



CLEANROOM EQUIPMENT



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 **Guardtech**
group



the
GUARD
charter

-  **GUIDE** Knowledgeable & Collaborative
-  **UNDERSTAND** Analytical & Reflective
-  **ADAPT** Flexible & Innovative
-  **RESPOND** Reactive & Thorough
-  **DELIVER** Dependable & Committed



**CLEANROOM
EQUIPMENT**

Transfer hatches
Biosafety cabinets
Laminar flow units

Fume hoods
Nitrogen generators
Measuring instruments

Fume cupboards
Transmitters

TRANSFER HATCHES

STAINLESS STEEL

Transfer Hatches provide a controlled air-tight zone between classified and non-classified or lower-graded environments for the transfer of products and ancillary items. Transfer hatches eliminate unnecessary traffic from the cleanroom and reduce particle ingress, while reducing the risk of cross-contamination. Chambers are adequately sized to allow for product wipe down with preferred cleaning agents.

● Stainless steel hatches are typically used in Pharmaceutical applications providing high chemical resistance and hygienic surfaces for easy cleaning. Stainless construction is highly durable and ensures longevity of a piece of equipment that will be used many times throughout the course of a day.



Twin stack trolley & pass through hatch

- Grade 304 & 316 stainless steel
- Mechanical or Electrical Interlock
- Reinforced
- Vertically sliding door available

W	L	H	Interlock	Product code
1000	1000	1800	Mechanical	GS2HM101018
1000	1000	1800	Electro-Magnetic	GS2HEM101018



Pass through hatch

W	L	H	Interlock	Product code
600	600	600	Mechanical	GSPHM1606060
600	600	600	Electromagnetic	GSPHEM1606060

- Grade 304 & 316 stainless steel
- Mechanical or Electrical Interlock
- Reinforced
- Vertically sliding door available

Trolley hatch

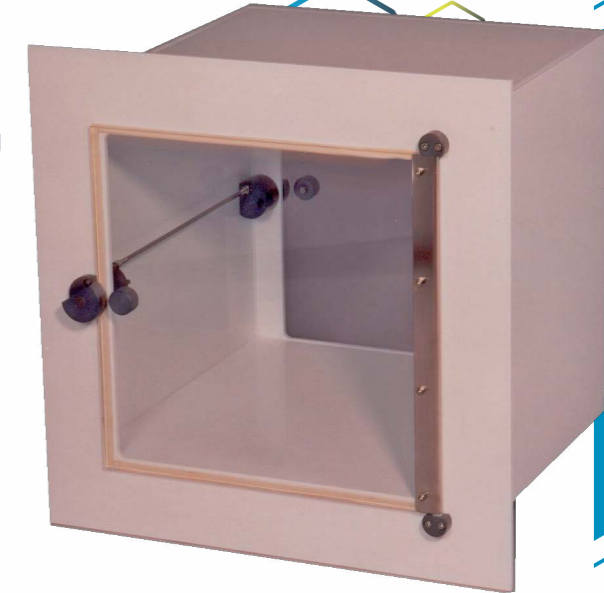
W	L	H	Interlock	Product Code
1000	1000	1200	Mechanical	GSTHM101012
600	600	600	Electromagnetic	GSTHEM101012



- Grade 304 & 316 stainless steel
- Mechanical or Electrical Interlock
- Reinforced
- Vertically sliding door available

POLYPROPYLENE

Polypropylene Transfer Hatches provide a cost-effective alternative to stainless steel while still providing the benefits of chemical resistance and hygienic surfaces. All seams are achieved with continuous hot welds and internal seams are covered. Front faces can be flush mounted and finished with a thin bead of silicone.



Pass through hatch

- Clear Perspex doors for visibility
- Mechanical or Electrical Interlock
- Easy to clean surface
- No visible fixings
- Hinged doors

W	L	H	Interlock	Product code
600	600	600	Mechanical	GPPHM1606060
600	600	600	Electromagnetic	GPPHEM1606060

Trolley hatch



W	L	H	Interlock	Product code
1000	1000	1200	Mechanical	GPTHM101012
600	600	600	Electromagnetic	GPTHEM101012

- Clear Perspex doors for visibility
- Mechanical or Electrical Interlock
- Easy to clean surface
- No visible fixings
- Hinged doors

Twin stack trolley & pass through hatch

- Clear Perspex doors for visibility
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W	L	H	Interlock	Product code
1000	1000	1800	Mechanical	GP2HM101018
1000	1000	1800	Electromagnetic	GP2HEM101018



BIO SAFETY CABINETS

CLASS II

Esco is a world leader in biological safety cabinets, offering the industry's widest product range, with thousands of installations in leading laboratories in more than 100 countries. Esco's

● The Airstream® Class II Biological Safety Cabinet is an effective solution for operator, product and environmental protection within laboratories and industrial facilities. With its DC ECM blower, this is the



biological safety cabinets have earned more independent certifications, in more countries, in more languages, than any other product. Call 0330 113 0303 to discuss your various options with a rep.

most energy-efficient Class II biosafety cabinet in the world, with 70% energy savings compared to AC motors. Self-compensating airflow, despite building voltage fluctuations and filter loading.

