

Insulation Recommendations for Outdoor Location BIBO Systems

IAS Bulletin #151-01-16



CONTAMINATION
TECHNOLOGY
CORPORATION



CTC Model B1-212-3x2-RCD22x48 (above), with round or oval dampers which are difficult to insulate and ship without risk of damage. Best to insulate in the field (after making duct connections) using a soft-wrap, insulation, as pictured below on a B2-series housing w/dampers.



Condensation is going to be a problem for any Bag-in/Bag-out (BIBO) Filter equipment located outdoors, particularly in lower temperatures and in colder climates. Warm and humid building air will migrate upwards (even when the fans are off) through the exhaust duct and into the steel filter box where it will condense out when it hits the cold stainless-steel.

This water will wet filter media, increasing pressure drop and causing eventual degradation of the media and frames. Condensation must be eliminated or at the very least, minimized. This can best be achieved with the use of insulation on the outer wall of the filter equipment.

IAS/CTC RECOMMENDATION:

Our recommendation is to provide factory double-wall insulation over the filter section of the system. Thanks to outward-turned flanges on all four sides of the filter housings, it is easy to provide rigid foam-board insulation on three sides of the filter housing, top, back and bottom. The filter-access (filter door) side is impossible to insulate because of the door/collar and multiple wall penetrations found on the access door side.

Transitions and dampers, because of their shape, are very difficult to double-wall insulate at the factory, plus they are prone to damage in shipping and rigging/handling. For these reasons we strongly **recommend field insulation of the dampers and transitions** with material matching the duct insulation. Another consideration is that duct connections must be made at all dampers, so any factory installed insulation would have to be pulled-back during installation anyways. **In our opinion, field insulation of the transitions and dampers makes for a cleaner and less expensive insulation job.** (see example in picture at left)

INSULATION RESPONSIBILITIES:

CTC FACTORY: Double-wall insulate & skin filter section ONLY
CONTRACTOR: Foil-back soft-wrap insulation on transitions and dampers after installation on roof.