



Landscape & Irrigation Manual

General Landscape Maintenance

Thoroughly water all newly installed plants, once a week (minimum), during the growing season (April-June). With a garden hose and at a slow speed, water shrubs one (1) to three (3) minutes; trees ten (10) minutes for each inch of the caliper, and evergreen conifers one (1) to three (3) minutes for each foot of height.

Example

1 - Red Sunset Maple 2.5" cal. = 25 minutes

1 - Honey Locust 3" cal. = 30 minutes

1 - Blue Spruce 6' = 18 minutes

1 - Scotch Pine 8' = 24 minutes

Note:

1. To avoid over-watering, cut back the number of minutes if your shrubs are watered directly by automatic irrigation. Generally, automatic irrigation systems are ineffective when watering deciduous trees and evergreen conifers. Therefore, remain consistent with recommended watering as specified.
2. Skip watering if it rains an inch or more and begin to water again 4-5 days after the rain has stopped.
3. Water all evergreen trees and shrubs during dry winter months, but do not exceed 2-3 times per month. Pruning is not necessary during the first growing season, except to remove dead and/or leggy growth.

NEWLY SODDED LAWN MAINTENANCE

1. New sod should be watered twice daily for the first two weeks. It is important that water penetrates the sod to the soil underneath.
2. Keep all traffic off the sod for it will separate the seams and disturb the soil.

First Mowing:

1. The first mowing can usually occur about (3) - (4) weeks after installation or when sod reaches a height of 3 1/2-4" tall.
2. Adjust mower height to 3" and be certain that blades are sharp.
3. Do not water the day before mowing as this will mat the new sod.
4. Repeat mowing procedures approximately once a week during the growing season. Do not remove more than 1/3" of the grass blade per mowing.

Weeding/Fertilization:

1. After installation of sod, apply fertilizer with a pre-emergent combination to reduce weeds. A non-DMA pre-emergent is best. Spot spray broadleaf weeds as needed.
2. At approximately (6) week intervals from April through October, fertilize your lawn with a well-balanced (20-10-5) fertilizer at the recommended rate. It is best to fertilize in two directions at ½ the recommended rate to assure proper coverage and overlap. Remember, more frequent, light applications will give better color than less frequent, heavy applications.

General Notes:

- Once established, a new lawn will perform better when watered heavily a fewer number of times rather than lightly a greater number of times. This promotes deeper root growth and a healthier stand of grass.
- Winter watering is important, especially in the first year when the root system may not have fully developed. Water your lawn at least once every four weeks.
- As your lawn gets older, you will need to aerate it in order to facilitate air movement as well as fertilizer and water intake. We recommend aerating your lawn at least once per year. Depending upon the traffic your lawn is receiving, aeration may be needed as soon as the second year and as often as two times per year.

NEWLY SEEDED LAWN MAINTENANCE

1. Keep the seedbed evenly moist at all times until most of the seed has germinated (approximately 10-21 days depending on the type of seed). Overwatering will cause erosion and drowning; drying between waterings may cause the seedlings to die.
2. Once the new lawn is up, reduce the watering slightly. Do not allow the seedbed to become excessively dry as it will stress the new seedlings.
3. Do not apply herbicides to the new lawn as this will burn the new seedlings (see "Weeding/Fertilizing").

First Mowing:

1. The first mowing can usually occur between three and four weeks after the seeding has taken place. Mow in alternating directions without catching clippings unless there is an abundance of flowering weeds.

2. After the first several mowing, you can begin to catch the clippings if you choose. Mow approximately once a week during the growing season at a height of about 2.5".

Weeding/Fertilization:

1. After the grass plants have two leaves, you may want to apply a light application of a slow release fertilizer. If you start to see yellowing of seedlings, this also indicates it is time to fertilize.

2. After the first several mowings, the lawn is ready for an application of "weed and feed". Be careful not to apply too much as this will burn the young lawn. A liquid spray application of a broadleaf herbicide can also be used (it will be more effective on weeds). Be sure to follow the directions on the label carefully.

3. At approximately six-week intervals, fertilize your lawn with a well-balanced (20-10-5) fertilizer at the recommended rate. It is best to fertilize in two directions at ½ the recommended rate to assure proper coverage and overlap.

4. If weeds persist, mow them before they flower, making sure to catch all clippings. Also make several follow-up herbicide applications; spot spraying will probably be more effective and more efficient.

General Notes:

- Do not be alarmed if weeds should appear in your new lawn, as this is perfectly normal. These weeds have come from seeds found in your soil or have been blown in.

- Once established, a new lawn will perform better when watered heavily a fewer number of times rather than lightly a greater number of times. This promotes deeper root growth and a healthier stand of grass.

- Never remove more than 1/3 of the grass blade when mowing.

- Winter watering is important, especially in the first year when the root system may not be fully developed. Water your lawn at least once every four weeks.

- It will take approximately one year for your lawn to fill into a full turf area. Tender loving care can speed this process along.

TREE AND SHRUB CARE

Several deciduous shrubs & trees could take till mid to end of May to come out of Winter dormancy. This area is tending to get warm stretches in the Winter months followed by late freezes so it delays when plants will start producing new leaves in Spring.

Large Deciduous Trees - Prune mid-December through mid-March, any crossing or rubbing branches. Prune as desired for limb height and basic shape during these months. Fertilize in early spring when trees begin to bud or in late fall after the dropping of its leaves. Prune maple trees in July or August.

* Current research indicates that trees should only be staked when they cannot stand straight by themselves.

Flowering Deciduous Trees - Prune March through May within three weeks after flowering. Prune as desired for limb height and basic shape during these months. Fertilize in early spring when trees begin to bud or in late fall after the dropping of its leaves.

Deciduous Shrubs - Prune approximately one to three weeks after flowering. Prune as desired for the basic shape. Fertilize in early spring when trees begin to bud or in late fall after the droppings of its leaves. Do not allow shrubs to go through late fall and into early winter dry, especially during drought years. Soak well in mid-November and repeat in early December. When drought conditions prevail, water new shrubs twice monthly and established shrubs monthly through the winter. You may wish to spray your lilacs once sometime during January or early February with a dormant oil containing lime sulfur to prevent several potential insect pests, especially scale. Do not allow the spray to drift onto evergreens, broadleaf evergreens or roses.

Evergreen Trees - As a rule of thumb, if the evergreen begins to brown from the bottom inside out, the soil is too wet; if the evergreen begins to brown from the upper outside in, the soil is too dry. Trim to the desired shape after new growth as hardened off, approximately May through June. Fertilize with Miracid only in early spring. Do not fertilize summer through fall.

Juniper Trees – They are widely used in Europe, Asia, and North America. Many are hardy and form good trees for garden decoration. Some are dwarf enough for rock gardens and ground covers, some are good foundation plants, and others grow into trees of moderate size. They flourish in ordinary soil where there is little lime. Junipers prefer sunny locations and are excellent for planting in south and west exposures.

- Junipers are beautiful and fragrant and grow rapidly once established. To maintain size and shape they should be pruned or sheared two to three times each year, though this practice is not absolutely essential for survival.

- Juniper cones are small, pea-like bodies, each containing one or more seeds and are generally bluish in color. These are called Juniper berries. They are one of the main ingredients in the production of gin.

- Junipers generally are disease-free but do get a gall-like growth called Cedar Apple Gall. Through not harmful to Junipers, gall will cause problems for apple and pear trees, crabapples, roses, and Hawthorns.

- Junipers prefer organic fertilizers such as binomial or manure. Some of the recent commercial fertilizers also are good. Junipers also need Aluminum Sulfate every other year to maintain an acid soil.

- Junipers can be susceptible to infestation by Red Spiders and Bagworms. Bagworms require two separate spraying with different products because they build up immunity so rapidly. The first spraying should be within a week of June 7th and the second about two to four weeks later.

Japanese Yews – They are beautiful evergreen shrubs that are native to North America, Europe, and Asia.

- Male and female flowers usually are produced on different shrubs in early spring. The fruit is a small, hard, dark green or brownish seed surrounded, except at the apex, by a fleshy envelope that is red and juicy when ripe. This fruit should not be eaten.

- The Japanese Yew grows at a medium rate in comparison to other evergreen shrubs. The new growth, though usually beautiful and lush, is generally slightly stringy. To maintain a dense compact plant, trimming is recommended around mid-June. To achieve size, cut the new growth back in half. To maintain size, cut the growth off entirely.

In the Kansas City area, the Japanese Yew is almost disease-and insect-free. They prefer good drainage and little, if any, afternoon sun. They will thrive on the east or north side in acid soil. This is achieved with peat moss and Aluminum Sulfate. They also like heavy fertilizer with manure, bonemeal or one of the commercial fertilizers for acid-loving plants.

Broadleaf Evergreens - Soak well in fall and spray anti-desiccant to the plants (with Wilt-Pruf). Select a location with partial shade, especially with full shade from 11:00 a. m. to 5:00. The location should have good drainage, porous soil without a puddled or saturated condition existing following rain or artificial watering). Protection from north winter winds is preferred for Azaleas and is required for Pieris. A site with dappled or light shade throughout the day is satisfactory if the shrubs have afternoon shade in the winter.

Remove occasional weeds by hand. Do not hoe because roots are shallow. Mulch with cypress bark, pine straw, or oak leaves. Do not walk in the planted area any more than necessary. Apply a 30-10-10 fertilizer (Miracid is very good) at a rate of one-third the recommended strength at the time of bud color. Repeat when in full bloom. Make a third application when the blossoms have faded. In late July or early August, lightly dust aluminum sulfate or epsom salts over the root system areas and water in. In early - to mid-September, repeat the aluminum sulfate or epsom salts and fertilize with a low nitrogen fertilizer such as tomato food (4-24-8) or root starter.

To help ensure viability, protection is very important the first three years with Rhododendrons, the first five years with Azaleas, and annually with Pieris. Following the first killing frost, add 2 to 4" of mulch, preferably Cypress Bark, Pine Needles or oak leaves, under the shrubs. Remove

excess mulch leaving about 2" through the growing season. This practice should be considered basic, annually, for Azaleas subject to north winter winds or afternoon sun in the winter.

Perennials - Water thoroughly after planting. Root stimulator may be added to the water but add no fertilizer for the first two weeks. Water frequently for the first couple of weeks. A guideline for watering for the rest of the season is the equivalent of 1" of rain per week. Mulching will help conserve moisture in the soil. Fertilize with a liquid fertilizer every two weeks or once a month with granular fertilizer (keep away from steams). Remove faded flowers for appearance and to encourage more flowering. Spray for disease and insect pests as needed. Weed and remove any plant debris or dead foliage to prevent disease. Cut back foliage to ground level and mulch for winter around the end of November.

Groundcovers - Prepare the planting area by digging or tilling in generous amounts of organic matter. Work in 5-10-5 fertilizer. Plant in large holes, spreading roots outward and downward. Firm soil around roots eliminates air pockets. Water thoroughly after planting. Root stimulator may be added to the water but add no fertilizer for the first two weeks. Water frequently for the first couple of weeks. A guideline for watering for the rest of the season is the equivalent of 1" of rain per week. Mulching will help conserve moisture in the soil. Keep well-weeded while plants establish and fill in. Fertilize with a liquid fertilizer every two weeks or once a month with granular fertilizer until a good root system is established. Spray for disease and insect pests as needed.

Vines - Water frequently for the first couple of weeks. A guideline for watering for the rest of the season is the equivalent of 1" of rain per week. Mulching will help conserve moisture in the soil. Fertilize with a liquid fertilizer every two weeks or once a month with granular fertilizer until a good root system is established. Provide support for vines that climb by twining, winding, or with tendrils. Spray for disease and insect pests as needed.

LANDSCAPING MONTHLY CHECKLIST

JANUARY Plants need protection this time of year against weather and critters. Build a windscreen around less hardy material and protect root systems with thick layers of mulch. Animals are also seeking sources for shelter and food, unfortunately, our planting beds are an ideal source. Use wire fencing, poison baits or traps for protection. Fungus and disease can be a problem if you don't clean up the 'droppings' from fall. Seed pods, rotting fruit, and leaves will harbor disease, insects, and larvae through the winter.

FEBRUARY Dormant oil can be sprayed when the temperatures will not reach freezing for 24 hours. Use oil to control scale on Lilacs, Cotoneaster, Pyracantha, Euonymus, dormant shrubs, and trees. Be careful not to spray Evergreens. Anti-desiccants should be sprayed when the temperature is above freezing. This will help your broadleaf plants make it through the drying winds to come. Water plants that may have dried out from winter. It is also a good time to add a fungicide to groundcover beds and areas in the lawn that may have fungus or mold problems. Prune any shade and non-flowering ornamental shrubs while you can still see the branching

structure. Enjoy the blooms on the flowering varieties before you prune those. Maple trees should be pruned in July or August if possible. Grass seed can be applied to bare areas late this month. You will get new grass about the same time all the other areas are beginning to green up. Pre-emergent herbicides can be applied to prevent weeds from early germination. We can still expect some freezing and thawing action to work them into the soil for us.

MARCH Bulbs could use a light coating of fertilizer broadcast on the planting beds. Use a mild fertilizer such as 10-10-10 or 5-10-5. As their blooms fade, cut off spent flower stalks, but don't remove the foliage until it yellows. Wind and Winter may have left your most recent fall plantings a little less straight than you left them in the fall. Now would be a good time to straighten them before the root systems begin to get active. Dormant oil should be sprayed while the plants are still dormant to control scale insects, Mealybugs and Red Spider Mites on ornamental trees and shrubs, fruit trees, and roses. Fireblight can be prevented now by treatment of streptomycin sulfate spray on apples, pears, pyracantha, chrysanthemums, and roses. Cut back Liriope and ornamental grasses before they show new growth. Fertilize your lawn now with a good ratio of nitrogen, phosphorus, and potassium with a blend that will provide your lawn with approximately one pound of nitrogen per 1000 square feet of lawn. Add a good fungicide and pre-emergent weed control if you haven't seeded recently.

APRIL Hard frost can be a possibility until April 15th in our area and we can expect lighter late frosts until about Mother's Day in the Kansas City area. Seed or overseed lawn areas now. There have been some major advances in turf-type rye and fescue grasses. They give the appearance of Blue Grass without all the disease and drought problems. Roses need to be uncovered and pruned back to around 12". Feed and use a systemic insect and disease control when the new growth begins to appear. Fungicide can be applied to your lawn to correct any snow mold, brown patch, or dollar spot problems winter may have left you with. Root stimulators such as upstart will give you better results when planting and transplanting this spring. Also, consider an application of granular fertilizer around your shrubs and trees if you forgot to fertilize them in the fall. Pines and Spruce could use a treatment of Orthene this month to prevent brown tips caused by Borers and Red Spider.

MAY Prune flowering shrubs, Azaleas, and Rhododendrons after they finish blooming this month. They begin to set bloom buds soon after this season's blooms fade and the plant may need a little shaping or thinning. If you prune now you will guarantee better and stronger blooms for next year. Bagworms begin to emerge from their nests around the last week in May and the first week in June. They are most susceptible to most sprays in their infant stages. Annuals and vegetables are safe to plant about Mother's Day. Don't forget to give planting and care instructions with that gift you give this month. Continue your spray program for fire blight on apples, crabs, hawthorne, pears and pyracantha through the bloom period this month. Bagworms begin to emerge from their nests around the last week in May and the first week in June. Chrysanthemums can be divided and transplanted now. Add a little bone meal into the soil at the same time. Mulch those worn-looking beds this month. A good layer of mulch will prevent

weeds and help retain moisture in the soil for those dry months to come. A new layer of mulch will make your landscape look new and refreshing again.

JUNE Roses need to be fed monthly through the growing season for good blooms. Spray weekly for the first 3 weeks in June for scale insects. Black spot and mildew can be prevented with use of a good fungicide. Grubs may be the cause of those brown patches and the mole tunnels you are seeing in your lawn. Treat with diazinon crystals or liquid. The new "hose end" attachments now make this an easy job well worth the time and expense. Spider mites may be the cause of the 'dull' look your evergreens are starting to get. To check, hold a piece of white paper under a limb and shake the limb - if you see movement on the paper you have a problem. Use Kelthane spray to kill the spiders - it may take more than one treatment.

JULY Maples can be pruned this month and next without the 'dripping' problem. Remove any branches that may be crossing another branch. Cut as near the stem or trunk as possible without cutting into the 'collar' that will provide the tissue needed for healing. Use pruning paint on the larger cuts and spray the freshly exposed areas with insecticide to prevent infestation. Roses can be pruned back to a series of five leaves after the first flush of blooming. Remember to feed and use a fungicide for prevention. Japanese Beetles are becoming a yearly concern for trees and shrubs. They will start eating leaves this month. If you notice them on your plants have them sprayed or set traps to get rid of them. Perennials - cut back the stalks of Shasta Daisies, Daylilies and Iris. Lawns need about 1-1/2 inch of water per week. To measure, put a bowl in the center of the watering pattern. Raise your mower blade about 1 inch during the summer months.

