

# POGO TurfPro System



Superior insight | Scientific decisions | Healthier turf

# The POGO System

## Turf Insights to Actions

POGO is an advanced turf-intelligence platform that delivers clear, actionable insights to optimize course performance. By integrating high-precision soil, weather, and other environmental measurements with powerful mapping tools, it identifies the key factors influencing turf health, performance, and playability. Backed by global research and patented technology, POGO empowers your team to act proactively in turf best management practices such as irrigation and stress management. POGO sets the benchmark for turf monitoring, mapping, analysis, and control.



To use the POGO system, simply insert the sensor tines into the turf and tap the “**Sample**” button in the POGO TurfPro Mobile app. Each reading automatically captures the precise GPS location (with sub-meter accuracy on the POGO Pro+ and POGO mini), allowing you to pinpoint and analyze specific areas of turf stress with exceptional precision. Images and notes can be logged with each measurement.



At the core of the system, **POGO TurfPro Cloud** delivers automated intelligence by analyzing data from POGO devices, weather inputs, and environmental sensors to generate fast, reliable insights.

With only 3–4 samples per 1,000 square feet (93 square meters), POGO provides a statistically accurate assessment of turf conditions for a user defined zone—typically in under five minutes for an average green. Once sufficient measurements are collected for a zone, any team member can immediately access the analysis to make informed, data-driven decisions on precise application requirements and locations.



Attach a photo or memo to any measurement or data set. For example, document the mowing setup, roll/no roll, detail hand watering events, recent product applications, and more.

Tap to instantly capture a new measurement.

View your current location and measurements captured in real-time on a satellite map or aerial drone imagery of your property. Multiple images may be utilized.

Sync all data to TurfPro Cloud and visualize turf conditions within minutes.

Data and configurations are accessible to all designated users, facilitating a property to be split among multiple individuals while maintaining standardized measurement.

Charts, reports, and visual maps show emerging patterns, while trend analysis and performance modeling help proactively identify potential issues before they appear.

Designed for proactive management, TurfPro Cloud turns complex data into clear, actionable guidance—reducing guesswork and costly remediation.

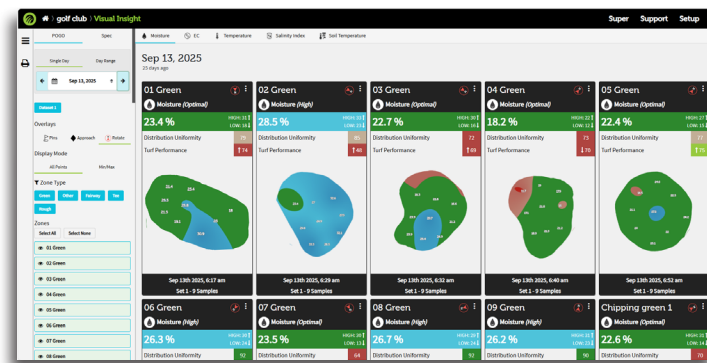


# Visual Insights

## TurfPro Platform: Desktop + App

### Precision Data Mapping

Every POGO measurement records essential turf variables along with precise, professional-grade GPS location data. Additionally, custom inputs can also be integrated, allowing TurfPro Cloud—when connected through TurfPro Mobile—to instantly visualize results on detailed, geo-referenced course maps.



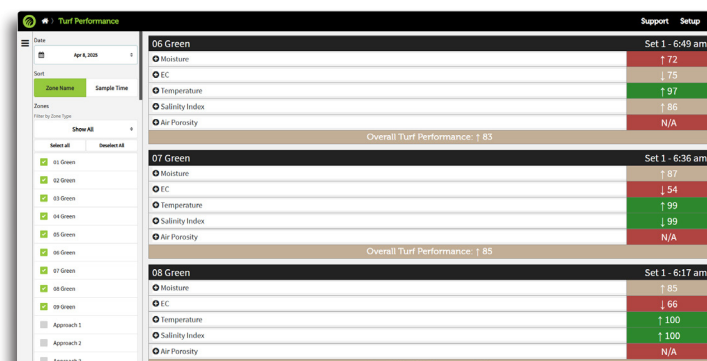
### Comprehensive Course Audits

Immediately after measurements, the POGO system automatically assesses the distribution uniformity (DU) of soil moisture, conductivity, temperature, and salinity for that zone. POGO calculates DU metrics of soil conditions in real time, providing an accurate picture of what's truly reaching the turf. This enables precise analysis of irrigation performance and nutrient uniformity. POGO's patented uniformity process replaces the traditionally labor-intensive catch-can test method, providing a clearer understanding of moisture and nutrient conditions experienced by the turf.



