

Guide to Esco Products and Services 2019-2020

Dedicated to delivering innovative solutions for the clinical, life sciences, research, industrial, laboratory, pharmaceutical, and IVF community



ESCO
WORLD CLASS. WORLDWIDE.

Guide to Esco Products and Services

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Welcome to Esco

Esco's Vision is to provide enabling technologies for scientific discoveries to make human lives healthier and safer.



The Esco Group of Companies is committed to deliver innovative solutions for the clinical, life sciences, research, industrial, laboratory, pharmaceutical, and IVF community. With the most extensive product line in the industry, Esco have passed a number of international standards and certifications, and is operating under ISO 90001, ISO 14001, and ISO 13485. Esco represents innovation and forward-thinking designs, that are of the highest standard quality since 1978.

Availability and Accessibility. Esco has headquarters in Singapore, Indonesia, and Philippines, with manufacturing facilities are 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 products are of high quality, reliable, and dependable; assuring customers of research accuracy. Cross functional teams from Esco Production, R&D, Quality Assurance, and Senior Management, are regularly assembled to review and implement areas for improvement.

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

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

Esco Cares for the Environment. One in every four of Esco's employees is involved in R&D and a number of them evaluate new components and/or designs to produce energy efficient equipment. Being GREEN is more than just modifying parts used to produce a new energy efficient technology, it is also embodied in the every aspect of the company.

Customer Service and Support. Our service does not stop once purchase has been done. Esco gives on-time customer service and offers end-user seminars, service training, preventive maintenance, and provides educational materials and informative videos.

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

Tradition of Quality & Innovation

1978

Esco manufactures the first laminar flow clean bench; designs and builds its first microelectronics Class 10,000 cleanroom for Siemens Corporation.

1984

Esco designs and builds Class 100 laundry and becomes the first company in the region to enter the cleanroom laundry business.

1990

Esco expands distribution to pharmaceutical, life science, biotechnology and medical research markets.

2000

Esco begins transformation into a life sciences tools company

2001

Esco earns first EN 12469 certification for biological safety cabinet.

2004

Esco earns first NSF / ANSI certification for biological safety cabinet.

2005

The Chinese Food and Drug Administration invites Esco to participate in a joint committee to develop the National Standard for Biological Safety Cabinets.

Esco launches its first line of Ductless Fume Hoods.



2006

Esco earns on-site UL accreditation

2007

Esco became member of NSF Joint Committee and JACA Committee.

Esco launches VIVA® Animal Containment Workstations



Worldwide expansion of sales and services through the establishment of offices in USA, UK, China and Bahrain

2008

Esco launches Isoclean® - new compounding pharmacy isolators.



Esco launches Frontier® Acela - the world's first ergonomically designed, angled front, high performance low flow fume hood.



Esco launches Labculture® Class II (Low Noise Series) – introduced as the industry's lowest noise (~50dBA per EN) biological safety cabinet.



Esco launches Infinity® – the world's first biological safety cabinet designed with a redundant dual fan system that guarantees operator protection even in case of a single fan failure.



2009

Esco launches Isotherm® - new Laboratory Ovens and Incubators.



Esco launches Pharmacon™ new Downflow Booths.



Esco launches Swift® MaxPro and MiniPro new generation PCR thermal cyclers



Esco launches Labculture® In Vitro Fertilization Workstations.



2010

Esco launches CelCulture®
New CO₂ incubator.

**2011**

Esco launches Lexicon® range of
Ultra-low Temperature Freezers.



Esco launches CelCulture®
New CO₂ incubator with
Suppressed O₂ feature.

**2012**

Esco manufactured the lowest
noise (45 dBA) BSC in the
world for a large installation in
Karolinska Institute, Sweden



Esco launches the Esco Medical
Division, providing world class
ART/IVF solutions worldwide,
with a focus on the new MIRI®
Multi-room Embryo Incubator.



Esco Pharma equipment was launched at PMEC
China exhibition.

2013

Esco launches Airstream® G3
Class II, the greenest low noise
biological safety cabinet in the
world.



Esco launches eSafe®, the
technologically and ergonomically
advanced TÜV-NORD certified
BSC.



Esco launches MIRI® GA Gas
and Temperature Validation
Unit



Esco launches Anti-Vibration
Table (AVT)

**2013**

Esco launches Fertilisafe™ IVF
Workstation



Esco launches MIRI® Time-
Lapse incubator

**2014**

Singapore Prestige Brand Award
(SPBA) recognized and honoured
Esco as the overall winner in the
Maybank Regional Brands category.



Esco launches CelCulture® CO₂
Incubator (Direct Heat Air-Jacketed,
Water Jacketed and With Cooling
System)



Esco launches Biostream®
Biosafety Cabinets Class II Type A2
cabinet for Japan market



Esco launches AgriSafe® Food
Safety Cabinets for the Food
Industry



Esco launches OrbiCult™ Shakers



Esco launches NSF version of
Airstream® Class II Cabinets, the
leading energy-efficient biosafety
cabinet in the world



2014

Esco launches Gen 2 VIVA® Dual Access Animal Containment Workstations, the quietest animal containment workstation in the world.



Esco launches Airstream® Reliant Biosafety Cabinets with simple switches, and UL and NSF certified (4 ft. model).



2015

Singapore Prestige Brand Award (SPBA) recognized and honoured Esco as the overall winner in the Maybank Regional Brands category.



Creation of Esco Ventures as the strategic investment arm of Esco Group, focused on early stage investments in life sciences tools and medical technology start ups with innovative technologies.

Esco launches Versati™ centrifuges- equipped with maintenance-free motors, robust mechanism, and intelligent Versati™ microprocessor control system that offers extreme reliability and safety.



2016

Introduced Esco Healthcare as part of the group in the Esco Group of companies, with the following Divisions:

1. Esco Pharma - provides specialist services, equipment packages and process solutions leading to improved protection of operators, reduction of cross-contamination and more efficient processing, thereby advancing occupational health and human healthcare.

2. Esco VacciXcell - specializes in adherent bioprocessing, provides design & manufacture of single-use, multiple-use and hybrid bioreactor solutions for the vaccine, cell therapy, and biologics industry.

3. TaPestle Rx - specializes in healthcare & laboratory design and construction.

Esco receives the Hall of Fame Award from Singapore Prestige Brand Award for winning 3 consecutive years



2016

Esco launches Streamline® Compounding Isolator - Total Exhaust Model (SCI-TE) Compounding Aseptic Containment Isolator



Esco launches Isoclean® Healthcare Platform Isolator (HPI-G3)



Esco launches Containment Barrier Isolator (CBI)



Esco launches BioNOC™ II - Cell Culture Matrix / Carrier



Esco launches GlucCell™ - Glucose Monitoring System



Esco launches CelCradle™ - Upstream Process / Bioreactor



Esco launches TideCell® - Adherent Tide Motion Bioreactor (Pilot/Production Scale)



Esco launches StirCradle™- PRO - Fermenter / Stirred Tank Bioreactor (Production Scale)



Esco launches CradlePro Isolator (CPI)



Esco launches Sampling Rigid Isolator



2016

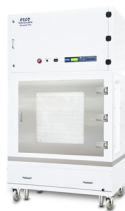
Esco launches Ventilated Balance Enclosure (VBE)



Esco launches Advanced Processing Platform Isolator (APPI)



Esco launches EDVC / EDHC - Evidence Drying Cabinet



Esco launches BioVap™ Biodecontamination System



Esco launches Mini MIRI® Humidified Benchtop Incubator



Esco launches Fertilisafe™ Workstation with MIRI® Chambers



Esco launches SCE - Semi Closed Environment



2017

Esco launches Esco Aster™: an independent Contract Development and Manufacturing Organization (CDMO) in the Esco Group of companies, specializing in contractual development and manufacturing of services from upstream to downstream processing.



Esco launches Specialized Ductless Fume Hoods - ForMax™ and TitraMax™



2018

Esco was named and recognized as one of 2018 Singapore's Top Employer Brands on the 2018 CEO



Esco Group acquired the AT Medical UAB, which was renamed as Esco Medical Technologies UAB and continue operations as a separate legal entity within Esco Group's life science ecosystem.

