

EFFECTIVE JANUARY 1, 2020 — All Products Made in U.S.A., except where indicated.† Supersedes all previous price lists. All product labeling and instructions printed in English except where indicated.

This catalog reflects standard models of instruments held in stock for expedited order fulfillment. Other models are available by special order. Please call the factory for IRROMETER Models R, S and TG.

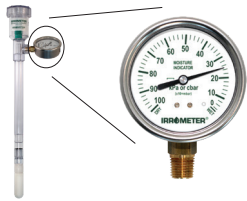
IRROMETER® SOIL MOISTURE SENSORS

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).

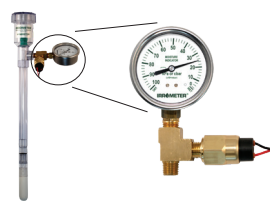
Both SR and LT IRROMETERS have a membrane vent for better temperature and elevation related compensation, a larger 2 1/2 inch face for ease of reading, and a stainless steel rustproof body.



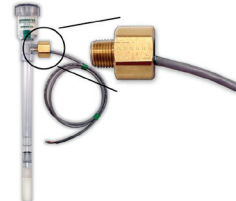
MANUAL GAUGE



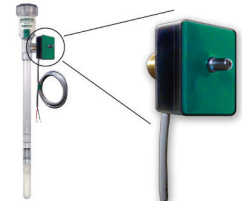
AUTOMATIC SWITCH



VOLTAGE OUTPUT



CURRENT OUTPUT



SR DEPTH	CAT #
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	CAT #
6" (15 cm)	506
12" (30 cm)	512
18" (45 cm)	518
24" (60 cm)	524
MLT DEPTH	CAT #
MINI	MLT

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 DEPTH	CATALOG #
MINI	MLT-AVS-*

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 DEPTH	CATALOG #
MINI	MLT-RSU-V

SR DEPTH	CATALOG #
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	CATALOG #
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	CATALOG #
MINI	MLT-RSU-C

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.

*SWITCH OUTPUT provides adjustable automatic vacuum switching capabilities. 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. *Refer to product specification sheet for details.*

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.

IRROMETER® SERVICE UNITS

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 (not shown)

Catalog #1007

Includes: Same items as #1001, except Vacuum Pump is syringe style.

(Available in Spanish, specify #1001-SP or #1002-SP)

IRROMETER® ACCESSORY ITEMS

CAT #	ITEM
1003	Test Pump Adapter
1004	IRROMETER Fluid (1 oz. concentrate)
1004-L	IRROMETER Fluid (6 oz. concentrate)
1005	Chart Forms (MONTHLY)

IRROMETER® Vacuum Gauges

1008†	SR Gauge only (0-100 cb[kPa])
1008-LT†	LT Gauge only (0-40 cb[kPa])
1008-MLT	MLT Gauge only (0-40 cb[kPa])

CAT #	ITEM
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OUTPUT OPTIONS

AVS-*	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-34	Remote Sensing Unit 0-34 cb (kPa) for use with LT/MLT IRROMETER (1/4 NPT)
RSU-C-93	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)

CAT #	ITEM
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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)

IRROMETER® SOIL SOLUTION ACCESS TUBES

Call the factory for Soil Solution Access Tubes without suction lines or Series A tubes longer than 48" (120 cm).

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)

LENGTH	STANDARD TENSION		LOW TENSION		SERIES B	SERIES B - LT
	Single Line	Double Line	Single Line	Double Line		
6" (15 cm)	A6C	A6C-DBL	A6C-LT	A6C-LT-DBL	B6C	B6C-LT
12" (30 cm)	A12C	A12C-DBL	A12C-LT	A12C-LT-DBL	B12C	B12C-LT
18" (45 cm)	A18C	A18C-DBL	A18C-LT	A18C-LT-DBL	B18C	B18C-LT
24" (60 cm)	A24C	A24C-DBL	A24C-LT	A24C-LT-DBL	B24C	B24C-LT
36" (90 cm)	A36C	A36C-DBL	A36C-LT	A36C-LT-DBL	B36C	B36C-LT
48" (120 cm)	A48C	A48C-DBL	A48C-LT	A48C-LT-DBL		

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

Series B has polyethylene / neoprene suction line with threaded compression seal and ball valve closure.

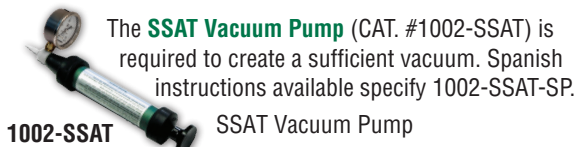
ACCESSORIES FOR SOIL SOLUTION ACCESS TUBES

CAT #	SERIES A
SLA	Suction Line Assembly (to 24") <i>For longer length, Call Factory</i>
SLT-A	Bulk Vinyl Suction Line Tubing
FC	Finger Clamp
SGL-STOP	Single Hole Stopper..... per doz.
DBL-STOP	Double Hole Stopper per doz.

