

F&J SPECIALTY PRODUCTS, INC.

The Nucleus of Quality Air Monitoring Programs

Emergency Response AC/DC Air Samplers Consumables and Accessories



**DF-60L-5Li
AC/DC Air Sampler in
Instrument Case**



**DF-AB-75L-Li
Emergency Response
Air Sampler in plastic
Ammo Box Design**



**DF-40L-400M-20Li
Emergency Response AC/DC
Air Sampler in Metal Enclosure
with Optional Rain Shielded
Filter Holder**



**DF-ABM-40L-10Li
Military Grade AC/DC
Air Sampler in
Metal Ammo Box**



**DF-75L-400-Li
Emergency Response AC/DC
Air Sampling System with
Optional Rain Shielded
Filter Holder in
Ruggedized Plastic Enclosure**



**DF-ABM50-75L-20Li
Military Grade AC/DC
Air Sampler in Metal
Ammo Box**

Rev.: 28 June 2022



DF-ABM-40L-AC

Military Grade Emergency Response AC/DC Air Samplers (Metal Ammo Box Design)



DF-ABM50-75L-20Li

Instrument Case Design

<u>Model</u>	<u>DF-ABM-40L-AC</u>	<u>DF-ABM-40L-10Li</u>	<u>DF-ABM50-75L-AC</u>
Voltage	100-240VAC/12VDC	100-240VAC/12VDC	100-240VAC/12VDC
Flow Range	10 - 40 SLPM	5 - 40 SLPM	10 - 75 SLPM
Pump Type	Dual diaphragm high efficiency	Dual diaphragm high efficiency	High speed centrifugal blower
Dimensions (in) (cm)	13.5L x 6.13W x 7.75H 34.29L x 15.57W x 19.69H	13.5L x 6.13W x 7.75H 34.29L x 15.57W x 19.69H	13.0L x 8.0W x 10.3H 33.0L x 20.3W x 26.1H
Weight lbs (kg)	10 (4.54)	15.5 (7.0)	14 (6.6)
Flow Accuracy	±4.0% Full Scale	±4.0% Full Scale	±4.0% Full Scale
Battery	None	10 Ah; LiFePO ₄	None

<u>Model</u>	<u>DF-ABM50-75L-20Li</u>	<u>DF-ABM50-100L-20Li</u>	<u>DF-ABM50-170L-20Li</u>
Voltage	100-240VAC/12VDC	100-240VAC/12VDC	100-240VAC/12VDC
Flow Range	10-75 SLPM	15-100 SLPM	50-170 SLPM
Pump Type	High speed centrifugal blower	High speed centrifugal blower	High speed centrifugal blower
Dimensions (in) (cm)	13.0L x 8.0W x 10.3H 33.0L x 20.3W x 26.1H	13.0L x 8.0W x 10.3H 33.0L x 20.3W x 26.1H	13.0L x 8.0W x 10.3H 33.0L x 20.3W x 26.1H
Weight lbs (kg)	20 (9.1)	20 (9.1)	20 (9.1)
Flow Accuracy	±4.0% Full Scale	±4.0% Full Scale	±4.0% Full Scale
Battery	20 Ah; LiFePO ₄	20 Ah; LiFePO ₄	35 Ah; LiFePO ₄



DF-ABM50-170L-20Li



DF-40L-400-Li

Ruggedized Plastic Enclosure Emergency Response AC/DC Air Samplers



DF-EDL-500-Li

Instrument Case Design

<u>Model</u>	<u>DF-40L-400-Li</u>	<u>DF-75L-400-Li</u>	<u>DF-30L-400M-20Li</u>
Voltage	100-240VAC/14.8VDC	100-240VAC/14.8VDC	100-240VAC/12VDC
Flow Range	10 - 35 SLPM	15 - 75 SLPM	4-30 SLPM
Pump Type	Dual diaphragm high efficiency	Dual diaphragm high efficiency	Dual diaphragm high efficiency
Dimensions in (cm)	16.8"L × 9.0"W × 14.0"H (42.7 × 22.9 × 35.6 cm)	16.8"L × 9.0"W × 14.0"H (42.7 × 22.9 × 35.6 cm)	17.0"L × 9.0"W × 13.0"H (43.1 × 22.9 × 33.2 cm)
Weight lbs (kg)	16.5 (7.4)	21 (9)	21.10 (9.57)
Flow Accuracy	±4.0% Full Scale	±4.0% Full Scale	±4.0% Full Scale
Battery	20 Ah Li Ion	20 Ah Li Ion	20 Ah Li Ion