Esco launches Bio Booth, a Class II Walk-In Containment Enclosure



Esco launches Sputum Booth



Esco launches BioPass™ Pass Through



Esco launches upgraded Turbulent Flow Aseptic Isolator (TFAI™) with Pod Flange™ a flexible and detachable worktop



Esco launches Cell Processing Isolator (CPI)



Esco launches Ascent™ Storage Cabinet



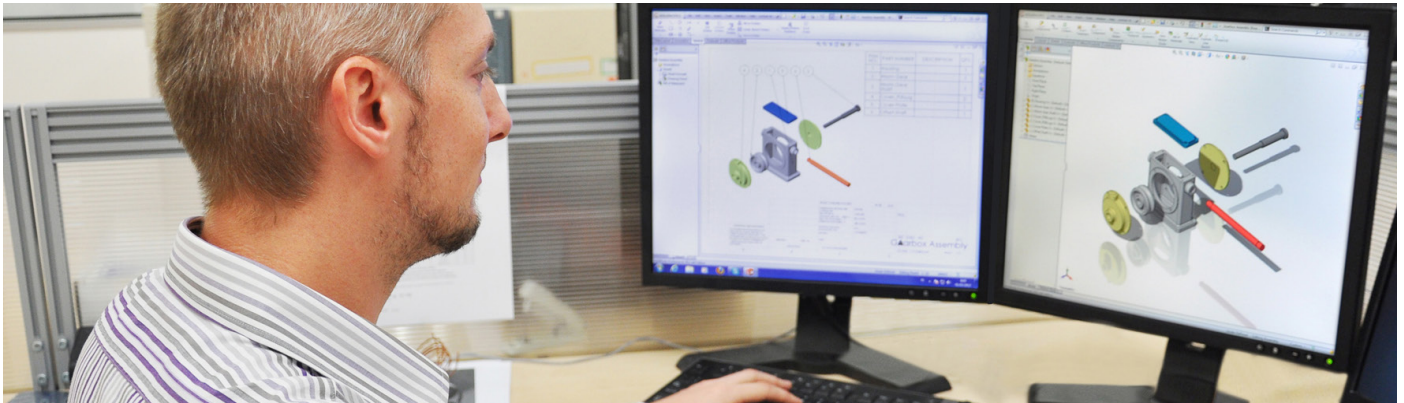
Esco launches MIRI® Time Lapse Incubator with 6 Chambers or 12 Chambers



Esco launches SAFE Sens integration to MIRI®, Mini MIRI® and MIRI® TL



Research and Development



An integral part of our business planning effort is based on managing a robust research and development program in Singapore, China, Europe, and USA, balanced against an investment in service support, training and customer education. Compared to industry averages, Esco invests a significant percentage of annual revenues in research and development. As a result of our investment, and with continuous feedback and idea evaluation among our research, global sales, marketing, purchasing and manufacturing teams; Esco products reflect the best contemporary designs in performance, ergonomics, and customer satisfaction.

- Engineers located in technology centers in Singapore, China, Europe, UK, and the USA
- Growing patent portfolio
- Core competencies:
 - Embedded system, sensor and software development and integration
 - Containment engineering for biohazards, chemical vapors, and hazardous powders
 - Decontamination cycle development
 - Computational fluid dynamics
 - Temperature, humidity, gas and environmental control
 - Imaging systems
 - Wireless and remote monitoring
 - cGMP laboratory design

Production and Quality



Our manufacturing advantage stems from extensive degree of vertical integration; enabled by our world-leading high throughput. All processes, with a few exceptions, are performed in-house. This allows us to achieve a truly world class reliability and quality.

- Incoming materials inspection and warehousing
- CNC-controlled sheet metal fabrication
- Full range of welding including MIG, TIG, Spot, Orbital, and Robotic welding
- Environment-friendly powder coating lines
- Electromechanical final product assembly
- Electrical / electronics sub-assembly
- Multi-step electrical and physical performance testing
- Independent quality control at each step in the production cycle
- Microbiology, chemistry, containment test labs
- Instruments calibration laboratory

Esco's focus on quality and timeliness is relentless. Continuous improvement is a mantra. Cross-functional teams from Esco Production, R&D, Quality Assurance, Senior Management, are regularly assembled to review and implement areas for improvement.

Esco manufacturing site is audited by certification bodies like ISO 9001, ISO 140001, ISO 13485, NSF International, UL International, and TUV Nord Germany. Our machines safety, workplace safety, and environmental safety are also audited by different government institutions.

All of the third party certifications and audits help our customers to ensure Esco manufacturing site's consistency of producing high quality products and continual improvements.

Products and Applications

Life Sciences Laboratory Equipment

Sample Preparation

- Class I Biological Safety Cabinets
- Class II Microbiological 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 Clean Benches
- Vertical Laminar Flow Clean Benches
- Laboratory Animal Research Workstations
- Laboratory Centrifuges

Sample Cultivation

- CO₂ Incubators, Direct Heat Air-Jacketed
- CO₂ Incubators with Cooling System
- CO₂ Incubators with Stainless Steel Exterior
- Laboratory Shakers

Sample Handling and Analysis

- PCR Thermal Cyclers
 - Conventional Thermal Cyclers
- PCR Sample Handling
 - Microplate Shakers
 - PCR Cabinets

Sample Storage & Sample Protection Solutions

- Ultra-low Temperature Freezers
- Lab Refrigerators and Freezers
- Sample Database Management Software
- Intelligent Remote Monitoring Application Protocol
- Remote Monitoring, Datalogging, Programming Software
- Wireless Monitoring System

Chemical Research

- Ductless Fume Hoods
- Laboratory Fume Hoods
- Fume Hood Airflow Monitors
- Exhaust Blowers
- Powder Weighing Balance Enclosures
- Filtered Storage Cabinet

General Equipment

Laboratory Thermostatic Products

- Laboratory Oven
- Laboratory Incubator
- Refrigerated Incubator
- Natural Convection Incubator

Forensic Sciences

- Evidence Drying Cabinet

Medical / IVF Equipment

Controlled Embryo Handling

- Fertilisafe™ ART Workstation
- AVT-I Anti Vibration Table
- Semi Closed Environment IVF

Safe Embryo Culture

- MIRI® Multi room Benchtop Incubator
- CelCulture® CO₂ Incubator
- Mini MIRI® Humidified Benchtop Incubator

Innovative Time Lapse Imaging

- MIRI® Time-lapse Incubator

Accurate Quality Control

- MIRI® GA Gas and Temperature Validation Unit
- MIRI® GA Mini Gas Validation Unit

Unique Consumables

- CultureCoin

Healthcare

Esco Pharma Products

Airflow Containment Products

- Pharmacon® Downflow Booths
- Ceiling Laminar Airflow Units
- Laminar Flow Horizontal/Vertical Trolley
- Enterprise™ Laminar Flow Straddle Unites
- Cytoculture™ Cytotoxic Safety Cabinets

Isolation Containment

- Aseptic Containment Isolator (ACTI)
- Weighing and Dispensing Containment Isolator (WDCI)
- General Processing Platform Isolator (GPPI)
- Containment Barrier Isolator (CBI)
- Turbulent Flow Aseptic (Grade A) Isolator (TFAI)
- Isoclean® Healthcare Platform Isolator (HPI)
- Streamline® Compounding Isolators (SCI)
- Technetium Dispensing Isolators
- Blood Cell Labeling Isolators
- Open and Closed Restricted Barrier Access Systems (RABS)

Cross Contamination Facility Integrated Barrier

- BioPass™ Pass Through
- Infinity® Air Shower Pass Box
- Cleanroom Air Shower
- Infinity® Cleanroom Transfer Hatch
- Infinity® Pass Box
- Soft capsule® Soft Wall Cleanroom
- Dynamic Passboxes and Dynamic Floor Laminar Hatches
- Laminar Flow Storage Cabinet

Ventilation Containment

- Ventilated Balance Enclosure

VacciXcell Products

Bioreactors and Fermenters

- CelCradle™
- TideXcell™
- VacciXcell™ Hybrid Bioreactor

Cell Culture Monitoring, Media and Consumables

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

Filling Line Equipment

- Filling Line Isolators
- cRabs (close restricted access barriers)
- oRabs (open restricted access barriers)

Integrated Solutions

- Cell Processing Isolator
- Cell Processing Center

TaPestle Rx Products and Services

PRODUCTS

Pharmacy Automation and Compounding Supply

- Compounding Pharmacy Isolators (SCI, HPI, CBI, GPPI)
- Safety Cabinets and Enclosures (Class II BSC, VBE, LFC)
- Radiopharmacy Hoods and Isolators
- Aseptic Filling Systems

Healthcare and Laboratory Construction Components

- Prefabricated Walls (Airecell®)
- Prefabricated Containerized Facility (Prefab™)
- Series Ceiling Systems
- Hygienic/Hermetic Door Systems
- Surgical Scrub Sinks
- Vinyl Tiles and Epoxy
- Laboratory Fit-outs
 - Worktops
 - Frames
 - Specialty Storage cabinets
 - Service Spines & Reagent Shelving

SERVICES

- Conceptualization
- Planning
- Procurement
- Installation

FACILITY DESIGNS

- Process Architecture
- Biocontainment/Biosafety
- Pharmacy Compounding/Nuclear Medicine
- Cleanroom, Vaccine and Cell Processing
- Laboratory
- Containerized Facility
- ART/IVF
- Cold Chain

Biological Safety Cabinets



Introduction

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 around the globe. Esco's biological safety cabinets have earned more independent certifications, in more countries, in more languages, than any other product, demonstrating our commitment to the industry's best safety and quality.

Features

- Energy saving DC ECM blower*
- ISOCIDE™ antimicrobial powder coating
- H14 filter or ULPA filter with 99.999% efficiency at 0.1 – 0.3 µm selection.

