ESCO®
LIFESCIENCES

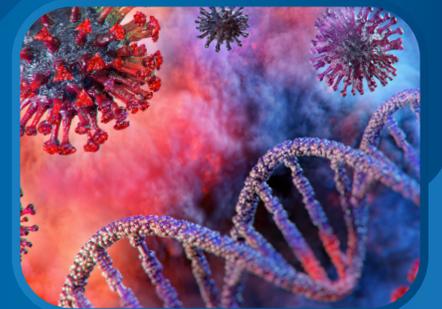**Airstream®**
Class II Type A2 Biosafety Cabinet

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

ESCO	CLASS II A2 AC2	CABINET IS SAFE			
BSC-1	Administrator	Temp: 72°F	2026-214451	10:30 AM	Mar 11 2026

Sash : Safe height
Downflow : 60 fpm
Inflow : 105 fpm

Centurion Touchscreen Controller

- 7" Capacitive Touch Screen, 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
- Optional: 21 CFR Part 11 Compliance

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 (S-Series)and Glass Hybrid (E-Series) Wall

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

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

Available in 3', 4', 5', and 6'

NSF 49   UL 61010

Airstream® NS G4

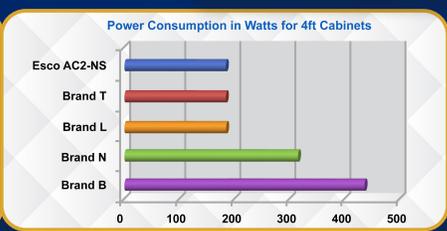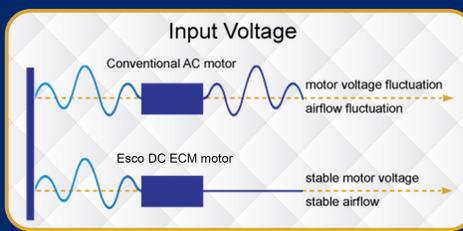Class II Type A2 • **Biological Safety Cabinets**

2

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%

Input Voltage

Conventional AC motor — motor voltage fluctuation / airflow fluctuation

Esco DC ECM motor — stable motor voltage / stable airflow

Power Consumption in Watts for 4ft Cabinets

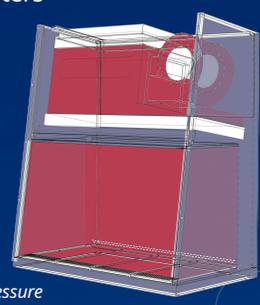|	
Esco AC2-NS	
Brand T	
Brand L	
Brand N	
Brand B	

0   100   200   300   400   500

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 the internal silicone membrane
- NSF-approved and 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

