



Installation Instructions

20 Minute Positive Pressure Fire Door

WH = PP Cat A

1. Doors must be installed in a listed and labeled fire-rated frame that will match the installed door. The frame must have a minimum fire-rating equivalent to the rating of the door. Frames must be installed square, plumb, and level.
2. This door assembly does NOT require the installation of surface fire-rated seal system.
3. Trimming for height may be done only on the bottom rail (per NFPA 80, maximum trim of $\frac{3}{4}$ " [19.0mm] allowed on site).
4. Surface-mounted hardware must be attached with through-bolts unless interior blocking is provided.
5. A maximum of $\frac{1}{8}$ " (3.2mm) clearance between the frame and door (or between meeting leaves of pair) is allowed.
6. For flush bolts, concealed overhead stops / closers, electronic power transfer units, metal edge guards, and / or other hardware that disrupts the internal door concealed intumescent, a strip of approved and listed intumescent must be applied over the hardware after hardware installation. The intumescent can be applied to the door or the frame at these locations. All hardware must be UL Listed for the appropriate wood door fire rating. Install all hardware per the hardware manufacturers installation instructions.
7. Doors with light cut outs shall be installed with a light kit that is listed and labeled in compliance with UBC 7-2-97 for the specific type of door and fire rating. Install listed light kit and glass per the vision frame manufactures instructions.
8. If door assembly requires "S" rating for smoke rating, a *fire-rated* smoke and draft control gasket shall be installed to the opening. The smoke and draft control gasket shall be labeled showing compliance with UBC 7-2-97, Parts I & II. Smoke gaskets are to be installed per instructions provided with the gasket system and must be compatible with the door and frame type. If the opening is a pair, smoke gasket must be applied at one of the meeting edges.



Installation Instructions

20 Minute Positive Pressure Fire Door

WH = PP Cat B

1. Doors must be installed in a listed and labeled fire-rated frame that will match the installed door. The frame must have a minimum fire-rating equivalent to the rating of the door. Frames must be installed square, plumb, and level.
2. The perimeter of the frame opening **MUST** be furnished with a “listed” surface *fire-rated* edge seal system. Follow specific manufacturer’s instructions for proper installation. Pemko HSS 2000 around perimeter – OR - Any other manufacturers Hot Smoke seal that meets the requirements of UBC 7-2, Part I, Positive Pressure. *If the opening is a pair, a listed intumescent is built into the meeting edge during manufacturing and is not required to be surfaced applied to the meeting edge at installation.*
3. Trimming for height may be done only on the bottom rail (per NFPA 80, maximum trim of ¾” [19.0mm] allowed on site).
4. Surface-mounted hardware must be attached with through-bolts unless interior blocking is provided.
5. A maximum of 1/8” (3.2mm) clearance between the frame and door (or between meeting leaves of pair) is allowed.
6. Doors with light cut outs shall be installed with a light kit that is listed and labeled in compliance with UBC 7-2-97 for the specific type of door and fire rating. Install listed light kit and glass per the vision frame manufactures instructions.
7. If door assembly requires “S” rating for smoke rating, a *fire-rated* smoke and draft control gasket shall be installed to the opening. The smoke and draft control gasket shall be labeled showing compliance with UBC 7-2-97, Parts I & II. Smoke gaskets are to be installed per instructions provided with the gasket system and must be compatible with the door and frame type. If the opening is a pair, smoke gasket must be applied at one of the meeting edges.



Installation Instructions

20 Minute Positive Pressure & Smoke Control Doors

To meet positive pressure and smoke control requirements per UBC 7-2-97, Parts I & II, doors must be installed with fire-rated smoke and draft control gasketing. In some cases, an intumescent seal may be required, as noted below. The smoke and draft control gasket shall be “Listed” for compliance with test procedure UBC Standard 7-2-97, Parts I & II. Refer to gasketing manufacturer’s installation instructions for frame preparation and application guidelines, unless otherwise specified below.

