

DISTRIBUTOR TECH DATA MANUAL

SECTION - PAGE	DESCRIPTION
0-000	Revised page to reflect recently updated sections.
1-000	Revised page to reflect recently updated pages.
1-000B	Revised page to reflect recently updated pages.
1-901	Created page to show door installation instructions.
2-000	Revised page to reflect recently updated pages.
2-402	Created page to show flush kit glass door opening designs. Also, updated dutch doors glass kit options.
2-402A	Created page to show center seam door flush steel glass kits 3/8" thru 5/8" pocket.
2-402B	Created page to show center seam door flush steel glass kits 1/2" thru 1-1/8" pocket.
2-402C	Created page to show tab and slot door flush steel glass kits 3/8" thru 1-1/8" pocket
3-000	Revised page to reflect recently updated pages.
3-402	Created page to show flush kit glass door opening designs. Also, updated dutch doors glass kit options.
3-402A	Created page to show center seam door flush steel glass kits 3/8" thru 5/8" pocket.
3-402B	Created page to show center seam door flush steel glass kits 1/2" thru 1-1/8" pocket.
3-402C	Created page to show tab and slot door flush steel glass kits 3/8" thru 1-1/8" pocket
5-000	Revised page to reflect recently created & updated pages.
5-001	Created index to reflect recently updated pages
5-101	Updated available glass kits for dutch doors.
5-201	Added cap channel screw.
5-202	Edited Title
5-302	Edited Title
5-401	Created page to show 1-3/4" Trio steel stiffened door standard designs. Added glass kit notes.
5-501	Created page to show 1-3/4" Trio (HF, NF) steel stiffened fiberglass core door construction.
5-502	Created page to show 1-3/4" Trio (HF, NF) steel stiffened fiberglass core door edge construction.
5-503	Created page to show Trio (HF, HT) tab and slot door flush steel glass kits 3/8" through 1-1/8" pocket.
5-601	Created page to show 1-3/4" Trio (HU, NU) steel stiffened polyurethane core door construction.
5-602	Created page to show 1-3/4" Trio (HU, NU) steel stiffened polyurethane core door edge construction.
5-701	Created page to show 1-3/4" Trio (HT, NT) steel stiffened mineral core door construction.
5-702	Created page to show 1-3/4" Trio (HT, NT) steel stiffened mineral core door edge construction.
5-801	Created page to show 1-3/4" Trio (HE, NE) steel stiffened mineral core door construction.
5-802	Created page to show 1-3/4" Trio (HE, NE) steel stiffened mineral core door edge construction.
7-000	Revised page to reflect recently updated pages.
7-001	Revised page to reflect recently updated pages.
7-102	Removed smoke note
7-102A	Created page to show smoke only label and 20 minute fire rating.
7-509	Updated Title
7-510	Added page to show alternate Fuego temp. rise door.

DISTRIBUTOR TECH DATA MANUAL

SECTION - PAGE	DESCRIPTION
11-001A	Revised page to reflect recently updated pages.
11-903	Created page to show existing wall frame installation.
11-903A	Created page to show existing wall frame installation continued.
11-904	Changed page number.
11-905	Changed page number.
12-001	Revised page to reflect recently updated pages.
12-101	Updated SU series frame profile.
12-102	Combined SQ and SR series frame profiles.
12-103	Updated SC series frame profile.
12-104	Added SQ8 and SR8 series profile frames.
12-105	Created page to show SQW and SRW series profile frames.
12-204	Created page to show SQW and SRW series frames.
13-101	Updated DQ and DU frame profile minimum depths and updated 18 gage minimum depth.
13-102	Updated DQW minimum depth.
13-103	Removed hinge plaster guard from hinge prep.
13-104	Updated DQ8 and DR8 frame profiles minimum depth.
13-105	Removed hinge plaster guard from hinge prep.
14-101	Updated SQW and SRW 18 gage frame limitations.
14-201	Updated DQW and DRW 18 gage frame limitations. Also, revised minimum frame depth.
14-301	Updated BQW and BRW 18 gage frame limitations.
16-002	Revised page to reflect recently updated pages.
16-605	Created page to show SQT thermal break mullion parts.
16-606	Created page to show SRT thermal break mullion parts.
16-705	Created page to show drywall knock-down sidelite installation instructions.
18-103	Updated BR, BR8, and BQ8 minimum frame depths. Also, updated BQ8 minimum soffit depth.
18-104	Added minimum soffit width to BQW and BRW table.

ARCHITECTURAL TECH DATA MANUAL

SECTION - PAGE	DESCRIPTION
D1-1	Updated door codes and updated dutch door glass kit options.
D2-1	Added an embossed 6 panel isometric view and removed embossment 6 panel note.
D3-1	Added high definition embossment and updated dutch door glass kit options.
D4-1	Added high definition embossment and updated dutch door glass kit options.
D4A-1	Added an embossed 6 panel isometric view, removed embossment 6 panel note, and updated dutch door glass kit options.
D4B-1	Added an embossed 6 panel isometric view, removed embossment 6 panel note, and updated dutch door glass kit options.
D5-1	Updated dutch door glass kit options.
D9-2	Updated Flush kit notes
D9-2A	Created page to show flush glass lite trim kits.

ARCHITECTURAL TECH DATA MANUAL

SECTION - PAGE	DESCRIPTION
D9-2B	Created page to show flush glass lite trim kits for Medallion and Thrulite doors.
D19-1	Changed patent pending to patented and updated dutch door glass kit options.
D19-2	Changed patent pending to patented.
D19-4	Changed patent pending to patented.
D19A-1	Changed patent pending to patented and updated dutch door glass kit options.
D19A-2	Changed patent pending to patented.
D19A-4	Changed patent pending to patented.
F1-4	Added 16 and 14 gage endurance level and legend to series SU steel frames.
F2-4	Added 16 and 14 gage endurance level and legend to series SQ, SR, & SC steel frames.
F2A-1	Created page to show SQ8 and SR8 steel frames for 1-3/8" doors.
F2A-2	Created page to show SQ8 and SR8 steel frame elevations and anchors for 1-3/8" doors.
F2A-3	Created page to show SQ8 and SR8 steel frame corner conditions, lock & strike prep, and optional anchors for 1-3/8" doors.
F2A-4	Created page to show SQ8 and SR8 steel frames product specifications, standard sizes nominal door opening, fire door frames, and physical endurance level for 1-3/8" doors.
F4-4	Added 16, 14, & 12 gage endurance level to series c custom profiles and added legend.
F5-2	Removed text stating hinge plaster guard as a standard and removed 5/8" deep strike plaster guard as an option.
F5-3	Removed hinge plaster guard.
F5-4	Added 16 and 14 gage to series DU drywall frames.
F6-1	Updated BQ minimum frame depth and changed B & C column headings.
F6-2	Removed text stating hinge plaster guard as a standard and removed 5/8" deep strike plaster guard as an option.
F6-3	Removed hinge plaster guard.
F6-4	Added 16 & 14 gage endurance levels.
F6A-1	Created page to show DQ8 and DR8 slip-on drywall frames for 1-3/8" doors.
F6A-2	Created page to show DQ8 and DR8 slip-on drywall frame elevations and frame installation for 1-3/8" doors.
F6A-3	Created page to show DQ8 and DR8 slip-on drywall frame corner conditions, lock & strike prep, and optional anchors for 1-3/8" doors.
F6A-4	Created page to show DQ8 and DR8 slip-on drywall frame product specifications, standard sizes nominal door opening, fire door frames, and physical endurance level for 1-3/8" doors.
F7-1	Updated B series before drywall minimum frame depths.
F7-4	Added 16 & 14 gage endurance levels.
F7A-1	Created page to show BQ8 and BR8 before drywall frames for 1-3/8" doors.
F7A-2	Created page to show BQ8 and BR8 before drywall frame elevations and optional anchors for 1-3/8" doors.
F7A-3	Created page to show BQ8 and BR8 before drywall frame corner conditions, lock & strike prep, and optional anchors for 1-3/8" doors.
F7A-4	Created page to show BQ8 and BR8 before drywall frame product specifications, standard sizes nominal door opening, fire door frames, and physical endurance level for 1-3/8" doors.

ARCHITECTURAL TECH DATA MANUAL

SECTION - PAGE	DESCRIPTION
F8-1	Updated DQW minimum frame depth and changed B & C column headings.
F8-2	Removed text stating hinge plaster guard as a standard.
F8-3	Removed hinge plaster guard.
F8-4	Added 16 & 14 gage endurance levels.
F8A-1	Changed B & C column headings
F8A-4	Added 16 & 14 gage endurance levels.
F9-4	Added 16 & 14 gage endurance levels and added legend.
F10-4	Added 16 & 14 gage endurance levels and added legend.
F11-4	Added 16, 14, and 12 gage endurance levels.
F13-2	Updated Information on page.
F20-4	Added 16 gage endurance levels and added legend.

SUBMITTALS/APPROVALS/SHOP DRAWINGS - 1090'S

SECTION - PAGE	DESCRIPTION
106	Added narrow glass kit door design, updated dutch door glass kit options, updated vertical edge note, added fire label note, and added optional top leaf closer reinforcement.
132	Removed DQ8 and DR8 frames, removed text stating hinge plaster guard as standard, and removed 5/8" deep strike plaster guard option.
135	Removed BQ8 and BR8 frames
143	Removed plaster guard from hinge prep and removed 5/8" deep strike plaster guard option.
144	Removed SQ8 and SR8 frames.
145A	Updated Information on page.
162	Updated Flush kit notes.
162A	Created page to show optional flush glass lite trim kits.
172	Created page to show SQ8 and SR8 frames.
173	Created page to show DQ8 and DR8 frames.
174	Created page to show BQ8 and BR8 frames.

GENERAL INDEX

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Flush Welded Steel Glazing (Optional For Doors Shown)

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Vision Lites and Narrow Lites

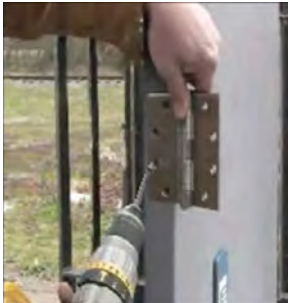
Slim Trim Kit, Steel, for 1/4" Glazing	1-703
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Installation

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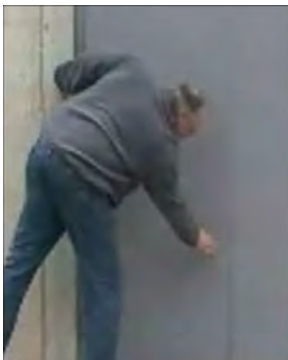
1. Install hinges or pivots onto door using manufacturer's instructions. Use screws provided with hinges or pivots. **DO NOT SUBSTITUTE.**

2. Install lock, exit device, strike and/or bolts into door using manufacturer's instructions.

3. Install appropriate hardware into frame using manufacturer's instructions.



4. Hang door in frame with hinges. Use screws provided with hinges.



5. Check for appropriate gaps between door and frame. Refer to NFPA 80 for correct clearances. Shim if needed. See Steel Door Institute publication 122-07 for shimming instructions.

6. Confirm door opens, closes and latches correctly. Adjust with shims as needed.

Checklist

1. Confirm door opens, closes and latches correctly.
2. Check that hardware meets latch engagement requirements per manufacturer's instructions.
3. Confirm for fire rated applications

Door Sizes

Regent (Handed)

Single Swing 1-101

Double Swing 1-102

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Single Swing 1-103

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Door Designs

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Regent Doors Flush Welded Steel Glass Kits 2-402 thru 2-402C

Slim Trim Glass Lite Kit With 3/8" Wide Pocket 1-703

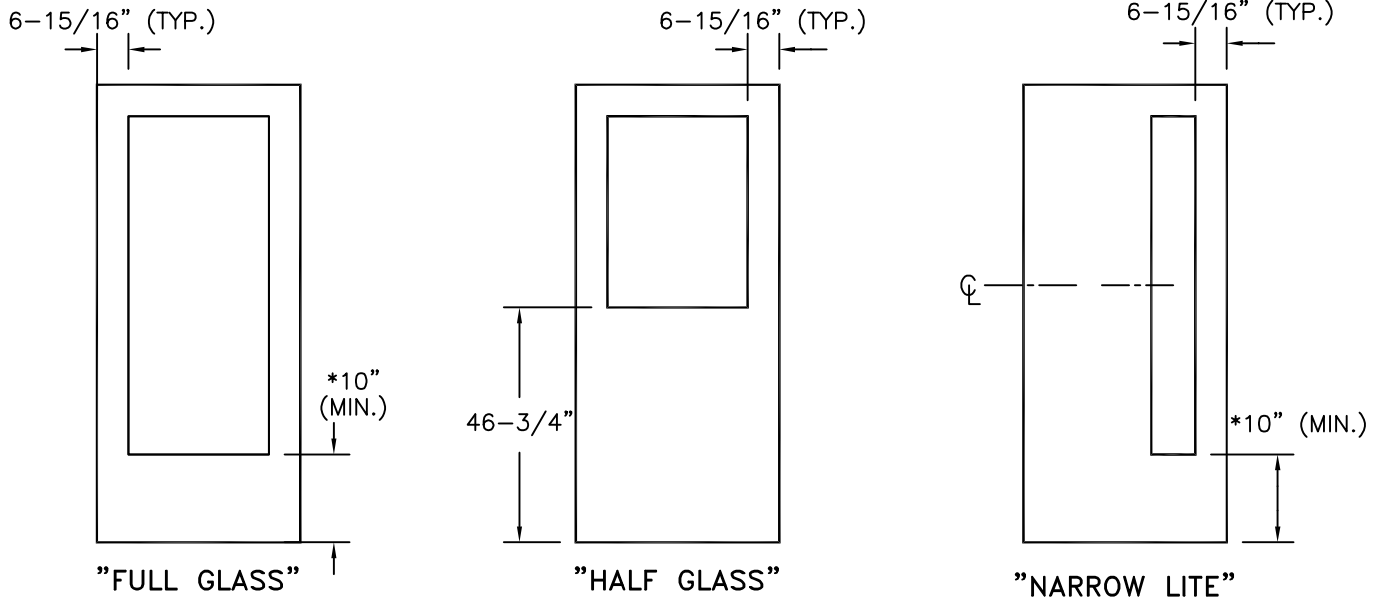
Slim Trim Glass Lite Kits for 3/8" to 1" Glass 1-704

Louvers See Section 1

Astragals..... See Section 1

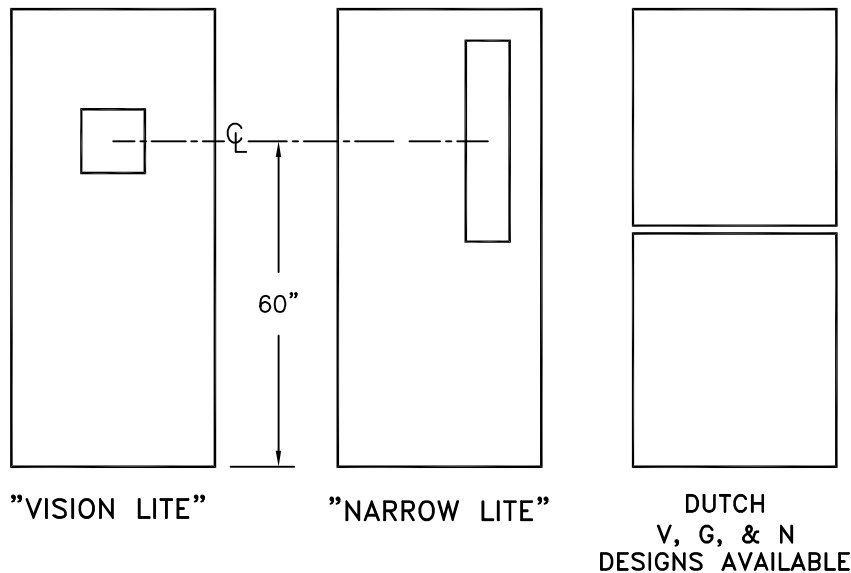
Hardware Preparations See Section 1

Performance Data See Section 1



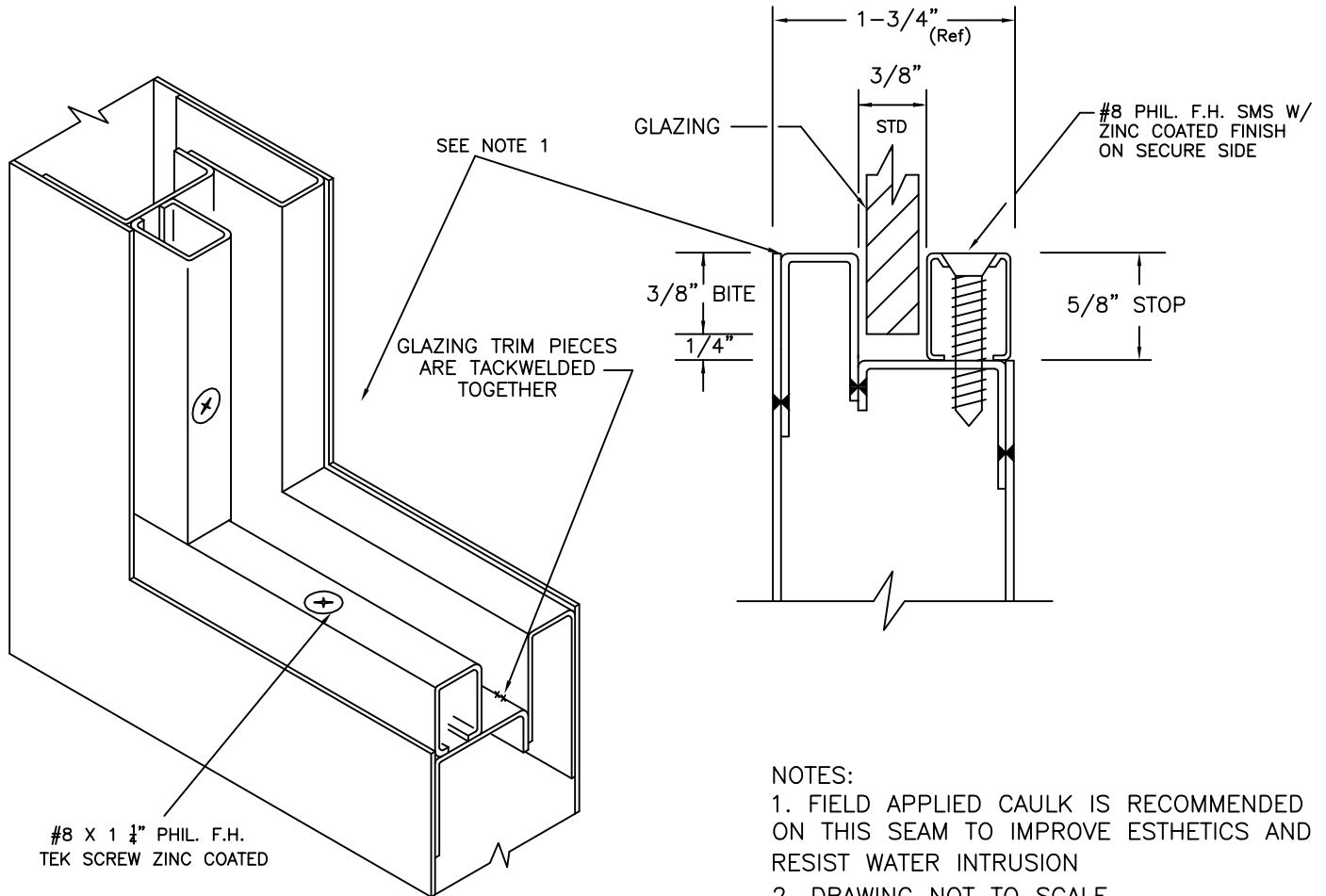
SKETCHES SHOULD BE FORWARDED
TO ENSURE ACCURACY.

*CECO PROVIDES MIN. 10" BOTTOM RAIL TO MEET ADA
REQUIREMENTS FOR NARROW AND FULL GLASS APPLICATIONS



GLASS AND GLAZING ARE NOT INCLUDED UNLESS COVERED BY CONTRACT AGREEMENT.

(Conversion: 1" = 25.4 mm, e.g., 1-3/4" = 44.45 mm)



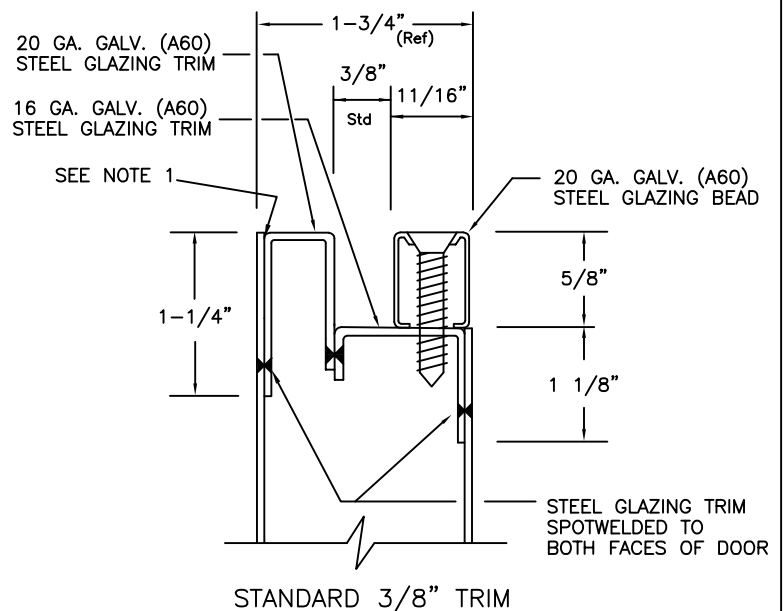
NOTES:

1. FIELD APPLIED CAULK IS RECOMMENDED ON THIS SEAM TO IMPROVE ESTHETICS AND RESIST WATER INTRUSION
2. DRAWING NOT TO SCALE

OPTIONAL FLUSH GLASS KITS			
GLASS KIT	GLASS THICKNESS	POCKET WIDTH	BEAD WIDTH
4880	1/2"	5/8"	1/2"
4884	1/4"	3/8"	15/16"

POCKET SIZE IS 1/8" LARGER THAN GLASS SIZE SHOWN.

FLUSH WELDED KITS NOT AVAILABLE WITH OMEGA (NON-HANDED) DOORS.
FLUSH WELDED KITS AVAILABLE AS AN OPTION WITH REGENT (HANDED) DOORS.

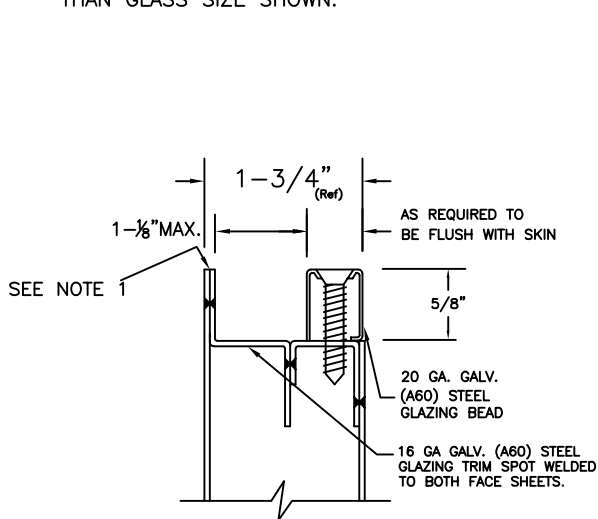


FORMULA: ACTUAL GLASS SIZE = VISIBLE GLASS + 3/4"

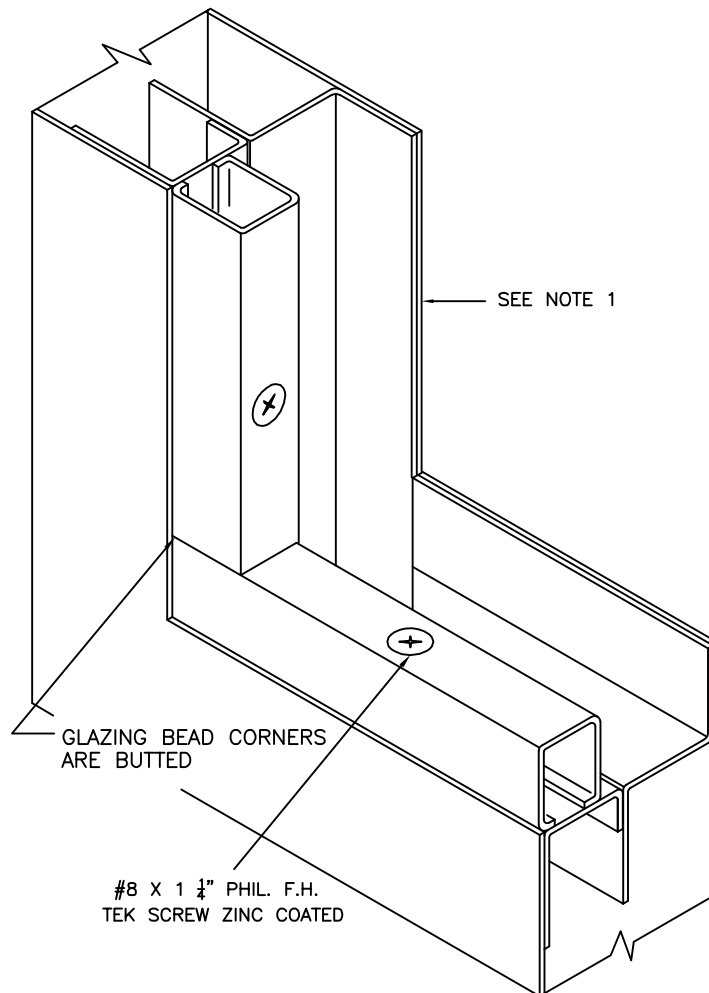
2-402A
01/17/14

OPTIONAL FLUSH GLASS KITS			
GLASS KIT	GLASS THICKNESS	POCKET WIDTH	BEAD WIDTH
4882	5/8"	1/2"	15/16"
4886	3/4"	5/8"	25/32"
4888	1"	1-1/8"	1/2"

POCKET SIZE IS 1/8" LARGER THAN GLASS SIZE SHOWN.



OPTIONAL TRIM FOR GLASS
POCKET WIDTHS UP TO 1-1/8"



FLUSH WELDED KITS NOT AVAILABLE WITH
OMEGA (NON-HANDED) DOORS.
FLUSH WELDED KITS AVAILABLE AS AN OPTION
WITH REGENT (HANDED) DOORS.

NOTES:

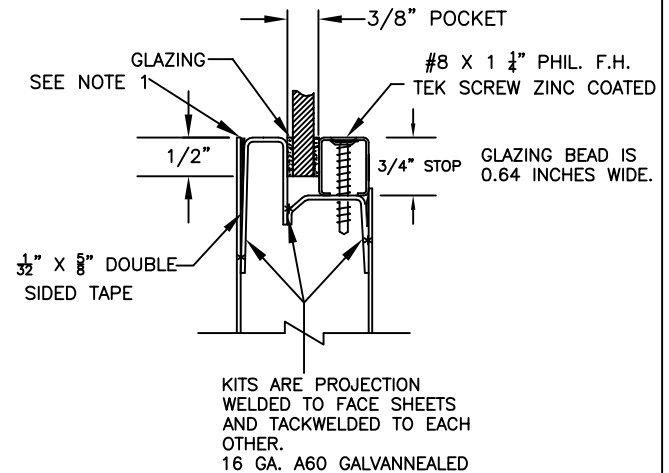
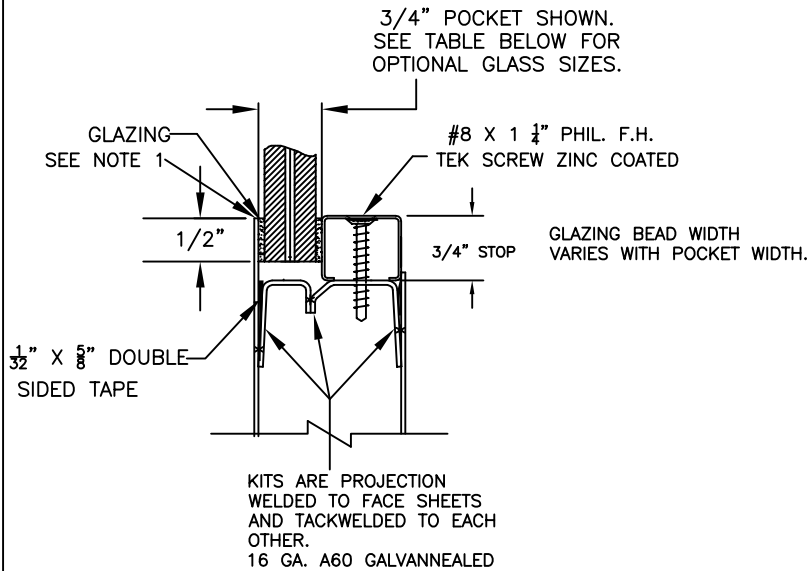
1. FIELD APPLIED CAULK IS RECOMMENDED ON THIS SEAM TO IMPROVE ESTHETICS AND RESIST WATER INTRUSION
2. DRAWING NOT TO SCALE

FORMULA: ACTUAL GLASS SIZE = VISIBLE GLASS + 3/4"

(Conversion: 1" = 25.4 mm, e.g., 1-3/4" = 44.45 mm)

2-402B

01/17/14

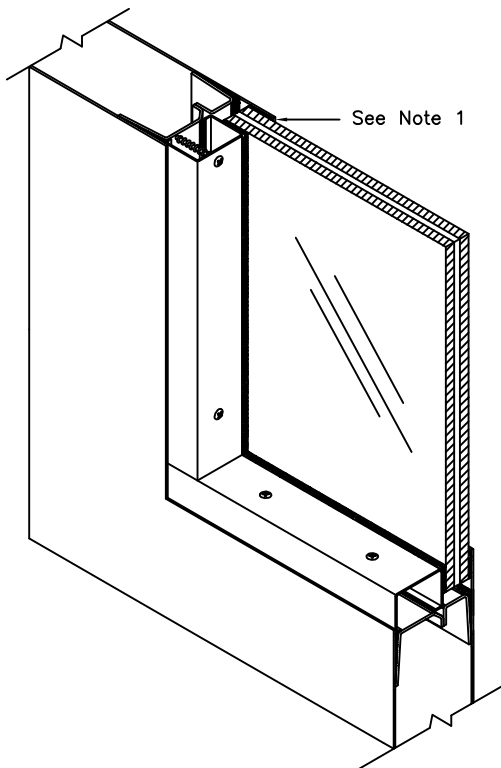


OPTIONAL FLUSH GLASS KITS			
GLASS KIT	GLASS THICKNESS	POCKET WIDTH	BEAD WIDTH
4881	1/2"	5/8"	1-1/32"
4883	5/8"	3/4"	15/16"
4887	3/4"	7/8"	25/32"
4889	1"	1-1/8"	1/2"

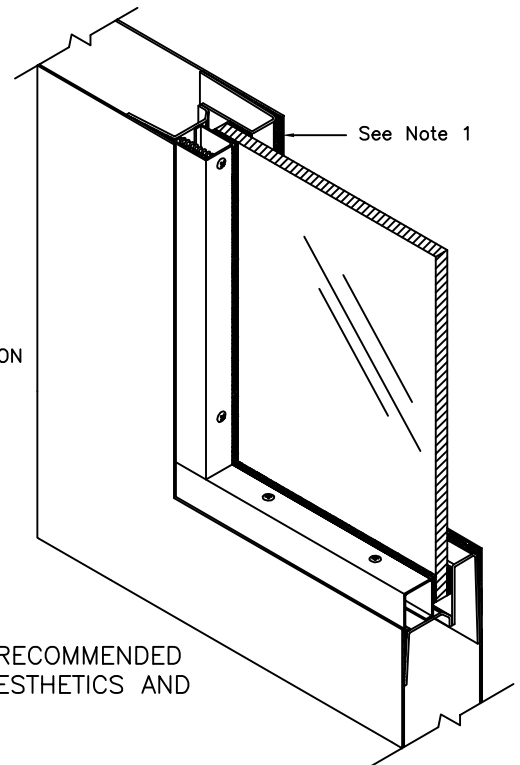
POCKET SIZE IS 1/8" LARGER
THAN GLASS SIZE SHOWN.

FLUSH GLASS KIT			
GLASS KIT	GLASS THICKNESS	POCKET WIDTH	BEAD WIDTH
4885	1/4"	3/8"	15/16"

POCKET SIZE IS 1/8" LARGER
THAN GLASS SIZE SHOWN.



FLUSH WELDED KITS NOT AVAILABLE WITH
OMEGA (NON-HANDED) DOORS.
FLUSH WELDED KITS AVAILABLE AS AN OPTION
WITH REGENT (HANDED) DOORS.



NOTES:

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FORMULA: ACTUAL GLASS SIZE = VISIBLE GLASS + 3/4"

2-402C
01/17/14

Door Sizes**Legion (Handed)**

Single Swing 1-101

Double Swing 1-102

UltraDor (Non-Handed)

Single Swing 1-103

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Door Designs

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Door Construction

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Alternate Edge Construction 3-302A

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Glass Lite Options

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Legion Doors Flush Welded Steel Glass Kits 3-402 thru 3-402C

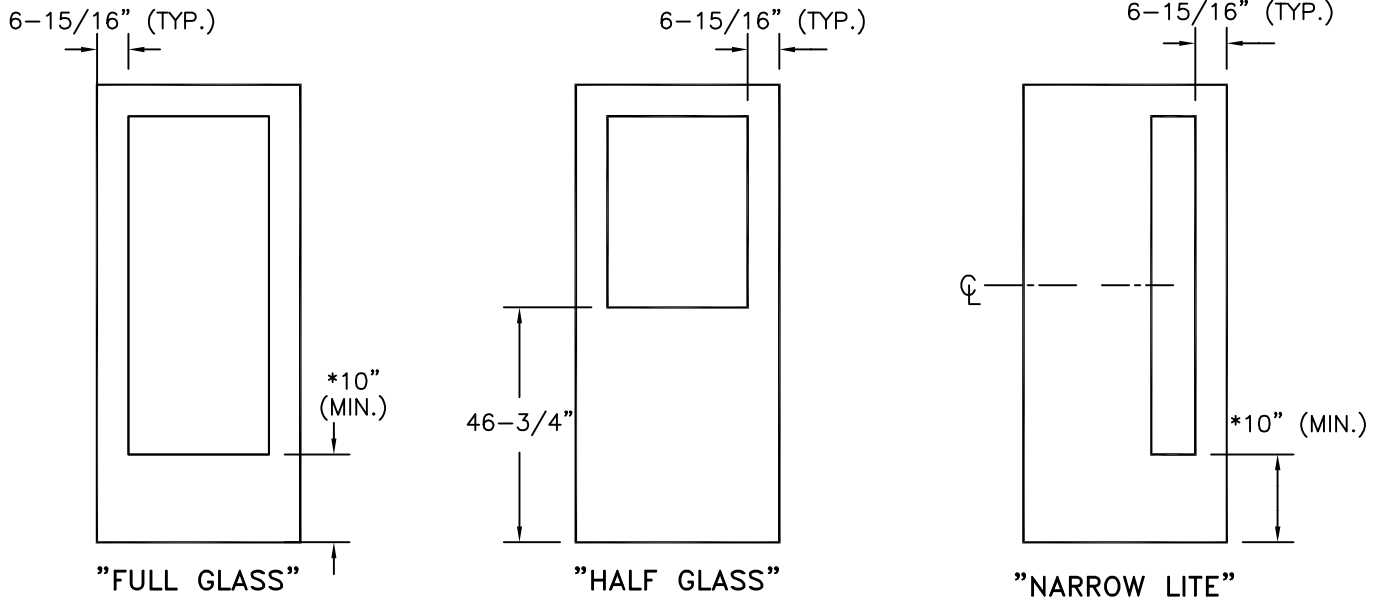
Slim Trim Glass Lite Kits for 1/4" Glass 1-703

Slim Trim Glass Lite Kits for 3/8" to 1" Glass 1-704

Louvers

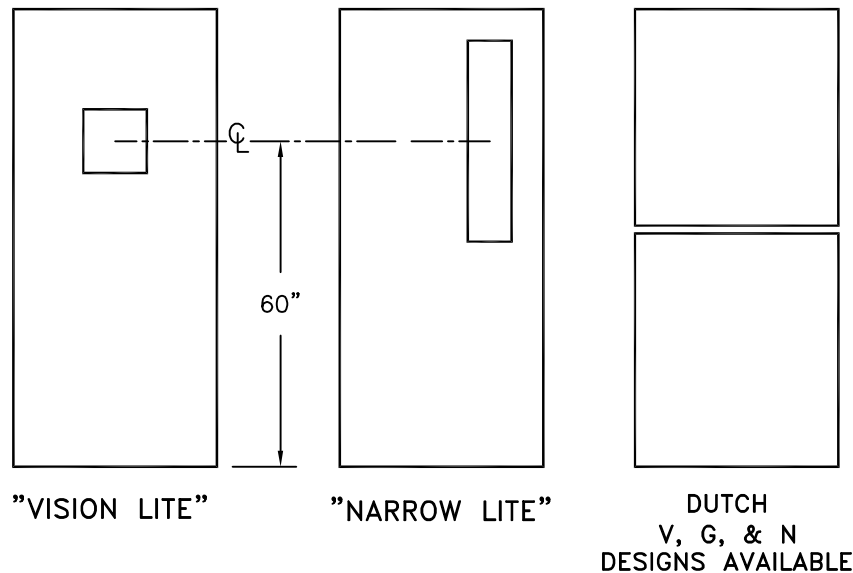
Applied See Section 1

Astragals..... See Section 1



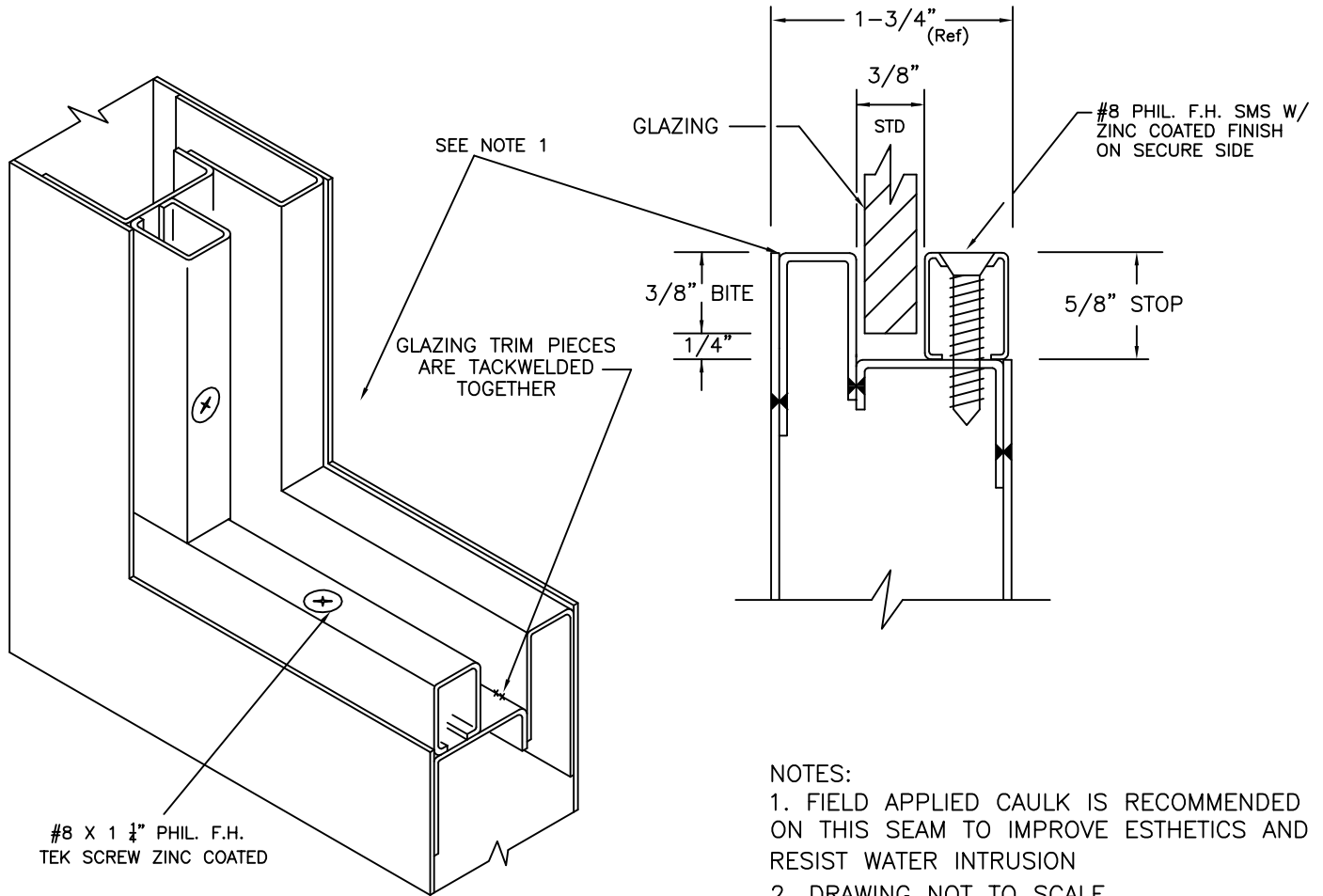
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REQUIREMENTS FOR NARROW AND FULL GLASS APPLICATIONS



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(Conversion: 1" = 25.4 mm, e.g., 1-3/4" = 44.45 mm)



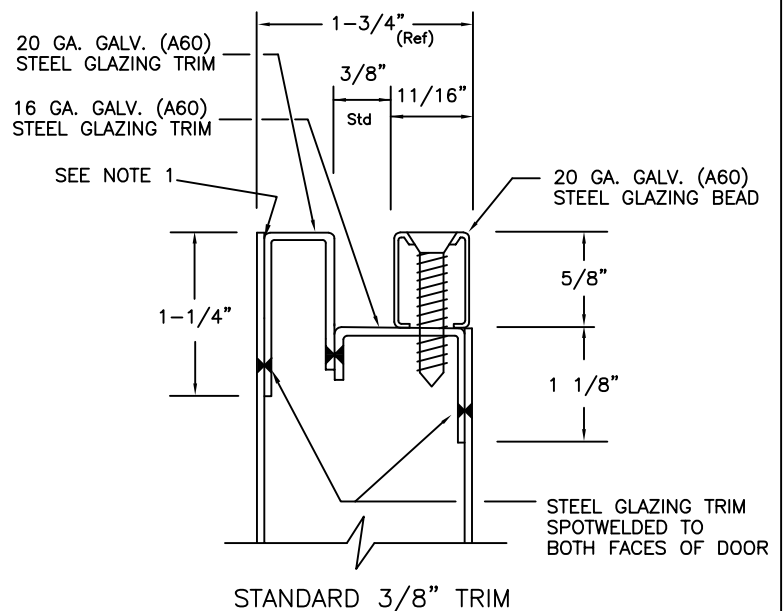
NOTES:

1. FIELD APPLIED CAULK IS RECOMMENDED ON THIS SEAM TO IMPROVE ESTHETICS AND RESIST WATER INTRUSION
2. DRAWING NOT TO SCALE

OPTIONAL FLUSH GLASS KITS			
GLASS KIT	GLASS THICKNESS	POCKET WIDTH	BEAD WIDTH
4880	1/2"	5/8"	1/2"
4884	1/4"	3/8"	15/16"

POCKET SIZE IS 1/8" LARGER THAN GLASS SIZE SHOWN.

FLUSH WELDED KITS NOT AVAILABLE WITH ULTRADOR (NON-HANDED) DOORS.
FLUSH WELDED KITS AVAILABLE AS AN OPTION WITH LEGION (HANDED) DOORS.

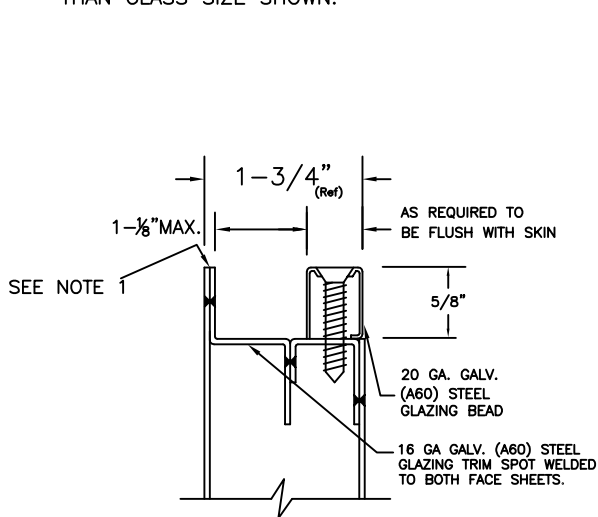


FORMULA: ACTUAL GLASS SIZE = VISIBLE GLASS + 3/4"

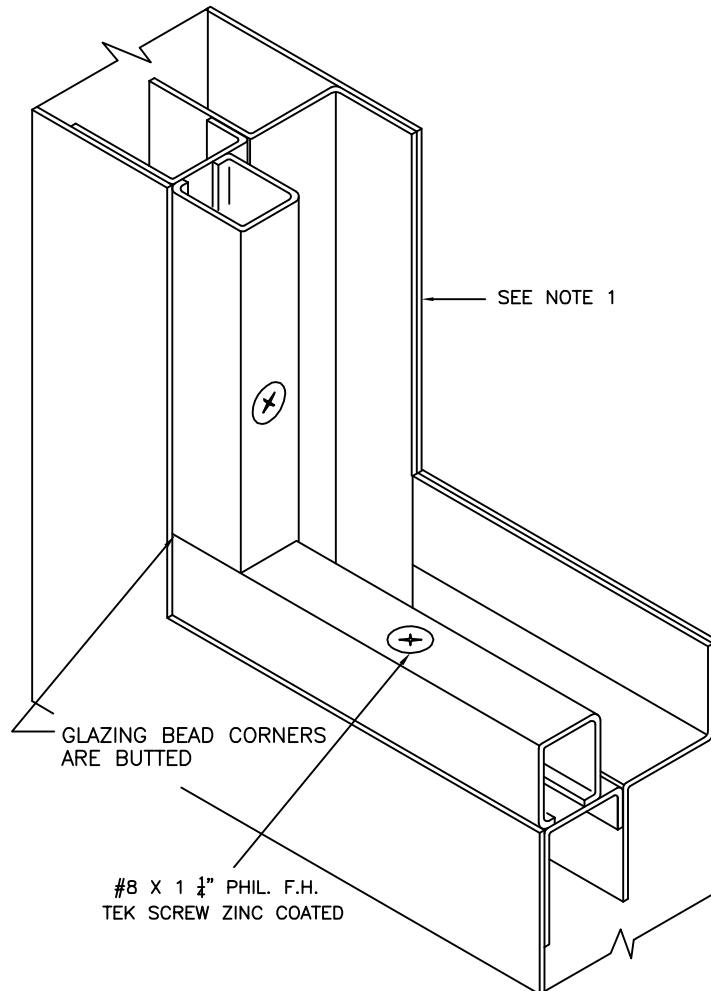
3-402A
01/17/14

OPTIONAL FLUSH GLASS KITS			
GLASS KIT	GLASS THICKNESS	POCKET WIDTH	BEAD WIDTH
4882	5/8"	1/2"	15/16"
4886	3/4"	5/8"	25/32"
4888	1"	1-1/8"	1/2"

POCKET SIZE IS 1/8" LARGER THAN GLASS SIZE SHOWN.



OPTIONAL TRIM FOR GLASS POCKET WIDTHS UP TO 1-1/8"



FLUSH WELDED KITS NOT AVAILABLE WITH ULTRADOR (NON-HANDED) DOORS. FLUSH WELDED KITS AVAILABLE AS AN OPTION WITH LEGION (HANDED) DOORS.

NOTES:

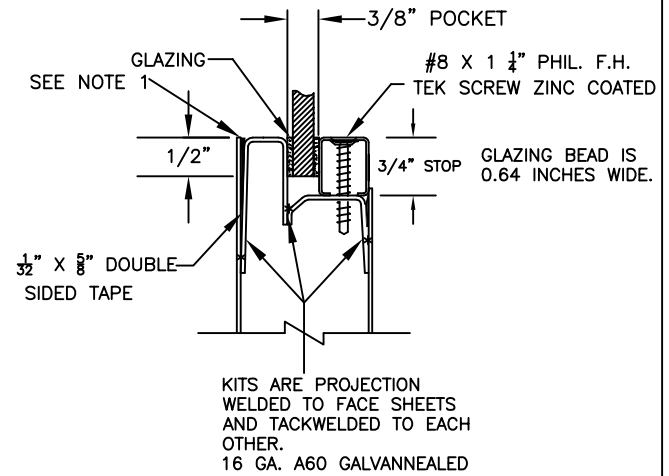
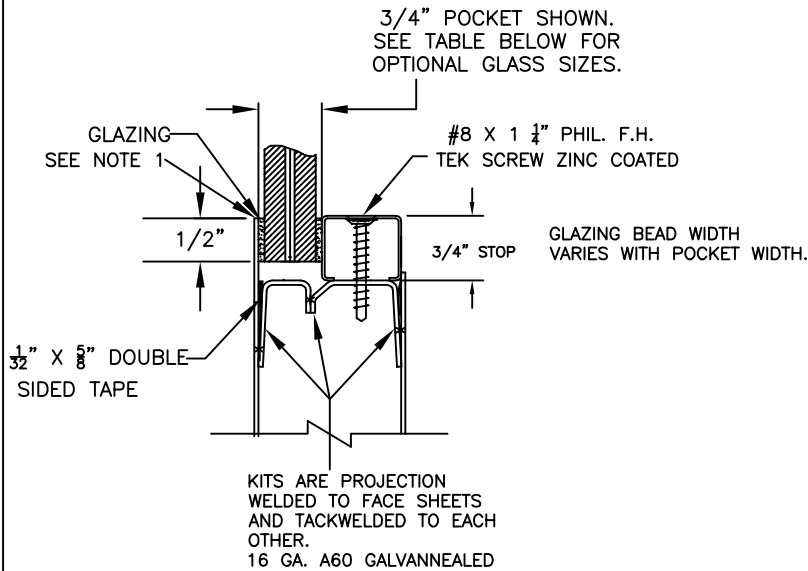
1. FIELD APPLIED CAULK IS RECOMMENDED ON THIS SEAM TO IMPROVE ESTHETICS AND RESIST WATER INTRUSION
2. DRAWING NOT TO SCALE

FORMULA: ACTUAL GLASS SIZE = VISIBLE GLASS + 3/4"

(Conversion: 1" = 25.4 mm, e.g., 1-3/4" = 44.45 mm)

3-402B

01/17/14

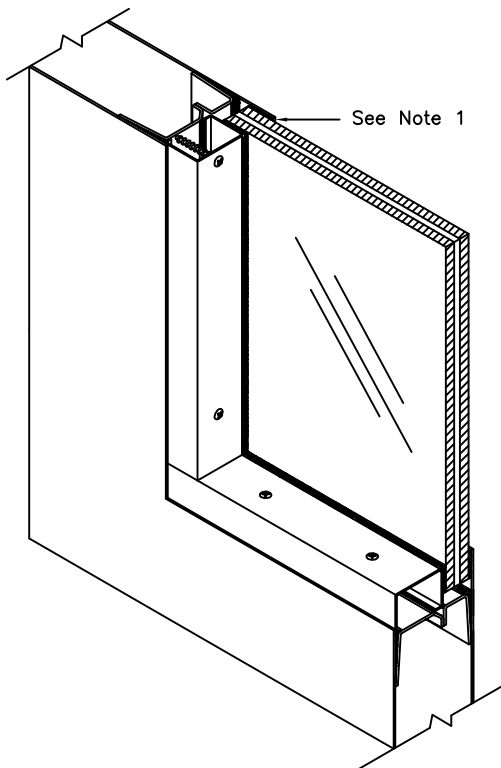


OPTIONAL FLUSH GLASS KITS			
GLASS KIT	GLASS THICKNESS	POCKET WIDTH	BEAD WIDTH
4881	1/2"	5/8"	1-1/32"
4883	5/8"	3/4"	15/16"
4887	3/4"	7/8"	25/32"
4889	1"	1-1/8"	1/2"

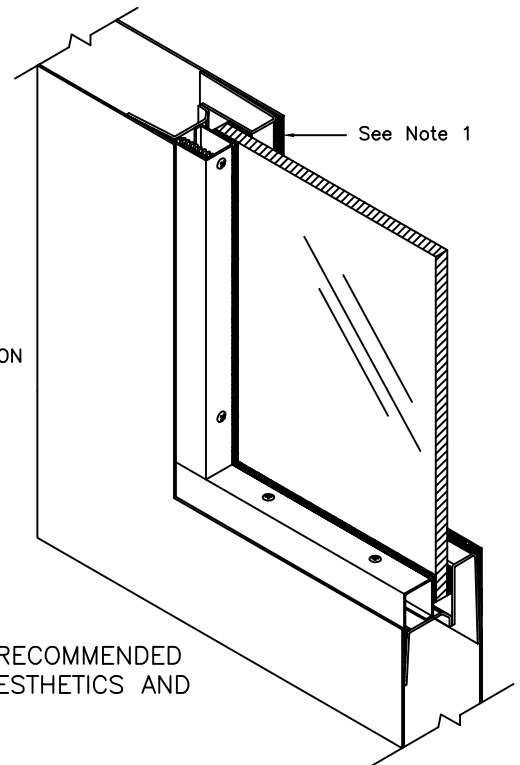
POCKET SIZE IS 1/8" LARGER THAN GLASS SIZE SHOWN.

FLUSH GLASS KIT			
GLASS KIT	GLASS THICKNESS	POCKET WIDTH	BEAD WIDTH
4885	1/4"	3/8"	15/16"

POCKET SIZE IS 1/8" LARGER THAN GLASS SIZE SHOWN.



FLUSH WELDED KITS NOT AVAILABLE WITH ULTRADOR (NON-HANDED) DOORS.
FLUSH WELDED KITS AVAILABLE AS AN OPTION WITH LEGION (HANDED) DOORS.

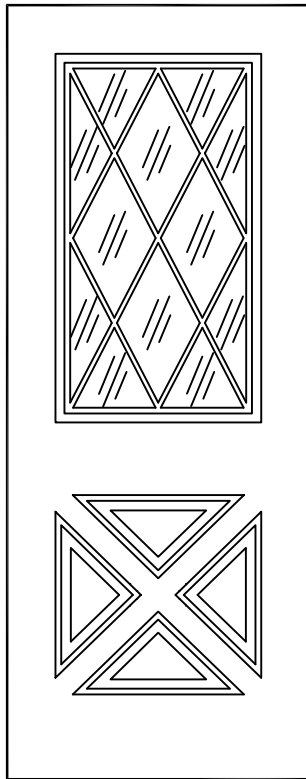


NOTES:

1. FIELD APPLIED CAULK IS RECOMMENDED ON THIS SEAM TO IMPROVE ESTHETICS AND RESIST WATER INTRUSION
2. DRAWING NOT TO SCALE

FORMULA: ACTUAL GLASS SIZE = VISIBLE GLASS + 3/4"

CROSSBUCK DIAMOND LITE

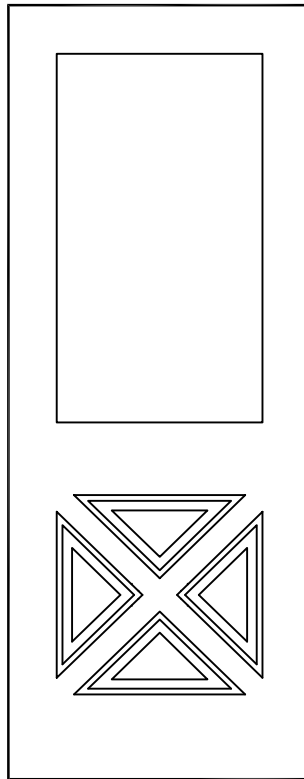


ORDER CODE:

EC04 1/2" THICK INSULATED
CLEAR GLASS

GLASS KIT PART NUMBER:
E482PLE12C 1/2" INSULATED
INSULATED CLEAR GLASS

CROSSBUCK CUTOUT ONLY

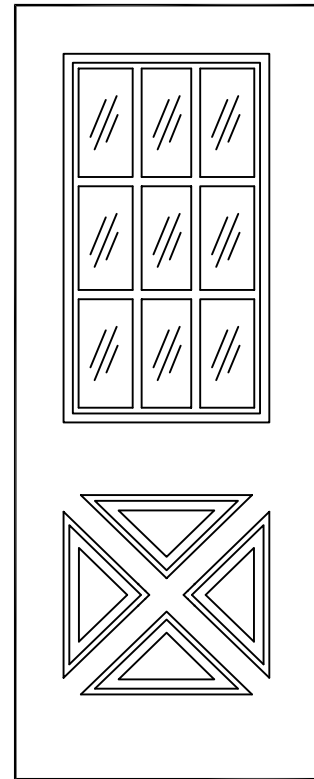


ORDER CODES:

EC02 STANDARD "G" CUTOUT ONLY
STANDARD SIZE 23"X37" CUTOUT

EC03 CUSTOMER DESIGNATED
GLASS KIT

CROSSBUCK 9 LITE



ORDER CODES:

EC05 1/8" THICK GLASS

EC06 1/2" THICK
CLEAR INSULATED GLASS

GLASS KIT PART NUMBERS:
E481PLE18C 1/8" CLEAR GLASS
E481PLE12C 1/2" INSULATED
CLEAR GLASS

2'8" x 6'8", 3'0" x 6'8" & 2'8" x 7'0", 3'0" x 7'0" A40 GALVANIZED ONLY

NO FIRE RATING AVAILABLE WITH GLASS KITS SHOWN
REFERENCE PAGE 4-301 FOR GLASS KITS SHOWN.

- CROSSBUCK DOORS ARE ONLY AVAILABLE WITH FACTORY GLASS LITE CUTOUT OR FACTORY GLASS KIT AVAILABLE IN 18 & 20 GAGE ONLY.
- CYLINDRICAL LOCKS AVAILABLE IN 2'8" & 3'0" WIDTH.
- MORTISE LOCKS AVAILABLE IN 3'0" WIDTH ONLY.
- DOORS MAY BE FIRE RATED WITH ANY LISTED GLASS AND KIT.
- FIRE RATED DOORS, AND DOORS WITH THE ABOVE GLASS KITS, WILL HAVE PERIMETER REINFORCING INSTALLED.
- DOORS WITH CUTOUT ONLY AND NO FIRE RATING, WILL NOT HAVE PERIMETER REINFORCING.
- REFERENCE PAGE 4-104A FOR PANEL LAYOUT DIMENSIONS.
- GLASS INCLUDED IN KITS SHOWN ABOVE.

(Conversion: 1" = 25.4 mm, e.g., 1-3/4" = 44.45 mm)

Door Sizes

Medallion and Trio (Handed)

Single Swing.....	1-101
Double Swing	1-102

Trio (Non-Handed)

Single Swing.....	1-103
Double Swing	1-104

Door Designs

1-3/4" Medallion Vertically Steel Stiffened Standard	5-101
1-3/4" Trio Steel Stiffened Door Standard Designs	5-401

Door Construction

Exploded View - Medallion	5-201
Formed Steel Vertical Stiffeners - Medallion.....	5-202
End Channels.....	1-201
Exploded View – Trio (HF, NF) Door.....	5-501
Exploded View – Trio (HF, NF) Edge Door Construction	5-502
Exploded View – Trio (HU, NU) Door.....	5-601
Exploded View – Trio (HU, NU) Edge Door Construction	5-602
Exploded View – Trio (HT, NT) Door	5-701
Exploded View – Trio (HT, NT) Edge Door Construction	5-702
Exploded View – Trio-E (HE, NE) Door	5-801
Exploded View – Trio-E (HE, NE) Edge Door Construction	5-802

Medallion Glass and Glazing

Standard Flush Glazing Kit	5-301
Glass & Flush Kit Details	5-302

Trio Glass Lite Options

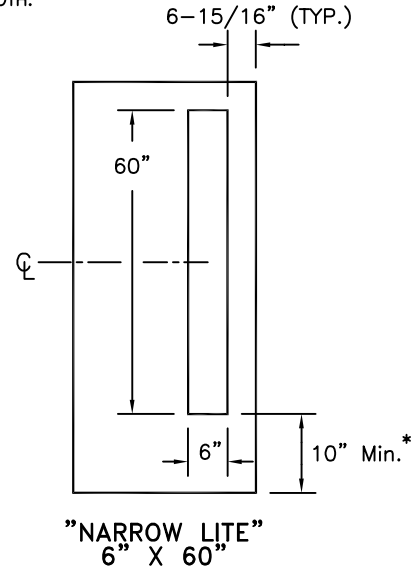
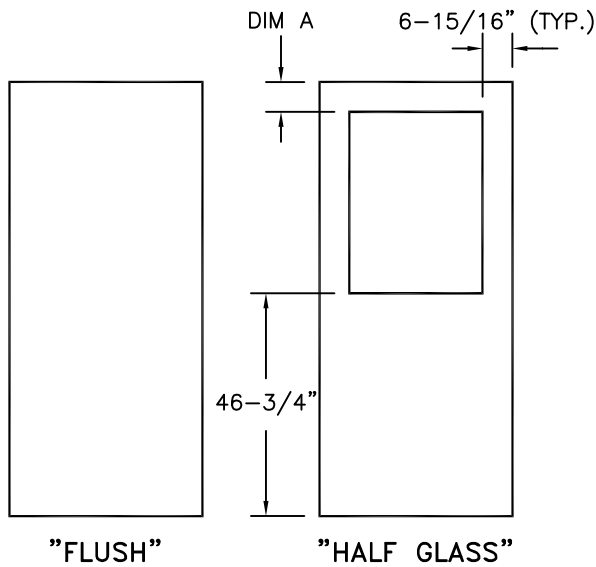
Trio (HF, HT) Doors Flush Welded Steel Glass Kits	5-503
Slim Trim Glass Lite Kits for 1/4" Glass	1-703
Slim Trim Glass Lite Kits for 3/8" to 1" Glass	1-704

Louvers

Applied See Section 1

Hardware Preparations See Section 1

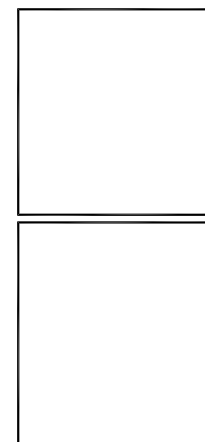
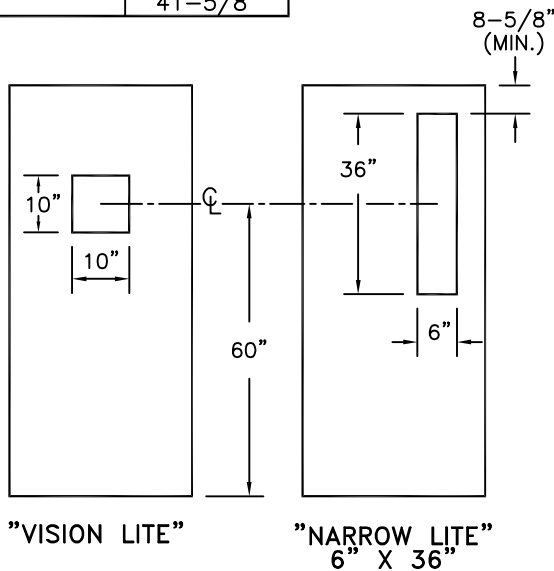
SEE PAGE 01-302
FOR VISION LITE
WIDTH.



DOOR HEIGHT	DIM "A"
	"HALF GLASS"
6-8, 7-0, 7-2	8-5/8"
7-10	15-5/8"
8-0	17-5/8"
9-0	29-5/8"
10-0	41-5/8"

SKETCHES SHOULD BE FORWARDED
TO INSURE CORRECTNESS.

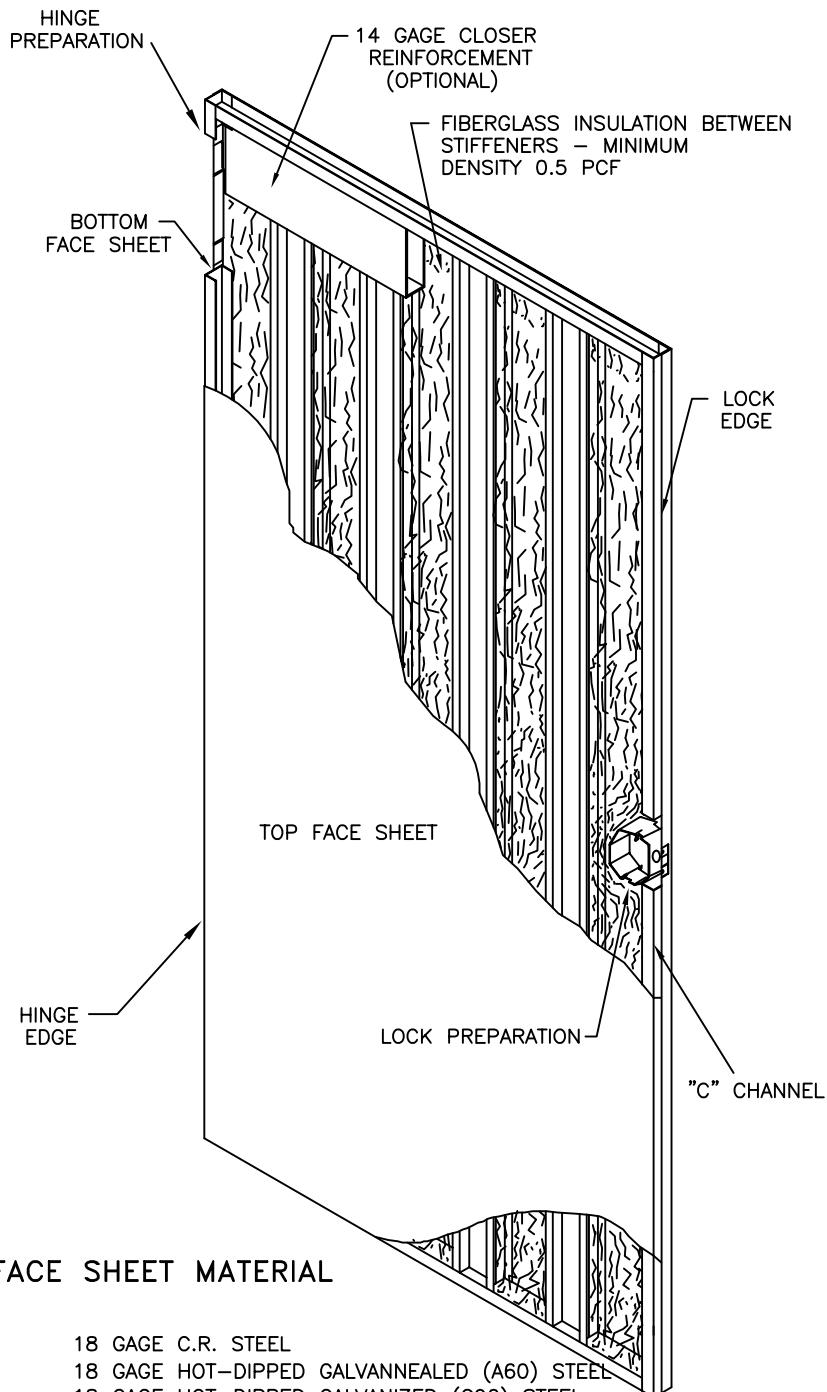
* CECO PROVIDES MIN. 10" BOTTOM RAIL TO
MEET ADA REQUIREMENTS FOR NARROW GLASS APPLICATIONS



DUTCH
V, G, & N
DESIGNS AVAILABLE

GLASS AND GLAZING ARE NOT INCLUDED UNLESS COVERED BY CONTRACT AGREEMENT.

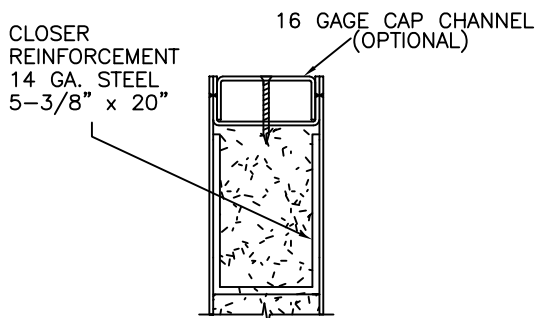
(Conversion: 1" = 25.4 mm, e.g., 1-3/4" = 44.45 mm)



FACE SHEET MATERIAL

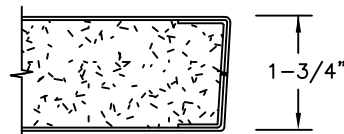
- 18 GAGE C.R. STEEL
- 18 GAGE HOT-DIPPED GALVANNEALED (A60) STEEL
- 18 GAGE HOT-DIPPED GALVANIZED (G90) STEEL
- 16 GAGE C.R. STEEL
- 16 GAGE HOT-DIPPED GALVANNEALED (A60) STEEL
- 16 GAGE HOT-DIPPED GALVANIZED (G90) STEEL
- 14 GAGE C.R. STEEL
- 14 GAGE HOT-DIPPED GALVANNEALED (A60) STEEL
- 14 GAGE HOT-DIPPED GALVANIZED (G90) STEEL
- 12 GAGE C.R. STEEL
- 12 GAGE HOT-DIPPED GALVANIZED (A60) STEEL

LOCK EDGE IS BEVELED 1/8" IN 2" (1:16)
HINGE EDGE IS SQUARE.
HINGE BACKSET IS 1/4" STD (3/16" & 5/16" OPTIONAL; See Note 1)
RECESSED 16 GAGE TOP CHANNEL IS WELDED TO BOTH FACES



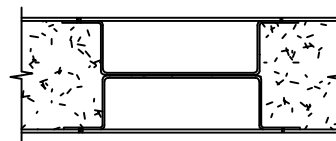
VERTICAL SECTION
THRU TOP OF DOOR

VERTICAL EDGES ARE CONTINUOUSLY WELDED WITH 18 GA. MINIMUM BACKUP ANGLE FULL HEIGHT OF DOOR AND DRESSED SMOOTH TO OBTAIN COMPLETELY SEAMLESS HINGE AND LOCK EDGES.



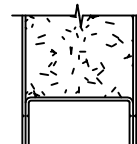
HORIZONTAL SECTION
THRU DOOR EDGES

22 GAGE CRS FORMED STEEL STIFFENERS (20, 18, & 16 GAGE, CRS, AND GALV. STEEL OPTIONAL) POSITIONED NOT MORE THAN 6" APART AND SPOT WELDED TO BOTH FACE SHEETS AT 5" O.C. MAX.



HORIZONTAL SECTION
THRU VERTICAL STIFFENER

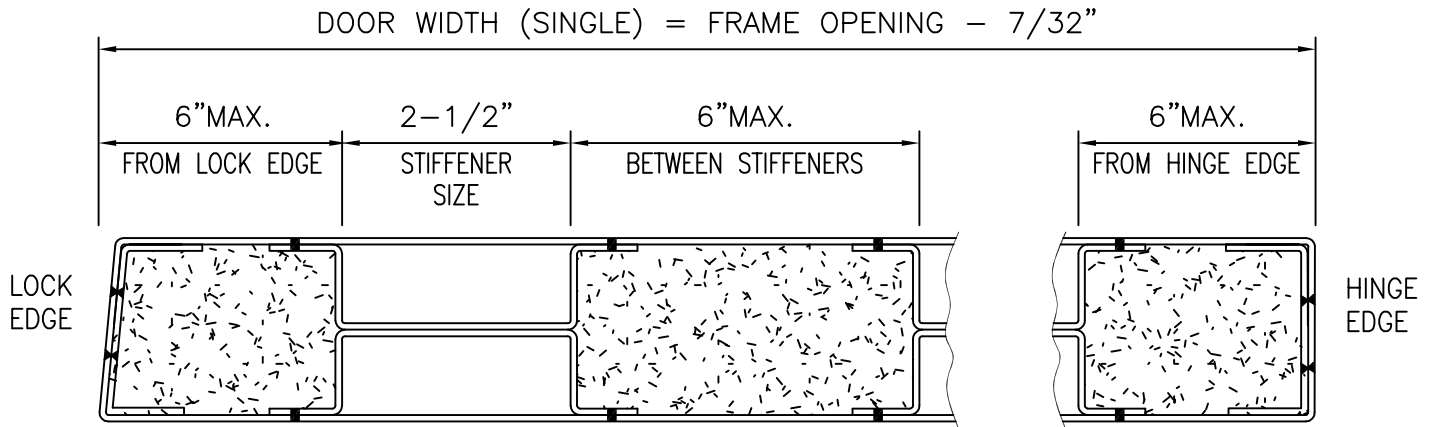
RECESSED 16 GAGE BOTTOM CHANNEL IS SPOT WELDED TO BOTH FACE SHEETS



VERTICAL SECTION
THRU BOTTOM OF DOOR

NOTE: 1. 3/16" BACKSET AVAILABLE ON 18 GA DOOR ONLY

(Conversion: 1" = 25.4 mm, e.g., 1-3/4" = 44.45 mm)



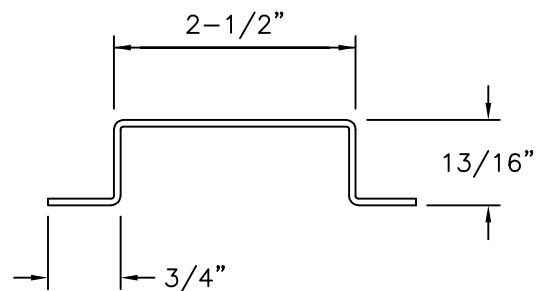
HANDED

DOOR HEIGHT ($\frac{W}{3/4}$ " UNDERCUT) = FRAME OPENING - $\frac{7}{8}$ "

LOCK EDGE IS BEVELED $\frac{1}{8}$ " IN 2"
HINGE EDGE IS SQUARE
STIFFENERS ATTACHED TO FACE SHEETS
BY SPOT WELDS NOT MORE THAN 5" ON
CENTER.

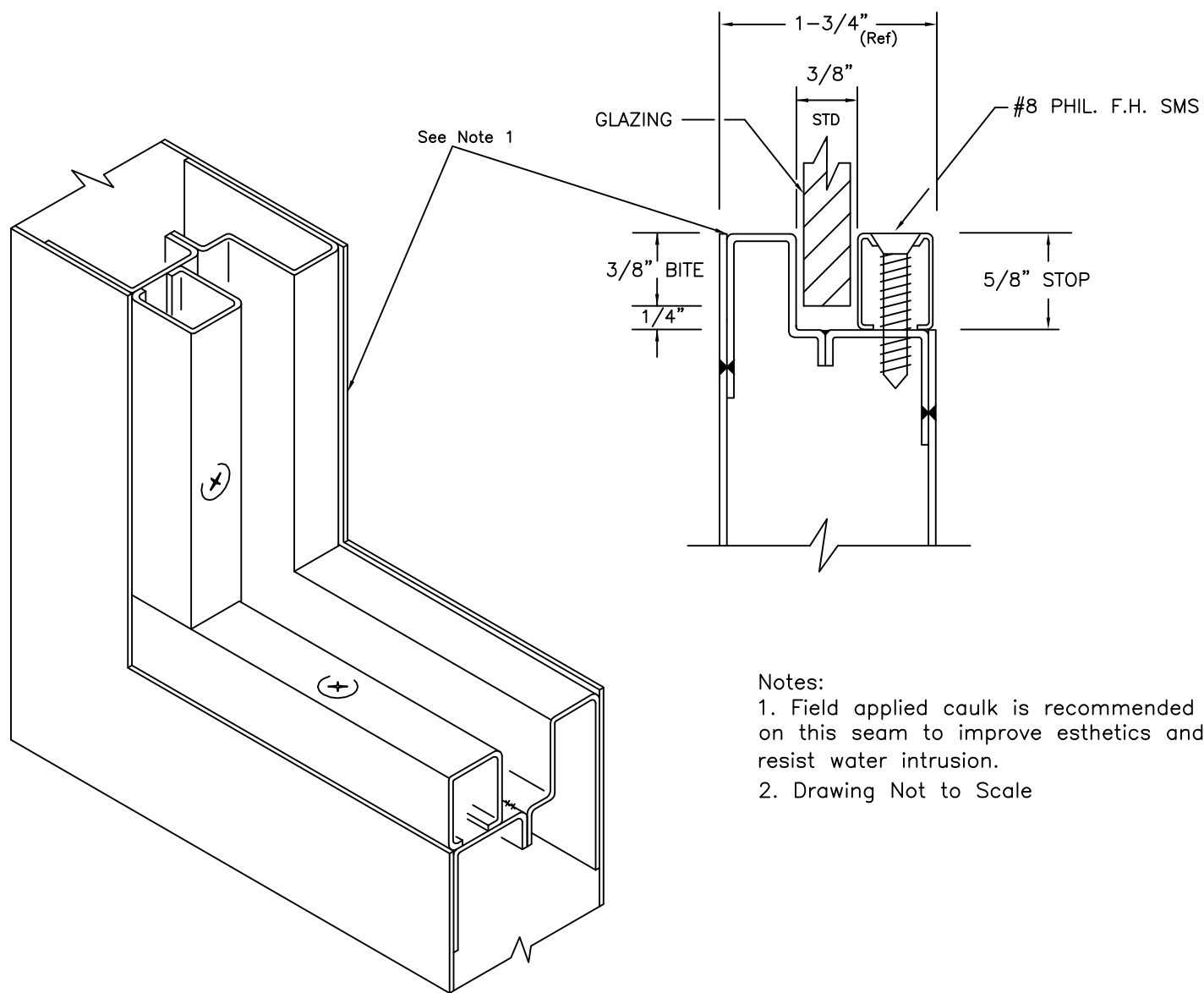
DIMENSIONS ARE IN INCHES

SPACES FILLED WITH FIBERGLASS
INSULATION



22 GAGE CRS FORMED STEEL STIFFENER SECTIONS FULL HEIGHT OF DOOR STANDARD
22 GAGE GALV. STEEL STIFFENERS OPTIONAL
20, 18 & 16 GAGE CRS AND GALV. STEEL STIFFENERS OPTIONAL

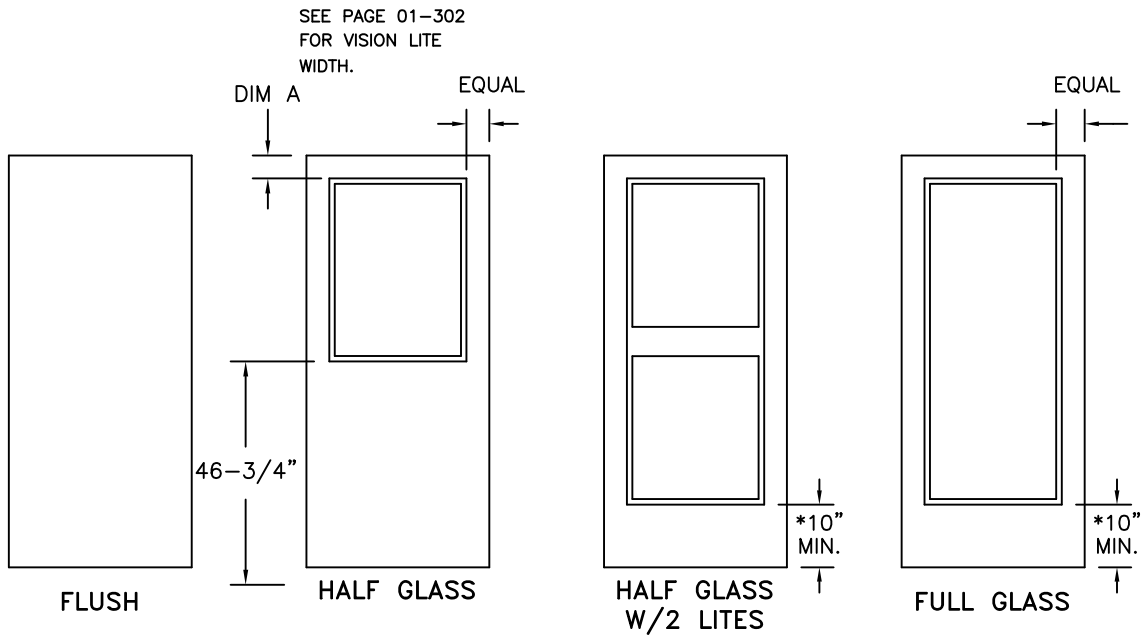
(Conversion: 1" = 25.4 mm, e.g., 1-3/4" = 44.45 mm)



Notes:

1. Field applied caulk is recommended on this seam to improve esthetics and resist water intrusion.
2. Drawing Not to Scale

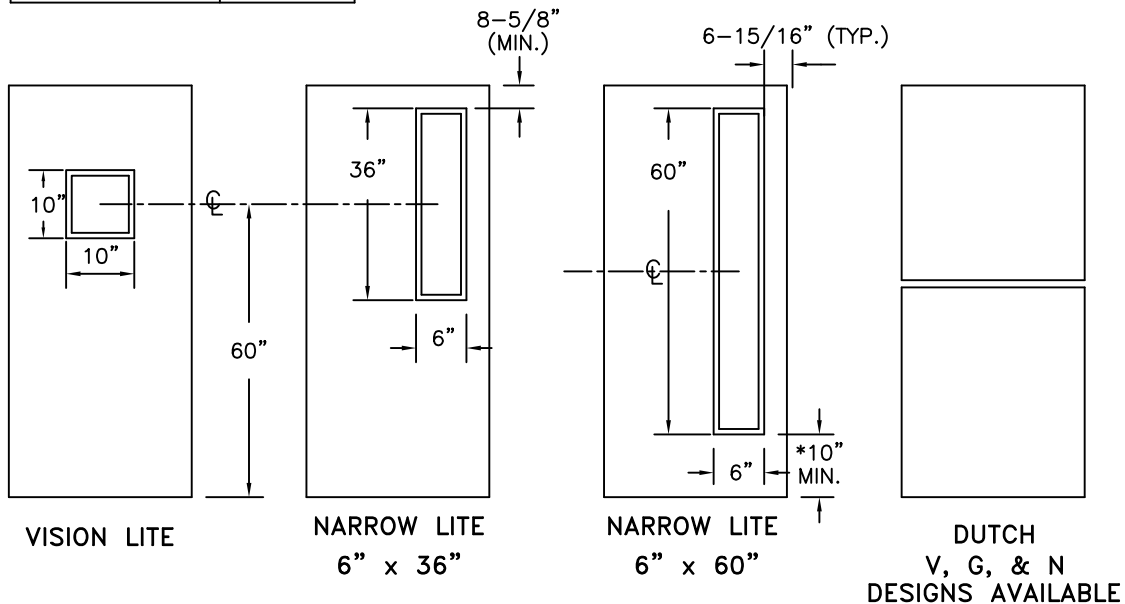
FORMULA: ACTUAL GLASS SIZE = VISIBLE GLASS + 3/4"



DOOR HEIGHT	DIM "A"
	"G"
6-8, 7-0, 7-2	8"
7-10	16"
8-0	18"

SKETCHES SHOULD BE FORWARDED
TO ENSURE CORRECTNESS.

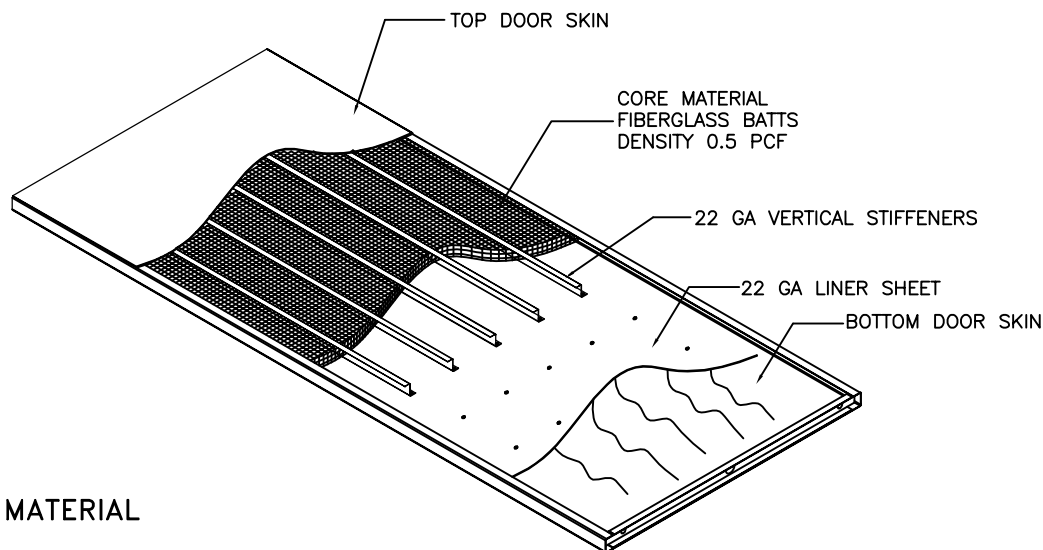
*CECO PROVIDES MIN. 10" BOTTOM RAIL TO MEET
ADA REQUIREMENTS FOR NARROW AND FULL GLASS APPLICATIONS



- FLUSH KIT AVAILABLE FOR (HT & HF) SEE PAGE 5-503.
- FLUSH KITS NOT AVAILABLE IN NF, NT, HU, NU, HE, & NE
- HT FLUSH AND GLASS LITE DESIGNS EQUAL TO OR LESS THAN
- 100 SQ INCHES MAY BE 450° TEMP RISE RATED, WHEN FIRE PROTECTIVE GLASS IS INSTALLED.

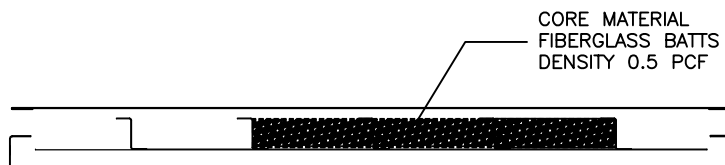
GLASS AND GLAZING ARE NOT INCLUDED UNLESS COVERED BY CONTRACT AGREEMENT.

(Conversion: 1" = 25.4 mm, e.g., 1-3/4" = 44.45 mm)



FACE SHEET MATERIAL

- 18 GAGE C.R. STEEL
 - 18 GAGE HOT-DIPPED GALVANNEALED (A60) STEEL
 - 18 GAGE HOT-DIPPED GALVANIZED (G90) STEEL
 - 16 GAGE C.R. STEEL
 - 16 GAGE HOT-DIPPED GALVANNEALED (A60) STEEL
 - 16 GAGE HOT-DIPPED GALVANIZED (G90) STEEL
 - 14 GAGE C.R. STEEL
 - 14 GAGE HOT-DIPPED GALVANNEALED (A60) STEEL
 - 14 GAGE HOT-DIPPED GALVANIZED (G90) STEEL
- NOTE; 14 GAGE CAN'T BE FIRE RATED



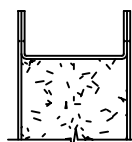
(OPTIONAL) CLOSER
REINFORCEMENT
14 GA. STEEL
5-3/8" x 20"

18 GAGE CAP CHANNEL
(OPTIONAL)

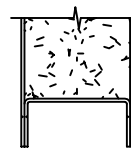
#8-18x1-1/4"
PHIL FH TEK
ZINC PLATED

VERTICAL SECTION
THRU TOP OF DOOR

RECESSED 16 GAGE TOP & BOTTOM CHANNELS
ARE SPOT WELDED TO BOTH FACE SHEETS

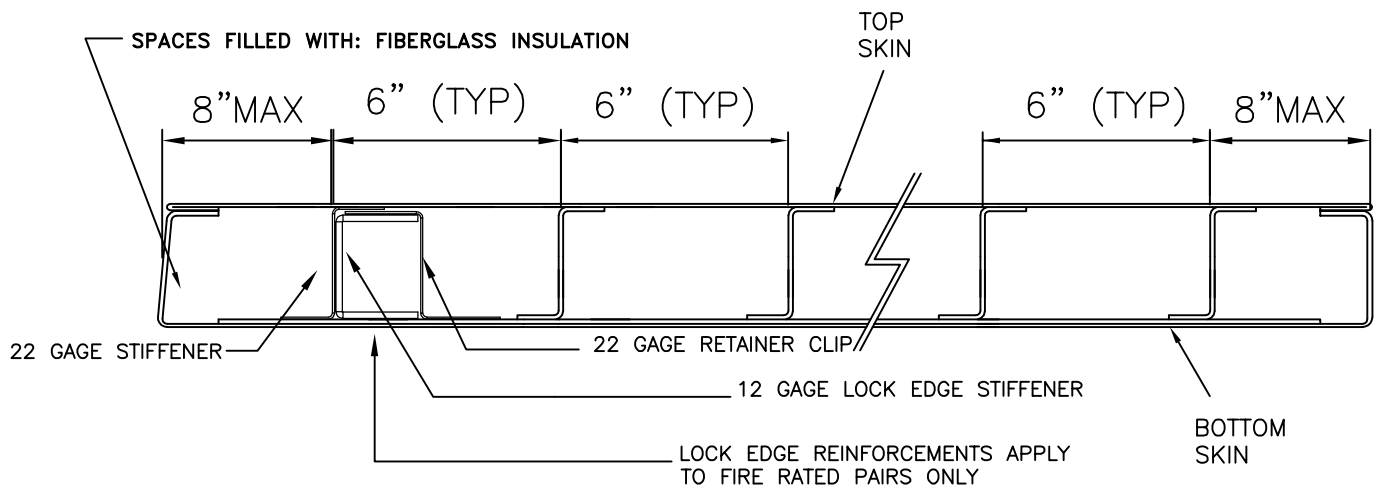


VERTICAL SECTION
THRU TOP OF DOOR

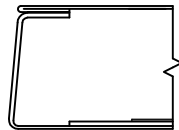


VERTICAL SECTION
THRU BOTTOM OF DOOR

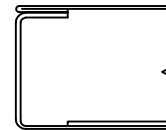
(Conversion: 1" = 25.4 mm, e.g., 1-3/4" = 44.45 mm)



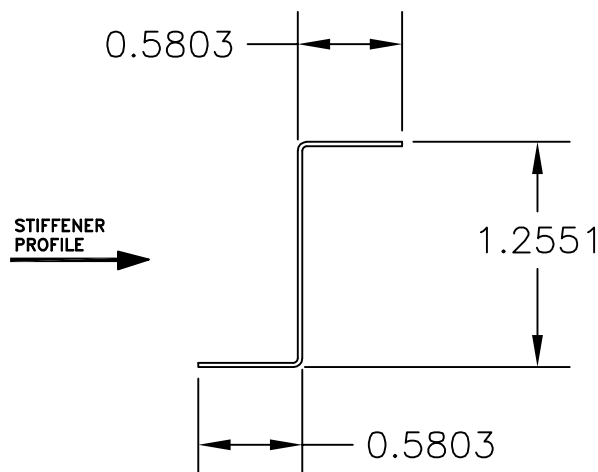
HF (HANDED):
LOCK EDGE IS
BEVELED 1/8" IN 2" (1:16)
HINGE EDGE IS SQUARE



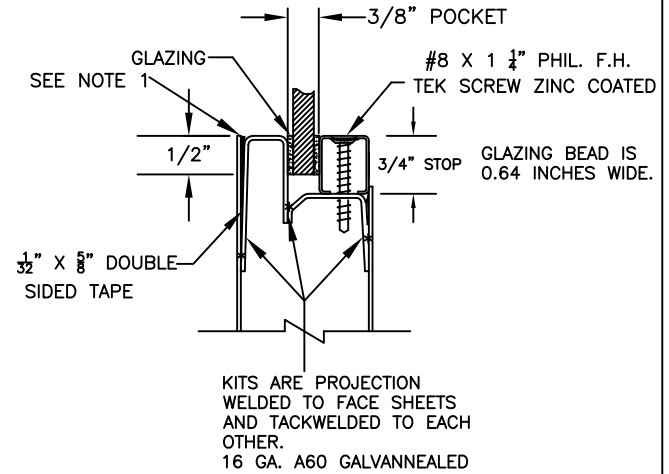
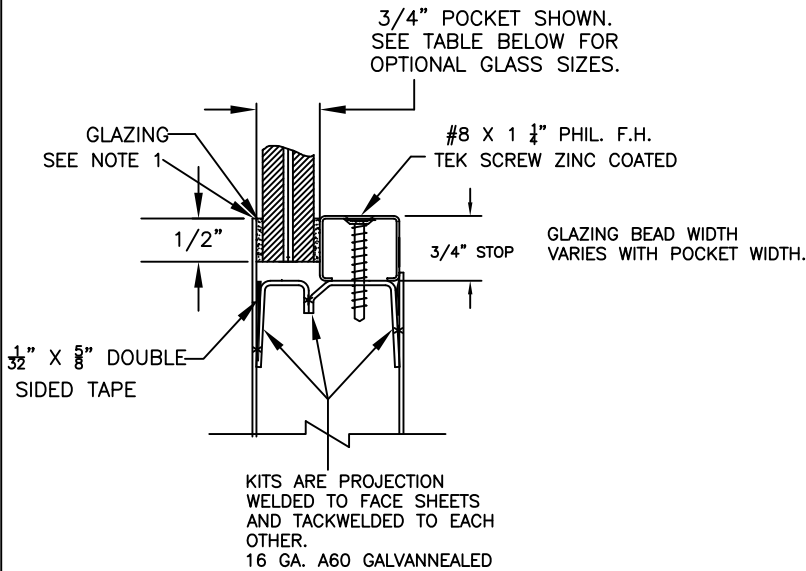
NF (NON-HANDED):
LOCK AND HINGE
EDGE ARE SQUARE



STIFFENERS ATTACHED TO LINER BY SPOT WELDS NOT MORE THAN 5" ON CENTER.
1/8" CONTINUOUS BEAD OF EPOXY APPLIED BETWEEN STIFFENERS & TOP SKIN.
LINER ATTACHED TO BOTTOM SKIN USING EPOXY.



(Conversion: 1" = 25.4 mm, e.g., 1-3/4" = 44.45 mm)

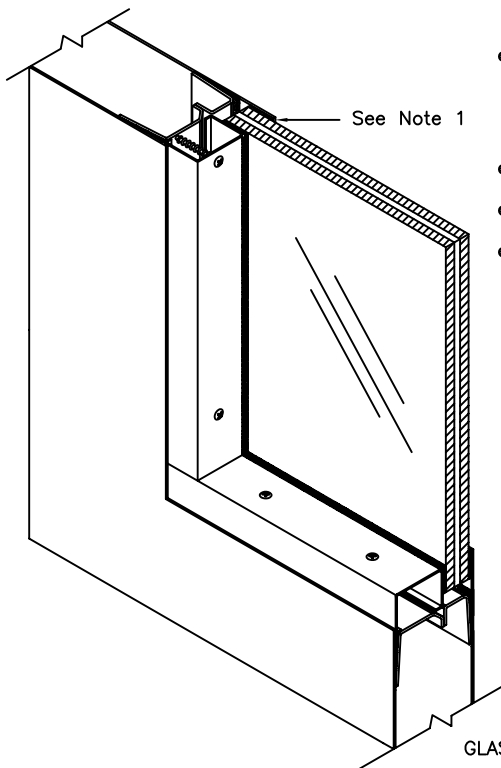


OPTIONAL FLUSH GLASS KITS			
GLASS KIT	GLASS THICKNESS	POCKET WIDTH	BEAD WIDTH
4881	1/2"	5/8"	1-1/32"
4883	5/8"	3/4"	15/16"
4887	3/4"	7/8"	25/32"
4889	1"	1-1/8"	1/2"

POCKET SIZE IS 1/8" LARGER
THAN GLASS SIZE SHOWN.

FLUSH GLASS KIT			
GLASS KIT	GLASS THICKNESS	POCKET WIDTH	BEAD WIDTH
4885	1/4"	3/8"	15/16"

POCKET SIZE IS 1/8" LARGER
THAN GLASS SIZE SHOWN.



●HT FLUSH AND GLASS LITE DESIGNS EQUAL TO
OR LESS THAN 100 SQ INCHES MAY BE
450° TEMPERATURE RISE RATED.

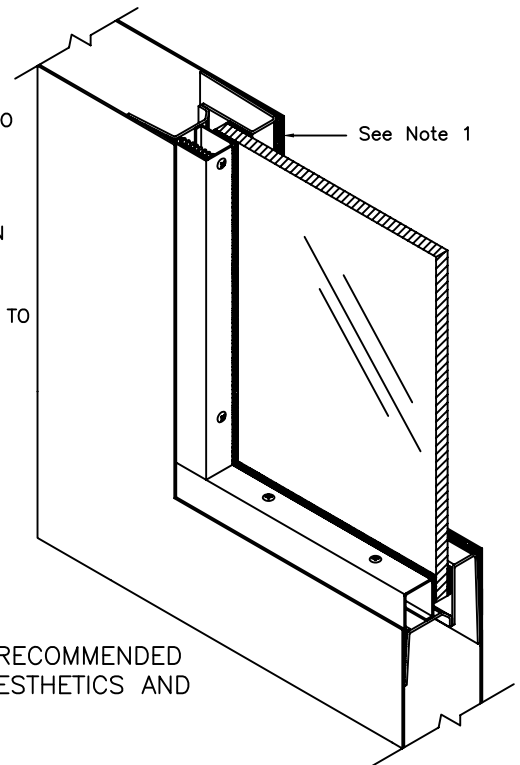
- FLUSH WELDED KITS AVAILABLE AS AN OPTION
WITH TRIO (HF, HT) (HANDED) DOORS.
- FLUSH WELDED KITS NOT AVAILABLE WITH
TRIO (HU, HE, NU, NE, NF, OR NT) DOORS.
- (HT) FLUSH AND GLASS LITE DESIGNS EQUAL TO
OR LESS THAN 100 SQ INCHES MAY BE
450° TEMPERATURE RISE RATED, WHEN FIRE
PROTECTIVE GLASS IS INSTALLED.

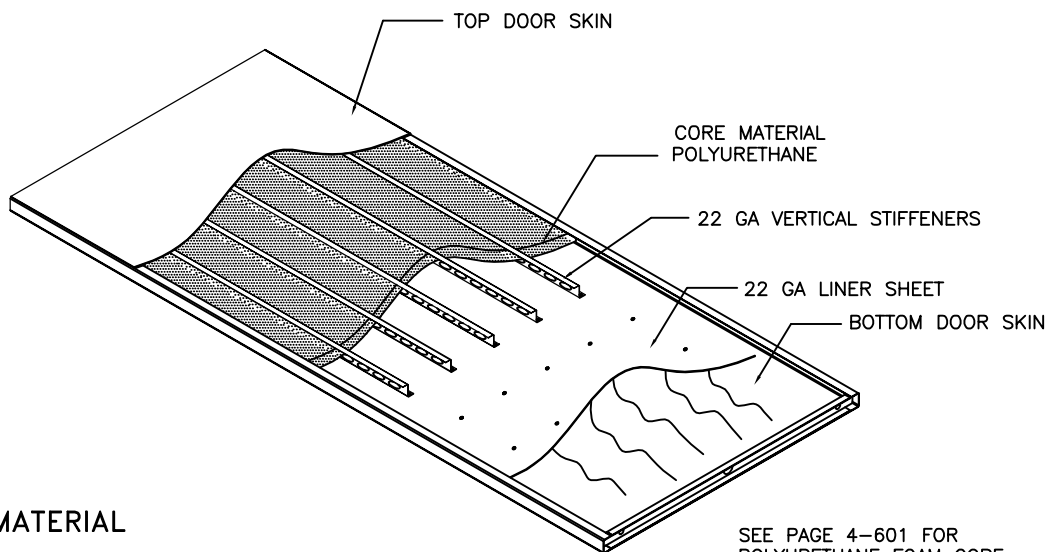
NOTES:

1. FIELD APPLIED CAULK IS RECOMMENDED
ON THIS SEAM TO IMPROVE ESTHETICS AND
RESIST WATER INTRUSION
2. DRAWING NOT TO SCALE

GLASS AND GLAZING ARE NOT INCLUDED UNLESS COVERED BY CONTRACT AGREEMENT.

FORMULA: ACTUAL GLASS SIZE = VISIBLE GLASS + 3/4"

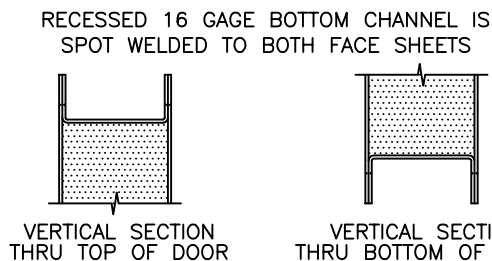
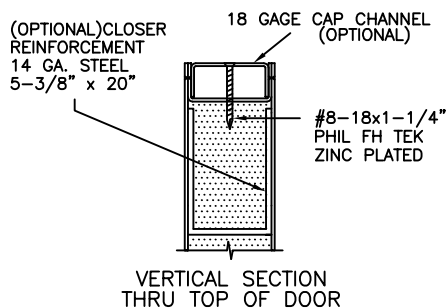
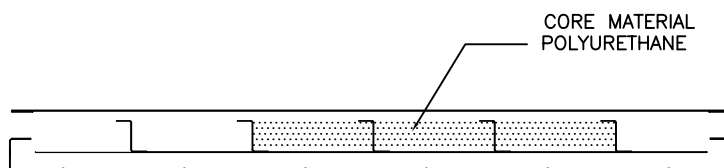




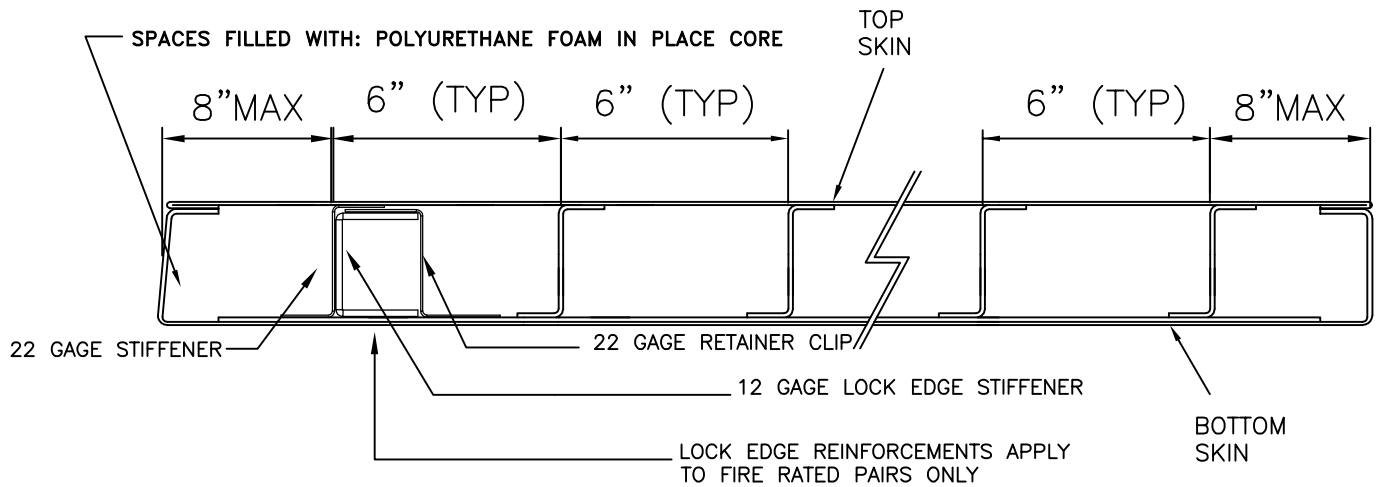
FACE SHEET MATERIAL

- 18 GAGE C.R. STEEL
 - 18 GAGE HOT-DIPPED GALVANNEALED (A60) STEEL
 - 18 GAGE HOT-DIPPED GALVANIZED (G90) STEEL
 - 16 GAGE C.R. STEEL
 - 16 GAGE HOT-DIPPED GALVANNEALED (A60) STEEL
 - 16 GAGE HOT-DIPPED GALVANIZED (G90) STEEL
 - 14 GAGE C.R. STEEL
 - 14 GAGE HOT-DIPPED GALVANNEALED (A60) STEEL
 - 14 GAGE HOT-DIPPED GALVANIZED (G90) STEEL
- NOTE: 14 GAGE CAN'T BE FIRE RATED

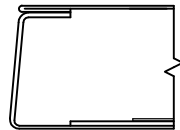
SEE PAGE 4-601 FOR
POLYURETHANE FOAM CORE
CHARACTERISTICS.



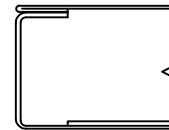
(Conversion: 1" = 25.4 mm, e.g., 1-3/4" = 44.45 mm)



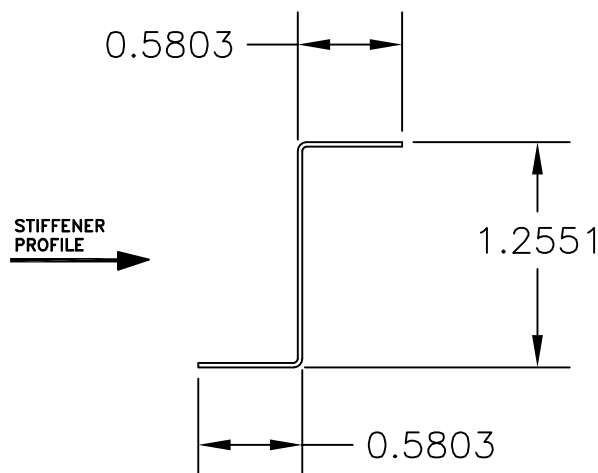
HU (HANDED):
LOCK EDGE IS
BEVELED 1/8" IN 2" (1:16)
HINGE EDGE IS SQUARE



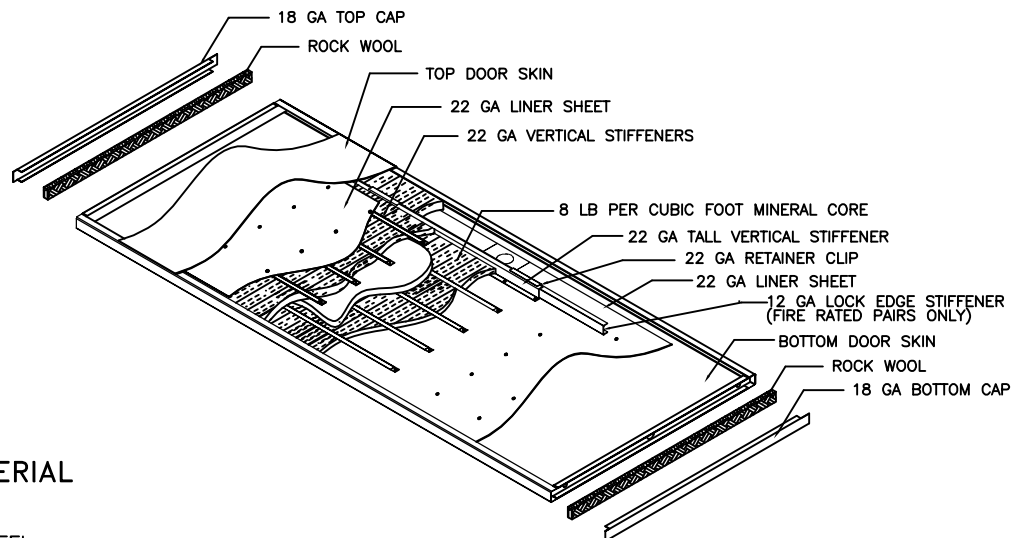
NU (NON-HANDED):
LOCK AND HINGE
EDGE ARE SQUARE



STIFFENERS ATTACHED TO LINER BY SPOT WELDS NOT MORE THAN 5" ON CENTER.
1/8" CONTINUOUS BEAD OF EPOXY APPLIED BETWEEN STIFFENERS & TOP SKIN.
LINER ATTACHED TO BOTTOM SKIN USING EPOXY.



(Conversion: 1" = 25.4 mm, e.g., 1-3/4" = 44.45 mm)

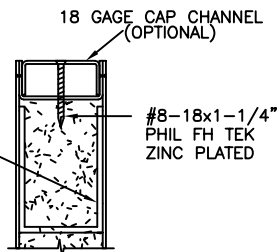


FACE SHEET MATERIAL

- 18 GAGE C.R. STEEL
 - 18 GAGE HOT-DIPPED GALVANNEALED (A60) STEEL
 - 18 GAGE HOT-DIPPED GALVANIZED (G90) STEEL
 - 16 GAGE C.R. STEEL
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 - 14 GAGE C.R. STEEL
 - 14 GAGE HOT-DIPPED GALVANNEALED (A60) STEEL
 - 14 GAGE HOT-DIPPED GALVANIZED (G90) STEEL
- NOTE: 14 GAGE CAN'T BE FIRE RATED

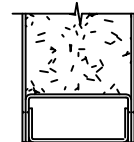
- HT FLUSH AND GLASS LITE DESIGNS EQUAL TO OR LESS THAN 100 SQ INCHES MAY BE 450° TEMP RISE RATED, WHEN FIRE PROTECTIVE GLASS IS INSTALLED.

CLOSER
REINFORCEMENT
14 GA. STEEL
5-3/8" x 20"

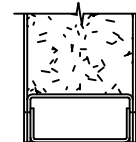


VERTICAL SECTION
THRU TOP OF DOOR

RECESSED 16 GAGE BOTTOM CHANNEL IS
SPOT WELDED TO BOTH FACE SHEETS

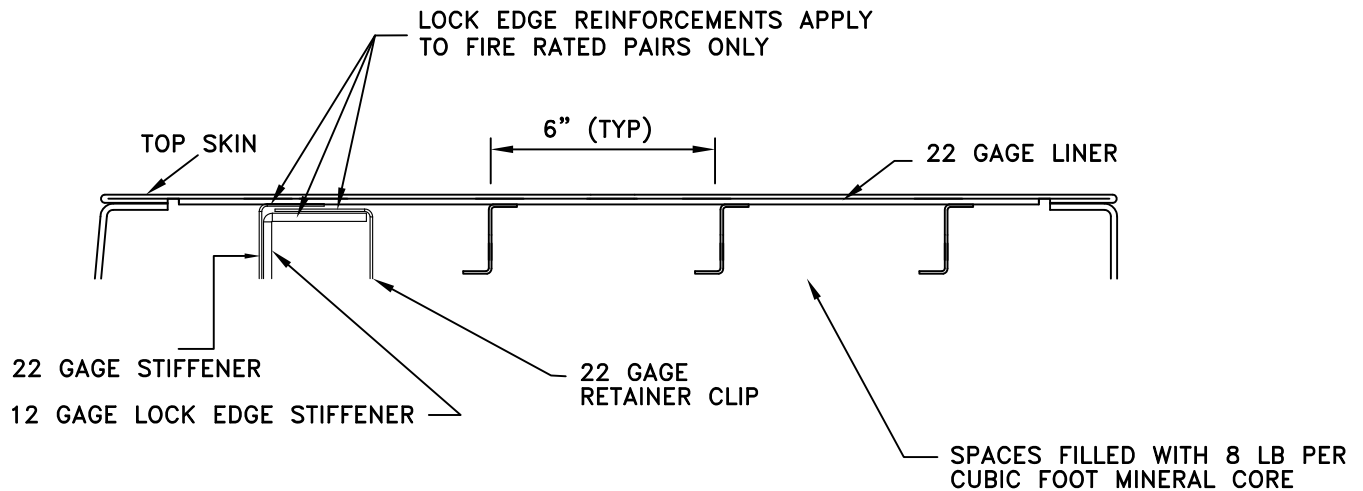


VERTICAL SECTION
THRU TOP OF DOOR

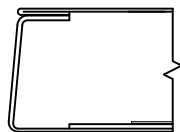


VERTICAL SECTION
THRU BOTTOM OF DOOR

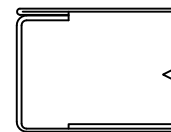
(Conversion: 1" = 25.4 mm, e.g., 1-3/4" = 44.45 mm)



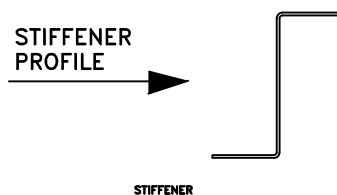
HT (HANDED):
LOCK EDGES ARE
BEVELED 1/8" IN 2" (1:16)
HINGE EDGE IS SQUARE



NT (NON-HANDED):
LOCK AND HINGE
EDGE ARE SQUARE

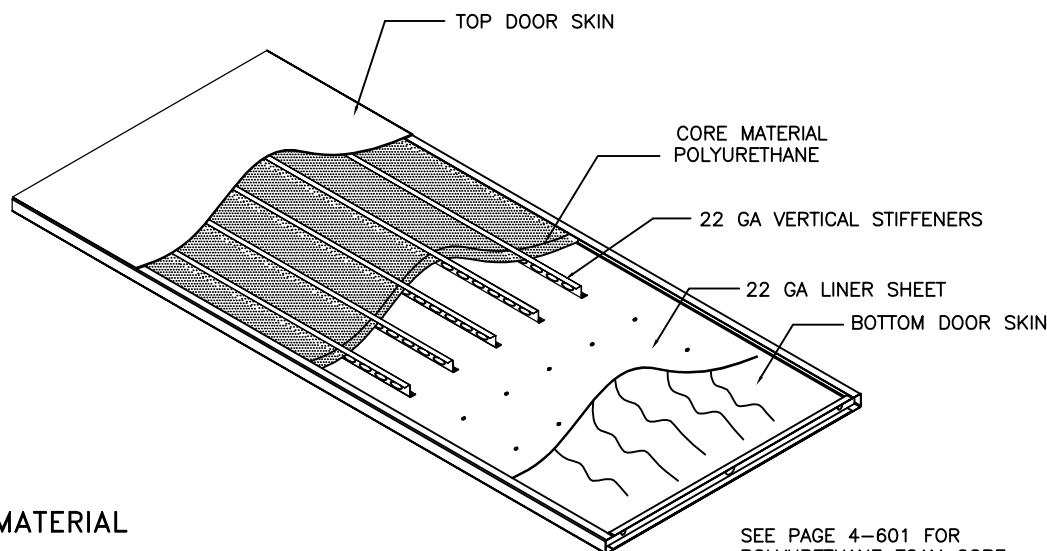


STIFFENERS ATTACHED TO LINER BY SPOT WELDS NOT MORE THAN 5" ON CENTER.
1/8" CONTINUOUS BEAD OF EPOXY APPLIED BETWEEN STIFFENERS & TOP SKIN.
LINER ATTACHED TO SKINS USING EPOXY



●HT FLUSH AND GLASS LITE DESIGNS EQUAL TO OR LESS THAN
100 SQ INCHES MAY BE 450° TEMP RISE RATED WHEN FIRE PROTECTIVE GLASS IS INSTALLED.

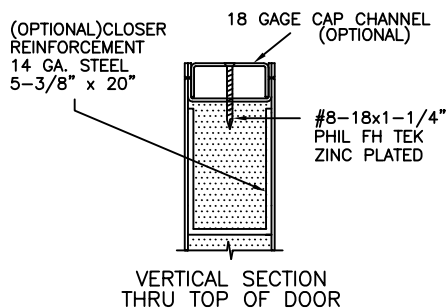
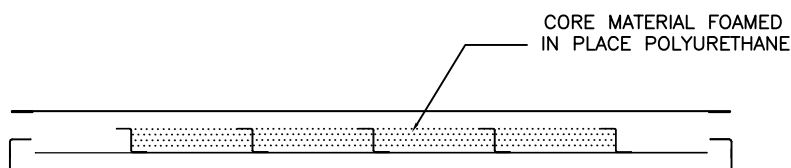
(Conversion: 1" = 25.4 mm, e.g., 1-3/4" = 44.45 mm)



FACE SHEET MATERIAL

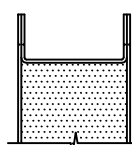
- 18 GAGE C.R. STEEL
 - 18 GAGE HOT-DIPPED GALVANNEALED (A60) STEEL
 - 18 GAGE HOT-DIPPED GALVANIZED (G90) STEEL
 - 16 GAGE C.R. STEEL
 - 16 GAGE HOT-DIPPED GALVANNEALED (A60) STEEL
 - 16 GAGE HOT-DIPPED GALVANIZED (G90) STEEL
 - 14 GAGE C.R. STEEL
 - 14 GAGE HOT-DIPPED GALVANNEALED (A60) STEEL
 - 14 GAGE HOT-DIPPED GALVANIZED (G90) STEEL
- NOTE: 14 GAGE CAN'T BE FIRE RATED.

SEE PAGE 4-601 FOR
POLYURETHANE FOAM CORE
CHARACTERISTICS.

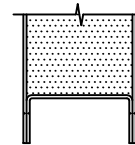


VERTICAL SECTION
THRU TOP OF DOOR

RECESSED 16 GAGE BOTTOM CHANNEL IS
SPOT WELDED TO BOTH FACE SHEETS

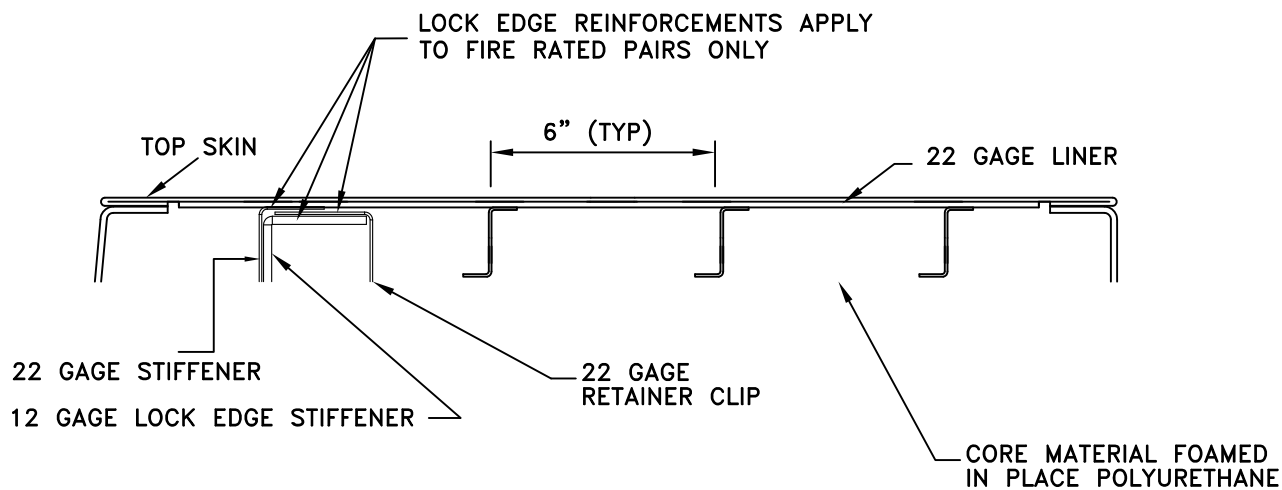


VERTICAL SECTION
THRU TOP OF DOOR

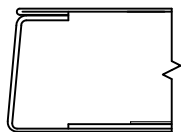


VERTICAL SECTION
THRU BOTTOM OF DOOR

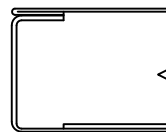
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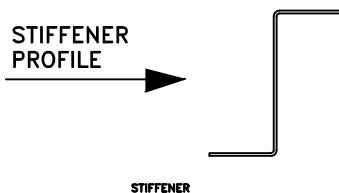
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STIFFENERS ATTACHED TO LINER BY SPOT WELDS NOT MORE THAN 5" ON CENTER.
1/8" CONTINUOUS BEAD OF EPOXY APPLIED BETWEEN STIFFENERS & TOP SKIN.
LINER ATTACHED TO SKINS USING EPOXY.



GENERAL INFORMATION

Fire Doors and Frames Testing and Labeling	7-101 thru 7-105
Fire Doors and Frames Hardware Requirements	7-106 thru 7-106A

LABELED DOORS

Doors	7-001 thru 7-514

LABELED DOORS AND FRAMES

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LABELED FRAMES

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(Before Drywall) Frames	7-800 thru 7-806
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GENERAL INFORMATION

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Hardware Requirements.....	7-106, 7-106A

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Vertically Steel Stiffened UL/WH	7-111 thru 7-112B
250° Temp. Rise Rated, Solid Core UL/WH	7-113 thru 7-113C
Polyurethane Foam Core UL/WH	7-114 thru 7-114C
Stile and Rail Insulated Tubular Core UL/WH	7-115 thru 7-115C
450° Temp. Rise Rated, Vertically Steel Stiffened UL/WH	7-116 thru 7-116C
Polystyrene Core UL/WH	7-117 thru 7-117C

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Margins (Operating Clearances)	7-132, 7-133

Construction

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Medallion (NTR)	7-301 thru 7-305
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Imperial/Versadoor	7-501 thru 7-504
Fuego (250°).....	7-505 thru 7-510
Legion/UltraDor	7-511 thru 7-514

TEMPERATURE RISE

Although the heat transmitted can be recorded throughout the test, the first 30 minutes determine temperature rise criteria for labeling. After 30 minutes, the temperature inside is about 1550° F. The temperature then begins to level off and after 3 hours reaches about 1925° F. The manufacturer can opt to end the test 1-1/2 hours which would limit product to 1-1/2 hour rating maximum. Ceco typically goes for the full 3 hour test which allows the product to be labeled for any fire-rating specified.

HOSE STREAM TEST

As soon as the fire is extinguished, the test panel unit is moved away from the furnace and, when required, subjected to a hose stream test (in the U.S., the hose stream is not required for 1/3 hour rated assemblies). During the hose stream test, the door(s), which may be red hot on the furnace side, are immediately hit with a stream of water from a fire hose.

FIRE HOSE STREAM TEST

Rating (Hours)	Nozzle Water Pressure	Duration
3	45 Psi	3 Sec. Per Sq. Ft. of Exposed Area
1-1/2 but less than 3	30 Psi	1.5 Sec. Per Sq. Ft. of Exposed Area
1 but less than to 1-1/2	30 Psi	0.9 Sec. Per Sq. Ft. of Exposed Area
Less than 1	30 Psi	0.6 Sec. Per Sq. Ft. of Exposed Area

The rapid change in temperature and force exerted by the hose stream test cause extreme stresses on the assembly.

EVALUATION

Upon completion of the test(s), a final evaluation is made. If the test is rated successful by the agency, a "procedure" is issued and the manufacturer is allowed to attach appropriate label(s) to doors/frames – when the units are of the same type as those tested and as described in the procedure.

PROCEDURES

Ceco Door has authorized labeling procedures from the agencies:

UL
WH (ITS)
FM

SMOKE ONLY LABEL

THE NEW INTERTEK/WARNOCK HERSEY SMOKE ONLY LABEL IS FOR SMOKE AND DRAFT CONTROL WHERE THERE'S NO FIRE RATING REQUIREMENT. SMOKE PARTITIONS ARE MUCH LESS RESTRICTIVE THAN SMOKE BARRIERS AND ARE NOT REQUIRED TO BE A FIRE-RESISTANT RATED WALL, UNLESS SPECIFICALLY CALLED FOR BY THE ARCHITECT. THESE SMOKE PARTITIONS ARE INTENDED ONLY TO RESIST THE PASSAGE OF SMOKE. THE SMOKE ONLY LABEL IS AVAILABLE FOR DOORS AND FRAMES, AND CAN BE ORDERED BY PLACING SW IN THE LABEL FIELD OF THE ORDER FORM OR YOUR SOFTWARE ORDERING SYSTEM.

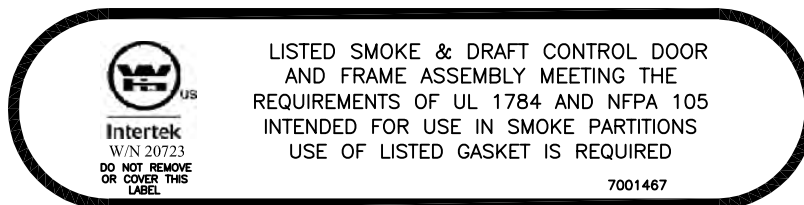
WHEN TO USE "SMOKE DOORS" IN SMOKE PARTITIONS?

NAVIGATING THE MAZE OF REQUIREMENTS FOR "SMOKE DOORS" IN SMOKE PARTITIONS CAN BE DIFFICULT TO DETERMINE. THE DIFFICULTY IN MAKING A DETERMINATION IS BECAUSE THERE ARE SEVERAL TYPES OF DOORS THAT CAN BE CALLED SMOKE DOORS, WITH EACH HAVING DIFFERENT REQUIREMENTS. THIS INFORMATION HEREIN IS BASED ON THE 2009 EDITION OF THE INTERNATIONAL BUILDING CODE (IBC). IT SHOULD BE NOTED THAT OTHER CODES MAY HAVE DIFFERENT REQUIREMENTS FOR THESE DOOR AND FRAME ASSEMBLIES.

UL1784 - AIR LEAKAGE TESTS OF DOOR ASSEMBLIES AND ITS RELATIONSHIP TO GASKETING REQUIREMENTS IS PART OF THE MAZE THAT MUST BE UNDERSTOOD. THE IBC REQUIRES CERTAIN DOORS TO BE TESTED IN ACCORDANCE WITH UL 1784. THE MAXIMUM AMOUNT OF AIR FLOW ALLOWED BY THE IBC IS 3.0 CUBIC FEET PER MINUTE PER SQUARE FOOT OF DOOR OPENING AT 0.10 INCH OF WATER FOR BOTH THE AMBIENT TEMPERATURE TEST AND THE ELEVATED TEMPERATURE EXPOSURE TEST. WHEN DOORS AND FRAMES ARE REQUIRED TO MEET THESE LIMITS, WHEN TESTED IN ACCORDANCE WITH UL 1784, THEY WILL NEED GASKETING APPLIED TO ACHIEVE THE AFOREMENTIONED VALUES. NFPA 105 - STANDARD FOR SMOKE DOOR ASSEMBLIES AND OTHER OPENING PROTECTIVES ALSO INCLUDES THE REQUIREMENT FOR TESTING IN ACCORDANCE WITH UL1784.

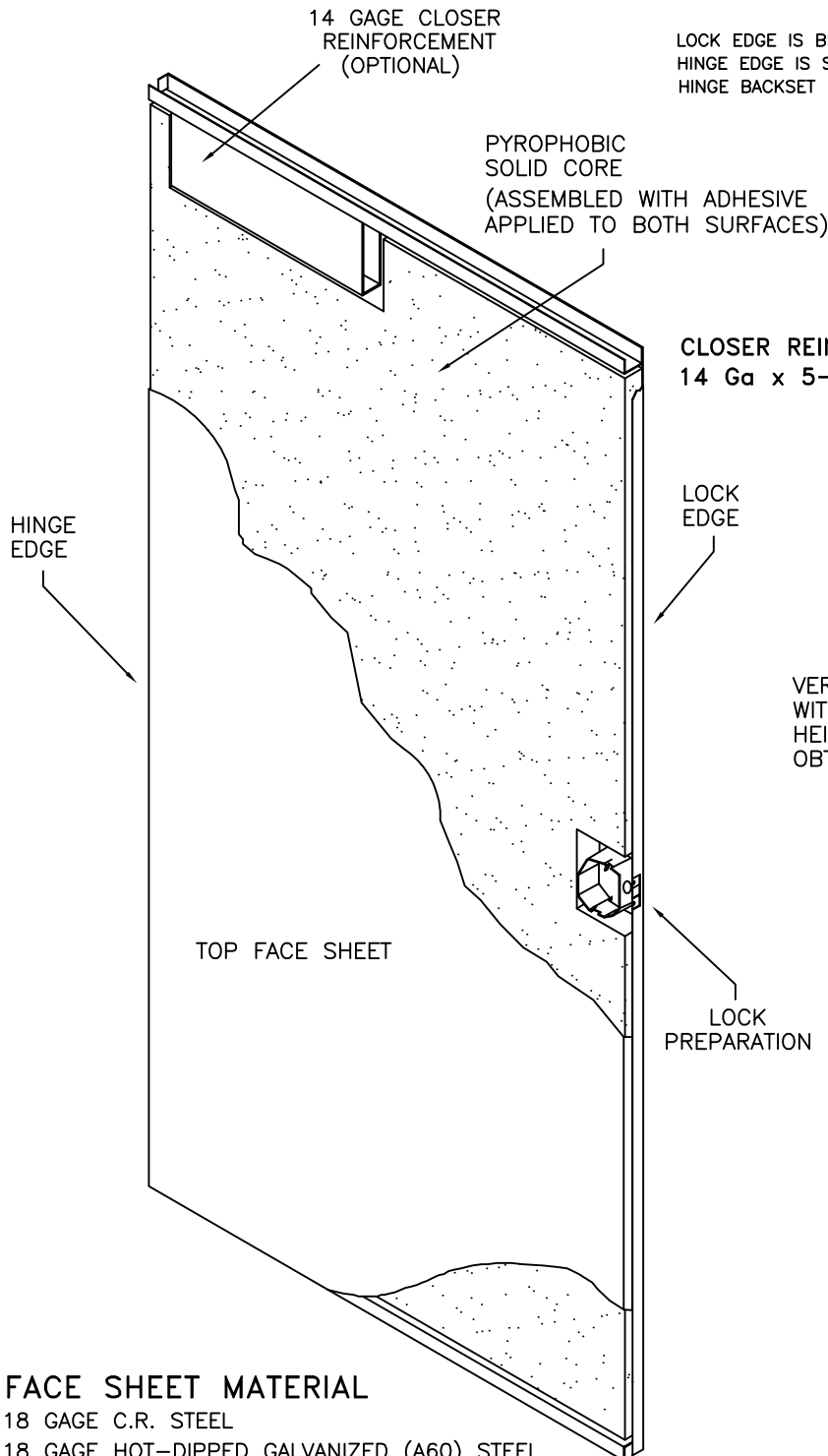
SMOKE PARTITIONS HAVE THEIR REQUIREMENTS OUTLINED IN SECTION 711 OF THE 2009 IBC, WHICH ALSO INCLUDE THE DOOR AND FRAME OPENINGS IN THESE PARTITIONS. SMOKE PARTITIONS ARE MUCH LESS RESTRICTIVE THAN SMOKE BARRIERS AND ARE NOT REQUIRED TO BE A FIRE-RESISTANT RATED WALL, UNLESS SPECIFICALLY CALLED FOR BY THE ARCHITECT. THESE SMOKE PARTITIONS ARE INTENDED ONLY TO RESIST THE PASSAGE OF SMOKE. THEY MAY BE TERMINATED TO THE UNDERSIDE OF A CEILING MEMBRANE DESIGNED TO PREVENT THE PASSAGE OF SMOKE. DOORS AND FRAMES IN SMOKE PARTITIONS SHALL BE SELF (OR AUTOMATIC) CLOSING BY SMOKE DETECTION IN ACCORDANCE WITH SECTION 715.4.8.3, THUS THEY REQUIRE A CLOSER. DOORS IN SMOKE PARTITIONS REQUIRE AN ACTIVE LATCH BOLT THAT WILL SECURE THE DOOR WHEN IT IS CLOSED ACCORDING WITH SECTION 715.4.8.1. GASKETING IS REQUIRED ACCORDING TO SECTION 711.5.2, AS IT STATES THAT DOORS IN SMOKE PARTITIONS SHALL MEET THE REQUIREMENTS FOR A SMOKE AND DRAFT CONTROL ASSEMBLY TESTED IN ACCORDANCE WITH UL 1784. THIS SECTION ALSO REQUIRES THE INSTALLATION OF SMOKE ASSEMBLIES TO BE IN ACCORDANCE WITH NFPA 105.

