

**COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION**

In the Matter of:

ELECTRONIC BEECH GROVE WATER SYSTEM,)	
INC. UNACCOUNTED-FOR WATER LOSS)	CASE NO. 2022-00318
REDUCTION PLAN, SURCHARGE AND)	
MOTITORING)	

**BEECH GROVE WATER SYSTEM, INC. RESPONSES TO COMMISSION
STAFF'S THIRD REQUEST FOR INFORMATION**

Beech Grove Water Systems, Inc. submits the following Responses to Staff's Third Request for Information and states that Sheila Murphy, Office Manager, is the witness for all Responses:

RESPONSES

1. Refer to Beech Grove Water's Response to Commission Staff's Second Request for Information. Provide the location of the large leak discovered by the operator, a description of the damage to the pipe that resulted in the leak, and the steps taken to repair the leak.

Response: Beech Grove Water System largest leak was discovered March 4, 2023 on State Route 56 at West Fork Knoblick Creek by the operator. The leak was located in a joint of 6-inch PVC SDR 21 pipe, which was in the bottom of a creek under water. Beech Grove Water fixed the leak by placing valves on both sides of the creek, then hired Fannon Equipment Company to bore under creek to replace 6" water line. The new 6" pipe back was tied into the valves on each side of creek.

2. Refer to Beech Grove Water's Infrastructure Improvement Plan Proposal (Proposal) which was filed on April 14, 2023.

a. Provide any contract, service agreement, or work proposal between Reveal Underground Services and Beech Grove Water.

Response: Beech Grove Water System only has proposed quotes from Reveal Underground at the present time, see attachment.

b. Provide the cost to hire Reveal Underground Services.

Response: See attached quote.

c. Explain specifically what services Reveal Underground Services will provide and for how long.

Response: United System will be able to combine the meter reading, meter billing, and water detection into one system. The LEICA DS 2000 radar is used to locate water lines underground. Beech Grove Water System has some water some lines that we haven't been able to locate. So, if Beech Grove Water System had the LEICA DS 2000 radar we would be able to locate all water lines. Detailed description of equipment and appurtenance, see attachment.

The timeline is variable and the length of time depends upon how long it takes to get the system to a reasonable water loss level. Reveal Underground Services estimates 8 working days for listening, 18 days for logging plus additional time for repairs. See attachments.

d. State the estimate amount of time it will take Reveal Underground services will provide and for how long.

Response: The timeline is variable and the length of time depends upon how long it takes to get the system to a reasonable water loss level. Reveal Underground Services estimates 8 working days for listening, 18 days for logging plus additional time for repairs. See attachments.

3. Refer to the Proposal. Provide documentation and support for the \$19,995 cost of the proposed purchase of the LEICA DS2000 radar, and a detailed description of what equipment and appurtenances

Response: The description is in the attached proposal. See Response to 2c. The cost of this system is now \$44,150.80 with all the additional items added by the vendor.

4. Refer to the proposal. Provide a detailed description of the “United Systems Meter-leak Systems” Beech Grove proposed to purchase for \$30,100.00, including support and documentation of the purchase price, and a breakdown of the system components.

See attached documentation that shows the cost now as \$39,400.00 plus recurring monthly fees.

5. State who will install the “meter-leak system”, how long installation is expected to take and how much it will cost.

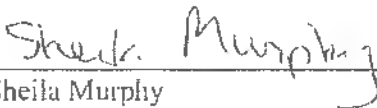
Response: Both United Systems, and to save on costs where possible, in-house labor will be used.

6. Provide documentation and support for the assertion that the meter-leak system is compatible with Beech Grove's existing meter infrastructure and billing software system.

Response: Beech Grove is investigating the purchase of compatible software for \$39,400 per the attached quote from United Systems.

VERIFICATION

I hereby verify that the foregoing responses to Staff's Third Data Requests are true and correct to the best of my knowledge and belief.




Sheila Murphy
Beech Grove Water System, Inc.

