



PYLON ELECTRONICS INC.

INSTRUMENT MANUFACTURING DIVISION

PRODUCT CATALOGUE

REVISION 9

PYLON ELECTRONICS INC.

147 Colonnade Road,

Ottawa, Ontario K2E 7L9

Canada

TEL: 613-226-7920

FAX: 613-226-8195

EMAIL: instrument@pylonelectronics.com

Visit us @ www.pylonelectronics.com



TABLE OF CONTENTS

GENERAL INFORMATION.....3

WARRANTY STATEMENT4

REPAIR AND SERVICE POLICY.....5

POWER CORD POLICY.....6

PRODUCT OFFERING LIST.....7

MONITORING UNITS.....7

DETECTORS8

Pylon Cell Detectors8

Other Detectors And Probes.....9

ACCESSORIES.....10

Sampling Accessories.....10

CRM Optional Accessories.....10

Data Processing.....11

Pumps.....11

Flowmeters11

Chargers / Adapters12

Miscellaneous / Spares.....12

Consumables.....13

RADON, THORON AND OTHER SOURCES15

Check Sources.....15

Radon Dispensing Source.....16

Radon Progeny Sources16

Flow Through Sources16

Passive Radon Source.....17

SERVICE AND CALIBRATION18

MANUALS.....21



GENERAL INFORMATION

Specifications, designs, and product offerings are subject to change without notice.

The customer is responsible for all Taxes, Duty, Freight, Brokerage and Insurance.

NOTE

Unless otherwise requested and paid for by either the Distributor and/or Customer, all orders are shipped without insurance. Any claims for compensation for shipping damage must be made to the Carrier. Pylon will not be held responsible for any damage incurred during transport. Should any shipment become damaged, the cost of any repairs, calibrations, return shipping, etc. will remain the responsibility of the Distributor and/or Customer.

It should be noted that, on uninsured shipments, the Carrier will only accept responsibility for a small percentage of the value of the goods being shipped should any damage arise during transport.

All shipments are F.O.B. Ottawa, Ontario, Canada.

Quantity discounts are available. Please contact Pylon for more information.

Please visit our website at www.pylonelectronics.com to obtain more information on each of the products including a more detailed description and specifications, as appropriate. Select "Products" to enter the Instrument Manufacturing home page.



WARRANTY STATEMENT

PYLON ELECTRONICS INC. products are warranted against defects in material and workmanship for a period of one year from the date of shipment. Our warranty obligation is limited to the repair of products or parts thereof which, on our examination, prove to be defective during the warranty period.

PYLON ELECTRONICS INC. repairs are warranted against defects in material and workmanship for a period of 90 days from the date of shipment. Our warranty obligation is limited to the repair of the unit returned prepaid, to our factory and which on our examination prove to be defective, during the warranty period. Equipment which has worked performed under Warranty will be returned to the Distributor and/or Customer freight prepaid.

The warranty shall not apply to any equipment which has been subject to accident, incorrect wiring not of our own or operation not in accordance with manufacturer's written instructions.

This warranty is given by PYLON in lieu of all other warranties arising in law or otherwise in respect of the goods, and this Company shall not be liable under any circumstances for consequential damage.

NOTE

All product(s) must be returned prepaid, to our factory.

All warranty claims shall be addressed to:

Pylon Electronics Inc.
147 Colonnade Road,
Ottawa, Ontario K2E 7L9
Canada

Phone: 613-226-7920
Fax: 613-226-8195
Email: instrument@pylonelectronics.com



REPAIR AND SERVICE POLICY

All equipment shipments being returned for either Repair and/or Service work must be returned prepaid, to our factory at the following address:

Pylon Electronics Inc.
Instrument Manufacturing Division
147 Colonnade Road,
Ottawa, Ontario K2E 7L9
Canada

Phone: 613-226-7920
Fax: 613-226-8195
Email: instrument@pylonelectronics.com

Any brokerage fees, freight, taxes, etc. associated with the return of equipment being sent in for Repair and/or Service will remain the responsibility of the Distributor and/or Customer and will be charged back to the Distributor and/or Customer at cost.

NOTE

PYLON ELECTRONICS INC. reserves the right to refuse any inbound shipment that arrives “Collect”.



