



2007 Price Catalog

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Advanced Calibration Designs, Inc.

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ACD Price Catalog

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GENERAL TERMS AND CONDITIONS

The following is a summary of the major provisions of Advanced Calibration Designs, Inc.'s (ACD) Terms and Conditions of Sale. For full details, consult the complete document or contact the factory.

1. Prices are subject to change without advance notice.
2. Payment terms are NET 30, payable in U.S. dollars, unless otherwise notified at the time of the order.
3. F.O.B. point is factory, Tucson, Arizona 85705 U.S.A.
4. Minimum billing is \$50.00 per order. Any order under \$50.00 will be charged an additional \$10.00 handling fee.
5. Claims for shortages or shipping errors must be made within 30 days of shipment.
6. Returns for credit will be accepted only with prior approval, and subject to a 25% restocking charge. The minimum restocking charge will be \$50.00. Electrochemical generating cells and batteries are not returnable for credit, except by special arrangement. There will be an additional charge for instruments returned that include electrochemical generating cells and/or batteries.
7. Returns for repair or service (e.g. recalibration) must be accompanied by an ACD Return Authorization (RA) number. Please call our customer service department at (520) 290-2855 to obtain an RA number. You will need to provide the instrument model number, type of gas generated, and serial number, along with a description of the problem or required service.
8. Warranty is automatically allowed on products returned with an RA in good physical condition within their warranty period, and which, by our tests, are found to be defective. Please see **Standard Warranty** and **Supplemental Warranty** (attached) for full details.
9. Unless warranty is claimed at the time of return, allowance of warranty is solely at the discretion of ACD. ACD will automatically allow warranty, whether claimed or not, on instruments or components which, in ACD's judgment, have failed under warranty. No retroactive warranty claims will be allowed.
10. Instruments returned to ACD, but that are found to have no defect, other than a regularly replaceable, expendable part, will be subject to a charge of \$100.00 even if the defective parts are deemed to be within warranty, since installation of such parts is deemed to be within the distributor's or user's capability and responsibility. Instruments returned for repair, whether under warranty or not, will be subject to a minimum labor charge if no explanation or reason for rejection is received.

Cal 2000



The **CAL 2000** provides unmatched versatility and accuracy in corrosive calibration gases. Field replaceable electrochemical generating cells provide a calibration standard for accurately testing chlorine, chlorine dioxide, hydrogen, hydrogen cyanide, and hydrogen sulfide gas sensors. The **CAL 2000** is microprocessor controlled and has an LCD display allowing field adjustable concentration and flow rate. The generating cells are interchangeable and field replaceable. Best of all, the **CAL 2000** provides up to **50 times** as much calibration gas as a disposable cylinder at approximately the same cost. The **CAL 2000** gas generator has a built-in mass flow sensor that automatically compensates for altitude and temperature.

The **CAL 2000** gas generator's features include:

- CSA NRTL/C Exia T-6 approved intrinsically safe with CE mark
- NIST traceable certification
- Automatic purge on shut down
- Low power consumption
- Adjustable ppm and flow rate
- Interchangeable calibration gases
- Alkaline battery powered

Specifications

| | |
|---------------------------------------|--|
| Air Flow Rate (with internal pump) | 0.2 to 1 LPM |
| Sample draw rate (with pump disabled) | 0.2 to 5 LPM |
| Useful Cell Life | 50 or 100 hours |
| Warm-up time (to 90%) | Approximately 5 minutes |
| L x W x H | 8.50 x 4.25 x 3.00" (21.59 x 10.8 x 7.62 cm) |
| Weight | 3 lb. (1360 g) |
| Operating Temperature | 0° C to 50° C |
| Relative Humidity (intermittent use) | 0 -100% |
| Accuracy | ±10% |
| Repeatability | ±5% |
| Battery Power | 4 alkaline "C" |
| Battery Life | 10 hours (at .5 LPM flow rate) |

CAL 2000 (Continued)

Note: All **Cal 2000** units are CSA approved and are shipped certified as directly traceable to NIST with an accuracy of $\pm 10\%$ of the gas output and include a five foot hose, a nylon carrying case, an instruction manual, and 4 size "C" batteries.

Instruments

| Item Description | Part Number | Price |
|---|-------------|------------|
| Cal 2000 instrument complete, less cell | 750-0603-00 | \$1,700.00 |

Cells

| Item Description | PPM | Part Number | Price |
|---|------------|-------------|------------|
| Cal 2000 cell, Cl ₂ , 50 hour capacity | 0.5 - 50 | 510-2000-00 | \$650.00 |
| Cal 2000 micro-cell, Cl ₂ , 50 hour capacity | 0.05 - 1.0 | 510-2000-05 | \$650.00 |
| Cal 2000 double life cell, Cl ₂ , 100 hour capacity | 0.5 - 50 | 510-2000-20 | \$1,000.00 |
| Cal 2000 cell, H ₂ S, 50 hour capacity | 0.5 - 50 | 510-2050-00 | \$650.00 |
| Cal 2000 micro-cell, H ₂ S, 50 hour capacity | 0.05 - 1.0 | 510-2050-05 | \$650.00 |
| Cal 2000 cell, ClO ₂ , 50 hour capacity | 0.5 - 5 | 510-2060-00 | \$650.00 |
| Cal 2000 double life cell, ClO ₂ , 100 hour capacity | 0.5 - 5 | 510-2060-20 | \$1,000.00 |
| Cal 2000 cell, HCN, 50 hour capacity | 0.5 - 50 | 510-2070-00 | \$650.00 |
| Cal 2000 cell, H ₂ , 50 hour capacity | 0.5 - 50 | 510-2090-00 | \$650.00 |
| Cal 2000 double life cell, H ₂ , 100 hour capacity | 0.5 - 50 | 510-2090-20 | \$1,000.00 |

