Common Jamb Construction for Rolling Counter Fire Doors:
Masonry Construction - Bolted Guides

Introduction:
Rolling counter fire doors are tested for compliance with UL 10B and NFPA 252. When tested, these doors are mounted on frames with jambs intended to replicate field construction. The test frame is held on the face of the test furnace for a specified period of time. The guides must remain fastened to the jambs and no “through gaps” may occur in the door assembly during the test. This DASMA Technical Data Sheet includes a representation of jamb construction and guide attachment details. Guide configurations and approved jamb construction will vary with individual fire door manufacturer's listings. Consult with individual manufacturers for specific guide details and their approved jamb constructions.

Objectives:
The objectives of preparing the set of standard details enclosed areas follows:

1. To show how counter fire door guide assemblies are located on the jamb for face of wall mounting and between jamb mounting.
2. To provide recommendations for rebar locations in jambs.
3. To help architects, engineers and others involved with building specifications understand the relationship between the rolling counter fire door guides and the jamb/wall design.
4. To have the attached details included in applicable reference documents used by architects, engineers, specifiers and code officials

See the following pages for a list of standard jamb construction details.
DASMA Recommended

Standard Jamb Construction:

Rolling Counter Fire Doors on Masonry Walls

Bolted Guides

General Notes:

1. Existing and new wall construction covered
2. Details are for general information only
3. Details are based on UL Classified and FM Approved Products
4. Consult a structural engineer for actual wall construction
5. Details are attachments to TDS-263
List of Standard Jamb Construction Details
(Rolling Counter Fire Doors: Masonry Construction - Bolted Guides)

Figure 1. Preferred CMU Reinforcement Detail
Figure 2. Preferred Brick/Concrete Reinforcement Detail
Figure 3. Face-mounted counter fire door guide configuration; bolted connection; hollow block
Figure 4. Face-mounted counter fire door guide configuration; bolted connection; filled block
Figure 5. Face-mounted counter fire door guide configuration; bolted connection; brick or poured concrete
Figure 6. Face-mounted counter fire door guide configuration; fastened connection; steel bent plate at jamb; brick or poured concrete
Figure 7. Face-mounted counter fire door guide configuration; fastened connection; steel angle at jamb; brick or poured concrete
Figure 8. Face-mounted counter fire door guide configuration; fastened connection; structural steel channel at jamb; brick or poured concrete
Figure 9. Face-mounted counter fire door guide configuration; fastened connection; steel angle at jamb; filled block
Figure 10. Jamb-mounted counter fire door guide configuration; bolted connection; filled block
Figure 11. Jamb-mounted counter fire door guide configuration; bolted connection; brick or poured concrete
Figure 12. Jamb-mounted counter fire door guide configuration; fastened connection; structural steel channel at jamb; brick or poured concrete
Figure 13. Jamb-mounted counter fire door guide configuration; fastened connection; steel bent plate at jamb; brick or poured concrete

Note: Technical Data Sheets are information tools only and should not be used as substitutes for instructions from individual manufacturers. Always consult with individual manufacturers for specific recommendations for their products and check the applicable local regulations.

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Common Jamb Construction for Rolling Counter Fire Doors
For Maximum 4 Hour Rating

2" (max.) Rebar, Typical
CMU filled with min. 2500 psi Concrete

2" (max.)

2" (max.)

Figure 1
Preferred CMU Reinforcement Detail

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Figure 2
Preferred Brick/Concrete Reinforcement Detail

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Figure 3
Face-mounted counter fire door guide configuration; bolted connection; hollow block

Crush Plate, or equivalent
Unfilled Block
Min. 3/8" Dia. Threaded Rod
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Rebar Location, See Figure 1
CMU Filled with min. 2500 psi Concrete

8 x Bolt Dia. (min.)

Min. 3/8” Dia. Threaded Rod

6 x Bolt Dia. (min.)

