



Ventilated Balance Enclosure (VBE-4ft)

Ventilated Balance Enclosure (VBE)

Ensuring Stability and Accuracy of Powder Weighing Tasks

Introduction

The Ventilated Balance Enclosure (VBE) is designed specifically for stability and accuracy while maintaining a high level of operator protection during handling of hazardous airborne powders. Using our aerodynamic sash design and arm rest plus a sectionalized baffle, the powders are well-contained inside the enclosure and are exhausted out through a HEPA filter or directly to the lab exhaust.

Construction

The enclosure is made of ISOCIDE™ powder-coated electrogalvanized sheet with polycarbonate sash and side panels. It is also equipped with aerodynamic sash handle and arm rest to provide optimized airflow within the enclosure.

The design of VBE is modular in terms of exhaust and filtration system. It consists of three basic modules: the Base Module, the Filter Module, and the Blower Module.

Key Features

- Negative pressure system for applications requiring high level of operator protection from hazardous airborne particles
- Disposal Port is equipped with O-Ring to provide a sealed trash bag for additional powder containment solution
- Modular Design using VBE modules allow the unit to be fully customized
- Filtration System VBE can be equipped with a Filter Module or a Portable Filter Module, and for an added air flow control, a Blower Module can be added.

Control System Package

- RH/Temperature Sensor: 1 unit Vaisala HM120T sensor with LCD
- Fan Speed Control: 1 unit Jumo dTRON 304 controller

Filtration Package

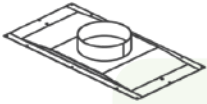
- **SINGLE Filtration System:** Single Bag-in/Bag-out (BIBO) Filter
 - Efficiency: 99.995% at 0.3 micron
 - Classification: H14
 - Media: Glass Fiber
 - Sealing Method: Gasket
- **DUAL Filtration System:** Two BIBO Filter installed on top of each other
 - Efficiency: 99.995% at 0.3 micron
 - Classification: H14
 - Media: Glass Fiber
 - Sealing Method: Knife-edge Gel sealed

Warranty

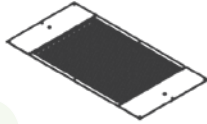
1 year warranty (excluding consumables). Consumables are ballast, fluorescent, and filters. The warranty will cover all other parts including the blower, fan switch, and electrical main board. During the period of warranty, any repair, modification, testing and commissioning performed by any unauthorized party other than the Esco Service Team shall void the warranty of the unit.

EXHAUST MODULE

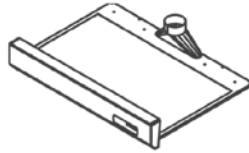
VBE has 3 options for Exhausting Filtered Air such as DUCTED, DUCTLESS, PORTABLE.



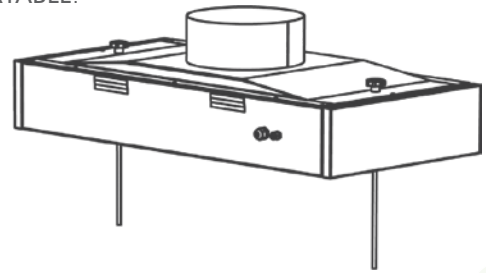
Ducted



Ductless

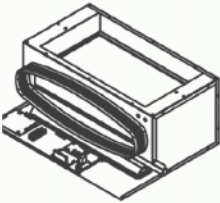


Ducted or Portable

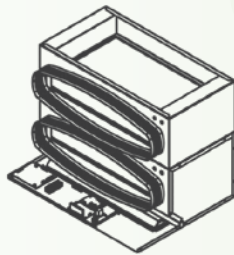


FILTER MODULE

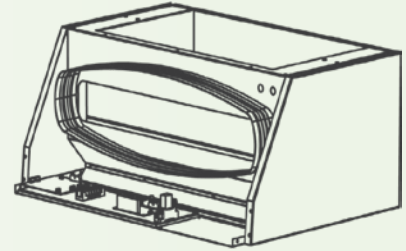
Filter Module can be configured as **Dual** or **Single Filter**. Each module section quantity may vary from 1 - 3 depending on the width of the enclosure. Additional carbon filter may be supplied for odor control.



