

RD1800™ Series Spray Heads

Built to Endure Any Installation

RD1800™ Series Spray Heads build on the reputation of the 1800® Series that have provided unmatched durability, reliability and performance for over 30 years.

The RD1800 Series has been built to withstand harsh operating conditions such as chemically treated recycled water (reclaimed / non-potable), dirty water containing grit, debris, and other particulates, and high operating pressures common in commercial irrigation systems.

Features

The RD1800 Series features an exclusive molded, pressure activated Triple-Blade Wiper Seal to assure a positive seal without excess "flow-by", which enables more heads to be installed on the same valve. The 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, assuring positive stem retraction in all soil types. Debris pockets in the base of the spray body prevent recirculation of harmful debris during operation to reduce wear on the wiper seal and stem.

- Designed for use with all Rain Bird nozzles – Rotary Nozzles, U-Series, MPR, VAN, HE-VAN, and SQ Series.
- Parts developed to be resistant to corrosion in treated recycled water containing chlorine and other chemicals.
- Strong stainless steel spring provides reliable stem retraction and withstands corrosion.
- Reinforced ratchet mechanism allows easy nozzle pattern alignment without tools, withstands chemicals in recycled water and prevents pattern misalignment over time.
- Pre-installed 1800 Pop-Top™ flush plug blocks debris from entering after flushing and allows for easy nozzle installation.
- Constructed of time-proven ultraviolet-resistant plastic and corrosion-resistant stainless steel parts, assuring long product life.
- All sprinkler components are removable from the top without special tools, providing for quick and easy flushing and maintenance of the sprinkler.
- Side inlets featured on all models except SAM Models.
- Five-year trade warranty.

Operating Range

- Spacing: 2.5 to 24 feet (0.8 to 7.3 m)
- Pressure: 15 to 100 psi (1.0 to 6.9 bar)

Specifications

- Flow-by:
 - **SAM Models:** 0 at 15 psi (1.0 bar) or greater; 0.5 gpm (0.1 m³/h; 0.03 l/s) otherwise
 - **All Other Models:** 0 at 10 psi (0.7 bar) or greater; 0.5 gpm (0.1 m³/h; 0.03 l/s) otherwise

Dimensions / Models

- ½" (15/21) NPT female threaded inlet
- Models and height:
 - **RD-04:** 6" (15.2 cm) body height; 4" pop-up height (10.2 cm)
 - **RD-06:** 9 ¾" (23.8 cm) body height; 6" pop-up height (15.2 cm)
 - **RD-12:** 16" (40.6 cm) body height; 12" pop-up height (30.5 cm)
- Exposed surface diameter: 2 ¼" (5.7 cm)



Standard Cover

Non-Potable Cover

How To Specify

RD-XX - X - Nozzle



Nozzle

See Rotary Nozzle, U-Series, MPR, VAN, HE-VAN and SQ Nozzle specifications for more information

Optional Features

S: Seal-A-Matic™ check valve
 P30: 30 psi (2.1 bar) in-stem pressure regulation
 P45: 45 psi (3.1 bar) in-stem pressure regulation
 F: Flow-Shield™ Technology
 NP: Non-Potable Cover

Model

RD-04: 4" (10 cm) pop-up height
 RD-06: 6" (15 cm) pop-up height
 RD-12: 12" (40 cm) pop-up height

Notes:

SAM feature included with P45 models.

Flow-Shield™ Technology available in P30 and P45 models only.

Specify sprinkler bodies and nozzles separately.

RD1800 Series Sprays Models

4" Models

RD-04-NP	RD-04-S-P30
RD-04-S	RD-04-S-P30-F
RD-04-S-NP	RD-04-S-P30-F-N
RD-04-P30-F	RD-04-S-P45-F
RD-04-P30-F-NP	RD-04-S-P45-F-N

6" Models

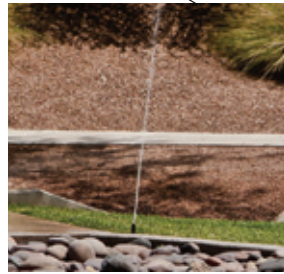
RD-06	RD-06-S-P30
RD-06-NP	RD-06-S-P30-F
RD-06-S	RD-06-S-P30-F-N
RD-06-S-NP	RD-06-S-P45-F
RD-06-P30-F	RD-06-S-P45-F-N
RD-06-P30-F-NP	

12" Models

RD-12	RD-12-S-P30
RD-12-NP	RD-12-S-P30-F
RD-12-S	RD-12-S-P30-F-N
RD-12-S-NP	RD-12-S-P45-F
RD-12-P30-F	RD-12-S-P45-F-N
RD-12-P30-F-NP	

Exclusive Flow-Shield™ Technology

Exclusive Flow-Shield™ Technology provides up to 90% reduction in water loss when a nozzle is removed, preventing potentially costly and unacceptable run-off.