Accessories

| Item Description | Part Number | Price |
|---|-------------|----------|
| Plunger feet fastener, package of 10 | 106-0603-00 | \$55.00 |
| Plunger feet fastener | 106-0603-01 | \$6.00 |
| Outlet Fitting, body (1/8 NPT) quick connect | 113-0400-00 | \$11.00 |
| Hose connector, insert (hose barb) quick connect | 113-0402-00 | \$11.00 |
| Charcoal filter element | 150-0121-00 | \$12.00 |
| Charcoal filter element, package of 12 | 150-0131-00 | \$110.00 |
| Empty plastic bottle with pipette | 180-0100-00 | \$6.50 |
| Electrolyte, Cl ₂ , 50 ml bottle | 193-0100-00 | \$185.00 |
| Electrolyte, ClO ₂ , 15 ml vial | 193-0101-01 | \$30.00 |
| Electrolyte, ClO ₂ , 15 ml vial, 5 pack | 193-0101-05 | \$135.00 |
| Electrolyte, ClO ₂ , 15 ml vial, 10 pack | 193-0101-10 | \$252.00 |
| Electrolyte, ClO ₂ , 15 ml vial, 25 pack | 193-0101-25 | \$525.00 |
| Electrolyte, H ₂ S, 50 ml bottle | 193-0105-00 | \$185.00 |
| Electrolyte, HCN, 50 ml bottle | 193-0107-00 | \$185.00 |
| Electrolyte, H ₂ , 50 ml bottle | 193-0109-00 | \$185.00 |
| Continuous operation adapter, 115VAC with US plug | 362-0600-00 | \$49.00 |
| Hose, with quick connect, Norprene, 3' | 715-0403-0X | \$21.00 |
| Hose, with quick connect, Norprene, 5' | 715-0405-0X | \$27.00 |
| Nylon carrying case, Cal 2000, Cal 2000 LT | 730-0603-00 | \$80.00 |
| Hard body carrying case, Cal 2000, Cal 2000 LT | 730-0615-00 | \$135.00 |
| Cal 2000 instruction manual | 910-0603-00 | \$12.00 |

Cal 2000 LT



The **CAL 2000 LT** is an economical alternative for calibration of corrosive gas detection equipment. The **CAL 2000 LT** is available in pre-set flow-rates of 0.5 or 1.0 LPM. Generating cells are rated at 10 and 25 hours and are available for chlorine, hydrogen, hydrogen cyanide and hydrogen sulfide. A gas concentration must be specified when ordering generating cells. To change gas type or concentration, simply insert a different cell into the instrument.

The **CAL 2000 LT** gas generator's features include:

- CSA NRTL/C Exia T-6 approved intrinsically safe with CE mark
- NIST traceable certification
- Automatic purge on shut down
- Low power consumption
- Upgradeable to Cal 2000
- Interchangeable calibration gases
- Alkaline battery powered

Specifications

| | |
|--------------------------------------|--|
| Air Flow Rate (with internal pump) | 0.5 or 1 LPM |
| Useful Cell Life | 10 or 25 hours |
| Warm-up time (to 90%) | Approximately 5 minutes |
| L x W x H | 8.50 x 4.25 x 3.00" (21.59 x 10.8 x 7.62 cm) |
| Weight | 3 lb. (1360 g) |
| Operating Temperature | 0° C to 50° C |
| Relative Humidity (intermittent use) | 0 -100% |
| Accuracy | ±10% |
| Repeatability | ±5% |
| Battery Power | 4 alkaline "C" |
| Battery Life | 10 hours (at .5 LPM flow rate) |

CAL 2000 LT (Continued)

Note: All **Cal 2000 LT** units are CSA approved and are shipped certified as directly traceable to NIST with an accuracy of $\pm 10\%$ of the gas output and include a five foot hose, a nylon carrying case, an instruction manual, and 4 size "C" batteries.

Instruments

| Item Description | Part Number | Price |
|--|-------------|----------|
| Cal 2000 LT instrument complete, less cell | 750-0603-LT | \$950.00 |

Cells

| Item Description | Part Number | Price |
|---|-------------|----------|
| Cal 2000 LT cell, Cl ₂ , 10 hour capacity, specify PPM | 510-2000-LT | \$400.00 |
| Cal 2000 LT cell, Cl ₂ , 25 hour capacity, specify PPM | 510-2005-LT | \$600.00 |
| Cal 2000 LT cell, H ₂ S, 10 hour capacity, specify PPM | 510-2050-LT | \$400.00 |
| Cal 2000 LT cell, H ₂ S, 25 hour capacity, specify PPM | 510-2055-LT | \$600.00 |
| Cal 2000 LT cell, HCN, 10 hour capacity, specify PPM | 510-2070-LT | \$400.00 |
| Cal 2000 LT cell, HCN, 25 hour capacity, specify PPM | 510-2075-LT | \$600.00 |
| Cal 2000 LT cell, H ₂ , 10 hour capacity, specify PPM | 510-2090-LT | \$400.00 |
| Cal 2000 LT cell, H ₂ , 25 hour capacity, specify PPM | 510-2095-LT | \$600.00 |

