ESCO VACCIXCELL
ADHERENT BIOPROCESSING SPECIALIST

Designed in Singapore

Cell Processing Isolator (CPI)

Taking Cell Processing to Greater Heights!

ESCO® Healthcare
"Discovery to Delivery"

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 (H_2O_2) based Biodecontamination System

Applications:

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

Incubation System

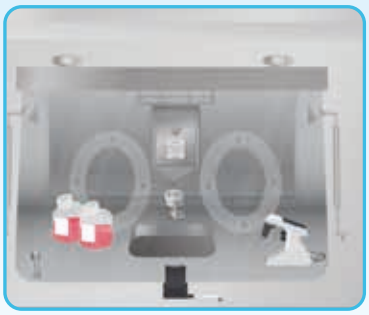
Integration of **Tide Motion Bioreactors**
(may vary based on customer requirements)

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

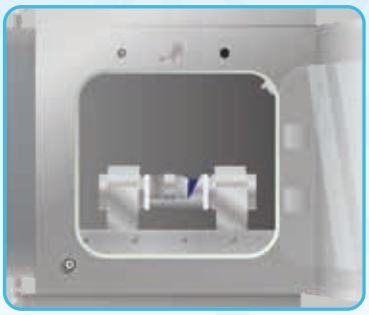


Cell Processing Area

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

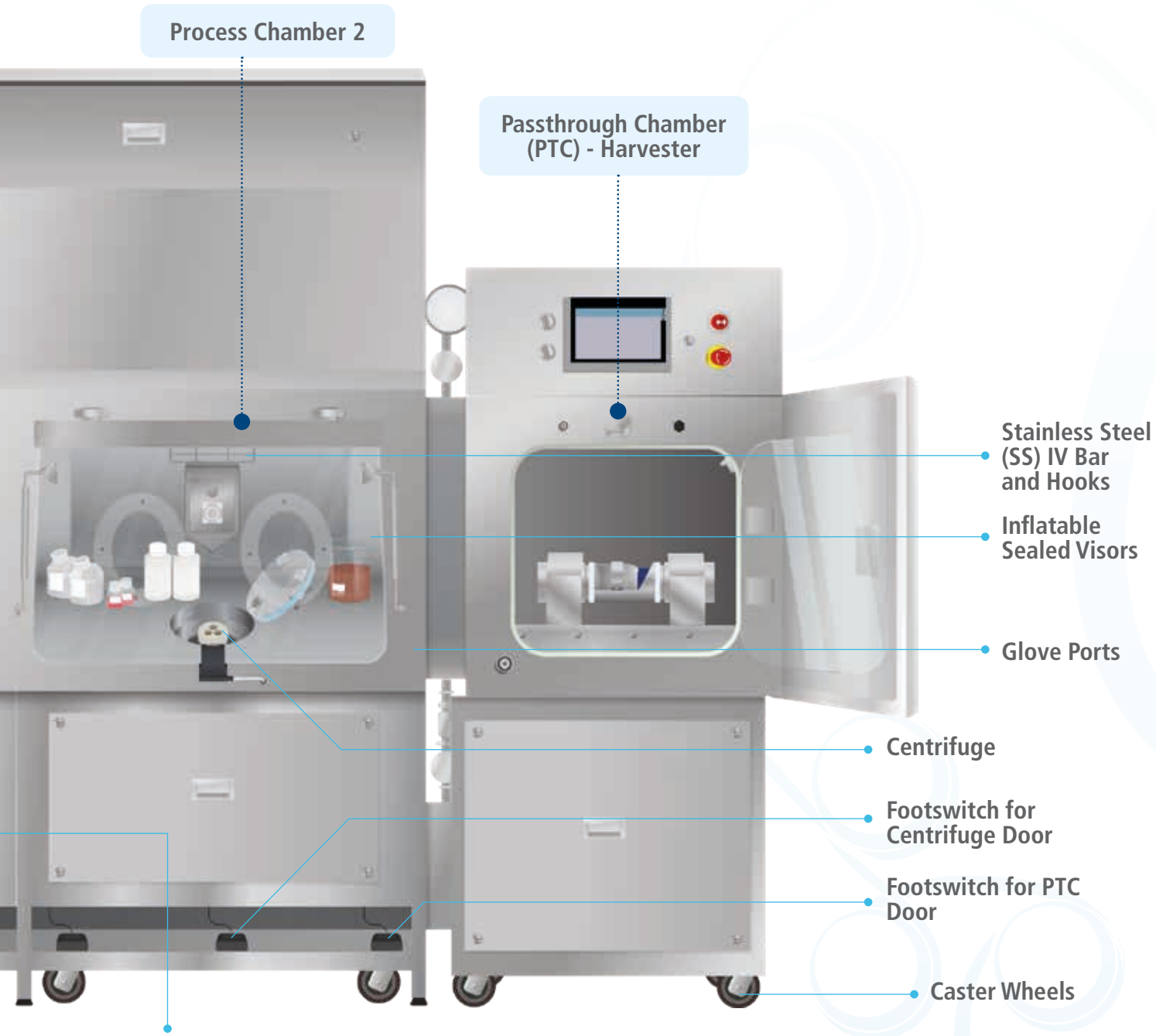
Pass-through chamber for final product harvest and/or removal from the containment system

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.

Optional Equipment Integration:

- Benchtop Freeze Dryer
- Benchtop Shaker
- Biobank
- Bioreactor
- Biosafety Cabinet
- Centrifuge
- CO_2 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
CPI	Cell Processing Isolator

Code	Number of Process Chambers
1x2G	1 unit of 2-Glove Process Chamber
2x2G	2 unit of 2-Glove Process Chamber
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

Code	Electrical Configuration
8	220-240 VAC 50/60 Hz
9	110-120 VAC 50/60 Hz

Code	Pod Flange D
PF	With Pod Fl
NF	Without Pod

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)
ange	**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						

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For queries and comments, please contact Esco VacciXcell Technical Support team.

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