## 2.15. Ducts and Air-Transfer Openings

### 2.15.1. Fire Damper Requirements

**2.15.1.1.** Fire dampers shall be installed to protect ducts and air-transfer openings that penetrate fire barriers and fire walls.

**2.15.1.2.** Fire dampers shall be designed and tested in accordance with **Section 7**, and shall have the minimum fire protection rating specified in **Table 1.11** for the rating of the assembly penetrated

**Table 1.13: Fire Damper ratings.**

| FIRE RESISTANCE RATING OF THE ASSEMBLY | MINIMUM FIRE DAMPER RATING |
|---|---|
| 3 Hour or greater fire resistance rated assembly | 3 Hour |
| Less than 3 Hour fire resistance rated assembly | 90 Minutes |
| Ceiling or floor-ceiling or roof-ceiling assemblies | Same rating as of assemblies |

**2.15.1.3.** Fire dampers shall be required in the following locations:

**a.** Ducts and air-transfer openings penetrating walls or partitions having a fire resistance rating of 2 or more hours.

**b.** Ducts and air-transfer openings penetrating shaft walls having a fire resistance rating of 1 or more hours.

**c.** Ducts and air-transfer openings penetrating floors that are required to have protected openings where the duct is not protected by a shaft enclosure.

**d.** Air-transfer openings that occur in walls or partitions that are required to have a fire-resistive rating of 30 minutes or more.

**2.15.1.4.** Please refer to **Chapter 10. Table 10.1.8.** for further details.

## Points to Ponder

**There are two major reasons for the spread of fire in a fully fire resistive construction.**

1. **Fire spread through HVAC ducts.**
2. **Leap frog effect, where fire spreads out exterior from the window of a floor and back into window of the next upper level.**