

ESCO

WORLD CLASS. WORLDWIDE.



Esco HP Series

Laboratory Refrigerators and Freezers
High-Performance Protection For Your Precious Sample





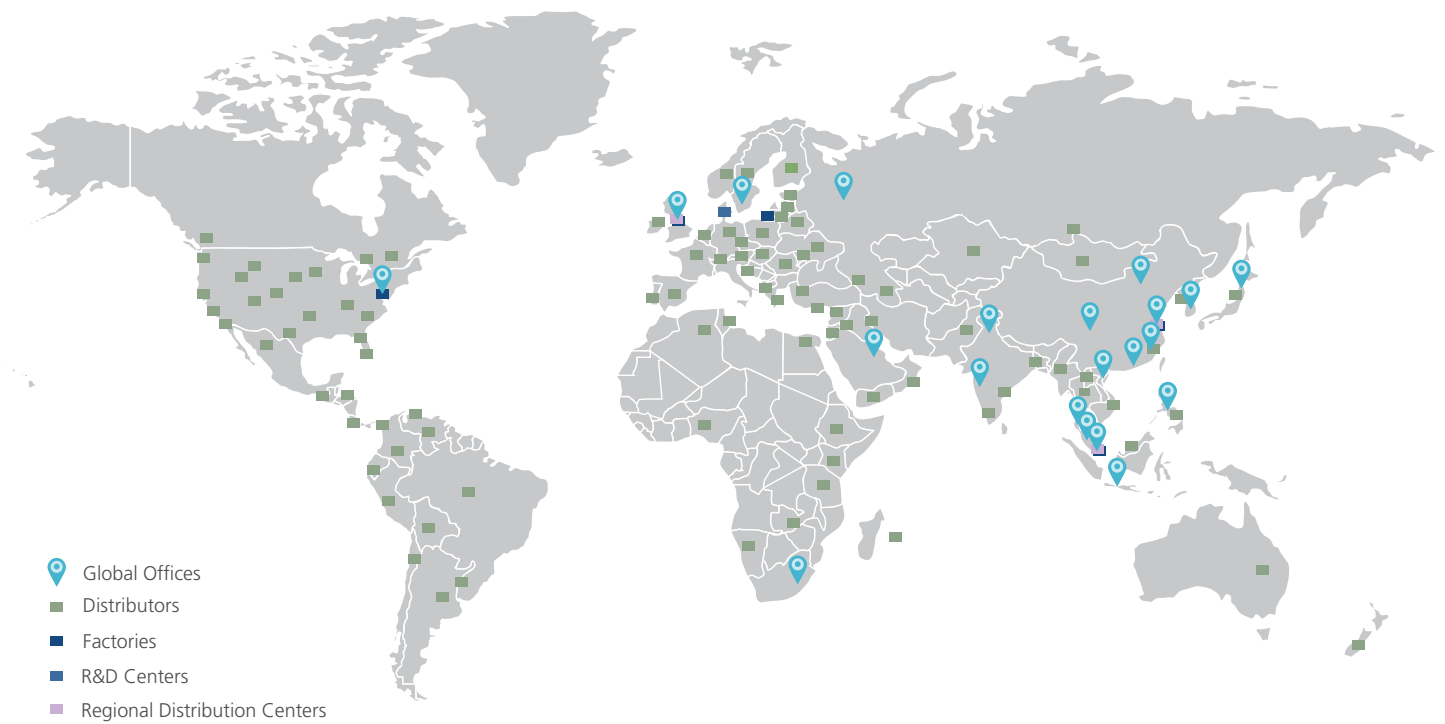
WELCOME TO ESCO

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

- A leader in the development of controlled environment, laboratory and pharmaceutical equipment solutions.
- A world leader in biological safety cabinets.
- Esco has established offices in 13 countries such as Bahrain, China, India, Japan, Korea, Malaysia, Philippines, Singapore, UK, US, Vietnam, South Africa and Indonesia and is continually expanding.
- North American facilities in Pennsylvania; sales, service, logistics for US & Canada.
- Group total of more than 600 employees.
- Distributors in more than 100 countries.
- Products independently tested to international standards.
- Large R&D investments, world leading technologies.
- State-of-the-art production; vertically integrated manufacturing floor space.
- Worldwide service played out over a geographic expanse so broad that the sun never sets on what we do.



GLOBAL NETWORK



Products and Application

Life Sciences Laboratory Equipment

Sample Preparation

- Class I Biological Safety Cabinets
- Class II Type A2 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
- Freeze Dryers

Sample Cultivation

- CO₂ Incubators with Cooling System
- CO₂ Incubators with Stainless Steel Exterior
- CO₂ Incubators (Water Jacketed)
- Laboratory Shakers

Sample Analysis

- PCR Thermal Cyclers
- Conventional Thermal Cyclers
- Real-time PCR Systems

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

General Equipment

Laboratory Thermostatic Products

- Laboratory Oven
- Laboratory Incubator
- Refrigerated Incubator
- Constant Climate Chamber

Medical / IVF Equipment

- Time-Lapse Embryo Incubators
- Benchtop Multi-room Embryo Incubators

- CO₂ Incubators
- IVF Workstation

- Anti-Vibration Table
- CO₂ / O₂ Temperature Validation Unit

Pharmaceutical Equipment

Airflow Containment

- Downflow Booths
- Ceiling Laminar Airflow Units
- Laminar Flow Horizontal Trolley
- Laminar Flow Vertical Trolley
- Laminar Flow Straddle Units
- Garment Storage Cabinet

Isolation Containment

- Aseptic Containment Isolator (ACTI)
- Weighing and Dispensing Containment Isolator (WDCI)
- General Processing Platform Isolator (GPPI)

Cross Contamination Facility Integrated Barrier

- Cleanroom Air Showers
- Air Shower Pass Box
- Cleanroom Transfer Hatch
- Pass Boxes
- Soft Wall Cleanroom
- Dynamic Passboxes and Dynamic Floor Label Hatches

Barrier Isolation System

- Pharmacy Compounding Aseptic Containment Isolator (Recirculating)
- Pharmacy Compounding Aseptic Isolator
- Cytotoxic Safety Cabinets

HP Series

Laboratory Refrigerators and Freezers

INTRODUCTION

Esco HP Series Refrigerators and Freezers are designed for laboratory use, offering superior product protection with long-term reliability and exceptional product quality.

When superior levels of cold storage performance, reliability and flexibility are needed, the ESCO HP Series Laboratory Refrigerators and Freezers are the best choice—providing high-performance protection for your precious samples!



HP SERIES LABORATORY REFRIGERATORS



HP SERIES LABORATORY FREEZERS



HP SERIES LABORATORY COMBINATION REFRIGERATORS AND FREEZERS

KEY FEATURES

High-performance protection for your precious samples!