*most models

- Large performance envelope
- Ergonomic design
- Low noise
- Easy to clean

Product Lines

- Class I, Biological Safety Cabinets

* Brand Available: Airstream®

- Class II, Type A2 Biological Safety Cabinets

* Brands Available: Airstream®, Airstream® Reliant, Labculture®, Labculture® Reliant, Biostream®

- Class II, Type B1 Biological Safety Cabinets

* Brand Available: Labculture®

- Class II Type B2 Biological Safety Cabinets

*Brands Available: Labculture®, Airstream®

- Class II Microbiological Safety Cabinets

* Brands Available: Airstream®, Airstream® Plus

- Class III Biological Safety Cabinets

*Brand Available: Airstream®

- Lead-Shielded Class II Biological Safety Cabinets

*Brand Available: Cytoculture®

- Floor-Mounted Class II, Type A2 Biological Safety Cabinets

*Brand Available: BioBooth®

- Floor-Mounted Class II, Type B2 Biological Safety Cabinets

*Brand Available: BioBooth®

Certifications



Life Science | Sample Preparation

Laminar Flow Clean Benches



Horizontal Laminar Flow Clean Benches



LHG-4_G-F_ LHS-4_G-F_ LHG-4DS-F_

Vertical Laminar Flow Clean Benches



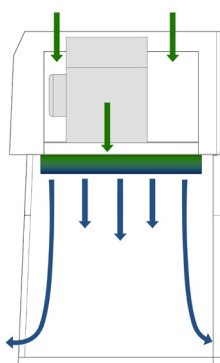
LVS-4A_ LVS-4_G-S_ LVS-4_G-F_ LVG-4_G-F_ ACB-4E_

Introduction

Esco is an industry leader in the development of professional quality laminar flow clean benches for the global life sciences market. With tens of thousands sold throughout the life sciences market worldwide, Esco has reinforced its reputation for dependability by providing reliable protection for samples and work processes in a multitude of applications.

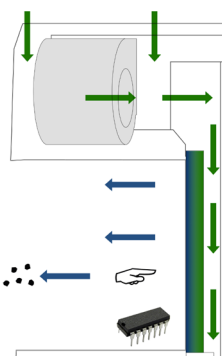
Our selection of Vertical, Horizontal and Specialty clean benches offers a variety of choices for installations where high quality construction is essential. Our clean benches are aerodynamically engineered and use only premium quality ULPA and HEPA filters with integrated motor/blower assemblies for quiet operation and long service life.

Since 1978, Esco has emerged as the industry leader producing laminar flow cabinets that are the premium selection for the discerning researcher, offering a combination of value, high quality construction, low operating noise levels, and a wide product range to suit all budgets.



Vertical Laminar Flow Cabinet

- Air does not blow straight to user's face
- Air curtain is not disrupted by large object



Horizontal Laminar Flow Cabinet

- Easier to put sensitive material near clean air source
- Contaminant is not blown towards sensitive material

Product Lines

- Horizontal Laminar Flow Clean Benches
- Horizontal Laminar Flow Clean Benches for Plant Tissue Culture
- Vertical Laminar Flow Clean Benches (sliding or fixed sash window)
- Vertical Laminar Flow Clean Benches with Black interior, suitable for optical industries

Certification



UL 61010

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Lab Animal Research Workstations

Dual Access Animal Containment Workstations



VDA-4A_

Bedding Disposal Animal Containment Workstations



VBD-4A_

Universal Animal Containment Workstations



VA2-4A_-E

Introduction

Animal research, cage changing and bedding disposal procedures are now simpler, safer and more productive with the Esco range of VIVA® Animal Containment Workstations. Esco's experience in clean air and containment technologies extends to lab animal research products to help protect the investigator, animal technicians, animals, and the environment during research, cage changing and bedding disposal procedures.

VIVA® lab animal research products help laboratories comply with NIOSH recommendations to create a safer, healthier, more productive work environment and to ensure that this is achieved, operator and environment protection of each VIVA® workstation evaluated through the ELISA analysis.

Actual cage changing and bedding disposal operations were performed to simulate how the workstations are used, and allergen concentration at designated areas was sampled. The allergen concentration was quantified using sandwich ELISA method.

The result: VIVA® Workstations offer high levels of operator and environment protection that can substantially help to minimize allergen exposure.

Product Lines

- Universal Animal Containment Workstations
- Dual Access Animal Containment Workstations
- Bedding Disposal Animal Containment Workstations

*Brand Available: VIVA®

Certification



UL 61010



Laboratory Centrifuges

Micro Centrifuges



Tabletop Centrifuges



Introduction

Esco proudly introduces the best choice for high performance and superior quality centrifuge. Versati™ centrifuges are equipped with maintenance-free motors, robust mechanism, and intelligent Versati™ microprocessor control system that offers extreme reliability and safety. Versati™ has a strong versatility covering micro centrifuge and low-to-high speed general-purpose centrifuge with variety of rotors, adapters, and accessories to fit all your application needs and suit various consumable tubes, strips, and plates.

Features

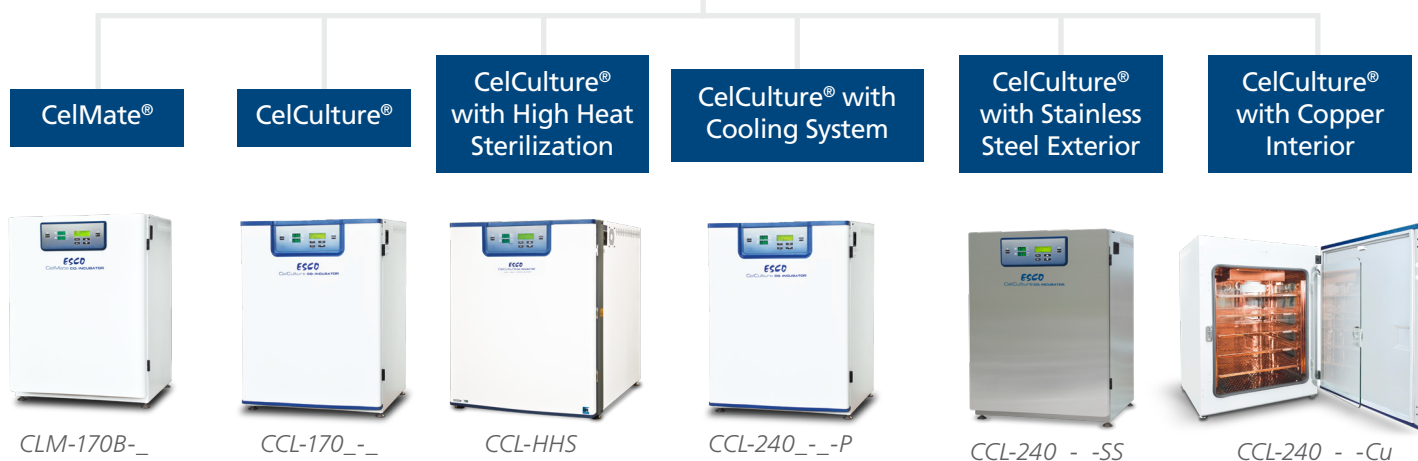
- Distinct Control Panel and Intelligent Versati™ Microprocessor Control System
- Genuine-Protec™ Safety Lid Lock
- V-balance™ Weight Imbalance Protection
- Smartdrive™ Rotor Auto Recognition
- Diverse Choices of Rotor (Swing-out and Fixed-angle Rotors)
- Integrated Design of Interior Centrifuge Chamber
- Temperature range from -20°C to 40°C with 1°C increments (Refrigerated models only)
- Maintenance-free, Brushless Motor
- CFC-free refrigeration system
- Emergency Switch
- Polished and Practical Appearance
- Maximum speed up to 16,000 rpm (RCF= 24, 381 x g)
- Storage of up to 99 programs
- Noise level ≤ 68 dBA (depends on the rotor)

Product Line

- Micro Centrifuge Ventilated (MCV)
Max sample capacity: 88 ml
- Micro Centrifuge Refrigerated (MCR)
Max sample capacity: 88 ml
- Tabletop Centrifuge Ventilated (TCV)
Max sample capacity: 1500 ml
- Tabletop Centrifuge Refrigerated (TCR)
Max sample capacity: 1500 ml

*Brand Available: Versati™

CO₂ and CO₂ / O₂ Incubators



Introduction

Esco CO₂ Incubators offer the best temperature and CO₂ control providing superior protection for your cell cultures. Sleek, reliable and intuitive, the Esco CO₂ incubators provide comprehensive sample protection that brings your scientific dreams one step closer to reality.

