

This door has been evaluated in accordance with ASTM E 330-02 and ANSI/DASMA 108-05.

Per ASCE 7-05, design Pressures (DP) as charted on this drawing typically meet or exceed requirements for corresponding wind speeds.

These ASCE 7-05 exposure B wind speeds are for 8' high doors on fully enclosed flat roof buildings with dimensions 60' x 40' x 30'.

width	fastener	spacing	psf (+/-)	Exposure "B"
20'-04"	1/2"	16"	70.7	217 (mph)
22'-04"	1/2"	16"	70.7	218 (mph)
24'-04"	1/2"	16"	64.9	210 (mph)
25'-04"	1/2"	16"	62.3	205 (mph)
26'-04"	1/2"	16"	60.0	202 (mph)
28'-04"	1/2"	16"	53.7	192 (mph)
30'-04"	1/2"	16"	48.4	182 (mph)

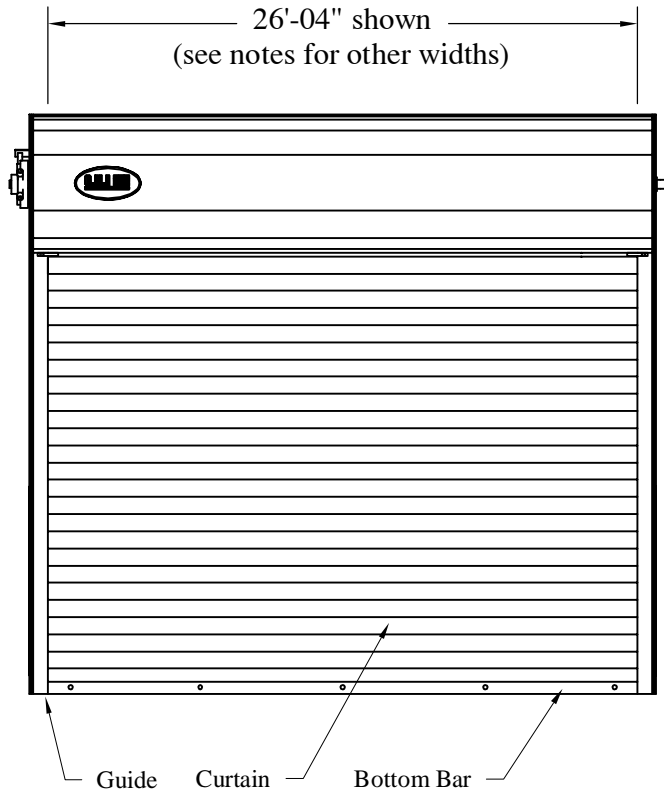
Use self threading screws or welds with spacing above to install door on structural steel or equivalent. See page 4.

width	fastener	spacing	psf (+/-)	Exposure "B"
20'-04"	5/8"	8"	70.7/-69.7	215 (mph)
22'-04"	5/8"	8"	68.3/-60.5	201 (mph)
24'-04"	5/8"	8"	59.8/-53.1	189 (mph)
25'-04"	5/8"	8"	56.1/-50.0	183 (mph)
26'-04"	5/8"	8"	52.9/-47.2	179 (mph)
28'-04"	5/8"	8"	47.2/-42.3	170 (mph)
30'-04"	5/8"	8"	42.4/-38.2	162 (mph)

Use spacing above to through bolt with grade 5 rod on 2000psi concrete, filled CMU, or equivalent. See page 4, item 3c.

width	fastener	spacing	psf (+/-)	Exposure "B"
20'-04"	5/8"	8"	70.7	217 (mph)
22'-04"	5/8"	8"	70.7	218 (mph)
24'-04"	5/8"	8"	64.9	210 (mph)
25'-04"	5/8"	8"	62.3	205 (mph)
26'-04"	5/8"	8"	60.0	202 (mph)
28'-04"	5/8"	8"	53.7	192 (mph)
30'-04"	5/8"	8"	48.4	182 (mph)


Use spacing above to through bolt with grade 8 rod on 2500psi concrete or equivalent. See page 4, item 3d.



This page is for steel jamb or bolt through spacing details.

See Page 2 for 4000psi concrete jamb fastener spacing details.

