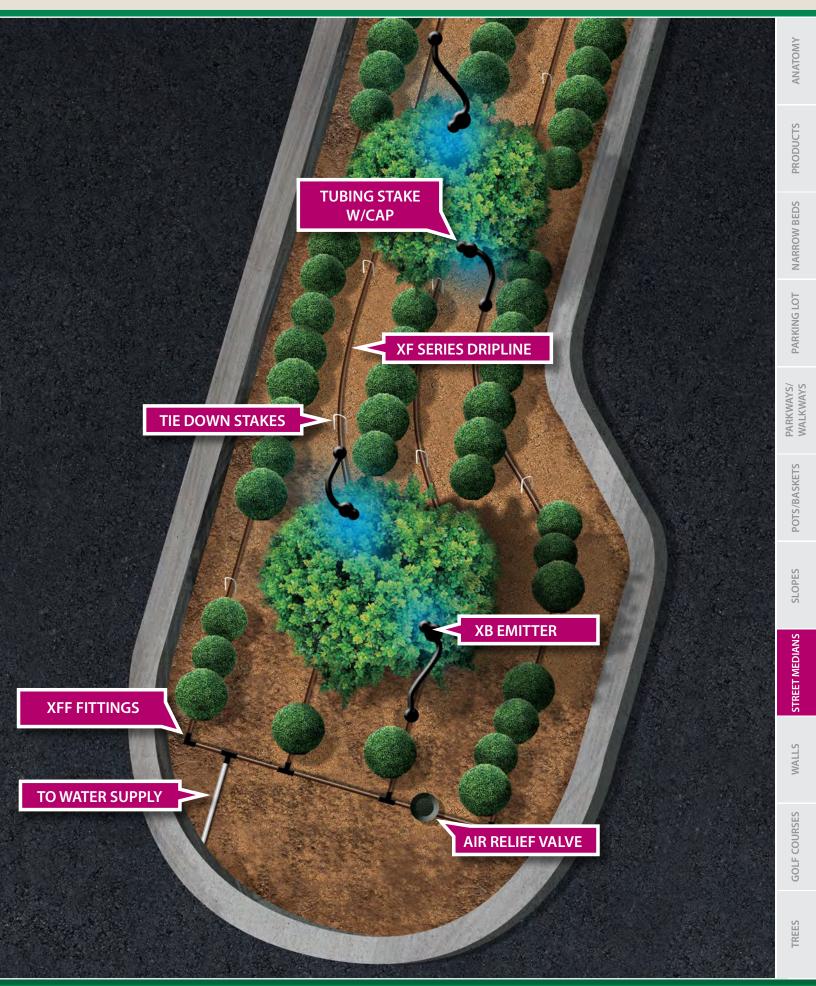
* Select appropriate emitter flow rate

TO DO LIST :	TIME: (approx.)	
Assemble Control Zone Kit and connect to water source.	1 hr	
Connect Easy Fit series for connection to Control Zone Kit.	5 min	
Cut lengths of XF Series Dripline to assemble grid in planting area.	10 min/50′	
Use Easy Fit Compression Fittings (or XFF Dripline fittings) to create XF Series Dripline grid. Add 1/2" Air Relief Valve Kit and stake grid in place. Insert Xeri-Bug Emitters into XF Series Dripline for supplemental watering.	1 hr 30 min	
Connect 1/4" tubing to Xeri-Bug Emitters, run lines and stake next to larger plants.	8 min/Stake	
Flush zones until clean water flows.	2 min	
Install planting material.		

INSTALLATION AND MAINTENANCE TIPS :

- Flush the zone upon installation and 2-4 times per year.
- Install 1/2" Air Relief Valve Kit at high point in the system.
- Leave XF Series Dripline coil in the sun while preparing for installation.
- Supplemental Xeri-Bug Emitters or Pressure Compensating Modules are placed next to larger plants with higher water requirements.





Walls Retaining Walls

Solution

XF Series Dripline

Advantages

- Up to 60% water savings due to zero wind loss
- Targeted watering helps reduce erosion of wall
- No runoff = reduced liability in high traffic areas
- XF Dripline is easy to install, resulting in labor savings

Installation

XFD-06-12	XF Series Dripline .6 gph @ 12" Spacing
XCZ-100-PRF	1" Xeri Control Zone Kit
ARV 050	1/2" Air Relief Valve
MDCF Series OR	Easy Fit Compression Fittings/Adapters
XFF Series	XFF Dripline 17mm Insert Fittings
TDS-050 BEND	Tie Down Stake





