

GLOBAL AIR SAMPLING OVERVIEW F&J MODEL GAS-EDL-110W-REMP

The Global Air Sampling (GAS) systems provide air monitoring specialists worldwide with the ultimate operator flexibility for customizing the hardware to meet their specific needs.

The GAS product line enables an operator to select the engineering units for measured and calculated parameters as well as mass or volumetric flow and periodic or continuous sampling mode. The operator can select the data storage frequency and the RS232 data output frequency that best suits his application.

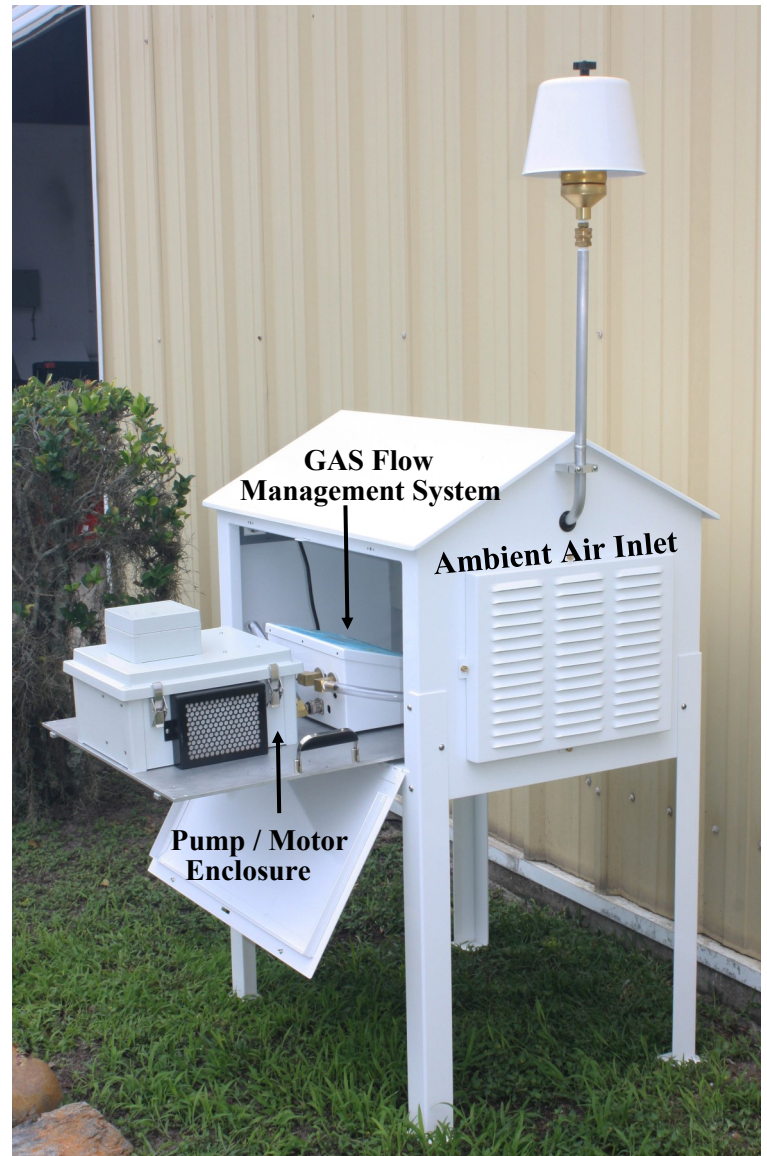
The GAS system displays a multitude of on-board calculations, including maximums, minimums and averages for measured and calculated parameters. The % Availability of the unit is also determined for continuous operation mode along with power outage commencement time and duration.

Hardware features include a 4 line \times 24 character vacuum fluorescent display, dual RS232 ports which permits integration with other instruments and to enable in-bound and out-bound communication.

The flow rate and volume accuracy of 3.0% Full Scale (F.S.) is among the best in the industry.

The F&J Global Air Sampling (GAS) systems raise the bar for air sampling instruments by providing air sampling specialists with the maximum operator flexibility, an increase in the amount of valuable information about the air sampling event, increased accuracy and the best combination of tools to comply with present and future regulatory requirements.

Model GAS-EDL-110W-REMP is designed for operation in desert environments of high temperatures and frequent wind blown sand storms.

