**IRROMETER**

**SOIL MOISTURE SENSORS**

**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 IRROMETER gauges have a vent for better temperature and elevation related compensation, a large 2 ½ inch face for ease of reading, and a stainless steel rustproof body.

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

**MLT CATALOG #**
- MINI MLT-AVS

**A Test Pump Service Unit (#1002) is recommended for AVS and RSU models.**

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

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

**MLT CATALOG #**
- MINI MLT-AVS

**CURRENT OUTPUT**

**SR DEPTH CATALOG #**
- 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 CATALOG #**
- 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 CATALOG #**
- MINI MLT-RSU-V

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

**MANUAL GAUGE**

**AUTOMATIC SWITCH**

**VOLTAGE OUTPUT**

**CURRENT OUTPUT**

**IMPORTANT NOTICE**

Please contact us for longer lengths on any IRROMETER. Spanish labels available, add -SP to Catalog #. Options and Accessories on Page 2.
**IRRROMETER® SERVICE UNITS**

A Service Unit is necessary for proper operation of the IRRROMETER® instrument and should be included on initial order. One unit will service ALL of your IRRROMETERS.

- **#1001**
  - **STANDARD SERVICE UNIT**
  - Catalog #1001
  - Includes:
    - 1 Hand Vacuum Pump
    - 1 Bottle IRRROMETER® Fluid
    - 25 Monthly Chart Forms
    - 1 Reference Book

  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.

  For Spanish instructions, add -SP to Catalog #

- **#1002**
  - **TEST PUMP SERVICE UNIT**
  - Catalog #1002
  - Includes: Same items as #1001, except Hand Vacuum Pump is equipped with test gauge.

**IRRROMETER® ACCESSORY ITEMS**

<table>
<thead>
<tr>
<th>CAT #</th>
<th>ITEM</th>
<th>OUTPUT OPTIONS</th>
<th>REPLACEMENT TIPS &amp; COMPONENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1003</td>
<td>Test Pump Adapter</td>
<td>AVS: Auto Vacuum Switch</td>
<td>SRT: SR Replacement Tip</td>
</tr>
<tr>
<td>1004</td>
<td>IRRROMETER Fluid (0.7 oz. concentrate)</td>
<td>RSU-C: Remote Sensing Unit</td>
<td>QFSRT: LT Replacement Tip</td>
</tr>
<tr>
<td>1004-L</td>
<td>IRRROMETER Fluid (6 oz. concentrate)</td>
<td>4-20 mA Current Output - (1/4 NPT)</td>
<td>MLT-TIP: MLT Replacement Tip</td>
</tr>
<tr>
<td>1005</td>
<td>Chart Forms (Monthly/100 Sheets)</td>
<td>RSU-V: Remote Sensing Unit</td>
<td>CAP: IRRROMETER Cap and Stopper Assembly</td>
</tr>
</tbody>
</table>

**IRRROMETER® SOIL SOLUTION ACCESS TUBES**

- **#1002-SSAT**
  - **1002-SSAT Vacuum Pump**– New stopcock connection. Pump is required to create a sufficient vacuum. For Spanish add -SP.
  - (Contact us for previous version adapter)

  **SSAT –** For easy extraction of soil solution samples when testing salinity levels or plant nutrients in soil water. Includes vinyl suction line with rubber stopper seal and stopcock closure. Requires a vacuum source. (accessories below)

  **NEW DESIGN:**

<table>
<thead>
<tr>
<th>LENGTH</th>
<th>CAT #</th>
<th>ITEM</th>
<th>LENGTH</th>
</tr>
</thead>
<tbody>
<tr>
<td>6” (15 cm)</td>
<td>A6C</td>
<td>......</td>
<td>6” (15 cm)</td>
</tr>
<tr>
<td>12” (30 cm)</td>
<td>A12C</td>
<td>......</td>
<td>12” (30 cm)</td>
</tr>
<tr>
<td>18” (45 cm)</td>
<td>A18C</td>
<td>......</td>
<td>18” (45 cm)</td>
</tr>
<tr>
<td>24” (60 cm)</td>
<td>A24C</td>
<td>......</td>
<td>24” (60 cm)</td>
</tr>
<tr>
<td>36” (90 cm)</td>
<td>A36C</td>
<td>......</td>
<td>36” (90 cm)</td>
</tr>
<tr>
<td>48” (120 cm)</td>
<td>A48C</td>
<td>......</td>
<td>48” (120 cm)</td>
</tr>
</tbody>
</table>