<u>Model</u>	<u>DF-EDL-500-AC</u>	<u>DF-EDL-500-Li</u>
Voltage	100-240VAC/12VDC	100-240VAC/12VDC
Flow Range	20-160 SLPM	20-160 SLPM
Pump Type	Centrifugal blower	Centrifugal blower
Dimensions in (cm)	19.7"L × 12"W × 18"H (50 × 30.5 × 46 cm)	19.7"L × 12"W × 18"H (50 × 30.5 × 46 cm)
Weight lbs (kg)	33 (15)	45.65 (20.72)
Flow Accuracy	±4.0% Full Scale	±4.0% Full Scale
Battery	None	20 Ah Li Ion



DF-EDL-500-AC



Emergency Response AC/DC Air Samplers (Instrument Case Designs)



Instrument Case Design

<u>Model</u>	<u>DF-1L-BL-AC</u>	<u>DF-2L-BL-AC</u>	<u>DF-12L-8</u>	<u>DF-60L-5Li</u>
Voltage	100-240VAC/12VDC	100-240VAC/12VDC	100-240VAC/12VDC	100-240VAC/12VDC
Flow Range	0.2-1.0 SLPM	0.4-2.0 SLPM	2-12 SLPM	10-60 SLPM
Pump Type	Dual diaphragm high efficiency	Dual diaphragm high efficiency	Dual diaphragm high efficiency	Dual diaphragm high efficiency
Dimensions (in) (cm)	9"L x 10"W x 10"H 23 x 25 x 25 cm	9"L x 10"W x 10"H 23 x 25 x 25 cm	8"L x 6"W x 8"H 20 x 15 x 20 cm	8"L x 6"W x 8"H 20 x 15 x 20 cm
Weight lbs (kg)	5.5 (2.5)	5.5 (2.5)	9 (4)	8 (3.6)
Flow Accuracy	±4.0% F.S.	±4.0% F.S.	±4.0% F.S.	±4.0% F.S.
Filter Holder	47 mm, 2" or 50 mm	47 mm, 2" or 50 mm	47 mm, 2" or 50 mm	47 mm, 2" or 50 mm
Battery	None	None	4500 mAH NiMH	5 Ah; LiFePO ₄

<u>Model</u>	<u>DF-40L-AC</u>	<u>DF-40L-Li</u>	<u>DF-75L-AC</u>	<u>DF-75L-20Li</u>
Voltage	100-240VAC/12VDC	100-240VAC/12VDC	100-240VAC/12VDC	100-240VAC/12VDC
Flow Range	10-30 SLPM	10-35 SLPM	10-75 SLPM	10-75 SLPM
Pump Type	Dual diaphragm high efficiency	Dual diaphragm high efficiency	Dual diaphragm high efficiency	Dual diaphragm high efficiency
Dimension in (cm)	8"L x 6"W x 8"H 20 x 15 x 20.3 cm	8"L x 9"W x 12"H 20 x 23 x 30 cm	15"L x 16"W x 13"H 38.1 x 28 x 33 cm	15"L x 11"W x 13"H 38.1 x 28 x 33 cm
Weight lbs (kg)	10 (4.5)	13 (5.9)	19 (8.6)	23 (10.4)
Flow Accuracy	±4.0% F.S.	±4.0% F.S.	±4.0% F.S.	±4.0% F.S.
Filter Holder	47 mm, 2" or 50 mm	47 mm, 2" or 50 mm	47 mm, 2" or 50 mm	47 mm, 2" or 50 mm
Battery	None	20 Ah (Li-ion)	None	20 Ah; LiFePO ₄



**DF-AB-75L-AC
Ammo Box Design**

Emergency Response AC/DC Air Samplers (Plastic Enclosure Designs)



DF-400 Series

<u>Model</u>	<u>DF-AB-40L</u>	<u>DF-AB-40L-20Li</u>	<u>DF-AB-40L-AC</u>	<u>DF-40L-400-20Li</u>
Voltage	100-240VAC/12VDC	100-240VAC/12VDC	100-240VAC/12VDC	100-240VAC/12VDC
Flow Range	10-35 SLPM	10-35 SLPM	10-35 SLPM	10-35 SLPM
Pump Type	Dual diaphragm high efficiency	Dual diaphragm high efficiency	Dual diaphragm high efficiency	Dual diaphragm high efficiency
Dimension in (cm)	14.5L x 8W x 10H 36,8 x 20,3 x 25,4	18L x 10.4W x 13H 45.7 x 26.4 x 33	14.5L x 8W x 10H 36,8 x 20,3 x 25,4	16.8L x 9W x 14H 42.7 x 22.9 x 35.6
Weight lbs (kg)	13 (5.9)	16 (7.3)	11.2 (5.6)	16.5 lbs. (7.4 kg)
Flow Accuracy	±4.0% Full Scale	±4.0% Full Scale	±4.0% F.S.	±4.0% Full Scale
Battery	4500 mAh NiMH	20 Ah; Li Ion	None	20 Ah; LiFePO ₄

