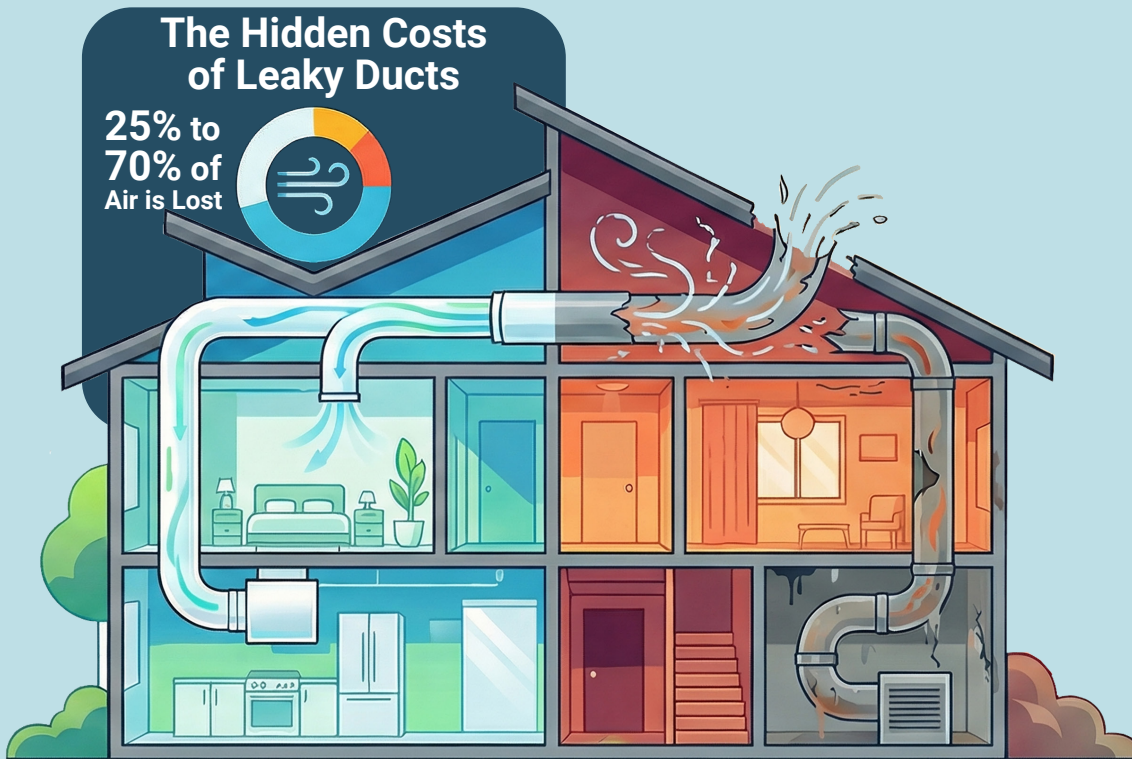


What's Hiding in Your Walls?

A Homeowner's Guide to Duct Systems

Your home's HVAC system relies on ducts to deliver heated and cooled air, but these are often hidden and their condition is unknown. Leaks in older or poorly installed ducts can waste a significant amount of energy and money while degrading comfort and air quality.



The Hidden Costs of Leaky Ducts

25% to 70% of Air is Lost



Three Major Benefits of Healthy Ducts



Improved Comfort



Better Indoor Air Quality



Lower Energy Bills

Is It Time for an Upgrade?

A Duct System Age Guide

Identify Your System to Find the Solution: The age and appearance of your ducts can tell you if a repair or replacement is needed.