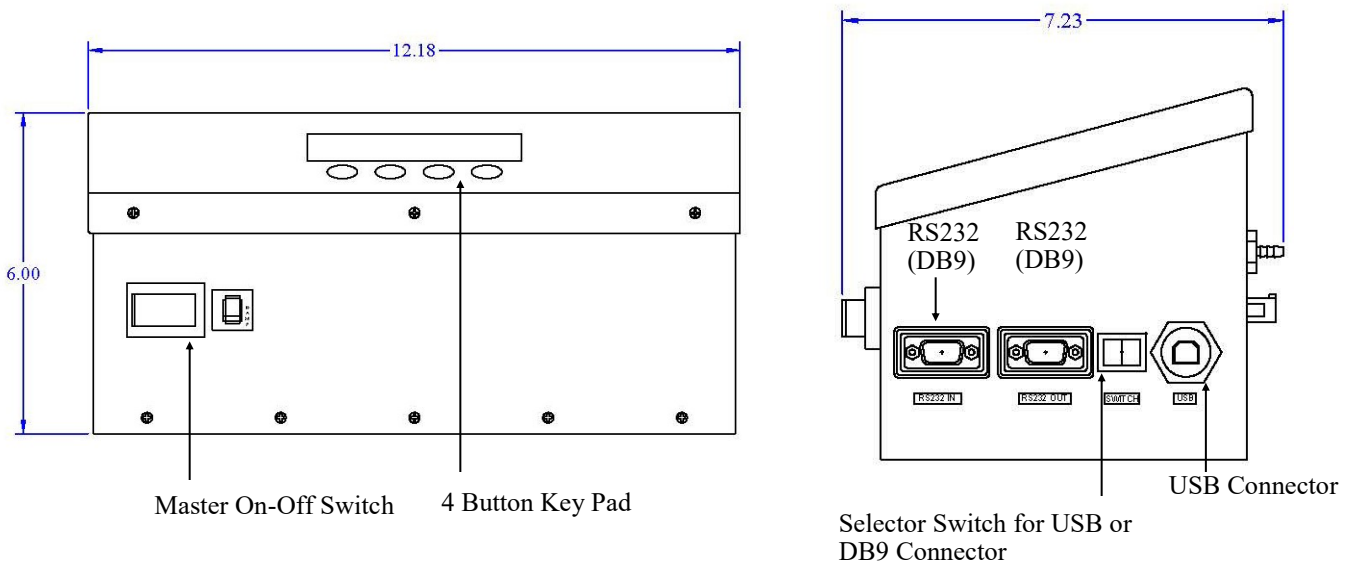


GLOBAL AIR SAMPLER SYSTEM FEATURES

Operator Selectable Features in Setup Mode

Language:	English
Sampling Mode:	Volumetric Flow or Mass Flow
Gas Type:	Air, O ₂ , N ₂ , H ₂ , CO, CO ₂ , C ₃ H ₆ , H _c , NH ₃
Engineering Units	
Volumetric Flow:	scem, SLPM, SCFM, sm ³ /min, sm ³ /hr
Mass Flow:	kg/hr, g/min, lbs/hr
Temperature:	°C, °F
Pressure:	In. Hg, mm Hg, bar, mbar, atm, kPa, hPa
Reference T and P	
Reference T:	0°C, 15°C, 20°C, 21.1°C (70°F), 25°C
Reference P:	101.325 kPa (760 mm Hg), 100 kPa (1bar)
RS232 Data Output Frequency:	1 sec, 1 min, 10 min, 20 min, 30 min, 1 hr
Data Storage Frequency:	1 min, 10 min, 20 min, 30 min, 1 hr
Operating Mode:	Continuous, Periodic
Periodic Sampling Options:	1 hr. (12 five minute periods), or weekly (24 one hour periods for 7 days)
Ending Mode:	By time, By volume
Operator Selectable Passwords:	2 levels
Alarm Settings	Flow, inlet P., temperature, DP due to dust loading, loss of power
Date and Time Setup	Input of real time and date

Close Up Drawings of Control Box



Examples of Viewable Data Screens

KEY MEASUREMENT IN PROGRESS INFORMATION (LV)

Elapsed Time and Flow Values

Elapsed time: 4:00:08
Current flow: 3.12 SCFM
Ambient flow: 3.24 CFM
Initial flow: 3.00 SCFM*

*Appears after 6th minute of operation

Average Flow Values and Volumes

Avg. std. flow: 3.12 SCFM
Avg. amb. flow: 3.24 CFM
Std. volume: 1.235E02 SCF
Amb. volume: 1.453E02 CF

Temperature and Pressure Values

Temperature: 23.3 C
Diff. press: 0.012 InHg
Inlet press: 29.87 InHg
Amb. press: 29.91 InHg

POST MEASUREMENT INFORMATION

Start time, End Mode, Elapsed Time and Operating Mode Info

Start at: 29MAY2011 08:16
Stop at: 11JUN2011 08:16
Elapsed time: 0,12:11
Op: 5 min per: 010011011101

Average Flow Values and Volume

Avg. std. flow: 3.12 SCFM
Avg. amb. flow: 3.24 CFM
Std. volume: 1.235E02 SCF
Amb. volume: 1.453E02 CF

Ref. and Amb. Flow, T and Amb. Pressure Ranges

Std. f: 9.02- 9.19 SCFM
Amb. f: 9.14- 9.33 CFM
Temp: 23.1- 26.4 C
Amb. p: 29.81- 29.99 InHg

Flow, T and Ambient Pressure Ranges

Std. f: 9.02- 9.19 SCFM
Amb. f: 9.14- 9.33 CFM
Temp: 23.1- 26.4 C
Amb. p: 29.81- 29.99 InHg

DP Range, Gas and Ref. Values

DiffP: 0.012- 0.045 InHg
Initial flow: 3.00 SCFM
Ref. temp.: 21.1 C
Ref. press.: 29.92 InHg

Start time, End Mode, Current Time and Operating Mode Info

Start at: 29MAY2011 08:16
Stop at: 11JUN2011 08:16
Time: Wed 01JUN2011 08:20
Op: 5min per: 010011011101

DP Range, Initial Flow and Ref Values

DiffP: 0.012- 0.045 InHg
Initial flow: 3.00 SCFM
Ref. temp.: 21.1 C
Rf. Press.: 29.92 InHg

Set up Flow and % Availability

Setup flow: 10.50 SCFM
% availability: 98.9 %

Gas, Storage Freq. and Power Outages Info

Gas: Air
Storage freq.: 1 min
Power outages: 1
Duration: 0,00:12

Additional Power Outage Info

29MAY 08:14, L: 0,00:12

EXIT

GAS-EDL-110W-REMP Air Sampler Specifications

Pump Type: Centrifugal blower, 100 watt Brushless motor with ceramic bearings and high temperature grease.

Maximum Flowrate:

155 LPM - Typical w/47mm FP47M glass fiber Media; flow rate with other filter mediums will vary
230+ LPM – Free air flow capacity

Power Source:

Line Power; 100VAC to 120VAC
External DC Source – 24VDC

Maximum Current Draw: 4 A maximum on line power
10 A maximum on 24 VDC

Filter Holder Fitting: 3/8 FNPT quick disconnect

Weight: 120 lbs. (54.4 kg)

Dimensions: 52.6" × 33.8" × 25.9"
(133.6 × 85.8 × 65.7 cm)

Foot Print Specifications:

Dimension: 28" x 22" (71.1 x 55.8 cm)
Hole Diameters: 0.563" (1.43 cm)

Operating Temperature Range:

0°F to 145°F (-17°C to 60°C)

Display: VFD, 4×24 characters

Flow Control:

Adjustable from keypad between 30-210 LPM

Flow Accuracy: ±3.0% of Full Scale

Communication Interface: Dual RS-232

Operator Selectable Features

Language Options: English
Sampling Mode: Volumetric Flow or Mass Flow
Gas Type: Air, O₂, N₂, H₂, CO, CO₂, C₃H₆, He, NH₃

Engineering Units

Volumetric Flow: sccm, SLPM, SCFM, sm³/min, sm³/hr
Mass Flow: kg/hr, g/min, 1 lbs/hr
Temperature: °C, °F
Pressure: In, Hg, mm Hg, bar, atm, kPa, hPa

Reference T and P

Reference T: 0°C, 15°C, 20°C, 21.1°C (70°F), 25°C
Reference P: 101.325 kPa (760 mm Hg), 100 kPa (1 bar)

RS232 Data Output Frequency: 1 sec, 1 min, 10 min, 20 min, 30 min, 1 hr

Data Storage Frequency: 1 min, 10 min, 20 min, 30 min, 1 hr

Operating Mode: Continuous, Periodic

Periodic Sampling Options: 1 hr. (12 five minute periods), or weekly (24 one hour periods for 7 days)