*When ordering Cal 2000 LT Cells, specify exact concentration (PPM) desired.
All cells may be ordered within a range of 1 to 25 PPM in whole PPM increments.*

Accessories

| Item Description | Part Number | Price |
|---|-------------|----------|
| Plunger feet fastener, package of 10 | 106-0603-00 | \$55.00 |
| Plunger feet fastener | 106-0603-01 | \$6.00 |
| Outlet Fitting, body (1/8 NPT) quick connect | 113-0400-00 | \$11.00 |
| Hose connector, insert (hose barb) quick connect | 113-0402-00 | \$11.00 |
| Charcoal filter element | 150-0121-00 | \$12.00 |
| Charcoal filter element, package of 12 | 150-0131-00 | \$110.00 |
| Continuous operation adapter, 115VAC with US plug | 362-0600-00 | \$49.00 |
| Hose, with quick connect, Norprene, 3' | 715-0403-0X | \$21.00 |
| Hose, with quick connect, Norprene, 5' | 715-0405-0X | \$27.00 |
| Nylon carrying case, Cal 2000, Cal 2000 LT | 730-0603-00 | \$80.00 |
| Hard body carrying case, Cal 2000, Cal 2000 LT | 730-0615-00 | \$135.00 |
| Cal 2000 LT instruction manual | 910-0603-LT | \$12.00 |

HydroGen



The **HydroGen** gives unlimited hydrogen calibration gas using an ‘infinite life’ electrochemical gas generating cell. The cell is capable of generating hour after hour of calibration gas with no pre-set end of service life. The **HydroGen** is microprocessor controlled and has an LCD display allowing field adjustable ppm and flow rate, with a maximum range of up to 1,250 ppm. In addition, the **HydroGen** can easily be changed from English to French, German or Spanish in the field.

The **HydroGen** gas generator has a built-in mass flow sensor that automatically compensates pump flow for altitude and temperature. The mass flow sensor, combined with our electrochemical cell, provide a highly versatile calibration source.

The **HydroGen** gas generator’s features include:

- NIST traceable certification
- Adjustable ppm and flow rate
- Automatic purge on shut down
- Low power consumption
- Compact “hand-held” design
- Alkaline battery powered

Specifications

| | |
|--------------------------------------|--|
| Hydrogen (H ₂) | 50 – 500 ppm (@0.5 LPM, ppm range varies with flow rate) |
| Air Flow Rate | 0.05 to 1.0 LPM |
| Useful Cell Life | Unlimited |
| Warm-up time (to 90%) | 5 minutes |
| L x W x H | 8.50 x 4.25 x 3.00” (21.59 x 10.8 x 7.62 cm) |
| Weight | 3 lb. (1360 g) |
| Operating Temperature | 0° C to 50° C |
| Relative Humidity (intermittent use) | 0 -100% |
| Repeatability | ±5% |
| Battery Power | 4 alkaline “C” |
| Battery Life | 10 hours (at .5 LPM flow rate) |

HydroGen (Continued)

Note: All **HydroGen** units are shipped certified as directly traceable to NIST with an accuracy of $\pm 10\%$ of the gas output and include a five foot hose, a nylon carrying case, an instruction manual, and 4 size "C" batteries.

Instruments

| Item Description | Part Number | Price |
|------------------------------|-------------|------------|
| HydroGen instrument complete | 850-0604-00 | \$2,500.00 |

Accessories

| Item Description | Part Number | Price |
|---|-------------|----------|
| Plunger feet fastener, package of 10 | 106-0603-00 | \$55.00 |
| Plunger feet fastener | 106-0603-01 | \$6.00 |
| Outlet Fitting, body (1/8 NPT) quick connect | 113-0400-00 | \$11.00 |
| Hose connector, insert (hose barb) quick connect | 113-0402-00 | \$11.00 |
| Charcoal filter element | 150-0121-00 | \$12.00 |
| Charcoal filter element, package of 12 | 150-0131-00 | \$110.00 |
| Continuous operation adapter, 115VAC with US plug | 362-0600-00 | \$49.00 |
| Hose, with quick connect, Norprene, 3' | 715-0403-0X | \$21.00 |
| Hose, with quick connect, Norprene, 5' | 715-0405-0X | \$27.00 |
| Nylon carrying case, Cal 2000, Cal 2000 LT | 730-0603-00 | \$80.00 |
| Hard body carrying case, Cal 2000, Cal 2000 LT | 730-0615-00 | \$135.00 |
| HydroGen instruction manual | 910-0604-00 | \$12.00 |

MiniBump



The **MiniBump** is specifically designed for applications where 'bump' testing is required or recommended. The **MiniBump** generates a puff of gas so that an instrument's response and alarms may be checked. Available in chlorine, hydrogen, hydrogen cyanide and hydrogen sulfide, the **MiniBump** provides up to 1000 tests for each field replaceable generating cell. The **MiniBump** also has an optional wall mounting housing to make a fixed bump test station.

The **MiniBump** is CSA approved for Class I, Division 1, Groups A, B, C & D environments, and is small enough to fit into a shirt pocket.