Features

- **Precise Parameter Control**
 - Best uniformity and control among competition, which means samples are evenly heated
 - Fast CO₂, temperature and humidity recovery without overshoot
 - Direct heat and air jacket for rapid temperature recovery and provide isolation from ambient temperature fluctuations
 - Forced convection system accelerates recovery of chamber air after door closing to prevent contamination
 - All Esco CO₂ incubators are now equipped with infrared CO₂ sensor for enhanced precision and stability
- **Robust Contamination Control for Optimum Protection**
 - SteriSafe™ ULPA Filtration System
 - Validated SwiftCon™ 90°C Moist Heat Decontamination Cycle (CelMate® and CelCulture®)
 - 180°C High Heat Sterilization Cycle (CelCulture® HHS)
 - Filtered Gas Injection Lines
 - ISOCIDE™ Antimicrobial Coating
 - Optional Copper Interior
- **Provide maximum safeguarding of cell cultures via Voyager software system**
 - It is a centralized monitoring and control system for your laboratory which provides extra protection for your samples.
 - With alarms to alert user when exceeding predefined parameter limits
- **User-friendly Controller Software Interface**
 - Comprehensive, user-configurable alarms
 - CelAlert™ alarm system reminds user to replace parts
 - Intelligent data and event logger records all incubator parameters for on screen recall. A 16 Mb built-in flash memory guarantees long-term storage of data

Product Lines

- CO₂ Incubators
 - *Brand Available: CelMate®
- CO₂ and CO₂ / O₂ Incubators
 - Direct Heat Air-Jacketed
 - With Cooling System
 - With Stainless Steel Exterior
 - With Copper Interior
 - *Brand Available: CelCulture®
- CO₂ and CO₂/O₂ Incubators
 - 180°C Dry Heat Sterilization
 - Direct Heat Air-Jacketed
 - High temperature resistant CO₂ sensor, O₂ sensor, and Humidity Sensor (no need to remove during sterilization)
 - *Brand Available: CelCulture® High Heat Sterilization

Certifications



Life Science | Sample Cultivation



Laboratory Shakers

Benchtop Ambient Shaker

Benchtop Incubator Shaker



AS1-NC-19



IBS-R-19

Introduction

Esco offers laboratory shakers that fit all your needs. Cutting Edge Technologies, Robust Mechanism, Flexible Accessories, Intuitive Interface and Environment-friendly Design – making sure that Esco laboratory shakers deliver outstanding features and excellent performance year after year.

Features

- **TriDrive™:** Esco unique triple-eccentric counterbalanced drive supports heavy duty and high-speed applications.
- **RobustDrive™** mechanism eliminates the need for lubrication as the Brushless DC Motor saves maintenance worries.
- **SmartRun™:** Excellent out-of-balance sensor & proprietary imbalance compensation algorithm ensures smooth operation without any vibration.
- Microprocessor P.I.D. controller enables accurate temperature, gas, speed and running time settings to deliver reproducible results.
- Unparalleled design provides broader temperature and speed control range.
- **Programmable Design:** Unit's memory can store up to 15 (for IBS) and 25 (for AS1) steps program with various time, temperature and speed settings.
- **Built for Safety:**
 - Audible and visible alarms alert any speed and temperature deviations.
 - Shaker automatically restarts after power interruption for the non-volatile program saved in the memory.
- Multiple accessories choices allow you to customize most suitable solution for your applications.

Product Lines

- Benchtop Ambient Shaker: for Ambient Shaking Application
- Benchtop Incubator Shaker: for Constant Temperature Shaking Application

*Brand Available: OrbiCult™

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Upright Ultra-low Temperature Freezers

Silver Controller



UUS-597A-_-SS

Gold Controller



UUS-597B-_-SS

Platinum Controller



UUS-597C-_-

Introduction

The Lexicon® II series ULT freezer incorporates the best and most complete sample protection and sample organization system of any ULT freezer manufacturer. Ultra-low temperature (ULT) freezers are widely used in scientific research for long-term storage of samples. As ULT freezers are often operated at -80°C continuously for years, reliability is of paramount importance to researchers. Esco has used industry-accepted Highly Accelerated Life Testing (HALT) to stress test a large number of Esco ULT Freezers at extreme conditions. All Esco ULT Freezers passed these extreme stress tests insuring a design that is optimized to protect your precious samples.

In accordance with ANSI/ASHRAE 72-2005 and ARI 1200-2006/2008 guidelines and as tested by a UL-validated third party test lab, DNS USA, the Esco ULT Freezers surpassed the performance of 5 major competitors with lower energy consumption, superior cabinet performance (as measured by warm-up time), and demonstrated a larger BTU refrigeration reserve capacity to insure the highest level of performance and protection of your samples.

Features

• Sample Safety and Integrity

- Excellent vial capacity with a minimal footprint.
- All controllers are available in every size to meet customer capacity requirements. Available in 363, 480, 597, and 714 liters.
- Built with triple gasket seal to provide protection against thermal intrusion.
- Environment-friendly CFC- and HCFC- refrigerants are used.

• Performance

- Low-noise operation that ensures a quiet and pleasant working environment for laboratory users.
- Pressure Equalization Port (PEP) to facilitate fast door reopening times.
- User-friendly display which shows the actual temperature and ambient temperature with clear indication of alarms.
- USB interface that allows transfer of temperature data (for Gold and Platinum controllers).

• Complete event monitoring and logging system

- Compatible with **Voyager®** Software that allows easy, unified local freezer control and monitoring for proper operation from a central location via user established or local network.
- **IRMAP™** allows for an additional optional Esco service to allow Esco to monitor freezers from a remote location.
- **PROtect** Redundant Wireless Sample Monitoring System.
- **GSM Modem**: a device that alerts the user through SMS in case of sample threatening alarms (for Gold and Platinum controllers).

Product Lines

- Ultra-low Temperature Freezer with Silver Controller (Standard)
- Ultra-low Temperature Freezer with Gold Controller (Advanced)
- Ultra-low Temperature Freezer with Platinum Controller (Touchscreen)

*Brand Available: Lexicon® II

Certification



UL 61010



CE

Laboratory Refrigerators and Freezers

Laboratory Refrigerators



HR1-140S- _

HR1-400T- _

Laboratory Freezers



HF2-400T- _

HF2-1500S- _

Laboratory Combination Refrigerators and Freezers



HC6-400S- _

HC6-700S- _

Introduction

HP Series Laboratory Refrigerators and Freezers are high performance models designed to provide a high level of protection to samples used in life science research and clinical applications.

When superior levels of cold storage performance, reliability, and flexibility are needed, the Esco HP series of Laboratory Refrigerators and Freezers are the best choice.

Features

- **High Performance**
 - Superior forced-air design instead of regular cold wall for both refrigerators and freezers.
 - Rapid cool down and very fast recovery due to fan assistance.
 - Fast temperature equilibration; superior sample protection.
 - Intelligent automatic defrost to minimize temperature changes during ice defrost
- **Sample Safety**
 - Door lock provides additional security for expensive samples and reagents from unauthorized users.
 - External surfaces are powder-coated with Esco ISOCIDE™ to eliminate 99.9% of surface bacteria within 24 hours of exposure.
 - Triple-pane glass doors for refrigerator models to easily locate needed samples or reagents with the door closed, preventing risks. Triple-pane doors provide superior insulation compared to any other glass door technology.
 - Door will automatically close under 90° when released to maintain temperature and to protect samples.
 - Audible alarms during door opening, high/low temperature, power failure and clogged condenser filter.

User Friendly

- Comfortable, ergonomic handle
- Internal LED lighting
- Wheels with integral brakes are included on every model

Product Lines

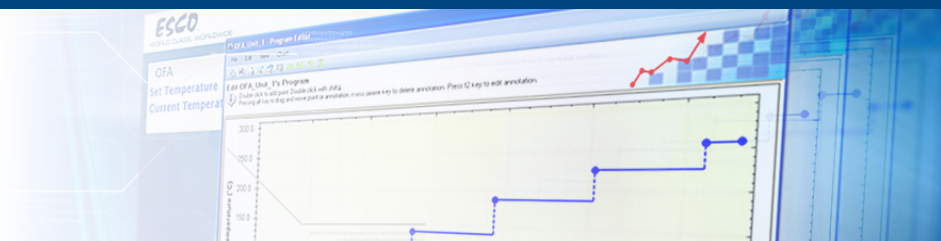
- Laboratory Refrigerator (+2°C to +15°C)
- Laboratory Freezer (-10°C to -25°C)
- Deep Freezer (-20°C to -40°C)
- Laboratory Combined Refrigerator (+2°C to +15°C) and Freezer (-10°C to -24°C)

*Brand Available: HP Series

ESCO

WORLD CLASS. WORLDWIDE.

Life Science | Sample Protection



Remote Monitoring, Datalogging, Programming Software

Voyager®

Introduction

Esco Voyager® is a PC-based software package developed for the remote monitoring, data-logging and programming/device configuration of Esco controlled environment laboratory equipment. This software has the capability to push updates to Esco equipment connected to the software. In any event of equipment failure, the software is able to send out remote alarm notification through e-mail. It is also compliant to 21 CFR Part 11 standard for traceability.

