PINE
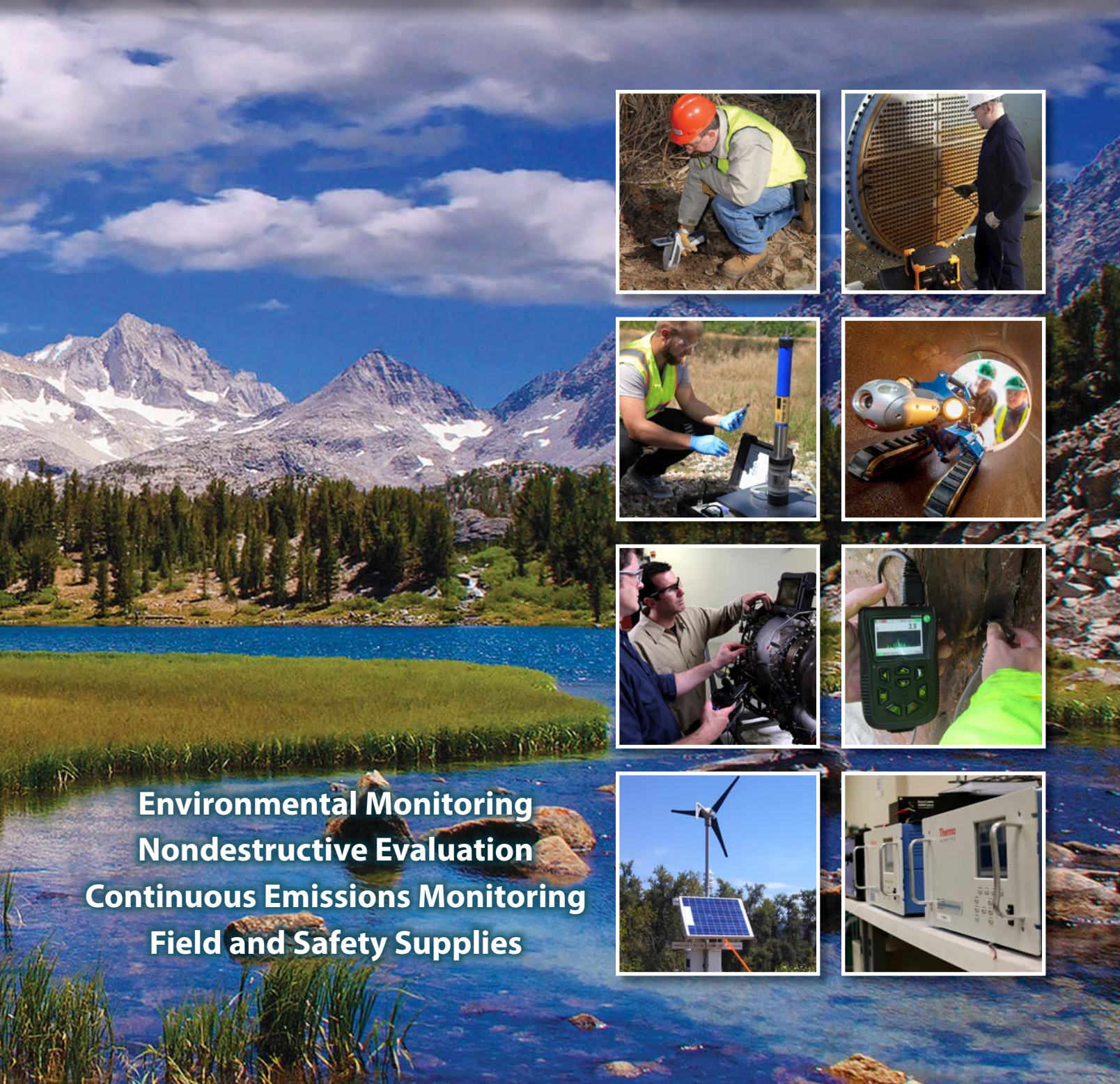
Rentals | Sales
Supplies | Services

Environmental Monitoring
Nondestructive Evaluation
Continuous Emissions Monitoring
Field and Safety Supplies

pine-environmental.com

Building Our Presence Across North America . . .

Corporate Headquarters
New Jersey - Windsor
Windsor Industrial Park
92 North Main St., Bldg. 20, Windsor, NJ 08561
Toll-Free: 800-301-9663
Local: 609-371-9663 / Fax: 609-371-1663

Arizona - Phoenix
3001 S. 35th Street, Suite C-11, Phoenix, AZ 85034
Local: 602-603-5995

California - Irvine
11397 Slater Avenue, Fountain Valley, CA 92708
Local: 949-263-1500 / Fax: 949-263-1503

California - San Diego
8940 Activity Rd., Suite G, San Diego, CA 92126
Local: 858-368-9197 / Fax: 858-368-9337

California - Oakland
2375 Lincoln Ave., Bldg. 7, Hayward, CA 94545
Local: 510-732-6591 / Fax: 510-746-7916

Colorado - Denver
7332 S. Alton Way, Bldg. 13, Ste. E
Centennial, CO 80112
Local: 303-741-3800 / Fax: 303-741-3804

Connecticut - Hartford
22 Prestige Park Circle, East Hartford, CT 06108
Local: 860-206-1139 / Fax: 860-519-1629

Florida - Fort Lauderdale
3600 Hacienda Blvd, Ste. C
Fort Lauderdale, FL 33314
Local: 954-533-0242 / Fax: 954-900-5170

Florida - Tampa
3901 Coconut Palm Dr, Suite 107, Tampa, FL 33619
Local: 813-620-1001

Georgia - Atlanta (ENV)
1790 Corporate Dr., Ste. 300, Norcross GA 30093
Local: 770-925-2855 / Fax: 770-925-2811

Georgia - Atlanta (NDT)
1790 Corporate Dr., Ste. 300, Norcross GA 30093
Local: 770-427-8533 / Fax: 770-427-8558

Illinois - Chicago (CEMS & ENV)
1153 N. Main St., Lombard, IL 60148
Local ENV Office: 847-718-1246
Local CEMS Office: 847-631-0002

Indiana - Indianapolis
7136 Zionsville Rd., Indianapolis, IN 46268
Local: 317-238-3441 / Fax: 317-388-1124

Louisiana - Baton Rouge
14141 Airline Hywy., Bldg. 4, Baton Rouge, LA 70817
Local: 225-610-1270 / Fax: 225-753-1331

Maine - Portland
29 Washington Ave, Unit A, Scarborough, ME 04074
Local: 207-885-9100 / Fax: 207-885-9112

Maryland - Baltimore
798 Cromwell Park Drive, Suite R/S,
Glen Burnie, MD 21061
Local: 410-595-6086 / Fax: 410-846-5365

Massachusetts - Boston
24 Tower Office Park, Woburn, MA 01801
Local: 781-932-9698 / Fax: 781-932-9729

Missouri - St. Louis
11669 Lilburn Park Rd., St. Louis, MO 63146
Local: 314-344-1079 / Fax: 314-344-5074

New York - Long Island
128 Charlotte Avenue, Hicksville, NY 11801
Local: 516-284-1339

New York - Rochester
1057 East Henrietta Rd., Rochester, NY 14623
Local: 585-424-2140 / Fax: 585-424-2166

New York - Syracuse
405 Cambridge Ave., Syracuse, NY 13208
Local: 315-455-5100 / Fax: 315-455-5130

North Carolina - Raleigh
530 Pylon Drive, Raleigh, NC 27606
Local: 919-713-0008 / Fax: 315-455-5130

Ohio - Cleveland
5170 Hudson Dr., Ste. E, Hudson, OH 44236
Local: 330-650-3571 / Fax: 330-650-3581

Pennsylvania - Philadelphia
780 5th Ave., Suite 110, King of Prussia, PA 19406
Local: 484-690-1019

Pennsylvania - Pittsburgh
902 Parkway View Dr., Pittsburgh, PA 15205
Local: 412-788-2724 / Fax: 412-788-2748

Tennessee - Knoxville
10521 Research Dr., Suite 102, Knoxville, TN 37932
Local: 865-777-1418 / Fax: 864-777-1404

Texas - Austin
2201 Denton Dr., Ste. 100, Austin, TX 78758
Local: 512-362- 6222 / Fax: 713-981-7466

Texas - Corpus Christi
2209 North Padre Island Drive, Suite I
Corpus Christi, TX 78408
Local: 361-360-3233 / Fax: 713-981-7466

Texas - Dallas
440 Wrangler Drive, Suite 200, Coppell, TX 75019
Local: 469-586-5918 / Fax: 469-533-0520

Texas - Deer Park (NDT)
101 Center St., Deer Park, TX 77536
Local: 281-991-1448 / Fax: 713-981-7466

Texas - Houston (ENV)
3130 Rogerdale Rd, Ste. 120 Houston, TX 77042
Local: 713-331-3924 / Fax: 713-981-7466

Virginia - Richmond
2225 Tomlynn St., Richmond, VA 23230
Local: 804-353-9272 / Fax: 804-353-9276

Washington - Seattle
3225 South 116th St., Building 1 Suite 181
Tukwila, WA 98168
Local: 425-285-9102 / Fax: 425-896-7487
....

Alberta - Edmonton
4911-99 St., Edmonton, AB T6E 4Y1
Local: 780-643-2680 / Fax: 780-468-3050

British Columbia - Vancouver
5069 Beresford St., Burnaby, BC V5J 1H8
Local: 604-678-8300 / Fax: 604-678-8302

Ontario - Ottawa
159 Colonnade Rd., Unit 4, Nepean, ON K2E 7J4
Local: 343-882-1470

Ontario - Toronto
6580 Kestrel Rd., Mississauga, ON L5T 1Z9
Local: 905-795-9700 / Fax: 905-795-0002

**Pine has branch locations across
North America to serve you**

Dear Valued Customer,

Since we started Pine Environmental Services in 1995, our company mission has remained consistent:

To be the most trusted source for rental equipment, supplies and support providing expertise and solutions from a team dedicated to exceeding our customers' expectations.

Since 1995, we've had the honor to support thousands of customers across the United States, Canada and beyond with the equipment and supplies necessary to complete their work successfully. Our company continues to remain focused on building long-lasting customer relationships by understanding your business needs, providing quality equipment and supplies, and delivering industry-leading service.

We invest millions of dollars each year into new equipment to provide you with the equipment quality and availability you expect. Our extensive equipment offering is cleaned, calibrated and maintained to factory specifications by local Pine technicians every day. The manufacturing relationships we've built over the years enable Pine to offer our customers new technologies and customer solutions better than anyone in the industry.

We're very proud of our professional office staffs, company-operated delivery fleet and other resources we make available to provide you the very best customer service in the industry. Our integrated network of over 38 offices across North America is ready and capable to support you wherever your project work takes you.

Please take the opportunity to explore our extensive offering of equipment and supplies in our new Pine Environmental Services catalog. We remain committed to being your trusted Equipment Supply and Support People!

Angelo Pinheiro   William Keresey
Founder   Chief Executive Officer

The Pine Advantage

Pine Environmental Services is the industry leader providing Environmental Monitoring, Non-Destructive Evaluation, and Continuous Emissions Monitoring rental equipment, supplies and services. We are committed to helping our customers increase their productivity and reduce the total costs involved with completing their work.

Since 1995, Pine has built the following unique capabilities and resources we call *The Pine Advantage* to best serve our many thousands of customers:

39 Offices Across North America
Pine has built the industry's largest network of offices in the United States and Canada. The company has more than three times the number of offices across North America than its closest competitor.

Broad Equipment Offering and Availability
Pine invests millions of dollars each year into new equipment to provide its customers locally with the largest selection of rental equipment and new technologies.

Complimentary Delivery and Pick-Up
The company has invested in over 130 company operated vehicles across the United States and Canada to provide the most timely and reliable delivery of equipment and supplies to its customers.

Local Technical Support and Training
Pine's local Office Managers, Technical Sales Representatives and Technicians are experienced and driven to provide you and your organization with the best technical support and training.

We're committed to further building up upon Pine's competitive advantages and continuing to deliver *The Pine Advantage* to all of our customers locally across the United States and Canada.

39 Branch Locations Across North America

Broad Equipment Offering & Availability

Timely & Local Delivery & Pick-Up

Technical Support & Equipment Training

Emergency Support 24/7/365

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REFERENCE GUIDE & CHARTS

ENVIRONMENTAL MONITORING

RAE Systems MiniRAE 3000-PGM 7320

Item # 51238

- Third generation patented PID technology
- Highly accurate VOC measurement
- LED backlight for enhanced display readability
- Low maintenance - easy access to lamp and sensor
- 95 dB alarm at 12" buzzer and flashing red LED to indicate exceeded preset limits
- Two-point or three-point calibration for zero and span
- IP-67 waterproof design

Sensors:	Photoionization sensor with 10.6 eV or optional 9.8 eV or 11.7 eV UV lamp
Range:	0-15,000 ppm
Resolution:	0.1 ppm (0-999.9 ppm), 1 ppm (1,000-15,000 ppm)
Response:	3 seconds
Sample Rate:	500 cc/min, 100' horizontally or vertically
Power:	Rechargeable, external, field-replaceable lithium-ion battery pack
Run Time:	16 hrs

RAE Systems MiniRAE 2000-PGM 7600

Item # 51237

- Patented sensor sets a new standard for resistance to moisture and dirt
- VOC measurement to more chemicals than any PID
- Easy-to-read display with backlight
- 90 dB alarm buzzer and flashing red LED to indicate exceeded preset limits
- Two-point field calibration of zero and standard reference gas
- Over 300 built-in correction factors
- Rugged rubber boot

Sensors:	Photoionization sensor with 10.6 eV or optional 9.8 eV or 11.7 eV UV lamp
Range:	0-10,000 ppm
Resolution:	0.1 ppm (0 to 99.9 ppm), 1 ppm (100 to 10,000 ppm)
Response:	3 seconds
Sample Rate:	450 - 550 cc/min, 100' horizontally or vertically
Power:	Rechargeable, external, field-replaceable NiMH battery pack
Run Time:	10 hrs

RAE Systems ToxiRAE PRO PID-PGM 1800

Item # 50148

- World's smallest wireless personal monitor
- Quickly detects and accurately monitors over 300 VOC's
- Largest graphical display in its class with white LED backlighting
- Wireless access to real-time instrument readings and alarm status from any location
- Wireless remote alarm notification
- Automatic calibration with AutoRAE 2 Test and Calibration System or manual
- On-board correction factor library for 190 compounds

Sensors:	Over 20 intelligent interchangeable field-replaceable electrochemical sensors
Range:	0.1-2,000 ppm (Industrial Hygiene configuration), 1-1,000 ppm (Safety Configuration)
Response:	15 seconds
Sample Rate:	Internal fan
Power:	Rechargeable lithium-ion battery
Run Time:	12 hrs (normal operation, non-wireless)
Datalogging:	Continuous datalogging with a 3-month capacity (at one-minute intervals)

RAE Systems ppbRAE 3000-PGM 7340

Item # 51242

- Most advanced handheld VOC monitor available for parts-per-billion detection
- Comprehensive VOC gas monitor and datalogger for hazardous environments
- Large display presents gas type, correction factor and concentration
- Real-time wireless data transmission through built-in Bluetooth and RAElink3 link
- 95 dB alarm buzzer and flashing red LED to indicate exceeded preset limits
- Two-point or three-point calibration for zero and span

Sensors:	Photoionization sensor with 10.6 eV or optional 9.8 eV lamp
Range:	Extended range from 1 ppb - 10,000 ppm
Resolution:	1 ppb (0-9,999 ppb), 0.01 ppm (10-99 ppm), 0.1 ppm (100-999 ppm), 1 ppm (1,000-9,999 ppm)
Response:	3 seconds
Sample Rate:	500 cc/mn, 100' horizontally and vertically
Power:	Rechargeable, external field-replaceable lithium-ion battery pack

RAE Systems ppbRAE Plus-PGM 7240
Item # 51241

- Patented dual-channel 3D sensor sets a new standard for resistance to moisture and dirt
- True ppb detection for applications from Indoor Air Quality to HazMat/Homeland Security
- Easy-to-read display with backlight
- Download data and upload instrument set-up from PC through RS-232 link to serial port
- 90dB alarm buzzer and flashing red LED to indicate exceeded preset limits
- Two-point field calibration of zero and standard reference gas

Sensors:	Patented, planar, dual-channel, photoionization sensor with super-bright 10.6 eV lamp
Range:	Extended range from 1 ppb-2,000 ppm
Resolution:	1 ppb (0-9,999 ppb), 0.1 ppm (10.0-99.9 ppm), 1 ppm (100-2,000 ppm)
Response:	5 seconds
Sample Rate:	400 cc/mn, 100' horizontally and vertically
Power:	Rechargeable, external, field replaceable NiMH battery pack

RAE Systems UltraRAE 3000-PGM-7360
Item # 51246

- Most advanced Compound-Specific Monitor on the market
- Versatile VOC or Benzene-Specific modes
- Large graphic display
- Download data and upload instrument setup from PC through charging cradle
- 95 dB alarm buzzer and flashing red LCD to indicate exceeded preset limits
- 2-point or 3-point calibration from zero to span

Sensors:	Photoionization sensor with standard 9.8 eV or optional 10.6 eV or 11.7 eV lamps
Range:	0.05-10,000 ppm (VOC mode), 50 ppb-200 ppm (benzene-specific mode)
Resolution:	0.025 ppm (0-99.99 ppm), 0.1 ppm (100-999.9 ppm), 1 ppm (1,000-9,999 ppm)
Response:	3 seconds
Sample Rate:	400 cc/mn, 100' horizontally and vertically
Power:	Rechargeable, external field-replaceable lithium-ion battery pack

RAE Systems UltraRAE-PGM 7200
Item # 51244

- The only compound-specific monitor with combination of interchangeable separation tubes and PID
- Ideal for confined space entry pre-screening during refinery and plant maintenance, hazmat material response, marine spill response and refinery down-stream monitoring
- Large LCD, manual and alarm-activated back light
- Download data to PC and upload instrument setup from PC through RS-232 link to serial port on PC
- 90 dB alarm buzzer and flashing LED to indicate exceeded preset limits

Sensors:	Photoionization detector with vacuum UV lamp
Range:	0-2,000 ppm (VOC), 0-200 ppm (Benzene), 0-200 ppm (Halocarbons), 0-200 ppm (Butadiene)
Resolution:	0.1 ppm (0-99 pppm), 1.0 ppm (100-2,000 ppm)
Response:	75 seconds
Sample Rate:	Internal pump with 400 cc/mn flow rate with VOC tube
Power:	Rechargeable snap-in, field-replaceable NiMH battery pack

Ion Science PhoCheck TIGER
Item # 51255

- Patented fence electrode technology
- Dynamic range for specific volatiles
- Bright LED and vibration alarms
- Easy USB connection
- Flashing LED alarm and 95 dBA at 300mm (12") audible sounder
- Standard calibration 100 ppm isobutylene
- Rugged design with protective, removable rubber boot
- Designed to IP65 (heavy rain) and intrinsically safe

Sensors:	10.6 eV Krypton PID lamp (standard) 10.0 eV and 11.7eV lamps available
Range:	Dynamic range ppb to 20,000 ppm
Resolution:	1 ppb or 0.001 mg/m3
Response:	2 seconds
Sample Rate:	220 ml/min with flow fail alarm
Power:	Lithium-ion battery
Run Time:	24 hrs
Datalogging:	Durable USB 1.1 connection

Ask About Our Rental Protection Plan (RPP)

Photovac MicroFID

- Designed for field use in a self-contained single hand-held package
- Accurate, reliable detection of VOC's
- 2-line, 16-character LCD with alphanumeric readout
- Special TUTOR key prompts end user through basic operation
- Audible alarm
- Simple two-step calibration holds for a full workday

Sensors:	High sensitivity flame ionization detector
Range:	0.5-50,000 ppm
Response:	3 seconds
Power:	Detachable battery pack
Run Time:	15 hrs
Datalogging:	Download data to a PC using Windows HyperTerminal and any Windows-based software package can be used for data management

Thermo Scientific TVA 2020 PID/FID

Item # 54773

- The FID technology allows for a wide dynamic and linear range that produces stable and repeatable responses
- Capable of detecting virtually all organic and inorganic compounds
- Bluetooth enabled
- Set different alarm levels
- Lightweight and compact design reduces fatigue for true portability and is easier to service in the field

Sensors:	PID and FID capable
Range:	FID Instrument - 1.0-30,000 ppm of methane, PID Instrument - 0.5-2,000 ppm of isobutylene
Resolution:	FID Instrument - ±10% of reading or ±1.0 ppm, whichever is greater, from 1.0 to 10,000 ppm, PID Instrument - ±20 % of reading or ±0.5 ppm, whichever is greater, from 0.5-500 ppm
Response:	PID Instrument - less than 3.5 seconds for 90% of final value, using 500 ppm of isobutylene, FID Instrument - less than 3.5 seconds for 90% of final value, using 10,000 ppm of methane

Thermo Scientific TVA 1000B PID/FID

Item # 51126

- One of the few organic vapor analyzers that have a model with dual PID/FID measurement capability

Sensors:	PID and FID capable
Range:	Dynamic Range: 1-2000 ppm Minimum Detectable Level: 100 ppb benzene, Flame Ionization Dynamic Range: 0-50,000 ppm Minimum Detectable Level: 300 ppb hexane
Response:	3.5 seconds
Power:	Rechargeable Ni-Cd battery
Run Time:	8 hrs

Thermo Scientific TVA 1000B FID only

Item # 51125

- The only portable, dual Flame Ionization Detector (FID) and Photo Ionization Detector (PID) analyzer
- Detects organic and inorganic compounds
- 4-character LCD screen to display measurement values
- Low, high, STEL alarm
- Intrinsically safe

Sensors:	Simultaneous FID/PID or Single FID detector(s)
Range:	Dyanmic - 0.5-2,000 ppm (PID) isobutylene; 0.5-50,000 ppm (FID) methane, Linear - 0.5-500 ppm (PID) isobutylene; 0.5-10,000 ppm (FID) methane
Resolution:	FID= 25% of reading or 2.5ppm, whichever is greater from 1.0-10,000ppm; PID= 25% of reading or 2.5ppm. whichever is greater from 0.5-500ppm
Response:	3.5 seconds
Power:	Rechargeable Ni-Cd battery

RAE Systems MultiRAE-PGM 6228

- Most advanced portable chemical detector on the market
- For use in industrial hygiene, personal protection and leak detection in industries such as aviation (wing tank entry), chemical environmental, oil & gas, pharamceutical, shipping/marine, hazmat response and clandestine drug labs
- Largest display in its class
- Wireless 95 dB remote alarm notification with flashing bright red LED's and on-screen indication of alarm conditions

Sensors:	25 intelligent interchangeable field-replaceable sensorsincluding PID for VOCs, electrochemical sensorsfor toxic gases and oxygen,combustible LEL and NDIR sensors, and CO2 NDIR sensor
Range:	0-5,000 ppm (PID sensor)
Resolution:	0.1 ppm (PID sensor)
Sample Rate:	Built-in pump. Average flow rate: 250 cc/min. Auto shutoff in low-flow conditions
Power:	Rechargeable lithium-ion battery
Run Time:	12 hrs

RAE Systems MultiRAE Lite-PGM 6208

- Broadest selection of sensor options in its class
- PID for VOC's, NDIR and catalytic for combustibles, and NDIR for CO2
- Monochrome graphicalLCD display(128 x 160)with backlighting. Automaticscreen "flip"feature
- Wireless 95 dB remote alarm notification with vibration, visible (flashing bright red LEDs) and on-screen indication of alarm conditions
- Automatic calibration with AutoRAE 2 Test and Calibration System3 or manual
- Correction factor included in display readout

Sensors:	25 interchangeable sensor options
Range:	0 -10,000 ppm (PID sensor)
Resolution:	1 ppm (PID sensor)
Sample Rate:	Built-in pump or diffusion
Power:	Rechargeable lithium-ion battery
Run Time:	12 hrs
Datalogging:	Continuous datalogging (6 monthsfor 5 sensors at 1-minute intervals, 24/7) - User-configurable datalogging intervals(-from 1 to 3,600 seconds)

Ask About Our Rental Protection Plan (RPP)

RAE Systems MultiRAE Plus-PGM 50

- Combines a PID with the standard 4 gases of a confined space monitor
- Ideal for HazMat/Homeland Security, confined space entry, environmental, industrial hygiene and plant & health safety
- Easy-to-read display with backlight
- Loud audible alarm that varies for different alarm conditions and an optional external vibration alarm for noisy areas
- Two-point field calibration for zero span gas
- Over 60 correction factors built in

Sensors:	Up to 5 sensors including PID detector for VOC's (10.6 eV lamp standard), protected catalytic bead for combustible gases and interchangeable electrochemical sensors for oxygen and toxic gases (2)
Range:	0-200, 200-2,000 ppm (VOC's)
Resolution:	0.1 and 1 ppm (VOC's)
Sample Rate:	Low: ~ 150 cc/min, High: ~ 250 cc/min
Power:	Interchangeable lithium-ion and alkaline battery packs
Run Time:	14 hrs

RAE Systems MultiRAE IR-PGM 54

- Patented non-dispersive infrared (NDIR) sensor
- Accurate measurement of VOC's for indoor air quality, beverage & brewery, food industry, hospitals and respirable breathing-air testing
- Easy-to-read display with backlight
- 90 dB buzzer and flashing red LED to indicate exceeded preset limits
- Two-point field calibration for zero and span gas
- Over 60 built-in correction factors
- Rugged rubber boot

Sensors:	Up to 5 sensors including non-dispersive infrared sensor for CO2, protected catalytic bead for combustible gas, interchangeable electrochemical sensors for oxygen and toxi gases and PID for VOC's (10.6 eV, 9.8 eV and 11.7 eV lamps)
Range:	0-20,000 ppm (CO2), 0-2,000 ppm (VOC's at 0.1 ppm resolution)
Sample Rate:	Internal pump with user selectable flow rate: High: ~ 250 cc/min, Low: ~150 cc/min

RAE Systems VRAE-PGM 7800

- Wide variety of interchangeable sensors
- For use in refineries and petrochemical plants, pulp and paper mills, utility cable vaults, transformer stations, waste-water treatment plants, landfill operations and fire service
- Large backlit LCD display
- 90 dB buzzer and flashing red LED to indicate exceeded preset alarms
- Two-point field calibration of zero and span gas
- Rugged proof weather-proof case

Sensors:	Catalytic sensor for combustible gas, thermal conductivity sensor for percentage volume combustible gas and electrochemical sensors for oxygen and toxic gases
Response:	Internal pump for quick response and simple remote sampling
Sample Rate:	400 cc/min with automatic shut off at low flow conditions
Power:	Rechargeable, snap-in, field replaceable 4.8V/1250 mAh, NiMH battery pack, 4 AA battery adapter

RAE Systems QRAE III-PGM 2500

- Fully featured compact 4-gas monitor
- Ideal for confined space entry
- Large graphical display icon-driven user interface through intuitive, simple-to-operate two-button user interface
- Multi-tone 95dB buzzer (at 11.8"/ 30 cm, typical),vibration alarm, and flashing red LEDs and on-screen indication of alarm conditions
- Two-point calibration for zero and span (manual, or automatic with AutoRAE 2)
- Built-in correction factor library

Sensors:	Up to four replaceable sensors: LEL: catalytic bead for combustibles, oxygen: liquid electrolyte O2, electrochemical-sensor for toxics
Sample Rate:	Built-in pump or diffusion can sample through tubing up to 98ft (30m)
Power:	Rechargeable lithium-ion battery
Run Time:	14 hrs continuous non-wireless, diffusion, 11 hrs continuous non-wireless, pumped, 10 hrs continuous with wireless, diffusion, 8 hrs continuous with wireless, pumped

RAE Systems QRAE II-PGM 2400

- Fully featured compact 4-gas monitor
- Ideal for confined space entry
- Large graphic display can be flipped 180º with a push of a button for convenient viewing from belt or hand
- 95dB alarm with vibration and flashing red LED
- Two-point calibration for zero and span (manual, or automatic with the AutoRAE Lite)
- Rugged housing
- Best EMI/RFI immunity technology, minimizing electro magnetic and radio interference

Sensors:	Catalytic bead for combustibles, oxygen: SPE O2 ™ (non-consumable Solid Polymer Electrolyte technology) and toxic: electrochemical for H2S or CO
Range:	0-30% (oxygen), 0-100% (combustible), 0-1,000 ppm (carbon monoxide), 0-100 ppm (hydrogen sulfide)
Resolution:	0.1% (oxygen), 1% (LEL), 1 ppm (carbon monoxide), 0.1 ppm (hydrogen sulfide)
Sample Rate:	300 cc/min
Power:	Lithium-ion or alkaline battery packs

RAE Systems QRAE Plus-PGM 2000

- One to four plug-in "smart" sensors including combustibles, oxygen, hydrogen sulfide and carbon monoxide
- Perfect for confined space entry, refineries and petro chemical plants, power plants, pulp and paper industry and steel mills
- 2 line, 16 digit LCD with LED back light automatically in dim light or alarm condition
- 95 dB alarm with flashing red LED to indicate exceeded preset limits
- Two-point calibration for zero and span, userselectable three-point calibration for oxygen

Sensors:	Combustible: Protected dual-mode catalytic bead, oxygen: electrochemical fuel-cell, toxic: interchangeable electrochemical for CO, H2S, SO2, NO, NO2, CI2, HCN, NH3, and PH3
Range:	0-30% (oxygen), 0-100% LEL (combustible), 0-500 ppm (carbon monoxide), 0-100 ppm (hydrogen sulfide), 0-20.0 ppm (sulfur dioxide), 0-250 ppm (nitric oxide), 0-20.0 ppm (nitrogen dioxide), 0-10.0 ppm (chlorine), 0-100 ppm (hydrogen cyanide), 0-50 ppm (ammonia), 0-5.0 ppm (phosphine)

RAE Systems QRAE-PGM 50

- One to four sensor capability
- Ideal for confined space entry, waste water treatment plants, shipyard and maritime confined spaces, land-fill operations, sewers and manholes, refineries and power plants to name a few
- Large, simple-to-use buttons operable with 3 layers of gloves
- Audible and visual alarm
- Water and dust resistant case to withstand harsh environments

Sensors:	Four Sensors (oxygen, combustible, hydrogen sulfide and carbon monoxide), electrochemical sensors for toxic gases and oxygen, catalytic sensors for combustible gases
Range:	LEL 0-100% 1% 15 sec, O2 0-30% 0.1% 15 sec, CO 0-500ppm 1ppm 20 sec, H2S 0-100 ppm 1ppm 30 sec
Sample Rate:	Internal integrated with 250 cc/min flow rate (high setting)
Power:	Rechargeable 4.8V/1100 mAh lithium ion or 4.8V/1700 mAh Ni-Cd battery pack

RKI GX-6000

- Monitor up to 6 different gases
- Handles confined space entry, hazmat response teams, arson investigation, remediation sites, perimeter monitoring, leak detection, landfill monitoring, leak detection, landfill monitoring and wing tank entry
- Digital LCD, autobacklite, peak bar display, auto display rotation, and customize order of gases
- 95 dB alarm at 1 ft.
- Lightweight, small, rugged IP-67 design

Sensors:	2 smart sensor slots auto recognize PID, IR and super toxic sensors
Sample Rate:	Flow rate of 0.45 lpm (50' sample range)
Power:	Interchangeable battery packs Li-ion alkaline
Run Time:	14 hrs
Datalogging:	Interval, alarm trend, station and user ID

RKI GX-2009

- For use in personal monitoring, confined spaces, refineries/petrochemical, utilities, oil & gas, water/ wastewater, fire services and construction
- Large LCD display screen
- 3 visual alarm LED's
- Calibration and bump test lock out or reminder controls
- IP-67 water resistant/dustproof design
- RFI resistant

Range:	0 ~ 100% LEL (1% LEL) (combustible gaes), 0 ~ 40.0% Vol. (0.1% Vol.) (oxygen), 0 ~ 100.0 ppm (0.5 ppm) hydrogen sulfide and 0 ~ 500 ppm (1 ppm) carbon monoxide
Response:	Within 30 seconds (T90)
Power:	NiMH batteries
Run Time:	20 hrs
Datalogging:	3600 data point capacity and stores up to 100 calibration records

RKI Eagle II

- Monitors up to 6 different gases
- PPM, % LEL or % vol. auto-ranging combustible detection
- 3 display modes: display all gases, large font-autoscroll, or large font-manual scroll. Polyurethane protected overlay. Backlight, illuminates for alarms and by demand, with adjustable time.
- 2 alarms per channel plus TWA and STEL alarms for toxics. The two alarms are fully adjustable for levels, latching or self reset, and silenceable.
- Auto and single gas calibration

Sensors:	Specialty sensors - PID, infrared, thermal conductivity, smart toxic, plug and play sensors
Range:	125'
Response:	30 seconds to 90% (for most gases) using standard 5 ft. hose
Sample Rate:	Flow rate approximately 2.0 SCFH
Power:	Alkaline or NiMH batteries
Run Time:	16 hrs (alkaline) or 18 hrs (NiMH)
Datalogging:	Datalogging standard

RKI Eagle

- Simultaneous detection of up to 6 different gases
- Over 400 gas monitoring configurations
- 4 x 20 LCD readout. Viewed through window in case top. Displays readings & status of 4 channels simultaneously. Backlight, automatic for alarms and by demand with adjustable time.
- Auto calibration / single gas calibration
- Intrinsically safe design, CSA (C / US) & UL classified
- Ergonomic RFI / EMI chemical / weather resistant enclosure

Sensors:	IR Sensors available for CO2, % LEL CH4 or HC, % volume CH4 or HC
Range:	Powerful long-life pump up to 125' range with filters
Response:	30 Seconds to 90% (most gases) using standard 5 ft hose
Sample Rate:	Powerful, long-life pump (over 6,000 hrs) can draw samples over 125 feet. Flow rate approximately 2.0 SCFH.
Power:	4 Alkaline or Ni-Cad, size D batteries
Datalogging:	Datalogging option

Honeywell BW MicroClip XT/XL 4 Gas

- Simple one-button operation for the ultimate ease of use significantly reduces training times
- Protection from atmospheric hazards
- Continuous LCD show real-time gas concentrations
- 95 dB visual, vibrating audible alarm
- Simple automatic calibration procedure; compatible with BW MicroDock II automatic test and calibration station
- Built-in concussion-proof boot

Sensors:	Detect H2S, CO, O2 and LEL
Range:	0-100 ppm (H2S), 0-500 ppm (CO), 0-30.0% (O2), 0-100% LEL/0-5.0% v/v (combustible gases)
Resolution:	1 ppm (H2S), 1 ppm (CO), 0.1% (O2), 1%/0.1% (combustible gases)
Power:	Lithium polymer battery
Run Time:	10 hrs

MSA Altair 5 Multigas Detector

- XCell sensor technology and PID option
- VOC detection for industrial hygiene, HazMat and specialized detection applications
- High-contrast monochrome or color display
- InstantAlert feature provides manual alarm to alert others as to a potentially hazardous situation
- Span calibration time of 60 seconds for most common sensor configurations
- Durable, rubberized housing for secure grip

Sensors:	Extended life sensors do not need replacement after 2 years
Response:	15 seconds
Power:	Rechargeable Li-ION or AA alkaline
Run Time:	20 hrs at room temperature

MSA Altair 4/4X Multigas Detector

- Built upon years of sensor design experience for im proved performance
- Ideal for oil, gas and petrochemical, pharmaceutical, chemical, confined spaces, fire service, utilities and telecommunications, municipal works/ waste water and mining
- High contrast LCD display
- 95 dB alarm with four ultra-bright LED's on top and bottom
- 60-second span calibration time

Sensors:	MSA XCell combustible, CO/H2S and oxygen sensor
Range:	0-100% (LEL), 0-30% vol (O2), 0-1,999 ppm (CO), 0-200 ppm (H2S)
Resolution:	1% (LEL), 0.1% vol (O2), 1 ppm (CO), 1 ppm (H2S)
Response:	15 seconds
Power:	Rechargeable li-polymer
Run Time:	24 hrs at room temperature

MSA Sirius Multigas Detector

- Powered by a proprietary MSA sensor design
- Readings for combustible gases, VOCs (if activated), CO, O2, and H2S
- LCD display with large, easy-to-read characters
- 90 dB and visual alarm with bright flashing LED's
- Autocalibration and compatibility with MSA's Galaxy Test System

Sensors:	Proprietary PID sensor (four gas detector) 9.8 eV and 10.6 eV lamps available
Range:	0-100% LEL (combustible), 0-25% vol (oxygen), 0-500 ppm (carbon monoxide), 0-200 ppm (hydrogen sulfide), 0-200 (VOC), 200-2000 (VOC), 0-9900 ppb (VOC - optional)
Power:	Interchangeable lithium-ion and alkaline battery packs
Datalogging:	Record & store data for an average of (16 hrs min) (with 5 channels at 3-min intervals) without ovewriting existing data

Bascom-Turner Gas Explorer

- Now with electronic leak sheets
- Designed to test ambient air and flue gas over a wide temperature range
- Automatic storage of calibration data from the last 24 calibrations
- High-impact, ergonomic case weighing only 24 oz
- Intrinsically safe (class 1, division 1, groups C, D)

Sensors:	Methane (dual CC/TC), Oxygen (electrochemical), CO (electrochemical), H2S (electrochemical)
Resolution:	Track gas: 20 ppm (0-40,000 ppm), monitor: 0.05% volume (0-5%), monitor: 1.0% volume (5-100%), CO: 1 ppm, H2S: 1 ppm
Power:	Two C alkaline or NiMH rechargeable batteries
Run Time:	10-12 hrs
Datalogging:	Automatic, time & mode stamped, 2-3 months readings data, 1 month GPS data

Ask About Our Rental Protection Plan (RPP)

RAE Systems AreaRAE / Steel - PGM 5020
Item # 55393

- Ability to view real-time sensor data and alarm status
- Ideal for Hazmat and emergency response, refineries and petrochemical plants, power plants, pulp and paper industry, plant and mill turnarounds, marine and offshore wells
- 2-line, 16-digit LCD display with manually activated LED backlight
- Two-point field calibration for fresh air and standard reference gas
- Rugged, stainless steel housing

Sensors:	Up to five sensors (O2, combustible, two toxic and VOC), electrochemical sensors for toxic gases and oxygen, photoionization detector for VOC, catalytic combustion sensor for combustible gases
Sample Rate:	Internal integrated diaphragm pump with programmable High (400cc/min) and Low (300cc/min) flow rate settings
Range:	2 miles
Power:	Rechargeable, 7.4V/4.5Ah,Lithium-ion battery pack with built-in charger or a 6 C-size alkaline battery pack

RAE Systems RAELink 3
Item # 55057

- Wireless with integrated global positioning system
- Can be used for incident response, venue protection, industrial safety, permiter monitoring, confined space entry, pulp and paper industry, plant turnarounds, marine and offshore wells
- LCD display, 128 x 64
- Shock resistant and weatherproof

Range:	2 miles
Power:	Rechargeable, 7.4V/1650mAh, Lithium-ion external battery pack with charging station (6 hour charging time), and alkaline adapter (5 x AA)
Run Time:	18 hrs

RAE Systems RAELink 2
Item # 54992

- Real-time communication and display of information about hazardous materials and radiation
- For use in industrial safety, fire department and HazMat, indoor air quality monitoring, confined space entry, fenceline monitoring, venue protection, law enforcement

Range:	2 miles
Power:	Rechargeable, 7.4V/1.8Ah, Lithium-ion battery pack with built-in charger (less than 10 hrs charge time)
Run Time:	24 hrs

RAE Systems ToxiRAE PRO - PGM 1820
Item

- For use in agriculture, chemical, fire service/HazMat, food & beverage, oil & gas, pharmaceutical, pulp and paper, steel manufacturing and water & wastewater industries
- Largest display in its class
- Wireless access to real-time instrument readings and alarm status from any location
- 95 dB alarm with vibration and fashing bright red LED's
- Automatic with AutoRAE 2 Test and Calibration System or manual
- Dust and water resistant

Range:	0-100 ppm (NH3), 0-500 ppm (CO), 0-50 ppm (Cl2), 0-1 ppm (ClO2)
Resolution:	1 ppm (NH3), 1 ppm (CO), 0.1 ppm (Cl2), 0.03 ppm (ClO2)
Power:	Rechargeable Li-ion battery
Run Time:	30 hours
Datalogging:	Continuous datalogging with a three-month capacity(at one-minute intervals) - User-configurable datalogging interval (from 1 to 3,600 seconds)

RAE Systems ToxiRAE 3 - PGM 1700

Item # 50123

- Ideal for emergency response, environmental, fire service, industrial safety and oil & gas
- Large easy-to-read display and user-configurable display (concentration or days remaining)
- 95 dB alarm with buzzer and flashing red LED to indicate exceeded preset limits
- Two-point calibration for zero and span
- Rugged dust-tight and waterproof housing for harsh environments

Range:	0-100 ppm (H2S), 0 - 500 ppm (CO), 0-1,999 ppm (CO)
Resolution:	0.1 ppm (H2S), 1 ppm (CO)
Response:	T90 < 12 seconds
Power:	User-replaceable 2/3 AA high-capacity lithium
Datalogging:	10 events
Sensors:	High-performance, 3-electrode, pinless micro sensor

RAE Systems ToxiRAE II - PGM 1100

Item # 51143

- Suits a wide variety of applications including oil & gas, chemical plants, fire service, industrial safety, pulp and paper, waste-water treaments plants, landfill operations, power plants and steel mills
- Easy-to-read LCD continuously displays gas concentration and text messages
- Audible 90 dB alarm with visible bright red / green LED bar visible from the top, front and sides
- Two-point field calibration
- Rugged water and dust resistant housing

Range:	0-50 ppm (gas monitor), 0-500 ppm (CO), 0-1999 (CO), 0-10 (Cl2), 0-1 (ClO2), 0-100 (HCN), 0-100 (H2S), 0-250 (NO), 0-20 (NO2), 0-30% (O2), 0-5 (PH3), 0-20 (SO2)
Resolution:	1 (NH3, CO, HCN, H2S, NO), 10 (CO), 0.1 (Cl2, NO2, SO2), 0.01 (ClO2, PH3),
Power:	User-replaceable 2/3 AA high-capacity lithium battery (use only RAE Systems batteries)
Run Time:	2 years typical battery life when used 8 hrs/day with less than 5 minutes of alarms per day

RAE Systems DoseRAE 2

Item # 54687

- For use in nuclear power plants, environmental survey, fire departments, hazardous material response teams, police, EMS, military and hospitals
- LCD display
- USB interfaces with computer for datalog download
- Loud audible 85+ dB alarm with highly visible LED lights and built-in vibration alarm
- Long calibration life
- Protective silicone boot
- Stand-alone electronic dosimeter

Range:	Dose Range - 0 µSv to 10 Sv (0 µR to 1140 R)
Power:	LIR2450 rechargeable batteries
Run Time:	Up to 200 hours after each charge (one week continuous use)
Datalogging:	3,000 data points, user programmable, from 30 to 3,600 seconds
Sensors:	Gamma sensors - CsI (TI) + photodiode (low environment radiation) Energy-compensated PIN diode (level of radiation protection)

Honeywell BW Gas Alert Extreme

Item # 54775

- Continuous LCD display shows real-time gas concentrations
- Visual and vibrating 95 dB alarm
- Simple automatic calibration procedure; compatible with BW MicroDock II automatic test and calibration station
- Built-in concussion-proof boot
- Direct, real-time readings

Range:	0-100/500 ppm (H2S), 0-100 (SO2, NH3, NO2, ETO), 0-30 (HCN), 0-1000 (CO), 0-400 (NH3), 0-50 (Cl2), 0-250 (NO), 0-5 (PH3), 0-1 (ClO2, O3), 0-30% (O2)
Power:	Replaceable 3V battery
Run Time:	1.5 year battery life (typical)
Datalogging:	Secure and accurate history captured
Sensors:	Field replaceable

Ask About Our Rental Protection Plan (RPP)

Honeywell MicroMAX Pro

- Perfect for oil & gas, cold storage, water/wastewater treatment, chemicals, engine rooms, plastics & fibers, agriculture, printing and light industrial
- 4-line "automatic" backlit display
- Audible 90 dB alarm with visual red LED flashing display characters
- Easy calibration
- Voice Assist speaker

Range:	0-40% by volume (O2), 0-100% (LEL), 0-999 ppm (CO), 0-500 ppm (H2S), 0-200 ppm (NH3, HCN), 0-20 ppm (Cl2, SO2, PH3), 0-10 ppm (ClO2), 0-50 ppm (NO2), 0-500 ppm (CO & H2S)
Power:	NiMH and alkaline batteries
Run Time:	13 hrs NiMH, 10 hrs alkaline
Datalogging:	2400 data points/channel with wrap-around memory - user selectable 1, 2, 3, 4, or 5 minute intervals (1 min. = 40 hrs, 5 mins. = 200 hours)

Draeger PAC III

- Accurate and precise measurement of oxygen, toxic and combustible gases and vapors
- Concentration of gas displayed on LCD readout display
- Two levels of alarm indicate action levels at increasing concentrations
- Chrome-plated polymer housing

Range:	0-2000 ppm (CO)
Resolution:	1 ppm
Power:	9V alkaline battery
Run Time:	600 hrs
Datalogging:	> 125 hrs (with one-minute averages)
Sensors:	34 different intelligent electro-chemical sensors

Biosystems Toxi Vision IR

- Detects Os, CO, H2 and a number of toxic sensors for hazardous environments
- Oversized LCD display which can be seen from several feet away
- Loud warbling two-toned alarm rated at 92 dBA @ 1 foot
- True one-button auto calibration is available at any time while in normal operation. Simply press the "MODE" button three times, attach the adapter, and flow gas to the sensor. All adjustments are automatic.
- Rugged metal-plated case

Range:	0-50,000 ppm (CO2), 0-100% LEL (CH4) Non Dispersive Infrared
Resolution:	10 ppm
Power:	Two AA batteries
Run Time:	4,000 continuous hrs per set of batteries

Industrial Scientific T82

- Detects carbon monoxide
- Displays carbon monoxide, oxygen or hydrogen sulfide
- 90 dB audible alarm with ultrabright visual alarm
- RFI resistant case
- Includes belt clips
- Automatically recognizes and adjusts to any sensor changes

Range:	0 1,500 ppm in 1 ppm increments
Power:	Replaceable 9V alkaline or lithium battery
Run Time:	2,300 hrs (alkaline), 4,000 hrs (Lithium)
Datalogging:	Optional datalogging and insdustrial hygiene functions
Sensors:	Oxygen and toxic gases - electromagnetic

AIR MONITORING – Multi, Single, Specific Gas, Landfill Monitors

Industrial Scientific GasBadge Pro

Item # 54538

- Monitors unsafe levels of oxygen or any one of the following toxic gases: carbon monoxide, hydrogen sulfide, nitrogen dioxide, sulfur dioxide, chlorine, chlorine dioxide, phosphine, ammonia, hydrogen cyanide and hydrogen

- Custom LCD with graphical icons for easy use, segmented display for direct gas readings, backlight for low light conditions, "Go/No Go" display mode, peak reading indication

- Communicates directly via infrared interface

- User selectable low and 95 dB high alarm with ultra-bright LED's and vibration

Range:	0-1,500 ppm (CO), 0-500 ppm (H2S), 0-30% by volume, 0-150 ppm (NO2, SO2), 0-500 ppm (NH3), 0-100 ppm (Cl2), 0-1 ppm (ClO2), 0-10 ppm (PH3), 0-30 ppm (HCN), 0-2,000 ppm (H2)
Power:	User replaceable 3V, CR2 Lithium battery
Run Time:	2,600 hrs
Datalogging:	1-year continuous storage of data
Sensors:	CO, H2S, O2, NO2, SO2, NH3, Cl2, ClO2, PH3, HCN, H2, CO/H2

Arizona Jerome J605 H2S Analyzers

Item # 51150

- Accurately analyzes hydrogen sulfide

- USB data transfer

- Sturdy metal housing and solid state design with light and ergonomically designed case

- Industry-proven, gold film sensor has been upgraded and improved from previous models

Range:	3 ppb (0.003 ppm) - 10 ppm in three graduated ranges
Resolution:	20 ppt (0.02 ppb) (range dependent)
Response:	12-27 seconds (manual survey mode), 12-52 seconds (auto sample mode)
Power:	Rechargeable NiMH battery
Run Time:	18 hrs
Datalogging:	On-board data logging for up to 20,000 measurements

Arizona Jerome 631-X H2S Analyzer

Item # 51148

- For use in industries such as wastewater treatment, oil & gas, pulp & paper and farming

- Automatic LCD backlight during low light conditions

- RS-232 Serial, Baud Rate 1200 for use with data logger, and/or Jerome® Communication Program, 20 mA Digital Current Output

- Functional Test Module (FTM) verifies instrument functions correctly between recommended annual factory calibrations

- Sturdy metal housing and solid state design make the 631 tough enough for any environment

Range:	3 ppb (0.003 ppm) – 50 ppm in four graduated ranges
Resolution:	0.001 ppm
Response:	3-20 seconds (survey mode), 13-30 seconds (sample mode)
Power:	Rechargeable nickel-cadmium
Run Time:	6 hrs
Datalogging:	Optional datalogging
Sensors:	Inherently stable gold film sensor

OdaLog Type L2 - H2S Monitor

Item # 55151

- For use in gas monitoring in manholes, drains, pits, odor monotoring in sewer & streaming water, ventilation pipes and rising mains, inside sewer collection lines, selected areas in treatment plants, asset management and odor control

- Easy-to-read large alpha numeric display

- Fast downloading through True IrDA communication link

- Unique and proven robust design and double o-rings

- Increased memory, proprietary OdaStat-G software

Range:	0-1000/2000 ppm (H2S), 0-1000 ppm (CO), 0-50 ppm (SO2), 0-100 ppm (NO), 0-50 ppm (NO2), 0-20 ppm (Cl2), 0-30 ppm (HCN), 0-100 ppm (NH3)
Resolution:	1 ppm (H2S), 1 ppm (CO), 0.5 ppm (SO2), 1 ppm (NO), 0.1 ppm (NO2), 0.1 ppm (Cl2), 0.2 ppm (HCN), 1 ppm (NH3)
Power:	Replaceable C-size lithium battery (approved battery type/brand/make only)
Run Time:	12 hrs
Datalogging:	Capacity > interval of 1min = 29 days

PPM Technology Formaldemeter htV

- Offers precise 3-parameter monitoring for low levels of formaldehyde vapors under extremes of temperature and humidity
- Easy-to-use 4-button interface
- USB or WiFi data download
- Built-in alarm sounder
- Calibration by user with supplied calibration standard or by original manufacturer
- Single button operation for immediate indication of concentration levels

Range:	0-10ppm as standard (0- 12.3 mg/m³ at 25°C) - extended range available on request
Resolution:	0.01 ppm
Response:	60 seconds
Power:	Mains or battery powered
Run Time:	Up to one month
Sensors:	Electrochemical sensor manufactured by PPM Technology

RKI FP-30/FP-40 Formaldehyde Gas Detector

- Ideal for furniture and woodworking, coating and varnishing, engineered wood products, medical / veterinary, painting & corrosion resistant finishes, carpet manufacture & storage, adhesives, heat treatment operations and RV / trailer / mobile home inspecting
- Digital LCD display
- Glove friendly buttons
- Uses photoelectric photometry technology

Range:	0 - 0.4 ppm (0.005 ppm / digit), 0 - 1.0 ppm (0.01 ppm / digit)
Response:	30 and 15 minutes
Power:	AA size alkaline batteries (4 total)
Run Time:	12 hrs

Aeroqual 500 Series Ozone Meter

- Perfect for wide area air quality surveys, checking pollution "hotspots", personal exposure monitoring and short term fixed monitoring networks
- LCD digital display
- Connect to PC via USB cable
- Audible alarm with low and / or high alarm set points (with mute)
- Zero calibration, gain adjustment
- Active fan sampling ensures the highest possible accuracy

Sensors:	Interchangeable gas sensor heads (30+)
Range:	- 40 °C to 124 °C (- 40 °F to 255 °F), 0 to 100 % RH
Power:	Lithium battery
Run Time:	8 hrs
Datalogging:	Built-in datalogging (up to 8,188 records)

RKI Eagle Ozone Configured Gas Monitor

- Great for standard confined space protection for LEL, O2, H2S and CO
- 4 x 20 LCD readout, viewed through window in case top, displays readings & status of 4 channels simultaneously, backlight, automatic for alarms and by demand with adjustable time.
- 2 alarms per channel plus TWA and STEL alarms for toxics. The two alarms are fully adjustable for levels, latching or self reset and silenceable.
- Autocalibration and single gas calibration
- Can operate in rain or set into 2.0" of water

Response:	30 seconds to 90% (most gases) using standard 5 ft. hose
Power:	4 Alkaline or Ni-Cad, size D batteries (charger has alkaline recognition to prevent battery damage if charging is attempted with alkalines)
Run Time:	30 hrs (alkaline batteries), 18 hrs (Ni-Cads)
Datalogging:	Option available

AIR MONITORING - Multi, Single, Specific Gas, Landfill Monitors

Maxtec UltraMax O2 Oxygen Analyzer

- Fast and easy verification of oxygen concentration, flow and outlet pressure of oxygen concentrators
- Large, easy-to-read LCD display
- Impact resistant ergonomic case
- Advanced design yields unparalleled performance and reliability

Range:	20.9 - 96% (oxygen measurement range - from a concentrator)
Resolution:	0.1 % oxygen (oxygen measurement resolution)
Response:	17 seconds
Power:	2 - AA alkaline batters
Run Time:	1,100 hrs (16,500 read cycles)

Bacharach GMD AutoStep Plus Toxic Gas Monitor

- Used in applications such as leak detection, survey work, area monitoring and emergency response involving isocyanates
- Alphanumeric LCD display
- 80 dB alarm

Range:	TDI and HDI: 0 to 500 ppb at 1 ppb resolution, MDI: 0 to 200 ppb at 1 ppb resolution
Power:	Lead acid cells
Run Time:	12 hrs
Datalogging:	2,000 data points

Radiodetection MGD-2002 Multi-Gas Leak Detector

- Ideal for detecting leaks in pressurized cables, storage tanks or any closed system that can be pressurized with the tracer gas
- Backlit LCD display
- Tactile membrane keypad
- Designed for one-handed operation of all functions

Range:	+40°F to +110°F
Resolution:	+/- 25 ppm (low range), +/- 0.2%
Response:	15 seconds
Power:	Rapid charging Ni-MH battery with AC and car adaptors
Run Time:	8 hrs
Sensors:	Pinpoint accuracy with sensitivity from 25 ppm up to 100% concentration

Ion Science GasCheck 5000 IS

- For use in applications such as industrial, refrigeration, manufacturing, laboratory, medical and research
- LCD backlit display
- Flashing LED and 90 dBA audible alarm
- Factory calibrated to fully documented procedures in accordance with our ISO 9001:2008 Quality Management System

Range:	32 to 104 °F
Response:	T90 = 1 second rise and clear down
Power:	4 alkaline AA batteries
Run Time:	40 hrs
Datalogging:	> 1,000 data points
Sensors:	Micro thermal conductivity detector (MTCD) - sensor is poison resistant with over range protection

Ask About Our Rental Protection Plan (RPP)

RKI Eagle II Landfill Configured Gas Monitor

- Internal pump with a low flow auto pump shut-off
- For use in monitoring at gas wells, soil gas monitoring, near surface gas monitoring, emissions monitoring and ambient air monitoring
- Two alarms per channel plus TWA and STEL alarms for toxics - the buzzer is rated at 95 dB at 30 cm with four high intensity LED's
- Weatherproof, chemical resistant and water & dust resistant

Range:	0-100 % LEL, 0-100 % (Vol)
Sample Rate:	Draws samples from up to 25' away
Power:	Alkaline batteries
Run Time:	18 hrs (alkaline), 20 hrs (Ni-MH)
Power:	Rechargeable li-polymer
Datalogging:	Logs up to 2,000 days

Landtec SEM5000 Portable Methane Detector

- Specific to Methane, no cross-gas or false readings
- Wide measurement range (less than 2.5 seconds)
- Integral GPS and Bluetooth
- Meets EPA method 21 requirements
- ATEX certified - Zone 1
- Laser technology
- Landfill surface emissions monitoring
- Reporting and detecting potential leaks at wellheads and surface penetrations

Target Gas:	Methane (CH_4)
Detection Method:	Tunable Diode Laser Absorbtion Spectroscopy
Range:	0.5ppm to 100% volume
Run Time:	8 hrs
Response Time:	T90 = 2.5 seconds T90 = 3.5 seconds (w/probe)
Power:	Lithium Ion Rechargeable Battery Pack (3.7V - 4000mA/h)

QED/Landtec GEM 5000 Landfill Gas Analyzer

- Six time more accurate
- Applications include landfill gas collection and control systems, environmental compilance, landfill gas to energy and subsurface migration probes
- Calibrated to ISO/IEC 17025
- Ligher and more compact

Range:	0-100 % (CH_4), 0-100 % (CO_2), 0-25 % (O_2), 0-2,000 ppm (CO), 0-500 ppm (H_2S)
Sample Rate:	50 cc / min (flow pump), 80 cc / min (flow with 80 in. H20 vacuum)
Power:	Battery
Run Time:	8 hrs

QED/Landtec GEM 5000 Plus Landfill Gas Analyzer

- Six time more accurate
- Applications include landfill gas collection and control systems, environmental compilance, landfill gas to energy and subsurface migration probes
- Calibrated to ISO/IEC 17025
- Ligher and more compact

Range:	0-100 % (CH_4), 0-100 % (CO_2), 0-25 % (O_2), 0-2,000 ppm (CO), 0-500 ppm (H_2S)
Sample Rate:	50 cc / min (flow pump), 80 cc / min (flow with 80 in. H20 vacuum)
Power:	Battery
Run Time:	8 hrs

Landtec GEM 2000 Plus Landfill Gas Analyzer/Extraction

- Add the enhanced ability to read carbon monoxide and hydrogen sulfide
- Applications include gas extraction wells, flare monitoring, landfills and biogas sites

Range:	0-25 % (O2), 1-100 % Reading (CH4), 0-2,000 ppm (CO), 0-100 % Reading (CO2), 0-200 ppm (H2S)
Sample Rate:	300 cc / min (flow), 250 cc / min (flow with 5.9 in. HG vacuum)
Power:	Battery
Run Time:	10 hrs
Datlogging:	Consistent collection of data for better analysis

Landtec GEM 2000 Landfill Gas Analyzer / Extraction

- Combines the GEM 500 and GA-90 into one faster, more accurate instrument
- Applications include landfills, gas extraction wells, flare monitoring and subsurface migration probes

Range:	0-100 % Reading (CH4), 0-100% (CO2), 0-25% (O2)
Sample Rate:	300 cc / min (flow), 250 cc / min (flow with 5.9 in. HG vacuum)
Power:	Battery
Run Time:	10-14 hrs extended operation
Datalogging:	Consistent collection of data for better analysis

Envision Landfill Gas Analyzer

- Made for technicians by technicians so no limitations - edit on the go
- Clear color display
- Wireless connectivity via Bluetooth
- Built with internal heating pads to withstand the coldest of temperatures

Sensors:	CH4, CO2 and O2
Range:	0-100 % (CH4), 0-100 % (CO2), 0-35 % (O2)
Power:	NiMH Battery
Run Time:	13.8 hrs (77 degrees)

Ask About Our Rental Protection Plan (RPP)

PINE
Partner for Test & Measurement Equipment Services and Data Solutions

Rental Protection Plan (RPP) Protects Your Investment

Damage Protection

- RPP provides coverage for repairs due to accidental or incidental damage to equipment.

- Damage resulting from abuse or misuse is not covered - abuse or misuse is defined as equipment used in an application it was not designed for or an application that exceeds the manufacturers' specifications.

Rental Liability

- Significantly reduces your liability for damaged or stolen equipment.

- Avoid claims against your insurance.

- The RPP gives you coverage when your business insurance leaves you exposed.

Theft Protection

- You are only responsible for a percentage of the replacement cost depending on protection level selected.
- A police report must be filed and notification given to Pine within 48 hrs of the customer being made aware of stolen equipment. If a police report is not provided, the customer is fully liable for the entire cost of replacement.
- In the event that the stolen equipment is recovered, Pine will retain ownership.

RPP Available Options for NDE/RVI & Environmental Equipment

	Plan	Repair Coverage	Theft & Loss
1	15% of List Rate	50%	30%
2	20% of List Rate	75%	50%

* All RPP is based on list rental rate. National or customized rates DO NOT APPLY.
Some items are excluded from our rental Protection Plan

www.pine-environmental.com

PINE
Partner for Test & Measurement Equipment Services and Data Solutions

Examples of RPP Savings

20% Rental = 75% Coverage of Damage

Damage IPLEX Scope (RVI)* #54826	With RPP	Without RPP
List Rate (weekly)	$2,200.00	$2,200.00
RPP (20%)	$440.00	
Repair Cost (manufacturer's repair cost)	$13,000.00	$13,000.00
RPP Benefit (75% of repair)	- $9,750.00	
Customer Cost:	$3,250.00	$13,000.00
Total Customer Cost (Rental & Repair)	**$5,890.00**	**$15,200.00**

15% Rental = 30% Coverage of Stolen Equipment

Stolen MiniRAE 3000* #51238	With RPP	Without RPP
List Rate (weekly)	$233.00	$233.00
RPP (15%)	$34.95	
Replacement Cost (manufacturer's list price)	$5,006.00	$5,006.00
RPP Benefit (30% of replacement)	- $1,501.80	
Customer Cost:	$3,504.20	$5,006.00
Total Customer Cost (Rental & Replacement)	**$3,772.15**	**$5,239.00**

Don't go without protection! Ask for the RPP on your next rental!

* All RPP is based on list rental rate. National or customized rates DO NOT APPLY. Some items are excluded from our rental Protection Plan. Customer is responsible for all rental rates up until the day of notification to Pine. Ask your local Pine branch for more details on our Rental Protection Plan (RPP) Agreement.