The **MiniBump** gas generator's features include:

- CSA NRTL/C Exia T-6 approved intrinsically safe with CE mark
- Automatic shut down after each test
- Disposable generating cell
- Interchangeable calibration gases
- Alkaline battery powered

Specifications

| | |
|--------------------------------------|---|
| Useful Cell Life | Up to 1000 tests |
| Bump Test Time | Less than 120 seconds |
| Intrinsic Safety | Class 1, Division 1, Groups A, B, C, D |
| L x W x H | 4.09 x 2.36 x 1.18" (10.4 x 6.0 x 3.0 cm) |
| Weight | 0.5 lb. (220 g) |
| Operating Temperature | -40° C to 50° C |
| Relative Humidity (intermittent use) | 0 -100% |
| Battery Power | 2 alkaline "AA" |
| Battery Life | 10 hours |

MiniBump (Continued)

Note: All **MiniBump** units are CSA approved and are shipped with a rubber calibration cup, an instruction manual, and 2 size "AA" alkaline batteries.

Instruments

| Item Description | Part Number | Price |
|--|-------------|----------|
| MiniBump station complete with wall mount housing, Cl2 cell, batteries, 3' hose and manual | 210-0750-00 | \$665.00 |
| MiniBump station complete with wall mount housing, H2S cell, batteries, 3' hose and manual | 210-0750-05 | \$665.00 |
| MiniBump instrument complete, less cell | 750-0401-00 | \$300.00 |

Cells

| Item Description | Approx. PPM Output | Part Number | Price |
|--------------------|--------------------|-------------|----------|
| MiniBump Cell, Cl2 | 5 PPM | 510-0500-01 | \$300.00 |
| MiniBump Cell, H2S | 25 PPM | 510-0550-02 | \$300.00 |
| MiniBump Cell, HCN | 10 PPM | 510-0570-02 | \$300.00 |
| MiniBump Cell, H2 | 25 PPM | 510-0590-02 | \$300.00 |

Accessories

| Item Description | Part Number | Price |
|--|-------------|----------|
| Screw cap, with hose fitting, MiniBump, MiniCal | 115-0400-00 | \$40.00 |
| Wall mount case for MiniBump | 210-0400-00 | \$65.00 |
| Battery cover, MiniBump, MiniCal | 250-0401-00 | \$4.50 |
| Rubber cal cup with quick connect, MiniBump | 715-0100-00 | \$29.00 |
| Hose, with quick connect, Norprene, 3' | 715-0403-0X | \$21.00 |
| Hose, with quick connect, Norprene, 5' | 715-0405-0X | \$27.00 |
| Hard body carrying case, MiniBump, QC-50, QC-100 | 730-0415-00 | \$105.00 |
| MiniBump instruction manual | 910-0550-00 | \$12.00 |



QC-50



The **QC-50** is a simple yet rugged device allowing quick and easy testing of gas detection systems. The **QC-50** uses ACD's patent pending QuickCheck Vial (QCV) technology. These QCV factory sealed vials contain a small amount of the chemical to be tested in an inner glass ampoule. For use, the QCV is firmly squeezed to break the inner ampoule before it is inserted into the **QC-50**. Then with a few squeezes of the aspirator bulb a reliable bump test gas is produced. The QCV contains such a small amount of chemical it is non-hazardous for shipping, storage and disposal. And since the vials are sealed they have a very long shelf life compared to many other bump test methods.

The **QC-50** QuickCheck bump test features include:

- Simple to use
- Durable design
- Non-hazardous shipping and disposal
- No batteries
- Easy to transport
- Expandable as other gases become available

Specifications

| | |
|--------------------------------------|---------------------------|
| Useful Vial Life | Up to 8+ hours per vial |
| Warranty | One year |
| Dimensions (QC-50) | 2 x 7.2" (5 x 18.4 cm) |
| Dimensions (QCV) | 0.4 x 1.3" (1.1 x 3.4 cm) |
| Weight (QC-50) | 2.5 oz (75 gm) |
| Weight (QCV) | .14 oz (4 gm) |
| Operating Temperature | Nominal @ 20° C |
| Relative Humidity (intermittent use) | 0 -100% |

QC-50 (Continued)**Instruments**

| Item Description | Part Number | Price |
|--|-------------|----------|
| QC-50 instrument, includes 3' hose and manual | 750-1050-00 | \$35.00 |
| QC-50 kit, includes belt pack, manual, 3' hose and 12 QCV (specify gas) | 850-1050-00 | \$200.00 |

Quick Check Vials

| Item Description | Part Number | Price |
|--|-------------|----------|
| QCV, Ammonia (NH ₃), 12 Pack | 525-0001-12 | \$180.00 |
| QCV, Hydrogen Chloride (HCl), 12 Pack | 525-0002-12 | \$180.00 |
| QCV, Toluene (C ₇ H ₈), 12 Pack | 525-0003-12 | \$180.00 |
| QCV, Hexane (C ₆ H ₁₄), 12 Pack | 525-0004-12 | \$180.00 |

