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Drip products can provide the most water-efficient irrigation solution. A successful outcome requires careful consideration of multiple factors:

- Such factors include soil condition, plant type and spacing, environmental conditions, potential for rodent and other animal damage, vandalism and budget.

- Rain Bird’s Extra Durable Drip System should be considered for high impact commercial sites where durability, longevity, ease of maintenance and minimal plant failure rate are the top priorities.

- Using only thick walled flexible pipe, durable spiral barb fittings and pressure compensating, self-flushing emitters, this system will place the right amount of water directly at the plant rootball with minimal risk of environmental damage or vandalism.

- Only Rain Bird has the combination of components to provide maximum flexibility for the contractor while providing absolute quality of fit and finish that end users deserve. From valves and filters to Root Watering Systems or emitters, Rain Bird has the full solution.
Rain Bird offers the ultimate in durability for point source irrigation systems that need protection.

From durable valves and filters, to thick-walled SPX-Flex distribution tubing, the heart of your system will endure.

That same durability also extends to our emission devices such as XBT, PCT and 1400 emitters and RWS Root Watering Systems.
THE ANATOMY OF AN EXTRA DURABLE DRIP SYSTEM

Rain Bird offers the ultimate in durability for point source irrigation systems that need protection. From durable valves and filters, to thick-walled SPX-Flex distribution tubing, the heart of your system will endure. That same durability also extends to our emission devices such as XBT, PCT and 1400 emitters and RWS Root Watering Systems.

**RWS Root Watering System**

(0.25, 0.5, and 1.0 GPM bubblers for trees and large shrubs)

- **Model**: RWS, RWS-Mini and RWS Supplemental

**Page**: 21-22

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**1400 Series Bubbler**

(0.25, 0.5, 1, and 2 GPM Pressure Compensating Full-Circle Bubblers)

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**SPX-FLEX**

(½" Extra Flexible Swing Pipe)

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**SBA-050**

(½" thread to spiral barb adapter)

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**TDS-050**

(Tie-Down Stake)

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**PSI-M40X-100**

(Pressure Regulator)

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**PVC**
Application: Slope Plantings

Solution

- **SPX Flex Pipe with either PCT or XBT Emitters**

Advantages

- Allows for precise application rates depending upon plant size or water use factor
- Increases precision of irrigation application directly above the root ball
- Highly robust solution helps protect against rodent damage or vandalism
- Self flushing emitters reduce maintenance requirement

**Valve and Filter**

<table>
<thead>
<tr>
<th>Valve Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>EFB-CP, PEB, or PESB-R Valve and LCRBY Filter</td>
<td>Flexible Swing Pipe</td>
</tr>
<tr>
<td>PCT Bubblers OR XBT Emitters</td>
<td>5, 7, and 10 GPH Emitters</td>
</tr>
<tr>
<td>TDS-050 SBA-050</td>
<td>Tie Down Stake ½” Threaded Adapter</td>
</tr>
</tbody>
</table>

HOW TO SPECIFY:

- Select emitter type and quantity based on water demand of plant and soil type
- Select commercial valve and LCRBY Filter based on rate of flow
- Use PSI-M40X-100 pressure regulators to control pressure due to elevation loss or gain
- Use UV rated PVC pipe for distribution lines (when installed on grade) and use pipe stabilizers to secure the pipe
- Insert applicable Rain Bird CAD Detail into irrigation plan

INSTALLATION AND MAINTENANCE TIPS:

- Flush the zone after installation and 2-4 times per year

www.rainbird.com
ON-SURFACE INSTALLATION

- Emitter/Bubbler SPX-FLEX
- Tie-Down Stake
- SBA-050 (1/2" thread to spiral barb adapter)
- SPX-FLEX
- Emitter/Bubbler
- On-surface Installation of PVC
- PSI-M40X-100 Pressure Regulator
- Pipe Stabilizer
- Commercial Valve and LCRBY Filter in Valve Box

Extra Durable Drip System Design Guide
Application: Median and Parkway Plantings

Solution

• SPX Flex Pipe with either PCT or XBT Emitters

Advantages

• Allows for precise application rates depending upon plant size or water use factor
• Increases precision of irrigation application directly above the root ball
• Highly robust solution helps protect against rodent damage or vandalism
• Self flushing emitters reduce maintenance requirement