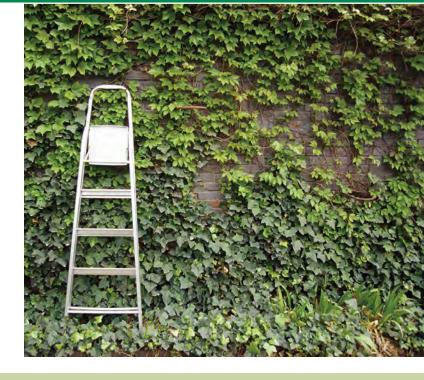
XFD

XFF FITTINGS

TO DO LIST :	TIME: (approx.)
Assemble Control Zone Kit and connect to water source.	1 hr
Cut lengths of XF Series Dripline to lay laterally below retaining wall.	10 min/50′
Connect lengths of XF Series Dripline to Easy Fit Fittings, add 1/2" Air Relief Valve and add Flush Cap to end. Connect to Control Zone Kit.	30 min/50'
Stake XF Series Dripline in place and flush until clean water flows.	5 min/10'
Install planting material.	

INSTALLATION AND MAINTENANCE TIPS :

- Flush the zone upon installation and 2-4 times per year.
- Install 1/2" Air Relief Valve Kit at high point in the system.
- Leave XF Series Dripline coil in the sun while preparing for installation.
- Break up watering cycles to avoid run off or pooling of water in blocks.
- Use XFS Series Dripline to protect against root intrusion





Flower Bed Combination Applications

Solution

• XF Series Dripline Grid with Xeri-Bug Emitters

Advantages

- Up to 60% water savings
- No unsightly run off in high visibility areas
- No damage to walls, entry way or cart paths from overspray
- XF Dripline is easy to install, resulting in labor savings

Installation

XFD-06-12 XCZ-075-PRF	XF Series Dripline .6 gph @ 12" Spacing 3/4" Xeri Control Zone Kit
MDCF Series OR	Easy Fit Compression Fittings/Adapters
XFF Series	XFF Dripline 17mm Insert Fittings
ARV050	1/2" Air Relief Valve
TDS-050-30	Tie Down Stake
XB XX*	Xeri-Bug Pressure Compensating
	Drip Emitters (0.5 to 2.0 gph)
XQ-100	1/4" Distribution Tubing
TS-025	1/4"Tubing Stake
DCB-025	Diffuser Bug Cap







XFD

XM TOOL

XB XX

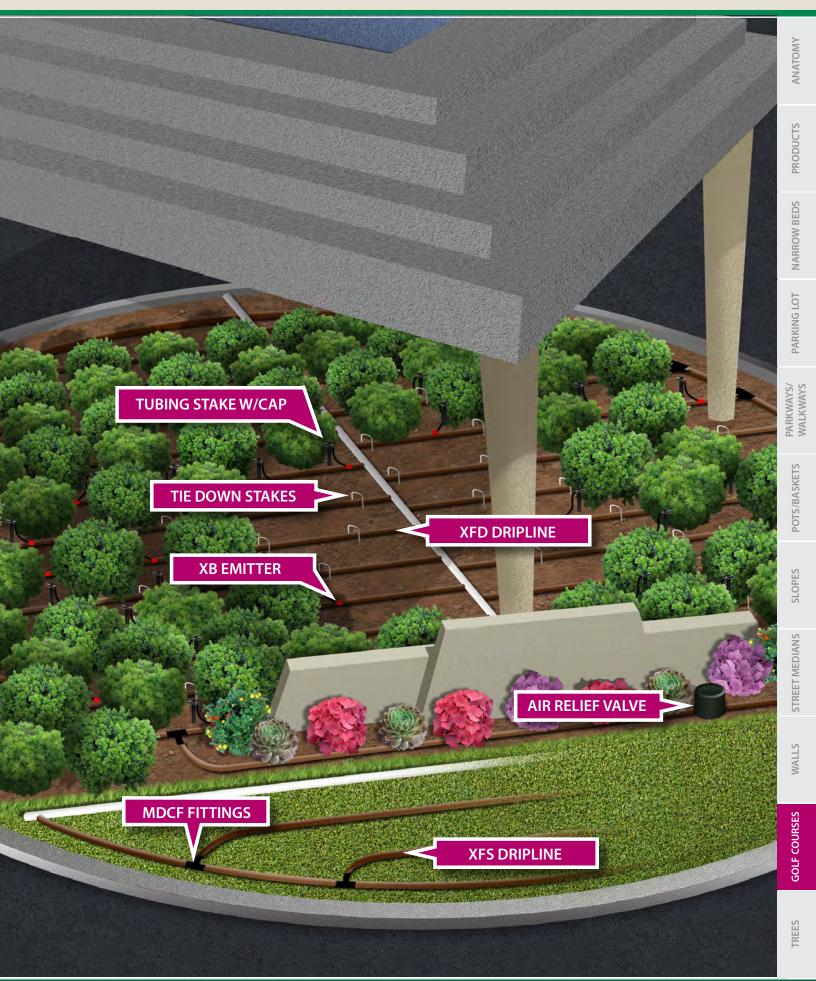
* Select appropriate emitter flow rate

TO DO LIST :