Airstream®
Class II Type A2 Biosafety Cabinet

SILVER IONS PENETRATE THE BACTERIUM

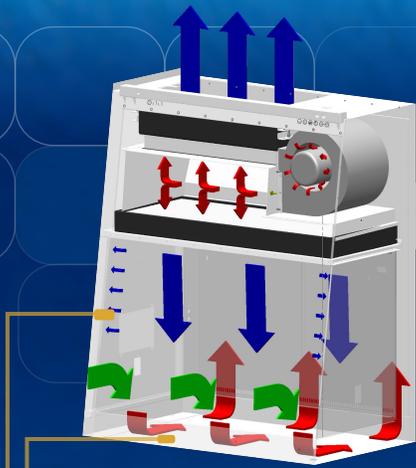DESTRUCTION OF THE BACTERIUM

BACTERIA

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

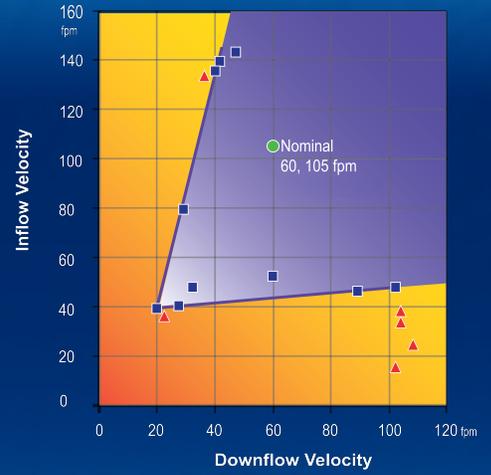| Performance	Air Quality	Filtration	Electrical Safety	Electromagnetic Compatibility (EMC)
NSF / ANSI 49	ISO 14644.1, Class 3, Worldwide, US Fed Std 209E, Class 1 USA, JIS B9920, Class 3, Japan	EN-1822 (H14), Europe, IEST-RP-CC001, USA	UL 61010-1 3rd Ed, USA, CSA22.2, No.1010-192, Canada, IEC61010-1, Worldwide	EN IEC 61326-1 Group 1 / Class A

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).
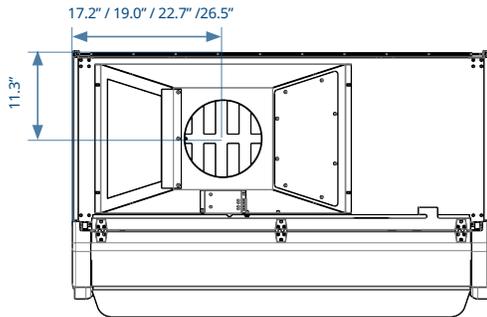
The design was optimized to give large performance envelope, that provides operator and product protection at wide Inflow and Downflow variation from the Nominal point.

- Dynamic air barrier, where inflow and downflow converge
- Side capture zones

- ◼ ULPA-filtered air
- ◼ Unfiltered / potentially contaminated air
- ◼ Room air / Inflow air
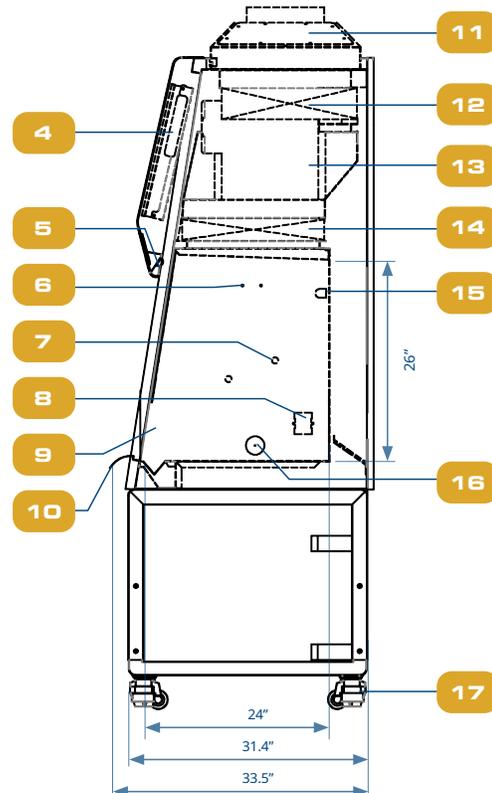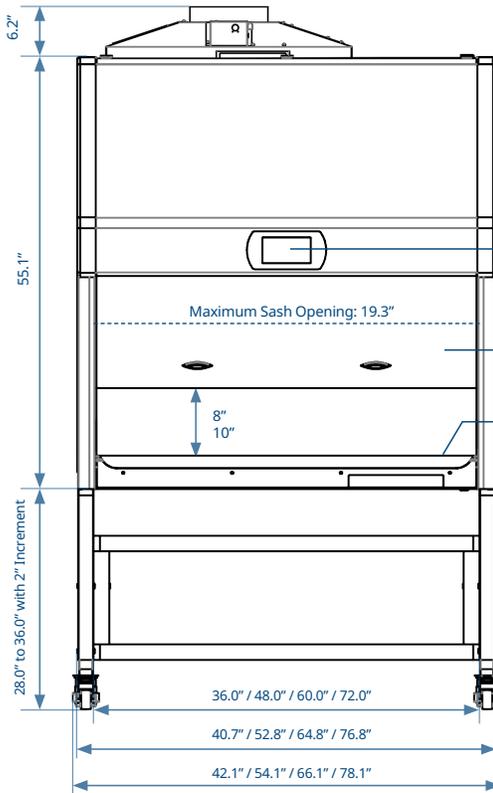
The Performance Envelope Concept