SMOKE ONLY LABEL



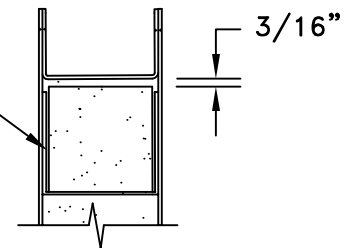
20 MINUTE FIRE

THE 20 MINUTE (S) CLASSIFICATION IS FOR OPENINGS WHERE SMOKE CONTROL IS A PRIMARY CONSIDERATION. THE 20 MINUTE FIRE DOOR CATEGORY DOES NOT HAVE TO UNDERGO A HOSE STREAM TEST. SMOKE CONTROL TESTING OF DOOR ASSEMBLIES IS PERFORMED IN ACCORDANCE WITH UL1784. ASSEMBLIES TESTED IN CONFORMANCE WITH UL1784 COMPLY WITH NFPA 80 (...INSTALLATION OF FIRE DOORS...) AND NFPA 105 (...SMOKE AND DRAFT CONTROL...). THE UL 1784 TEST ASSEMBLY INCLUDES SOME FORM OF GASKETING. VARIOUS LISTED GASKETING ARE ACCEPTABLE (HOWEVER, ONLY POSITIVE PRESSURE LISTED GASKETS ARE APPROVED FOR POSITIVE PRESSURE RATED ASSEMBLIES). CECO'S "SMOKE-TECH" LABELED DOOR, KERFED FRAME AND LISTED GASKET ASSEMBLY COMPLIES WITH THIS SMOKE PROTECTION CATEGORY, I.E. UL 10B, UL 10C, UL 1784, AND NFPA 105. SMOKE-TECH ALSO MEETS FIRE PROTECTION CRITERIA FOR UP TO 3 HOUR RATING (UL 10B, UL 10C).



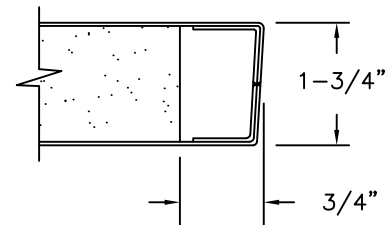
LOCK EDGE IS BEVELED 1/8" IN 2" (1:16)
HINGE EDGE IS SQUARE.
HINGE BACKSET IS 1/4" STD (3/16" & 5/16" OPTIONAL)

RECESSED 16 GAGE TOP CHANNEL IS WELDED TO BOTH FACE SHEETS.



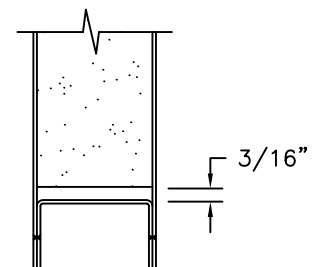
VERTICAL SECTION THRU TOP OF DOOR

VERTICAL EDGES ARE CONTINUOUSLY WELDED WITH 16 GA. MINIMUM BACKUP CHANNEL FULL HEIGHT OF DOOR AND DRESSED SMOOTH TO OBTAIN SEAMLESS HINGE AND LOCK EDGES.



HORIZONTAL SECTION THRU LOCK EDGE

RECESSED 16 GAGE BOTTOM CHANNEL IS SPOT WELDED TO BOTH FACE SHEETS

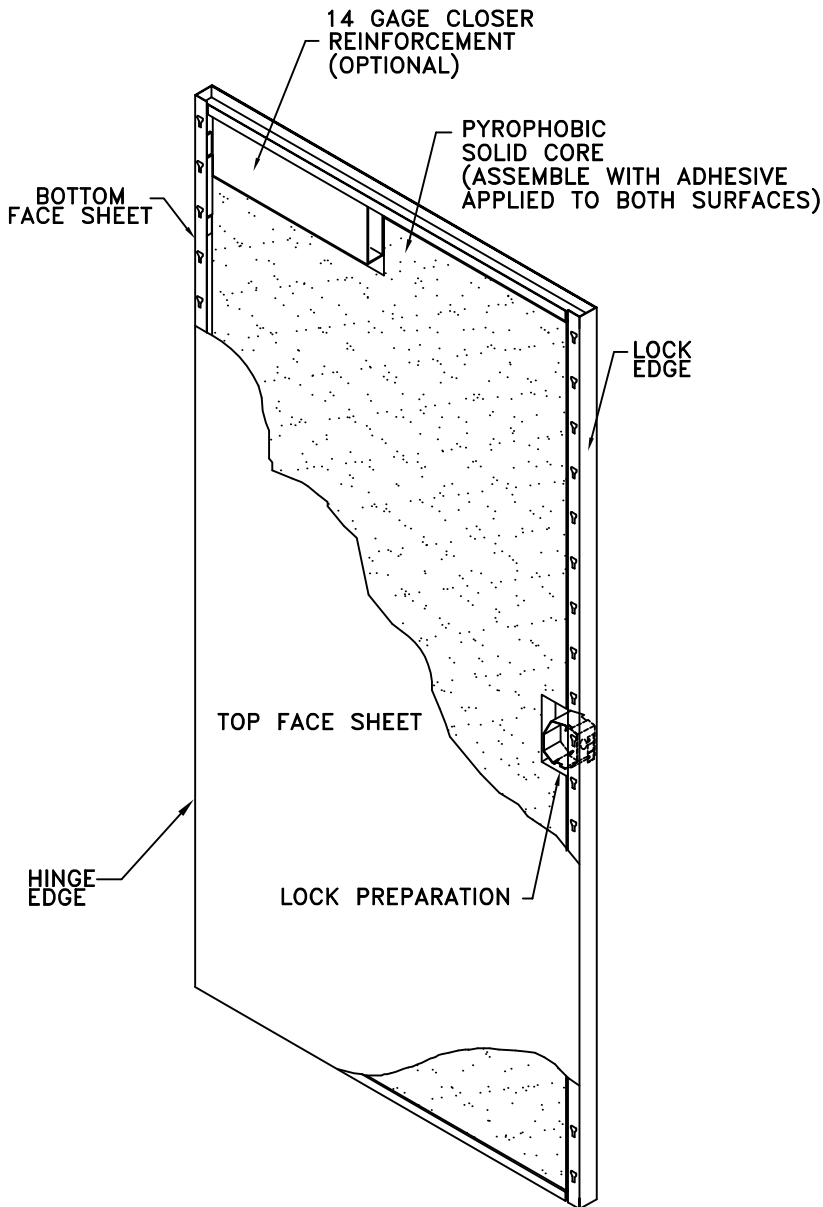


VERTICAL SECTION THRU BOTTOM OF DOOR

FACE SHEET MATERIAL

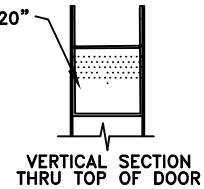
- 18 GAGE C.R. STEEL
- 18 GAGE HOT-DIPPED GALVANIZED (A60) STEEL
- 16 GAGE C.R. STEEL
- 16 GAGE HOT-DIPPED GALVANIZED (A60) STEEL
- 14 GAGE C.R. STEEL
- 14 GAGE HOT-DIPPED GALVANIZED (A60) STEEL

(Conversion: 1" = 25.4 mm, e.g., 1-3/4" = 44.45 mm)



LOCK EDGE IS BEVELED 1/8" IN 2" (1:16)
SQUARE LOCK EDGE OPTIONAL: HINGE EDGE IS SQUARE
HINGE BACKSET IS 1/4" STD (3/16" & 5/16" OPTIONAL)
RECESSED 16 GAGE TOP CHANNEL IS WELDED TO BOTH FACE SHEETS

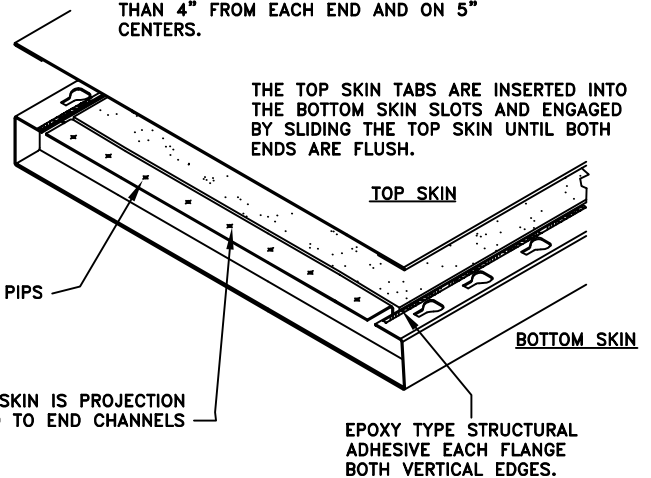
CLOSER REINF.
14Ga x 5-3/8" x 20"



RECESSED 16 GAGE BOTTOM CHANNEL IS SPOT WELDED TO BOTH FACE SHEETS



NOTE:
TABS WILL BE SPACED NO GREATER THAN 4" FROM EACH END AND ON 5" CENTERS.



FACE SHEET MATERIAL

- 18 GAGE C.R. STEEL
- 18 GAGE HOT-DIPPED GALVANIZED (A60) STEEL
- 18 GAGE HOT-DIPPED GALVANIZED (G90) STEEL
- 16 GAGE C.R. STEEL
- 16 GAGE HOT-DIPPED GALVANIZED (A60) STEEL
- 16 GAGE HOT-DIPPED GALVANIZED (G90) STEEL

(Conversion: 1" = 25.4 mm, e.g., 1-3/4" = 44.45 mm)

Hardware Reinforcements

Closer Reinforcements, Plate Type.....	11-401, 11-402
Closer Reinforcements, Sleeve Type	11-403

Frame Anchors

Anchor Quantity	11-500
Snap-In Stock Metal and Wood Stud Anchors	11-501
Recessed Welded Wood Stud Anchor	11-502
Flush Welded Wood Stud Anchor	11-503
Snap-In Adjustable Jamb Anchor for Wood Stud Walls	11-504
Snap-In Adjustable Before Drywall Stud Anchor	11-505
Recessed Welded Metal Stud Anchor	11-506
Flush Welded Metal Stud Anchor	11-507
Wire Masonry and Masonry "T" Anchors (Loose)	11-508
Yoke and Strap Masonry / Existing Opening Pipe and Plate Anchor ..	11-509
Snap-In Existing Opening Butterfly Jamb Anchor	11-510
Welded Existing Opening Anchor for Standard and Special Faces.....	11-511
Welded Floor Anchor	11-512
Welded Adjustable Floor Anchor	11-513
Sidelite Floor Anchor / Bracing Strap / Closure Clip	11-514
Frame Spline	11-515

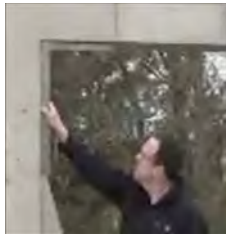
Special Information

Standard Frame Installation	11-901, 11-902
Existing Wall Frame Installation	11-903, 11-903A
Frame Spreader Bars	11-904
Hospital/Sanitary Stop	11-905

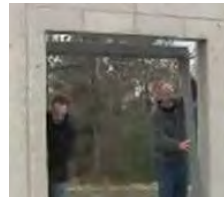
1. Check the rough opening to confirm the frame will fit the opening. With a long string, run the string diagonally from each corner to check alignment of the rough opening. You may need to switch the string over to the other side to ensure that the string is not binding.



6. If the frame is welded together, remove the shipping spreader from frame before setting in the opening. If frame is knock down construction, see manufacturer's instructions for assembly.



2. Check rough opening for square in corners using a framing square.



7. Locate frame in opening.



3. Check rough openings for level and plumb of walls with a 6' level. Both sides and the top need to be verified for level.



8. Install setting spreader bar (set at correct width) at the bottom of the frame using wood spreader bar or PLS tool.



4. Check to confirm rough opening dimensions are correct. This will help determine the amount of shimming needed to install frame. The rough opening shall be no less than 1/4" larger on the width and 3/16" on the height than the overall size of the frame. The maximum rough opening is 3/8" larger than overall size of the frame on the width and 1/4" on the height.



9. Shim bottom of the frame on the lock side to keep hinge side tight to wall. If too many shims are needed, (max 1/4") then divide evenly between the two jambs. Use shims to tighten frame to the spreader bar width, make sure all four rabbets of the frame touch the spreader bar. This prevents twist in the frame.

Note: The installer is responsible for shimming and aligning the frame. Gaps are normally sealed as part of the installation or caulking/painting process. Refer to architectural specifications for the appropriate sealant material to be used at fire or smoke control openings.

Tip: Use tapered shims between anchors and wall (above the holes for bolts) and spreader bar to maintain squareness and alignment of frame, and to maintain door opening sizes.



5. Determine location of frame in opening width. Reference architectural drawings for required placement. Set frame in determined location and snap a chalk line along the door hinge side to help determine the frame location on the face side.

Note: frames are not always centered in the opening.



10. Level the head, if not level shim under bottom of frame. If necessary. Be aware that bottom latch on the strike side has a minimum engagement per hardware manufacturer's instructions, shim accordingly.

(Conversion: 1" = 25.4 mm, e.g., 1-3/4" = 44.45 mm)



11. Align hinge jamb to the chalk line and confirm level and plumb of hinge jamb. Anchor hinge jamb to wall. Drill appropriate size and depth holes (per fastener manufacturer's instructions) for one-piece anchor bolts. We recommend drilling and anchoring each anchor one at a time. Insert anchor bolt into hinge jamb starting with the bottom bolt and tighten securely following bolt manufacturer's recommended torque. Install top bolt in the hinge jamb next, checking frame alignment before installing. Install balance of bolts on the hinge side, checking for frame alignment as each bolt is secured.

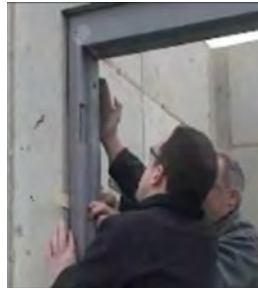


12. Tape string (tape string to face of frame in opposite corners running diagonally) to check alignment of frame. Keep in mind you may need to move one string from inside to the outside to make sure of correct alignment.

Helpful hint: keep strings on frame until the frame is completely anchored.



13. Check alignment of frame with cross strings.



14. Plumb and square the strike jamb, and shim if necessary. Shims used should be located immediately above the anchor points.

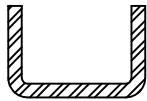
15. Anchor strike jamb (other hinge jamb on paired application) to wall, install bolts in the same sequence as previous jamb, check center of frame for correct width, before installing center bolts. Shim as necessary to maintain correct opening width.

16. Check to see if shims are required between head and wall. Remember to place shims above anchor point.

17. Anchor head in the same way as jambs.

Note: Backer rod or caulking shall be used where gaps occur between frame and wall. See specified caulk manufacturer's instructions for details.

1. SPREADER BAR PROFILE



2. SPREADER BAR LENGTH

Length of spreader bar is equivalent to door opening width dimension.

This bar is not to be used for installation. A wood spreader is to be used for maintaining proper spacing between jambs. (See the DHI publication "The Installation of Commercial Steel Doors and Steel Frames", "Insulated Steel Doors in Wood Frames", and "Builder's Hardware").

3. SPREADER BAR QUANTITY AND LOCATION

- A. All single rabbet frames and double rabbet, single swing frames with depth not exceeding 6 inches: attach (1) spreader bar to the door rabbet. (See Fig. #1)
- B. All double rabbet, double swing frames or double rabbet, single swing frames with depth exceeding 6 inches: attach one (1) spreader bar to each frame rabbet (two total). (see Fig. #2)

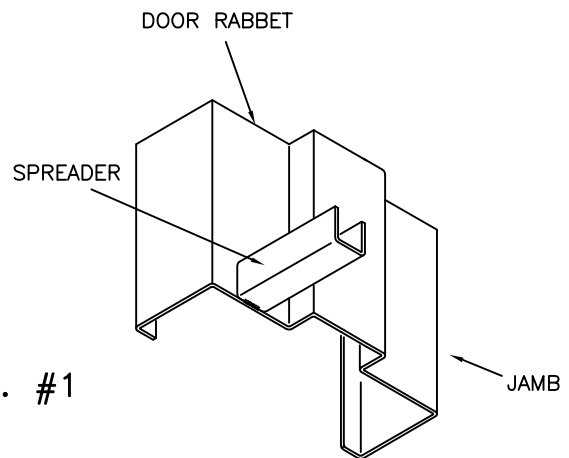


Fig. #1

4. SPREADER BAR ATTACHMENT

Verify spreader bar length by checking to see that said length is equivalent to the door opening width dimension at head. Place the spreader bar at the bottom of the door opening and tack weld in place. Strength of welds should be such that spreader bar remains in place during transit and also be such that the spreader bar can be removed when required (by means of a sharp hammer blow) without incurring frame damage.

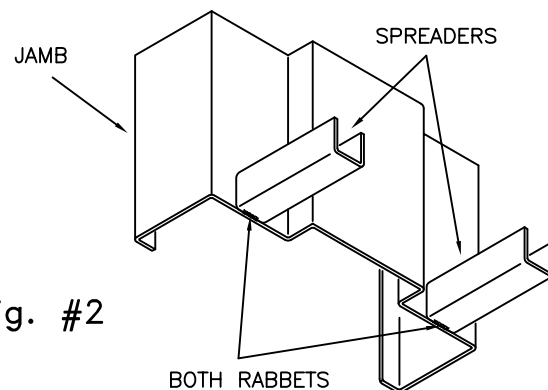
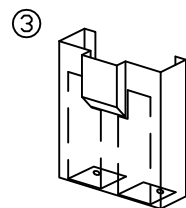
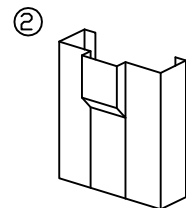
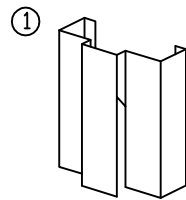
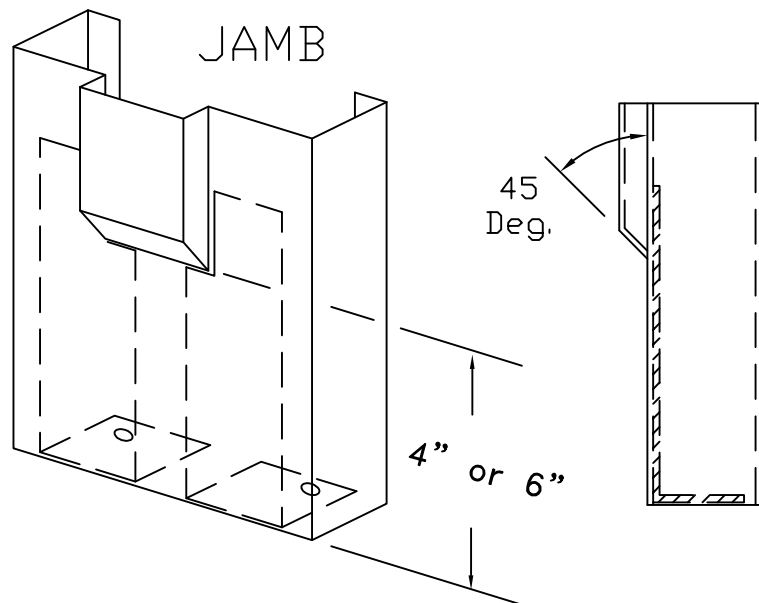
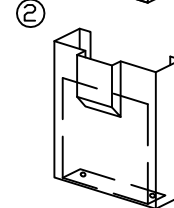
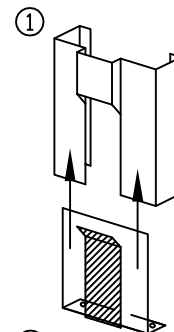


Fig. #2

Stops are cut at a 45 degree angle at either 4" or 6" heights (as required by contract) from the base of the angle to the bottom of the frame.



STD. PREP
THRU 14"
DEPTH

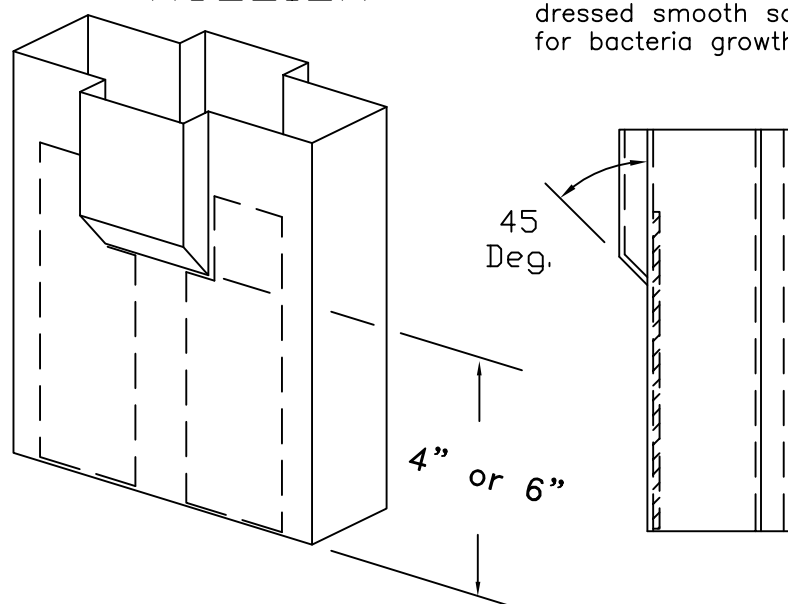


STD. PREP
ABOVE 14"
DEPTH

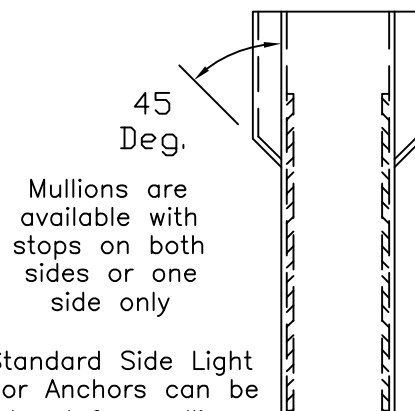
Split hospital stop backing plates are shown. Other reinforcing might be used to accommodate various profiles and/or depths.

Floor anchors are incorporated in "S" & "B" series jambs (Existing Opening applications not included). Floor anchors are not included on "D" series jambs.

MULLION



Reference: All seams are continuously welded and dressed smooth so as to allow as few opportunities for bacteria growth as possible.



General Information

Index, Section 12 (Standard Frames) 12-001

Profile Guidelines

SU – 1-3/4" Door Frames Profiles and Materials 12-101

SQ & SR – 1-3/4" Door Frame Profiles 12-102

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S Series Frame Parameters and SQ8, SR8 Profiles..... 12-104

SQW & SRW Weatherkerf Frame Profiles & Parameters 12-105

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Double Rabbet KD Corner Assembly 12-201

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4" Head for Modular Walls 12-203

Weatherkerf KD Corner Assembly..... 12-204

Hardware Reinforcements

Closer Reinforcement, Sleeve Type..... 12-301

Closer Reinforcement, Plate Type See Section 11

Closer Reinforcement, Half Sleeve See Section 11

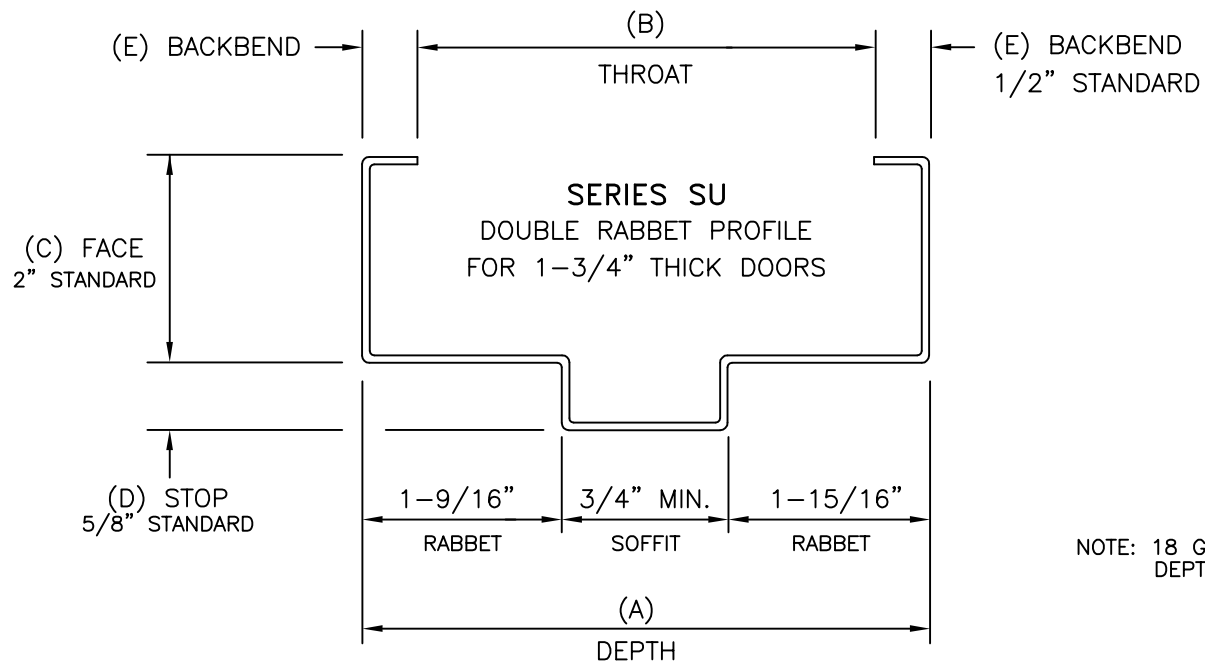
Frame Anchors

Masonry Anchors..... See Section 11

Wood/Metal Stud Anchor..... See Section 11

Existing Opening Anchor See Section 11

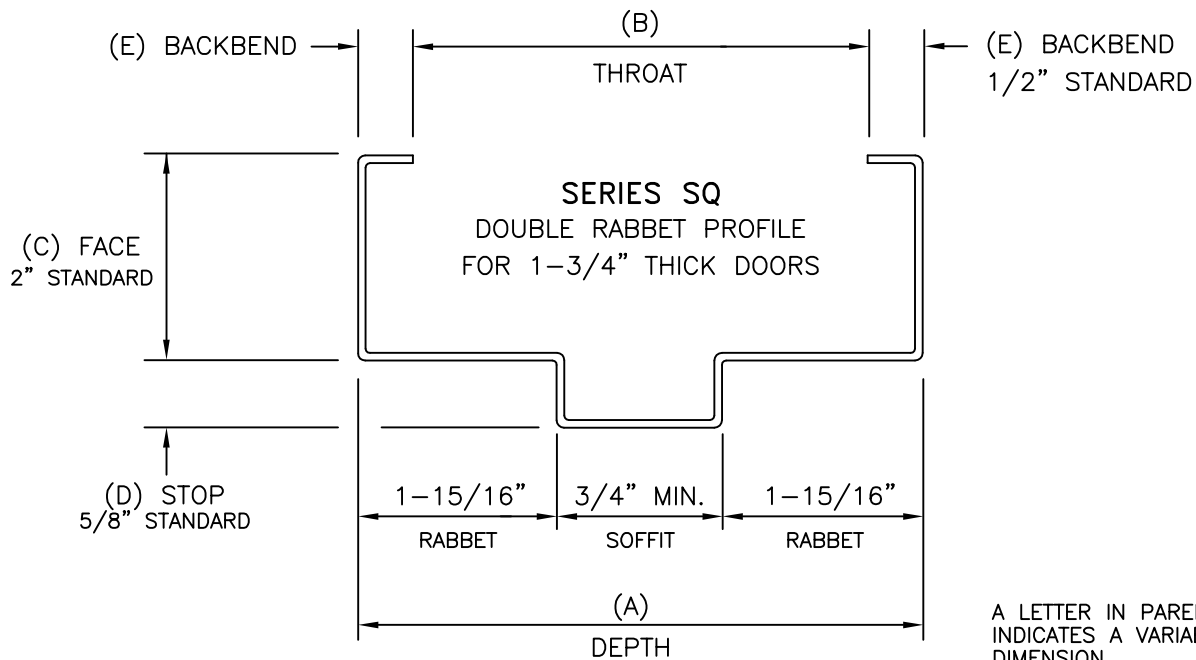
Floor Anchors See Section 11



NOTE: 18 GAGE MAXIMUM
DEPTH IS 7-7/8".

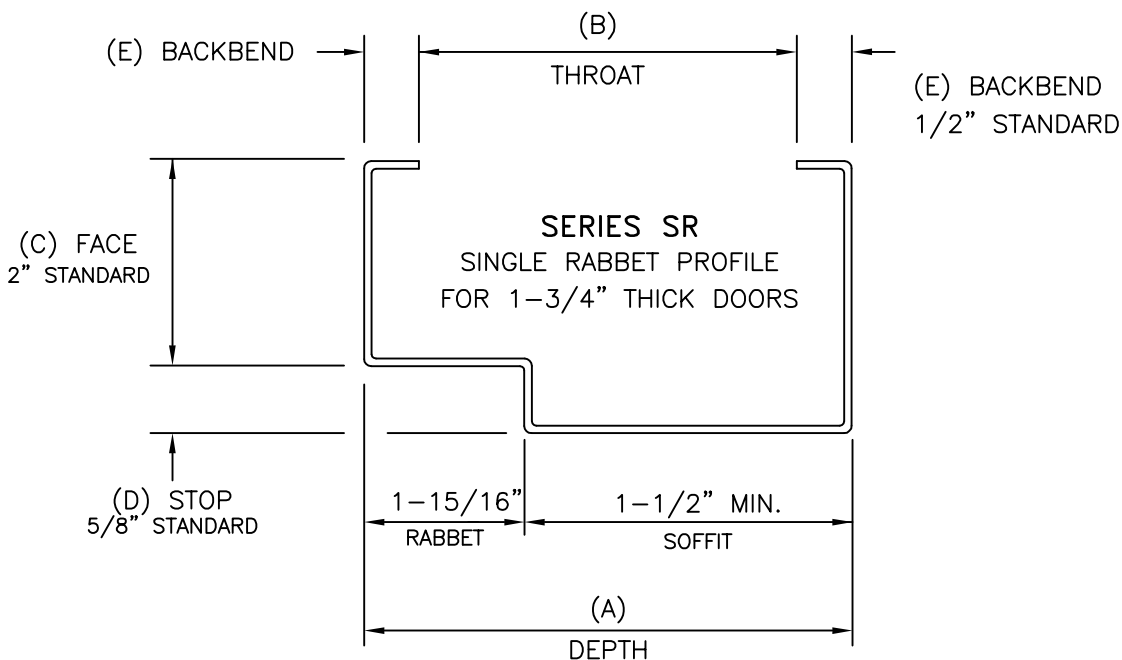
DEPTHS AVAILABLE IN 1/8" INCREMENTS.
1" FACES (HEAD AND JAMBS) AND 4" FACES (HEADS)
ARE ALSO AVAILABLE IN SELECTED DEPTHS.

A LETTER IN PARENTHESIS
INDICATES A VARIABLE
DIMENSION.
REFER TO PAGE 12-104
FOR ALTERNATE PROFILES,
LIMITS OF VARIABLE DIMENSIONS,
AND STEEL OPTIONS.

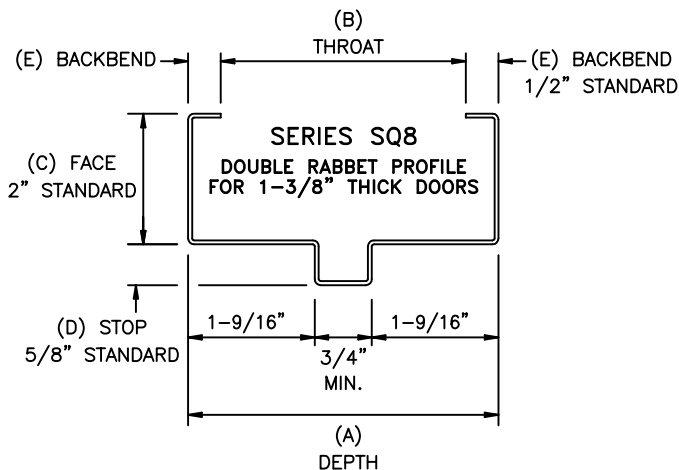
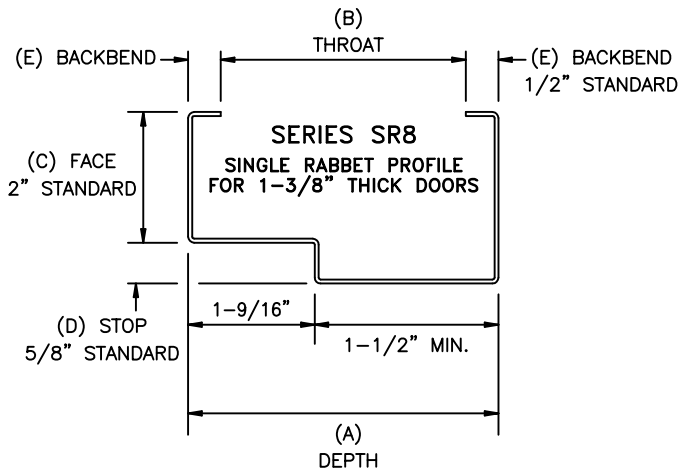


NOTE: 18 GAGE MAXIMUM
DEPTH IS 7-7/8".

A LETTER IN PARENTHESIS
INDICATES A VARIABLE
DIMENSION.
REFER TO PAGE 12-104
FOR ALTERNATE PROFILES
AND LIMITS OF VARIABLE
DIMENSIONS.



(Conversion: 1" = 25.4 mm, e.g., 1-3/4" = 44.45 mm)



GAGE	18, 16, 14, 12
MATERIAL	COLD ROLLED ASTM A60 GALVANIZED ASTM G90 GALVANIZED (N/A 18 OR 12 GA.)
FINISH	PRIME PAINTED
CORNER CONDITION	12 GAGE SET UP AND WELDED KD AVAILABLE WITH EQUAL JB AND HD FACE
OPENING WIDTH SINGLE	1'-0" THRU 5'-0" (18 GA 1'-0" THRU 3'0")
OPENING WIDTH DOUBLE	3'-0" THRU 10'-0" (18 GA 3'0" THRU 6'0")
OPENING HEIGHT	1'-0" TO 10'-0" 1'-0" TO 7'-0" (18 GA.)

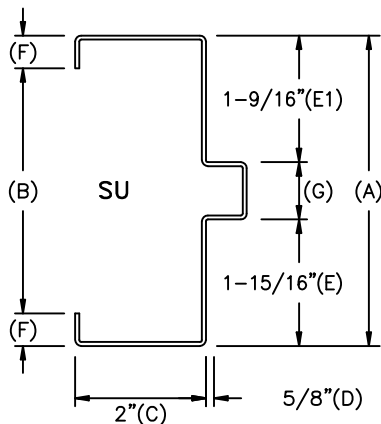
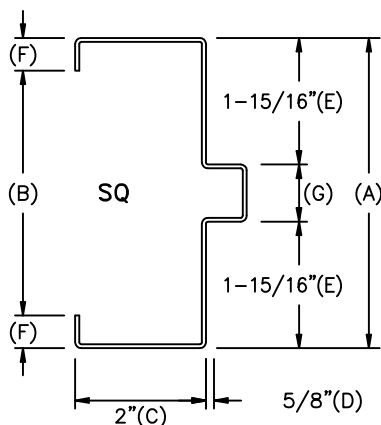
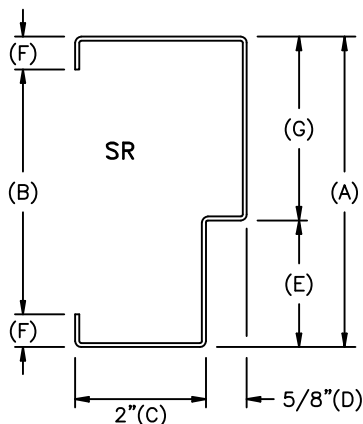
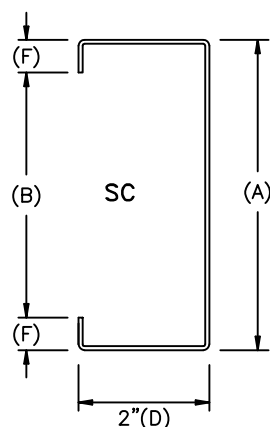
A.	DEPTH: SU	4-1/4" TO 17-7/8" (16 and 14 GAGE) 5-1/4" TO 14" (12 GAGE)
	SQ	4-5/8" TO 17-7/8" (16 and 14 GAGE) 5-1/4" TO 14" (12 GAGE)
	SQ8	3-7/8" TO 17-7/8" (16 and 14 GAGE) 5-1/4" TO 14" (12 GAGE)
	SR,SR8	3" TO 17-7/8" (16 and 14 GAGE) 3-3/4" TO 6" (12 GAGE)
	SC	3" TO 14" (16 and 14 GAGE) 3-3/4" TO 6" (12 GAGE)
		(18 GAGE ALL PROFILES MAX. DEPTH 7-7/8")
B.	THROAT	STANDARD IS 1" LESS THAN DEPTH WITH 1/2" BACKBENDS
C.	FACE	1" TO 5" FACE DIMENSION MUST BE LESS THAN DEPTH
D.	STOP HEIGHT	5/8" (STANDARD), 3/4", 1", 1-1/4"
E.	BACKBENDS	1/2" (STANDARD) 7/16" TO 1" (18, 16, AND 14 GAGE) 1/2" TO 1" 12 GAGE

ANCHOR OPTIONS	ATTACHMENT METHOD
FIXED FLOOR	WELDED IN
MASONRY	LOOSE
MASONRY	WELDED IN
METAL STUD	WELDED IN
WOOD STUD	WELDED IN
EXISTING OPENING	LOOSE
EXISTING OPENING	WELDED IN
ADJUSTABLE STUD	LOOSE

*SEE ANCHORS IN FRAMES, GENERAL SECTION FOR COMPATIBILITY OF LOOSE ANCHORS

All dimensions shown are standard.
For variations refer to the chart for limits.

(Conversion: 1" = 25.4 mm, e.g., 1-3/4" = 44.45 mm)



GAGE	18, 16, 14, 12
MATERIAL	COLD ROLLED ASTM A60 GALVANIZED ASTM G90 GALVANIZED (N/A 18 GA.)
FINISH	PRIME PAINTED
CORNER CONDITION	12 GAGE SET UP AND WELDED KD AVAILABLE WITH EQUAL JB AND HD FACE
OPENING WIDTH SINGLE	1'-0" THRU 5'-0" (18 GA 1'-0" THRU 3'0")
OPENING WIDTH DOUBLE	3'-0" THRU 10'-0" (18 GA 3'0" THRU 6'0")
OPENING HEIGHT	1'-0" TO 10'-0" 1'-0" TO 7'-0" (18 GA.)

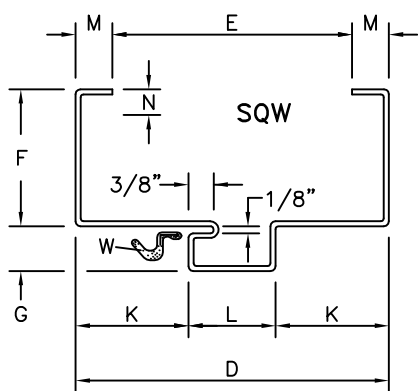
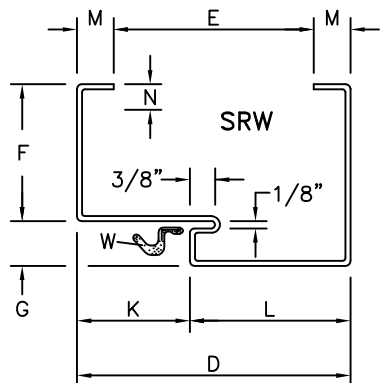
A.	DEPTH: SU	4-1/4" TO 14" (16 and 14 GAGE) 5-1/4" TO 11 7/8" (12 GAGE)
	SQ	4-5/8" TO 14" (16 and 14 GAGE) 5-1/4" TO 11 7/8" (12 GAGE)
	SR	3" TO 14" (16 and 14 GAGE) 3-3/4" TO 6" (12 GAGE)
	SC	3" TO 14" (16 and 14 GAGE) 3-3/4" TO 6" (12 GAGE)
		(18 GAGE ALL PROFILES MAX. DEPTH 7-7/8")
B.	THROAT	STANDARD IS 1" LESS THAN DEPTH WITH 1/2" BACKBENDS
C.	FACE	1" TO 5" FACE DIMENSION MUST BE LESS THAN DEPTH
D.	STOP HEIGHT	5/8" (STANDARD), 3/4", 1", 1-1/4"
E.	RABBET	EQUAL, 1-9/16" AND 1-15/16" TO 4" KD ONLY WITH 1-15/16" OR 1-9/16"
	(E) (E1)	1-15/16" 1-9/16"
F.	BACKBENDS	1/2" (STANDARD) 7/16" TO 1" (18, 16, AND 14 GAGE) 1/2" TO 1" 12 GAGE
G.	SOFFIT	3/4" MINIMUM 18, 16, & 14 GAGE, 5/8" STOP 1-3/8" MINIMUM 12 GAGE, 5/8" STOP

ANCHOR OPTIONS	ATTACHMENT METHOD
FIXED FLOOR	WELDED IN
MASONRY	LOOSE
MASONRY	WELDED IN
METAL STUD	WELDED IN
WOOD STUD	WELDED IN
EXISTING OPENING	LOOSE
EXISTING OPENING	WELDED IN
ADJUSTABLE STUD	LOOSE

*SEE ANCHORS IN FRAMES, GENERAL SECTION FOR COMPATIBILITY OF LOOSE ANCHORS

All dimensions shown are standard.
For variations refer to the chart for limits.

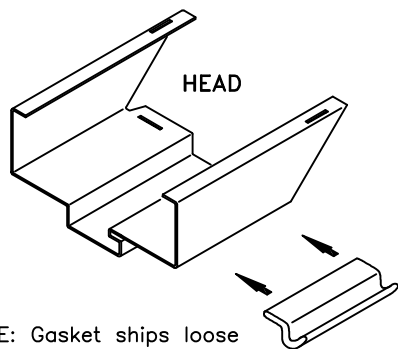
(Conversion: 1" = 25.4 mm, e.g., 1-3/4" = 44.45 mm)



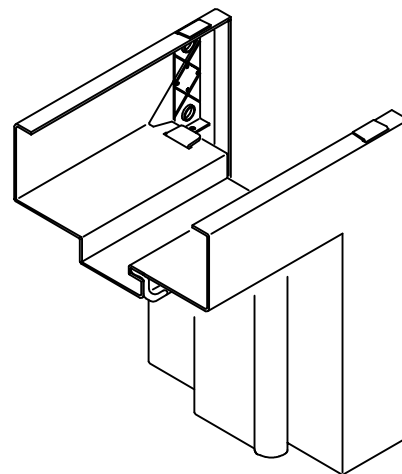
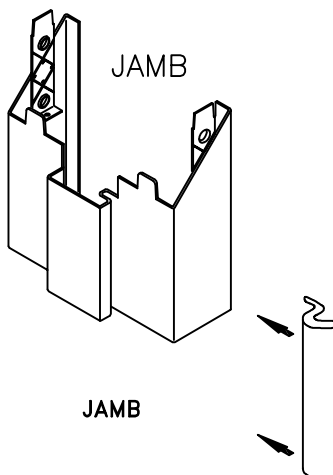
A.	GAGE	18, 16 , & 14
B.	MATERIAL	COLD ROLLED ASTM A60 GALV G90 (N/A 18 GA.)
C.	FINISH	PRIME PAINTED
D.	DEPTH: SINGLE RABBET DOUBLE RABBET	3-3/8" TO 6" 5-1/2" TO 14" (18 GAGE ALL PROFILES MAX. DEPTH 7-7/8")
E.	THROAT	1" LESS THAN DEPTH (STANDARD)
F.	FACE	2" STD. (4" FACE KD HEADS OPTIONAL)
G.	STOP HEIGHT	5/8"
H.	CORNER CONDITION	KD OR WELDED
I.	OPENING WIDTH: SINGLE DOUBLE	2'-0" THRU 4'-0" 2'-0" THRU 3'-0" (18 GAGE) 4'-0" THRU 8'-0" 4'-0" THRU 6'-0" (18 GAGE)
J.	OPENING HEIGHT:	2'-0" THRU 8'-0" (16 GAGE & 14 GAGE) 2'-0" THRU 7'-0" (18 GAGE)
K.	RABBET	EQUAL, 2-1/8" FOR 1-3/4" DOOR
L.	SOFFIT: DOUBLE RABBET SINGLE RABBET	NORMALLY DEPTH MINUS 4-1/4" MIN. SOFFIT WIDTH 1-1/4" NORMALLY DEPTH MINUS 2-1/8" MIN. SOFFIT WIDTH 1-1/2"
M.	BACKBENDS	1/2" (STANDARD) 7/16", 9/16" AND 5/8" OPTIONAL
W.	WEATHERSTRIP	FOAM FILLED, FIRE AND SMOKE RATED

NOTE: Gasket ships loose when frame is prime painted. Do not install gasket until frame has been finish painted.

FOR OTHER SIZES OR VARIATIONS, CONTACT CUSTOMER SERVICE.



NOTE: Gasket ships loose when frame is prime painted. Do not install gasket until frame has been finish painted.

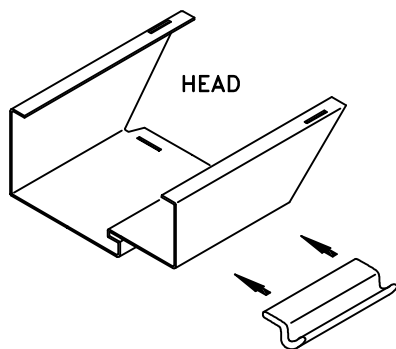


ASSEMBLY

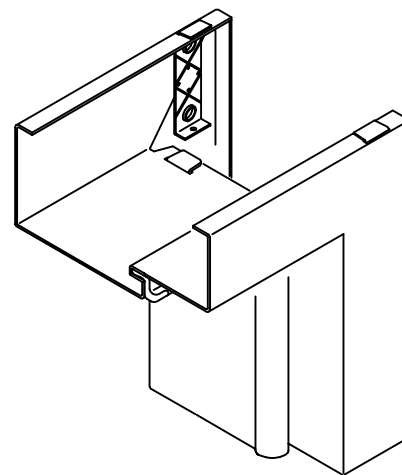
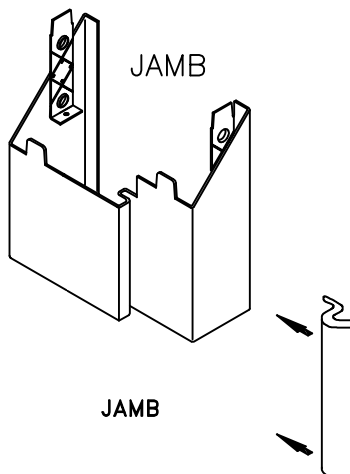
ASSEMBLY PROCEDURE:

1. Align head—tabs with jamb slots. Slide components together while engaging tabs in slots. Tabs and slots are mated when miter seam is closed tight.

LOOSE WEATHERSTRIP PART NUMBERS	
PART NUMBERS	SIZE
7000648	38"
7000647	86"
7000658	120"
7000657	97"

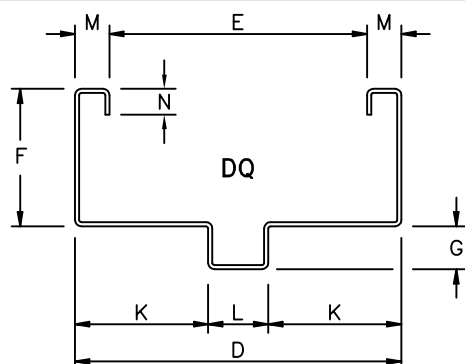
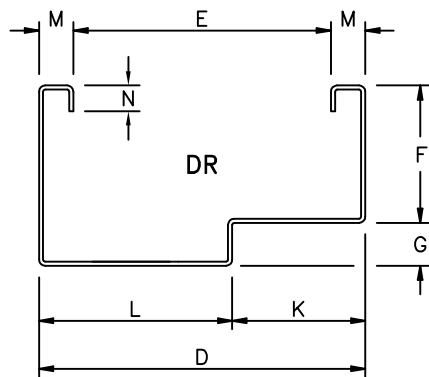
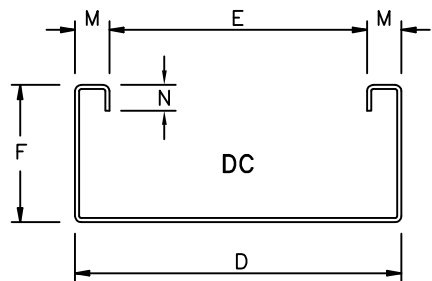


NOTE: Gasket ships loose when frame is prime painted. Do not install gasket until frame has been finish painted.



ASSEMBLY

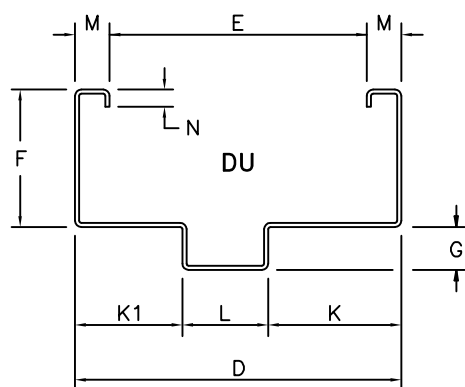
(Conversion: 1" = 25.4 mm, e.g., 1-3/4" = 44.45 mm)



A.	GAGE	18, 16 & 14
B.	MATERIAL	COLD ROLLED OR ASTM A60 GALV
C.	FINISH	PRIME PAINTED
D.	DEPTH DOUBLE RABBET DEPTH SINGLE RABBET DEPTH CASED OPENING	4-7/8" TO 14" (7-7/8" MAX. DEPTH 18 GA.) 3" TO 5-7/8" 3" TO 14" (7-7/8" MAX. DEPTH 18 GA.)
E.	THROAT	1" LESS THAN DEPTH (STANDARD)
F.	FACE*	2" (STANDARD)
G.	STOP HEIGHT	5/8" (STANDARD)
H.	CORNER CONDITION	KD
I.	OPENING WIDTH: SINGLE DOUBLE	2'-0" THRU 4'-0" (18 GA 2'-0" THRU 3'-0") 4'-0" THRU 8'-0" (18 GA 4'-0" THRU 6'-0")
J.	OPENING HEIGHT:	2'-0" TO 9'-0" (14 AND 16 GAGE) 2'-0" TO 7'-0" (18 GAGE)
K.	RABBET	1-15/16"
L.	SOFFIT DR: SOFFIT DQ:	1" MINIMUM 1" MINIMUM
M.	BACKBENDS	1/2" (STANDARD) 7/16", 9/16", AND 5/8" OPTIONAL
N.	BACKBEND RETURN	5/16"

FOR OTHER SIZES OR VARIATIONS, CONTACT CUSTOMER SERVICE.

* 4" Heads are available with 2" Face Jambs

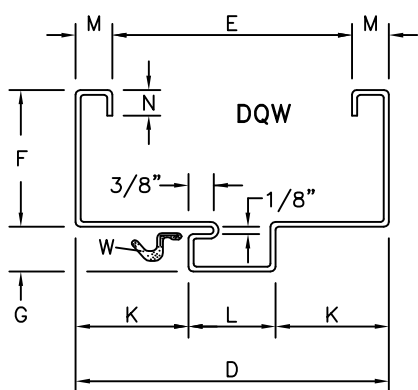
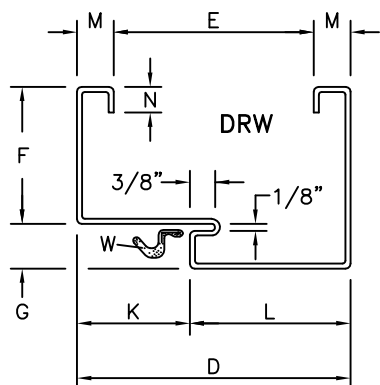


A.	GAGE	18, 16 & 14
B.	MATERIAL	COLD ROLLED OR ASTM A60 GALV
C.	FINISH	PRIME PAINTED
D.	DEPTH: DOUBLE RABBET	4-1/2" TO 14" (7-7/8" MAX. DEPTH 18 GA.)
E.	THROAT	DEPTH MINUS DIM "M" x 2
F.	FACE*	2" (STANDARD)
G.	STOP HEIGHT	5/8" STANDARD
H.	CORNER CONDITION	KD
I.	OPENING WIDTH: SINGLE DOUBLE	2'-0" THRU 4'-0" (18 GA 2'-0" THRU 3'-0") 4'-0" THRU 8'-0" (18 GA 4'-0" THRU 6'-0")
J.	OPENING HEIGHT:	2'-0" THRU 9'-0" (14 AND 16 GAGE) 2'-0" THRU 7'-0" (18 GAGE)
K.	RABBET	1-15/16"
K1.	RABBET	1-9/16"
L.	SOFFIT:	1" MINIMUM
M.	BACKBENDS	1/2" (STANDARD) 7/16", 9/16", AND 5/8" OPTIONAL
N.	BACKBEND RETURNS	5/16"

FOR OTHER SIZES OR VARIATIONS, CONTACT CUSTOMER SERVICE.

*4" HEADS ARE AVAILABLE WITH 2" FACE JAMBS

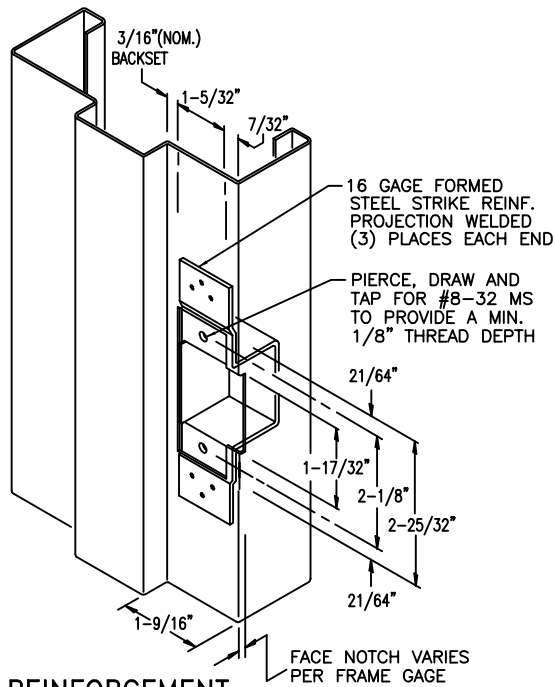
(Conversion: 1" = 25.4 mm, e.g., 1-3/4" = 44.45 mm)



A.	GAGE	18, 16, & 14
B.	MATERIAL	COLD ROLLED ASTM A60 GALV G90 (N/A 18 GA.)
C.	FINISH	PRIME PAINTED
D.	DEPTH: SINGLE RABBET DOUBLE RABBET	3-3/8" TO 6" 5-3/4" TO 14" (7-7/8" MAX. DEPTH 18 GA.)
E.	THROAT	1" LESS THAN DEPTH (STANDARD)
F.	FACE	2" STD. (4" FACE KD HEADS OPTIONAL)
G.	STOP HEIGHT	5/8"
H.	CORNER CONDITION	K.D.
I.	OPENING WIDTH: SINGLE DOUBLE	2'-0" THRU 4'-0" 4'-0" THRU 8'-0" 4'-0" THRU 6'-10" (18 GAGE)
J.	OPENING HEIGHT:	2'-0" THRU 9'-0" (14 & 16 GAGE) 2'-0" THRU 7'-0" (18 GAGE)
K.	RABBET	EQUAL, 2-1/8" FOR 1-3/4" DOOR
L.	SOFFIT: DOUBLE RABBET SINGLE RABBET	NORMALLY DEPTH MINUS 4-1/4" MIN. SOFFIT WIDTH 1-1/2" NORMALLY DEPTH MINUS 2-1/8" MIN. SOFFIT WIDTH 1-1/2"
M.	BACKBENDS	1/2" STANDARD 7/16", 9/16" AND 5/8" OPTIONAL
N.	BACKBEND RETURN	5/16"
W.	WEATHERSTRIP	FOAM FILLED, FIRE AND SMOKE RATED

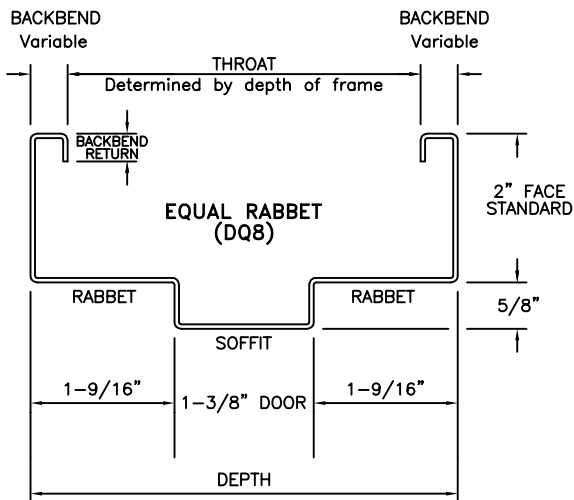
FOR OTHER SIZES OR VARIATIONS, CONTACT CUSTOMER SERVICE.

(Conversion: 1" = 25.4 mm, e.g., 1-3/4" = 44.45 mm)

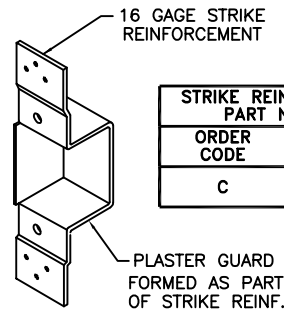


STRIKE REINFORCEMENT

USE WITH CYLINDRICAL LOCKS ONLY
(1-1/8" x 2-3/4" "T" STRIKE)

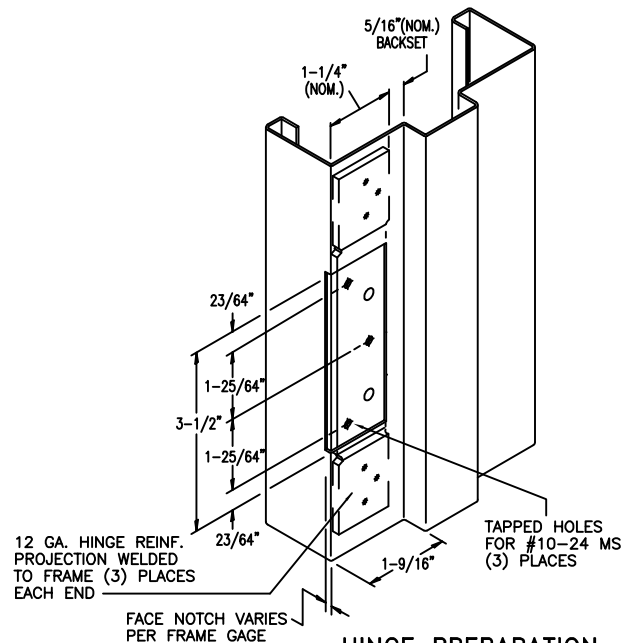


The standard backbend dimension of series DQ8 frame profiles is 1/2". Optional backbend dimensions are 7/16", 9/16", and 5/8".



STRIKE REINFORCEMENT PART NUMBER	
ORDER CODE	PART NUMBER
C	FS0007

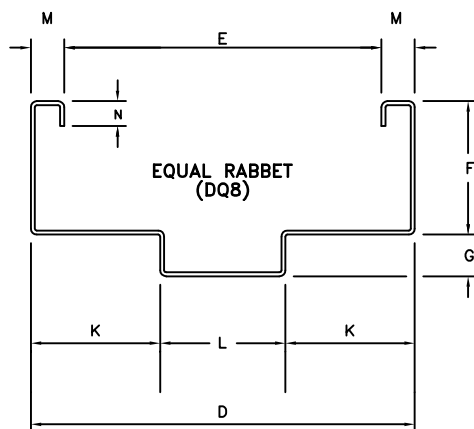
FOR OPENING SIZES SEE PG. 11-101
FOR STANDARD HARDWARE LOCATIONS SEE PG. 11-102
FOR MUTE APPLICATIONS SEE PG. 11-209
FOR "KD" CORNER CONDITIONS SEE PG. 13-201



HINGE PREPARATION

FOR USE ONLY WITH 3-1/2" HIGH,
.123 HINGE LEAF THICKNESS
TEMPLATE HINGES (ANSI A156.7)

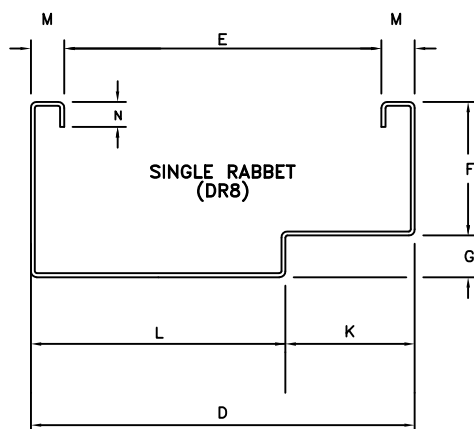
HINGE REINFORCEMENT PART NUMBER
FHR35R

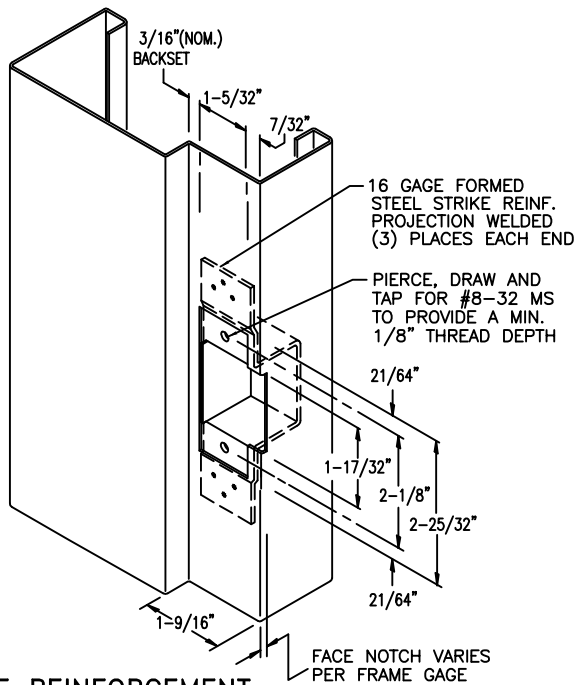


A.	GAGE	18 & 16
B.	MATERIAL	COLD ROLLED OR ASTM A60 GALV
C.	FINISH	PRIME PAINTED
D.	DEPTH DOUBLE RABBET DEPTH SINGLE RABBET	4-1/8" TO 14" (7-7/8" MAX. DEPTH 18 GA.) 3" TO 5-7/8"
E.	THROAT	1" LESS THAN DEPTH (STANDARD)
F.	FACE *	2" (STANDARD)
G.	STOP HEIGHT	5/8" (STANDARD)
H.	CORNER CONDITION	KD
I.	OPENING WIDTH: SINGLE DOUBLE	2'-0" THRU 4'-0" 4'-0" THRU 8'-0" 4'-0" THRU 6'-10" (18 GAGE)
J.	OPENING HEIGHT:	2'-0" TO 9'-0" (14 AND 16 GAGE) 2'-0" TO 7'-0" (18 GAGE)
K.	RABBET	1-15/16"
L.	SOFFIT DR: SOFFIT DQ:	1" MINIMUM 1" MINIMUM
M.	BACKBENDS	1/2" (STANDARD) 7/16", 9/16", AND 5/8" OPTIONAL
N.	BACKBEND RETURN	5/16"

FOR OTHER SIZES OR VARIATIONS, CONTACT CUSTOMER SERVICE.

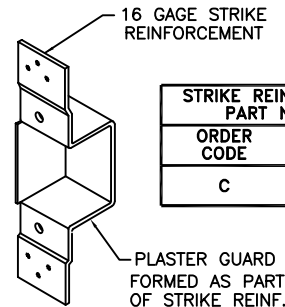
* 4" Heads are available with 2" Face Jambs





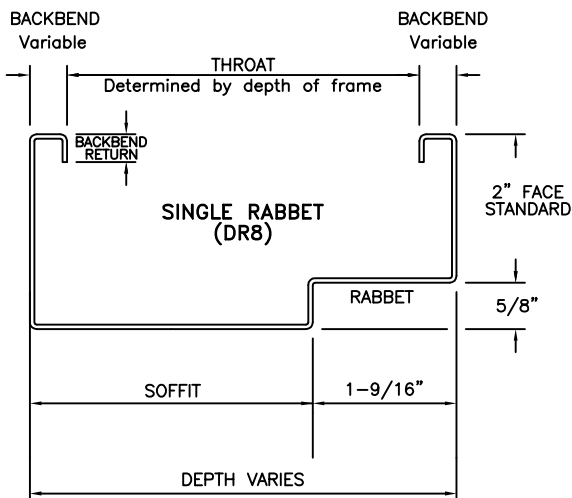
STRIKE REINFORCEMENT

USE WITH CYLINDRICAL LOCKS ONLY
(1-1/8" x 2-3/4" "T" STRIKE)

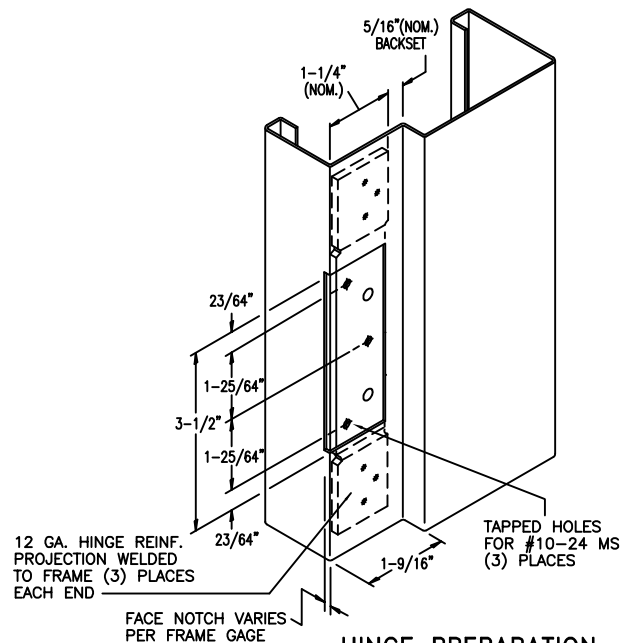


STRIKE REINFORCEMENT PART NUMBER	
ORDER CODE	PART NUMBER
C	FS0007

FOR OPENING SIZES SEE PG. 11-101
FOR STANDARD HARDWARE LOCATIONS SEE PG. 11-102
FOR MUTE APPLICATIONS SEE PG. 11-209
FOR "KD" CORNER CONDITIONS SEE PG. 13-201



The standard backbend dimension of series DR8 frame profiles is 1/2". Optional backbend dimensions are 7/16", 9/16", and 5/8".

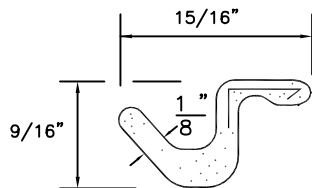
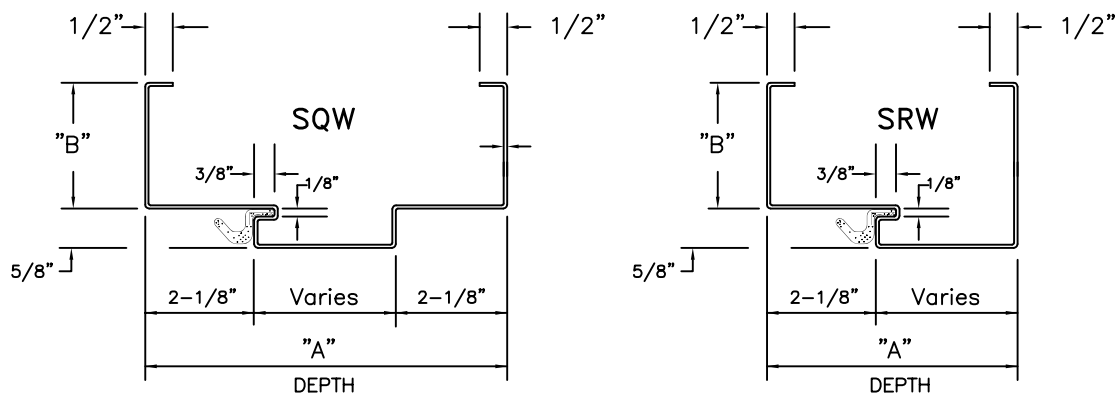


HINGE PREPARATION

FOR USE ONLY WITH 3-1/2" HIGH,
.123 HINGE LEAF THICKNESS
TEMPLATE HINGES (ANSI A156.7)

HINGE REINFORCEMENT PART NUMBER	
FHR35R	

Smoke & Draft Control System when used with Ceco fire rated door.
Meets Life Safety requirements & National Fire Codes.



- Notes: 1.) Prime Painted Finish
2.) Opening Widths: 20 thru 40 Single
40 thru 80 Pair
3.) Opening Height: 20 thru 80 (16 & 14 ga.)
20 thru 70 (18 gauge)

LOOSE WEATHERSTRIP PART NUMBERS	
PART NUMBERS	SIZE
7000648	38"
7000647	86"
7000658	120"
7000657	97"

FOAM FILLED GASKET
COMPRESSION TYPE
FIRE RATED

NOTE: GASKET SHIPS LOOSE WHEN FRAME IS PRIME PAINTED.
DO NOT INSTALL GASKET UNTIL FRAME HAS BEEN FINISH PAINTED.

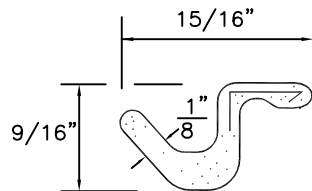
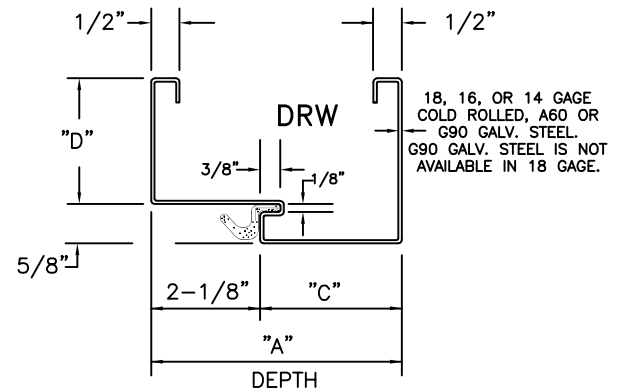
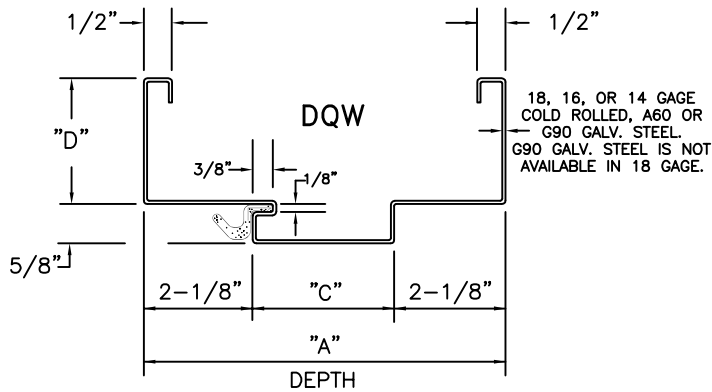
GAGE	18,16 OR 14
FINISH	CRS, A60 OR G90
PROFILE	Dim A (Depth)
DOUBLE RABBET	5-1/2" THRU 14"
SINGLE RABBET	3-3/8" THRU 6"

FACE	Dim B
HEAD	1" Thru 4"
JAMBS	1" Thru 4"
SILL	2" Thru 12"
TUBES	1" or 2"

Knocked Down (KD) frames are available with faces from 1" thru 2" when head and jamb faces are the same size.
4" face, KD heads are also available for 2", face KD jambs.
Size ranges listed above are available in 1/8" increments.

(Conversion: 1" = 25.4 mm, e.g., 1-3/4" = 44.45 mm)

SMOKE & DRAFT CONTROL SYSTEM WHEN USED WITH CECO FIRE RATED DOOR.
MEETS LIFE SAFETY REQUIREMENTS & NATIONAL FIRE CODES.



FOAM FILLED GASKET
COMPRESSION TYPE
FIRE RATED

NOTE: GASKET SHIPS LOOSE
WHEN FRAME IS PRIME PAINTED.
DO NOT INSTALL GASKET UNTIL
FRAME HAS BEEN FINISH PAINTED.

- NOTES: 1.) PRIME PAINTED FINISH
2.) OPENING WIDTHS: 20 THRU 40 SINGLE
20 THRU 30 SINGLE (18 GAGE)
40 THRU 80 PAIR
40 THRU 60 PAIR (18 GAGE)
3.) OPENING HEIGHT: 20 THRU 90 (16 & 14 GAGE)
20 THRU 70 (18 GAGE)

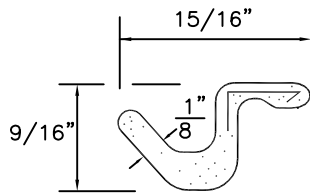
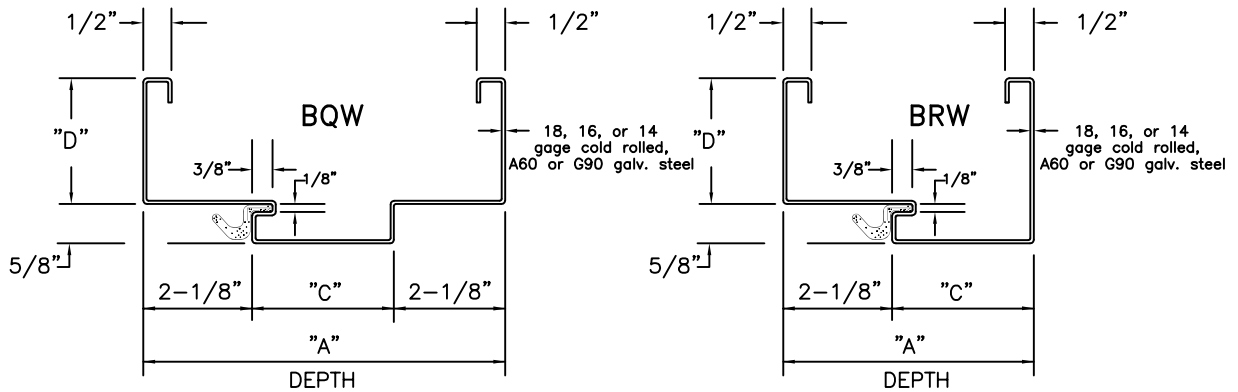
LOOSE WEATHERSTRIP PART NUMBERS	
PART NUMBERS	SIZE
7000648	38"
7000647	86"
7000658	120"
7000657	97"

NOTE: 18 GAGE MAXIMUM
DEPTH IS 7-7/8".

PROFILE	A (DEPTH)	B (WALL THICKNESS)	C (STOP WIDTH)	D (FACE)	
				JAMB	HEAD
SINGLE RABBET	3-3/8" thru 6"	2-3/8" thru 5"	"A" (-) 2-1/8"	2"	2"
DOUBLE RABBET	5-3/4" thru 14"	4-3/4" thru 13"	"A" (-) 2(2-1/8")	2"	2" or 4"

(Conversion: 1" = 25.4 mm, e.g., 1-3/4" = 44.45 mm)

Draft & Smoke Control System when used with Ceco fire rated door.
Meets Life Safety requirements & National Fire Codes.



FOAM FILLED GASKET
COMPRESSION TYPE
FIRE RATED

NOTE: Gasket ships loose when frame is prime painted. do not install gasket until frame has been finish painted.

- Notes: 1.) Prime Painted Finish
2.) Opening Widths: 20 thru 40 Single
40 thru 80 Pair
3.) Opening Height: 20 thru 90 (16 or 14 gauge)
20 thru 70 (18 gauge)

LOOSE WEATHERSTRIP PART NUMBERS	
PART NUMBERS	SIZE
7000648	38"
7000647	86"
7000658	120"
7000657	97"

PROFILE	A (DEPTH)	B (WALL THICKNESS)	C (STOP WIDTH)	D (FACE)	
				JAMB	HEAD
SINGLE RABBET	3-3/8" thru 6"	2-3/8" thru 5"	"A" (-) 2-1/8"	2" thru 4"	2" thru 4"
DOUBLE RABBET	5-1/2" thru 14"	4-1/2" thru 13"	"A" (-) 2(2-1/8")	2" thru 4"	2" thru 4"

(Conversion: 1" = 25.4 mm, e.g., 1-3/4" = 44.45 mm)

SQT & SRT Thermal Break Frames

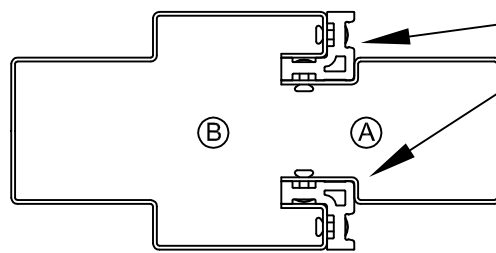
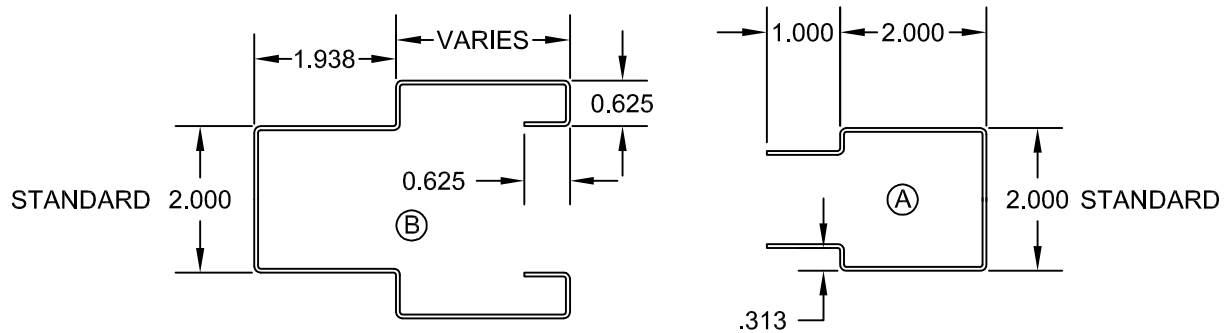
Profiles	16-601
Floor and Jamb Anchors	16-602
Hardware Preparations	16-603
Corner Construction	16-604
Double Rabbet Mullion Construction	16-605
Single Rabbet Mullion Construction.....	16-606

Knock-Down Lites

Knock-Down Borrowed Lite Frame	16-701
Knock-Down DryWall Borrowed Lite Anchors	16-701A
Knock-Down Sidelite Frame	16-702
Knock-Down Sidelite Profiles and Information	16-703
Knock-down Sidelite Configurations	16-704

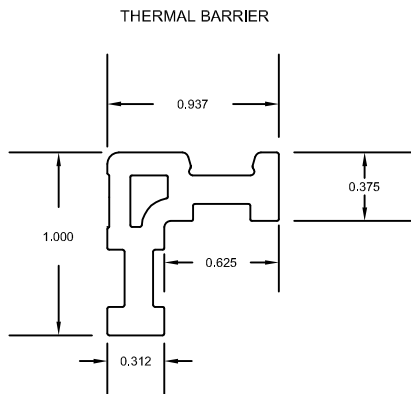
Sidelites

Security Sidelite	16-800
Security Sidelite Hardware & Anchors	16-801

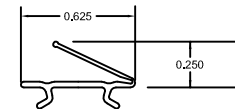


FASTEN VINYL TO PART A AND
ASSEMBLE PART A TO PART B THEN
FASTEN VINYL TO PART B.

MATERIAL SPECIFICATIONS
16 GA GALV. (14 GA OPTIONAL)
(16 AND 14 GA CRS OPTIONAL)

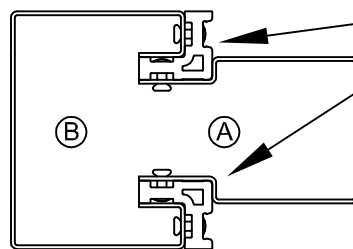
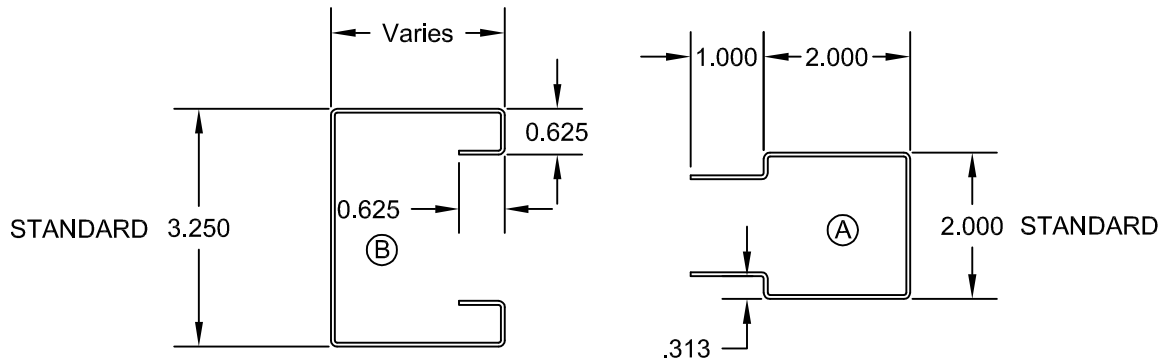


THERMAL BARRIER FRAME
WEATHER STRIP



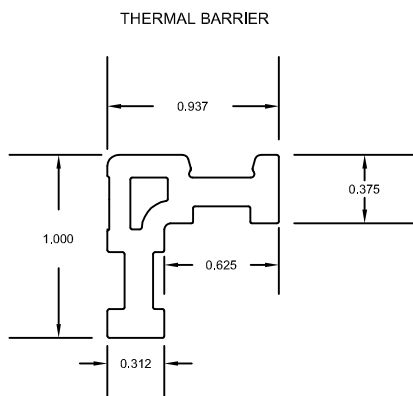
DESCRIPTION	PART NUMBERS	PART LENGTH
THERMAL BARRIER	6200315	98"
WEATHER STRIP	6200316	98"

(Conversion: 1" = 25.4 mm, e.g., 1-3/4" = 44.45 mm)

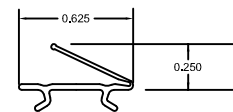


FASTEN VINYL TO PART A AND
ASSEMBLE PART A TO PART B THEN
FASTEN VINYL TO PART B.

MATERIAL SPECIFICATIONS
16 GA GALV. (14 GA OPTIONAL)
(16 AND 14 GA CRS OPTIONAL)



THERMAL BARRIER FRAME
WEATHER STRIP



DESCRIPTION	PART NUMBERS	PART LENGTH
THERMAL BARRIER	6200315	98"
WEATHER STRIP	6200316	98"

(Conversion: 1" = 25.4 mm, e.g., 1-3/4" = 44.45 mm)

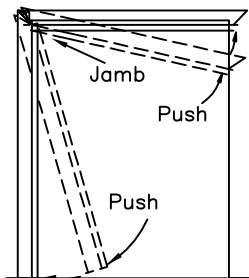
Tools required to begin assembly:
Level
Square
Phillips Screwdriver
String
Tape Measure
Rubber Mallet
Wood Block
Pencil
Frame Spacing Bar

TO DETERMINE ROUGH OPENING:

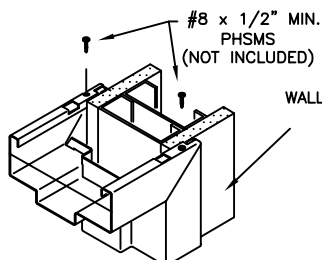
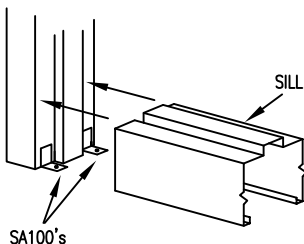
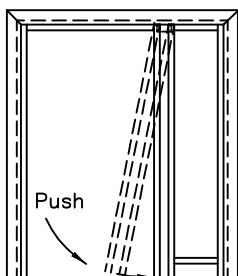
ADD 2" TO FINISHED OPENING WIDTH
ADD 1" TO FINISHED OPENING HEIGHT

SEE PAGE 16-702 FOR INSTRUCTIONS ON HOW TO LOCATE INSTALLATION VIDEO

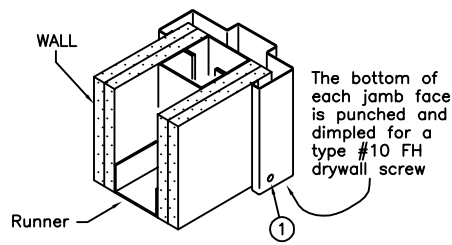
STEP 1



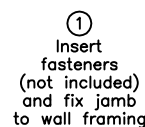
STEP 3



FASTENERS AT HEAD



STANDARD SILL ANCHOR



OPTIONAL SILL ANCHOR

(Conversion: 1" = 25.4 mm, e.g., 1-3/4" = 44.45 mm)

PROCEDURE

STEP 1

- Begin with door jamb in a vertical position. Then back off the compression anchor in the top of the jamb.
- Insert the frame head over the corner clips of the door jamb and raise and position over the side jamb.
- Using a wood block and mallet align the miter of the jamb with the miter on the head. Make sure the jamb and head are fully wrapping the sheet rock wall.

STEP 2

- Insert the corner clips of the remaining jamb in the opposite end of the head.
- Then position the second jamb on the wall.
- Again using the wood block and rubber mallet align the two miters together.
- With the perimeter of the frame approximately centered in the rough opening, level and square the frame using the top compression anchors for adjustment.
- The compression anchors can be tightened by turning clock wise.
- Install base anchor screws into the bottom of the jamb farthest from the mullion this is usually the door hinge jamb.
- Make sure the jamb farthest from the mullion is plumb and level as this will determine the accuracy of the rest of the frame.

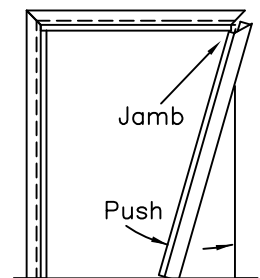
STEP 3

- Next slip the top of the mullion, the end with the notch, over the mullion stirrup located in the head with the base of the mullion tipped toward the secured jamb. Slide the mullion into place so it is approximately vertical.
- Push base of the unsecured jamb back on the wall and slip sill into place.
- Locate a removable frame spacing bar in door opening to maintain proper opening width for the door.
- Pull the unsecured side jamb with the sill and mullion toward the spacing bar. Make sure the base of the mullion is against the frame spacing bar.

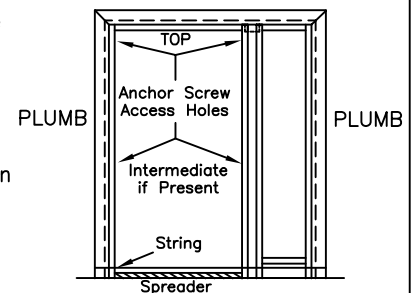
STEP 4

- To properly align the base of the frame run a string across the faces of both jambs and position the face of the mullion in line with the jamb faces.
- Mark location of Mullion on floor.
- Making sure the vertical mullion stays against the frame spacing bar push the jamb back onto the wall to loosen the assembly.
- Lift the sill piece and secure the mullion foot clip anchor with screws to the floor. Then, lower the sill piece to the floor.
- To complete the assembly secure the bottom of the unsecured jamb with base anchor screws.

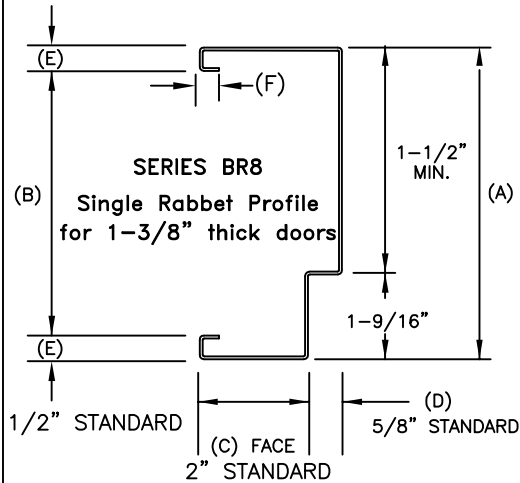
STEP 2



STEP 4

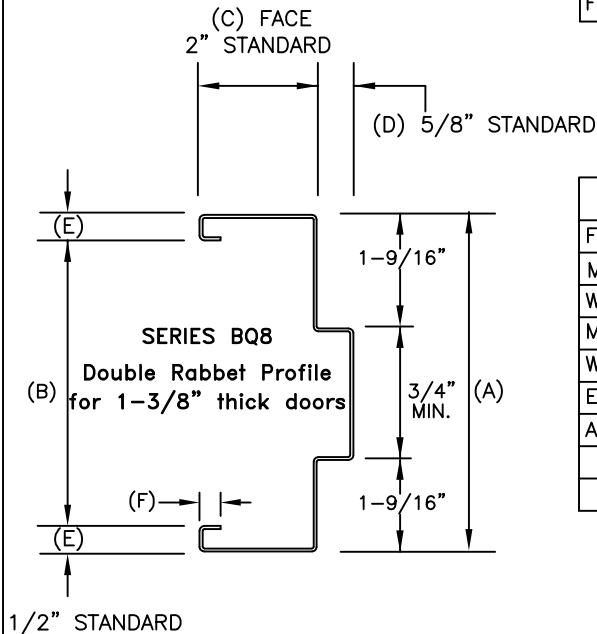


Wood spreader must be square and at least 1" thick. Length of spreader equals door opening width. Spreader must be nearly as wide as frame depth. Notch around frame stop.



GAGE	18, 16, 14
MATERIAL	COLD ROLLED ASTM A60 GALVANIZED ASTM G90 GALVANIZED (N/A 18 GA.)
FINISH	PRIME PAINTED
CORNER CONDITION	KD AVAILABLE WITH EQUAL JAMB AND HEAD FACE, AND 2" FACE JAMBS WITH 4" FACE HEAD
OPENING WIDTH SINGLE	2'-0" TO 4'-0" (18 GA 2'-0" TO 3'0")
OPENING WIDTH DOUBLE	4'-0" TO 8'-0" (18 GA 4'0" TO 6'0")
OPENING HEIGHT	2'-0" TO 10'-0" 2'-0" TO 7'-0" (18 GA.)

A.	DEPTH: BU	4-1/4" TO 17-7/8" (16 and 14 GAGE)
	BQ	4-5/8" TO 17-7/8" (16 and 14 GAGE)
	BQ8	3-7/8" TO 17-7/8" (16 and 14 GAGE)
	BR, BR8	3" TO 5-7/8" (16 and 14 GAGE)
	BC	3" TO 17-7/8" (16 and 14 GAGE)
		(18 GAGE ALL PROFILES MAX. DEPTH 7-7/8")
B.	THROAT	STANDARD IS 1" LESS THAN DEPTH WITH 1/2" BACKBENDS
C.	FACE	1-1/4" TO 4" FACE DIMENSION MUST BE LESS THAN DEPTH
D.	STOP HEIGHT	5/8" (STANDARD), 3/4", 1", 1-1/4"
E.	BACKBENDS	1/2" (STANDARD) 7/16" TO 1" (18, 16, AND 14 GAGE)
F.	BACKBEND RETURNS	5/16"

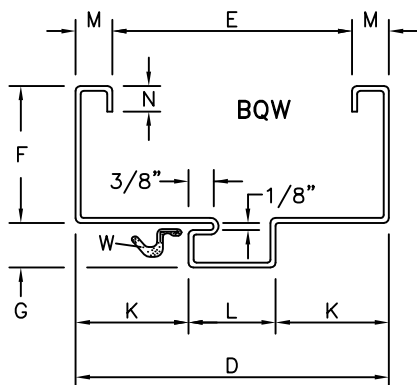
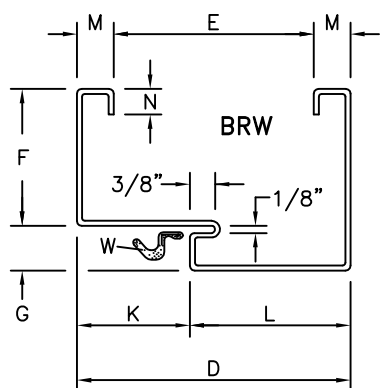


ANCHOR OPTIONS	ATTACHMENT METHOD
FIXED FLOOR	WELDED IN
METAL STUD	*LOOSE
WOOD STUD	*LOOSE
METAL STUD	WELDED IN
WOOD STUD	WELDED IN
EXISTING OPENING	WELDED IN
ADJUSTABLE STUD	*LOOSE

*SEE ANCHORS IN FRAMES, GENERAL SECTION FOR COMPATIBILITY OF LOOSE ANCHORS

All dimensions shown are standard.
For variations refer to the chart for limits.

(Conversion: 1" = 25.4 mm, e.g., 1-3/4" = 44.45 mm)



A.	GAGE	18, 16 , & 14
B.	MATERIAL	COLD ROLLED ASTM A60 GALV G90 (N/A 18 GA.)
C.	FINISH	PRIME PAINTED
D.	DEPTH: SINGLE RABBET DOUBLE RABBET	3-3/8" TO 6" 5-1/2" TO 14" (18 GAGE ALL PROFILES MAX. DEPTH 7-7/8")
E.	THROAT	1" LESS THAN DEPTH (STANDARD)
F.	FACE	2" STD. (4" FACE KD HEADS OPTIONAL)
G.	STOP HEIGHT	5/8"
H.	CORNER CONDITION	KD OR WELDED
I.	OPENING WIDTH: SINGLE DOUBLE	2'-0" THRU 4'-0" 4'-0" THRU 8'-0" 4'-0" THRU 6'-10" (18 GAGE)
J.	OPENING HEIGHT:	2'-0" THRU 10'-0" (16 GAGE & 14 GAGE) 2'-0" THRU 7'-0" (18 GAGE)
K.	RABBET	EQUAL, 2-1/8" FOR 1-3/4" DOOR
L.	SOFFIT: DOUBLE RABBET SINGLE RABBET	NORMALLY DEPTH MINUS 4-1/4" MIN. SOFFIT WIDTH 1-1/4" NORMALLY DEPTH MINUS 2-1/8" MIN. SOFFIT WIDTH 1-1/2"
M.	BACKBENDS	1/2" (STANDARD) 7/16", 9/16" AND 5/8" OPTIONAL
N.	BACKBEND RETURN	5/16"
W.	WEATHERSTRIP	FOAM FILLED, FIRE AND SMOKE RATED

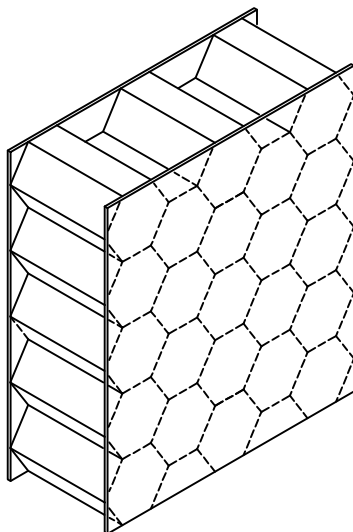
NOTE: Gasket ships loose
when frame is prime painted.
Do not install gasket until frame
has been finish painted.

FOR OTHER SIZES OR VARIATIONS, CONTACT CUSTOMER SERVICE.

1-3/4" REGENT (RI) HONEYCOMB CORE DOORS

FLUSH AND EMBOSSED PANEL STEEL DOORS

BEVELED LOCK EDGE, HANDED

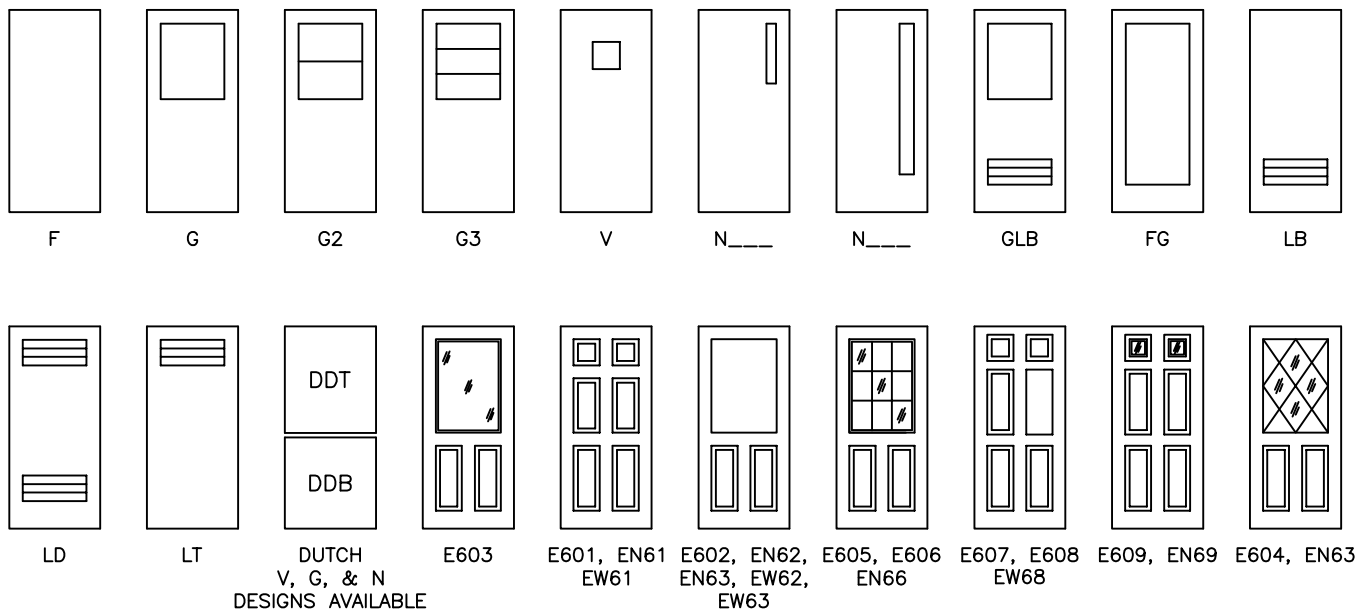


*Kraft fibre honeycomb slab,
bonded to the inside of both
face sheets with a water
resistant, contact adhesive.*

Suggested Use:

*Interior or Exterior ...
Office, Motel/Hotel, Apartment,
Urban Renewal, Health Care,
Institutional, Mercantile,
Public Utility, Factory, or Warehouse.*

DOOR DESIGNS

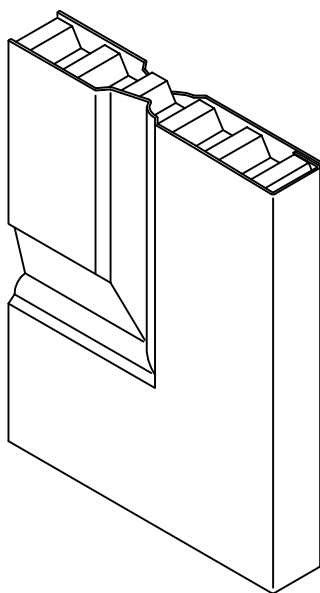
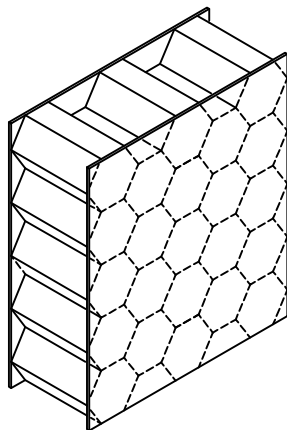


EMBOSSED 6 PANEL ORDER CODES AND DOOR WIDTHS		
2'6", 2'8" NARROW 6 PANEL	2'8", 3'0" STD. 6 PANEL	3'4" - 4'0" WIDE 6 PANEL
EN61	E603	EW61
EN62	E601	EW62
EN63	E602	EW63
EN66	E605	EW68
E607	E606	
E608	E607	
EN69	E608	
EN63	E609	
E603	E604	

1-3/4" OMEGA (OI) HONEYCOMB CORE DOORS

FLUSH AND EMBOSSED PANEL STEEL DOORS

UNIVERSAL, NON-HANDED



*Kraft fibre honeycomb slab,
bonded to the inside of both
face sheets with a waterproof,
contact adhesive.*

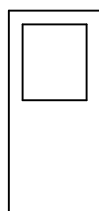
Suggested Use:

*Interior or Exterior ...
Office
Motel/Hotel
Apartment
Urban Renewal
Health Care
Institutional
Mercantile
Public Utility
Factory
Warehouse*

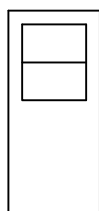
DOOR DESIGNS



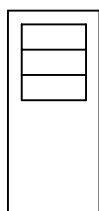
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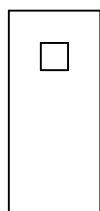
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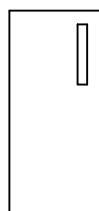
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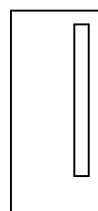
G3



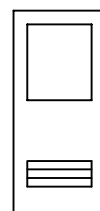
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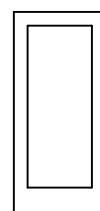
N___



N___



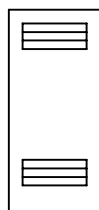
GLB



FG



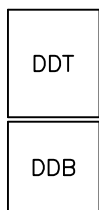
LB



LD



LT

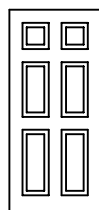


DDT



DDB

DUTCH
V, G, & N
DESIGNS AVAILABLE



E601

1-3/4" IMPERIAL (IU) POLYURETHANE CORE

FLUSH AND EMBOSSED PANEL STEEL DOORS

BEVELED LOCK EDGE, HANDED

FULL FLUSH OR SEAMLESS STYLE...

FOAMED-IN-PLACE POLYURETHANE CORE FILLS ENTIRE DOOR CAVITY. CORE IS CHEMICALLY BONDED TO ALL INTERIOR SURFACES. HIGH IMPACT RESISTANCE. EXCELLENT INSULATION CHARACTERISTICS.

SUGGESTED USE:

INTERIOR OR EXTERIOR...

CONDOMINIUMS

DORMITORIES

MOTELS/HOTELS

OFFICE BUILDINGS

URBAN RENEWAL

HEALTH CARE

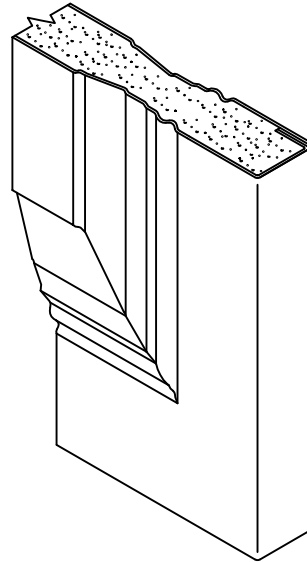
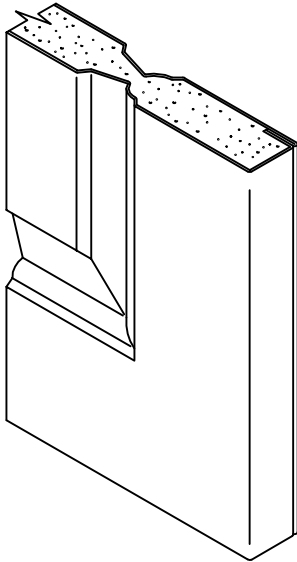
INSTITUTIONAL

DATA PROCESSING

MERCANTILE

FOOD PROCESSING

FLUSH DESIGNS SIMILAR LESS EMBOSSED PANEL



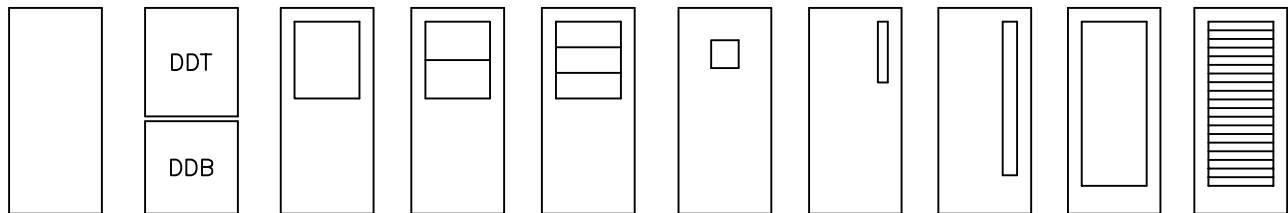
EMBOSSED PANEL DESIGNS:

8 PANEL
6 PANEL
CROSSBUCK

HIGH DEFINITION EMBOSSED

PANEL DESIGNS:
1 PANEL
2 PANEL

FLUSH DESIGNS



F

DDT

DDB

G

G2

G3

V

N

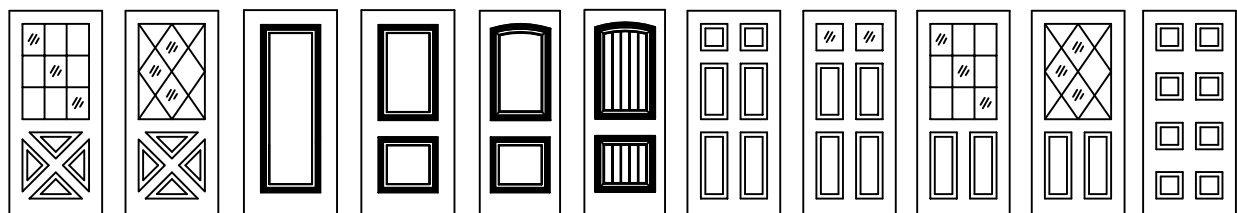
N

FG

LF

V, G, & N
DESIGNS AVAILABLE

EMBOSSED PANEL DESIGNS



EC05

EC04

E101

E201

E202

E203

E601

E609

E605

E604

E801

1-3/4" VERSADOOR (VU)

POLYURETHANE FOAM CORE

FLUSH AND EMBOSSED PANEL STEEL DOORS, NON-HANDED

FULL FLUSH OR SEAMLESS STYLE...

FOAMED-IN-PLACE POLYURETHANE CORE FILLS ENTIRE DOOR CAVITY. CORE IS CHEMICALLY BONDED TO ALL INTERIOR SURFACES. HIGH IMPACT RESISTANCE. EXCELLENT INSULATION CHARACTERISTICS.

SUGGESTED USE:

INTERIOR OR EXTERIOR...

CONDOMINIUMS

DORMITORIES

MOTELS/HOTELS

OFFICE BUILDINGS

URBAN RENEWAL

HEALTH CARE

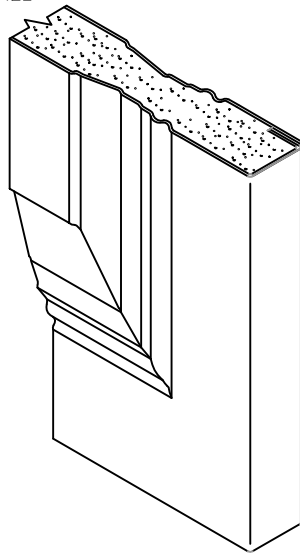
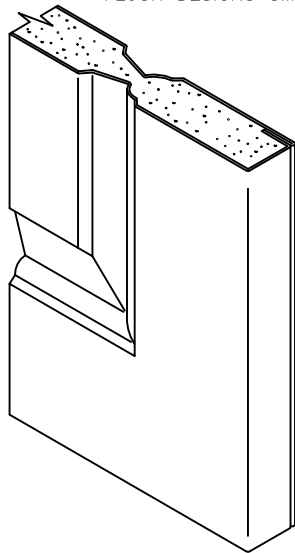
INSTITUTIONAL

DATA PROCESSING

MERCANTILE

FOOD PROCESSING

FLUSH DESIGNS SIMILAR LESS EMBOSSED PANEL



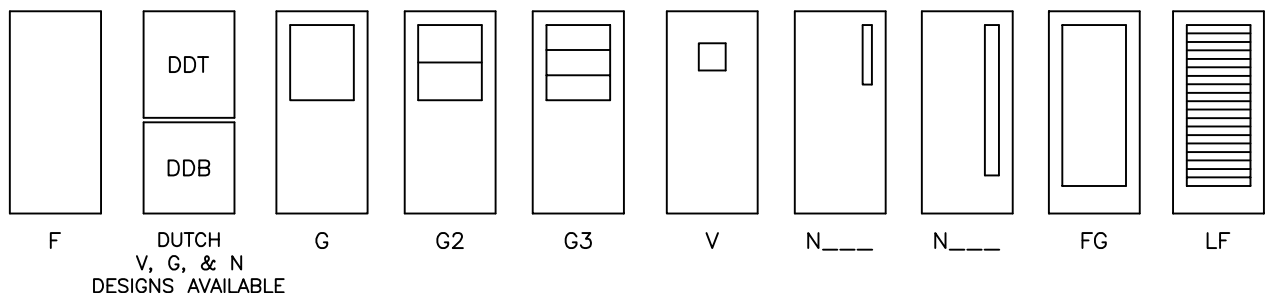
EMBOSSED PANEL DESIGNS:

8 PANEL
6 PANEL
CROSSBUCK

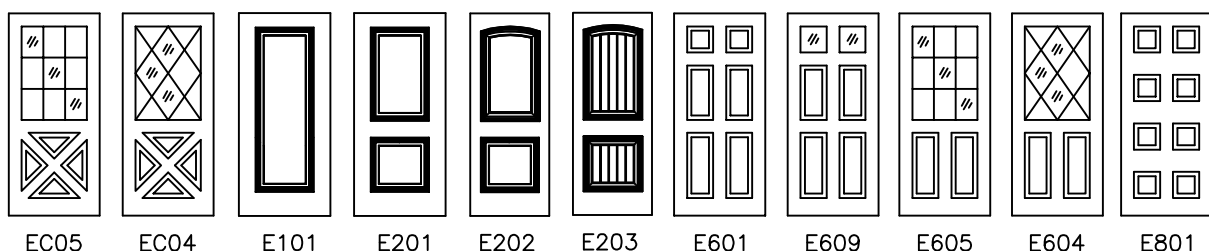
HIGH DEFINITION EMBOSSED

PANEL DESIGNS:
1 PANEL
2 PANEL

FLUSH DESIGNS



EMBOSSED PANEL DESIGNS



1-3/4" LEGION (LP) POLYSTYRENE CORE DOORS

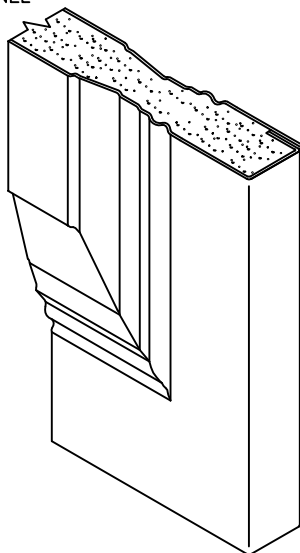
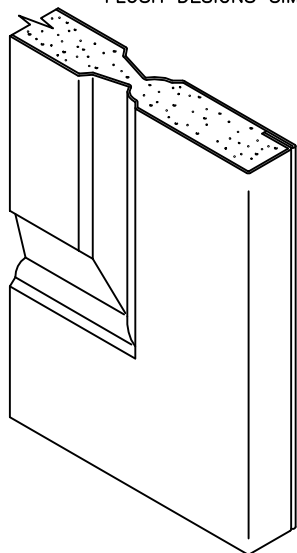
FLUSH PANEL STEEL DOORS
BEVELED LOCK EDGE, HANDED

POLYSTYRENE SLAB, BONDED TO THE INSIDE OF BOTH FACE SHEETS WITH A WATERPROOF, CONTACT ADHESIVE.

SUGGESTED USE:

INTERIOR OR EXTERIOR...
OFFICE
MOTEL/HOTEL
APARTMENT
CONDOMINIUMS
DORMITORIES
URBAN RENEWAL
HEALTH CARE
INSTITUTIONAL
MERCANTILE
PUBLIC UTILITY
FACTORY
WAREHOUSE

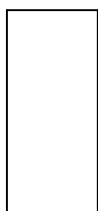
FLUSH DESIGNS SIMILAR LESS EMBOSSED PANEL



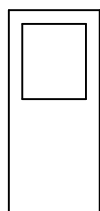
EMBOSSED PANEL DESIGNS:
8 PANEL
6 PANEL
CROSSBUCK

HIGH DEFINITION EMBOSSED
PANEL DESIGNS:
1 PANEL
2 PANEL

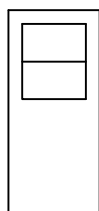
DOOR DESIGNS



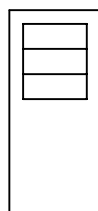
F



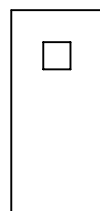
G



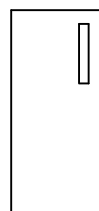
G2



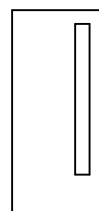
G3



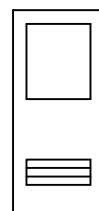
V



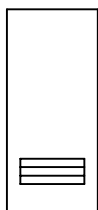
N___



N___



GLB



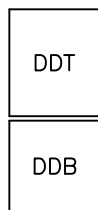
LB



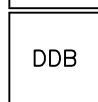
LD



LT

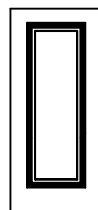


DDT

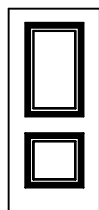


DDB

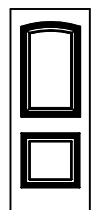
DUTCH
V, G, & N
DESIGNS AVAILABLE



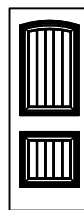
E101



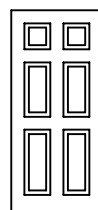
E201



E202



E203



1-3/4" ULTRADOR (UP) POLYSTYRENE CORE DOORS

FLUSH PANEL STEEL DOORS

UNIVERSAL, NON-HANDED

POLYSTYRENE SLAB, BONDED TO THE INSIDE OF BOTH FACE SHEETS WITH A WATERPROOF, CONTACT ADHESIVE.

SUGGESTED USE:

INTERIOR OR EXTERIOR...

OFFICE

MOTEL/HOTEL

APARTMENT

CONDOMINIUMS

DORMITORIES

URBAN RENEWAL

HEALTH CARE

INSTITUTIONAL

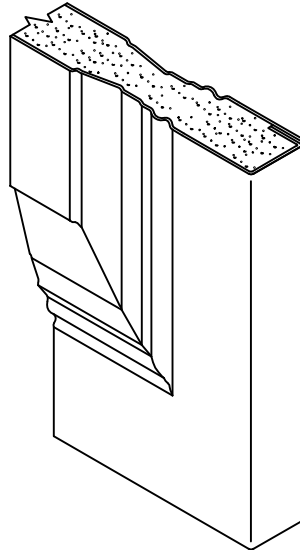
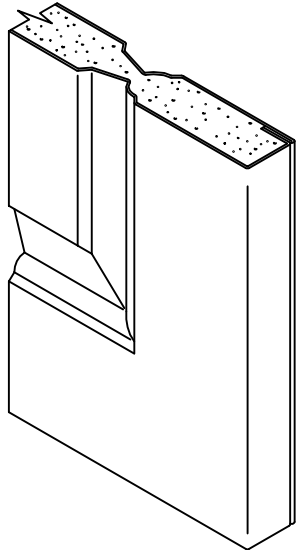
MERCANTILE

PUBLIC UTILITY

FACTORY

WAREHOUSE

FLUSH DESIGNS SIMILAR LESS EMBOSSED PANEL



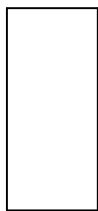
EMBOSSED PANEL DESIGNS:

8 PANEL
6 PANEL
CROSSBUCK

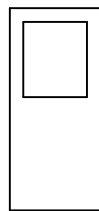
HIGH DEFINITION EMBOSSED

PANEL DESIGNS:
1 PANEL
2 PANEL

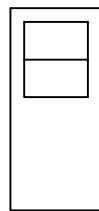
DOOR DESIGNS



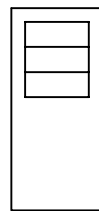
F



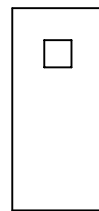
G



G2



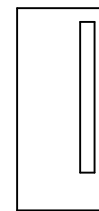
G3



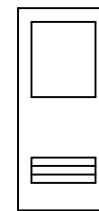
V



N___



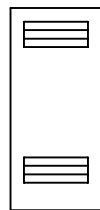
N___



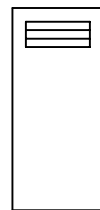
GLB



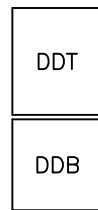
LB



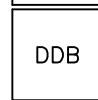
LD



LT

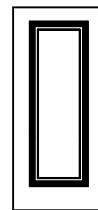


DDT

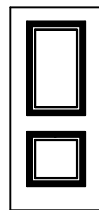


DDB

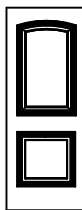
DUTCH
V, G, & N
DESIGNS AVAILABLE



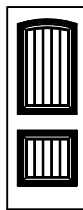
E101



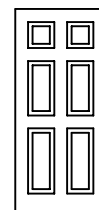
E201



E202



E203



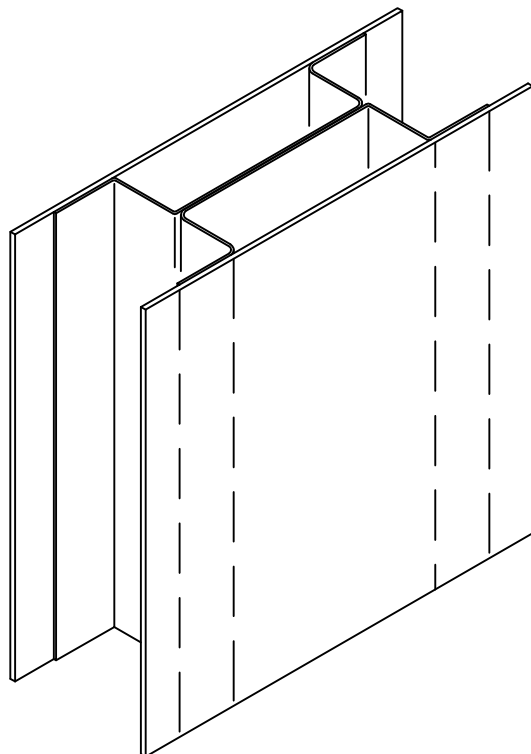
E601

6-PANEL EMBOSSED
DESIGN 4070 MAX.

D5-1

1-3/4" MEDALLION (MS)

VERTICALLY STEEL STIFFENED, CENTER SEAM, CUSTOM TYPE
STEEL DOORS, BEVELED LOCK, HANDED



FIBERGLASS INSULATION BETWEEN STIFFENERS

*Designed to Take Extreme
People punishment...*

*Complies with NAAMM Specifications
22 gage steel stiffeners placed 6"
apart and welded every 5" along
their length. Center seam edges.
Fiberglass, sound deadening
insulation between stiffeners.*

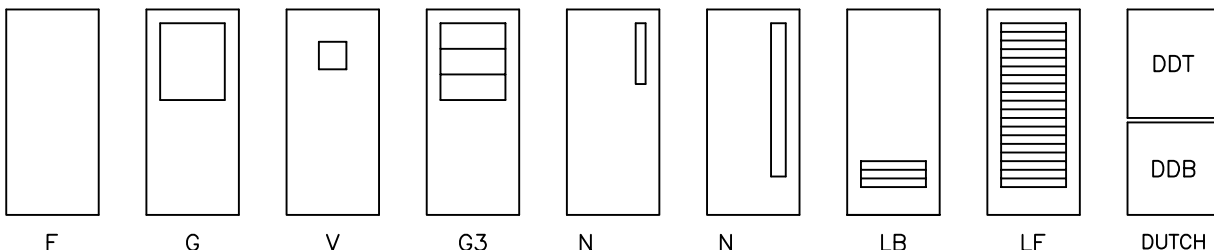
Suggested Use:

Interior or Exterior...

** Schools/Training Centers
Institutional Facilities
Public Utility Stations
Government Buildings
Warehouses/Factories
Manufacturing Plants
Transportation Terminals
Vehicle Service Facilities*

** 14 Ga Medallion Maxim Door has a Full Lifetime Warranty
when used in Schools*

DOOR DESIGNS



DUTCH
V, G, & N
DESIGNS AVAILABLE

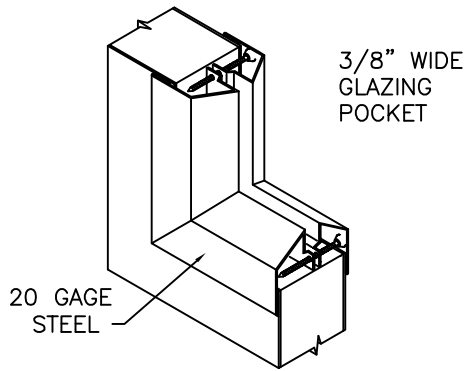
11/21/13

DOOR ACCESSORIES GLASS LITE AND VISION LITE TRIM KITS

(Unless otherwise indicated, glass and glazing are not included)

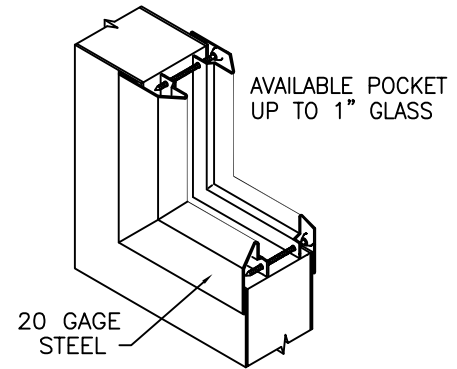
GLAZING TRIM SlimTrim

UL LISTED

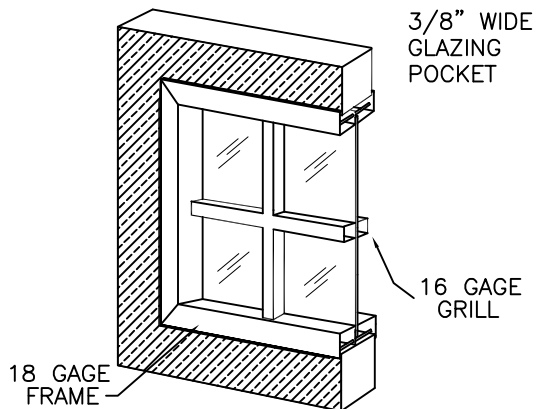


GLAZING TRIM (THICK GLASS) SlimTrim 20 GAGE

UL LISTED

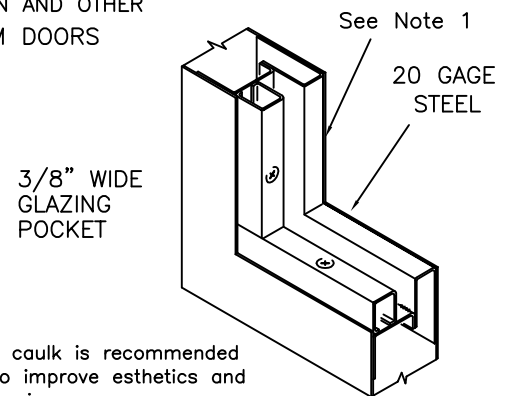


GLAZING TRIM Steel Multi-Lite



GLAZING TRIM 4884 FOR MEDALLION AND OTHER CENTER SEAM DOORS 20 GAGE

UL LISTED



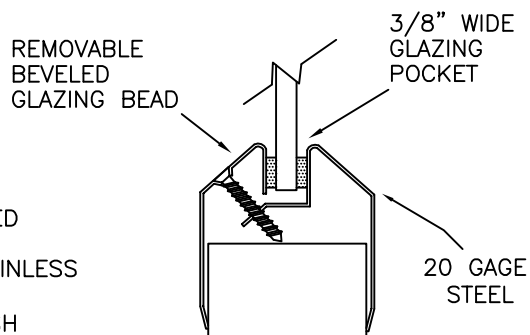
Notes:

1. Field applied caulk is recommended on this seam to improve esthetics and resist water intrusion.
2. Drawing Not to Scale

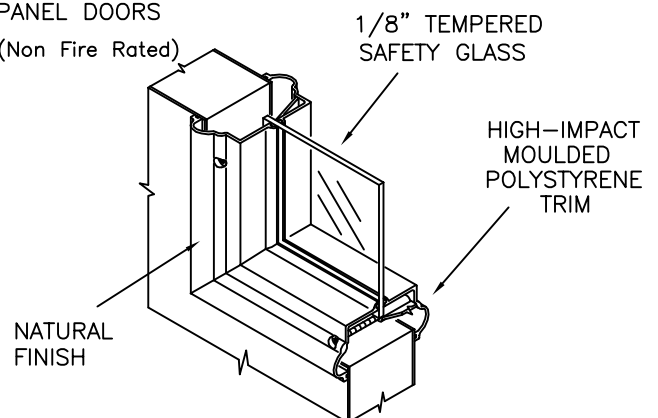
GLAZING TRIM Stainless Steel FOR STAINLESS STEEL DOORS ONLY

UL LISTED

304 STAINLESS
STEEL
#4 FINISH



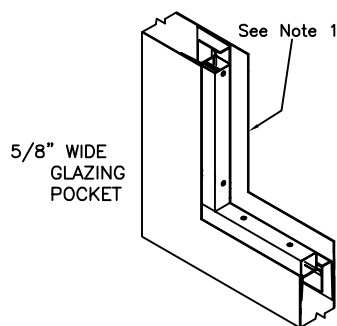
GLAZING SYSTEM FOR STANDARD EMBOSSED 6, 8, & Crossbuck PANEL DOORS (Non Fire Rated)



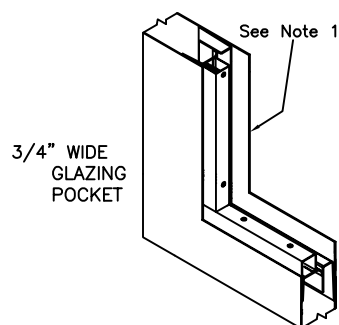
DOOR ACCESSORIES GLASS LITE TRIM KITS

(Unless otherwise indicated, glass and glazing are not included)

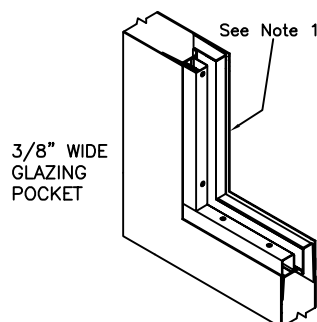
GLAZING TRIM 4881 (FLUSH)



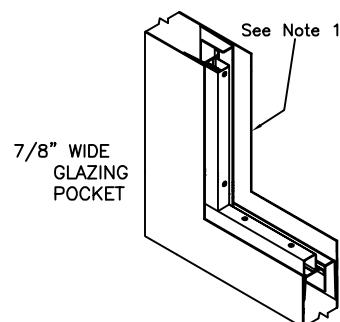
GLAZING TRIM 4883 (FLUSH) FOR MEDALLION AND THRULITE DOORS



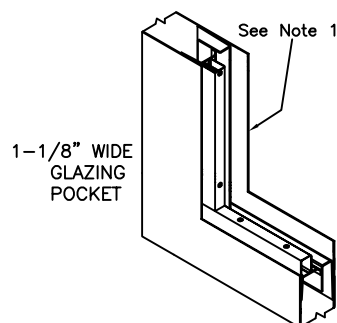
GLAZING TRIM 4885 (FLUSH)



GLAZING TRIM 4887 (FLUSH)



GLAZING TRIM 4889 (FLUSH)



Notes:

1. Field applied caulk is recommended on this seam to improve esthetics and resist water intrusion.
2. Drawing Not to Scale
3. Not for use on Medallion or Thrulite doors

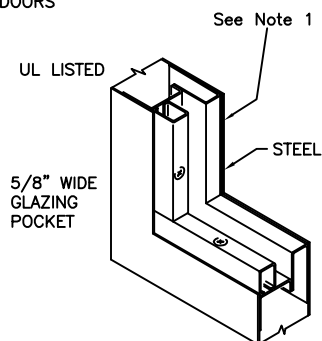
(Conversion: 1" = 25.4 mm, e.g., 1-3/4" = 44.45 mm)

DOOR ACCESSORIES GLASS LITE TRIM KITS

(Unless otherwise indicated, glass and glazing are not included)

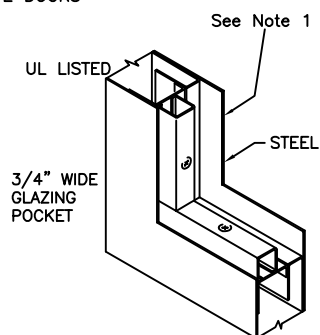
GLAZING TRIM 4880 (FLUSH)

FOR MEDALLION AND
THRULITE DOORS



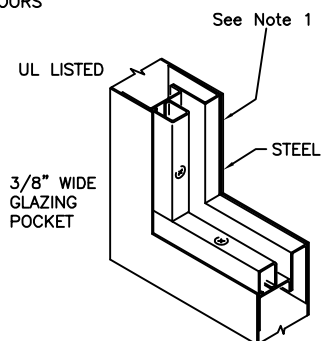
GLAZING TRIM 4882 (FLUSH)

FOR MEDALLION AND
THRULITE DOORS



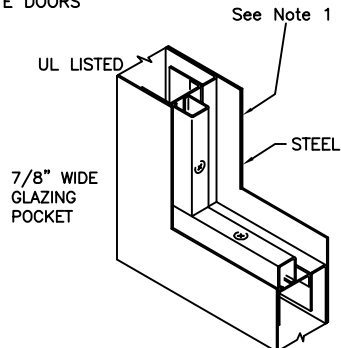
GLAZING TRIM 4884 (FLUSH)

FOR MEDALLION AND
THRULITE DOORS



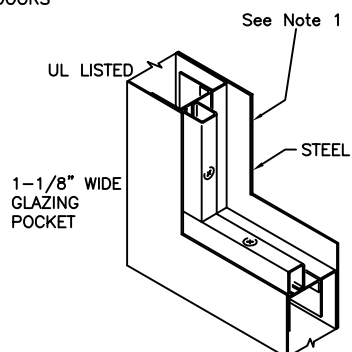
GLAZING TRIM 4886 (FLUSH)

FOR MEDALLION AND
THRULITE DOORS



GLAZING TRIM 4888 (FLUSH)

FOR MEDALLION AND
THRULITE DOORS



Notes:

1. Field applied caulk is recommended on this seam to improve esthetics and resist water intrusion.
2. Drawing Not to Scale

(Conversion: 1" = 25.4 mm, e.g., 1-3/4" = 44.45 mm)

D19-1

ASSA ABLOY

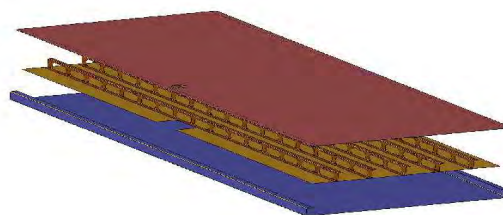
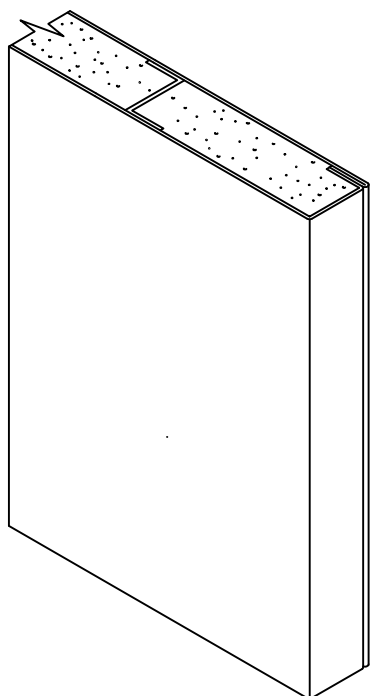
1-3/4" TRIO DOOR

VERTICALLY STEEL STIFFENED LAMINATED CORE
WITH POLYURETHANE FOAMED IN PLACE
OR OPTIONAL FIBERGLASS FILLED

BEVELED LOCK EDGE, HANDED
SQUARE LOCK EDGE, NON-HANDED

Full Flush or Seamless Style ...