RPP Flyer 1-3-2020 - US

www.pine-environmental.com

Defiant FROG-4000 VOC Analyzer

Item # 51170

- Portable analysis of VOC's in the air, water and soil
- Perfect for identification and concentration of VOC's in groundwater monitoring, surface water monitoring, vapor intrusion monitoring, soil vapor extraction process monitoring, soil vapor monitoring, soil monitoring, environmental remediation site characterization, adaptable for IAQ and process monitoring
- Includes a micro preconcentrator, micro gas chromatographic (GC) column and a photoionization detector (PID)
- Scrubs ambient air as the carrier gas
- Chromatography software for data analysis
- Data automatically downloads to a micro SD card for further analysis at a later time
- RS-232 port or USB computer interface
- Can be calibrated for specific applications using customized operating parameters

Sensors:	10.6eV PID
Range:	1-160 ppb (Silver PID) or 20 ppb-4 ppm (Black PID) compound and matrix dependent
Sample Rate:	5-12 minutes sample run time, compound dependent
Power:	Battery or AC power
Display:	2.1" x .75" LCD
Run Time:	6 hrs
Dimensions:	10" x 7.5" x 14.5"
Weight:	4.8 lbs

MIRAN SapphIRe XL/DL Portable Ambient Analyzers

Item # 51367

- Exclusive wavelength generator filter design
- Monitor ambient air in workplace environments for the purpose of detecting the presence of gases
- User definable alarm
- LIghtweight and portable

Sensors:	Single beam infrared spectrophometer
Sample Rate:	14 liters per min. (nominal) with sampling wand and particulate filter
Power:	Internal, rechargeable NiCd 7.2V nominal; 5.7 Ah capacity
Run Time:	4 hrs

Photovac Voyager Portable Gas Chromatograph

Item # 51169

- Port access to ECD and PID with 4 soft keys for manual options and scrolling
- Wide variety of applications including environmental, petrochemical/refining, ABS rubber, pulp & paper, surfactrants & sterilants, latex polymers, chemicals, pharmaceutical, agricultural fumigants, indoor air quality and adhesives
- Built-in backlit 128 x 64 element graphical LCD display
- Upload data to a PC in the field or use Photovac SiteChart software
- 85 dB alarm with LED's
- Compact, lightweight (15 lbs) and ergonomically designed for field use

Sensors:	Photoionization detector with quick-change electrodeless discharge UV lamp, 10.6 eV (standard), Electron Capture Detector (optional)
Power:	Rechargeable, field replaceable battery pack or 10-18 VDC, 115 or 240 VAC, adapter provided
Run Time:	8 hrs
Datalogging:	Stores a full day of field results

TSI DustTrak DRX (Model 8533, 8534)

- Only monitor that can simultaneously measure both mass and size fraction
- Easy-to-use graphical user interface with color touch-screen for efffortless operation
- Cloud Data Management System for efficient remote monitoring
- Instantaneous alarm settings with visual and audible warnings
- Standard and advanced calibration capabilities for consistent accuracy

Sensors:	90° light scattering
Range:	0.1 to 15 µm
Resolution:	±0.1% of reading or 0.001 mg/m3, whichever is greater
Sample Rate:	3.0 L/min
Power:	Battery or AC power adapter with universal line cord included, 115-240 VAC
Run Time:	6 hrs (single battery), 12 hrs (2 batteries)
Datalogging:	5 MB of on-board memory (>60,000 data points) 45 days at 1 minute intervals

TSI Dustrak II (Model 8530, 8532)

- Suitable for clean office settings as well as harsh indus trial workplaces, construction and environmental sites, and other outdoor applications
- Graphical user interface with color touch-screen
- USB (host and device) and Ethernet. Stored data accessible using flash memory drive
- Instantaneous alarm settings with visual and audible warnings
- Gravimetric reference sampling capability for custom reference calibrations

Sensors:	90° light scattering
Range:	0.1 to 10 µm
Resolution:	±0.1% of reading or 0.001 mg/m3, whichever is greater
Sample Rate:	3.0 L/min set at factory, 1.40 to 3.0 L/min, user adjustable
Power:	Battery or AC power adapter with universal line cord included, 115-240 VAC
Run Time:	6 hrs (single battery), 12 hrs (2 batteries)
Datalogging:	5 MB of on-board memory (>60,000 data points) 45 days at 1 minute intervals

TSI DustTrak Auto Zero Module

- For use in outdoor environmental monitoring, fugitive emissions monitoring, site perimeter monitoring, fence-line monitoring, dust control operations, environmental research studies, construction sites, harsh industrial environments and urban pollution studies
- Conditions the sample air stream before entering the DustTrak II
- Removes humidity and water vapor from the sample
- Simple to connect
- No programming required

See TSI's video on YouTube:

https://www.youtube.com/watch?v=cMYmIkyk_-M

Thermo Scientific MIE DataRAM 4000

- Patented two-wavelength particle detection system
- Monitors the real-time concentration and median particle size ofairborne dust, smoke, mist and fumes
- RS232 and RS485 data ports for two-way digital communications
- 65 dB audible alarm
- Self-calibrating, internal filter designed for use in the field

Range:	0.0001 to 400mg/m3
Resolution:	0.1% ofreading or 0.0001 mg/m3, whichever is greater
Sample Rate:	1.0 to 3.0 liters/min. (accuracy: 0.05 liters/min., adjustability: 0.1 liters/min.)
Power:	Internal battery: rechargeable, sealed lead-acid, 6.5 Ahr, 6 V
Run Time:	20 hrs
Datalogging:	50,000 data points in up to 99 tags (data sets)

TSI DustTrak Environmental Enclosure (Model 8535)

- Portable and custom designed - includes a water trap
- Suitable for outdoor environmental monitoring, fugitive emissions monitoring, site perimeter monitoring, fence-line monitoring, dust control operations, environmental research studies, construction sites, harsh industrial environments and urban pollution studies
- Weatherproof case with survey tripod mount

Wind Speed:	0-22 mph
Operating Temperature:	32 to 120°F
External Dimensions:	8.1" H x 16.9" W x 20.6" D
Weight:	38 lbs (with internal battery system and DusTrak)

Thermo Scientific ADR 1500

Item # 51352

- Utilizes highly sensitive light-scattering photometer (nephelometer) technology
- Real-time ambient dust monitoring design for continuous monitoring
- Two-line LCD readout display
- Communications options are available for USB, RS-232, analog and wireless capability
- Durable weather-proof IP65 enclosure

Sensors:	Temperature and relative humidity
Range:	1.0 to 3.5 liters/min.
Resolution:	0.1 µg/m3
Power:	AC, external DC or internal battery
Run Time:	24 hrs
Datalogging:	Averaged concentrations, temperature, RH, barometric pressure, time/date, and data point number

Thermo Scientific pDR 1500

Item # 51349

- Meets and exceeds the need for a fully integrated, active sampling personal scale instrument
- Designed for applications such as site remediation, size discrimination, mass validation, exposure modeling, and protection of asthma patients
- LCD readout display with 16 characters x 2 lines
- Communication via USB / RS-232

Sensors:	Interchangeable cyclones for different accuracies
Range:	0.001 to 400 mg/m3 range
Resolution:	0.1% of reading or 0.001 mg/m3
Accuracy:	± 5% of reading
Sample Rate:	1.0 to 3.5 liters/minute
Power:	4 AA alkaline batteries
Run Time:	24 hrs
Datalogging:	Averaging concentration, temperature, RH, barometric pressure, time/date, and data point number

TSI SidePak AM520

Item # 55095

- Robust impactors for higher mass concentration range
- Monitor dusts, fumes, mists, smokes and fog - perfect for general industry, foundries, construction sites, chemical plants, refineries, petrochemical, power and utilities, transportation, aerospace, maritime, confined spaces and mining
- Color OLED display
- Audible and visual alarms
- Calibrated against a gravimetric reference using the respirable fraction of standard ISO 12103-1, A1 Test Dust

Sensors:	90 degree light scattering, 650 nm laser diode
Range:	0.001-100 mg/m3 (concentration)
Resolution:	0.001 mg/m3 (minimum)
Sample Rate:	0-1.8 liters/min
Power:	5400 mAH lithion-ion pack
Run Time:	Greater than 20 hrs at 1.7 lpm with a PM25 impactor
Datalogging:	Approx. 80,000 data points (55 days logging once per minute)

Ask About Our Rental Protection Plan (RPP)

TSI SidePak AM510

- Built-in "gas gauge" in the battery packs to monitor battery condition and provide precise run time info
- Perfect for personal exposure monitoring/IH studies, ambient/work area monitoring, trending/screening, engineering studies, epidemiology health studies, environmental sampling
- Easy-to-read LCD display
- USB port lets you conveniently connect to your computer
- Define, label and store multiple calibration constants

Sensors:	90° light scattering, 670 nm laser diode
Range:	0.1 to 10 micrometer (µm)
Resolution:	0.001 mg/m3 (min)
Sample Rate:	User-adjustable, 0.7 to 1.8 liters/min (L/min)
Power:	NiMH battery pack, 4.8V or 6 AA batteries
Run Time:	Up to 22.5 hrs
Datalogging:	31 data points

TSI AeroTrak 9306V

- The most features and flexibility for customer interested in versatile handheld particle contamination monitoring
- Ideal for tracking down particle contamination sources, classifying clean areas, looking for filter leaks and conducting IAQ investigations
- 3.5-inch (8.9-cm) color touch screen interface
- USB cable, USB storage device and ethernet transfer
- Audible alarm
- NIST Traceable with TSI calibration system

Sensors:	Optional temp/RH probe
Range:	0.3 to 25 µm
Resolution:	<15% @ 0.5 µm (per ISO 21501-4
Sample Rate:	0.1 CFM (2.83 L/min) with ±5% accuracy
Power:	Removeable/rechargeable Li-Ion or 110 to 240 VAC, 50 to 60 Hz universal in-line power supply
Run Time:	6 hrs
Datalogging:	250 zones, 999 locations and 10,000 samples

TSI P-Trak 8525

- Use to check office equipment, cleanroom containment checks, filter checks, check fume hoods, check safety cabinets, vehicle emission migration, combustion leaks and control smoking areas
- Available RS232 serial port for downloading information
- Calibration certificate

Range:	0 to 5 x 105 particles/cm3
Sample Rate:	100 cm3/min / 700 cm3/min (nominal)
Power:	6 AA alkaline batteries
Run Time:	6 hrs at 70°F (21°C)
Datalogging:	1,000 hours at one-minute intervals, maximum of 141 separate tests

Fluke 985/983

- Six channels
- Portable solution for determining airborne particulate concentrations
- Large 3.5 QVGC color display
- Download data to a PC using a USB memory stick, USB cable or ethernet connection - no special software needed
- Available alarm settings for sample count
- Calibration: PSL particles in air (NIST traceable)
- Ultra-lightweight and ergonomic design

Range:	0.3-10.0 µm
Power:	Rechargeable Li-ion 7.4V 2600 mAh battery or 100 V AC to 240 V AC, 12 V DC, 2.5 A
Run Time:	10 hrs
Datalogging:	10,000 records (rotating buffer)

Met One Aerocet 531

- Particulate mass profiler and counter in a single hand-held unit
- Ideal for controlled environments, indoor air quality, hospitals & clinics, process control, HVAC applications, filter testing, mining & ore processing, emission sourcing and remote sampling
- 16-character x 4 line LCD
- Communication via RS-232, USB

Range:	PM1, PM2.5, PM4, PM7, PM10 and TSP
Power:	7.4V Li-ion battery pack or AC adapter
Run Time:	20 hrs
Datalogging:	Stores up to 6,000 records

Clean Air Solutions Clean Air Trakker 2000 Fogger

- Truly portable cleanroom fogger
- Video cleanroom airflow patterns
- Visually verify vortices and flow disturbances
- Trace mitigation patterns
- Verify pressure differentials
- Dynamic smoke studies
- Durable uni-body construction

Capacity:	1.2 liters of water
Power:	110V 50/60Hz or 220V 50/60Hz
Run Time:	1 hr capacity at max output
Material:	316L electropolished stainless steel
Size:	12" x 6" x 9"
Power:	110V 50/60Hz or 220V 50/60Hz

Allerair Vocarb 5000 Air Purifier

- Removes 99.97% of airborne particulates such as pollen, dust, mold, bacteria, viruses, pet dander down to 0.3 microns in size
- Removes VOC's, the most common and lethal chemicals in the home
- All-metal housing
- Ozone-free filtration technology
- Energy efficient
- Refillable carbon canisters
- Styrofoam free

CFM:	400 free flow
Filters:	18 lb Carbon and Medical Grade HEPA
Power:	115V / 60Hz or 230V / 50Hz
Dimensions:	20.5" H x 15" D
Power:	115 V / 60 Hz or 230 V / 50 Hz
Weight:	50 lbs

Tisch TE-6070 / TE-6070V - PM-10

- Anodized aluminum shelter
- Continuous flow / pressure recorder
- Elapsed time indicator
- Blower motor assembly - 2-stage vacuum 0.6 HP

Range:	40 cfm (adjustable) (1.02 to 1.24m^3)
Controller:	MFC
Power:	110V / 60Hz or 220V / 50Hz
Dimensions:	45.5" x 22.5" x 20" sampler carton, 32 x 32 x 26 inlet carton shipping dimensions
Weight:	74 lb shipping weight

Tisch TE-5170 / TE-5170V - TSP

- Anodized aluminum shelter
- Meets EPA code of Federal Regulation, Appendix B to Part 50
- Continuous flow / pressure recorder
- Elapsed time indicator
- Blower motor assembly - 2-stage vacuum 0.6 HP

Range:	39-60 cfm (1.1-1.7m)
Controller:	Volumetric with look-up table, digital timer and digital elapsed time indicator
Power:	110V / 60Hz or 220V / 50Hz
Run Time:	7 days
Dimensions:	45.5" x 22.5" x 20" and 19' x 14" x 14" (two cartons)
Weight:	75 lbs and 9 lbs (two cartons)

Tisch TE-5028 - TSP/PM-10 Calibration Kit

- Includes variable flow calibration orifice, NIST traceable calibration certificate, water manometer, top load adapter plate, gasket, tubing and carrying case
- Calibrated in Tisch's NIST traceable calibration lab to ensure dependable and accurate results
- 40 CFR part 50 and 51

Calibration:	High volume TSP, PM10 and PM 2.5 (requires annual calibration)
Certification:	NIST Traceable
Dimensions:	23" L x 13" H x 10" W
Weight:	10 lbs

Tisch TE-1000 Polyurethane Foam Air Sampler

- Simultaneously collects suspended airborne particulates as well as trap airborne pesticide vapors
- Anodized aluminum shelter
- Meets EPA methods TO4A, TO9A and TO13
- Magnehelic pressure gage
- 7-day mechanical timer
- Two-stage vacuum motor
- Available calibration kit

Range:	200-280 lpm (7-10 cfm)
Controller:	15-25 scfm
Power:	110V / 60Hz or 220V / 50Hz
Run Time:	7 days
Dimensions:	45.5" x 22.5" x 20" and 19" x 14" x 14" (2 cartons)
Weight:	70 lbs and 9 lbs (2 cartons)

BGI PQ100 Portable PM 2.5 / PM10

- Suitable for lead, asbestos, oil mists, indoor air pollutants and allergens
- EPA Federal Reference Method for PM10 (Designation No. RFPS-1298-124)

Controller:	2-25 LPM Flow
Power:	Internal built-in 12V battery, optional solar panel
Run Time:	24 hrs
Dimensions:	10 x 6 x 9.7 (pump), 68" (tripod height)
Weight:	34 lbs

BGI DeltaCal Air Flow Calibrator

- Appropriate for field or indoor use
- Completely silent with no moving parts
- In accordance with U.S. EPA requirements

Range:	2-19.5 LPM - DC1, 10-60 LPM - DC100, 0.8-3.5 LPM - DC200
Power:	Four AA batteries for universal power supply (120/240 VAC)
Run Time:	20 hrs (battery)
Weight:	2.2 lbs

Met One E-BAM Mass Monitor

- True ambient sampling for accurate measurement of semi-volatile nitrates and organic compounds
- Lightweight, rugged construction is easily mounted on a tripod in minutes
- Accuracy and precision consistent with U.S. EPA requirements for Class III PM 2.5 and PM2.5 measurment
- Hourly or real-time analog output

Range:	0-65 mg per cubic meter
Particle Size:	Larger than 10 microns (PM10)
Power:	AC/DC power, battery or solar
Dimensions:	41 cm x 36 cm x 20 cm, 13 kg

Partisol FRM 2000 Air Sampler RP

- Used for a variety of ambient conditions from hot & dry to hot & moist
- U.S. EPA-designed PM2.5 WINS impactor

Power:	2.2 A @ 120 VAC, 1.1 A @ 240 VAC
Controller:	ActiVol flow control and long-life pump
Dimensions:	16" (41 cm) W x 24" (61 cm) H x 13" (33 cm) D, inlet system adds 31" to height, 42' W x 32" H x 18" D (stand)
Weight:	61 lbs

Sensidyne GilAir Plus

Item # 54487

- Patent pending QuadMode air sampling technology with the widest flow range of any personal air sampling pump
- Samples particulates, vapors, gases and metal fumes
- Large, easy-to-read back-lit display
- Dock provides charging and communication functions for the STP and data-logging models
- Convenient and innovative SmartCal feature provides automatic pump calibration
- Standard temperature and pressure correction

Range:	Constant flow 20-5,000 cc/min. without external adaptors. Constant pressure 1-5,000 cc/min. without external adaptors
Power:	Rechargeable NiMH battery
Datalogging:	PC application allows users to review datalogs, generate sampling reports, manage sampling programs, and create pump set-up profiles that expedite deployment of large pump fleets
Run Time:	8 hrs

Sensidyne GilAir 5000

Item # 51308

- Four stage program with repeat cycling and programmable start
- Large LCD continuously shows real-time flow, total sample time and total volume sampled
- 30-day calibration

Range:	20 - 5000 cc/min (Total*), 800 - 5000 cc/min (High Flow); 20-800 cc/min (Low Flow*) *with low flow constant pressure adapter
Power:	Fast-charge, removeable and rechargeable NiMH memory-free battery
Run Time:	8 hrs

Sensidyne Gilian GilAir - 3 Air Sampling Pump

Item # 51309

- One of the largest user bases of any air sampling pump worldwide
- Display messages include LAST, CAL, SHUT/OFF (Clock, Program); E, PC, P1-P6, OLD (Program)

Flow Mode:	1- 3000 cc/min (Total), 850 - 3000 cc/min (High Flow); 5-500 cc/min (Constant Low Flow); 1-750 cc/min (Constant Pressure)
Back Pressure:	3000cc up to 8" H20 back pressure, 2500cc up to 15" H20 back pressure, 1000cc up to 25" H20 back pressure, 850cc up to 20" H20 back pressure
Power:	NiMh battery
Run Time:	8 hrs

Sensidyne Gilian GilAir - 5 Air Sampling Pump

Item # 61197

- One of the largest user bases of any air sampling pump worldwide
- Display messages include LAST, CAL, SHUT/OFF (Clock, Program); E, PC, P1-P6, OLD (Program)

Flow Mode:	1- 5000 cc/min (Total), 850 - 5000 cc/min (High Flow); 5-500 cc/min (Constant Low Flow); 1-750 cc/min (Constant Pressure)
Back Pressure:	5000cc up to 8" H20 back pressure 4000cc up to 18" H20 back pressure 3000cc up to 23" H20 back pressure 850cc up to 29" H20 back pressure
Power:	NiMh battery
Run Time:	8 hrs

Sensidyne Gilian BDX II Air Sampling Pump

- Built-in rotarameter
- Specifically designed for abatement and lead applications
- Compact, lightweight, rugged and reliable

Range:	500-3,000 cc/min
Power:	Rechargeable NiCd battery
Run Time:	10 hrs at 2 LPM

Sensidyne Gilian AirCon-2

Item # 51316

- Fully programmable - up to 3 custom timing routines for unattended sampling up to 99 hrs
- Ideal for asbestos background and clearance sampling following NIOSH, OSHA or EPA methodology and for ambient dust monitoring
- Touchpad and LCD display

Range:	2-30 LPM
Power:	12Vdc battery pack or directly off the charger module connect to AC, without the use of a battery
Run Time:	8 hrs

Sensidyne Gilian HFS-513AUC High Flow Sampling System

Item # 52095

- First system truly designed with the user in mind
- Low / high flow calibration
- Rugged, reliable and compact

Range:	High Flow: 750–5000 cc/min constant flow sampling, Low Flow: 1–750 cc/min achieved through use with variable flow controller - this unique feature allows very low flows as well as two or more simultaneous, independently set samples
Power:	Plug-in battery pack, rechargeable NiCad, 1.8 Ah, 6.0V, UL listed - can be charge internally or externally with use of an adaptor

SKC DCS Deployable Particulate Sampler

Item # 51368

- Fullly programmable with a specially designed sampling head
- Ideal for remote locations or indoor air sampling
- Calibration tubing and adapter included
- Compact and portable - only one case

Flow Rate:	10 l/m
Power:	Rechargeable Li-Ion battery, 7.4 V, 12-Ah capacity, 88.8 Wh
Run Time:	> 24 hrs (one battery charge)

Ask About Our Rental Protection Plan (RPP)

SKC Universal PCXR8 Programmable Sampling Pump

- Ideal for industrial hygiene studies as well as environmental testing
- Touch keypad for programmable functions
- Durable RFI-shielded case

Range:	1000 to 5000 ml/min (UL Listed model) (5 to 500 ml/min requires adjustable low fl ow holder)
Power:	6.0-V plug-in NiMH battery pack, rechargeable, 3.5-Ah capacity or 6.0-V plug-in nickel-cadmium battery pack, rechargeable, 2.0-Ah capacity A battery eliminator is available

SKC AirCheck XR5000

- Patented highly accurate isothermal flow control compensates within ±5%
- Suitable for low flow gas / vapor or high flow particulate sampling
- Large LCD displays elapsed time and accumulated run time

Range:	5-5,000 ml / min
Power:	High-power Li-Ion (4 cell), rechargeable, 7.4 V, 4.4 Ah, 32.6 Wh capacity or Standard Li-Ion (2 cell), rechargeable, 7.4 V, 2.2 Ah, 16.3 Wh capacity
Run Time:	40 hrs (high-power Li-Ion - 2 L/min), 22 hrs (high-power Li-Ion - 5 L/min), 20 hrs (standard Li-Ion - 2 L/min), 11 hrs (standard Li-ion - 5 L/min)

SKC Vac-U-Chamber 1L

- Allows for direct filling of SKC air sample bags
- Protects sample and pump from contamination
- Perfect for soil gas/vapor sampling, indoor air remediation system monitoring petroleum constituents, ground water testing, stack sampling, ventilation studies and HazMat testing
- Rugged, heavy-duty construction
- Sample line extends from contaminant source through case to bag

Sample Rate:	User selectable
Sample Time:	Varies
Sample Pump:	Universal or XR500 (1-5 l/min)

SKC Vac-U-Chamber 10L

- Allows for direct filling of SKC air sample bags
- Protects sample and pump from contamination
- Perfect for soil gas/vapor sampling, indoor air remediation system monitoring petroleum constituents, ground water testing, stack sampling, ventilation studies and HazMat testing
- Rugged, heavy-duty construction
- Sample line extends from contaminant source through case to bag

Sample Rate:	User selectable
Sample Time:	Varies
Sample Pump:	Universal or XR500 (1-5 l/min)

SKC Leland Legacy

Item # 51332

- Advanced flow control with patented internal flow sensor
- Ideal for 24-hr exposure monitoring, indoor air studies, particulate sampling, environmental sampling, sampling with cascade impactors and spore trap sampling (VersaTrap)
- Large, easy-to-read LCD
- CalCheck automatic calibration feature
- Rugged and convenient case design

Range:	5-15 L / min
Power:	Removable, rechargeable lithium-ion (Li-Ion) battery pack 7.4 V x 12-Ah capacity, 88.8 Wh.
Run Time:	24+ hrs

MSA ELF Escort Sampling Pump

Item # 51339

- Patented electronic laminar flow control
- Used for personal and area sampling
- Elapsed time readout and low-battery warning
- Stainless steel-filled plastic case provides EMI / RFI protection

Range:	30 inches of water load up to 2 lpm and 10 inches up to 3 lpm
Power:	4.8-volt battery pack of four NiMH cells. (Units Mfg before Oct 2011 contain NiCd cells)
Run Time:	Varies with flow rate and sampling device loading.

Mesa Labs Bios Defender Series Calibrators

Item # 51325

- For use on non-corrosive, non-condensing, non-combustible gases, less than 70% humidity
- Backlit graphical LCD
- Data port for PC interface
- User selectable options makes customizing your calibrations easy
- Available Pelican case

Range:	5-500 ccm
Flow Modes:	Pressure or suction
Power:	6V rechargeable, sealed lead-acid battery
Run Time:	6-8 hrs
Datalogging:	Serial RS-232

Mesa Labs Bios Defender Dry Cal DC - Lite Calibrators

Item # 51319

- Ideal for applications including industrial hygiene, environmental and laboratory flow measurement
- LCD screen
- Parallel-to-serial converter kit for data transfer
- Calibration includes clean flow cell and piston, valve mechanism adjustment (as required), change inlet filter (as required), battery capacity test, performance test, 3-point "as-received" and "as-shipped" flow data and NIST-Traceable Calibration Certificate
- Compact and sturdy case

Range:	10 ml/min-500 ml/min (L), 50 ml/min–2 L/min (ML), 100 ml/min–7 L/min (M), 200 ml/min–20 L/min (MH), 500 ml/min–30 L/min (H)
Back Pressure:	Use of a 25mm, 0.8m filter cassette creates a suitable backpressure
Power:	6V rechargeable, sealed lead-acid battery
Run Time:	6-8 hrs
Datalogging:	Transfer of data through parallel-to-serial converter kit

Ask About Our Rental Protection Plan (RPP)

GAST High Volume Area Sampling Pump

- Redesigned and offers up to 70% noise reduction
- Durable, economical choice for lead and asbestos area sampling
- Durable and economical

Range:	3-30 LPM
Flow Modes:	Free flow rate of over 45 LPM
Power:	110-115 volts

Allegro High Volume Area Sampling Pump

Item # 52096

- One moving part for continuous draw and low maintenance
- Sampling pump has an adjustable regulator
- Meets all OSHA and AHERA standards for air sampling
- Rigid metal base and housing, powder coated gray

Range:	3-20 lpm
Power:	1/10 HP 115 VAC, Single Phase, 60 Hertz, 3450 RPM
Accessories:	Includes 5' vinyl tube, inline filters, feet, handle and power cord with switch
Dimensions:	7" L x 3.75" W x 6" H
Weight:	10 lbs

Dawson 1-300 High Volume Area Sampling Pump

Item # 51338

- Meets AHERA standards
- Designed for area monitoring and clearance sampling
- Ideal for environmental testing professionals, abatement contractors, industrial hygienists and safety managers

Flow Rate:	Adjustable from 3-20 lpm
Standard Testing:	Breathing zone cassette holder
Dimensions:	6" x 10.5" x 4"
Weight:	9.2 lbs

Field Supplies

PINE
Partner for Test & Measurement
Equipment Services and Data Solutions

For all your Consumables, PPE and Instrumentation needs.

Arizona J405 Analyzer

Item # 51174

- Significant performance enhancements
- Ideal for mercury spill detection and clean-up analysis
- USB data output
- Sturdy metal housing and sold-state design tough enough for any environment

Range:	0.5 µg/m3 – 999 µg/m3 (0.0005 mg/m3 to 0.999 mg/m3)
Resolution:	0.01 µg/m3 (0.00001 mg/m3)
Response:	2 seconds in survey mode, 16 seconds in sample mode
Sample Rate:	750 ± 50 cc/min (0.75 ± 0.05 liters/min)
Power:	Rechargeable nickel metal hydride (NiMH) battery
Datalogging:	On-board datalogging (20,000 data points)

Arizona Jerome 431X Analyzer

Item # 51173

- Patented gold film sensor
- Applications include industrial hygiene monitoring, mercury spill clean-up and mercury exclusion testing
- RS-232 serial output
- Sturdy metal housing and solid-state design make the 431 tough enough for any environment

Range:	0.003 mg/m3 – 0.999 mg/m3
Resolution:	0.001 mg/m3
Response:	3 seconds (survey mode), 12 seconds (sample mode)
Sample Rate:	750 ± 50 cc/min (0.75 ± 0.05 liters/min)
Power:	Rechargeable nickel cadmium battery
Datalogging:	Available data logger module can store up to 1,000 measurements

Jerome J505 Atomic Fluorescence Spectroscopy

Item # 51176

- Color display with easy-to-use menu system
- USB keyboard can be used for easy entry of locations (optional)
- Choice of two independently adjustable high limit alarms

Range:	0.05 to 500 µg/m3
Resolution:	0.01 µg/m3 (10ng/m3) in standard mode
Response:	Search: 8 sec first reading; continuous 1 sec updates, Quick: 16 seconds, standard: 28 seconds
Sample Rate:	1 liter / min
Power:	Rechargeable nickel metal hydride (NiMH) internal battery pack
Run Time:	10+ hrs

Ohio Lumex 915+

Item # 51177

- Direct detection of mercury wihthout its preliminary accumulation on a gold trap
- Ultralow mercury detection limit in air (2 ng/m3) in real-time operation mode
- Mercury determination in complex samples without sample pretreatment
- Field operation from a bult-in battery for measurements of atmospheric air and industrial gases measurements
- Built-in test cell for field performance verification

Range:	0.00001 – 0.1 mg/m³ (wide dynamic quantification)
Response:	1 second
Power:	~220/110V, 50/60 Hz, DC 10/14V
Power Consumption:	15 W
Size:	460 x 210 x 110 mm
Weight:	7.5 kg

Ohio Lumex RA-915 Light

Item # 54673

- Fully automated with built-in performance verification test cell and auto-zero
- Suitable for emergency response to mercury spills and verification of spill clean-up
- USB interface
- Rugged and versatile design for laboratory and field applications

Range:	0.1-3000 µg/m3 (wide dynamic measuring)
Sample Rate:	10 l/min (ambient air)
Power:	Multi-power and battery
Run Time:	12 hrs
Datalogging:	Built-in datalogger

Ohio Lumex RP-91 Cold Vapor Option

Item # 51178

- Determine mercury concentration in liquid samples (water, blood, urine)
- Any sample preparation technique can be used
- Use single-path or multi-path analytical cell depending on the task (background measurement or analysis of highly contaminated waste water)
- Mercury determination without gold amalgam pre-concentration
- Wide dynamic measurement range more than 3 exponent (without sample dilution)

Size:	340 x 240 x 120 mm
Weight:	4 kg
Power Supply:	~220/110 V, 50/60 Hz; dc 6 V
Power:	15 W
Rate of Analysis Per Hour:	12 to 15

Ohio Lumex RP-91C Pyrolysis Option

Item # 51179

- Attachment for complex samples
- Simple software installation with PC
- Minimal system requirements: Windows®-95/98, Pentium® 120 MHz, 20 Mb RAM, free serial port

Size:	340 x 240 x 120 mm
Weight:	5.5 kg
Power Supply:	~220/110 V, 50/60 Hz
Power:	250 W
Rate of Analysis Per Hour:	6 to 8

TSI VelociCalc Multi-Function Ventilation Meter (Model 9565/9565A/9565P, 9555/9555P)

- Best-in-class air velocity accuracy
- Perfect for HVAC testing and balancing, cleanroom testing, biological safety cabinet and laboratory fume hood testing, HVAC commissioning and troubleshooting, IAQ investigations, thermal comfort studies, ventilation evaluations, process air flow testing
- Large graphic display showing 5 measurements simultaneously
- Bluetooth communications for transferring data

Sensors:	Pitot or airflow probe
Range:	250 to 15,500 ft/min (1.27 to 78.7 m/s)
Accuracy:	±1.5% at 2,000 ft/min (10.16 m/s)
Power:	Four AA-size batteries or AC adapter
Datalogging:	26,500+ samples and 100 test IDs
Interval:	1 second to 1 hour

TSI VelociCal Plus Multi-Parameter Ventilation Meter (Model 8386/8386A, 8385, 8384)

- Simultaneously measure and data log several ventilation parameters using a single probe with multiple sensors
- Back-lit display is easy to read in poor lighting conditions
- TSI downloading software permits easy transfer of data to a computer
- Optional portable printer provides hard copy documentation of your measurements

Sensors:	Thermal sensor or a Pitot tube
Range:	0 to 10,000 ft/min (0 to 50 m/s)
Accuracy:	±3.0% of reading or +±3 ft/min (± .015 m/s), whichever is greater
Power:	Four AA-size batteries or AC adapter
Datalogging:	1394 samples with a time and date stamp
Interval:	2 sec, 5 sec, 10 sec, 15 sec, 20 sec, 30 sec, 60 sec, 2 min, 5 min, 10 min, 15 min, 20 min, 30 min, 60 min

TSI VelociCalc Air Velocity Meter (Model 9545A, 9535, 8360, 8355, 8347, 8346, 8345)

- Simultaneously measures and data logs several ventilation parameters using a single probe with multiple sensors
- Ideal for HVAC system performance, commissioning, plant maintenance, critical environment certification and duct traverses
- Easy-to-read display
- LogDat2 downloading software included
- Calibration certificate included

Range:	0 to 6,000 ft/min (0 to 30 m/s) (model 9535)
Accuracy:	±3% of reading or ±3 ft/min (±0.015 m/s), whichever is greater (model 9535)
Power:	Four AA-size batteries or AC adapter
Datalogging:	12,700+ samples and 100 test ID's
Interval:	1 second to 1 hour

TSI VelociCalc Rotating Vane Anemometer (Model 8322, 8324)

- Computer connection via interface cable for remote polling
- Field calibration adjustable
- Print data using the portable printer

Range:	50 to 6,000 ft/min (0.25 to 30 m/s) (100 mm head)
Accuracy:	±1.0% of reading or ±3 ft/min (±0.015 m/s), whichever is greater (100 mm head)
Power:	Four AA-size batteries or AC adapter
Datalogging:	Up to 2,849 samples and 1,000 test IDs
Interval:	1 sec, 2 sec, 5 sec, 10 sec, 15 sec, 20 sec

TSI VelociCheck Air Velocity Meter (Model 8340, 8330)

Item # 51200

- Small, pocket-sized meter that requires no training
- Quickly take the measurements you need
- Easy-to-read digital display
- NIST traceable calibration certificate

Sensors:	Retractable probe (stainless steel)
Range:	0 to 10.00 m/s (0 to 2,000 ft/min)
Accuracy:	5.0% of reading or +± 0.025 m/s (±5 ft/min) whichever is greater
Power:	Four AA-size alkaline (model 8340)

TSI Accubalance Air Capture Hood (Model 8371, 8370)

Item # 54444

- Measure air volume flowing through registers, diffusers and grilles
- Ideal for air volume measurements, thermal comfort studies, HVAC testing and adjusting & balancing
- Back-lit display is easy to read in poor lighting conditions
- Field calibration adjustment
- Variety of hood sizes lets you take readings from most diffusers, registers or grilles

Range:	30 to 2,000 cfm (15 to 1,000 l/s, 50 to 3,500 m3/hr)
Accuracy:	±5% reading and ±5 cfm (±2.4 l/s, ±8.5 m3/hr)
Power:	4 C-size batteries (4 alkaline batteries provided)

TSI Q-Trak IAQ Monitor (Model 7575, 7565)

- Simultaneously displays CO2, CO, temperature and humidity measurements
- Used for IAQ investigations, industrial hygiene surveys, baseline trending and screening, building commissioning and tracking down emissions to their source (point source location)
- Large graphic display with up to 5 measurements and on-screen messages and instructions
- Bluetooth communication for transferring data or remote polling

Sensors:	Electro-chemical (carbon monoxide), dual-wavelength NDIR (carbon dioxide), Themistor (temperature), thin-film capacitive (relative humidity)
Range:	0-500 ppm (carbon monoxide), 0-5,000 ppm (carbon dioxide), 32 to 140°F (temperature), 5-95% (relative humidity), 0-100% (outside air), 20.36 to 36.648 in. Hg (517.15 to 930.87 mm Hg)
Power:	Four AA-size alkaline batteries or AC adapter

TSI Q-Trak Plus IAQ Monitor (Model 8554, 8552, 8551)

- Quick, accurate information to assess key parameters
- Ideal for IAQ investigations, industrial hygiene surveys, baseline trending and screening, and buliding commissioning and tracking down emissions to their source (point source location)
- Large graphic display with up to 5 measurements and on-screen messages and instructions
- Bluetooth communication for transferring data or remote polling

Sensors:	Non-Dispersive Infrared (NDIR) (CO2), Thermistor (temperature), thin-film capacitive (humidity), electro-chemical (CO)
Range:	0-5,000 ppm (CO2), 0 to 50° C (32 to 122° F) (temperature), 5-95% (relative humidity), 0-500 ppm (CO sensor)
Power:	Batteries: Four AA-size alkaline or rechargeable or AC adapter
Run Time:	20 hrs (alkaline battery)

RKI Eagle IAQ Configured Gas Monitor

- Simultaneous detection of up to 6 different gases
- Over 400 gas monitoring configurations
- 4 x 20 LCD readout. Viewed through window in case top. Displays readings & status of 4 channels simultaneously. Backlight, automatic for alarms and by demand with adjustable time.
- Auto calibration / single gas calibration
- Ergonomic RFI/EMI chemical / weather resistant enclosure

Sensors:	IR Sensors available for CO2, % LEL CH4 or HC, % volume CH4 or HC
Range:	Powerful long-life pump up to 125' range with filters
Power:	4 alkaline or nickel-cadmium, size D batteries (charger has alkaline recognition to prevent battery damage if charging is attempted with alkalines)
Run Time:	30 hrs
Datalogging:	Included datalogging option

RAE Systems MultiRAE IR PGM-54 CO2 and PID Personal Protection Gas Monitor

- Patented non-dispersive infrared (NDIR) sensor
- Accurate measurement of VOC's for indoor air quality, beverage & brewery, food industry, hospitals and respirable breathing-air testing
- Easy-to-read display with backlight
- Wireless access to real-time instrument readings
- 90 dB buzzer and flashing red LED to indicate exceeded preset limits
- Two-point field calibration for zero and span gas

Sensors:	Up to 5 sensors including non-dispersive infrared sensor for CO2, protected catalytic bead for combustible gas, interchangeable electrochemical sensors for oxygen and toxi gases and PID for VOC's (10.6 eV, 9.8 eV and 11.7 eV lamps)
Range:	0 - 20,000 ppm (CO2), 0 - 2,000 ppm (VOC's at 0.1 ppm resolution)
Power:	Li-ion drop-in battery
Run Time:	12 hours

Ask About Our Rental Protection Plan (RPP)

RAE Systems IAQRAE - PGM 5210

- The only IAQ monitor that combines a PID with traditional IAQ parameters like temperature, humidity and carbon dioxide
- Directly measure VOC's in cleaning and maintenance supplies, carpets, fabrics, finishes, furniture and building materials, office equipment, microbial contamination, human occupancy, renovations, vocational training shops & art rooms and pesticides.
- Large digital display and keypad
- Upload data to PC and download monitor set-up from PC through RS 232 link to serial port on PC

Sensors:	Up to 5 sensors (PID, CO2, temperature, humidity and one toxic), 10.6 eV PID sensor for VOC, NDIR for CO2, electro-chemical sensor for toxic gas, polymer capacitive for humidity and thermistor for temperature
Range:	0.01-9.99 ppm, 10.0-99.9 ppm, 100-500 ppm (VOC's)
Power:	Rechargeable, lithium-ion battery pack with built-in charger or a 6 C-cell battery pack
Run Time:	48 hrs on Li-ion battery

Alpha II Radon Detector

- State-of-the-art and designed for professionals
- Simple and reliable
- 16 character LCD
- RS-232 to optional dot matrix printer

Power:	Three C-cell alkaline batteries or 120 VAC adapter
Run Time:	3 days
Logging Interval:	64 (max intervals)

Durridge RAD7 - Electronic Radon Detector

- Fastest response and recovery times of any electronic monitor/sniffer on the market
- Widely used in laboratories and research work around the globe, by radon testers, mitigators and home inspectors, in mines and deserts, on the ocean and up volcanoes, at extremes of temperature
- LCD display output (2 line x 16 character alpha-numeric)
- Bluetooth and USB connectivity

Range:	0.1 - 20,000 pCi/L (4 - 750,000 Bq/m3)
Accuracy:	+/-5% absolute accuracy, 0% - 100% RH
Power:	11-15V DC (12V nominal) @ 1.25A, center pin positive, or included internal EnerSys sealed lead acid rechargeable battery pack (6V nominal, 30Wh, 5Ah)
Run Time:	24 hrs (SNIFF mode), 72 hrs (Monitor mode)
Datalogging:	1,000 records, each with 23 fields of data, log of printer output also stored

Delmhorst Moisture Meter BD-10

- Easy to operate and easy to read
- Measures moisture in wood and other non-wood building materials
- Analog display
- Built-in calibration check
- Rugged construction with sturdy plastic carrying case

Sensors:	Built-in connector accepts any Delm-horst electrode
Range:	6-40% (wood scale), 0-100 (reference scale)
Power:	9V battery

Delmhorst Moisture Meter BD-2100

- Great for measuring moisture in a variety of different building materials including wood, concrete, drywall, EIFS, roofing, insulation and flooring
- Bright, clear digital display
- Audible, adjustable alarm alerts you when your pre-selected MC has been reached
- Built-in calibration check
- Rugged construction with sturdy plastic carrying case

Sensors:	Built-in connector accepts any Delmhorst electrode
Range:	6-40% (wood scale), 0-100 (reference scale), 0.2-50% (gypsum scale)
Power:	9V battery
Datalogging:	Averages up to 100 accumulated readings

GE Protimeter MMS Moisture Meter

- Three different modes of operation
- Measure and diagnose dampness in buildings and building materials
- Large liquid crystal display (LCD)
- Available data download software and cable
- Check the moisture meter measure mode via the calibration check device (Calcheck)

Sensors:	Moisture, hygrostick probe and humistick probe
Range:	0-1,000 relative scale (moisture meter), 30-100%rh (Hygrostick probe), 0-100%rh (Humistick probe)
Power:	Two AA batteries

Vaisala HM34 Temperature and RH Meter

- Probe conveniently slides in and out of meter casing
- Ideal for spot checking humidity and temperature levels
- 3 1/2 digit LCD
- NIST traceable certificate included
- Lightweight and pocket-size

Sensors:	HUMICAP® thin film capacitive
Range:	0-100% rh
Power:	9V battery
Run Time:	50 hrs
Accuracy:	±2%

Extech SD700

- Three units of available measurement: hPa, mmHg and inHg
- Monitors barometric pressure, humidity, and temperature levels in clean rooms, warehouses, storage rooms, freezers, and water damage restoration projects
- Triple LCD simultaneously displays barometric pressure, temperature, and relative humidity
- SD card for easy transfer of data to PC
- Five
- Six
- Seven

Barometric Pressure:	10-1100 hPa, 7.5-825.0 mmHg, 0.29-3248 inHg
Resolution:	0.1 hPa, 0.1 mmHg, 0.01 nHg
Temperature:	32-122 degrees F
Humidity:	10-90%
Datalogging:	2M data using 2G SD card
Power:	6 AAA batteries
Size::	5.2" x 3.1" x 1.3"
Weight:	10 oz

Ask About Our Rental Protection Plan (RPP)

Thermo Scientific N6 Microbial Sampler

Item # 52116

- Developed in collaboration with NIOSH and referenced in EPA, OSHA, and FDA particle sizing protocols
- Applications include indoor air quality studies, pharmaceutical production, animal care laboratories, wastewater treatment plants, cosmetic manufacturing, filter & clean room efficiency studies, brewery fermentation, food processing area, hospital environments, grain processing and transportation and agricultural emissions
- High mass collection and verifiable flow rate
- Spring action retainer clamps for easy disassembly and cleaning

Flow Rate::	28.3 L/min
Sharp Cut-Off Diameter:	0.65 microns
Calibration:	NIST traceable flow calibration
Dimensions:	9.5" W x 5.5" H x 4.5" D (vacuum pump)
Weight:	8.6 lbs (vacuum pump)

Bioscience International SAS - 180 Microbial Sampler

Item # 54454

- Powerful high volume air flow
- Perfect for a cleanroom, hospital or place of research
- Large back-lit screen with intuitive menu
- Data transfer and reporting according to GLP-GMP
- NIST traceable certificate of calibration with all units
- Durable construction - molded polyresin housing for added strength and operational life

Range:	1,000 liters
Power:	Battery
Run Time:	7 hrs
Datalogging:	RS232 output for PC printer connection; computer software allows data to be reported electronically and plotted according to EN45001 specifications
Interval:	Programmable start and aspiration time, and total air time to be sampled

Zefon Bio Pump Plus

Item # 51229

- The smallest and lightest portable battery powered IAQ sampling pump available
- Very small in size and weight - over 40% less than the standard Zefon Bio-Pump
- Programmable timer allows unattended operation
- Quick-charge battery charger included (approx 3 hrs)
- Quiet operation

Flow Rate:	15 lpm
Housing:	ABS
Housing Color:	Black
Power:	Nicket Metal Hydride battery
Size:	4.375" W x 8" D x 2.75" H
Weight:	1.6 lbs

Drager (CMS) Chip Measurement System

Item # 51372

- One of the most accurate and reliable portable detection systems available for spot gas measurements
- More than 55 gas-specific chips are available
- Store up to 50 measurements in the DataRecorder
- Dot matrix display for clear, legible concentrations and menu navigation
- Main control element for easy and safe operation
- Carrying strap allows the instrument to be carried safely, even when the user is wearing gloves

Measurement Time:	30 sec to 5 min in range of the limit values, depends on chip type and concentration of hazardous substance
Operating Temperature:	0-40 degrees C (during operation)
Power:	Four 1.5V batteries
Size:	215 x 105 x 65 mm
Weight:	730 g (analyzer with batteries)

Drager Accuro Hand Pump

Item # 51373

- Fast measurement with one hand
- One-handed operation
- Use Drager tubes to take measurements under extreme conditions

Stroke Volume:	100 +/- 5 cm³
Length:	170 mm
Width:	45 mm
Height:	85 mm
Weight:	250 g

Drager X-act 5000 - Auto Tube Pump

Item # 54540

- The first all-in-one solution designed for measurements with Dräger Short-term Tubes and for Sampling Tubes and Systems
- Versatile and robust
- Simple operation
- Automatic transfer of measurement parameters
- Direct settings for sampling

Flow Rate:	0.1 to 2.0 l/m
Sample Time:	Adjustable, up to 12 hrs, depending on flow rate, resolution in steps of 15 minutes (default) or 1 minute
Operating Time:	41-104 degrees F
Power:	NiMH rechargeable battery (7.2V 1500 mAh) or 6 AA cells
Size:	7" x 9" x 4.25"
Weight:	3.5 lbs

Sensidyne Piston Hand Pump

Item # 61262

- No other system offers the Sensidyne pump's combination of superior features and benefits.
- Piston-type volumetric pump assures accuracy every time
- High precision direct reading detector tubes for nearly 300 substances
- No laboratory turnaround time, no power requirement, and no user calibration needed

Measuring Range:	Concentrations measured above or below the printed scale by simply increasing or decreasing the number of strokes
Accuracy:	Calibration scales in ppm, mg/l or percent depending on the substance to be measured and the desired measuring range

Ask About Our Rental Protection Plan (RPP)

RAE Systems Piston Hand Pump LP-1200   *Item # 51377*

- Manually measure toxic and combustible gases
- Works seamlessly with RAE systems colorimetric tubes
- Built-in counter keeps track of the number of strokes
- Ergonomic, durable and features a spring-less piston design
- Can be used with multiple layers of gloves
- Solid metal construction

Sampling:	50 ml or 100 ml
Range:	Wide selection of tubes
Power:	Hand-powered for use with colormetric tubes

Gastec Gas GV-100-s-TR Hand Pump   *Item # 51371*

- Fewer Pump Strokes provide faster results than leading competitors
- Thermal ring encircles base of pump, providing accurate temperature readings to reduce risk of error and increases safety by enabling users to make temperature corrections on the spot
- The only pump compatible with Gastec Detector tubes - Gastec has more SEI certified tubes than any other manufacturer and many tubes for use with this pump provide lower detection limits than competitor tubes

Sampling:	50 or 100 ml
Temperature Range:	32 to 104 °F (in increments of 9 °F)
Temperature Correction:	True Concentration = 2.5 ppm x 1.10 = 2.75 ppm
Humidity Correction:	True Concentration = 5 ppm x 0.68 = 3.4 ppm

PINE
Partner for Test & Measurement Equipment Services and Data Solutions

Rental Protection Plan (RPP) Protects Your Investment

Damage Protection
- RPP provides coverage for repairs due to accidental or incidental damage to equipment.
- Damage resulting from abuse or misuse is not covered - abuse or misuse is defined as equipment used in an application it was not designed for or an application that exceeds the manufacturers' specifications.

Rental Liability
- Significantly reduces your liability for damaged or stolen equipment.
- Avoid claims against your insurance.
- The RPP gives you coverage when your business insurance leaves you exposed.

Theft Protection
- You are only responsible for a percentage of the replacement cost depending on protection level selected.
- A police report must be filed and notification given to Pine within 48 hrs of the customer being made aware of stolen equipment. If a police report is not provided, the customer is fully liable for the entire cost of replacement.
- In the event that the stolen equipment is recovered, Pine will retain ownership.

RPP Available Options for NDE/RVI & Environmental Equipment

	Plan	Repair Coverage	Theft & Loss
1	15% of List Rate	50%	30%
2	20% of List Rate	75%	50%

* All RPP is based on list rental rate. National or customized rates DO NOT APPLY. Some items are excluded from our rental Protection Plan

www.pine-environmental.com

Solinst 101 / 101 Mini

- See water levels and total well depth
- Accurately measurements in wells, boreholes and cascading water with almost zero displacement
- PVDF flat tape with increased tensile strength and electrical efficiency
- Stand-alone designed reel with convenient carrying handle and sturdy probe holder
- 3/8" (10 mm) tape comes with permanent laser markings every 1/1000 ft. or each millimeter, in lengths up to 5,000 ft

Probes:	Stainless steel attached to permanently marked flat tape, fitted on well-balanced reel
Lengths:	100', 200', 300' (small reel), 500', 750', 1,000' (medium reel), 1,250', 1,650', 2,000' (large reel)
Accuracy:	Traceable to national standards, sensitivity adjustment to conductivity & probes avoid false readings in cascading water
Sensitivity:	Allows the buzzer to be turned off while in cascading water

Solinst 102

- Note groundwater levels, especially in small diameter tubes and piezometers, or where a flexible assembly is needed to get past down hole instrumentation
- Coaxial cable with durable polyethlyne jacket with permanent markings precisely laser etched on the cable every 1/1,000 ft or each millimeter
- Standard reel has an easy access battery drawer, a well designed brake assembly and convenient carrying handle
- Laser markings each 1/100 ft or each millimeter

Probes:	Two small diameter probe designs
Lengths:	80' (mini reel), 100', 200', 300', 500', 750', 1,000' (small reel)
Accuracy:	Traceable to national standards
Sensitivity:	On/Off switch
Power:	9 volt battery
Dimensions:	3/8" diameter x 2.75" long (P10 probe), 0.157" diameter x 1.5" long (P4 probe)
Weight:	6.14 oz (P10 probe), 0.35 oz (P4 probe)

Solinst 103 Tag Line

- Designed for use during the installation of monitoring wells
- Accurately measure the depth to backfill during well construction or measure safety support line for deployment of pumps, bailers, samplers and packers
- Tape break strength greater than 220 lbs
- Sturdy, free-standing reel with a carrying handle, weight holder and brake
- PVDF laser marked tape

Lengths:	100-1,000 ft.
Dimensions:	1/16" (polyethylene coated stranded stainless steel wireline), 3/8" PVDF flat tape
Weight:	1.5 lbs (standard stainless steel tag weight), 0.65 lbs narrow tag weight

Solinst 107 TLC Meter

- Displays accurate measurements of conductivity and temperature
- Applications include profiling conductivity and temperature in wells and open water, salinity studies, saltwater intrusion investigations, testing for water quality impairments from road salt, tracer tests, general indication of chemical contamination level, early warning of changes in water quality at landfills and industrial sites
- High quality PVDF flat tape reels smoothly, remains flexible and hangs straight in the well, irrespective of temperature

Lengths:	100 ft, 200 ft, 300 ft, 500 ft, 750 ft, 1,000 ft
Accuracy:	5% of reading or 100 μS
Power:	Standard 9V alkaline battery
Dimensions:	3/4" (probe diameter)

Heron Dipper-T

- Measures static and falling head levels or falling water levels during purging
- Used in wells, boreholes and standpipes
- High tensile steel tape jacketed with polyethylene, high break strength, stretch resistant and lifelong legibility
- Winding handle custom made for easy rewinding with gloved hands
- Ultra bright red LED and 80dbi buzzer

Probes:	Fully pressure/depth rated, field replaceable for optional casing or bottom detector probes
Lengths:	50ft/15m-2,000ft/600m
Sensitivity:	Stainless steel and aluminum construction
Power:	9V alkaline battery
Dimensions:	14" H x 11" W and 9.5" D
Weight:	2.4 kg (reel weight)

Heron Little Dipper

- Used to measure static and falling head levels
- Perfect to use for wells and boreholes
- High tensile steel tape jacketed with polyethylene, high break strength, stretch resistant and lifelong legibility
- Winding handle custom made for easy rewinding with gloved hands
- Ultra bright red LED and 80dbi buzzer

Probes:	Fully pressure/depth rated, 5/8" field replaceable
Lengths:	50ft or 15m, 75ft or 22m, 100ft or 30m
Sensitivity:	Stainless steel and aluminum construction
Power:	9V alkaline battery
Dimensions:	8" H x 7" W x 13" D
Weight:	6 lbs, 7 lbs and 8 lbs

Heron Skinny Dipper

- Ideal for measuring static water levels
- Use in narrow wells, boreholes, tubes and piezometers
- Extruded 1/4" Polyethylene tape – markings in metric (mm) or engineering scale (1/100')
- Ultra bright red LED and 80dbi buzzer
- Premium paddded carry case

Probes:	1/4" fully submersible up to 100m/300' for 20 minutes
Lengths:	100-500 ft
Power:	9 volt alkaline battery
Dimensions:	14" H x 11" W x 9.5" D
Weight:	5.29 lbs (reel), .070 lbs (probe)

Slope Indicator

- Measure water levels in standpipes and wells
- Laser-marked graduations are as durable as the cable itself - English unit cables have 0.01 foot graduations, metric-unit cables have 2 mm marks
- Sturdy reel featuring bronze bearings and aluminum plate sides
- LED and beeper provide a positive indication of contact with water
- Heavy-gage aluminum plate sides, PVC spool, rotating knob - larger reels are equipped with a stand made of strong steel tubing, a probe holder and a reel brake

Probes:	Stainless steel body and tip, polyethylene insulator - 10 x 170 mm (3/8" x 6.6")
Lengths:	100-1,000 ft.
Sensitivity:	Provides consistent results in different well and water conditions and helps eliminates false triggering.
Power:	Two AA batteries

Geotech ET & ETL

- Provides reliable and accurate measurement of groundwater levels
- Highly accurate Polyethylene coated steel tape marked in engineering or metric increments
- Built in reel hanger on ET models and included tape guide for longer tape life
- Audible and visible alarms activated when the probe makes contact with water
- Lightweight steel and aluminum storage reel for easy transportation and durability in the field

Probes:	5/8" field replaceable probe
Lengths:	100-1,000'
Accuracy:	ET Tape - 100th of a foot/100' (Federal Specification GGG-T-106E)
Power:	9 Volt DC alkaline battery
Dimensions:	13" H x 11" W x 7" D (ET reel), 14.5" H x 9" W x 11.5" D (ETL 500' reel), 15.75" H x 13" W x 11.5" D (ETL 750/1,000' reel)
Weight:	9 lbs (ET 100'), 11 lbs (ET 200'), 14 lbs (ET 300'), 20 lbs (ETL 500'), 24 lbs (ET 750'), 28 lbs (ETL 1,000)

Global Water WL650

- Fast, accurate measurements without the use of a down-hole water level meter
- Works in cased steel or PVC-capped wells partially cased rock wells, crooked wells, and wells with pipes, wiring, and operating pumps
- Obtain measurements in seconds
- Avoid cross-contamination
- No equipment to clean

Measurement Range:	Normal 10-500', Deep 200-1,200'
Display Resolution:	0.1'
Accuracy:	±0.2% of reading
Operating Temperature:	30-140° F
Power:	8 AA dry cell batteries
Dimensions:	7" L x 4" H x 5" W
Weight:	3.5 lbs

Field Supplies

PINE
Partner for Test & Measurement
Equipment Services and Data Solutions

For all your Consumables, PPE and Instrumentation needs.

Ask About Our Rental Protection Plan (RPP)

Solinst 122 and 122 Mini

- Measures water and product level and thickness
- For use in wells and tanks
- PVDF laser marked cable (mini) and PVDF flat tape (standard)
- Audible tone and light when probes enters a liquid
- Designed for rugged field use

Probes:	P8 (122M) measuring 5/8"
Lengths:	Up to 1,000 ft
Accuracy:	1/200 ft or 1.0mm
Intrinsically Safe:	ATEX certified
Power:	Standard 9 volt battery

Heron H.OIL and SM.OIL

- Used to measure the interface level between two liquids
- Ideal for use in hazardous environments by oil & gas, chemical and petrochemical industries
- High tensile steel tape, jacketed with Kynar, high break strength, stretch resistant and lifelong legibility – markings in metric (mm) or engineering scale (1/100')
- Winding handle - custom made for easy rewinding with gloved hands
- Ultra bright red LED and 80 dbi Buzzer

Probes:	Fully pressure/depth rated, 19mm field replaceable
Lengths:	Ability to measure product layer as thin as 1mm (1/200ft)
Intrinsically Safe:	Certified to CSA and ANSI/UL standards
Power:	9 volt alkaline battery
Dimensions:	14" H x 11" W x 9.5" D
Weight:	5.29 lbs (2.4 kg)

Kynar Testwell IP

- Detects and measures 1/2 mm or 1/400 ft of floating product in 1/2" or 12 mm I.D. wells
- Kynar or polyethylene tape
- Based on the popular SST-series rugged reel

Probes:	7/16" or 5/8"
Lengths:	50-2,000 ft (15-600 m)
Accuracy:	1/100 ft or 1 mm & 5x more accurate than white tapes with a Kynar or Polyethylene jacket
Sensitivity:	Get quick readings through heavy oils while preventing false readings-electronics will also correct for a severely damaged optical sensor
Power:	9V battery

Geotech ORS Oil / Water Interface Probe

- Accurately measures depth to hydrocarbons and water in monitoring wells and tanks
- Audible and visual alarms
- Packaged in NEMA 3, weather resistant, rugged aluminum housing

Probes:	1" (standard or chemical probe), 5/8" (small probe) - field replaceable sensing prisms on standard and chemical probes
Lengths:	100' / 30 m
Accuracy:	Measurements to depth of fluid are accurate to within 1/100' (3.05mm)
Intrinsically Safe:	Standard 1" intrinsically safe probe and conductivity sensor with optical prism
Power:	9V DC (6 replaceable AA size batteries)
Dimensions:	12" x 12" x 4" (30.48 x 30.48 x 10.16 cm)
Weight:	7.8 lbs

QED Hammerhead Pump - 2"

- The first automatic air-driven pump that can be used in a 2" well
- Automatic shut-off when the liquid level is pumped down below depth level (min 26") or 46" (top inlet) of liquid, and will automatically begin pumping again once well level has recovered
- No waiting between active phases of the cycle for the entire length of air supply tubing to re-pressurize
- Stainless steel construction with PTFE inlet and discharge check balls, epoxy float and Viton O-rings

Type:	Positive air displacement
Stroke Volume:	0.7 gal
Operating Pressure Range:	15-100 psi
Lift:	200'
Flow Rate:	2 1/4 GPM
Length:	39.5"
Weight:	5.75 lbs

QED Hammerhead Pump - 4"

- High-rate air-driven pneumatic pump primarily useful for total fluids applications
- Automatic shut-off when the well drops below pumping level
- No waiting between active phases of the cycle for the entire length of air supply tubing to re-pressurize
- Stainless steel construction with PTFE inlet and discharge check balls, epoxy float and Viton O-rings

Type:	Positive air displacement
Stroke Volume:	0.8 gal
Operating Pressure Range:	10-160 psi
Lift:	300'
Flow Rate:	14+ GPM
Length:	55"
Weight:	23.5 lbs

QED LP1301 Pulse Pump

- Air-powered and requires an external timer-based controller to control the air cycling OFF and ON to the pump
- Pneumatic displacement pump
- Low maintenance performance in sinking layer recovery and other tough applications
- Reliable operation with only 2 moving parts downwell even in high solids and the thickest liquids
- Available pump controller

Max Flow:	2 (7.5), 2,880 (10,900)
Max Depth:	230 ft
Inlet Position:	Bottom
Length:	20"
Weight:	2 lbs

QED AP2 Bottom / Top Loading Pump - Short / Long

- Pneumatic fluid extraction pump that pumps in pulses
- Used for 2" wells or larger
- Long, short or low dardown pump
- Small and lightweight
- Available AP data module, pump cycle counter, tank-full shut-off and inlet conversions

Diameter:	2.0" I.D. and larger
Pressure Range:	5-130 psi
Flow Ranges:	0-2.2 GPM
Weight:	8.8 lbs (long), 6.3 lbs (short)

Ask About Our Rental Protection Plan (RPP)

QED AP4 Bottom / Top Loading Pump - Short / Long

Item # 51828

- Small and lightweight
- Color coded hoses with all different fittings so only the proper connections can be made
- Pneumatically powered with no electrical components, thus avoiding sparks in control power and sensing devices
- Durable stainless steel air valves that can pass liquids as viscous as 90 weight gear oil without fouling
- Rugged construction ensures long system life

Diameter:	3.5" (pump)
Pressure Range:	5-120 psi, 5-200 psi (high pressure option)
Max Flow:	0-16 gallons per minute
Max Depth:	250 ft, 425 ft
Actuation:	53" (long AP4 + bottom inlet), 27" (short AP4 + bottom inlet), 52" (long AP4 + top inlet), 37" (short AP4 + top inlet)
Inlet:	Top and Bottom

Grundfos Redi-Flo 2 - 2" Pump

- Works well in portable and permanent applications
- Perfect for monitoring small wells, groundwater sampling and groundwater purging
- VFD controller
- Optional reel system
- Offers a smooth, uninterrupted flow for accurate sampling
- Lightweight and easy installation

Diameter:	2"
Lengths:	50', 75', 100', 150', 175', 200', 250' and 300'
Flow Rates:	Continuous / Variable (100ml/min. - 9 U.S. GPM)
Power:	2500W 16 amp generator (recommended) or 115 or 220V
Weight:	5.5 lbs

Grundfos Redi-Flo Variable Frequency Drive Controller for 2" Pump

- Designed to operate and protect the Redi-Flo 2 and Redi-Flo 4
- Ideal sampling device for representative groundwater samples
- Designed for long term reliability
- Enclosure designed for outdoor duty and is resistant to damage as a result of incidental exposure to rain or splashing water

Flow Rates:	50 gallons per minute (maximum) to 100 milliliters per minute (minimum)
Power:	Compatible with either 120V or 230V single-phase, AC input
Dimensions:	Protective Case – 17¾" L x 12½" W x 8" H (45cm L x 32cm W x 20cm H) VFD only – 13" L x 7¾" W x 7" H (33cm L x 20cm W x 18cm H)
Weight:	35 lbs

Grundfos 5 SQ / SQE - 3" Pump

- Compact 3" multistage centrifugal pump that can be installed in a borehole no larger than the pump itself
- Suitable for continuous and intermittent operation for a variety of applications including groundwater supply, liquid transfer in tanks, pressure boosting, environmental applications and garages and petrol stations
- Connected to the Grundfos CU 301 control box
- 100% stainless streel construction

Diameter:	74mm
Flow Rates:	Up to 9m3 /h (SQ/SQN 7), Head up to 238 m (SQ/SQN 1)
Weight:	4.7 - 6.4 kg

Grundfos 10 SQ / SQE - 3" Pump

- Compact 3" multistage centrifugal pump that can be installed in a borehole no larger than the pump itself
- Suitable for continuous and intermittent operation for a variety of applications including groundwater supply, liquid transfer in tanks, pressure boosting, environmental applications and garages and petrol stations
- Connected to the Grundfos CU 301 control box
- 100% stainless streel construction

Diameter:	74mm
Flow Rates:	Up to 9m3 /h (SQ/SQN 7), Head up to 238 m (SQ/SQN 1)
Weight:	4.7 - 6.4 kg

Ask About Our Rental Protection Plan (RPP)

Grundfos 22 SQ / SQE - 3" Pump

- Compact 3" multistage centrifugal pump that can be installed in a borehole no larger than the pump itself
- Suitable for continuous and intermittent operation for a variety of applications including groundwater supply, liquid transfer in tanks, pressure boosting, environmental applications and garages and petrol stations
- Connected to the Grundfos CU 301 control box
- 100% stainless streel construction

Diameter:	74mm
Flow Rates:	Up to 9m3 /h (SQ/SQN 7), Head up to 238 m (SQ/SQN 1)
Weight:	4.7 - 6.4 kg

Grundfos 30 SQ / SQE - 3" Pump

- Compact 3" multistage centrifugal pump that can be installed in a borehole no larger than the pump itself
- Suitable for continuous and intermittent operation for a variety of applications including groundwater supply, liquid transfer in tanks, pressure boosting, environmental applications and garages and petrol stations
- Connected to the Grundfos CU 301 control box
- 100% stainless streel construction

Diameter:	74mm
Flow Rates:	Up to 9m3 /h (SQ/SQN 7), Head up to 238 m (SQ/SQN 1)
Weight:	4.7 - 6.4 kg

Grundfos CU/CUE Controller for 3" Pump

- Capable of controlling pumps based on multiple sensor signals
- Delivers exact constant water pressure control
- Customizable system set-up
- Simple communication with the pump system
- Auxiliary relay can be used to operate external equipment
- Siren call for each of the sensor and/or alarm settings
- Alarm detects no contact to pump, over-voltage, under-voltage, dry running, speed reduction and more

Voltage:	1 x 100-240 V - 10 %/+ 6 %, 50/60 Hz, PE
Power Consumption:	5 W
Current Consumption:	Maximum 130 mA
Enclosure Class:	IP55
Ambient Temp:	During operation: -30 °C to +50 °C During storage: -30 °C to +60 °C
Relative Air Humidity:	95%

Grundfos Cooling Shroud

- Specifically designed for use with the Grundfos RediFlo 2 in wells 4" in diameter or larger
- For use in 2" diameter wells
- Designed to stay cool by the action of the water passing rapidly over the body of the stainless steel and PTFE pump

WATER LEVEL / QUALITY MONITORING - Remediation, Submersible Pumps & Controllers

Geotech SS GeoSub Controller with Optional Inverter

Item # 51846

- Designed specifically for use with Geotech's SS Geosub Pump
- Built-in sensing gives the operator accurate and precise control over the pump during sampling events
- Push button Up/Down control
- Heavy duty rated power cable for years of service

Dimensions:	16" L x 13" W x 7" H
Weight:	16.45 lbs

Geotech Geopump Peristaltic Pump

Item # 51858

- Operates by mechanical peristalsis, so the sample only comes in contact with the tubing
- Designed for single and multi-stage pressure or vacuum pumping of liquids
- Accessories include easy-load II pump head, silicone tubing, tygon tubing, other tubing, stainless steel tubing weight, custom length power cord, Geotech back flushing membrane filter holder

Tubing:	5' (1.5 m)
Depth:	Suction from 27 feet (8 meters) at sea level
RPM Range:	30-300 rpm (1st pump station), 60-600 rpm (2nd pumping station)
Power:	AC only, DC only, or AC/DC combination
Dimensions:	3.5 x 8 x 8 in. (9 x 20 x 20 cm)

Solinst 410 Peristaltic Pump

Item # 51859

- Ideal for vapor or water sampling
- Applications include groundwater sampling from shallow wells, surface water sampling, vapor sampling and back flushing Solinst Drive-Point Profilers
- Compact and lightweight with no vents, grates or openings

Tubing:	5/8" OD (16 mm) medical grade silicone, optional 3/8" OD (10 mm)
Sample Rate:	120 ml/min to almost 3.5 L/min (standard 5/8" tubing), 40 ml/min and up to 900 ml/min (optional 3/8" tubing)
Power:	12 volt DC
Dimensions:	13" x 5" x 6-1/2" (33 cm x 13 cm x 17 cm)
Weight:	8 lbs

Ask About Our Rental Protection Plan (RPP)

WATER LEVEL / QUALITY MONITORING - Remediation, Submersible Pumps & Controllers

PINE
Partner for Test & Measurement Equipment Services and Data Solutions

Rental Protection Plan (RPP) Protects Your Investment

Damage Protection
- RPP provides coverage for repairs due to accidental or incidental damage to equipment.
- Damage resulting from abuse or misuse is not covered - abuse or misuse is defined as equipment used in an application it was not designed for or an application that exceeds the manufacturers' specifications.

Rental Liability
- Significantly reduces your liability for damaged or stolen equipment.
- Avoid claims against your insurance.
- The RPP gives you coverage when your business insurance leaves you exposed.

Theft Protection
- You are only responsible for a percentage of the replacement cost depending on protection level selected.
- A police report must be filed and notification given to Pine within 48 hrs of the customer being made aware of stolen equipment. If a police report is not provided, the customer is fully liable for the entire cost of replacement.
- In the event that the stolen equipment is recovered, Pine will retain ownership.

RPP Available Options for NDE/RVI & Environmental Equipment

	Plan	Repair Coverage	Theft & Loss
1	15% of List Rate	50%	30%
2	20% of List Rate	75%	50%

* All RPP is based on list rental rate. National or customized rates DO NOT APPLY. Some items are excluded from our rental Protection Plan

www.pine-environmental.com

PINE
Partner for Test & Measurement Equipment Services and Data Solutions

Examples of RPP Savings

20% Rental = 75% Coverage of Damage				15% Rental = 30% Coverage of Stolen Equipment		
Damage IPLEX Scope (RVI) #54826	**With RPP**	**Without RPP**		**Stolen MiniRAE 3000** #51238	**With RPP**	**Without RPP**
List Rate (weekly)	$2,200.00	$2,200.00		List Rate (weekly)	$233.00	$233.00
RPP (20%)	$440.00			RPP (15%)	$34.95	
Repair Cost (manufacturer's repair cost)	$13,000.00	$13,000.00		Replacement Cost (manufacturer's list price)	$5,006.00	$5,006.00
RPP Benefit (75% of repair)	- $9,750.00			RPP Benefit (30% of replacement)	- $1,501.80	
Customer Cost:	$3,250.00	$13,000.00		Customer Cost:	$3,504.20	$5,006.00
Total Customer Cost (Rental & Repair)	$5,890.00	$15,200.00		**Total Customer Cost (Rental & Replacement)**	$3,772.15	$5,239.00

Don't go without protection! Ask for the RPP on your next rental!

* All RPP is based on list rental rate. National or customized rates DO NOT APPLY. Some items are excluded from our rental Protection Plan. Customer is responsible for all rental rates up until the day of notification to Pine. Ask your local Pine branch for more details on our Rental Protection Plan (RPP) Agreement.

RPP Flyer 1-3-2020 - US

www.pine-environmental.com

Ask About Our Rental Protection Plan (RPP)

Masterflex E/S Portable Sampler

Item # 51800

- Economical choice for basic sampling applications

- Features a single-turn potentiometer for speed control, ON indicator, and three-position power/reversing switch

- IP54-rated control panel protects against inclement weather and splashing water

- Accessories include sampling pump automotive/cigarette lighter power adapter, and portable sampling pump auxiliary power supply kit

RPM Range:	400 (top speed)
Power:	12 VDC rechargeable battery
Dimensions:	16"H x 11-1/3"W x 10-1/2"D

Spectra Field Pro Peristaltic Pump

Item # 51861

- State-of-the-art peristaltic pump that features a heavy-duty, all-inclusive design with no external cables or batteries to worry about

- Best pump head available for environmental work

- Advanced electronic flow controller maintains a steady flow rate regardless of battery voltage - will not cut out during low flow sampling

- Heavy duty construction with top quality components

Tubing:	Compatible with Masterflex sizes 15 through 36
Sample Rate:	50-1,900 ml/min
Power:	Battery
Dimensions:	16.5" L x 10.5" W x 9" H
Weight:	29 lbs (13 kg)

Pine Peristaltic Pump

Item # 51860

- Operates by mechanical peristalsis, so the sample only comes in contact with the tubing

- Designed for single and multi-stage pressure or vacuum pumping of liquids

- Accessories include easy-load II pump head, silicone tubing, tygon tubing, other tubing, stainless steel tubing weight, custom length power cord, Geotech back flushing membrane filter holder

Depth:	Suction from 27' (8 meters) at sea level
Sample Rate:	0.6 L/min (station 1 @ 350 rpm max), 1.04 L/min (station 2 @ 600 rpm max)
RPM Range:	30-300 rpm (1st pump station), 60-600 rpm (2nd pumping station)
Tubing:	5' (1.5M)
Power:	12 VDC or 120 VAC
Dimensions:	3.5 x 8 x 8 in. (9 x 20 x 20 cm)

DGSI TR200 Peristaltic Pump

Item # 51852

- Designed for environmental sampling in outdoor applications

- Includes overheated and battery status indicator lamp

- Water resistant ABS plastic construction

Depth:	25' suction lift
Sample Rate:	100-500 ml/min (with 25' of 1/4" OD suction hose and 0' head, and full battery charge)
Tubing:	3/8" OD x 3-1/6" ID unreinforced silicone tubing
Power:	12 V, 7.5 A·h gel cell rechargeable battery
Dimensions:	9.5" x 7.5" x 6" (241 x 190 x 152 mm)
Weight:	10 lbs with battery

QED Sample Pro Portable MicroPurge Pump

- Operated by compressed gas and a bladder pump control unit, and is ideally used with the MicroPurge basics models MP10 and MP15 controllers
- The first pump designed specifically to meet the needs of portable low-flow sampling
- Polyethylene bladder
- Solid, 303 stainless steel construction

Diameters:	1.75"
Depth:	250'
Sample Rate:	1.2 liters per min @ 25', 400 ml per min @ 150'
Volume:	100 milliliters
Dimensions:	14.75" (37.5 cm) Push-in / 16.5" (41.9 cm) Compression bottom of pump to center line of inlet 12.12" (30.8cm)
Weight:	4.25 lbs

QED Well Wizard Dedicated Sampling Pump

- The most reliable, cost-effective low-flow groundwater sampling system available
- Perfect for deep sampling wells or narrow or obstructed casings
- Use with MicroPurge controllers
- High-performance PTFE bladder
- 316 electropolished stainless steel

Volume:	395 milliliters
Maximum Lift:	1,000'
Size:	3.4' length, 1.66" diameter

QED MicroPurge Basics - MP10 Controller

- Simple up-down arrow keys increase and decrease purge flow to meet low-flow requirements
- Ideal for low-flow groundwater sampling
- Exclusive MicroPurge control mode
- 2 line, 16 character LCD display
- Weatherproof controls housed in a rugged, compact case

Depth:	250'
Power:	3 "AA" batteries
Dimensions:	10-3/4" x 9-3/4" x 5" (27 x 25 x 13 cm)
Weight:	5.5 lbs

Ask About Our Rental Protection Plan (RPP)

QED MicroPurge Basics - MP10 H Controller

- Simple up-down arrow keys increase and decrease purge flow to meet low-flow requirements
- Ideal for low-flow groundwater sampling
- Exclusive MicroPurge control mode
- 2 line, 16 character LCD display
- Weatherproof controls housed in a rugged, compact case

Depth:	600'
Power:	3 "AA" batteries
Dimensions:	16" x 13" x 7" (40.6 x 33 x 17.8 cm)
Weight:	19.25 lbs

QED MicroPurge Basics - MP10 UH Controller

- Simple up-down arrow keys increase and decrease purge flow to meet low-flow requirements
- Ideal for low-flow groundwater sampling
- Exclusive MicroPurge control mode
- 2 line, 16 character LCD display
- Weatherproof controls housed in a rugged, compact case

Depth:	1,000'
Power:	3 "AA" batteries
Dimensions:	16" x 13" x 7" (40.6 x 33 x 17.8 cm)
Weight:	19.25 lbs

QED MicroPurge - MP50 Controller and 12V Compressor

- Used to operate QED Well Wizard™ bladder sampling pumps to purge and sample ground water
- Ideal for wells and other groundwater sampling
- Multi-mode digital controller
- LCD display, 32 characters (2 lines, 16 characters each)
- Lightweight and compact with a waterproof protective case

Depth:	200' max lift
Power:	3 "AA" batteries
Dimensions:	16" x 13" x 6.5"
Weight:	21 lbs

QED MicroPurge - MP15 Backpack

- Combines advanced low-flow control with the quiet power of a built-in compressed gas source
- Portable and easy to use for sampling groundwater with bladder pumps
- Controller with 6-button keypad
- Lightweight and portable

Depth:	250' max pump depth
Power:	3 "AA" batteries
Dimensions:	25 1/2" x 12 1/2" x 10" (65 x 32 x 25 cm)
Weight:	27 lbs

QED MicroPurge - Model 3020 Oil-less Electric Compressor

- A useful option for low-flow sampling of wells
- Convenient, portable pneumatic power choice for many sampling systems.

