



POST OF 17/09/2026

Ducts and passages: The three inspection points

The lining does not stop at the furnace wall. Ducts and passages between furnace chambers see less heat than the chamber itself, but every charge heats them up and lets them cool down again. The lining works harder there than inside.

That is why we treat them as a lining of their own. Three things decide: thermal cycling, tightness and cross-section.

Checklist for ducts and passages

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| ☐ Material | selected for thermal shock resistance, not for peak temperature |
| ☐ Joints | closed: every open joint draws in false air, cools the gas and costs draught |
| ☐ Connection to the furnace wall | tight and built with room for expansion |
| ☐ Cross-section | built to nominal size and re-measured at every shutdown |
| ☐ Build-up | removed regularly before it narrows the duct |
| ☐ Repair castable | applied to nominal size, not on the principle that thicker lasts longer |



Duct between two furnace chambers: cross-section to nominal size



Passage: every open joint draws in false air

Common mistakes

- Ducts lined with the same material as the furnace chamber, although thermal cycling rather than peak temperature is what counts there.
- Overlooking open joints: the false air shifts the wear to the next spot.
- Repair castable applied generously: the cross-section shrinks and the draught is lost.

PRACTICAL NOTE

Re-measure the cross-section of ducts and passages at the same points at every shutdown. A duct that is slowly narrowing only shows up by comparison.

Questions about your furnace?

We assess lining, zones and condition — with a reply within 24 hours on working days.

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