Vertically steel stiffened laminated core with foamed in place polyurethane fills entire door cavity. Core is chemically bonded to all interior surfaces. High impact resistance. Excellent insulation characteristics. 22 gage steel stiffeners are placed 6" apart and welded every 5" along their length. Fiberglass insulation core filler is optional.



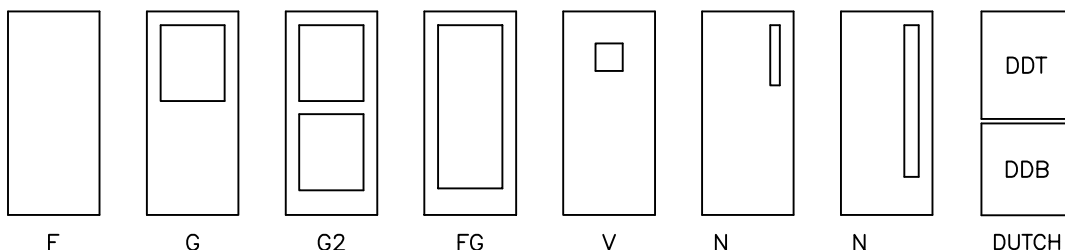
Suggested Use:

*Interior or Exterior ...
Motels/Hotels
Office Buildings
Urban Renewal
Health Care
Institutional
Data Processing
Mercantile
Food Processing*

*Schools/Training Centers
Institutional Facilities
Public Utility Stations
Government Buildings
Warehouses/Factories
Manufacturing Plants
Transportation Terminals
Vehicle Service Facilities*

PATENTED

DESIGNS

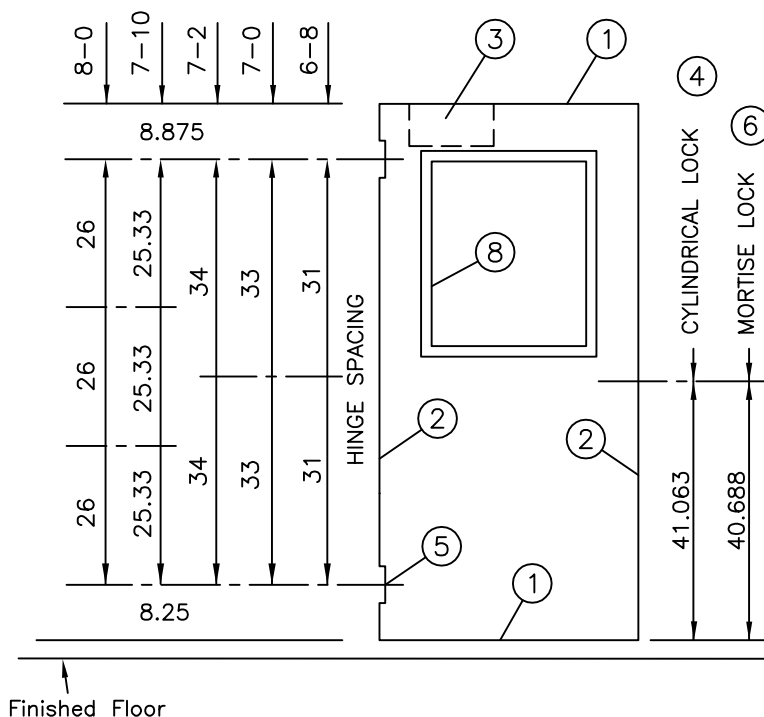


DUTCH
V, G, & N
DESIGNS AVAILABLE

12/17/13

D19-2

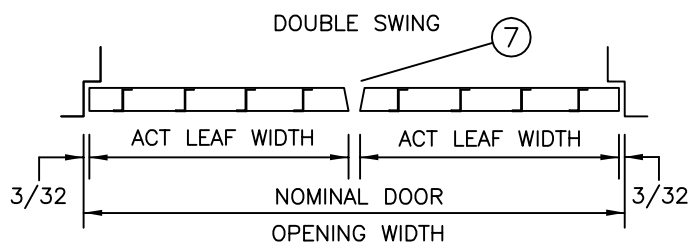
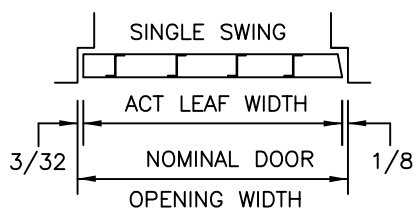
Hardware locations shown match Ceco standard frames.



DOOR ELEVATION



VERTICAL SECTION



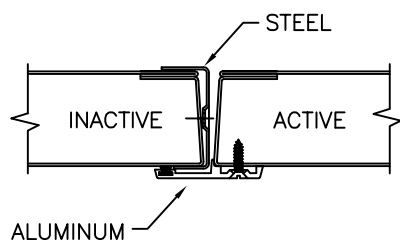
HORIZONTAL SECTIONS

(Conversion: 1" = 25.4 mm, e.g., 1-3/4" = 44.45 mm)

PATENTED

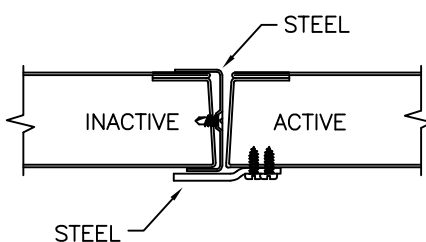
OVERLAPPING ASTRAGAL 4451

FOR 1-3/4" THICK DOORS WITH OPTIONAL POLY-PILE INSERT



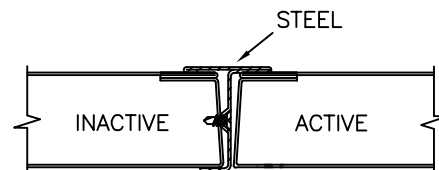
OVERLAPPING ASTRAGAL 4441

FOR 1-3/4" THICK DOORS



OVERLAPPING ASTRAGAL 4471

FOR 1-3/4" THICK DOORS



12/17/13

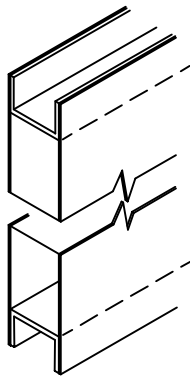
D19-3

16 GAGE STEEL END CHANNELS

WELDED
TO BOTH
FACE SHEETS

INVERTED
TOP AND
BOTTOM

OPTIONAL
TOP AND
BOTTOM CAPS



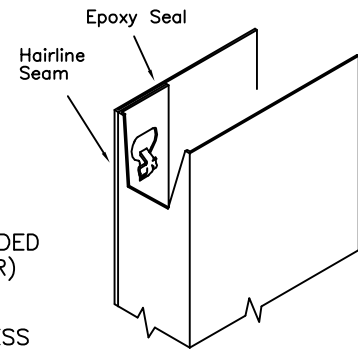
①

VERTICAL EDGES

MECHANICALLY
INTERLOCKED
HEMMED EDGES

ALSO AVAILABLE
SEAMLESS (WELDED
OR BODY FILLER)

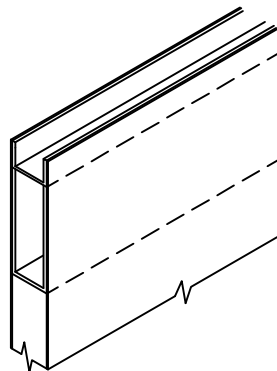
14 GAGE STEEL
WELDED SEAMLESS
(ONLY)



②

CLOSER REINFORCEMENT (OPTIONAL)

14 GAGE STEEL
CHANNEL 20" LONG

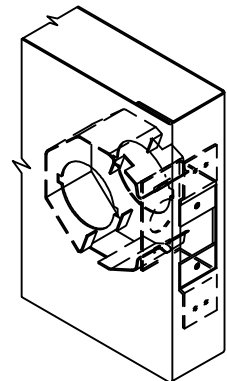


③

LOCK PREPARATION GOV. 160/161 CYLINDRICAL TYPE

(LC1)

(ANSI A115.2)
2-3/4"
BACKSET

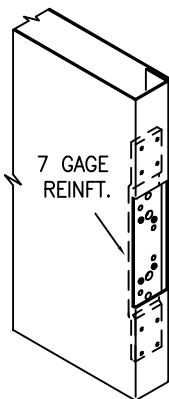


④

HINGE PREPARATION

4-1/2 OR 5 IN.
HIGH, STANDARD
OR HEAVY WEIGHT,
FULL MORTISE
HINGES

HINGE EDGE IS HANDED
AND NOT BEVELED.



ANSI A156.7
TEMPLATE

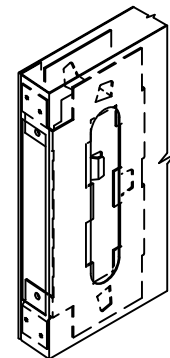
⑤

LOCK PREPARATION GOV. 86-4 MORTISE TYPE

(LM1) (ANSI A115.1)
2-3/4" BACKSET

(LM0) SIMILAR TO DETAIL
LESS FACE CUTOUT

(LP0) SIMILAR TO DETAIL
LESS ALL CUTOUTS
AND REINFORCEMENT

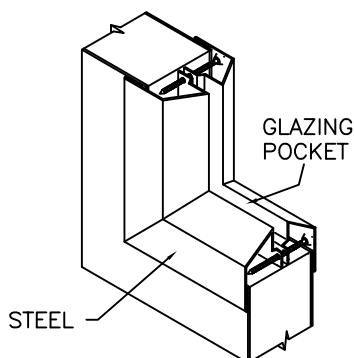


⑥

LOCK EDGE IS BEVELED
1/8" in 2" (1:16)

(Conversion: 1" = 25.4 mm, e.g., 1-3/4" = 44.45 mm)

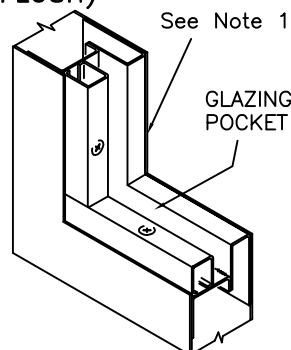
GLAZING TRIM SlimTrim



⑧

GLAZING TRIM 4884 (FLUSH)

ONLY AVAILABLE WITH
FIBERGLASS FILLED CORE



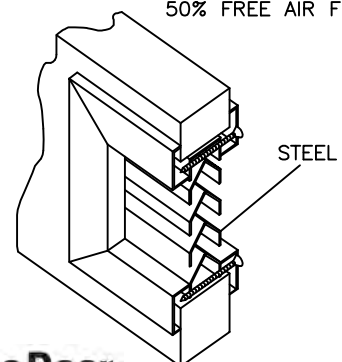
Notes:

1. Field applied caulk is recommended on this seam to improve esthetics and resist water intrusion.
2. Drawing Not to Scale

FIXED SLAT TYPE LOUVER 4634

FOR 1-3/4" THICK
DOORS

50% FREE AIR FLOW



08/26/13

CecoDoor

ASSA ABLOY

PATENTED
STANDARD SIZES
NOMINAL DOOR OPENING

WIDTH		HEIGHT
SINGLE	DOUBLE	
2'-0"	4'-0"	6'-8"
2'-4"	4'-8"	
2'-6"	5'-0"	7'-0"
2'-8"	5'-4"	7'-2"
2'-10"	5'-8"	7'-4"
3'-0"	6'-0"	7'-6"
3'-4"	6'-4"	7'-8"
3'-6"	6'-8"	8'-0"
3'-8"	7'-0"	
3'-10"	7'-4"	
4'-0"	7'-8"	
	8'-0"	

PATENTED
FIRE DOORS

LABELING AGENCY: UL & WH	
TEST: UL10C, UL10B, UL1784 & NFPA252	
• DESIGNS: F, G, N, V	
• RATING:	
UL	
MAX. SIZE: 40 x 80 SINGLE	
80 x 80 PAIR*	
ALL CORES - 20 MIN. THRU 3 HR	
*ADDITIONAL 12 GAGE	
INTERNAL LOCK SIDE	
REINFORCEMENT REQ'D.	
(FOR PAIRS ONLY)	
*NO ASTRAGAL REQUIRED	
WH	
MAX. SIZE: 40 x 80 SINGLE*	
FIBERGLASS CORE	
20 MIN. THRU 3 HR	
POLYURETHANE CORE	
20 MIN. THRU 1-1/2 HR	
*ADDITIONAL 12 GAGE	
INTERNAL LOCK SIDE	
REINFORCEMENT REQ'D.	
FOR FIBERGLASS CORE	
DOOR EXCEEDING 1-1/2 HR	
MAX. SIZE: 80 x 80 PAIRS*	
FIBERGLASS CORE	
20 MIN. THRU 3 HR	
*ADDITIONAL 12 GAGE	
INTERNAL LOCK SIDE	
REINFORCEMENT REQ'D.	
*NO ASTRAGAL REQUIRED	

PRODUCT SPECIFICATIONS:

1-3/4" Thick steel doors shall be as manufactured by Ceco Door, Milan, TN USA. Doors shall conform to the Steel Door Institute guide specification, ANSI A250.8 & HMMA 867; see chart below for performance classifications.

TRIO doors are made full-flush or (optional) seamless style. Face sheets are commercial quality cold rolled steel conforming to ASTM A1008 ...or (optional) hot-dipped galvanized steel conforming to ASTM A924 and A653 -- see chart below.

TRIO full-flush doors have mechanically interlocked, hemmed, hairline seams on vertical edges and have no visible seams on faces (S.D.I. Model 1). Doors specified "seamless" have no visible seams on faces or vertical edges (S.D.I. Model 2). Face sheets are totally supported by a steel stiffened laminated core with polyurethane or optional fiberglass filler. 22 gage stiffeners are placed no more than 6" apart and welded no more than 5" O.C. along their length to a 22 gage liner plate. The core fills the entire door cavity and is chemically bonded to all interior surfaces. Density of foam exceeds 1.8 pcf and it has a crush strength of 3600 psf. The top and bottom door edges are closed with 16 gage steel channels welded to both face sheets.

Hardware Provisions: Hinge preparations are handed. Hinge edges are mortised for 4-1/2" or 5" high, standard and heavy weight hinges (specify which). 7 gage steel hinge reinforcements are welded inside the door edge and are drilled and tapped for fasteners in accordance with ANSI A156.7. The lock edge has a standard bevel (1:16) and is prepared for Gov. series 86 or 160/161 locks in accordance with ANSI A115 (specify which). Optional closer reinforcement is a 14 gage steel channel.

Paint: 1-3/4" steel doors shall be provided with one coat of oven-cured neutral color primer paint. Primer coat shall conform with ANSI A250.10. The primer coat is a preparatory base for necessary finish painting. "Colorstyle" finish coat is also available from a selection of standard colors (optional). Colorstyle finish is electrostatically applied, oven-cured urethane enamel, and shall conform to ANSI A250.3 For accurate color selectors ask for a Ceco Colorstyle chart.

(Conversion: 1" = 25.4 mm, e.g., 1-3/4" = 44.45 mm)

MATERIAL

DOOR FACE SHEETS	LEVEL	C.R.	GALV		RECOMMENDED DOOR FRAME MATERIAL
			A60	G90	
18 Gage Steel	Heavy Duty	STD	OPT	OPT	16 Gage Steel
16 Gage Steel	Extra heavy Duty	STD	OPT	OPT	16 or 14 Gage Steel
14 Gage Steel	Maximum Duty	STD	OPT	OPT	14 or 12 Gage Steel

PERFORMANCE

Physical Endurance Level:	Meets ANSI A250.4 Performance Test 18, 16, and 14 Gage: Level A (1,000,000 Cycles)		
Polyurethane Thermal Characteristic Value:	FULLY OPERABLE ASSEMBLIES (ASTM C1363)	R = 2.40	U = 0.41
	CORE CALCULATED (ASTM C518)	R = 11.01	U = 0.091
Fiberglass Thermal Characteristic Value:	FULLY OPERABLE ASSEMBLIES (ASTM C1363)	R = 2.30	U = 0.43
Sound Transmission Class:	STC 38 (F Design, 18 Gage Face Sheets, Fiberglass Filler ASTM E90 & E413 [Fully Operable])		

ASSA ABLOY

1-3/4" Trio-E DOOR

VERTICALLY STEEL STIFFENED LAMINATED CORE
WITH POLYURETHANE FOAMED IN PLACE

BEVELED LOCK EDGE, HANDED
SQUARE LOCK EDGE, NON-HANDED

Full Flush or Seamless Style ...

Vertically steel stiffened core with foamed in place polyurethane fills entire door cavity. Core is chemically bonded to all interior surfaces. High impact resistance. Excellent insulation characteristics. 22 gage steel stiffeners are placed 6" apart and welded every 5" along their length.



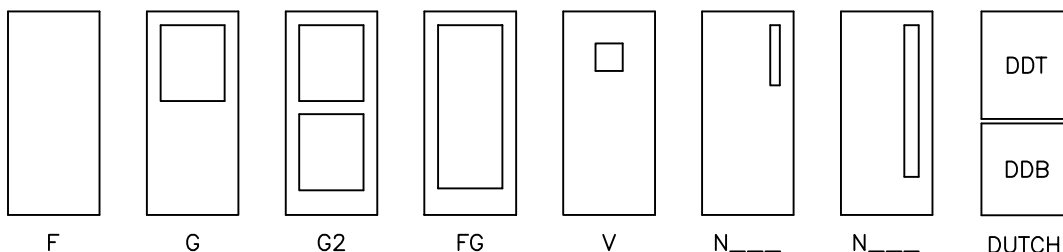
Suggested Use:

*Interior or Exterior ...
Motels/Hotels
Office Buildings
Urban Renewal
Health Care
Institutional
Data Processing
Mercantile
Food Processing*

*Schools/Training Centers
Institutional Facilities
Public Utility Stations
Government Buildings
Warehouses/Factories
Manufacturing Plants
Transportation Terminals
Vehicle Service Facilities*

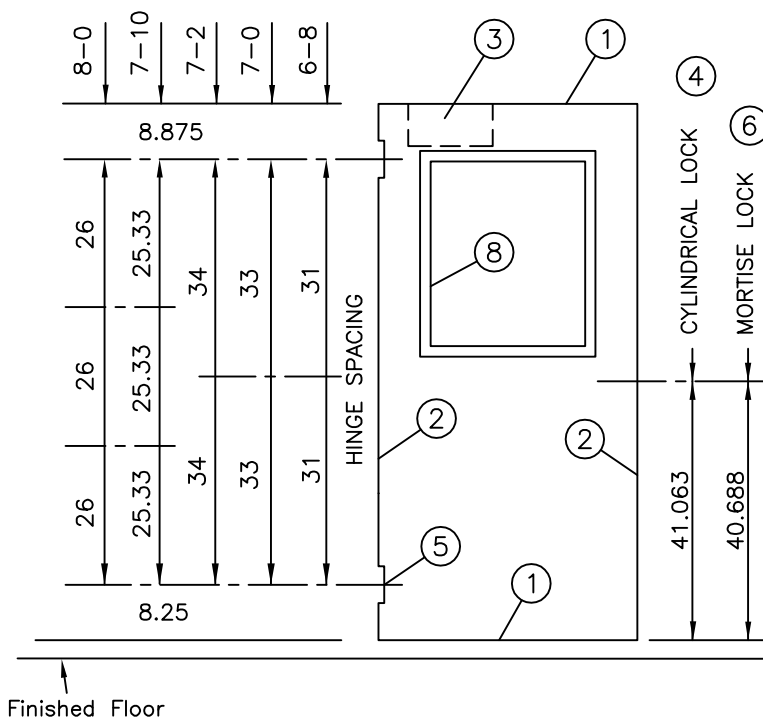
PATENTED

DESIGNS

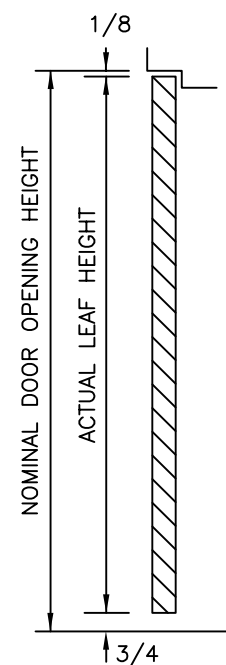


D19A-2

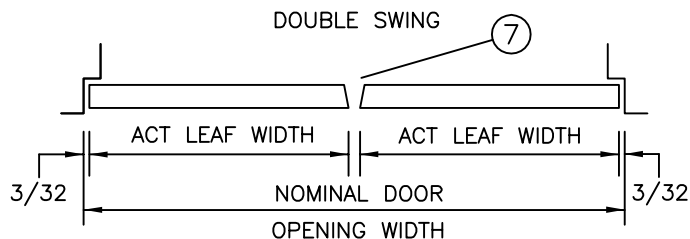
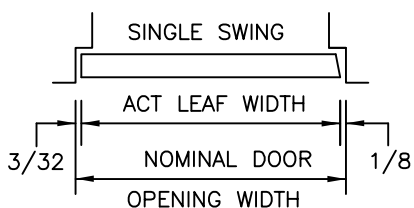
Hardware locations shown match Ceco standard frames.



DOOR ELEVATION



VERTICAL SECTION



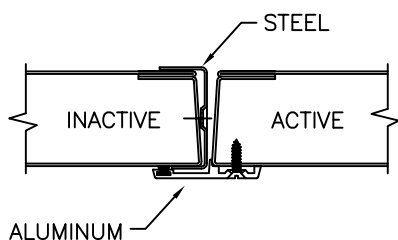
HORIZONTAL SECTIONS

(Conversion: 1" = 25.4 mm, e.g., 1-3/4" = 44.45 mm)

PATENTED

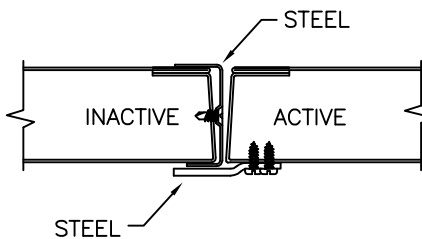
OVERLAPPING ASTRAGAL 4451
FOR 1-3/4" THICK DOORS WITH OPTIONAL POLY-PILE INSERT

7



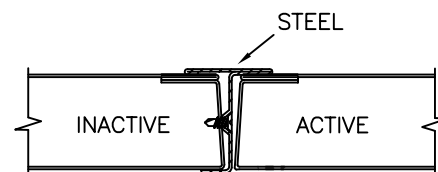
OVERLAPPING ASTRAGAL 4441
FOR 1-3/4" THICK DOORS

7



OVERLAPPING ASTRAGAL 4471
FOR 1-3/4" THICK DOORS

7



12/17/13

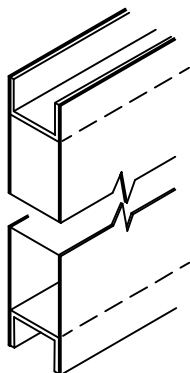
D19A-3

16 GAGE STEEL END CHANNELS

WELDED
TO BOTH
FACE SHEETS

INVERTED
TOP AND
BOTTOM

OPTIONAL
TOP AND
BOTTOM CAPS



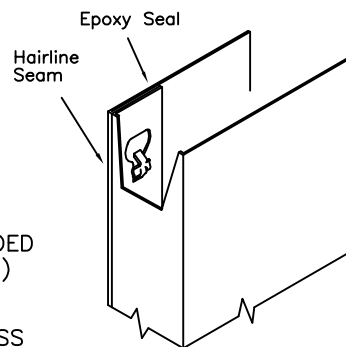
①

VERTICAL EDGES

MECHANICALLY
INTERLOCKED
HEMMED EDGES

ALSO AVAILABLE
SEAMLESS (WELDED
OR BODY FILLER)

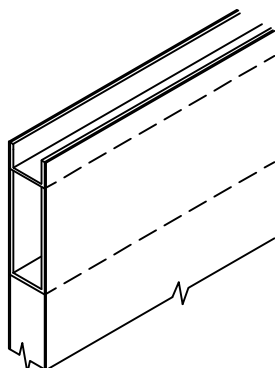
14 GAGE STEEL
WELDED SEAMLESS
(ONLY)



②

CLOSER REINFORCEMENT (OPTIONAL)

14 GAGE STEEL
CHANNEL 20" LONG

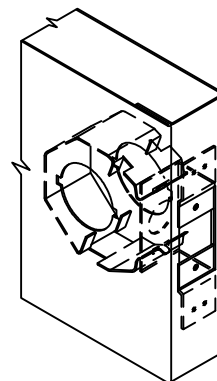


③

LOCK PREPARATION GOV. 160/161 CYLINDRICAL TYPE

(LC1)

(ANSI A115.2)
2-3/4"
BACKSET

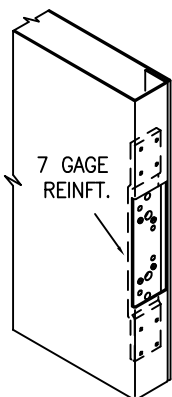


④

HINGE PREPARATION

4-1/2 OR 5 IN.
HIGH, STANDARD
OR HEAVY WEIGHT,
FULL MORTISE
HINGES

HINGE EDGE IS HANDED
AND NOT BEVELED.



ANSI A156.7
TEMPLATE

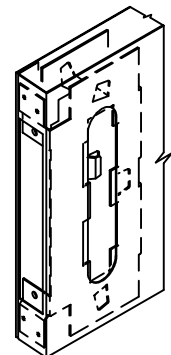
⑤

LOCK PREPARATION GOV. 86-4 MORTISE TYPE

(LM1) (ANSI A115.1)
2-3/4" BACKSET

(LM0) SIMILAR TO DETAIL
LESS FACE CUTOUT

(LP0) SIMILAR TO DETAIL
LESS ALL CUTOUTS
AND REINFORCEMENT



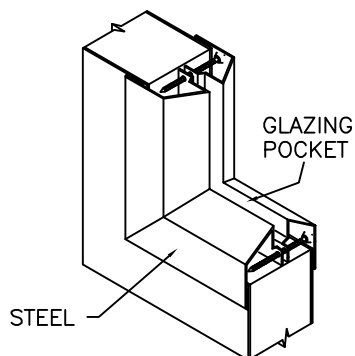
⑥

LOCK EDGE IS BEVELED
1/8" in 2" (1:16)

(Conversion: 1" = 25.4 mm, e.g., 1-3/4" = 44.45 mm)

GLAZING TRIM SlimTrim

⑧



05/31/13

PATENTED

STANDARD SIZES
NOMINAL DOOR OPENING

WIDTH		HEIGHT
SINGLE	DOUBLE	
2'-0"	4'-0"	6'-8"
2'-4"	4'-8"	
2'-6"	5'-0"	
2'-8"	5'-4"	
2'-10"	5'-8"	7'-2"
3'-0"	6'-0"	7'-10"
3'-4"	6'-8"	8'-0"
3'-6"	7'-0"	
3'-8"	7'-4"	
3'-10"	7'-8"	
4'-0"	8'-0"	

PATENTED

FIRE DOORS

LABELING AGENCY: UL & WH
TEST: UL10C, UL10B, UL1784 & NFPA252
• DESIGNS: F, G, N, V
• RATING:
UL
20 min to 3 HR
MAX. SIZE: 40 x 80 SINGLE
MAX. SIZE: 80 x 80 PAIR
WH
20 min to 1-1/2 HR
MAX. SIZE: 40 x 80 SINGLE
MAX. SIZE: 80 x 80 PAIR

PRODUCT SPECIFICATIONS:

1-3/4" Thick steel doors shall be as manufactured by Ceco Door, Milan, TN USA. Doors shall conform to the Steel Door Institute guide specification, ANSI A250.8 & HMMA 867; see chart below for performance classifications.

TRIO-E doors are made full-flush or (optional) seamless style. Face sheets are commercial quality cold rolled steel conforming to ASTM A1008 ...or (optional) hot-dipped galvanized steel conforming to ASTM A924 and A653 -- see chart below.

TRIO-E full-flush doors have mechanically interlocked, hemmed, hairline seams on vertical edges and have no visible seams on faces (S.D.I. Model 1). Doors specified "seamless" have no visible seams on faces or vertical edges (S.D.I. Model 2). Face sheets are supported by a steel stiffened laminated core with polyurethane filler. 22 gage stiffeners are placed no more than 6" apart and welded no more than 5" O.C. along their length to a 22 gage liner plate. The core fills the entire door cavity and is chemically bonded to all interior surfaces. Density of foam exceeds 1.8 pcf and it has a crush strength of 3600 psf. The top and bottom door edges are closed with 16 gage steel channels welded to both face sheets.

Hardware Provisions: Hinge preparations are handed. Hinge edges are mortised for 4-1/2" or 5" high, standard and heavy weight hinges (specify which). 7 gage steel hinge reinforcements are welded inside the door edge and are drilled and tapped for fasteners in accordance with ANSI A156.7. The lock edge has a standard bevel (1:16) and is prepared for Gov. series 86 or 160/161 locks in accordance with ANSI A115 (specify which). Optional closer reinforcement is a 14 gage steel channel.

Paint: 1-3/4" steel doors shall be provided with one coat of oven-cured neutral color primer paint. Primer coat shall conform with ANSI A250.10. The primer coat is a preparatory base for necessary finish painting. "Colorstyle" finish coat is also available from a selection of standard colors (optional). Colorstyle finish is electrostatically applied, oven-cured urethane enamel, and shall conform to ANSI A250.3. For accurate color selectors ask for a Ceco Colorstyle chart.

MATERIAL

DOOR FACE SHEETS	LEVEL	C.R.	GALV		RECOMMENDED DOOR FRAME MATERIAL
			A60	G90	
18 Gage Steel	Heavy Duty	STD	OPT	OPT	16 Gage Steel
16 Gage Steel	Extra heavy Duty	STD	OPT	OPT	16 or 14 Gage Steel

PERFORMANCE

Sound Transmission Class:	STC 30 (F Design, 18 Gage Face Sheets, ASTM E90 & E413 [Fully Operable]) (4'0" x 8'0" max. size)
Physical Endurance Level:	Meets ANSI A250.4 Performance Test, Level A (1,000,000 Cycles) 18 and 16 Gage

Flush Door Thermal Characteristic Value:	CORE CALCULATED (ASTM C518)	R = 11.01	U = 0.091
	FULLY OPERABLE ASSEMBLIES TESTED WITH THERMAL BREAK FRAME AND PEMKO THRESHOLD 273X3AFG AND 216AFG DOOR SHOE. (ASTM C1363)	R = 3.4	U = 0.294
	FULLY OPERABLE ASSEMBLIES TESTED WITH KERF FRAME AND PEMKO THRESHOLD 273X3AFG AND 216AFG DOOR SHOE. (ASTM C1363)	R = 2.77	U = 0.361

(Conversion: 1" = 25.4 mm, e.g., 1-3/4" = 44.45 mm)

STANDARD SIZES NOMINAL DOOR OPENING

WIDTH		HEIGHT
SINGLE	DOUBLE	
2'-0"	4'-0"	6'-8"
2'-4"	4'-8"	
2'-6"	5'-0"	7'-0"
2'-8"	5'-4"	7'-2"
2'-10"	5'-8"	7'-10"
3'-0"	6'-0"	8'-0"
3'-4"	6'-8"	9'-0"
3'-6"	7'-0"	10'-0"
3'-8"	7'-4"	
3'-10"	7'-8"	
4'-0"	8'-0"	
5'-0"	10'-0"	

PRODUCT SPECIFICATIONS:

Steel door frames shall be as manufactured by Ceco Door Products, Milan, TN or Mason City, IA USA. They shall conform to the Steel Door Institute guide specification, ANSI A250.8. See chart below for performance classifications.

Series SU frames for 1-3/4" doors are formed from commercial quality cold rolled steel conforming to ASTM A1008 ...or (optional) hot-dipped galvanized steel conforming to ASTM A924 and A653 - see chart below.

Frames are knocked down (K.D.) field assembled type or welded unit type. Head and jamb members of K.D. frames have diecut mitered corners that interlock rigidly when field assembled. Integral door stops are 5/8" high. Jambs are sized to suit wall applications. Twist-in anchors are available for new masonry, wood stud, metal stud, or existing opening wall conditions (indicate which). Floor anchors or extra jamb anchors are provided to anchor sill. Welded-in jamb anchors are also available.

FIRE DOORS

LABELING AGENCIES:

- UNDERWRITERS LABORATORY
- WARNOCK HERSEY
- FACTORY MUTUAL

TEST: UL10B, UL10C, UI1784 & NFPA 252

- RATING: 20 MIN, 3/4 HR, 1 HR, 1-1/2 HR, OR 3 HR
- MAX. SIZE: 40 x 100 SINGLE
80 x 100 PAIR

Not all ratings are available in all sizes, designs and materials. Hourly classifications are not shown on label unless class is less than 3 hours.

Hardware Provisions: Frames are handed. Hinge jambs are mortised for 4-1/2" or 5" high, standard and heavy weight hinges (specify which). 7 gage steel reinforcements are welded in place and are drilled and tapped for fasteners in accordance with ANSI A156.7. The strike jamb is prepared for 4-7/8" universal or 2-3/4" cylindrical strike in accordance with ANSI A 115.1 & 2 (specify which). Plaster guards are provided. Optional closer reinforcement is a 14 gage steel formed steel sleeve (12 gage upon request). 3 door mutes are provide per strike jamb and 2 for double swing heads.

Paint: Steel door frames are provided with one coat of oven-cured neutral color primer paint. Primer coat shall conform with ANSI A250.10 . The primer coat is a preparatory base for necessary finish painting. "Colorstyle" finish coat is also available on K.D. frames from a selection of standard colors (optional). Colorstyle finish is electrostatically applied, oven-cured urethane enamel, and shall conform to ANSI A250.3. For accurate color selectors ask for a Ceco Colorstyle chart.

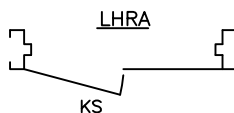
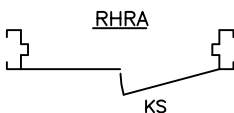
MATERIAL

DOOR FRAME MATERIAL	LEVEL	C.R.	GALV	
			A60	G90
16 Gage Steel	Heavy or Extra Heavy Duty	STD	OPT	OPT
14 Gage Steel	Maximun Duty	STD	OPT	OPT

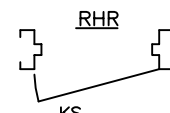
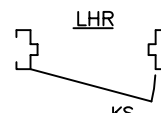
(Conversion: 1" = 25.4 mm, e.g., 1-3/4" = 44.45 mm)

PERFORMANCE

Physical Endurance Level:	Meets ANSI A250.4 Performance Test -- 16 & 14 gage steel: Level A (1,000,000 Cycles)



INSIDE



OUTSIDE

"SUFFIX"A" = ACTIVE LEAF OF PAIRS

"KS" = KEY SIDE

Ceco Door

ASSA ABLOY

STANDARD SIZES NOMINAL DOOR OPENING

WIDTH		HEIGHT
SINGLE	DOUBLE	
2'-0"	4'-0"	6'-8"
2'-4"	4'-8"	
2'-6"	5'-0"	7'-0"
2'-8"	5'-4"	7'-2"
2'-10"	5'-8"	7'-10"
3'-0"	6'-0"	8'-0"
3'-4"	6'-8"	9'-0"
3'-6"	7'-0"	10'-0"
3'-8"	7'-4"	
3'-10"	7'-8"	
4'-0"	8'-0"	
5'-0"	10'-0"	

FIRE DOOR FRAMES

LABELING AGENCIES:

- UNDERWRITERS LABORATORY
- WARNOCK HERSEY
- FACTORY MUTUAL

TEST: UL 10C, UL 10B,
UL 1784, & NFPA 252

• RATING: 20 MIN, 3/4 HR,
1 HR, 1-1/2 HR, OR 3 HR

• MAX. SIZE: 40 x 100 SINGLE
80 x 100 PAIR

Not all ratings are available
in all sizes, elevations, and
materials.
Hourly ratings are not
shown on label unless rating
is less than 3 hours.

PRODUCT SPECIFICATIONS:

Steel door frames shall be as manufactured by Ceco Door Products, Milan, TN or Mason City, IA, USA. They shall conform to the Steel Door Institute guide specification, ANSI A250.8. See chart below for performance classifications.

Series SQ, SR, and SC frames for 1-3/4" doors are formed from commercial quality cold rolled steel conforming to ASTM A1008 ...or (optional) hot-dipped galvanized steel conforming to ASTM A924 and A653 - see chart below.

3 piece door frames are shipped knocked down or welded. Transoms, sidelites and borrowed lites are welded unit type with all exposed welds ground smooth. Oversize frames are shipped in multiple units for field splicing. Integral door stops are 5/8" high. Double rabbet (SQ), single rabbet (SR), or cased opening (SC) profiles are sized to suit wall applications. Elevations conform with approved Ceco shop drawings. Jamb anchors are available for new masonry, wood stud, metal stud or existing opening wall conditions (indicate which). Floor anchors or extra jamb anchors are provided to anchor sill.

Hardware Provisions: Frames are handed. Hinge jambs are mortised for 4-1/2" or 5" high, standard or heavy weight hinges (specify which). 7 gage steel reinforcements are welded in place and are drilled and tapped for fasteners in accordance with ANSI A156.7. The strike jamb is prepared for 4-7/8" universal strike in accordance with ANSI A 115.1 & 2. Plaster guards are 26 gage steel. Preparations for various other mechanical and electronic locks and strikes are also available. Optional hardware reinforcement (e.g. closer/holder) is 14 gage minimum steel welded in place (designate hardware). 3 door mutes are provided per strike jamb and 2 for double swing heads.

Paint: Steel door frames are provided with one coat of oven-cured neutral color primer paint. Primer coat shall conform with ANSI A250.10. The primer coat is a preparatory base for necessary finish painting. "Colorstyle" finish coat is also available on K.D. frames from a selection of standard colors (optional). Colorstyle finish is electrostatically applied, oven-cured urethane enamel, and shall conform to ANSI A250.3. For accurate color selectors ask for a Ceco Colorstyle chart.

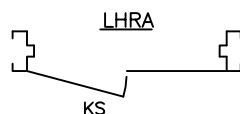
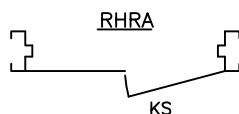
MATERIAL

DOOR FRAME MATERIAL	LEVEL	C.R.	GALV	
			A60	G90
16 Gage Steel	Heavy or Extra Heavy Duty	STD	OPT	OPT
14 Gage Steel	Maximum Duty	STD	OPT	OPT

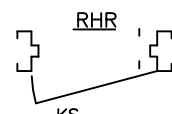
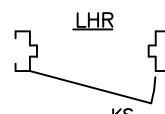
(Conversion: 1" = 25.4 mm, e.g., 1-3/4" = 44.45 mm)

PERFORMANCE

Physical Endurance Level:	Meets ANSI A250.4 Performance Test -- 16 & 14 gage steel: Level A (1,000,000 Cycles)



INSIDE



OUTSIDE

"SUFFIX"A" = ACTIVE LEAF OF PAIRS

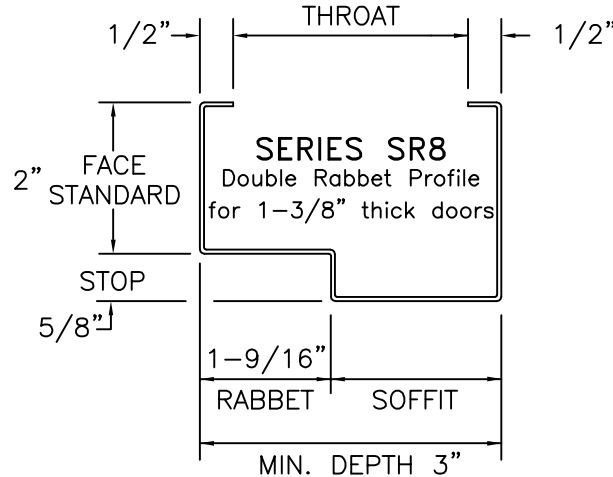
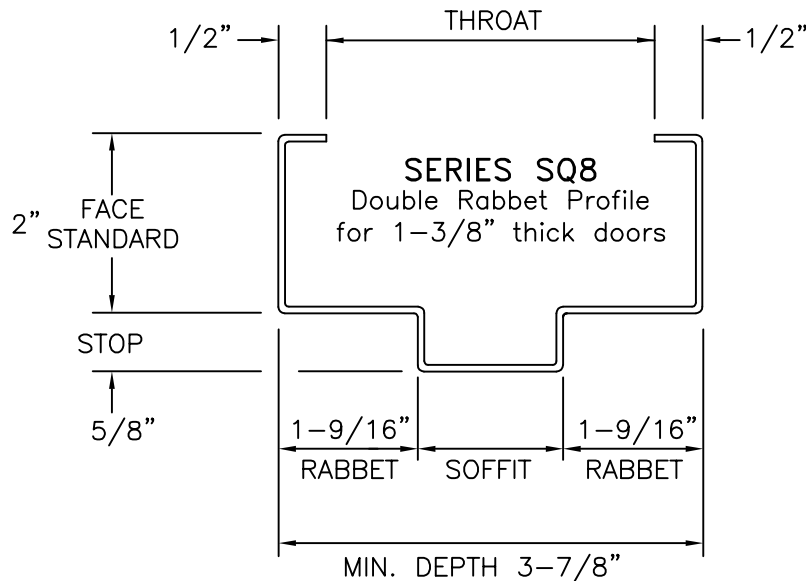
"KS" = KEY SIDE



SERIES SQ8 AND SR8 STEEL FRAMES

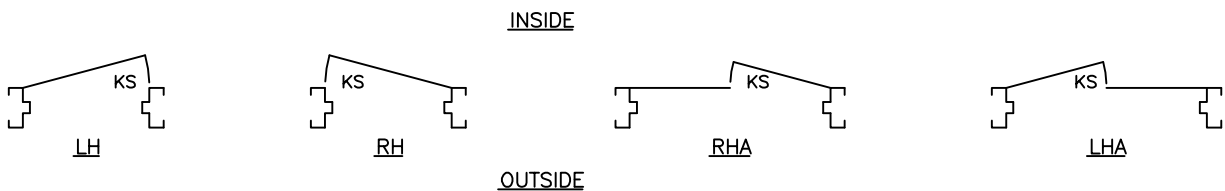
FOR 1-3/8" DOORS

STANDARD WALL APPLICATION, HANDED



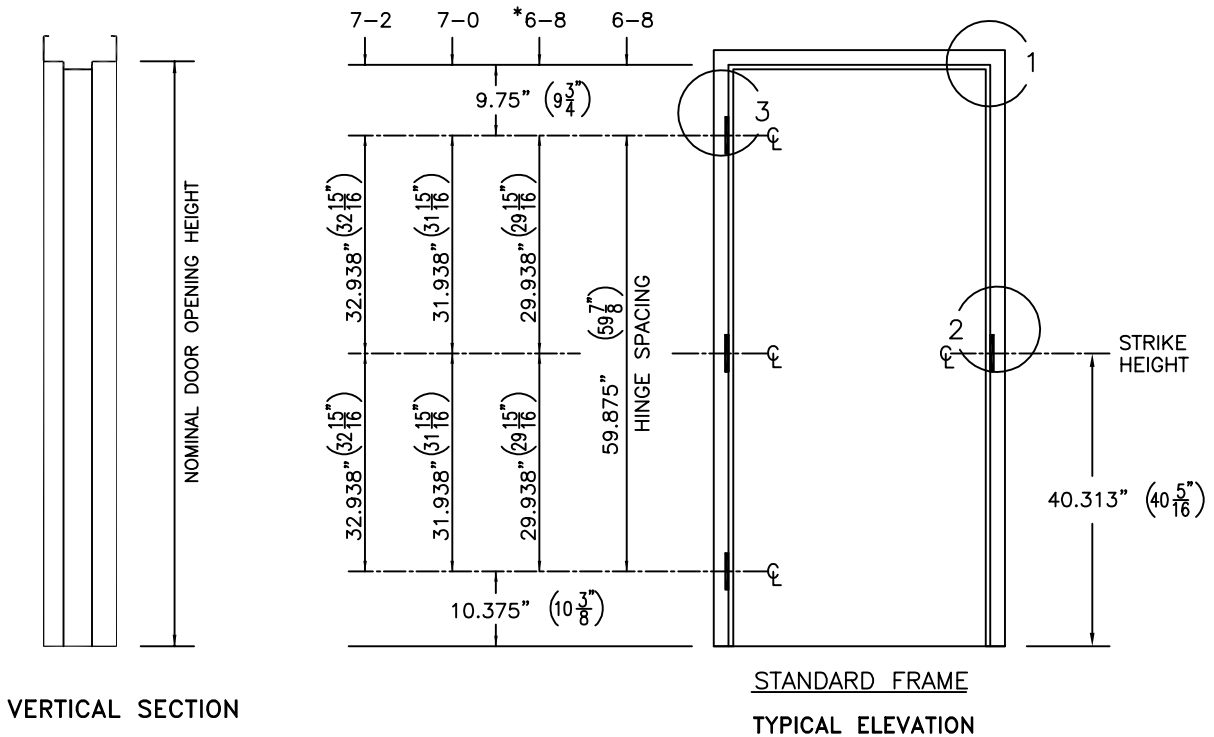
(Conversion: 1" = 25.4 mm, e.g., 1-3/4" = 44.45 mm)

Depth, face, soffit, and backbend dimensions are variable (made to order) within limits of material and tooling. Hardware preparations are for 1-3/8" thick doors. Rabbet dimensions and hardware preparations to suit other door thicknesses are also available. Backbends need not be the same on opposite faces of basic profile, but limits of material and/or tooling may restrict certain combinations of backbends and other profile variations. Profiles are not limited to those shown ...many other designs and combinations are available.

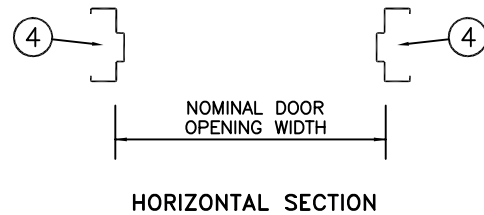


"KS" = KEY SIDE

F2A-2



- * Labeled 6-8 frames require 3 hinges.
- 2 hinges standard for non-labeled 6-8 frames
- 3 hinges optional for non-labeled 6-8 frames

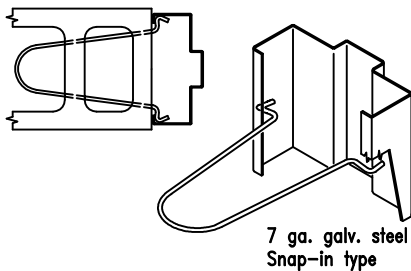


(Conversion: 1" = 25.4 mm, e.g., 1-3/4" = 44.45 mm)

JAMB ANCHOR QUANTITIES

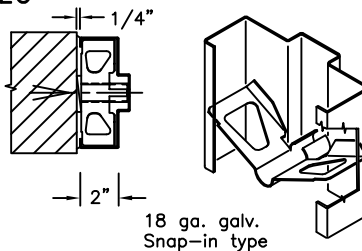
2 PER JAMB FOR HEIGHTS >3/6 THRU 5/0 AND ONE FLOOR ANCHOR
 3 PER JAMB FOR HEIGHTS >5/0 THRU 7/2 AND ONE FLOOR ANCHOR
 ONE ADDITIONAL JAMB ANCHOR FOR EACH ADDITIONAL TWO FEET IN HEIGHT OR FRACTION THEREOF
 ONE ADDITIONAL JAMB ANCHOR IN LIEU OF FLOOR ANCHOR FOR EXISTING STUDS AND/OR WALL CONDITIONS.

WIRE MASONRY ANCHOR WMA



(For 3" thru 8-3/4" Depths)

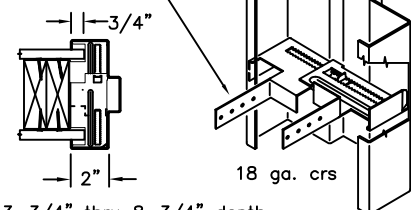
EXISTING OPENING ANCHOR EO



EO/S6: 4-1/2" thru 6-3/4" depth
 EO/S8: 6-7/8" thru 8-3/4" depth

ADJUSTABLE ANCHOR FOR STUD WALLS ADJ/STUD

SETUP ANCHORS AND BEND TAILPIECES TO GRIP METAL OR WOOD STUD.



3-3/4" thru 8-3/4" depth

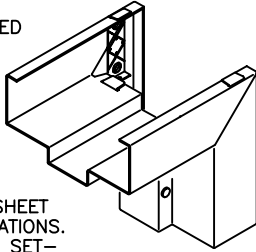
CecoDoor

ASSA ABLOY

F2A-3

① KNOCKED DOWN (KD) CORNERS

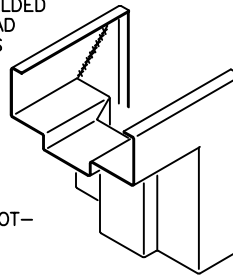
NORMALLY LIMITED TO 3 PIECE FRAMES. CORNERS ARE DIECUT. HEAD AND 2 JAMBS ARE SHIPPED KD FOR FIELD ASSEMBLY. SEE BACK OF SHEET FOR FACE LIMITATIONS. ALSO AVAILABLE SET-UP AND WELDED.



① WELDED CORNERS

MITERED AND WELDED CORNER --- HEAD AND JAMB FACES MUST BE EQUAL

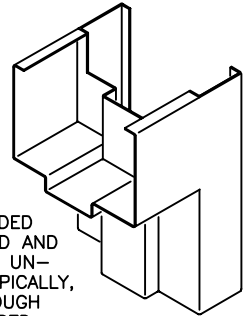
MITER SEAM IS WELDED AND FACE IS GROUND SMOOTH AND SPOT-PRIMERED.



① WELDED CORNERS

FACE SEAM IS WELDED, GROUND SMOOTH, AND SPOT PRIMERED.

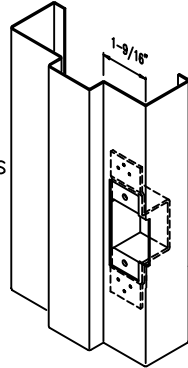
BUTTED AND WELDED CORNER --- HEAD AND JAMBS MAY HAVE UNEQUAL FACES. TYPICALLY, JAMB RUNS THROUGH AND HEAD IS COPED.



② LOCK STRIKE PREPARATION

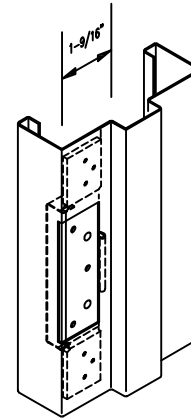


CYLINDRICAL (2-3/4") ANSI A115.3 TEMPLATE 16 GAGE STEEL REINFORCING WITH EXTRUDED SCREW HOLES EQUAL TO 14 GAGE.

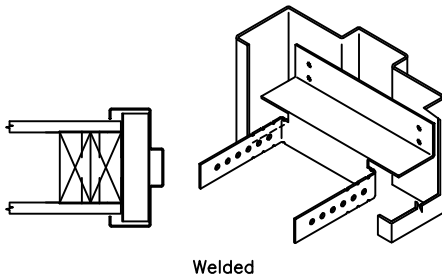


③ HINGE PREPARATION

3-1/2" x .123" ANSI A156.7 TEMPLATE ONLY. 12 GAGE STEEL REINFORCEMENT. PLASTER GUARD IS 26 GAGE STEEL. BACKSET: 5/16"

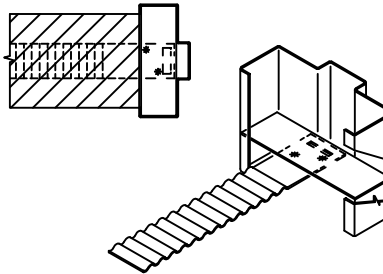


④ WOOD STUD "Z" STRAP ANCHOR WSZS (RECESSED)

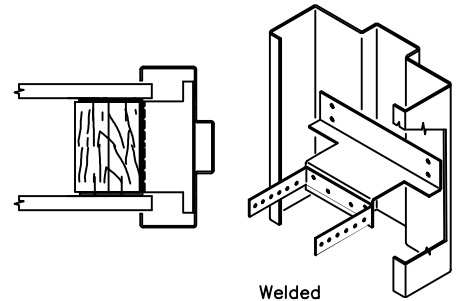


Welded

④ MASONRY "T" ANCHOR MT

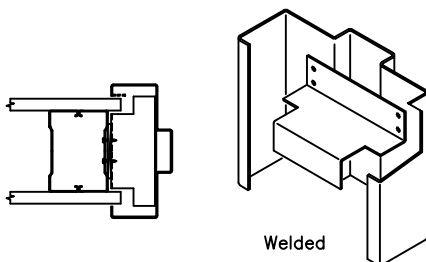


④ WOOD STUD "Z" STRAP ANCHOR WSZS (FLUSH)



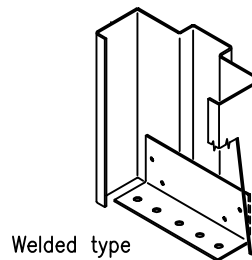
Welded

④ METAL STUD "Z" ANCHOR MSZ2



Welded

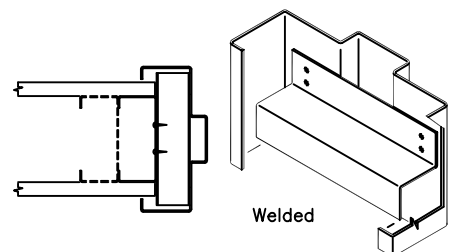
④ SPECIAL SIZE FLOOR ANCHOR SA



Welded type

ONE PIECE

④ METAL STUD "Z" ANCHOR MSZ1



Welded

(Conversion: 1" = 25.4 mm, e.g., 1-3/4" = 44.45 mm)

CecoDoor

ASSA ABLOY

PRODUCT SPECIFICATIONS:

Steel door frames shall be as manufactured by Ceco Door Products, Milan, TN USA. They shall conform to the Steel Door Institute guide specification, ANSI A250.8. See chart below for performance classifications.

Series SQ8 and SR8 frames for 1-3/8" doors are formed from commercial quality cold rolled steel conforming to ASTM A1008 ...or (optional) hot-dipped galvanized steel conforming to ASTM A924 and A653 - see chart below.

3 piece door frames are shipped knocked down or welded. Transoms, sidelites and borrowed lites are welded unit type with all exposed welds ground smooth. Oversize frames are shipped in multiple units for field splicing. Integral door stops are 5/8" high. Double rabbet (SQ8) and single rabbet (SR8) profiles are sized to suit wall applications. Elevations conform with approved Ceco shop drawings. Jamb anchors are available for new masonry, wood stud, metal stud or existing opening wall conditions (indicate which). Floor anchors or extra jamb anchors are provided to anchor sill.

Hardware Provisions: Frames are handed. Hinge jambs are mortised for 3-1/2" standard weight hinges only. 12 gage steel reinforcements are welded in place and are drilled and tapped for fasteners in accordance with ANSI A156.7. The strike jamb is prepared for 2-3/4" universal strike in accordance with ANSI A115.3. Hinge plaster guards are 26 gage steel. Optional hardware reinforcement (e.g. closer/holder) is 14 gage minimum steel welded in place (designate hardware). 3 door mutes are provided per strike jamb and 2 for double swing heads.

Paint: Steel door frames are provided with one coat of oven-cured neutral color primer paint. Primer coat shall conform with ANSI A250.10. The primer coat is a preparatory base for necessary finish painting. "Colorstyle" finish coat is also available on K.D. frames from a selection of standard colors (optional). Colorstyle finish is electrostatically applied, oven-cured urethane enamel, and shall conform to ANSI A250.3. For accurate color selectors ask for a Ceco Colorstyle chart.

STANDARD SIZES NOMINAL DOOR OPENING

WIDTH		HEIGHT
SINGLE	DOUBLE	
2'-0"	4'-0"	6'-8" 7'-0" 7'-2"
2'-4"	4'-8"	
2'-6"	5'-0"	
2'-8"	5'-4"	
2'-10"	5'-8"	
3'-0"	6'-0"	
3'-4"	6'-8"	

FIRE DOOR FRAMES

LABELING AGENCIES:

- UNDERWRITERS LABORATORY
- WARNOCK HERSEY

TEST: UL 10C, UL 10B,
UL 1784, & NFPA 252

• RATING: 20 MIN, 3/4 HR,
1 HR, 1-1/2 HR, OR 3 HR

• MAX. SIZE: 34 x 72 SINGLE
68 x 72 PAIR

18 GA: 34 x 70 SINGLE
18 GA: 68 x 70 PAIR

Not all ratings are available
in all sizes, elevations, and
materials.
Hourly ratings are not
shown on label unless rating
is less than 3 hours.

MATERIAL

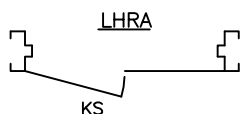
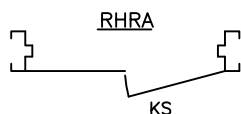
DOOR FRAME MATERIAL	LEVEL	C.R.	GALV	
			A60	G90
18 Gage Steel	Standard Duty	STD	OPT	N/A
16 Gage Steel	Heavy or Extra Heavy Duty	STD	OPT	OPT

18 gage steel for use with 1-3/8" hollow core wood doors.

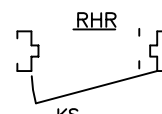
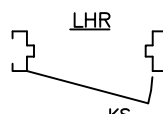
PERFORMANCE

(Conversion: 1" = 25.4 mm, e.g., 1-3/4" = 44.45 mm)

Physical Endurance Level:	Meets ANSI A250.4 Performance Test -- 16 gage steel: Level A (1,000,000 cycles)



INSIDE



OUTSIDE

"SUFFIX"A" = ACTIVE LEAF OF PAIRS



STANDARD SIZES NOMINAL DOOR OPENING

WIDTH		HEIGHT
SINGLE	DOUBLE	
2'-0"	4'-0"	
2'-4"	4'-8"	
2'-6"	5'-0"	6'-8"
2'-8"	5'-4"	7'-0"
2'-10"	5'-8"	7'-2"
3'-0"	6'-0"	7'-10"
3'-4"	6'-8"	8'-0"
3'-6"	7'-0"	9'-0"
3'-8"	7'-4"	10'-0"
3'-10"	7'-8"	
4'-0"	8'-0"	

FIRE DOOR FRAMES

LABELING AGENCIES:

- UNDERWRITERS LABORATORY
- WARNOCK HERSEY
- FACTORY MUTUAL

TEST: UL 10C, UL 10B,
UL 1784, & NFPA 252

• RATING: 20 MIN, 3/4 HR,
1 HR, 1-1/2 HR, OR 3 HR

• MAX. SIZE: 40 x 90 SINGLE
80 x 90 PAIR

Not all ratings are available
in all sizes, elevations, and
materials.
Hourly ratings are not
shown on label unless rating
is less than 3 hours.

PRODUCT SPECIFICATIONS:

Steel door frames shall be as manufactured by Ceco Door Products, Milan, TN or Mason City, IA, USA. They shall conform to the Steel Door Institute guide specification, ANSI A250.8. See chart below for performance classifications.

Series C Custom Profile frames for 1-3/4" doors are formed from commercial quality cold rolled steel conforming to ASTM A1008 ...or (optional) hot-dipped galvanized steel conforming to ASTM A924 and A653 - see chart below.

3 piece door frames are shipped knocked down or welded. Transoms, sidelites and borrowed lites are welded unit type with all exposed welds ground smooth. Oversize frames are shipped in multiple units for field splicing. Integral door stops are 5/8" high. Double rabbet, single rabbet, or cased opening profiles are sized to suit wall applications. Elevations conform with approved Ceco shop drawings. Jamb anchors are available for new masonry, wood stud, metal stud or existing opening wall conditions (indicate which). Floor anchors or extra jamb anchors are provided to anchor sill.

Hardware Provisions: Frames are handed. Hinge jambs are mortised for 4-1/2" or 5" high, standard or heavy weight hinges (specify which). 7 gage steel reinforcements are welded in place and are drilled and tapped for fasteners in accordance with ANSI A156.7. The strike jamb is prepared for 4-7/8" universal strike in accordance with ANSI A 115.1 & 2. Plaster guards are 26 gage steel. Preparations for various other mechanical and electronic locks and strikes are also available. Optional hardware reinforcement (e.g. closer/holder) is 14 gage minimum steel welded in place (designate hardware). 3 door mutes are provided per strike jamb and 2 for double swing heads.

Paint: Steel door frames are provided with one coat of oven-cured neutral color primer paint. Primer coat shall conform with ANSI A250.10. The primer coat is a preparatory base for necessary finish painting.

MATERIAL

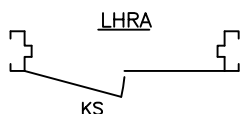
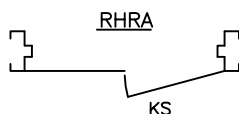
DOOR FRAME MATERIAL	LEVEL	C.R.	GALV	
			A60	G90
16 Gage Steel	Heavy or Extra Heavy Duty	STD	OPT	OPT
14 Gage Steel	Maximum Duty	STD	OPT	OPT
12 Gage Steel *	ANSI/NAAMM	STD	OPT	—

*Not all profiles available in 12 Gage Steel

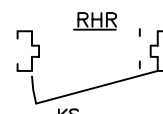
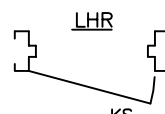
PERFORMANCE

(Conversion: 1" = 25.4 mm, e.g., 1-3/4" = 44.45 mm)

Physical Endurance Level:	Meets ANSI A250.4 Performance Test -- 16, 14, & 12 gage steel: Level A (1,000,000 Cycles)



INSIDE



OUTSIDE

"SUFFIX"A" = ACTIVE LEAF OF PAIRS

"KS" = KEY SIDE

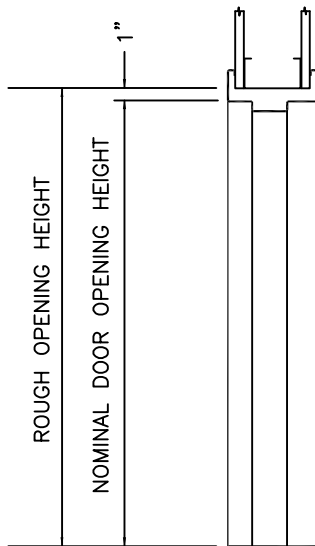
Ceco Door

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ASSA ABLOY, the global leader
in door opening solutions.

F5-2

Hardware locations shown match Ceco standard doors.



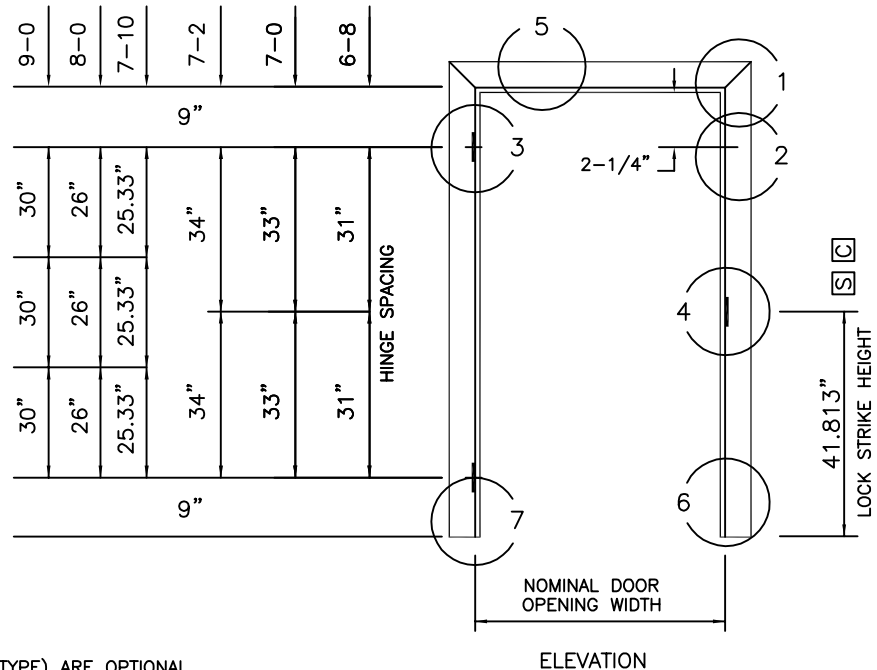
VERTICAL SECTION

NOTE #1:

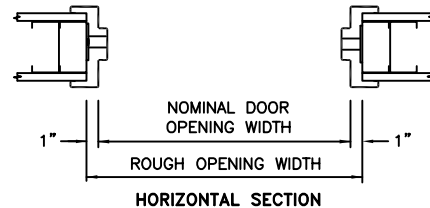
STRIKE PLASTER GUARDS (SNAP-IN TYPE) ARE OPTIONAL.

□ 1" DEEP

- STEEL/WOOD STUD AND DRYWALL CONSTRUCTION METHODS, IN CONJUNCTION WITH FRAME ANCHORAGE, COULD RESULT IN INTERFERENCE BETWEEN THE STUD AND HARDWARE PREP. NOTCHING OF THE STUD COULD RESULT IN COMPROMISING THE STABILITY OF THE FRAME. CONSIDERATION SHOULD BE GIVEN TO SPECIFYING THE HARDWARE SUITABLY SIZED TO FIT THE CONFINES OF A STANDARD FRAME OR SPECIFYING ALTERNATE FRAME PROFILES TO ACCOMMODATE THE HARDWARE.
- IF NECESSARY TO REMOVE, PLASTER GUARDS ARE BEST REMOVED BEFORE FRAME INSTALLATION.



ELEVATION

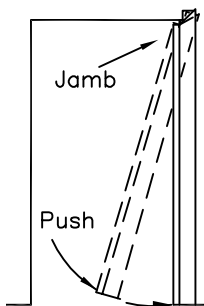


HORIZONTAL SECTION

INSTALLATION INSTRUCTIONS

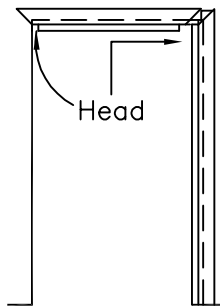
ROUGH OPENING:
DOOR OPENING WIDTH PLUS 2"
DOOR OPENING HEIGHT PLUS 1"

STEP 1



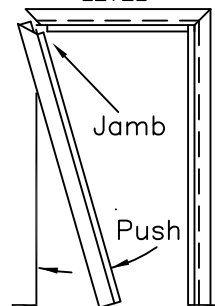
- PUSH TOP OF ONE JAMB OVER THE WALL.
- HOLD TOP OF JAMB IN PLACE, THEN PUSH BOTTOM IN TOWARDS AND OVER WALL.

STEP 2



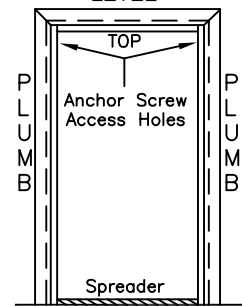
- POSITION FRAME HEAD OVER THE WALL.
- ALIGN HEAD TABS WITH JAMB SLOTS, THEN SLIDE HEAD TOWARD JAMB AND ENGAGE TABS IN SLOTS.

STEP 3 LEVEL



- PUSH TOP OF REMAINING JAMB OVER WALL AND MATE TABS IN SLOTS.
- PUSH BOTTOM OF JAMB IN TOWARDS AND OVER WALL.
- LEVEL HEAD.

STEP 4 LEVEL



- ADJUST PLUMB ANCHORS WITH SCREWDRIVER.
- PLUMB HINGE JAMB AND ANCHOR SILL.
- WITH TEMPORARY SPREADER, ADJUST STRIKE JAMB AND ANCHOR SILL.
- INSTALL MUTES.

(Conversion: 1" = 25.4 mm, e.g., 1-3/4" = 44.45 mm)

Ceco Door

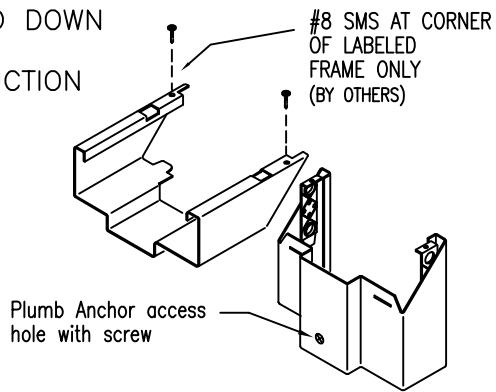
ASSA ABLOY

ASSA ABLOY, the global leader
in door opening solutions.

01/15/14

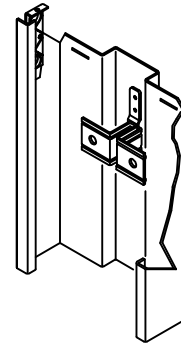
F5-3

KNOCKED DOWN CORNER CONSTRUCTION



①

ADJUSTABLE PLUMB ANCHOR



ONE EACH JAMB

Adjust with screwdriver

②

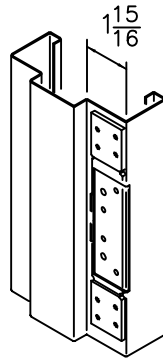
Dual plumb anchors are applied in depths greater than 8-3/4".

HINGE PREPARATION

4-1/2" x .134" OR
4-1/2" x .180"
ANSI A156.7 TEMPLATE
7 GAGE STEEL
REINFORCING

BACKSET: 5/16"

SEE NOTE #1



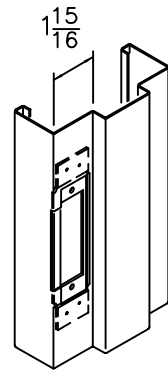
③

STRIKE PREPARATION



UNIVERSAL (4-7/8")
ANSI A115.1 & 2 TEMPLATE
12 GAGE STEEL REINFORCING
STANDARD FOR 1-3/4" DOORS

SEE NOTE #1



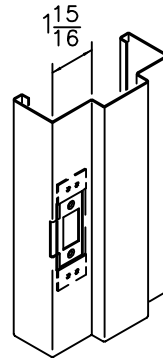
④

LOCK STRIKE PREPARATION



CYLINDRICAL (2-3/4")
ANSI A115.2 TEMPLATE
14 GAGE STEEL REINFORCING
ALSO AVAILABLE WITHOUT
LIP CUTOUT FOR DEADLOCKS

SEE NOTE #1



④

CLOSER REINFORCEMENT (OPTIONAL)

14 GAGE STEEL

(HEAD)

FULL DEPTH CLOSER
REINFORCEMENT(SHOWN)
HALF SLEEVE OR PLATE
ALSO AVAILABLE

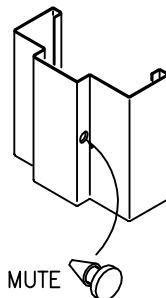
PROJECTION WELDED

14"

⑤

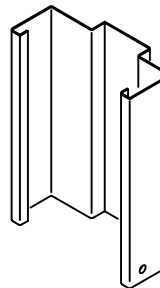
DOOR SILENCER (MUTE)

RUBBER MUTE
(3) / STRIKE JAMB
(2) / DOUBLE
SWING HEAD



STANDARD SILL ANCHOR

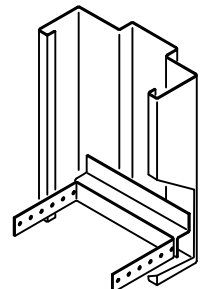
DIMPLED HOLE
FOR #10 FH
FASTENER.
FASTENER IS BY
CONTRACTOR AND
MUST BE LONG
ENOUGH TO
ENGAGE STUD.



⑥

OPTIONAL SILL STRAP ANCHOR

FASTENER IS
BY CONTRACTOR
AND MUST
ENGAGE STUD.



⑦

(Conversion: 1" = 25.4 mm, e.g., 1-3/4" = 44.45 mm)

Ceco Door

ASSA ABLOY

PRODUCT SPECIFICATIONS:

Steel door frames shall be as manufactured by Ceco Door, Milan, TN or Mason City, IA, USA. They shall conform to the Steel Door Institute guide specification, ANSI A250.8-1998. See chart below for performance classifications.

Series DU frames for 1-3/4" doors are formed from commercial quality cold rolled steel conforming to ASTM A1008 ...or (optional) hot-dipped galvanized steel conforming to ASTM A924 and A653 - see chart below.

Frames are knocked down, field assembled type. Components have diecut mitered corners that interlock rigidly when field assembled. Double rabbet profiles are sized to fit 3 popular wall thicknesses. Integral door stops are 5/8" high and frame faces are 2". Adjustable, compression type anchors are welded to jambs and allow frame installation, plumbing and squaring after wallboard is applied (to adjust anchors use Phillips head screw driver). Components have backbend-returns that protect the wall surface during installation. Sill anchoring is by means of screws through dimpled holes in faces ... welded on sill strap anchors are also available (optional).

Hardware Provisions: Frames are handed. Hinge jambs are mortised for 4-1/2" high, standard or heavy weight hinges (specify which). 7 gage steel reinforcements are welded in place and are drilled and tapped for fasteners in accordance with ANSI A156.7. The strike jamb is prepared for 4-7/8" universal or 2-3/4" cylindrical strike in accordance with ANSI A 115.1&2 (specify which). Optional closer reinforcement is a 14 gage steel formed steel sleeve. 3 door mutes are provide per strike jamb and 2 for double swing heads.

Paint: Steel door frames are provided with one coat of oven-cured neutral color primer paint. Primer coat shall conform with ANSI A250.10. The primer coat is a preparatory base for necessary finish painting. "Colorstyle" finish coat is also available. Colorstyle finish is electrostatically applied, oven-cured urethane enamel. For accurate color selector chart ask customer service for a Pantone Colorstyle chart.

STANDARD SIZES NOMINAL DOOR OPENING

WIDTH		HEIGHT
SINGLE	DOUBLE	
2'-0"	4'-0"	6'-8"
2'-4"	4'-8"	
2'-6"	5'-0"	
2'-8"	5'-4"	
2'-10"	5'-8"	
3'-0"	6'-0"	
3'-4"	6'-8"	
3'-6"	7'-0"	
3'-8"	7'-4"	
3'-10"	8'-0"	
4'-0"		

FIRE DOOR FRAMES

LABELING AGENCIES:

- UNDERWRITERS LABORATORY
- WARNOCK HERSEY
- FACTORY MUTUAL

TEST: UL 10C, UL 10B,
UL 1784, & NFPA 252

• RATING: 20 MIN, 3/4 HR,
OR 1-1/2 HR

• MAX. SIZE: 14 GAGE STEEL
16 GAGE STEEL
40 x 90 SINGLE
80 x 90 PAIR
18 GAGE STEEL
40 x 70 SINGLE
610 x 70 PAIR

NOT ALL RATINGS ARE AVAILABLE
IN ALL SIZES, DESIGNS AND
MATERIALS.

MATERIAL

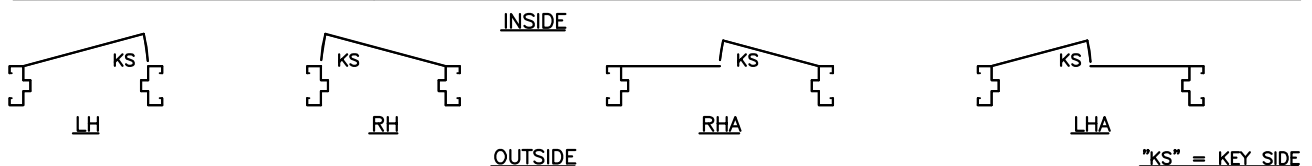
DOOR FRAME MATERIAL	LEVEL	C.R.	GALV	
			A60	G90
18 Gage Steel	Standard Duty	STD	OPT	N/A
16 Gage Steel	Standard, Heavy, or Extra Heavy Duty	STD	OPT	OPT
14 Gage Steel	Maximum Duty	STD	OPT	OPT

18 gage steel for use with 1-3/4" wood doors.

Also available in 18 gage steel for 1-3/8" doors ...Ask for details

PERFORMANCE

Physical Endurance Level:	Meets ANSI A250.4 Performance Test -- 16 & 14 gage steel: Level A (1,000,000 Cycles)



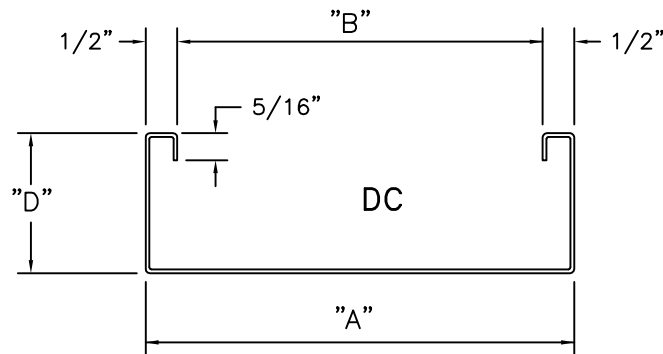
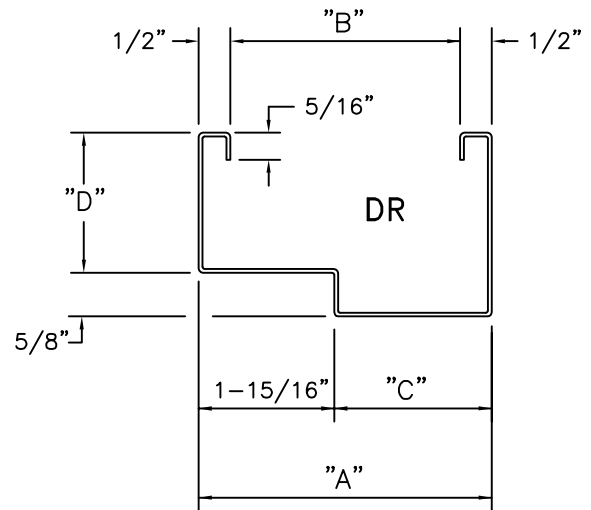
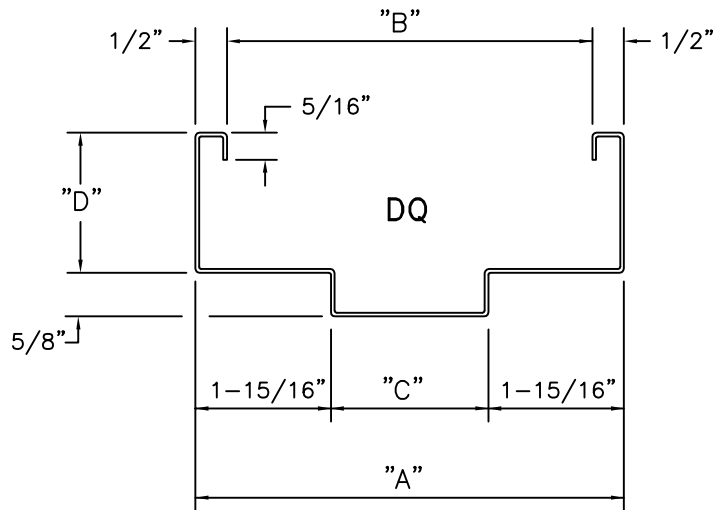
SUFFIX "A" = ACTIVE LEAF OF PAIRS

(Conversion: 1" = 25.4 mm, e.g., 1-3/4" = 44.45 mm)

SERIES DQ, DR, AND DC SLIP-ON DRYWALL FRAMES

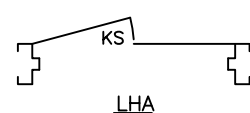
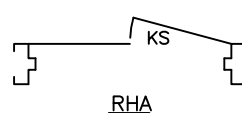
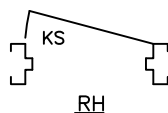
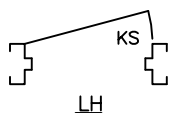
FOR 1-3/4" THICK DOORS

HANDED



(Conversion: 1" = 25.4 mm, e.g., 1-3/4" = 44.45 mm)

PROFILE	A (DEPTH)	B (THROAT)	C (SOFFIT WIDTH)	D (FACE)	
				JAMB	HEAD
SINGLE RABBET	3" thru 5-7/8"	2" thru 4-7/8"	"A" (-) 1-15/16"	2"	2"
DOUBLE RABBET	4-7/8" thru 14"	3-7/8" thru 13"	"A" (-) 2(1-15/16)"	2"	2" or 4"
CASED OPENING	3" thru 14"	2" thru 13"	OMIT	2"	2"

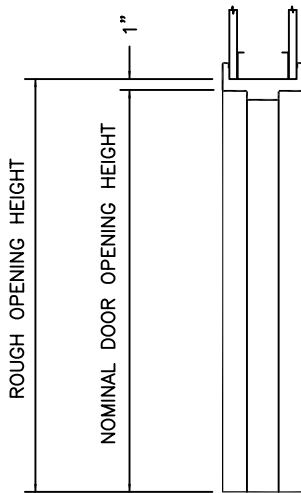


SUFFIX "A" = ACTIVE LEAF OF PAIRS

OUTSIDE

"KS" = KEY SIDE

Hardware locations shown match Ceco standard doors.
Double rabbet profiles are shown, single rabbet and cased opening profiles are similar.



VERTICAL SECTION

NOTE #1:

STRIKE PLASTER GUARDS (SNAP-IN TYPE) ARE OPTIONAL.

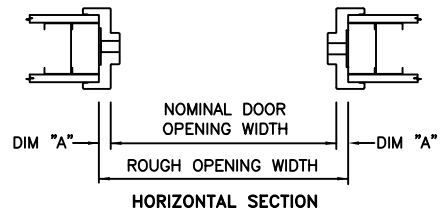
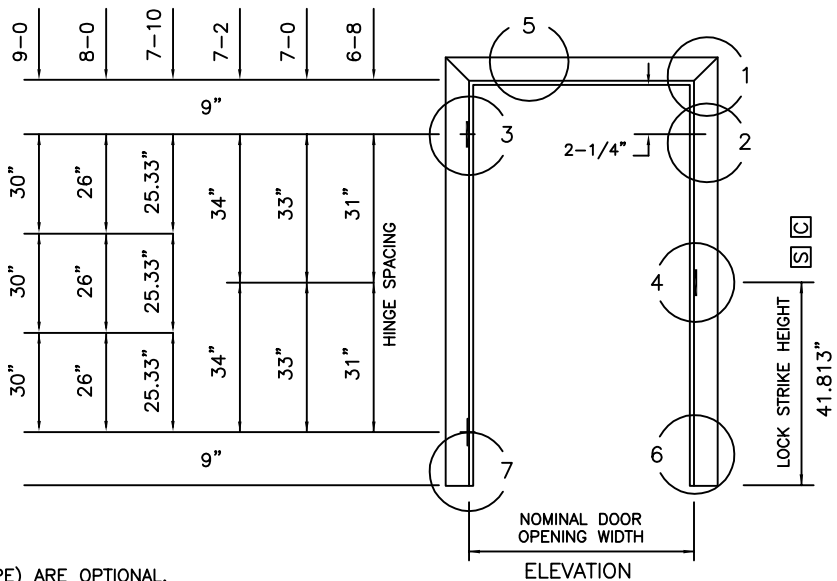
□ 1" DEEP

- STEEL/WOOD STUD AND DRYWALL CONSTRUCTION METHODS, IN CONJUNCTION WITH FRAME ANCHORAGE, COULD RESULT IN INTERFERENCE BETWEEN THE STUD AND HARDWARE PREP. NOTCHING OF THE STUD COULD RESULT IN COMPROMISING THE STABILITY OF THE FRAME. CONSIDERATION SHOULD BE GIVEN TO SPECIFYING THE HARDWARE SUITABLY SIZED TO FIT THE CONFINES OF A STANDARD FRAME OR SPECIFYING ALTERNATE FRAME PROFILES TO ACCOMMODATE THE HARDWARE.
- IF NECESSARY TO REMOVE, PLASTER GUARDS ARE BEST REMOVED BEFORE FRAME INSTALLATION.

INSTALLATION INSTRUCTIONS

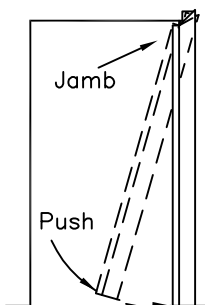
ROUGH OPENING: SINGLE AND DOUBLE RABBET
DOOR OPENING WIDTH PLUS 2"
DOOR OPENING HEIGHT PLUS 1"

ROUGH OPENING: CASSED OPENING
DOOR OPENING WIDTH PLUS 2-3/4"
DOOR OPENING HEIGHT PLUS 3/4"



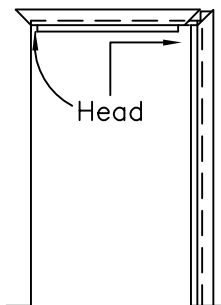
	DIM "A"
SINGLE RABBET	1"
DOUBLE RABBET	1"
CASSED OPENING	1-3/8"

STEP 1



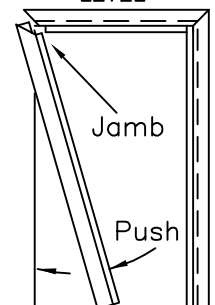
- PUSH TOP OF ONE JAMB OVER THE WALL.
- HOLD TOP OF JAMB IN PLACE, THEN PUSH BOTTOM IN TOWARDS AND OVER WALL.

STEP 2



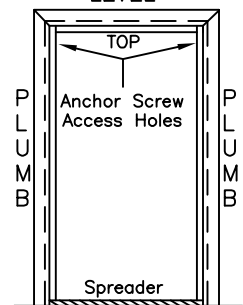
- POSITION FRAME HEAD OVER THE WALL.
- ALIGN HEAD TABS WITH JAMB SLOTS, THEN SLIDE HEAD TOWARD JAMB AND ENGAGE TABS IN SLOTS.

STEP 3 LEVEL



- PUSH TOP OF REMAINING JAMB OVER WALL AND MATE TABS IN SLOTS.
- PUSH BOTTOM OF JAMB IN TOWARDS AND OVER WALL.
- LEVEL HEAD.

STEP 4 LEVEL



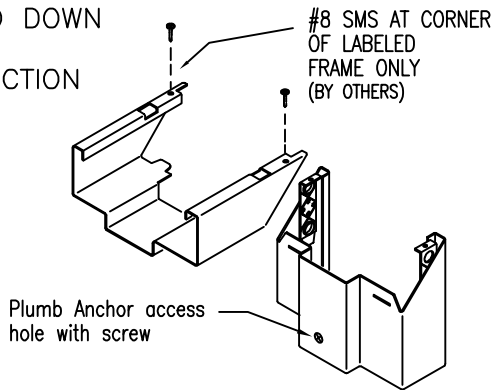
- ADJUST PLUMB ANCHORS WITH SCREWDRIVER.
- PLUMB HINGE JAMB AND ANCHOR SILL.
- WITH TEMPORARY SPREADER, ADJUST STRIKE JAMB AND ANCHOR SILL.
- INSTALL MUTES.

(Conversion: 1" = 25.4 mm, e.g., 1-3/4" = 44.45 mm)



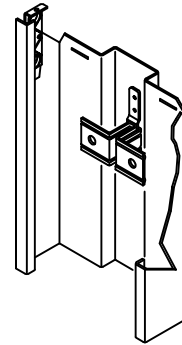
F6-3

KNOCKED DOWN CORNER CONSTRUCTION



①

ADJUSTABLE PLUMB ANCHOR



ONE EACH JAMB

Adjust with screwdriver

②

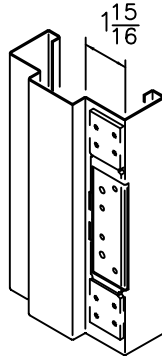
Dual plumb anchors are applied in depths greater than 8-3/4".

HINGE PREPARATION

4-1/2" x .134" OR
4-1/2" x .180"
ANSI A156.7 TEMPLATE
7 GAGE STEEL
REINFORCING

BACKSET: 5/16"

SEE NOTE #1



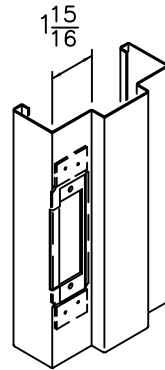
③

STRIKE PREPARATION



UNIVERSAL (4-7/8")
ANSI A115.1 & 2 TEMPLATE
12 GAGE STEEL REINFORCING
STANDARD FOR 1-3/4" DOORS

SEE NOTE #1



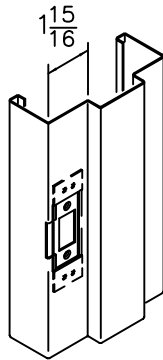
④

LOCK STRIKE PREPARATION



CYLINDRICAL (2-3/4")
ANSI A115.2 TEMPLATE
14 GAGE STEEL REINFORCING
ALSO AVAILABLE WITHOUT
LIP CUTOUT FOR DEADLOCKS

SEE NOTE #1



④

CLOSER REINFORCEMENT (OPTIONAL)

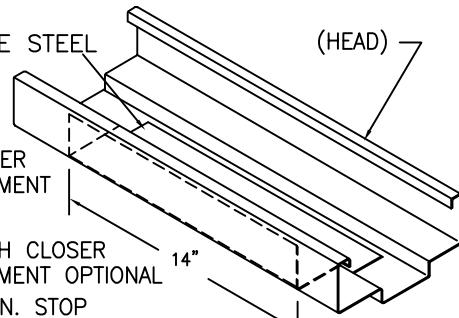
14 GAGE STEEL

(HEAD)

HALF CLOSER
REINFORCEMENT
(SHOWN)

FULL DEPTH CLOSER
REINFORCEMENT OPTIONAL
1-1/2" MIN. STOP
WIDTH. FOR SMALLER STOPS,
A 14 GAGE PLATE IS USED.

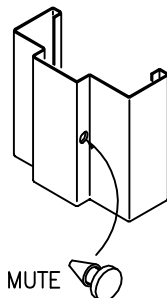
PROJECTION WELDED
AT RABBIT



⑤

DOOR SILENCER (MUTE)

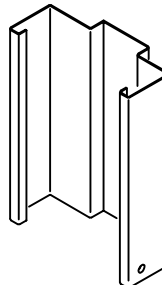
RUBBER MUTE
(3) / STRIKE JAMB
(2) / DOUBLE
SWING HEAD



MUTE

STANDARD SILL ANCHOR

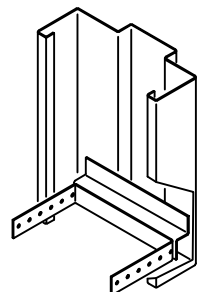
DIMPLED HOLE
FOR #10 FH
FASTENER.
FASTENER IS BY
CONTRACTOR AND
MUST BE LONG
ENOUGH TO
ENGAGE STUD.



⑥

OPTIONAL SILL STRAP ANCHOR

FASTENER IS
BY CONTRACTOR
AND MUST
ENGAGE STUD.



⑦

(Conversion: 1" = 25.4 mm, e.g., 1-3/4" = 44.45 mm)

PRODUCT SPECIFICATIONS:

Steel door frames shall be as manufactured by Ceco Door, Milan, TN or Mason City, IA, USA. They shall conform to the Steel Door Institute guide specification, ANSI A250.8. See chart below for performance classifications.

STANDARD SIZES NOMINAL DOOR OPENING

WIDTH		HEIGHT
SINGLE	DOUBLE	
2'-0"	4'-0"	6'-8"
2'-4"	4'-8"	
2'-6"	5'-0"	
2'-8"	5'-4"	7'-0"
2'-10"	5'-8"	7'-2"
3'-0"	6'-0"	7'-10"
3'-4"	6'-8"	8'-0"
3'-6"	7'-0"	9'-0"
3'-8"	7'-4"	
3'-10"	7'-8"	
4'-0"	8'-0"	

Series DQ, DR, AND DC slip-on drywall frames for 1-3/4" doors are formed from commercial quality cold rolled steel conforming to ASTM A1008...or (optional) hot-dipped galvanized steel conforming to ASTM A924 and A653 - see chart below.

Frames are knocked down, field assembled type. Components have diecut mitered corners that interlock rigidly when field assembled. Single rabbet, double rabbet, and cased opening profiles are sized to fit popular wall thicknesses. Integral door stops are 5/8" high and frame faces are 2" except double rabbet profiles are available with 4" face heads. Adjustable, compression type anchors are welded to jambs and allow frame installation, plumbing and squaring after wallboard is applied (To adjust anchors use Phillips head screw driver). Components have backbend-returns that protect the wall surface during installation. Sill anchoring is by means of screws through dimpled holes in faces ...welded on sill strap anchors are also available (optional).

FIRE DOOR FRAMES

LABELING AGENCIES:

- UNDERWRITERS LABORATORY
- WARNOCK HERSEY
- FACTORY MUTUAL

TEST: UL 10C, UL 10B,
UL 1784, & NFPA 252

• RATING: 20 MIN, 3/4 HR,
OR 1-1/2 HR

• MAX. SIZE: 14 GAGE STEEL
16 GAGE STEEL
40 x 90 SINGLE
80 x 90 PAIR

18 GAGE STEEL
40 x 70 SINGLE
610 x 70 PAIR

Single or double rabbet profiles.
Not all sizes are available in
all ratings.

Hardware Provisions: Frames are handed. Hinge jambs for 1-3/4" doors are mortised for 4-1/2" or 5" high, standard and heavy weight hinges (specify which). 7 gage steel reinforcements are welded in place and are drilled and tapped for fasteners in accordance with ANSI A156.7. Strike jambs for 1-3/4" doors are prepared for 4-7/8" universal or 2-3/4" cylindrical strike in accordance with ANSI A 115.1&2 (specify which). Optional closer reinforcement is a 14 gage steel formed sleeve or 14 gage minimum plate welded in place. 3 door mutes are provide per strike jamb and 2 for double swing heads. Frames for 1-3/8" doors are also available ...ask for details.

Paint: Steel door frames are provided with one coat of oven-cured neutral color primer paint. Primer coat shall conform with ANSI A250.10. The primer coat is a preparatory base for necessary finish painting. "Colorstyle" finish coat is also available from a selection of standard colors (optional). Colorstyle finish is electrostatically applied, oven-cured urethane enamel. Maximum size: 4090 single and 8090 double swing. For accurate color selectors ask for a Ceco Colorstyle chart.

MATERIAL

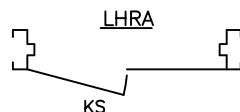
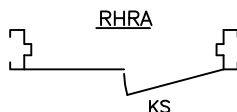
DOOR FRAME MATERIAL	LEVEL	C.R.	GALV	
			A60	G90
18 Gage Steel	Standard Duty	STD	OPT	N/A
16 Gage Steel	Standard, Heavy, or Extra Heavy Duty	STD	OPT	OPT
14 Gage Steel	Maximum Duty	STD	OPT	OPT

18 gage steel for use with 1-3/4" wood doors.

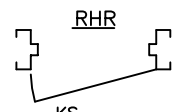
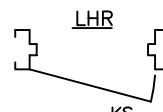
Also available in 18 gage steel for 1-3/8" doors ...Ask for details

PERFORMANCE

Physical Endurance Level:	Meets ANSI A250.4 Performance Test -- 16 & 14 gage steel: Level A (1,000,000 cycles)



INSIDE



"KS" = KEY SIDE

OUTSIDE

SUFFIX "A" = ACTIVE LEAF OF PAIRS

(Conversion: 1" = 25.4 mm, e.g., 1-3/4" = 44.45 mm)

Ceco Door

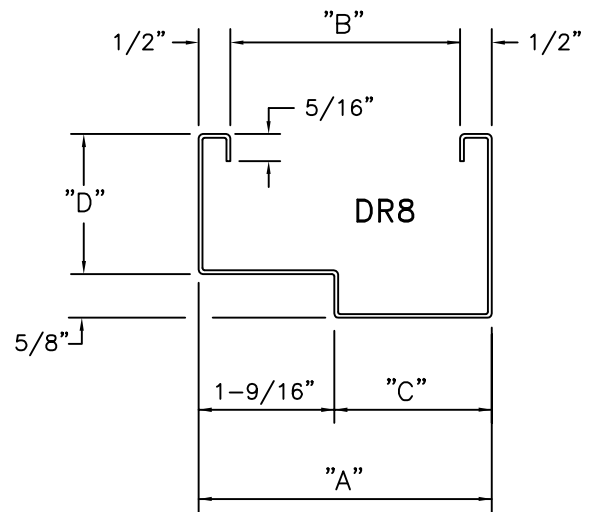
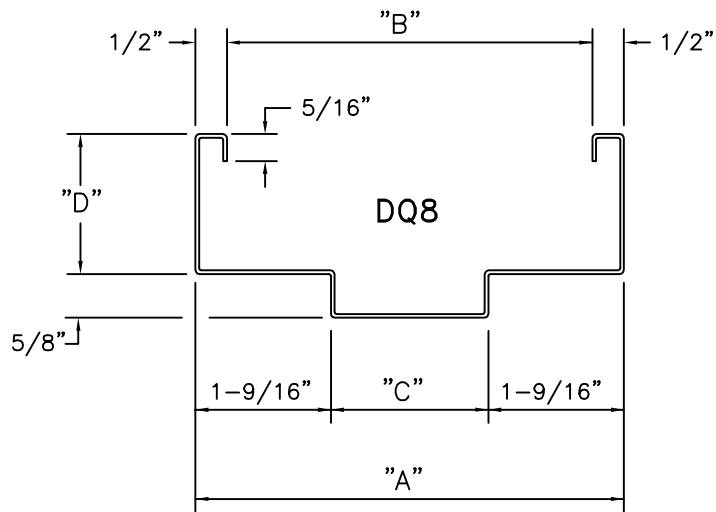
ASSA ABLOY

ASSA ABLOY, the global leader
in door opening solutions.

SERIES DQ8 AND DR8 SLIP-ON DRYWALL FRAMES

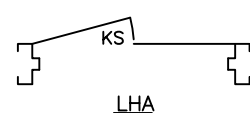
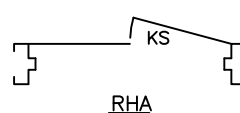
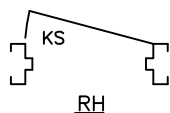
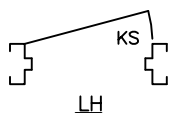
FOR 1-3/8" THICK DOORS

HANDED



(Conversion: 1" = 25.4 mm, e.g., 1-3/4" = 44.45 mm)

PROFILE	A (DEPTH)	B (THROAT)	C (SOFFIT WIDTH)	D (FACE)	
				JAMB	HEAD
SINGLE RABBET	3" thru 5-7/8"	2" thru 4-7/8"	"A" (-) 1-15/16	2"	2"
DOUBLE RABBET	4-1/8" thru 14"	3-1/8" thru 13"	"A" (-) 2(1-15/16)	2"	2" or 4"



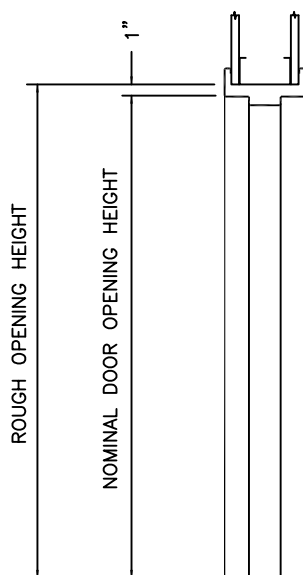
SUFFIX "A" = ACTIVE LEAF OF PAIRS

INSIDE

OUTSIDE

"KS" = KEY SIDE

F6A-2



VERTICAL SECTION

NOTE #1:

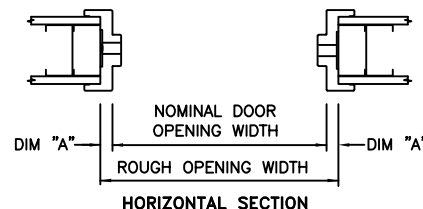
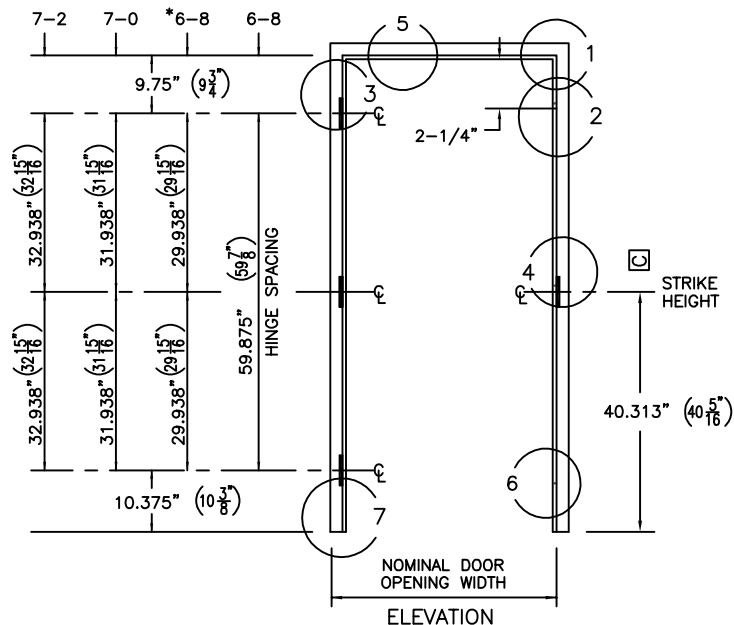
STRIKE PLASTER GUARDS (SNAP-IN TYPE) ARE OPTIONAL.

□ 1" DEEP

- STEEL/WOOD STUD AND DRYWALL CONSTRUCTION METHODS, IN CONJUNCTION WITH FRAME ANCHORAGE, COULD RESULT IN INTERFERENCE BETWEEN THE STUD AND HARDWARE PREP. NOTCHING OF THE STUD COULD RESULT IN COMPROMISING THE STABILITY OF THE FRAME. CONSIDERATION SHOULD BE GIVEN TO SPECIFYING THE HARDWARE SUITABLY SIZED TO FIT THE CONFINES OF A STANDARD FRAME OR SPECIFYING ALTERNATE FRAME PROFILES TO ACCOMMODATE THE HARDWARE.
- IF NECESSARY TO REMOVE, PLASTER GUARDS ARE BEST REMOVED BEFORE FRAME INSTALLATION.

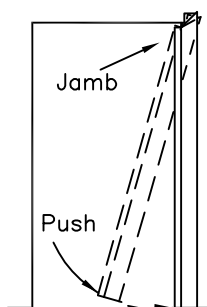
INSTALLATION INSTRUCTIONS

ROUGH OPENING: SINGLE AND DOUBLE RABBET
DOOR OPENING WIDTH PLUS 2"
DOOR OPENING HEIGHT PLUS 1"



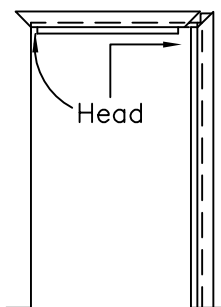
	DIM "A"
SINGLE RABBET	1"
DOUBLE RABBET	1"

STEP 1



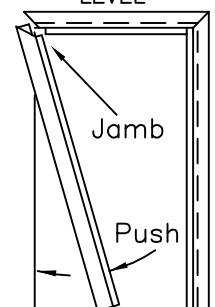
- PUSH TOP OF ONE JAMB OVER THE WALL.
- HOLD TOP OF JAMB IN PLACE, THEN PUSH BOTTOM IN TOWARDS AND OVER WALL.

STEP 2



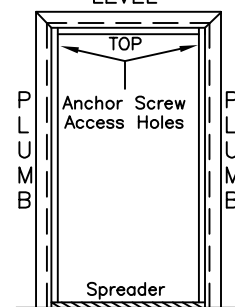
- POSITION FRAME HEAD OVER THE WALL.
- ALIGN HEAD TABS WITH JAMB SLOTS, THEN SLIDE HEAD TOWARD JAMB AND ENGAGE TABS IN SLOTS.

STEP 3 LEVEL



- PUSH TOP OF REMAINING JAMB OVER WALL AND MATE TABS IN SLOTS.
- PUSH BOTTOM OF JAMB IN TOWARDS AND OVER WALL.
- LEVEL HEAD.

STEP 4 LEVEL



- ADJUST PLUMB ANCHORS WITH SCREWDRIVER.
- PLUMB HINGE JAMB AND ANCHOR SILL.
- WITH TEMPORARY SPREADER, ADJUST STRIKE JAMB AND ANCHOR SILL.
- INSTALL MUTES.

(Conversion: 1" = 25.4 mm, e.g., 1-3/4" = 44.45 mm)

Ceco Door

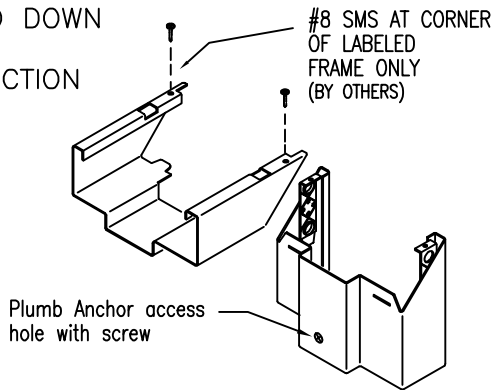
ASSA ABLOY

ASSA ABLOY, the global leader
in door opening solutions.

01/20/14

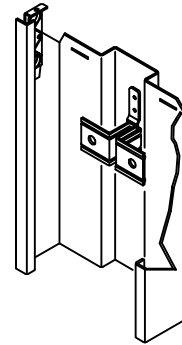
F6A-3

KNOCKED DOWN CORNER CONSTRUCTION



①

ADJUSTABLE PLUMB ANCHOR



ONE EACH JAMB

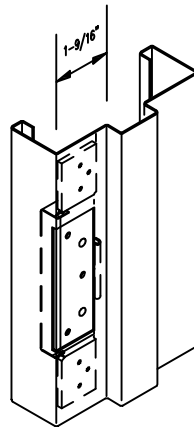
Adjust with screwdriver

②

Dual plumb anchors are applied in depths greater than 8-3/4".

HINGE PREPARATION

3-1/2" X .123
ANSI A156.7 TEMPLATE
12 GAGE STEEL
REINFORCEMENT ONLY.
PLASTER GUARD IS
26 GAGE STEEL.



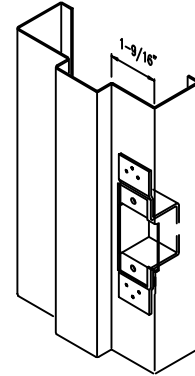
SEE NOTE #1

③

LOCK STRIKE PREPARATION



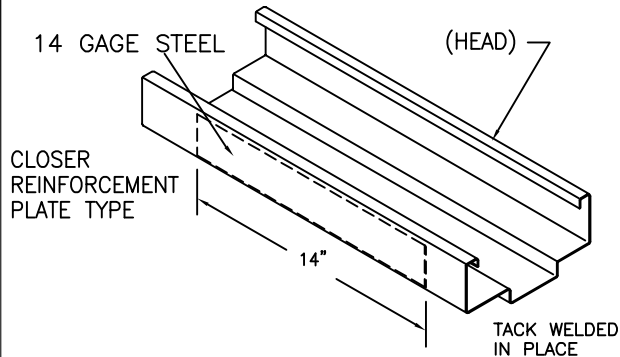
CYLINDRICAL (2-3/4")
ANSI A115.3 TEMPLATE
16 GAGE STEEL
REINFORCING WITH
EXTRUDED SCREW HOLES
EQUAL TO 14 GAGE.



SEE NOTE #1

④

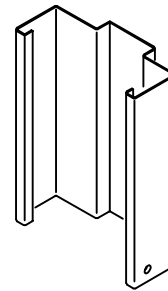
CLOSER REINFORCEMENT (OPTIONAL)



⑤

STANDARD SILL ANCHOR

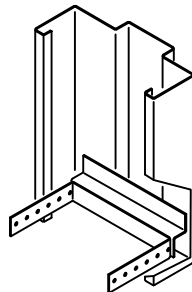
DIMPLED HOLE FOR #10 FH FASTENER. FASTENER IS BY CONTRACTOR AND MUST BE LONG ENOUGH TO ENGAGE STUD.



⑥

OPTIONAL SILL STRAP ANCHOR

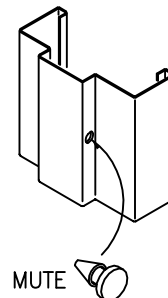
FASTENER IS BY CONTRACTOR AND MUST ENGAGE STUD.



⑦

DOOR SILENCER (MUTE)

RUBBER MUTE
(3) / STRIKE JAMB
(2) / DOUBLE SWING HEAD



MUTE

11/20/13

(Conversion: 1" = 25.4 mm, e.g., 1-3/4" = 44.45 mm)

PRODUCT SPECIFICATIONS:

Steel door frames shall be as manufactured by Ceco Door, Milan, TN USA. They shall conform to the Steel Door Institute guide specification, ANSI A250.8. See chart below for performance classifications.

Series DQ8 and DR8 slip-on drywall frames for 1-3/8" doors are formed from commercial quality cold rolled steel conforming to ASTM A1008...or (optional) hot-dipped galvanized steel conforming to ASTM A924 and A653 - see chart below.

Frames are knocked down, field assembled type. Components have diecut mitered corners that interlock rigidly when field assembled. Single rabbet and double rabbet profiles are sized to fit popular wall thicknesses. Integral door stops are 5/8" high and frame faces are 2" except double rabbet profiles are available with 4" face heads. Adjustable, compression type anchors are welded to jambs and allow frame installation, plumbing and squaring after wallboard is applied (To adjust anchors use Phillips head screw driver). Components have backbend-returns that protect the wall surface during installation. Sill anchoring is by means of screws through dimpled holes in faces ...welded on sill strap anchors are also available (optional).

Hardware Provisions: Frames are handed. Hinge jambs for 1-3/8" doors are mortised for 3-1/2" high, standard weight hinges. 12 gage steel hinge reinforcements are welded in place and are drilled and tapped for fasteners in accordance with ANSI A156.7. Strike jambs for 1-3/8" doors are prepared for 2-3/4" cylindrical strike in accordance with ANSI A115.3. Optional closer reinforcement is a 14 gage minimum plate welded in place. 3 door mutes are provided per strike jamb and 2 for double swing heads.

Paint: Steel door frames are provided with one coat of oven-cured neutral color primer paint. Primer coat shall conform with ANSI A250.10. The primer coat is a preparatory base for necessary finish painting. "Colorstyle" finish coat is also available from a selection of standard colors (optional). Colorstyle finish is electrostatically applied, oven-cured urethane enamel. Maximum size: 3472 single and 6872 double swing. For accurate color selectors ask for a Ceco Colorstyle chart.

STANDARD SIZES NOMINAL DOOR OPENING

WIDTH		HEIGHT
SINGLE	DOUBLE	
2'-0"	4'-0"	6'-8" 7'-0" 7'-2"
2'-4"	4'-8"	
2'-6"	5'-0"	
2'-8"	5'-4"	
2'-10"	5'-8"	
3'-0"	6'-0"	
3'-4"	6'-8"	

FIRE DOOR FRAMES

LABELING AGENCIES:

- UNDERWRITERS LABORATORY
- WARNOCK HERSEY
- FACTORY MUTUAL

TEST: UL 10C, UL 10B,
UL 1784, & NFPA 252

• RATING: 20 MIN, 3/4 HR,
OR 1-1/2 HR

• MAX. SIZE: 16 GAGE STEEL
34 x 72 SINGLE
68 x 72 PAIR
18 GAGE STEEL
34 x 70 SINGLE
68 x 70 PAIR

Single or double rabbet profiles.
Not all sizes are available in
all ratings.

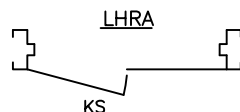
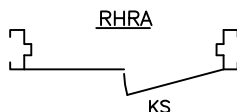
MATERIAL

DOOR FRAME MATERIAL	LEVEL	C.R.	GALV	
			A60	G90
18 Gage Steel	Standard Duty	STD	OPT	N/A
16 Gage Steel	Standard, Heavy, or Extra Heavy Duty	STD	OPT	OPT

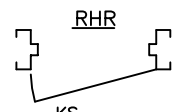
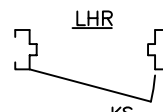
18 gage steel for use with 1-3/8" hollow core wood doors.

PERFORMANCE

Physical Endurance Level:	Meets ANSI A250.4 Performance Test -- 16 gage steel: Level A (1,000,000 cycles)



INSIDE



"KS" = KEY SIDE

OUTSIDE

SUFFIX "A" = ACTIVE LEAF OF PAIRS

(Conversion: 1" = 25.4 mm, e.g., 1-3/4" = 44.45 mm)

Ceco Door

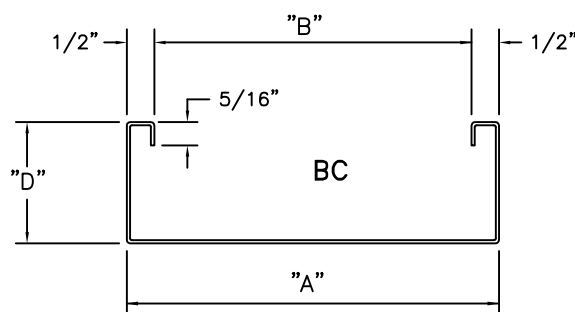
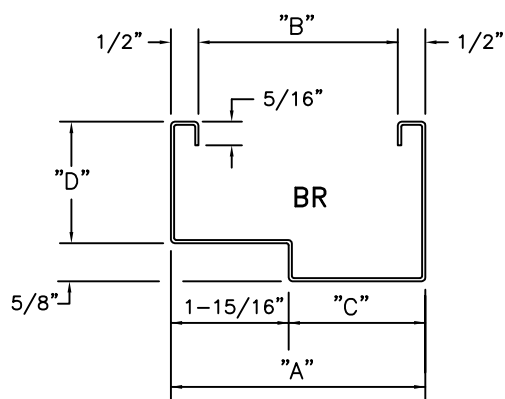
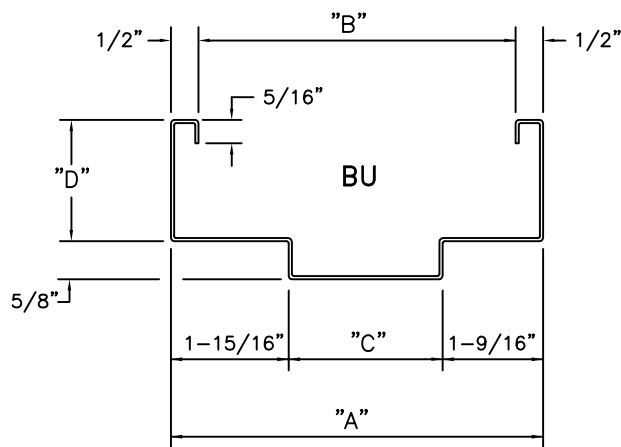
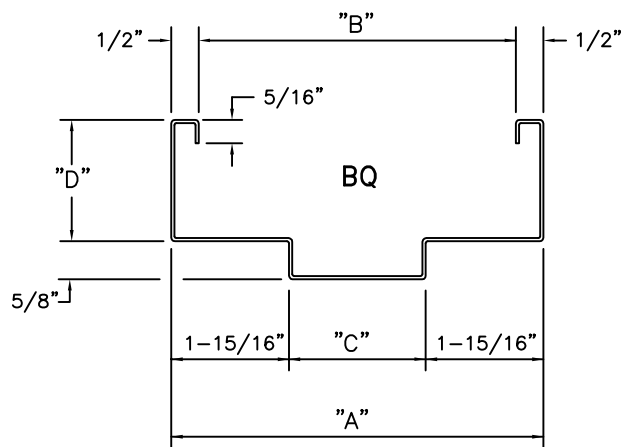
ASSA ABLOY

ASSA ABLOY, the global leader
in door opening solutions.

SERIES BQ, BU, BR, AND BC (BEFORE DRYWALL FRAMES)

FOR 1-3/4" DOORS

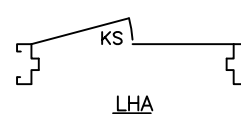
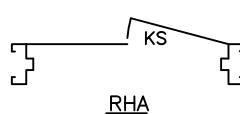
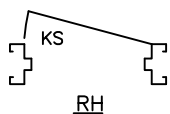
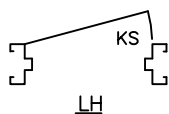
HANDED



(Conversion: 1" = 25.4 mm, e.g., 1-3/4" = 44.45 mm)

PROFILE	A (DEPTH)	B (THROAT)	C (SOFFIT WIDTH)	D (FACE)	
				JAMB	HEAD
SINGLE RABBIT	3" thru 5-7/8"	2" thru 4-7/8"	"A" (-) 1-15/16	2"	2"
DOUBLE RABBIT: BU	4-1/4" thru 17-7/8"	3-1/4" thru 16-7/8"	"A" (-) 2(RABBETS)	1" thru 4"	1" thru 4"
DOUBLE RABBIT: BQ	4-5/8" thru 17-7/8"	3-5/8" thru 16-7/8"	"A" (-) 2(RABBETS)	1" thru 4"	1" thru 4"
CASED OPENING	3" thru 17-7/8"	2" thru 16-7/8"	OMIT	1" thru 4"	1" thru 4"

INSIDE



SUFFIX "A" = ACTIVE LEAF OF PAIRS

OUTSIDE

"KS" = KEY SIDE

STANDARD SIZES NOMINAL DOOR OPENING

WIDTH		HEIGHT
SINGLE	DOUBLE	
2'-0"	4'-0"	6'-8"
2'-4"	4'-8"	
2'-6"	5'-0"	
2'-8"	5'-4"	
2'-10"	5'-8"	7'-0"
3'-0"	6'-0"	7'-2"
3'-4"	6'-8"	7'-10"
3'-6"	7'-0"	8'-0"
3'-8"	7'-4"	9'-0"
3'-10"	7'-8"	10'-0"
4'-0"	8'-0"	

FIRE DOOR FRAMES

LABELING AGENCIES: • UNDERWRITERS LABORATORY • WARNOCK HERSEY • FACTORY MUTUAL	
TEST: UL 10C, UL 10B, UL 1784, & NFPA 252	
RATING: 20 MIN, 3/4 HR, 1-1/2 HR, OR 3 HR.	
MAX. SIZE: 14 GAGE STEEL 16 GAGE STEEL 40 x 90 SINGLE 80 x 90 PAIR 18 GAGE STEEL 40 x 70 SINGLE 610 x 70 PAIR	
Single or double rabbet profiles. Not all sizes, gages, etc., are available in all ratings.	

PRODUCT SPECIFICATIONS:

Steel door frames shall be as manufactured by Ceco Door, Milan, TN. USA. They shall conform to the Steel Door Institute guide specification, ANSI A250.8. See chart below for performance classifications.

Series BQ, BU, BR, and BC before drywall frames for 1-3/4" doors are formed from commercial quality cold rolled steel conforming to ASTM A1008 ...or (optional) hot-dipped galvanized steel conforming to ASTM A924 and A653 - see chart below.

Frames are knocked down, field assembled or welded unit type. Components have diecut mitered corners that interlock rigidly when field assembled. Single rabbet, double rabbet, and cased opening profiles are sized to fit popular wall thicknesses. Integral door stops are 5/8" high and frame faces are 2" except double rabbet profiles are available with 4" face heads. Components have backbend-returns that facilitates installation of wall board. Twist-in or welded jamb-anchors are available for various stud wall conditions; welded floor anchors or extra jamb anchors are furnished at sill (indicate which).

Hardware Provisions: Frames are handed. Hinge jambs for 1-3/4" doors are mortised for 4-1/2" or 5" high, standard and heavy weight hinges (specify which). 7 gage steel reinforcements are welded in place and are drilled and tapped for fasteners in accordance with ANSI A156.7. Strike jambs for 1-3/4" doors are prepared for 4-7/8" universal or 2-3/4" cylindrical strike in accordance with ANSI A 115.1&2 (specify which). Optional closer reinforcement is a 14 gage steel formed steel sleeve or 14 gage minimum plate welded in place. 3 door mutes are provide per strike jamb and 2 for double swing heads. Frames for 1-3/8" doors are also available ...ask for details.

Paint: Steel door frames are provided with one coat of oven-cured neutral color primer paint. Primer coat shall conform with ANSI A250.10. The primer coat is a preparatory base for necessary finish painting. "Colorstyle" finish coat is also available on K.D. frames from a selection of standard colors (optional). Colorstyle finish is electrostatically applied, oven-cured urethane enamel, and shall conform to ANSI A250.3. Maximum size: 40100 single and 80100 double swing. For accurate color selectors ask for a Ceco Colorstyle chart.

MATERIAL

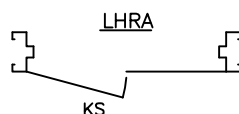
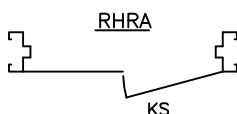
DOOR FRAME MATERIAL	LEVEL	C.R.	GALV	
			A60	G90
18 Gage Steel	Standard Duty	STD	OPT	N/A
16 Gage Steel	Standard, Heavy, or Extra Heavy Duty	STD	OPT	OPT
14 Gage Steel	Maximum Duty	STD	OPT	OPT

18 gage steel for use with 1-3/4" wood doors.

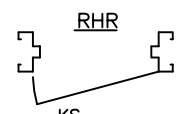
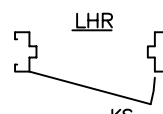
Also available in 18 gage steel for 1-3/8" doors ...Ask for details

PERFORMANCE

Physical Endurance Level:	Meets ANSI A250.4 Performance Test -- 16 & 14 gage steel: Level A (1,000,000 cycles)



INSIDE



"KS" = KEY SIDE

OUTSIDE

SUFFIX "A" = ACTIVE LEAF OF PAIRS

(Conversion: 1" = 25.4 mm, e.g., 1-3/4" = 44.45 mm)

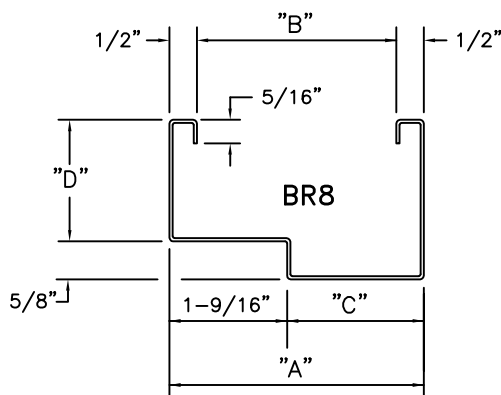
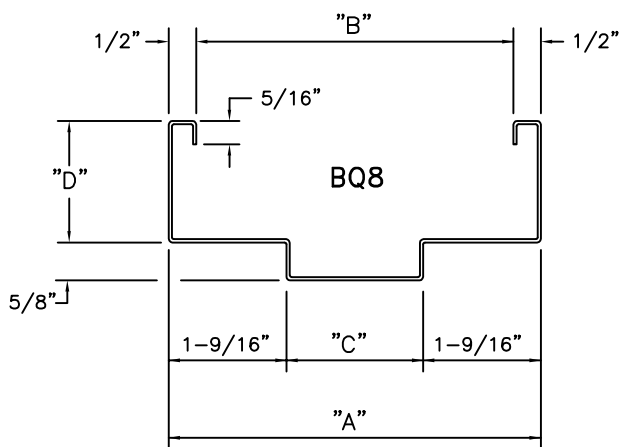
Ceco Door

ASSA ABLOY

SERIES BQ8 AND BR8 (BEFORE DRYWALL FRAMES)

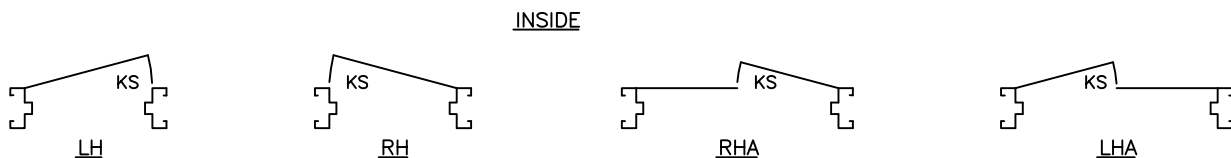
FOR 1-3/8" DOORS

HANDED



(Conversion: 1" = 25.4 mm, e.g., 1-3/4" = 44.45 mm)

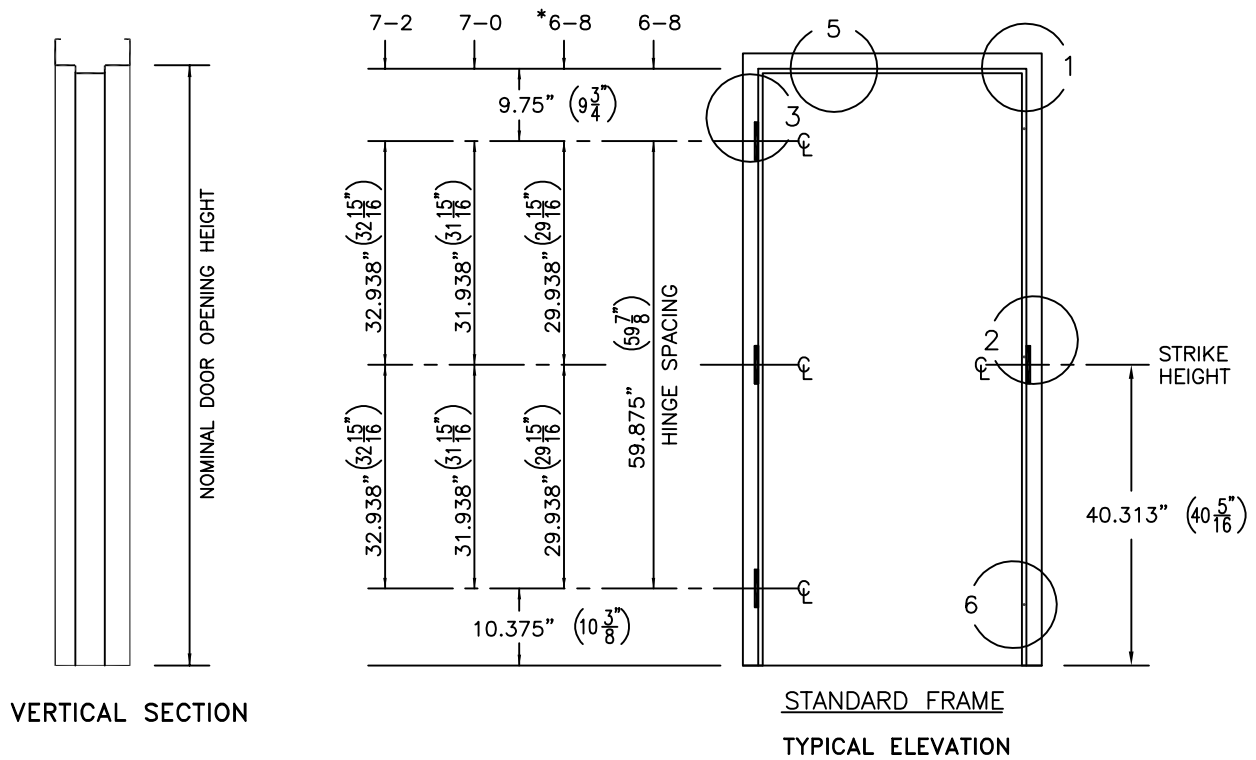
PROFILE	A (DEPTH)	B (THROAT)	C (SOFFIT WIDTH)	D (FACE)	
				JAMB	HEAD
SINGLE RABBET: BR8	3" thru 5-7/8"	2" thru 4-7/8"	"A" (-) 1-15/16"	2"	2"
DOUBLE RABBET: BQ8	3-7/8" thru 17-7/8"	2-7/8" thru 16-7/8"	"A" (-) 2(RABBETS)	1" thru 4"	1" thru 4"



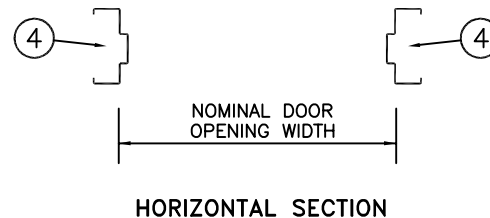
SUFFIX "A" = ACTIVE LEAF OF PAIRS

"KS" = KEY SIDE

F7A-2



- * Labeled 6-8 frames require 3 hinges.
- 2 hinges standard for non-labeled 6-8 frames
- 3 hinges optional for non-labeled 6-8 frames

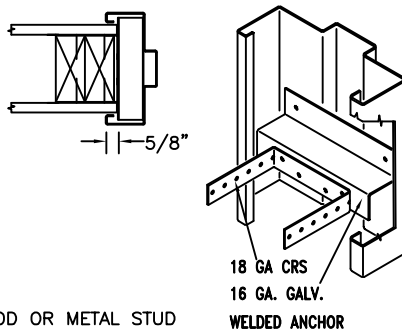


(Conversion: 1" = 25.4 mm, e.g., 1-3/4" = 44.45 mm)

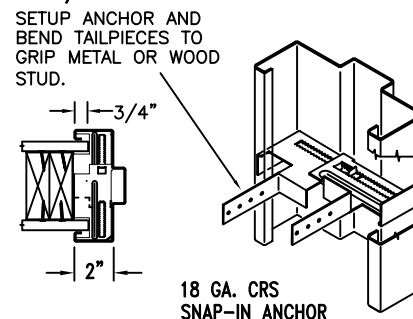
JAMB ANCHOR QUANTITIES

2 PER JAMB FOR HEIGHTS >3/6 THRU 5/0 AND ONE FLOOR ANCHOR
 3 PER JAMB FOR HEIGHTS >5/0 THRU 7/2 AND ONE FLOOR ANCHOR
 ONE ADDITIONAL JAMB ANCHOR FOR EACH ADDITIONAL TWO FEET IN HEIGHT OR FRACTION THEREOF
 ONE ADDITIONAL JAMB ANCHOR IN LIEU OF FLOOR ANCHOR FOR EXISTING STUDS AND/OR WALLS.