<table>
<thead>
<tr>
<th>Valve and Filter</th>
<th>EFB, PEB, or PESB-R Valve and LCRBY Filter</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPX-FLEX</td>
<td>Flexible Swing Pipe</td>
</tr>
<tr>
<td>PCT Modules OR</td>
<td>5, 7, and 10 GPH Emitters</td>
</tr>
<tr>
<td>XBT Emitters</td>
<td>1.0 and 2.0 GPH Emitters</td>
</tr>
<tr>
<td>TDS-050</td>
<td>Tie Down Stake</td>
</tr>
<tr>
<td>SBA-050</td>
<td>½” Threaded Adapter</td>
</tr>
</tbody>
</table>

HOW TO SPECIFY:

- Select emitter type and quantity based on water demand of plant and soil type
- Select commercial valve and LCRBY Filter based on rate of flow
- Use PSI-M40X-100 pressure regulators to control pressure due to elevation loss or gain
- For on grade applications use UV rated PVC pipe for distribution lines and use pipe stabilizers to secure the pipe
- For below grade applications, use PVC pipe for distribution lines; pipe stabilizers and tie-down stakes are not required
- Insert applicable Rain Bird CAD Detail into irrigation plan

INSTALLATION AND MAINTENANCE TIPS:

♦ Flush the zone after installation and 2-4 times per year
For additional protection of system components specify below grade. When installing below grade, traditional PVC pipe (non UV rated) can be used.

ON GRADE INSTALLATION
When installing above grade, UV rated PVC and VIT stakes or TDS-050 are required.

BELOW GRADE INSTALLATION

Pipe Stabilizer
PSI-M40X-100 Pressure Regulator
SBA-050 Fitting
TDS-050 Tie-down Stake
SPX-FLEX Flexible Tubing
SBA-050 Fitting
PCT Bubbler
Commercial Valve and LCRBY Filter
Application: Trees

**Solution**

SPX Flex Pipe with Emitters or Root Watering System (RWS)

**Advantages**

- Precise application of water to trees, with emitter choice based on water demand of tree species
- Robust materials increases durability protecting the most valuable landscape assets
- Use of RWS products for medians and parkways encourages deep, robust root structure, reducing damage to hardscape and increasing stability

<table>
<thead>
<tr>
<th>RWS</th>
<th>Root Watering System</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPX-FLEX</td>
<td>Flexible Swing Pipe</td>
</tr>
<tr>
<td>PCT Bubblers OR 1400 Series Bubblers</td>
<td>5, 7, and 10 GPH Emitters 0.25 to 2.0 GPM Bubblers</td>
</tr>
<tr>
<td>TDS-050</td>
<td>Tie Down Stake</td>
</tr>
<tr>
<td>SBA-050</td>
<td>½” Threaded Adapter</td>
</tr>
</tbody>
</table>

**Emitter Selection Chart**: Selection based on tree size and slope condition

<table>
<thead>
<tr>
<th>Tree Size</th>
<th>5-15 Gallons</th>
<th>24” in Box</th>
<th>36” in Box</th>
<th>48” in Box</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bubb. or emitters</td>
<td>3 ea.</td>
<td>4 ea.</td>
<td>5 ea.</td>
<td>6 ea.</td>
</tr>
<tr>
<td>Root Watering System</td>
<td>2 ea. RWS Supplemental</td>
<td>2 ea. RWS Mini</td>
<td>3 ea. RWS</td>
<td>4 ea. RWS</td>
</tr>
</tbody>
</table>

**HOW TO SPECIFY**:  
- Select commercial valve and LCRBY Filter based on rate of flow  
  - For flat grade, use RWS Root Watering Systems  
  - Select commercial valve and LCRBY Filter based on rate of flow  
  - Use PSI-M40X-100 pressure regulators to control pressure due to elevation loss or gain  
  - For below grade applications, use PVC pipe for distribution lines; pipe stabilizers and tie-down stakes are not required  
  - Insert applicable Rain Bird CAD Detail into irrigation plan
TREES ON SLOPES
15 GALLON INSTALLATION SHOWN

