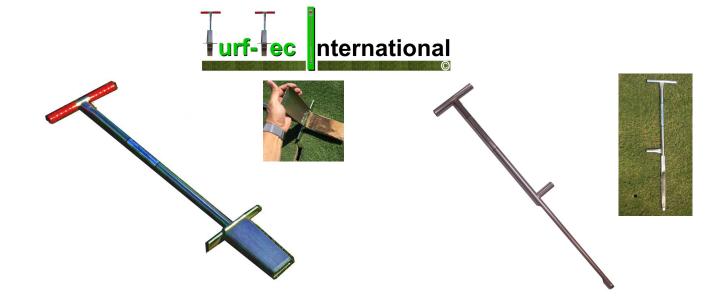




Version 7.0

**Engineering Catalog for Professional Engineers** 



### Heavy Duty Mascaro Profile Sampler (7 inch deep - 38 inches tall)

# Tubular Soil Sampler w/step (16 inch deep sample - 36 inches tall)

#### Part #: MPS2-S

http://store.turf-tec.com/mpshdlLit.html

The Heavy Duty Mascaro Profile Sampler extracts a cross section of the soil profile with this 7 inch deep, 3 inch wide and ½ inch thick sampler. This heavy duty sampler has a 30 inch long handle with reinforced cutter blades allowing reliable use even in hard or rocky soils. An unmatched quality sample is extracted through a specially designed hinge opening in the cutter. Overall height is 38 inches long.

#### Part #: TSS2-S

http://store.turf-tec.com/tss2lit.html

The Turf-Tec Tubular Soil Sampler is a 100% stainless steel sampler that has a step on the handle for easy insertion into the soil. Stainless Steel design allows for laboratory analysis of clean soil samples. Foot peg is welded at 13 inches from bottom. The 36 inch Tubular Soil Sampler extracts a sample 12 inches deep by ¾ inch wide. Overall unit is 36 inches tall.

#### MADE IN USA MADE IN USA



### Tubular Soil Sampler w/step (12 inch deep sample - 36 inches tall)

### GoFactorGO Playground Impact Tester with hard Case

#### Part #: TSS2-12-S

http://store.turf-tec.com/tss2-12-lit.html

The Turf-Tec Tubular Soil Sampler is a 100% stainless steel sampler that has a step on the handle for easy insertion into the soil. The stainless steel design allows for laboratory analysis of clean soil samples. Foot peg is welded at 17½ inches from bottom. The 36 inch Tubular Soil Sampler extracts a sample 16 inches deep by ¾ inch wide. Overall unit is 36 inches tall

**MADE IN USA** 

#### Part #: PN-GoFactorGO-S

 $\underline{https://store.turf\text{-}tec.com/products/pn\text{-}gfactorgo\text{-}s.html}$ 

The GoFactorGO Wireless Playground Impact Tester is a simple tool designed to test surfaces where playground equipment exist and children or athletes play. It is intended to be used to measure the impact attenuation of surfaces under and around playground equipment for safe playing surfaces. The 10.1 pound Impact Tester has a head shaped form and when dropped, wirelessly sends peak gMax, HIC (Head Impact Criteria), height of drop, angle of impact with a time and date stamp to the handheld control unit and drop test data can also be transferred from a removable SD card onto the Triax software on a PC or laptop computer.









#### **OSHA** Penetrometer

#### Pocket Digital Thermometer (Fahrenheit & Celsius)

#### Part #: PN5-S

http://store.turf-tec.com/pn5lit.html



http://store.turf-tec.com/dpt-lit.html

The Pocket Digital Thermometer is easy to carry and tells the soil temperature within 10 seconds. The temperature range is -40F to 300F (-40C to 150C). Unit is very durable with a 31/4 inch long probe. Readings are taken from the tip of the probe, so you can check water temperature in infiltration rings to be compliant with ASTM 3385 and 5093. Ideal for quick temperature readings. Unit folds up to protect probe. \*Note: Unit is compliant with ASTM 3385 and 5093.

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 lawsuits and construction delays. The OSHA Pocket Penetrometer is a spring-operated device that measures strength in tons per sq. ft. or kg per sq. cm. Simply push the device's loading piston into the soil to a depth of .025". A friction ring indicates maximum reading.

