Together, we can make a difference

At Rain Bird, we believe that saving water is a responsibility that we all share. Our industry can have a tremendous impact on water conservation by installing more efficient systems and teaching customers how to use them correctly. By working together, we can really make a difference.

Rain Bird’s 25 Ways offers practical, effective tips and advice drawn from the company’s 80-plus years of experience in the irrigation industry. Available at 25ways.rainbird.com, these resources can be used anywhere and by anyone who wants to improve their watering efficiency.

Water Saving Tips from Rain Bird

Visit 25ways.rainbird.com for a complete list of water saving tips and techniques in each of the following categories.

- Improve Your Existing System
- Water Only At The Right Times
- Don’t Overwater
- Use The Right Products
- Keep Your Water In Place
- Update Your Landscape
Water efficient irrigation technology for every landscape application

When you design and install Rain Bird complete irrigation solutions, you can be confident knowing that the system will perform better and last longer for many years to come. No matter what your irrigation needs are, Rain Bird has a solution that will help save water for every application in your next green project.

Spray Bodies
Page 8

Spray & Rotary Nozzles
Page 15

Rotors
Page 30

Valves
Page 50

Controllers
Page 63

Sensors
Page 77

Central Controls
Page 83

Drip Irrigation
Page 95

Filtration
Page 133

Resources
Page 140

Not all models are listed. Not all models are available in all markets. Review your regional price list or contact your Rain Bird sales representative for local model availability.
Anatomy of a Water-Efficient Residential System

This residential design guide highlights Rain Bird product and technology solutions for a healthy landscape that uses less water.

Sprays
In-Stem Pressure Regulation
High Efficiency Nozzles
Seal-A-Matic™ (SAM) Check Valve Devices
Non-Potable Spray Heads
p. 8

Controllers and Sensors
Automatic Controllers with Water Efficient Features
Smart Controller Technologies
Automatic Shut-Off Devices
p. 63

Landscape Drip
Direct-to-Plant-Root Watering Devices
p. 95

*All claims of water savings dependent on proper design, installation, and maintenance of irrigation products. Actual water savings may vary from user to user depending on weather, irrigation system and site conditions, and previous irrigation practices.
Introduction
Anatomy of a Water-Efficient Residential System
Anatomy of a Water-Efficient Commercial System

This commercial design guide highlights Rain Bird product and technology solutions for a healthy landscape that uses less water.

### Sprays
- In-Stem Pressure Regulation
- High Efficiency Nozzles
- Seal-A-Matic™ (SAM) Check Valve Devices
- Non-Potable Spray Heads
  p. 8

### Central Control Systems
- Automatic ET-Based Scheduling
- Flow Management
- Flow Monitoring/Leak Detection Cycle + Soak™
  p. 83

### Landscape Drip
- Direct-to-Plant-Root Watering Devices
  p. 95

*All claims of water savings dependent on proper design, installation, and maintenance of irrigation products. Actual water savings may vary from user to user depending on weather, irrigation system and site conditions, and previous irrigation practices.*
Introduction
Anatomy of a Water-Efficient Commercial System

- Sub-Surface Dripline
  p. 95
- Valves
  p. 50
- Controllers and Sensors
  Automatic Controllers with Water Efficient Features
  Automatic Shut-Off Devices
  p. 63
- Rotors
  In-Stem Pressure Regulation
  High Efficiency Nozzles
  Check Valve Devices
  Vandal Resistance
  p. 30
Spray Bodies

Major Products

<table>
<thead>
<tr>
<th></th>
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Water Saving Tips

- The patented, built-in PRS regulator maintains optimal operating pressure and restricts water loss by up to 70% if a nozzle is removed or damaged. It also ends water waste by eliminating misting and fogging caused by high pressure.

- Save water, stop low head drainage, and reduce water hammer by preventing water from draining out of pipes after irrigation with 1800/RD1800 Series Sprays featuring Seal-A-Matic™ (SAM) check valves.

- Exclusive Flow Shield Technology available in the RD1800 Series provides up to 90% reduction in water loss when a nozzle is removed, preventing potentially costly and unacceptable run-off.
UNI-Spray™ Series
Compact and reliable spray heads for any application

Features
- Small exposed cover makes the unit virtually invisible for more attractive landscapes
- Constructed of durable materials including corrosion resistant stainless steel, assuring long product life even in high pressure or surge conditions
- Pressure-activated wiper seal prevents excessive flow-by and water waste and keeps debris from entering upon retraction
- Two-piece ratchet mechanism allows easy nozzle pattern alignment and provides added durability
- Three Year Trade Warranty

Operating Range
- Spacing: 0.8 to 7.3 m**
- Pressure: 1.0 to 4.8 bar

Specifications
- Flow-by: 0 at 0.75 bar or greater; 0.04 m³/h; 0.60 l/m otherwise

Models*
Select models shown. Review your regional price list for complete availability.
- US400: 10 cm (4”) pop-up height, body only
- US410: 10 cm (4”) pop-up height with VAN-10 attached
- US412: 10 cm (4”) pop-up height with VAN-12 attached
- US415: 10 cm (4”) pop-up height with VAN-15 attached
- US418: 10 cm (4”) pop-up height with VAN-18 attached

Models with High-Efficiency Nozzles Pre-Attached*
- US408HE: 10 cm (4”) pop-up height with HE-VAN-8 attached
- US410HE: 10 cm (4”) pop-up height with HE-VAN-10 attached
- US412HE: 10 cm (4”) pop-up height with HE-VAN-12 attached
- US415HE: 10 cm (4”) pop-up height with HE-VAN-15 attached

* The UNI-Spray accepts all Rain Bird nozzles

How to Specify

High Efficiency Variable Arc Nozzles (2.4 m, 3.0 m, 3.7 m, or 4.6 m) are available pre-installed
1800® Series

The #1 irrigation spray head in the world

Features

- Co-molded wiper seal provides unmatched resistance to grit, pressure and the environment
- Constructed of time-proven UV-resistant plastic and corrosion resistant stainless steel parts, ensuring long product life
- Precision controlled flush at pop-down clears debris from unit, assuring positive stem retraction in all soil types
- Two-piece ratchet mechanism allows easy nozzle pattern alignment and provides added durability
- Five Year Trade Warranty

Operating Range

- Spacing: 0.8 to 7.3m**
- Pressure: 1.0 to 4.8 bar

Specifications

- Flow-by: 0 at 0.6 bar or greater; 20 l/h otherwise

Dimensions/Models

Select models shown. Review your regional price list for complete availability.

- ¼” NPT female threaded inlet
- Models and height:
  - 1802: 10 cm (4”) body height; 5 cm (2”) pop-up height
  - 1804: 15 cm (6”) body height; 10 cm (4”) pop-up height
  - 1806: 23 cm (9 ¾”) body height; 15 cm (6”) pop-up height
  - 1812: 40 cm (16”) body height; 30 cm (12”) pop-up height
- Exposed surface diameter: 5.7 cm

* 1806 and 1812-SAM, SAMPRS, and SAM-PRS-45 units do not have a side inlet
** 0.8m to 4.6m with standard Rain Bird Spray Head Nozzles (SQ, U-Series, HE-VAN) 2.4m to 7.3m with Rain Bird Rotary Nozzles (R-VAN)

How to Specify

<table>
<thead>
<tr>
<th>Model</th>
<th>SAM-PRS</th>
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<tbody>
<tr>
<td>1804</td>
<td>Option</td>
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<tr>
<td></td>
<td>SAM: Seal-A-Matic™ check valve</td>
</tr>
<tr>
<td></td>
<td>PRS: Pressure regulator (30psi)</td>
</tr>
<tr>
<td></td>
<td>P45: Pressure regulator (45psi)</td>
</tr>
<tr>
<td>Pop-up Height</td>
<td></td>
</tr>
<tr>
<td>1802: 5 cm (2”) pop-up height</td>
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</tr>
<tr>
<td>1804: 10 cm (4”) pop-up height</td>
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<tr>
<td>1806: 15 cm (6”) pop-up height</td>
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</tr>
<tr>
<td>1812: 30 cm (12”) pop-up height</td>
<td></td>
</tr>
</tbody>
</table>
1800®-SAM, 1800®-PRS, 1800®-P45,
1800®-SAM-PRS, 1800®-SAM-P45 Series
10.2 cm, 15.2 cm, 30.5 cm

Features

- **1800®-SAM Series**: Built-in Seal-A-Matic™ (SAM) check valve. Eliminates the need for under-the-head check valves. Traps water in lateral pipes in elevation changes of up to 4.2 m. Reduces wear on system components by minimizing water hammer during start-up.

- **1800®-PRS Series**: Maintains constant outlet pressure at 2.1 bar. PRS pressure regulator built into the stem simplifies system design. Eliminates misting and fogging caused by high pressure. Saves time and money.

- **1800®-P45 Series**: Maintains constant outlet pressure at 3.1 bar. P45 pressure regulator built into the stem simplifies system design. Eliminates misting and fogging caused by high pressure. Saves time and money.

- **1800®-SAM-PRS Series**: Incorporates all 1800 Series SAM and PRS features. Meets the needs of all spray areas, regardless of changing elevation or water pressures.

- **1800®-SAM-P45 Series**: Incorporates all 1800 Series SAM and P45 features. Maintains constant outlet pressure at 3.1 bar at varying inlet pressures. Ensures maximum spray body and nozzle performance, even with varying inlet pressures. Maintains constant pressure regardless of nozzle used.

Specifications

- 10.2 cm, 15.2 cm, 30.5 cm
- SAM capability: holds up to 4.2 m of head; 0.4 bar
- PRS and P45 models regulate nozzle pressure to an average 2.1 or 3.1 bar with inlet pressures of up to 4.8 bar
- Flow-by: 0 at 0.6 bar or greater; 0.02 m³/h; 0.36 l/m otherwise
- Installation: side or bottom inlet
- Side inlet installation not recommended in freezing climates
- Five Year Trade Warranty

1800®-SAM Models

- 1804-SAM: 10 cm (4”) pop-up height
- 1806-SAM: 15 cm (6”) pop-up height
- 1812-SAM: 30 cm (12”) pop-up height

1800®-PRS Models

- 1804 PRS: 10 cm (4”) pop-up height
- 1806 PRS: 15 cm (6”) pop-up height
- 1812 PRS: 30 cm (12”) pop-up height

1800®-P45 Models

- 1804 P45: 10 cm (4”) pop-up height
- 1806 P45: 15 cm (6”) pop-up height
- 1812 P45: 30 cm (12”) pop-up height

1800®-SAM-PRS Models

- 1804-SAM-PRS: 10 cm (4”) pop-up height
- 1806-SAM-PRS: 15 cm (6”) pop-up height
- 1812-SAM-PRS: 30 cm (12”) pop-up height

1800®-SAM-P45 Models

- 1804-SAM-P45: 10 cm (4”) pop-up height
- 1806-SAM-P45: 15 cm (6”) pop-up height
- 1812-SAM-P45: 30 cm (12”) pop-up height

Operating Range

- Spacing: 0.8 to 7.3 meters
- Pressure: 1.0 to 4.8 bar

When using 2.1 bar and 3.1 bar pressure regulating spray heads


Patented pressure regulator in stem compensates for high or fluctuating water pressure to ensure maximum performance.

* 0.8m to 5.5m with standard Rain Bird Spray Head Nozzles (SQ, MPR, VAN, HE-VAN, U-Series), 2.4m to 7.3m with Rain Bird Rotary Nozzles (R-VAN)
RD1800™ Series Spray Heads
Robust Design for Harsh Applications

Features
- Patented, Triple-Blade Wiper Seal precisely balances flushing, flow-by and debris protection to optimize performance and durability at pop-up and retraction. Precision-controlled flushing at pop-up and retraction clears debris, ensuring positive stem retraction in all soil types
- Unique debris pockets hold grit in place, removing it from circulation and preventing long-term damage. Parts resistant to corrosion in treated recycled water containing chlorine
- RD1800™ SAM PRS Series: Incorporates all RD1800 Series SAM and PRS features. Meets the needs of all spray areas, regardless of changing elevation or water pressures
- RD1800™ SAM P45 Series: Incorporates all RD1800 Series SAM and P45 features. Ensures maximum spray body and nozzle performance even with varying inlet pressures. Recommended for use with rotary nozzles (R-VAN)
- RD1800™ Flow-Shield™ Series: Provides low flow vertical water jet visible from +61 meter line of sight when a nozzle has been removed
- RD1800™ Non-Potable Water Series: Provides an alternative to clip-on caps and molded purple covers. Easy-to-read English “DO NOT DRINK”, Spanish “NO BEBA” warnings, and international do not drink symbol

Operating Range
- Spacing: 0.8 to 7.3 m
- Pressure: 1.0 to 6.9 bar

Specifications
- 10.2 cm; 15.2 cm; 30.5 cm
- SAM capability: Holds up to 4.2 m of head; 0.3 bar
- Flow-by: SAM Models: 0 at 1.0 bar or greater; 0.1 m³/h; 0.03 l/s otherwise
  All Other Models: 0 at 0.7 bar or greater; 0.1 m³/h; 0.03 l/s otherwise
- SAM-PRS models regulate nozzle pressure to an average 2.1 bar with inlet pressures of up to 6.9 bar
- SAM-P45 models regulate nozzle pressure to an average 3.1 bar with inlet pressures of up to 6.9 bar
- Five-year trade warranty

Dimensions
- ½” NPT female threaded inlet

Models

<table>
<thead>
<tr>
<th>Models</th>
<th>10 cm (4&quot;)</th>
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<td>RD12-S-P-45-F-NP</td>
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Non-Potable Cover

Notes:
- Specify sprinkler bodies and nozzles separately.
**1800® NP Cover**
Non-Potable 1800 Spray Head Cover

**Features**
- Designed for excellent retention on 1800 Series Spray Body covers
- Purple plastic cover for easy identification of non-potable water system
- Marked with “Do Not Drink!” warning in both English and Spanish
- Snaps onto all 1800® Series Spray Body covers

**Model**
- 1800-NP

---

**PA-8S-PRS & PA-8S-P45**
30 psi and 45 psi Pressure Regulating Shrub Adapters

**Features**
- Adapts nozzles for use with ½” (15/21) NPT threaded risers
- Patented PRS pressure regulator built into the stem. No parts to be installed at the site. Saves time and money
- Maintains constant pressure at 2,1 bar or 3,1 bar
- Restricts water loss by up to 70% if nozzle is removed or damaged. Saves water and money. Reduces liability. Recommended for vandal-prone areas
- Fits all Rain Bird plastic nozzles
- Rugged thermoplastic construction resists UV rays

**Operating Range**
- Pressure: 1.0 to 4.8 bar
- Flow: 0.05 to 0.91 m³/h; 0.06 to 15.0 l/m

**Specifications**
- ½” female inlet threads
- Fine top threads accept all Rain Bird nozzles
- Height: 13.3 cm

**Models**
- PA-8S-PRS
- PA-8S-P45

---

**PA-80**
Plastic Adapter

**Features**
- Adapts Rain Bird Spray Bodies for use with any 1 ½” (15/21) NPT bubbler or spray nozzle
- Rugged, UV-resistant thermoplastic construction
- Easy to install; no tools required

**Dimensions**
- Height: 3.8 cm; 2.0 cm above 1800 cap

**Model**
- PA-80

---

**1800®-EXT**
Plastic Extension

**Features**
- UV-resistant thermoplastic construction for long life
- Fits all Rain Bird Spray Bodies and Nozzles. Exception: Cannot be used with bubblers

**Model**
- 1800-EXT

---

**PA-8S**
Plastic Shrub Adapter

**Features**
- Adapts Rain Bird Nozzles for use with ½” (15/21) NPT threaded risers
- Accepts protective, non-clogging 1800 Series filter screen (shipped with nozzle) and PCS Series screens
- Durable, non-corrosive plastic construction
- Non-Potable Plastic Shrub Adapter

**Specifications**
- ½” (15/21) female inlet threads
- Fine top threads accept all Rain Bird nozzles

**Model**
- PA-8S
- PA-8S-NP

---

**SPX Series Swing Pipe**
Swing Pipe with Spiral Barb Fittings Provides a Flexible Swing Assembly for Sprays and Rotors

**Features and Benefits**
- **SPX-FLEX100**
  - Superior flexibility allows pipe to be efficiently routed around hardscape, terraces, and uneven terrain to turn landscape design into reality
  - Textured surface makes product easier to handle, contributing to labor efficiency, especially under wet conditions
  - Resists kinking
  - Quick and easy installation lowers material and labor costs
  - Installs quickly leaving time for additional system installations and incremental revenue opportunities

**Specifications**
- Inside diameter: 1.24 cm
- Operating pressure: 5.5 bar
- Temperature: 43°C

**Models**
- SPX-FLEX-100: 30 m (100’) coil

---

**1800® NP Cover**
Non-Potable 1800 Spray Head Cover

**Features**
- Designed for excellent retention on 1800 Series Spray Body covers
- Purple plastic cover for easy identification of non-potable water system
- Marked with “Do Not Drink!” warning in both English and Spanish
- Snaps onto all 1800® Series Spray Body covers

**Model**
- 1800-NP

---

**PA-8S-PRS & PA-8S-P45**
30 psi and 45 psi Pressure Regulating Shrub Adapters

**Features**
- Adapts nozzles for use with ½” (15/21) NPT threaded risers
- Patented PRS pressure regulator built into the stem. No parts to be installed at the site. Saves time and money
- Maintains constant pressure at 2,1 bar or 3,1 bar
- Restricts water loss by up to 70% if nozzle is removed or damaged. Saves water and money. Reduces liability. Recommended for vandal-prone areas
- Fits all Rain Bird plastic nozzles
- Rugged thermoplastic construction resists UV rays

**Operating Range**
- Pressure: 1.0 to 4.8 bar
- Flow: 0.05 to 0.91 m³/h; 0.06 to 15.0 l/m

**Specifications**
- ½” female inlet threads
- Fine top threads accept all Rain Bird nozzles
- Height: 13.3 cm

**Models**
- PA-8S-PRS
- PA-8S-P45

---

**PA-80**
Plastic Adapter

**Features**
- Adapts Rain Bird Spray Bodies for use with any 1 ½” (15/21) NPT bubbler or spray nozzle
- Rugged, UV-resistant thermoplastic construction
- Easy to install; no tools required

**Dimensions**
- Height: 3.8 cm; 2.0 cm above 1800 cap

**Model**
- PA-80

---

**1800®-EXT**
Plastic Extension

**Features**
- UV-resistant thermoplastic construction for long life
- Fits all Rain Bird Spray Bodies and Nozzles. Exception: Cannot be used with bubblers

**Model**
- 1800-EXT

---

**PA-8S**
Plastic Shrub Adapter

**Features**
- Adapts Rain Bird Nozzles for use with ½” (15/21) NPT threaded risers
- Accepts protective, non-clogging 1800 Series filter screen (shipped with nozzle) and PCS Series screens
- Durable, non-corrosive plastic construction
- Non-Potable Plastic Shrub Adapter

**Specifications**
- ½” (15/21) female inlet threads
- Fine top threads accept all Rain Bird nozzles

**Model**
- PA-8S
- PA-8S-NP

---

**SPX Series Swing Pipe**
Swing Pipe with Spiral Barb Fittings Provides a Flexible Swing Assembly for Sprays and Rotors

**Features and Benefits**
- **SPX-FLEX100**
  - Superior flexibility allows pipe to be efficiently routed around hardscape, terraces, and uneven terrain to turn landscape design into reality
  - Textured surface makes product easier to handle, contributing to labor efficiency, especially under wet conditions
  - Resists kinking
  - Quick and easy installation lowers material and labor costs
  - Installs quickly leaving time for additional system installations and incremental revenue opportunities

**Specifications**
- Inside diameter: 1.24 cm
- Operating pressure: 5.5 bar
- Temperature: 43°C

**Models**
- SPX-FLEX-100: 30 m (100’) coil
SB Series Spiral Barb Fittings
A Natural Product Complement to SPX Series Swing Pipe

Features and Benefits
• Fittings are made of robust acetal material to make connecting swing pipe fast and easy
• Easy twist-in insertion – no glue or clamps needed for installation
• Aggressive barb lip makes a secure connection that is less likely to leak
• Broad range of shapes and sizes allow the contractor to choose the best fitting for the application
• Extended length and aggressive barb lip prevent blow outs, reducing likelihood of contractor call backs

Specifications
• Operating pressure: 5.5 bar
• Temperature: Up to 43°C

Models
• SB-CPLG: ½” barb x ½” barb coupling
• SBA-050: ½” M NPT x ½” barb adapter
• SBE-075: ¾” M NPT x ½” barb elbow
• SBE-050: ½” M NPT x ½” barb elbow
• SB-TEE: ½” barb x ½” barb x ½” barb tee

SA Series
Swing Assemblies Connect Heads to Lateral Pipes.

Features
• Quality alternative to locally assembled swing pipe/spiral barb fittings that do not carry a manufacturer’s warranty
• Comprehensive range of products support a variety of landscape solutions
• Complementary engineered fittings and spray heads instill confidence in product specification

Specifications
• The operating range of the Rain Bird Swing Assemblies matches or exceeds the operating range for most 1.3 cm sprays and 1.9 cm rotors
• Operating pressure: Up to 5.5 bar
• Surge pressure: Up to 15.5 bar
• Temperature: Up to 43°C
• Maximum flow: 0.5 l/sec

Models
Select models shown. Review your regional price list for complete availability.

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<thead>
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<th>Inlet/Outlet</th>
<th>Length</th>
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<td>15.2 cm</td>
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<tr>
<td>½” (1.3 cm)</td>
<td>30.5 cm</td>
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How to Specify

SA 12 5050

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<tr>
<th>Inlet/Outlet</th>
<th>Length</th>
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<td>½” (1.3 cm)</td>
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<tr>
<td>½” (1.3 cm)</td>
<td>12” (30.5 cm)</td>
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<tr>
<td>½” (1.3 cm)</td>
<td>6” (15.2 cm)</td>
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Model
Swing Assembly
Spray & Rotary Nozzles

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<th>Major Products</th>
<th>Rotary Nozzles</th>
<th>Variable ARC Sprays</th>
<th>Fixed ARC Sprays</th>
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<td>R-VAN</td>
<td>HE-VAN</td>
<td>VAN</td>
</tr>
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<td>Standard</td>
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Refer to page 105 for more information on SQ Series, Square Pattern Nozzles

**Water Saving Tips**

- Rotary Nozzles have efficient water distribution through rotating streams that uniformly deliver water at a low precipitation rate, significantly reducing runoff and erosion.
- HE-VAN nozzles are fully adjustable from 0 to 360 degrees with high uniformity and efficiency. HE-VAN nozzles can reduce the number of variations that need to be carried to cover just about any field challenge. Available in radii from 2.4m to 4.6m, this high efficient nozzle has you covered.
- U-Series Nozzles are dual-orifice nozzles that have better, more uniform water distribution. Water flowing from both orifices combines to form a continuous water stream and eliminates gaps for more uniform coverage throughout the entire watering area.
What is a High-Efficiency Nozzle?

Typical nozzles – Un-Even Watering
With typical nozzles, part of the lawn may not have enough water and other parts may be over-watered. A large portion of water may be lost to evaporation / misting, and over-spray.

High-efficiency nozzles – Even Watering
High-efficiency nozzles provide better coverage. Better coverage means shorter zone run-times while keeping grass healthy. Shorter run-times means you will save up to 25%+ water vs. typical nozzles. Rain Bird’s high-efficiency nozzles are also engineered to produce large water droplets to reduce wind drift.

Standard or Low Precipitation Rate?

Low Precipitation Rate Nozzles
Low precipitation rate nozzles are best used in sloped or compacted soil areas to minimize run-off. The low watering rate makes run-times longer.

Standard Precipitation Rate Nozzles
Standard precipitation rate nozzles are best used for shorter distance irrigation, and when watering times may be limited due to city ordinances.

Low Precipitation Rate

High-Efficiency Rotary Nozzles

Standard Precipitation Rate

High-Efficiency Nozzles

Standard Nozzles

Adjustable Arc (45° - 270°) | Full Circle (360°) | Adjustable Arc | Fixed Arc | Adjustable Arc | Fixed Arc

R-VAN | HE-VAN | U-Series | VAN | MPR
R-VAN Nozzles
High Efficiency, Multi-Stream

Rain Bird® R-VAN Adjustable Rotary Nozzles save more water, are easier to use, and are lower priced compared to leading rotating nozzles. R-VANs thick streams and large water droplets cut through the wind to deliver water where you want it. R-VANs are easier to use thanks to its hand-adjustable arc and radius.

Features
- Matched precipitation across radius, arcs, and pattern types
- Low precipitation rate reduces run-off and erosion
- Adjust arc and radius without tools
- A pull-up to flush feature clears the nozzle of dirt and debris
- Maintains efficient performance at high operating pressures without misting or fogging
- Compatible with all models of Rain Bird spray bodies, risers and adapters
- Installing with Rain Bird 5000 MPR Series Rotors allows for matched precipitation from 2.4m to 10.7m
- Three year trade warranty

Operating Specifications
- Pressure Range: 2.1 to 3.8 bar
- Recommended Operating Pressure: 3.1 bar
- Spacing: 2.4 to 7.3m
- Adjustments: Arc and radius should be adjusted while water is running

Models

2.4 to 4.6m
- R-VAN14: 45° - 270° Adjustable Arc
- R-VAN14-360: 360° Full Circle

4.0 to 5.5m
- R-VAN18: 45° - 270° Adjustable Arc
- R-VAN18-360: 360° Full Circle

5.2 to 7.3m
- R-VAN24: 45° - 270° Adjustable Arc
- R-VAN24-360: 360° Full Circle

Strip Nozzles
- R-VAN-LCS: 1.5 x 4.6m Left Corner Strip
- R-VAN-RCS: 1.5 x 4.6m Right Corner Strip
- R-VAN-SST: 1.5 x 9.1m Side Strip

Rain Bird recommends using 1800 P45 Spray Bodies to maintain optimum nozzle performance

How to Specify

For Optimum Performance, Use Rain Bird 1800 3.1 Bar Regulated or RD1800 3.1 Bar Regulated Spray Bodies

How to Specify

Product Type Radius DU(LQ)
R-VAN Multi-stream 2.4 to 7.3m > 0.70

Rain Bird Nozzles meet the standard for high efficiency nozzles.

The average DU(LQ) of the applicable products exceed 0.65 distribution uniformity.
### 2.4 to 4.6m Adjustable Arc Nozzles (45° to 270°)

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<th>Flow l/m</th>
<th>Precip mm/h</th>
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### 2.4 to 4.6m Full Circle Nozzles (360°)

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### 4.0 to 5.5m Adjustable Arc Nozzles (45° to 270°)

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### 4.0 to 5.5m Full Circle Nozzles (360°)

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**Note:** All R-VAN nozzles tested on 10 cm pop-ups

■ Square spacing based on 50% diameter of throw

▲ Triangular spacing based on 50% diameter of throw

Performance data taken in zero wind conditions

R-VAN24 and R-VAN24-360: “Do not reduce the radius below 5.2 m

R-VAN18 and R-VAN18-360: “Do not reduce the radius below 4.0 m

R-VAN14 and R-VAN18-360: “Do not reduce the radius below 2.4 m
### 5.2 to 7.3m Adjustable Arc Nozzles (45° to 270°)

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### 5.2 to 7.3m Full Circle Nozzles (360°)

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### Easy Adjustments

#### Adjustable Arc Nozzles
R-VAN14, R-VAN18, R-VAN24

- **RADIUS ADJUSTMENT**
- **ARC ADJUSTMENT**

#### Full Circle Nozzles
R-VAN14-360, R-VAN18-360, R-VAN24-360

- **RADIUS ADJUSTMENT**

#### Strip Nozzles
R-VAN-LCS, R-VAN-RCS, R-VAN-SST

- **SIZE ADJUSTMENT**

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**Note:** All R-VAN nozzles tested on 10 cm pop-ups

- Square spacing based on 50% diameter of throw
- Triangular spacing based on 50% diameter of throw

Performance data taken in zero wind conditions

R-VAN24 and R-VAN24-360: “Do not reduce the radius below 5.2 m

R-VAN18 and R-VAN18-360: “Do not reduce the radius below 4.0 m

R-VAN14 and R-VAN14-360: “Do not reduce the radius below 2.4 m

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**Did you know?**

You Can use R-VAN Nozzles and 5000 Series MPR Rotors on the same zone!

- Matched precipitation rate (MPR) from 2.4m to 10.7m
- Superior coverage – >0.70 DU[LU]
- Thick, wind-resistant streams – near to far

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**www.rainbird.com/sprays**
### Strip Nozzles (Left Corner, Side, Right Corner)

#### R-VAN-LCS 1.5 x 4.6m

<table>
<thead>
<tr>
<th>Nozzle</th>
<th>Pressure bar</th>
<th>Size m</th>
<th>Flow m³/h</th>
<th>Flow l/m</th>
<th>Precip mm/h</th>
<th>Precip mm/h</th>
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<tbody>
<tr>
<td>Left Corner Strip</td>
<td>2.1 1.2x4.3</td>
<td>0.04</td>
<td>0.68</td>
<td>16</td>
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<tr>
<td>Right Corner Strip</td>
<td>2.4 1.5x4.6</td>
<td>0.05</td>
<td>0.83</td>
<td>14</td>
<td>14</td>
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</tr>
<tr>
<td></td>
<td>2.8 1.5x4.6</td>
<td>0.05</td>
<td>0.87</td>
<td>15</td>
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<tr>
<td></td>
<td>3.1 1.5x4.6</td>
<td>0.05</td>
<td>0.91</td>
<td>16</td>
<td>16</td>
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<tr>
<td></td>
<td>3.4 1.5x4.6</td>
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<td>0.95</td>
<td>16</td>
<td>16</td>
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<tr>
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<td>3.8 1.8x4.9</td>
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<td>14</td>
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#### R-VAN-SST 1.5 x 9.1m

<table>
<thead>
<tr>
<th>Nozzle</th>
<th>Pressure bar</th>
<th>Size m</th>
<th>Flow m³/h</th>
<th>Flow l/m</th>
<th>Precip mm/h</th>
<th>Precip mm/h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Side Strip</td>
<td>2.1 1.2x8.5</td>
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<tr>
<td>Right Corner Strip</td>
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<td></td>
<td>2.8 1.5x9.1</td>
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<td>1.74</td>
<td>15</td>
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</tr>
<tr>
<td></td>
<td>3.1 1.5x9.1</td>
<td>0.11</td>
<td>1.82</td>
<td>16</td>
<td>16</td>
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<td>3.4 1.5x9.1</td>
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<td>14</td>
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</tr>
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</table>

**Note:** All R-VAN nozzles tested on 10 cm pop-ups

**Performance data taken in zero wind conditions**

- Straight-line spacing based on 50% overlap of throw for LCS, SST, and RCS
- Triangular spacing based on 50% overlap of throw for LCS, SST, and RCS

#### R-VAN-RCS 1.5 x 4.6m

<table>
<thead>
<tr>
<th>Nozzle</th>
<th>Pressure bar</th>
<th>Size m</th>
<th>Flow m³/h</th>
<th>Flow l/m</th>
<th>Precip mm/h</th>
<th>Precip mm/h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Right Corner Strip</td>
<td>2.1 1.2x4.3</td>
<td>0.04</td>
<td>0.68</td>
<td>16</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td>Right Corner Strip</td>
<td>2.4 1.5x4.6</td>
<td>0.05</td>
<td>0.83</td>
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<td>14</td>
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<tr>
<td></td>
<td>2.8 1.5x4.6</td>
<td>0.05</td>
<td>0.87</td>
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<tr>
<td></td>
<td>3.1 1.5x4.6</td>
<td>0.05</td>
<td>0.91</td>
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<tr>
<td></td>
<td>3.4 1.5x4.6</td>
<td>0.06</td>
<td>0.95</td>
<td>16</td>
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<tr>
<td></td>
<td>3.8 1.8x4.9</td>
<td>0.06</td>
<td>1.06</td>
<td>14</td>
<td>14</td>
<td></td>
</tr>
</tbody>
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#### R-VAN Requires Half the Models to Cover 45° to 360°

- **R-VAN**
  - 45° - 270°
- **Competitor**
  - 45° - 105°
  - 90° - 210°
  - 210° - 270°
  - 360°

**Offering Valuable Bottom-Line Savings**

- Shorter zone run times save water and energy
- Lower precipitation rates reduce wasteful runoff and costly erosion
- Fewer nozzles needed to cover any area, reducing your inventory costs

**Improving Watering Efficiencies Up to 30%**

- Gentle, rotating streams create uniform coverage at lower precipitation rates
- Multi-stream technology optimizes absorption for healthier lawns
- Larger droplets and thicker streams cut through wind and keep water in target zone
HE-VAN Series Nozzles
High-Efficiency Variable Arc Spray Nozzles

Features
- HE-VAN’s even coverage allows you to shorten run times by up to 35%, saving you water and money, while still maintaining a healthy lawn. HE-VAN has more than a 40 percent even-coverage improvement over existing variable arc nozzles
- HE-VAN nozzles have a unique stream pattern, designed for superior coverage and wind resistance. Low-trajectory spray and large water droplets prevent misting and airborne evaporation so the right amount of water is delivered to the right place. Gentle close-in watering eliminates dry-spots around the spray head
- HE-VAN nozzles throw to the exact specified radius, delivering the cleanest edge of any VAN on the market today
- Reduced zone run times, compared to competitive nozzles, help stay within tight watering windows, conserve water, and save money
- With full adjustability from 0° to 360°, you’ll be able to efficiently water landscapes of all shapes, while saving time and stocking fewer nozzles
- Matched precipitation rates allow you to install Rain Bird HE-VAN, MPR and U-Series nozzles on the same zone
- HE-VAN nozzles have a tactile click to keep the arc setting from drifting over time
- Three year trade warranty

Operating Range
- Spacing: 1.8 to 4.6 m
- Pressure: 1.0 to 2.1 bar
- Optimum pressure: 2.1 bar

Models
- HE-VAN-08: 1.8 to 2.4 m
- HE-VAN-10: 2.4 to 3.0 m
- HE-VAN-12: 2.7 to 3.7 m
- HE-VAN-15: 3.7 to 4.6 m

1 These ranges are based on proper pressure at nozzle
2 Rain Bird recommends using 1800/RD1800 PRS Spray Bodies to maintain optimum nozzle performance in higher pressure situations

For Optimum Performance, Use Rain Bird 1800 2.1 Bar Regulated or RD1800 2.1 Bar Regulated Spray Bodies

HE-VAN Nozzles meet the standard for high efficiency nozzles.

The average DU(LQ) of the applicable products exceed 0.65 distribution uniformity.

<table>
<thead>
<tr>
<th>Product</th>
<th>Type</th>
<th>Radius</th>
<th>DU(LQ)</th>
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</thead>
<tbody>
<tr>
<td>HE-VAN</td>
<td>Spray, Variable Arc</td>
<td>1.8m - 4.6m</td>
<td>&gt; 0.70</td>
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How to Specify

**HE-VAN-15**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Model</th>
<th>High Efficiency Nozzle</th>
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<tr>
<td>VAN: Variable Arc</td>
<td>Radius Range</td>
<td></td>
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<tr>
<td>8: 1.8 to 2.4 m</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10: 2.4 to 3.0 m</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12: 2.7 to 3.7 m</td>
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<td></td>
</tr>
<tr>
<td>15: 3.7 to 4.6 m</td>
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<td></td>
</tr>
</tbody>
</table>

Stainless steel adjustment screw to adjust flow and radius, up to a 25% reduction in radius
Fits on all Rain Bird® 1800® Series Spray Heads, UNI-Spray™ Series Spray Heads and Rain Bird Shrub Adapters
Available in popular 2.4m, 3.0m, 3.7m, and 4.6m models
0 to 360 degree adjustable arc collar
### 8 Series HE-VAN

**24° Trajectory**

<table>
<thead>
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<th>Nozzle</th>
<th>Pressure (bar)</th>
<th>Radius (m)</th>
<th>Flow (m³/h)</th>
<th>Flow (l/m)</th>
<th>Precip (mm/h)</th>
<th>Precip (mm/h)</th>
</tr>
</thead>
<tbody>
<tr>
<td>360° Arc</td>
<td>1.0</td>
<td>2.1</td>
<td>0.19</td>
<td>3.14</td>
<td>82</td>
<td>95</td>
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<tr>
<td></td>
<td>1.4</td>
<td>2.4</td>
<td>0.27</td>
<td>4.43</td>
<td>45</td>
<td>52</td>
</tr>
<tr>
<td>270° Arc</td>
<td>1.0</td>
<td>2.1</td>
<td>0.25</td>
<td>4.05</td>
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<td>62</td>
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<tr>
<td></td>
<td>1.4</td>
<td>2.4</td>
<td>0.30</td>
<td>5.07</td>
<td>44</td>
<td>51</td>
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<tr>
<td>180° Arc</td>
<td>1.0</td>
<td>2.1</td>
<td>0.26</td>
<td>4.17</td>
<td>50</td>
<td>57</td>
</tr>
<tr>
<td></td>
<td>1.4</td>
<td>2.4</td>
<td>0.31</td>
<td>5.07</td>
<td>44</td>
<td>51</td>
</tr>
<tr>
<td>90° Arc</td>
<td>1.0</td>
<td>2.1</td>
<td>0.07</td>
<td>1.20</td>
<td>64</td>
<td>74</td>
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<td>1.4</td>
<td>2.4</td>
<td>0.10</td>
<td>1.69</td>
<td>44</td>
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**23° Trajectory**

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<th>Radius (m)</th>
<th>Flow (m³/h)</th>
<th>Flow (l/m)</th>
<th>Precip (mm/h)</th>
<th>Precip (mm/h)</th>
</tr>
</thead>
<tbody>
<tr>
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<td>1.0</td>
<td>2.7</td>
<td>0.38</td>
<td>6.33</td>
<td>50.5</td>
<td>58.3</td>
</tr>
<tr>
<td></td>
<td>1.4</td>
<td>3.0</td>
<td>0.44</td>
<td>7.31</td>
<td>47.3</td>
<td>54.6</td>
</tr>
<tr>
<td>270° Arc</td>
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<td>2.7</td>
<td>0.28</td>
<td>4.75</td>
<td>50.5</td>
<td>58.3</td>
</tr>
<tr>
<td></td>
<td>1.4</td>
<td>3.0</td>
<td>0.33</td>
<td>5.48</td>
<td>47.3</td>
<td>54.6</td>
</tr>
<tr>
<td>180° Arc</td>
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<td>2.7</td>
<td>0.19</td>
<td>3.17</td>
<td>50.5</td>
<td>58.3</td>
</tr>
<tr>
<td></td>
<td>1.4</td>
<td>3.0</td>
<td>0.22</td>
<td>3.66</td>
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<td>54.6</td>
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<tr>
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<td>2.7</td>
<td>0.09</td>
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<td>50.5</td>
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<td>1.83</td>
<td>47.3</td>
<td>54.6</td>
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</table>

### 10 Series HE-VAN

**27° Trajectory**

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<th>Pressure (bar)</th>
<th>Radius (m)</th>
<th>Flow (m³/h)</th>
<th>Flow (l/m)</th>
<th>Precip (mm/h)</th>
<th>Precip (mm/h)</th>
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<tbody>
<tr>
<td>360° Arc</td>
<td>1.0</td>
<td>2.1</td>
<td>0.29</td>
<td>4.78</td>
<td>64</td>
<td>74</td>
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<tr>
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<td>1.4</td>
<td>2.4</td>
<td>0.34</td>
<td>5.52</td>
<td>56</td>
<td>65</td>
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<tr>
<td>270° Arc</td>
<td>1.0</td>
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<td>0.22</td>
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<td>64</td>
<td>74</td>
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<td>2.4</td>
<td>0.28</td>
<td>4.63</td>
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<td>180° Arc</td>
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<td>74</td>
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<td>2.4</td>
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<td>74</td>
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### 15 Series HE-VAN

**25° Trajectory**

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<th>Pressure (bar)</th>
<th>Radius (m)</th>
<th>Flow (m³/h)</th>
<th>Flow (l/m)</th>
<th>Precip (mm/h)</th>
<th>Precip (mm/h)</th>
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</thead>
<tbody>
<tr>
<td>360° Arc</td>
<td>1.0</td>
<td>3.4</td>
<td>0.59</td>
<td>9.91</td>
<td>52.9</td>
<td>61.1</td>
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<tr>
<td></td>
<td>1.7</td>
<td>4.3</td>
<td>0.77</td>
<td>12.79</td>
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<td>48.7</td>
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<tr>
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<td>1.0</td>
<td>3.4</td>
<td>0.45</td>
<td>7.43</td>
<td>52.9</td>
<td>61.1</td>
</tr>
<tr>
<td></td>
<td>1.7</td>
<td>4.3</td>
<td>0.58</td>
<td>9.59</td>
<td>42.2</td>
<td>48.7</td>
</tr>
<tr>
<td>180° Arc</td>
<td>1.0</td>
<td>3.4</td>
<td>0.30</td>
<td>4.95</td>
<td>52.9</td>
<td>61.1</td>
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<td>4.3</td>
<td>0.19</td>
<td>3.20</td>
<td>42.2</td>
<td>48.7</td>
</tr>
</tbody>
</table>

**Note:** All HE-VAN nozzles tested on 10 cm pop-ups

- Square spacing based on 50% diameter of throw
- Triangular spacing based on 50% diameter of throw

Performance data taken in zero wind conditions

**Note:** Radius reduction over 25% of the normal throw of the nozzle is not recommended
U-Series Nozzles
Dual orifice spray nozzles that use 30% less water¹

Features
- Additional orifice for close-in watering minimizes brown spots around the spray head and eliminates gaps in coverage so the entire watering area is more uniformly covered.
- Superior coverage for efficient watering. Use up to 30% less water.
- Matched precipitation rate with Rain Bird HE-VAN and MPR nozzles.
- Five year trade warranty.

Operating Range
- Spacing: 1.7 to 4.6 m²
- Pressure: 1.0 to 2.1 bar
- Optimum pressure: 2.1 bar³

Models
- U-8 Series: 2.4m Quarter, Half, Full nozzles
- U-10 Series: 3.1m Quarter, Half, Full nozzles
- U-12 Series: 3.7m Quarter, Half, Full nozzles
- U-15 Series: 4.6m Quarter, Half, Full nozzles

¹ When U-Series dual-orifice nozzles are installed instead of standard nozzles on every spray body in the zone. Results may vary based on site-specific conditions such as sprinkler spacing, wind, temperature, soil and grass type.
² These ranges are based on proper pressure at nozzle.
³ Rain Bird recommends using 1800/RD1800 PRS Spray Bodies to maintain optimum nozzle performance in higher pressure situations.

How to Specify
For optimum performance, use Rain Bird 1800 2.1 Bar Regulated or RD/1800 2.1 Bar Regulated Spray Bodies.

U-Series Nozzles meet the standard for high efficiency nozzles.