STATE OF KENTUCKY
COUNTY OF MCLEAN

The foregoing was subscribed and sworn to before me by Sheila Murphy, Office Manager, Beech Grove Water Systems, Inc., this 26th day of September, 2023.

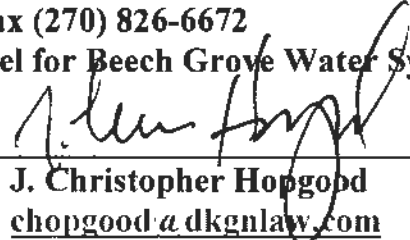
My commission expires 5-3-2026



Notary Public
Notary Public ID#: KY NP 49640

DORSEY, GRAY, NORMENT & HOPGOOD
318 Second Street
Henderson, KY 42420
Telephone (270) 826-3965
Telefax (270) 826-6672
counsel for Beech Grove Water System, Inc.

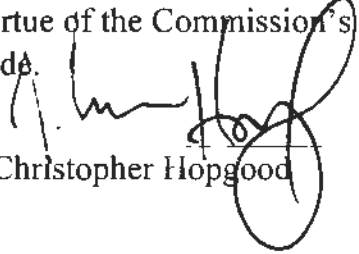
By



J. Christopher Hopgood
chopgood@dkgnlaw.com

CERTIFICATE OF SERVICE

I hereby certify that the foregoing electronic filing was transmitted to the Kentucky Public Service Commission for filing on September 26th, 2023; that there are currently no parties that the Commission has excused from participation by electronic means in this proceeding by virtue of the Commission's Order of 2020-00085, no paper copies of this filing will be made.



J. Christopher Hopgood

Re: quote

From: Kevin Leonard (l.kevin05@gmail.com)
To: beechgrovewaters@bellsouth.net
Date: Friday, September 22, 2023 at 05:19 AM CDT

Scope of Work

Reveal leak detection responsibilities include:

- Daily communication with designated utility personnel
- Provide two men, truck, and tools to perform task
- Touching every meter connection and shutting off as necessary to identify noise
- Touching every fire hydrant
- Working only when it is not windy, raining, or significant traffic (for accurate work)
- Follow-up with evaluating area to make sure sound is not present after leak has been repaired
- Provide Loggers that will come on at 2:00am to assist in leak locations. These provide a document by location and sound profiles.

Utility requirements:

- Provide a person that knows the system and meter locations (maps, paint, flag)
- Leaks will be noted by addresses provided by utility

The cost for the leak detection will be at \$1,500/day not counting mileage
The drive time is 1 hour and 45 min from my shop. We will usually work 10-12hr days
Due to the distance I have to charge \$100/day for mileage.

The repair of leaks will be made at \$2,700 day not counting mileage.
All materials and restoration will be provided by the Water System
This is labor and equipment not including directional bores
Directional bores on 2" and under will be \$6/foot.

If you have any questions please call.

Thank you,

On Sep 20, 2023, at 10:36 AM, Beech Grove Water System <beechgrovewaters@bellsouth.net> wrote:

Kevin, can you give us a update on a quote in writing for locating water leaks in Beech Grove Water System.

Sheila Murphy
270 273-5738



P.O. Box 547, 205 Ash Street, Benton, Kentucky 42025
 Phone: (270) 527-3293 • Toll-Free: 1-800-455-3293
 FAX: (270) 527-3132 • www.unitor-systems.com

United Systems & Software, Inc. (USS) is a software development firm that specializes in providing end-to-end computer solutions for local government and utilities. Founded in 1977, USS now serves nearly 1000 customers within a twenty-state region. We are recognized as an Itron Business Partner and a Microsoft Certified Partner and we are proud of our affiliations with all of these world-class technology leaders.



Quote For: Sheila Murphy
 Beech Grove Water Works
 Ph: (270) 273-5728 - Email: beechgrovewaters@bellsouth.net

August 15, 2023

Prices guaranteed for 90 days. Please consider the following:

Temetra AMR Meter Reading System Upgrade:
 Billing software Interface is not included in this quote. Utility will need to Quote an Itron Interface through the current Billing Software provider.

