



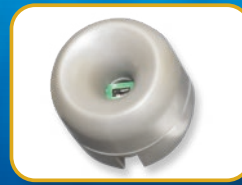
Labculture® G4

Class II Type A2 Biological Safety Cabinets

*The Most Advanced Energy-efficient, Safe,
and Ergonomic Biosafety Cabinet in the World*



LABCULTURE® G4 (LA2 G4) CLASS II TYPE A2 BIOSAFETY



Airflow Sensor

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

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 7" Capacitive Touchscreen Controller

- Displays all safety information on one large screen
- Shows cabinet parameters with intuitive 3D illustration
- Easy to use menu, similar to Smart Phone Apps
- Large buttons, easy to operate when wearing gloves
- Self-guidance to users to deal with specific situations
- Centered and angled down for easy reach and viewing
- Optional: 21 CFR Part 11 Compliance



Single Piece Wall

- Easy to reach service fixtures and electrical outlets on sidewalls
- Large radius corners for easy cleaning



User-friendly Work Tray

- Largest useable area in the market
- Recessed to contain spillage
- Sloped perimeter for easy cleaning
- Large, easy to clean tray handle



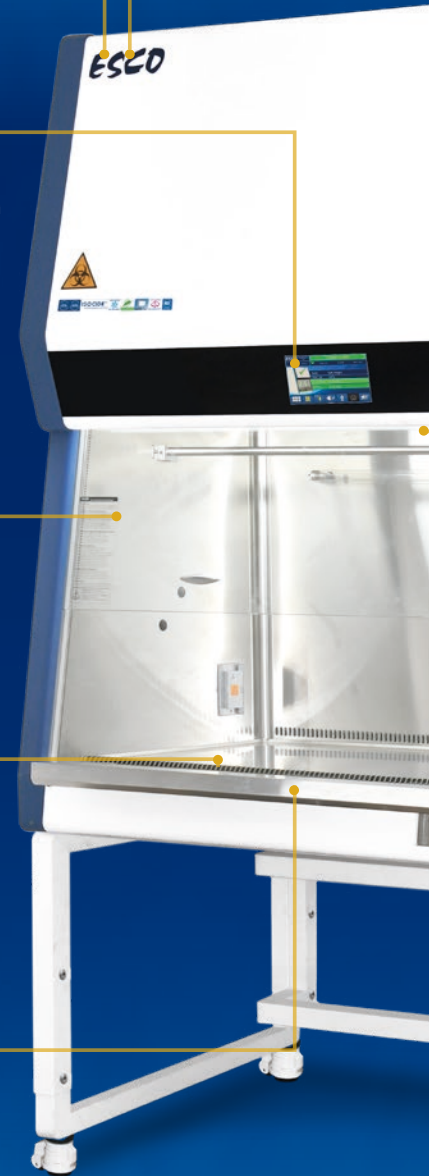
Raised Arm Rest

- Prevent grille blocking
- Comfortable working posture
- Durable stainless steel construction



Ergonomic Work Zone

- 10° angle to optimize user comfort, reduce glare, and maximize reach into the work area
- Brightly illuminated with >1200 lux (111 ft. cd)
- Industry-leading dimmable LED for optimum work comfort
- Airtight seal port for cable/tube exit protected by a negative pressure side wall

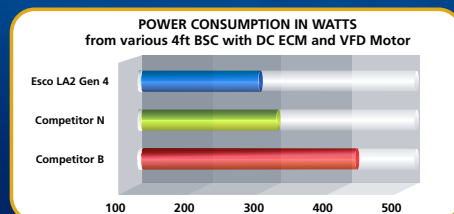
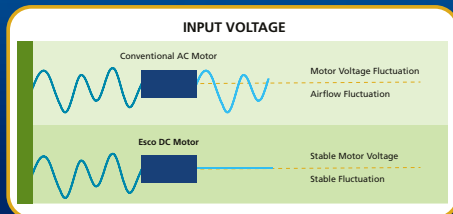


Esco Labculture® G4 Class II Type A2 Biosafety Cabinet
Available in 3 feet, 4 feet, 5 feet, and 6 feet models.