Single Filtration Module



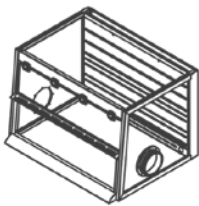
Dual Filtration Module



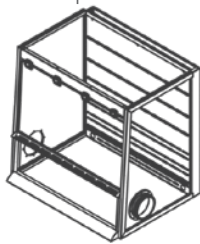
ENCLOSURE MODULE

VBE Enclosure covers a wide range of weighing and powder handling options and requirements. We have **SMALL, MEDIUM, LARGE** models.

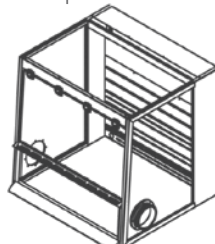
- **Small Models** are perfect for small spaces, and by adding portable filter options, the end-user can save great amount of ceiling space.
- **Medium Models** are perfect if you are using tall equipment when weighing powders.
- **Large Models** are perfect for large scale powder handling, it can also be combined with our Worktop with Drum Access Options.



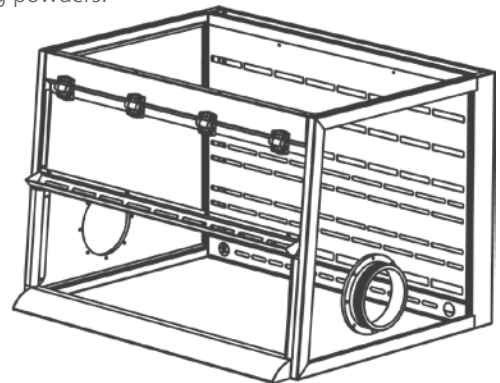
Small Model



Medium Model



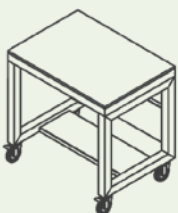
Large Model



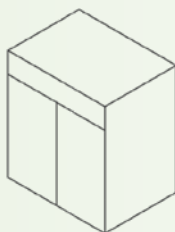
WORKTOP OPTION

There are 3 types of Worktop available, **SOLID EPOXY, STAINLESS STEEL (SS304 or SS316), GRANITE**.

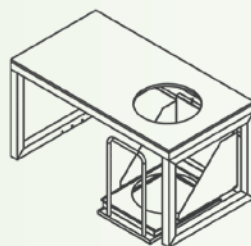
For the Base, **SUPPORT STAND, CABINET, SUPPORT STAND w/ DRUM ACCESS** can be ordered. In addition to this, **Castor wheel** or **Leveling feet** can be selected for Footing options.



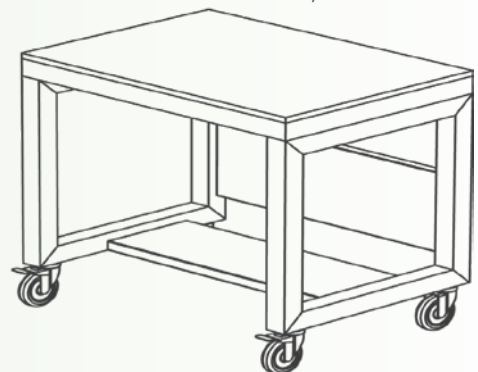
Standard Support Stand

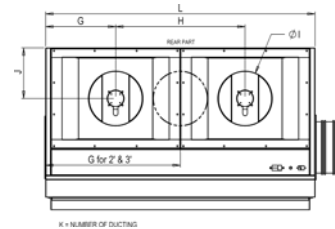
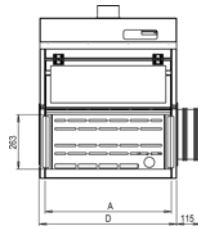


