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Turf-Tec International Company History

Turf-Tec International was started by the late Tom Mascaro in 1976 to manufacture tools to benefit Golf Course Superintendents and Sports Turf Managers in their everyday maintenance. John Mascaro, Tom's son, now heads Turf-Tec, and is carrying on the family tradition of introducing innovative tools to aid the Superintendent, Sports Turf Manager and the Professional Engineer.

Tom was best known for his invention of the Aerifier in 1946 and the Verti-Cut in 1955 along with over 100 other turf related inventions. With his insight we have developed a line of diagnostic instruments for the engineering community that until now were only available to researchers at universities. These instruments are simple to use yet give meaningful results.

John is also known for his monthly articles called "John Mascaro's Photo Quiz" that appears in Golf Course Management Magazine and SportsTurf Magazine.

Turf-Tec International is committed to developing new products and new techniques to assist in land development, land restoration, development as well as government regulatory compliance.

Our products are the highest quality, most made in the USA and fully warranted. We look forward to your business.

DIAGNOSTIC SOIL ANALYSIS PRODUCTS

2. Heavy Duty Mascaro Profile Sampler 7 inch Deep Order #: MPS2-S		Price: \$ 225.00
		<p>Profile Sampler extracts a cross section of the soil profile with this 7" deep, 3" wide and 1/2" thick sampler. This Heavy-duty sampler has a 30-inch long handle and the reinforced cutter blades allow reliable use even in hard or rocky soils.</p> <p>The cutter blade opens with the aid of a specially designed hinge exposing the Soil Profile with unmatched quality. Overall Height is 38 inches long.</p>
		
*36-inch Tubular Soil Sampler with Step 36 inch Order #: TSS2-S		Price: \$ 85.00
		Stainless steel sampler has a step on the handle for easy insertion into the soil. Stainless design allows for laboratory analysis of clean soil samples. The 36-inch Tubular Soil Sampler extracts a sample 15 inches deep by 3/4 inches wide.
		
13. Brass Sieve Set for Sand - 8 inch Diameter Order #: BS1-S		Price: \$ 450.00
14. BS2-S Brass Sieve Set for Gravel - 8 inch Diameter Order #: BS2-S		Price: \$ 350.00
		<p>BS1-S Test your own sandy soils with a complete set of brass sand sieves! Excellent for soil classification breakdowns, on site evaluations and testing existing soil profiles. This set will give you a general particle breakdown including 2.0 MM, 1.0 MM, 0.5 MM, .25 MM, .15 MM and .05 MM sizes. Top and bottom pans are also included. Set is 8 inches in diameter, solid brass with bronze screens. * Different meshes are available</p> <p>BS2-S - This brass sieve set will give you a full gravel breakdown including 5/8", 1/2", 3/8", 1/4" and 2.00 MM. Top and bottom pans are also included.</p>
		

16. OSHA Pocket Penetrometer Order #: PN5-S		Price: \$ 90.00
		<p>The OSHA Pocket Penetrometer is required by OSHA on all excavation jobs to verify whether sidewalls require shoring. By using this handy tool you can protect against costly law suits and construction delays.</p> <p>The OSHA Pocket Penetrometer is a spring-operated device measures strength in tons per sq. ft. or kg per sq. cm. Simply push the device's loading piston into soil to a depth of .25". A friction ring indicates maximum reading.</p>
		
17. Turf-Tec Penetrometer Order #: PN1-S		Price: \$ 350.00
		<p>The Turf-Tec Penetrometer is a gravity operated instrument used to determine soil compaction. The Turf-Tec Penetrometer is calibrated in percentages from 0% to 100%.</p> <p>A weighted shaft is simply raised up until it locks into place and then the center shaft is dropped from a known height. The blunt penetrating point enters the soil, showing the percentage of air space in the soil. Readings are in percentages from 0% to 100%. Overall height is 45 inches tall.</p> <p>The compaction can be taken on various soil areas and compared to one another to determine uniformity of compaction. This is important in testing infiltration on large scale areas.</p> <p>Unit can be special ordered as a detachable unit.</p>
		
		18. Infrared Turf Thermometer with probe Order #: IR2-S
		Price: \$ 180.00
		<p>The new Infrared Thermometer is easy to use, and since it does not have to make contact with the area to be measured, it is a quick way to get non contact temperatures. Simply point the laser at the area to be measured and read the LCD screen. This new unit also comes with a temperature probe so you can also test the soil temperature or water temperature with one compact unit. It is an excellent tool when measuring infiltration rates to check the infiltration ring water temperature as required in ASTM testing. Unit also comes with a hard plastic protective case.</p>