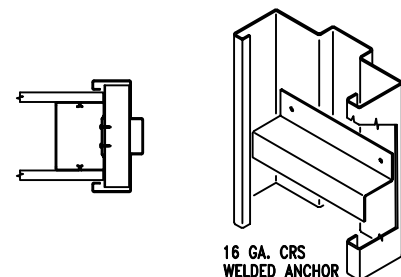
WOOD STUD "Z" STRAP ANCHOR WSZS (RECESSED)



ADJUSTABLE ANCHOR FOR STUD WALLS ADJ/STUD



METAL STUD "Z" ANCHOR MSZ1



3-3/4" THRU 8-3/4" DEPTH

CecoDoor
ASSA ABLOY

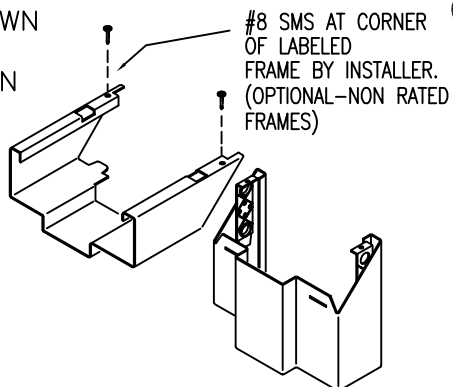
WOOD OR METAL STUD MAY BE USED.

ASSA ABLOY, the global leader in door opening solutions.

11/20/13

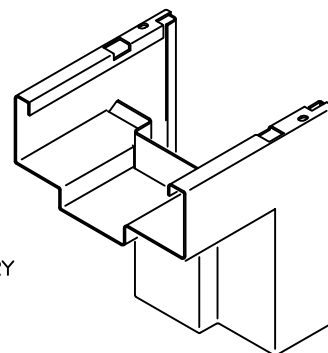
F7A-3

KNOCKED DOWN CORNER CONSTRUCTION



①

WELDED CORNERS



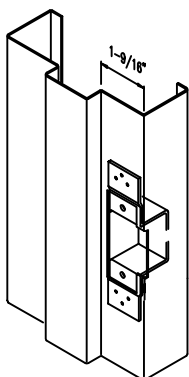
①

FRAME IS SETUP AND WELDED WITH TEMPORARY SPREADER AT SILL.

LOCK STRIKE PREPARATION



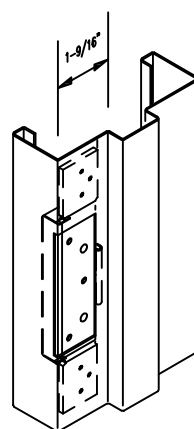
CYLINDRICAL (2-3/4") ANSI A115.3 TEMPLATE 16 GAGE STEEL REINFORCING WITH EXTRUDED SCREW HOLES EQUAL TO 14 GAGE.



②

HINGE PREPARATION

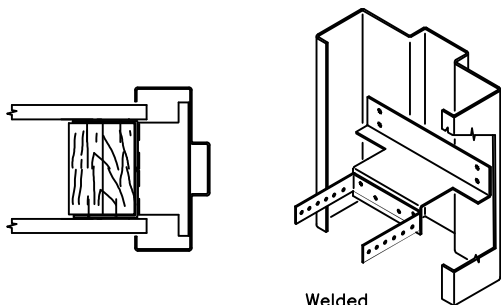
3-1/2" X .123 ANSI A156.7 TEMPLATE ONLY. 12 GAGE STEEL REINFORCEMENT. PLASTER GUARD IS 26 GAGE STEEL.



③

BACKSET: 5/16"

WOOD STUD "Z" STRAP ANCHOR WSZS (FLUSH)



Welded

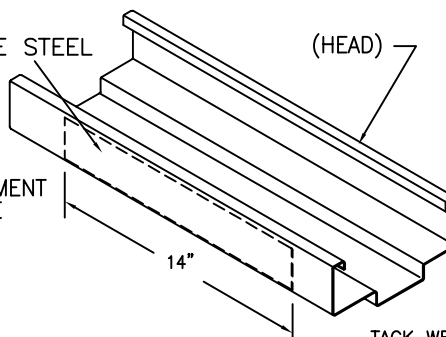
④

CLOSER REINFORCEMENT (OPTIONAL)

14 GAGE STEEL

(HEAD)

CLOSER REINFORCEMENT PLATE TYPE



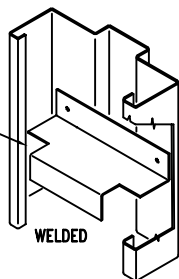
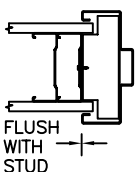
14"

TACK WELDED IN PLACE

⑤

METAL STUD "Z" ANCHOR MSZ2 (FLUSH)

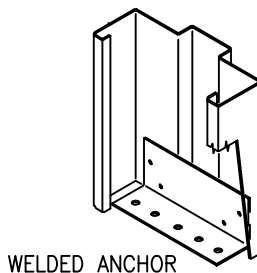
DESIGNATE WALL CONFIGURATION SO THAT PROPER POCKET CAN BE PROVIDED



WELDED

④

SPECIAL SIZE FLOOR ANCHOR SA



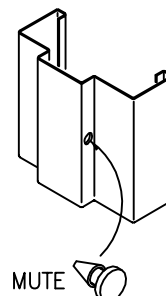
WELDED ANCHOR

ONE PIECE

④

DOOR SILENCER (MUTE)

RUBBER MUTE (3) / STRIKE JAMB (2) / DOUBLE SWING HEAD



⑥

(Conversion: 1" = 25.4 mm, e.g., 1-3/4" = 44.45 mm)

CecoDoor

ASSA ABLOY

STANDARD SIZES NOMINAL DOOR OPENING

WIDTH		HEIGHT
SINGLE	DOUBLE	
2'-0"	4'-0"	6'-8" 7'-0" 7'-2"
2'-4"	4'-8"	
2'-6"	5'-0"	
2'-8"	5'-4"	
2'-10"	5'-8"	
3'-0"	6'-0"	
3'-4"	6'-8"	

FIRE DOOR FRAMES

LABELING AGENCIES:

- UNDERWRITERS LABORATORY
- WARNOCK HERSEY

TEST: UL 10C, UL 10B,
UL 1784, & NFPA 252

• RATING: 20 MIN, 3/4 HR,
1-1/2 HR, OR 3 HR.

• MAX. SIZE: 16 GAGE STEEL
34 x 72 SINGLE
68 x 72 PAIR
18 GAGE STEEL
34 x 70 SINGLE
68 x 70 PAIR

Single or double rabbet profiles.
Not all sizes, gages, etc., are
available in all ratings.

PRODUCT SPECIFICATIONS:

Steel door frames shall be as manufactured by Ceco Door, Milan, TN. USA. They shall conform to the Steel Door Institute guide specification, ANSI A250.8. See chart below for performance classifications.

Series BQ8 and BR8 before drywall frames for 1-3/8" doors are formed from commercial quality cold rolled steel conforming to ASTM A1008 ...or (optional) hot-dipped galvanized steel conforming to ASTM A924 and A653 - see chart below.

Frames are knocked down, field assembled or welded unit type. Components have diecut mitered corners that interlock rigidly when field assembled. Single rabbet and double rabbet profiles are sized to fit popular wall thicknesses. Integral door stops are 5/8" high and frame faces are 2" standard. Double rabbet profiles are available with 4" face heads (optional). Components have backbend-returns that facilitates installation of wall board. Twist-in or welded jamb-anchors are available for various stud wall conditions; welded floor anchors or extra jamb anchors are furnished at sill (indicate which).

Hardware Provisions: Frames are handed. Hinge jambs for 1-3/8" doors are mortised for 3-1/2" high, standard weight hinges only. 12 gage steel hinge reinforcements are welded in place and are drilled and tapped for fasteners in accordance with ANSI A156.7. Strike jambs for 1-3/8" doors are prepared for 2-3/4" cylindrical strike in accordance with ANSI A115.3. Optional closer reinforcement is a 14 gage minimum plate welded in place. 3 door mutes are provide per strike jamb and 2 for double swing heads.

Paint: Steel door frames are provided with one coat of oven-cured neutral color primer paint. Primer coat shall conform with ANSI A250.10. The primer coat is a preparatory base for necessary finish painting. "Colorstyle" finish coat is also available on K.D. frames from a selection of standard colors (optional). Colorstyle finish is electrostatically applied, oven-cured urethane enamel, and shall conform to ANSI A250.3. For accurate color selectors ask for a Ceco Colorstyle chart.

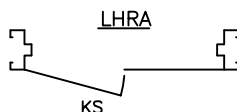
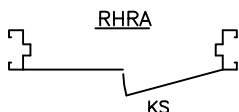
MATERIAL

DOOR FRAME MATERIAL	LEVEL	C.R.	GALV	
			A60	G90
18 Gage Steel	Standard Duty	STD	OPT	N/A
16 Gage Steel	Standard, Heavy, or Extra Heavy Duty	STD	OPT	OPT

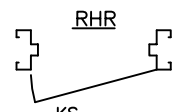
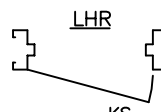
18 gage steel for use with 1-3/8" hollow core wood doors.

PERFORMANCE

Physical Endurance Level:	Meets ANSI A250.4 Performance Test -- 16 gage steel: Level A (1,000,000 cycles)



INSIDE



"KS" = KEY SIDE

OUTSIDE

SUFFIX "A" = ACTIVE LEAF OF PAIRS

(Conversion: 1" = 25.4 mm, e.g., 1-3/4" = 44.45 mm)

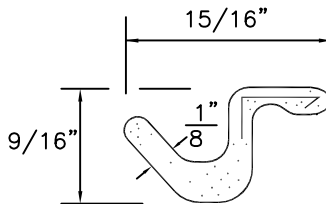
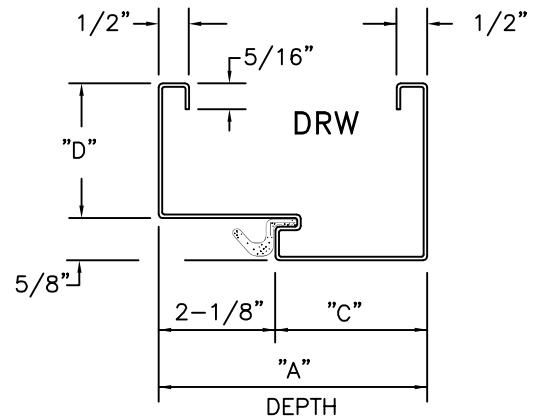
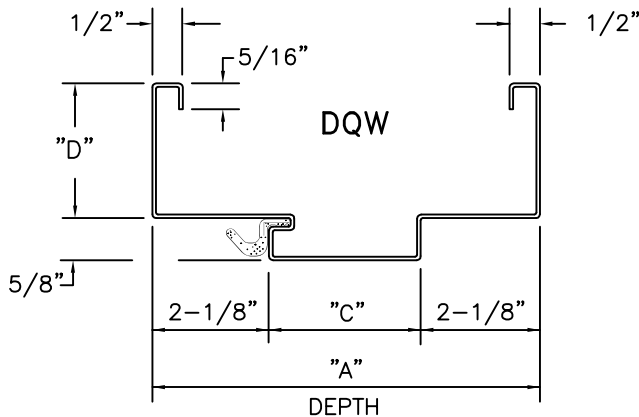
Ceco Door

ASSA ABLOY

SERIES DQW AND DRW GASKETED STEEL FRAMES

FOR 1-3/4" THICK DOORS

SLIP-ON DRYWALL APPLICATION, HANDED

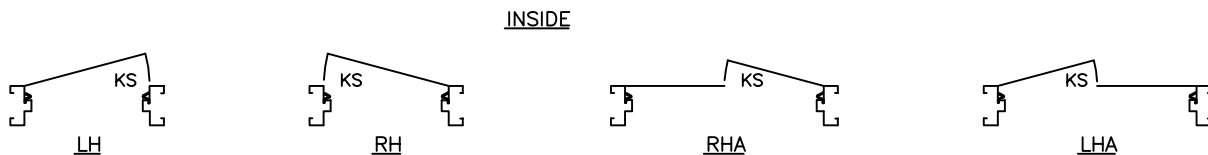


FOAM FILLED GASKET
COMPRESSION TYPE
FIRE RATED

NOTE: Gasket ships loose
when frame is prime painted.
do not install gasket until frame
has been finish painted.

(Conversion: 1" = 25.4 mm, e.g., 1-3/4" = 44.45 mm)

PROFILE	A (DEPTH)	B (THROAT)	C (SOFFIT WIDTH)	D (FACE)	
				JAMB	HEAD
SINGLE RABBIT	3-3/8" thru 6"	2-3/8" thru 5"	"A" (-) 2-1/8"	2"	2"
DOUBLE RABBIT	5-3/4" thru 14"	4-3/4" thru 13"	"A" (-) 2(2-1/8")	2"	2" or 4"

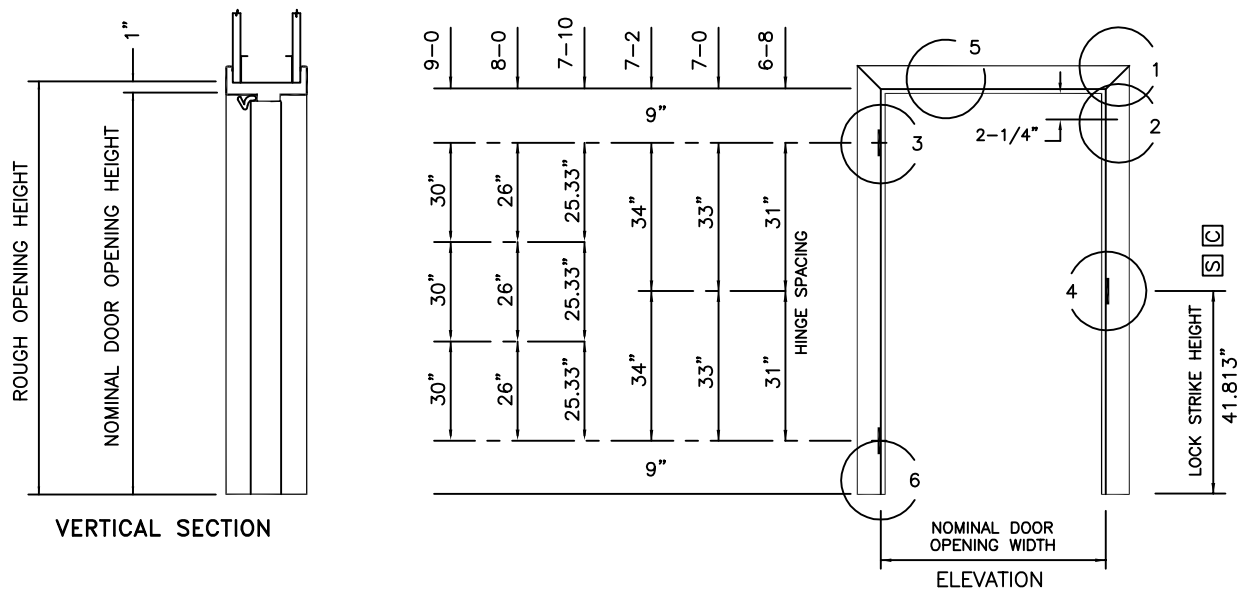


SUFFIX "A" = ACTIVE LEAF OF PAIRS

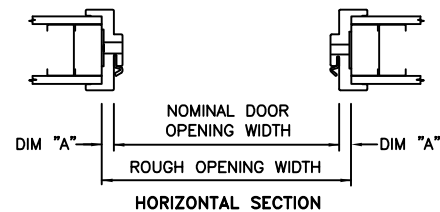
"KS" = KEY SIDE

FB-2

Hardware locations shown match Ceco standard doors.
Double rabbet profile is shown, single rabbet profile is similar.



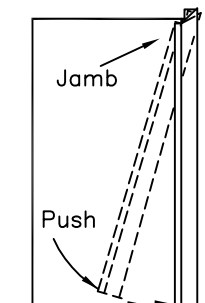
- STEEL/WOOD STUD AND DRYWALL CONSTRUCTION METHODS, IN CONJUNCTION WITH FRAME ANCHORAGE, COULD RESULT IN INTERFERENCE BETWEEN THE STUD AND HARDWARE PREP. NOTCHING OF THE STUD COULD RESULT IN COMPROMISING THE STABILITY OF THE FRAME. CONSIDERATION SHOULD BE GIVEN TO SPECIFYING THE HARDWARE SUITABLY SIZED & THE ANCHOR TYPE TO FIT THE CONFINES OF A STANDARD FRAME OR SPECIFYING ALTERNATE FRAME PROFILES TO ACCOMMODATE THE HARDWARE.
- IF NECESSARY TO REMOVE, PLASTER GUARDS ARE BEST REMOVED BEFORE FRAME INSTALLATION.



INSTALLATION INSTRUCTIONS
ROUGH OPENING: SINGLE AND DOUBLE RABBET
DOOR OPENING HEIGHT PLUS 1"
DOOR OPENING WIDTH PLUS 2"

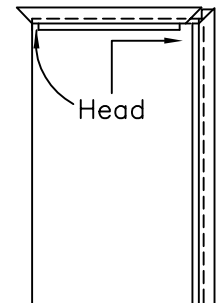
	DIM "A"
SINGLE RABBET	1"
DOUBLE RABBET	1"
CASED OPENING	1-3/8"

STEP 1



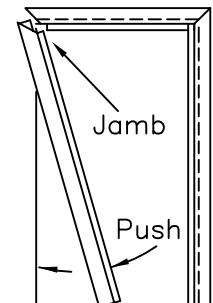
- PUSH TOP OF ONE JAMB OVER THE WALL.
- HOLD TOP OF JAMB IN PLACE, THEN PUSH BOTTOM IN TOWARDS AND OVER WALL.

STEP 2



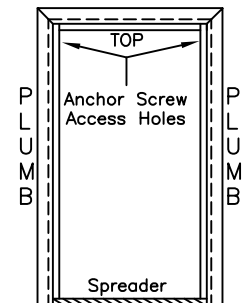
- POSITION FRAME HEAD OVER THE WALL.
- ALIGN HEAD TABS WITH JAMB SLOTS, THEN SLIDE HEAD TOWARD JAMB AND ENGAGE TABS IN SLOTS.

STEP 3
LEVEL



- PUSH TOP OF REMAINING JAMB OVER WALL AND MATE TABS IN SLOTS.
- PUSH BOTTOM OF JAMB IN TOWARDS AND OVER WALL.
- LEVEL HEAD.

STEP 4
LEVEL



- ADJUST PLUMB ANCHORS WITH SCREWDRIVER.
- PLUMB HINGE JAMB AND ANCHOR SILL.
- WITH TEMPORARY SPREADER, ADJUST STRIKE JAMB AND ANCHOR SILL.
- INSTALL MUTES.

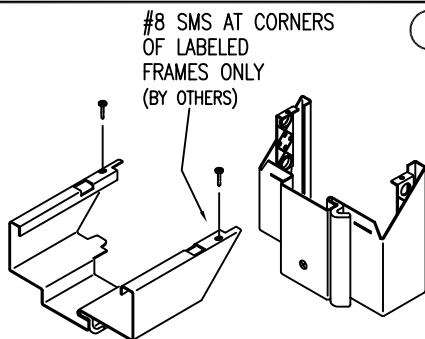
(Conversion: 1" = 25.4 mm, e.g., 1-3/4" = 44.45 mm)

CecoDoor

ASSA ABLOY

F8-3

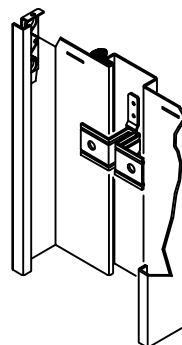
KNOCKED DOWN CORNER CONSTRUCTION



Components are shipped "knocked down" and assembled at the job site

①

ADJUSTABLE PLUMB ANCHOR



ONE EACH JAMB

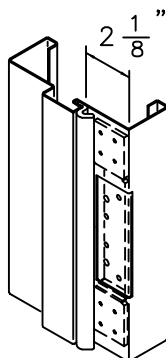
Adjust with screwdriver

Dual plumb anchors are applied in depths greater than 8-3/4".

②

HINGE PREPARATION

4-1/2" x .134" OR
4-1/2" x .180"
ANSI A156.7 TEMPLATE
7 GAGE STEEL REINFORCEMENT

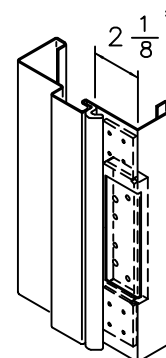


SEE NOTE #1

③

HINGE PREPARATION

5" x .146" OR
5" x .190"
ANSI A156.7 TEMPLATE
7 GAGE STEEL REINFORCEMENT



SEE NOTE #1

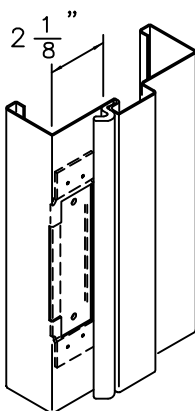
③

LOCK STRIKE PREPARATION



UNIVERSAL (4-7/8")
ANSI A115.1 & 2
TEMPLATE
12 GAGE STEEL REINFORCEMENT

SEE NOTE #1



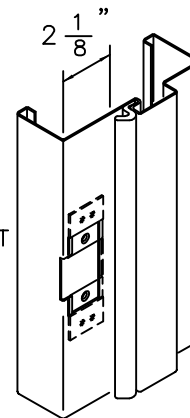
④

LOCK STRIKE PREPARATION (OPTIONAL)



CYLINDRICAL (2-3/4")
ANSI A115.2 TEMPLATE
16 GAGE STEEL REINFORCEMENT
(Holes are drawn to provide 1/8" minimum thread depth)
ALSO AVAILABLE WITHOUT LIP NOTCH FOR DEADBOLTS.

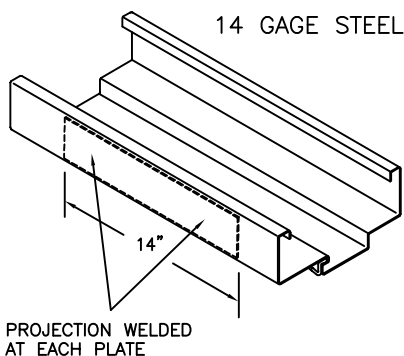
SEE NOTE #1



④

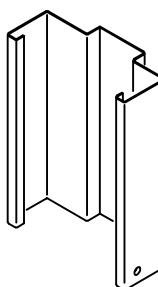
CLOSER REINFORCEMENT (OPTIONAL)

⑤



STANDARD SILL ANCHOR

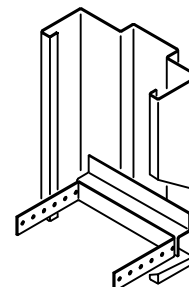
DIMPLED HOLE FOR #10 FH FASTENER. FASTENER IS BY CONTRACTOR AND MUST BE LONG ENOUGH TO ENGAGE STUD.



⑥

OPTIONAL SILL STRAP ANCHOR

FASTENER IS BY CONTRACTOR AND MUST ENGAGE STUD.



⑥

01/15/14

(Conversion: 1" = 25.4 mm, e.g., 1-3/4" = 44.45 mm)

STANDARD SIZES NOMINAL DOOR OPENING

WIDTH		HEIGHT
SINGLE	DOUBLE	
2'-0"	4'-0"	6'-8"
2'-4"	4'-8"	
2'-6"	5'-0"	7'-0"
2'-8"	5'-4"	7'-2"
2'-10"	5'-8"	7'-10"
3'-0"	6'-0"	8'-0"
3'-4"	6'-8"	9'-0"
3'-6"	7'-0"	
3'-8"	7'-4"	
3'-10"	7'-8"	
4'-0"	8'-0"	

FIRE DOOR FRAMES

LABELING AGENCY: • WARNOCK HERSEY • UNDERWRITERS LABORATORY	
TEST: UL 10C, UL 10B, UL 1784, & NFPA 252	
RATING: 20 MIN, 3/4 HR, OR 1-1/2 HR	
MAX. SIZE: 14 GAGE STEEL 16 GAGE STEEL 40 x 90 SINGLE 80 x 90 PAIR 18 GAGE STEEL 40 x 70 SINGLE 610 x 70 PAIR	
Single or double rabbet profiles. Not all sizes are available in all ratings.	

PRODUCT SPECIFICATIONS:

Steel door frames shall be as manufactured by Ceco Door, Milan, TN USA. They shall conform to the Steel Door Institute guide specification, ANSI A250.8. See chart below for performance classifications.

Series DQW and DRW slip-on drywall frames for 1-3/4" doors are formed from commercial quality cold rolled steel conforming to ASTM A1008 ...or (optional) hot-dipped galvanized steel conforming to ASTM A924 and A653 - see chart below

Frames are knocked down, field assembled type. Components have diecut mitered corners that interlock rigidly when field assembled. Single rabbet and double rabbet profiles are sized to fit wall thicknesses from 2-5/8" thru 13" (in 1/8" increments). Door stops are 5/8" high and have an integral kerf with foam filled, fire rated, compression type gasket (weatherstrip). Frame faces are 2" except double rabbet profiles are available with 4" face heads. Adjustable, compression type anchors are welded to jambs and allow frame installation, plumbing and squaring after wallboard is applied (To adjust anchors use Phillips head screw driver). Components have backbend-returns that protect the wall surface during installation. Sill anchoring is by means of screws through dimpled holes in faces ...welded on sill strap anchors are also available (optional).

Hardware Provisions: Frames are handed. Hinge jambs for 1-3/4" doors are mortised for 4-1/2" or 5" high, standard and heavy weight hinges (specify which). 7 gage steel reinforcements are welded in place and are drilled and tapped for fasteners in accordance with ANSI A156.7. Strike jambs for 1-3/4" doors are prepared for 4-7/8" universal or 2-3/4" cylindrical strike in accordance with ANSI A 115.1&2 (specify which). Optional closer reinforcement is a 14 gage minimum steel plate welded in place. Frames for 1-3/8" doors are also available ...ask for details.

Paint: Steel door frames are provided with one coat of oven-cured neutral color primer paint. Primer coat shall conform with ANSI A250.10. The primer coat is a preparatory base for necessary finish painting. "Colorstyle" finish coat is also available from a selection of standard colors (optional). Colorstyle finish is electrostatically applied, oven-cured urethane enamel, and shall conform to ANSI A250.3. Maximum size: 4090 single and 8090 double swing. For accurate color selectors ask for a Ceco Colorstyle chart.

MATERIAL

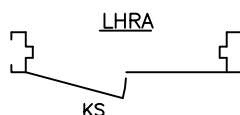
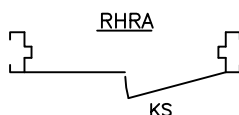
DOOR FRAME MATERIAL	LEVEL	C.R.	GALV	
			A60	G90
18 Gage Steel	Standard Duty	STD	OPT	N/A
16 Gage Steel	Standard, Heavy, or Extra Heavy Duty	STD	OPT	OPT
14 Gage Steel	Maximum Duty	STD	OPT	OPT

18 gage steel for use with 1-3/4" wood doors.

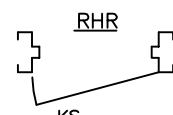
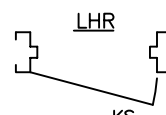
Also available in 18 gage steel for 1-3/8" doors ...Ask for details

PERFORMANCE

Physical Endurance Level:	Meets ANSI A250.4 Performance Test -- 16 & 14 gage steel: Level A (1,000,000 cycles)



INSIDE



"KS" = KEY SIDE

OUTSIDE

SUFFIX "A" = ACTIVE LEAF OF PAIRS

(Conversion: 1" = 25.4 mm, e.g., 1-3/4" = 44.45 mm)

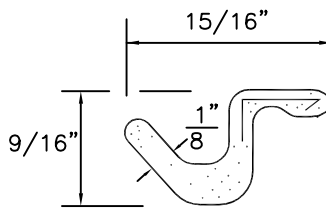
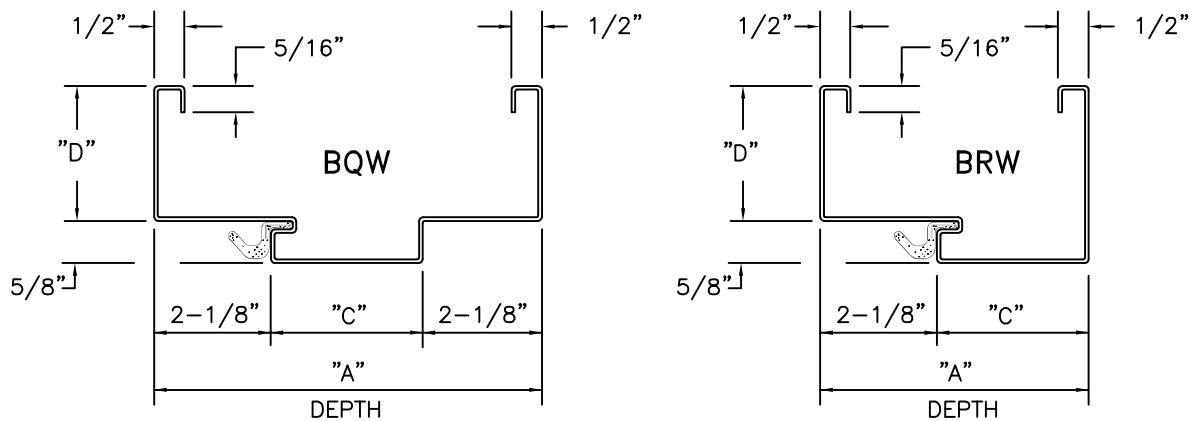


ASSA ABLOY, the global leader
in door opening solutions.

SERIES BQW AND BRW GASKETED STEEL FRAMES

FOR 1-3/4" THICK DOORS

BEFORE DRYWALL APPLICATION, HANDED

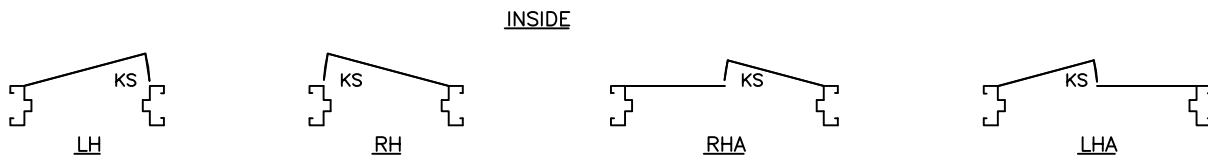


FOAM FILLED GASKET
COMPRESSION TYPE
FIRE RATED

NOTE: GASKET SHIPS LOOSE
WHEN FRAME IS PRIME PAINTED.
DO NOT INSTALL GASKET UNTIL FRAME
HAS BEEN FINISH PAINTED.

(Conversion: 1" = 25.4 mm, e.g., 1-3/4" = 44.45 mm)

PROFILE	A (DEPTH)	B (THROAT)	C (SOFFIT WIDTH)	DIMENSION "D" STD. FACE SIZES	
				JAMB	HEAD
SINGLE RABBIT	3-3/8" thru 6"	2-3/8" thru 5"	"A" (-) 2-1/8"	2"	2"
DOUBLE RABBIT	5-1/2" thru 14"	4-1/2" thru 13"	"A" (-) 2(2-1/8")	1" thru 4"	1" thru 4"



SUFFIX "A" = ACTIVE LEAF OF PAIRS

"KS" = KEY SIDE

STANDARD SIZES NOMINAL DOOR OPENING

WIDTH		HEIGHT
SINGLE	DOUBLE	
2'-0"	4'-0"	6'-8"
2'-4"	4'-8"	
2'-6"	5'-0"	7'-0"
2'-8"	5'-4"	
2'-10"	5'-8"	7'-2"
3'-0"	6'-0"	
3'-4"	6'-8"	8'-0"
3'-6"	7'-0"	
3'-8"	7'-4"	10'-0"
3'-10"	7'-8"	
4'-0"	8'-0"	

FIRE DOOR FRAMES

LABELING AGENCIES:

- UNDERWRITERS LABORATORY
- WARNOCK HERSEY

TEST: UL 10C, UL 10B,
UL 1784, & NFPA 252

• RATING: 20 MIN, 3/4 HR,
1-1/2 HR, OR 3 HR.

• MAX. SIZE: 14 GAGE STEEL
16 GAGE STEEL
40 x 90 SINGLE
80 x 90 PAIR

18 GAGE STEEL
40 x 70 SINGLE
610 x 70 PAIR

Single or double rabbet profiles.
Not all sizes & gauges are
available in all ratings.

PRODUCT SPECIFICATIONS:

Steel door frames shall be as manufactured by Ceco Door, Milan, TN. USA. They shall conform to the Steel Door Institute guide specification, ANSI A250.8. See chart below for performance classifications.

Series BQW, BRW before drywall frames for 1-3/4" doors are formed from commercial quality cold rolled steel conforming to ASTM A1008 ...or (optional) hot-dipped galvanized steel conforming to ASTM A924 and A653 - see chart below.

Frames are knocked down, field assembled or welded unit type. Components have die cut mitered corners that interlock rigidly when field assembled. Single and double rabbet profiles are sized to fit popular wall thicknesses. Integral door stops are 5/8" high and frame faces are 2" except double rabbet profiles are available with 4" face heads, as standards. Custom face frames are available. Components have backbend-returns that facilitates installation of wall board. Twist-in or welded jamb-anchors are available for various stud wall conditions; welded floor anchors or extra jamb anchors are furnished at sill (indicate which).

Hardware Provisions: Frames are handed. Hinge jambs for 1-3/4" doors are mortised for 4-1/2" or 5" high, standard and heavy weight hinges (specify which). 7 gage steel reinforcements are welded in place and are drilled and tapped for fasteners in accordance with ANSI A156.7. Strike jambs for 1-3/4" doors are prepared for 4-7/8" universal or 2-3/4" cylindrical strike in accordance with ANSI A 115.1&2 (specify which). Optional closer reinforcement is a 14 gage steel formed sleeve or 14 gage minimum plate welded in place. 3 door mutes are provided per strike jamb and 2 for double swing heads. Frames for 1-3/8" doors are also available ...ask for details.

Paint: Steel door frames are provided with one coat of oven-cured neutral color primer paint. Primer coat shall conform to ANSI A250.10. The primer coat is a preparatory base for necessary finish painting. "Colorstyle" finish coat is also available on K.D. frames from a selection of standard colors (optional). Colorstyle finish is electrostatically applied, oven-cured urethane enamel, and shall conform to ANSI A250.3. Maximum size: 40100 single and 80100 double swing. For accurate color selectors ask for a Ceco Colorstyle chart.

MATERIAL

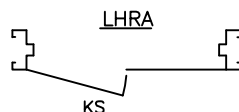
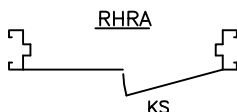
DOOR FRAME MATERIAL	LEVEL	C.R.	GALV	
			A60	G90
18 Gage Steel	Standard Duty	STD	OPT	N/A
16 Gage Steel	Standard, Heavy, or Extra Heavy Duty	STD	OPT	OPT
14 Gage Steel	Maximum Duty	STD	OPT	OPT

18 gage steel for use with 1-3/4" wood doors.

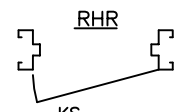
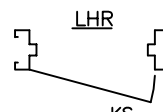
Also available in 18 gage steel for 1-3/8" doors ...Ask for details

PERFORMANCE

Physical Endurance Level:	Meets ANSI A250.4 Performance Test -- 16 & 14 gage steel: Level A (1,000,000 cycles)



INSIDE



"KS" = KEY SIDE

OUTSIDE

SUFFIX "A" = ACTIVE LEAF OF PAIRS

(Conversion: 1" = 25.4 mm, e.g., 1-3/4" = 44.45 mm)

Ceco Door

ASSA ABLOY

STANDARD SIZES NOMINAL DOOR OPENING

WIDTH		HEIGHT
SINGLE	DOUBLE	
2'-0"	4'-0"	6'-8" 7'-0" 7'-2" 7'-10" 8'-0"
2'-4"	4'-8"	
2'-6"	5'-0"	
2'-8"	5'-4"	
2'-10"	5'-8"	
3'-0"	6'-0"	
3'-4"	6'-8"	
3'-6"	7'-0"	
3'-8"	7'-4"	
3'-10"	7'-8"	
4'-0"	8'-0"	

FIRE DOOR FRAMES

LABELING AGENCY:

- UNDERWRITERS LABORATORY
- WARNOCK HERSEY

TEST: UL 10C, UL 10B,
UL 1784, & NFPA 252

- RATING: 20 MIN, 3/4 HR,
1 HR, 1-1/2 HR, OR 3 HR

- MAX. SIZE: 40 x 80 SINGLE
80 x 80 PAIR

Not all ratings are available
in all sizes, elevations, and
materials.
Hourly ratings are not
shown on label unless rating
is less than 3 hours.

PRODUCT SPECIFICATIONS:

Steel door frames shall be as manufactured by Ceco Door Products, Milan, TN or Mason City, IA, USA. They shall conform to the Steel Door Institute guide specification, ANSI A250.8. See chart below for performance classifications.

Series SQW and SRW frames for 1-3/4" doors are formed from commercial quality cold rolled steel conforming to ASTM A1008 ...or (optional) hot-dipped galvanized steel conforming to ASTM A924 and A653 - see chart below.

Frames are knocked down (K.D.) field assembled type or welded unit type. Head and jamb members of K.D. frames have diecut mitered corners that interlock rigidly when field assembled. Door stops are 5/8" high and have an integral kerf with foam filled, fire rated, compression type gasket (weatherstrip). Single or double rabbet profile sizes are available in depths from 3-5/8" thru 14" (in 1/8" increments). Twist-in anchors are available for new masonry, wood stud, metal stud or existing opening wall conditions (indicate which). Welded floor anchors or extra jamb anchors are provided to anchor sill. Welded-in jamb anchors are also available.

Hardware Provisions: Frames are handed. Hinge jambs are mortised for 4-1/2" or 5" high, standard and heavy weight hinges (specify which). 7 gage steel reinforcements are welded in place and are drilled and tapped for fasteners in accordance with ANSI A156.7. The strike jamb is prepared for 4-7/8" universal or 2-3/4" cylindrical strike in accordance with ANSI A 115.1&2 (specify which). Plaster guards are 26 gage steel. Optional hardware reinforcement (for O/H closer or holder) is 14 gage minimum steel welded in place.

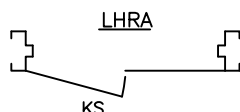
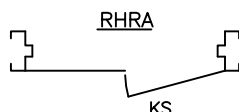
Paint: Steel door frames are provided with one coat of oven-cured neutral color primer paint. Primer coat shall conform with ANSI A250.10. The primer coat is a preparatory base for necessary finish painting. "Colorstyle" finish coat is also available from a selection of standard colors (optional). Colorstyle finish is electrostatically applied, oven-cured urethane enamel, and shall conform to ANSI A250.3. Maximum size: 4080 single and 8080 double swing. For accurate color selectors ask for a Ceco Colorstyle chart.

MATERIAL

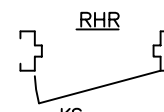
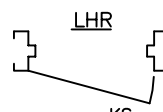
DOOR FRAME MATERIAL	LEVEL	C.R.	GALV	
			A60	G90
16 Gage Steel	Standard, Heavy, or Extra Heavy Duty	STD	OPT	OPT
14 Gage Steel	Maximum Duty	STD	OPT	OPT

PERFORMANCE

Physical Endurance Level:	Meets ANSI A250.4 Performance Test -- 16 & 14 gage steel: Level A (1,000,000 Cycles)



INSIDE



"KS" = KEY SIDE

OUTSIDE

"SUFFIX"A" = ACTIVE LEAF OF PAIRS

(Conversion: 1" = 25.4 mm, e.g., 1-3/4" = 44.45 mm)

Ceco Door

ASSA ABLOY

ASSA ABLOY, the global leader
in door opening solutions.

F10-4

STANDARD SIZES NOMINAL DOOR OPENING

WIDTH		HEIGHT
SINGLE	DOUBLE	
2'-0"	4'-0"	6'-8"
2'-4"	4'-8"	
2'-6"	5'-0"	7'-0"
2'-8"	5'-4"	7'-2"
2'-10"	5'-8"	7'-10"
3'-0"	6'-0"	8'-0"
3'-4"	6'-8"	
3'-6"	7'-0"	
3'-8"	7'-4"	
3'-10"	7'-8"	
4'-0"	8'-0"	

FIRE RATING
NOT AVAILABLE

PRODUCT SPECIFICATIONS:

Steel door frames shall be as manufactured by Ceco Door Products, Milan, TN or Mason City, IA, USA. They shall conform to the Steel Door Institute guide specification, ANSI A250.8. See chart below for performance classifications.

Series SQT and SRT thermal break frames for 1-3/4" doors are formed from commercial quality cold rolled steel conforming to ASTM A1008 ...or (optional) hot-dipped galvanized steel conforming to ASTM A924 and A653 - see chart below.

Frames are knocked down (K.D.) field assembled type or welded unit type. Head and jamb members of K.D. frames have diecut mitered corners that interlock rigidly when field assembled. Door stops are 5/8" high and have an integral, 3/8" thick, vinyl, positive thermal break with a compression type gasket (weatherstrip). Single or double rabbet profile sizes are available in depths from 3-3/4" thru 12-3/4" (in 1/8" increments). Thermal barrier anchor applications are available for new masonry, wood stud, metal stud or existing opening wall conditions (indicate which), and to anchor jamb at bottom. To maximize efficiency, use with an insulated door, a threshold, and a gasket/sweep at sill.

Hardware Provisions: Frames are handed. Hinge jambs are mortised for 4-1/2" or 5" high, standard and heavy weight hinges (specify which). 7 gage steel reinforcements are welded in place and are drilled and tapped for fasteners in accordance with ANSI A156.7. The strike jamb is prepared for 4-7/8" universal or 2-3/4" cylindrical strike in accordance with ANSI A 115.1&2 (specify which). Plaster guards are 26 gage steel. Optional hardware reinforcement (for O/H closer or holder) is 14 gage minimum steel welded in place.

Paint: Steel door frames are provided with one coat of oven-cured neutral color primer paint. Primer coat shall conform with ANSI A250.10. The primer coat is a preparatory base for necessary finish painting.

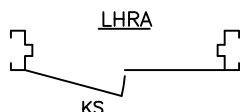
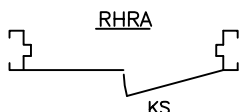
MATERIAL

DOOR FRAME MATERIAL	LEVEL	C.R.	GALV	
			A60	G90
16 Gage Steel	Standard, Heavy, or Extra Heavy Duty	STD	OPT	OPT
14 Gage Steel	Maximum Duty	STD	OPT	OPT

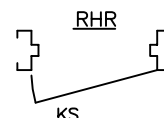
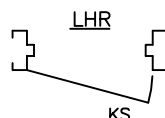
PERFORMANCE

(Conversion: 1" = 25.4 mm, e.g., 1-3/4" = 44.45 mm)

Physical Endurance Level:	Meets ANSI A250.4 Performance Test -- 16 & 14 gage steel: Level A (1,000,000 Cycles)



INSIDE



OUTSIDE

"SUFFIX"A" = ACTIVE LEAF OF PAIRS

"KS" = KEY SIDE



ASSA ABLOY, the global leader
in door opening solutions.

01/22/14

STANDARD DOUBLE EGRESS NOMINAL DOOR OPENING SIZES

WIDTH	HEIGHT
DOUBLE	
4'-0"	
4'-8"	
5'-0"	6'-8"
5'-4"	7'-0"
5'-8"	7'-2"
6'-0"	7'-10"
6'-8"	8'-0"
7'-0"	9'-0"
7'-4"	10'-0"
7'-8"	
8'-0"	

FIRE DOOR FRAMES

LABELING AGENCIES:

- UNDERWRITERS LABORATORY
- WARNOCK HERSEY

TEST: UL 10C, UL 10B,
UL 1784, & NFPA 252

- RATING: 20 MIN, 3/4 HR,
1 HR, 1-1/2 HR, OR 3 HR
- MAX. SIZE: 80 x 100 PAIR

Not all ratings are available in all sizes, elevations, materials or hardware selections. Hourly ratings are not shown on frame label.

Doors and frames are normally furnished as a set (Regent or Medallion) but frame may be furnished separately for use with classified wood double egress doors.

PRODUCT SPECIFICATIONS:

Steel door frames shall be as manufactured by Ceco Door Products, Milan, TN or Mason City, IA, USA. They shall conform to the Steel Door Institute guide specification, ANSI A250.8. See chart below for performance classifications.

Series SE1 and SE2 frames for 1-3/4" doors are formed from commercial quality cold rolled steel conforming to ASTM A1008 ...or (optional) hot-dipped galvanized steel conforming to ASTM A924 and A653 - see chart below.

Door frames are knock down (K.D.) field assembled type or welded unit type with all exposed welds ground smooth. Single step heads as well as double step jambs and heads in depths from 5-1/4" through 14" may be specified. Integral door stops are 5/8" high. Frame faces from 1-3/8" through 4" may be selected to suit popular hardware and aesthetic conditions. Jamb anchors are available for new masonry, wood stud, metal stud or existing opening wall conditions (indicate which). Welded floor anchors or extra jamb anchors are furnished to anchor sill (specify which).

Hardware Provisions: Frames are handed and are normally sized to match Ceco standard doors with parallel bevel lock edges. Hinge jambs are mortised for 4-1/2" or 5" high, standard or heavy weight hinges (specify which). 7 gage steel hinge reinforcements are welded in place and are drilled and tapped for fasteners in accordance with ANSI A156.7. Plaster guards are provided. Optional hardware reinforcement (e.g. OH holder/closer) is 14 gage minimum steel welded in place (designate hardware). 2 rubber mutes are included.

Paint: Steel door frames are provided with one coat of oven-cured neutral color primer paint. Primer coat shall conform with ANSI A250.10. The primer coat is a preparatory base for necessary finish painting. "Colorstyle" finish coat is also available on K.D. frames from a selection of standard colors (optional). Colorstyle finish is electrostatically applied, oven-cured urethane enamel, and shall conform to ANSI A250.3. For accurate color selectors ask for a Ceco Colorstyle chart.

MATERIAL

DOOR FRAME MATERIAL	LEVEL	C.R.	GALV	
			A60	G90
16 Gage Steel	Heavy or Extra Heavy Duty	STD	OPT	OPT
14 Gage Steel	Maximum Duty	STD	OPT	OPT
12 Gage Steel	ANSI/NAAMM	STD	OPT	—

PERFORMANCE

Physical Endurance Level:	Meets ANSI A250.4 Performance Test — 16, 14, & 12 gage steel: Level A (1,000,000 Cycles)

(Conversion: 1" = 25.4 mm, e.g., 1-3/4" = 44.45 mm)

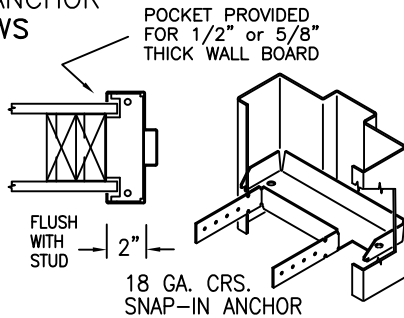
F13-2

JAMB ANCHOR QUANTITIES

2 PER JAMB FOR HEIGHTS >3/6 THRU 5/0 AND ONE FLOOR ANCHOR
 3 PER JAMB FOR HEIGHTS >5/0 THRU 7-2 AND ONE FLOOR ANCHOR
 4 PER JAMB FOR HEIGHTS >7-2 THRU 9-0 AND ONE FLOOR ANCHOR
 5 PER JAMB FOR HEIGHTS >9/0 THRU 10-0 AND ONE FLOOR ANCHOR
 ONE ADDITIONAL JAMB ANCHOR FOR EACH ADDITIONAL 24" IN HEIGHT OR FRACTION THEREOF
 ONE ADDITIONAL JAMB ANCHOR IN LIEU OF FLOOR ANCHOR FOR EXISTING STUDS AND/OR WALLS

(Conversion: 1" = 25.4 mm, e.g., 1-3/4" = 44.45 mm)

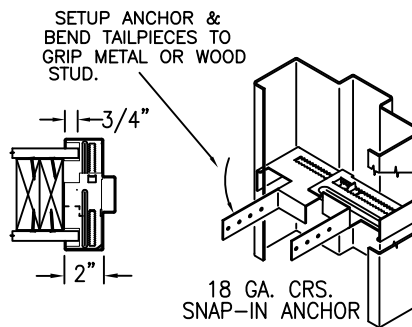
WOOD STUD ANCHOR WS



AVAILABLE 4-3/4", 5-3/4", 6-1/4", 6-3/4", 7-1/8", 7-1/4", 7-3/4", 8-1/4" & 8-3/4" DEPTHS.

(USED ALSO WITH METAL STUD WALLS)

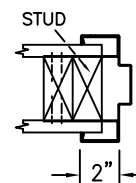
ADJUSTABLE ANCHOR FOR STUD WALLS ADJ/STUD



3-3/4" THRU 8-3/4" DEPTH

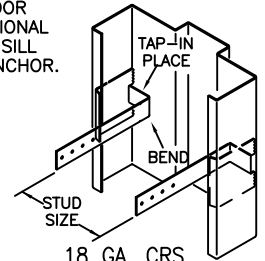
WOOD STUD ANCHOR XP/ANC

ANCHORS ARE BENT IN FIELD TO THICKNESS OF WALLBOARD. IF WALL FRAME WORK IS SET UP BEFORE DOOR FRAME, USE ADDITIONAL JAMB ANCHORS AT SILL INSTEAD OF SILL ANCHOR.

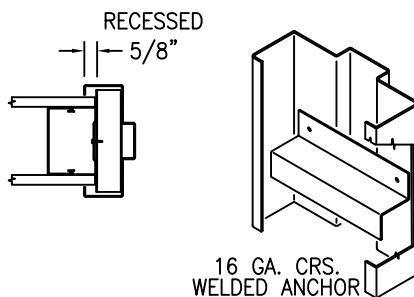


(USED ALSO WITH METAL STUD WALLS)

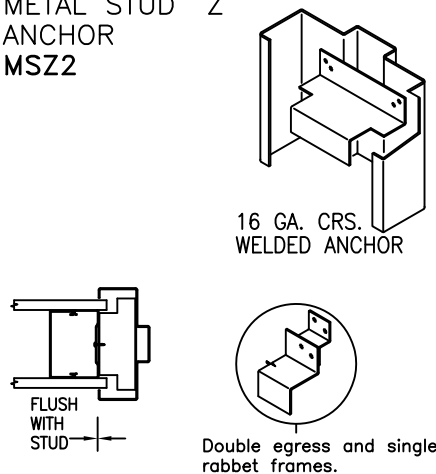
NOTE
 FRAME IS SET-UP AND JAMBS ANCHORED BEFORE WALLBOARD IS INSTALLED.



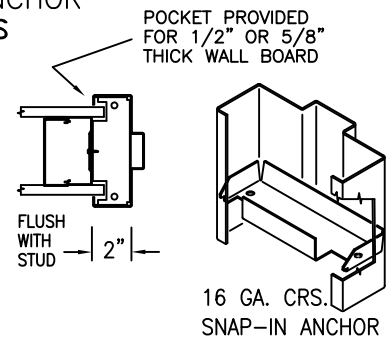
METAL STUD "Z" ANCHOR MSZ1



METAL STUD "Z" ANCHOR MSZ2



METAL STUD ANCHOR MS

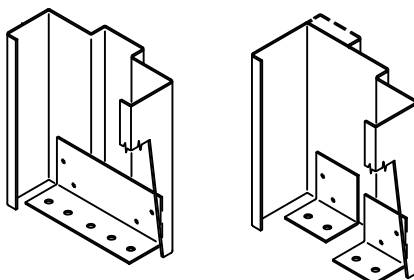


4-3/4 AND 5-3/4" DEPTH ONLY. FOR OTHER DEPTHS USE WS TYPE.

FLOOR ANCHOR SA

STANDARD DOUBLE RABBET ONE PIECE ANCHOR

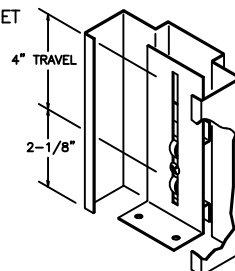
SINGLE RABBET OR DOUBLE RABBET DOUBLE EGRESS



16 GA. WELDED FLOOR ANCHOR

FLOOR ANCHOR ADJFL

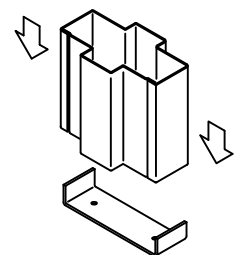
ANGLE:
 1-1/2" x 6-3/4" @
 2-3/4" LONG
 SCREW:
 #10 x 3/8" PHIL THSMS
 HAT:
 1-5/8" WIDE x 3/4"
 LEGS x 9/16" OFFSET
 @ 3-1/4" LONG



16 GA. WELDED ADJUSTABLE FLOOR ANCHOR

SLFA

IN-FIELD:
 FASTEN ANCHOR TO FLOOR.
 SLIP-FIT FRAME OVER ANCHOR



12 GA. GALV. SIDELITE FLOOR ANCHOR

Ceco Door

ASSA ABLOY

05/04/13

STANDARD NOMINAL DOOR OPENING

WIDTH		HEIGHT
SINGLE	DOUBLE	
2'-6"	5'-0"	6'-8"
2'-8"	5'-4"	7'-0"
2'-10"	5'-8"	8'-0"
3'-0"	6'-0"	9'-0"
4'-0"	8'-0"	

ASSEMBLY SPECIFICATIONS:

08 17 13 Integrated Metal Door Opening Assemblies and/or
08 17 23 Integrated Wood Door Opening Assemblies

All units shall be supplied to Job-site preassembled and prefinished, with all hardware mounted and functioning. Hardware installation shall be performed by Certified Hardware Installers and functionality of units reconciled prior to shipment.

Units shall be supplied as a completely functioning prehung unit, allowing installation after completed wall.

Assembled units shall be packaged in a manner to protect contents through transportation to site, separated as such to prevent any damage to hardware and door and frame finish. Each door unit shall be individually packaged with clear protective bagging or coating. Units shall be on pallet bases to allow movement via forklifts.

PRODUCT SPECIFICATIONS:

FIRE DOOR FRAMES

LABELING AGENCIES:

- UNDERWRITERS LABORATORY
- WARNOCK HERSEY

TEST: UL10B, UL10C & UL1784

• RATING: Up to 1-1/2 hours

Not all ratings are available in all materials and sizes.

ReadySet frames are produced for pre-hanging of commercial 1 3/4" doors (hollow metal and wood), as manufactured by ASSA ABLOY Door Group Companies and will be assembled using ASSA ABLOY Hardware and Door Components. Frames are formed from 16-gauge commercial quality cold rolled steel conforming to ASTM A1008 or optional hot-dipped galvanized steel conforming to ASTM A924 and A653.

Frames are produced in two welded units, to be mechanically joined during field installation. The base side is prepared for all required hardware using standard Ceko reinforcing. Both units (base and trim) are furnished with welded mitered faces. Base unit is supplied with temporary spreader bar, which is designed to stay in place until after installation of base (see installation instructions). Frame anchoring includes pressure anchors (2 per jamb) and stud screws (metal or wood), which are supplied with units.

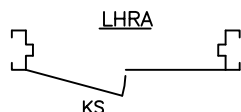
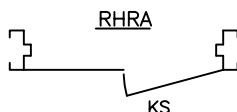
MATERIAL

DOOR FRAME MATERIAL	GRADE	CRS	GALV	
			A40	A60
16 Gage C.R. Steel	Standard or Heavy Duty	STD	OPT	OPT

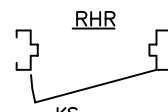
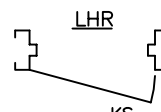
(Conversion: 1" = 25.4 mm, e.g., 1-3/4" = 44.45 mm)

PERFORMANCE

Physical Endurance Level:	Meets ANSI A250.4 Performance Test -- 16 gage steel: Level A (3,000,000 Cycles)



INSIDE



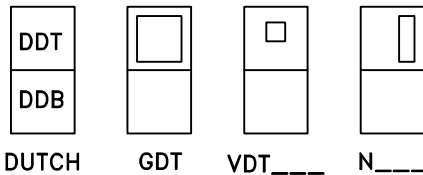
OUTSIDE

"SUFFIX"A" = ACTIVE LEAF OF PAIRS

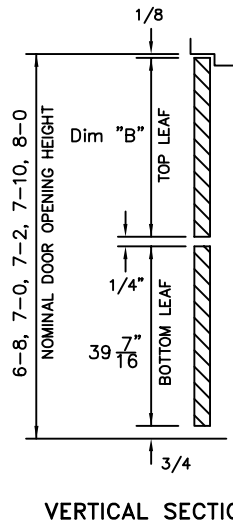
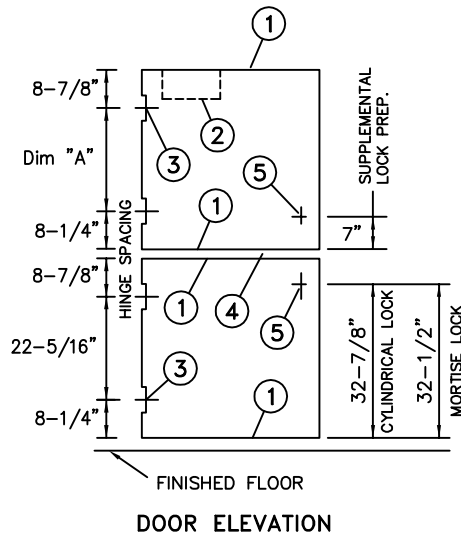
"KS" = KEY SIDE



DOOR DESIGNS



CONSTRUCTION FEATURES		
DOOR TYPE	CORE MATERIAL	VERTICAL EDGES
REGENT	HONEYCOMB	SEE DOOR SERIES PRODUCT PAGE FOR VERTICAL EDGE CONSTRUCTION.
IMPERIAL	URETHANE FOAMED-IN-PLACE	
LEGION	POLYSTYRENE	
MEDALLION	VERTICALLY STEEL STIFFENED	
TRIO	INSULATED STEEL STIFFENED	



NOTE:
FOR DOOR TYPE REQUIRED, SEE DOOR SCHEDULE.
FOR ADDITIONAL DATA ON DOOR CONSTRUCTION, SEE STANDARD DOOR PRODUCT SHEET. EXCEPT AS NOTED HERE, STANDARD DOOR CONSTRUCTION WILL BE UTILIZED.
TOP LEAF CAN ALSO BE MADE TO LATCH INTO BOTTOM LEAF.

FIRE DOORS:

TESTS: UL10B, UL10C & UL1784

RATING: 20 MIN THRU 3 HOUR
MAX. SIZE: 4072 SINGLE

(REGENT - UL & WH)
(MEDALLION - UL)

HORZ ASTRAGAL REQUIRED
(TWO PIECE OR FLAT PLATE)

SINGLE POINT LOCK LATCHING EITHER HORIZONTALLY OR VERTICALLY, OR SELF LATCHING FLUSH BOLT REQUIRED IN THE TOP LEAF

HALF SHELF (OPTIONAL)

TOP LEAF CENTER HINGE SPACING

OPENING HEIGHT	6-8	7-0	7-2	7-10	8-0
DIM "A"	22-5/16"	26-5/16"	28-5/16"	36-5/16"	38-5/16"

TOP LEAF HEIGHT

OPENING HEIGHT	6-8	7-0	7-2	7-10	8-0
DIM "B"	39-7/16"	43-7/16"	45-7/16"	53-7/16"	55-7/16"

① END CHANNELS

INVERTED TOP AND BOTTOM

STEEL TOP CAP INSTALLED IN TOP OF LOWER LEAF

② CLOSER REINFORCEMENT (OPTIONAL TOP LEAF)

14 GAGE STEEL CHANNEL 20"

③ HINGE PREPARATION

4-1/2 OR 5 IN. HIGH, STANDARD OR HEAVY WEIGHT, FULL MORTISE HINGES

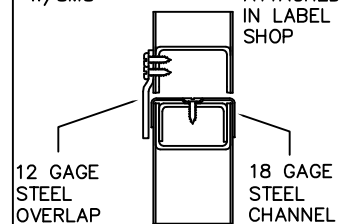
ANSI A156.7 TEMPLATE

HANDED

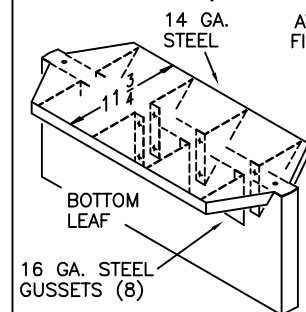
④A OPTIONAL (2) PIECE HORIZONTAL ASTRAGAL

ATTACHED W/SMS

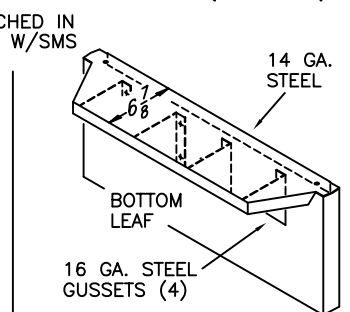
FIRE RATED ATTACHED IN LABEL SHOP



④B DUTCH DOOR FULL SHELF (OPTIONAL)



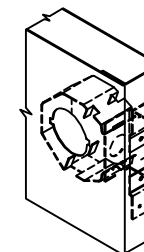
④C DUTCH DOOR HALF SHELF (OPTIONAL)



⑤ LOCK PREPARATIONS

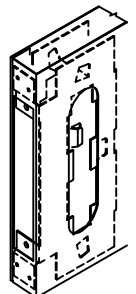
(LC1)

GOV. 160/161 CYLINDRICAL LOCK PREP (ANSI A115.2) 2-3/4" BACKSET



(LM1)

GOV. 86 MORTISE LOCK PREP (ANSI A115.1) 2-3/4" BACKSET



(LM0)

SIMILAR TO DETAIL LESS FACE CUTOUT

1-3/4" DUTCH DOORS

CecoDoor (Conversion: 1" = 25.4 mm, e.g., 1-3/4" = 44.45 mm)

ASSA ABLOY

DRAWN BY _____	DATE _____			
CHK'D BY _____	DATE _____			
SHT _____ OF _____	CONTRACT NO. _____	ISSUE DATE _____	REVISIONS _____	BY _____

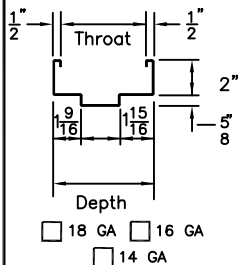
C.R.S. STEEL IS STANDARD
GALVANIZED STEEL IS OPTIONAL

DRYWALL SERIES

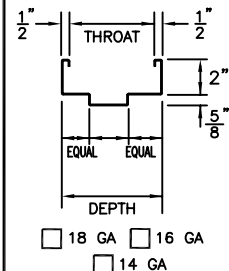
- ☐ DU (for 1-3/4" DOOR)
- ☐ DQ (for 1-3/4" DOOR)
- ☐ DR (for 1-3/4" DOOR)

PROFILES

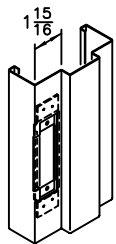
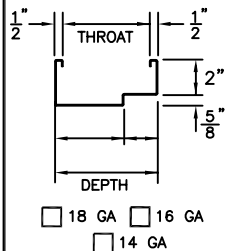
DU



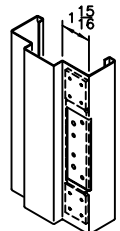
DQ



DR



S UNIVERSAL (4-7/8")
ANSI A115.1
& 2 TEMPLATE 12 GAGE
STEEL REINFORCING
(STANDARD FOR
1-3/4" DOORS)



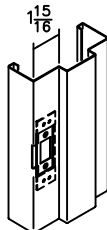
E

HINGE
PREPARATION

BACKSET: 5/16"

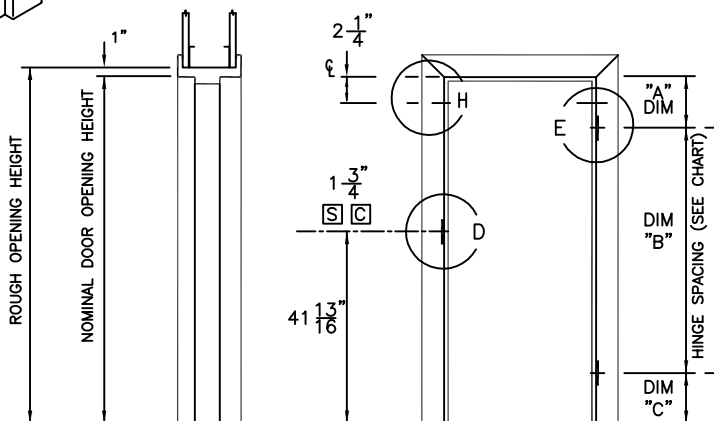
4-1/2" x .134" OR
4-1/2" x .180"
ANSI A156.7 TEMPLATE
7 GAGE STEEL
REINFORCING
(STANDARD FOR
1-3/4" DOORS)

D LOCK STRIKE
PREPARATION



SEE PLASTER
GUARD NOTE

C CYLINDRICAL (2-3/4")
ANSI A115.3 TEMPLATE
16 GAGE STEEL REINFORCING
(OPTIONAL FOR 1-3/4" DOORS)



VERTICAL SECTION

SINGLE SWING
ELEVATION

LABELING AGENCIES
Underwriters Laboratory
Warnock Hersey
Factory Mutual
TEST STANDARDS
NFFPA 252, UL10B, UL10C
& UL1784

C.R.S. steel is standard.
Galvanized steel is optional.

HINGE SPACING

OPENING HEIGHT	6-8			7-0			7-2			7-10			8-0			9-0		
DOOR THICKNESS	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
1 3/4" STANDARD	9"	(2) AT 31"	9"	9"	(2) AT 33"	9"	9"	(2) AT 34"	9"	9"	(3) AT 25.33"	9"	9"	(3) AT 26"	9"	9"	(3) AT 30"	9"

NOTE-PLASTER GUARDS:

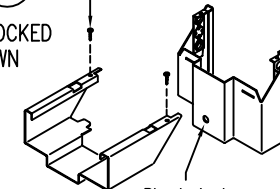
STRIKE PLASTER GUARDS (SNAP-IN TYPE) ARE OPTIONAL.

☐ 1" DEEP

- STEEL/WOOD STUD AND DRYWALL CONSTRUCTION METHODS, IN CONJUNCTION WITH FRAME ANCHORAGE, COULD RESULT IN INTERFERENCE BETWEEN THE STUD AND HARDWARE PREP. NOTCHING OF THE STUD COULD RESULT IN COMPROMISING THE STABILITY OF THE FRAME. CONSIDERATION SHOULD BE GIVEN TO SPECIFYING THE HARDWARE SUITABLY SIZED TO FIT THE CONFINES OF A STANDARD FRAME OR SPECIFYING ALTERNATE FRAME PROFILES TO ACCOMMODATE THE HARDWARE.
- IF NECESSARY TO REMOVE, PLASTER GUARDS ARE BEST REMOVED BEFORE FRAME INSTALLATION.

F

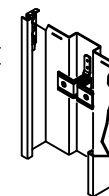
KNOCKED
DOWN



8 SMS AT CORNERS
OF LABELED
FRAMES ARE REQUIRED
(BY OTHERS)

Plumb Anchor
access hole
with screw

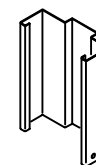
H ADJUSTABLE
PLUMB
ANCHOR



ONE EACH
JAMB

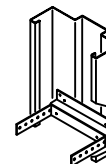
Adjust with
screw driver

G STANDARD
SILL
ANCHOR

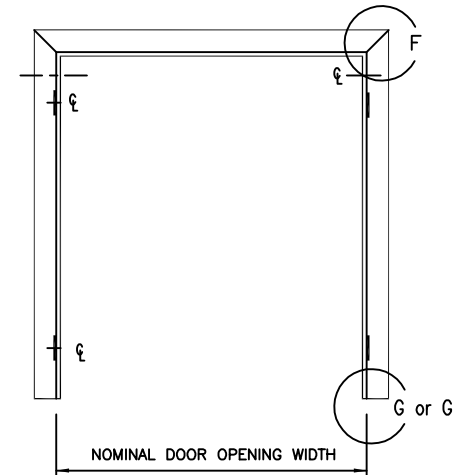


DIMPLED HOLE
FOR #10 FH
FASTENER.
FASTENER IS
BY CONTRACTOR
AND SHOULD
BE LONG
ENOUGH TO
ENGAGE STUD.

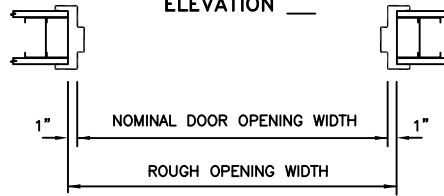
G1 OPTIONAL
SILL
STRAP
ANCHOR



FASTENER IS
BY CONTRACTOR
AND SHOULD
ENGAGE STUD.



DOUBLE SWING
ELEVATION



HORIZONTAL SECTION

SERIES DQ, DU, & DR DRYWALL FRAMES (SLIP-ON DRYWALL FRAMES)



(Conversion: 1" = 25.4 mm, e.g., 1-3/4" = 44.45 mm)

DRAWN BY _____	DATE _____			
CHK'D BY _____	DATE _____			
SHT _____	CONTRACT NO. _____	ISSUE DATE _____	REVISIONS _____	BY _____
OF _____				

FOR HAND & SWING
SEE DOOR SCHEDULE

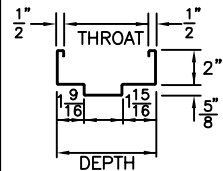


BEFORE DRYWALL SERIES

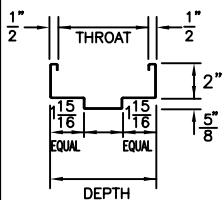
- ☐ BU (for 1-3/4" DOOR)
- ☐ BQ (for 1-3/4" DOOR)
- ☐ BR (for 1-3/4" DOOR)

PROFILES

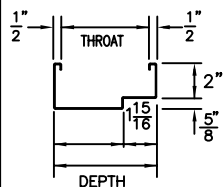
BU



BQ



BR



LABELING AGENCIES
Underwriters Laboratory
Warnock Hersey
Factory Mutual

TEST STANDARDS
NFPA 252, UL10B, UL10C
& UL1784

BU frames are 1-15/16" door side rabbet & 1-9/16" non-door side rabbet.
BQ & BR frames are 1-15/16" rabbet(s).

BU, BQ & BR frames are fabricated from Series DU, DQ & DR frame components as KD or welded units. Plumb anchors or dimpled holes at sill are not used. Metal or wood stud anchors are standard. "Before Drywall" frames can be installed before or after wall frame work is erected but before wallboard is applied. See anchor sheet for suggested wall details.

C.R.S. steel is standard.
Galvanized steel is optional.



ASSA ABLOY

(Conversion: 1" = 25.4 mm, e.g., 1-3/4" = 44.45 mm)

DRAWN BY _____	DATE _____			
CHK'D BY _____	DATE _____			
SHT _____	CONTRACT NO. _____	ISSUE DATE _____	REVISIONS _____	BY _____

ASSA ABLOY, the global leader in door opening solutions.

HINGE SPACING

OPENING HEIGHT	6-8			7-0			7-2			7-10			8-0			9-0			10-0		
DOOR THICKNESS	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
1 3/4" STANDARD	9"	(2) AT 31"	9"	9"	(2) AT 33"	9"	9"	(2) AT 34"	9"	9"	(3) AT 25.33"	9"	9"	(3) AT 26"	9"	9"	(3) AT 30"	9"	9"	(3) AT 34"	9"

NOTE #1: STRIKE PLASTER GUARD IS AN INTEGRAL PART OF THE STRIKE REINFORCEMENT. STRIKE PLASTER GUARD IS 1-1/8" DEEP WITH A 2" FACE STRIKE JAMB.

STEEL/WOOD STUD AND DRYWALL CONSTRUCTION METHODS, IN CONJUNCTION WITH FRAME ANCHORAGE AND/OR ELECTRICAL JUNCTION BOX, COULD RESULT IN INTERFERENCE BETWEEN THE STUD AND HARDWARE PREP. NOTCHING OF THE STUD COULD RESULT IN COMPROMISING THE STABILITY OF THE FRAME. CONSIDERATION SHOULD BE GIVEN TO SPECIFYING HARDWARE SUITABLY SIZED TO FIT THE CONFINES OF A STANDARD FRAME OR SPECIFYING ALTERNATE FRAME PROFILES TO ACCOMMODATE THE HARDWARE.

SEE NOTE #1

LOCK STRIKE PREPARATION

UNIVERSAL (4-7/8")
ANSI A115.1 & 2 TEMPLATE
16 GAGE STEEL REINFORCING
WITH EXTRUDED SCREW HOLES
EQUAL TO 14 GAGE (STANDARD)

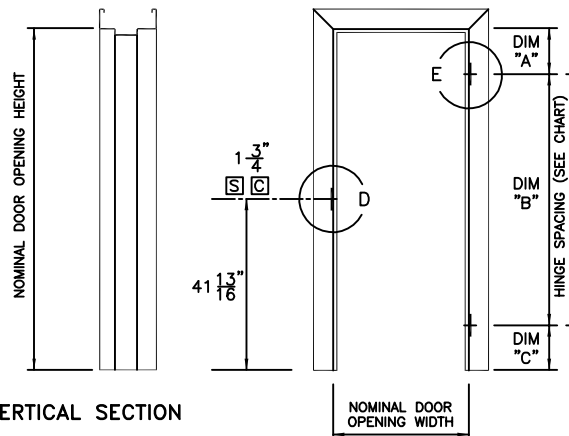
HINGE PREPARATION

BACKSET: 5/16"

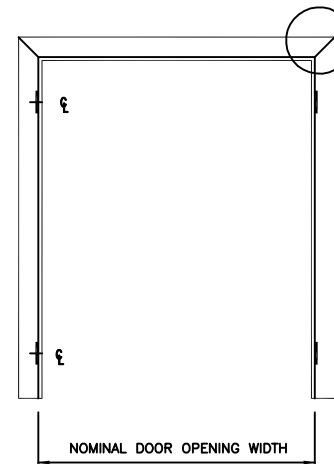
4-1/2" x .134" OR
4-1/2" x .180"
ANSI A156.7 TEMPLATE
7 GAGE STEEL REINFORCING
(STANDARD FOR 1-3/4" DOORS)

CYLINDRICAL (2-3/4")
ANSI A115.3 TEMPLATE
16 GAGE STEEL REINFORCING
WITH EXTRUDED SCREW HOLES
EQUAL TO 14 GAGE.
(OPTIONAL FOR 1-3/4" DOORS)

VERTICAL SECTION

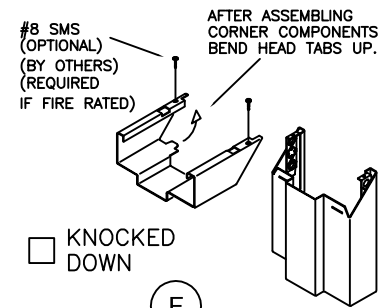
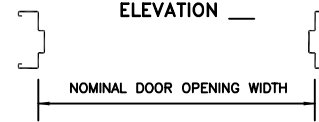


SINGLE SWING ELEVATION



DOUBLE SWING ELEVATION

HORIZONTAL SECTION



KNOCKED DOWN

WELDED CORNERS TYPE _____

V2 = FACE WELD ONLY
V3 = FULL FACE & WEB WELD

* Production welded corner types with "V" prefix do not utilize corner tabs.

Frames with welded corners have temporary spreaders tackwelded at sill.

FOR HAND & SWING
SEE DOOR SCHEDULE

FOR ANCHORAGE
SEE DOOR SCHEDULE & ANCHOR SHEET

SERIES BU, BQ, & BR DOOR FRAMES

(BEFORE DRYWALL FRAMES w/ APPLIED ANCHORS)

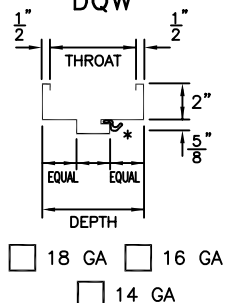
Furnished with one coat of neutral color primer paint.
Primer paint has been tested in conformance with ANSI A250.10.

KERFED SERIES DRYWALL FRAMES FOR 1-3/4" DOORS

PROFILES

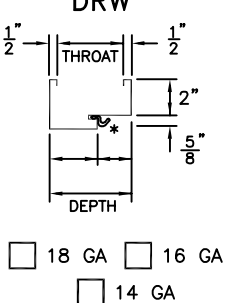
DOUBLE
RABBIT

DQW



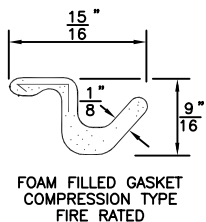
SINGLE
RABBIT

DRW



C.R.S. steel is standard.
Galvanized steel is optional.

GASKET



FOAM FILLED GASKET
COMPRESSION TYPE
FIRE RATED

NOTE: Gasket ships loose
when frame is prime
painted. Do not install
gasket until frame has
been finish painted.

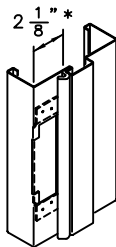
CecoDoor (Conversion: 1" = 25.4 mm, e.g., 1-3/4" = 44.45 mm)

ASSA ABLOY

DRAWN BY _____ DATE _____			
CHK'D BY _____ DATE _____			
SHT _____ OF _____	CONTRACT NO. _____	ISSUE DATE _____	REVISIONS _____ BY _____

ASSA ABLOY, the global leader
in door opening solutions.

(D)

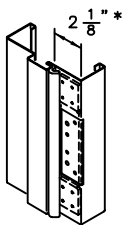


SEE NOTE #1

LOCK STRIKE
PREPARATION

[S] UNIVERSAL (4-7/8") (shown)
ANSI A115.1 & 2 TEMPLATE
12 GAGE STEEL REINFORCING
STANDARD

[C] CYLINDRICAL (2-3/4") (not shown)
ANSI A115.3 TEMPLATE
18 GAGE STEEL REINFORCING
OPTIONAL



(E)

HINGE
PREPARATION

4-1/2" x .134" OR
4-1/2" x .180"
ANSI A156.7 TEMPLATE
7 GAGE STEEL
REINFORCING

HINGE SPACING

OPENING HEIGHT	6-8			7-0			7-2			7-10			8-0			9-0		
DOOR THICKNESS	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
1-3/4" STANDARD	9"	(2) AT 31"	9"	9"	(2) AT 33"	9"	9"	(2) AT 34"	9"	9"	(3) AT 25.33"	9"	9"	(3) AT 26"	9"	9"	(3) AT 30"	9"

The maximum size for 18 gage material is 4-0x7-0 (single) and 6-10x7-0 (pair).
For larger sizes and/or heavy doors, use 16 or 14 gage steel.

NOTE #1:
STRIKE PLASTER GUARDS (SNAP-IN TYPE) ARE OPTIONAL.
☐ 1" DEEP

- STEEL/WOOD STUD AND DRYWALL CONSTRUCTION METHODS, IN CONJUNCTION WITH FRAME ANCHORAGE, COULD RESULT IN INTERFERENCE BETWEEN THE STUD AND HARDWARE PREP. NOTCHING OF THE STUD COULD RESULT IN COMPROMISING THE STABILITY OF THE FRAME. CONSIDERATION SHOULD BE GIVEN TO SPECIFYING THE HARDWARE SUITABLY SIZED TO FIT THE CONFINES OF A STANDARD FRAME OR SPECIFYING ALTERNATE FRAME PROFILES TO ACCOMMODATE THE HARDWARE.
- IF NECESSARY TO REMOVE, PLASTER GUARDS ARE BEST REMOVED BEFORE FRAME INSTALLATION.

#8 SMS AT CORNERS
OF LABELED FRAMES
ARE REQUIRED
(BY OTHERS)

(F)

KNOCKED
DOWN

Plumb Anchor
access hole
with screw

(H)

ADJUSTABLE
PLUMB
ANCHOR

ONE EACH
JAMB

Adjust with
screw driver

(G)

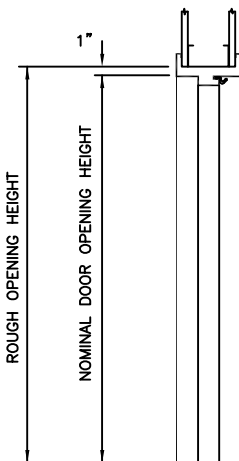
☐ STANDARD
SILL
ANCHOR

DIMPLED HOLE
FOR #10 FH
FASTENER.
FASTENER IS
BY CONTRACTOR
AND SHOULD
BE LONG
ENOUGH TO
ENGAGE STUD.

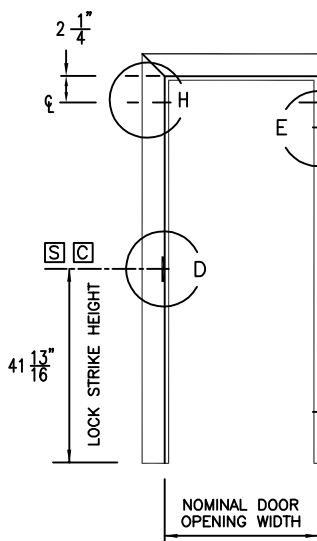
(G1)

☐ OPTIONAL
SILL
STRAP
ANCHOR

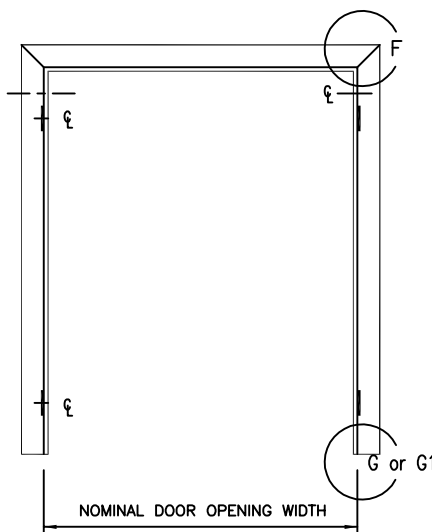
FASTENER IS
BY CONTRACTOR
AND SHOULD
BE LONG
ENOUGH TO
ENGAGE STUD.



VERTICAL SECTION

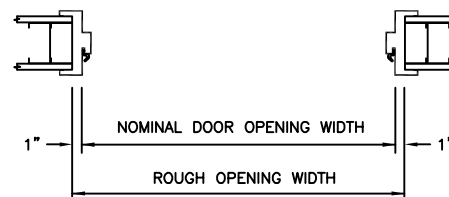


SINGLE SWING
ELEVATION



DOUBLE SWING
ELEVATION

LABELING AGENCIES
Underwriters Laboratory
Warnock Hersey
Factory Mutual
TEST STANDARDS
NFPA 252, UL10B, UL10C
& UL1784



HORIZONTAL SECTION

SERIES DQW & DRW GASKETED DRYWALL FRAMES SLIP-ON DRYWALL FRAMES FOR 1-3/4" THICK DOORS

FOR HAND & SWING
SEE DOOR SCHEDULE

SERIES	
SQ	(for 1-3/4" DOOR)
SR	(for 1-3/4" DOOR)

LABELING AGENCIES
Underwriters Laboratory
Warnock Hersey
Factory Mutual
TEST STANDARDS
NFPA 252, UL10B, UL10C
& UL1784

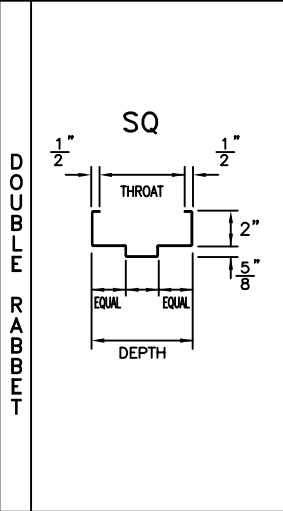
HINGE SPACING																						
OPENING HEIGHT ▶		6-8			7-0			7-2			7-10			8-0			9-0			10-0		
DOOR THICKNESS		C	D	E	C	D	E	C	D	E	C	D	E	C	D	E	C	D	E	C	D	E
1	3/4" STANDARD	9"	(2) AT 31"	9"	9"	(2) AT 33"	9"	9"	(2) AT 34"	9"	9"	(3) AT 25.33"	9"	9"	(3) AT 26"	9"	9"	(3) AT 30"	9"	9"	(3) AT 34"	9"

Unless otherwise indicated, frames are for 1-3/4" thick doors.

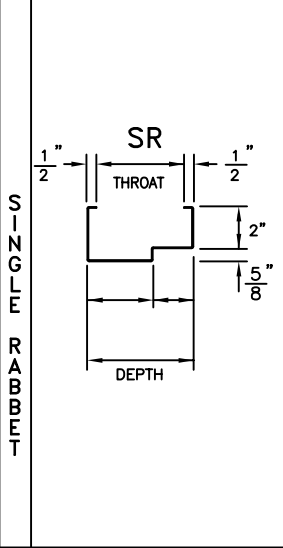
Cold rolled steel is standard.
Galvanized steel is optional.

STANDARD FRAMES HAVE THE FOLLOWING HINGE PREP QUANTITY:
7'-6" HIGH OR SMALLER: (3) HINGE PREPS
HIGHER THAN 7'-6": (4) HINGE PREPS

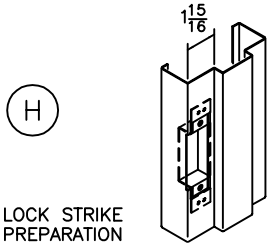
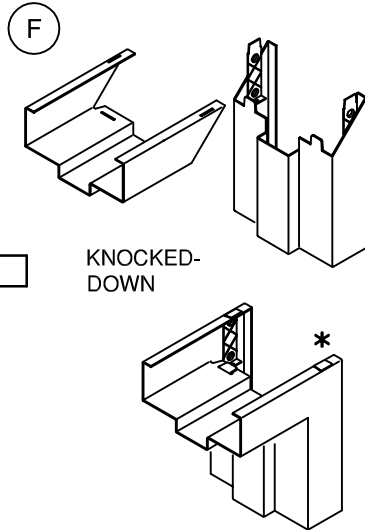
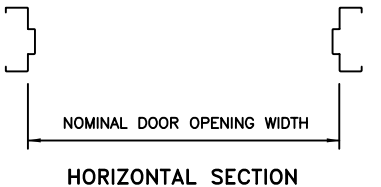
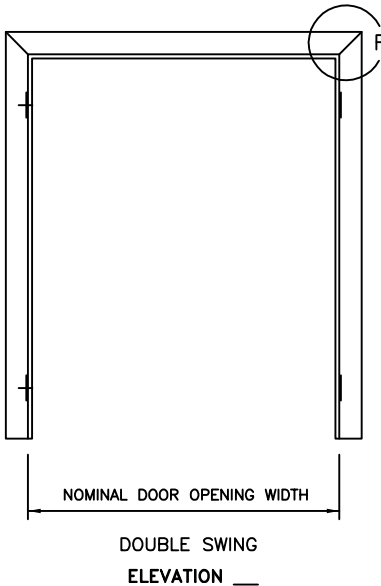
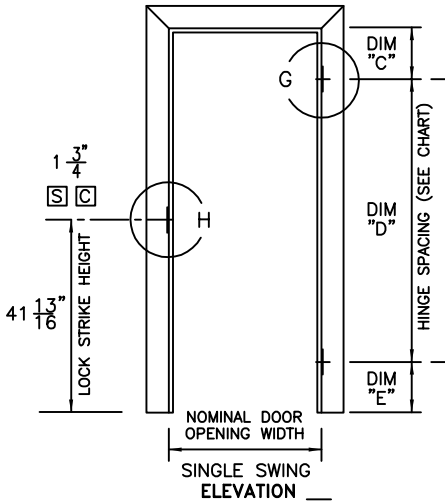
PROFILES



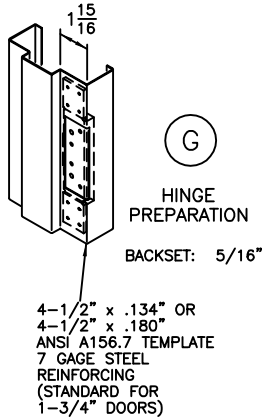
SQ & SR frames have 1-15/16" rabbets.



VERTICAL SECTION



LOCK STRIKE PREPARATION



HINGE PREPARATION
BACKSET: 5/16"

- S** UNIVERSAL (4-7/8") (shown) ANSI A115.1 & 2 TEMPLATE 16 GAGE STEEL REINFORCING WITH EXTRUDED SCREW HOLES EQUAL TO 14 GAGE (STANDARD)
- C** CYLINDRICAL (2-3/4") (not shown) ANSI A115.3 TEMPLATE 16 GAGE STEEL REINFORCING WITH EXTRUDED SCREW HOLES EQUAL TO 14 GAGE. (STANDARD FOR 1-3/8" DOORS OPTIONAL FOR 1-3/4" DOORS)

4-1/2" x .134" OR
4-1/2" x .180"
ANSI A156.7 TEMPLATE
7 GAGE STEEL REINFORCING
(STANDARD FOR 1-3/4" DOORS)



(Conversion: 1" = 25.4 mm, e.g., 1-3/4" = 44.45 mm)

DRAWN BY _____	DATE _____			
CHK'D BY _____	DATE _____			
SHT _____	CONTRACT NO. _____	ISSUE DATE _____	REVISIONS _____	BY _____
OF _____				

SERIES SQ & SR
STEEL FRAMES

(FIRE DOOR FRAMES MUST COMPLY WITH PROCEDURES OF LABELING AGENCY)

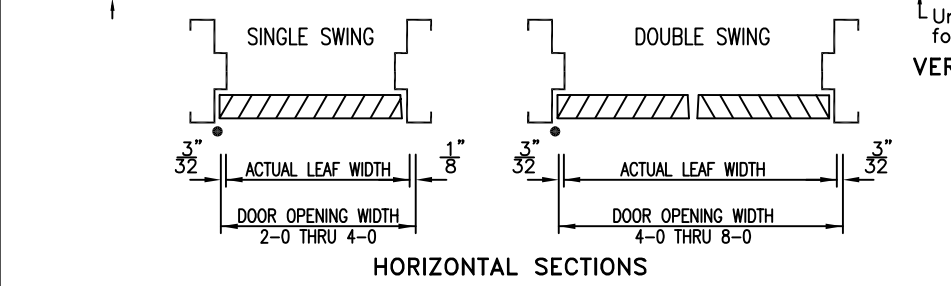
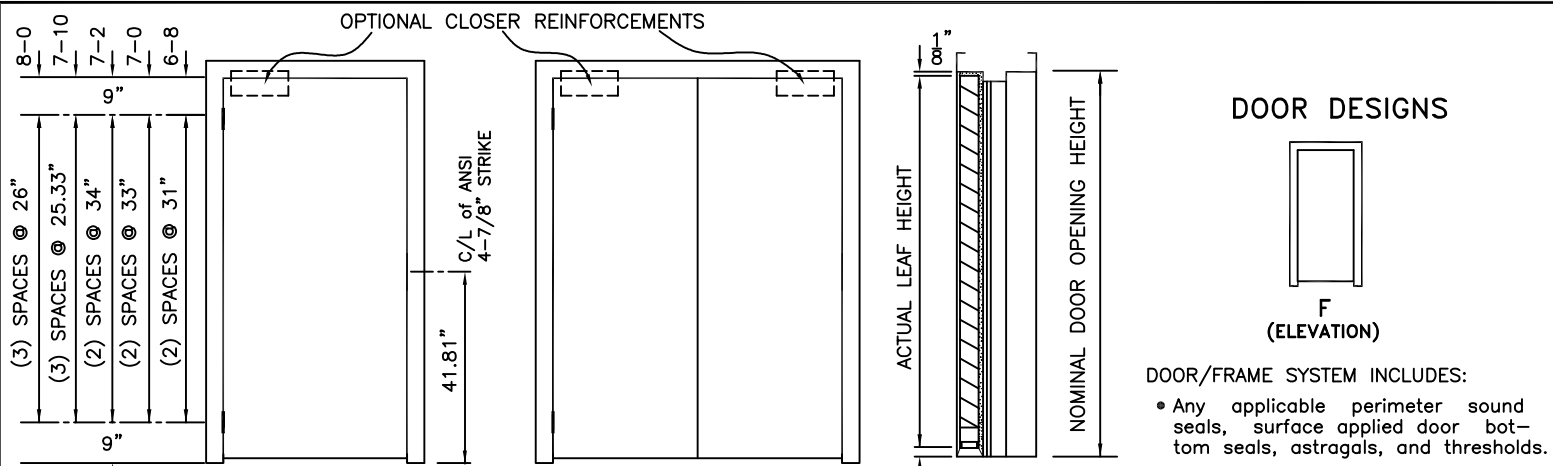
Furnished with one coat of neutral color primer paint.
Primer paint has been tested in conformance with ANSI A250.10.

FOR HAND & SWING
SEE DOOR SCHEDULE



FOR ANCHORAGE
SEE DOOR SCHEDULE &
ANCHOR SHEET





HORIZONTAL SECTIONS

STC Rating							
SINGLE DOORS				DOUBLE DOORS			
☐ 32	☐ 36	☐ 40	☐ 44	☐ 32	☐ 36	☐ 40	☐ 44
☐ 33	☐ 37	☐ 41	☐ 45	☐ 33	☐ 37	☐ 41	☐ 45
☐ 34	☐ 38	☐ 42	☐ 46	☐ 34	☐ 38	☐ 42	
☐ 35	☐ 39	☐ 43		☐ 35	☐ 39	☐ 43	

Notes: Mutes are not allowed. The only preps allowed in the header are surface closer reinforcements, flush bolt strikes, & surface bolt reinforcements. Frame must be grouted for STC 40 and above to achieve the STC rating. A STC label will be applied to the door only.

Fire Rating:
 TESTS: UL10B, UL10C & UL1784
 UL & WH Label to 3 hours
 Not available in all STC ratings at 3 hours.
 Not all ratings are available in all sizes, designs, & materials.

(Conversion: 1" = 25.4 mm, e.g., 1-3/4" = 44.45 mm)

Sound-Tech Xpress, Acoustical Door System

For requirements STC 32 thru STC 46

DRAWN BY _____ DATE _____		FOR HAND & SWING SEE DOOR SCHEDULE		CecoDoor	
CHK'D BY _____ DATE _____				ASSA ABLOY	
SHT _____ OF _____	CONTRACT NO. _____	NOTE: FOR DESIGN OR HDWE. REQUIRED, SEE DOOR AND HDWE. SCHEDULE.	FINISH:	STANDARD PRIMER PAINT; COLORSTYLE (OPTIONAL) ON DOORS & FRAMES UP TO 3'0" X 8'0"	
ISSUE DATE	REVISIONS	BY	ACOUSTICAL PERFORMANCE	DOOR SYSTEM TESTED IN CONFORMANCE WITH ASTM 2235, ASTM E1332 ASTM E90 & E413, FULLY OPERABLE, STC AS NOTED ABOVE.	

STC 32 thru 46

FRAME:

GAUGE:

☐ 16 CRS ☐ 16 GALV
☐ 14 CRS ☐ 14 GALV

ANCHORS: Masonry with SFA or Welded Wood Stud or Metal Stud (MS22)
CORNERS: Continuously Welded

DOOR STANDARDS:

EDGES
 Vertical: Tab & Slot – STC32 Thru STC46
Center Seam – STC33 thru STC46

Top: Inverted End Channels
 Bottom: Inverted End Channels

GLAZING:
 None Allowed
Handed Doors Only

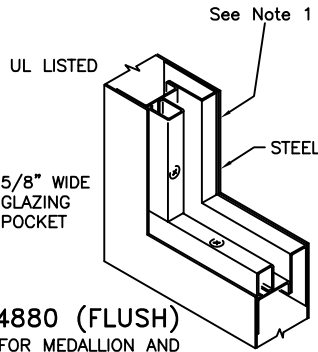
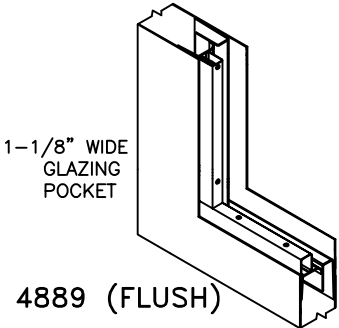
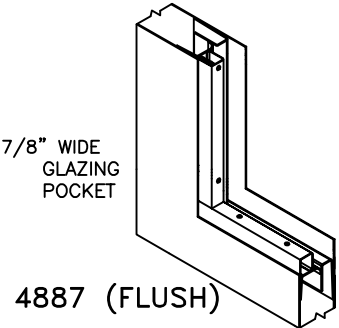
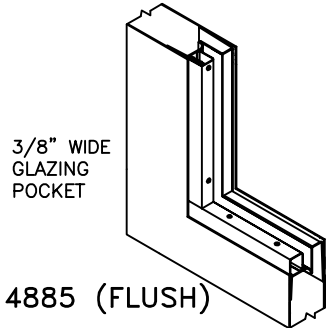
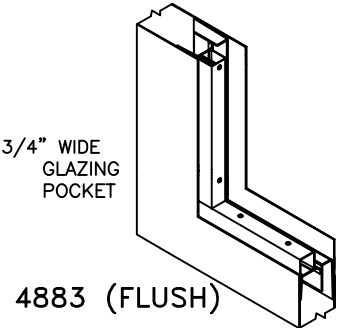
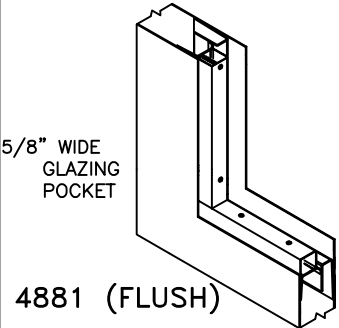
HDWE PREPS:

HINGES:
 4.5 x .134, 4.5 x .180, 5 x .146 or 5 x .190, full mortise, ANSI A156.7

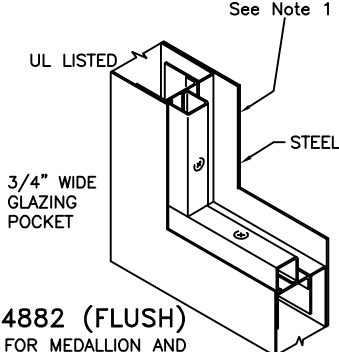
LOCK: 2-3/4" B.S.
 Cylindrical or Mortise
 Surface or Flushbolt (Inact.)
 Rim or Surface Vert. Rod,

OPTIONAL:
 CLOSERS: Surface Mounted

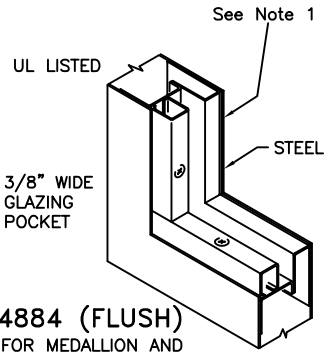
GLASS LITE TRIM KITS (G, V, and N)



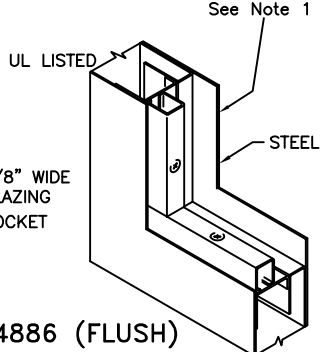
Note:
1. Field applied caulk is recommended
on this seam to improve esthetics and
resist water intrusion in Medallion door.



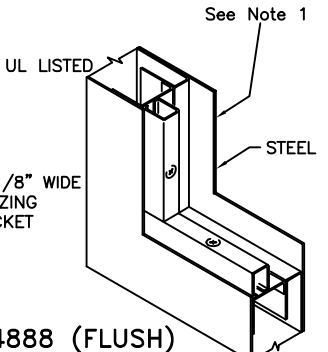
Note:
1. Field applied caulk is recommended
on this seam to improve esthetics and
resist water intrusion in Medallion door.



Note:
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on this seam to improve esthetics and
resist water intrusion in Medallion door.



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on this seam to improve esthetics and
resist water intrusion in Medallion door.



Note:
1. Field applied caulk is recommended
on this seam to improve esthetics and
resist water intrusion in Medallion door.



DOOR ACCESSORIES

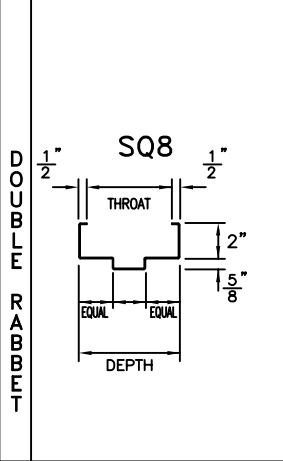
(FOR 1-3/4" DOORS)

ASSA ABLOY (Conversion: 1" = 25.4 mm, e.g., 1-3/4" = 44.45 mm)

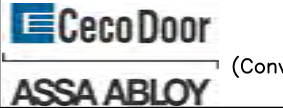
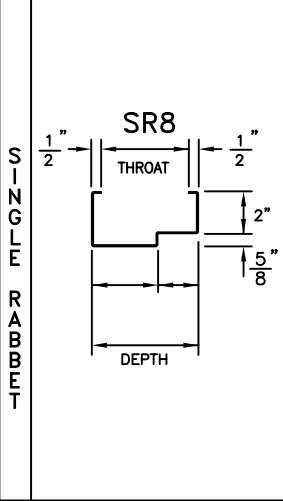
DRAWN BY _____		DATE _____			
CHK'D BY _____		DATE _____			
SHT _____	CONTRACT NO. _____		ISSUE _____	REVISIONS	BY
OF _____			DATE		

SERIES	
SQ8	(for 1-3/8" DOOR)
SR8	(for 1-3/8" DOOR)

PROFILES



1-9/16" rabbets
for 1-3/8" thick doors



DRAWN BY _____ DATE _____				
CHK'D BY _____ DATE _____				
SHT _____ OF _____	CONTRACT NO. _____	ISSUE DATE _____	REVISIONS _____	BY _____

ASSA ABLOY, the global leader
in door opening solutions.

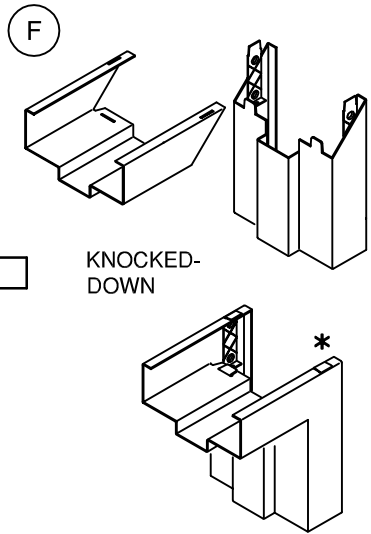
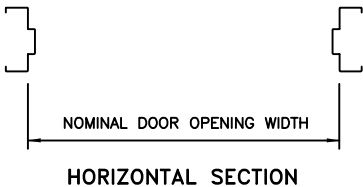
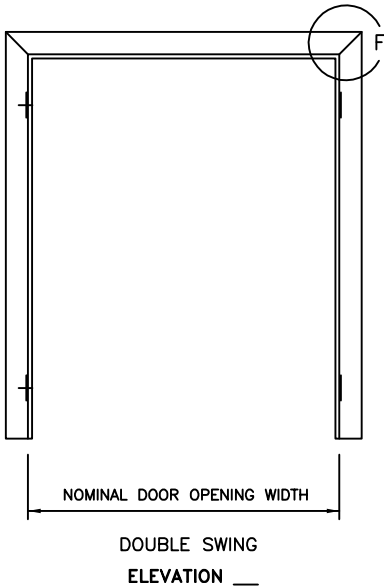
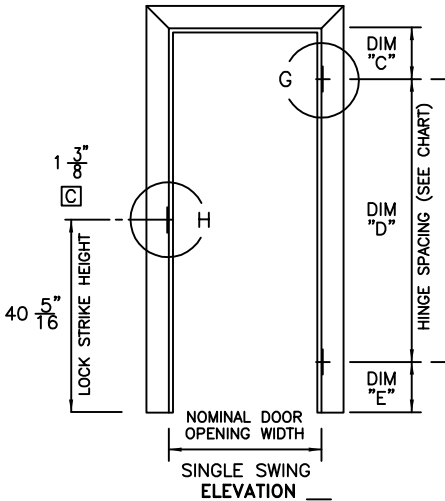
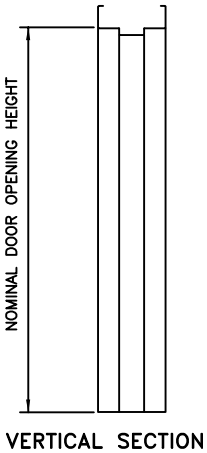
LABELING AGENCIES
Underwriters Laboratory Warnock Hersey Factory Mutual
TEST STANDARDS
NFPA 252, UL10B, UL10C & UL1784

HINGE SPACING									
OPENING HEIGHT	6-8			7-0			7-2		
DOOR THICKNESS	C	D	E	C	D	E	C	D	E
1 3/8" (8) STANDARD	9 3/4"	59 7/8"	10 3/8"	9 3/4"	(2) AT 31 15/16"	10 3/8"	9 3/4"	(2) AT 31 15/16"	10 3/8"
1 3/8" (8) STANDARD UL OPTIONAL NON-UL (6-8")	9 3/4"	(2) AT 29 15/16"	10 3/8"	9 3/4"	(2) AT 31 15/16"	10 3/8"			

Code (8) indicates that frames are for 1-3/8" thick doors.

Cold rolled steel is standard.
Galvanized steel is optional.

STANDARD FRAMES HAVE THE FOLLOWING HINGE PREP QUANTITY:
7'-6" HIGH OR SMALLER: (3) HINGE PREPS
HIGHER THAN 7'-6": (4) HINGE PREPS



☐ WELDED CORNERS
TYPE _____

V2 = FACE WELD ONLY
V3 = FULL FACE & WEB WELD

* Production welded corner
types with "V" prefix do not
utilize corner tabs.

Frames with welded
corners have temporary
spreaders tackwelded
at sill.

SERIES SQ8 & SR8
STEEL FRAMES

(FIRE DOOR FRAMES MUST COMPLY WITH PROCEDURES OF LABELING AGENCY)

Furnished with one coat of neutral color primer paint.
Primer paint has been tested in conformance with ANSI A250.10.

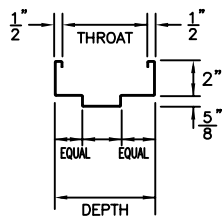
FOR HAND & SWING SEE DOOR SCHEDULE	
FOR ANCHORAGE SEE DOOR SCHEDULE & ANCHOR SHEET	

DRYWALL SERIES

- ☐ DQ8 (for 1-3/8" DOOR)
- ☐ DR8 (for 1-3/8" DOOR)

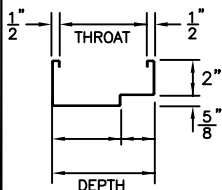
PROFILES

DQ8



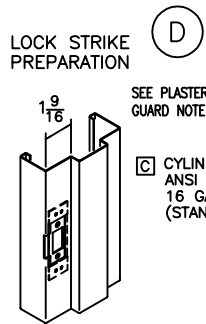
- ☐ 18 GA ☐ 16 GA ☐ 14 GA

DR8

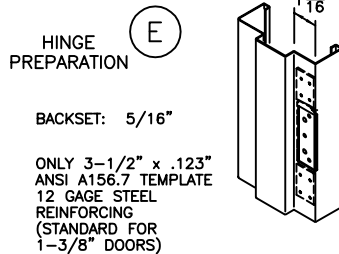


- ☐ 18 GA ☐ 16 GA ☐ 14 GA

LABELING AGENCIES
Underwriters Laboratory
Warnock Hersey
Factory Mutual
TEST STANDARDS
NFPA 252, UL10B, UL10C
& UL1784



C CYLINDRICAL (2-3/4")
ANSI A115.3 TEMPLATE
16 GAGE STEEL REINFORCING
(STANDARD FOR 1-3/8")



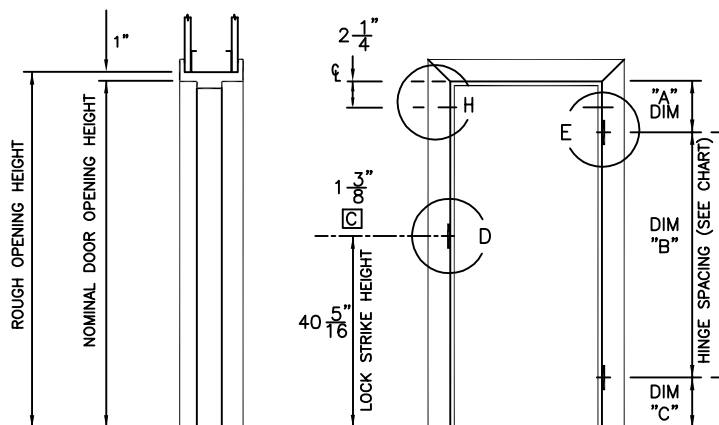
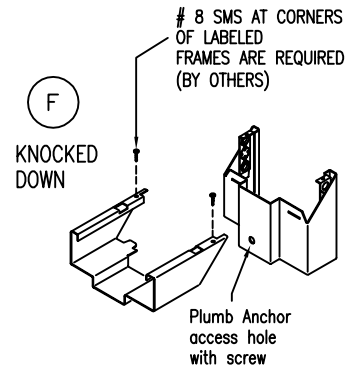
E HINGE PREPARATION
BACKSET: 5/16"
ONLY 3-1/2" x .123"
ANSI A156.7 TEMPLATE
12 GAGE STEEL
REINFORCING
(STANDARD FOR
1-3/8" DOORS)

HINGE SPACING

OPENING HEIGHT	6-8			7-0			7-2		
	A	B	C	A	B	C	A	B	C
1 3/8" STANDARD	9 3/4"	59 7/8"	10 3/8"	9 3/4"	(2) AT 31 15/16"	10 3/8"	9 3/4"	(2) AT 32 15/16"	10 3/8"
1 3/8" STANDARD UL OPTIONAL (6"8") NON-UL	9 3/4"	(2) AT 29 15/16"	10 3/8"	9 3/4"	(2) AT 31 15/16"	10 3/8"			

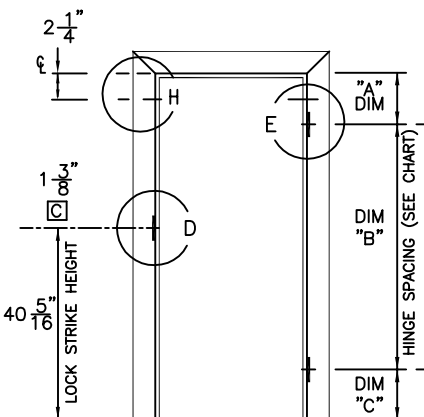
NOTE-PLASTER GUARDS:
STRIKE PLASTER GUARDS (SNAP-IN TYPE) ARE OPTIONAL.
☐ 1" DEEP

- STEEL/WOOD STUD AND DRYWALL CONSTRUCTION METHODS, IN CONJUNCTION WITH FRAME ANCHORAGE, COULD RESULT IN INTERFERENCE BETWEEN THE STUD AND HARDWARE PREP. NOTCHING OF THE STUD COULD RESULT IN COMPROMISING THE STABILITY OF THE FRAME. CONSIDERATION SHOULD BE GIVEN TO SPECIFYING THE HARDWARE SUITABLY SIZED TO FIT THE CONFINES OF A STANDARD FRAME OR SPECIFYING ALTERNATE FRAME PROFILES TO ACCOMMODATE THE HARDWARE.
- IF NECESSARY TO REMOVE, PLASTER GUARDS ARE BEST REMOVED BEFORE FRAME INSTALLATION. HINGE PLASTER GUARDS ARE PROVIDED, AS STANDARD.

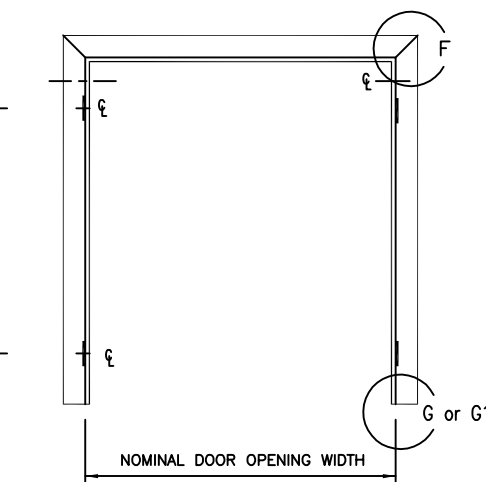


VERTICAL SECTION

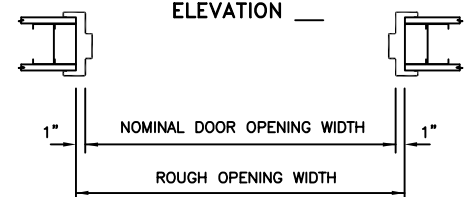
C.R.S. steel is standard.
Galvanized steel is optional.



SINGLE SWING ELEVATION



DOUBLE SWING ELEVATION



HORIZONTAL SECTION

H ADJUSTABLE PLUMB ANCHOR
ONE EACH JAMB
Adjust with screw driver

G STANDARD SILL ANCHOR
DIMPLED HOLE FOR #10 FH FASTENER. FASTENER IS BY CONTRACTOR AND SHOULD BE LONG ENOUGH TO ENGAGE STUD.

G1 OPTIONAL SILL STRAP ANCHOR
FASTENER IS BY CONTRACTOR AND SHOULD ENGAGE STUD.

SERIES DQ8 AND DR8 DRYWALL FRAMES

(SLIP-ON DRYWALL FRAMES)

DRAWN BY _____		DATE _____	
CHK'D BY _____		DATE _____	
SHT _____	CONTRACT NO. _____	ISSUE DATE _____	REVISIONS _____
OF _____			BY _____

(Conversion: 1" = 25.4 mm, e.g., 1-3/4" = 44.45 mm)

FOR HAND & SWING
SEE DOOR SCHEDULE



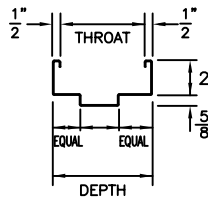
BEFORE DRYWALL SERIES

☐ BQ8 (for 1-3/8" DOOR)

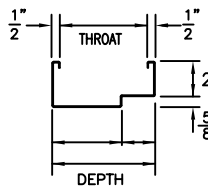
☐ BR8 (for 1-3/8" DOOR)

PROFILES

BQ8



BR8



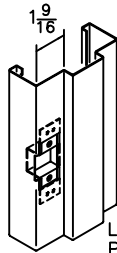
LABELING AGENCIES

Underwriters Laboratory
Warnock Hersey
Factory Mutual

TEST STANDARDS

NFPA 252, UL10B, UL10C
& UL1784

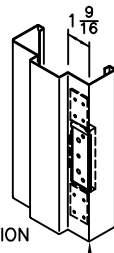
(D)



SEE NOTE #1

(C) CYLINDRICAL (2-3/4")
ANSI A115.3 TEMPLATE
16 GAGE STEEL REINFORCING
WITH EXTRUDED SCREW HOLES
EQUAL TO 14 GAGE.
(STANDARD FOR 1-3/8" DOORS)

(E)



HINGE
PREPARATION

BACKSET: 5/16"

ONLY 3-1/2" x .123"
ANSI A156.7 TEMPLATE
12 GAGE STEEL
REINFORCING
(STANDARD FOR
1-3/8" DOORS)

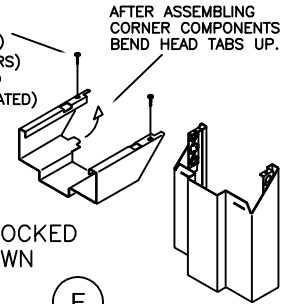
HINGE SPACING

OPENING HEIGHT	6-8			7-0			7-2		
DOOR THICKNESS	A	B	C	A	B	C	A	B	C
1 3/8" STANDARD	9 3/4"	59 7/8"	10 3/8"	9 3/4"	(2) AT 31 15/16"	10 3/8"	9 3/4"	(2) AT 31 15/16"	10 3/8"
1 3/8" STANDARD UL OPTIONAL NON-UL (6'-8")	9 3/4"	(2) AT 29 15/16"	10 3/8"	9 3/4"	(2) AT 31 15/16"	10 3/8"			

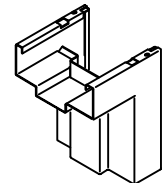
NOTE #1: STRIKE PLASTER GUARD IS AN INTEGRAL PART OF THE STRIKE REINFORCEMENT. STRIKE PLASTER GUARD IS 1-1/8" DEEP WITH A 2" FACE STRIKE JAMB.

STEEL/WOOD STUD AND DRYWALL CONSTRUCTION METHODS, IN CONJUNCTION WITH FRAME ANCHORAGE AND/OR ELECTRICAL JUNCTION BOX, COULD RESULT IN INTERFERENCE BETWEEN THE STUD AND HARDWARE PREP. NOTCHING OF THE STUD COULD RESULT IN COMPROMISING THE STABILITY OF THE FRAME. CONSIDERATION SHOULD BE GIVEN TO SPECIFYING HARDWARE SUITABLY SIZED TO FIT THE CONFINES OF A STANDARD FRAME OR SPECIFYING ALTERNATE FRAME PROFILES TO ACCOMMODATE THE HARDWARE.

#8 SMS
(OPTIONAL)
(BY OTHERS)
(REQUIRED
IF FIRE RATED)



OR



☐ KNOCKED
DOWN

(F)

☐ WELDED CORNERS
TYPE _____

V2 = FACE WELD ONLY
V3 = FULL FACE & WEB WELD

* Production welded corner types with "V" prefix do not utilize corner tabs.

Frames with welded corners have temporary spreaders tackwelded at sill.

VERTICAL SECTION

BQ8 & BR8 frames are 1-9/16" rabbet(s).

BU, BQ & BR frames are fabricated from Series DU, DQ & DR frame components as KD or welded units. Plumb anchors or dimpled holes at sill are not used. Metal or wood stud anchors are standard. "Before Drywall" frames can be installed before or after wall frame work is erected but before wallboard is applied. See anchor sheet for suggested wall details.

C.R.S. steel is standard.
Galvanized steel is optional.



(Conversion: 1" = 25.4 mm, e.g., 1-3/4" = 44.45 mm)

DRAWN BY _____	DATE _____			
CHK'D BY _____	DATE _____			
SHT _____	CONTRACT NO. _____	ISSUE DATE _____	REVISIONS _____	BY _____

SERIES BQ8 & BR8 DOOR FRAMES

(BEFORE DRYWALL FRAMES w/ APPLIED ANCHORS)

Furnished with one coat of neutral color primer paint.
Primer paint has been tested in conformance with ANSI A250.10.

FOR HAND & SWING

SEE DOOR SCHEDULE



FOR ANCHORAGE
SEE DOOR SCHEDULE &
ANCHOR SHEET



SECTION 11 - FRAMES, GENERAL

Technical Information:

Prime Paint Data	11-002
Colorstyle Paint Data	11-003

Frame, Door Opening Sizes and Hardware Provisions:

1-3/8" Door - Single and Double	11-101
Hardware Locations - Standard 1-3/8" Door	11-102
1-3/4" Door - Single and Double	11-103
Hardware Locations - Standard 1-3/4" Door	
6-8, 7-0, 7-2 High, 4-1/2" or 5" High Hinge	11-104
7-10, 8-0, 9-0, 10-0 High, 4-1/2" or 5" High Hinge	11-104A
5-0 Thru 10-0	11-104B, 11-104C
6-8, 7-0, 7-2, 8-0 High, Dutch, 4-1/2" or 5" High Hinge	11-104D
Hardware Locations - Optional (NAAMM), 1-3/4" Door	
6-8, 7-0, 7-2 High, 4-1/2" High Hinge	11-105
7-10, 8-0, 9-0 High, 4-1/2" High Hinge	11-105A
6-8, 7-0, 7-2 High, 5" High Hinge	11-106
7-10, 8-0, 9-0 High, 5" High Hinge	11-106A
1-3/8" Door Frames, Hinge and Strike Preparations	11-201
1-3/4" Door Frames, 4-1/2" and 5" Hinge Preparations	11-202
1-3/4" Door Frames, ANSI (4-7/8") Strike Preparations	11-203
1-3/4" Cylindrical Strike Preparation	11-204
Series SQW Weatherstrip Kerf Frame Hinge Preparation	11-205
Series SQW Weatherstrip Kerf Frame Strike Preparation	11-206
Full Depth Hinge Reinforcement	11-207
High Frequency Hinge Preparation	11-208
1-3/8" and 1-3/4" Door Frame Mute Application	11-209
Reversible Flush Bolt Preparation	11-210

Frame Construction:

Double Rabbet Frames, Die-cut, Welded Corner	
Assembly T-1	11-301
Double Rabbet Frames, Die-cut, Welded Corner	
Assembly T-2, T-3	11-302
Double Rabbet Frames, Die-cut, Welded Corner	
Assembly V-1, V-2	11-303
Double Rabbet Frames, Die-cut, Welded Corner	
Assembly V-3	11-304
Double Rabbet Frames, Miter-sawed, Welded Corner	
Assembly V-4, V-5	11-305
Double Rabbet Frames, Coped, Butted, Welded Corner	
Assembly V-7	11-306
Double Rabbet Frames, Welded Junctions	
Assembly V-8, V-9	11-307

SECTION 11 - FRAMES, GENERAL**Hardware Reinforcements:**

Closer Reinforcements, Plate Type	11-401, 11-402
Miscellaneous Hardware Reinforcements, Plate Type	11-403

Frame Anchors:

Anchor Quantity	11-500
Floor Anchors	11-501 thru 11-503
Masonry Anchors	11-504, 11-505
Existing Opening Anchors	11-505 thru 11-507
Wood Stud Anchors	11-508, 11-509
Metal Stud Anchors	11-510, 11-511
Before Drywall Stud Anchor	11-512
Closure Clip	11-512
Frame Splines	11-513

Special Information:

Standard Frame Installation	11-901, 11-902
Frame Spreader Bars	11-903

PRIME PAINT DATA DOOR FRAMES

Process Data

Steel door frame pieces are processed through a washer to clean and pre-treat the steel. This treatment removes mill-contaminants and provides excellent primer adhesion and under film corrosion protection.

After the wash, the frame pieces are dried and then painted with a neutral-color primer. Application is by means of spray or by immersion in a dip-tank. The frame pieces are then oven dried.

The primer coating provides protection against rust and exhibits excellent adhesion characteristics. This primer is an environmentally friendly water-base paint that contains no heavy metal pigments and meets air quality guidelines. The primer coating is intended as a preparatory base for necessary field painting.

Standard primer color: Gray

Performance Data

Primer-painted steel surfaces have been subjected to the following tests:

- Salt Spray
- Humidity
- Impact
- Film Adhesion

Primer paint meets the requirements for acceptance stated in the current version of ANSI Standard A250.10, "Test Procedure and Acceptance Criteria for Prime Painted Steel Surfaces".

Field Painting

A finish coat of paint is to be applied to prime painted units by the painting contractor. The topcoat of paint used over the primer plays a very important role in extending the life of a steel frame. Any paint used must be compatible with steel. Solvent base finish paints are recommended for application over the factory applied primer. If solvent base finish paints cannot be used, it is important that a water-base primer formulated for steel be applied over the factory primer. This should be done before applying water-base top coats, to prevent flash rusting.

Gloss

Show-through characteristics of finish increase as the paint gloss increases. To minimize this, a maximum paint gloss rating of 20% reflectance, measured using a 60° gloss meter is recommended. This should be suitable for most applications. Translucent paints may emphasize show-through and their use is not recommended.

Distributor Tech Data

COLORSTYLE PAINT DATA DOOR FRAMES

Process Data

Factory-applied Colorstyle finish is a two-part, urethane top-coat that is electrostatically applied over the standard primer. The paint is then oven cured.

The chemically reactive cure provides a top quality, abrasion resistant finish with excellent weathering characteristics. This finish is environmentally friendly in that it does not contain heavy metal pigments.

60° Gardner Gloss: 15 to 20.

Colors: Standard color selectors available upon request.

Performance Data

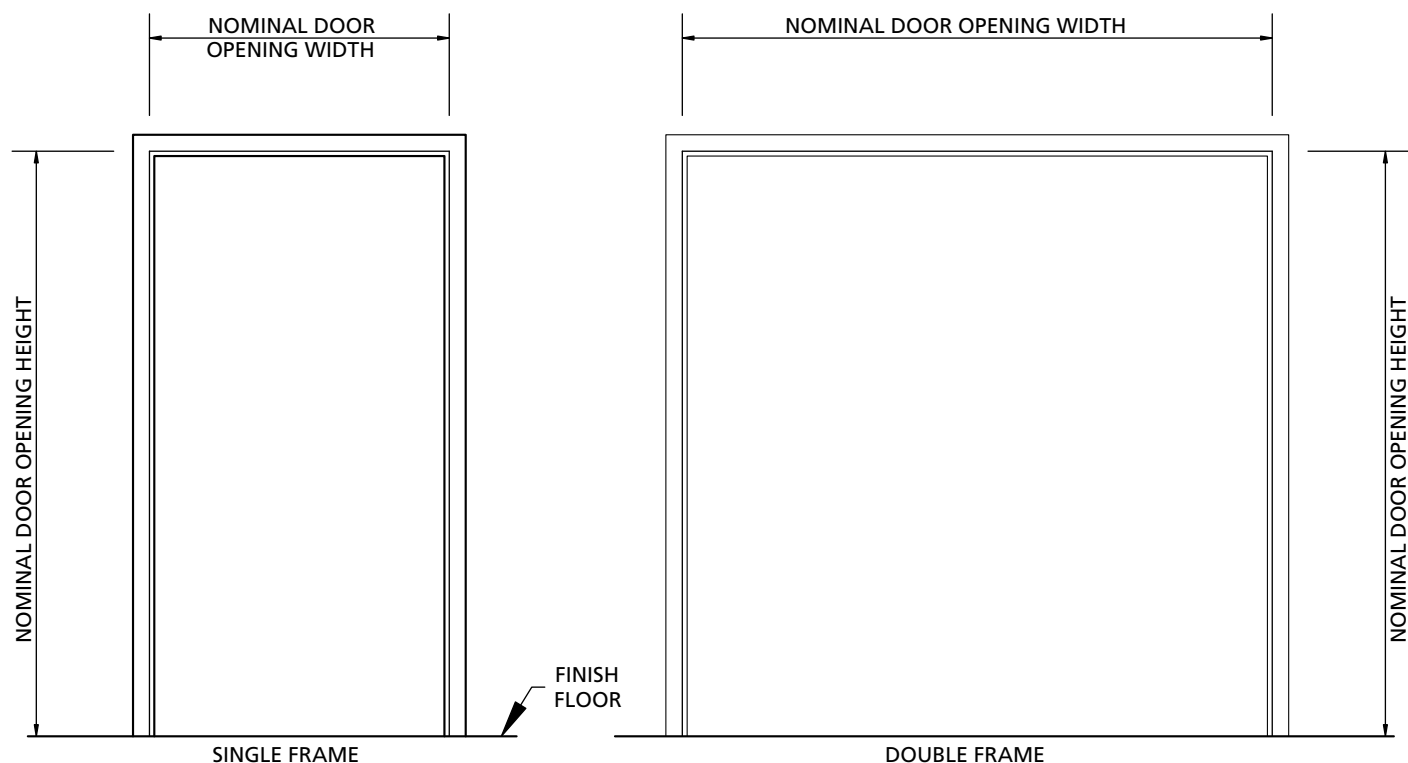
Colorstyle, factory applied finish paint process has been subjected to the following tests:

- Salt Spray
- Humidity
- Accelerated Weathering
- Impact
- Film Adhesion
- Abrasion

Factory applied Colorstyle finish paint meets the performance requirements and acceptance criteria as stated in ANSI Standard A250.3, "Test Procedure and Acceptance Criteria for Factory Applied Finish Painted Steel Surfaces...".

Distributor Tech Data

1-3/8" DOOR FRAME

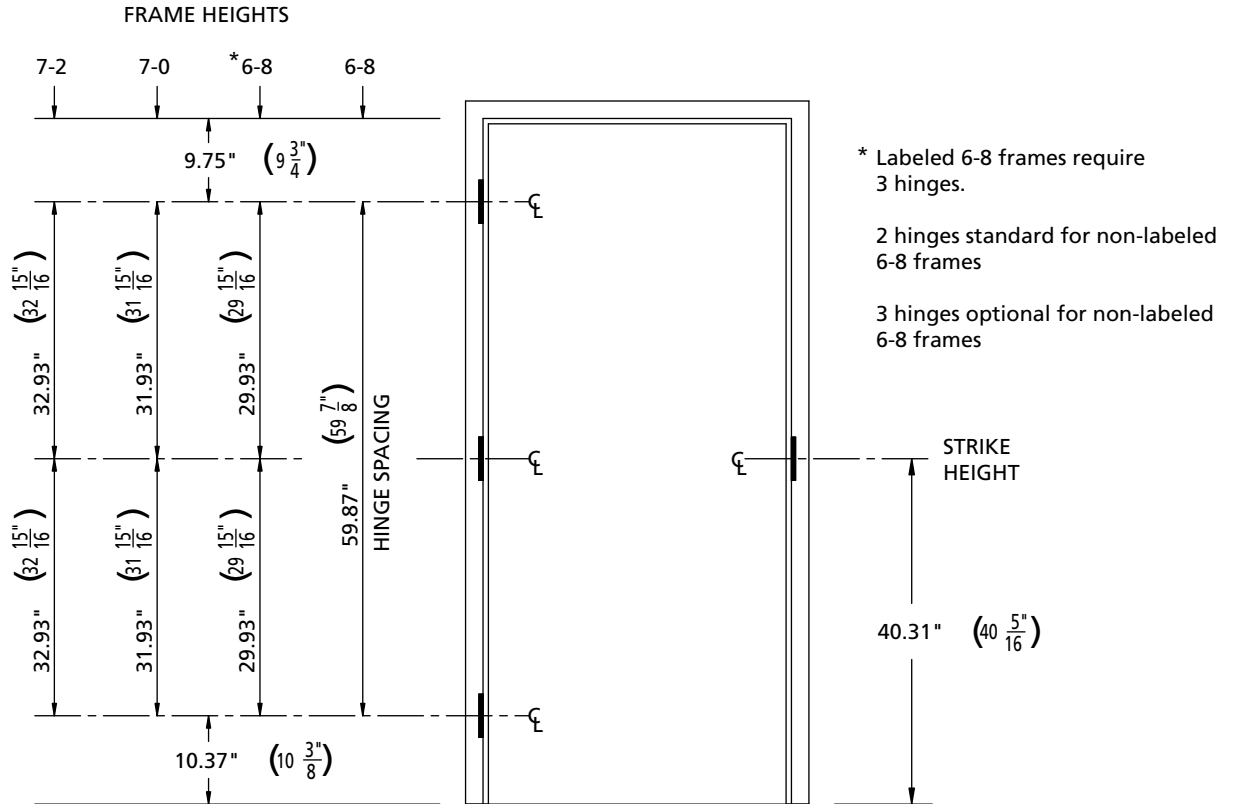


STANDARD DOOR OPENING SIZES				
OPENING HEIGHT ►		6-8	7-0	7-2
SINGLE WIDTH	PAIR WIDTH			
2-0	4-0	●	●	●
2-4	4-8	●	●	●
2-6	5-0	●	●	●
2-8	5-4	●	●	●
2-10	5-8	●	●	●
3-0	6-0	●	●	●

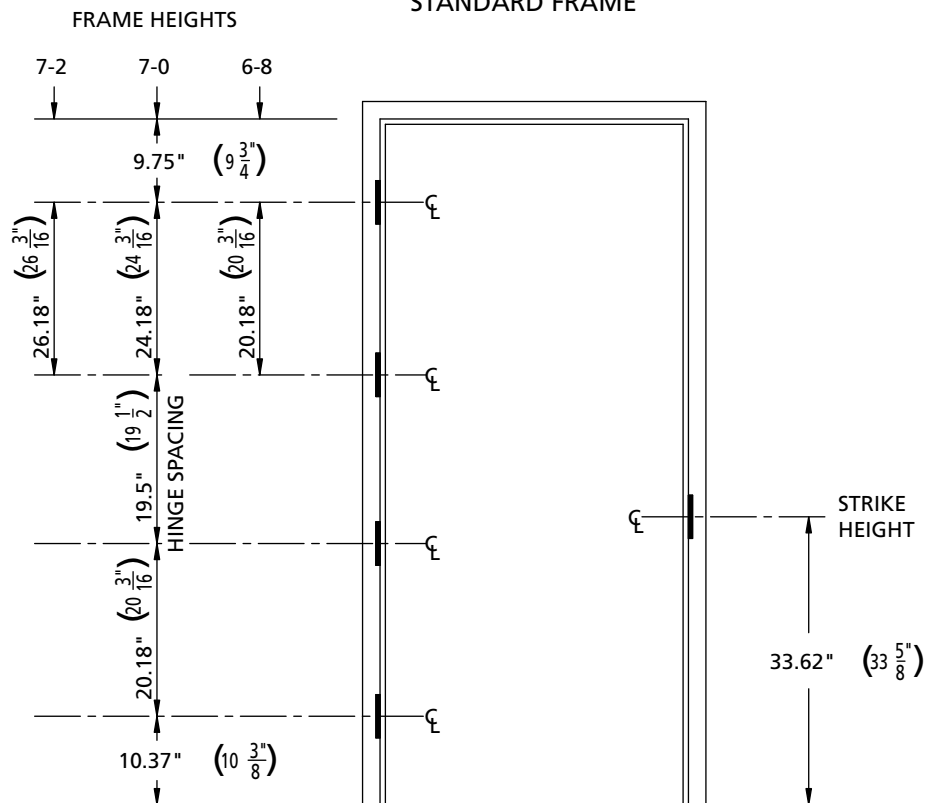
FRAMES ON THIS PAGE ARE FOR USE WITH 1-3/8" THICK DOORS.