**ACCESSORIES FOR SOIL SOLUTION ACCESS TUBES**

<table>
<thead>
<tr>
<th>CAT #</th>
<th>ITEM</th>
<th>CAT #</th>
<th>ITEM</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLA</td>
<td>Suction Line Assembly (to 24”)</td>
<td>SLT</td>
<td>Bulk Vinyl Suction Line Tubing</td>
</tr>
<tr>
<td>SGL-STOP</td>
<td>Single Hole Stopper</td>
<td>per doz.</td>
<td>DBL-STOP</td>
</tr>
</tbody>
</table>

**1002-SSAT Vacuum Pump**

**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).

**Cat #1002-SSAT**

**DC-50CC**
WATERMARK SOIL MOISTURE SENSOR

<table>
<thead>
<tr>
<th>CAT #</th>
<th>CABLE LENGTH</th>
</tr>
</thead>
<tbody>
<tr>
<td>200SS-5</td>
<td>5' (1.5 m)</td>
</tr>
<tr>
<td>200SS-S-S</td>
<td>5' (1.5 m)</td>
</tr>
<tr>
<td>200SS-15</td>
<td>15' (4.5 m)</td>
</tr>
<tr>
<td>200SS-15-S</td>
<td>15' (4.5 m)</td>
</tr>
<tr>
<td>200SS-X</td>
<td>6&quot; (15 cm)</td>
</tr>
</tbody>
</table>

For lengths longer than 5’—Add per foot.

(minimum applies)

VTC Vinyl Caps for pipe assembly
(bag of 100) ......................................

200SS-VA Voltage Adapter* ..................

200SS-V-6 6 Channel Voltage Adapter* .......

*Converts WATERMARK to voltage signal

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 or download data to a laptop. The 900M Monitor accepts WATERMARK soil moisture sensors, soil and air temperature sensors, switch closure sensors, rain gauge, and IRROMETER RSU-V.

A Cellular Gateway option can be added to the 900 Monitor to improve productivity by sending data to the IRROcloud data platform and allowing access through any internet connected device. (See page 4)

Cellular Gateway systems include a battery pack and solar panel.

900M ACCESSORIES

<table>
<thead>
<tr>
<th>CAT #</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>900M-CG/ATT</td>
<td>AT&amp;T® Cellular Gateway w/ battery pack &amp; solar panel</td>
</tr>
<tr>
<td>900M-CG/VRZ</td>
<td>Verizon® Cellular Gateway w/ battery pack &amp; solar panel</td>
</tr>
<tr>
<td>900M-RSU-V</td>
<td>RSU Voltage Wiring Board (One per 8 RSUs)</td>
</tr>
<tr>
<td>200TS</td>
<td>Soil Temperature Sensor with 15&quot; (4.5 m) wire lead</td>
</tr>
<tr>
<td>ATS</td>
<td>Air Temperature Station with 36 in. (91 cm) wire lead</td>
</tr>
<tr>
<td>APS</td>
<td>Adjustable Pressure Switch</td>
</tr>
<tr>
<td>900RG</td>
<td>Rain Gauge</td>
</tr>
<tr>
<td>CDS</td>
<td>Annual Cellular Data Service</td>
</tr>
</tbody>
</table>

ATS –
Air Temperature Station includes sensor, radiation shield, and mounting bracket

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

WATERMARK Soil Moisture Sensor for use with all crops in most soils. To be used with WATERMARK Meter, Monitor, Voltage Adapter, IC-10, 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. Pipe spigot end (-S) allows for installation on pipe, both top and bottom.

Galvanic isolation may be required for some reading devices. See 200SS-V-6.
The IRROcloud Data Platform enables viewing of IRROMETER or WATERMARK sensor data in real-time from any mobile device or computer. The intuitive dashboard provides device status, location maps, a quick reference gauge panel with adjustable thresholds. The full-featured graph and reporting suite supports detailed analysis of soil moisture, rainfall, irrigation events, and text based frost alerting.

**IC-10 Sensor Options** –
- Watermark
- IRROMETER RSU-V
- Soil Temperature Sensor
- Adjustable Pressure Switch
- Air Temperature Station*
- Rain Gauge*

*Pictured on page 3*

**IC-10 Monitor** — REI certified

- **IC-10**: IRROcloud Sensor Monitor (without sensors) reads WATERMARKS. Includes 1 free year of IRROcloud service.
- **IC-10-IR**: IRROcloud Sensor Monitor (without sensors) reads RSU-V IRROMETERS. Includes 1 free year of IRROcloud service.
- **IC-10-PRO**: IRROcloud Sensor Monitor Includes 6 Watermarks, 1 Soil Temp, 1 Pressure Switch and 1 free year of IRROcloud service.

