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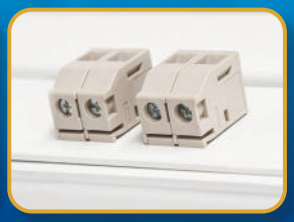
Airstream® G4

Class II Type A2 Biological Safety Cabinets

The Leading Energy-efficient, Quiet,
and Ergonomic Biosafety Cabinet in the World



USB Port and Zero Volt Relay Contact

- USB Port to send operational information to Building Management System (BMS)
- Zero Volt Relay Contact to turn ON/OFF exhaust blower and signal the building alarm

Centurion Touchscreen Controller

- 7" capacitive touchscreen, intuitive to use like phones
- Displays key safety information graphically on one screen
- Built-in guide to use the cabinet and respond to situations
- Centered and angled down for easy reach & viewing
- Datalogger to assist diagnostics and send info to BMS

One-Piece Interior Wall

- Double layer side walls with negative pressure
- Easy to reach service fixture and outlets
- Large radius corner for easy cleaning

Unique Stainless Steel and Glass Hybrid Wall (E-Series)

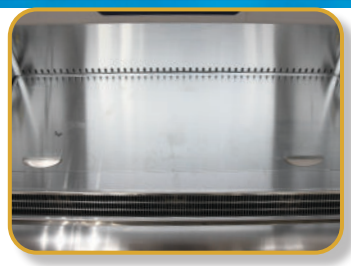
- Large corner radius for easy cleaning
- Easy to reach service fixture and outlets
- Stainless steel side wall is available (S-Series)
- Hole-free side glass for increased safety

Removable Paper Catch

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

Raised Ergonomic Arm Rest

- Helps prevent grille blocking
- Comfortable working posture



Dished Work Tray

- Contains spillage
- Angled edge for easy cleaning
- V-shaped grille to prevent blocking
- Work tray holder for drain pan cleaning

NSF/ ANSI 49

UL 61010

CABINET, FEATURING ADVANCED TOUCHSCREEN CONTROLLER

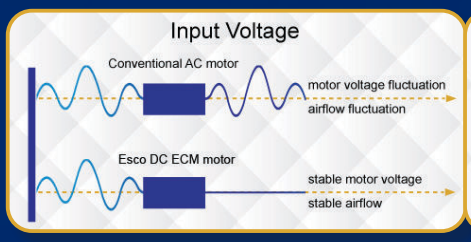
Available in 0.9, 1.2, 1.5, and 1.8 meter width (3', 4', 5', and 6')

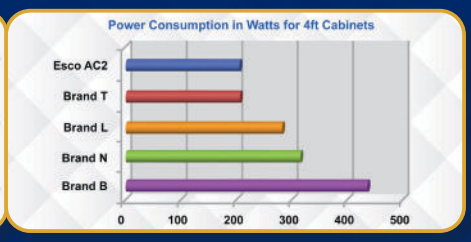
Airflow Sensor

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

Energy-efficient DC ECM Blower

- 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 and filter loading
- Standby mode to further reduce power consumption by 60%



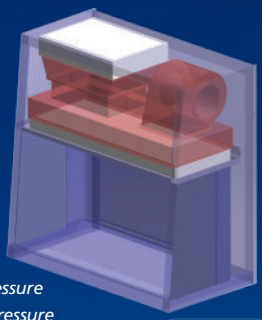


ULPA Filter

- 10x Filtration efficiency of HEPA filter
- Creates ISO Class 3 work zone instead of industry-standard ISO Class 5
- Same 10 years filter life and replacement cost as HEPA filters

Dynamic Chamber™

- Blower plenum and side walls are surrounded by negative pressure
- Prevents contaminants from escaping outside
- Steel plenum with Isocide™ coating, instead of flexible bag plenum, to prevent contamination leak



Positive pressure
Negative pressure

User Modified Pass-Through / Cable Port

- 3" Port with ¼" hole on rubber membrane inside
- NSF-approved. Surrounded by negative pressure
- Allows cables and tubes to exit with fully closed sash

