

NEW!



Airstream Class II Type A2  
Biosafety Cabinet, Model AC2-459-NS

# Airstream®

**Class II Type A2 Biological Safety Cabinets**  
The Leading Energy Efficient, Quiet, and Ergonomic  
Biosafety Cabinet



### RS 232 SERIAL INTERFACE PORT



### RS 232 Serial Interface Port

- Send operational information to Building Management System (BMS)
- Optional zero volt exhaust and alarm contact



Esco AC2  
Airflow: OK  
I: 0.53 m/s  
Socket: DH

15:34  
Sash: OK  
D: 0.38 m/s

Sentinel<sup>™</sup> GOLD

MICROPROCESSOR CONTROL SYSTEM



### Sentinel<sup>™</sup> Gold Microprocessor Controller

- Displays all safety information on one screen
- Centered and angled down for easy reach & viewing
- Selectable Quickstart mode for fast operation

2



### Single-Piece Wall

- Easy to reach service fixture and outlets
- Large radius for easy cleaning



### Single-piece Work Tray

- Recessed to contain spillage
- Sloped perimeter that's easy to wipe



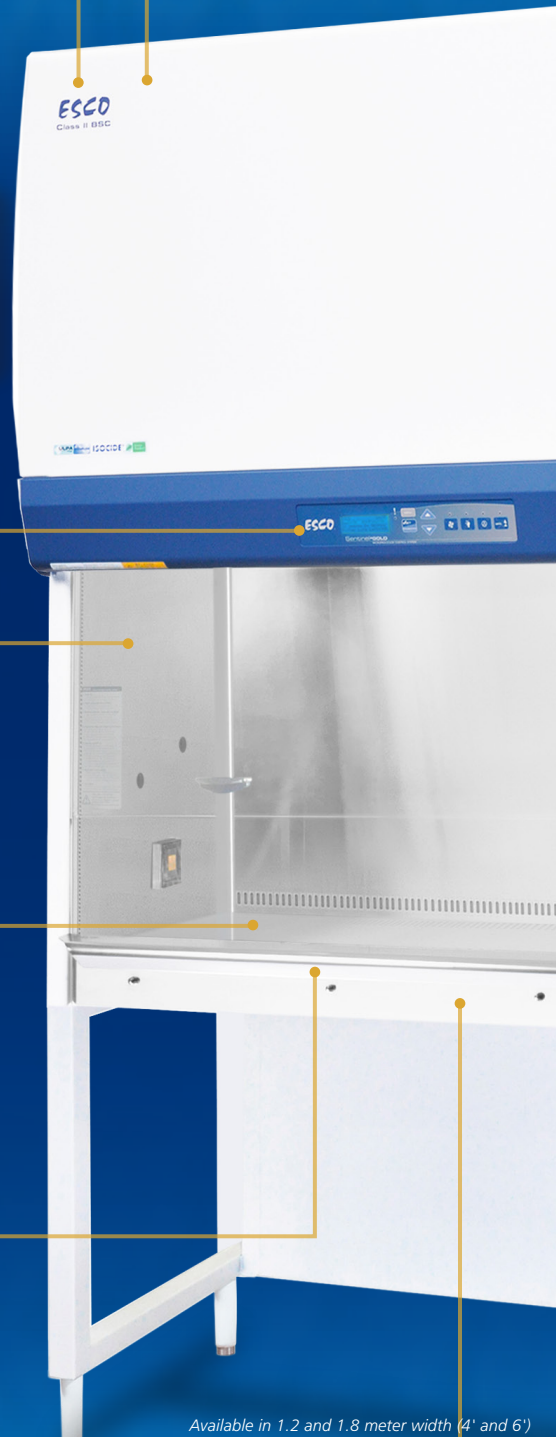
### Raised Arm Rest

- Helps prevent grille blocking
- Comfortable working posture



### Removable Paper Catch

- Easy to clean
- Optional pre-filter can be fitted



Available in 1.2 and 1.8 meter width (4' and 6')

