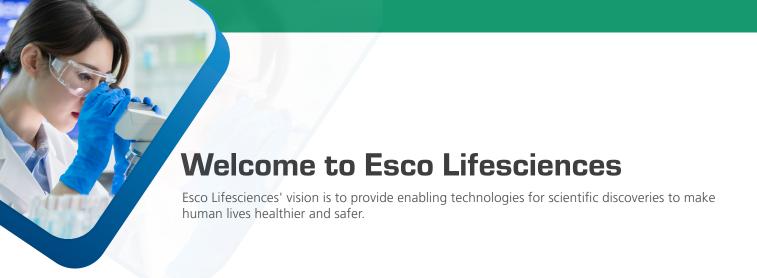


Storage Cabinet

Filtered Storage Solution





Esco Lifesciences is committed to delivering innovative solutions for the clinical, life sciences, research, industrial, laboratory, pharmaceutical, and IVF communities. With the most extensive product line in the industry, Esco has passed a number of international standards and certifications. Esco Lifesciences represents innovation and forward-thinking designs, that are of the highest standard quality since 1978.

Availability and Accessibility. Esco Lifesciences has headquarters in Singapore, Indonesia, and Philippines, with manufacturing facilities located in Asia and Europe. Research and Development (R&D) is conducted worldwide spanning the US, Europe and Asia. Sales, services, and marketing subsidiaries are located in 42 major markets including US, UK, Japan, China and India. Esco regional distribution centers are located in Singapore, Malaysia, Thailand, Vietnam, Myanmar, Indonesia, Philippines, Bangladesh, Hong Kong, Taiwan, South Korea, China, Japan, India, UAE, Central and South Africa, Denmark, Germany, Italy, Lithuania, Russia, United Kingdom, and USA. Because of our worldwide presence, you can be sure that Esco is within your reach.

High Quality, Reliable, and Dependable. Esco Lifesciences products are of high quality, reliable, and dependable. Crossfunctional teams from Esco Production, R&D, Quality Assurance, and Senior Management, are regularly assembled to review and implement areas for improvement.

Esco Lifesciences Cares for Your Safety. Esco Lifesciences focuses on providing safety not just for your samples, but also for you and the environment.

Esco Lifesciences Cares for Your Comfort. Building ergonomic designs and reducing noise levels of the units ensure comfort for our users.

Esco Lifesciences Cares for the Environment. Esco Lifesciences incorporates the latest proven technologically advanced components available. One in every four of Esco's employees is involved in Research and Development and are evaluating new components or designs for better efficiency. Whenever a new technology is available, Esco Lifesciences redesigns technology into our new products that will use lesser energy.

Customer Service and Support. Our service does not stop once purchase has been done. Esco Lifesciences gives on-time customer service such as service training, preventive maintenance, and re-certification, to respond to your equipment needs. Esco Lifesciences also offers free end-user seminars and provides educational materials and informative videos.

As Esco Lifesciences takes the opportunity to respond to the world's needs, we aim not only to contribute to the advancement of scientific discoveries but also in making the world a safer, healthier, and better place to live in.



Products and Applications

Life Sciences Laboratory Equipment

Sample Preparation

- Class I Biological Safety Cabinets
- Class II Biological Safety Cabinets
- Class II Type A2 Biological Safety Cabinets
- Class II Type B1 Biological Safety Cabinets
- Class II Type B2 Biological Safety Cabinets
- Class III Biological Safety Cabinets
- Horizontal Laminar Flow Cabinets
- Vertical Laminar Flow Cabinets
- Laboratory Animal Research Workstations
- Laboratory Centrifuges

Sample Cultivation

- CO₂ Incubators, Direct Heat Air-Jacketed
- CO2 Incubators with Cooling System
- CO₂ Incubators with High Heat Sterilization
- Laboratory Shakers

Amplification and Detection

- Conventional Thermal Cyclers
- Microplate Shakers
- PCR Cabinets

Sample Storage & Sample Protection Solutions

- Laboratory Refrigerators and Freezers
- Ultra-low Temperature Freezers
- Remote Monitoring, Datalogging, and Programming Software
- Wireless Monitoring System