CABINET, FEATURING ADVANCED TOUCHSCREEN CONTROLLER

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 80%



Advanced ULPA Filtration System

- 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



Dimmable LED Lamp

- Save energy and optimize work comfort



Removable Paper Catch

- Prevent objects from being pulled into blower plenum
- Removable for easy cleaning
- Optional pre-filter can be fitted



Tray Support Beams

- Support work tray evenly for less vibration
- Cleaning holder to easily wipe the drain pan



ISOCIDE™ Powder Coat

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

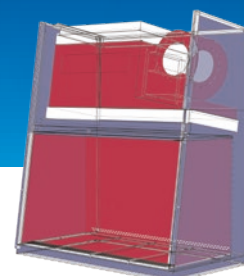
Certification

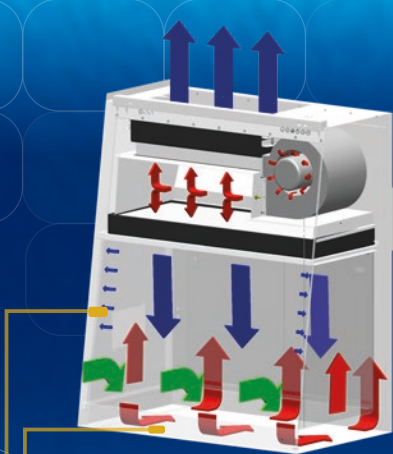
	Performance	Air Quality	Filtration	Electrical Safety
Standards Compliance	NSF / ANSI 49, USA	ISO 14644.1, Class 3, Worldwide, US Fed Std 209E, Class 1 USA JIS B9920, Class 3, Japan	EN-1822 (H14), Europe IEST-RP-CC001, USA	UL 61010-1 3rd Ed, USA CSA22.2, No.1010-192, Canada IEC61010-1, Worldwide

Dynamic Chamber™

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

- Positive Pressure
- Negative Pressure





Cabinet Filtration System

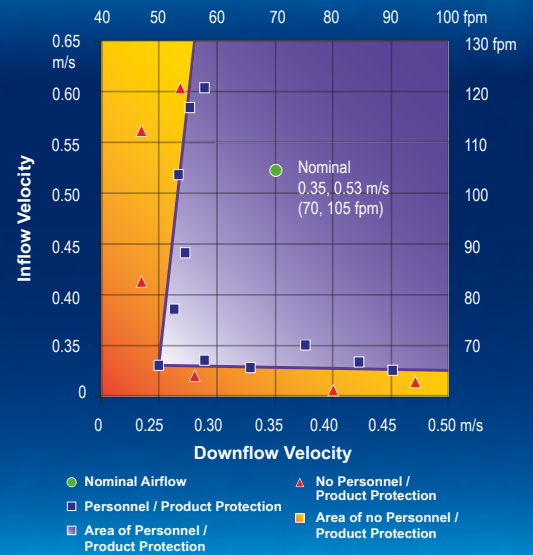
- Ambient air is pulled through front grille to create inflow, without going into the work surface. Inflow is joined by half of the downflow, to create front air curtain that is fine-tuned to create a large performance envelope. The combined air stream travels through the back air column towards the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