- Commercial Valve and LCRBY Filter
- Wetting Pattern
- Tree Canopy
- Tie-Down Stake
- SPX-FLEX
- SBA-050 Adapter
- Emitter/Bubbler

TREES ON FLAT GRADE
15 GALLON INSTALLATION SHOWN

- Commercial Valve and LCRBY Filter
- Wetting Pattern
- Tree Canopy
- SPX-FLEX
- RWS - Root Watering System (Installed below grade)
EFB-CP Series Brass Valves
Highly durable Brass Irrigation Valves - Globe Configuration

Features & Benefits:
- Reliable performance even in dirty water applications. Self-flushing filter resists debris build-up
- Rugged red brass construction for longer life
- Durable, fabric-reinforced diaphragm composed of EPDM, a rubber material which is chlorine and chemical resistant
- Normally closed, reverse flow design ensures valve will fail in the closed position if a tear or rip in the diaphragm occurs. Prevents flooding, water waste and landscape damage
- Slow closing to prevent water hammer and subsequent system damage
- One-piece solenoid design with captured plunger and spring for easy servicing. Prevents loss of parts during field service
- Manual internal bleed operates the valve without allowing water into the valve box. Allows pressure regulator adjustment without turning on the controller
- Manual external bleed permits flushing debris from the system. Recommended for system start up and other repairs
- Contamination-proof, self-flushing filter screen resists debris build-up. Water flow continuously flushes the screen, dislodging particles and debris before they can accumulate and clog the filter
- Reclaimed water compatible: all models now feature EPDM diaphragms and chlorine-resistant parts as standard equipment
- Three-year trade warranty

Models:
- **100-EFB-CP**: 1” (26/34) Valve
- **150-EFB-CP**: 1 1/2” (40/49) Valve
- **200-EFB-CP**: 2” (50/60) Valve

Operating Range:
- Pressure: 15 to 200 psi (1,04 to 13,80 bar)
- Flow with/without PRS-D: 5 to 200 GPM (1.14 to 45,40 m3/h; 0,32 to 12,60 l/s)
- Temperature: up to 150°F (66°C)

Electrical Specifications:
- 24 VAC 50/60 Hz (cycles per second) solenoid
- Inrush current: 0.41A (9.9VA)
- Holding current: 0.14A (3.43VA)
- Coil resistance: 30-39 ohms

Dimensions: (Height x Length x Width)
- **100-EFB-CP**: 6” (15.2 cm) x 4 1/2” (11.4 cm) x 3 1/4” (8.3 cm)
- **150-EFB-CP**: 6 1/2” (16.5 cm) x 5 1/2” (14 cm) x 4 1/2” (11.4 cm)
- **200-EFB-CP**: 7” (17.8 cm) x 6 3/4” (17.1 cm) x 5 3/4” (14.6 cm)

*Note: The PRS-D option adds 2” (5.1 cm) to the valve height.*
PEB & PESB Series Valves
Best-in-class Professional Series Plastic Irrigation Valves

Features & Benefits:

- 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.

Models:
- **100-PEB and 100-PESB:** 1” (26/34)
- **150-PEB and 150-PESB:** 11/2” (40/49)
- **200-PEB and 200-PESB:** 2” (50/60) BSP threads available; specify when ordering

Dimensions: (Height x Length x Width)
- **100-PEB and 100-PESB:**
  - 6.5” (16.5 cm) x 4” (10.2 cm) x 4” (10.2 cm)
- **150-PEB and 150-PESB:**
  - 8” (20.3 cm) x 6” (15.2 cm) x 6” (15.2 cm)
- **200-PEB and 200-PESB:**
  - 8” (20.3 cm) x 6” (15.2 cm) x 6” (15.2 cm)

Specifications:

- **Pressure:** 20 to 200 psi (1,4 to 13,8 bar)
- **Flow without PRS-D option:** 0.25 to 200 GPM (0,06 to 45 m3/h; 0,02 to 12,60 l/s)
- **Flow with PRS-D option:** 5 to 200 GPM (1,14 to 45 m3/h; 0,32 to 12,60 l/s)
- **Temperature:** Up to 150°F (66°C)
- **24VAC 50/60Hz (cycles/sec) solenoid power requirement**
  - Inrush current: 0.41A (9.9VA) at 60Hz
  - Holding current: 0.14A (3.43VA) at 60Hz
  - Solenoid coil resistance: 30-39 Ohms, nominal
PESB-R Series Valves
Durable Plastic – chlorine resistant Professional Plastic Irrigation Valves
for reclaimed water irrigation applications

