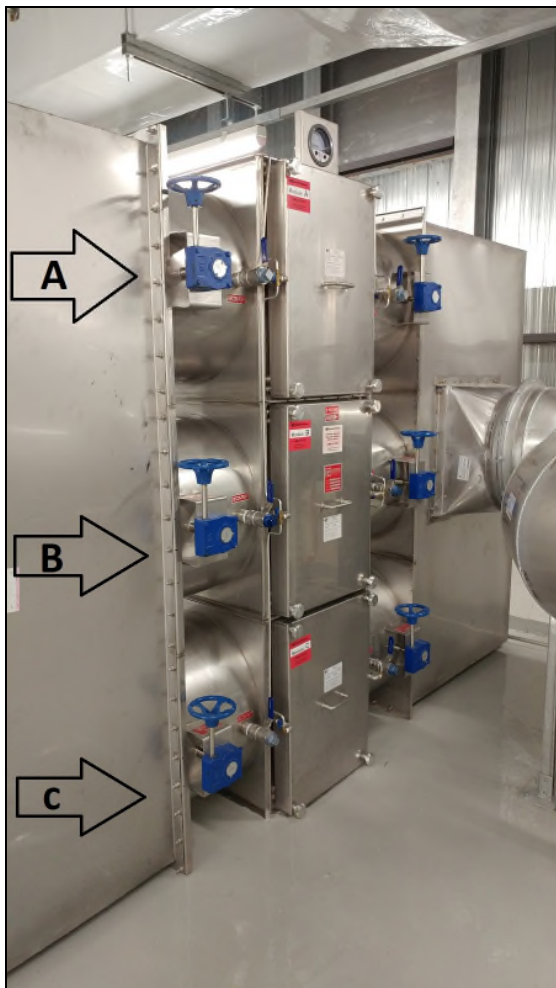


## CTC BAG-IN/BAG-OUT FILTER SYSTEMS FOR HOSPITAL AIRBORNE ISOLATION ROOMS



IAS Bulletin #108-01-2016

*Containment HEPA Filter Systems designed to meet the requirements of Hospital Airborne Isolation Rooms per CAN/CSA-Z317.2-15 (A National Standard of Canada)*



### CAN/CSA-Z317.2-15

#### 6.10.4.2 Airborne Isolation Rooms

*“6.10.4.2.1 (g) HEPA filtration of exhaust in cases where exhaust air is not discharged clear of building openings or where a risk of recirculation exists;”*

The above, taken from CAN/CSA-Z317.2-15, clearly states that HEPA filtration is required under certain circumstances for exhaust air from Airborne Isolation Rooms (AIR's). Industry Air Sales recommends HEPA filtration to be employed on the exhaust air from all Airborne Isolation Rooms (AIR's). HEPA Filtration is the only way to guarantee that airborne contaminants are trapped and contained, and the only way to ensure that harmful micro-organisms are not re-entrained by HVAC systems.

Exhaust HEPA Filtration Systems can range from Containment Isolation Filter Systems (like the ones pictured at left) to less elaborate side-access HEPA Filter housings. Regardless of the type of system used, every filter system must provide for **leak-free operation that can be certified by independent sources.**



**CSA-Z317.2-15 Special Requirements for  
HVAC Systems in Health Care Facilities,  
Airborne Isolation Rooms (6.10.4.2)**

*Industry Air Sales – Your Containment Filtration Specialists*

**CONTAINMENT HEPA  
FILTER SYSTEM  
(pictured at right)  
complete with:**

- ✓ Bag-In/Bag-Out (BIBO)  
HEPA Filter Housing
- ✓ Inlet & Outlet Transitions  
with Decon Ball Valves
- ✓ Bubble-Tight Dampers with  
Manual Actuators
- ✓ H.E. Utility Fan/Motor
- ✓ Skid Base



***BENEFITS OF A CTC CONTAINMENT HEPA FILTER SYSTEM:***

CTC Containment HEPA Filter Systems (like the one pictured above) provide the ultimate in Airborne Isolation Room (AIR) exhaust air protection.

