Insulate Hard Pipe Ducts

Job Aid for Insulate Ducted Distribution System Badge

Aligns With Standard Work Specifications 5.0107.1, 5.0105.2



Verify ducts are properly connected, supported, and sealed.



Layer insulation around duct, fitting between duct and construction members as necessary.



Tape joints to secure insulation in place.



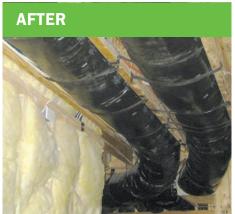
Ensure insulation is not compressed.



Tape around circumference of duct at regular intervals.



Use twine or zip ties to provide additional support, being careful to not compress the insulation.



Well-supported and uniformlyinsulated ducts perform at higher efficiency.

CHECKLIST Insulate ducted distribution system

DESIRED OUTCOME

Reduced conductive heat transfer of duct system and minimized condensation on the duct system.¹

Preparing for the work:		Flex ducts:		
	Ducts are prepared and sealed according to "air seal ducted distribution system" guidelines.		All metal fittings including boots, elbows, and take-offs are insulated separately using a duct wrap of the minimum acceptable R-value with vapor retarder.	
General:				
Duct insulation has an attac continuous vapor retarder.	Duct insulation has an attached and continuous vapor retarder. Duct insulation is mechanically fastened and sealed with no exposed ducts.		Insulation on metal fittings, boots, elbows, and take-offs is mechanically fastened (e.g., stitch staples, tie bands) and sealed with no exposed metal.	
All insulation seams are sea	All insulation seams are sealed.		Any replacement flex duct is sized accordingly.	
support materials do not ca dimensions of the ductwork	Ducts are adequately supported and support materials do not cause the interior dimensions of the ductwork to be smaller		Interior liner of flex-to-metal connections is fastened with tie bands using tie band tensioning tool. ³	
than specified. Metal ducts:			Interior liner of flex-to-metal connections is sealed with UL 181 B-M listed mastic.	
Insulation is securely attach	Insulation is securely attached to the ducts with metal wire or rot-proof nylon twine.		The exterior liner of the flex duct is fastened with tie bands using a tie band tensioning tool.	
Pattern of wire or twine is su hold the duct insulation tigh	•		Exterior liner connections are sealed with UL 181 B-M listed mastic.	
Duct insulation vapor barrie sealed with manufacturer approximation				
Duct insulation is minimum	R-8. ²		U.S. DEPARTMENT OF	Office of ENERGY EFFICIENCY
1. Relevant Standards: 5.0107.1, 5.0105.2			ENERGY	& RENEWABLE ENERGY
2. If variance request has been approved, replace this with approved figure.			Fau manus luda	

3. Or other appropriate mechanical fasteners as necessary.

For more information, visit: energy.gov/eere/wap

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