Category “H” 20-minute Positive Pressure single swing doors (4-0 x 9-0 max.)

1. Install “Listed” Pemko S88, S44, or equivalent smoke gasketing at both jamb legs and header (See drawing E). This category includes gasket systems that are surface-applied (such as kerf-applied, adhesive-backed, or mechanically attached) to frames or doors.
2. Any manufacturer’s smoke and draft control gasket that meets the requirements of UBC 7- 2, Part I & II, Positive Pressure, and has been tested to meet the applicable size requirements may be used.
3. Doors must be installed in a listed and labeled fire-rated frame that will match the installed door. The frame must have a minimum fire-rating equivalent to the rating of the door. Frames must be installed square, plumb, and level.
4. This application meets the requirements of Positive Pressure and is eligible to receive the “S” mark on the fire-rating label.

Category “H” 20-minute Positive Pressure paired doors (8-0 x 9-0 max.)

1. Install “Listed” Pemko S88, S44, or equivalent smoke gasketing at both jamb legs and header (See drawing E). This category includes gasket systems that are surface-applied (such as kerf-applied, adhesive-backed, or mechanically attached) to frames or doors.
2. Install Pemko S77, or equivalent smoke gasket at the meeting edge of one door. (intumescent is factory installed in the meeting edge with a veneer applied over the intumescent). (See drawing D).
3. Any manufacturer’s smoke and draft control gasket that meets the requirements of UBC 7- 2, Part I & II, Positive Pressure, and has been tested to meet the applicable size requirements may be used.
4. Doors must be installed in a listed and labeled fire-rated frame that will match the installed door. The frame must have a minimum fire-rating equivalent to the rating of the door. Frames must be installed square, plumb, and level.
5. This application meets the requirements of Positive Pressure and is eligible to receive the “S” mark on the fire-rating label.



Installation Instructions

Category “B” 20-minute Positive Pressure single swing doors (4-0 x 9-0 max.) –Including door and transom assemblies with a transom bar.

1. Install “Listed” Pemko S-88, or equivalent gasketing next to the stop and apply Pemko HSS 2000 intumescent hot smoke seal, or equivalent 5/8” from the stop on both jamb legs and header (See drawing B).
 - Any manufacturers smoke and draft control gasket and hot smoke seal that meets the requirements of UBC 7-2, Part I & II, Positive Pressure, and has been tested to meet the applicable size requirements may be used.
 - These systems are surface applied to either the perimeter of the door or frame. They may be kerf-applied, adhesive-backed, or mechanically fastened.
2. Doors must be installed in a listed and labeled fire-rated frame that will match the installed door. The frame must have a minimum fire-rating equivalent to the rating of the door. Frames must be installed square, plumb, and level.
3. For door and transom assemblies *with* a transom bar, use the same installation method as the door and apply both seals on all edges of the frame.

Category “B” 20-minute Positive Pressure paired doors (8-0 x 9-0 max.) (With FMEA Edge Guards) – Including door and transom assemblies with a transom bar.

1. Install “Listed” Pemko S-88, or equivalent gasketing next to the stop and apply Pemko HSS 2000 intumescent hot smoke seal, or equivalent 5/8” from the stop on both jamb legs and header. (See drawing B).
 - Any manufacturers smoke and draft control gasket and hot smoke seal that meets the requirements of UBC 7-2, Part I & II, Positive Pressure, and has been tested to meet the applicable size requirements may be used.
 - These systems are surface applied to either the perimeter of the door or frame. They may be kerf-applied, adhesive-backed, or mechanically fastened.
 - After installing the metal edge and astragal on the doors, apply Pemko HSS 2000 intumescent hot smoke seal, or equivalent on one leaf of the pair at the meeting edge (See drawing C).
2. Doors must be installed in a listed and labeled fire-rated frame that will match the installed door. The frame must have a minimum fire-rating equivalent to the rating of the door. Frames must be installed square, plumb, and level.
3. For door and transom assemblies *with* a transom bar, use the same installation method as the door and apply both seals on all edges of the frame.