#### MADE IN USA





#### **Turf-Tec Soil Compaction Tester / Dial Penetrometer**

### **Digital Soil Compaction Tester**

#### Part #: PN-COMP1-S

http://store.turf-tec.com/pn-comp1-lit.html The Soil Compaction Tester / Dial Penetrometer is a simple tool to

measure hard pans in the soil. It uses downward pressure to determine soil compaction in PSI at different depths in the soil profile. It shows if you have layers or hard pans in the soil up to 27½ inches (70 cm) deep. This unit also comes with two tips: one for hard soils and one for softer soils.

Part #: PN-COMP-DIG-S

http://store.turf-tec.com/pn-comp-dig-lit.html

The new Digital Soil Compaction Tester is a digital version of the Dial Penetrometer for testing hard pans in the soil. It uses an electronic force sensor that eliminates changing tip size for different soil types. The LCD display reads in PSI or kPa PLUS showing compaction severity with green/yellow/red color code. It is rugged and meets ASABE S313.3 Soil Compaction Standard.

**MADE IN USA** 







#### **Clegg Impact Tester**

#### Part # Description

PNCLEGG-S-0.5 - 0.5 kg Model with hard case (Golf Greens)
PNCLEGG-S-2.25A - 2.25 kg Model - 0 to 150 Gravities with case
PNCLEGG-S-2.25 - 2.25 kg Model - 0 to 500 Gravities with case
PNCLEGG-S-2.25A-FCASE - 2.25 kg Model - 0 to 150 Gravities
with factory hard case

http://store.turf-tec.com/clegg.html https://store.turf-tec.com/products/PNCLEGG-S-05.html

Clegg Impact Tester is used to determine the hardness of all types of areas. Readings are in Gravities (gMax), CIT's and F355 Equivalent and has wireless Bluetooth display, GPS enabled tablet with data logging and mapping. The unit comes in three main models:

**The PNCLEGG-S-0.5** is a 0.5 kg Model used for testing Golf Greens, approaches and bunker sand. The hammer is lightweight so it will not damage putting surfaces during testing.

The PNCLEGG-S-2.25-A is a 2.25 kg Model used for testing natural grass & synthetic turf athletic fields and reads from 0 to 150 Gravities, 0 to 15 CIT's or 0 to 218 - F355 gMax equivalent readings. This model is the same model that is used to test all National Football League (NFL) Stadium Fields before games. App also converts readings to F355 equivalent. The 150 gMax reading on this unit is sufficient for maximum impact readings in the ASTM F355 range after using the conversion formula. 200 g's on F355 Impact Tester = 135 g's on Clegg Impact Tester. The PNCLEGG-S-2.25 is a 2.25 kg Model used for Equine testing on Dirt, Turf, Synthetic and Grass racetracks, arenas, equestrian areas and all equine areas. It conforms to standards testing for Horse Racing Integrity and Safety Act (HISA) for the racetrack safety program.

The principle behind the Clegg Impact Soil Tester or Clegg Decelerometer, is to obtain a measurement of the deceleration of a free falling mass (hammer) from a set height onto a surface to determine hardness. The impact of the hammer produces an electrical pulse, which is converted and displayed on the GPS enabled tablet in gravities "gMax", tens of gravities "CIT" or F355 equivalent units. Reference ASTM test methods ASTM 1936, ASTM F355, D5874 and F1702. The Clegg offers the convenience of rapidly testing compaction variations over large areas.

#### FieldTester ASTM FIFA Impact Tester

#### Part #

#### **Description**

PN-FieldTester-3A-V4 - FieldTester (3A Model) v4 FIFA Impact Tester with Clegg Hammer Equivalents

https://store.turf-tec.com/pn-fieldtester.html



The Deltec FieldTester (3A Model) V4 FIFA Impact Tester with Clegg Hammer Equivalents is a lightweight, simple, and quick test device that measures gMax, Force Reduction, Vertical Deformation, Energy Restitution and also gives Clegg Hammer (CIST / gMax) equivalent readings. It is useful In measuring athletic field surface safety and playability as well as surface uniformity for football, soccer, baseball, softball, polo, lacrosse and almost any indoor sport. The unit conforms to ASTM, FIFA and CEN/TS test procedures for measuring the safety of natural and synthetic sports field playing surfaces. It is easy to carry and operate. It has a built-in universal axial speed sensor and uses a spring and foot plate similar to the 3A Artificial Athlete testing device, and it produces comparable test results.