Accessories

| Item Description | Part Number | Price |
|--|-------------|----------|
| Hose, with quick connect, Norprene, 3' | 715-0403-0X | \$21.00 |
| Hose, with quick connect, Norprene, 5' | 715-0405-0X | \$27.00 |
| Hard body carrying case, MiniBump, QC-50, QC-100 | 730-0415-00 | \$105.00 |
| Nylon carrying case, QC-50, QC-100 | 730-1050-00 | \$27.00 |
| QC-50 instruction manual | 910-1050-00 | \$12.00 |

QC-100



The **QC-100** is another member of the QuickCheck family, allowing quick and easy testing of gas detection systems. The **QC-100** uses ACD's patent pending QuickCheck Vial (QCV) technology. These QCV factory sealed vials contain a small amount of the chemical to be tested in an inner glass ampoule. For use the QCV is firmly squeezed to break the inner ampoule before it is inserted into the **QC-100**. The **QC-100** has a built-in pump for continuous flow, and the built-in needle valve allows an adjustable output concentration. The QCV itself contains such a small amount of chemical it is non-hazardous for shipping, storage and disposal. And since the vials are sealed they have a very long shelf life compared to many other bump test methods.

The **QC-100** QuickCheck bump test features include:

- Simple to use
- CE Approved
- Non-hazardous shipping and disposal
- Adjustable output
- Alkaline battery powered
- Expandable as other gases become available

Specifications

| | |
|--------------------------------------|--|
| Useful Vial Life | Up to 8+ hours per vial |
| Warranty | One year |
| Dimensions (QC-100) | 6.0 x 2.3 x 1.2" (15.2 x 5.8 x 3.0 cm) |
| Dimensions (QCV) | 0.4 x 1.3" (1.1 x 3.4 cm) |
| Weight (QC-100) | 8 oz (220 gm) |
| Weight (QCV) | .14 oz (4 gm) |
| Operating Temperature | 5 - 50° C |
| Relative Humidity (intermittent use) | 0 -100% |
| Battery Power | 2 Alkaline "AA" |
| Battery Life | 10 hours |

QC-100 (Continued)**Instruments**

| Item Description | Part Number | Price |
|--|-------------|----------|
| QC-100 instrument, includes batteries, 3' hose and manual | 750-1100-00 | \$350.00 |
| QC-100 kit, includes belt pack, manual, 3' hose and 12 QCV (specify gas) | 850-1100-00 | \$500.00 |

Quick Check Vials

| Item Description | Part Number | Price |
|--|-------------|----------|
| QCV, Ammonia (NH ₃), 12 Pack | 525-0001-12 | \$180.00 |
| QCV, Hydrogen Chloride (HCl), 12 Pack | 525-0002-12 | \$180.00 |
| QCV, Toluene (C ₇ H ₈), 12 Pack | 525-0003-12 | \$180.00 |
| QCV, Hexane (C ₆ H ₁₄), 12 Pack | 525-0004-12 | \$180.00 |

Accessories

| Item Description | Part Number | Price |
|--|-------------|----------|
| Hose, with quick connect, Norprene, 3' | 715-0403-0X | \$21.00 |
| Hose, with quick connect, Norprene, 5' | 715-0405-0X | \$27.00 |
| Hard body carrying case, MiniBump, QC-50, QC-100 | 730-0415-00 | \$105.00 |
| Nylon carrying case, QC-50, QC-100 | 730-1050-00 | \$27.00 |
| QC-100 instruction manual | 910-1100-00 | \$12.00 |

Discontinued Instruments

Note: The **EC Cal** and **MiniCal** instruments are no longer available. We still provide the following replacement parts for these two units.

EC Cal

| Item Description | Part Number | Price |
|--|-------------|----------|
| Screw cap, with hose fitting, EC Cal | 115-0600-00 | \$40.00 |
| Battery cover, EC Cal | 250-0603-00 | \$5.50 |
| EC Cal Cell, Cl ₂ , .5-30 PPM @ 0.5 LPM | 510-0600-00 | \$700.00 |
| EC Cal Cell, H ₂ S, .5-30 PPM @ 0.5 LPM | 510-0650-00 | \$700.00 |
| EC Cal Cell, HCN, .5-30 PPM @ 0.5 LPM | 510-0670-00 | \$700.00 |
| EC Cal Cell, H ₂ , .5-30 PPM @ 0.5 LPM | 510-0690-00 | \$700.00 |

MiniCal

| Item Description | Part Number | Price |
|---|-------------|----------|
| Screw cap, with hose fitting, MiniBump, MiniCal | 115-0400-00 | \$40.00 |
| Battery cover, MiniBump, MiniCal | 250-0401-00 | \$4.50 |
| MiniCal cell, Cl ₂ , 10 hour capacity, specify PPM and LPM | 510-0400-0X | \$425.00 |
| MiniCal cell, Cl ₂ , 2 hour capacity, specify PPM and LPM | 510-0401-0X | \$225.00 |
| MiniCal cell, Cl ₂ , 5 hour capacity, specify PPM and LPM | 510-0405-0X | \$325.00 |
| MiniCal cell, H ₂ S, 10 hour capacity, specify PPM and LPM | 510-0450-0X | \$425.00 |
| MiniCal cell, H ₂ S, 2 hour capacity, specify PPM and LPM | 510-0451-0X | \$225.00 |
| MiniCal cell, H ₂ S, 5 hour capacity, specify PPM and LPM | 510-0455-0X | \$325.00 |
| MiniCal cell, HCN, 10 hour capacity, specify PPM and LPM | 510-0470-0X | \$425.00 |
| MiniCal cell, HCN, 2 hour capacity, specify PPM and LPM | 510-0471-0X | \$225.00 |
| MiniCal cell, HCN, 5 hour capacity, specify PPM and LPM | 510-0475-0X | \$325.00 |
| MiniCal cell, H ₂ , 10 hour capacity, specify PPM and LPM | 510-0490-0X | \$425.00 |
| MiniCal cell, H ₂ , 2 hour capacity, specify PPM and LPM | 510-0491-0X | \$225.00 |
| MiniCal cell, H ₂ , 5 hour capacity, specify PPM and LPM | 510-0495-0X | \$325.00 |

When ordering MiniCal Cells, specify exact flow rate (LPM) and concentration (PPM) desired.