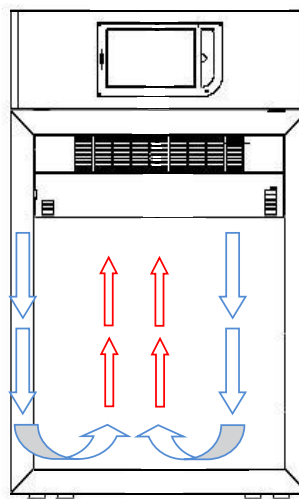
SUPERIOR DESIGN

The AVERAGE value of samples in a laboratory refrigerator or freezer is \$50,000 USD!

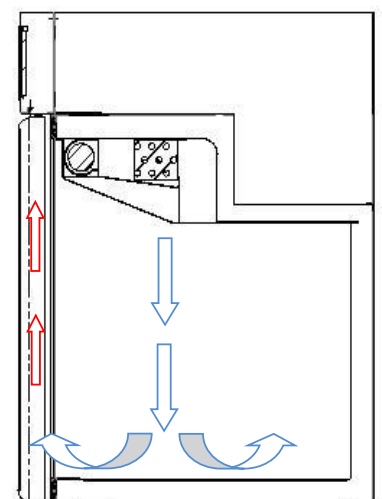
For long-term reliability and product quality – protect samples!

FORCED-AIR DESIGN

- Superior forced-air design instead of regular cold wall for both refrigerators and freezers.
- Rapid cooldown and very fast recovery due to fan assistance.
- Fast temperature equilibration; superior sample protection!



Front View



Side View

INTELLIGENT AUTOMATIC DEFROST FOR ADDITIONAL SAMPLE PROTECTION

- High Performance units use intelligent defrost to maximize sample protection.
- Computer has a thermocouple on the evaporator.
 - Detects ice formation.
 - Defrosts only when needed to keep units at optimum performance.
 - Keeps chamber temperature within safe limits.
 - No sample risk when cold wall.



HP Series Laboratory Refrigerator

Esco HP Series Laboratory Refrigerators are designed for laboratory use offering superior product protection with long term reliability and exceptional product quality. Laboratory Refrigerators are widely used by laboratories, hospitals, clinics and pharmacies. They ensure optimal storage conditions for temperature-sensitive biological and medical products in order to meet the accurate storage temperature required. Its temperature ranges from +2°C to +15°C.

Door Lock

- Provides additional security for expensive samples and reagents from unauthorized users



Internal LED Lighting

- Save up to 70% power with less heat exposure to precious samples. LED lighting also has a longer lifetime than fluorescent or incandescent lighting



Stainless Steel Interior

- Avoids corrosion and protects your precious samples from contamination



Wheels

- Provided as a standard to make units easy to locate and move



Small Caster



Standard Caster

Controller

- Displays data about the unit and used to control temperature and other menu



Touchscreen Controller



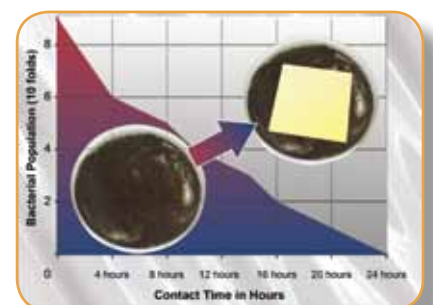
Standard Controller

Triple-Pane Glass Door

- Easily locate needed samples or reagents with the door closed, preventing unnecessary warming of samples or reagents risk. Triple-pane doors provide superior insulation compared to any other glass door technology
- Door automatically closes under 90° when released to maintain temperature and to protect samples

Quality Esco Construction

- Electrogalvanized steel with white, oven-baked epoxy-polyester, anti-microbial, **ISOCIDE™** powder-coated finish to eliminate 99.9% of surface bacteria within 24 hours of exposure



HR1-400S-

Guide to Models, HP Series Laboratory Refrigerator

H R 1 - 400

Product Line	Code	Type	Code	Temperature Range	Code	Volume	Code	Controller	Code	Electrical Code	Code
High Performance	H	Refrigerator	R	+2°C to +15°C (35.6°F to 59°F)	1	128 L (4.5 cu. ft)	140	Standard	S	220-240 VAC, 50 Hz	1
						347 L (12.3 cu. ft)	400				
						620 L (21.9 cu. ft)	700	Touchscreen	T	110-120 VAC, 50/60 Hz	2
						1355 L (47.9 cu. ft)	1500			220-240 VAC, 60 Hz	3
										220-240 VAC, 50/60 Hz	8

General Specifications, HP Series Laboratory Refrigerator

Model	220-240 VAC, 50 Hz		HR1-400S-1 2130002	HR1-400T-1 2130013					
	110-120 VAC, 50/60 Hz	HR1-140S-2 2130023	HR1-400S-2 2130025	HR1-400T-2 2130027	HR1-700S-2 2130028	HR1-700T-2 2130029	HR1-1500S-2 2130030	HR1-1500T-2 2130031	
	220-240 VAC, 60 Hz		HR1-400S-3 2130024	HR1-400T-3 2130026					
	220-240 VAC, 50/60 Hz	HR1-140S-8 2130001			HR1-700S-8 2130003	HR1-700T-8 2130014	HR1-1500S-8 2130004	HR1-1500T-8 2130015	
Capacity		128 L (4.5 cu. ft)		347 L (12.3 cu. ft)		620 L (21.9 cu. ft)		1355 L (47.9 cu ft)	
Temperature Range		+2°C to +15°C (35.6°F to 59°F)							
Temperature Uniformity Range		±3°C (37.4°F)							
Door		1 glass door with triple-pane glass panels with ergonomic handle					2 glass doors with triple-pane glass panels and ergonomic handle		
Alarms			Open door, High/Low temperature, Clogged condenser filter						
Controller		Standard Controller with 0.1°C resolution, password protected			Touchscreen Controller	Standard Controller with 0.1°C resolution, password protected	Touchscreen Controller	Standard Controller with 0.1°C resolution, password protected	Touchscreen Controller
Defrost		Intelligent Automatic							
Warranty		2 years							
Certifications		CE Mark							
Door Lock		Key Lock			Electronic Door Lock	Key Lock	Electronic Door Lock	Key Lock	Electronic Door Lock
Dry Contacts Alarm		Dry contact to connect to remote alarms							
Lighting		LED							
Wheels		Small Caster (3.5 cm)				Standard Caster (10.5 cm)			
Refrigerant		R134a	R404a			R134a			
Power Consumption (kW/24H)		2.2				2.9		4.9	
Interior Walls		AISI 304 Stainless Steel							
Shelves		2 shelves	4 shelves					8 shelves	
Maximum Number of Shelves/Drawers		3/5	7/14			8/14		16/28	
Typical Noise Level (<dBA)		39	46			51		54	
Internal Dimensions (W x D x H)		400 x 516 x 560 mm (17.3" x 20.3" x 22")		500 x 493 x 1405 mm (19.7" x 19.4" x 55.3")		600 x 686 x 1505 mm (23.6" x 27.0" x 59.3")		1300 x 690 x 1510 mm (51.2" x 27.2" x 59.4")	
Insulation Thickness		40 mm (1.6")		60 mm (2.4")				70 mm (2.8")	
External Dimensions (W x D x H)		520 x 635 x 835 mm (20.5" x 25" x 32.9")		600 x 655 x 1955 mm (23.6" x 25.8" x 77.0")		720 x 825 x 2050 mm (28.3" x 32.5" x 80.7")		1440 x 820 x 2050 mm (56.7" x 32.3" x 80.7")	
Net Weight		58 Kg (127.9 lbs)		112 Kg (246.9 lbs)		129 Kg (284.4 lbs)		227 Kg (500.4 lbs)	
Shipping Weight		67 Kg (147.7 lbs)		135 Kg (297.6 lbs)		172 Kg (379.2 lbs)		264 Kg (582.0 lbs)	
Shipping Volume		0.41 m³ (37.1 cu. ft)		1.05 m³ (37.1 cu. ft)		1.49 m³ (52.6 cu. ft)		2.72 m³ (96.1 cu. ft)	
Shipping Dimensions (W x D x H)		550 x 690 x 1080 mm (21.7" x 27.2" x 42.5")		650 x 720 x 2250 mm (25.6" x 28.3" x 88.6")		760 x 870 x 2250 mm (29.9" x 34.3" x 88.6")		1490 x 860 x 2120 mm (58.7" x 33.9" x 83.5")	