Ending Mode: By time, By volume

Operator Selectable Passwords: 2 levels

Date and Time Setup: Input of real time and date

Standard Combination Filter Holders Available:

FILTER HOLDER MODEL	CHARCOAL CARTRIDGE DIMENSIONS	PARTICULATE PAPER DIAMETER
FJ-05P	F&J Model B	2" or 50 mm
FJ-21P	F&J Model C	2" or 50 mm
FJ-35P	F&J Model B	47 mm
FJ-46P	F&J Model C	47 mm
FJ-51P	F&J Model M	2" or 50 mm
FJ-53P	F&J Model M	47 mm
FJ-47RH	F&J Model C	47mm
FJ-20RH	F&J Model C	2 inch or 50 mm

Optional Items:

- Air Sampler Data Acquisition Program
P/N: GASdaq
- Ruggedized Cellular Phone System
P/N: CASRPS
- Automatic Line Power to 24 VDC switch over electronics P/N: LP-24V
- Heating system with thermostat control for cold weather periods



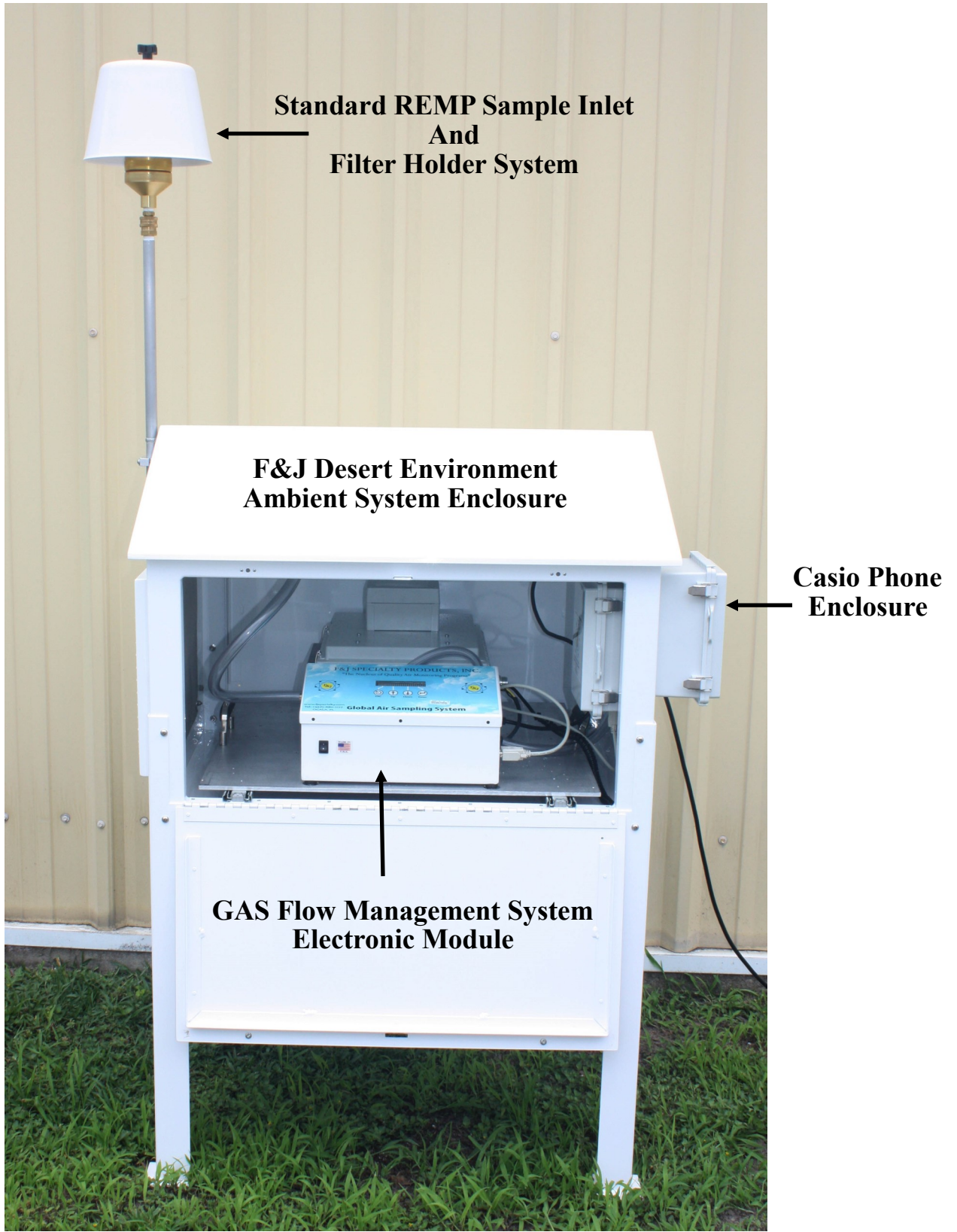
CASRPS

Typical Maximum Flow Rates for Various Filter Media Combinations

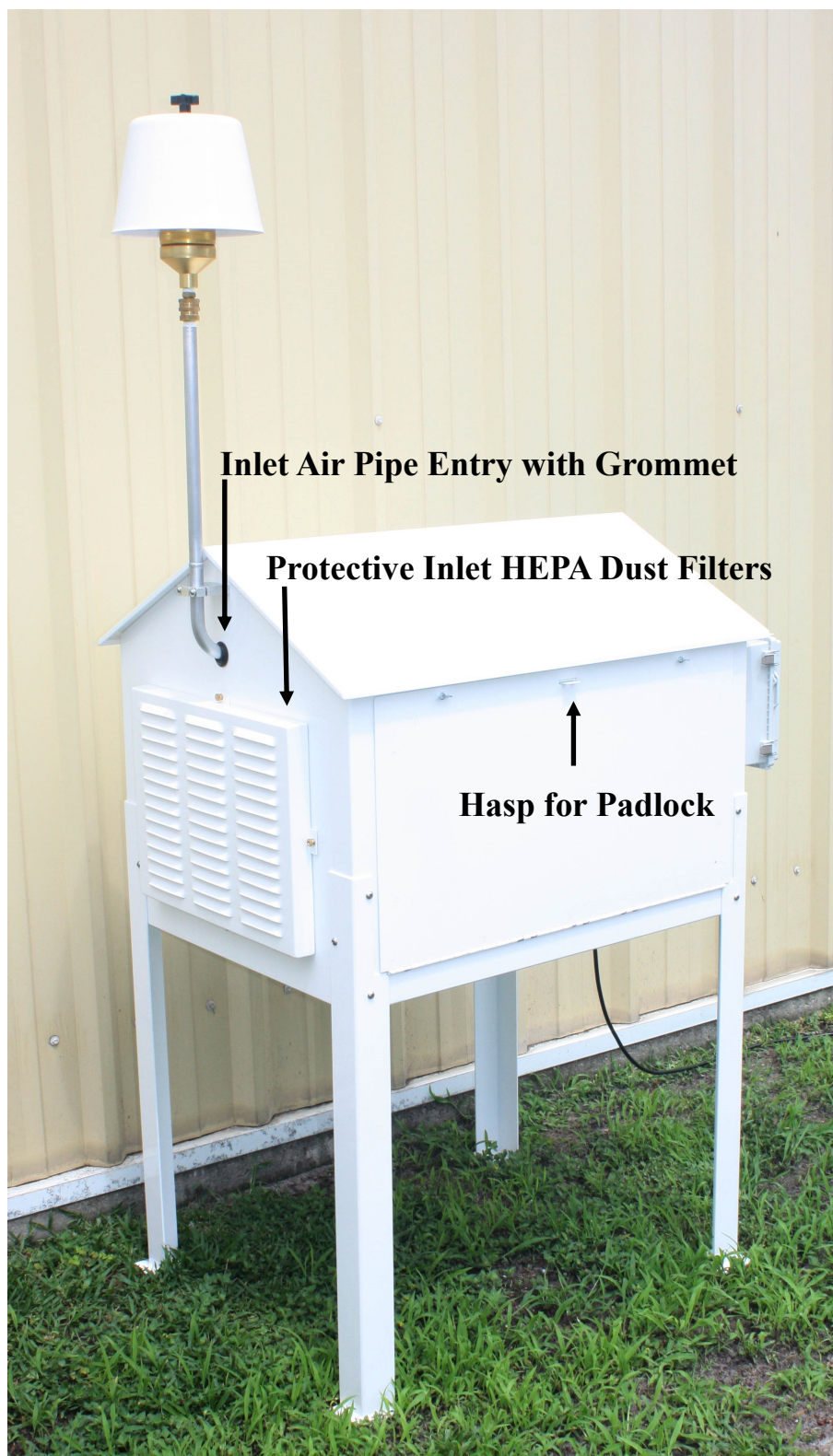
Filter Media	Flow Rate (SCFM)	Flow Rate (SLPM)	Media D.P.("Hg)	Media D.P.("H ₂ O)
FP47	3.49	98	3.22	43.78
FP47M	5.47	155	2.13	28.96
FP47M2	8.43	238	1.31	17.81
FP47 & TE2C	2.76	78.11	3.55	48.26
FP47M & TE3C	4.28	121	2.85	38.75
FP47M2 & TE1C	5.36	151.69	1.79	24.34
FP20M	5.40	152.82	1.80	24.47
FP20M & TE2C	3.83	108.39	2.95	40.11
FP20M & TE3C	4.22	119.43	2.67	36.30
FP40M	11	310	0.77	10.47



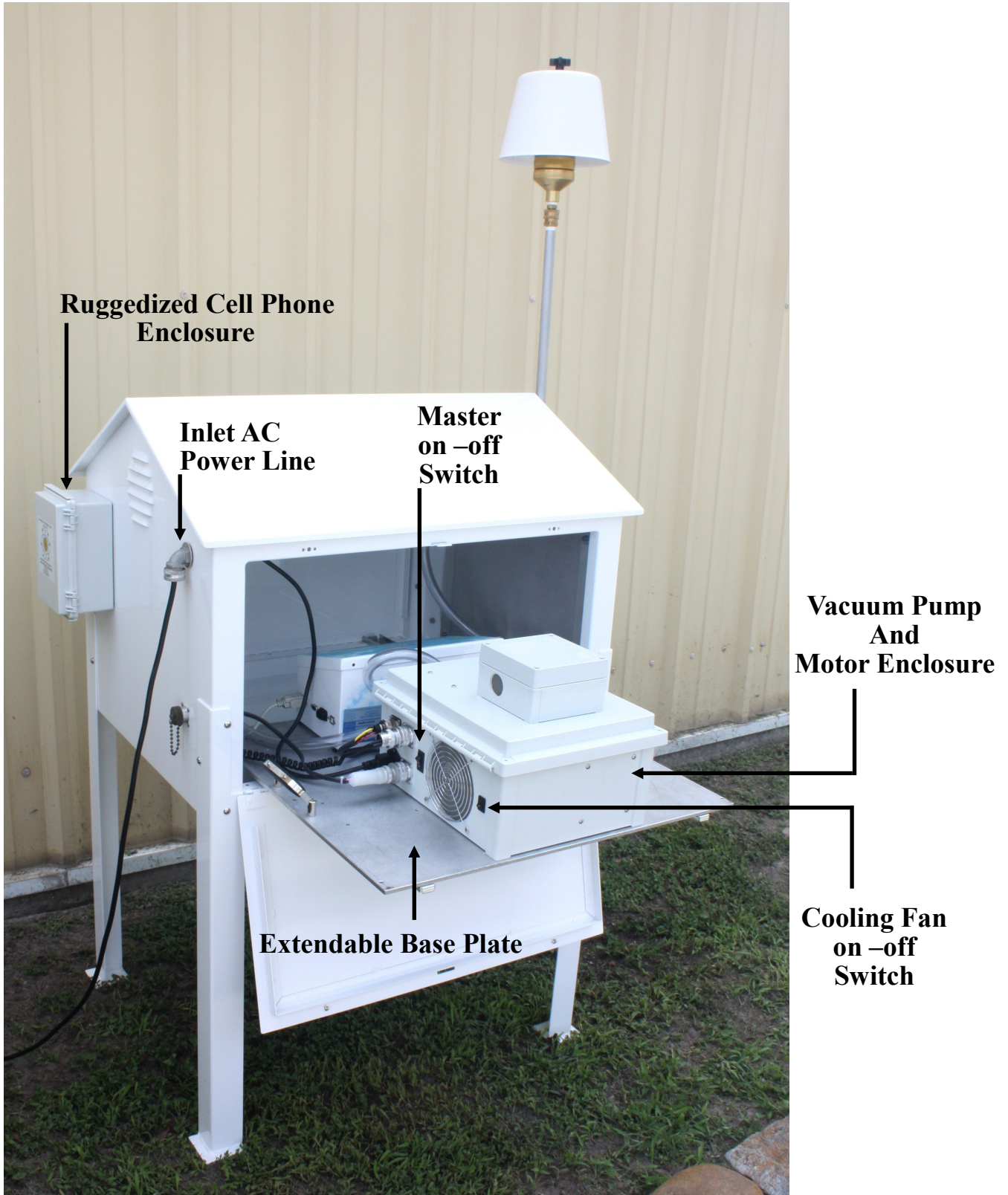
GAS-EDL-110W-REMP Air Sampler Specifications



