Construction Bulletin No. 9

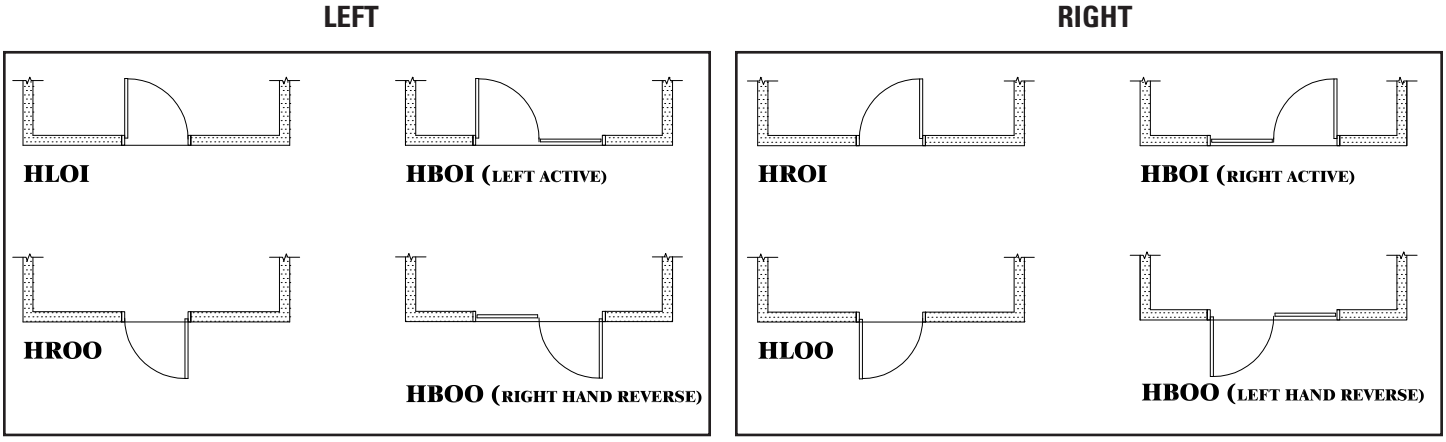
Hollow Metal Doors and Frames

January 2015 - Issue #2

The Hollow Metal Doors and Frames for CONFORM® are manufactured from galvanneal steel and are unpainted. Each door and frame is provided as a package that includes all accessories for both interior and exterior use, except for the lock-sets and closers. Each package includes:

- 16 ga. Reinforced Prewelded Frame
- 18 ga. Insulated Slab Door R6.87
- Single Lockset Prep and Vinyl Door Cap
- Hinges and Bolts
- Strike Plate and Screws
- 3/8"ø x 5" Mounting Sleeve Bolts
- Neoprene Sweep and Screws (for exterior use)
- Aluminum Threshold and Screws (for exterior use)
- Adhesive Neoprene Weather-stripping (for exterior use)
- 16 ga. Drip Flashing (for exterior use)
- Rubber Bumpers (for interior use)

Door Swings



Options

A Nuform representative should be contacted regarding the standard features and other options available for doors and frames. Some common options are:

- ULC 1 1/2 hour Fire Rating
- Lockset and Deadbolt Prep or No Lockset Prep
- Fixed Handle or Crash Bar Door Hardware Reinforcing
- Door Grill and Opening (18" x 12" Typ)
- Door Glazing and Opening (6" x 16" and 24" x 36" Typ)

Standard Sizes

The nominal sizes of the standard doors and frames and the rough openings required in the CONFORM® wall systems are as follows:

Nominal Door and Frame Width		CONFORM® Rough Opening Width	
3'-0"	915	3'-4 3/8"	1026
4'-0"	1219	4'-4 1/4"	1327
6'-0"	1829	6'-4 1/2"	1944
8'-0"	2438	8'-4 1/4"	2547

Nominal Door and Frame Height		CONFORM® Rough Opening Height	
7'-0"	2134	7'-2 1/8"	2189
8'-0"	2438	8'-2 1/8"	2493

Frame Depth	
CF4	3 3/4"
CF6	4 1/2"
CF8	5 3/4"
CF8i	5 3/4"