HP Series Laboratory Freezer

Esco HP Series Laboratory Freezers are designed for laboratory use offering superior product protection with long term reliability and exceptional product quality. Laboratory Freezers are generally used for storing non-volatile reagents and biological specimens for a longer period of time. The temperature ranges from -10°C to -40°C .

Door Lock

- Provides additional security for expensive samples and reagents from unauthorized users



Internal LED Lighting

- Save up to 70% power with less heat exposure to precious samples. LED lighting also has a longer lifetime than fluorescent or incandescent lighting



Stainless Steel Interior

- Avoids corrosion and protects your precious samples from contamination



Wheels

- Provided as a standard to make units easy to locate and move



Small Caster



Standard Caster

Controller

- Displays data about the unit and used to control temperature and other menu



Touchscreen Controller



Standard Controller

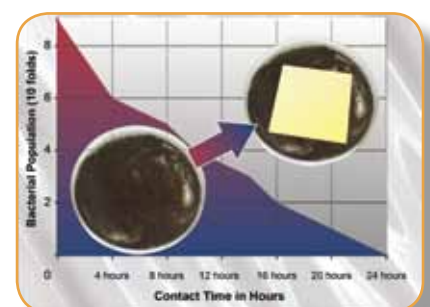
Solid Door

- Provides superior insulation. Door automatically closes under 90° when released to maintain temperature and to protect samples



Quality Esco Construction

- Electrogalvanized steel with white, oven-baked epoxy-polyester, anti-microbial, **ISOCIDE™** powder-coated finish to eliminate 99.9% of surface bacteria within 24 hours of exposure



HF2-400S-

Guide to Models, HP Series Laboratory Freezer

H F 2 - 140

Product Line	Code	Type	Code	Temperature Range	Code	Volume	Code	Controller	Code	Electrical Code	Code	
High Performance	H	Freezer	F	-10°C to -20°C (14°F to -4°F) for 140 L units	2	128 L (4.5 cu. ft)	140	Standard	S	220-240 VAC, 50 Hz	1	
				347 L (12.3 cu. ft)		400	Touchscreen	T	110-120 VAC, 50/60 Hz	2		
				-10°C to -25°C (14°F to -13°F) for 400 / 700 / 1500 L units		620 L (21.9 cu. ft)	700			220-240 VAC, 60 Hz	3	
						1355 L (47.9 cu. ft)	1500					

General Specifications, HP Series Laboratory Freezer

Model	220-240 VAC, 50 Hz	HF2-140S-1 2130005	HF2-400S-1 2130006	HF2-400T-1 2130016	HF2-700S-1 2130007	HF2-700T-1 2130017	HF2-1500S-1 2130008	HF2-1500T-1 2130018
	110-120 VAC, 50/60 Hz	HF2-140S-2 2130033	HF2-400S-2 2130035	HF2-400T-2 2130037	HF2-700S-2 2130039	HF2-700T-2 2130041	HF2-1500S-2 2130043	HF2-1500T-2 2130045
	220-240 VAC, 60 Hz	HF2-140S-3 2130032	HF2-400S-3 2130034	HF2-400T-3 2130036	HF2-700S-3 2130038	HF2-700T-3 2130040	HF2-1500S-3 2130042	HF2-1500T-3 2130044
Capacity		128 L (4.5 cu. ft)	347 L (12.3 cu. ft)		620 L (21.9 cu. ft)		1355 L (47.9 cu. ft)	
Temperature Range		-10°C to -20°C (14°F to -4°F)	-10°C to -25°C (14°F to -13°F)					
Temperature Uniformity Range		±3°C (37.4°F)						
Door		1 solid door, steel white color with aluminum handle and powder-coated with ISOCIDE™					2 solid doors, steel white color with aluminum handle and powder-coated with ISOCIDE™	
Alarms		Open door, High/Low temperature, Clogged condenser filter						
Controller		Standard Controller with 0.1°C resolution, password protected		Touchscreen Controller	Standard Controller with 0.1°C resolution, password protected	Touchscreen Controller	Standard Controller with 0.1°C resolution, password protected	Touchscreen Controller
Defrost		Intelligent Automatic						
Warranty		2 years						
Certifications		CE Mark						
Door Lock		Key Lock		Electronic Door Lock	Key Lock	Electronic Door Lock	Key Lock	Electronic Door Lock
Dry Contacts Alarm		Dry contact to connect to remote alarms						
Lighting		LED						
Wheels		Small Caster (3.5 cm)			Standard Caster (10.5 cm)			
Refrigerant		R404a						
Power Consumption (kW/24H)		5.2	8.6		12.1		14.3	
Interior Walls		AISI 304 Stainless Steel						
Shelves		2 shelves	4 shelves				8 shelves	
Maximum Number of Shelves/Drawers		3/5	5/7		6/7		12/14	
Typical Noise Level (<dBA)		43	49		52		55	
Internal Dimensions (W x D x H)		440 x 516 x 560 mm (17.3" x 20.3" x 22.0")	500 x 493 x 1405 mm (19.7" x 19.4" x 55.3")		600 x 686 x 1505 mm (23.6" x 27.0" x 59.3")		1300 x 690 x 1510 mm (51.2" x 27.2" x 59.4")	
Insulation Thickness		40 mm (1.6")	60 mm (2.4")				70 mm (2.8")	
External Dimensions (W x D x H)		520 x 635 x 835 mm (20.5" x 25.0" x 32.9")	600 x 655 x 1955 mm (23.6" x 25.8" x 77.0")		720 x 825 x 2050 mm (28.3" x 32.5" x 80.7")		1440 x 820 x 2050 mm (56.7" x 32.3" x 80.7")	
Net Weight		52 Kg (114.6 lbs)	98 Kg (216.1 lbs)		116 Kg (255.7 lbs)		229 Kg (504.9 lbs)	
Shipping Weight		62 Kg (136.7 lbs)	119 Kg (262.4 lbs)		160 Kg (352.7 lbs)		249 Kg (549.0 lbs)	
Shipping Volume		0.41 m³ (14.5 cu. ft)	1.05 m³ (37.1 cu. ft)		1.49 m³ (52.6 cu. ft)		2.72 m³ (96.1 cu. ft)	
Shipping Dimensions (W x D x H)		550 x 690 x 1080 mm (21.7" x 27.2" x 42.5")	650 x 720 x 2250 mm (25.6" x 28.3" x 88.6")		760 x 870 x 2250 mm (29.9" x 34.3" x 88.6")		1490 x 860 x 2120 mm (58.7" x 33.9" x 83.5")	