AUGUST Lawn renovation should take place between August 15th and September 15th for best results. Use good seed - don't cheat on recommended coverage rates and mulch lightly with straw to retain moisture and provide shade for new grass. Common problems with poor lawns include poor use of fertilizer, improper watering, poor seed mixtures, mowing too closely, too much traffic, too much shade, and poorly drained or droughty soils. Tent caterpillars and fall webworms may be showing up in the fruit and ornamental trees. Orthene or Isotox should help cure the problem. You need to make sure your spray will penetrate the nests. Make sure to read and follow label recommendations. Iris and Daylilies can be divided and transplanted. Cut back the foliage to about 4" to 6". Bury the rhizome to the same depth it was originally. Fertilize - your last 'warm season' feeding should occur before September 15th. Any later frost damage may injure the new growth caused by the fertilizer. Water is important this month. If we haven't had adequate rainfall make sure those plantings get the much-needed drink this month. If you plan to be away, ask the neighbors for help or consider the new 'moisture sensing' watering computers now on the market. You have too much time and money invested in your landscape to watch it all dry up. Sometimes we don't notice a problem until it is too late.

SEPTEMBER Roses will continue to bloom until 'hard frost'. Continue regular pesticide and fungicide control. Give each plant one last feeding of ¼ cup to ½ cup of 5-10-5 or similar fertilizer. Perennials - plant or divide existing perennials. Doing this in the fall gives roots time

to establish before being subjected to the demands of spring growth. Prune for shape now. Trimming hedges and flowering shrubs now will give the plants some time to put on new foliage before winter halts their growth. It will also allow time for the to heal before winter arrives. Chrysanthemums - The 'fall' flowers are blooming now. They have been raised in the orient for more than 2000 years and there are more than 1000 varieties in dozens of shades. Add some color to your fall by planting mums.

OCTOBER Fall is for planting- shop early for the fall planting season while supplies are good and begin planning your spring needs to ensure availability. Fall is an ideal time to plant trees, shrubs, lawns, and bulbs. Trees and shrubs increase the value of the property and brighten up your home and your life. Bulbs - Fall is the only time to plant spring - flowering bulbs. Plant Tulips, Daffodils, Hyacinths, Crocus and more. Bulbs are easy to plant and easy to grow. Prepare the soil by turning it to a depth of 10-12", work in about 1 cup of superphosphate per square yard of bed, add peat moss, and about a teaspoon of bone meal with each bulb. A general rule of thumb is to plant small bulbs such as Crocus and Grape Hyacinths 1-2" apart and 4" deep while planting larger bulbs about 4-6" apart and 8" deep. Water thoroughly! Mulch your planting beds now. Give your plants that extra blanket of protection they will need for winter. Mulch will also enhance the beauty of dull-looking plant beds through the winter. Compost materials are plentiful this time of year. Use spent flowers, vegetables, leaves, grass clippings, and weeds. Never compost diseased materials. Turn the pile weekly to speed decomposition. Tree wrap should be used on trees that were planted this year for added protection against winter burn and sun-scald. Trees don't have their leaves to shade their trunk in the winter. Paint the trunk with Lindane to stop insect infestation before applying the tree wrap.

NOVEMBER Water - Just because the leaves are turning and dropping does not mean that plants don't need watering anymore. The root systems are very active this time of year and need moisture as much as ever. Continue watering until the ground freezes. Plants will go through winter wet much better than having the roots freeze dry. Fertilize established plants with 2 pounds of 25-5-10 per 100 square feet of bed area. This will provide the plants with the nutrients they will need next spring. Dig Cannas, Caladium's, Tuberous Begonias, Dahlias and Gladiolus when the frost has killed the tops. Dry in the sun, remove the soil and store in cool but not freezing, damp sand or peat moss. Prune now for shape so that you can see the overall structure of the branches and thin where needed. A thinning will make a stronger plant next season. Till your soil now for your garden or future landscape areas you are planning to plant in the spring. The freezing and thawing action will condition your soil.

DECEMBER Roses - Leave the last blossoms to form seed pods. This helps the plants into dormancy. After the first good freeze, cut back the canes and cover with mulch, peat or mushroom compost. This will protect the plants through the winter. Broadleaf evergreens tend to lose moisture through their leaves in the winter. Use an anti-desiccant spray such as Wilt-Pruf or Envy to slow that transpiration process. It will give your plants an edge against the cold

winds. Multi-stemmed evergreens, such as Arborvitae or upright Junipers can be tied up to prevent snow and ice from causing the plants to split

Irrigation System

The standard irrigation system will have 6 zones. For larger yards, the system may need 7-8 zones. The irrigation controller is located inside the garage. For established yards, it is best to water early in the morning and avoids watering at night as this will cause fungus on the turf. System run times and run days will need to be adjusted throughout the season depending on the weather. During the Spring and Fall, the systems will not need to run as much due to cooler temperatures and regular rain. During the Summer months, run times and days will need to be increased to avoid stressing the yard and dry spots. If dry spots occur in the yard, increase the run times on affected zones. It is best not to just program the system in the Spring and not adjust it again. Too much watering will cause the grass roots to stay shallow instead of growing deeper in the soil creating much stronger roots and turf. Not enough water in the Summer will stress the turf and require much more water to recover.

Each irrigation system has a backflow device located in the large, rectangle, green box in the yard next to the water meter. The city or water department will require a yearly backflow test to be performed in the Spring to make sure the backflow is preventing water from draining back into the city water supply. Any certified backflow tester can perform this test and submit the proper documents.

Every Fall, around the end of October or into November, the system will need to be winterized. Compressed air will need to be blown through the lines to remove all the water so it does not freeze and cause damage to the lines. It takes several days of weather below freezing all day long before damage can occur so do not worry if the weather drops below freezing briefly at night but warms back up. Only customers with above-ground backflows, typically Olathe residents, need to have their systems winterized before any freezing weather or the backflow will need to be wrapped to prevent damage. Most irrigation companies offer this service.

There are 3 main styles of irrigation heads in systems. Sprinkler heads will require adjustments 2-3 times a season as standard homeowner maintenance and is not considered a warranty item.

- The rotor heads - typically located in the front and backyard unless the side yards are larger. They spray the furthest distance and require the most run times. It is best to run these style heads 15-20 minutes.

- MP Rotator Heads can be used in any location in the yard. They are a low flow nozzle that spray small jets of water that fan out over the turf. This style of heads can run 15-20 minutes.

- Spray heads are typically located on side yards in tighter locations. These style heads put out the most amount of water so they should run anywhere from 5-15 minutes. It is easy to over-water with these heads, so watch run times and adjust as needed.

It is best to make sure the system is run through and adjusted in the Spring with the turn-on. It is common for heads to move in the soil with the Spring rains, Summer droughts making heads heave out of the soil, and regular lawn mowing. Lawn mowers running overheads will cause them to move very easily affecting how they spray. It is best to avoid running over any of the green valve boxes with lawn mowers to prevent damage to the valves located in those boxes.

This is an example of a standard 6-zone system:

- Zone 1 – Rotor heads for the front yard 15-20 minutes
- Zone 2 – Spray heads for the side yard 5-15 minutes
- Zone 3 & 4 – Rotor heads for the backyard 15-20 minutes
- Zone 5 – Spray heads for the side yard 5-15 minutes
- Zone 6 – Spray heads for the front landscape bed



ESP-TM2 Controller User Manual



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Introduction

Welcome to Rain Bird

Thank you for choosing Rain Bird's ESP-TM2 controller. In this manual are step by step instructions for how to install and operate the ESP-TM2.



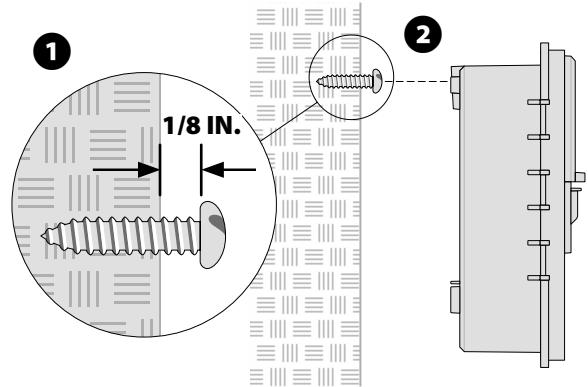
Controller Features

Feature	Description
Maximum Stations	12
Simultaneous Stations	1 plus master valve
Start Times	4
Programs	3
Program Cycles	Custom Days, Odd, Even and Cyclic
Permanent Days Off	Per program
Master Valve Control	On/Off per station
Rain Delay	Supported
Rain/Freeze Sensor	Supported
Rain Sensor Control	Global or by station
Seasonal Adjust	Global or by program
Manual Station Run	Yes
Manual Program Run	Yes
Manual Test All Stations	Yes
Station Advance	Yes
Short Detect	Yes
Delay Between Stations	Yes
Accessory Port	Yes (5 pin)
Save & Restore Programming	Yes

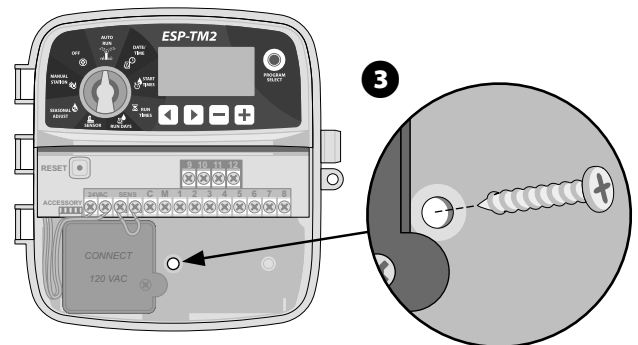
Installation

Mount Controller

- 1 Drive a mounting screw into the wall, leaving an 1/8 inch gap between the screw head and the wall surface (use the supplied wall anchors if necessary), as shown.
- 2 Locate the keyhole slot on back of the controller unit and hang it securely on the mounting screw.



- 3 Remove the wiring bay cover on the lower part of the controller unit, and drive a second screw through the open hole inside the controller and into the wall, as shown.



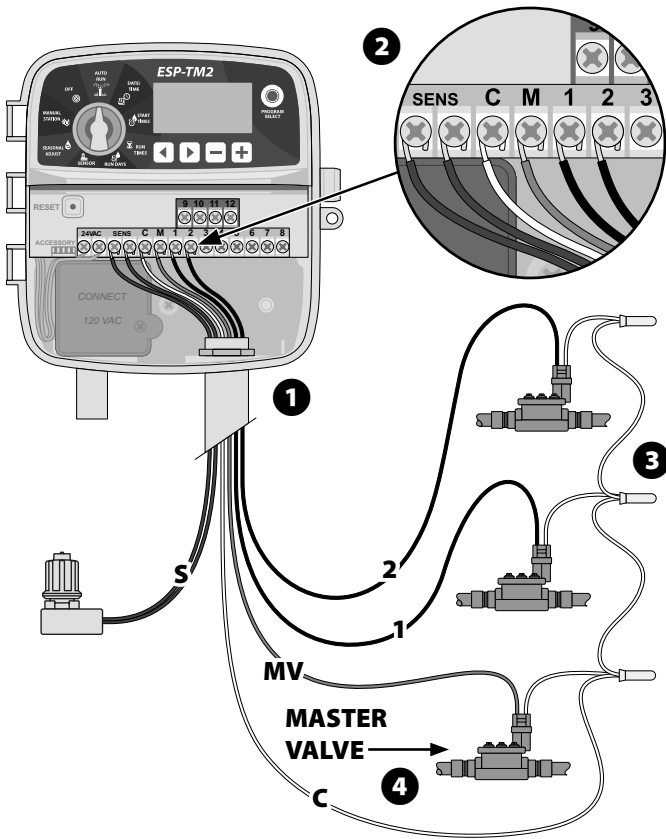
NOTE: Choose a suitable mounting location close to a 120 VAC wall outlet.

Wiring Connections

Connect Valves

- 1 Route all field wires through the opening at the bottom of the unit, or through the knock-out in back of the unit. Attach conduit if desired, as shown.
- 2 Connect one wire from each valve to one of the numbered station terminals (1-12) on the controller, as shown.
- 3 Connect a field common wire (C) to the common terminal (C) on the controller. Then connect the remaining wire from each valve to the field common wire, as shown.

NOTE: The ESP-TM2 controller supports one valve solenoid per station terminal.



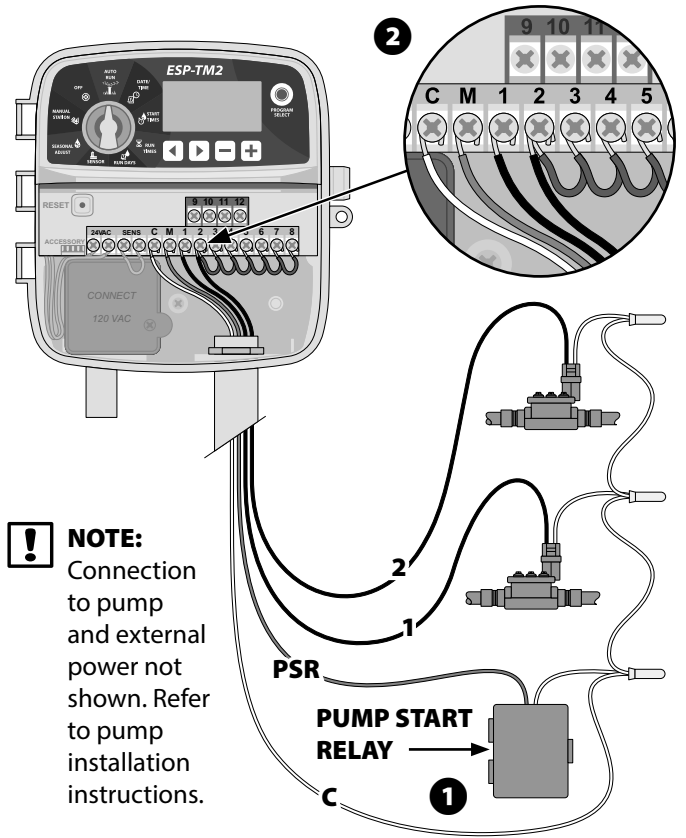
Connect Master Valve (optional)

- 4 Connect a wire from the master valve (M) to the master valve terminal (M) on the controller. Then connect the remaining wire from the master valve to the field common wire, as shown.

Connect Pump Start Relay (optional)

The ESP-TM2 can control a pump start relay, to turn the pump on and off as needed.

- 1 Connect a wire from the pump start relay (PSR) to the master valve terminal (M) on the controller. Then connect another wire from the pump start relay to the field common wire, as shown.
- 2 To avoid the possibility of damage to the pump, connect a short jumper wire from any unused terminal(s) to the nearest terminal in use, as shown.



NOTE: Connection to pump and external power not shown. Refer to pump installation instructions.

NOTE: The ESP-TM2 controller DOES NOT provide power for a pump. The relay must be wired according to manufacturer instructions.

Only the following Rain Bird pump start relay models are compatible with the ESP-TM2:

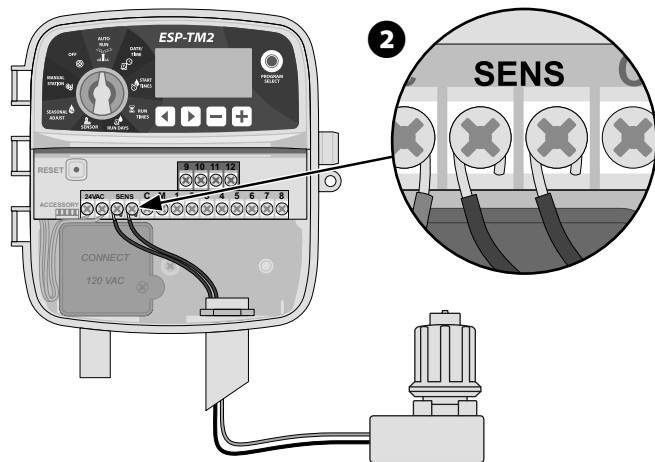
Description	Model #	Volts
Universal Pump Relay	PSR110IC	110V
Universal Pump Relay	PSR220IC	220V

Connect Rain/Freeze Sensor (optional)

The ESP-TM2 controller can be set to obey or ignore a rain sensor.

Refer to the Rain Sensor section under Advanced Programming.

- 1 Remove the yellow jumper wire from the SENS terminals on the controller.
- 2 Connect both rain sensor wires to the SENS terminals, as shown.



NOTE: Do not remove the yellow jumper wire unless connecting a rain sensor.

NOTE: Rain Bird controllers are only compatible with normally closed rain sensors.

NOTE: For wireless rain/freeze sensors, refer to installation instructions for sensor.

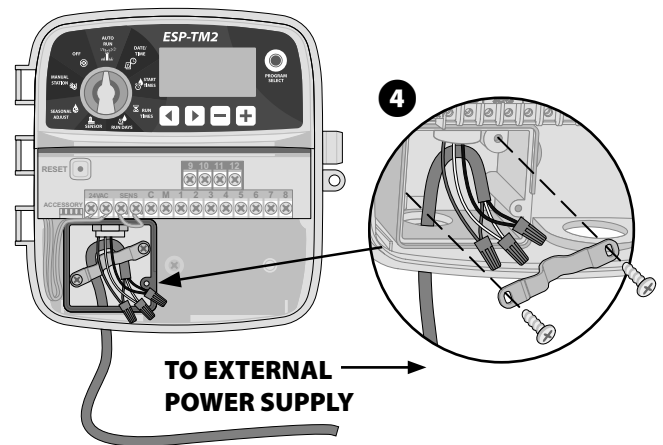
WARNING: Do not apply power until you have completed and checked all wiring connections.

