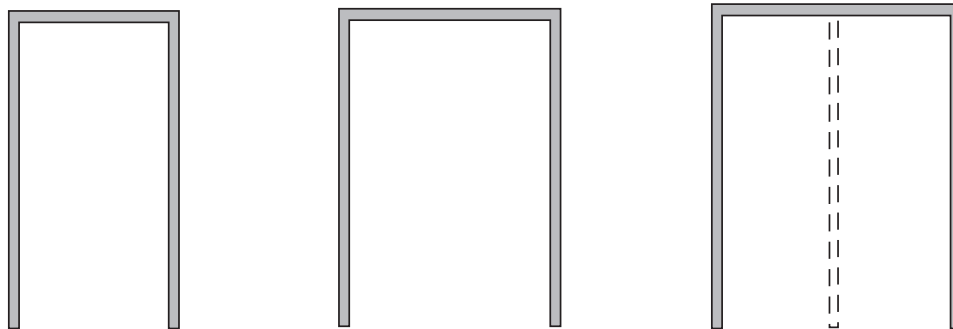
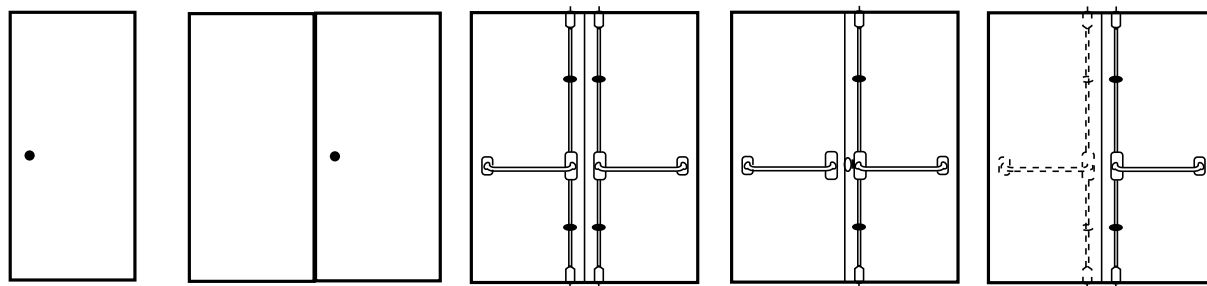


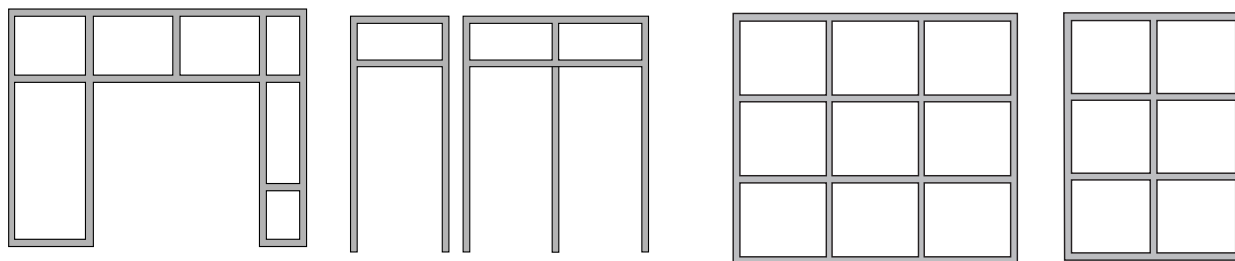
**SMOKE AND DRAFT RATED PRODUCTS:****Typical Frame Elevations:**

All three (3) sided frame series and elevations shown in **Section 9.2 of this manual** are approved for Smoke and Draft label applications.

**Typical Door Elevations:**

All door series and elevations shown in **Section 9.3 of this manual** are approved for Smoke and Draft label applications except:

- Fusible Link Louvers are not approved for smoke and draft applications

**Transom and Side Light Frames Fire Window (Borrowed Light) Frames**

Transom/Sidelight Frame elevations are listed for Smoke and Draft Control applications.

Fire Window (Borrowed Light) Frame elevations are not required to be listed for Smoke and Draft Control applications.