Guide to Models, HP Series Laboratory Freezer

HF3 - 400

Product Line	Code	Type	Code	Temperature Range	Code	Volume	Code	Controller	Code	Electrical Code	Code
High Performance	H	Freezer	F	-20°C to -40°C (-4°F to -40°F)	3	360 L (12.7 cu ft)	400	Standard	S	220-240 VAC, 50 Hz	1
						544 L (19.2 cu. ft)	700	Touchscreen	T	110-120 VAC, 50/60 Hz	2
										220-240 VAC, 60 Hz	3

General Specifications, HP Series Laboratory Freezer

Model	220-240 VAC, 50 Hz	HF3-400S-1 2130009	HF3-400T-1 2130019	HF3-700S-1 2130010	HF3-700T-1 2130020
	110-120 VAC, 50/60 Hz	HF3-400S-2 2130047	HF3-400T-2 2130049	HF3-700S-2 2130051	HF3-700T-2 2130053
	220-240 VAC, 60 Hz	HF3-400S-3 2130046	HF3-400T-3 2130048	HF3-700S-3 2130050	HF3-700T-3 2130052
Capacity		360 L (12.7 cu. ft)		544 L (19.2 cu. ft)	
Temperature Range		-20°C to -40°C (-4°F to -40°F)			
Temperature Uniformity Range		±3°C (37.4°F)			
Door		1 solid door, steel white color with aluminum handle and powder-coated with ISOCIDE™			
Alarms		Open door, High/Low temperature, Clogged condenser filter			
Controller		Standard Controller with 0.1°C resolution, password protected	Touchscreen Controller	Standard Controller with 0.1°C resolution, password protected	Touchscreen Controller
Defrost		Intelligent Automatic			
Warranty		2 years			
Certifications		CE Mark			
Door Lock		Key Lock	Electronic Door Lock	Key Lock	Electronic Door Lock
Dry Contacts Alarm		Dry contact to connect to remote alarms			
Wheels		Small Caster (3.5 cm)		Standard Caster (10.5 cm)	
Refrigerant		R404a			
Power Consumption (kW/24H)		13.8		14.2	
Interior Walls		AISI 304 Stainless Steel			
Shelves		4 shelves			
Maximum Number of Shelves/Drawers		6/6		7/7	
Typical Noise Level (<dBA)		50		60	
Internal Dimensions (W x D x H)		510 x 600 x 1255 mm (20.1" x 23.6" x 49.4")		600 x 686 x 1320 mm (23.6" x 27.0" x 52.0")	
Insulation Thickness		80 mm (3.1")		60 mm (2.4")	
External Dimensions (W x D x H)		670 x 825 x 1940 mm (26.4" x 32.5" x 76.4")		720 x 860 x 2050 mm (28.3" x 33.9" x 80.7")	
Net Weight		145 Kg (320.0 lbs)		142 Kg (313.0 lbs)	
Shipping Weight		159 Kg (350.5 lbs)		175 Kg (385.8 lbs)	
Shipping Volume		1.39 m³ (49.1 cu. ft)		1.57 m³ (55.4 cu. ft)	
Shipping Dimensions (W x D x H)		710 x 870 x 2250 mm (28.0" x 34.3" x 88.6")		760 x 920 x 2250 mm (29.9" x 36.2" x 88.6")	



HC6-400S-

HC6-700S-

HP Series Combination Laboratory Refrigerator and Freezer

Esco HP Series Laboratory Combination Refrigerators and Freezers are designed for laboratory use offering superior product protection with long term reliability and exceptional product quality. It is a double temperature equipment featuring two independent component. It can be used for a wide variety of applications in life science. Its temperature ranges from +2°C to +15°C for refrigerator and -10°C to -24°C for freezer.

Door Lock

- Provides additional security for expensive samples and reagents from unauthorized users



Solid Steel Door

- Solid doors provide superior insulation
- Doors automatically close under 90° when released to maintain temperature and to protect samples

Internal LED Lighting

- Save up to 70% power with less heat exposure to precious samples. LED lighting also has a longer lifetime than fluorescent or incandescent lighting



Wheels

- Provided as a standard to make units easy to locate and move



Small Caster



Standard Caster

Controller

- Displays data about the unit and used to control temperature and other menu



Touchscreen Controller



Standard Controller

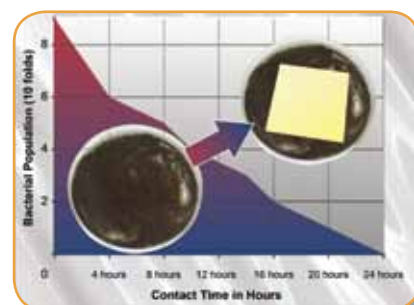
Stainless Steel Interior

- Avoids corrosion and protects your precious samples from contamination



Quality Esco Construction

- Electrogalvanized steel with white, oven-baked epoxy-polyester, anti-microbial, **ISOCIDE™** powder-coated finish to eliminate 99.9% of surface bacteria within 24 hours of exposure