Connect Custom Wiring (optional)

If desired, the provided 120 volt power cord can be removed and replaced with a custom wiring.

To remove the factory installed power cord and connect custom wiring:

- 1 Ensure that AC power is disconnected.
- 2 Remove the controller junction box cover and disconnect the power cord to the unit.
- 3 Remove the factory installed power cord by loosening the 2 screws securing the metal strain-relief bar, as shown.
- 4 Connect the external power supply wires using the wire nuts and then re-secure the metal strain relief bar by tightening the 2 screws.



Power Wiring Connections (120VAC)

Black supply wire (hot) to the black transformer wire

White supply wire (neutral) to the white transformer wire

Green supply wire (ground) to the green or green-yellow transformer wire

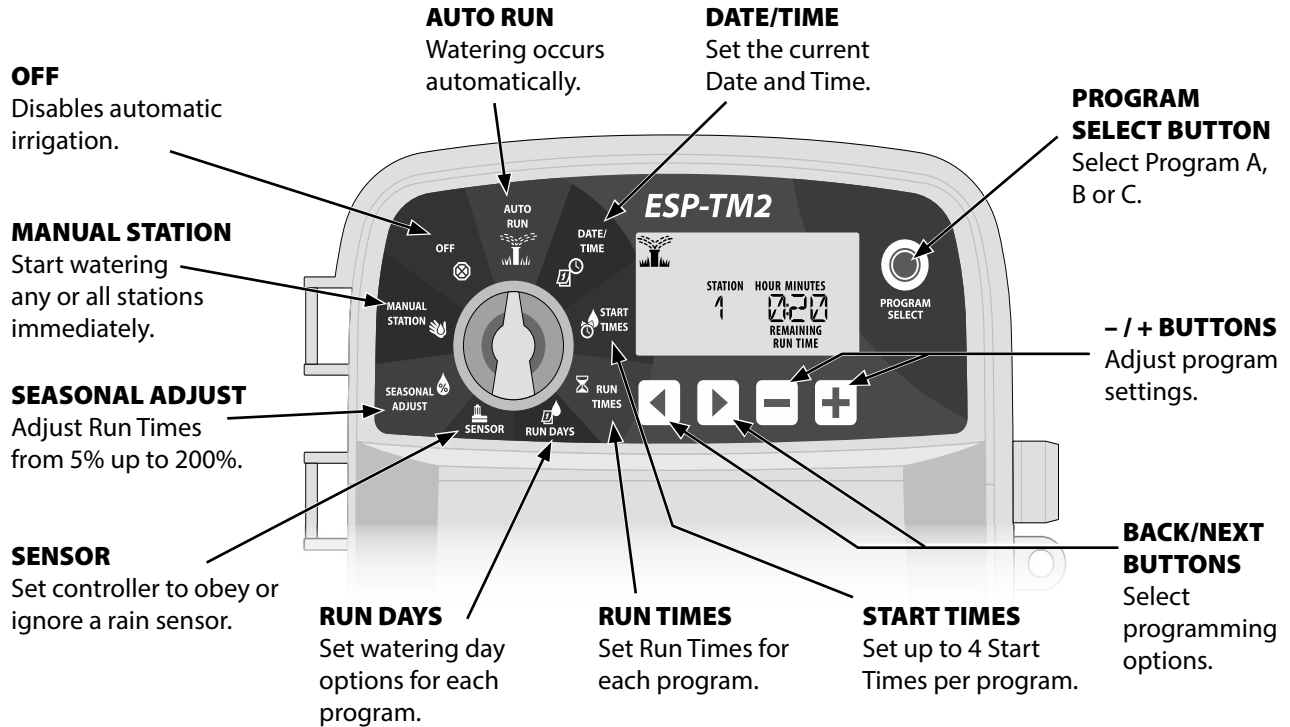
- 5 Verify that all wiring connections are secure and then replace the junction box cover.

CAUTION: The strain-relief bar must be re-secured for the unit to function properly.

WARNING: DO NOT apply power until you have completed and checked all wiring connections.

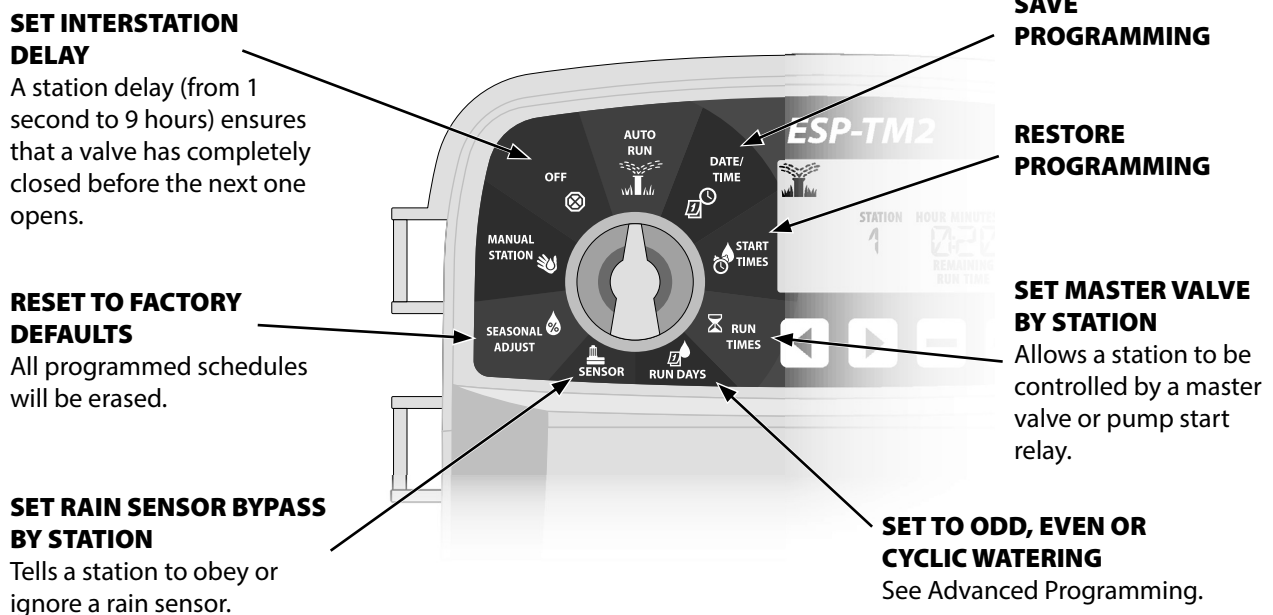
Controls and Indicators

Turn the dial to select programming features.




Special Features

- Turn the dial to the desired position.
- Press and hold ◀ and ▶ at the same time.



Basic Programming

1 Set Date and Time

 Turn the dial to **DATE/TIME**.


- Press ◀ or ▶ to select the setting to change.
- Press – or + to change the setting value.
- Press and hold – or + to accelerate adjustments.

To change the time format (12 hour or 24 hour):

- With **MINUTES** blinking, press ▶.
- Press – or + to select the desired time format, then press ▶ to return to the time setting.

2 Set Watering Start Times


Up to four Start Times are available for each program.

 Turn the dial to **START TIMES**.

- Press **Program Select** to choose the desired Program (if necessary).
- Press ◀ or ▶ to select an available Start Time.
- Press – or + to set the selected Start Time (ensure the AM/PM setting is correct).
- Press ▶ to set additional Start Times.

3 Set Station Run Times

Run Times can be set from one minute up to six hours.


 Turn the dial to **RUN TIMES**.

- Press **Program Select** to choose the desired Program (if necessary).
- Press ◀ or ▶ to select a Station.
- Press – or + to set the Run Time for the selected Station.
- Press ▶ to set additional Station Run Times.


4 Set Watering Days

Custom Days of the Week

Set watering to occur on specific days of the week.

 Turn the dial to **RUN DAYS**.

- Press **Program Select** to choose the desired Program (if necessary).
- Press – or + to set the selected (blinking) day as either **ON** or **OFF**, and to automatically move to the next day.
- You can press ◀ or ▶ at any time to move the cursor to the previous or next day.

 **CAUTION:** If Sunday is selected, ▶ will enter and activate Cyclic Watering (see the Advanced Programming section). If this is not desired, press the ◀ button to return to watering by Custom Days.

Manual Watering Options

Test All Stations

Start watering immediately for all programmed stations.

 Turn the dial to **MANUAL STATION**.

- Press **-** or **+** to set a Run Time.
- Press and hold **▶** or turn the dial to **AUTO RUN** to start manual station test.

Run a Single Station


Start watering immediately for a single station.

 Turn the dial to **MANUAL STATION**.

- Press **▶** to display the MANUAL STATION screen.
- Press **◀** or **▶** to select a Station.
- Press **-** or **+** to set a Run Time.
- Press and hold **▶** or turn the dial to **AUTO RUN** to start the selected Station.

Run a Single Program

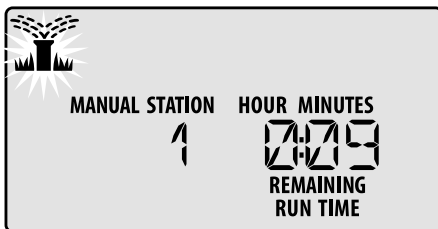
Start watering immediately for one program.

 Turn the dial to **AUTO RUN**.

- Press **Program Select** to choose the desired Program (if necessary).
- Press and hold **▶** to start the selected Program.

During Manual Watering:

The display shows a blinking sprinkler symbol, the active Station Number or Program, and the Remaining Run Time.

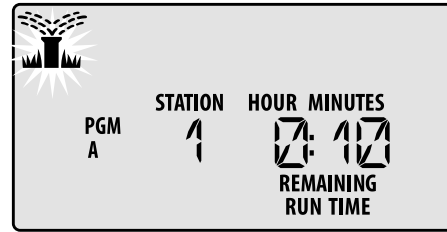


- To cancel manual watering, turn the dial to **OFF** for three seconds until the screen shows OFF.


Normal Operation


AUTO RUN

During watering, the display shows a blinking sprinkler symbol, the current Program and the Remaining Run Time.



OFF


Turn the dial to  **OFF** to stop automatic irrigation or to cancel all active watering immediately.

 **CAUTION:** Watering will NOT occur if the controller remains in **OFF**.

Advanced Programming

Odd or Even Calendar Days


Set watering to occur on all **ODD** or **EVEN** calendar days.

 Turn the dial to **RUN DAYS**.

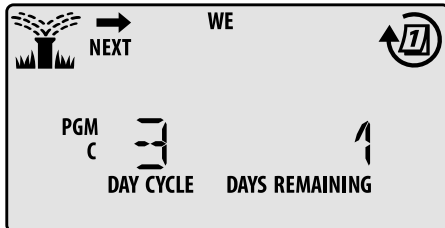
- Press **Program Select** to choose the desired Program (if necessary).
- Press and hold ◀ and ▶ at the same time until **ODD** or **EVEN** is displayed.

Cyclic Days

Set watering to occur at specific intervals, such as every 2 days, or every 3 days, etc.

 Turn the dial to **RUN DAYS**.


- Press **Program Select** to choose the desired Program (if necessary).
- On the **Custom Days** screen, press ▶ until the **Cyclic** screen is displayed (after SUN).
- Press – or + to set the desired DAY CYCLE, then press ▶
- Press – or + to set the DAYS REMAINING before the cycle begins. The NEXT watering day updates on the display to indicate the day that watering will start as shown.



Rain Sensor

Set the controller to obey or ignore a rain sensor.

When set to **ACTIVE**, automatic irrigation will be suspended if rainfall is detected. When set to **BYPASS** all programs will ignore the rain sensor.

 Turn the dial to **SENSOR**.

- Press – or + to select **ACTIVE** (obey) or **BYPASS** (ignore).

 **NOTE:** See **Special Features** to set Rain Sensor Bypass by Station.

Seasonal Adjust

Increase or decrease program run times by a selected percentage (5% to 200%).

Example: If the Seasonal Adjust is set to 100% and the station Run Time is programmed for 10 minutes, the station will run for 10 minutes. If the Seasonal Adjust is set to 50%, the station will run for 5 minutes.

 Turn the dial to **SEASONAL ADJUST**.

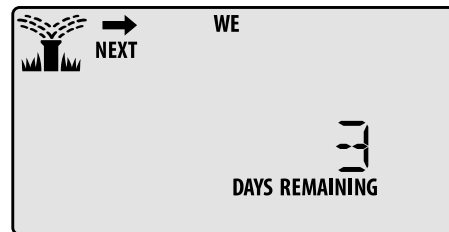
- Press – or + to increase or decrease the global percentage setting.
- To adjust an individual Program, press **Program Select** to choose the desired Program (if necessary).

Delay Watering


Suspend watering for up to 14 days.

 Turn the dial to **AUTO RUN**, then press and hold +

- Press – or + to set the DAYS REMAINING. The next watering day will update on the display to indicate when watering will resume.




- To cancel a Rain Delay, set the DAYS REMAINING back to 0.

 **NOTE:** When the delay expires, automatic irrigation resumes as scheduled.

Permanent Days Off

Prevent watering on selected days of the week (for Odd, Even or Cyclic programming only).

 Turn the dial to **RUN DAYS**.

- Press **Program Select** to choose the desired Program (if necessary).
- Press and hold **Program Select**.
- Press **-** to set the selected (blinking) day as a Permanent Day Off or press **+** to leave the day **ON**.

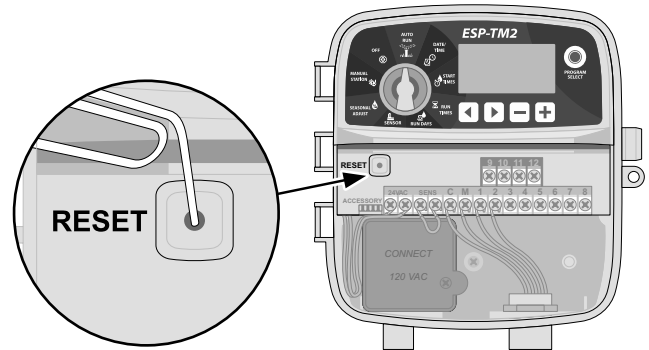


Options

Reset Button

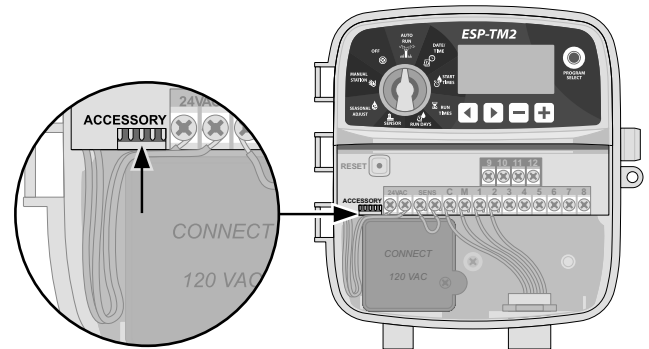
If the controller is not working properly, you can try pressing **RESET**.

- Insert a small tool such as a paper clip, into the access hole and press until the controller is reset. All previously programmed watering schedules will remain stored in memory.




Remote Accessories

A 5 pin accessory port is available for Rain Bird approved external devices.



Troubleshooting


Watering Issues


Problem	Possible Cause	Possible Solution
Watering icon on the display is flashing, but the system is not watering 	Water supply issue.	Verify there is no disruption to the main water line and that all other water supply lines are open and functioning.
	Wiring is loose, not properly connected or damaged.	Check that wiring is securely connected at the controller and in the field. Check for damage and replace if necessary. Check wiring connections and replace with watertight splice connectors if needed.
Automatic and/or Manual Watering will not start	Connected rain sensor may be activated.	Let the rain sensor dry out or else disconnect it from the controller terminal block and replace it with a jumper wire connecting the two SENS terminals.
	Jumper wire connecting the two SENS terminals may be missing or damaged.	Jumper the two SENS terminals on the controller terminal block by connecting them with a short length of 14 to 18 gauge wire.
	Solenoid or master valve is shorted.	Confirm short message on the display. Correct the issue in the wiring. Clear the message by testing watering at the shorted valve or by pressing the ► button.
Excessive watering	Programs may have multiple start times that were set unintentionally	Programs (A, B or C) only require a single start time in order to run. Separate start times are not required for each valve.

Electrical Issues


Problem	Possible Cause	Possible Solution
Display is blank.	Power not reaching the controller.	Verify the main AC power supply is securely plugged in or connected and working properly.
		Verify the orange power supply wires are connected to the controller "24 VAC" terminals.
Display is frozen and controller will not accept programming.	An electrical surge may have interfered with the controller's electronics.	Unplug the controller for 2 minutes, then plug it back in. If there is no permanent damage, the controller should accept programming and resume normal operation.
		Press and release the RESET button.


Safety Information

 **WARNING:** This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capacity, or lack of experience and knowledge unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety. Children should be supervised to ensure that they do not play with the appliance.