The FieldTester comes with a wireless measurement application that is compatible with iOS and comes with all the items necessary to perform testing including an iPod for use with the device. The FieldTester application generates fast results that are stored in the application immediately after the measurement, and are also displayed on the tablet screen. This device allows you to monitor the quality of the maintenance of various sports and playing surfaces and measure the desired technical characteristics. The tool is user-friendly and easy to move from test area to test area with a overall weight of approximately 22 lbs (10 kilos). Vertical Deformation measures the vertical compression of the surface. Force Reduction measures the percentage of shock absorption that the surface provides as compared to concrete (0%). Energy Restitution is the energy returned to the lower extremities of an adult running athlete as compared to concrete.

#### MADE IN USA

#### MADE IN EUROPE













#### Triax Touch gMax Impact Tester & Hard Case

#### Part #: PN-TRIAX-GMAX-01-S

https://store.turf-tec.com/products/pn-triax-gmax.html

The Triax Touch gMax Impact Tester is used to measure the impact safety of artificial and natural turf playing surfaces in compliance with standards including ASTM F1936 and ASTM F355. The impact hammer is cylindrical shaped with a flat bottom and has a weight of 20.0 pounds. The hammer is dropped in a guide tube from a fixed height of 24 inches and results are displayed on the wireless handheld tablet. Drop test data can also be transferred from a removable SD card into the Triax software on a PC or laptop computer.

#### MADE IN USA



#### Triax Touch HIC Impact Tester with tripod and hard case

#### Part #: PN-TRIAX-HIC-01-S

https://store.turf-tec.com/products/pn-triax-hic.html

The Triax Touch HIC Impact Tester with tripod is used to measure the impact attenuation of surfaces under and around playground equipment in compliance with worldwide ASTM standards for safety. The unit has a hemispherical shaped impact hammer with a weight of 10.1 pounds.

The hammer is dropped from an adjustable height tripod and the hammer can be dropped from variable but consistent heights. Readings of HIC (Head Impact Criteria), height of drop, angle of impact, with a time and date stamp, and drop test data are displayed on the handheld control unit cand an be transferred from a removable SD card into the Triax software on a PC or laptop computer.

MADE IN USA



#### Turf-Tec Heavy Duty Infiltration Rings 6 & 12 inch x 4 inches tall

#### Part #: IN7-W

http://store.turf-tec.com/in7lit.html

The Turf-Tec Heavy Duty Infiltration Rings allow the field testing of soil infiltration rates quickly and easily with minimal amounts of time and water These Turf-Tec Heavy Duty Infiltration Rings are designed to be inserted into the soil to a depth of two inches deep and then the rings are filled with water. The drop of water in the center ring is then measured over time to determine the rate of infiltration. These infiltration rings are constructed of heavy duty 16 gauge (.065 inch) galvanized steel to prevent rust, ensure a long life, and are made for rocky and hard soils. They have a 6 inch inner ring and a 12 inch outer ring with a 4 inch height. A gripped rubber handle is attached to allow easy insertion into the soil.

#### MADE IN USA

#### Turf-Tec Heavy Duty Infiltration Rings 6 & 12 inch x 4 inches tall (with port option)

Part #: IN8-W

http://store.turf-tec.com/in8lit.html

Part #: IN8P-W - Ring with ports for IN12-W

http://store.turf-tec.com/IN8Plit.html

Turf-Tec Heavy Duty Tall Infiltration Rings allow field infiltration rates to be measured. This tool conforms to the Pennsylvania Stormwater BMP 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. The IN8-P model has ports that allow the connection of the IN12-W Mariotte Tubes. The ports are located 3 inches above the bottom of the ring. These infiltration rings are made of