<table>
<thead>
<tr>
<th>Product</th>
<th>Type</th>
<th>Radius Range</th>
<th>DU(LQ)</th>
</tr>
</thead>
<tbody>
<tr>
<td>U-Series</td>
<td>Spray, Fixed Arc</td>
<td>1.8m - 4.6m</td>
<td>&gt; 0.70</td>
</tr>
</tbody>
</table>
### U8 Series

**10° Trajectory**

<table>
<thead>
<tr>
<th>Nozzle</th>
<th>Pressure bar</th>
<th>Radius m</th>
<th>Flow m³/h</th>
<th>Flow l/m</th>
<th>Flow l/s</th>
<th>Precip mm/h</th>
<th>Precip mm/h</th>
</tr>
</thead>
<tbody>
<tr>
<td>U-8F</td>
<td>1.0</td>
<td>1.7</td>
<td>0.16</td>
<td>2.8</td>
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<td>84</td>
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</tr>
<tr>
<td></td>
<td>1.5</td>
<td>2.1</td>
<td>0.20</td>
<td>3.4</td>
<td>58</td>
<td>68</td>
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<tr>
<td></td>
<td>2.0</td>
<td>2.4</td>
<td>0.23</td>
<td>3.9</td>
<td>48</td>
<td>55</td>
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<tr>
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<td>2.4</td>
<td>0.24</td>
<td>4.0</td>
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<td>1.7</td>
<td>0.08</td>
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<td>72</td>
<td>84</td>
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Note: All U-Series nozzles tested on 10 cm pop-ups

- Square spacing based on 50% diameter of throw
- Triangular spacing based on 50% diameter of throw

Performance data taken in zero wind conditions

Radius refers to recommended product spacing. Actual radii along arc may vary
VAN Series Nozzles
Variable Arc Nozzles

Features
- A simple twist of the center collar with no special tools increases or decreases the arc setting making it ideal for watering odd shaped areas
- Quickly identify radius with Top Color-coded™ nozzles even when system is not operating
- 12, 15, and 18-VAN have matched precipitation rates with Rain Bird MPR Nozzles
- Three year trade warranty

Easy to Adjust

Operating Range
- Spacing: 0.9 m to 5.5 m
- Pressure: 1.0 to 2.1 bar
- Optimum pressure: 2.1 bar

Models
- 4-VAN Series: 0.9 to 1.2 m
- 6-VAN Series: 1.2 to 1.8 m
- 8-VAN Series: 1.8 to 2.4 m
- 10-VAN Series: 2.1 to 3.1 m
- 12-VAN Series: 2.7 to 3.7 m
- 15-VAN Series: 3.4 to 4.6 m
- 18-VAN Series: 4.3 to 5.5 m

1 These ranges are based on proper pressure at nozzle.
2 Rain Bird recommends using 1800 PRS Spray Bodies to maintain optimum nozzle performance in higher pressure situations.

4 Series VAN

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6 Series VAN

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Note: All VAN nozzles tested on 10 cm pop-ups
■ Square spacing based on 50% diameter of throw
▲ Triangular spacing based on 50% diameter of throw

8 Series VAN

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Performance data taken in zero wind conditions
Note: Radius reduction over 25% of the normal throw of the nozzle is not recommended
### 10 Series VAN

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#### 15 Series VAN

### 12 Series VAN

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### Did you know?

You can use HE-VAN nozzles to have better coverage and save water vs. VAN nozzles.

- Stronger streams and larger water droplets for increased wind resistance.
- Superior close-in watering and edges provide better coverage.
- Shortened run times saves up to 35% in water

---

**Note:** All VAN nozzles tested on 10 cm pop-ups

Square spacing based on 50% diameter of throw

Triangular spacing based on 50% diameter of throw

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**Performance data taken in zero wind conditions**

**Note:** Radius reduction over 25% of the normal throw of the nozzle is not recommended
MPR Spray Nozzles
Matched Precipitation Rate Nozzles

Features
- Matched precipitation rates across sets and patterns in 5 Series, 8 Series, 10 Series, 12 Series, and 15 Series for even water distribution and design flexibility
- MPR Nozzles are installed by more contractors than all other brands combined
- Quickly identify radius and arc with Top Color-coded™ nozzles even when system is not operating
- Three year trade warranty

Operating Range
- Spacing: 0.9 to 4.6 m
- Pressure: 1 to 2.1 bar
- Optimum pressure: 2.1 bar

Models
- 5 Series: Quarter, Half, Full Nozzles
- 5 Series: Bubbler Nozzles
- 8 Series: Quarter, Half, Full Nozzles
- 8 FLT Series: Designed for lower trajectory applications, such as windy areas
- 10 Series Nozzles
- 12 Series Nozzles
- 15 Series: Quarter, Half, Full Nozzles
- 15 Strip Series Nozzles

For Optimum Performance, Use Rain Bird 1800 2.1 Bar Regulated or RD1800 2.1 Bar Regulated Spray Bodies

How to Specify

5° Trajectory

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Note: All MPR nozzles tested on 10 cm pop-ups
Square spacing based on 50% diameter of throw
Triangular spacing based on 50% diameter of throw

Performance data taken in zero wind conditions
Note: Radius reduction over 25% of the normal throw of the nozzle is not recommended
### 10 Series MPR

#### 15° Trajectory

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<th>Flow l/m</th>
<th>Precip mm/h</th>
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#### 30° Trajectory

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### 12 Series MPR

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### 15 Series MPR

#### 30° Trajectory

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<th>Flow l/m</th>
<th>Precip mm/h</th>
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Note: All MPR nozzles tested on 10 cm pop-ups
■ Square spacing based on 50% diameter of throw
▲ Triangular spacing based on 50% diameter of throw

Performance data taken in zero wind conditions

Note: Radius reduction over 25% of the normal throw of the nozzle is not recommended
1300A-F
Adjustable Full-Circle Bubbler

Features
• Stainless Steel adjustment screw regulates flow and radius for spacing between from 0.3 m to 0.9 m apart
• Non-corrosive plastic and stainless steel construction for long life
• Shipped with SR-050 1/2” (15/21) inlet filter screen for easy installation and resistance to debris
• Operates over a wide range of pressures
• Five year trade warranty

Operating Range
• Flow: 3.6 to 8.4 l/m
• Spacing: 0.3 to 0.9 m
• Pressure: 0.7 to 4.1 bar

Model
• 1300A-F

*These ranges are based on proper pressure at nozzle
* Rain Bird recommends using 1800 PRS Spray Bodies to maintain optimum nozzle performance in higher pressure situations

1400 Series
Pressure Compensating Full-Circle Bubblers

Features
• Low flow rates allow water to be absorbed as needed. Reduces runoff
• Flow will not fluctuate at pressures between 1.4 to 6.2 bar
• Flow is not adjustable for increased vandal resistance
• Shipped with special SR-050 1/2” (15/21) bubbler filter screen for easy installation and resistance to debris
• Trickle pattern on models 1401 and 1402; umbrella pattern on models 1404 and 1408
• Five-year trade warranty

Operating Range
• Flow: 1.2 to 7.2 l/m
• Spacing: 0.3 to 0.9 m
• Pressure: 1.4 to 6.2 bar

Models
• 1401: 0.06 m³/h; 0.9 l/m; full-circle, trickle pattern
• 1402: 0.11 m³/h; 1.8 l/m; full-circle, trickle pattern
• 1404: 0.23 m³/h; 3.6 l/m; full-circle, umbrella pattern
• 1408: 0.46 m³/h; 7.2 l/m; full-circle, umbrella pattern

* These ranges are based on proper pressure at nozzle. Rain Bird recommends using 1800/ RD1800 PRS Spray Bodies to maintain optimum nozzle performance in higher pressure situations.

Pressure-Compensating Modules
Point-Source Medium-Flow Emitters for Watering Larger Shrubs and Trees

• PCT-05, PCT-07, PCT-10
• 1/2” FPT inlet that easily threads onto a 1/2” PVC riser

Operating Range
• Flow: 18.93, 26.50, 37.95 l/h
• Pressure: 0.7 to 3.5 bar
• Required filtration: 150 micron

Refer to page 104 for more information
Rotors

Major Products

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<thead>
<tr>
<th>Gear Driven Rotors</th>
<th>Impact Rotors</th>
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<td>Primary Applications</td>
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Water Saving Tips

- Rain Curtain™ nozzle technology is the standard in water-saving nozzle performance. Rain Curtain™ performance is available in all Rain Bird Rotors.
- 5000 Series Rotors with PRS reduce water waste from 15%-45%. By eliminating pressure variation and/or over pressurization, you’ll save water and deliver greener results.
- All rotors with Seal-a-Matic™ (SAM) check valves prevent drainage from heads at lower elevations, stop water waste and eliminate landscape damage due to flooding and/or erosion.
3500 Series
Compact Residential Rotor. Big on Value and Convenience

Features
- Rain Curtain™ nozzles deliver even distribution over the entire radius including large wind resistant droplets and gentle close-in watering resulting in greener turf using less water
- Oversized wiper seal prevents leaks and protects internals from debris
- Arc adjustment through the top of the rotor requiring only a flat-blade screwdriver
- 3 year trade warranty

Options
- SAM Seal-A-Matic™ check valves holds up to 2.1 m of elevation change

Operating Specifications
- Precipitation rate: 9 to 21 mm/h
- Radius: 4.6 to 10.7 m
- Radius may be reduced up to 25% with radius reduction screw
- Pressure: 1.7 to 3.8 bar
- Flow rate: 2.0 to 17.4 l/m
  - 1/2" NPT female bottom threaded inlet
  - Reversing full- and part-circle adjustment 40° - 360°
  - Nozzle trajectory of 25°

Models
Select models shown. Review your regional price list for complete availability.
- 3504-PC: 4” part/reverse full circle
- 3504-PC-SAM: 4” part/reverse full circle with SAM

3504 Series Nozzle Performance

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Precipitation rates based on half-circle operation
■ Square spacing based on 50% diameter of throw
▲ Triangular spacing based on 50% diameter of throw
Performance data collected in zero wind conditions
Performance data derived from tests that conform with ASABE Standards; ASABE S398.1.
See page 144 for complete ASABE Test Certification Statement.

How to Specify
3500 Series 4” (10.2 cm) pop-up

Options
- SAM Seal-A-Matic™ check valves holds up to 2.1 m of elevation change

How to Specify
3504-PC: 4” part/reverse full circle
3504-PC-SAM: 4” part/reverse full circle with SAM
5000 Series
Engineered to be the Industry’s Most Reliable and Best Performing Rotor

Features
• Oversized wiper seal prevents leaks and protects internals from debris
• Rain Curtain™ nozzles deliver even distribution over the entire radius including large wind resistant droplets and gentle close-in watering resulting in greener turf using less water
• A history of proven performance and reliability tested in millions of installations
• Self-flushing arc adjustment port that prevents buildup of debris
• 5 year trade warranty

Operating Specifications
• Precipitation rate: 5 to 37 mm/h
• Radius: 7.6 to 15.2 m
• Radius may be reduced up to 25% with radius reduction screw
• Pressure: 1.7 to 4.5 bar
• Flow Rate: 3.0 to 36.6 l/m; 0.17 to 2.19 m³/h
• Reversing full- and part-circle adjustment from 40°-360°
• Standard nozzle trajectory of 25°. Low angle nozzle trajectory of 10°. MPR nozzles varied nozzle trajectory between 12° - 25°.

Optional Features
• Plus (+) Flow shutoff - “The Green Top”. Reduce downtime on jobs by flushing and nozzling rotors without running back and forth to the controller or valves
• PRS (R) with flow optimizer technology. The 3.1 bar pressure regulator lowers water bills, provides exact flow of each rotor, equalizes lateral lines, and eliminates misting and fogging
• SAM Seal-A-Matic™ check valve holds up to 2.1 m of elevation change
• Stainless steel (SS) riser helps deter vandalism on public turf areas (available on 5004 and 5006 models)

Models
Consult “How to Specify” table for product models and features. Not all combinations are offered.

• 5004: 4” (10 cm) pop-up
• 5006: 6” (15 cm) pop-up
• 5012: 12” (30.5 cm) pop-up

How to Specify

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Rotation
PC: Reversing Part Circle
FC: Full Circle

Options
SAM
R: PRS
SS: Stainless Steel

Note: Certain specifications not available for some rotor series.
## 5000 Series Std. Angle Rain Curtain™ Nozzle Performance

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Pressure: bar  
Nozzle Radius: m  
Flow: l/m  
Flow: m³/h  
Precipitation: mm/h

## 5000 Series Low Angle Nozzle Performance

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Pressure: bar  
Nozzle Radius: m  
Flow: l/m  
Flow: m³/h  
Precipitation: mm/h

## Tools

### Holdup Tool with Bubble Level

**Features**
- Combination holdup tool/bubble level makes proper installation easier
- Works with 5000, Falcon® 6504, and 8005

**Model**
- HOLDUPTOOL

### Rotor Tool

**Features**
- Flat blade screwdriver and pull-up tool all in one
- Works with 3500, 5000, Falcon® 6504, and 8005

**Model**
- ROTORTOOL

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Precipitation rates based on half-circle operation
■ Square spacing based on 50% diameter of throw
▲ Triangular spacing based on 50% diameter of throw
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 Precipitation rates based on half-circle operation
■ Square spacing based on 50% diameter of throw
▲ Triangular spacing based on 50% diameter of throw
Performance data collected in zero wind conditions

Performance data derived from tests that conform with ASABE Standards; ASABE S398.1.
See page 144 for complete ASABE Test Certification Statement.

---

### 5000 PRS Low Angle Nozzle Performance

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 Precipitation rates based on half-circle operation
■ Square spacing based on 50% diameter of throw
▲ Triangular spacing based on 50% diameter of throw
Performance data collected in zero wind conditions

Performance data derived from tests that conform with ASABE Standards; ASABE S398.1.
See page 144 for complete ASABE Test Certification Statement.
5000 Series MPR Nozzles
Perfectly Balanced Coverage with the 5000 Series Rotor

Features
- Rain Curtain™ nozzles deliver even distribution over the entire radius including large wind resistant droplets and gentle close-in watering resulting in greener turf using less water
- Precipitation rate is automatically matched with a uniform radius that does not require stream deflection
- Matched 0.6”/hour precipitation rates enable large and small turf areas to be zoned together by mixing rotors and Rain Bird R-VAN rotary nozzles

Models
- 5000MPRMPK: 5000/5000 Plus Series MPR nozzle tree multi pack- 7.6 m, 9.1 m, 10.7 m radius in Quarter, Third, Half, Full arc

---

How to Specify

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Installing Rotors with 5000 series MPR nozzles and Rain Bird R-VAN Rotary Nozzles in the same zone allows for matched precipitation from 2.4m to 10.7m
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- Square spacing based on 50% diameter of throw
- Triangular spacing based on 50% diameter of throw

Performance data collected in zero wind conditions.

Performance data derived from tests that conform with ASABE Standards; ASABE S398.1.

See page 144 for complete ASABE Test Certification Statement.
Falcon® 6504 Series
Reliable and Economical

Features
- Ratcheting stem just like standard spray bodies
- 3-port, color-coded Rain Curtain nozzles for optimal long range, mid-range, and close-in watering
- SAM Seal-A-Matic check valve
- Self-adjusting stator does not require replacement when changing nozzles
- Heavy-duty, stainless steel retract spring ensures positive pop-down
- 5 year warranty

Options
- Stainless steel (SS) riser helps deter vandalism on public turf areas
- Purple cover (NP) for non-potable systems

Operating Specifications
- Reversing full- and part-circle adjustment from 40-360°
- Precipitation rate: 9 to 33 mm/h
- Radius: 11.3 to 19.8 m
- Pressure: 2.1 to 6.2 bar
- Flow: 0.66 to 4.93 m³/h; 10.8 to 82.2 l/m
- 1” female NPT or BSP threaded inlet
- SAM Seal-A-Matic™ check valve check device holds up to 3.1 m of elevation change
- Rain Curtain™ Nozzles: Included with rotor, other sizes available upon request; 10-grey, 12-beige, 14-light green, 16-dark brown, 18-dark blue
- Nozzle outlet trajectory is 25°

Models
Select models shown. Review your regional price list for complete availability.
- I6504PC: Falcon Series 4” BSP Part Circle
- I6504FC: Falcon Series 4” BSP Full Circle
- I6504PCSS: Falcon Series 4” BSP Part Circle Stainless Steel
- I6504FCSS: Falcon Series 4” BSP Full Circle Stainless Steel
- 6504PC: Falcon Series 4” NPT Part Circle
- 6504FC: Falcon Series 4” NPT Full Circle

How to Specify

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Note: For non-U.S. applications, it is necessary to specify NPT or BSP thread type.
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Precipitation rates based on half-circle operation
■ Square spacing based on 50% diameter of throw
▲ Triangular spacing based on 50% diameter of throw

Performance data collected in zero wind conditions

Performance data derived from tests that conform with ASABE Standards; ASABE S398.1.

See page 144 for complete ASABE Test Certification Statement.

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Low Flow Kit - B81610

Standard Flow Kit - B81620

Falcon® 6504 Rain Curtain™ Nozzles
8005 Series
Protect Your Turf with High Performance, Vandal and Abuse Resistant Rotors from 11.9 to 24.7 m

Features
- Vandal resistance, brass reinforced turret for increased side impact durability
- Memory Arc® returns the rotor to its original arc setting
- Non-strippable drive mechanism prevents damage from vandals
- Easy, wet, dry arc adjustment with slotted screwdriver through top of rotor from 50° to 330° part-circle, 360° non-reversing full-circle. Full and part circle operation in one unit
- Left and right side trips adjustable for ease of installation without turning the case and loosening the pipe connection
- SAM Seal-A-Matic check valve
- 3-port, color-coded Rain Curtain nozzles for optimal long-range, mid-range, and close-in watering
- 5 year warranty

Options
- Stainless steel (SS) riser helps deter vandalism on public turf areas
- Purple cover (NP) for non-potable systems
- Optional Sod Cup

Operating Specifications
- Radius: 11.9 to 24.7 m
- Precipitation rate: 12 to 32 mm/h
- Pressure: 3.5 to 6.9 bar
- Flow: 0.86 to 8.24 m³/h; 12.5 to 137 l/m
- 1” NPT or BSP female threaded inlet
- SAM Seal-A-Matic™ check valve holds up to 3.1 m of elevation change
- Nozzle outlet trajectory is 25°
- Rain Curtain™ Nozzles: Included with rotor, other sizes available upon request: 10-grey, 12-beige, 14-light green, 16-dark brown, 18-dark blue

Models
Select models shown. Review your regional price list for complete availability.
- 8005: 8005 Part/Full Circle, Less Nozzle
- 8005NP: 8005 Part/Full Circle, Less Nozzle W/NP Cover
- 8005SS: 8005 Part/Full Circle, Stainless Steel, Less Nozzle
- 8005NPSS: 8005 Part/Full Circle, Stainless Steel, Less Nozzle w/ NP Cover
- 8005: 8000 Series 1” BSP Part/Full Circle
- 8005NP: 8000 Series 1” BSP Part/Full Circle Non-Potable
- 8005SS: 8000 Series 1” BSP Stainless Steel
- 8005NPSS: 8000 Series 1” BSP Non-Potable Stainless Steel

**Note: For non-U.S. applications, it is necessary to specify NPT or BSP thread type.

How to Specify

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Note: Pop-up height is measured from cover to the primary nozzle port. Overall body height is measured popped down.
### 8005 Nozzle Performance

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### 8005 Nozzle Performance (continued)

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Percipitation rates based on half-circle operation
- Square spacing based on 50% diameter of throw
- Triangular spacing based on 50% diameter of throw

Performance data collected in zero wind conditions

Performance data derived from tests that conform with ASABE Standards; ASABE S398.1. See page 144 for complete ASABE Test Certification Statement.
2045A Maxi-Paw™ and 2045-PJ Maxi-Bird™

Dirty Water Applications - Spacing Up to 13.7 m

Features
- Proven impact drive with straight-through flow for superior performance in dirty water
- Five standard trajectory and two low angle (LA) color-coded nozzles for matched precipitation and in a wide range of applications
- 360° full-circle OR arc adjustable from 20° to 340°
- Side and combination ½" or ¾" bottom inlet for design flexibility (Maxi-Paw)
- 3 year warranty

Operating Specifications
- Precipitation rate: 7 to 31 mm/h
- Spacing: 6.7 to 13.7 m
- Flow rate: 0.34 to 1.91 m³/h; 0.09 to 0.53 l/s
- Radius: 6.7 to 13.7 m; 5.4 m with Radius Reduction Screw
- Pressure: 1.7 to 4.1 bar
- Combination ½" or ¾" female bottom inlet (Maxi-Paw)
- ½" FPT side inlet (Maxi-Paw)
- ½" NPT Riser-Mounted (Maxi-Bird)

Models
- 2045A Maxi-Paw
- 42064: Maxi-Paw Wrench - for removing internal assembly from case
- 2045-PJ Maxi-Bird

Maxi-Paw and Maxi-Bird Nozzle Performance

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LA = Low Angle
Precipitation rates based on half-circle operation
■ Square spacing based on 50% diameter of throw
▲ Triangular spacing based on 50% diameter of throw
Performance data collected in zero wind conditions
Performance data derived from tests that conform with ASABE Standards; ASABE S398.1. See page 144 for complete ASABE Test Certification Statement.
25BPJ

Part or Full Circle Bronze Impact Sprinklers. These impact heads are designed to be riser-mounted. They are used to irrigate hedges, shrubs, and flower beds.

**Features**
- Bronze impact drive sprinklers (with die-cast PJ arm on 25)
- Straight through flow
- Precision Jet tube (PJ™) to minimize side splash on PJ models
- Distance control flap (DA) on 25BPJ
- Distance control diffuser pin (ADJ) on model 25BPJ
- Long wearing TNT bearing
- FP trip permits part circle (20° to 340°) or full circle operation
- Brass straight bore nozzle with vane on model 25BPJ

**Specifications**
- Radius: 11.6 to 12.5 m
- Pressure: 2.1 to 3.5 bars
- Flow: 0.70 to 1.14 m³/h
- ½” NPT male threaded inlet
- Nozzle outlet trajectory: 25°

**Models**
*Select models shown. Review your regional price list for complete availability.*
- 25BPJ-FP-ADJ-DA-TNT: ½” NPT

### 25BPJ-FP-ADJ-DA-TNT Performance

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Precipitation rates based on half-circle operation
- Square spacing based on 50% diameter of throw
- Triangular spacing based on 50% diameter of throw

Performance data collected in zero wind conditions

Performance data derived from tests that conform with ASABE Standards; ASABE S398.1.

See page 144 for complete ASABE Test Certification Statement.
LF Series
Full circle low-flow sprinkler

Applications
The Rain Bird® LF Series Sprinkler is built rugged to withstand the harsh conditions in turf and agricultural applications (nurseries, sod farm...). It has been designed to combine the advantages of an impact sprinkler with stream height flexibility, delivering precise, uniform and unrivalled water distribution.

Features
High Distribution Uniformity
• Weighted drive disk provides an increased dwell time between stream interruptions to achieve the maximum distance of throw
• During impact, the Precision Jet (PJ) spoon guides the water stream gently away from the riser

Most Robust Sprinkler in its Class
• Patented Ceramic Radial Bearing (CRB) is longer lasting than conventional counterparts
• Drive disk made of engineered thermoplastic
• Shields and protects brake mechanism from wind-blown debris and freezing
• Springs and pin composed of high-grade stainless steel
• Ultraviolet (UV) stabilizer protects the sprinkler from the sun

• Easy to Use
• No special tools required
• Color coded nozzles and deflectors allow easy identification
• Weed Guard blocks weeds from growing into the sprinkler and stopping the rotation

Specifications
• ½” (13 mm) BSP male pipe thread

Nozzle Sizes
• LF 1200: 270 l/h to 480 l/h (in mm: 1.98 / 2.18 / 2.39 / 2.59/ 2.76)
• LF 2400: 450 l/h to 910 l/h (in mm: 2.76/ 2.97/ 3.18/ 3.38/ 3.63)

Deflector trajectory outlets available
• LF 1200: 6° / 10° / 12° / 16° / 17° / 21°
• LF 2400: 10° / 13° / 15° / 22°
• LF 2400 LR: 27°

Common Spacings Range
• 8 m x 8 m to 15 m x 15 m

Models
Select models shown. Review your regional price list for complete availability.
• LF 1200
• LF 2400/LF LR 2400
### LF1200 Performance

<table>
<thead>
<tr>
<th>Deflector</th>
<th>Nozzle</th>
<th>Stream Height (cm)</th>
<th>Flow Rate at Standard Pressures (l/h)</th>
<th>Throw Radius at Standard Pressure (meter)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>2.1 bar</td>
<td>2.4 bar</td>
</tr>
<tr>
<td><strong>6 Degree Dark Purple</strong></td>
<td><strong>Orange</strong></td>
<td>35-50</td>
<td>266</td>
<td>286</td>
</tr>
<tr>
<td></td>
<td><strong>Purple</strong></td>
<td>35-53</td>
<td>316</td>
<td>341</td>
</tr>
<tr>
<td></td>
<td><strong>Yellow</strong></td>
<td>40-53</td>
<td>370</td>
<td>402</td>
</tr>
<tr>
<td><strong>12 Degree Blue</strong></td>
<td><strong>Orange</strong></td>
<td>71-99</td>
<td>266</td>
<td>286</td>
</tr>
<tr>
<td></td>
<td><strong>Purple</strong></td>
<td>71-101</td>
<td>316</td>
<td>341</td>
</tr>
<tr>
<td></td>
<td><strong>Yellow</strong></td>
<td>76-109</td>
<td>370</td>
<td>402</td>
</tr>
<tr>
<td><strong>17 Degree Sky Blue</strong></td>
<td><strong>Orange</strong></td>
<td>124-152</td>
<td>266</td>
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<tr>
<td></td>
<td><strong>Purple</strong></td>
<td>106-154</td>
<td>316</td>
<td>341</td>
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<tr>
<td></td>
<td><strong>Yellow</strong></td>
<td>109-154</td>
<td>370</td>
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<tr>
<td><strong>21 Degree Olive Green</strong></td>
<td><strong>Orange</strong></td>
<td>152-187</td>
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<tr>
<td></td>
<td><strong>Purple</strong></td>
<td>127-190</td>
<td>316</td>
<td>341</td>
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<td><strong>Yellow</strong></td>
<td>134-182</td>
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### LF2400 Performance

<table>
<thead>
<tr>
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<th>Stream Height (cm)</th>
<th>Flow Rate at Standard Pressures (l/h)</th>
<th>Throw Radius at Standard Pressure (meter)</th>
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<tbody>
<tr>
<td></td>
<td></td>
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<td>2.1 bar</td>
<td>2.4 bar</td>
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<td>60-96</td>
<td>493</td>
<td>534</td>
</tr>
<tr>
<td></td>
<td><strong>Red 1/8”</strong></td>
<td>60-104</td>
<td>568</td>
<td>613</td>
</tr>
<tr>
<td></td>
<td><strong>Silver 9/64” Drill</strong></td>
<td>81-111</td>
<td>743</td>
<td>802</td>
</tr>
<tr>
<td><strong>15 Degree Tangerine</strong></td>
<td><strong>Tan</strong></td>
<td>71-127</td>
<td>493</td>
<td>534</td>
</tr>
<tr>
<td></td>
<td><strong>Red 1/8”</strong></td>
<td>88-137</td>
<td>568</td>
<td>613</td>
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<tr>
<td></td>
<td><strong>Silver 9/64” Drill</strong></td>
<td>106-144</td>
<td>743</td>
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<tr>
<td><strong>22 Degree Dark Green</strong></td>
<td><strong>Green 7/64”</strong></td>
<td>160-241</td>
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<td></td>
<td><strong>Tan</strong></td>
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<td>534</td>
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<tr>
<td></td>
<td><strong>Red 1/8”</strong></td>
<td>170-254</td>
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<td></td>
<td><strong>Black 29 Drill</strong></td>
<td>287-304</td>
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<td>688</td>
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<td></td>
<td><strong>Silver 9/64” Drill</strong></td>
<td>182-259</td>
<td>743</td>
<td>802</td>
</tr>
</tbody>
</table>

For complete performance charts, please consult [www.rainbird.eu](http://www.rainbird.eu)
LFX300/LFX600 Series

The Rain Bird® LFX Low Flow Sprinkler is perfect for a wide variety of applications.

Applications

For Agriculture, Greenhouse, and Nursery applications which require a small footprint or low-volume sprinkler. Optimized for a wide variety of applications including orchard and field irrigation, environmental control, crop cooling, and dust control.

Upgrade to Flow Control (FC) Nozzles to Regulate Application Across Pressure Range.

LFX FC Nozzles control water flow over pressure variation to provide a consistent application rate along laterals or across terrain variation.

- Two flow rates available: 62 to 161 l/h
- Operating range from 1.75 to 3.25 bar
- Flow control mechanism contained in nozzle housing; installs in standard body. No special tools required

Features

- Simple three part sprinkler design includes body, nozzle, and brake assembly with attached deflector
- Easy field maintenance with simple snap-in-place nozzle and brake assembly including visual indicators to ensure correct positioning
- Engineered to provide superior distribution uniformity (under-tree or over-head configuration)
- Color coded nozzles and deflectors for easy identification

Specifications

LFX300 Operating Range

- Pressure: 1.75 to 3.25 bar
- Flow rate: 62 to 161 l/h
- Radius of throw: 6.1 to 7.6 meters

LFX600 Operating Range

- Pressure: 1.75 to 3.25 bar
- Flow rate: 140 to 469 l/h
- Radius of throw: 6.8 to 9.4 meters

Models

Select models shown. Review your regional price list for complete availability.

LFX300

- LFX300 Body LFXBNPT
- LFX300 Nozzles
- LFXN40B
- LFXN45P
- LFXN50G
- LFXN55Y
- LFXN60R
- LFXN3GPM
- LFXN5GPM

LFX300 Break with Deflector

- LFXBR9R
- LFXBR9W
- LFXBR15O

LFX600

- LFX600 Body: LFXBNPT
- LFX600 Nozzles
- LFXN65G
- LFXN70W
- LFXN78B
- LFXN7GPM
- LFXN1GPM
- LFXN860
- LFXN94P
- LFXN102Y

LFX600 Break with Deflector

- LFXBR9B
- LFXBR12P
- LFXBR15P
- LFXBR15G

LFX300 / LFX600 Accessories

- LFX Stream Splitter One Side: LFXSS1
- LFX Stream Splitter Two Side: LFXSS2
- LFX Edge Guard: LFXG
### LFX300 Brake Assembly with Deflector Performance

<table>
<thead>
<tr>
<th>Deflector</th>
<th>Nozzle</th>
<th>Stream Height (cm)</th>
<th>Flow Rate at Standard Pressures (l/h)</th>
<th>Throw Radius at Standard Pressure (meter)</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>1.75 bar</td>
<td>2.0 bar</td>
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<td>Deflector 9° Red Radius: (6.1 - 6.7 m)</td>
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<td>P/n: 18116940B</td>
<td>50.8 - 58.4</td>
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<td>48.3 - 63.5</td>
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<td>76</td>
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<tr>
<td>P/n: 18116950G</td>
<td>53.3 - 73.6</td>
<td>83</td>
<td>88</td>
<td>94</td>
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<tr>
<td>P/n: 18172135</td>
<td>50.8 - 63.5</td>
<td>5.5</td>
<td>5.5</td>
<td>5.5</td>
</tr>
<tr>
<td>P/n: 18212543</td>
<td>50.8 - 63.5</td>
<td>6.0</td>
<td>6.0</td>
<td>6.0</td>
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<tr>
<td>Deflector 9° White Radius: (6.4 - 7.6 m)</td>
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<td></td>
</tr>
<tr>
<td>P/n: 18116950G</td>
<td>50.8 - 61</td>
<td>0</td>
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<td>94</td>
</tr>
<tr>
<td>P/n: 18116955Y</td>
<td>43.2 - 63.5</td>
<td>100</td>
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<td>114</td>
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<td>50.8 - 61</td>
<td>5.5</td>
<td>5.5</td>
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<td>43 - 71</td>
<td>140</td>
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<td>158</td>
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<td>7.3</td>
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<td>56 - 76</td>
<td>7.0</td>
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<tr>
<td>P/n: 18172150</td>
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<td>113.6</td>
<td>113.6</td>
<td>113.6</td>
</tr>
<tr>
<td>Deflector 10° Orange Radius: (7.0 - 7.6 m)</td>
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<td></td>
<td></td>
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<tr>
<td>P/n: 18116950G</td>
<td>50.8 - 107</td>
<td>100</td>
<td>107</td>
<td>114</td>
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<tr>
<td>P/n: 18116955Y</td>
<td>91.4 - 106.7</td>
<td>100</td>
<td>107</td>
<td>114</td>
</tr>
<tr>
<td>P/n: 18116960G</td>
<td>83.8 - 104.1</td>
<td>118</td>
<td>126</td>
<td>134</td>
</tr>
<tr>
<td>Deflector 12° Pink Radius: (7.0 - 9.1 m)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>P/n: 18116978B</td>
<td>56 - 79</td>
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<td>113.6</td>
<td>113.6</td>
</tr>
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<td>P/n: 18116965G</td>
<td>79 - 112</td>
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<td>0</td>
<td>70</td>
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<tr>
<td>P/n: 18116970W</td>
<td>56 - 76</td>
<td>7.0</td>
<td>7.0</td>
<td>7.3</td>
</tr>
<tr>
<td>P/n: 18116978B</td>
<td>56 - 76</td>
<td>7.0</td>
<td>12</td>
<td>3.0</td>
</tr>
<tr>
<td>Deflector 15° Purple Radius: (7.3 - 8.8 m)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>P/n: 18116965G</td>
<td>79 - 112</td>
<td>0</td>
<td>0</td>
<td>70</td>
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<tr>
<td>P/n: 18116970W</td>
<td>79 - 112</td>
<td>161</td>
<td>175</td>
<td>182</td>
</tr>
<tr>
<td>P/n: 18116978B</td>
<td>86 - 114</td>
<td>6.1</td>
<td>6.4</td>
<td>6.7</td>
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<td>P/n: 18212575</td>
<td>79 - 107</td>
<td>170</td>
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<tr>
<td>P/n: 18172150</td>
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<td>113.6</td>
<td>113.6</td>
<td>113.6</td>
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<tr>
<td>Deflector 15° Gold Radius: (7.9 - 9.4 m)</td>
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<td>69 - 127</td>
<td>246</td>
<td>263</td>
<td>279</td>
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<tr>
<td>P/n: 18116995P</td>
<td>97 - 124</td>
<td>8.5</td>
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<td>P/n: 181169102Y</td>
<td>104 - 135</td>
<td>344</td>
<td>368</td>
<td>390</td>
</tr>
</tbody>
</table>

For complete performance charts, please consult www.rainbird.eu
**XLR Series Water Jets**

The World's Most Advanced Long-Range Rotor

**Features**
- Constant speed independent of operating pressure and flow rate
- Water deflector distributes water uniformly for entire throw distance
- Barrel and nozzle design optimized to maximize throw
- Nozzle is 54% larger than competition
- Innovative material selection maximize efficiency of movement
- Full- and part-circle (20-340°) in one unit
- Adjustable trajectory model provides ultimate in adaptability
- 5 nozzles options (sold separately)
- Only 2 field serviceable components – built to last reliably
- One-year trade warranty

**Operating Specifications**
- Radius: 25.6 – 57.3 m
- Pressure: 2.1 to 8.3 bar
- Flow: 7.9 to 86.1 m³/h
- Inlet: 2” NPT, 2” BSP or 2” flange
- Nozzle trajectory: 24° fixed, 44° fixed or adjustable (15° to 45°)
- Nozzles (sold separately):
  - 12 mm
  - 16 mm
  - 20 mm
  - 24 mm
  - 28 mm
- Nozzle tool available (sold separately)

**Options**
- Optional Jet-Breaker for improved distribution uniformity
- Inlet adapter kits available in flange, NPT and BSP configurations to convert existing inlet

**Models**
- IXLR24: 24° fixed trajectory with flange inlet
- IXLR44: 44° fixed trajectory with flange inlet
- IXLRADJ: Adjustable trajectory (15-45°) with flange inlet
- XLR24NPT: 24° fixed trajectory with NPT inlet
- XLRADJNPT: Adjustable trajectory (15-45°) with NPT inlet
- XLR24BSP: 24° fixed trajectory with BSP inlet
- XLRADJBSP: Adjustable trajectory (15-45°) with BSP inlet

**How to Specify**

**Application Rate**

<table>
<thead>
<tr>
<th>Model</th>
<th>Application Rate (cm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>IXLR24</td>
<td></td>
</tr>
<tr>
<td>IXLR44</td>
<td></td>
</tr>
<tr>
<td>IXLRADJ</td>
<td></td>
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</table>

**Throw (m)**

<table>
<thead>
<tr>
<th>Model</th>
<th>Throw (m)</th>
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<tbody>
<tr>
<td>IXLR24</td>
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<tr>
<td>IXLR44</td>
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<tr>
<td>IXLRADJ</td>
<td></td>
</tr>
</tbody>
</table>

*Order Separately*
XLR 24 Nozzle Throw Range | Fixed 24° Trajectory

<table>
<thead>
<tr>
<th>Pressure bar</th>
<th>12 mm</th>
<th>16 mm</th>
<th>20 mm</th>
<th>24 mm</th>
<th>28 mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.0</td>
<td>7.8 m³/h</td>
<td>24.2 m</td>
<td>13.8 m³/h</td>
<td>28.9 m</td>
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<td>8.7 m³/h</td>
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<td>15.4 m³/h</td>
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<td>3.0</td>
<td>9.6 m³/h</td>
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<td>4.0</td>
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<tr>
<td>6.5</td>
<td>14.1 m³/h</td>
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<td>43.3 m³/h</td>
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XLR 44 Nozzle Throw Range | Fixed 44° Trajectory

<table>
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<th>Pressure bar</th>
<th>12 mm</th>
<th>16 mm</th>
<th>20 mm</th>
<th>24 mm</th>
<th>28 mm</th>
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<tbody>
<tr>
<td>3.0</td>
<td>9.6 m³/h</td>
<td>26.1 m</td>
<td>11.9 m³/h</td>
<td>31.0 m</td>
<td>12.3 m³/h</td>
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<td>3.5</td>
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<td>27.7 m</td>
<td>13.1 m³/h</td>
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<td>13.7 m³/h</td>
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<tr>
<td>4.0</td>
<td>11.1 m³/h</td>
<td>29.3 m</td>
<td>14.3 m³/h</td>
<td>34.9 m</td>
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<td>4.5</td>
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<td>30.4 m</td>
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<tr>
<td>5.0</td>
<td>12.4 m³/h</td>
<td>31.5 m</td>
<td>15.9 m³/h</td>
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<td>17.1 m³/h</td>
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<tr>
<td>5.5</td>
<td>13.0 m³/h</td>
<td>32.4 m</td>
<td>16.4 m³/h</td>
<td>38.7 m</td>
<td>17.9 m³/h</td>
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<td>6.0</td>
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<tr>
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<td>37.2 m</td>
<td>18.4 m³/h</td>
<td>42.1 m</td>
<td>20.6 m³/h</td>
</tr>
</tbody>
</table>

XLR ADJ Nozzle Throw Range | Adjustable Trajectory

- For every 3° drop of the trajectory angle, the throw is reduced by approximately 3 to 4%.
- Use the XLR 24 Nozzle Throw Range Table for your pressure and nozzle diameter.

The performance data were obtained under ideal testing conditions and may be adversely affected by wind and other factors. Pressure refers to pressure at nozzle. A lowered trajectory angle improves the irrigation efficiency in windy conditions. For every 3° drop of the trajectory angle the throw is reduced by approximately 3 to 4%. Radius = radius of throw in feet. Nozzle at 1.5 m above ground level. Height = maximum stream height in meters above nozzle.
TSJ/TSJ-PRS Series
Swing Joints Connect ¾" (1.9 cm) and 1" (2.5 cm) Rotors or Quick Coupler Valves to Lateral Pipes

Features
- Preassembled units save the contractor time and reduce installation costs
- Excellent structural integrity from the swept elbow design reduces the costs associated with fatigue related failures
- Double O Ring provides extra protection against leaks and keeps threads clean of debris making hand tightening easy
- The TSJ-PRS combines the great flow characteristics of the Rain Bird turf swing joint with an inline pressure regulating outlet elbow for controlling and maintaining constant pressure right at the rotor inlet

Operating Specifications
- Pressure rating: 21.7 bar at 22.8º C (per ASTM D3139)
- ¾" joint pressure loss: 0.02 bar at 0.4 l/s
- 1" joint pressure loss: 0.1 bar at 1.1 l/s; 0.2 bar at 1.5 l/s
- TSJ-PRS maximum flow: 1.41 l/s

TSJ-PRS Application Information
- The TSJ-PRS is not recommended for use in systems where the pressure in the lateral lines is equal to or less than the nominal regulation pressure, as the increased pressure drop may adversely affect the performance of such systems
- To reduce the effects of water hammer, Rain Bird recommends flow rates in the supply line not exceed 1.5 m/s. The TSJ-PRS is not intended to function as a water hammer prevention device
- There are no user-serviceable parts inside. The internal spring is under compression. Do not open the PRS unit under any circumstances

Models
- TSJ-12075: 12" (30.5 cm) long, ¾" M NPT x M NPT swing joint
- TSJ-12: 12" (30.5 cm) long, 1" M NPT x M NPT swing joint
- TSJ-100-PRS: 1" swing joint with 4.8 bar pressure regulator, 12" (30.5 cm) long, 1" M NPT x M NPT inlet and outlet
### Valves

#### Major Products

<table>
<thead>
<tr>
<th>Primary Applications</th>
<th>HV</th>
<th>HVF</th>
<th>DV</th>
<th>DVF</th>
<th>PGA</th>
<th>PEB/PESB/PESB-R</th>
<th>BPES</th>
<th>QC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manual Bleed</td>
<td>I/E</td>
<td>I/E</td>
<td>I/E</td>
<td>I/E</td>
<td>I/E</td>
<td>I/E</td>
<td>I/E</td>
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<tr>
<td>Flow Control</td>
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<td>I</td>
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<td>Bottom Inlet</td>
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<td>DV-A</td>
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<td>I</td>
<td></td>
</tr>
<tr>
<td>PRS-Dial Compatible</td>
<td></td>
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<td></td>
<td>I</td>
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<td>Dirty Water</td>
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<td>I</td>
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<td>Non-Potable Water</td>
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<tr>
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<tr>
<td>Decoder System Compatible</td>
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<td></td>
<td></td>
<td>I</td>
<td></td>
</tr>
</tbody>
</table>

- **DV/DVF** available in globe, angle, slip x slip, and male x barb configurations.
- Flows below 0.68 m³/h; 0.19 l/s install 200 mesh filter upstream.
- **I/E = Internal/External**
- The **PESB-R and EFB-CP** are specifically designed with chlorine-resistant components for reclaimed water applications.