Dynamic air barrier, where inflow and downflow converge

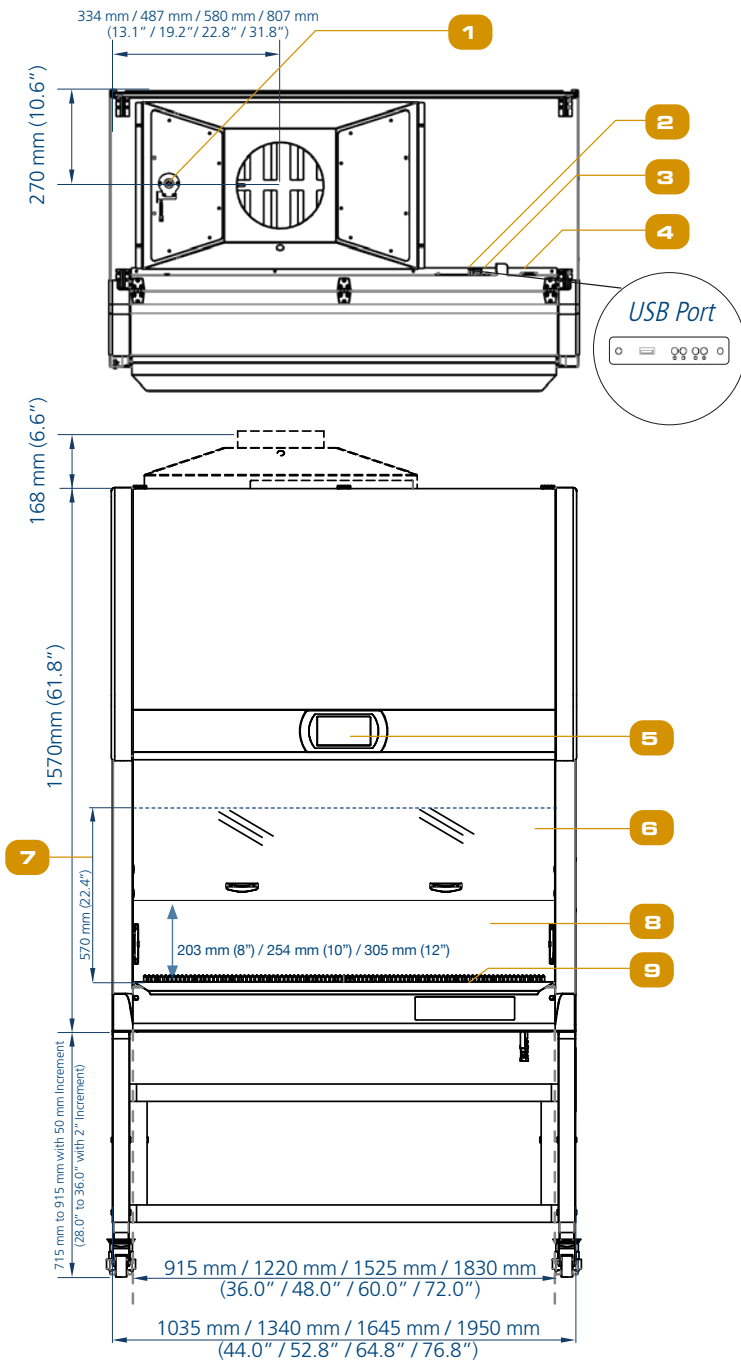
Side capture zones

- ULPA-filtered air
- Unfiltered / potentially contaminated air
- Room air / Inflow air