TO DO LIST :	TIME: (approx.)
Assemble Control Zone Kit and connect to water source.	1 hr
Cut lengths of XF Series Dripline to build grid in planting area.	10 min/50'
Connect lengths of XF Series Dripline to Easy Fit Fittings to create grid, add 1/2" Air Relief Valve.	20 min/50'
Connect Easy Fit Adapter to Easy Fit Tee for connection to Control Zone Kit.	5 min
Stake XF Series Dripline grid in place.	5 min/10′
Punch self-piercing barb inlet of Xeri-Bug Emitters into XF Series Dripline, connect 1/4" tubing to barb outlet and run 1/4" tubing to larger plant.	8 min/Emitter
Stake tubing in place and attach Diffuser Bug Cap on the end.	3 min/Stake
 Flush system until clean water flows. Install planting material. 	2 min

INSTALLATION AND MAINTENANCE TIPS:

- Supplemental Xeri-Bug Emitters are placed next to larger plants with higher water requirements.
- Flush the zone upon installation and 2-4 times per year.
- Install Xeri-Bug Emitters with the Xeriman Tool (XM Tool) for 50% faster installation.
- Leave XF Series Dripline coil in the sun while preparing for installation.



Narrow Planting Bed Next to Clubhouse or Cart Path

Sparse Application

Solution

Xeri-Bird 8 & Xeri-Bug Emitters on a PVC Lateral

Advantages

- Up to 60% water savings
- Xeri-Bird 8 Manifold with PRS offers pressure regulation, filtration and controlled watering to multiple plants
- Manifold allows for increase/decrease in future plant water demands



Installation

XBD-80	Xeri-Bird 8 Outlet Manifold
XB XX*	Xeri-Bug Pressure Compensating Drip Emitters (0.5 to 2.0 gph)
PRS-050-30	In-stem 30 psi Pressure Regulator
XQ-100	1/4" Distribution Tubing
TS-025	1/4"Tubing Stake
DCB-025	Diffuser Bug Caps
PVC Misc.	PVC Laterals, Fittings, Glue
SEB7X	Emitter Box







XBD-80

PRS-050-30

XB XX

* Select appropriate emitter flow rate and barbed or threaded connection

TO DO LIST :

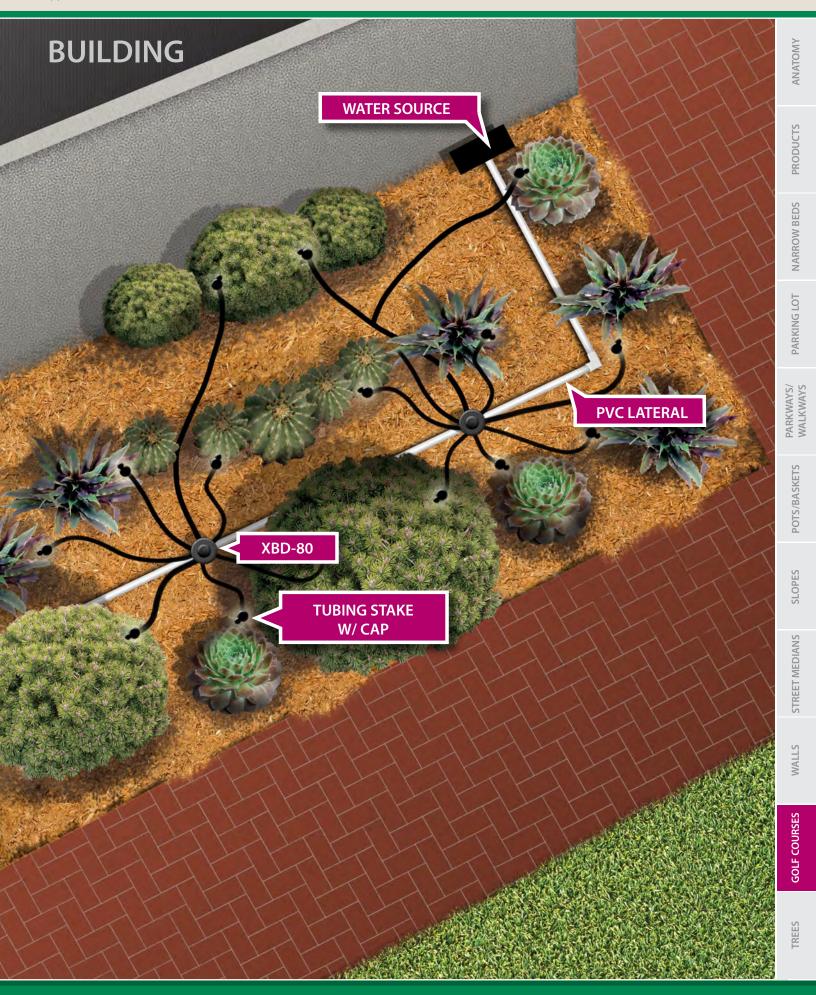
- □ Trench, cut and glue PVC laterals.
- Connect lines to water source.
- □ Thread Xeri-Bird 8 Outlet Manifold onto in-stem 30 psi Pressure Regulator, then connect to PVC tee.
- □ Attach 1/4" distribution tubing to outlets on Xeri-Bird 8 Outlet Manifold.
- □ Run 1/4" lines to plants, stake in place with a Diffuser Bug Cap on the end.
- □ Install the desired Xeri-Bug Emitter inside Xeri-Bird 8 Outlet Manifold.
- Use an SEB7X Emitter Box for added protection of the Xeri-Bird 8. (optional)