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 <small>ROLLING STEEL DOORS</small> <small>1485 Sunrise Drive, Arthur, IL 61911</small>	Date: 8-31-2015
	Models: 6202, 6222, 6242, 6181, 6201, 6221, 6266
20'-04" through 30'-04"	
C.H.I. Drawing: TZ12w-26-R1002	

opening width	fastener size	approximately 110mph			approximately 120mph			approximately 130mph or more														
		spacing	psf	mph	spacing	psf	mph	spacing	psf	mph	spacing	psf	mph	spacing	psf	mph						
20'-04"	1/2"	16"	28.5/-25.1	129	15"	30.2 / -26.5	133	13"	34.3 / -30.1	142	12"	36.8 / -32.4	147	10"	43.4 / -38.2	160	9"	47.9 / -42.1	168	8"	53.4 / -47.0	177
22'-04"	1/2"	16"	24.2/-21.4	120	15"	25.7 / -22.7	123	13"	29.2 / -25.9	132	12"	31.5 / -27.8	137	10"	37.2 / -32.9	149	9"	41.1 / -36.3	156	8"	45.9 / -40.6	165
24'-04"	1/2"	16"	21.0/-18.6	112	14"	23.7 / -21.0	119	12"	27.3 / -24.3	128	11"	29.6 / -26.3	133	10"	32.4 / -28.8	140	9"	35.8 / -31.8	147	8"	40.0 / -35.6	155
25'-04"	1/2"	15"	20.8/-18.5	112	13"	23.7 / -21.1	119	11"	27.7 / -24.7	129	10"	30.3 / -27.0	135	9"	33.5 / -29.9	142	8"	37.5 / -33.4	150			
26'-04"	1/2"	14"	20.8/-18.5	112	12"	24.0 / -21.4	121	11"	26.1 / -23.3	126	10"	28.5 / -25.5	132	9"	31.5 / -28.1	138	8"	35.3 / -31.5	146			
28'-04"	1/2"	13"	19.8/-17.7	110	10"	25.4 / -22.7	125	9"	28.1 / -25.1	131	8"	31.4 / -28.2	139									
30'-04"	1/2"	11"	20.8/-18.7	113	10"	22.8 / -20.5	119	9"	25.2 / -22.7	125	8"	28.2 / -25.4	132									

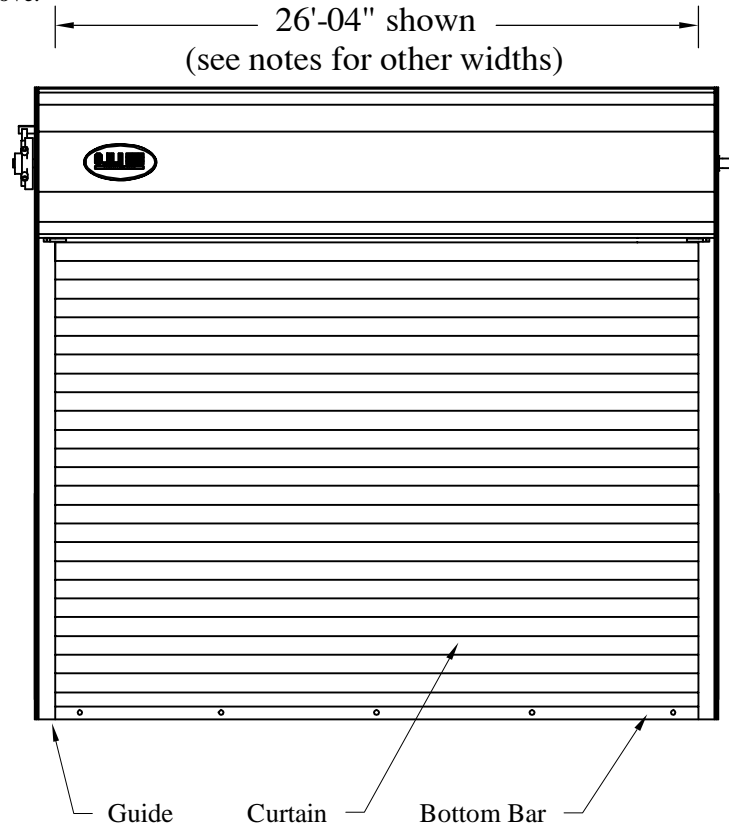
Install door on 4000psi concrete jambs with spacing as above.

See page one when through bolting on 2000psi concrete, filled CMU or equivalent.