17A. Clegg Impact Soil Tester
PNCLEGG-S-0.5 - 0.5 kg Model
PNCLEGG-S-2.25 - 2.25 kg Model

Price: \$ 3725.00



The principle behind the Clegg impact Soil Tester is to obtain a measurement of the deceleration of a free falling mass (Hammer) from a set height onto a surface under test to determine hardness. The impact of the hammer produces an electrical pulse, which is converted and displayed on the Control Unit in units of gravities "G" or tens of gravities "CIT". Reference ASTM test methods D5874 and F1702. Available in following models.

.5 and 2.25 kg - Used for surfaces consisting of natural or synthetic turf (football, baseball, soccer fields, playgrounds horse tracks, and golf greens)

4.5 kg - Used for surfaces such as pre-constructed soils, trench reinstatement, bell holes, and foundations

10 kg - Used for flexible pavement, aggregate road beds, trench reinstatement, bell holes, and foundations.

20 kg - Used for surfaces such as flexible pavement, aggregate road beds, trench reinstatement, bell holes, and foundations.



Clegg Impact Soil Tester Digital Readout Shown

INFILTRATION MEASURING EQUIPMENT



23. Turf-Tec Infiltrometer
Order #: IN2-W Price: \$ 475.00

The Turf-Tec Infiltrometer is ideal for determining water infiltration rates easily right in the field in a matter of minutes.

Turf-Tec Infiltrometer can be use in testing percolation pits and for engineering firms and for stormwater evaluation. It is also utilized by the EPA (Environmental Protection Agency) for measuring urban runoff and some states DEP (Department of Environmental Protection) for storm water soil evaluations.

Simply insert the case hardened cutter blades into the soil, fill the rings up to the top with water and set the countdown timer. Infiltration rates can be measured by reading the pointer located on the face of the unit. Double ring accuracy insures reliable infiltration readings.

(Approx. 2.5 Inch inner ring and 4.5 Inch outer ring)



25. Turf-Tec Heavy Duty Infiltration Rings - 6 and 12 Inch Diameter
Order #: IN7-W Price: \$ 240.00



The Turf-Tec Infiltration Rings allow for field infiltration rates to be measured in hard soils. It has a 6-inch inner ring and a 12-inch outer ring. A welded gripped handle is attached to the galvanized rings to allow easy insertion into the soil and to insure proper centering of the rings. These heavy duty rings are made from 16 Gauge galvanized steel.









26. Turf-Tec Heavy Duty Tall Infiltration Rings
Order #: IN8-W Price: \$ 350.00
(With port for IN12 Mariotte Tubes) Order #: IN8P-W Price: \$ 395.00



The new Turf-Tec Heavy Duty Tall Infiltration Rings allow the field infiltration rates to be measured. This tool conforms to the new 2006 Pennsylvania Stormwater Best Management Practices Manual. The Turf-Tec Heavy Duty Tall Infiltration Rings have a 6 inch inner ring and a 12 inch outer ring with a 7 inch height. A gripped rubber handle is welded across the rings to keep them concentric and allow easy insertion into, and removal from the soil. These rings are ideal for hard soil types.



27. Turf-Tec Driving Plates for Turf-Tec 6 and 12 inch Infiltration Rings Order #: IN6-W Price: \$ 99.00	
	The new driving plate for all the Turf-Tec 6 and 12 inch Infiltration Rings allow the infiltration rings to be hammered into the ground for ease of insertion. The specially designed plate fits directly overtop the center handle assembly on the IN5-W, IN7-W and IN8-W model Infiltration Rings. 
	28. Turf-Tec Infiltration Rings 12 and 24 Inch Order #: IN10-W Price: \$550.00 The new Turf-Tec Infiltration Rings match the ASTM Standard 3385 for performing infiltration readings of high sand content soils. These infiltration rings are ideal for testing lake beds, reservoirs, containment areas as well as testing for stormwater evaluations. The unit has a 12-inch inner ring and a 24-inch outer ring. They have an overall height of 20 inches. The rings are made from galvanized steel for long life and the top handles are welded in place to insure proper centering of the rings and suspension of the center ring.
	28a. Turf-Tec Heavy Duty Infiltration Rings - 12 & 24" ASTM 3385 Order #: IN14-W Price: \$600.00 The new Turf-Tec Heavy Duty Infiltration Rings match the ASTM Standard 3385 for performing infiltration readings of high sand content soils. They are identical to above rings except made from heavier steel and have a 1/4 inch steel reinforced to edge for use in very hard soils. These also have ports to accept optional Mariotte tubes.
29. Turf-Tec Driving Plates for 12 and 24 inch Infiltration Rings Order #: IN11-W Price: \$ 200.00	
	The new driving plate for the Turf-Tec 12 and 24 inch Infiltration Rings (IN10-W) allow the infiltration rings to be hammered or jacked into the ground for ease of insertion. The specially designed plate fits directly overtop the center handle assembly on the IN10-W model Infiltration Rings. *Note- Price is for driving plate only! 

