



2800K1 GUELPH PERMEAMETER KIT

**The fastest way to get Field Soil Hydraulic Data in 3D,
the data of natural flow patterns**

Too often measurements of hydraulic properties have been confined to vertical parameters only, take hours of time and are not related in many ways to the reality of 3 dimensional flow in nature. The Guelph has been a break through in the science of soil permeability allowing for multiple depth, multiple head heights all in the same bore hole. Measurements are based on both vertical (gravity) and lateral (capillary) flow from a point source of known head height forming saturated flow patterns as would be the case in nature. The ideal instrument obtaining in-situ hydraulic conductivity data, when designing a Landfill Site for Monitoring Hazardous Waste Disposal or Hydrological Investigations in Drainage or Soil Erosion Studies. The model 2800K1 Guelph Permeameter is an easy to use instrument for quickly and accurately measuring in-situ hydraulic conductivity, generally less than 20 minutes. These quick measurements, at various depths will provide efficiency of irrigation and drainage, optimizing the availability of water for plants, improving the yield of crops and minimizing erosion. This instrument with accessory items 2805D Pressure Infiltrometer attachments can also be used to check clay liners in water and solution holding farms. Constructed of tough polycarbonate and acrylic, it has no items to corrode or get plugged over years of use. The stand included with the unit allows for easy setup and take down in a matter of minutes. The valve at the base of the reservoirs allows you to choose an inner (for very low flow soils) and larger outer reservoir capacity (for moderate and high flow soils). Measurement with the Guelph Permeameter may be made from 0 to 20-ft (610-cm) depth. Meeting the requirements of ASTM – 5126, our permeameters and infiltrometers are rugged field ready kits that are lightweight and durable, and can be operated by one person.

SPECIFICATIONS:

2800K1 GUELPH PERMEATEER KIT, complete in carrying case, with auger, filling bottle, dual reservoirs, hand vacuum pump, stand and instructions.
 50" L X 17.5" W X 6" H (132.1x44.4x15.2 cm)
 Weight 44 lbs. (19.9 kg)
 Operating Range 10^{-2} cm/s to 10^{-6} cm/s.
 Operating Depth 6"-15" (15-38 cm) (standard) or 6"-20" (15-610cm) (extended)
 Volume.0.9 gal (3.5 liter)
 Water container 2.9 gal (11 liter)



2805D PRESSURE INFILTRMETER ATTACHMENT

**The easy way to measure permeability in ponded
situations, soil liner capabilities**

The 2805D series provides a confining vertical element to assess the integrity of clay liners or other soil barriers to solution impoundments. If the specifications for a clay soil liner having a maximum flow value it's important to be able to test the actual constructed liner. With the 2805D and a 2800 Guelph you can do just that. The Pressure Infiltrometer comes in 10 cm (3.93") Diameter or 20 cm (7.87") Diameter version for your needs. Constructed of steel and nickel plated it's meant for years of use in the field. The attachment is driven into the liner and the Guelph attached and a reasonable head height established and the permeability determined for several head heights at the site. Done at several points within the liner or containment area the overall permeability is established using standard calculations.

SPECIFICATIONS

2805D10 PRESSURE INFILTRMETER ATTACHMENT,
 10 cm diameter Length 10" L X 10" W X 10" H (25.4cm L X 25.4cm W X 25.4cm H)
 Weight 4.4 lbs. (1.9 kgs)
 2805D20 PRESSURE INFILTRMETER ATTACHMENT,
 20 cm diameter Length 10" L X 10" W X 10" H (25.4cm L X 25.4cm W X 25.4cm H)
 Weight 9.6 lbs. (4.3 kgs)



SOILMOISTURE EQUIPMENT CORP.
 P.O. 30025, Santa Barbara, CA 93130
 Ofc:801 S. Kellogg Ave., Goleta, CA. 93117
<http://www.soilmoisture.com>
 PH: 1-805-964-3525 FAX 1-805-683-2189
 Contact: sales@soilmoisture.com