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Use 5/8" fasteners on 4000psi concrete with spacing as shown below.

width	fastener	spacing	psf	Exposure "B"	spacing	psf	Exposure "B"
20'-04"	5/8"	16"	33.3/-29.3	140 (mph)	10"	51.2 / -45.0	173 (mph)
22'-04"	5/8"	16"	28.4/-25.2	130 (mph)	10"	44.0 / -38.9	162 (mph)
24'-04"	5/8"	16"	24.7/-21.9	122 (mph)	10"	38.3 / -34.0	152 (mph)
25'-04"	5/8"	16"	23.1/-20.6	118 (mph)	10"	35.9 / -32.0	147 (mph)
26'-04"	5/8"	16"	21.7/-19.3	115 (mph)	10"	33.8 / -30.2	143 (mph)
28'-04"	5/8"	16"	19.2/-17.2	109 (mph)	10"	30.1 / -27.0	136 (mph)
30'-04"	5/8"	14"	19.5/-17.6	110 (mph)	10"	27.0 / -24.3	129 (mph)

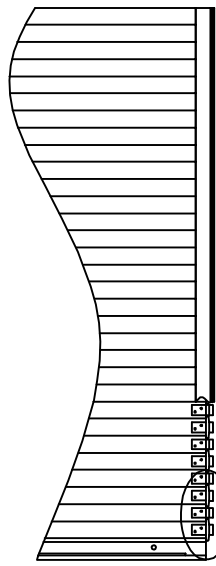
This page is for 4000psi concrete jamb fastener spacing details.

See Page 1 for steel jamb fastener spacing details.

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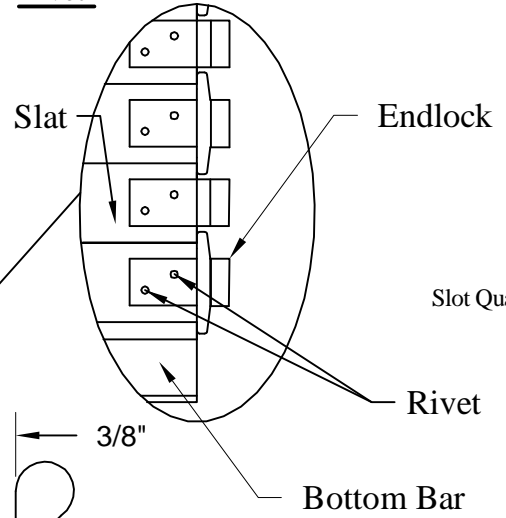
 <small>ROLLING STEEL DOORS</small> <small>1485 Sunrise Drive, Arthur, IL 61911</small>	Date: 8-31-2015
	Models: 6202, 6222, 6242, 6181, 6201, 6221, 6266
20'-04" through 30'-04"	
C.H.I. Drawing: TZ12w-26-R1002	

Professional Engineer's seal provided only for verification of windload construction details

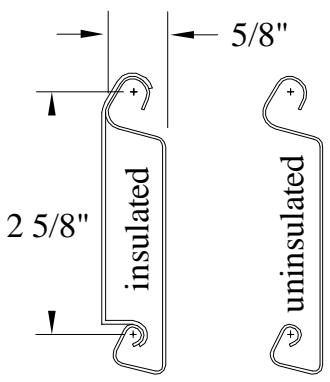
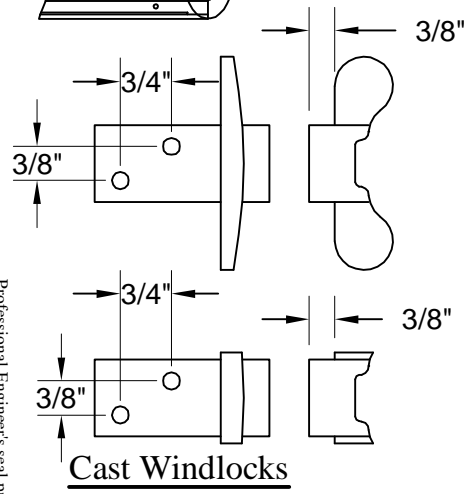
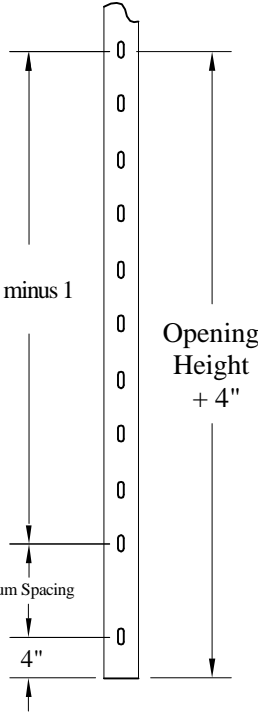


