IRROMETER® measures soil water tension which indicates plant water availability. The white tipped STANDARD (SR) is for general use with row, tree, and field crops, with ranges from 0-100 cb (kPa). The blue tipped LOW TENSION (LT) is designed for use in very coarse soils and non-soil container media with ranges from 0-40 cb (kPa).

Both SR and LT IRROMETERS have a membrane vent for better temperature and elevation related compensation, a larger 2 ½ inch face for ease of reading, and a stainless steel rustproof body.

IRROMETER® SOIL MOISTURE SENSORS

**SR DEPTH**
- 6” (15 cm) 206
- 12” (30 cm) 212
- 18” (45 cm) 218
- 24” (60 cm) 224
- 36” (90 cm) 236
- 48” (120 cm) 248

**LT DEPTH**
- 6” (15 cm) 506
- 12” (30 cm) 512
- 18” (45 cm) 518
- 24” (60 cm) 524

**MLT DEPTH**
- MINI MLT

**CATALOG #**
- SR DEPTH: 206-AVS-
- LT DEPTH: 506-AVS-
- MLT DEPTH: MLT-AVS-

**IMPORTANT NOTICE**
Service Unit should be purchased with initial order (see page 2). Only one Service Unit is necessary to service all of your IRROMETERS.

**VOLTAGE OUTPUT**

**SR DEPTH**
- 6” (15 cm) 206-RSU-V
- 12” (30 cm) 212-RSU-V
- 18” (45 cm) 218-RSU-V
- 24” (60 cm) 224-RSU-V
- 36” (90 cm) 236-RSU-V
- 48” (120 cm) 248-RSU-V

**LT DEPTH**
- 6” (15 cm) 506-RSU-V
- 12” (30 cm) 512-RSU-V
- 18” (45 cm) 518-RSU-V
- 24” (60 cm) 524-RSU-V

**MLT DEPTH**
- MINI MLT-RSU-V

**CURRENT OUTPUT**

**SR DEPTH**
- 6” (15 cm) 206-RSU-C
- 12” (30 cm) 212-RSU-C
- 18” (45 cm) 218-RSU-C
- 24” (60 cm) 224-RSU-C
- 36” (90 cm) 236-RSU-C
- 48” (120 cm) 248-RSU-C

**LT DEPTH**
- 6” (15 cm) 506-RSU-C
- 12” (30 cm) 512-RSU-C
- 18” (45 cm) 518-RSU-C
- 24” (60 cm) 524-RSU-C

**MLT DEPTH**
- MINI MLT-RSU-C

**RSU-V REMOTE SENSING UNITS** are designed to show soil moisture levels by converting the reading to a voltage signal. Refer to product specification sheet for details.

**RSU-C REMOTE SENSING UNITS** are designed to show soil moisture levels by converting the reading to a current signal. Refer to product specification sheet for details.

For longer lengths on any IRROMETER contact factory. Spanish labels now available add - SP to Cat #.

Options and Accessories on Page 2.

951.682.9505 OPTIMIZING IRRIGATION... MAXIMIZING CONSERVATION... SINCE 1951
IRROMETER.COM
A Service Unit is necessary for proper operation of the IRROMETER® instrument and should be included on initial orders. One unit will service ALL of your IRROMETERS. The Standard Service Unit is used during initial installation and then periodically for removal of air from instrument to ensure maximum sensitivity and accuracy. The Test Pump Service Unit serves the dual purpose of removing air and testing the gauge in one operation.

### Standard Service Unit
- Catalog #1001
- Includes:
  - 1 Hand Vacuum Pump
  - 1 Bottle IRROMETER® Fluid
  - 25 Monthly Chart Forms
  - 1 Reference Book.

### Test Pump Service Unit
- Catalog #1002
- Includes: Same items as #1001, except Hand Vacuum Pump is equipped with test gauge.

### MLT Service Unit
- Catalog #1007
- Includes: Same items as #1001, except Vacuum Pump is syringe style.

#### IRR® Accessory Items

**Output Options**
- AVS-A: Auto Vacuum Switch
  - *To complete catalog number please add desired centibar value for preset switch position. If not specified, AVS will have a default setting of 30 centibars.
- RSU-C: Remote Sensing Unit
  - 0-34 cb (kPa) for use with LT/MLT IRROMETER (1/4 NPT)
- RSU-C: Remote Sensing Unit
  - 0-93 cb (kPa) for use with SR IRROMETER (1/4 NPT)
- RSU-V: Remote Sensing Unit
  - Voltage Option (1/4 NPT)