Patented Pressure Regulator

The RD1800's patented pressure regulator increases nozzle efficiency by up to 50% in high pressure applications.



Reinforced Ratchet Mechanism

The RD1800's ratchet mechanism was designed to improve ease of use and consistency, hold its setting over time, withstand years of chlorine exposure and provide greater debris resistance.

Seal-A-Matic™ (SAM) Check Valve

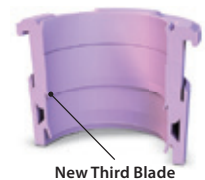
Exclusive to Rain Bird, the SAM Check Valve holds back up to 14 feet of head and helps eliminate low head drainage, erosion, run-off and water hammer at start-up.

Service Indication Stream

Exclusive Flow-Shield Technology delivers a low-flow service indication stream when a nozzle is removed. As a result, system performance is maintained, water is saved and you don't have to wait until you have brown grass or dead plants to notice something's wrong.

Triple-Blade Wiper Seal

The RD1800™ Series features an exclusive Triple-Blade Wiper Seal. The top seal flushes during pop-up and wipes the stem clean during retraction, preventing external debris from entering. During operation, the primary seal combines with the stem's surface to eliminate flow-by. The exclusive Third Blade provides another line of defense, in case the primary seal is damaged.



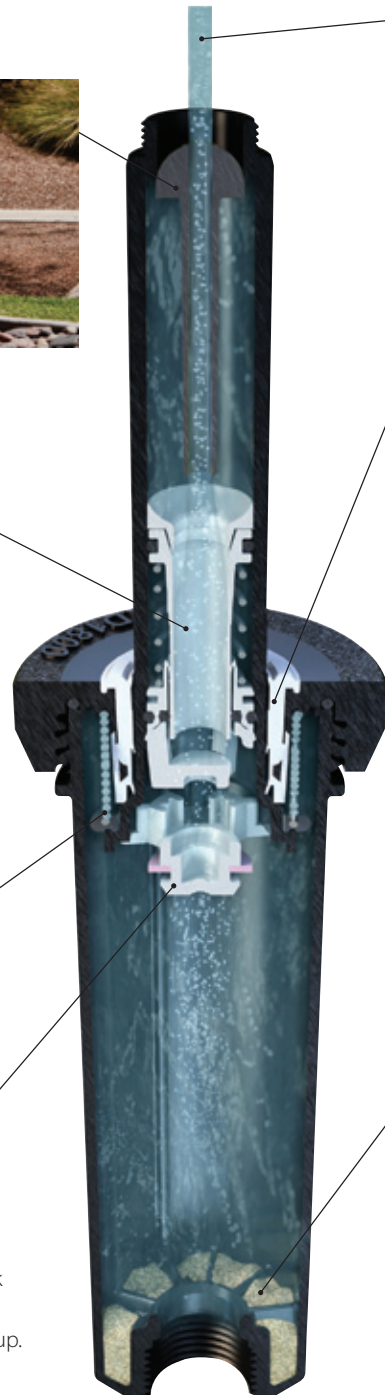
New Third Blade

Reclaimed Water Resistant

The RD1800 Series is designed with reclaim water resistant materials such as EPDM and Polyester. These materials resist degradation caused by chlorine in reclaimed water, ensuring a longer life.

Unique Debris Pockets

With each system start-up, the RD1800's unique debris pockets hold grit in place—removing it from circulation and preventing long-term damage.



RD1800 Series

Designed for use in dirty water applications and systems with high operating pressures.

- Exclusive co-molded Triple-Blade Wiper Seal to assure a positive seal without excess “flow-by” which enables more heads to be installed on the same valve.
- Debris pockets in the base of the spray body prevent recirculation of harmful debris during operation to reduce wear on the wiper seal and stem.
- Spray body is rating from 15 to 100 psi providing extra durability in high pressure systems.