Depth:	Up to 200'
Sample Rate:	0.21 scfm @ 100 psi (0.357 m3 /h @ 6,895 kPa)
Power:	12 VDC (battery cable)
Dimensions:	15" x 11" x 6.5" (38 x 28 x 17 cm)
Weight:	15 lbs

QED MicroPurge - MP40C Direct Drive Air Compressor

- Oil free direct drive air compressor
- Compatible with MP10 and MP15 or Model 400 controllers
- Equipped with regulator, gauges, quick connect and cushioned grips

Sample Rate:	6.9 cfm @ 40 psi, (11.7 @ 275) 5.0 cfm @ 90 psi (8.5 @ 620)
Power:	Gas
Dimensions:	24.5" x 21.5" x 20" (62 x 54 x 50cm)
Weight:	74 lbs

QED MicroPurge Basics - MP30 Drawdown Meter

- Designed to help control draw-down during monitoring well purging, especially when used with MicroPurgebasics pump controllers
- Connect to the MicroPurge basics controller with the cable provided
- Includes light and sound indicators of reaching the drawdown limit (dry probe condition)

Diameters:	5/8" O.D. (probe)
Tape Length:	150' or 300'
Power:	9V battery
Dimensions:	14" x 10 - 1/2" x 8" (37 x 27 x 20 cm)
Weight:	7 lbs

Solinst Model 407 Bladder Pump

- Excellent for either regular or low flow sampling
- Allows consistent, high quality samples in all types of applications
- Rugged, dependable controller
- Durable PTFE bladder
- 316 stainless steel body

Depth:	500'
Sample Rate:	100 mL/min
Power:	12 volt DC power
Dimensions:	1.66" x 1"
Weight:	21 lbs

Ask About Our Rental Protection Plan (RPP)

Geotech Bladder Pumps

- Single turn release head and quick change bladders allow for quick, in-the-field bladder changes and easy decontamination

- Designed with input from field technicians who actually do the sampling

- Compatible with the Geotech Geocontrol PRO & BP Controller units

- Available in PTFE and Polyethylene for all models

- Constructed of 316 stainless steel

Diameters:	.675", .850" and 1.66"
Depth:	200'
Pump Volumes:	11 oz (1.66" x 36"), 5 oz (1.66" x 18"), 0.9 oz (.850"), 0.5 oz (.675")
Dimensions:	40" L (1.66" x 36"), 19" (166" x 18"), 18 5/8" (.850"), 18 3/4" (.675")
Weight:	5 lbs (166" x 36"), 3 lbs (1.66" x 18"), 1.1 lbs (.850"), .83" (.675")

Marschalk Bladder Pump

- Ideal for both gentle low-flow sampling and higher volume purging

- Electro/pneumatic controllers

- Dedicated Geotech bladder pump engineered for easy installation and use

- Welded assembly consisting of four 316 Stainless Steel components, the Upper and Lower Head and two Spanner Rods

Diameters:	1.75"
Depth:	289'
Pump Volumes:	9.8 oz (24"), 19.2 oz (42"), 30.5 oz (60")
Power:	Battery
Dimensions:	24" L, 42" L, 60" L (without screen), 29" L, 45" L, 69" L (with screen)
Weight:	5.44 lbs (24"), 7.33 lbs (42"), 9.63 lbs (60")

Solinst 12V Air Compressor

- Ideal for field use
- Lightweight and compact
- Air tank rated to 150 psi

Sampling:	100 ml/min
Memory:	99 user-created flow rates saved to FRAM memory
Power:	12 volt DC power
Weight:	21 lbs

Solinst Model 408 Double Valve Pump

- Pneumatic drive pump that allows consistent, high quality samples

- Suitable for low flow or regular flow sampling

- Use with Solinst Model 464 Controller in both 125 psi and 250 psi versions

- Excellent performance and reliability

- Easy decontamination without the use of tools

- 316 stainless steel construction

- Accessories include a 12 V air compressor, packers, in-line disposable filters and tag line

Diameters:	1.66" and 5/8" (16 mm)
Depth:	500'
Power:	Four "AA" batteries for Solinst Model 464 Controller

Solinst Model 464 Controller

- Fully automatic with preset sample modes from low to high flow sampling
- Can be operated manually, using only a compressed gas source
- Automatic preset sample modes from low through high flow settings
- 125 psi or 250 psi versions
- Rugged and dependable

Sample Rate:	100 ml/min or less when sampling VOC's
Power:	Four "AA" batteries

Solinst Model 425 Discrete Interval Sampler

- Sampler, with LDPE tubing mounted on the convenient Solinst reel
- Perfect for obtaining a representative groundwater sample from below oil/product layers, discrete interval sampling in lakes, rivers and wells, chemical profiling of wells, sampling at points of inflow to well and LNAPL and DNAPL sampling
- Easy disassembly for decontamination
- Stainless steel construction

Diameters:	1" x 2', 1.66" x 2', 2" x 2', 1" x 4', 1.66" x 4', 2" x 4'
Depth:	25', 50', 100', 200', 300', 500'

Ask About Our Rental Protection Plan (RPP)

DGSI Arch Pump Model TR-602

- Pneumatic air displacement pump
- Used primarily for well development in 2" and larger wells
- Arch Pump pneumatic controller sets the intake and discharge times that regulate the pumping rate
- Stainless steel pump body and head

Sample Rate:	2.5 gpm
Dimensions:	1.65" x 32" with 3/8" fittings

Waterra Intertial HydroLift II Pump

- Suitable for purging and sampling groundwater monitoring wells
- Great for well development of 2" and 4" wells using standard or high flow foot valves with surge blocks
- Efficient, reliable and inexpensive

RPM Range:	200 cycles per min
Power:	3/4 hp (6 amps) DC electric motor (110 volt)
Dimensions:	15" length, 20" height, 7" width (38cm L x 51cm H x 18cm W)
Weight:	38 lbs

Waterra PowerPump - 2

- Most powerful pump actuator manufactured by Waterra
- Excellent choice for extreme pumping requirements

Power:	Honda GX100 Air-cooled, 4-Stroke OHC gasoline engine
Dimensions:	29" length, 30" height, 12" width (74cm L x 76cm H x 30cm W)
Weight:	75 lbs (34 kg)

Waterra PowerLift - 3

- Powerful, portable actuator with the durability of the Waterra Power-Pump-2's mechanism and the light weight of the Hydrolift-2's motor, gear and control
- For use with intertial pumping systems, standard and high flow
- Accessories include tubing, footvalves, surge protector and gloves

Depth:	150'
Power:	110 volt or 220 volt AC
Dimensions:	16" L x 30" H x 12" W (41 cm L x 76 cm H x 30 cm W)
Weight:	45 lbs

Honda WB20 Trash Pump

- General purpose, centrifugal 2" pump
- Easy starting Honday OHV commercial engine
- Durable silicone carbide mechanical seal
- Cast iron volute and impeller

Diameters:	2"
Sample Rate:	164 gallons per minute
Power:	Gas
Dimensions:	19.3" L x 14.4" W x 16.5" H
Weight:	44 lbs (dry weight)

Honda WX10TA Trash Pump

Item # 55033

- Lightweight general purpose 1" pump
- Easy starting Honda mini 4-stroke engine
- OHC design
- Aluminum volute and impeller
- Carbon ceramic & mechanical seal
- Aluminum volute and impeller
- Lightweight design

Diameters:	1"
Sample Rate:	32 gallons per minute
Power:	Gas
Dimensions:	12.8" L x 8.7" W x 11.8 H
Weight:	13 lbs

Honda WT20 Trash Pump

Item # 51897

- Easy starting Honda OHV commercial engine
- Solid handling capability up to 13/16"
- Cast iron volute and impeller
- Quick clean out port
- Heavy-duty 2" construction trash pump

Diameters:	1"
Sample Rate:	185 gallons per minute
Power:	Gas
Dimensions:	24.4" L x 18.1" W x 18.3" H
Weight:	104 lbs (dry weight)

ISCO 6700 Composite Sampler

Item # 51776

- An integral part of Isco's comprehensive sampling system including the 6700 compact, standard land 6700FR refrigerated sampler
- Withstands the hostile environments of industrial and municipal monitoring sites
- Controller offered with expanded memory capacity - 4 MB of RAM for program and data storage
- Durable, corrosion-resistant materials

Max Suction Lift:	28'
Transport Velocity:	2.2 ft/s, 2.3 ft/s, 2.5 ft/s, 2.7 ft/s, 2.9 ft/s, 3.0 ft/s,
Repeatability:	±5 ml or ±5% of the average of the maximum and minimum sample volume in a sample set, whichever is greater.
Power:	Nickel Cadmium Battery, Lead Acid Battery
Dimensions:	10.3" L x 12.5" W x 10" H
Weight:	13 lbs controller, 13.2 w/pump tube

Ask About Our Rental Protection Plan (RPP)

ISCO 6712 Composite Sampler

- Features a vacuum-formed ABS plastic shell to withstand exposure and abuse

- Applications include wastewater effluent, stormwater monitoring, CSO monitoring, permit compliance, pre-treatment compliance

- Controller allows you to select different programming modes to assure the most suitable routine for your application - programming is fast and simple, with on-line help just a key stroke away

- Pump revolution counter and patented liquid detection sensor ensure accurate sample volumes

Intake Tubing:	3/8", (3-99' length)
Max Suction Lift:	28'
Transport Velocity:	2' / sec, even at head heights of 26'
Repeatability:	Typical ±5 ml or ±5% of the average volume in a set
Power:	12 VDC

ISCO 3710 Composite Sampler

- Combines simple operation and high volume capacity for single-bottle sampling

- Perfect for wastewater effluent, CSO monitoring, permit compliance and pre-treatment compliance

- 3710 Controller is housed in a NEMA 4X and 6 (IP67) environmentally sealed enclosure, and is fully interchangeable between portable and refrigerated samplers

- Easy set-up and programming - simply choose the options needed from the selections displayed on the two-line, backlit LCD

Intake Tubing:	3/8" or 1/4", (3-99' length)
Max Suction Lift:	26'
Transport Velocity:	2.5 ft./s @ 3 ft; 2.5 ft./s @ 10 ft; 1.9 ft./s @ 15 ft. (0.76 m/s @ 0.9 m; 0.76 m/s @ 3.1 m; 0.58 m/s @ 4.6 m)
Repeatability:	Exclusive LD90 Liquid Presence Detector and pump revolution counting system ensure accurate, repeatable sample volumes

ISCO GLS Composite Sampler

Item # 51781

- Designed for general purpose or priority pollutant sampling in municipal and industrial applications where a full-size sampler is too large
- Applications include wastewater effluent, stormwater monitoring, CSO monitoring, wasterwater effluent, permit compliance, pre-treatment compliance
- NEMA 4X, 6 IP67 controller
- Simplified programming
- Accessories and options include composite sampling bottle configurations (1-g or 2.5-g glass or plastic, 2-g ProPak disposable sampling system), power sources, suction lines/strainers, Samplink Software

Intake Tubing:	.375" or .250" (3-99' length)
Max Suction Lift:	26'
Transport Velocity:	2.9 ft./s @ 3 ft; 2.5 ft./s @ 10 ft; 1.9 ft./s @ 15 ft. (0.76 m/s @ 0.9 m; 0.76 m/s @ 3.1 m; 0.58 m/s @ 4.6 m)
Repeatability:	±10 ml
Sample Volumes:	Programmable 10 to 9,990 ml in 1 ml increments
Power:	12 volts DC or AC power converter

ISCO Avalanche Sampler

Item # 51775

- Provides the advanced control, data logging, and communication features of the 6712, combined with on-the-go cooling from either AC power or a 12-volt deep cycle battery
- Applications include stormwater runoff compliance, TMDL and watershed monitoring enforcement monitoring and anywhere you need advanced sampling capability with datalogging and communications for flow, rainfall and water quality parameters - plus reliable, on-demand cooling
- NEMA 4X, 6 (IP67) controller
- Cell phone and wireless radio data retrieval

Intake Tubing:	.375" (3-99' length)
Max Suction Lift:	28'
Transport Velocity:	3.0 ft./s @ 3 ft; 2.9 ft./s @ 10 ft; 12.7 ft./s @ 15 ft. (0.91 m/s @ 0.9 m; 0.87 m/s @ 3.1 m; 0.83 m/s @ 4.6 m)
Repeatability:	±5 ml or ±5% of the average volume in a set
Sample Volumes:	10 to 9,990 ml in 1 ml increments

ISCO Glacier Sampler

Item # 54769

- Combines the small size, light weight, and mobility of a portable with an exclusive new active temperature control system
- Applications include stormwater sampling, biomonitoring, influent and effluent sampling and anywhere you need sampling mobility plus reliable, ice-free cooling
- NEMA 4x, 6 (IP67) controller enclosure is watertight and dustproof
- Options and accessories include mobility option, single-bottle sampling configurations and suction lines and strainers

Intake Tubing:	.375" or .250" (3-99' length)
Max Suction Lift:	26'
Transport Velocity:	2.9 ft./s @ 3 ft; 2.5 ft./s @ 10 ft; 1.9 ft./s @ 15 ft. (0.88 m/s @ 0.9 m; 0.76 m/s @ 3.1 m; 0.58 m/s @ 4.6 m)
Repeatability:	±10 ml
Sample Volumes:	10 to 9,990 ml in 1 ml increments

ISCO Rain Gauge

Item # 54664

- Precision instrument that uses a tipping bucket design for accurate rainfall measurement
- Great for stormwater runoff monitoring, inflow and infiltration studies, combined sewer overflow monitoring, cMOM and CSO/SSO programs and general rainfall measurement
- Store rainfall data in internal memory for retrieval and analysis with Isco Flowlink® Software
- Included 50' cable connects directly to compatible Isco flow meters and samplers
- Accessories include English and Metric units

Type:	Tipping Bucket
Accuracy:	+/-1% at 2"/hr, +3%/-4% up to 5"/hr
Capacity:	22"/hr
Operating Temperature:	32 to 140 degrees F
Storage Temperature:	-40 to 140 degrees F
Size:	13" H x 9.5" D
Weight:	10 lbs

Ask About Our Rental Protection Plan (RPP)

ISCO 1640 Liquid Level Actuator

- Provides a simple, reliable way to trigger an Isco sampler to begin a sampling routine when the liquid level reaches a predetermined height

- Ideal for triggering sample collection when liquid to be sampled rises to a predetermined level at the sampling point

- Options and accessories include a standard 27' cable or optional built-to-order cable length up to 250'

Power:	12 VDC
Dimensions:	2.92" H x 1.38" W x 2.25" D
Weight:	1 lb

ISCO 780 Smart Analog Output Module

- Gives your Isco 6700 Series Sampler the capability to interpret analog data from other equipment that you already own

- An Isco 6700 Series Sampler with 780 module can interpret any 4-20 analog signal and use the data to pace sampling, and store the data digitally for later retrieval and analysis

- Cable with twin leads allow you to connect to your analiog signal and program the sampler for proper operation

- Constructed of polystryene material

Power:	provided by 6700 series sampler
Dimensions:	4.9" H x 5.7" W x 2" D
Weight:	1.1 lbs

ISCO 750 Area Velocity Flow Module

- Directly measure average velocity in the flow stream

- Applications include accurate open channel flow measurement without a weir or flume, pretreatment compliance, stormwater runoff monitoring, permit enforcement, sewer flow monitoring, combined sewer overflow studies, inflow and infiltration studies, river and stream gauging

- Level and velocity data stored in the sampler are available for later retrieval, reporting, and graphing using Isco Flowlink® software

- Made of polystryene material

Power:	9 to 14 V DC (provided by 6700 series sampler)
Dimensions:	4.9" H x 5.7" W x 2" D
Weight:	0.9 lbs

ISCO 730 Bubbler Flow Module

- Use an internal air compressor to force a metered amount of air through a bubble line submerged in the flow channel

- Applications include level and flow measurement in shallow streams, and/or where lightning and debris may occur, triggering the 6712 sampler based on flow or level, collecting flow proportioned samples, treatment capacity analysis, river and stream gauging

- All level data stored in the sampler is available for later retrieval, reporting, and graphing using Isco Flowlink® software

- Made of polystryene material

Power:	9 to 14V DC (provided by 6700 Series Sampler)
Dimensions:	4.9" H x 5.7" W x 2" D
Weight:	1.1 lbs

ISCO 2150 Area Velocity Flow Module

- Uses continuous wave Doppler technology to measure mean velocity

Power:	Typically, an Isco 2191 Battery Module, containing 2 alkaline or 2 rechargeable lead-acid batteries
Dimensions:	2.9" H x 11.3" W x 7.5" D
Weight:	2 lbs

ISCO 934 Battery

- Portable power source for use with Isco GLS, 3700, 6100, and 6700 Series Portable Samplers; 4200 Series Flow Meters; and 150 Portable Peristaltic Pump. Recharge using Model 961 or 965 battery charger
- Long lasting
- Maintenance Free
- Ruggedly built
- Temperature Tolerant

Type:	Nickel Cadmium
Amp-Hour Rating:	4.0
Connector Type:	2-pin circular amphenol
Output Voltage:	12-41V DC
Temperature Tolerance:	Output from Lead-Acid batteries drops substantially at temperatures below 0°C (32°F)

ISCO 913 Power Pack

- High-capacity power supply
- Combines a regulated 12 VDC, 5-amp power supply with a Model 934 nickel cadmium battery charging capability
- Intended for use on a 120 VAC 60 Hz circuit and is equipped with a three-prong standard grounded plug

Type:	Nickel Cadmium
Input Voltage:	120V AC, 50 or 60 Hz
Output Voltage:	12.5V DC at 5 amps
Connector Type:	2-pin circular amphenol
Weight:	2 lbs

Hach Sigma SD900 All Weather Refrigerated Sampler

- Automatically collects and preserves liquid samples
- Applications include drinking water, wastewater, food, beverage and industrial water
- Factory-installed controller compartment heater option allows operation in temps from -40° to 120°F
- Store up to 510 entries in Sample History log including sample time stamp, bottle number, and status of sample (success, bottle full, rinse error, user abort, distributor error, pump fault, purge fail, sample timeout, power fail and low main battery)

Intake Tubing:	9.5 mm (3/8 in.) ID vinyl PTFE® lined polyethylene
Max Suction Lift:	29'
Transport Velocity:	0.9 m/s (2.9 ft./s) at 4.6 m (15 ft.) vertical lift (16 ft. of 3/8-in. vinyl intake tubing at 70°F, at 5000 ft. elevation)

Ask About Our Rental Protection Plan (RPP)

Global Water WS750 Wastewater Stormwater Sampler

- Two-bottle sampler combines all the features you need to meet a wide variety of sampling requirements
- Wastewater, industrial and environmental sampling
- Easy-to-use state-of-the-art controller
- Output provided for use with optional datalogger
- Rugged construction for harsh environments
- Accessories include a stormwater kit, quick release pump head, AC-powered battery option, smart charger battery, 3 and 9-channel datalogger and pulse converter

Intake Tubing:	1/4" ID polyethylene flexible tubing
Max Suction Lift:	20'
Sample Volumes:	Flow rate of 1,000 ml per min at a 4' head
Power:	Rechargeable 5 AH Gel Cell
Dimensions:	22" H x 17" W x 9" D
Weight:	22 lbs

Global Water WS300 Wastewater Sampler

- Takes a "time weighted" composite sample in a 2-gallon bottle
- Designed specifically to meet the sampling requirements for industrial discharges, sewers, rivers and streams
- CMOS Solid State (fully potted in epoxy) controller
- Easiest and most reliable method for collecting water quality samples
- Simple to operate - no programming required
- Rugged construction for harsh environments

Intake Tubing:	1/4" ID polyethylene flexible tubing
Max Suction Lift:	22'
Repeatability:	Adjustable and repeatable sample volume
Sample Volumes:	Composite: 25 ml to 600 ml as set by user (Two gallon composite sample maximum)
Power:	Rechargeable 5 AH Gel Cell
Dimensions:	9" L X 17" W X 22" H

Global Water SS505 Stormwater Sampler

- Takes a discrete sample, filling the one liter sample bottle, based on rainfall and/or water level.
- Perfect for stormater sampling and includes a rain gauge
- Logic timer/controller included
- Optional datalogging option
- Easy to operate - no programming required
- Rugged, lightweight and easy to install

Intake Tubing:	1/4" ID polyethylene flexible tubing
Max Suction Lift:	22'
Sample Volumes:	1,000 ml per minute at 4 feet head
Power:	Rechargeable 12V 5AH Gel Cell
Dimensions:	7" L x 13" W x 17" H
Weight:	15 lbs, 17 lbs (shipping weight)

Global Water SS201 Stormwater Sampler

- Easily installed near any storm water channel and can store water samples throughout a storm event
- Designed to specifically meet many stormwater sampling requirements
- CMOS Solid State (fully potted in epoxy) controller
- Quality tested and approved to provide accurate and reliable measurements
- Rugged, rainproof, lockable carrying enclosure

Intake Tubing:	1/4" ID polyethylene flexible tubing
Max Suction Lift:	22'
Sample Volumes:	1,000 ml per minute at 4 ft. head
Power:	Rechargeable 5 AH Gel Cell
Dimensions:	9" L X 17" W X 22" H
Weight:	22 lbs

WATER LEVEL / QUALITY MONITORING - Composite / Grab Samplers

Global Water RG333 Rain Gauge

- Durable weather instrument for monitoring total rainfall

- Appropriate for a variety of applications including stormwater runoff monitoring, rainfall monitoring studies, and soil moisture studies

- Simple design and trouble-free operation

Power:	Two AA batteries
Dimensions:	10" (tube depth), 1 3/4" (funnel diameter), 11" x 5" (mounting plate)
Weight:	1 lb (shipping weight)

Wildco Hand Corer

- Ideal for shallow coring in fresh, salt and brackish waters

- Attach a line to Clevis for deeper samples

- Extention handles (4.5m or 6m) are available, allowing you to sample various depths

- Samples captured in a clear plastic liner

- Plastic retainer in nose cone prevents sample from falling out

- Robust design (316 stainless steel)

- Simple and easy to use

Sample Size:	50 mm x 500 mm
Extensions:	4.5 m or 6 m
Dimensions:	600 mm long x 50 mm diameter
Weight:	15 lbs

Wildco Ekman Dredge Sampler (9 x 9)

- Perfect for soft, finely divided littoral bottoms free from vegetation such as sticks and decayed leaves as well as intermixtures of sand, stones and other debris

- Simple operation - attach to a line and pass it through the trip mechanism, set the springs over the knobs and pull the jaws apart, lower till the grab hits the bottom and send a messenger down the line, allowing the springs to close the scoops

- Scoops overlap to reduce lap loss

- No screen mesh

- All stainless steel construction

Volume:	11.9 liter
Sample Area:	81" squared
Bite Depth:	9"
Size:	14 x 13"
Weight:	15 lbs (dry weight)

Wildco Ekman Grab Sampler (6 x 6)

- Samples well on substrate composed of finely divided muck, mud, ooze, submerged marl or fine peaty materials

- Designed to collect samples in soft, finely divided sediments free from vegetation and intermixtures of sand, stones and other coarse debris

- No screen mesh

- All stainless steel construction

Volume:	3.5 liters
Sample Area:	36" squared
Bite Depth:	6"
Size:	6" x 6" x 6"
Weight:	7 lbs (dry weight)

Ask About Our Rental Protection Plan (RPP)

Wildco Petite Ponar Sampler

- Easily take samples of hard bottoms such as sand, gravel, consolidated marl or clay
- Widely used in fresh and salt water
- Designed for hand line operation
- Self-closing scoops have center pivot closing action
- 500 µm removeable screen mesh
- Self-releasing pinch-pin
- Constructed of 316 stainless steel

Volume:	2.4 liters
Sample Area:	36" squared
Weight:	24 lbs (dry weight)

Wildco Ponar Sampler

- Easily takes samples of hard bottoms such as sand, gravel, consolidated marl or clay
- Performs well in fresh and saltwater
- Self-closing scoops with center pivot closing action
- 500 µm screen mesh
- Uses a patented spring-loaded Pinch-Pin™ system that releases when the sampler impacts the bottom and the lowering cable or line becomes slack
- All stainless steel construction

Volume:	8.2 liters
Sample Area:	81" squared
Bite Depth:	3.5"
Size:	9" x 9"
Weight:	50 lbs (dry weight)

Wildco Kemmerer Sampler

- Used for general sampling when stainless steel is not required, or for trace metal sampling
- Wide-mouth opening for a lower profile
- Metal parts consist of stainless steel

Volume:	0.4 to 6.2 liters
Material:	Soft blue polyurethane seals
Messenger:	100' 3/16 line (diameter sized)

Wildco Ogeechee Core Sampler

- First sampler to effectively sample most bottom sands
- Designed for coring in fresh, salt or brackish waters
- Sample in swiftly moving water with the use of an extension handle up to 15' long
- Solid 316 stainless steel head assembly

Useage:	Up to 15' deep water
Operation:	Twist and thrust into sand
Extension Lengths:	Three to choose from

WATER LEVEL / QUALITY MONITORING - Composite / Grab Samplers

Conbar Bomb Sampler - Stainless Steel

- Designed to collect liquid samples
- Perfect for use in storage tanks, lakes, ponds, manholes, wells and other hard to reach places
- Plunger assembly automatically activates when the sampler contacts a hard surface
- High quality corrosion resistant type 304 stainless steel

Capacity:	500 ml
Diameter:	2"
Size:	11" L

Lamotte Van Dorn Sampler

Item # 51795

- Collecting chamber is transparent acrylic plastic with lead collar and rubber end caps
- Furnished with 20 meters of calibrated nylon line
- Built-in side outlet and flexible tube allows for removal of the water sample

Sample Area:	1 liter
Weight:	8 lbs (approx)

Conbar Telescopic Dipper Sampler - 6-18' *Item #*

- Designed to grab samples from spillways, tanks, rivers, manholes and other hard to reach places
- Useful in obtaining sediment samples from the bottom of tanks, lakes and holding ponds
- Optional swivel adapter allows dipping ladles to rotate 360 degrees

Volume:	600 ml
Material:	Aluminium tubing
Lengths:	8', 12', 18' and 24'

Global FP 101 Water Flow Probe

Item # 51806

- Easy flow monitoring
- Ideal for measuring flows in streams, rivers, canals, stormwater, wastewater and industrial process waters
- Digital readout display
- Lightweight, rugged and reliable

Sensor Type:	Protected Turbo-Prop propeller with electro-magnetic pickup
Range:	0.3-15 FPS (0.1-4.5 MPS)
Accuracy:	0.1 FPS
Power:	Internal watch batteries
Dimensions:	3' to 6'
Weight:	2 Lbs (10 lbs. U.S., 14 lbs. international shipping weight)

Ask About Our Rental Protection Plan (RPP)

Global FP 201 Water Flow Probe

Item # 51807

- Easy flow monitoring
- Ideal for measuring flows in streams, rivers, canals, stormwater, wastewater and industrial process waters
- Digital readout display
- Lightweight, rugged and reliable

Sensor Type:	Protected Turbo-Prop propeller with electro-magnetic pickup
Range:	0.3-15 FPS (0.1-4.5 MPS)
Accuracy:	0.1 FPS
Power:	Internal watch batteries
Dimensions:	5' to 15'
Weight:	2 lbs (10 lbs U.S., 14 lbs international shipping weight)

Global FP 111 Water Flow Probe

Item # 51808

- Measures flows in open channels and partially filled pipes
- Ideal for storm water runoff studies, sewer flow measurements, measuring flows in rivers and streams, and monitoring water velocity in ditches and canals
- Liquid crystal display (LCD)
- Total of 30 memory locations
- Shock and water resistant

Sensor Type:	Turbo-Prop propeller with magnetic pickup
Range:	0.3-19.9 FT/S (0.1-6.1 M/S)
Accuracy:	0.1 FT/S (0.1 M/S)
Power:	Internal Lithium, Approx 5 year life Non-Replaceable
Dimensions:	3' to 6'
Weight:	2 lbs (10 lbs U.S. shipping weight)

Global FP 211 Water Flow Probe

- Measures flows in open channels and partially filled pipes
- Ideal for storm water runoff studies, sewer flow measurements, measuring flows in rivers and streams, and monitoring water velocity in ditches and canals
- Liquid crystal display (LCD)
- Total of 30 memory locations
- Shock and water resistant

Sensor Type:	Turbo-Prop propeller with magnetic pickup
Range:	0.3-19.9 FT/S (0.1-6.1 M/S)
Accuracy:	0.1 FT/S (0.1 M/S)
Power:	Internal Lithium, Approx 5 year life Non-Replaceable
Dimensions:	5' to 15'
Weight:	3 lbs (13 lbs U.S. shipping weight)

Hach - FH950 Flow Meter

- Provides accurate velocity measurements while simplifying the entire measurement process
- Applications include wastewater, collection systems and environmental
- Real-time velocity graphed on color display
- Download data to a PC via the USB connection
- Lightweight and rugged
- Accessories include a fabric carrying case, lithium ion battery, battery charger, USB 3' cable, universal sensor mount, adjustable meter mount, wipe cloth, sensor thumb screw kit and lanyard

Sensor Type:	Electromagnetic
Range:	0 to +20 ft/s (0 to +6.09 m/s)
Accuracy:	±2% of reading ±0.05 ft/s (±0.015 m/s) through the range, 0 to 10 ft/s (0 to 3.04 m/s); ±4% of reading from 10 to 16 ft/s. (3.04 to 4.87 m/s)
Zero Stability:	±0.05 ft/s (± 0.015 m/s)
Power:	Lithium-Ion, rechargeable battery
Dimensions:	8.6" L x 3.7" W x 2.1" H

SonTek / YSI FlowTracker ADV

- Compact, handheld package for high-precision water velocity measurements
- Perfect for natural streams, weirs/flumes and open channels related to irrigation, stormwater, water treatment and mining
- Simple keypad interface with instructions and real-time data displayed on an LCD screen
- Internal memory for 80,000 measurements (non-volatile)
- Rugged construction for any climate

Sensor Type:	Built-in temperature sensor
Range:	± 0.001 m/s to 5 m/s (0.003 to 16 ft/s)
Accuracy:	1% of measured velocity
Power:	Eight AA batteries

Easiflo EASZ-10P Portable Flow Meter

- Handheld non-invasive microprocessor based meter for measuring flow rate and total volume of liquids flowing through process and effluent pipelines
- Ideal for slurries, dredging, pulps, primary sludge, digested sludge, thickened sludge, waste activated sludge and return activated sludge
- 2-line 16 character backlit LCD
- Black moulded ABS electronics enclosure

Range:	0.3 to 10.0 m/s
Accuracy:	better than ±2% of FS
Power:	4 AA batteries
Dimensions:	198mm H x 100mm W
Weight:	0.85 kg

Ask About Our Rental Protection Plan (RPP)

Greyline PDFM 4.0 Portable Doppler Flow Meter

- Provides for non-intrusive flow measurement, indication, totalizing and transmitting of flow rate
- Large 4-digit LCD for flow rate display and 16-digit alphanumeric for totalizer/menu/status
- Programmable 50,000 data point capacity
- Output includes 4-20mA, RS232C with programmable baud rates up to 19,200
- Accessories include a high temperature sensor, sensor cable and sensor mounting

Sensor Type:	Strap-on, single head ultrasonic for 1/2" - 180" ID pipes
Accuracy:	±2% of full scale on most wastewater applications
Power:	Built-in battery with internal charger - switch select 100-160VAC 50/60Hz or 200-260VAC 50/60Hz - 12 VDC (from external battery)
Weight:	10 lbs

Greyline PDFM 5.1 Portable Doppler Flow Meter

- Ideal for troubleshooting, balancing and checking performance of permanent flow meters
- Recommended for difficult liquids like wastewater, slurries, sludge, chemicals and viscous liquids
- Large backlit LCD display and Totalizer
- 300,000 point datalogger
- 4-20mA output
- Rugged watertight carry case

Sensor Type:	Ultrasonic
Range:	-/+ 0.1 to 40 ft/sec (-/+ 0.03 to 12.2 m/sec) in most applications
Accuracy:	±2% of reading or 0.1 ft/sec (0.03 m/sec)
Power:	Built-in rechargeable NiMH battery
Dimensions:	8" H x 4.33" W x 1.6" D

Greyline MantaRay Portable Area Velocity Meter

- Measures flow in partially filled pipes and open channels
- Designed for monitoring stormwater, sewage, industrial effluent, irrigation water and natural streams
- Backlit LCD display for flow rate, totalizer and menu system
- 2-million point data logger with USB output to flash drives
- 4-20mA and Relay outputs for connection to Samplers and SCADA

Sensor Type:	Hydrodynamic Ultrasonic
Range:	1 inch to 20 ft/sec (0.03 to 6.2 m/sec) and reverse flow to - 5 ft/sec (-1.5 m/sec)
Accuracy:	Level: ±0.25% of Range . Velocity: ±2% of Reading or 1 mm (0.04") Repeatability and Linearity: ±0.1%
Power:	Internal rechargeable NiMH, 12VDC, 10,000 mAh
Weight:	15 lbs (shipping weight)

Thermo Scientific Peak DCT7088 Digital Correlation Transit Time Flow Meter

- Measure velocity, flow rate and volumetric flow with a digital correlation transit-time flowmeter
- Used in applications such as HVAC, ultrapure liquids, potable water, de-ionized water, petroleum products, water and wastewater management
- Two-line, 40-character, high-resolution, backlit LCD
- 40,000-point data logger
- Outputs include a 4-20 mA analog signal and RS232 serial interface

Range:	±0 to 12 m/s (±0 to 40 ft/s)
Accuracy:	±0.5% of velocity or ±0.03 m/s (±0.1 ft/sec)
Power:	Built-in lead acid gel battery
Dimensions:	14" W x 13.5" H x 6" D
Weight:	15 lbs with 16 hr battery

Omega FTB 700 Series Inline Turbine Flow Meter

Item # 51833

- Unique system with precisely-machined helical rotors and high-quality jewel bearings
- Display rate of 6-digit autorange, 1/2" character height
- Both pulse and 4 to 20 mA analog outputs
- Rugged, metallic housing

Sensor Type:	Solid state Hall-effect
Range:	0.1-9999999.9 units/pulse (pulse output range), 0.01-999999.99 (flow alarm ouput range)
Accuracy:	±1% FS
Power:	6 to 24 Vdc
Dimensions:	75.4" mm D

Solinst Levelogger Edge Model 3001

Item # 51910

- Records highly accurate groundwater and surface water level and temperature measurements
- Perfect for aquifer characterization, watershed, drainage basin and recharge monitoring, stream gauging, lake and reservoir management, harbour and tidal fluctuation measurement, welands and stormwater run-off monitoring, water supply and tank level measurement, mine water and landfill leachate management and long-term water level monitoring in wells, surface water bodies and seawater environment
- Robust Hastelloy pressure sensor

Accuracy:	± 0.05% FS
Temp Comp Range:	0ºC to 50ºC
Temperature Sensor:	Platinum Resistance Temperature Detector (RTD)
Measure-ment Rates:	1/8 sec to 99 hrs
Power & Life:	10 year battery based on 1 reading/min
Dimensions:	7/8" x 6.25"
Weight:	4.6 oz

Solinst LTC Levelogger Edge Model 3001

Item # 55402

- Logs conductivity, waer level and temperature
- Ideal for salt water intrusion, soil salination monitoring, plume remediation monitoring and studies, leachate monitoring at landfills, mine tailings, waste disposal storage sites, agricultural and stormwater runoff monitoring, tracer tests and so much more
- 4-electrode platinum sensor
- Single or multi-point conductivity calibration
- Slate or continuous memory
- Titanium ceramic PVD coating

Ranges:	5, 10, 20, 30, 100 and 200 m
Accuracy:	±0.05% FS
Temp Comp Range:	0°C to 50°C
Resolution:	0.003°C (temperature sensor)
Measure-ment Rates:	2 seconds to 99 hours
Power & Life:	8 year battery based on 1 reading every 5 min
Dimensions:	7/8" x 7.5"
Weight:	7.05 oz

Ask About Our Rental Protection Plan (RPP)

PINE
Partner for Test & Measurement Equipment Services and Data Solutions

Rental Protection Plan (RPP) Protects Your Investment

Damage Protection

- RPP provides coverage for repairs due to accidental or incidental damage to equipment.
- Damage resulting from abuse or misuse is not covered - abuse or misuse is defined as equipment used in an application it was not designed for or an application that exceeds the manufacturers' specifications.

Rental Liability

- Significantly reduces your liability for damaged or stolen equipment.
- Avoid claims against your insurance.
- The RPP gives you coverage when your business insurance leaves you exposed.

Theft Protection

- You are only responsible for a percentage of the replacement cost depending on protection level selected.
- A police report must be filed and notification given to Pine within 48 hrs of the customer being made aware of stolen equipment. If a police report is not provided, the customer is fully liable for the entire cost of replacement.
- In the event that the stolen equipment is recovered, Pine will retain ownership.

RPP Available Options for NDE/RVI & Environmental Equipment

	Plan	Repair Coverage	Theft & Loss
1	15% of List Rate	50%	30%
2	20% of List Rate	75%	50%

* All RPP is based on list rental rate. National or customized rates DO NOT APPLY. Some items are excluded from our rental Protection Plan

www.pine-environmental.com

PINE
Partner for Test & Measurement Equipment Services and Data Solutions

Examples of RPP Savings

20% Rental = 75% Coverage of Damage				15% Rental = 30% Coverage of Stolen Equipment		
Damage IPLEX Scope (RVI) * #54826	**With RPP**	**Without RPP**		**Stolen MiniRAE 3000** * #51238	**With RPP**	**Without RPP**
List Rate (weekly)	$2,200.00	$2,200.00		List Rate (weekly)	$233.00	$233.00
RPP (20%)	$440.00			RPP (15%)	$34.95	
Repair Cost (manufacturer's repair cost)	$13,000.00	$13,000.00		Replacement Cost (manufacturer's list price)	$5,006.00	$5,006.00
RPP Benefit (75% of repair)	- $9,750.00			RPP Benefit (30% of replacement)	- $1,501.80	
Customer Cost:	$3,250.00	$13,000.00		Customer Cost:	$3,504.20	$5,006.00
Total Customer Cost (Rental & Repair)	$5,890.00	$15,200.00		**Total Customer Cost (Rental & Replacement)**	$3,772.15	$5,239.00

Don't go without protection! Ask for the RPP on your next rental!

* All RPP is based on list rental rate. National or customized rates DO NOT APPLY. Some items are excluded from our rental Protection Plan. Customer is responsible for all rental rates up until the day of notification to Pine. Ask your local Pine branch for more details on our Rental Protection Plan (RPP) Agreement.

RPP Flyer 1-3-2020 - US

www.pine-environmental.com

Solinst Levelogger Junior Edge

Item # 54660 / 851

- Measures groundwater and surface water levels and temperature
- Perfect for monitoring water levels in wells and surface water, pump and slug tests, reservoir and stormwater runoff management, watershed and drainage basin monitoring, stream gauging, lake and wetland monitoring, tank level measurement to name a few
- Robust Hastelloy pressure sensor
- Basic and advanced data compensation options
- Memory for 40,000 data points

Ranges:	5 and 10 m
Accuracy:	± 0.1% FS
Temp Comp Range:	0ºC to 40ºC
Resolution:	0.1ºC
Measurement Rates:	0.5 seconds to 99 hours
Power & Life:	5 year battery using one reading per min
Dimensions:	7/8" x 5.6"
Weight:	4.2 oz

Solinst Levelogger Gold Model 3001

Item # 51920

- Water level and temperature recording device
- Combines a datalogger, pressure transducer and temperature sensor
- Real-time viewing - data can be exported
- Radio, satellite or cellular telemetry
- SDI-12 compatible, up to 1500 ft (450 m)
- Allows a maximum of 40,000 readings of level and temperature, set up in individual logs
- User-selectable, 30 line sampling schedule

Accuracy:	0.05% FS
Temp Comp Range:	-10 to +40°C
Resolution:	0.003°C (temp sensor)
Measurement Rates:	0.5 seconds to 99 hrs
Power & Life:	10 year battery based one reading per min
Dimensions:	7/8" x 6"
Weight:	6.3 oz

Solinst Leveloader DataGrabber

Item # 17622

- Simple and portable way to copy data from Solinst dataloggers in the field to a USB flash drive key with one push of a button
- Includes a Solinst 512 MB USB flash drive key
- LED light to indicate status
- Uses separate, replaceable battery
- Data transfer does not interrupt running Levelogger
- IP64 dust and splash resistant

Materials:	ABS black, 316 stainless steel
Operating Temperature:	-20ºC to +50ºC
Power:	9V battery
Size:	1.80" x 3.91"
Weight:	5.79 oz

Solinst Levelogger App Interface

Item # 16971

- Program and download data using your smart device
- Uses Bluetooth® wireless technology to communicate to your iOS or Android™ smart device
- E-mail data from the field
- Convenient for any application

Materials:	Black Delrin®, 316 stainless steel
Operating Temperature:	-20ºC to +50ºC
Power:	9V battery
Size:	2.25" x 4.875"
Weight:	13.7 oz

Ask About Our Rental Protection Plan (RPP)

Solinst Optical Reader

- Facilitates connection to Levelogger at the office for configuration & data upload
- Optical reader connects directly to USB port
- Direct interface to Leveloggers and Rainloggers

Compatibility:	Levelogger Junior Edge, Levelogger Edge, LTC Levelogger Junior, and the Barologger Edge
Software:	Levelogger Software 4.1 or newer recommended
Weight:	Less than 1 lb

In-Situ LevelTROLL 700 Datalogger

- Continuous monitoring of water level, water pressure and temperature
- Designed specifically for aquifer characterization
- 4.0 MB memory holds 260,000 data points
- Open communications protocols easily integrate with existing telemetry systems and HydroVu Data Services, plus get 24/7 data and automatic event alerts
- Fully sealed, all titanium construction and sensors

Operating Ranges:	-20-80° C (-4-176° F)
Accuracy:	±0.05% FS ±0.1% FS
Resolution:	±0.005% FS or better
Power & Life:	3.6V lithium battery with 10 years life or 2M readings
Dimensions:	8.5" L x .72" D
Weight:	0.43 lbs

In-Situ TROLL Com - USB

- Link your Level TROLL 300/400/700, Aqua TROLL 100/200/400 or TROLL 9500 Data Logger to your laptop, PC or RuggedReader Handheld PC
- Available in Direct-connect or Cable-connect
- IP67-rated to protect against dust and temporary submersion

Operating Ranges:	-20°C to 50°C (-4°F to 122°F)
Dimensions:	6.4" L (including strain relief), 1.25" O.D.

In-Situ TROLL Com - RS485-232

- Communication interface between a Level TROLL, Aqua TROLL or MP TROLL 9500 and a desktop / laptop or handheld PDA
- PC interface with DB 9 pin, null modem (crossover), DTE to DTE

Operating Ranges:	-5°C to 60°C (23°F to 140°F)
Dimensions:	3.5" L x .72" D

Van Essen Cera-Diver

- Robust and durable water level logger
- Perfect long term solution for saline environments - applications include saltwater intrusion projects, leachate monitoring at landfill sites, monitoring groundwater and surface water, monitoring stored brines and reclaimed waste water, estuary and wetlands monitoring, groundwater monitoring network automation, aquifer storage and recovery projects, groundwater monitoring projects
- 30-point pressure factory calibration
- Innovative ceramic housing technology

Sample Interval:	1/2 second to 99 hrs
Memory:	48,000 measurements
Power & Life:	Battery with 8-10 years of life
Size:	90 mm L x 22 mm D
Weight:	50 grams

Van Essen Micro-Diver

- Easy to use water level logger - perfect for pump and slug tests
- 30-Point Pressure Factory Calibration
- 48,000 records of time stamp, pressure & temperature
- Optically separated communication
- Event based, averaging and pumping tests sample methods to conserve memory
- Housing made of stainless steel

Power & Life:	Battery with 8-10 years of life
Dimensions:	88 mm L x 18 mm D
Weight:	45 grams

Van Essen Mini-Diver

- Compact water level logger for groundwater monitoring
- Ceramic pressure sensor
- 24,000 records of time stamp, pressure & temperature
- Fixed / linear sample methods
- Housing made of stainless steel

Dimensions:	90 mm L x 22 mm D
Weight:	55 grams

Van Essen CTD-Diver

- Multi-parameter groundwater datalogger
- Applications include saltwater intrusion monitoring, water quality monitoring, tidal fluctuations monitoring, estuary and wetlands fluctuations monitoring, leachate monitoring at landfill sites, aquifer storage and recovery and network automation monitoring
- 30-point pressure factory calibration
- 48,000 records of time stamp, pressure & temperature
- Event based, averaging and pumping tests sample methods to conserve memory
- Corrosion proof housing

Power & Life:	Battery with 8-10 years of life
Dimensions:	88 mm L x 18 mm D
Weight:	45 grams

Ask About Our Rental Protection Plan (RPP)

Van Essen Diver DXT

- Short-range radio device that connects to Diver dataloggers and allows for wireless data collection
- Suitable for various different installation types: above ground, below ground (street pot), within synthetic protective cover
- Contains a built-in barometric pressure and temperature datalogger for automatic barometric compensation
- 24,000 measurements (non-volatile memory)
- Durable, robust and water resistant housing

Operating Ranges:	-20 °C to 60 °C
Power & Life:	Non-rechargeable lithium-thionyl chloride (3,600 mAh) battery with 5 years of life
Dimensions:	141 mm x 49-23 mm D
Weight:	84 grams

Van Essen Diver Gate

- Provides communication between the Diver-DXT and a mobile device via a radio and a bluetooth connection
- USB port, Bluetooth® and UART communication
- ABS casing housing material

Power & Life:	USB rechargeable battery with 10 hours of life in Bluetooth connection mode
Dimensions:	138 x 62 x 34 mm (with protection guard)
Weight:	181 grams

Global FL16 Flow Logger (3', USB)

- Records water flow and temperature in partially filled stormwater or sewer pipes, flumes, or weirs
- Ideal for applications such as inflow & infiltration studies, stormwater and wastewater collection systems, open channels and a host of other gravity flow systems
- 316 stainless steel outer sleeve (water flow sensor) and silicon coating to help prevent damage to electronics from condensation
- Non-volatile flash memory (81,759 time/date stamped datapoints (includes battery voltage)
- USB and serial communication options available

Resolution:	12 bit
Power & Life:	Two 9VDC Alkaline Batteries with up to one year of life (depending on recording intervals)
Dimensions:	11-1/2" L x 1 7/8" D
Weight:	1.6 lbs (with battery and 25' cable)

Heron Dipper Log

- Ideal for collecting rapid water-level vs time measurements for slug test and pumping tests
- Non-volatile eeprom memory stores 16,000 readings (16 fully loaded loggers) and 256,000 readings from more than 16 loggers
- Communication via USB, RS232
- Electro polished corrosion resistant stainless steel and delrin

Operating Ranges:	-20Deg.C to +80 Deg.C
Accuracy:	0.05% net FS
Temp Comp Range:	-20 Deg.C to +85 Deg.C
Resolution:	0.024% net FS
Power & Life:	Battery with 10 years of life
Dimensions:	8.5" L x 0.75" D
Weight:	246 grams

In-Situ RuggedReader

- Resilient, field-ready computer that collects data from In-Situ water quality testing equipment in the field
- Communicates with Aqua TROLL 100 / 200, Level TROLL 400 / 500 / 700, Rugged TROLL 100 / 200 and TROLL 9500 instruments
- IP67-rated to protect against rain, temporary submersion and dust
- High-visibility color LCD screen for easy viewing in all conditions
- Connect wirelessly up to 30' away
- Waterproof, shockproof and dustproof

Processor:	520 MHz
Memory:	64 MB low-power RAM
Data Storage:	256 MB of internal solid-state storage
Operating Temp:	-22° to 122° F (-30° to 50° C)
Real Time Clock:	Battery-backed and keeps time and date
Power:	Rechargeable smart lithium ion battery
Dimensions:	6.5" L x 3.5" W x 1.7" thick

Van Essen Archer Field PC

- IP67 sealed rating - waterproof and dusproof
- 3.5" (89 mm) QVGA active matrix color TFT transflective LCD with LED backlight; 240 x 320 pixels
- Integrated Bluetooth or Bluetooth supported with CF or SD Bluetooth card; Wi-Fi supported; wireless cellular modem
- Magnesium case with elastomer overmold

Memory:	64 MB low-power RAM
Data Storage:	Internal solid-state 128, 256 or 512 MB
Operating Temp:	-22° to 122°F (-30° to 50°C)
Real Time Clock:	Battery-backed
Power:	Intelligent, rechargeable Li-Ion battery pack, 14 W-hr (nom.)
Dimensions:	6.5" L x 3.5" W x 1.7" thick
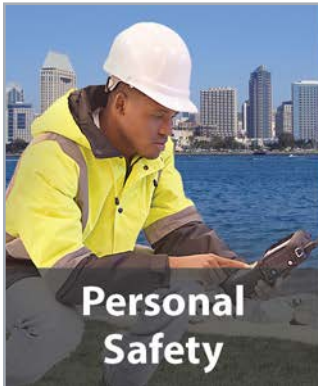
Ask About Our Rental Protection Plan (RPP)

YSI 6820/6920 V2-2 Multi-Parameter Sondes

Item # 51680

- Measure a wide variety of parameters for long-term monitoring, profiling or sampling
- Perfect for fresh, sea or polluted water
- Measures multiple parameters simultaneously
- Standard with RS-232 and SDI-12 communications
- Utilizes EcoWatch software
- Field replaceable sensors
- Corrosion resistant titanium wiper shaft

Range:	-5 to +50°C
Accuracy:	±0.15°C
Resolution:	0.01°C
Power:	12 V DC (external), 8 AA alkaline batteries
Dimensions:	13.5" L, 2.86" D, 18" (6920)
Weight:	3.4 lbs, 1.5 kg

YSI 600 XL/XLM/OMS/QS Multi-Parameter Sondes

Item # 54672

- Economical solution in a small package
- Ideal for surface water and groundwater applications
- Measures eleven parameters simultaneously
- Available with detachables cables
- Communications via RS-232 and SDI-12
- Utilizes EcoWatch software
- Stores up to 150,000 readings

Water Depth:	200'
Range:	-5 to +50°C
Accuracy:	±0.15°C
Resolution:	0.01°C
Power:	12 V DC (external), 4 AA alkaline batteries (internal - 600 XLM only)
Dimensions:	16 in, 40.6 cm (600 XL), 21.3 in, 54.1 cm (600 XLM)

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YSI 600 OMS with Rhodamine WT Sensor *Item # 51624*

- Measures optical dissolved oxygen, chlorophyll, blue-green algae, rhodamine or turbidity in comibination with temperature, conductivity and depth
- Its small size is perfect for applications such as turbidity or oxygen monitoring
- Parameters available include temperature, conductivity, salinity, specific conductance, depth, TDS and shallow vented level to name a few
- Easily connects to data collection platforms
- Compatible with EcoWatch data analysis software
- 150,000 reading memory

Water Depth:	200'
Range:	-5 to +50℃
Accuracy:	±0.15℃
Resolution:	0.01℃
Power:	12 V DC (external), 4 AA Alkaline cells, 25 to 30 days at 15-minute sampling interval at 25℃
Dimensions:	21.3" L, 1.65" D
Weight:	1.3 lbs

YSI Rhodamine Sensor - 6820 / 6920 / 6600 *Item # 90144*

- Red dye which measures the TOT (Time of Travel) for surface and ground water
- Applications include dispersion and mixing studies, circulation studies of lakes, reservoirs, bay and estruaries, spill mapping and response, stormwater retention and wastewater treatment facility hydraulics
- Self-cleaning sensor
- Field-replaceable
- Temperature compensation for better accuracy
- Rejects turbidity and chlorophyll interferences

Water Depth:	200'
Range:	0-200 µg/L
Accuracy:	±5% reading or 1 µg/L, whichever is greater
Resolution:	0.1 µg/L

YSI 556-01 Multi-Parameter Sondes *Item # 51657*

- Simultaneously measures dissolved oxygen, pH, conductivity, temperature and ORP
- Available 4, 10 and 20-m (13.1, 32.8, 65.6 ft.) cables
- RS-232 interface for PC connection
- Compatible with EcoWatch® for Windows® data analysis software
- Stores over 49,000 data sets, time and date stamped, interval or manual logging
- IP-67, impact-resistant, waterproof case

Probe:	pH probe for any 5563 cable
Range:	0-50 mg/L (dissolved oxygen), -5 to 45℃ (temp), 0-200 mS/cm (conductivity), 0-70 ppt (salinity)
Resolution:	0.01 mg/L (dissolved oxygen), 0.1℃ (temp), 0.001 mS/cm to 0.1 mS/cm (range-dependent - conductivity), 0.01 ppt (salinity)

YSI 556-02 Multi-Parameter Sondes with Barometer *Item # 51658*

- Simultaneously measures dissolved oxygen, pH, conductivity, temperature and ORP
- Available 4, 10 and 20-m (13.1, 32.8, 65.6 ft.) cables
- RS-232 interface for PC connection
- Compatible with EcoWatch® for Windows® data analysis software
- Stores over 49,000 data sets, time and date stamped, interval or manual logging
- IP-67, impact-resistant, waterproof case

Probe:	pH probe for any 5563 cable
Range:	0-50 mg/L (dissolved oxygen), -5 to 45℃ (temp), 0-200 mS/cm (conductivity), 0-70 ppt (salinity)
Resolution:	0.01 mg/L (dissolved oxygen), 0.1℃ (temp), 0.001 mS/cm to 0.1 mS/cm (range-dependent - conductivity), 0.01 ppt (salinity)

Ask About Our Rental Protection Plan (RPP)

YSI Pro Plus Handheld Multiparameter Instrument

- Extreme flexibility for the measurement of a variety of combinations
- Ideal for dissolved oxygen, conductivity, specific conductance, salinity, resistivity, total dissolved solids (TDS), pH, ORP, pH/ORP combination, ammonium (ammonia), nitrate, chloride and temperature
- Choose among 1, 4, 10, 20 and 30-meter cable lengths
- Backlit display and keypad
- USB connection also powers the instrument
- Data Manager software and ProComm II saddle
- 5,000 data set memory
- Easily download data into the Data Manager software

Water Depth:	17-meter maximum depth
Range:	0 to 40˚C (lab grade)
Resolution:	0.1˚C (lab grade)
Accuracy:	±0.35˚C (lab grade)
Stability:	User-defined auto-stable function holds stable readings on display
Power:	2 alkaline C-cells
Dimensions:	8.3 cm width x 21.6 cm length x 5.6 cm depth (3.25 in x 8.5 in x 2.21 in)
Weight:	475 grams (1.05 lbs) with batteries

YSI EXO Water Quality Sonde

- Advanced water quality monitoring Includes the versatile multiparameter EXO1 sonde
- Ideal for estuarine, surface water or ground water applications
- Fast response times for profiling and sampling
- Wireless communications
- 1,000,000 logged readings (512 MB total memory)
- High-impact plastic and titanium resists breaking

Water Depth:	0-250 m
Range:	-5 to +50℃
Resolution:	0.001 °C
Accuracy:	±0.01℃2 / ±0.05℃2
Power:	2 alkaline batteries
Dimensions:	1.85″D x 25.50″L
Weight:	3.15 lbs

YSI ProDSS Water Quality Meter

- Portable water quality measurements
- Designed for use in applications such as surface water, groundwater, coastal/estuarine, aquaculture and wastewater
- Backlit keypad, color, LCD graphic display
- Built-in micro USB On-The-Go port for PC connection
- 100,000 data sets
- Rugged, waterproof case (IP-67 rated) with rubber over-mold and metal, military-spec (MS) cable connectors as well as rugged titanium sensors

Water Depth:	Optional sensor available
Range:	5 to 70℃
Resolution:	0.01℃ or 0.1 °F (user selectable)
Accuracy:	±2 °C
Power:	Rechargeable lithium-ion battery pack
Dimensions:	3.27″ x 8.5″ x 2.21″
Weight:	1.25 lbs (with batteries)

Horiba U-53 Water Quality System

- Measure and display up to 11 parameters simultaneously
- Standard: 2m, Option: 10m, 30m cable lengths
- Large 3.5″ easy-to-read LCD with backlighting for use in dark and low-light conditions
- Transfer information to a PC via a built-in USB connection
- Up to 10,000 data sets
- Rugged housing is both waterproof and shock resistant

Water Depth:	30m
Range:	-10 to 55℃
Resolution:	0.01℃
Accuracy:	JIS class B platinum thermometer sensor (±0.3+0.005 |t|)
Power:	4s C-size batterie
Dimensions:	115 W x 66 D x 283 H mm
Weight:	1.76 lbs

Horiba U-52 Water Quality System

- Measure and display up to 11 parameters simultaneously
- Standard: 2m, Option: 10m, 30m cable lengths
- Large 3.5" easy-to-read LCD with backlighting for use in dark and low-light conditions
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Range:	-10 to 55°C
Resolution:	0.01°C
Accuracy:	JIS class B platinum thermometer sensor (±0.3+0.005 |t|)
Power:	4s C-size batterie
Dimensions:	115 W x 66 D x 283 H mm
Weight:	1.76 lbs

Hanna HI9828 Multi-Parameter Sondes

- Monitors up to 13 different water quality parameters
- Displays up to 12 parameters
- Standard cable lengths of the probe are 4, 10 and 20 meters (13, 32 and 64 feet) - (custom lengths also available)
- Graphic LCD with backlight
- USB for PC connectivity
- HI929829 software included
- Log on demand and automatic logging (up to 60,000 samples)

Water Depth:	30 ft
Range:	-5.00 to 55.00°C; 23.00 to 131.00°F; 268.15 to 328.15K
Resolution:	0.01°C; 0.01°F; 0.01K
Accuracy:	±0.15°C; ±0.27°F; ±0.15K
Power:	1.5V alkaline C cells (approximately 150 hours of continuous use without backlight) (4) / 1.2V rechargeable C cells (approximately 70 hours of continuous use without backlight) (4)

Hanna HI9829 Multi-Parameter Sondes

- Portable logging multiparameter that monitors up to 14 different water quality instruments
- Microprocessor based multi-sensor probe allows for the measurement of key parameters including pH, ORP, conductivity, dissolved oxygen, turbidity, ammonium, chloride, nitrate and temperature
- Stores up to 140,000 single parameter readings or 35,000 for all parameters (H17629829 autonomously logging probe)
- Available with 4, 10, or 20 meter cable
- Backlit dot matrix LCD display

Range:	-5.00 to 55.00 °C, 23.00 to 131.00 °F, 268.15 to 328.15 K
Resolution:	0.01 K, 0.01 °C, 0.01 °F
Accuracy:	±0.15 °C; ±0.27 °F; ±0.15 K
Power:	1.2V (4) NiMH, rechargeable batteries, size C type; up to 140 hours depending on configuration
Dimensions:	221 x 115 x 55 mm (8.7 x 4.5 x 2.2")
Weight:	750 g (26.5 oz.)