Qty	Product/Service Description	Unit Price	Ext Price
Itron Choiceconnect Meter Reading Solution:			
500	Diehl 5/8x3/4" Ultrasonic Water Meters (No Moving Parts) US Gallons, with 5' Itron Cable & Connector, 20-year warranty (10 Full/10 Prorated).	\$ 135.00	\$ 81,000.00
500	Itron 100W+ Water Radios with Inline Connectors -Pit Model (Encoder) ERW-1300-402 List Price: \$159.64 Ea. (Box qty: 24) Compatible with Neptune/Hersey/Badger/Sensus/Amco/Zenner encoder registers.	\$ 105.00	\$ 63,000.00
-	Itron MC4Core Mobile Unit for Automatic Drive By Meter Reading Includes GPS Mapping, Data logging Support, Rugged 10" FZ-G2 Win10 Tablet, 1-year Itron Hardware Warranty: 3-year Tablet Warranty. Tablet requires 3rd party vehicle mount, typically \$200 to \$600 (not included).	\$22,995.00	\$ 22,995.00
1	Itron Temetra Drive-By Reading Software up to 2,500 Services. Does NOT include first year Software Subscription Fee of \$5,665.	\$ 2,900.00	\$ 2,900.00
1	Itron Mobile Radio (Bluetooth Radio Handheld Replacement). 1-year Itron Hardware Warranty: Annual Maintenance: \$186/Yr. Use with IOS, Android, Windows 10 Pro device for Programming/Check/Read.	\$ 2,795.00	\$ 2,795.00
1	Itron Technical Services: ESTIMATED: 16 hours remote setup & 8 hours onsite. Service \$250/hr and Travel \$340/trip (24@ \$250, 1@ \$340) Actual Services rendered will be billed.		\$ 6,340.00
Water AMR Drive-by Total:			\$179,030.00

Optional Equipment, ERT, and Meter Options:

24	100W Through Lid Kit CFG-1300-004	\$ 4.00	\$ 84.00
500	6" In-Line Cable Assy Kit with Nicor Connector and female dust cap This allows utility to use existing Zenner Meters.	\$ 27.00	\$ 16,200.00

General- Prices do not include shipping and/or sales tax (if applicable). This quotation shall remain firm for ninety (90) days from the quotation date, unless modified in writing by USS prior to USS acceptance. All related invoices shall be paid on a Net 10 Day basis. All services are to be delivered during USS' standard service window (8AM-4:30PM, Monday thru Friday, excluding USS Holiday).

Continued Next Page

PRICING MODEL - SCHEDULE

Date Issued: 07.24.2023
 Valid 60 Days

The quotation outlined below details the startup AND ongoing costs associated with **Utility Process Management (UPM)**. The UPM ecosystem is designed to help your office operate substantially more efficiently and effectively by eliminating the need to prepare billing and delinquent statements, increasing automated customer payments and billing processes, encouraging customer self-service, automating field communications, and much more.

With UPM, you can access the ALLIANCE™ cloud application from any internet-equipped computer.¹ This eliminates the need for an on-premise application server and other associated costs such as separate software support charges.

In return for a monthly service fee, USS agrees to provide UPM services for thirty-six (36) months:

***Estimated* Recurring Utility Billing Monthly Fees:**

Estimated UPM with TPM Monthly Fee	\$ 1,014.00
Monthly Charges Estimated at \$1.69/ Billed Account for ~600 Billed Accounts Includes 2 Named Network & Software User Licenses & 2 GB Storage (Additional Software Licenses Add: \$99 ea. per month) (Additional Network Users Add: \$200 ea. per month)	

Additional Recurring Monthly Application Fees:

General Ledger, Accounts Payable w/ ACH, Purchase Orders, Asset Management & Commercial Accounts Receivable	\$ 350.00
Payroll with Direct Deposit	<u>\$ 150.00</u>

Total Monthly Application and Service Charges: \$ 1,514.00

Initial Fees:

Initial UPM Setup Fee	\$ 1,500.00
ALLIANCE™ Remote & Onsite Setup and Technical Services ² (UPM) Setup, application configuration, and training (estimated 48 hours) ³ Hourly rate of \$250/hr (48); travel \$255/trip (1); daily per diem \$275/day (3). Services will be billed as they are rendered. ⁵ <i>Should additional services be required, travel and daily per diem charges will apply.</i>	\$ 13,080.00
ALLIANCE™ Remote & Onsite Setup and Technical Services ² (Financials) Setup, application configuration, and training (estimated 32 hours) ³ Hourly rate of \$250/hr (32); travel \$255/trip (1); daily per diem \$275/day (2). Services will be billed as they are rendered. ⁵ <i>Should additional services be required, travel and daily per diem charges will apply.</i>	\$ 8,005.00
Networking Remote & Onsite Setup and Technical Services ² (Managed IT-N) Setup, application configuration, and training (estimated 40 hours) ³ Hourly rate of \$250/hr (40); travel \$255/trip (1); daily per diem \$275/day (2). Services will be billed as they are rendered. ⁵ <i>If additional services are required, hourly rate, travel and daily per diem charges will apply.</i>	\$ 10,805.00
<u>Utility Data Conversion with ~2 Years History (~600 accounts)⁵</u>	<u>\$ 5,300.00</u>

Total Initial Fees: \$ 39,490.00



P.O. Box 547, 205 Ash Street, Benton, Kentucky 42025
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FAX: (270) 527-3132 • www.united-systems.com

AGREEMENT TERMS & CONDITIONS

Both parties agree to the following terms and conditions as related to the software, hardware and services outlined within this Sales Order outline:

1. This quotation shall remain firm for ninety (90) days from the date submitted, unless modified in writing by USS prior to USS acceptance.
2. This quotation supersedes all previous quotations, and all previous quotations are null and void.
3. Acceptance of this Agreement also requires the client to execute Itron's Indirect Sales Agreement.
4. The Client will be billed upon shipment or delivery of products/services. All related invoices shall be paid on a 'Net 10 day' basis.
5. The system, which may include both equipment and software, includes the manufacturer's warranty. Warranty services will be provided on a mail-in depot basis with the manufacturer's warranty provisions prevailing. See Itron's End User License Agreement (EULA) for warranty durations on each system component.
6. Delivery shall be within 30-90 days. USS shall not be responsible for any delays beyond its control. Quotations do not include related shipping and/or sales tax, if applicable.
7. USS shall not be liable for any consequential damages arising out of the use of the system.

USS and the client understand and agree to the terms and conditions as outlined. Client acknowledges that Client has read this Agreement, understands it, and agrees to be bound by its terms. Client further agrees this is the complete and exclusive statement of Agreement between the parties, which supersedes all implied, oral, and written communications between the parties relating to this Agreement.

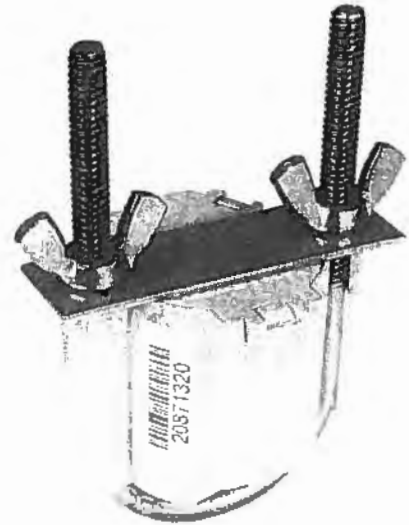
This Agreement shall be effective when signed by both parties. This Agreement is entered into as of this _____ day of _____, 2023.

United Systems & Software, Inc.

City of Beech Grove, KY

/ Receiver Manager

By: / Title _____



Leak Sensor+

It's estimated that up to 30 percent of water pumped through distribution systems is lost to leaks. In today's conservation-driven environment, water losses — and associated pumping and treatment costs — add up quickly. Distribution leak detection, and keeping system losses minimal, are important operational concerns for water providers.