Doors and frames covered in this section have been tested or evaluated in accordance with UL 10C, and UL 1784 listed by either Underwriters Laboratories (UL) or Warnock Hersey. FM Global (FM) does not offer listings for Smoke and Draft rated products. The main components of a Smoke and Draft Rated assembly are:

1. Frame (steel fire rated)
2. Door (steel fire rated)
3. Hardware (fire rated and required)
4. Smoke Seals (fire/smoke control rated)
5. Fire Rated Wall

### SMOKE AND DRAFT RATED DOORS AND FRAMES:

#### FRAMES (Steel):

Smoke and Draft Rated Assemblies must include a Fire Rated Door Frame. Three sided frames are designed to be set on the floor anchored to the wall construction. All frame anchoring must be in accordance with the installation instructions for the appropriate frame construction.

#### DOORS (Steel):

Smoke and Draft Rated Assemblies must include a Fire Rated Door. Steelcraft doors are listed for most commercial building applications. Variations in hardware and glass lights must be considered in the selection of the correct door construction. Smoke and Draft Rated doors can be prepared for glass lights. The required hourly rating will dictate the approved glass lights available. All glass used in fire rated doors must be listed glass, and be either 1/4" wire or other listed glazing material. Basic guidelines on glass are as follows:

- **3 hour** – flush door, no glass.
  - Exception – one (1) light with 100 square inches (.06 square meters) maximum of glass is permitted on 3 hour L, B, & T series doors if Fire Light or other 3 hour listed glazing material is used. Maximum width of 12" (305 mm) or height of 33" (838mm).
- **1-1/2 hour** – 100 sq. in. per door leaf max.
  - 1296 square inches (.84 square meters) maximum of glass is permitted on 1 1/2 hour L & B series doors if Fire Light or other appropriately listed glazing material is used. Maximum width of 36" (914 mm) or height of 54" (1372mm). UL listed doors may have multiple lights, provided each light does not exceed 1296 square inches of exposed glass area.
- **3/4 hour** – 1296 sq. in. per light with neither dimension exceeding 54", unless listed otherwise.
  - Exception – 3/4 hour doors may have multiple lights provided the limits of 1296 square inches per light and 54 inches are not exceeded.
- **20 minute** – 1296 sq. in. per light with neither dimension exceeding 54", unless listed otherwise.

Doors with louvers are not listed for use in areas requiring Smoke and Draft Ratings.

#### HARDWARE:

Hardware used on Smoke and Draft rated assemblies conform to the same requirements as a conventional fire rated door assembly.

#### GASKETING:

Smoke and Draft Rated Assemblies must include the appropriate Fire/Smoke Rated Seals.

Steelcraft frames: Must have a UL10C/UL1784 Listed/Classified gasketing applied to the frame head and jambs, installed in accordance with the gasketing manufacturer's installation instructions.

Steelcraft doors: Recommend a UL10C/UL1784 Listed/Classified gasketing applied to the meeting stile edges of pairs of doors which do not include an astragal.

Door bottom gasketing is not required unless required by the local authority having jurisdiction.

Intumescent gasketing is not required for hollow metal doors installed in hollow metal frames.

The clearance between the door and frame, meeting edges of pairs of doors, and the floor and the bottom of the door must meet the requirements specified in NFPA-80.

Wood doors in steel frames: Refer to the wood door manufacturer's listing for gasketing required for their product to comply with UL10C/UL1784 listings.

#### FIRE RATED WALL:

The wall requirements for Smoke and Draft Control Assemblies are the same as conventional Fire Door Assemblies.

#### HOURLY RATINGS:

Smoke and Draft Rated Assemblies are mainly intended for use in 20 minute with out hose stream applications. Depending on building code requirements and the AHJ, they may be required in areas requiring 3/4, 1-1/2 or 3 hour listings.

#### APPROVED PRODUCTS:

- Frames – F, FN, DW, K, FE, DE, and MU Series
- Doors – L, B, CE, H, HE, SL, TH, T, A, and AN Series

#### LISTING INFORMATION COVERED:

All listing covered in this section are for reference and assistance in developing overall parameters of approvals. Several variables such as hardware, wall construction and application will affect the fire ratings. Individual manufacturer's listing will take precedence.

#### INSTALLATION:

Installation of all Steelcraft framing systems shall conform to the published Steelcraft installation instructions, ANSI/SDI A250.11 "Recommended Installation Instructions for Steel Frames", and HMMA 840. All fire rated frames must be installed in accordance with NFPA 80, and/or the Local AHJ.