OTT Hydromet Hydrolab Quanta G

- For basic water quality parameter spot measurement in groundwater wells
- Parameters measured include temperature, conductivity, cepth, pH, oxygen reduction potential (ORP), dissolved oxygen (Clark Cell)
- 3.5" screen size display
- Memory of 200 data frames
- NEMA 6 rated (waterproof)

Water Depth:	0-25 m, 0-100 m
Sensor Range:	-5 ... 50 °C
Sensor Resolution:	0.01 °C
Sensor Accuracy:	± 0.15 °C
Power:	3 C-size batteries
Dimensions:	15" L x 1.74" D
Weight:	2.1 lbs

Ask About Our Rental Protection Plan (RPP)

QED Micropurge Basics
MP20/MP20D/MP20DT

- Measures purge water indicator parameters in-line
- Displays 7 parameters - temperature, DO, specific conductivity, pH, OPR, turbidity and salinity
- Memory of 100 data frames

Stability:	PurgeScan technology provides automatic stabilization alert, with visible and audible signals
Power:	3 C-size batteries
Dimensions:	18-1/2"x15"x6-1/2"
Weight:	14 lbs

In-Situ Aqua Troll 200

- Measures and records water level, pressure, conductivity and temperature
- Applications include aquifer storage and recovery systems, coastal deployments—saltwater intrusion monitoring, storm surge analysis, and estuary/wetland research, remediation site and mine water monitoring and stormwater monitoring programs
- Supported parameters include actual conductivity, specific conductivity, salinity, total dissolved solids, resistivity and density (water salinity)
- Flexible communication protocols (4-20 mA, SDI-12, RS-485)

Water Depth:	1,153 ft
Range:	35' (30 psia), 197' (100 psia), 658' (300 psia), 1,120' (500 psia)
Resolution:	0.005% FS or better
Accuracy:	0 to 50° C: ±0.1% FS
Power:	8-36 VDC
Dimensions:	12.4" L x 0.72" D
Weight:	1.0 lbs

In-Situ SmarTROLL Multi-Parameter

- Instantly collect data on water quality parameters, all from your Android or iOS mobile device
- Applications include ambient water quality spot checking, aquaculture, vertical profiling, low-flow groundwater sampling, mine water monitoring and stormwater management
- Quickly measures 14 parameters
- Consolidate all site information on your smartphone and tag data with site photos and GPS coordinates - log data to your smartphone and download results in a standard .csv file format

Probe:	SMARTROLL MP Probe
Range:	5 to 50° C (23 to 122° F)
Resolution:	0.01° C or better
Accuracy:	±0.1° C
Power:	6 VDC from Battery Pack for iOS™; 5 VDC from power pack for Android™
Dimensions:	10.6" L x 1.85" D with restrictor installed (does not include connector)
Weight:	1.53 lbs

In-Situ Troll9500 Multi-Parameter Sonde

- Customizable water quality instrument that houses up to 9 sensors
- Sensor options include standard parameters like DO, pH and conductivity, plus advanced parameters like turbidity, chloride and nitrate
- Proven reliable Twist-Lock connectors with fully deptachable custom cable lengths
- USB or RS-232 communications
- Quick Cal solution, telemetry access and HydroVu Data Services, and user-friendly software make data collection faster and easier
- 16 programmable tests for datalogging

Range:	-5°C – 50°C
Accuracy:	± 0.1°C
Power:	2 internal user-replaceable D batteries (alkaline or high-power lithium), RDO requires 2 lithium batteries or external power
Dimensions:	18.6" L x 1.85" D
Weight:	4.2 lbs

YSI Pro1030 pH or ORP, Conductivity, Salinity Instrument

- Everything you need in a handheld instrument for the measurement of either pH or ORP along with temperature, conductivity, specific conductance, salinity and total dissolved solids (TDS)

- Reporting parameters include pH, ORP/Redbox, conductivity, specific conductance, sailinity, total dissolved solids (TDS) and temperature

- Available with 1m, 4m, 10m, 20m and 30m cable lengths standard

- Graphic, backlit display and glow in the dark keypad

Range:	-5 to 55°C
Resolution:	0.1°C
Accuracy:	±0.2°C
Power:	2 alkaline C-cells providing ~425 hours of battery life; low battery indicator
Dimensions:	3.25" x 8.5" x 2.25"
Weight:	1.05 lbs (with batteries)

YSI Pro1020 Dissolved Oxygen and pH or ORP Instrument

- Handheld meter that measures dissolved oxygen and temperature along with either pH or ORP (redox)

- Reporting parameters include pH, ORP/Redbox, dissolved oxygen, temperature

- Available with 1m, 4m, 10m, 20m and 30m cable lengths standard

- Large graphic, backlit display and keypad

- Stores 50 data sets - no need to write down data

- Tough, IP67, impact-resistant, waterproof case

Range:	-5 to 55°C (0 to 45°C for DO compensation range for mg/L)
Resolution:	0.1°C
Accuracy:	±0.2°C
Compensation:	(0 to 45°C for DO compensation range for mg/L
Power:	2 alkaline C-cells providing ~425 hrs of battery life; low battery indicator
Dimensions:	3.25" x 8.5" x 2.25"

Ask About Our Rental Protection Plan (RPP)

YSI 60 Handheld pH & Temperature System

- Handheld units use to measure pH and temperature
- Designed for use in environmental, aquaculture, and industrial applications where accurate pH and temperature measurements are desired
- Four cable lengths to choose from - 10', 25', 50' or 100' attached cable
- Bright backlit displays for easy reading and recording
- Data storage for 50 sets of readings with on screen recall

Water Depth:	Up to 100'
Range:	-5 to +75 °C
Resolution:	0.1 °C
Accuracy:	± 0.1°C ±1 LSD
Compensation:	Automatic temperature compensation
Power:	6 AA-size alkaline batteries (approx 100 hrs of operation from each new set of battteries)

YSI 63 Handheld pH , Conductivity, Salinity & Temperature System

- Micro-processor based, digital meter
- Designed for use in environmental, aquaculture, and industrial applications where accurate pH, conductivity, salinity and temperature measurements are desired
- Reporting parameters include pH, conductivity, salinity and temperature
- Non-detachable cable available in lengths of 10', 25', 50' or 100'
- LCD backlit with 2.3" W x 1.5" L screen size

Water Depth:	Up to 100'
Range:	-5 to +75 °C
Resolution:	0.1 °C
Accuracy:	± 0.1°C ±1 LSD
Compensation:	Automatic temperature compensation for conductivity readings
Power:	6 AA-size alkaline batteries (approximately 100 hrs of operation from each new set of battteries)

YSI 85 Handheld DO, Salinity, Conductivity & Temperature System

- Micro-processor based, digital meter with attached YSI combination conductivity and dissolved oxygen
- Designed for use in field, lab, and process control applications as well as for environmental, aquaculture, and industrial uses
- Reporting parameters include dissolved oxygen, conductivity, salinity and temperature system
- Available with cable lengths of either 10', 25', 50' or 100'
- LCD backlit with 2.3" W x 1.5" L screen size

Water Depth:	0-10', 0-25', 0-50' or 0-100'
Range:	-5 to +65 °C
Resolution:	0.1 °C
Accuracy:	± 0.1 °C (±1 lsd)
Compensation:	Automatic temperature
Power:	9 VDC -6 AA-size alkaline batteries (approx. 100 hrs operation from each new set of batteries)

YSI 30 Conductivity, Salinity & Temperature System

- Ideal in any field application for the measurement of conductivity
- Parameters include conducitivity, specific conductance, sailnity, total disolved solids (TDS) and temperature
- Chose among 1m, 4m, 10m, 20m or 30m cables
- Graphic, backlit display and glow in the dark keypad
- Rugged and reliable
- Stores 50 data sets

Range:	-5 to 55 °C (23 °C to 131 °C)
Resolution:	0.1 °C
Accuracy:	±0.2 °C
Power:	2 alkaline C-cells providing 400 hours of battery life (low battery indicator on Pro30)
Dimensions:	8.5" H x 3.25" W x 2.25 D (depth)
Weight:	1.05 lbs

Hanna 9025 pH/ORP Meter

Item # 51595

- Measures pH and temperature or PH, ORP & temperature
- Ideal for field measurements
- Housed in rugged, waterproof, ABS casings that are built to last

Range:	0.0 to 100.0°C / 32.0°F to 212.0°F
Resolution:	0.1°C / 0.1°F
Accuracy:	±0.4°C / ±0.8°F
Compensation:	Automatic or manual
Power:	4 x 1.5V AA / approx. 500 hours of continuous use; auto-off after 20 minutes of non-use (can be disabled)
Dimensions:	7.7" x 3.1" x 2.4"
Weight:	1.1 lb

Hanna 9125 pH/ORP Meter

Item # 51599

- Portable measurement of pH and mV
- One or two point calibration
- On-screen instructions
- Durable plastic body pH Electrode
- Dual-level LCD
- Measurement recall
- Automatic shut-off
- Rugged and waterproof (IP67 standards)

Range:	-20.0 to 120.0 ºC, -4.0 to 248.0 °F
Resolution:	0.1 °C, 0.1 °F
Accuracy:	±0.4°C; ±0.8°F
Compensation:	Automatic
Power:	1.5V (3) AAA / approximately 200 hours of continuous use
Dimensions:	7.3" x 2.8" x 1.4"
Weight:	10.6 oz

Hanna 9126 pH/mV Meter

Item # 61200

- Portable measurement of pH and mV
- One or two point calibration
- On-screen instructions
- Stability indicator
- Backlit LCD display
- Automatic shut-off
- Battery error prevention systems (BEPS)
- Waterproof to IP67 Standards

Range:	-20.0 to 120.0°C (-4.0 to 248.0°F)
Resolution:	0.1°C / 0.1°F
Accuracy:	±0.4°C (±0.8°F) (excluding probe error)
Compensation:	Automatic
Power:	1.5V (3) AAA / approximately 200 hours of continuous use without backlight (50 hours with backlight)
Dimensions:	7.3" x 2.8" x 1.4"
Weight:	10.06 oz

Hanna 9023C pH Meter

Item # 52102

- Performs measurements for a long period of time without the need for frequent battery changes
- Reporting parameters include pH, ORP, ISE and temperature
- Rugged carrying case

Range:	0.0-100.0 °C
Resolution:	0.1 °C
Accuracy:	±0.4 °C
Compensation:	Automatic or manual
Power:	4 x 1.5V AA / ~400 hours of continuous use
Dimensions:	7.7" x 3.1" x 2.4" (meter), 13.8" x 9" x 3.1" (complete kit)
Weight:	11.3 oz (meter), 3 lb (complete kit)

Ask About Our Rental Protection Plan (RPP)

Hanna 9142 Dissolved Oxygen Meter

- Dissolved oxygen (DO) meter designed to provide reliable measurements under harsh environmental conditions
- Replaceable membrane caps
- Polarographic measuring system
- One or two point calibration
- Automatic temperature compensation

Probe:	Polarographic DO probe, internal temperature sensor, DIN connector
Range:	-5.0 to 50.0°C (23.0 to 122.0°F)
Resolution:	0.1°C (1°F)
Accuracy:	±0.2°C (±1°F) (excluding probe error)
Compensation:	automatic, 0 to 50°C (32 to 122°F)
Power:	1.5V AA (4) / approx. 500 hours of use
Dimensions:	7.7" x 3.1" x 2.4"
Weight:	1.1 lbs

Hanna 98129 pH, Conductivity & TDS Meter

- Measure pH quick and easy
- High accuracy measurements in a single handheld unit
- Reporting parameters for pH, EC/TDS and temperature
- Easy-to-read LCD
- Waterproof and design to float

Probe:	High Accuracy EC/TDS graphite probe
Range:	0.0 to 60.0°C / 32.0 to 140.0°F
Resolution:	0.1°C / 0.1°F
Accuracy:	±0.5°C /±1°F
Compensation:	pH: automatic; EC/TDS: automatic with β adjustable from 0.0 to 2.4% / °C
Power:	1.5V (4) / approx. 100 hours of continuous use, auto-off after 8 minutes of non-use

Myron 6P UltraMeter II

- Packages multiple parameters for water quality into a single all-purpose instrument
- Perfect for irrigation water, hydroponics, laboratories, wastewater, reverse osmosis, deionization, cooling towers, environmental, desalination, fountain solutions and homeland security
- Measures conductivity, resistivity, TDS, ORP, Free Chlorine , pH and temperature
- 4 digit liquid crystal display
- Ample memory provides increased flexibility to record and store 100 separate readings

Range:	0–71°C (32–160°F)
Resolution:	0.1°C/F
Accuracy:	±0.1°C
Compensation:	Automatic
Power:	9V alkaline battery (>100 hours (5000 readings))
Dimensions:	7.7" L x 2.7" W x 2.5" H
Weight:	12.4 oz

Oakton pH/CON 300 Meter Series

- Microprocessor-based meter for all-in-one operation
- Check metal finishing, cooling tower water, printing fountain solutions, boiler water, brines, rinse tanks, ponds, pollution control, recirculating systems and waste water
- Measures pH, conductivity, TDS and temperature
- Includes pH electrode with 3' cable
- Dual display shows measured parameter plus temperature
- Wide variety of available accessories

Probe:	pH and conductivity/TDS probes
Range:	0.0-100.0°C (32.0-212.0°F)
Resolution:	0.1°C (0.1°F)
Accuracy:	±0.5°C, ±0.5°F
Compensation:	Selectable manual or automatic
Power:	4 x 1.5 V AAA batteries >200 hrs continuous use
Dimensions:	7.5" L x 3.5" W x 1.75" H (meter), 9.2" L x 9.2" W x 2.75" H (boxed)

Oakton pH/CON 10 Meter

Item # 51604

- Microprocessor-based meter with the convenience of just one probe
- Applications include environmental/agricultural, industrial, water quality testing and educational
- Measures pH, conductivity, TDS and temperature
- Includes 10' submersible cable
- Dual display shows measured parameter plus °C simultaneously
- Rugged, dustproof and waterproof model with an IP67-rated housing that floats

Probe:	Multi-sensor submersible
Water Depth:	10'
Range:	0.0-100.0˚C
Resolution:	0.1˚C
Accuracy:	±0.5˚C
Compensation:	Automatic
Power:	Standard pH/CON 10: 4 x 1.5 V AAA batteries; >50 hours continuous use, 9V, 500 mA AC adapter (optional)

Orion 250A, ORP and Temperature Meter

Item # 51614

- Multi-purpose pH meter for one-handed, field operation, featuring built-in electrode storage sleeve with cable management
- Enhanced pH/mV/ORP/Temperature measurement
- Custom liquid crystal display
- Dust, splash and corrosion resistant housing
- Accessories include an AC power adapter and pH/ATC probe

Range:	-5.0 to 105.0 C
Resolution:	0.1 C
Accuracy:	+/- 1.0 C
Power/Life:	One 9 volt alkaline or lithium battery, or line adapter for 110 V, 220 V or 240 V (50 hrs continuous use)
Dimensions:	3.25"W x 7.6"L x 1.9"D

YSI ProODO Optical Dissolved Oxygen Instrument

Item # 51660

- Utitlizes ODO® technology, an optical-based sensor, to measure dissolved oxygen
- User-replaceable cables in lengths of 1- to 100-meters; cable management kit included with 4- through 30-meter cables
- Easy-to-read graphic, backlit display and keypad for use in any lighting condition
- Smart sensor retains calibration in the probe
- 5000 data-set memory

Probe:	Built-in replaceable probe
Range:	3-meters (6')
Resolution:	-5 to 70°C
Accuracy:	0.1°C
Compensation:	± 0.2°C
Power/Life:	-5 to +50° C

YSI Pro20 Dissolved Oxygen Instrument

Item # 54656

- Portable dissolved oxygen meter for the lab or field
- Parameters include dissolved oxygen % and mg/L (electrochemical), temperature and BOD (biochemical oxygen demand)
- Available with 1- 4- 10- 20- 30- and 100-m cable lengths standard (special order up to 100-meter cables in 10-meter increments)
- Graphic, backlit display and glow-in-the dark keypad
- One Touch Cal allows easy DO calibrations within 3 seconds with the press of a button
- Stores 50 data sets - no need to write down data

Probe:	Polarographic or galvanic for the field or a self-stirring BOD probe for the lab
Range:	-5 to 55°C (0 to 45°C DO compensation)
Resolution:	0.1°C
Accuracy:	±0.3°C
Compensation:	Automatic barometric
Power:	2 alkaline C-cells providing 400 hrs of battery life with low battery indicator
Dimensions:	3.25"W x 8.5"L x 2.25"D

Ask About Our Rental Protection Plan (RPP)

YSI 550/550A Dissolved Oxygen Instrument

- Measure dissolved oxygen in the field
- Simultaneously measure temperature as well
- 12, 25, 50 and 100-foot cable lengths
- Large, backlit display
- Push-button calibration with built-in calibration chamber
- Waterproof and meets IP-67 specifications

Probe:	Field-replaceable module
Range:	-5 to +45°C
Resolution:	0.1°C
Accuracy:	±0.3°C
Compensa-tion:	Automatic for dissolved oxygen
Power:	4 alkaline C cells
Dimensions:	4.7" W x 9" L x

YSI 55 Dissolved Oxygen Instrument

- Micro-processor based, digital meter with an attached YSI dissolved oxygen probe
- Measures oxygen and temperature
- Available with cable lengths of 12, 25 or 50 feet
- Easy-to-read, backlit liquid crystal display
- Single calibration regardless of which dissolved oxygen display you use
- IP-65 (water resistant), CE compliant
- Membrane kit, standard, includes electrolyte (1 mil)

Range:	-5 to +45o C
Resolution:	.0.1 degrees celcius
Accuracy:	± 0.2o C
Power:	2 alkaline C-cells provide 400 continuous hrs at ambient temperature without backlight
Dimensions:	9.5" H x 3.5" W x 2.2" T (thick)
Weight:	1.7 lbs

YSI 95 Dissolved Oxygen Meter

- Microprocessor-based, digital meter with an attached YSI microelectrode array (MEA) dissolved oxygen probe
- Perfect for applications in aquaculture, environmental and industrial
- Measures dissolved oxygen and termperature
- Cable lengths of 10, 25, 50 or 100 feet
- Liquid crystal display
- Push-button calibration
- Data storage for 50 sets of readings with on screen recall

Probe:	Low maintenance MEA DO probe
Range:	-5 to +45 °C
Resolution:	0.1 °C
Accuracy:	± 0.2 °C
Compensa-tion:	Automatic (temperature)
Power:	6 AA-size alkaline batteries included - approximately 150 hrs operation from each new set of batteries
Dimensions:	9.5" H x 3.5" W x 2.2" T (thick)

Hanna 9142 Dissolved Oxygen Meter

- Solves the common problems of field use, such as cold, rain, snow and dust, that can damage a meter, rapidly deteriorating its performance and life
- Portable dissolved oxygen measurement
- Supplied with a 4 m (13') cable for harder to reach places
- Liquid crystal display
- Dedicated calibration button
- Rugged and waterproof

Probe:	Polarographic
Range:	0.0 to 19.9 mg/L (ppm)
Resolution:	0.1 mg/L
Accuracy:	±1.5% FS
Compensa-tion:	Automatic, 0 to 30°C
Power:	4 x 1.5V (approx. 500 hours of use)
Dimensions:	196 x 80 x 60 mm (7.7 x 3.1 x 2.4")
Weight:	1.1 lbs

Lamotte 2020 Turbidity Meter

- Portable, microprocessor controlled nephelometer
- Ideally suited for both low-level drinking water applications as well as monitoring high turbidity in the field
- 6-line LCD with backlit display; 160 x 100 backlit LCD; 20 x 6 line graphics
- Pre-calibrated in the range of 0 to 1100 NTU with AMCOTM primary standards
- RS232 compatible, asynchronous serial, 9600 baud, no parity, 8 data bits, 1 stop bit

Method:	180.1 (EPA)
Modes:	Standard and EPA
Range:	0.00 -1100 NTU
Resolution:	0.01 from 0.00 -10.99 NTU, 0.1 from 11.0-109.9 NTU, 1 from 110-1100 NTU (standard mode)
Accuracy:	.05 or ±2% for readings below 100 NTU, whichever is greater ±3% above 100 NTU
Response:	5 seconds

Lamotte 2020e Turbidity Meter

- Portable, microprocessor controlled, direct reading colorimeter and nephelometer
- Graphical liquid crystal display and 6 button keypad
- State of the art, multi-detector micro optical configuration assures long term stability of calibrations
- Real-time data acquisition and data storage using a PC via an RS232 serial port

Method:	180.1 (EPA) or 7027 (ISO)
Range:	0-2000 NTU, 0-2000 FNU, 40-4000 FAU, 0-35000 ASBC, 0-500 EBC
Resolution:	0.01 NTU, 0–10.99 NTU Range 0.1 NTU, 11–109.99 NTU Range 1 NTU, 110–4000 NTU Range
Accuracy:	±0.05 or ±2% of reading, whichever is greater, below 100 NTU ±3% of reading, above 100 NTU
Response:	5 seconds

Ask About Our Rental Protection Plan (RPP)

Lamotte 2020we Turbidity Meter

- One of the most innovative handheld turbidity meter on the market
- 6-line LCD with backlit display; 160 x 100 backlit LCD; 20 x 6 line graphics
- USB port data transfer
- Datalogging up to 500 points
- Waterproof to IP67

Range:	0-4000 NTU/FNU, 0-10,500 ASBC, 0-150 EBC
Resolution:	0.01 NTU/FNU 10.00-10.99, 0.1 NTU/FNU 11.00-109.9, 1 NTU/FNU 110-4000
Accuracy:	±0.05 NTU (from 0-2.5 NTU), ±2% (from 2.5-100 NTU), ±3% (from 100 NTU)
Power:	Lithium ion rechargeable battery

Hach 2100Q Turbidity Meter

- Portable turbidimeter offering unsurpassed ease of use
- Perfect for drinking water, wastewater, beverage, field use, food QC lab, industrial water and power
- Graphic LCD
- Easy on-screen assisted calibration and verification
- Simple data transfer via USB + power module
- Up to 500 measurements are automatically stored in the instrument for easy access and back-up

Method:	180.0 (EPA)
Modes:	Normal (push to read), signal averaging, rapidly settling turbidity
Range:	0 - 1000 NTU (FNU)
Resolution:	0.01 NTU on lowest range
Accuracy:	± 2 % of reading plus stray light
Response:	6 seconds
Power:	110-230 Vac, 50/60 Hz (with power or USB+Power Module) 4 AA alkaline batteries rechargeable NiMH (for use with USB + Power Module)

Hach 2100P Turbidity Meter

- The range, accuracy, and resolution of many laboratory instruments
- Designed primarily for field use
- Four-digit liquid crystal; 10.16 mm (0.4 in) high digits with custom icons
- Calibrated with Formazin Primary Standard at the factory

Method:	180.1 (EPA)
Range:	0 - 1000 NTU in automatic range mode or manual range selection of 0 - 1000 NTU
Resolution:	0.01 NTU on lowest range
Accuracy:	± 2% of reading plus stray light from 0-1000 NTU
Response:	6 seconds
Power:	Four AA Alkaline cells or optional battery eliminator (life is typically 300 tests with signal average mode off; 180 tests with signal average mode on)

Global Water WQ770 Turbidity Meter

- Handheld, portable unit that can be used for environmental or process sites that do not require permanent monitoring
- Ideal for river monitoring, stream measurement, reservoir water quality testing, groundwater testing, water and wastewater treatment, effluent and industrial control, and more
- Six digit LED screen
- Rugged stainless steel and Delrin sensor housing

Method:	Nephelometer with correction
Range:	Sensor=0-50 NTU and 0-1000 NTU; Meter=0-50 NTU or 0-1000 NTU selectable
Resolution:	12 bit
Accuracy:	+/- 1% of full scale
Power:	Internal 9V battery

Hanna 98703 Turbidity Meter

- Specially designed for water quality measurements, providing reliable and accurate readings, especially in the low turbidity range
- Perfect for the examination of water and wastewater
- Primarily used for reporting turbidity
- Backlit LCD display provides an easy to understand, user-friendly interface
- Two, three, or four-point turbidity calibration can be performed by using the supplied (<0.10, 15.0, 100, and 750 NTU) standards
- USB for data transfer

Method:	180.1 (EPA)
Modes:	Normal measurement, continuous measurement or signal averaging measurement
Range:	0.00-9.99; 10.0-99.9; 100-1000 NTU
Resolution:	0.01; 0.1; 1 NTU
Accuracy:	±2% of reading plus 0.02 NTU
Power:	Battery or line voltage

HF Scientific Micro TPI Portable Turbidimeter

- Designed to provide the ease of portability needed in the field with rugged durability
- Perfect for monitoring turbidity on the go
- 4 Digit (7 segment) LCD
- Calibration initiated with the push of a button ensures accurate readings
- Water proof housing allows sample measuring and cleaning in any wet environment

Method:	180.1 (EPA), 7027 (ISO)
Range:	Auto-Ranging from 0 - 1100 NTU
Resolution:	0.01 NTU < 100 NTU 0.1 NTU < 100.0 - 999.9 NTU 1 NTU < 1000 -1100 NTU
Accuracy:	± 2% of reading or ± 0.01 NTU whichever is greater (0-500 NTU), ± 3% of reading
Response:	14 seconds
Power:	Four - AAA alkaline batteries

Hach Spectrophotometer DR 5000

- Maximum analysis flexibility with high speed wavelength scanning across the UV and visible spectrum
- Backlit Grayscale LCD Touch Screen
- Automatic wavelength calibration
- Easy data transfer via USB memory stick
- 1000 points of data storage
- Water resistant to enclosure (IP31)

Modes:	Stored Programs, User Programs, Favorite Programs, Single Wavelength Mode, Multi-Wavelength Mode, Wavelength Scanning Mode and Time Course Mode
Range:	190–1100 nm
Resolution:	0.1 nm
Accuracy:	± 1 nm in wavelength range 200-900 nm
Power:	100 V - 120 V

Hach Spectrophotometer DR 3900

- The simplest way to perform tests for water analysis
- Ideal for applications in beverage, drinking water, wastewater, food QC lab and power
- Reporing parameters include ammonia, COD, chlorine, chromium, iron, nitrate, nitrite, nitrogen, phosphorus and sulfate
- 7"TFT display
- Automatic wavelength calibration
- Three USB ports allow easy interface connection to Hach WIMS or any LIMS system

Range:	320 to 1100 nm
Resolution:	1 nm
Accuracy:	± 1.5 nm (wavelength range 340 to 900 nm)
Power:	Benchtop power supply

Ask About Our Rental Protection Plan (RPP)

Hach Spectrophotometer DR 2800

- Portable spectrophotometer that can be used for more than 240 analytical methods
- Perfect for applications including drinking water, wastewater, power, industrial water, environmental water and food & beverage
- More than more than 30 TNTplus reagent vial tests that provide innovative bar code labeling for reliable, automatic method detection
- Small footprint and large touch screen interface
- Automatic wavelength calibration
- USB memory stick updates instrument or transfers data

Range:	340 to 900 nm
Resolution:	1 nm
Accuracy:	±1.5 nm
Power:	Line power or lithium-ion battery power

Hach Spectrophotometer DR 2400

- The portable solution for optimizing water analysis
- Ideal for municipal, industrial, environmental or educational applications
- Graphic user interface with touch-screen display
- Automatic wavelength selection and calibration
- Download data via RS-232 communication directly to a printer or computer
- Collect up to 1000 data points
- Enclosure is IP32 rated (splash proof)

Modes:	Transmittance, Absorbance, Concentration
Range:	400-880 nm
Resolution:	1.0 nm
Accuracy:	± 1 nm, 400 - 880 nm
Power:	3 'D' cell batteries included; optional rechargeable battery pack

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Hach DR 900 - Colorimeter

- Allows quick and easy access to your most-used testing methods
- Works great in drinking water, wastewater and industrial water applications
- Provides access to 90 of the most common parameters
- Graphical display 240 x 160 pixel (backlit)
- Comes with a USB port for easily downloading or transferring information
- Stores data for up to 500 tests
- Waterproof, dustproof and field durable

Modes:	Transmittance (%), Absorbance and Concentration
Range:	420 nm, 520 nm, 560 nm, 610 nm
Power:	4, AA size alkaline batteries

Hach DR 890 - Colorimeter

- Can be used for drinking water, wastewater municipal, pure water/power, industrial water, environmental, collections and food & beverage
- Preprogrammed to test for at least 20, 50 or 90 parameters
- Large liquid-crystal display (LCD) shows results, parameter name, program number and units
- Auto-wavelength selection, datalogging capabilities and user-generated calibrations
- Infrared to RS-232 serial using data adapter
- Stores up to 99 measurements

Modes:	Concentration, Abs, %T
Range:	Low-range and high-range USEPA -approved COD procedures
Power:	4 AA alkaline or rechargeable alkaline batteries, nominal life of six months

WATER LEVEL / QUALITY MONITORING - *Water Analysis Instruments*

Hach DR 850 - Colorimeter

Item # 51582

- Configured for immediate use
- Reliable results without a mains connection
- Liquid crystal display shows results, parameter, name, and unit
- RS232 interface capabilities
- Data memory with 100 measuring values
- Dustproof, waterproof, shockproof, worry-free (designed to meet IP67 standards)

Range:	520, 610 nm
Sensor Accuracy:	± 1 nm Fixed Wavelength, varies with model
Power:	Four AA alkaline batteries

Hach Colorimeter II - Chlorine, Manganese, Hex. Chromium

Item # 51585

- Pocket size colorimeter suitable for extended field work or quick, on-the-spot monitoring
- Applications include drinking water, wastewater, power, industrial water, field use, beverage and food QC lab
- Factory programmed for one of two of more than 30 possible parameters
- Backlit liquid crystal display

Detector:	Silicon
Range:	0-2.5 Abs (absorbance)
Power:	4 AAA batteries - approximate life of 2000 tests (use of backlight reduces this number)

LaMotte Smart 3 Colorimeter

Item # 54893

- Direct reading for complete on-site water analysis
- Large graphical liquid crystal display
- Easy to use software allows the analyst to choose a test factor from over 75 pre-programmed calibrations for LaMotte reagent systems
- USB connection allows an interface of the colorimeter with a computer for real-time data acquisition and data transfer
- Log up to 500 time and date stamped datapoints

Detector:	4 silicon photodiodes with integrated interference filters
Modes:	Pre-programmed tests, absorbance, %T
Range:	-2 to +2 AU
Accuracy:	±0.005 AU at 1.0 AU
Power:	Lithium ion rechargeable battery, 3.7v, 2.5 x .75 inches, 1.7 oz. or USB computer cable or wall adapter

Turner Designs Aquaflor Handheld Fluorometer/Turbidimeter

Item # 54555

- Lightweight, inexpensive, handheld fluorometer /turbidimeter ideal for field use
- Perfect for the user who needs quick measurements away from the laboratory
- 12 bit resolution
- Single-point plus blank calibration
- Internal data logging stores up to 1,000 points of data
- Dustproof / waterproof with floating capability (IP-67)

Detector:	Photodiode 300nm-1,000nm capable
Range:	0 - 1000 NTU (turbidity)
Power:	4 AAA batteries (standard or rechargeable)

Ask About Our Rental Protection Plan (RPP)

Fluorimeter SMF4 Fecal Coliform

- Portable fluorimeter that uses established fluorescent techniques to determine the polluted load by faecal matter in water courses and sewers
- Applications include monitoring organic pollution in storm water sewers, assessment of BOD values through the waste water treatment process and monitoring discharges to watercourse
- LCD display 93 x 70 mm
- Easy connection to PC or datalogger via a 9-pin RS 232 / USB output
- Internal memory data capture of up to 2000 sample records

Power: Internal rechargeable batteries

Hand Auger Kit

Item # 90194

- Large variety of styles, diameters and connection styles
- Used for obtaining soil samples at or near the surface
- Boring to depths where samples may be obtained with a soil sampler or soil core sampler

Fiberglass Auger Kit

Item # 90109

- Provides some protection against possible electric shock when working in areas where buried electric cables may be present
- Features the trusted AMS Signature Series thread pattern, which takes 2-1/2 revolutions to connect and disconnect
- 18" rubber coated Signature Series cross handle detaches for convenience while providing comfort during augering

Power Auger Kit

Item # 51563

- Core through those dreaded frozen soil conditions
- Equipped with carbide cutting teeth that are specifically designed to chew through tough frozen soil and pull relatively undisturbed cores inside the barrel
- Designed to work with an SDS-Max rotary hammer drill, but may be adapted to a Tanaka TIA-350PFS Gas Drill for added portability

Power Auger Kit

Item # 51563

- SDS-Max bit system offers tool-free bit changes, with automatic bit locking, dust protection, and efficient impact-energy transfer rate
- Combination dual-mode selector delivers two modes of operation: rotary hammer and hammer-only mode
- Variable-speed dial for accurate bit starting and controlled chipping applications

Digital Scale

- Lightweight
- Portable
- Compact
- Easy to use
- CS200, CS2000 and Adventurer models available

Split Core Samplers

- Made of 300 series stainless steel
- Choice of 5/8" NC threaded or Signature Series top connection for extension, cross handle or slide hammer attachments
- Core tip is made of 400 series stainless steel
- Includes a top cap, cup set and either an auger tip or coring tip or both - depending on the sampler option selected

Soil/Sludge Gas Vapor System
Item # 51570

- Designed to sample up to 12 feet depending on soil conditions
- Patented gas vapor tip and Retract-A-Tip for soil gas monitoring and surveying as well as taking shallow groundwater samples

Sludge Sampling Kit
Item #00000

- Everything you need to collect relatively undisturbed samples from non-cohesive materials and various types of impoundments
- Uses the advanced multi-stage slude core tip, plastic soil core catcher and liner to prevent loss of the sample upon retrieval
- Ideal for discrete interval sediments sampling in rivers, lakes, wetlands and estuaries because it stops caving sediment

Wildco Stainless Steel Hand Corer
Item # 75391

- Handles for shallow water coring
- Clevis for deeper water
- Simple automatic flap valve
- Sample by hand or by gravity on a line
- Auxillary weights for more penetration in deeper water
- 316 stainless steel head assembly

Geoprobe Hand Tool System
Item # 90271

- Several sizes and configurations to suit a wide variety of site conditions
- Great economical means of collecting subsurface information from shallow depths without the use of a direct push machine

Dexsil PetroFLAG TPH Analyzer System
Item # 51615

- Determines hydrocarbon contamination in soil
- Environmentally safe, inexpensive and field portable
- Perform analysis of a 10 gram soil sample using three simple steps: extraction, filtration, and analysis
- Utilizes an EEPROM memory system
- PPM results on a liquid crystal display (LCD)

Analysis:	Total Petroleum Hydrocarbons (TPH)
Range:	15, 50, 100, 500, 1,000 and 2,000 ppm
Number of Tests:	10
Detection Method:	Turbidimetric development
MDL/MQL:	15 ppm (MDL), 45 ppm (MQL)
Overall Accuracy:	10% +/-MDL
Analysis Time:	15 min

Hanna Direct Soil Tester for EC/Temp

Item # 51569

- Stainless steel penetration probe for direct measurement of conductivity in soil
- Compact size with single button operation
- One-point calibration and temperature compensation
- Waterproof

Conductivity Accuracy:	±50 µS/cm (0 to 2000 µS/cm), ±300 µS/cm (2000 to 4000 µS/cm); ±0.05 mS/cm (0.00 to 2.00 mS/cm), ±0.30 mS/cm (2.00 to 4.00 mS/cm)
Temperature Correction Coefficient:	Fixed 2% per degree celcius
Power:	CR2032 lithium-ion
Life:	100 hrs continuous use
Dimensions:	50 x 196 x 21 mm (2.0 x 7.7 x 0.9")
Weight:	74 g (2.4 oz)

PINE
Partner for Test & Measurement Equipment Services and Data Solutions

Rental Protection Plan (RPP) Protects Your Investment

Damage Protection
- RPP provides coverage for repairs due to accidental or incidental damage to equipment.
- Damage resulting from abuse or misuse is not covered - abuse or misuse is defined as equipment used in an application it was not designed for or an application that exceeds the manufacturers' specifications.

Rental Liability
- Significantly reduces your liability for damaged or stolen equipment.
- Avoid claims against your insurance.
- The RPP gives you coverage when your business insurance leaves you exposed.

Theft Protection
- You are only responsible for a percentage of the replacement cost depending on protection level selected.
- A police report must be filed and notification given to Pine within 48 hrs of the customer being made aware of stolen equipment. If a police report is not provided, the customer is fully liable for the entire cost of replacement.
- In the event that the stolen equipment is recovered, Pine will retain ownership.

RPP Available Options for NDE/RVI & Environmental Equipment

	Plan	Repair Coverage	Theft & Loss
1	15% of List Rate	50%	30%
2	20% of List Rate	75%	50%

* All RPP is based on list rental rate. National or customized rates DO NOT APPLY. Some items are excluded from our rental Protection Plan

www.pine-environmental.com

Fluke 1625 GEO Earth Ground Tester

- 3- and 4-pole earth ground measurement
- 4-Pole soil resistivity testing
- 2-pole resistance measurement AC
- 2- and 4-pole resistance measurement DC
- Selective testing, no disconnection of ground conductor (1 clamp)
- Stakeless testing, quick ground loop testing (2 clamps)
- Earth impedance measurement at 55 Hz
- Automatic frequency control (AFC) (94, 105, 111, 128 Hz)

Measuring Voltage:	Vm = 20/48 V AC
Measuring Range:	0.001 Ω to 299.9 kΩ (3-pole and 4-pole ground resistance measurement)
Display:	2999 Digit LCD – 7 segment liquid crystal display with special symbols and backlight
Battery Life:	Typical 3000 measurements (RE+RH ≤ 1 kΩ), Typical 6000 measurements (RE+RH ≤ 10 kΩ)
Size:	133 mm x 187 mm x 250 mm

Colorimeter II, PCB in Soil

- Ideal for drinking water, wastewater, power, industrial water, field use, beverage and food QC lab
- Single parameter go-anywhere portability
- Fast, easy, accurate results
- Factory-programmed
- Lightweight and rugged
- Backlit display, data logging and recall

Detector Type:	Silicon
Display Type:	LCD
Absorbance Range:	0 to 2.5 Abs
Number of Tests:	2,000 tests (use of backlight reduces this number)
Power:	Four AAA batteries
Dimensions:	2.5" x 6.2" x 1.4"
Weight:	0.5 lbs

Aquaterr TEMP-350 Digital Soil Moisture and Temperature Meter

- Displays both soil moisture percentage and soil temperature °F.
- May be used in a variety of soils, and is unaffected by temperature, pH, dissolved salts or metallic ions
- Portable for immediate results in the field
- Multiple probes in one - moisture, temperature and salinity
- Easy to use - inset, select, read
- Rugged, reliable and accurate results

Probe Length:	30"
Moisture Range:	0-100%
Meter Accuracy:	± 1.5%
Power/Life:	9V battery (~3 months)
Dimensions:	11" x 5" x 38" (shipping dimensions)
Weight:	6 lbs

FieldScout Direct Soil EC Meter

- Professional-grade meter
- No need to prepare samples - simply sample through the profile
- Patented paired sensor tip provides maximum soil-sensor contact and higher accuracy
- Sample directly in plug trays, pots, containers, solutions, or ground soils
- 0 to 19.9 mS/cm
- Automatic temperature compensation
- Includes EC calibration standard

EC Range:	0.00 - 19.99 mS/cm
Accuracy:	EC: ±1% Full Scale Temperature: ±0.5 oC
EC Resolution:	0.01 mS/cm
Calibration:	1-point, manual calibration
Temperature Compensation:	Automatic from 0 to 50 degrees C
Power:	Four LR44 1.5V alkaline batteries

Ask About Our Rental Protection Plan (RPP)

Thermo Niton XL3T GOLDD+

Item # 54120

- Most powerful x-ray tube on the market for handheld XRF analysis
- Point and shoot simplicity - very easy to use even by non-technical personnel
- Rugged design for real-world industrial environments
- Non-destructive analysis with near instantaneous results
- Sealed against moisture and dust
- Ergonomically designed

Number of Elements:	Standard analytical range: Up to 30 elements from Mg to U (varies by application)
Testing:	Scrap metal recycling, mining exploration and environmental
Memory / Data Storage:	Internal >10,000 readings with spectra
Display:	Color, touch-screen display
Power:	Two lithium-ion battery packs

Thermo Niton XL2 GOLDD XRF Analyzer

Item # 54322

- Point-and-shoot simplicity - very easy to use even by non-technical personnel
- Non-destructive analysis with near instantaneous results
- Ergonomical design
- Daylight-readable icons
- Multilanguage options
- Integrated camera
- Standard Analytical Range: up to 30 elements from Mg to U (varies by application)

Number of Elements:	Silicon drift detector (SDD) technology for fast, accurate analysis of light elements without helium purging or vacuum pumps
Testing:	Scrap metal recycling yards
Memory / Data Storage:	Internal >10,000 readings with spectra
Display:	Fixed angle, color, touch-screen display
Power:	Two 6-cell lithium-ion battery packs

Field Supplies

PINE
Partner for Test & Measurement
Equipment Services and Data Solutions

For all your Consumables, PPE and Instrumentation needs.

Thermo Niton XL3T+ 600

Item # 51551

- Real-time data in the palm of your hand for the identification and remediation of environmental contaminants on-site
- Quickly take readings, set your contamination boundaries in real-time and make on-the-spot decisions
- Data transfer via Bluetooth to a range of USB communication features

Testing:	Soils, sediments, waste water, liquids and painted surfaces
Display:	Liquid crystal display touch-screen
Power:	Battery pack with charger

Thermo Niton XLT 898ADI

Item # 54119

- High performance x-ray tube excitation
- High-strength, injection molded and environmentally sealed housing
- Intergrated touch-screen display with advanced and intuitive user interface
- Patented high-speed electronics for unequaled performance

Number of Elements:	22 standard alloying elements in the range Ti (22) to Bi (83)
Testing:	Alloy grade with chemistry (Fundamental Parameters analysis)
Memory / Data Storage:	Internal 3000 readings with x-ray spectra (maximum)
Display:	Backlit VGA touchscreen LCD
Power:	Two rechargeable lithium-ion battery packs with Hot-swap capability (6-12 hr use)

Thermo Niton XLT 898D

Item # 54119

- High performance x-ray tube excitation
- High-strength, injection molded and environmentally sealed housing
- Intergrated touch-screen display with advanced and intuitive user interface
- Patented high-speed electronics for unequaled performance

Number of Elements:	22 Standard alloying elements in the range Ti(22) to Bi(83)
Testing:	Alloy grade with chemistry (Fundamental Parameters analysis)
Memory / Storage:	Internal 3000 readings with x-ray spectra (maximum)
Display:	Backlit VGA touchscreen LCD

Olympus Delta DS 2000 (with Optional Delta Soil Extension Pole)

Item # 51548

- Lightning fast bootup and data acquisition: Faster testing, more results
- Integrated Bluetooth for data input and output
- Ergonomic rubberized handle for enhanced grip
- Analysis indicator lights visible from 360°
- 4 W X ray tube

Number of Elements:	Alloy and Mining: Mg and up for Rh/Ag and Al and up for Ta/Au; Soil: P and higher
Testing:	Alloy Plus, Lead in Paint. Not recommended for HUD testing applications.
Memory / Storage:	1 GB MicroSD (Up to 75,000 readings)
Display:	Color Touch Screen
Power:	2x Li-Ion Batteries

Ask About Our Rental Protection Plan (RPP)

Innov-X 6000 Alpha Series

- Analyze low alloy, stainless, nickel, titanium, cobalt, copper-based alloys and more
- Confidently separate challenging alloys such as 304 & 321, P91 & 9 Cr, Ti Grade 7 & CP Ti
- Designed for tests to 800 degrees F
- Measure Cr in carbon steel to 0.03% - for evaluating flow accelerated corrosion (FAC)

Number of Elements:	Standard package includes 21 elements. Customer may specify 4 additonal, or use multiple suites of 25 elements each.
Testing:	Alloy, Soil Mode
Memory / Storage:	128 Mb standard memory. 20,000 test results with spectra, upgrade to >100,000 with optional 1 Gb flash card.
Display:	Color, high resolution touchscreen.
Power:	Li-ion batteries, rechargeable (charger included).

RMD XRF LPA-1 Lead Paint Analyzer

- Non-destructive testing for lead on painted surfaces
- Fast, efficient and easy to use testing device - completes readings in 2-4 seconds
- No preparation needed. Simply test on the surfaces in question: doors, window casings, walls, floors, moldings etc.
- Quickly and Easily download data to create a variety of Inspection Reports

Testing:	Wood, drywall, concrete, metal	
Accuracy of Results:	Wood, Drywall	±0.05 mg/cm2
	Concrete, Metal	±0.10 mg/cm2
Operating Temperature:	20-120°F	
Memory / Storage:	4,000 data points	
Power:	Rechargeable battery with 8 hrs time on normal usage	

Thermo Niton XLP 818 🍁 only

- Fast, Powerful & Precise
- Rugged & Highly Portable
- Versatile and Easy to Use

Source:	241 Am Maximum: 30 mCi (1110 MBq)
Detector:	High-Performance, thermo-electricity cooled, solid state detector system
Display:	Back-lit 1/4 VGA touch screen LCD, visible in all conditions
Standard Analytical Range:	22 Standard alloying elements in the range Ti(22) to Bi(83)

Thermo Niton XLP 702 🍁 only

- High-strength, rugged, environmentally sealed housing
- Portable GPS integration for real-time contamination mapping
- Very easy to use - even by nontechnical personnel

Number of Elements:	Up to 25 elements (standard) from P to Pb
Testing:	Lead, mercury and arsenic
Memory / Storage:	Internal ~6000 readings + spectra
Display:	Backlit VGA touch screen LCD
Power:	Li-ion battery pack

Oxford ARC-MET 8000 Optical Emission Spectrometer

Item # 54318

- Accurate results displayed on probe and main unit
- Argon kit available
- Ideal for ferrous and non-ferrous materials
- Maximum performance for all types of analysis
- Versatile mobile unit affords flexibility in all applications

Probe:	Flat field holographic grating, full spectrum recording
Wavelength Range:	185-370nm, SP option from 175nm
Metals:	Carbon and low alloy steels, Cr Steels, Cr Ni Steels, Ni Alloys
Battery/ Battery Life:	4 to 5 hours

Customer must possesss a user license with the Canadian Nuclear Safety Commission prior to shipment of the Niton XLP radioactive source-based analyzers. License applications may be attained from the CNSC.

Ludlum Model 3 Survey Meter (with and without 44-9 G-M Detector)

Item # 51515

- Handheld analog ratemeter known for accuracy and long-lasting dependability
- Comes in a variety of measurement ranges and units to support the external radiation detector selected
- Aluminum cast instrument housing
- Front-panel controls for selecting the four-decade range

Detector:	GM and scintillation
Temperature Range:	-20 to 50 °C (-4 to 122 °F), may be certified for operation from -40 to 65 °C (-40 to 150 °F)
Power:	Two each "D" cell batteries (housed in externally accessible sealed compartment)
Battery Life:	Typically greater than 2000 hrs with alkaline batteries (battery condition can be checked on meter)

Ludlum Model 5 Geiger Counter

Item # 51545

- Equipped with two internally housed, energy-compensated GM detectors
- Aluminum cast housing with separate battery compartment
- Front-panel rotary switch for selecting five display ranges

Measurement Range:	Typically 0-2000 mR/hr
Detector:	2 energy-compensated GMs, housed inside instrument enclosure
Sensitivity:	100 ± 30 mV for the low range detector; 425 ± 75 mV for the high range detector
Temperature Range:	-20 to 50
Power:	Two each "D" cell batteries
Battery Life:	Typically greater than 2000 hours

Ask About Our Rental Protection Plan (RPP)

Ludlum Model 19 MicroR Meter

- Highly sensitive gamma µR/meter employing an internally housed, 2.5 cm diameter by 2.5 cm thick (1.0 x 1.0 in.)
- Measuring range is 0 to 50 µSv/h (0–5000 µR/hr)
- Complete turn-key system
- Includes two D cell batteries

Measurement Range:	0–50 µSv/h (0–5000 µR/hr)
Detector:	2.5 x 2.5 cm (1 x 1 in.) NaI (Tl) scintillator
Sensitivity:	Approximately 17,500 cpm/µSv/h (175 cpm/µR/hr) (137Cs gamma)
Temperature Range:	-20 to 50 °C (-4 to 122 °F), may be certified for operation from -40 to 65 °C (-40 to 150 °F)
Power:	2 each "D" cell batteries (housed in sealed compartment that is externally accessible)

Ludlum Model 192 MicroR Meter

- High-sensitivity gamma µR ratemeter employing an internally housed 5.1 cm diameter by 2.5 cm thick (2 x 1 in.)
- Supports two types of alarms - a user adjustable fixed point alarm and a deviation alarm
- Front-panel controls allow you to select one of four ranges
- Aluminum case housing and a separate battery compartment

Measurement Range:	0–50 µSv/h (0–5000 µR/hr)
Detector:	5.1 cm diameter x 2.5 cm thick (2.0 x 1.0 in.) NaI(Tl) scintillator
Sensitivity:	Typically 650 cpm/µR/hr for 137Cs gamma
Power:	Alkaline batteries
Battery Life:	600 hours
Size:	21.6 x 8.9 x 22.4 cm (8.5 x 3.5 x 8.8 in.) (H x W x D), with handle
Weight:	5 lbs (including batteries)

Ludlum Model 2241 Scale & Ratemeter

- General purpose, digital ratemeter with a built-in scaler that facilitates timed counts over a user specified period
- LCD presents readings in a 4-digit moving decimal format together with one of a wide range of available units of measure
- Features adjustable alert & alarm setpoints for both the Ratemeter & Scaler modes

Detector:	GM, proportional, scintillation
Power:	Alkaline batteries
Battery Life:	200 hours
Size:	6.5" x 3.5" x 8.5") (H x W x L)
Weight:	3.5 lbs (including batteries)

Ludlum Model 44-2 NaI Gamma Scintill

- Photomultiplier tube (2.86 cm) diameter, magnetically shielded
- Energy response is energy dependent
- For low-level, wide-energy gamma survey
- Series "C" connector
- Recommended energy range of 20 KeV to 1.5 MeV

Detector:	Scintillator, 1" x 1") (Dia x L) thick NaI
Sensitivity:	Typically 175 cpm/µR/hr (137Cs gamma)
Operating Voltage:	500-1,200 volts
Temperature Range:	-15 to 50 °C (5 to 122 °F), may be certified for -40 to 65 °C (-40 to 150 °F)
Size:	2" x 7.3" (D x L)
Weight:	1 lb

SEI Inspector Model 4EC Radiation Monitor

Item # 54475

- Compact, ergonomic, general purpose survey meter
- Detects alpha, beta, gamma and x-rays over 3 selectable ranges
- Operating range of 0-.5, 0-5, 0-50 mR/hr 0-500, 0-5,000, 0-50,000 CPM or 0-5, 0-50, 0-500 µSv/hr (SI Scale Meter Option)
- Accuracy reading of ±15% of reading (Cs137)
- Temperature Range of -20° to 55°C (-4° to 131°F)

Measurement Range:	0-.5, 0-5, 0-50 mR/hr 0-500, 0-5,000, 0-50,000 CPM or 0-5, 0-50, 0-500 µSv/hr (SI Scale Meter Option)
Temperature Range:	-20° to 55°C (-4° to 131°F)
Power:	9-volt alkaline battery
Battery Life:	Approx. 2000 hrs at normal background
Size:	209 x 71 x 50 mm (8.2 x 2.8 x 1.9 in.)
Weight:	M4: 200 g (7.1 oz) M4EC: 224 g (7.9 oz)

Schonstedt GA72 CD

Item # 51533

- Most Popular for UXO and Demining Applications
- Audio & Visual Output
- Battery & Sensitivity Indicators
- Choice of Two Audio Modes: Peak or Null response
- 4 Levels of sensitivity and 3-digit LCD readout
- Signal Strength and Polarity Indications
- No response to aluminum, brass, or copper
- Patented HeliFlux® sensors
- Modular construction; high performance components

Audio Output:	Switch at "A" Signal increases or decreases in volume with gradient-field intensity, switch at "B" Signal increases or decreases in frequency with gradient-field intensity.
Video Output:	Digital readout and expanding bar graphs indicate polarity (+ or-) and relative strength of the magnetic field
Input Power:	Supplied by two 9V lithium batteries
Battery Life:	60 Hours (intermittent usage)
Battery Check:	4-segment LCD BATT indicator

Schonstedt MAC 51B Pipe and Cable Locator

Item # 61261

- Includes transmitter and a dual-function receiver
- Versatile, efficient and easy to use
- 4" diameter cast-iron pipes can be located at depths up to 8'
- Accurate enough to find nails covered with 8" of asphalt

Operating Voltage:	12 volts (8 c-cell batteries)
Battery Life:	50 hrs intermittent operation at 70 degrees F
Output Frequency:	82.5 kHz modulated at 382 Hz. nulsed at 4,8 Hz (inductive or conductive)
Audio Indicator:	2.58 kHz pulsed at 4.8 Hz
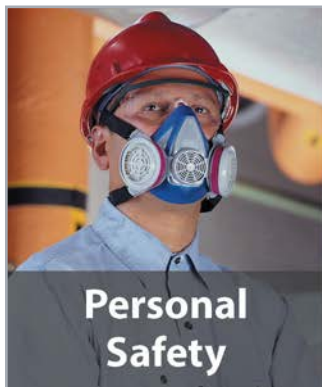
Ask About Our Rental Protection Plan (RPP)

Schonstedt GA92XT

- Digital readout and expanding bar graph displays signal strength and polarity
- Continuous Gain control, with range indicated by a 4-segment LCD at each quarter turn
- Piezoelectric speaker
- 24-hour operational life (intermittent usage) on 1 lithium 9-volt battery
- Includes one 9-volt lithium battery
- 4-segment BATT LCD monitors battery charge
- Lightweight, easy-to-use design reduces search time

Audio Output:	Signal increases or decreases in frequency with signal strength (gradient field intensity). Audio frequency range - 30 to 4000 Hz.
Visual Output:	Visual: Expanding bar-graphs indicate polarity (positive or negative) and signal strength. Digital readout shows gradient field intensity expressed in milligauss (mG). Range – 0 to 500 mG
Battery Indicator:	4-segment LCD

Schonstedt GA52 CX Magnetometer

- Detects the magnetic field of iron and steel objects, with unmatched sensitivity
- Audio output
- 5 levels of sensitivity
- No response to aluminum, brass or copper
- Patented HeliFlux® sensors
- Modular construction; high performance components

Output:	40 Hz idle tone in speaker
Operating Temperature:	-13° to 140°F (-25° to 60°C)
Nominal Sensor Spacing:	20" (50.8 cm)
Power:	Two alkaline 9V batteries
Size:	42-5/16" overall length
Weight:	2.5 lbs
Seven	Seven

RD4000RX Above Ground Locator

- Highest performance digital Receiver even in the presence of interference
- Fast, clear, positive response even in congested areas
- Multiple active frequencies and modes provides sophisticated location tools
- Peak, null and single antenna modes
- Position and depth measurement
- Current measurement to identify individual networks
- Real Sound - audible perception of locating dynamics
- High output 10 Watt Transmitter to locate deep utilities

Current Reading:	± 5% Active signal bw limited
Fault Finding:	Diagnose faults from s/c to 2M ohm
Locate Quality:	140 dB @ 10 Hz bandwith (dynamic range), 120 dB/Hz up to 200 kHz (selectivity), 5E-15 Tesla (32,768Hz, 1Hz b/w) (sensitivity)
Accuracy:	±5% of depth, good condition
Depth Accuracy:	± 2.5% 0.1 m to 3 m (4in to 10 ft) (Line), ± 2.5% 0.1 m to 7 m (4in to 16 ft) (Sonde)

Pipehorn LD-12 Detector

- 10 easy to use filter combinations
- Large meter to help pinpoint with precision
- Limiter switch to protect your ears
- Noise reducing headphones available

Frequency Range:	100-1200 Hz (13 dB) w/filter-thru OFF, 15-30,000 Hz (13 dB) w/filter-thru ON
Power:	Six AA alkaline batteries
Battery Life:	Up to 28 hrs
Weight:	31 oz.

Metrotech 880 Iron and Steel Locator

Item # 54508

- Ultra strong submersible ABS & carbon fiber antenna tube
- Fast electronics processor engine for fast, reliable, and accurate results
- Improved ergonomics for comfort during prolonged usage
- Dot matrix LCD backlit display
- Audio and visual signal strength indicators
- Magnetic field polarity indicator
- One touch auto sensitivity control w/manual control
- 60Hz proximity warning

Peizo Speaker:	Tone frequency increases or decreases with gradient field intensity
Receiver Antennas:	Dual magnetometers
Connectors:	1 x mini USB socket for programming
Power:	Two AA batteries (LR6) cells
Battery Life:	26 hrs
Weight:	1.54 lbs

Proceq Profoscope Rebar Locator

Item # 55067

- Rebar detector with real-time visualization of the rebars beneath the instrument
- Visual indication of rebars in close proximity
- Optical and acoustical indication of rebar location and minimum cover alert
- Cordless and single-handed operation
- Switchable display backlight for dark environments
- Icon-based language independent menus

Voltage Range:	3.6V to 1.8V
Temperature Range:	14° to 140° F
Humidity Range:	0 to 100 % rH
Power:	2 x 1.5V AA batteries
Five	Five
Six	Six
Seven	Seven

Trimble Geo XT

Item # 51465

- Integrated SBAS and EVEREST multipath rejection technology
- 520 MHz processor, 128 MB RAM, and 1GB of storage
- High resolution VGA display for crisp and clear map viewing
- Bluetooth® and wireless LAN connectivity options
- 1 GB onboard storage plus SD slot for removable storage cards
- Windows Mobile® version 6 operating system
- Rugged handheld with all-day battery

Receiver:	High performance, submeter GPS
Channels:	12
Update Rate:	1 Hz
Power:	Rechargeable lithium-ion battery
Size:	8.5" x 3.9" x 3.0"
Weight:	1.76 lbs (with battery)

Ask About Our Rental Protection Plan (RPP)

Trimble Geo XH

- Real-time subfoot (30 cm) accuracy with the internal antenna and decimeter (10 cm) accuracy with an optional Zephyr™ external antenna
- 520 MHz processor, 128 MB RAM, and 1GB of storage
- Real-time H-Star™ technology for decimeter to subfoot accuracy in the field
- High resolution VGA display for clear map viewing
- Bluetooth® and wireless LAN connectivity options
- 1 GB onboard storage plus SD slot for removable storage cards
- Windows Mobile® version 6 operating system

Receiver:	Trimble GPS
Channels:	12
Update Rate:	1 Hz
Power:	Rechargeable lithium-ion battery
Size:	8.5" x 3.9" x 3.0"
Weight:	1.76 (with battery)

Trimble GeoExplorer 6000

- Decimeter accuracy without the wait
- Floodlight satellite shadow reduction
- Never-seen-before display performance
- Work online, anywhere, cable-free
- High quality photo capture
- Designed for work

Receiver:	GNSS with real-time H-Star technology
Channels:	220
Update Rate:	1 Hz
Power:	Rechargeable, removeable lithium-ion battery
Size:	9.2" x 3.9 x 2.0"
Weight:	2.0 lbs (with battery)

Trimble Geo 7X Handheld Data Collector

- Easy-to-use feature coding
- Feature-rich graphical COGO routines for calculating points and features
- Graphical staking of points, lines, arcs, and alignments from active maps
- Detachable Geo 7X rangefinder accessory - simply point and shoot to get the position
- Integrated Surveying technology combines optical, scanning, and GNSS data plus images in the same job
- Trimble VISION enabled sensor control

Receiver:	Dual-frequency GNSS and antenna with Trimble R-Track™ technology
Channels:	220
Power:	Rechargeable, removable Li-ion
Size:	3.9" x 9.2" x 2.2"
Weight:	2.0 lbs (1080 g) with battery

Trimble Hurricane Kit

- Ideal for all mapping applications, especially in difficult terrains
- Integrated groundplane for rejecting multipath signals
- Integrated screw threads allows for easy mounting to backpack or pole
- Includes padded case & cable

Frequency:	1575.42 ±10 MHz
Noise:	2.5 dB max
Gain:	42 dBm
Power Consumption:	0.2 watts
Connector:	TNC
Mounting:	5/8-11 thread
Cable:	1.5 m TNC to SMB antenna cable
Size:	6.35" D x 2.3" H
Weight:	0.86 lbs

Trimble Zephyr Antenna

- Comprehensive GNSS support, including GPS, GLONASS, Galileo, Beidou and QZSS
- Robust low-elevation satellite tracking
- Minimized multipath
- Sub-millimeter phase center repeatability
- Ideal for fixed reference stations and GNSS infrastructure networks

Input Voltage:	3.5 V DC to 20 V DC
Input Current:	125 MA maximum
Operating Temperature:	−40 ºF to +158 ºF
Humidity:	100% humidity proof
Size:	6.5" D x 3" H

Trimble Zephyr II Antenna

- Optimized for GNSS base station applications
- Robust low-elevation satellite tracking
- Large ground plane for best multipath rejection
- Sub-millimeter phase center repeatability
- Ideal for fixed reference stations and GNSS infrastructure networks

Input Voltage:	3.5 V DC to 20 V DC
Input Current:	125 MA maximum
Operating Temperature:	−40 ºF to +158 ºF
Humidity:	100% humidity proof
Size:	6.5" D x 3" H

Trimble Yuma Windows Tablet

- Outdoor rugged design
- Integrated WiFi b/g
- Integrated Bluetooth 2.1
- Integrated GPS
- Two integrated cameras
- ExpressCard Slot
- SDIO slot
- 7" sunlight readable touch screen display
- Ultra light weight

Memory Storage:	32 GB solid state hard drive
Operating Temperature:	−22 °F to 140 °F (−30 °C to 60 °C)
Processor:	Intel Atom Z530 1.6 GHz processor
RAM Memory:	1 GB DDR2
Expansion:	SDIO memory slot
Power:	Standard battery set (4 hours)

Garmin GPSMAP 60CS

- Lightweight, rugged and water resistant GPS
- 256-color, highly refelecting display with easy viewing in almost any lighting condition
- 20 hour battery life
- Includes rapid automatic route calculation

Waypoints:	1000
Routes:	50
Track Log:	10K points, 20 saved tracks
Power:	2 AA batteries
Size:	2.4" x 6.1" x 1.3" (6.1 x 15.5 x 3.3 cm)
Weight:	7.5 oz (213 g) with batteries

Ask About Our Rental Protection Plan (RPP)

Meridian Magellan GPS System

- Rugged, waterproof and built to last
- Tracks up to 12 satellites at any one time
- Comes with a 8" rich screen
- Standard with 2 MB RAM
- Waterproof

Waypoints:	500
RAM Memory:	2 MB
Expansion:	SD slot allowing you to use an 8mb, 16mb, 32mb or 64mb SD card
Power:	Two AA batteries (15 hrs life)

Topcon AT-G7N

- Rapid, stable automotic leveling
- Twin horizontal fine lines
- Magnetically dampened Mylar compensator with superior resistance to cold, heat and shock
- Fully waterproof gas filled compensator

Magnification:	22 x
Objective:	30 mm
Minimum Focus:	0.5 m
Accuracy:	+ / - 2.5 mm over 1 km of double run leveling
Weight:	1.6 kg

Topcon Pulse Total Station GPT-6000C

- Long range measurement
- High speed non-prism measurement
- Simple operation
- Graphic display / numeric keyboard
- Five

Range:	3-150 m non-prism 7,000 m with single prism
Speed:	0.3 seconds in tracking mode, 1.2 seconds in fine mode
Compensation:	Dual axis
Display:	Large graphic
Weight:	6.0 kg (with battery)
Size:	343 mm H x 230 mm W x 178 mm

Jobcom Two Way Radio

- Up to 10 Channel Capability
- High Visibility, Easy-To-Read LED Channel Display
- Easy-To-Hear, High Audio Output Speaker
- 2-Tone Paging Decode
- Channel Scan with Nuisance Channel Delete
- Quick Change Battery
- Drop-In Charge Capability

Radio Sub-Category:	Two way
License Required:	Yes
FCC Narrow Band Compliant:	Yes

SOIL, SURVEY, NOISE & OTHER MONITORING – GPS / Survey, Weather Analysis

Davis Vantage Pro2 Weather Station with Optional Weather Station Tripod

Item # 51502

- Versatile and rugged
- Rugged sensor suite for rain, wind, temperature and humidty
- Accurate weather data updates every 2.5 seconds
- Wireless transmission from station to console up to 1,000 ft (300 m)
- Wireless or cabled versions are customizable by adding more sensors, stations and accessories to meet your needs

Temperature:	-40° to +150°F (-40° to +65°C)
Power:	Three C-cells
Size:	10.625" x 9.625" x 1.625" (270 mm x 245 mm x 41 mm) with antenna extended up
Weight:	1.88 lbs

Kestrel 4500 Weather Meter

Item # 51506

- Flip-open impeller cover
- Large three-line graphical display with backlight
- High accuracy
- Patented impeller and sensor technology
- Quick response external temperature sensor
- Temperature corrected humidity sensor
- Wind speed average function
- User-replaceable impeller
- Customizeable screens to display user-selected measurements

Measuring Range:	-20° to 158°F
Data Storage:	2,900 points
Power:	Two AAA batteries
Size:	5.0" x 1.8" x 1.1"
Weight:	3.6 oz

Ask About Our Rental Protection Plan (RPP)

Lufft WS 500 Compact Weather Station

- Measures air temperature, relative humidity, air pressure, wind direction and wind speed
- IP65 weatherproof enclosure
- Aspirated temperature/humidity measurement
- Open communication protocol: UMB-ASCII, UMB-binary, SDI-12, Modbus
- RS-485 interface

Measuring Range:	-50° to 60°C
Temperature Accuracy:	±0.2 °C (-20 to 50 °C), otherwise ±0.5 °C (>-30 °C)
Humidity:	0 to 100% RH
Air Pressure:	300 to 1,200 hPa
Power:	4 to 32 VDC
Size:	150 mm, height approx. 287mm
Weight:	Approx. 1.2 kg

Lufft WS 600 Ultrasonic Weather Station

- Simultaneously measures air temperature, humidity, pressure, precipitation & wind with an integrated electronic compass for corrected wind direction on moving platforms
- 24GHz Doppler radar measures precipitation drop speed and calculates quantity & type
- Easily mounts to 2" diameter pipe with integrated bracket mount & U-bolts
- SDI-12 output for integration with data loggers

Measuring Range:	-50° to 60°C
Temperature Accuracy:	±0.2 °C (-20 to 50 °C), otherwise ±0.5 °C (>-30 °C)
Humidity:	0 to 100% RH
Air Pressure:	300 to 1,200 hPa
Power:	4 to 32 VDC
Size:	150 mm, height approx. 343 mm
Weight:	Approx. 1.5 kg

Quest SoundPro DL1 including 1/1 & 1/3 Octave

- Provides Class 1 sound level monitoring
- Concurrent A-weighted and C-weighted measurements
- Programmable and level-triggered start and stop
- Luminescent keypad and backlit display
- USB communications port and serial RS-232 output
- Back erase function
- Noise dose calculation / dosimetry function

Range:	0-140 dB
Exchange Rates:	3, 4, 5 and 6 dB
Frequency Weighting:	A, C and Z (flat)
Microphone:	Class 1
Memory:	SD card
Datalogging:	1 sec to 60 min intervals
Response:	Fast, slow and IEC impulse time

Quest SoundPro DL2 including 1/1 & 1/3 Octave

- Provides Class 2 sound level monitoring
- Concurrent A-weighted and C-weighted measurements
- Programmable and level-triggered start and stop
- Luminescent keypad and backlit display
- USB communications port and serial RS-232 output
- Back erase function
- Noise dose calculation / dosimetry function

Range:	0-140 dB
Exchange Rates:	3, 4, 5 and 6 dB
Frequency Weighting:	A, C and Z (flat)
Microphone:	Class 2
Memory:	SD card
Datalogging:	1 sec to 60 min intervals
Response:	Fast, slow and IEC impulse time

Quest 2900 Type 2 with QC10

- Operator controls allow for fast and simple operation
- Large liquid crystal display
- Simple one-button field calibration
- Integral AC and DC signal outputs
- Resistance to magnetic and electrostatic fields
- Integral tripod mount

Range:	20-140 dB
Exchange Rates:	3, 4, 5 and 6 dB
Frequency Weighting:	A, C and Linear
Microphone:	Removable 1/2" prepolarized condenser (electret)
Memory:	Internal
Datalogging:	5 quantities at 1 second intervals for up to 4 hrs
Response:	Fast, slow, impulse and peak

Quest 2700 Type 2

- Operator controls allow for fast and simple operation
- Large liquid crystal display
- Simple one-button field calibration
- Integral AC and DC signal outputs
- Resistance to magnetic and electrostatic fields
- Integral tripod mount
- Tough modular construction
- Choice of three optional detachable octave band filter sets

Range:	20-140 dB
Frequency Weighting:	A, B, C and Linear
Microphone:	Removable precision 1/2" prepolarized condenser (electret)
Memory:	Internal
Response:	Slow, fast, impulse and peak

Quest 2100 Type 2

- Fast and Slow response modes
- "A" and "C" weighting modes
- Displays SPL and maximum SPL
- Low battery indicator
- Simple one-button field calibration
- Tough, RF-shielded construction
- AC/DC output jack for recorders

Range:	32-140 dBA, 38-140 dBC
Frequency Rating:	A and C
Microphone:	Removable precision 1/2" prepolarized condenser (electret)
Memory:	Internal
Response:	Fast and slow

Ask About Our Rental Protection Plan (RPP)

Quest SoundPro (OMS) Outdoor Kit

- Protects meter from enviromental exposure such as wind, rain, snow, chemicals particulates, animals, vandalism and theft
- Used for extended battery life with up to one week of continuous monitoring (2 weeks with optional second battery)
- Room for accessories and storage of the system when not in use
- Exposed components made of stainless steel or plastic to resist corrosion

Battery Type:	One 12V, 42 amp-hour
Run Time:	80% of 42 amp-hours , 34 amp-hours of 12 volt power
Operating Temperature:	0°C to 50°C (32°F to 122°F)
Dimensions:	(In Transit) 64 cm (W) x 51 cm (D) x 38 cm (H); 25" (W) x 20" (D) x 15" (maximum height), (Ready To Use) 64 cm (W) x 51 cm (D) x 200 cm (H); 25" (W) x 20" (D) x 78" (maximum height)
Weight:	67 lbs (with one battery)

Quest OB100 Octave Band Filter Set

- 1900 / 1800 / 1700 / 2900 / 2800
- Easily adapt to the modular design of Quest sound level meters
- Manually or automatically sequence through each octave band and display the measured level on the sound level meter
- Heavy duty plastic housing
- Wide frequency ranges

Battery Type:	One 12V, 42 amp-hour
Run Time:	80% of 42 amp-hours , 34 amp-hours of 12 volt power
Operating Temperature:	0°C to 50°C (32°F to 122°F)
Dimensions:	(In Transit) 64 cm (W) x 51 cm (D) x 38 cm (H); 25" (W) x 20" (D) x 15" (maximum height), (Ready To Use) 64 cm (W) x 51 cm (D) x 200 cm (H); 25" (W) x 20" (D) x 78" (maximum height)
Weight:	67 lbs (with one battery)

Quest OB300 Octave Band Filter

- Easily adapt to the modular design of Quest sound level meters
- Manually or automatically sequence through each octave band and display the measured level on the sound level meter
- Heavy duty plastic housing
- Wide frequency ranges

Frequency Range:	33 frequencies from 12.5 Hz to 20 kHz in 1/3-octave steps, or in 11 frequencies from 16 Hz to 16 kHz in 1/1 octave steps
Frequency Selection:	Full manual control or automatic sequential stepping through each frequency band
Power:	Sound Level Meter
Size:	3.3" x 4.2" x 1.8"
Weight:	9 oz

Quest QC10 Calibrator

- Standard 1" coupler opening that may be reduced via snap-in adapters
- Meets ANSI S1.40-1984 and IEC 942:1988 Class 1 standards
- Distortion less than 1% within temperature and humidity operating ranges
- Provides precise 1 volt RMS output signal via 1/8-inch phone jack

Output Frequency:	1,000 Hz
Output Accuracy:	+/- 0.3 dB @ 20 degrees C 760 mm Hg
Distortion:	Less than 1% within temperature and humidity operating ranges
Humidity:	5-95% RH with less than 0.1 dB change in ouput
Power:	9V transistor battery
Size:	4.1" L x 2.4" D
Weight:	12 oz

SOIL, SURVEY, NOISE & OTHER MONITORING – Sound Level Meters, Noise Dosimeters

Quest QC20 Calibrator

- Recommended for use with precision ANSI and IEC Type 1 meters
- Standard 1" coupler opening that may be reduced via snap-in adapters
- Meets ANSI S1.40-1984 and IEC 942:1988 Class 1 standards
- Distortion less than 1% within temperature and humidity operating ranges
- Provides precise 1 volt RMS output signal via 1/8" phone jack

Output Frequency:	Selectable, 250 Hz, 1,000 Hz +/- 2%
Output Accuracy:	+/- 0.3 dB @ 20 degrees C 760 mm Hg
Distortion:	Less than 1% within temperature and humidity operating ranges
Humidity:	5-95% RH with less than 0.1 dB change in ouput
Power:	9V transistor battery
Size:	4.1" L x 2.4" D
Weight:	12 oz

Casella CEL 490 Type 1

- Compliant with latest IEC 61672 standard
- Time history profiles for built-in graphic level recording
- Available in both Class 1 and Class 2 accuracy grades
- Environmental kit casing avaiilable
- Real-time frequency analysis in octave and one-third octave
- Easy to use menu with user definable configurations
- Choice of broadband only, octave or one-third octave instruments
- Firmware and software upgradeable

Measurement Range:	140 dB
Microphone:	1/2" Electret microphone
Power:	Four LR6 alkaline cells
Size:	340 x 100 x 40 mm (13.5 x 4 x 1.5 in)
Weight:	550 gm (19.3 oz) with batteries.

Casella CEL 480 Type 1 & 2

- Automated data collection
- Easy download to a PC or printer
- 70 dB dynamic range adjustable in 10 dB steps
- Frequency analysis includes full octaves and one-third octave bands.

