



IsoArk - Portable Isolation Chamber

Overview

The Portable Isolation Chamber is designed for rapid setup of a biologically isolated space from a clean outside environment. The IsoArk is a complete solution for turning any room or space into a biologically contained area, allowing for the isolation of infected or contaminated people and matter. The entire system meets and easily exceeds today's standards for airborne infection isolation, including the 2003 CDC guidelines for healthcare infection control. Other applications may include mail screening, workplace safety in harmful dust environments and temporary laboratory work.

Description

The airlock attached to the main chamber provides the capability to move easily in and out of the isolated area without losing the negative pressure or contaminating the outside environment. This system gives the option to focus on treatment from outside avoiding contamination of equipment and staff. Required equipment can be placed outside the chamber and probes, hoses and cables can be passed through utility sleeves into the isolated area. The integrated Filtration System FA 2000 combines a high efficient HEPA-filter and a UV-radiation source which enables the best available biological protection against contamination threats. The system draws contaminated air from within the chamber through a prefilter followed by a HEPA-Filter and discharges the purified air into the outside environment.



Features

- Well-ried and tested in successful hospital service
- Quick exit through high flushing airlock which enables shortest dwell times
- Very simple and fast assembly without the need of tools
- Cost effective and flexible



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A UV-radiation source contained within the filters kills the microorganism trapped inside, which prevents the accumulation of living micro-organisms in the system. Those features contribute to offer a cost effective and practical alternative to costly and permanent isolation rooms which can provide the necessary isolation protection within minutes.

Main Chamber

The main chamber is constructed from a lightweight aluminum “quick connect” structure, supporting the transparent chamber liner which is made from special resistant laminate.

Airlock

The airlock is a self supporting construction consisting of wide double swing doors for quick and easy access with equipment or beds. When entering the airlock an electro-optical eye switches automatically the filtration system to the high flush mode, increasing the airflow through the airlock many fold. This reduces dramatically the wait time for a complete air change in the airlock and ensures that negative pressure is maintained even when entering or exiting the chamber.



Electro-optical eye in airlock

Filtration System

The filtration system has three different airflow modes, allowing quick air flushing when needed while minimizing noise level and energy use when high flush rates are not required.

Additionally the system is equipped with a differential pressure gauge, indicating the condition of the HEPA-Filter. For Filter- or UV-unit replacement no tools are required.

Features

- Auto activation sensor
- Extremely low noise level
- Filter condition indicator
- Simple filter exchange without the need of tools

Filtration System
FA 2000 HS



Patient treatment inside

Safe waste disposal

Access with glove box

Optional X-ray sleeve

Optional IsoArk Items

● Negative Pressure Indicator

The negative pressure indicator controls the current under pressure in the main chamber. If the negative pressure drops out of the acceptable range the red light starts to blink and an audible buzzer gives alarm. An integrated potential free contact enables tracking of the pressure status by connection to a computer or an alarm system. The pressure indicator is installed at the outside of the IsoArk airlock and an air pipe connects the main chamber with its measure point



● Internal Utility Racks

The internal utility racks are holding equipment and connection facilities required inside the Isolation Chamber. The cables and hoses of the equipment can be routed into the chamber through utility sleeves which are incorporated into the chamber liner.



Applicable Standards

- HEPA-filter efficiency EN 1822 IEST-PR-CC-001.3
- Certified according UL 507 CSA 113 UL 60601



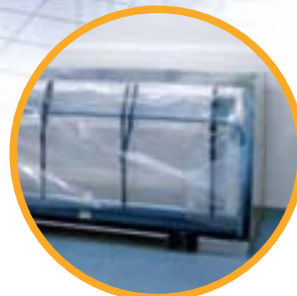
● Small Transport Container

The small transport container houses the filtration system FA 2000 HS.



● Waste Box System

The waste box enables a safe disposal of waste from the interior of the chamber /airlock. Through an incorporated sleeve the waste is thrown into a bag which can be airtight closed for disposal.



● Large Transport Container with Trolley

The large transport container houses the trolley which is able to hold all the equipment required to build the IsoArk system (excluding the filtration system). Therefore the equipment can be moved easily wherever it is required to assemble the IsoArk system.



