



Rain Bird Homeowner Sprinkler Installation Guide

Get your yard watering, not a drop out of place with Rain Bird

Make the outdoors yours

[Learn more at RainBird.com](https://RainBird.com)

Rain Bird Homeowner Irrigation Design Package



Your custom system design is engineered for maximum distribution uniformity and operational efficiency.

Your digital package includes:

- **Detailed site plan:** Head placement with specified nozzle arcs and radio.
- **Hydraulic layout:** Zone routing, valve manifolds, mainline/lateral pipe sizing, and wire runs.
- **Bill of materials:** Itemized take-off of all required components.

Design Specifications & Technical FAQ

1. **Head spacing:** All designs utilize **Head-to-head coverage** to eliminate dry spots and ensure matched precipitation rates.
2. **Head selection:** Do not mix different head types (e.g., rotor with sprays) on the same zone to avoid uneven watering and pressure imbalances.
3. **Zoning & Hydraulics:** Zones are calculated based on your provided GPM/PSI at the point of contact. Total zone demand is capped to maintain safe flow velocities and prevent water hammer.
4. **Field adjustments:** Lateral lines and valve boxes placements are schematic. Adjust as needed to suit-specific hardscaping or planter beds while maintaining hydraulic integrity.
5. **Compliance:** Verify all your valves and back-flow selections against local municipal codes. Ensure the specified BFP (Back-flow prevention) meets local hazard requirements.
6. **Manifold Placement:** Manifolds are strategically located to minimize friction loss and reduce pipe/trenching costs.
7. **Smart controls:** We recommend integrating a Rain Sensor and the Rain Bird App to automate your system with seasonal adjustments and meet local water restrictions.
8. **Winterization:** For systems in freeze-prone regions, ensure the design includes a blow-out port located downstream of the back-flow assembly.

CAUTION: Your design is based on using Rain Bird products. Other manufacturers' products may not work on this design due to differences in flow, distance throw, inlet size or other variables.

Visit the [Rain Bird Online Store](#) to quickly get the products required to complete the installation of your design or look for the closest authorized retailers [here](#).

How an Irrigation System Works

An irrigation system distributes water through a connected set of components designed to deliver uniform coverage, reliable operation, and efficient water use.

Key Underground System Components

- 1.- Controller (Timer)

2.- Valves and manifold

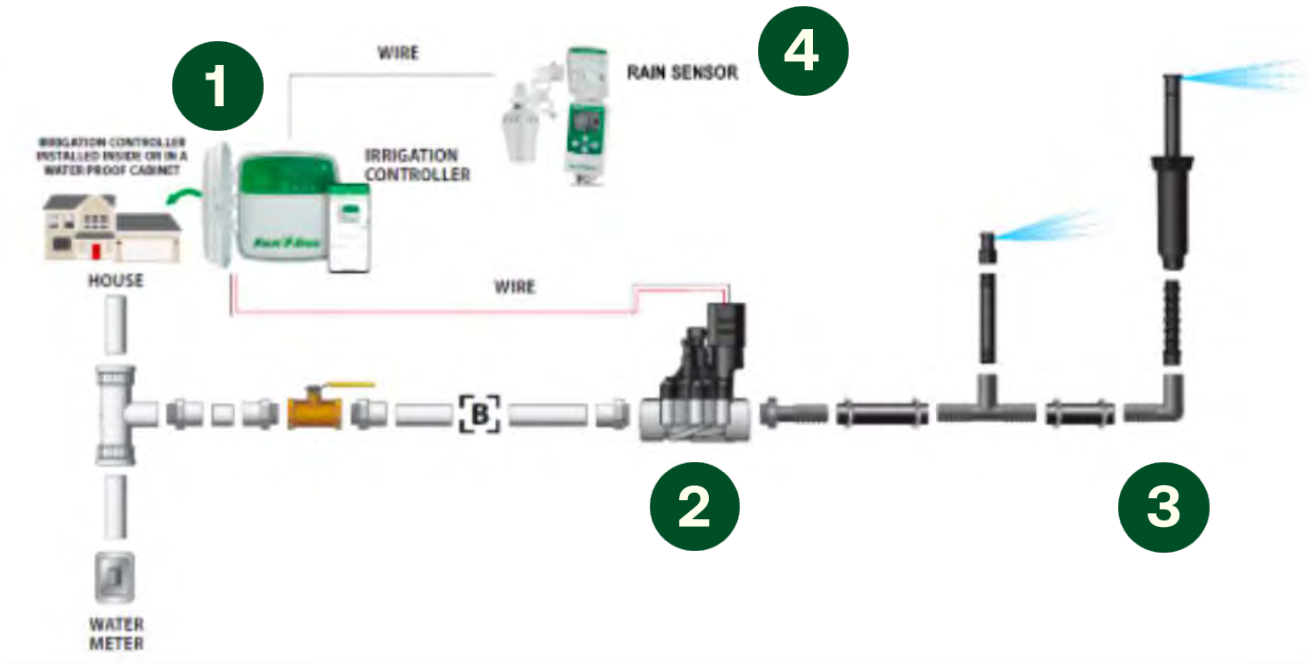
3.- Pipe, fittings and sprinkler heads

4.- Wire, sensors, and accesories
- Schedules and activates irrigation zones.

Control water flow to each zone.

Move and apply water evenly across the landscape.

Support control, adjustments, and future upgrades.