Installation Instructions

Category “B” 20 minute Positive Pressure paired doors (8-0 x 9-0 max.) (Without Metal Edge Guards) – Including door and transom assemblies with a transom bar.

1. Install “Listed” Pemko S-88, or equivalent gasketing next to the stop and apply Pemko HSS 2000 intumescent hot smoke seal, or equivalent 5/8” from the stop on both jamb legs and header. (See drawing B).
 - Any manufacturers smoke and draft control gasket and hot smoke seal that meets the requirements of UBC 7-2, Part I & II, Positive Pressure, and has been tested to meet the applicable size requirements may be used.
 - These systems are surface applied to either the perimeter of the door or frame. They may be kerf-applied, adhesive-backed, or mechanically fastened.
 - The meeting edge intumescent seal system is part of the door construction. Apply a strip of Pemko S77 smoke seal gasket, or equivalent centered on the door edge, on one leaf of the pair at the meeting edge (See drawing D).
2. Doors must be installed in a listed and labeled fire-rated frame that will match the installed door. The frame must have a minimum fire-rating equivalent to the rating of the door. Frames must be installed square, plumb, and level.
3. For door and transom assemblies *with* a transom bar, use the same installation method as the door and apply both seals on all edges of the frame.

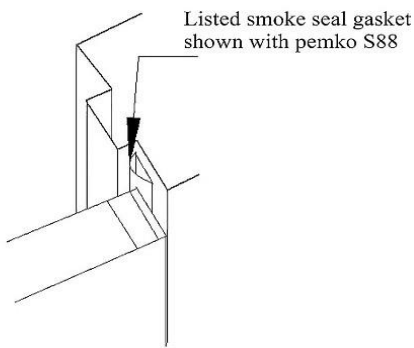
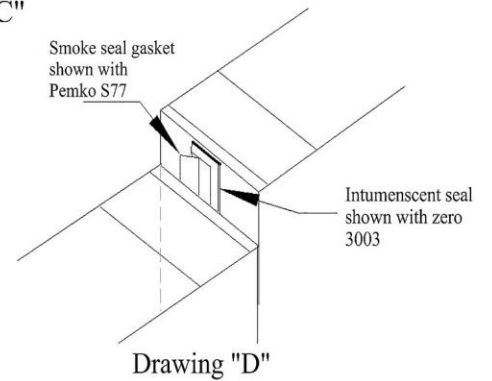
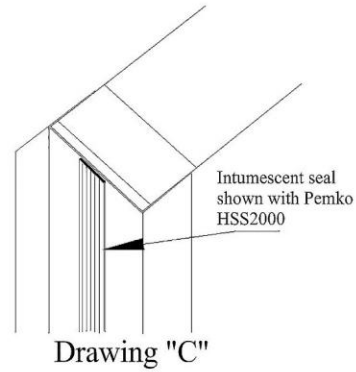
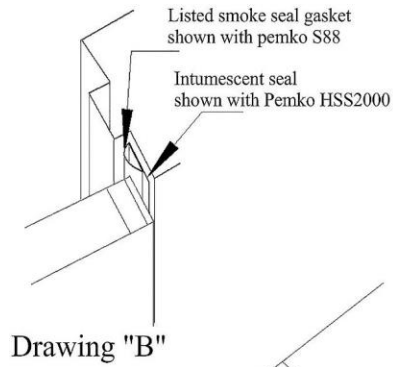


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Installation Instructions

Note: Drawings on this page pertain to 20-minute rated doors.