<u>Model</u>	<u>DF-AB-75L-AC</u>	<u>DF-75L-400-Li</u>
Voltage	100-240VAC/15VDC	100-240VAC/12VDC
Flow Range	30-75 SLPM	15-75 SLPM
Pump Type	Dual diaphragm high efficiency	Dual diaphragm high efficiency
Dimension in (cm)	17L x 10.4W x 13H 43,2 x 26,4 x 33	16.8L x 9.0W x 14.0H 42,7 x 22,9 x 35,6
Weight lbs (kg)	31 (14)	21 (9 kg)
Flow Accuracy	±4.0% F.S.	±4.0% F.S.
Filter Holder	47 mm, 2" or 50 mm	47 mm, 2" or 50 mm
Battery	None	20 Ah; LiFePO ₄



View of Inside
Ruggedized Plastic Enclosure Designs



Metal Ammo Box Design



Connection to vehicle cigarette lighter for
12VDC sampling applications

DF-75L-400-Li connected to
BATBANK-12 portable battery bank



Indoor use Configuration



Beta CAMs

Optional Data Storage Device



RMDF-30L-RV



RMDF-60L-Li

These portable-lightweight Beta CAMs are continuous radiation monitors that measure near real-time gross radioactivity levels on a 47 mm glass fiber filter paper. This system provides audible and visible alarms based upon an operator selectable alarm value for activity or concentration value.

Gross beta-gamma radioactivity is measured as a Cs-137 equivalent value. Other specific isotopes are operator selectable.

Metric or English units are available as a factory installed selection.

These lightweight instruments are ideal for homeland security applications and for commercial nuclear power plant emergency kits.

Typical detection sensitivity is $1.4 \times 10^{-9} \mu\text{Ci/cc}$ based on the Cs-137 isotope and sampling for ten minutes. Longer sample collection times result in better detection sensitivity. The typical flow rate range is 10-30 LPM depending upon the airflow resistance of the filter media as selected by the end user.

ECONAIR PLUS Personal Air Samplers

NOTABLE FEATURES:

- Compact, Rugged and Quiet
- No tools required to change flow rates
- Flow setting is saved in memory for next day/use quick start
- Battery pack rechargeable while attached or separated
- Stainless steel belt clip with built-in tripod connector
- One-hour rechargeable batteries and extended run triple battery packs
- High impact steel fiber filled Lexan case, antistatic and RFI shielded
- “Auto-restart” within one minute of a flow fault
- Flows up to 4 LPM for special cyclone requirements
- Low flows, 5-800 cc/m, with universal low flow sorbent tube holder
- High backpressure capable for 25mm 0.45µ asbestos filters
- Built in washable stainless steel 100 micron filter for economy of use
- One year warranty
- Intrinsically Safe Approval



L-5P



L-12P and L-15P

Consumables and Accessories



**LP-947
Particulate Lapel
Filter Holder**



**FJ-832 Series
Combination Lapel
Filter Holder**

Filter Paper Media



**MC-5L
Personal Air Sampler
Calibration System**



**FJ433
Radioiodine Collection
Cartridges**

TEDA Impregnated Radioiodine Collection Filter Cartridges (RICF)

Charcoal Cartridges and Silver Zeolite

F&J is the world's largest manufacturer of RICF, employing TEDA impregnated charcoal and silver zeolite adsorbents.

F&J implements the most comprehensive RICF testing program to determine performance capabilities as part of its certified ISO 9001:2015 quality management system.

F&J offers multiple mesh sizes of adsorbents that offer a variety of pressure drop and collection efficiency characteristics.

F&J offers the greatest variety of cartridge geometry available from any manufacturer of RICF products.

Please contact F&J for detailed product specifications, quality assurance test data, shelf life information and RICF QA System testing program description.