Operating Range

- Spacing: 2.5 to 24 feet (0.8 to 7.3 m)
- Pressure: 15 to 100 psi (1.0 to 6.9 bar)

Specifications

- Flow-by: 0 at 15 psi (1.0 bar) or greater; 0.5 gpm (0.1 m³/h; 0.03 l/s) otherwise

Dimensions / Models

- ½” (15/21) NPT female threaded inlet
- Models and height:
 - **RD-04:** 6” (15.2 cm) body height; 4” pop-up height (10.2 cm)
 - **RD-06:** 9 ¾” (23.8 cm) body height; 6” pop-up height (15.2 cm)
 - **RD-12:** 16” (40.6 cm) body height; 12” pop-up height (30.5 cm)
 - Exposed surface diameter: 2 ¼” (5.7 cm)

RD1800 SAM Series

Ideal for use in areas with changing elevations, the RD1800 SAM Series has all RD1800 Series features plus:

- Built-in Seal-A-Matic™ (SAM) check valve. Eliminates the need for under-the-head check valves. No parts to be installed at the site.
- Stronger retract spring to accommodate elevation changes up to 14’ (4.2 m). One of the strongest springs in the industry.
- Prevents drainage from spray heads at lower elevations. Stops water waste. Ends landscape damage due to flooding and erosion.
- Retains water in lateral pipes which reduces wear on system components by minimizing water hammer during start-up.
- “SAM” printed on the cap for easy identification and maintenance.

Operating Range

- Spacing: 2.5 to 24 feet (0.8 to 7.3 m)
- Pressure: 15 to 100 psi (1.0 to 6.9 bar)

Specifications

- SAM capability: Holds up to 14 feet (4.2 m) of head; 6 psi (0.3 bar)
- Flow-by: 0 at 15 psi (1.0 bar) or greater; 0.5 gpm (0.1 m³/h; 0.03 l/s) otherwise
- No side inlet

Dimensions / Models

- ½” (15/21) NPT female threaded inlet
- Models and height:
 - **RD-04-S:** 6” (15.2 cm) body height; 4” pop-up height (10.2 cm)
 - **RD-06-S:** 9 ¾” (23.8 cm) body height; 6” pop-up height (15.2 cm)
 - **RD-12-S:** 16” (40.6 cm) body height; 12” pop-up height (30.5 cm)
 - Exposed surface diameter: 2 ¼” (5.7 cm)

RD1800 SAM PRS Series

Meets the needs of all spray areas, regardless of changing elevation or water pressure. Incorporates all RD1800 Series SAM and PRS features. “SAM-PRS” printed on the cap for easy identification and maintenance. Five year trade warranty.

Operating Range

- Spacing: 2.5 to 24 feet (0.8 to 7.3 m)
- Pressure: 15 to 100 psi (1.0 to 6.9 bar)

Specifications

- SAM capability: Holds up to 14 feet (4.2 m) of head; 6 psi (0.3 bar)
- Flow-by: 0 at 15 psi (1.0 bar) or greater; 0.5 gpm (0.1 m³/h; 0.03 l/s) otherwise
- Regulates nozzle pressure to an average 30 psi (2.1 bar) with inlet pressures of up to 100 psi (6.9 bar)
- No side inlet

Dimensions / Models

- ½” (15/21) NPT female threaded inlet
- Models and height:
 - **RD-04-S-P30:** 6” (15.2 cm) body height; 4” pop-up height (10.2 cm)
 - **RD-06-S-P30:** 9 ¾” (23.8 cm) body height; 6” pop-up height (15.2 cm)
 - **RD-12-S-P30:** 16” (40.6 cm) body height; 12” pop-up height (30.5 cm)
 - Exposed surface diameter: 2 ¼” (5.7 cm)

RD1800™ Flow-Shield™ Series

Designed to save water and preserve system hydraulics to maintain proper operation throughout the irrigation zone. Provides protection against plant material loss and reduces likelihood of incurring costly fines as a result of excessive run-off when a nozzle has been removed. The RD1800 Flow-Shield™ Series offers all RD1800 SAM, PRS, and PRS-45 features plus:

- Exclusive Flow-Shield Technology built into the stem. No parts to be installed at the site. Saves water, plant material, time, and money.
- Restricts water loss by up to 90% if nozzle is removed from a non-PRS spray head.
- Restricts water loss by up to 50% if nozzle is removed from a PRS spray head.
- Reduces possibility of accidents and property damage. Recommended for high pressure and vandal-prone areas.
- Provides low flow vertical water jet visible from +200' line of sight when a nozzle has been removed. Height and low flow of vertical water jet causes water to dissipate during descent, reducing puddles and run-off.
- Low flow vertical water jet does not exceed 2 gpm (0.45 m³/h; 0.13 l/s), even with varying inlet pressure.
- Low flow vertical water jet decreases likelihood of nozzle removal going unnoticed, prompting nozzle replacement to decrease probability of stressed turf and plant material losses.
- "F" printed on cap for easy identification and maintenance.

Operating Range

- Spacing: 2.5 to 24 feet (0.8 to 7.3 m)
- Pressure: 15 to 100 psi (1.0 to 6.9 bar)

Specifications

- SAM capability: Holds up to 14 feet (4.2 m) of head; 6 psi (0.3 bar)
- Flow-by:
 - **SAM Models:** 0 at 15 psi (1.0 bar) or greater; 0.5 gpm (0.1 m³/h; 0.03 l/s) otherwise
 - **All Other Models:** 0 at 10 psi (0.7 bar) or greater; 0.5 gpm (0.1 m³/h; 0.03 l/s) otherwise

Dimensions / Models

- ½" (15/21) NPT female threaded inlet
- Models and height:
 - **RD-04-P30-F, RD-04-S-P30-F, RD-04-S-P45-F:** 6" (15.2 cm) body height; 4" pop-up height (10.2 cm)
 - **RD-06-P30-F, RD-06-S-P30-F, RD-06-S-P45-F:** 9 ¾" (23.8 cm) body height; 6" pop-up height (15.2 cm)
 - **RD-12-P30-F, RD-12-S-P30-F, RD-12-S-P45-F:** 16" (40.6 cm) body height; 12" pop-up height (30.5 cm)
- Exposed surface diameter: 2 ¼" (5.7 cm)

RD1800 Non-Potable Water Series

All RD1800™ Series Spray Heads (standard, SAM Series, SAM PRS Series, and Flow-Shield™ Series) are built with materials specifically selected for their ability to withstand the corrosive impact of chemically treated recycled water. The RD1800 Non-Potable Water Series provides an alternative to clip-on caps and molded purple covers to identify non-potable water use. The RD1800 Non-Potable Water Series offers all RD1800 SAM, SAM PRS, SAM PRS-45, and Flow-Shield Series features plus:

- Exclusive, non-potable water use indication on cover featuring purple Triple-Blade Wiper Seal, easy-to-read English "DO NOT DRINK", Spanish "NO BEBA" warnings, and international do not drink symbol illustrated below:



- Does not require the use of purple clip caps that can be removed by a vandal.
- Does not require use of eye-catching purple molded covers that give away sprinkler location.

Operating Range

- Spacing: 2.5 to 24 feet (0.8 to 7.3 m)
- Pressure: 15 to 100 psi (1.0 to 6.9 bar)

Specifications

- SAM capability: Holds up to 14 feet (4.2 m) of head; 6 psi (0.3 bar)
- Flow-by:
 - **SAM Models:** 0 at 15 psi (1.0 bar) or greater; 0.5 gpm (0.1 m³/h; 0.03 l/s) otherwise
 - **All Other Models:** 0 at 10 psi (0.7 bar) or greater; 0.5 gpm (0.1 m³/h; 0.03 l/s) otherwise

Dimensions / Models

- ½" (15/21) NPT female threaded inlet
- Models and height:
 - **RD-04-S-NP, RD-04-P30-F-NP, RD-04-S-P30-F-N, RD-04-S-P45-F-N:** 6" (15.2 cm) body height; 4" pop-up height (10.2 cm)
 - **RD-06-NP, RD-06-S-NP, RD-06-P30-F-NP, RD-06-S-P30-F-N, RD-06-S-P45-F-N:** 9 ¾" (23.8 cm) body height; 6" pop-up height (15.2 cm)
 - **RD-12-NP, RD-12-S-NP, RD-12-P30-F-NP, RD-12-S-P30-F-N, RD-12-S-P45-F-N:** 16" (40.6 cm) body height; 12" pop-up height (30.5 cm)
- Exposed surface diameter: 2 ¼" (5.7 cm)