Angled Sash

- 10° angled front to optimize user comfort, reduce glare and maximize reach into the work area

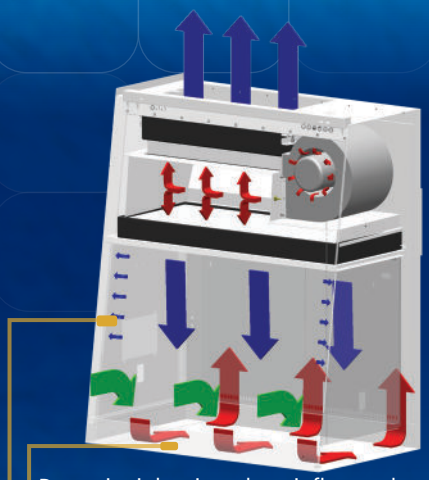
ISOCIDE™ Powder Coat

- Silver-ion impregnated powder coat
- Inhibits microbial growth to improve safety
- Prevents the plenum from becoming biohazard landfill

Standards Compliance and Certifications

Biosafety Cabinets	Air Quality	Filtration	Electrical Safety
NSF / ANSI 49	ISO 14644.1, Class 3, Worldwide, US Fed Std 209E, Class 1 USA JIS B9920, Class 3, Japan BS 5295, Class 3, UK	EN-1822 (H14), Europe IEST-RP-CC001, USA	UL 61010-1 3rd Ed, USA CSA22.2, No.1010-192, Canada IEC61010-1, Worldwide