30. Turf-Tec Mariotte Tubes for use with IN10-W Order #: IN12-W Price: \$ 550.00	
	 These tubes are a companion tool for use with the Turf-Tec 12 and 24 inch Infiltration Rings (IN10-W). They match the ASTM Standard D 3385-94. The Mariotte tubes insure that a constant head pressure of water is delivered into the infiltration rings (IN10-W). The Turf-Tec Mariotte Tubes are constructed of durable heavy wall PVC tubing with solid brass and stainless steel hardware for many years of service. The set includes a 3000 ml and 10,000 ml tube.
31. Large Volume Mariotte Tubes for use with 12 and 24 inch Diameter Infiltration Rings Order #: IN13-W Price: \$ 1500.00 (Price for tubes only, IN10 Sold separately)	
	 The new Turf-Tec Large Volume Mariotte Tubes match the ASTM for standard testing of soils with a hydraulic conductivity between 1X10-2 cm/s or sand type soils with high infiltration rates, but the new large volume tubes can hold a large volume of water for extended testing periods. (Over 20 Gallons per Tube.) They are constructed of heavy wall PVC tubing and have solid brass and stainless steel fittings. * IN10-W Rings sold separately
	36. Evapotranspiration (ET) Gauge Order #: ETG1-W Price: \$ 400.00 This Evapotranspiration gauge easily shows the amount of water that has evaporated. Readings can be taken from the gauge when performing infiltration tests to calculate evaporation from the infiltration rings as required in ASTM test procedures. The top of the unit is constructed from a ceramic plate that is covered with a cloth fabric. As water evaporates off the top of the ET Gauge, the sight glass on the side indicates the Evapotranspiration level. The unit comes with mounting bracket and full instruction manual on calculation. 

32. Turf-Tec SDRI 5 foot and 12 foot Infiltration Rings
Order #: IN15-W

Price: \$ 6000.00



The new IN15-W Turf-Tec SDRI Infiltration Rings have diameters of 5 foot and 12 foot rings that match ASTM Standard D 5093-02 which replaced old ASTM D 5093-90. These rings are for performing a Sealed Double Ring Infiltration Test or SDRI (S.D.R.I.). For testing soils with a hydraulic conductivity between 1×10^{-7} m/s to 1×10^{-10} m/s or tight soils with low infiltration rates.

They are constructed of durable aluminum outer ring and a durable steel inner ring. The inner ring is a seam welded one piece tank to prevent leaks. The outer rings are constructed of rigid aluminum and bolted together with the aid of a rubber gasket to form a tight seal. The inner infiltration rings are also painted to prevent rust and insure a long life. The outer rings are made from aluminum and do not require painting. Using the Turf-Tec SDRI Infiltration Rings for ASTM Standard D 5093-02 test method is useful for field measurement of the infiltration rate of very slow infiltrating soils. This test method is useful for measuring liquid flow through soil moisture barriers such as compacted clay liner or covers used at waste disposal facilities, for canal and reservoir liners, for seepage blankets, lake and irrigation pond areas and for amended soil liners such as those used for retention ponds or storage tanks. It is also useful in determining if a spill occurs, how the soil around the area will react. This test method is government approved and matches ASTM Standards. The purpose of the double ring is to insure the downward flow of movement of water to insure proper measurements. These infiltration rings are ideal for taking ASTM infiltration tests on all areas and match the ASTM 5093 test.

The IN15-W infiltration set comes with both inner and outer rings, rubber gasket for 12 X 12 foot Infiltration rings, bolts for 12 X 12 foot Infiltration rings, 3000 ml IV bag, rubber splash guard and all necessary hoses and fitting to conduct the complete ASTM Standard D 5093-02 test for the Sealed Double Ring Infiltration Test or SDRI. Outer rings disassemble into five foot wide flat panels for ease of transportation.

