Tech Spec

Root Watering System

Primary Application

The Rain Bird® Root Watering System (RWS) enables vital water, air, and nutrients to bypass compacted soil and directly reach tree and shrub root systems. It's factory assembled irrigation hardware and patented basket weave canister allow ground installation to a depth of 36" (91,4 cm) for the RWS, 18" (45,7 cm) for the RWS-Mini, and 10" (25,4 cm) for the RWS-Supplemental. This system is intended for use with water dispensing devices, such as a bubbler head or an emitter. This system can be customized by the end user to meet their specific required irrigation needs or can be purchased with pre-installed bubbler and check valve options.

Features and Benefits

Investment Protection
- Deep and broad roots yield transplantation survivability, stability in high winds, fast and healthy growth

Watering Efficiency
- Subsurface irrigation minimizes run-off and evaporation

Landscape Aesthetics
- Installs at grade and helps minimize damage to hardscapes

Models

RWS (Root Watering System)

RWS — Root Watering System Basic, 4" (10,2 cm) grate, ready for customer provided irrigation hardware

RWS-B-1401 — Root Watering System with 0.25 GPM (0,95 l/m) bubbler, 4" (10,2 cm) grate, versatile swing assembly with 1/2" (15/21) M NPT inlet

RWS-B-1402 — Root Watering System with 0.50 GPM (1,9 l/m) bubbler, 4" (10 cm) grate, 12" (30,5 cm) versatile swing assembly with 1/2" (15/21) M NPT inlet

RWS-B-C-1401 — Root Watering System with 0.25 GPM (0,95 l/m) bubbler & check valve, 4" (10,2 cm) grate, versatile swing assembly with 1/2" (15/21) M NPT inlet

RWS-B-C-1402 — Root Watering System with 0.50 GPM (1,9 l/m) bubbler & check valve, 4" (10,2 cm) grate, versatile swing assembly with 1/2" (15/21) M NPT inlet

RWS-B-C-1404 — Root Watering System with 1.00 GPM (3,8 l/m) bubbler & check valve, 4" (10,2 cm) grate, versatile swing assembly with 1/2" (15/21) M NPT inlet

RWS-MINI (Mini Root Watering System)

RWS-M — Mini Root Watering System Basic with 4" (10,2 cm) grate, ready for customer provided irrigation hardware

RWS-M-B-1401 — Mini Root Watering System with 0.25 GPM (0,95 l/m) bubbler, 4" (10,2 cm) grate, 1/2" (15/21) M NPT inlet spiral barb elbow

RWS-M-B-1402 — Mini Root Watering System with 0.50 GPM (1,9 l/m) bubbler & check valve, 4" (10,2 cm) grate, 1/2" (15/21) M NPT inlet spiral barb elbow

RWS-M-B-C-1401 — Mini Root Watering System with 0.25 GPM (0,95 l/m) bubbler & check valve, 4" (10,2 cm) grate, 1/2" (15/21) M NPT inlet spiral barb elbow

RWS-M-B-C-1402 — Mini Root Watering System with 0.50 GPM (1,9 l/m) bubbler & check valve, 4" (10,2 cm) grate, 1/2" (15/21) M NPT inlet spiral barb elbow

RWS/RWS-MINI ACCESSORIES

RWS-SOCK — Root Watering System Sock (6 per bag)

RWS-GRATE-P —RootWateringSystem4" (10 cm) Purple Grate

RWS-Supplemental

RWS-S-B-1401 — Supplemental Root Watering System with 0.25 GPM (0,95 l/m) bubbler, 2" (5,1 cm) snap-on cap and base, 1/2" (15/21) M NPT inlet spiral barb elbow

RWS-S-B-C-1401 — Supplemental Root Watering System with 0.25 GPM (0,95 l/m) bubbler & check valve, 2" (5,1 cm) snap-on cap and base, 1/2" (15/21) M NPT inlet spiral barb elbow