INSTALLATION AND MAINTENANCE TIPS :

- Flush the zone after installation and 2-4 times per year.
- Install Xeri-Bug Emitters in Xeri-Bird 8 Outlet Manifold with self-piercing barb end up.
- Leave 6" slack in 1/4" tubing next to manifold in case of unexpected maintenance.

TIME: (approx.)
1 hr/20'
1 hr
8 min/Assembly
5 min/XBD-80
8 min/Stake

3 min/XBD-80



Landscaped Areas on the Course Adjacent to Tee Box, Fairways or Greens

Solution

Pressure Compensating Multi-Outlet Xeri-Bug Device on a PVC Lateral

Advantages

- Up to 60% water savings
- Durable installation in high maintenance areas
- Targeted watering reduces weed growth and extends life of mulch
- Native plant life helps reduce water usage



Installation

XBT-10-6	1.0 GPH Multi-Outlet Xeri-Bug Manifold	
XQ-100	1/4" Distribution Tubing	
TS-025	1/4"Tubing Stake	6.01-20
1/2″ Riser	Sch-80 Riser 1/2" MPT	and the second se
DCB-025	Diffuser Bug Cap	-
PVC Misc.	PVC Laterals, Fittings, Glue	
SEB7X	Emitter Box (optional)	VDT 1



- Trench, cut and glue PVC laterals.
- Assemble Control Zone Kit and position in valve box.
- Connect Control Zone to water source and laterals.
- Thread 1/2" riser into PVC and thread 1.0 GPH Multi-Outlet Xeri-Bug Manifold onto riser.
- Connect 1/4" lines to manifold outlets and run to sparse plantings.
- □ Stake in place and add Diffuser Bug Cap to end of lines.
- □ Flush system until clean water flows.
- □ Add planting material and mulch.

INSTALLATION AND MAINTENANCE TIPS:

- Flush the zone after installation and 2-4 times per year.
- Do not run 1/4" lines more than 5'-8' from water source for optimal performance. ۵
- Adjust watering time as seasons/weather changes.