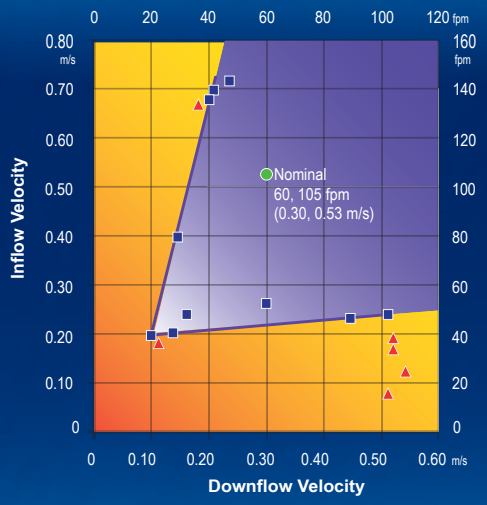
ESCO SCIENTIFIC



Cabinet Filtration System

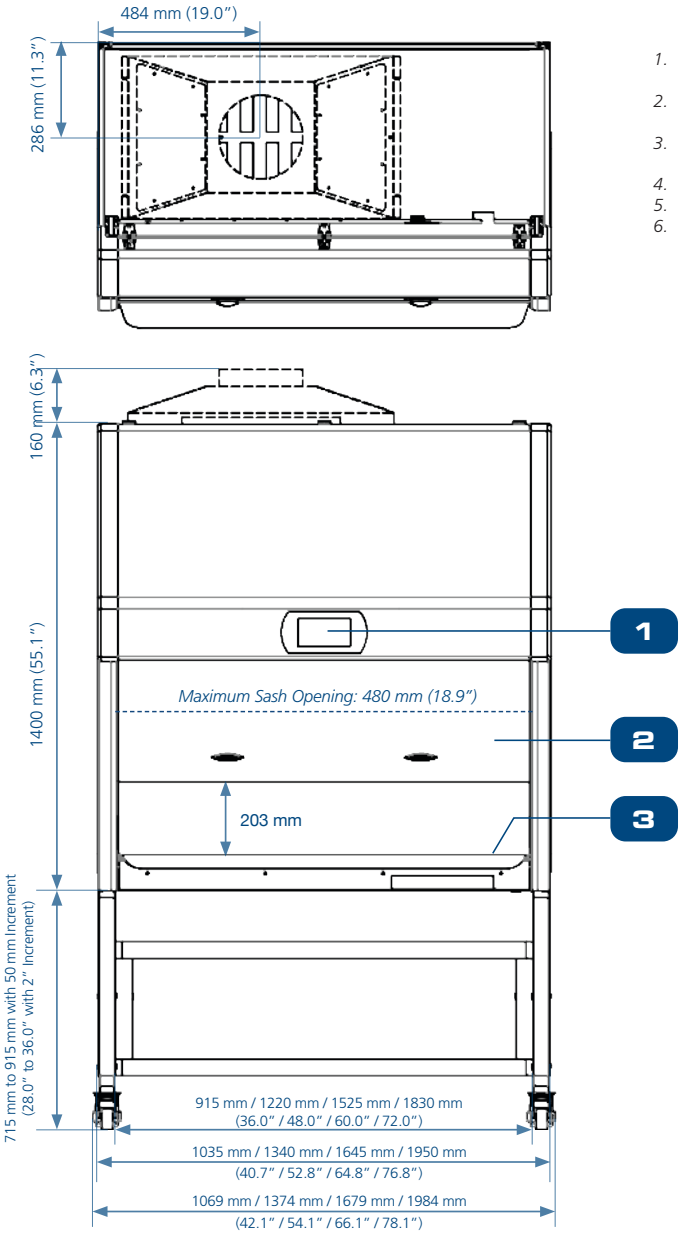
- Ambient air is pulled through front grille to create inflow, without going into the work surface. Inflow is joined by half of the downflow, to create front air curtain that is fine-tuned to create a large performance envelope. The combined air stream travels through the back air column towards the blower.
- Approximately ⅓ of the air in the common plenum is exhausted through the ULPA filter to the room. The remaining ⅔ 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.

The Performance Envelope Concept

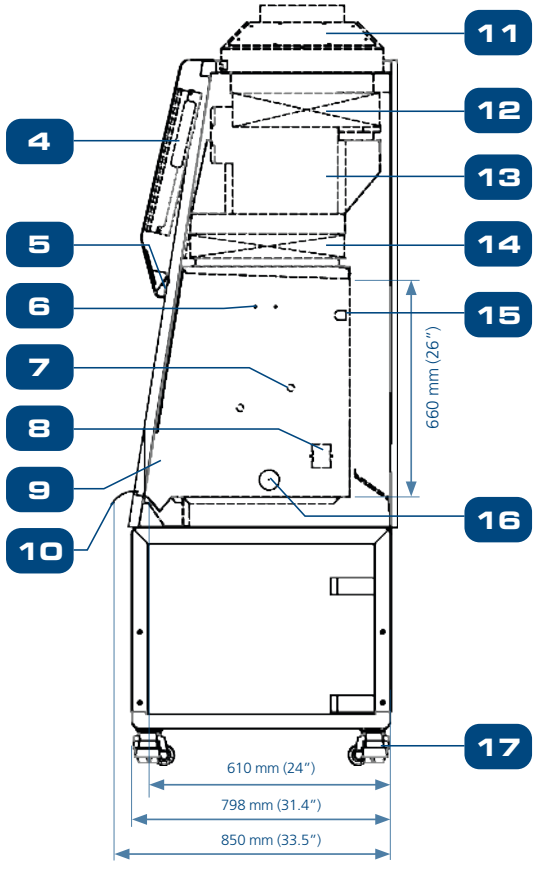


- Nominal Airflow
- Personnel / Product Protection
- Area of Personnel and Product Protection
- NO Personnel / Product Protection
- Area of NO Personnel and Product Protection

