Heating Season Tips: Building Envelope

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Hours: 9:00 am – 5:00 pm
Building Envelope

In the following slides we will talk about tips on how to address your building envelope with equipment from the CUNY Field Equipment Lending Library (FELL).

**Tips on:**

- How to use the right instrument to identify heat loss through your building envelope – a better sealed envelope will retain heat longer.

- Maintaining a clean, efficient system, especially in areas that are out of reach and often overlooked – and as a result develop dirt buildup, forcing building systems to work harder.

*Remember: click on the equipment images to be taken to their listing in the online FELL directory.*
# Building Envelope

<table>
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<th>Applications</th>
<th>Instruments to use</th>
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<td>• Building envelope cold spots (insulation, air leaks and internal air leaks)</td>
<td><img src="image1.png" alt="Thermal image camera" /></td>
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| • Chimney clear/clean  
• Duct and filters cleanliness | ![Video borescope](image2.png) |
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**Tips**

Heat loss through your building envelope may be the reason why you are cranking up your system to meet occupants’ desired comfort, which leads to higher energy bills and overloaded equipment. Visual inspection with a thermal image camera allows you to:

- Identify areas in your building where missing insulation may be causing cold spots.

- Check for air leaks around outlets, doors, windows and light fixtures.

*Missing insulation at top of wall (see cold spot in thermal image)*

*Air leak at outlet*
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**Before and after picture of an air duct that required cleaning**

**Clean and dirty filters**

**Video borescope camera**

**Tips**

Visual inspection with video borescope will allow you to:

- See a visual of those hard-to-reach places where maintenance may be required.
- Check your air ducts for dirt build up.
- Change and clean your filters.
- Check your chimney and make sure it’s clear.

**Before** | **After**

**Using a borescope to inspect inside an air duct**