Meets CAT. "H" requirements for positive pressure seal



Installation Instructions

45/60/90 Minute Positive Pressure Fire Door

WH = 45 PP Cat A

WH = 60 PP Cat A

WH = 90 PP Cat A

1. Doors must be installed in a listed and labeled fire-rated frame that will match the installed door. The frame must have a minimum fire-rating equivalent to the rating of the door. Frames must be installed square, plumb, and level.
2. This door assembly does **NOT** require the installation of surface *fire-rated* seal system. **DO NOT** install any additional edge seal system to this assembly. The seal system is part of the door construction.
3. Trimming for height may be done only on the bottom rail (per NFPA 80, maximum trim of $\frac{3}{4}$ " [19.0mm] allowed on site).
4. Surface-mounted hardware must be attached with through-bolts unless interior blocking is provided.
5. For flush bolts, concealed overhead stops / closers, electronic power transfer units, metal edge guards, and / or other hardware that disrupts the internal door concealed intumescent, a strip of approved and listed intumescent must be applied over the hardware after hardware installation. The intumescent can be applied to the door or the frame at these locations. All hardware must be UL Listed for the appropriate wood door fire rating. Install all hardware per the hardware manufacturers installation instructions.
6. Doors with light cut outs shall be installed with a light kit that is listed and labeled in compliance with UBC 7-2-97 for the specific type of door and fire rating. Install listed light kit and glass per the vision frame manufactures instructions.
7. If door assembly requires "S" rating for smoke rating, a *fire-rated* smoke and draft control gasket shall be installed to the opening. The smoke and draft control gasket shall be labeled showing compliance with UBC 7-2-97, Parts I & II. Smoke gaskets are to be installed per instructions provided with the gasket system and must be compatible with the door and frame type.



Installation Instructions

45/60/90 Minute Positive Pressure Fire Door

WH = 45 PP Cat B

WH = 60 PP Cat B

WH = 90 PP Cat B

1. Doors must be installed in a listed and labeled fire-rated frame that will match the installed door. The frame must have a minimum fire-rating equivalent to the rating of the door. Frames must be installed square, plumb, and level.
2. Edge Seals Required: Pemko HSS 2000 or equivalent intumescent applied to the perimeter of the frame rabbet. Pairs require one strip of Pemko HSS 2000 or equivalent intumescent applied to one edge at the meeting edge of the pair.
3. Trimming for height may be done only on the bottom rail (per NFPA 80, maximum trim of $\frac{3}{4}$ " [19.0mm] allowed on site.
4. Surface-mounted hardware must be attached with through-bolts unless interior blocking is provided.
5. A maximum of $\frac{1}{8}$ " (3.2 mm) clearance between the frame and door (or leaves of pair) is allowed.
6. Doors with light cut outs shall be installed with a light kit that is listed and labeled in compliance with UBC 7-2-97 for the specific type of door and fire rating. Install listed light kit and glass per the vision frame manufactures instructions.
7. If door assembly requires "S" rating for smoke rating, a *fire-rated* smoke and draft control gasket shall be installed to the opening. The smoke and draft control gasket shall be labeled showing compliance with UBC 7-2-97, Parts I & II. Smoke gaskets are to be installed per instructions provided with the gasket system and must be compatible with the door and frame type.



Installation Instructions

45/60/90 Minute Positive Pressure & Smoke Control Doors

To meet positive pressure and smoke control requirements per UBC 7-2-97, Parts I & II, doors must be installed with *fire-rated* smoke and draft control gasketing. In some cases, an intumescent seal may be required, as noted below. The smoke and draft control gasket shall be “Listed” for compliance with test procedure UBC Standard 7-2-97, Parts I & II. Refer to gasketing manufacturer’s installation instructions for frame preparation and application guidelines, unless otherwise specified below.

45, 60 or 90-minute positive pressure single swing doors—including door and transom assemblies with the use of a transom bar:

Install “Listed” smoke seal gasketing next to the stop and apply intumescent (HSS2000 –OR – any listed Hot Smoke Seal) 5/8” from the stop on both door jambs and header (See drawing B).

For door and transom assemblies with a transom bar, use the same installation method for both the door and the transom. Install “Listed” smoke seal gasketing and intumescent on all edges of the frame around the transom.