HC6-400S-

Guide to Models, HP Series Laboratory Combination Refrigerator and Freezer

H C 6 - 400

Product Line	Code	Type	Code	Temperature Range	Code	Volume	Code	Controller	Code	Electrical Code	Code
High Performance	H	Combination of Refrigerator and Freezer	C	Refrigerator: +2°C to +15°C (35.6°F to 59°F) Freezer: -10°C to -24°C (14°F to -11.2°F)	6	Refrigerator: 170 L (6.0 cu. ft) Freezer: 160 L (5.7 cu. ft)	400	Standard	S	220-240 VAC, 50 Hz	1
						Refrigerator: 260 L (9.19 cu. ft) Freezer: 265 L (9.77 cu.ft)	700	Touchscreen	T	110-120 VAC, 50/60 Hz	2
										220-240 VAC, 60 Hz	3

General Specifications, HP Series Laboratory Combination Refrigerator and Freezer

Model	220-240 VAC, 50 Hz	HC6-400S-1 2130011	HC6-400T-1 2130021	HC6-700S-1 2130012	HC6-700T-1 2130022
	110-120 VAC, 50/60 Hz	HC6-400S-2 2130055	HC6-400T-2 2130057	HC6-700S-2 2130059	HC6-700T-2 2130061
	220-240 VAC, 60 Hz	HC6-400S-3 2130054	HC6-400T-3 2130056	HC6-700S-3 2130058	HC6-700T-3 2130060
Capacity		Refrigerator: 170 L (6.0 cu. ft) Freezer: 160 L (5.7 cu. ft)		Refrigerator: 260 L (9.2 cu. ft) Freezer: 265 L (9.4 cu. ft)	
Temperature Range		Refrigerator: +2°C to +15°C (35.6°F to 59°F) Freezer: -10°C to -24°C (14°F to -11.2°F)			
Temperature Uniformity Range		±3°C (37.4°F)			
Door		2 solid doors, steel white color with aluminum handle and powder-coated with ISOCIDE™			
Alarms		Open door, High/Low temperature, Clogged condenser filter			
Controller		Standard Controller with 0.1°C resolution, password protected	Touchscreen Controller	Standard Controller with 0.1°C resolution, password protected	Touchscreen Controller
Defrost		Intelligent Automatic			
Warranty		2 years			
Certifications		CE Mark			
Door Lock		Key Lock	Electronic Door Lock	Key Lock	Electronic Door Lock
Dry Contacts Alarm		Dry contact to connect to remote alarms			
Lighting		LED			
Wheels		Small Caster (3.5 cm)		Standard Caster (10.5 cm)	
Refrigerant		R404a			
Power Consumption (kW/24H)		7.8		13.8	
Interior Walls		AISI 304 Stainless steel			
Shelves		4 shelves			
Maximum Number of Shelves/Drawers		6/10			
Typical Noise Level (<dBA)		53		55	
Internal Dimensions (W x D x H)		Refrigerator: 500 x 490 x 685 mm (19.7" x 19.3" x 27.0") Freezer: 500 x 496 x 730 mm (19.7" x 19.5 x 28.7")		Refrigerator: 600 x 686 x 700 mm (23.6" x 27.0" x 27.6") Freezer: 600 x 686 x 740 mm (23.6" x 27.0" x 29.1")	
Insulation Thickness		Refrigerator: 50 mm (2.0") Freezer: 70 mm (2.8")		Refrigerator: 60 mm (2.4") Freezer: 60 mm (2.4")	
External Dimensions (W x D x H)		600 x 630 x 2015 mm (23.6" x 24.8" x 79.3")		720 x 860 x 2050 mm (28.3" x 33.9" x 80.7")	
Net Weight		126 Kg (277.8 lbs)		154 Kg (339.5 lbs)	
Shipping Weight		140 Kg (308.6 lbs)		193 Kg (425.5 lbs)	
Shipping Volume		1.06 m³ (37.4 cu. ft)		1.54 m³ (54.4 cu. ft)	
Shipping Dimensions (W x D x H)		650 x 720 x 2270 mm (25.6" x 28.3" x 89.4")		760 x 900 x 2250 mm (29.9" x 35.4" x 88.6")	

EXCELLENT PERFORMANCE

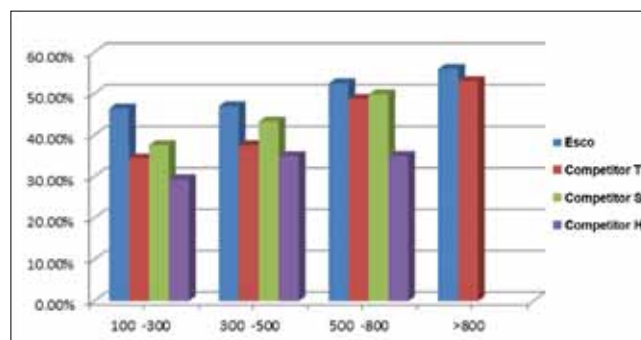
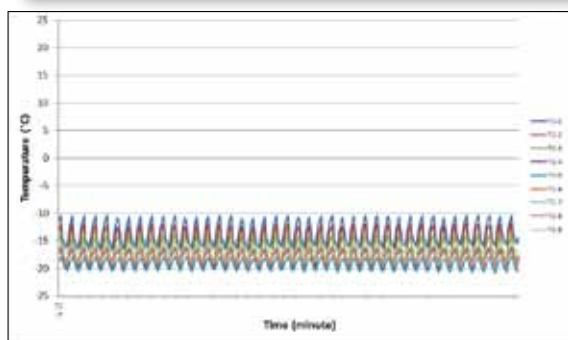
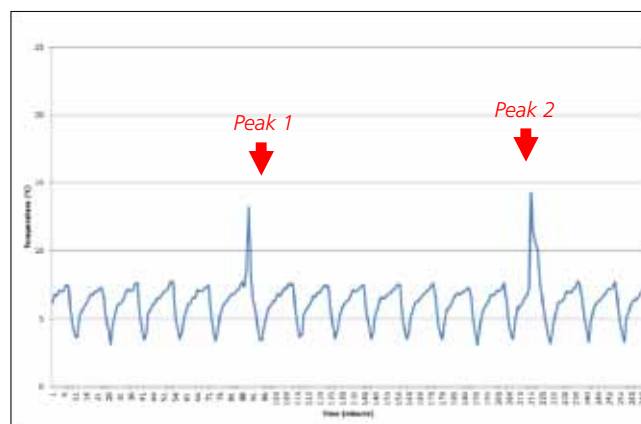
Fast Temperature Recovery After Door Opening

- With a laboratory-grade sealed system, Esco HP Series provide FAST TEMPERATURE RECOVERY from door open events.
- Bigger compressor with longer life.
- More refrigeration power for fast cool down and high stability.