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Technical Specification:

Main Chamber					
Chamber Type	Width m (inch)	Length m (inch)	Height m (inch)	Weight kg (lbs)	Length with airlock and open doors m (inch)
90 x 60*	2.35 (92.5)	1.60 (63.0)	2.35 (92.5)	33.5 (73)	3.20 (126)
60 x 90*	1.60 (63.0)	2.35 (92.5)	2.35 (92.5)	33.5 (73)	4.65 (183)
90 x 90	2.35 (92.5)	2.35 (92.5)	2.35 (92.5)	50 (111)	3.95 (155)
90 x 120	2.35 (92.5)	3.10 (122)	2.35 (92.5)	67 (148)	4.70 (185)
120 x 120	3.10 (122)	3.10 (122)	2.35 (92.5)	89 (196)	4.70 (185)
120 x 150*	3.10 (122)	3.85 (151.5)	2.35 (92.5)	111 (245)	5.45 (215)

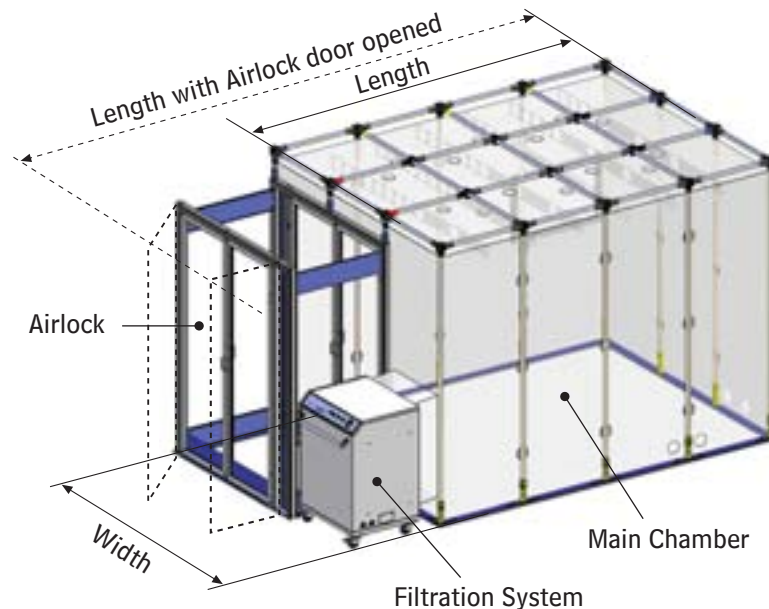
Airlock				
	Width m (inch)	Length m (inch)	Height m (inch)	Weight kg (lbs)
	1.60 (63)	0.90 (35.5)	2.10 (83)	54 (119)

Filtration System				
Technical data	FA 2000 HSZ	FA 2000 HSZA	FA 2000 HSZB	
Nominal Voltage	230 VAC	115 VAC	100 VAC	
Power Consumption	550 Watt	680 Watt	680 Watt	
Nominal Frequency	50 Hz	60 Hz	60 Hz	
Airflow Rate (3 Stages)	1000/1400/2200 m ³ /h (591/823/1180 cfm)			
Noise Level	52/56/65 dB			
Filtration efficiency @ particle size 0.3 micron:				
Standard : H13	99.995 %			
Optional : U15	99.99995 %			
Optional : Combi filter	Combined HEPA-filter and activated carbon filter			
	Width m (inch)	Length m (inch)	Height m (inch)	Weight kg (lbs)
Filtration System	0.703 (27.7)	0.744 (29.3)	1.076 (42.4)	86 (190)

Transport containers (optional)				
	Width m (inch)	Length m (inch)	Height m (inch)	Weight empty kg (lbs)
Large transport container with trolley	0.735 (29)	2.31 (91)	1.135 (44.5)	145 (319)
Small transport container for FA 2000 HSZ	0.735 (29)	0.77 (30.5)	1.15 (45.5)	65 (143)

* Dimensions available on request

Specifications are subject to change without prior notice



The optional available transport containers provide a compact and safe packaging for the IsoArk components. The containers are stackable and transportable with a forklift which allows storing of 24 complete IsoArk systems in one 40 ft container.