The Leak Sensor+ is an advanced approach to distribution system leak detection. Part of Itron's advanced metering solution, for ChoiceConnect 100, the sensor is the result of merging the water meter module with an acoustic sensor to create a single point for collecting meter data and monitoring for distribution system leaks. The Leak Sensor+ leverages the robust network of ChoiceConnect 100. It offers unattended daily monitoring of leaks in distribution lines for proactive leak detection and timely mitigation. This reduces non-revenue water losses,

associated costs and potential service disruptions caused by major leak events. The innovation behind the Leak Sensor+ is a vibration sensor, amplifier, processor and bidirectional one-wire automated meter reading (AMR) interface. Every day the acoustic sensors analyze sound patterns in its environment, detecting new, evolving and pre-existing leaks automatically. Sensors attach to endpoints and transmit vibration recordings along with other metering information to the utility via walk-by, drive-by or fixed network data collection. An Itron web interface — mlogonline Network Leak Monitoring System — handles data interpretation and

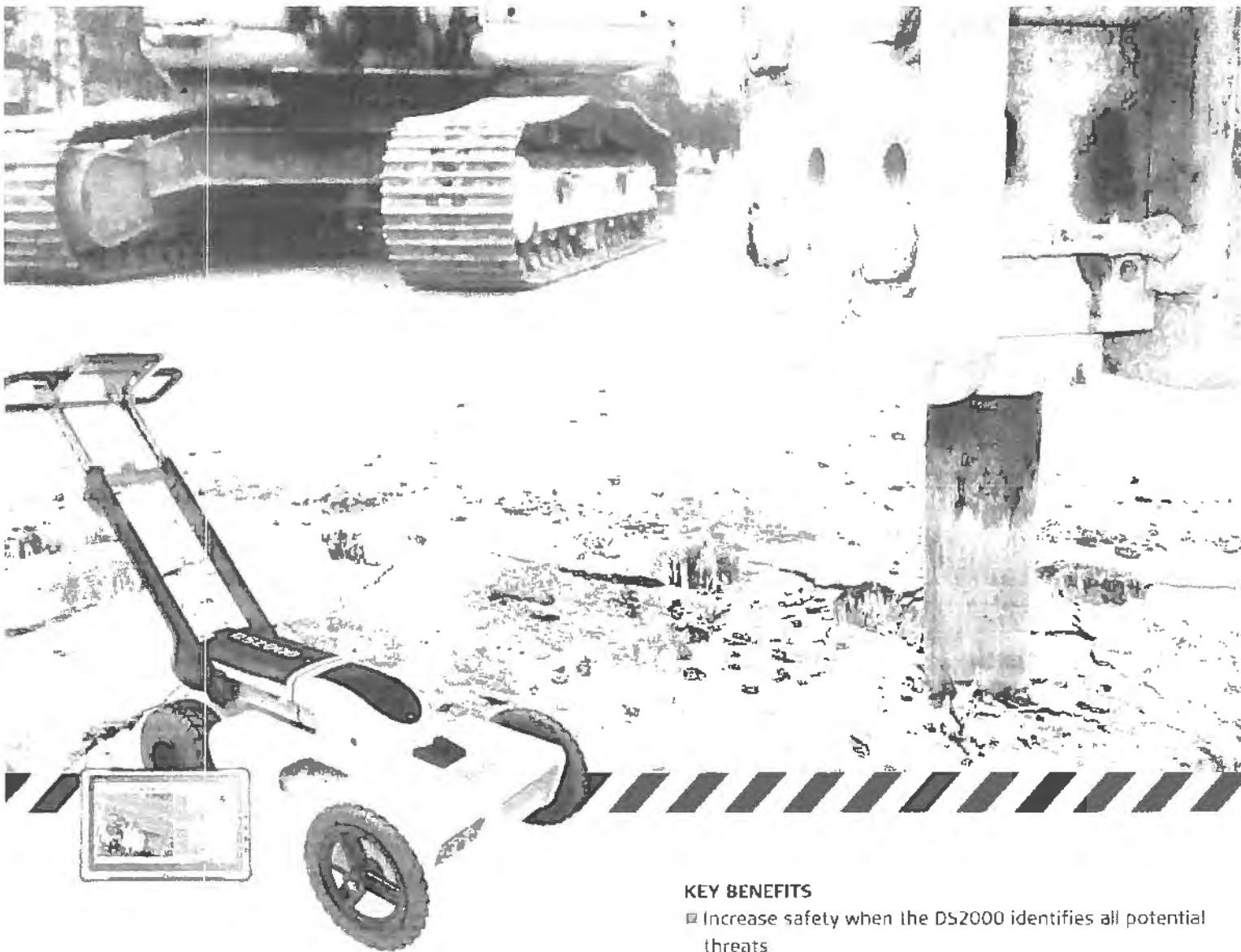
analysis of the recordings and graphically displays all sensor locations using visual maps and satellite images, highlighting the status of leak locations.