POWER CORD POLICY

Pylon provides power cords for electrical products for all North American orders. However, due to the wide variety of Power Cord Connectors in the international market, Pylon **does not** provide a Power Cord with International Instrument Orders. The Distributor and/or Customer is responsible for providing the appropriate power cord.

The standard connector provided on all Pylon Power Supplies is 3 pin IEC320-C14 inlet connector type.



PRODUCT OFFERING LIST

MONITORING UNITS

<u>Part Number</u>	<u>Model</u>	<u>Description</u>
7102000	AB6A	Touchscreen Portable Radiation Monitor complete with client and host USB ports, PC software, USB cable, USB memory device, gel battery, universal power supply (120/220VAC).
6204610	WLx	Working Level Measurement System. Portable Working Level measurement system complete with printer, DTU PC software, RS-232 cable, universal power supply (120/220VAC), and radon calibration.
6243300	CRM-1	Continuous Radiation Site Monitor - Active sampling. 110VAC.
6243400	CRM-2	Continuous Radiation Site Monitor - Passive sampling. 110/220VAC
6244000	CRM-1A	Continuous Radiation Site Monitor - Active sampling. 220VAC. CE Mark compliant.

¹ The AB-5, AB-5R, AB-4, and AB-4A monitors have been phased out. Please refer to the AB6A for the current generation replacement product. The AB-5, AB-5R, AB-4, and AB-4A monitors will be supported as long as Pylon is able to support them and may be available on special order.



DETECTORS

PYLON LUCAS CELL DETECTORS

<u>Part Number</u>	<u>Model</u>	<u>Description</u>
7100200	600P ²	Continuous Passive Radon Detector Lucas type scintillation cell for AB6A. (Approximate volume 272 ml.)
6243350	200P ²	Continuous Passive Radon Detector Lucas type scintillation cell for CRM-2.
A201733	CPRD ²	Continuous Passive Radon Detector Lucas type scintillation cell for AB-5 / AB-5R.
6209720	CPC ²	Continuous Passive Radon Detector Lucas type scintillation cell for Model AB-4.
7100180	600A	Active Radon Detector Lucas type scintillation cell for AB6A. (Approximate volume 272 ml.)
7100190	610A	Active Radon Detector Lucas type scintillation cell for AB6A. (Approximate volume 154 ml.)
6243330	200A	Active Radon Detector Lucas type scintillation cell for CRM-1/CRM-1A.
A204721	300A	Active Radon Detector Lucas type scintillation cell for AB-5 / AB5-R. (Approximate volume 270 ml.)
A202019	110A	Active Radon Detector Lucas type scintillation cell for AB-5 / AB-5R. (Approximate volume 153 ml.)

² Includes single point Calibration and Certificate.



OTHER DETECTORS AND PROBES

<u>Part Number</u>	<u>Model</u>	<u>Description</u>
6249000	TEL1 ^{3,4}	Trace Environmental Level Radon Detector c/w 120/240V Adapter. Low level detector for AB-5 / AB-5R.
7100290	6400	Filter Sample Detection System c/w filter holders and scintillation disks. For AB6A.
6200035	503	Filter Sample Detection System. Sample filter holder c/w scintillation disks. For AB-5 / AB-5R.
A202041	AEP-47 ⁴	Alpha Emitting Particulate Detector Assembly for AB-5 / AB-5R.
A202043	BEP-47 ⁴	Beta Emitting Particulate Detector Assembly for AB-5 / AB-5R.
A201650	WT-A ⁴	Wipe Test Alpha Detector Assembly for AB-5 / AB-5R.
6201622	WT-B ⁴	Wipe Test Beta Detector Assembly for AB-5 / AB-5R.
6201623	WT-AB ⁴	Wipe Test Alpha/Beta Detector Assembly for AB-5 / AB-5R.
A201770	SA ^{3,4}	Surface Alpha Contamination Detector Probe for AB-5 / AB-5R.
A201780	SB ^{3,4}	Surface Beta Contamination Detector Probe for AB-5 / AB-5R.
A201750	SAB ^{3,4}	Surface Alpha/Beta Contamination Detector Probe for AB-5 / AB-5R.
A201700	GB ³	Gamma and Beta Detector Probe Assembly for AB-5 / AB-5R.