Measurement Range:	30 to 135 dB(A)
Microphone:	1/4" Electret microphone capsule with fixed preamplifier
Operating Temperature:	-10OC to +50OC operating (-20OC to +60OC storage)
Power:	4 x AAA Manganese Alkaline Cells
Size:	258 mm x 70 mm x 21 mm, 10.2 x 2.8 x 0.8 in
Weight:	230 grams, 8 oz (with batteries)

Casella CEL 254 Type 2

- Lightweight and slim design fits in the pocket
- Two wide measurement ranges cover all noise levels between 30 and 135 dB(A)
- Slow, Fast and Impulse responses available
- 'A' and 'C' frequency weightings cover most applications
- Long battery life using 4 AAA alkaline cells
- Overload and battery voltage checks provided
- AC and DC outputs provide analog signals to other pieces of equipment

Measurement Range:	30 to 135 dB(A) Type 2 measurement
Power:	Four AAA alkaline batteries
Size:	10.4 x 2.5" x 0.87"
Weight:	0.5 lbs

Ask About Our Rental Protection Plan (RPP)

Casella 490 Outdoor Kit

- Completely waterproof enclosure constructed of heavy duty plastic molding
- Fitted with one waterproof socket for the C6717 microphone extension cable and one waterproof 2 pin DC power socket for an external input from main power supply or 12V battery
- Can be padlocked to a post, pole or other fixed object for security when left unattended

Size:	24" x 18" x 9"
Weight:	10 lbs (empty case)

Casella Acoustic Calibrator

Item # 54990

- Applicable standard ANSI S1.40-1984 (R1997) Class 1
- 1 kHz ± 2 Hz frequency output
- Custom LCD with warning signs
- Harmonic distortion < 1%
- Battery auto off when microphone removed
- Reference calibration conditions for stated accuracy 20°C, 101.3 kPa, 65% RH

Measurement Range:	114.0 and 94.0 dB ± 0.4 dB level outputs
Operating Temperature:	40 to 95°F (+5 to +35 °C) ± 0.3 dB
Power:	9 V radio
Size:	2.8 x 1.6 x 4.0 in (71 x 41 x 100 mm)
Weight:	6.4 oz.(180 gm)

Quest Edge 5 Noise Dosimeter

Item # 51419

- Intrinsically safe for use in harsh environments
- Displays SPL, dose, Lavg or Leq, TWA, max level, min level, peak level, exposure, and run time... all while in Run mode
- Features the ability for a third independent dosimeter, allowing for simultaneous measurement against up to three industry standards
- Independent selectable thresholds from 70 to 90dB or none, independent exchange rates for each dosimeter (3, 4, or 5 dB), and independent criterion levels from 70 to 90 dB in 1dB increments
- Convenient cable-free design

Measurement Range:	70-140 dB
Microphone:	1/4" prepolarized condenser (electret) field replaceable threaded
Windscreen:	Rugged foam permanently attached to a threaded mount for maximum protection
Power:	Lithium polymer (flat cell)
Size:	3.5" L x 2.1" W x .75" thick
Weight:	2.5 oz (71 g), less mounting device

Quest NoisePro DL

Item # 51413

- IP-65 rated, industrial-grade cast aluminum case
- Large, backlit liquid crystal display
- Auto-configuration to standards
- Real-time compliance indicator
- High-speed infrared RS-232 communications
- High-capacity non-volatile data storage
- Intrinsically safe
- Time history and statistical distribution profiling via QuestSuite® Professional

Measurement Range:	40-110 dB and 70-140 dB
Microphone:	Optional boom microphone allows conversion to sound level meter for area sampling
Accuracy:	Class/type 2
Power:	Two AA alkaline batteries
Size	2.7" x 5" x 1.5"
Weight:	14 oz (369 g)

Quest NoisePro DLX

Item # 51417

- IP-65 rated, industrial-grade cast aluminum case
- Large, backlit liquid crystal display
- Auto-configuration to standards
- Real-time compliance indicator
- High-speed infrared RS-232 communications
- High-capacity non-volatile data storage
- Intrinsically safe
- Up to four virtual dosimeters in one
- Infrared retrieval of data from other NoisePro monitors
- Expanded time history data

Measurement Range:	40-110 dB and 70-140 dB
Microphone:	Optional boom microphone allows conversion to sound level meter for area sampling
Accuracy:	Class/type 2
Power:	Two AA alkaline batteries
Size	2.7" x 5" x 1.5"
Weight:	14 oz (369 g)

Quest NoisePro Q-400

Item # 52098

- Functions as a personal noise dosimeter, environmental monitor or event monitor
- True RMS, 63 dB pulse range
- Multi-line LCD display
- Cast aluminum housing with tamper, water and dust-resistant security cover

Measurement Range:	40 to 140 dB, 70 to 140 dB
Temperature:	-10 C to +50 degrees C (operating), -20 to +60 degrees C (battery removed)
Microphone:	8 mm shoulder-mount, Type 2
Power:	9V battery
Size:	5.5" x 2.8" x 1.4"
Weight:	15.5 oz

Quest NoisePro Q-300

Item # 52097

- Perfect for applications such as workplace evaluations, personal exposures, compliance assessments and environmental analysis
- Calculates, displays and stores sound pressure levels
- Time histories for average levels, max and peak, plus statistical tables are readily available for printout
- RF Shielded
- Intrinsically safe

Measurement Range:	40 to 110 dB, 70 to 140 dB
Temperature:	-10 C to +50 degrees C (operating), -20 to +60 degrees C (battery removed)
Microphone:	8 mm shoulder-mount, Type 2
Power:	9V battery
Size	5.5" x 2.8" x 1.4""
Weight:	15.5 oz
Seven	Seven

Casella CEL 350 IS dBadge

Item # 54502

- Measures and logs all workplace noise parameters
- 28 hour battery life, fully charges in 90 minutes
- Integrated display and visual exposure alarm
- Simple auto-calibration function
- Comprehensive software package
- 'Pro' mode displays dose and projected dose values
- Run duration timers
- Intrinsically safe models available for use in hazardous atmospheres

Linear Operating Range:	65 to 140.3 dB RMS
Peak Measurement Range:	95 to 143.3 dB Peak
Operating Temperature:	0 to +40 degrees C
Power:	Internal NiMH cells
Size:	2.8" x 1.7" x 2.0"
Weight:	2.4 oz

Ask About Our Rental Protection Plan (RPP)

Casella CEL 360

- Comprehensive data logging function for complete results
- Easy to start and collect data
- Large non-volatile memory
- Up to 50 separate runs saved in non-volatile memory
- Up to 220,000 data points stored in memory
- Up to 10 key parameters stored for each interval
- Delayed start and stop times for automatic operation
- Pre-programmed setups to quickly start up and go
- Flexibility to customize units

Measurement Range:	30-100, 50-120, 70-140 (display range dB)
Operating Temperature:	-10 C to +50 degrees C
Power:	9V alkaline
Size:	4.8" x 2.6" x1.2"
Weight:	11 oz

Casella CEL 460 Noise Dosimeter

- Measures and logs all workplace noise parameters
- Integrated display and visual exposure alarm
- Simple auto-calibration function
- Comprehensive software package
- Run duration timers

Measurement Range:	70 to 140 dB, 50 to 120 dB, 30 to 100 dB (for sound level mode), peak over top 40
Power:	9V battery
Size:	4.8 x 2.6" x 1.2"
Weight:	0.5 lbs

TSI 8038 Pro Plus Respirator Fit Tester

- Fit test any tight-fitting respirator including N95, P2 and P1 disposables
- Faster N95 fit testing time -- down from 10 minutes 24 seconds to 7 minutes 15 seconds
- Simple with built-in N95 Companion™ technology
- Standalone operation - no external computer required
- Use with external computer to generate reports and print fit test cards
- Able to perform N95 fit testing with much lower ambient particle concentrations

Fit Factor Accuracy:	±10% of reading
Fit Factor Range:	1 to greater than 10,000
Temperature:	32 to 100°F (0 to 38°C)
Power:	Autosensing 100 to 250 VAC, 50 to 60 Hz
Size:	9" H x 13.7" W x 19.5" D
Weight:	5.0 lbs (unit only)

SOIL, SURVEY, NOISE & OTHER MONITORING – Sound Level Meters, Noise Dosimeters

TSI 8030 Portacount Pro

- Standalone operation - no external computer required
- Optional mask sampling adapters allow fit testing with employee's own mask
- Color touch screen enables operation via the touch of your finger, pen or stylus
- Automates fit testing with FitPro+™ Fit Test Software
- Use with external computer to generate reports and print fit test cards
- Computes respirator fit factor using microscopic particles in ambient air

Fit Factor Range:	1 to greater than 10,000
Temperature:	-40 to 70°C (-40 to 160°F)
Power:	Autosensing 100 to 250 VAC, 50 to 60 Hz
Size:	6.75" H x 8.5" W x 9.5" D
Weight:	5.0 lbs (unit only)

TSI 8020 Portacount Plus

- Fit test any tight-fitting respirator
- Fit test in the employee's own mask
- Easy to use
- Unlimited fit testing for full-face masks
- OSHA accepted

Particle Size Range:	0.02 to greater than 1 micrometer
Fit Factor Range:	1 to greater than 10,000
Temperature:	32 to 100°F (0 to 38°C)
Power:	Autosensing 100 to 250 VAC, 50 to 60 Hz
Size:	9.5 in. × 7.5 in. × 5.5 in. (24 cm × 19 cm × 14 cm)
Weight:	3.3 lbs (1.5 kg) - unit only

TSI 8026 Particle Generator for TSI 8038

- Supplements ambient particle concentration levels
- Non-toxic salt (NaCl) aerosol
- Portable
- Fast operation
- Safer alternative to a candle
- Meets minimum levels necessary for fit testing

Generated Particle Stats:	0.04 micrometers (nominal) - using 2% NaCl solution in distilled water
Operating Voltage:	115 or 230 VAC (check label on unit)
Power:	115 or 230 VAC (specify when ordering)
Size:	10 in. x 4 in. x 5.25 in. (25.4 cm x 10.1 cm x 13.3 cm)
Weight:	2.75 lb. (1.25 kg)

Quest QT-32 / QT-34 / QT-36 Thermal Environmental Monitor

- Integral RH sensor for quick, accurate information
- Optimizes safe work time with real-time guidance on work/rest regimens
- Meets ISO requirement for head, torso, and ankle measurements
- Measurements up to 200 feet (60m)
- Datalogging function, and are compatible with 3M Quest software for data storage, retrieval, analysis, reporting and charting

Measurement:	Indoor/outdoor WBGT index values
Temperature:	Sensor assembly: -5° C to 100° C (23° F to 212° F), Electronics: -5° C to 60° C (23° F to 140° F)
Power:	150-hour Alkaline battery, 300-hour rechargeable, or AC power adapter
Size:	9.2" x 7.2" x 3"
Weight:	2.6 lbs

Ask About Our Rental Protection Plan (RPP)

Quest Temp II / III Personal Heat Stress Monitor

- Compact size combined with belt or pocket attachment allows for convenient personal monitoring

- 3M™ E-A-R™ E-A-RLink™ Earplug covers ear canal sensor providing a comfortable vehicle for measurement and warning if dangerous deep body core temperatures are reached

- Minute-by-minute data logging allows for documentation of personal heat exposure

- Intrinsic safety certification for monitoring in potentially hazardous locations with extreme heat

Measurement:	Worker core temperature
Temperature:	0° C to 70° C (32° F to 158° F)
Power:	9V disposable batteries (60 hrs)
Size:	13 x 6.4 x 2.5 cm (5.1" x 2.5" x 1")
Weight:	10 oz (housing), 0.15 oz ear sensor assembly

Holaday Low Frequency EMF Survey System

- Complete system for the low frequency spectrum

- Complies with ANSI C95.1

- Evaluates electric and magnetic fields associated with 50/60 Hertz power lines and electrically operated equipment and appliances

Range:	Model 3603 E-Field: 1 to 2000 V/M H-Field: 1 to 2000 mA/M, Model 3604 E-Field: 1V/M to 200 kV/M H-Field: 0.1 mGauss to 20 Gauss
Power:	Two 9V batteries
Size:	14.13" x 8.38" x 1.75"
Weight:	2.5 lbs

Holaday ELF Magnetic Field Meter

- 5 - 2000 Hz
- Low frequency cut off at 5 or 30 Hz
- Includes 3-axis orthogonal probe, battery charger, calibration certificate, manual and carrying case
- Three concentric orthogonal field sensors
- True RMS detection

Range:	0.2 milliGauss – 20 Gauss (100dB)
Power:	Battery
Size:	156H x 95W x 57D mm
Weight:	23 oz (meter), 23 oz (probe)

Holaday DC Magnetic Field Meter - Model 3550

- Track exposure to ACGIH TLV for static magnetic fields
- Compact size fits pocket or belt
- User settable alarm
- Peak Hold displayed continuously
- One second, six minute averaged, and max hold readings

Range:	0.1 mT to 0.3 T
Accuracy:	0.1 mT to 0.5 mT ± 0.05 mT 0.5 mT to 0.3 T ± 10%
Modes:	Instantaneous with peak hold function Integrating (mT-hours)
Power:	Four AAA batteries
Size:	5.2" x 2.9" x 0.8"
Weight:	.33 lbs
Seven	Seven

Holaday Microwave Survey Meter

- Measures microwave leakage from microwave devices
- Three ranges
- Includes 3.94' cable and 11.81" probe

Accuracy:	± 1 dB
Range:	2450 MHz and 915 MHz
Power:	Two 9V batteries
Size:	6.25" x 3.63" x 2.63"
Weight:	2 lbs (with probe)

Extech Heavy Duty Light Meter

- Simultaneous display of Foot Candles or Lux and lighting type
- Large 1.4" (1999 count) LCD display
- Percentage displays differential from reference point
- "ZERO" Re-Calibration
- Utilizes precision photo diode and color correction filter
- Cosine and color corrected measurements
- ±4% accuracy is enhanced by selecting lighting type (Tungsten/Daylight, Fluorescent, Sodium, Mercury)
- Record/Recall MIN, MAX and AVG readings

Accuracy:	±4%FS
Range:	LUX: 0 to 50,000 LUX (3 range); Fc: 0 to 5000 Fc (3 range); Relative mode: 0 to 1999%
Resolution:	0.1Fc/1Lux
Power:	9V battery
Size:	Instrument: 7.1 x 2.9 x1.3" (180 x 72 x 32 mm) Sensor: 3.3 x 2.2 x 0.7" (85 x 55 x 17.5 mm)
Weight:	0.71 lbs

Ask About Our Rental Protection Plan (RPP)

Fisher Control Light Meter

Item # 51539

- Convenient operation and data storage
- DATA HOLD button freezes display to capture readings
- Precise photodiode and color-connection filter provide cosine-and-color-corrected measurements
- Push-button recall of highest, lowest and average readings
- RS-232 port for connection to computer

Accuracy:	±2% full-scale plus two digits
Range:	0 to 199.9µW/cm2, 1 to 19.99mW/cm2, 1 to 1.999mW/cm2
Resolution:	0.1µW/cm2, 0.01mW/cm2, 1 to 1.999mW/cm2
Wavelength:	320-390 nm
Power:	9V battery
Size:	1.25L x 3W x 7 in. H (3.2 x 7.6 x 17.8cm)
Weight:	9.5 oz

International Light 1400A Radiometer and Photometer

Item # 54469

- 7 decade dynamic range
- NIST- traceable calibration
- Direct readings in any optical units
- 0.2% Linearity
- USB Output for Datalogging on Computer
- Membrane keypad with backlit display
- NIST traceable calibration with certificate
- Exposure integration up to 24 Hours

Accuracy:	NIST-traceable
Range:	100 picoAmps to 350 microAmps
Resolution:	10 picoAmps (min)
Power:	Rechargeable battery pack (requires USB A to A male cable, not included)
Size:	7.3" x 3.9" x 1.7" (185 mm x 100 mm x 43 mm)

Dwyer Digital 475-0 FM Manometer

Item # 51207

- Rugged aluminum case protects instrument from damage during transport/use
- Large, easy to read LCD and simple operation
- FM approved to be intrinsically safe in hazardous locations, Class 1, Div 2, Groups A, B, C, D, T4 Ta = 70°C

Service:	Air and compatible combustible gases
Accuracy:	±0.5% Full Scale, 60 to 78°F (15.6 to 25.6°C); ±1.5% Full Scale from 32 to 60°F and 78 to 104°F (0 to 15.6°C and 25.6 to 40°C)
Temperature:	0 to 140°F (-17.8 to 60°C)
Power:	9V alkaline battery
Weight:	10.2 oz (306 g)

Dwyer Digital 477-0 FM Manometer

Item # 51210

- New low pressure ranges
- New USB option comes with cable and software for easy data downloading
- Instant selection from up to nine English/metric units
- Stores 40 readings in memory for later reference
- Measures positive, negative or differential pressures
- Both audible and visual overpressure alarms
- Includes + and - indicators plus low battery warning
- Operates up to 100 hours

Service:	Air and compatible gases. FM models: air and compatible combustible gases
Accuracy:	±0.5% Full Scale, 60 to 78°F (15.6 to 25.6°C); ±1.5% Full Scale from 32 to 60°F and 78 to 104°F (0 to 15.6°C and 25.6 to 40°C)
Temperature:	0 to 140°F (-17.8 to 60°C) (limits)
Power:	9V alkaline battery
Weight:	10.2 oz (289 g)

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Dwyer Digital 477-1 FM Manometer

- New low pressure ranges
- New USB option comes with cable and software for easy data downloading
- Instant selection from up to nine English/metric units
- Stores 40 readings in memory for later reference
- Measures positive, negative or differential pressures
- Both audible and visual overpressure alarms
- Includes + and - indicators plus low battery warning
- Operates up to 100 hours

Service:	Air and compatible gases. FM models: air and compatible combustible gases
Range:	0-20.00 in. w.c.
Accuracy:	±0.5% Full Scale, 60 to 78°F (15.6 to 25.6°C); ±1.5% Full Scale from 32 to 60°F and 78 to 104°F (0 to 15.6°C and 25.6 to 40°C)
Temperature:	0 to 140°F (-17.8 to 60°C) (limits)
Power:	9V alkaline battery
Weight:	10.2 oz (289 g)

Dwyer Digital 477-2 FM Manometer

- New low pressure ranges
- New USB option comes with cable and software for easy data downloading
- Instant selection from up to nine English/metric units
- Stores 40 readings in memory for later reference
- Measures positive, negative or differential pressures
- Both audible and visual overpressure alarms
- Includes + and - indicators plus low battery warning
- Operates up to 100 hours

Service:	Air and compatible gases. FM models: air and compatible combustible gases
Range:	0-40.00 in. w.c.
Accuracy:	±0.5% Full Scale, 60 to 78°F (15.6 to 25.6°C); ±1.5% Full Scale from 32 to 60°F and 78 to 104°F (0 to 15.6°C and 25.6 to 40°C)
Temperature:	0 to 140°F (-17.8 to 60°C) (limits)
Power:	9V alkaline battery

Dwyer Digital 477-3 FM Manometer

- New low pressure ranges
- New USB option comes with cable and software for easy data downloading
- Instant selection from up to nine English/metric units
- Stores 40 readings in memory for later reference
- Measures positive, negative or differential pressures
- Both audible and visual overpressure alarms
- Includes + and - indicators plus low battery warning
- Operates up to 100 hours

Service:	Air and compatible gases. FM models: air and compatible combustible gases
Range:	0-200.0 in. w.c.
Accuracy:	±0.5% Full Scale, 60 to 78°F (15.6 to 25.6°C); ±1.5% Full Scale from 32 to 60°F and 78 to 104°F (0 to 15.6°C and 25.6 to 40°C)
Temperature:	0 to 140°F (-17.8 to 60°C) (limits)
Power:	9V alkaline battery
Weight:	10.2 oz (289 g)

Dwyer Digital 477-4 FM Manometer

- New low pressure ranges
- New USB option comes with cable and software for easy data downloading
- Instant selection from up to nine English/metric units
- Stores 40 readings in memory for later reference
- Measures positive, negative or differential pressures
- Large easy-to-read 0.4
- Both audible and visual overpressure alarms
- Includes + and - indicators plus low battery warning
- Operates up to 100 hours

Service:	Air and compatible gases. FM models: air and compatible combustible gases
Range:	0-10.00 psid
Accuracy:	±0.5% Full Scale, 60 to 78°F (15.6 to 25.6°C); ±1.5% Full Scale from 32 to 60°F and 78 to 104°F (0 to 15.6°C and 25.6 to 40°C)
Temperature:	0 to 140°F (-17.8 to 60°C) (limits)
Power:	9V alkaline battery
Weight:	10.2 oz (289 g)

Dwyer Digital 477-6 FM Manometer

Item # 51203

- New low pressure ranges
- New USB option comes with cable and software for easy data downloading
- Instant selection from up to nine English/metric units
- Stores 40 readings in memory for later reference
- Measures positive, negative or differential pressures
- Both audible and visual overpressure alarms
- Includes + and - indicators plus low battery warning
- Operates up to 100 hours

Service:	Air and compatible gases. FM models: air and compatible combustible gases
Range:	0-100.0 psid
Accuracy:	±0.5% Full Scale, 60 to 78°F (15.6 to 25.6°C); ±1.5% Full Scale from 32 to 60°F and 78 to 104°F (0 to 15.6°C and 25.6 to 40°C)
Temperature:	0 to 140°F (-17.8 to 60°C) (limits)
Power:	9V alkaline battery

Dwyer Magnehelic Gauge

Item # 51479

- Measures fan and blower pressures, filter resistance, air velocity, furnace draft, pressure drop across orifice plates, liquid levels with bubbler systems and pressure in fluid amplifier or fluidic systems and so much more
- Frictionless Magnahelic gauge movement - quickly indicates low air or non-corrosive gas pressures
- Design resists shock, vibration and over-pressures
- No manometer fluid to evaporate, freeze or cause toxic or leveling problems

Service:	Air and non-combustible, compatible gases. (Natural Gas option available.)
Accuracy:	±2% of FS (±3% on -0, -100PA, -125PA, -10MM and ±4% on -00, -60PA, -6MM ranges), throughout range at 70°F (21.1°C)
Temperature:	20 to 140°F (-6.67 to 60°C). -20°F (-28°C) with low temperature option (limits)
Size:	4" (101.6 mm) diameter dial face
Weight:	1 lb 2 oz (510 g); MP & HP 2 lb 2 oz (963 g)

Infiltec Digital DM1 Micro Manometer

Item #

- Resolution 0.1 Pa below 200 Pa, and to 1 Pa above 200 Pa, or 0.001
- Bi-directional: Range -750 Pa (-3.0)
- Four keys covered by a weatherproof overlay
- Units select Metric (Pa) or U.S.
- LCD Display with 1/2

Accuracy:	±1% of measurement or ±1 display digit, whichever is greater
Temperature:	32°F to 122°F. (0°C to 50°C)
Power:	9V alkaline battery
Size:	3.6" x 5.75" x 1.3/1.9" (91 x 146 x 33/49 mm)
Weight:	2 lbs (with battery)

Engineering Solutions Omnigaurd IV Differential Pressure Recorder

Item # 51370

- Graphic Liquid Crystal Display (LCD) with adjustable backlight and over 3.5 sq. inch viewing area
- 20 character wide thermal printer
- Two programmable alarm setpoints, 95db audible alarm with flashing LED and on-screen warning indicate alarm condition
- Copolymer polypropylene case with polycarbonate window in the lid and stainless steel hanging hook

Accuracy:	+/- 0.003 inches Water Column or +/- 1% of reading whichever is greater
Operating Range:	+/- 0.250 inches Water Column (+/- 6.35 mm WC, +/- 62.5 Pascals)
Power:	115 VAC 60Hz with 6 ft power cord (220 VAC 50Hz optional, 6VDC battery pack optional)
Size:	9.25" x 7.5" x 4.5" (case)
Weight:	6 lbs

Ask About Our Rental Protection Plan (RPP)

Engineering Solutions Omnigaurd V Differential Pressure Recorder

Item # 54998

- Menu driven interface for easy set-up
- Instant on screen help
- Dual inlet ports allow monitoring between areas
- High/low alarm programmable setpoints
- 30+ day internal memory stores pressure readings and alarm occurrences with a time/date stamp
- Large graphic display with blue backlight shows current pressure, monitoring status and alarm settings at a glance

Accuracy:	+/- 0.003 inches Water Column or +/- 1% of reading whichever is greater
Operating Range:	+/- 0.250 inches Water Column (+/- 6.35 mm WC, +/- 62.5 Pascals)
Power:	115 VAC/60Hz with 6 ft. power cord (220 VAC/50Hz optional)
Size:	9.25" x 7.5" x 4.5" (case)
Weight:	6 lbs

FLIR BCAM SD Thermal Camera

Item # 51552

- Spectral range: 7.5 to 13µm
- Stores 1,000 Radiometric JPEG Images
- 120 x 120 pixel detector
- Razor-Sharp, Thermal Image Quality
- Built-in Laser LocatIR
- Includes New, Powerful QuickReport Software
- Dew Point, Insulation and Color Alarm Features
- Large 3.5" full color LCD

Field of View:	25° × 25° / 0.10 m (0.33 ft.)
Thermal Sensitivity:	< 0.10°C (0.25°C)
Accuracy:	2% and thermal sensitivity better than 0.10°C helps you find problems faster and easier
Storage Type:	Standard 128 MB SD card
Operating Temperature:	14°F to 212°F (-10°C to 100°C)
Power:	Rechargeable Li-Ion battery

FLIR GF320 Infrared Camera

Item # 55289

- Detects hydrocarbon and volitile organic compounds emissions from natural gas production and use
- Optical gas imaging camera can see potential gas leaks in real-time
- Embedded GPPS data helps in identifying the precise location of faults and leaks, for faster repairs
- Detects 400+ gases including Methane, Methanol, Propane, Bensene, Ethane, Propylene, and many more.
- Applications for offshore platforms, liquid natural gas shipping terminals, oil refineries, natural gas wellheads, processing plants, and compressor stations

Spectral Range:	3.2 – 3.4 µm
Resolution	320 x 240
Temp. Range:	-20°C to 350°C (-4°F to 662°F)
Color LCD Monitor:	4.3 in., 800 x 480 pixels
GPS:	Location data automatically added to images

RIDGID Micro CA-300 Inspection Camera   *Item # 51402*

- Record still images and videos of problems in hard-to-reach areas
- Comfortable pistol-grip design
- Large screen
- Rugged anodized aluminum camera head
- Bright LED illumination
- 3.5" color LCD (320 x 240 resolution)

Storage Type:	235 MB (internal memory), 32 GB SD-card
Power:	3.7V Li-Ion battery or 5V AC adapter
Size:	13.25" L x 6.6" W x 14.2" H
Weight:	10.3 lbs

Insight Vision DXP-200 / 300 Cameras   *Item # 51389*

- 10.4" LCD Monitor
- Quick connect centers
- Built-in text writer
- Remote pouch
- Mini wheels
- Durable horizontal frame design
- Self-leveling
- Flexiguard spring

Camera Size:	1.3" diameter
Recording:	DVR: one-touch, on-demand remote control USB recording
Inspection:	2-12" pipes
Image Storage:	8 GB USM memory
Power:	Internal battery (Nihm) - up to 4 hr run time

RIDGID Seesnake Micro (Thermal Imaging Cameras)   *Item # 54833*

- Lightweight and compact design
- Multi-monitor compatibility with existing SeeSnake monitors, or the micro CA-300 digital inspection camera
- Durable and reliable construction with hardened stainless steel camera head spring assembly for a long service life
- Long-lasting high-intensity lights for exceptional viewing.
- Stiffer push cable than microDrain to enable line inspections up to 100' (30m)

Camera Head:	0.98"
Cable Length:	100'
Cable Diameter:	0.27"
Line Capacity:	11/2" to 4" or 5" (40-100 / 125 mm)
Resolution:	510 x 496
Sonde:	512 Hz
Size:	13.25" L x 6.6" W x 14.2" H

Quest HavPro Vibration Monitor   *Item # 54496*

- Basic monitor with fast, simple operation
- Comprehensive summary and time history data
- Fully integrated with QuestSuite Professional II The System Solution software application
- Large 100 test memory capacity
- S-232 Interface, optional USB adapter
- Serves hand-arm, whole-body and machine vibration applications
- Up to three simultaneous measurement channels

Vibration Modes:	Acceleration, Velocity, Displacement
Frequency:	0.5 - 3000 Hz +/- 5% 0.3 - 5000 Hz +/- 10%
Temperature Range:	-20 to 60C (-4 to 140F) Up to 90RH, non-condensed
Power:	(2) "AA" (IEC Type LR6), 12 hours with Charge/Direct modes, 4 hours with voltage mode
Size:	6.0" x 3.3" x 1.1"

Ask About Our Rental Protection Plan (RPP)

Quest VI-100 Vibration Monitor

- Provides displacement, velocity or acceleration measurements
- Easy-to-use four-button control
- Large LCD readout for easy viewing of data
- Lightweight at only 14.6 ounces

Frequency:	5 to 10,000 Hz
Temperature Range:	0 to +60 degrees C
Power:	Two 9V batteries
Size:	8.5" x 2.75" x 1"
Weight:	14.6 oz (unit)

Instantel MiniMate Seismograph

- 40 full waveform event capacity
- Ability to define how the monitor operates
- Multiple and record modes for unlimited flexibility during monitoring operations - single event, continuous, auto record time, programmed start/stop and manual
- Full waveform event analysis - full field analysis of the event including peak particle velocity, peak air pressure, peak vector sum, peak acceleration and peak displacement
- 1024 sample rate

Sample Rate:	1024 samples per second, all channels, all record modes
Range:	100-142 dB (2 to 250 Pa) (air linear)
Accuracy:	Linear calibration to within 0.4 dB of B & K reference @ 30 Hz and 127 dB
Storage:	40 one-second events (no of full wave events)
Battery Life:	10 days continuous recording, 25 days with timer
Size	3.2" x 3.6" x 6.3"
Weight:	3 lbs

White Industrial Mini Seis III

- Sample rates from 1024, 2048, 4096 and 16384 over 4 channels
- Waveform duration from 1-120 seconds at rates of 1024 and 4096, 1 to 7 seconds at 16384
- Selectable 16 or 12 bit resolution when retrieving data
- Direct data retrieval via USB and/or USB thumb drive
- Remove access with approved cellular modem
- Special sensitivity options
- Weighted sound option

Operating Temperature:	0-130 degrees F (-18 to 54 degrees C)
Memory:	Over 2,000 waveform and histogram records
Power:	Internal 6.0V rechargeable battery
Run Time:	7-10 days at 1024 samples per second
Size:	6" x 4.5" x 3.5"
Weight:	3.5 lbs

RAE Systems RAELink 3

- Onboard long-range license-free radio for transmission of data
- Onboard microcomputer provides flexible protocol translation in order to interace to most monitoring devices via a serial port
- Onboard Bluetooth master provides Bluetooth wireless connection with other Bluetooth devices
- Onboard GPS receiver provides global positioning capability
- Onboard LCD displaying radio signal strength, GPS tracking status and battery life

Range:	2 miles
Run Time:	18 hrs
Data Interface:	Bluetooth, RS-232
Power:	Rechargeable, 7.4V/1650mAh, lithium-ion external battery pack
Size:	4.73" x 3.4" x 1.85"
Weight:	17.3 oz

SOIL, SURVEY, NOISE & OTHER MONITORING - Vibration Analysis

RAE Systems RAELink 2

Item # 51276

- Provides long-range wireless communication between remote portable gas monitors and a base station /computer for comprehensive monitoring

- Network with up to 32 monitors

- Onboard microcomputer provides flexible protocol translation in order to interface to most monitoring devices via a serial port

- Factory preconfiguration allows for simple, fast, error-free set-up

- Compatible with other RAE Systems wireless products, including AreaRAE, AreaRAE Gamma etc.

Range:	2 miles
Run Time	20 hrs
Data Interface:	RS-232
Power:	Rechargeable, 7.4V/2.0 Ah, lithium-ion battery pack with built-in charger
Size:	4.5" L x 3.1" W x 1.5" H
Weight:	1 lbs with 1/2-wavelength antenna, 2.4 lbs with magnetic-mount antenna

Honda EU1000i Generator

Item # 51511

- 1,000 watts, 120V
- Super quiet
- Easy to carry (less than 29 lbs)
- Fuel efficient (8.3 hrs on one gallon of gas)
- Inverter - stable power for computers & more

Honda EU2000i Generator

Item # 51510

- 2,000 watts, 120V
- Super quiet
- Easy to carry (less than 46 lbs)
- Fuel efficient (8.1 hrs on one gallon of gas)
- Inverter - stable power for computers & more

Personal Safety

PINE
Partner for Test & Measurement
Equipment Services and Data Solutions

For all your Consumables, PPE and Instrumentation needs.

Ask About Our Rental Protection Plan (RPP)

Pine Environmental Global Telemetry Solutions

Pine's Global Telemetry Solutions are built to provide our customers with an integrated and easy to use remote environmental monitoring system to improve their productivity and reduce operating costs while meeting a wide variety of data gathering applications. Data from your field equipment is streamed directly to your smartphone, tablet or personal computer in real-time.

Key Features

- Compatibility with most instruments
- GPS mapping of monitoring stations
- Advanced remote communications
- Easy-to-use web application software
- Real-time alerts/alarms and messaging

Benefits

- Access to data anytime, anywhere via web
- Secure remote monitoring and data storage
- Remote configuration and programming
- Customized data collection and analysis
- Technical support throughout project

Monitoring Instrument Examples

Air and Gas   RAE Systems MiniRAE 3000/2000, MultiRAE, ppbRAE and VRAE, TSI DustTrak II 8530 and DustTrak DRX 8533, Thermo DR 4000 and PDR 1500, Jerome 631X Analyzer

Water Level   Insitu Level Troll, VanEssen Micro-Diver and Diver-DCX, INW Lelevl Scout, TE KPSI and Trublue

Water Quality   YSI 600XL, XLM, 6920 V2, 6920 and 6820, EXO

Sound/Other   Quest SoundPro DL, Davis Vantage Pro 2, Metone E-BAM, Luft WS600-UMB Multi-Parameter Weather Station

Note: Additional instruments are being added continuously.
Pine's integration of field equipment includes primary & backup power sources (battery, solar, wind), in addition to enclosures, alarms and other required telemetry components.

Cellular Model Capabilities

	Standard Option	**Advanced Option**
Cellular Network	GSM 2G/3G	GSM 4G/3G
Data Upload Interval	5 minutes	1 minute
Memory/Data Storage	4 Mb Flash	8 GB SD card
Digital Ports	RS485/232 and SDI12	Standard plus 2XUSB
GPS/Built In Sensors	Yes/No	Yes/Yes

Contact your local Pine office to develop an integrated remote monitoring system to meet your needs.

Honda EU3000i Generator

Item # 51512

- 3,000 watts
- Lightest 3,000 watt inverter generator made by Honda
- Wheels and folding handle for true portability
- Offset handles for easier lifting
- Super quiet

Generac GP Series 5,500 Watt Generator

Item # 51509

- Compact design provides unparalleled power-to-weight ratio
- Covered, circuit breaker protected outlets provide added protection form the environment and rugged working conditions
- Low oil shutdown prevents engine damage
- Low-tone mufflers for quiet operation

Generac iX Series 2,000 Watt Generator

Item # 51509

- 2,000 watts of clean power to safely power sensitive electronics
- Electric circuit breakers protect against overload
- Low oil shutdown prevents engine damage
- FlexPower™ to save fuel and reduce noise
- 12V DC charging outlet

Generac iX Series 800 Watt Generator

Item # 51509

- 800 watts of clean power to safely power sensitive electronics
- Electronic circuit breakers protect against overloads
- Low oil shutdown prevents engine damage
- FlexPower™ to save fuel and reduce noise
- Super compact and quiet

Wobble Light

Item # 51542

- 15,000 lumens is equal to 12 100W bulbs
- Self-righting - won't fall over
- Floating shock system - protects bulb
- Convection and fan cooled - won't burn
- Durable plastic housing - won't bend
- Tough polycarbonate dome - won't break
- No set-up required - just plug in

Marine Battery with Charger

Item # 61159

- 675 marine cranking amps
- 10" x 6.5" x 10"
- 30-40 lbs

John Deere XUV 825i Gator

Item # 51511

- 50 hp, 812cc, 3-cylinder, DOHC, EFI 4-cycle automotive-style engine has the most displacement and power in its class
- 44 mph top speed for barreling down a trail or crossing a pasture
- 75 amp alternator generates 1012 watts of electricity - plenty of power for accessories
- Excellent low-end torque for towing, hauling and climbing hills

Ask About Our Rental Protection Plan (RPP)

Polaris Ranger Crew 570

Item # 51512

- ProStar pulling power
- On-demand true all-wheel drive
- Engine management system
- Class-leading towing and payload
- Smoothest riding features
- Nimble handling
- Versatile carlisle tires

Kawasaki 610 4x4 MUV Mule

Item # 51499

- Rugged and compact
- Easily transported in the back of a full-size pick-up truck
- Can tow up to 1,000 lbs

Smith-Root LR-24 Electrofisher

Item # 51684

- Quick set-up
- Dual Output
- Power limit key and power limit mode
- Precise control over ouput settings
- Numerous waveform choices
- Rugged construction
- Storage for up to 10 user selected settings

Cygnus 1 Intrinsically Safe UT Thickness Gauge

Item # 54268

- Certified Intrinsically Safe to: ATEX Marking Group 1 & Group 11 or CSA Class 1 Division 1 Group A, B, C & D
- For use in Zone 0, Zone 1 hazardous areas
- Heavy duty sealed unit - IPX5 and IPX7 rated - highly water / dirt / dust resistant
- Rugged, durable, shock proof construction
- Various probe options
- Echo strength indicator to aid measurement
- Bright LED display with polarized filter

Measurement Range in Steel:	0.110" - 9.995" (3 mm - 250 mm) with 2.25 MHz probe, 0.065" - 6.000" (2 mm - 150 mm) with 3.5 MHz probe, 0.045" - 4.000" (1 mm - 50 mm) with 5.0 MHz probe
Accuracy:	0.005" (0.1 mm) when calibrated in accordance with Cygnus Instruments calibration procedures
Resolution:	0.005" (0.1 mm) or 0.002" (0.05 mm)
Power and Battery Life:	NiMH rechargeable battery / 10 hrs continuous operation

NON-DESTRUCTIVE EVALUATION

Cygnus 6+ Pro

- Multiple-Echo for reliable, accurate through coating measurements
- Single-Echo & Echo-Echo measuring with twin crystal probes for extreme corrosion
- A-scan display/ Real Time B scan Display
- Bluetooth connectivity
- MSI™ (Measurement Stability Indicator) used in Single-Echo and Echo-Echo measurement modes
- Large bright colour LCD screen with back light

Velocity Ranges:	Sound velocities between 2000 - 9000 m/s - covers virtually all common engineering materials
Measurement Range:	Single crystal probes in Multiple-Echo: (1-250mm) with appropriate Probe, Twin Crystal Probes- 0.7mm - 250mm eith appropriate probe
Accuracy:	±0.1 mm or 0.1% of thickness measurement, whichever is greatest, when calibrated in accordance with Cygnus Instruments calibration procedure

Cygnus Dive

- Wrist-mountable giving the diver a free hand
- Large bright color AMOLED display, highly viewable by diver and camera in poor visibility
- Multiple Echo means no need to remove protective coatings up to 20mm thick
- A-Scan display
- 'Auto-Log' datalog option, no log button to press - stores up to 5,000 measurements with A-Scans
- HelmetView remote display for mounting on the divers helmet for use in extremely low visibility water
- Single Echo option

Velocity Ranges:	2000 to 9000 m/s in 1 m/s setps
Measurement Range:	Appropriate probes: 1 - 150mm thick (different probes vary)
Accuracy:	±0.1 mm or 0.1% of thickness measurement, whichever is greatest, when calibrated in accordance with Cygnus Instruments calibration procedure
Measurement Resolution:	Multiple-Echo with single crystal probes - 0.1 or 0.05 mm, Single-Echo and Echo-Echo with twin crystal probes - 0.1 or 0.01 mm

Cygnus ROPE

- Wrist-mountable
- Large, bright color 2.8 AMOLED display
- Two buttons for easy menu navigation
- Deep-coat mode measures through coatings up to 20 mm
- A-Scan display
- Datalogging - up to 5,000 measurement points recorded with their A-scans
- Auto log (hands free operation)

Velocity Ranges:	2000 to 9000 m/s in 1 m/s steps
Measurement Ranges:	Single Echo Twin element transducers: Single Echo Mode Echo Echo Mode 5.0 MHz: 0.08 to 4" 0.1
Accuracy:	±0.004" or 0.1% of thickness measurement whichever is the greatest
Measurement Resolution:	mm (0.005") Low Resolution Mode or measurement >99.95 mm 0.05 mm (0.002") High Resolution Mode and measurement <100.0 mm 0.01 mm (0.001)

GE DMS GO Auto V

- Intuitive arrow-keypad for positive digital control of parameters
- A large, 800 x 480 pixel, display screen, ergonomically sized to reduce eyestrain
- Small size, lightweight (870g, 1.9lb), robust construction to IP67 for hash environments
- Automatic gain control for excellent repeatability and corrosion monitoring
- Expanded data recording capability with additional boiler, custom grid, custom linear, custom point, and 3D, & 4D file structures via UltraMATE

Velocity Ranges:	250 to 16,000 m/s (0.0098" to 0.6299"/µs)
Measurement Range:	.40 mm to 650 mm (0.010" to 25.00") in steel, in standard operation, depending on the probe, material and surface
Measurement Resolution:	0,01 mm or 0,1 mm (0.001" or 0.01") selectable
Power and Battery Life:	Li-Ion, rechargeable, > 8 hours operation time
Display:	800 x 480 pixels, 108 × 65 mm (W x H)

NON-DESTRUCTIVE TESTING - Ultrasonic Thickness Gauges

GE DMS2 Thickness Gauge

Item # 54272

- Suitable for numerous test tasks on components subjected to wear
- Large selection of probes
- State-of-the-art LCD providing good readability even in the brightest sunlight
- Small, lightweight and rugged
- Wide range of practical functions
- Memory capacity for over 150,000 readings 1,100 A or B-scans
- RF display mode, four automatic band passes, selectable display update rate

Velocity Ranges:	39,400 to 393,662 inches/s 1000 to 9999 m/s
Measurement Range:	DMS 2E: .025 to 25.00 (0.6 mm to 635 mm) DMS 2 and DMS 2TC: .008 to 25.00 (0.2 mm to 635 mm) in steel, in standard operation
Gain:	Automatic or manual in 1 dB steps
Display Resolution:	001 to .01 inches (0.01 mm or 0.1 mm) (selectable) over the entire range
Power and Battery Life:	4 AA 1.5V (AlMn or NiMH) with NiMH batteries min. 40 hours

GE DM4 Thickness Gauge

Item # 54270

- Lightweight; only 9 oz. with batteries
- 5 key operation DM4, 9 key operation (DM4DL)
- Stable high temp. readings
- MIN Mode captures thinnest reading
- On-Board 5,000 reading data logger (DM4DL)
- 200 hrs on 2 AA Alkaline Batteries- no special battery packs or chargers
- DUAL MULTI mode for measuring through-coatings

Velocity Ranges:	39,000 to 393,700 in./sec., (1000 to 9999 m/sec)
Measurement Range:	025" - 20.00" (.64 - 500 mm) depending on probe, material, surface condition, and temperature
Gain:	Automatic or manual (high, med, low)
Display Resolution:	.001 or .01 up to 9.999 inches, .01 above 9.999 inches; (.01 or .1 up to 99.99mm, .1 above 99.99 mm)
Power and Battery Life:	2 ea. 1.5V AA alkaline cells - up to 200 hours @ 25% duty cycle without backlight

Olympus 38DL Plus Thickness Gauge

Item # 54115

- Dual and single element transducer compatibility
- Corrosion thickness gaging with dual element transducers
- THRU-COAT® and Echo-to-Echo measurements on painted and coated surfaces
- Standard resolution of 0.01 mm or 0.001 in. for all transducers
- Multilayer software option for measurements of up to four layers simultaneously
- Thickness, velocity, and time-of-flight measurements
- Time-based B-scan mode; 10,000 readings per scan

Velocity Ranges:	.508 mm/µs to 13.998 mm/µs (0.020 in./µs to 0.551 in./µs)
Measurement Range:	0.08 mm (0.003 in.) to 635 mm (25 in.)
Operation Temp:	-10 °C to 50 °C (14 °F to 122 °F)
Measurement Resolution:	0.01 mm or 0.001 in. for all transducers
Power and Battery Life:	AC/DC adaptor, 24 V; lithium-ion battery 23.760 Wh; or 4 AA auxiliary batteries/ 14 hr typical

Elcometer 236-2 DC Holiday Detector

Item # 54256

- The Elcometer 236 provides high voltage porosity testing to detect pits, flaws, holes, etc. in a wide variety of non-metallic coatings
- Robust and fully portable
- Audio and visual alarms for noisy environments
- Supplied with a band brush probe
- Digital display of output voltage or current
- Adjustable sensitivity
- 15kV and 30kV options available with fully adjustable output voltage

Power Supply:	NimH 12V internal rechargeable battery, providing 10/12 hours continuous use
Voltage Output:	.5-30kv in 100Vsteps depending on model
Approx Thickness Range:	0-7.5 mm (0-300 mils) depending on model
Weight:	2.8Kg (6lb 3 oz) Lightweight

Ask About Our Rental Protection Plan (RPP)

Elcometer 270-4 Pinhole Detector

- Utilizes the wet sponge technique and has been designed to set a new standard for wet sponge pinhole detectors - a high quality, low voltage detector with similar accessories to a high voltage spark tester
- Automatic gauge calibration check & low battery indicator
- Simple, accurate & very versatile pinhole tester
- Wide range of accessories available to meet all your pinhole detection requirements

Power:	3 x AA (LR1600) 1.5V Alkaline
Measurement Range (Max):	500um (20mils)
Voltage:	9v,67.5V and 90V
Accuracy of Setting:	-0.05

Tinker & Rasor AP/W Holiday Detector

- Operates well on damp surfaces
- Audible and Visual Holiday Indicators
- Form fitting design for wearing on hip or over the shoulder
- Ergonomic design, reduces user fatigue
- Check Coatings on Pipelines, tanks, concrete sewers etc.

Power:	Rechargeable dry-cell NiCad pack
Cable Length:	20 ft (50.8 cm) flexible ground wire
Min. Voltage Output:	800 Volts
Max. Voltage Output:	35,000 Volts
Holiday Detector Type:	Pulse- Type DC

Tinker & Rasor Model M/1

- On-board calibration verification
- Sponge-type holiday detector
- Push button calibration check
- Audible & visual holiday detecting indicators
- Use on thin film coatings on conductive substrates such as tanks, concrete, etc

Power:	6 AA batteries
Max Film Thickness:	Not to exceed 20 mil
Wand Measurements:	18' wand with 6' cable
Ground Cable Length:	15'

DeFelsko PosiTector 200C

- Comfortable, ergonomic finger grip
- Water and dust resistant - weatherproof
- High-resolution color LCD
- Scratch/solvent/impact resistant lens
- Solvent, acid, oil resistant, hi-grade, industrial strength housing
- Shock-absorbing, protective rubber holster with belt clip and wrist strap

Measurement Range:	50-3800 um (2-150 mils)
Power:	3 AAA Batteries
Minimum Thickness Range:	2 mils (50um)
Method:	Ultrasonic
Data Storage/ Memory:	Up to 250 readings

Fischer FMP30 Feritscope

- Corrective calibration with customer-specific standards possible
- Measurement range 0.1 to 80% Fe or 0.1 to 110 FN
- Ferrite measurable either in Ferrite percentage "%Fe" or Ferritenumber "FN"
- Measurements according ISO 17655 or "Basler Standard"

Range:	0.1 to 110 FN or 0.1 to 80% Fe
Power:	Four AA batteries (included) or optional 110 VAC adapter
Display:	Graphical backlit LCD display
Method:	Magnetic induction method (DIN EN ISO 2178, ASTM D7091
Data Storage/ Memory:	Up to 20,000 readings

Fischer MP30 Feritscope

- Non-destructive measurement of the ferrite content in a range of 0.1 to 110 FN or 0.1 to 80% Fe in austenitic and duplex steel
- Simple measurement for complex geometry
- Statistical evaluation of test series and display of min., max. and mean value, number of measurements, standard deviation as well as date and time
- Input of specification limits
- Free-running display with additional presentation of the measurement as analog bar between selected specification limits

Range:	0.1 to 100FN or 0.1 to 80% Fe in austenitic and duplex steel
Power:	9V batteries
Display:	Min., max. and mean value, number of measurements, standard deviation as well as date and time
Method:	Magnetic Induction/ Eddy Current depending on Application
Data Storage:	Max 10,000 measurements in 1,000 blocks in up to 100 applications, fixed or free block size selection

Fischer MP30 Deltascope

- Simple calibration adjustment to the test area geometry with the ZERO key
- Ability to calibrate on a coating of unknown thickness (for magnetic induction method only)
- Single measurement mode - only the mean value of several single readings is stored
- Unit of measurement selectable between U.S. and metric units

Range:	0-60 mils (0-1500 um)
Power:	9V battery
Display:	Large LCD Screen
Method:	Magnetic Induction/ Eddy Current depending on application
Data storage:	A maximum of 10,000 measurements can be stored in 1,000 blocks in up to 100 applications

Fischer MP40E DUALSCOPE

- Easily exchangeable plug-in probes
- All magnetic induction, eddy current and dual probes can be connected
- External key-triggered measurement acquisition
- Up to 100 calibrated applications

Range:	0-80 mils (0-2000 um)
Power Supply:	Alkaline batteries/ AC adapter
Display:	LCD Screen
Method:	Magnetic Induction/ Eddy Current depending on application
Data Storage:	A maximum of 10,000 measurements can be stored in 1,000 blocks in up to 100 applications

Ask About Our Rental Protection Plan (RPP)

Elcometer 456

- Easy to use with large buttons for gloved hands and high contrast color LCD with auto rotate
- Accurate thickness measurement capability to ±1%
- Batch date and time stamp facility
- Sealed, heavy duty and impact resistant - dust and waterproof equivalent to IP64
- Fast reading rate of 70+ per minute, 140+ per minute w/Ultra/Scan Probe and multiple calibration memories
- Wide range of interchangeable probes
- USB and Bluetooth® data output to iPhone or Android™ devices

Range:	0-60 mils (0-1500 μm) - Scale 1, 0-200 mils (0-5 mm) - Scale 2, 0-500 mils (0-13 mm) - Scale 3
Power Supply:	2 x AA dry cell batteries, rechargeable batteries can also be used
Display:	2.4" (6 cm) QVGA color TFT
Methods:	User selectable calibration methods
Data Storage:	Stores up to 150,000 readings in 2,500 batches

AUT Solutions AccuTrak Automated 3-Axis Scanner

- Lightweight - 17 lbs
- Portable - ships in 2 cases
- Versatility - Axial I.D. pipe scans : 14"+
- Mobility - Zero turn within a 12" radius
- Magnetic wheels - Strong, allows vertical climbing
- Compatible - Works with ProScan, Omniscan, TD Scan, Pocket UT, PRAGMA, GE, Zetec, VEO, and more

Scanner Truck Dimensions/ Weight:	Length: 13.5", Width: 10.5", Height: 4.25", Weight: 17 lbs.
Maximum Scanner Speeds:	Wheel: 6' / sec, Arm: 30" / sec
Encoder Resolution Per Tick:	X-axis (Wheel): 0.00002", Y-axis (arm): 0.00015"

Olympus OmniScan MX 16:128

- Compact, rugged and battery-operated design
- Shock, impact and water resistant
- Interchangeable modular design that automatically detects and presets system according to chosen module
- Clear 8.4" screen with 60Hz refresh rate
- 6-hour run time with two Li-Ion batteries

Power Supply + Battery Life:	2 x Smart Li-Ion Batteries / 15V - 18V DC-in (min 50W)/ Minimum 6 Hours
Rectiflier:	Both, positive, negative
Storage Devices:	Compact Flash Card, USB storage device or Ethernet Internal 32Mb DiskOn-Chip©/
Number of Elements:	128

Olympus Omniscan MX 2 32:128

- Bright, large touch screen
- New phased array and TOFD modules
- New NDT setupbuilder design software
- New OmniPC analysis software
- Available in original MX model

Battery Type:	Smart Li-ion battery
Rectifier:	RF, full wave, half wave +, half wave –
Storage Devices:	SDHC card, most standard USB storage devices or fast Ethernet
Number of Elements:	128

Olympus HydroFORM Manual Scanner

- Easy gate synchronization with the front wall for OD and ID corrosion monitoring
- Wedge reflection is eliminated
- Coupling is optimized
- Provides excellent near-surface resolution

Depth Resolution:	0.1 mm
OD Inspection Range:	4" and greater
ID Inspection Range:	10" and greater
Contact Device with Surface:	Wheels

Olympus Chain Scanner

- Standard configuration using one or two probes
- Optional configuration using four probes for TOFD, phased array, or pulse-echo inspections
- Encoded manual scan on one or two axis (depends on the model)
- Ergonomic handle to protect encoder connectors and provide cable management
- Independent chain links mounted on bearings wheels coated with urethane for smooth rolling
- Easy clamping device for quick scanner positioning

Length in Scan Axis:	114 mm (75 W x 84 H)
Encoder Resolution (X) Axis:	19.2 steps / mm
Encoder Resolution (Y) Axis:	56.7 steps / mm
Weight:	2.2 lbs (main module)

Ask About Our Rental Protection Plan (RPP)

Olympus EPOCH 600

- Designed to meet the requirements of EN12668-1
- PerfectSquare tunable square wave pulser
- Digital high dynamic range receiver
- 2 kHz PRF for rapid scanning
- Knob or navigation pad adjustment configurations
- Standard dynamic DAC/TVG and onboard DGS/AVG
- 2 GB MicroSD memory card for data transfers and storage
- Alarm and VGA outputs

Transducer Connections:	BNC or Number 1 LEMO
Data Storage:	50,000 IDs onboard, removable 2 GB MicroSD card (standard)
Battery Type:	Single lithium-ion rechargeable standard/ 12h-13hr/ 3h (alkaline)
Test Mode:	Pulse Echo, Dual, Through Transmission
Range:	.132 inch - 527 inch (3.36mm-13,405mm)

Olympus EPOCH XT

- EN 12668-1 compliant
- Multi-color LCD display
- Designed to meet IP67 requirements - sealed to withstand harsh environments
- Dynamic DAC/TVG standard
- Multiple battery options can be used with Lithium Ion, NiMH, or C-Cells
- Available with B scan

Transducer Connections:	BNC or Number 1 Lemo (BNC rated to IP67)
Battery:	Choice of lithium-ion, nickel metal hydride and alkaline C-cells
Data Storage:	Up to 10,000 IDs with waveforms, measurements, and setup parameters
Test Method:	Pulse echo, dual, or through transmission
Range:	0.073 to 527" (1.86 to 13,400 mm)

Eddyfi Ectane ERNMI

- Light, rugged, portable and sealed
- SmartMUX: integrated, universal, and programmable ECA multiplexer for up to 256 channels
- Multi-technology for tube inspections: ECT, RFT, NFT, MFL, and array equivalents, and IRIS ultrasound technology
- Battery power and backup for 100% uptime
- One-man operation via remote control
- Available Iris kit

Battery Type:	Lithium-ion, rechargeable DOT compliant/ 8 hours (typical)
	Automatic probe recognition and setup technology (advanced array probes only)
	32113 °F (045 °C)
	95%, non-condensing
	ASME, EN 61010-1, EMC, CE, WEEE, RoHS
Probe Inputs (ECT):	8

Olympus MultiScan MS5800U

- Setup wizard
- Real-time gain and gate controls
- Real-time and continuous color C-scans
- Full tube-length recording
- Available Iris kit

Power:	120 VAC or 220 VAC ±10%, automatic selection, 48 Hz to 63 Hz
Probe Inputs:	Four independent differential inputs, and up to 64 multiplexed inputs (16 time slots) with MUX-PKG-MS (U8780060)
ECT Channels:	16 simultaneously (4 inputs x 4 frequencies); 256 in super-multiplexed mode (with 16 time slots)
Number of Frequencies:	8
Frequency:	Adjustable from 20 Hz to 6 MHz

Zetec MIZ 28

- Combines both multiplexed and simultaneous injection (SI) technologies into one box that tests most tube materials including magnetic alloys

- Testing with multiplexed frequencies provides the best detection capabilities from surface cracks to deep flaws with speed and reliability

- Simultaneous injection eddy current technology offers the highest testing speeds and supports remote field testing (RFT)

- Optional RFT Amplifier supplies the high drive voltages that generate the stronger magnetic field necessary to discriminate the flaws from good material

Test Method:	Multifrequency electromagnetic testing in multiplexed mode - supports 4 test frequencies
	SI mode - Up to 4 frequencies or up to 8 coil pairs (number of test frequencies depends on number of boards installed and coils being used)
Power:	85 - 264 VAC 47 - 63 HZ 140 watts maximum with all options
Storage:	40 GB internal hard drive

Olympus Nortec 600

- Designed to meet the requirements of IP66
- EN-15548 compliant
- Long battery life (up to 10 hours)
- Bright, 5.7 inch (14,5 cm) VGA display
- Full-screen option in any display mode
- Improved filters for rotary scanner mode
- Intuitive interface with Application Selection presets
- 10 Hz to 12 MHz frequency capacity
- Storage capacity of up to 500 files (program and data)

Frequency (Conductivity):	60 kHz or 480 kHz
Data Storage:	500 traces of 120 s max featuring user-selectable on-board preview
Battery Type:	Single lithium-ion rechargeable battery or optional AA-size alkaline batteries (in 8-cell holder) - up to 10 hrs
	Absolute and differential in either bridge or reflection configuration - the instrument is fully compatible with NORTEC PowerLink probes and other accessories

MFE 1212 Mark II

- MFE electronics module compatible
- Displays digital volume loss signals in real-time
- Adjustable gain for improving signal and reducing noise
- Horizontal guide wheels and pivoting handle
- Scan speeds up to 3' per second
- Doubled magnetic material in bridge
- Performs inspections of thicker plate
- Performs through coating inspections

Scan Width:	6"
Speed:	3 feet per second
Thickness Range:	Up to 3/8"
Maximum Coating Thickness:	Floor plate and coating up to 3/8"
Power Requirements:	12V Battery

MFE 2412 Mark II

- MFE electronics module compatible
- Adjustable gain for improving signal and reducing noise
- Scans speeds up to 3' per second
- Double magnetic material in bridge
- Performs through coating inspections
- Performs inspections of thicker plate
- Battery operated for over 12 hrs of continous use
- Performs through coating inspections

Scan Width:	12"
Battery Operated:	High capacity sealed lead acid battery
Max Coating Thickness:	Floor plate and coatings up to 3/8"
Thickness Range:	Up to 3/8"
Speed:	3' per second

Ask About Our Rental Protection Plan (RPP)

MFE 2412 Mark III

- Uses magnetic flux leakage (MFL) technology
- Rugged touch screen Panasonic Toughbook
- Improved magnetic bridge
- Easy access to gain and alarm adjustments

Scan Width:	12"
Speed:	3' per second
Thickness Range:	0.5" / 12.5 mm
Max Coating Thickness:	Floor plate and coatings up to .5" / 12.5 mm
Real Time Analysis:	12 channels
Power Requirements:	12V battery

SARCOS Guardian-S Magnetic Crawler

- Lightweight & Man-Portable: Easily hand-carried, and able to carry a 10-lb payload on horizontal surfaces
- Expansive Navigation: Low-profile, vertical surfaces, all-terrain: mud, gravel, water, unstructured terrain and confined spaces as narrow as 7 inches
- Real-Time Communication: Transmits two-way video, audio and sensor data while the operator stays at a safer standoff distance
- Cloud Connected: Command Center provides robot control, data gathering, analytics and secure communications

Max Payload:	10 lbs horizontal, 5 lbs vertical
Speed:	1.4 MPH (unloaded)
Operating Temp:	-4 to 140 0F -20 to 60 0C
Video:	(6) 4k color cameras with digital zoom Optiontial: FLIR hi-res camera
Audio	Built-in microphone and speaker to enable two-way audio between the OCU and robot (half duplex PTT)

Personal Safety

PINE
Partner for Test & Measurement
Equipment Services and Data Solutions

For all your Consumables, PPE and Instrumentation needs.

EDDYFI SILVERWING SCORPION2 CRAWLER

Item # 56098

- Scorpion2 is equipped with the best ultrasonic electronics and Software the industry has to offer.
- The simple controls and long umbilical minimize the need to handle the crawler.
- The carriage enables recording thickness measurements within 25 mm (1 in) of weld caps, making inspecting critical heat affected zones (HAZ) possible.
- Applications include: vertical and horizontal storage tanks, pipelines, pressure vessels, tank trucks, offshore structures, spherical tanks, marine vessels

Power:	Type Lithium-ion, rechargeable, DOT compliant
Speed:	7 in/sec (180 mm/sec)
External circumderential dia.	10 ft / 3 m
Min Material thickness	0.18 in / 4.7 mm
Max Material thickness	4 in / 100 mm

JIREH TRI-POD TR20 Crawler

Item # 54131

- Unique Linkage System: The TriPod's magnetic drive wheels automatically remain perpendicular to the pipe or tank surface when driving in both the longitudinal and circumferential directions
- Molded umbilical: The TriPod has a rugged umbilical with power, communication, 4 coax conductors and a water line molded into a durable polyurethane jacket
- Environmental Sealing: Extensive use of re-sealable o-ring gaskets and seals protect from contamination
- Multi-probe holding adapter (optional): If multiple probes are required, an adapter is available to integrate the STIX probe holding system on the TriPod

Vertical Lifting Capacity:	30 lbs (on standard painted surface)
Speed:	Variable 0 -1.5 ft/sec
Min External Tank/Pipe Range:	24" outside diameter
Min Internal Tank Range:	72" internal diameter
Drive Wheel Magnetic Strength:	200 lbs each

Olympus HST-X04 Manual Scanner

Item # 54141

- Easy gate synchronization with the front wall for OD and ID corrosion monitoring
- Wedge reflection is eliminated
- Coupling is optimized
- Provides excellent near-surface resolution

Phased Array Probe:	I4
Maximum One-Line Scan (width):	60 mm
Typical near-surface resolution (1/8 in. FBH):	1.5 mm
Depth Resolution:	0.1 mm

GE MIC 10 DL Hardness Tester

Item # 54260

- Easy hardness testing operation
- Single or as the active arithmetical average values
- Instrument operation can be customized for specific testing requirements
- Probes with test loads from 1N (HV0.1) to 98N (HV10)
- Automatic conversion into different hardness scales and tensile strength
- Probes with test loads from 1N (HV0.1) to 98N (HV10)
- Also available in a non datalog version

Range:	20-1740 HV
Conversion:	HV, HB, HRC, HRB N/mm² (only with the 10 kgf handheld probe) according to DIN 50150, ASTM E 140
Display:	4 digit LCD with switchable backlight
Power:	2 x 1.5V AA batteries
Data Logger (for version MIC 10DL):	Internal memory for up to 1800 measurments, memory card for up to 590 measurements - dependent on the number of measurements per set - warning given with memory overflow

Ask About Our Rental Protection Plan (RPP)

GE Dynapocket Hardness Tester

Item # 54114

- Easy on-site hardness testing on solid, non-transportable components and even on positions difficult to access
- Hardness measurement independent of impact direction
- Display of the single or average value
- Standard conversion tables stored for nine material groups

Test Method:	Rebound hardness testing according to ASTM standard specification A 956
Measuring Range:	Depending on the material group, e.g for low-alloy steel: 150-1000 HL; 75-1000 HV; 75-700 HB; 35-100 HRB; 20-70 HRC; 30-100 HS; 250-2200 N/ mm^2; 9 fixed material groups stored in the instrument
Display:	LCD, 4-digit display of the hardness value
Conversion:	According to DIN 50150, ASTM E 140, instrument-specific conversion (Dyna)
Statistics:	Display of average value

Proceq Equotip 550

Item # 54865

- More flexibility - modular concept, custom reports
- Improved Performance - combined method, conversion curves
- Increased Efficiency - guiding wizards, interactive guides
- Enhanced Quality Assurance - automatic verification, automation option

Display:	7" color display 800x480 pixels
Range:	1-999HL
Conversion:	All Common Hardness Scales (HV,HB,HRC,HRB,HRA,HS,Rm)
Data logger:	Internal 8 GB flash memory (up to 1,000,000 measurements)
Test Method:	LEEB/ Rebound
Battery:	Lithium Polymer, 3.6 V, 14.0 Ah

Proceq Equotip 2 Portable Hardness Tester

Item # 54257

- Ability to freehand measurements on large parts
- Rapidity and good reproducibility through accurate distance measurement
- Very good selectivity through small penetration of a few µm
- Simple, convenient operating
- Integrated conversions

Display:	Large High Contrast LCD
Range:	150-950 HLD/ 250-970 HLD1
Conversion:	HL, HV, HB, HRB, HS
Data Logger:	N/A
Test Method:	LEEB/ REBOUND
Battery:	6 x 1.5 v LR6 giving 65 hrs use

Proceq Equotip 3 Portable Hardness Tester

Item # 54864

- Large, easy to read display with backlight
- Automatic correction for impact direction
- Leeb Rebound test method
- Available probes - C, D, DC, DL, E, G, S
- Large memory with on-screen review of data
- User profiles for fast change of all settings
- Rugged sealed membrane keypad
- Custom conversions for uncommon alloys

Testing Method:	Leeb rebound
Conversion:	HV,HB,HRC,HRB,HRA,HS,Rm
Display:	Large QVGA LCD with adjustable contrast
Internal Data Storage:	~ 100'000 values
Battery Type:	Rechargeable Li ion or 3 standard size "C" cells

TSC Amigo ACFM Unit

- Rapid scanning using a hand-held probe
- Reliable crack detection and sizing (length and depth)
- Dual frequency option: 5kHz
- Around 10 hour operation on one fully-charged battery pack, and easy exchange of battery packs in the field
- Reduced cleaning requirements with no need to clean to bare metal
- Optional high frequency probe

Probe Cable Length:	5m (16.4 ft) standard, up to 50m (164 ft) by special request
Serial Communications Cable:	Up to 30 meters (98 ft) in length
Operating Temperature:	-20° to 40°C or -4° to +104°F
Environment Protection:	IP54 rated
Array Support:	16 channels plus position encoder

TSC Amigo ACFM High Frequency Probe

- Rapid scanning using a hand-held probe
- Reliable crack detection and sizing (length and depth)
- Dual frequency option: 5khz to 50KHZ
- Around 10 hour operation on one fully-charged battery pack, and easy exchange of battery packs in the field
- Reduced cleaning requirements with no need to clean to bare metal

Probe Cable Length:	5m (16.4 ft) standard, up to 50m (164 ft) by special request
Serial Communications Cable:	Up to 30 metres (98ft)
Operating Temperature:	-20° to 40°C or -4° to +104°F
Environment Protection:	IP54 rated
Array Support:	16 channels plus position encoder

Ask About Our Rental Protection Plan (RPP)

Magnaflux Y6 & Y7 AC/DC Yokes

Item # 54145

- Used for the detection of surface cracking in any ferro-magnetic material
- Widely used in the testing of welds, automotive components, steel and grey iron castings and for in-plant inspection and repair
- Lightweight and easy to use single-handed
- Articulated legs (Y6) and double-jointed legs (Y7)
- Pole adjustable from 25-250 mm (Y6) and 0-300 mm (Y7)
- Demagnetizing capability

Leg Capacity:	0-250 mm
Span:	Up to 9.8" across poles
Duty Cycle:	2 min on/off duty cycle
Line Current:	AC-3.5 Amps DC- 8.5 Amps
Weight:	3.4Kg
AC/DC Voltage:	AC-115 DC-12v (Battery)

Parker B300 AC Yoke

Item # 54707

- Use with dry powder, wet fluorescent or visible
- Portable, self-contained instrument designed to produce a magnetic field on or within ferrous-magnetic materials
- DC mode produces an intense Half Wave Rectified (DC) field for detection of some subsurface defects
- AC mode produces an intense AC field for detection of surface defects and demagnetizing after inspection
- Constant AC or Half Wave Rectified (DC) fields with the flip of a switch

Line Voltage:	115 VAC 50/60Hz
Line Current:	6 amps AC/DC
Duty Cycle:	2 minutes on- 2 minutes off
Weight:	8.5 lbs (3.8kg)
Span:	12" (305cm) across poles

Parker PM-50 Permanent Magnetic Yoke

Item # 54708

- Used for magnetic particle inspection applications - ASTM E 709, ASTM E 1444, ASME Section V Article 7 and MIL-STD-1949
- Strong magnets for powerful lift capacity
- Order the yoke set separately or with the complete kit which includes a plastic carrying case, one pound of red and gray dry inspection powder and PB-1 powder applicator
- Certification included

Lift Capacity:	50 lbs
Wire Length:	13.5" (cable can not be removed from the magnet
Unit Length:	6.5"
Unit Diamter:	1.5"

Spectroline Opti-Lux 365 BFL LED Black Light

Item # 54795

- Coverage area up to 2.5 inch (6.3 cm) diameter at 15" (38 cm), with minimum UV-A intensity of 2,000 µW/cm2
- Instant-on operation; lamp reaches full intensity immediately
- Convenient on/off switch for easy, one-handed operation
- Powered by one rechargeable lithium-ion battery (extra battery included with lamp) - each provides 4 hrs of continuous inspection

Light Source:	UV-A LED
Lamp Style:	Cordless flashlight
Weight (w/ battery):	4.6 oz
Power Requirement:	One 3.7V 2200mA/Hr lithium-ion battery (rechargeable)

Spectroline 150P Black Light

- Unique Built-In-Ballast™ 150-watt bulb eliminates the need for a heavy, external transformer
- Vinyl-coated, stainless-steel, wraparound caging protects against burns and acts as a lamp stand
- Easily meets ASTM UV-A intensity specifications for FPI and MPI
- Its light weight and ergonomic design ensure easy handling for long inspections

Weight:	3.25 lbs (1.5kg)
Watt:	150Kw
Range:	9 5/8" including heat guard and stand
Voltage Requirements:	120 VAC Plug -IN

GSSI StructureScan Mini XT

- Locate ferrous and non-ferrous targets (rebar, post tension, conduits and non-metallic objects)
- High frequency, high resolution concrete antena to resolve deeper targets
- Enhanced data visualization with 6.5" HD touchscreen user interface
- Operation modes include: QuickScan to collect 2D data with the push of one button, ScanMax to access advanced options, and Scan3D to use as a 3D building scanner.
- Measure slab thickness up to 20", concrete scanning and imaging, condition assessment, structure inspection
- Complete GPR system for concrete inspection
- Lightweight and simple to transport (4 lbs)

Memory:	14.5 GB
Display:	6.5", full color
Environmental rating:	IP65
Display modes:	Linescan, Focus and 3D
Available ports:	USB
Maximum Depth:	Up to 20"
Operating Temp.:	-4°F to 104°F (-20°C to 40°C)

GSSI StructureScan Mini HR

- Locate ferrous and non-ferrous targets (rebar, stainless steel, plastic conduit) in real-time
- User-friendly, intuitive navigation
- Ability to see multiple rebar layers within concrete
- Automatic dielectric calculation
- 5.7" color high resolution data screen
- Locate and mark targets quickly with backup cursor feature and innovative laser positioning
- Lightweight and simple to transport (3 lbs)

Memory:	Based on SD card size, default is 2 GB
Display:	5.7", full color
Post-Processing:	On-screen
Battery:	2.5 hours
Environmental:	Water-resistant and dust proof IP 65 rating
Maximum Depth:	Up to 16"

Ask About Our Rental Protection Plan (RPP)

GSSI Concrete StructureScan Mini Scanner

Item # 54774

- Locate rebar, post tension cables, conduits (PVC and metal) in real-time
- User-friendly, intuitive navigation
- Built-in automatic target detection software
- Automatic depth calculation
- Locate and mark targets quickly with backup cursor feature and innovative laser positioning
- Lightweight and simple to transport, all-in-one unit weights about 3 lbs

Memory:	Based on SD card size, default is 2 GB
Display:	5.7", full-color
Post-Processing:	On-screen or via GSSI software (optional)
Battery:	2.5 hours
Environmental:	Water-resistant and dust proof (IP-65 rating)
Maximum Depth:	Up to 20"

MALA CX 12 Concrete Radar

Item # 54121

- Detects metal and non-metallic objects
- Detects voids
- Locates and identifies 50/60Hz power cables
- Project modes for 2D,3D Grid and Object Mapper/ Software
- Measure depth of cover or slab thickness
- Locate and map reinforcing support structure
- Measure layer thickness

Power Supply:	External 12v or Li-ion 12V/12Ah Battery
Memory	1 GB
Display:	10.4 color TFT Ultra-Hi-Brite LCD monitor
Antenna:	1.6HHz Antenna
Maximum Depth:	Up to 15" depending on antenna

MALA Easy Locator

Item # 54323

- Portable, lightweight modular design
- High contrast, shock proof TFT monitor
- Rugged, weatherproof construction
- Easy to use, automated controls and settings
- Comes with dedicated Easy Vision software
- Images can be saved for subsequent analysis

Power Supply:	LI-ION 12V/6.6Ah
Memory:	USB memory
Display:	Colur TFT 10.4
Antenna:	Shallow, mid, deep
Maximum Depth:	Up to 15' depending on antenna

MALA Easy Locator HDR RTC

Item # 54701

- Detects metallic and non-metallic utilities
- On-site marking of utilities and objects with back up cursor
- Ergonomic, compact and field rugged design
- Minimal set-up time
- Simple one-button operation
- Multiple battery management (no swapping - up to four batteries
- Real-time zoom (no depth window setting necessary)

Operating Temperature:	-20° to +50°C or 0° to 120 °F
Operating Speed:	> 15 mph
Scan Rate:	>1024 scans/sec. @ 700 samples
Antenna:	High Dynamic Range 450 MHz
Power Supply:	Li-Ion 12V/8.7Ah battery
Weight:	40 lbs

MALA Easy Locator Off-Road

- Easy to use, automated controls and settings
- High contrast, shock proof TFT monitor
- Images can be saved for subsequent analysis
- Portable, lightweight modular design

Power Supply:	Lithium-ion 12V/6.6Ah
Maximum Depth:	Up to 15' depending on antenna
Display:	Colur TFT 10.4
Antenna:	Shallow, mid, deep

MALA RAMAC X3M

Item # 54330

- Autostacking for highest data quality and optimized speed performance
- Compact and integrated radar unit, easy to use
- Compatible with 100, 250, 500, 800 and 5000 MHz antennas

Power Supply:	External 12V DC battery
Maximum Depth:	Up to 20 ft
Display:	N/A
Antenna:	100, 250, 500, 800, 5000 mhz

MALA X3M 500 MHz Antenna

Item # 54327
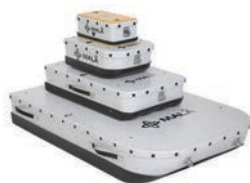
- Designed for use in urban areas or sites with lots of background noise
- Contains transmitter and receiver antenna elements in a single housing
- Equipped with a pulling eye on the front of the housing for attaching tow handles or straps
- Removeable skid/wear plates protect the bottom of the antenna housing
- Antenna electronics, pulling devices and measuring wheels are compatible and interchangeable

Size:	50 x 36 x 16 cm
Weight:	5.0 kg

MALA GroundExplorer (GX) HDR

Item # 54889

- Well designed, field-rugged enclosure
- Built-in power supply and DGPS
- Simplified graphical user interface
- In-the-field processing and interpretation
- High resolution HDR controller display
- All antennas meet FCC, EC and IC regulatory limits on radio emissions

Power Supply:	12v Li-ion battery or ext 12vDC
Maximum Depth:	50 ft
Display:	High resolution HDR display
Antenna:	GX 160

Ask About Our Rental Protection Plan (RPP)

Proceq Profometer 5

- Location and orientation of reinforcing bars
- Measuring concrete cover depth
- Determination of bar diameter
- Compact, user-friendly indicating device with backlight
- Can be operated in metric and imperial units

Memory:	Non-volatile memory for 40'000 measured values and 60 objects respectively
Display:	LCD with backlight option
Interface:	RS232 or with Adapter for USB Port on PC
Software:	ProVista for downloading data and evaluation on PC
Batteries:	6 x 1.5V for 45h operation; 30h with backlight on
Temperature Range:	-10° to +60°C

Elcometer 331 Covermeter

- Half-Cell Mode
- Gaphics Plot Mod
- Threshold View
- Autosizing and Orthogonal Function
- Data Logging Feature
- Powerful Statistics Feature

Power Supply:	7.4V battery pack
Operating Temperature:	0 to 50°C (32 to 120°F)
Weight:	1.54kg (3.4lbs)
Memory:	up to 200 batches of 1000 readings
Range:	15mm to 95mm depending on bar

Proceq Pundit Lab Ultrasonic Pulse Velocity Concrete Tester

- Integrated waveform display
- Open interface: full remote control of the instrument is also possible with third party software
- Direct data logging on the PC

Range:	0.1 9999 µs
Resolution:	0.1 µs
Display:	79 x 21 mm passive matrix OLED
Transmitter:	Optimized energizing pulse 125 V, 250 V, 350 V, 500V, AUTO
Receiver:	
Bandwidth:	20 kHz 500 kHz
Memory:	Non volatile, > 500 measured values

Proceq Schmidt Concrete Hardness Tester

- Type N Original Schmidt: Rebound values are read from a scale for subsequent calculation of the mean - compressive strength values can be read from a conversion diagram
- Type NR Original Schmidt: Rebound values are recorded as a bar chart on a paper strip which has a capacity for 4000 test impacts

Type N Measuring Range:	1,450 psi to 10,150 psi (10 to 70 N/mm2 compressive strength) (below 25 N/mm2 type P is better suited)
Range:	10 to 70 N/mm2 compressive strength
Data Memory:	Type N- N/A Type NR- Print Strip up to 4000 impacts

Oxford ARC-MET8000 Optical Emission Spectrometer

- Accurate results displayed on probe and main unit
- Argon kit available
- Ideal for ferrous and non-ferrous materials
- Maximum performance for all types of analysis
- Versatile mobile unit affords flexibility

Probe:	Flat field holographic grating, full spectrum recording
Range:	185-370nm, SP option from 175nm
Metals:	Carbon and low alloy steels, Cr Steels, Cr Ni Steels, Ni Alloys
Battery Life:	4 to 5 hours

SciAps X-550 XRF Analyzer

- This XRF analyzer delivers PMI for most alloys in one second with excellent precision
- Optimized for key PMI applications like Residuals and Sulfidic corrosion
- Great on high temp alloys and precious metals
- Sort your widest variety of Al alloys in 1-2 seconds
- Applications: Contaiminant Phosphorus and Sulfur, Tramp Elements, Mining, Environmenatal soil, and RoHS

Excitation Source:	40 kV, 200 uA Rh anode and 10kV, 500 uA for alloy testing, 50 kV, 200 uA Au anode for most other apps
Comms / Data Transfer	Wifi, Bluetooth, USB connectivity to most devices, and SciAps software
Power:	On board rechargeable Li-ion battery, rechargeable inside device or with external charger, AC power

SciAps Z-200 C+ LIBS Analyzer

- High-purity Argon and Purge. Argon purge is essential for quantitative analysis with LIBS and OES, and for carbon it is critical
- High laser pulse energy and frequency. The SciAps laser delivers 5-6 mJ/pulse on the sample, with a 50 Hz repetition rate
- High speed laser cleaning shots. Eliminates most surface sample prep
- Eliminates bad burns. On-board camera and laser targeting eliminates poor quality "burns"

Excitation Source:	5-6 mJ/pulse, 50 Hz repetition rate, 1064 nm laser source
Comms / Data Transfer	Wifi, Bluetooth, USB. Connectivity to most devices, including SciAps Profile Builder PC software
Power:	On board rechargeable Li-ion battery, rechargeable inside device or with external charger, AC power
Display:	5" color touchscreen Smartphone type display – PowerVR SGX540 3D graphic

Thermo Fisher Scientific Niton XL5

- Analyze metal alloys in soil, structural integrity of piping, metal fabricating, environmental remediation, lead paint analysis, and more.
- Alloy identification ultra-low light element detection
- Analytical performance designed to return lab quality results
- Results are displayed in real time.
- Vivid new icons and an easy to use application interface. Utilize swipe and touchscreen functionality.