#### Water Saving Tips

- **The PRS-Dial** is an excellent means of regulating outlet pressure at the valve regardless of incoming pressure fluctuations. It helps ensure optimal pressure performance at the head.
- **Rain Bird valves** provide excellent filtration characteristics for maximum reliability in a wide range of environments.
- **PESB-R and EFB-CP** reclaimed valves provide reliable operation in all water conditions. Valve diaphragms are composed of EPDM, a rubber material which is chlorine and chemical resistant.
**DV / DVF Series**

**Diaphragm Valve – The Industry Leader for Over 25 Years**

**Features**
- Double-filtered (diaphragm and solenoid) pilot-flow design for maximum reliability and grit resistance
- Buna-N, balanced pressure diaphragm with self-cleaning 200 micron pilot water filter and captive spring
- Energy-efficient, low-power encapsulated solenoid with captured plunger and 200 micron solenoid filter
- Unique, easy-to-turn pressure assisted flow control mechanism (DVF models only)
- External bleed to manually flush system of dirt and debris during installation and system start-up
- Internal bleed for spray-free manual operation
- Accepts Rain Bird TBOS latching solenoid for use with most battery-operated controllers
- Operates in low-flow and Landscape Drip applications when a 200 mesh filter is installed upstream
- **Not recommended for use with two-wire control systems**

**Specifications**
- Pressure: 1.0 to 10.4 bar
- 100-DV Non-Flow Control Model: 0.05 to 9.085 m³/h; 0.01 to 2.52 l/s. For flows below 0.68 m³/h; 0.19 l/s or any Landscape Drip application, use a 200 mesh filter installed upstream
- 100-DVF Flow Control Model: 0.05 to 9.085 m³/h; 0.01 to 2.52 l/s; For flows below 0.68 m³/h; 0.19 l/s or any Landscape Drip application, use a 200 mesh filter installed upstream
- Water Temperature: Up to 43° C
- Ambient air temperature: Up to 52° C
- 24 VAC 50/60 Hz (cycles per second) solenoid power requirement: 0.450A inrush current; 0.250A holding current
- Solenoid coil resistance: 38 Ohms

**Dimensions**

**DV Valves**
- Height: 11.4 cm
- Length: 11.1 cm
- Length (MB): 14.6 cm
- Width: 8.4 cm

**DVF Valves**
- Height: 14.2 cm
- Length: 11.1 cm
- Length (MM): 14.6 cm
- Width: 8.4 cm

**Models**

Select models shown. Review your regional price list for complete availability.

- 075-DV: ¾” female threaded inlet and outlet
- I100-DV: 1” BSP female x female*
- I100-DV-MM: 1” male x male*
- 100-DV-MM-9V: 1” male x male, latching solenoid*
- I100-DVF: 1” BSP female x female*

* Available with NPT threads

**Recommendations**
1. Rain Bird recommends flow rates that result in discharge velocities in the supply line not to exceed 2.3 m/s in order to reduce the effects of water hammer.
2. Rain Bird residential valves cannot be used with PRS pressure regulating modules.
3. **Not recommended for use with two-wire systems**.

**DV and DVF Valve Pressure Loss (bar)**

<table>
<thead>
<tr>
<th>Flow m³/h</th>
<th>l/m</th>
<th>100-DV/100-DVF 1&quot; bar</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.23</td>
<td>4</td>
<td>0.23</td>
</tr>
<tr>
<td>0.60</td>
<td>10</td>
<td>0.24</td>
</tr>
<tr>
<td>1.20</td>
<td>20</td>
<td>0.26</td>
</tr>
<tr>
<td>3.60</td>
<td>60</td>
<td>0.32</td>
</tr>
<tr>
<td>4.50</td>
<td>75</td>
<td>0.35</td>
</tr>
<tr>
<td>6.00</td>
<td>100</td>
<td>0.41</td>
</tr>
<tr>
<td>9.00</td>
<td>150</td>
<td>0.59</td>
</tr>
</tbody>
</table>

**100-DV Angle, MxB Valve Pressure Loss (bar)**

<table>
<thead>
<tr>
<th>Flow m³/h</th>
<th>l/m</th>
<th>100-DV/100-DVF 1&quot; bar</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.23</td>
<td>4</td>
<td>0.17</td>
</tr>
<tr>
<td>0.60</td>
<td>10</td>
<td>0.19</td>
</tr>
<tr>
<td>1.20</td>
<td>20</td>
<td>0.21</td>
</tr>
<tr>
<td>3.60</td>
<td>60</td>
<td>0.26</td>
</tr>
<tr>
<td>4.50</td>
<td>75</td>
<td>0.30</td>
</tr>
<tr>
<td>6.00</td>
<td>100</td>
<td>0.44</td>
</tr>
<tr>
<td>9.00</td>
<td>150</td>
<td>0.86</td>
</tr>
</tbody>
</table>

**Note:** DV/DVF Male x barb not recommended for flows exceeding 30 gpm (6.81 m³/h, 113.56 l/m)

**How to Specify**

<table>
<thead>
<tr>
<th>I100 - DV - MM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Optional Configuration</td>
</tr>
<tr>
<td>MM: Male x Male</td>
</tr>
<tr>
<td>MM-9V: Male x Male, latching solenoid</td>
</tr>
<tr>
<td>TBOS: TBOS latching solenoid</td>
</tr>
</tbody>
</table>

This specifies an I100-DV valve. If 2½” barb male x male valve flow is over 2½” barb female use a male male flow control valve. For rain-2-U applications it is necessary to specify NPT or BSP thread type ("F" only).
**HV Series**


**Features**

- Patented, eccentric, balanced pressure, Buna-N diaphragm with self-cleaning 200 micron pilot water filter and captured stainless steel spring – Eccentric design provides smoother closing, less water hammer
- Only four durable, captured multi-drive bonnet screws that come out with half the number of turns for fast and easy servicing – at least twice as fast as the competition
- Glass-filled polypropylene body for strength (slip by slip model bodies are PVC)
- All popular model configurations available
- Compact design, 6.5 cm spin radius for tight installations
- Reverse flow, normally closed design
- External bleed to manually flush system of dirt and debris during installation and system start-up
- Internal bleed for spray-free manual operation
- Operates in low-flow and Landscape Drip applications when a 74 micron filter is installed upstream

**Specifications**

- Pressure: 1.0 to 10.3 bar
- Flow: 0.05 to 6.82 m³/h; 0.01 to 1.89 l/s; for flows below 0.68 m³/h; 0.19 l/s or any Landscape Drip application, use a 200 mesh filter installed upstream
- Operating Temperatures: Water temperature up to 43° C; ambient temperature up to 52° C
- 24 VAC 50/60 Hz (cycles/sec.) solenoid
- Inrush current: 0.290A at 50/60 Hz
- Holding current: 0.091A at 50/60 Hz
- Solenoid Coil resistance: 70-85 Ohms (4.4° C - 43° C)

**HV Valve Pressure Loss (bar)**

<table>
<thead>
<tr>
<th>Flow m³/h</th>
<th>1” HV bar</th>
<th>1” HV-MM bar</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.25</td>
<td>0.11</td>
<td>0.12</td>
</tr>
<tr>
<td>0.75</td>
<td>0.14</td>
<td>0.14</td>
</tr>
<tr>
<td>1.00</td>
<td>0.16</td>
<td>0.16</td>
</tr>
<tr>
<td>2.00</td>
<td>0.23</td>
<td>0.19</td>
</tr>
<tr>
<td>5.00</td>
<td>0.32</td>
<td>0.31</td>
</tr>
<tr>
<td>7.50</td>
<td>0.42</td>
<td>0.94</td>
</tr>
</tbody>
</table>

* Rain Bird recommends flow rates in the supply line not to exceed 2.3 m/s in order to reduce the effects of water hammer.

**Dimensions**

- Height: 11.7 cm
- Height (F): 14.3 cm
- Height (MM): 11.4 cm
- Length: 11.2 cm
- Length (MM): 14.4 cm
- Width: 7.9 cm

**Models**

Select models shown. Review your regional price list for complete availability.

- 1100-HVF-BSP: 1" BSP female x female
- 1100-HVF-BSP-9V: 1" BSP female x female, 9V DC Latching Solenoid
- 1100-HVF-MM: 1" male x male
- 1100-HVF-MM-9V: 1" male x male, 9V DC Latching Solenoid

**Recommendations**

1. Rain Bird recommends flow rates that result in discharge velocities in the supply line not to exceed 2.3 m/s in order to reduce the effects of water hammer.
2. Rain Bird residential valves cannot be used with PRS pressure regulating modules.
3. Not recommended for use with two-wire systems.

---

**How to Specify**

<table>
<thead>
<tr>
<th>100 - HV - MM</th>
<th>Optional Configuration: M/M: Male x Male</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>HV: High Value Valve</td>
</tr>
<tr>
<td>Size</td>
<td>100: 1&quot;</td>
</tr>
</tbody>
</table>

Note: For non-U.S. applications, it is necessary to specify NPT or BSP thread type (1" only).
PGA Series
Plastic Globe and Angle Valves. The Toughest, Most Reliable Valves In their Class

Features

- Water-tight seal between the body and bonnet for maximum confidence, even in the most extreme conditions
- Robust construction and electrical design for quiet performance you can count on
- Filtered pilot flow to resist debris and clogging
- Slow closing to prevent water hammer and subsequent system damage
- Normally closed, forward flow design Accepts latching solenoid for use with Rain Bird battery-operated controllers
- Multi-drive screws (Phillips, flathead, hexagonal) for easy maintenance*
- Manual internal bleed operates the valve without allowing water into the valve box. This allows the pressure regulator to be adjusted without turning the valve on at the controller
- One-piece solenoid design with captured plunger and spring for easy servicing. Prevents loss of parts during field service
- Three-year trade warranty
- Accommodates optional, field-installed PRS-D pressure regulating dial to ensure optimum sprinkler performance
- Accepts latching solenoid for use with Rain Bird battery-operated controllers

Options

- Accommodates optional, field-installed PRS-D pressure regulating module to ensure optimum sprinkler performance
- Accepts latching solenoid for use with Rain Bird battery-operated controllers up to 10.35 bar
- Compatible with ESP-LXD decoders

Specifications

- Pressure: 1.04 to 10.4 bar
- Flow without PRS-D option: 0.45 to 34.05 m$^3$/h; 7.8 to 568 l/m
- Flow with PRS-D option: 1.14 to 34.05 m$^3$/h; 19.2 to 568 l/m
- Water temperature: Up to 43° C
- Ambient temperature: Up to 52° C
- 24VAC 50/60Hz (cycles/sec) solenoid power requirement
- Inrush current: 0.41A (9.9VA) at 50/60Hz
- Holding current: 0.14A (3.43VA) at 50/60Hz
- Solenoid coil resistance: 30-39 Ohms, nominal

Extreme Durability
The PGA valve maintains a strong, worry-free seal between the body and bonnet, no matter the conditions. PGA valves were exposed to extreme temperature swings and intense pressures. The result—zero leaks.*

Pressure-Resistant Seal
The PGA valve’s body-to-bonnet seal is built to overcome the intense water pressure typical of many commercial sites. Faced with repeated pressure surges well into the triple digits, our valves outlasted the nearest competitor more than 2 ½ times to 1.*
**PEB / PESB Series**

**Best-in-class Professional Series Plastic Irrigation Valves**

**Features**
- Durable glass-filled nylon construction with fabric-reinforced rubber diaphragm for long life and reliable performance
- Globe configuration
- Normally closed, forward flow design
- Slow closing to prevent water hammer and subsequent system damage
- Low flow capability for a wide range of applications
- One-piece solenoid design with captured plunger and spring for easy servicing. Prevents loss of parts during field service
- Flow control handle adjusts water flows as needed
- Manual internal bleed manually operates the valve without allowing water into the valve box; allows pressure regulator to be adjusted without turning the valve on at the controller first
- Manual external bleed permits flushing debris from the system. Recommended for system start up and after repairs
- Stainless steel studs molded into the body. Bonnet can be attached and removed more easily and more often without damaging threads
- Nylon scrubber scrapes a stainless steel screen to clean and break down grit and plant material. Prevents debris build-up and clogging (PESB Series only)
- Five-year trade warranty

**Options**
- Accommodates optional, field installed PRS-D pressure regulating module to ensure optimum sprinkler performance
- Accepts latching solenoid for use with Rain Bird battery-operated controllers up to 10,35 bar
- Compatible with ESP-LXD decoders
- Optional purple flow control handle for non-potable water applications PEB-NP-HAN1 (1”); PEB-NP-HAN2 (1 1/2” and 2”)

**Specifications**
- Pressure: 1.4 to 13.8 bar
- Flow without PRS-D option: 0.06 to 45 m³/h; 0.02 to 12.60 l/s
- Flow with PRS-D option: 1.14 to 45 m³/h; 0.32 to 12.60 l/s
- Temperature: Up to 66° C
- 24VAC 50/60Hz (cycles/sec) solenoid power requirement
- Inrush current: 0.41A (9.9VA) at 50/60Hz
- Holding current: 0.14A (3.43VA) at 50/60Hz
- Solenoid coil resistance: 30-39 Ohms, nominal

**Dimensions**

<table>
<thead>
<tr>
<th>Model</th>
<th>Height</th>
<th>Length</th>
<th>Width</th>
</tr>
</thead>
<tbody>
<tr>
<td>100-PEB and 100-PESB:</td>
<td>16.5 cm</td>
<td>10.2 cm</td>
<td>10.2 cm</td>
</tr>
<tr>
<td>150-PEB and 150-PESB:</td>
<td>20.3 cm</td>
<td>15.2 cm</td>
<td>15.2 cm</td>
</tr>
<tr>
<td>200-PEB and 200-PESB:</td>
<td>20.3 cm</td>
<td>15.2 cm</td>
<td>15.2 cm</td>
</tr>
</tbody>
</table>

**Notes:**
- The PRS-Dial option adds 5.1 cm to valve height

---

**PEB and PESB Series Valve Pressure Loss (bar)**

<table>
<thead>
<tr>
<th>Flow m³/h</th>
<th>Flow l/m</th>
<th>100-PEB 2.5cm</th>
<th>150-PEB 3.8cm</th>
<th>200-PEB 5.1cm</th>
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</thead>
<tbody>
<tr>
<td>0.06</td>
<td>1</td>
<td>0.06</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>0.3</td>
<td>5</td>
<td>0.09</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>0.6</td>
<td>10</td>
<td>0.10</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>1.2</td>
<td>20</td>
<td>0.12</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>3</td>
<td>50</td>
<td>0.15</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>6</td>
<td>100</td>
<td>0.32</td>
<td>0.26</td>
<td>-</td>
</tr>
<tr>
<td>9</td>
<td>150</td>
<td>0.68</td>
<td>0.24</td>
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<td>12</td>
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<td>0.33</td>
</tr>
<tr>
<td>15</td>
<td>250</td>
<td>-</td>
<td>0.33</td>
<td>0.32</td>
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<tr>
<td>18</td>
<td>300</td>
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<td>0.42</td>
<td>0.32</td>
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<tr>
<td>21</td>
<td>350</td>
<td>-</td>
<td>0.57</td>
<td>0.34</td>
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<td>24</td>
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<td>0.74</td>
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<td>27</td>
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<td>33</td>
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<td>42</td>
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<tr>
<td>45</td>
<td>757</td>
<td>-</td>
<td>1.34</td>
<td>-</td>
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</tbody>
</table>

**Options**
- Accommodates optional, field installed PRS-D pressure regulating module to ensure optimum sprinkler performance
- Accepts latching solenoid for use with Rain Bird battery-operated controllers up to 10,35 bar
- Compatible with ESP-LXD decoders
- Optional purple flow control handle for non-potable water applications PEB-NP-HAN1 (1”); PEB-NP-HAN2 (1 1/2” and 2”)

**Specifications**
- Pressure: 1.4 to 13.8 bar
- Flow without PRS-D option: 0.06 to 45 m³/h; 0.02 to 12.60 l/s
- Flow with PRS-D option: 1.14 to 45 m³/h; 0.32 to 12.60 l/s
- Temperature: Up to 66° C
- 24VAC 50/60Hz (cycles/sec) solenoid power requirement
- Inrush current: 0.41A (9.9VA) at 50/60Hz
- Holding current: 0.14A (3.43VA) at 50/60Hz
- Solenoid coil resistance: 30-39 Ohms, nominal

**Dimensions**

<table>
<thead>
<tr>
<th>Model</th>
<th>Height</th>
<th>Length</th>
<th>Width</th>
</tr>
</thead>
<tbody>
<tr>
<td>100-PEB and 100-PESB:</td>
<td>16.5 cm</td>
<td>10.2 cm</td>
<td>10.2 cm</td>
</tr>
<tr>
<td>150-PEB and 150-PESB:</td>
<td>20.3 cm</td>
<td>15.2 cm</td>
<td>15.2 cm</td>
</tr>
<tr>
<td>200-PEB and 200-PESB:</td>
<td>20.3 cm</td>
<td>15.2 cm</td>
<td>15.2 cm</td>
</tr>
</tbody>
</table>

**How to Specify**

1. Flow values are with flow control fully open
2. PRS-Dial recommended for use in shaded area only

**Models**
- 100-PEB and 100-PESB: 1""""
- 150-PEB and 150-PESB: 1 1/2”
- 200-PEB and 200-PESB: 2”

**Options**
- Optional purple flow control handle for non-potable water applications PEB-NP-HAN1 (1”); PEB-NP-HAN2 (1 1/2” and 2”)
- Stainless steel studs molded into the body. Bonnet can be attached and removed more easily and more often without damaging threads
- Nylon scrubber scrapes a stainless steel screen to clean and break down grit and plant material. Prevents debris build-up and clogging (PESB Series only)
- Five-year trade warranty

**Specifications**
- Pressure: 1.4 to 13.8 bar
- Flow without PRS-D option: 0.06 to 45 m³/h; 0.02 to 12.60 l/s
- Flow with PRS-D option: 1.14 to 45 m³/h; 0.32 to 12.60 l/s
- Temperature: Up to 66° C
- 24VAC 50/60Hz (cycles/sec) solenoid power requirement
- Inrush current: 0.41A (9.9VA) at 50/60Hz
- Holding current: 0.14A (3.43VA) at 50/60Hz
- Solenoid coil resistance: 30-39 Ohms, nominal

**Dimensions**

<table>
<thead>
<tr>
<th>Model</th>
<th>Height</th>
<th>Length</th>
<th>Width</th>
</tr>
</thead>
<tbody>
<tr>
<td>100-PEB and 100-PESB:</td>
<td>16.5 cm</td>
<td>10.2 cm</td>
<td>10.2 cm</td>
</tr>
<tr>
<td>150-PEB and 150-PESB:</td>
<td>20.3 cm</td>
<td>15.2 cm</td>
<td>15.2 cm</td>
</tr>
<tr>
<td>200-PEB and 200-PESB:</td>
<td>20.3 cm</td>
<td>15.2 cm</td>
<td>15.2 cm</td>
</tr>
</tbody>
</table>

**Notes:**
- The PRS-Dial option adds 5.1 cm to valve height

---

**How to Specify**

1. Rain Bird recommends flow rates in the supply line not to exceed 2.29 m/s in order to reduce the effects of water hammer
2. For flows below 1.14 m³/h; 19.2 l/m, Rain Bird recommends use of upstream filtration to prevent debris from collecting below the diaphragm
3. For flows below 2.27 m³/h; 37.8 l/m Rain Bird recommends the flow control stem be turned down two full turns from the fully open position
4. For PRS-Dial applications, Rain Bird recommends the installation of a pressure-regulating master valve or inline pressure regulator when the inlet pressure exceeds 6.9 bar
300-BPES Brass Valves
3" Brass Master Valve - Globe and angle configuration

Features
- Unique hybrid construction featuring durable red brass body and glass-filled nylon bonnet for long life at a value price
- Normally closed, forward flow design
- Slow closing to prevent water hammer and subsequent system damage
- Robust solenoid provides dependable performance even during constant operation
- Flow control handle adjusts water flows as needed and incorporates a brass thread insert for longer life
- Manual internal bleed operates the valve without allowing water into the valve box. Allows pressure regulator adjustment without turning the valve on at the controller
- Manual external bleed permits flushing debris from the system. Recommended for system start up and repairs
- Highly efficient operation with extremely low pressure loss
- Patented nylon scrubber scrapes a stainless steel screen to clean and break down grit and plant material. Prevents debris build-up and clogging
- Three-year trade warranty

Options
- Accommodates field-installed PRS-D pressure regulating module to ensure optimum sprinkler performance
- Purple flow control handle for non-potable water applications (BPE-NP-HAN)
- Latching solenoid for use with Rain Bird battery-operated controllers up to 10.4 bar

Specifications
- Pressure: 1.4 to 13.8 bar
- Flow with/without PRS-D option: 13.6 to 68.1 m³/h; 3.78 to 18.90 l/s
- Temperature: up to 60° C
- Power: 24 VAC 50/60 Hz (cycles/sec) solenoid
- Inrush current: 0.41 A (9.8 VA) at 50/60Hz
- Holding current: 0.14 A (3.43 VA) at 50/60Hz
- Coil resistance: 30-39 Ohms, nominal

Dimensions
Model | Height | Length | Width
--- | --- | --- | ---
300 | 34.61 cm | 20.32 cm | 17.78 cm

Models
- 300-BPES: 3" NPT
  BSP threads available; specify when ordering

Recommendations
1. Rain Bird recommends flow rates in the supply line not to exceed 2.29 m/s in order to reduce the effects of water hammer.
2. For flows below 1.14 m³/h; 19.2 l/m, Rain Bird recommends use of upstream filtration to prevent debris from collecting below the diaphragm.
3. For flows below 2.27 m³/h; 37.8 l/m Rain Bird recommends the flow control stem be turned down two full turns from the fully open position.

Notes
1. Loss values are with flow control fully open
2. PRS-Dial module recommended for all flow rates
PVC Manifold System

Complete Male and Female Manifold System

Features
- Telescoping Manifold System allows valve replacement (with different lay lengths) without any cutting or adding new parts
- Big O-Rings to insure no leaking
- Parts are all hand tightened
- Female valve connectors connect directly to male valves without the need for an adapter
- Male Valve Connectors connect directly to female valves without the need for a coupling
- No Teflon® tape needed for assembly

Specifications
- Operating Pressure: 10,5 bar

Models

Select models shown. Review your regional price list for complete availability.

RB 1300 Series - Male Valve Connectors
- RB1301-010: Union Tee 1” F X 1” M Swivel X 1” M
- RB1301-210: 1” F X 2 outlets 1” M Swivel X 1” M
- RB1303-010: Tee double Swivel 2 outlets 1” M Swivel X 1” F
- RB1306-010: Union Elbow 1” M X 1” M Swivel
- RB1312-010: Union Elbow 1” F X 1” M Swivel
- RB1320-010: Union Cross 1” F X 2 outlets 1” M Swivel X 1” M
- RB1330-010: Union Coupling 1” F X 1” F
- RB1330-131: Union Coupling 1” F X ¾” F
- RB1348-010: Cap 1” F
- RB1330-310: 3 outlet manifold 1” F X 3 outlets 1” M Swivel X 1”M
- RB1301-410: 4 outlet manifold 1” F X 4 outlets 1” M Swivel X 1” M

RB 1200 Series - Female Valve Connectors
- RB1201-010: Union Tee 1” F X 1” F Swivel X 1” M
- RB1201-210: 1” F X 2 outlets 1” F Swivel X 1” M
- RB1203-010: Tee double Swivel 2 outlets 1” F Swivel X 1” F
- RB1206-010: Union Elbow 1” M X 1” F Swivel
- RB1212-010: Union Elbow 1” F X 1” F Swivel
- RB1220-010: Union Cross 1” F X 1” F Swivel X 1” F Swivel X 1” M
- RB1234-010: 1” Euro adapter
- RB1201-310: 3 outlet manifold M 1” F X 3 outlets 1” F Swivel X 1” M
- RB1201-410: 4 outlet manifold M 1” F X 4 outlets 1” F Swivel X 1” M
- RB1239-131: Adapter 1” M X ¾” F
- RB1282-010: Adapter 1” M X 1” M
- RB1282-131: Adapter 1” M X ¾” M

MTT-100

Manifold Tee For Electric Valves

Application
- Manifold tee used to build a valve manifold for 1” (26/34) BSP female threaded valves

Features
- No tools required
- O-Ring permits watertight connection between tees (no Teflon required)
- Properly spaces valves
- Used to form a valve manifold to accommodate any desired number of valves (1 MTT-100 per electric valve)

Specifications
- Pressure: up to 10 bars
- 1” male x 1” (26/34) male (with O-ring) x 1” (26/34) female BSP

Dimensions
- Length: 12 cm

Model

Select models shown. Review your regional price list for complete availability.
- MTT-100
PRS-Dial
Pressure Regulating Module

Features
- The PRS-Dial is an excellent means of regulating outlet pressure at the valve regardless of incoming pressure fluctuations. The visible scale makes adjustment quick and easy. The regulator fits all Rain Bird PGA, PEB, PESB, PESB-R, EFB-CP, and BPES series valves
- Regulates and maintains constant outlet pressure between 1.04 to 6.9 bar within ±0.21 bar
- Ergonomic design with snap-tight cover to prevent vandalism
- Waterproof dial cartridge eliminates fogging and binding
- Dial cartridge retrofits into all existing PRS-D units
- Schrader valve connects pressure hose gauge
- Easy field installation, PRS-Dial threads underneath the solenoid and adapter
- Corrosion-resistant glass-filled nylon for rugged performance

Operating Range
- Pressure: Up to 6.9 bar*
- Regulation: 1.04 to 6.9 bar
- Flow: Refer to chart

* While the PRS-Dial unit can withstand pressures up to 13.8 bar, accurate pressure regulation can be maintained only up to 6.9 bar

Model
- PRS-D

Application Information
- Proper operation requires inlet pressure to be a minimum of 1.04 bar higher than desired outlet pressure
- For areas with very high pressure or uneven terrain, install sprinklers with PRS pressure regulating stems and/or SAM check valves
- When inlet pressure exceeds 6.9 bar, a pressure regulating master valve or inline pressure regulator is required
- Rain Bird does not recommend using the pressure regulating module for applications outside the recommended flow ranges
- To reduce the effects of water hammer, Rain Bird recommends flow rates in the supply line not to exceed 2.29 m/s
- For flows below 2.27 m³/h; 37.8 l/m, Rain Bird recommends the flow control stem be turned down two full turns from the fully open position

† Note: Valve and PRS-Dial module must be ordered separately.

Valve Flow Ranges*

<table>
<thead>
<tr>
<th>Model</th>
<th>m³/h</th>
<th>l/m</th>
</tr>
</thead>
<tbody>
<tr>
<td>100-PGA</td>
<td>1.14-9.08</td>
<td>19.2-151</td>
</tr>
<tr>
<td>150-PGA</td>
<td>6.81-22.70</td>
<td>113-378</td>
</tr>
<tr>
<td>200-PGA</td>
<td>9.08-34.05</td>
<td>151-568</td>
</tr>
<tr>
<td>100-PEB</td>
<td>1.14-11.35</td>
<td>19.2-189</td>
</tr>
<tr>
<td>150-PEB</td>
<td>4.54-34.05</td>
<td>76-568</td>
</tr>
<tr>
<td>200-PEB</td>
<td>17.03-45.40</td>
<td>284-757</td>
</tr>
<tr>
<td>100-PESB/PESB-R</td>
<td>1.14-11.35</td>
<td>19.2-189</td>
</tr>
<tr>
<td>150-PESB/PESB-R</td>
<td>4.54-34.05</td>
<td>76-568</td>
</tr>
<tr>
<td>200-PESB/PESB-R</td>
<td>17.03-45.40</td>
<td>284-757</td>
</tr>
<tr>
<td>100-EFB-CP</td>
<td>1.14-11.35</td>
<td>19.2-189</td>
</tr>
<tr>
<td>125-EFB-CP</td>
<td>4.54-18.16</td>
<td>76-302</td>
</tr>
<tr>
<td>150-EFB-CP</td>
<td>4.54-31.78</td>
<td>76-529</td>
</tr>
<tr>
<td>200-EFB-CP</td>
<td>4.54-45.40</td>
<td>76-757</td>
</tr>
<tr>
<td>300-BPES</td>
<td>13.62-68.10</td>
<td>227-1136</td>
</tr>
</tbody>
</table>

* These are the valve flow ranges.
**RC Series: 5LRC**
Brass Quick-Coupling Valves and Keys

**Applications**
Quick-Coupling valves provide underground water supply outlets for installations ranging from residential lawns to city parks. They are installed flush to grade and are used in conjunction with above grade sprinklers or hose.

**Features**
- Brass construction
- Key is inserted into top of the valve. A turn of the key opens the valve and releases the water. Remove the key to close the valve
- Thermoplastic cover for durability
- Stainless steel internal valve spring prevents leakage

**Specifications**
- 5LRC
- Flow: 7.0 to 16.0 m³/h
- Pressure: 0.4 to 8.6 bar

**Quick-Coupling Valves Pressure Loss (bar)**

<table>
<thead>
<tr>
<th>Flow (m³/h)</th>
<th>SLRC</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.0</td>
<td>0.30 bar</td>
</tr>
<tr>
<td>8.0</td>
<td>0.40 bar</td>
</tr>
<tr>
<td>9.0</td>
<td>0.50 bar</td>
</tr>
<tr>
<td>10.0</td>
<td>0.61 bar</td>
</tr>
<tr>
<td>12.0</td>
<td>0.85 bar</td>
</tr>
<tr>
<td>14.0</td>
<td>1.15 bar</td>
</tr>
<tr>
<td>16.0</td>
<td>1.48 bar</td>
</tr>
</tbody>
</table>

**Dimensions**
- SLRC - Height: 14.0 cm

**Models**
Select models shown. Review your regional price list for complete availability.
- 33DK: Valve key ¾” male and ½” female threads
- 5LRC: 1” BSP female threaded inlet with locking rubber cover
- 55K-1: Valve key 1” BSP male threads

---

**SH Series: SHO and SH2BSP**
Brass Swivel Hose Ell

**Applications**
The SHO/SH2BSP are connected to the 33DK/55K-1 Quick-Coupling Valve keys. Hose can be pulled in any direction - full 360° swivel - without kinking.

**Features**
- Brass construction
- O-Ring seal
- Used in conjunction with the 33DK/55K-1 keys

**Specifications**
- SHO
  - Female threaded inlet: ¾”
  - Male threaded outlet: ¾”
- SH2BSP
  - Female threaded inlet: 1”
  - Male threaded outlet: 1”

**Models**
Select models shown. Review your regional price list for complete availability.
- SHO: Swivel Hose Ell ¾”
- SH2BSP: Swivel Hose Ell 1”

---

**P-33 Series: P-33 / P-33DK**
Plastic Quick-Coupling Valve and Key

**Applications**
These Quick-Coupling Valves permit easy access to water from an underground piping system and can be used in conjunction with hose for manual irrigation or cleaning driveways, sidewalks, etc.

**Features**
- Used in conjunction with P-33DK “turn and lock” key with ribbed grip
- Delrin™ valve cage
- 2-piece valve body design, 1-piece key
- Stainless steel spring
- Cover snaps on valve body to keep out debris
- Impact resistant plastic with UV-inhibitors
- O-Ring seal

**Specifications**
- Maximum operating pressure: 6.2 bars
- Valve: ¾” male threaded inlet
- Key: ¾” male threaded outlet
- ¼” female threaded inlet; ¼” (20/27) male threaded outlet

**P-33 Series Quick-Coupling Valves Pressure Loss (bar)**

<table>
<thead>
<tr>
<th>Flow (m³/h)</th>
<th>P-33</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.5</td>
<td>&lt; 0.1</td>
</tr>
<tr>
<td>3.0</td>
<td>-0.13</td>
</tr>
<tr>
<td>3.5</td>
<td>-0.18</td>
</tr>
<tr>
<td>4.0</td>
<td>-0.23</td>
</tr>
<tr>
<td>4.5</td>
<td>-0.29</td>
</tr>
<tr>
<td>5.0</td>
<td>-0.35</td>
</tr>
</tbody>
</table>

**Dimensions**
- Height P-33 Quick Coupling Valve: 13.8 cm
- Height P-33DK Key: 18.0 cm

**Models**
Select models shown. Review your regional price list for complete availability.
- P-33: Quick Coupling Valve
- P-33DK: Valve Key for P-33
**VBA-Series**

Polyprop Valve Boxes - Valve Boxes with the Best Value for Money.

**Applications**
Rectangular and round valve boxes made of plastic permit easy access to electric and manual valves and other equipment used in automatic irrigation installations. These valve boxes are highly recommended for residential systems.

**Features**
- Boxes made of black polypropylene. Green cover made of same material.
- Cover included (except extensions).
- Extensions available for models VBA02674 and VBA02675.
- Aesthetic, lightweight, and nest within each other to reduce freight costs.
- Lockable cover.
- Exclusive T-COVER:
  - Easy to identify: Molded model number and Rain Bird marking.
  - Easy to open: Built-in hole and built-in notch for 2 in 1 lifting key.
  - Pre-cut pipe inlets and outlets. No tools required.

**Models**
Select models shown (see table below). Review your regional price list for complete availability.

**Valves**

**ADDITIONAL FEATURES**
- Boxes made of black polypropylene. Green cover made of same material.
- Aesthetic, lightweight, and nest within each other to reduce freight costs.
- Round irrigation hydrant with built-in 3/4" (20/27) valve.

**MODELS**
- VBA17186: Round irrigation hydrant with built-in 3/4" (20/27) valve.
- VBA02672: Round valve box with bayonet-type cover.
- VBA02673: Round valve box with clip-on cover.
- VBA02674: Extension for model VBA02674 (less cover).
- VBA02675: Rectangular valve boxes with bolt lock cover.
- VBA02675C: Cover for valve box model VBA02674 and for extension VBA02676.
- VBA02676: Extension for model VBA02675 (less cover).
- VBA02677: Rectangular valve boxes with bolt lock cover.
- VBA02677C: Cover for valve box model VBA02674 and for extension VBA02676.
- VBA02678: Rectangular valve boxes with bolt lock cover.
- VBA02679: Cover for valve box model VBA02674 and for extension VBA02676.
- VBA02679: Cover for extension VBA02677.

**Dimensions**

<table>
<thead>
<tr>
<th>Round valve boxes</th>
<th>VBA17186</th>
</tr>
</thead>
<tbody>
<tr>
<td>ØS Diameter</td>
<td>210 mm</td>
</tr>
<tr>
<td>ØB Diameter</td>
<td>180 mm</td>
</tr>
<tr>
<td>H Height</td>
<td>120 mm</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Round valve boxes</th>
<th>VBA02672</th>
<th>VBA02673</th>
</tr>
</thead>
<tbody>
<tr>
<td>ØS Diameter</td>
<td>160 mm</td>
<td>242 mm</td>
</tr>
<tr>
<td>ØB Diameter</td>
<td>200 mm</td>
<td>335 mm</td>
</tr>
<tr>
<td>H Height</td>
<td>236.5 mm</td>
<td>255 mm</td>
</tr>
<tr>
<td>LC Slots for pipe (Width)</td>
<td>67 mm</td>
<td>52 mm</td>
</tr>
<tr>
<td>HC Slots for pipe (Height)</td>
<td>64 mm</td>
<td>89 mm</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Rectangular valve boxes</th>
<th>VBA02674</th>
<th>VBA02675</th>
</tr>
</thead>
<tbody>
<tr>
<td>LS1 Length</td>
<td>386 mm</td>
<td>545 mm</td>
</tr>
<tr>
<td>LS1 Width</td>
<td>267 mm</td>
<td>380 mm</td>
</tr>
<tr>
<td>H1 Height</td>
<td>305 mm</td>
<td>305 mm</td>
</tr>
<tr>
<td>LB1 Length</td>
<td>505 mm</td>
<td>630 mm</td>
</tr>
<tr>
<td>LB1 Width</td>
<td>370 mm</td>
<td>480 mm</td>
</tr>
<tr>
<td>LC Slots for pipe (Width)</td>
<td>70 mm</td>
<td>80 mm</td>
</tr>
<tr>
<td>HC Slots for pipe (Height)</td>
<td>105 mm</td>
<td>105 mm</td>
</tr>
</tbody>
</table>
VB Series Valve Boxes

Commercial grade boxes that are loaded with a rich set of industry-leading features

Features
- Strength and Stability – Multiple sizes and shapes are designed with corrugated sides and wide flange bases for maximum durability, compression strength, and stability
- Smart Lid Design – Designed with no holes to keep out pests, beveled edges to minimize damage potential from turf equipment, and for easy hand and shovel access
- Flexible Installations – Interlocking stacking capabilities, extension models and pipe hole knockouts support deeper and flexible installations
- Environmentally Friendly – Earth-friendly, LEED-compliant material made of 100% recycled materials (black boxes and black lids only)

Models
Select models shown (see table below). Review your regional price list for complete availability.

### Models
- **7 Inch Round Valve Box**
  - Bottom Diameter: 21.4 cm
  - Height: 23.4 cm
  - Length: 59.0 cm
  - Width: 49.1 cm
  - Height: 31.8 cm
- **10 Inch Round Valve Box**
  - Bottom Diameter: 30.0 cm
  - Height: 26.0 cm
  - Length: 50.8 cm
  - Width: 37.5 cm
  - Height: 17.1 cm
- **Standard Valve Box**
  - Length: 70.0 cm
  - Width: 45.5 cm
  - Height: 17.2 cm
- **Jumbo Valve Box**
  - Length: 62.0 cm
  - Width: 45.5 cm
  - Height: 17.2 cm
- **Super Jumbo Valve Box**
  - Length: 84.1 cm
  - Width: 60.7 cm
  - Height: 38.1 cm
- **Maxi Jumbo Valve Box**
  - Length: 102.5 cm
  - Width: 68.9 cm
  - Height: 45.7 cm

### ADDITIONAL FEATURES
- Easily removable knock-outs simplify pipe placement and reduce installation time
- Four equally spaced knock-outs accommodate up to 5.0 cm diameter pipe
- Two large center knock-outs accommodate up to 8.9 cm diameter pipe and eleven knock-outs accommodate up to 5.0 cm diameter pipe
- Extension models support deeper and more flexible installations
- Extension models support deeper and more flexible installations
- Extension models support deeper and more flexible installations
- Four equally removable knock-outs simplify pipe placement and reduce installation time
- Two large center knock-outs accommodate up to 8.9 cm diameter pipe
- Six large knock-outs on the ends accommodate up to 12.7 cm diameter pipe and 12 knock-outs on the sides accommodate up to 7.6 cm diameter pipe

### MODELS
- **VB7RND: 7” Round Body & Green Lid**
- **VB7RD: 7” Round Body Only**
- **VB7RNL: Black Lid**
- **VB7RNL: Green Lid**
- **VB7RNDPL: Purple Lid**
- **VB10RND: 10” Round Body & Green Lid**
- **VB10RD: 10” Round Body Only**
- **VB10RNL: Black Lid**
- **VB10RNL: Green Lid**
- **VB10RNDPL: Purple Lid**
- **VBSTD: Standard Body & Green Lid**
- **VBSTD: Standard Body Only**
- **VBSTD6EXTB: Standard Extension Body Only**
- **VBJMB: Jumbo Body & Green Lid**
- **VBJMB: Jumbo Body & 2 Lock Green Lid**
- **VBJMB6EXTB: Jumbo Extension Body Only**
- **VBSPRH: Super Jumbo Body & Green Lid**
- **VBSPRH: Super Jumbo Body & 2 Lock Green Lid**
- **VBMAXH: Maxi-Jumbo Body & 2 Lock Green Lid**

### LOCKING SYSTEMS
- **VB-LOCK-P: Pent head 1.0 x 5.7 cm bolt, washer, and clip**

The Intelligent Use of Water.™
DBM10
Quick Connect Wire Connectors

Features
- Approved for 30V wet/damp locations
- Allows electrical connections up to 3 wires sized 1.5 mm² or 0.8 mm²
- IP 67 and compact
- Self-stripping
- Use with insulated copper wire
- One piece metal blade improves the flow of current between conductors
- Translucent Green depression cap allows for visible connections
- UV and impact resistant

Specifications
- Silicone Sealant (-45°C to 200°C)
- Maximum wire voltage: 600V

Model
- DBM10, bag of 10 units

KING
Waterproof Wire Connectors

Features
- Spring locks on to wire for tight grip
- Eliminates failures due to moisture and corrosion
- Arrests sparking
- Copper-to-copper wire only. Cannot be reused
- Used for electrical connections in low voltage installations (< 30V)
- Allows electrical connections up to 2 wires sized 2,5 mm² or 3 wires sized 1,5 mm²
- Waterproof

Specifications
- Maximum wire voltage: 30V

Model
- KING

WC Series Wire Connector
Connections Made Easy

Features and Benefits
- Install Faster – the WC Series Wire Connectors quick to install and provides reliable moisture sealing for controller and valve electrical connections you can count on
- Simplify Inventory – This is the only wire connector you’ll need! It is ideal for use on two wire decoder control systems
- Avoid Call Backs – Locating and repairing a corroded wire splice costs your business time and money. Avoid unnecessary service call backs
- Use for standard controllers, valve boxes and soil moisture sensors
- Wire combinations ranging from 0.3 mm² to 8.4 mm²
- Use on connections from 24 VAC to 600 VAC
- UL 486D certified for direct burial
- The Strain Relief ensures wires are secure and won’t pull apart
- Waterproof silicone sealant protects against corrosion
- UV-resistant material ensures product performance does not degrade even after long periods of exposure to sunlight

Models
- WC20: Direct Bury Silicone Tube, Red Yellow Wire Nut, Bag of 20

Wire Combinations (for solid and stranded wire)

<table>
<thead>
<tr>
<th>WC20</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2-3 x 5.3 mm²</td>
<td>2 x 0.8 mm²</td>
</tr>
<tr>
<td>2-5 x 3.3 mm²</td>
<td>1 x 8.3 mm² w/2 x 0.8 mm²</td>
</tr>
<tr>
<td>2-5 x 2.1 mm²</td>
<td>3 x 5.3 mm² w/1 x 0.8 mm²</td>
</tr>
<tr>
<td>4-6 x 1.3 mm²</td>
<td>3 x 3.31 mm² w/3 x 0.8 mm²</td>
</tr>
<tr>
<td>3 x 2.1 mm²</td>
<td>w/2 x 0.8 mm²</td>
</tr>
</tbody>
</table>

The combinations listed are only a sample of the most common wire combinations.
Multi-Conductor Irrigation Cable

Applications
Very low voltage (< 30 Volts) multi-conductor cable. Ideal for carrying power supply from controller terminal strips to electric valves.

Features
- 3, 5, 7, 9 and 13 conductor models
- Single core multi-conductor cable
- Black polyethylene jacket. Thickness: 0.64 mm. Highly resistant to mechanical stress, chemicals and moisture
- PE jacket with a nylon rip cord to facilitate stripping
- 0.8 mm^2 conductor cross section for any type of residential irrigation installation
- Maximum distance between a controller and a valve: 350 m (175 m if 2 valves)
- Cable Marked “Rain Bird”
- 1-meter incremental marking

Models
Select models shown. Review your regional price list for complete availability.
- Irricable 3/75: 3 conductors, 75 m drum
- Irricable 3/150: 3 conductors, 150 m drum
- Irricable 5/75: 5 conductors, 75 m drum
- Irricable 5/150: 5 conductors, 150 m drum
- Irricable 7/75: 7 conductors, 75 m drum
- Irricable 7/150: 7 conductors, 150 m drum
- Irricable 9/75: 9 conductors, 75 m drum
- Irricable 13/75: 13 conductors, 75 m drum

Single Conductor Electric Cable

Applications
Very low voltage (< 30V) single conductor cable. Ideal for carrying power supply from controllers to decoders or valve-in-head rotors.