Features

• Remote Monitoring and Data Logging

- Automatic, continuous monitoring of device parameters (Temp, CO₂, RH, etc.)
- Viewing and graphing device parameters in real-time
- Saving and exporting log data in various formats
- Automatic emailing of log data at user-defined intervals
- Download of data logs from equipment memory (only for devices with built-in data logging memory, i.e. CO₂ Incubators)

• Alarm

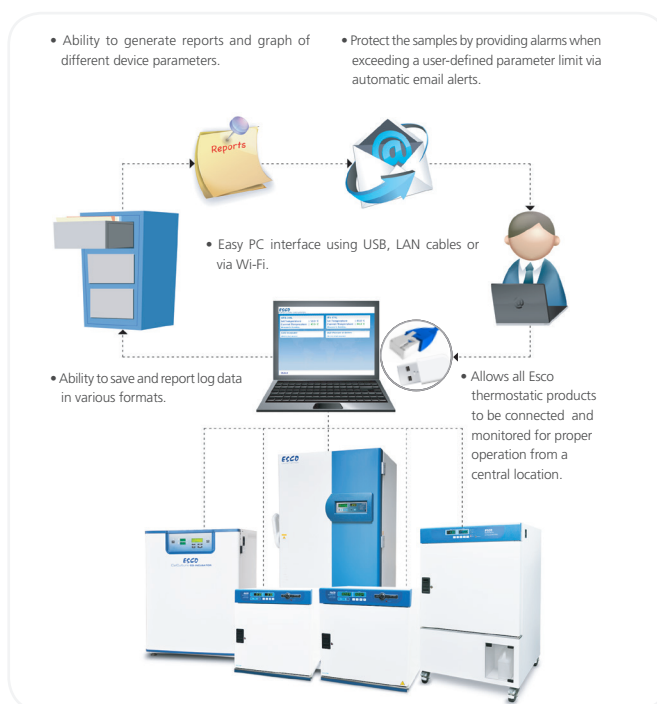
- Alarms when exceeding a user-defined parameter limit
- Automatic email alerts
- Documentation of all alarms with time/date stamp

• Remote Programming and Equipment Configuration

- Development of programs using a graphical interface, for subsequent download to device memory (only for equipment with program functions, i.e. Forced Convection Laboratory Ovens and Incubators)
- Configure devices remotely (set points, local alarm limits, etc.)

Minimum System Requirements

- Operation system: 32-bit or 64-bit Windows 2000, 2003 Server, XP, 7, and 10.
- Memory: 4 GB
- Hard disk space: 10 GB
- Interface : USB/RS232/ RS485
- Prerequisite Software: .NET Framework 2.0 (included) Windows Installer 3.1 (included)



Compatible Equipment

- Lexicon® – Ultra-Low Temperature Freezer v.1 (Silver, Gold, and Platinum controller)
- CelCulture® – CO₂ Incubator (CCL) v. 1.3.1
- CelMate® – CO₂ Incubator (CLM)
- Isotherm® – Forced Convection Oven (OFA) v. 1
- Isotherm® – Forced Convection Incubator (IFA) v. 1
- Isotherm® – Low Temperature BOD Incubator (IFC) v. 1
- Isotherm® – Natural Convection Incubator (INA) v. 1



Intelligent Remote Monitoring Application Protocol

iRMAP™

Introduction

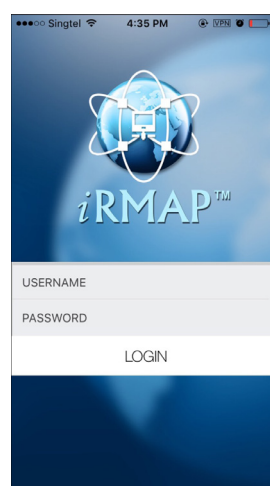
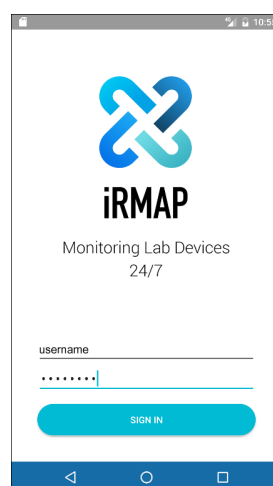
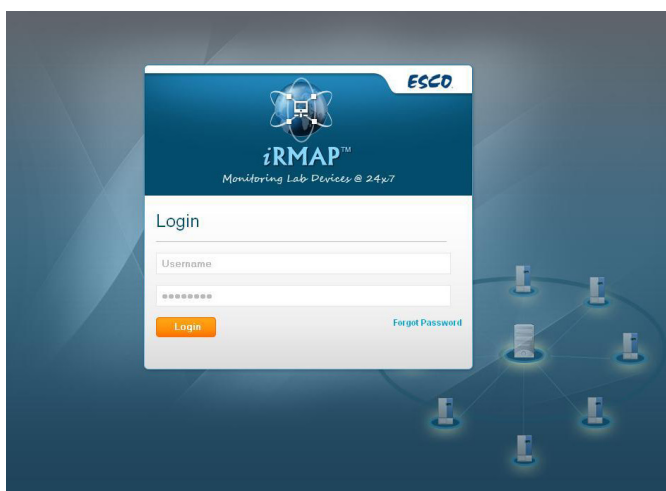
Intelligent Remote Monitoring Applications Protocol (iRMAP™) is a cloud service that Esco can provide for any users of Esco incubators and freezers. A user purchases Voyager®, installs it on a PC, and connects it up to their freezer network. The monitoring data is encrypted and transmitted to an Esco server. iRMAP™ is accessible for authenticated users from all over the world using internet.

Features

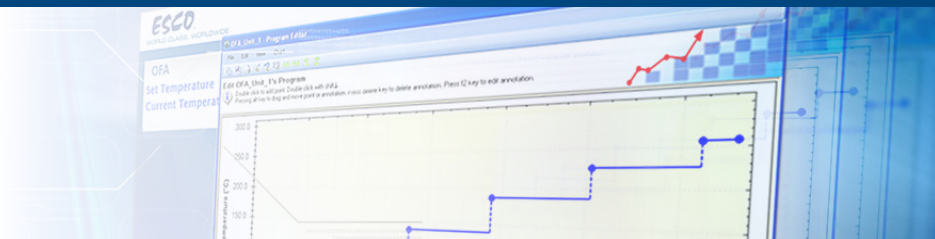
- Users can access Voyager® data logs anytime and at any location using web browser applications
- Customer can access and acknowledge alarms and data using all browser in all devices with different platform (IOS,Android, etc.)
- Monitoring data is encrypted and transmitted to a secured server
- Users can access monitored equipment (incubator or freezer) using iOS or Android app.

Compatible Equipment

- Lexicon® – Ultra-Low Temperature Freezer v.1 (Silver, Gold, and Platinum controller)
- CelCulture®– CO₂ Incubator (CCL) v. 1.3.1
- CelMate® – CO₂ Incubator (CLM)
- Isotherm® – Forced Convection Oven (OFA) v. 1
- Isotherm® – Forced Convection Incubator (IFA) v. 1
- Isotherm® – Low Temperature BOD Incubator (IFC) v. 1
- Isotherm® – Natural Convection Incubator (INA) v. 1



Life Science | Sample Protection



Wireless Monitoring System

PROtect

Introduction

Esco PROtect monitoring system includes radio frequency recorders which can be connected to any brands of freezer, cold storage system and temperature controlled equipment. These recorders automatically send data to a central server to monitor temperature and other parameters and send real-time alert to users in case of severe failure.

Esco PROtect complies with quality assurance procedures:

ISO 17025 and ISO 15189 norm, GMP and audit trail traceability for conformance to 21 CFR Part 11

Features

A. Real Time Monitoring System

- Wireless Technology that protects your samples 24/7 with continuous data logging function and immediate alarm notifications
- Centralize monitoring for all your equipment (any brands and any models):
 - Temperature for refrigerators, freezers, cold chambers, cryogenic tanks and -80°C freezers
 - Temperature and CO₂ for ovens/incubators
 - Temperature and humidity for climatic chamber, ambient area
- Measurement and recording of physical parameters such as temperature, CO₂ and humidity
- Direct reading on the display
- In using the radio frequency, the recorder has longer battery lifetime and transmission distance.
- Configurable alarm using SMS and email notification
- Continuous measurement even during facility power failure situations.