Distributor Tech Data

1-3/8" DOOR FRAMES HINGE AND STRIKE LOCATIONS



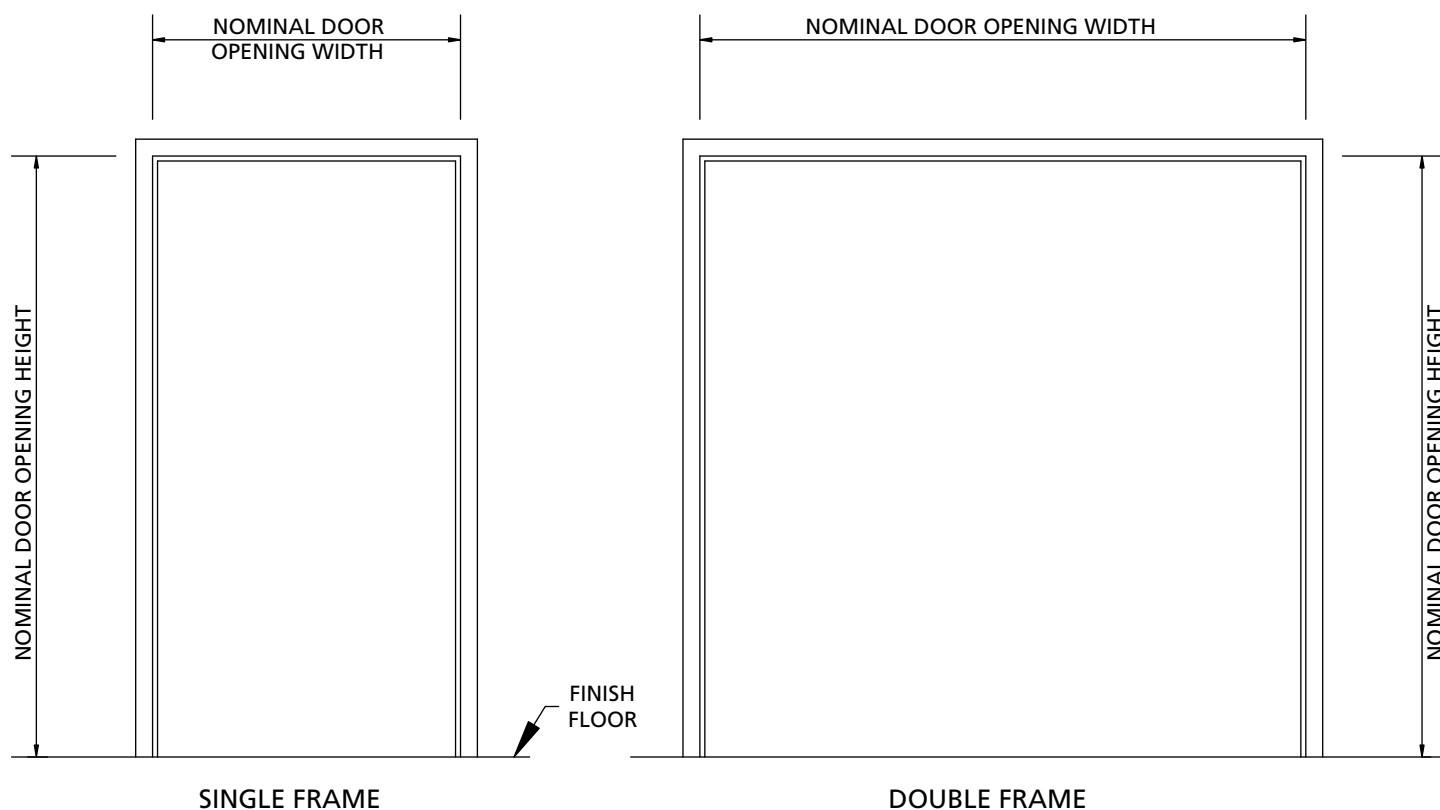
STANDARD FRAME



DUTCH DOOR FRAME

Distributor Tech Data

1-3/4" DOOR FRAME SIZES

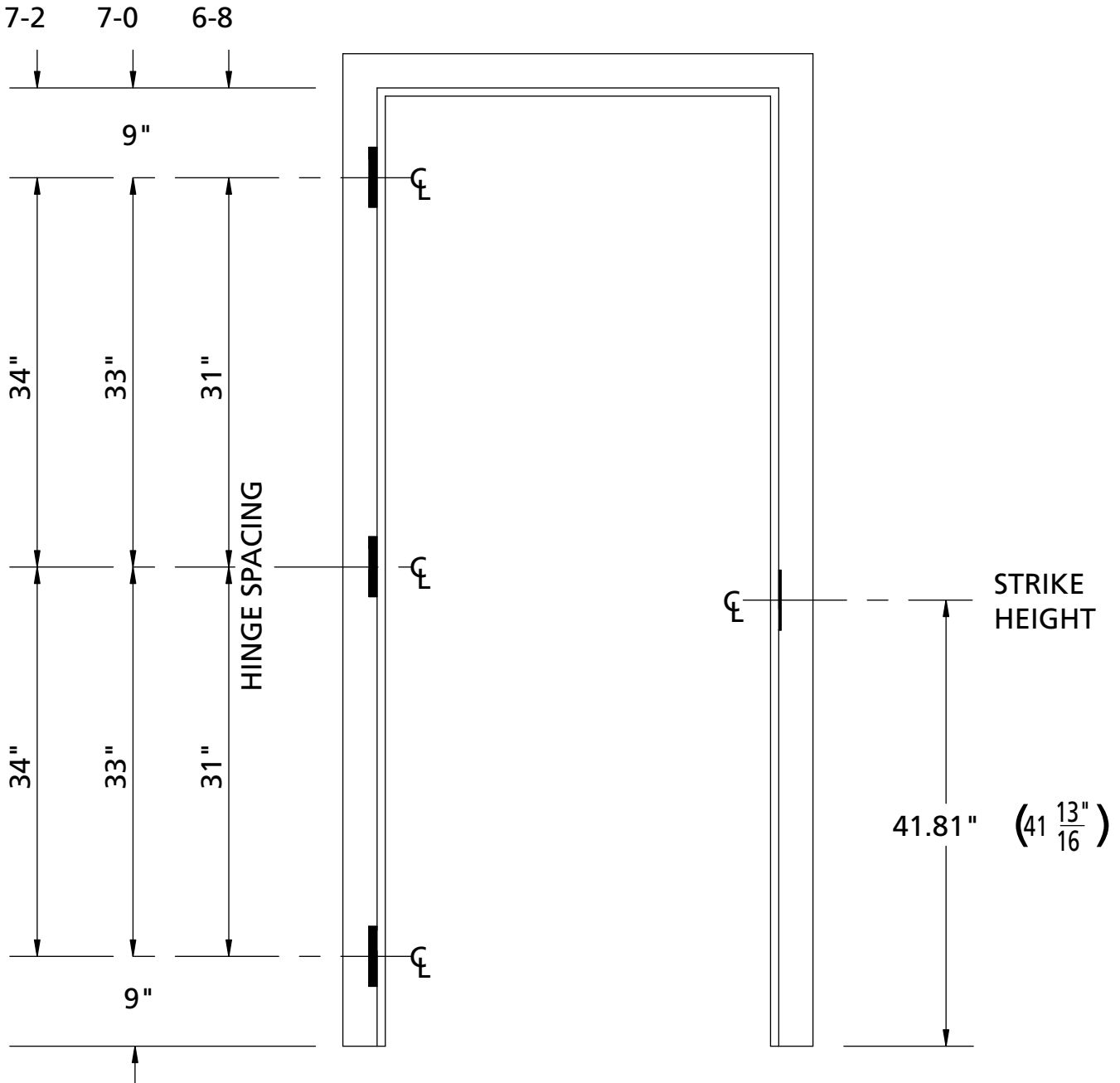


STANDARD DOOR OPENING SIZES								
OPENING HEIGHT ►		6-8	7-0	7-2	7-10	8-0	9-0	10-0
SINGLE WIDTH	PAIR WIDTH							
2-0	4-0	●	●	●	●	●	●	●
2-4	4-8	●	●	●	●	●	●	●
2-6	5-0	●	●	●	●	●	●	●
2-8	5-4	●	●	●	●	●	●	●
2-10	5-8	●	●	●	●	●	●	●
3-0	6-0	●	●	●	●	●	●	●
3-4	6-8	●	●	●	●	●	●	●
3-6	7-0	●	●	●	●	●	●	●
3-8	7-4	●	●	●	●	●	●	●
3-10	7-8	●	●	●	●	●	●	●
4-0	8-0	●	●	●	●	●	●	●
5-0	10-0	●	●	●	●	●	●	●

Distributor Tech Data

STANDARD HARDWARE LOCATIONS 1-3/4"
DOOR FRAMES: 6-8, 7-0 & 7-2 HEIGHTS
4-1/2" OR 5" HIGH HINGES

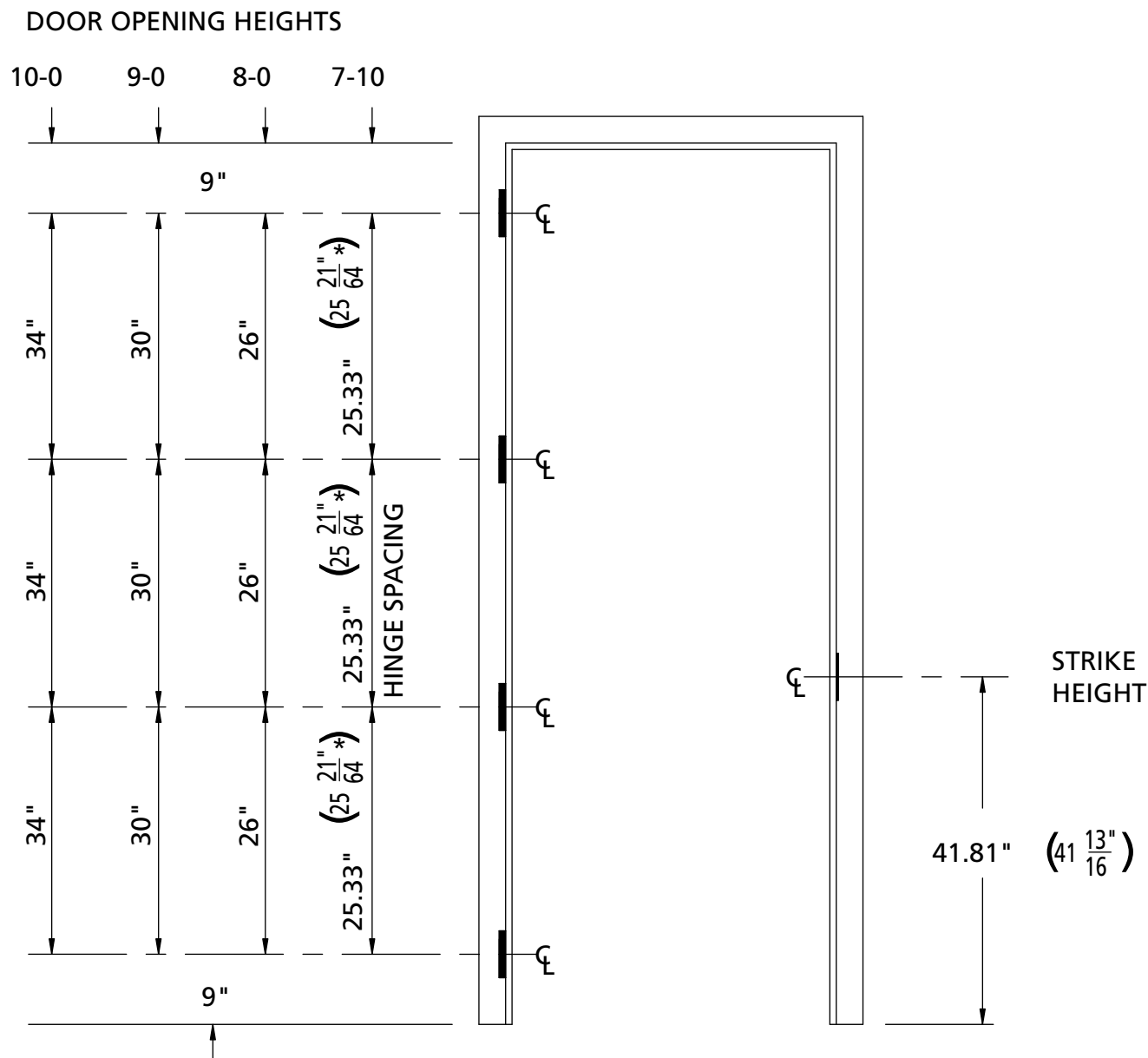
DOOR OPENING HEIGHTS



These hardware locations are Ceco Door Products standard and will be furnished unless otherwise agreed to.

Distributor Tech Data

STANDARD HARDWARE LOCATIONS FOR 1-3/4" DOOR FRAMES: 7-10, 8-0, 9-0, AND 10-0 HEIGHTS



* $21/64$ " represents a measurable approximation to .33".

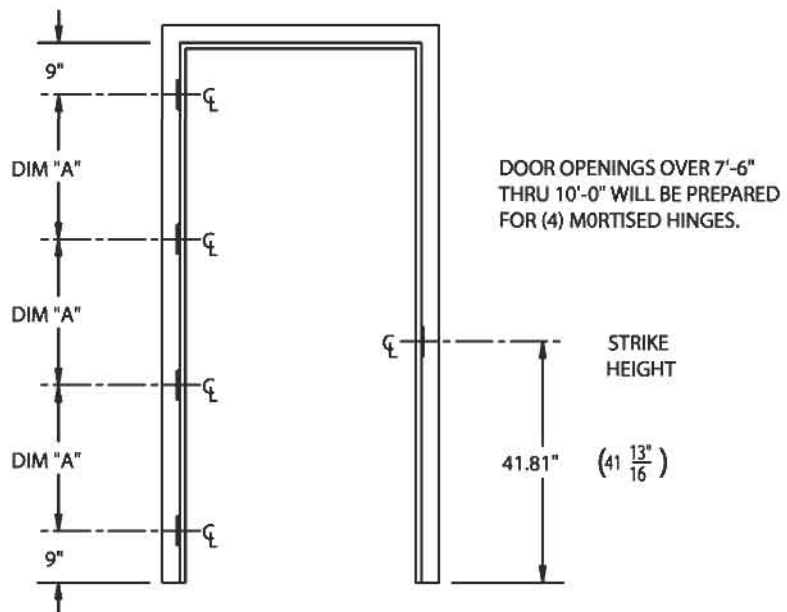
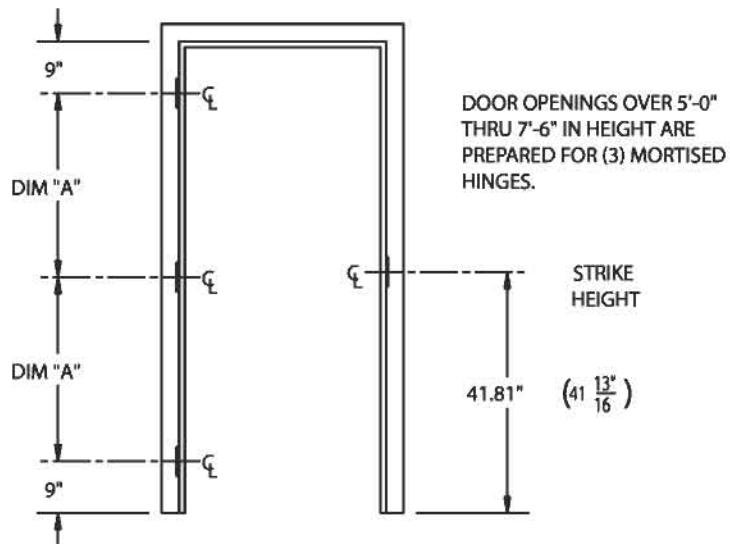
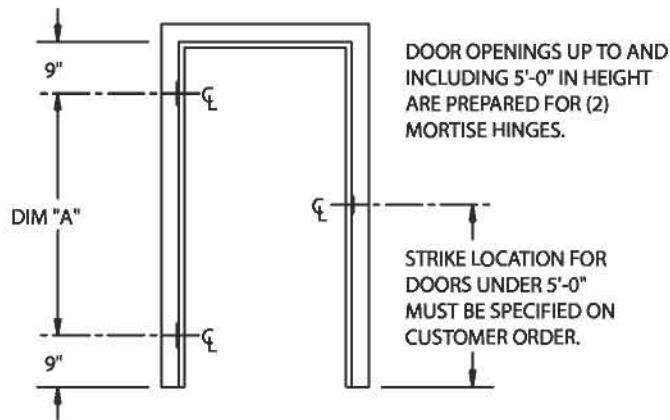
These hardware locations are Ceco Door Products standard and will be furnished unless otherwise agreed to.

Distributor Tech Data

FACTORY STANDARD HARDWARE

LOCATIONS: HEIGHTS 5'-0" THRU 10'-0"

Note: This standard applies to all door opening sizes. The charts on page 11-104C depict standard hardware locations for sizes listed in one inch increments.



Distributor Tech Data

FACTORY STANDARD HARDWARE LOCATIONS: HEIGHTS 5'-0" THRU 10'-0"

OPENING HEIGHT	NUMBER OF HINGES	DIM "A"
5'-0"	2	42"

OPENING HEIGHT	NUMBER OF HINGES	DIM "A"
5'-1"	3	2 @ 21.5"
5'-2"	3	2 @ 22"
5'-3"	3	2 @ 22.5"
5'-4"	3	2 @ 23"
5'-5"	3	2 @ 23.5"
5'-6"	3	2 @ 24"
5'-7"	3	2 @ 24.5"
5'-8"	3	2 @ 25"
5'-9"	3	2 @ 25.5"
5'-10"	3	2 @ 26"
5'-11"	3	2 @ 26.5"
6'-0"	3	2 @ 27"
6'-1"	3	2 @ 27.5"
6'-2"	3	2 @ 28"
6'-3"	3	2 @ 28.5"
6'-4"	3	2 @ 29"
6'-5"	3	2 @ 29.5"
6'-6"	3	2 @ 30"
6'-7"	3	2 @ 30.5"
6'-8"	3	2 @ 31"
6'-9"	3	2 @ 31.5"
6'-10"	3	2 @ 32"
6'-11"	3	2 @ 32.5"
7'-0"	3	2 @ 33"
7'-1"	3	2 @ 33.5"
7'-2"	3	2 @ 34"
7'-3"	3	2 @ 34.5"
7'-4"	3	2 @ 35"
7'-5"	3	2 @ 35.5"
7'-6"	3	2 @ 36"

OPENING HEIGHT	NUMBER OF HINGES	DIM "A"
7'-7"	4	3 @ 24.33"
7'-8"	4	3 @ 24.66"
7'-9"	4	3 @ 25"
7'-10"	4	3 @ 25.33"
7'-11"	4	3 @ 25.66"
8'-0"	4	3 @ 26"
8'-1"	4	3 @ 26.33"
8'-2"	4	3 @ 26.66"
8'-3"	4	3 @ 27"
8'-4"	4	3 @ 27.33"
8'-5"	4	3 @ 27.66"
8'-6"	4	3 @ 28"
8'-7"	4	3 @ 28.33"
8'-8"	4	3 @ 28.66"
8'-9"	4	3 @ 29"
8'-10"	4	3 @ 29.33"
8'-11"	4	3 @ 29.66"
9'-0"	4	3 @ 30"
9'-1"	4	3 @ 30.33"
9'-2"	4	3 @ 30.66"
9'-3"	4	3 @ 31"
9'-4"	4	3 @ 31.33"
9'-5"	4	3 @ 31.66"
9'-6"	4	3 @ 32"
9'-7"	4	3 @ 32.33"
9'-8"	4	3 @ 32.66"
9'-9"	4	3 @ 33"
9'-10"	4	3 @ 33.33"
9'-11"	4	3 @ 33.66"
10'-0"	4	3 @ 34"

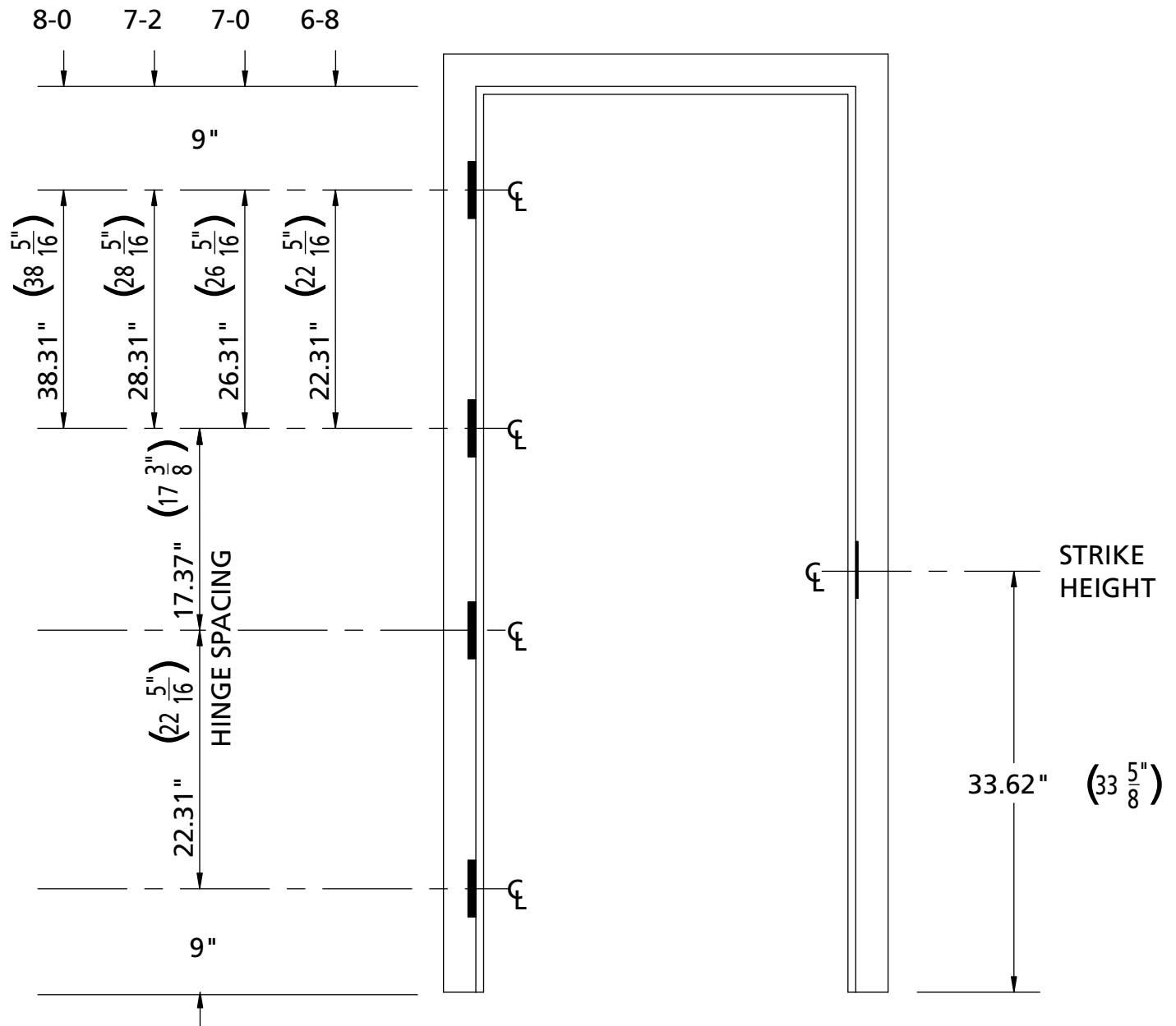
Distributor Tech Data

STANDARD HARDWARE LOCATIONS, 1-3/4"

DUTCH FRAMES: 6-8, 7-0, 7-2 & 8-0

HEIGHTS - 4-1/2" OR 5" HIGH HINGES

DOOR OPENING HEIGHTS



These hardware locations are Ceco Door Products standard and will be furnished unless otherwise agreed to.

Distributor Tech Data

† NAAMM ALTERNATE HDWE LOCATIONS, 1-3/4"
DOOR FRAMES: 6-8, 7-0 & 7-2 HEIGHTS
4-1/2" HIGH HINGES

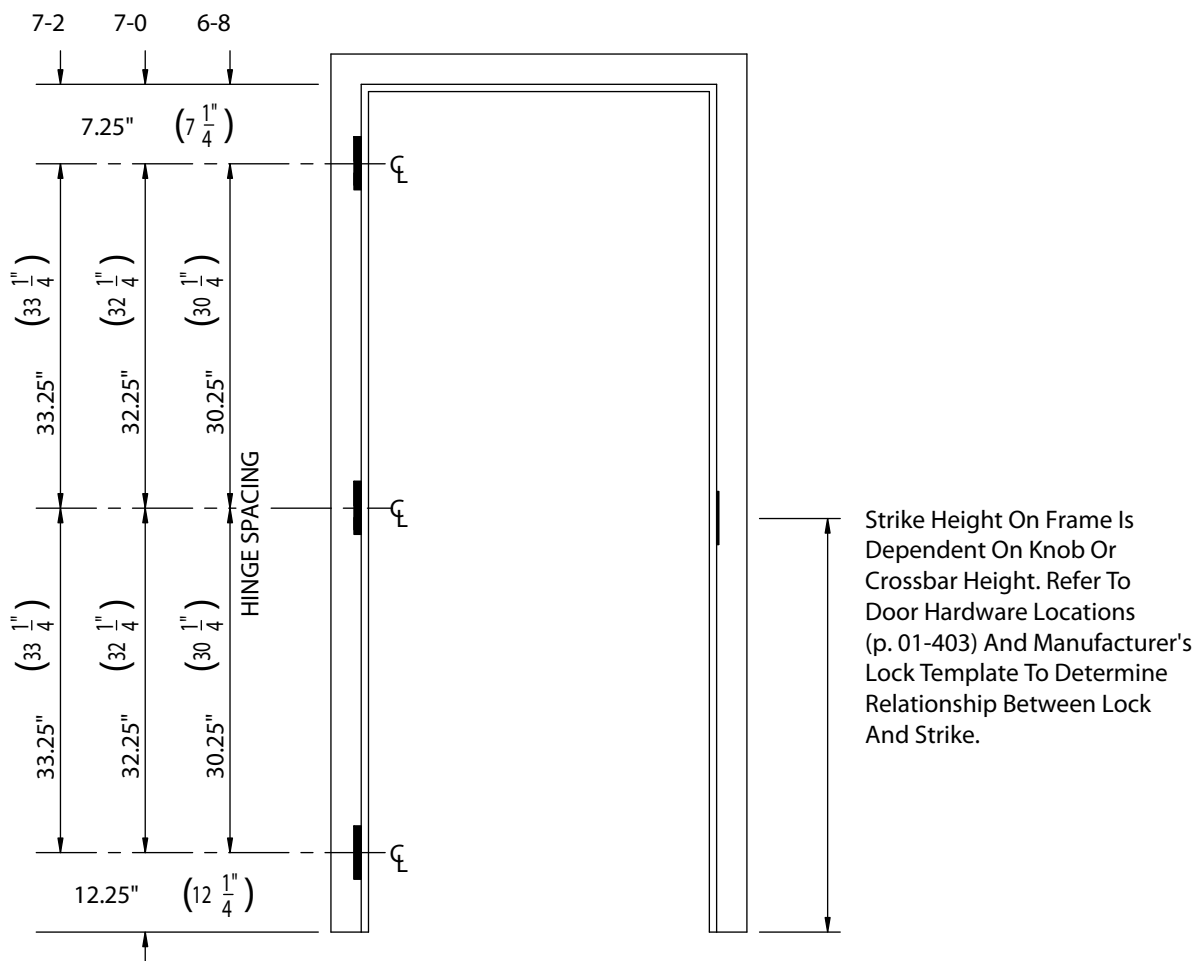
HARDWARE LOCATIONS SHOWN BELOW ARE BASED
ON THE FOLLOWING:

5" from head to top of upper hinge.

10" from bottom of jamb to bottom of lower hinge.

Equal spacing between intermediate hinges.

DOOR OPENING HEIGHTS



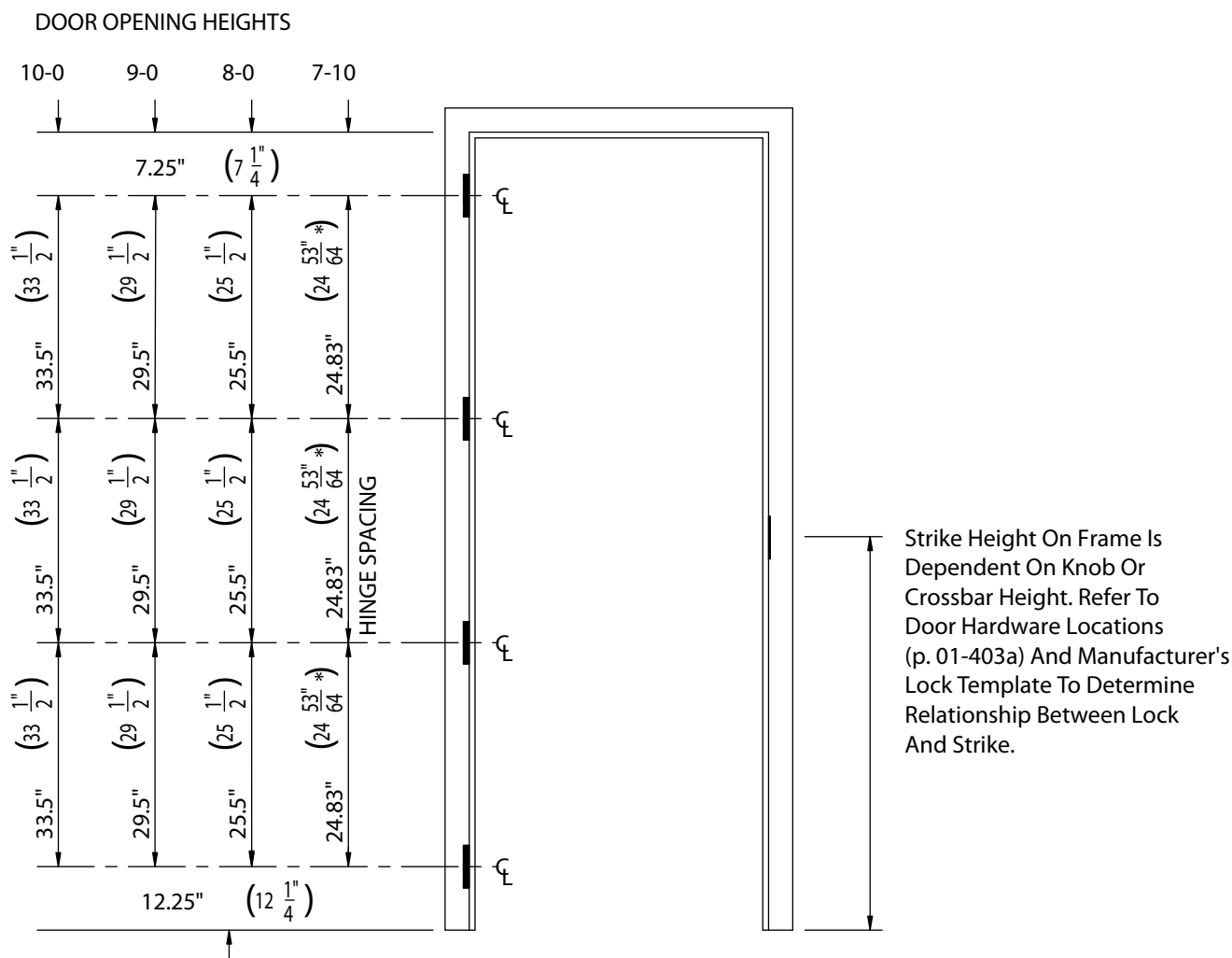
The above hardware locations will be
furnished only when agreed to.

Distributor Tech Data

NAAMM HDWE LOCATIONS, 1-3/4" DOOR FRAMES: 7-10, 8-0, 9-0, AND 10-0 HEIGHTS - 4-1/2" HIGH HINGES

HARDWARE LOCATIONS SHOWN BELOW ARE BASED
ON THE FOLLOWING:

- 5" from head to top of upper hinge.
- 10" from bottom of jamb to bottom of lower hinge.
- Equal spacing between intermediate hinges.



* 53/64" represents a measurable approximation to .83".

The above hardware locations will be furnished only when agreed to.

NAAMM ALTERNATE HDWE LOCATIONS, 1-3/4"

DOOR FRAMES: 6-8, 7-0 & 7-2 HEIGHTS
5" HIGH HINGES

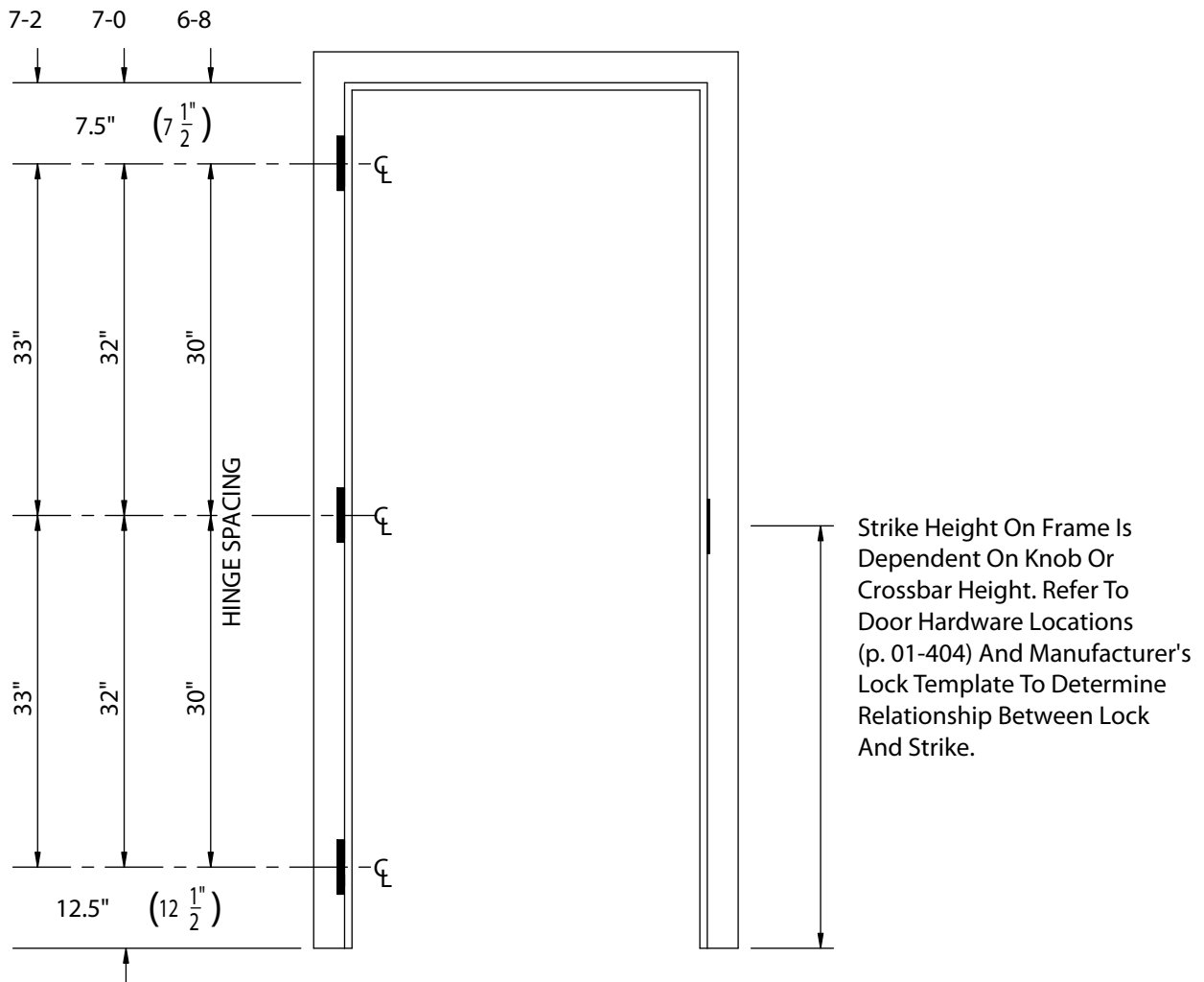
HARDWARE LOCATIONS SHOWN BELOW ARE
BASED ON THE FOLLOWING:

5" from head to top of upper hinge.

10" from bottom of jamb to bottom
of lower hinge.

Equal spacing between intermediate
hinges.

DOOR OPENING HEIGHTS



The above hardware locations will be
furnished only when agreed to.

Distributor Tech Data

NAAMM ALTERNATE HDWE LOCATIONS

1-3/4" DOOR FRAMES: 7-10, 8-0, 9-0

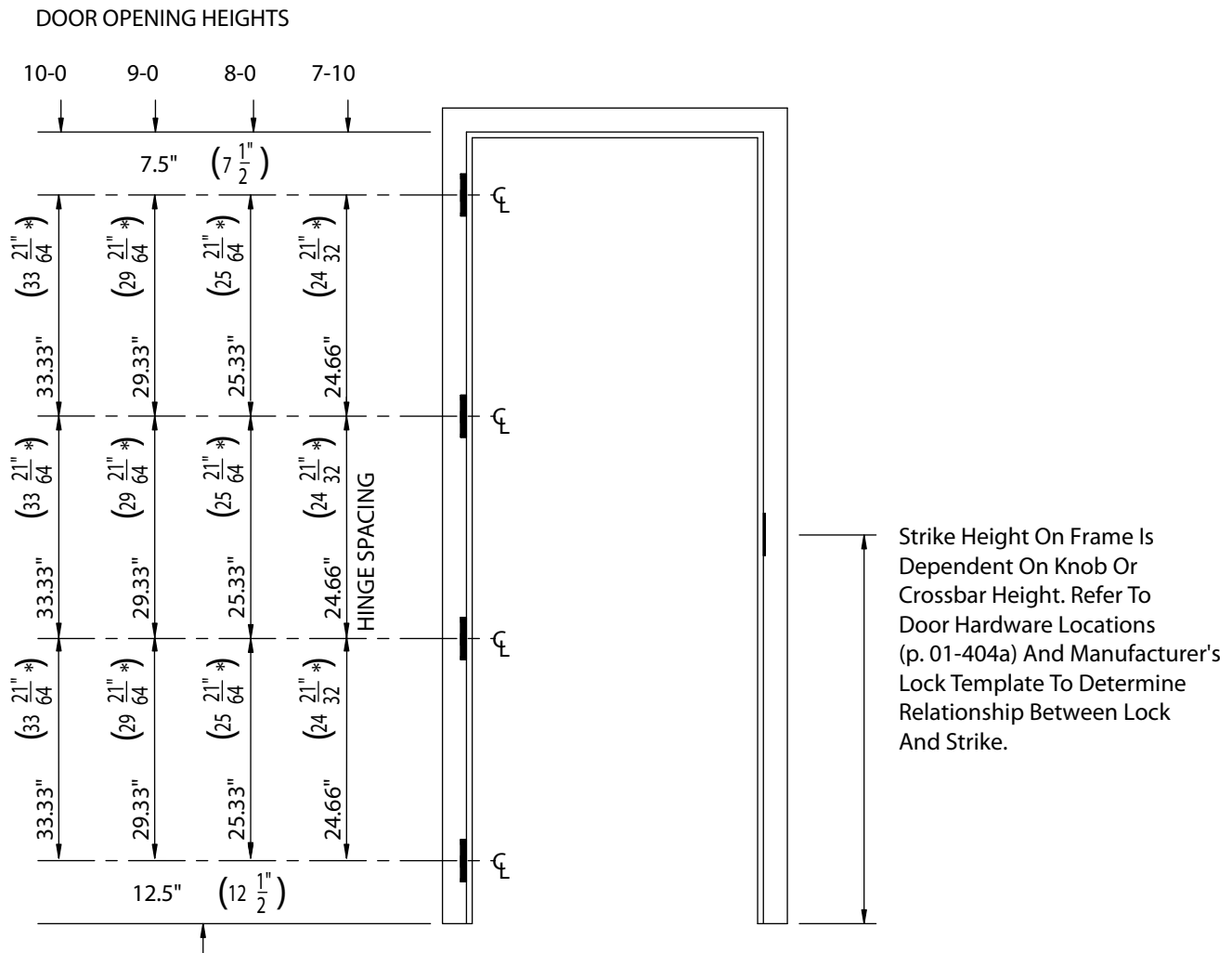
AND 10-0 HEIGHTS - 5" HIGH HINGES

HARDWARE LOCATIONS SHOWN BELOW ARE BASED ON THE FOLLOWING:

5" from head to top of upper hinge.

10" from bottom of jamb to bottom of lower hinge.

Equal spacing between intermediate hinges.



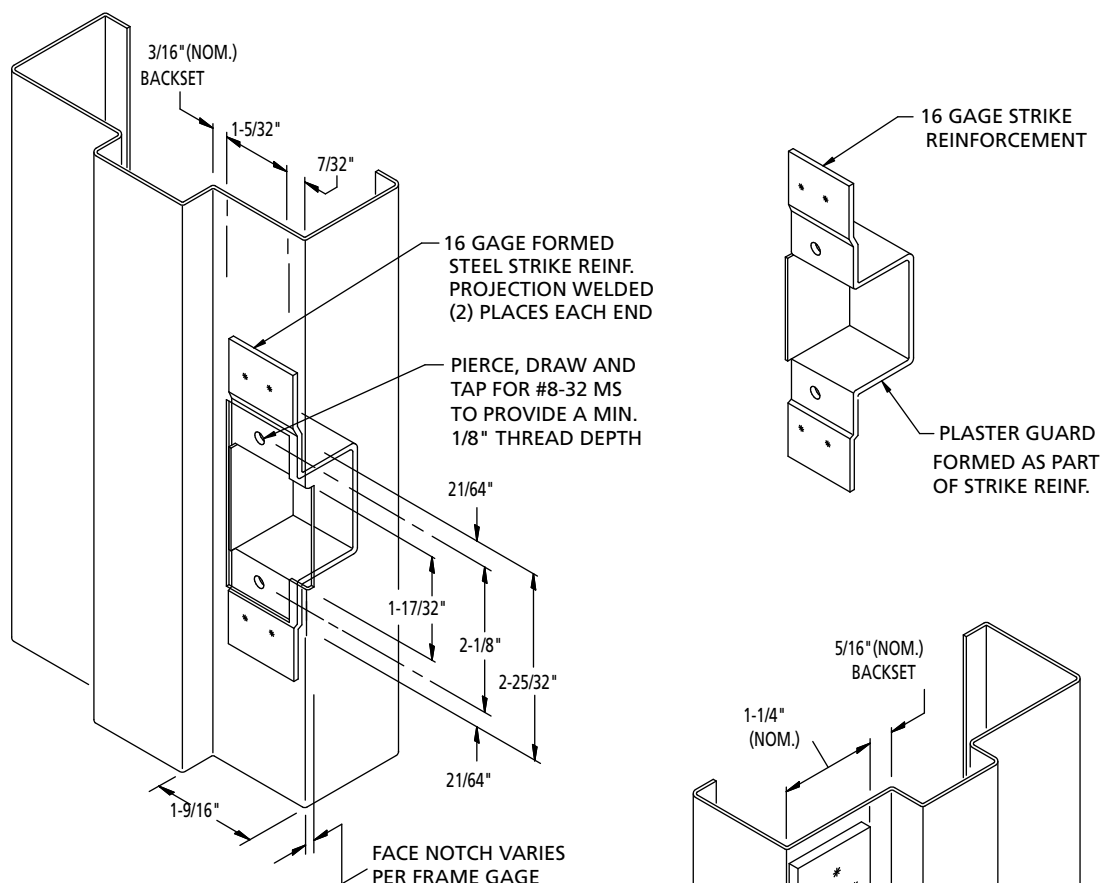
* 21/64" represents a measurable approximation to .33".

* 21/32" represents a measurable approximation to .66".

The above hardware locations will be furnished only when agreed to.

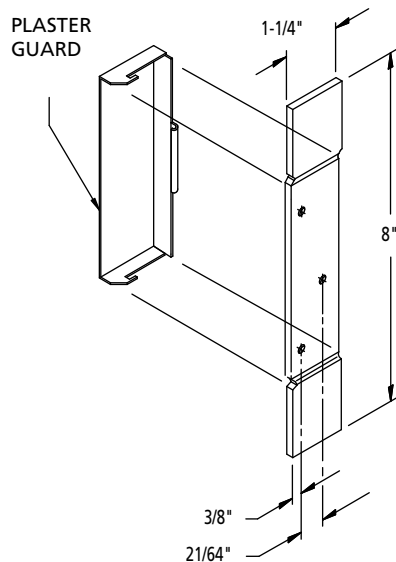
Distributor Tech Data

1-3/8" DOOR FRAME STRIKE AND HINGE PREPS



STRIKE REINFORCEMENT

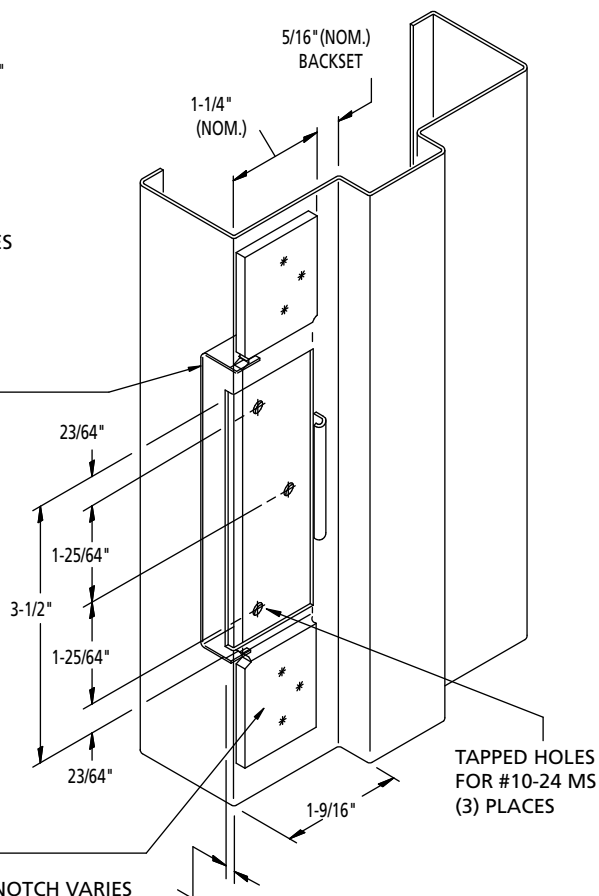
USE WITH CYLINDRICAL LOCKS ONLY
(1-1/8" x 2-3/4" "T" STRIKE)



26 GAGE STEEL PLASTER GUARD IS SNAPPED-IN PLACE AFTER HINGE REINF. IS WELDED TO JAMB

12 GA. HINGE REINF. PROJECTION WELDED TO FRAME (3) PLACES EACH END

FACE NOTCH VARIES PER FRAME GAGE

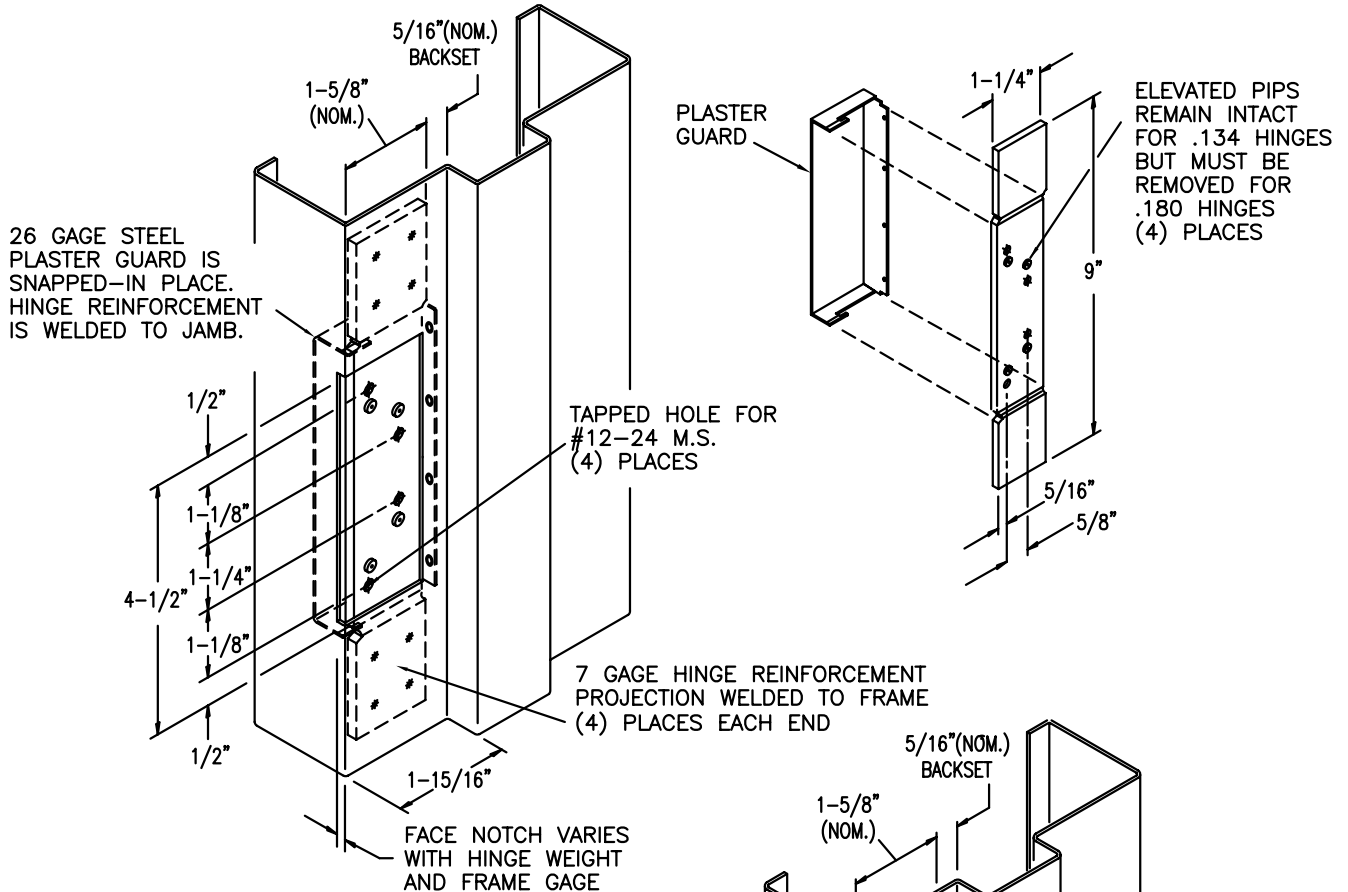


HINGE PREPARATION

FOR USE WITH 3-1/2" HIGH
TEMPLATE HINGES (ANSI A156.7)

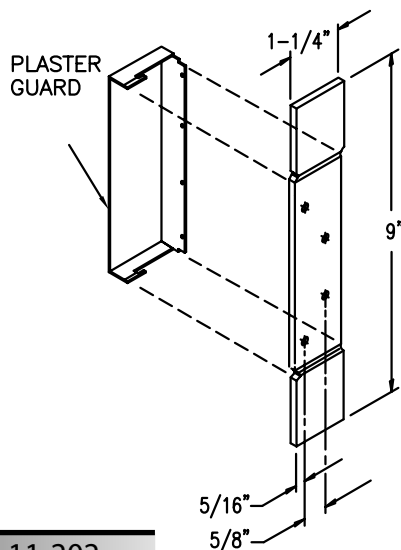
1-3/4" DOOR FRAME

4-1/2" & 5" HINGE PREPS

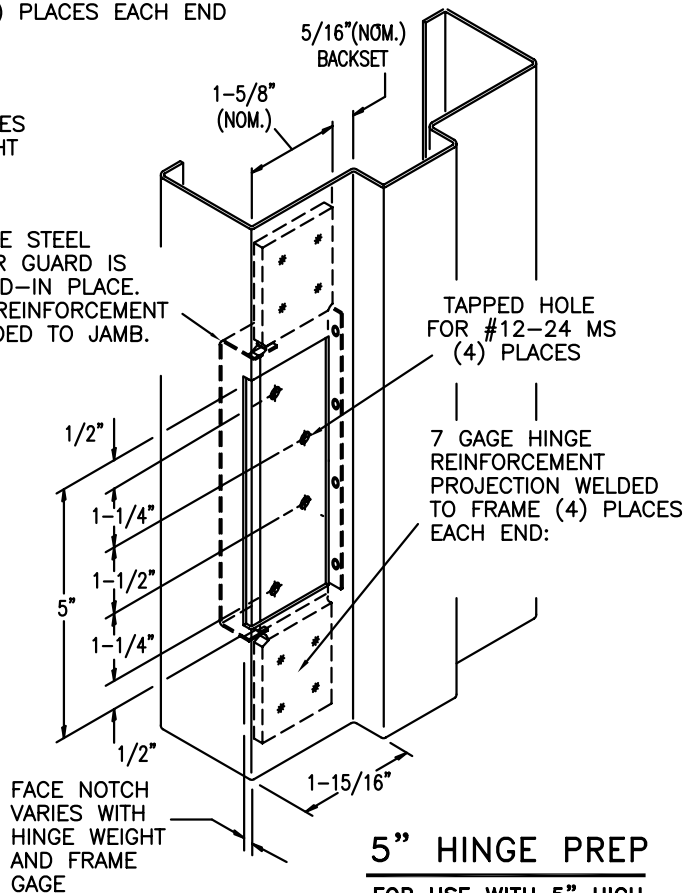


4-1/2" HINGE PREP

FOR USE WITH 4-1/2" HIGH TEMPLATE HINGES (ANSI A156.7)



26 GAGE STEEL PLASTER GUARD IS SNAPPED-IN PLACE. HINGE REINFORCEMENT IS WELDED TO JAMB.

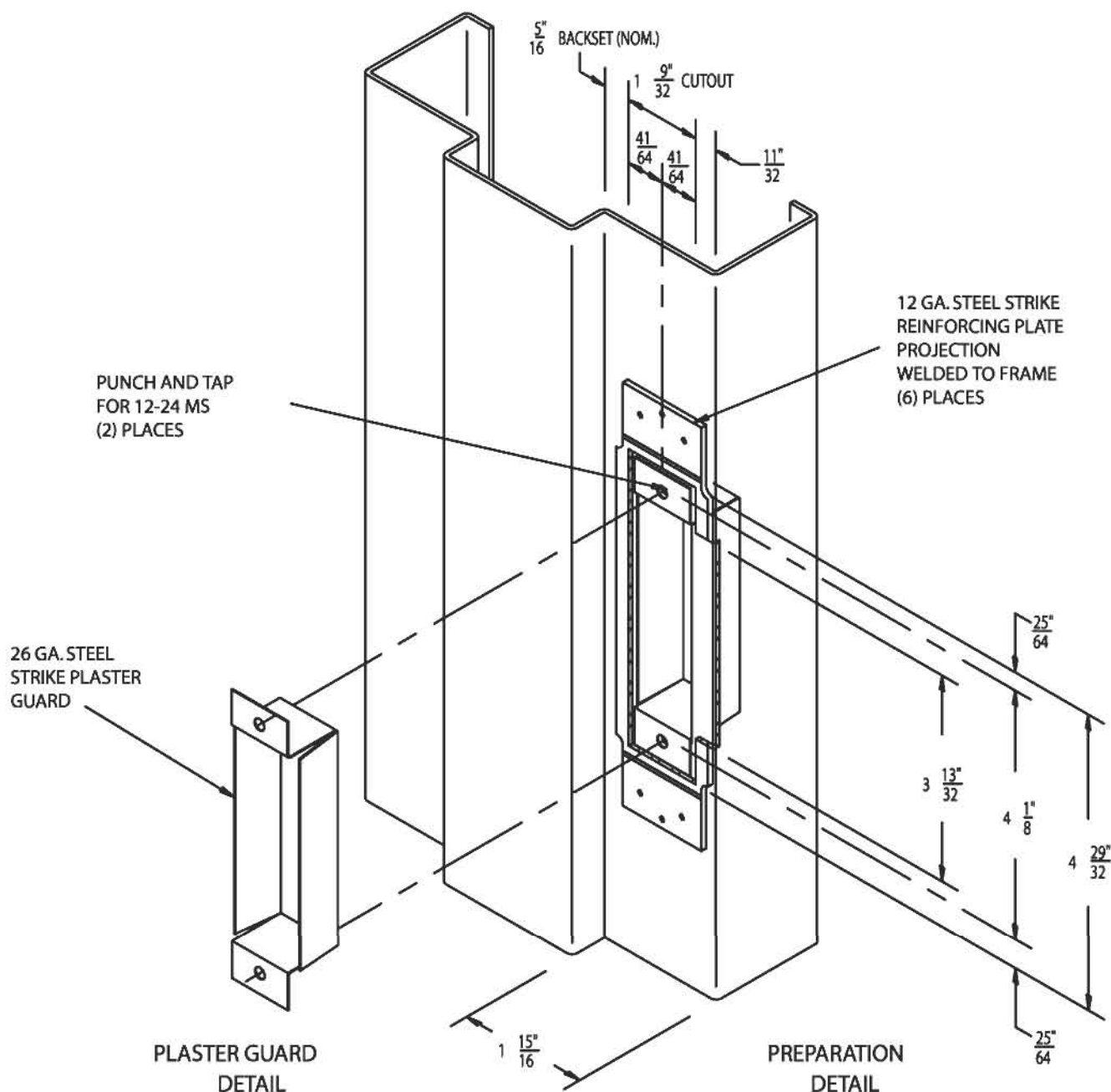


5" HINGE PREP

FOR USE WITH 5" HIGH TEMPLATE HINGES (ANSI A156.7)

Distributor Tech Data

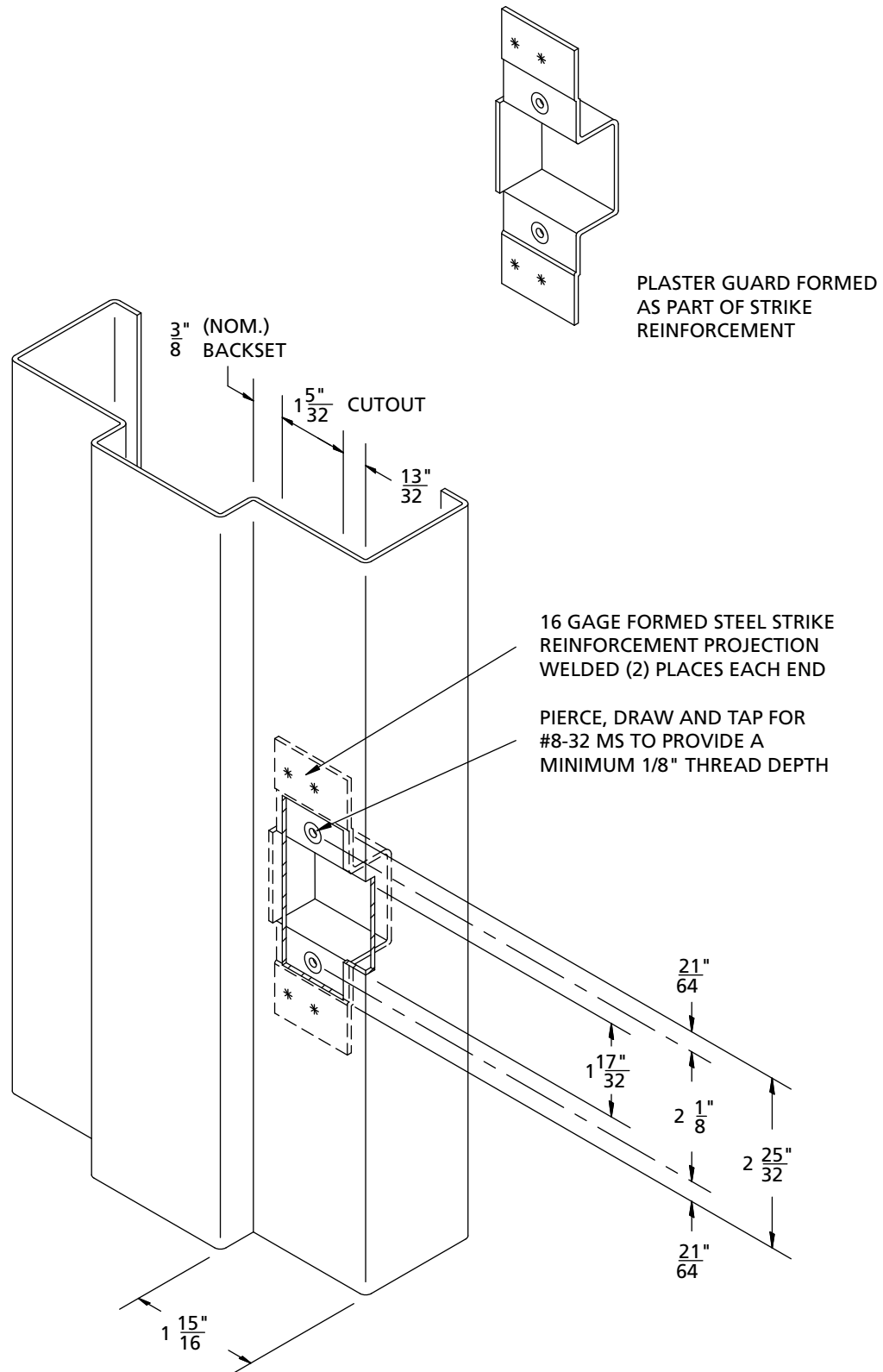
1-3/4" DOOR FRAME ANSI STRIKE PREPARATION



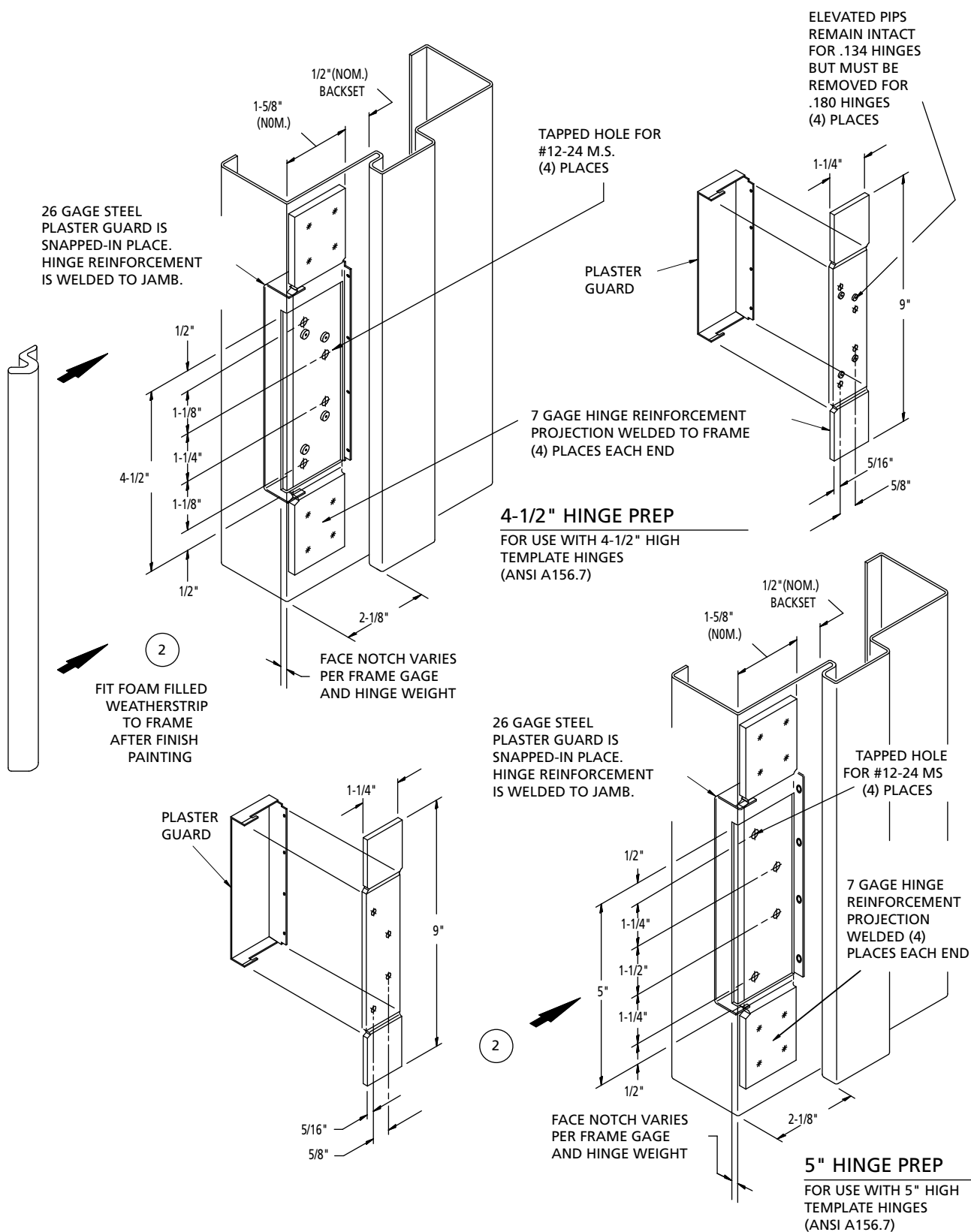
Plaster Guard is installed (snapped in place) after reinforcement is welded to jamb. Snap-in-design effectively prevents removal from the outside. Standard plaster guard shown will accept bolt throws of up to one inch long and is suitable for labeled fire-door frames.

Distributor Tech Data

1-3/4" DOOR FRAME CYLINDRICAL STRIKE PREPARATION



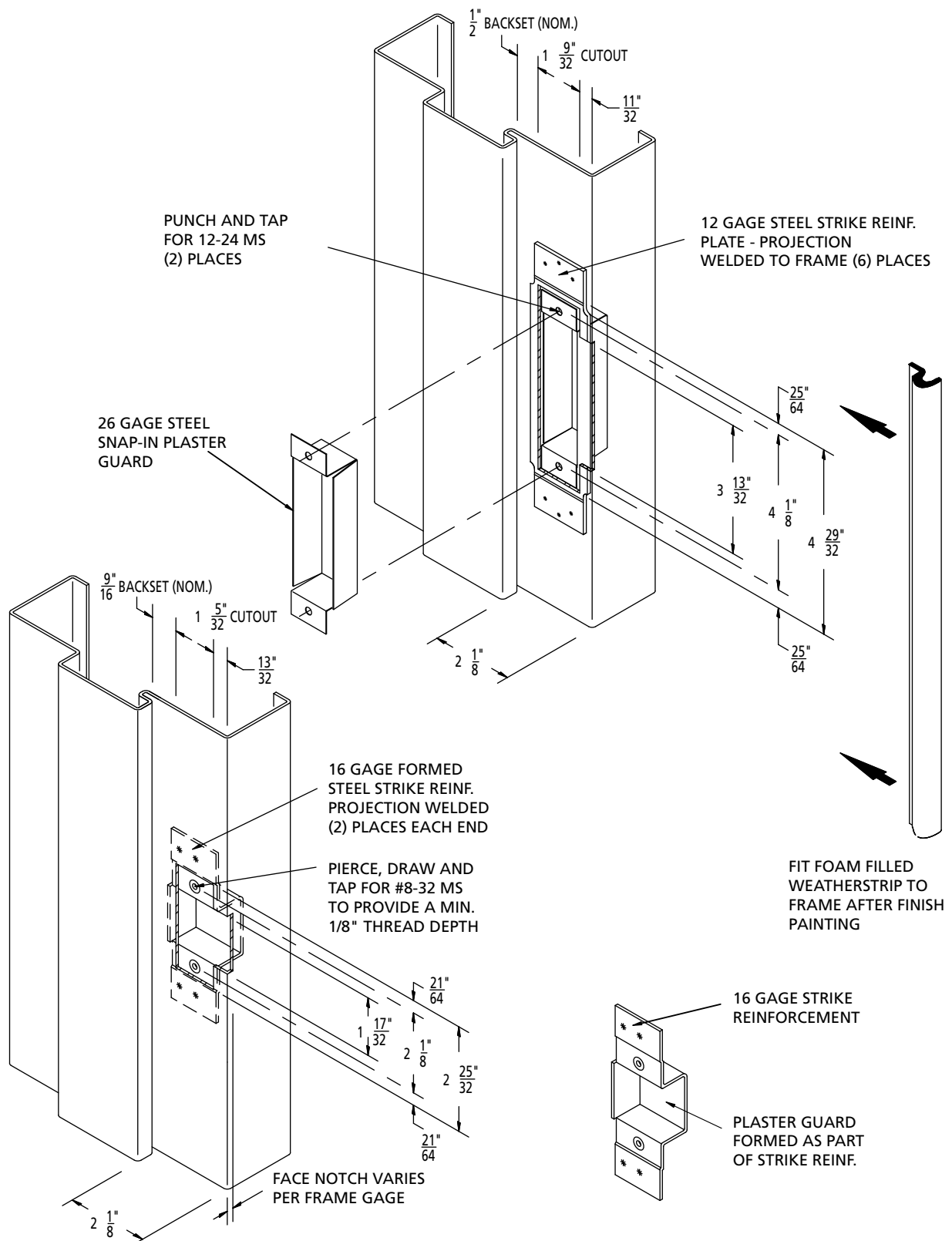
SERIES SQW WEATHERSTRIP KERF FRAME HINGE PREPARATION



Distributor Tech Data

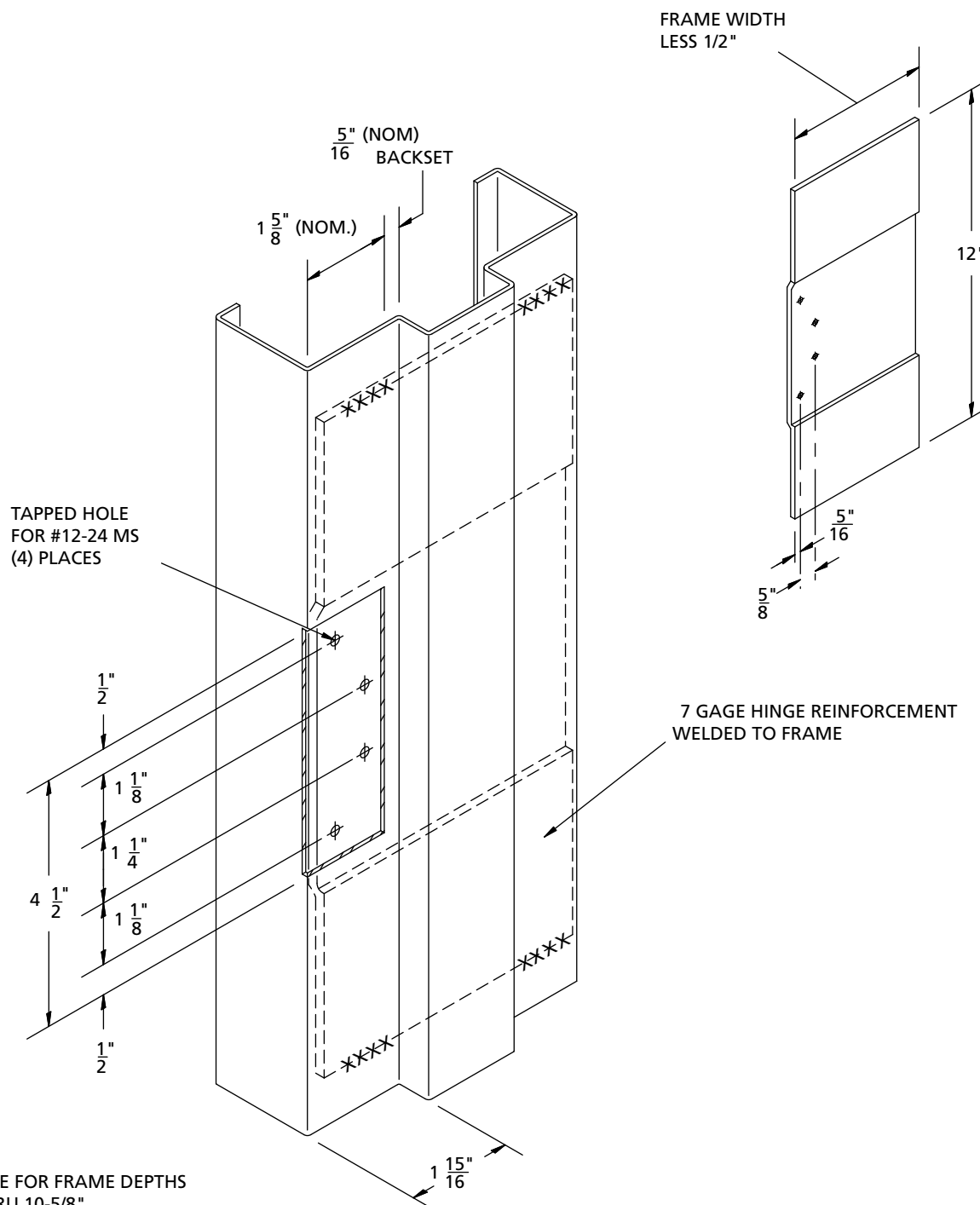
SERIES CF PROFILE WK

WEATHERSTRIP - KERF FRAME STRIKE PREPARATION



Distributor Tech Data

1-3/4" DOOR FRAME, FULL DEPTH HINGE REINFORCEMENT

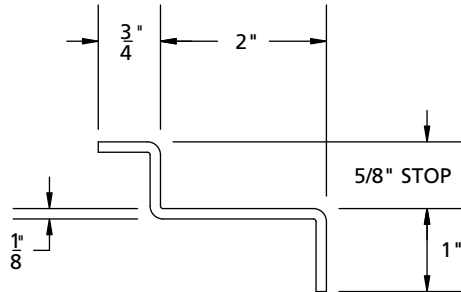


AVAILABLE FOR FRAME DEPTHS
5-1/2" THRU 10-5/8"

4-1/2" HIGH HINGE
APPLICATION SHOWN

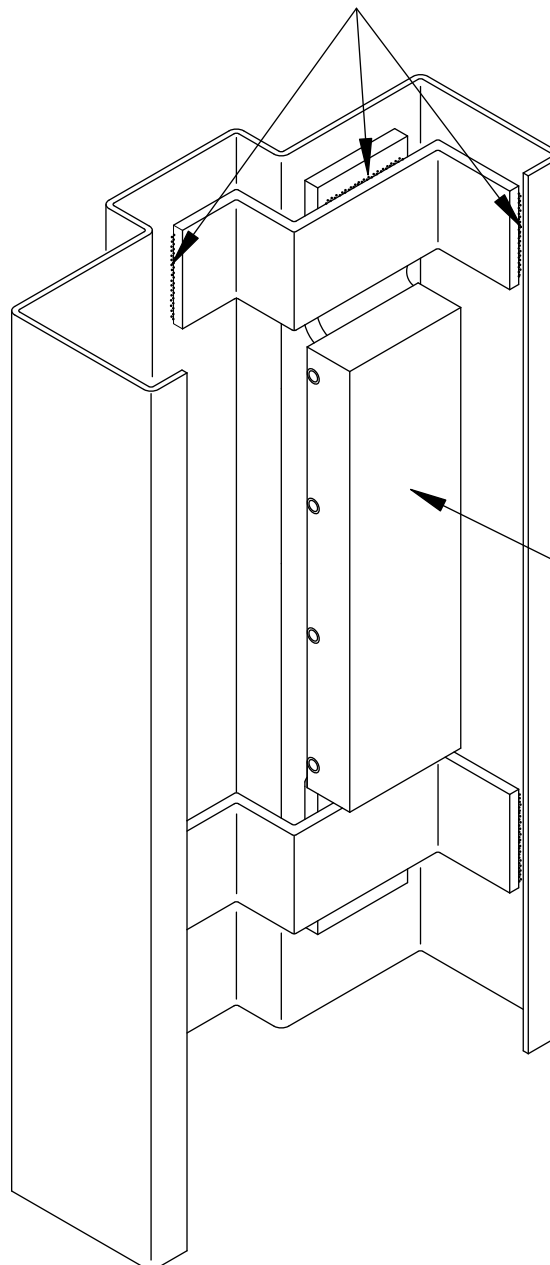
Distributor Tech Data

DOOR FRAME HIGH FREQUENCY HINGE REINFORCEMENT STRAP



STEEL STRAP

1/4" LONG ARC WELDS
(3) PLACES PER STRAP

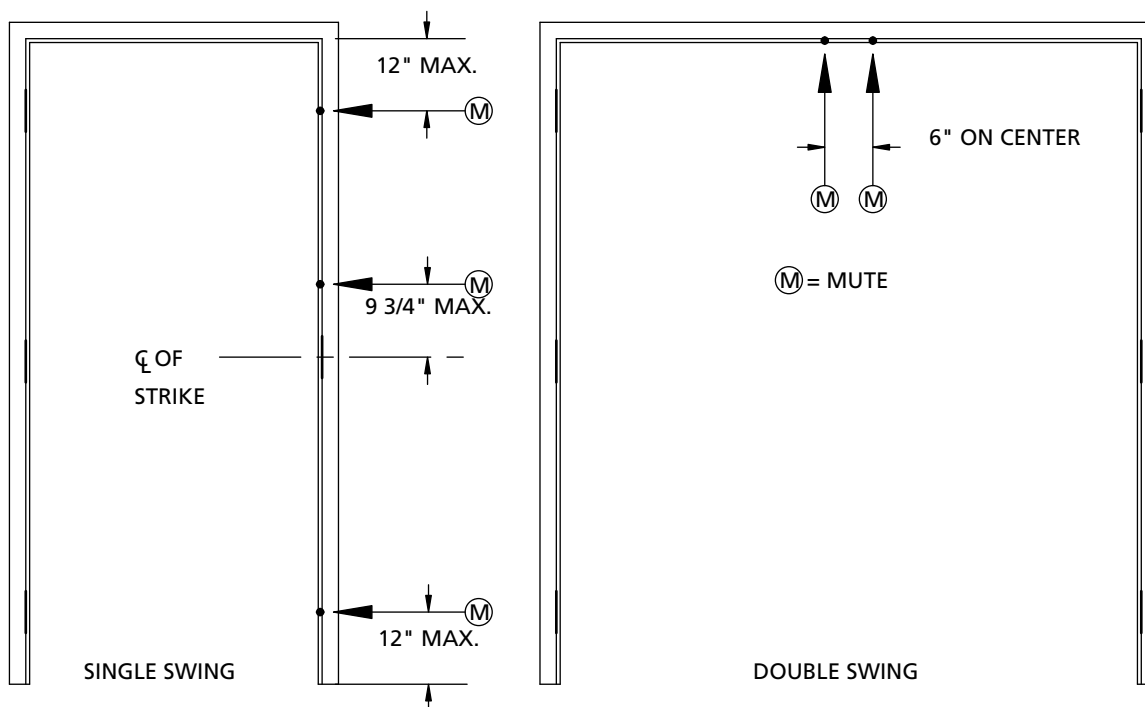


HINGE REINFORCEMENT AND
PLASTER GUARD APPLIED
PER PAGE #11-202

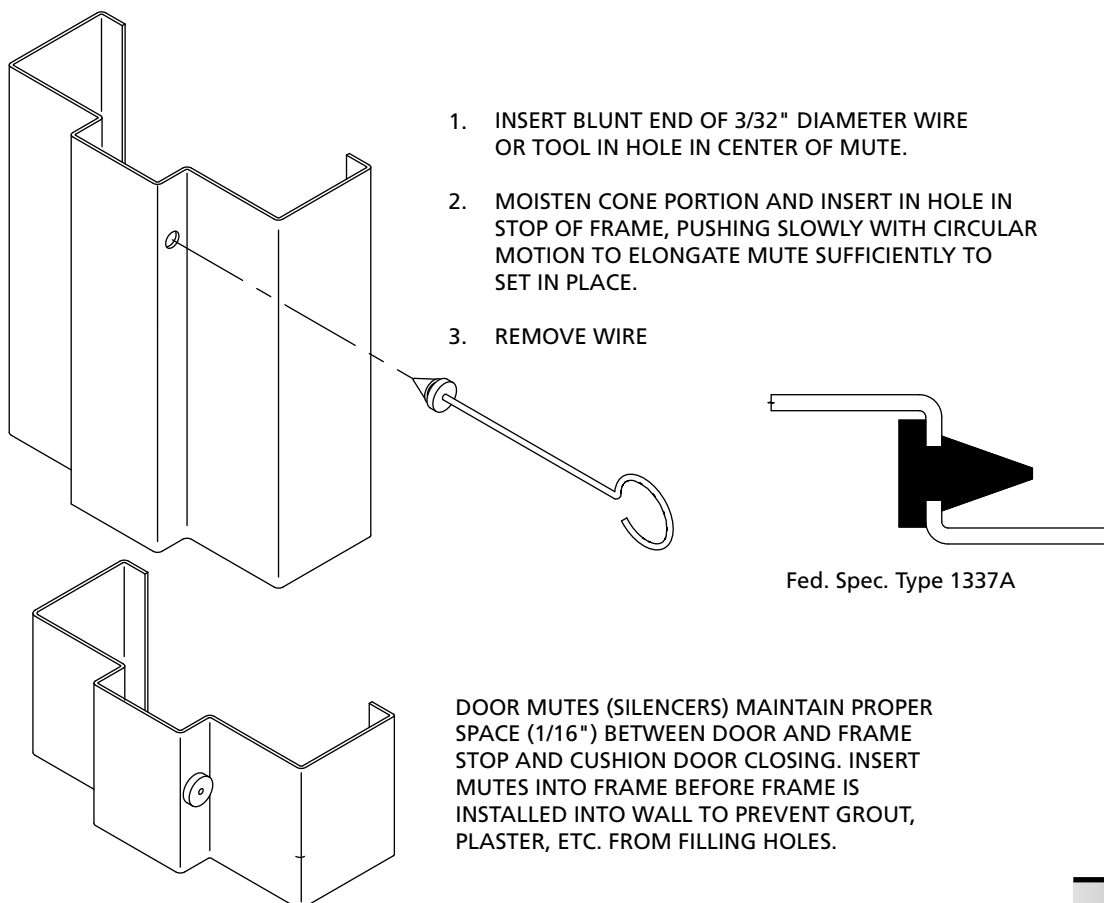
Distributor Tech Data

DOOR FRAME MUTES

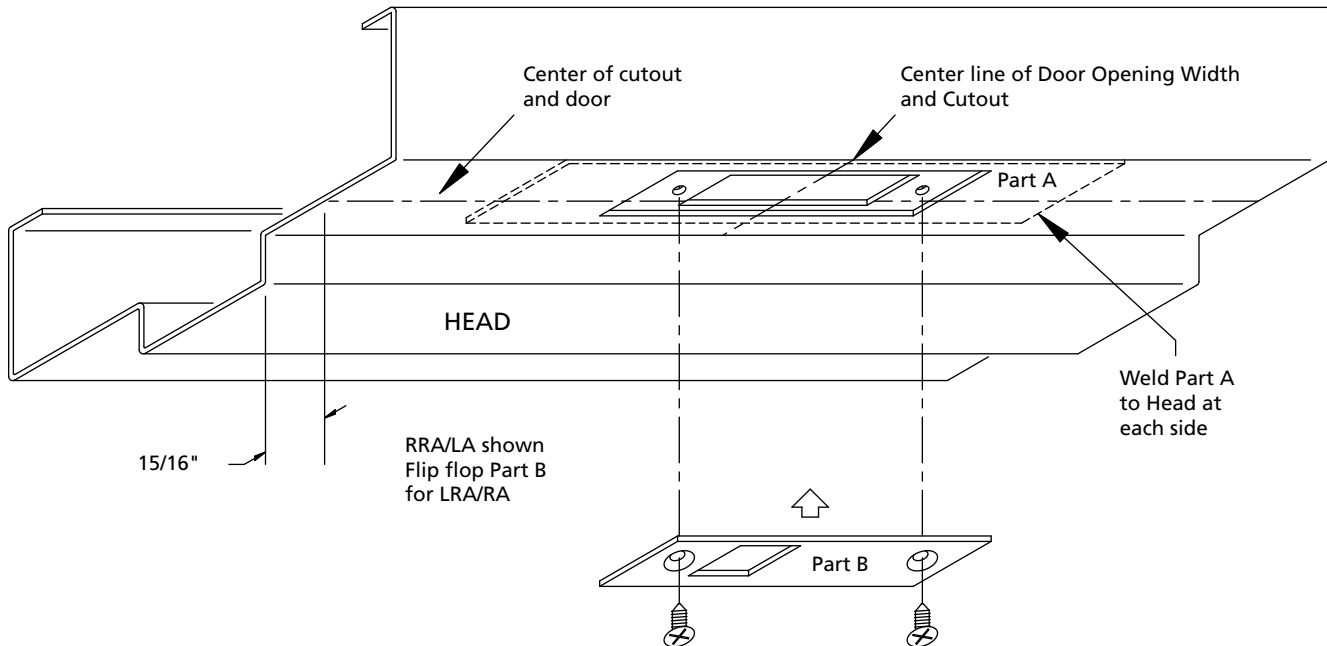
SINGLE SWING DOOR FRAMES - 3 MUTES
DOUBLE SWING DOOR FRAMES - 2 MUTES
DUTCH DOOR FRAMES - 4 MUTES



STANDARD LOCATION OF DOOR MUTES



REVERSIBLE FLUSH BOLT PREPARATION

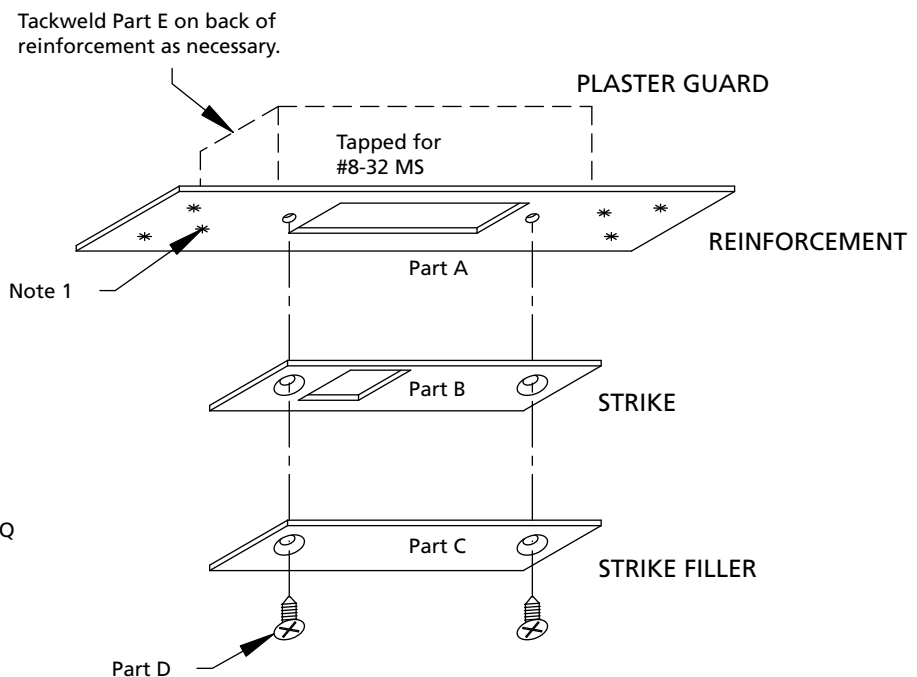


Note 1

Pips are provided for projection welding. If other welding is used, flip Part A over.

RFB Assembly
Parts A,B, and D as listed
below:

- A. (12 ga. galv. steel)
- B. (16 ga. galv. steel, prime paint)
- C. (16 ga. galv. steel, prime paint)
- D. #8-32 x 1/2" UCFHMS (2)
- E. Plaster guard (Included on SU and SQ frames only)

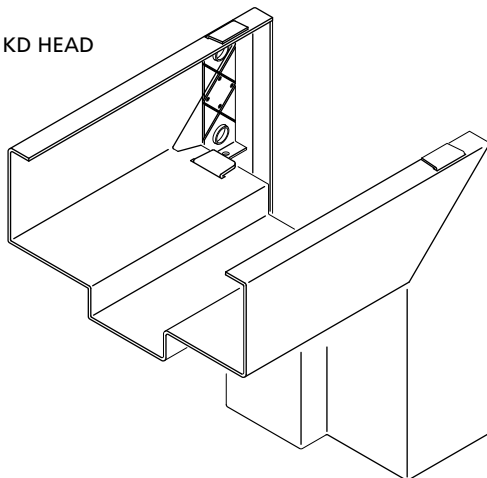


Distributor Tech Data

DIE-CUT, DOUBLE-RABBET FRAME WELDED CORNER ASSEMBLY

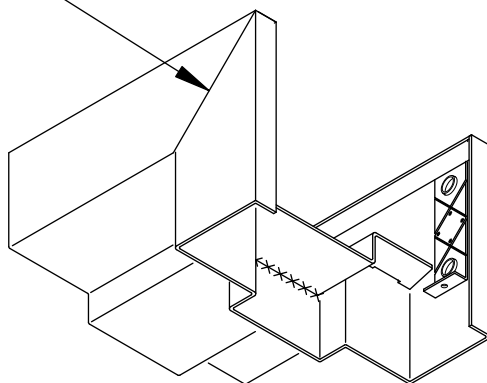
Reference: This corner has a full and continuous backbend at the head and jambs. It can be used on frames that cap the wall.

STANDARD KD HEAD



STANDARD KD JAMB

FACE-MITER SEAM
IS VISIBLE

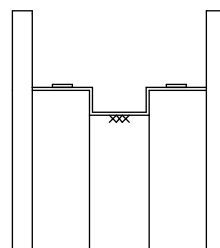


1. Assemble frame: Bend tabs after assuring that face-miter seam is "closed" and "tight". Bend corner reinforcement tabs toward inside (toward throat) of frame. Bend rabbet tabs towards outside (toward jamb backbends).

2. Place weld bead as required at the joint of the head and jamb soffits from the backside.

2a. If weld penetration occurs, file smooth.

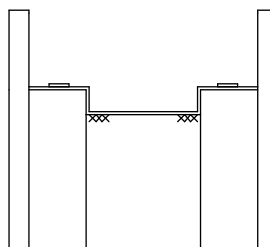
2b. Spot paint



NARROW STOP
(up to 1-1/2" wide)

Narrow Stop

One 1/2" (minimum) length stitch weld, located in the center of the soffit.



WIDE STOP
(1-1/2" wide and up)

Wide Stop:

Two 1/2" long stitch welds located at each end of the head and jamb soffit seam.

WELDING TYPE T-1 "STITCH WELD at SOFFIT ONLY"
Standard KD frame components from stock with corner reinforcements.
NO SAWING REQUIRED.

WELDING TYPE
T-1

DIE-CUT, DOUBLE-RABBIT FRAME WELDED CORNER ASSEMBLY

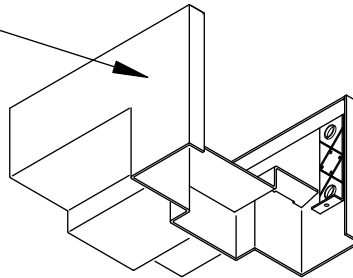
1. Assemble frame: Bend tabs after assuring that face-miter seam is "closed" and "tight" Bend corner reinforcement tabs toward inside (toward throat) of frame. Bend rabbet tabs toward outside (toward jamb backbends) of frame.

2. Weld the entire face-miter seam, between head and jamb, from the outside (both faces).

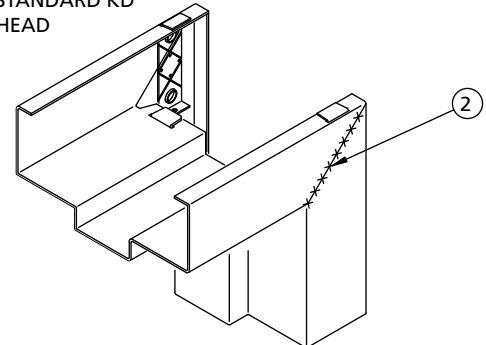
3. Grind and dress smooth both face-miter seams after welding.

3a. Spot paint

FACE-MITER SEAM IS COMPLETELY INVISIBLE



STANDARD KD HEAD



STANDARD KD JAMB

Reference: This corner has a full and continuous backbend at the head and jambs. It can be used on frames that cap the wall.

T-2

WELDING TYPE T-2 "OUTSIDE FACE WELD ONLY"
Standard KD frame components from stock with corner reinforcements.
NO SAW CUTTING REQUIRED.

Reference: This corner has a full and continuous backbend at the head and jambs. It can be used on frames that cap the wall.

1. Assemble frame: Bend tabs after assuring that face-miter seam is "closed" and "tight" Bend corner reinforcement tabs toward inside (toward throat) of frame. Bend rabbet tabs toward outside (toward jamb backbends) of frame.

2. Weld the entire face-miter seam, between head and jamb, from the outside (Both faces).

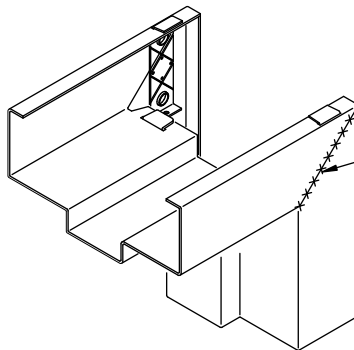
3. Grind and dress smooth both face-miter seams after welding.

4. Weld the entire web seam (including the seams between head and jamb rabbets, stops and soffits) from the backside, with a continuous weld bead.

4a. If weld penetration occurs, file smooth.

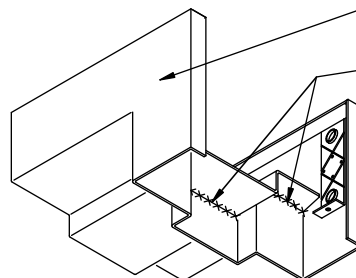
5. Spot paint

STANDARD KD HEAD



STANDARD KD JAMB

FACE-MITER SEAM IS COMPLETELY INVISIBLE



T-3

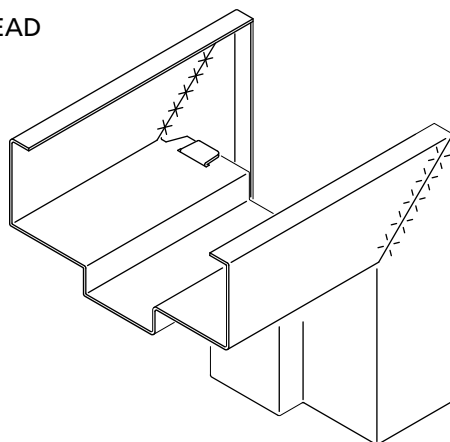
WELDING TYPE T-2 "OUTSIDE FACE WELD and FULL WEB WELD"
Standard KD frame components from stock with corner reinforcements.
NO SAW CUTTING REQUIRED.

Distributor Tech Data

DIE-CUT, DOUBLE-RABBET FRAME WELDED CORNER ASSEMBLY

Reference: This corner has a full and continuous backbend at the head and jambs. It can be used on frames that cap the wall.

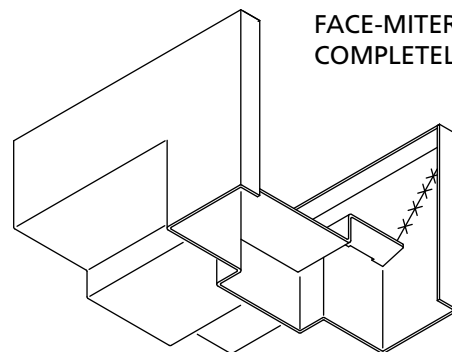
DIE-CUT HEAD



DIE-CUT JAMB

1. Assemble frame: Bend tabs after assuring that face-miter seam is "closed" and "tight". Bend rabbet tabs toward outside (toward jamb backbends) of frame.
2. Weld the entire face-miter seam from the inside. Weld is to penetrate to exterior.
- 2a. Grind the exterior face and fill as necessary.

FACE-MITER SEAM IS
COMPLETELY INVISIBLE



V-2

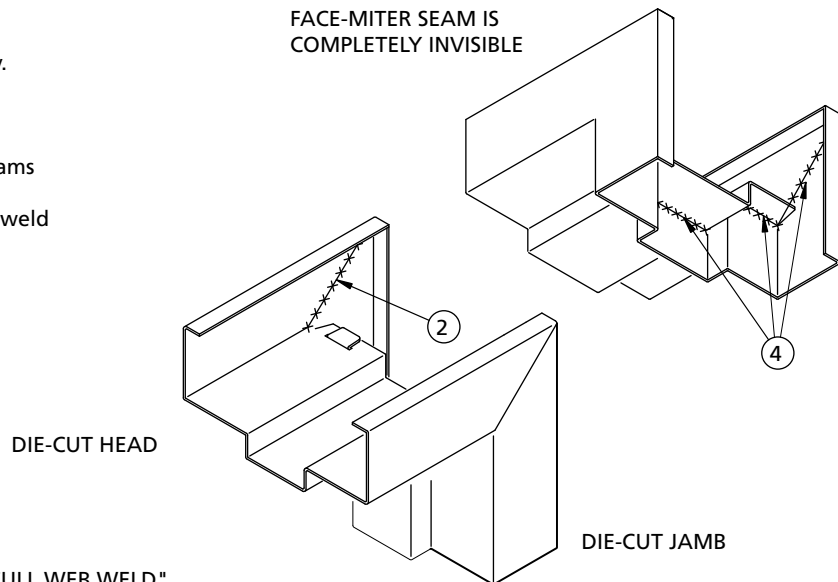
WELDING TYPE V-2 " INSIDE FACE WELD ONLY"
Die-cut frame components - VOID OF CORNER REINFORCEMENTS
NO SAW CUTTING REQUIRED

Distributor Tech Data

DIE-CUT, DOUBLE RABBET FRAME WELDED CORNER ASSEMBLY

1. Assemble frame: Bend tabs after assuring that face-miter seam is "closed" and tight. Bend rabbet tabs toward outside (toward jamb backbends) of frame.
2. Weld the entire face-miter seam from the inside. Weld is to penetrate to exterior.
- 2a. Grind the exterior face and fill as necessary.
3. Dress reworked areas.
4. Weld the entire web seam (including the seams between head and jamb rabbets, stops, and soffits) from the backside with a continuous weld bead.
- 4a. If weld penetration occurs, file smooth.
5. Spot weld.

Reference: This corner has a full and continuous backbend at the head and jambs. It can be used on frames that cap the wall.



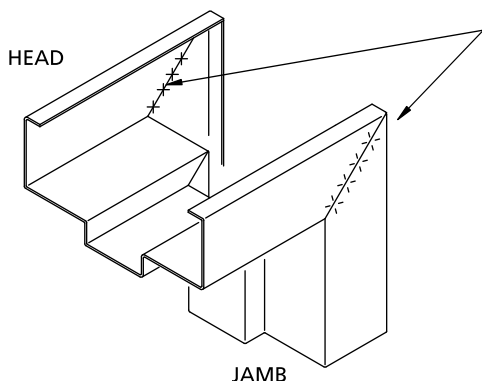
V-3

WELDING TYPE V-3 "INSIDE FACE WELD and FULL WEB WELD"
Die-cut frame components - VOID OF CORNER REINFORCEMENTS
NO SAW CUTTING REQUIRED.

Distributor Tech Data

MITER - SAWED FRAME WELDED CORNER ASSEMBLY

Reference: This corner has a full and continuous backbend at the head and jambs. It can be used on frames that cap the wall.



Double rabbet shown
Other profiles similar

WELDING TYPE V-4 "INSIDE FACE WELD ONLY"
Miter-sawed frames

1. Miter-saw the ends of the head and jambs at 45°. (Note: The face dimensions of the head and jamb have to be equal.)

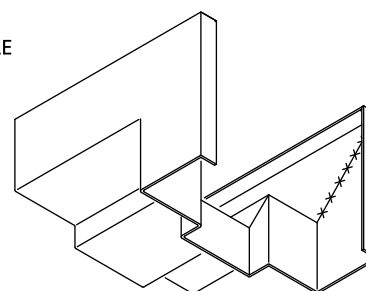
- 1a. Clamp the head and jamb at 90°.

2. Weld the entire face-miter seam from the inside. Weld is to penetrate to exterior.

- 2a. Grind the exterior face and fill as necessary.

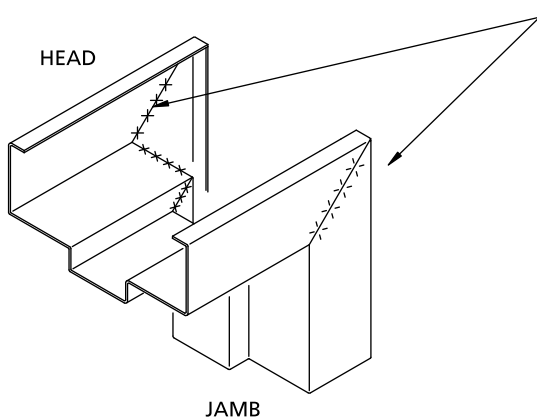
3. Dress reworked areas and spot paint.

FACE-MITER SEAM IS
COMPLETELY INVISIBLE



V-4

Reference: This corner has a full and continuous backbend at the head and jambs. It can be used on frames that cap the wall.



Double rabbet shown
Other profiles similar

WELDING TYPE V-5 "INSIDE FACE WELD and FULL WEB WELD"
Miter-sawed frames

1. Miter-saw the ends of the head and jambs at 45°. (Note: The face dimensions of the head and jamb have to be equal.)

- 1a. Clamp the head and jamb at 90°.

2. Weld the entire face-miter seam from the inside. Weld is to penetrate to exterior.

- 2a. Grind the exterior face and fill as necessary.

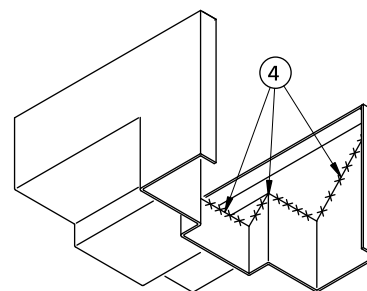
3. Dress the face-miter seam (exterior) and spot paint.

4. Weld the entire web seam (including the seams between head and jamb rabbets, stops, and soffits) from the backside, with a continuous weld bead.

- 4a. If weld penetration occurs, file smooth.

5. Spot paint

FACE-MITER SEAM IS
COMPLETELY INVISIBLE

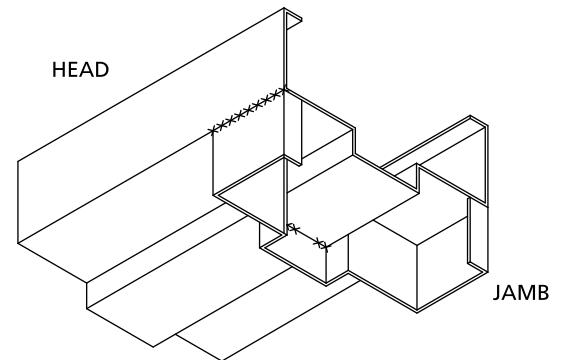
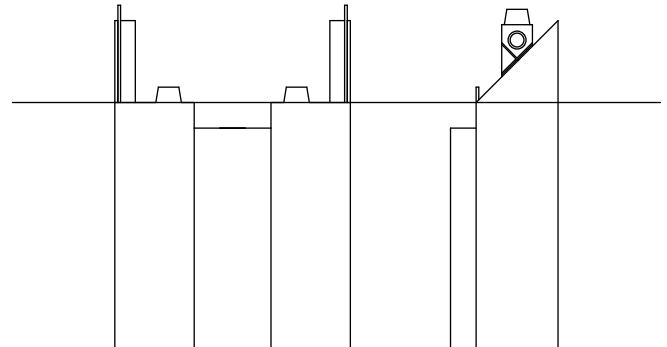


V-5

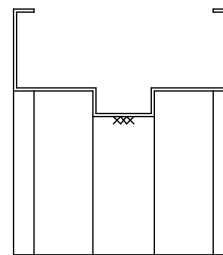
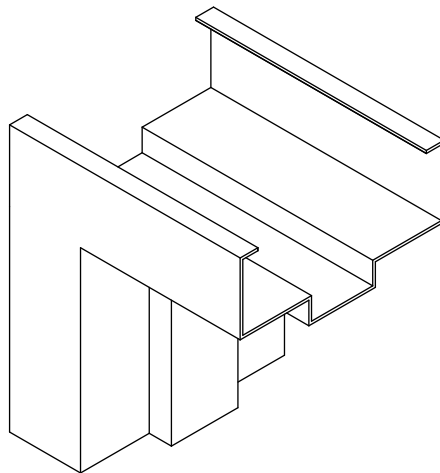
COPED JAMB DOUBLE RABBET FRAME-WELDED, BUTTED CORNER ASSEMBLY

Reference: The area on each end of the head is void of backbends. This assembly is normally specified for butted-frame applications only.

1. Cut on this line. (Remove miter)
- 1a. Cut off soffit tab/s if present.
2. Clamp head and jamb at 90°.
3. Weld the entire face seam between head and jamb from the outside.
4. Grind and dress-smooth both face seams.
5. Place weld bead as required at the joint of the head and jamb soffits from the backside
- 5a. If weld penetration occurs, file smooth.
6. Spot paint



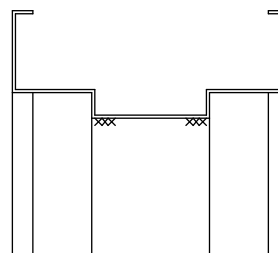
FACE SEAM IS
COMPLETELY
INVISIBLE



NARROW STOP
(up to 1-1/2" wide)

Narrow Stop

One 1/2" (minimum) length stitch weld, located in the center of the soffit.



WIDE STOP
(1-1/2" wide and up)

Wide Stop:

Two 1/2" long stitch welds located at each end of the head and jamb soffit seam.

V-7

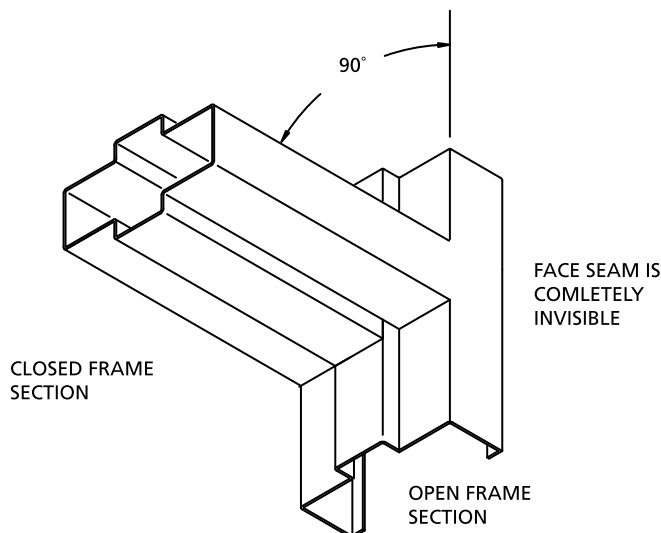
WELDING TYPE V-7, "COPED JAMB -- OUTSIDE
FACE WELD and SOFFIT WEB WELD"
Re-work standard KD jamb -- stock bar head

Distributor Tech Data

DOUBLE RABBIT FRAMES WELDED JUNCTIONS

Reference: This condition can be specified for horizontal mullions and transom bars (as shown), or for vertical imposts. Reinforcements for surface applied hardware must be installed before unit is assembled.

1. Square cut closed frame section and cope to receive jamb stop.
2. Insure that angle formed by junction of the open and closed frame section is 90°.
3. Check the alignment of faces at seams between the open and closed frame sections.
4. Weld the entire face seam between open and closed frame sections from the outside.
- 4a. Grind and dress smooth both face seams after welding.
5. Spot paint all exposed metal.

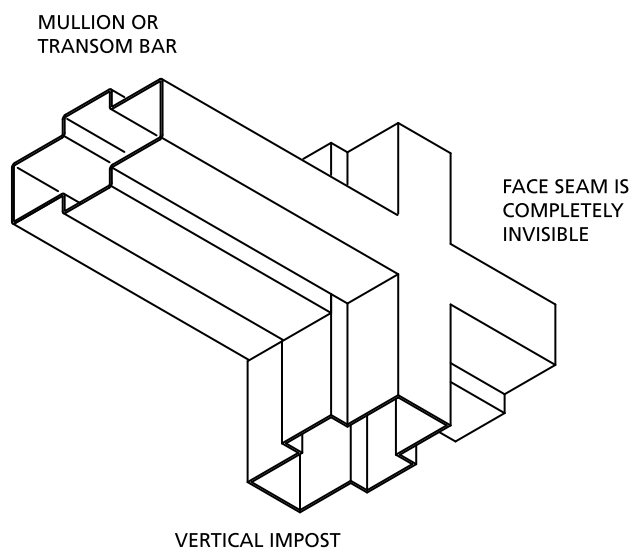


WELDING TYPE V-8, BUTTED CORNER - JUNCTION OF CLOSED FRAME SECTION WITH OPEN FRAME SECTION - OUTSIDE FACE WELD ONLY."

V-8

Reference: This condition can be specified for the junction between mullion or transom bar with vertical impost: i.e., two closed frame sections. Reinforcement for surface applied hardware must be installed before unit is assembled.

1. Square cut mullion or transom and cope to receive jamb stop.
2. Insure that angle formed by junction of both the vertical and horizontal frame sections is 90°.
3. Check the alignment of faces at seams between both the vertical and horizontal frame sections.
4. Weld the entire face seam between both the vertical and horizontal frame sections from the outside.
- 4a. Grind and dress smooth both face seams after welding.
5. Spot paint all exposed metal.



WELDING TYPE V-9, "BUTTED CORNER - JUNCTION OF CLOSED FRAME SECTION WITH CLOSED FRAME SECTION - OUTSIDE FACE WELD ONLY."

V-9

4" & 6" HOSPITAL STOPS

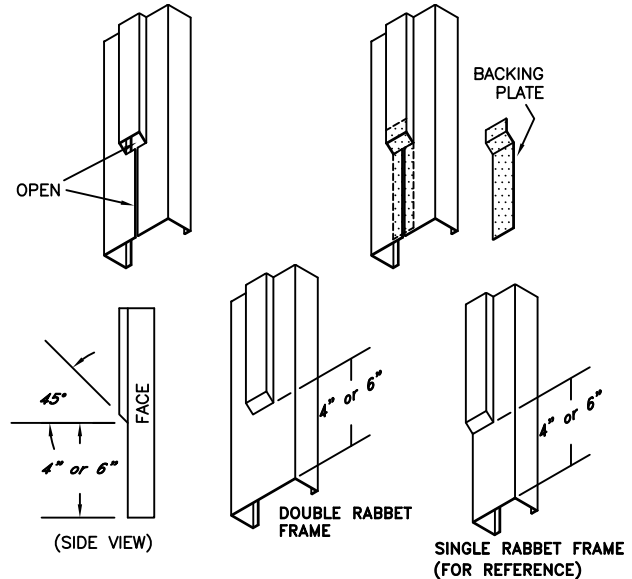
Application and Purpose: Frames with hospital stops are primarily used in health care facilities where a clean environment is desired. This condition is for any jamb component where there's a desire for easier cleaning and minimizing the build-up of dirt, germs, and bacteria at the floor level of the door opening.

****AVAILABLE IN ALL SERIES WITH A SOFFIT****
(NOT RECOMMENDED FOR THERMAL BREAK OR WEATHERKERF)

FIRE RATING NOTE: The hospital stop option is available on positive pressure fire rated frames. Stop termination height cannot exceed 6" from bottom of jamb to termination point. Check with AHJ regarding smoke and draft control conditions as terminated stop leaves no place for smoke seals to be adhered.

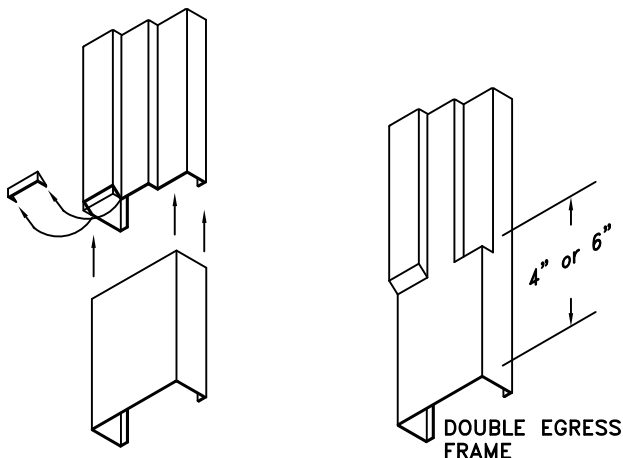
DOUBLE & SINGLE RABBET:

1. A horizontal & vertical slot is made in the jamb,
2. The jamb is formed as such that the vertical slot closes together.
3. A backing plate is welded to the sill end behind the vertical and horizontal slots.
4. All seams are welded completely. Putty or bondo may be used to finish the seams smooth.



DOUBLE EGRESS:

1. A 45° cut is made to the upper soffit and the material is removed.
2. A cased open piece, of proper length, is welded at the bottom of the jamb.
3. The 45° cut and the open area at the lower soffit is closed with the same gauge & finish material as the jamb.
4. All seams are welded completely. Putty or bondo may be used to finish the seams smooth.

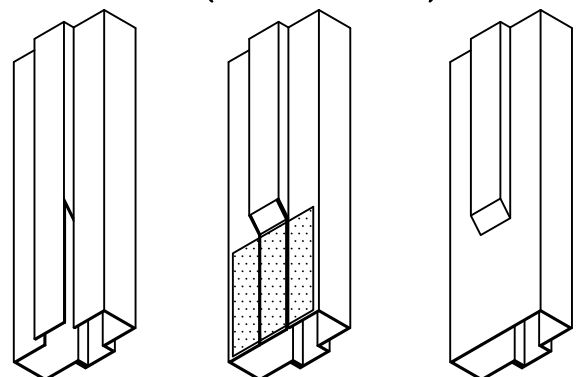


MULLION:

1. Slots are cut along the stops, to the proper length, ending in a 45° angle.
2. The flap that is left is bent down flush with rabbets & supported by a backing plate.
3. All seams are welded, ground smooth, and finished with putty or bondo before prime paint is applied.

NOTE: The hospital stop is available on one or both sides of a "D", "T", or "B" mullion.

(D-Mullion shown)

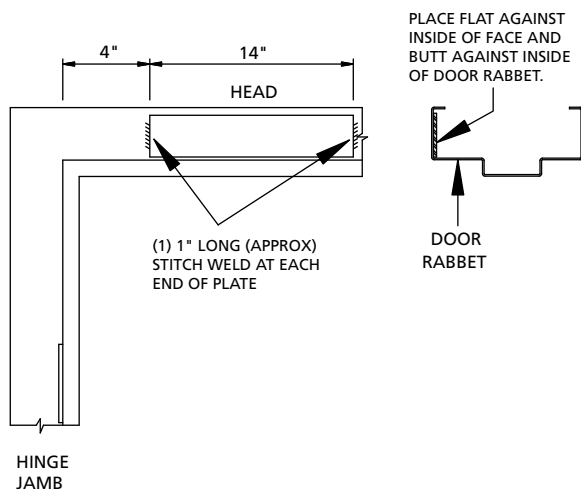


CLOSER REINFORCEMENT PLATE TYPE

REINFORCEMENT PLATE:

14 GAGE MIN. STEEL x 1/3/4" x 14" (1)

Note: If 1-3/4" dimension is too big to fit face ...decrease size to suit.

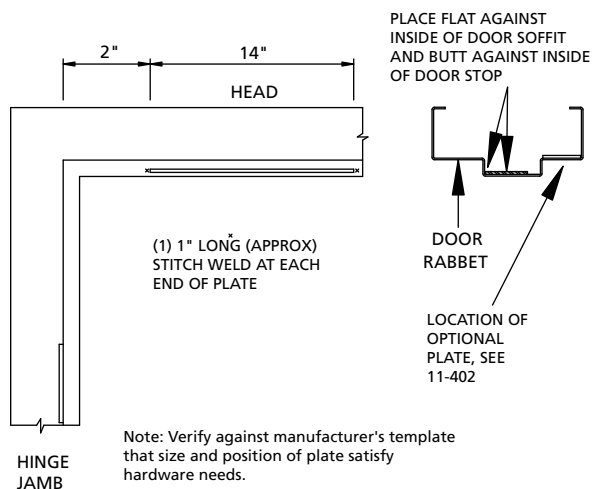


**REGULAR ARM
CLOSER MOUNTING**

REINFORCEMENT PLATE:

14 GAGE MIN. STEEL x 1/3/4" x 14" (1)

Note: If 1-3/4" dimension is too big to fit stop ...decrease size to suit.

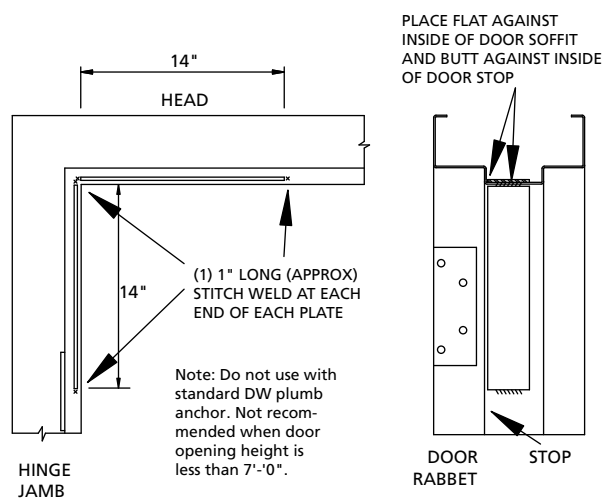


**PARALLEL ARM
CLOSER MOUNTING**

REINFORCEMENT PLATE:

14 GAGE MIN. STEEL x 1/3/4" x 14" (2)

Note: If 1-3/4" dimension is too big to fit stop ...decrease size to suit.

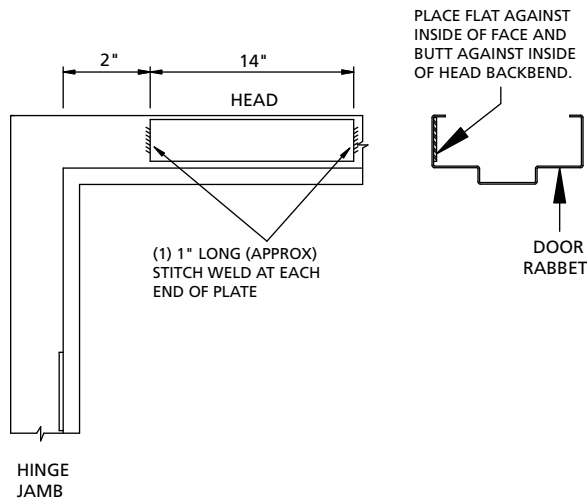


**CORNER BRACKET
CLOSER MOUNTING**

REINFORCEMENT PLATE:

14 GAGE MIN. STEEL x 1/3/4" x 14" (1)

Note: If 1-3/4" dimension is too big to fit face ...decrease size to suit.

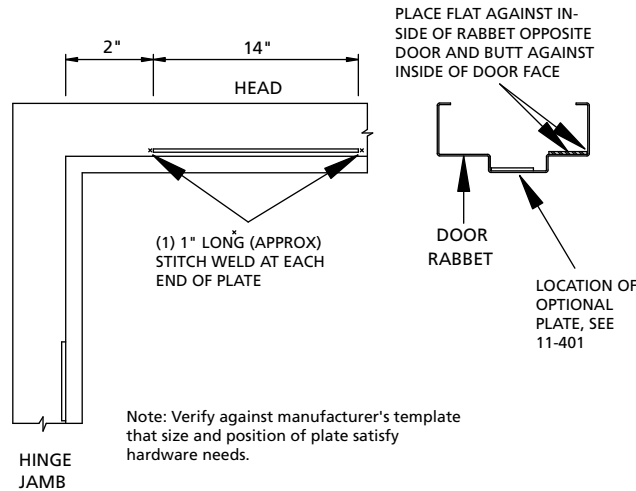


**TOP JAMB
CLOSER MOUNTING**

CLOSER REINFORCEMENT PLATE TYPE

REINFORCEMENT PLATE:
14 GAGE MIN. STEEL x 1/3/4" x 14" (1)

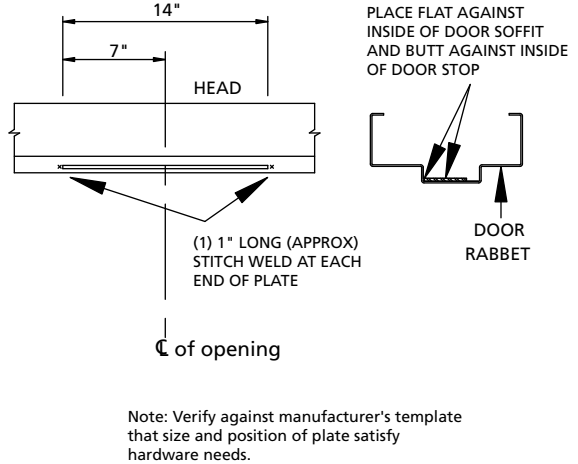
Note: If 1-3/4" dimension is too big to fit face ..decrease size to suit.



PARALLEL ARM CLOSER MOUNTING

REINFORCEMENT PLATE:
14 GAGE MIN. STEEL x 1/3/4" x 14" (1)

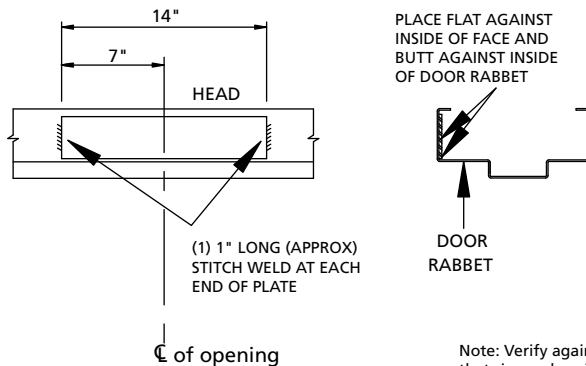
Note: If 1-3/4" dimension is too big to fit stop ..decrease size to suit.



OUTSWING DOOR: SURFACE BOLTS AND REMOVABLE MULLIONS

REINFORCEMENT PLATE:
14 GAGE MIN. STEEL x 1/3/4" x 14" (1)

Note: If 1-3/4" dimension is too big to fit face ..decrease size to suit.



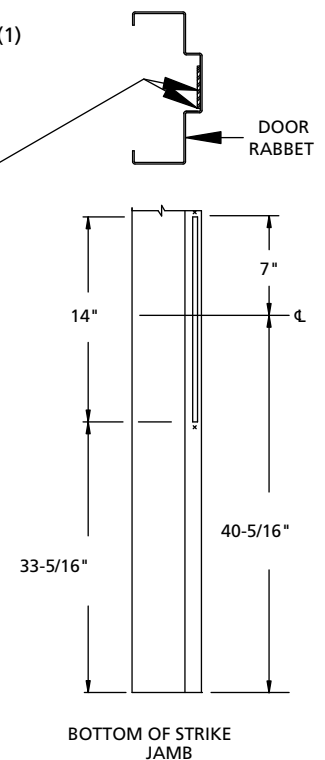
INSWING DOOR: SURFACE BOLTS

REINFORCEMENT PLATE:
14 GAGE MIN. STEEL x 1/3/4" x 14" (1)

Note: If 1-3/4" dimension is too big to fit stop ..decrease size to suit.

PLACE FLAT AGAINST INSIDE OF DOOR SOFFIT AND BUTT AGAINST INSIDE OF DOOR STOP

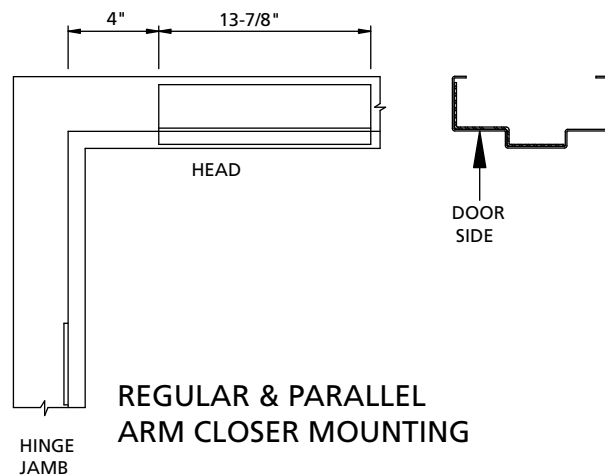
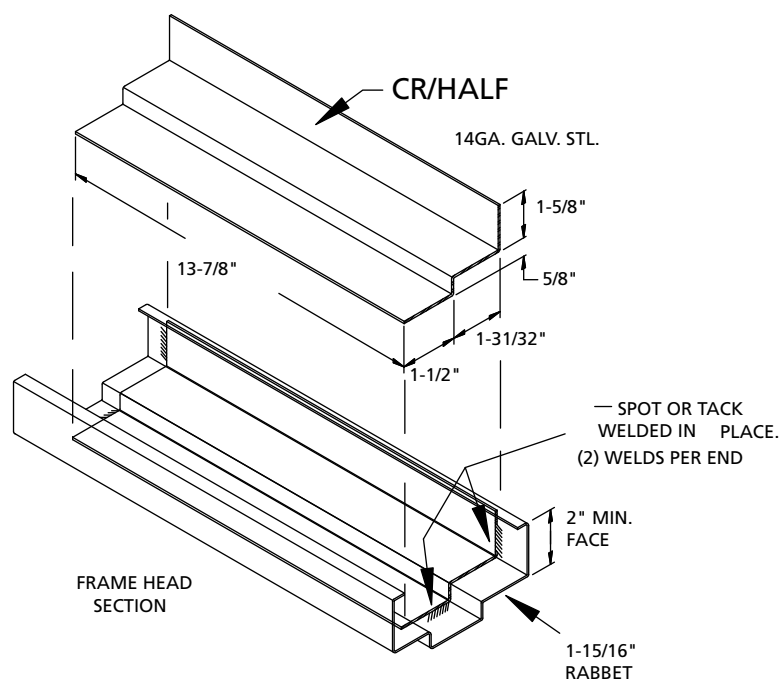
(1) 1" LONG (APPROX) STITCH WELD AT EACH END OF PLATE



RIM TYPE PANIC DEVICE MOUNTING

Distributor Tech Data

HALF-CLOSER REINFORCEMENT



Distributor Tech Data

JAMB ANCHOR QUANTITIES FOR STANDARD HEIGHT FRAMES

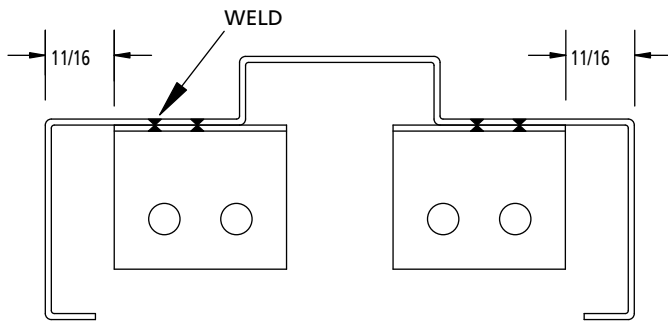
ANCHOR TYPE	QUANTITY		
	JAMB ANCHORS PER FRAME		FLOOR ANCHORS PER FRAME
	6-8 THRU 7-2	7-10 THRU 10-0	
NEW MASONRY	6	8	2
EXISTING OPENING	8	10	OMIT
WOOD STUD	6	8	2 *
METAL STUD	6	8	2 *
SOLID PLASTER	6	8	2 *
LAMINATED DRYWALL	6	8	2 *

* Floor anchors may be omitted and replaced with two additional jamb anchors.

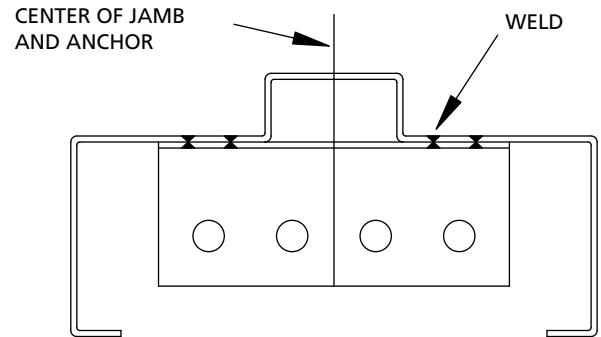
Unless otherwise indicated, jamb anchors are normally located on the same center line as the hinge preparations except where interference would occur with hardware reinforcements. Where interference would occur, anchors should be positioned above or below hinge reinforcements and directly opposite on the strike jamb.

For sizes other than listed above, the following guidelines are followed (unless otherwise indicated)...For heights to 6-0: Two jamb anchors per jamb; For heights greater than 6-0 thru 7-6: Three jamb anchors per jamb; For heights greater than 7-6 thru 10-0: Four jamb anchors per jamb; and for each additional 2 feet of height or fraction thereof: One additional jamb anchor per jamb.