2825 TENSION INFILTRMETER ATTACHMENT

The easiest way to measure soil surface flow characteristics

Often it's the soil surface that will determine the flow of water applied by irrigation or storm that makes it into the sub surface. The soil surface will determine in large part the runoff for watersheds, or the ability to recharge the subsurface over a rainy season all extremely important to environmental health or determining flooding hazards. These measurements also apply to understanding irrigation efficiencies, infiltration rates, plant rooting preferences, and where runoff to furrow or channel can be expected. The 2825 can measure these changing surface conditions caused compaction, and settling that effect water sorptivity and permeability into the soil. 2825 Tension Permeameter sorptivity measurements help discriminate between gravity and capillarity flow through near surface soils structures. It uses the Guelph 2800 proven rugged polycarbonate and Santoprene body with a reservoir capacity of either 3.18 L (both reservoirs) or 235 ml (inner reservoir only) The model 2825 is a 20 cm (7.87 in) diameter Tension Infiltrometer attachment that fits directly onto a Guelph 2800 and provides accurate reservoir and flow data. The 2825 separate Mariott Bubbler provides the tension head of 0 - 22 mb of tension. Constructed from rugged clear polycarbonate base that includes a heavy duty special porous plastic plate (vapor ionized for permanent hydrophilic behavior), acrylic Mariott Bubbler and polycarbonate attachment tube. The 2825K1 Tension Infiltrometer Kit is a "stand alone" unit and comes complete with Guelph Body Reservoir, filling container, hand pump telescoping carrying case for Guelph Reservoir and backpack for all other Tension Attachment items.

SPECIFICATIONS:

2825 TENSION INFILTRMETER ATTACHMENT, comes complete with attachment tube & Mariott Bubbler for use with 2800 Guelph
Accessories 10" L x 10"W x 10"H (25cmx25cmx25cm) Weight 3.5 lbs. (1.6 kg)
2825K1 TENSION INFILTRMETER KIT, stand alone configuration, complete with Guelph Body, Mariott Bubbler, hoses ,
Carrying case for Guelph Reservoir and backpack for other Tension Attachments.
Accessories 72" L x 13"W x 13"H (182cmx33cmx33cm) Weight 15 lbs. (6.8 kg)



2826D TENSION INFILTRMETERS

Light weight, portable tension infiltrmeters for field or lab

Results are plainly clear when you're using the 2826 series of Tension Infiltrmeters since everything is produced from crystal clear acrylic allowing you to see it all. Made from durable acrylic, this unit is light weight and easy to tote to the field. A great tool for the lab as well in teaching others. When more precise and accurate measurements are required, one may think of using a smaller D08 size infiltrmeters which will measure with more sensitivity due to its smaller reservoir and accelerated water drops. The 2826 are porous membrane surface interface designs for speedy reactions. The 2826D20 Reservoir holds 1.65 Liters and the smaller D08 model reservoir holds 410 ml, bubbler is similar for both having 0-28 mb of tension settings. The model 2826D Tension Infiltrmeters comes in two sizes a 3.1" (8-cm) or 7.8" (20-cm) diameter system. With adjustable head heights, low volume of water used to obtain qualified data, and the ability to add pressure transducers to automate, makes the 2826D a serious choice for the researcher. A field rugged carrying case is a valuable option for this unit protecting your instrument and investment during transport and storage. To add this feature add "CS" to the product number.

SPECIFICATIONS:

2628D08 Series
2826D08 TENSION INFILTRMETER, 8 cm dia. tension disc., comes complete no carrying case
2826D08CS TENSION INFILTRMETER, 8 cm dia. tension disc, comes complete with case.
2826D08UCS CARRYING CASE, for 2826D08 Tension Infiltrmeters, only no infiltrmeters