Features & Benefits:

■ Plastic diaphragm and scrubber components molded of chlorine- and chemical-resistant plastic material
■ Durable glass-filled nylon construction for long life and heavy-duty performance at 200 psi (13.80 bars) pressure
■ Stainless steel studs molded into the body. Bonnet can be attached and removed easily without damaging threads
■ One-piece solenoid design with captured plunger and spring for easy servicing. Prevents loss of parts during field service
■ External bleed protects the solenoid ports from debris when system is flushed
■ Internal bleed operates the valve without allowing water into the valve box; allows pressure regulator to be adjusted without turning on the valve at the controller first
■ Slow closing to prevent water hammer and subsequent system damage
■ Scrubber mechanism scrapes stainless steel screen clean to break down grit and plant material
■ Purple flow control handle standard on PESB-R Series valves
■ Five-year trade warranty

Models:
• 100-PESB-R: 1” (26/34)
• 150-PESB-R: 11/2” (40/49)
• 200-PESB-R: 2” (50/60)

Dimensions: (Height x Length x Width)
• 100-PESB-R: 6.5” (16.5 cm) x 4” (10.2 cm) x 4” (10.2 cm)
• 150-PESB-R: 8” (20.3 cm) x 6” (15.2 cm) x 6” (15.2 cm)
• 200-PESB-R: 8” (20.3 cm) x 6” (15.2 cm) x 6” (15.2 cm)

Specifications:
• Pressure: 20 to 200 psi (1.38 to 13.80 bar)
• Flow: 0.25 to 200 gpm (0.06 to 45.40 m3/h; 0.02 to 12.60 l/s)
• Flow with PRS-Dial: 5 to 200 gpm (1.14 to 45.40 m3/h; 0.32 to 12.60 l/s) • Temperature: Up to 150° F (66° C)
• 24VAC 50/60Hz (cycles/sec) solenoid power requirement
• Inrush current: 0.41A (9.9VA) at 60Hz
• Holding current: 0.14A (3.43VA) at 60Hz
• Solenoid coil resistance: 30-39 Ohms, nominal
**LCRBY Series Large Capacity Y-Filters**

Large filtration capacity for residential, commercial, and municipal drip applications

**Features & Benefits:**

- Disc and Stainless Steel Screen filtration options
- Disc Filtration: Ideal for dirty water supplies due to increased filtration area. Particularly effective for water with high organic matter (algae)
- Stainless Steel Screen: Ideal for removing hard particulates (sand) from the water
- 120 Mesh (130 Micron) filtration level
- Maximum flow: Up to 110 gpm
- Sizes ranging from 1” NPT to 2” NPT

**Models:**

- **LCRBY100D - 1” Large Capacity Disc Filter - NPT**
  - Max Recommended Flow: 26 gpm (6 m3/h)
  - Filtration Area: 28 in² (180 cm²)
  - LCRBY150S - 1.5” Large Capacity Screen Filter - NPT

- **LCRBY150S - 1.5” Large Capacity Screen Filter - NPT**
  - Max Recommended Flow: 88 gpm (20 m3/h)
  - Filtration Area: 76 in² (490 cm²)

- **LCRBY150D - 1.5” Large Capacity Disc Filter - NPT**
  - Max Recommended Flow: 88 gpm (20 m3/h)
  - Filtration Area: 83 in² (535 cm²)

- **LCRBY200D - 2” Large Capacity Disc Filter - NPT**
  - Max Recommended Flow: 110 gpm (25 m3/h)
  - Filtration Area: 83 in² (535 cm²)

- **LCRBY200S - 2” Large Capacity Screen Filter - NPT**
  - Max Recommended Flow: 110 gpm (25 m3/h)
  - Filtration Area: 76 in² (490 cm²)