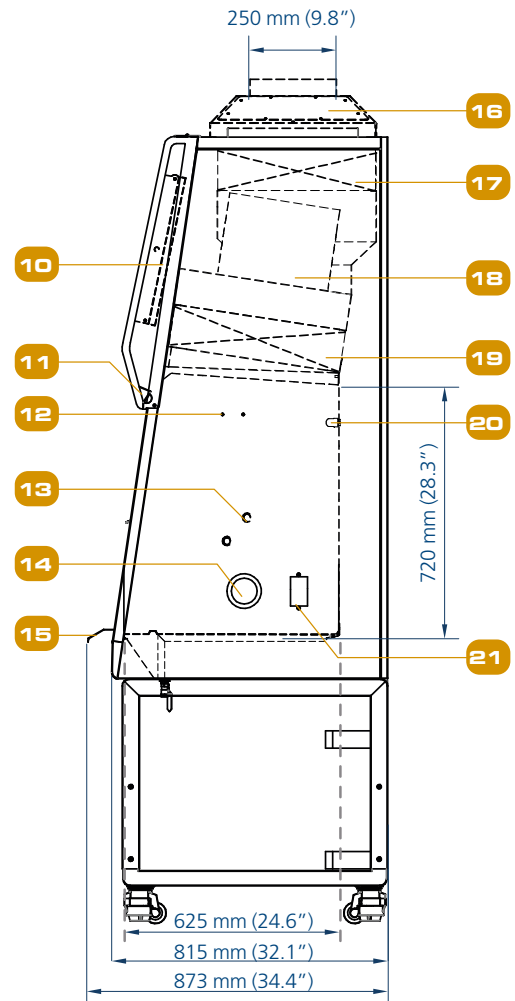
The Performance Envelope Concept



Engineering Drawing



- Exhaust sensor
- USB Port
- Zero Volt Relay Contact
- Power Inlet
- Centurion Touchscreen Controller
- 10° Angled Sash Window
- Max. Sash Opening
- Single-piece Stainless Steel Back Wall
- Single-piece Stainless Steel Work Tray
- Electrical Panel
- LED Lamp
- IV Bar Retrofit Kit Provision
- Service Fixture Retrofit Kit Provision
- Cable Port
- Stainless Steel Arm Rest
- Exhaust Collar (optional)
- Exhaust Filter
- DC ECM Blower
- Downflow Filter
- UV Lamp Provision
- Duplex GFCI Outlet (L/R), Max 5 Amp total



TECHNICAL SPECIFICATIONS (10" SASH OPENING)

Labculture® Class II	Stainless Steel Side Walls	110-130 VAC, 50/60 Hz	LA2-359 G4 10" 2011683	LA2-459 G4 10" 2011685	LA2-559 G4 10" 2011687	LA2-659 G4 10" 2011689
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)	Without Arm Rest		1035 x 815 x 1570 mm (40.7" x 32.1" x 61.8")	1340 x 815 x 1570 mm (52.8" x 32.1" x 61.8")	1645 x 815 x 1570 mm (64.8" x 32.1" x 61.8")	1950 x 815 x 1570 mm (76.8" x 32.1" x 61.8")
	With Arm Rest		1035 x 873 x 1570 mm (44.0" x 34.4" x 61.8")	1340 x 873 x 1570 mm (52.8" x 34.4" x 61.8")	1645 x 873 x 1570 mm (64.8" x 34.4" x 61.8")	1950 x 873 x 1570 mm (76.8" x 34.4" x 61.8")
Internal Dimensions (W x D x H)			915 x 625 x 720 mm (36.0" x 24.6" x 28.3")	1220 x 625 x 720 mm (48.0" x 24.6" x 28.3")	1525 x 625 x 720 mm (60.0" x 24.6" x 28.3")	1830 x 625 x 720 mm (72.0" x 24.6" x 28.3")
Usable Work Area			0.47 m ² (5.0 sq.ft.)	0.62 m ² (6.7 sq.ft.)	0.80 m ² (8.5 sq.ft.)	0.96 m ² (10.3 sq.ft.)
Maximum Sash Opening			570 mm (22.4")			
Average Airflow Velocity	Inflow		105 fpm (0.53 m/s)	105 fpm (0.53 m/s)	105 fpm (0.53 m/s)	105 fpm (0.53 m/s)
	Downflow		65 fpm (0.33 m/s)	60 fpm (0.30 m/s)	65 fpm (0.33 m/s)	60 fpm (0.30 m/s)
Airflow Volume	Inflow		446 m ³ /h (263 cfm)	591 m ³ /h (350 cfm)	741 m ³ /h (438 cfm)	887 m ³ /h (525 cfm)
	Downflow		639 m ³ /h (374 cfm)	848 m ³ /h (499 cfm)	1063 m ³ /h (624 cfm)	1272 m ³ /h (748 cfm)
	Exhaust		446 m ³ /h (263 cfm)	591 m ³ /h (350 cfm)	741 m ³ /h (438 cfm)	887 m ³ /h (525 cfm)
Static Pressure for Optional Thimble Exhaust Collar (Measured 360mm / 14" from the top of exhaust collar)			20-30 Pa	35-45 Pa	25-35 Pa	55-65 Pa
Required Exhaust with Optional Thimble Exhaust Collar			480 m ³ /h (283 cfm)	637 m ³ /h (375 cfm)	770 m ³ /h (453 cfm)	944 m ³ /h (556 cfm)
ULPA Filter Typical Efficiency			≥99.999% for particle size between 0.1 to 0.3 microns			
Sound Emission (dBA)*	NSF / ANSI 49 (Anechoic chamber)		60	59	63	63.3
Light Intensity			> 1200 lux (111 ft. cd)			
Cabinet Construction	Main body	Electro-galvanized steel with white oven-baked epoxy-polyester Isocide™ antimicrobial powder-coated finish, 1.5 mm (0.06") / 16 gauge thick				
	Work Zone	Stainless steel Type 304 with No.4 finish, 1.5 mm (0.06") / 16 gauge thick				
Electrical**	Nominal power		203 W	205 W	380 W	431 W
	Heat Load		693 BTU/hr	699 BTU/Hr	1297 BTU/Hr	1471 BTU/Hr
	Full Load Amps 110-130V exclude 5A EO		10 A		16 A (2 power inlet)	
	Optional Outlets FLA		5A		5A	
Cabinet Construction	Main body	Electro-galvanized steel with white oven-baked epoxy-polyester Isocide™ antimicrobial powder-coated finish, 1.5 mm (0.06") / 16 gauge thick				
	Work Zone	Stainless steel type 304 with no.4 finish, 1.5 mm (0.06") / 16 gauge thick				
Net Weight			243 Kg (536 lbs)	287 Kg (633 lbs)	381 Kg (840 lbs)	400 kg (882 lbs)
Shipping Weight			292 Kg (644 lbs)	350 Kg (772 lbs)	439 Kg (968 lbs)	506 kg (1116 lbs)
Shipping Dimensions, Maximum (W x D x H)			1185 x 890 x 1900 mm (46.7" x 35.0" x 74.8")	1490 x 890 x 1900 mm (58.7" x 35.0" x 74.8")	1795 x 890 x 1900 mm (70.7" x 35.0" x 74.8")	2100 x 890 x 1900 mm (82.7" x 35.0" x 74.8")
Shipping Volume Dimensions (W x D x H)			2.00 m ³ (cu.ft.)	2.5 m ³ (cu.ft.)	3.00 m ³ (cu.ft.)	3.6 m ³ (cu.ft.)