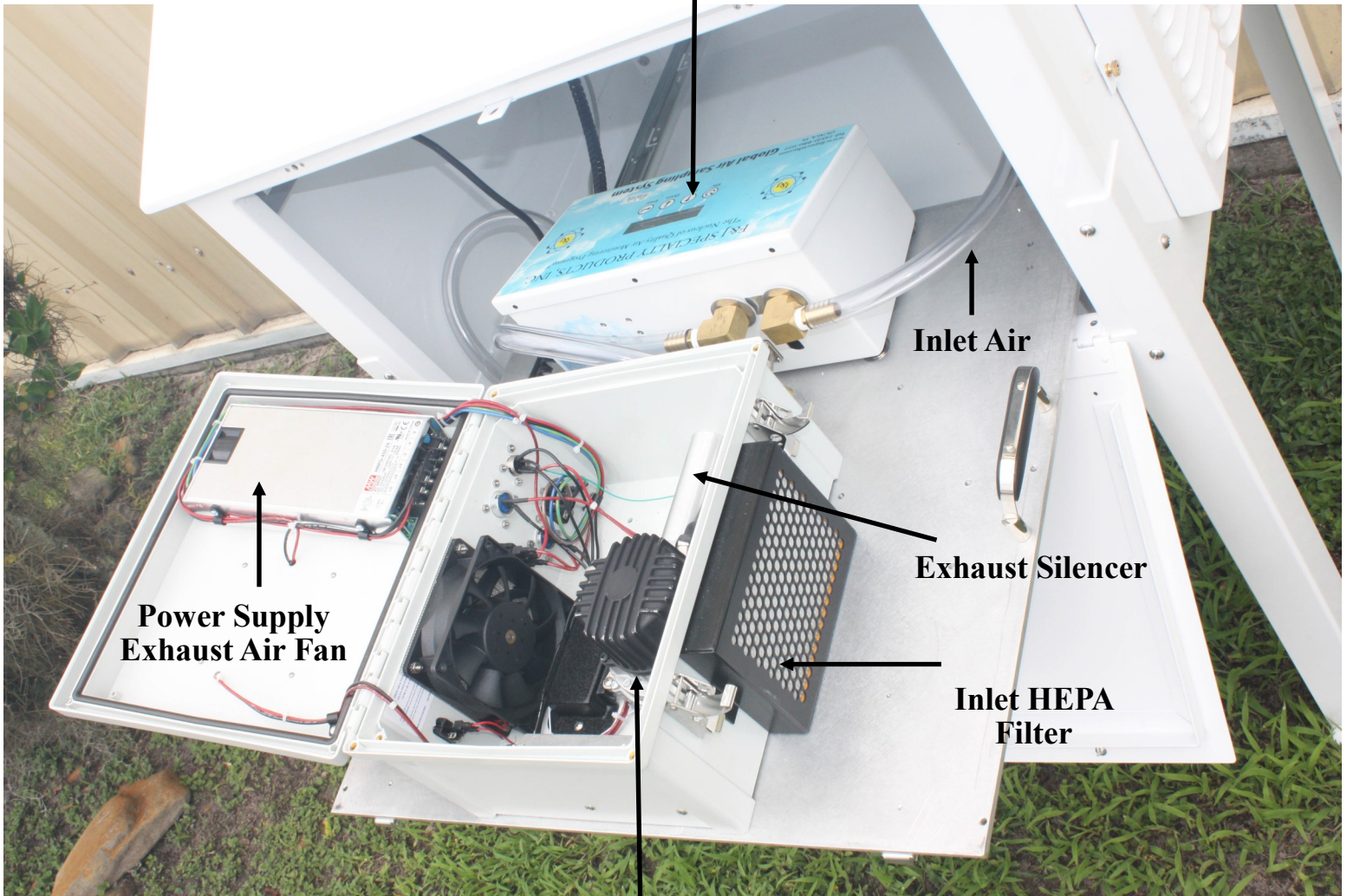
GAS-EDL-110W-REMP Air Sampler Specifications