M, B, C and 433 Geometry



FJ-433 (TEDA Charcoal) FJ-434 (Silver Zeolite)
for
**Personal Air Sampler
FJ-832 Series Filter Holders**

Label Color Coding Guide for Mesh Sizes (mm):

Green:	30 × 50
Yellow:	20 × 40
Brown:	12 × 20
Red	8 × 16
Blue:	Silver Zeolite (16×40, or 30×50)*

* The 16 x 40 mesh silver zeolite cartridges are recommended for battery powered units.

FILTER PAPER MEDIA

F&J provides filter media of various characteristics in many different dimensions.

F&J provides its own proprietary filter grades, as well as those manufactured by Whatman, Ahlstrom and Millipore.

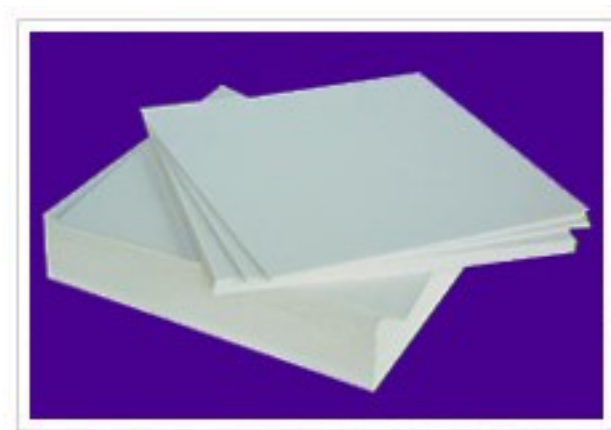
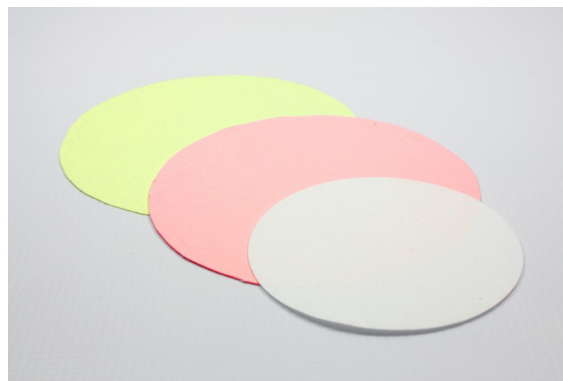
Filter Media Types:

Glass Fiber, Cellulose, Membrane, Quantitative and Qualitative

Typical Dimensions:

<u>Diameter (mm)</u>	<u>Diameter (Inches)</u>	<u>Sheets</u>
21, 25, 37, 47, 50 60, 70, 76 and 102	2, 2.25, 3.0 and 4.0	8"×10" (20.3cm × 25.4cm)

Custom diameters are available and may require a tooling cost in the initial order.



Filter Holders



FJ-34 Open Face, Aluminum



**LP-947 Lapel
(47 mm Particulate)**



FJ-44, Aluminum, In-line



FJ-34P Open Face, Plastic

Weather Protective Rain Shield Filter Holders



**FJ-47RH Combination
Rain Shield Filter Holder**



**FJ-47RHM Combination
Mini Rain Shield
Filter Holder**

Filter Holders

Styles:

Open Face
 Cassette
 Particulate
 In-Line
 Combination (charcoal/particulate)

Materials:

Plastic
 Aluminum
 Stainless Steel

Model	Open Face	In-Line	Plastic	Stainless Steel	Aluminum	Size (mm)	Connection
FJ-19P	X		X			50	1.83" MPT
FJ-21P	X		X			50	3/8" FPT
FJ-34P	X		X			47	1.83" MPT
FJ-46P	X		X			47	3/8" FPT
FJ46LM	X		X			47	3/8" FPT with 1/4 HB
FJ-44P		X	X			47	3/8" FPT
FJ-45P		X	X			50	3/8" FPT
FJ-44		X			X	47	3/8" FPT
FJ-44Z		X			X	47	3/8" FPT with QD
FJ-45		X			X	50	3/8" FPT
FJ-4C		X			X	47	1/2" FPT
FJ4C.3		X			X	47	3/8" FPT
FJ4C.4		X			X	47	1/4" FPT
FJ44SS		X		X		47	3/8"
RLF-2B	X				X	47	TWIST LOCK FPT
RLF-21	X				X	50	TWIST LOCK FPT
FJ-19	X				X	50	1.83" MPT
FJ-21	X				X	50	3/8" FPT
FJ-34	X				X	47	1.83" MPT
FJ-34T	X				X	47	1.83" MPT
FJ-46	X				X	47	3/8" FPT
FJ-6C	X			X		47	1.83" MPT
FJ-6C1	X			X		50	1.83" MPT
FJ-7.1	X				X	47	1.83" MPT