- ● Nominal Airflow
- ◻ Personnel / Product Protection
- ◻ Area of Personnel and Product Protection
- ▲ NO Personnel / Product Protection
- ◼ Area of NO Personnel and Product Protection

Engineering Drawing

17.2" / 19.0" / 22.7" /26.5"
11.3"

1. Centurion 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. DC-ECM Blower
14. Downflow ULPA (H14) Filter
15. UV Lamp
16. Cable Port
17. Caster wheel – Leveling Feet Combo

6.2"
55.1"
Maximum Sash Opening: 19.3"
8"
10"
28.0" to 36.0" with 2" Increment
36.0" / 48.0" / 60.0" / 72.0"
40.7" / 52.8" / 64.8" / 76.8"
42.1" / 54.1" / 66.1" / 78.1"

26"
24"
31.4"
33.5"

Airstream® NS G4

TECHNICAL SPECIFICATIONS

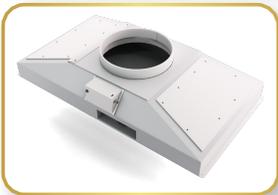| Model			AC2-3S9-NS G4 8" 2011429	AC2-4S9-NS G4 8" 2011403	AC2-5S9-NS G4 8" 2011431	AC2-6S9-NS G4 8" 2011433
	Stainless Steel Side Walls	8" Sash Opening	AC2-3S9-NS G4 8" 2011429	AC2-4S9-NS G4 8" 2011403	AC2-5S9-NS G4 8" 2011431	AC2-6S9-NS G4 8" 2011433
		10" Sash Opening	AC2-3S9-NS G4 10" 2011926	AC2-4S9-NS G4 10" 2011927	AC2-5S9-NS G4 10" 2011928	AC2-6S9-NS G4 10" 2011929
	Glass Hybrid Side Walls	8" Sash Opening	AC2-3E9-NS G4 8" 2011421	AC2-4E9-NS G4 8" 2011423	AC2-5E9-NS G4 8" 2011425	AC2-6E9-NS G4 8" 2011427
Nominal Size			3'	4'	5'	6'
External Dimensions (W x D x H)			40.7" x 33.5" x 55.1"	52.8" x 33.5" x 55.1"	64.8" x 33.5" x 55.1"	76.8" x 33.5" x 55.1"
Gross Internal Dimensions (W x D x H)			36.0" x 24.0" x 26.0"	48.0" x 24.0" x 26.0"	60.0" x 24.0" x 26.0"	72.0" x 24.0" x 26.0"
Usable Work Area (W x D)			35.5" x 19.5"	47.5" x 19.5"	59.5" x 19.5"	71.5" x 19.5"
Working Opening			8" / 10"			
Maximum Opening			19.3"			
Average Inflow Velocity			105 fpm			
Average Downflow Velocity			60 fpm			
Airflow Volume	Inflow / Exhaust Without Ducting	8" Sash Opening	210 cfm	280 cfm	350 cfm	417 cfm
		10" Sash Opening	263 cfm	350 cfm	438 cfm	525 cfm
	Downflow	8" Sash Opening	333 cfm	442 cfm	554 cfm	663 cfm
		10" Sash Opening	333 cfm	442 cfm	554 cfm	663 cfm
	Required Exhaust with Optional Thimble Exhaust Collar	8" Sash Opening	224 cfm	312 cfm	370 cfm	459 cfm
		10" Sash Opening	274 cfm	382 cfm	463 cfm	559 cfm
	Static Pressure For Optional Thimble Exhaust Collar	8" Sash Opening	0.06-0.10 in H_2O	0.10-0.14 in H_2O	0.10-0.14 in H_2O	0.18-0.22 in H_2O
		10" Sash Opening	0.08-0.12 in H_2O	0.12-0.16 in H_2O	0.14-0.18 in H_2O	0.20-0.24 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
LED Lamp Light Intensity			117 ft-cd	122 ft-cd	113 ft-cd	114 ft-cd
Cabinet Construction	Main Body		0.05" / 18 gauge EG Steel with Isocide™ Oven-Baked Epoxy-Polyester Anti-microbial Powder Coating			
	Work Zone		0.06" / 16 gauge, Stainless Steel 304, 4B finish			
	Side Walls	Stainless Steel (S Series)	0.06" / 16 gauge, Stainless Steel 304, 4B finish			
		Glass Hybrid (E Series)	0.25" thickness UV-absorbing Tempered Glass			
	Sash Glass Material		0.25" thickness UV-absorbing Tempered Glass			
Electrical** 110-130 VAC, 50/60 Hz	Nominal Power Consumption (W)	8" Sash Opening	132	180	242	333
		10" Sash Opening	148	184	255	338
	Heat Load (BTU / Hr)	8" Sash Opening	450	614	826	1136
		10" Sash Opening	505	628	870	1153
	Cabinet Full Load Amps (FLA)	8" Sash Opening	15	15	15	15
		10" Sash Opening	15	15	15	15
Net Weight			448 lbs	540 lbs	668 lbs	796 lbs
Shipping Weight			509 lbs	661 lbs	814 lbs	977 lbs
Shipping Dimensions, Maximum (W x D x H)			45.3" x 33.5" x 76.8"	57.1" x 33.5" x 76.8"	69" x 33.5" x 76.8"	80.7" x 33.5" x 76.8"
Shipping Volume			70.6 cu.ft	88.2 cu.ft	105.9 cu.ft	127.1 cu.ft