Battery:	Two lithium-ion battery packs, 110/220 VAC battery charger/AC adaptor
Source:	Powered by a 5W x-ray tube
Detector:	Geometrically Optimized Large Area Drift Detector (GOLDD)
Display:	Tilting, color touch screen
Compliance:	CE, RoHS, FCC, Industry Canada, Safety to IEC 61010-1:2010, IP54

Thermo Fisher Scientific Niton Apollo LIBS Analyzer

- Specially engineered to determine carbon content in low alloy and carbon steel

Rapid results powered by a class 3B laser, that generates accurate results in about 10 seconds

- View alloy identification and advanced averaging instead of sending results to the lab
- Data is displayed in real time, enabling fast and efficient decision making

Battery:	Two Redlithium 9.0 battery packs, and battery charger/AC adaptor
Source:	Powered by a 3B laser, 1064nm
Argon Usage:	About 200 shots per cylinder
Display:	Tilting, color touch screen
Macro Camera:	Integrated CCD macro camera for capturing overview images
Range:	Al, C, Cr, Cu, Fe, Mn, Mo, Ni, Si, Ti, V, W

Ask About Our Rental Protection Plan (RPP)

Thermo Niton XL3T

- Analyze metals in soil
- 25 element library for analysis
- Real time on-site results
- Generate reports and analyse data with the Niton Data Transfer software
- Carry out component testing for RoHS and WEEE compliance

Number of Elements:	Up to 30 elements from Mg to U (varies by application)
Testing:	CE, RoHS
Memory Storage:	32MB internal system memory/128 MB internal user storage
Display:	Tilting, color, touch-screen display
Power:	Two eight-hour, rechargeable lithium-ion battery packs, battery charger

Thermo Niton XL2 980 GOLDD

- Silicon drift detector (SDD) technology for fast, accurate analysis of light elements without helium purging or vacuum pumps
- Point-and-shoot simplicity — very easy to use even by non-technical personnel
- Non-destructive analysis with near instantaneous results
- Ergonomical design
- Daylight-readable icons
- Multilanguage options

Number of Elements:	Varies by application:Alloy Modes: Metal Alloy, Electronics Alloy, Precious MetalsBulk Modes: Mining, SoilPlastic Modes: RoHS
Testing:	Varies by application:Alloy Modes: Metal Alloy, Electronics Alloy, Precious MetalsBulk Modes: Mining, SoilPlastic Modes: RoHS
Memory Storage:	64 MB internal system memory/128 MB internal user storage, Up to 10,000 reading with Spectrta Keep

Olympus Vanta VCR Series Handheld XRF Analyzer

- Rugged, with exceptional durability under extreme conditions. IP65 rated to withstaind rain, dirt, and dust.
- Analytical excellence is engineered with the best circuits and interface technologies for faster results.
- Touch screen display and data is easily exported via USB flash drive, Wi-Fi, or Bluetooth.
- Scrap sorting feature intuitively lengthens or shortens test times based on material to save time while providing the best possible match.
- Possitive Material Identification (PMI) provides identification in as little as 1–2 seconds.

Positive Material Identification:	Aluminum, Carbon Steel, Nickel, Cobalt, Super Alloys, Stainless, and Titanium.
Safety Screening:	Elemental analysis for lead (Pb), cadmium (Cd), arsenic (As), mercury (Hg), chromium (Cr), and other toxic metals.
Memory Storage:	microSD™ slot with included 1 GB Industrial SD card
Display:	800 x 480 (WVGA) LCD and supports gesture control
Power:	Removable 14.4 V Li-Ion battery

Olympus Delta DS 2000

- Lightning fast bootup and data acquisition - faster testing, more results
- Integrated Bluetooth for data input and output
- Ergonomic rubberized handle for enhanced grip
- Analysis indicator lights visible from 360°
- 4 W X ray tube

Number of Elements:	Alloy and Mining: Mg and up for Rh/Ag and Al and up for Ta/Au; Soil: P and higher
Applications:	Alloy Plus, Lead in Paint - not recommended for HUD testing
Memory	1 GB MicroSD (up to 75,000 readings)
Display:	Color touch screen

Innov-X 6000 Alpha Series

Item # 54308

- Analyze low alloy, stainless, nickel, titanium, cobalt, copper-based alloys and more
- Confidently separate challenging alloys such as 304 & 321, P91 & 9 Cr, Ti Grade 7 & CP Ti
- Designed for tests to 800 degrees F
- Measure Cr in carbon steel to 0.03% for evaluating flow accelerated corrosion (FAC)

Number of Elements:	Standard package includes 21 elements Customer may specify 4 additonal, or use multiple suites of 25 elements each
Testing:	Alloy, soil mode
Memory Storage:	128 Mb standard memory - 20,000 test results with spectra, upgrade to >100,000 with optional 1 GB flash card
Display:	Color, high resolution touchscreen

Thermo Niton XLP 818 🇨🇦 only

Item # 54313

- Fast, powerful and precise
- Rugged & highly portable
- Versatile and easy to use

Source:	241 Am Maximum: 30 mCi (1110 MBq)
Detector:	High-Performance, thermo-electricity cooled, solid state detector system
Display:	Back-lit 1/4 VGA touch screen LCD, visible in all conditions
Range:	22 Standard alloying elements in the range Ti(22) to Bi(83)

Thermo Niton XL3P 800 🇨🇦 only

Item # 54321

- Very easy to use, even by non technical personnel
- Improved cycle time for high sample throughput
- Up to 18 hours of continous use for each battery
- Alloy grade ID and pass/Fail analysis is commom in 1-2 seconds
- Accurate chemical analysis common in 3 to 5 seconds

Battery:	Two 4 Cell Li-Ion battery packs
Source:	30mCi sealed (241)Am Infiniton Radioisotope Source
Detector:	High Performace Si PIN diode
Display:	Color touch Screen
Compliance:	CE, RoHS
Range:	>25 Elements fro Ti to U

Thermo Niton XLP 702 🇨🇦 only

Item # 54314

- High-strength, rugged, environmentally sealed housing
- Portable GPS integration for real-time contamination mapping
- Easy to use - even by non-technical personnel

Source:	One or more of the following sealed radioisotope sources: 241Am (Infinition), 55Fe, 109Cd
Detector:	High-performance Si-PiN detector; Peltier cooled
Display	Backlit VGA touch screen LCD
Range:	To 25 elements from P to Pb

🇨🇦 Customer must possesss a user license with the Canadian Nuclear Safety Commission prior to shipment of the Niton XLP radioactive source-based analyzers. License applications may be attained from the CNSC.

Ask About Our Rental Protection Plan (RPP)

FLIR BCAM SD Thermal Camera

- Field of view: fixed 25° x 25°
- Spectral range: 7.5 to 13µm
- Razor-sharp, thermal imaging quality
- Long, 7 hour battery life
- Ultra-portable, weighs just 1.2 lbs
- Easy-to-operate, large 3.5 full color LCD
- Dew point, insulation and color alarm features

Battery Type:	Li-Ion - Rechargeable Li/Ion battery
Display:	Large 3.5 Full Color LCD
Water and Dust Resistant (encapsulation):	IP 54
Shock:	25G, IEC 68-2-29
Vibration:	2G, IEC 68-2-6
Field of View:	25" x 25"

Fluke Ti25 (-4° - 662° F)

- Enhanced problem detection and analysis capabilities with IR-Fusion® Technology
- Optimized for field use in harsh work environments
- Withstands dust and water—tested to an IP54 rating
- Delivers the clear, crisp images needed to find problems fast
- Identify even small temperature differences that could indicate problems with excellent thermal sensitivity (NETD)
- Adjustable hand strap for left-or right-handed use

Display:	9.1 cm (3.6 in) diagonal landscape color VGA (640 x 480) LCD with backlight (selectable bright or auto)
Batteries:	Internal rechargeable battery pack (included)
Field of View:	23" x 17"
Vibration:	2 G, IEC 68-2-29
Shock:	25 G, IEC 68-2-29 {2 m (6.5 ft) drop, 5 sides}
Drop:	0.27 x 0.13 x 0.15 m (10.5 x 5 x 6 in)

Fluke Ti45FT (-4° - 1112° F)

- Fluke IR-Fusion Technology
- See exactly what you are viewing
- Large, sharp thermal images
- A sharp image in every situation
- Makes anomalies visible
- Analysis and reporting comes standard
- Radiometric measurement - the 'data behind the picture'

Field of View:	20 mm lens 23 ° x 17 ° FOV, 10.5 mm lens 42 ° x 32 °, 54 mm lens 9° x 6°
IR Digital Zoom:	2x
Measurement Modes:	Centerpoint, center box (area min/max, average), moveable spots/boxes, user defined field/text annotations, isotherms, automatic hot and cold point detection, visible color alarm above and below
Digital Display:	5" large high-resolution digital display

Fluke TiR1 (-4° - 212° F)

- Includes IR-Fusion® Technology both in camera and software for easy identification and reporting of problems
- Rugged and reliable: Engineered to withstand a 2 m (6.5 ft) drop
- Temperature range and thermal sensitivity optimized for building diagnostics applications
- Reflected background temperature (reflected temperature compensation)

Display:	9.1 cm (3.6 in) diagonal landscape color VGA (640 x 480) LCD with backlight (selectable bright or auto)
Digital Zoom:	N/A Manual Focus
Field of View:	23" x 17"
Batteries:	Internal rechargeable battery pack (included)
Vibration:	2 G, IEC 68-2-29

Olympus IPLEX RT (6mm x 3.5m)

- Still images and movies as crisp as live images
- Large monitor providing easy yet accurate inspections
- Compact and portable design
- Wide scope variation
- Quick and easy operation
- Compact and portable design
- Operable in all weather
- Unique PulsarPic image processor to produce exceptionally high-resolution

Tip Operating Temp:	–25º to 100ºC (–13º to 212ºF) IPLEX RX/ In Water subject to change
Display:	6.5 in. daylight-view LCD, anti-reflective type
Battery / Power:	Battery: 10.8 V nominal, approx. 120-minute operating time, AC power: 100 V to 240 V, 50/60 Hz
Waterproof:	IV94 series -- Up to an equivalent to 3.5 m (11.5 ft) in depth
Articulation:	130 to 150 degrees

Olympus IPLEX LX (6mm x 7.5m)

- Compact and lightweight
- Small size, large monitor
- One-handed scope control and interface
- All-weather resistance
- Impervious to environmental hazards
- One-handed scope control and interface
- Ultra-bright, interchangeable LED tip adapters
- High-quality images and movies
- Proven stereo measurement

Tip Operating Temp:	-25 to 100℃ (–13°F to 212°F)
Display:	6.5 in. daylight-view LCD, anti-reflective type
Battery / Power:	Battery: 10.8 V nominal. IV84 and IV86 Series: over 120-minute operating time.
Waterproof:	Operable under water with viewing tip adapter attached - not operable underwater with stereo measurement tip adapters

Olympus IPLEX LT Series

- 8.5mm diameter x 10.0m length (North America model)
- Available in a 6mm x 7.5m length
- Measurement for precise detection
- Intutive Icon Based Menus
- Compact and Lightweight
- Small size and lightweight, Big Screen

Tip Operating Temp:	-25 to 100℃ (–13°F to 212°F)
Display:	6.5 in. daylight-view LCD, anti-reflective type
Battery / Power:	10.8 V nominal - IV84 and IV86 Series: over 120-minute operating time
Waterproof:	Operable under water with viewing tip adapter attached - not operable underwater with stereo tip adapters
Articulation:	4-way angle - UP/DOWN/RIGHT/ LEFT/150o

Olympus IPLEX FX Series

- Scope diameter from 4mm to 6mm
- Swappable insertion probes
- TrueFeelTM scope articulation
- Temperature resistance (to +100 celcius)
- 2 GB data storage capacity
- Lightweight, shock resistant and splash proof construction

Tip Operating Temp:	-25 to 100℃ (–13°F to 212°F)
Display:	XGA high resolution 1024 x 768
Battery / Power:	Voltage: 14.8V nominal, 11.5V to 16.8V /
Waterproof:	Liquid Resistance: Operable when exposed to Machine oil, light oil, 5% saline solution
Articulation	4 - way angle - UP/DOWN/RIGHT/ LEFT/150o
Field of View:	40 to 120 degrees

Ask About Our Rental Protection Plan (RPP)

GE XLGO Video Borescope (8.4mm x 6m)

Item # 54808

- Intuitive, easy-to-use contrls
- StereoProbe®, ShadowProbe® and Comparison defect measurement
- Sealed housings for Dust and Water ingress protection to IP55
- Integrated Temperature Warning system
- 1 GB Internal Flash memory
- 2 USB® 2.0 ports, VGA video out
- Two or four-hour lithium-ion batteries

Tip Operating Temp:	-25°C to 80°C (-13°F to 176°F) reduced articulation below 0°C (32°F)
Display:	Integrated 9.40 cm (3.70 in) active matrix VGA color LCD
Battery/Power:	8.4V, 43Wh and 86Wh battery pack, AC: 90-264 Vac, 47-63Hz, <1.2Arms @90 Vs, DC:10.2V +5/-3%. 4.9A
Waterproof:	Insertion tube and tip to 14.7 psi (1 bar, 10.2m of H2 O, 33.5 ft of H2 O)
Articulation:	360° all-way

iRis DVR X Handheld Videoprobe

Item # 61214

- 5.0" (12.7 cm) screen
- 6 hour operation time
- 4-way articulation
- Large digital storage capacity
- Video borescope measurement
- Lightweight (under 3 lbs)
- Hand held for easy and safe to use

Tip Operating Temp:	Minus 13 f to 176 degrees f (-25C-+80C)
Display:	VGA LCD
Battery/Power:	Rechargeable lithium-ion
Waterproof:	14.7 psi (1 bar)
Articulation:	4-Way
Field Of View:	90°

BorsEye 2030 Borescope (4mm x 2m) Non Articulating

Item # 54973

- 3.5 LCD display
- Supports video recording (MPEG4) and snap shot stills (JPEG)
- Handheld and robust system
- Waterproof
- Tube length 2m

Tip Operating Temp:	-20º to 60º C
Display:	3.5"TFT LCD Monitor
Battery / Power:	Rechargeable lithium-ion Battery/DC-5V
Resolution:	VGA resolution provides real 640x480
Water Proof:	Cameras are waterproof and available with 35, 45 and 55 degree mirrors
Articulation:	N/A

Testo View 318 36" Probe

Item # 54205

- Can be used for all types of diagnostics
- Optional clip on 45 degree mirror makes inspection a snap
- One hand operation with light switch and focus ring
- Powerful halogen lamp for optimum illumination

Tip Operating Temp:	Not built to withstand heat (ideal for room temp inspections)
Display:	Eye piece look thru, no display
Battery:	4 x AA
Waterproof:	Not tested
Articulation:	N/A
Field of View:	40 degrees
Light Source:	Halogen lamp (600 fc, 3220K)
Zoom:	Focus ring

Insight Vision Inspection System 190' w/ 2" Head & DVD

- 1/2" diameter premium spiral-wound fiberglass reinforced push rod
- 10.4" high resolution color LCD screen
- On-screen digital distance counter
- 2" camera head
- LITE-ON brand DVD recorder
- Sealed weatherproof touchpad controls
- Lightweight design, detachable from reel/wheels

Cable Size:	1/2" diameter premium spiral-wound fiberglass reinforced push rod
Counter / Encoder:	On-screen digital distance counter
Waterproof:	Sealed weatherproof touchpad controls
Sonde (locator):	512 Hz sonde inside of spring for location

Insight Vision D2-200 CVSL

- Molded with Polyethylene for ruggedness and toughness
- Digital on-screen distance counter
- ClearVIEW camera heads designed for brilliant inspections
- Ideal for 3" and 4" pipe traps / 90 ° turns

Counter:	Digital counter of measurement
Resolution:	480 x 720
Cable Make up:	Fiberglass optimized for further pushes, bends and turns

Laval SC-350 Inspection Camera & SC350/500 9" Monitor

- Ultra-Light, Compact and Portable
- Survey Water Wells, Boreholes, and Vertical Shafts from 2 inches (5 cm) to 10 inches (25 cm)
- Manually Operated Winch with Collapsible Handle
- Braking System allows 360 degree Stopping Capability
- Robust, 304 Stainless Steel Housing for Rugged Applications
- Automatic Gain Control

Cable:	350 feet (107 meters) of Kevlar Reinforced Coaxial Cable
Cable Head:	Detachable Laval Quick-Connect Cable Head, Pressure Rated to 5,000 PSI with Built in Strain Relief
Power Supply:	12VDC Power Cable. Optional 12V Battery Pack or 120VAC/220VAC Adaptor
Monitor:	7 inch LCD Color Monitor with Adjustable Mounting Bracket
Waterproof:	Pressure tested and waterproof to 750 psi

Rausch MinCord Pipe Inspection Camera (13mm x 30m)

- The minCord push camera reel is only 9" in diameter
- SD card reader, up to 4 GB
- The KK13 camera is only 0.51" in diameter
- The 3.5" TFT-LCD monitor doubles as the system control unit
- The KK13 camera is super flexible for tight bends in the pipe
- Application range up to 3" pipe diameter

Cable Reel:	50 ft. (15m) of flexible push-pull cable (available up to 100')
Sonde:	Optional - 512 Hz standard (33 kHz special order)
Battery:	2100 mA battery for more than 2.5 hrs operation
Camera Head:	13 mm
Size:	9" x 11" x 4" (L x H x W)
Weight:	2.5 lbs

Ask About Our Rental Protection Plan (RPP)

Pearpoint P332 Flexiprobe 200'

- Sharp, digital images on TFT-LCD monitor
- Compact, weatherproofed comand center for optional video recording capability
- Maintenance-free white LED lighting and sapphire lens
- Detachable Flexiprobe controller
- Digital video and stills recording for quick integration in reports
- IP53 rated control unit for use in all weathers
- Choice of mains and battery power making it easy to use in areas with unreliable power sources

Camera Head:	1" x 1.5" (25mm x 39mm) stainless steel
Resolution:	640 x 480
Light Source:	Super bright LED's
Monitor:	200mm color TFT
Push Rod:	0.5" x 200' (10mm x 60m) semi rigid pushrod
Power:	110V - 240V auto sensing mains

Pearpoint P340 Flexiprobe 200'

- One-touch recording to USB memory sticks and compact flash cards
- Outstanding picture quality from toughened cameras
- Super-flexible Plumbers system for residential and commercial plumbing
- High quality digital video with digital pan and zoom
- On-site inspection reports with integrated writer
- Weatherproof, robust and truly portable

Camera Head:	2" camera head / option to a 1"
Battery:	14.8V, 6.6Ah (98Wh)/ Up to 1 day's typical usage, 7hrs view only / 4hrs continuous recording
Display:	8" Industrial TFT
Storage:	High speed flash card or USB flash drive
Resolution:	640 x 480
Rod:	200' length
Lighting:	Ultra bright white LED's

Pearpoint P341 Camera System

- One-touch recording to USB memory sticks and Compact Flash cards
- Outstanding picture quality from toughened cameras
- Super-flexible Plumbers system for residential and commercial plumbing
- High quality digital video with digital pan and zoom
- On-site inspection reports with integrated writer
- Weatherproof, robust and truly portable

Camera Head:	2" camera head/ option to a 1"
Battery:	14.8V, 6.6Ah (98Wh)/ Up to 1 day's typical usage, 7 hrs view only / 4hrs continuous recording
Display:	8" Industrial TFT
Resolution:	640 x 480
Rod:	200' length
Lighting:	Ultra bright white LED's

Pearpoint P342 Flexiprobe

- One-touch recording to USB memory sticks and compact flash cards
- Outstanding picture quality from toughened cameras
- Super-flexible Plumbers system for residential and commercial plumbing
- High quality digital video with digital pan and zoom
- On-site inspection reports with integrated writer
- Weatherproof, robust and truly portable

Camera Head:	2 inch camera head/ option to a 1 inch
Battery:	14.8V, 6.6Ah (98Wh)/ Up to 1 day's typical usage, 7hrs view only / 4hrs continuous recording
Display:	8" Industrial TFT
Construction:	Powder-coated tubular steel frame
Rod:	200' cable length
Lighting:	Ultra bright white LEDs

Pearpoint P343 FlexiProbe 500' (2 Camera Head)

- One-touch recording to USB memory sticks and compact flash cards
- Outstanding picture quality from toughened cameras
- Super-flexible Plumbers system for residential and commercial plumbing
- High quality digital video with digital pan and zoom
- Inspection reports prepared on-site with report writer

Weatherproof, robust and truly portable

Camera Head:	2" camera head
Battery:	14.8V, 6.6Ah (98Wh) / Up to 1 day's typical usage, 7 hrs view only / 4 hrs continuous recording
Display:	8" Industrial TFT
Construction:	Powder-coated tubular steel frame
Rod:	500' cable length

Pearpoint P374 IS Camera System

- 60m reinforced pushrod
- Intrinsically Safe to EEx ia IIC T6 for Zone 0 Hazardous areas
- Integrated high resolution screen & QWERTY keypad
- Waterproof to IP68 (11Bar)
- CMOS camera technology and white LED's for increased performance and reliability
- Built-in electronic rod-counter
- Optional DVR

Camera Head:	2" head standard (1" available upon request)
Battery:	110V AC 0r 12VDC
Display:	8" Industrial TFT
Resolution:	510 x 492
Rod:	200 ft length
Lighting:	Maintenance free LED's

Pearpoint P571 EX Flexicoiler 150m

- Explosion Proof
- Systems are approved, labelled and listed by nationally recognized NRTL for use in Class 1, Div 1, Gas Groups C & D, T3 Environments
- Coiler running 500 feet (150m) of rod
- Built-in sonde (8.125kHz)
- Waterproof to 11 Bar (150 PSI)
- Video in and Video out VCR connectors for recording and playback of surveys

Camera Head:	5.3"
Battery / Power:	100 - 240V AC
Display:	5.6" display for easy viewing
Resolution:	760 x 582
Lighting:	10W-30W depending on camera head
Rod/Cable Length:	500' cable length

Wohler VIS 700 HD-Video Inspection System

- High definition, razor-sharp image quality
- Position of camera head indicated in the display
- Keep your sense of orientation with home function – camera aligns itself automatically
- 4 hr flexibility – two rechargeable batteries for mobility
- Transmit images and video via Wireless LAN
- 360° degree pan and 180° tilt camera head

Length:	100 ft
TFT-Display:	7" / 16:9 format
Light:	10 white LED's
Weight:	2 lb
Power:	3.7 V, 11.4 Ah rechargeable Li-Ion battery
Field of View:	360 degrees

Ask About Our Rental Protection Plan (RPP)

Wohler 350 Plus Video System + IL200 Locator   *Item # 54758*

- Video inspection system proven over many years – now with CCS picture quality
- Position of camera head indicated in the display
- Keep your sense of orientation with home function – camera aligns itself automatically
- 4 hr flexibility – two rechargeable batteries for mobility
- Built-in location transmitter for wireless detection
- 360° degree pan and 180° tilt camera head

Length:	100 ft
TFT-Display:	7" / 16:9 format
Light:	12 mini LED's
Weight:	1 lb
Power:	Space for 2 rechargeable batteries, each 12 V or via power pack
Field of View:	360 degrees

Wohler 350 Video Inspection System   *Item # 54231*

- Video inspection system proven over many years – now with CCS picture quality
- Position of camera head indicated in the display
- Keep your sense of orientation with home function – camera aligns itself automatically
- 4 hour flexibility – two rechargeable batteries for lasting mobility
- Built-in location transmitter for wireless detection
- 360° degree pan and 180° tilt camera head

Length:	100 ft
TFT-Display:	7" / 16:9 format
Light:	12 mini LED's
Weight:	1 lb
Power:	Space for 2 rechargeable batteries, each 12 V or via power pack
Field of View	360 degrees

Wohler 220 Video Inspection System   *Item # 54231*

- 1" diameter stainless steel camera head
- 65' distance indicated push rod cable
- Super bright TFT color monitor
- Dual rechargeable 12V batteries
- Camera head waterproof up to 100'
- RCA video ouput for recording

TFT Size:	5.6"
Length:	65'
Weight:	12 oz
Power:	Two rechargeable batteries 12 V / 1.2 Ah
Field of View:	120 degrees
Light:	12 mini LED's

Wohler 340 Video Inspection System   *Item # 54232*

- 360° degree pan and 180° tilt camera head
- Large flip up 7" LCD
- SD card storage
- USB file transfer
- 1.5 inch camera head x 2"
- Digital distance meter
- VIS 340 Plus includes additional 1" camera head

Monitor Size:	7" x 4.5" x 1.3"
Field of View:	360 degree
Weight:	1 lb
Power Supply:	Two rechargeable batteries 12 V / 1.2 Ah
Length:	100'
Light	12 mini LED's

RIDGID nanoReel (SeeSnake®) Industrial Video Inspection System

- Small diameter and tight turn radius camera allows lines up to 85' (25 m) to be inspected with tight turns in 1" (25 mm) lines
- Lightweight and compact unit allows for easy transport and efficient storage
- Interchangeable drums let you change out the inner drum depending on the application
- D30 and D65S – Small diameter with tight turns, 1 1⁄2" to 4" (40 - 100 mm) P-traps, toilet traps, pool lines up to 65' (20 m)

Camera Head:	0.62 (15.5 mm)
Cable Length:	85' (25 m)
Weight:/ Size:	9.5 lbs / 33.7cm x 16.8cm x 44.5cm
Resolution:	510 x 496
Sonde:	512 Hz
Counter:	Not available

RIDGID Mini See Snake 200'

- Choose Mini-SeeSnake when portability and maneuverability are crucial (multi-story buildings, roof tops, confined areas, etc.)
- 100% hardened stainless steel camera head for increased durability
- Flexible transmitter makes locating easier and is fully compatible with RIDGID NaviTrack II / NaviTrack Scout
- Improved push cable and smaller camera head to push farther through tighter spots
- Rugged, high-intensity lights for improved visibility
- Ideal for inspecting 1¼' to 6' lines

Maximum Run:	200'
Waterproof:	330' (100M)
Camera Resolution:	380 horizontal x 350 vertical
Lighting:	15 red LED's with variable intensity control

Inuktun Spectrum 90 Camera System

- Robust, reliable and lightweight construction
- Compact size for confined spaces and portability
- Operate in air and underwater
- Permanent or mobile installations
- Depth rated to 100' / 30 m
- Pan / tilt position feedback
- Built-in inclinometer

Diameter:	3.5" / 90 mm
Length:	11" / 280 mm + connector
Material:	Aluminum or 316 stainless steel
Imager:	1/4-type Exview HAD CCD
Resolution:	460 TV lines
Focus:	Auto or manual (remote)
Lights:	3x high intensity variable LED's
Power:	Voltage (Nom): 40-54 VDC65 W

Ask About Our Rental Protection Plan (RPP)

Inuktun VT100 MKII Crawler System

- Applications: municipal (sewer/water), nuclear, oil & gas (onshore/offshore), petrochemical, tank inspection (internal/external), subsea/ship hull inspection, well/caisson inspection (drop camera operation)
- Easily configurable for small diameters, in parallel configuration fro larger pipes and ductwork, or with a magnetic attachment for vertical and inverted travel on ferrous surfaces.
- Portable and easy to set up
- Low maintenance

Tether Length:	300m / 1,000ft
Depth Rating:	60m / 200ft
Camera:	Front Facing Camera: Spectrum 45™
Operating Temperature:	0°-40° C / 32°-122° F

Inuktun VT100 Mini Crawler

Item # 54201

- Adjustable for a range of pipe diameters
- Easily configurable for round pipe or flat surface operation
- Waterproof to 100' / 30 m
- Can penetrate up to 600' / 183 m
- Low maintenance
- Steerable in the parallel configuration

Tether Length:	Tether Cable 500'/150m; Multi-conductor; Abrasion Resistant Rilsan
Pipe Diameter:	Adjustable for a range of pipe diameters from 6" / 15 cm to 24" / 60 cm
Camera:	Type Inuktun Spectrum 45 pan & tilt camera
Operating Temperature:	0º to 50º C (32º to 122º F)
Power:	110/220 VAC

Inuktun VT150 Parallel Crawler
(with optional 1000' Winch and Tether)

Item # 54190

- Waterproof to 200' / 60 m
- Long range specifications up to 1,500' / 457 m
- High resolution color camera option for 360 degree views and close-ups
- Intuitive controls for ease of operation
- Clutched tracks for easy retrieval
- Steerable in parallel configuration

Tether Cable:	Up to 1,500' / 457 m (multi-conductor abrasion resistant Rislan Kevlar 700 lb strength member, yellow jacket)
Pipe Diameter:	6" / 150 mm to 12" / 300 mm inline chassis or 12" / 300 mm and greater parallel chassis
Operating Temperature:	0°-50° C (32°-122° F)
Power:	110/220 VAC

MiniCam Proteus Crawler Camera Inspection System

Item # 55632

- Drain and pipline inspection, CCTV surveys, tank, void, cavity or conduit inspection
- With a steerable 6-wheel drive, the Proteus system is robust, lightweight, durable and able to operate in harsh working conditions.
- Camera: 360° Pan & Rotate Camera
- Reporting: Images and Videos   (JPEG and MPEG-4)
- Control unit: CCU 208 Digital Control Unit, Highly Portable

Cable Length:	Up to 200m
Pipe Diameter:	6" / 150 mm
Pressure Rating:	1 bar (14.50psi)
Battery:	Up to 5 hours

Pearpoint P350 Crawler | P354 (4") P356 (6")

- Compact and tough command module, can be left on the drum or fitted where convenient
- IP53 weather proofed and light weight (as little as 12lbs)-(5.5kg)
- Splashproof keyboard for text entry and on-site comprehensive reporting systems with XML and HTML output
- Intuitive tractor control options, compatible with third party USB gamepads

Temperature (Operating):	14 to 122°F (-10 to 50°C)
Power Requirements:	12-24VDC, 40W/ Push Rod Battery 14.8V
Tether Cable:	Up to 1,000'
Pipe Diameter:	1 ¼"(35mm) to 24" (600mm) in diameter
Camera:	Forward and full pan and tilt view

Olympus iSpeed Black & White Video Camera

- Analyze motion by providing a slow motion view of high-speed events
- Recording speeds of up to 33,000 fps
- 800 x 600 resolution at 1,000 fps
- Ethernet link for image download and PC control
- Various trigger modes including (ROC) Record on Command and (BROC) Burst
- Instantly edit the video footage (no PC is required)

Speed Controller Display Unit:	Display: 8.4" LCD daylight viewing Input Voltage: 12V ±10% power consumption: 8W maximum (also available - b/w LCD)
i-Speed Remote Control Pad:	Input voltage: 12V power consumption: 1W maximum
Camera Power:	Input voltage: 12V DC ±10% (110v-240V AC) mains adaptor supplied - power consumption: 36W Maximum

RD 4000RX Above Ground Locator

- Fast one-button depth and current measurement (CM)
- Current Direction (CD) helps identify the target line in congested areas
- Fault-find pinpoints cable sheath faults using an accessory a-frame
- Weather sealed RS232, accessory port and earphone socket
- Downloadable features, frequencies and upgrades
- High resolution signal strength meter for precision
- Available with RD 4000 T3 transmitter

Frequency:	8.19 kHz
Visual Indication:	Liquid crystal display
Locate Accuracy:	±5% of depth, good condition
Batteries:	Four alkaline size D
Maximum Depth:	Up to 6m

RD 7000

- Bluetooth® connectivity to external compatible devices (marker models)
- Compass orientation display
- Accessory connection
- Headphone connection
- IP54 environmental protection
- High visibility reflective safety arrows
- Available with RD 5 trasmitter

Visual Indication:	High contrast LCD with auto-backlight
Maximum Depth:	Up to 7m
Locate Accuracy:	± 5% of depth
Batteries:	Cable and pipe locator: two D-cells (LR20) or optional lithium-ion battery pack, Marker locator: lithium-ion battery pack or three D-cells (LR20), Transmitter: eight D-cells (LR20) or optional lithium-ion battery pack

Ask About Our Rental Protection Plan (RPP)

RIDGID Scout Sonde & Line Locator

- Distinctive on-screen markers guide you to the target
- Displays real-time signal strength with no need to adjust gain
- Calculates depth over the target
- Provides a map to trace energized lines at four different frequencies as well as passive AC

Weight:	3 lbs
Power Source:	Four alkaline C-cell batteries
Sonde	16, 512, 640, Hz 874 and 33 KHz

Olympus BondMaster 1000e+

- Improved processor speed (up to 10 times faster)
- Full multimode capability: pitch-catch (RF, impulse, swept), MIA (mechanical impedance analysis), resonance
- Customer-interchangeable displays (high-bright electroluminescent, monochrome liquid crystal and color liquid crystal)
- Improved screen displays: split-screen displays (P-C RF, P-C impulse), outdoor display
- Lightweight

Display:	Customer-interchangeable QVGA displays (320 pixels x 240 pixels): color or monochrome LCD, high-bright electroluminescent
Operating Temperature:	−20 °C to 60 °C (−4 °F to 140 °F)
Classification:	Complies with Class 2 specifications from the MIL-PRF-28800F handbook
Altitude:	Maximum operating and non-operating altitude is 4,600 m (15,000')
Weight:	4.4 lbs

Pipehorn LD-12 Detector (Water Leak Detector)

- 10 easy-to-use filter combinations
- Large meter to help pinpoint with precision
- Limiter switch to protect your ears
- Noise reducing headphones available

Frequency Range:	100 Hz to 1200 Hz (13 dB) w/ Filter-Thru OFF 15 Hz to 30,000 Hz (13 dB) w/ Filter-Thru ON
Power (amplifier):	6 AA alkaline batteries
Weight:	31 oz
Headset:	Aviation grade deluxe headset

UE Systems Ultraprobe 9000

- Open platform software
- Spin and Click™ Technology
- 120 dB dynamic range
- 400 memory locations record (dB, frequency, time, date, text, operation mode and more)
- Acoustic isolating headphones
- Environmentally friendly rechargeable batteries
- Easy interface for most vibration analyzers
- Upload and download data via USB

Frequency Range:	20 kHz to 100 kHz (tunable in 1 kHz increments)
Battery:	NiMH rechargeable
Headset:	Deluxe noise attenuating headphones - over 23 dB of noise attenuation - meets or exceeds ANSI specifications and OSHA standards

Thermo 42i NO-NO2-NOx Analyzer

Item # 54370

- Enhanced user interface with one-button programming and large display screen
- Ethernet connectivity for efficient remote access
- Flash memory for increased data storage and user downloadable software
- Dual-range and auto-range
- Continuous operation in either the NO or NOx modes
- Response time 90% full scale in less than 5 seconds
- Temperature and pressure correction

Detection Method:	Chemiluminescence
Preset Ranges:	Multiple:0 - 0.05 up to 100 ppm / 0 - 0.1mg/m3 up to 150 mg/m3
Linearity:	+/-1% full scale
Outputs:	Selectable voltages up to 10VDC, RS232/RS485, TCP/IP Optional Isolated Currents - 0-20 or 4-20 mA

Thermo 48i CO Analyzer

Item # 54372

- Dedicated communications processor
- Enhanced user interface with one-button programming and large display screen
- Dual-range and auto-range
- Ethernet connectivity for efficient remote access
- Linear through all ranges
- Temperature and pressure correction
- Flash memory for increased data storage and user downloadable software

Detection Method:	Gas Filter Correlation - Infrared; GFC-IR
Preset Ranges:	Multiple: 0-50 up to 10,000 ppm / 0-50, up to 10,000 mg/m3
Linearity:	+/-1% full scale < 1000 ppm +/-2.5% full scale > 1000 ppm
Outputs:	Selectable voltages - up to 10VDC, RS232/RS485, TCP/IP Optional isolated currents - 0-20 or 4-20 mA

Thermo 43i SO2 Analyzer

Item # 54385

- High sensitivity and fast response time
- Internal sample pump
- Linear through all ranges
- Insensitive to changes in flow and ambient temperature
- Ethernet connectivity for efficient remote access
- Enhanced user interface with one-button programming and large display screen
- Flash memory for increased data storage and user downloadable software

Detection Method:	Pulsed Fluorescence
Preset Ranges:	Multiple: 0-0.05 up to10 ppm / 0-0.2 up to 25 mg/m3
Linearity:	+/-1% full scale < 100ppm
Outputs:	Selectable voltages up to 10VDC, RS232/RS485, TCP/IP Optional Isolated Currents - 0-20 or 4-20 mA

Thermo 410i CO2 PPM Analyzer

Item # 54403

- Ethernet connectivity for efficient remote access
- Enhanced user interface with one-button programming and large display screen
- Flash memory for increased data storage and user downloadable software
- User-selectable reporting capabilities
- Linearity through all ranges

Detection Method:	Advanced Non-Dispersive Infrared (NDIR)
Preset Ranges:	Multiple: 0 - 200 up to 10,000ppm
Linearity:	+/- 1.5% of span (at concentrations of 10% - 100% of span)
Outputs:	Selectable voltages up to 10VDC, RS232/RS485, TCP/IP Optional Isolated Currents - 0-20 or 4-20 mA

Ask About Our Rental Protection Plan (RPP)
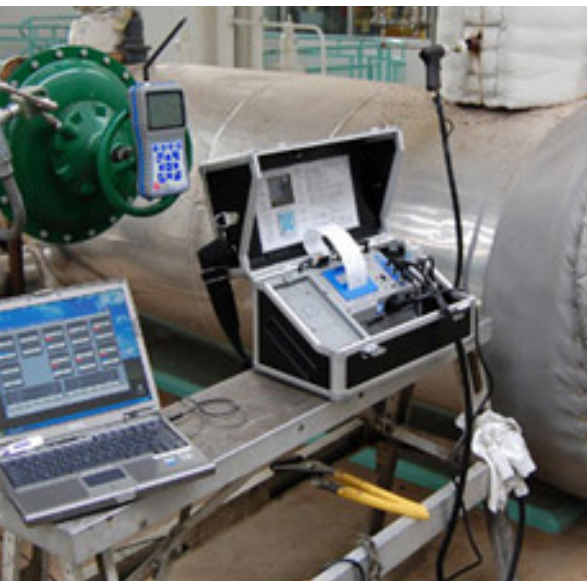
CAI 602 Dual Bench ppm CO2 Analyzer

Item # 54386

- Auto Calibration and Ranging
- Comprehensive Diagnostics/ Data Archiving
- Measures up to 3,000 ppm Full Scale CO2

Detection Method:	Non-dispersive Infrared (NDIR)
Available Ranges:	0-1,000, 2,000, or 3,000 ppm
Repeatability:	+/- 1% Full Scale
Noise:	Less Than 1% Full Scale
Warm-Up Time:	Approximately 2 Hours

Thermo 450i TRS / H2S

Item # 54399

- Pulsed excitation and intensity stabilization
- Reflective bandpass filters
- Stable, lone-life UV source
- Superior zero stability
- Temperature stabilization reaction chamber
- Features such as an ethernet port as well as flash memory for increased data storage

Det. Method:	Pulsed Fluorescence
Preset Ranges:	0 - 0.05 up to 10 ppm / 0 - 0.2 up to 25 mg/m³
Linearity:	+/-1% full scale
Converter Efficiency:	> 80% H2S to SO2 - other sulfur compounds can be converted at varying percentages
Outputs:	Selectable voltages up to 10VDC, RS232/RS485, TCP/IP Optional Isolated Currents - 0-20 or 4-20 mA
Inputs:	16 digital inputs, 8 0-10vdc analog inputs

Thermo 49i Ozone Monitor

Item # 54400

- Enhanced electronics design optimizes product commonality
- 20 second response time
- Ethernet connectivity for efficient remote access
- Temperature and pressure correction are standard features

Detection Method:	UV Photometric Technology
Preset Ranges:	0 - 0.05 up to 200 ppm / 0-0.1 up to 400 mg/m³
Zero Drift:	<1.0 ppb
Span Drift:	<1% full scale per month
Linearity:	+/-1% full scale
Outputs:	Selectable voltages up to 10VDC, RS232/RS485, TCP/IP Optional Isolated Currents - 0-20 or 4-20 mA

Thermo 146i Multi-Gas Calibrator

Item # 54946

- Calibrator supplies precise levels of ozone, carbon monoxide, non-methane hydrocarbons, sulfur dioxide, nitric oxide and nitrogen dioxide or other gases
- Mass flow controllers dilute standard gases for the calibration of gas monitoring instrumentation
- Microprocessor-based calculation increases operator availability
- Unit can be operated remotely by a data logger or to perform multipoint calibrations
- Gas phase titration for generation of O3 and NO2

Response Time:	99% of target (at manifold) within 60 seconds
Linearity:	0.5% full scale
Outputs:	10 - relay and 8 - 24VDC Solenoid
Zero Air Requirements:	10 SLPM @ 30 PSI Optional ranges: 20 SLPM @ 30 PSI

Ask About Our Rental Protection Plan (RPP)

Environics Multi-Gas Diluter 6103

- Automated leak test function
- Automatic calculation of dilution and span gas flows
- Internally-stored mass flow controller calibration data
- User-friendly interactive software with plain language prompts is simple to use

Performance (Accuracy):	Concentration: ± 1.0% setpoint / Flow: ± 1.0% setpoint
Ozone Generator:	Range: 0.02 - 0.5 ppm at 5 - 10 slpm / Optional: 0.05 - 1.0 ppm at 5 - 10 slpm
Linearity:	0.3% F.S.O.
Operating Pressure:	Min: 20 psig (1.38 Bar) / Max: 30 psig (2.07 Bar)
Wetted Surfaces:	Tubing: PTFE; MFCs: 316 SS / Seals: Viton; Glass Chambers: Pyrex
Operating Modes:	Keypad - RS-232 serial data interface; I / O Control (8 in / 8 out)

Teledyne / API T701 Zero Air Generator

- Regenerative dryer for water removal independent of inlet dewpoint
- Long life scrubbers for SO2, NO, NO2, O3, H2S, and NH3
- Optional CO and/or Hydrocarbon scrubbers
- Automatic water drain
- Automatic pump control based on flow demand
- May be used to provide combustion air for FID (with HC Scrubber option)
- Source of purge air for permeation tube ovens
- Zero air for Ozone Generators

Output:	20 SLPM @ 30 psig
Dewpoint:	-20°C up to 15 LPM -10°C above 15 LPM
Dryer:	Regenerative heatless dryer with life-time of greater than 5 years
Output Concentra-tions (max):	SO2 < 0.1 ppb, H2S < 0.1 ppb, NO < 0.1 ppb, NO2 < 0.1 ppb, O3 < 0.4 ppb, NH3 < 0.1 ppb, CO < 20 ppb (requires optional scrubber), Hydrocarbons < 5 ppb (requires optional scrubber)
Power:	115V, 60 Hz 220-240V, 50/60 Hz

Thermo 42i HL NO-NO2-NOx Analyzer
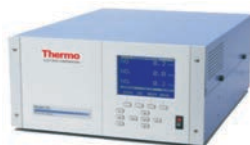
- Enhanced user interface with one button programming and large display screen
- Ethernet connectivity for efficient remote access
- Flash memory for increased data storage and user downloadable software
- Dual range and auto range
- Can be operated continuously in either the NO or NOx modes
- Response times of less than 5 seconds

Detection Method:	Chemiluminescence
Preset Ranges:	0-10 up to 5000 ppm
Linearity:	+/- 1% Full scale
Lower Detecable Limit:	50 ppb
Outputs:	Selectable voltages up to 10VDC, RS232/RS485, TCP/IP Optional Isolated Currents - 0-20 or 4-20 mA

Thermo 42i LS - Low Source NO/NO2/NOX

- Dual range and auto range
- Five-second response time
- Temperature and pressure correction
- User-selectable alarm levels for concentration

Detection Method:	Chemiluminescence
Measure-ment:	0 - 0.05 up to 100 ppm; 0 - 0.1 up to 150 mg/m3
Detection:	0.01 ppm (1 minute average time)
Linearity:	+1% full scale
Outputs:	Selectable voltages up to 10VDC, RS232/RS485, TCP/IP Optional Isolated Currents - 0-20 or 4-20 mA

CAI 650 NOxygen Analyzer (NOx & O2)

Item # 54406

- Auto calibration
- Dual analyzer reads NOx and O2
- Automatic calibrations may be activated locally or remotely or at preset times
- Display NO, NOX, NO2, and O2 via selectable time and hold commands

Methods of Detection:	NOx - Chemiluminescence / O2 - Paramagnetic
NO/NOx Ranges:	0-3 to 0-3000 ppm NO/NOx
Oxygen Rate:	0-25%
Linearity:	Better than 1% of full scale
Outputs:	(RS232 and TCP/IP) 0-1, 0-5, 0-10 VDC 4-20mA

Thermo 48i HL- CO Analyzer

Item # 54372

- Dedicated Communications Processor
- Highly Specific to CO
- Remote Performance Diagnostics
- Self Aligning Optics

Detection Method:	Gas Filter Correlation, Infrared (GFC- IR)
Preset Ranges:	0-50 up to 20,000 ppm / 0-50 up to 20,000 mg/m3
Lower Detectable Limit:	4 ppm
Linearity:	+ 2% full scale
Outputs:	Selectable voltages up to 10VDC, RS232/RS485, TCP/IP Optional Isolated Currents - 0-20 or 4-20 mA

Ametek 9000 - SO2 Analyzer

Item # 54380

- Excellent for Low PPM Ranges
- Simultaneous dual range analysis
- Very Stable

Detection Method:	Ultraviolet - Photometric
Ranges:	0-100 up to 5,000 ppm
Linearity:	+/-1% of Full Scale
Outputs:	Two (expandable to six) isolated Analog Outputs, each configurable to 0-20 mA, 4-20 mA, 0-5V DC

Servomex 1440 CO2 Analyzer

Item # 54107

- Excellent stability and performance
- No electrochemical cells to replace or renew
- Concentration and low flow alarms

Detection Method:	Infrared
Range:	0-25% std / 0-100% with high level transducer
Outputs:	4-20mA / 0-1V one per transducer
Linearity:	1% of selected range

Ask About Our Rental Protection Plan (RPP)

Thermo 410i HL CO2 Analyzer

- User-selectable reporting capabilities
- Expanded ambient temperature operating range
- High performance over a wider range of concentrations
- Linear through all ranges

Detection Method:	Non-Dispersive Infrared (NDIR)
Preset Measurement Ranges:	0 to 0.5 up to 25%
Detection Limits:	20ppm (300 second averaging time)
Outputs:	Selectable voltages up to 10VDC, RS232/RS485, TCP/IP Optional Isolated Currents - 0-20 or 4-20 mA

Servomex 1440 O2 Analyzer

- Measures one or two gases
- Concentration and low flow alarms
- Voltage and current outputs
- Bright LED display

Detection Method:	Paramagnetic
Range:	0-25% and 0-100%
Flow:	1-2 L/M
Linearity:	+/- 1% full scale

Teledyne T803 O2/CO2 Analyzer

- Large, vivid, and durable color graphics display with touch screen interface
- Ethernet, RS-232, and (optional) USB com ports
- Adaptive signal filtering optimizes response time
- Temperature & pressure compensation
- Comprehensive internal data logging with programmable averaging periods

Detection Method:	O2 - Paramagnetic; CO2 - IR Absorbtion
Ranges:	User Selectable: O2 0-100%; CO2 0-20%
Lower Detectable Limit:	< 0.04 %
Linearity:	< ±0.1%

Horiba PG-350E Portable Gas Analyzer

- Robust design
- Measure NOX, SO2, CO, O2, CO2 simultaneously
- Color touch panel
- SD memory card slot

Detection Methods:	NOx - Chemie; SO2,CO,CO2 - NDIR; O2 - Zirconia
Ranges:	NOx - 0-25 to 2500ppm; SO2 - 0-200 to 1000ppm; CO - 0-200 to 5000ppm; CO2 - 0-20 vol%; O2 - 0-25 vol%
Data:	On-board data-logging

Horiba VIA-510 CO Analyzer

- Monitors concentrations of specific sample gas
- Measurement results are displayed on the front panel and are available to remote datalogging systems through an industry-standard interface
- Digital ouputs: range setting information
- Digital alarms indicate malfunctions or calibration failure
- Digital inputs include zero cal, span cal and data hold

Detection Method:	Non-Dispersive Infrared (NDIR)
Ranges:	0-5 to 100%
Performance:	Lowest detection limit: 1.0 ppm
Outputs:	0-1 VDC, 0-10 VDC or 4-20 mA
Range Inputs:	4 inputs BCD code

Thermo 15i HCl Analyzer

- Enhanced electronics design optimizes product commonality
- Enhanced user interface with one button programming and large display screen
- Ethernet connectivity for efficient remote access
- Flash memory for increased data storage and user downloadable software

Detection Method:	Gas Filter Correlation, Infrared (GFC- IR)
Preset Ranges:	0-5 up to 5,000 ppm / 0-10 up to 7,500 mg/m3
Linearity:	+/-2% full scale <1000 ppm, +/- 5% full scale>1000 ppm
Outputs:	Selectable voltages up to 10VDC, RS232/RS485, TCP/IP Optional Isolated Currents - 0-20 or 4-20 mA
Inputs:	16 Digital Inputs (std), 8 0-10vdc Analog Inputs (opt)

Environics Multi-Gas Dilutor 4040

- Allows multi-point calibration of analyzers
- Automatic calculation of dilution and span gas flows
- Significantly reduces the number of cylinders needed to perform compliance tests
- Internally-stored Mass Flow Controller calibration tables

Performance (Accuracy):	Concentration: ± 1.0% setpoint / Flow: ± 1.0% setpoint
Dilution Ratios:	up to 1,000:1
Performance Temp:	59° - 95°F
Note:	Requires PC to run unit

Teledyne T100H SO2 Analyzer

- Easy, accurate and dependable meaurements of low level SO2
- Selectable ranges with dual range capability
- Temperature and pressure compensation
- Comprehensive internal datalogging with programmable averaging periods
- Large, vivid and durable color graphics display with touch screen interface
- Internal Sample Pump

Detection Method:	UV Fluorescence
Ranges:	Up to 0-5,000 ppm
Lower Detectable Limit:	0.2 ppm
Linearity:	+/- 1% of Range
Analog Output Ranges:	mV, 1V, 5V, 10V

Ask About Our Rental Protection Plan (RPP)

Teledyne API T200H NOX Analyzer

Item # 54581

- External Sample Pump with O3 Scrubber
- Independent ranges and auto ranging
- Adaptive signal filtering optimizes response time
- Temperature & pressure compensation

Detection Method:	Chemiluminescence
Ranges:	User Selectable 0-5,000PPM
Lower Detectable Limit:	40 ppb (2x noise as per USEPA)
Analog Output Ranges:	0.1 V, 1 V, 5 V or 10 V
Linearity:	1% of full scale

J.U.M. 3-500 THC Analyzer

Item # 54378

- All sample wetted components are housed in heated oven, controlled at 190C
- Built-In sample and control/burner air pressure pumps
- Microprocessor PID-type temperature controller
- Optional dual fuel gas switch, select 100% H2 or 60/40 mixed fuels (He or N2)

Detection Method:	Flame Ionization Detection (FID)
Linearity:	+/- 1% Full scale
Ranges:	0-10 up to 100,000 ppm
Output:	0 to 10V DC

J.U.M. 109L Methane/Non-Methane THC Analyzer

Item # 54926

- Detects methane concentrations to EPA Method 25 and 503
- Perfect for applications such as stack gas emissions monitoring, ambient air monitoring to low concentration levels, thermal reactor and combustion emissions monitoring, and raw automotive and diesel exhaust analysis
- Built-in sample pump, sample filter and all pressure and flow regulating components
- Includes power cord and analog output cable

Detection Method:	Flame Ionization Detection (FID)
Linearity:	+/- 1% Full scale
Ranges:	0-10 up to 100,000 ppm
Power:	110V 60Hz
Output:	0 to 10V DC
Response Time:	90% of full scale in 1 second (THC), 4 seconds (NMHC)

CAI 600 Methane/Non-Methane THC Analyzer

Item # 54404

- Automatic fuel/air shut-off
- Auto ranging / auto calibration
- He/H2 FID Fuel Required
- Zero Air needs to be connected for combustion

Detection Method:	Flame Ionization Detection (FID)
Ranges:	0-3 up to 0-30,000 ppm
Linearity:	+/- 1% Full scale
Outputs:	Analog outputs - user scalable

Thermo 51i THC Analyzer

- Adjustable ranges
- Real-time correction of THC readings
- Temperature controlled detector oven and sampling system
- Reporting of alarm conditions

Detection Method:	Flame Ionization Detection (FID)
Ranges:	0-1 up to 10,000 ppm
Detection Limit:	0.05 ppm (10 second averaging time)
Linearity:	+/- 2% full scale

Thermo 55i Methane/Non-Methane THC (GC Column)

- RS 232 Communication System and PC base software
- Automatic flame sensing and ignition
- Enhanced user interface with one-button programming and large display screen
- In-line particulate filter
- Zero Air & H2 fuel (combustion) and N2 (Carrier) gases required
- Real Time correction of THC Readings
- Data storage and user downloadable software

Preset Ranges:	0-20, 200, 2000 ppm
Linearity:	+/- 2% full scale
Zero Drift (24 Hour) - 55c:	Standard: +/- 1.0PPM
Sample Flow Rate:	0.5 lpm, minimum
Outputs:	Selectable Voltage, RS232/RS485, TCP/IP, 10 Status Relays, and Power Fail Indication 0-20 or 4-20 mA Isolated Output

VIG 20 THC Analyzer

- Microprocessor-based, oven-heated
- Internal combustion air pump
- Automatic start-up/ignition, fuel shut-off and flame-out indicator
- Heated sample pump head
- Two stage sample filter with exchangeable sintered stainless steel elements
- Automatic ranging
- Choice of hydrogen or hydrogen/helium fuel
- Easy-to-use software

Detection Method:	Flame Ionization Detection (FID)
Range:	0-100 up to 100,000ppm
Precision:	+/-1% of full scale
Oven Temperature:	Adjustable 200 to 400F
Output:	4 to 20mA and 0 to 1, 5 or 10V

Ask About Our Rental Protection Plan (RPP)

VIG 20/2 Dual Channel THC Analyzer

Item # 54383

- Automatic start-up / ignition
- Choice of Hydrogen or Hydrogen/Helium fuel
- Heated sample pump heads
- Two stage sample filters with exchangeable sintered stainless steel elements
- 2 Separate FIDS and sample flow paths
- Graphic, backlit, 240W x 64H pixels, high contrast, wide viewing angle

Detection Method:	Flame Ionization Detection (FID)
Ranges:	0-10 up to 0-100,000ppm (lower detection limit 0.01ppm)
Dual Channels:	4 Ranges /amplifier, 2 amplifiers / analyzer
Operation Require-ments:	Fuel - UHP Hydrogen @ 18psi incoming pressure (standard)
Linearity:	+/-1% of full scale
Outputs:	0-10VDC (standard)

VIG 210 Methane / Ethane Analyzer

Item # 54393

- Adjustable alarm and oven settings
- Two heated sample pump heads
- PTFE isolated detectors (FIDs)
- Two stage sample filter with exchangeable sintered stainless steel elements

Detection Method:	Flame Ionization Detection (FID) - both channels
Range:	0-100 up to 100,000ppm (Lower detection limit 0.1ppm)
Linearity:	+/-1% of full scale
Oxygen Synergism:	Within 1% of full scale within selected range

ECOM J2KN Portable Emissions Analyzer

Item # 54108

- In-line flowmeter with 3.5+ lpm pump
- Measures O2, CO, NOx, Low NOx, SO2 and combustibles
- Stack Temperature and Draft Measurement
- Thermoelectric Gas cooler & Automatic
- Ambient, Flue Gas, Sensor Temperature Measurement

Oxygen:	Range: 0 - 21% vol.
Carbon Monoxide:	Range: 0 - 4,000 ppm
Nitric Oxide:	Range: 0 - 4,000 ppm
Nitrogen Dioxide:	Range: 0 - 500 ppm
Sulfur Dioxide:	Range: 0 - 5,000 ppm
Combusti-bles:	Range: 0 - 6.00 % vol
Gas Temp:	Range: 32 - 1800 F
Display:	Backlit, displays all parameters simulta-neously.
Sample Line:	15' high-temp flex hose w/thermocou-ple wire

Testo 350 Portable Emissions Analyzer

Item # 54105

- Touchscreen operation for quick operation and input
- Built-in printer and internal datalogger
- Battery and 240V mains operation
- Analysis unit with datalogging function allows measurement without control unit
- Highly accurate in lower ranges for CO and NO

Oxygen:	Range: 0 to 21% vol
Carbon Monoxide:	Range: 0 to 10,000ppm
Nitric Oxide:	Range: 0 to 3,000 ppm
Nitrogen Dioxide:	Range: 0 to 500 ppm
Sulfur Dioxide:	Range: 0 to 500 ppm
Carbon Dioxide:	Range: 0 to 25% vol.
Temperature:	Range: -40°C to +1,200°C

MKS MultiGas 2030 FTIR Continuous Gas Analyzer

Item # 54405

- 10-100 ppb sensitivity without moisture removal
- Transportable from site to site, sets up in minutes
- Simultaneous analysis and display of more than 30 gases
- Patented, linearized detector response assures all instruments maintain the same calibration
- Permanent calibrations eliminates the need for gas cylinders
- User-friendly software, simple operation, minimal training
- RJ-45 cross over ethernet communication
- Includes Notebook Intel Pentium® PC under Microsoft® Windows® XP

Measurement Technique:	FTIR Spectrometry
Gases and Vapors Measurable:	Most molecules except for N2, H2, and O2
Ranges:	Concentration setting between 10 ppb and 100% full scale
Spectral Resolution:	0.5 128cm^-1
Scan Time:	1 - 300 sec
Detector:	Liquid N2 - cooled MCT; TE - cooled MCT
Ouput:	XML, Analog, AK and others

Ask About Our Rental Protection Plan (RPP)

Personal Safety

PINE
Partner for Test & Measurement
Equipment Services and Data Solutions

For all your Consumables, PPE and Instrumentation needs.

Pine Environmental Voyager FTIR System

Item # 54405

Fourier Transform Infra-Red analysis has become the workhorse of the emissions testing industry The Voyager FTIR System is a complete extractive gas monitoring system capable of measuring multiple compounds quickly and simultaneously. The fully integrated system eliminates assembly and is easy to set up for 24/7 remote operational control.

Key Features

- Six individually controlled heating zones
- Eight separate calibration gas standards can be connected for system calibration and validation
- Integrated mass flow controller for calibration, flow control and dynamic spiking
- State-of-the-art intelligent simple pump module
- Heated pump in oven capable of running @ 10 lpm
- Built-in fail safe to protect equipment in case of power interruption
- Web-enabled pump box for remote control access
- Remote option uses proxicast internet router and cellular modem

Specifications

Status Lives:	6 status outputs, 2cude/cal mode, fault mode, standing mode, test mode, override mode, FID pip stating
Control Lines:	5 digital outputs (closed contact actuated), 1 control output (2 VDC) to probe solenoid option/2 x DP25, PM control line for the heater
Operating Temp:	65-80 °F
Oven Temp:	375 °F / 191 °C
Sample Flow Rates:	Up to 101 pm thru 100' x 3/8" heated line
Communications:	DB25 pim communication control port
Options:	Remote monitoring capabilities, hot wet O2 monitoring and automated daily system checks

Applications

- Coal fired boiler
- Natural gas engine
- Diesel engine
- Gasoline engine
- Ethanol plant emissions
- Auto emissions

Please contact Pine's CEMS office at 847-631-0002 to learn more about the Voyager FTIR System!