Performance Testing-700 L Refrigerator

Remark: Two spikes mean door openings.

Temperature Recovery	Peak1	Peak2
Max (°C)	13.2	14.3
Min (°C)	3.4	3.1
Rate (°C/min)	1.63	1.24



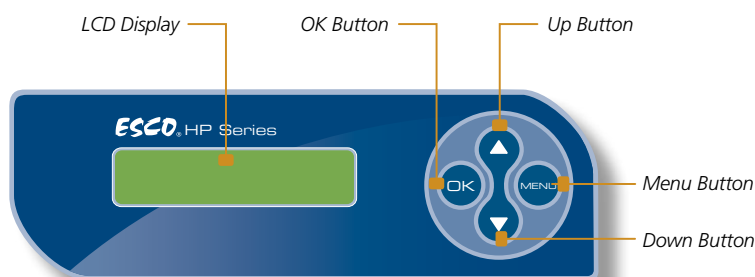
Excellent Uniformity

- Uniformity test measures the difference between the coldest spot and warmest spot in the freezer chamber when the freezer is operating at a set temperature.
- Esco HP Series has excellent chamber uniformity. This guarantees that all samples are protected regardless of their location.

Superior Cabinet Design

- A ratio of capacity and external dimension is a very good measure of the value of the effective capacity of the refrigerator and freezer
- Esco reserve capacity surpasses that all major competitors above.

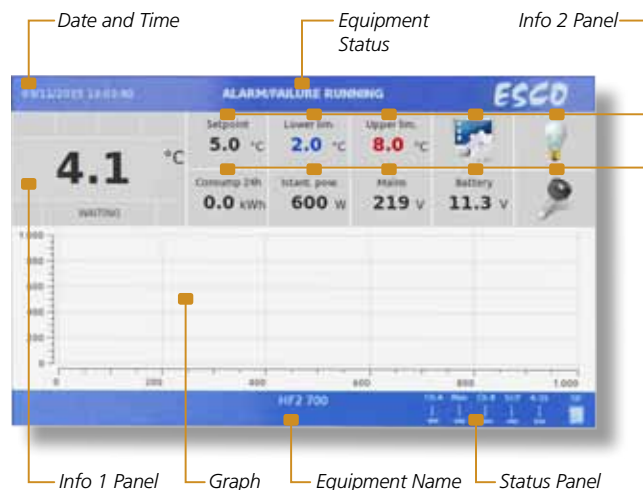
CONTROL SYSTEM



Standard Controller

Features:

- Advanced defrost monitoring, lower power consumption and greater guarantee of temperature uniformity
- Temperature display
- Signaling critical conditions.



Touchscreen Controller

Features:

- Multi-user management with passwords
- Live and historical graphing of temperature
- Data storage on SD card
- Ethernet connection
- Electronic door lock

ORDERING INFORMATION

Laboratory Refrigerators				
Model	Item Code	Description	Controller	Electrical
HR1-140S-2	2130023	Refrigerator, Undercounter model, 128 L, +2°C to +15°C	Standard Controller	110-120 VAC, 50/60 Hz
HR1-140S-8	2130001	Refrigerator, Undercounter model, 128 L, +2°C to +15°C	Standard Controller	220-240 VAC, 50/60 Hz
HR1-400S-1	2130002	Refrigerator, Upright model, 347 L, +2°C to +15°C	Standard Controller	220-240 VAC, 50 Hz
HR1-400S-2	2130025	Refrigerator, Upright model, 347 L, +2°C to +15°C	Standard Controller	110-120 VAC, 50/60 Hz
HR1-400S-3	2130024	Refrigerator, Upright model, 347 L, +2°C to +15°C	Standard Controller	220-240 VAC, 60 Hz
HR1-400T-1	2130013	Refrigerator, Upright model, 347 L, +2°C to +15°C	Touchscreen Controller	220-240 VAC, 50 Hz
HR1-400T-2	2130027	Refrigerator, Upright model, 347 L, +2°C to +15°C	Touchscreen Controller	110-120 VAC, 50/60 Hz
HR1-400T-3	2130026	Refrigerator, Upright model, 347 L, +2°C to +15°C	Touchscreen Controller	220-240 VAC, 60 Hz
HR1-700S-2	2130028	Refrigerator, Upright model, 620 L, +2°C to +15°C	Standard Controller	110-120 VAC, 50/60 Hz
HR1-700S-8	2130003	Refrigerator, Upright model, 620 L, +2°C to +15°C	Standard Controller	220-240 VAC, 50/60 Hz
HR1-700T-2	2130029	Refrigerator, Upright model, 620 L, +2°C to +15°C	Touchscreen Controller	110-120 VAC, 50/60 Hz
HR1-700T-8	2130014	Refrigerator, Upright model, 620 L, +2°C to +15°C	Touchscreen Controller	220-240 VAC, 50/60 Hz
HR1-1500S-2	2130030	Refrigerator, Upright model, 1355 L, +2°C to +15°C	Standard Controller	110-120 VAC, 50/60 Hz
HR1-1500S-8	2130004	Refrigerator, Upright model, 1355 L, +2°C to +15°C	Standard Controller	220-240 VAC, 50/60 Hz
HR1-1500T-2	2130031	Refrigerator, Upright model, 1355 L, +2°C to +15°C	Touchscreen Controller	110-120 VAC, 50/60 Hz
HR1-1500T-8	2130015	Refrigerator, Upright model, 1355 L, +2°C to +15°C	Touchscreen Controller	220-240 VAC, 50/60 Hz

Laboratory Freezers				
Model	Item Code	Description	Controller	Electrical
HF2-140S-1	2130005	Freezer, Undercounter model, 128 L, -10°C to -20°C	Standard Controller	220-240 VAC, 50 Hz
HF2-140S-2	2130033	Freezer, Undercounter model, 128 L, -10°C to -20°C	Standard Controller	110-120 VAC, 50/60 Hz
HF2-140S-3	2130032	Freezer, Undercounter model, 128 L, -10°C to -20°C	Standard Controller	220-240 VAC, 60 Hz
HF2-400S-1	2130006	Freezer, Upright model, 347 L, -10°C to -25°C	Standard Controller	220-240 VAC, 50 Hz
HF2-400S-2	2130035	Freezer, Upright model, 347 L, -10°C to -25°C	Standard Controller	110-120 VAC, 50/60 Hz
HF2-400S-3	2130034	Freezer, Upright model, 347 L, -10°C to -25°C	Standard Controller	220-240 VAC, 60 Hz
HF2-400T-1	2130016	Freezer, Upright model, 347 L, -10°C to -25°C	Touchscreen Controller	220-240 VAC, 50 Hz
HF2-400T-2	2130037	Freezer, Upright model, 347 L, -10°C to -25°C	Touchscreen Controller	110-120 VAC, 50/60 Hz
HF2-400T-3	2130036	Freezer, Upright model, 347 L, -10°C to -25°C	Touchscreen Controller	220-240 VAC, 60 Hz
HF2-700S-1	2130007	Freezer, Upright model, 620 L, -10°C to -25°C	Standard Controller	220-240 VAC, 50 Hz
HF2-700S-2	2130039	Freezer, Upright model, 620 L, -10°C to -25°C	Standard Controller	110-120 VAC, 50/60 Hz
HF2-700S-3	2130038	Freezer, Upright model, 620 L, -10°C to -25°C	Standard Controller	220-240 VAC, 60 Hz
HF2-700T-1	2130017	Freezer, Upright model, 620 L, -10°C to -25°C	Touchscreen Controller	220-240 VAC, 50 Hz
HF2-700T-2	2130041	Freezer, Upright model, 620 L, -10°C to -25°C	Touchscreen Controller	110-120 VAC, 50/60 Hz
HF2-700T-3	2130040	Freezer, Upright model, 620 L, -10°C to -25°C	Touchscreen Controller	220-240 VAC, 60 Hz

