



Cell Processing Isolator (CPI)

Taking Cell Processing to Greater Heights!

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Cell Processing Isolator

The Esco Cell Processing Isolator (CPI) is an advanced aseptic containment system that combines several types of equipment into one isolation technology.

As a cGMP-compliant isolator, it is designed to isolate the process to ensure operator safety without compromising product quality. It provides a sterile ISO Class 5/Grade A environment that is required in carrying out sterile/aseptic cell processing.



Features:

- Customizable, adaptable design as per client's process flow and requirements
- ISO Class 5 / Grade A air cleanliness in vertical, unidirectional/laminar airflow (0.45 m/s air velocity)
- Capable of automated pressure hold testing (APHT)
- Fully integrated BioVap™ Hydrogen peroxide (H₂O₂) based Biodecontamination System

Applications:

- | | |
|--|----------------------------------|
| • Aseptic Processing | • cGMP Manufacturing |
| • Allogenic Cell Therapy | • Monoclonal Antibody Production |
| • Autologous Cell Therapy | • Phase III Clinical Trial |
| • Biosafety/Animal Biosafety Level 3/4 Containment | • Protein Production |
| • Cell Banking | • Quality Control |
| • Cell and Gene Therapy | • Vaccine Research |
| | • Virus Production |



Incubation System

Integration of Tide Motion
Bioreactors

(may vary based on customer requirements)

How does it work?

The CPI's design and configuration are highly dependent on the process flow described by each client. Every CPI unit is carefully designed upon consultations with the client and Esco's multi-versed team. This is a critical process in order for Esco to provide the optimal solution specific for the application, product, and requirements of each client. Overall, the goal is to optimize the delivery of high-quality biologics.

Our technical and application support team will be with you from design stage of the preferred cell processing containment technology, up to actual equipment production.



Unidirectional Process Workflow



Cell Processing Area

Integration of cell processing laboratory tools and equipment



Monitoring and Harvest

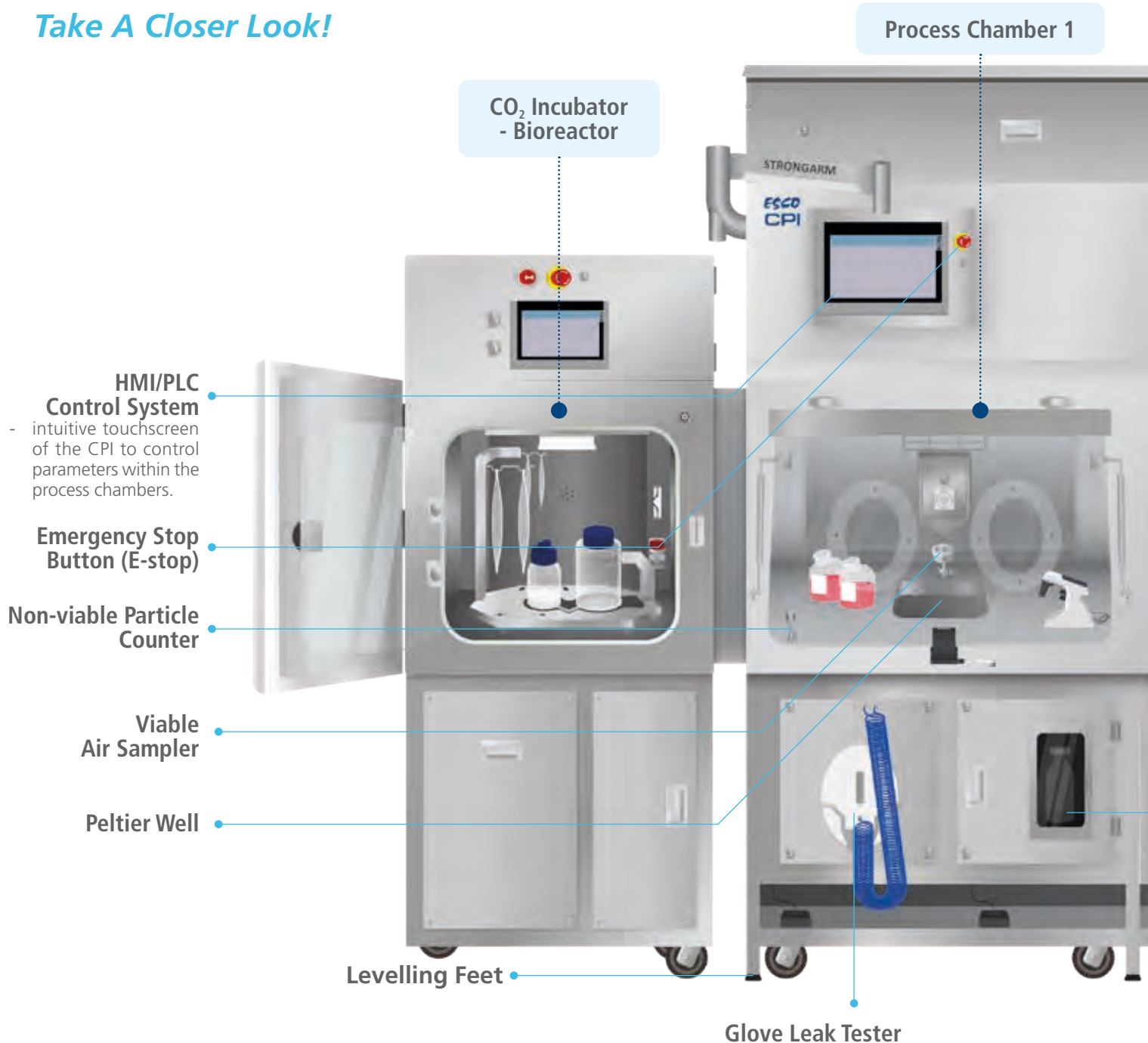
Monitoring devices such as microscope and harvest systems are placed in this area