44. Turf-Tec Lysimeter
Order #: LYC1-W

Price: \$ 995.00 (Discounts for multiple units)



The Turf-Tec Lysimeter is designed for the purpose of finding out how much water is percolating through an area like a containment basin. It is installed directly into the soil at a depth of eight to twelve inches below the soil surface.

The lysimeter can then be monitored in case of a spill and the information will aid in the determination of area contamination. The Lysimeter is also useful in monitoring new construction projects for potential runoff. Set is constructed entirely out of stainless steel to insure purity of sample analysis.

33. Turf-Tec Moisture Sensor
Order #: MS1-W

Price: \$ 350.00

The Turf-Tec Moisture Sensor is one of the quickest ways of determining soil moisture. The Moisture Sensor is calibrated in percentages and read outs are immediate. Check moisture at any level from 1 inch to 4 inches deep. Readings are in percentages from 0% to 100%.

Quick moisture sensor readings can be taken over large areas to determine where infiltration testing should be performed. Typically, infiltration test should be performed in areas with dissimilar soil conditions and the Turf-Tec Moisture Sensor is a quick way to determine where these areas are located on a tract of land without digging holes. The unit is also useful in determining when areas have reached saturation for stormwater evaluations.



**Moisture Sensor
Replacement Parts**

**34. Turf-Tec Moisture Sensor
Replacement Probe**
Order #: TTMP75-W Price: \$ 80.00



**35. Turf-Tec Moisture Sensor replacement
Spike 4' Set 2**
Order #: TTMP26-W Price: \$ 25.00

33C. Field Scout Digital Moisture Sensor with soft case and one set spikes
Order #: MSFS1-W Price: \$ 1,100.00



The Field Scout Digital Moisture Sensor allows you to monitor and record soil moisture quickly and accurately with TDR technology (time-domain measurement technology). The Field Scout Digital Moisture Sensor offers a portable unit to accurately measure soil moisture across the full range of soil moisture conditions. Unit comes standard with one set of probes listed below (Select one size) and soft sided carrying case.

The Unit has two volumetric water content modes; one for standard soils and one for higher clay soils. In volumetric water content (VWC) mode, the meter converts a measured electrical signal into percent soil moisture content. Unit includes software and PC cable.

Mapping software requires GPS Unit/Cable (not included)

- MSFSP01 Replacement Spikes 1.5 inch (3.8cm) \$ 56.00
- MSFSP03 Replacement Spikes 3 inch (7.5cm) \$ 56.00
- MSFSP04 Replacement Spikes 4.8 inch (12 cm) \$ 56.00
- MSFSP05 Replacement Spikes 8.0 inch (20 cm) \$ 56.00
- MSFS1-USB-Cable - Convert 9 pin cable to USB \$ 32.00
- MSFS1-Cable - Field Scout GPS Cable \$ 39.00
- MSFS1-GPS-Bracket - Mounting Bracket (GPS) \$124.00
- MSFS-Maps - Internet based GPS Mapping 1 year \$198.00
- MSFS1-Case - Replacement Soft Carrying Case \$114.00



33D. Turf-Tec Digital Moisture Sensor
Order #: MS6-W Price: \$ 600.00



From the inventors of one of the first moisture sensors available to the turfgrass industry comes the new Turf-Tec Digital Moisture Sensor.

The Turf-Tec Digital Moisture Sensor has been developed to determine soil moisture in the soil profile. The unit has an adjustable foot which allows you to determine moisture at the one inch, two inch, three inch or four inch depth without changing probes. This will insure you can determine the soil moisture at different levels in the profile.

Simply slide the adjustable foot to the desired depth, insert the Turf-Tec Digital Moisture Sensor into the soil and after five seconds, read the digital display. The read out is a percentage of soil moisture that is held within the air space in the soil.

This state of the art unit is designed to work in all soil types and salinity ranges. The probes are also easily replaceable. The Turf-Tec Digital Moisture Sensor uses a newly designed electrical conductivity sensing circuit that gives quick and reliable readings of soil moisture. With years of science behind the sensing results, there is no easier way to test for soil moisture.



The adjustable foot on the Turf-Tec Digital Moisture Sensor allows moisture readings to be taken at different depths in the soil profile, from 1 to 4 inches deep.