³ Require an external Photomultiplier Tube Assembly sold separately. See part number A201680.

⁴ Includes single point Calibration and Certificate.

ACCESSORIES

SAMPLING ACCESSORIES

<u>Part Number</u>	<u>Model</u>	<u>Description</u>
6215928	WG-1001	Water Degassing System without cells. Can be used with AB6A active cells as well as the AB-5 active cells.
A215900	WG-1001A	Water Degassing System c/w quantity 5 Model 600A, 610A, 300A, or 110A cells as specified by the customer.
6215940	WG-1001B	Water Degassing System c/w water trap, without cells. Can be used with AB6A active cells as well as the AB-5 active cells.
6215950	WG-1001C	Water Degassing System c/w water trap and quantity 5 Model 600A, 610A, 300A, or 110A cells as specified by the customer.
A215402	154	Vacuum Soil Probe. Requires a vacuum pump and cells sold separately. See the portable hand operated vacuum pump (PN A202150) or VFP series electric vacuum pumps. Cells that can be used include the 600A, 610A, 300A, 110A, and 200A.

CRM OPTIONAL ACCESSORIES⁵

<u>Part Number</u>	<u>Model</u>	<u>Description</u>
6243640		External visible and audible alarm system (Includes alarm mast with mounting brackets, 25' alarm cable, visible alarm beacon and audible alarm siren).
6243360		4 – 20 mA current loop port (Factory Installed).
6243650		CRM Heater Option (Factory Installed).
6243720		Spare control system for CRM-1. Allows measurements to continue when a control system is being calibrated.
6243730		Spare control system for CRM-2. Allows measurements to continue when a control system is being calibrated.

⁵ The CRM external alarm system and heater option have not been tested for CE Mark compliance. Installation of either of these optional accessories on the CRM-1A will void the CE Mark compliance.



DATA PROCESSING

<u>Part Number</u>	<u>Model</u>	<u>Description</u>
6250000	DTU	Data Transfer Utility Software. A Windows based software on a CD ROM. Note: This software is available for downloading on our website at no charge.
1146001		Serial communication cable. Replacement for CI-55 (AB-5) cable.
1146002		Serial communication cable. Replacement for AB-4 cable.
1146003		Serial communication cable. Replacement for WLx cable.

PUMPS

<u>Part Number</u>	<u>Model</u>	<u>Description</u>
7101200	6800	Internal pump for AB6A. 0.1 to 2.5 l/min. c/w 0.15 to 1 l/min flowmeter, fittings, and tubing. User installable.
A201317	VFP-10	High Volume Vacuum Pump - 0.1 - 10 l/min, 115V, 60Hz. Complete with Flowmeter.
A201323	VFP-20	High Volume Vacuum Pump - 0.1 - 10 l/min, 220V, 50Hz. Complete with Flowmeter.
7100570	6660	Vacuum Hand Pump.
A202150		Portable Hand Operated Vacuum Pump.
A200470		Sampling pump. Replacement for AB-5 internal pump.

FLOWMETERS

<u>Part Number</u>	<u>Model</u>	<u>Description</u>
7101000	6700	Flowmeter Kit; Adjustable; 0.15 - 1 l/min; Active Cell. c/w Fittings and Tubing.
7101010	6710	Flowmeter Kit; Adjustable; 0.2 - 4 l/min; Active Cell. c/w Fittings and Tubing.



<u>Part Number</u>	<u>Model</u>	<u>Description</u>
7101020	6720	Flowmeter Kit; Adjustable; 1 - 10 l/min; Active Cell. c/w Fittings and Tubing.
7101030	6730	Flowmeter Kit; 0.15 - 1 l/min; Active Cell. c/w Fittings and Tubing.
7101040	6740	Flowmeter Kit; 0.2 - 4 l/min; Active Cell. c/w Fittings and Tubing.
7101050	6750	Flowmeter Kit; 1 - 10 l/min; Active Cell. c/w Fittings and Tubing.

CHARGERS / ADAPTERS⁶

<u>Part Number</u>	<u>Model</u>	<u>Description</u>
7102040		Universal AC (120/240VAC, 50/60 Hz) battery charger - 12V, 1.2A. Replacement for AB6A charger.
A202810	RM-122A	Universal AC (120/220V 50/60Hz) Adapter with BNC output connector. Replacement for older version AB-5 AC adapters.
A202830	RM-126	Universal AC (120/220V 50/60Hz) Adapter. Replacement for AB-5, WLx and AB-4 AC adapters.