#### heavy duty 16 gauge (.065 inch) galvanized steel. MADE IN USA

# Turf-rec nternational





Shown with optional Mariotte Tubes





### Turf-Tec Infiltration Rings for ASTM 3385 (12 & 24 inch diameter x 20 inches tall)

Part #: IN10-W

http://store.turf-tec.com/IN10Lit.html

#### Part #: IN14-W

http://store.turf-tec.com/IN14Lit.html



#### Conforms to ASTM Standard 3385

The new Turf-Tec Infiltration Rings have diameters of 12 and 24 Inches (60 CM and 30 CM) and an overall height of 20 inches (50 CM) that match ASTM Standard D3385-09 which replaced old ASTM D3385-94 and ASTM D3385-03. The Turf-Tec Infiltration Rings are double rings for standard testing of soils with a hydraulic conductivity between 1X10-2 cm/s or less than about 1 X 10-6 cm/s or sand type soils with high infiltration rates. This Double Ring Infiltrometer set is constructed of heavy duty and durable galvanized steel and braced with welded steel supports inside and out to ensure the rings stay evenly centered as they penetrate the soil. These Infiltration Rings are constructed of heavy duty 16 Gauge (.065 inch) galvanized steel to prevent rust and ensure a long life.

The Turf-Tec 12 & 24 inch diameter Infiltration Rings also contain ports to allow easy connection of Turf-Tec Mariotte Tubes. These rings provide an ASTM approved double ring infiltration test which provides a soil infiltration test in a simple yet efficient manner. Turf-Tec 12 and 24 inch Infiltration Rings are already centered in position for ease of positioning rings and ease of insertion into the soil. The welded handle and welded inside support braces ensure the rings are perfectly centered with every test. In addition, the center ring is already suspended one inch above the outer ring to identically match the ASTM specifications and to ensure exact soil placement. This method of testing is useful for field measurement of the infiltration rate of soils. Infiltration rates have applications in the field of liquid waste disposal, evaluation of potential septic tank disposal fields, leaching studies and drainage efficiencies. They are also helpful in determining irrigation requirements, water spreading or recharge, canal leakage and reservoir leakage testing and studies.

#### MADE IN USA

#### Conforms to ASTM Standard 3385

Turf-Tec Heavy Duty Infiltration Rings for ASTM 3385 (12 & 24 inch diameter x 20

The Turf-Tec Heavy Duty Infiltration Rings have diameters of 12 and 24 Inches (60 CM and 30 CM) and an overall height of 20 inches (50 CM) that match ASTM Standard D 3385-03. The Turf-Tec Infiltration Rings are double rings for standard testing of soils with a hydraulic conductivity between 1X10-2 cm/s or less than about 1 X 10-6 cm/s or sand type soils with high infiltration rates. This Double Ring Infiltrometer set is constructed of heavy duty and durable galvanized steel and braced with welded steel supports inside and out to ensure the rings stay evenly centered as they penetrate the soil. The heavy duty set also has a 1/4 inch thick steel welded on top edge to allow aggressive driving into hard soils. These rings are already centered in position for ease of positioning rings and ease of insertion into the soil. The welded handle and welded inside support braces ensure the rings are perfectly centered with every test. In addition, the center ring is already suspended one inch above the outer ring to identically match the ASTM specifications and to ensure exact soil placement. This method of testing is useful for field measurement of the infiltration rate of soils. Infiltration rates have applications in the field of liquid waste disposal, evaluation of potential septic tank disposal fields, leaching studies and drainage efficiencies. They are also helpful in determining irrigation requirements, water spreading or recharge, canal leakage and reservoir leakage testing and studies. The Turf-Tec 12 and 24 inch ASTM Infiltration Rings are useful in industries like geology, geotechnical, engineering, hydrology, forestry, environmental testing, hydrogeological, runoff studies, wetland mitigation, permeability testing, sanitation contractors, project planning and EPA requirements. The purpose of the double ring is to ensure the downward flow of movement of water to ensure proper measurements. These Infiltration Rings are ideal for taking ASTM infiltration tests on all areas and match the ASTM 3385 test. These infiltration rings are made of heavy duty 14 gauge (.10 inch) galvanized steel.





