



# WATER MANAGEMENT

## RAIN BIRD

### Residential & Commercial Irrigation

#### Sprays and Nozzles

Pressure activated pop up sprays and nozzles designed to irrigate shrubs and flowers. Features include 'In-Stem Pressure Regulation', high efficiency nozzles, Seal-A-Matic™ (SAM) check valve devices, and non-potable spray heads.

#### Pop Up Spray Models

**Unispray** – 2 pop up sizes, compatible with all nozzles.

**1800** – Industry standard with many sizes and options.

**RD1800** – For demanding applications.

#### Nozzles

**VAN** – Short to medium coverage.

**HE-VAN** – High efficiency short to medium coverage.

**MPR** – Matched precipitation nozzles.

**R-VAN** – Full circle, 360 and strip state of the art nozzles for close and long distance coverage.



#### Controllers

Rain Bird is focused on manufacturing products that give efficient water usage, and these controllers exemplify that philosophy.

#### Residential and Small Commercial

**Tap Timer** – A simple to install single outlet programmer with a digital timer. A favourite starting point for irrigation installations.

**ESP-RZX** – 4, 6 or 8 station irrigation controller with multiple start times and easy programming. LNK Wifi compatible.

**ESP-ME** – 4-22 station expandable controller with feature-rich design. LNK WiFi compatible.

#### Landscape Drip

Made especially for low-volume irrigation systems they offer targeted watering with unparalleled efficiency and reliability.

#### Drip Technology

**XFD** – On surface drip.

**XFS** – Sub surface drip.

**XFCV** – Sloped surface drip.

**XF** – Header pipe.

**RWS** – Root watering systems.

#### Valves, Filters & Regulators

Low flow valves ● In line filters ● Control zone kits.

#### Connectors

XFF fittings ● Lock type fittings breathers.

#### Valves

Excellent pressure and flow characteristics, representing the optimum balance between reliability, performance and value.

#### Residential

**HV** – A high value 1" landscape valve for landscape applications.

**DV** – The classic, fully featured Rain Bird contractor irrigation valve for landscapes.

#### Commercial and Sports

**PGA** – A commercial 1, 1.5" and 2" valve designed for bigger landscape or sports installations that require higher flow rates.

**PEB** – High quality, 13.8 bar valve in 1, 1.5" and 2" for applications that demand ultimate robustness and reliability.

**100 Series** – 3" plastic valve for high flow applications.

**BPES Series** – 3" brass valve for high flow and robust applications in Globe or Angle formation.



#### Commercial

**ESP-LXME** – 8-48 station controller for larger commercial installations. Use with Rain Bird's communication cartridges and IQ Software for full remote control.

**ESP-LXD** – 50 station decoder controller, expandable to 200 stations. Compatible with Rain Bird field decoders. Industry standard wall mounted controller for sports and commercial applications. IQ Compatible.

**Site Control** – For larger or more complex applications, Rain Bird's central control system can handle hundreds of stations. These systems are typically found in theme parks, resorts and similar large scale irrigation projects.

#### Irrigation Rotors

Our range covers applications from landscape to sports turf, with industry leading features including Rain Bird's patented Rain Curtain technology that gives excellent water coverage. These high quality rotors are built to be reliable and robust with outstanding performance.

#### Rotors

**3504** – For small landscape or turf areas.

**5000** – Mid distance rotor packed with performance and water saving features.

**6504 Falcon** – For longer distances in larger turf areas and sports applications.

**8005** – Industry standard 'in pitch' rotor for football and other areas. Sod Cup also available.

**752** – Excellent for irrigation of golf greens

**900/950 Eagle** – 'Valve in Head' or block versions available for extra long distances and superb coverage.

#### Connections

**Swing Joints** – Full range of BSP and ACME threads to suit larger rotors.

**SPX Flex Pipe** – For 3504, 5000 Series and Spray Bodies.

**SB Series Fittings** – Make connecting small rotors to SPX Flex pipe easy and quick.

#### Accessories

A wide range of accessories are available to connect and compliment the Rain Bird main products. Some are listed here, but please enquire for the rest of the range: ● Irrigation cables ● Drip pipe-fittings, emitters, filters and regulators ● Rain, freeze and moisture sensors ● Tools-Swing Joints and flexible connecting pipes ● Valve and joint boxes.