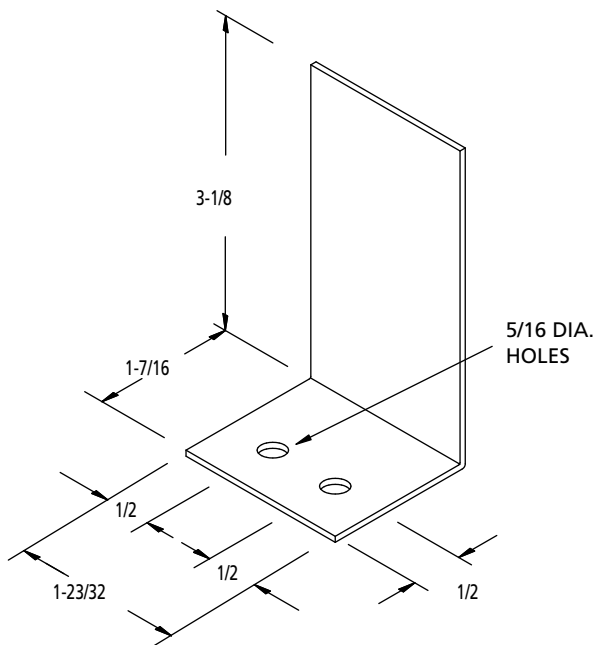
WELDED FLOOR ANCHOR



TWO PIECE APPLICATION

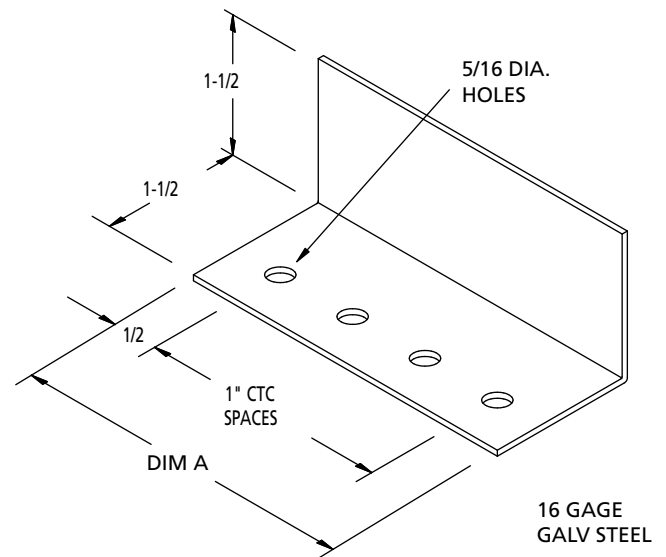


ONE PIECE APPLICATION



TWO PIECE ANCHOR

(16 GA. GALV.)
(16 GA. COLD ROLLED)

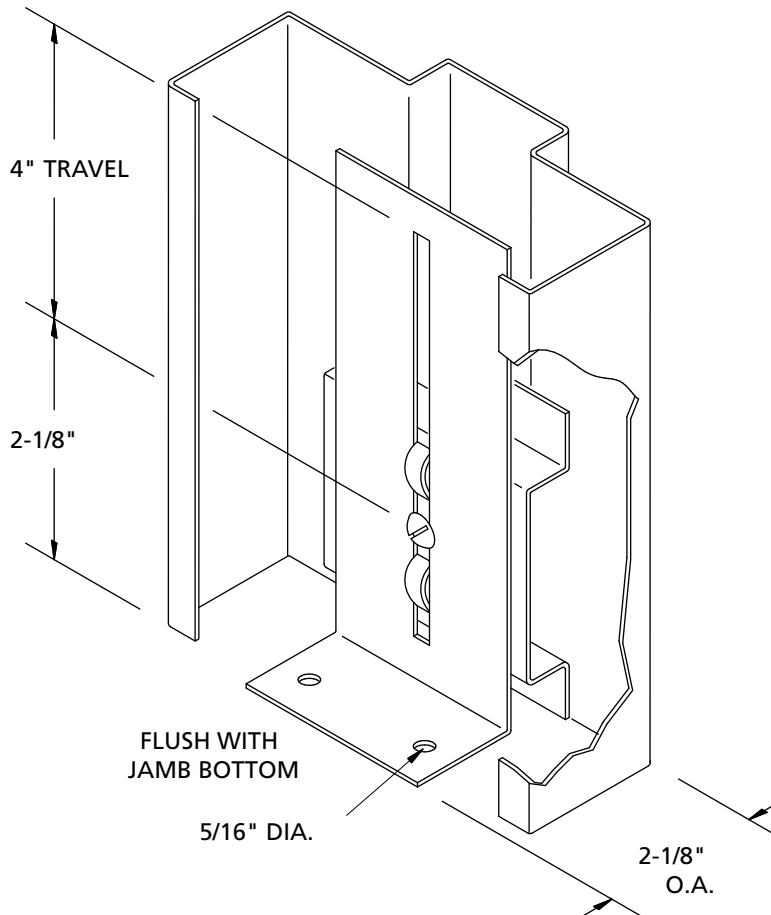


ONE PIECE ANCHOR SELECTION CHART

DIM A	FRAME DEPTH	HOLES
3-1/2	4-1/2 to 5-1/4	3
5	5-3/8 to 6-3/4	5
6-1/2	6-7/8 to 8-1/4	6
8	8-3/4 to 9-3/4	8

All dimensions are in inches. For SI conversion: 1" = 25.4 mm.
Anchors for depths outside the above range are made to order.

ADJUSTABLE FLOOR ANCHOR



HAT:
4-1/4" WIDE x 3/4" LEGS
x 5/8" OFFSET @ 3-1/4"
LONG

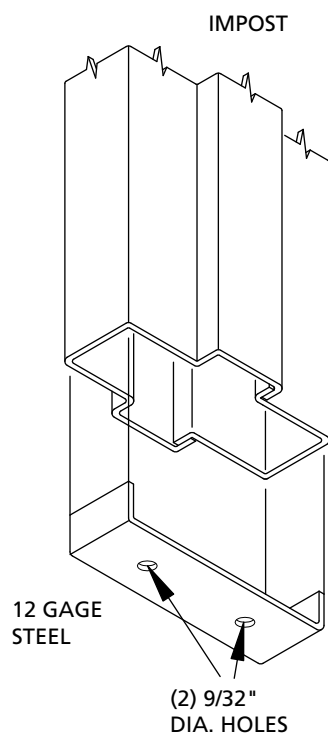
ANGLE:
1-1/2" x 6-3/4" @ 2-3/4"
LONG

SCREW:
#10 x 3/4" THSMS

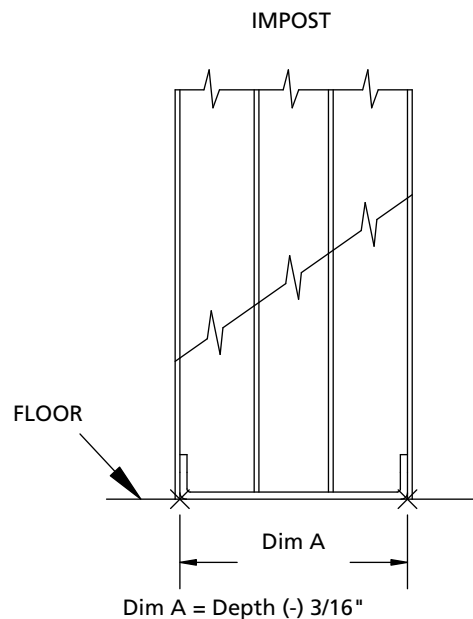
Distributor Tech Data

SIDELITE FLOOR ANCHOR

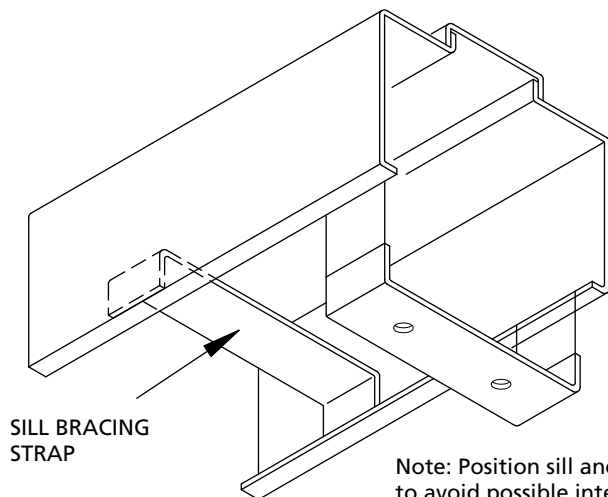
Note: Anchor is attached to floor at two places. Mullion or sill is slipped over anchor (fastening is optional).



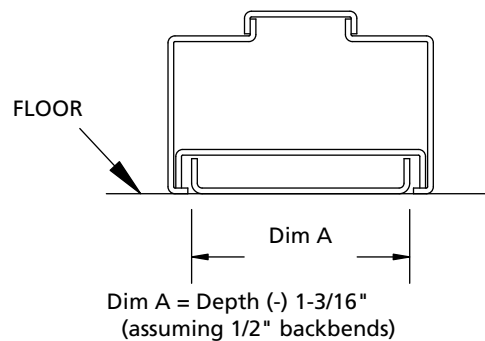
FOR VERTICAL MULLIONS



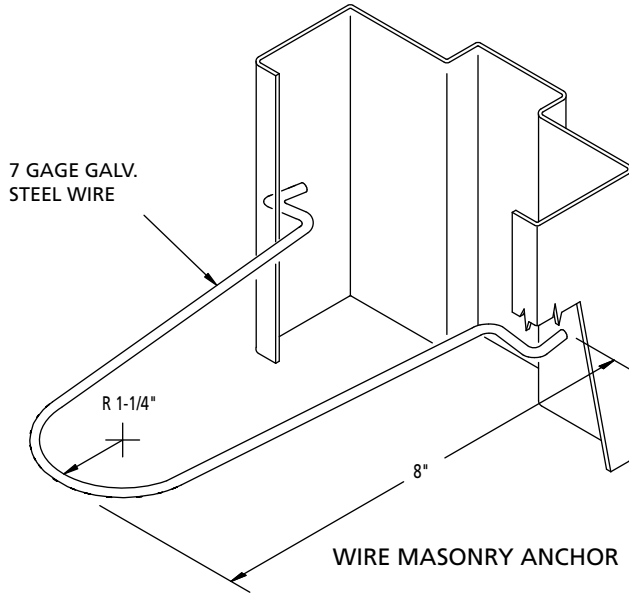
FOR BASE SILLS



Note: Position sill anchor to avoid possible interference with sill bracing strap if present.

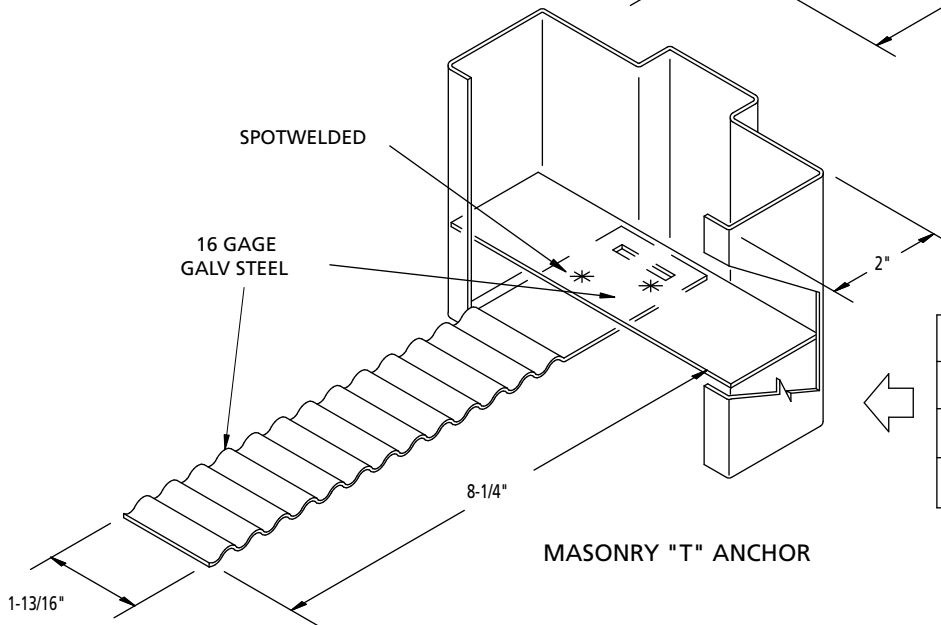
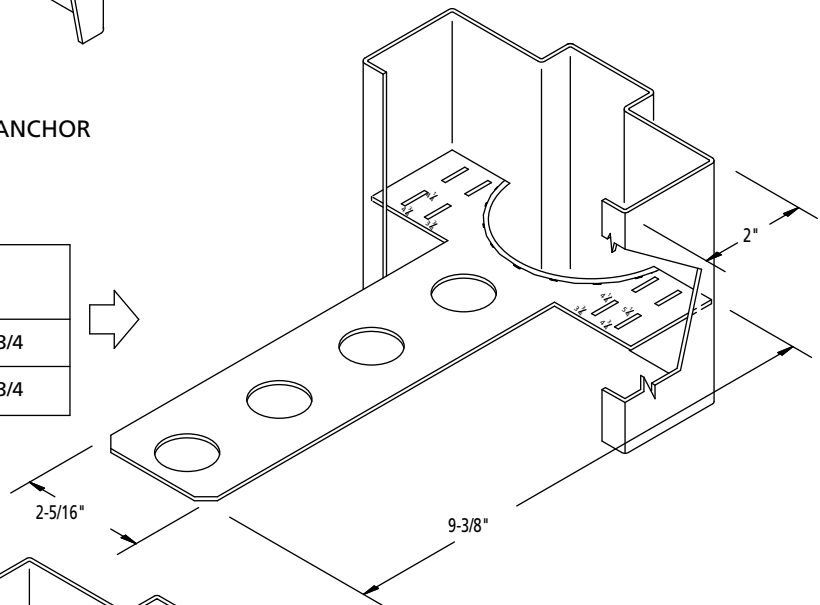


ANCHORS FOR NEW MASONRY



THROAT RANGE
2 THRU 8-3/4

MFG DEPTH	FIELD MODIFIED DEPTH			
5-3/4	5-1/4	4-3/4	4-1/4	3-3/4
4-3/4	-	-	4-1/4	3-3/4

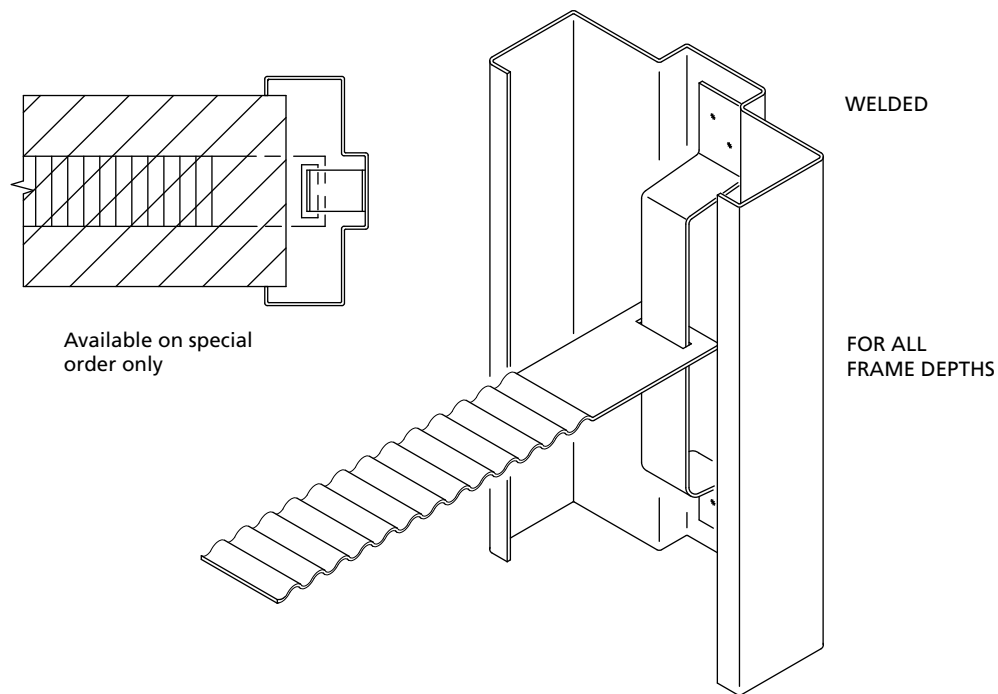


All dimensions are in inches; for SI conversion, 1" = 25.4 mm.

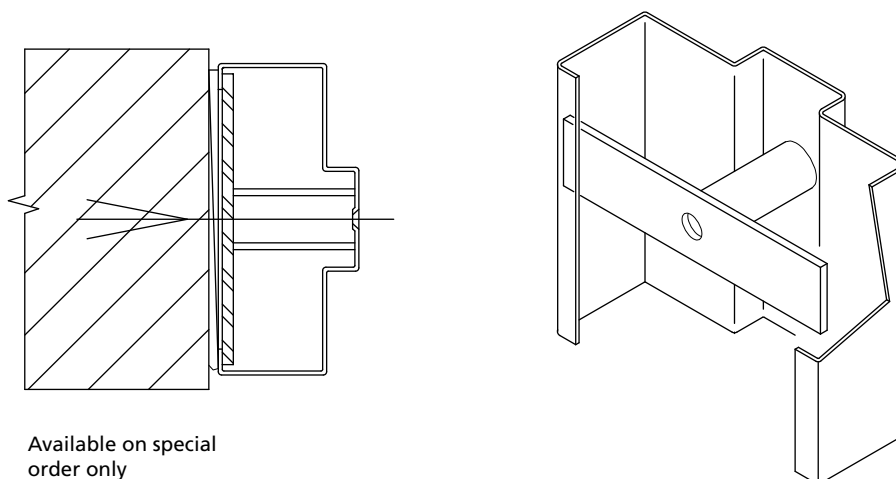
DEPTH
6-3/4
7-3/4
8-3/4

Distributor Tech Data

MASONRY ANCHORS CONT. EXISTING OPENING ANCHOR



YOKE AND STRAP MASONRY ANCHOR



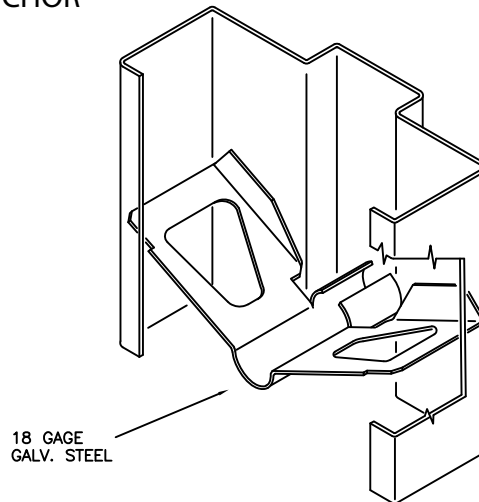
EXISTING OPENING ANCHOR

EXISTING OPENING STANDARD JAMB ANCHOR

- A. Existing opening (EO) "butterfly" anchors are available as an option. They are normally shipped unattached. Jamb punching ($\frac{3}{8}$ " dia. dimpled hole) and FH Dynabolts or wood screws are provided upon request.
- B. An existing opening anchor is used at the sill instead of a floor anchor.
- C. As an option, existing opening anchors are available shop attached. When this option is called for, the anchor is installed and welded to the jamb at the factory. For jamb depths over $8\text{--}3\frac{3}{4}$ ", the EO anchor is always installed and tack welded to the jamb.
- D. Punching for $\frac{5}{16}$ ", $\frac{1}{4}$ " or #10 FH fasteners are also available as an option. (These fasteners are not included unless covered by contract agreement).

FRAME DEPTH	EXISTING OPENING ANCHOR NUMBER
4- $1\frac{1}{2}$ " thru 6- $\frac{3}{4}$ "	EO/S6
6- $\frac{7}{8}$ " thru 9- $\frac{3}{4}$ "	EO/S8

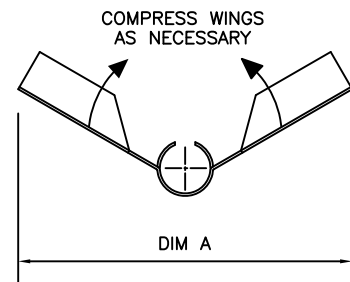
The existing opening anchors shown on this page are for double rabbet frames in sizes listed above only.



EXISTING OPENING ANCHOR

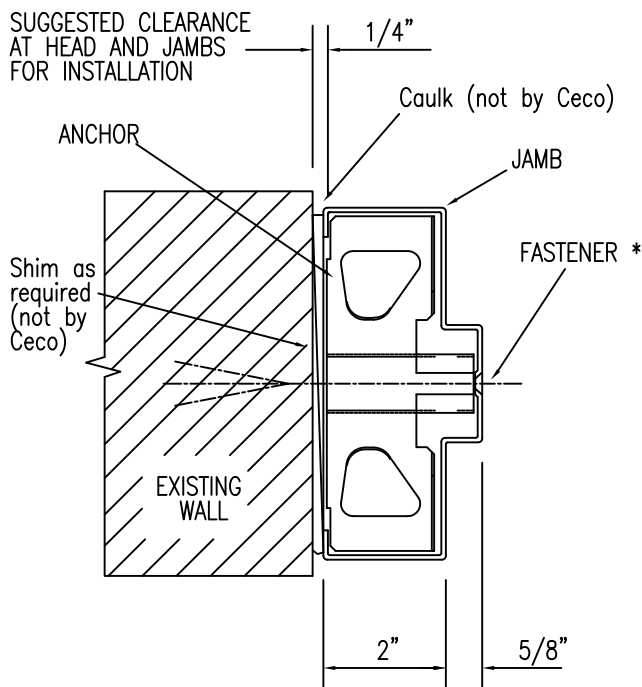
STANDARD LOCATION OF DIMPLED HOLES IN JAMB STOPS

JAMB HEIGHT	DIMPLED HOLE SPACING	FASTENER QUANTITY
6-8 thru 7-2	4" - 3 equal spaces - 4"	FOUR
7-2 thru 9-4	4" - 4 equal spaces - 4"	FIVE
9-4 thru 11-4	4" - 5 equal spaces - 4"	SIX



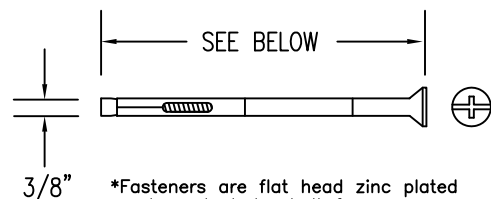
To install EO "butterfly" anchor, depress wings as necessary to suit depth (dim A). Hold one wing horizontal and position this wing under one of the backbends while placing tube over dimpled hole. Rotate anchor and snap remaining wing under opposite backbend.

DIM A: Dimension across wings should be approximately equal to jamb depth minus $\frac{1}{4}$ ".



SECTION AT JAMBS

CECO can purchase and provide fasteners as a service to our customers.



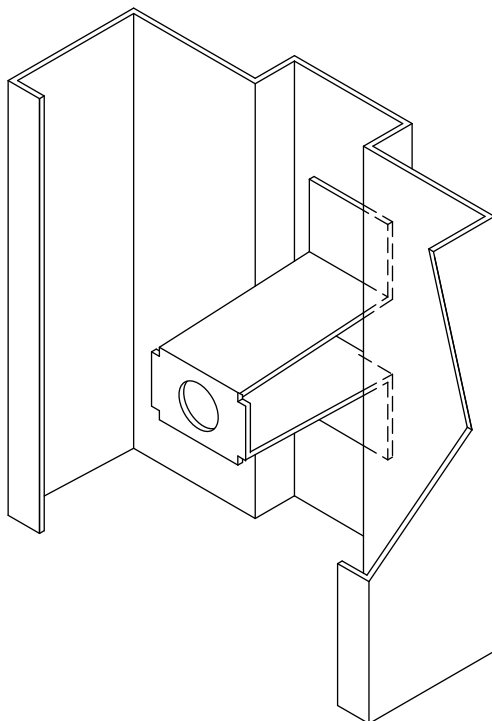
*Fasteners are flat head zinc plated carbon steel dynabolt for masonry. Fastener lengths are shown below:

- $\frac{3}{8}$ " x 4" Dynabolt
- $\frac{3}{8}$ " x 5" Dynabolt
- $\frac{3}{8}$ " x 6" Dynabolt

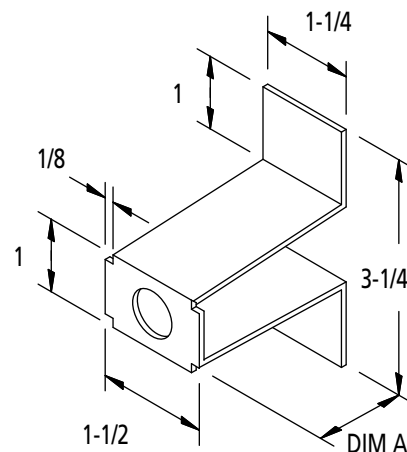
*Fastener is flat head wood screw for wood buck
#24 x 4- $1\frac{1}{2}$ FHWS
(screw detail not shown)

Distributor Tech Data

EXISTING OPENING ANCHOR FOR SPECIAL FACES



EXISTING OPENING/NARROW



EXISTING OPENING/NARROW ANCHOR SIZE CHART

FACE	1	1-1/4	1-1/2	1-3/4	2	2-1/2
DIM A	1-9/16	1-13/16	2-1/16	2-5/16	2-9/16	3-1/16

All dimensions are in inches. For SI conversion: 1" = 25.4mm.

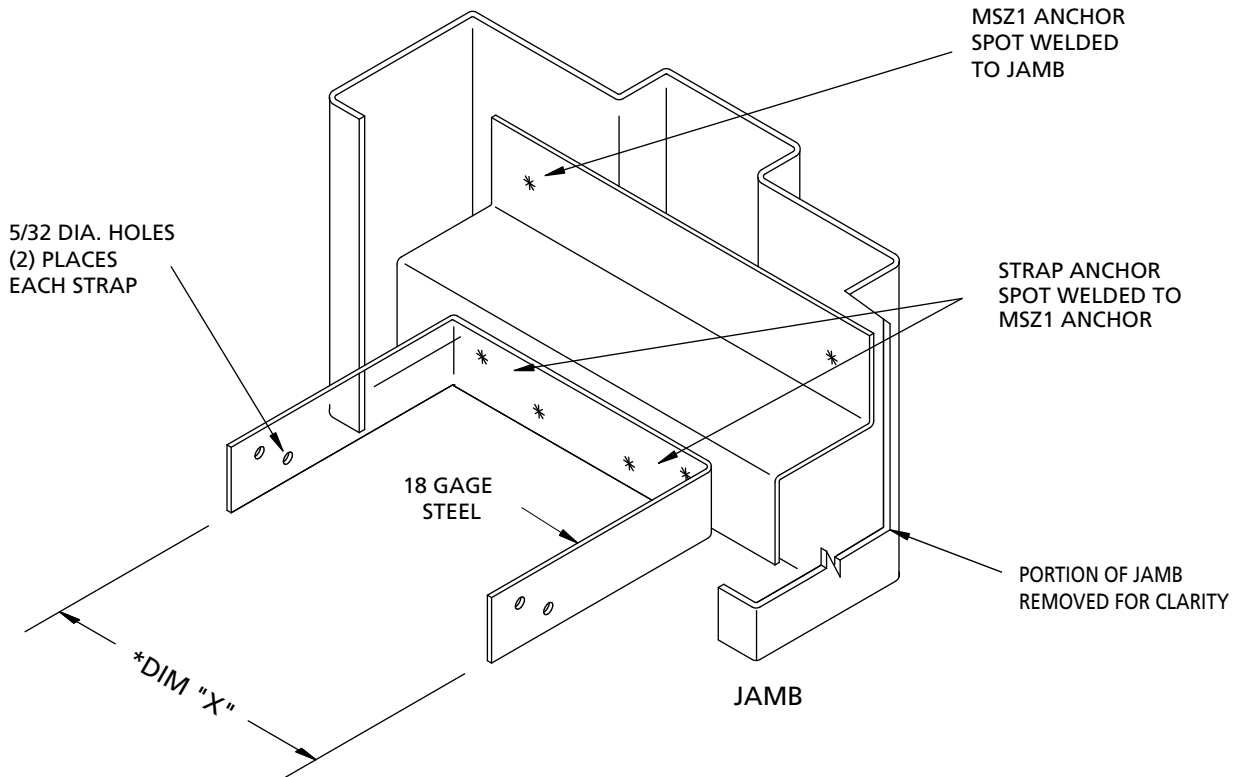
Dimension A assumes a 5/8" frame stop height.

Suggested Rough-opening clearance: 1/4" @ head and jambs.

See page 11-506 for jamb punching, spacing, fastener, and floor anchor notes.

WELDED WOOD STUD ANCHOR

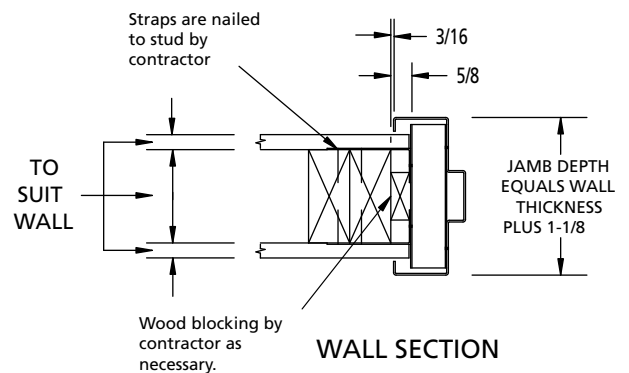
The wood stud anchor depicted below is shop attached. Unless otherwise designated, a stud anchor will be attached at each sill in lieu of a floor anchor.



* Or to suit other stud sizes.
For stud sizes other than shown
below: actual stud dimension should
be noted. Also, wall board thicknesses
should be shown so that straps can
be properly positioned.

WOOD STUD ANCHOR SELECTION CHART	
STUD SIZE	DIM "X"
2 x 4	3-1/2
2 x 6	5-1/2

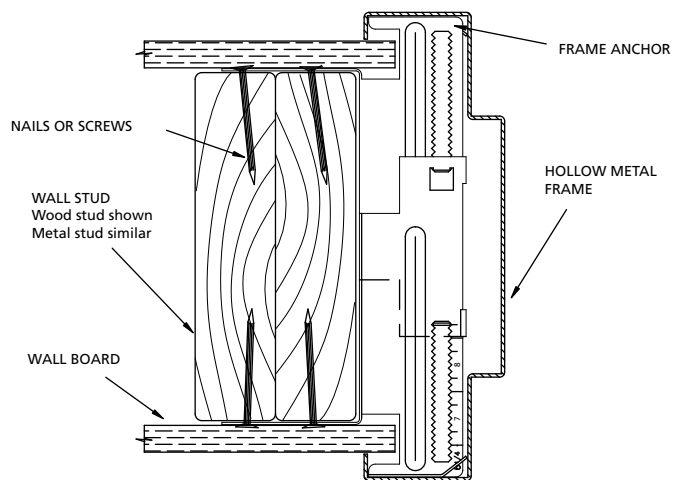
INSTALLATION SEQUENCE
1. WALL FRAMING
2. DOOR FRAME
3. WALL SURFACE MATERIAL



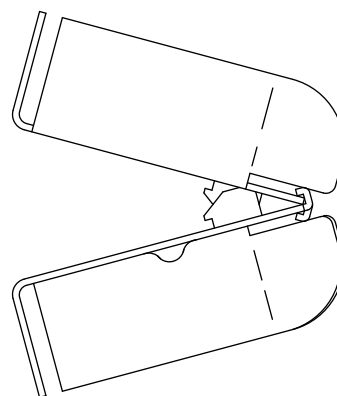
All dimensions are in inches, for
SI conversion, 1" = 25.4 mm.

Distributor Tech Data

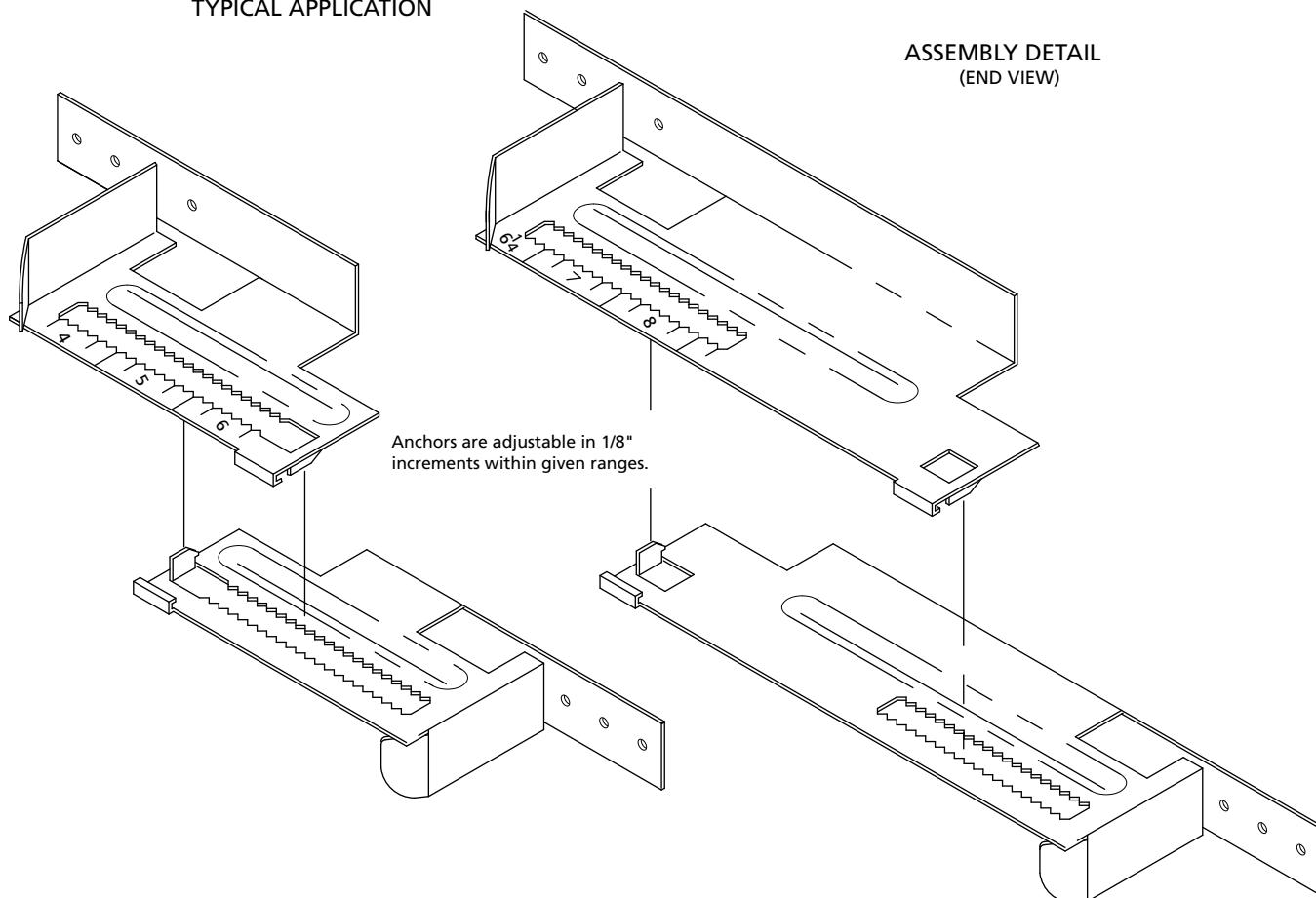
ADJUSTABLE JAMB ANCHOR FOR STUD WALLS



TYPICAL APPLICATION



ASSEMBLY DETAIL
(END VIEW)



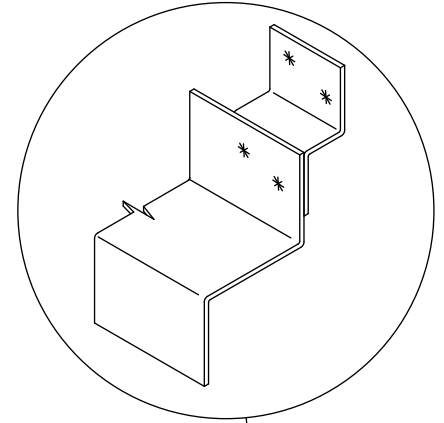
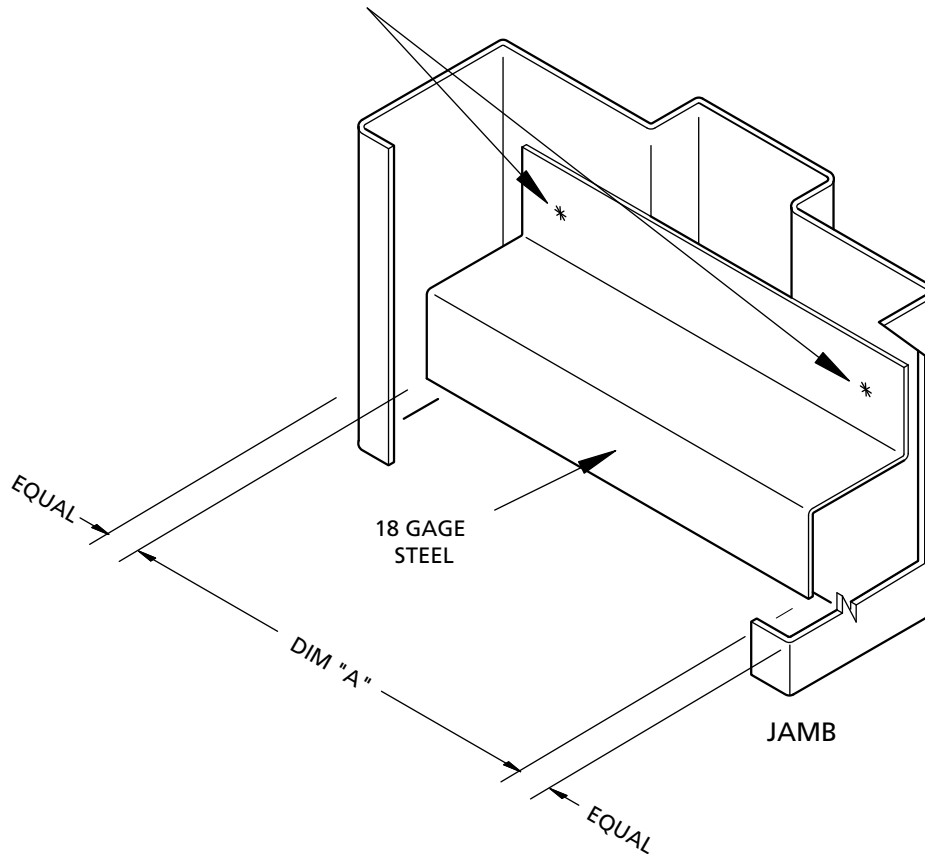
FRAME DEPTH: 3-3/4" thru 6-1/4"

FRAME DEPTH: 6-1/4" thru 8-3/4"

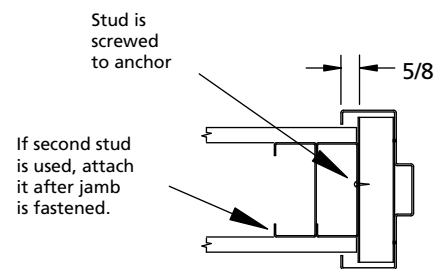
WELDED METAL STUD ANCHOR RECESSED TYPE

The metal stud anchor depicted below is shop attached. Unless otherwise designated, a stud anchor will be provided for each sill.

ZEE ANCHOR (1x1-1/4x1 @ Dim "A" long)
SPOT WELDED TO JAMB



For single rabbet depths over 4 inches, a 3/4 x 5/8 x 3/4 x 1 long steel "zee" clip is welded to MSZ anchor and stop as necessary



WALL SECTION

DIM "A"	FRAME DEPTH RANGE
3-1/2	4-1/2 THRU 5-1/4
5	5-3/8 THRU 6-3/4
6-1/2	6-7/8 THRU 8-1/4
8	8-3/8 THRU 9-3/4

INSTALLATION SEQUENCE

1. DOOR FRAME
2. WALL FRAMING
3. WALL SURFACE MATERIAL

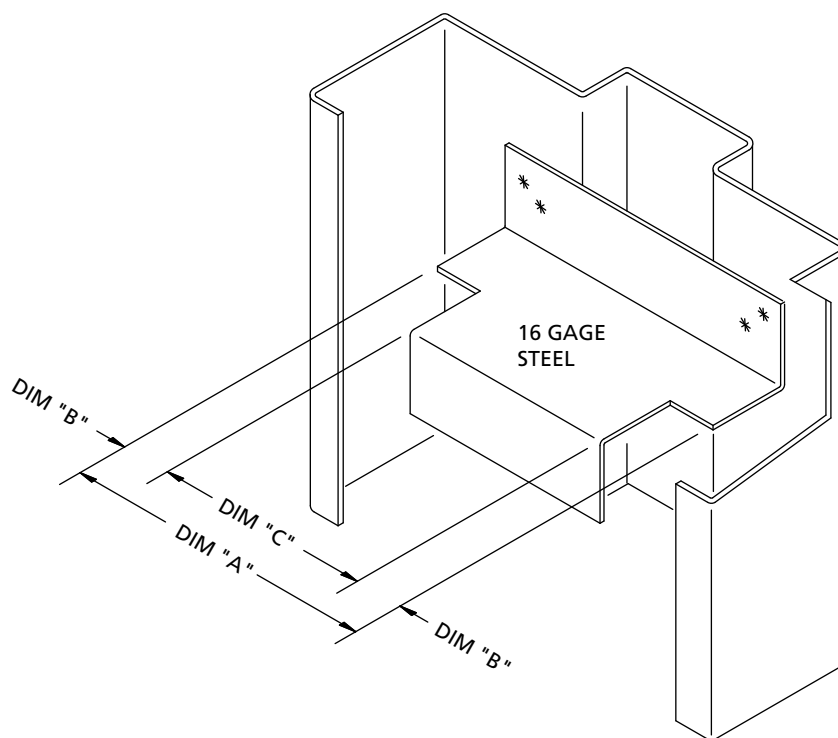
All dimensions are in inches, for SI conversion, 1" = 25.4 mm.

Distributor Tech Data

WELDED METAL STUD ANCHOR FLUSH TYPE

The metal stud anchor depicted below is shop attached at sill.

Designate if floor anchor or jamb anchor is desired

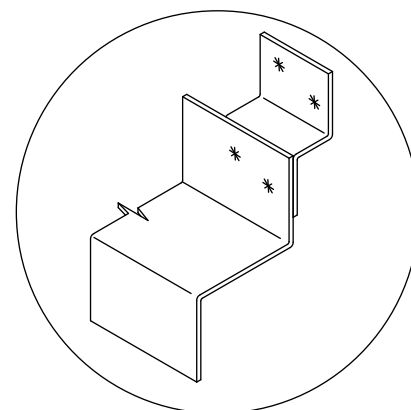


DIM "A"	DIM "B"	DIM "C"	FRAME DEPTH RANGE
4-5/8	13/16	3	5-3/8 THRU 6
5-7/8	1-7/16	3	6-1/8 THRU 7-5/8
7-1/2	2-1/8	3-1/4	7-3/4 THRU 9-1/4

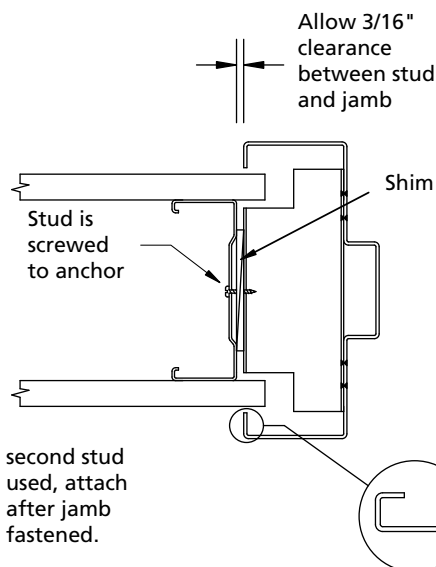
Anchor is normally positioned in the center of throat to accommodate equal thicknesses of wallboard at each side of stud. If wall is not symmetrical, drawings showing condition should be provided.

INSTALLATION SEQUENCE

1. WALL FRAMING
2. DOOR FRAME
3. WALL SURFACE MATERIAL



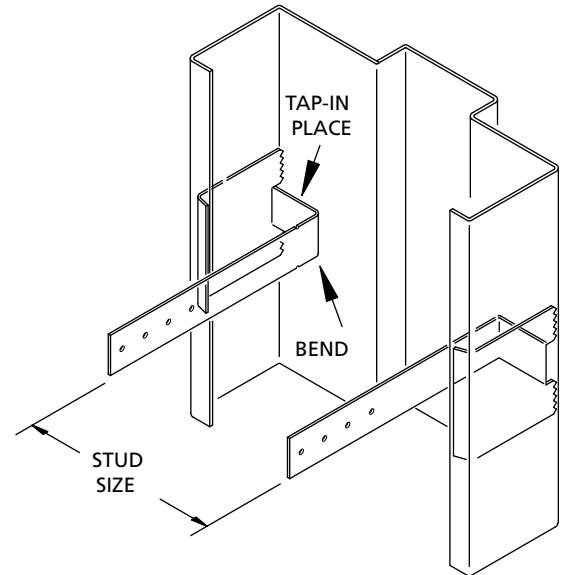
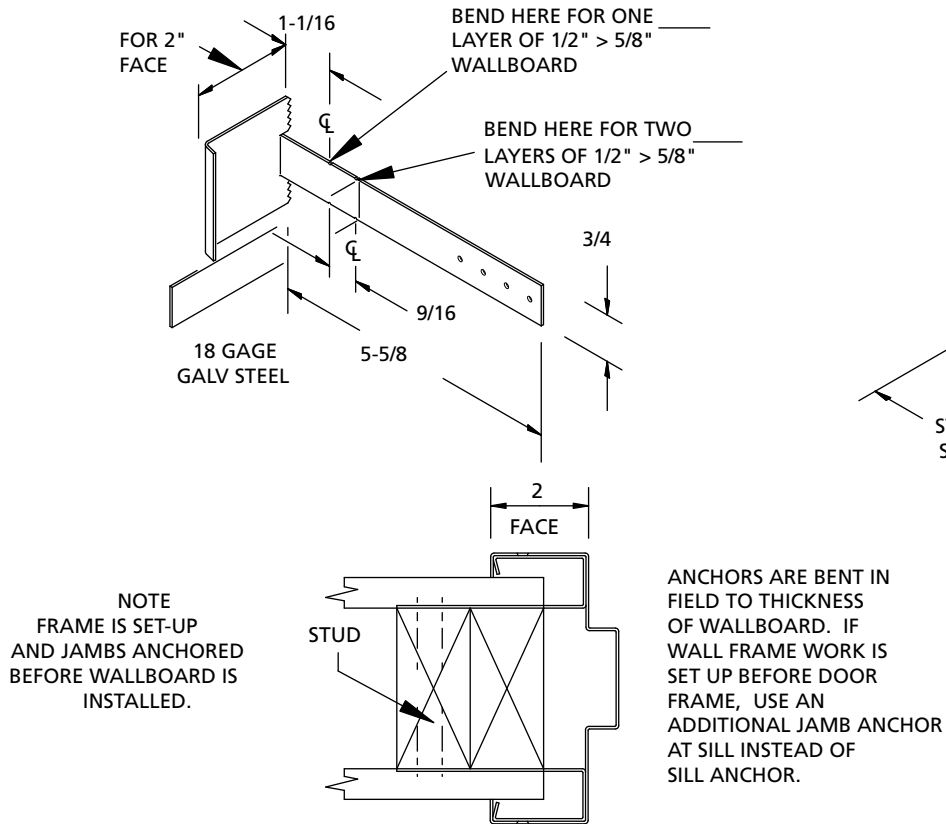
For single rabbet depths over 4 inches, a 3/4 x 5/8 x 3/4 x 1 long steel "zee" clip is welded to MSZ anchor and stop as necessary



Series BQ should be considered

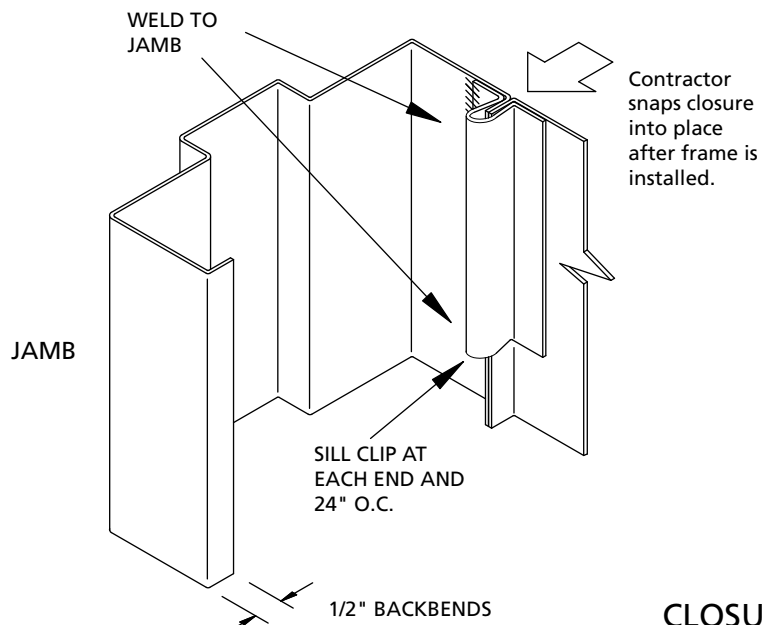
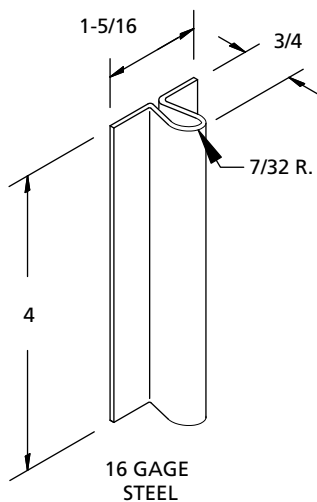
All dimensions are in inches, for SI conversion, 1" = 25.4 mm.

BEFOR DRYWALL STUD ANCHOR AND CLOSURE CLIP



BEFORE DRYWALL STUD ANCHOR

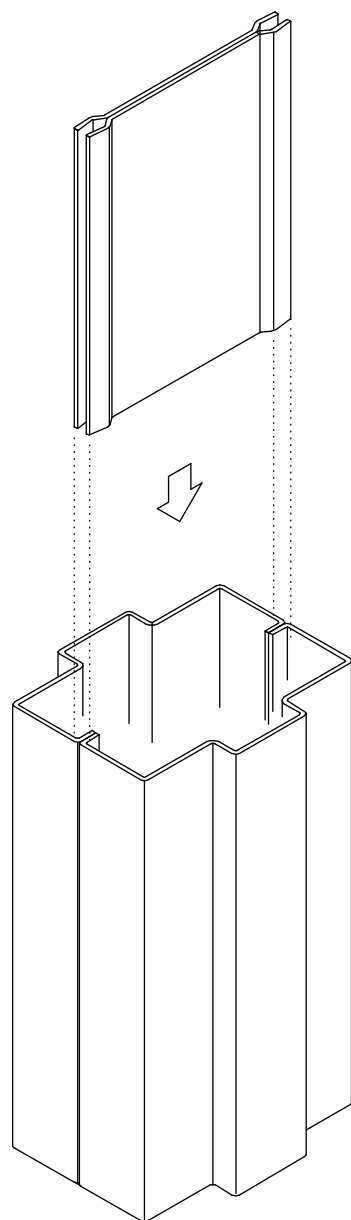
All dimensions are in inches, for
SI conversion, 1" = 25.4 mm.



CLOSURE CLIP

Distributor Tech Data

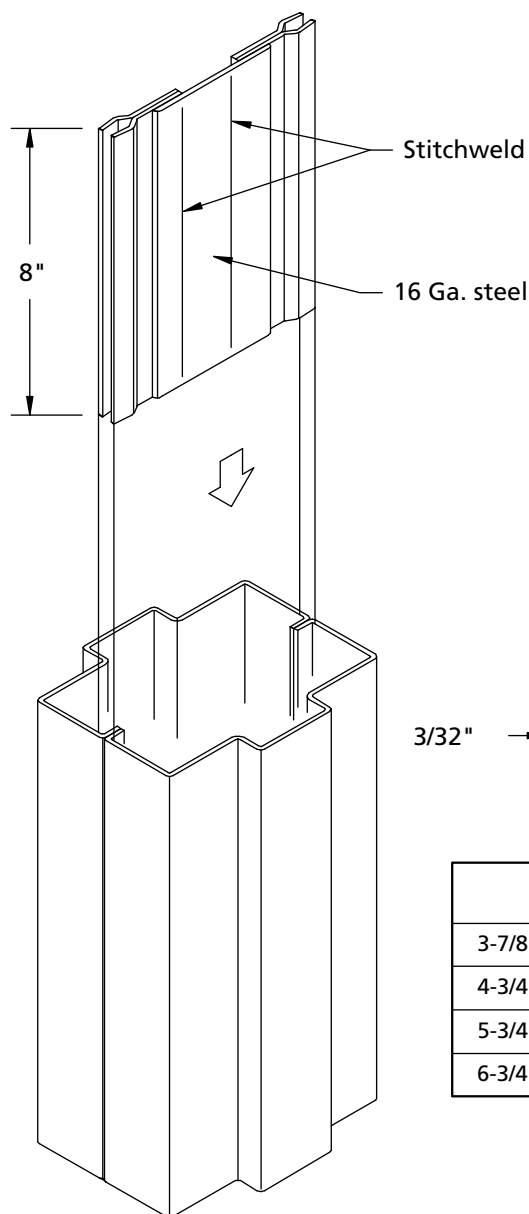
FRAME SPLINES



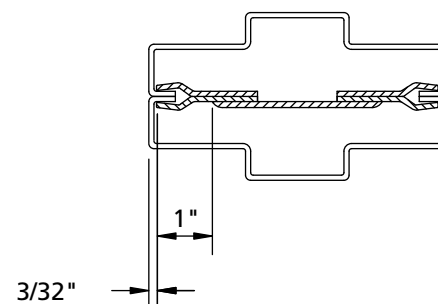
SPLINE APPLICATION

For shipping via common carrier, frame size should not exceed 8'-0" in more than one dimension.

Frame components should have open ends. Mitered corners prevent spline installation without modification of backbend. Allot one spline for every 2 feet of impost height. Drive spline in from ends, locate approx. equal distance from one another.



SPLINE APPLICATION
(For Custom Depths)



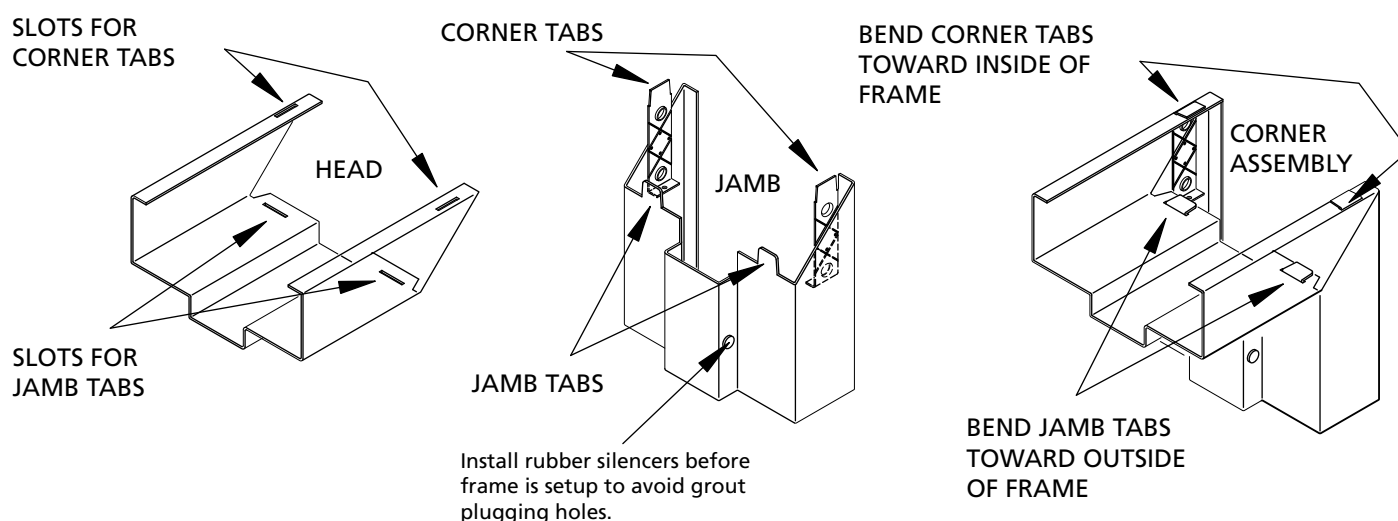
DEPTH	REWORK FSPA
3-7/8" or OVER	334
4-3/4" or OVER	434
5-3/4" or OVER	534
6-3/4" or OVER	634

Distributor Tech Data

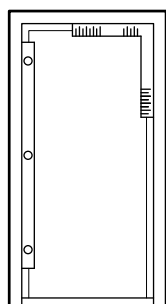
FRAME INSTALLATION MASONRY AND STUD WALLS

JOBSITE STORAGE: Store frames off the ground on wood runners or skids. Do not store directly on the ground. Cover frames with tarpaulin or plastic but do insure that adequate ventilation is provided to eliminate moisture condensation. When frames are to be fully grouted and when plaster or mortar contain "anti-freeze" agents, the inside of the frames should be coated with a bituminous, water-resistant paint by the installation contractor.

ASSEMBLY of FRAME

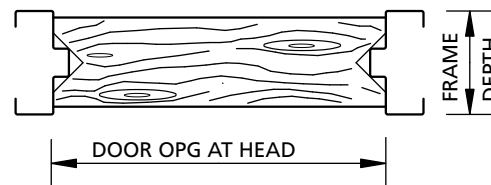


PLUMBING FRAME



SQUARING THE FRAME

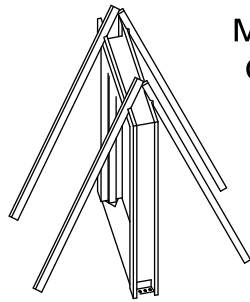
The installer should use wood spreaders (as described at right), a carpenters level (the longer the better), and a carpenters square (the bigger the better). Set the frame in the desired location. Level head and plumb jambs. Shim under jambs if necessary.



SPREADER

Typical wood spreader must be square and made from lumber at least 1" thick. Length of spreader equals door opening width at the head. Cut clearance notches for frame stops as shown. Spreader must be nearly as wide as frame depth for proper installation.

FRAME INSTALLATION CONT.



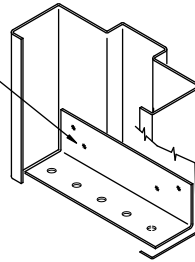
BRACING THE FRAME

NOTE: If frame is received setup and welded, remove and discard the temporary metal supports that are tack welded to jambs at sill before starting installation.

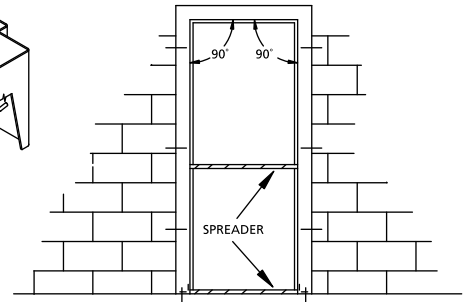
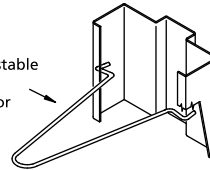
Brace the frame as shown or shore to ceiling. Do not brace in the direction of intended wall. Plumb and square jambs. Set spreader. Attach jambs to floor through floor anchor.

MASONRY WALL CONSTRUCTION

Floor anchor is attached to jamb at sill with (4) welds.



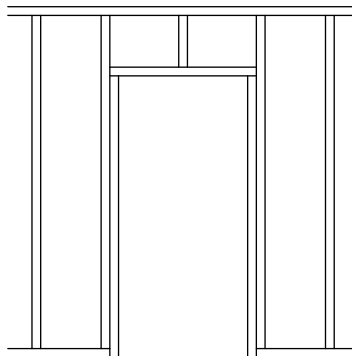
Adjustable jamb anchor



INSTALLING THE FRAME

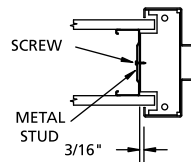
Set and plumb frame. Install jamb anchors at hinge levels as wall is laid up. (3 anchors for heights to 7-2 -- one more anchor per jamb for each additional 2 feet of height or fraction thereof.) Grout frame in the area of the anchors. A second spreader should be used at mid-point of opening to maintain the door opening dimension. Continually check plumb and square as wall progresses. CHECK: The difference between diagonals measured from opposite corners should not exceed 1/16".

WOOD or METAL STUD WALL CONSTRUCTION

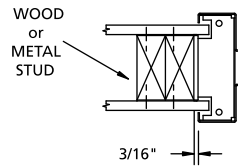
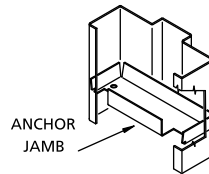


ROUGH STUD OPENING

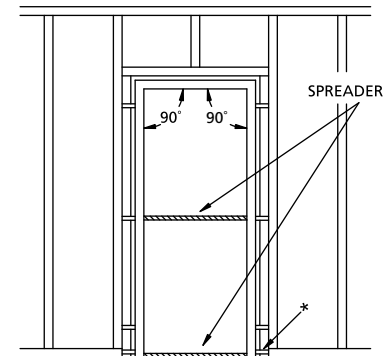
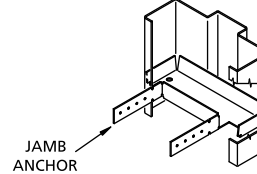
ADD 3/8" TO OVERALL FRAME WIDTH
ADD 1/8" TO OVERALL FRAME HEIGHT



DET. A



DET. B



INSTALLING THE FRAME

1. Build the rough opening in wall allowing 3/16" clearance between upright stud and frame jamb and 1/8" clearance between header and top of door frame.

2. Insert jamb anchors in frame throat and tap into place with a hammer. Place at hinge location and directly opposite on strike jamb. Position anchors also at sill.

3. Place frame in rough opening.

4. Set spreader and level frame. Shim jambs if necessary.

*If you choose to erect door frame before wall framing: brace frame and anchor at sill per masonry procedure above, then butt studs to door frame.

5. Square and fasten top anchors to stud on ONE JAMB ONLY. Check plumb and square of door frame and continue to fasten balance of anchors to studs. Repeat on opposite jamb.

6A. If your anchor looks like Det. A, fasten anchor to metal stud thru web of channel using suitable fastener for sheet metal.

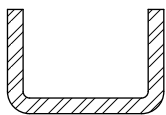
6B. If your anchor looks like Det. B, bend anchor tabs around stud and fasten tabs with suitable fastener.

7. Maintain necessary clearance between frame returns and stud for inserting wall board. Do not install wall board until you are sure that frame is plumb and square.

Distributor Tech Data

FRAME SPREADER BARS

1. SPREADER BAR PROFILE



2. SPREADER BAR LENGTH

Length of spreader bar is equivalent to door opening width dimension.

This bar is not to be used for installation. A wood spreader is to be used for maintaining proper spacing between jambs. (See the DHI publication "The Installation of Commercial Steel Doors and Steel Frames", "Insulated Steel Doors in Wood Frames", and "Builder's Hardware").

3. SPREADER BAR QUANTITY AND LOCATION

- A. All single rabbet frames and double rabbet, single swing frames with depth not exceeding 6 inches: attach (1) spreader bar to the door rabbet. (See Fig. #1)
- B. All double rabbet, double swing frames or double rabbet, single swing frames with depth exceeding 6 inches: attach one (1) spreader bar to each frame rabbet (two total). (see Fig. #2)

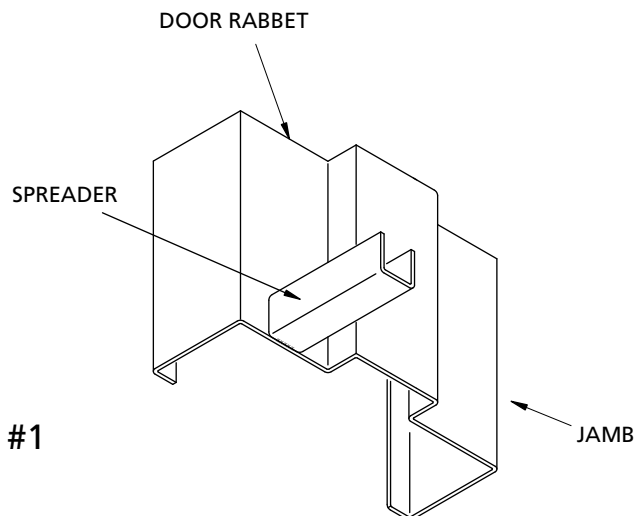


Fig. #1

4. SPREADER BAR ATTACHMENT

Verify spreader bar length by checking to see that said length is equivalent to the door opening width dimension at head. Place the spreader bar at the bottom of the door opening and tack weld in place. Strength of welds should be such that spreader bar remains in place during transit and also be such that the spreader bar can be removed when required (by means of a sharp hammer blow) without incurring frame damage.

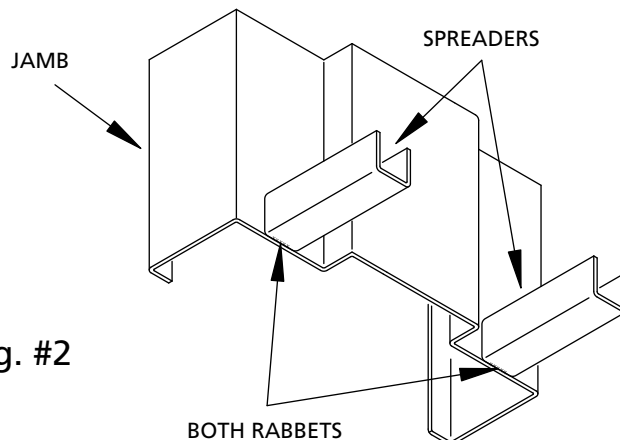


Fig. #2



Distributor Tech Data

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Distributor Tech Data

FIRE DOOR AND FRAME TESTING AND LABELING

Ceco Door Products invests considerable research and development efforts in the design and performance testing of fire barrier and smoke infiltration resistant products. Only independent, third party agencies which are internationally recognized by fire and safety authorities are utilized for testing.

TESTING AGENCIES:

Underwriters Laboratories, Inc. (UL)
Warnock Hersey, Int. (WH) (ITS, Intertek Testing Services)

In addition to providing the testing service, the above agencies and Factory Mutual Engineering Corp. (FM) furnish labeling and follow-up inspection services, and they also publish directories of products that meet established standards. In addition, UL & FM publish standards that define the testing of various product categories.

FIRE TESTING

In order for a manufacturer to apply a fire label to its products, the manufacturer must first submit the product to one of the testing agencies for a fire test. There are currently two basic methods of fire tests - one we call "neutral pressure" and one that is known as "positive pressure". These two methods have multiple document identifiers:

Neutral Pressure fire test method

UL-10B
ASTM E152 (Obsolete - withdrawn)
NFPA 252 (Lets user decide on pressure condition)
CSFM title 19

Positive Pressure fire test method

UBC 7-2
UL - 10C
NFPA 252 (Lets user decide on pressure condition)

Both methods test the assembly for the following:

1. Prevention of passage of fire and products of combustion for a designated time period.
2. Heat transmission criteria, after 30 minutes of fire exposure.
3. Structural performance - unit to remain intact throughout the fire exposure period.
4. Structural performance - unit to remain intact throughout the hose stream test.

TEST PROCEDURE

The two test methods are quite similar except for the pressure gradient within the furnace. The "positive" pressure test is said to better represent "real-life" conditions in this respect (typically, the upper 2/3 of a room is under positive pressure during fire conditions).

The door assembly which is to be tested is installed in a test panel that becomes the front of the test furnace. Attached to each door, on the outside of the test panel, are several thermocouples which measure the temperature on the unexposed face of the unit.

During a "neutral-pressure" test, pressure inside the furnace is slightly less than ambient resulting in a tendency for atmosphere outside the furnace to be drawn into the furnace. During a "positive-pressure" test, pressure inside the furnace near the top of the door is slightly more than ambient resulting in a tendency for products of combustion and superheated gases inside the furnace to exit the test chamber through the margins.

FIRE DOOR FRAME TESTING AND LABELING (continued)

TEMPERATURE RISE

Although the heat transmitted can be recorded throughout the test, the first 30 minutes determine temperature rise criteria for labeling. After 30 minutes, the temperature inside the furnace is about 1550° F. The temperature then begins to level off and after 3 hours reaches about 1925° F. The manufacturer can opt to end the test at 1-1/2 hours which would limit product to 1-1/2 rating maximum. Ceco typically goes for the full 3 hour test which allows the product to be labeled for any fire-rating specified.

HOSE STREAM TEST

As soon as the fire is extinguished, the test panel unit is moved away from the furnace and, when required, subjected to a hose stream test (in the U.S., the hose stream is not required for 1/3 hour rated assemblies). During the hose stream test, the door(s), which may be red hot on the furnace side, are immediately hit with a stream of water from a fire hose.

FIRE HOSE STREAM TEST		
Rating (Hours)	Nozzle Water Pressure	Duration
3	45 Psi	3 Sec. Per Sq. Ft. of Exposed Area
1-1/2 but less than 3	30 Psi	1.5 Sec. Per Sq. Ft. of Exposed Area
1 but less than to 1-1/2	30 Psi	0.9 Sec. Per Sq. Ft. of Exposed Area
Less than 1	30 Psi	0.6 Sec. Per Sq. Ft. of Exposed Area

The rapid change in temperature and force exerted by the hose stream test cause extreme stresses on the assembly.

SMOKE

The 20 minute (S) classification is for openings where smoke control is a primary consideration. The 20 minute fire door category does not have to undergo a hose stream test. Smoke control testing of door assemblies is performed in accordance with UL 1784. Assemblies tested in conformance with UL 1784 comply with NFPA 80 (...Installation of Fire Doors...) and NFPA 105 (...Smoke and Draft Control...). The UL 1784 test assembly includes some form of gasketing. Various listed gasketing are acceptable (however, only positive pressure listed gaskets are approved for positive pressure rated assemblies). Ceco's "Smoke-Tech" labeled door, kerfed frame and listed gasket assembly complies with this smoke protection category, i.e. UL10B, UBC 7-2 and UL 1784. Smoke-tech also meets fire protection criteria for up to 3 hour rating (UL 10B, UBC 7-2).

EVALUATION

Upon completion of the test(s), a final evaluation is made. If the test is rated successful by the agency, a "procedure" is issued and the manufacturer is allowed to attach appropriate label(s) to doors/frames - when the units are of the same type as those tested and as described in the procedure.

PROCEDURES

Ceco Door Products has authorized labeling procedures from the following agencies:

- UL
- WH (ITS)
- FM

Distributor Tech Data

FIRE DOOR AND FRAME TESTING AND LABELING

LABELING

Generally speaking, fire labels for steel doors indicate: labeling agency, manufacturer, duration of fire test (rating), temperature rise, and latch or fire exit hardware category. Certification of the positive pressure fire test is indicated by a statement on the label or by a supplemental UBC 7-2 conformance label. Labels for steel door frames usually just indicate the label agency, manufacturer, and product, e.g., "UL, Manufacturer's I.D., Fire door frame". Normally, frames thus labeled can be used with all types of fire door ratings up to 3 hours. Exceptions: certain frames designed for specific applications have guidelines noted on label (e.g., slip-on-drywall frames designed for 1-1/2 hour rated DW partitions have "1-1/2 hour" specified on the label, certain panel assemblies have the panel type specified on the label, etc.)

INSPECTION

All labeled fire doors and frames are subject to factory or warehouse follow-up inspection programs. Under these programs, an inspector from the labeling agency frequently spot checks labeled doors and frames in various stages of manufacturing and in the warehouses to be certain material provided is in accordance with label service procedures. Strict control prevents manufacturer from furnishing anything which is not included in their procedures.

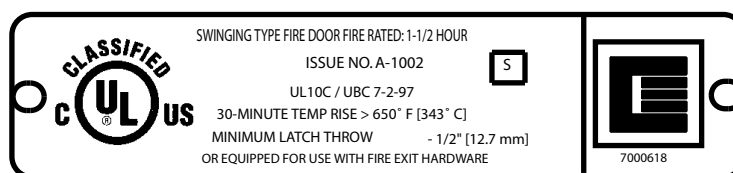
FIRE DOORS FOR THE INTERNATIONAL MARKET

Ceco Door Products has extensive experience and expertise in international fire door testing methods and code acceptance (including the positive pressure test). Existing programs are in place to satisfy the needs of the global market place - ask for details.

LABELS

There are various labeling methods authorized by the agencies involved - label examples appear below. In addition to the methods shown, certain frames have the labels embossed into the steel during manufacturing.

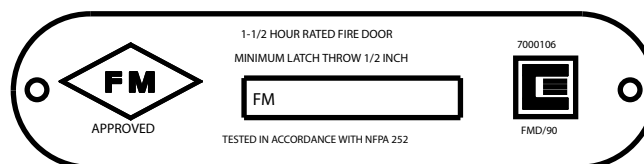
Underwriters Laboratory Inc.
Metal Label



Warnock Hersey
Metal Label



Factory Mutual
Metal Label



LABELED FIRE DOOR APPLICATION TABLE

LOCATION / FIRE HAZARD	CLASS*	RATING	MAXIMUM GLASS AREA	REGENT OMEGA	MEDAL LION	FUEGO	IMPERIAL VERSA-DOOR	LEGION ULTRA	THRU-LITE
Openings in walls separating buildings or dividing a building into fire area	A	3 HOUR	see chart page ---	NTR	NTR	250° maximum temp. rise	NTR	NTR	NTR
Openings in enclosures of vertical communication elevators, stairwells, and in 2 hour rated partitions providing horizontal fire separation	B	1-1/2 HOUR	see chart page ---	NTR	450° maximum temp. rise	250° maximum temp. rise	NTR	NTR	NTR
Corridor and room partitions	C	3/4 HOUR	see chart page ---	NTR	NTR	NTR	NTR	NTR	NTR
Exterior walls subject to severe fire exposure from outside	D	1-1/2 HOUR	NONE	NTR	450° maximum temp. rise	250° maximum temp. rise	NTR	NTR	NTR
Exterior walls subject to moderate fire exposure from outside	E	3/4 HOUR	see chart page ---	NTR	NTR	NTR	NTR	NTR	NTR
Openings where smoke control is a primary consideration: in partitions between a habitable room and a corridor when the wall is constructed to have a fire resistance of more than on hour- or across corridors where a smoke partition is required	20 MINUTE	1/3 HOUR OR 1/2 HOUR	see chart page ---	NTR	NTR or 450° maximum temp. rise	NTR	NTR	NTR	NTR
Openings requiring "Positive Pressure" test conformance	UBC 7-2	1/3 HOUR	see chart page ---	NTR	450° maximum temp. rise	250° maximum temp. rise	NA	NTR	NTR
Openings requiring Smoke control testing	UL 1784 NFPA 105	1/3 HOUR	see chart page ---	NTR	450° maximum temp. rise	250° maximum temp. rise	NA	NTR	NTR

NTR denotes: No temperature rise

NA denotes: Not Available

NEUTRAL PRESSURE / POSITIVE PRESSURE FIRE TEST

For door Series compliance with a specific fire test, see tables beginning on page 7-107

HOURLY* RATING / LETTER CLASSIFICATION

The letter-reference shown in the "CLASS" column above is in disuse. It was meant to classify the opening for which the fire door was considered suitable. The current trend, is to use the fire protection hourly rating not the letter class. Normally, a unit with a higher hourly rating can be used in lieu of one with a lesser rating. The maximum glass dimensions for both door and location still though hold and any conflict would prohibit labeling of the opening. Generally, doors have the hourly rating listed on the label, frames do not (slip-on DW frames, which have the hourly rating listed on the label, are an exception).

(continued)

Distributor Tech Data

FIRE DOOR AND FRAME TESTING AND LABELING (continued)

OPENING SIZES AND GLASS AREAS

Fire Door opening sizes and exposed glass areas are typically limited by product, by test, by hardware, and/or by application. For your convenience, these parameters are charted for various Ceco product lines beginning on page 7-107.

GLAZING MATERIAL

Glass and glazing is normally by glazing contractor. However certain provisions must be provided for glazing during door construction. These provisions are specified for labeled products in agency procedures. For your convenience, we have tabulated size parameters for listed materials that are currently in our procedures (refer to page 7-103) Note: materials and allowable sizes change as new materials are developed and tested. If you need something not shown, contact our product Development group for latest data.

TEMPERATURE RISE

The "maximum Temperature Rise" entry in the door type columns indicates performance for that type of door construction. Generally speaking, a door with a lower heat transmission can be used in lieu of a door with a greater heat transmission, e.g., a door with 250° F maximum temperature rise will satisfy the performance requirements for 450° F or 650° F maximum temperature rise. The maximum glass dimensions for both door and location still hold though and any conflict would prohibit labeling of the opening. "NTR" denotes temperature rise in excess of 650° Unless a listed glazing material allows otherwise, any fire door, regardless of its construction, with a glass lite area in excess of 100 sq. in. is considered to have a temperature rise in excess of 650°

LABELED CONSTRUCTION ONLY

Doors which, because of some characteristic, do not meet labeling requirements, can be fabricated, when necessary, but cannot bear a physical label. When furnished, they can, upon request, be certified as being constructed in accordance with, insofar as possible, labeling requirements. Certification will indicate the specific reason(s) why the labels were not applied. The user assumes responsibility of the application.

LABELED FIRE DOOR HARDWARE REQUIREMENTS

All labeled fire doors must be fabricated and prepared for hardware according to the procedures of the labeling agencies and the recommendations of the National Fire Protection Association. Should local codes conflict with NFPA recommendations, we must still prepare our doors for hardware in accordance with our manufacturing procedure. There can be no deviation from this restriction. When local codes are vague or unknown, the NFPA hardware recommendations in Pamphlet #80 should be employed. The minimum hardware requirements on labeled doors, in accordance with NFPA Pamphlet #80-1996 are as follows:

HINGES

All 1-3/4" thick fire doors over 5'-0" and up to 7'-6" high must be provided with three 4-1/2" high x .134" thick, steel, ball bearing, hinges* All 1-3/4" thick fire doors exceeding 7'-6" high up to 9'-0" high require four such hinges. Unusually wide and / or heavy doors subject to high frequency use should have heavy weight hinges. Spring hinges can be used to satisfy both hinging and closing functions. When spring hinges are used instead of the above butt hinges, at least 2 spring hinges should be employed.

* or other qualified anti-friction bearings...

LOCKS AND LATCHES

Only "UL" listed locks and latches should be used. All single doors and active leaves of doors in pairs should be provided with an active latch bolt which cannot be held in a retracted position. Except when the fire door is used as a required means of egress, a supplementary deadbolt in addition to the active latch bolt, may be employed. Locks with interconnected deadbolts-latch bolts which retract deadbolt when latch is retracted-may be used on fire doors within a means of egress.

FIRE EXIT HARDWARE (FEH)

Only "UL" listed FEH shall be used. FEH meets both the life safety requirements and the fire protection requirements. Devices are not "UL" qualified, from a fire protection point of view, unless they bear a "UL" label stating "Listed as Fire Exit Hardware".

Doors scheduled for use with FEH are to bear the supplementary marking on the attached label stating: "Fire Door to be equipped with Fire Exit Hardware".

These fire doors may be supplied for a building in any one of the three following manners, in accordance with procedures:

1. Door is reinforced and prepared in the plant for FEH
2. Door is reinforced only for field drilling and tapping with an additional label applied which states "Reinforced for ... Type Exit Device"
3. Door is not reinforced for Fire Exit Hardware with an additional label applied which states: "Fire Exit Hardware Reinforcement not provided - Use sex-bolts to mount FEH"

TOP AND BOTTOM BOLTS

Where the inactive leaf of a pair of doors is not required for exit purposes, the inactive leaf may be provided with labeled self-latching or automatic top and bottom bolts (or labeled two-point latches). Manually operated, labeled top and bottom bolts, surface or flush, are permitted on the inactive leaf of a pair of doors when acceptable to local authority providing that the bolts do not pose a hazard to safety of life.

This provision limits the use of manually operated bolts to rooms not normally occupied by people (like storage rooms, transformers vaults, mechanical rooms, etc.) In this case a closer is not required on the inactive leaf. When automatic bolts are used, "dummy" trim on the inactive leaf is not permitted as it might detract from functional trim on the active leaf in an emergency.

Distributor Tech Data

LABELED FIRE DOOR HARDWARE REQUIREMENTS (continued)

CLOSERS

A listed closing device shall be installed on every fire door. A closing device will insure that the door will be closed and latched at the time of fire. When there is an overlapping astragal, a coordinating device shall be employed so that the inactive leaf closes and latches before the active leaf closes. Exception: A closer may be omitted from the inactive leaf of a pair of doors for mechanical equipment rooms. There are two categories of door closing operation.

1. Self closing: Fire doors which normally remain in the closed position must be provided with a Labeled closer which causes the door to return to the closed, latched position, after opening. Anything that restricts or prevents the door from returning to the closed, latched position, in an approved manner, is prohibited.
2. Automatic closing: Fire doors which normally remain in the open position must be provided with a labeled closing mechanism, which when activated or released by an approved fire / smoke or temperature sensor, causes the door to return to the closed, latched position. Anything that restricts or prevents the door from returning to the closed, latched position, in an approved manner, is prohibited.

CAUTION:

The listing of closers does not automatically imply that door manufacturers can prepare for the device. Certain listed types are not applicable for use with all types of fire doors.

COORDINATING DEVICE

When there is an overlapping astragal, a projecting latch bolt (w/o open back strike), or other such obstacle, which prevents the inactive leaf of a pair of doors from closing and latching before the active leaf closes and latches, a coordinating device should be used. A coordinating device is not necessary when each leaf closes and latches independently of each other. For example:

1. Pairs of doors swinging in the same direction with 2 vertical rod type FEH and no astragal.
2. Pairs of doors swinging in opposite directions (double egress) with two vertical rod type FEH.
3. Pairs of doors with mortise type FEH or single point latch on active leaf, vertical rod type FEH and open back strike on inactive leaf, and no astragal.
4. Pairs of doors with two devices and a removable mullion.

ASTRAGAL

Unless otherwise noted, doors swinging in pairs must be provided with a steel astragal attached in place so as to overlap approximately 3/4 inch. Overlapping astragals are not allowed on pairs, swinging in the same direction with a vertical rod on each leaf - see charts beginning on page 7-107 for other exceptions.

Certain authorities require the use of pairs of doors without astragal in exit locations (class B or C locations) when both leaves are required for exit purposes each shall be provided with labeled fire exit hardware. These leaves may swing in opposite directions or the same direction.

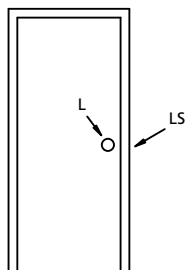
Where acceptable to the authority having jurisdiction, pairs of doors without an astragal may be provided with labeled fire exit hardware and open back strike installed on the inactive leaf, and either labeled fire exit hardware or labeled latch (capable of being opened by one obvious operation from egress side) on the active leaf.

OPEN BACK STRIKE

It is a strike applied to the inactive leaf of a pair of doors and cut away at the back to permit either leaf to open or close independently. Doors swinging in pairs in the same direction may be provided with a listed single point latch or mortise type FEH on the active leaf and a listed vertical rod type FEH or automatic flush bolt on the inactive leaf. No coordinator is necessary. No overlapping astragal is required. For weather protection at the lock edge, a weatherstrip may be used. Shop preparation for open back strike is required. Listed open back strikes are permitted on openings with a fire rating of up to and including 1-1/2 hour.

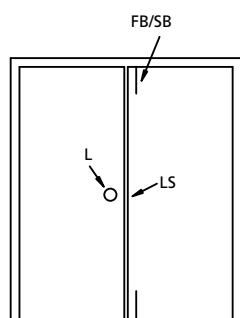
Distributor Tech Data

SIZE LIMITS - UL LABELED HONEYCOMB CORE FIRE DOOR SINGLE POINT LATCH



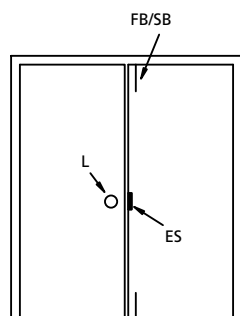
HOURLY RATING	FACE GAUGE	UL10b		UBC 7-2	
		MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT
1/3, 3/4, 1-1/2	14, 16, 18	4'-0"	9'-0"	4'-0"	9'-0"
	20	3'-4"	7'-2"	3'-4"	7'-2"
	22, 24	3'-0"	7'-0"	3'-0"	7'-0"
3	14, 16, 18	4'-0"	9'-0"	4'-0"	9'-0"

SINGLE SWING DOORS



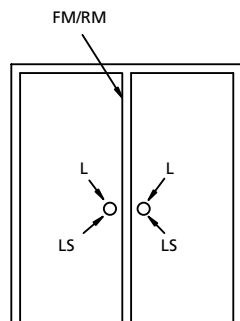
HOURLY RATING	FACE GAUGE	UL10b		UBC 7-2		ASTRAGAL INFO
		MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT	
1/3, 3/4, 1-1/2	16, 18	8'-0"	9'-0"	8'-0"	9'-0"	OPTIONAL
	20, 22 24	6'-0"	7'-0"	6'-0"	7'-0"	REQUIRED
3	16, 18	8'-0"	8'-0"	8'-0"	8'-0"	REQUIRED

PAIR OF DOORS



HOURLY RATING	FACE GAUGE	UL10b		UBC 7-2		ASTRAGAL INFO
		MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT	
1/3, 3/4, 1-1/2	16, 18	8'-0"	9'-0"	8'-0"	9'-0"	OPTIONAL
3	16, 18	6'-0"	7'-2"	6'-0"	7'-2"	REQUIRED

PAIR OF DOORS WITH ELECTRIC STRIKE



HOURLY RATING	FACE GAUGE	UL10b		UBC 7-2	
		MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT
1/3, 3/4, 1-1/2	14, 16, 18	(2) 4'-0"	9'-0"	(2) 4'-0"	9'-0"
	20	(2) 3'-4"	7'-2"	(2) 3'-4"	7'-2"
	22, 24	(2) 3'-0"	7'-0"	(2) 3'-0"	7'-0"
3	14, 16, 18	(2) 4'-0"	9'-0"	(2) 4'-0"	9'-0"

PAIR OF DOORS WITH HOLLOW METAL MULLION

LEGEND:

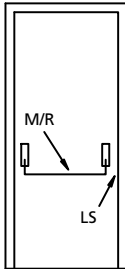
L = LATCH, SINGLE POINT
LS = LATCH STRIKE
FB/SB = FLUSH BOLT or SURFACE BOLT

ES = ELECTRIC STRIKE
FM/RM = FIXED OR REMOVABLE MULLION

CAUTION:

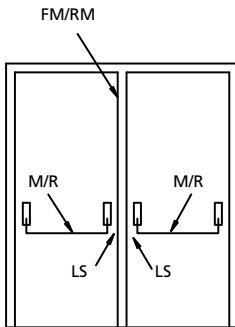
SOME LATCHING DEVICES MAY NOT BE APPROVED FOR USE ON DOORS UP TO MAXIMUM SIZES LISTED.

SIZE LIMITS - UL LABELED HONEYCOMB CORE FIRE DOOR FIRE EXIT HARDWARE



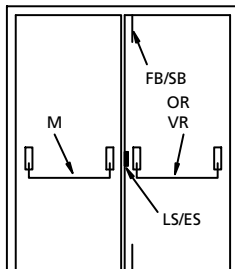
HOURLY RATING	FACE GAUGE	UL10b		UBC 7-2	
		MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT
1/3, 3/4, 1-1/2	14, 16, 18	4'-0"	9'-0"	4'-0"	9'-0"
	20	3'-4"	7'-2"	3'-4"	7'-2"
3	14, 16, 18	4'-0"	9'-0"	4'-0"	9'-0"

SINGLE SWING DOORS



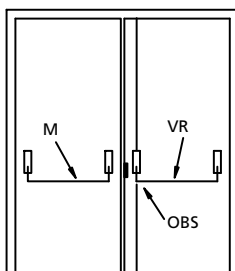
HOURLY RATING	FACE GAUGE	UL10b		UBC 7-2	
		MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT
1/3, 3/4, 1-1/2	14, 16, 18	(2) 4'-0"	9'-0"	(2) 4'-0"	9'-0"
	20	(2) 3'-4"	7'-2"	(2) 3'-4"	7'-2"
3	14, 16, 18	(2) 4'-0"	9'-0"	(2) 4'-0"	9'-0"

PAIR OF DOORS WITH HOLLOW METAL OR HARDWARE MULLION



STRIKE TYPE	HOURLY RATING	FACE GAUGE	UL10b		UBC 7-2		ASTRAGAL INFO
			MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT	
LS OR ES	1/3, 3/4, 1-1/2	16, 18	8'-0"	9'-0"	8'-0"	9'-0"	OPTIONAL
ES	3	16, 18	6'-0"	7'-2"	6'-0"	7'-2"	REQUIRED
LS	3	16, 18	8'-0"	8'-0"	8'-0"	8'-0"	REQUIRED

PAIR OF DOORS WITH 3 POINT LATCHING

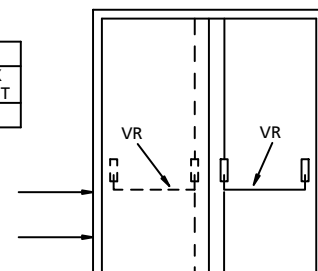


ASTRAGAL OPTIONAL

HOURLY RATING	FACE GAUGE	UL10b		UBC 7-2	
		MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT
1/3, 3/4, 1-1/2	16, 18	8'-0"	9'-0"	8'-0"	9'-0"

STD. SWING - NO ASTRAGAL PERMITTED

DBL. EGRESS - ASTRAGAL OPTIONAL



*PAIR OF DOORS WITH 3 OR 4 POINT LATCHING

LEGEND:

M = MORTISE FEH
R = RIM FEH
LS = LATCH STRIKE
FM/RM = FIXED OR REMOVABLE MULLION
* OPTIONAL TOP ROD ONLY - HDWE MUST BE APPROVED FOR THE APPLICATION

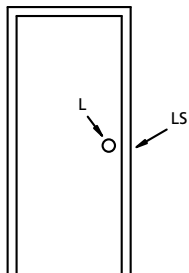
FB/SB = FLUSH OR SURFACE BOLT
VR = VERTICAL ROD FEH
ES = ELECTRIC STRIKE
OBS = OPEN BACK STRIKE

CAUTION:

SOME LATCHING DEVICES MAY NOT BE APPROVED FOR USE ON DOORS UP TO MAXIMUM SIZES LISTED.

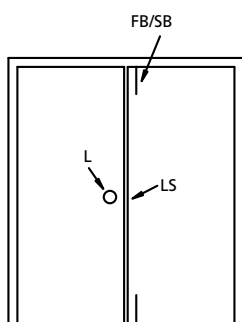
Distributor Tech Data

SIZE LIMITS - WH LABELED HONEYCOMB CORE FIRE DOOR SINGLE POINT LATCH



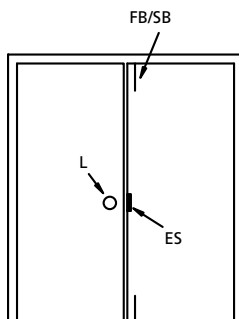
HOURLY RATING	FACE GAUGE	UL10b		UBC 7-2	
		MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT
1/3, 3/4, 1-1/2	14, 16, 18	4'-0"	9'-0"	4'-0"	9'-0"
	20	4'-0"	8'-0"	4'-0"	8'-0"
	22, 24	3'-0"	7'-0"	3'-0"	7'-0"
3	14, 16, 18	4'-0"	9'-0"	4'-0"	9'-0"
	20	4'-0"	8'-0"	4'-0"	8'-0"

SINGLE SWING DOORS



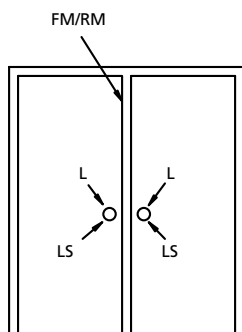
HOURLY RATING	FACE GAUGE	UL10b		UBC 7-2		ASTRAGAL INFO
		MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT	
1/3, 3/4, 1-1/2	16, 18	8'-0"	9'-0"	8'-0"	9'-0"	OPTIONAL
	20	8'-0"	8'-0"	8'-0"	8'-0"	REQUIRED
	22, 24	6'-0"	7'-0"	6'-0"	7'-0"	REQUIRED
3	16, 18, 20	8'-0"	8'-0"	8'-0"	8'-0"	REQUIRED

PAIR OF DOORS



HOURLY RATING	FACE GAUGE	UL10b		UBC 7-2		ASTRAGAL INFO
		MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT	
1/3, 3/4, 1-1/2	16, 18	8'-0"	9'-0"	8'-0"	9'-0"	OPTIONAL
	20	8'-0"	8'-0"	8'-0"	8'-0"	OPTIONAL
3	16, 18, 20	6'-0"	7'-2"	6'-0"	7'-2"	REQUIRED

PAIR OF DOORS WITH ELECTRIC STRIKE



HOURLY RATING	FACE GAUGE	UL10b		UBC 7-2	
		MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT
1/3, 3/4, 1-1/2	14, 16, 18	(2) 4'-0"	9'-0"	(2) 4'-0"	9'-0"
	20	(2) 4'-0"	8'-0"	(2) 4'-0"	8'-0"
	22, 24	(2) 3'-0"	7'-0"	(2) 3'-0"	7'-0"
3	14, 16, 18	(2) 4'-0"	9'-0"	(2) 4'-0"	9'-0"
	20	(2) 4'-0"	8'-0"	(2) 4'-0"	8'-0"

PAIR OF DOORS WITH HOLLOW METAL MULLION

LEGEND:

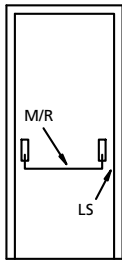
L = LATCH, SINGLE POINT
LS = LATCH STRIKE
FB/SB = FLUSH BOLT or SURFACE BOLT

ES = ELECTRIC STRIKE
FM/RM = FIXED OR REMOVABLE MULLION

CAUTION:

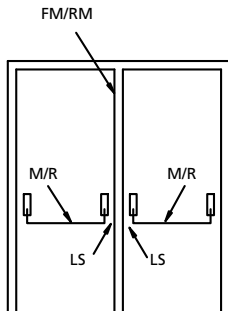
SOME LATCHING DEVICES MAY NOT BE APPROVED FOR USE ON DOORS UP TO MAXIMUM SIZES LISTED.

SIZE LIMITS - WH LABELED HONEYCOMB CORE FIRE DOOR FIRE EXIT HARDWARE



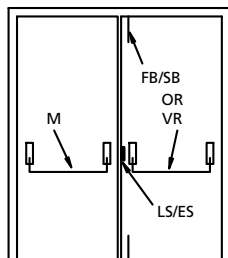
HOURLY RATING	FACE GAUGE	UL10b		UBC 7-2	
		MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT
1/3, 3/4, 1-1/2, 3	14, 16, 18	4'-0"	9'-0"	4'-0"	9'-0"
	20	4'-0"	8'-0"	4'-0"	8'-0"

SINGLE SWING DOORS



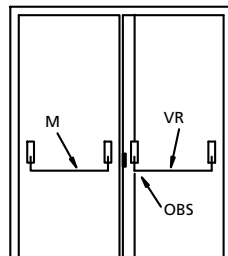
HOURLY RATING	FACE GAUGE	UL10b		UBC 7-2	
		MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT
1/3, 3/4, 1-1/2, 3	14, 16, 18	(2) 4'-0"	9'-0"	(2) 4'-0"	9'-0"
	20	(2) 4'-0"	8'-0"	(2) 4'-0"	8'-0"

PAIR OF DOORS WITH HOLLOW METAL OR HARDWARE MULLION



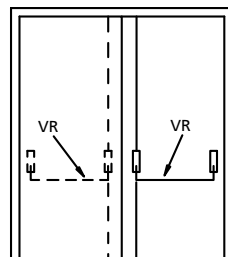
STRIKE TYPE	HOURLY RATING	FACE GAUGE	UL10b		UBC 7-2		ASTRAGAL INFO
			MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT	
LS OR ES	1/3, 3/4, 1-1/2	16, 18	8'-0"	9'-0"	8'-0"	9'-0"	OPTIONAL
LS		20	8'-0"	8'-0"	8'-0"	8'-0"	OPTIONAL
ES	3	16, 18, 20	6'-0"	7'-2"	6'-0"	7'-2"	REQUIRED
LS	3	16, 18, 20	8'-0"	8'-0"	8'-0"	8'-0"	REQUIRED

PAIR OF DOORS WITH 3 POINT LATCHING



HOURLY RATING	FACE GAUGE	UL10b		UBC 7-2		ASTRAGAL INFO
		MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT	
1/3, 3/4, 1-1/2	16, 18	8'-0"	9'-0"	8'-0"	9'-0"	OPTIONAL

PAIR OF DOORS WITH OPEN BACK STRIKE



SWING TYPE	HOURLY RATING	FACE GAUGE	UL10b		UBC 7-2		ASTRAGAL INFO
			MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT	
STANDARD	1/3, 3/4, 1-1/2	16, 18	8'-0"	9'-0"	8'-0"	9'-0"	NOT ALLOWED
DBL. EGRESS			8'-0"	9'-0"	8'-0"	9'-0"	OPTIONAL
DBL. EGRESS	3	16, 18, 20	8'-0"	7'-2"	8'-0"	7'-2"	REQUIRED
STANDARD	1/3, 3/4, 1-1/2	20	8'-0"	8'-0"	8'-0"	8'-0"	NOT ALLOWED

*PAIR OF DOORS WITH 4 POINT LATCHING

LEGEND:

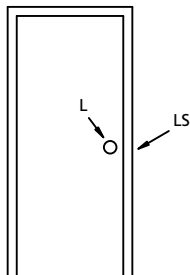
M = MORTISE FEH
R = RIM FEH
LS = LATCH STRIKE
FM/RM = FIXED OR REMOVABLE MULLION
* OPTIONAL TOP ROD ONLY - HDWE MUST
BE APPROVED FOR THE APPLICATION

FB/SB = FLUSH OR SURFACE BOLT
VR = VERTICAL ROD FEH
ES = ELECTRIC STRIKE
OBS = OPEN BACK STRIKE

CAUTION:

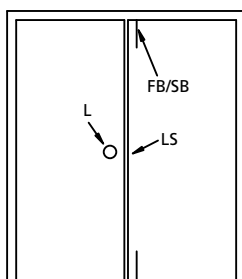
SOME LATCHING DEVICES MAY NOT
BE APPROVED FOR USE ON DOORS
UP TO MAXIMUM SIZES LISTED.

SIZE LIMITS - UL LABELED STEEL STIFFENED FIRE DOOR SINGLE POINT LATCH



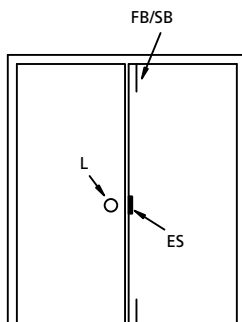
HOURLY RATING	FACE GAUGE	UL10b		UBC 7-2	
		MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT
1/3, 3/4, 1, 1-1/2	14	4'-0"	9'-0"	4'-0"	9'-0"
	16, 18	4'-0"	10'-0"	4'-0"	10'-0"
	20	4'-0"	8'-0"	4'-0"	8'-0"
3	14	4'-0"	9'-0"	4'-0"	9'-0"
	16, 18	4'-0"	10'-0"	4'-0"	10'-0"

SINGLE SWING DOORS



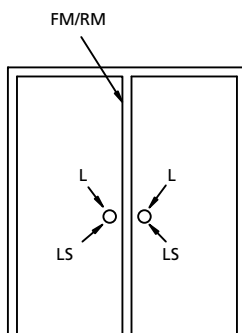
HOURLY RATING	FACE GAUGE	UL10b		UBC 7-2		ASTRAGAL INFO
		MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT	
1/3, 3/4, 1, 1-1/2	16, 18	8'-0"	9'-0"	8'-0"	9'-0"	OPTIONAL
	16, 18	8'-0"	10'-0"	8'-0"	10'-0"	REQUIRED
	14	8'-0"	9'-0"	8'-0"	9'-0"	REQUIRED
3	16, 18	8'-0"	10'-0"	8'-0"	10'-0"	REQUIRED
	14	8'-0"	9'-0"	8'-0"	9'-0"	REQUIRED

PAIR OF DOORS



HOURLY RATING	FACE GAUGE	UL10b		UBC 7-2		ASTRAGAL INFO
		MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT	
1/3, 3/4, 1, 1-1/2	16, 18	8'-0"	9'-0"	8'-0"	9'-0"	OPTIONAL
3	16, 18	6'-0"	7'-2"	6'-0"	7'-2"	REQUIRED

PAIR OF DOORS WITH ELECTRIC STRIKE



HOURLY RATING	FACE GAUGE	UL10b		UBC 7-2	
		MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT
1/3, 3/4, 1, 1-1/2	14	(2) 4'-0"	9'-0"	(2) 4'-0"	9'-0"
	16, 18	(2) 4'-0"	10'-0"	(2) 4'-0"	10'-0"
	20	(2) 4'-0"	8'-0"	(2) 4'-0"	8'-0"
3	14	(2) 4'-0"	9'-0"	(2) 4'-0"	9'-0"
	16, 18	(2) 4'-0"	10'-0"	(2) 4'-0"	10'-0"

PAIR OF DOORS WITH HOLLOW METAL MULLION

LEGEND:

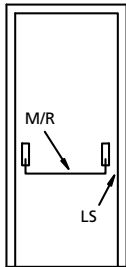
L = LATCH, SINGLE POINT
LS = LATCH STRIKE
ES = ELECTRIC STRIKE

FB/SB = FLUSH BOLT OR SURFACE BOLT
FM/RM = FIXED OR REMOVABLE MULLION

CAUTION:

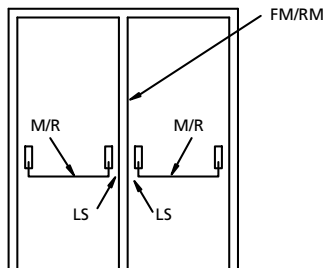
SOME LATCHING DEVICES MAY NOT BE APPROVED FOR USE ON DOORS UP TO MAXIMUM SIZES LISTED.

SIZE LIMITS - UL LABELED STEEL STIFFENED FIRE DOOR FIRE EXIT HARDWARE



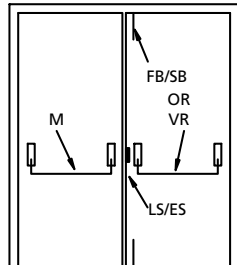
HOURLY RATING	FACE GAUGE	UL10b		UBC 7-2	
		MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT
1/3, 3/4, 1, 1-1/2	14	4'-0"	9'-0"	4'-0"	9'-0"
	16, 18	4'-0"	10'-0"	4'-0"	10'-0"
	20	4'-0"	8'-0"	4'-0"	8'-0"
3	14	4'-0"	9'-0"	4'-0"	9'-0"
	16, 18	4'-0"	10'-0"	4'-0"	10'-0"

SINGLE SWING DOORS



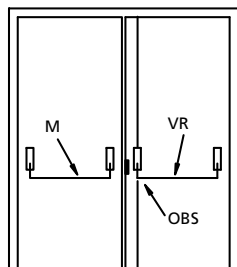
HOURLY RATING	FACE GAUGE	UL10b		UBC 7-2	
		MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT
1/3, 3/4, 1, 1-1/2	14	(2) 4'-0"	9'-0"	(2) 4'-0"	9'-0"
	16, 18	(2) 4'-0"	10'-0"	(2) 4'-0"	10'-0"
	20	(2) 4'-0"	8'-0"	(2) 4'-0"	8'-0"
3	14	(2) 4'-0"	9'-0"	(2) 4'-0"	9'-0"
	16, 18	(2) 4'-0"	10'-0"	(2) 4'-0"	10'-0"

PAIR OF DOORS WITH HOLLOW METAL OR HARDWARE MULLION



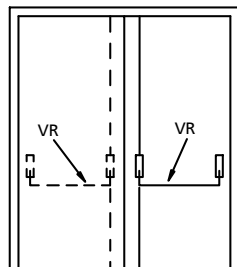
HOURLY RATING	STRIKE TYPE	FACE GAUGE	UL10b		UBC 7-2		ASTRAGAL INFO
			MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT	
1/3, 3/4, 1, 1-1/2	LS	16, 18	8'-0"	9'-0"	8'-0"	9'-0"	OPTIONAL
	LS	16, 18	8'-0"	10'-0"	8'-0"	10'-0"	REQUIRED
	LS	14	8'-0"	9'-0"	8'-0"	9'-0"	REQUIRED
	ES	16, 18	8'-0"	9'-0"	8'-0"	9'-0"	OPTIONAL
3	LS	16, 18	8'-0"	10'-0"	8'-0"	10'-0"	REQUIRED
	LS	14	8'-0"	9'-0"	8'-0"	9'-0"	REQUIRED
	ES	16, 18	6'-0"	7'-2"	6'-0"	7'-2"	REQUIRED

PAIR OF DOORS WITH 3 POINT LATCHING



HOURLY RATING	FACE GAUGE	UL10b		UBC 7-2		ASTRAGAL INFO
		MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT	
1/3, 3/4, 1, 1-1/2	16, 18	8'-0"	8'-0"	8'-0"	8'-0"	OPTIONAL
1/3, 3/4, 1, 1-1/2	14	8'-0"	8'-0"	8'-0"	8'-0"	REQUIRED

PAIR OF DOORS WITH OPEN BACK STRIKE



SWING TYPE	HOURLY RATING	FACE GAUGE	UL10b		UBC 7-2		ASTRAGAL INFO
			MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT	
STANDARD	1/3, 3/4, 1, 1-1/2	16, 18	8'-0"	9'-0"	8'-0"	9'-0"	NOT ALLOWED
DBL. EGRESS			8'-0"	9'-0"	8'-0"	9'-0"	OPTIONAL
DBL. EGRESS			8'-0"	10'-0"	8'-0"	10'-0"	REQUIRED
DBL. EGRESS	3		8'-0"	10'-0"	8'-0"	10'-0"	REQUIRED

* PAIR OF DOORS WITH 4 POINT LATCHING

LEGEND:

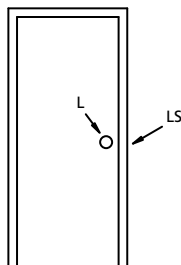
M = MORTISE FEH
R = RIM FEH
LS = LATCH STRIKE
FM/RM = FIXED OR REMOVABLE MULLION
* OPTIONAL TOP ROD ONLY - HDWE MUST BE APPROVED FOR THE APPLICATION

FB/SB = FLUSH OR SURFACE BOLT
VR = VERTICAL ROD FEH
OBS = OPEN BACK STRIKE
ES = ELECTRIC STRIKE

CAUTION:

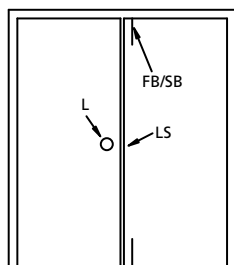
SOME LATCHING DEVICES MAY NOT BE APPROVED FOR USE ON DOORS UP TO MAXIMUM SIZES LISTED.

SIZE LIMITS - WH LABELED STEEL STIFFENED FIRE DOOR SINGLE POINT LATCH



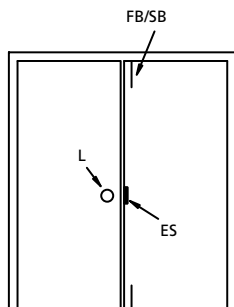
HOURLY RATING	FACE GAUGE	UL10b		UBC 7-2	
		MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT
1/3, 3/4, 1, 1-1/2	14	4'-0"	9'-0"	4'-0"	9'-0"
	16, 18	4'-0"	10'-0"	4'-0"	10'-0"
	20	4'-0"	8'-0"	4'-0"	8'-0"
3	14	4'-0"	9'-0"	4'-0"	9'-0"
	16, 18	4'-0"	10'-0"	4'-0"	10'-0"

SINGLE SWING DOORS



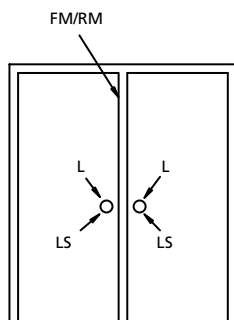
HOURLY RATING	FACE GAUGE	UL10b		UBC 7-2		ASTRAGAL INFO
		MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT	
1/3, 3/4, 1, 1-1/2	16, 18	8'-0"	9'-0"	8'-0"	9'-0"	OPTIONAL
	16, 18	8'-0"	10'-0"	8'-0"	10'-0"	REQUIRED
	14	8'-0"	9'-0"	8'-0"	9'-0"	REQUIRED
3	16, 18	8'-0"	9'-0"	8'-0"	9'-0"	OPTIONAL*
	16, 18	8'-0"	10'-0"	8'-0"	10'-0"	REQUIRED
	14	8'-0"	9'-0"	8'-0"	9'-0"	REQUIRED

PAIR OF DOORS



HOURLY RATING	FACE GAUGE	UL10b		UBC 7-2		ASTRAGAL INFO
		MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT	
1/3, 3/4, 1, 1-1/2	16, 18	8'-0"	9'-0"	8'-0"	9'-0"	OPTIONAL
3	16, 18	6'-0"	7'-2"	6'-0"	7'-2"	OPTIONAL*

PAIR OF DOORS WITH ELECTRIC STRIKE



HOURLY RATING	FACE GAUGE	UL10b		UBC 7-2	
		MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT
1/3, 3/4, 1, 1-1/2	14	(2) 4'-0"	9'-0"	(2) 4'-0"	9'-0"
	16, 18	(2) 4'-0"	10'-0"	(2) 4'-0"	10'-0"
	20	(2) 4'-0"	8'-0"	(2) 4'-0"	8'-0"
3	14	(2) 4'-0"	9'-0"	(2) 4'-0"	9'-0"
	16, 18	(2) 4'-0"	10'-0"	(2) 4'-0"	10'-0"

PAIR OF DOORS WITH HOLLOW METAL MULLION

*NFPA-80 AND MANY BUILDING CODES REQUIRE THE USE OF AN OVERLAPPING ASTRAGAL ON 3 HOUR RATED PAIRS. CHECK WITH AUTHORITY HAVING JURISDICTION PRIOR TO INSTALLATION OF A 3 HOUR PAIR W/O AN ASTRAGAL.

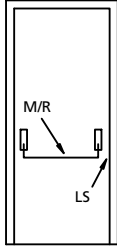
LEGEND:

L = LATCH, SINGLE POINT
LS = LATCH STRIKE
ES = ELECTRIC STRIKE

FB/SB = FLUSH BOLT OR SURFACE BOLT
FM/RM = FIXED OR REMOVABLE MULLION

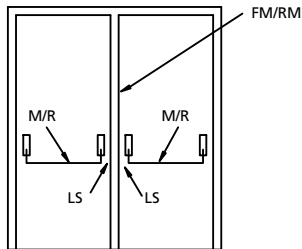
CAUTION:
SOME LATCHING DEVICES MAY NOT BE APPROVED FOR USE ON DOORS UP TO MAXIMUM SIZES LISTED.

SIZE LIMITS - WH LABELED STEEL STIFFENED FIRE DOOR FIRE EXIT HARDWARE



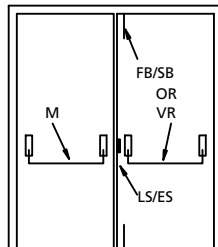
HOURLY RATING	FACE GAUGE	UL10b		UBC 7-2	
		MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT
1/3, 3/4, 1, 1-1/2	14	4'-0"	9'-0"	4'-0"	9'-0"
	16, 18	4'-0"	10'-0"	4'-0"	10'-0"
	20	4'-0"	8'-0"	4'-0"	8'-0"
3	14	4'-0"	9'-0"	4'-0"	9'-0"
	16, 18	4'-0"	10'-0"	4'-0"	10'-0"

SINGLE SWING DOORS



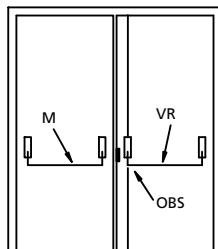
HOURLY RATING	FACE GAUGE	UL10b		UBC 7-2	
		MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT
1/3, 3/4, 1, 1-1/2	14	(2) 4'-0"	9'-0"	(2) 4'-0"	9'-0"
	16, 18	(2) 4'-0"	10'-0"	(2) 4'-0"	10'-0"
	20	(2) 4'-0"	8'-0"	(2) 4'-0"	8'-0"
3	14	(2) 4'-0"	9'-0"	(2) 4'-0"	9'-0"
	16, 18	(2) 4'-0"	10'-0"	(2) 4'-0"	10'-0"

PAIR OF DOORS WITH HOLLOW METAL OR HARDWARE MULLION



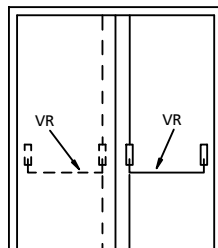
HOURLY RATING	STRIKE TYPE	FACE GAUGE	UL10b		UBC 7-2		ASTRAGAL INFO
			MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT	
1/3, 3/4, 1, 1-1/2	LS	14	8'-0"	9'-0"	8'-0"	9'-0"	REQUIRED
	LS	16, 18	8'-0"	10'-0"	8'-0"	10'-0"	REQUIRED
	LS OR ES	16, 18	8'-0"	9'-0"	8'-0"	9'-0"	OPTIONAL
3	LS	14	8'-0"	9'-0"	8'-0"	9'-0"	REQUIRED
	LS	16, 18	8'-0"	9'-0"	8'-0"	9'-0"	OPTIONAL*
	LS	16, 18	8'-0"	10'-0"	8'-0"	10'-0"	REQUIRED
	ES	16, 18	6'-0"	7'-2"	6'-0"	7'-2"	OPTIONAL*

PAIR OF DOORS WITH 3 POINT LATCHING



HOURLY RATING	FACE GAUGE	UL10b		UBC 7-2		ASTRAGAL INFO
		MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT	
1/3, 3/4, 1, 1-1/2	16, 18	8'-0"	8'-0"	8'-0"	8'-0"	OPTIONAL
1/3, 3/4, 1, 1-1/2	14	8'-0"	8'-0"	8'-0"	8'-0"	REQUIRED

PAIR OF DOORS WITH OPEN BACK STRIKE



SWING TYPE	HOURLY RATING	FACE GAUGE	UL10b		UBC 7-2		ASTRAGAL INFO
			MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT	
STANDARD	1/3, 3/4, 1, 1-1/2	16, 18	8'-0"	9'-0"	8'-0"	9'-0"	NOT ALLOWED
DBL. EGRESS			8'-0"	9'-0"	8'-0"	9'-0"	OPTIONAL
DBL. EGRESS			8'-0"	10'-0"	8'-0"	10'-0"	REQUIRED
STANDARD	3	16, 18	8'-0"	9'-0"	8'-0"	9'-0"	NOT ALLOWED*
DBL. EGRESS			8'-0"	9'-0"	8'-0"	9'-0"	OPTIONAL*
DBL. EGRESS			8'-0"	10'-0"	8'-0"	10'-0"	REQUIRED

****PAIR OF DOORS WITH 4 POINT LATCHING**

LEGEND:

M = MORTISE FEH
R = RIM FEH
LS = LATCH STRIKE
FM/RM = FIXED OR REMOVABLE MULLION
** OPTIONAL TOP ROD ONLY - HDWE MUST BE APPROVED FOR THE APPLICATION

FB/SB = FLUSH OR SURFACE BOLT
VR = VERTICAL ROD FEH
OBS = OPEN BACK STRIKE
ES = ELECTRIC STRIKE

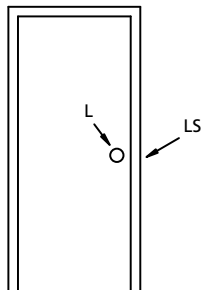
CAUTION:

SOME LATCHING DEVICES MAY NOT BE APPROVED FOR USE ON DOORS UP TO MAXIMUM SIZES LISTED.

*NFPA-80 AND MANY BUILDING CODES REQUIRE THE USE OF AN OVERLAPPING ASTRAGAL ON 3 HOUR RATED PAIRS. CHECK WITH AUTHORITY HAVING JURISDICTION PRIOR TO INSTALLATION OF A 3 HOUR PAIR W/O AN ASTRAGAL.

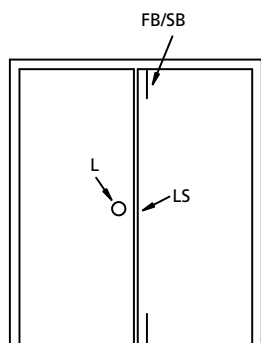
Distributor Tech Data

SIZE LIMITS - UL LABELED SOLID CORE FIRE DOOR SINGLE POINT LATCH



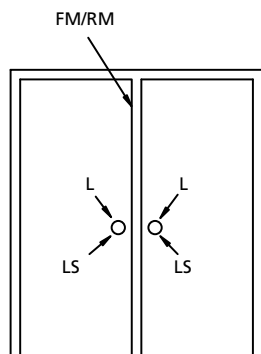
HOURLY RATING	FACE GAUGE	UL10b		UBC 7-2	
		MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT
1/3, 3/4, 1-1/2, 3	14, 20	4'-0"	8'-0"	4'-0"	8'-0"
	16, 18	4'-0"	9'-0"	4'-0"	9'-0"

SINGLE SWING DOORS



HOURLY RATING	FACE GAUGE	UL10b		UBC 7-2		ASTRAGAL INFO
		MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT	
1/3, 3/4	14	8'-0"	8'-0"	8'-0"	8'-0"	REQUIRED
	16, 18	8'-0"	9'-0"	8'-0"	9'-0"	REQUIRED
	20	8'-0"	8'-0"	8'-0"	8'-0"	REQUIRED
1-1/2	14	8'-0"	8'-0"	8'-0"	8'-0"	REQUIRED
	16, 18	8'-0"	9'-0"	8'-0"	9'-0"	REQUIRED
	20	7'-4"	7'-2"	7'-4"	7'-2"	REQUIRED
3	14, 20	7'-4"	7'-2"	7'-4"	7'-2"	REQUIRED
	16, 18	7'-4"	9'-0"	7'-4"	9'-0"	REQUIRED

PAIR OF DOORS



HOURLY RATING	FACE GAUGE	UL10b		UBC 7-2	
		MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT
1/3, 3/4, 1-1/2, 3	14, 20	(2) 4'-0"	8'-0"	(2) 4'-0"	8'-0"
	16, 18	(2) 4'-0"	9'-0"	(2) 4'-0"	9'-0"

PAIR OF DOORS WITH HOLLOW METAL MULLION

LEGEND:

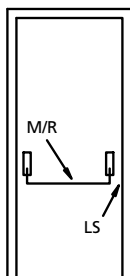
L = LATCH, SINGLE POINT
LS = LATCH STRIKE

FB/SB = FLUSH BOLT or SURFACE BOLT

FM/RM = FIXED OR REMOVABLE MULLION

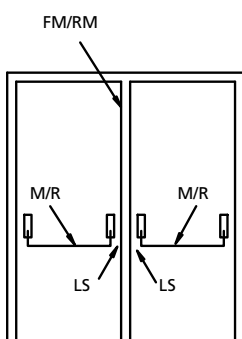
1/3 HOUR INCLUDES BOTH WITH & WITHOUT HOSESTREAM

SIZE LIMITS - UL LABELED SOLID CORE FIRE DOOR FIRE EXIT HARDWARE



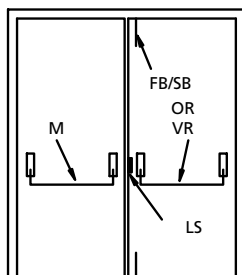
HOURLY RATING	FACE GAUGE	UL10b		UBC 7-2	
		MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT
1/3, 3/4, 1-1/2, 3	14, 20	4'-0"	8'-0"	4'-0"	8'-0"
	16, 18	4'-0"	9'-0"	4'-0"	9'-0"

SINGLE SWING DOORS



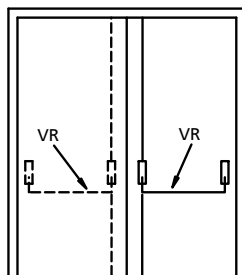
HOURLY RATING	FACE GAUGE	UL10b		UBC 7-2	
		MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT
1/3, 3/4, 1-1/2, 3	14, 20	(2) 4'-0"	8'-0"	(2) 4'-0"	8'-0"
	16, 18	(2) 4'-0"	9'-0"	(2) 4'-0"	9'-0"

PAIR OF DOORS WITH HOLLOW METAL OR HARDWARE MULLION



HOURLY RATING	FACE GAUGE	UL10b		UBC 7-2		ASTRAGAL INFO
		MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT	
1/3, 3/4, 1-1/2	14, 20	8'-0"	8'-0"	8'-0"	8'-0"	REQUIRED
	16, 18	8'-0"	9'-0"	8'-0"	9'-0"	REQUIRED
3	14, 20	7'-4"	7'-2"	7'-4"	7'-2"	REQUIRED
	16, 18	7'-4"	9'-0"	7'-4"	9'-0"	REQUIRED

PAIR OF DOORS WITH 3 POINT LATCHING



SWING TYPE	HOURLY RATING	FACE GAUGE	UL10b		UBC 7-2		ASTRAGAL INFO
			MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT	
STANDARD	1/3, 3/4, 1-1/2	16, 18	8'-0"	9'-0"	8'-0"	9'-0"	NOT ALLOWED
		14, 20	8'-0"	8'-0"	8'-0"	8'-0"	NOT ALLOWED
DBL. EGRESS	3	14, 16, 18	8'-0"	8'-0"	8'-0"	8'-0"	OPTIONAL
DBL. EGRESS		14, 16, 18	8'-0"	8'-0"	8'-0"	8'-0"	REQUIRED

*PAIR OF DOORS WITH 4 POINT LATCHING

LEGEND:

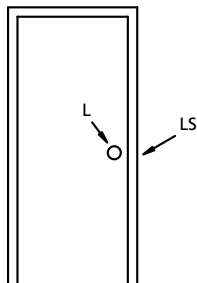
M = MORTISE FEH
R = RIM FEH
LS = LATCH STRIKE
FM/RM = FIXED OR REMOVABLE MULLION
* OPTIONAL TOP ROD ONLY - HDWE MUST BE APPROVED FOR THE APPLICATION

FB/SB = FLUSH OR SURFACE BOLT
VR = VERTICAL ROD FEH

1/3 HOUR INCLUDES BOTH WITH & WITHOUT HOSESTREAM

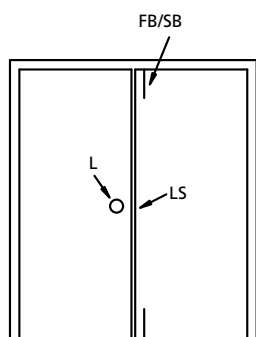
Distributor Tech Data

SIZE LIMITS - WH LABELED SOLID CORE FIRE DOOR SINGLE POINT LATCH



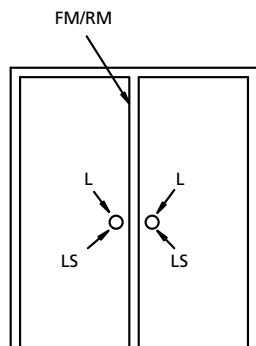
HOURLY RATING	FACE GAUGE	UL10b		UBC 7-2	
		MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT
1/3, 3/4, 1-1/2, 3	20	4'-0"	8'-0"	4'-0"	8'-0"
	16, 18	4'-0"	9'-0"	4'-0"	8'-0"

SINGLE SWING DOORS



HOURLY RATING	FACE GAUGE	UL10b		UBC 7-2		ASTRAGAL INFO
		MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT	
1/3, 3/4	20	8'-0"	8'-0"	8'-0"	8'-0"	REQUIRED
	16, 18	8'-0"	9'-0"	8'-0"	8'-0"	REQUIRED
1-1/2	20	8'-0"	8'-0"	8'-0"	8'-0"	REQUIRED
	16, 18	8'-0"	9'-0"	8'-0"	8'-0"	REQUIRED
3	20	7'-4"	7'-2"	7'-4"	7'-2"	REQUIRED
	16, 18	7'-4"	9'-0"	7'-4"	8'-0"	REQUIRED

PAIR OF DOORS



HOURLY RATING	FACE GAUGE	UL10b		UBC 7-2	
		MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT
1/3, 3/4, 1-1/2, 3	20	(2) 4'-0"	8'-0"	(2) 4'-0"	8'-0"
	16, 18	(2) 4'-0"	9'-0"	(2) 4'-0"	8'-0"

PAIR OF DOORS WITH HOLLOW METAL MULLION

LEGEND:

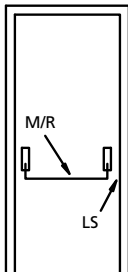
L = LATCH, SINGLE POINT
LS = LATCH STRIKE

FB/SB = FLUSH BOLT or SURFACE BOLT

FM/RM = FIXED OR REMOVABLE MULLION

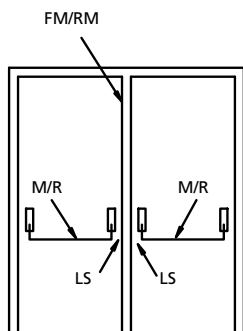
1/3 HOUR INCLUDES BOTH WITH & WITHOUT HOSESTREAM

SIZE LIMITS - WH LABELED SOLID CORE FIRE DOOR FIRE EXIT HARDWARE



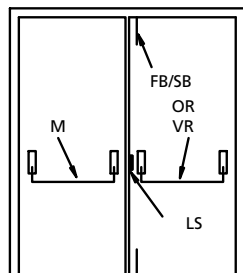
HOURLY RATING	FACE GAUGE	UL10b		UBC 7-2	
		MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT
1/3, 3/4, 1-1/2, 3	20	4'-0"	8'-0"	4'-0"	8'-0"
	16, 18	4'-0"	9'-0"	4'-0"	8'-0"

SINGLE SWING DOORS



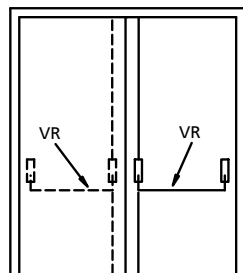
HOURLY RATING	FACE GAUGE	UL10b		UBC 7-2	
		MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT
1/3, 3/4, 1-1/2, 3	20	(2) 4'-0"	8'-0"	(2) 4'-0"	8'-0"
	16, 18	(2) 4'-0"	9'-0"	(2) 4'-0"	8'-0"

PAIR OF DOORS WITH HOLLOW METAL OR HARDWARE MULLION



HOURLY RATING	FACE GAUGE	UL10b		UBC 7-2		ASTRAGAL INFO
		MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT	
1/3, 3/4, 1-1/2	20	8'-0"	8'-0"	8'-0"	8'-0"	REQUIRED
	16, 18	8'-0"	9'-0"	8'-0"	8'-0"	REQUIRED
3	20	7'-4"	7'-2"	7'-4"	7'-2"	REQUIRED
	16, 18	7'-4"	9'-0"	7'-4"	8'-0"	REQUIRED

PAIR OF DOORS WITH 3 POINT LATCHING



SWING TYPE	HOURLY RATING	FACE GAUGE	UL10b		UBC 7-2		ASTRAGAL INFO
			MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT	
STANDARD	1/3, 3/4, 1-1/2	16, 18	8'-0"	9'-0"	8'-0"	8'-0"	NOT ALLOWED
		20	8'-0"	8'-0"	8'-0"	8'-0"	NOT ALLOWED
DBL. EGRESS	3	16, 18	8'-0"	8'-0"	8'-0"	8'-0"	REQUIRED
DBL. EGRESS		16, 18	8'-0"	8'-0"	8'-0"	8'-0"	REQUIRED

*PAIR OF DOORS WITH 4 POINT LATCHING

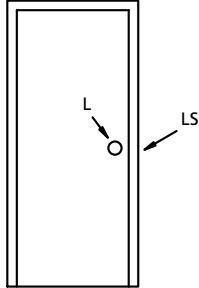
LEGEND:

M = MORTISE FEH
R = RIM FEH
LS = LATCH STRIKE
FM/RM = FIXED OR REMOVABLE MULLION
* OPTIONAL TOP ROD ONLY - HDWE MUST BE APPROVED FOR THE APPLICATION

FB/SB = FLUSH OR SURFACE BOLT
VR = VERTICAL ROD FEH

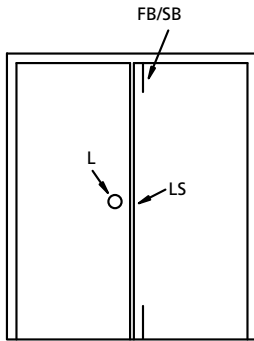
1/3 HOUR INCLUDES BOTH WITH & WITHOUT HOSESTREAM

SIZE LIMITS - UL LABELED POLYURETHANE CORE FIRE DOOR SINGLE POINT LATCH



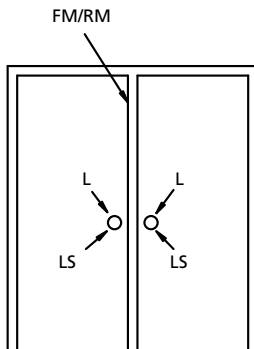
HOURLY RATING	FACE GAUGE	POLYSTYRENE UL10C/UL10B & POLYURETHANE UL10B		POLYURETHANE UL10C	
		MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT
1/3, 3/4, 1-1/2	14, 16, 18, 20	4'-0"	8'-0"	4'-0"	7'-0"
	22, 24	3'-6"	7'-0"	3'-6"	7'-0"
3	14, 16, 18	4'-0"	8'-0"	4'-0"	7'-0"

SINGLE SWING DOORS



HOURLY RATING	FACE GAUGE	POLYSTYRENE UL10C/UL10B & POLYURETHANE UL10B		POLYURETHANE UL10C		ASTRAGAL INFO
		MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT	
1/3, 3/4, 1-1/2	16, 18, 20	8'-0"	8'-0"	6'-0"	7'-0"	OPTIONAL
	22, 24	6'-0"	7'-0"	6'-0"	7'-0"	OPTIONAL
3	16, 18	8'-0"	8'-0"	6'-0"	7'-0"	REQUIRED

PAIR OF DOORS



HOURLY RATING	FACE GAUGE	POLYSTYRENE UL10C/UL10B & POLYURETHANE UL10B		POLYURETHANE UL10C	
		MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT
1/3, 3/4, 1-1/2	14, 16, 18, 20	(2) 4'-0"	8'-0"	(2) 4'-0"	7'-0"
	22, 24	(2) 3'-6"	7'-0"	(2) 3'-6"	7'-0"
3	14, 16, 18	(2) 4'-0"	8'-0"	(2) 4'-0"	7'-0"

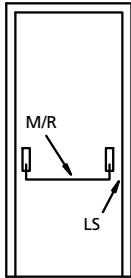
PAIR OF DOORS WITH HOLLOW METAL MULLION

LEGEND:

L = LATCH, SINGLE POINT
LS = LATCH STRIKE

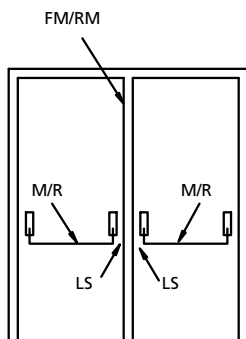
FB/SB = FLUSH BOLT or SURFACE BOLT
FM/RM = FIXED OR REMOVABLE MULLION

SIZE LIMITS - UL LABELED POLYURETHANE CORE FIRE DOOR FIRE EXIT HARDWARE



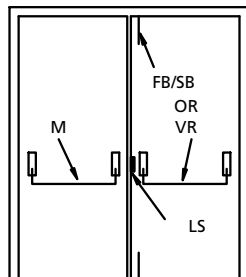
HOURLY RATING	FACE GAUGE	POLYSTYRENE UL10C/UL10B & POLYURETHANE UL10B		POLYURETHANE UL10C	
		MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT
1/3, 3/4, 1-1/2	14, 16, 18, 20	4'-0"	8'-0"	4'-0"	7'-0"
	22, 24	3'-6"	7'-0"	3'-6"	7'-0"
3	14, 16, 18	4'-0"	8'-0"	4'-0"	7'-0"

SINGLE SWING DOORS



HOURLY RATING	FACE GAUGE	POLYSTYRENE UL10C/UL10B & POLYURETHANE UL10B		POLYURETHANE UL10C	
		MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT
1/3, 3/4, 1-1/2	14, 16, 18, 20	(2) 4'-0"	8'-0"	(2) 4'-0"	7'-0"
	22, 24	(2) 3'-6"	7'-0"	(2) 3'-6"	7'-0"
3	14, 16, 18	(2) 4'-0"	8'-0"	(2) 4'-0"	7'-0"

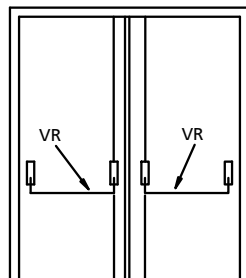
PAIR OF DOORS WITH HOLLOW METAL OR HARDWARE MULLION



HOURLY RATING	FACE GAUGE	POLYSTYRENE UL10C/UL10B & POLYURETHANE UL10B		POLYURETHANE UL10C		ASTRAGAL INFO
		MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT	
1/3, 3/4, 1-1/2	16, 18	8'-0"	*9'-0"	6'-0"	7'-0"	OPTIONAL
	20	8'-0"	8'-0"	6'-0"	7'-0"	OPTIONAL
	22, 24	6'-0"	7'-0"	6'-0"	7'-0"	OPTIONAL
3	16, 18	8'-0"	8'-0"	6'-0"	7'-0"	REQUIRED

PAIR OF DOORS WITH 3 POINT LATCHING

*9'-0" W/VERTICAL RODS
8'-0" OTHERWISE



SWING TYPE	HOURLY RATING	FACE GAUGE	POLYSTYRENE UL10C/UL10B & POLYURETHANE UL10B		POLYURETHANE UL10C		ASTRAGAL INFO
			MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT	
DBL. EGRESS	1/3, 3/4, 1-1/2	16, 18	8'-0"	9'-0"	6'-0"	7'-0"	OPTIONAL
DBL. EGRESS	3	16, 18	8'-0"	7'-2"	6'-0"	7'-0"	REQUIRED
STANDARD	1/3, 3/4, 1-1/2	16, 18	8'-0"	9'-0"	6'-0"	7'-0"	NOT ALLOWED

** PAIR OF DOORS WITH 4 POINT LATCHING

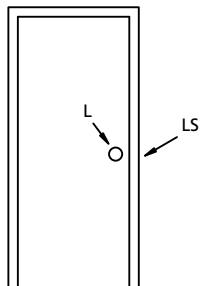
LEGEND:

M = MORTISE FEH
R = RIM FEH
LS = LATCH STRIKE
FM/RM = FIXED OR REMOVABLE MULLION

FB/SB = FLUSH OR SURFACE BOLT
VR = VERTICAL ROD FEH
** OPTIONAL TOP ROD ONLY - HDWE MUST BE APPROVED FOR THE APPLICATION

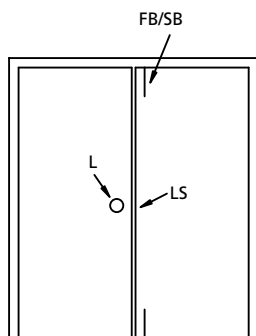
Distributor Tech Data

SIZE LIMITS - WH LABELED POLYURETHANE CORE FIRE DOOR SINGLE POINT LATCH



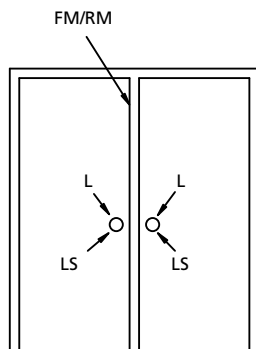
HOURLY RATING	FACE GAUGE	POLYSTYRENE UL10C/UL10B & POLYURETHANE UL10B		POLYURETHANE UL10C	
		MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT
1/3, 3/4, 1-1/2	14, 16, 18, 20	4'-0"	8'-0"	4'-0"	7'-0"
	22, 24	3'-6"	7'-0"	3'-6"	7'-0"
3	14, 16, 18, 20	4'-0"	8'-0"	4'-0"	7'-0"

SINGLE SWING DOORS



HOURLY RATING	FACE GAUGE	POLYSTYRENE UL10C/UL10B & POLYURETHANE UL10B		POLYURETHANE UL10C		ASTRAGAL INFO
		MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT	
1/3, 3/4, 1-1/2	16, 18, 20	8'-0"	8'-0"	6'-0"	7'-0"	OPTIONAL
	22, 24	6'-0"	7'-0"	6'-0"	7'-0"	OPTIONAL
3	16, 18, 20	8'-0"	8'-0"	6'-0"	7'-0"	REQUIRED

PAIR OF DOORS



HOURLY RATING	FACE GAUGE	POLYSTYRENE UL10C/UL10B & POLYURETHANE UL10B		POLYURETHANE UL10C	
		MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT
1/3, 3/4, 1-1/2	14, 16, 18, 20	(2) 4'-0"	8'-0"	(2) 4'-0"	7'-0"
	22, 24	(2) 3'-6"	7'-0"	(2) 3'-6"	7'-0"
3	14, 16, 18, 20	(2) 4'-0"	8'-0"	(2) 4'-0"	7'-0"

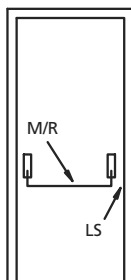
PAIR OF DOORS WITH HOLLOW METAL MULLION

LEGEND:

L = LATCH, SINGLE POINT
LS = LATCH STRIKE

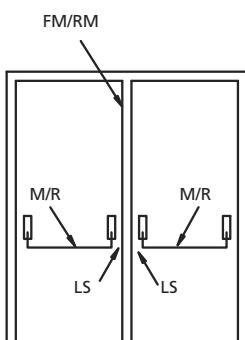
FB/SB = FLUSH BOLT or SURFACE BOLT
FM/RM = FIXED OR REMOVABLE MULLION

SIZE LIMITS - WH LABELED POLYURETHANE CORE FIRE DOOR FIRE EXIT HARDWARE



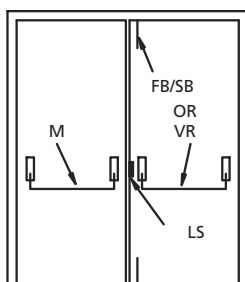
HOURLY RATING	FACE GAUGE	POLYSTYRENE UL10C/UL10B & POLYURETHANE UL10B		POLYURETHANE UL10C	
		MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT
1/3, 3/4, 1-1/2	14, 16, 18, 20	4'-0"	8'-0"	4'-0"	7'-0"
	22, 24	3'-6"	7'-0"	3'-6"	7'-0"
3	14, 16, 18, 20	4'-0"	8'-0"	4'-0"	7'-0"

SINGLE SWING DOORS



HOURLY RATING	FACE GAUGE	POLYSTYRENE UL10C/UL10B & POLYURETHANE UL10B		POLYURETHANE UL10C	
		MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT
1/3, 3/4, 1-1/2	14, 16, 18, 20	(2) 4'-0"	8'-0"	(2) 4'-0"	7'-0"
	22, 24	(2) 3'-6"	7'-0"	(2) 3'-6"	7'-0"
3	14, 16, 18, 20	(2) 4'-0"	8'-0"	(2) 4'-0"	7'-0"

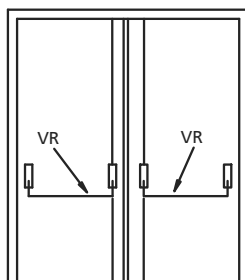
PAIR OF DOORS WITH HOLLOW METAL OR HARDWARE MULLION



HOURLY RATING	FACE GAUGE	POLYSTYRENE UL10C/UL10B & POLYURETHANE UL10B		POLYURETHANE UL10C		ASTRAGAL INFO
		MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT	
1/3, 3/4, 1-1/2	16, 18	8'-0"	*9'-0"	6'-0"	7'-0"	OPTIONAL
	20	8'-0"	8'-0"	6'-0"	7'-0"	OPTIONAL
	22, 24	6'-0"	7'-0"	6'-0"	7'-0"	OPTIONAL
3	16, 18, 20	8'-0"	8'-0"	6'-0"	7'-0"	REQUIRED

PAIR OF DOORS WITH 3 POINT LATCHING

*9'-0" W/VERTICAL RODS
8'-0" OTHERWISE



SWING TYPE	HOURLY RATING	FACE GAUGE	POLYSTYRENE UL10C/UL10B & POLYURETHANE UL10B		POLYURETHANE UL10C		ASTRAGAL INFO
			MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT	
DBL. EGRESS	1/3, 3/4, 1-1/2	16, 18	8'-0"	9'-0"	6'-0"	7'-0"	OPTIONAL
DBL. EGRESS	3	16, 18, 20	8'-0"	7'-2"	6'-0"	7'-0"	REQUIRED
STANDARD	1/3, 3/4, 1-1/2	16, 18	8'-0"	9'-0"	6'-0"	7'-0"	NOT ALLOWED
STANDARD	1/3, 3/4, 1-1/2	20	8'-0"	8'-0"	6'-0"	7'-0"	NOT ALLOWED

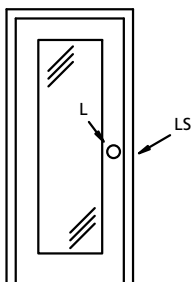
** PAIR OF DOORS WITH 4 POINT LATCHING

LEGEND:

M = MORTISE FEH
R = RIM FEH
LS = LATCH STRIKE
FM/RM = FIXED OR REMOVABLE MULLION

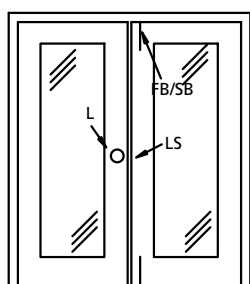
FB/SB = FLUSH OR SURFACE BOLT
VR = VERTICAL ROD FEH
** OPTIONAL TOP ROD ONLY - HDWE MUST BE APPROVED FOR THE APPLICATION

SIZE LIMITS - UL LABELED STILE AND RAIL FIRE DOOR SINGLE POINT LATCH



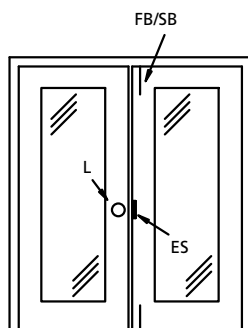
HOURLY RATING	FACE GAUGE	UL10b		UL10c & UBC 7-2	
		MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT
1/3, 3/4	16	4'-0"	8'-0"	4'-0"	8'-0"

SINGLE SWING DOORS



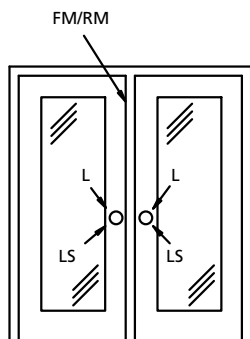
HOURLY RATING	FACE GAUGE	UL10b		UL10c & UBC 7-2		ASTRAGAL INFO
		MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT	
1/3, 3/4	16	8'-0"	8'-0"	8'-0"	8'-0"	OPTIONAL

PAIR OF DOORS



HOURLY RATING	FACE GAUGE	UL10b		UL10c & UBC 7-2		ASTRAGAL INFO
		MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT	
1/3, 3/4	16	8'-0"	8'-0"	8'-0"	8'-0"	OPTIONAL

PAIR OF DOORS WITH ELECTRIC STRIKE



HOURLY RATING	FACE GAUGE	UL10b		UL10c & UBC 7-2	
		MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT
1/3, 3/4	16	(2) 4'-0"	8'-0"	(2) 4'-0"	8'-0"

PAIR OF DOORS WITH HOLLOW METAL MULLION

LEGEND:

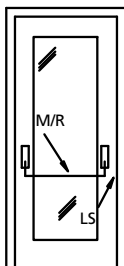
L = LATCH, SINGLE POINT
LS = LATCH STRIKE
ES = ELECTRIC STRIKE

FB/SB = FLUSH BOLT OR SURFACE BOLT
FM/RM = FIXED OR REMOVABLE MULLION

CAUTION:
SOME LATCHING DEVICES MAY NOT BE
APPROVED FOR USE ON DOORS UP TO
MAXIMUM SIZES LISTED.