● ULPA Filter* with 99.999% efficiency against 0.3µm particles, 99.995% filter efficiency for MPPS at 0.1µm improves safety

● Sentinel™ Gold Microprocessor Controller displays all safety information on one screen

● Airflow sensor alerts the user if airflow is sufficient for greater safety

● Side capture zones and negative pressure side walls optimize containment

● ISOCIDETM powder coat inhibits microbial growth on external surface prevents contamination and improves safety

● Single-Piece Stainless Steel work top with coved construction retains spill

● Ergonomically-designed raised arm rest helps prevent grille blocking and create a comfortable working posture

● RS 232 Serial Interface Port enables sending of operational information to Building Management System

● Single-Piece Stainless Steel inner liner with large radiused corners facilitates easy cleaning and contamination

● Available in 0.6m [2'], 0.9m [3'], 1.2m [4'], 1.5m [5'], 1.8m [6'] sizes



Airstream® Class II Biological Safety Cabinet
Gen 3 (S-Series)



NordicSafe® Low Noise
Class II Biological Safety Cabinet

Labculture®
Class II
(Low Noise)
Biosafety
Cabinet



Streamline®
Class II
Biological
Safety
Cabinet
(Stainless
Steel Side Walls
SC2-S series)



Cytoculture® Lead-Shielded
Class II Biosafety Cabinet



Call 0330 113 0303 to speak with a Guardtech rep about all your equipment needs

BIO SAFETY CABINETS

CLASS III

Esco offers a range of Class III cabinets that provide the highest level of personnel, product and environment protection against agents assigned to biosafety levels one, two, three and four.

● Class III cabinets can be custom-built to suit different process and budget requirements of the client. Multiple Class III cabinets can be joined together in a 'line' to provide a larger working space. Several piece of



They are frequently used for handling the deadliest biohazards such as bacteria, viruses and microorganisms. Call 0330 113 0303 to discuss your various options with a Guardtech rep.

equipment, such as refrigerators, shelves, microscopes, centrifuges and incubators, can be installed inside the Class III cabinets upon request. Call 0330 113 0303 for more information on your cabinet options.



Airstream® Class III Biological Safety Cabinet

- Exhaust air is double-filtered through high-quality ULPA filters (per IEST-RP-CC-001.3) with typical efficiency of >99.999% for 0.1 to 0.3 micron particles, better than HEPA filters
- An angled cabinet front ensures a comfortable working posture
- Exclusive dual exhaust filters provide > 100,000 times better protection than single-stage designs
- Microprocessor-based Esco Sentinel™ Silver control system provides visual/audible alarms for airflow
- Magnehelic* pressure gauge is mounted in the rear of the work zone for at-a-glance monitoring of work zone negative pressure.
- Neoprene™ gauntlets are single-piece, leak-tested glove assemblies which guarantee maximum protection
- An integrated pass-through with interlocking doors permits materials transfer without risk of environmental contamination
- Esco ISOCIDE™ antimicrobial surface on all painted surfaces minimizes contamination
- Cabinet operates at negative pressure relative to the laboratory in order to prevent migration of pathogenic materials out of the work area



Containment Barrier Isolator

- Facilitates the isolation of a product or process while providing the required conditions for a sterile/aseptic environment.



Isoclean® Healthcare Platform Isolator
(Without Filter Below Work Zone)

Call 0330 113 0303 to speak with a Guardtech rep about all your equipment needs

- Provides sterile environment for aseptic preparations. Factory-configured to operate at positive or negative pressure in a recirculating or total exhaust airflow scheme.