**Dimensions:**

<table>
<thead>
<tr>
<th>Model</th>
<th>A-B</th>
<th>H</th>
<th>W</th>
<th>X</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>1”</td>
<td>1” NPT</td>
<td>6.81”</td>
<td>7.48”</td>
<td>6.22”</td>
<td>3.27”</td>
</tr>
<tr>
<td>1.5”</td>
<td>1.5” NPT</td>
<td>9.53”</td>
<td>10.28”</td>
<td>9.92”</td>
<td>5.67”</td>
</tr>
<tr>
<td>2”</td>
<td>2” NPT</td>
<td>9.76”</td>
<td>10.63”</td>
<td>10.51”</td>
<td>5.67”</td>
</tr>
</tbody>
</table>

**Inline Pressure Regulator**

Regulates outlet pressure to 40 psi, can be installed above or below ground.

**Features & Benefits:**

- Can be installed above or below the ground
- Preset outlet pressure: 40 psi (2.8 Bars)
- 3/4” (20/27) or 1” (26/34) female-threaded inlet and outlet

**Flow:** PSI-M40X-100: 2.0 to 20.0 gpm; 120 to 900 gph (7.8 to 56.8 l/m)

**Inlet Pressure:**

10-150 psi (0.7 to 10.3 bar)
Control Zone Kit Selection Guide

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

*Note: Use only for flat areas with little to no elevation change.*

### PVB Professional Series Valve Boxes

Protects in-ground irrigation valves. Functions as a durable enclosure that provides easy access to valves for maintenance. Used in turf applications to house single valves, multiple valves, or other subsurface components of an irrigation system.

Available models are available at rainbird.com
Swing Pipe Tubing and Fittings

SPX Series – Swing Pipe

**Primary Applications:**
Use Rain Bird Swing Pipe with Spiral Barb Fittings as a flexible swing assembly for point source drip applications.

**Features & Benefits:**
- 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
- Up to 25% more flexible
- Requires 15% less force to insert fittings
- Enhanced kink resistance
- Quick and easy installation lowers material and labor costs
- Installs quickly leaving time for additional system installations and incremental revenue opportunities
- UV Resistant
- *Three-year trade warranty

**Specifications:**
Inside diameter: 0.49”
Operating pressure up to 80 psi and 110° F

**Models:**
SPX-FLEX-100: 100’ (30 m) coil
SPX-FLEX-330: 330’ (100 m) coil

**How to Specify/Order:**

<table>
<thead>
<tr>
<th>Model</th>
<th>Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPX-FLEX: Extra Flexible Swing Pipe</td>
<td>100 ft.</td>
</tr>
</tbody>
</table>

XBT Pressure Compensating Emitters

**Primary Applications:**
Ideal for watering lower water use shrubs and for soils with slower infiltration rates. Xeri-Bug threaded emitters water at rates of 1.0 and 2.0 gallons-per-hour (GPH) which allows soils to absorb water more completely into the root zones of plants.

**Features & Benefits:**
- Pressure-compensating design delivers uniform flow throughout a wide pressure range (15 to 50 psi; 1.0 to 3.5 bar)
- 1/2 in. FPT inlet that easily threads onto a 1/2 in. PVC riser
- Outlet barb securely retains 1/4 in. 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

**Specifications:**
- 1/2” FPT Inlet
- Required filtration: 150 to 200 mesh (75 to 100 micron)

**Operating Range:**
Pressure: 15 to 50 psi (1.0 to 3.5 bar)

**How to Specify/Order:**

| XBT-10 |
|--------|----------|
| Xeri-Bug Threaded | Flow: |
| 10 = 1.0 gph | 20 = 2.0 gph |

Bubblers

PCT Series Pressure Compensating Threaded Low Flow Bubblers

Primary Applications:
Rain Bird’s Pressure Compensating Bubblers are rugged medium flow emitters at rates of 5, 7, and 10 gph. They are ideal for a variety of applications including shrub plantings, trees, containers, annual color, and flower beds.