Figure 4
Face-mounted counter fire door guide configuration;
bolted connection; filled block
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Common Jamb Construction for Rolling Steel Counter Fire Doors
For Maximum 4 Hour Rating

Figure 5
Face-mounted counter fire door guide configuration;
bolted connection; brick or concrete
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Face-mounted counter fire door guide configuration;
steel bent plate at jamb; brick or concrete

Note: For guides mounted to a steel member,
this member must be secured to the masonry wall.

Rebar Location, See Figure 2

Min. 3/16" Thick
Bent Plate, with
Welded Studs or
equivalent, by others

Min. 3/8" Dia. Fasteners

Figure 6
Face-mounted counter fire door guide configuration;
steel bent plate at jamb; brick or concrete
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Brick, or min. 2500 psi
Concrete (shown)

Notes:
1. For guides mounted to a steel angle, this angle must be embedded, or secured to the masonry wall. Angle must be designed to have an expansion gap equal to 1/8” for each foot of opening height in order to be suitable for welding guide angle to jamb.
2. For guides mounted to steel, when this steel stops at the header, metal shims must be inserted between the guide wall angle and the wall above the opening.

Figure 7
Face-mounted counter fire door guide configuration; fastened connection; steel angle at jamb; brick or concrete
Rebar Location, See Figure 2

Structural Steel Channel, with Welded Studs or equivalent, by others

Min. 3/8" Dia. Fasteners

Figure 8
Face-mounted counter fire door guide configuration; fastened connection; structural steel channel at jamb; brick or concrete

Notes:
1. For guides mounted to a steel channel, this channel must be embedded, or secured to the masonry wall. Channel must be designed to have an expansion gap equal to 1/8" for each foot of opening height in order to be suitable for welding guide angle to jamb.
2. For guides mounted to steel, when this steel stops at the header, metal shims must be inserted between the guide wall angle and the wall above the opening.

Brick, or min. 2500 psi Concrete (shown)

2-1/2" (min.)
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Locate U-shape 1/4" Dia. Rebar Anchors Welded to Jamb Angle at 24" O.C. Vertically.
Min. 3/16" Thick Steel Angle
Min. 3/8" Dia. Fasteners
2-1/2" (min.)

Notes:
1. For guides mounted to a steel angle, this angle must be embedded, or secured to the masonry wall. Angle must be designed to have an expansion gap equal to 1/8" for each foot of opening height in order to be suitable for welding guide angle to jamb.
2. For guides mounted to steel, when this steel stops at the header, metal shims must be inserted between the guide wall angle and the wall above the opening.

CMU Filled with
min. 2500 psi Concrete

Figure 9
Face-mounted counter fire door guide configuration; fastened connection; steel angle at jamb; filled block
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Min. 3/8" Dia. Fasteners
6 x Bolt Dia. (min.), from either edge
Optional Steel Cap (Not Shown)

Rebar Location, See Figure 1
CMU Filled with min. 2500 psi Concrete

Figure 10
Face-mounted counter fire door guide configuration; bolted connection; filled block

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Figure 11
Jamb-mounted counter fire door guide configuration; bolted connection; brick or concrete

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Notes:
1. For guides mounted to a steel channel, this channel must be embedded, or secured to the masonry wall. Channel must be designed to have an expansion gap equal to 1/8" for each foot of opening height in order to be suitable for welding guide angle to steel jamb.
2. For guides mounted to steel, when this steel stops at the header, metal shims must be inserted between the guide wall angle and the wall above the opening.

Figure 12
Jamb-mounted counter fire door guide configuration; fastened connection; structural steel channel at jamb; brick or concrete

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Notes:
1. For guides mounted to a steel plate, this plate must be embedded, or secured to the masonry wall. Plate must be designed to have an expansion gap equal to 1/8" for each foot of opening height in order to be suitable for welding guide angle to steel jamb.
2. For guides mounted to steel, when this steel stops at the header, metal shims must be inserted between the guide wall angle and the wall above the opening.

Figure 13
Jamb-mounted counter fire door guide configuration; fastened connection; steel bent plate at jamb; brick or concrete