Digital Moisture Sensor Replacement Parts



Order #: MS6-P001- Turf-Tec Digital Moisture Sensor probes (Set 2) \$ 75.00

SOIL AND WATER pH TESTING

	<p>51. pH Pen by Hannah Order #: PHEP5-N Price: \$ 110.00</p> <p>52. pH Pen by Hannah Replacement Sensor Order #: Phep5-27-N Price: \$ 50.00</p>
	<p>The Hannah pH Electronic Pen is ideal for testing infiltration ring water as required by the ASTM test procedures. It is also useful in testing well water, irrigation water and also measuring soil pH by taking soil samples and mixing a slurry. The pH pen electrode can be placed into a soil slurry for soil pH readings.</p> <p>It has 0.1 accuracy, large LCD display and a one year warranty. It is waterproof and even floats if dropped into water.</p>
<p>54. pH Ionode Pen for Soil / Water Order # PHION-01-N Price: \$ 370.00</p>	
	<p>The new pH Ionode Pen is small, rugged and can be used in water as well as inserted into a soil sample or directly into the ground for quick and accurate pH readings. Unit has 0.1 accuracy, LCD display and a two year warranty. It will withstand a 3 foot drop onto cement.</p> <p>It is also waterproof and has a replaceable electrode with refillable electrode. pH Ionode Pen is shipped in protective box and also comes with calibration fluid.</p>
	<p>pH Ionode Replacement Parts</p> <p>55. pH Ionode Pen Replacement Sensor Order # PHION-50-N Price: \$ 265.00</p>
	
	<p>53. pH Calibration liquid pH 7.01 & pH 4.01 (20ml) (5 of Each) For use to calibrate any of our pH Meters or pH Pens Order #: PH-CAL-N Price: \$ 25.00</p>
<p>56. EC Meter Probe for soil and water Order # FCM1-N Price: \$ 375.00</p>	
	
<p>The Field Scout Soil EC Soil Meter permits instant, accurate measurement of salts directly in the soil as well as water. Use this portable EC meter and probe to measure soil salinity directly on the job site, without conducting tedious soil sampling and soil preparation. The 8 inch long probe reads directly from the soil so there is no need to pull samples with this easy to use meter. Unit comes with hard case, batteries and 250 ML Bottle of conductivity standard.</p>	

	<p>58. pH & EC Pen by Hannah Order #: PHEP-EC-N Price: \$ 160.00</p>
	<p>The combination pH and EC Pen waterproof tester offers high accuracy pH, EC/TDS and temperature measurements in a single tester! The waterproof Combo (it even floats) has a large easy-to-read, dual-level LCD and automatic shut off.</p> <p>pH and EC/TDS readings are automatically compensated for the effects of temperature (ATC). It is excellent for testing wells, rivers, containment areas as well as soil slurries.</p>
	<p>58A. EC Pen Oakfield Order #: ECPEN-OAK-N Price: \$ 79.00</p>
	<p>This waterproof microprocessor EC Tester offer push-button calibration and ±1% accuracy in a rugged waterproof housing. Never worry about losing your tester in a pond or tank; these testers even float!</p> <p>It can be used in liquid or the probe can be inserted directly into a moist soil sample after the sample has been extracted from the ground.</p>
	<p>57. EC Meter Conductivity Standard 1.41 mS/cm (250 ML) (One bottle comes with above unit) Order #: ECM-CAL-N Price: \$ 25.00</p>
<p>71. Turf-Tec Diagnostic Kit with hard case Order #: DKIT1-M Price: \$ 999.00</p>	
	<p>The Turf-Tec Diagnostic kit comes with the following items:</p> <ul style="list-style-type: none"> MPS1-S - Mascaro Profile Sampler (Full Size) MS1-W (Short) - Turf-Tec Moisture Sensor - Short Model PN1-S - Turf-Tec Penetrometer - Full size detachable unit TSS3-S - 1 Pocket Tubular Soil Sampler 1/2" X 8 1/2 inches DPT1-S (F or C) - Digital Pocket Thermometer IR1-S - Infrared Thermometer with Laser TSDL5-N - Turf Stress Detection Glasses <p>All housed in a protective hard case that closes to (27 X 16 X 10 inches)</p>
<p>Turf-Tec International now offers a complete Diagnostic kit. The kit includes our most popular diagnostic tools so you can easily transport the tools from one area to another, remove them from the hard plastic protective case and do your testing. It can be checked as luggage for travel and fits easily into a utility vehicle. Now you can have your own traveling laboratory. Test for layers, compaction, moisture levels, stress, soil and water temperature, surface temperature</p> <p>All housed in a protective hard case that closes to (27 X 16 X 10 inches)</p>	