### Powerful, Actionable Insights

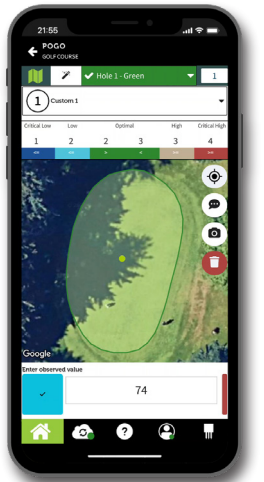
The POGO System offers more than data collection; it provides timely and intelligent analysis to support confident decision-making. Instantly identify hot spots for hand-watering, detect nutritional or traffic stress, and monitor changing rootzone conditions. Track the impact of cultural practices, evaluate product performance, and recognize both positive or negative trends—all presented clearly to facilitate effective and efficient turf management every day.



POGO's patented Turf Performance Index (TPI) provides a standardized and objective performance score for your turf—providing instant insight into current conditions. It identifies the key factors influencing your score and offers targeted recommendations for improvement. When integrated with POGO Weather Pro+, enhanced stress prediction models unlock even deeper foresight and control over turf performance.

### Manual & Custom Metrics

Using the TurfPro Mobile App, track key performance metrics such as ball speed, firmness, grass clippings, and other course specifications using POGO's manual measurement features. Add tasks, photos, and notes that automatically align with your data for precise, time-based analysis—all without needing to connect to a POGO device for manual inputs.



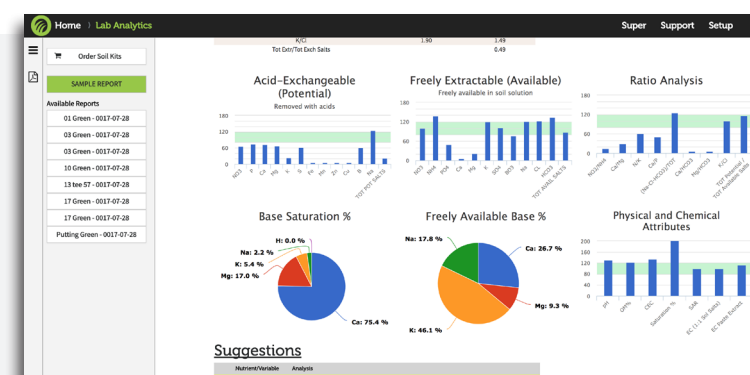
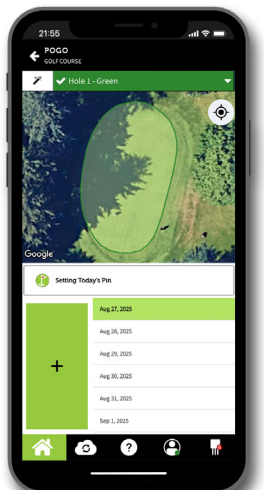
### Fast, Insight Data Collection

Gathering course data takes only minutes each day with POGO. Each measurement records critical key factors influencing turf performance, with reports and historical trends available just seconds after sampling. Instantly generate visual plots across zones, parameters, and date ranges to identify patterns, guide adjustments, and build confidence in management decisions.

### Pin Position Planning and Management

With the integrated Pin Planner, schedule upcoming positions that directs staff where to place the pin using GPS and to automatically populate a pin sheet—ready to print or instantly share with the pro shop, members, and staff via a public URL.

Record daily pin locations and correlate them with turf conditions measured by POGO to gain insight into performance patterns and plan optimal future pin placements. The POGO System also links with ezLocator's strategic pin placement service.