Laboratory Freezers

Model	Item Code	Description	Controller	Electrical
HF2-1500S-1	2130008	Freezer, Upright model, 1355 L, -10°C to -25°C	Standard Controller	220-240 VAC, 50 Hz
HF2-1500S-2	2130043	Freezer, Upright model, 1355 L, -10°C to -25°C	Standard Controller	110-120 VAC, 50/60 Hz
HF2-1500S-3	2130042	Freezer, Upright model, 1355 L, -10°C to -25°C	Standard Controller	220-240 VAC, 60 Hz
HF2-1500T-1	2130018	Freezer, Upright model, 1355 L, -10°C to -25°C	Touchscreen Controller	220-240 VAC, 50 Hz
HF2-1500T-2	2130045	Freezer, Upright model, 1355 L, -10°C to -25°C	Touchscreen Controller	110-120 VAC, 50/60 Hz
HF2-1500T-3	2130044	Freezer, Upright model, 1355 L, -10°C to -25°C	Touchscreen Controller	220-240 VAC, 60 Hz
HF3-400S-1	2130009	Freezer, Upright model, 360 L, -20°C to -40°C	Standard Controller	220-240 VAC, 50 Hz
HF3-400S-2	2130047	Freezer, Upright model, 360 L, -20°C to -40°C	Standard Controller	110-120 VAC, 50/60 Hz
HF3-400S-3	2130046	Freezer, Upright model, 360 L, -20°C to -40°C	Standard Controller	220-240 VAC, 60 Hz
HF3-400T-1	2130019	Freezer, Upright model, 360 L, -20°C to -40°C	Touchscreen Controller	220-240 VAC, 50 Hz
HF3-400T-2	2130049	Freezer, Upright model, 360 L, -20°C to -40°C	Touchscreen Controller	110-120 VAC, 50/60 Hz
HF3-400T-3	2130048	Freezer, Upright model, 360 L, -20°C to -40°C	Touchscreen Controller	220-240 VAC, 60 Hz
HF3-700S-1	2130010	Freezer, Upright model, 544 L, -20°C to -40°C	Standard Controller	220-240 VAC, 50 Hz
HF3-700S-2	2130051	Freezer, Upright model, 544 L, -20°C to -40°C	Standard Controller	110-120 VAC, 50/60 Hz
HF3-700S-3	2130050	Freezer, Upright model, 544 L, -20°C to -40°C	Standard Controller	220-240 VAC, 60 Hz
HF3-700T-1	2130020	Freezer, Upright model, 544 L, -20°C to -40°C	Touchscreen Controller	220-240 VAC, 50 Hz
HF3-700T-2	2130053	Freezer, Upright model, 544 L, -20°C to -40°C	Touchscreen Controller	110-120 VAC, 50/60 Hz
HF3-700T-3	2130052	Freezer, Upright model, 544 L, -20°C to -40°C	Touchscreen Controller	220-240 VAC, 60 Hz

Laboratory Combination Refrigerator and Freezers

Model	Item Code	Description	Controller	Electrical
HC6-400S-1	2130011	Combination, Upright model, 330 L (170 L/ 160 L) +2°C to +15°C; -10°C to -24°C	Standard Controller	220-240 VAC, 50 Hz
HC6-400S-2	2130055	Combination, Upright model, 330 L (170 L/ 160 L) +2°C to +15°C; -10°C to -24°C	Standard Controller	110-115 VAC, 50/60 Hz
HC6-400S-3	2130054	Combination, Upright model, 330 L (170 L/ 160 L) +2°C to +15°C; -10°C to -24°C	Standard Controller	220-240 VAC, 60 Hz
HC6-400T-1	2130021	Combination, Upright model, 330 L (170 L/ 160 L) +2°C to +15°C; -10°C to -24°C	Touchscreen Controller	220-240 VAC, 50 Hz
HC6-400T-2	2130057	Combination, Upright model, 330 L (170 L/ 160 L) +2°C to +15°C; -10°C to -24°C	Touchscreen Controller	110-115 VAC, 50/60 Hz
HC6-400T-3	2130056	Combination, Upright model, 330 L (170 L/ 160 L) +2°C to +15°C; -10°C to -24°C	Touchscreen Controller	220-240 VAC, 60 Hz
HC6-700S-1	2130012	Combination, Upright model, 525 L (260 L/ 265 L) +2°C to +15°C; -10°C to -24°C	Standard Controller	220-240 VAC, 50 Hz
HC6-700S-2	2130059	Combination, Upright model, 525 L (260 L/ 265 L) +2°C to +15°C; -10°C to -24°C	Standard Controller	110-115 VAC, 50/60 Hz
HC6-700S-3	2130058	Combination, Upright model, 525 L (260 L/ 265 L) +2°C to +15°C; -10°C to -24°C	Standard Controller	220-240 VAC, 60 Hz
HC6-700T-1	2130022	Combination, Upright model, 525 L (260 L/ 265 L) +2°C to +15°C; -10°C to -24°C	Touchscreen Controller	220-240 VAC, 50 Hz
HC6-700T-2	2130061	Combination, Upright model, 525 L (260 L/ 265 L) +2°C to +15°C; -10°C to -24°C	Touchscreen Controller	110-115 VAC, 50/60 Hz
HC6-700T-3	2130060	Combination, Upright model, 525 L (260 L/ 265 L) +2°C to +15°C; -10°C to -24°C	Touchscreen Controller	220-240 VAC, 60 Hz

OPTIONS AND ACCESSORIES



Shelf Kits (SK_)

Atoxic, plastic-coated steel, supported by anti-tilt clips. It is for additional space inside your chamber where you can place your samples. It also provides a good support for your samples to prevent damage and maintain organization of samples.