Chemical Research

- Ducted Fume Hoods
- Ductless Fume Hoods
- Filtered Storage Cabinets
- Powder Weighing Balance Enclosure
- Exhaust Blowers
- Fume Hood Airflow Monitor

General Equipment

Laboratory Thermostatic Products

- Forced Convection Laboratory Oven
- Forced Convection Laboratory Incubator
- Natural Convection Laboratory Incubator
- · Refrigerated Laboratory Incubator

Medical / IVF Equipment

Innovative Time-Lapse Imaging

MIRI® TL6 and MIRI® TL12

Embryo Culture

- MIRI® Multiroom Incubator
 MIRI® Humidity Multiroom Incubator
- Mini MIRI® Dry and Humidity Incubator
- CelCulture® CO₂ Incubator
- MIRI® II-12 Multiroom Incubator

Sample Handling

- Esco Multi-Zone ART Workstation
- MIRI® AVT
- Versati™ Tabletop Centrifuge
- Airstream® Laminar Flow Bench

Accurate Quality Control

MIRI® GA Gas and Temperature Validation Unit

Unique Consumables

CultureCoin[®]

Traceability Tool

MIRI® Evidence

Healthcare

Esco Pharma Products

Airflow Containment

- BioBooth®
- Ceiling Laminar Airflow (CLAF)
- Cytoculture® Cytotoxic Safety Cabinet (CYT)
- Pharmacon™ Downflow Booth
- Esco Garment Storage Cabinet
- Esco Glassware Hoods
- Laminar Flow Horizontal/Vertical Trolley (LFH/VT)
- Laminar Flow Straddle Units
- Evidence Drying Cabinet

Isolation Containment

- Advanced Processing Platform Isolator (APPI)
- Aseptic Containment Isolator (ACTI)
- Blood Cell Labelling Isolator
- Streamline® Closed Restricted Access Barrier System (SLC-RABS)
- Containment Barrier Isolator (CBI)
- CBI-Unidirectional (CBI-U)
- CBI-Turbulent (CBI-T)
- CBI-Class III Biosafety Cabinet (CBI-III)
- CBI-Hybrid (CBI-H)
- Isoclean® Healthcare Platform Isolator (HPI) - HPI-G3-Without Filter Below Work Zone
- HPI-G3-With Filter Below Work Zone
- HPI-Inflatable Seal (HPI-IS)
- HPI Inflatable Seal BioVapTM (HPI-IS-BVP)
- General Processing Platform Isolator (GPPI)
- GPPI-Inflatable Seal (GPPI-IS)
- GPPI-Static Seal (GPPI-SS)
- Streamline® Compounding Isolator (SCI)
- Streamline® Containment Isolator Class III (SCI-III)
- Technetium Dispensing Isolator
- Turbulent Flow Aseptic Isolator™ (TFAI™)
- Weighing and Dispensing Containment Isolator (WDCI)

Cross Contamination Facility Integrated Barrier

- BioPass™ Pass Through
- Cleanroom Air Showers
- Dynamic Pass Boxes/ Dynamic Floor Laminar Hatches
- Infinity® Air Shower Pass Box
- Esco Sputum Booth
- Infinity® Pass Boxes Infinity® Cleanroom Transfer Hatch
- Soft Capsule® Soft Wall Cleanroom

Ventilation Containment

• Ventilated Balance Enclosure

Esco VacciXcell Products

Tide Motion Bioreactors

- CelXrocker™ (CXR) • MiniTide®
- CelCradle™ (CC)
- CelCradle X® (CCX)
- TideXcell® (TXL)

Stirred Tank Bioreactors

- BioXcell®
- StirCradle™
- StirCradle™ PRO
- VXL™ Hybrid

Harvesting System

- CelShaker™
- CelCradle X® Semi-automated Harvester System(CCX-SAH)
- TideXcell® Harvester System (TXLHS)

Cell Culture Monitoring, Media and Consumables

- Super Plus™
- Plus™ Vero
- PlusTM MDCK Plus™ MDCK II
- BioNOC™ II macrocarriers • GlucCell™ Glucose Monitoring System
- CVD Kit

Filling Line Equipment

- Traditional Filling Line
- cRABS (Closed Restricted Access Barrier
- oRABS (Open Restricted Access Barrier System)