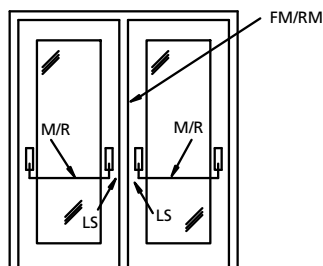
Distributor Tech Data

SIZE LIMITS - UL LABELED STILE AND RAIL FIRE DOOR FIRE EXIT HARDWARE



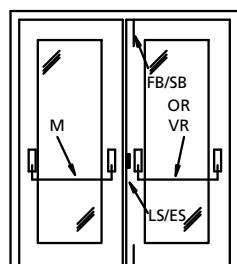
HOURLY RATING	FACE GAUGE	UL10b		UL10c & UBC 7-2	
		MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT
1/3, 3/4	16	4'-0"	8'-0"	4'-0"	8'-0"

SINGLE SWING DOORS



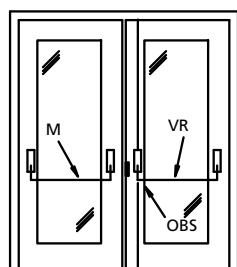
HOURLY RATING	FACE GAUGE	UL10b		UL10c & UBC 7-2	
		MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT
1/3, 3/4	16	(2) 4'-0"	8'-0"	(2) 4'-0"	8'-0"

PAIR OF DOORS WITH HOLLOW METAL OR HARDWARE MULLION



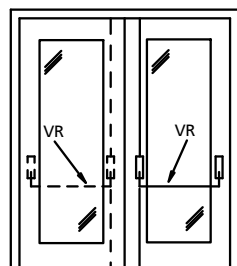
HOURLY RATING	STRIKE TYPE	FACE GAUGE	UL10b		UL10c & UBC 7-2		ASTRAGAL INFO
			MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT	
1/3, 3/4	LS, ES	16	8'-0"	8'-0"	8'-0"	8'-0"	OPTIONAL

PAIR OF DOORS WITH 3 POINT LATCHING



HOURLY RATING	FACE GAUGE	UL10b		UL10c & UBC 7-2		ASTRAGAL INFO
		MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT	
1/3, 3/4	16	8'-0"	8'-0"	8'-0"	8'-0"	OPTIONAL

PAIR OF DOORS WITH OPEN BACK STRIKE



SWING TYPE	HOURLY RATING	FACE GAUGE	UL10b		UL10c & UBC 7-2		ASTRAGAL INFO
			MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT	
STANDARD	1/3, 3/4	16	8'-0"	8'-0"	8'-0"	8'-0"	NOT ALLOWED
DBL. EGRESS			8'-0"	8'-0"	8'-0"	8'-0"	OPTIONAL

*PAIR OF DOORS WITH 4 POINT LATCHING

LEGEND:

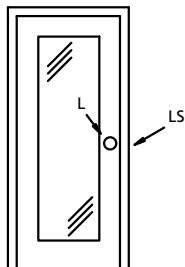
M = MORTISE FEH
R = RIM FEH
LS = LATCH STRIKE
FM/RM = FIXED OR REMOVABLE MULLION
*OPTIONAL TOP ROD ONLY

FB/SB = FLUSH OR SURFACE BOLT
VR = VERTICAL ROD FEH
OBS = OPEN BACK STRIKE
ES = ELECTRIC STRIKE

CAUTION:

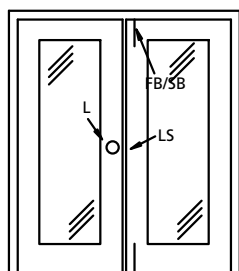
SOME LATCHING DEVICES MAY NOT
BE APPROVED FOR USE ON DOORS
UP TO MAXIMUM SIZES LISTED.

SIZE LIMITS - WH LABELED STILE AND RAIL FIRE DOOR SINGLE POINT LATCH



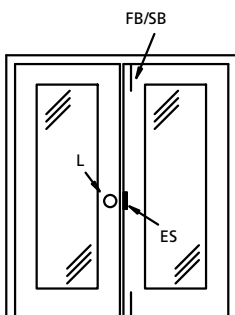
HOURLY RATING	FACE GAUGE	UL10b		UL10c & UBC 7-2	
		MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT
1/3, 3/4	16	4'-0"	8'-0"	4'-0"	8'-0"

SINGLE SWING DOORS



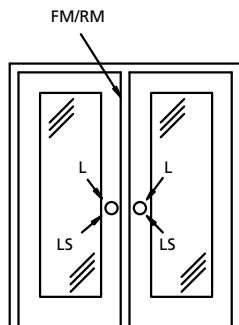
HOURLY RATING	FACE GAUGE	UL10b		UL10c & UBC 7-2		ASTRAGAL INFO
		MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT	
1/3, 3/4	16	8'-0"	8'-0"	8'-0"	8'-0"	OPTIONAL

PAIR OF DOORS



HOURLY RATING	FACE GAUGE	UL10b		UL10c & UBC 7-2		ASTRAGAL INFO
		MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT	
1/3, 3/4	16	8'-0"	8'-0"	8'-0"	8'-0"	OPTIONAL

PAIR OF DOORS WITH ELECTRIC STRIKE



HOURLY RATING	FACE GAUGE	UL10b		UL10c & UBC 7-2	
		MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT
1/3, 3/4	16	(2) 4'-0"	8'-0"	(2) 4'-0"	8'-0"

PAIR OF DOORS WITH HOLLOW METAL MULLION

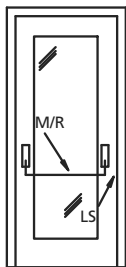
LEGEND:

L = LATCH, SINGLE POINT
LS = LATCH STRIKE
ES = ELECTRIC STRIKE

FB/SB = FLUSH BOLT OR SURFACE BOLT
FM/RM = FIXED OR REMOVABLE MULLION

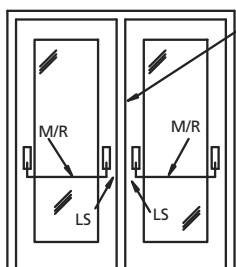
CAUTION:
SOME LATCHING DEVICES MAY NOT BE
APPROVED FOR USE ON DOORS UP TO
MAXIMUM SIZES LISTED.

SIZE LIMITS - WH LABELED STILE AND RAIL FIRE DOOR FIRE EXIT HARDWARE



HOURLY RATING	FACE GAUGE	UL10b		UL10c & UBC 7-2	
		MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT
1/3, 3/4	16	4'-0"	8'-0"	4'-0"	8'-0"

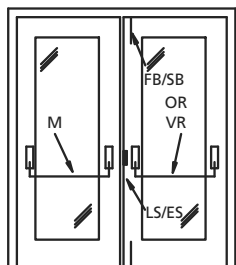
SINGLE SWING DOORS



FM/RM

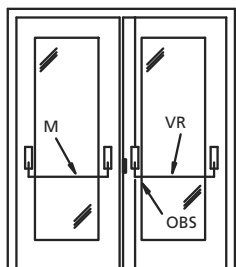
HOURLY RATING	FACE GAUGE	UL10b		UL10c & UBC 7-2	
		MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT
1/3, 3/4	16	(2) 4'-0"	8'-0"	(2) 4'-0"	8'-0"

PAIR OF DOORS WITH HOLLOW METAL OR HARDWARE MULLION



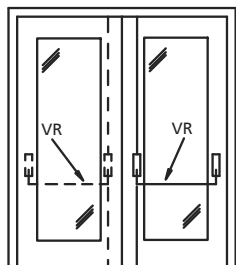
HOURLY RATING	STRIKE TYPE	FACE GAUGE	UL10b		UL10c & UBC 7-2		ASTRAGAL INFO
			MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT	
1/3, 3/4	LS, ES	16	8'-0"	8'-0"	8'-0"	8'-0"	OPTIONAL

PAIR OF DOORS WITH 3 POINT LATCHING



HOURLY RATING	FACE GAUGE	UL10b		UL10c & UBC 7-2		ASTRAGAL INFO
		MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT	
1/3, 3/4	16	8'-0"	8'-0"	8'-0"	8'-0"	OPTIONAL

PAIR OF DOORS WITH OPEN BACK STRIKE



SWING TYPE	HOURLY RATING	FACE GAUGE	UL10b		UL10c & UBC 7-2		ASTRAGAL INFO
			MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT	
STANDARD	1/3, 3/4	16	8'-0"	8'-0"	8'-0"	8'-0"	NOT ALLOWED
DBL. EGRESS			8'-0"	8'-0"	8'-0"	8'-0"	OPTIONAL

*PAIR OF DOORS WITH 4 POINT LATCHING

LEGEND:

M = MORTISE FEH
R = RIM FEH
LS = LATCH STRIKE
FM/RM = FIXED OR REMOVABLE MULLION
*OPTIONAL TOP ROD ONLY

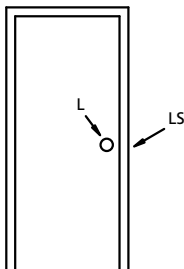
FB/SB = FLUSH OR SURFACE BOLT
VR = VERTICAL ROD FEH
OBS = OPEN BACK STRIKE
ES = ELECTRIC STRIKE

CAUTION:

SOME LATCHING DEVICES MAY NOT BE APPROVED FOR USE ON DOORS UP TO MAXIMUM SIZES LISTED.

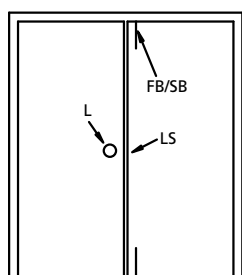
SIZE LIMITS - UL LABELED

450°F (232°C) STEEL STIFFENED FIRE DOOR SINGLE POINT LATCH



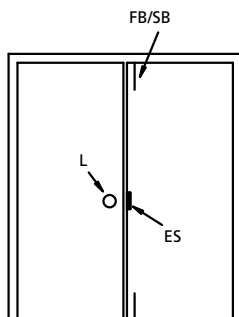
HOURLY RATING	FACE GAUGE	UL10b		UBC 7-2	
		MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT
1/3, 3/4, 1, 1-1/2	14	4'-0"	9'-0"	4'-0"	9'-0"
	16, 18	4'-0"	10'-0"	4'-0"	10'-0"
	20	4'-0"	8'-0"	4'-0"	8'-0"
3	14	4'-0"	9'-0"	4'-0"	9'-0"
	16, 18	4'-0"	10'-0"	4'-0"	10'-0"

SINGLE SWING DOORS



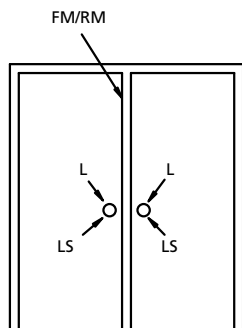
HOURLY RATING	FACE GAUGE	UL10b		UBC 7-2		ASTRAGAL INFO
		MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT	
1/3, 3/4, 1, 1-1/2	16, 18	8'-0"	9'-0"	8'-0"	9'-0"	OPTIONAL
	16, 18	8'-0"	10'-0"	8'-0"	10'-0"	REQUIRED
	14	8'-0"	9'-0"	8'-0"	9'-0"	REQUIRED
3	16, 18	8'-0"	10'-0"	8'-0"	10'-0"	REQUIRED
	14	8'-0"	9'-0"	8'-0"	9'-0"	REQUIRED

PAIR OF DOORS



HOURLY RATING	FACE GAUGE	UL10b		UBC 7-2		ASTRAGAL INFO
		MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT	
1/3, 3/4, 1, 1-1/2	16, 18	8'-0"	9'-0"	8'-0"	9'-0"	OPTIONAL
3	16, 18	6'-0"	7'-2"	6'-0"	7'-2"	REQUIRED

PAIR OF DOORS WITH ELECTRIC STRIKE



HOURLY RATING	FACE GAUGE	UL10b		UBC 7-2	
		MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT
1/3, 3/4, 1, 1-1/2	14	(2) 4'-0"	9'-0"	(2) 4'-0"	9'-0"
	16, 18	(2) 4'-0"	10'-0"	(2) 4'-0"	10'-0"
	20	(2) 4'-0"	8'-0"	(2) 4'-0"	8'-0"
3	14	(2) 4'-0"	9'-0"	(2) 4'-0"	9'-0"
	16, 18	(2) 4'-0"	10'-0"	(2) 4'-0"	10'-0"

PAIR OF DOORS WITH HOLLOW METAL MULLION

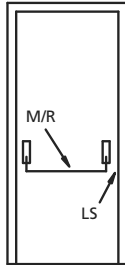
LEGEND:

L = LATCH, SINGLE POINT
LS = LATCH STRIKE
ES = ELECTRIC STRIKE

FB/SB = FLUSH BOLT OR SURFACE BOLT
FM/RM = FIXED OR REMOVABLE MULLION

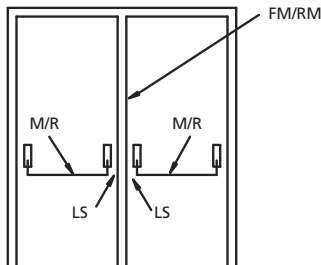
CAUTION:
SOME LATCHING DEVICES MAY NOT BE
APPROVED FOR USE ON DOORS UP TO
MAXIMUM SIZES LISTED.

SIZE LIMITS - UL LABELED 450°F (232°C) STEEL STIFFENED FIRE DOOR FIRE EXIT HARDWARE



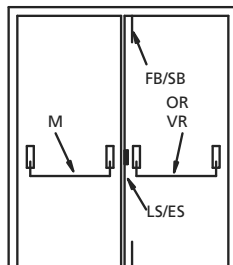
HOURLY RATING	FACE GAUGE	UL10b		UBC 7-2	
		MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT
1/3, 3/4, 1, 1-1/2	14	4'-0"	9'-0"	4'-0"	9'-0"
	16, 18	4'-0"	10'-0"	4'-0"	10'-0"
	20	4'-0"	8'-0"	4'-0"	8'-0"
3	14	4'-0"	9'-0"	4'-0"	9'-0"
	16, 18	4'-0"	10'-0"	4'-0"	10'-0"

SINGLE SWING DOORS



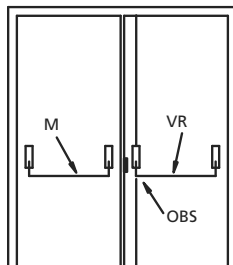
HOURLY RATING	FACE GAUGE	UL10b		UBC 7-2	
		MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT
1/3, 3/4, 1, 1-1/2	14	(2) 4'-0"	9'-0"	(2) 4'-0"	9'-0"
	16, 18	(2) 4'-0"	10'-0"	(2) 4'-0"	10'-0"
	20	(2) 4'-0"	8'-0"	(2) 4'-0"	8'-0"
3	14	(2) 4'-0"	9'-0"	(2) 4'-0"	9'-0"
	16, 18	(2) 4'-0"	10'-0"	(2) 4'-0"	10'-0"

PAIR OF DOORS WITH HOLLOW METAL OR HARDWARE MULLION



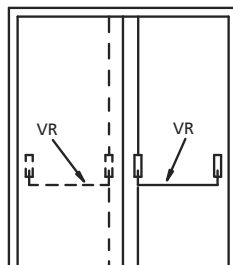
HOURLY RATING	STRIKE TYPE	FACE GAUGE	UL10b		UBC 7-2		ASTRAGAL INFO
			MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT	
1/3, 3/4, 1, 1-1/2	LS	16, 18	8'-0"	9'-0"	8'-0"	9'-0"	OPTIONAL
	LS	16, 18	8'-0"	10'-0"	8'-0"	10'-0"	REQUIRED
	LS	14	8'-0"	9'-0"	8'-0"	9'-0"	REQUIRED
	ES	16, 18	8'-0"	9'-0"	8'-0"	9'-0"	OPTIONAL
3	LS	16, 18	8'-0"	10'-0"	8'-0"	10'-0"	REQUIRED
	LS	14	8'-0"	9'-0"	8'-0"	9'-0"	REQUIRED
	ES	16, 18	6'-0"	7'-2"	6'-0"	7'-2"	REQUIRED

PAIR OF DOORS WITH 3 POINT LATCHING



HOURLY RATING	FACE GAUGE	UL10b		UBC 7-2		ASTRAGAL INFO
		MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT	
1/3, 3/4, 1, 1-1/2	16, 18	8'-0"	8'-0"	8'-0"	8'-0"	OPTIONAL
1/3, 3/4, 1, 1-1/2	14	8'-0"	8'-0"	8'-0"	8'-0"	REQUIRED

PAIR OF DOORS WITH OPEN BACK STRIKE



SWING TYPE	HOURLY RATING	FACE GAUGE	UL10b		UBC 7-2		ASTRAGAL INFO
			MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT	
STANDARD	1/3, 3/4, 1, 1-1/2	16, 18	8'-0"	9'-0"	8'-0"	9'-0"	NOT ALLOWED
DBL. EGRESS			8'-0"	9'-0"	8'-0"	9'-0"	OPTIONAL
DBL. EGRESS			8'-0"	10'-0"	8'-0"	10'-0"	REQUIRED
DBL. EGRESS	3		8'-0"	10'-0"	8'-0"	10'-0"	REQUIRED

* PAIR OF DOORS WITH 4 POINT LATCHING

LEGEND:

M = MORTISE FEH
R = RIM FEH
LS = LATCH STRIKE
FM/RM = FIXED OR REMOVABLE MULLION
* OPTIONAL TOP ROD ONLY - HDWE MUST BE APPROVED FOR THE APPLICATION

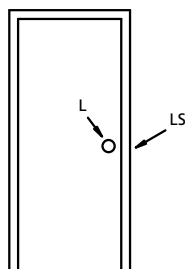
FB/SB = FLUSH OR SURFACE BOLT
VR = VERTICAL ROD FEH
OBS = OPEN BACK STRIKE
ES = ELECTRIC STRIKE

CAUTION:

SOME LATCHING DEVICES MAY NOT BE APPROVED FOR USE ON DOORS UP TO MAXIMUM SIZES LISTED.

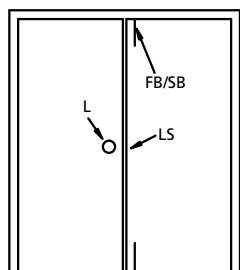
SIZE LIMITS - WH LABELED

450°F (232°C) STEEL STIFFENED FIRE DOOR SINGLE POINT LATCH



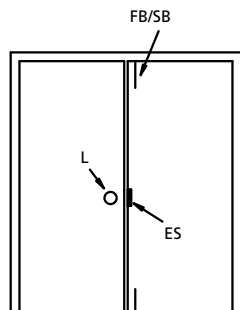
HOURLY RATING	FACE GAUGE	UL10b		UBC 7-2	
		MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT
1/3, 3/4, 1, 1-1/2	14	4'-0"	9'-0"	4'-0"	9'-0"
	16, 18	4'-0"	10'-0"	4'-0"	10'-0"
	20	4'-0"	8'-0"	4'-0"	8'-0"
3	14	4'-0"	9'-0"	4'-0"	9'-0"
	16, 18	4'-0"	10'-0"	4'-0"	10'-0"

SINGLE SWING DOORS



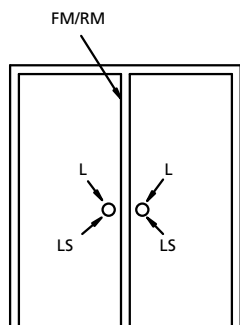
HOURLY RATING	FACE GAUGE	UL10b		UBC 7-2		ASTRAGAL INFO
		MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT	
1/3, 3/4, 1, 1-1/2	16, 18	8'-0"	9'-0"	8'-0"	9'-0"	OPTIONAL
	16, 18	8'-0"	10'-0"	8'-0"	10'-0"	REQUIRED
	14	8'-0"	9'-0"	8'-0"	9'-0"	REQUIRED
3	16, 18	8'-0"	9'-0"	8'-0"	9'-0"	OPTIONAL*
	16, 18	8'-0"	10'-0"	8'-0"	10'-0"	REQUIRED
	14	8'-0"	9'-0"	8'-0"	9'-0"	REQUIRED

PAIR OF DOORS



HOURLY RATING	FACE GAUGE	UL10b		UBC 7-2		ASTRAGAL INFO
		MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT	
1/3, 3/4, 1, 1-1/2	16, 18	8'-0"	9'-0"	8'-0"	9'-0"	OPTIONAL
3	16, 18	6'-0"	7'-2"	6'-0"	7'-2"	OPTIONAL*

PAIR OF DOORS WITH ELECTRIC STRIKE



HOURLY RATING	FACE GAUGE	UL10b		UBC 7-2	
		MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT
1/3, 3/4, 1, 1-1/2	14	(2) 4'-0"	9'-0"	(2) 4'-0"	9'-0"
	16, 18	(2) 4'-0"	10'-0"	(2) 4'-0"	10'-0"
	20	(2) 4'-0"	8'-0"	(2) 4'-0"	8'-0"
3	14	(2) 4'-0"	9'-0"	(2) 4'-0"	9'-0"
	16, 18	(2) 4'-0"	10'-0"	(2) 4'-0"	10'-0"

PAIR OF DOORS WITH HOLLOW METAL MULLION

*NFPA-80 AND MANY BUILDING CODES REQUIRE THE USE OF AN OVERLAPPING ASTRAGAL ON 3 HOUR RATED PAIRS. CHECK WITH AUTHORITY HAVING JURISDICTION PRIOR TO INSTALLATION OF A 3 HOUR PAIR W/O AN ASTRAGAL.

LEGEND:

L = LATCH, SINGLE POINT
LS = LATCH STRIKE
ES = ELECTRIC STRIKE

FB/SB = FLUSH BOLT OR SURFACE BOLT
FM/RM = FIXED OR REMOVABLE MULLION

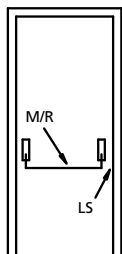
CAUTION:
SOME LATCHING DEVICES MAY NOT BE APPROVED FOR USE ON DOORS UP TO MAXIMUM SIZES LISTED.

Distributor Tech Data

SIZE LIMITS - WH LABELED

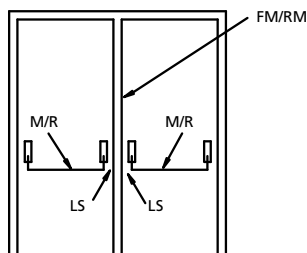
450°F (232°C) STEEL STIFFENED FIRE DOOR

FIRE EXIT HARDWARE



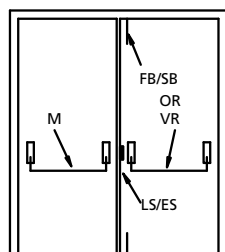
HOURLY RATING	FACE GAUGE	UL10b		UBC 7-2	
		MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT
1/3, 3/4, 1, 1-1/2	14	4'-0"	9'-0"	4'-0"	9'-0"
	16, 18	4'-0"	10'-0"	4'-0"	10'-0"
	20	4'-0"	8'-0"	4'-0"	8'-0"
3	14	4'-0"	9'-0"	4'-0"	9'-0"
	16, 18	4'-0"	10'-0"	4'-0"	10'-0"

SINGLE SWING DOORS



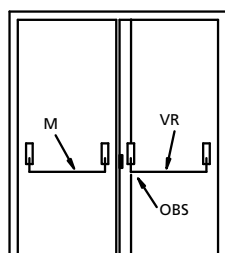
HOURLY RATING	FACE GAUGE	UL10b		UBC 7-2	
		MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT
1/3, 3/4, 1, 1-1/2	14	(2) 4'-0"	9'-0"	(2) 4'-0"	9'-0"
	16, 18	(2) 4'-0"	10'-0"	(2) 4'-0"	10'-0"
	20	(2) 4'-0"	8'-0"	(2) 4'-0"	8'-0"
3	14	(2) 4'-0"	9'-0"	(2) 4'-0"	9'-0"
	16, 18	(2) 4'-0"	10'-0"	(2) 4'-0"	10'-0"

PAIR OF DOORS WITH HOLLOW METAL OR HARDWARE MULLION



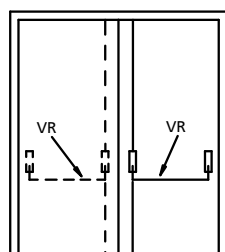
HOURLY RATING	STRIKE TYPE	FACE GAUGE	UL10b		UBC 7-2		ASTRAGAL INFO
			MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT	
1/3, 3/4, 1, 1-1/2	LS	14	8'-0"	9'-0"	8'-0"	9'-0"	REQUIRED
	LS	16, 18	8'-0"	10'-0"	8'-0"	10'-0"	REQUIRED
	LS OR ES	16, 18	8'-0"	9'-0"	8'-0"	9'-0"	OPTIONAL
3	LS	14	8'-0"	9'-0"	8'-0"	9'-0"	REQUIRED
	LS	16, 18	8'-0"	9'-0"	8'-0"	9'-0"	OPTIONAL*
	LS	16, 18	8'-0"	10'-0"	8'-0"	10'-0"	REQUIRED
	ES	16, 18	6'-0"	7'-2"	6'-0"	7'-2"	OPTIONAL*

PAIR OF DOORS WITH 3 POINT LATCHING



HOURLY RATING	FACE GAUGE	UL10b		UBC 7-2		ASTRAGAL INFO
		MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT	
1/3, 3/4, 1, 1-1/2	16, 18	8'-0"	8'-0"	8'-0"	8'-0"	OPTIONAL
1/3, 3/4, 1, 1-1/2	14	8'-0"	8'-0"	8'-0"	8'-0"	REQUIRED

PAIR OF DOORS WITH OPEN BACK STRIKE



SWING TYPE	HOURLY RATING	FACE GAUGE	UL10b		UBC 7-2		ASTRAGAL INFO
			MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT	
STANDARD	1/3, 3/4, 1, 1-1/2	16, 18	8'-0"	9'-0"	8'-0"	9'-0"	NOT ALLOWED
DBL. EGRESS			8'-0"	9'-0"	8'-0"	9'-0"	OPTIONAL
DBL. EGRESS			8'-0"	10'-0"	8'-0"	10'-0"	REQUIRED
STANDARD	3		8'-0"	9'-0"	8'-0"	9'-0"	NOT ALLOWED*
DBL. EGRESS			8'-0"	9'-0"	8'-0"	9'-0"	OPTIONAL*
DBL. EGRESS			8'-0"	10'-0"	8'-0"	10'-0"	REQUIRED

** PAIR OF DOORS WITH 4 POINT LATCHING

LEGEND:

M = MORTISE FEH
R = RIM FEH
LS = LATCH STRIKE
FM/RM = FIXED OR REMOVABLE MULLION

FB/SB = FLUSH OR SURFACE BOLT
VR = VERTICAL ROD FEH
OBS = OPEN BACK STRIKE
ES = ELECTRIC STRIKE

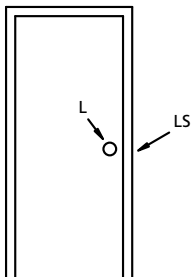
CAUTION:

SOME LATCHING DEVICES MAY NOT BE APPROVED FOR USE ON DOORS UP TO MAXIMUM SIZES LISTED.

*NFPA-80 AND MANY BUILDING CODES REQUIRE THE USE OF AN OVERLAPPING ASTRAGAL ON 3 HOUR RATED PAIRS. CHECK WITH AUTHORITY HAVING JURISDICTION PRIOR TO INSTALLATION OF A 3 HOUR PAIR W/O AN ASTRAGAL.

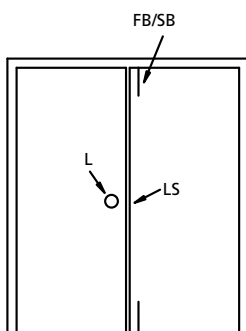
** OPTIONAL TOP ROD ONLY - HDWE MUST BE APPROVED FOR THE APPLICATION

SIZE LIMITS - UL LABELED POLYSTYRENE CORE FIRE DOOR SINGLE POINT LATCH



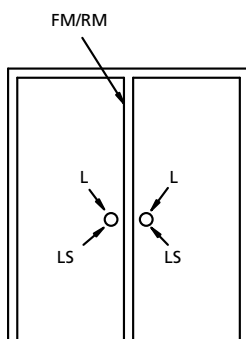
HOURLY RATING	FACE GAUGE	POLYSTYRENE UL10C/UL10B & POLYURETHANE UL10B		POLYURETHANE UL10C	
		MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT
1/3, 3/4, 1-1/2	14, 16, 18, 20	4'-0"	8'-0"	4'-0"	7'-0"
	22, 24	3'-6"	7'-0"	3'-6"	7'-0"
3	14, 16, 18	4'-0"	8'-0"	4'-0"	7'-0"

SINGLE SWING DOORS



HOURLY RATING	FACE GAUGE	POLYSTYRENE UL10C/UL10B & POLYURETHANE UL10B		POLYURETHANE UL10C		ASTRAGAL INFO
		MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT	
1/3, 3/4, 1-1/2	16, 18, 20	8'-0"	8'-0"	6'-0"	7'-0"	OPTIONAL
	22, 24	6'-0"	7'-0"	6'-0"	7'-0"	OPTIONAL
3	16, 18	8'-0"	8'-0"	6'-0"	7'-0"	REQUIRED

PAIR OF DOORS



HOURLY RATING	FACE GAUGE	POLYSTYRENE UL10C/UL10B & POLYURETHANE UL10B		POLYURETHANE UL10C	
		MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT
1/3, 3/4, 1-1/2	14, 16, 18, 20	(2) 4'-0"	8'-0"	(2) 4'-0"	7'-0"
	22, 24	(2) 3'-6"	7'-0"	(2) 3'-6"	7'-0"
3	14, 16, 18	(2) 4'-0"	8'-0"	(2) 4'-0"	7'-0"

PAIR OF DOORS WITH HOLLOW METAL MULLION

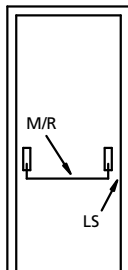
LEGEND:

L = LATCH, SINGLE POINT
LS = LATCH STRIKE

FB/SB = FLUSH BOLT or SURFACE BOLT

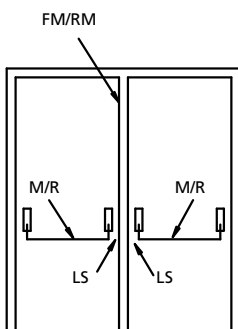
FM/RM = FIXED OR REMOVABLE MULLION

SIZE LIMITS - UL LABELED POLYSTYRENE CORE FIRE DOOR FIRE EXIT HARDWARE



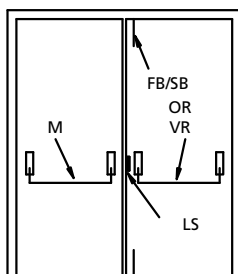
HOURLY RATING	FACE GAUGE	POLYSTYRENE UL10C/UL10B & POLYURETHANE UL10B		POLYURETHANE UL10C	
		MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT
1/3, 3/4, 1-1/2	14, 16, 18, 20	4'-0"	8'-0"	4'-0"	7'-0"
	22, 24	3'-6"	7'-0"	3'-6"	7'-0"
3	14, 16, 18	4'-0"	8'-0"	4'-0"	7'-0"

SINGLE SWING DOORS



HOURLY RATING	FACE GAUGE	POLYSTYRENE UL10C/UL10B & POLYURETHANE UL10B		POLYURETHANE UL10C	
		MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT
1/3, 3/4, 1-1/2	14, 16, 18, 20	(2) 4'-0"	8'-0"	(2) 4'-0"	7'-0"
	22, 24	(2) 3'-6"	7'-0"	(2) 3'-6"	7'-0"
3	14, 16, 18	(2) 4'-0"	8'-0"	(2) 4'-0"	7'-0"

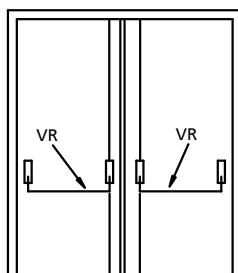
PAIR OF DOORS WITH HOLLOW METAL OR HARDWARE MULLION



HOURLY RATING	FACE GAUGE	POLYSTYRENE UL10C/UL10B & POLYURETHANE UL10B		POLYURETHANE UL10C		ASTRAGAL INFO
		MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT	
1/3, 3/4, 1-1/2	16, 18	8'-0"	*9'-0"	6'-0"	7'-0"	OPTIONAL
	20	8'-0"	8'-0"	6'-0"	7'-0"	OPTIONAL
	22, 24	6'-0"	7'-0"	6'-0"	7'-0"	OPTIONAL
3	16, 18	8'-0"	8'-0"	6'-0"	7'-0"	REQUIRED

PAIR OF DOORS WITH 3 POINT LATCHING

*9'-0" W/VERTICAL RODS
8'-0" OTHERWISE



SWING TYPE	HOURLY RATING	FACE GAUGE	POLYSTYRENE UL10C/UL10B & POLYURETHANE UL10B		POLYURETHANE UL10C		ASTRAGAL INFO
			MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT	
DBL. EGRESS	1/3, 3/4, 1-1/2	16, 18	8'-0"	9'-0"	6'-0"	7'-0"	OPTIONAL
DBL. EGRESS	3	16, 18	8'-0"	7'-2"	6'-0"	7'-0"	REQUIRED
STANDARD	1/3, 3/4, 1-1/2	16, 18	8'-0"	9'-0"	6'-0"	7'-0"	NOT ALLOWED

**** PAIR OF DOORS WITH 4 POINT LATCHING**

LEGEND:

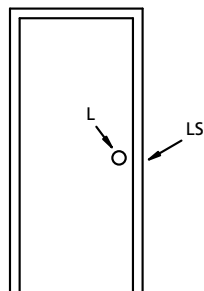
M = MORTISE FEH
R = RIM FEH
LS = LATCH STRIKE
FM/RM = FIXED OR REMOVABLE MULLION

FB/SB = FLUSH OR SURFACE BOLT
VR = VERTICAL ROD FEH

** OPTIONAL TOP ROD ONLY -
HDWE MUST BE APPROVED
FOR THE APPLICATION

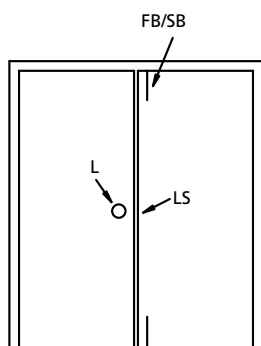
Distributor Tech Data

SIZE LIMITS - WH LABELED POLYSTYRENE CORE FIRE DOOR SINGLE POINT LATCH



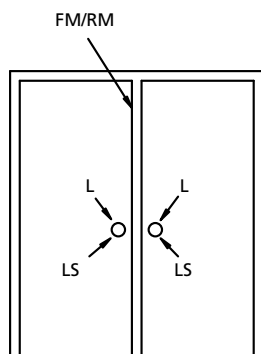
HOURLY RATING	FACE GAUGE	POLYSTYRENE UL10C/UL10B & POLYURETHANE UL10B		POLYURETHANE UL10C	
		MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT
1/3, 3/4, 1-1/2	14, 16, 18, 20	4'-0"	8'-0"	4'-0"	7'-0"
	22, 24	3'-6"	7'-0"	3'-6"	7'-0"
3	14, 16, 18, 20	4'-0"	8'-0"	4'-0"	7'-0"

SINGLE SWING DOORS



HOURLY RATING	FACE GAUGE	POLYSTYRENE UL10C/UL10B & POLYURETHANE UL10B		POLYURETHANE UL10C		ASTRAGAL INFO
		MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT	
1/3, 3/4, 1-1/2	16, 18, 20	8'-0"	8'-0"	6'-0"	7'-0"	OPTIONAL
	22, 24	6'-0"	7'-0"	6'-0"	7'-0"	OPTIONAL
3	16, 18, 20	8'-0"	8'-0"	6'-0"	7'-0"	REQUIRED

PAIR OF DOORS



HOURLY RATING	FACE GAUGE	POLYSTYRENE UL10C/UL10B & POLYURETHANE UL10B		POLYURETHANE UL10C	
		MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT
1/3, 3/4, 1-1/2	14, 16, 18, 20	(2) 4'-0"	8'-0"	(2) 4'-0"	7'-0"
	22, 24	(2) 3'-6"	7'-0"	(2) 3'-6"	7'-0"
3	14, 16, 18, 20	(2) 4'-0"	8'-0"	(2) 4'-0"	7'-0"

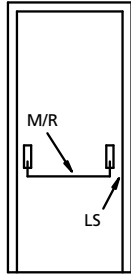
PAIR OF DOORS WITH HOLLOW METAL MULLION

LEGEND:

L = LATCH, SINGLE POINT
LS = LATCH STRIKE

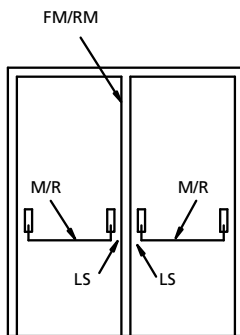
FB/SB = FLUSH BOLT or SURFACE BOLT
FM/RM = FIXED OR REMOVABLE MULLION

SIZE LIMITS - WH LABELED POLYSTYRENE CORE FIRE DOOR FIRE EXIT HARDWARE



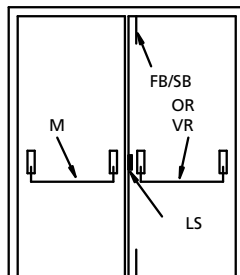
HOURLY RATING	FACE GAUGE	POLYSTYRENE UL10C/UL10B & POLYURETHANE UL10B		POLYURETHANE UL10C	
		MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT
1/3, 3/4, 1-1/2	14, 16, 18, 20	4'-0"	8'-0"	4'-0"	7'-0"
	22, 24	3'-6"	7'-0"	3'-6"	7'-0"
3	14, 16, 18, 20	4'-0"	8'-0"	4'-0"	7'-0"

SINGLE SWING DOORS



HOURLY RATING	FACE GAUGE	POLYSTYRENE UL10C/UL10B & POLYURETHANE UL10B		POLYURETHANE UL10C	
		MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT
1/3, 3/4, 1-1/2	14, 16, 18, 20	(2) 4'-0"	8'-0"	(2) 4'-0"	7'-0"
	22, 24	(2) 3'-6"	7'-0"	(2) 3'-6"	7'-0"
3	14, 16, 18, 20	(2) 4'-0"	8'-0"	(2) 4'-0"	7'-0"

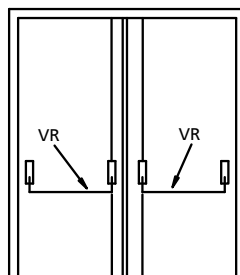
PAIR OF DOORS WITH HOLLOW METAL OR HARDWARE MULLION



HOURLY RATING	FACE GAUGE	POLYSTYRENE UL10C/UL10B & POLYURETHANE UL10B		POLYURETHANE UL10C		ASTRAGAL INFO
		MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT	
1/3, 3/4, 1-1/2	16, 18	8'-0"	*9'-0"	6'-0"	7'-0"	OPTIONAL
	20	8'-0"	8'-0"	6'-0"	7'-0"	OPTIONAL
	22, 24	6'-0"	7'-0"	6'-0"	7'-0"	OPTIONAL
3	16, 18, 20	8'-0"	8'-0"	6'-0"	7'-0"	REQUIRED

PAIR OF DOORS WITH 3 POINT LATCHING

*9'-0" W/VERTICAL RODS
8'-0" OTHERWISE



SWING TYPE	HOURLY RATING	FACE GAUGE	POLYSTYRENE UL10C/UL10B & POLYURETHANE UL10B		POLYURETHANE UL10C		ASTRAGAL INFO
			MAX WIDTH	MAX HEIGHT	MAX WIDTH	MAX HEIGHT	
DBL. EGRESS	1/3, 3/4, 1-1/2	16, 18	8'-0"	9'-0"	6'-0"	7'-0"	OPTIONAL
DBL. EGRESS	3	16, 18, 20	8'-0"	7'-2"	6'-0"	7'-0"	REQUIRED
STANDARD	1/3, 3/4, 1-1/2	16, 18	8'-0"	9'-0"	6'-0"	7'-0"	NOT ALLOWED
STANDARD	1/3, 3/4, 1-1/2	20	8'-0"	8'-0"	6'-0"	7'-0"	NOT ALLOWED

** PAIR OF DOORS WITH 4 POINT LATCHING

LEGEND:

M = MORTISE FEH
R = RIM FEH
LS = LATCH STRIKE
FM/RM = FIXED OR REMOVABLE MULLION

FB/SB = FLUSH OR SURFACE BOLT
VR = VERTICAL ROD FEH

** OPTIONAL TOP ROD ONLY -
HDWE MUST BE APPROVED
FOR THE APPLICATION

Distributor Tech Data

GLASS LIGHT LIMITATIONS FOR FIRE DOORS USING WIRE GLASS UL AND WH

Louvers are not permitted on doors with glass lights.

RATINGS	WIRE GLASS			
	MAX. EXPOSED GLASS AREA		MAX. EXPOSED GLASS DIM.	
	UL10B	UL10C	WIDTH	HEIGHT
3 HR.	---	---	---	---
2 HR.	---	---	---	---
1-1/2 HR.	100 IN ² /LEAF	100 IN ² /LEAF	33"	33"
1 HR.	100 IN ² /LEAF	100 IN ² /LEAF	33"	33"
3/4 HR.	1296 IN ² /LITE	1296 IN ² /LITE	54"	54"
20 MIN.	1296 IN ² /LITE	1296 IN ² /LITE	54"	54"
20 MIN. NO HOSE STREAM	2971 IN ² /LITE	2971 IN ² /LITE	35 3/4"	83 1/2"

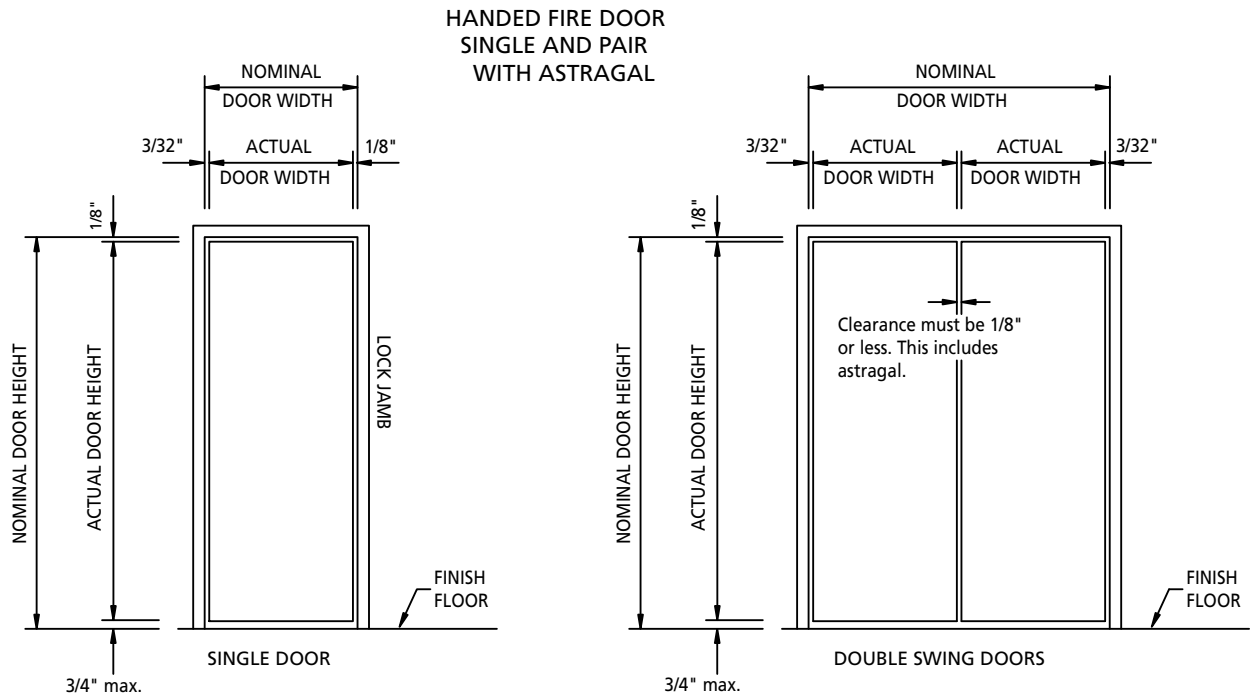
RATINGS	WIRE GLASS w/ " FIRE GLAZE FG3000" COMPOUND						
	MAX. EXPOSED GLASS AREA		MAX. EXPOSED GLASS DIM.				MULTIPLE LITES ALLOWED
	UL10B	UL10C	UL10B		UL10C		
1-1/2 HR.	552 IN ² /LITE	552 IN ² /LITE	12" W	46" H	12" W	46" H	YES
3/4 HR.	2856 IN ² /LITE	1008 IN ² /LITE	34" W	84" H	34" W	84" H	YES
20 MIN.	2856 IN ² /LITE	1008 IN ² /LITE	34" W	84" H	34" W	84" H	YES
Only Air Louver's VL3000 Kit or Listed wire glass glazed with Pemko's "Fire Glaze FG3000" compound in a Pemko PLK glass kit may be used. The door must bear a supplemental marking indicating the specific glass, glass light kit, and glazing compound. Maximum door size is 40100.							

Distributor Tech Data

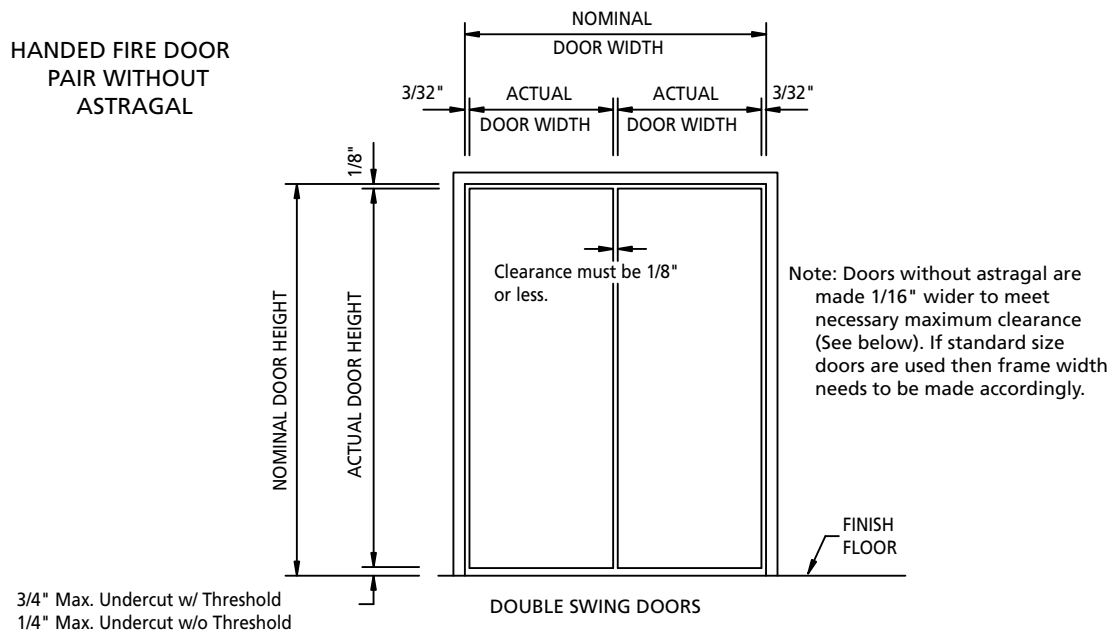
GLASS LIGHT LIMITATIONS USING FIRELITE GLASS UL AND WH

RATINGS	"FIRELITE GLASS"			
	MAX. EXPOSED GLASS AREA		MAX. EXPOSED GLASS DIM.	
	UL10B	UL10C	WIDTH	HEIGHT
3 HR.	100 IN ² /LEAF	100 IN ² /LEAF	33"	33"
2 HR.	1296 IN ² /LITE	1296 IN ² /LITE	36"	45"
1-1/2 HR.	1296 IN ² /LITE	1296 IN ² /LITE	36"	45"
1 HR.	1296 IN ² /LITE	1296 IN ² /LITE	54"	54"
3/4 HR.	1296 IN ² /LITE	1296 IN ² /LITE	54"	54"
20 MIN.	1296 IN ² /LITE	1296 IN ² /LITE	54"	54"
20 MIN. NO HOSE STREAM	2971 IN ² /LITE	2971 IN ² /LITE	35 3/4"	83 1/2"
Special Glazing Option: When a door is prepared for a glass over glass design, the lower glass kit may be glazed with a 3/8" thick sandwich panel. When "Firelite" glazing material is required, supplemental labels must be attached. Louvers are not permitted on doors with glass lights.				

LABEL FIRE DOOR UL/WH/FM SIZES AND OPERATING CLEARANCES



Example: 3070 nominal = 35-25/32" x 83-1/8" actual leaf size



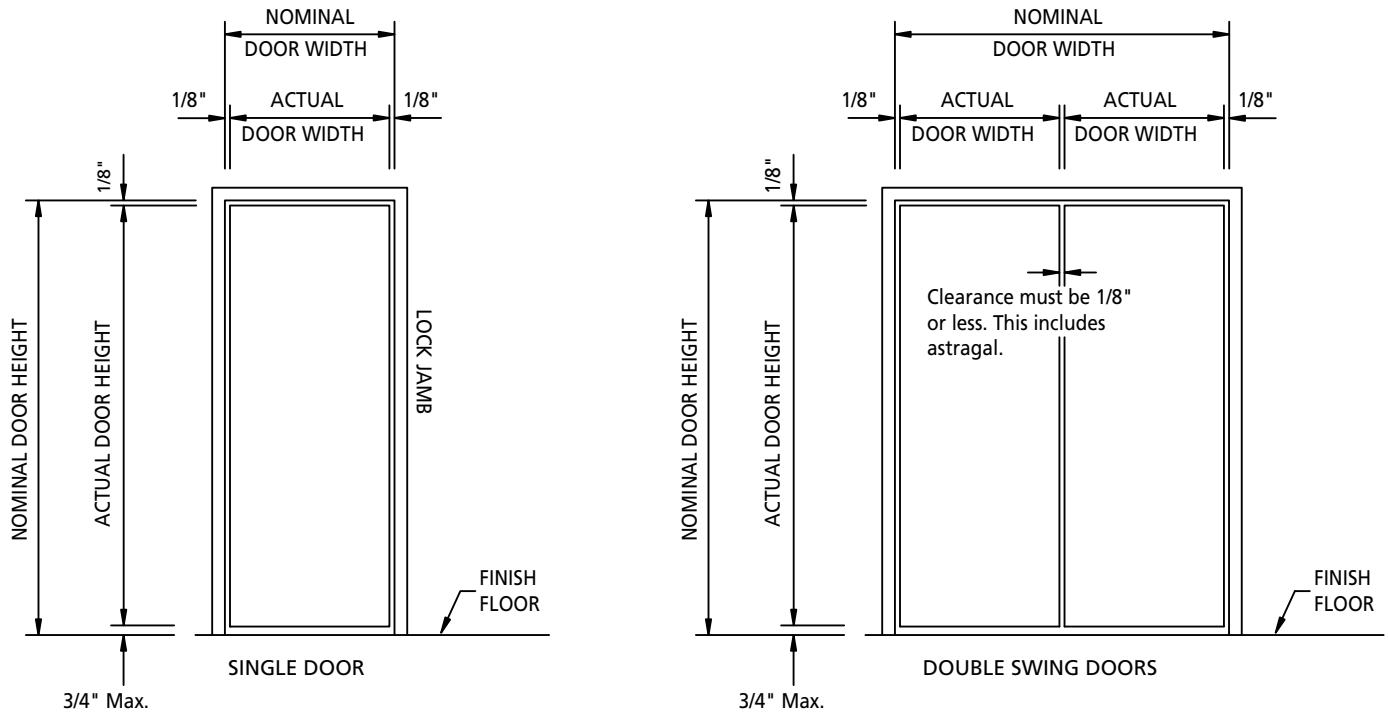
Examples

3/4" undercut: 6070 nominal = (2) 35-27/32" x 83-1/8" actual leaf size
1/4" undercut: 6070 nominal = (2) 35-27/32" x 83-5/8" actual leaf size

Distributor Tech Data

LABELED FIRE DOOR UL/WH/FM SIZES AND OPERATING CLEARANCES

NON-HANDED FIRE DOOR SINGLE AND PAIR WITH ASTRAGAL



Example: 3070 nominal = 35-3/4" x 83-1/8" actual leaf size

Distributor Tech Data

HONEYCOMB CORE FIRE DOORS REGENT/OMEGA - UL/WH LABEL SINGLE SWING

1. Fire Test:
 - a. UL 10B, UL 10C, UBC 7-2, NFPA 252
 - b. Hardware and gasketing should comply with test method and hourly rating
2. Hourly Rating:

3 hour, 1 hour, 1-1/2 hour, 3/4 hour, and 20 minute
3. Maximum Temperature rise rating: NTR
4. Maximum Door opening sizes:

See pages 7-107 thru 7-110
5. Face Sheets:

See pages 7-107 thru 7-110
6. Construction:

See pages 2-301 thru 2-303 except as noted herein
7. Clearances: 1/8" at top, 1/8" maximum at hinge and lock edge, 3/4" maximum at sill w/o threshold) see pages 7-132 and 7-133
8. End channels: (see pages 2-301 & 2-302)
 - a. Welded to both face sheets
 - b. end channels are inverted
 - c. special bottom channel for automatic door bottom available
9. Hinge Preparations: ANSI A156.7 template 7 ga. steel reinforcement
 - a. full mortise, 4-1/2" standard or heavy weight
 1. Regent - handed
 2. Omega - non-handed
 - b. full mortise, 5" standard or heavy weight
 1. Regent - handed
 - c. half surface, pivots, anchor hinge, pocket pivots, and continuous
10. Door edges:
 - a. Square hinge edge
 - b. lock edge...
 1. Regent: beveled 1/8" in 2"
 2. Omega: square
11. Closer reinforcement:
 - a. optional - see page 1-417 & 1-418
 - b. when reinforcement is not furnished, a paper label is applied stating "...USE SEX BOLTS TO MOUNT CLOSER".
12. Lock Preparation:
 - a. Listed, positive latching, 1/2" minimum throw - see section one
 1. Cylindrical type, 5" B.S. max.
 2. Mortise type, escutcheon or sectional trim
 3. Combination type
 4. Unit (preassembled) lock
 5. "Rigid" type lock
 6. "G" type lock
 7. "Integralock"
 8. 2 or 3-point latch
 - b. Supplemental deadlock preparation
 - c. Listed fire exit hardware
 1. Rim type
 2. Mortise type
 - d. Listed hospital latches
 - e. Interlock type "M" for elevator swinging door
13. Miscellaneous Hardware:
 - a. magnetic switch
 - b. surface / concealed stop and shock absorbers
 - c. surface / concealed closers
 - d. electric power transfer
 - e. Listed electric hardware (hinges and locks)
 - f. Listed viewer: 1" maximum hole dia. located a minimum of 12" from top or either edge (1-1/2 hr. rated, UL or WH door)
14. Designs:

See page 7-205
15. Glass lite trim kits:

See pages 1-703 thru 1-704
16. Louver:

See page 7-205
17. Embossed panels:

See page 7-205

**HONEYCOMB CORE FIRE DOORS
REGENT/OMEGA - UL/WH LABEL
PAIRS, W/ASTRAGAL, NO OBS**

1. FIRE TEST:
 - a. UL 10B, UL 10C, UBC 7-2, NFPA 252
 - b. hardware and gasketing should comply with test method and hourly rating
2. Hourly rating:
3 hour, 1-1/2 hour, 1 hr., 3/4 hour & 20 minute
3. Maximum Temperature rise rating: NTR
4. Maximum door opening sizes:
See pages 7-107 thru 7-110
5. Face sheets:
See pages 7-107 thru 7-110
6. Construction:
See page 2-301 thru 2-303
7. Clearances:
1/8" top, 1/8" maximum at hinge edge,
1/8" maximum between leaves, and
3/4" maximum at sill (w/o threshold)
See pages 7-132 & 7-133
8. End channels:
See page 2-301 & 2-302
9. Hinge Preparations:
See page 7-201
10. Door edges:
See page 7-201
11. Closer reinforcement:
See page 7-201
12. Lock preparation, active leaf, see section one
 - a. Listed, positive latching, 1/2" minimum throw, examples:
 1. Cylindrical type, 5" B.S. max.
 2. Mortise type, escutcheon or sectional trim
 3. Combination type
 4. Unite (preassembled) lock
 5. "Rigid" type lock
 6. "G" type lock
 7. "Integralock"
 8. 2 or 3-point latch
 - b. supplemental deadlock preparation
 - c. Listed fire exit hardware
 1. Rim type
 2. Mortise type
 - d. Listed electrical single point lock
13. Miscellaneous Hardware:
 - a. surface / concealed closers
 - b. surface / concealed stops and shock absorbers
 - c. Listed electric hardware (hinges and locks)
 - d. Listed viewer: 1" maximum hole dia. located a minimum of 12" from top or either edge (1-1/2 hr. rated, UL or WH door)
14. Designs:
See page 7-205
15. Glass lite trim kits:
See pages 1-703 & 1-704
16. Louver:
See page 7-205
17. Embossed panels:
See page 7-205
18. Astragal: Steel overlapping type...
See pages 1-601 & 1-602; Use with:
 - a. listed single point latch
 - b. listed mortise type FEH
 - c. overlap strip optional for 1-1/2 hr. or less rated, 18 or 16 ga. doors
19. Listed removable mullion use with...
 - a. Listed rim type FEH (two)
(no overlapping astragal necessary)
20. Lock preparation, Inactive leaf, see section one
 - a. with single point latch and astragal:
 1. Listed manual flush bolts
(top and bottom)
 2. Listed manual surface bolts
(top and bottom)
 3. Listed self latching flush bolts
(top and bottom)
 4. Listed auto-flush bolts
(top and bottom)
 - b. with rim device and removable mullion
 1. listed rim type FEH
 - c. Listed vertical rod FEH surface or concealed



Distributor Tech Data

HONEYCOMB CORE FIRE DOORS REGENT/OMEGA - UL/WH LABEL PAIRS, TWO VERTICAL RODS W/O ASTRAGAL

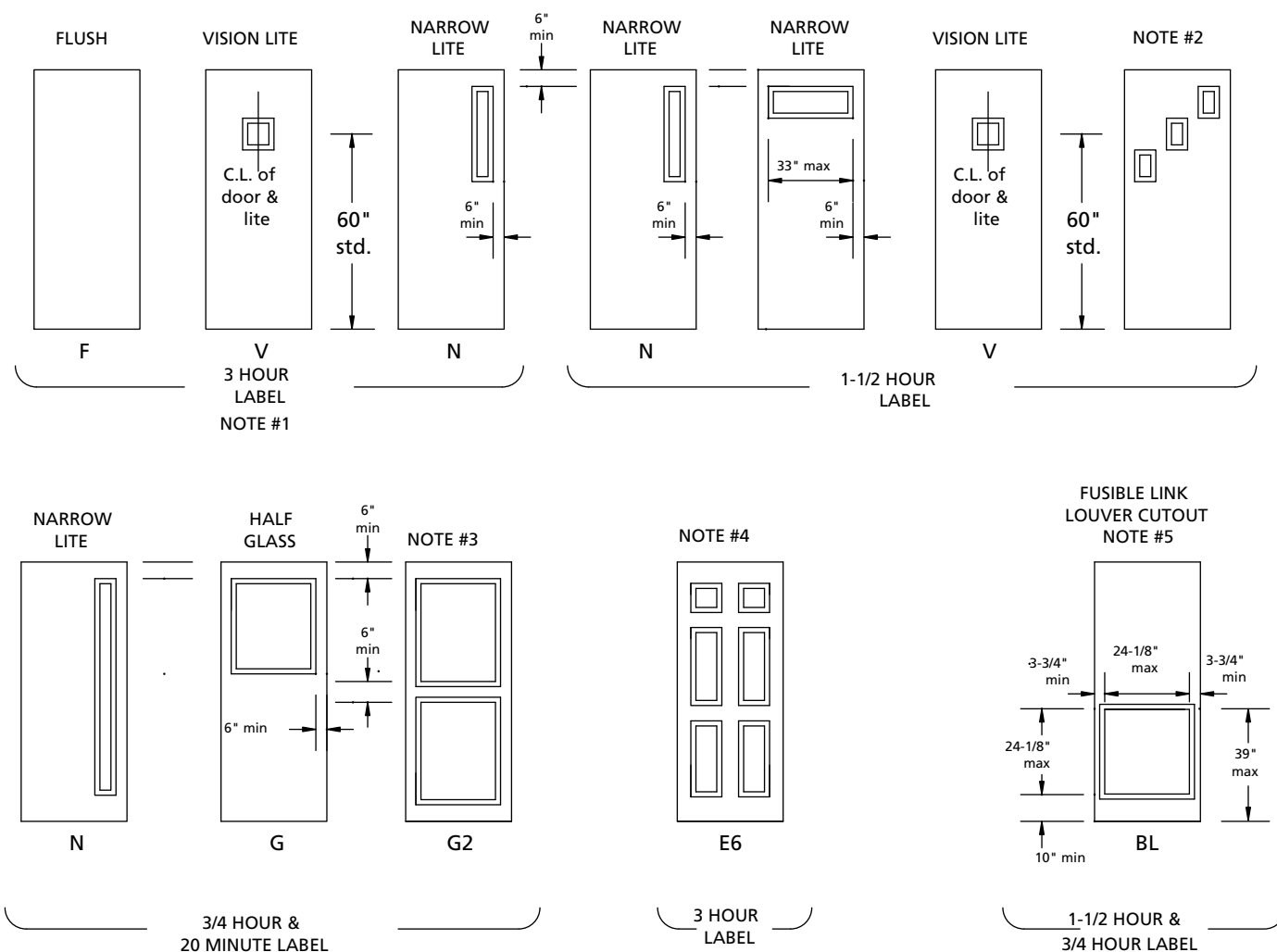
1. Fire Test:
 - a. UL 10B, UL 10C, UBC 7-2, NFPA 252
 - b. Hardware and gasketing should comply with test method and hourly rating
2. Hourly Rating:
 - 1-1/2 hour, 1 hour, 3/4 hour & 20 minute
3. Maximum Temperature rise rating: NTR
4. Maximum Door opening sizes:
 - See pages 7-107 thru 7-110
5. Face Sheets:
 - See pages 7-107 thru 7-110
6. Construction:
 - See pages 2-301 thru 2-303 except as noted herein
7. Clearances: See page 7-132 & 7-133
8. End channels:
 - a. Welded to both face sheets
 - b. end channels are inverted
 - c. special bottom channel for automatic door bottom available
9. Hinge Preparations:
 - See page 7-201
10. Door edges:
 - See page 7-201
11. Closer reinforcement:
 - See page 7-201
12. Listed fire exit hardware (one each leaf)
 - a. vertical rod type
 1. surface mounted
 2. concealed
 - a. door must be factory prepared for concealed vertical rod FEH
 3. top rod only optional
13. Designs:
 - See page 7-205
14. Glass lite trim kits:
 - See pages 1-703 thru 1-704
15. Louver:
 - None w/FEH
16. Embossed panels:
 - See page 7-205

**HONEYCOMB CORE FIRE DOORS
REGENT/OMEGA - UL/WH LABEL
PAIRS, W/O ASTRAGAL, W/ OBS**

1. Fire test:
 - a. UL 10B, UL 10C, UBC 7-2, NFPA 252
 - b. hardware and gasketing should comply with test method and hourly rating
2. Hourly rating:
1-1/2 hour, 1 hr., 3/4 hour & 20 minute
3. Maximum Temperature rise rating: NTR
4. Maximum door opening sizes:
See pages 7-107 thru 7-110
5. Face sheets:
See pages 7-107 thru 7-110
6. Construction:
See page 2-301 thru 2-303
7. Clearances:
See pages 7-132 & 7-133
8. End channels:
 - a. welded to both face sheets
 - b. end channels are inverted
 - c. special bottom channel for automatic door bottom available
9. Hinge preparations:
See page 7-201
10. Door edges:
See page 7-201
Lock edge to suit open back strike
check open back strike template
11. Closer reinforcement:
See page 7-201
12. Lock Preparation (Active leaf):
 - a. Listed, single point latch 1/2" minimum throw
 - b. Listed mortise type FEH
13. Inactive leaf lock and strike preparation:
 - a. Listed open back strike (OBS)
 1. verify compatibility with single point latch or FEH
 2. depending on mfg, strike may or may not be handed - coordinate with hand of door and door lock edge
 3. Door is factory prepared for OBS
 - b. Listed fire exit hardware (FEH)
 1. Vertical rod type
 - a. Concealed
 1. factory prep req'd
 2. insure that OBS and concealed rod/operator don't interfere
 - b. surface mounted
14. Designs: refer to page 7-205
15. Glass lite trim kits:
See pages 1-703 thru 1-704
16. Louvers:
None w/FEH; See page 7-206
17. Overlapping astragal:
 - a. NONE
18. Lock edge weatherstrip: OPTIONAL
19. Coordinator: Not necessary

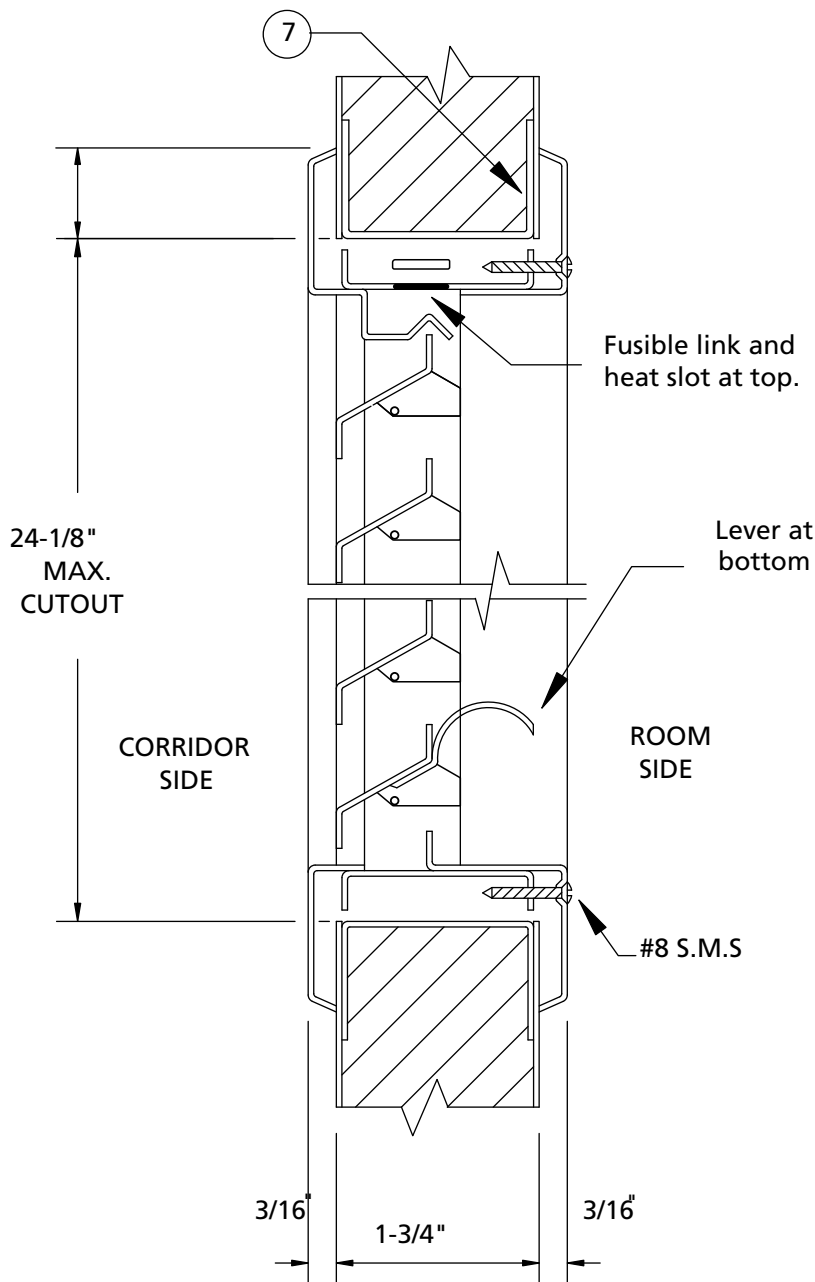
Distributor Tech Data

HONEYCOMB CORE FIRE DOOR DESIGNS



1. 3 hour fire doors restricted to 100 sq in max area and "Firelite" glazing, see page 7-131..
2. For 1-1/2 hour labeled doors, the total exposed glass area listed on pages 7-130 & 131 is allowed per door leaf. This area can be distributed among more than one individual lite kits.
3. For 3/4 hour and 20 minute doors, each lite cannot exceed the area listed on pages 7-130 & 131, although more than one lite may be permitted per door.
4. For embossed panel design guidelines, see page 2-202.
5. No more than of one louver is allowed per leaf. See page 7-206 for louver details and additional guidelines.
6. For steel glass trim kits, see pages 1-703 thru 1-704. Honeycomb core fire doors generally require a steel perimeter channel installed inside door around perimeter of cutout.

FUSIBLE LINK INVERTED SLAT FIRE DOOR LOUVER



FIRE RATINGS: UL & WH 3/4 OR 1-1/2 HOUR.
FIRE TEST: UL10B or UL10C
576 SQ. IN. MAX. LOUVER AREA.
LOUVER SIZE:
MAXIMUM -- 24" WIDTH & 24" HEIGHT,
MINIMUM -- 12" WIDTH & 6" HEIGHT.
18 GAGE C.R. STEEL FRAME AND BLADES.
FINISH: ONE COAT PRIMER PAINT.

1. For 1-3/4" thick fire door -- see fire door section for applicable door model and louver location.
2. Louvers are restricted to one per door which includes installation in each leaf of a pair.
3. Not permitted on doors with fire exit hardware or glass lites.
4. Should not be installed in 20 minute, 3 hour, or temperature rise fire doors.
5. 16 gage steel channels, around perimeter of cutout, are welded to face sheets
6. Shop prep of door required. Louver may be installed in plant or field.
7. Free air flow: approximately 40% free air area when blades are open.
8. Screens are not available.

Distributor Tech Data

VERTICALLY STEEL STIFFENED FIRE DOORS MEDALLION (NTR) - UL/WH LABEL SINGLE SWING

1. Fire Test:
 - a. UL 10B, UL 10C, UBC 7-2, NFPA 252
 - b. Hardware and gasketing should comply with test method and hourly rating
2. Hourly Rating:

3 hour, 1-1/2 hour, 1 hour, 3/4 hour, and 20 minute
3. Maximum Temperature rise rating: NTR
4. Maximum Door opening sizes:

See pages 7-111 thru 7-112B
5. Face Sheets:

See pages 7-111 thru 7-112B
6. Construction:

See pages 7-201 except as noted herein
7. Clearances: 1/8" at top, 1/8" maximum at hinge and lock edge, 3/4" maximum at sill (w/o threshold) see page 5-132
8. End channels:

see page 5-303
9. Hinge Preparations: ANSI A156.7 template
7 ga. steel reinforcement
 - a. full mortise, 4-1/2" standard or heavy weight
 1. handed
 2. non-handed
 - b. full mortis, 5" standard or heavy weight
 1. handed
 - c. half surface, pivots, anchor hinge, pocket pivots, and continuous
10. Door edges:

See page 5-202
11. Closer reinforcement:
 - a. optional - see page 5-201
 - b. when reinforcement is not furnished, a paper label is applied stating "...USE SEX BOLTS TO MOUNT CLOSER".
12. Lock Preparation:
 - a. Listed, positive latching, 1/2" minimum throw - Examples:
 1. Cylindrical type, 5" B.S. max.
 2. Mortise type, escutcheon or sectional trim
 3. Combination type
 4. Unit (preassembled) lock
 5. "Rigid" type lock
 6. "G" type lock
 7. "Integralock"
 8. 2 or 3-point latch
 - b. Supplemental deadlock preparation
 - c. Listed fire exit hardware
 1. Rim type
 2. Mortise type
 - d. Listed hospital latches
 - e. Interlock type "M" for elevator swinging door
13. Miscellaneous Hardware:
 - a. 105A magnetic switch
 - b. surface / concealed stop and shock absorbers
 - c. surface / concealed closers
 - d. electric power transfer
 - e. Listed electric hardware (hinges and locks)
 - f. Listed viewer: 1" maximum hole dia. located a minimum of 12" from top or either edge (1-1/2 hr. rated, UL or WH door)
14. Designs:

See page 7-305
15. Glass lite trim kits:

See pages 5-301 or 1-703 thru 1-704
16. Louver:

See page 7-305

**VERTICALLY STEEL STIFFENED FIRE DOORS
MEDALLION (NTR)-UL/WH LABEL
PAIRS, W/ASTRAGAL, NO OBS**

1. Fire Test:
 - a. UL 10B, UL 10C, UBC 7-2, NFPA 252
 - b. hardware and gasketing should comply with test method and hourly rating
2. Hourly rating:
3 hour, 1-1/2 hour, 1 hr., 3/4 hr. & 20 minute
3. Maximum Temperature rise rating: NTR
4. Maximum door opening sizes:
See pages 7-111 thru 7-112B
5. Face sheets:
See pages 7-111 thru 7-112B
6. Construction:
See page 7-301
7. Clearances:
1/8" top, 1/8" maximum at hinge edge,
1/8" maximum between leaves, and
3/4" maximum at sill (w/o threshold)
See page 7-132
8. End channels:
See page 7-301
9. Hinge Preparations:
See page 7-301
10. Door edges:
See page 7-301
11. Closer reinforcement:
See page 7-301
12. Lock preparation, active leaf:
 - a. Listed, positive latching, see section one
 - b. Pairs 3 hour: 5/8" minimum throw
 - c. All others 1/2" minimum throw
 1. Cylindrical type, 5" B.S. max.
 2. Mortise type, escutcheon or sectional trim
 3. Combination type
 4. Unit (preassembled) lock
 5. "Rigid" type lock
 6. "G" type lock
 7. "Integralock"
 8. 2 or 3-point latch
 - b. supplemental deadlock preparation
 - c. Listed fire exit hardware
 1. Rim type
 2. Mortise type
 - d. Listed electrical single point lock
13. Miscellaneous Hardware:
 - a. surface / concealed closers
 - b. surface / concealed stops and shock absorbers
 - c. Listed electric hardware (hinges and locks)
 - d. Listed viewer: 1" maximum hole dia. located a minimum of 12" from top or either edge (1-1/2 hr. rated, UL or WH door)
14. Designs:
See page 7-305
15. Glass lite trim kits:
See pages 5-301 or 1-703 thru 1-704
16. Louver:
See page 7-305
17. Astragal: Steel overlapping type...
See pages 1-604 or 1-601 & 1-602; Use with:
 - a. listed single point latch
 - b. listed mortise type FEH
 - c. overlap strip optional for 1-1/2 hr. or less rated, 18 or 16 ga. doors
18. Listed removable mullion use with...
 - a. Listed rim type FEH (two)
(no overlapping astragal necessary)
19. Lock preparation, Inactive leaf
 - a. with single point latch and astragal:
 1. Listed manual flush bolts
(top and bottom)
 2. Listed manual surface bolts
(top and bottom)
 3. Listed self latching flush bolts
(top and bottom)
 4. Listed auto-flush bolts
(top and bottom)
 - b. with rim device and removable mullion
 1. listed rim type FEH
 - c. Listed vertical rod FEH surface or concealed



Distributor Tech Data

VERTICALLY STEEL STIFFENED FIRE DOORS MEDALLION (NTR) - UL/WH LABEL TWO VERTICAL RODS, W/O ASTRAGAL

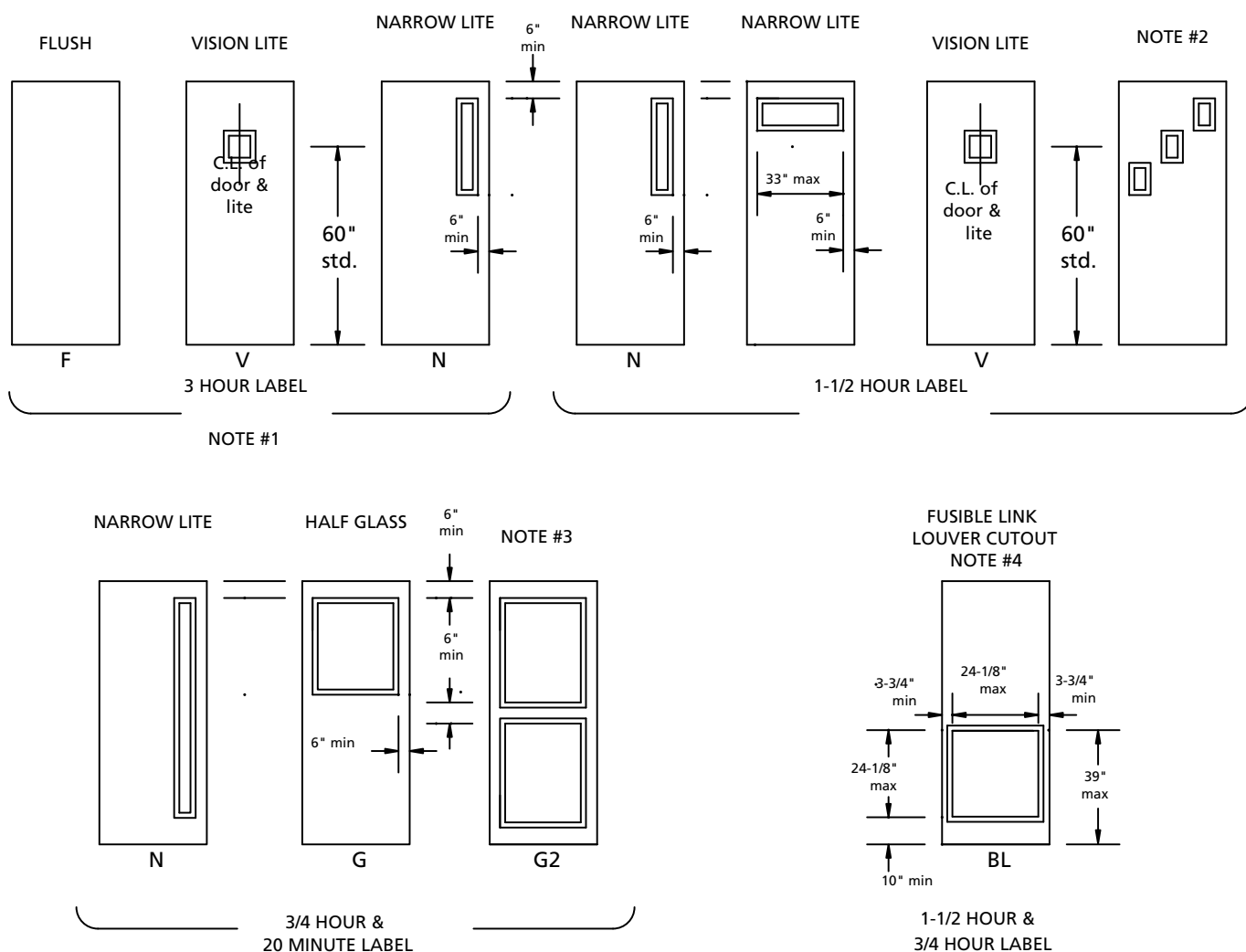
1. Fire Test:
 - a. UL 10B, UL 10C, UBC 7-2, NFPA 252
 - b. Hardware and gasketing should comply with test method and hourly rating
2. Hourly Rating:
 - 1-1/2 hour, 1 hour, 3/4 hour, and 20 minute
3. Maximum Temperature rise rating: NTR
4. Maximum Door opening sizes:
 - See pages 7-111 thru 7-112B
5. Face Sheets:
 - See pages 7-111 thru 7-112B
6. Construction:
 - See pages 7-301
7. Clearances:
 - see page 7-302
8. End channels:
 - see page 7-301
9. Hinge Preparations:
 - See page 7-301
10. Door edges:
 - See page 7-301
11. Closer reinforcement:
 - See page 7-301
12. Listed Fire Exit Hardware (one each leaf)
 - a. Vertical rod type
 1. surface mounted
 2. concealed
 - a. door must be factory prepared for concealed vertical rod FEH
13. Designs:
 - See page 7-305
14. Glass lite trim kits:
 - See pages 5-301 or 1-703 thru 1-704
15. Louver:
 - None w/FEH, see page 7-305

**VERTICALLY STEEL STIFFENED FIRE DOORS
MEDALLION (NTR)-UL/WH LABEL
PAIRS, W/O ASTRAGAL, W/OBS**

1. Fire Test:
 - a. UL 10B, UL 10C, UBC 7-2, NFPA 252
 - b. hardware and gasketing should comply with test method and hourly rating
2. Hourly rating:
1-1/2 hour, 1 hr., 3/4 hour & 20 minute
3. Maximum Temperature rise rating: NTR
4. Maximum door opening sizes:
See pages 7-111 thru 7-112B
5. Face sheets:
See pages 7-111 thru 7-112B
6. Construction:
See page 5-201 except as noted herein
7. Clearances:
See page 7-302
8. End channels:
See page 7-301
9. Hinge Preparations:
See page 7-301
10. Door edges:
See page 7-301
11. Closer reinforcement:
See page 7-301
12. Lock preparation, active leaf:
 - a. See page 7-301
 - b. Listed mortise type FEH
13. Inactive Leaf lock and strike preparation:
 - a. Listed open back strike (OBS)
 1. verify compatibility with single point latch or FEH
 2. depending on mfg, strike may or may not be handed - coordinate with hand of door and door lock edge
 3. door is factory prepared for OBS
 - b. Listed Fire Exit Hardware (FEH)
 1. vertical rod type
 - a. concealed
 1. factory prep req'd
 2. insure that OBS and concealed rod/operator don't interfere
 - b. surface mounted
14. Designs:
refer to page 7-305
15. Glass lite trim kits:
See pages 5-301 or 1-703 thru 1-704
16. Louver:
Non w/FEH See page 7-305
17. Overlapping astragal:
 - a. NONE
18. Lock edge weatherstrip: OPTIONAL
19. Coordinator: Not necessary

Distributor Tech Data

VERTICALLY STEEL STIFFENED NTR - FIRE DOOR DESIGNS



1. 3 hour fire doors restricted to 100 sq in max area and "Firelite" glazing, see page 7-131.
2. For 1-1/2 hour labeled doors, the total exposed glass area listed on pages 7-130 & 131 is allowed per door leaf. This area can be distributed among more than one individual lite kits.
3. For 3/4 hour and 20 minute doors, each lite cannot exceed the area listed on pages 7-130 & 131, although more than one lite may be permitted per door.
4. No more than of one louver is allowed per leaf. See page 7-206 for louver details and additional guidelines.
5. See page 5-301 for Medallion flush glazing trim kit. For optional applied steel glass trim kits, see pages 1-703 thru 1-704. Medallion fire doors require steel perimeter channel installed inside door around perimeter of glass cutout.

Distributor Tech Data

VERTICALLY STEEL STIFFENED FIRE DOORS MEDALLION (450° F, 232° C) - UL/WH LABEL SINGLE SWING

1. Fire Test:
 - a. UL 10B, UL 10C, UBC 7-2, NFPA 252
 - b. Hardware and gasketing should comply with test method and hourly rating
2. Hourly Rating:

1-1/2 hour, 1 hour, 3/4 hour, and 20 minute
3. Maximum Temperature rise rating: 450° F (232° C)
4. Maximum Door opening sizes:

See pages 7-116 thru 7-116C
5. Face Sheets:

See pages 7-116 thru 7-116C
6. Construction:
 - a. See pages 7-312
 - b. Insulation: Rock wool
7. Clearances: 1/8" at top, 1/8" maximum at hinge and lock edge, 3/4" maximum at sill (w/o threshold) see page 7-132
8. End channels:

see page 5-203
9. Hinge Preparations: ANSI A156.7 template
7 ga. steel reinforcement
 - a. full mortise, 4-1/2" standard or heavy weight - handed
 - b. full mortise, 5" standard or heavy weight handed
 - c. half surface, pivots, continuous anchor hinges, and pocket pivots available
10. Door edges:

See page 7-301
11. Closer reinforcement:
 - a. optional - see page 7-312
 - b. when reinforcement is not furnished, a paper label is applied stating "...USE SEX BOLTS TO MOUNT CLOSER".
12. Lock Preparation:
 - a. Listed, positive latching, 1/2" minimum throw - examples:
 1. Cylindrical type, 5" B.S. max.
 2. Mortise type, escutcheon or sectional trim
 3. Combination type
 4. Unit (preassembled) lock
 5. "Rigid" type lock
 6. "G" type lock
 7. "Integralock"
 8. 2 or 3-point latch
 - b. Supplemental deadlock preparation
 - c. Listed fire exit hardware
 1. Rim type
 2. Mortise type
 - d. Listed hospital latches
 - e. Interlock type "M" for elevator swinging door
13. Miscellaneous Hardware:
 - a. 105A magnetic switch
 - b. surface / concealed stop and shock absorbers
 - c. surface / concealed closers
 - d. electric power transfer
 - e. Listed electric hardware (hinges and locks)
 - f. Listed viewer: 1" maximum hole dia. located a minimum of 12" from top or either edge (1-1/2 hr. rated, UL or WH door)
14. Designs:

See page 7-311
15. Glass lite trim kits:

See pages 5-301 or 1-703 thru 1-704
16. Louver:

Not Applicable

**VERTICALLY STEEL STIFFENED FIRE DOORS
MEDALLION (450° F, 232° C)-UL/WH LABEL
PAIRS, W/ASTRAGAL, NO OBS**

1. Fire Test:
 - a. UL 10B, UL 10C, UBC 7-2, NFPA 252
 - b. Hardware and gasketing should comply with test method and hourly rating
2. Hourly Rating:
1-1/2 hour, 1 hour, 3/4 hour, and 20 minute
3. Maximum Temperature rise rating: 450° F (232° C)
4. Maximum Door opening sizes:
See pages 7-116 thru 7-116C
5. Face Sheets:
See pages 7-116 thru 7-116C
6. Construction:
 - a. See pages 7-312
7. Clearances: 1/8" at top, 1/8" maximum at hinge edge, 1/8" maximum between leaves, and 3/4" maximum at sill
(w/o threshold) see page 7-132
8. End channels:
see page 5-203
9. Hinge Preparations: See page 7-307
10. Door edges:
See page 7-301
11. Closer reinforcement:
see page 7-312
12. Lock Preparation:
Active Leaf listed positive latching
See page 7-307
13. Miscellaneous Hardware:
 - a. surface / concealed closers
 - b. surface / concealed stop and shock absorbers
 - c. Listed electric hardware (hinges and locks)
 - d. Listed viewer: 1" maximum hole dia. located a minimum of 12" from top or either edge (1-1/2 hr. rated, UL or WH door)
14. Designs:
See page 7-311
15. Glass lite trim kits:
See pages 5-301 or 1-703 thru 1-704
16. Louver:
Not Applicable
17. Astragal: Steel overlapping type...
See page 1-604 or 1-601 & 1-602
 - a. listed single point latch
 - b. listed mortise type FEH
 - c. overlap strip optional for 1-1/2 hr. or less rated, 18 or 16 ga. doors.
18. Listed removable mullion use with...
 - a. Listed rim type FEH (two) (no overlapping astragal necessary)
19. Lock Preparation, Inactive Leaf:
 - a. with single point latch and astragal
 1. Listed manual flush bolts (Top & Bottom)
 2. Listed manual surface bolts (Top & Bottom)
 3. Listed self latching flush bolts (Top & Bottom)
 4. Listed auto flush bolts (Top & Bottom)
 - b. with rim device and removable mullion
 1. Listed rim type FEH
 - c. Listed vertical rod FEH surface or concealed



Distributor Tech Data

VERTICALLY STEEL STIFFENED FIRE DOORS MEDALLION (450° F, 232° C) - UL/WH LABEL TWO VERTICAL RODS, W/O ASTRAGAL

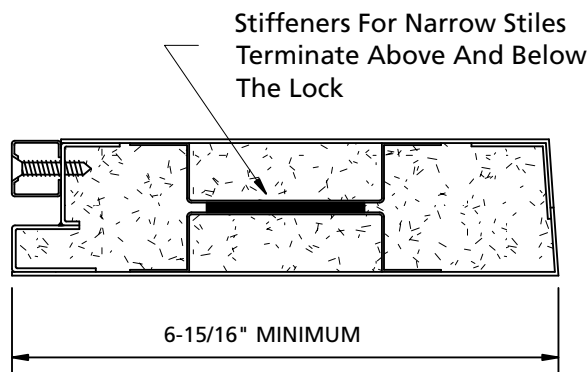
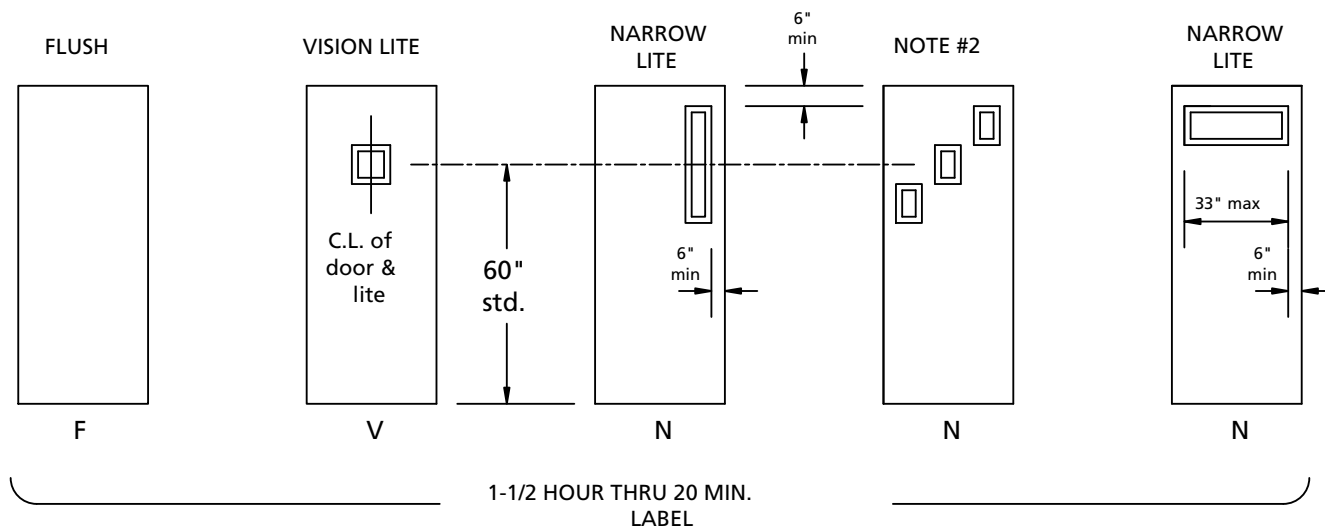
1. Fire Test:
 - a. UL 10B, UL 10C, UBC 7-2, NFPA 252
 - b. Hardware and gasketing should comply with test method and hourly rating
2. Hourly Rating available:
1-1/2 hour, 1 hour, 3/4 hour, and 20 minute
3. Maximum Temperature rise rating: 450° F (232° C)
4. Maximum Door opening sizes:
See pages 7-116 thru 7-116C
5. Face Sheets:
See pages 7-116 thru 7-116C
6. Construction:
See pages 7-312
7. Clearances:
see page 7-308
8. End channels:
see page 5-203
9. Hinge Preparations:
See page 7-307
10. Door edges:
See page 7-301
11. Closer reinforcement:
See page 7-312
12. Listed Fire Exit Hardware (one each leaf)
 - a. Vertical rod type
 1. Surface mounted
 2. Concealed
 - a. door must be factory prepared for concealed vertical rod FEH
13. Designs:
See page 7-311
14. Glass lite trim kits:
See pages 5-301 or 1-703 thru 1-704
16. Louver:
Not Applicable

**VERTICALLY STEEL STIFFENED FIRE DOORS
MEDALLION (450° F, 232° C)-UL/WH LABEL
PAIRS, W/O ASTRAGAL, W/OBS**

1. Fire Test:
 - a. UL 10B, UL 10C, UBC 7-2, NFPA 252
 - b. Hardware and gasketing should comply with test method and hourly rating
2. Hourly Rating:
1-1/2 hour, 1 hour, 3/4 hour, and 20 minute
3. Maximum Temperature rise rating: 450° F (232° C)
4. Maximum Door opening sizes:
See pages 7-116 thru 7-116C
5. Face Sheets:
See pages 7-116 thru 7-116C
6. Construction:
 - a. See pages 7-312 except as noted herein
7. Clearances:
see page 7-308
8. End channels:
see page 5-203
9. Hinge Preparations: See page 7-307
10. Door edges:
See page 7-301
check open back strike template
11. Closer reinforcement:
see page 7-312
12. Lock Preparation Active Leaf
 - a. See page 7-307
 - b. Listed mortise type FEH
13. Inactive leaf lock and strike preparation:
 - a. Listed open back strike (OBS)
 1. verify compatibility with single point latch or FEH
 2. Depending on mfg. strike may or may not be handed - coordinate with hand of door and door lock edge
 - b. Listed fire exit hardware (FEH)
 1. vertical rod type
 - a. concealed
 1. factory prep req'd
 2. Insure that OBS and concealed rod / operator don't interfere
 3. Door is factory prepared for OBS
 - b. surface mounted
14. Designs:
See page 7-311
15. Glass lite trim kits:
See pages 5-301 or 1-703 thru 1-704
16. Louver:
Not Applicable
17. Overlapping astragal
 - a. Not applicable
18. Lock edge weatherstrip: OPTIONAL
19. Coordinator: Not necessary

Distributor Tech Data

450° F, (232° C) TEMPERATURE RISE RATED FIRE DOOR DESIGNS



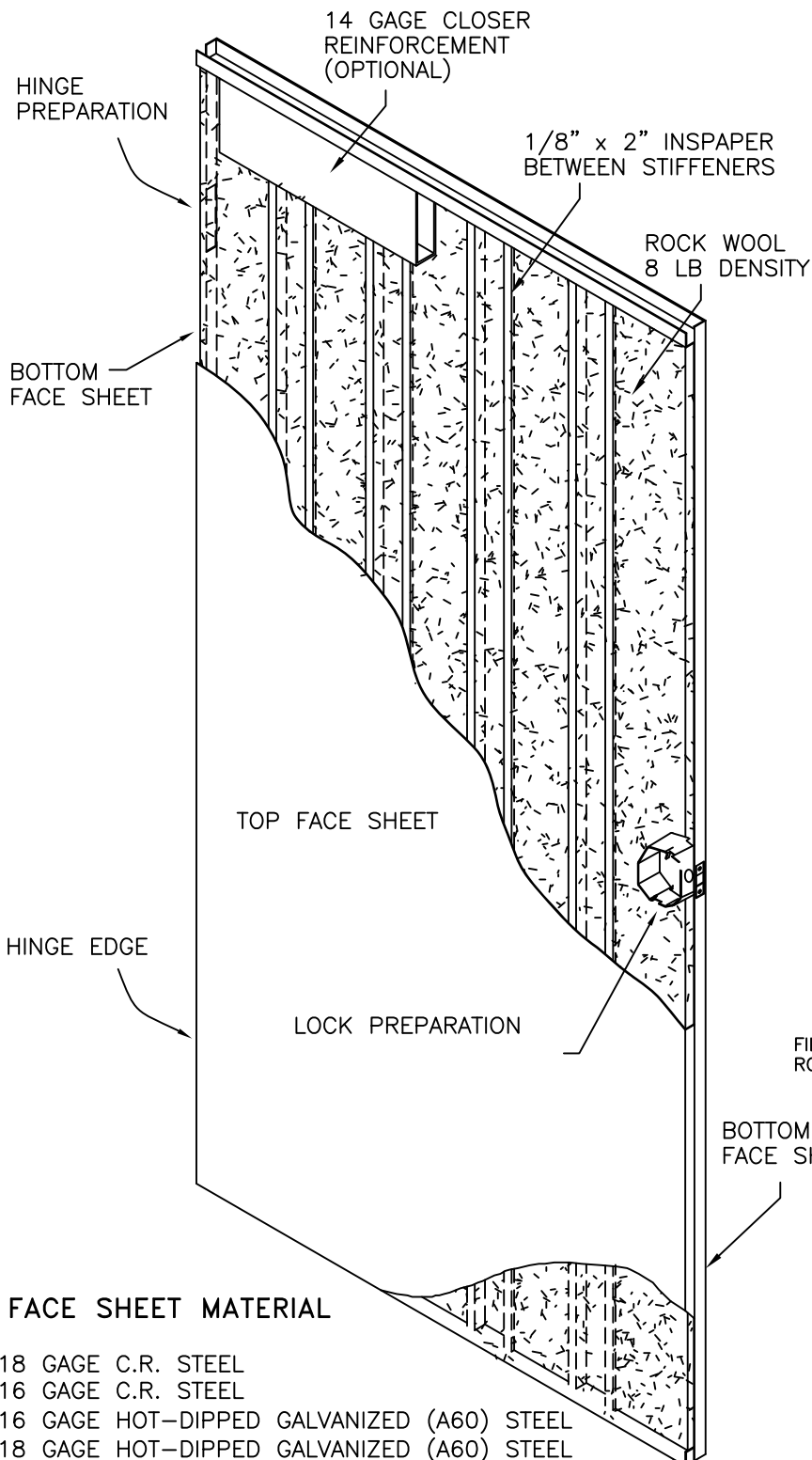
STANDARD FLUSH GLAZING TRIM

See page 5-301 for details
or see Note #4 for options.

1. Doors with a temperature rise rating - 100 sq. in. exposed glass maximum.
2. For 1-1/2 hour labeled doors, the total exposed glass area listed on pages 7-130 & 131 is allowed per door leaf. This area can be distributed among more than one individual lite kits.
3. For 3/4 hour and 20 minute doors, each lite cannot exceed the area listed on pages 7-130 & 131, although more than one lite may be permitted per door.
4. For applied steel glass trim kits, see pages 1-703 thru 1-704.
5. Minimum exposed glass width is 3".

Distributor Tech Data

450° F (232° C) TEMP. RISE RATED
FIRE DOOR CONSTRUCTION



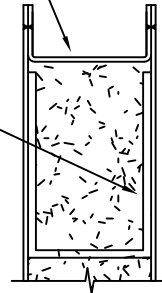
FACE SHEET MATERIAL

- 18 GAGE C.R. STEEL
- 16 GAGE C.R. STEEL
- 16 GAGE HOT-DIPPED GALVANIZED (A60) STEEL
- 18 GAGE HOT-DIPPED GALVANIZED (A60) STEEL

HINGE BACKSET IS 1/4" (VARIES PER CONDITION)

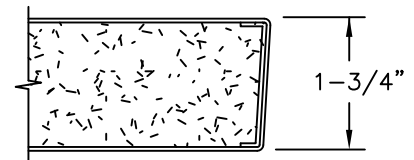
RECESSED 16 GAGE TOP CHANNEL IS WELDED TO BOTH FACES

CLOSER REINFORCEMENT (14Gx6"x20")



VERTICAL SECTION THRU TOP OF DOOR

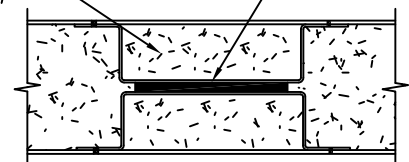
VERTICAL EDGES ARE CONTINUOUSLY WELDED WITH 18 GA. MINIMUM BACKUP ANGLE FULL HEIGHT OF DOOR AND DRESSED SMOOTH TO OBTAIN COMPLETELY SEAMLESS HINGE AND LOCK EDGES.



HORIZONTAL SECTION THRU LOCK EDGE

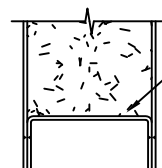
22 GAGE FORMED STEEL STIFFENERS POSITIONED NOT MORE THAN 6" APART AND SPOT WELDED TO BOTH FACE SHEETS AT 5" O.C. MAX.

FILL CAVITY WITH ROCK WOOL-8# DENSITY 1/8" x 2" INSPAPER



HORIZONTAL SECTION THRU VERTICAL STIFFENER

RECESSED 16 GAGE BOTTOM CHANNEL IS SPOT WELDED TO BOTH FACE SHEETS



VERTICAL SECTION THRU BOTTOM OF DOOR

Distributor Tech Data

STILE AND RAIL FIRE DOORS THRULITE - UL/WH LABEL SINGLE SWING

1. Fire Test:
 - a. UL 10B, UL 10C, UBC 7-2, NFPA 252
 - b. Hardware and gasketing should comply with test method and hourly rating
2. Hourly Rating:
 - 3/4 hour, and 20 minute
3. Maximum Temperature rise rating: NTR
4. Maximum Door opening sizes:
 - See pages 7-115 thru 7-115C
5. Face Sheets:
 - 16 ga. ONLY tubular construction
6. Construction:
 - See pages 6-301
7. Clearances: 1/8" at top, 1/8" maximum at hinge and lock edge, 3/4" maximum at sill (w/o threshold) see page 7-132
8. Top and bottom of door (see page 6-301)
 - a. standard flush top - tubular construction
 - b. recessed bottom channel
 - c. special bottom channel for automatic door bottom available.
9. Hinge Preparations:
 - a. ANSI A156.7 template 7 ga. steel reinforcement
 - b. full mortise, 4-1/2" or 5" standard or heavy weight
 - c. half surface, pivots, anchor hinge, pocket pivots, and continuous
10. Door edges: Seamless tubular construction
 - a. hinge and lock edge are beveled 1/8" in 2"
11. Closer reinforcement:
 - a. optional - see page 6-301
 - b. when reinforcement is not furnished, a paper label is applied stating "...USE SEX BOLTS TO MOUNT CLOSER".
12. Lock Preparation:
 - a. Listed, positive latching, 1/2" minimum throw - see section one
 1. Cylindrical type
 2. Mortise type, escutcheon or sectional trim
 3. Combination type
 4. Unit (preassembled) lock
 - b. Supplemental deadlock preparation
 - c. Listed fire exit hardware
 1. Rim type
 2. Mortise type
13. Miscellaneous Hardware:
 - a. magnetic switch
 - b. surface stop and shock absorbers
 - c. surface closers
14. Designs:
 - See page 7-405
15. Glass lite trim kits:
 - See pages 6-401 and 6-402

**STILE AND RAIL FIRE DOORS
THRULITE - UL/WH LABEL
PAIRS, W/ASTRAGAL, NO OBS**

1. Fire Test:
 - a. UL 10B, UL 10C, UBC 7-2, NFPA 252
 - b. Hardware and gasketing should comply with test method and hourly rating
2. Hourly Rating:
3/4 hour, and 20 minute
3. Maximum Temperature rise rating: NTR
4. Maximum Door opening sizes:
See pages 7-115 thru 7-115C
5. Face Sheets:
16 ga. ONLY tubular construction
6. Construction:
See pages 6-301
7. Clearances: 1/8" at top, 1/8" maximum at hinge edge, 1/8" maximum between leaves and 3/4" maximum at sill (w/o threshold) see page 7-132
8. Top and bottom of door
see page 6-301
9. Hinge Preparations: Handed
See section one
10. Door edges: Seamless tubular construction
See page 7-401
11. Closer reinforcement:
See page 7-401
12. Lock Preparation - Active leaf (see section one)
 - a. Listed, positive latching, 1/2" minimum throw - examples:
 1. Cylindrical type
 2. Mortise type, escutcheon or sectional trim
 3. Combination type
 4. Unit (preassembled) lock
 - b. Supplemental deadlock preparation
 - c. Listed fire exit hardware
 1. Rim type
 2. Mortise type
13. Miscellaneous Hardware:
 - a. surface stop and shock absorbers
 - b. surface closers
14. Designs:
See page 7-405
15. Glass lite trim kits:
See pages 6-401 and 6-402
18. Astragal: Steel overlapping type
See pages 1-601, 1-602, & 1-604
 - a. listed single point latch
 - b. listed mortise type FEH
 - c. overlap strip optional
19. Listed removable mullion use with
 - a. Listed rim type FEH (two) (no overlapping astragal necessary)
20. Lock preparation - inactive leaf (see section one)
 - a. with single point latch and astragal
 1. Listed manual flush bolts (top and bottom)
 2. Listed manual surface bolts (top and bottom)
 3. Listed self latching flush bolts (top and bottom)
 4. Listed auto-flush bolts (top and bottom)
 - b. with rim device and removable mullion
 1. Listed rim type FEH
 - c. Listed vertical rod FEH surface



Distributor Tech Data

STILE AND RAIL FIRE DOORS THRULITE - UL/WH LABEL PAIRS, TWO VERTICAL RODS, W/O ASTRAGAL

1. Fire Test:
 - a. UL 10B, UL 10C, UBC 7-2, NFPA 252
 - b. Hardware and gasketing should comply with test method and hourly rating
2. Hourly Rating:
 - 3/4 hour, and 20 minute
3. Maximum Temperature rise rating: NTR
4. Maximum Door opening sizes:
 - See pages 7-115 thru 7-115C
5. Face Sheets:
 - 16 ga. ONLY tubular construction
6. Construction:
 - See page 7-401
7. Clearances:
 - See page 7-401
8. Top and bottom of door
 - See page 7-401
9. Hinge Preparations:
 - See page 7-401
10. Door edges:
 - See page 7-401
11. Closer reinforcement:
 - See page 7-401
12. Listed Fire Exit Hardware (one each leaf)
 - a. Vertical rod type
 1. Surface mounted
 2. Top rod only optional
13. Designs:
 - See page 7-405
15. Glass lite trim kits:
 - See pages 6-401 and 6-402

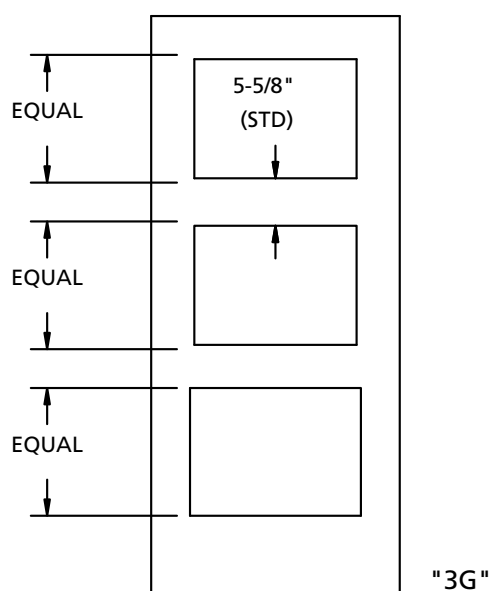
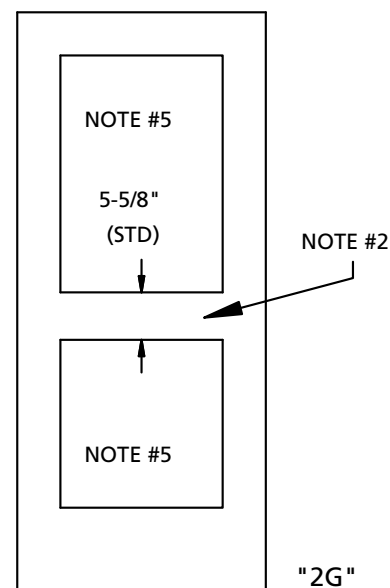
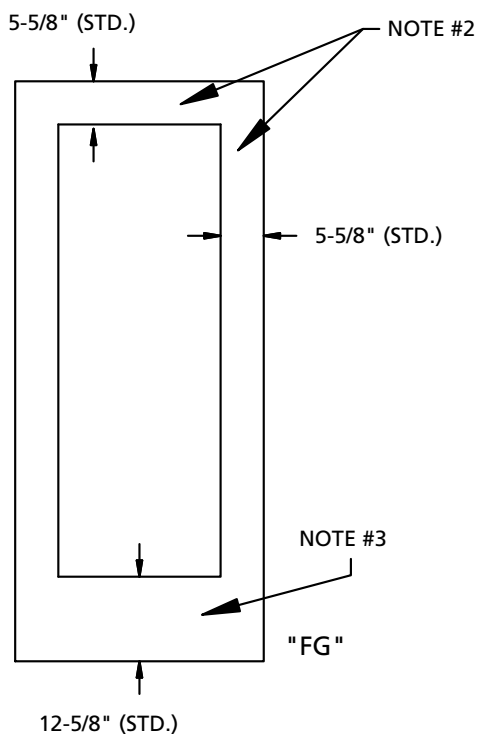
Distributor Tech Data

STILE AND RAIL FIRE DOORS THRULITE - UL/WH LABEL PAIRS, W/O ASTRAGAL, W/OBS

1. Fire Test:
 - a. UL 10B, UL 10C, UBC 7-2, NFPA 252
 - b. Hardware and gasketing should comply with test method and hourly rating
2. Hourly Rating:
3/4 hour, and 20 minute
3. Maximum Temperature rise rating: NTR
4. Maximum Door opening sizes:
See pages 7-115 thru 7-115C
5. Face Sheets:
16 ga. ONLY tubular construction
6. Construction:
See pages 6-301
7. Clearances:
See page 7-401
8. Top and bottom of door
See page 7-401
9. Hinge Preparations:
See page 7-401
10. Door edges:
See page 7-401
Lock edge to suit open back strike;
check open back strike template
11. Closer reinforcement:
See page 7-401
12. Lock Preparation - Active leaf
 - a. Listed, single point latch 1/2" minimum throw
 - b. Listed mortise type FEH
13. Inactive Leaf lock and strike preparation:
 - a. Listed open back strike (OBS)
 1. verify compatibility with single point latch or FEH
 2. depending on mfg, strike may or may not be handed - coordinate with hand of door and door lock edge
 3. door is factory prepared for OBS
 - b. Listed Fire Exit Hardware (FEH)
 1. vertical rod type - surface mounted
14. Designs:
See page 7-405
15. Glass lite trim kits:
See pages 6-401 and 6-402
16. Overlapping astragal:
 - a. NONE
17. Lock edge weatherstripping: OPTIONAL
18. Coordinator: Not necessary

Distributor Tech Data

STILE AND RAIL FIRE DOOR DESIGNS



NOTES

1. Glass openings: See page 7-130 & 7-131 for glazing guidelines.
2. 3-5/8" stiles and top rail optional. Caution: Verify that required listed hardware for narrow stiles and special prep are available.
3. 10-5/8", 14-5/8", & 16-5/8" bottom rail are optional.
4. Louvers not allowed
5. 3/8" panels are permitted in lieu of glazing (see page 6-201).

Distributor Tech Data

POLYURETHANE CORE FIRE DOORS IMPERIAL/VERSADOOR - UL/WH LABEL SINGLE SWING

1. Fire Test:
 - a. UL 10B, UL 10C, UBC 7-2, NFPA 252
 - b. Hardware and gasketing should comply with test method and hourly rating
2. Hourly Rating:
3 hour, 1-1/2 hour, 1 hour, 3/4 hour, and 20 minute
3. Maximum Temperature rise rating: NTR
4. Maximum Door opening sizes:
See pages 7-114 thru 7-114C
5. Face Sheets:
See pages 7-114 thru 7-114C
6. Construction:
See pages 4-201 & 4-202 except as noted herein
7. Clearances: 1/8" at top, 1/8" maximum at hinge and lock edge, 3/4" maximum at sill (w/o threshold) see page 7-132 & 7-133
8. End channels:
See page 1-201
9. Hinge Preparations: ANSI A156.7 template 7 ga. steel reinforcement
 - a. full mortise, 4-1/2" standard or heavy weight
 1. Imperial - handed
 2. Versadoor - non-handed
 - b. full mortise, 5" standard or heavy weight
 1. Imperial - handed
 - c. half surface, pivots, anchor hinge, pocket pivots, and continuous
10. Door edges: Seamless tubular construction
 - a. square hinge edge
 - b. lock edge
 1. Imperial: beveled 1/8" in 2"
 2. Versadoor: square
11. Closer reinforcement:
 - a. optional - see page 1-417 & 1-418
 - b. when reinforcement is not furnished, a paper label is applied stating "...USE SEX BOLTS TO MOUNT CLOSER".
12. Lock Preparation:
 - a. Listed, positive latching, 1/2" minimum throw - see section one
 1. Cylindrical type, 5" B.S. max.
 2. Mortise type, escutcheon or sectional trim
 3. Combination type
 4. Unit (preassembled) lock
 5. "Rigid" type lock
 6. "G" type lock
 7. "Integralock"
 8. 2 or 3 point latch
 - b. Supplemental deadlock preparation
 - c. Listed fire exit hardware
 1. Rim type
 2. Mortise type
 - d. Listed hospital latches
 - e. Interlock type "M" for elevator swinging door
13. Miscellaneous Hardware:
 - a. magnetic switch
 - b. surface / concealed stop and shock absorbers
 - c. surface /concealed closers
 - d. electric power transfer
 - e. Listed electric hardware (hinges and locks)
 - f. Listed viewer: 1" maximum hole dia. located a minimum of 12" from top or either edge (1-1/2 hr. rated, UL or WH door)
14. Designs:
See page 7-504
15. Glass lite trim kits:
See pages 1-703 and 1-704
16. Louver:
See page 7-206

**POLYURETHANE CORE FIRE DOORS
IMPERIAL/VERSADOOR - UL/WH LABEL
PAIRS, W/ASTRAGAL**

1. Fire Test:
 - a. UL 10B, UL 10C, UBC 7-2, NFPA 252
 - b. Hardware and gasketing should comply with test method and hourly rating
2. Hourly Rating:
 - 3 hour, 1-1/2 hour, 1 hour, 3/4 hour, and 20 minute
3. Maximum Temperature rise rating: NTR
4. Maximum Door opening sizes:
 - See pages 7-114 thru 7-114C
5. Face Sheets:
 - See pages 7-114 thru 7-114C
6. Construction:
 - See pages 7-501
7. Clearances:
 - 1/8" top, 1/8" maximum at hinge edge. 1/8" maximum between leaves, and 3/4" maximum at sill (w/o threshold)
 - See pages 7-132 & 7-133
8. End channels
 - See page 7-501
9. Hinge Preparations:
 - See page 7-501
10. Door edges:
 - See page 7-501
11. Closer reinforcement:
 - See page 7-501
12. Lock Preparation - Active leaf (see section one)
 - a. Listed, positive latching, 1/2" minium throw, examples:
 1. Cylindrical type, 5" B.S. max.
 2. Mortise type, escutcheon or sectional trim.
 3. Combination type
 4. Unit (preassembled) lock
 5. "Rigid" type lock
 6. "G" type lock
 7. "Integralock"
 8. 2 or 3-point latch
 - b. supplemental deadlock preparation
 - c. Listed Fire Exit Hardware
 1. Rim type
 2. Mortise type
 - d. Listed electrical single point lock
13. Miscellaneous Hardware:
 - a. Surface / concealed closers
 - c. Surface / concealed stops and shock absorbers
 - e. Listed electric hardware (hinges and locks)
 - f. Listed viewer: 1" maximum hole dia. located a minimum of 12" from top or either edge (1-1/2 hr. rated UL or WH door)
14. Designs:
 - See page 7-504
15. Glass lite trim kits:
 - See pages 1-703 and 1-704
16. Louver:
 - See page 7-206
17. Astragal: Steel overlapping type
 - See page 1-601 & 1-602
 - a. listed single point latch
 - b. listed mortise type FEH
 - c. overlap strip optional for 1-1/2 hr. or less rated, 18 or 16 ga. doors
18. Listed removable mullion use with
 - a. Listed rim type FEH (two) (no overlapping astragal necessary)
19. Lock Preparation, Inactive Leaf, see section one
 - a. with single point latch and astragal:
 1. Listed manual flush bolts (Top & bottom)
 2. Listed manual surface bolts (Top & bottom)
 3. Listed self latching flush bolts (Top & bottom)
 4. Listed auto-flush bolts (Top & bottom)
 - b. with rim device and removable mullion
 1. Listed rim type FEH
 - c. Listed vertical rod FEH surface or concealed

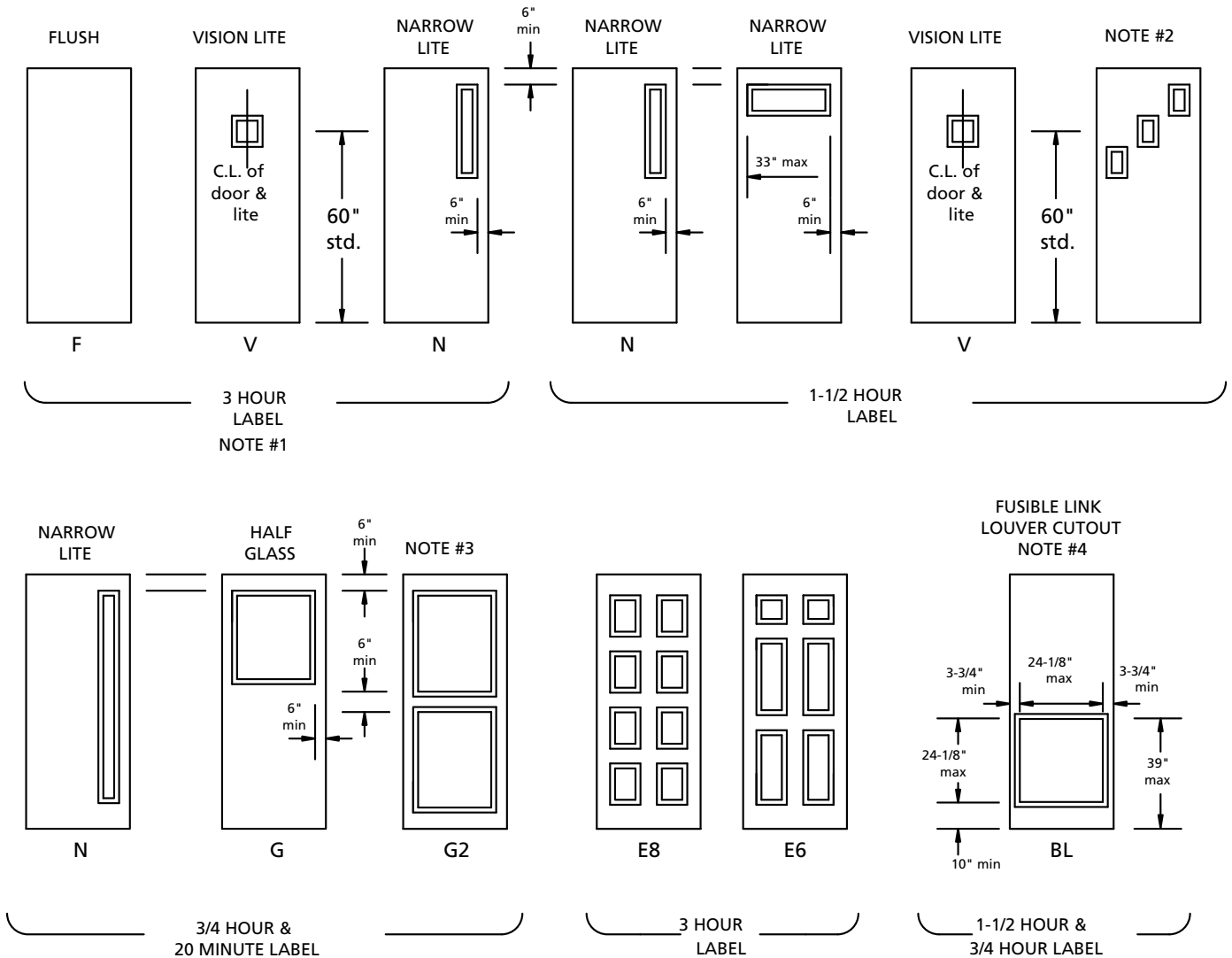


Distributor Tech Data

POLYURETHANE CORE FIRE DOORS IMPERIAL/VERSADOOR - UL/WH LABEL PAIRS, TWO VERTICAL RODS W/O ASTRAGAL

1. Fire Test:
 - a. UL 10B, UL 10C, UBC 7-2, NFPA 252
 - b. Hardware and gasketing should comply with test method and hourly rating
2. Hourly Rating:
1-1/2 hour, 1 hour, 3/4 hour, and 20 minute
3. Maximum Temperature rise rating: NTR
4. Maximum Door opening sizes:
See pages 7-114 thru 7-114C
5. Face Sheets:
See pages 7-114 thru 7-114C
6. Construction:
See page 7-501
7. Clearances:
see page 7-502
8. End channels:
See page 1-501
9. Hinge Preparations:
See page 7-501
10. Door edges:
See page 7-501
11. Closer reinforcement:
See page 7-501
12. Listed Fire Exit Hardware (one each leaf)
 - a. vertical rod type
 1. surface mounted
 2. Concealed
 - a. door must be factory prepared for concealed vertical rod FEH
 3. top rod only optional
13. Designs:
See page 7-504
14. Glass lite trim kits:
See pages 1-703 and 1-704
15. Louver:
None w/FEH
16. Madera finish (steel wood grain)

POLYURETHANE CORE FIRE DOOR DESIGNS



1. 3 hour fire doors restricted to 100 sq in max area and "Firelite" glazing, see page 7-131.
2. For 1-1/2 hour labeled doors, the total exposed glass area listed on pages 7-130 & 131 is allowed per door leaf. This area can be distributed among more than one individual lite kits.
3. For 3/4 hour and 20 minute doors, each lite cannot exceed the area listed on pages 7-130 & 131, although more than one lite may be permitted per door.
4. No more than of one louver is allowed per leaf. See page 7-206 for louver details and additional guidelines.
5. For steel glass trim kits, see pages 1-703 thru 1-704. Polyurethane core fire doors require steel perimeter channel installed inside door around perimeter of cutout.