Disclaimer: Technical Specifications may be subjected to further changes without prior 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.
**Electrical power consumption is an measurement of new unit with clean filter operated within nominal setpoint. Result per unit may vary.

Options and Accessories

		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
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
Exhaust Damper		DAMPER-10 5170104			
UV Lamp		UV-15A-L 5170251	UV-30A-L 5170255		
IV Bar		IV-910 5170499	IV-1215 5170231	IV-1520 5170500	IV-1825 5170501
Electrical Outlet	GFCI	EO-GFCI 5170071			
Service Fixtures	US SF-Universal-20 mm	SF-2U22 5170504			
	Copper Piping for SF	CU-Pipe 5170026			
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 Caster Cradle		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 5170073			
Laboratory Chair		ME-LD-AR360 1150006			
IQOQ Protocol		9010179			

ECO-F-LA2/AC2-4 G4

UV LAMP

IV Bar with 6 Hooks

EO-GFCI

SF-2U

STA

SPML

SPMC

SLC

Pipette Storage Shelf

MEWREST

FT-REST

Seismic Bracket

ME-LD-AR360

IQOQ

Airstream® NS G4

ESCO LIFESCIENCES GROUP

Life Science Tools

Biological Safety Cabinets

Laminar Flow Cabinet

Animal Workstation

CO_2 and Tri-gas Incubators

Chemical Research

Ducted Fume Hoods

Ductless Fume Hoods

Pharma Compounding

cGMP and USP Isolators

Powder Containment Workstations

Medical (IVF)

Multi-room Incubators

Time-Lapse Incubators

IVF Workstations

PCR

PCR Workstations

Bioprocessing

Bioreactors

Pharmaceutical

cGMP and Filling Line Isolators

Air Shower and Pass Boxes

Downflow Booths

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- ◻ R&D Centres
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Esco Technologies, Inc. • 903 Sheehy Drive, Suite F, Horsham, PA 19044, USA
Tel: +1 215-441-9661 • Fax 484-698-7757
eti.admin@escolifesciences.com

Esco Micro Pte. Ltd. • 19 Changi South Street 1 • Singapore 486779
Tel +65 6542 0833 • mail@escolifesciences.com
www.escolifesciences.com