### nternational





#### **Turf-Tec Mariotte Tubes**

#### Large Volume Mariotte Tubes (for 12 & 24 inch diameter rings)

Part #: IN12-W

http://store.turf-tec.com/IN12Lit.html

#### Part #: IN13-W

http://store.turf-tec.com/IN13Lit.html



#### Conforms to ASTM Standard D 3385-94

These tubes are a companion tool for use with the Turf-Tec 12 and 24 inch infiltration rings (IN10-W or IN14-W). They match the ASTM Standard D 3385-94. The Mariotte tubes ensure that a constant head pressure of water is delivered into the IN10-W or IN14-W. The units are connected to the infiltration rings with brass valves that open allowing water to reach a predetermined depth above the soil surface in relation to the height of the Mariotte tubes. Water infiltration rates are then monitored by observing the site glass at predetermined increments of time.

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 Turf-Tec Mariotte Tubes allow for measurement of liquid flow during the infiltration test by providing a constant flow of water into the Turf-Tec 12 and 24 inch Infiltration Rings. Without the tubes, a technician needs to constantly fill the Infiltration Rings with a graduated cylinder in order to maintain the fluid level and constant head pressure. With the Turf -Tec Mariotte Tubes, the tubes allow the water that is infiltrated into the soil to be replenished through the tubes, keeping the head pressure constant eliminating the need for an extra technician during the test procedure. Infiltration amounts are simply read on the site glass at selected time intervals.

The set consists of two Mariotte Tubes, one holding 3000 ml and one holding 10,000 ml. Each tube draws a vacuum and regulates the flow of water from the Mariotte tube and into the Turf-Tec 12 and 24 inch Infiltration Rings. Once the flow rate of liquid from the Mariotte Tubes is consistent with the infiltration into the soil from the Turf-Tec 12 and 24 inch Infiltration Rings, the calibrated sight glass on the side of the tubes is checked at given time intervals for infiltration rates. The Turf-Tec Mariotte Tubes allow testing personnel the ability to perform other tasks and periodically check and record the infiltration rate instead of constantly filling the Infiltration rings by hand as the head falls. The new design allows both Turf-Tec Mariotte tubes to be connected to the outside if the IN10-W Turf-Tec 12 and 24 inch Infiltration Rings to facilitate reading of the site glass. Price is for set of 2.

#### MADE IN USA

#### Conforms to ASTM Standard D 3385-94

The 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 very high infiltration rates like beach sand. Conforms to ASTM Standard D 3385-94. The new Turf-Tec Large Volume Mariotte Tubes match the ASTM for standard testing of soils with a hydraulic conductivity around 1X10-2 cm/s or loose sand type soils with very high infiltration rates. The new large volume tubes can also hold a large volume of water for extended testing periods. These tubes are a companion tool for using with the Turf-Tec 12 and 24 inch Infiltration Rings (IN10-W). They match the ASTM Standard D 3385-03 which replaced old ASTM Standard D 3385-94. The tubes are constructed of durable heavy wall PVC tubing with solid brass and stainless steel hardware for many years of service. The Turf-Tec Large Volume Mariotte Tubes allow for measurement of liquid flow during the infiltration test by providing a constant flow of water into the Turf-Tec 12 and 24 inch Infiltration Rings. The set consists of two Large Volume Mariotte Tubes, each one containing 100,000 ml (100 liter or about 26 gallons). The tops are removable for easy maintenance and cleaning and the site glass is calibrated in 250 ml increments. Each tube is fitted with a solid brass valve to regulate the flow of water from the Mariotte tube and into the Turf -Tec 12 and 24 inch Infiltration Rings. Once the flow rate of liquid from the Mariotte Tubes is consistent with the infiltration into the soil from the Turf-Tec 12 and 24 inch Infiltration Rings, the calibrated sight glass on the side of the tubes can be checked for infiltration rates. The Turf-Tec Large Volume Mariotte Tubes allow testing personnel the ability to perform other tasks and periodically check and record the infiltration rate instead of manually filling the Infiltration rings by hand. This method of testing is useful for field measurement of the infiltration rate of soils. Infiltration rates have applications in the field of liquid waste disposal, evaluation of potential septic tank disposal fields, leaching studies and drainage efficiencies. They are also helpful in determining irrigation requirements, water spreading or recharge, canal leakage and reservoir leakage testing and studies. The purpose of the double ring is to ensure 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 3385 test. Price is for set of 2.











