



Superior insight | Better decisions | Healthier turf



Knowledge is power. And high performing turf is awesome.

POGO is a professional, all-in-one system obtaining superior insight into course conditions allowing better decisions to be made efficiently and cost effectively for presenting the finest conditions possible.

Apply irrigation and fertilization precisely through condition-based management. Reduce chances for turf decline and waste using visual analysis and condition audits. Create GPS mapping, IPM logs, pin sheets, customized reports and much more!

Unmatched precision, better decisions.

Unmatched precision. Better decisions.

The POGO system is a holistic approach to measuring the most influential factors that ultimately determine course quality and turf performance. It's patented technology is unparalleled in precision and accuracy while allowing for customization to suit your specific needs.

Integrated, professional-quality GPS receiver

Adds an extra dimension—precise location—geospatial condition analysis, cup placements, sprinkler positions and patterns, area measurements, custom mapping and more.

Rechargeable battery

Provides a full day of intense use between charges.

Proven reliability and research-grade accuracy you can trust

A patented sensor depended on by the USDA, NOAA, leading irrigation companies, and many universities for over 10 years.



MOISTURE



SALINITY (EC)



CANOPY TEMPERATURE

The POGO's design allows for capturing the most influential turf variables repeatedly due to its unique size, shape and durability.

Precisely measures the right depth (2.25")

The predominant moisture and salinity exchange within the rootzone of all types of turf systems occurs in the top 2" to 2.5"*
Measuring only this depth maximizes precision.

* Results of independent study available upon request.



Integrated WiFi

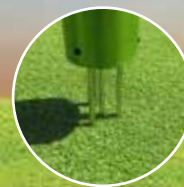
The best user interface for POGO is the one already in your pocket. POGO connects easily via an ad-hoc WiFi connection to any Apple or Android device—no cables. The rich, touch-based interface provides actionable analysis immediately while taking samples.

No need for calibration, ever.

Consistent accuracy and precision in all turf and soil types with no maintenance.

5 Year Warranty.

Low total cost of ownership, no downtime and consistent accuracy. Industry-leading, **5-year warranty** on sensor, including the marine-grade stainless steel probes. Durability that fits the needs of the turf manager.



Turf remains virtually undisturbed

4 small probes, 3.1mm (1/8") diameter.



“Having managed both cool and warm season turf, I understand the changing dynamics in irrigation and nutrient applications. When the best decision is not made, it can be costly. Using POGO removes any guesswork—I know exactly what's going on when it comes to managing moisture, salts and fertilizer. POGO is my most valuable resource in my daily operations.”

Dario Pascua, Golf Course Superintendent, Sherbrooke Golf and Country Club


Optimal turfgrass performance requires optimal, timely decisions.

The free POGO Turf Pro app for iPhone, iPad and Android devices turns your smartphone or tablet into a data acquisition and logging system that collects, displays and logs turf conditions measured by the WiFi-connected POGO.

The app displays real-time analytics and assessments of turf/soil moisture, salinity and temperature. This allows for timely reaction to conditions that could lead to costly problems.

Easily synchronize data with the POGO Turf Pro cloud system and unleash unprecedented insight and analysis from any internet connection (data can also be emailed as a .csv file if desired).

A revolutionary BMP!
The POGO system works seamlessly to capture, analyze and share information you feel is most important to your operation.



Each new moisture, salinity (EC) and temperature sample is color-coded and indicated on a bar meter to display where your conditions are in relation to your customized desired range.

Running average for the zone with comparison to the last reading.

Tap to acquire a new measurement.

Data and configurations are shared with all other users, allowing a property to be split between multiple people, yet ensuring standardized measurement.



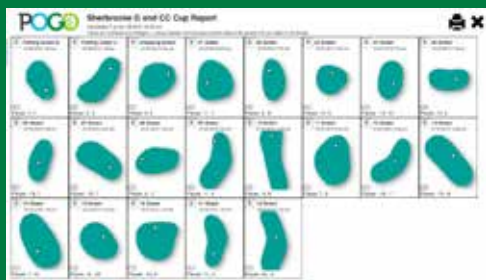
“ POGO has allowed us to track our VWC% on a daily basis, and given us the ability to apply exactly what’s required on every individual green. We also have a definite indicator as to what our EC levels are, and where. We’re able to forecast, plan and prepare so much better and our greens have never been more consistent. I highly recommend it—it’s easy to use, gives us great data and makes it easy to understand what the data really means, giving us what we need to make the right decisions. ”

Craig Haldane, Director of Golf Course Maintenance, Dubai Golf

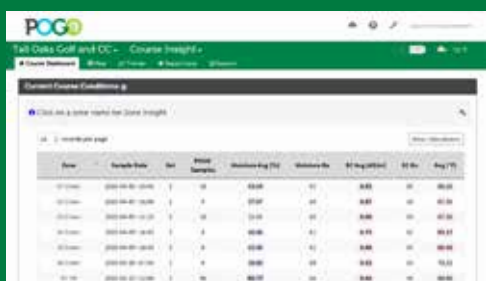
VISUAL INSIGHT: So much more than just numbers



Plot data for any combination of zones, turf parameters and date range to help identify trends and know how and when to adjust your irrigation, fertilization and cultural practice applications.