Features
- Solid bare copper conductor
- Available in single PE insulation cable
- Cross section: 1.5 mm^2
- Thickness: 3 mm.
- Highly resistant to mechanical stress, chemicals, moisture.
- Cable Marked “Rain Bird”
- 1-meter incremental marking

Models
Select models shown. Review your regional price list for complete availability.
- SI 115: 1 x 1.5 mm^2, single PE insulation cable, 500 m drum
- DI 115: 1 x 1.5 mm^2, double PVC-PE insulation cable, 500 m drum

Decoder Cable

Applications
Ideal for use as a power and communications/control cable for decoder and SiteControl systems.

Features
- 2 Solid bare copper conductors with a PE insulation jacket
- Cross section: 2.5 mm^2

Model
Select models shown. Review your regional price list for complete availability.
- Decoder Cable 500m drum

Wire Stripper Tool

Applications
Multi-function tool for all standard round cables. For quick, safe and precise wire stripping of outer sheathing and wire stripping of inner solid and stranded wires.

Features
- No adjustment of cutting depth necessary
- No damage to conductors
- Stripping range: 0.2 - 4.0 mm^2
- Radial cutting and stripping (up to 20 cm) in one step
- Additional lengthwise slitter for stripping in excess of 20 cm

Model
Select models shown. Review your regional price list for complete availability.
- Wire Stripper
• A Seasonal Adjust feature is available on all Rain Bird AC-powered controllers, allowing users to easily adjust irrigation schedules to changing seasonal landscape water requirements. The ESP-LX Series Controllers also feature an automated Monthly Seasonal Adjust feature to help save water through automatic adjustments every month of the year. LNK WiFi Module compatible controllers can be adjusted daily with the Automatic Seasonal Adjustment feature in the Rain Bird App.

• Water savings can also be optimized through daily irrigation schedule adjustments which fine-tune watering based on current weather. All ESP-LX series controllers can easily be upgraded to include smart weather-based/ET or soil moisture irrigation control capability by adding a local rain sensor or soil moisture sensor.

• All Rain Bird controllers simplify conservation through a variety of flexible programming features. With the touch of a button, the ESP-ME3 and ESP-TM2 can recall a previously saved “Contractor Default” irrigation program; the ESP-LX Series “Delayed Recall” feature automatically reverts to typical watering programs after a user-set time period.
## Major Products

<table>
<thead>
<tr>
<th>Primary Applications</th>
<th>Controllers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential</td>
<td>ESP-LXIVM</td>
</tr>
<tr>
<td>Light Commercial</td>
<td>ESP-TM2</td>
</tr>
<tr>
<td>Commercial/Industrial</td>
<td>ESP-RXZE</td>
</tr>
<tr>
<td>Outdoor Location</td>
<td>ESP-LXME</td>
</tr>
<tr>
<td>Residential</td>
<td>ESP-LXMEF</td>
</tr>
<tr>
<td>Residential</td>
<td>ESP-LXD</td>
</tr>
<tr>
<td>Digital Hose-End Timer</td>
<td>WPX</td>
</tr>
<tr>
<td>Digital Hose-End Timer</td>
<td>TBOS BT</td>
</tr>
</tbody>
</table>

### Type of Controller
- Hybrid
- Solid State
- Battery Operated
- Indoor Location
- Outdoor Location

### Features
- **Stations (up to)**: 60/240, 12, 8, 22, 48, 200, 1, 6, 6
- **Programs (up to)**: 10/40, 3, –, 4, 4, 1, 6, 3
- **Station Timing (up to)**: 96 hr, 6 hr	extsuperscript{1}, 199 min, 6 hr	extsuperscript{1}, 12 hr	extsuperscript{1}, 12 hr	extsuperscript{1}, 6 hr, 4 hr, 6 hr
- **Number of Starts per Program (up to)**: 8, 4, 6, 6, 8, 8, 2, 6, 8
- **Surge protection**: ✔
- **230VAC Option**: ✔
- **Master Valve/Pump Start**: (Multi-station models only)
- **Water Budgeting**: ✔
- **Individual Program/Zone Shut-Off**: ✔
- **Rain Delay**: ✔
- **Mobile App Programmable**: ✔
- **Sensor Terminals, Status Indicator and Override**: ✔
- **Delay Between Stations (up to)**: 0 - 60 min, 9 hrs, 9 hrs, 0 - 10 min, 0 - 10 min, 1 sec - 1 hr	extsuperscript{1}
- **Flow Sensing**: ✔
- **Simultaneous Multi-Station Operation**: ✔
- **Cycle + Soak™**: ✔
- **Overlapping Programs**: ✔
- **Manual On/Off**: ✔
- **Remote Control Compatible**: ✔
- **Diagnostic Test**: ✔
- **Diagnostic Valve Circuit Breaker**: ✔
- **Out-of-Valve Box Programming**: ✔
- **Submersible (up to)**: 1 m, 1 m
- **Vandal/Tamper Resistant**: ✔
- **Self-Cleaning Solenoid**: ✔
- **Low Battery Indicator**: ✔
- **Save / Restore Programs**: ✔
- **Master Valve ON/OFF by Station**: ✔
- **Total Run Time Calculator by Program**: ✔
- **Bypass Rain Sensor by Station**: ✔

### Programming Schedule
- **7 Day-of-Week**: ✔
- **1-7 Variable Cycle**: ✔
- **1-31 Variable Cycle**: ✔
- **Odd/Even Cycle**: ✔
- **Odd 31st**: ✔
- **365-Day Calendar**: ✔
- **Event Day Off**: ✔

### Central Control Compatibility
- **IQ™ Upgradeable**: ✔

### Cabinet
- **Plastic-Indoor**: ✔
- **Plastic-Outdoor**: ✔
- **Powder-Coated Metal Outdoor**: ✔
- **Stainless Steel Pedestal**: ✔
- **Powder-Coated Metal Pedestal**: ✔

### Hardware/Accessories
- **Two-Wire Devices and Accessories**: ✔
- **Rain Sensing (need Rain Sensor)**: ✔
- **Flow Sensing (need Flow Sensor)**: ESP-LXMEF only
- **SMRT-Y Soil Moisture Sensor**: ✔

---

1. With water budgeting, timing can be extended
2. Programmable by station
3. 6 independent start times per zone
4. Selectable for each program and by month
5. With Flow Smart Module
6. IQ only

*Only with LNK WiFi Module*
ESP-LXIVM and LXIVM Pro 2-Wire Controllers

60/240 Station Capable Two-Wire Commercial Controller

Controller Features

- 60-station capability standard expandable to 240 stations with LXIVM Pro Panel
- Four available sensor inputs (one wired plus up to three on 2-Wire path) with override switch. Eight (Seven plus 1) for LX-IVM Pro
- Five flow sensors supported (LX-IVM), Ten for LX-IVM Pro
- Supported Field devices: IVM-SOL, IVM-OUT and IVM Smart Valves
- Supports IVM-SEN sensor devices (flow sensing and weather sensor support) and IVM-SD surge devices (one per 500 feet of two-wire path or every 15 devices required)
- Central Control capable with Rain Bird IQ Communications Cartridges and software (see pg. 88)
- Six user-selectable languages
- 10 independent programs (LX-IVM) or 40 Programs (LX-IVM Pro)
- Removable front panel is programmable under battery power
- Plastic, locking, UV resistant, wall-mount case, Optional Metal and Stainless Steel Case & Pedestal
- Compatible with Rain Bird Landscape Irrigation and Maintenance and Third Party Remotes
- Plastic, locking, UV resistant, wall-mount case, Optional Metal and Stainless Steel Case & Pedestal

Operating Specifications

- Station timing: 0 min to 96 hrs
- Program level and global Monthly Seasonal Adjust; 0% to 300% (96 hrs maximum station run time)
- 8 start times per program
- Program Day Cycles include Custom days of the week, Odd, Odd no 31st, Even, and Cyclical dates
- Manual station, program, test program

Diagnostic Features

- Alarm light with external case lens
- 2-Wire diagnostics to simplify and expedite troubleshooting
- Four isolated wire paths prevent full system failure under a single short
- 2-Wire Mapping: Maps the devices to corresponding wire paths in the controller to help quickly find and resolve issues
- Trending 12-month electrical history reports and proactive action
- Self-Healing: Automatically detect “fixes” to wire path and splice issues and re-start irrigation without reliance on manual intervention
- Two-Way Communication: with Intelligent Valve Modules (IVM) communication happens both ways enabling key features
- Self-Shutoff: Once loss of power is detected, automatically shutoff valve to avoid leaks

Certifications

- cULus, CE, IPX4. For current certifications visit: www.rainbird.com/esplxivm
ESP-LXIVM and LXIVM Pro 2-Wire Controllers (cont.)

Water Management Features
- Learn Flow utility and flow usage totalizer help optimize water usage
- FloWatch™ protection for high and low flow conditions set by the user
- FloManager™ manages hydraulic demand, make full use of available water to turn on as many stations as possible without exceeding water supply and reducing the total time to complete irrigation cycles.
- SimulStations™ allows stations to operate at the same time; up to 8 with LX-IVM and 16 with LXIVM Pro
- Cycle+Soak™ by station
- Rain Delay up to 30 days
- 365-Day Calendar Day Off (up to 5 days)
- Station Delay by program
- Normally Open or Normally Closed Master Valves programmable by station; up to 5 with LX-IVM and 10 with LX-IVM Pro
- Optional Weather Sensors are programmable by station to prevent or pause watering; up to 4 with LX-IVM and 8 with LX-IVM Pro
- Seasonal Adjust by Program or by Month

Environmental
- Operating Temperature
  - Operating temperature range: 14°F to 149°F (-10ºC to 65ºC)
- Operating Humidity
  - Operating humidity range: 95% max at 40°F to 120°F (4ºC to 49ºC) in a non-condensing environment
- Storage Temperature
  - Storage temperature range: -40°F to 150°F (-40ºC to 66ºC)
- Upgrade Options
  - IQ-NCC Network Communication Cartridge
  - LXIVM Pro Panels (for regular 60 station controllers)

Electrical Specifications
- Power Supply Voltage: 120 VAC ± 10%, 60Hz
- Power back-up: Lithium coin-cell battery maintains time and date while nonvolatile memory maintains the schedule
- Simultaneous operation of up to eight (IVM) or sixteen (IVM Pro) Stations plus any corresponding master valves

Dimensions (W x H x D)
- 14.32" x 12.69" x 5.50" (36.4 x 32.2 x 14.0 cm)

Model
- IESPLXIVM: International Version 230V
- IESPLXIVMP: International Version (Pro) 230V
- ILXIVMEU: European Version 230V
- ILXIVMPEU: European Version (Pro) 230V
- ILXIVMAU: Australian Version 230V
- ILXIVMPAU: Australian Version (Pro) 230V

Accessories
- IVM Field Devices* (see next page)
- Painted Metal and Stainless Steel Pedestal/Enclosure Options available (see pg. 95)
- IQ-NCC: Network Communication Cartridge for ESP-LX Series Controllers (see pg. 88)
- See page 78 for information on Rain Bird FS-Series Flow Sensors
- Pump Start Relays (PSR110-IVM or PSR220-IVM)

* IVM Field devices include peel-off barcode address labels

For more information call the ESP-LX Hotline: 1-866-544-1406
Controllers
ESP-LXIVM and LXIVM Pro 2-Wire Controllers

Field Devices
ESP-LXIVM 2-Wire Field Devices Field Devices are installed along the 2-Wire path to interface with valves and other hardware.

**IVM-SOL**
- Interfaces with LX-IVM to control station valves and master valves
- Interfaces with PEB, PESB, PGA, EFB-BP and BESP Valves
- Available pre-installed in a SmartValve configuration with PEB and PGA Valves
- Rain Bird WC20 connectors (included) to be used for all splices
- Current Draw: 0.67mA
- Model: LXIVMSOL

**IVM-OUT**
- Interfaces with LX-IVM to manage 3rd party valves and external gear such as pump stations
- Rain Bird WC20 connectors (included) to be used for all splices
- Current Draw: 0.67mA
- Model: LXIVMOUT

**IVM-SEN**
- Interfaces with LX-IVM to control weather sensors or flow sensors
- Rain Bird WC20 connectors (included) to be used for all splices
- Current Draw: 6mA
- Model: LXIVMSEN

**IVM-SD (Surge Protection)**
- IVM-SD provides surge protection on the 2-Wire path
- One every 500ft or 15 field devices
- Rain Bird WC20 connectors to be used for all splices
- Model: LXIVMSD

**Key Specifications**

<table>
<thead>
<tr>
<th>Feature</th>
<th>LX-IVM</th>
<th>LX-IVM Pro</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max Programs</td>
<td>10</td>
<td>40</td>
</tr>
<tr>
<td>Stations</td>
<td>60</td>
<td>240</td>
</tr>
<tr>
<td>Max Simulstations</td>
<td>8</td>
<td>16 (plus active MV’s)</td>
</tr>
<tr>
<td>Master Valves</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>Flow sensors</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>Weather sensors</td>
<td>4</td>
<td>8 (including 1 Local)</td>
</tr>
<tr>
<td>Watering windows</td>
<td>1 per program</td>
<td></td>
</tr>
<tr>
<td>Max run time</td>
<td>96 hrs</td>
<td></td>
</tr>
<tr>
<td>Start Times/program</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>Interstation delay</td>
<td>1 hour per program</td>
<td></td>
</tr>
<tr>
<td>LCD</td>
<td>2.5”x5” at 127x256 pixels. Monochrome with backlight</td>
<td></td>
</tr>
<tr>
<td>Front Panel Buttons</td>
<td>- All Buttons are back-lit - 5 Programming Button - Dedicated Language, Info and Back Buttons</td>
<td></td>
</tr>
<tr>
<td>Transformer size</td>
<td>1.9 amp (50 VA)</td>
<td></td>
</tr>
<tr>
<td>IVM current draw</td>
<td>720 uA (Standby)</td>
<td></td>
</tr>
<tr>
<td>Sensor current draw</td>
<td>8.4mA (Standby)</td>
<td></td>
</tr>
<tr>
<td>Max wire run</td>
<td>1.65 miles (2.66Km) 14 AWG in Star configuration 6.61 miles (10.63Km) Looped</td>
<td></td>
</tr>
<tr>
<td>No. 2-Wire paths and terminal pairs</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Cabinet</td>
<td>Plastic</td>
<td></td>
</tr>
<tr>
<td>FloWatch (flow sensing)</td>
<td>YES - Available Options: Diagnose &amp; Eliminate, Shut Down &amp; Alarm, Alarm Only</td>
<td></td>
</tr>
<tr>
<td>FloManager (flow optimization)</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Flow Rate</td>
<td>0 to 9999.9 gallons/min. (0.1 gallons/min. resolution)</td>
<td></td>
</tr>
<tr>
<td>Surge</td>
<td>20 kV int. - 1 IVM-SD every 500 ft. (or 15 field devices)</td>
<td></td>
</tr>
<tr>
<td>Valve type</td>
<td>DC Latching</td>
<td></td>
</tr>
<tr>
<td>Diagnostics Short Finding</td>
<td>Automatically Detect and Turn Off Wire Path Ability to turn on constant current source for field trouble shooting</td>
<td></td>
</tr>
<tr>
<td>Diagnostics Electrical History</td>
<td>- Daily Values (Last 30 Days) - Monthly Averages (Last 12 Mos.) - Values recorded 11:59 PM daily</td>
<td></td>
</tr>
<tr>
<td>Diagnostics – Field Device Response</td>
<td>List Responding and List Not Responding</td>
<td></td>
</tr>
<tr>
<td>Diagnostics Controller Output</td>
<td>Tracks Current Draw from 2-Wire Path 0.67 mA per IVM-SOL/IVM-OUT 6 mA per IVM-SEN</td>
<td></td>
</tr>
<tr>
<td>Diagnostics Watering Test</td>
<td>Test All Stations 1 to 10 Mins. (per station)</td>
<td></td>
</tr>
<tr>
<td>Central Control Capable</td>
<td>Yes</td>
<td></td>
</tr>
</tbody>
</table>

www.rainbird.com
LNK WiFi Module
Irrigation System Control from Anywhere

Features
• Upgrades WiFi-ready controllers (ESP-ME3, ESP-RZXe, and ESP-TM2) to make them fully accessible and programmable from iOS or Android compatible devices*
• Operates like a wireless remote control for your irrigation system while onsite or an internet-based monitoring and control system when offsite
• Streamlines and simplifies initial irrigation timer setup and seasonal adjustment
• Instant access allows for real-time system management and timer settings
• Compatible professional app features allow for simple multi-site management and remote diagnostics by landscape professionals
• Built-in mobile notifications provide troubleshooting access, simplify service calls, and warn of freezing conditions when expected
• Automatic weather adjustments provide daily run time changes, saving up to 50% in water
• Superior programming capabilities that are designed to meet the most stringent water restrictions

Specifications
• 2.4 GHz (only) WiFi router compatible with WEP and WPA security settings
• Compatible with iOS 8.0 and Android 6 (Marshmallow) or later mobile devices*
• Operating Temperature: -10°C to 65°C
• Storage Temperature: -40°C to 66°C
• Operating Humidity: 95% max @ 10°C to 49°C non-condensing environment

Electrical Specifications
• Input: 24VAC(RMS) 50/60Hz; 55mA max

Certifications
• cULus, FCC Part 15c, ISED RSS-247, IFETEL,CE, RCM, Smart Approved WaterMark. For current certifications visit:  www.rainbird.com/lnkwifi

Dimensions
• Width: 2.87 cm
• Height: 4.65 cm
• Depth: 1.22 cm

Model
• LNKWiFi

* Requires internet connection and compatible mobile device.
ESP-TM2 Series Controller
Simple, Flexible, and Reliable for Residential Applications

Features
• Upgradeable for WiFi-based remote monitoring and control via iOS and Android mobile devices (with LNK WiFi Module sold separately).
• Internet-based weather information can be used to make daily adjustments to the irrigation schedule, saving up to 30% in water (with LNK WiFi Module sold separately).
• 4, 6, 8, and 12 station models to meet small or large residential irrigation needs
• Set Permanent Days Off per program to ensure watering never occurs on days when maintenance crews are on site (for Odd/Even/Cyclic schedules)
• Easy to install indoors or outdoors with pre-installed power cord
• Quick programming in just 3 steps for ease of setup
• 3 available programs with up to 4 start times for each program to meet the needs of varied landscapes
• One-touch manual watering capability for ease of use
• Large back-lit LCD display for improved visibility in low-light and direct sun conditions
• Contractor Default™ allows you to easily save and restore your custom schedule
• Delay Watering up to 14 days and automatically resume watering after the set delay has elapsed
• Bypass Rain Sensor for any station gives you the ability to customize which stations react to a rain sensor
• Seasonal Adjust by program allows you to easily reduce or increase watering by program

Specifications
• Operating Temperature: Up to 65°C
• Storage Temperature: -40°C to 66°C
• Operating Humidity: 95% max @ 10°C to 49°C non-condensing environment

Electrical Specifications
• Input required: 230 VAC @ 50/60 Hz; 120VAC (±10%) @ 60Hz
• Output: 1A at 24VAC
• Master Valve/Pump Start Relay
• External battery back-up not required. Nonvolatile memory permanently saves the current programming and a 10 year life lithium battery maintains the controllers time and date during power outages

Certifications
• CE, IP24, RCM, IRAM, ICASA, CMAC, Kvalitet, UkrSEPRO. For current certifications visit: www.rainbird.com/esptm2

Dimensions
• Width: 20.1 cm
• Height: 20.0 cm
• Depth: 9.0 cm

Models
Select models shown. Review your regional price list for complete availability.
• TM2-4-230: 4 Station
• TM2-6-230: 6 Station
• TM2-8-230: 8 Station
• TM2-12-230: 12 Station
• TM2-4-AUS: 4 Station Australia
• TM2-6-AUS: 6 Station Australia
• TM2-8-AUS: 8 Station Australia
• TM2-12-AUS: 12 Station Australia

Accessories
• LNKWIFI: LNK WiFi Module for remote control and notification via iOS or Android device
• WR2 Series Wireless Rain + Freeze Sensors
• RSD Series Rain Sensors
ESP-RZXe Series Controllers

The Rain Bird ESP-RZXe WiFi Compatible Series provides a contractor grade, fixed station irrigation controller for residential and light commercial applications. The ESP-RZXe Controller provides zone based set up that is easier to understand by untrained users. 4, 6 and 8 zone models are available.

Applications

The ESP-RZXe provides flexible scheduling features that make the controller ideal for a wide variety of applications including residential and light-commercial irrigation systems.

Features

Easy to Use

- The ESP-RZXe Controller was designed with ease of use in mind. Zone-based scheduling allows every valve to be scheduled independently; no more explaining “programs” to end users, virtually eliminating call-backs. The large LCD display shows all of the programming for each zone at the same time.
- Simple graphic based user interface is easy to explain and presents every controller feature at your fingertips.

Easy to Install

- The ESP-RZXe Controller requires only two mounting screws. A guide for ½” or ¾” conduit allows for professional installation of field wires into the cabinet.

Controller Hardware

- Plastic wall-mount case
- 2 x AAA batteries for time and date backup
- Wire nuts for outdoor models

Controller Features

- WiFi compatible with the Rain Bird LNK WiFi Module
- Large LCD display with easy to navigate user interface
- Weather Sensor input with software override
- Master valve/pump start circuit
- Non-Volatile (100-year) program memory
- Programmable under battery power

Scheduling Features

- Zone based scheduling, allows for independent schedules assigned to each zone. (Run times, Start Times and Watering Days are customizable by zone)
- Contractor Rapid Programming™ automatically copies the Start Times and Watering Days from zone 1 to all remaining zones at initial set up
- 6 independent Start Times per zone
- 4 Watering Days options by zone: Custom days of week, ODD calendar days, EVEN calendar days, Cyclic (every 1 – 14 days)
- Manually water ALL zones or SINGLE zone on demand

Advanced Features

- Electronic diagnostic circuit breaker
- Contractor Rapid Programming™ and “Copy previous Zone” for faster initial set up
- Contractor Default™ Save / Restore
- Rain Sensor bypass
- Rain Sensor bypass by Zone
- Manual water single or all zones

Operating Specifications

- Zone timing: 0 to 199 min
- Seasonal Adjust: -90% to +100%
- Independent schedule per zone
- 6 Start Times per zone
- Program Day Cycles include Custom days of the week, Odd, Even, & Cyclical dates

Electrical Specifications

- Input required: 230 VAC ± 10%, 50Hz
- Power back-up: 2 x AAA batteries maintain time and date while nonvolatile memory maintains the programming

Certifications

- CE, IRAM, IPX4, RCM.
- For current certifications visit: www.rainbird.com/RZXe

Dimensions

<table>
<thead>
<tr>
<th>MODELS</th>
<th>INDOOR</th>
<th>OUTDOOR</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Width: 16.9 cm</td>
<td>Width: 20.1 cm</td>
</tr>
<tr>
<td></td>
<td>Height: 15.0 cm</td>
<td>Height: 19.9 cm</td>
</tr>
<tr>
<td></td>
<td>Depth: 3.9 cm</td>
<td>Depth: 3.9 cm</td>
</tr>
</tbody>
</table>

Works with LNK WiFi
ESP-ME3 Series Controllers

The industry's most flexible irrigation controller solution. Supports up to 22 stations.

Features
- Built-in flow-sensing capabilities
- Large back-lit LCD display for improved visibility in low-light and direct sun conditions
- Rain Sensor input with override capability
- Master valve/pump start circuit
- Non-Volatile (100 year) storage memory
- Remotely Programmable under 9V battery power (not included)
- Program based scheduling allows 4 individual programs with 6 independent start times per program for 24 total start times
- Watering schedule options: By days of week, ODD calendar days, EVEN calendar days, or Cyclic (every 1 – 30 days)
- Advanced diagnostics and short detection with LED alert
- Contractor Default™ Program Save/Restore saved program(s)
- Rain Sensor bypass by Station
- One Touch manual watering
- Delay Watering up to 14 days (applies only to stations not set to ignore Rain Sensor)
- Manual Watering option by program or station
- Seasonal Adjust applied to all programs or individual program
- Adjustable delay between valves (default set to 0)
- Master Valve on/off by station
- Upgradeable for WiFi-based remote monitoring and control via iOS and Android mobile devices (with LNK WiFi Module sold separately).
- Internet-based weather information can be used to make daily adjustments to the irrigation schedule, saving up to 30% in water (with LNK WiFi Module sold separately).

Operating Specifications
- Station timing: 1 minute to 6 hours
- Seasonal Adjust: 5% to 200%
- Max operating temperature: 65°C

Electrical Specifications
- Input Required: 230/240VAC ± 10%, 50/60Hz
- Master Valve/Pump Start Relay
- Operating Voltage: 24VAC 50/60Hz
- Max Coil Inrush: 11VA
- Max Coil Holding: 5VA
  - Idle/Off power draw 0.06 amps at 120VAC
- Power back-up not required. Nonvolatile memory permanently saves the current programming and a 10 year life lithium battery maintains the controllers time and date during power outages.

Certifications
- CE, IRAM, IPX4, RCM, For current certifications visit: www.rainbird.com/me3

Dimensions
- Width: 27.2 cm
- Height: 19.5 cm
- Depth: 11.2 cm

Models
Controller Base Models:
- ESP4ME3EUR 4-Station indoor / outdoor for international markets except Australia
- ESP4ME3AUS 4-Station indoor / outdoor for Australia

Modules:
- ESP-SM3: 3-station extension module
- ESPSM6: 6-station extension module

Accessories
- LNKWIFI: LNK WiFi Module for remote control and notification via iOS or Android device
- WR2: Wireless Rain + Freeze Sensors
- RSD Series Rain Sensors
- Wired flow sensors

Works with LNK WiFi
Digital Hose End Timer
Faucet attached Controller

Applications
Automate your hose-end sprinklers, drip irrigation system or soaker hose for better scheduling consistency with this easy-to-use digital controller. Along with rugged dependability for season-long outdoor use, this professional grade controller offers sophisticated functions for worry-free watering convenience.

Features
• Extra large readout screen and programming dial make it easy to set and review your watering schedules.
• In operation, the screen also displays program status such as next scheduled cycle and time remaining on a current cycle.
• Advanced features include programming up to two watering times per day on any day(s) of the week, plus “water now” and “cancel” buttons to override programs instantly when desired.
• Ideal for use with Rain Bird drip or any hose end sprinklers. Go automatic with your watering in any area of your yard: gardens, landscaping beds, newly seeded as well as established lawns.

Specifications
• Digital settings allow tailoring schedules for greener results with less water
• Scheduled watering up to twice per day enables water to soak in, even on slopes or with clay soil
• Programming by day of week complies with watering restrictions
• Instant override buttons for Rain Delay (cancel watering) and Water Now (manual watering)
• Specific rain delay up to 96 hours can also be set without affecting the stored program
• Large screen lets you see all settings at a glance.
• Duration of watering time: 1 mn to 6h
• Number of station: 1
• ¾” female threaded inlet (BSP)
• ¾” male threaded outlet (BSP)
• Intended for outdoor use with cold water only.
• Working water pressure: 1 bar (minimum) – 6 bar (maximum)
• Working temperature: Keep from freezing – maximum temperature: 43°
  - Mini Flow: 162 L/h
  - Max Flow: 2.2 m³/h
• Uses 2 x 1,5V AA alkaline batteries (not included)

Certifications
• NOM-001-SCFI-1993, CE, RCM.

Model
• 1ZEHTMR
WPX Series
Battery-Operated Controller

Features

Controller Features
• Waterproof case ensures long life, even when installed in a valve box
• Common programming features are easily accessed on one screen, making programming quick and easy
• Operates for approximately one full year using one 9-volt alkaline battery, or two years with two 9-volt alkaline batteries
• Large LCD display with easy to navigate user interface
• Sensor input with bypass override
• Mast valve/pump-start circuit (multi-zone units only)
• Non-volatile (100-year) program memory
• IP68 certified for protection against dust and water intrusion
• Plastic controller case has outstanding resistance to weather, yellowing and aging

Scheduling Features
• Dedicated manual watering button for easy operation
• Automatic zone-stacking ensures that only one valve irrigates at the same time. WPX will automatically irrigate the lower number zone first if zones are scheduled to water at the same time
• Contractor Rapid Programming™ automatically copies the start times and watering days from zone 1 to all remaining zones at initial setup
• Run times, start times, and watering days are customizable by zone
  • 6 start times per zone
  • 4 watering day options per zone: Custom days of the week, Cyclic, and ODD or EVEN calendar days
  • Delay watering (1 to 9 days)

Controller Dimensions
• Width: 13.59 cm
• Height: 10.26 cm
• Depth: 6.15 cm
• Weight: 907 g

LCD Screen Size
• Width: 5.72 cm
• Height: 3.18 cm

Optional Wall Mount Dimensions
• Width: 10.76 cm
• Height: 17.60 cm
• Depth: 4.99 cm
• Weight: 107 g

Certifications
• cULus, CE, IP68. For current certifications visit: www.rainbird.com/WPX

Models
• WPX1: 1-Zone Controller
• WPX2: 2-Zone Controller
• WPX4: 4-Zone Controller
• WPX6: 6-Zone Controller
• WPX1SOL: 1-Zone + 9V Solenoid
• WPX1DVKIT: 1-Zone + 1" DV Valve
• 9VMOUNT: Wall-mount kit
The Intelligent Use of Water.™

Controllers

TBOS-BT Bluetooth Battery-Operated Controller

Features

Rain Bird Mobile App Features for TBOS BT
- Create, review and transmit irrigation programs
- Capability to set zones or programs to manually irrigate
- Basic programming includes 3 independent programs A, B and C, each with 8 start times per day
- Stations can be assigned to several programs with different watering run times
- Run time is from 1 minute to 12 hours in 1-minute increments
- Five watering day cycle modes (Custom, even, odd, odd-31, cyclical) selectable by program for maximum flexibility and watering
- Program and global Monthly Seasonal Adjust; 0% to 300% (1% increments)
- Delay watering from 1 to 14 days
- Built-in ID with naming capability. The control module and stations can be individually named.
- Optional passcode
- Permanently turn the controller off to prevent irrigation
- Battery indicator reports the status of the control module’s battery
- Capability to clear the control module’s irrigation program

Controller Features
- Operates for approximately one full year using one 9-volt alkaline battery
- Completely potted to obtain IP68 conformity
- Independent station operation allows sequential start times (with stacking in case of overlap) restriction compliance
- Master valve output on TBOS BT1, 2, 4, & 6 Control Modules
- No loss of irrigation program after a battery replacement
- Backwardly compatible with the TBOS-II Field Transmitter

Valve Compatibility
- Rain Bird TBOS Potted Latching Solenoid (K80920)
  - DV, DVF, ASVF, PGA, PEB, PESB, EFB-CP, and BPES series
- Hunter 458200
- Irritrol DCL
- Toro DCLS-P

Certifications
- cULus, FCC Part 15b, ISED RSS-247 Issue 2.0, CE, IP68, ICASA, CITC, ACMA, SUBTEL, SRRC, MIC, IFETEL, CRA, TRA.
For current certifications visit: www.rainbird.com/tbosbt

TBOS-BT System Components

Rain Bird Mobile App Features for TBOS BT
- Available for Android and IOS devices

Models
- TBOS-BT1 (1 Station)
- TBOS-BT2 (2 Station)
- TBOS-BT4 (4 Station)
- TBOS-BT6 (6 Station)

Accessories
- K80920 TBOSPSOL: TBOS Potted Latching Solenoid
- RSDBEX: RSD Series Rain Sensors
- Adapter for Non-Rain Bird plastic valves
  - K80510 TBOSADAPP
- Adapter for Non-Rain Bird brass valves
  - K80610 TBOSADAPP

TBOS-BT Bluetooth Battery-Operated Controller and Mobile App
**ESP-LXME/F Controllers**

**Modular -** Easily expandable from 8 or 12 stations up to 48 stations with 8- and 12-station modules

**Features**
- Hot-swappable modules, no need to power down the controller to add/remove modules
- 8- or 12-stations base unit expandable to 48 stations with 8- and 12-Station Modules
- Flow Smart Module™ factory installed (ESP-LXMEF) or field upgradable (ESP-LXME)
- Dynamic station numbering eliminates station numbering gaps
- Master valve/pump start circuit
- Weather Sensor input with override switch
- 6 user-selectable languages
- Standard 10kV surge protection
- Non-Volatile (100-year) program memory
- Front panel is removable and programmable under battery power
- Compatible with Rain Bird Landscape Irrigation and Maintenance Remote
- Plastic, locking, UV resistant, wall-mount case, Optional Metal and Stainless Steel Case & Pedestal

**Water Management Features**
- Optional Flow Smart Module™ with Learn Flow utility and flow usage totalizer — standard on ESP-LXMEF
- FloWatch™ protection for high and low flow conditions with user defined reactions (requires flow sensor)
- FloManager™ manages hydraulic demand, making full use of available water to shorten total watering time
- SimulStations™ are programmable to allow up to 5 stations to operate at the same time
- Station sequencing by station numbers or station priorities
- Water Windows by program plus Manual MV Water Window
- Cycle+Soak™ by station
- Rain Delay
- 365-Day Calendar Day Off
- Programmable Station Delay by program
- Normally Open or Closed Master Valve programmable by station
- Weather Sensor programmable by station to prevent or pause watering
- Program Seasonal Adjust
- Global Monthly Seasonal Adjust

**Operating Specifications**
- Station run times: 0 min to 12 hrs
- Seasonal Adjust; 0% to 300% (16 hrs maximum station run time)
- 4 independent programs (ABCD)
- ABCD programs can overlap
- 8 start times per program
- Program Day Cycles include Custom days of the week, Odd, Odd31, Even, & Cyclical dates
- Manual station, program, test program

**Electrical Specifications**
- Power Supply Voltage: 120 VAC ± 10%, 60Hz (International models: 230 VAC ± 10%, 50Hz; Australian models: 240 VAC ± 10%, 50Hz)
- Output: 26.5 VAC 1.9A
- Power back-up: Lithium coin-cell battery maintains time and date while nonvolatile memory maintains the programming
- Multi-valve capacity: Maximum five 24 VAC, 7A solenoid valves simultaneous operation including the master valve, maximum two solenoid valves per station module

**Certifications**
- cULus, FCC Part 15b, WaterSense (when upgraded with ET Manager Cartridge), CAN ICES-3(B)/NMB-3(B), CE, IPX4, RCM, Smart Approved WaterMark. For current certifications visit: www.rainbird.com/esplxme-esplxmeef

**Dimensions**
- Width: 36.4 cm
- Height: 32.2 cm
- Depth: 14.0 cm

**Models**
- IESP8LXME: 8-Station Controller for International Market, 230VAC
- FSMLXME: Flow Smart Module for ESPLXME/F Controller
- ESPLXMSM8: 8-Station Module for ESP-LXME/F Controller
- ESPLXMSM12: 12-Station Module for ESP-LXME/F Controller
- ESPLXMEFP: ESPLXME Controller Front Panel Only

**Accessories**
- Painted Metal and Stainless Steel Pedestal/Enclosure Options available
- IQ Communication Cartridge (see page 88)
- Rain Bird FS-Series Flow Sensors (see page 78)

For more information call the ESP-LX Hotline: 1-866-544-1406
ESP-LXD Decoder Controller

50 – 200 station capable Two-Wire Decoder Commercial Controller

Controller Features

- 50-station capability standard expandable to 200 stations with optional ESP-LXD-SM75 modules
- Four available sensor inputs (one wired plus up to three decoder-managed) with override switch
- Five flow sensors supported
- Supports SD-210TURF sensor decoders (flow sensing and weather sensor support) and LSP-1 line surge protectors (one per 500 feet of two-wire path required)
- Central Control capable with Rain Bird IQ Communications Cartridges and software (see pg. 88)
- Advanced Features From Cycle+Soak™ to Contractor Default Program™, the ESP-LXD offers innovative features proven to cut installation expenses, troubleshooting time and water use
- Six user-selectable languages
- Removable front panel is programmable under battery power
- Plastic, locking, UV resistant, wall-mount case, Optional Metal and Stainless Steel Case & Pedestal
- Compatible with Rain Bird Landscape Irrigation and Maintenance Remote - Flow Smart Module™ factory installed or field upgradable
- Plastic, locking, UV resistant, wall-mount case, Optional Metal and Stainless Steel Case & Pedestal

Operating Specifications

- Station timing: 0 min to 12 hrs
- Program level and global Monthly Seasonal Adjust; 0% to 300% (16 hrs maximum station run time)
- 4 independent programs (ABCD); ABC programs stack, ABCD overlap
- 8 start times per program
- Program Day Cycles include Custom days of the week, Odd, Odd no 31st, Even, and Cyclical dates
- Manual station, program, test program

Certifications

- cULus, WaterSense (when upgraded with ET Manager Cartridge), CE, IPX4, RCM, Smart Approved WaterMark. For current certifications visit: www.rainbird.com/esplxd

Upgrade Options

- IQ-NCC Network Communication Cartridge
- ESP-LXD-SM75 75-station module

Electrical Specifications

- Power Supply Voltage: 120 VAC ± 10%, 60Hz (International models: 230 VAC ± 10%, 50Hz; Australian Models: 240 VAC ± 10%, 50Hz)
- Power back-up: Lithium coin-cell battery maintains time and date while nonvolatile memory maintains the schedule
- Multi-valve station capacity: up to 2 solenoid valves per station; simultaneous operation of up to eight solenoids and/or master valves

Dimensions (W x H x D)

- 36.4 x 32.2 x 14.0 cm

Model

- IESPLXD: 50-station for international markets, 230 VAC
- IESPLXDEU: 50-station for Europe, 230 VAC
- IESPLXDAU: 50-station for Australia, 240 VAC

Accessories

- FD-TURF: two-wire decoders
- SD-210TURF: two-wire sensor decoder
- LSP-1TURF: two-wire line surge protection
- DPU-210: two-wire decoder programming unit
- Painted Metal and Stainless Steel Pedestal/Enclosure Options available
- IQ-NCC: Network Communication Cartridge for ESP-LX Series Controllers (see page 88)
- See page 78 for information on Rain Bird FS-Series Flow Sensors

For more information call the ESP-LX Hotline: 1-866-544-1406

LXMMSSPED Shown with ESP-LXD in LXMMSS Stainless Steel Cabinet

Works with IQ

ESP-LXD Decoder Controller
**Sensors & Meters**

**Sensors & Meters Compatibility Matrix**

<table>
<thead>
<tr>
<th>Accessory</th>
<th>Description</th>
<th>ESP9V</th>
<th>TROS8</th>
<th>ESPLT2</th>
<th>ESPME</th>
<th>ESPLXME</th>
<th>ESPLXMEF</th>
<th>ESPLXD</th>
<th>ESPLXIV</th>
<th>ESPLXIVMP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weather Sensors &amp; Stations</td>
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<tr>
<td>RSD-BEx</td>
<td>Wired Rain Sensor</td>
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<tr>
<td>WR2</td>
<td>Wireless Rain/Freeze Sensor</td>
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<tr>
<td>SMRT-Y</td>
<td>Solar Moisture Sensor</td>
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<tr>
<td>ANEMOMETER</td>
<td>Wind Speed Sensor</td>
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<tr>
<td>Flow Meters &amp; Sensors</td>
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<tr>
<td>MJ100B</td>
<td>1” Brass Water Meter</td>
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<tr>
<td>FS100P</td>
<td>1” PVC Tee Flow Sensor</td>
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<tr>
<td>FS150P</td>
<td>1-1/2” PVC Tee Flow Sensor</td>
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<tr>
<td>FS200P</td>
<td>2” PVC Tee Flow Sensor</td>
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<tr>
<td>FS300P</td>
<td>3” PVC Tee Flow Sensor</td>
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<tr>
<td>FS400P</td>
<td>4” PVC Tee Flow Sensor</td>
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<tr>
<td>FS100B</td>
<td>1” Brass Tee Flow Sensor</td>
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<tr>
<td>FS150B</td>
<td>1-1/2” Brass Tee Flow Sensor</td>
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<tr>
<td>FS200B</td>
<td>2” Brass Tee Flow Sensor</td>
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<tr>
<td>FSINSERT</td>
<td>Replacement insert for tee sensors</td>
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<tr>
<td>FS350B</td>
<td>Insert Flow Sensor</td>
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</tbody>
</table>

1 Requires PT3002 Pulse Transmitter

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**Water Saving Tips**

- Properties managed with a flow sensor averaged 35% savings. As part of a two-year study, historical water usage was compared on eight properties to water usage after a flow sensor was installed.
- By installing a Rain Bird flow sensor and a compatible flow-sensing controller, you can quickly identify leaks, shut down damaged areas and prevent costly flooding to your property. Plus, you can monitor your water efficiency over time.
- With cost-effective flow-sensing technology from Rain Bird, you can help avoid small leaks and big issues—building more trust and a stronger reputation for your business.
Flow Meters and Sensors

Compatible with IQ3, IQ4, Maxicom, SiteControl, LINK, Site SAT, ESP-LXD, LXME, LXMEF, ESP-ME3 and LX-IVM Controllers

Features

- Simple six-bladed impeller design
- Designed for outdoor or underground applications
- Available in PVC, brass or stainless steel construction
- Pre-installed in tee or saddle mounted insert versions

Operating Specifications

- Accuracy: ±1% (full scale)
- Velocity: 1/2-30 feet (0.15 - 9.2 meters) per second depending on model
- Pressure: 400 psi (27.5 bars) (max) on brass models; 100 psi (6.9 bars) (max) on plastic models
- Temperature: 220° F (105° C) (max) on brass models; 140° F (60° C) (max) on plastic models

FS Series Impeller Flow Sensors

- FS350B: Brass Insert Sensor
- FS100B, 150B, and 200B: Brass Sensors
- FS150P, 200P, 300P, and 400P: PVC Sensors
- FS100P: Tee Sensor

For complete Controller/Sensor compatibility information, see the Sensors & Meters Compatibility Matrix on page 96

Rain Bird Flow Sensor Suggested Operating Range

The following tables indicate the suggested flow range for Rain Bird Flow Sensors. Rain Bird Sensors will operate both above and below the indicated flow rates. However, good design practice dictates the use of this range for best performance. Sensors should be sized for flow rather than pipe size.