 **WARNING:** Special precautions must be taken when valve wires (also known as station or solenoid wires) are located adjacent to, or share a conduit with other wires, such as those used for landscape lighting, other "low voltage" systems or other "high voltage" power.

Separate and insulate all conductors carefully, taking care not to damage wire insulation during installation. An electrical "short" (contact) between the valve wires and another power source can damage the controller and create a fire hazard.

 **WARNING:** All electrical connections and wiring runs must comply with local building codes. Some local codes require that only a licensed or certified electrician can install power. Only professional personnel should install the controller. Check your local building codes for guidance.

 **CAUTION:** Use only Rain Bird approved accessory devices. Unapproved devices may damage the controller and void warranty.

For a list of compatible devices go to: www.rainbird.com

Disposal of Electronic Waste



In compliance with European Directive 2002/96/CE and EURONORM EN50419:2005, this device must not be thrown away with household garbage. This device must be the object of an appropriate, selective removal procedure in order to recuperate it.



NOTE: Date and time are retained by a lithium battery which must be disposed of in accordance with local regulations.

Questions?

Scan the QR code

to visit www.rainbird.com/esptm2 for help setting up and operating the Rain Bird ESP-TM2 Controller



Call Rain Bird toll free Technical Support at **1-800-724-6247** (USA and Canada only)



FCC Part 15

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If the equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.
- Changes or modifications not expressly approved by Rain Bird Corporation could void the user's authority to operate the equipment. This product was FCC certified under test conditions that included the use of shielded I/O cables and connectors between system components. To be in compliance with FCC regulations, the user must use shielded cables and connectors and install them properly.
- This class B digital apparatus meets all requirements of the Canadian Interference Causing Equipment Regulations.
Cet appareil Numérique de la classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

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690299-01 Rev.05/16

RAIN BIRD®

5000 & 5000 Plus Series Rotors (including PRS models) Installation Instructions

Radius Adjustment slot

Cavité de réglage de la portée
Strahlstörsschraube
Ranura de ajuste del radio de alcance
Ranhura de ajuste do raio de alcance
Alloggiamento vite rompigitto
Schroef om de sproeistraat in te stellen
Mesafe ayar girişi
Σχισμή ρύθμισης της ακτίνας
εκτόξευσης

Pull-up slot

Cavité de soulèvement de la tige
Öffnung zum Hochziehen
Ranura de elevación
Ranhura de puxar
Alloggiamento chiave di sollevamento
Sleuf voor omhoogtrekken stijgbuis
Gövdeyi kaldırma girişi
Σχισμή για δυνατότητα
τραβήγματος

Flow Shut-off slot (5000 Plus only)

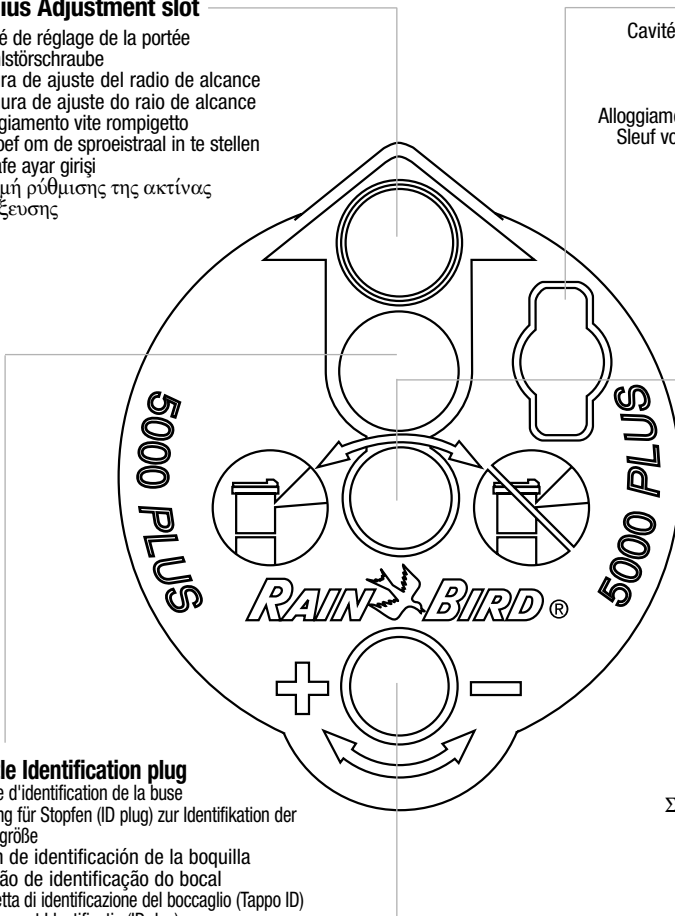
Cavité pour
arrêt de l'arroseur
(5000 Plus uniquement)
Sleuf om water
af te sluiten
(Alleen 5000 plus)
Ranura de cierre del flujo
(Solamente 5000 Plus)
Ranhura de
fechamento do fluxo
(Apenas 5000 Plus)
Alloggiamento chiave
di arresto del flusso
(5000 Plus unicamente)
Schlitz zum Abstellen
(nur 5000 Plus)
Su akışını durdurma girişi
(Sadece 5000 Plus)
Σχισμή διακοπής παροχής
(5000 Plus μόνο)

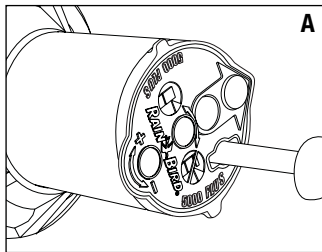
Nozzle Identification plug

Pastille d'identification de la buse
Fassung für Stopfen (ID plug) zur Identifikation der
Düsengröße
Tapón de identificación de la boquilla
Tampão de identificação do bocal
Targhetta di identificazione del bocaglio (Tappo ID)
Nozzle maat identificatie (ID dop)
Nozul tanımlama girişi
Βύσμα αναγνώρισης ακροφυσίου

Arc Adjustment slot

Cavité de réglage du secteur
Schlitz zur Sektoreneinstellung
Ranura de ajuste del arco de cobertura
Ranhura de ajuste do arco de cobertura
Alloggiamento vite regolazione settore
Sproeihoek afstelsleuf
Açı ayar girişi
Σχισμή ρύθμισης αρδευόμενου τομέα





English Installation Instructions

Installing and Removing Nozzles:

1. Insert tool into pull-up slot, turn 90 degrees, and lift up stem. **(A)**
2. Insert the desired nozzle into the nozzle socket, and turn the radius adjustment screw clockwise to secure the nozzle in place. **(B)**
3. Insert the selected nozzle's identification plug into the opening on the top of the rotor. **(B)**
4. To remove the nozzle, back out the radius adjustment screw, place the blade of the screwdriver under the nozzle removal tab and press the handle down. **(C)**

Setting the Arc:

The arc is adjustable from 40 –360 degrees (PC units only). The rotor is factory set to 180 degrees.

Align Fixed LEFT Edge:

1. Pull up turret and turn to the left trip point (counterclockwise). **CAUTION:** If the rotor does not turn easily to the left, first turn it right (clockwise) to the right trip point.
2. Rotate entire case to the desired fixed left position, OR unscrew cap and pull out assembly. Rotate internals to re-align left trip point to the desired point and re-install.

To increase or decrease the arc: (D)

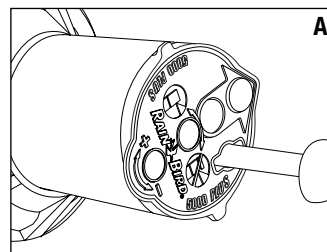
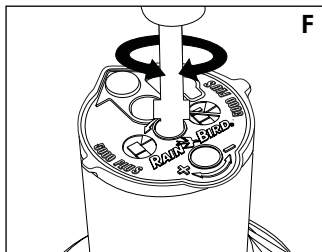
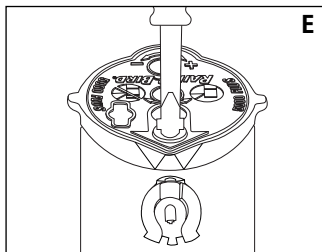
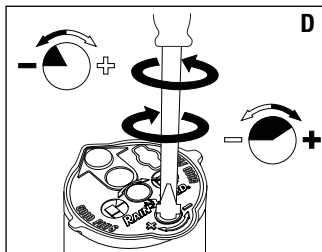
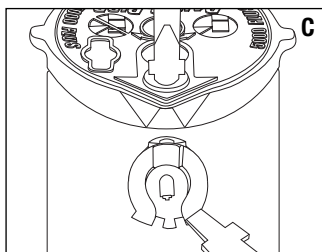
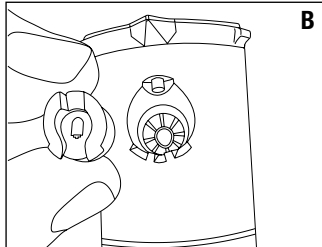
1. While holding the nozzle turret at the fixed LEFT stop, insert tool or screwdriver into the adjustment socket.
- 2a. Turn the screwdriver clockwise, (+) to INCREASE arc.
- 2b. Turn the screwdriver counterclockwise, (-) to DECREASE arc.
3. Each full clockwise turn of the screwdriver will add or remove 90 degrees of arc.
4. When the maximum arc of 360 degrees or minimum arc of 40 degrees has been set, you will hear a ratcheting noise. Do not adjust the rotor beyond the maximum or minimum arc.

Radius Adjustment: (Radius can be reduced up to 25%) (E)

1. Insert screwdriver into the radius adjustment socket.
2. Turn the screwdriver clockwise to reduce radius, and counterclockwise to increase radius.

(5000 PLUS ONLY) Turning Flow On or Off (F)

1. Insert screwdriver into Flow Shut-off Slot.
2. Turn screwdriver clockwise 180 degrees to stop the flow of water.
3. Turn screwdriver counterclockwise 180 degrees to start the flow of water.



Deutsche Installationsanleitung

Einsetzen und Herausnehmen der Düsen:

1. Stecken Sie das Werkzeug in die dafür vorgesehene Öffnung, drehen es um 90° und ziehen den Aufsteiger hoch. **(A)**
2. Setzen Sie die gewünschte Düse in die Düsenbasis ein und drehen die Strahlstörsschraube in Uhrzeigerichtung, um die Düse zu arretieren. **(B)**
3. Setzen Sie den Identifikationsstopfen für die gewählte Düse in die Öffnung oben auf dem Regner.
4. Um die Düse herauszunehmen, drehen Sie die Strahlstörsschraube wieder zurück, stecken einen Schraubendreher unter die Aussparung der Düse und heben sie heraus. **(C)**

Sektoreneinstellung:

Der Sektor ist von 40° bis 360° einstellbar (nur für Teilkreismodelle); die werkseitige Einstellung ist 180°.

Einstellen des fixierten LINKEN Anschlags:

1. Ziehen Sie das Düsengehäuse hoch und drehen es zum linken Anschlag (gegen die Uhrzeigerichtung). **ACHTUNG:** wenn es sich nicht leicht nach links drehen läßt, drehen Sie es zuerst nach rechts (in Uhrzeigerichtung) zum rechten Anschlag.
2. Drehen Sie das ganze Gehäuse in die gewünschte Position mit dem fixierten linken Anschlag ODER schrauben Sie den Deckel ab und nehmen das Innenteil heraus. Dann drehen Sie das Innenteil zum gewünschten Punkt, um den linken Anschlag auszurichten und setzen es danach wieder ein.

Vergrößerung oder Verkleinerung des Sektors: (D)

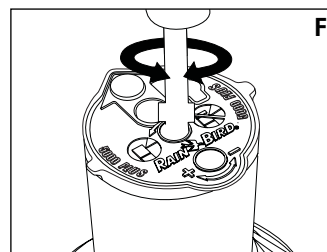
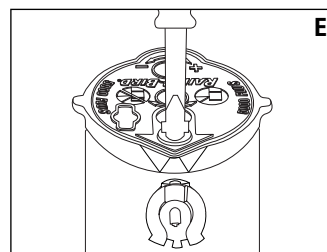
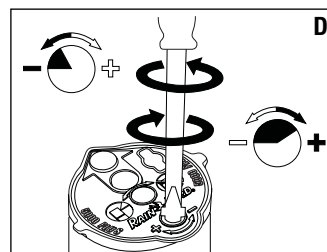
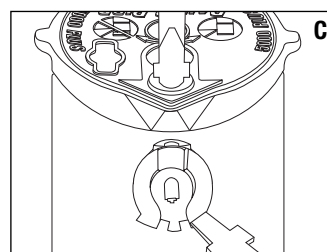
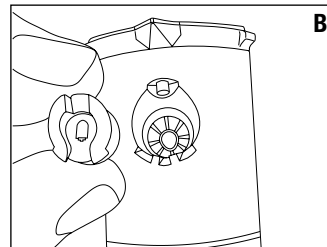
1. Während Sie das Düsengehäuse am fixierten LINKEN Anschlag festhalten, stecken Sie das Spezialwerkzeug oder einen Schraubendreher in den Schlitz zur Sektoreneinstellung.
- 2a. Drehen Sie den Schraubendreher in Uhrzeigerichtung (+), um den Sektor zu vergrößern.
- 2b. Drehen Sie den Schraubendreher gegen die Uhrzeigerichtung (-), um den Sektor zu verkleinern.
3. Jede volle Umdrehung des Schraubendrehers in Uhrzeigerichtung/gegen die Uhrzeigerichtung vergrößert/verkleinert den Sektor um 90°.
4. Wenn der max. Sektor von 360° oder der min. Sektor von 40° eingestellt ist, hören Sie ein Einrasten. Gehen Sie nicht über den maximalen oder minimalen Sektor hinaus.

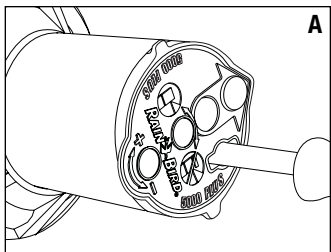
Einstellung der Wurfweite (die Wurfweite kann bis zu 25 % reduziert werden): (E)

1. Stecken Sie den Schraubendreher in den dafür vorgesehenen Schlitz.
2. Drehen Sie den Schraubendreher in Uhrzeigerichtung zum Verringern der Wurfweite und gegen die Uhrzeigerichtung zum Vergrößern der Wurfweite.

(nur 5000 Plus) An- oder Abstellen des Durchflusses: (F)

1. Stecken Sie den Schraubendreher in den Schlitz zum Abstellen.
2. Drehen Sie den Schraubendreher um 180° in Uhrzeigerichtung, um den Wasserdurchfluss zu stoppen.
3. Drehen Sie den Schraubendreher um 180° gegen die Uhrzeigerichtung, um den Wasserdurchfluss anzustellen.





Οδηγίες εγκατάστασης

Εγκατάσταση και απομάκρυνση ακροφυσίων:

1. Τοποθετείτε το εργαλείο στη σχισμή τραβήγματος, περιστρέψτε 90 μοίρες, και ανυψώνετε το στέλεχος του εκτοξευτήρα (A)
2. Τοποθετείτε το επιθυμητό ακροφύσιο στη σχισμή του ακροφυσίου, και περιστρέψτε τη βίδα ρύθμισης της ακτίνας εκτόξευσης προς τη κατεύθυνση κίνησης των δεικτών του ρολογιού, για να ασφαλίσετε το ακροφύσιο στη θέση του. (B)
3. Τοποθετείτε το επιλεγμένο βύσμα αναγνώρισης ακροφυσίου στο ανοίγμα στο πάνω μέρος του εκτοξευτήρα.
4. Για να απομακρύνετε το ακροφύσιο, ξεβιδώνετε τη βίδα ρύθμισης της ακτίνας, τοποθετείτε το άκρο του κατσαβιδιού κάτω από το σημείο απομάκρυνσης του ακροφυσίου και πατάτε το χερούλι προς τα κάτω. (C)

Ρύθμιση του τομέα άρδευσης:

Ο τομέας άρδευσης ρυθμίζεται από 40-360 μοίρες (το μοντέλο τμήματος κύκλου μόνο). Ο εκτοξευτήρας ρυθμίζεται εξ εργοστασίου στις 180 μοίρες.

Ευθυγράμμιση της σταθερής ΑΡΙΣΤΕΡΗΣ γωνίας:

1. Τραβάτε προς τα επάνω το στέλεχος του εκτοξευτήρα και περιστρέψτε προς το αριστερό σημείο διαδρομής (προς την αντίθετη κατεύθυνση της κίνησης των δεικτών του ρολογιού). ΠΡΟΣΟΧΗ: Αν ο εκτοξευτήρας δεν περιστρέφεται εύκολα προς τα αριστερά, πρώτα περιστρέψτε τον δεξιά (προς τη κατεύθυνση κίνησης των δεικτών του ρολογιού) προς το δεξιά σημείο της διαδρομής.
2. Περιστρέψτε ολόκληρη τη θήκη του εκτοξευτήρα στο επιθυμητό αριστερό σταθερό σημείο, ή ξεβιδώνετε το καπάκι και απομακρύνετε το εσωτερικό του. Περιστρέψτε το εσωτερικό του για να ευθυγραμμίσετε το αριστερό σημείο διαδρομής στο επιθυμητό σημείο και το επανα-εγκαθιστάτε.