**Replacement Tips & Components**
- SRT: SR Replacement Tip
- QFSRT: LT Replacement Tip
- MLT-TIP: MLT Replacement Tip
- CAP: IRROMETER Cap and Stopper Assembly
- STOP: Stoppers
- SR-O: O-Ring (SR/LT)

#### IRR® Soil Solution Access Tubes

**SSAT**
- For easy extraction of soil solution samples when testing salinity levels or plant nutrients in soil water, now with two series to choose from. Both series A and B require a vacuum source. (see options below)

**Series A**
- Single Line: 6” (15 cm), 12” (30 cm), 18” (45 cm), 24” (60 cm), 36” (90 cm), 48” (120 cm)
- Double Line: 6” (15 cm), 12” (30 cm), 18” (45 cm), 24” (60 cm), 36” (90 cm), 48” (120 cm)

**Series B**
- Single Line: 6” (15 cm), 12” (30 cm), 18” (45 cm), 24” (60 cm), 36” (90 cm), 48” (120 cm)

**Series B – LT**
- Single Line: 6” (15 cm), 12” (30 cm), 18” (45 cm), 24” (60 cm), 36” (90 cm), 48” (120 cm)

**Accessories for Soil Solution Access Tubes**

**Series A** has vinyl suction line with rubber stopper seal and pinch clamp closure.

The DS-50CC Extraction Syringe is used primarily to extract soil solution from SSAT Tube and can also be used to create a partial vacuum on shorter tubes [12 in. (30 cm) or less]. For SSAT Tubes longer than 12 in. (30 cm), use SSAT Vacuum Pump (1002-SSAT).

**The SSAT Vacuum Pump** (CAT. #1002-SSAT) is required to create a sufficient vacuum. Spanish instructions available specify 1002-SSAT-SP.

**SSAT Vacuum Pump**
- 951.682.9505
- IRROMETER.COM
**WATERMARK SOIL MOISTURE SENSOR**

<table>
<thead>
<tr>
<th>CAT #</th>
<th>CABLE LENGTH</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>200SS-5</td>
<td>5' (1.5 m)</td>
<td>Standard WATERMARK Soil Moisture Sensor for use with all crops in most soils. To be used with WATERMARK Meter, Monitor, Voltage Adapter or a compatible device. Reads electrical resistance in 0-200 centibar (cb) and kilopascal (kPa) range. Comes standard with half inch stripped and tinned ends. Ships in bulk. Galvanic isolation may be required for some reading devices. See 200SS-V-6.</td>
</tr>
<tr>
<td>200SS-15</td>
<td>15' (4.5 m)</td>
<td>For lengths longer than 5’—Call Factory (minimum applies)</td>
</tr>
<tr>
<td>200SS-X</td>
<td>6” (15 cm)</td>
<td>Add “-S” to catalog number for pipe spigot end</td>
</tr>
<tr>
<td>200SS-VA</td>
<td>Voltage Adapter</td>
<td></td>
</tr>
<tr>
<td>200SS-V-6</td>
<td>6 channel Galvanic Isolator</td>
<td></td>
</tr>
<tr>
<td>VTC</td>
<td>Vinyl Caps (bag of 100)</td>
<td></td>
</tr>
</tbody>
</table>

**WATERMARK METER**

Solid state, digital hand-held, alternating current resistance bridge meter for reading standard WATERMARK Sensors. Adjustable for soil temperature variations. Touch pad operating panel with LCD display. Includes durable case, 9 volt battery and field replaceable cable assembly.

**WATERMARK MONITOR | WaterGraph software for downloading and graphing data is available free from our website.**

The 900M Monitor is a battery operated data-logger, that automatically reads up to eight sensors. Users can view readings on the screen, download data to a laptop, or use our Data Shuttle to transport the information to a computer. The 900M Monitor accepts WATERMARK soil moisture sensors, soil and air temperature sensors, switch closure sensors, rain gauge, and IRROMETER RSUs. See Monitor Packages for sensor combination options.

A Cellular Gateway option can be added to the 900 Monitor to improve productivity by sending data to the cloud and allowing access through an internet connected device. Cellular Gateway systems include a battery pack and solar panel.