<table>
<thead>
<tr>
<th>Model</th>
<th>Suggested Operating Range (Gallons / Minute)</th>
<th>Suggested Operating Range (Liters / Minute)</th>
<th>Suggested Operating Range (Cubic Meters / Hour)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FS150P</td>
<td>5 - 100</td>
<td>19 - 380</td>
<td>1.1 - 23</td>
</tr>
<tr>
<td>FS200P</td>
<td>10 - 200</td>
<td>40 - 750</td>
<td>2.3 - 45</td>
</tr>
<tr>
<td>FS300P</td>
<td>20 - 300</td>
<td>75 - 1130</td>
<td>4.5 - 70</td>
</tr>
<tr>
<td>FS400P</td>
<td>40 - 500</td>
<td>150 - 1900</td>
<td>9 - 110</td>
</tr>
<tr>
<td>FS100B</td>
<td>2 - 40</td>
<td>7.6 - 150</td>
<td>0.5 - 9</td>
</tr>
<tr>
<td>FS150B</td>
<td>4 - 80</td>
<td>15 - 300</td>
<td>1 - 18</td>
</tr>
<tr>
<td>FS200B</td>
<td>10 - 100</td>
<td>38 - 380</td>
<td>2.3 - 23</td>
</tr>
<tr>
<td>FS350B</td>
<td>Depends on Pipe Type and Size - please reference Flow Sensors tech spec</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Models and Dimensions

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>MJ100B</td>
<td>1” Brass Flow Sensor for the ESP-ME3</td>
<td>10.75” x 4.38” x 5.13” (273mm x 111mm x 130mm)</td>
</tr>
<tr>
<td>FS100P</td>
<td>1” (25mm) PVC Tee Flow Sensor</td>
<td>3.50” x 3.94” x 1.315” (89mm x 100mm x 33mm)</td>
</tr>
<tr>
<td>FS150P</td>
<td>1 1/2” (40mm) PVC Tees Flow Sensor</td>
<td>5.0” x 5.16” x 2.38” (127mm x 131mm x 60mm)</td>
</tr>
<tr>
<td>FS200P</td>
<td>2” (50mm) PVC Tee Flow Sensor</td>
<td>6.5” x 6.76” x 2.88” (165mm x 173mm x 73mm)</td>
</tr>
<tr>
<td>FS300P</td>
<td>3” (75mm) PVC Tee Flow Sensor</td>
<td>8.5” x 8.85” x 4.23” (219mm x 224mm x 107mm)</td>
</tr>
<tr>
<td>FS400P</td>
<td>4” (110mm) PVC Tee Flow Sensor</td>
<td>7.38” x 7.83” x 5.38” (187mm x 199mm x 137mm)</td>
</tr>
<tr>
<td>FS100B</td>
<td>1 1/2” (40mm) Brass Tee Flow Sensor</td>
<td>5.45” x 4.94” x 2.21” (138mm x 126mm x 56mm)</td>
</tr>
<tr>
<td>FS150B</td>
<td>1” (25mm) Brass Tee Flow Sensor</td>
<td>6.5” x 5.19” x 2.5” (165mm x 132mm x 64mm)</td>
</tr>
<tr>
<td>FS200B</td>
<td>2” (50mm) Brass Tee Flow Sensor</td>
<td>4.25” x 8.35” x 2.94” (108mm x 212mm x 75mm)</td>
</tr>
<tr>
<td>FS350B</td>
<td>3” and higher, Brass Insert Flow Sensor</td>
<td>7.13” x 3” (diameter) (181mm x 76mm (diameter)</td>
</tr>
<tr>
<td>FSTINSERT</td>
<td>Replacement insert for Tee type sensors</td>
<td></td>
</tr>
</tbody>
</table>
Flow Monitors / Pulse Transmitters

The PT322 Pulse Transmitter converts a flow sensor’s data output and transmits it through the two-wire path to the Site Controller or to the MaxiLink communication board. Designed for use with Maxicom, SiteControl, Link, and SiteSat systems, the PT322 is easily configurable through your computer, providing real-time flow or wind speed data.

The PT5002 Flow Monitor/Transmitter is a state-of-the-art instrument, translating flow sensor data or anemometer wind speed data to display instantaneous and total flow/speed in multiple formats, and transmit data to Maxicom and SiteControl Satellite Controller Systems. It also features two high flow cutoff outputs, closing valves and saving water if a pipe or rotor malfunctions, or a high wind speed alert is set. Replacing the PT3002, the new model features a large backlit display and an improved user interface with easy-to-program functionality.

Features

PT5002 Flow Monitor/Transmitter
- Large, easy to read backlit display
- Simple menu driven soft-key programming
- Pre-programmed Rain Bird flow sensor k-factor and offset selection
- Flow Sensor or Wind Sensor input
- Instantaneous Flow Rate
- Resettable Total Flow
- Hi Flow / High Wind Master Valve Shutoff
- Pulse Decoder output to various controllers and central controls
- Available in two versions:
  - PT5002 Panel Mount Kit I/O terminal connectors, mounting hardware, and 24v power supply included
  - PT5002NEMA Wall Mount Kit Weatherproof NEMA enclosure, I/O terminal connectors, mounting hardware, and 24v power supply included

PT322 Pulse Transmitter
- Reliable Solid State design
- Compact, easy to mount
- Secure snap fit connectors
- Two diagnostic Status LEDs
- Programmable from Laptop or Computer

Operating Specifications
- Input required: -12-30 VDC/VAC on PT322-12-24 VAC/VDC on PT5002
- Output: Pulse output
- Operating Temp: -20° C to 70° C

Configuration
- For ESP-LXD Decoder Systems, the Flow Sensor is installed with a Two-Wire Decoder Sensor Decoder (SD210TURF)
- For ESP-LXMEF Systems, the Flow Sensor is attached to the FSM-LXME Flow Smart Module
- For ESP-ME3 Controllers, the Flow Sensor is attached to flow sensor terminals in the controller
- For (Hard Wire) Two-Wire Satellite Systems (Maxicom® and SiteControl), the Flow Sensor is installed with a Pulse Transmitter and a Rain Bird Pulse Decoder (DECPULLR)
- For Link Radio Satellite Systems (Maxicom® and SiteControl), the Flow Sensor is installed with a Pulse Transmitter (no pulse decoder required)
- For ESP-SITE Satellite Systems (Maxicom®), the Flow Sensor is installed with a Pulse Transmitter (no decoder required)
- For SiteControl Decoder Systems, the Flow Sensor is installed with a Two-Wire Decoder Sensor Decoder (SD210TURF)
- Surge protection (FSSURGEKIT) is recommended for Maxicom & SiteControl systems – One at the Pulse Transmitter, and if more than 15.2 meters of wire run, one at the Flow Sensor. FSSURGEKIT is not compatible with ESP-LXMEF and ESP-LXD Controllers

Compatibility Matrix

<table>
<thead>
<tr>
<th>Product</th>
<th>Description</th>
<th>ESP9V</th>
<th>TBOSBT</th>
<th>ESPTM2</th>
<th>ESPME</th>
<th>ESPME3</th>
<th>ESPLXME</th>
<th>ESPLXMEF</th>
<th>ESPLXD</th>
<th>ESPLXIVM</th>
<th>ESPLXIVMP</th>
</tr>
</thead>
<tbody>
<tr>
<td>PT322</td>
<td>Pulse Transmitter Flow</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PT5002</td>
<td>Flow Monitor/Pulse Transmitter Flow</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PT322</td>
<td>Flow Monitor/Pulse Transmitter Wind</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Product</th>
<th>Description</th>
<th>ESPLXME</th>
<th>ESPLXMEF</th>
<th>ESPLXIVM</th>
<th>ESPLXIVMP</th>
</tr>
</thead>
<tbody>
<tr>
<td>PT322</td>
<td>Pulse Transmitter Flow/Wind</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PT5002</td>
<td>Flow Monitor/Pulse Transmitter Flow/Wind</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Requires DECPULLR Decoder for Flow Sensor Input
**RSD-BEx**

Wired Rain Sensor

**Features and Benefits**
- Automatic rain shutoff prevents overwatering due to natural precipitation
- Robust, reliable design reduces service call backs
- Moisture sensing disks work in a variety of climates
- Different sensor mounts permit speed and flexibility on the job site
- Latching hinge maintains alignment

**Mechanical Properties**
- Multiple rainfall settings from ¼” – ⅜” (5 - 20 mm) are quick and easy with just the twist of a dial
- Adjustable vent ring helps control drying time
- High-grade, UV resistant polymer body resists the elements
- Comes with 5” latching aluminum bracket
- Not compatible with ESP-SMT or ESP-SMTe controllers

**Electrical Specifications**
- Application: Suitable for low voltage 24 VAC control circuits and 24 VAC pump start relay circuits*
- Switch electrical rating: 3A @ 125/250 VAC
- Capacity: Electrical rating suitable for use with up to ten 24 VAC, 7 VA solenoid valves per station, plus one master valve
- Wire: 25’ (7.6 m) length of #20, 2 conductor UV resistant extension wire
  * Not recommended for use with high voltage pump start, pump start relay circuits or devices.

**Certifications**
- cULus, CE, RCM. For current certifications visit: www.rainbird.com/rsd

**Dimensions**
- Overall length: 6.5” (16.5 cm)
- Overall height: 5.4” (13.7 cm)
- Bracket hole pattern: 1.25” (3.2 cm)

**Model**
- RSD-BEx: Rain sensor w/ latching bracket, extension wire

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**ANEMOMETER Wind Sensor**

Maxicom®, SiteControl, IQ®, ESP-LXME, ESP-LXD, ESP-LXIVM, ESP-LXIVM Pro

**Features**
- Accurate wind speed measurement for high-wind shutdown or interrupt of irrigation programs
- Heavy-duty metal mounting bracket
- Requires PT322 or PT5002 Pulse Transmitter for use with Maxicom² System
- Requires PT5002 Pulse Transmitter for use with SiteControl, IQ Systems, ESP-LXME, ESP-LXD, ESP-LXIVM, ESP-LXIVM Pro

**Model**
- ANEMOMETER
WR2 Series Wireless Rain + Freeze Sensors

Superior responsiveness to rainfall and cold temperatures, save up to 35% on water usage

Features & Benefits

- Enhanced antenna array provides superior signal reliability that overcomes most line-of-sight obstructions
- Sensor signal strength indicator enables one person set up, reducing installation time
- Convenient adjustment and monitoring of rain or freeze settings at the controller interface
- Simple battery replacement without the need to disassemble the sensor
- Highly intuitive icon-driven controller interface simplifies programming
- Easy to install, self-leveling sensor bracket mounts to flat surfaces or rain gutters
- Antennas concealed within the units for greater visual appeal and product robustness
- “Quick Shut Off” interrupts active irrigation cycle during a rain event

Electrical Specifications

- Application: suitable for use with 24 VAC controllers (with or without pump start / master valve)
- Electrical rating suitable for use with up to six 24VAC 7VA solenoids plus an additional master valve or pump start that does not exceed 53VA
- Controller Interface Wire: 30” (76 cm) length of #22 gauge (0.64 mm) UV resistant extension wire
- FCC approved spread spectrum 2 way radio transceivers with FCC Class B approvals
- Signal transmission distance of 700’ (213.4 m) Line of Sight
- Battery life: four or more years under normal operating conditions
- 6 KV surge / lightning protection

Certifications

- cULus, FCC Part 15c, ISED RSS-210, CE.
  For current certifications visit: www.rainbird.com/wr2

Mechanical Properties

- Adjustable rainfall settings from 1/8” – 1/2” (3 – 13 mm)
- Adjustable low temperature settings from 33°F – 41°F (0.5° – 5°C)
- Three irrigation modes to select: Programmed, Suspend Irrigation for 72 hours, Override sensor for 72 hours
  Note: The WR2-48 model replaces the Suspend Irrigation for 72 Hours mode with 48-Hour Irrigation Hold Active mode.
- “Quick Shut Off” suspends active irrigation cycle within approximately two minutes
- High-grade, UV resistant polymer units resist harmful environmental effects

Models

- North America (916 MHz)
  - WR2-RFC: Rain + Freeze Combo
  - WR2-48: Rain + Freeze Combo with 48-hour hold
- International (868 MHz)
  - WR2-RFC-868: Rain + Freeze Combo

---

WR2 Series Wireless Rain/Freeze Sensors

Rugged self-leveling bracket maintains rain sensor orientation

Step 1
Program in seconds

Step 2
Determine best sensor location

Step 3
Install sensor easily using mounting bracket

Step 1
Robust internal antennas for superior aesthetics

Step 2
WR2 Series Wireless Rain + Freeze Sensors

Step 3

SMRT-Y Soil Moisture Sensor Kit

Features and Benefits
- Turns any controller into a water saving smart controller
- Healthier landscapes less prone to nutrient depletion, fungus and shallow root growth
- Typical water savings exceed 40%
- TDT digital sensor enables highly accurate readings that are independent of soil temperature and electrical conductivity (EC)
- Displays soil moisture content, soil temperature and EC
- Corrosion-resistant in-ground sensor made of high-grade 304 stainless steel

Operating Specifications
- 25 Volts AC at 12W
- Operating temperature: -4°F to 158°F (-20°C to 70°C)
- Survival temperature: -40°F to 185°F (-40°C to 85°C)

Certifications
- cULus, FCC Part 15b, CE.
  For current certifications visit: www.rainbird.com/smrt-y

Dimensions
Controller Interface
- W: 3.0” (76mm); H: 3.0” (76mm); D: 0.75” (19mm)

In-Ground Soil Moisture Sensor (without wires)
- W: 2.0” (50mm); L: 8.0” (200mm); D: 0.5” (12mm)
- 18 AWG wire leads @ 42 in. (106.7 cm) length

SMRT-Y Kit
Includes
- Controller Interface
- In-Ground Soil Moisture Sensor
- Anodized, rust-proof screws, 1.5” (two per package)
- Wire nuts – 5 blue, 2 gray, 1 yellow
- Multilingual instruction manual, “Quick Start” Guide and Soil Moisture sticker

Models
- SMRT-Y: Soil Moisture Sensor Kit

Note: All SMRT-Y models are RoHS compliant
Central Controls

Water Saving Tips

- Maxicom®, SiteControl, and IQ™ Systems provide fully-automated ET (evapotranspiration) adjustment of irrigation programs for maximum water savings.

- Maxicom® and IQ™ FloWatch™ utility monitors and records real-time flow and automatically diagnoses and eliminates flow problems caused by broken pipes, vandalism or stuck valves.

- The New Rain Bird® IQ™ Platform. The ultimate tool for remote water management. With no hidden fees, it’s the perfect remote water management solution. With the new IQ4-Cloud software, you can control your irrigation system from any device, anywhere with all the features of the full system. With set up that takes less than five minutes, multi-user access and no recurring annual fees, you finally have the option you’ve been waiting for.

Join the IQ Movement! Visit www.rainbird.com/products/iq4 and take control now.
## Major Products

<table>
<thead>
<tr>
<th>System Name</th>
<th>IQ4 - Cloud</th>
<th>SiteControl</th>
<th>Maxicom *</th>
</tr>
</thead>
<tbody>
<tr>
<td>System Type</td>
<td>Modular multi-site central control system</td>
<td>Modular single site central control system</td>
<td>Multi-satellite central control system</td>
</tr>
<tr>
<td>Traditionally wired or two-wire decoder</td>
<td>Works with both</td>
<td>Works with both</td>
<td>Traditionally wired</td>
</tr>
<tr>
<td>Typical applications</td>
<td>Multi-site management with modular features. Ideal solution for water managers, schools, parks, corporate campuses and transportation departments</td>
<td>Single site management with modular features. Ideal for large resorts, cemeteries, shopping centers, theme parks and sports stadiums</td>
<td>Multi-site commercial or industrial irrigation applications. Ideal for municipalities, school districts, homeowner associations and park and recreation departments</td>
</tr>
<tr>
<td>Number of sites/system</td>
<td>1000+</td>
<td>1</td>
<td>200+</td>
</tr>
<tr>
<td>Local and/or remote site control</td>
<td>Local and remote</td>
<td>Local</td>
<td>Local and remote</td>
</tr>
<tr>
<td>Maximum number of simultaneous stations per site/system</td>
<td>5 per ESP-LXME 8 per ESP-LXD</td>
<td>8 per ESP-LXVM 10 per ESP-LXIVM Pro</td>
<td>3,584 per site 112 per CCU</td>
</tr>
<tr>
<td>Number of ET (weather) sources</td>
<td>100</td>
<td>4</td>
<td>16</td>
</tr>
<tr>
<td>Program adjustments by ET</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Program adjustments by percentage</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Programming by volume/gallons</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Number of programs</td>
<td>4 per ESP-LXME 4 per ESP-LXD</td>
<td>10 per ESP-LXIVM 10 per ESP-LXIVM Pro</td>
<td>100 total per system 999 per CCU</td>
</tr>
<tr>
<td>Flow management capabilities</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Flow monitoring/recording capabilities</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>High-flow shutdown</td>
<td>Mainline and laterals</td>
<td>Mainline and laterals</td>
<td>Mainline only</td>
</tr>
<tr>
<td>Low-or-zero-flow shutdown</td>
<td>Mainline and laterals</td>
<td>No</td>
<td>Mainline and laterals</td>
</tr>
<tr>
<td>Alarms/warnings</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Number of weather sensor inputs</td>
<td>1 per ESP-LXME 4 per ESP-LXD</td>
<td>5 per ESP-LXIVM 10 per ESP-LXIVM Pro</td>
<td>Up to 200 sensor inputs per system Up to 6 (two wire) or 20 (Link) per CCU</td>
</tr>
<tr>
<td>Number of flow sensor inputs</td>
<td>1 per ESP-LXME 4 per ESP-LXD</td>
<td>5 per ESP-LXIVM 10 per ESP-LXIVM Pro</td>
<td>Up to 200 sensor inputs per system</td>
</tr>
<tr>
<td>Software/password log-on protection</td>
<td>Yes</td>
<td>N/A</td>
<td>Yes</td>
</tr>
<tr>
<td>Remote control capabilities</td>
<td>Yes</td>
<td>Yes, Freedom System</td>
<td>Yes, Freedom System</td>
</tr>
<tr>
<td>Cycle+Soak™</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Water window by program/schedule</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Computer included with software</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Computer programming</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>24/7 system monitoring</td>
<td>Yes, by the controller</td>
<td>Yes, by the computer</td>
<td>Yes, by the CCU</td>
</tr>
<tr>
<td>Remote site telephone, cellular, radio, Ethernet, Wi-Fi communication</td>
<td>All</td>
<td>No</td>
<td>All</td>
</tr>
<tr>
<td>Automatic remote site communication</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Satellite controllers or decoders</td>
<td>ESP-LXME ESP-LXIVM</td>
<td>ESP-LXIVM Pro</td>
<td>ESP-SAT Satellites or FO-Series Decoders ESP-SAT or ESP-SITE Satellites</td>
</tr>
<tr>
<td>Modular station capacity</td>
<td>ESP-LXME: 8-48 ESP-LXIVM: 50-200</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Number of site/system interfaces</td>
<td>N/A – No interfaces required</td>
<td>8</td>
<td>&gt;200</td>
</tr>
<tr>
<td>Number of satellites/system</td>
<td>16,000+</td>
<td>896</td>
<td>&gt;5,600</td>
</tr>
<tr>
<td>Number of satellites/site interface</td>
<td>Up to 150 satellites per IQNet</td>
<td>Up to 112 per TWI</td>
<td>Up to 28 per CCU</td>
</tr>
<tr>
<td>Number of satellite stations/site</td>
<td>ESP-LXME: Up to 7,200 per IQNet ESP-LXIVM: Up to 9,000 per IQNet ESP-LXIVM Pro: Up to 36,000 per IQNet</td>
<td>Up to 21,504 per system</td>
<td>Up to 672 per CCU</td>
</tr>
<tr>
<td>Number of decoder addresses per site</td>
<td>Up to 30,000 per IQNet</td>
<td>Up to 4,000</td>
<td>N/A</td>
</tr>
<tr>
<td>Interactive map interface</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>GPS, CAD, SHP, BMP Import</td>
<td>N/A</td>
<td>Yes</td>
<td>BMP, PDF, JPEG</td>
</tr>
<tr>
<td>Valve control: stations or decoders</td>
<td>Both</td>
<td>Both</td>
<td>Satellite stations only</td>
</tr>
<tr>
<td>Estimated/actual water use report</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Event recording (station operation)</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Projected operation (dry/run) capability</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Supported by Global Services Plan</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Can also manage lighting and security systems</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>
IQ4 Central Control Software
Modular Multi-Site Central Control

The IQ Platform offers state-of-the-art command and control features in an easy to learn and use interface. IQ provides advanced water management features saving money and time.

Applications
All IQ versions provide remote programming, management, and monitoring of ESP-LX Series Controllers from the computer in your office. IQ is the perfect irrigation control solution for parks departments, school districts, property managers, landscape maintenance contractors, and water managers. IQ can manage small single-controller sites as well as large multi-controller sites and supports both ESP-LX Series traditionally-wired and 2-wire controllers.

IQ-Cloud is a cloud based service allowing users to login and control their irrigation system from any internet connected device including desktop computers, tablet computers and mobile smartphones.

IQ-Cloud is ideal for organizations with multiple irrigation system administrators and/or users that require mobility. IQ-Cloud features the ability to use mobile devices providing quick access to all IQ4 features in an interface designed for touchscreen devices found in smartphones or tablets. Users are not restricted to an initial capacity and can add satellites at will. Internet access is required.

IQ Platform Software Features
• Compatible with ESP-LXME, ESP-LXIVM and ESP-LXMEF traditionally-wired and ESP-LXD two-wire decoder controllers
• Programming in seconds, minutes, and hours
• ET station run time adjustments by site
• Detailed logs and reports
• Automated satellite Synchronize & Retrieve Logs
• Satellite Two-Way Programming (changes made at the satellite can be viewed and accepted in the IQ4 software)
• Auto-Synchronization of data from IQ to Satellite
• Software uses Irrigation Association terminology and formulas
• IQ Global Weather Internet Service which provides local weather data including rain fall
• Retrieves minute-by-minute flow logs from flow sensor equipped ESP-LXMEF, ESP-LXIVM and ESP-LXD Satellite Controllers
• Flow Logs vs. Projected Flow Graphical Report (identifies which programs & stations where running at any point in time)
• User selectable languages include English, Spanish, French, German, Italian and Portuguese

Visit www.rainbird.com/products/iq4 to learn more about the features included in the IQ4 Platform.

Additional 5-Satellite Capacity Upgrade (IQ Desktop/Enterprise Ony)
• IQ Software satellite controller capacity can be upgraded in 5-satellite increments
• Additional capacity is added through a purchased software activation Keycode

Recommended Computer Requirements for IQ-Desktop
• Windows 10, Windows 8, Windows 7 Service Pack 1
• Intel i5-540M or equivalent processor
• 8 GB RAM (minimum)
• 10 GB available disk space
• 1024 x 768 pixel screen resolution
• Internet Access
• Chrome (recommended), Edge, or Firefox browser
• Network Connection (for Ethernet, WiFi, Cellular)
• Serial Port or USB to Serial Adapter (for Direct Connect and External Modem communication)
TBOS Integration in IQ3 Cloud

TBOS-II Controller Series enables remote control from IQ3 Cloud via radio communication. This feature is available through installation of an IQ TBOS Master Radio Module into an IQ ESP-LX satellite

Specifications

- IQ3 Cloud enables support of 250 TBOS Networks
- IQ TBOS Master Radio Module is installed in an ESP-LX series server satellite controller to remotely controlled TBOS/TBOS-II control modules in the field
- A TBOS Radio Network consists in one Master Radio Module, zero to fifteen TBOS Radio Relay(s) and one or several TBOS/TBOS-II Control Modules (equipped with TBOS-II Radio Adaptors)
- Each Radio Relay (including IQ TBOS Master Radio Module) can manage up to 32 TBOS/TBOS-II Control Modules via Radio (equipped with TBOS-II Radio Adaptors), for a maximum total of 512 TBOS clients per TBOS Net

Central Control Features

- Backward compatibility: all TBOS control modules can be centralized on IQ3 Cloud if equipped with TBOS-II adapter
- IQ3 Cloud can manage up to 250 IQ TBOS Master Radio Module (1 per SERVER satellite)
- IQ3 Cloud enables to automatically learn TBOS radio network in order to communicate with in-field TBOS/TBOS-II controllers
- IQ3 Cloud enables naming control modules and stations. Reverse Synchronize operation overwrites station and controller names with actual device names on the field
- IQ3 Cloud reflects the battery charge level of TBOS-II control modules, radio adapters and TBOS radio relays
- IQ3 Cloud enables TBOS dry-run
- IQ3 Cloud enables all manual and programming commands: start station, start program, cancel all, test all stations, rain delay, Off command, On command
- IQ3 Cloud enables programming and data synchronization and reverse synchronization
- IQ3 Cloud enables IQ TBOS Master Radio Module and TBOS Radio Relay firmware upgrade
- TBOS-II control module standard sensor connection accommodates dry contract sensors (rain) but when centralized on IQ also accommodates pulse dry contact sensor (flow)
- Flow sensor alerts retrieve in IQ3 Cloud every 12 hours or per user request
Hardware

IQ TBOS Master Radio Module

- IQ TBOS Master Radio Module is installed in an ESP-LX series server satellite controller to remotely controlled TBOS/TBOS-II Control Modules in the field
- It provides:
  - Serial communication with Network Communication Cartridge (send and receive data from remote PC)
  - Radio communication with max. 15 TBOS Radio relays
  - Radio communication with max. 32 nearby TBOS-II radio adaptors
  - Sensor alarm management
  - Installed in one of the 4 ESP-LX station Module slot (max. one per controller)
- Radio communication operates on license free ism bands
- A TBOS net radio network consists in one (1) Master Radio Module, zero (0) to fitting (15) TBOS Radio Relay(s) and one or several TBOS-II Radio adapter
- An IQ TBOS Master Radio Module enables remote control of 32 TBOS/ TBOS-II control modules within its radio range.

ITBOS MRM EU (P/N: F48320)

TBOS Radio Relay

- Radio operates on license-free ism bands
- IP44 class
- TBOS radio relays are expected to be installed on high points. In some external installations power supply may be available only by night. An internal Battery pack (sealed-lead battery, 6V, 2.5Ah) is included. The battery is delivered disconnected so as to preserve its service life. Once the battery is connected, it switches to “active” mode and needs to be regularly recharged. The following cycle is necessary to fully charge the battery: 8h charging at night on public lighting, 16h discharging during the day (with or without radio traffic)
- Supply between 207V and 244V AC
- Relay input voltage between 12 and 14V
- Radio range in open field:
  - between 2 TBOS Radio Relays: approx. 1200 m
  - between TBOS Radio Relay and TBOS-II Radio Adapter: approx. 300 m
  - between TBOS Radio Relay and TBOS-II field transmitter: approx. 100 m (ITBOS RR EU)

Operation Specifications

- Operating temperature: -10° to +65°C
- Operating humidity: 95% max. at +4°C to +49°C

Electrical Specifications

- Supply between 207V and 244V AC
- Relay input voltage between 12 and 14V

Model

- IQ TBOS: Feature Pack is standard in IQ3 Cloud and optional for IQ Desktop and IQ Entreprise
IQ NCC Network Communication Cartridge
Upgrades any ESP-LX Series Controller to an IQ Central Control Satellite Controller

Features
• IQ is the perfect irrigation control solution for parks departments, school districts, property managers, landscape maintenance contractors and water managers. IQ can manage small single-controller sites as well as large multi-controller sites. IQ NCC cartridges are compatible with the ESP-LXME Controller with 1 to 48-station capacity, ESP-LXD Decoder Controller with 1 to 200-station capacity, ESP-LXIVM Controller with 1 to 60-station capacity and ESP-LXIVM Pro with 1 to 240 station capacity
• IQ NCC cartridges are initially configured through a setup wizard provided in the ESP-LX Series Controller IQ Settings dial position. Communication setting parameters are configured through the IQ software or the NCC Configurator Software designed for netbook/laptop use on the job site

Direct Satellites
• Single controller sites would use an IQ NCC cartridge configured as a Direct satellite. A Direct satellite has an IQ central computer communication connection but no network connections to other satellites in the system

Server & Client Satellites
• Multi-controller sites would use one IQ NCC cartridge configured as a Server satellite and the other NCC cartridges configured as Client satellites. The Server satellite has an IQ central computer communication connection and shares this communication connection with the Client satellites though high-speed data cable or radios. The communication connection between Server and Client satellites is called the IQNet™
• Satellites on a common IQNet can share weather sensors and master valves
• Server and Client satellites using high-speed data cable for IQNet communication require installation of an IQ CM Communication Module. Server and Client satellites using radio communication for IQNet communication require installation of an IQSSRADIO radio. Each cartridge kit includes cables to connect the NCC cartridge to connection module and/or radio

IQ NCC 3G Cellular Cartridge
• Includes embedded 3g/Cellular Data Modem with antenna connector
• Includes internal antenna for plastic controller enclosures (optional 4G external antenna available for metal case controller enclosures)
• Requires Cellular data service plan with static IP address from Cellular Service Provider
• Available with 1st year of communication service included. Cartridge with included communication service not offered in all areas

IQ NCC-EN Ethernet Cartridge
• Includes embedded Ethernet Network Modem with RJ-45 port
• Includes RJ-45e patch cable (requires LAN network static IP address)

IQ NCC-RS RS232 Cartridge
• Includes RS-232 Port for IQ Direct Cable or External Modem communication connection to the IQ central computer, and external modem cable (IQ Direct Cable provided with IQ Software Package)
• Used for Direct or Server Satellite applications requiring direct cable connection or external modem (radio or other 3rd-party device) communication with the IQ central computer, and for Client Satellite applications requiring IQNet high-speed data cable or radio communication with the Server Satellite

IQ FSCM-LXME Flow Smart Connection Module
• Provides IQNet high-speed data cable connections for ESP-LXME Controller
• Includes Flow Smart Module and Base Module functions
• Replaces standard ESP-LXME Base Module

IQ CM-LXD Connection Module
• Provides IQNet high-speed data cable connections for ESP-LXD Controller
• Installs in ESP-LXD 0 (zero) module slot

IQ SS-Radio Radio Modem
• Provides IQNet wireless radio communication between Server and Client satellite controllers
• Can also be used with the IQ NCC-RS RS232 Cartridge for IQ central computer to Direct or Server satellite radio communication
• Includes power supply and external antenna (programming software and cable provided separately)
SiteControl
A Full-Featured Central Control System for Single Site Applications

Features
- Advanced Graphical Tracking - Maps generated by GPS technology or AutoCAD recreate your site. Interactive mapping and on-screen graphics show your complete site with location of individual valves and sprinklers allows you to measure and calculate areas from your map
- Smart Weather™ is designed to take complete advantage of Rain Bird’s most advanced line of weather stations, tracks ET and rainfall via a weather station and reacts to current weather conditions based on user-defined options. Advanced warning system accepts user-defined sensor thresholds. System operator is immediately alerted if thresholds are exceeded
- RainWatch™ uses tipping bucket rain can(s) to detect and suspend irrigation while measuring rainfall. When rain stops, irrigation resumes with run times reduced according to measured rain
- Minimum ET allows setting minimum ET threshold values for irrigation to take place. Promotes deep watering for optimum turf conditions
- Automatic ET automatically adjust run times in relation to fluctuations in Evapotranspiration (ET) values
- Remote System Control allows you to take control of your system and operate SiteControl from anywhere on your site using the Rain Bird FREEDOM System. Phone (landline or cellular) or radio communication options
- Hybrid System operates Satellite Controllers and/or Two-Wire Decoders
- SiteControl Plus operates four Large Decoder Interfaces (LDI), each capable of operating up to 1,000 solenoids with Hybrid system, can further expand capabilities by combining Two-Wire Decoder and/or Satellite Controller options up to four total interface devices

Superior Monitoring and Scheduling
- Flo-Graph™ allows visibility of real-time graphics with individual station information presented in colorful charts
- Flo-Manager™ balances system demands and maximum capacities with efficiency helping to lower water demand, reduce system wear and tear and save energy
- Cycle + Soak™. Better control the application of water on slopes and in areas with poor drainage
- QuickIRR™ Quick and easy method to build irrigation schedules and programs based on your parameters

Other Features
- Up to 200 points of connection
- Up to 200 pulse sensors
- Water usage logs
- Station run-time logs
- Posted and dry run logs
- ET spreadsheet
- 1 year Global Service Plan included

Models
- SCON: Desktop PC with SiteControl software, includes 1 year Global Support Plan (GSP)

Software Module Options
- Smart Weather
- Rain Bird Messenger (for Smart Weather)
- Automatic ET
- Hybrid Module
- Smart Sensor
- Map Utilities
- Freedom
- 8 Additional Locations
- Additional Wire-Path (2nd)
- Additional Wire-Path (3rd)
- Additional Wire-Path (4th)
- SiteControl Plus
- Smart Pump
- MI (Mobile Interface)

Global Service Plan (GSP)
- Visit rainbird.com/gsp/index.htm for more information.

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Global Service Plan (GSP)
- Visit rainbird.com/gsp/index.htm for more information.
SiteControl Hardware

TWI Satellite Interface
- Allows real-time, two-way communication between SiteControl Central Controller and field satellites
- Allows use of advanced in-field capabilities of ESP-SAT two-wire or LINK versions
- Modular capacity can grow with the site

Two-Wire Decoder Interface
- Allows real-time, two-way communication between SiteControl Central Controller and decoders
- Connects the powerful capabilities of SiteControl with the ease of installation and security of a two-wire decoder system
- System can be set up and expanded according to project needs

ESP-SAT Satellite Controller
- 40 Stations Satellite Controller
- Field Satellite Controller for Maxicom® or SiteControl Central Control systems
- The power of an advanced water-management tool, in an easy-to-use package
- All the features and stand-alone capabilities of the Rain Bird ESP-MC Controller line

Spread Spectrum Radio
- Frequency hopping to avoid interference
- Reduced cost of ownership, no FCC license required
- No FCC restrictions on antenna height (User should check local laws)
- Radios can be set up as repeater to achieve great distances and overcome obstacles

Ethernet Devices
- Use Ethernet networks to:
  - Communicate from Central Control Computer to CCUs, SiteSats, TWIs and weather stations
  - Communicate from CCU and TWIs to ESP-Sats

WS-PRO Weather Stations
- Scientific accuracy sensors located three meters above the ground for added vandal-resistance
- Powerful, internal micro-logger for climatic data collection, logging and analysis, constant communication with weather sensors, and storage of 30 days of data
- Rugged yet lightweight metal construction;

Sensor-Pulse Decoders
- Complete feedback system
- Extends central control system versatility
- Color-coded wire leads for ease of installation
- Programmable address codes for individual operation

RAINGAUGE Rain Sensor
- Accurate rain counter switch counts rainfall in 1/100th inch increments
- Heavy-duty metal construction
- Mounting bracket
- Debris screen

ANEMOMETER Wind Sensor
- Accurate wind speed measurement for high-wind shutdown or interrupt of irrigation programs
- Heavy-duty metal mounting bracket
- Requires PT322 or PT5002 Pulse Transmitter/Monitor for use with Maxicom® System

Maxi Interface Boards
- Upgrades an ESP-MC Controller (wall mount or pedestal) to an ESP-SAT Satellite Controller
- No additional enclosures or external wiring required
- Installs on stand-offs on controller output board

MSP-1 Surge Protection
- Protects central control components from electrical surges on a two-wire communication path
- Can be installed in satellite or CCU pedestal or in valve box in conjunction with MGP-1 (Maxicom® Grounding Plate)

MGP-1 Surge Grounding Plate
- Provides a mounting location for MSP-1 or other grounding wires directly to a grounding rod or pipe
- Installed on grounding rod or pipe
Maxicom® version 4.5 now available
Multi-Site Central Control Ideal for Large Commercial Systems

- Windows 10 compatibility
- Seek & Eliminate Low Flow (SELF) – Automatically diagnose a low flow problem
- Station Lockout – Quarantine zones that have had high/low flow alarms until the user takes action
- Station Priorities for Flow Manager – allows the user to alter the sequence of irrigation zones by assigning priorities when flow manager is being used
- Queued irrigation max run time limit increased from 99 minutes to 999 minutes
- Adjustable rain can settings
- Seek & Eliminate Excessive Flow (SEEF) improvement to account for manual adjustments
- Database trim setting is no longer fixed and is user-selectable so users can decide how far back the records go
- Phone number/address field works with URLs and longer IP Addresses
- Field Device Configuration Report now includes satellite names and sensor names
- More robust database (SQL Server)

System Features
- Maxicom® Central Controller Package comes with Maxicom® software, pre-configured computer, Global Service Plan (GSP), and training
- Control hundreds of ESP SITE-SAT Satellites (single controller sites) and Cluster Control Units (CCUs) which can each control up to 28 individual ESP-SAT Satellite Controllers on multi-controller sites
- Monitor dozens of Weather Sources including WSPRO2 Weather Stations, ET Managers, or rain counting sensors (Raingauge)
- Freedom Remote Control allows manual operation of system through a cellular phone or radio
- Multiple log and water usage reports are generated automatically to track system operation and water savings

Water Management Features
- Cross satellite schedule operation; 999 separate schedules per CCU provides precision watering of areas and microclimates
- ET Checkbook™ manages Evapotranspiration (ET) and automatically adjusts Satellite Controller station run-time or day cycle intervals to match the landscapes water requirements
- FloManager™ manages the total flow demand placed on the water source(s), optimizing both the available water and watering window
- FloWatch™ monitors flow sensors at each water source, records flow, and automatically reacts to problems by shutting down the effected portion of the system (individual valve or mainline)
- RainWatch™ monitors rain counting sensors, records rainfall, and automatically reacts to rainfall by interrupting irrigation, waiting to see how much rain has fallen, and determines if the irrigation should be resumed or cancelled

Operational Features
- Communication Control Engine automatically sends updated programming to sites before watering begins and retrieves logs after irrigation is completed; manual operation can be performed at any time
- Start day cycles: Custom (day of the week), Odd/Even, Odd31, or Cyclical and include Event Day Off Calendar scheduling
- Station run-times programmable from 1 minute to 16 hours
- Cycle + Soak™ optimizes water application to soil infiltration rate, reducing runoff and puddling
- Control non-irrigation functions such as lighting, fountains, door locks and gates

Maxicom® Communications Options
- Central Controller to CCU: Phone, direct connect, radio, cellular, network (Ethernet, Wi-Fi, fiber-optics)
- CCU to ESP-SAT2: Two-wire path
- CCU to ESP-SATL: Radio, MasterLink, network (Ethernet, Wi-Fi, fiber-optics)

Global Service Plan (GSP)
- Visit rainbird.com/gsp/index.htm for more information.

Models
- MC2GOLD1: New System - Desktop PC with Maxicom software, includes 1 year Global Support Plan (GSP)
- GSPMCPL3: Current GSP Or Expired GSP Subscribers, Desktop PC with Maxicom software, includes 3 Years Platinum Plus Global Support Plan
- GSPMXPPCI: Current GSP Subscribers, Desktop PC with Maxicom software, based on 3 Year Platinum Plus Global Support Plan, includes year 1 GSP, requires year 2 and 3 GSP to be purchased separately (M95543A2)
- GSPMXPFCIM: Current GSP Subscribers, Desktop PC with Maxicom software, based on 3 Years Platinum Plus Global Support Plan, includes month 1 GSP, requires month 2 - 36 GSP to be purchased separately (M95542M2)
- GSPMXPPNIA: New GSP or Expired GSP Subscribers, Desktop PC with Maxicom software, based on 3 Years Platinum Plus Global Support Plan, includes year 1 GSP, requires year 2 and 3 GSP to be purchased separately (M95541A2)
- GSPMXPPNIM: New GSP or Expired GSP Subscribers, Desktop PC with Maxicom software, based on 3 Years Platinum Plus Global Support Plan, includes month 1 GSP, requires month 2 - 36 GSP to be purchased separately (M95542M2)
- MC2UPG: Maxicom Upgrade Software - CD Only, upgrade existing Maxicom 1.X, 2.X and 3.X system to latest Maxicom Version
Maxicom<sup>2</sup>® Hardware

Cluster Control Unit CCU Interface
- Runs real-time operations of a site consisting of up to 28 satellites
- Adapts station sequence to changing conditions for maximum efficiency
- Instantly responds to unexpected conditions and sensor inputs

ESP-SAT Satellite Controller
- 40 Stations Satellite Controller
- Field Satellite Controller for Maxicom<sup>2</sup> or SiteControl Central Control systems
- The power of an advanced water-management tool, in an easy-to-use package
- All the features and stand-alone capabilities of the Rain Bird ESP-MC Controller line

ESP-SITE-SAT Satellite Controller
- 40 Stations Satellite Controller
- Combines power of a Cluster Control Unit (CCU) with capabilities of a single ESP-Satellite controller for small Maxicom<sup>2</sup> sites
- Advanced water-management tool, in an easy-to-use package
- All the features and stand-alone capabilities of the Rain Bird ESP-MC Controller line

Spread Spectrum Radio
- Frequency hopping to avoid interference
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- No FCC restrictions on antenna height (User should check local laws)
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Ethernet Devices
- Use Ethernet networks to:
  - Communicate from Central Control Computer to CCUs, SiteSats, TWIs and weather stations
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WS-PRO Weather Stations
- Scientific accuracy sensors located three meters above the ground for added vandal-resistance
- Powerful, internal micro-logger for climatic data collection, logging and analysis, constant communication with weather sensors, and storage of 30 days of data
- Rugged yet lightweight metal construction

Sensor-Pulse Decoders
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- Heavy-duty metal construction
- Mounting bracket
- Debris screen

ANEMOMETER Wind Sensor
- Accurate wind speed measurement for high-wind shutdown or interrupt of irrigation programs
- Heavy-duty metal mounting bracket
- Requires PT322 or PT5002 Pulse Transmitter/Monitor for use with Maxicom<sup>2</sup> System

Maxi Interface Boards
- Upgrades an ESP-MC Controller (wall mount or pedestal) to an ESP-SAT or ESP-SITE Satellite Controller
- No additional enclosures or external wiring required
- Installs on stand-offs on controller output board

MSP-1 Surge Protection
- Protects central control components from electrical surges on a two-wire communication path
- Can be installed in satellite or CCU pedestal or in valve box in conjunction with MGP-1 (Maxicom<sup>2</sup> Grounding Plate)

MGP-1 Surge Grounding Plate
- Provides a mounting location for MSP-1 or other grounding wires directly to a grounding rod or pipe
- Installed on grounding rod or pipe
**WS-PRO Weather Stations**
Maxicom™ (WS-PRO2 only), SiteControl, IQ™ v3.0 (WS-PRO2 and WS-PRO-LT)

**Features**
- Scientific accuracy sensors located three meters above the ground for added vandal-resistance
- Powerful, internal micro-logger for climatic data collection, logging and analysis, constant communication with weather sensors, and storage of 30 days of data
- Rugged yet lightweight metal construction
- Self-diagnostic test mechanisms: internal moisture, battery voltage level, test port for local sensor check, and simple-to-service sensors and internal components
- State-of-the-art weather software calculates ET values, stores daily and historic ET values, monitors and displays current weather conditions, and graphically displays weather parameters

**SiteControl Features**
- WS-PRO2 and WS-PRO-LT Weather Station compatibility is standard for SiteControl v3.0 or later software
- SiteControl can interface with up to 6 weather stations
- Automatic communication between Central Controller and Weather Station requires SiteControl Automatic ET Software Module
- SiteControl Smart Weather Software Module enables automatic, user-defined reactions to weather events (rain, freeze, high wind, etc.)

