

Building Compliance
Design & Testing

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ON-SITE

Smoke Shaft Air Leakage Testing

Methods to achieve air tightness

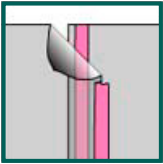


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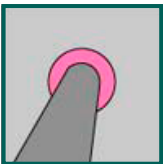
Air barriers must be impermeable to air, continuous, durable, and accessible. Internal air barriers need to be air tight. Air barriers can be vapour open but require careful specification of adjoining construction.



Use fire-rated ductwork and components designed for smoke shafts to seal a smoke shaft effectively. During installation, ensure all joints, connections, and penetrations are sealed using fire-resistant sealants, gaskets, or mechanical fasteners. Install access doors securely and seal them to prevent air leakage. Conduct a pressure test after installation to identify and fix any leaks promptly.



Seal AOV (Automatic Opening Vent) door frame: These doors often have common leakage paths around the perimeter. Apply mastic sealant along the shaft and carefully temporarily seal the doors.



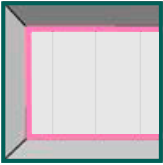
Seal holes around services passing through the external wall including water, drainage, gas pipes, boiler flues and electrical cables. (Ensure that the sealant around boiler flues is heat resistant).



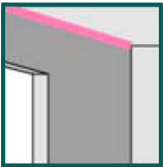


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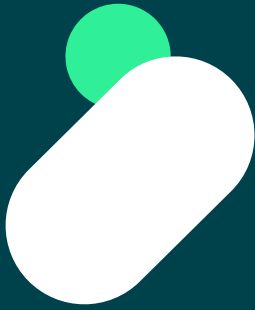
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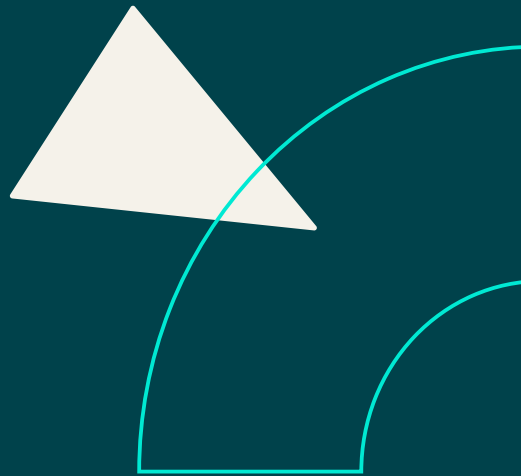
Drylining is notoriously air leaky; consider parge coating the wall for airtightness before drylining or applying a liquid membrane directly to the block work. When drylining directly to an external wall, apply a continuous perimeter of adhesive. Ensure the joints between boards are sealed.



Ensure the plasterboards or block work are sealed at the head and the very base of the shaft.



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