Για να αυξήσετε ή να ελαττώσετε το τομέα άρδευσης: (D)

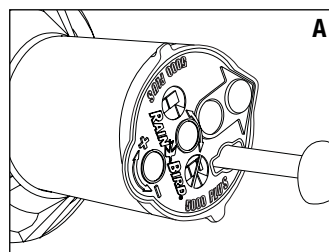
1. Κρατώντας τον πυργίσκο του ακροφυσίου στο σταθερό ΑΡΙΣΤΕΡΟ σημείο που σταματά, τοποθετείτε το εργαλείο ή το κατσαβίδι στη σχισμή ρύθμισης.
- 2a. Περιστρέψτε το κατσαβίδι προς τη κατεύθυνση κίνησης των δεικτών του ρολογιού, (+) για να αυξήσετε το τομέα.
- 2b. Περιστρέψτε το κατσαβίδι προς την αντίθετη κατεύθυνση της κίνησης των δεικτών του ρολογιού, (-) για να ελαττώσετε το τομέα.
3. Η κάθε πλήρης περιστροφή του κατσαβιδιού θα προσθέσει ή θα αφαιρέσει 90 μοίρες από το τομέα.
4. Όταν το μέγιστο των 360 μοιρών ή το ελάχιστο των 40 μοιρών έχει ρυθμισθεί, θα ακούσετε ένα διακριτικό θόρυβο. Μη ρυθμίσετε τον εκτοξευτήρα πέραν του μέγιστου ή ελάχιστου σημείου του τομέα.

Ρύθμιση της ακτίνας εκτόξευσης: Η ακτίνα μπορεί να μειωθεί έως και 25% (E)

1. Τοποθετείτε το κατσαβίδι στη σχισμή ρύθμισης της ακτίνας.
2. Περιστρέψτε το κατσαβίδι προς τη κατεύθυνση κίνησης των δεικτών του ρολογιού για να ελαττώσετε την ακτίνα, και αντίστροφα για να αυξήσετε την ακτίνα.

(5000 Plus μόνο) Ανοίγμα ή κλείσιμο της παροχής: (F)

1. Τοποθετείτε το κατσαβίδι στη σχισμή διακοπής παροχής
2. Περιστρέψτε το κατσαβίδι προς τη κατεύθυνση κίνησης των δεικτών του ρολογιού 180 μοίρες, για να σταματήσετε τη παροχή νερού.
3. Περιστρέψτε το κατσαβίδι προς την αντίθετη κατεύθυνση της κίνησης των δεικτών του ρολογιού 180 μοίρες, για την έναρξη παροχής νερού



Instrucciones para la instalación – español

Cómo instalar y remover las boquillas:

1. Introduzca la herramienta en la ranura de elevación, gire 90 grados y tire hacia arriba para levantar el vástago (portaaspersor). (A)
2. Introduzca la boquilla que desea en el soquete de la boquilla y gire el tornillo de ajuste del radio en el sentido de las agujas del reloj para fijar la boquilla en su lugar. (B)
3. Introduzca el tapón de identificación de la boquilla seleccionada en la abertura en la parte superior del rotor.
4. Para remover la boquilla, retire el tornillo de ajuste del radio de alcance, coloque la punta del destornillador debajo de la lengüeta de extracción de la boquilla y presione la manija hacia abajo. (C)

Cómo ajustar el arco de cobertura:

El arco de cobertura (sector de riego) puede ser ajustado de 40 a 360 grados (solamente en los modelos de círculo parcial – PC). El rotor ha sido ajustado en fábrica a 180 grados.

Aliñe el borde fijo izquierdo:

1. Levante la torrecilla hacia arriba y gire hacia el punto de inversión izquierdo (en el sentido contrario a las agujas del reloj). **CUIDADO:** Si el rotor no gira fácilmente hacia la izquierda, primero gírelo a la derecha (en el sentido de las agujas del reloj) hacia el punto de inversión derecho.
2. Gire la carcasa entera hasta la posición fija izquierda deseada o desenrosque la tapa y empuje el conjunto hacia fuera. Gire las piezas internas para realinear el punto de inversión izquierdo al punto deseado y reinstale.

Para aumentar o disminuir el arco de cobertura: (D)

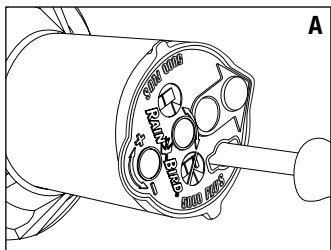
1. Mientras sostiene la torrecilla de la boquilla en el punto de inversión fijo izquierdo, introduzca la herramienta o el destornillador en el soquete de ajuste del arco de cobertura.
- 2a. Gire el destornillador en el sentido de las agujas del reloj (+) para AUMENTAR el arco de cobertura.
- 2b. Gire el destornillador en el sentido contrario a las agujas del reloj (-) para DISMINUIR el arco de cobertura.
3. Cada vuelta completa del destornillador aumentará o disminuirá el arco de cobertura 90 grados.
4. Cuando se haya fijado el arco de cobertura máximo de 360 grados o mínimo de 40 grados, usted escuchará como un matraqueo. No ajuste el rotor a un grado mayor o menor del arco de cobertura.

Ajuste del radio de alcance: (el radio de alcance puede ser reducido hasta en un 25%) (E)

1. Introduzca el destornillador en el soquete del ajuste del radio de alcance.
2. Gire el destornillador en el sentido de las agujas del reloj para reducir el radio de alcance y en el sentido contrario a las agujas del reloj para aumentar el radio.

(Solamente 5000 Plus) Cómo abrir o cerrar el flujo: (F)

1. Introduzca el destornillador en la ranura de cierre del flujo.
2. Gire el destornillador 180 grados en el sentido de las agujas del reloj para interrumpir el flujo del agua.
3. Gire el destornillador 180 grados en el sentido contrario a las agujas del reloj para iniciar el flujo del agua.



Instruções para instalar - português

Como instalar e remover bocais:

1. Insira uma ferramenta na ranhura de puxar, gire 90 graus e levante a haste. **(A)**
2. Insira o bocal desejado no soquete do bocal e gire o parafuso de ajuste do raio de alcance no sentido horário para fixar o bocal no lugar devido. **(B)**
3. Insira o tampão de identificação do bocal selecionado na abertura na parte superior do rotor.
4. Para remover o bocal, retire o parafuso de ajuste do raio de alcance, coloque a ponta da chave de fenda abaixo da lingüeta de remoção do bocal e pressione o cabo para baixo. **(C)**

Como ajustar o arco de cobertura:

O arco de cobertura pode ser ajustado de 40 a 360 graus (somente em modelos de círculo parcial - PC). O rotor é ajustado em fábrica a 180 graus.

Alinhe a borda fixa ESQUERDA:

1. Puxe a torre do rotor para cima e gire no sentido anti-horário até o ponto de inversão. **CUIDADO:** Se o rotor não girar facilmente, gire primeiro para a direita (sentido horário) até o ponto de inversão da direita.
2. Gire a caixa inteira até a posição fixa esquerda desejada OU desenrosque a tampa e puxe o conjunto para fora. Gire as peças internas para realinhar o ponto de inversão esquerdo no ponto desejado e reinstale.

Para aumentar ou diminuir arco de cobertura: (D)

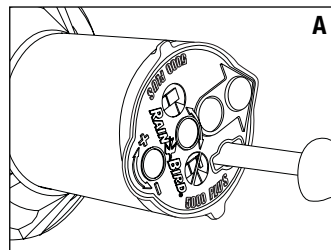
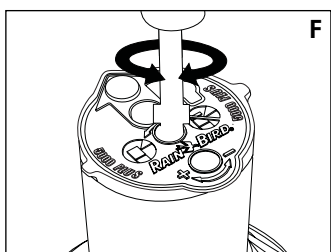
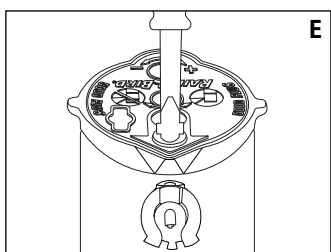
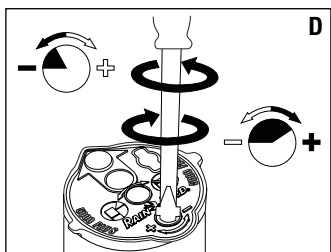
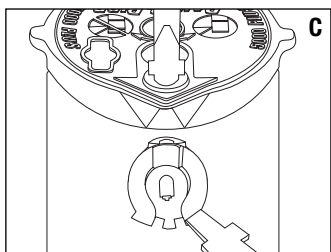
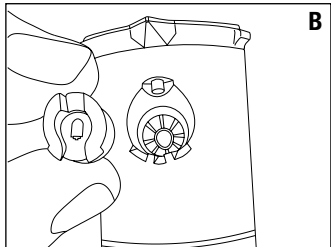
1. Enquanto estiver segurando o torno de bocal no ponto de inversão fixo ESQUERDO, insira a ferramenta ou chave de fenda no soquete de ajuste de arco de cobertura.
- 2a. Gire a chave de fenda no sentido horário (+) para AUMENTAR o arco de cobertura.
- 2b. Gire a chave de fenda no sentido anti-horário (-) para DIMINUIR o arco de cobertura.
3. Cada volta completa da chave de fenda adicionará ou diminuirá 90 graus ao arco de cobertura.
4. Quando for ajustado o arco de cobertura máximo de 360 graus, se escutará um ruído tipo catraca. Não ajuste o rotor além do arco de cobertura máximo.

Ajuste do raio de alcance: (o raio de alcance pode ser reduzido até 25%) (E)

1. Insira a chave de fenda no soquete de ajuste do raio de alcance.
2. Gire a chave de fenda no sentido horário para reduzir o raio de alcance ou no sentido anti-horário para aumentá-lo.

(Apenas 5000 Plus) Como abrir ou fechar o fluxo: (F)

1. Insira a chave de fenda na ranhura de fechamento do fluxo.
2. Gire a chave de fenda 180 graus no sentido horário para interromper o fluxo da água.
3. Gire a chave de fenda 180 graus no sentido anti-horário para iniciar o fluxo da água.



Istruzioni di installazione - italiano

Per Installare e Rimuovere gli Ugelli :

1. Inserire l'apposita chiave nell'alloggiamento previsto, ruotare di 90 gradi e sollevare il pistone. **(A)**
2. Inserire l'ugello desiderato nell'apposito foro ed avvitare in senso orario la vite di regolazione della gittata per bloccare l'ugello. **(B)**
3. Inserire la targhetta di identificazione dell'ugello scelto nell'alloggiamento predisposto sulla parte superiore dell'irrigatore.
4. Per rimuovere l'ugello, svitare la vite di regolazione della gittata, posizionare la lama del cacciavite sotto la sede dell'ugello e fare leva. **(C)**

Regolazione dell'Angolo di Lavoro (unicamente su irrigatori parzializzabili) :

L'angolo di lavoro è regolabile da 40 a 360 gradi. L'irrigatore è inizialmente regolato a 180 gradi alla fabbricazione.

Allineare il punto fermo di sinistra :

1. Sollevare il pistone e ruotarlo verso il punto fermo di sinistra (in senso antiorario). **ATTENZIONE :** Se l'irrigatore non gira facilmente verso sinistra, girarlo prima verso destra (senso orario) fino al punto fermo di destra.
2. Ruotare l'intero irrigatore nella posizione fissa di sinistra desiderata, O svitare la sommità dello stesso ed estrarre il dispositivo interno, quindi ruotarlo per allinearlo al punto fermo di sinistra desiderato e reinstallare il tutto.

Per aumentare o diminuire l'angolo di lavoro: (D)

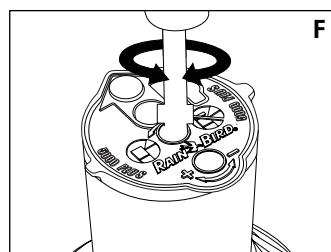
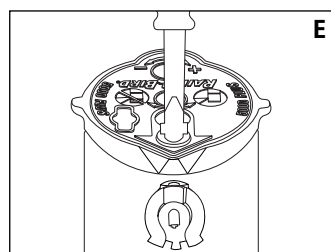
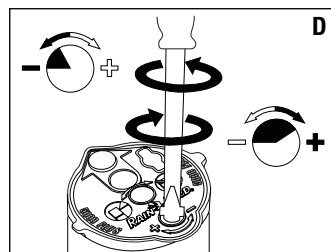
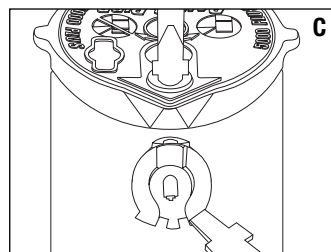
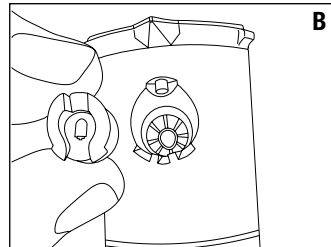
1. Mantenere la torretta porta ugelli nel punto fermo di SINISTRA, quindi inserire l'apposita chiave o un cacciavite nell'alloggiamento di regolazione dell'angolo di lavoro.
- 2a. Ruotare il cacciavite in senso orario (+) per AUMENTARE l'angolo di lavoro.
- 2b. Ruotare il cacciavite in senso antiorario (-) per DIMINUIRE l'angolo di lavoro.
3. Ogni giro completo del cacciavite, in senso orario o antiorario, aumenterà o diminuirà l'angolo di lavoro di 90 gradi.
4. Quando l'angolo di lavoro massimo di 360 gradi o minimo di 40 gradi è stato raggiunto, si sentirà un rumore meccanico. Non regolare l'irrigatore oltre l'angolo di lavoro massimo o minimo.

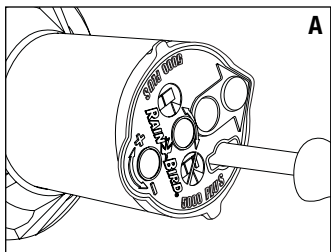
Regolazione della gittata : (Si può ridurre la gittata fino al 25%) (E)

1. Inserire l'apposita chiave o un cacciavite nell'alloggiamento di regolazione della gittata.
2. Ruotare il cacciavite in senso orario per diminuire la gittata e in senso antiorario per aumentare la gittata.

(5000 Plus unicamente) Per chiudere o aprire il flusso (F)

1. Inserire il cacciavite nella sede "Flow-off" (chiusura flusso)
2. Ruotare il cacciavite di 180 gradi in senso orario per arrestare il flusso d'acqua.
3. Ruotare il cacciavite di 180 gradi in senso antiorario per ripristinare il flusso d'acqua.





Instructions d'installation – français

Installer et retirer la buse :

1. Introduisez l'outil dans la cavité de soulèvement; tournez à 90 degrés et soulevez la tige escamotable. **(A)**
2. Insérez la buse désirée dans son logement et tournez la vis brise-jet dans le sens des aiguilles d'une montre afin de fixer la buse. **(B)**
3. Insérez la pastille d'identification de la buse dans l'ouverture au-dessus de l'arroseur.
4. Pour retirer la buse, dégagez d'abord la vis brise-jet. Placez la tête plate du tournevis sous la languette de la buse et appuyez sur le manche du tournevis pour faire levier et extraire la buse. **(C)**

Réglage du secteur arrosé :

Le secteur peut être réglé en tre 40 et 360 degrés (arroseurs secteur de cercle uniquement). L'arroseur est pré-réglé en usine à 180 degrés.

Alignez butée GAUCHE fixe :

1. Soulevez le porte-buse et tournez-le jusqu'au point d'arrêt de gauche (dans le sens inverse des aiguilles d'une montre). **ATTENTION :** si l'arroseur ne tourne pas facilement vers la gauche, tournez-le d'abord vers la droite (sens des aiguilles d'une montre) jusqu'au point d'inversion droit.
2. Ensuite, faites pivoter le boîtier de l'arroseur jusqu'à la position désirée, OU dévissez le couvercle du boîtier, sortez la partie interne, repositionnez-la comme désiré et revissez.