Integrated Solutions

- Cell Processing Isolator (CPI)
- Cell Processing Center

Esco TaPestle Rx Products and Services Pharmacy Automation and Compounding Supply

- Compounding Pharmacy Isolators (SCI, HPI, CBI, GPPI)
- Safety Cabinets and Enclosures (CYT, Class II BSC, VBE,
- Filling Line Isolators/RABS

Radiopharmacy Equipment

- Blood Cell Labeling Isolator
- Cytoculture® Lead-Shielded Class II Biosafety Cabinet
- Frontier® Radioisotope™ Fume Hood
- GMP-compliant Radioisotope Dispensing Isolator
- Radiopharmacy Hood (Lead Shielded Biological Safety Cabinet)
- · Technetium Dispensing Isolator

Ascent™ **Storage Cabinet**

INTRODUCTION

Fumes from chemical containers often result to the storage cabinet's corrosion and contaminated air in the laboratory Ascent™ storage cabinet is ideal in providing a safe and convenient storage solution. This cabinet is equipped with Nanocarb™ filters that effectively adsorb chemical fumes to provide operator and environment protection.



Designed for Enhanced Usability and Efficiency

The Ascent™ Storage Cabinet is designed specifically to provide the operator with a high level of usability, comfort and visibility.

- Industrial-grade main body constructed of electro-galvanized steel: with an abrasion resistant white oven-baked powder-coated finish.
- Esco Isocide™ antimicrobial surface on all painted surfaces minimizes surface contamination.
- Multiple filter configuration options to suit customer's needs.
- Permanently lubricated direct drive centrifugal fan(s); energy efficient, extremely low noise and vibration levels due to proprietary construction and mounting technology.
- Acrylic Glass doors with alarms to notify if doors are left opened.
- Large tray capacity to accommodate more chemical bottles with different weights.

Enhanced Filtration System

Esco's Nanocarb™ activated carbon filters are constructed in order to ensure maximum filter efficiency, retention capacity and operator protection. Esco's research scientists and engineers, working in consultation with world-leading authorities on adsorption science, have developed the following set of unique technologies:

- Optimized retention capacity.
- Generously sized filters with more activated carbon by weight retain more chemicals and last longer.
- Proprietary computer modelling software to predict application suitability, filter saturation capacity, and efficiency for single and multiple compounds.
- Quick-change out filter clamping mechanism allows filter replacements to be carried out with minimal tools; even filter clamping (perimeter, not point force) prevents leaks from occurring.
- Diffusion technology to ensure even filter loading and better airflow uniformity.
- Can filter most commonly used solvents specially acids and organic solvents

Sentinel™ Microprocessor Control System

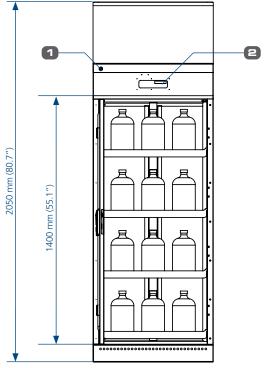
Esco's Sentinel™ microprocessor control system supervises the operation of all cabinet's functions. It is fully configurable and is equipped with enhanced features to promote cabinet usability. It also has a bright, easy to read LCD panel located at the center of the cabinet.

	Guide to Models							
<u>ASC</u> - <u>4A8</u>								
Model	Code	External Width	Code	Filter Configuration	Code	Electrical	Code	
	ASC	27.0" (2ft.)	2	Carbon filter only	Α	230 VAC , 50/60 Hz	8	
		53.9" (4ft.)	4	Carbon Filter + HEPA Filter	В	115 VAC , 50/60 Hz	9	
Ascent™ Storage Cabinet		80.9" (6ft.)	6	Carbon filter + Carbon filter	С			
Cabillet				HEPA filter only	D			
				HEPA Filter + Carbon Filter	E			



Engineering Drawing

1. Sample Port 2. Sentinel™ Control System



3. Electrical panel

4. Front panel

6. Blower

800 mm (31.5") 700 mm (27.6")