CAT #	SERIES B
SLT-B	Bulk Polyethylene Suction Line Tubing
DLT-B	Bulk Neoprene Discharge Line Tubing
BV	Ball Valve
CS	Compression Seal

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. (30cm), use SSAT Vacuum Pump (1002-SSAT).

DS-50CC† Extraction Syringe

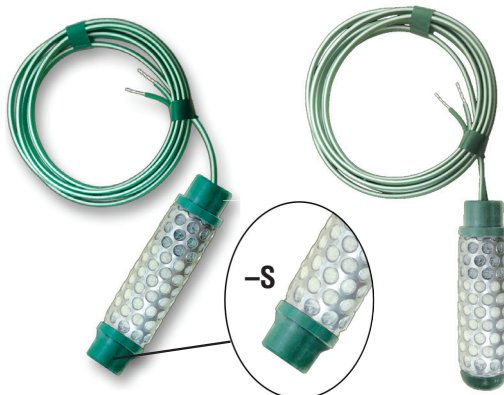


1002-SSAT

SSAT Vacuum Pump

WATERMARK SOIL MOISTURE SENSOR

CAT #	CABLE LENGTH
200SS-5	5' (1.5 m)
200SS-15	15' (4.5 m)
200SS-X	6" (15 cm)
For lengths longer than 5'— Call Factory (minimum applies)	
-S	Add "-S" to catalog number for pipe spigot end
200SS-VA	Voltage Adapter
200SS-V-6	6 channel Galvanic Isolator
VTC	Vinyl Caps (bag of 100)



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.

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.



CAT #	DESCRIPTION
30-KTCD-NL	WATERMARK Meter
30-KTCD-NL-SP	WATERMARK Meter with Spanish label and instructions
30-KTCD-Cable†	Replacement Cable

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 IRRMETER 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

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

**Contact IRRMETER for specific country coverage and availability.*

CAT #	DESCRIPTION
COMPONENTS	
900M-0	Monitor Only (without sensors)
POPULAR MONITOR PACKAGES:	
900M	WATERMARK Monitor with seven WATERMARK Sensors and one Temperature Sensor, each with 15' (4.5 m) wire leads.
900M-8	WATERMARK Monitor with eight WATERMARK Sensors, each with 15' (4.5 m) wire leads.
900M-1-6-PPS	WATERMARK Monitor with six WATERMARK Sensors, one Temperature Sensor, each with 15' (4.5 m) wire leads and one 5psi preset pressure switch (for recording irrigation events).

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.