Pour agrandir ou réduire le secteur d'arrosage : (D)

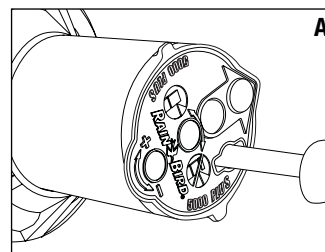
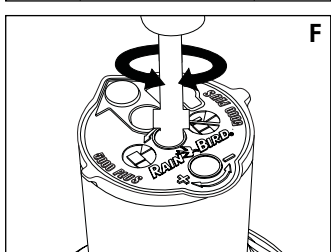
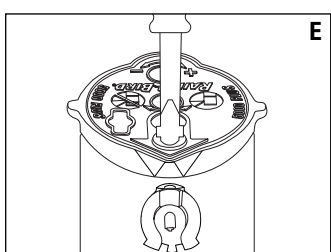
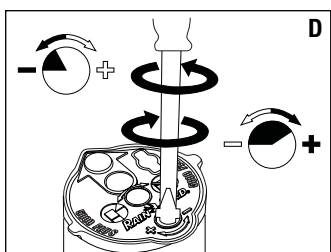
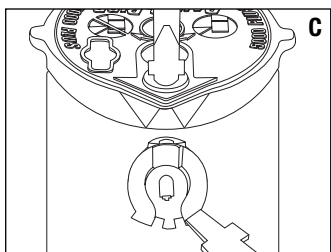
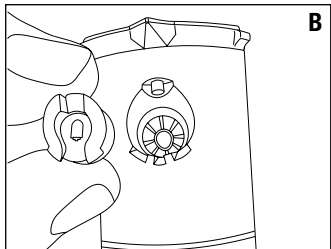
1. Tout en maintenant le porte-buse au point d'arrêt GAUCHE, insérez l'outil ou le tournevis dans l'orifice de réglage du secteur.
- 2a. Tournez le tournevis dans le sens des aiguilles d'une montre (+) pour AGRANDIR le secteur arrosé.
- 2b. Tournez le tournevis dans le sens inverse des aiguilles d'une montre (-) pour REDUIRE le secteur arrosé.
3. Chaque tour complet, dans le sens des aiguilles d'une montre ajoutera 90 degrés au secteur, dans le sens inverse des aiguilles d'une montre réduira le secteur arrosé de 90 degrés.
4. Quand le secteur maximum (360 degrés) ou minimum est atteint (40 degrés), vous entendrez un cliquetis. Ne réglez pas l'arroseur au-delà du secteur maximum ou au-dessous du secteur minimum.

Réglage de la portée : (la portée de l'arroseur peut être réduite jusqu'à 25%) (E)

1. Insérez le tournevis dans la fente de réglage de portée (vis brise jet).
2. Tournez le tournevis dans le sens des aiguilles d'une montre pour réduire la portée ou dans le sens inverse des aiguilles d'une montre pour augmenter la portée.

(5000 Plus uniquement) Arrêt d'un arroseur (F)

1. Insérez le tournevis dans la cavité d'arrêt de l'arroseur.
2. Tournez le tournevis à 180 degrés dans le sens des aiguilles d'une montre pour couper le débit.
3. Tournez le tournevis à 180 degrés dans le sens inverse des aiguilles d'une montre pour réactiver l'arroseur.



Nederlandse Installatie Handleiding

Installeren en Verwijderen van Nozzles:

1. Steek het hulpstuk in de sleuf, draai dit 90 graden en trek de stijgbuis omhoog. **(A)**
2. Schuif de te gebruiken nozzle in de daarvoor bestemde opening en draai de afstelschroef met de klok mee om de nozzle vast te zetten. **(B)**
3. Druk de juiste nozzle-identificatiedop in de daarvoor bestemde opening aan de bovenkant van de sproeier.
4. Om het mondstuk te verwijderen dient eerst de afstelschroef losgedraaid te worden. Plaats vervolgens een platte schroevendraaier onder het handsteeksel om het mondstuk te verwijderen en duw het handvat naar beneden. **(C)**

Instellen van de sproeihoek:

De sproeihoek is instelbaar van 40 - 360 graden (alleen sectorsproeiers). De sproeier is door de fabriek ingesteld op 180 graden.

Instellen van het vaste LINKER omkeerpunt:

1. Trek het sproeientje omhoog en draai dit tot het linker omkeerpunt. (tegen de klok in). **VOORZICHTIG:** Als het sproeientje niet gemakkelijk linksom gedraaid kan worden draai het dan eerst rechtsom (met de klok mee) tot het rechter omkeerpunt.
2. Draai de gehele sproeier tot het gewenste linker omkeerpunt bereikt is, OF verwijder het deksel en neem het binnenwerk uit. Draai het binnenwerk zodat het linker omkeerpunt zich op de gewenste plaats bevindt en installeer het weer.

Om de sproeihoek te vergroten of te verkleinen: (D)

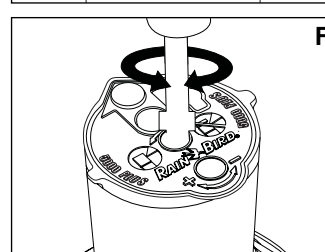
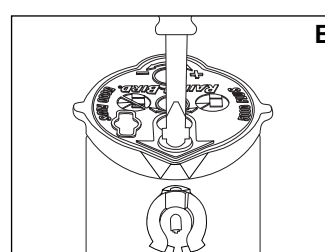
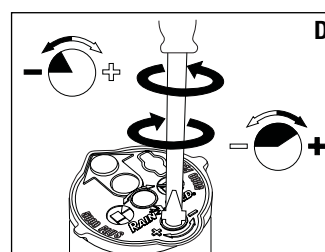
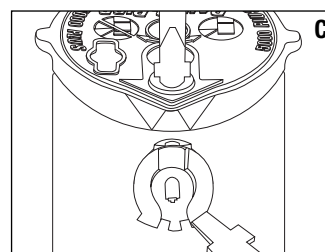
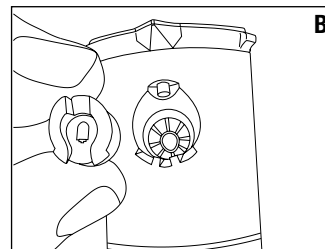
1. Steek, terwijl u het sproeientje op het LINKER omkeerpunt vasthoudt, het hulpstuk of een schroevendraaier in de afstelsleuf.
- 2a. Draai de schroevendraaier met de klok mee (+) om de sproeihoek te VERGROTEN.
- 2b. Draai de schroevendraaier tegen de klok in (-) om de sproeihoek te VERKLEINEN
3. Iedere volle draaicirkel met de schroevendraaier verandert 90 graden aan de sproeihoek.
4. Wanneer de maximale sproeihoek van 360 graden of de minimale sproeihoek van 40 graden bereikt is hoort u een tikgeluid. Stel de sproeihoek dan niet verder af.

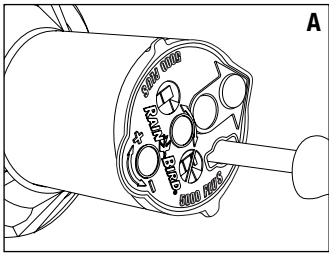
Instellen van de sproeistraal: (Straal kan maximaal tot met 25% worden teruggebracht) (E)

1. Steek een platte schroevendraaier in de sleuf van de afstelschroef.
2. Verminder de werpwijdte door de schroevendraaier met de klok mee te draaien en vermeerder deze door tegen de klok in te draaien.

(Alleen 5000 plus) Watertoevoer in- of uitschakelen (F)

1. Steek een platte schroevendraaier in de sleuf om water af te sluiten.
2. Draai de schroevendraaier 180 graden met de klok mee om de toevoer af te sluiten.
3. Draai de schroevendraaier 180 graden tegen de klok in om de toevoer weer open te zetten.





Türkçe kullanma kılavuzu

Nozulların yerleştirilmesi ve çıkarılması:

- Gövdeyi kaldırma girişine aparatı sokarak 90 derece döndürün, ve gövdeyi kaldırın. (A)
- İstediğiniz nozulu nozul yuvasına sokun, ve mesafe ayar vidasını saat yönünde döndürerek nozulun yuvasından çıkmayacak şekilde yerleşmesini sağlayın. (B)
- Seçtiğiniz nozulun tanımlama parçasını rotorun üstündeki Nozul Tanımlama Girişine takın.
- Nozulu yuvasından çıkartmak için, önce mesafe ayar vidasını saat yönünün tersine çevirerek yukarıya kaldırın. Tornavidanın düz ucunu nozul çıkartma çıkıntısının altına sokup, tornavidayı aşağıya doğru bastırın. (C)

Açı Ayarı:

Açı, 40-360 derece arasında ayarlanabilir (Açı ayarlı modeller). Rotor fabrikada 180 dereceye ayarlanmıştır.

SOL sabit noktaya hizalama:

- Gövdeyi yukarı kaldırın ve rotor kafasını sol durma noktasına kadar çevirin (saat yönünün tersine) DİKKAT: Eğer rotor sola doğru rahatça dönmezse, önce sağa doğru (saat yönünde) sağ durma noktasına varıncaya kadar çevirin.
- Rotoru (dış kabıyla beraber) istenen sol sabit noktaya doğru çevirin, YA DA üst kapağı açarak iç aksamı çıkartın. İç aksamı döndürerek seçtiğiniz sol durma hizasına getirip tekrar yerine yerleştirin.

Açıyı arttırmak ya da azaltmak: (D)

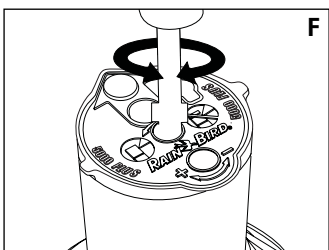
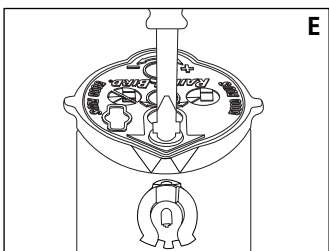
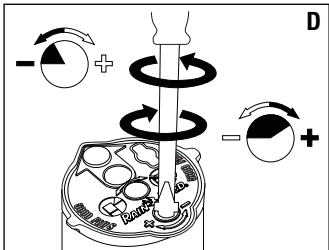
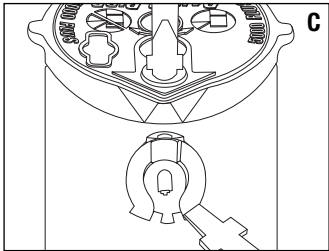
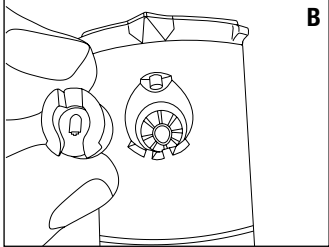
- Nozul kafasını SOL durma noktasında sabit tutarken, aparatı ya da düz uçlu bir tornavidayı açı ayar girişine sokun.
- 2a. Tornavidayı saat yönünde çevirin, (+) açığı ARTTIRMAK için.
- 2b. Tornavidayı saat yönünün tersine çevirin, (-) açığı AZALTMAK için.
- Tornavidanın saat yönündeki her bir tam dönüşü açığı 90 derece arttıracak ya da azaltacaktır.
- Maksimum açı olan 360 dereceye ya da minimum açı olan 40 dereceye ulaşıldığında, bir dişli sesi duymaya başlayacaksınız. Bu durumda tornavidayı döndürmeyi bırakın.

Mesafe ayarı (Yarıçap atış mesafesi %25 oranında azaltılabilir) (E)

- Aparatı ya da düz uçlu bir tornavidayı mesafe ayar girişine sokun.
- Yarıçap atış mesafesini azaltmak için tornavidayı saat yönünde, arttırmak için saat yönünün tersine çevirin.

(Sadece 5000 Plus) Su akışını durdurma ya da durdurmak (F)

- Düz uçlu tornavidayı Su Akışını Durdurma Girişine sokun.
- Su akışını durdurmak için tornavidayı saat yönünde 180 derece döndürün.
- Su akışını başlatmak için tornavidayı saat yönünün tersine 180 derece döndürün.



5000/5000 Plus Nozzle Performance

(Standard)

Standard Angle Rain Curtain Nozzle Performance

Pressure psi	Nozzle	Radius ft.	Flow (GPM)	Precip. (in/h)	Precip. (mm/h)
				Square	Triangular
25	1.5	33	1.12	0.20	0.23
	2.0	35	1.50	0.24	0.27
	2.5	35	1.81	0.28	0.33
	3.0	36	2.26	0.34	0.39
	4.0	37	2.91	0.41	0.47
	5.0	39	3.72	0.47	0.54
	6.0	39	4.25	0.54	0.62
35	8.0	36	5.90	0.88	1.01
	1.5	34	1.35	0.22	0.26
	2.0	36	1.81	0.27	0.31
	2.5	37	2.17	0.31	0.35
	3.0	38	2.71	0.36	0.41
	4.0	40	3.50	0.42	0.49
	5.0	41	4.47	0.51	0.59
45	6.0	43	5.23	0.54	0.63
	8.0	43	7.06	0.74	0.85
	1.5	35	1.54	0.24	0.28
	2.0	37	2.07	0.29	0.34
	2.5	37	2.51	0.35	0.41
	3.0	40	3.09	0.37	0.43
	4.0	42	4.01	0.44	0.51
55	5.0	45	5.09	0.48	0.56
	6.0	46	6.01	0.55	0.63
	8.0	47	8.03	0.70	0.81
	1.5	35	1.71	0.27	0.31
	2.0	37	2.30	0.32	0.37
	2.5	37	2.76	0.39	0.45
	3.0	40	3.47	0.42	0.48
65	4.0	42	4.44	0.48	0.56
	5.0	45	5.66	0.54	0.62
	6.0	47	6.63	0.58	0.67
	8.0	50	8.86	0.68	0.79
	1.5	34	1.86	0.31	0.36
	2.0	35	2.52	0.40	0.46
	2.5	37	3.01	0.42	0.49
8.0	3.0	40	3.78	0.45	0.53
	4.0	42	4.83	0.53	0.61
	5.0	45	6.16	0.59	0.68
	6.0	48	7.22	0.60	0.70
	8.0	50	9.63	0.74	0.86

(Metric)

Standard Angle Rain Curtain Nozzle Performance

Pressure bar	Nozzle	Radius m	Flow m ³ /h	Flow l/s	Precip. (mm/h)	Precip. (mm/h)
					Square	Triangular
1,7	1.5	10,1	0,25	0,07	5	6
	2,0	10,7	0,34	0,09	6	7
	2,5	10,7	0,41	0,11	7	8
	3,0	11,0	0,51	0,14	8	10
	4,0	11,3	0,66	0,18	10	12
	5,0	11,9	0,84	0,23	12	14
	6,0	11,9	0,97	0,27	14	16
2,0	8,0	11,0	1,34	0,37	22	26
	1,5	10,2	0,28	0,08	5	6
	2,0	10,8	0,36	0,10	6	7
	2,5	10,9	0,44	0,12	7	9
	3,0	11,2	0,55	0,15	9	10
	4,0	11,6	0,71	0,20	11	12
	5,0	12,1	0,91	0,25	12	14
2,5	6,0	12,4	1,05	0,29	14	16
	8,0	11,8	1,45	0,40	21	24
	1,5	10,4	0,31	0,09	6	7
	2,0	11,0	0,41	0,11	7	8
	2,5	11,3	0,50	0,14	8	9
	3,0	11,2	0,62	0,17	9	11
	4,0	12,3	0,81	0,22	11	13
3,0	5,0	12,7	1,03	0,29	13	15
	6,0	13,2	1,21	0,34	14	16
	8,0	13,3	1,63	0,45	19	21
	1,5	10,6	0,34	0,10	6	7
	2,0	11,2	0,45	0,13	7	8
	2,5	11,3	0,56	0,16	9	10
	3,0	12,1	0,69	0,19	9	11
3,5	4,0	12,7	0,89	0,25	11	13
	5,0	13,5	1,13	0,31	12	14
	6,0	13,9	1,34	0,37	14	16
	8,0	14,1	1,79	0,50	18	21
	1,5	10,7	0,37	0,10	7	8
	2,0	11,3	0,49	0,14	8	9
	2,5	11,3	0,60	0,17	9	11
4,0	3,0	12,2	0,74	0,21	10	12
	4,0	12,8	0,97	0,27	12	14
	5,0	13,7	1,23	0,34	13	15
	6,0	14,2	1,45	0,40	14	17
	8,0	14,9	1,93	0,54	18	20
	1,5	10,6	0,40	0,11	7	8
	2,0	11,1	0,52	0,15	8	10
4,5	2,5	11,3	0,64	0,18	10	12
	3,0	12,2	0,80	0,22	11	12
	4,0	12,8	1,04	0,29	13	15
	5,0	13,7	1,32	0,37	14	16
	6,0	14,9	1,55	0,43	15	17
	8,0	15,2	2,06	0,57	18	21
	1,5	10,4	0,42	0,12	8	9
5,0	2,0	10,7	0,55	0,15	10	11
	2,5	11,3	0,68	0,19	11	12
	3,0	12,2	0,84	0,23	11	13
	4,0	12,8	1,10	0,30	13	15
	5,0	13,7	1,40	0,39	15	17
	6,0	14,6	1,64	0,47	15	18
	8,0	15,2	2,19	0,61	19	22

Precipitation rates calculated at 50% diameter "head to head" spacing, half circle operation.

Tasa de precipitación en base a un diámetro de alcance de 50%, con el aspersor operando en círculo parcial.

Pluviometria baseada em 50% do diâmetro de alcance, com o aspersor operando em meio-círculo.

Pluviometria calcolata con interdistanza pari al 50% della gittata e una rotazione di 180°.

Pluviométrie horaire calculée pour des arroseurs fonctionnant en demi-cercle et écartés de 50% du diamètre arrosé.

Die Berechnungsdichte bezieht sich auf 180° bei einem Regnerabstand von 50% des berechneten Durchmesser.

Neerslagintensiteiten berekend voor afstand tussen sproeiers van 50% van diameter, met sectorinstelling 180 graden.