GAS-EDL-110W-REMP Air Sampler Specifications



Global Air Sampler Flow Management System Electronic Module



Inlet Air

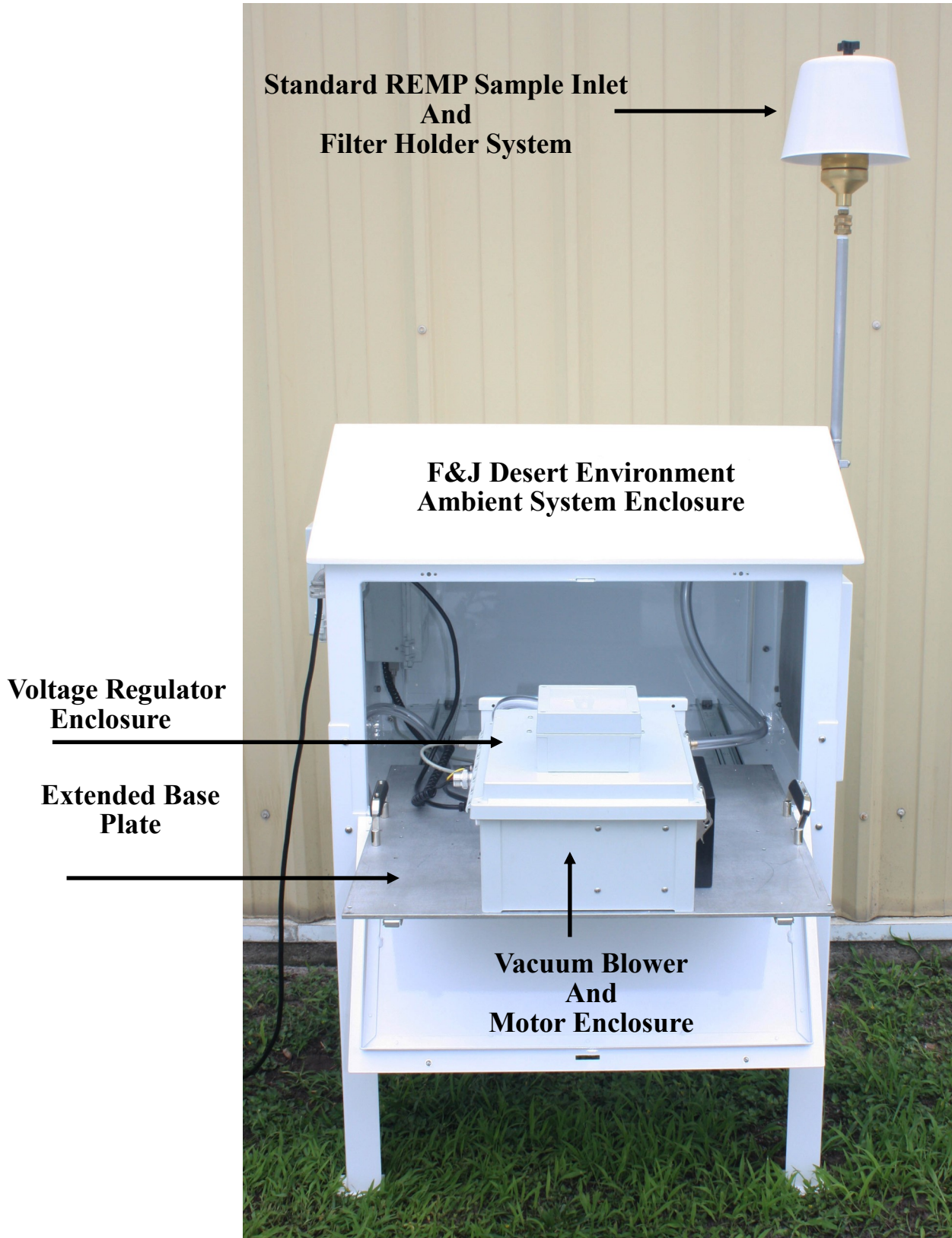
Power Supply
Exhaust Air Fan

Exhaust Silencer

Inlet HEPA
Filter

Vacuum Pump
Motor

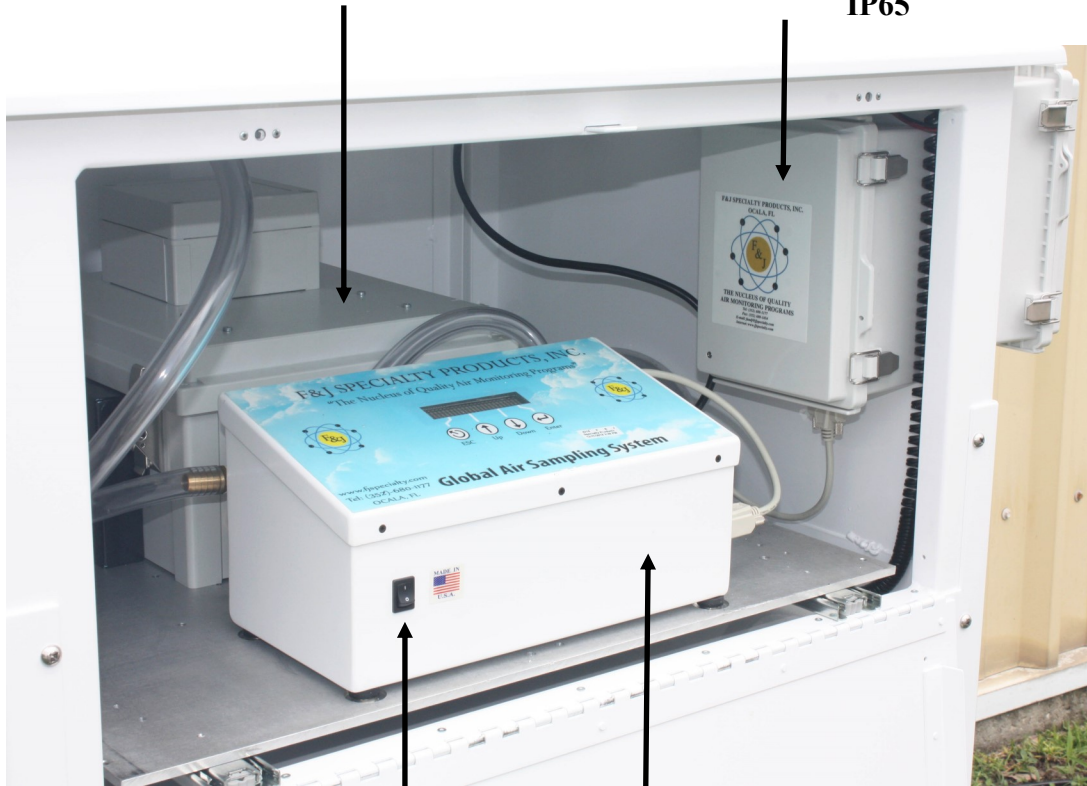
GAS-EDL-110W-REMP Air Sampler Specifications