Universal Analyzers 3080 Sample Gas Conditioner

Item # 54411

- Moisture removal for most gas analyzers
- Pre-cooler condenses water at the temperature of the environment

Flow Rate:	0 to 10 L/M (at STP)
Heat Exchange:	Kynar/Glass 280° F (138° C) TE cooled, 'Peltier Effect'
Cooling Power:	126 BTSU's/Hr. (120kJ/Hr.) (2nd stage)
Outlet Sample Dew Point:	41° F (5° C), adjustable
Op Temp:	32 - 105° F

Ask About Our Rental Protection Plan (RPP)

PermaPure Mini-GASS Dryer System

Item # 54397

- Includes 0.1 micron coalescing/particulate filter
- Moisture removal for most gas analyzers
- Capable of hot, dirty, very wet samples
- Ammonia scrubber to protect the Nafion dryer

Sample Flow Rate:	0 to 10 L/M (at STP)
Outlet Sample Dew Point:	As low as -25° C

PTFE Heated Sample Lines
10', 25', 50', 100'

Item # 54374

- Maintains minimum operating temperature of 300° F
- Controller included
- Insulated calibration line

Available Lengths:	10', 25', 50' and 100'

Stainless Steel Heated Sample Lines
10', 30', 50', 75'

Item # 54427

- Maintains minimum operating temperature of 300° F
- Controller included
- Insulated calibration line

Available Lengths:	10', 30', 50' and 75'

Calibration Gas Regulators

Item # 54638

- Check valve cylinder connections
- Stainless steel diaphragms
- Bar stock body for low internal volume
- Encapsulated filter seat assembly for added gas stream purity and extended service life
- Nickel-plated brass body provides long lasting good looks - will not tarnish
- Mounting front panel mount and two 10-32 taps for rear mounthing

Max Rated Inlet Pressure:	3,500 psig
Outlet Pressure Ranges:	0-100 psig
Flow Capacity:	Cv=0.13
Ambient Operating Temperature:	-40 to +165 degrees F
Weight:	3 lbs

Yokogawa MV 1000 Datalogger

Item # 54429

- Multi-channel universal inputs: Up to 48 input channels
- With the MW100 DAQMASTER series enables expansion to 300 input channels
- Secure, high capacity memory
- Removable input terminals simplify field wiring
- Choice of secure binary or versatile text data file formats
- Advanced network connectivity with e-mail, file transfer and web server functions

Number of Inputs:	1 - 6 Channels
Voltage Inputs:	DC voltage: 20, 60, 200 mV, 2, 6, 20, 50 V, 1-5 V
Thermocouple Inputs:	TC type: R, S, B, K, E, J, T, N, W, L,U,Wre
Memory Capacity:	Internal memory - 400 MB, external storage memory: CF card and USB memory

Yokogawa MV 2000 Datalogger

- 24 VDC transmitter power supply (/TPS2*, /TPS4*)
- Maximum output current: 25 mADC (overcurrent protection level: approximately 68 mADC) * /TPS2 is only available for the MV1000, /TPS4 is only available for the MV 2000
- Output voltage: 22.8 to 25.2 VDC (for rated current load)
- Rated output current: 4 to 20 mADC
- Remote control (/R1)
- The MV can be controlled through contact input (up to 8 inputs can be set)

Number of Inputs:	1 - 30 Channels
Voltage Inputs:	DC voltage: 20, 60, 200 mV, 2, 6, 20, 50 V, 1-5 V
Thermocouple Inputs:	TC type: R, S, B, K, E, J, T, N, W, L, U, Wre

Agilaire 8872 Data System

- True digital site platform for all your site needs, including traditional I/O, direct polling of serial / Ethernet based equipment
- Provides a host platform for other required site software such as APICOM, iPort, etc.
- Four serial points, an additional 32 serial points (optional)
- Ethernet com. to Ethernet-based units, DSL, wireless, satellite, etc.

Inputs / Outputs:	4 RS-232 Ports, Ethernet Port (10/100), Up to 24 Voltage Inputs, Up to 18 Status Inputs, Up to 18 Relay Outputs (5A)
Data Storage:	Up to 20,000,000 data points active, Up to 100,000,000 in archive files
Communications:	Modem, satellite, TCP/IP, Wirless IP, Local WiFi terminal connection
User Connections:	Ethernet, VGA video / USB input

ESC Model 8832 Data Logger

- Supports several channel types, including math pack, stream-witching, time-on-line counters, rolling averages and (optionally) meteorological parameters
- Simple and complex calibration programs, providing both ease of use and flexibility
- Up to 99 parameters per data system controller can be monitored

Connections:	Ethernet and RS232
Inputs:	Analog - (16 current - 4-20mA; 16 Voltage - +100mV, +1v, +5v, +10v full scale)
	Digital - 16 Status inputs
Outputs:	24 Latching coil relay ouputs, 8 4-20mA analog output channels

Ask About Our Rental Protection Plan (RPP)

Calibration Gas	Analysis	Range
Nitrogen Oxide (NOx)	EPA Protocol 1	1 to 10,000 ppm
Sulfur Dioxide (SO2)	EPA Protocol 1	1 to 10,000 ppm
Carbon Monoxide (CO)	EPA Protocol 1	1 to 10,000 ppm
Carbon Dioxide (CO2)	EPA Protocol 1	1 to 25%
Oxygen (O2)	EPA Protocol 1	1 to 25%
Propane (C3H8)	EPA Protocol 1	1 to 10,000 ppm
Methane (CH4)	EPA Protocol 1	1 to 10,000 ppm
Hydrogen Chloride (HCL)	Std. Calibration Gas	1 to 5,000 ppm
Formaldehyde (CH2O)	Std. Calibration Gas	1 to 1,000 ppm
Zero Air & Zero Nitrogen (N2)	Used for zero calibration on all units	
FID FUELS Hydrogen (H2) & 60/40 (He/H2) Helium/Hydrogen	Fuel for Hydrocarbon Analyzers	
Sulfur Hexafluoride (SF6) *CALL	FTIR Validation Gas	Dilution Tracer Gas

Please contact the Pine CEMS office for specific ordering information.

Ask About Our Rental Protection Plan (RPP)

FIELD & PERSONAL SAFETY SUPPLIES

FEP Weighted		
Description / Size	Quantity	Item No.
0.5" x 36"	Each	71768
0.75" x 36"	Each	71770
1.6" x 36"	Each	71764

Polyethylene Non-Weighted		
Description / Size	Quantity	Item No.
0.5" x 36"	Each	71739
0.75" x 12"	Each	71742
0.75" x 36"	Each	71744
1.6" x 12"	Each	71724
1.6" x 18"	Each	71751
1.6" x 36"	Each	71720
1.6" x 42" (Voss)	Each	75999
1.6" x 48"	Each	71730
1.6" x 72"	Each	71731
3" x 36"	Each	71749
3.5" x 36"	Each	71748

Polyethylene Weighted		
Description / Size	Quantity	Item No.
0.5" x 36"	Each	71735
0.75" x 36"	Each	71740
0.75" x 12"	Each	71743
1.5" x 12"	Each	71714
1.5" x 36"	Each	71713
1.6" x 12"	Each	71723
1.6" x 18"	Each	71761
1.6" x 36"	Each	71715
1.6" x 42"	Each	71725
1.6" x 48"	Each	71727
1.6" x 60"	Each	71729
1.6" x 72"	Each	71732
1.6" x 36" (Voss)	Each	71718
1.6" x 36", (Aqua)	Each	71715
3" x 36"	Each	71747
3.5" x 36"	Each	71746
0.75" x 36", Heavy Weighted	Each	71741
1.6" x 12", Double-Check Weighted	Each	71752
1.6" x 36", Double-Check Weighted	Each	71757
0.5" x 36", Double-Weighted	Each	71753
0.75" x 36", Double Weighted	Each	71758
1.6" x 36", Double Weighted	Each	71757
1.6" x 48", Double Weighted	Each	71728
0.75" x 36", Single-Check Double Weighted	Each	71754
1.5" x 36", Single-Check Double Weighted	Each	71756
1.6" x 36", Single-Check Double Weighted	Each	71755

Ask About Our Rental Protection Plan (RPP)

PTFE Non-Weighted

Description / Size	Quantity	Item No.
0.5" x 36"	Each	71769
0.75" x 36"	Each	71771
1.6" x 12"	Each	71767
1.6" x 36"	Each	71765

PTFE Weighted

Description / Size	Quantity	Item No.
0.5" x 36"	Each	71768
0.75" x 36"	Each	71770
1.6" x 12"	Each	71766
1.6" x 36"	Each	71764
1.6" x 12", Double-Check Weighted	Each	71774
1.6" x 36", Double-Check Weighted	Each	71775

PVC, Clear Non-Weighted

Description / Size	Quantity	Item No.
0.70" x 36"	Each	71777
0.75" x 36"	Each	71793
1.5" x 12"	Each	71779
1.5" x 36"	Each	71783
1.6" x 12"	Each	71794
1.6" x 36"	Each	71796
1.6" x 48"	Each	71799
3.5" x 36"	Each	71787

PVC, Clear Weighted

Description / Size	Quantity	Item No.
0.75" x 36"	Each	71789
1.50" x 36"	Each	71780
1.6" x 12"	Each	71792
1.6" x 36"	Each	71795
1.6" x 48"	Each	71798
3.50" x 36"	Each	71791
1.6" x 36", Weighted, SF	Each	71800
1.50" x 36", Med-Weighted	Each	71784
3.30" x 36", Med-Weighted	Each	71785
1.5" x 36", Hydro Carb	Each	75022

PVC, Permanent

Description / Size	Quantity	Item No.
1.6" x 36"	Each	71803
3.5" x 36"	Each	71808

Poly/PTFE Bailer VOC Tips

Description / Size	Quantity	Item No.
Poly for 0.5" bailer	Each	71704
Poly for 0.75" bailer	Each	71705
Poly for 1.6" bailer	Each	71706
PTFE for 0.5" bailer	Each	71708
PTFE for 0.75" bailer	Each	71709
PTFE for 1.6" bailer	Each	71710

Standard / Quick / High Capacity		
Description / Size	Quantity	Item No.
CAP300-X2, 0.2 Micron	Each	71653
In-Line/Standard, QED 0.45 Micron	Each	71665
In-Line/Standard, Waterra 0.45 Micron, Cap	Each	74297
Standard, 0.1 Micron	Each	71657
Standard, 0.2 Micron	Each	71658
Standard, Waterrra 0.2 Micron	Each	75381
Standard, 0.45 Micron	Each	71646
Standard, 1.0 Micron	Each	71659
Standard, 5.0 Micron	Each	71663
Standard, Aqua Bailer 5.0 Micron	Each	71660
Standard, 10.0 Micron	Each	71662
Quick Filter, 0.45 Micron	Each	71647
Quick Filter, 1.0 Micron	Each	71659
High Capacity, Gelman 0.45 Micron	Each	71645
High Capacity, Waterra 0.45 Micron	Each	71648
High Capacity, 1.0 Micron, Ground Water	Each	71656

Nalgene		
Description / Size	Quantity	Item No.
0.45 Micron	Each	71650
0.45 Micron (150 ml)	Each	71674
0.45 Micron (500 ml)	Each	71670
0.45 Micron Vacuum Filter	Each	75176

Well Caps / Plugs		
Description / Size	Quantity	Item No.
Standard 2"	Each	71409
Torquer T4 4"	Each	71411
Plug/Cherne 2"	Each	71406
1" Locking	Each	71415
1.5" Locking	Each	71402
2" Locking (Cherne)	Each	71169
2" Locking (Torquer)	Each	75712
4" Locking	Each	71413
6" Locking	Each	71417

Foot Valves		
Description / Size	Quantity	Item No.
Delrin Low Flow 0.5" (D13)	Each	71624
Delrin Standard Flow 0.625" (D16)	Each	71615
Delrin 1" (D25)	Each	71614
Delrin 1.25" High Flow (D32)	Each	71620
High Flow 1.25" (SS-32)	Each	71621
Low Flow 0.5" (SS-13)	Each	71625
Micro Flow 0.375" (SS-10)	Each	71626
Standard Flow 0.625" (SS-16)	Each	71617
Standard Flow 0.75" (SS-19)	Each	71616

Ask About Our Rental Protection Plan (RPP)

Polyethylene, High Density (HDPE)		
Description / Size	Quantity	Item No.
0.17" ID x 1/4" OD	100'	74284
0.17" ID x 1/4" OD	500'	75299
1/4" ID x 3/8" OD	100'	74122
1/4" ID x 3/8" OD	500'	75300
1/2" ID x 5/8" OD	200'	75301
1/2" ID x 5/8" OD	100'	74282
1/2" ID x 5/8" OD	500'	74096
3/4" ID x 1" OD	200'	74072
3/4" ID x 1" OD	300'	74131
3/8" ID x 1/2" OD	100'	74125
3/8" ID x 1/2" OD	500'	74126
7/8" ID x 1" OD	100'	74143
3/4" ID x 1" OD (black)	Per Foot	74068
1/2" ID x 3/4" OD	Per Foot	74067
1" ID (black)	Per Foot	74080

Polyethylene, Low Density (LDPE)		
Description / Size	Quantity	Item No.
0.17" ID x 1/4" OD	100'	74097
0.17" ID x 1/4" OD	500'	74098
0.17" ID x 1/4" OD	1000'	74090
0.17" x 1/4" - .17" x 1/4" (bonded)	Per Foot	74148
0.17" x 1/4" - 1/4" x 3/8" (bonded)	Per Foot	74150
1/16" ID x 1/8" OD	100'	74117
1/16" ID x 1/8" OD	500'	74089
1/16" x 1/8" - .17" x 1/4"	Per Foot	75470
1/8" ID x 1/4" OD	100'	74137
1/8" ID x 1/4" OD	500'	74139
1/8" x 1/4" - 1/4" x 3/8" (bonded)	Per Foot	74057
1/8" x 1/4" - 1/8" x 1/4" (bonded)	Per Foot	74145
3/16" ID x 1/4" OD	500'	74133
3/16" ID x 5/16" OD	100'	74134
3/16" ID x 5/16" OD	500'	74135
1/4" ID x 3/8" OD	100'	74093
1/4" ID x 3/8" OD	500'	74123
1/4" x 1/4" (bonded)	Per Foot	75609
3/8" ID x 1/2" OD	100'	75307
3/8" ID x 1/2" OD	500'	74124
1/2" ID x 5/8" OD	500'	74128
1/2" ID x 5/8" OD	100'	74127
1/2" ID x 5/8" OD	200'	75313

Polyvinyl		
Description / Size	Quantity	Item No.
1/8" ID x 1/4" OD	100'	74161
1/8" ID x 1/4" OD	500'	74162
3/16" ID x 5/16" OD	100'	74164
1/4" ID x 3/8" OD	100'	74158
1/4" ID x 3/8" OD	500'	74159
3/8" ID x 1/2" OD	100'	74103
3/8" ID x 1/2" OD	500'	74160

Pure PTFE

Description / Size	Quantity	Item No.
0.17" ID X 1/4" OD	Per Foot	74209
1/8" ID x 1/16" OD	Per Foot	74203
1/8" ID x 3/16" OD	Per Foot	74200
1/8" ID x 1/4" OD	Per Foot	74198
1/4" ID x 3/8" OD	Per Foot	74171
1/4" ID x 3/8" OD	Per Foot	74195
1/4" ID x 5/16" OD	Per Foot	74176
3/16" ID x 1/4" OD	Per Foot	74207
3/8" ID x 7/16" OD	Per Foot	74201
3/8" ID x 7/15" OD	Per Foot	74177
3/8" ID x 1/2" OD	Per Foot	74196
5/8" ID x 3/4" OD	Per Foot	74204
1/2" ID x 9/16" OD	Per Foot	74202
1/2" ID x 5/8" OD	Per Foot	74173
3/4" ID x .830 OD	Per Foot	74205
3/4" ID x 7/8" OD	Per Foot	74206

Silicone

Description / Size	Quantity	Item No.
3/16" ID x 1/4" OD	Per Foot	74056
3/16" ID x 3/8" OD	Per Foot	74101
1/4" ID x 7/16" OD	Per Foot	74215
3/8" ID x 5/8" OD	Per Foot	74213

Specialty Tubing

Description / Size	Quantity	Item No.
3/16" ID Masterflex	25'	74100
L/S 14 Masterflex	25'	74113
L/S 15 Masterflex	Per Foot	75167
L/S 15 Masterflex	1,525'	74060
L/S 16 Masterflex	25'	74109
L/S 17 Masterflex	25'	74111
L/S 24 Masterflex (Tygon)	25'	74059
L/S 24 Masterflex	25'	74108
L/S 25 Masterflex	25'	73994

PTFE Lined (LDPE)

Description / Size	Quantity	Item No.
0.17" ID x 1/4" OD	Per Foot	74174
0.17" x 1/4" TLPE, .17" x 1/4" LDPE (bonded)	Per Foot	74181
0.17" x 1/4" TLPE, 1/16" x 1/8" LDPE (bonded)	Per Foot	74088
0.17" x 1/4" TLPE, 1/4" x 3/8" LDPE (bonded)	Per Foot	74183
1/8" ID x 1/4" OD	Per Foot	74105
1/8" x 1/4" TLPE, 1/8" x 1/4" LDPE (bonded)	Per Foot	74178
3/16" ID x 1/4" OD	Per Foot	74175
1/4" x 3/8" TLPE, 1/8" x 1/4" LDPE (bonded)	Per Foot	74185

Please contact your local Pine office for descriptions and sizes not shown.

Ask About Our Rental Protection Plan (RPP)

Hanna Solutions		
Description / Size	**Quantity**	**Item No.**
Hanna Solution; ORP/Redox-500 m	Each	32001
Hanna Solution; pH 4- 500 mL	Each	32021
Hanna Solution; pH 7- 500 mL	Each	32029
Hanna Solution; Storage 500 mL	Each	32005
Hanna Solution-pH 10- 500 mL	Each	32037
Solution Cond 80,000 - Hanna	Each	32063

Horiba Solutions		
Description / Size	**Quantity**	**Item No.**
Horiba Solution; Turb Std-800N	Each	32130
Solution Horiba Auto-Cal - 1 L	Each	32098
Solution Horiba Auto-Cal - 1 G	Each	32097

PH Solutions		
Description / Size	**Quantity**	**Item No.**
Solution pH 4 - 250 mL	Each	NS0010
Solution pH 4 - 500 mL	Each	NS0011
Solution pH 4 - 1 L	Each	NS0012
Solution pH 4 - 1 G	Each	NS0013
Solution pH 4 - 5 G	Each	32017
Solution pH 7 - 1 L	Each	32023
Solution pH 7 - 1 L	Each	NS0016
Solution pH 7 - 250 mL	Each	NS0014
Solution pH 7 - 500 mL	Each	NS0015
Solution pH 7 - 1 G	Each	NS0017
Solution pH 7 - 5 G	Each	32025
Solution pH 10 - 250 mL	Each	NS0018
Solution pH 10 - 500 mL	Each	NS0019
Solution pH 10 - 1 L	Each	NS0020
Solution pH 10 - 1 G	Each	NS0021
Solution pH 10 - 5 G	Each	32034

Solution Cond		
Description / Size	**Quantity**	**Item No.**
Solution Cond 1000 - 500 mL	Each	31927
Solution Cond 1413 - 250 mL	Each	NS0022
Solution Cond 1413 - 500 mL	Each	32057
Solution Cond 1413 - 1 L	Each	NS0024
Solution Cond 1413 - 1 G	Each	NS0025
Solution Cond 1413 - 5 G	Each	31986

Turbidity		
Description / Size	**Quantity**	**Item No.**
Solution Turb Std-0 NTU-1 G	Each	31999
Solution Turb Std-0 NTU-60mL	Each	32114
Solution Turb Std-1 NTU-60mL E	Each	31975
Solution Turb Std-10 NTU-60mL	Each	31976
Solution Turb Std-10 NTU-500 mL	Each	31993
Solution Turb Std-YSI126 NTU 1 G	Each	31963

Please contact your local Pine office for descriptions and sizes not shown.

Specialty Water		
Description / Size	Quantity	Item No.
1 L (Deionized)	Each	NS0005
1 G (Deionized)	Each	75817
1 G (HPLC)	Each	71232
2.5 G (UF)	Each	71237
5 G (Deionized)	Each	71236
5 G (ASTM Type II)	Each	71244
5 G (Ultra Filtered)	Each	71153
Reagent Grade (includes spigot), 20 LC	Each	75725
Ultra Filtered	Each	71176

Detergents / Cleaning		
Description / Size	Quantity	Item No.
Alconox Powder	4 lb box	71433
Alconox Powder	Pack 50 x 1/2 oz	75713
Alconox Powder	Single Pack x 1/2 oz	75521
Alconox Powder (Dispenser Box)	Pack 50 x 1/2 oz	71136
Hand Soap, Gojo	1 Gallon	72101
Liqui-Nox	1 Quart	71434
Liqui-Nox	1 Gallon	71435
Liqui-Nox	1 Liter	75672
Luminox	1 Gallon	71436
Rags (Colored Terry)	50 lb box	72217
Rags (Sweatshirt)	25 lb box	72206
Rags (T-Shirt)	25 lb box	72156
Rags (T-Shirt)	50 lb box	72203
Rags (T-Shirt, 100% Cotton)	25 lb box	72212
Roof Brush,Tampico (White 7")	Each	72105
Utility Brush, Tampico (20" length)	Each	72311

Rope / Twine		
Description	Quantity	Item No.
AquaLine Nylon Rope, 1/10" x 250' (solid braid)	Spool	71692
AquaLine Nylon Rope, 1/10" x 500' (solid braid)	Spool	71699
AquaLine Nylon Rope, 1/10" x 1000' (solid braid)	Spool	71693
Aqua TNT Twine, 225'	Spool	71681
Aqua TNT Twine, 250'	Spool	71685
Aqua TNT Twine, 800'	Spool	71682
Nylon Rope, 1/8" x 500' (solid braid, white)	Spool	71700
Nylon Rope, 1/8" x 500' (solid braid)	Spool	71687
Nylon Rope, 1/8" x 600' (solid braid)	Spool	71680
Nylon Rope, 1/8" x 1000' (solid braid)	Spool	71679
Polypropylene Rope, 3/8" x 600' (twisted)	Spool	72014
Twine, Nylon, 100'	Spool	71689
Twine, Nylon, 200'	Spool	71690
Twine Nylon, 225'	Spool	75332
Twine Nylon, 300'	Spool	71691

Ask About Our Rental Protection Plan (RPP)

AIR

Air		
Description / Size	**Quantity**	**Item No.**
1 ppm / THC 17 L	Each	31843
1 ppm / THC 34 L	Each	31844
1,000 ppm / 500 ml	Each	32304
Zero Air, 20.9% O2 / N2 34 L	Each	32199
Zero Air, 20.9% O2 / N2 103 / 105 L	Each	17134
Zero Air, RKI / 34 L	Each	41191

NH₃

Ammonia		
Description / Size	**Quantity**	**Item No.**
10 ppm / N2 58 L	Each	31737
20 ppm / Air 58 L	Each	31733
25 ppm / Air 58 L	Each	31734
25 ppm / N2 34 L	Each	31939
25 ppm / N2 58 L	Each	31736
50 ppm / Air 34 L	Each	31739
50 ppm / N2 34 L	Each	31732
50 ppm / N2 58 L	Each	31735
100 ppm / N2 58L	Each	31731

C₆H₆

Benzene		
Description / Size	**Quantity**	**Item No.**
0.5 ppm / Air 31 cu ft.	Each	32251
5 ppm / Air 17 L	Each	31704
5 ppm / Air 34 L	Each	31705
5 ppm / Air 103 / 105 L	Each	31706
5 ppm C6H6 / Air 17 L	Each	31704
5 ppm C6H6 / Air 34 L	Each	31705
5 ppm C6H6 / Air 103 / 105 L	Each	31706

CO₂

Carbon Dioxide		
Description / Size	**Quantity**	**Item No.**
100 ppm / N2 17 L	Each	31601
1,000 ppm / Air 103L / 105 L	Each	31607
1,000 ppm / N2 17 L	Each	31604
1,000 ppm / N2 34 L	Each	31605
1,000 ppm / N2 103 / 105 L	Each	31606
2,000 ppm N2 17 L	Each	31609
2,000 ppm N2 34 L	Each	31610
2,000 ppm / N2 103 / 105 L	Each	31611
5,000 ppm / N2 17 L	Each	31706
5,000 ppm / N2 34 L	Each	31613
5,000 ppm / N2 103L / 105 L	Each	31612
25,000 ppm / Air 17 L	Each	31614
25,000 ppm / Air 103L / 105 L	Each	31619
150,000 ppm / N2 / 34 L	Each	32277
150,000 ppm / N2 / 103 / 105L	Each	31623
250,000 ppm / N2 103L / 105 L	Each	31622

Please contact your local Pine office for descriptions and sizes not shown.

CO

Carbon Monoxide		
Description / Size	Quantity	Item No.
20 ppm / Air 17 L	Each	31627
20 ppm / Air 34 L	Each	31628
20 ppm / N2 103 / 105 L	Each	31629
35 ppm / N2 103 L / 105 L	Each	31632
50 ppm / Air 17 L	Each	31633
50 ppm / Air 34 L	Each	31635
50 ppm / Air 103L/105 L	Each	31634
60 ppm / Air 103 / 105 L	Each	31639
100 ppm / Air 17 L	Each	31637
100 ppm / Air 34 L	Each	31640
100 ppm / Air 103 L / 105 L	Each	31641
200 ppm / Air 17 L	Each	31643
200 ppm / Air 34 L	Each	31644
200 ppm / Air 103 / 105 L	Each	31645
300 ppm / Air 17 L	Each	31647
300 ppm / Air 103 / 105L	Each	31648
500 ppm / N2 34 L	Each	31653
500 ppm / N2 103/105 L	Each	31650
1,000 ppm / N2 103/105 L	Each	31654

Cl

Chlorine		
Description / Size	Quantity	Item No.
2 ppm / N2 58 L	Each	31913
5 ppm / N2 34 L	Each	31907
5 ppm / N2 58 L	Each	31908
10 ppm / N2 34 L	Each	31910
10 ppm / N2 58 L	Each	31909
10 ppm / N2 MSA	Each	31911
10 ppm / Balance N2 34 L	Each	41114

He

Helium		
Description / Size	Quantity	Item No.
99.999% UHP 17 L	Each	31863
99.999% UHP 34 L	Each	31867
99.999% UHP 100 L	Each	31864
99.999% UHP 103 / 105 L	Each	31866
99.999% UHP 221 L	Each	32387

C₆H₁₄

Hexane		
Description / Size	Quantity	Item No.
5 ppm / Air 34 L	Each	32340
50 ppm / Air 34 L	Each	31667
50 ppm / Air 103 / 105 L	Each	31668
100 ppm / Air 17 L	Each	31670
100 ppm / Air 34L	Each	31671
100 ppm / Air 103 / 105 L	Each	31673
400 ppm / Air 34 L	Each	32159
400 ppm / Air 103L / 105 L	Each	41135
500 ppm / Air 34 L	Each	31675
500 ppm / Air 103 / 105 L	Each	31676
500 ppm (20.9% O2 balance Nitrogen) 58 L	Each	32274

Please contact your local Pine office for descriptions and sizes not shown.

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1,000 ppm / Air 34 L	Each	31677
1,000 ppm / Air 103 / 105 L	Each	31679
4,400 ppm / Air 103 / 105 L	Each	32189
6,000 ppm / Air 103 L	Each	32353
10,000 ppm / Air 34 L	Each	32227
150,000 ppm (15%) LEL / Air 17 L	Each	31687
150,000 ppm (15%) LEL / Air 34L	Each	41132
15,0000 ppm (15%) LEL / Air 103 / 105 L	Each	30015
150,000 ppm (15%) LEL / 10% O2 N2 34 L	Each	32178
250,000 ppm (25%) LEL / 15% O2 / N2 103 / 17 L	Each	31683
250,000 ppm (25%) LEL / 15% O2 / N2 103 / 105 L	Each	31684
400,000 ppm (40%) LEL / Air 17 L	Each	31685
400,000 ppm (40%) LEL / Air 34L	Each	41134
400,000 (40%) LEL / Air 103 / 105 L	Each	31686

H

Hydrogen		
Description / Size	**Quantity**	**Item No.**
1,000 ppm 103 / 105 L	Each	32321
40% / 60% / N2 600 L	Each	31861
50% LEL (2.0% volume) / 103 / 105 L	Each	32398
70% / N2 34 L	Each	32301
99.999% / 34 L	Each	32260
99.999% / 552 L	Each	32212
99.999% / 600 / 620 L	Each	31858

H₂S

Hydrogen Sulfide		
Description / Size	**Quantity**	**Item No.**
10 ppm / N2 34 L	Each	31694
10 ppm / N2 58 L	Each	31691
25 ppm / Air 34 L	Each	32495
25 ppm / N2 34 L	Each	31693
25 ppm / N2 58 L	Each	31695
40 ppm / N2 34 L	Each	31698
40 ppm / N2 58 L	Each	31697
50 ppm / N2 58 L	Each	31700
100 ppm / N2 58 L	Each	31702
200 ppm / N2 34 L	Each	32248
200 ppm / N2 58 L	Each	32181

C₄H₈

Isobutylene		
Description / Size	**Quantity**	**Item No.**
0.5 ppm / Air 2107 B	Each	32250
1 ppm / Air 34 L	Each	32341
5 ppm / Air 17 L	Each	31713
5 ppm / Air 103 / 105 L	Each	31714
10 ppm / Air 17 L	Each	31715
10 ppm / Air 34 L	Each	31716
10 ppm / Air 103 / 105 L	Each	31717
100 ppm / Air 17 L	Each	31719
100 ppm / Air 34 L	Each	31721
100 ppm / Air 103 / 105 L	Each	31562
200 ppm / Air 34 L	Each	32410

Please contact your local Pine office for descriptions and sizes not shown.

250 ppm / Air 17 L	Each	31723
250 ppm / Air 34 L	Each	32409
500 ppm / Air 103 / 105 L	Each	31724
1,000 ppm / Air 34 L	Each	31727
1,000 ppm / Air 103 / 105 L	Each	31726
5,000 ppm / Air 34L	Each	32184
10,000 ppm / Air 17 L	Each	31729

CH₄

Methane		
Description / Size	Quantity	Item No.
10 ppm / Air 17 L	Each	31744
10 ppm / Air 103 / 105 L	Each	31748
50 ppm / H2S 10 ppm / 18% O2 / 5% LEL	Each	32411
75 ppm / Air 103 / 105 L	Each	31750
80 ppm / Air 58 L	Each	32271
100 ppm / Air 17 L	Each	31752
100 ppm / Air 34 L	Each	31754
100 ppm / Air 103 / 105 L	Each	31756
500 ppm / Air 17 L	Each	31755
500 ppm / Air 34 L	Each	31757
500 ppm / Air 103 / 105 L	Each	31758
1,000 ppm / Air 103 / 105 L	Each	31761
2,000 ppm / Air 103 / 105 L	Each	31763
5,000 ppm / Air 103 / 105 L	Each	31767
10,000 ppm / Air 17 L	Each	31770
10,000 ppm / Air 34 L	Each	31771
10,000 ppm / Air 103 / 105 L	Each	31772
20,000 ppm / Air 103 / 105 L	Each	31774
150,000 ppm / N2 17 L	Each	31789
150,000 ppm / N2 103 / 105 L	Each	31787
400,000 ppm / N2 103 / 105 L	Each	31793
30% LEL / 15% O2 / N2 103 / 105 L	Each	31778
30% LEL / 60 pm CO / 15% O2 / N2 103 / 105 L	Each	31554
50 % LEL / 10 pm H2S / 15% O2 / N2 58 L	Each	31557
50 % LEL / 15% O2 / N2 17 L	Each	31782
50% LEL / 15% O2 / N2 103 / 105 L	Each	31783
50% LEL / 25 pm H2S / 15% O2 / N2 58 L	Each	31560
50% LEL / 50 m CO / 25 m H2S 58 L	Each	32238
50% LEL / Air 17 L	Each	41186

MIXED GAS

Mixed Gas		
Description / Size	Quantity	Item No.
10 ppm H2S / 50 ppm CO / 2.5% CH4 / 18% O2 / N2 34 L	Each	32198
10 ppm H2S / 50 ppm CO / 2.5% CH4 / 18% O2 / N2 58 L	Each	32472
10 ppm H2S / 50 ppm CO / 2.5% CH4 / 20.9% O2 / N2 58 L	Each	32228
25 ppm H2S / 50 ppm CO / 2.5% CH4 / 12% O2 / N2 34 L	Each	41106
25 ppm H2S / 50 ppm CO / 2.5% CH4 / 12% O2 / N2 58 L	Each	41108
25 ppm H2S / 50 ppm CO / 2.5% CH4 / 18% O2 / N2 34 L	Each	31523
25 ppm H2S / 50 ppm CO / 2.5% CH4 / 18% O2 / N2 58 L	Each	31578
25 ppm H2S / 50 ppm CO / 2.5% CH4 / 20.9% O2 / N2 34 L	Each	32211
25 ppm H2S / 100 ppm CO / 2.5% CH4 / 18% O2 34 L	Each	31585
25 ppm H2S / 100 ppm CO / 2.5% CH4 / 18% O2 58 L	Each	31584

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100 ppm CO / 1000 ppm CO2 / N2 17 L	Each	31659
100 ppm CO / 1000 ppm CO2 / N2 34 L	Each	31657
100 ppm CO / 1000 ppm CO2 / N2 103 / 105 L	Each	31661
15% CH4 / 15% CO2 / N2 17 L	Each	31789
15% CH4 / 15% CO2 / N2 34 L	Each	41113
15% CH4 / 15% CO2 / N2 103 / 105 L	Each	31790
50% CH4 / 35% CO2 / N2 17 L	Each	31802
50% CH4 / 35% CO2 / N2 34 L	Each	31803
50% CH4 / 35% CO2 / N2 103 / 105 L	Each	31808

NO

Nitric Oxide		
Description / Size	Quantity	Item No.
25 ppm / N2 58 L	Each	31815
225 ppm / 34 L	Each	32249

N₂

Nitrogen		
Description / Size	Quantity	Item No.
99.99 % 17 L	Each	31819
99.99 % 34 L	Each	31820
99.99 % 103 / 105 L	Each	31821
99.99% 620 L (UHP)	Each	31564

O₂

Oxygen		
Description / Size	Quantity	Item No.
0.4% / N2 103 / 105 L	Each	31851
4% / N2 17 L	Each	31848
4% / N2 34 L	Each	31850
4% / N2 103 / 105 L	Each	31849
4% Balance Nitrogen / 34 L	Each	32425
8% / N2 34 L	Each	32455
8% / N2 103 / 105 L	Each	31854
20.9% / N2 103 / 105 L	Each	31857
20.8% / N2 103 / 105 L	Each	32581
99.99% UHP 103 / 105 L (C-10 aluminum cylinder)	Each	31524

C₅H₁₂

Pentane		
Description / Size	Quantity	Item No.
25 ppm / Air 103 / 105 L	Each	32323
250 ppm / Air 103 / 105 L	Each	32324
25% LEL / Air 17 L	Each	31826
25% LEL / Air 103 / 105 L	Each	31827
25% LEL / 15% O2 / N2 17 L	Each	31828
25% LEL / 15% O2 / N2 103 / 105 L	Each	31829
25% LEL / 100 m CO / 25 m H2S / O2 58 L	Each	31512
25% LEL / 100 ppm CO / 25 ppm H2S / 19% O2 / N2 34 L	Each	31525
25% LEL / 100 ppm CO / 25 ppm H2S / 19% O2	Each	32342
50% LEL / Air 17 L	Each	31831
50% LEL / Air 34 L	Each	41146
50% LEL / Air 103 / 105 L	Each	41145
50% LEL / 15% O2 / N2 17 L	Each	31832
50% LEL / 50 m CO / 15% O2 / N2 103 / 105 L	Each	31556
50% LEL / 50 ppm CO / 25 ppm H2S / 12 % O2 N2 58 L	Each	32428

Regulators		
Description / Size	Quantity	Item No.
0.25 LPM, 34 L, Female	Each	74257
0.25 LPM, 105 L/34 L, Male	Each	74265
0.50 LPM, 17 L	Each	74317
0.50 LPM, 17 L / 34 L	Each	75219
0.50 LPM, 34 L, Female	Each	74259
0.50 LPM, 34 / 58 / 103 L	Each	75220
0.50 LPM, 105 L	Each	74322
0.50 LPM, 105 L / 34 L, Male	Each	74267
1.0 LPM, 17 L / 34 L	Each	75221
1.0 LPM, 34 L, Female	Each	74260
1.00 LPM, 105 L	Each	74323
1.0 LPM, 105 L / 34 L, Male	Each	74268
103/105 L Demand Flow	Each	74314
105 L/34 L, Demand Flow, Model 2001, Male	Each	75550
105 L/34 L Demand Flow, Model 2007	Each	75551

Tedlar Bags		
Description / Size	Quantity	Item No.
1L , Poly, 7" x 7"	Each	74328
1L, PP, Single	Each	75283
3L, Poly, 9.5" x 10"	Each	74329
5L, Poly, 12" x 12.5"	Each	74330
10L, 12" x 19"	Each	74298

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Detection Tubes		
Description / Size	**Quantity**	**Item No.**
Ammonia (1 - 30 ppm)	10 Per Box	31453
Benzene (0.5 - 10 ppm), Drager	10 Per Box	32205
Carbn Monoxide (5 - 700 ppm), Drager	10 Per Box	31408
Carbon Monoxide (10 - 3000 ppm), Drager	10 Per Box	31375
Carbon Monoxide (2 - 300 ppm), Drager	10 Per Box	31295
Carbon Pretube	10 Per Box	31357
Chlorine .2/a (.2 - 30 ppm)	10 Per Box	31348
Diesel (0.5 - 25 ppm)	10 Per Box	31461
Drager (0.25 - 10 ppm)	10 Per Box	32205
Drager Vinyl Chloride (0.5 - 30 ppm)	10 Per Box	31330
H20 Vapor 5/A-P (5 - 250 mg/mg3)	10 Per Box	31380
H2S (100 - 2000 ppm)	10 Per Box	31345
H2S 1/D (1 - 200 ppm)	10 Per Box	31332
Hydrogen 0.2%/a	10 Per Box	31388
Hydrogen Sulfide (10 - 4000 ppm)	10 Per Box	31427
RAE - SEP Benzene	10 Per Box	31448
RAE - SEP VOC Tubes	10 Per Box	70105
RAE Benzene	10 Per Box	31449
Tetrachloroethylene (0.1 - ppm)	10 Per Box	31432
Vinyl Chloride 0.5/B (0.5 - 30 ppm)	10 Per Box	31330
VOC Zeroing - RAE	10 Per Box	31455

Oil in Soil Kits		
Description / Size	Quantity	Item No.
Blue Screening Kit	Each	74052
Red Screening Kit	Each	74051
Oil Stick	25 Per Pack	70017
Oil Stick	10 Per Pack	74053

Oil Sorbent Booms		
Description / Size	Quantity	Item No.
3" x 18"	4 Per Pack	72840
3" x 18", Bilge	Each	73084
5" x 10"	4 Per Pack	73043
5" x 10", White, Oil Base Fiber Polypropylene	4 Per Pack	73224
5" x 20"	Each	73899
5" x 120", Marine White (oil only)	4 Per Pack	75770
8" x 10"	4 Per Pack	73044
8" x 10" (oil only)	4 Per Pack	73900
8" x 18", Bilge	10 Per Pack	72865
Super Swamp	Each	75735

Oil Sorbent Pads		
Description / Size	Quantity	Item No.
Light Weight	100 Per Pack	73033
Medium Weight	100 Per Pack	73030
Medium Weight	100 Per Pack	73908
Medium Weight, 15" x 18", Universal	100 Per Pack	73904
Medium Weight, Sonic Bonded Gray	100 Per Pack	75773
Heavy Weight	100 Per Pack	72993
Heavy Weight	100 Per Pack	73034
Heavy Weight (oil only)	100 Per Pack	76288
Heavy Weight, Universal Bonded, 15" x18"	100 Per Pack	76287
MAXX Enhanced Heavy Weight SPC, 15" x 19" (oil only)	100 Per Pack	72839
Universal, Gray	100 Per Pack	73909

Oil Sorbent Socks		
Description / Size	Quantity	Item No.
1.5" x 2"	Each	73093
1.5" x 18" (oil only)	Each	73902
2" Canister, Soakease	Each	73905
3" x 18"	Each	72527
4" Canister, Soakease	Each	73906

Oil Sorbent Pillows		
Description / Size	Quantity	Item No.
18" x 18", White (oil only)	Each	72505

Universal Spill Kits		
Description / Size	Quantity	Item No.
5-Gallon	Each	75759
20-Gallon	Each	73257
95-Gallon	Each	71341

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Rite in the Rain Books

Description / Size	Quantity	Item No.
Bound, Orange	Each	71365
Bound, Fabrikroid Cover	Each	71264
Construction, Orange	Each	71364
HardBound, Fabric Cover, 350 F	Each	71286
Hardbound, Fabric Cover, 550 F	Each	71292
Hardbound, Fabric Cover, 550-4F	Each	71282
Spiral, Polydura Cover, 353	Each	71265
Spiral, Polydura Cover, 313	Each	71266
Model 135 (3" x 5" notebook)	Each	71279
Model 300 (4 5/8" x 7 1/4")	Each	71294
Model 301 (4 5/8" x 7")	Each	71318
Model 303 (4 5/8" x 7"	Each	71271
Model 310 (4 5/8" x 7 1/4")	Each	71291
Model 311 (4 5/8" x 7 1/4"	Each	71308
Model 353 N 4 5/8" x 7")	Each	71270
Model 350 (3/4" x 7 1/2")	Each	71293
Model 351 FX (4 5/8" x 7")	Each	71313
Model 371 (4 5/8" x 7)	Each	71322
Model 373 (4 5/8" x 7")	Each	71274
Model 390 (4 5/8" x 7 1/4")	Each	71289
Model 391 M	Each	71369
Model 393 (4 5/8" x 7")	Each	71272
Model 540 F	Each	71268
Model 550 (4 3/4" x 7 1/2")	Each	71267

Pens

Description	Quantity	Item No.
37 Black (All Weather)	Each	71317
37 R Black Refill	Each	71367
47 Blue (All Weather)	Each	71307
47 R Blue Refill	Each	71368

Marking Paint

Description / Size	Quantity	Item No.
Aervoe Construction Grade (Flourescent Yellow)	Each	71132
Aervoe Paint Stick Applicator	Each	71590
Fluorescent Orange, 17 oz.	Each	71580
Fluorescent Orange, 17 oz. (Construction)	Each	71131
Fluorescent Pink, 17 oz. (Construction)	Each	71139
Fluorescent Red, 17 oz. (Construction)	Each	71151
Orange, 17 oz.	Each	71157
White, 17 oz.	Each	71588
White, 17 oz.	Each	71158

Labels		
Description	**Quantity**	**Item No.**
Hazardous Waste	Each	72272
Non-Hazardous Waste (Lab Safety Supply)	Each	72229
Non-Hazardous Waste (Labelmaster Inc)	Each	72228
Non-Hazardous Waste, Pending Analysis	Each	72274

Flagging and Measuring Tape		
Description / Size	**Quantity**	**Item No.**
25' Keson Economy Tape (Inches and Tenths)	Each	71528
25' Keson Powerglide Measuring Tape (Inches and Tenths)	Each	71538
100' Keson Fiberglass Measuring Tape (Foot and Tenths)	Each	17574
200' Keson Fiberglass Measuring Tape (Foot and Tenths)	Each	17575
300' Keson Fiberglass Measuring Tape (Foot and Tenths)	Each	17573
Keson Digital Measuring Wheel	Each	75421
Lufkin Engineers Rule 6'	Each	71577
RoloTape Measuring Wheel	Each	51436

Buckets and Drums		
Description / Size	**Quantity**	**Item No.**
5-Gallon Bucket with Lid	Each	71998
55-Gallon Poly (Closed Top)	Each	75537
55-Gallon Poly (Open Top)	Each	71135
55-Gallon Steel (Closed Top)	Each	71218
55-Gallon Steel (Open Top)	Each	71427
55-Gallon Steel, Reconditioned (Closed Top)	Each	71217
55-Gallon Steel, Reconditioned (Open Top)	Each	71225

Batteries		
Description / Size	**Quantity**	**Item No.**
1.5 Volt (AA)	Each	13442
1.5 Volt (AAA)	Each	13449
1.5 Volt (C)	Each	13444
1.5 Volt (D)	Each	13448
7.2 Volt (TVA 1000)	Each	11371
9 Volt	Each	13445
6600 mAH (Dusttrak II Lithium-Ion)	Each	12813
Lithium-Ion (M3K/ppbRAE)	Each	12500

Battery Chargers		
Description	**Quantity**	**Item No.**
110 Volt (MiniRAE/MultiRAE/ppbRAE/QRAE/UltraRAE/VRAE)	Each	11502

Battery Packs		
Description	**Quantity**	**Item No.**
4.8 Volt, 1250 mAH (VRAE & MiniRAE)	Each	11365
Aircon-2 (4 hour)	Each	11514
BDX II	Each	11867
GilAir, 5 NiMH	Each	12784
GilAir 3, Blue	Each	11328
Ni-MH (MultiRAE+/QRAE)	Each	12699

Gloves		
Description	**Quantity**	**Item No.**
Ansell Neoprene (Size 8)	Box	73503
Ansell Neoprene (Size 9)	Box	73504
Ansell Neoprene (Size 10)	Box	73502
Ansell Winter Monkey Grip	Box	73175
Big Jake, Leather Palm (L)	Box	75850
Blue Whizard Slipguard	Box	75677
Cotton String Knit, Chem Res (L)	Box	72615
Cotton String Knit Gloves, Brown Jersey, Poly/Cotton/Men's	Box	72618
DD, Org Foam Insulated	Box	72508
Economy Grain Pigskin (L)	Box	73163
Economy Grain Pigskin (XL)	Box	73166
Glove Liners	Box	72561
Heat Protective, Tsunami Grip Lite (Size 9)	Box	75678
Heat Protective, Tsunami Grip Lite (Size 10)	Box	75679
Keystone, Thumb Driver (M)	Box	72591
Keystone, Thumb Driver (L)	Box	72590
Keystone, Thumb Driver (XL)	Box	72593
Keystone, Unlined Pigskin (L)	Box	72726
Keystone, Unlined Pigskin (XL)	Box	72729
Latex Diamond Grip, Powder Free (L)	Box	73472
Latex Diamond Grip, Powder Free (XL)	Box	73475
Latex Flex-Tuff, 10 Gauge (L)	Box	72693
Latex Flex-Tuff, 10 Gauge (XL)	Box	72695
Latex, Blue, Natural, 18 mil (L)	Box	73226
LatexRoll, CuffNM (M)	Box	72671
LatexRoll, CuffNM (L)	Box	72670
LatexRoll, CuffNM (XL)	Box	72672
Leather Palm, Double, 2.5 Rubberized Safety Cuff, Dozen	Box	72509
Liner	Box	73507
Liner, Full Finger (L)	Box	75728
Liner, Heavy Weight (L)	Box	72561
Liner, Navy Blue	Box	73508
Microflex Diamond Grip, Powder Free Latex (S)	Box	73474
Microflex Diamond Grip, Powder Free Latex (M)	Box	73473
Microflex Diamond Grip, Powder Free Latex (L)	Box	73472
Microflex Diamond Grip, Powder Free Latex (XL)	Box	73475
Microflex Micro One, Lightly Powdered Latex (S)	Box	73478
Microflex Micro One, Lightly Powdered Latex (M)	Box	73477
Microflex Micro One, Lightly Powdered Latex (L)	Box	73476
Microflex Micro One, Lightly Powdered Latex (XL)	Box	73479
N-Dex, Lightly Powdered, Nitrile (L)	Box	73447
N-Dex, Powder Free, Nitrile (L)	Box	73452
NeoPro, Chloropreene, Powder Free (L)	Box	73480
Nitri-Care Powder Free, 4 mil (S)	Box	74290
Nitri-Care Powder Free, 4 mil (M)	Box	74291
Nitri-Care Powder Free, 4 mil (L)	Box	74292
Nitri-Care Powder Free, 4 mil (XL)	Box	74285
Nitrile Powder Free, 8 mil (XL)	Box	72520
Nitrile Powder Free, Best N-Dex (S)	Box	73454
Nitrile Powder Free, Best N-Dex (M)	Box	73453
Nitrile Powder Free, Best N-Dex (L)	Box	73452
Nitrile Powder Free, Best N-Dex (XL)	Box	73455

Nitrile Powder Free, Blaze (L)	Box	75733
Nitrile Powder Free, Blaze (XL)	Box	75699
Nitrile Powder Free, Duraskin, 4 mil (XL)	Box	75791
Nitrile Powder Free, DuraSkin, 8 mil (L)	Box	75797
Nitrile Powder Free, Duraskin, 8 mil (XL)	Box	75795
Nitrile Powder Free, Duraskin, 8 mil (XXL)	Box	75794
Nitrile Powder Free, N-Dex (L)	Box	73452
Nitrile Powder Free, Purple (M)	Box	73512
Nitrile Powder Free, Purple (L)	Box	73513
Nitrile Powder Free, Purple (XL)	Box	73514
Nitrile Powder Free, SemperForce, Black (S)	Box	72917
Nitrile Powder Free, SemperForce, Black (M)	Box	72916
Nitrile Powder Free, SemperForce, Black (L)	Box	72915
Nitrile Powder Free, SemperForce, Black (XL)	Box	72918
Nitrile Powder Free, SemperForce, Black (XXL)	Box	72895
Nitrile Powder Free, SemperGuard (S)	Box	73467
Nitrile Powder Free, SemperGuard (M)	Box	73466
Nitrile Powder Free, SemperGuard (L)	Box	73465
Nitrile Powder Free, SemperGuard (XL)	Box	73022
Nitrile Powdered, Best N-Dex (S)	Box	73449
Nitrile Powdered, Best N-Dex (M)	Box	73448
Nitrile Powdered, Best N-Dex (L)	Box	73447
Nitrile Powdered, Best N-Dex (XL)	Box	73450
Nitrile Powdered, SemperGuard (S)	Box	73470
Nitrile Powdered, SemperGuard (M)	Box	73469
Nitrile Powdered, SemperGuard (L)	Box	73468
Nitrile Powdered, SemperGuard (XL)	Box	73471
Nitrile SemperForce, Black, Powder Free (XL)	Box	72918
Nitrile, 11 mil (Size 6)	12 Per Bag	73097
Nitrile, 11 mil (Size 7)	12 Per Bag	72658
Nitrile, 11 mil (Size 8)	12 Per Bag	72659
Nitrile, 11 mil (Size 9)	12 Per Bag	72660
Nitrile, 11 mil (Size 9.5)	12 Per Bag	73101
Nitrile, 11 mil (Size 10)	12 Per Bag	73095
Nitrile, 11 mil (Size 11)	12 Per Bag	73096
Nitrile, Touch 'n Tough, 8.5	Box	72742
Nitrile, Touch 'n Tough, 9.5	Box	72743
Nylon Shell, Black (XL)	Box	72684
Radnor Premium Select, Double Leather Palm (L)	Box	76254

Ask About Our Rental Protection Plan (RPP)

Foot Protection		
Description / Size	**Quantity**	**Item No.**
10" Overshoe, PVC, Black (XL)	Pair	73846
11" Overshoe Packlite (Size 6)	Pair	73861
11" Overshoe Packlite (Size 7)	Pair	73862
11" Overshoe Packlite (Size 8)	Pair	73863
11" Overshoe Packlite (Size 9)	Pair	73864
11" Overshoe Packlite (Size 10)	Pair	73855
11" Overshoe Packlite (Size 11)	Pair	73856
11" Overshoe Packlite (Size 12)	Pair	73857
11" Overshoe Packlite (Size 13)	Pair	73858
11" Overshoe Packlite (Size 14)	Pair	73859
11" Overshoe Packlite (Size 15)	Pair	73860
12" Shoe Cover, Latex Hazmat (L)	Pair	73029
12" Shoe Cover, Latex Hazmat (XL)	Pair	73061
12" Shoe Cover, Latex Hazmat (XXL)	Pair	73836
12" Shoe Cover, Latex Hazmat (XXXL)	Pair	73060
12" Shoe Cover, Latex Hazmat/D, (S)	Pair	73838
12" Shoe Cover, Latex Hazmat/D, (M)	Pair	73837
15" Knee Boot with Steel Shank (Size 5)	Pair	72763
15" Knee Boot with Steel Shank (Size 6)	Pair	72764
15" Knee Boot with Steel Shank (Size 7)	Pair	72765
15" Knee Boot with Steel Shank (Size 8)	Pair	72766
15" Knee Boot with Steel Shank (Size 9)	Pair	72767
15" Knee Boot with Steel Shank (Size 10)	Pair	72757
15" Knee Boot with Steel Shank (Size 11)	Pair	72758
15" Knee Boot with Steel Shank (Size 12)	Pair	72759
15" Knee Boot with Steel Shank (Size 13)	Pair	72760
15" Knee Boot with Steel Shank (Size 14)	Pair	72761
15" Knee Boot with Steel Shank (Size 15)	Pair	72762
15" Shoe Cover, PVC (M)	Pair	73841
15" Shoe Cover, PVC (L)	Pair	73840
15" Shoe Cover, PVC, (XL)	Pair	73083
15" Shoe Cover, PVC (XXL)	Pair	73839
16" Boot, Steel Toe, Majesty	Pair	73865
16" Boot, Steel Toe, Monarch (Size 7)	Pair	73867
16" Boot, Steel Toe, Monarch (Size 8)	Pair	73273
16" Boot, Steel Toe, Monarch (Size 9)	Pair	73868
16" Boot, Steel Toe, Monarch (Size 10)	Pair	73269
16" Boot, Steel Toe, Monarch (Size 11)	Pair	73270
16" Knee Boot, Standard PVC, Steel Toe (Size 6)	Pair	73262
16" Knee Boot, Standard PVC, Steel Toe (Size 7)	Pair	73263
16" Knee Boot, Standard PVC, Steel Toe (Size 8)	Pair	73264
16" Knee Boot, Standard PVC, Steel Toe (Size 9)	Pair	73265
16" Knee Boot, Standard PVC, Steel Toe (Size 10)	Pair	73258
16" Knee Boot, Standard PVC, Steel Toe (Size 11)	Pair	73259
16" Knee Boot, Standard PVC, Steel Toe (Size 12)	Pair	73260
16" Knee Boot, Standard PVC, Steel Toe (Size 13)	Pair	73261
16" Overboot, Yellow (Size 7)	Pair	73833
16" Overboot, Yellow (Size 8)	Pair	73834
16" Overboot, Yellow (Size 9)	Pair	73835
16" Overboot, Yellow (Size 10)	Pair	73059
16" Overboot, Yellow (Size 11)	Pair	73825
16" Overboot, Yellow (Size 12)	Pair	73826

16" Overboot, Yellow (Size 13)	Pair	73827
16" Overboot, Yellow (Size 14)	Pair	73828
16" Overboot, Yellow (Size 15)	Pair	73829
17" Overshoe Slicker, Yellow (Size 7)	Pair	73833
17" Overshoe Slicker, Yellow (Size 8)	Pair	73834
17" Overshoe Slicker, Yellow (Size 9)	Pair	73835
17" Overshoe Slicker, Yellow (Size 10)	Pair	73059
17" Overshoe Slicker, Yellow (Size 11)	Pair	73825
17" Overshoe Slicker, Yellow (Size 12)	Pair	73826
17" Overshoe Slicker, Yellow (Size 13)	Pair	73827
17" Overshoe Slicker, Yellow (Size 14)	Pair	73828
17" Overshoe Slicker, Yellow (Size 15)	Pair	73829
17" Overshoe Slicker, Yellow (Size 16)	Pair	73830
17" Overshoe Slicker, Yellow (Size 17)	Pair	73831
17" Overshoe Slicker, Yellow (Size 18)	Pair	73832
17" Overshoe, Black (XS)	Pair	73824
17" Overshoe, Black (S)	Pair	73822
17" Overshoe, Black (M)	Pair	73821
17" Overshoe, Black (L)	Pair	73820
17" Overshoe, Black (XL)	Pair	73823
17" Overshoe, Black (XXL)	Pair	73819
17" Overshoe, Yellow (Size 7)	Pair	73852
17" Overshoe, Yellow (Size 8)	Pair	73853
17" Overshoe, Yellow (Size 9)	Pair	73854
17" Overshoe, Yellow (Size 10)	Pair	73847
17" Overshoe, Yellow (Size 11)	Pair	73848
17" Overshoe, Yellow (Size 12)	Pair	73849
17" Overshoe, Yellow (Size 13)	Pair	73850
17" Overshoe, Yellow (Size 14)	Pair	73078
17" Overshoe, Yellow (Size 15)	Pair	73079
17" Overshoe, Yellow (Size 16)	Pair	73080
Boot, Steel Toe, Onguard (Size 11)	Pair	76251

Safety Glasses / Goggles

Description / Size	Quantity	Item No.
Crews Excalibur Series, Black Frame, Clear Lens	Each	72960
Crews Excalibur Series, Black Frame, Grey Lens	Each	73355
Crews Protective Chemical Splash Goggle	Each	72959
Crews Protective Goggle (Small)	Each	73352
Crews Storm Series, Black Frame, Clear Lens	Each	73361
Crews Storm Series, Black Frame, Grey Lens	Each	73050
Crews Storm Series, Replacement Lenses , Clear	Each	73359
Crews Storm Series, Replacement Lenses , Grey	Each	73360
Crews Tacoma Series, Black Frame, Clear Lens	Each	73366
Crews Tacoma Series, Black Frame, Grey Lens	Each	73367
Crews Tomahawk Series, Black Frame, Clear Lens	Each	73364
Crews Tomahawk Series, Black Frame, Grey Lens	Each	73365
Crews Tomahawk Series, Replacement Lenses, Clear	Each	73362
Crews Tomahawk Series, Replacement Lenses, Gray	Each	73363
Pyramex Itek, Clear Lens	Each	73392
Pyramex Itek, Tinted Lens	Each	73393
Pyramex Venture 3 Clear	Each	72539
Pyramex Venture 3 Gray	Each	72540
Uvex Genesis XC, Clear	Each	72783
Uvex Genesis XC, Espresso	Each	72735
Uvex Seismic	Each	75629
Wilson, Clear/Clear	Each	72823

Face Shields

Description / Size	Quantity	Item No.
3M Respirator Faceshield Covers	25 Per Pack	72817
Faceshield Visor, Nylon Mesh, Black (6.5"x14")	Each	73314
Faceshield Visor, Clear Poly (8"x15"x.040")	Each	75847
Faceshield Visor, PETG, Clear (8"x15.5")	Each	73319
Faceshield Visor, Polycarb, Clear (8"x15.5")	Each	73320
Faceshield Z87+, Clear	Each	75924
Faceshield, PETG, Clear, Crews	Each	73982
Frame Foldback Faceshield Metal	Each	72972
Headgear Faceshield, Propionate Visor (8.5"x15"x.07")	Each	76470

Hearing Protection

Description / Size	Quantity	Item No.
EAR Plugs, Uncorded	200 Per Box	73251
EAR Plugs, Neo Blast Uncorded	200 Per Box	73606
EAR Plugs, Corded	200 Per Box	73605
Ear Brand Muff - Model 3000	Each	75961
Ear Muff Peltor - Optime 101	Each	72647

PERSONAL SAFETY SUPPLIES - Eye, Face and Ear Protection

Hard Hats		
Description / Size	Quantity	Item No.
3-R Ratchet GN	Each	73561
Cap with Ratchet Suspension	Each	75958
Full Brim, 8-Point Suspension, White	Each	72619
Grainger, Pink	Each	76242
Jackson, Blue, SC-6	Each	73591
KISC logo, White	Each	73559
Metal, North/Fibre, Green	Each	72925
Model 4100	Each	73551
Model 5100R, White (Economy Cap)	Each	73250
MSA, Yellow V-Gard	Each	75128
North/Fibermetal, Red	Each	73562
North/Fibermetal, White	Each	72926
Omega II, Mega Ratchet, 6-Point Nylon Suspension, Green	Each	72516
Omega II, Ratchet Hi Viz, Orange	Each	72775
Omega II, Ratchet, Blue	Each	73001
Omega II, Ratchet, Red	Each	73000
Omega II, Ratchet, White	Each	72971
Pryamex, Blue (HP16060) with 6-Point Snap Lock Suspension	Each	73564
Python, Coil Tether, 2 lb	Each	75935
Rain Trough, White	Each	73566
Standard Hard Hat	Each	75127

Tyvek (Style 1412)		
Description / Size	Quantity	Item No.
Coveralls with Zipper Front (L)	25 Per Case	73692
Coveralls with Zipper Front (XL)	25 Per Case	73693
Coveralls with Zipper Front (XXL)	25 Per Case	73688
Coveralls with Zipper Front (XXXL)	25 Per Case	72981
Coveralls with Zipper Front (XXXXL)	25 Per Case	73689

Tyvek (Style 1414)		
Description / Size	Quantity	Item No.
Coveralls with Hood & Booties (S)	25 Per Case	73699
Coveralls with Hood & Booties (M)	25 Per Case	73698
Coveralls with Hood & Booties (L)	25 Per Case	72983
Coveralls with Hood & Booties (XL)	25 Per Case	72984
Coveralls with Hood & Booties (XXL)	25 Per Case	73694
Coveralls with Hood & Booties (XXXL)	25 Per Case	73695
Coveralls with Hood & Booties (XXXXL)	25 Per Case	73696

Tyvek (Style 1417)		
Description / Size	Quantity	Item No.
Coveralls with Elastic Wrist & Ankle (S)	25 Per Case	73705
Coveralls with Elastic Wrist & Ankle (L)	25 Per Case	73703
Coveralls with Elastic Wrist & Ankle (XL)	25 Per Case	73706
Coveralls with Elastic Wrist & Ankle (XXL)	25 Per Case	73700
Coveralls with Elastic Wrist & Ankle (XXXL)	25 Per Case	73701
Coveralls with Elastic Wrist & Ankle (XXXXL)	25 Per Case	73702

Ask About Our Rental Protection Plan (RPP)

Tyvek (Style 1428)

Description / Size	Quantity	Item No.
Coveralls with Hood, Elastic Wrists & Ankles (S)	25 Per Case	73712
Coveralls with Hood, Elastic Wrists & Ankles (M)	25 Per Case	72985
Coveralls with Hood, Elastic Wrists & Ankles (L)	25 Per Case	73711
Coveralls with Hood, Elastic Wrists & Ankles (XL)	25 Per Case	73713
Coveralls with Hood, Elastic Wrists & Ankles (XXL)	25 Per Case	73707
Coveralls with Hood, Elastic Wrists & Ankles (XXXL)	25 Per Case	73708
Coveralls with Hood, Elastic Wrists & Ankles (XXXXL)	25 Per Case	73709

Tychem (Style 5412)

Description / Size	Quantity	Item No.
QC Coveralls with Zipper Front (S)	12 Per Case	73725
QC Coveralls with Zipper Front (M)	12 Per Case	73724
QC Coveralls with Zipper Front (L)	12 Per Case	73723
QC Coveralls with Zipper Front (XL)	12 Per Case	73726
QC Coveralls with Zipper Front (XXL)	12 Per Case	73720
QC Coveralls with Zipper Front (XXXL)	12 Per Case	73721
QC Coveralls with Zipper Front (XXXXL)	12 Per Case	73722

Tychem (Style 5414)

Description / Size	Quantity	Item No.
QC Coveralls with Hood, Boots and Elastic Wrists (S)	12 Per Case	73733
QC Coveralls with Hood, Boots and Elastic Wrists (M)	12 Per Case	73732
QC Coveralls with Hood, Boots and Elastic Wrists (L)	12 Per Case	73731
QC Coveralls with Hood, Boots and Elastic Wrists (XL)	12 Per Case	73734
QC Coveralls with Hood, Boots and Elastic Wrists (XXL)	12 Per Case	73727
QC Coveralls with Hood, Boots and Elastic Wrists (XXXL)	12 Per Case	73728
QC Coveralls with Hood, Boots and Elastic Wrists (XXXXL)	12 Per Case	73729

Tychem (Style 5417)

Description / Size	Quantity	Item No.
QC Coveralls with Elastic Wrists and Ankles (S)	12 Per Case	73741
QC Coveralls with Elastic Wrists and Ankles (M)	12 Per Case	73817
QC Coveralls with Elastic Wrists and Ankles (L)	12 Per Case	73740
QC Coveralls with Elastic Wrists and Ankles (XL)	12 Per Case	73735
QC Coveralls with Elastic Wrists and Ankles (XXL)	12 Per Case	73736
QC Coveralls with Elastic Wrists and Ankles (XXXL)	12 Per Case	73737
QC Coveralls with Elastic Wrists and Ankles (XXXXL)	12 Per Case	73738

Tychem (Style # 5428)

Description / Size	Quantity	Item No.
QC Coveralls with Hood, Elastic Wrists and Ankles (S)	12 Per Case	73747
QC Coveralls with Hood, Elastic Wrists and Ankles (M)	12 Per Case	73746
QC Coveralls with Hood, Elastic Wrists and Ankles (L)	12 Per Case	72987
QC Coveralls with Hood, Elastic Wrists and Ankles (XL)	12 Per Case	73748
QC Coveralls with Hood, Elastic Wrists and Ankles (XXL)	12 Per Case	73742
QC Coveralls with Hood, Elastic Wrists and Ankles (XXXL)	12 Per Case	73743
QC Coveralls with Hood, Elastic Wrists and Ankles (XXXXL)	12 Per Case	73744

Nomex		
Description / Size	Quantity	Item No.
IIIA, Flame Resistant (S)	Each	73925
IIIA, Flame Resistant (M)	Each	73924
IIIA, Flame Resistant (L)	Each	73077
IIIA, Flame Resistant (XL)	Each	73926
IIIA, Flame Resistant (XXL)	Each	73062
IIIA, Flame Resistant (XXXL)	Each	73923

Rain Jackets and Pants		
Description / Size	Quantity	Item No.
Jacket (S)	Each	73966
Jacket (M)	Each	73965
Jacket (L)	Each	73964
Jacket (XL)	Each	73967
Jacket (XXL)	Each	73962
Jacket (XXXL)	Each	73963
Pants (S)	Each	73972
Pants (M)	Each	73971
Pants (L)	Each	73970
Pants (XL)	Each	73973
Pants (XXL)	Each	73968
Pants (XXXL)	Each	73969

Rain Suits		
Description / Size	Quantity	Item No.
Sitex, .35mm (S)	Each	73784
Sitex, .35mm (M)	Each	73783
Sitex, .35mm (L)	Each	73782
Sitex, .35mm (XL)	Each	73785
Sitex, .35mm (XXL)	Each	73779
Sitex, .35mm (XXXL)	Each	73780
Sitex, .35mm (XXXXL)	Each	73781
Tuftex, .30mm (S)	Each	73802
Tuftex, .30mm (M)	Each	73801
Tuftex, .30mm (L)	Each	73800
Tuftex, .30mm (XL)	Each	73803
Tuftex, .30mm (XXL)	Each	73797
Tuftex, .30mm (XXXL)	Each	73798
Tuftex, .30mm (XXXXL)	Each	73799
Webtex, .65mm (S)	Each	73791
Webtex, .65mm (M)	Each	73790
Webtex, .65mm (L)	Each	73789
Webtex, .65mm (XL)	Each	73792
Webtex, .65mm (XXL)	Each	73786
Webtex, .65mm (XXXL)	Each	73787
Webtex, .65mm (XXXXL)	Each	73788

Ask About Our Rental Protection Plan (RPP)

Safety Vests

Description / Size	Quantity	Item No.
V310, High Visibility (S)	Each	73947
V310, High Visibility (M)	Each	73946
V310, High Visibility (L)	Each	73945
V310, High Visibility (XL)	Each	73948
V310, High Visibility (XXL)	Each	73941
V310, High Visibility (XXXL)	Each	73942
V310, High Visibility (XXXXL)	Each	73943
V310, High Visibility, Class III (Orange/Lime, L)	Each	72956
V310, High Visibility, Class III (Orange/Lime, XL)	Each	72957
V310, High Visibility, Class III (Orange/Lime, XXL)	Each	72955

Respirators

Description / Size	Quantity	Item No.
3M Full Mask, 6900 Series	Each	73662
3M Full Mask, 6800 Series	Each	73663
3M Half Mask, 7500 Series Ultimate (S)	Each	72882
3M Half Mask, 7500 Series Ultimate (M)	Each	72881
3M Half Mask, 7500 Series Ultimate (L)	Each	72880
3M Half Mask, 7501 - 7000 Series (S)	Each	72834
3M Half Mask, 7502-M 7000 Series (M)	Each	72833
MSA Half Mask, Comfo Classic, Hycar Black (S)	Each	73618
MSA Half Mask, Comfo Classic, Hycar Black (M)	Each	73617
MSA Half Mask, Comfo Classic, Hycar Black (L)	Each	73616
MSA Half Mask, Advantage 200 LS (S)	Each	73620
MSA Half Mask, Advantage 200 LS (M)	Each	73619
MSA Half Mask, Advantage, 200 LS (L)	Each	73055
MSA Full Mask, Ultra-Twin (S)	Each	73630
MSA Full Mask, Ultra-Twin (M)	Each	73629
MSA Full Mask, Ultra-Twin (L)	Each	73628
MSA Full Mask, Advantage 1000 (S)	Each	73633
MSA Full Mask, Advantage 1000 (M)	Each	73632
MSA Full Mask, Advantage 1000 (L)	Each	73631
MSA OptimAir, MM2K, PAPR UV Hycar (S)	Each	73643
MSA OptimAir, MM2K, PAPR UV Hycar (M)	Each	72975
MSA OptimAir, MM2K, PAPR UV Hycar (L)	Each	73642
MSA OptimAir, MM2K, PAPR UV Sil (S)	Each	72974
MSA OptimAir, MM2K, PAPR UV Sil (M)	Each	73641
MSA OptimAir, MM2K, PAPR UV Sil (L)	Each	73640
North Half Mask, 7700 Series (S)	Each	73625
North Half Mask, 7700 Series (M)	Each	73624
North Half Mask, 7700 Series (L)	Each	73623
North Half Mask, 550030 Series (M)	Each	73622
North Half Mask, 550030 Series (L)	Each	73621
North Half Mask, 7600 Series (S)	Each	73626
North Full Mask, 7600 Series (M/L)	Each	73627
North Full Mask, 5400 Series	Each	73637
North Escape Mouth Bit, 7902 Series	Each	75970