Air Flow Calibration Systems



World Calibrator-PC Version



World Calibrator-VFD Version



World Calibrator Multi-Sensor Series



Compact Digital V.2 Series



Bench top Digital, V.2 Series



Mini-Calibrator



World Calibrator + PC Screen + DF-1

Comparisons of F&J Air Flow Calibrator Designs

Features	Mini-Calibrator	V.2 Series Calibrator	WC-VFD Series	WC-PC Series
Correction of Air Flows to a Reference T and P	X (factory settable)	X (factory settable)	X (operator selectable)	X (operator selectable)
Ambient Flow Option	Yes	Yes	Yes	Yes
<u>Setting of Engineering Units</u>				
Flow Rate/Volume	X (factory settable)	X (operator selectable)	X (operator selectable)	X (operator selectable)
Temperature (°C or °F)	X (factory settable)	X (operator selectable)	X (operator selectable)	X (operator selectable)
Pressure (Hg", mmHg or kPa)	X (factory settable) 3 options	X (operator selectable) 3 options	X (operator selectable) 5 options	X (operator selectable) 5 options
Accuracy Available	$\pm 2.0\%$	$\pm 2.0\%$ $\pm 1.0\%$ (optional)	$\pm 1.0\%$	$\pm 1.0\%$
Gas	Air	Air	Operator selectable 6 options	Operator selectable 6 options
Flow Mode	Volumetric	Volumetric	Volumetric or Mass Flow	Volumetric or Mass Flow
Printable Calibration Certificate	No	No	Yes	Yes
Display	1 Line LED	1 Line LED	4 Line VFD/PC Screen	PC Screen
RS232 port	Yes	Yes	Dual	Dual
Power	100-120 VAC; 200-240 VAC	100-120 VAC; 200-240 VAC	100-120 VAC; 200-240 VAC	100-120 VAC; 200-240 VAC
Battery option	No	Yes	Yes	No
Multi-Flow Range Option	No	No	No	Yes
Multiple Language Option	No	No	Yes 9 options (PC Screen)	Yes 9 options (PC Screen)
Semi-automatic calibration	No	No	Yes	Yes
PC Software Option	No	Yes	Standard	Standard

F&J BATTERY BANK MODELS

Ruggedized Plastic Enclosure Models



LIBATBANK-12V



LIBATBANK-24V

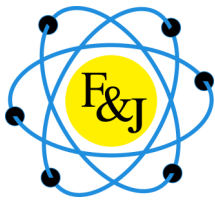
Metal Plastic Enclosure Models



LIBATBANKM-12V



LIBATBANKM-24V



PRODUCT PROFILE

Air Sampling Systems

- High Volume Air Samplers
 - Portable Grab Samplers
 - Environmental Systems
 - Enzyme Dust Samplers
 - PM10 Systems
- Continuous Air Samplers
 - Environmental Systems
 - Portable
 - Fixed Station
- Personal Air Samplers
- Emergency Response DC Powered Air Sampling Systems

Tritium Detection Systems

- Portable and Fixed Station Collection Systems utilizing Silica Gel or Molecular Sieve Absorbents
- Continuous Tritium Monitors

Air Flow Calibrators

- World Calibrator Series
- Compact Digital V.2 Series
- Mini-Calibrator

New Products

- Global Air Sampler Systems
- Digital Flow Meter Air Samplers
- C-14 Collection Systems
- Isokinetic Air Sampling Systems
- ELITE DIGITAL LIGHT (EDL) Air Samplers
- MEGA High Volume Air Samplers
- ULTRA High Volume (CTBTO) Air Samplers
- JUNIOR CTBTO Air Samplers

Radon Detection Devices

- 2-Day Passive Charcoal Canisters
- 7-Day Passive Charcoal Canisters
- Continuous Radon Monitors

Radioiodine Collection Cartridges

- TEDA Impregnated Charcoal
- Silver Zeolite
- Custom Cartridges
- Bulk Silver Zeolite

Filter Paper

- Glass Fiber
- Cellulose
- Membrane
- Quartz

Filter Holders

- Open Face
- In-Line
- PAS Filter Holders
- Materials
 - Plastic
 - Aluminum
 - Stainless Steel