GAS-EDL-110W-REMP Air Sampler Specifications

**Vacuum Pump and Motor
Protective Housing**

**Data Concentrator
Protective Enclosure
IP65**

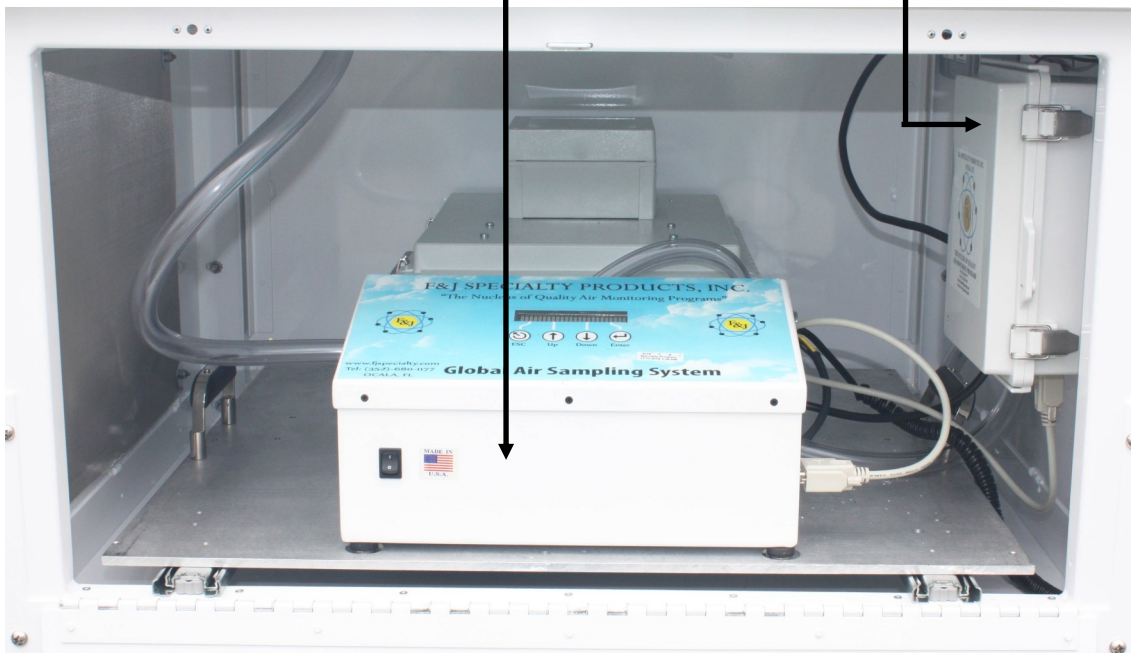


**GAS Flow Management System
on-off Switch**

**Global Air Sampler
Flow Management System
Electronic Module**

**Global Air Sampler
Flow Management System
Electronic Module**

**Data Concentrator
Protective Enclosure
IP65**

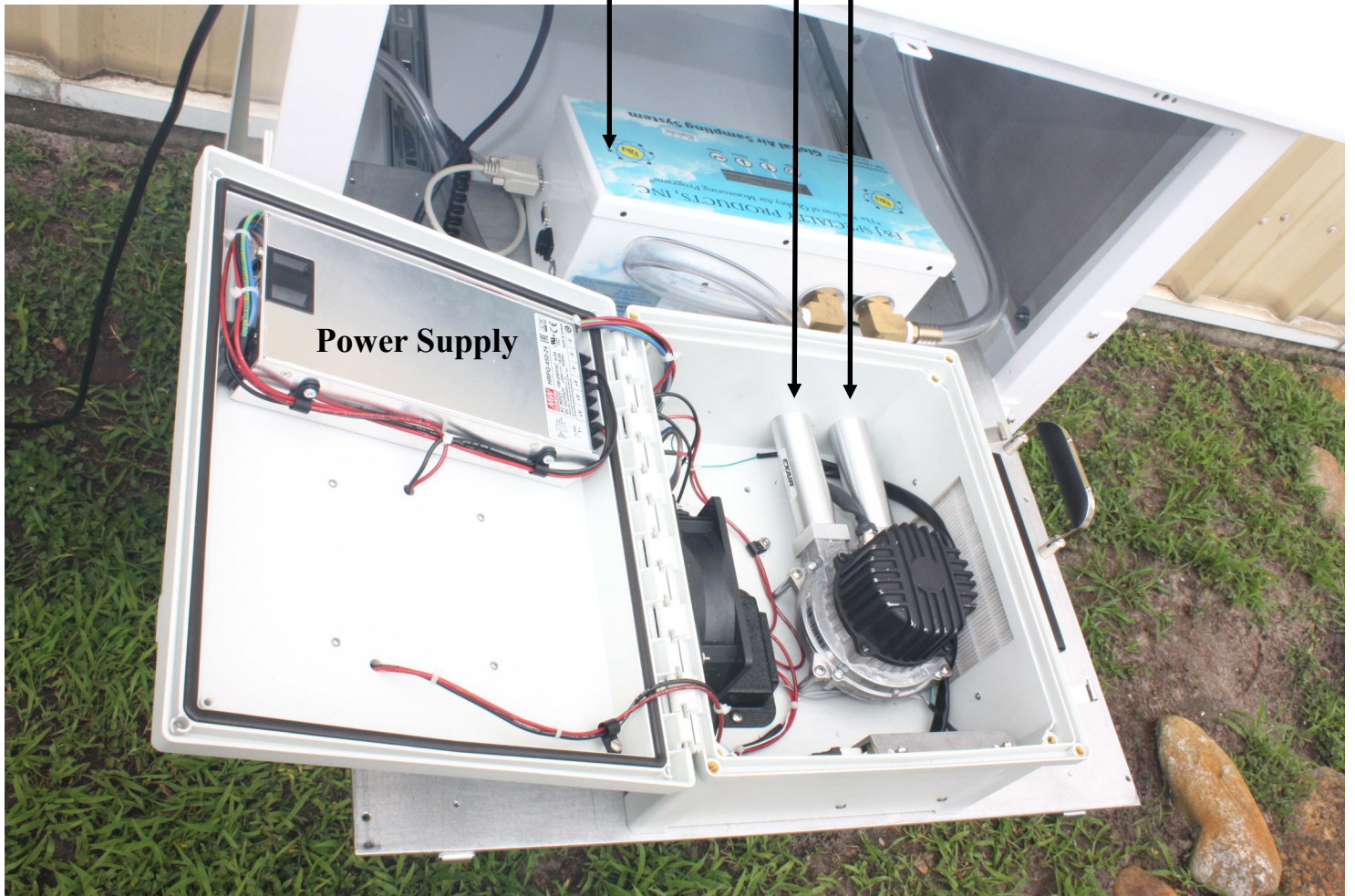


