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

Introduction

Rolling fire doors are tested by being mounted to a furnace which is in compliance with Underwriters Laboratories requirements. The doors are mounted on the jambs of a wall intended to replicate field construction. The fire door guides must remain securely fastened to the jambs at the end of fire test. This DASMA Technical Data Sheet includes a representation of masonry 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 are as follows:

- 1. To show how 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 steel fire door guides and the jamb/wall design.
- 4. To help door dealers and distributors know the limitations for welding guide angles to steel jambs.
- 5. To have the details included in applicable reference documents used by architects, engineers, specifiers and code officials.

Special Notations

- 1. UL has approved the welded guide details ONLY AS SHOWN.
- 2. FM does not allow guides to be welded to steel jambs.

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

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.



DASMA Recommended

Standard Jamb Construction:

Rolling Fire Doors On Masonry Walls

Bolted and Welded Guides

General Notes:

- 1. Existing and new wall construction covered
- 2. Details are for general information only
- 3. Consult a structural engineer for actual wall construction
- 4. Details are attachments to TDS-261

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TECHNICAL DATA SHEET #261

<u>List of Standard Jamb Construction Details</u> (Rolling Fire Doors: Masonry Construction - Bolted and Welded Guides)

- Figure 1. Preferred CMU Reinforcement Detail
- Figure 2. Preferred Brick/Concrete Reinforcement Detail
- Figure 3. Face-mounted "Z" guide configuration; bolted connection; hollow block
- Figure 4. Face-mounted "Z" guide configuration; bolted connection; filled block
- Figure 5. Face-mounted "Z" guide configuration; bolted connection; brick or poured concrete
- Figure 6. Face-mounted "E" guide configuration; fastened or welded connection; steel bent plate at jamb; brick or poured concrete
- Figure 7. <u>Face-mounted "E" guide configuration; fastened or welded connection; steel angle at jamb; brick or poured concrete</u>
- Figure 8. <u>Face-mounted "E" guide configuration; fastened or welded connection; structural steel channel at jamb;</u> brick or poured concrete
- Figure 9. Face-mounted "E" guide configuration; fastened or welded connection; steel angle at jamb; filled block
- Figure 10. Jamb-mounted "Z" guide configuration; bolted connection; filled block
- Figure 11. Jamb-mounted "Z" guide configuration; bolted connection; brick or poured concrete
- Figure 12. Jamb-mounted "Z" guide configuration; fastened or welded connection; structural steel channel at jamb; brick or poured concrete
- Figure 13. Jamb-mounted "Z" guide configuration; fastened or welded connection; steel bent plate at jamb; brick or poured concrete
- Figure 14. Section view, face-mounted welded guide wall angle
- Figure 15. Section view, jamb-mounted welded guide wall angle

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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 "Z" configuration; bolted connection; hollow block

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Figure 4 Face-mounted "Z" configuration; bolted connection; filled block

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inserted between the guide wall angle and the

wall above the opening.

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Figure 6 Face-mounted "E" configuration; fastened or welded connection; steel bent plate at jamb; brick or concrete

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Figure 7 Face-mounted "E" configuration; fastened or welded connection; steel angle at jamb; brick or concrete

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Figure 8 Face-mounted "E" configuration; fastened or welded connection; structural steel channel at jamb; brick or concrete

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2. For doors 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 9 Face-mounted "E" configuration; fastened or welded connection; steel angle at jamb; filled block

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Figure 10 Jamb-mounted "Z" configuration; bolted connection; filled block

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Figure 11 Jamb-mounted "Z" configuration; bolted connection; brick or concrete

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Figure 12 Jamb-mounted "Z" configuration; fastened or welded connection; structural steel channel at jamb; brick or concrete

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This Technical Data Sheet was prepared by the members of DASMA's Rolling Door Division Technical Committee. DASMA is a trade association comprising manufacturers of rolling doors, fire doors, grilles, counter shutters, sheet doors, and related products; upward-acting residential and commercial garage doors; operating devices for garage doors and gates, sensing devices, and electronic remote controls for garage doors and gate operators; as well as companies that manufacture or supply either raw materials or significant components used in the manufacture and installation of the Active Members' products.

have an expansion gap equal to 1/8" for each foot of opening height in order to be suitable for

2. For doors mounted to steel, when this steel stops at the header, metal shims must be inserted between the guide wall angle and the

welding guide angle to steel jamb.

wall above the opening.



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1. For doors 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 doors 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 "Z" configuration; fastened or welded connection; steel bent plate at jamb; brick or concrete

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Min. 3/16" Thick Steel Angle, Bent Plate, or Structural Channel (By Others) Note: Use E6010/E6011 Electrodes or Electrodes of Equivalent Strength Slot Spacing T 1 1/2 Face of Jamb Mounted Guide Wall Angle Length of One Side т of Slot T = Wall Angle Thickness Figure 14 (Section A-A)

Face of Jamb Welded Guide Wall Angle (UL listed products only)

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Figure 15 (Section B-B) Between Jamb Welded Guide Wall Angle (UL listed products only)

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