Features & Benefits:
- ½” FPT threads screw onto a variety of risers, spray heads, and fittings, delivering point-source, pressure compensating flow
- Uniform flow throughout a wide pressure range (15 to 50 psi; 1.03 to 3.45 bar)
- Robust design - durable plastic construction is UV-resistant and color coded caps identify flow rate
- Three-year trade warranty

Specifications:
Inlet: ½” FPT threads are specifically designed to be used with:
- ½” PVC risers, schedule 80 risers
- MDVF50MPT 1/2” MPT compression fittings (16-18mm)
- XFFMA050 ½” MPT insert fittings (17mm)
- Rain Bird 1800 Series spray head with fitting
- Xeri-Pop spray head with fitting
- UNI-Spray or shrub adapter

Operating Range:
- Flow rates: 5 to 10 gph (18.93 to 37.85 l/h)
- Pressure: 15 to 50 psi (1.03 to 3.45 bar)
- Required Filtration: 100 mesh (150 micron)

Models:
- PCT-05: Light brown, 5 gph (18.93 l/h)
- PCT-07: Violet, 7 gph (26.50 l/h)
- PCT-10: Green, 10 gph (37.85 l/h)

How to Specify/Order:

PC-T-05
PC: Pressure Compensating Model
½” FPT inlet
Flow:
- 05 = 5 gph
- 07 = 7 gph
- 10 = 10 gph

1400 Series - Pressure Compensating Full-Circle Bubblers

Primary Applications:
Rain Bird 1400 Series pressure compensating full circle bubblers provide a controlled, gentle umbrella of water for irrigating trees, flowers and shrub areas where pressure compensation is required. Mount these bubblers on 1/2” male risers to effectively water areas from 1’ to 3’.

Features & Benefits:
- Low flow rates allow water to be absorbed as needed
- Reduces runoff
- Flow will not fluctuate at pressures between 20 and 90 psi (1.4 to 6.2 bar)
- Maintains even flow
- Flow is not adjustable for increased vandal resistance
- No adjustment required
- Corrosion-proof plastic and rubber construction for long life
- 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: 0.25 to 2.00 GPM (0.06 to 0.46 m3/h; 0.02 to 0.12 l/s)
- Spacing: 1 to 3 feet (0.3 to 0.9 m)
- Pressure: 20 to 90 psi (1.4 to 6.2 bar)

Dimensions:
- 1/2” (15/21) female threaded inlet
- Height: 1” (2.5 cm)
- Top diameter: 1” (2.5 cm)

Models:
- 1401 - 0.25 gpm (0.06 m3/h; 0.02 l/s) - full circle, trickle pattern
- 1402 - 0.50 gpm (0.11 m3/h; 0.03 l/s) - full circle, trickle pattern
- 1404 - 1.00 gpm (0.23 m3/h; 0.06 l/s) - full circle, umbrella pattern
- 1408 - 2.00 gpm (0.46 m3/h; 0.13 l/s) - full circle, umbrella pattern

Root Watering Series (RWS)

RWS Root Watering System

Primary Applications:
Rain Bird’s RWS series Root Watering Systems are ideal for trees in parkways and medians where a deep, robust root structure is desired.

Features & Benefits:
- 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
- Self-contained and factory assembled units for assured reliability
- Variety of models available to accommodate design flexibility

For the RWS Model:
- 4” (10.2 cm) retaining cap and vandal resistant locking grate tops a 36” (91.4 cm) semi-rigid mesh tube
- Factory installed swing assemblies (excluding RWS) with a 1401 (0.25 gpm; 0.95 l/m), 1402 (0.5 gpm; 1.9 l/m), or 1404 (1.00 gpm; 3.8 l/m) bubbler on a fixed riser makes connecting to lateral lines easy
- Optional check valve included to keep the lines from draining
- Optional sock is ideal for use in sandy soil

For the RWS - Mini:
- 4” (10.2 cm) retaining cap and vandal resistant locking grate tops a 18” (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
- Optional check valve included to keep the lines from draining
- Optional sand sock is ideal for use in fine soils

For the RWS - Supplemental:
- 2” (5.1 cm) snap-on cap and base cap enclose a 10” (25.4 cm) semi-rigid mesh tube
- Factory installed ½” spiral barb elbow with PCT05 (5gph / 18.93 l/h) or 1401 bubbler makes connecting to lateral lines easy
- Optional check valve included to keep the lines from draining
- Right size for small trees

RWS (Root Watering System) (cont.)