An expanding database of historical information provides comprehensive condition assessment of the entire water distribution system.

Simple, affordable and technically superior, the Leak Sensor+ is sensible leak detection and location at optimal cost. Best of all, the Leak Sensor+ leverages the investment in fixed network meter data collection technology, often paying for itself within a few years.

Leica DS2000

Uncovering safer, faster, mo



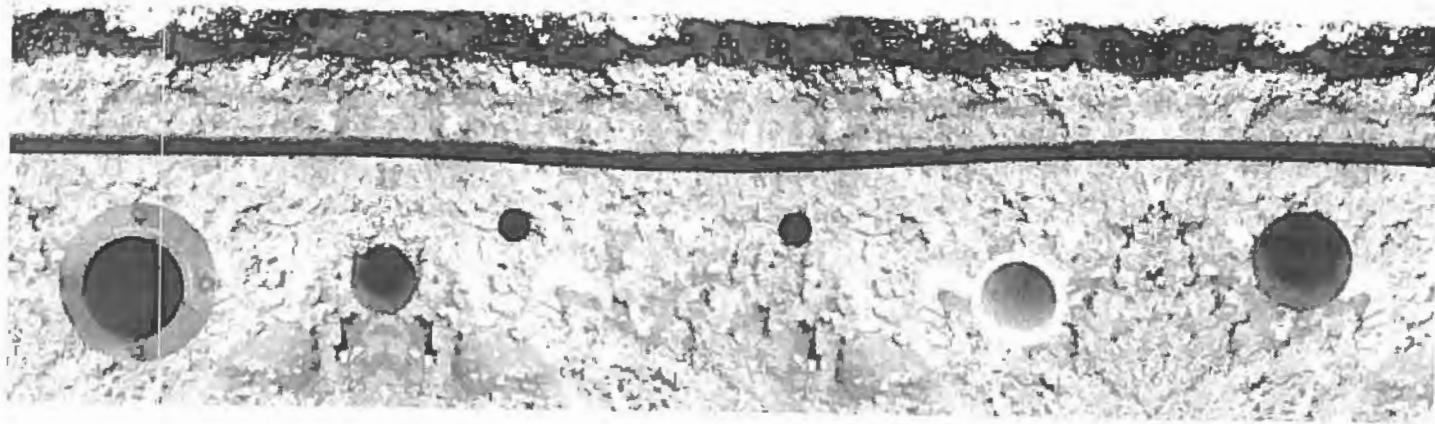
There's a lot going on underground that you need to know about before you ever start to dig. The Leica DS2000 Utility Detection Radar finds all potential threats, including non-conductive pipes and fibre optics, increasing safety by lowering the risk of accidentally hitting underground assets.