Airstream<sup>®</sup>

Class II Type A2 • Biological Safety Cabinets



NSF 49

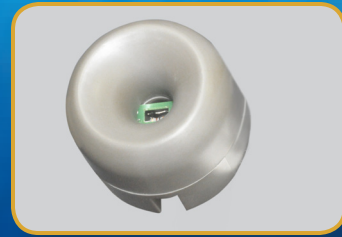


UL 61010



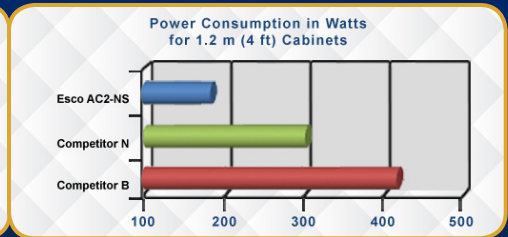
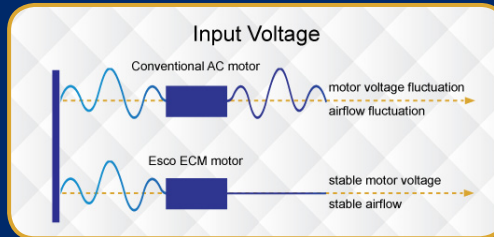
### Airflow Sensor

- Monitors real-time airflow for safety
- Alert the user if airflow is insufficient



### Energy Efficient ECM Motor

- The leading energy efficient Class II Type A2 Biosafety Cabinet in the world with 70% Energy savings compared to AC motor
- Stable airflow, despite building voltage fluctuations & filter loading
- Night Setback mode to further reduce power consumption by 60%

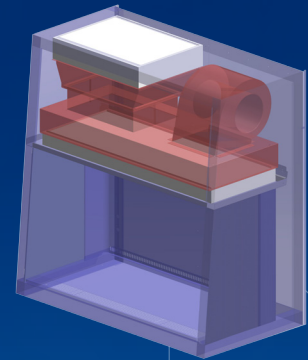


### ULPA Filter

- 10x Filtration efficiency of HEPA filter
- Creates ISO Class 3 work zone instead of industry-standard ISO Class 5

### Dynamic Chamber

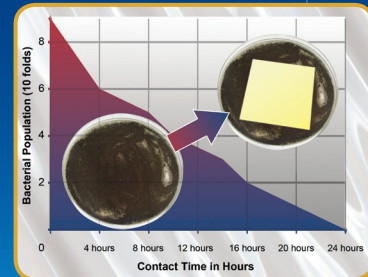
- Blower plenum and side walls are surrounded by negative pressure
- Prevent contaminants from escaping outside



■ Positive pressure  
 ■ Negative pressure

### ISOCIDE™ Powder Coat

- Silver-ion impregnated powder coat
- Inhibit microbial growth to improve safety

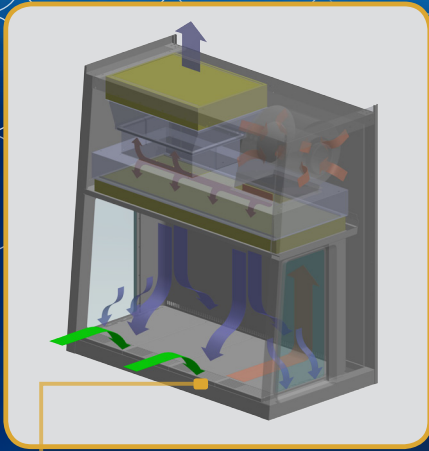


### Certification

Standards Compliance	Biosafety Cabinets	Air Quality	Filtration	Electrical Safety
	NSF / ANSI 49 NSF*	ISO 14644.1, Class 3, Worldwide JIS B9920, Class 3, Japan JIS BS5295, Class 3, Japan US Fed Std 209E, Class 1 USA	EN-1822 (H14), Europe IEST-RP-CC001.3, USA IEST-RP-CC007, USA IEST-RP-CC034.1, USA	UL-61010A-1, USA CSA22.2, No.1010-192, Canada EN-61010-1, Europe IEC61010-1, Worldwide