**IRROMesh System**

**975 Components**

- **CAT # ITEM**
  - 975B Base
    - Mesh System Base Node, allows multiple ‘hops’ for greater system range, uses combination of Relay and End Nodes.
  - 975NR Relay Node
    - Capacity for 3 WATERMARK Sensors, 1 Temperature Sensor, 1 Adjustable Pressure Switch and 1 Rain Gauge. Node has 25’ (7.6 m) Cable.
  - 975NE End Node
    - Capacity for 3 WATERMARK Sensors, 1 Temperature Sensor, 1 Adjustable Pressure Switch and 1 Rain Gauge. Node has 25’ (7.6 m) Cable.

**Nodes** –

- **975NR**
  - **BC**: Bird Cover
  - Factory mounted if added to catalog number with “BC” Example: 975NR-BC.

The IRROMesh node accepts WATERMARK sensors, soil and air temperature sensors, switch closure sensors, rain gauge, and IRROMETER RSU-Vs.

**DATA COLLECTION DEVICE**

- **CAT # ITEM**
  - 975G-BP Gateway w/Battery Pack & Solar Panel*
    - Data transfer to Internet via Cellular Modem. (Includes Solar Panel)

**Accessories**

- **CAT # ITEM**
  - 975-RSU-V RSU-V Voltage Transducer Adapter

*WEB Based Data Service – Required for PC Link and Cell Gateway. Displays data online in real time. Per unit charges apply from per month.*

**IRROMETER.COM • 951.682.9505**
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 2½ 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 2½ 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.

The WATERSWITCH manages irrigation based on soil moisture status by overriding the irrigation controller operation when the soil becomes wetter than the moisture setting. The WATERSWITCH includes a weather resistant control module and one Watermark #200SS-5 sensor. Both AC and DC options available. Packaged for display.

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>

The WATERSWITCH

- Nine selectable moisture level settings
- Reads sensor and changes switch accordingly
- Uses a single Watermark sensor
- Status indicator light
- Timed bypass
- CE and CSA marked

**SELECTION CHART**

**COMMON INTERRUPT SENSOR CIRCUIT**

<table>
<thead>
<tr>
<th>CAT#</th>
<th>DESCRIPTION</th>
<th>SINGLE</th>
<th>GROUPS</th>
<th>ALL</th>
</tr>
</thead>
<tbody>
<tr>
<td>WS-AC</td>
<td>powered by 24 VAC from your controller</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>WS-DC</td>
<td>powered by its own internal 9 volt battery</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
</tbody>
</table>

**MULTIPLE 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**: Please contact us to verify compatibility.
**IRROMETER® REPAIR PRICES**

**CAT #** | **DESCRIPTION** | **WEIGHT**
--- | --- | ---
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) | 

**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) |

Call IRROMETER for a Returned Goods Authorization Number (RGA)

Ship prepaid to: 1425 Palmyrita Avenue, Riverside, CA 92507

**WEIGHT AND MEASUREMENT INFORMATION**

| 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 |

**CAT #** | **DESCRIPTION** | **WEIGHT**
--- | --- | ---
200SS | WATERMARK Sensor 5” (1.5 m) | 157 lb. / .071 kg |
30-KTCD-NL | WATERMARK Meter | .752 lb. / .341 kg |
WS-AC and WS-DC | WATERSWITCH | .7 lb. / .31 kg |
900M | WATERMARK Monitor | 5.00 lb. / 2.27 kg |
975NR or 975NE | IRROMesh Node (Relay or End) | 1.53 lb. / .69 kg |
975B | IRROMesh Base | 1.54 lb. / .70 kg |
975G-BP | IRROMesh Cellular Gateway/Battery Pack | 11.0 lb. / 4.98 kg |
7 Series | Gauge | 375 lb. / .170 kg |
IC-10 | IRROMETER Cloud Sensor Monitor | 2.00 lb. / 1.00 kg |

**CAT #** | **DESCRIPTION** | **WEIGHT**
--- | --- | ---
1001 | Service Unit | 1.07 lb. / .484 kg |
1002 | Test Pump Service Unit | 1.44 lb. / .654 kg |
1004 | IRROMETER Fluid | .187 lb. / .085 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 |

Shipping and Mailing Address:
1425 Palmyrita Avenue
Riverside, California 92507-1600

Phone: (951) 682-9505 Fax: (951) 682-9501
Email: sales@IRROMETER.com

All prices F.O.B. Riverside, California, and apply to North America. (U.S. Dollars)

Terms: Cash, VISA, MasterCard with order or C.O.D. Net 30 days with previously established credit. Minimum $7.50 order charge

Prices and specifications subject to change without notice.

EXPORT PACKING CHARGE: $0.50 per IRROMETER - $5.00 minimum per package.

(Applies only to shipments outside North America.)