### Turf-Tec Mariotte Tube (One Tube 10,000 ml only)

### Turf-Tec Driving Plates (for IN10-W & IN14-W)

#### Part #: IN12A-W

http://store.turf-tec.com/IN12A-W.html

This single 10,000 ml Turf-Tec Mariotte Tube matches the ASTM for standard testing of soils with a hydraulic conductivity between 1x10-2 cm/s or sand type soils with high infiltration rates. This tube is designed to be used with the new IN16-W and has a diameter of 12 inches (30 cm) and an overall height of 20 inches (50 cm).

Part #: IN11-W

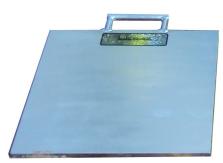
http://store.turf-tec.com/IN11lit.html



The driving plate for the Turf-Tec 12 and 24 inch infiltration rings (IN10-W & IN14-W) allow the infiltration rings to be hammered or jacked into the ground for ease of insertion. The specially designed plate fits directly over top the center handle assembly on the IN10-W & IN14-W model infiltration rings so when you are driving the rings into the soil, the driving plate is sitting on the Infiltration Rings and not on the handles.

#### MADE IN USA







## Turf-Tec Driving Plates for all 6 & 12 inch Infiltration Rings

### Turf-Tec Heavy Duty Driving Plate (12 inch diameter)

#### Part #: IN6-W

http://store.turf-tec.com/IN6lit.html

The Turf-Tec Driving Plates are for all the Turf-Tec 6 and 12 inch infiltration rings assisting the infiltration rings to be hammered into the ground for ease of insertion.

The specially designed ¼ inch thick steel plate is specially designed to fit directly overtop the center handle assembly on the IN7-W and IN8-W model infiltration rings for ease of insertion into the soil with a bottle jack, rubber hammer or dead blow mallet.

Size 14 inch by 14 inch (35.56 cm by 35.56 cm) Weight 15 lbs. (6.8 kg)

#### Part #: IN17-W

http://store.turf-tec.com/IN17Lit.html



This driving plate is specially designed to be used with the Turf-Tec Heavy Duty 12 inch diameter infiltration ring (IN16-W). The Turf-Tec Heavy Duty Driving Plate is used by first placing the IN16-W on the area to be tested and then placing the ½ inch thick steel driving plate (IN17-W) on top of the ring and driving the ring into the soil. The infiltration ring can then be filled with water and the infiltration rate can be determined by timing the amount of time it takes the water to go into the soil.



















#### **Turf-Tec Infiltrometer**

#### Part #: IN2-W

http://store.turf-tec.com/in2lit.html

The Turf-Tec Infiltrometer is ideal for determining water infiltration rates easily, right in the field. Turf-Tec Infiltrometer can be used in testing percolation pits, for engineering firms and for stormwater evaluation. It is also utilized by the Environmental Protection Agency for measuring urban runoff and some states DEP 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 ensures reliable infiltration readings. This unit is also ideal for "Qualifying" sites, making sure soil infiltration is consistent from area to area when performing ASTM 3385 Infiltration tests with larger rings. Unit has 2 1/2 inch inner ring and 4 1/2 inch outer ring. Inner ring is 7 inches tall and outer ring is 6 inches tall.

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## SDRI Infiltration Rings for ASTM D 5093-02 (5 foot to 12 foot)

#### Part #: IN15-W

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http://store.turf-tec.com/IN15Lit.html



#### Conforms to ASTM Standard D 5093-02

The 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 Standard D 5093-90. These rings are for performing a Sealed Double Ring Infiltration Test or SDRI. For testing soils with a hydraulic conductivity between 1x10-7 m/s to 1x10-10m/s or tight soils with low infiltration rates. They are constructed with a durable aluminum outer ring and 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 ensure 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 rates of very slow infiltrating soils. This test method is useful for measuring liquid flow through soil moisture barriers such as compacted clay liners 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 ensure the downward flow of movement of water to ensure 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 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 fittings 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.