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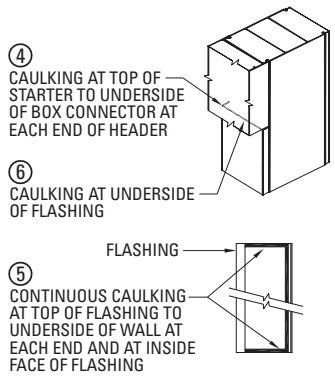
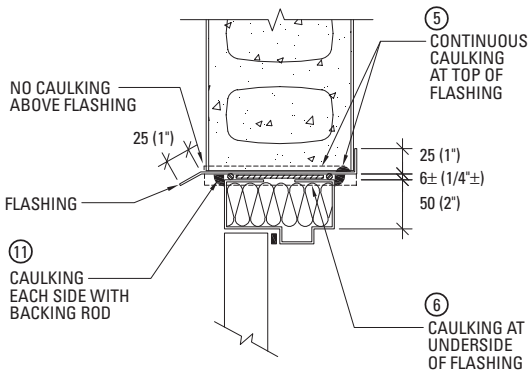
Installation Details

1. **A rough opening is provided in the CONFORM® formwork** to suit the frame width and height, including approximately, 6 mm (1/4") all around the frame, for shimming and caulking. An uncored CONFORM® starter is provided for the full height of the opening, on the face of the CONFORM® panel at each jamb.
2. **The webs of the CONFORM® header components are fastened together** to ensure that the undersides are flush and level. A CONFORM® basic frame may be used as a temporary closure at the underside of the header to contain the concrete during the concrete pour. However, the CONFORM® basic frame must not remain in place, since it traps the water in the joints between components.
3. **The opening is braced** continuously at the jambs and the header during placement of the concrete. The bracing must hold both sides of the opening aligned, parallel, plumb and square, during the concrete pour. Typically, the bracing is a continuous 2x6 or 2x8 wood buck with vertical post shores to the header and horizontal cross bracing to the jambs, at 700 mm (2'-4") maximum. The bracing must not increase the opening width since the shim space around the frame will become excessive and the caulking will be unsightly. After the concrete is poured and set, the bracing and the temporary CONFORM® basic frames are removed
4. **Caulking is applied between the top of the starter** and the CONFORM® box connector at each end of the header. The caulking must not be applied in the joint between the box connector legs and the panel grooves.
5. **A drip flashing is installed at the underside of the header.** A continuous 3/8" bead of caulking is installed on top of the flashing at the inside face and at each end. The flashing is pressed tight to the underside of the header and held in place until the caulking cures. The flashing is held in place with flat head concrete screws, 3/16" dia. by 1-1/4" long installed at 6" from each end and at 800 mm (2'-8") on centre, maximum.
6. **A 3/8" bead of caulking is applied at the underside of the flashing** to the top of the starter, at each jamb.
7. **Where an insulated frame is required,** strips of 2" rigid insulation are cut to suit the width of the frame, less 1/2". The face of the insulation is notched for the plates at the hinges and keeper. The insulation is notched along one edge to install the insulation into the frame.
8. **The frame is centred in the opening** and shims are place all around to plumb, square and level the frame. The frame is anchored to the concrete wall with 3 - 3/8"ø x 5" expansion bolts, at each jamb. A 3/8" concrete bit is used to drill 3" deep holes in the concrete for the expansion bolts.
9. **The door is installed into the frame** and adjusted to ensure that the door operation is acceptable.
10. **The aluminum threshold is caulked** and anchored to the slab at the sill. The sweep is attached to the door and the weather-strip-ping is applied around the frame.
11. **To complete the installation,** a foam backer rod, 3/8"ø or 1/2"ø, is inserted all around the frame on both sides and the gap between the frame and the wall is caulked with an approved sealant.
12. **For in-swing exterior doors,** the heads of the bolts in the frame are ground and patched with resin body filler to prevent removal of the bolts.

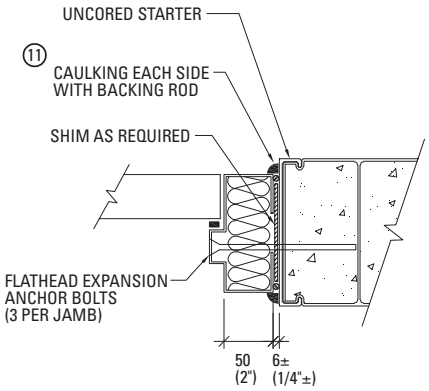
FLASHING



HEADER



JAMB



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