### Integrated Laboratory Analysis

POGO efficiently combines in-field measurements with laboratory testing conducted at independent, USDA-certified lab—enabling comprehensive analysis of essential physical and chemical properties in soil, water, tissue, and microbiology.

# The POGO Product Family Hardware

## POGO *Pro+*

The POGO Pro+ accurately measures critical factors affecting turf performance with its patented, **no-calibration-required sensor**. Designed to meet the demands of professional turf management, it features a rugged, weather-resistant housing, long-lasting battery, high-precision GPS, and Bluetooth connectivity for instant communication with any smartphone or mobile device. Reliable and durable—POGO Pro+ delivers trusted precision throughout every season.

Ergonomic handle

Integrated, professional-grade GPS receiver gives precise location to all measurements

Infrared turf canopy heat index sensor

Rechargeable battery, provides more than a week of use between charges

— Bluetooth to any iOS or Android device

— No calibration, ever

— Industry-leading 2-year warranty

Depth adjustable soil temperature probe (optional)

Long lasting marine-grade stainless steel 2.25 in. (57 mm) probes measure the correct depth where predominant moisture and salinity exchanges occur

## HydraProbe® Technology

Powered by the patented HydraProbe—the world's most trusted soil sensor—POGO delivers lab-grade accuracy without the need for calibration. HydraProbe independently measures soil moisture and salinity, giving turf managers precise and consistent insights in any condition with comparable measurement across your course and with others.

Trusted for over 30 years by the USDA, NOAA, USGS, and leading universities, HydraProbe is the gold standard in soil sensing—supported by extensive global research and proven results. With POGO, you can make confident, data-driven decisions to consistently achieve outstanding turf quality.



A T-handle bar and cell phone holder are options for all POGO models

## POGO Measurements



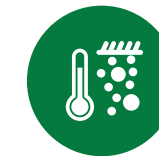
MOISTURE



SALINITY (EC)



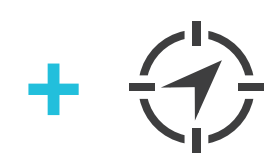
CANOPY TEMPERATURE



SOIL TEMPERATURE



POGO'S UNIQUE SALINITY INDEX



PRO-GRADE GPS

## POGO *mini*

The POGO mini is the perfect tool for checking soil moisture, EC and salinity index while unlocking certain features of the TurfPro Cloud. It provides visual insights into soil moisture, trends, and distribution uniformity with GPS precise, geo-referenced mapping. Upgrading to the PRO plan unlocks advanced features such as Pin Planning and GIS Asset Management, offering comprehensive control and visibility across your course.

## POGO *lite*

The POGO lite is ideal for quick spot checks of soil moisture and EC. It incorporates the same lab-grade HydraProbe soil sensor used in the POGO Pro+ and POGO mini and does not require a Turfpro.com subscription. This simple, rugged, and reliable POGO lite's results can be easily exported in a .csv file via email for quick data sharing.



## POGO *mapper*

Enhance your property mapping and asset control with POGO Mapper's advanced GPS technology. Compact and belt-mounted, it connects via Bluetooth to the TurfPro Mobile App to create precise irrigation maps, a GIS as-built maps, facilitate Pin Placement, document IPM problem areas, and locate covered features such as drainage components—all with professional-grade GPS precision to support efficient and effective course management.

## POGO Weather Pro+

The POGO Weather Pro+ measures essential ambient variables essential for superior turf and property management. When combined with site-specific measurements from the POGO Pro+ or POGO mini, along with satellite imagery and mapping, it provides powerful insights for enhancing turf health, irrigation management, turf stress indicators, playability, and operational efficiency.