Drawer Kits (DK_)

A drawer extractible on telescopic slides, adjustable in height, bottom made of painted steel, beehive structure type, supplied with adjustable dividers made of polypropylene, front is fitted with an ergonomic aluminum handle, for the storage of samples in a more convenient and organized way.



Digital Monitor (DM_)

An independent visual/acoustic alarm and recording system, with an accuracy of 0.1°C due to the PT100 probe used for temperature detection. It will take over alarm failures, together with standard rechargeable batteries that record event such as unauthorized personnel.



Access Port (AP_)

A 15 mm or 35 mm diameter hole that will be placed at the back of the unit, closed with a white plastic cap, used for the access of additional probes inside the chamber.



Basket Kit (BK1)

Made of stainless steel that provides an anti-corrosion environment for your samples. It is mounted on anti-tilt side slides and can be glided outside the chamber for the purpose of easy access to samples.

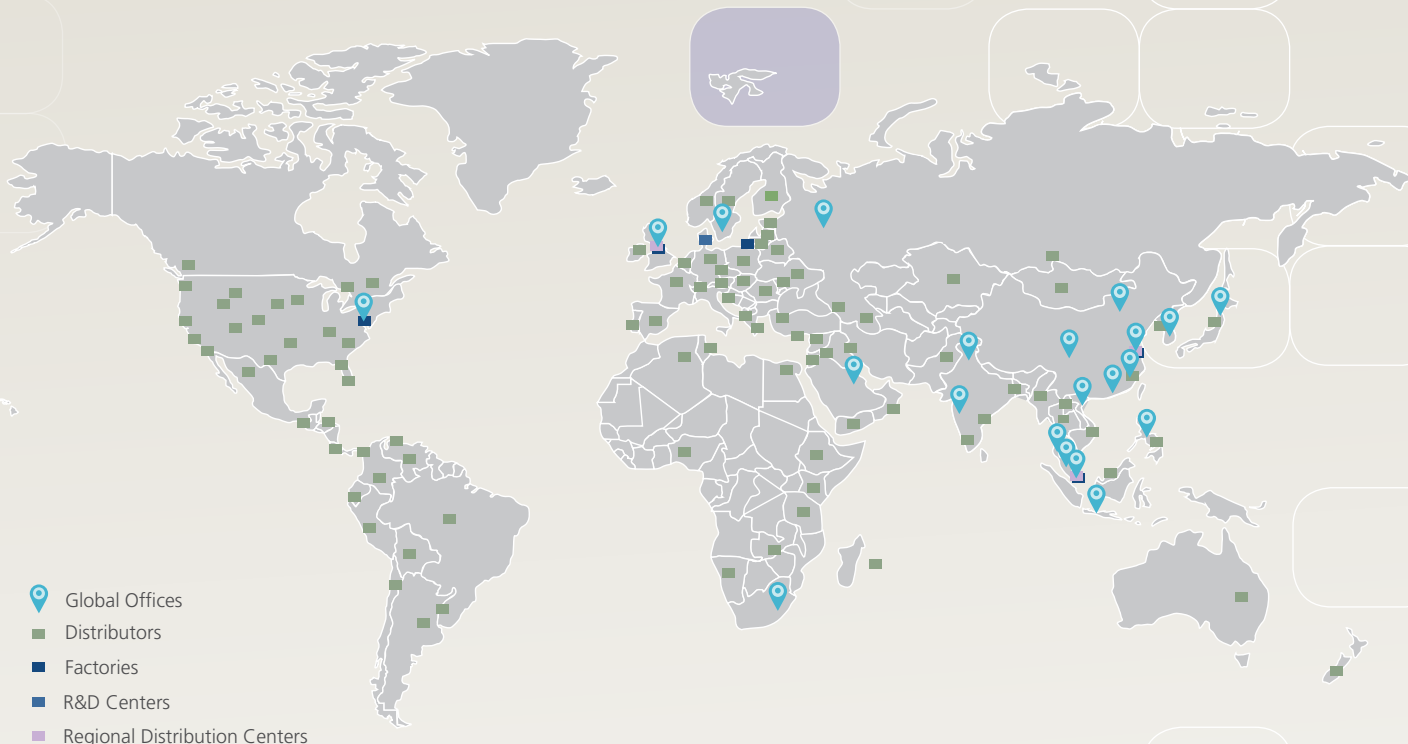


IQOQ

A document that is available for verifying that the equipment has been installed in accordance with the installation specifications, functioning and operating at the intended operational parameters. It can be an Electronic Copy or Hard Copy.

Model	Item Code	Description
SK1	1330063	Shelf Kits for HR1-140, HF2-140 (Standard and Touchscreen models)
SK2	1330064	Shelf Kits for HR1-400, HF2-400 and HC6-400 (Standard and Touchscreen models)
SK3	1330065	Shelf Kits for HR1-700, HF2-700, HF3-700, HC6-700, HR1-1500 and HF2-1500 (Standard and Touchscreen models)
SK4	1330066	Shelf Kits for HF3-400 (Standard and Touchscreen models)
DK1	1330067	Drawer Kits for HR1-140, HF2-140 (Standard and Touchscreen models)
DK2	1330068	Drawer Kits for HF2-400, HR1-400 and HC6-400 (Standard and Touchscreen models)
DK3	1330069	Drawer Kits for HR1-1500, HF2-1500, HR1-700, HF2-700 and HC6 700 (Standard and Touchscreen models)
DK4	1330070	Drawer Kits for HF3-400 (Standard and Touchscreen models)
DM1	1330013	Digital Monitor for single chamber models for Touchscreen models only
DM2	1330073	Digital Monitor for dual chamber models for Touchscreen models only
AP15	1330074	15 mm Access Port for all models (Standard and Touchscreen models)
AP35	1330075	35 mm Access Port for all models (Standard and Touchscreen models)
BK1	1330076	Stainless Steel Basket Kit for HR1-700, HR1-1500, HF2-700, HF2-1500, HF3-700 and HC6-700S (Standard and Touchscreen models)
IQOQ	9010179	Installation Qualification Operation Qualification for all models

ESCO GLOBAL NETWORK



ART Equipment
Biological Safety Cabinets
CO₂ Incubators
Cold Storage
Compounding Pharmacy Equipment
Containment / Pharma Products
Ductless Fume Hoods
Lab Animal Research Products
Laboratory Fume Hoods
Laboratory Incubators
Laboratory Ovens
Laboratory Shakers
Laminar Flow Cabinets
Laboratory Freeze Dryers
PCR Cabinets
PCR Thermal Cyclers
Powder Weighing Balance Enclosures

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