\* The NSF / ANSI 49 certified models are: AC2-4S8-NS, AC2-4S9-NS, AC2-6S8-NS and AC2-6S9-NS

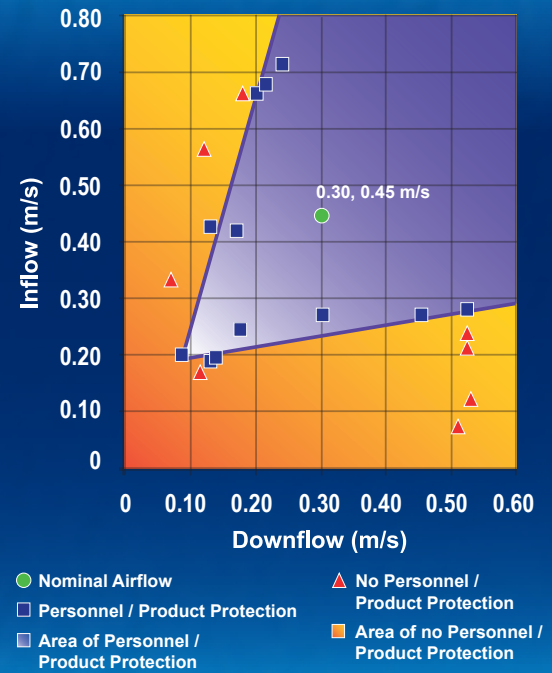
## Cabinet Filtration System



- Dynamic air barrier, where inflow and forward-directed downflow air converge
- ULPA-filtered air
- Unfiltered / potentially contaminated air
- Room air / Inflow air

- Ambient air is pulled through front grille to create inflow, without going into the work surface. Inflow is joined by half of the downflow, to create front air curtain that is fine-tuned to create a large performance envelope. The combined air stream travels through the back air column towards the blower.
- Approximately 1/3 of the air in the common plenum is exhausted through the ULPA filter to the room. The remaining 2/3 of the air is passed through the downflow ULPA filter and into the work area as a vertical laminar flow air to create ISO Class 3 work surface and prevents cross contamination.
- Near the work surface, the downflow splits. About Half goes to the front grille, and half goes to the rear grille. A small portion enters the the side capture zones to prevent dead air corners (small blue arrows).
- The design was optimized to give large performance envelope, that provides operator and product protection at wide Inflow and Downflow variation from the Nominal point.

## Performance Envelope of AC2 G3



## Options and Accesories for AC2 Biological Safety Cabinets

Model	Description
UV	UV lamp, 254nm
EO	Direct Mounted Electrical Outlet. Optional GFCI avai
SPC-_A0	Support Stand with Caster Wheels (Height 28") for sitting position
SPC-_B0	Support Stand with Caster Wheels (Height 34") for standing position
SAL-_A0	Support Stand with Leveling Feet (Height 28") for sitting position
SAL-_B0	Support Stand with Leveling Feet (Height 28") for standing position
STC-_A0	Telescoping Support Stand with Caster Wheels (Adjustable: 28"-34")
STL-_A0	Telescoping Support Stand with Leveling Feet (Adjustable: 28"-34")
SPM-_A1	Motorized Adjustable Support Stand with Caster Wheels (28"-37.8")
VHP	???
SF-X	Service Fixture with 50mm Thread Length for Gas, Vacuum, Nitrogen, Air, Water or Universal
IV-XXXX	IV bar kit, Includes 6 hooks, Max Load 6 Kg (13 lbs), Specify model when ordering, Field installed
FOOT REST	Ergonomic Foot Rest- angled surface, easily adjustable from 75 to 275 mm increment (500 mm wide)
ECO-AC22_C	Thimble Exhaust Collar
TEM-4	TriSafe Exhaust Module, additional HEPA filter fitted in ductwork
ABBV-01	Anti Blowback Valve, automatically shuts exhaust, preventing back flow in the duct
B2-Damper	Air Tight Damper