This system provides for the following (*see below for details*):

- Bag-In/Bag-Out filter service, allowing filter change-out with zero exposure to trapped contaminants
- System isolation by means of shut-off dampers for extra security when servicing the system (Contaminants cannot migrate through the system even when the filter(s) is being changed-out.
- Option to decontaminate the filter housing via ball valve ports
- Ability to certify the HEPA filter performance to **99.97% efficiency on 0.3 micron particles** (or higher depending on the filter employed)
- Leak-free performance certified to a minimum of 10”wg (2500Pa) by factory testing

***ADVANTAGES OF A CTC FILTER SYSTEM OVER ALTERNATIVE SYSTEMS:***

1. CTC systems use “Industry Standard” HEPA filters in standard 24x24 and 12x24 inch sizes. *Competitive units often use “custom-sized” filters that can only be sourced through the OEM.*
2. Every CTC system is factory-tested and guaranteed to offer leak-free performance, ensuring that you get optimal efficiency from your filter once it is secured in the housing. *Most competitive units cannot guarantee that you will get 99.97% efficiency from the filter when it is installed in their unit because the filter is not clamped securely into the housing and the housing is not guaranteed to be leak-free.*
3. CTC Bag-In/Bag-Out Filter Systems are designed to stringent nuclear industry standards, ensuring the maximum protection for your maintenance staff and your facility.

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**CSA-Z317.2-15 Special Requirements for HVAC Systems in Health Care Facilities, Airborne Isolation Rooms (6.10.4.2)**

*Industry Air Sales – Your Containment Filtration Specialists*

## **BAG-IN/BAG-OUT CONTAINMENT SYSTEM FEATURES**



**Housing has integral 2” deep pre-filter track. Optional 4” pre-filter section (additional access door) is also available. (Left)**

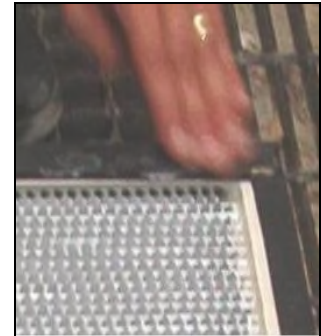


**Clamping Mechanism is accessed from outside the containment housing. Clamping mechanism assures a positive seal on the HEPA filter to ensure leak-free operation. (Left)**

**Filter Change-Out Bag is fabricated of heat-sealed 8-mil PVC. Bag assures safe HEPA filter extraction and disposal with guaranteed containment. (Right)**



**The CTC Containment System utilizes industry standard HEPA filters. These factory-tested filters are available from numerous Canadian suppliers. HEPA filters require gasket for housing seal. (Right)**



**Bag-In/Bag-Out (BIBO) Housings** feature continuous seam-welded stainless-steel construction. Housings are built to ASME N509 Nuclear Standard and every housing is pressure-decay (leak) tested to ASME N510 Std. Every housing is tested to ensure zero leakage at a minimum of 10”wg. As well, the filter clamping mechanism assures that HEPA filters can be certified to true 99.97% efficiency performance on 0.3 micron and larger particles.

**2N & N+1 Redundancy:** CTC can meet CSA Z317.2-15 by providing either **2N or N+1** Redundant filter systems. (see pic at left of a stacked 2N redundant BIBO filter system)





**CSA-Z317.2-15 Special Requirements for HVAC Systems in Health Care Facilities, Airborne Isolation Rooms (6.10.4.2)**

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## **Options & Accessories:**



**DAMPERS:** Bubble-tight dampers can be provided on either or both sides of the housing to provide leak-free isolation. Dampers are available with manual, pneumatic or electric actuators. *(Left)*

## **HEPA/ULPA FILTER CERTIFICATION:**

IAS can arrange for site HEPA filter certification and/or filter change-out or system decontamination by an accredited contractor. *(right)*



**DIFFERENTIAL PRESSURE GAGES:** Filter D.P. Gages can be provided with relay switch, 4-20mA output or with digital programming.



## **DECONTAMINATION BALL VALVES:**

Ports and/or ball valves can be provided on transitions. These can be used for DOP testing or for decontamination agent injection.

Industry Air Sales Ltd (IAS) has been supplying CTC HEPA Filter Containment Systems to Canadian hospitals for over 20 years, and in many different arrangements: multi-stage housings, gas-phase systems, custom plenums and transitions, scan-test and sampling sections, round & oval blade dampers, skid base, factory insulation and systems with integral fan and VFD.

We have supplied containment filter systems for exhaust air on applications including:

- ✓ Emergency Room AIR
- ✓ SARS Clinics
- ✓ Patient Negative Pressure Rooms (Airborne Isolation Room/TB Isolation)
- ✓ Bronchoscopy Suites
- ✓ Endoscopy Suites
- ✓ Dialysis Suite Exhaust
- ✓ Brachytherapy

***Contact Industry Air Sales Ltd and let us customize a system to suit your particular requirements and budget.***

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