Final Product

Pass-through chamber for final product harvest and/or removal from the containment system

Take A Closer Look!



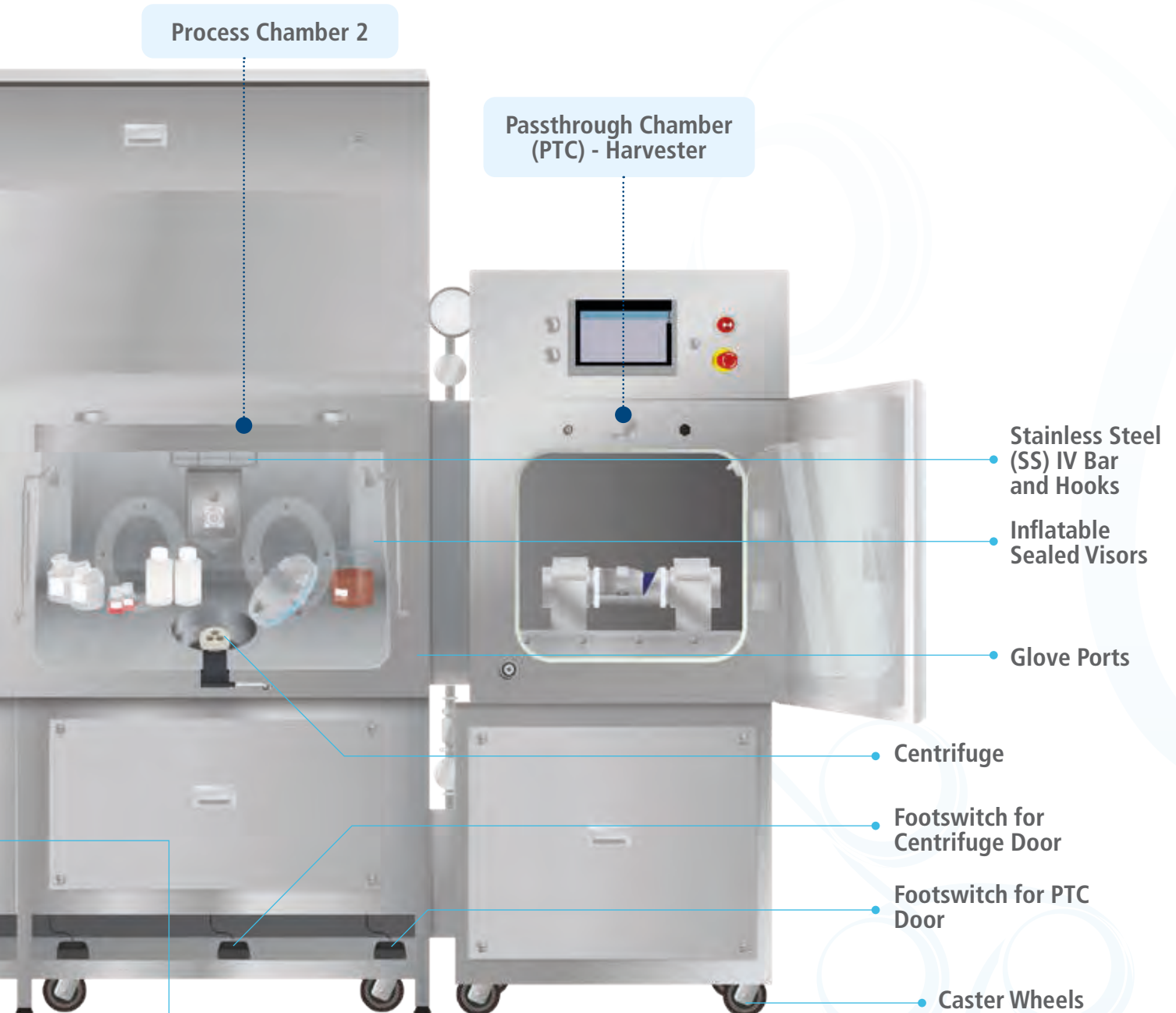
Note: Customizations may apply based on end user's requirement. This pre-set is for general culture process only. Kindly contact Esco VacciXcell for further assistance.