# Specifications

	POGO lite	POGO mini	POGO Pro+
Soil Probe Technology	Stevens HydraProbe (Ratiometric Coaxial Impedance Dielectric Reflectometer) Inner Sensor Variability <1% for universal comparability Measures real and imaginary complex dielectric permittivity No calibration - USDA / ARS integrated algorithm		
Soil Moisture (SM)	Volumetric Water Content (%) Range: From 0% to 100% of saturation Accuracy: +/- 2% VWC for most turf soils		
Bulk Electrical Conductivity (EC)	Range: 0 to 4 dS/m +/- 2% or 0.2 dS/m whichever is greater		
Canopy Temperature Accuracy	N/A	N/A	+/- 0.5°C (0°C - +50°C) (32°F - 122°F)
Soil Temperature	N/A	N/A	+/- 0.5°C (0°C - +50°C) (32°F - 122°F)
Tines	Hardened Marine Grade 2.25 in (57 mm) 630 stainless steel tines		
GPS/GNSS	N/A	Sub-meter accuracy   GPS, GLONASS, BeiDou, Galileo	
Power	USB-C Charging Port   Rechargeable Lithium-ion (Li-ion) Battery 3.7V / 10500 mAh / 38.8Wh		
Connectivity	Bluetooth Low Energy 5.2		
Unit Weight	3.28 lb (1.49 kg) with 4 segments + knob		4.3 lb (1.95 kg) with 1 segment + knob
Dimensions	31.75 in x 3.5 in x 2.5 in (80.8 cm x 8.9 cm x 6.4 cm)		30.5 in x 3.5 in x 2.5 in (78 cm x 8.9 cm x 6.4 cm)
Part Number	93633-1001	93633-1002	93633-900

POGO mapper	
GPS/GNSS	Sub-meter accuracy
Power	Rech. Li-Ion 3.7V / 3500 mAh / 25.9Wh
Charge Time	4 hours
Connectivity	Bluetooth Low Energy 5.2
Unit Weight	0.55 lb (0.25 kg)
Dimensions	4.8 in x 2.7 in. x 1.2 in. (12.4 cm x 6.8 cm x 3.1 cm)
Part Numbers	93633-012

POGO Weather Pro+		
Sensor Parameters	- Air temperature - Relative humidity - Barometric Pressure	- Wind speed   direction - Rainfall - Solar radiation
Optional Parameters	- Photosynthetically Active Radiation (PAR) - Soil moisture - Electrical conductivity (EC) - Soil temperature	- Wet bulb globe temperature - Wind gust (AC power preferred) - Wind direction averaging (AC power preferred)
Calculated Parameters	- Dew Point - Heat stress - Wind chill - Evapotranspiration (ET)	- Growing Degree Days - Cooling Degree Days - Heating Degree Days - Water and fungal stress

## POGO TurfPro Plans

	FREE	BASIC	PRO
App	✓	✓	✓
Web	✗	✓	✓
POGO <i>lite</i>	Optimized	✓	✓
POGO <i>mini</i>	✓	Optimized	✓
POGO <i>Pro+</i>	✗	✓	Optimized
POGO <i>mapper</i>	✗	✗	✓
POGO Weather Pro+	✗	✗	✓
	FREE	BASIC	PRO
POGO <i>lite</i>		No additional benefits	
POGO <i>mini</i>	- SM/EC measurements - Manual measurements (SPECS) - Zones only (no boundaries) - Export via email (lite only)	- SM/EC/SI measurements - SM Visual Insight - SM Distribution Uniformity - SM/EC/SI Trends - Zone with boundaries - Manual measurements (SPECS)	<b>All BASIC Features +</b> - EC/SI/SPECS Visual Insight - EC Distribution Uniformity - SPECS Trends - Pin Planner - Asset Management - Weather Pro+ Connectivity - Turf Performance Indicators
POGO <i>Pro+</i>		- Soil lab analytics - Export to Excel	<b>All mini Features +</b> - CHI/ST measurements - CHI/ST Visual Insight - CHI/ST Trends
POGO <i>mapper</i>			- Zone boundaries - Asset Management - Pin Planner
POGO Weather Pro+			- Ambient conditions - Trends & reports - Evapotranspiration calculations - Degree-Days and turf stress models

SM: Soil Moisture

EC: Electrical Conductivity

SI: Salinity Index

CHI: Canopy Heat Index

ST: Soil Temperature

DESIGNED AND MANUFACTURED IN THE USA BY:  
**STEVENS**  
 12067 NE Glenn Widing Dr., Suite 106.  
 Portland, Oregon 97220 USA  
 1-503-445-8000



TurfPro.com  
 info@pogoturfpro.com  
 +1-971-420-0500