Available PPM ranges by flow rate:

- @ ¼ LPM = specify ppm between 1 and 50 ppm
- @ ½ LPM = specify ppm between .5 and 25 ppm
- @ 1 LPM = specify ppm between .25 and 12.5 ppm

Numerical Index

| Part Number | Item Description | Price |
|-------------|---|----------|
| 106-0603-00 | Plunger feet fastener, package of 10 | \$55.00 |
| 106-0603-01 | Plunger feet fastener | \$6.00 |
| 113-0400-00 | Outlet Fitting, body (1/8 NPT) quick connect | \$11.00 |
| 113-0402-00 | Hose connector, insert (hose barb) quick connect | \$11.00 |
| 115-0400-00 | Screw cap, with hose fitting, MiniBump, MiniCal | \$40.00 |
| 115-0600-00 | Screw cap, with hose fitting, EC Cal | \$40.00 |
| 150-0121-00 | Charcoal filter element | \$12.00 |
| 150-0131-00 | Charcoal filter element, package of 12 | \$110.00 |
| 180-0100-00 | Empty plastic bottle with pipette | \$6.50 |
| 193-0100-00 | Electrolyte, Cl ₂ , 50 ml bottle | \$185.00 |
| 193-0101-01 | Electrolyte, ClO ₂ , 15 ml vial | \$30.00 |
| 193-0101-05 | Electrolyte, ClO ₂ , 15 ml vial, 5 pack | \$135.00 |
| 193-0101-10 | Electrolyte, ClO ₂ , 15 ml vial, 10 pack | \$252.00 |
| 193-0101-25 | Electrolyte, ClO ₂ , 15 ml vial, 25 pack | \$525.00 |
| 193-0105-00 | Electrolyte, H ₂ S, 50 ml bottle | \$185.00 |
| 193-0107-00 | Electrolyte, HCN, 50 ml bottle | \$185.00 |
| 193-0109-00 | Electrolyte, H ₂ , 50 ml bottle | \$185.00 |
| 210-0400-00 | Wall mount case for MiniBump | \$65.00 |
| 210-0750-00 | MiniBump station complete with Cl ₂ cell, batteries, 3' hose and manual | \$665.00 |
| 210-0750-05 | MiniBump station complete with H ₂ S cell, batteries, 3' hose and manual | \$665.00 |
| 250-0401-00 | Battery cover, MiniBump, MiniCal | \$4.50 |
| 250-0603-00 | Battery cover, EC Cal | \$5.50 |
| 362-0600-00 | Continuous operation adapter, 115VAC with US plug | \$49.00 |
| 510-0400-0X | MiniCal cell, Cl ₂ , 10 hour capacity, specify PPM and LPM | \$425.00 |
| 510-0401-0X | MiniCal cell, Cl ₂ , 2 hour capacity, specify PPM and LPM | \$225.00 |
| 510-0405-0X | MiniCal cell, Cl ₂ , 5 hour capacity, specify PPM and LPM | \$325.00 |
| 510-0450-0X | MiniCal cell, H ₂ S, 10 hour capacity, specify PPM and LPM | \$425.00 |
| 510-0451-0X | MiniCal cell, H ₂ S, 2 hour capacity, specify PPM and LPM | \$225.00 |
| 510-0455-0X | MiniCal cell, H ₂ S, 5 hour capacity, specify PPM and LPM | \$325.00 |
| 510-0470-0X | MiniCal cell, HCN, 10 hour capacity, specify PPM and LPM | \$425.00 |
| 510-0471-0X | MiniCal cell, HCN, 2 hour capacity, specify PPM and LPM | \$225.00 |