B. Simple and Cost Effective

- Fast Installation, commissioning and maintenance
- Can centrally monitor integrity of samples even during a power outage or electronic failure of refrigerator, freezer, incubator, oven, etc.
- Accurate and efficient compared to manual data readings
- Reduce labor cost for manual data readings since manual data readings are less accurate, less reliable and time consuming. This saves you time and money
- Readily accessible through the display or monitoring software thru PC
- Multi-site installation
- Interchangeable digital probes with embedded memory to facilitate maintenance procedures
- Modern and eco-friendly

C. Traceability and Security – Quality Assurance

- Local regulations or recommendations within Quality Management Programs

Minimum System Requirements

• PROtect Server:

- Computer Architecture: 32 bit or 64 bit
- OS: Windows 2000, XP, Vista, Win 7 and Windows 2003-2012 Server
- RAM: 8 GB
- HD: 250 GB capacity
- Video Card: VGA compatible 1280 X 1024 32 bit

• PROtect Client:

- Computer Architecture: 32 bit or 64 bit
- OS: Windows 2000, XP, Vista, Win 7, Windows 2003-2012 Server and Windows 10
- RAM: 4 GB
- HD: 20 GB capacity
- Video Card: VGA compatible 1280 X 1024 32 bit





Sample Tracking System

SampleTracker

Introduction

Esco SampleTracker is a comprehensive Biosample Inventory Management solution. The Software tracks the sample management activities throughout its life cycle. The software scope covers all the features and functionalities required for the Sample Inventory Management and Tracking for all sizes of laboratories, managing different types of samples and having various types of storages. Flexibility in configuration of laboratories and sample attributes is one of the unique characteristics of SampleTracker.

SampleTracker automatically generates a unique identification number for each sample, which makes it easy for users to trace the sample as and when required.

Compatible Esco Equipment : Esco Aalto Platinum controller freezer

Key Features:

- Sample Definition and Configuration
- Laboratory Equipment Configuration and Management
- User Management and Roles and Privileges Management
- Sample operations such as:
 - Check In
 - Sample Aliquoting
 - Sample assignment to storage location
 - Sample movement within storage location
 - Sample Check Out
- Sample shipment to outside of facility
- Sample disposal
- Barcode label creation
- Freezer Controller Communication Service
- Query Builder
- Report
- Backup and Restore
- Data Import and Export
- Audit Trail and Signature points configuration

Benefits:

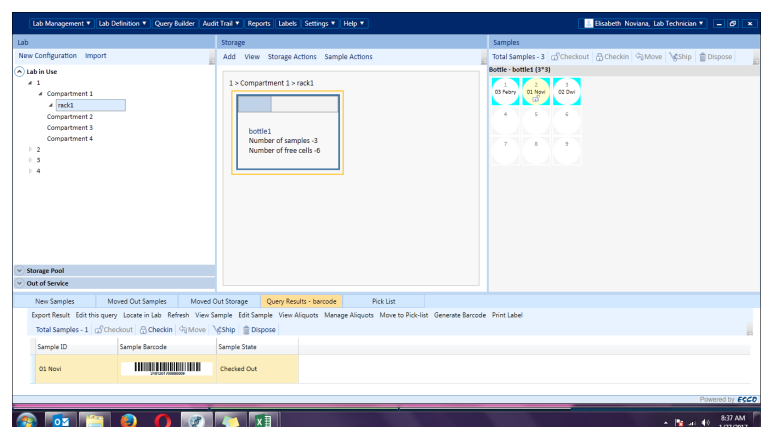
- Intuitive User Interface, Feature-rich and easy-to-use.
- Flexible configuration
- 21 CFR Part 11 compliant software
- System monitors to observe internal functions
- Backup option for database
- User defined dedicated access rights for individual users
- Robust reporting tools
- Communication with Freezer

SampleTracker Client:

- Operating system: Windows XP, 7, 8 and Windows 2003 and 2008 Server (English)
- Memory: 8 GB
- Hard disk space: 20 GB
- Prerequisite Software: .NET Framework 4.0 (included)

SampleTracker Server:

- Operating system: Windows XP, 7, 8 and Windows 2003-2012 Server. (English)
- Memory: 8 GB
- Hard disk space: 4 GB
- Prerequisite Software: .NET Framework 4.0 (included)
SQL Server 2008 R2 Express (included) or higher



Life Science | Chemical Research



Ductless Fume Hoods



Ascent® Opti Ductless Fume Hoods

Ascent® Max Ductless Fume Hoods

Specialized Ductless Fume Hoods



SPD-4A_



ADC-4B_



ADC-4D_



ADC-4C_



SPF-4A_



PW1-3A_



SPT-4A_



ASC-4_

Introduction

The Esco Ductless Fume Hoods provide protection to both laboratory personnel and the environment from toxic fumes. Unlike conventional fume hoods, these hoods filter out chemical fumes and recycle air directly back to the laboratory, providing energy savings, personnel and environmental protection, mobility, and convenience. Esco Ductless fume hoods' fume containment and airflow uniformity meet the requirements of ASHRAE 110-1995, BS 7258, EN 14175-3 and AFNOR NFX 15-203.

Key Benefits

- **"GREEN" solution**
 - Environment-friendly
 - Does not discharge toxic gases to the environment
 - Saves energy, and reduces total carbon footprint
- **Safe carbon filtration**
 - Compliance to international standards
 - Proprietary Nanocarb™ activated carbon technology
 - Optional VOC sensor system to detect filter saturation
 - FiltraCheck™ service to qualify your application's suitability for a ductless solution
- **Low cost**
 - No ductwork required
 - No exhaust system required
- **Convenience**
 - No installation hassle
 - Mobile and flexible

Certifications



ASHRAE 110



AFNOR NF X 15-203



EN 14175-3

BS 7258

BS 7989

Product Lines

- Ductless Fume Hoods
*Brand Available: Ascent® Opti
- Standard Ductless Fume Hoods
*Brand Available: Ascent® Max (B-Series)
- Ductless Fume Hoods - with Secondary Back Up Carbon Exhaust Filter
*Brand Available: Ascent® Max (C-Series)
- Ductless Fume Hoods - with Transparent Back Wall
*Brand Available: Ascent® Max (D-Series)
- Ductless Fume Hoods - with Secondary HEPA Filter
*Brand Available: Ascent® Max (E-Series)
- Specialized Ductless Fume Hoods
*Brands Available: PowderMax™ for Powder Weighing Applications
ForMax™ specialized as a Formalin Dispensing Unit
TitraMax™ for Titration Applications
- Filtered Storage Cabinet
*Brand Available: Ascent®



Laboratory Fume Hoods



General Purpose Fume Hoods



EFH



EFD

High Performance Fume Hood



EFA

Full Polypropylene Fume Hood



PPH

Specialized High Performance Fume Hoods



EFP



EFI



EFA-M



EFF

Introduction

Esco Laboratory Fume Hoods are among the best in the world. They comply with international standards ASHRAE 110-1995, BS 7258, and EN 14175-3. They are also tested for fire, electrical, and mechanical hazards under the fume hood standard UL 1805.

Features

- Durable construction made of industrial grade electro-galvanized steel with corrosion and abrasion resistant, oven-baked, powder-coated finish.
- Precisely tuned aerodynamic design eliminates air turbulence, minimizes noise levels and static pressure losses.
- Constant volume/high performance concept eliminates the need for complex VAV systems.
- Ensured maximum containment through computational fluid dynamics design.
- ISOCIDE™ antimicrobial coating prevents surface contamination and inhibits bacterial growth.

Product Lines

- General Purpose Fume Hoods

*Brands Available: Frontier® Mono, Frontier® Duo

- High Performance Fume Hood

*Brand Available: Frontier® Acela

- Specialized High Performance Fume Hood

*Brands Available: Frontier® Acid Digestion, Frontier® Perchloric Acid, Frontier® Radioisotope, Frontier® Acela™ M, Frontier® Floor Mounted

- Full Polypropylene Fume Hood – Trace Metal Applications

*Brand Available: Frontier® PPH

- Chemical Fume Scrubbers

- Exhaust Blowers

- Fume Hood Airflow Monitors

*Brand Available: Sentinel™ XL

Certifications



ASHRAE 110



EN14175



UL 1805



Life Science | General Equipment

Laboratory Thermostatic Products

Forced Convection Laboratory Oven



OFA-110-__

Forced Convection Laboratory Incubator



IFA-110-__

Natural Convection Laboratory Incubator



INA-110-__

Refrigerated Incubator



IFC-110-__

Introduction

The EscO world class laboratory incubators and ovens for thermal convection applications. With ergonomic design, microprocessor PID controls, 4-zone heated air jacket and precisely tuned and tested ventilation and insulation package, EscO Isotherm® is your reliable equipment for universal applications.

Features

- Wide range of programming options
- Multiple over-temperature protection systems guarantee maximum sample and user protection
- Access port for temperature validation and mapping

For Forced Convection Ovens, Incubators and Refrigerated Incubators

- Solaris™ Pre-Heat Chamber Technology
- Forced convection design provides faster temperature response rates, improved uniformity, and reduced fluctuation
- Fan speed and air exchange rates are adjustable
- Ergonomic door handle with keylock
- Optional stainless steel main body meets pharmaceutical and clinical laboratory requirements

For Natural Convection Incubators

- Natural convection design best suits for gentle ventilated incubation requirement
- Ergonomic door handle

Product Lines

- Forced Convection Laboratory Ovens
- Forced Convection Laboratory Incubators
- Natural Convection Laboratory Incubators
- Refrigerated Incubators

*Brand Available: Isotherm®

Conventional PCR Thermal Cyclers



Swift™ Series
Thermal Cyclers, MiniPro®

Aeris™ Thermal Cyclers

Microplate Shaker



ProvoCell™ Shaking
Micro Incubator

Conventional Thermal Cyclers

Introduction

Esco offers a choice of Conventional Thermal Cycler models designed to meet critical requirements for almost all kinds of PCR variants such as Touchdown PCR, High-throughput PCR, *in situ* PCR, and so on. Block configurations are available for a number of sample formats of PCR tubes, strips, plates and slides.