Specifications

RD-06, and RD-12 Pop-up Full or Part Circle Spray Sprinkler

The sprinkler body, stem, nozzle, and screen shall be constructed of heavy-duty and ultra-violet resistant plastic. All components shall be designed to withstand chlorine and other harsh chemicals found in reclaimed and recycled water systems. It shall have a heavy-duty stainless steel retract spring for positive pop-down and a ratcheting system for easy alignment of the nozzle pattern and retention of pattern edges. The sprinkler shall have an elastomer pressure-activated co-molded Triple-Blade Wiper Seal for cleaning debris from the pop-up stem as it retracts into the case and to prevent stem stick ups. The Triple-Blade Wiper Seal shall also minimize flow-by and allow adequate flushing of debris to prevent wear. The Triple-Blade Wiper Seal shall contain a biocide to resist biological degradation in water sourced from chemically treated waste water.

The sprinkler shall have a matched precipitation rate (MPR) plastic nozzle with an adjusting screw capable of regulating the radius and flow. The sprinkler shall be capable of housing protective, non-clogging filter screens of pressure compensating screens (PCS) under the nozzle. The screen shall also be used in conjunction with the adjusting screw for regulating. The 6" (15.2 cm) and 12" (30.5 cm) models shall have both a side and a bottom ½" (15/21) FNPT inlet for ease of installation.

The sprinkler shall have a Pop-Top™ Flush Plug pre-installed. The plug shall prevent debris from clogging the sprinkler during installation and allow for the system to be flushed before nozzling. The plug shall be bright orange in color and constructed of polypropylene material.

RD-04-S, RD-06-S, and RD-12-S Full or Part Circle Seal-A-Matic™ Pop-up Spray Sprinkler

Optional Feature Specifications:

When so indicated on the design, the 4", 6", or 12" high pop-up spray sprinklers shall also include a Seal-A-Matic (SAM) check valve to prevent low head drainage of up to 14 feet of head. These units shall be identifiable from the top with "SAM" marking printed on the cover. The sealing device shall be an integral part of the pop-up stem, removable through the top of the sprinkler, and shall seal against the bottom case inlet. It shall create no more than 1 psi pressure drop at the maximum rated flow. The SAM seal washer shall be made of EPDM rubber material which is chlorine and chemical resistant.

RD-04-S-P30, RD-06-S-P30, and RD-12-S-P30 Full or Part Circle Seal-A-Matic™ Pop-up Spray Sprinkler

Optional Feature Specifications:

When so indicated on the design, the 4", 6", and 12" high pop-up spray sprinkler shall also include Seal-A-Matic™ (SAM) check valve and a 30 psi pressure regulating device. These units shall be identifiable from the top with "SAM-PRS" marking printed on the cover.

The check valve shall prevent low head drainage of up to 14 feet of head. The 30 psi pressure regulating device shall prevent high pressure operation of the nozzle that causes water waste and undesirable performance by regulating the nozzle operating pressure to 30 psi for inlet pressures from 35 psi to 100 psi. Below 35 psi the pressure loss shall not exceed 6 psi.

RD-04-P30-F, RD-04-S-P30-F, RD-04-S-P45-F, RD-06-P30-F, RD-06-S-P30-F, RD-06-S-P45-F, RD-12-P30-F, RD-12-S-P30-F, RD-12-S-P45-F Full or Part Circle Pop-up Spray Sprinklers with Flow-Shield™ Technology

Optional Feature Specifications:

When so indicated on the design, the 4", 6", and 12" high pop-up spray sprinkler shall also include Flow-Shield™ Technology (F) to save water, preserve system hydraulics to maintain proper operation throughout the irrigation zone, provide protection against plant material loss, and reduce likelihood of incurring costly fines as a result of excessive run-off when a nozzle has been removed. Flow-Shield™ Technology shall provide a 2 gpm maximum, vertical water jet visible from +200' line of sight when a nozzle has been removed. Height and low flow of vertical water jet shall cause water to dissipate during descent reducing puddles and run-off. Flow-Shield™ Technology shall be an integral part of the pop-up stem.

Flow-Shield Technology shall be made available in all RD1800 model featuring 30 psi or 45 psi in-stem pressure regulation.

The 30 psi pressure regulating device shall prevent high pressure operation of the nozzle that causes water waste and undesirable performance by regulating the nozzle operating pressure to 30 psi for inlet pressures from 35 psi to 100 psi. Below 35 psi the pressure loss shall not exceed 6 psi.