# RAIN BIRD

## Golf Course Irrigation

With an exclusive focus on irrigation for 85 years, Rain Bird designs total system solutions for all your new and renovated system needs. Reservoir to rotor systems provide complete integration of components, making them easier to manage and more efficient to operate than mix-and-match solutions. This saves water and labour costs every time you run your system with additional benefits such as Timeless Compatibility™ and real-time response that only Rain Bird can offer.

### Golf rotors

Rain Bird golf rotors are engineered for precise application and distribution uniformity, helping you get the most from your water source. They also offer a low cost of ownership through a powerful combination of versatility, performance and durability. Intelligent, easy-to-use features like a top serviceable design and quick full-circle/part-circle adjustments save greenkeeping teams time. Every EAGLE® rotor manufactured since 1992 has been designed for Timeless Compatibility™, giving you the flexibility to update the internal assembly without having to dig up the case.

### 551 Series

- Radius: 32' to 55' (9.8 to 16.8m)
- Pressures: From 60–100 psi (4.1 to 6.9 bars)
- Arc: Full Circle: 360°/ Part Circle: 30° to 345°

Rain Bird 551 Series rotors provide the right coverage for tee boxes, greens and other small areas with short and medium throw range. Rapid-Adjust Technology enables easy arc adjustments with the turn of a screw.



### 700 Series

- Radius: 57' to 79' (17.4m to 24.1m)
- Pressures: From 60 to 100 psi (4.1 to 6.9 bars)
- Arc: Full Circle 360°

For use on greens, fairways, surrounds and larger tee boxes, the 700 Series rotors feature consistent pressure regulation and high-efficiency nozzles with large droplets that cut through harsh winds to provide the even distribution you need for a healthy playing surface.



### EAGLE® 900 Series

- Radius: 63' to 97' (19.2m to 29.6m)
- Pressures: From 60 to 100 psi (4.1 to 6.9 bars)
- Arc: Full Circle 360°

Rain Bird 900 Series rotors deliver the longest throw radius coverage in a full circle rotor and are ideal for use on larger greens, fairways and surrounds. The 900 high performance nozzles allow you to reach longer distances with increased droplet size for maximum efficiency and coverage.



### Swing joints

Available in a wide range of configurations, Rain Bird swing joints are designed to deliver the performance you expect while saving you money. With superior flow characteristics and excellent structural integrity, they are the perfect complement to our golf series rotors.



### IC System™

- No satellites or decoders
- Up to 90% less wire
- Test more than 1,000 stations in 45 seconds
- Add components anywhere there is MAXI™ Wire

The Rain Bird® IC System™ delivers revolutionary control and diagnostics for every single rotor and valve while eliminating the challenges of satellites and decoders. This proven innovation takes real-time response and easy-to-use control to a powerful new level, saving you time and money during installation, everyday operation and future expansions. Rain Bird® IC CONNECT™ lets you extend the reach and effectiveness of your system by enabling you to integrate, automate and interact with various sensors and field equipment.



### Decoders

A technology long-since proven on golf courses around the world, Rain Bird decoders provide 'best-in-class' field control on centrally controlled irrigation systems. Installed underground and featuring simple, low-cost wiring, decoders are an aesthetically pleasing, full-featured, economical option for reliable in-field control.



### PC Central Control

- Options to fit any course
- Manage your irrigation system in real-time
- Operate and adjust from any location

Designed to deliver a real-time response to changing conditions, Rain Bird® Central Control systems make it easy to automate and streamline irrigation management. Intuitive, easy-to-use programming and advanced technologies like Rain Watch™ and MI Series™ mobile control help you micromanage water and create detailed programmes from any location. Timeless Compatibility™ means your new software and software updates will work with in ground components, so existing satellites, decoders and rotors will not become obsolete.



Rigby Taylor is the UK's distributor of Rain Bird irrigation products for golf, residential and commercial use. The company can facilitate the complete package from planning through to implementation • Replacement parts • New rotors/nozzles • Control Systems • System Audits • Design and specification





# POGO

## POGO Pro+ Soil Monitoring System



**Integrated, professional-grade GPS receiver**  
Records the precise location with all measurements for geospatial condition analysis, cup placements, sprinkler positions and patterns, area measurements, custom mapping, and more