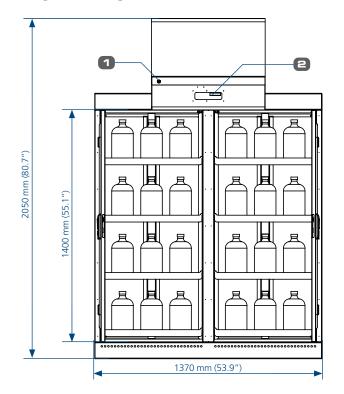
- 5. Secondary Filter (For B, C, and E series only)
- 7. Main Filter

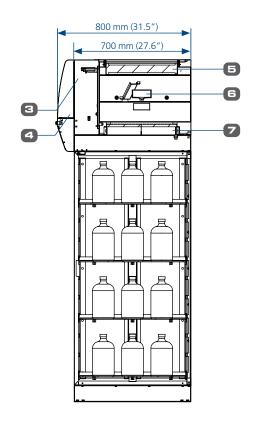
6 6

	General Spe	cifications, Asc	ent™ Storage	Cabinet (2ft. s	series)		
Models	220-240 VAC, 50-60 Hz, 1Ø	ASC-2A8 2040293	ASC-2B8 2040294	ASC-2C8 2040295	ASC-2D8 2040296	ASC-2E8 2040328	
	110-120 VAC, 50-60 Hz, 1Ø	ASC-2A9 2040297	ASC-2B9 2040298	ASC-2C9 2040299	ASC-2D9 2040300	ASC-2E9 2040330	
Nominal Size		0.7 m (2')					
External Dimensions (W x D x H)		685 mm x 700 mm x 2050 mm (27.0" x 27.6" x 80.7")					
Door		Powder Coated electro-galvanized steel door with 6 mm thick Acrylic window and lockable Swing Handle					
Main Body		1.2 mm 18 gauge electro-galvanized steel with white oven-baked epoxy-polyester ISOCIDE™ antimicrobial powder coated finish					
Number of Blower/s		1					
Air volume		140 cfm					
	Number of Trays	Standard: 4 Trays Maximum: 6 Trays					
	Tray capacity per bottle size	For 2.5 - 4 L bottles: each tray can fit 9 bottles For 2.0 L bottles: each Tray can fit 12 bottles					
Trays	Maximum weight per tray	40 kg					
	Tray dimension	600 mm x 600 mm (23.6" x 23.6")					
	Tray material	Polypropylene					
Filtration Elements	Main Filter	Nanocarb™ Filter (type A-H)	Nanocarb™ Filter (type A-H)	Nanocarb™ Filter (type A-H)	HEPA filter	HEPA Filter	
	Secondary Filter	None	HEPA Filter	Nanocarb™ Filter (type A-H)	None	Nanocarb™ Filte (type A-H)	
Control System		Sentinel™ Silver microprocessor control system					
VOC Sensor		\checkmark					
Door Alarm		\checkmark					
Lamp (Fluorescent)		\checkmark					

Ascent™ **Storage Cabinet**

Engineering Drawing

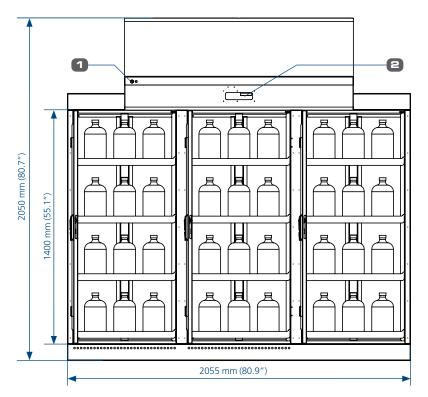




- 1. Sample Port 2. Sentinel™ Control System
- 3. Electrical panel
- 4. Front panel
- 5. Secondary Filter (For B, C, and E series only)
- 6. Blower
- 7. Main Filter