Features

- Excellent temperature uniformity and stability
- Suitable for various sample formats, which can simplify experiments
- User-friendly controls and operation
- Long warranty period wipes your worries away

Product Line

- Conventional PCR Thermal Cycler
- * Brands Available: Aeris™, Swift™

Microplate Shakers

Introduction

The Esco ProvoCell™ Shaking Micro Incubator is designed for a wide variety of mixing applications for accurate incubation of reactions and denaturation of nucleic acids and proteins. ProvoCell™ combines an advanced microprocessor-based controller with Peltier heating and cooling to deliver outstanding reliability, safety and overall performance.

Features

- 7 easily interchangeable blocks designed to suit most of your laboratory applications.
- Digitally controlled
- Advanced Peltier heating and cooling technology
- Fully programmable even during running, with speed setting up to 1500 rpm
- Clear large Vacuum Fluorescent Display (VFD) and User-friendly interface
- Contamination-free metal blocks
- Small footprint
- Can be used inside safety cabinets
- Orbital movement
- Excellent rotation stability
- Optimized mixing
- Durable

Product Line

- Microplate Shaker/Incubator
- *Brand Available: ProvoCell™

PCR Cabinets



Streamline® SCR-2A_



Airstream® PCR-4A_

PCR Cabinets

Introduction

Polymerase Chain Reaction (PCR) is a process where millions of copies of DNA are amplified from a single copy or low copy number template. Because of the high copy number generated during PCR, it is also essential to prevent possible contamination of the PCR samples.

Features

- Greater protection against contamination from the ambient environment and cross-contamination within the main chamber.
- High quality polyester pre-filter and main HEPA filter with a typical efficiency of >99.99% at 0.3 microns.
- Built-in UV lamp with timer to facilitate decontamination between PCR cycles.
- Available in 0.6, 0.9 and 1.2 meter models (2', 3' and 4').

Product Line

- Polymerase Chain Reaction Cabinets

**Brands Available: Airstream®, Streamline®*



Esco Healthcare is the latest Group Division in the Esco Group of companies. Collectively, we enable a complete translational discovery to delivery within the Healthcare Industry from research and development to clinical trials, final commercial production, and pharmacy compounding/stem cell therapy.



ESCO
PHARMA

Esco Pharma is a leading manufacturer of containment and isolation systems with a global footprint spanning US, Europe and Asia. We provide specialist services, equipment packages, and process solutions from core platform products, leading to improved protection of operators, reduction of cross-contamination and more efficient processing, thereby, directly and indirectly, advancing occupational health and human healthcare. Globally, Esco Pharma's scope of activity revolves around Biotherapeutics, Niche Manufacturing, and QC/QA.

Esco provides standardized platforms with built-in configurations, which enables users to modify operational parameters in situ, based on process demands and need not to commit to operational parameters upfront.

Esco Pharma Products

Airflow Containment Products

- Pharmacon® Downflow Booths
- Ceiling Laminar Airflow Units
- Laminar Flow Horizontal Trolley
- Laminar Flow Vertical Trolley
- Enterprise® Laminar Flow Straddle Units
- Garment Storage Cabinet
- Cytotoxic Safety Cabinets
- Bio Booth, Class II Walk-In Containment Enclosure
- Sputum Booth

Cross Contamination Facility Integrated Barrier

- Cleanroom Air Showers
- Infinity® Air Shower Pass Box
- Infinity® Cleanroom Transfer Hatch
- Infinity® Pass Boxes
- Soft Capsule® Soft Wall Cleanroom
- Dynamic Passboxes and Dynamic Floor Label Hatches
- Esco BioVap™ Biodecontamination System
- BioPass™ Pass Through

Isolation Containment

- Streamline® Compounding Isolators (SCI)
- Isoclean® Healthcare Platform Isolator (HPI)
- Containment Barrier Isolator (CBI)
- General Processing Platform Isolator (GPPI)
- Weighing and Dispensing Containment Isolator (WDCI)
- Aseptic Containment Isolator (ACTI)
- Turbulent Flow Aseptic (Grade A) Isolator (TFAI)
- Technetium Dispensing Isolators
- Blood Cell Labeling Isolators
- Open and Closed Restricted Barrier Access Systems (RABS)
- Cell Processing Isolator (CPI)
- Filling Line Isolator

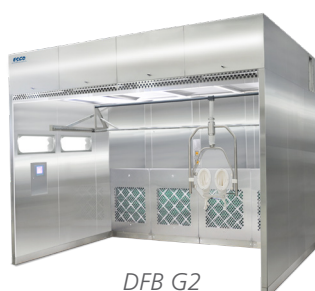
Ventilation Containment

- Ventilated Balance Enclosure

Certification



UL 61010 (for HPI)



DFB G2



TFAI™



BioPass™



VBE



BioVap™
Biodecon System



HPI-G3

ESCO

WORLD CLASS. WORLDWIDE.



TaPestle Rx is the division of Esco Healthcare that specializes in healthcare and laboratory design and construction, providing world class facility brought in line with international cGMP standards.

TaPestle Rx is built on the legacy of two pharmacists whose oath is to consider the welfare of humanity and the relief of human suffering. Our primary concern is always fundamental in shaping our vision of elevating healthcare by providing access to life sciences tools in developing countries.

PRODUCTS

Pharmacy Automation and Compounding Supply

- Compounding Pharmacy Isolators (SCI, HPI, CBI, GPPI)
- Safety Cabinets and Enclosures (Class II BSC, VBE, LFC)
- Radiopharmacy Hoods and Isolators
- Aseptic Filling Systems

Healthcare and Laboratory Construction Components

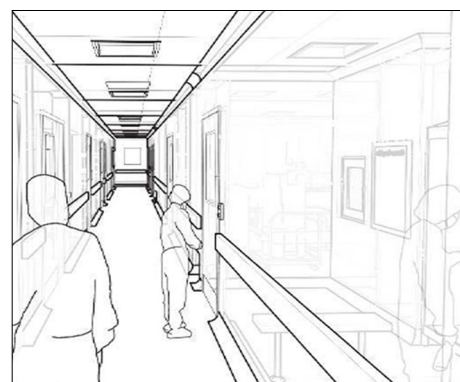
- Prefabricated Walls (Airecell®)
- Prefabricated Containerized Facility (Prefab™)
- Series Ceiling Systems
- Hygienic/Hermetic Door Systems
- Surgical Scrub Sinks
- Vinyl Tiles and Epoxy
- Laboratory Fit-outs
 - Worktops
 - Frames
 - Specialty Storage cabinets
 - Service Spines & Reagent Shelving

FACILITY DESIGNS

- Process Architecture
- Biocontainment/Biosafety
- Pharmacy Compounding/Nuclear Medicine
- Cleanroom, Vaccine and Cell Processing
- Laboratory
- Containerized Facility
- ART/IVF
- Cold Chain

SERVICES

- Conceptualization
- Planning
- Procurement
- Installation





ESCO
VACCIXCELL
ADHERENT BIOPROCESSING SPECIALIST

Esco Vaccixcell is the bioprocessing division of Esco Healthcare, specializing in adherent bioprocessing. Esco Vaccixcell provides design and manufacture of single-use, multiple-use, and hybrid bioreactor solutions for vaccine, cell therapy, and biologics industry. Esco Vaccixcell envisions a world of vaccine self-sufficiency easy access to advanced therapeutics and high quality biologics for all nations. Esco Vaccixcell is Esco's social entrepreneurship, in line with the group's vision to provide enabling technologies to make human lives safer and healthier.

Esco Vaccixcell core technology is the Tide Motion system, which is the only bioreactor system that is truly linearly scalable for up to 5,000 L in packed bed volume comparable to 20,000 L stirred tank manufacturing scale.