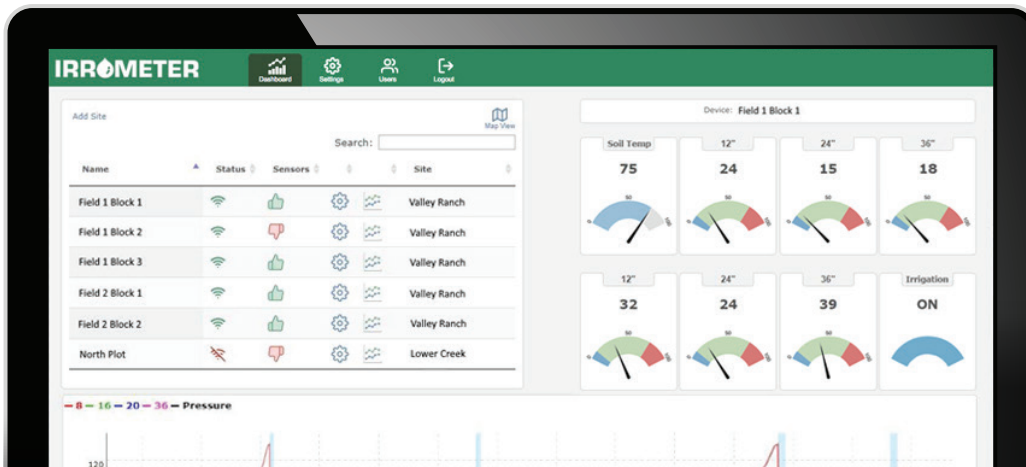
IRROCLOUD DATA PLATFORM



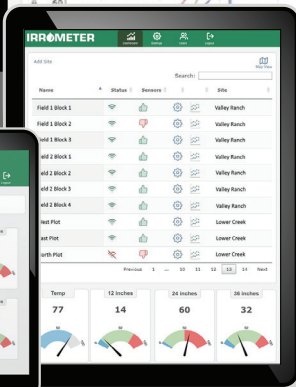
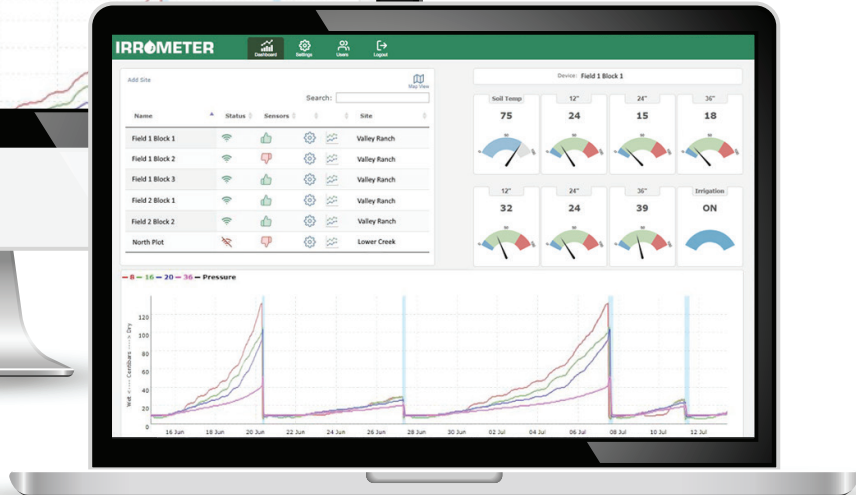
IRROcloud is a Wireless Sensor Network that delivers data to an Internet of Things web environment.



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.

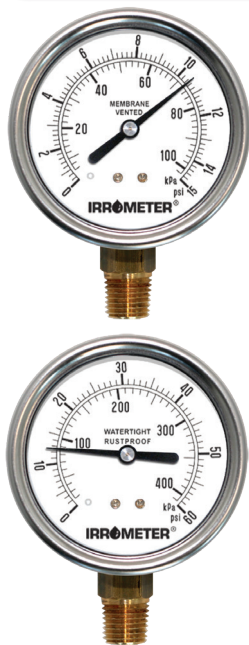


900M Cloud Packages

CAT #	DESCRIPTION
900M-CLOUD-ATT	900M Monitor Only (No sensors), AT&T® cellular modem, battery pack, solar panel, 1 year subscription
900M-CLOUD-VRZ	900M Monitor Only (No sensors), Verizon® cellular modem, battery pack, solar panel, 1 year subscription

When ordering a 900M Cloud Package, sensors must be ordered separately.

IRROMETER® PRESSURE GAUGES



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.

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.

GAUGE RANGE	MEMBRANE VENT	LIQUID FILLED	
psi/kPa	CAT#	CAT#	CAT#
15 psi / 100 kPa	7MV-15†	N/A	N/A
30 psi / 200 kPa	7MV-30†	N/A	N/A
60 psi / 400 kPa	7MV-60†	7LF-60†	
100 psi / 700 kPa	7MV-100†	7LF-100†	
200 psi / 1400 kPa	7MV-200†	7LF-200†	
400 psi / 2800 kPa	7MV-400†	7LF-400†	

LANDSCAPE AUTOMATION PRODUCTS

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

WATERMARK Electronic Module

For Valve Control –

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

WATERMARK Electronic Module Dry Contact

For Controller Sensor Circuits –

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



WATER SWITCH

Residential Systems – WS-1 overrides irrigation controller operation when soil becomes wetter than the moisture setting.

WS-1 includes a weather resistant control module, one Watermark #200SS-X sensor, and 2 direct burial wire nuts. *Packaged for display.*



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

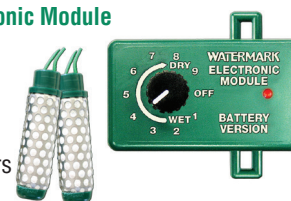
SOIL MOISTURE SWITCHING DEVICE SELECTION CHART				
CAT#	TYPE	VALVE CONTROL		
		Single	Groups	ALL
WS1	AC			✓
WEM	AC	✓	✓	
WEM-DCT	AC			✓
WEM-B	DC			✓

NOTE – See Specification Sheet or call factory for details.

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.*



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



MULTIPLE HYDROZONE SYSTEM PACKAGES			
SYSTEM	HYDROZONES	VALVE CAPACITY	
MHS-4-16	4	16	
MHS-6-32	6	32	
MHS-8-48	8	48	
MHS-TD	Required for pump start relays		

NOTE – Packages above include all necessary components

IRROMETER®, SSAT OR WATERMARK INSTALLATION TOOLS

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 #1013



Auger Tool Kit – Nickel plated 1" (25 mm) soil auger. Makes oversize 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 #1014

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



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

IRROMETER® REPAIR PRICES • IN NORTH AMERICA ONLY •

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)

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

WEIGHT AND MEASUREMENT INFORMATION

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

CAT #	DESCRIPTION	WEIGHT
200SS	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
975NR 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. / 4.98 kg

CAT #	ACCESSORIES (NET WEIGHTS)	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
7 Series	Gauge	.375 lb. / .170 kg

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