Rivet Diameter: 1/4"
 Rivet Body: Steel
 Rivet Mandrel: Steel
Rivet

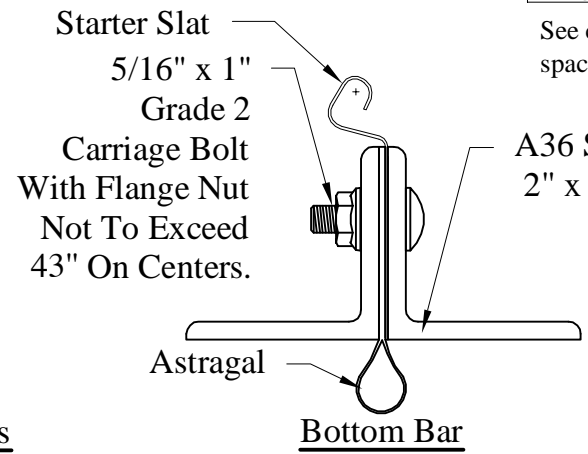
Note:
 Construction of the door above the header is not part of the windload design and not detailed on this drawing.



Slot Quantity minus 1



Steel Slat Thickness
 .024/.024 insulated
 .028 uninsulated



Opening Height	MAXIMUM SPACING								
	8"	9"	10"	11"	12"	13"	14"	15"	16"
08'-00"	13	12	11	10	9	9	8	8	7
09'-00"	15	13	12	11	10	10	9	8	8
10'-00"	16	15	13	12	11	11	10	9	9
11'-00"	18	16	15	13	12	12	11	10	9
12'-00"	19	17	16	15	13	13	12	10	10
13'-00"	21	19	17	16	14	13	13	11	11
14'-00"	22	20	18	17	15	14	13	12	11
15'-00"	24	21	19	18	16	15	14	13	12
16'-00"	25	23	21	19	17	16	15	14	13
17'-00"	27	24	22	20	18	17	16	15	14
18'-00"	28	25	23	21	19	18	17	16	15
19'-00"	30	27	24	22	20	19	18	17	16
20'-00"	31	28	25	23	21	20	19	17	16
21'-00"	33	29	27	24	22	21	19	18	17
22'-00"	34	31	28	25	23	22	20	19	18
23'-00"	36	32	29	27	24	23	21	20	19
24'-00"	37	33	30	28	25	24	22	21	19
25'-00"	39	35	31	29	26	25	23	22	20
26'-00"	40	36	33	30	27	25	24	23	21
27'-00"	42	37	34	31	28	26	25	24	22
28'-00"	43	39	35	32	29	27	25	24	22
29'-00"	45	40	36	33	30	28	26	25	23
30'-00"	46	41	37	34	31	29	27	26	24
Opening Height	Slot Quantity								

See charts on Pages 1 and 2 for maximum fastener spacing. See Page 4 for fastener descriptions.

Maximum door height: 30'-0"

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Guide Details

1. Jamb Material:

- A500 Structural Steel (1/4" thick, see page 1) or
- Concrete: Simpson Strong-Tie (4000psi, see page 2) or
- Filled CMU or Concrete: Bolt Through (2000psi, see page 1) or
- 2500 Concrete: Bolt Through (2500psi, see page 1)

2. Wall Angle: (A36 Structural Steel Angle)

- 4" x 4" x 5/16" "E" Guide Configuration for Steel Jamb.
- 4" x 4" x 5/16" "Z" Guide Configuration for Concrete Jamb.

3. Jamb Fastener: (Quantity Shown On Page 3)

- Steel: 1/2"-13 x 1-1/4" Self Tapping Bolt (ASME B18.6.3)

An alternative to self tapping bolts is

Welding of Guides: 3/16" Fillet Weld

Along Perimeter of Slots Utilizing an E60 Electrode.

Slot Quantity and Spacing Same as Steel Fasteners (see page 3).

- Concrete: Simpson Strong-Tie

Titen HD 1/2" x 6" or Titen HD 5/8" x 6"

- Filled CMU or Concrete: Bolt Through

5/8"-11 Bolt or Rod (minimum 115,000 psi), Nut, 1"OD flat washers, with Square crush plate: 4"x4"x0.25" thick (A36 steel or better)

- 2500psi Concrete: Bolt Through

5/8"-11 Bolt or Rod (minimum 150,000 psi), Nut, 1-1/4"OD flat washers, with Square crush plate: 4"x4"x0.25" thick (A36 steel or better)

4. Guide to Guide Fastener:

1/2"-13 x 1-1/4" Grade 5 Carriage Bolt with Steel Serrated-Flange Hex Locknut 1/2"-13 not to exceed 24" on centers.

