

# APT AIR PRESSURE TESTING LTD

Regional Office: 36 Mayfield Road, Luton, Bedfordshire, LU2 8AP  
Tel: 07775623464 Fax: 01582 896709  
Offices in London, Luton and Cardiff  
[www.airpressuretesting.net](http://www.airpressuretesting.net)

---

## **Checklist For Sealing Rooms For Clean Agents**

1. All doors leading from the test enclosure will have drop seals to the bottoms and weather stripping around the jams. Latching mechanism and door closer hardware/ironmongery. Double doors shall have weather stripping between the doors to prevent air leakage between the doors and a coordinator to assure the proper sequence of closure. For the avoidance of doubt doors should be treated as though they are weather proofed for out side use with the least amount of light possible from passing around all sides. Doors which cannot be kept normally closed should be equipped with electromagnets designed to release on alarm
2. Duct work leading from or into the Test enclosure may be permanently sealed off, air tight, with metal plates caulked and screwed into place. Ductwork left in service from the air handling unit must have butterfly blade type dampers, installed with the relevant neoprene seals. Dampers must be spring loaded or motor operated to provide 100% air shut off e.g. air tight. It is recommended that the building air handling unit/s be shut down to prevent the spread of smoke or clean agent into the other areas of the building.
3. Handling Units self contained within the test enclosure may be left in service at the owner's option. However one cannot discount that the air handling unit could be the source of the fire. Systems not manned 24 hrs a day should be tied into shutdown.
4. The test enclosure walls should be extend floor to ceiling slab, in areas where this is not possible the ceiling tiles should not be clipped. If the ceiling rests on top of the walls, all tiles should be clipped and a caulk applied to the around the entire perimeter where the tiles touch/about the walls. All tiles should be clipped within 1200mm of any discharge nozzle.
5. All holes, cracks or penetrations leading into or out of the test enclosure must be sealed; this includes pipe runs and cable trays. All walls should be sealed around the perimeter of the test enclose where they rest on the floor slab and where they intersect about the ceiling above.
6. If raised floors continue out of the test enclosure to adjoining rooms, the floors must be completely sealed under the floor, by constructing a bulkhead directly under the above walls to the test enclosure, these bulkheads must be sealed completely top and bottom. If the rooms share the same under floor air handlers, then the bulkheads must have dampers installed, the same as required for ductwork.
7. Block walls/masonry walls must be sealed slab to slab to prevent air leakage through the walls, the walls should be painted with at least 2 coats of masonry paint, however rendering the walls is a more airtight option.
8. Floor drains should have traps, these should be designed should be deigned to have water in them at all times.
9. The general aim is to make the test enclosure as air tight as possible, during and after the clean agent discharge. Clean agent is heavier than air and therefore openings below floors are usually more critical than those above ceilings. However during discharge the room gets pressurised to some extent and any gas that can be pushed out of the room

will not return. This is more prevalent in smaller rooms because each little crack becomes more significant as the surface to area to room volume ratio changes.

10. Once the gas has been discharged into the test enclosure, it must remain in the room at its designed concentration for at least 10 minutes. The length of time the agent will remain is proportional to the air tightness of the room, therefore it is critical the test enclosure is designed and constructed as air tight as possible

Please note for the avoidance of doubt: The 10 points are not all inclusive nor guarantee that that the fire integrity test will pass. They are however presented as the more common items that will affect clean agent concentration tests.