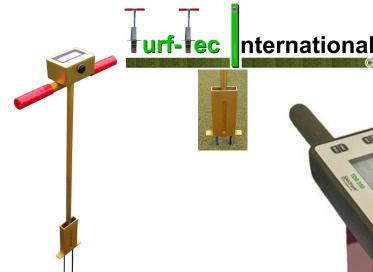
#### MADE IN USA

### Turf-Tec Heavy Duty Single Infiltration Ring (12 inch diameter)

#### Part #: IN16-W

http://store.turf-tec.com/IN16Lit.html

This single infiltration ring has a diameter of 12 inches (30 cm) and a height of 20 inches (50 cm). It is constructed of heavy duty galvanized steel and topped with a ¼ inch thick steel reinforced top edge for driving into the soil. The Turf-Tec Heavy Duty 12 inch diameter infiltration ring is ideal for infiltration testing areas that do not need a double ring infiltration test. You can set this ring on the area to be tested, place an optional ½ inch thick steel driving plate (IN17-W) on top and drive the ring into the soil. The ring can be filled with water and then the infiltration rate can be determined by timing the amount of time it takes the water to go into the soil. Steel is 11 gauge (.125 inch thick). MADE IN USA



#### **Turf-Tec Digital Moisture Sensor**

#### Part #: MS6-W

http://store.turf-tec.com/ms6-lit.html

The Turf-Tec Digital Moisture Sensor shows moisture in the soil profile. The unit has an adjustable foot which allows you to determine moisture localized at the 1", 2", 3" or 4" depth without changing probes. Simply slide the adjustable foot to the desired depth, insert the probes and press the read button. The newly designed electrical conductivity sensing circuit read out is a percentage of soil moisture that is held within the air space in the soil. This unit is designed to work in all soil types and salinity ranges as the unit is fully adjustable to match moisture percentages for different soil types and organic matter content. The probes are also easily MADE IN USA replaceable.



#### Field Scout TDR 250 Digital Moisture Sensor **VWC% Only - NO PROBES**

#### Part #: MSFS-TDR250-W

https://store.turf-tec.com/products/msfs-tdr250.html

New for 2021 the Field Scout TDR 250 Digital Moisture Sensor is a slimmed down version of the TDR 350. This simple to use moisture sensor displays the measurement of soil moisture in VWC (Volumetric Water Content). It does not have all the features of the TDR350 as it does not record GPS, EC or Temperature. It gives basic VWC readings. Unit accepts 1.5, 3.0, 4.8 & 8.0 inches deep probes - Sold separately. The unit also displays soil type, battery, has a backlit display and data logging capabilities. Measurements can be set to match TDR 350 & TDR 300 units. It is not compatible with SpecConnect or Field Scout App.

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#### Field Scout TDR 350 Digital Moisture Sensor w/ 1 set Probes and Soft Case

Part #:

MSFS1-CASE-

MSFSSC-W-

MSFSSC4-W-

MSFSSC8-W-

MSFS-SPACER-

#### http://store.turf-tec.com/msfs-tdr350.html

MSFS-TRD350-1.5 - Field Scout TDR 350 with 1.5 in probe set MSFS-TRD350-3.0 - Field Scout TDR 350 with 3.0 in probe set MSFS-TRD350-4.8 - Field Scout TDR 350 with 4.8 in probe set MSFS-TRD350-8.0 - Field Scout TDR 350 with 8.0 in probe set

The FieldScout TDR 350 displays VWC (Volumetric Water Content) soil moisture readings, EC (Electrical Conductivity) measurement, turf surface temperature measurement, a backlit display, integrated Bluetooth, internal GPS and data logging in addition to offering the proven time-domain measurement technology that professional engineers have come to trust in the FieldScout TDR brand. This unit takes into account EC readings and integrates that reading into the TDR results, giving consistent readings no matter the soil EC level of the soil. Mapping software required for GPS mapping (Not included but optional).