Increase safety, speed up work and lower asset management costs with the ability to prevent hazardous outages and collect more information. The

KEY BENEFITS

- ▣ Increase safety when the DS2000 identifies all potential threats
- ▣ Get to assets and recover quicker from outages when you know exactly where underground utility assets are located
- ▣ Dual frequency antenna to detect deep and shallow targets simultaneously
- ▣ Easily collect and understand data with the DS2000's simple and intuitive software and data storage
- ▣ Effortlessly maneuver around the most challenging sites with the DS2000's advanced ergonomics
- ▣ Without GPS, map onsite with no post processing needed when data is stored on the tablet
- ▣ Expert knowledge of Leica Geosystems with more than 270 service centres worldwide

Leica DS2000 - Utility Detection Radar



DUAL-FREQUENCY ANTENNA

Antenna footprint

Hardware channels

Antenna central frequencies

Antenna orientation

Sampling frequency

Display depth scale

Depth range

DATA ACQUISITION

Acquisition speed

Scan rate per channel for 512 samples per scan

Scan interval

Positioning

CONTROL UNIT

Power consumption / supply

Operating temperature range

Weight

Protection

40 x 50 cm

2

250 MHz and 700 MHz

Perpendicular, broadside

400 kHz

0 to 10 m

0 to 10 m (dep. on soil and env. conditions)

More than 10 km/h

381 scans per second

42 scan per metre

2 integrated encoders - GPS and/or TPS

13.3 W / Rechargeable SLAB (Sealed Lead Acid Battery)

12 V DC, 12 Ah

-10° C to +40° C

27 kg

IP65



PROTECT is subject to Leica Geosystems' international manufacturer warranty and the general terms and conditions for PROTECT. For more information visit: www.leica-geosystems.com/protect

Contact your Leica Geosystems distribution partner for more information on the Leica DS2000 and other solutions for construction professionals.





SUPPLY CO., Inc.

QUOTATION

WATER, SEWER & GAS SUPPLIES
SIGN & SAFETY SUPPLIES

P.O. Drawer 459 - 1105 State Route 77
Atwood, TN 38220
(731) 662-7193 or (800) 238-3836

Order Number
1963806

Order Date Page
09/25 2023 10:22:51 1 of 2

Bill To:

BEECH GROVE WATER SYSTEM
445 STATE ROUTE 56 N
CALHOUN, KY 42327

Ship To:

BEECH GROVE WATER SYSTEM
445 STATE ROUTE 56 N
CALHOUN, KY 42327

(270) 273-5738

Customer ID: 1036

PO Number			Ship Route	Taker			
			UTLY	AMORTON			
Quantities			Status Key	Item ID Item Description	Pricing UOM	Unit Price	Extended Price
Ordered	Remaining	Status of Balance	B Backorder D Direct C Canceled P Production				

Delivery Instructions: ***CALL DAY BEFORE***

1	1			6011496	EA	29,766.6700	29,766.67
LEICA DS2000 UTILITY DEFLECTION RADAR WITH GNSS ANTIENNA SUPPORT, BATTERY, BATTERY CHARGER, AND CONTROLLER							
1	1			6011542	FA	2,746.6700	2,746.67
LEICA DS2000 4 YEAR BRONZE CUSTOMER CARL PLAN							
1	1			818699	FA	4,866.6700	4,866.67
LEICA ULTRA PIPE AND CABLE LOCATOR							
1	1			850275	EA	2,520.0000	2,520.00
LEICA DA230 SIGNAL TRANSMITTER ADJUSTABLE UP TO 3 WATT OUTPUT POWER WITH CONNECTION CABLE AND GROUNDING ROD							
1	1			818706	FA	212.0000	212.00
LEICA ULTRA STORAGE BAG							
1	1			5004727	FA	1,506.6700	1,506.67
LEICA GPR TRAINING CLASS PER PERSON							

All returns may be subject to a manufacturers re-stocking charge. All custom or non-stock



SUPPLY CO., Inc.

QUOTATION

WATER SEWER & GAS SUPPLIES
SIGN & SAFETY SUPPLIES

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09/25 2023 10:22:51

Page

2 of 2

Quantities			Status Key	Item ID Item Description	Pricing UOM	Unit Price	Extended Price
Ordered	Remaining	Status of Balance	H - Backorder D - Direct C - Concealed P - Production				

Total Lines: 6

SUB-TOTAL: 41,618.68

TAX: 2,497.12

AMOUNT DUE: 44,115.80

U. S. Dollars