

CHANGE TYPE: Clarification

CHANGE SUMMARY: Ducts are now expressly allowed to exit a shaft, transition horizontally, and then enter another shaft without continuous shaft construction.

2015 CODE: 717.1.1 Ducts and Air Transfer Openings. Ducts transitioning horizontally between shafts shall not require a shaft enclosure provided that the duct penetration into each associated shaft is protected with dampers complying with this section.

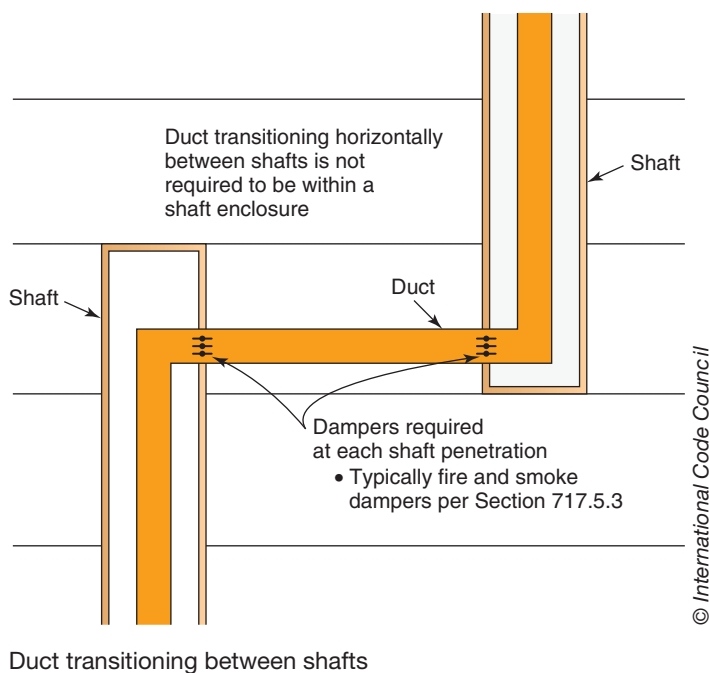
CHANGE SIGNIFICANCE: Shafts are used to enclose vertical openings within a building in order to prevent the spread of smoke or fire from one story to the next. Although shafts are generally vertical, they are permitted by Section 713.2 to be constructed using fire barriers, horizontal assemblies or both. Section 717.1.1 now specifically indicates that it is permissible to have a duct come out of one shaft and then transition into a different shaft provided that dampers exist at the point where the duct penetrates each of the shafts.

The new duct and shaft enclosure provisions do not allow for the violation of any other code requirements, such as those in the *International Mechanical Code* (IMC), that prohibit the installation of dampers within the ductwork (such as in a clothes dryer exhaust system, IMC Section 504.2, or ducts serving a hazardous exhaust system, IMC 510.7.1) or that require the enclosure to be continuous to the outlet terminal (such as grease duct enclosures serving a Type I hood, IMC Section 506.3.11). However, in a typical HVAC duct system, the transition of a duct from one shaft to another without requiring the duct between the shafts to be within a fire-resistance-rated shaft enclosure is acceptable.

717.1.1 continues

717.1.1

Ducts Transitioning between Shafts



717.1.1 continued

Because the ducts will be protected with dampers in accordance with Section 717 at both shafts, the code's basic intent of providing an appropriate separation between stories can be maintained. In general, duct penetrations of shafts require both fire and smoke dampers. Therefore, protecting the duct as it leaves one shaft and again as it enters another shaft enclosure will minimize the spread of fire and smoke through the building and help maintain the separation between stories.

Application wise, there is no technical change. Although not as clearly stated, this option is permissible in the 2012 and earlier editions of the IBC. The previous editions allow this design option by simply following the code's general requirements. The option to protect the ductwork with a continuous horizontal shaft enclosure or to provide dampers at each duct penetration of the associated discontinuous shaft enclosures has always been available. Having the provisions clearly stated allows the designer to determine which approach will be taken to protect the ductwork. Because properly constructing and supporting a horizontal shaft enclosure can be difficult and expensive, this option of providing dampers at each duct penetration may be used more frequently now that the IBC specifically addresses it.



This excerpt is taken from ***Significant Changes to the International Building Code®*, 2015 Edition**.

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