**ACCESSORIES**

<table>
<thead>
<tr>
<th>CAT #</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>900M-CG/BP LTE ATT</td>
<td>AT&amp;T Cellular Gateway w/ battery pack &amp; solar panel</td>
</tr>
<tr>
<td>900M-CG/BP LTE VRZ</td>
<td>Verizon Cellular Gateway w/ battery pack &amp; solar panel</td>
</tr>
<tr>
<td>900DS</td>
<td>Shuttle, cable, multimedia card</td>
</tr>
<tr>
<td>200TS</td>
<td>Temperature Sensor with 15’ (4.5 m) wire lead</td>
</tr>
<tr>
<td>900RG</td>
<td>Rain Gauge</td>
</tr>
<tr>
<td>PPS</td>
<td>5psi Preset Pressure Switch</td>
</tr>
<tr>
<td>900M-RSU-C</td>
<td>RSU Current Wiring Board (One per 4 RSUs)</td>
</tr>
<tr>
<td>900M-RSU-V</td>
<td>RSU Voltage Wiring Board (One per 8 RSUs)</td>
</tr>
<tr>
<td>CDS-2</td>
<td>Annual Data Service (Most Countries - Call factory for details)</td>
</tr>
</tbody>
</table>

**Data Shuttle** – is used to collect data from the 900M Monitor. Stores data on a multi-media card which is then transferred to the user’s computer using the included card reader. Includes:

- Data Shuttle w/ battery
- Cable
- Storage Pouch
- Instructions
- Multi-media Card
- Card Reader
- Software

**Rain Gauge** – AeroCone design with mounting base and bird spikes.

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*Contact IRROMETER for specific country coverage and availability.*
Adding a cellular gateway to the 900M Monitor enables viewing of IRROMETER or WATERMARK sensor data in real-time from any mobile device or computer through our IRROcloud data platform. An intuitive dashboard provides device status, maps and a gauge panel with adjustable thresholds for quick reference, while a full-featured graph and reporting suite supports detailed analysis of soil moisture, rainfall and irrigation events.

**900M Cloud Sensor Choices**
- Watermarks, IRROMETER RSUs, Temperature Sensor, Rain Gauge, and 5psi Preset Pressure Switch for recording irrigation events.

**900M Cloud Packages**

<table>
<thead>
<tr>
<th>CAT #</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>900M-CLOUD-ATT</td>
<td>900M Monitor Only (No sensors), AT&amp;T® cellular modem, battery pack, solar panel, 1 year subscription</td>
</tr>
<tr>
<td>900M-CLOUD-VRZ</td>
<td>900M Monitor Only (No sensors), Verizon® cellular modem, battery pack, solar panel, 1 year subscription</td>
</tr>
</tbody>
</table>

When ordering a 900M Cloud Package, sensors must be ordered separately.
Membrane Vented Pressure Gauge – (7MV series) Membrane vented pressure gauge allows for superior temperature and elevation related compensation while maintaining a dust proof and waterproof environment. Features a stainless steel case, with a durable 2¼ in. (63mm) polycarbonate face. Connected with a ¼ in. brass standard pipe thread stem (NPT) and integral snubber. Dual scale P.S.I. and kPa faceplate.

Liquid Filled Pressure Gauge – (7LF series) Glycerin filled for severe service conditions with pulsation and vibration. Features stainless steel case with a durable 2¼ in. (63mm) polycarbonate face. Connected with a ¼ in. brass standard pipe thread stem (NPT) and integral snubber. Dual scale P.S.I. and kPa faceplate.

Membrane Vented Pressure Gauge
This item has a 1.6% accuracy rating across the full scale of the gauge, a large 2½ inch face for ease of reading, a stainless steel rustproof body, and a membrane vent for temperature and elevation related compensation.

<table>
<thead>
<tr>
<th>GAUGE RANGE</th>
<th>MEMBRANE VENT</th>
<th>LIQUID FILLED</th>
</tr>
</thead>
<tbody>
<tr>
<td>psi/kPa</td>
<td>CAT#</td>
<td>CAT#</td>
</tr>
<tr>
<td>15 psi / 100 kPa</td>
<td>7MV-15</td>
<td>N/A</td>
</tr>
<tr>
<td>30 psi / 200 kPa</td>
<td>7MV-30</td>
<td>N/A</td>
</tr>
<tr>
<td>60 psi / 400 kPa</td>
<td>7MV-60</td>
<td>7LF-60</td>
</tr>
<tr>
<td>100 psi / 700 kPa</td>
<td>7MV-100</td>
<td>7LF-100</td>
</tr>
<tr>
<td>200 psi / 1400 kPa</td>
<td>7MV-200</td>
<td>7LF-200</td>
</tr>
<tr>
<td>400 psi / 2800 kPa</td>
<td>7MV-400</td>
<td>7LF-400</td>
</tr>
</tbody>
</table>

These devices manage irrigation based on soil moisture status, by switching the valve common circuit or signaling the controller.