Engineering Drawing



1. *Esco 7" Touchscreen Control System*
2. *Tempered Glass - Sliding Sash Window*
3. *Stainless Steel Dished Work Tray*
4. *Electrical/Electronic Panel*
5. *Dimmable LED lamp*
6. *Provision for IV Bar (Optional)*
7. *Service Fixture Retrofit Kit Provision*
8. *Electrical Outlet (Max. 5 Amp Total)*
9. *Stainless Steel Side Wall*
10. *Stainless Steel Curved Armrest*
11. *Exhaust Collar (Optional)*
12. *Exhaust ULPA (H14) Filter*
13. *ECM Blower*
14. *Downflow ULPA (H14) Filter*
15. *UV Lamp*
16. *Cable Port*
17. *Caster wheel – Leveling Feet Combo*



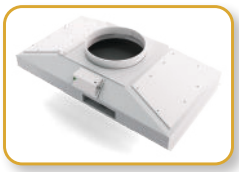
TECHNICAL SPECIFICATIONS

S-Series *Stainless steel side walls*	**110-130 VAC, 50/60 Hz**	**AC2-3S9-NS G4 2011429**	**AC2-4S9-NS G4 2011403**	**AC2-5S9-NS G4 2011431**	**AC2-6S9-NS G4 2011433**
	220-240 VAC, 50/60 Hz	**AC2-3S8-NS G4 2011428**	**AC2-4S8-NS G4 2011404**	**AC2-5S8-NS G4 2011430**	**AC2-6S8-NS G4 2011432**
E-Series *Tempered glass side walls*	**110-130 VAC, 50/60 Hz**	**AC2-3E9-NS G4 2011421**	**AC2-4E9-NS G4 2011423**	**AC2-5E9-NS G4 2011425**	**AC2-6E9-NS G4 2011427**
	220-240 VAC, 50/60 Hz	**AC2-3E8-NS G4 2011420**	**AC2-4E8-NS G4 2011422**	**AC2-5E8-NS G4 2011424**	**AC2-6E8-NS G4 2011426**
Nominal Size		0.9 meter (3')	1.2 meter (4')	1.5 meter (5')	1.8 meter (6')
External Dimensions (W x D x H)		1035 x 850 x 1400 mm (40.7" x 33.5" x 55.1")	1340 x 850 x 1400 mm (52.8" x 33.5" x 55.1")	1645 x 850 x 1400 mm (64.8" x 33.5" x 55.1")	1950 x 850 x 1400 mm (76.8" x 33.5" x 55.1")
Gross Internal Dimensions (W x D x H)		915 x 610 x 660 mm (36.0" x 24.0" x 26.0")	1220 x 610 x 660 mm (48.0" x 24.0" x 26.0")	1525 x 610 x 660 mm (60.0" x 24.0" x 26.0")	1830 x 610 x 660 mm (72.0" x 24.0" x 26.0")
Usable Work Area		0.45 m^2 (4.9 ft^2)	0.6 m^2 (6.5 ft^2)	0.75 m^2 (8.2 ft^2)	0.9 m^2 (9.8 ft^2)
Tested Opening		203 mm (8")			
Maximum Opening		480 mm (18.9")			
Average Inflow Velocity		0.53 m/s (105 fpm)			
Average Downflow Velocity		0.30 m/s (60 fpm)			
Airflow Volume	Inflow / Exhaust Without Ducting	356 cm (210 cfm)	473 cmh (280 cfm)	593 cmh (350 cfm)	709 cmh (417 cfm)
	Downflow	566 cmh (333 cfm)	751 cmh (442 cfm)	942 cmh (554 cfm)	1127 cmh (663 cfm)
	Additional Required Exhaust with Optional Thimble Exhaust Collar	34 cmh (20 cfm)	53 cmh (32 cfm)	34 cmh (20 cfm)	71 cmh (42 cfm)
	Static Pressure For Optional Thimble Exhaust Collar	15-25 Pa (0.06-0.10 in H_2O)	25-35 Pa (0.10-0.14 in H_2O)	25-35 Pa (0.10-0.14 in H_2O)	45-55 Pa (0.18-0.22 in H_2O)
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*		55.8 dBA	59.5 dBA	59.8 dBA	62.8 dBA
Fluorescent Lamp Intensity		117 foot candles (1260 lux)	122 foot candles (1313 lux)	113 foot candles (1216 lux)	114 foot candles (1227 lux)
Cabinet Construction	Main Body	1.2 mm (0.05") / 18 gauge EG steel with Isocide™ oven-baked epoxy-polyester anti-microbial powder coating			
	Work Zone	1.5 mm (0.06") / 16 gauge, stainless steel 304, 4B finish			
	Side Walls	S-Series: 1.5 mm (0.06") / 16 gauge, stainless steel 304, 4B finish E-Series: UV-absorbing tempered glass, 5 mm (0.2"), colorless and transparent			
Electrical 110-130 VAC, 50/60 Hz	Nominal Power Consumption (W)	132	197	258	345
	Heat Load (BTU / Hr)	450	672	880	1177
	Cabinet Full Load Amps (FLA)	15	15	15	15
Electrical 220-240 VAC, 50/60 Hz	Nominal Power Consumption (W)	162	197	274	378
	Heat Load (BTU / Hr)	509	619	861	1187
	Cabinet Full Load Amps (FLA)	10	10	10	10
Net Weight		203 Kg (448 lbs)	245 Kg (540 lbs)	303 Kg (668 lbs)	361 Kg (796 lbs)
Shipping Weight		231 Kg (509 lbs)	300 Kg (661 lbs)	369 Kg (814 lbs)	443 Kg (977 lbs)

