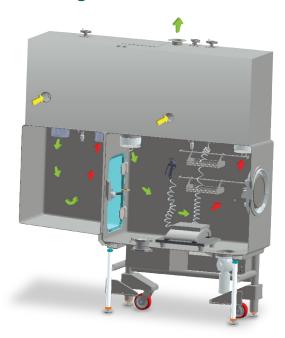![ESCO PHARMA]

WDCI

Weighing and Dispensing Containment Isolators

> **Weighing and Dispensing Containment Isolators (WDCI)** are advanced containment systems providing controlled negative pressure environments to maximize personnel protection during weighing and dispensing of potent compounds.

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

Airflow Regimes

Room air   Filtered air   Contaminated 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.
- Pressure tested to ISO 14644-7.
- Inflatable Anti-Bacterial, USP Class VI Compliant and Food grade FDA 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 weigh scale placement.
- Integrated automated pressure decay testing.
- 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.

GENERAL SPECIFICATIONS

WEIGHING & DISPENSING CONTAINMENT ISOLATOR (WDCI)

		WDCI-2G_	WDCI-3G_	WDCI-4G_	WDCI-5G_
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		$21m^3$/hr	$21m^3$/hr	$21m^3$/hr	$21m^3$/hr
Airflow Volume - Maximum (Intake & Exhaust) - Glove Breach Protection		$75m^3$/hr	$75m^3$/hr	$75m^3$/hr	$75m^3$/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 Type - 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		≥650Lux	≥650Lux	≥650Lux	≥650Lux
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	Color 6" HMI - Siemens - CE Marked	✓	✓	✓	✓
	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 Barg Pressure at 5ltr/sec	✓	✓	✓	✓
Exhaust Duct requirements (By Client) - Thimble Connection Required		(101.6mm) 4"	(101.6mm) 4"	(101.6mm) 4"	(101.6mm) 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 - Ø190, Ø270, Ø350, Ø460	✓	✓	✓	✓
	RTP Beta Canister - Ø190, Ø270, Ø350, Ø460	✓	✓	✓	✓
	RTP Beta Liner - Ø190, Ø270, Ø350, Ø460	✓	✓	✓	✓

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