⁶ See Power Cord Policy.

MISCELLANEOUS / SPARES

<u>Part Number</u>	<u>Model</u>	<u>Description</u>
7100260	6000	Adapter to mount AB-5 detector cells (300A, 110A, CPRD) on the AB6A.
7100900	6600	In-Line Filter Kit; Active Cell. c/w Filter Holder, Spare Filters, Fittings, and Tubing.
7100910	6610	Open Face Filter Kit; Active Cell. c/w Filter Holder, Spare Filters, Fittings, and Tubing.
7100920	6620	Drying Column Kit; Small; Active Cell. c/w Drying Tube, Fittings, Tubing, and Spare Drierite.



<u>Part Number</u>	<u>Model</u>	<u>Description</u>
7100930	6630	Drying Column Kit; Large; Active Cell. c/w Large Drying Column, Fittings, and Tubing.
7100940	6640	Vacuum Gauge; Digital; Active Cell. c/w Fitting & Tubing.
7100950	6650	Vacuum Gauge; Analog; Active Cell.
A205410		Accessory kit for Lucas cells. Consists of PVC tubing, two male Swagelok connectors, filter holder, & spare filters.
1112354		Male Swagelok connector for tubing hose for cells & TEL1/TEL.
A203540		Accessory kit for TEL1/TEL. Consists of PVC tubing, 600 ml drying column, filter holder, & spare filters.
7100560		Vacuum Gauge. Replacement for RN-150A Vacuum Gauge.
1113173		In line Gelman filter holder, 25mm. For cells, 503, RN-1025, & TH-1025.
6201705		Coaxial cable. Replacement for Model Ext PMT cable.
1119024		Battery - gel cell. 6V - 4AH. Replacement for AB-5, AB-5R, AB-4, AB-4A, and CRM internal batteries.
6201357	ABA	Cell adapter. Replacement for AB-5 monitor cell adapter.

CONSUMABLES

<u>Part Number</u>	<u>Model</u>	<u>Description</u>
6245003		25 mm, 0.8 um membrane filters (100/pkg) for WLx, 503, etc. For use under standard environmental conditions.
6245004		25 mm, 0.5 um membrane filters (100/pkg) for WLx, 503, etc. For high performance use under non-standard environmental conditions.
6245001		47mm, 0.8 um membrane filters (100/pkg) for AEP & BEP.
6245005		47mm filters (100/pkg) for CRM-1.



<u>Part Number</u>	<u>Model</u>	<u>Description</u>
6245002		25mm glass fibre filters (100/pkg) for cells, 503, RN-1025 & TH-1025.
1113273		ECR-5 ribbon cartridges for PPT-1 printer.
1113218		ECR-7 ribbon cartridges for AB-4 printer.
6243005		Paper rolls for PPT-1 printer (5 rolls).
6245200		Drierite, 8-10 mesh, 5 lb (2.25 kg) jar. Replacement drierite for various products.
6245100		PVC tubing, 1/4" I.D., 20 ft (6.0 m) roll for cells & TEL1/TEL.



RADON, THORON, AND OTHER SOURCES

NOTE

These sources contain radioactive materials. Pylon requires a copy of the user's radioisotope licence prior to shipping these products.

NOTE

Most sources have an activity loading tolerance of -10% to +25%. This is the tolerance of the activity that will be loaded into the source container. E.g., If a nominal activity of 100 kBq is specified by Pylon or the customer, the actual nominal activity loaded into the source container will be between 90 kBq and 125 kBq.

The calibration accuracy is $\pm 4\%$ for radon sources and $\pm 8\%$ for thoron sources. This is the accuracy of the actual loaded activity. Using the previous example of a nominal activity of 100 kBq and assuming a radon source, if the actual loaded activity was 110 kBq, the calibration accuracy would be $110 \text{ kBq} \pm 4\%$.

