Builder Tip
Issue No: 78
January 1, 2025
Updated to 2024 OBC

Duct Sealing For Dwellings

The Building Standards Department issues Builder Tips as part of our customer service program. They are designed to provide an improved understanding of the Building Code and to reduce the costs associated with correcting infractions. Please contact your area building inspector for further information or call the Building Standards Department at 905.475.4848 extension 2189

Division A – Part 1

1.4.1.2. Defined Terms

Conditioned space means any space within a building, the temperature of which is controlled to limit variation in response to the exterior ambient temperature by the provision, either directly or indirectly, of heating or cooling over substantial portions of the year.

9.33.6.7. Installation of Ducts and Plenums

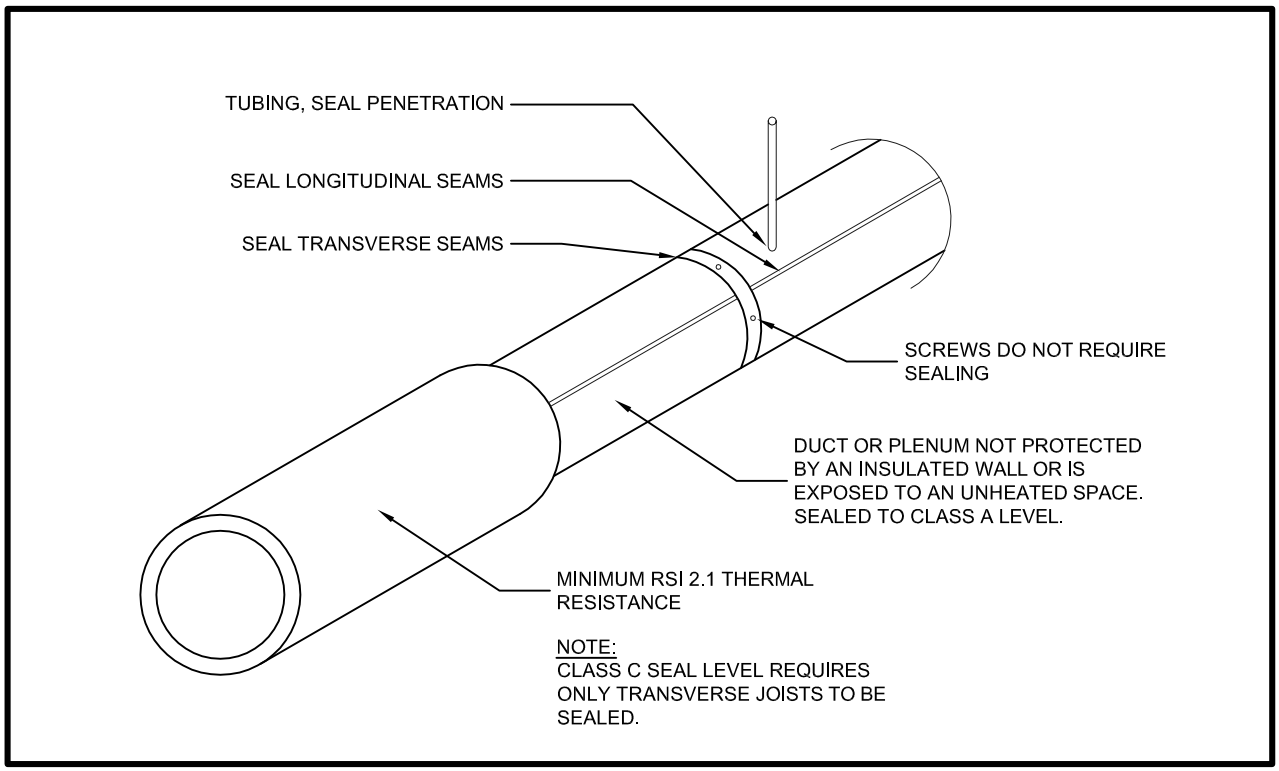
(8) Where a supply duct or return duct is not protected by an insulated exterior wall or where the duct is exposed to an unheated space it shall be insulated to provide a thermal resistance of not less than RSI 2.1.

(9) Where a supply duct or return duct is located in an unconditioned space or outdoors, all joints of the ductwork shall be sealed to a Class A seal level in accordance with the SMACNA, “HVAC Duct Construction Standards – Metal and Flexible”.

(10) Where a supply duct is located in a conditioned space, the ductwork shall be sealed to a Class C seal level in accordance with the SMACNA, “HVAC Duct Construction Standards – Metal and Flexible”.

OBJECTIVES

To promote energy efficiency the Building Code has implemented the sealing of ducts to improve comfort levels, enhance indoor air quality and reduce energy costs. Ducts passing through unconditioned or unheated spaces should have all joints taped to Class A seal level and all supply ducts, located in a conditioned space shall be sealed to Class C seal level. The diagram below is an example of a duct sealed to a Class A level.


TUBING, SEAL PENETRATION
SEAL LONGITUDINAL SEAMS
SEAL TRANSVERSE SEAMS
SCREWS DO NOT REQUIRE SEALING
DUCT OR PLENUM NOT PROTECTED BY AN INSULATED WALL OR IS EXPOSED TO AN UNHEATED SPACE. SEALED TO CLASS A LEVEL.
MINIMUM RSI 2.1 THERMAL RESISTANCE
NOTE:
CLASS C SEAL LEVEL REQUIRES ONLY TRANSVERSE JOISTS TO BE SEALED.