Liquid Filled Pressure Gauge – (7LF series) Glycerin filled for severe service conditions with pulsation and vibration. Features stainless steel case with a durable 2¼ in. (63mm) polycarbonate face. Connected with a ¼ in. brass standard pipe thread stem (NPT) and integral snubber. Dual scale P.S.I. and kPa faceplate.

Membrane Vented Pressure Gauge
This item has a 1.6% accuracy rating across the full scale of the gauge, a large 2½ inch face for ease of reading, a stainless steel rustproof body, and a membrane vent for temperature and elevation related compensation.

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<th>GAUGE RANGE</th>
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</tr>
</thead>
<tbody>
<tr>
<td>psi/kPa</td>
<td>CAT#</td>
<td>CAT#</td>
</tr>
<tr>
<td>15 psi / 100 kPa</td>
<td>7MV-15</td>
<td>N/A</td>
</tr>
<tr>
<td>30 psi / 200 kPa</td>
<td>7MV-30</td>
<td>N/A</td>
</tr>
<tr>
<td>60 psi / 400 kPa</td>
<td>7MV-60</td>
<td>7LF-60</td>
</tr>
<tr>
<td>100 psi / 700 kPa</td>
<td>7MV-100</td>
<td>7LF-100</td>
</tr>
<tr>
<td>200 psi / 1400 kPa</td>
<td>7MV-200</td>
<td>7LF-200</td>
</tr>
<tr>
<td>400 psi / 2800 kPa</td>
<td>7MV-400</td>
<td>7LF-400</td>
</tr>
</tbody>
</table>

These devices manage irrigation based on soil moisture status, by switching the valve common circuit or signaling the controller.

LANDSCAPE AUTOMATION PRODUCTS

WATERMARK Electronic Module

For Valve Control –

WEM overrides irrigation by interrupting the common when soil becomes wetter than the moisture setting.

WATERMARK Electronic Module

For Controller Sensor Circuits –

WEM-DC-T is used to signal the irrigation controller sensor circuit when soil becomes wetter than the moisture setting.

Both WEM and WEM DCT include a weather resistant control module and two Watermark #200SS-5 sensors. Packaged for display.

WATERMARK Battery Electronic Module

For Battery Controllers – WEM-B battery powered version of the WATERMARK Electronic Module (WEM) for use with battery powered (DC) irrigation controllers that have sensor input connections.

WEM-B includes a weather resistant control module, two #200SS-5 sensors, and a 9-volt battery. Packaged for display.

SOIL MOISTURE SWITCHING DEVICE SELECTION CHART

<table>
<thead>
<tr>
<th>CAT#</th>
<th>TYPE</th>
<th>Single</th>
<th>Groups</th>
<th>ALL</th>
</tr>
</thead>
<tbody>
<tr>
<td>WS1</td>
<td>AC</td>
<td></td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>WEM</td>
<td>AC</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>WEM-DCT</td>
<td>AC</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>WEM-B</td>
<td>DC</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

NOTE – See Specification Sheet or call factory for details.

Multiple Hydrozone System – the MHS provides soil moisture automation for any conventional 24 VAC irrigation controller.

MHS

MULITPLE HYDROZONE SYSTEM PACKAGES

<table>
<thead>
<tr>
<th>SYSTEM</th>
<th>HYDROZONES</th>
<th>VALVE CAPACITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>MHS-4-16</td>
<td>4</td>
<td>16</td>
</tr>
<tr>
<td>MHS-6-32</td>
<td>6</td>
<td>32</td>
</tr>
<tr>
<td>MHS-8-48</td>
<td>8</td>
<td>48</td>
</tr>
<tr>
<td>MHS-TD</td>
<td>Required for pump start relays</td>
<td></td>
</tr>
</tbody>
</table>

NOTE – Packages above include all necessary components.
Slide Hammer – Steel slide hammer with 7/8” (22 mm) diameter x 48” (120 cm) long insertion tip, calibrated every 12” (30 cm). Top of tool is sliding hammer that drives tip into and back out of the ground, leaving a smooth borehole for sensor insertion.
Cat #1012

Extension Rod – 12” (30 cm) extension rod for #1013 or #1014 to make deeper access holes.
Cat #1015

Coring Tool Kit – Nickel plated 7/8” (22 mm) soil coring tool. Comes as a kit in fabric storage pouch with two 12” (30 cm) extensions and handle for making up to a 36” (90 cm) access hole. Can also be used for soil sampling.
Cat #1014

Auger Tool Kit – Nickel plated 1” (25 mm) soil auger. Makes oversized hole for grout style sensor installation in hard or rocky soils. Comes as a kit in fabric storage pouch with two 12” (30 cm) extensions and handle for making up to a 36” (90 cm) access hole.
Cat #1013

Turf Coring Tool – Turf style installation tool for shallow sensor installation depths, to 12” (30 cm). Nickel plated 7/8” (22 mm) soil coring tool with integral handle. Can also be used for soil sampling. Cat #1016

WATERMARK Sensor Insertion Tool – Tee handle style tool for inserting a WATERMARK Sensor up to 30” (76 cm) into a borehole created by one of the other tools shown in this section. It has an internal ejection rod inside the tube to push the sensor off of the tool once it’s fully inserted into borehole.
Cat #1017

Specialty accessories available for deep installations, consult factory for pricing and availability.