45, 60 or 90-minute positive pressure pair with metal edge and astragal set:

Install “Listed” smoke seal gasketing next to the stop and apply intumescent (HSS2000 –OR – any listed Hot Smoke Seal) 5/8” from the stop on both door jambs and header, and on all edges of the frame around transom panels (See drawing B). After installing the metal edge and astragal on the doors, apply an additional strip of intumescent (HSS2000 Hot Smoke Seal) on one leaf of the pair at the meeting edge, 5/8” from the astragal (See drawing C).

45, 60 or 90-minute positive pressure pair without metal edges—including transom assemblies with a transom bar:

Install “Listed” smoke seal gasketing next to the stop end and apply intumescent (HSS2000 – OR - any listed Hot Smoke Seal) 5/8” from the stop on both door jambs and header (See drawing B). The meeting edge intumescent edge seal system is part of the door construction.

Apply a strip of Pemko S77, or equivalent smoke seal gasketing centered on top of the intumescent on one leaf of the pair at the meeting edge. (See drawing D).

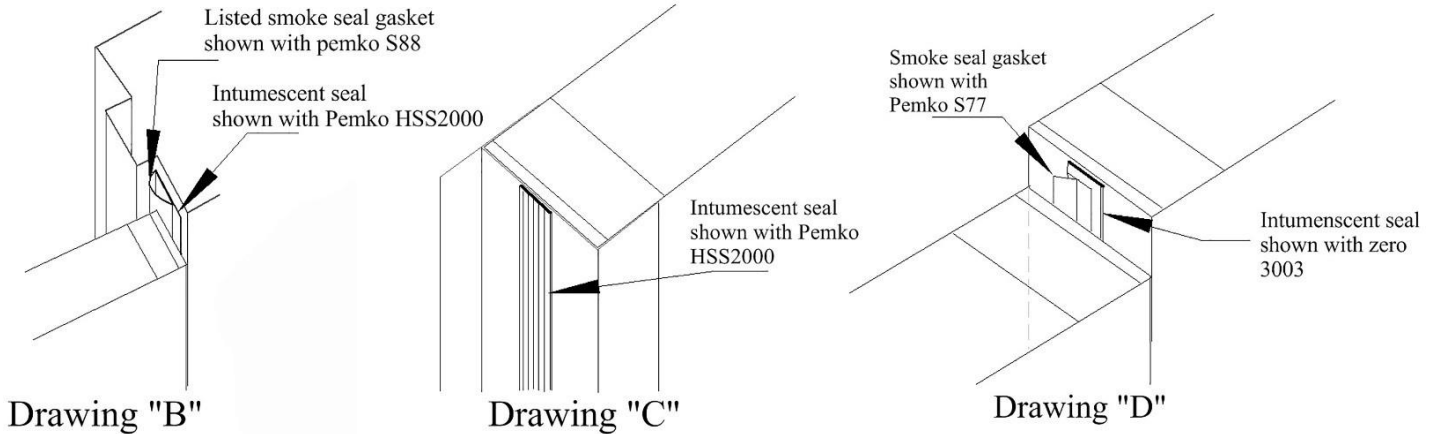
Note: If Category A assembly is used, Refer to page WH = 45/60/90 PP Cat A Instructions, item 2. Frame applied intumescent is not required.



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Installation Instructions

Note: Drawings on this page pertain to 45, 60 & 90 minute rated doors.



Note 1: Any manufacturer's Hot Smoke seal that meets the requirements of UBC 7-2, Part I, Positive Pressure may be substituted for the products referenced within these installation instructions, providing that they are *Listed and Labeled* to meet the applicable size and requirements of the opening.

Note 2: Any manufacturers smoke and draft control gasket that meets the requirements of UBC 7-2, Parts I & II, Positive Pressure may be substituted for the products referenced within these installation instructions, providing that they are *Listed and Labeled* to meet the applicable size and requirements of the opening.

Note 3: All installation instructions are subject to change upon current technical reviews and testing procedures.