	General Spe	cifications, Asc	ent™ Storage	Cabinet (4ft. s	eries)		
Models	220-240 VAC, 50-60 Hz, 1Ø	ASC-4A8 2040317	ASC-4B8 2040284	ASC-4C8 2040285	ASC-4D8 2040325	ASC-4E8 2040286	
	110-120 VAC, 50-60 Hz, 1Ø	ASC-4A9 2040318	ASC-4B9 2040288	ASC-4C9 2040289	ASC-4D9 2040326	ASC-4E9 2040290	
Nominal Size		1.2 m (4')					
External Dimensions (W x D x H)		1370 mm x 700 mm x 2050 mm (53.9" x 27.6" x 80.7")					
Door		Powder Coated electro-galvanized steel door with 6 mm thick Acrylic window and lockable Swing Handle					
Main Body		1.2 mm 18 gauge electro-galvanized steel with white oven-baked epoxy-polyester ISOCIDE™ antimicrobial powder coated finish					
Number of Blower/s		1					
Air volume		140 cfm					
	Number of Trays	Standard: 8 trays (4 per section) Maximum: 12 trays (6 per section)					
	Tray capacity per bottle size	For 2.5 -4L bottles: each tray can fit 9 bottles For 2.0 L bottles: each Tray can fit 12 bottles					
Trays	Maximum weight per tray	40 kg					
	Tray dimension	600 mm x 600 mm (23.6" x 23.6")					
	Tray material	Polypropylene					
Filtration Elements	Main Filter	Nanocarb™ Filter (type A-H)	Nanocarb™ Filter (type A-H)	Nanocarb™ Filter (type A-H)	HEPA filter	HEPA filter	
ritration Elements	Secondary Filter	None	HEPA filter	Nanocarb™ Filter (type A-H)	None	Nanocarb™ Filter (type A-H)	
Control System		Sentinel™ Silver microprocessor control system					
VOC Sensor		✓					
Door Alarm		√					
Lamp (Fluorescent)		\checkmark					

Engineering Drawing



800 mm (31.5")
700 mm (27.6")
5
6

- 1. Sample Port
- 2. Sentinel™ Control System
- 3. Electrical panel 4. Front panel
- 5. Secondary Filter (For B, C, and E series only)
- 6. Blower7. Main Filter
- General Specifications, Ascent™ Storage Cabinet (6ft. series) 220-240 VAC, ASC-6A8 ASC-6B8 ASC-6C8 ASC-6D8 ASC-6E8 50-60 Hz, 1Ø 2040319 2040321 2040323 2040327 2040331 Models 110-120 VAC, ASC-6A9 ASC-6C9 ASC-6D9 ASC-6E9 ASC-6B9 50-60 Hz, 1Ø 2040320 2040322 2040324 2040328 2040332 **Nominal Size** 1.8 m (6') External Dimensions (W x D x H) 2055 mm x 700 mm x 2050 mm (80.9" x 27.6" x 80.7") Door Powder Coated electro-galvanized steel door with 6 mm thick Acrylic window and lockable Swing Handle 1.2 mm 18 gauge electro-galvanized steel with white oven-baked epoxy-polyester ISOCIDE™ **Main Body** antimicrobial powder coated finish Number of Blower/s Air volume 140 cfm Standard: 12 trays (4 per section) **Number of Trays** Maximum: 18 trays (6 per section) Tray capacity per For 2.5 -4L bottles: each tray can fit 9 bottles bottle size For 2.0 L bottles: each Tray can fit 12 bottles Maximum weight per Trays 40 ka tray 600 mm x 600 mm (23.6" x 23.6") **Tray dimension** Tray material Polypropylene Nanocarb™ Filter Nanocarb™ Filter Nanocarb™ Filter **Main Filter** HEPA filter HEPA filter (type A-H) (type A-H) (type A-H) **Filtration Elements** Nanocarb™ Filter Nanocarb™ Filter **Secondary Filter** HEPA filter None None (type A-H) (type A-H) **Control System** Sentinel™ Silver microprocessor control system **VOC Sensor Door Alarm** Lamp (Fluorescent)

Ascent™ Storage Cabinet

CARBON FILTER OPTIONS Dimension: 425 X 520 X 65 mm

ITEM CODE	MODEL CODE	DESCRIPTION	
5080003	CFA-11	Standard filter	
5080095	CFB-11	Acid Filter	
5080028	CFC-11	Mercury Filter	
5080039	CFD-11	Sulphur Filter	
5080050	CFE-11	Halogen Filter	
5080061	CFF-11	Aldehyde Filter	
5080072	CFG-11	Ammonia / Amine Filter	
5080104	CFH-11	Ethers / Chloroforms Filter	