Esco Vaccixcell Products

Bioreactors and Fermenters

- CelCradle™
- TideXcell™
- StirCradle™
- StirCradle™-Pro
- Vaccixcell™ Hybrid Bioreactor

Cell Culture Monitoring, Media and Consumables

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

Filling Line Equipment

- Asepticell®
- Traditional Filling Line

Integrated Solutions

- CradlePro-Iso
- Cell Processing Center



CelCradle™



TideXcell™ -002



Vaccixcell™ Hybrid Bioreactor



CradlePro-Iso



StirCradle™



Plus™ MDCK



Super Plus™



GlucCell™

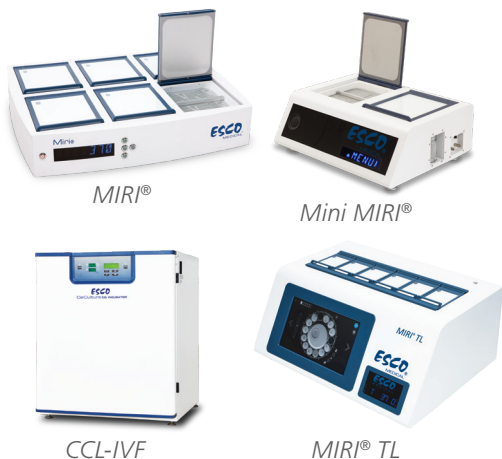


Plus™ Vero



Assisted Reproductive Technology (ART) Equipment

Embryo Culture



Embryo Handling



Quality Control



Introduction

Esco Medical is one of the divisions of the Esco Group of companies, which targets innovative technological solutions for fertility clinics and laboratories. Esco Medical is the leading manufacturer and innovator of high quality IVF equipment that are designed in Denmark and mostly made in the EU.

Embryo Incubators

- Time-Lapse Embryo Incubator
Brand Available: MIRI® TL Embryo Incubator
- Benchtop Multi-Room Incubator
Brand Available: MIRI® Benchtop Multi-room Incubator
- Humidified Benchtop Incubator
Brand Available: Mini MIRI® Benchtop Incubator
- CO₂ Incubator
Brand Available: CelCulture® CO₂ Incubator

Controlled Embryo Handling

- IVF Workstation
Brand Available: Fertilisafe™ IVF Workstation
- Semi Controlled Environment
Brands Available: SCE IVF and SCE ICSI
- Anti-Vibration Table
Brand Available: AVT-1

Other IVF accessories

- CO₂ / O₂ and Temperature Validation unit
Brand Available: MIRI® GA
- CO₂ / O₂ Gas Validation Unit
Brand Available: MIRI® GA Mini
- Stereo Zoom Microscope
Brand Available: Esco Stereomicroscope MS-1
- Continuous pH monitoring tool
Brand Available: SAFE Sens*

*SAFE Sens is a trademark brand of Blood Cell Storage, Inc. (BCSI)

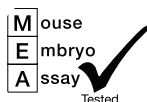
Certification



(for CelCulture)



(for MIRI® TL and MIRI®)





After Sales Services

Parts Availability

Whenever service is needed and parts are required, minimizing downtime is a critical objective. Statistical usage analysis helps Esco to predict parts life, permitting Esco to manage logistics and stage proper inventories around the world. The combination of predictive maintenance, historical data and geospecific proximity assures our customers that parts and labor are available whenever service is scheduled through the local sales organization.

Registration, Documentation and Instruction

Quality control at Esco extends from research and development through engineering, manufacturing, shipment, delivery and customer feedback. Esco maintains an aggressive program to encourage warranty card registration by mail, email or online submission so that we know where Esco products are located and how they are being used. Rest assured that all information disclosed from warranty registrations will be kept confidential. All Esco products include unique serial numbers for identification. Documentation for all performance tests is archived and maintained for customer reference with all the back up procedures.

Online Technical Information

Site preparation instructions are useful before product arrival and installation. Installation and start-up manuals, operation manuals and quick reference guides are available anytime from the Esco resources online. An interactive online LiveSupport™ concierge center accessible through the Esco website offers extended hours of operation. LiveSupport™ permits users to dialogue directly with Esco personnel.

NSF International Accreditations and TÜV Nord Certification

The National Sanitation Foundation (NSF) International is an independent, non-profit organization that provides standards development, product certification, auditing, education and risk management for public health and the environment.

The NSF mark is your assurance that the product complies with all the standard requirements, tested by one of the most respected independent certification organizations in existence today. NSF conducts periodic unannounced inspections and product testing to verify that the product continues to comply with the standard. It is valued by consumers, manufacturers, retailers and regulatory agencies worldwide.

TÜV NORD GS certification has been helping to minimise risks and hence ensure maximum safety and quality. TÜV NORD's recognised certifications stand worldwide for an exemplary level of safety and make a valuable contribution to the continuing improvement of products and processes.

Esco's passed the stringent requirements during testing and inspection and has given as the TÜV NORD approval mark which confirms compliance of the product with the provisions of the Product and Equipment Safety Act as regards health and safety.

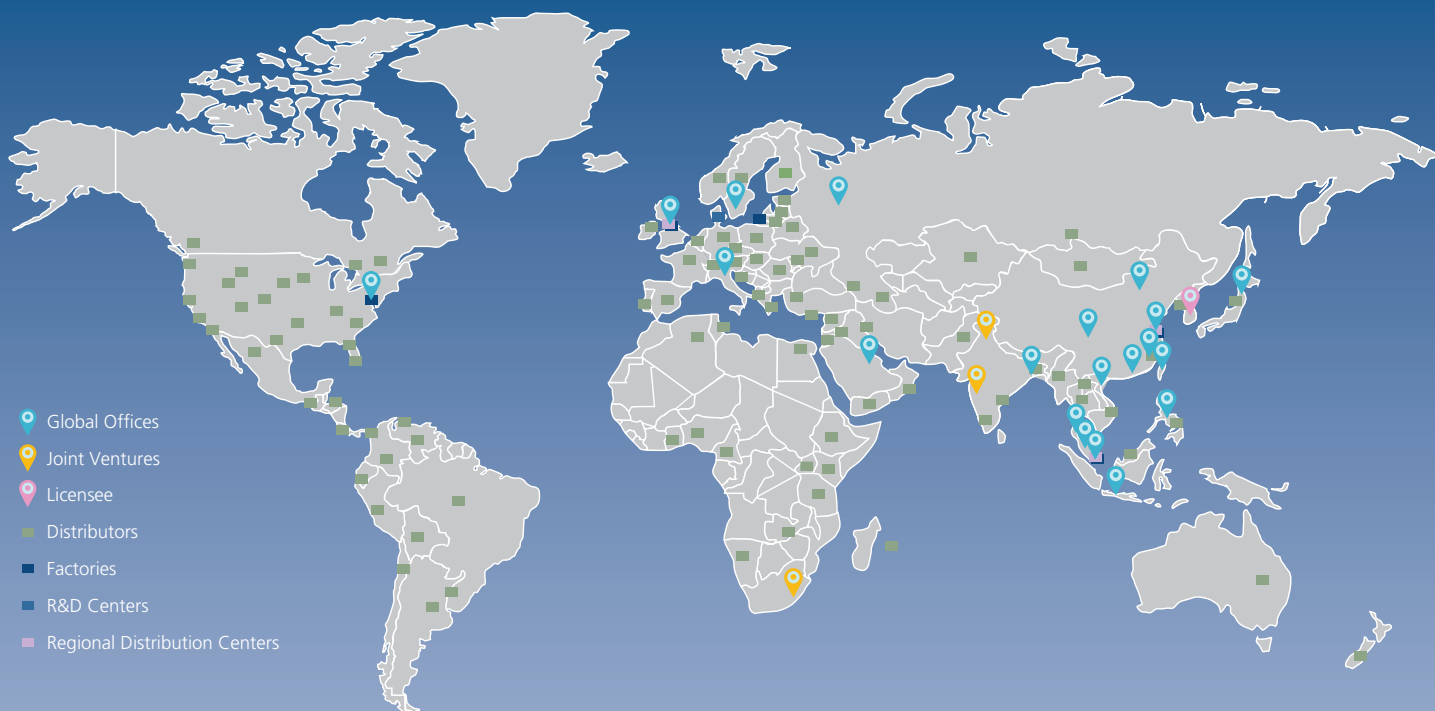
In line with Esco's commitment in providing world class services worldwide, Esco as a manufacturer feels the impact of providing the best after-sales service through our competent service engineers. Thus, Esco is the only manufacturer in the world with the most number of NSF accredited certifiers across the globe. In addition, Esco enhances the capacity to the highest quality of service by providing TÜV NORD GS certified service engineers with expertise to ensure timely preventive and corrective maintenance of the laboratory equipment. These accreditations make Esco not only an **Excellent Standards Company** but also an **Excellent Service Company**, which exemplifies Esco's collective quest of being an **Eternally Successful Company**.

References and Links

For more information, you can visit Esco at www.escoglobal.com

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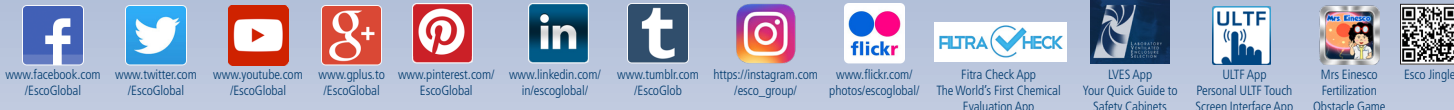
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Esco was named and recognized as one of **2018 Singapore's Top Employer Brands** on the 2018 CEO Asia Summit held at Marriot Tang Plaza Hotel, November 20, 2018.

The Top Employer Brand Award was given to the companies that scored above national benchmarks based on the companies' capacity to engage employees, understand their values, and develop meaningful human resource practices.

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