Key Drip Irrigation System Components

- 1.- Hose-End Timer

2.- Faucet Connection

3.- Distribution and emitter tubing

4.- Fittings, stakes and connectors

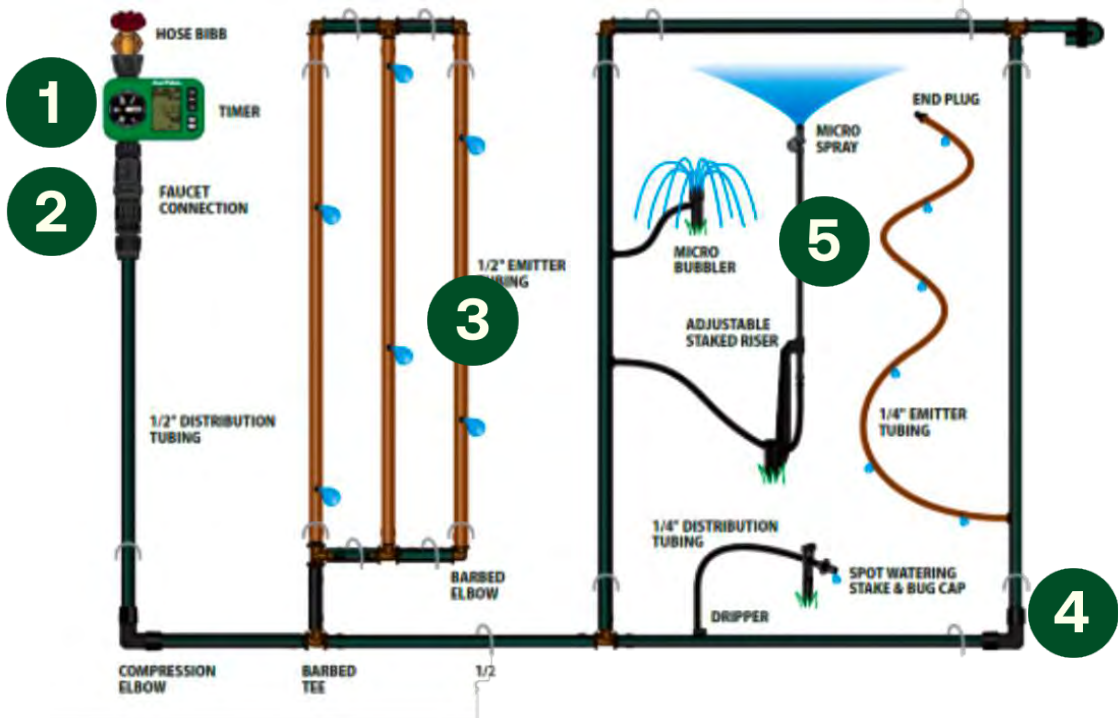
5.- Drippers, emitters and microsprays
- Schedules and activates your irrigation system.

Connects your drip irrigation system an outdoor faucet or timer.

Tubing to distribute water to your drip system components.

Connect and shape your drip system with these components

Bubblers, micro-bubblers and single or multi outlet options



PLAN: Irrigation Design Fundamentals

Strong installation starts with strong design. Confirm the basics before any trenching or material assembly begins.

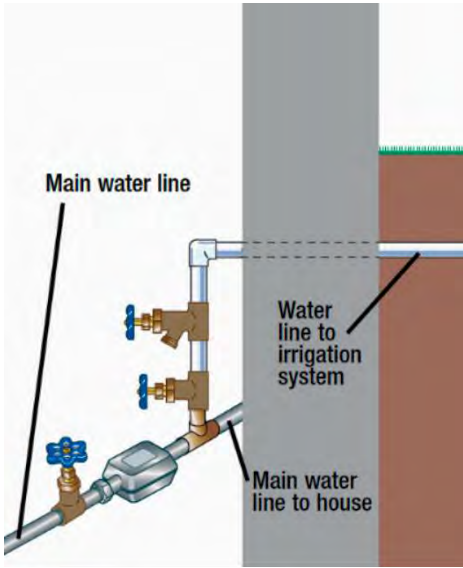
- **Create irrigation zones:** Separate zones by landscape type, sun exposure, slope, and pressure limitations so each area receives the right amount of water.
- **Maintain head-to-head coverage:** Space sprinklers so the spray from one head reaches the next. This improves uniformity and reduces dry spots.



INSTALL: Sprinkler System Core Installation Flow



Water meter located outside



Water meter located in basement



- 1. Connect to the main water line:** Shut off the water supply and install a tee connection to feed the irrigation system.
- 2. Install back-flow prevention:** Install the required back-flow device to protect the potable water supply in accordance with your local code.
- 3. Install the valve manifold:** Space valves so they remain serviceable and easy to replace if needed.
- 4. Install mainline and lateral pipes:** Run mainline piping first, then connect lateral lines from each valve to sprinkler locations.
- 5. Flush the system:** Before installing heads, run each zone manually to clear debris from the piping.
- 6. Install sprinkler heads:** Attach heads using threaded risers or flexible swing pipe connections.
- 7. Wire valves to the controller:** Use direct-burial irrigation wire and record zone wire colors for future service.

Sprinkler System Installation Complete

Your irrigation system is now ready for operation and seasonal scheduling adjustments. Regular inspection and maintenance will support efficient water use and long-term performance.

Technical Support	Design Service / Web
800-RAINBIRD	store.rainbird.com/learn/design-service RainBird.com

INSTALL: Drip System Installation

- 1. Connect to water source:** connect your hose-end timer to the hose bib, make sure the faucet connection kit is connected to your timer.
- 2. Run tubing to plants:** Lay the distribution tubing, cut and connect with connectors and fittings to achieve desired design.
- 3. Attach watering devices:** Bubblers, spot watering drippers and micro-sprays must be connected to the distribution tubing.
- 4. Program and run your timer:** Install batteries and turn on your timer, setup your irrigation schedule, test the system.



Install, maintain or expand your drip system with these easy to setup kits:



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The Intelligent Use of Water™

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.™

For questions about your plans or the design service:

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