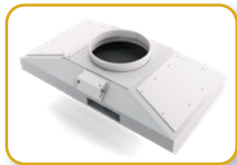
Disclaimer: Technical Specifications may be subjected to further changes without further notice.

*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

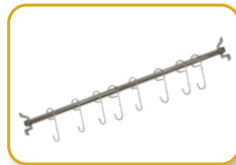
Exhaust Collar		ECO-F-LA2/AC2-3 G4 5171097	ECO-F-LA2/AC2-4 G4 5171098	ECO-F-LA2/AC2-5 G4 5171099	ECO-F-LA2/AC2-6 G4 5171100
UV Lamp		UV-15A-L 5170251	UV-30A-L 5170255		
IV Bar		IV-955 5170276	IV-1260 5170277	IV-1565 5170278	IV-1870 5170279
Electrical Outlet	Direct Mounted	EO-HL			
	GFCI	EO-GFCI 5170071			
Service Fixtures	US SF-Universal-20 mm	SF-2U22 5170504			
Support Stand	Telescoping Stand with Caster Wheels	STA-3 5131340	STA-4 5131341	STA-5 5131427	STA-6 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-_



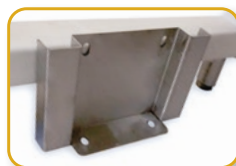
Pipette Storage Shelf



MEWREST



FT-REST



Seismic Bracket



ME-LD-AR360



IQOQ

Life Science Tools



Biological Safety Cabinets



Laminar Flow Cabinet



Animal Workstations



CO₂/O₂ Incubators

Chemical Research



Ducted Fume Hoods



Ductless Fume Hoods



USP 797 / 800
Compliant Isolators



Powder Containment
Workstations

Pharma Compounding

Medical (ART)



Multi-room Incubators



Time-Lapse Incubators



IVF Workstations

PCR



PCR Workstations

Bioprocessing

Pharmaceutical



Bioreactors



cGMP Isolators



Filling Line Isolators



Downflow Booths

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