Asbestos

Asbestos wrap, bare metal or very thin (R-2) insulation

Typical Leakage: **20-65%+**

Recommendation:
Complete Replacement

15+ Years Old

Thin yellow or older gray/black (R-4) insulation

Typical Leakage: **20-50%+**

Recommendation:
Complete Replacement

0-15 Years Old

Gray, black or silver (R-4 and R-6) insulation

Typical Leakage: **15-25%+**

Recommendation:
Targeted Repairs & Sealing

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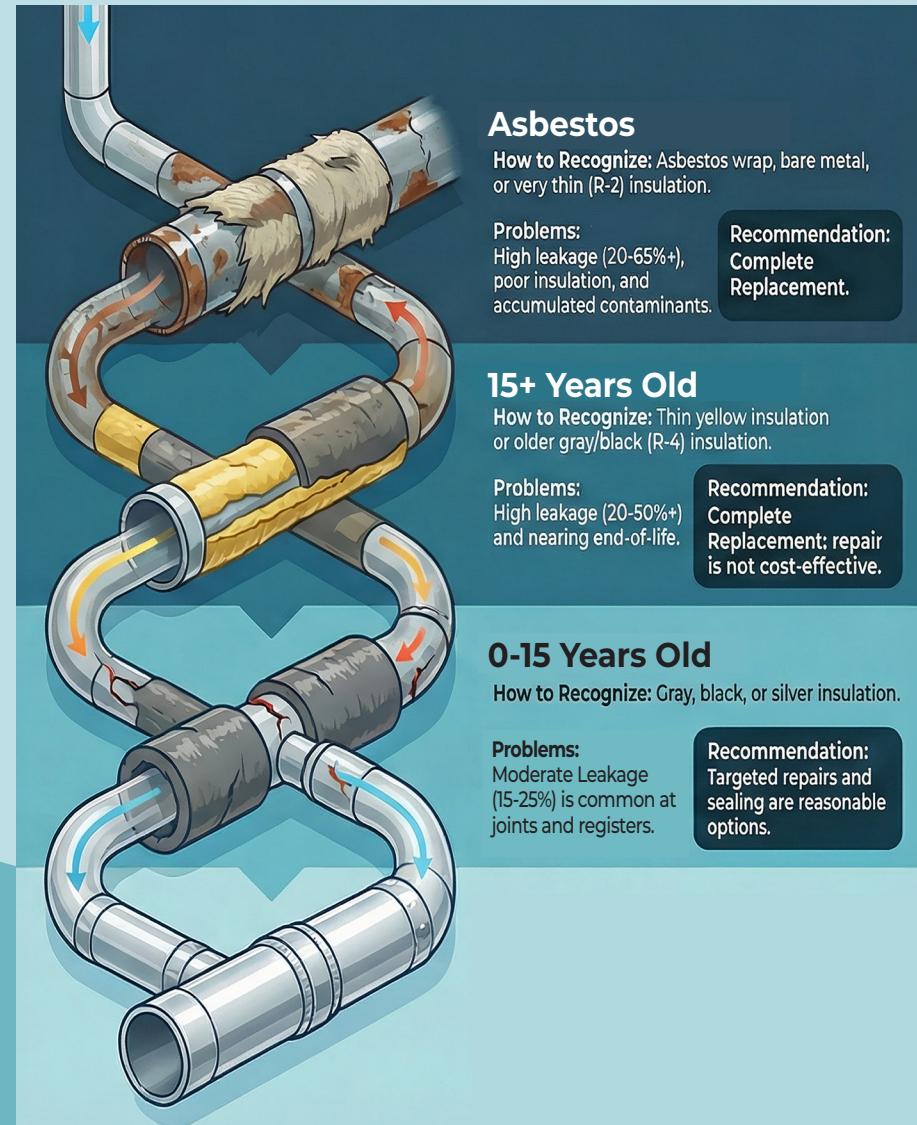


Lower Energy Bills

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A Duct System Age Guide

Identify Your System to Find the Solution: The age and appearance of your ducts can tell you if a repair or replacement is needed.



Asbestos

How to Recognize: Asbestos wrap, bare metal, or very thin (R-2) insulation.

Problems: High leakage (20-65%+), poor insulation, and accumulated contaminants.

Recommendation: Complete Replacement.

15+ Years Old

How to Recognize: Thin yellow insulation or older gray/black (R-4) insulation.