Monitor cup positions over time. Define where pins will go tomorrow. Automatically create pin sheets.



Date	Sample Date	Soil	BMP	Salinity (PS)	Moisture (%)	EC (dS/m)	Avg (7D)
11/11/2018	2018-11-11 08:00	A	100%	1.1	65.0	1.1	65.0
11/11/2018	2018-11-11 08:00	A	100%	1.1	65.0	1.1	65.0
11/11/2018	2018-11-11 08:00	A	100%	1.1	65.0	1.1	65.0
11/11/2018	2018-11-11 08:00	A	100%	1.1	65.0	1.1	65.0
11/11/2018	2018-11-11 08:00	A	100%	1.1	65.0	1.1	65.0
11/11/2018	2018-11-11 08:00	A	100%	1.1	65.0	1.1	65.0
11/11/2018	2018-11-11 08:00	A	100%	1.1	65.0	1.1	65.0
11/11/2018	2018-11-11 08:00	A	100%	1.1	65.0	1.1	65.0
11/11/2018	2018-11-11 08:00	A	100%	1.1	65.0	1.1	65.0
11/11/2018	2018-11-11 08:00	A	100%	1.1	65.0	1.1	65.0
11/11/2018	2018-11-11 08:00	A	100%	1.1	65.0	1.1	65.0

Distribution uniformity (DU) of moisture and EC for each zone is calculated instantly—a true representation turf conditions (what's actually penetrating the turf, not just what lands on the surface). Get a course-wide audit every day in minutes per zone without needing to do a traditional time consuming DU analysis.

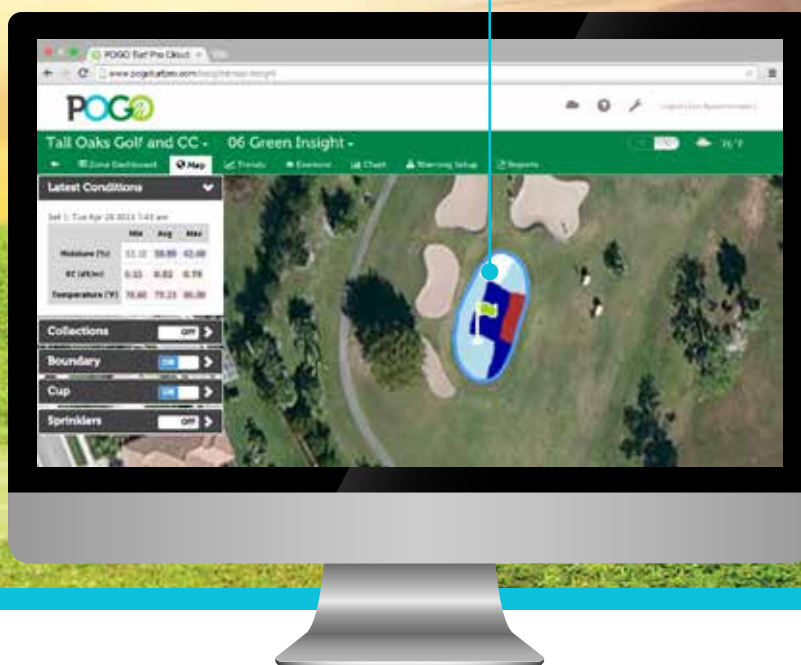


Observe how sprinkler patterns and traffic flow are contributing to the conditions you measure and see.

The POGO system doesn't just record and present the raw data. Because your time is limited, you really want an analysis—What does the data mean? What should you do?

POGO Turf Pro Cloud presents the results of multiple analyses of your data, all done instantly, automatically, and presented visually. There's no need to interpret data or wade through numbers in a table to chart (although charts are available, and great for seeing trends). Instead, user-defined, color-coded areas layered on a real satellite map of your course give you the insight you need at a glance. There's really nothing else like it.

Turf conditions for the entire green (even interpolated between where samples were taken) are illustrated with color-coded areas on a satellite map. See the variation of moisture, salinity and temperature across every zone of your course, and understand the effects of their interaction. Perform Best Management Practices (BMP's) by applying precisely what is needed, when it's needed.



Visual reports include every factor that contributes to turf health—moisture, salinity, temperature, sprinkler location and patterns, cup locations, and more. Illustrated information lets you visualize trends and allows you to see problems forming before symptoms appear so you can react before it becomes costly. Hot spot identification for site-specific hand watering, nutritional stress ID for insight to turf performance and traffic influences on the turf conditions are only a few benefits from this.