Cabinet Type



Drum Access





01 Series

02 Series

03 Series

SERIES	CONFIG SIZE	WORK SPACE			EXTERNAL			TOP LAYOUT					BASE SIZE		
		A	B	C	D	E	F	G	H	I	J	K	L	M	
01 Series	A	2	610	650	555	665*	835	760	330	-	4"	110	1	660	700
		3	915	650	555	970*	835	760	483	-	4"	110	1	965	700
		4	1220	650	555	1275*	835	760	330	610	4"	110	2	1270	700
		5	1525	650	555	1580*	835	760	407	763	4"	110	2	1575	700
		6	1830	650	555	1885*	835	760	483	915	4"	110	2	1880	700
		7	2135	650	555	2190*	835	760	559	1068	4"	110	2	2185	700
		8	2440	650	555	2495*	835	760	432	814	4"	110	3	2490	700
		B (TALL)	2	610	955	555	665*	1140	760	330	-	4"	110	1	660
3	915		955	555	970*	1140	760	483	-	4"	110	1	965	700	
4	1220		955	555	1275*	1140	760	330	610	4"	110	2	1270	700	
5	1525		955	555	1580*	1140	760	407	763	4"	110	2	1575	700	
6	1830		955	555	1885*	1140	760	483	915	4"	110	2	1880	700	
7	2135		955	555	2190*	1140	760	559	1068	4"	110	2	2185	700	
8	2440		955	555	2495*	1140	760	432	814	4"	110	3	2490	700	
C (TALL & DEEP)	2		610	955	705	665*	1140	910	330	-	4"	110	1	660	850
	3	915	955	705	970*	1140	910	483	-	4"	110	1	965	850	
	4	1220	955	705	1275*	1140	910	330	610	4"	110	2	1270	850	
	5	1525	955	705	1580*	1140	910	407	763	4"	110	2	1575	850	
	6	1830	955	705	1885*	1140	910	483	915	4"	110	2	1880	850	
	7	2135	955	705	2190*	1140	910	559	1068	4"	110	2	2185	850	
	8	2440	955	705	2495*	1140	910	432	814	4"	110	3	2490	850	
	02 Series	A	2	610	650	555	665*	1160	760	330	-	10"	238	1	660
3			915	650	555	970*	1160	760	483	-	10"	238	1	965	700
4			1220	650	555	1275*	1160	760	330	610	10"	238	2	1270	700
5			1525	650	555	1580*	1160	760	407	763	10"	238	2	1575	700
6			1830	650	555	1885*	1160	760	483	915	10"	238	2	1880	700
7			2135	650	555	2190*	1160	760	559	1068	10"	238	2	2185	700
8			2440	650	555	2495*	1160	760	432	814	10"	238	3	2490	700
B (TALL)			2	610	955	555	665*	1465	760	330	-	10"	238	1	660
	3	915	955	555	970*	1465	760	483	-	10"	238	1	965	700	
	4	1220	955	555	1275*	1465	760	330	610	10"	238	2	1270	700	
	5	1525	955	555	1580*	1465	760	407	763	10"	238	2	1575	700	
	6	1830	955	555	1885*	1465	760	483	915	10"	238	2	1880	700	
	7	2135	955	555	2190*	1465	760	559	1068	10"	238	2	2185	700	
	8	2440	955	555	2495*	1465	760	432	814	10"	238	3	2490	700	
	C (TALL & DEEP)	2	610	955	705	665*	1465	910	330	-	10"	238	1	660	850
3		915	955	705	970*	1465	910	483	-	10"	238	1	965	850	
4		1220	955	705	1275*	1465	910	330	610	10"	238	2	1270	850	
5		1525	955	705	1580*	1465	910	407	763	10"	238	2	1575	850	
6		1830	955	705	1885*	1465	910	483	915	10"	238	2	1880	850	
7		2135	955	705	2190*	1465	910	559	1068	10"	238	2	2185	850	
8		2440	955	705	2495*	1465	910	432	814	10"	238	3	2490	850	
03 Series		A	2	610	650	555	665*	1325	760	330	-	10"	238	1	660
	3		915	650	555	970*	1325	760	483	-	10"	238	1	965	700
	4		1220	650	555	1275*	1325	760	330	610	10"	238	2	1270	700
	5		1525	650	555	1580*	1325	760	407	763	10"	238	2	1575	700
	6		1830	650	555	1885*	1325	760	483	915	10"	238	2	1880	700
	7		2135	650	555	2190*	1325	760	559	1068	10"	238	2	2185	700
	8		2440	650	555	2495*	1325	760	432	814	10"	238	3	2490	700
	B (TALL)		2	610	955	555	665*	1630	760	330	-	10"	238	1	660
3		915	955	555	970*	1630	760	483	-	10"	238	1	965	700	
4		1220	955	555	1275*	1630	760	330	610	10"	238	2	1270	700	
5		1525	955	555	1580*	1630	760	407	763	10"	238	2	1575	700	
6		1830	955	555	1885*	1630	760	483	915	10"	238	2	1880	700	
7		2135	955	555	2190*	1630	760	559	1068	10"	238	2	2185	700	
8		2440	955	555	2495*	1630	760	432	814	10"	238	3	2490	700	
C (TALL & DEEP)		2	610	955	705	665*	1630	910	330	-	10"	238	1	660	850
	3	915	955	705	970*	1630	910	483	-	10"	238	1	965	850	
	4	1220	955	705	1275*	1630	910	330	610	10"	238	2	1270	850	
	5	1525	955	705	1580*	1630	910	407	763	10"	238	2	1575	850	
	6	1830	955	705	1885*	1630	910	483	915	10"	238	2	1880	850	
	7	2135	955	705	2190*	1630	910	559	1068	10"	238	2	2185	850	
	8	2440	955	705	2495*	1630	910	432	814	10"	238	3	2490	850	