CHECK SOURCES

<u>Part Number</u>	<u>Model</u>	<u>Description</u>
7100210	6000	Radon Field Check Source for AB6A. Nominal activity: 18 Bq (500 pCi).
A203552	3150A	Radon Field Check Source for AB5 and AB-5R. Nominal activity: 18 Bq (500 pCi).
6209710	4250A	Radon Field Check Source for CRMs, AB-4, and AB-4A. Nominal activity: 18 Bq (500 pCi).
6204619	WLx-AM	WLx check source. Consists of an Americium-241 planchette source mounted in a WLx attachable mount. Activity: 185 to 1147 Bq (5 to 31 nanocuries).
1121063	AM-241	Americium 241 planchette source. Activity: 185 to 1147 Bq (5 to 31 nanocuries). Diameter: 25 mm.



RADON DISPENSING SOURCE

<u>Part Number</u>	<u>Model</u>	<u>Description</u>
7100500	RN-150A	Radon gas source system used to calibrate active cells. Includes a hand operated vacuum pump & a digital manometer. Customer specified activity < 30 kBq (0.81 uCi).

RADON PROGENY SOURCES

<u>Part Number</u>	<u>Model</u>	<u>Description</u>
A202047	RN-190-47-4	Radon progeny source. Nominal activity: 4,000 dpm/cm ² .
A202045	TH-190-47-4	Thoron progeny source. Nominal activity: 4,000 dpm/cm ² .
6202039	RN-190-47-20	Radon progeny source. Nominal activity: 20,000 dpm/cm ² .
6202038	TH-190-47-20	Thoron progeny source. Nominal activity: 20,000 dpm/cm ² .

FLOW THROUGH SOURCES

<u>Part Number</u>	<u>Model</u>	<u>Description</u>
6202074	RN-1025-S- Custom	Radon Flow Through Gas Source. Ideal for calibration chambers. Customer specified activity < 2000 kBq (< 54.0 uCi).
6202075	RN-1025-L- Custom	Radon Flow Through Gas Source. Ideal for calibration chambers. Customer specified activity ≥ 2000 kBq (≥ 54.0 uCi) & ≤ 4995 kBq (≤ 135 uCi).
6202094	TH-1025-S- Custom	Thoron Flow Through Gas Source. Ideal for calibration chambers. Customer specified activity < 2000 kBq (< 54.0 uCi).
6202095	TH-1025-L- Custom	Thoron Flow Through Gas Source. Ideal for calibration chambers. Customer specified activity ≥ 2000 kBq (≥ 54.0 uCi) & ≤ 4995 kBq (≤ 135 uCi).
A206324	RNC	Radon Flow Through Gas Source. Nominal activity: 74 Bq (2,000 pCi).



PASSIVE RADON SOURCE

<u>Part Number</u>	<u>Model</u>	<u>Description</u>
6203670	2000A- Custom	Rugged Radon Source. Ideal for calibration chambers. Customer specified activity ≤ 500 kBq (13.5 uCi).



SERVICE AND CALIBRATION

<u>Part Number</u>	<u>Description</u>
7900000	Service Assessment - AB6A.
7900001	AB6A Internal PMT Operating Point Determination.
7900002	AB6A External PMT Operating Point Determination.
7900003	AB6A / Active Cell Calibration. Single Point. Call for multi point and special level calibrations.
7900004	AB6A / Passive Cell Calibration. Single Point. Call for multi point and special level calibrations.
9000128	Normal Service Rate. (Per hour, parts extra.)
9000068	Service Assessment. (Applies to AB-5, AB-5R, AB-4, WLx, CRM-1, CRM-1A, and CRM-2.)
9000076	AB-5 / AB-5R Operating Point Determination.
9000092	WLx Radon and Thoron Calibration
9000104	AB-5 / AB-5R and External PMT Operating Point Determination.
9000105	AB-5 / AB-5R and CPRD Calibration.
9000106	AB-5 / AB-5R and 110A Calibration.
9000107	AB-5 / AB-5R and 300A Calibration.
9000108	TEL / TEL1 Calibration.
9000110	AB-5 / AB-5R and AEP-47 Calibration. (Either Continuous or Quasi – each.)
9000111	AB-5 / AB-5R and WT-A Tuning.
9000112	AB-5 / AB-5R and WT-B Tuning.
9000113	AB-5 / AB-5R and WT-AB Tuning.
9000114	AB-5 / AB-5R and SA Tuning.