SAMPLE, LOG, ANALYZE & MAP.

In minutes a day, view the life pulse of your entire property.

POGO's unique all-in-one design replaces multiple pieces of equipment and software, analysis tools and manual reports. It provides massive efficiency gains and requires minimal training. POGO is the most cost-effective way of gaining this level of course insight.



SAMPLE.

- Easy: insert POGO into the turf and tap "Sample" on your smartphone/tablet, then move to next location
- Captures moisture, salinity (EC) and canopy temp with its integrated sensor precisely positioned in the most influential component of the turf system

LOG.

- Captured data is stored in the app.
- Using integrated GPS, log sprinkler locations, cup placement, ball speed, slope and boundary of the green or any zone, as simple as taking a sample
- Record notes and capture photos. Eliminate paper records and share easily. Retrieve at any time
- **The simple-to-use, all-in-one system replaces multiple pieces of equipment and manual processes, providing unparalleled efficiency**

ANALYZE.

- Instant analysis is performed while taking samples, providing the power of decision making in the palm of your hand. More thorough analysis is automatically performed on all data once uploaded to the cloud
- Real-time, clear and accurate irrigation, nutritional and uniformity assessments provide complete understanding of turf and soil conditions, water and fertilizer management optimization and causes of stress
- **Actionable conclusions to maximize turfgrass health using scientific insight, with minimal effort**

MAP.

- Our unique Visual Insight provides detailed analysis of the data you capture automatically, so you never need to wade through numbers or charts
- Map sprinkler patterns and uniformity assessments
- Assess area measurements precisely
- Map features unique to your property...easily
- Practice more efficient water, nutrient, turf enhancement, and IPM applications by knowing impacts on turfgrass performance at all times. Eliminate guessing and make decisions based on precise conditions
- **Predict and avoid future problems**

Get the INSIGHT you want.

OPTIMAL TURF PERFORMANCE

for minimal effort

- **OPTIMIZE** turf health and conditioning, root growth and soil conditions, irrigation distribution and performance
- **MINIMIZE** water and fertilizer consumption
- **KNOW** the effects of your nutritional and chemical applications. Adjust their timing more effectively
- **IMPROVE** playing conditions and stress tolerance
- **INCREASE** effectiveness of maintenance practices:
 - Validate aerification practices (air/water improvements)
 - Build degree days and POGO performance indicators accurately and specific to your property
 - Optimize nutritional and salinity management practices

SCIENTIFIC ANALYSIS

done for you

- **UNDERSTAND** reasons for turf decline: moisture, nutrients, stress, or the combined impact of moisture, salinity and temperature. Know if a 'dry' spot is hydrophobic or if the discolored condition is the result of elevated salinity or other measured condition
- **MAXIMIZE** nutrient release longevity
- **PREDICT** future stress: Analyze trends to identify negative conditions before symptoms develop
- **MEASURE** the most influential factors for turf performance, above and below ground to make the very best decisions in turfgrass management

MAXIMIZE EFFICIENCY

Do more in less time

- **AUTOMATE** paperwork and manual notes.
 - Log timestamp and GPS location with every turf sample taken automatically
 - Capture sprinkler and cup positions
 - Record notes and attach photos to each sample and share with users, who are all synced through the cloud
 - Correlate POGO lab analysis reports
- **ELIMINATE** spreadsheets and manual analysis: let the POGO system do the number crunching with advanced algorithms—just use the map-based Visual Insight to understand, predict and optimize your turfgrass. Make your best decisions with confidence

About EC (salinity)

- Every nutrient is a salt—a source of salinity
- EC affects moisture readings with typical moisture sensors
- Turf EC is always changing throughout a day or from day to day from fertilization, irrigation and natural processes
- Compaction and organic matter, indicated by moisture holding trends over time, also affect EC capacities in turf systems
- The effect of EC on the moisture availability

to the turf system is great. As salinity changes the water needs also change

- Moisture readings are affected by EC so measuring it allows the sensor to compensate for the EC and provide a more accurate moisture measurement
- POGO accurately and precisely measures EC, moisture and temperature together without calibration to ensure that like measurements over time (i.e. 20% wfv, 0.18 dS/m) are in fact the same conditions

Q: Why do I need to measure EC if I don't have a salt problem?

A. If you fertilize, you manage EC. Any turf stress may be because of a salinity problem or its effect on other measured variables. You won't know if it's from too much or too little water, increasing or decreasing salinity activity, inefficient nutrient applications or the combination of several variables. The best way to understand, avoid and manage turf stress is to measure the three most influencing variables that cause it while trending this information over time. See issues before symptoms appear.



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