**IQ™ Central Control Features**
- WS-PRO2 or WS-PRO-LT Weather stations are compatible with IQ™
- IQ can interface with 100 weather stations

**Maxicom™ Features** (WS-PRO2 only)
- WS-PRO2 Weather Station compatibility is standard for Maxicom™ v3.6 or later software
- Each site can have its own Weather Station or can share between sites
- Automatic communication standard
- Up to 24 automatic weather data retrievals can be configured per day

**Weather Station Sensors**
- Air Temperature
- Solar Radiation
- Relative Humidity
- Wind Speed
- Wind Direction
- Rainfall

**System Compatibility**
- Maxicom™ (WS-PRO2 only)
- SiteControl (requires Automatic ET Software Module)
- IQ™ Central Control

**Models**
- WS-PRO2-DC Direct Connect model – 2-pair wire connection with Central Controller via short-haul modem
- WS-PRO-LT-SH Short Haul model – 2-pair wire connection with Central Controller via short-haul modem
Global Service Plans
Support for your Central Control System — Software Support, Hardware Support, Upgrades, Exchanges, System Protection

IQ Software Support
• Professional diagnosis and assistance with toll-free phone support and direct on-line access to your system
• Sharpen your knowledge and stay up to date with the latest technical training and news
• The latest central control software and service packs included
• Piece-of-mind that your system is protected.

Maxicom and SiteControl Support
• Unlimited toll free GSP phone support
• A Rain Bird GSP Central Control Computer included with most service plans
• Automatic daily database cloud backups available for qualifying plans
• Upgrades to the latest central control software version
• MI Series Software included for SiteControl with most service plan options
• Minimize downtime with rapid hardware replacement and loaner equipment

Rain Bird has several plans and payment options to choose from. You can select from a fully comprehensive coverage plan to a basic coverage plan.

Board Exchange Services
Use Rain Bird factory-tested replacement components to improve and upgrade your controllers. We offer a variety of replacement components for your field controllers, interface devices, and weather stations. These include cables, transformers, pedestals, brackets, enclosures, and sensors. We also carry radios and wireless accessories to support LINK™, 900MHZ, and cellular communication.
• All boards are new or reconditioned with original Rain Bird quality parts
• Most support plans include an additional 20% discount on replacement boards
• Extensive stock of Rain Bird circuit boards including hard to find items

Contact us today at gspmarketing@rainbird.com to learn more about how we can support you.
Drip Irrigation

<table>
<thead>
<tr>
<th>Major Products</th>
<th>Single outlet emitter</th>
<th>Multi-outlet emitter</th>
<th>Bubbler emitter</th>
<th>Spray</th>
<th>Inline emitter (Dripline)</th>
<th>RWS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thick bushes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Single bush</td>
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<tr>
<td>Small trees</td>
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<tr>
<td>Large trees</td>
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<tr>
<td>Ground cover</td>
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<td>Annuals</td>
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<td>Mixed vegetation</td>
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<tr>
<td>Potted plants</td>
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<tr>
<td>Hedges</td>
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<td></td>
</tr>
<tr>
<td>Vegetation on slopes</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

Water Saving Tips

- Drip products deliver water directly to the root zone. Use dripline for dense plantings where it’s cost effective to distribute low-volume water evenly. Use a system of precise emitter devices for sparse plantings where it’s cost effective to separately irrigate each plant.

- Use drip to eliminate overspray, and you’ll eliminate waste. Eliminate unsightly spray stains on buildings and fences. Eliminate soil erosion, water runoff, and potential litigation. Walkways, roads, and vehicles stay dry.

- Ask your tax advisor about capital depreciation when calculating your return-on-investment for a drip retrofit. Save water, and save money at the same time.
Landscape Drip System Overview

1. Control Zone Kit (pg. 116)
1a. Low Flow Valve (pg. 127)
1b. Pressure Regulating Filter (pg. 129)
2. Easy Fit Female Adapter (pg. 120)
3. Easy Fit Coupling (pg. 120)
4. Xeriman Tool (pg. 101)
5. XF Series Blank Tubing (pg. 122)
6. Xeri-Bug Emitter (pg. 100)
7. ¼" Tubing Stake (pg. 109)
8. XQ ¼" Distribution Tubing (pg. 123)
9. ¼" Barb Tee (pg. 115)
10. Tie-Down Stake (pg. 117)
11. Easy Fit Elbow (pg. 120)
12. Diffuser Bug Cap (pg. 109)
13. PC Emitter Diffuser Cap (pg. 95)
14. PC Module-1032 (pg. 104)
15. PolyFlex Riser Assembly (pg. 101)
16. Xeri-Bug Emitter - ½" FPT (pg. 100)
17. ¾" Self-Piercing Barb Connector (pg. 102)
18. SQ Series Square Nozzle (pg. 105)
19. Xeri-Pop (pg. 107)
20. Xeri-Bubbler SPYK (pg. 98)
21. ARV050 Air Relief Valve Kit (U.S. only)
22. SEB-7X Emitter Valve Box (pg. )
23. XFD Dripline (pg. 112)
24. Tubing Cutter (pg. 123)
25. Xeri-Bird 8 (pg. 103)
Landscape Drip
System Overview

Targeted Watering with 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

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 combined pressure regulator and filter to reduce parts, 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 0.8 m or 1.2 m throw distances
• Point-source emitters that provide pressure compensation with a wide selection of flow rates and three inlet options (Barb, 1032 threaded, and ½” 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

www.rainbird.com/drip

www.rainbird.com

26. Retrofit Pressure Regulator (pg. 129)
27. 6 Outlet Manifold (pg. 102)
28. SQ Series Nozzle Adapter (pg. 105)
29. Easy Fit Tee (pg. 120)
30. Easy Fit Flush Cap (pg. 120)
31. Purple XF Dripline (pg. 112)
32. Xeri-Bug Emitter - 1032 (pg. 100)
33. XF Series Blank Tubing (pg. 122)
34. ¼” Barb Connector (pg. 115)
35. Multi-Outlet Xeri-Bug (pg. 102)
36. ¼” Landscape Dripline (pg. 122)
37. XFS Sub-Surface Dripline with Copper Shield Technology (pg. 115)
38. RETRO-1800 Spray-to-Drip Retrofit Kit
39. XT-025 ½” FPT x Barb Grey Transfer Fitting
40. XF Coupling (pg. 119)
41. PCT Bubbler (pg. 104)
42. XFCV Dripline with Heavy-Duty check valve (pg. 114)
43. RWS (Root Watering System) (pg. 110)
44. XF Insertion Tool (pg. 120)
45. PEB Valve (pg. 54)
46. Pressure Regulating Filter (pg. 131)
47. QF Dripline System (pg. 118)
48. XF Series Dripline (XFD/XFS/XFCV) (pg. 112-116)
49. Operation Indicator (pg. 107)
50. Twist Lock Fittings (pg. 112)
51. Xeri-Bug™ with Check Valve (pg. 98)
52. XDD12-CV Riser (pg. 111)
Xeri-Bug™ with Check Valve
Point-Source Low-Flow Emitters for Watering the Root Zones of Plants, Trees, and Container Plants

**Features**

**Efficient Water Usage**
- With 3 m of hold-back power, XBCV eliminates low-point drainage and provides uniform irrigation throughout the zone
- Strong check-valve protection helps conserve water by eliminating low-point drainage and flooding. In a standard 152 m line with 13 mm internal diameter, 76 L of water is held in the line instead of draining out
- In a zone that has a 3 m elevation change, only one zone is needed for the XBCV. Fewer zones allow you to save money on valves and time on installation

**Holds Water in the Line**
- Designed to hold water in the line, these emitters immediately begin irrigation and reduce zone run times
- By holding water in the line when the system is turned off, XBCV prevents particles from clogging the emitter — a problem when a system drains and siphons dirty water
- Holding water in the line reduces calcium build-up and extends the life of the emitter

**All-in-One Design**
- With its comprehensive capabilities, the XBCV can be taken to any jobsite. It’s the only emitter you need to stock, carry and install, simplifying point-source drip jobs

**Pressure Compensating**
- A pressure-compensating design offers a consistent flow from 1.0 to 3.5 bar
- XBCV delivers the same amount of water from the first emitter in the line to the last

**Self-Cleaning**
- A self-flushing action cleans the emitters every time the system turns on and off, reducing maintenance and extending the life of the emitter

**Self-Piercing Barb**
- Self-piercing models feature barbs that eliminate the need for a hole-punching tool, making installation easier

**Risers and Adapters**
- Models with 10-32 threaded ends can quickly connect to risers or adapters.

**Compact Design**
- With a diameter less than a dime, the emitter is unobtrusive and easily hidden

**Operating Range**
- Opening Pressure: 1.0 bar
- Pressure: 1.0 to 3.5 bar
- Flow Rates: 1.9, 3.79 or 7.57 l/h
- Filtration Requirement: 75 micron for 1.89 l/h, 100 micron for all others

---

### Models

**Self-Piercing Barb Inlet x Barb Outlet**
- XBCV-05PC: Blue, 1.9 lph
- XBCV-10PC: Black, 3.8 lph
- XBCV-20PC: Red, 7.6 lph

**10-32 Threaded Inlet x Barb Outlet**
- XBCV-05PC-1032: Blue, 1.9 lph
- XBCV-10PC-1032: Black, 3.8 lph
- XBCV-20PC-1032: Red, 7.6 lph

---

### How to Specify

<table>
<thead>
<tr>
<th>Flow Rate</th>
<th>Color</th>
<th>Bag Qty.</th>
<th>Model Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.89 l/h</td>
<td>Blue</td>
<td>25</td>
<td>XBCV05PC</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>XBCV05PCBLK</td>
</tr>
<tr>
<td>3.79 l/h</td>
<td>Black</td>
<td>25</td>
<td>XBCV10PC</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>XBCV10PCBLK</td>
</tr>
<tr>
<td>7.57 l/h</td>
<td>Red</td>
<td>25</td>
<td>XBCV20PC</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>XBCV20PCBLK</td>
</tr>
</tbody>
</table>

1032-threaded models are specifically designed to be used with PolyFlex Risers, 1032 thread adapters (1032-A), or 1800 Xeri-Bubbler Adapter (XBA-1800)
Xeri-Bug Check Valve Emitter Specifications and Models

<table>
<thead>
<tr>
<th>Model</th>
<th>Inlet Type/Color</th>
<th>Nominal Flow l/h</th>
<th>Filtration Required micron</th>
</tr>
</thead>
<tbody>
<tr>
<td>XBCV-05PC</td>
<td>Barb/Blue</td>
<td>1.89</td>
<td>75</td>
</tr>
<tr>
<td>XBCV-10PC</td>
<td>Barb/Black</td>
<td>3.79</td>
<td>100</td>
</tr>
<tr>
<td>XBCV-20PC</td>
<td>Barb/Red</td>
<td>7.57</td>
<td>100</td>
</tr>
<tr>
<td>XBCV-05PC1032</td>
<td>10-32T/Blue</td>
<td>1.89</td>
<td>75</td>
</tr>
<tr>
<td>XBCV-10PC1032</td>
<td>10-32T/Black</td>
<td>3.79</td>
<td>100</td>
</tr>
<tr>
<td>XBCV-20PC1032</td>
<td>10-32T/Red</td>
<td>7.57</td>
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</tbody>
</table>

Xeri-Bug Check Valve Emitter Performance

(For reference numbers below, please see the System Overview page 96)

Installation Option 1*
Using a Xeriman Tool, insert an emitter directly into 1/2” (12mm) or 3/4” (16mm) drip tubing or between dripline emitters as needed.

Installation Option 2*
For more precise water placement, use 6 mm distribution tubing, a 1/4” (6 mm) 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 1/4” (6 mm) distribution tubing. NOTE: should the emitter become dislodged, unregulated flow will occur.

Installation Option 4*
The Xeri-Bug 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 1/4” (6 mm) distribution tubing, 1/4” (6 mm) 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 1/4” (6 mm) distribution tubing to one of the outlets. Use a 1/4” (6 mm) tubing stake to ensure precise water placement. The emitter is placed on the end of the 1/4” (6 mm) distribution tubing to regulate the water flow. NOTE: should the emitter become dislodged, unregulated flow will occur.

* Preferred installation options, which provide flow regulation at the source.
Xeri-Bug™ Emitters
Point-Source Low-Flow Emitters for Watering the Root Zones of Plants, Trees, and Container Plants

Features
- The only emitters with self-piercing barbs, making them the easiest to install using the Xeriman™ tool
- Widest selection of pressure-compensating emitters, with 3 flow rates
- Most compact and unobtrusive emitters
- Flow-rates of 2, 4 and 8 l/h
- Pressure-compensating design delivers uniform flow throughout a wide pressure range (1.0 to 3.5 bar)
- Available with self-piercing barb for quick, one-step insertion into ½” (12 mm) or ¾” (16 mm) drip tubing
- Outlet barb securely retains ¼” (6 mm) Distribution Tubing (XQ)
- Design makes installation and maintenance easy
  - Self-flushing action minimizes clogging
  - Robust design made from highly inert materials that are resistant to chemicals
  - Durable plastic construction is UV-resistant
- Color-coded to identify flow rate

Operating Range
- Flow: 2 to 8 l/h
- Pressure: 1.0 to 3.5 bar
- Required filtration: 75 to 100 micron

Models: barb inlet x barb outlet
Select models shown. Review your regional price list for complete availability.
- XB-05PC: Blue, 2 l/h
- XB-10PC: Black, 4 l/h
- XB-20PC: Red, 8 l/h

---

Xeri-Bug Emitter Specifications and Models

<table>
<thead>
<tr>
<th>Model</th>
<th>Inlet Type/Color</th>
<th>Nominal Flow l/h</th>
<th>Filtration Required micron/mesh</th>
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<tr>
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<td>Barb/Blue</td>
<td>2</td>
<td>75/200</td>
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<tr>
<td>XB-10PC</td>
<td>Barb/Black</td>
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<td>XB-20PC</td>
<td>Barb/Red</td>
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<td>100/150</td>
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Xeri-Bug Emitter Bag Quantities and Models

<table>
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<tr>
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<th>Color</th>
<th>Bag Quantity</th>
<th>Model Number</th>
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<td>2 l/h</td>
<td>Blue</td>
<td>100</td>
<td>XB05PCBULK</td>
</tr>
<tr>
<td></td>
<td></td>
<td>8000</td>
<td>XB05MAXPAK</td>
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<tr>
<td>4 l/h</td>
<td>Black</td>
<td>100</td>
<td>XB10PCBULK</td>
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<tr>
<td></td>
<td></td>
<td>8000</td>
<td>XB10MAXPAK</td>
</tr>
<tr>
<td>8 l/h</td>
<td>Red</td>
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</tr>
<tr>
<td></td>
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<td>8000</td>
<td>XB20MAXPAK</td>
</tr>
</tbody>
</table>

---

Xeri-Bug Emitter Performance

- Flow Rate: 2 to 8 l/h
- Pressure: 1.0 to 3.5 bar
- Filtration: 75 to 100 micron

Select models shown. Review your regional price list for complete availability.
Installation Option 1
Using a Xeriman Tool, insert an emitter directly into 1/2” (12mm) or 3/4” (16mm) drip tubing or between dripline emitters as needed.

Installation Option 2
For more precise water placement, use 6mm distribution tubing, a 1/4” (6mm) 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 1/4” (6mm) distribution tubing. NOTE: if the emitter becomes dislodged, unregulated flow will occur.

Installation Option 4
The Xeri-Bug 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 1/4” (6mm) distribution tubing, 1/4” (6mm) 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 1/4” (6mm) distribution tubing to one of the outlets. Use a 1/4” (6mm) tubing stake to ensure precise water placement. The emitter is placed on the end of the 1/4” (6mm) distribution tubing to regulate the water flow. NOTE: if the emitter becomes dislodged, unregulated flow will occur.

* Preferred installation options, which provide flow regulation at the source.

Features
- Provides fast, easy, one-step installation of Xeri-Bug™ emitters and PC Modules directly into 12 mm or 16 mm drip tubing, XF Dripline or Landscape Dripline
- Cuts emitter installation time
- All-in-one tool inserts emitters, removes emitters, inserts 6 mm barbed fittings and installs goof plugs

Model
- XM-TOOL

*XM-TOOL*

For more precise water placement, use 6 mm distribution tubing, a 1/4” (6mm) tubing stake, and a bug cap.

NOTE: should the emitter become dislodged, unregulated /f_low will occur.

The Xeri-Bug 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 1/4” (6mm) distribution tubing, 1/4” (6mm) tubing stakes, and bug caps allow for precise water placement.

The emitter is placed on the end of the 1/4” (6mm) distribution tubing to regulate the water /f_low. NOTE: should the emitter become dislodged, unregulated /f_low will occur.

*Preferred installation options, which provide flow regulation at the source.*
Multi-Outlet Xeri-Bug™

Features
- Pressure compensating design delivers uniform flow throughout a wide pressure range (1.0 to 3.5 bar)
- Six-outlet emitter supplied with one outlet opened. Simply clip the outlet tips open with snips or clippers for additional operational ports
- Barbed outlets retain ¼” (6 mm) Distribution Tubing (XQ)
- Self-flushing action minimizes clogging
- Durable, UV-resistant color-coded plastic housing

Operating Range
- Flow: 4 l/h
- Pressure: 1.0 to 3.5 bar
- Filtration: 100-microns

Models: barb inlet x barb outlet
- XB-10-6: Black, 4 l/h

6 Outlet Manifold - EMT-6XERI

Features
- ⅝” (15/21) FPT inlet threads onto ½” (15/21) riser and provides a manifold with six free-flowing ⅛” (6 mm) barb outlets
- Each barb outlet is sealed with a durable plastic cap
- Plastic caps remove easily, allowing for a drip area that can be customized with up to six different emission devices
- Attach ¼” (6 mm) Distribution Tubing (XQ) onto each outlet for use with: Xeri-Bugs, PC Modules, Xeri-Pops, Xeri-Sprays, and Xeri-Bubblers

Operating Range
- Pressure: 1.0 to 3.5 bar
- Required filtration: 100 microns

Model
- EMT-6XERI

⅛” Self-Piercing Barb Connector

Features
- Used to connect ¼” (6 mm) Distribution Tubing into 1/2” (12 mm) or 3/4” (16 mm) distribution tubing
- Self-piercing Barb inlet is easily inserted into 1/2” (12 mm) or 3/4” (16 mm) distribution tubing using a Xeriman™ Tool (XM-Tool)
- Outlet Barb accepts ¼” (6 mm) Distribution Tubing (XQ). Gray outlet Barb indicates unit has unrestricted flow

Operating Range
- Pressure: 0 to 3.5 bar

Model
- SPB-025
Xeri-Bird™ 8-Outlet Emission Device

The Most Flexible and Feature-Rich Multi-Outlet Device on the Market, Ideal for New Projects and Retrofit Applications

**Features**

- The only multi-outlet device on the market with 8 configurable ports and 10 flow options for each port for maximum flexibility
- XBD-81 model contains a built-in filter. Makes retro-fitting easy when installed with the optional in-stem pressure regulator (PRS-050)
- Easy to maintain, because body can be easily removed from riser
- Threads onto any ½” (15/21) riser and delivers water to multiple locations for increased system flexibility
- Each port accepts a Xeri-Bug™ Emitter or PC Module for independent flows from 2 to 90.84 l/h or use a self-piercing barb connector (SPB-025) for unrestricted flow
- XBD-81 model features an integral 75 micron filter which is easily serviceable from the top of the unit
- Eight bottom-mounted, sure-grip barbed outlets securely retain 6 mm Distribution Tubing (XQ)
- Unique union base nut allows removal of Xeri-Bird 8 body from riser for easy installation and maintenance
- Emitters must be installed inside the Xeri-Bird to prevent excess back pressure

**Operating Range**

- Flow: 2 to 90.84 l/h per outlet
- Pressure: 1.0 to 3.5 bar

**Models**

- XBD-81: Xeri-Bird 8 unit (includes eight 4 l/h Xeri-Bug emitters factory installed, and filter)

---

Helpful Hint: Always install emitters with the pointed end (inlet barb) or threaded end up, as shown.

* Must be installed second
** Must be installed first

Each port can be configured on the Xeri-Bird™ by installing flow controlled emitters. Above shows a combination of 2, 4, and 8 l/h Xeri-Bug emitters.
Pressure-Compensating Modules

Point-Source Medium-Flow Emitters for Watering Larger Shrubs and Trees

Features
- The only emitters with self-piercing barbs, making them the easiest to install using the Xeriman™ tool
- Widest selection of pressure-compensating emitters, with 6 flow rates and 2 inlet options
- Most compact and unobtrusive emitters
- Flow rates from 18.93 to 90.84 l/h
- Pressure-compensating design delivers uniform flow throughout a wide pressure range (0.7 to 3.5 bar)
- Available with 2 different inlets:
  - Self-piercing barbs for quick one-step emitter insertion into 1/2” (12 mm) or 3/4” (16 mm) drip tubing
  - ½” (15/21) FPT inlet that easily threads onto a ½” (15/21) PVC riser
- Robust design - durable plastic construction is UV-resistant and color-coded to identify flow rate

Operating Range*
- Flow: 18.93 to 90.84 l/h
- Pressure: 0.7 to 3.5 bar
- Required filtration: 150 micron

Models: barb inlet x barb outlet
Select models shown. Review your regional price list for complete availability.
- PC-05: Light brown, 18.93 l/h
- PC-07: Violet, 26.50 l/h
- PC-10: Green, 37.85 l/h
- PC-12: Dark brown, 45.42 l/h
- PC-18: White, 68.13 l/h
- PC-24: Orange, 90.84 l/h

Models: ½” (15/21) FPT thread Inlet
Select models shown. Review your regional price list for complete availability.
- PCT-05: Light Brown, 18.93 l/h
- PCT-07: Violet, 26.50 l/h
- PCT-10: Green, 37.85 l/h

PC Diffuser Caps
PC Diffuser Caps are designed to fit onto outlet of pressure-compensating drip modules
Model
- PC-DIFFUSER: Black
SQ Series, Square Pattern Nozzles
The Most Precise and Efficient, Low-Volume Spray Solution
for Irrigation of Small Areas with Dense Plantings

Features
- Square spray pattern and pressure compensation offer increased efficiency and control, reducing overspray, property damage and liability
- Simplify design and installation with the flexibility of applications: one nozzle throws 0.8 m or 1.2 m and can be used on a variety of spray heads and risers
- Meets micro irrigation system requirement for less than 98.4 l/h flow rate at 2.0 bar
- Square spray pattern with edge-to-edge coverage allows you to easily design and install in small spaces
- Pressure compensation design delivers uniform flow over the pressure range
- Available in 3 models—quarter, half and full patterns with matched precipitation rate
  - Virtually no-mist performance from 1.4 bar to 3.4 bar
  - Two throw distances in each nozzle. One simple click adjusts to 0.8 m or 1.2 m
  - Shipped with blue filter screen (0.5 mm x 0.5 mm) to maintain precise distance of flow, and to prevent clogging
- Compatible with all 1800 Sprays, Xeri pops and UNI-Sprays

Operating Range
- Pressure: 1.4 to 3.5 bar
- Flow rates: 23, 39 and 76 l/h
- Required filtration: 375 micron

Models
- SQ-QTR: SQ Nozzle, quarter pattern (Purple)
- SQ-HLF: SQ Nozzle, half pattern (Brown)
- SQ-FUL: SQ Nozzle, full pattern (Red)
- SQ-ADP: SQ PolyFlex Riser Adapter only

Can be used on…
The SQ Nozzle is an ideal solution for a wide range of difficult-to-design areas, thanks to its compatibility with popular irrigation products.

SQ Nozzles with Screens

One Nozzle…Two Throws
With a simple turn of the nozzle to the next preset stop, the Rain Bird SQ Nozzle adjusts from a 0.8 m throw to a 1.2 m throw. It’s like having two nozzles in one.

1800® Series Spray Heads
Xeri-Pop Spray Heads

SQ-QTR  SQ-HLF  SQ-FUL
SQ Nozzle Performance

### 0.8 m throw @ 0.15 m height above grade

<table>
<thead>
<tr>
<th>Nozzle</th>
<th>Pressure bar</th>
<th>Throw Radius m</th>
<th>Flow lph</th>
<th>Flow lpm</th>
<th>Precip. Rate w/no overlap mm/h</th>
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<td>23</td>
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<td>3.4</td>
<td>0.9</td>
<td>27</td>
<td>0.45</td>
<td>34</td>
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<tr>
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<td>39</td>
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<td>1.72</td>
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### 1.2 m throw @ 0.15 m height above grade

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<th>Nozzle</th>
<th>Pressure bar</th>
<th>Throw Radius m</th>
<th>Flow lph</th>
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<tr>
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</table>

Performance data taken in zero wind conditions

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SQ Nozzles

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SQ Nozzle Installed on PolyFlex Riser with Nozzle Adapter
Xeri-Pop™ Micro-Spray

The Xeri-Pop™ Micro-Spray Makes It Easy to Integrate a Durable Micro-Spray into a Low-Volume Irrigation Design

Features
- The only pop-up spray that works in low-volume low-pressure application, and this is the perfect solution to vandal-prone areas
- Xeri-Pops can be installed and located in nearly any location and are ideal for small, odd-shaped planting beds
- Xeri-Pops work with Rain Bird 5’ and 8’ MPR nozzles and SQ Series Nozzles — nozzles with square spray patterns and adjustable throws of 0.8 m and 1.2 m
- The Xeri-Pop can operate with 1.4 to 3.5 bar base pressure when water is supplied via \( \frac{1}{4} \) (6 mm) Distribution Tubing (XQ)
- The flexibility of \( \frac{1}{4} \) (6 mm) tubing allows the Xeri-Pop to be easily located and relocated as planting conditions dictate
- A durable, plastic snap-collar secures the \( \frac{1}{4} \) (6 mm) tubing to the outside of the Xeri-Pop case
- The Xeri-Pop’s \( \frac{1}{4} \) (6 mm) Distribution Tubing can readily connect to \( \frac{1}{2} \) (12 mm) or \( \frac{3}{4} \) (16 mm) polyethylene tubing or to a multi-outlet manifold (EMT-6XERI). Connections to polyethylene tubing are accomplished with either an SPB-025 \( \frac{1}{4} \) (6 mm) Self-piercing barb Connector
- External parts are UV-resistant

Operating Range
- Pressure: 1.4 to 3.5 bar
- Filtration: Depends on nozzle used with Xeri-Pop

Models
- XP-400X: 10 cm pop-up

Nozzle Options
- SQ Series Nozzles (page 105)
- 5 Series MPR Nozzle (all configurations)
- 8 Series MPR Nozzle (8H, 8T and 8Q)

How to Specify

Xeri-Pop

Model

XP - 400X

Pop-Up Height

400X = 10 cm Pop-up

Always install a PCS-010, 020, 030, or 040 Pressure Compensating Screen whenever a 5B Bubbler Nozzle is installed on a Xeri-Pop.

Drip System Operation Indicator

Features
- Stem rises 15.2 cm for clear visibility
- When stem is extended, drip system is charged to a minimum of 1.38 bar
- Operational Indicator Kit includes three different indication caps: potable, non-potable, or an adjustable 4-VAN spray nozzle
- Includes 40.6 cm of \( \frac{1}{4} \) distribution tubing with connection fitting pre-installed

Model
- OPERIND
**SXB-360 SPYK and XS-360TS-SPYK**

**Adjustable Flow Micro-spray on Spike**

**Applications**
These adjustable micro-sprinklers with full circle pattern are shipped ready to install. Ideal for shrub plantings, trees, containers and flower beds.

**Features**
- Micro-Sprinkler mounted on 12.7 cm spike
- 360° spray pattern
- Adjust flow and radius by turning outer cap
- Shipped with 4-6 mm barb connection for installation into 13-16 mm tubing
- Excellent distribution uniformity

**Specifications**
- Pressure: 1 to 2.0 bar
- Flow: adjustable from 0 to 49 l/h for SXB-360-SPYK and 0 to 90 l/h for XS-360TS-SPYK
- Radius: adjustable from 0 to 46 cm for SXB-360-SPYK and from 0 to 2 m to XS-360TS-SPYK

**Models**
Select models shown. Review your regional price list for complete availability.
- SXB-360TS-SPYK: Adjustable flow micro-spray on spike
- SXB-360-SPYK: Adjustable flow micro-spray on spike

---

**XS-90, XS-180, XS-360 Series**

**Adjustable Flow Sprays**

**Applications**
These sprays have a uniform emission pattern to provide excellent distribution. Adjustable flow/radius by turning integral ball valve. Ideal for ground cover and annual flower beds.

**Features**
- Uniform emission pattern and excellent distribution
- 10-32 self-tapping threads fit into stake and riser assembly (PFR/RS)

**Specifications**
- Pressure: 0.5 to 2.5 bar
- Flow: 0 to 130 l/h
- Radius:
  - XS-90: adjustable from 0 to 3.3 m
  - XS-180: adjustable from 0 to 3.4 m
  - XS-360: adjustable from 0 to 4.1 m

**Models**
Select models shown. Review your regional price list for complete availability.
- XS-90: Adjustable flow/radius 90° spray
- XS-180: Adjustable flow/radius 180° spray
- XS-360: Adjustable flow/radius 360° spray

---

**Xeri-Sprays™ Performance**

<table>
<thead>
<tr>
<th>Xeri-Bubbler Performance</th>
<th>Pressure</th>
<th>XS-90 Radius of throw</th>
<th>XS-180 Radius of throw</th>
<th>XS-360 Radius of throw</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>bar</td>
<td>meters</td>
<td>l/h</td>
<td>meters</td>
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**Wetting Patterns**

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<th>Wetting Patterns</th>
<th>SXB-360 SPYK</th>
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<tbody>
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**Xeri-Sprays™ Performance**

<table>
<thead>
<tr>
<th>Xeri-Sprays™ Performance</th>
<th>Pressure</th>
<th>XS-90 Radius of throw</th>
<th>XS-180 Radius of throw</th>
<th>XS-360 Radius of throw</th>
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</thead>
<tbody>
<tr>
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<td>bar</td>
<td>meters</td>
<td>l/h</td>
<td>meters</td>
</tr>
<tr>
<td>0.5</td>
<td>0.15</td>
<td>0.53</td>
<td>0.19</td>
<td>0.53</td>
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<tr>
<td>1.0</td>
<td>0.24</td>
<td>0.78</td>
<td>0.24</td>
<td>0.78</td>
</tr>
<tr>
<td>1.5</td>
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<td>0.98</td>
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<tr>
<td>2.0</td>
<td>0.31</td>
<td>1.15</td>
<td>0.32</td>
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<td>2.5</td>
<td>0.33</td>
<td>1.30</td>
<td>0.34</td>
<td>1.30</td>
</tr>
</tbody>
</table>
Jet Spike 310-90, 310-180, 310-360

Adjustable Flow Spray on Spike

Features
- Ready to install. It is ideal for flower beds, ground cover and potted plants
- 31 cm spray on spike
- 20 cm extension
- Total height of spike with extension: 51 cm
- Micro-spray head made of acetal, spike made of polyethylene and extension made of HDPE
- 4/6 mm, pre-mounted, flexible PVC connection tube (length: 50 cm)

Jet Spike 310-90, 310-180, 310-360 Performance

<table>
<thead>
<tr>
<th>Pressure</th>
<th>90°</th>
<th>180°</th>
<th>360°</th>
</tr>
</thead>
<tbody>
<tr>
<td>bar</td>
<td>l/h</td>
<td>meters</td>
<td>l/h</td>
</tr>
<tr>
<td>0,5</td>
<td>0–58</td>
<td>0–1,7</td>
<td>0–58</td>
</tr>
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<td>1,0</td>
<td>0–82</td>
<td>0–2,5</td>
<td>0–82</td>
</tr>
<tr>
<td>1,5</td>
<td>0–101</td>
<td>0–2,9</td>
<td>0–101</td>
</tr>
<tr>
<td>2,0</td>
<td>0–117</td>
<td>0–3,2</td>
<td>0–117</td>
</tr>
<tr>
<td>2,5</td>
<td>0–130</td>
<td>0–3,5</td>
<td>0–130</td>
</tr>
</tbody>
</table>

Universal 1/4" Tubing Stake

Features
- Holds 1/4" (6 mm) Distribution Tubing and emitter or Diffuser Bug Cap firmly in place at the root zone of the plant
- Designed to securely hold Rain Bird and other manufacturers’ 1/4” (6 mm) Distribution Tubing — 4 mm to 4.6 mm I.D. and 5.6 mm to 6.4 mm O.D.
- Rigid stake featuring a flat enlarged head designed to withstand hammering into tough soil

Note: If emitter is installed at inlet to distribution tubing, use a Diffuser Bug Cap (DBC-025) at outlet of tubing to prevent bugs from clogging tubing and to help hold tubing in place

Model
- TS-025

PolyFlex Riser and Stake Assembly

Features
- 30.5 cm riser that is pre-assembled with a 7” (17.8 cm) stake
- Use with any 10-32 threaded emission device to deliver water directly to a plant. These include Xeri-Bugs, PC Modules, Xeri-Bubblers and Xeri-Sprays
- Saves time and money when installing a low-volume irrigation system
- Extremely rugged and reliable PolyFlex Riser constructed of thick-walled, high-density polyethylene

Operating Range
- Pressure: 1.0 to 3.5 bar

Model
- PFR-RS: 30.5 cm PolyFlex Riser and 7” (17.8 cm) stake
RWS (Root Watering System)
Root Watering System promotes deep root growth, healthy tree development, and accelerated growth.

Features and Benefits
- Subsurface aeration and irrigation prevents tree and shrub transplant shock
- Highest efficiency solution for tree irrigation - up to 95% emission uniformity with minimal wind, evaporation, or edge control losses
- Aesthetically designed subsurface bubbler contributes to a landscape's natural appearance
- Locking grate at grade deters vandals
- Helps prevent shallow root growth and hardscape damage
- Aesthetically attractive below grade installation
- Self-contained and factory assembled units for assured reliability

For the RWS Model:
- 10.2 cm retaining cap and vandal resistant locking grate tops a 91.4 cm semi-rigid mesh tube
- Factory installed swing assemblies (excluding RWS) with a 1401 (0.95 l/m), or 1402 (0.5 gpm) bubbler on a fixed riser makes connecting to lateral lines easy
- Options: Check valve to keep lines from draining (minimum holdback of 304.8 cm)
  - Sand sock for use in fine soils

For the RWS - Mini:
- 10.2 cm retaining cap and vandal resistant locking grate tops a 45.7 cm semi-rigid mesh tube
- Factory installed ½" spiral barb elbow with a 1401 or 1402 bubbler makes connecting to lateral lines easy
- Options: Check valve to keep lines from draining
  - Sand sock for use in fine soils

For the RWS - Supplemental:
- 5.1 cm snap-on cap and base cap enclose a 25.4 cm semi-rigid mesh tube
- Factory installed ½" spiral barb elbow with PCT or 1401 bubbler makes connecting to lateral lines easy
- Options: Check valve to keep lines from draining
  - Sand sock for use in fine soils

Models /Specifications  (Select models shown. Review your regional price list for complete availability.)

<table>
<thead>
<tr>
<th>Model</th>
<th>Bubbler</th>
<th>Check Valve*</th>
<th>Swing Assembly w/ ½” (15/21) M NPT inlet</th>
<th>Spiral Barb Elbow w/ ½” (15/21) M NPT inlet</th>
</tr>
</thead>
<tbody>
<tr>
<td>91.4 cm Root Watering System (with 10.2 cm vandal-resistant locking grate)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RWS</td>
<td>Ideal for ¼&quot; drip tubing or customer provided hardware</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RWS-B-C-1401</td>
<td>57 l/h</td>
<td>✔ (91.4 cm)</td>
<td>✔</td>
<td>–</td>
</tr>
<tr>
<td>RWS-B-1401</td>
<td>57 l/h</td>
<td>–</td>
<td>✔</td>
<td>–</td>
</tr>
<tr>
<td>RWS-B-X-1401</td>
<td>57 l/h</td>
<td>–</td>
<td>✔ (45.7 cm with no elbow)</td>
<td>–</td>
</tr>
<tr>
<td>RWS-B-C-1402</td>
<td>114 l/h</td>
<td>✔ (91.4 cm)</td>
<td>✔</td>
<td>–</td>
</tr>
<tr>
<td>RWS-B-1402</td>
<td>114 l/h</td>
<td>–</td>
<td>✔</td>
<td>–</td>
</tr>
<tr>
<td>RWS-B-C-1404</td>
<td>228 l/h</td>
<td>✔ (91.4 cm)</td>
<td>✔</td>
<td>–</td>
</tr>
</tbody>
</table>

41.7 cm Root Watering System - Mini (with 10.2 cm vandal-resistant locking grate)

<table>
<thead>
<tr>
<th>Model</th>
<th>Bubbler</th>
<th>Check Valve*</th>
<th>Swing Assembly w/ ½” (15/21) M NPT inlet</th>
<th>Spiral Barb Elbow w/ ½” (15/21) M NPT inlet</th>
</tr>
</thead>
<tbody>
<tr>
<td>RWS-M</td>
<td>Ideal for ¼&quot; drip tubing or customer provided hardware</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RWS-M-B-C-1401</td>
<td>57 l/h</td>
<td>✔ (45.7 cm)</td>
<td>–</td>
<td>✔</td>
</tr>
<tr>
<td>RWS-M-B-1401</td>
<td>57 l/h</td>
<td>–</td>
<td>–</td>
<td>✔</td>
</tr>
<tr>
<td>RWS-M-B-C-1402</td>
<td>114 l/h</td>
<td>✔ (45.7 cm)</td>
<td>–</td>
<td>✔</td>
</tr>
<tr>
<td>RWS-M-B-1402</td>
<td>114 l/h</td>
<td>–</td>
<td>✔</td>
<td>–</td>
</tr>
</tbody>
</table>

25.4 cm Root Watering System - Supplemental (with 5.1 cm snap-on cap and base)

<table>
<thead>
<tr>
<th>Model</th>
<th>Bubbler</th>
<th>Check Valve*</th>
<th>Swing Assembly w/ ½” (15/21) M NPT inlet</th>
<th>Spiral Barb Elbow w/ ½” (15/21) M NPT inlet</th>
</tr>
</thead>
<tbody>
<tr>
<td>RWS-S-B-C-PCT5</td>
<td>1140 l/h</td>
<td>✔ (25.4 cm)</td>
<td>–</td>
<td>✔</td>
</tr>
<tr>
<td>RWS-S-B-C-1401</td>
<td>57 l/h</td>
<td>✔ (25.4 cm)</td>
<td>–</td>
<td>✔</td>
</tr>
<tr>
<td>RWS-S-B-1401</td>
<td>57 l/h</td>
<td>–</td>
<td>✔</td>
<td>–</td>
</tr>
</tbody>
</table>

Root Watering - Accessories

<table>
<thead>
<tr>
<th>Model</th>
<th>Bubbler</th>
<th>Check Valve*</th>
<th>Swing Assembly w/ ½” (15/21) M NPT inlet</th>
<th>Spiral Barb Elbow w/ ½” (15/21) M NPT inlet</th>
</tr>
</thead>
<tbody>
<tr>
<td>RWS-SOCK (Root Watering Sock)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RWS-GRATE-P (Root Watering System Purple Grate for RWS and RWS Mini)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Check Valve is 4.3 m of holdback, or 0.4 bar
XFD On-Surface Dripline

The most flexible, pressure-compensating in-line emitter tubing available to irrigate ground cover, dense plantings, hedge rows and more

Features

- Extra flexible tubing for fast, easy installation
- Dual-layered tubing (brown over black or purple over black) provides unmatched resistance to chemicals, UV damage and algae growth
- Patent pending emitter design provides for increased reliability
- Longer lateral runs than competition
- Unique material offers significantly greater flexibility, allowing tighter turns with fewer elbows for easier installation
- Choice of flow rates, spacing and coil lengths provides design flexibility for a variety of non-turfgrass applications
- Use an Air/Vacuum Relief Valve Kit when installation is below soil (pg 121)

Operating Range

- Pressure: 0.58 to 4.1 bar
- Flow rates: 1.6 l/h, 2.3 l/h and 3.5 l/h
- Temperature: Water up to 37.8°C; Ambient up to 51.7°C
- Required filtration: 125 micron

Specifications

- Outside diameter: 16.1 mm
- Inside diameter: 13.6 mm
- Wall thickness: 1.2 mm
- Spacing: 33, 40 or 50 cm
- Lengths: 50, 100 m coils
- Use with XF Dripline Insert Fittings

XFD dripline offers improved flexibility for kink resistance and easy installation. The dripline can bend down to a 7.62 cm radius without kinking

Self-dispensing coil reduces layout time and improves ease of installation
Compatible Fittings

**XF Dripline Insert Fittings (pg. 119)**

![](image1)

**Easy Fit Compression Fittings (pg. 120)**

![](image2)

### XFD On-Surface Dripline Models

<table>
<thead>
<tr>
<th>Model</th>
<th>Flow l/h</th>
<th>Spacing cm</th>
<th>Coil Length m</th>
</tr>
</thead>
<tbody>
<tr>
<td>XFD1633100</td>
<td>1.6</td>
<td>33</td>
<td>100</td>
</tr>
<tr>
<td>XFD2333100</td>
<td>2.3</td>
<td>33</td>
<td>100</td>
</tr>
<tr>
<td>XFD2340100</td>
<td>2.3</td>
<td>40</td>
<td>100</td>
</tr>
<tr>
<td>XFD2350100</td>
<td>2.3</td>
<td>50</td>
<td>100</td>
</tr>
<tr>
<td>XFD233350</td>
<td>2.3</td>
<td>33</td>
<td>50</td>
</tr>
</tbody>
</table>

### XFD On-Surface Dripline Maximum Lateral Lengths (meters)

<table>
<thead>
<tr>
<th>Inlet Pressure bar</th>
<th>Nominal Flow l/h</th>
<th>Maximum Lateral Length (meters)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.00</td>
<td>1.6</td>
<td>33 cm: 104, 40 cm: 79, 50 cm: 54</td>
</tr>
<tr>
<td>1.70</td>
<td>2.3</td>
<td>33 cm: 131, 40 cm: 104, 50 cm: 77</td>
</tr>
<tr>
<td>2.40</td>
<td>3.5</td>
<td>33 cm: 146, 40 cm: 121, 50 cm: 93</td>
</tr>
<tr>
<td>3.10</td>
<td>1.6</td>
<td>33 cm: 146, 40 cm: 121, 50 cm: 93</td>
</tr>
<tr>
<td>3.80</td>
<td>2.3</td>
<td>33 cm: 146, 40 cm: 121, 50 cm: 93</td>
</tr>
</tbody>
</table>

### XFD On-Surface Dripline Maximum Lateral Lengths (Feet)

<table>
<thead>
<tr>
<th>Inlet Pressure psi</th>
<th>12&quot; Spacing</th>
<th>18&quot; Spacing</th>
</tr>
</thead>
<tbody>
<tr>
<td>15</td>
<td>273</td>
<td>314</td>
</tr>
<tr>
<td>20</td>
<td>318</td>
<td>353</td>
</tr>
<tr>
<td>30</td>
<td>360</td>
<td>413</td>
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<tr>
<td>40</td>
<td>395</td>
<td>465</td>
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<tr>
<td>50</td>
<td>417</td>
<td>528</td>
</tr>
<tr>
<td>60</td>
<td>460</td>
<td>596</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Inlet Pressure psi</th>
<th>Nominal Flow gph</th>
<th>Maximum Lateral Length (feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td>12&quot; Spacing</td>
<td>0.6</td>
<td>15</td>
</tr>
<tr>
<td>18&quot; Spacing</td>
<td>0.9</td>
<td>20</td>
</tr>
<tr>
<td>Nominal Flow gph: 0.6</td>
<td>15</td>
<td>30</td>
</tr>
<tr>
<td>Nominal Flow gph: 0.9</td>
<td>20</td>
<td>40</td>
</tr>
<tr>
<td>Purple</td>
<td></td>
<td>Purple</td>
</tr>
<tr>
<td>Purple</td>
<td></td>
<td>Purple</td>
</tr>
</tbody>
</table>
XFCV Dripline with Check Valve

Rain Bird® XFCV Dripline with a heavy-duty 0.24 bar check valve for on-surface applications adds a valuable member to the Rain Bird XF Series of Dripline. The XFCV is the most effective dripline in the industry and is ideal for areas where no other dripline will work. When used in applications where elevation changes exist, the patent-pending check valve keeps the dripline charged, holding 8 feet (2.4m) of hold back. Rain Bird’s XFCV offers better uniformity and helps to prevent over-watering at the low-point in the zone, avoiding puddling and water draining from the dripline.

