



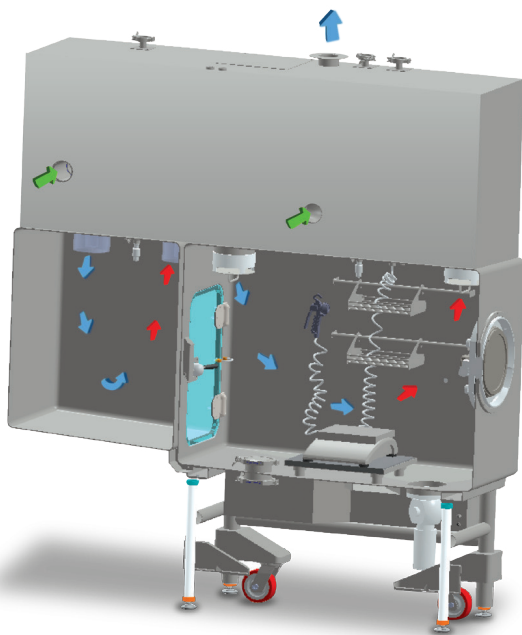
# Weighing and Dispensing Containment Isolator (WDCI)

## Introduction

The Weighing and Dispensing Containment Isolator (WDCI) is an advanced containment system providing controlled negative pressure environment to maximize personnel protection during weighing and dispensing of potent compounds.

Esco WDCI provide standard configurable designs able to adapt to various weighing and dispensing quantities and accuracies.

## Airflow Regimes



■ Filtered air   
 ■ Contaminated air   
 ■ Room air

## Basic Principles

- Turbulent airflow allowing maximum containment with low airflow and therefore improved energy efficiency
- Low negative pressure to reduce operator fatigue whilst providing maximum containment
- Stable weighing accuracy as a result of low chamber pressure and flow in conjunction with Anti-Vibration platform
- Contained Pass In / Pass Out systems to allow safe material transfer

## Standard Features

- Fully welded single piece SS316L internal chambers with rounded coved corners
- Class 2 Containment pressure tested as per ISO 10648-2
- Inflatable USP Class VI Compliant approved gaskets provides both proactive and reactive sealing.
- Safe change glove system allowing change of gloves whilst maintaining a contained system
- Integrated anti-vibration granite platform for weighing scale placement
- Fully automatic pressure hold testing (APHT) capability
- Clean interior and exterior finishing
- Safe change filters to allow in-process filter replacement
- Lighting external to isolator chamber for ease of servicing and process chamber cleanliness
- Integrated automated height adjustment providing 280mm of motion for ergonomic comfort.
- Nitrogen Purge: Inert chambers to <math><5\% \text{ O}\_2</math>