**Integrated wireless**  
POGO connects easily via Bluetooth to your smartphone

**Infrared surface temperature sensor**  
Instantly captures the temperature with extreme precision

- POGO System Measurement Features**
- \* Moisture
  - \* EC Salinity
  - \* Temperature
  - \* Soil/Root Zone
  - \* Weather/Ambient
  - \* Nutrition
  - \* Human Decision
  - \* GPS Visualisation

**Depth-adjustable soil temperature probe**  
Easily adjustable from 0 to 6 inches (15cm)

**Patented sensor precisely measures the right depth**  
The predominant moisture and salinity exchange within the rootzone of all types of turf systems occurs in the top 6cm. Measuring only this depth maximises precision

The POGO Pro+ is a portable, hand held tool that measures soil moisture, soil temperature and its salinity. Measurements are obtained from information received from the probe at the end of the device simply pushed into the soil surface, whether it's a sports pitch, golf fairway or green.

The POGO can be used to determine the need to irrigate, based on accurate soil moisture readings. From these readings, an analysis can be undertaken to see whether soil moisture is the reason for such variations.

POGO can also be used to determine when to apply fertilizers, based on the salinity readings of the root zone. Can be used to accurately GPS survey anything on the property.

Coupled with this, the POGO is a very accurate GPS receiver as it will record the exact location that is being tested, as an example it can be used to record the position of each hole's cup placements. This is particularly handy when an annual tournament is being planned and the exact location of every pin used on previous years tournament is known!

POGO can also accurately determine the square metre area of any given golf green so an easy calculation can be made as to how much fertilizer or chemical application is required.

Rigby Taylor has been working with POGO for over 4 years. The company employ a national, field based team of fully trained personnel who can train and provide ongoing technical support to obtain the very best results from the system, whether it is on a golf course or in a sports pitch situation.

Rigby Taylor also provides a UK based, phone support line for customers who subscribe to the full POGO cloud based package.

The Probe end of the POGO Pro is constructed of three steel prongs which, by sending out a small electrical current, can determine the soil moisture content in the top 6cm of the root zone, where most of the turf roots reside. There is also an infrared temperature sensor built into the machine which reads the soil temperature via a depth adjustable probe located on the side of the POGO

POGO connects to a smart phone via Bluetooth, so a mobile phone, tablet as well as a desk top computer can access the data.

The combination of POGO TurfPro mobile App (a free download) and TurfPro Cloud (annual subscription) provides a complete recording mapping package to optimize the management of turf surfaces.

The system can also be used to record output from other devices such as Clegg Hammer, traction meter, ball speed and infiltration meter. Such information can then be plotted as a colour map so can easily determine what is happening at root zone level of your turf, rather than just presenting raw data for you to interpret. The TurfPro Cloud analyses the data and presents it visually

POGO is available either as a stand-alone POGO Pro+ meter/mobile App (handy if you already have one but want to purchase another), or in a package, which includes the POGO Pro+ Meter/mobile App and POGO TurfPro Cloud annual subscription. If this is a first POGO purchase then it is suggested that one of the starter packs is





# SOIL SCOUT

## Wireless soil moisture sensing and monitoring

Soil Scout is an automatic soil moisture sensing system that comprises a small sensor that can just fit in the palm of a hand and is buried in the root zone below the turf surface.

A typical system would have no less than 3 sensors or could have several dozen. Each sensor is wireless with a battery that can last up to 20 years.

These sensors relay information back to a base station at 20 minute intervals, 24 hours of the day. The information relayed by the sensors report on the moisture content, temperature and salinity of the soil and displayed in a easily readably graphic display on an office computer.

By keeping tabs on the soil moisture of the root zone so regularly, a better understanding of what is happening below the surface will be achieved and can be reacted upon; Most of the current users of this system will wait until the moisture reaches a pre-determined minimum, before they initiate an irrigation cycle.



Soil Scout – 100 sensor with 20 minute updates

Soil Scout – Echo 116 Repeater (include antenna). For use in areas of poor communication



Soil Scout – Base Station (2G/3G), plus antenna & cables



it is time to re-apply the feed and, will also assist in determining whether too much fertilizer is being given at any one time.

The number of sensors in the system does not have a limit as the more sensors, the more accurate the information. Measuring soil moisture in different parts of a golf course or on a stadium pitch will provide an understanding of why issues are arising, for example, Dry Patch or moss growth in a particular area, or whether the irrigation system coverage is as accurate or consistent as it should be.

Soil Scout has an annual subscription, which provides support and allows the use of a portal which extrapolates the information being provided.