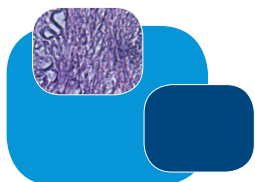
## TECHNICAL SPECIFICATIONS OF AC2-NS

Model	AC2-4S9-NS (115VAC 50/60Hz)	AC2-6S9-NS (115VAC 50/60Hz)	
	AC2-4S8-NS (230VAC 50/60Hz)	AC2-6S8-NS (230VAC 50/60Hz)	
External Dimensions (W x D x H) mm	1340 x 753 x 1400 (52.75" x 29.5" x 54.7")	1950 x 753 x 1400 (76.75" x 29.5" x 54.7")	
Gross Internal Dimensions (W x D x H) mm	1220 x 580 x 660 (48" x 22.75" x 26")	1830 x 580 x 660 (72" x 22.75" x 26")	
Usable Work Area	0.56 m <sup>2</sup> (6.1 ft <sup>2</sup> )	0.86 m <sup>2</sup> (9.2 ft <sup>2</sup> )	
Tested Opening	203 mm (8")		
Working Opening	218 mm (8.5")		
Average Inflow Velocity	0.53 m/s (105 fpm)		
Average Downflow Velocity	0.30 m/s (60 fpm)		
Airflow Volume	Inflow	473 cmh (280 cfm)	709 cmh (417 cfm)
	Downflow	738 cmh (434 cfm)	1107 cmh (652 cfm)
	Exhaust	473 cmh (280 cfm)	709 cmh (417 cfm)
	Required Exhaust With Optional Thimble Exhaust Collar	736 cmh (433 cfm)	1124 cmh (662 cfm)
	Static Pressure For Optional Thimble Exhaust Collar	45 Pa / 0.18 in H <sub>2</sub> O	65 Pa / 0.26 in H <sub>2</sub> O
ULPA Filter Typical Efficiency	>99.999% at 0.1 to 0.3 micron, ULPA as per IEST-RP-CC001.3 USA >99.999% at MPPS, H14 as per EN 1822 EU		
Sound Emission per NSF / ANSI 49*	57.5 dBA	60.5 dBA	
Fluorescent Lamp Intensity (lux)	1700 lux (158 foot candles)	1647 lux (153 foot candles)	
Cabinet Construction	Main body	1.2 mm (0.08") / 18 gauge EG Steel With Isocide Oven-Baked Epoxy-Polyester Powder Coating	
	Work Zone	1.5 mm (0.06") / 16 gauge, SS 304, 4B finish	
	Side Walls	1.5 mm (0.06") / 16 gauge, SS 304, 4B finish	
Electrical	Cabinet Full Load Amps (FLA)	11	15
	Heat Load (BTU / Hr)	628	1003
Nominal Power Consumption	200 W	294 W	
Net Weight **	230 Kg (507 lbs)	346 Kg (763 lbs)	
Shipping Weight **	285 Kg (628 lbs)	428 Kg (944 lbs)	
Shipping Dimensions, Maximum (W x D x H)**	1450 x 820 x 1760 mm (57" x 32" x 69")	2050 x 820 x 1760 mm (57" x 32" x 69")	
Shipping Volume, Maximum **	2.09 m <sup>3</sup> (74 ft <sup>3</sup> )	2.96 m <sup>3</sup> (105 ft <sup>3</sup> )	

Specifications are subject to change without notice.

\* Noise reading in open field condition / anechoic chamber. Noise reading in normal room varies by room size, layout, and background noise, but may reach roughly 3-4 dBA above these values.

\*\* Cabinet only, excludes optional stand.



- ART Equipment
- Biological Safety Cabinets
- CO<sub>2</sub> Incubators
- Cold Storage
- Compounding Pharmacy Equipment
- Containment / Pharma Products
- Ductless Fume Hoods
- Lab Animal Research Products
- Laboratory Fume Hoods
- Laboratory Incubators
- Laboratory Ovens
- Laminar Flow Cabinets
- Laboratory Freeze Dryers
- PCR Cabinets
- PCR Thermal Cyclers
- Powder Weighing Balance Enclosures

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# ESCO

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