5. Back Angle: (A36 Structural Steel Angle)

3-1/2" x 2-1/2" x 1/4"

6. Face Angle: (A36 Structural Steel Angle)

3-1/2" x 3-1/2" x 1/4"

7. Windlock Bar:

1/2" x 1" Hot Rolled Steel

1/2" Diameter Plug Welds every 16" maximum or

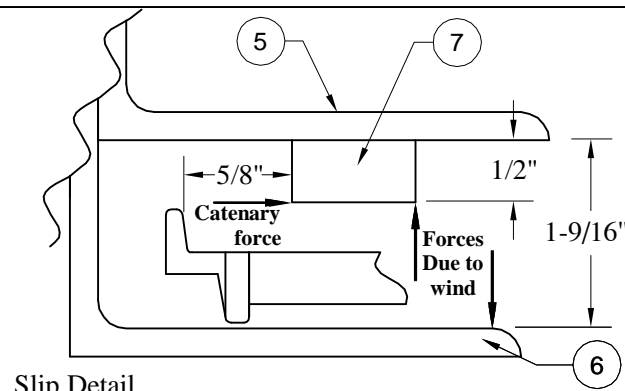
3/16" Fillet x 3/8" Long Welds every 16" maximum on Alternating Sides of Windlock Bar

8. Slat Cut-Length:

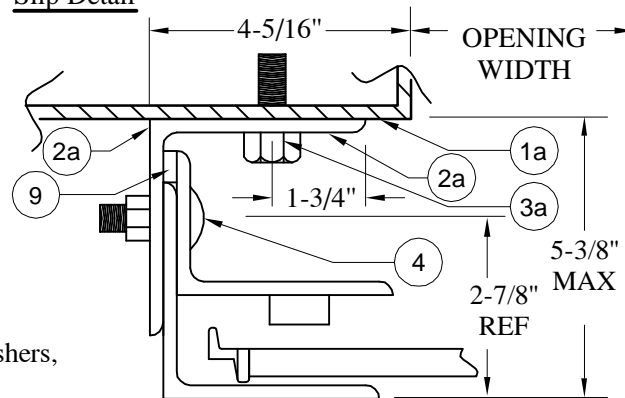
Slat Length = Opening Width plus 4-3/4"

9. Shim:

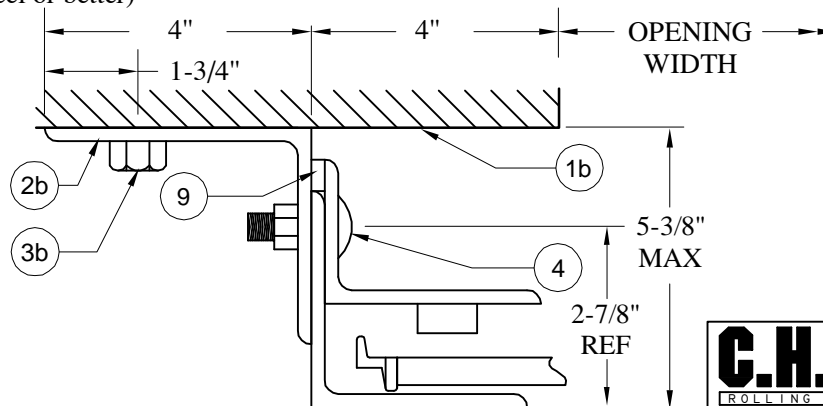
1/4" x 3/4" Hot Rolled Steel



Slip Detail



"E" Guide Details



"Z" Guide Details

The jambs must be designed (by others) to withstand direct forces due to wind (width x psf/2) and catenary forces created by this door. Forces are in units of "pounds per foot tall". Catenary is always in the direction shown. Direct forces due to wind occur in both (+) and (-) directions. Theoretical catenary forces are tabulated below. While lower psf may generate lesser forces, these doors are capable of enduring at least 150% of design pressure resulting in higher theoretical catenary forces.

width	dp max	catenary force
20'-04"	70.7(psf)	4100 (lbs/ft)
22'-04"	70.7(psf)	4800 (lbs/ft)
24'-04"	64.9(psf)	5000 (lbs/ft)
25'-04"	62.3(psf)	5100 (lbs/ft)
26'-04"	60.0(psf)	5300 (lbs/ft)
28'-04"	53.7(psf)	5200 (lbs/ft)
30'-04"	48.4(psf)	5200 (lbs/ft)

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