Gas Masks		
Description / Size	Quantity	Item No.
MSA Advantage 1000 (S)	Each	73127
MSA Advantage 1000 (M)	Each	73126
MSA Advantage 1000 (L)	Each	73125
Canister	Each	73646

Cartridges		
Description / Size	Quantity	Item No.
GMA Organic Vapor Cartridge - Comfo Series	10 Per Box	73669
MSA Comfo Series, GMA P100	6 Per Box	73057
MSA Comfo Series, GMC P100	10 Per Box	73651
MSA Comfo Series, GMB P100	6 Per Box	73658
MSA Comfo Series, GME P100	6 Per Box	73655

MSA Advantage - Cartridges		
Description / Size	Quantity	Item No.
CHEM/GMA	10 Per Pack	73672
MSA Advantage Series, GMC	10 Per Pack	73668
MSA Advantage Series, GMC P100	10 Per Pack	73071
MSA Advantage Series, GME P100	10 Per Pack	73073
MSA Advantage Series, GMI P100	2 Per Pack	73653
North Particulate Filter Cartridge - Model 7580P100	2 Per Pack	72903
North Particulate Filter Cartridge Double-Stack Model 7581	2 Per Pack	72778
North Organic Vapor Cartridge - Model N75001	2 Per Pack	72977
North Organic Vapor Cartridge - Double Standard	2 Per Pack	72778
North P100 Acid Gas/Organic Vapor - Model 7583	2 Per Pack	72777
North P100 Acid Gas/Organic Vapor	2 Per Pack	72621
North P100 Filter	2 Per Pack	72903
North MultiChem Cartridge - Model 75SCP100	2 Per Pack	72835
North Mercury Vapor Cartridge - Model 75852P100	2 Per Pack	73189
Peel Away Windows North Resp.	15 Per Pack	73028

Respirator Accessories		
Description / Size	Quantity	Item No.
Respirator Cleaning Pad - PSE	Each	71569
Respirator Storage Bag - Half Face	Each	76518
Respirator Storage Bag - Full Face	Each	73677

Dust Mask & Respirator Dust Mask		
Description / Size	Quantity	Item No.
Respirator Dust Mask 8210 N95	20 Per Box	72930
Respirator Dust Mask 8511 N95	10 Per Box	72929

Ask About Our Rental Protection Plan (RPP)

Lanyards and Harnesses

Description / Size	Quantity	Item No.
6' Lanyard,Shock Absorbing (Double Leg)	Each	75591
Full Body Harness; Unifit (S-L)	Each	75876
Full-Body Harness Classic Fit 5pt Adjustment-Universal Fit	Each	71929
Gaurdian 6' Internal Shock (Single Leg)	Each	71854
Gaurdian 6' Shock Absorbing Stretch (Double Leg)	Each	71852
Gaurdian 6' Shock Absorbing w/Hooks (Single Leg)	Each	71898
Gaurdian 6' Shock Absorbing w/Hooks (Double Leg)	Each	71897
Gaurdian Lanyard, Non-Shock Absorbing (Single Leg)	Each	75641
Lifeline Self Retracting 11'	Each	71913
Lifeline Self Retracting 20'	Each	71919
MIO Mechanical Safety Harness (Construction Style)	Each	75590
M-L Cyclone Construction	Each	71917
M-L Seraph Construction	Each	71896
S-L Velocity HUV	Each	71902
S-L Velocity HUV with 3D Rings	Each	71907

Eye Wash & First Aid Kits

Description / Size	Quantity	Item No.
Eye Wash (8 oz bottle)	Each	77228
Eye Wash (16 oz bottle)	Each	73433
Eye Wash (32 oz bottle)	Each	73434
First Aid Kit, 81 piece (Fabric Case)	Each	76259

REFERENCE GUIDE & CHARTS

REFERENCE INFORMATION -

Compound Name	Synonym/Abbreviation	CAS No.	Formula	9.8	C	10.6	C	11.7	C	IE (eV)	TWA
Acetaldehyde		75-07-0	C_2H_4O	NR	+	6	+	3.3	+	10.23	C25
Acetic acid	Ethanoic Acid	64-19-7	$C_2H_4O_2$	NR	+	22	+	2.6	+	10.66	10
Acetic anhydride	Ethanoic Acid Anhydride	108-24-7	$C_4H_6O_3$	NR	+	6.1	+	2.0	+	10.14	5
Acetone	2-Propanone	67-64-1	C_3H_6O	1.2	+	0.9	+	1.4	+	9.71	500
Acetone cyanohydrin	2-Hydroxyisobutyronitrile	75-86-5	C_4H_7NO					4	+	11.1	C5
Acetonitrile	Methyl cyanide, Cyanomethane	75-05-8	C_2H_3N					100		12.19	40
Acetylene	Ethyne	74-86-2	C_2H_2					2.1	+	11.40	ne
Acrolein	Propenal	107-02-8	C_3H_4O	42	+	3.9	+	1.4	+	10.10	0.1
Acrylic acid	Propenoic Acid	79-10-7	$C_3H_4O_2$			12	+	2.0	+	10.60	2
Acrylonitrile	Propenenitrile	107-13-1	C_3H_3N			NR	+	1.2	+	10.91	2
Allyl alcohol		107-18-6	C_3H_6O	4.5	+	2.4	+	1.6	+	9.67	2
Allyl chloride	3-Chloropropene	107-05-1	C_3H_5Cl			4.3		0.7		9.9	1
Ammonia		7664-41-7	NH_3	NR	+	10.9	+	5.7	+	10.16	25
Amyl acetate	mix of n-Pentyl acetate & 2-Methylbutyl acetate	628-63-7	$C_7H_{14}O_2$	11	+	2.3	+	0.95	+	<9.9	100
Amyl alcohol	1-Pentanol	75-85-4	$C_5H_{12}O$			5				10.00	ne
Aniline	Aminobenzene	62-53-3	C_6H_7N	0.50	+	0.48	+	0.47	+	7.72	2
Anisole	Methoxybenzene	100-66-3	C_7H_8O	0.89	+	0.58	+	0.56	+	8.21	ne
Arsine	Arsenic trihydride	7784-42-1	AsH_3			1.9	+			9.89	0.05
Benzaldehyde		100-52-7	C_7H_6O					1		9.49	ne
Benzene		71-43-2	C_6H_6	0.55	+	0.47	+	0.6	+	9.25	0.5
Benzonitrile	Cyanobenzene	100-47-0	C_7H_5N			1.6				9.62	ne
Benzyl alcohol	α-Hydroxytoluene, Hydroxymethylbenzene, Benzenemethanol	100-51-6	C_7H_8O	1.4	+	1.1	+	0.9	+	8.26	ne
Benzyl chloride	α-Chlorotoluene, Chloromethylbenzene	100-44-7	C_7H_7Cl	0.7	+	0.6	+	0.5	+	9.14	1
Benzyl formate	Formic acid benzyl ester	104-57-4	$C_8H_8O_2$	0.9	+	0.73	+	0.66	+		ne
Boron trifluoride		7637-07-2	BF_3	NR		NR		NR		15.5	C1
Bromine		7726-95-6	Br_2	NR	+	1.30	+	0.74	+	10.51	0.1
Bromobenzene		108-86-1	C_6H_5Br			0.6		0.5		8.98	ne
2-Bromoethyl methyl ether		6482-24-2	C_3H_7OBr			0.84	+			~10	ne
Bromoform	Tribromomethane	75-25-2	$CHBr_3$	NR	+	2.7		0.5	+	10.48	0.5
Bromopropane,1-	n-Propyl bromide	106-94-5	C_3H_7Br	150	+	1.5	+	0.6	+	10.18	ne
Butadiene	1,3-Butadiene, Vinyl ethylene	106-99-0	C_4H_6	0.8		0.6	+	1.1		9.07	2
Butadiene diepoxide, 1,3-	1,2,3,4-Diepoxybutane	298-18-0	$C_4H_6O_2$	25	+	3.5	+	1.2		~10	ne
Butane		106-97-8	C_4H_{10}			67	+	1.2		10.53	800
Butanol, 1-	Butyl alcohol, n-Butanol	71-36-3	$C_4H_{10}O$	70	+	4.7	+	1.4	+	9.99	20
Butanol, t-	tert-Butanol, t-Butyl alcohol	75-65-0	$C_4H_{10}O$	6.9	+	2.9	+			9.90	100
Butene, 1-	1-Butylene	106-98-9	C_4H_8			0.9				9.58	ne
Butoxyethanol, 2-	Butyl Cellosolve, Ethylene glycol monobutyl ether	111-76-2	$C_6H_{14}O_2$	1.8	+	1.2	+	0.6	+	<10	25
Butoxyethyl Acetate, 2-	2-Butoxyethyl acetate; 2-Butoxy-ethanol acetate; Butyl Cellosolve acetate; Butyl glycol acetate; EGBEA; Ektasolve EB acetate	112-07-2	$C_8H_{16}O_3$			1.27	+				20
Butyl acetate, n-		123-86-4	$C_6H_{12}O_2$			2.6	+			10	150
Butyl acrylate, n-	Butyl 2-propenoate, Acrylic acid butyl ester	141-32-2	$C_7H_{12}O_2$			1.6	+	0.6	+		10
Butylamine, n-		109-73-9	$C_4H_{11}N$	1.1	+	1.1	+	0.7	+	8.71	C5
Butyl cellosolve see 2-Butoxyethanol		111-76-2									
Butyl hydroperoxide, t-		75-91-2	$C_4H_{10}O_2$	2.0	+	1.6	+			<10	1

Compound Name	Synonym/Abbreviation	CAS No.	Formula	9.8	C	10.6	C	11.7	C	IE (eV)	TWA
Butyl mercaptan	1-Butanethiol	109-79-5	$C_4H_{10}S$	0.55	+	0.52	+			9.14	0.5
Butyraldehyde	Butanal	123-72-8	C_4H_8O			1.87	+			9.82	20
Camelinal HRJ						1.1	+	0.32	+		
Camelinal HRJ/JP-8 50/50						0.89	+	0.41	+		
CamelinalHRJ						1.15	+				
CamelinalHRJ/JP-8						1.07	+				
Carbon disulfide		75-15-0	CS_2	4	+	1.2	+	0.44		10.07	10
Carbon tetrachloride	Tetrachloromethane	56-23-5	CCl_4	NR	+	NR	+	1.7	+	11.47	5
Carbonyl sulfide	Carbon oxysulfide	463-58-1	COS							11.18	
Cellosolve see 2-Ethoxyethanol											
CFC-14 see Tetrafluoromethane											
CFC-113 see 1,1,2-Trichloro-1,2,2-trifluoroethane											
Chlorine		7782-50-5	Cl_2					1.0	+	11.48	0.5
Chlorine dioxide		10049-04-4	ClO_2	NR	+	NR	+	NR	+	10.57	0.1
Chlorobenzene	Monochlorobenzene	108-90-7	C_6H_5Cl	0.44	+	0.55	+	0.39	+	9.06	10
Chlorobenzotrifluoride, 4-	PCBTF, OXSOL 100 p-Chlorobenzotrifluoride	98-56-6	$C_7H_4ClF_3$	0.74	+	0.63	+	0.55	+	<9.6	
Chloro-1,3-butadiene, 2-	Chloroprene	126-99-8	C_4H_5Cl			3					10
Chloro-1,1-difluoroethane, 1-	HCFC-142B, R-142B	75-68-3	$C_2H_3ClF_2$	NR		NR		NR		12.0	ne
Chlorodifluoromethane	HCFC-22, R-22	75-45-6	$CHClF_2$	NR		NR		NR		12.2	1000
Chloroethane	Ethyl chloride	75-00-3	C_2H_5Cl	NR	+	NR	+	1.1	+	10.97	100
Chloroethanol	Ethylene chlrohydrin	107-07-3	C_2H_5ClO							10.52	C1
Chloroethanol, 2-	2-Chloroethanol; 2-Chloroethyl alcohol; Ethylene chlorhydrin	107-07-3	C_2H_5ClO			2.88	+			10.5	5
Chloroethyl ether, 2-	bis (2-chloroethyl) ether	111-44-4	$C_4H_8Cl_2O$	8.6	+	3.0	+				5
Chloroethyl methyl ether, 2-	Methyl 2-chloroethyl ether	627-42-9	C_3H_7ClO			3					ne
Chloroform	Trichloromethane	67-66-3	$CHCl_3$	NR	+	NR	+	3.5	+	11.37	10
Chloro-2-methylpropene, 3-	Methallyl chloride, Isobutenyl chloride	563-47-3	C_4H_7Cl	1.4	+	1.2	+	0.63	+	9.76	ne
Chloropicrin		76-06-2	CCl_3NO_2	NR	+	~400	+	7	+		0.1
Chlorotoluene, o-	o-Chloromethylbenzene	95-49-8	C_7H_7Cl			0.5		0.6		8.83	50
Chlorotoluene, p-	p-Chloromethylbenzene	106-43-4	C_7H_7Cl					0.6		8.69	ne
Chlorotrifluoroethene	CTFE, Chlorotrifluoroethylene Genetron 1113	79-38-9	C_2ClF_3	6.7	+	3.9	+	1.2	+	9.76	5
Chlorotrimethylsilane		75-77-4	C_3H_9ClSi	NR		NR		0.82	+	10.83	ne
Cresol, m-	m-Hydroxytoluene, 3-Methylphenol	108-39-4	C_7H_8O	0.57	+	0.50	+	0.57	+	8.29	5
Cresol, o-	ortho-Cresol; 2-Cresol; o-Cresylic acid; 1-Hydroxy-2-methylbenzene; 2-Hydroxytoluene; 2-Methyl phenol	95-48-7	C_7H_8O			1	+			8.14	5
Cresol, p-	para-Cresol; 4-Cresol; p-Cresylic acid; 1-Hydroxy-4-methylbenzene; 4-Hydroxytoluene; 4-Methyl phenol	106-44-5	C_7H_8O			1.4	+			8.34	5
Crotonaldehyde	trans-2-Butenal	123-73-9 4170-30-3	C_4H_6O	1.5	+	1.1	+	1.0	+	9.73	2
Cumene	Isopropylbenzene	98-82-8	C_9H_{12}	0.58	+	0.54	+	0.4	+	8.73	50
Cyanogen bromide		506-68-3	CNBr	NR		NR		NR		11.84	ne
Cyanogen chloride		506-77-4	CNCl	NR		NR		NR		12.34	C0.3
Cyclohexane		110-82-7	C_6H_{12}	3.3	+	1.4	+	0.64	+	9.86	300
Cyclohexanol	Cyclohexyl alcohol	108-93-0	$C_6H_{12}O$	1.5	+	0.9	+	1.1	+	9.75	50
Cyclohexanone		108-94-1	$C_6H_{10}O$	1.0	+	0.9	+	0.7	+	9.14	25

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Compound Name	Synonym/Abbreviation	CAS No.	Formula	9.8	C	10.6	C	11.7	C	IE (eV)	TWA
Cyclohexene		110-83-8	C_6H_{10}			0.8	+			8.95	300
Cyclohexylamine		108-91-8	$C_6H_{13}N$			1.2				8.62	10
Cyclopentane 85% 2,2-dimethylbutane 15%		287-92-3	C_5H_{10}	NR	+	15	+	1.1		10.33	600
Cyclopropylamine	Aminocyclpropane	765-30-0	C_3H_7N	1.1	+	0.9	+	0.9	+		ne
Decamethylcyclopentasiloxane		541-02-6	$C_{10}H_{30}O_5Si_5$	0.16	+	0.13	+	0.12	+		ne
Decamethyltetrasiloxane		141-62-8	$C_{10}H_{30}O_3Si_4$	0.17	+	0.13	+	0.12	+	<10.2	ne
Decane		124-18-5	$C_{10}H_{22}$	4.0	+	1.4	+	0.35	+	9.65	ne
Diacetone alcohol	4-Methyl-4-hydroxy-2-pentanone	123-42-2	$C_6H_{12}O_2$			0.7					50
Dibromochloromethane	Chlorodibromomethane	124-48-1	$CHBr_2Cl$	NR	+	5.2	+	0.7	+	10.59	ne
Dibromo-3-chloropropane, 1,2-	DBCP	96-12-8	$C_3H_5Br_2Cl$	NR	+	1.7	+	0.43	+		0.001
Dibromoethane, 1,2-	EDB, Ethylene dibromide, Ethylene bromide	106-93-4	$C_2H_4Br_2$	NR	+	1.7	+	0.6	+	10.37	ne
Dichlorobenzene, o-	1,2-Dichlorobenzene	95-50-1	$C_6H_4Cl_2$	0.54	+	0.64	+	0.38	+	9.08	25
Dichlorodifluoromethane	CFC-12	75-71-8	CCl_2F_2			NR	+	NR	+	11.75	1000
Dichlorodimethylsilane		75-78-5	$C_2H_6Cl_2Si$	NR		NR		1.1	+	>10.7	ne
Dichloroethane, 1,2-	EDC, 1,2-DCA, Ethylene dichloride	107-06-2	$C_2H_4Cl_2$			NR	+	0.6	+	11.04	10
Dichloroethene, 1,1-	1,1-DCE, Vinylidene chloride	75-35-4	$C_2H_2Cl_2$			0.82		0.8	+	9.79	5
Dichloroethene, c-1,2-	c-1,2-DCE, cis-Dichloroethylene	156-59-2	$C_2H_2Cl_2$			0.8				9.66	200
Dichloroethene, t-1,2-	t-1,2-DCE, trans-Dichloroethylene	156-60-5	$C_2H_2Cl_2$			0.45	+	0.34	+	9.65	200
Dichloro-1-fluoroethane, 1,1-	R-141B	1717-00-6	$C_2H_3Cl_2F$	NR	+	NR	+	2.0	+		ne
Dichloromethane see Methylene chloride											
Dichloropentafluoropropane	AK-225, mix of ~45% 3,3-dichloro-1,1,1,2,2-pentafluoro-propane (HCFC-225ca) & ~55% 1,3-Dichloro-1,1,2,2,3-penta-fluoropropane (HCFC-225cb)	442-56-0 507-55-1	$C_3HCl_2F_5$	NR	+	NR	+	25	+		ne
Dichloropropane, 1,2-		78-87-5	$C_3H_6Cl_2$					0.7		10.87	75
Dichloro-1-propene, 1,3-		542-75-6	$C_3H_4Cl_2$	1.3	+	0.96	+			<10	1
Dichloro-1-propene, 2,3-		78-88-6	$C_3H_4Cl_2$	1.9	+	1.3	+	0.7	+	<10	ne
Dichloro-1,1,1-trifluoroethane, 2,2-	R-123	306-83-2	$C_2HCl_2F_3$	NR	+	NR	+	10.1	+	11.5	ne
Dichloro-2,4,6-trifluoropyridine, 3,5-	DCTFP	1737-93-5	$C_5Cl_2F_3N$	1.1	+	0.9	+	0.8	+		ne
Dichlorvos**	Vapona; O,O-dimethyl O-dichlorovinyl phosphate	62-73-7	$C_4H_7Cl_2O_4P$			0.9	+			<9.4	0.1
Dicyclopentadiene	DCPD, Cyclopentadiene dimer	77-73-6	$C_{10}H_{12}$	0.57	+	0.48	+	0.43	+	8.8	5
Diesel Fuel**		68334-30-5	m.w. 226			0.9	+				11
Diesel Fuel #2 (Automotive)**		68334-30-5	m.w. 216	1.3		0.7	+	0.4	+		11
Diethylamine		109-89-7	$C_4H_{11}N$			1	+			8.01	5
Diethylaminopropylamine, 3-		104-78-9	$C_7H_{18}N_2$			1.3					ne
Diethylbenzene see Dowtherm J											
Diethyl ether	Diethyl ether; Diethyl oxide; Ethyl oxide; Ether; Solvent ether	60-29-7	$C_4H_{10}O$			1.74	+			9.51	400
Diethylene glycol butyl ether	2-(2-Butoxyethoxy)ethanol, BDG, Butyldiglycol, DB Solvent	112-34-5	$C_8H_{18}O_3$			4.6	+				5
Diethylene glycol monobutyl ether acetate	Butyldiglycol acetate, DB Acetate, Diethylene glycol monobutyl ether acetate	124-17-4	$C_{10}H_{20}O_4$			5.62	+				ne
Diethylmaleate		141-05-9	$C_8H_{12}O_4$			4					ne
Diethyl sulfide see Ethyl sulfide											
Diglyme see Methoxyethyl ether		111-96-6	$C_6H_{14}O_3$								

Compound Name	Synonym/Abbreviation	CAS No.	Formula	9.8	C	10.6	C	11.7	C	IE (eV)	TWA
Diisobutyl ketone	DIBK, 2,2-dimethyl-4-heptanone	108-83-8	$C_9H_{18}O$	0.71	+	0.61	+	0.35	+	9.04	25
Diisopropylamine		108-18-9	$C_6H_{15}N$	0.84	+	0.74	+	0.5	+	7.73	5
Diisopropylcarbodiimide,N,N'-	DIPC	693-13-0	$C_7H_{14}N_2$			0.42	+				ne
Diisopropylethylamine	'Hünig's base', N-Ethyldiisopropylamine, DIPEA, Ethyldiisopropylamine	7087-68-5	$C_8H_{19}N$			0.7	+				ne
Diketene	Ketene dimer	674-82-8	$C_4H_4O_2$	2.6	+	2.0	+	1.4	+	9.6	0.5
Dimethylacetamide, N,N-	DMA	127-19-5	C_4H_9NO	0.87	+	0.8	+	0.8	+	8.81	10
Dimethylamine		124-40-3	C_2H_7N			1.5				8.23	5
Dimethyl carbonate	Carbonic acid dimethyl ester	616-38-6	$C_3H_6O_3$	NR	+	~70	+	1.7	+	~10.5	ne
Dimethyl disulfide	DMDS	624-92-0	$C_2H_6S_2$	0.2	+	0.20	+	0.21	+	7.4	ne
Dimethyl ether see Methyl ether											
Dimethylethylamine	DMEA	598-56-1	$C_4H_{11}N$	1.1	+	1.0	+	0.9	+	7.74	~3
Dimethylformamide, N,N-	DMF	68-12-2	C_3H_7NO	0.7	+	0.7	+	0.8	+	9.13	10
Dimethylhydrazine, 1,1-	UDMH	57-14-7	$C_2H_8N_2$			0.8	+	0.8	+	7.28	0.01
Dimethyl methylphosphonate	DMMP, methyl phosphonic acid dimethyl ester	756-79-6	$C_3H_9O_3P$	NR	+	4.3	+	0.74	+	10.0	ne
Dimethyl sulfate		77-78-1	$C_2H_6O_4S$	~23		~20	+	2.3	+		0.1
Dimethyl sulfide see Methyl sulfide											
Dimethyl sulfoxide	DMSO, Methyl sulfoxide	67-68-5	C_2H_6OS			1.4	+			9.10	ne
Dioxane, 1,4-		123-91-1	$C_4H_8O_2$			1.3				9.19	25
Dioxolane, 1,3-	Ethylene glycol formal	646-06-0	$C_3H_6O_2$	4.0	+	2.3	+	1.6	+	9.9	20
Dowtherm A see Therminol®**											
Dowtherm J (97% Diethylbenzene)**		25340-17-4	$C_{10}H_{14}$			0.5					
DS-108F Wipe Solvent	Ethyl lactate/Isopar H/ Propoxypropanol ~7:2:1	97-64-3 64742-48-9 1569-01-3	m.w. 118	3.3	+	1.6	+	0.7	+		ne
Epichlorohydrin	ECH Chloromethyloxirane, 1-chloro2,3-epoxypropane	106-89-8	C_2H_5ClO	~200	+	8.5	+	1.4	+	10.2	0.5
Ethane		74-84-0	C_2H_6			NR	+	15	+	11.52	ne
Ethanol	Ethyl alcohol	64-17-5	C_2H_6O			9.6	+	3.1	+	10.47	1000
Ethanolamine**	MEA, Monoethanolamine	141-43-5	C_2H_7NO	5.6	+	1.6	+			8.96	3
Ethene	Ethylene	74-85-1	C_2H_4			9	+	4.5	+	10.51	ne
Ethoxyethanol, 2-	Ethyl cellosolve, Ethylene glycol monoethyl ether	110-80-5	$C_4H_{10}O_2$			1.3				9.6	5
Ethyl acetate	Acetic ester; Acetic ether; Ethyl ester of acetic acid; Ethyl ethanoate	141-78-6	$C_4H_8O_2$			3.8	+			10.01	400
Ethyl acetoacetate		141-97-9	$C_6H_{10}O_3$	1.4	+	1.2	+	1.0	+	<10	ne
Ethyl acrylate		140-88-5	$C_5H_8O_2$			2.4	+	1.0	+	<10.3	5
Ethylactate	Acetic ester; Acetic ether; Ethyl ester of acetic acid; Ethyl ethanoate	141-78-6	$C_4H_8O_2$					2.18	+	10.01	400
Ethylamine		75-04-7	C_2H_7N			0.8				8.86	5
Ethylbenzene		100-41-4	C_8H_{10}	0.52	+	0.65	+	0.51	+	8.77	100
Ethyl caprylate	Ethyl octanoate	106-32-1	$C_{10}H_{20}O_2$		+	0.52	+	0.51	+		
Ethylenediamine	1,2-Ethanediamine; 1,2-Diaminoethane	107-15-3	$C_2H_8N_2$	0.9	+	0.8	+	1.0	+	8.6	10
(Ethylenedioxy)diethanethiol, 2,2'-	1,2-Bis(2-mercaptoethoxy)ethane, 3,6-Dioxa-1,8-octane-dithiol	14970-87-7	$C_6H_{14}O_2S_2$			1.3	+				ne
Ethylene glycol**	1,2-Ethanediol	107-21-1	$C_2H_6O_2$			16	+	6	+	10.16	C100
Ethylene glycol, Acrylate**	2-hydroxyethyl Acrylate	818-61-1	$C_5H_8O_3$			8.2				≤10.6	
Ethylene glycol dimethyl ether	1,2-Dimethoxyethane, Monoglyme	110-71-4	$C_4H_{10}O_2$	1.1		1.1		0.7		9.2	ne

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Compound Name	Synonym/Abbreviation	CAS No.	Formula	9.8	C	10.6	C	11.7	C	IE (eV)	TWA
Ethylene glycol monobutyl ether acetate	1,2-Dimethoxyethane, Monoglyme	110-71-4	$C_4H_{10}O_2$	1.1		1.1		0.7		9.2	ne
Ethylene glycol, monothio		60-24-2	C_2H_6OS			1.5				9.65	
Ethylene oxide	Oxirane, Epoxyethane	75-21-8	C_2H_4O			13	+	3.5	+	10.57	1
Ethyl ether	Diethyl ether	60-29-7	$C_4H_{10}O$			1.1	+			9.51	400
Ethyl 3-ethoxypropionate	EEP	763-69-9	$C_7H_{14}O_3$	1.2	+	0.75	+				ne
Ethyl formate		109-94-4	$C_3H_6O_2$					1.9		10.61	100
Ethyl-1-hexanol, 2-	Isooctyl alcohol	104-76-7	$C_8H_{18}O$			1.9	+				ne
Ethyl hexyl acrylate, 2-	Acrylic acid 2-ethylhexyl ester	103-11-7	$C_{11}H_{20}O_2$			1.1	+	0.5	+		ne
Ethylidenenorbornene	5-Ethylidene bicyclo(2,2,1) hept-2-ene	16219-75-3	C_9H_{12}	0.4	+	0.39	+	0.34	+	≤8.8	ne
Ethyl (S)-(-)-lactate see also DS-108F	Ethyl lactate, Ethyl (S)-(-)-hydroxypropionate	687-47-8 97-64-3	$C_5H_{10}O_3$	13	+	3.2	+	1.6	+	~10	ne
Ethyl mercaptan	Ethanethiol	75-08-1	C_2H_6S	0.60	+	0.56	+			9.29	0.5
Ethyl sulfide	Diethyl sulfide	352-93-2	$C_4H_{10}S$			0.5	+			8.43	ne
Formaldehyde	Formalin	50-00-0	CH_2O	NR	+	NR	+	1.6	+	10.87	C0.3
Formamide		75-12-7	CH_3NO			6.9	+	4		10.16	10
Formic acid		64-18-6	CH_2O_2	NR	+	NR	+	9	+	11.33	5
Furfural	2-Furaldehyde	98-01-1	$C_5H_4O_2$			0.92	+	0.8	+	9.21	2
Furfuryl alcohol		98-00-0	$C_5H_6O_2$			0.80	+			<9.5	10
Gasoline #1		8006-61-9	m.w. 72			0.9	+				300
Gasoline #2, 92 octane		8006-61-9	m.w. 93	1.3	+	1.0	+	0.5	+		300
Glutaraldehyde	1,5-Pentanedial, Glutaric dialdehyde	111-30-8	$C_5H_8O_2$	1.1	+	0.8	+	0.6	+		C0.05
Glycidyl methacrylate	2,3-Epoxypropyl methacrylate	106-91-2	$C_7H_{10}O_3$	2.6	+	1.2	+	0.9	+		0.5
Halothane	2-Bromo-2-chloro-1,1,1-trifluoroethane	151-67-7	$C_2HBrClF_3$					0.6		11.0	50
HCFC-22 see Chlorodifluoromethane											
HCFC-123 see 2,2-Dichloro-1,1,1-trifluoroethane											
HCFC-141B see 1,1-Dichloro-1-fluoroethane											
HCFC-142B see 1-Chloro-1,1-difluoroethane											
HCFC-134A see 1,1,1,2-Tetrafluoroethane											
HCFC-225 see Dichloropentafluoropropane											
Heptane, n-		142-82-5	C_7H_{16}	45	+	2.8	+	0.60	+	9.92	400
Heptanol, 4-	Dipropylcarbinol	589-55-9	$C_7H_{16}O$	1.8	+	1.3	+	0.5	+	9.61	ne
Hexamethyldisilazane, 1,1,1,3,3,3-**	HMDS	999-97-3	$C_6H_{19}NSi_2$			0.2	+	0.2	+	~8.6	ne
Hexamethyldisiloxane	HMDSx	107-46-0	$C_6H_{18}OSi_2$	0.33	+	0.27	+	0.25	+	9.64	ne
Hexane, n-		110-54-3	C_6H_{14}	350	+	4.3	+	0.54	+	10.13	50
Hexanol, 1-	Hexyl alcohol	111-27-3	$C_6H_{14}O$	9	+	2.5	+	0.55	+	9.89	ne
Hexene, 1-		592-41-6	C_6H_{12}			0.8				9.44	30
HFE-7100 see Methyl nonafluorobutyl ether											
Histoclear (Histo-Clear)	Limonene/corn oil reagent		m.w. ~136	0.5	+	0.4	+	0.3	+		ne
Hydrazine**		302-01-2	H_4N_2	>8	+	2.6	+	2.1	+	8.1	0.01
Hydrazoic acid	Hydrogen azide		HN_3							10.7	
Hydrogen	Synthesis gas	1333-74-0	H_2	NR	+	NR	+	NR	+	15.43	ne
Hydrogen cyanide	Hydrocyanic acid	74-90-8	HCN	NR	+	NR	+	NR	+	13.6	C4.7
Hydrogen iodide**	Hydriodic acid	10034-85-2	HI			~0.6				10.39	
Hydrogen peroxide		7722-84-1	H_2O_2	NR	+	NR	+	NR	+	10.54	1
Hydrogen sulfide		7783-06-4	H_2S	NR	+	3.3	+	1.5	+	10.45	10
Hydroxyethyl acrylate, 2-	Ethylene glycol monoacrylate	818-61-1	$C_5H_8O_3$			8.2	+				ne

Compound Name	Synonym/Abbreviation	CAS No.	Formula	9.8	C	10.6	C	11.7	C	IE (eV)	TWA
Hydroxypropyl methacrylate		27813-02-1 923-26-2	$C_7H_{12}O_3$	9.9	+	2.3	+	1.1	+		ne
Iodine**		7553-56-2	I_2	0.1	+	0.1	+	0.1	+	9.40	C0.1
Iodomethane	Methyl iodide	74-88-4	CH_3I	0.21	+	0.22	+	0.26	+	9.54	2
Isoamyl acetate	Isopentyl acetate	123-92-2	$C_7H_{14}O_2$	10.1		2.1		1.0		<10	100
Isobutane	2-Methylpropane	75-28-5	C_4H_{10}			100	+	1.2	+	10.57	ne
Isobutanol	2-Methyl-1-propanol	78-83-1	$C_4H_{10}O$	19	+	3.8	+	1.5		10.02	50
Isobutene	Isobutylene, Methyl butene	115-11-7	C_4H_8	1.00	+	1.00	+	1.00	+	9.24	ne
Isobutyl acetate	2-methylpropyl ethanoate, β-methylpropyl acetate	110-19-0	$C_6H_{12}O_2$			2.1	+			9.97	150
Isobutyl acrylate	Isobutyl 2-propenoate, Acrylic acid Isobutyl ester	106-63-8	$C_7H_{12}O_2$			1.5	+	0.60	+		ne
Isoflurane	1-Chloro-2,2,2-trifluoroethyl difluoromethyl ether, forane	26675-46-7	$C_3H_2ClF_5O$	NR	+	NR	+	48	+	~11.7	ne
Isooctane	2,2,4-Trimethylpentane	540-84-1	C_8H_{18}			1.2				9.86	ne
Isopar E Solvent	Isoparaffinic hydrocarbons	64741-66-8	m.w. 121	1.7	+	0.8	+				ne
Isopar G Solvent	Photocopier diluent	64742-48-9	m.w. 148			0.8	+				ne
Isopar K Solvent	Isoparaffinic hydrocarbons	64742-48-9	m.w. 156	0.9	+	0.5	+	0.27	+		ne
Isopar L Solvent	Isoparaffinic hydrocarbons	64742-48-9	m.w. 163	0.9	+	0.5	+	0.28	+		ne
Isopar M Solvent	Isoparaffinic hydrocarbons	64742-47-8	m.w. 191			0.7	+	0.4	+		ne
Isopentane	2-Methylbutane	78-78-4	C_5H_{12}			8.2					ne
Isophorone		78-59-1	$C_9H_{14}O$					3		9.07	C5
Isoprene	2-Methyl-1,3-butadiene	78-79-5	C_5H_8	0.69	+	0.63	+	0.60	+	8.85	ne
Isopropanol	Isopropyl alcohol, 2-propanol, IPA	67-63-0	C_3H_8O	500	+	4.6	+	2.7		10.12	200
Isopropyl acetate		108-21-4	$C_5H_{10}O_2$			2.6				9.99	100
Isopropyl ether	Diisopropyl ether	108-20-3	$C_6H_{14}O$			0.8				9.20	250
Jet fuel JP-4	Jet B, Turbo B, F-40 Wide cut type aviation fuel	8008-20-6 + 64741-42-0	m.w. 115			1.0	+	0.4	+		ne
Jet fuel JP-5	Jet 5, F-44, Kerosene type aviation fuel	8008-20-6 + 64747-77-1	m.w. 167			0.6	+	0.5	+		29
Jet fuel JP-8	F-34, Kerosene type aviation fuel	8008-20-6 + 64741-77-1	m.w. 165			0.94	+	0.3	+		30
Jet fuel A-1	F-34, Kerosene type aviation fuel	8008-20-6 + 64741-77-1	m.w. 145			0.67					34
Jet Fuel TS	Thermally Stable Jet Fuel, Hydrotreated kerosene fuel	8008-20-6 + 64742-47-8	m.w. 165	0.9	+	0.6	+	0.3	+		30
JP-10						0.7	+	0.5	+		
JP5, Petroleum/camelinal						1.05	+				
JP5/Petroleum						0.98	+				
Limonene, D-	(R)-(+)-Limonene	5989-27-5	$C_{10}H_{16}$			0.33	+			~8.2	ne
Kerosene C10-C16 petro.distillate see Jet Fuels		8008-20-6									
MDI see 4,4'-Methylenebis (phenylisocyanate)											
Maleic anhydride	2,5-Furandione	108-31-6	$C_4H_2O_3$							~10.8	0.1
Mercapto-2-ethanol	β-Mercaptoethanol, 2-Hydroxyethylmercaptan, BME, Thioethylene glycol	60-24-2	C_2H_6OS			1.5	+			9.65	0.2
Mesitylene	1,3,5-Trimethylbenzene	108-67-8	C_9H_{12}	0.36	+	0.35	+	0.3	+	8.41	25
Methallyl chloride see 3-Chloro-2-methylpropene											
Methane	Natural gas	74-82-8	CH_4	NR	+	NR	+	NR	+	12.61	ne
Methanol	Methyl alcohol, carbinol	67-56-1	CH_4O	NR	+	NR	+	2.5	+	10.85	200
Methoxyethanol, 2-	Methyl cellosolve, Ethylene glycol monomethyl ether	109-86-4	$C_3H_8O_2$	4.8	+	2.4	+	1.4	+	10.1	5

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Compound Name	Synonym/Abbreviation	CAS No.	Formula	9.8	C	10.6	C	11.7	C	IE (eV)	TWA
Methoxyethoxyethanol, 2-	2-(2-Methoxyethoxy)ethanol Diethylene glycol monomethyl ether	111-77-3	$C_5H_{12}O_3$	2.3	+	1.2	+	0.9	+	<10	ne
Methoxyethyl ether, 2-	bis(2-Methoxyethyl) ether, Diethylene glycol dimethyl ether, Diglyme	111-96-6	$C_6H_{14}O_3$	0.64	+	0.54	+	0.44	+	<9.8	ne
Methyl acetate		79-20-9	$C_3H_6O_2$	NR	+	6.6	+	1.4	+	10.27	200
Methyl acrylate	Methyl 2-propenoate, Acrylic acid methyl ester	96-33-3	$C_4H_6O_2$			3.7	+	1.2	+	(9.9)	2
Methylamine	Aminomethane	74-89-5	CH_5N			1.2				8.97	5
Methyl amyl ketone	MAK, 2-Heptanone, Methyl pentyl ketone	110-43-0	$C_7H_{14}O$	0.9	+	0.85	+	0.5	+	9.30	50
Methylaniline, N-	MA; (Methylamino) benzene; N-Methyl aniline; Methylphenylamine; N-Phenylmethylamin	100-61-8	C_7H_9N			0.68	+			7.32	2
Methyl bromide	Bromomethane	74-83-9	CH_3Br	110	+	1.7	+	1.3	+	10.54	1
Methyl-2-butanol, 2-	tert-Amyl alcohol, tert-Pentyl alcohol	75-85-4	$C_5H_{12}O$			1.62	+			10.16	100
Methyl t-butyl ether	MTBE, tert-Butyl methyl ether	1634-04-4	$C_5H_{12}O$			0.9	+			9.24	40
Methyl cellosolve see 2-Methoxyethanol											
Methyl chloride	Chloromethane	74-87-3	CH_3Cl	NR	+	NR	+	0.74	+	11.22	50
Methylcyclohexane		107-87-2	C_7H_{14}	1.6	+	0.97	+	0.53	+	9.64	400
Methylene bis (phenyl-isocyanate), 4,4'-**	MDI, Mondur M		$C_{15}H_{10}N_2O_2$	Very slow ppb level response							0.005
Methylene chloride	Dichloromethane	75-09-2	CH_2Cl_2	NR	+	NR	+	0.89	+	11.32	25
Methyl ether	Dimethyl ether	115-10-6	C_2H_6O	4.8	+	3.1	+	2.5	+	10.03	ne
Methyl ethyl ketone	MEK, 2-Butanone	78-93-3	C_4H_8O	0.86	+	1.0	+	1.1	+	9.51	200
Methylhydrazine	Monomethylhydrazine, Hydrazomethane	60-34-4	$C_2H_6N_2$	1.4	+	1.2	+	1.3	+	7.7	0.01
Methyl isoamyl ketone	MIAK, 5-Methyl-2-hexanone	110-12-3	$C_7H_{14}O$	0.8	+	0.76	+	0.5	+	9.28	50
Methyl isobutyl ketone	MIBK, 4-Methyl-2-pentanone	108-10-1	$C_6H_{12}O$	0.9	+	0.8	+	0.6	+	9.30	50
Methyl isocyanate		624-83-9	C_2H_3NO	NR	+	4.6	+	1.5	+	10.67	0.02
Methyl isothiocyanate		551-61-6	C_2H_3NS	0.5	+	0.45	+	0.4	+	9.25	ne
Methyl mercaptan	Methanethiol	74-93-1	CH_4S	0.65		0.54		0.66		9.44	0.5
Methyl methacrylate		80-62-6	$C_5H_8O_2$	2.7	+	1.5	+	1.2	+	9.7	100
Methyl nonafluorobutyl ether	HFE-7100DL	163702-08-7, 163702-07-6	$C_5H_3F_9O$			NR	+	~35	+		ne
Methyl-1,5-pentanediamine, 2- (coats lamp)**	Dytek-A amine, 2-Methyl pentamethylenediamine	15520-10-2	$C_6H_{16}N_2$			~0.6	+			<9.0	ne
Methyl propyl ketone	MPK, 2-Pentanone	107-87-9	$C_5H_{12}O$			0.93	+	0.79	+	9.38	200
Methyl-2-pyrrolidinone, N-	NMP, N-Methylpyrrolidone, 1-Methyl-2-pyrrolidinone, 1-Methyl-2-pyrrolidone	872-50-4	C_5H_9NO	1.0	+	0.8	+	0.9	+	9.17	ne
Methyl salicylate**	Methyl 2-hydroxybenzoate	119-36-8	$C_8H_8O_3$	1.3	+	0.9	+	0.9	+	~9	ne
Methylstyrene, α-	2-Propenylbenzene	98-83-9	C_9H_{10}			0.5				8.18	50
Methyl sulfide	DMS, Dimethyl sulfide	75-18-3	C_2H_6S	0.49	+	0.44	+	0.46	+	8.69	ne
Methyl vinyl ketone	MVK, 3-Buten-2-one	78-94-4	C_4H_6O			0.93	+			9.65	ne
Methyltetrahydrofuran	2-MeTHF, Tetrahydro-2-methylfuran, Tetrahydrosilvan	96-47-9	$C_5H_{10}O$			2.44	+			9.22	ne
Mineral spirits	Stoddard Solvent, Varsol 1, White Spirits	8020-83-5 8052-41-3 68551-17-7	m.w. 144	1.0		0.69	+	0.38	+		100
Mineral Spirits	Viscor 120B Calibration Fluid, b.p. 156-207°C	8052-41-3	m.w. 142	1.0	+	0.7	+	0.3	+		100

Compound Name	Synonym/Abbreviation	CAS No.	Formula	9.8	C	10.6	C	11.7	C	IE (eV)	TWA
Monoethanolamine see Ethanolamine											
Mustard	HD, Bis (2-chloroethyl) sulfide	505-60-2 39472-40-7 68157-62-0	$C_4H_8Cl_2S$			0.6					0.0005
Naphtha see VM & P Naphtha											
Naphthalene	Mothballs	91-20-3	$C_{10}H_8$	0.45	+	0.42	+	0.40	+	8.13	10
Nickel carbonyl (in CO)	Nickel tetracarbonyl	13463-39-3	C_4NiO_4			0.18				<8.8	0.001
Nicotine	3-(1-Methyl-2-pyrrolidyl)pyridine	54-11-5	$C_{10}H_{14}N_2$			1.98	+				ne
Nitric oxide		10102-43-9	NO	~6		5.2	+	2.8	+	9.26	25
Nitrobenzene		98-95-3	$C_6H_5NO_2$	2.6	+	1.9	+	1.6	+	9.81	1
Nitroethane		79-24-3	$C_2H_5NO_2$					3		10.88	100
Nitrogen dioxide		10102-44-0	NO_2	23	+	16	+	6	+	9.75	3
Nitrogen trifluoride		7783-54-2	NF_3	NR		NR		NR		13.0	10
Nitromethane		75-52-5	CH_3NO_2					4		11.02	20
Nitropropane, 2-		79-46-9	$C_3H_7NO_2$					2.6		10.71	10
Nonane		111-84-2	C_9H_{20}			1.4				9.72	200
Norpar 12	n-Paraffins, mostly C_{10}-C_{13}	64771-72-8	m.w. 161	3.2	+	1.1	+	0.28	+		ne
Norpar 13	n-Paraffins, mostly C_{13}-C_{14}	64771-72-8	m.w. 189	2.7	+	1.0	+	0.3	+		ne
Octamethylcyclotetrasiloxane		556-67-2	$C_8H_{24}O_4Si_4$	0.21	+	0.17	+	0.14	+		ne
Octamethyltrisiloxane		107-51-7	$C_8H_{24}O_2Si_3$	0.23	+	0.18	+	0.17	+	<10.0	ne
Octane, n-		111-65-9	C_8H_{18}	13	+	1.8	+			9.82	300
Octene, 1-		111-66-0	C_8H_{16}	0.9	+	0.75	+	0.4	+	9.43	75
Pentachloropropane	1,1,1,3,3-pentachloropropane	23153-23-3	$C_3H_3Cl_5$					1.25	+		0.1
Pentane		109-66-0	C_5H_{12}	80	+	8.4	+	0.7	+	10.35	600
Peracetic acid**	Peroxyacetic acid, Acetyl hydroperoxide	79-21-0	$C_2H_4O_3$	NR	+	NR	+	2.3	+		ne
Peracetic/Acetic acid mix**	Peroxyacetic acid, Acetyl hydroperoxide	79-21-0	$C_2H_4O_3$			50	+	2.5	+		ne
Perchloroethene	PCE, Perchloroethylene, Tetrachloroethylene	127-18-4	C_2Cl_4	0.69	+	0.57	+	0.31	+	9.32	25
Propylene glycol methyl ether, 1-Methoxy-2-propanol	PGME	107-98-2	$C_6H_{12}O_3$	2.4	+	1.5	+	1.1	+		100
Propylene glycol methyl ether acetate, 1-Methoxy-2-acetoxypropane, 1-Methoxy-2-propanol acetate	PGMEA	108-65-6	$C_6H_{12}O_3$	1.65	+	1.0	+	0.8	+		ne
Phenol	Hydroxybenzene	108-95-2	C_6H_6O	1.0	+	1.0	+	0.9	+	8.51	5
Phosgene	Dichlorocarbonyl	75-44-5	CCl_2O	NR	+	NR	+	8.5	+	11.2	0.1
Phosgene in Nitrogen	Dichlorocarbonyl	75-44-5	CCl_2O	NR	+	NR	+	6.8	+	11.2	0.1
Phosphine (coats lamp)		7803-51-2	PH_3	28		3.9	+	1.1	+	9.87	0.3
Photocopier Toner	Isoparaffin mix					0.5	+	0.3	+		ne
Picoline, 3-	3-Methylpyridine	108-99-6	C_6H_7N			0.9				9.04	ne
Pinene, α-		2437-95-8	$C_{10}H_{16}$			0.31	+	0.47		8.07	ne
Pinene, β-		18172-67-3	$C_{10}H_{16}$	0.38	+	0.37	+	0.37	+	~8	100
Piperylene, isomer mix	1,3-Pentadiene	504-60-9	C_5H_8	0.76	+	0.69	+	0.64	+	8.6	100
Propane		74-98-6	C_3H_8			NR	+	1.8	+	10.95	2500
Propanol, n-	Propyl alcohol	71-23-8	C_3H_8O			5.5		1.7		10.22	200
Propene	Propylene	115-07-1	C_3H_6	1.5	+	1.4	+	1.6	+	9.73	ne
Propionaldehyde	Propanal	123-38-6	C_3H_6O			1.9				9.95	ne
Propyl acetate, n-		109-60-4	$C_5H_{10}O_2$			3.5				10.04	200
Propyl acetate	Propylacetate; n-Propyl ester of acetic acid	109-60-4	$C_5H_{10}O_2$			2.27	+			10.04	200

Compound Name	Synonym/Abbreviation	CAS No.	Formula	9.8	C	10.6	C	11.7	C	IE (eV)	TWA
Propylamine, n-	1-Propylamine, 1-Aminopropane	107-10-8	C_3H_9N	1.1	+	1.1	+	0.9	+	8.78	ne
Propylene carbonate**		108-32-7	$C_4H_6O_3$			62	+	1	+	10.5	ne
Propylene glycol	1,2-Propanediol	57-55-6	$C_3H_8O_2$	18		4.2	+	1.6	+	<10.2	ne
Propylene glycol propyl ether	1-Propoxy-2-propanol	1569-01-3	$C_6H_{14}O_2$	1.3	+	1.0	+	1.6	+		ne
Propylene oxide	Methyloxirane	75-56-9 16088-62-3 15448-47-2	C_3H_6O	~240		6.6	+	2.9	+	10.22	20
Propyleneimine	2-Methylaziridine	75-55-8	C_3H_7N	1.5	+	1.3	+	1.0	+	9.0	2
Propyl mercaptan, 2-	2-Propanethiol, Isopropyl mercaptan	75-33-2	C_3H_8S	0.64	+	0.66	+			9.15	ne
Pyridine		110-86-1	C_5H_5N	0.78	+	0.7	+	0.7	+	9.25	5
Pyrrolidine (coats lamp)	Azacyclohexane	123-75-1	C_4H_9N	2.1	+	1.3	+	1.6	+	~8.0	ne
RR7300 (PGME/PGMEA)	70:30 PGME:PGMEA (1-Methoxy-2-propanol: 1-Methoxy-2-acetoxypropane)	107-98-2	$C_4H_{10}O_2/$ $C_6H_{12}O_3$			1.4	+	1.0	+		ne
Sarin	GB, Isopropyl methylphosphonofluoridate	107-44-8 50642-23-4	$C_4H_{10}FO_2P$			~3					
Shell SPK						1.26	+				
Shell SPK						1.29	+	0.4	+		
Shell SPK 50/50						1.02	+	0.41	+		
Shell SPK/JP-8						1.11	+				
Stoddard Solvent see Mineral Spirits		8020-83-5									
Styrene		100-42-5	C_8H_8	0.45	+	0.43	+	0.4	+	8.43	20
Sulfur dioxide		7446-09-5	SO_2	NR		NR	+	NR	+	12.32	2
Sulfur hexafluoride		2551-62-4	SF_6	NR		NR		NR		15.3	1000
Sulfuryl fluoride	Vikane	2699-79-8	SO_2F_2	NR		NR		NR		13.0	5
Tabun**	Ethyl N, N-dimethylphosphoramidocyanidate	77-81-6	$C_5H_{11}N_2O_2P$			0.8					15ppt
Tallow HRJ						1.09	+				
Tallow HRJ						0.95	+	0.36	+		
Tallow HRJ/JP-8						1.14	+				
Tallow HRJ/JP-8 50/50						0.9	+	0.39	+		
Tetrachloroethane, 1,1,1,2-		630-20-6	$C_2H_2Cl_4$					1.3		~11.1	ne
Tetrachloroethane, 1,1,2,2-		79-34-5	$C_2H_2Cl_4$	NR	+	NR	+	0.60	+	~11.1	1
Tetrachlorosilane		10023-04-7	$SiCl_4$	NR		NR		15	+	11.79	ne
Tetraethyllead	TEL	78-00-2	$C_8H_{20}Pb$	0.4		0.3		0.2		~11.1	0.008
Tetraethyl orthosilicate	Ethyl silicate, TEOS	78-10-4	$C_8H_{20}O_4Si$			0.7	+	0.2	+	~9.8	10
Tetrafluoroethane, 1,1,1,2-	HFC-134A	811-97-2	$C_2H_2F_4$			NR		NR			ne
Tetrafluoroethene	TFE, Tetrafluoroethylene, Perfluoroethylene	116-14-3	C_2F_4			~15				10.12	ne
Tetrafluoromethane	CFC-14, Carbon tetrafluoride	75-73-0	CF_4			NR	+	NR	+	>15.3	ne
Tetrahydrofuran	THF	109-99-9	C_4H_8O	1.9	+	1.7	+	1.0	+	9.41	200
Tetramethyl orthosilicate	Methyl silicate, TMOS	681-84-5	$C_4H_{12}O_4Si$	10	+	1.9	+			~10	1
Therminol® D-12**	Hydrotreated heavy naphtha	64742-48-9	m.w. 160	0.8	+	0.51	+	0.33	+		ne
Therminol® VP-1**	Dowtherm A, 3:1 Diphenyl oxide: Biphenyl	101-84-8 92-52-4	$C_{12}H_{10}O$ $C_{12}H_{10}$			0.4	+				1
Toluene	Methylbenzene	108-88-3	C_7H_8	0.54	+	0.45	+	0.51	+	8.82	50
Tolylene-2,4-diisocyanate	TDI, 4-Methyl-1,3-phenylene-2,4-diisocyanate	584-84-9	$C_9H_6N_2O_2$	1.4	+	1.4	+	2.0	+		0.002
Trichlorobenzene, 1,2,4-	1,2,4-TCB	120-82-1	$C_6H_3Cl_3$	0.7	+	0.9	+			9.04	C5
Trichloroethane, 1,1,1-	1,1,1-TCA, Methyl chloroform	71-55-6	$C_2H_3Cl_3$			NR	+	1	+	11	350

Compound Name	Synonym/Abbreviation	CAS No.	Formula	9.8	C	10.6	C	11.7	C	IE (eV)	TWA
Trichloroethane, 1,1,2-	1,1,2-TCA	79-00-5	$C_2H_3Cl_3$	NR	+	NR	+	0.9	+	11.0	10
Trichloroethene	TCE, Trichloroethylene	79-01-6	C_2HCl_3	0.62	+	0.54	+	0.43	+	9.47	50
Trichloromethylsilane	Methyltrichlorosilane	75-79-6	CH_3Cl_3Si	NR		NR		1.8	+	11.36	ne
Trichlorotrifluoroethane, 1,1,2-	CFC-113	76-13-1	$C_2Cl_3F_3$			NR		NR		11.99	1000
Triethylamine	TEA	121-44-8	$C_6H_{15}N$	0.95	+	0.9	+	0.65	+	7.3	1
Triethyl borate	TEB; Boric acid triethyl ester, Boron ethoxide	150-46-9	$C_6H_{15}O_3B$			2.2	+	1.1	+	~10	ne
Triethyl phosphate	Ethyl phosphate	78-40-0	$C_6H_{15}O_4P$	~50	+	3.1	+	0.60	+	9.79	ne
Trifluoroethane, 1,1,2-		430-66-0	$C_2H_3F_3$					34		12.9	ne
Trimethylamine		75-50-3	C_3H_9N			0.9				7.82	5
Trimethylbenzene, 1,3,5- see Mesitylene		108-67-8									25
Trimethyl borate	TMB; Boric acid trimethyl ester, Boron methoxide	121-43-7	$C_3H_9O_3B$			5.1	+	1.2	+	10.1	ne
Trimethyl phosphate	Methyl phosphate	512-56-1	$C_3H_9O_4P$			8.0	+	1.3	+	9.99	ne
Trimethyl phosphite	Methyl phosphite	121-45-9	$C_3H_9O_3P$			1.1	+		+	8.5	2
Turpentine	Pinenes (85%) + other diisoprenes	8006-64-2	$C_{10}H_{16}$	0.37	+	0.4	+	0.29	+	~8	20
Undecane		1120-21-4	$C_{11}H_{24}$			2				9.56	ne
Varsol see Mineral Spirits											
Vinyl actetate		108-05-4	$C_4H_6O_2$	1.5	+	1.2	+	1.0	+	9.19	10
Vinyl bromide	Bromoethylene	593-60-2	C_2H_3Br			0.4				9.80	5
Vinyl chloride	Chloroethylene, VCM	75-01-4	C_2H_3Cl			2.0	+	0.6	+	9.99	5
Vinyl-1-cyclohexene, 4-	Butadiene dimer, 4-Ethenylcyclohexene	100-40-3	C_8H_{12}	0.6	+	0.56	+			9.83	0.1
Vinylidene chloride see 1,1-Dicholorethene											
Vinyl-2-pyrrolidinone, 1-	NVP, N-vinylpyrrolidone, 1-ethenyl-2-pyrrolidinone	88-12-0	C_6H_9NO	1.0	+	0.8	+	0.9	+		ne
Viscor 120B see Mineral Spirits — Viscor 120B Calibration Fluid											
V. M. & P. Naphtha	Ligroin; Solvent naphtha; Varnish maker's & painter's naphtha	64742-89-8	m.w. 111 (C_8-C_9)	1.7	+	0.97	+				300
Xylene, m-	1,3-Dimethylbenzene	108-38-3	C_8H_{10}	0.50	+	0.44	+	0.40	+	8.56	100
Xylene, o-	1,2-Dimethylbenzene	95-47-6	C_8H_{10}	0.56	+	0.45	+	0.43	+	8.56	100
Xylene, p-	1,4-Dimethylbenzene	106-42-3	C_8H_{10}	0.48	+	0.39	+	0.38	+	8.44	100

* The term "ionization energy" is more scientifically correct and replaces the old term "ionization potential." High-boiling ("heavy") compounds may not vaporize enough to give a response even when their ionization energies are below the lamp photon energy. Some inorganic compounds like H_2O_2 and NO_2 give weak response even when their ionization energies are well below the lamp photon energy.

** Compounds indicated in green can be detected using a MiniRAE 3000, UltraRAE 3000 or ppbRAE 3000 with slow response, but may be lost by adsorption on a MultiRAE, EntryRAE and AreaRAE. Response on multi-gas meters can give an indication of relative concentrations, but may not be quantitative and for some chemicals no response is observed.
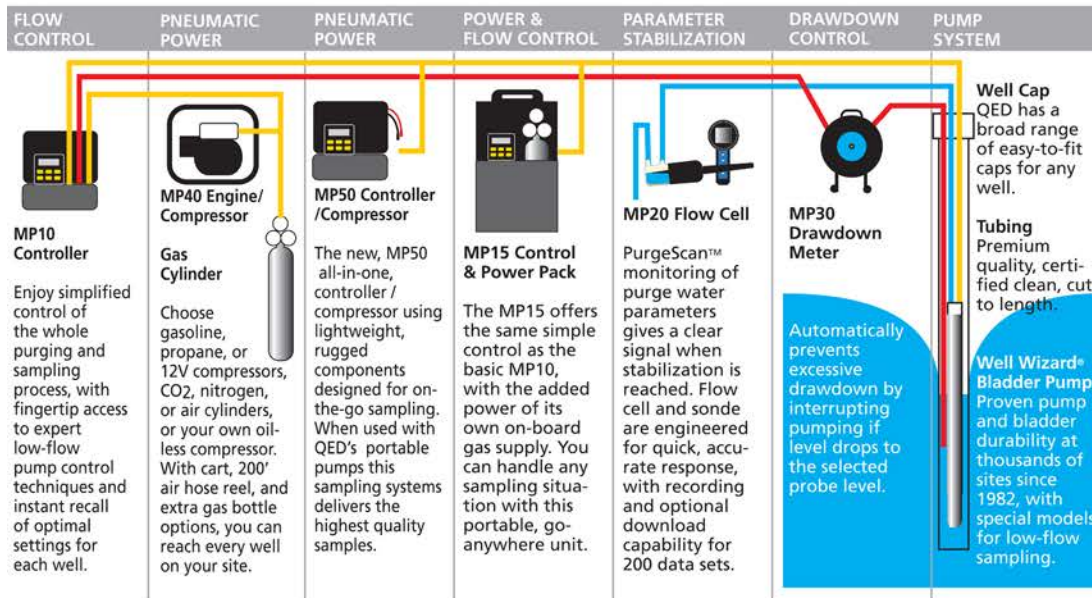
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Ask About Our Rental Protection Plan (RPP)
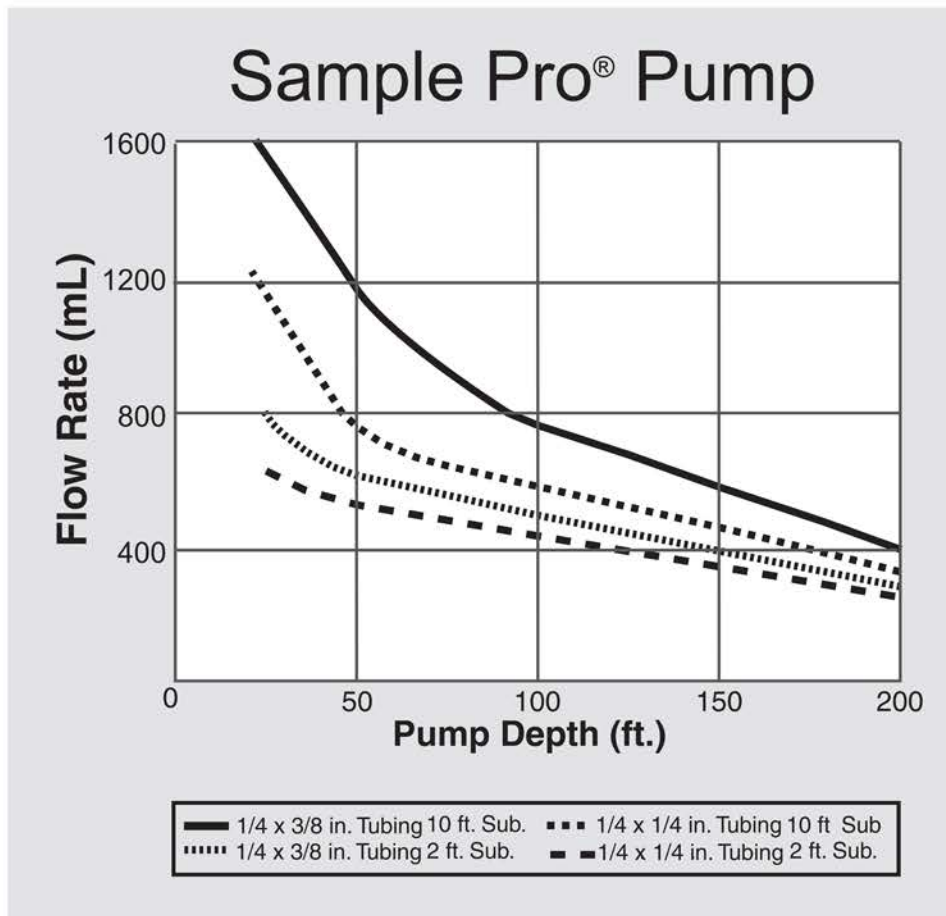
Bayonet-Style Respirator Cartridges

The Advantage Respirator line of particulate, chemical and combination cartridges is NIOSH-certified to 42 CFR, Part 84, and provides lightweight, low-profile performance. Cartridges fit Advantage 200 LS, and 420 Half-Masks, 1000, 3000, and 4000 Series Full-Facepiece Respirators.

MSA Cartridge Description	Re-Order Part Number	Color Coding	OV	CL	SD	CD	HC	HS*	AM	MA	FM	HF	MV	P100	R95	N95	See Notes below
			Organic Vapor	Chlorine	Sulfur Dioxide	Chlorine Dioxide	Hydrogen Chloride	Hydrogen Sulfide*	Ammonia	Methylamine	Formaldehyde	Hydrogen Fluoride	Mercury Vapor	Filter Type & Efficiency			
GMA	815355		✓														2,3
GMA with N95 Prefilter	815355 with 815394 or 816357		✓													✓	2,3
GMA with R95 Prefilter	815355 with 815397		✓												✓		2,3
GMA P100	815362		✓											✓			2,3,4
GMB	815356			✓	✓	✓	✓	✓									2
GMB with N95 Prefilter	815356 with 815394 or 816357			✓	✓	✓	✓	✓								✓	2
GMB with R95 Prefilter	815356 with 815397			✓	✓	✓	✓	✓							✓		2
GMB P100	815363			✓	✓	✓	✓	✓						✓			2,4
GMC	815357		✓	✓	✓	✓	✓	✓									2,3
GMC with N95 Prefilter	815357 with 815394 or 816357		✓	✓	✓	✓	✓	✓								✓	2,3
GMC with R95 Prefilter	815357 with 815967		✓	✓	✓	✓	✓	✓							✓		2,3
GMC P100	815364		✓	✓	✓	✓	✓	✓						✓			2,3,4
GMD	815358								✓	✓							2,3
GMD with N95 Prefilter	815358 with 815394 or 816357								✓	✓						✓	2,3
GMD with R95 Prefilter	815358 with 815397								✓	✓					✓		2,3
GMD P100	815365								✓	✓				✓			2,3,4
GME	815359		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓					2,3
GME with N95 Prefilter	815359 with 815394 or 816357		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				✓	2,3
GME with R95 Prefilter	815359 with 815397		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			✓		2,3
GME P100	815366		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓			2,3,4
GMI P100**	815641		✓											✓			2,4
Mersorb® Cartridge	815361		✓										✓				2,4
Mersorb with N95 Prefilter	815361 with 815394 or 816357		✓										✓			✓	2,4
Mersorb with R95 Prefilter	815361 with 815397		✓										✓		✓		2,4
Mersorb P100	815368		✓										✓	✓			2,4
Low-Profile P100	815369													✓			1,4
N95 Snap-On Prefilter and Cover	815394 Pack of 10 816357 Box of 50 815392 Reusable Snap-On Cover 2 in a package																
R95 Snap-On Prefilter and Cover	815397 Box of 20 815401 Reusable Snap-On Cover 2 in a package																

Acid Gases: Chlorine, Sulfur Dioxide, Chlorine Dioxide, Hydrogen Chloride, Hydrogen Sulfide*

Definitions

N95-Particulate Filter (95% filter efficiency level) effective against particulate aerosols free of oil; time use restrictions may apply.

R95-Particulate Filter (95% filter efficiency level) effective against all particulate aerosols; time use restrictions may apply.

P100-Particulate Filter (99.97% filter efficiency level) effective against all particulate aerosols.

Escape only.
** *Effective against, but not NIOSH-approved for iodine vapor.*

⚠ WARNING

An appropriate cartridge change-out schedule must be developed by a qualified professional, unless the cartridge/canister utilizes an end-of-service-life indicator. The change-out schedule must take into account all factors that may influence respiratory protection including specific work practices and other conditions unique to the worker's environment. If using against substances having poor warning properties, there is no secondary means of knowing when to replace the cartridges/canister. In such cases, take appropriate additional precautions to prevent overexposure, which may include a more conservative change-out schedule or using an air-supplied respirator or SCBA. Failure to follow this warning can result in serious personal injury or death. As a reference, below is a partial list of substances having poor warning properties:

Acrolein	Hydrogen cyanide	Nitric acid	Phosphorus trichloride
Aniline	Hydrogen selenide	Nitro compounds	Stibine
Arsine	Methanol	Nitrogen oxides	Sulfur chloride
Bromine	Methyl bromide	Nitroglycerin	Urethane or other diisocyanate-containing paints
Carbon monoxide	Methyl chloride	Nitromethane	Vinyl chloride
Diisocyanates	Methylene chloride	Phosgene	
Dimethyl sulfate	Nickel carbonyl	Phosphine	

QED Low-Flow Pneumatic Sampling System Component Chart

FLOW CONTROL	PNEUMATIC POWER	PNEUMATIC POWER	POWER & FLOW CONTROL	PARAMETER STABILIZATION	DRAWDOWN CONTROL	PUMP SYSTEM

MP10 Controller

Enjoy simplified control of the whole purging and sampling process, with fingertip access to expert low-flow pump control techniques and instant recall of optimal settings for each well.

MP40 Engine/Compressor

Gas Cylinder

Choose gasoline, propane, or 12V compressors, CO2, nitrogen, or air cylinders, or your own oil-less compressor. With cart, 200' air hose reel, and extra gas bottle options, you can reach every well on your site.

MP50 Controller /Compressor

The new, MP50 all-in-one, controller / compressor using lightweight, rugged components designed for on-the-go sampling. When used with QED's portable pumps this sampling systems delivers the highest quality samples.

MP15 Control & Power Pack

The MP15 offers the same simple control as the basic MP10, with the added power of its own on-board gas supply. You can handle any sampling situation with this portable, go-anywhere unit.

MP20 Flow Cell

PurgeScan™ monitoring of purge water parameters gives a clear signal when stabilization is reached. Flow cell and sonde are engineered for quick, accurate response, with recording and optional download capability for 200 data sets.

MP30 Drawdown Meter

Automatically prevents excessive drawdown by interrupting pumping if level drops to the selected probe level.

Well Cap
QED has a broad range of easy-to-fit caps for any well.

Tubing
Premium quality, certified clean, cut to length.

Well Wizard® Bladder Pump
Proven pump and bladder durability at thousands of sites since 1982, with special models for low-flow sampling.

QED Sample Pro Flow Rate / Pump Depth Graph

Sample Pro® Pump — Flow Rate (mL) vs Pump Depth (ft.)

— 1/4 x 3/8 in. Tubing 10 ft. Sub. ▪▪▪ 1/4 x 1/4 in. Tubing 10 ft Sub
▪▪▪▪ 1/4 x 3/8 in. Tubing 2 ft. Sub. ▪ ▪ 1/4 x 1/4 in. Tubing 2 ft. Sub.

NOTES:

PINE

The Equipment Supply and Support People

CORPORATE ADDRESS:
92 North Main Street
Building 20
Windsor, NJ 08561
800-301-9663