2628D08 Series
2826D20 TENSION INFILTRMETER, 20 cm dia. tension disc., comes complete no carrying case
2826D20CS TENSION INFILTRMETER, 20 cm dia. tension disc, comes complete with case.
2826D20UCS CARRYING CASE, for 2826D20 Tension Infiltrmeters, only no infiltrmeters
In the case Dim. 42" L x 15" W x 10" H (106.7cm L x 38.1cm W x 25.4cm H),
Weight 21 lbs (9.5 kgs)
No case Dim. 41" L x 11" W x 10" H (104.1cm L x 27.9cm W x 25.4cm H),
Weight 13 lbs (5.9 kgs)



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2830K1 DOUBLE RING INFILTRATOR KIT

The original method for determining permeability in soils

Often used by regulatory entities for determinations of leach lines spacing for sewage treatment, runoff determinations this was the standard for decades and remains so in many areas today. It's even more important in today's world with increased cost of water, increased needs to not pollute the environment while improving the efficiency of irrigation and drainage. It's an ASTM D3385-03 Standard Test Method. The 2830K1 is based on continued vertical flow from a falling head source. Our double ring system uses an inner pond and outer pond to obtain one dimensional flow rates using the falling head procedure. Using the installing "cross" the inner ring is driven into the ground and a second bigger ring around that to help control the flow of water through the first ring. A float support bar is placed across the smaller ring and then filled with water. The operator records how much water infiltrated by measurement of the float level within the smaller inner ring. Made from strong galvanized steel with three ring set pairs (11.02 in. & 20.9 in. diameters), (12.6 in. & 22.4 in diameters), (11.8 in. & 21.7 in diameters). The 2830K1 provides all the equipment necessary to perform the standard Double Ring Infiltrator method for infiltration rates

SPECIFICATION:

2830K1 DOUBLE RING INFILTRATOR KIT, complete with 3 ring sets, installing hardware and removal hooks.

SHIPPING INFORMATION:

2830K1 26" L x 26" W x 20" H (65 x 65 x50 cm) Weight: 110 lbs. (50 kgs)



2828KV SATURATED SOIL PERMEABILITY SYSTEM

Get fast saturated soil permeability tests (K-SAT) in the laboratory for a lot of samples

If you're doing a number of K-sat tests in a laboriously and time consuming manner think about a faster better way. The 2828 Saturated Soil Permeability System is your answer to those needs. The knowledge of soil saturated flow and its movement in soil is important for planning irrigation runoff and drainage limits or any other agricultural, environmental and hydrological research studies that deal with rainy and wet conditions. Knowing the air / water relationships that effect permeability and flow through a soil determines ponding and outflows of watersheds and wetlands for instance. Durable construction, burettes, reservoir, recirculation pump all make it a complete system, just add water. Features include adjustable head heights of 2mm to 20mm, constant or falling head measurements. In the "closed system" configuration, one may use special test fluids or specific water qualities to investigate K-Sat. In the "open system," only water is used and a separate water supply is required. The models 2828K10 or 2828K25 are laboratory test sets for the measurement of Saturated Hydraulic Conductivity (K-Sat) on undisturbed cores of 2.08 inch (53mm) or 2.36 inch (60 mm) diameters. The undisturbed cores can be taken in soil sample rings with the soil sample ring kit 0199K1. The 2828K10 set-up handles up to 10 cores samples simultaneously or the 2828K25 can handle up to 25 individual core samples.

SPECIFICATION:

2828K10V1 SATURATED SOIL PERMEABILITY SYSTEM, 110 V AC-60 Hz., comes complete, 33" L x 26" W x 52" H (84x62x130 cm) Weight 77 lbs. (35 kg)
 2828K10V2 SATURATED SOIL PERMEABILITY SYSTEM, 230 V AC -50 Hz., comes complete, 33" L x 26" W x 52" H (84x62x130 cm) Weight 77 lbs. (35 kg)
 2828K25V1 SATURATED SOIL PERMEABILITY SYSTEM, 110 VAC -60 Hz, comes complete, 40" L x 29" W x 52" H (100x73x130 cm), Weight 121 lbs. (55 kg)
 2828K25V2 SATURATED SOIL PERMEABILITY SYSTEM, 230 VAC -50 Hz, comes complete, 40" L x 29" W x 52" H (100x73x130 cm), Weight



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