<u>Part Number</u>	<u>Description</u>
9000115	AB-5 / AB-5R and SB Tuning.
9000116	AB-5 / AB-5R and SAB Tuning.
9000117	AB-5 / AB-5R and GB Tuning.
9000118	AB-4 Operating Point Determination.
9000119	AB-4 and CPC Calibration.
9000120	CRM-1 Operating Point Determination.
9000121	CRM-2 Operating Point Determination.
9000122	CRM-1 and 200A Calibration.
9000123	CRM-2 and 200P Calibration.
9000124	WLx Radon Calibration.
9000125	WLx Thoron Calibration.
9000126	Cell Repair, Model 110A & 300A, Re-coat cell, replace window & service valves.
9000127	Cell Repair, Model 110A & 300A, Replace window & service valves.

Notes:

- 1) All calibrations are traceable to NIST or the National Research Council of Canada (The Canadian equivalent of NIST).
- 2) A calibration certificate is provided with each calibration.
- 3) The calibrations will be performed using the Customer's monitor (i.e., AB6A, AB-5, AB-4, etc.) if it is provided and it is requested by the customer. Otherwise the calibration will be performed using Pylon's standard laboratory equipment.
- 4) Special calibrations are available (e.g., multi point calibrations at various activity levels, single point calibrations at non-standard activity levels, calibrations of non Pylon equipment, spike exposures, etc.). Call for availability and quote.



- 5) Repair cost estimates will be provided.
- 6) Operating Point Determinations are provided with a Plateau Graph showing the optimum operating point.
- 7) All calibrations have a 4% nominal tolerance for radon and 8% for thoron.



MANUALS

Pylon instruments are provided with a comprehensive instruction manual. Additional copies of the manuals may be purchased.

NOTE

Manuals are subject to change without notice. Pylon has made an effort to ensure that the material contained within our manuals, are both accurate and correct. However, Pylon will not be held responsible for any errors, omissions or damage that may result from the information contained within our manuals.

<u>Part Number</u>	<u>Description</u>
A900008	Model RNC Radon Gas Source Instruction Manual.
A900024	Model AB-5/AB-5R Portable Radiation Monitor Instruction Manual.
A900026	Model AEP-47 Alpha Detection Assembly Instruction Manual.
A900027	Model WT-A, Model WT-B, Model WT-AB Wipe Test Assembly Instruction Manual.
A900028	Model SA, SB, SAB Surface Contamination Probes Instruction Manual.
A900029	Model GB Gamma-Beta Probe Instruction Manual.
A900030	Model RN-1025 Flow Through Radon Gas Source Instruction Manual.
A900031	Model TH-1025 Flow Through Thoron Gas Source Instruction Manual.
A900034	Model RN-190 Radon Daughter Source Instruction Manual.
A900035	Model TH-190 Thoron Daughter Source Instruction Manual.
A900037	Model WG-1001 Vacuum Water Degassing System Instruction Manual.
A900040	Model PPT-1 Portable Printer for AB-5 Instruction Manual.
A900042	Model 154 Vacuum Soil Probe Assembly Instruction Manual.
A900057	Instructions For Using The Kusnetz Grab Working Level Method To Measure Radon Decay Products.



<u>Part Number</u>	<u>Description</u>
A900060	Model BEP-47 Beta Detector Assembly Instruction Manual.
A900069	Model 3150A, Model 4250A Radon Check Source Instruction Manual.
A900070	Model CPRD Continuous Passive Radon Detector Instruction Manual.
A900071	Model 110A, Model 300A Lucas Cell used with Pylon Model AB-5/AB-5R Instruction Manual.
A900079	Model WLx Working Level Measurement System Instruction Manual.
A900080	Model 2000A Passive Radon Gas Source Instruction Manual.
A900082	Model AB-4 Continuous Radon Measurement System Instruction Manual.
A900098	WLx-AM / AM-241 Instruction Manual.
A900099	Model CRM-1 Continuous Radiation Monitor Manual.
A900100	Model CRM-2 Continuous Radiation Monitor Manual.
A900101	Model DA-2005 AB-5 Data Acquisition Package Manual.
A900102	Model CRM-1A Continuous Radiation Monitor Manual.
A900103	Model TEL1 Trace Environmental Level Detector Manual.