It accepts Rain Bird Easy Fit Compression Fittings, XF Dripline Barbed Insert Fittings and other 17 mm barbed insert fittings.

Features

Simple
• Rain Bird’s patent-pending 0.24 bar check valve technology keeps the dripline charged with water at all times, increasing uniformity of watering, and conserves water by eliminating the need to recharge the line at the beginning of each watering cycle
• Through the use of a proprietary tubing material, the XFCV Dripline with heavy-duty check valve is the most flexible dripline tubing in the industry, making it the easiest dripline to design with and install
• Rain Bird’s low-profile emitter design reduces in-line pressure loss, allowing longer lateral runs, simplifying design and reducing installation time
• Variety of emitter flow rates, emitter spacing and coil lengths provide design flexibility for on-surface areas with or without elevation changes

Made with Recycled Content
• All Rain Bird XF Dripline (XFD, XFS, XFCV) qualify for LEED credit 4.2 because they contain at least 20% Polyethylene post consumer recycled material by cost. These come in an assortment of coil sizes, flow rates and emitter spacing

Reliable
• The pressure-compensating emitter design provides a consistent flow over the entire lateral length ensuring higher uniformity for increased reliability in the pressure range of 1.38 to 4.14 bar

Durable
• Dual-layered tubing (brown over black) provides unmatched resistance to chemicals, algae growth and UV damage

Grit Tolerant
• Rain Bird’s proprietary emitter design resists clogging by use of an extra wide flow path combined with a self-flushing action

With XFCV’s built-in 0.24 bar check valve, all lines are kept charged and up to 2.4 m of water is held back
### Operating Range
- Opening Pressure: 1.0 bar
- Pressure: 1.38 to 4.14 bar
- Flow rate: 2.3 l/hr
- Temperature:
  - Water: Up to 37.8° C
  - Ambient: Up to 51.7° C
- Required Filtration: 125 micron

### Specifications
- Dimensions:
  - OD: 16 mm
  - ID: 13.6 mm;
- Thickness: 1.2 mm
- 33 cm, 50 cm spacing
- Available in 100 m coils
- Coil Color: Brown
- Use with XF Dripline Insert Fittings or Rain Bird Easy Fit Compression Fittings

### XFCV Dripline Models

<table>
<thead>
<tr>
<th>Model</th>
<th>Flow l/h</th>
<th>Spacing cm</th>
<th>Coil Length m</th>
</tr>
</thead>
<tbody>
<tr>
<td>XFCV2333100</td>
<td>2.3</td>
<td>33</td>
<td>100</td>
</tr>
<tr>
<td>XFCV2350100</td>
<td>2.3</td>
<td>50</td>
<td>100</td>
</tr>
</tbody>
</table>

### XFCV Dripline Maximum Lateral Lengths (Meters)

<table>
<thead>
<tr>
<th>Inlet Pressure bar</th>
<th>Maximum Lateral Length (meters)</th>
<th>Nominal Flow (l/h)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>33 cm</td>
<td>50 cm</td>
</tr>
<tr>
<td>1.38</td>
<td>84</td>
<td>93</td>
</tr>
<tr>
<td>2.07</td>
<td>102</td>
<td>117</td>
</tr>
<tr>
<td>2.76</td>
<td>115</td>
<td>135</td>
</tr>
<tr>
<td>3.45</td>
<td>125</td>
<td>155</td>
</tr>
<tr>
<td>4.14</td>
<td>137</td>
<td>178</td>
</tr>
</tbody>
</table>

### XFCV Dripline Maximum Lateral Lengths (Feet)

<table>
<thead>
<tr>
<th>Inlet Pressure psi</th>
<th>Maximum Lateral Length (feet)</th>
<th>Nominal Flow (gph);</th>
<th>Nominal Flow (gph)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>12&quot; Spacing</td>
<td>18&quot; Spacing</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>192</td>
<td>136</td>
<td>254</td>
</tr>
<tr>
<td>30</td>
<td>289</td>
<td>205</td>
<td>402</td>
</tr>
<tr>
<td>40</td>
<td>350</td>
<td>248</td>
<td>498</td>
</tr>
<tr>
<td>50</td>
<td>397</td>
<td>281</td>
<td>573</td>
</tr>
<tr>
<td>60</td>
<td>436</td>
<td>309</td>
<td>637</td>
</tr>
</tbody>
</table>
XFS Sub-Surface Dripline with Copper Shield™ Technology

Sub-Surface Drip Irrigation (SDI) perfect for small, narrow and tight planting areas, switchbacks, as well as all turf landscapes. Rain Bird® XFS Sub-Surface Copper-Colored Dripline with Copper Shield™ Technology is the latest innovation in the Rain Bird Landscape Drip Family. Rain Bird’s patent-pending Copper Shield Technology protects the emitter from root intrusion, creating a long-lasting, low maintenance sub-surface drip irrigation system for use under turf grass or shrub and groundcover areas.

A proprietary tubing material makes the XFS Sub-Surface Dripline with Copper Shield the most flexible tubing in the industry, and the easiest sub-surface dripline to design with and install.

Features

Simple
- Rain Bird’s low-profile emitter design reduces in-line pressure loss, allowing longer lateral runs, simplifying design and reducing installation time.
- Variety of emitter flow rates, emitter spacing and coil lengths provide design flexibility for either sub-surface turf or sub-surface shrub and groundcover applications.

Reliable
- XFS Sub-Surface Dripline emitters are protected from root intrusion by Rain Bird’s patent-pending Copper Shield™ Technology resulting in a system that does not require maintenance or replacement of chemicals to prevent root intrusion.
- The pressure-compensating emitter design provides a consistent flow over the entire lateral length ensuring higher uniformity for increased reliability in the pressure range of 0.58 to 4.14 bar.

Durable
- Dual-layered tubing (copper over black) provides unmatched resistance to chemicals, algae growth and UV damage.
- Grit Tolerant: Rain Bird’s proprietary emitter design resists clogging by use of an extra-wide flow path combined with a self-flushing action.

Operating Range
- Pressure: 0.58 to 4.14 bar.
- Flow rates: 1.6 l/h, 2.3 l/hr, and 3.5 l/h.
- Temperature:
  - Water: Up to 37.8° C.
  - Ambient: Up to 51.7° C.
- Required Filtration: 125 micron.

Specifications
- Dimensions: OD: 16mm; ID: 13.6mm; Thickness: 1.2mm.
- 33 cm spacing.
- Available in 100 m coils.
- Coil Color: Copper or Purple.
- Use with XF Dripline Insert Fittings.
- XFS Sub-Surface Dripline offers increased flexibility for easy installation.
- Irrigation Association Show Winner.
### XFS Sub-Surface Dripline Models

<table>
<thead>
<tr>
<th>Model</th>
<th>Flow gph</th>
<th>Spacing in.</th>
<th>Coil Length ft.</th>
</tr>
</thead>
<tbody>
<tr>
<td>XFS04-12-100</td>
<td>0.42</td>
<td>12</td>
<td>100</td>
</tr>
<tr>
<td>XFS04-12-500</td>
<td>0.42</td>
<td>12</td>
<td>500</td>
</tr>
<tr>
<td>XFS04-18-100</td>
<td>0.42</td>
<td>18</td>
<td>100</td>
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<tr>
<td>XFS04-18-500</td>
<td>0.42</td>
<td>18</td>
<td>500</td>
</tr>
<tr>
<td>XFS06-12-100</td>
<td>0.60</td>
<td>12</td>
<td>100</td>
</tr>
<tr>
<td>XFS06-12-500</td>
<td>0.60</td>
<td>12</td>
<td>500</td>
</tr>
<tr>
<td>XFS06-18-100</td>
<td>0.60</td>
<td>18</td>
<td>100</td>
</tr>
<tr>
<td>XFS06-18-500</td>
<td>0.60</td>
<td>18</td>
<td>500</td>
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<tr>
<td>XFS09-12-100</td>
<td>0.90</td>
<td>12</td>
<td>100</td>
</tr>
<tr>
<td>XFS09-12-500</td>
<td>0.90</td>
<td>12</td>
<td>500</td>
</tr>
<tr>
<td>XFS09-18-500</td>
<td>0.90</td>
<td>18</td>
<td>500</td>
</tr>
</tbody>
</table>

### XFS Sub-Surface Dripline Maximum Lateral Lengths (meters)

<table>
<thead>
<tr>
<th>Inlet Pressure bar</th>
<th>Nominal Flow (l/h)</th>
<th>Maximum Lateral Length (meters)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.00</td>
<td>1.6</td>
<td>104</td>
</tr>
<tr>
<td>1.70</td>
<td>1.3</td>
<td>131</td>
</tr>
<tr>
<td>2.40</td>
<td>1.4</td>
<td>144</td>
</tr>
<tr>
<td>3.10</td>
<td>1.5</td>
<td>150</td>
</tr>
<tr>
<td>3.80</td>
<td>1.7</td>
<td>175</td>
</tr>
</tbody>
</table>

### XFS Sub-Surface Dripline Maximum Lateral Lengths (Feet)

<table>
<thead>
<tr>
<th>Inlet Pressure psi</th>
<th>Nominal Flow (gph): 12” Spacing</th>
<th>Nominal Flow (gph): 18” Spacing</th>
</tr>
</thead>
<tbody>
<tr>
<td>15</td>
<td>352 273 155</td>
<td>374 314 250</td>
</tr>
<tr>
<td>20</td>
<td>399 318 169</td>
<td>417 353 294</td>
</tr>
<tr>
<td>30</td>
<td>447 360 230</td>
<td>481 413 350</td>
</tr>
<tr>
<td>40</td>
<td>488 395 255</td>
<td>530 465 402</td>
</tr>
<tr>
<td>50</td>
<td>505 417 285</td>
<td>610 528 420</td>
</tr>
<tr>
<td>60</td>
<td>573 460 290</td>
<td>734 596 455</td>
</tr>
</tbody>
</table>

**Note:** Use only XF Dripline Insert Fittings in Sub-Surface applications.

---

**Clamp**

For 13-16 mm Tubing

**Applications**
- Clamps are used for 13-16 mm tubing.

**Model** (Available in Europe only)
- Clamp for 13-16 mm tubing

---

**C-12**

Tie-Down Stake for 13-16 mm Tubing

**Applications**
- Used to hold down 13-16 mm tubing to finish grade.

**Model** (Available in Europe only)
- C-12: Tie-Down Stake

---

**Galvanized Tie-Down Stake**

9-gauge galvanized steel stake to secure distribution tubing, XF Dripline or XBS Tubing to finished grade

**Features**
- Durability: Sturdy 9 gauge galvanized steel provides long-lasting and corrosion resistant hold strength for distribution tubing.
- Easy installation: Sharp tips provide easy insertion into all soil types
- Convenience: robust packaging options provide ease of transportation and storage

**Specifications:**
- Size: 15 cm
- Material: galvanized steel
- Thickness: 9 gauge

**Models**
- TDS-6050: 15 cm galvanized tie down stake (50 piece)
- TDS-6500: 15 cm galvanized tie down stake (500 pieces, pail)

---

**700-CF-22**

Tubing End Closure

**Applications**
- Figure 8 end closures are used at the end of 13-16 mm tubing

**Features**
- Easily installed onto the end of 13-16 mm tubing
- Easily removed for flushing

**Specifications**
- Pressure: 0 to 3.5 bar

**Model**
- 700-CF-22: End Closure for 13-16 mm tubing
QF Dripline Header
A Quick and Flexible Solution to Dripline Headers

The QF Dripline Header is a patent pending product that is the landscape industry’s first pre-fabricated header for dripline installations. A Quick and Flexible replacement for a site-built header, the QF Dripline Header saves time and labor expense. Using a proprietary blend of polyethylene, similar to Rain Bird’s XF Series Dripline, the QF Dripline header allows installers to simply roll out the header and attach the dripline at guaranteed 30 cm or 45 cm spacing. Eliminating the need for measuring, cutting, gluing and taping, the QF Dripline Header saves time and money, making projects more profitable.

Features
- The QF Dripline Header elbows rotate 360º and incorporate a protective ring — preventing damage and ensuring a proper seal.
- The ring also provides leverage to make attaching the dripline easier.
- The rotating barb manages trenching misalignment. Move left or right to accommodate the dripline – no need to re-trench.
- Elbows utilize the same design as Rain Bird’s popular XFF Fitting requiring 50% less insertion force, and are compatible with the XFF Fittings Tool.

Specifications

<table>
<thead>
<tr>
<th>QF Header - 3/4”</th>
<th>QF Header - 1”</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outside Diameter: 23.9mm</td>
<td>30.5mm</td>
</tr>
<tr>
<td>Inside Diameter: 20.8mm</td>
<td>26.9mm</td>
</tr>
<tr>
<td>Wall Thickness: 1.5mm</td>
<td>1.8mm</td>
</tr>
</tbody>
</table>

Models
Select models shown. Review your regional price list for complete availability.

- XQF7512100: XQF 3/4” Dripline Header (30.5 cm Spacing 30.5 m Coil)
- XQF7518100: XQF 3/4” Dripline Header (45.7 cm Spacing 30.5 m Coil)
- XQF1012100: XQF 1” Dripline Header (30.5 cm Spacing 30.5 m Coil)
- XQF1018100: XQF 1” Dripline Header (45.7 cm Spacing 30.5 m Coil)
- XQF101210P: XQF 1” Dripline Header (30.5 cm Spacing 30.5 m Coil) Purple
- XQF101810P: XQF 1” Dripline Header (45.7 cm Spacing 30.5 m Coil) Purple

How to Specify

<table>
<thead>
<tr>
<th>XQF - 75 - 12 - 100</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cod Length 100 = 100’ (30.5 m)</td>
</tr>
<tr>
<td>Elbow Spacing 12 = 12” (30.5 cm)</td>
</tr>
<tr>
<td>Dripline Diameter: 75 = 1.9 cm 10 = 2.5 cm</td>
</tr>
<tr>
<td>Models: XQF: Xerigation® Quick Flexible</td>
</tr>
</tbody>
</table>

Compatible Fittings

XQF compatible fittings
XF Dripline Insert Fittings

Features
- Complete line of 17mm insert fittings to simplify installation of XF Series Dripline
- High quality barbs grab tubing for a secure fit
- Unique barb design to reduce insertion force and still retain a secure fit
- Non-obtrusive colored fittings to complement natural earth tones

Operating Range
- Pressure: 1.0 to 3.5 bar if using 4.1 bar clamps will be required

Models
Select models shown. Review your regional price list for complete availability.
- XFF-COUP: 17mm Barb x Barb Coupling
- XFF-ELBOW: 17mm Barb x Barb Elbow
- XFF-MA-050: 17mm Barb x 1/2” MPT Male Adapter
- XFF-TEE: 17mm Barb x Barb x Barb Tee
- XFF-TMA-050: 17mm Barb x 1/2” MPT x 17mm Barb Tee Male Adapter
- XFF-MA-075: 17mm Barb x 3/4” MPT Male Adapter
- XFF-FA-050: low profile barb elbow female adapter 17 mm x 1/2” FPT
- XFF-TFA-050: low profile barb tee female adapter 17 mm x 1/2” FPT x 17 mm
XF Insertion Tool
The XF Insertion Tool reduces the effort required to insert the fittings into the tube by 50%.

Features
- 50% Less effort required to install fittings than without a tool
- Firmly locks fittings into place while inserting Dripline
- Tool helps widen the dripline opening to make the fitting insertion easier
- Solid grip and comfortable fit in hand

Model
- FITINS-TOOL

Easy Fit Compression Fitting System
Complete system of compression fittings and adapters for all tubing connection needs in a low-volume system

Features
- Reduces inventory costs: Multi-diameter compression fittings work with a wide range of 16mm - 17mm tubing or dripline
- Saves time and effort: 50% less force is required to connect tubing and fittings versus competitive compression fittings. Adapters swivel for easy installation
- Provides increased flexibility: Just three Easy Fit Fittings and five Easy Fit Adapters are needed to make over 160 combinations of connections, accommodating countless installation and maintenance situations
- Works with all 16-17mm dripline and blank tubing
- Patented fittings and adapters are molded from UV-resistant and durable ABS materials
- Removable flush caps can be used to flush end of line and temporarily cap off lines for later expansion
- Not recommended with subsurface irrigation

Operating Range
- Pressure: 0 to 4.1 bar
- Accepts tubing with an O.D. of 16 -17mm
- Recommended for use above surface only

Models
Select models shown. Review your regional price list for complete availability.

- Easy Fit Fittings
  - MDCF-COUP: Coupling
  - MDCF-EL: Elbow
  - MDCF-TEE: Tee

- Easy Fit Adapters
  - MDCF-CAP: Removable Flush Cap For Easy Fit Fittings (Black)

Note: Easy Fit Adapters are not barbed fittings. They are to be used only with Easy Fit Compression Fittings.

Friction Loss per Fitting

<table>
<thead>
<tr>
<th>Flow l/h</th>
<th>Loss bar</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>227.1</td>
<td>0.03</td>
</tr>
<tr>
<td>454.3</td>
<td>0.04</td>
</tr>
<tr>
<td>681.4</td>
<td>0.06</td>
</tr>
<tr>
<td>908.5</td>
<td>0.10</td>
</tr>
<tr>
<td>1135.6</td>
<td>0.13</td>
</tr>
<tr>
<td>1362.8</td>
<td>0.18</td>
</tr>
</tbody>
</table>
Lock Type Fittings
Fittings for 13-16 mm tubing

Applications
- Used to connect 13-16 mm tubing (drip application) and XF Dripline.

Features
- High safety connection for 16mm outside diameter tubing
- Can be used with Dripline and blank tubing. Easy to handle
- Easy-to-use

Specifications
- Made of polyethylene
- Exists in 8 different shapes: union, elbow and tee

Models
These models are available in Europe only. For other twist lock fittings type, please check local availability by consulting your regional price list or contacting your local sales representative.

- BF-12 lock: Quick union coupling
- BF-22 lock: Quick elbow coupling
- BF-32 lock: Quick tee coupling
- BF-82-50 lock: 16 mm quick union coupling x ½” male threaded
- BF-62-50 lock: 16 mm quick union coupling x ½” female threaded
- BF-82-75 lock: 16 mm quick union coupling x ¾” male threaded
- BF-62-75 lock: 16 mm quick union coupling x ¾” female threaded
- BF-plug lock: Quick end-plug for 16 mm tubing
- BF-92: ¾” Lock type
- BF-valve-lock: ¾” male threaded x lock manual valve
XF Series Blank Tubing

Features
- Greater flexibility is easier to install and saves time
- Brown color matches landscape and blends with mulch. Matches XF Series Dripline inline emitter tubing
- Compatible with XF Series Dripline (13.6 mm I.D. x 16.1mm O.D.)
- Accepts Rain Bird Easy Fit Compression Fittings, XF Dripline Insert Fittings, and lock type fittings

Specifications
- Outside Diameter: 16.1mm
- Inside Diameter: 13.6 mm
- Wall Thickness: 1.2 mm

Models
Select models shown. Review your regional price list for complete availability.
- DBL100: Blank Drip Tubing Black 100 m coil
- XFD1600100: brown blank tubing, 100 m coil

XF Blank Tubing Friction Loss Characteristics

<table>
<thead>
<tr>
<th>Flow (l/h)</th>
<th>Velocity (m/s)</th>
<th>Pressure Loss (bar)</th>
</tr>
</thead>
<tbody>
<tr>
<td>113.56</td>
<td>0.21</td>
<td>0.06</td>
</tr>
<tr>
<td>227.12</td>
<td>0.43</td>
<td>0.22</td>
</tr>
<tr>
<td>340.69</td>
<td>0.64</td>
<td>0.46</td>
</tr>
<tr>
<td>454.25</td>
<td>0.85</td>
<td>0.79</td>
</tr>
<tr>
<td>567.81</td>
<td>1.07</td>
<td>1.20</td>
</tr>
<tr>
<td>681.37</td>
<td>1.28</td>
<td>1.68</td>
</tr>
<tr>
<td>794.94</td>
<td>1.49</td>
<td>2.23</td>
</tr>
<tr>
<td>908.50</td>
<td>1.71</td>
<td>2.86</td>
</tr>
<tr>
<td>1022.06</td>
<td>1.92</td>
<td>3.56</td>
</tr>
<tr>
<td>1135.62</td>
<td>2.13</td>
<td>4.32</td>
</tr>
<tr>
<td>1249.19</td>
<td>2.35</td>
<td>5.16</td>
</tr>
<tr>
<td>1362.75</td>
<td>2.56</td>
<td>6.06</td>
</tr>
</tbody>
</table>

Note: Use of tubing at flows shown in dark shaded area is not recommended, as velocities exceed 1.5 m/s

1/4" (6 mm) Landscape Dripline

Rain Bird 1/4" (6 mm) Dripline is a perfect choice for small-sized areas such as planter boxes, container gardens, loops around trees, vegetable gardens and shrubs

Features
- Simple to use, as the flexible tubing makes watering pots and container gardens easy
- Clog resistance through built-in filtration and two outlet holes, 180 degrees apart
- Brown tubing complements Rain Bird XF Dripline
- Works with Rain Bird 1/4" (6 mm) barbed Fittings

Operating Range
- 0.7 to 2.7 bar
- Flow rate at 2.0 bar: 3.0 l/h
- Required filtration: 75 micron

Specifications
- Outside diameter: 6 mm
- Inside diameter: 4 mm
- Wall thickness: 1 mm
- Spacing: 15 cm and 30 cm
- Length: 30 m coils

Models
- LDQ0806100
- LDQ0812100

Flow Characteristics

<table>
<thead>
<tr>
<th>Model</th>
<th>Flow at 2.0 bar (l/h)</th>
<th>Spacing (cm)</th>
<th>Coil Length (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LDQ0806100</td>
<td>3.0</td>
<td>15</td>
<td>30</td>
</tr>
<tr>
<td>LDQ0812100</td>
<td>3.0</td>
<td>30</td>
<td>30</td>
</tr>
</tbody>
</table>

1/4" (6 mm) Landscape Dripline Performance

Maximum Length of Run (meters)

<table>
<thead>
<tr>
<th>Emitter Spacing</th>
<th>Maximum Length of Run</th>
</tr>
</thead>
<tbody>
<tr>
<td>15 cm</td>
<td>5.8 m</td>
</tr>
<tr>
<td>30 cm</td>
<td>10 m</td>
</tr>
</tbody>
</table>
XQ ¼” Distribution Tubing

The strongest and most flexible ¼” Distribution Tubing available to extend emitter outlets to desirable discharge locations

Features

- Unique blend of polymers that give it the flexibility of vinyl with hold of poly
- New textured finish improves handling
- Self extracting coiling feature makes it easy to use, store and eliminates waste
- Fits over barbed outlet ports and all Xerigation® emission devices and ¼” (6 mm) transfer fittings
- Extruded from UV-resistant polyethylene resin materials

Operating Range

- Pressure: 0 to 4.1 bar

Specifications

- Outside Diameter: 6.3 mm
- Inside Diameter: 4.3 mm
- Wall Thickness: 1.0 mm
- Lengths: 30 m and 300 m coils

Models

- XQ-100: 30m coil ¼” (6 mm) distribution tubing
- XQ-1000: 300 m coil ¼” (6 mm) distribution tubing
- XQ-1000-B: 300 m coil ¼” (6 mm) distribution tubing in a bucket

XQ ¼” Distribution Tubing Friction Loss Characteristics

<table>
<thead>
<tr>
<th>Flow m³/h</th>
<th>Flow l/h</th>
<th>Velocity m/s</th>
<th>Loss bar</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.00</td>
<td>3.79</td>
<td>0.08</td>
<td>0.01</td>
</tr>
<tr>
<td>0.01</td>
<td>11.6</td>
<td>0.24</td>
<td>0.09</td>
</tr>
<tr>
<td>0.02</td>
<td>18.92</td>
<td>0.41</td>
<td>0.22</td>
</tr>
<tr>
<td>0.03</td>
<td>26.50</td>
<td>0.57</td>
<td>0.41</td>
</tr>
<tr>
<td>0.04</td>
<td>34.07</td>
<td>0.73</td>
<td>0.66</td>
</tr>
<tr>
<td>0.05</td>
<td>41.64</td>
<td>0.89</td>
<td>0.95</td>
</tr>
<tr>
<td>0.06</td>
<td>56.78</td>
<td>1.21</td>
<td>1.69</td>
</tr>
<tr>
<td>0.06</td>
<td>64.35</td>
<td>1.38</td>
<td>1.23</td>
</tr>
<tr>
<td>0.07</td>
<td>68.13</td>
<td>1.46</td>
<td>2.36</td>
</tr>
<tr>
<td>0.07</td>
<td>71.92</td>
<td>1.54</td>
<td>2.61</td>
</tr>
<tr>
<td>0.08</td>
<td>75.70</td>
<td>1.62</td>
<td>2.87</td>
</tr>
<tr>
<td>0.09</td>
<td>71.92</td>
<td>2.03</td>
<td>4.34</td>
</tr>
<tr>
<td>0.11</td>
<td>113.55</td>
<td>2.43</td>
<td>6.08</td>
</tr>
</tbody>
</table>

Note: Use of tubing at flows shown in dark shaded area is not recommended, as velocities exceed 1.5 m/s

BF-1, BF-2, BF-3
Barb Transfer Fittings for 4-6 mm Tubing

Features

- Used to connect 4-6 mm distribution tubing (DT-025-50/DT-025-1000)
- Rugged plastic construction
- Pressure: 0 to 3.5 bar

Models

- BF-1: barb connector for 4-6 mm tubing
- BF-2: barb x barb elbow for 4-6 mm tubing
- BF-3: barb x barb x barb tee for 4-6 mm tubing

Tubing Goof Plug

Features

- Used to plug unwanted holes in tubing
- New design works with Xeriman™ Tool (XM-TOOL) for quick, easy installation while inserting self-piercing emission devices into a 13-16 mm tubing

Model

- EMA-GPX

T135SS
Tubing Cutter

Features

- Designed for easy and clean cutting of all distribution tubing used in low volume irrigation installations.

Specifications

- Length: 21.5 cm

Model

- T135SS: tubing cutter
Low Flow Control Zone Kits with PR Filter

- Reliable Control Zone Kits that include the Low Flow Valve, the only valve on the market that can handle low flows (below 45 l/h) without weeping.
- Shorter kits with only two components (valve plus pressure-regulating filter) mean that you can fit more Control Zone Kits in a valve box, saving time and money.
- These PR Filter kits provide on/off control, filtration, and pressure regulation with fewer components; so there is less chance of leakage at the connections, both at installation and over the life of the system.

Operating Range
- Flow: 45 l to 1135 l/h
- Inlet pressure: 1.4 to 10.3 bar
- Regulated pressure: 2.1 bar
- Filtration: 75 micron stainless steel screen

Models
- XCZ-075-PRF: ¾" Low Flow Valve with ¾" PR RBY Filter (Assembled - NPT/ BSP thread)
- ICZ-075-TBOS: ¾" Low Flow Valve with latching solenoid plus ¾" Pressure Regulating RBY Filter (NPT/BSP thread)
  - Flow: 0.8 to 18.91 l/m

Replacement Screen
- RBY-200SSMX (75 micron stainless steel screen)

Minimum Inlet Pressure for 2.1 bar/outlet pressure

<table>
<thead>
<tr>
<th>Flow (l/h)</th>
<th>Pressure (bar)</th>
</tr>
</thead>
<tbody>
<tr>
<td>45</td>
<td>2.4</td>
</tr>
<tr>
<td>227</td>
<td>2.5</td>
</tr>
<tr>
<td>681</td>
<td>2.6</td>
</tr>
<tr>
<td>1135</td>
<td>3.0</td>
</tr>
</tbody>
</table>
Medium Flow Control Zone Kits with PR Filter

- Shorter kits with only two components (valve plus pressure-regulating filter) mean that you can fit more Control Zone Kits in a valve box, saving time and money.
- These PR Filter kits provide on/off control, filtration, and pressure regulation with only two parts; so there is less chance of leakage at the connections, both at installation and over the life of the system.

Operating Range
- Flow: 684 to 3408 l/h
- Inlet pressure: 1.4 to 10.3 bar
- Filtration: 75 micron stainless steel screen
- Regulated pressure: 2.8 bar

Models
- XCZ-100-PRF: 1” DV Valve with 1” PR Filter (Assembled - NPT thread)
- IXCZ-100-PRF: 1”DV Valve with 1”PR Filter (Assembled- BSP thread)
- IXZ-100-TBOS: 1”DV Valve with latching solenoid + 1” Pressure Regulating RBY Filter (Assembled - BSP thread)

Replacement Screen
- RBY-200SSMX (75 micron stainless steel screen)

Wide Flow Commercial Control Zone Kit with PESB Valve & Pressure Regulating, Basket Filter

- Complete kit is the simplest, smallest and most reliable Control Zone kit for commercial application between 68 and 4542 l/h.
- Includes the reliable, proven PESB Valve which provides patented scrubbing action, making this kit ideal for commercial dirty water applications.
- Includes the Pressure Regulating, Quick-Check Basket Filter that has a clear indicator which goes from green to red, telling you when to clean the filter. This reduces maintenance and takes the guesswork out of cleaning the filter. In addition, the threaded top makes it easy to remove and clean the stainless steel screen.
- Basket Filter and Pressure Regulator have been combined for one smaller Pressure Regulating, Quick-Check Basket filter that is 24% smaller than the previous unit.

Operating Range
- Flow: 68 to 4542 l/h
- Inlet pressure: 1.4 to 10.3 bar
- Filtration: 75 micron stainless steel screen
- Regulated pressure: 2.8 bar

Models
- XCZ-100-PRB-COM: 1”Ball Valve with 1”PESB Valve and 1” Pressure Regulating Quick-Check Basket Filter (NPT threads)

Replacement Screen
- QKCHK100M (150 micron stainless steel screen)
- QKCHK200M (75 micron stainless steel screen)

Replacement cap
- QKCHKCAP (Complete cap with body o-ring)

For flows below 19 l/h, Rain Bird recommends use of upstream filtration to prevent debris from collecting below the diaphragm.

Minimum Inlet Pressure for 2.8 bar outlet pressure

<table>
<thead>
<tr>
<th>Flow (l/h)</th>
<th>Inlet Pressure (bar)</th>
</tr>
</thead>
<tbody>
<tr>
<td>684</td>
<td>3.0</td>
</tr>
<tr>
<td>1134</td>
<td>3.0</td>
</tr>
<tr>
<td>2274</td>
<td>3.3</td>
</tr>
<tr>
<td>3408</td>
<td>3.8</td>
</tr>
</tbody>
</table>

Minimum Inlet Pressure for 2.8 bar outlet pressure

<table>
<thead>
<tr>
<th>Flow (l/h)</th>
<th>Inlet Pressure (bar)</th>
</tr>
</thead>
<tbody>
<tr>
<td>68</td>
<td>2.82</td>
</tr>
<tr>
<td>227</td>
<td>2.86</td>
</tr>
<tr>
<td>684</td>
<td>2.9</td>
</tr>
<tr>
<td>1134</td>
<td>3.0</td>
</tr>
<tr>
<td>2274</td>
<td>3.3</td>
</tr>
<tr>
<td>3408</td>
<td>3.6</td>
</tr>
<tr>
<td>4542</td>
<td>4.3</td>
</tr>
</tbody>
</table>
1.5" Inline Commercial Control Zone Kit
Run Up to 62 gpm (14080 l/h) for Large Zones

- High Flow Range: Allows for larger drip zone coverage with one control zone kit, saving labor cost, material cost and installation hassle.
- Low Friction Loss: Allows usage in zones with lower head pressure.
- Fully Assembled: Saves installation labor cost by ensuring all key components are included and that the direction of flow in individual components is assembled properly.
- Inline Configuration: Fewer connection points, which fits two kits instead of just one in a jumbo valve box. Also provides more access for maintenance and components.

Operating Range
- Flow Range: 3414 l/h to 14080 l/h
- Inlet Pressure: 1.03 to 7.9 bar
- Regulated Pressure: 2.8 bar
- Water Temperature: 0.5°C up to 43°C
- Ambient Temperature: 0.5°C up to 52°C

Specifications
Dimensions
- XCZ-150-LCS: 52.7 cm L x 14.6 cm W x 24 cm H
- XCZ-150-LCDR: 60 cm L x 14.6 cm W x 24 cm H

Filtration
- XCZ-150-LCS: 3.81 cm Stainless Steel Screen Filter, 130 Micron; Surface Area: 270 cm²
- XCZ-150-LCDR: 3.81 cm Disc Filter, 130 Micron; Surface Area: 310 cm²

Valve Type
- XCZ-150-LCS: 1.5" PEB
- XCZ-150-LCDR: 1.5" PESB-R
- Power: 24 VAC 50/60 Hz (cycles/sec) solenoid
- Inrush Current: 0.41 A (9.84 VA) at 50/60Hz
- Holding Current: 0.14 A (3.43 VA) at 50/60Hz
- Coil Resistance: 30-39 Ohms
- Two-wire compatible with ESP-LXD Decoders
- NPT threads

Models
- XCZ-150-LCS
- XCZ-150-LCDR

Replacement Filters
Disc
- LGFC120MD

Screen
- LGFC120MS

Pressure Loss Characteristics

<table>
<thead>
<tr>
<th>Flow Rate (l/h)</th>
<th>XCZ-150-LCS</th>
<th>XCZ-150-LCDR</th>
</tr>
</thead>
<tbody>
<tr>
<td>56.8</td>
<td>0.13</td>
<td>0.16</td>
</tr>
<tr>
<td>75.7</td>
<td>0.17</td>
<td>0.23</td>
</tr>
<tr>
<td>94.7</td>
<td>0.28</td>
<td>0.34</td>
</tr>
<tr>
<td>113.6</td>
<td>0.37</td>
<td>0.37</td>
</tr>
<tr>
<td>151.4</td>
<td>0.51</td>
<td>0.55</td>
</tr>
<tr>
<td>189.3</td>
<td>0.94</td>
<td>0.99</td>
</tr>
<tr>
<td>227.1</td>
<td>1.43</td>
<td>1.43</td>
</tr>
</tbody>
</table>

2-Wire Compatible
Low Flow Valves

Valves designed exclusively for the low flow rates of a drip irrigation system (0.6 to 37.8 l/m)

Features

- The only valves in the industry made specifically for drip irrigation systems, making these the only valves that can effectively handle particles at low flow rates – patented design
- These valves contain all of the features of reliable Rain Bird DV valves, coupled with a unique diaphragm design that allows particles to pass through at extremely low flow rates, thereby preventing weeping of the valve
- Allows the filter to be safely placed downstream of the valve since these valves handle all sizes of particles
- Unique "double-knife" diaphragm coupled with 1/2" diameter seat for flawless operation at low flow rates
- Low Flow Valve is available in 3/4” in-line model
- Double-filtered pilot flow design for maximum reliability
- External bleed to manually flush the system of dirt and debris during installation and system start-up
- Internal bleed for spray-free manual operation.

Operating Range

- Flow: 45 l/h to 2271 l/h
- Pressure: 1.0 to 10.3 bar

Electrical Specifications

- 24 VAC 50/60 Hz (cycles/sec) solenoid
- Inrush current: 0.30 (7.2 VA) at 50/60 Hz
- Holding current: 0.19 A (4.56 VA) at 50/60 Hz

Models

- LFV-075: 3/4” (20/27) female threaded inlet and outlet Low Flow DV Valve
- LFV-075-9V: 3/4” (20/27) female threaded inlet and outlet Low Flow DV Valve, 9-V latching solenoid
- LFV-100*: 1” Low Flow DV Valve
  *Available with BSP threads

<table>
<thead>
<tr>
<th>Flow l/h</th>
<th>LFV-075 bar</th>
<th>LFV-100 bar</th>
</tr>
</thead>
<tbody>
<tr>
<td>45</td>
<td>0.21</td>
<td>0.21</td>
</tr>
<tr>
<td>227</td>
<td>0.22</td>
<td>0.23</td>
</tr>
<tr>
<td>454</td>
<td>0.23</td>
<td>0.26</td>
</tr>
<tr>
<td>900</td>
<td>0.25</td>
<td>0.34</td>
</tr>
<tr>
<td>1368</td>
<td>0.28</td>
<td>0.44</td>
</tr>
<tr>
<td>1817</td>
<td>0.47</td>
<td>0.52</td>
</tr>
</tbody>
</table>

Pressure Loss Characteristics
1" & 1½ " High Flow Inline Pressure Regulators

High flow Pressure Regulator family that delivers pre-set regulation for a wide flow range (114 to 15900 l/h) providing a solution for most irrigation applications

Features

Flexibility
- Its high flow range (114 to 15900 l/h) capacity allows usage in a wide range of applications, making it ideal for drip or spray applications. It can be installed above or below grade
  - 1" Pressure Regulators flow range: 114 to 7950 l/h
  - 1½" Pressure Regulator flow range: 3408 to 15900 l/h

Reliable Performance:
- Pre-set outlet pressure regulation at either 2.8 bar or 3.4 bar provides worry-free protection for your irrigation installations.

Durability:
- Tested to meet Rain Bird’s high-quality standards. High Strength ABS construction and stainless steel springs provide the durability to withstand any job

Operating Range
- Pressure Regulation:
  - PSI-H40X-100: 2.8 bar
  - PSI-H50X-100: 3.4 bar
  - PSI-H40X-150: 2.8 bar
- Flow Range:
  - PSI-H40X-100 & PSI-H50X-100: 114 l/h to 7950 l/h
  - PSI-H40X-150: 3408 l/h to 15900 l/h
- Inlet pressure: 1.0 bar to 10.3 bar

Specifications
- PSI-H40X-100 & PSI-H50X-100: 1" Female NPT X 1" Female NPT
- PSI-H40X-150: 1½" Female NPT X 1½" Female NPT

Dimensions:
- PSI-H40X-100 & PSI-H50X-100: 14.7 cm in Length x 6.8 cm in Width
- PSI-H40X-150: 16.0 cm in Length x 8.4 cm in Width

Models
- PSI-H40X-100: 1" 40 psi inline Pressure Regulator
- PSI-H50X-100: 1" 50 psi inline Pressure Regulator
- PSI-H40X-150: 1½" 40 psi inline Pressure Regulator

How to Specify

<table>
<thead>
<tr>
<th>PSI</th>
<th>H</th>
<th>XX</th>
<th>X</th>
<th>100</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model Pressure Regulator</td>
<td>Inlet/Outlet Size</td>
<td>Pre-Set Pressure Regulation</td>
<td>Flow Range Capacity</td>
<td></td>
</tr>
<tr>
<td>40</td>
<td>50</td>
<td>2.8 bar</td>
<td>3.5 bar</td>
<td>H = High Flow (up to 15900 l/h)</td>
</tr>
</tbody>
</table>
Pressure-Regulating Filter (RBY)
Unique, compact unit that works with all valves to create a simple, efficient control zone. Combines filtration and pressure regulation in one piece for protection of downstream components in a low-volume irrigation system.

Features
- Reduces the number of components in a control zone, making it smaller and easier to install. More control zones can fit in one valve box!
- Combination unit comes with 75 micron stainless steel reduces the number of connections, making installation easier and faster
- Static RBY filter regulates pressure to a nominal 2.0 or 2.8 bar - PR RBY Filter Cap has sealing O-ring and unthreads to provide access to the filter element for easy cleaning
- 2.1 or 2.8 bar pressure regulator is integrated into the filter body
- Robust body and cap are made of glass-filled polypropylene and provide 10.3 bar pressure rating

Operating Range
- Flow - ¾” units: 48 to 1134 l/h
  - 1” units: 684 to 3408 l/h
- Inlet pressure: 1.4 to 10.3 bar
- Regulated pressure: - ¾" units: 2.1 bar
  - 1" units: 2.8 bar

Models
- PRF-075-RBY: ¾” PR RBY Filter (NPT thread)
- PRF-100-RBY: 1” PR RBY Filter (NPT thread)
- IPRF-100-RBY: 1”PR RBY Filter (BSP thread)

Replacement Screen
- RBY-200SSMX (75 micron stainless steel screen)

Note: When installing with emission points more than 1.5 m above the pressure regulating filter, a check valve should be installed after the regulator end.

Inline Pressure Regulators
Features
- Can be installed above or below grade
- Preset outlet pressure: 1.0 to 2.1 bar
- ¾” (20/27) NPT female-threaded inlet and outlet

Operating Range
- Flow
  - psi-L30X-075: 0.8 to 18.9 l/m
  - psi-M30X-075, psi-M40X-075: 7.8 to 37.9 l/m
  - psi-M15-M50: 0.45 to 5 m³/hr
- Inlet Pressure: 0.7 to 10.3 bar

Models
- PSI-M15: preset outlet pressure: 1.0 bar
- PSI-M20: preset outlet pressure: 1.4 bar
- PSI-M25: preset outlet pressure: 1.8 bar
- PSI-M30: preset outlet pressure: 2.1 bar
- PSI-M40: preset outlet pressure: 2.8 bar
- PSI-M50: preset outlet pressure: 3.5 bar

Retrofit Pressure Regulators
Features
- Provides convenient 2.1 bar pressure regulation at the riser for any ½” FPT emission device or compression adapter
- Can be installed above or below grade
- Can be used with Xeri-bird™ 8 Multi-Outlet Emission Device (see page 103)

Operating Range
- Flow: 1.9 to 15.1 l/m
- Inlet Pressure: 1.0 to 4.8 bar

Dimensions
- ½” female-threaded inlet
- Height: 10 cm

Model
- PRS-050-30

Pressure Loss Characteristics

<table>
<thead>
<tr>
<th>Flow Rate l/h</th>
<th>PRF-075-RBY bar</th>
<th>PRF-100-RBY bar</th>
</tr>
</thead>
<tbody>
<tr>
<td>48</td>
<td>0.21</td>
<td>N/A</td>
</tr>
<tr>
<td>225</td>
<td>0.28</td>
<td>N/A</td>
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<tr>
<td>684</td>
<td>0.42</td>
<td>0.06</td>
</tr>
<tr>
<td>1134</td>
<td>0.69</td>
<td>0.14</td>
</tr>
<tr>
<td>1818</td>
<td>N/A</td>
<td>0.26</td>
</tr>
<tr>
<td>2274</td>
<td>N/A</td>
<td>0.36</td>
</tr>
<tr>
<td>3408</td>
<td>N/A</td>
<td>0.83</td>
</tr>
</tbody>
</table>

Note: Pressure loss for 200 mesh (75 micron) filter screen
Landscape Drip
Control Zone Components
Pressure Regulating Basket Filters

The only commercial-grade filter with built in pressure regulator for low-volume irrigation zones. Also available with a clean/dirty indicator.