NUMBER OF CARBON FILTERS TO ORDER:

Model	Qty (pcs)
ASC-2A/2B/2E	1
ASC-2C	2
ASC-4A/4B/4E	1
ASC-4C	2
ASC-6A/6B/6E	2
ASC-6C	4

ACCESSORIES AND OPTIONS

ITEM CODE	DESCRIPTION
5021370	Additional Polypropylene Tray 1 Set = 2 Trays: For 2 ft model - 1 set For 4 ft model - 2 sets For 6 ft model - 3 sets



WE PROVIDE A ONE-STOP SOLUTION FROM INSTALLATION TO DECOMMISSIONING OF YOUR EQUIPMENT!

Esco Services takes professional pride in ensuring compliance with legal guidelines and ISO standards while helping your company minimize disruption or downtime of equipment; thus improving your company's productivity.



ACCREDITATION

Our Field Service Representatives have extensive annual up-to-date safety training. Our list of credentials includes NSF (for Biosafety cabinets) TÜV NORD (for microbiological & cytotoxic cabinets), NEBB (for clean room), IFBA (for biorisk management), and CETA-CNBT (for fume hoods).



FAST RESPONSE

On-site response within 24 hours for priority cases/ clients. Easy to reach customer service, through email and phone call.



STRONG GLOBAL NETWORK

We offer comprehensive and reliable services through our extensive global network of Field Service Representative to our clients that include a dependable inventory of ready parts, technical support, field-based engineering, factory engineers, and after-sales representatives.



GOOD GLOBAL REPUTATION

dep Our Service Team is dedicated to providing service of the highest standards. We provide timely, responsive service while meeting or even exceeding customer's expectations.

OUR WIDE RANGE OF QUALITY SERVICES



Installation and Operational Qualification

Esco Service Team provides installation services and ensures that the unit is operational upon installation.



Decontamination

Esco offers safe and reliable decontamination services to ensure that your equipment is ready and safe to use.



Repair, Maintenance and Replacement

Esco Service Engineers are the best in providing service for Esco products and other brands. Esco provides authentic parts for replacement and any components that might fail while the product is in service.



Annual Recertification Testing and Calibration

Esco Field Service Representatives credentials include NSF (for Biosafety Cabinets), TÜV NORD (for Microbiological & Cytotoxic Cabinets), NEBB (for Clean Room), IFBA (for Biorisk Management), and CETA-CNBT (for Fume Hoods). Rest assured that your equipment will be properly certified according to international standards.



Contract Manufacturing and Development Organization (CDMO)

Esco Aster, as a full-range services partner, supports its global clients from early stage discovery to market approval of clients' products. We provide process development (PD) and contract manufacturing (from upstream to downstream, formulation and filling), consultation, clinical research services bridging the translation gap from bench to bedside.

OTHER SERVICES OFFERED

With Esco service, customers can expect that breakdown calls are attended promptly and technical issues can be resolved faster than any other service provider.



Cleanroom Certification

Esco cleanroom services experts will verify your manufacturing environment ensuring performance requirement and the compliance of related industry standards.



BSL Validation

Esco is qualified to validate your laboratory according to your appropriate biosafety level. Facility design and operational parameters must meet the predetermined requirements by the WHO Biosafety manual prior to operation.



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Improving Lives through Science





- Animal Research Workstation
- Biological Safety Cabinet
- CO₂ Incubator
- Ducted Fume Hood
- Ductless Fume Hood
- Filtered Storage Cabinet
- Laboratory Centrifuge
- Laboratory Oven and Incubator
- Laboratory Refrigerator and Freezer
- Laboratory Shaker
- Laminar Flow Cabinet
- PCR Cabinet
- Powder Weighing Balance Enclosure
- Thermal Cycler
- Ultra-low Temperature Freezer









- Time-Lapse Incubator
- Benchtop Incubator
- ART Workstation
- CO₂ Incubator
- Anti-Vibration Table • Gas Analyser













Pharmaceutical Manufacturing, Pharmacy Compounding, and Bioprocessing Tools



























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