Glove Leak Tester

- an accessory that detects a leak in the glove under pressure test to check its integrity.

Optional Equipment Integration:

- Benchtop Freeze Dryer
- Benchtop Shaker
- Biobank
- Bioreactor
- Biosafety Cabinet
- Centrifuge
- CO₂ Incubator (with Docking/Undocking Capability)
- Cooling/Heating Well



BioVap™ Biodecontamination System

- a system that atomizes H_2O_2 sterilant by utilizing a mist fog as it is injected into the chamber space for decontamination.

- Laminar Airflow Cabinet
- Microscope
- Sieve
- Rapid Transfer Port (RTP)
- Rapid Decontamination System
- Refrigerator/Freezer
- Sterile Liquid Transfer Port



Every CPI unit is carefully designed in close collaboration with the client to provide the optimal solution specific for the application, product, and requirements, for the delivery of high-quality biologics.

Model Code Guide

CPI - 2x2G - 8 PF - B S - CP6 - 1

Code	Base Isolator Unit	Code	Number of Process Chambers	Code	Electrical Configuration	Code	Pod Flange Design
CPI	Cell Processing Isolator	1x2G	1 unit of 2-Glove Process Chamber	8	220-240 VAC 50/60 Hz	PF	With Pod Flange
		2x2G	2 unit of 2-Glove Process Chamber	9	110-120 VAC 50/60 Hz	NF	Without Pod Flange
		3x2G	3 unit of 2-Glove Process Chamber				
		4x2G	4 unit of 2-Glove Process Chamber				
		5x2G	5 unit of 2-Glove Process Chamber				
		6x2G	6 unit of 2-Glove Process Chamber				
		7x2G	7 unit of 2-Glove Process Chamber				

Notes:

- Pod Flanges Design will be detailed in the description of each unit.
- The list of integrated equipment and its sequence is based on the process flow described by each client.
- Additional accessories are also included based on the client's requirements.

General Specifications

Cell Processing Isolator (CPI)		External Dimensions (W x D x H)	Internal Dimensions (W x D x H)
CPI-2G Main Chamber		1364 x 1150 x 2350 mm (53.7" x 45.3" x 92.5")	1312 x 700 x 845 mm (51.7" x 27.6" x 33.3")
Passthrough Chamber		770 x 1150 x 2350 mm (30.3" x 45.3" x 92.5")	720 x 700 x 845 mm (28.3" x 27.6" x 33.3")
CCXBR 220L		985 x 960 x 1720 mm (38.8" x 37.8" x 67.7")	600 x 550 x 650 mm (23.6" x 21.7" x 25.6")
CPI Incubator 60L		680 x 875 x 1600 mm (26.8" x 34.4" x 63.0")	430 x 425 x 385 mm (16.9" x 16.7" x 15.2")
CPI Incubator 220L		985 x 960 x 1720 mm (38.8" x 37.8" x 67.7")	600 x 550 x 650 mm (23.6" x 21.7" x 25.6")
		Main Chamber	Passthrough Chamber
Process Chamber Environment		ISO Class 5 / Grade A Environment	
Prefilter			
Downflow Filter		HEPA H14 Filter with Gasket Seal and Integral Mesh Guard	
1st Stage Exhaust Filter		HEPA H14 Filter with Gasket Seal and Integral Mesh Guard	
2nd Stage Exhaust Filter		HEPA H14 Filter with Gasket Seal and Integral Mesh Guard	
Lighting Level		≥ 600 Lux	
Sound Level		<65 dBA	
Isolator Construction	External	SS 304	
	Internal	SS 316L	
	Service Housing	SS 304	
	Support Frame	SS 304	
Electrical Requirements	220-240 VAC 50/60 Hz	✓	
	110-120 VAC 50/60 Hz	✓	
Compressed Air Requirement		6-12 Bar-g Pressure at 5 L/sec	
Optional Accessories	Glove Leak Tester	✓	
	RTP Alpha Port	✓	
	RTP Beta Container or Liner	✓	
	Temp and RH Control	✓	
	BIBO Exhaust Filter	✓	
	Tri-Gas Control	✓	
	N ₂ Ports	✓	
	Non-viable Particle Counter	✓	
	Viable Air Sampler	✓	
	Sterility Test Pump Integration	✓	

Design	Code	Passthrough Chamber Design	Code	Door Design	Code	Docked Unit	Code	Rapid Decontamination System (RDS)
Range	O	No PTC	Y	Yes - with Doors	CX2	CCXBR-220L	1	with RDS
Flange	L	Left PTC Only	N	No - without Doors	CP6	CPI Incubator 60L	0	without RDS
	R	Right PTC Only	S	Seamless Design	CP2	CPI Incubator 220L		
	B	Both- Left and Right PTC						
	T	with Three-way PTC						

По вопросам продаж и поддержки обращайтесь:

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