**Features**
- Reduces maintenance and labor costs - 40% larger filter surface than standard filters means less frequent cleaning
- Provides increased reliability – "No Spill" feature ensures dirt does not fall back into the filter during cleanup operation
- Simplifies installation and maintenance – threaded top with O-ring makes it easy to remove and clean that stainless steel filter screen
- Efficient design – combines filtration and pressure regulation in one compact unit with fewer connections
- Available in 1" model
- Comes pre-assembled with 75 micron stainless steel screen (other screen sizes available)
- Built-in 2.7 bar pressure regulator

**Operating Range**
- Flow: 684 to 4542 l/h
- Inlet Pressure: 1.0 to 10.3 bar
- Regulating Pressure: 2.8 bar
- Filtration: 75 micron stainless steel
- Temperature: Up to 66° C

**Models**
- IPRB-100: 1" Basket Filter with built-in Pressure Regulator (2.8 bar) and 75 micron stainless steel screen (BSP thread)
- PRB-100: 1" Basket filter with built in Pressure Regulator (2.8 bar) and 200 mesh (75 micron) stainless steel screen (NPT thread)
- IPRB-QKCHK-100: 1" Basket filter with built in Pressure Regulator (2.8 bar) and 200 mesh (75 micron) stainless steel screen (BSP thread)
- PRB-QKCHK-100: 1" Basket filter with built in Pressure Regulator (2.8 bar) and 200 mesh (75 micron) stainless steel screen (NPT thread)

**Flow Indicating Basket Filter**
- X14155: International Flow Sensor Pressure Regulating Basket Filter, 75 mesh. The Basket Filter Body is the 1" BSP
- X14156: International Flow Sensor Pressure Regulating Basket Filter, 120 mesh. The Basket Filter Body is the 1" BSP
- X14157: International Flow Sensor Pressure Regulating Basket Filter, 150 mesh. The Basket Filter Body is the 1" BSP
- X14158: International Flow Sensor Pressure Regulating Basket Filter, 200 mesh. The Basket Filter Body is the 1" BSP

**Replacement Filter Screens**
- QKCHK-200M: 75 micron stainless steel screen, white

Note: When installing with emission points more than 1.5 m above the pressure regulator a check valve should be installed after the regulator end.
Large-Capacity Filters
Large-Capacity high flow and low maintenance with a solid disc and screen filters

Features
- Provides extra large filtration capacity for residential, commercial, and municipal applications
- Durable filters can be easily removed for cleaning, significantly reducing cleaning time
- Disc filters can decompress for easy cleaning
- Auxiliary connection with a threaded cap can be drilled to allow draining or depressurization

Operating Range
- 3/4" Model: Maximum flow: up to 5 m³/hr
  - Filtering surface (disc): 180 cm²
  - Filtering surface (screen): 160 cm²
- 1" Model: Maximum flow: Up to 6 m³/hr
  - Filtering surface (disc): 180 cm²
  - Filtering surface (screen): 160 cm²
- 1.5" Models: Maximum flow: Up to 20 m³/hr
  - Filtering surface (disc): 535 cm²
  - Filtering surface (screen): 490 cm²
- 2" Models: Maximum flow: Up to 25 m³/hr
  - Filtering surface (disc): 525 cm²
  - Filtering surface (screen): 485 cm²
- Maximum Pressure: 8 bar
- Maximum Temperature: Up to 60°C

Specifications
- Inlet / Outlet Size:
  - 3/4" Models: 3/4" BSP
  - 1" Models: 1" BSP
  - 1.5" Models: 1.5" BSP
  - 2" Models: 2" BSP

Models
- ILCRBY100D: 1" Large-Capacity Disc Filter
- ILCRBY100S: 1" Large-Capacity Screen Filter
- ILCRBY150D: 1.5" Large-Capacity Disc Filter
- ILCRBY150S: 1.5" Large-Capacity Screen Filter
- ILCRBY200D: 2" Large-Capacity Disc Filter
- ILCRBY200S: 2" Large-Capacity Screen Filter

Filtration
- Stainless Steel Screen Filter: 130 Micron
- Plastic Filter Discs: 130 Micron

Note: NPT thread options are also available.
Filtration

Water Saving Tips

- Backwash for the specified time only. Longer will use more water and will not increase effectiveness - and may cause other operational issues.
- Perform periodic manual cleaning and inspection of your filter to ensure the element is intact. This reduces downstream maintenance and ensures backwash cycles are working as intended.
- Size filtration based on operational specification. Under-sizing the filter will result in a higher backwash rate and higher water usage. For assistance call 520-741-6189 or email filters@rainbird.com.
"G-Series" Hydraulic Suction Scanning Screen Filter
Economy and Value with Lower Backwash Volumes

Features

- Provides worry free medium-flow rate filtered water quality
- Powered by source line water pressure, the filter’s backwashing system produces a concentrated high velocity and low volume reverse water flow to systematically clean the screen of any entrapped contaminants
- Models are available as a filter unit only, or as a filter assembly including bypass plumbing and valves for fast and easy installation on site
- Heavy-duty, durable, SS woven wire mesh screen filtration element with PVC support is supplied standard. Optional screen construction including multi-layer sintered SS and wedgewire are also available upon request. HT models only supplied with sintered SS
- Standard: 200 micron. Optional: 50 - 2000 micron. Flow rates will vary with screen size and water source. Max flow assumes good water quality (< 20 ppm solids) and 200 micron screen
- Standard flow rates from 100 to 2,640 GPM
- Standard maximum operating pressure of 150 PSI (higher pressures optionally available)
- Filtered, clean water backwashing initiated automatically by time or pressure differential via integrated Rain Bird F2 AC/DC Controller
- Flanged inlet and outlet standard except on HO-G-02 and HT-G-02 filter only configurations which are thread. Grooved inlet and outlet configuration optionally available
- Vessel Material (based on model): Powder Coated Carbon Steel or 304 Stainless Steel, 316 SS and Duplex SS optional
- Available as filter only, or as a complete assembly with bypass manifold and valves. Higher pressures optionally available

"G-Series" Suction Scanning Screen Filter Performance Data

<table>
<thead>
<tr>
<th>Powder Coated Carbon Steel Model Number</th>
<th>Stainless Steel Model Number</th>
<th>SS Mesh Screen Area (in²)</th>
<th>Sintered Screen Area (in²)</th>
<th>Max Flow (GPM)</th>
<th>Max Flow (m³/hr)</th>
<th>Max Pressure (psi)</th>
<th>Inlet / Outlet Flange Size (in)</th>
<th>Flush Valve Size</th>
<th>Minimum Inlet Pressure During Rinse Cycle (psi)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HO-G-02-LE-C</td>
<td>HO-G-02-LE-S</td>
<td>64</td>
<td></td>
<td>100</td>
<td>22.7</td>
<td>150</td>
<td>2</td>
<td>1&quot;</td>
<td>35</td>
</tr>
<tr>
<td>HO-G-03-LE-C</td>
<td>HO-G-03-LE-S</td>
<td>120</td>
<td></td>
<td>200</td>
<td>45.4</td>
<td>150</td>
<td>3</td>
<td>1&quot;</td>
<td>35</td>
</tr>
<tr>
<td>HO-G-04-LE-C</td>
<td>HO-G-04-LE-S</td>
<td>120</td>
<td></td>
<td>300</td>
<td>68.1</td>
<td>150</td>
<td>4</td>
<td>1&quot;</td>
<td>35</td>
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<tr>
<td>HO-G-04-LE-C</td>
<td>HO-G-04-LE-S</td>
<td>466</td>
<td></td>
<td>500</td>
<td>113.6</td>
<td>150</td>
<td>4</td>
<td>1.5&quot;</td>
<td>35</td>
</tr>
<tr>
<td>HO-G-06-LS-C</td>
<td>HO-G-06-LS-S</td>
<td>466</td>
<td></td>
<td>750</td>
<td>170.3</td>
<td>150</td>
<td>6</td>
<td>1.5&quot;</td>
<td>35</td>
</tr>
<tr>
<td>HO-G-08-LS-C</td>
<td>HO-G-08-LS-S</td>
<td>648</td>
<td></td>
<td>1300</td>
<td>295.3</td>
<td>150</td>
<td>8</td>
<td>1.5&quot;</td>
<td>35</td>
</tr>
<tr>
<td>HO-G-08-LE-C</td>
<td>HO-G-08-LE-S</td>
<td>810</td>
<td></td>
<td>1320</td>
<td>299.8</td>
<td>150</td>
<td>8</td>
<td>2&quot;</td>
<td>35</td>
</tr>
<tr>
<td>HT-G-02-LE-C</td>
<td>HT-G-02-LEX-S</td>
<td>216</td>
<td>200</td>
<td>150</td>
<td>45.4</td>
<td>150</td>
<td>2</td>
<td>1&quot;</td>
<td>35</td>
</tr>
<tr>
<td>HT-G-02-LEX-S</td>
<td>HT-G-02-LEX-S</td>
<td>432</td>
<td>300</td>
<td>150</td>
<td>68.1</td>
<td>150</td>
<td>2</td>
<td>1&quot;</td>
<td>35</td>
</tr>
<tr>
<td>HT-G-03-LE-C</td>
<td>HT-G-03-LE-S</td>
<td>216</td>
<td>200</td>
<td>150</td>
<td>45.4</td>
<td>150</td>
<td>3</td>
<td>1&quot;</td>
<td>35</td>
</tr>
<tr>
<td>HT-G-04-LS-S</td>
<td>HT-G-04-LS-S</td>
<td>432</td>
<td>500</td>
<td>150</td>
<td>113.6</td>
<td>150</td>
<td>4</td>
<td>1&quot;</td>
<td>35</td>
</tr>
<tr>
<td>HT-G-04-LE-S</td>
<td>HT-G-04-LE-S</td>
<td>720</td>
<td>600</td>
<td>150</td>
<td>136.3</td>
<td>150</td>
<td>4</td>
<td>1&quot;</td>
<td>35</td>
</tr>
</tbody>
</table>

Contact Rain Bird for drawings or visit www.rainbird.com to download.

Filter flow is based on 200 micron or greater filtration of clear irrigation water (< 20 ppm solids). Appropriate flow de-rating is required for excessive debris loads (silt, organics, algae, etc.), reclaim water and finer screens. Water sources with chlorides over 175 PPM and free chlorine over 2 mg/l require special construction materials. Contact Rain Bird for filter selection assistance for these applications.

Not available in all markets, consult Rain Bird for availability
"I-Series"
Hydraulic Suction Scanning Screen Filter

Irrigation Uses
Self-cleaning, line powered hydraulic water filters for turf, landscape, agriculture, greenhouse, golf course and nursery applications.

Features
- Flow Rate: 300 – 7,500 gpm
- Max Temperature: 210° F
- Single SS electric ball valve for flushing operations standard
- Heavy-duty, durable, 316 SS woven wire mesh screen filtration element with PVC support is supplied standard. Optional screen construction including multi-layer sintered 316 SS and wedgewire are also available upon request. HT models only supplied with sintered SS.
- Screen opening: 50μ – 2000μ
- Working pressure: 40 – 150 psi
- Vessel Material (based on model): Powder Coated Carbon Steel or 304 Stainless Steel, 316 SS and Duplex SS optional
- Available as filter only, or as a complete assembly with bypass manifold and valves. Higher pressures optionally available.

"I-Series" Suction Scanning Screen Filter Performance Data

<table>
<thead>
<tr>
<th>Powder Coated Carbon Steel Model Number</th>
<th>Stainless Steel Model Number</th>
<th>Line Size (in)</th>
<th>Std. Flow Rate (gpm)</th>
<th>Std. Flow Rate (gpm)</th>
<th>Std. Flow Rate (gpm)</th>
<th>Std. Flow Rate (gpm)</th>
<th>SS Mesh Screen Area (in²)</th>
<th>Sintered Screen Area (in²)</th>
<th>Rinse Duration (Seconds)</th>
<th>Flush Valve Size (in)</th>
<th>Flush Valve Size (Gallons)</th>
<th>Minimum Inlet Pressure During Rinse Cycle (psi)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HO-I-03-PS-C-M</td>
<td>HO-I-03-PS-S-M</td>
<td>2</td>
<td>300</td>
<td>300</td>
<td>300</td>
<td>300</td>
<td>260</td>
<td>254</td>
<td>12 to 16</td>
<td>≈ 35</td>
<td>1.5</td>
<td>40</td>
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<tr>
<td>HO-I-04-PS-C-M</td>
<td>HO-I-04-PS-S-M</td>
<td>4</td>
<td>500</td>
<td>500</td>
<td>500</td>
<td>500</td>
<td>420</td>
<td>413</td>
<td>12 to 16</td>
<td>≈ 35</td>
<td>1.5</td>
<td>40</td>
</tr>
<tr>
<td>HO-I-06-PS-C-M</td>
<td>HO-I-06-PS-S-M</td>
<td>6</td>
<td>750</td>
<td>750</td>
<td>580</td>
<td>580</td>
<td>420</td>
<td>413</td>
<td>12 to 16</td>
<td>≈ 35</td>
<td>1.5</td>
<td>40</td>
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<tr>
<td>HO-I-08-PS-C-M</td>
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<td>8</td>
<td>1000</td>
<td>830</td>
<td>580</td>
<td>580</td>
<td>420</td>
<td>413</td>
<td>12 to 16</td>
<td>≈ 35</td>
<td>1.5</td>
<td>40</td>
</tr>
<tr>
<td>HO-I-10-PS-C-M</td>
<td>HO-I-10-PS-S-M</td>
<td>10</td>
<td>2000</td>
<td>1300</td>
<td>920</td>
<td>920</td>
<td>675</td>
<td>614</td>
<td>12 to 16</td>
<td>≈ 65</td>
<td>2</td>
<td>40</td>
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<tr>
<td>HO-I-12-PS-C-M</td>
<td>HO-I-12-PS-S-M</td>
<td>12</td>
<td>2750</td>
<td>1800</td>
<td>1200</td>
<td>1200</td>
<td>850</td>
<td>826</td>
<td>12 to 16</td>
<td>≈ 65</td>
<td>2</td>
<td>40</td>
</tr>
<tr>
<td>HO-I-14-PS-C-M</td>
<td>HO-I-14-PS-S-M</td>
<td>14</td>
<td>3750</td>
<td>1950</td>
<td>1300</td>
<td>1300</td>
<td>875</td>
<td>826</td>
<td>12 to 16</td>
<td>≈ 65</td>
<td>2</td>
<td>40</td>
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<tr>
<td>HT-I-03-LP-S-M</td>
<td>HT-I-03-LP-S-M</td>
<td>3</td>
<td>300</td>
<td>300</td>
<td>300</td>
<td>300</td>
<td>360</td>
<td>360</td>
<td>12 to 16</td>
<td>≈ 12</td>
<td>1</td>
<td>40</td>
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<tr>
<td>HT-I-04-PE-S-M</td>
<td>HT-I-04-PE-S-M</td>
<td>4</td>
<td>600</td>
<td>600</td>
<td>600</td>
<td>600</td>
<td>720</td>
<td>720</td>
<td>12 to 16</td>
<td>≈ 35</td>
<td>1.5</td>
<td>40</td>
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<tr>
<td>HT-I-06-PE-S-M</td>
<td>HT-I-06-PE-S-M</td>
<td>6</td>
<td>800</td>
<td>800</td>
<td>800</td>
<td>800</td>
<td>720</td>
<td>720</td>
<td>12 to 16</td>
<td>≈ 35</td>
<td>1.5</td>
<td>40</td>
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<tr>
<td>HT-I-08-PE-S-M</td>
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<td>8</td>
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<td>1400</td>
<td>1400</td>
<td>1000</td>
<td>1008</td>
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<td>≈ 35</td>
<td>1.5</td>
<td>40</td>
</tr>
<tr>
<td>HT-I-10-PE-S-M</td>
<td>HT-I-10-PE-S-M</td>
<td>10</td>
<td>1500</td>
<td>1500</td>
<td>1500</td>
<td>1152</td>
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<td>1152</td>
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<td>≈ 65</td>
<td>2</td>
<td>40</td>
</tr>
<tr>
<td>HT-I-12-PS-S-M</td>
<td>HT-I-12-PS-S-M</td>
<td>12</td>
<td>3200</td>
<td>3200</td>
<td>2520</td>
<td>1800</td>
<td>1800</td>
<td>1800</td>
<td>12 to 16</td>
<td>≈ 65</td>
<td>2</td>
<td>40</td>
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</tbody>
</table>

Bypass Manifold

- I-3-CS-T: 300
- I-4-CS-F: 600
- I-6-CS-F: 800
- I-8-CS-F: 1300
- I-10-CS-F: 10,300
- I-12-CS-F: 12,300
- I-14-CS-F: 14,3750

Contact Rain Bird for drawings or visit www.rainbird.com to download.

The calculated flow rates above are based on average clear lake quality water (< 40 ppm solids). For good, poor or bad water contact Rain Bird. Drawings of standard filter models are available at www.rainbird.com. Standard Rain Bird controllers: F2 AC/DC or Filtron 110 controller (based on application).

Water sources with chlorides over 175 PPM and free chlorine over 2 mg/l require special construction materials. Contact Rain Bird for filter selection assistance for these applications.

Not available in all markets, consult Rain Bird for availability.
PSS Series
Self-Cleaning Pump Suction Screen

Keep Debris Out of Your Pump and Irrigation System

Features

- Galvanized, Self-Cleaning Pump Suction Screen removes large trash and debris from water sources, saving time and money in energy, pumping efficiency and maintenance costs.
- All water must pass through the pump suction screen attached to the end of the pump suction line before entering the pump intake pipe. A small, side-stream from the pump discharge plumbing drives two spray bars that continually rotate, jetting water at the screen and blasting debris away.
- Heavy 12 mesh stainless steel screen increases your pump efficiency for many years to come.

12 Mesh Self-Cleaning Pump Suction Screen Performance Data

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Flow US GPM</th>
<th>Flow m³/Hour</th>
<th>Screen Length (in)</th>
<th>Total Length (in)</th>
<th>Screen Diameter (in)</th>
<th>Flange Size (in)</th>
<th>Return Inlet Pipe Size (in)</th>
<th>Operating Pressure (min - max psi)</th>
<th>Weight Lbs.</th>
<th>Cleaning Spray (GPM)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSS200</td>
<td>325</td>
<td>73.8</td>
<td>11</td>
<td>25</td>
<td>16</td>
<td>4</td>
<td>1.5</td>
<td>35-100</td>
<td>38</td>
<td>20</td>
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<tr>
<td>PSS400</td>
<td>550</td>
<td>124.9</td>
<td>15</td>
<td>28.8</td>
<td>16</td>
<td>6</td>
<td>1.5</td>
<td>40-100</td>
<td>57</td>
<td>20</td>
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<tr>
<td>PSS600</td>
<td>750</td>
<td>170.3</td>
<td>16</td>
<td>32.5</td>
<td>24</td>
<td>8</td>
<td>1.5</td>
<td>40-100</td>
<td>101</td>
<td>20</td>
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<td>PSS800</td>
<td>950</td>
<td>215.7</td>
<td>18</td>
<td>34.5</td>
<td>24</td>
<td>10</td>
<td>1.5</td>
<td>45-100</td>
<td>108</td>
<td>20</td>
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<tr>
<td>PSS1000</td>
<td>1350</td>
<td>306.5</td>
<td>23</td>
<td>39.5</td>
<td>24</td>
<td>10</td>
<td>1.5</td>
<td>50-100</td>
<td>116</td>
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<td>PSS1400</td>
<td>1650</td>
<td>374.6</td>
<td>26</td>
<td>42.5</td>
<td>24</td>
<td>12</td>
<td>1.5</td>
<td>55-100</td>
<td>128</td>
<td>24</td>
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<td>PSS1700</td>
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<td>44.5</td>
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<td>12</td>
<td>1.5</td>
<td>55-100</td>
<td>148</td>
<td>24</td>
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<tr>
<td>PSS2000</td>
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<td>533.5</td>
<td>32</td>
<td>48.5</td>
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<td>14</td>
<td>1.5</td>
<td>60-100</td>
<td>160</td>
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<tr>
<td>PSS2400</td>
<td>2600</td>
<td>590.2</td>
<td>35</td>
<td>52.5</td>
<td>30</td>
<td>16</td>
<td>1.5</td>
<td>65-100</td>
<td>223</td>
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<tr>
<td>PSS3000</td>
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<td>40-65</td>
<td>236</td>
<td>44</td>
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<td>PSS3500</td>
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<td>794.5</td>
<td>40</td>
<td>59.5</td>
<td>36</td>
<td>18</td>
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<td>40-65</td>
<td>283</td>
<td>44</td>
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<td>PSS4000</td>
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<td>908.0</td>
<td>40</td>
<td>63.5</td>
<td>42</td>
<td>18</td>
<td>1.5</td>
<td>40-65</td>
<td>358</td>
<td>44</td>
</tr>
</tbody>
</table>

Contact Rain Bird for drawings or visit www.rainbird.com to download.
CS Series
Centrifugal Sand Separator
Remove contaminants to minimize required maintenance and increase efficiency

Features
• Capacities of 4 to 8300 gpm
• Simple installation (no electrical power required)
• Efficient pre-filter to reduce sand load on downstream components
• Rain Bird Centrifugal Sand Separators are designed to separate abrasive particles before they can enter the irrigation system, keeping equipment clean and clear of debris, which minimizes the amount of maintenance required and increases operational efficiency
• The separator removes sand and particles that are heavier than water (materials with a specific gravity of 2 or greater)
• Liquids and solids enter the unit and begin traveling in a circular flow. This centrifugal action throws heavier particulates towards the filter walls and eventually downward in a spiral motion to the separation chamber. The particulates collect in the separation chamber and are purged manually from the system. The filtered water is then drawn to the separator's vortex and through the outlet
• An optional automatic purge controller and valve can be used on all applications to automate the purge process, which eliminates the need for manual flushing. Small vertical design separators may be wall mounted or supported by the system piping

Centrifugal Sand Separators Performance Data

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Flow* US GPM</th>
<th>Flow m³/Hour</th>
<th>Inlet / Outlet Line Size (in)</th>
<th>Length (cm)</th>
<th>Weight Lbs.</th>
<th>Max. Particle Size (in)</th>
<th>Flush Valve Size (in)</th>
</tr>
</thead>
<tbody>
<tr>
<td>VCS-R5V</td>
<td>4 - 10</td>
<td>0.9 - 2.3</td>
<td>0.5</td>
<td>20</td>
<td>50.8</td>
<td>13</td>
<td>0.625</td>
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<tr>
<td>VCS-R7V</td>
<td>10 - 20</td>
<td>2.3 - 4.6</td>
<td>0.75</td>
<td>20</td>
<td>50.8</td>
<td>15</td>
<td>0.375</td>
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<tr>
<td>VCS-R10V</td>
<td>18 - 38</td>
<td>4 - 8.7</td>
<td>1</td>
<td>30.5</td>
<td>77.5</td>
<td>26</td>
<td>0.5</td>
</tr>
<tr>
<td>VCS-R12V</td>
<td>26 - 52</td>
<td>6 - 12</td>
<td>1.25</td>
<td>30.5</td>
<td>77.5</td>
<td>26</td>
<td>0.5</td>
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<tr>
<td>VCS-R15V</td>
<td>38 - 79</td>
<td>8.7 - 18</td>
<td>1.5</td>
<td>30.5</td>
<td>77.5</td>
<td>26</td>
<td>0.5</td>
</tr>
<tr>
<td>VCS-R20V</td>
<td>63 - 120</td>
<td>14.5 - 27.6</td>
<td>2</td>
<td>36</td>
<td>91.4</td>
<td>44</td>
<td>0.5</td>
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<tr>
<td>VCS-R25V</td>
<td>100 - 180</td>
<td>23 - 41.4</td>
<td>2.5</td>
<td>44</td>
<td>111.8</td>
<td>55</td>
<td>0.5</td>
</tr>
<tr>
<td>VCS-R30V</td>
<td>125 - 260</td>
<td>28.8 - 59.8</td>
<td>3</td>
<td>48</td>
<td>121.9</td>
<td>75</td>
<td>0.5</td>
</tr>
<tr>
<td>VCS-R40V</td>
<td>190 - 345</td>
<td>43.7 - 79.4</td>
<td>4</td>
<td>52</td>
<td>132.1</td>
<td>120</td>
<td>0.5</td>
</tr>
<tr>
<td>ACS-R40LA</td>
<td>200 - 525</td>
<td>46 - 120</td>
<td>4</td>
<td>80</td>
<td>221</td>
<td>280</td>
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<tr>
<td>ACS-R60LA</td>
<td>365 - 960</td>
<td>84 - 220</td>
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<td>106.25</td>
<td>293.4</td>
<td>493</td>
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<td>ACS-R80LA</td>
<td>800 - 1600</td>
<td>184 - 369</td>
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<td>114</td>
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<td>ACS-R100LA</td>
<td>1300 - 2300</td>
<td>299 - 529</td>
<td>10</td>
<td>123.5</td>
<td>342.9</td>
<td>840</td>
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<tr>
<td>ACS-R120LA</td>
<td>2025 - 3400</td>
<td>465 - 782</td>
<td>12</td>
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<td>ACS-R140LA</td>
<td>2975 - 5000</td>
<td>684 - 1150</td>
<td>14</td>
<td>148</td>
<td>424.2</td>
<td>1550</td>
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<tr>
<td>ACS-R160LA</td>
<td>4000 - 6200</td>
<td>920 - 1426</td>
<td>16</td>
<td>160</td>
<td>462.3</td>
<td>1850</td>
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<tr>
<td>ACS-R180LA</td>
<td>5100 - 8300</td>
<td>1173 - 1909</td>
<td>18</td>
<td>177</td>
<td>462.3</td>
<td>2400</td>
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</tbody>
</table>

Not available in all markets, consult Rain Bird for availability
HDF Series
Disc Filters
Automatic self-cleaning disc filtration equipment

Features
- Automatic self-cleaning disc filtration equipment with 2” valves and high density polyethylene manifolds
- Ideal for surface and well water containing both organic (algae) and inorganic materials: rivers, reservoirs, canals, waste water, and well water containing light sand (<3PPM) and other contaminants
- The patented system’s helical action provides efficient cleaning
- Manufactured from engineered plastics to resist rust and corrosion from chemicals and water
- All units are factory tested prior to shipment
- Disc elements provide depth filtration -not just surface filtration
- Unit is pre-assembled with HDPE (High-density polyethylene) manifold for easy installation
- DP, time or manual backflush cycle can be imitated from the controller
- Plastic backflush valves are lightweight and corrosion resistant
- Low maintenance and performs reliable backflush
- Filtration disc versatility (filtration grades can be easily changed)
- Available with 100, 130, 200 or 400 micron discs (specify when ordering)

Rain Bird HDF Series 1X2 filter backwash.
- **Filtration Stage:** As water goes through the discs, particles are projected away due to the cyclone effect, reducing the backflushing frequency
- **Backflushing Stage:** Water is projected through the discs, expelling the retained particles and evacuating them through the drainage manifold while the rest of the equipment is still in the filtration stage, supplying the remaining installation

Rain Bird HDF Series-2 systems backwashes one station at a time while the remaining elements continue filtering.
- **Filtration Stage:** As water goes through the discs, particles are projected away and kept in suspension due to the cyclone effect, reducing the backflushing frequency
- **Backflushing Stage:** Water is projected through the discs, expelling the retained particles and evacuating them through the drainage manifold. The rest of the filters battery continue filtering. The filtration process restarts when the discs recompress. The backflush process is controlled by the Rain Bird Control Unit
Specifications

HDF Series 1x2 Disc Filters
- Suited for areas with or without electricity.
- Ideal where manual cleaning is troublesome.
- Compact design fits in tight spaces.
- Control Unit functions on pressure differential or time.
- Automatic self-cleaning 2" filter for low flow ranges.
- Maximum Flow: 106 gpm (24 m³/h).
- Maximum filtering surface (231 in² / 1492 cm²).
- Maximum pressure: 145 psi (10 bar).
- Maximum temperature: 140° F (60° C).
- Standard 100 micron: Optional 130, 200 or 400 micron.

HDF Series 2 Disc Filters
- Suitable for surface and well waters containing both organic (algae) and inorganic materials.
  - Rivers, reservoirs, canals and waste water.
  - Well water containing light sand (<3 PPM) and other contaminants.
- Maximum flow: 848 gpm (192 m³/h) - 106 gpm (24 m³/h) per filter element. Max flow is based on 200 micron discs and good water quality source (<20 ppm solids). Flow is de-rated based on water source and filtration level. Consult Rain Bird for sizing information.
- Maximum filtering surface: (231 in² / 1492 cm²).
- Maximum pressure: 145 psi (10 bar).
- Maximum temperature: 140° F (60° C).
- Standard: 100 micron. Optional: 20, 50, 130, 200 or 400 micron.

Control Units
Rain Bird Filtron 11 O with integrated pressure differential switch allows backwash activation by time or pressure differential. Controllers are available in 12 VDC, 11 O VAC and 220 VAC.

HDF Series 1x2 Disc Filters Specifications

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Number of Filters</th>
<th>Manifold</th>
<th>Filtering Surface</th>
</tr>
</thead>
<tbody>
<tr>
<td>1X2/2G</td>
<td>1-2&quot;</td>
<td>Inlet: 2&quot; PVC Outlet: 2&quot; NPT Drainage: 2&quot; NPT</td>
<td>231 1492</td>
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</table>

HDF Series 2 Disc Filters Specifications

<table>
<thead>
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<th>Model Number</th>
<th>Number of Filters</th>
<th>Manifold</th>
<th>Filtering Surface</th>
</tr>
</thead>
<tbody>
<tr>
<td>2X2/3G</td>
<td>2</td>
<td>3&quot; GROOVED</td>
<td>463 2,984</td>
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<tr>
<td>3X2/4G</td>
<td>3</td>
<td>4&quot; GROOVED</td>
<td>694 4,476</td>
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<tr>
<td>4X2/6G</td>
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<td>6&quot; GROOVED</td>
<td>925 5,968</td>
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<td>6&quot; GROOVED</td>
<td>1,156 7,460</td>
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<td>6&quot; GROOVED</td>
<td>1,388 8,952</td>
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<td>1,619 10,444</td>
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Rain Bird Filtration Controller

F2 AC/DC-P Specifications

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<tr>
<td>115 - 230VAC</td>
</tr>
<tr>
<td>12 - 15VDC</td>
</tr>
<tr>
<td>230VAC (optional)</td>
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<table>
<thead>
<tr>
<th>OUTPUT</th>
</tr>
</thead>
<tbody>
<tr>
<td>24VAC, 12VDC</td>
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</table>

<table>
<thead>
<tr>
<th>FEATURES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up to Two (2) stations plus master valve</td>
</tr>
<tr>
<td>Input voltage 115, 230 VAC (optional) 12VDC</td>
</tr>
<tr>
<td>Output selectable to operate 24VAC, 12VDC solenoids</td>
</tr>
<tr>
<td>Pressure differential (PD) gauge included</td>
</tr>
<tr>
<td>Fixed PD delay</td>
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<tr>
<td>Retestable backwash count</td>
</tr>
<tr>
<td>Retestable alarm</td>
</tr>
<tr>
<td>Plastic outdoor box</td>
</tr>
<tr>
<td>Periodic, manual, or pressure differential (PD) actuation</td>
</tr>
<tr>
<td>Accurate timing</td>
</tr>
<tr>
<td>Simple programming</td>
</tr>
</tbody>
</table>

Rain Bird reserves the right to change the characteristics of these products without prior notice.

HDF Series 4 Disc Filtration systems for flows over 848 GPM (192 m³/h) quoted upon request.
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Dedicated to the Development of Irrigation Professionals

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• Get the designation that proves to your customers that you are the best choice to do the job

To learn more, visit: www.rainbirdservices.com
## Controller Compatibility Matrix

<table>
<thead>
<tr>
<th>Accessory</th>
<th>Description</th>
<th>ESP9V</th>
<th>TBOSBT</th>
<th>ESPTIME</th>
<th>ESPME</th>
<th>ESPME3</th>
<th>ESPLEXME</th>
<th>ESPLEXMEF</th>
<th>ESPLXID</th>
<th>ESPLXIVM</th>
<th>ESPLXIVMP</th>
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</thead>
<tbody>
<tr>
<td><strong>Weather Sensors &amp; Stations</strong></td>
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<tr>
<td>RSD-BEx</td>
<td>Wired Rain Sensor</td>
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<td>●</td>
<td></td>
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1 Requires PT5002 Pulse Transmitter
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1 Requires PT5002 Pulse Transmitter  
2 Requires PT132 or PT156 Pulse Transmitter  
3 Requires DEC-Series Decoder for Sensor Input
How to Use This Catalog

Precipitation Rates
Rain Bird has calculated for you the precipitation rates for our comprehensive lines of impacts, sprays, and rotors. These rates are an indication of the approximate rate at which water is being applied. The equations used to calculate the precipitation rates are as follows:

**Square Spacing**
- U.S.: \[ \text{PR} = 96.3 \times \text{gpm per piece} \]
- Metric: \[ \text{PR} = 1000 \times \text{m}^3/\text{h} \]

**Triangular Spacing**
- U.S.: \[ \text{PR} = 96.3 \times \text{gpm per piece} \]
- Metric: \[ \text{PR} = 1000 \times \text{m}^3/\text{h} \]

96.3 = Constant (inches/square foot/hour)
1000 = Constant (millimeter/square meter/hour)
gpm = Gallons per minute (applied to area by sprinklers)
m³/h = Cubic meters per hour (applied to area by sprinklers)
S = Spacing between sprinklers
L = Spacing between rows (S x 0.866)

Specification Information
The information in this catalog was accurate at the time of printing and may be used for proper specification of each product. For the most up-to-date information, go to the Rain Bird web site at www.rainbird.com.

ASABE Test Certification Statement
Rain Bird Corporation certifies that pressure, flow rate, and radius data for its products were determined and listed in accordance with ASABE/ICC 802-2014 or ASAE S398.1, Procedure for Sprinkler Testing and Performance Reporting, and are representative of performance of production sprinklers at the time of publication. Actual product performance may differ from the published specifications due to normal manufacturing variations and sample selection. All other specifications are solely the recommendations of Rain Bird Corporation.

Reference Charts
Information contained in this catalog is based upon generally accepted formulas, computations, and trade practices. Rain Bird Corporation, and its subsidiaries and affiliates, shall not be responsible or liable therefore if any problems, difficulties, or injuries should arise from or in connection with the use or application of this information, or if there is any error herein, typographical or otherwise.

Not all models are listed. Not all models are available in all markets. Review your regional price list or contact your Rain Bird sales representative for local model availability.

Worry-Free Warranties
Our comprehensive product warranties make it even easier to choose Rain Bird and relax. Most Rain Bird Landscape Irrigation products are warranted to the trade for a period of either three or five years from the date of original purchase. A Rain Bird warranty is hassle-free support that enables maximum peak performance by irrigation system professionals. For you, it’s the added peace of mind of knowing Rain Bird is there when you need it.

Rain Bird’s Professional Customer Satisfaction Policy
Rain Bird will repair or replace at no charge any Rain Bird professional product that fails in normal use within the warranty period stated below. You must return it to the dealer or distributor where you bought it. Product failures due to acts of God including without limitation, lightning and flooding, are not covered by this warranty. This commitment to repair or replace is our sole and total warranty.

Implied Warranties of Merchantability and Fitness, if Applicable, are Limited to One Year from the Date of Sale.

We will not, under any circumstances be liable for incidental or consequential damages, no matter how they occur.

I. Landscape Irrigation and Drainage Products
- 1800 Series Pop-Up Spray Heads, U-Series Nozzles, PA-8S and PA-8S-PRS Shrub Adapters, 1300 and 1400 Bubblers, 5000 Series Rotors, 5500 Series Rotors, 8005 Series Rotors, Falcon® 6504 Series Rotors, PEB/PESB/PESB-R Plastic Valves, DV/DVF and ASVF Plastic Valves, VB Series Valve Boxes, Internet Connected Water Meters (ICWM), and XF Series Dripline* – 5 years
- C2 Power Unit – 2 years
- Pump Start Relays – 1 year for controls/electronics, 2 years for enclosure
- All other Landscape Irrigation and Drainage products – 3 years

II. Golf Products, Agricultural Products, and Pump Stations
- For complete information and details please visit: http://www.rainbird.com/corporate/CustomerSatisfactionPolicy.htm
- All Other Products - 1 year

For more information, see your Rain Bird Distributor.
To find the nearest authorized distributor in your area, visit www.rainbird.eu

* XF Series Dripline - 7 Years on Environmental Stress Cracking (ESCR)
Index

1/4" (6 mm) Landscape Dripline ........................................ 122
1/4" Self-Piercing Barb Connector ................................... 102
1" & 1½" High Flow Inline Pressure Regulators ................. 128
1.5" Inline Commercial Control Zone Kit ......................... 126
6 Outlet Manifold – EMT-6Xeri .................................. 102
258P. ........................................................................ 42
300-BPES Brass Valves ............................................... 55
700-CT-22 .................................................................. 117
1300A-F ...................................................................... 29
1400 Series .............................................................. 29
1800®-EXT .............................................................. 13
1800® NP Cover .......................................................... 13
1800®-SAM, 1800®-PRS, 1800®-P45, 1800®-NP Cover ....... 11
1800® Series .............................................................. 10
2045A Maxi-Paw™ and 2045-PJ Maxi-Bird™ ................. 41
3500 Series .............................................................. 31
5000 Series .............................................................. 32
5000 Series MPR Nozzles .............................................. 35
8005 Series .............................................................. 39
Anemometer Wind Sensor ............................................ 80
Anemometer Wind Sensor ............................................ 80
BF-1, BF-2, BF-3 ...................................................... 123
C-12 ............................................................................ 117
Centrifugal Sand Separator ............................................ 137
Clamp ........................................................................ 117
C5 Series ................................................................. 137
Decoder Cable ............................................................ 62
Diffuser Bug Cap ......................................................... 109
Digital Hose End Timer ............................................... 72
Disk Filters ................................................................ 138
Drip System Operation Indicator ................................ 107
DV / DVF Series .......................................................... 51
Easy Fit Compression Fitting System ......................... 120
ESP-LXDX Decoder Controller ................................... 76
ESP-LXDM and LXDM Pro 2-Wire Controllers .......... 65
ESP-LXM/E/SP Controllers ........................................ 75
ESP-ME3 Series Controllers ........................................ 71
ESP-RZXE Series Controllers .................................. 70
ESP-TM2 Series Controller ........................................ 69
Falcon® 6504 Series ................................................... 37
Flow-Indicating Basket Filter ....................................... 130
Flow Meters and Sensors ............................................ 78
Flow Monitors / Pulse Transmitters .............................. 79
Galvanized Tie-Down Stake ........................................ 117
Global Service Plans ..................................................... 94
G-Series™ Hydraulic Suction Scanning Screen Filter ....... 134
HDF Series .............................................................. 138
HE-VAN Series Nozzles .............................................. 21
Holdup Tool with Bubble Level .................................. 33
How to Use This Catalog .......................................... 144
HV Series .................................................................. 52
 Inline Pressure Regulators ........................................ 129
IQ4 Central Control Software .................................. 85
IQ NCC Network Communication Cartridge ................. 88
I-Series™ Hydraulic Suction Scanning Screen Filter ....... 135
Jet Spike 310-90, 310-180, 310-360 ......................... 109
King ........................................................................ 61
Landscape Drip System Overview .............................. 96
Large-Capacity Filters ................................................ 132
LF Series .................................................................. 43
LFX300/LFX600 Series ................................................. 45
LNK WiFi Module ........................................................ 68
Lock Type Fittings ...................................................... 121
Low Flow Control Zone Kits with PR Filter ................. 124
Low Flow Valves ........................................................ 127
Maxicom® version 4.5 .............................................. 91
Maxicom® Hardware ............................................... 92
Medium Flow Control Zone Kits with PR Filters ......... 125
MPR Spray Nozzles .................................................... 27
MTT-100 .................................................................... 56
Multi-Conductor Irrigation Cable ................................ 62
Multi-Outlet Xeri-Bug™ ............................................. 102
P-33 Series: P-33 / P-33DK ....................................... 58
PA-8S-PRS & PA-8S-P4S ........................................ 13
PA-80 ........................................................................ 13
PC Diffuser Caps ........................................................ 104
PEB / PEB/S Series .................................................... 54
PGA Series .............................................................. 53
PolyFlex Riser and Stake Assembly ........................... 109
Pressure-Compensating Modules ................................ 29
Pressure Regulating Basket Filters .......................... 131
Pressure-Regulating Filter (IRF) ................................ 129
PRS-Dual ................................................................. 57
PSS Series Self-Cleaning Pump ................................. 136
Suction Screen ........................................................... 126
V-Watering System ..................................................... 110
SB Series .................................................................. 34
SH Series: SHO and SH2BSP ..................................... 58
Single Conductor Electric Cable ................................ 62
SiteControl ............................................................... 89
SiteControl Hardware ................................................. 90
SMRT-1 Soil Moisture Sensor Kit ................................ 82
SPX Series Swing Pipe .............................................. 13
SQ Series, Square Pattern Nozzles ............................ 105
SXR-360 SPYK and XS-360TS-SPYK ......................... 108
T135SS ................................................................. 123
TBOS-8T ................................................................. 74
TBOS Integration in IQ3 Cloud ................................ 86
TS/TS3-PRS Series ................................................... 49
Tubing Goof Plug ....................................................... 123
UNI-Spray™ Series .................................................. 9
Universal 1/4" Tubing Stake ......................................... 109
U-Series Nozzles ........................................................ 23
WAN Series Nozzles ................................................. 25
VBA-Series ............................................................. 59
VB Series Valve Boxes ............................................... 60
WC Series Wire Connector ......................................... 61
Wide Flow Commercial Control Zone Kit with PEB/SB Valve & Pressure Regulating, Basket Filter .................. 125
Wire Stripper Tool ..................................................... 62
Worry-Free Warranties .............................................. 144
WPX Series ................................................................ 73
WR2 Series Wireless Rain + Freeze Sensors ............. 81
WS-PRO Weather Stations ......................................... 93
XC Risers .................................................................. 111
Xeri-Bug™ 8-Outlet Emission Device ...................... 103
Xeri-Bug™ Emitter ................................................... 100
Xeri-Bug™ with Check Valve ..................................... 98
Xeriman™ Tool ........................................................ 101
Xeri-Pop™ Micro-Spray ............................................. 107
XFD On-Surface Dripline ........................................... 114
XFD Over-Surface Dripline ......................................... 112
XF Dripline Insert Fittings .......................................... 119
XFR Insertion Tool ........................................................... 120
XFX Sub-Surface Dripline with Copper Shield™ Technology ........................................................... 116
XLR Series Water Jets .................................................. 47
XQ 1/4" Distribution Tubing ......................................... 123
XS-90, XS-180, XS-360 Series .................................. 108

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The need to conserve water has never been greater. We want to do even more, and with your help, we can. Visit www.rainbird.com for more information about The Intelligent Use of Water.™