* = with Disposal Port, additional +115mm

VBE AIRLOW DIAGRAM

TOP COVER

Designed to be ducted or ductless

BIBO RING WITH BIBO BAG

To provide Hazard free Filter Change Procedure

SENTINEL MICROPROCESSOR

To provide control, visual monitoring and alarm system

SASH SWEEP – Incoming air from this area sweep airborne particle away from sash

SIDE AIRFOILS – Designed to maximize the airflow to the enclosure by pulling air from sides

MAIN STREAM – The sash opening provides an airflow velocity of 0.3 m/s

BLOWER – With low level noise

HEPA FILTER – To provide high level of Filtration

BAFFLE – Is tested to provide optimized airflow inside the enclosure

SASH HANDLE – Provides air from the top of the sash to the enclosure if the user is blocking a section of the sash during operation.

ARM REST – Provides air from bottom of the sash to the enclosure. Provides base sweep.

COMFORTABLE ERGONOMIC DESIGN

- The 5° angled front frame improves viewing on the workspace
- Lightweight sash with position hinge to provide easy access on equipment inside
- Instant start-up fluorescent lamp
- The arm rest is raised above the work zone to improve comfort and to ensure the user's arm is not blocking the airflow
- Optimized side panels provide more light inside



- Filtered air
- Room air / Inflow air
- Unfiltered / Potentially contaminated air

CABINET CONSTRUCTION

- Constructed with ISOCIDE™ powder coated electrogalvanized steel with antimicrobial property
- The cabinet is fully assembled and ready to install and operate when shipped
- Jet black granite table top and optional support stand
- Easy to clean baffle due to pivoted design

ELECTRICAL SAFETY AND CERTIFICATION

- All components meet or exceed applicable safety requirements
- Each cabinet is individually tested at the factory for electrical safety
- Documentation specific to each cabinet serial number is maintained on file

ESCO PHARMA®

Esco Pharma

21 Changi South Street 1 Singapore 486777 • Tel: +65 65420833
Fax: +65 65426920 • Email: csis.pharma@escoglobal.com

Esco Technologies, Inc.

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

Esco Gb Ltd

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

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