The 45 psi pressure regulating device shall prevent high pressure operation of the nozzle that causes water waste and undesirable performance by regulating the nozzle operating pressure to 45 psi for inlet pressures from 50 psi to 100 psi. Below 50 psi the pressure loss shall not exceed 6 psi.

The check valve shall prevent low head drainage of up to 14 feet of head.

During normal operation, the Flow-Shield Technology device shall be held in-stem by the nozzle filter. In the event the nozzle is removed, in-stem flow shall cause the Flow-Shield™ to travel upstream and seal against the base of the nozzle threads limiting water loss and geysers of excessive flow.

Pressure loss across the Flow-Shield shall not exceed 1 psi across operating range.

Specifications

RD-04-NP, RD-04-S-NP, RD-04-P30-F-NP, RD-04-S-P30-F-N, RD-04-S-P45-F-N, RD-06-NP, RD-06-S-NP, RD-06-P30-F-NP, RD-06-S-P30-F-N, RD-06-S-P45-F-N, RD-12-NP, RD-12-S-NP, RD-12-P30-F-NP, RD-12-S-P30-F-N, RD-12-S-P45-F-N
Full or Part Circle Non-Potable Pop-up Spray Sprinkler

Optional Feature Specifications:

When so indicated on the design, the 4", 6", and 12" high pop-up spray sprinkler shall also include a purple Triple-Blade Wiper Seal and non-potable water use identification on the cover with English "DO NOT DRINK", Spanish "NO BEBA", and the international do not drink symbol illustrated below:



The purple text and Triple-Blade Wiper Seal shall be made of materials and colorants that resist fading due to exposure to chlorine and other chemicals found in reclaimed and recycled water systems and ultra-violet light.

All other RD1800 Series Spray features shall be available in the non-potable versions including; Seal-A-Matic™ (SAM) check valves, in-stem 30 psi pressure regulation (PRS), in-stem 45 psi pressure regulation (PRS-45), and Flow-Shield™ (F).

RD1800 Series Non-Potable sprays may include a Flow-Shield Technology device to save water, preserve system hydraulics to maintain proper operation throughout the irrigation zone, provide protection against plant material loss, and reduce likelihood of incurring costly fines as a result of excessive run-off when a nozzle has been removed. Flow-Shield Technology

shall provide a 2 gpm maximum, vertical water jet visible from +200' line of sight when a nozzle has been removed. Height and low flow of vertical water jet shall cause water to dissipate during descent reducing puddles and run-off. Flow-Shield Technology shall be an integral part of the pop-up stem.

The 30 psi pressure regulating device shall prevent high pressure operation of the nozzle that causes water waste and undesirable performance by regulating the nozzle operating pressure to 30 psi for inlet pressures from 35 psi to 100 psi. Below 35 psi the pressure loss shall not exceed 6 psi.

The 45 psi pressure regulating device shall prevent high pressure operation of the nozzle that causes water waste and undesirable performance by regulating the nozzle operating pressure to 45 psi for inlet pressures from 50 psi to 100 psi. Below 50 psi the pressure loss shall not exceed 6 psi.

The check valve shall prevent low head drainage of up to 14 feet of head.

During normal operation, the Flow-Shield shall be held in-stem by the nozzle filter. In the event the nozzle is removed, in-stem flow shall cause the Flow-Shield™ to travel upstream and seal against the base of the nozzle threads limiting water loss and geysers of excessive flow.

Pressure loss across the Flow-Shield shall not exceed 1 psi across operating range.

Rain Bird Corporation

6991 E. Southpoint Road
 Tucson, AZ 85756
 Phone: (520) 741-6100
 Fax: (520) 741-6522

Rain Bird Technical Services

(800) RAINBIRD (1-800-724-6247)
 (U.S. and Canada)

Rain Bird Corporation

970 West Sierra Madre Avenue
 Azusa, CA 91702
 Phone: (626) 812-3400
 Fax: (626) 812-3411

Specification Hotline

800-458-3005 (U.S. and Canada)

Rain Bird International, Inc.

1000 West Sierra Madre Ave.
 Azusa, CA 91702
 Phone: (626) 963-9311
 Fax: (626) 852-7343

The Intelligent Use of Water™
www.rainbird.com