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| Part Number | Item Description | Price |
|--------------------|---|--------------|
| 510-0475-0X | MiniCal cell, HCN, 5 hour capacity, specify PPM and LPM | \$325.00 |
| 510-0490-0X | MiniCal cell, H2, 10 hour capacity, specify PPM and LPM | \$425.00 |
| 510-0491-0X | MiniCal cell, H2, 2 hour capacity, specify PPM and LPM | \$225.00 |
| 510-0495-0X | MiniCal cell, H2, 5 hour capacity, specify PPM and LPM | \$325.00 |
| 510-0500-01 | MiniBump Cell, Cl2 | \$300.00 |
| 510-0550-02 | MiniBump Cell, H2S | \$300.00 |
| 510-0570-02 | MiniBump Cell, HCN | \$300.00 |
| 510-0590-02 | MiniBump Cell, H2 | \$300.00 |
| 510-0600-00 | EC Cal Cell, Cl2, .5-30 PPM @ 0.5 LPM | \$700.00 |
| 510-0650-00 | EC Cal Cell, H2S, .5-30 PPM @ 0.5 LPM | \$700.00 |
| 510-0670-00 | EC Cal Cell, HCN, .5-30 PPM @ 0.5 LPM | \$700.00 |
| 510-0690-00 | EC Cal Cell, H2, .5-30 PPM @ 0.5 LPM | \$700.00 |
| 510-2000-00 | Cal 2000 cell, Cl2, 50 hour capacity, 0.5-50 PPM @ 0.5 LPM | \$650.00 |
| 510-2000-05 | Cal 2000 micro-cell, Cl2, 50 hour capacity, 0.05-1.0 PPM @ 0.5 LPM | \$650.00 |
| 510-2000-20 | Cal 2000 double life cell, Cl2, 100 hour capacity, 0.5-50 PPM @ 0.5 LPM | \$1,000.00 |
| 510-2000-LT | Cal 2000 LT cell, Cl2, 10 hour capacity, specify PPM | \$400.00 |
| 510-2005-LT | Cal 2000 LT cell, Cl2, 25 hour capacity, specify PPM | \$600.00 |
| 510-2050-00 | Cal 2000 cell, H2S, 50 hour capacity, 0.5-50 PPM @ 0.5 LPM | \$650.00 |
| 510-2050-05 | Cal 2000 micro-cell, H2S, 50 hour capacity, 0.05-1.0 PPM @ 0.5 LPM | \$650.00 |
| 510-2050-LT | Cal 2000 LT cell, H2S, 10 hour capacity, specify PPM | \$400.00 |
| 510-2055-LT | Cal 2000 LT cell, H2S, 25 hour capacity, specify PPM | \$600.00 |
| 510-2060-00 | Cal 2000 cell, ClO2, 50 hour capacity, 0.5-5 PPM @ 0.5 LPM | \$650.00 |
| 510-2060-20 | Cal 2000 double life cell, ClO2, 100 hour capacity, 0.5-5 PPM @ 0.5 LPM | \$1,000.00 |
| 510-2070-00 | Cal 2000 cell, HCN, 50 hour capacity, 0.5-50 PPM @ 0.5 LPM | \$650.00 |
| 510-2070-LT | Cal 2000 LT cell, HCN, 10 hour capacity, specify PPM | \$400.00 |
| 510-2075-LT | Cal 2000 LT cell, HCN, 25 hour capacity, specify PPM | \$600.00 |
| 510-2090-00 | Cal 2000 cell, H2, 50 hour capacity, 0.5-50 PPM @ 0.5 LPM | \$650.00 |
| 510-2090-20 | Cal 2000 double life cell, H2, 100 hour capacity, 0.5-50 PPM @ 0.5 LPM | \$1,000.00 |
| 510-2090-LT | Cal 2000 LT cell, H2, 10 hour capacity, specify PPM | \$400.00 |
| 510-2095-LT | Cal 2000 LT cell, H2, 25 hour capacity, specify PPM | \$600.00 |
| 525-0001-12 | QCV, Ammonia (NH3), 12 Pack | \$180.00 |
| 525-0002-12 | QCV, Hydrogen Chloride (HCl), 12 Pack | \$180.00 |

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| Part Number | Item Description | Price |
|--------------------|---|--------------|
| 525-0003-12 | QCV, Toluene (C7H8), 12 Pack | \$180.00 |
| 525-0004-12 | QCV, Hexane (C6H14), 12 Pack | \$180.00 |
| 715-0100-00 | Rubber cal cup with quick connect, MiniBump | \$29.00 |
| 715-0403-0X | Hose, with quick connect, Norprene, 3' | \$21.00 |
| 715-0405-0X | Hose, with quick connect, Norprene, 5' | \$27.00 |
| 730-0415-00 | Hard body carrying case, MiniBump, QC-50, QC-100 | \$105.00 |
| 730-0603-00 | Nylon carrying case, Cal 2000, Cal 2000 LT | \$80.00 |
| 730-0615-00 | Hard body carrying case, Cal 2000, Cal 2000 LT | \$135.00 |
| 730-1050-00 | Nylon carrying case, QC-50, QC-100 | \$27.00 |
| 750-0401-00 | MiniBump instrument complete, less cell | \$300.00 |
| 750-0603-00 | Cal 2000 instrument complete, less cell | \$1,700.00 |
| 750-0603-LT | Cal 2000 LT instrument complete, less cell | \$950.00 |
| 750-1050-00 | QC-50 instrument, includes 3' hose and manual | \$35.00 |
| 750-1100-00 | QC-100 instrument, includes batteries, 3' hose and manual | \$350.00 |
| 850-0604-00 | HydroGen instrument complete | \$2,500.00 |
| 850-1050-00 | QC-50 kit, includes belt pack, manual, 3' hose and 12 QCV (specify gas) | \$200.00 |
| 850-1100-00 | QC-100 kit, includes belt pack, manual, 3' hose and 12 QCV (specify gas) | \$500.00 |
| 910-0550-00 | MiniBump instruction manual | \$12.00 |
| 910-0603-00 | Cal 2000 instruction manual | \$12.00 |
| 910-0603-LT | Cal 2000 LT instruction manual | \$12.00 |
| 910-0604-00 | HydroGen instruction manual | \$12.00 |
| 910-1050-00 | QC-50 instruction manual | \$12.00 |
| 910-1100-00 | QC-100 instruction manual | \$12.00 |

Repair Policies

Normal Instrument Repair *(non-warranty work)*

| | | |
|----------------|----------|-----------|
| Inspection Fee | Minimum | \$ 100.00 |
| Labor | Per Hour | \$ 100.00 |

Calibration Services

Please Note: When instruments and generating cells are listed as separate items in the price catalog, each item must be calibrated and certified individually. If an upgraded $\pm 5\%$ NIST calibration is desired, each item needs to be certified individually and then the instrument and cell must be certified together as a single item.