Presipitasyon oranları, rotorlar arası mesafenin, çaplarının %50'si olduğu düşünülerek ve yarı tur çalışmaları varsayılarak hesaplanmıştır.

Η ένταση της βροχόπτωσης υπολογίζεται στο 50% της διαμέτρου σε διάταξη 'από εκτοξευτήρα σε εκτοξευτήρα', λειτουργίας μισού κύκλου.

5000/5000 Plus Low Angle Nozzle Performance

(Standard)

Low Angle Nozzle Performance

Pressure psi	Nozzle	Radius ft.	Flow (GPM)	■	▲
				Precip. (in/h) Square	Precip. (in/h) Triangular
25	1.0 LA	25	0.76	0.22	0.26
	1.5 LA	27	1.15	0.30	0.35
	2.0 LA	29	1.47	0.34	0.39
	3.0 LA	29	2.23	0.51	0.59
35	1.0 LA	28	0.92	0.21	0.25
	1.5 LA	30	1.38	0.30	0.34
	2.0 LA	31	1.77	0.35	0.41
	3.0 LA	33	2.68	0.47	0.55
45	1.0 LA	29	1.05	0.23	0.26
	1.5 LA	31	1.58	0.32	0.37
	2.0 LA	32	2.02	0.38	0.44
	3.0 LA	35	3.07	0.48	0.56
55	1.0 LA	29	1.17	0.25	0.29
	1.5 LA	31	1.76	0.35	0.41
	2.0 LA	33	2.24	0.40	0.46
	3.0 LA	36	3.41	0.51	0.58
65	1.0 LA	29	1.27	0.27	0.32
	1.5 LA	31	1.92	0.38	0.44
	2.0 LA	33	2.45	0.43	0.50
	3.0 LA	36	3.72	0.55	0.64

(Metric)

Low Angle Nozzle Performance

Pressure bar	Nozzle	Radius m	Flw m ³ /h	Flow l/s	■	▲
					Precip. (mm/h) Square	Precip. (mm/h) Triangular
1,7	1,0 LA	7,6	0,17	0,05	6	7
	1,5 LA	8,2	0,26	0,07	8	9
	2,0 LA	8,8	0,33	0,09	9	10
	3,0 LA	8,8	0,51	0,14	13	15
2,0	1,0 LA	8,0	0,18	0,05	6	6
	1,5 LA	8,6	0,28	0,08	8	9
	2,0 LA	9,1	0,36	0,10	9	10
	3,0 LA	9,3	0,55	0,15	13	15
2,5	1,0 LA	8,6	0,20	0,06	5	6
	1,5 LA	9,2	0,32	0,09	8	9
	2,0 LA	9,5	0,41	0,11	9	10
	3,0 LA	10,1	0,62	0,17	12	14
3,0	1,0 LA	8,8	0,22	0,06	6	7
	1,5 LA	9,4	0,35	0,10	8	9
	2,0 LA	9,7	0,45	0,13	10	11
	3,0 LA	10,6	0,68	0,19	12	14
3,5	1,0 LA	8,8	0,24	0,07	6	7
	1,5 LA	9,4	0,38	0,11	9	10
	2,0 LA	9,9	0,49	0,14	10	11
	3,0 LA	10,8	0,74	0,21	13	15
4,0	1,0 LA	8,8	0,26	0,07	7	8
	1,5 LA	9,4	0,41	0,11	9	11
	2,0 LA	10,1	0,52	0,15	10	12
	3,0 LA	11,0	0,80	0,22	13	15
4,5	1,0 LA	8,8	0,27	0,08	7	8
	1,5 LA	9,4	0,44	0,12	10	11
	2,0 LA	10,1	0,56	0,15	11	13
	3,0 LA	11,0	0,84	0,23	14	16

Precipitation rates calculated at 50% diameter "head to head" spacing, half circle operation.

Tasa de precipitación en base a un diámetro de alcance de 50%, con el aspersor operando en círculo parcial.

Pluviometria baseada em 50% do diâmetro de alcance, com o aspersor operando em meio-círculo.

Pluviometria calcolata con interdistanza pari al 50% della gittata e una rotazione di 180°.

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Die Berechnungsdichte bezieht sich auf 180° bei einem Regnerabstand von 50% des berechneten Durchmessers.

Neerslagintensiteiten berekend voor afstand tussen sproeiers van 50% van diameter, met sectorinstelling 180 graden.

Presipitasyon oranları, rotorlar arası mesafenin, çaplarının %50'si olduğu düsünülecek ve yarım tur çalışıkları varsayılarak hesaplanmıştır.

Η ένταση της βροχόπτωσης υπολογίζεται στο 50% της διαμέτρου σε διάταξη 'από εκτοξευτήρα σε εκτοξευτήρα', λειτουργίας μισού κύκλου.

5000/5000 Plus PRS Nozzle Performance

(Standard)

Standard Angle Rain Curtain Nozzle Performance

Inlet Pressure psi	Nozzle	Radius ft.	Flow (GPM)	■	▲
				Precip. (in/h) Square	Precip. (in/h) Triangular
25	1.5	33	1.12	0.20	0.23
	2.0	35	1.50	0.24	0.27
	2.5	35	1.81	0.28	0.33
	3.0	36	2.26	0.34	0.39
	4.0	37	2.91	0.41	0.47
	5.0	39	3.72	0.47	0.54
	6.0	39	4.25	0.54	0.62
	8.0	36	5.90	0.88	1.01
	35	1.5	34	1.35	0.22
2.0		36	1.81	0.27	0.31
2.5		37	2.17	0.31	0.35
3.0		38	2.71	0.36	0.41
4.0		40	3.50	0.42	0.49
5.0		41	4.47	0.51	0.59
6.0		43	5.23	0.54	0.63
8.0		43	7.06	0.74	0.85
45		1.5	35	1.54	0.24
	2.0	37	2.07	0.29	0.34
	2.5	37	2.51	0.35	0.41
	3.0	40	3.09	0.37	0.43
	4.0	42	4.01	0.44	0.51
	5.0	45	5.09	0.48	0.56
	6.0	46	6.01	0.55	0.63
	8.0	47	8.03	0.70	0.81
	55 - 75	1.5	35	1.59	0.25
2.0		37	2.14	0.30	0.35
2.5		37	2.60	0.37	0.42
3.0		40	3.20	0.39	0.44
4.0		42	4.15	0.45	0.52
5.0		45	5.27	0.50	0.58
6.0		46	6.22	0.57	0.65
8.0		47	8.31	0.72	0.84

Precipitation rates calculated at 50% diameter "head to head" spacing, half circle operation.

Tasa de precipitación en base a un diámetro de alcance de 50%, con el aspersor operando en círculo parcial.

Pluviometria baseada em 50% do diâmetro de alcance, com o aspersor operando em meio-círculo.

Pluviometria calcolata con interdistanza pari al 50% della gittata e una rotazione di 180°.

Pluviométrie horaire calculée pour des arroseurs fonctionnant en demi-cercle et écartés de 50% du diamètre arrosé.

Die Berechnungsdichte bezieht sich auf 180° bei einem Regnerabstand von 50% des berechneten Durchmessers.

Neerslagintensiteiten berekend voor afstand tussen sproeiers van 50% van diameter, met sectorinstelling 180 graden.

Presipitasyon oranları, rotorlar arası mesafenin, çaplarının %50'si olduğu düsünülecek ve yarım tur çalışıkları varsayılarak hesaplanmıştır.

Η ένταση της βροχόπτωσης υπολογίζεται στο 50% της διαμέτρου σε διάταξη 'από εκτοξευτήρα σε εκτοξευτήρα', λειτουργίας μισού κύκλου.

(Metric)

Standard Angle Rain Curtain Nozzle Performance

Inlet Pressure bar	Nozzle	Radius m	Flw m ³ /h	Flow l/s	■	▲
					Precip. (mm/h) Square	Precip. (mm/h) Triangular
1,7	1,5	10,1	0,25	0,07	5	6
	2,0	10,7	0,34	0,09	6	7
	2,5	10,7	0,41	0,11	7	8
	3,0	11,0	0,51	0,14	8	10
	4,0	11,3	0,66	0,18	10	12
	5,0	11,9	0,84	0,23	12	14
	6,0	11,9	0,97	0,27	14	16
	8,0	11,0	1,34	0,37	22	26
	2,0	1,5	10,2	0,28	0,08	5
2,0		10,8	0,36	0,10	6	7
2,5		10,9	0,44	0,12	7	9
3,0		11,2	0,55	0,15	9	10
4,0		11,6	0,71	0,20	11	12
5,0		12,1	0,91	0,25	12	14
6,0		12,4	1,05	0,29	14	16
8,0		11,8	1,45	0,40	21	24
2,5		1,5	10,4	0,31	0,09	6
	2,0	11,0	0,41	0,11	7	8
	2,5	11,3	0,50	0,14	8	9
	3,0	11,2	0,62	0,17	9	11
	4,0	12,3	0,81	0,22	11	13
	5,0	12,7	1,03	0,29	13	15
	6,0	13,2	1,21	0,34	14	16
	8,0	13,3	1,63	0,45	19	21
	3,0	1,5	10,6	0,34	0,10	6
2,0		11,2	0,45	0,13	7	8
2,5		11,3	0,56	0,16	9	10
3,0		12,1	0,69	0,19	9	11
4,0		12,7	0,89	0,25	11	13
5,0		13,5	1,13	0,31	12	14
6,0		13,9	1,34	0,37	14	16
8,0		14,1	1,79	0,50	18	21
3,5 - 5,2		1,5	10,6	0,35	0,10	6
	2,0	11,2	0,47	0,13	8	9
	2,5	11,3	0,58	0,17	9	11
	3,0	12,1	0,71	0,20	10	11
	4,0	12,7	0,92	0,26	12	13
	5,0	13,5	1,17	0,32	13	15
	6,0	13,9	1,39	0,38	14	17
	8,0	14,1	1,85	0,52	18	21

5000/5000 Plus PRS Low Angle Nozzle Performance

(Standard)

Low Angle Rain Curtain Nozzle Performance

Inlet Pressure psi	Nozzle	Radius ft.	Flow (GPM)	Precip.	
				(in/h) Square	(in/h) Triangular
25	1.0 LA	25	0.76	0.22	0.26
	1.5 LA	27	1.15	0.30	0.35
	2.0 LA	29	1.47	0.34	0.39
	3.0 LA	29	2.23	0.51	0.59
35	1.0 LA	28	0.92	0.21	0.25
	1.5 LA	30	1.38	0.30	0.34
	2.0 LA	31	1.77	0.35	0.41
	3.0 LA	33	2.68	0.47	0.55
45	1.0 LA	29	1.05	0.23	0.26
	1.5 LA	31	1.58	0.32	0.37
	2.0 LA	32	2.02	0.38	0.44
	3.0 LA	35	3.07	0.48	0.56
55 - 75	1.0 LA	29	1.09	0.25	0.29
	1.5 LA	31	1.64	0.33	0.38
	2.0 LA	32	2.09	0.39	0.45
	3.0 LA	35	3.18	0.50	0.58

(Metric)

Low Angle Rain Curtain Nozzle Performance

Inlet Pressure bar	Nozzle	Radius m	Flow m ³ /h	Flow l/s	Precip.	
					(mm/h) Square	(mm/h) Triangular
1,7	1,0 LA	7,6	0,17	0,05	6	7
	1,5 LA	8,2	0,26	0,07	8	9
	2,0 LA	8,8	0,33	0,09	9	10
	3,0 LA	8,8	0,51	0,14	13	15
2,0	1,0 LA	8,0	0,18	0,05	6	6
	1,5 LA	8,6	0,28	0,08	8	9
	2,0 LA	9,1	0,36	0,10	9	10
	3,0 LA	9,3	0,55	0,15	13	15
2,5	1,0 LA	8,6	0,20	0,06	5	6
	1,5 LA	9,2	0,32	0,09	8	9
	2,0 LA	9,5	0,41	0,11	9	10
	3,0 LA	10,1	0,62	0,17	12	14
3,0	1,0 LA	8,8	0,22	0,06	6	7
	1,5 LA	9,4	0,35	0,10	8	9
	2,0 LA	9,7	0,45	0,13	10	11
	3,0 LA	10,6	0,68	0,19	12	14
3,5 - 5,2	1,0 LA	8,8	0,23	0,06	6	7
	1,5 LA	9,4	0,36	0,10	8	10
	2,0 LA	9,7	0,47	0,13	10	12
	3,0 LA	10,6	0,70	0,20	13	15

Precipitation rates calculated at 50% diameter "head to head" spacing, half circle operation.

Tasa de precipitación en base a un diámetro de alcance de 50%, con el aspersor operando en círculo parcial.

Pluviometria baseada em 50% do diâmetro de alcance, com o aspersor operando em meio-círculo.

Pluviometria calcolata con interdistanza pari al 50% della gittata e una rotazione di 180°.

Pluviométrie horaire calculée pour des arroseurs fonctionnant en demi-cercle et écartés de 50% du diamètre arrosé.

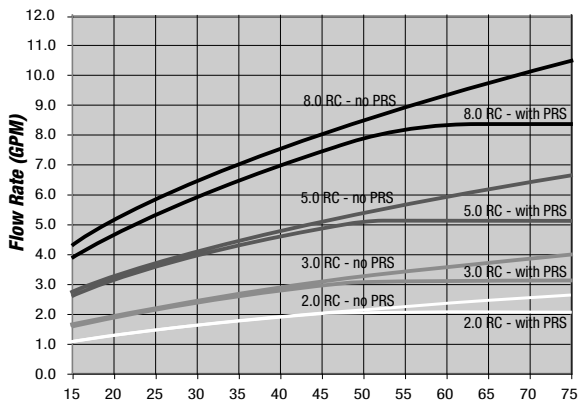
Die Beregnungsdichte bezieht sich auf 180° bei einem Regnerabstand von 50% des berechneten Durchmessers.

Neerslagintensiteiten berekend voor afstand tussen sproeiers van 50% van diameter, met sectorinstelling 180 graden.

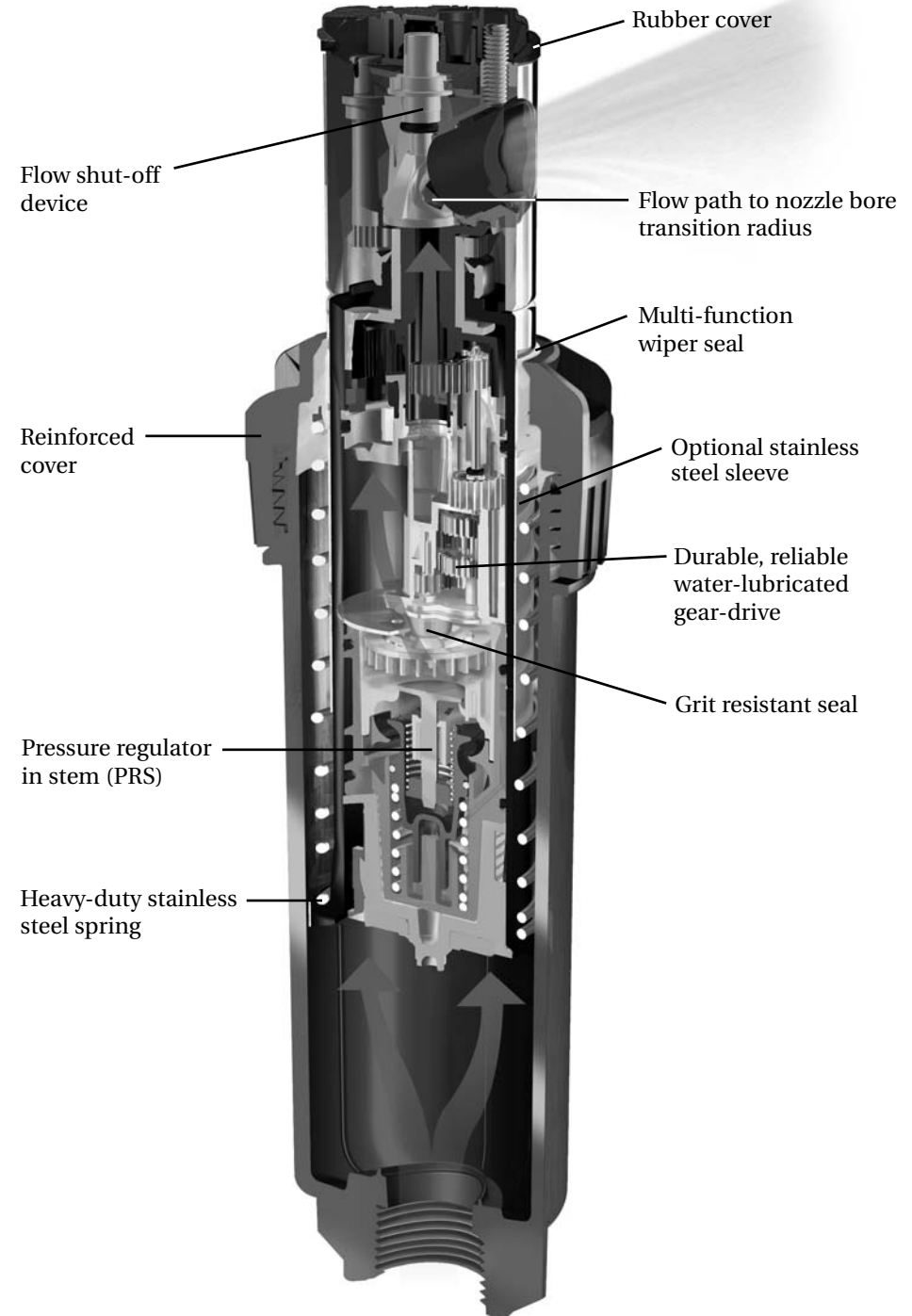
Presipitasyon oranları, rotorlar arası mesafenin, çaplarının %50'si olduğu düşünülerek ve yarım tur çalıştıkları varsayılarak hesaplanmıştır.