Problems: High leakage (20-50%+) and nearing end-of-life.

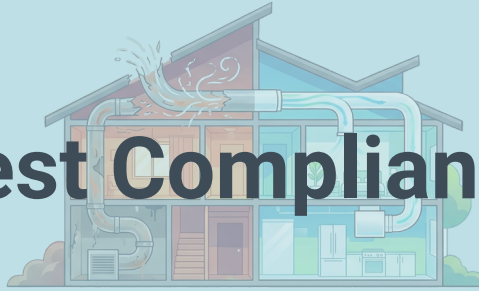
Recommendation: Complete Replacement; repair is not cost-effective.

0-15 Years Old

How to Recognize: Gray, black, or silver insulation.

Problems: Moderate Leakage (15-25%) is common at joints and registers.

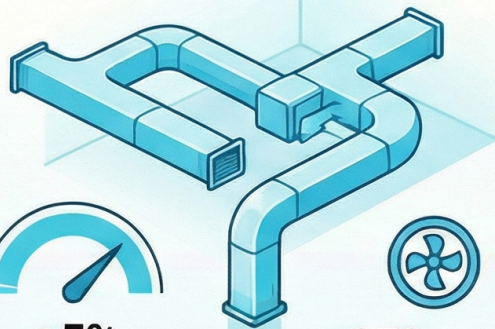
Recommendation: Targeted repairs and sealing are reasonable options.



HVAC Duct Test Compliance at a Glance

At Elements, we help homeowners, builders, and contractors navigate energy code compliance with clarity and confidence. This quick-reference infographic breaks down HVAC duct test requirements at a glance—so you can easily see what’s required based on your system, level of replacement, and accessibility. Our goal is simple: make compliance straightforward, reduce surprises, and keep your project moving forward efficiently.

New System or >75% Replacement (Fully Accessible)



≤ 5% Duct Leakage

Applies when the entire system is 100% accessible for inspection.



≥ 350 CFM / ton Airflow

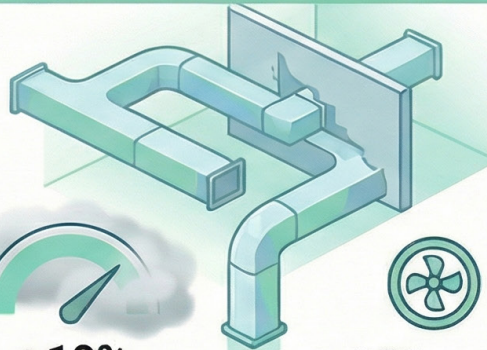
Airflow must be verified at or above this cooling capacity rate.



Consider Return Air Upgrades

Adding or enlarging returns may be needed to meet airflow requirements.

New System or >75% Replacement (Partially Inaccessible)



≤ 10% Duct Leakage

A smoke or fog test may be used for verification.



≥ 300 CFM / ton Airflow

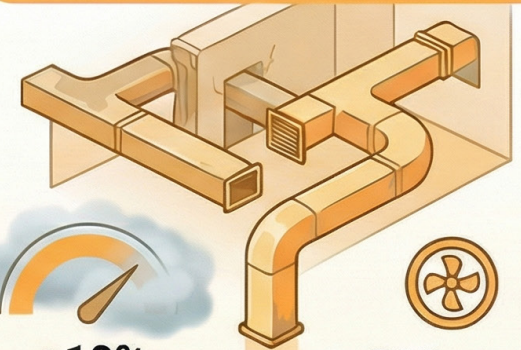
Airflow must be verified at or above this cooling capacity rate.



Consider Return Air Upgrades

Adding or enlarging returns may be needed to meet airflow requirements.

Existing System or <75% Replacement



≤ 10% Duct Leakage

A smoke or fog test may be used for verification.



≥ 300 CFM / ton Airflow

Airflow must be verified at or above this cooling capacity rate.



Consider Return Air Upgrades

Adding or enlarging returns may be needed to meet airflow requirements.