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.

Options and Accessories

Exhaust Collar		ECO-F-LA2/AC2-3 G4 5171097	ECO-F-LA2/AC2-4 G4 5171098	ECO-F-LA2/AC2-5 G4 5171099	ECO-F-LA2/AC2-6 G4 5171100
UV Lamp		UV-15A-L 5170251	UV-30A-L 5170255		
IV Bar		IV-955 5170276	IV-1260 5170277	IV-1565 5170278	IV-1870 5170279
Electrical Outlet	Direct Mounted (for -8 models)	EO-H_			
	GFCI	EO-GFCI 5170071			
Service Fixtures	US SF-Universal-20 mm	SF-2U22 5170504			
Support Stand	**Telescoping Stand with Caster Wheels**	STA-3A0 5131340	STA-4A0 5131341	STA-5A0 5131427	STA-6A0 5131389
	Motorized Stand Height with Levelling Feet	SPML-3A2 5131503	SPML-4A2 5131504	SPML-5A2 5131505	SPML-6A2 5131506
	Motorized Stand Height with Levelling Feet and Seismic Bracket		SPML-4A2-SB 5131403	SPML-5A2-SB 5131443	SPML-6A2-SB 5131404
	Motorized Stand Height with Caster Wheels	SPMC-3A2 5130093	SPMC-4A2 5130047	SPMC-5A2 5130100	SPMC-6A2 5131141
	Motorized Stand with Castors Cradle		SLC-4A2 G4 with 12" piston 5131437	SLC-5A2 G4 with 12" piston 5131445	SLC-6A2 G4 with 12" piston 5131438
			SLC-4A2 G4 with 20" piston 5131441	SLC-5A2 G4 with 20" piston 5131447	SLC-6A2 G4 with 20" piston 5131440
Pipette Storage Shelf		5260327			
Arm Rest Padding		MEWREST 5170127			
Foot Rest		FT-REST 5170492			
Laboratory Chair		ME-LD-AR360 1150006			
IQ OQ Protocol		9010179			


ECO-F-LA2-4 G4


UV-_A-L


IV-_


EO-GFCI


SF-2U_


STA-_


SPML-_

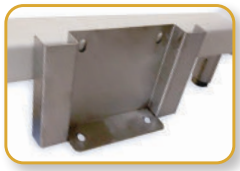

SPMC-_


SLC-_


Pipette Storage Shelf


MEWREST


FT-REST


Seismic Bracket


ME-LD-AR360


IQOQ