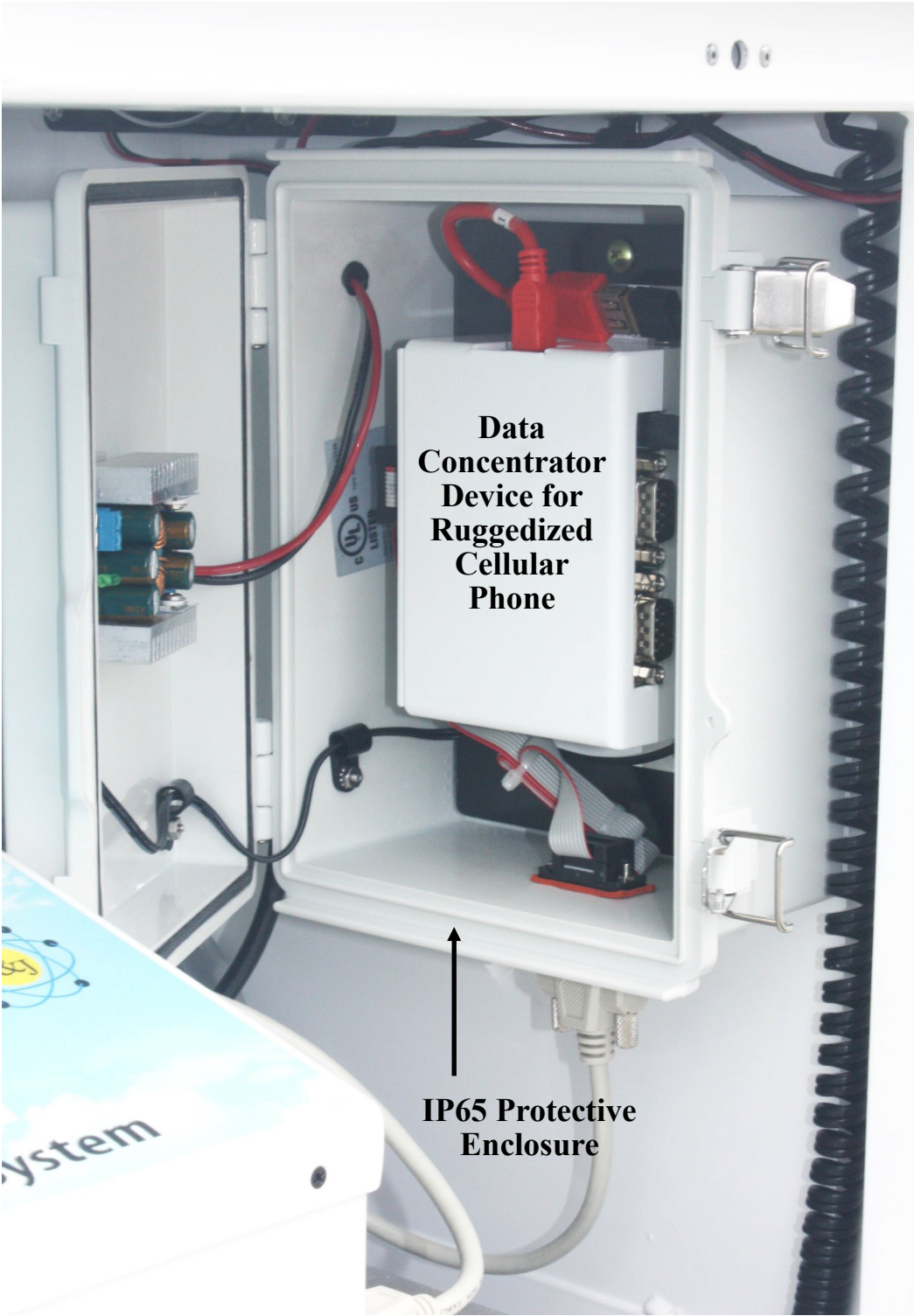
GAS-EDL-110W-REMP Air Sampler Specifications

**Global Air Sampler
Flow Management System
Electronic Module**

Air Exhaust

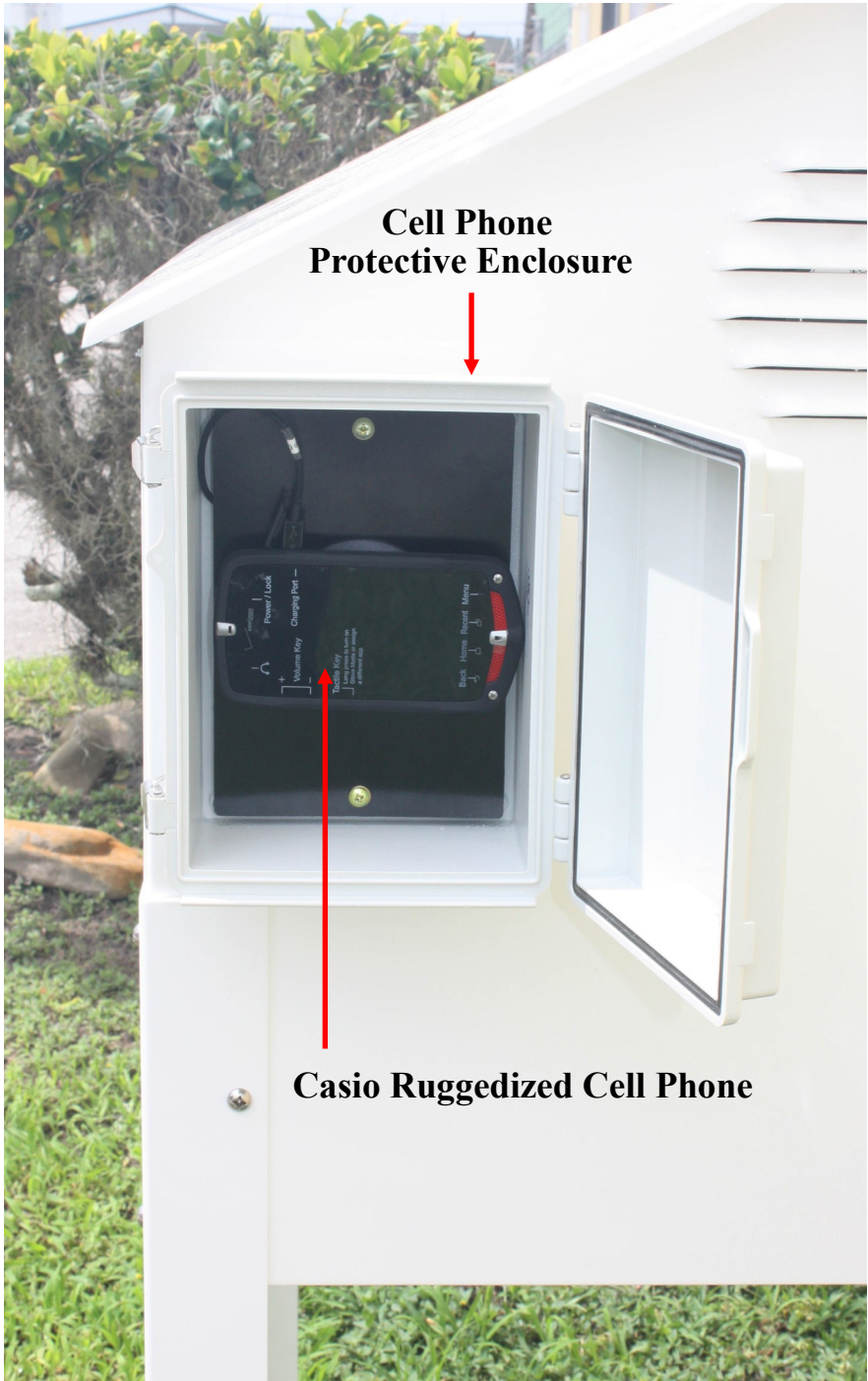
Air Intake





**Data
Concentrator
Device for
Ruggedized
Cellular
Phone**

**IP65 Protective
Enclosure**



**Cell Phone
Protective Enclosure**

Casio Ruggedized Cell Phone

GAS-EDL-110W-REMP Air Sampler Specifications