Η ένταση της βροχόπτωσης υπολογίζεται στο 50% της διαμέτρου σε διάταξη 'από εκτοξευτήρα σε εκτοξευτήρα', λειτουργίας μισού κύκλου.

Flow Rate v Inlet Pressure – Rain Curtain Nozzles



5000/5000 Plus PRS Series Rotor





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Variable Arc Nozzles (VANs)

Adjustable nozzles for all standard and irregular-shaped turf and shrub areas. Fit all Rain Bird spray heads and shrub adapters.

Features

- Easy arc adjustment from 0° to 360° for 10-, 12-, 15- and 18 VAN; 0° to 330° for 4-, 6- and 8 VAN.
- Simple twist of center collar increases or decreases arc setting.
- No special tools required.
- Stainless steel adjustment screw to adjust flow and radius.
- Ideal for watering odd-shaped areas.
- 12-, 15-, and 18 VAN have matched precipitation rates with Rain Bird MPR Nozzles.
- Shipped with blue filter screen (.02 x .02) to maintain precise radius adjustment and prevent clogging.

Models

- 4-VAN
- 6-VAN
- 8-VAN
- 10-VAN
- 12-VAN
- 15-VAN
- 18-VAN

Operating Range

- Radius: *
 - 4-VAN: 3 to 4 feet (0.9 to 1.2 m)
 - 6-VAN: 4 to 6 feet (1.2 to 1.8 m)
 - 8-VAN: 6 to 8 feet (1.8 to 2.4 m)
 - 10-VAN: 8 to 10 feet (2.4 to 3.0 m)
 - 12-VAN: 10 to 12 feet (3.0 to 3.7 m)
 - 15-VAN: 12 to 15 feet (3.7 to 4.6 m)
 - 18-VAN: 14 to 18 feet (4.3 to 5.5 m)
- Pressure: 15 to 30 psi (1 to 2.1 bar)
- Optimum pressure: 30 psi (2.1 bar)

*These ranges are based on proper pressure at nozzle.

Specifications

4, 6, 8, 10, 12, 15 and 18 Series VAN Nozzles

The plastic VAN nozzle shall be constructed of UV resistant plastic. The radius adjustment screw shall be constructed of stainless steel.

The nozzle shall accept the Rain Bird blue filter screen to allow for radius adjustment.

The plastic VAN nozzles shall be manufactured by Rain Bird Corporation, Azusa, California.



Simply twist collar to adjust arc pattern

How To Specify





1804 - 15-VAN





Spray Head Model





Nozzle Series Pattern





This specifies an 1800 Series spray head with 4" (10 cm) pop-up height; 15 Series Variable Arc Nozzle providing 0° - 360° coverage.





Variable Arc Nozzles (VANs)





4 Series VAN						
0° Trajectory Nozzle	Pressure psi	Radius ft.	Flow gpm	■ Precip In/h	▲ Precip In/h	
	15	3	0.62	7.23	8.35	
	20	3	0.70	8.17	9.43	
	25	4	0.80	5.25	6.06	
	30	4	0.88	5.78	6.67	
	15	3	0.52	7.42	8.57	
	20	3	0.58	8.27	9.55	
	25	4	0.66	5.29	6.11	
	30	4	0.73	5.86	6.77	
	15	3	0.32	6.84	7.90	
	20	3	0.37	7.91	9.13	
	25	4	0.41	4.93	5.69	
	30	4	0.45	5.41	6.25	
	15	3	0.21	8.98	10.37	
	20	3	0.24	10.27	11.86	
	25	4	0.26	6.26	7.23	
	30	4	0.29	6.98	8.06	

4 Series VAN							METRIC	
0° Trajectory Nozzle	Pressure bar	Radius m	Flow m³/h	Flow l/m	■ Precip mm/h	▲ Precip mm/h		
	1.0	0.9	0.14	2.3	189	218		
	1.5	1.0	0.17	2.8	183	215		
	2.0	1.2	0.20	3.3	152	176		
	2.1	1.2	0.20	3.3	152	176		
	1.0	0.9	0.12	2.0	198	229		
	1.5	1.0	0.14	2.3	187	216		
	2.0	1.2	0.16	2.7	148	171		
	2.1	1.2	0.17	2.8	157	181		
	1.0	0.9	0.07	1.2	173	200		
	1.5	1.0	0.09	1.5	180	208		
	2.0	1.2	0.10	1.7	139	161		
	2.1	1.2	0.10	1.7	139	161		
	1.0	0.9	0.05	0.8	247	285		
	1.5	1.0	0.06	0.9	240	277		
	2.0	1.2	0.06	1.1	167	193		
	2.1	1.2	0.07	1.1	194	224		

6 Series VAN						
0° Trajectory Nozzle	Pressure psi	Radius ft.	Flow gpm	■ Precip In/h	▲ Precip In/h	
	15	4	0.85	5.58	6.44	
	20	5	0.96	4.03	4.65	
	25	5	1.09	4.58	5.29	
	30	6	1.20	3.50	4.04	
	15	4	0.79	6.34	7.32	
	20	5	0.88	4.52	5.22	
	25	5	1.00	5.13	5.92	
	30	6	1.10	3.92	4.53	
	15	4	0.42	5.05	5.83	
	20	5	0.49	3.77	4.35	
	25	5	0.55	4.24	4.90	
	30	6	0.60	3.21	3.71	
	15	4	0.26	6.26	7.23	
	20	5	0.30	4.62	5.33	
	25	5	0.34	5.24	6.05	
	30	6	0.37	3.96	4.57	





6 Series VAN							METRIC	
0° Trajectory Nozzle	Pressure bar	Radius m	Flow m³/h	Flow l/m	■ Precip mm/h	▲ Precip mm/h		
	1.0	1.2	0.19	3.2	144	166		
	1.5	1.5	0.23	3.8	112	129		
	2.0	1.8	0.27	4.5	91	105		
	2.1	1.8	0.27	4.5	91	105		
	1.0	1.2	0.18	3.0	167	193		
	1.5	1.5	0.21	3.5	124	143		
	2.0	1.8	0.24	4.1	99	114		
	2.1	1.8	0.25	4.2	103	119		
	1.0	1.2	0.10	1.6	139	161		
	1.5	1.5	0.11	1.9	98	113		
	2.0	1.8	0.13	2.2	80	92		
	2.1	1.8	0.14	2.3	86	99		
	1.0	1.2	0.06	1.0	167	193		
	1.5	1.5	0.07	1.2	124	143		
	2.0	1.8	0.08	1.4	99	114		
	2.1	1.8	0.08	1.4	99	114		





8 Series VAN						
5° Trajectory Nozzle	Pressure psi	Radius ft.	Flow gpm	■ Precip In/h	▲ Precip In/h	
	15	6	1.21	3.53	4.07	
	20	7	1.36	2.91	3.36	
	25	7	1.55	3.32	3.83	
	30	8	1.70	2.79	3.22	
	15	6	1.11	3.95	4.55	
	20	7	1.24	3.24	3.74	
	25	7	1.41	3.69	4.25	
	30	8	1.55	3.10	3.58	
	15	6	0.84	4.49	5.18	
	20	7	0.97	3.81	4.40	
	25	7	1.09	4.28	4.94	
	30	8	1.19	3.58	4.13	
	15	6	0.51	5.46	6.29	
	20	7	0.59	4.64	5.35	
	25	7	0.66	5.19	5.98	
	30	8	0.72	4.33	5.00	





8 Series VAN							METRIC	
5° Trajectory Nozzle	Pressure bar	Radius m	Flow m³/h	Flow l/m	■ Precip mm/h	▲ Precip mm/h		
	1.0	1.8	0.27	4.6	91	105		
	1.5	2.1	0.32	5.4	79	91		
	2.0	2.3	0.38	6.3	78	90		
	2.1	2.4	0.39	6.4	74	86		
	1.0	1.8	0.25	4.2	103	119		
	1.5	2.1	0.30	4.9	91	105		
	2.0	2.3	0.34	5.8	86	99		
	2.1	2.4	0.35	5.9	81	94		
	1.0	1.8	0.19	3.2	117	135		
	1.5	2.1	0.23	3.8	104	120		
	2.0	2.3	0.26	4.4	98	113		
	2.1	2.4	0.27	4.5	94	109		
	1.0	1.8	0.12	1.9	148	171		
	1.5	2.1	0.14	2.3	127	147		
	2.0	2.3	0.16	2.7	121	140		
	2.1	2.4	0.16	2.7	111	128		





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





Note: Turning the radius reduction screw may be required to achieve catalog radius and flow when the arc is set at less than maximum arc
Performance data taken in zero wind conditions





10 Series VAN					
10° Trajectory Nozzle	Pressure psi	Radius ft.	Flow gpm	■ Precip In/h	▲ Precip In/h
	15	7	1.93	3.80	4.39
	20	8	2.32	3.50	4.04
	25	9	2.52	3.00	3.46
	30	10	2.60	2.50	2.89
	15	7	1.45	3.80	4.39
	20	8	1.75	3.50	4.04
	25	9	1.89	3.00	3.46
	30	10	2.10	2.70	3.12
	15	7	0.97	3.80	4.39
	20	8	1.20	3.50	4.04
	25	9	1.26	3.00	3.46
	30	10	1.45	2.80	3.23
	15	7	0.48	3.80	4.39
	20	8	0.58	3.50	4.04
	25	9	0.63	3.00	3.46
	30	10	0.75	2.90	3.35

10 Series VAN METRIC						
10° Trajectory Nozzle	Pressure bar	Radius m	Flow m³/h	Flow l/m	■ Precip mm/h	▲ Precip mm/h
	1.0	2.1	0.44	7.3	96	111
	1.5	2.4	0.53	9.0	89	103
	2.0	2.7	0.57	9.8	76	88
	2.1	3.1	0.59	9.8	63	73
	1.0	2.1	0.33	5.5	96	111
	1.5	2.4	0.4	6.8	89	103
	2.0	2.7	0.43	7.8	76	88
	2.1	3.1	0.48	7.9	68	79
	1.0	2.1	0.22	3.7	96	111
	1.5	2.4	0.27	4.6	89	103
	2.0	2.7	0.29	5.3	76	88
	2.1	3.1	0.33	5.5	71	82
	1.0	2.1	0.11	1.8	96	111
	1.5	2.4	0.13	2.3	89	103
	2.0	2.7	0.14	2.7	76	88
	2.1	3.1	0.17	2.8	73	85

12 Series VAN					
15° Trajectory Nozzle	Pressure psi	Radius ft.	Flow gpm	■ Precip In/h	▲ Precip In/h
	15	9	1.56	1.86	2.14
	20	10	1.86	1.79	2.06
	25	11	2.12	1.68	1.95
	30	12	2.36	1.58	1.82
	15	9	1.17	1.86	2.14
	20	10	1.39	1.79	2.06
	25	11	1.59	1.68	1.94
	30	12	1.77	1.58	1.82
	15	9	0.78	1.86	2.14
	20	10	0.93	1.79	2.06
	25	11	1.06	1.68	1.95
	30	12	1.18	1.58	1.82
	15	9	0.39	1.86	2.14
	20	10	0.46	1.79	2.06
	25	11	0.53	1.68	1.95
	30	12	0.59	1.58	1.82





12 Series VAN METRIC						
15° Trajectory Nozzle	Pressure bar	Radius m	Flow m³/h	Flow l/m	■ Precip mm/h	▲ Precip mm/h
	1.0	2.7	0.35	5.80	48	55
	1.5	3.2	0.44	7.37	43	50
	2.0	3.6	0.52	8.75	41	47
	2.1	3.7	0.54	9.02	40	46
	1.0	2.7	0.26	4.35	48	55
	1.5	3.2	0.33	5.53	43	50
	2.0	3.6	0.39	6.56	41	47
	2.1	3.7	0.41	6.76	40	46
	1.0	2.7	0.17	2.90	48	55
	1.5	3.2	0.22	3.69	43	50
	2.0	3.6	0.26	4.37	41	47
	2.1	3.7	0.27	4.51	40	46
	1.0	2.7	0.09	1.45	48	55
	1.5	3.2	0.11	1.84	43	50
	2.0	3.6	0.13	2.19	41	47
	2.1	3.7	0.14	2.25	40	46

15 Series VAN					
23° Trajectory Nozzle	Pressure psi	Radius ft.	Flow gpm	■ Precip In/h	▲ Precip In/h
	15	11	2.60	2.07	2.39
	20	12	3.00	2.01	2.32
	25	14	3.30	1.62	1.87
	30	15	3.70	1.58	1.83
	15	11	1.95	2.07	2.39
	20	12	2.25	2.01	2.32
	25	14	2.48	1.62	1.87
	30	15	2.78	1.58	1.83
	15	11	1.30	2.07	2.39
	20	12	1.50	2.01	2.32
	25	14	1.65	1.62	1.87
	30	15	1.85	1.58	1.83
	15	11	0.65	2.07	2.39
	20	12	0.75	2.01	2.32
	25	14	0.82	1.62	1.87
	30	15	0.92	1.58	1.83





15 Series VAN METRIC						
23° Trajectory Nozzle	Pressure bar	Radius m	Flow m³/h	Flow l/m	■ Precip mm/h	▲ Precip mm/h
	1.0	3.4	0.60	9.8	52	60
	1.5	3.9	0.72	11.8	47	55
	2.0	4.5	0.84	13.7	41	48
	2.1	4.6	0.84	14.0	40	46
	1.0	3.4	0.45	7.4	52	60
	1.5	3.9	0.54	8.8	47	55
	2.0	4.5	0.63	10.3	41	48
	2.1	4.6	0.63	10.5	40	46
	1.0	3.4	0.30	4.9	52	60
	1.5	3.9	0.36	5.9	47	55
	2.0	4.5	0.42	6.9	41	48
	2.1	4.6	0.42	7.0	40	46
	1.0	3.4	0.15	2.5	52	60
	1.5	3.9	0.18	2.9	47	55
	2.0	4.5	0.21	3.4	41	48
	2.1	4.6	0.21	3.5	40	46

■ Square spacing based on 50% diameter of throw
 ▲ Triangular spacing based on 50% diameter of throw

Note: Turning the radius reduction screw may be required to achieve catalog radius and flow when the arc is set at less than maximum arc
 Performance data taken in zero wind conditions

18 Series VAN						
26° Trajectory Nozzle	Pressure psi	Radius ft.	Flow gpm	■ Precip In/h	▲ Precip In/h	
 360° Arc	15	14	4.21	2.07	2.39	
	20	15	4.70	2.01	2.32	
	25	17	4.86	1.62	1.87	
	30	18	5.32	1.58	1.83	
 270° Arc	15	14	3.16	2.07	2.39	
	20	15	3.52	2.01	2.32	
	25	17	3.65	1.62	1.87	
	30	18	3.99	1.58	1.83	
 180° Arc	15	14	2.11	2.07	2.39	
	20	15	2.35	2.01	2.32	
	25	17	2.43	1.62	1.87	
	30	18	2.66	1.58	1.83	
 90° Arc	15	14	1.05	2.07	2.39	
	20	15	1.17	2.01	2.32	
	25	17	1.22	1.62	1.87	
	30	18	1.33	1.58	1.83	

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

18 Series VAN					METRIC	
26° Trajectory Nozzle	Pressure bar	Radius m	Flow m³/h	Flow l/m	■ Precip mm/h	▲ Precip mm/h
 360° Arc	1.0	4.3	0.96	15.9	52	60
	1.5	4.8	1.07	18.0	47	55
	2.0	5.4	1.20	19.8	41	48
	2.1	5.5	1.21	20.1	40	46
 270° Arc	1.0	4.3	0.72	12.0	52	60
	1.5	4.8	0.80	13.5	47	55
	2.0	5.4	0.90	14.8	41	48
	2.1	5.5	0.91	15.1	40	46
 180° Arc	1.0	4.3	0.48	8.0	52	60
	1.5	4.8	0.54	9.0	47	55
	2.0	5.4	0.60	9.9	41	48
	2.1	5.5	0.61	10.1	40	46
 90° Arc	1.0	4.3	0.24	4.0	52	60
	1.5	4.8	0.27	4.5	47	55
	2.0	5.4	0.30	5.0	41	48
	2.1	5.5	0.30	5.0	40	46

Note: Turning the radius reduction screw may be required to achieve catalog radius and flow when the arc is set at less than maximum arc. Performance data taken in zero wind conditions.

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