Streamline® Compounding Isolator

LAMINAR FLOW UNITS

VERTICAL

Guardtech have partnered with Esco to bring you an extensive, exciting range of cleanroom equipment solutions, with an array of models to meet your laminar flow clean bench needs. Esco's

The full range of the new Esco Airstream laminar flow clean benches are powered by the latest generation DC ECM motor. It is more efficient than legacy ECM and VFD motors and now also offers ISO Class 3 workzone with 10x

- Sentinel™ Gold Microprocessor Controller displays all safety information on one screen
- Spill-retaining worktop design will ensure containment of accidental liquid spills
- ISOCIDE™ Powder Coat (silver-impregnated) that inhibits microbial growth to improve safety
- Energy efficient DC ECM Motor that offers 70% energy savings compared to AC Motor - offering stable airflow, despite voltage fluctuations and filter loading
- New features that still maintains excellent performance but with low noise at 54.5 dBA
- Each clean bench is individually factory tested for safety and performance in accordance with international standards
- 10x filtration efficiency of HEPA filter creates ISO Class 3 workzone instead of industry-standard ISO Class 5
- All components are cleanroom compatible
- Esco Airstream® Laminar Flow Clean Benches have been tested for cross-contamination and product protection using microbiological test method adopted from EN12469



new generation Airstream® laminar flow units offer a wide range of options in terms of material specifications, width and height. Call 0330 113 0303 to discuss your various options with a rep.

the efficiency of its ULPA H14 filters. With more choice for customers, Esco laminar flow clean benches still offer the same level of product protection for your samples and processes where operator protection is not required.



Airstream® Gen 3 Laminar Flow Clean Bench
Vertical with Sliding Sash (Stainless Steel Side Wall)



OptiMair™ Vertical Laminar Flow Clean Bench

Airstream® Gen 3 Laminar Flow Clean Bench

Vertical with Fixed Sash (Glass Side Wall)

Airstream® Gen 3 Laminar Flow Clean Benches

Vertical with Fixed Sash (Stainless Steel Side Wall)

Airstream® Gen 3 Laminar Flow Clean Benches
Vertical with Sliding Sash (Glass Side Wall)



Call 0330 113 0303 to speak with a Guardtech rep about all your equipment needs

● OptiMair Series Clean Benches are useful for mycology, food microbiology, plant and mammalian cell culture, clinical pharmacy and hospital protocols, cleanrooms, semiconductor assembly, pharmaceutical, aerospace and medical devices industries, where product protection is required for the user.

LAMINAR FLOW UNITS

HORIZONTAL

Guardtech have partnered with Esco to bring you an extensive, exciting range of cleanroom equipment solutions, with an array of models to meet your laminar flow clean bench needs. Esco's

new generation Airstream® laminar flow units offer a wide range of options in terms of material specifications, width and height. Call 0330 113 0303 to discuss your various options with a rep.

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the efficiency of its ULPA H14 filters. With more choice for customers, Esco laminar flow clean benches still offer the same level of product protection for your samples and processes where operator protection is not required.



Airstream® Gen 3 Laminar Flow Clean Bench
(Horizontal - Glass Side Wall)

- Sentinel™ Gold Microprocessor Controller displays all safety information on one screen
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- ISOCIDE™ Powder Coat (silver-impregnated) that inhibits microbial growth to improve safety
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Ventilated Balance Enclosure

● Ventilated Balance Enclosure (VBE) is designed for stability and accuracy while ensuring a high level of operator protection by containing hazardous airborne powder. Through the aerodynamic design sash and armrest, airborne particles are well contained inside the enclosure and exhausted through a HEPA filter or direct to the pharmacy exhaust.

Airstream® Gen 3 Laminar Flow Clean Benches
(Horizontal - Stainless Steel Side Wall)



Airstream® Horizontal Laminar Flow Clean Bench
(For Plant Tissue Culture)



Call 0330 113 0303 to speak with a Guardtech rep about all your equipment needs



FUME HOODS

Ascent™ Max Ductless Fume Hood Standard Model ADC (B-Series)

DUCTLESS



Esco Ascent Ductless Fume Hoods provide protection to both laboratory personnel and the environment from toxic fumes and are quickly becoming

a viable alternative to conventional fume hoods. Call 0330 113 0303 to discuss our various options with a Guardtech rep.



● These hoods filter out chemical fumes and recycle air directly back to the laboratory, providing energy savings, personnel and environmental protection, and convenience, as you

do not have to deal with complicated ducting systems, and mobility, since ductless hoods are independent systems. Guardtech are also able to offer ducted fume cupboard options.

- Electrogalvanized steel wall for maximum durability
- Front service panel opens up easily for maintenance functions
- Grade 304 stainless steel work top surface that will never rust, chip or generate particles
- Lip at the front edge of work surface ensures that any spillage is contained in the work zone
- All cabinet service and filter replacement can be carried out from the front, allowing the cabinet to be placed against wall in the laboratory to save space
- Optional VOC sensor to monitor chemical concentration within the cabinet work zone
- Ergonomically-designed raised arm rest helps prevent grille blocking and create a comfortable working posture
- Over eight different Nanocarb™ filter types to choose from: volatile organic compounds, acid, mercury, sulfur, halogen, aldehyde, ammonia or ethers/chloroform

Ascent™ Opti Ductless Fume Hoods



DUCTED FUME CUPBOARDS

Also available for installation. Call 0330 113 0303 or email sales@guardtech.com for more information.