**IRROMETER® REPAIR PRICES**  
*In North America Only*

**IRROMETER® NET WEIGHTS**

| LENGTHS | 6 INCH (15 CM) | 12 INCH (30 CM) | 18 INCH (45 CM) | 24 INCH (60 CM) | 36 INCH (90 CM) | 48 INCH (120 CM) | 60 INCH (150 CM) |
|----------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| IRROMETER | .844 lb. / .383 kg | .968 lb. / .439 kg | 1.09 lb. / .496 kg | 1.22 lb. / .553 kg | 1.47 lb. / .666 kg | 1.72 lb. / .780 kg | 1.97 lb. / .893 kg |
| SSAT | .176 lb. / .080 kg | .254 lb. / .115 kg | .331 lb. / .150 kg | .408 lb. / .185 kg | .562 lb. / .255 kg | .717 lb. / .325 kg | .871 lb. / .395 kg |

**WEIGHT AND MEASUREMENT INFORMATION**

Shipping and Mailing Address:
1425 Palmyrita Avenue
Riverside, California 92507-1600
Phone: (951) 682-9505 Fax: (951) 682-9501
Email: sales@IRROMETER.com

LITHO U.S.A. (10/19) #9

**Cat #**

**Description**

**R1**
Recondition IRROMETER – R, SR or TG (includes new tip, stopper, complete cleaning and gauge check)

**R1-LT**
Recondition IRROMETER – LT or MLT (includes new tip, stopper, complete cleaning and gauge check)

**R2**
Repair Gauge – 2018 or earlier

**R2-LT**
Repair Gauge – 2018 or earlier

**Cat #**

**Description**

**EXTEND**
Extend IRROMETER

**RHVP**
Recondition Hand Vacuum Pump (plus parts)

**TRADE-IN**
Trade-In Plan (exchange old for new)

**CONVERT**
Convert R to SR (replaceable tip) (add to recondition cost)

**Cat #**

**Description**

**2000SS**
WATERMARK Sensor 5’ (1.5 m) ……………….. 157 lb. / .071 kg

**30-KTCD-NL**
WATERMARK Meter ………………………………. .752 lb. / .341 kg

**WEM, WS1 or WEM-B**
WATERMARK Modules …………………………... .5 lb. / .23 kg

**900M**
WATERMARK Monitor …………………………... 5.00 lb. / 2.27 kg

**975N or 975NE**
IRROmesh Node (Relay or End) ………………. 1.53 lb. / .69 kg

**975B**
IRROmesh Base …………………………………. 1.54 lb. / .70 kg

**975L**
IRROmesh Logger …………………………….... 2.14 lb. / .97 kg

**975P**
IRROmesh PC Link …………………………….. 9.6 oz. / .272 kg

**975G-BP**
IRROmesh Cellular Gateway/Battery Pack …… 11.0 lb. / .498 kg

**Cat #**

**Description**

**ACCESSORIES (NET WEIGHTS)**

**1001**
Service Unit ………………………………………1.07 lb. / .484 kg

**1002**
Test Pump Service Unit ……………………………1.44 lb. / .654 kg

**1004**
IRROMETER Fluid …………………………….. 1.87 lb. / .855 kg

**1005**
Monthly Chart (100) ……………………………. 28 lb. / .128 kg

**1012**
Slide Hammer …………………………………... 33.00 lb. / 14.97 kg

**1013**
Coring Tool Kit …………………………………... 3.00 lb. / 1.36 kg

**1014**
Auger Tool Kit …………………………………... 3.00 lb. / 1.36 kg

**1017**
WATERMARK Insertion Tool …………………….. 3.00 lb. / 1.36 kg

**7 Series**
Gauge……………………………………………... 375 lb. / .170 kg

**Call IRROMETER for a Returned Goods Authorization Number (RGA) then Ship via UPS or U.S. Postal Service prepaid to: 1425 Palmyrita Avenue, Riverside, CA 92507**