

General Fire and Smoke Damper Requirements

Based on 2011 OBC (With Oakland Amendments)

See specific code sections for exceptions if ducts are used as part of a smoke control system

Ducts that penetrate fire rated assemblies & are not required to have dampers under section 716 need to be fire stopped per an approved fire-rated assembly - 713.3

Ducts & air transfer openings shall not penetrate exit enclosures and exit passageways unless they are necessary for independent pressurization. There shall be no penetrations, whether protected or not, between adjacent enclosures - 1022.4

		Fire Damper Required	Smoke Damper Required
FIRE WALLS	716.5.1	Each portion of a building separated by one or more fire walls shall be considered a separate building (section 706)	
All occupancies		Typically ducts shall not penetrate fire walls but if allowed then damper is required	No requirements stated in section
FIRE BARRIERS	716.5.2	Shaft and exit enclosures, exit passageway, occupancy separation	
	In other than high rise or A, E, H, I, L, R, or regulated by SFM	Yes, unless penetration meets ASTM E119 or UL 263 - or meets all of the following: wall is 1-hr or less, building is fire sprinklered, & entire duct system is 26 Ga.	No requirements stated in section
	For high rise or A, E, H, I, L, R, or regulated by SFM	Yes, unless penetration meets ASTM E119	Yes
SHAFTS	716.5.3	Yes unless B, R, or parking garage	Yes unless B, R, or parking garage
	B & R	No if building is fire sprinklered, penetration is 26 GA subduct exhaust for kitchen, bath, or dryer, duct extends 22" vertical & exhaust fan with cont. upward air flow.	
	Parking garages	No if shafts are garage exhaust or supply & are 2-hr, & have no openings to other occupancies	
FIRE PARTITIONS	716.5.4	Dwelling separation, corridors, elevator lobby separation, tenant separation	
	For occupancies not listed below	Yes unless corridor wall and building is fire sprinklered and duct is protected as a through penetration per Section 713 (this exception is not applicable to H & L) - or tenant partition in covered mall buildings where walls are not required to extend to the underside of floors or roof sheathing - or all of the following: duct is less than 100 sq in, duct is 24 ga, no duct openings between corridor and adjacent spaces, duct is above ceiling, duct does not terminate at fire resistive wall, & duct has 16 ga 12" sleeve attached both sides with 1.5" angles secured to sleeve & wall with #10 screws, annular space between sleeve & wall opening filled with mineral wool on all sides	Yes at corridors unless the duct through corridor is 26 ga & has no openings into corridor. No requirements stated for all other types of fire partitions
	High Rise or A, E, I, R, or regulated by SFM	Yes unless in corridor wall and duct is 26 ga, is protected as a through penetration per Section 713, & no openings serving the corridor - or all of the following: duct is less than 100 sq in (not I-2), duct is 24 ga, no duct openings between corridor and adjacent spaces, duct is above ceiling, duct does not terminate at fire resistive wall, & duct is protected as a through penetration per Section 713 or has 16 ga 12" sleeve attached both sides with 1.5" angles secured to sleeve & wall with #10 screws, annular space between sleeve & wall opening filled with mineral wool on all sides	Same as above