DIMENSIONS

- Root Watering System: 4" (10.2 cm) diameter \(\times\) 36" (91.4 cm) length
- Root Watering System – Mini: 4" (10.2 cm) diameter \(\times\) 18" (45.7 cm) length
- Root Watering System – Supplemental: 2" (5.1 cm) diameter \(\times\) 10" (25.4 cm) length

<table>
<thead>
<tr>
<th>RWS MODELS/SPECIFICATIONS</th>
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<tbody>
<tr>
<td><strong>MODEL</strong></td>
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<tr>
<td><strong>ROOT WATERING (36&quot; (91 CM) LENGTH WITH 4&quot; (10 CM) VANDAL-RESISTANT LOCKING GRATE)</strong></td>
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<tr>
<td>RWS</td>
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<tr>
<td>RWS-B-C-1401</td>
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<td>RWS-B-1401</td>
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<td>RWS-B-X-1401</td>
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<td>RWS-B-C-1402</td>
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<td>RWS-B-1402</td>
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<td>RWS-B-C-1404</td>
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<tr>
<td><strong>ROOT WATERING SYSTEM - MINI (WITH 4&quot; (10.2 CM) VANDAL-RESISTANT LOCKING GRATE)</strong></td>
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<tr>
<td>RWS-M-B-C-1401</td>
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<tr>
<td>RWS-M-B-1401</td>
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<tr>
<td>RWS-M-B-C-1402</td>
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<tr>
<td>RWS-M-B-1402</td>
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<tr>
<td><strong>ROOT WATERING SYSTEM - SUPPLEMENTAL (10&quot; (25 CM) LENGTH WITH 2&quot; (5 CM) SNAP-ON CAP AND BASE)</strong></td>
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<tr>
<td>RWS-S-B-C-PCT05</td>
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<tr>
<td>RWS-S-B-C-1401</td>
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<tr>
<td>RWS-S-B-1401</td>
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<tr>
<td><strong>ROOT WATERING - ACCESSORIES</strong></td>
</tr>
<tr>
<td>RWS- SOCK (Root Watering Sand Sock) (6 per bag)</td>
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<tr>
<td>RWS- GRATE-P (Root Watering System Purple Grate for RWS and RWS Mini)</td>
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</tbody>
</table>

* No fitting

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How To Specify

RWS - X - X - X - XXXX

Bubbler Model
1401
1402
1404
PCT05

Optional Check Valve
C: Check Valve pre-installed

Optional Bubbler
B: Bubbler pre-installed

Other Size
M: RWS-Mini (4" (10.2 cm) \(\times\) 18" (45.7 cm))
S: RWS-Supplemental Grate (2" (5.1 cm) \(\times\) 10" (25.4 cm))

Model
RWS Root Watering System

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Install product even with finish grade.

Oxygen and water circulation promote healthy plant growth.

Position units evenly spaced around root ball.
SB Series - Spiral Barb Fittings

Primary Applications:
For use in conjunction with Swing Pipe as a flexible swing assembly

Features & 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
- *Three-year trade warranty

Specifications:
Operating pressure up to 80 psi and 110° F

Models:
- **SBE-050**: 1/2” M NPT x 1/2” barb elbow
- **SBE-050B**: 1/2” M NPT x 1/2” barb elbow - bulk package
- **SBE-075**: 3/4” M NPT x 1/2” barb elbow
- **SBE-075B**: 3/4” M NPT x 1/2” barb elbow - bulk package
- **SBA-050**: 1/2” M NPT x 1/2” barb adapter
- **SB-TEE**: 1/2” barb x 1/2” barb x 1/2” barb tee
- **SB-CPLG**: 1/2” barb x 1/2” barb coupling

How to Specify/Order:

**SBA-050**

<table>
<thead>
<tr>
<th>Model</th>
<th>Diameter</th>
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<tbody>
<tr>
<td>SB= Spiral Barb Fittings</td>
<td>050 = 1/2</td>
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<tr>
<td>CPLG = Coupling</td>
<td>075 = 3/4</td>
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<tr>
<td>TEE = T Shaped Fitting</td>
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</tbody>
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At Rain Bird, we believe it is our responsibility to develop products and technologies that use water efficiently. Our commitment also extends to education, training and services for our industry and our communities.

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™.