#### **Probes**

MSFSP01- Replacement Probes 1.5 inch (3.8 cm) MSFSP03- Replacement Probes 3.0 inch (7.5 cm) MSFSP04- Replacement Probes 4.8 inch (12 cm)

MSFSP05- Replacement Probes 8.0 inch (20 cm)

Replacement Parts

Replacement Soft Carrying Case SpecConnect 1 year Subscription 1-3 Devices SpecConnect 1 year Subscription 4-7 Devices SpecConnect 1 year Subscription 8+ Devices MSFS-IR-TEMP1-W-Infrared Temperature Sensor for TDR 350 Rod Spacer for 1/2" & 1" Depth

(1.5" Rods Sold separately)











#### Spot On Soil VWC Moisture Meter with 1.5 and 2.4 inch rods

https://store.turf-tec.com/products/MSTDR-SPOT.html

Part #: MSVWC-SPOT

The new Spot On Soil VWC Soil Moisture Meter gives continuous reading of VWC (volumetric water content) in a moisture sensor for quick moisture readings (no button pressing required). The unit also measures and displays salinity (EC) in ms/cm. EC reading taken at the same time as VWC Moisture Readings ensure moisture readings are consistent in different soil types and salinity ranges. The unit can also be set to display large format VWC Moisture or display VWC Moisture, EC and surface temperature on the same screen. The meter also allows you to see the average readings of the last several readings taken. The unit comes complete with both 1.5 and 2.4 inch probes that are rubber mounted to resist bending in dry or rocky soils. The brand new ultra-high frequency (100 MHz) measuring circuit provides accurate moisture measurements in a variety of soil types and salinity levels.

#### **MADE IN USA**

#### Replacement Probes

MSVWC-SPOTP01 - Two 1.5 inch (3.80 cm) Rods MSVWC-SPOTP03 - Two 2.4 inch (6.09 cm) Rods









Part #: WIND3-M

http://store.turf-tec.com/products/WIND3-M.html





### **Direct Soil pH Pen**

Part #: PHDS2-N

http://store.turf-tec.com/phds1lit.html

This pH pen gives the pH reading directly in a soil sample without having to mix a slurry. Simply pull a soil sample out of the ground, press the Direct Soil pH Pen's flat surface electrode into the soil and read the meter. The Direct Soil pH Pen also measures in liquids so you can test the water being used in the IN10-W, IN14-W ASTM 3385, and IN15-W ASTM 5093 Infiltration tests as required in the test procedure. Memory recall, automatic temperature compensation and simultaneous display of pH and temperature. Complete with flat surface pH electrode, protective sensor cap, rinse bottle, batteries, 4.01 & 7.01 pH calibration fluid.

#### EC Meter Probe for Soil & Water (with 1.41 mS/cm Calibration Fluid and Hard Case

Part #: ECM-1-N

http://store.turf-tec.com/eclit.html

The FieldScout Soil EC Meter with Probe permits instant, accurate measurement of salts directly in the soil as well as in water or other solutions. Use this portable EC Meter with Probe to measure soil salinity on discharge areas and containment areas right on the job site, without conducting tedious soil sampling and soil preparation. The 8 inch long probe reads directly from the soil or any fluid so there is no need to pull samples with this easy to use meter. Unit comes with hard case and 1 bottle of Conductivity Standard. Useful in fracking. MADE IN USA

ECM-CAL2-N

Replacement Conductivity Standard 1.41 mS





This unit is ideal for professional engineers. It ensures you meet local & regional requirements for employee safety measurements for heat stress. Unit has a Wet Bulb Global Temperature (WBGT) reading and Thermal Work Limit (TWL) with on-screen and flashing LED alarm when conditions enter the caution and danger zones.

The Kestrel Wet Bulb Heat Stress Tracker, Wind Meter & Weather Meter also displays natural wet bulb temperature and black globe temperature and has a 5-year warranty. The Bluetooth model allows you to use a free app or download data to your computer.







1471 Capital Circle NW, Suite # 13 Tallahassee, FL 32303 USA

(800) 258-7477 - (850) 580-4026

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