GENERAL SPECIFICATIONS		WDCI-2G_	WDCI-3G_	WDCI-4G_	WDCI-5G_
WEIGHING & DISPENSING CONTAINMENT ISOLATOR (WDCI)					
Nominal Size Process Chamber		1.2m	1.6m	2.0m	2.4m
External Dimensions (W x D x H)	Without Base Stand	1.2m x 0.65m x 1.73m	1.6m x 0.65m x 1.73m	2.0m x 0.65m x 1.73m	2.4m x 0.65m x 1.73m
	With Adjustable Base Stand (Min)	1.2m x 0.65m x 2.08m	1.6m x 0.65m x 2.08m	2.0m x 0.65m x 2.08m	2.4m x 0.65m x 2.08m
	With Adjustable Base Stand (Max)	1.2m x 0.65m x 2.36m	1.6m x 0.65m x 2.36m	2.0m x 0.65m x 2.36m	2.4m x 0.65m x 2.36m
Glove Port Height Min		1015	950	950	950
Glove Port Height Max		1300	1300	1300	1300
Chamber Pressure		Negative Pressure	Negative Pressure	Negative Pressure	Negative Pressure
Airflow Type		Turbulent Flow	Turbulent Flow	Turbulent Flow	Turbulent Flow
Airflow Volume - Maximum (Intake & Exhaust) - Normal Operation		21m <sup>3</sup> /hr	21m <sup>3</sup> /hr	21m <sup>3</sup> /hr	21m <sup>3</sup> /hr
Airflow Volume - Maximum (Intake & Exhaust) - Glove Breach Protection		75m <sup>3</sup> /hr	75m <sup>3</sup> /hr	75m <sup>3</sup> /hr	75m <sup>3</sup> /hr
Filter Type - Inlet		H14 Cartridge Filter with PVC Shroud	H14 Cartridge Filter with PVC Shroud	H14 Cartridge Filter with PVC Shroud	H14 Cartridge Filter with PVC Shroud
Filter Efficiency - Inlet - Safe Change		99.999%	99.999%	99.999%	99.999%
Filter Efficiency - Exhaust - Safe Change		H14 Push Push Filter with 316L St. St. Housing	H14 Push Push Filter with 316L St. St. Housing	H14 Push Push Filter with 316L St. St. Housing	H14 Push Push Filter with 316L St. St. Housing
Filter Efficiency - Exhaust		99.999%	99.999%	99.999%	99.999%
Lighting Level		≥650 Lux	≥650 Lux	≥650 Lux	≥650 Lux
Sound Level		≤68dBA	≤68dBA	≤68dBA	≤68dBA
Isolator Construction	Chamber	316L	316L	316L	316L
	Service Housing	316L	316L	316L	316L
	Support Frame	316L	316L	316L	316L
Anti vibration weighing mount	Black Granite for Analytical Weigh Scale	✓	✓	✓	✓
Isolator Finish	Chamber Internal	≤0.4Ra	≤0.4Ra	≤0.4Ra	≤0.4Ra
	Chamber External	≤0.6Ra	≤0.6Ra	≤0.6Ra	≤0.6Ra
	Service Housing External	0.6Ra	0.6Ra	0.6Ra	0.6Ra
	Support Frame	1.0Ra	1.0Ra	1.0Ra	1.0Ra
Controls	HMI/PLC Control System	✓	✓	✓	✓
	Operator Specific Login sets Isolator Working Height for Ergonomic Comfort (Selectable)	✓	✓	✓	✓
Electrical Requirements (By Client)	110-120V, AC, 50Hz/60Hz, 1Ø	✓	✓	✓	✓
	220-240V, AC, 50Hz/60Hz, 1Ø	✓	✓	✓	✓
	480V, AC, 50Hz/60Hz, 3Ø	✓	✓	✓	✓
Compressed Air requirements (By Client)	6 Bar/g Pressure at 5ltr/sec	✓	✓	✓	✓
Exhaust Duct Requirements (By Client) - Thimble Connection Required		(101.6 mm) 4"	(101.6 mm) 4"	(101.6 mm) 4"	(101.6 mm) 4"
Options	Pass Chamber	✓	✓	✓	✓
	Temperature & Humidity Monitoring	✓	✓	✓	✓
	Process Chamber Drain	✓	✓	✓	✓
	WIP - Spray Gun - Process Chamber	✓	✓	✓	✓
	CIP - Spray Balls - Process Chamber	✓	✓	✓	✓
	CIP - Spray Balls - Pass Chamber	✓	✓	✓	✓
	Split Butterfly Valve - 4"	✓	✓	✓	✓
	RTP Alpha - Ø105, Ø190, Ø270, Ø350, Ø460	✓	✓	✓	✓
	RTP Beta Canister - Ø105, Ø190, Ø270, Ø350, Ø460	✓	✓	✓	✓
RTP Beta Liner - Ø105, Ø190, Ø270, Ø350, Ø460	✓	✓	✓	✓	



### Esco Micro Pte Ltd

19 Changi South Street 1, Singapore 486779  
Tel: +65 65420833  
Email: mail@escolifesciences.com

### Esco Technologies, Inc.

2512 Metropolitan Drive, Suite 120 B  
Feasterville- Trevose, PA 19053-6738  
Tel: +1 215 322 2155  
Email: eti.pharma@escolifesciences.com

### Esco GB Ltd

Unit 2 R-evolution @ Gateway 36, Kestrel Way, Barnsley, S70 5SZ  
Tel: +44 (0) 1226 360 799  
Email: egb.info@escolifesciences.com

Esco Lifesciences Offices: Bangladesh | China | Denmark | Germany | Hong Kong | India | Indonesia | Italy | Japan | Lithuania | Malaysia | Myanmar | Philippines | Russia | Singapore | South Africa | South Korea | Taiwan | Thailand | UAE | UK | USA | Vietnam



9010644.WDCI.SellSheet.A4.vA.03052025  
Esco can accept no responsibility for possible errors in catalogues, brochures and other printed materials. Esco reserves the right to alter its products and specifications without notice. Esco is not responsible for damages of any type, the property of Esco and the respective companies.