Cal 2000, Cal 2000 LT, EC Cal

| | | |
|---|-----------------|--------------------------------|
| Instrument Calibration | $\pm 10\%$ NIST | \$200.00 |
| Cell Calibration | $\pm 10\%$ NIST | \$200.00 |
| Instrument and Cell 5% NIST Calibration Upgrade | $\pm 5\%$ NIST | <i>Add additional \$250.00</i> |

Hydrogen

| | | |
|--|-----------------|--------------------------------|
| Instrument Calibration | $\pm 10\%$ NIST | \$400.00 |
| Instrument 5% NIST Calibration Upgrade | $\pm 5\%$ NIST | <i>Add additional \$250.00</i> |

MiniCal

| | | |
|------------------------|-----------------------|----------|
| Instrument Calibration | Factory Certification | \$150.00 |
| Cell Calibration | Factory Certification | \$150.00 |

VersaCal

| | | |
|--|-----------------|--------------------------------|
| Instrument Calibration | $\pm 10\%$ NIST | \$400.00 |
| Instrument 5% NIST Calibration Upgrade | $\pm 5\%$ NIST | <i>Add additional \$250.00</i> |

Gas Detector Calibration Services

Most Manufacturer's Single Gas or 4-Gas Portable Gas Detectors

| | | |
|------------------------|-----------------------|---------|
| Instrument Calibration | Factory Certification | \$85.00 |
|------------------------|-----------------------|---------|

Standard Warranty Gas Calibration Instruments

We warrant gas calibration equipment manufactured and sold by us to be free from defects in materials, workmanship and performance for a period of one year from the date of shipment. Any parts found defective within that period will be repaired or replaced, at our option, free of charge, F.O.B. factory. This warranty does not apply to those items which by their nature are subject to deterioration or consumption in normal service, and which must be cleaned, repaired, or replaced on a routine basis.

Such items may include:

- a. Electrochemical type generating cells
- b. Quick Check Vials (QCV)
- c. Batteries
- d. Fuses
- e. Air Filters

Warranty is voided by abuse including rough handling, mechanical damage, alteration or repair procedures not in accordance with the instruction manual. This warranty indicates the full extent of our liability, and we are not responsible for removal or replacement costs, local repair costs, transportation costs or contingent expenses incurred without our prior approval.

Advanced Calibration Designs, Inc.'s obligation under this warranty shall be limited to repairing or replacing, and returning any product which shall be returned to Advanced Calibration Designs, Inc. at its manufacturing facilities, with transportation charges prepaid, and which Advanced Calibration Designs, Inc.'s Material Review Board examination shall disclose to its satisfaction to have been defective.

This warranty is expressed in lieu of any and all other warranties and representations, expressed or implied, and all other obligations or liabilities on the part of Advanced Calibration Designs, Inc. including, but not limited to, the warranty of fitness for a particular purpose. In no event shall Advanced Calibration Designs, Inc. be liable for direct, incidental or consequential loss or damage of any kind connected with the use of its products or failure of its products to function or operate properly.

Warranty Supplement

Electrochemical Generating Cells

The following is a listing of the available electrochemical cells and their standard warranty when installed in equipment manufactured and supplied by Advanced Calibration Designs, Inc.

MiniGen Family

1. MiniCal Chlorine, Hydrogen Sulfide, Hydrogen Cyanide, Hydrogen
 - One year or 10 hours of use, 10 hour cell.
 - One year or 5 hours of use, 5 hour cell.
 - One year or 2 hours of use, 2 hour cell.
2. MiniBump Chlorine, Hydrogen Sulfide, Hydrogen Cyanide, Hydrogen
 - One year or a minimum of 250 tests.

EC Cal

1. Chlorine, Hydrogen Sulfide, Hydrogen Cyanide, Hydrogen
 - One year or 50 hours of use.

CAL 2000

1. Chlorine, Chlorine Dioxide, Hydrogen
 - One year or 50 hours of use, 50 hour cell.
 - One year or 100 hours of use, 100 hour cell.
2. Hydrogen Sulfide, Hydrogen Cyanide
 - One year or 50 hours of use.

CAL 2000LT

1. Chlorine, Hydrogen Sulfide, Hydrogen Cyanide
 - One year or 10 hours of use, 10 hour cell.
 - One year or 25 hours of use, 25 hour cell.

HydroGen

1. One year, unlimited usage.

Quick Check Vials (QCV)

Quick Check Vials (QCV) are warranted for one year from date of purchase unless specifically noted in future QCV offerings. Vials are warranted to be sealed and free from defects for this time period. Note that this warranty covers vials with an intact inner ampoule. Once the inner ampoule has been broken the vial is considered to have been used and is no longer covered under warranty.