### Soil Scout Packages

To simplify matters a Soil Scout system can be purchased as a package that contains all the input necessary to get up and running. This includes all antenna cables etc. Further expansion of the system with extra sensors or Echo Repeater stations can be achieved.

#### Sports Field Packages

##### Football Package A

Includes: 6 Soil Scout Hydra 100, 20 minute sensors, one base station bundle and a 12 month subscription.

##### Football Package B

Includes: 12 Soil Scout Hydra 100, 20 minute sensors, one base station bundle, one Echo repeater bundle and a 12 month subscription.

##### Football Package C

Includes: 18 Soil Scout Hydra 100, 20 minute sensors, one base station bundle, one Echo repeater bundle and a 12 month subscription.

#### Golf Course Packages

##### Golf Course Basic

Includes: 6 Soil Scout Hydra 100, 20 minute sensors, one base station bundle and a 12 month subscription.

##### Golf Course Intermediate

Includes: 18 Soil Scout Hydra 100, 20 minute sensors, one base station bundle and a 12 month subscription.

##### Golf Course Pro

Includes: 36 Soil Scout Hydra 100, 20 minute sensors, one base station bundle and a 12 month subscription.

This system has huge benefits and can save significant amounts of water (and kilowatt energy). This is because irrigation will only be required after checking the soil moisture sensor readings and an assessment made as to whether moisture has dropped low enough to decide irrigation is required.

Any other method of determining when to irrigate is based on what is happening above ground, NOT what is affecting the actual grass roots below the surface.

By reducing the frequency of irrigation, there is much less likely hood of leaching away expensive fertilizer applications. The salinity recordings from the sensors will help in assessing when





## Vertical Drainage System



Fairway saturated and prone to ponding at Copt Heath Golf Club



Ground Water Dynamics (GWD) provides a revolutionary new vertical drainage system for the UK sports, landscape and amenity markets.

Totally different from other drainage systems, the GWD use an Energy-Passive Ground-Water Recharge Pump (EGRP) that enables rain water to be captured 'at source' instead of simply moving the problem to another area.

### How does it work?

The system is installed by drilling bore-holes up to 12 metres deep with minimal surface disruption and does not require trenches or major earth works. Each bore-hole is no more than 90mm in diameter and, after the insertion of the five-chamber EGRP device, the bore-hole is top dressed with a root zone mix.

### The Problem

Certain soil types, comprised of horizontal layers of clay and silt, can offer limited drainage capacity resulting in heavily saturated playing surfaces and localised ponding.

Traditional drainage methods of excavating trenches and laying underground pipe work causes major surface disruption and prevents utilization of the facility until the surface has been reinstated.

### The Answer

Groundwater Dynamics' EGRP system addresses this problem by inserting the system vertically into the ground and, once activated, the unique five-chamber design with its mild vacuum connects these horizontal layers of soil and attracts groundwater laterally towards the device before taking it down to lower unsaturated strata and away from problem areas.

### The Benefits

EGRP requires no external energy source, creates very little disruption during installation and is environmentally sustainable. It is suitable for all soil types and provides designers, planners and landscape architects with the opportunity to manage surface water run-off, nuisance groundwater and localised flooding. Most importantly, rainfall can be dealt with at "source" with no requirement to link up with storm-drains or sewers.

### Key Features:

- › Little surface disruption
- › No outflow required
- › No external energy source
- › Deals with rainfall at source
- › No maintenance required
- › Targets localised areas
- › Drains bunkers

### Projects:

Football Clubs - Fulham FC  
 Golf Clubs - Copt Heath GC  
 Gleneagles  
 Infrastructure - Silverstone  
 Cricket - Warwickshire CCC





According to Basildon Council Parks and Countryside Supervisor, Glen Owers, a Euroflor seed mix was first introduced into Lake Meadows Park because the council wanted to “add some colour and make it more attractive to visitors”, and due to the colourful “wow factor” that first year, they’ve used the seed mix ever since.

“The Euroflor Sarah Bouquet works well for us because it offers a good variety of species, that flower throughout the summer and still looks good in October,” Glen further adds “Once the seeds have germinated, the team use Apex Organic OC2 fertiliser and the area is irrigated during dry spells. The first colour appears around 60 days after sowing and the mix of species ensures that as one plant blooms and fades, another is coming through to take its place,”



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Parks and Countryside Supervisor  
Basildon Council