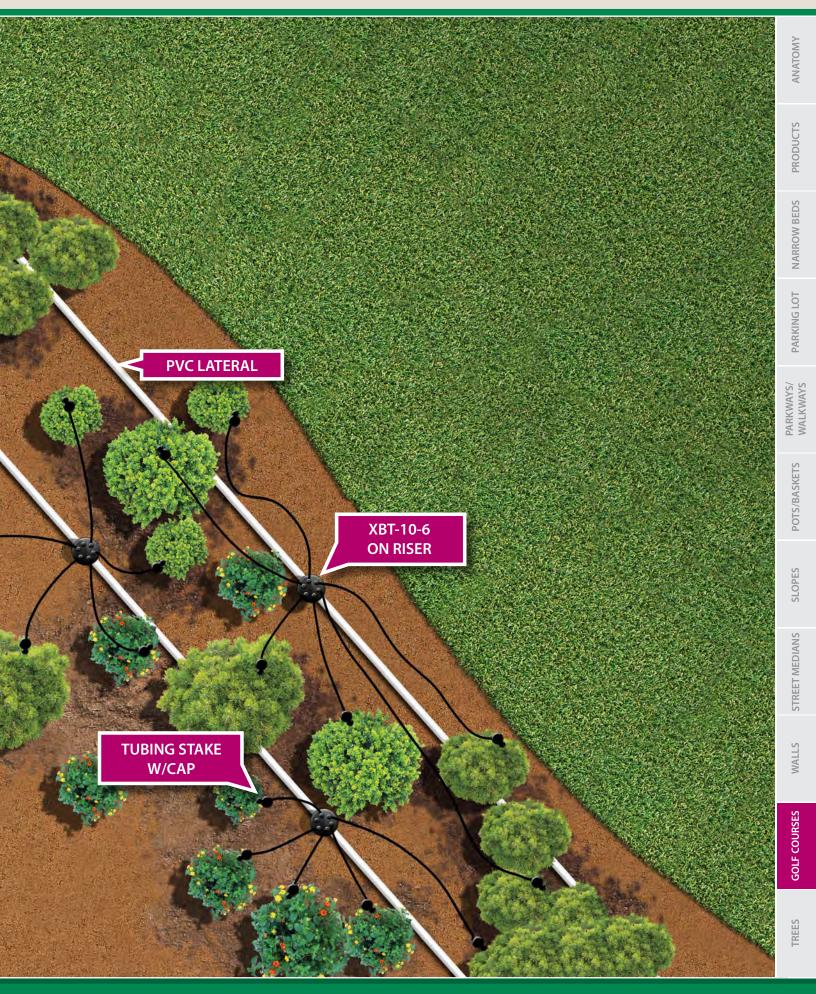
XBT-10-6

TS-025

TIME: (approx.)			
1 hr/20′			
20 min			
1 hr			
5 min/Assembly			
5 min/Line			
3 min/Stake			
2 min			

Drip Tip

Use an SEB7X Emitter Box for added protection of the XBT-10-6 (optional).



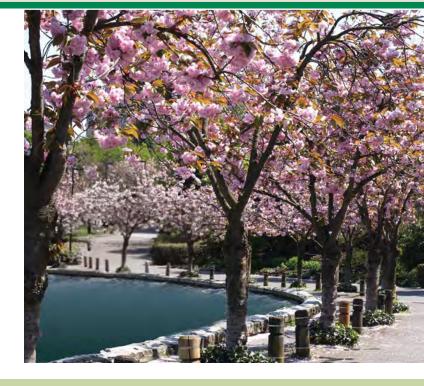
Trees Combination Applications

Solution

Root Watering Series with XF Series Dripline Blank Tubing

Advantages

- Helps prevent damage to hardscapes from tree roots
- Promotes health in trees and shrubs
- Vandal resistant



XFD

Installation

XCZ-100-PRF	1" Control Zone Kit
RWS or RWS-M	RWS Root Watering Series
XFD-XXX	XF Series Dripline Blank Tubing
SPB-025	1/4" Self Piercing Barb Connector
XQ-100	1/4" Distribution Tubing
XB XX*	Xeri-Bug Pressure Compensating
OR	Drip Emitters (0.5 to 2.0 gph)
PC-XX	Pressure Compensating Module
	(be sure to use a PC Diffuser Cap)

Add other drip products as needed (optional)

* Select appropriate emitter flow rate

TO DO LIST :

TO DO LIST :	TIME: (approx.)
Assemble Control Zone Kit and connect to water source.	1 hr
Connect lengths of XF Blank Tubing and insert two to four 1/4" Self Piercing Barb Connectors for	10 min/50'
each tree. Attach length of 1/4" distribution tubing to each barb connector.	
Thread the 1/4" distribution tubing through the hole in the side of the RWS Root Watering Series	10 min/RWS
unit, secure the 1/4" distribution tubing in the 1/4" tubing support brackets at the top of the	
RWS and install the appropriate Xeri-Bug or PC Module with Diffuser Cap emitter at the end of	
the tubing.	
Install additional drip products as needed for other plant material (optional).	as needed
Flush system until water runs clear.	

INSTALLATION AND MAINTENANCE TIPS:

- Flush the zone after installation and 2-4 times per year.
- Leave XF Series Dripline Blank Tubing coils in the sun while preparing for installation.
- Install emitters and 1/4" Self Piercing Barbs with a Xeriman Tool (XM Tool) for 50% faster installation.

🖇 Drip Tip

Use two RWS for young/newly planted trees. Use three to four RWS for older/more mature trees

RWS



1/4" SELF-PIERCING BARB CONNECTOR





WALLS

The Intelligent Use of Water.™

LEADERSHIP • EDUCATION • PARTNERSHIPS • PRODUCTS

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