NITROGEN GENERATORS

Guardtech Cleanrooms' Nitrogen Generators are a reliable and efficient alternative to conventional high pressure cylinder and liquid gas supplies. Taking away the on-going costs, safety considerations and transportation of traditional gas supplies, our generators are some of the most advanced and intelligent available.



● The control system gives the user all the necessary information to ensure an efficient, consistent supply of gas is always available. From process to flow and alarms – including auto-start/stop functionality – trend graphs, service alarm and service records pages, these generators are well worth the investment.

- Range of flow rates
- Storage vessels available
- Compact and quiet design
- 99.9995%-98% purity
- Auto-run facility
- Energy-saving mode
- Outlet flow indicator (% flow)
- Trend graphs for MS Excel
- Alarms with help menu
- Audible alarm
- Remote access via Internet
- With or without internal, oil-free air compressor



Generator	Flow rate	Purity	Pressure	L	W	H	With compressor	Without compressor
GT1-1	1.0 l/min	99.9995%	75.0 psi g	300	320	650	GNGCM1999995	GNGNC1999995
GT3-3	3.0 l/min	99.9995%	75.0 psi g	660	400	700	GNGCM3999995	GNGNC3999995
GT4-4	4.0 l/min	99.95%	80.0 psi g	550	320	650	GNGCM4009995	GNGNC4009995
GT6-6	6.0 l/min	99.9995%	100.0 psi g	660	400	700	GNGCM6999995	GNGNC6999995
GT6-10	10.0 l/min	99.99%	100.0 psi g	660	400	700	GNGCM1009999	GNGNC1009999
GT6-16	16.0 l/min	99.9%	100.0 psi g	660	400	700	GNGCM1600999	GNGNC1600999
GT6-25	25.0 l/min	99.5%	100.0 psi g	660	400	700	GNGCM2500995	GNGNC2500995
GT6-30	30.0 l/min	99%	100.0 psi g	660	400	700	GNGCM3000099	GNGNC3000099

MEASURING INSTRUMENTS

The Sauermann DBM 620 Air Flow Meter is a multipurpose electronic air balancing instrument

primarily used for efficiently taking direct air volume readings from air vents.

- Air Changes per Hour (ACPH) metric is the first of its kind to be included in a Balometer
- Easily swap between five different hood configurations
- SmartKap App allows for easy reading and export of data
- Also functions as autonomous micromanometer with Pitot tube attachment
- Lighter and smaller than previous models
- Extendable tripod eliminates the need for ladders in most environments

DBM 620 Air Flow Meter

Measuring Instrument	Product code
Mechanical	GTMEASDBM620



LV 110 Thermo-anemometer

- Displays velocity and temperature measurements
- Airflow calculation
- Automatic average
- Hold function and min-max values
- Selection of units
- Airflow calculation, airflow calculation with cone (LV 110/117), detection of flow direction

Measuring Instrument	Product code
LV 110 Thermo-anemometer with integrated vane probe	GTMEASLV110
HD 110 Thermo-hygrometer	GTMEASHD110
VT 210 Thermo-hygrometer-anemometer	GTMEASVT210



HD 110 handheld thermo-hygrometer

- HD 110 handheld thermo-hygrometer measures relative humidity, temperature and dew point
- Measuring range: humidity: 5 to 95 % RH, temperature: -20 to +70 °C, and dew point: -40 to +70 °C td
- Calibration certificate

VT 210 Thermo-hygrometer-anemometer

- Designed for the control of ventilation systems – allows users to measure air velocity, airflow and temperature in ducts
- Up to six measurements simultaneously



TRANSMITTERS

C 310 Multifunction Sensor

- Interchangeable probes
- Displays and measures four parameters simultaneously
- Four visual and audible alarms
- Two analogue outputs 0-5/10 V or 0/4-20 mA
- Adjustment certificate



Measuring Instrument	Product code
C 310 Multifunction Sensor	GTMEASC310



CPE310 Transmitter

- Flushmount multifunction pressure sensor
- Measures temperature, humidity, air velocity, CO, CO2
- Three visual and audible alarms
- Adjustment certificate

Measuring Instrument	Product code
CPE310 Transmitter	GTMEASCPE310





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