RWS Supplemental

How To Specify

RWS - X - X - X - XXXX

Model
RWS 36"
(91,4cm)

Bubbler Model:
1401
1402
1404

Optional:
C: Check Valve

Bubbler:
B: Bubbler Pre-installed

Other Size:
M: Mini (18" - 45,7cm)
S: Supplemental (10" - 25,4cm)
GRATE-P: Purple Grate
RWS-Sock: Sock

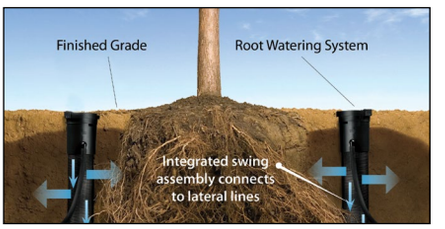
Specifications

The RWS is the smart watering product line designed to maximize tree and shrub transplanting survivability. It consists of a perforated polyethylene cylinder in three different lengths – 36" (91,4 cm) for large trees, 18" (45,7 cm) for small trees, and 10" (25,4 cm) for shrubs and row plantings – and two different widths – 4" (10.2 cm) for trees and 2" (5,1 cm) for shrubs and row plantings. The rigid mesh material helps support the horizontal movement of water and air into the root zone and adjacent soil. The cylinder supports pea gravel fill to provide better top-to-bottom water dispersion and firmness against root compression.

The RWS is designed with an integrated bubbler and optional check valve. The water being emitted from the bubbler helps train roots away from surfaces and hardscapes, minimize surface erosion and reduce waste due to run-off. The factory-assembled RWS comes pre-configured with swing assemblies and/or spiral barbed fittings in order to promote irrigation design flexibility, accommodate all tree and shrub sizes, and help save installation time by being ready to install out of the box. The assemblies and fittings enable the RWS to be directly connected to PVC or polyethylene lateral lines. The bubblers on the 18" (45,7cm) and 36" (91,4cm) RWS models can be replaced with Rain Bird's 6-outlet drip manifold (EMT-6XERI) allowing use of the RWS as a drip distribution hub. RWS includes two ports allowing distribution of XQ 1/4" drip tubing to surrounding RWS units or other drip irrigation emitters. Rain Bird's Drip System Operation Indicator (OPERIND) can be optionally used to indicate active RWS irrigation.

The RWS, including the RWS-M and RWS-S models, protect the investment property owners make in trees and shrubs. It helps trees and shrubs establish deeper and broader roots for better stability against high winds and quicker, healthier growth. The subsurface irrigation design improves watering efficiency by minimizing the total volume of water used to irrigate trees and shrubs and minimize water lost due to evaporation and run-off. The RWS improves the aesthetics of the landscape by installing at finish-grade level and minimizing root damage to hardscapes. The RWS supports an extra-wide molded collar to provide convenient access to the bubbler and drip line fastener. It supports a locking grate cover to help deter vandalism. It offers a purple, reclaimed water grate cover option. The RWS offers also a sock option in order to prevent small particles from penetrating the RWS cylinder. The RWS is designed with a peripheral watering feature which allows water to flow along the perforated cylinder resulting in the wetting of soil along the vertical distance of the cylinder.

RWS units should be installed on their own watering zone in order to improve irrigation efficiency and management.



- *Position units evenly spaced, adjacent to the root zone and within the canopy of the tree*
- *Consider filling canisters with pea gravel to fill to provide better top-to-bottom water dispersion and firmness against root compression*
- *Optional soil sock should be used to prevent particle intrusion into cyliner*
- *Optional purple grate cover should be used for non-potable water sources*
- *For long-term deep and broad roots, consider installing two RWS perimeters on seperate zones — running the inner zone for the first couple of years and the outer zone in subsequent years*

RWS Usage Guide

- Use 2-3 RWS units for large trees
- Use 1-2 RWS-MINI units for small trees
- Use 1-2 RWS-Supplemental units for shrubs

RWS

RWS-MINI

RWS-Supplemental

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