Distributor Tech Data

SOLID CORE FIRE DOORS FUEGO (250° F, 121° C) UL/WH LABEL SINGLE SWING

1. Fire Test:
 - a. UL 10B, UL 10C, UBC 7-2, NFPA 252
 - b. Hardware and gasketing should comply with test method and hourly rating
2. Hourly Rating:
3 hour, 1-1/2 hour, 1 hour, 3/4 hour, and 20 minute
3. Maximum Temperature rise rating: 250°
4. Maximum Door opening sizes:
See pages 7-113 thru 7-113C
5. Face Sheets:
See pages 7-113 thru 7-113C
6. Construction:
See page 7-509
7. Clearances:
1/8" at top, 1/8" maximum at hinge and lock edge, 3/4" maximum at sill (w/o threshold) See page 7-132
8. End channels:
See page 7-509
9. Hinge Preparations: ANSI A156.7 template
7 ga. steel reinforcement
 - a. full mortise, 4-1/2" standard or heavy weight
 - b. full mortise, 5" standard or heavy weight
 - c. half surface, continuous, pivots, anchor hinges, and pocket pivots
10. Door edges
See page 7-509
11. Closer reinforcement:
 - a. optional - see 7-509
 - b. when reinforcement is not furnished, a paper label is applied stating ...USE SEX BOLTS TO MOUNT CLOSER
12. Lock Preparation:
 - a. Listed positive latching, 1/2" minimum throw - see section one
 1. Cylindrical type, 5" B.S. max.
 2. Mortise type, escutcheon or sectional trim
 3. Combination type
 4. Unit (preassembled) lock
 5. "Rigid" type lock
 6. "G" type lock
 7. "Integralock"
 8. 2 or 3- point latch
 - b. Supplemental deadlock preparation
 - c. Listed fire exit hardware
 1. Rim type
 2. Mortise type
 - d. Listed hospital latches
 - e. Interlock type "M" for elevator swinging door
13. Miscellaneous Hardware:
 - a. magnetic switch
 - b. surface/concealed stop and shock absorbers
 - c. surface/concealed closers
 - d. electric power transfer
 - e. Listed electric hardware (hinges and locks)
 - f. Listed viewer: 1" maximum hole dia. located a minimum of 12" from top or either edge (1-1/2" hr rated UL or WH door)
14. Designs:
See page 7-508
15. Glass lite trim kits:
See pages 7-508 or 1-703 thru 1-704
16. Louver:
Not permitted

Distributor Tech Data

SOLID CORE FIRE DOORS

FUEGO (250° F, 121° C) - UL/WH LABEL

PAIRS, W/ASTRAGAL, NO OBS

1. Fire Test:
 - a. UL 10B, UL 10C, UBC 7-2, NFPA 252
 - b. Hardware and gasketing should comply with test method and hourly rating
2. Hourly Rating:
 - 3 hour, 1-1/2 hour, 1 hour, 3/4 hour, and 20 minute
3. Maximum Temperature rise rating: 250°
4. Maximum Door opening sizes:
See pages 7-113 thru 7-113C
5. Face Sheets:
See pages 7-113 thru 7-113C
6. Construction:
See pages 7-509
7. Clearances:
 - 1/8" top, 1/8" maximum at hinge edge. 1/8" maximum between leaves, and 3/4" maximum at sill (w/o threshold)See pages 7-132
8. End channels
See page 7-505 & 7-509
9. Hinge Preparations:
See page 7-505 & 7-509
10. Door edges:
See page 7-505 & 7-509
11. Closer reinforcement:
See page 7-505 & 7-509
12. Lock Preparation - Active leaf (see section one)
 - a. Listed, positive latching, minium throw: 5/8" for 1-1/2 & 3 hr. rating, All others 1/2" min throw
Examples:
 1. Cylindrical type, 5" B.S. max.
 2. Mortise type, escutcheon or sectional trim.
 3. Combination type
 4. Unit (preassembled) lock
 5. "Rigid" type lock
 6. "G" type lock
 7. "Integralock"
 8. 2 or 3-point latch
 - b. supplemental deadlock preparation
 - c. Listed Fire Exit Hardware
 1. Rim type
 2. Mortise type
 - d. Listed electrical single point lock
13. Miscellaneous Hardware:
 - a. Surface / concealed closers
 - c. Surface / concealed stops and shock absorbers
 - e. Listed electric hardware (hinges and locks)
 - f. Listed viewer: 1" maximum hole dia. located a minimum of 12" from top or either edge (1-1/2 hr. rated UL or WH door)
14. Designs:
See page 7-508
15. Glass lite trim kits:
See pages 7-508 or 1-703 thru 1-704
16. Louver:
Not permitted
17. Astragal: Steel overlapping type
See page 1-601, 1-602, and 1-604.
Use with:
 - a. listed single point latch
 - b. listed mortise type FEH
 - c. see page 7-113 thru 7-113C
18. Listed removable mullion use with
 - a. Listed rim type FEH (two) (no overlapping astragal necessary)
19. Lock Preparation, Inactive Leaf, see section one
 - a. with single point latch and astragal:
 1. Listed manual flush bolts (Top & bottom)
 2. Listed manual surface bolts (Top & bottom)
 3. Listed self latching flush bolts (Top & bottom)
 4. Listed auto-flush bolts (Top & bottom)
 - b. with rim device and removable mullion
 1. Listed rim type FEH
 - c. Listed vertical rod FEH surface or concealed

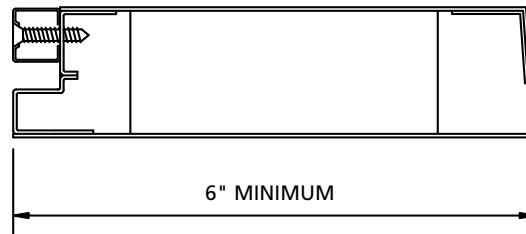
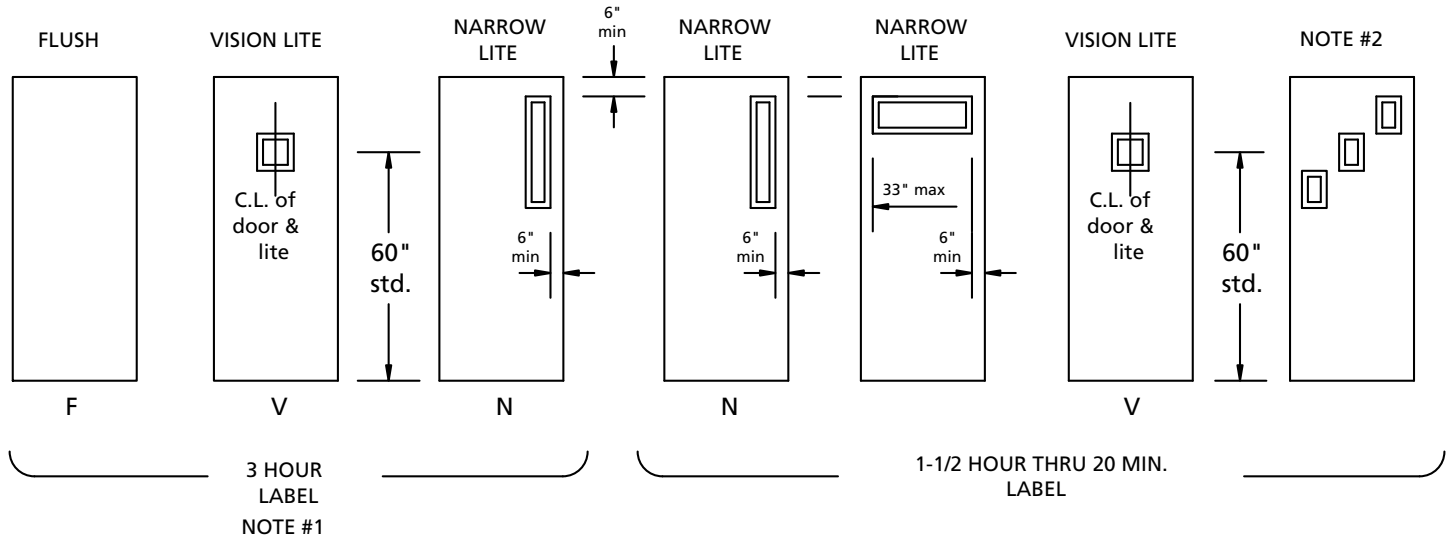


Distributor Tech Data

SOLID CORE FIRE DOORS FUEGO (250° F, 121° C) UL/WH LABEL PAIRS, TWO VERTICAL RODS W/O ASTRAGAL

1. Fire Test:
 - a. UL 10B, UL 10C, UBC 7-2, NFPA 252
 - b. Hardware and gasketing should comply with test method and hourly rating
2. Hourly Rating:
 - 1-1/2 hour, 1 hour and 20 minute
3. Maximum Temperature rise rating: 250°
4. Maximum Door opening sizes:
 - See pages 7-113 thru 7-113C
5. Face Sheets:
 - See pages 7-113 thru 7-113C
6. Construction:
 - See page 7-509
7. Clearances:
 - See page 7-132
8. End channels:
 - See page 7-509 & 7-505
9. Hinge Preparations:
 - See pages 7-505 & 7-509
10. Door edges
 - See page 7-505 & 7-509
11. Closer reinforcement:
 - See page 7-505 & 7-509
12. Listed Fire Exit Hardware (one each leaf)
 - a. vertical rod type
 1. surface mounted
 2. concealed
 - a. door must be factory prepared for concealed vertical rod FEH
 3. top rod only optional
13. Designs:
 - See page 7-508
14. Glass lite trim kits:
 - See pages 7-508 or 1-703 thru 1-704
16. Louver:
 - Not permitted

FUEGO (250° F, 121° C) SOLID CORE FIRE DOOR DESIGNS

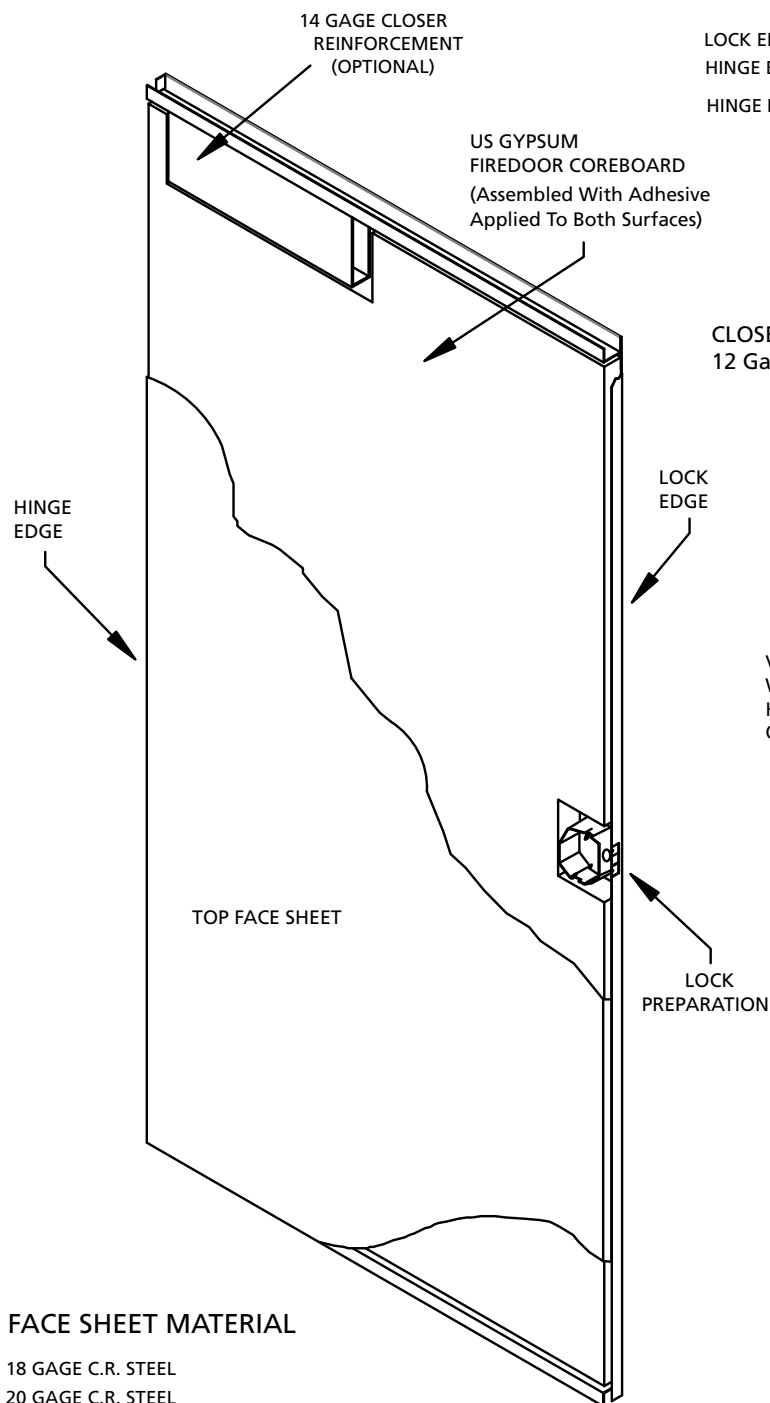


STANDARD FLUSH GLAZING TRIM
See page 5-301 for details
or see Note #4 for options.

1. Doors with a 3 hr. rating or a temperature rise rating - 100 sq. in. exposed glass maximum.
2. For 1-1/2 hour labeled doors, the total exposed glass area listed on pages 7-130 & 131 is allowed per door leaf. This area can be distributed among more than one individual lite kits.
3. For 3/4 hour and 20 minute doors, each lite cannot exceed the area listed on pages 7-130 & 131, although more than one lite may be permitted per door.
4. For applied steel glass trim kits, see pages 1-703 thru 1-704. 3 Hour rated Solid core Fuego fire doors require a steel perimeter channel installed inside door around perimeter of cutout.
5. Minimum exposed glass width is 3".

Distributor Tech Data

250° F (121° C) FUEGO SOLID CORE FIRE DOOR CONSTRUCTION



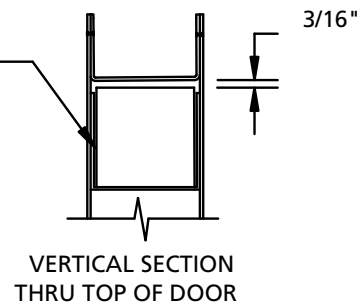
LOCK EDGE IS BEVELED 1/8" IN 2" (1:16)

HINGE EDGE IS SQUARE.

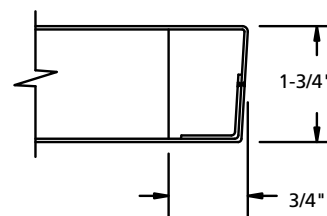
HINGE BACKSET IS 1/4" STD (3/16" & 5/16" OPTIONAL)

RECESSED 16 GAGE TOP CHANNEL IS WELDED TO BOTH FACE SHEETS.

CLOSER REINF.
12 Gax6"x20"

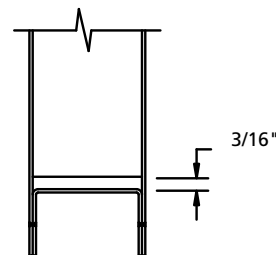


VERTICAL EDGES ARE CONTINUOUSLY WELDED WITH 18 GA. MINIMUM BACKUP ANGLE FULL HEIGHT OF DOOR AND DRESSED SMOOTH TO OBTAIN SEAMLESS HINGE AND LOCK EDGES.



HORIZONTAL SECTION THRU LOCK EDGE

RECESSED 16 GAGE BOTTOM CHANNEL IS SPOT WELDED TO BOTH FACE SHEETS



VERTICAL SECTION THRU BOTTOM OF DOOR

FACE SHEET MATERIAL

- 18 GAGE C.R. STEEL
- 20 GAGE C.R. STEEL
- 20 GAGE HOT-DIPPED GALVANIZED (A60) STEEL
- 18 GAGE HOT-DIPPED GALVANIZED (A60) STEEL
- 16 GAGE C.R. STEEL
- 16 GAGE HOT-DIPPED GALVANIZED (A60) STEEL

Distributor Tech Data

POLYSTYRENE CORE FIRE DOORS LEGION/ULTRA - UL/WH LABEL SINGLE SWING

1. Fire Test:
 - a. UL 10B, UL 10C, UBC 7-2, NFPA 252
 - b. Hardware and gasketing should comply with test method and hourly rating
2. Hourly Rating:
3 hour, 1-1/2 hour, 1 hour, 3/4 hour, and 20 minute
3. Maximum Temperature rise rating: NTR
4. Maximum Door opening sizes:
See pages 7-117 thru 7-117C
5. Face Sheets:
See pages 7-117 thru 7-117C
6. Construction:
See page 3-301 & 3-302 except as noted herein
7. Clearances:
1/8" at top, 1/8" maximum at hinge and lock edge, 3/4" maximum at sill (w/o threshold) See page 7-132 & 7-133
8. End channels:
See page 1-201
9. Hinge Preparations: ANSI A156.7 template
7 ga. steel reinforcement
 - a. full mortise, 4-1/2" standard or heavy weight
 1. Legion - handed
 2. Ultra - non-handed
 - b. full mortise, 5" standard or heavy weight
 1. Legion - handed
 - c. half surface, pivots, anchor hinge, pocket pivots, and continuous
10. Door edges
 - a. square hinge edge
 - b. lock edge
 1. Legion: beveled 1/8" in 2"
 2. Ultra: square
11. Closer reinforcement:
 - a. optional - see page 1-417 & 1-418
 - b. when reinforcement is not furnished, a paper label is applied stating ...USE SEX BOLTS TO MOUNT CLOSER
12. Lock Preparation:
 - a. Listed positive latching, 1/2" minimum throw - see section one
 1. Cylindrical type, 5" B.S. max.
 2. Mortise type, escutcheon or sectional trim
 3. Combination type
 4. Unite (preassembled) lock
 5. "Rigid" type lock
 6. "G" type lock
 7. "Integralock"
 8. 2 or 3- point latch
 - b. Supplemental deadlock preparation
 - c. Listed fire exit hardware
 1. Rim type
 2. Mortise type
 - d. Listed hospital latches
 - e. Interlock type "M" for elevator swinging door
13. Miscellaneous Hardware:
 - a. magnetic switch
 - b. surface/concealed stop and shock absorbers
 - c. surface/concealed closers
 - d. electric power transfer
 - e. Listed electric hardware (hinges and locks)
 - f. Listed viewer: 1" maximum hole dia. located a minimum of 12" from top or either edge (1-1/2" hr rated UL or WH door)
14. Designs:
See page 7-514
15. Glass lite trim kits:
See pages 1-703 thru 1-704
16. Louver:
See page 7-206

**POLYSTYRENE CORE FIRE DOORS
LEGION/ULTRA - UL/WH LABEL
PAIRS W/ASTRAGAL**

1. Fire Test:
 - a. UL 10B, UL 10C, UBC 7-2, NFPA 252
 - b. Hardware and gasketing should comply with test method and hourly rating
2. Hourly Rating:
3 hour, 1-1/2 hour, 1 hour, 3/4 hour, and 20 minute
3. Maximum Temperature rise rating: NTR
4. Maximum Door opening sizes:
See pages 7-117 thru 7-117C
5. Face Sheets:
See pages 7-117 thru 7-117C
6. Construction:
See page 7-511
7. Clearances:
1/8" at top, 1/8" maximum at hinge and lock edge, 3/4" maximum at sill (w/o threshold) See page 7-132 & 7-133
8. End channels:
See page 7-511
9. Hinge Preparations:
See page 7-511
10. Door edges
See page 7-511
11. Closer reinforcement:
See page 7-511
12. Lock Preparation: Active leaf, see section one
 - a. Listed positive latching, 1/2" minimum throw - Examples:
 1. Cylindrical type, 5" B.S. max.
 2. Mortise type, escutcheon or sectional trim
 3. Combination type
 4. Unit (preassembled) lock
 5. "Rigid" type lock
 6. "G" type lock
 7. "Integralock"
 8. 2 or 3- point latch
 - b. Supplemental deadlock preparation
 - c. Listed fire exit hardware
 1. Rim type
 2. Mortise type
 - d. Listed electrical single point lock
13. Miscellaneous Hardware:
 - a. surface/concealed closers
 - b. surface/concealed stops and shock absorbers
 - e. Listed electric hardware (hinges and locks)
 - f. Listed viewer: 1" maximum hole dia. located a minimum of 12" from top or either edge (1-1/2" hr rated UL or WH door)
14. Designs:
See page 7-514
15. Glass lite trim kits:
See pages 1-703 thru 1-704
16. Louver:
See page 7-206
17. Astragal Steel overlapping type
See page 1-601 & 1-602
Use with:
 - a. listed single point latch
 - b. listed mortise type FEH
 - c. overlap strip optional for 1-1/2 hr. or less rated, 18 or 16 ga. doors
18. Listed removable mullion use with
 - a. Listed rim type FEH (two) (no overlapping astragal necessary)
19. Lock preparation. Inactive leaf, see section one
 - a. with single point latch and astragal
 1. Listed manual flush bolts (Top and Bottom)
 2. Listed manual surface bolts (Top and Bottom)
 3. Listed self latching flush bolts (Top and Bottom)
 4. Listed auto-flush bolts (Top and Bottom)
 - b. with rim device and removable mullion
 1. Listed rim type FEH
 - c. Listed vertical rod FEH surface or concealed

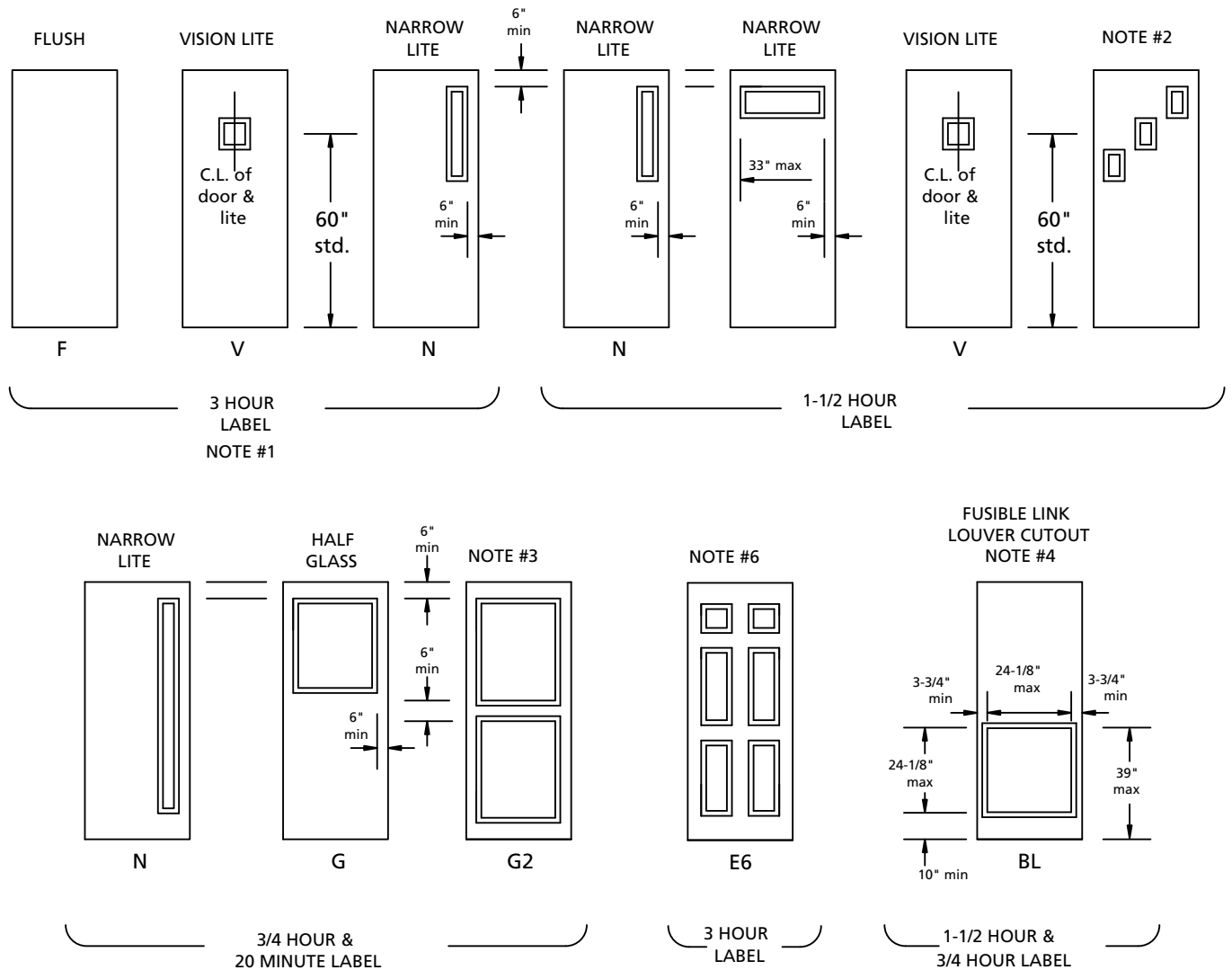


Distributor Tech Data

POLYSTYRENE CORE FIRE DOORS LEGION/ULTRA - UL/WH LABEL PAIRS, TWO VERTICAL RODS W/O ASTRAGAL

1. Fire Test:
 - a. UL 10B, UL 10C, UBC 7-2, NFPA 252
 - b. Hardware and gasketing should comply with test method and hourly rating
2. Hourly Rating:
1-1/2 hour, 1 hour, 3/4 hour, and 20 minute
3. Maximum Temperature rise rating: NTR
4. Maximum Door opening sizes:
See pages 7-117 thru 7-117C
5. Face Sheets:
See pages 7-117 thru 7-117C
6. Construction:
See page 7-511
7. Clearances:
See page 7-511
8. End channels:
See page 7-511
9. Hinge Preparations:
See page 7-511
10. Door edges
See page 7-511
11. Closer reinforcement:
See page 7-511
12. Listed Fire Exit Hardware (one each leaf)
 - a. vertical rod type
 1. surface mounted
 2. concealed
 - a. door must be factory prepared for concealed vertical rod FEH
 3. top rod only optional
13. Designs:
See page 7-514
14. Glass lite trim kits:
See pages 1-703 thru 1-704
15. Louver:
None w/FEH

POLYSTYRENE CORE FIRE DOOR DESIGNS



1. 3 hour fire doors restricted to 100 sq in max area and "Firelite" glazing, see page 7-131.
2. For 1-1/2 hour labeled doors, the total exposed glass area listed on pages 7-130 & 131 is allowed per door leaf. This area can be distributed among more than one individual lite kits.
3. For 3/4 hour and 20 minute doors, each lite cannot exceed the area listed on pages 7-130 & 131, although more than one lite may be permitted per door.
4. No more than of one louver is allowed per leaf. See page 7-206 for louver details and additional guidelines.
5. For steel glass trim kits, see pages 1-703 thru 1-704. Polystyrene core fire doors require steel perimeter channel installed inside door around perimeter of cutout.
6. For embossed panel design guidelines, see page 3-202.

Distributor Tech Data

INDEX - DUTCH FIRE DOORS AND FRAMES

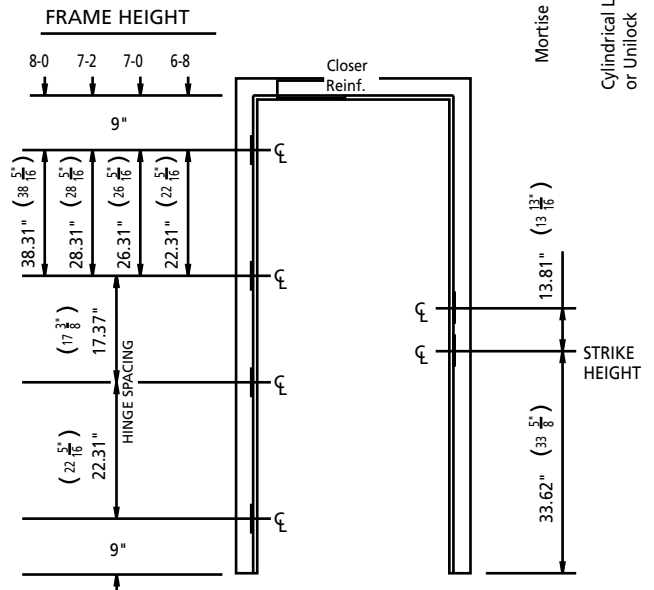
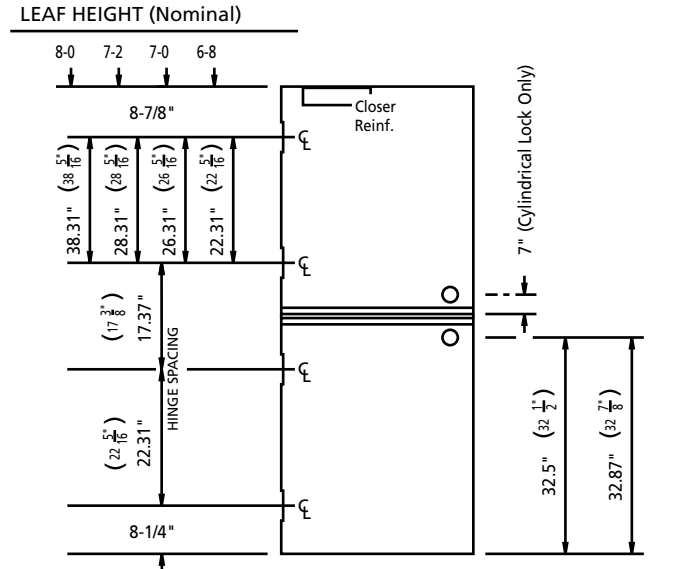
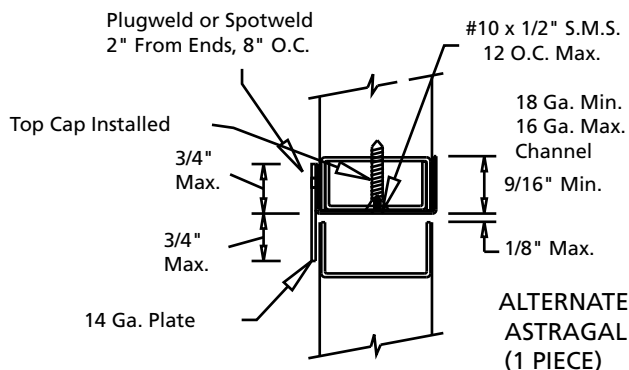
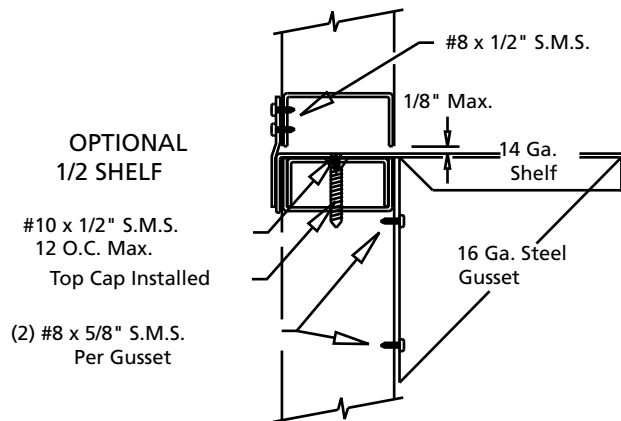
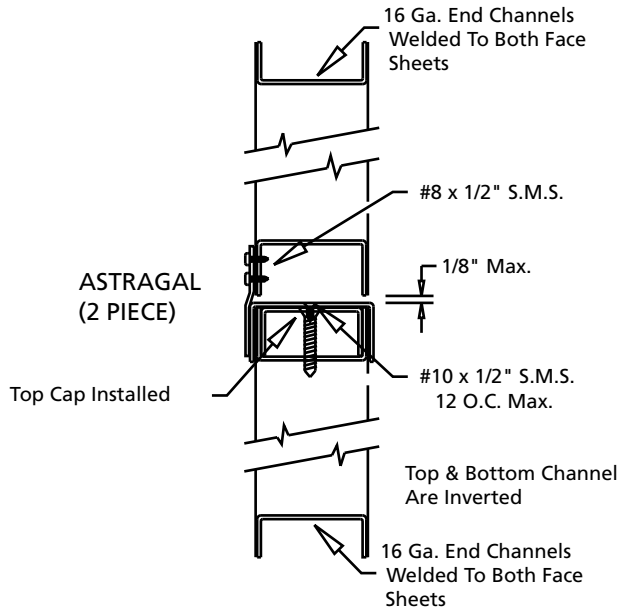
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Distributor Tech Data

REGENT/OMEGA AND MEDALLION DUTCH FIRE DOORS UL/WH LABEL SINGLE SWING

1. Hourly rating available: 20 min. thru 3 hr.
2. Maximum temperature rating: 450°
3. Maximum door opening sizes:
 - a. UL 10b (4'0" x 8'0")
 - b. UL 10c (4'0" x 7'2")
4. Frame material: 16 ga., 14 ga. and 12 ga.
 - a. Depths: Series SU and SQ - all labeled profiles
 - b. Corners: KD or welded
5. Door face sheets: 18 ga. and 16 ga. steel
6. Core:
 - a. Regent - Honeycomb core
 - b. Medallion - Vertically steel stiffened w/fiberglass insulation
7. Clearances: 1/8" at top, 1/8" maximum at lock and hinge edges, 3/4" maximum at bottom (when no sill is used), 1/8" maximum between upper and lower leaves (astragal included)
8. Hinge preparations:
 - a. Full mortise 4-1/2" x standard weight ANSI A156.17 template. 7 ga. steel reinforcements, handed
 - b. 4-1/2" heavy weight, 5" standard or heavy weight preparation available.
9. Door edges:
 - a. Honeycomb (see 7-201)
 - b. Steel stiffened (see 5-202)
10. Closer reinforcement:
 - a. Top leaf - optional 14 ga. channel. If not provided, paper label applied stating, "Closer reinforcement Not provided - Use Sex-Bolts (Through Bolts) to Mount Closer"
 - b. Frame - reinforcement optional (UL), optional (WH)
11. Glass lite trim kit:
 - a. "v" design
 - b. Refer to pages 1-703 thru 1-704 or 5-301
12. Lock preparation:
 - a. Top and bottom lock to be any listed single point latch (latching horizontally)
 - b. Top lock cylindrical, or self-latching flushbolt (latching vertically only)
13. Horizontal astragal: Required (see following page)
14. Louver: not allowed
15. Double swing: Not allowed

LABELED DUTCH DOOR AND FRAME ELEVATIONS



	FACE GAGE	HOURLY RATING	MAX. SIZE
UL10B	16, 18	3 HOUR	40 x 80
UL10C	16, 18	3 HOUR	40 x 72

Distributor Tech Data

DOUBLE EGRESS FIRE DOORS AND FRAMES INDEX

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ANCHORS	See 16-501 thru 16-507



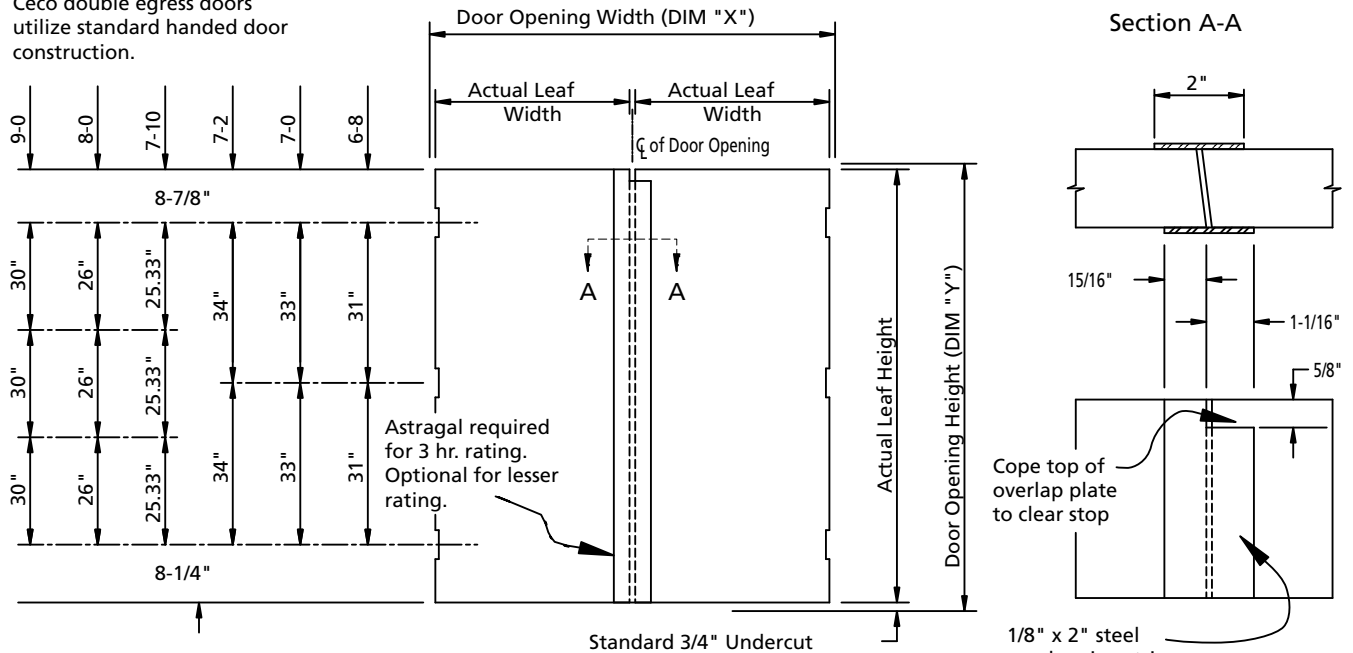
Distributor Tech Data

DOUBLE EGRESS FIRE DOORS AND FRAMES UL/WH LABEL

1. Hourly rating available: 20 min. thru 3 hr.
2. Maximum temperature rating: 250° (Fuego only)
3. Maximum door opening sizes:
 - a. Regent (see pages 7-108, 7-110)
 - b. Medallion (see pages 7-112, 7-112B) (7-116A, 7-116C for 450° TR)
 - c. Imperial (see pages 7-114A, 7-114C)
 - d. Fuego (see pages 7-113A, 7-113C)
 - e. Legion (see pages 7-117A, 7-117C)
 - f. Thru-lite (see pages 7-115A, 7-115C)
4. Door Face Sheets:
Refer to pages as shown above
5. Frame material:
16 ga., 14 ga. or 12 ga.
6. Construction:
Regent, Medallion, Medallion 450° TR, Imperial, Fuego, Legion, Thru-Lite
7. Clearances:
1/8" at top, 1/8" maximum at lock and hinge edge, 1/8" maximum between leaves, 3/4" maximum at sill.
8. Hinge preparations:
 - a. Full mortise 4-1/2" x standard weight ANSI A156.17 template. 7 ga. steel reinforcements, handed
 - b. 4-1/2" heavy weight and 5" standard or heavy weight preparation available.
9. End Channels: Inverted &
Welded to both face sheets
10. Closer Reinforcements:
 - a. Optional (UL & WH) 14 ga. steel channel
 - b. When reinforcement is not provided (UL only), paper label is applied to door stating, "Closer Reinforcement Not provided - Use Sex Bolts (Through Bolts) to Mount Closer"
11. Designs:
Standard glass opening and flush designs and trim kits.
12. Astragal:
3 hr. rating requires an overlapping 1/8" steel plate attached to one leaf. Optional for other ratings.
13. Louver: not permitted
14. Fire Exit Hardware:
 - a. UL listed vertical rod type (pair)
 1. Surface mounted - Doors may be reinforced; however, when omitted, each leaf must have supplemental label applied stating, "Fire Exit Hardware Reinforcement Not Provided - Use Sex Bolts (Through Bolts) To Mount Fire Exit Hardware"
 2. Concealed (pair) - Doors must be reinforced and prepared.

DOUBLE EGRESS FIRE DOORS

Ceco double egress doors utilize standard handed door construction.

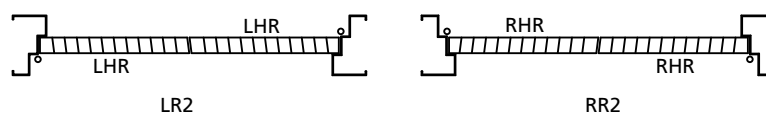


NOTE: THE USE OF ASTRAGAL CHANNEL IS PROHIBITED

STANDARD LEAF WIDTHS and corresponding DOOR OPENING WIDTHS		
Nominal Leaf Width	Actual Leaf Width	Door Opening Width-DIM "X"
20	(2) 23-25/32"	47-13/16"
24	(2) 27-25/32"	55-13/16"
26	(2) 29-25/32"	59-13/16"
28	(2) 31-25/32"	63-13/16"
30	(2) 35-25/32"	71-13/16"
34	(2) 39-25/32"	79-13/16"
36	(2) 41-25/32"	83-13/16"
38	(2) 43-25/32"	87-13/16"
40	(2) 47-25/32"	95-13/16"
DIM "X" = (2 x Actual Leaf Width) + 1/4"		

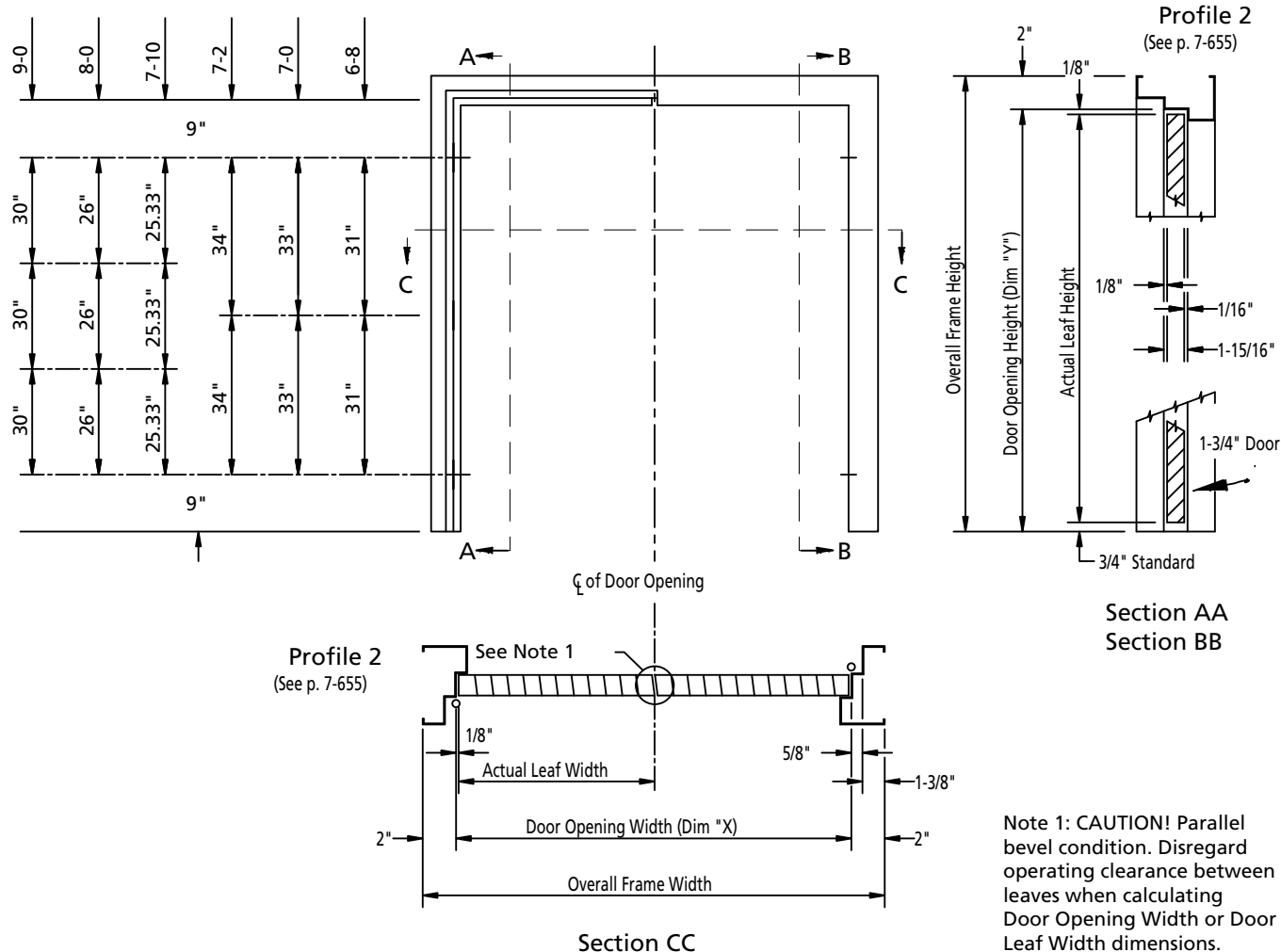
STANDARD LEAF HEIGHTS (3/4" undercut) and corresponding DOOR OPENING HEIGHTS		
Nominal Leaf Height	Actual Leaf Height	Door Opening Height-DIM "Y"
6-8	79-1/8"	80"
7-0	83-1/8"	84"
7-2	85-1/8"	86"
7-10	93-1/8"	94"
8-0	95-1/8"	96"
9-0	107-1/8"	108"
DIM "Y" = Actual Leaf Height + 7/8"		

Ceco doors are recommended. However, if other doors are used, make sure that they have parallel bevel lock edges or that they can be made to function with parallel bevel lock edges. Also, make sure to coordinate the door leaf sizes and frame opening size in accordance with above.



HAND and SWING DIAGRAM

LABELED DOUBLE EGRESS FRAME SE2 PROFILE/TYPE 2 HEAD



DOOR OPENING WIDTH (Dim "X") = (2 x Actual Leaf Width) + 1/4".
OVERALL FRAME WIDTH = Door Opening Width + (2 x 2").

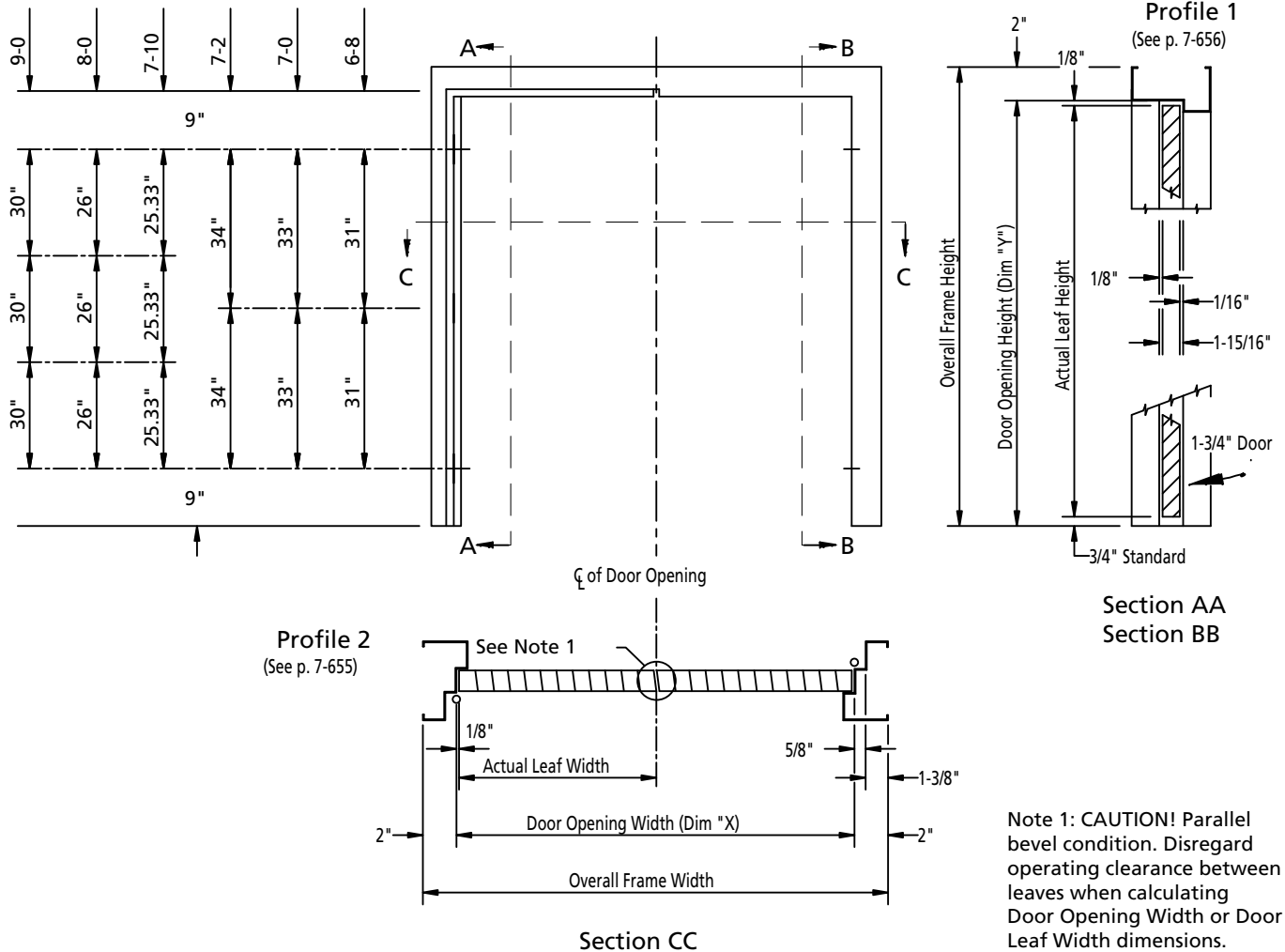
EXAMPLE for a PAIR of STANDARD 3-0 (nominal) WIDE CECO DOORS:
Door Opening Width = (2 x 35-25/32") + 1/4" = 71-13/16".
Overall Frame Width = 71-13/16" + 4" = 75-13/16".

DOOR OPENING HEIGHT (Dim "Y") = Actual Leaf Height + 1/8" + Sill Clearance.
OVERALL FRAME HEIGHT = Door Opening Height + 2".

EXAMPLE for STANDARD 6-8 (nominal) CECO LEAF HEIGHT:
Door Opening Height = 79-1/8" + 1/8" + 3/4" = 80"
Overall Frame Height = 80" + 2" = 82".

The above is based on standard 1-3/8" faces.
For optional face sizes, adjust calculations accordingly.

LABELED DOUBLE EGRESS FRAME SE1 PROFILE/TYPE 1 HEAD



DOOR OPENING WIDTH (Dim "X") = (2 x Actual Leaf Width) + 1/4".
OVERALL FRAME WIDTH = Door Opening Width + (2 x 2").

EXAMPLE for a PAIR of STANDARD 3-0 (nominal) WIDE CECO DOORS:
Door Opening Width = (2 x 35-25/32") + 1/4" = 71-13/16".
Overall Frame Width = 71-13/16" + 4" = 75-13/16".

DOOR OPENING HEIGHT (Dim "Y") = Actual Leaf Height + 1/8" + Sill Clearance.
OVERALL FRAME HEIGHT = Door Opening Height + 2".

EXAMPLE for STANDARD 6-8 (nominal) CECO LEAF HEIGHT:
Door Opening Height = 79-1/8" + 1/8" + 3/4" = 80"
Overall Frame Height = 80" + 2" = 82".

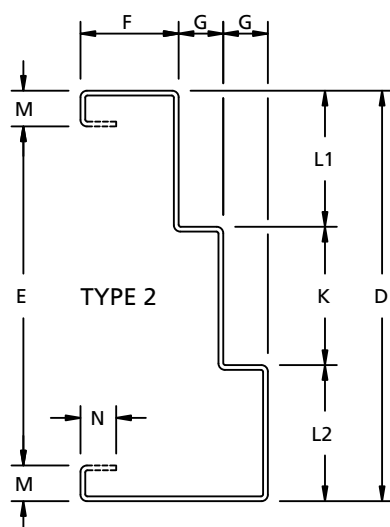
The above is based on the standard 1-3/8" face jambs.
For optional face sizes, adjust calculations accordingly.

Distributor Tech Data

LABELED

DOUBLE EGRESS FRAME

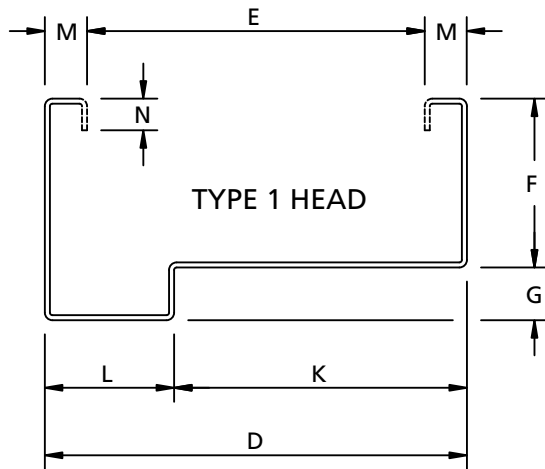
DE PROFILE TYPE 2 HEAD AND JAMBS



A.	GAGE	16 14 12
B.	MATERIAL	COLD ROLLED A60 GALVANIZED
C.	FINISH	PRIME PAINTED
D.	DEPTH	5" TO 14"
E.	THROAT	1" LESS THAN DEPTH
F.	FACE	1-3/8" IS STANDARD 2" IS OPTIONAL
G.	STOP HEIGHT	5/8"
H.	CORNER CONDITION	KD or SET UP and WELDED
I.	OPENING WIDTH: DOUBLE	8'-0" MAX.
J.	OPENING HEIGHT:	10'-0" MAX.
K.	DOOR RABBET	1-15/16"
L1.	DOOR SIDE SOFFIT:	$[(\text{DEPTH MINUS } 1-15/16") / 2]$
L2.	STOP SIDE SOFFIT	$[(\text{DEPTH MINUS } 1-15/16") / 2]$
M.	BACKBENDS	1/2"
N.	BACKBEND RETURN	OPTIONAL

FOR OTHER SIZES OR VARIATIONS, CONTACT CUSTOMER SERVICE.

+ LABELED DOUBLE EGRESS FRAME DE PROFILE TYPE 1 HEAD AND JAMBS



A.	GAGE	16 14 12
B.	MATERIAL	COLD ROLLED ASTM A60 GALVANIZED
C.	FINISH	PRIME PAINTED
D.	DEPTH	5" TO 14"
E.	THROAT	1" LESS THAN DEPTH
F.	FACE	2"
G.	STOP HEIGHT	5/8"
H.	CORNER CONDITION	KD or SET UP and WELDED
I.	OPENING WIDTH: DOUBLE	8'-0" MAX.
J.	OPENING HEIGHT:	10'-0" MAX.
K.	DOOR RABBET	VARIES TO MATCH JAMB
L.	SOFFITS:	VARIES TO MATCH JAMB
M.	BACKBENDS	1/2"
N.	BACKBEND RETURN	OPTIONAL

FOR OTHER SIZES OR VARIATIONS, CONTACT CUSTOMER SERVICE.

FIRE DOOR FRAME SECTION INDEX

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Distributor Tech Data

LABELED DOOR FRAMES

GENERAL

- LABELING AGENCY: UNDERWRITERS LABORATORIES (UL)
WARNOCK HERSEY (WH)
- HOURLY RATING: 3 hr., 1-1/2 hr., 1 hr., 3/4 hr., 20 min., or 20 min. without hose stream
- DOOR THICKNESS: 1-3/4" OR 1-3/8"
- HINGE and STRIKE LOCATIONS: See Section 11
- WALL and FLOOR ANCHORS: See pages 7-735 & 7-742
- CLOSER REINFORCEMENT: See pages 7-731 & 7-732
(Closer is not necessary when spring hinges are used)

SPECIAL HARDWARE PREPARATIONS:

The following are acceptable:

Anchor hinges, Pivots, surface hinges, pocket pivots, concealed closers, concealed door stops, supplemental deadlock strike, (if latch strike for listed lock is also prepared for), electric power transfers. Magnetic switch, & listed fire exit hardware.

Memo: For labeling purposes, hardware and / or door size limitations can be less than frame maximums - the lesser of the two apply.

HOSPITAL SANITARY STOPS: See page 7-733

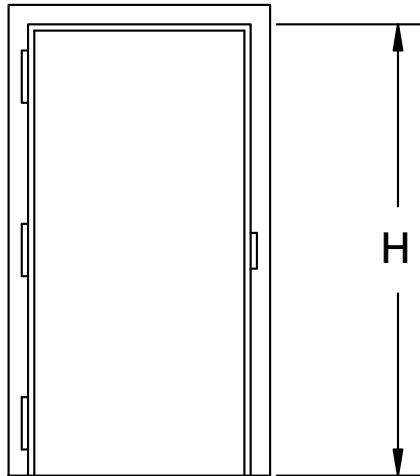
RATING GUIDELINES, THREE PIECE FRAMES:

Corners:	Knocked Down (KD) or welded
Door opening sizes:	See page 7-702
Steel Gages:	See page 7-702
Anchors:	See page 7-702
Installation instructions:	See page 7-743 thru 7-748

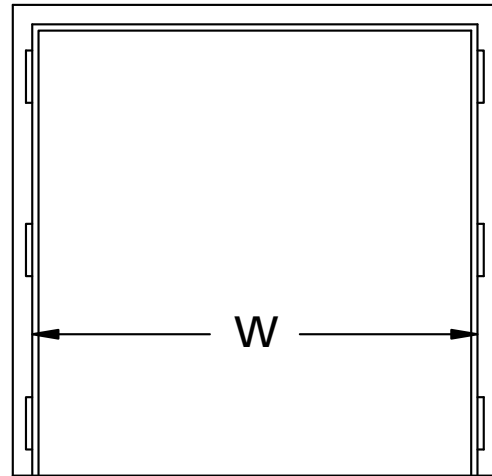
RATING GUIDELINES, HOLLOW METAL FRAME ASSEMBLIES: See page 7-708

† LABELED FRAME SIZES FOR 1-3/4" THICK FIRE DOORS

H = DOOR OPENING HEIGHT, W = DOOR OPENING WIDTH
e.g., 3070 = 3'-0" X 7'-0" (W = 3'-0" & H = 7'-0")



SINGLE SWING



DOUBLE SWING

UL or WH	UP TO 3 HR RATED 16,14 OR 12 GAGE STEEL ANCHORS LOOSE or WELDED 40100 MAX	‡
WH	UP TO 1-1/2 HR RATED 18 GAGE STEEL ANCHORS LOOSE or WELDED 4070 MAX	
WH	KERFED FRAMES UP TO 1-1/2 HR RATED 18 GAGE STEEL 3670 MAX	
UL or WH	KERFED FRAMES UP TO 3 HR RATED 16 GAGE STEEL 40100 MAX ANCHORS: LOOSE	‡

UL or WH	UP TO 3 HR RATED 16,14 OR 12 GAGE STEEL ANCHORS LOOSE or WELDED 80100 MAX	‡
WH	UP TO 1-1/2 HR RATED 18 GAGE STEEL ANCHORS LOOSE or WELDED 8070 MAX	
WH	KERFED FRAMES UP TO 1-1/2 HR RATED 18 GAGE STEEL 7070 MAX	
UL or WH	KERFED FRAMES UP TO 3 HR RATED 16 GAGE STEEL 80100 MAX ANCHORS: LOOSE	‡

NOTES

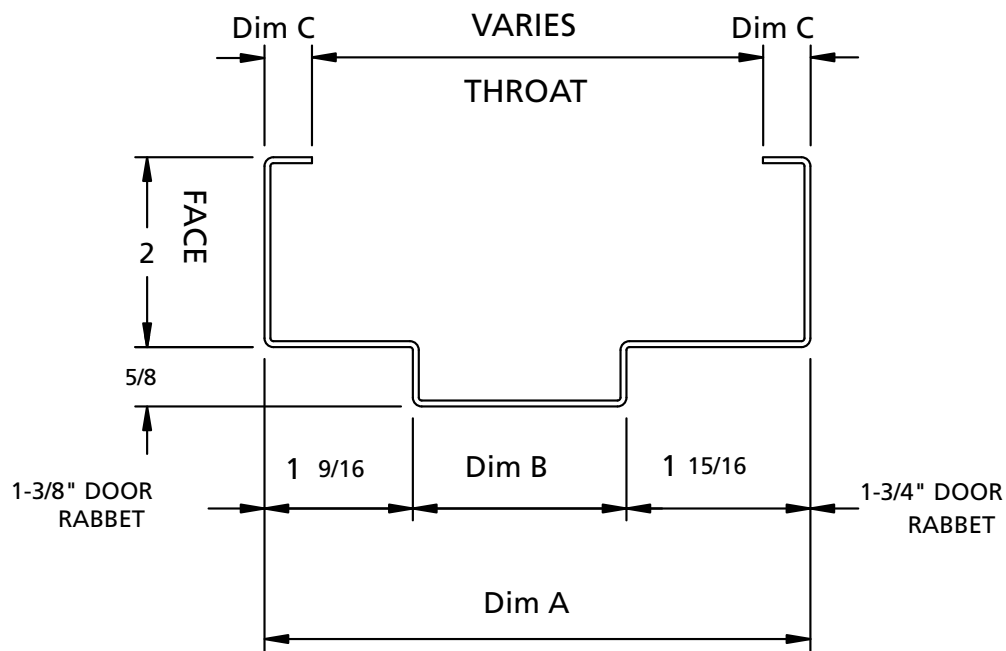
1. SEE FIRE DOOR SECTION FOR MAXIMUM CECO DOOR SIZES.
2. FRAMES FOR 1-3/8" FIRE DOORS ARE ALSO AVAILABLE;
CONTACT YOUR CECO REPRESENTATIVE FOR DETAILS.

‡3 HOUR RATING IS AVAILABLE WITH LOOSE OR WELDED METAL STUD ANCHORS
WHEN INSTALLED IN FOUR HOUR RATED DRYWALL PARTITION. MAX. SINGLE
4'-0" X 9'-0", MAX. PAIR 8'-0" X 9'-0".

Distributor Tech Data

SERIES SU DOUBLE RABBIT LABELED DOOR FRAMES PROFILES AND GAGES

Dimensions are in inches



CODE	Dim A (DEPTH)	Dim B	Dim C
434	4-3/4	1-1/4	1/2
534	5-3/4	2-1/4	7/16
634	6-3/4	3-1/4	1/2
734	7-3/4	4-1/4	1/2
834	8-3/4	5-1/4	1/2

GAGE: 16 or 14

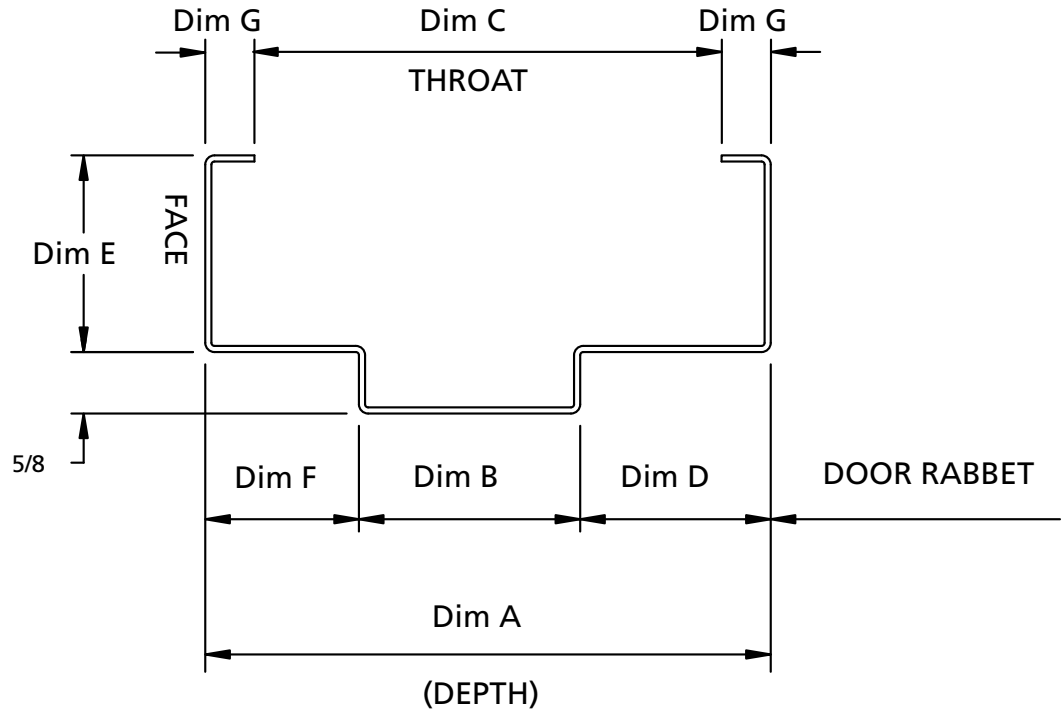
(See page 7-702 for guidelines)

MATERIAL: COLD ROLLED or GALVANIZED STEEL

FINISH: PRIME PAINT

SERIES SQ DOUBLE RABBET LABELED DOOR FRAMES PROFILE AND GAGES

Dimensions are
in inches



Dim A	4-1/8" MIN THRU 14" MAX
Dim B	5/8" MIN
Dim C	3" MIN THRU 13" MAX
Dim D	1-15/16" FOR 1-3/4" DOOR 1-9/16" FOR 1-3/8" DOOR
Dim E	1" MIN FOR MASONRY OR CONCRETE WALLS 1-1/4" MIN FOR STUD WALLS 4" MAX ALL
Dim F	NORMALLY EQUAL TO DOOR RABBET
Dim G	1/2" STANDARD 1/4" MIN THRU 1-1/2" MAX AVAILABLE

GAGE: 18 (WH Only), 16, 14 or 12

(See page 7-702 for guidelines)

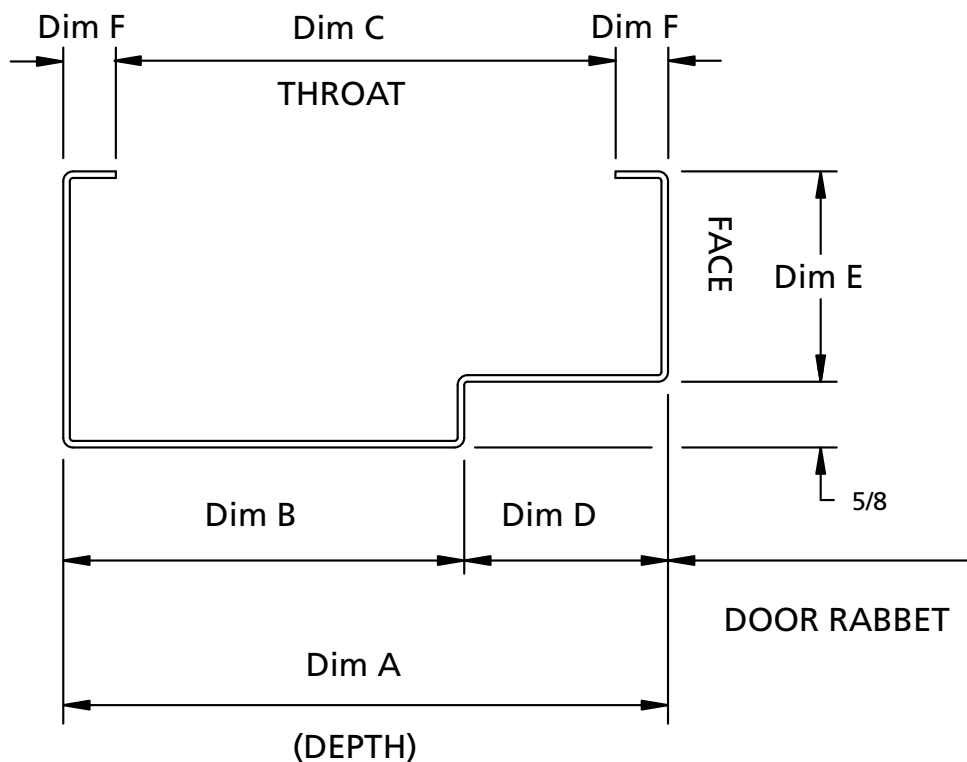
MATERIAL: COLD ROLLED or GALVANIZED STEEL

FINISH: PRIME PAINT

Distributor Tech Data

SERIES SR SINGLE RABBET LABELED DOOR FRAMES PROFILES AND GAGES

Dimensions are in
inches.



Dim A	2-1/2" MIN THRU 14" MAX
Dim B	VARIES
Dim C	2" MIN THRU 13" MAX
Dim D	1-15/16" FOR 1-3/4" DOOR 1-9/16" FOR 1-3/8" DOOR
Dim E	1" MIN FOR MASONRY OR CONCRETE WALLS 1-1/4" MIN FOR STUD WALLS 4" MAX ALL
Dim F	1/2" STANDARD 1/4" MIN THRU 1-1/2" MAX AVAILABLE

GAGE: 18(WH only), 16, 14 or 12

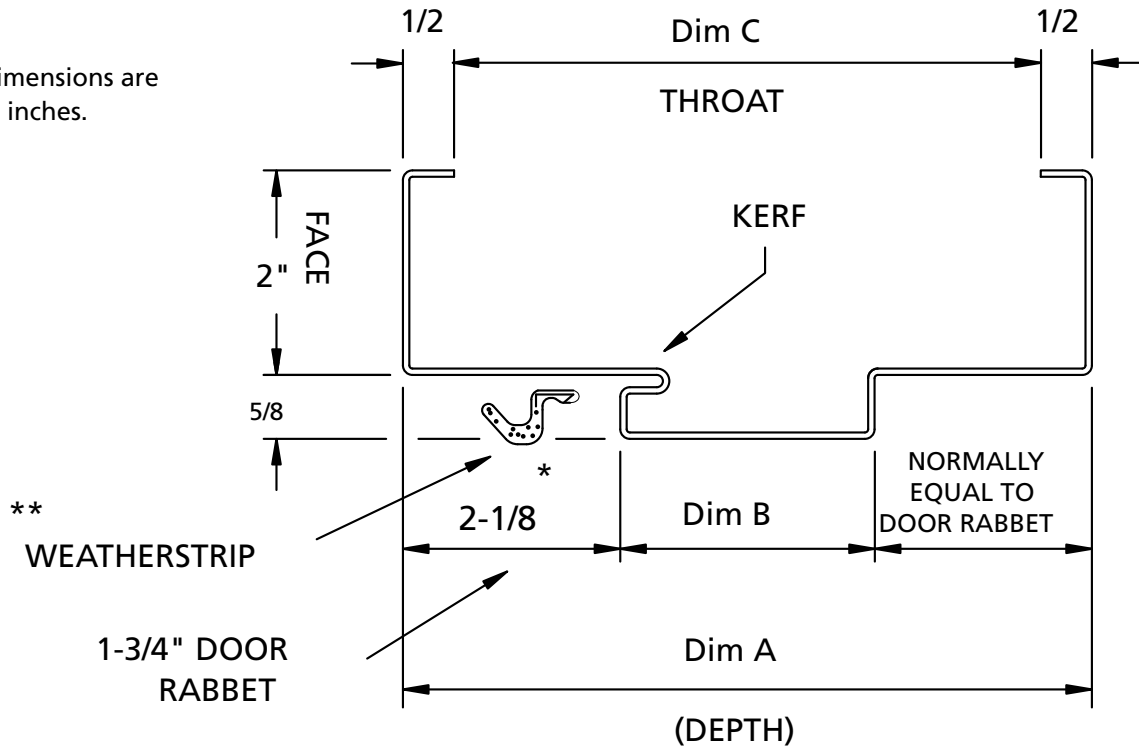
(See page 7-702 for guidelines)

MATERIAL: COLD ROLLED or GALVANIZED STEEL

FINISH: PRIME PAINT

SERIES SQW DOUBLE RABBET LABELED DOOR FRAME PROFILES AND GAGES

Dimensions are
in inches.



Dim A	5-1/2" MIN THRU 14" MAX
Dim B	1-1/4" MIN
Dim C	4-1/2" MIN THRU 13" MAX

GAGE: 18 (WH only) or 16 (See page 7-702 for guidelines)

MATERIAL: COLD ROLLED or GALVANIZED STEEL

WEATHERSTRIP: RATED, COMPRESSION TYPE, FOAM FILLED

FINISH: PRIME PAINT

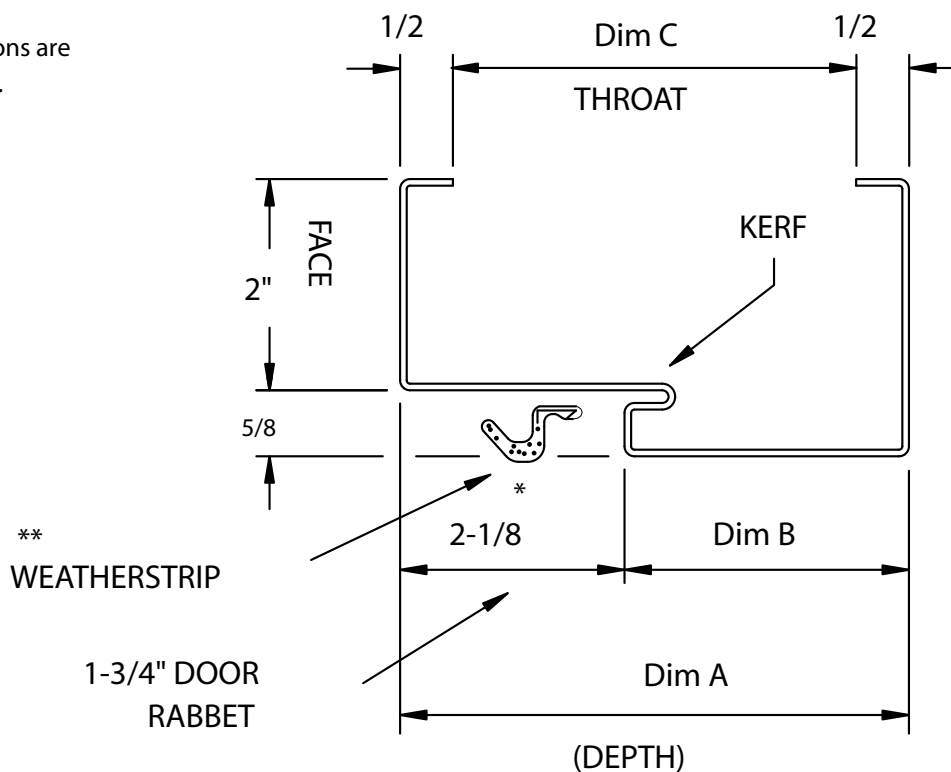
* MAY VARY DEPENDING ON FRAME

** WEATHERSTRIP IS SHIPPED WITH FRAME

Distributor Tech Data

SERIES SRW SINGLE RABBET LABELED DOOR FRAME PROFILES AND GAGES

Dimensions are
in inches.



Dim A	3-5/8" MIN THRU 14" MAX
Dim B	1-1/4" MIN
Dim C	2-5/8" MIN THRU 13" MAX

GAGE: 18(WH only) or 16

(See page 7-702 for guidelines)

MATERIAL: COLD ROLLED or GALVANIZED STEEL

WEATHERSTRIP: RATED, COMPRESSION TYPE, FOAM FILLED

FINISH: PRIME PAINT

* MAY VARY DEPENDING ON FRAME

** WEATHERSTRIP IS SHIPPED WITH FRAME

LABELED HOLLOW METAL SERIES SU & SQ FRAME ASSEMBLIES

The frame elevations shown on the following pages illustrate various configurations of door / transom / sidelite frames, borrowed lite frames, and multiple door opening frames which can be labeled for fire resistance or as smoke barriers.

Certain aspects of the program which these elevations represent are common to all types unless specifically noted otherwise on the elevation sheets.

LABELS: Typically, rating classification (e.g., 3 hour, 1-1/2 hour ...) does not appear on the frame label. Door, hardware, panel, glazing, and / or wall rating will classify opening, e.g., if a frame rated for use with doors which have a rating of up to 3 hours is used with a door having a 20 minute label - the opening would have a 20 minute rating.

HARDWARE REQUIREMENTS: Similar to 3-sided frames, see page 7-701

PROFILES: Series SU or SQA, see pages 7-703 thru 7-707

ANCHOR REQUIREMENTS: Typically, anchor quantity is a function of overall frame dimensions.

- Height: up to 9'0" can have loose anchors
over 9'0" and less than 10'0" must have attached anchors
10'0" and over must have attached masonry anchors
- Width: up to 8'0" can have loose anchors
over 8'0" must have attached anchors
- Except where otherwise specified on the following pages, anchors are normally required at jambs and sill only
- Maximum anchor spacing is 30" on center
- Existing opening anchors typically qualify as "masonry anchors" where such are indicated on the following pages

IMPOSTS AND MULLIONS: Sidelite floor anchor or removable mullion anchor is required.

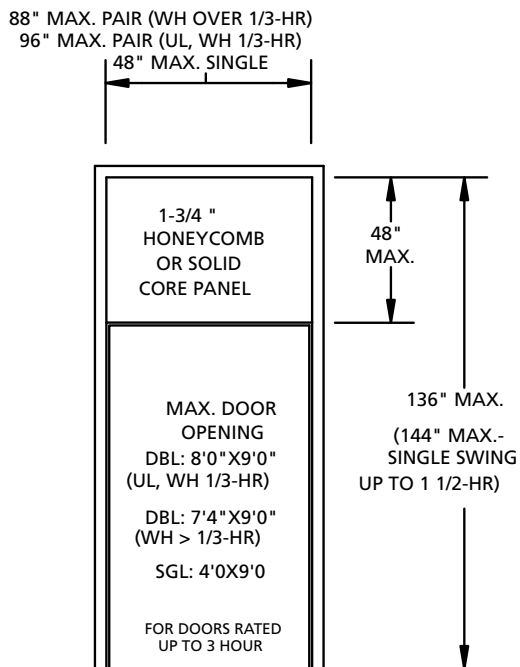
OVERSIZE FRAMES: Frame larger than 8'0" overall, in width and height are shipped in multiple units because of carrier limitations. Field assembly is by contractor.

GLAZING: Where glazing is indicated, frames are prepared to receive either 1/4" minimum thick labeled wire glass or classified glazing material. Glass and glazing are by contractor.

EXPOSED GLASS DIMENSIONS: 8" minimum. Maximum as stated on the following pages. The 8" minimum is a self-imposed limitation. For lesser dimensions, contact your Ceco representative.

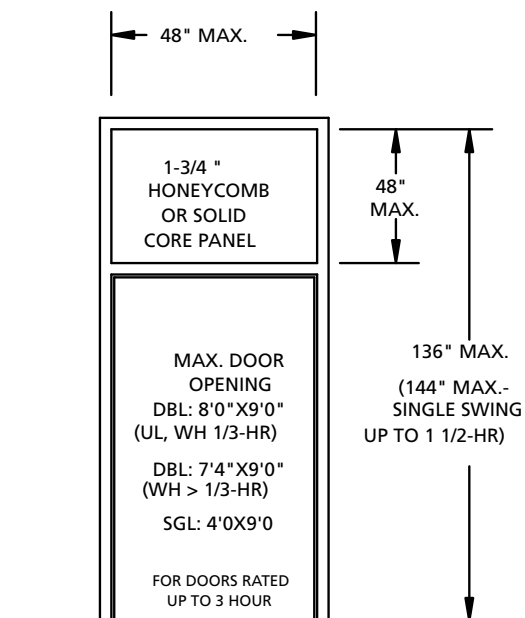
Distributor Tech Data

LABELED TRANSOM FRAMES HONEYCOMB CORE PANEL SOLID WH/UL LABEL



3 HOUR RATED WITH FIXED HORIZONTAL ASTRAGAL
PANEL: 1-3/4" thick, honeycomb or solid core, 20 gage min. face sheets. Panel is available as removable or fixed. Fixed type must be shop installed. Removable type must be shipped separate from frame for field installation.
FRAME FACE: 1-1/4" minimum; 4" maximum.

TRANSOM ASSEMBLY W/1-3/4"
HONEYCOMB OR SOLID CORE PANEL
WITHOUT TRANSOM BAR AND WITH
HORIZONTAL ASTRAGAL

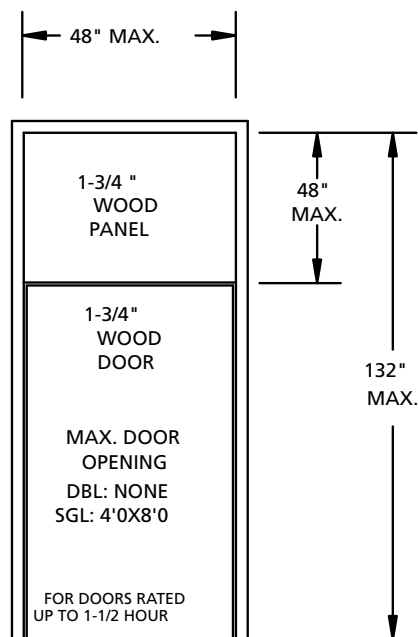


3 HOUR RATED WITH FIXED TRANSOM BAR
PANEL: 1-3/4" thick, honeycomb or solid core, 20 gage min. face sheets. Panel is available as removable or fixed. Fixed type must be shop installed. Removable type must be shipped separate from frame for field installation.
FRAME FACE: 1-1/4" minimum; 4" maximum.

TRANSOM ASSEMBLY W/1-3/4"
HONEYCOMB OR SOLID CORE PANEL
WITH TRANSOM BAR

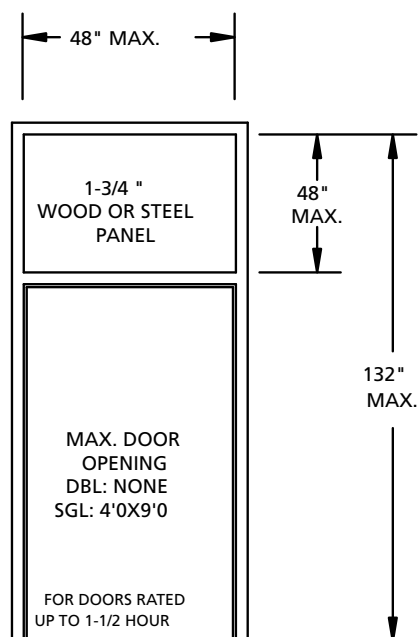
Distributor Tech Data

LABELED TRANSOM FRAMES WOOD PANEL WH/UL LABEL



1-1/2 HOUR RATED WITHOUT TRANSOM BAR
Panel and door are proprietary, UL/WH fire rated composite type and must be supplied as a unit (Algoma Wood doors only) in accordance with UL/WH procedure.
Panel is field installed by contractor and is non-removable.
FRAME FACE: 1-1/4" minimum; 4" maximum.

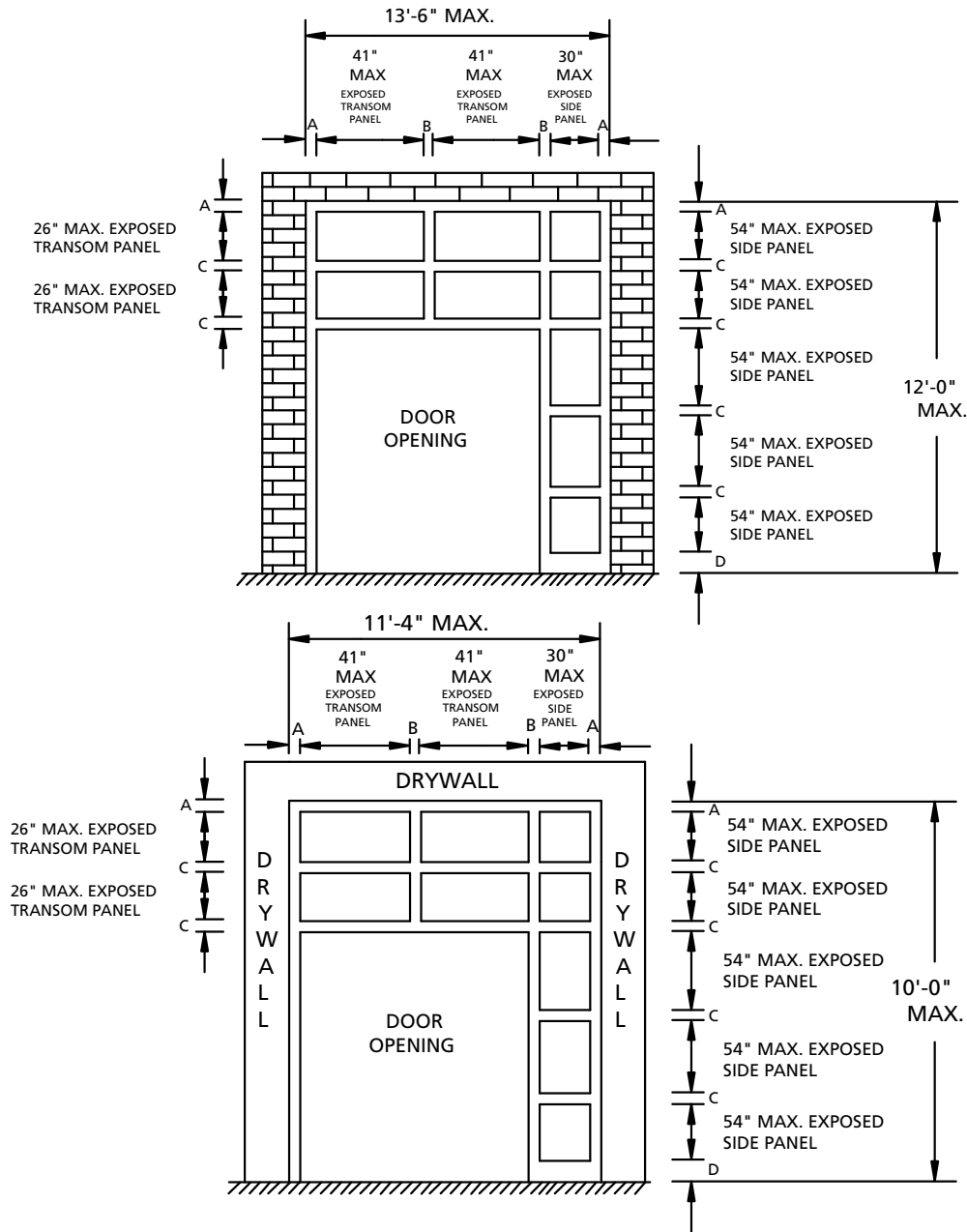
TRANSOM ASSEMBLY FOR
1-3/4" WOOD PANEL & DOOR
WITHOUT TRANSOM BAR



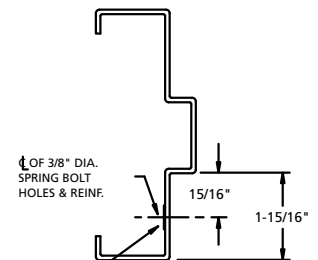
1-1/2 HOUR RATED WITH FIXED TRANSOM BAR
Wood Panel is proprietary, UL/WH fire rated composite type and is supplied as a unit in accordance with UL/WH procedure. Panel is field installed by contractor and is non-removable.
Any labeled fire door can be used.
FRAME FACE: 1-1/4" minimum; 4" maximum.
TRANSOM BAR: Fixed only.

TRANSOM ASSEMBLY
FOR 1-3/4" WOOD OR STEEL
PANEL W/TRANSOM BAR

LABELED TRANSOM / SIDE PANEL FRAME WITH RECESSED INSULATED, 1-3/4" WOOD OR HOLLOW METAL PANEL



1. MAX. RATING = 1-1/2 HR
2. MAX. PANEL AREA :
1066 SQ. INCHES PER TRANSOM PANEL.
1296 SQ. INCHES PER SIDE PANEL.
3. CORNER CONSTRUCTION :
WELDED ONLY
4. ANCHORS :
ALL TYPES APPROVED (LOOSE OR WELDED).
FRAMES EXCEEDING 8'-0" X 9'-0" MUST BE WELDED IN PLACE.
5. THROAT OPENING :
3-1/2" MIN & 9" MAX.
6. DOOR STOP HEIGHT =
5/8" MIN.
7. DOOR OPENING =
4'-0" X 10'-0" SINGLE MAX
8'-0" X 10'-0" PAIRS MAX
8. PANEL TYPE = 3/8" APPROVED METAL CLAD FIBER BOARD OR 1 3/4" WOOD (SIDE PANEL ONLY) OR HOLLOW METAL.
9. SEE DETAIL "A" FOR SPECIFICS ON SPRING BOLTS.



REINF. PLATES ARE 1" X 3" X 12 GA. STEEL (MIN.) SECURED BY (3) SPOT WELDS OR (3) TACK WELDS (MIN.) PER PIECE.

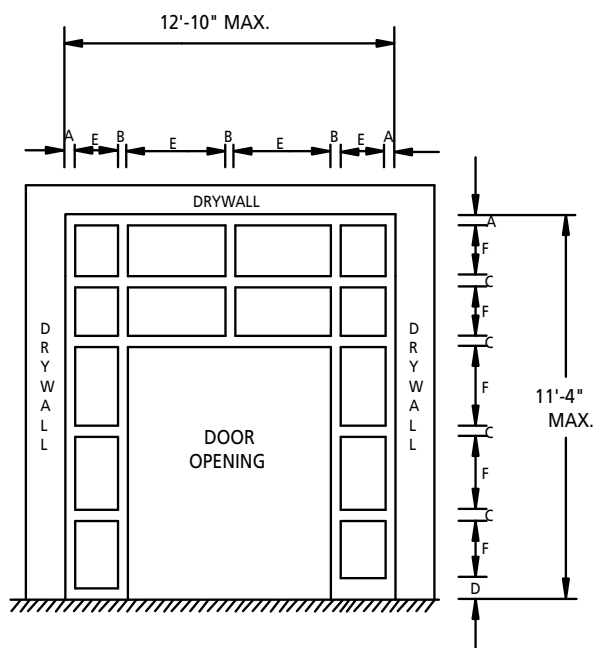
ALTERNATE:
CONTINUOUS 12 GA. X 1" STEEL PLATE SPOT OR TACK WELDED 3" O.C.

FACE	DIM. A	FACE	DIM. B	FACE	DIM. C	FACE	DIM. D
MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.
1-1/4"	4"	1-1/4"	4-1/2"	1-1/4"	8"	1-1/4"	16"

Distributor Tech Data

LABELED TRANSOM / SIDELITE DOOR FRAME FOR GLASS

DRYWALL
INSTALLATION
ONLY

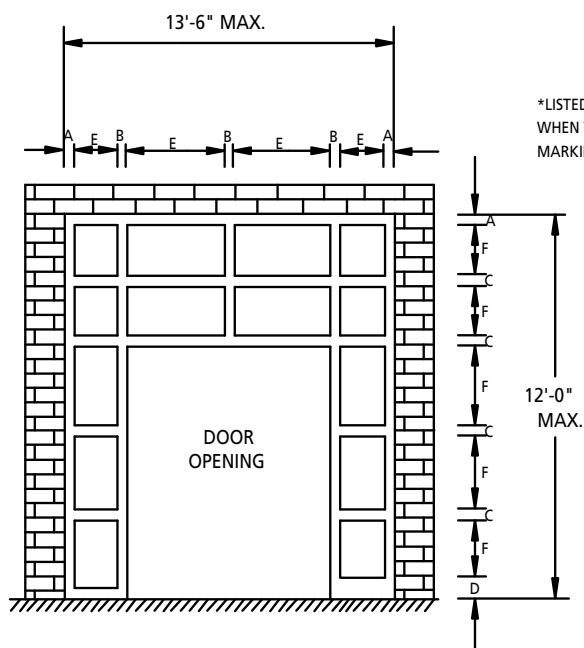


1. MAX. RATING = 3/4 HOUR
2. MAX. GLASS AREA = PER CHART BELOW
3. CORNER CONSTRUCTION = WELDED ONLY
4. ANCHORS = ALL TYPES APPROVED (LOOSE OR WELDED). FRAMES EXCEEDING 8'-0" X 9'-0" MUST BE WELDED IN PLACE.
5. THROAT OPENING = 3-1/2" MIN.
6. DOOR OPENING = 4'-0" X 10'-0" SINGLE MAX.
8'-0" X 10'-0" PAIRS MAX.
7. STOP HEIGHT = PER CHART BELOW

STOP HEIGHT	MAXIMUM EXPOSED GLAZED AREA in. ²	DIM. "E" MAX.	DIM. "F" MAX.	FRAME FACES							
				DIM. "A"		DIM. "B"		DIM. "C"		DIM. "D"	
				MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.
5/8"	500	54"	54"	1- ¹ / ₄ "	4"	1- ¹ / ₄ "	4- ¹ / ₂ "	1- ¹ / ₄ "	8"	1- ¹ / ₄ "	16"
	1,296	48"	54"	2"	2"	2"	2"	2"	2"	2"	12"
	*4,704	*106"	*106"								
3/4"	1,296	54"	54"	1- ¹ / ₄ "	4"	1- ¹ / ₄ "	4- ¹ / ₂ "	1- ¹ / ₄ "	8"	1- ¹ / ₄ "	16"

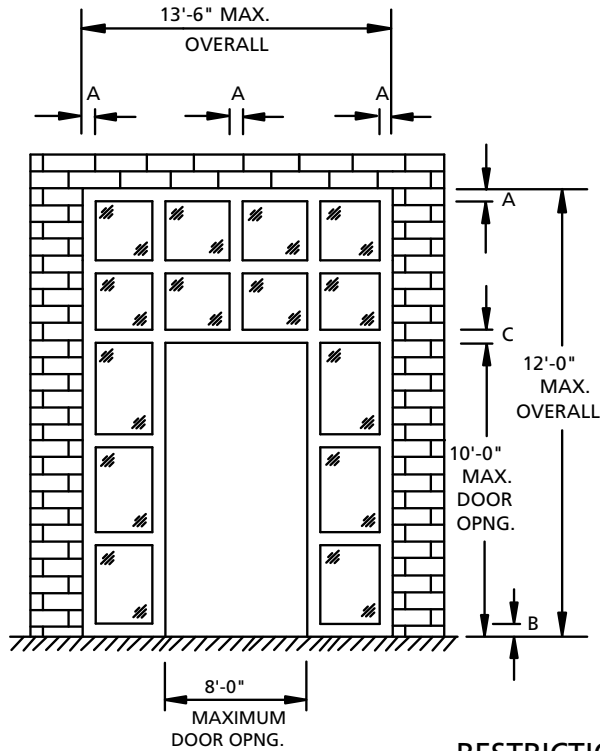
*LISTED 1/4" WIRE GLASS WITH FIREGLAZE FG3000 GLAZING MUST BE USED!
WHEN THIS OPTION IS USED, IT WILL BE NECESSARY FOR THE FRAME TO BEAR A SUPPLEMENTAL
MARKING INDICATING LISTED GLASS AND SPECIFIC GLAZING COMPOUND THAT MUST BE USED!

MASONRY
INSTALLATION
ONLY

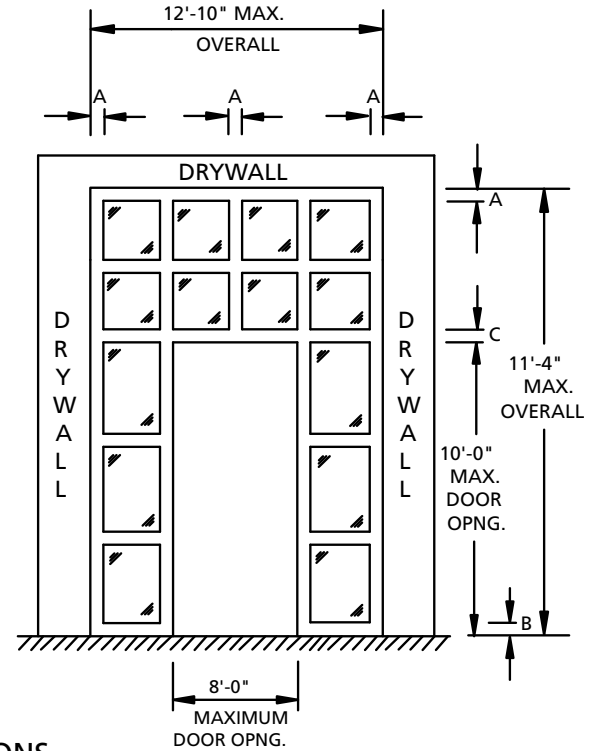


LABELED TRANSOM / SIDELITE & TRANSOM OR SIDELITE DOOR FRAMES

MASONRY INSTALLATION



DRYWALL INSTALLATION



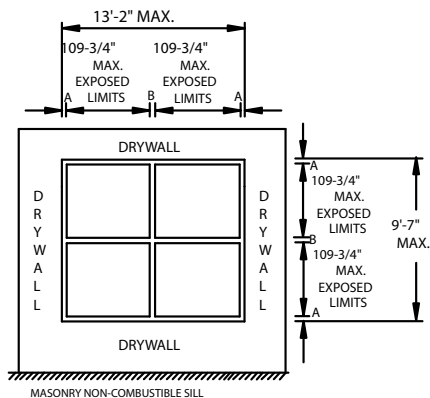
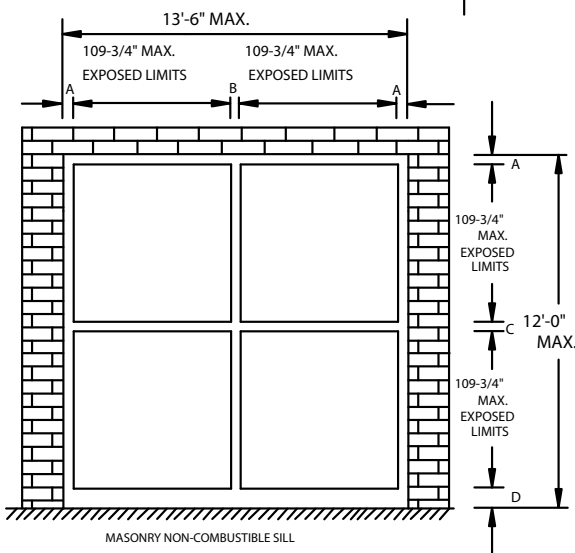
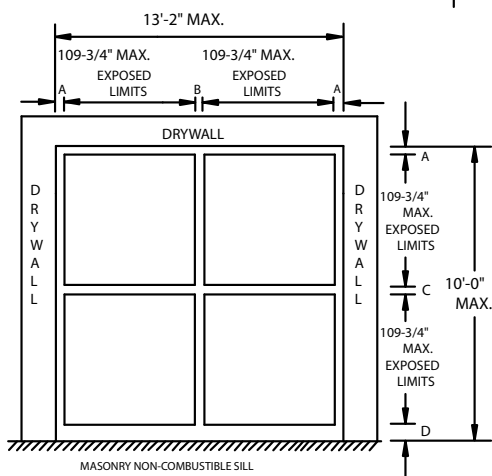
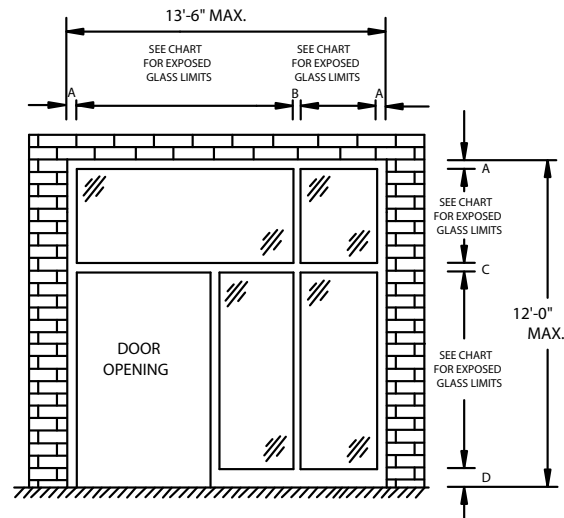
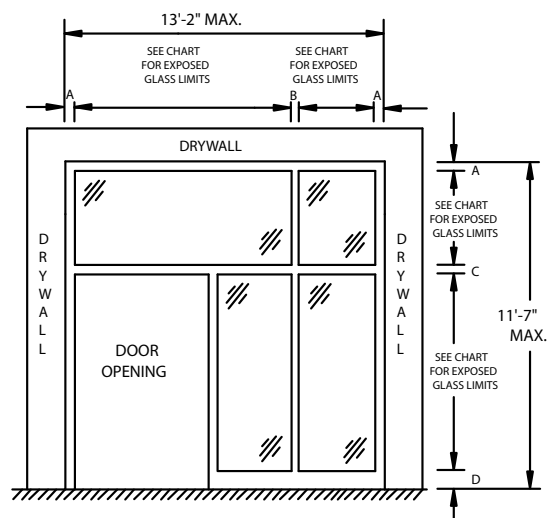
RESTRICTIONS

- 16, 14 OR 12 GA. STEEL FRAMES ONLY
- WELDED CORNER CONSTRUCTION ONLY
- MINIMUM THROAT DEPTH = 4-7/8"
- GLAZING MATERIAL MUST BE FIRELITE[®]
- ONLY LABELED SEALANT OR 100% SILICONE SEALANT MAY BE USED AS GLAZING COMPOUND FOR INSTALLING FIRELITE[®]
- ANCHORS - ALL TYPES APPROVED
 - (LOOSE OR WELDED) FOR MASONRY
 - (WELDED ONLY) FOR DRYWALL
 - ALL FRAMES EXCEEDING 8'-0" X 9'-0" ANCHORS MUST BE WELDED IN PLACE.
- GLAZING STOP FASTENERS -
 - MAX. SPACING = 4" FROM ENDS & 12" O.C.
 - MIN. OF 2 SCREWS PER STOP REQUIRED AT QUARTER POINTS NOT TO EXCEED 12" O.C.
- LIGHTS EXCEEDING THE RATING OR SIZE LIMITATIONS IN NFPA 80 MUST BE APPROVED BY AUTHORITY HAVING JURISDICTION.

FRAME DESCRIPTION	STOP HEIGHT	MAX. FIRELITE AREA PER LIGHT	MAX. WIDTH EXPOSED FIRELITE	MAX. HEIGHT EXPOSED FIRELITE	FIRE RATING	DIM. "A"	DIM. "B"	DIM. "C"
SINGLE LIGHT SIDELITE (NO MULLIONS) OR MULTIPLE LIGHT SIDELITE & TRANSOM (WITH MULLIONS)	5/8"	3325 SQ. IN.	95"	95"	20 MIN. OR 3/4 HR.	1" MIN.	1" MIN.	1" MIN.
	5/8"	2721 SQ. IN.	77"	77"	1 HR.	TO	TO	TO
	5/8"	2627 SQ. IN.	46.5"	56.5"	1 1/2 HR.	2" MAX.	16" MAX.	8" MAX.

Distributor Tech Data

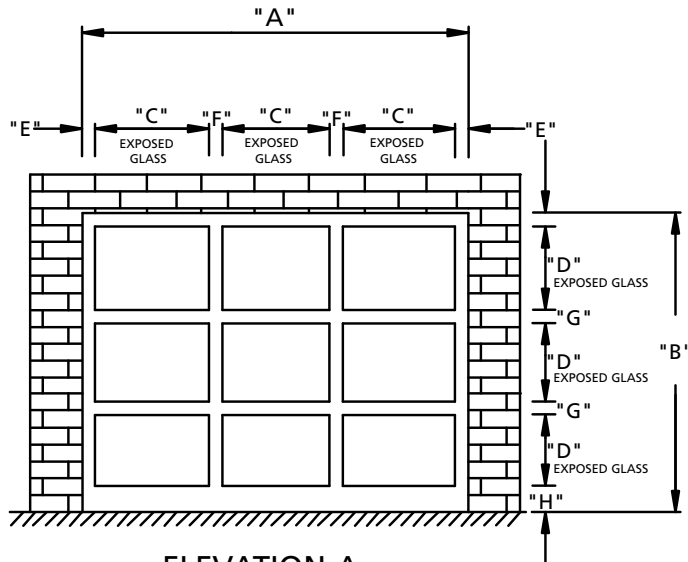
20 MINUTE RATED SIDELITE, TRANSOM OR WINDOW FRAME, FIRE TESTED WITHOUT HOSESTREAM



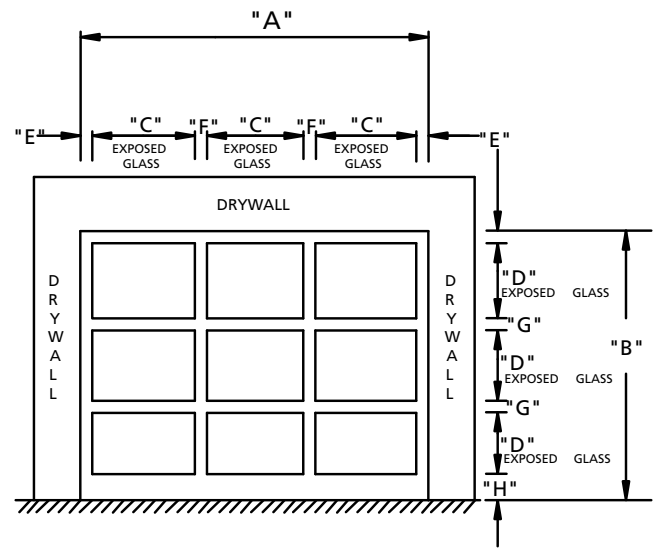
1. MAX. RATING = 20 MINUTE (FIRE TESTED WITHOUT HOSE STREAM)
2. MAX. GLASS AREA = SEE CHART BELOW
3. CORNER CONSTRUCTION = WELDED ONLY
4. ANCHORS = ALL TYPES APPROVED (LOOSE OR WELDED)
5. THROAT OPENING = 3-1/2" MIN.
6. GLASS STOP HEIGHT = 5/8" MIN.
7. DOOR OPENING = 4'-0" X 10'-0" SINGLE
8'-0" X 10'-0" PAIRS

TRANSOM LIGHT, SIDELIGHT & WINDOW FRAME GLASS LIMITATIONS			FACE DIM. A		FACE DIM. B		FACE DIM. C		FACE DIM. D	
WIDTH OF EXPOSED GLASS	HEIGHT OF EXPOSED GLASS	MAX. EXPOSED GLASS AREA PER LIGHT	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.
109-3/4" MAX.	109-3/4" MAX.	5268 SQ. IN. PER LIGHT	1-1/4"	4"	1-1/4"	4-1/2"	1-1/4"	8"	1-1/4"	16"

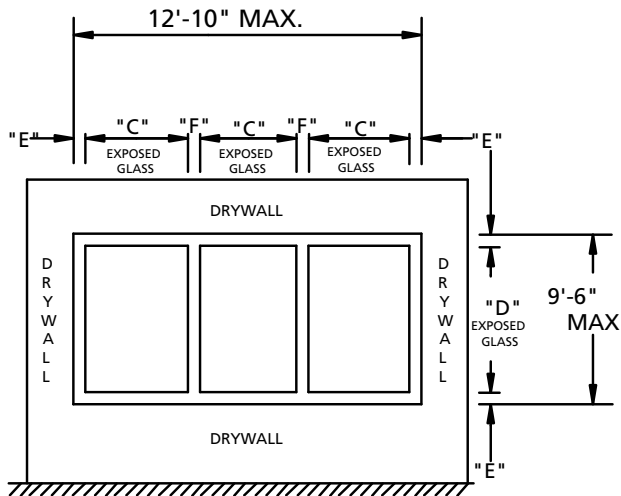
LABELED BORROWED LITES (FIRE WINDOW FRAMES)



ELEVATION-A



ELEVATION-B



ELEVATION-C

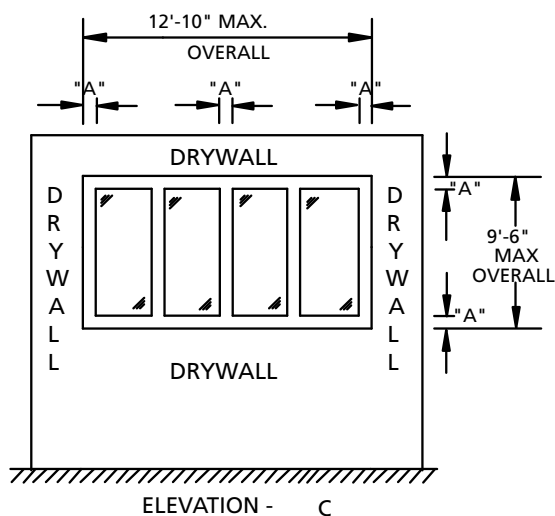
1. MAX. RATING = 3/4 HOUR
2. MAX. GLASS AREA (PER LIGHT) = PER CHART BELOW
3. CORNER CONSTRUCTION = WELDED
4. ANCHORS = ALL TYPES APPROVED (LOOSE OR WELDED). FRAMES EXCEEDING 8'-0" X 9'-0" MUST BE WELDED IN PLACE. FRAMES ABOVE THE FLOOR & COMPLETE PERIMETER IS DRYWALL MUST HAVE ANCHORS AROUND ENTIRE PERIMETER OF FRAME.
5. THROAT OPENING = 3-1/2" MIN.
6. STOP HEIGHT = PER CHART BELOW

OVERALL FRAME SIZE				STOP HEIGHT	MAXIMUM EXPOSED GLAZED AREA in. ²	DIM. "C" MAX.	DIM. "D" MAX.	FRAME FACES							
DRYWALL		MASONRY						DIM. "E"		DIM. "F"		DIM. "G"		DIM. "H"	
DIM. "A"	DIM. "B"	DIM. "A"	DIM. "B"					MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.
11'4"	10'0"	13'6"	12'0"	5/8"	500	54"	54"	1 1/4"	4"	1 1/4"	4 1/2"	1 1/4"	8"	1 1/4"	16"
12'10"	11'4"	13'6"	12'0"		1,296	48"	54"	2"	2"	2"	2"	2"	2"	2"	12"
					*4,704	*106"	*106"								
12'10"	11'4"	13'6"	12'0"	3/4"	1,296	54"	54"	1 1/4"	4"	1 1/4"	4 1/2"	1 1/4"	8"	1 1/4"	16"

* LISTED 1/4" WIRE GLASS WITH FIREGLAZE FG3000 GLAZING COMPOUND MUST BE USED!
WHEN THIS OPTION IS USED, IT WILL BE NECESSARY FOR THE FRAME TO BEAR A SUPPLEMENTAL MARKING
INDICATING LISTED GLASS AND SPECIFIC GLAZING COMPOUND THAT MUST BE USED!

LABELLED BORROWED LITES (FIRE WINDOW FRAMES)

MASONRY INSTALLATION



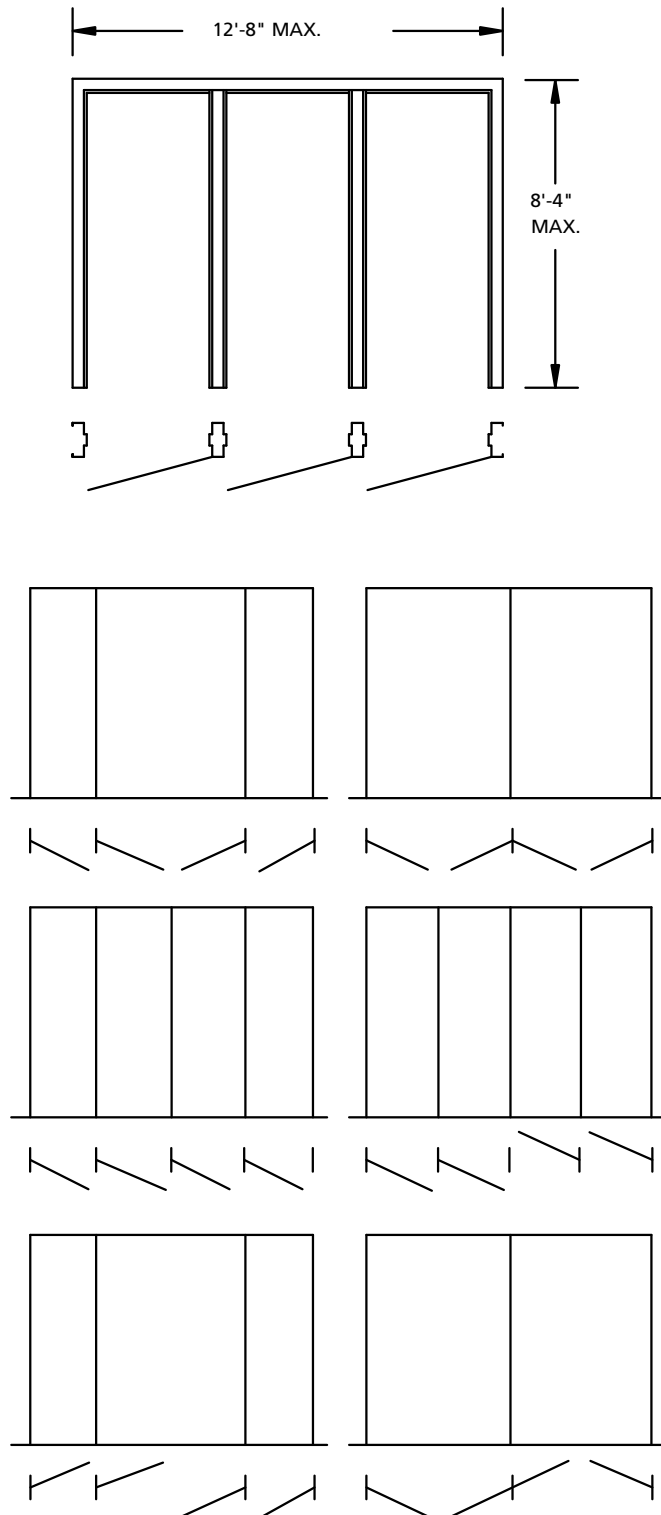
1. 16, 14 OR 12 GA. STEEL FRAMES ONLY
2. WELDED CORNER CONSTRUCTION ONLY
3. MINIMUM THROAT DEPTH = 4-7/8"
4. GLAZING MATERIAL MUST BE FIRELITE®.
5. ONLY LABELED SEALANT OR 100% SILICONE SEALANT MAY BE USED AS GLAZING COMPOUND FOR INSTALLING FIRELITE®.
6. ANCHORS - ALL TYPES APPROVED
 - A. (LOOSE OR WELDED) FOR MASONRY
 - B. (WELDED ONLY) FOR DRYWALL
 - C. ALL FRAMES EXCEEDING 8'-0" X 9'-0" ANCHORS MUST BE WELDED IN PLACE.
 - D. FRAMES ABOVE FLOOR (4 SIDED DRYWALL) MUST HAVE ANCHORS AROUND PERIMETER
7. GLAZING STOP FASTENERS -
 - A. MAX. SPACING = 4" FROM ENDS & 12" O.C.
 - B. MIN. OF 2 SCREWS PER STOP REQUIRED AT QUARTER POINTS NOT TO EXCEED 12" O.C.
8. LIGHTS EXCEEDING THE RATING OR SIZE LIMITATIONS IN NFPA 80 MUST BE APPROVED BY JURISDICTION HAVING JURISDICTION

FRAME DESCRIPTION	STOP HEIGHT	MAX. FIRELITE AREA PER LIGHT	MAX. WIDTH EXPOSED FIRELITE	MAX. HEIGHT EXPOSED FIRELITE	FIRE RATING	DIM. "A"	DIM. "B"
SINGLE LIGHT (NO MULLIONS) OR MULTIPLE LIGHTS (WITH MULLIONS)	5/8"	3325 SQ. IN.	95"	95"	20 MIN. & 3/4 HR.	1" MIN. TO 2" MAX.	1" MIN. TO 16" MAX.
	5/8"	2721 SQ. IN.	77"	77"	1 HR.		
	5/8"	2627 SQ. IN.	46.5"	56.5"	1 1/2 HR.		

Distributor Tech Data

LABELED MULTIPLE OPENING DOOR FRAMES

UL or WH LABEL



1-1/2 HOUR OR LESS FIRE RATING

16, 14 OR 12 GAGE STEEL

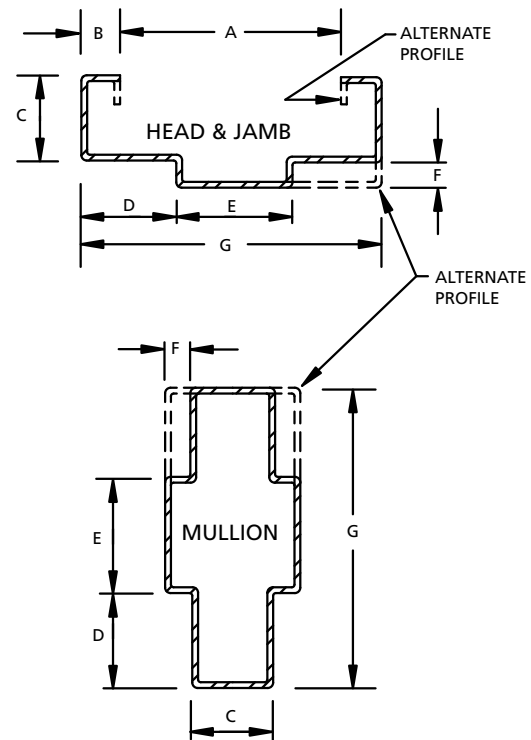
WELDED CONSTRUCTION ONLY

4080 MAX. SINGLE DOOR OPENING

8080 MAX. DOUBLE DOOR OPENING

FIXED OR REMOVEABLE MULLIONS

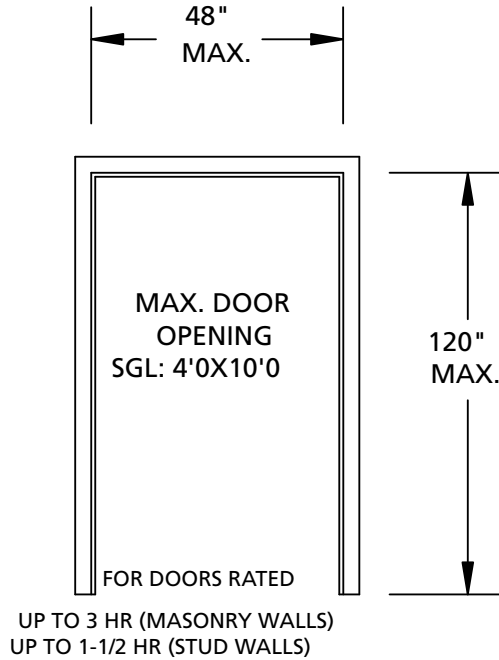
LOOSE OR ATTACHED ANCHORS PERMITTED



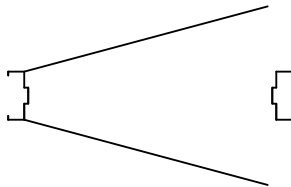
	DIMENSIONS	
	MINIMUM	MAXIMUM
A	4"	13"
B	1/4"	1-1/2"
C	2"	4"
D	1-15/16"	—
E	1"	—
F	5/8"	—
G	4-1/2"	15-1/2"

LABELED COMMUNICATING DOOR FRAMES

UL OR WH LABEL



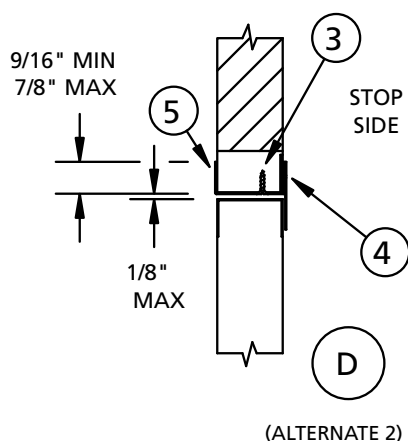
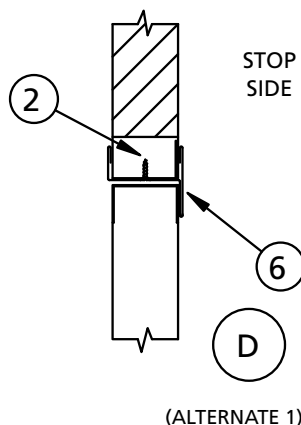
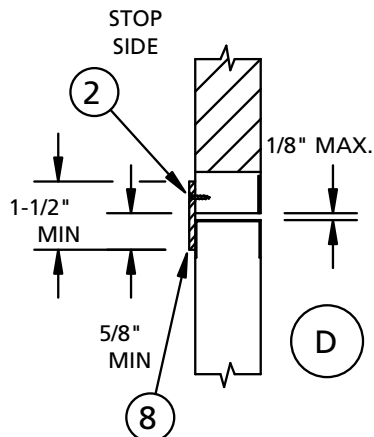
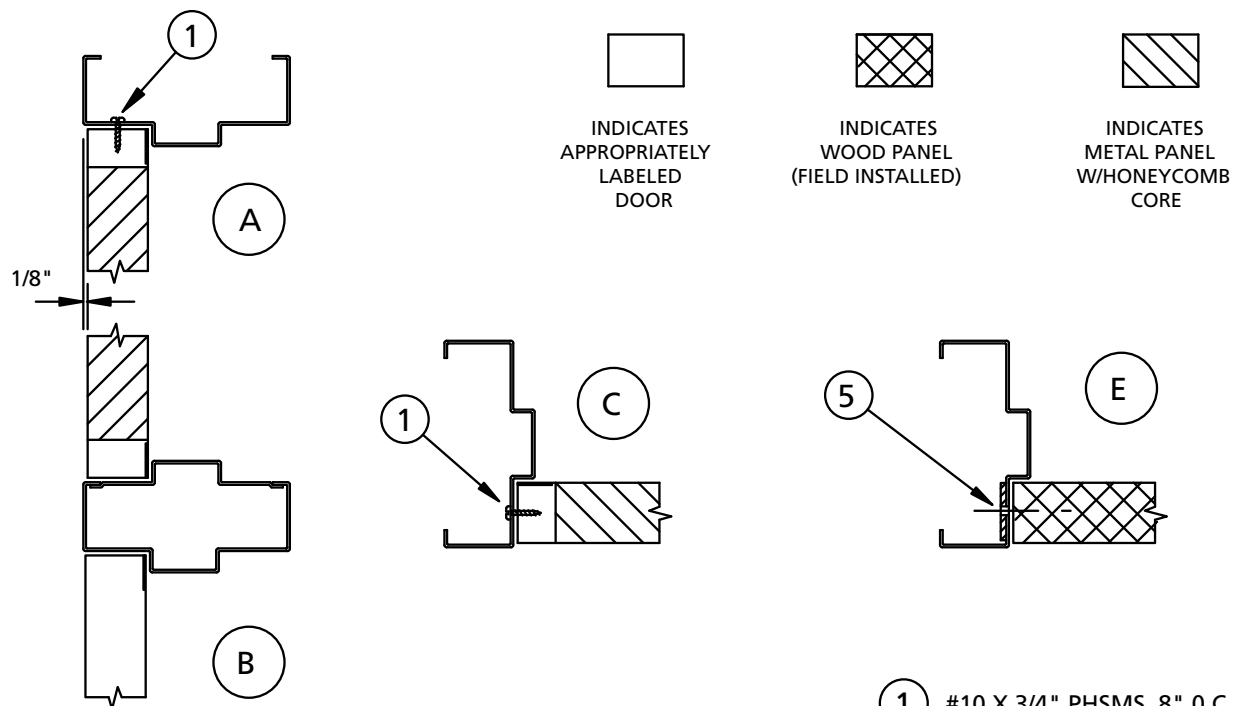
3 HOUR RATED (MASONRY) 1-1/2 RATED (STUD WALL)
CONSTRUCTION: K.D. or welded
MATERIAL: 16, 14 or 12 gage
THROAT: 3" minimum; 13" maximum
FACE: 1" minimum (masonry walls); 4" maximum
1-1/4" minimum (stud walls); 4" maximum



COMMUNICATING FRAMES
SINGLE SWING, IN/OUT
(MASONRY OR STUD WALLS)

Distributor Tech Data

LABELED TRANSOM FRAME 1-3/4" PANEL INSTALLATION DETAILS



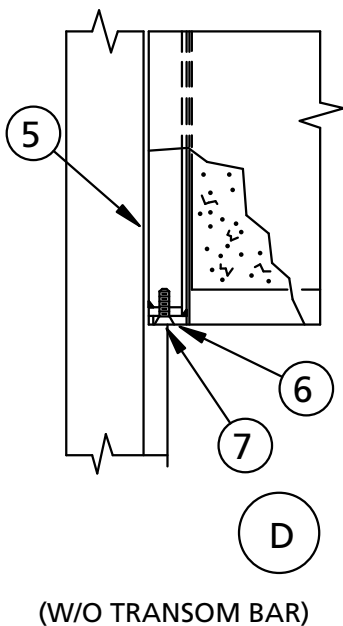
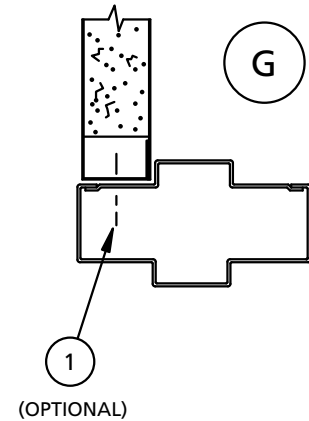
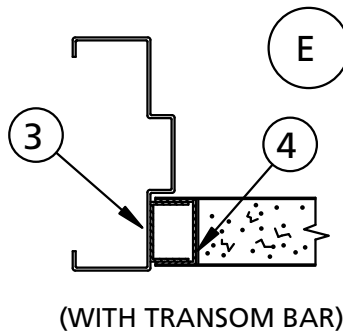
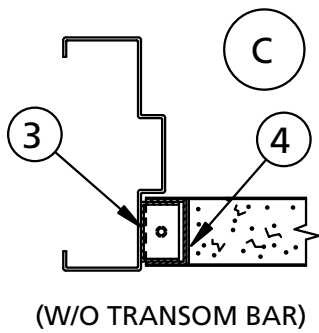
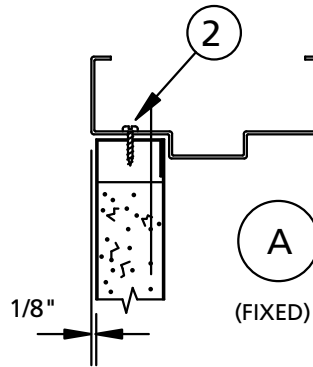
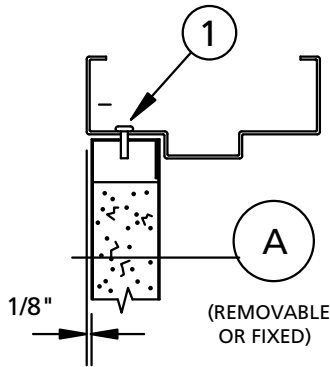
- (1) #10 X 3/4" PHSMS. 8" O.C.
- (2) #8 X 1/2" FHSMS, 8" O.C.
- (3) #10 X 1/2" FHSMS, 12" O.C.
- (4) WELD 8" O.C.
- (5) 3/8" DIA. HOLE & REINF. FOR PANEL SPRING CLIP, QUANTITY AND LOCATION PER UL PROCEDURE.
- (6) 18 GAGE STEEL
- (7) 18 GAGE STEEL, MINIMUM
16 GAGE STEEL, MAXIMUM
- (8) 12 GAGE STEEL

NOTE
1-3/4" METAL PANEL IS SHOWN WITH MECHANICAL INTERLOCK HEMMED EDGE RUNNING HORIZONTALLY; METAL PANEL IS ALSO AVAILABLE WITH END CHANNELS RUNNING HORIZONTALLY (HEMMED EDGE RUNS VERTICALLY).

ANY APPROPRIATELY LABELED DOOR CAN BE USED.

LABELED TRANSOM

FRAME SOLID CORE PANEL INSTALLATION



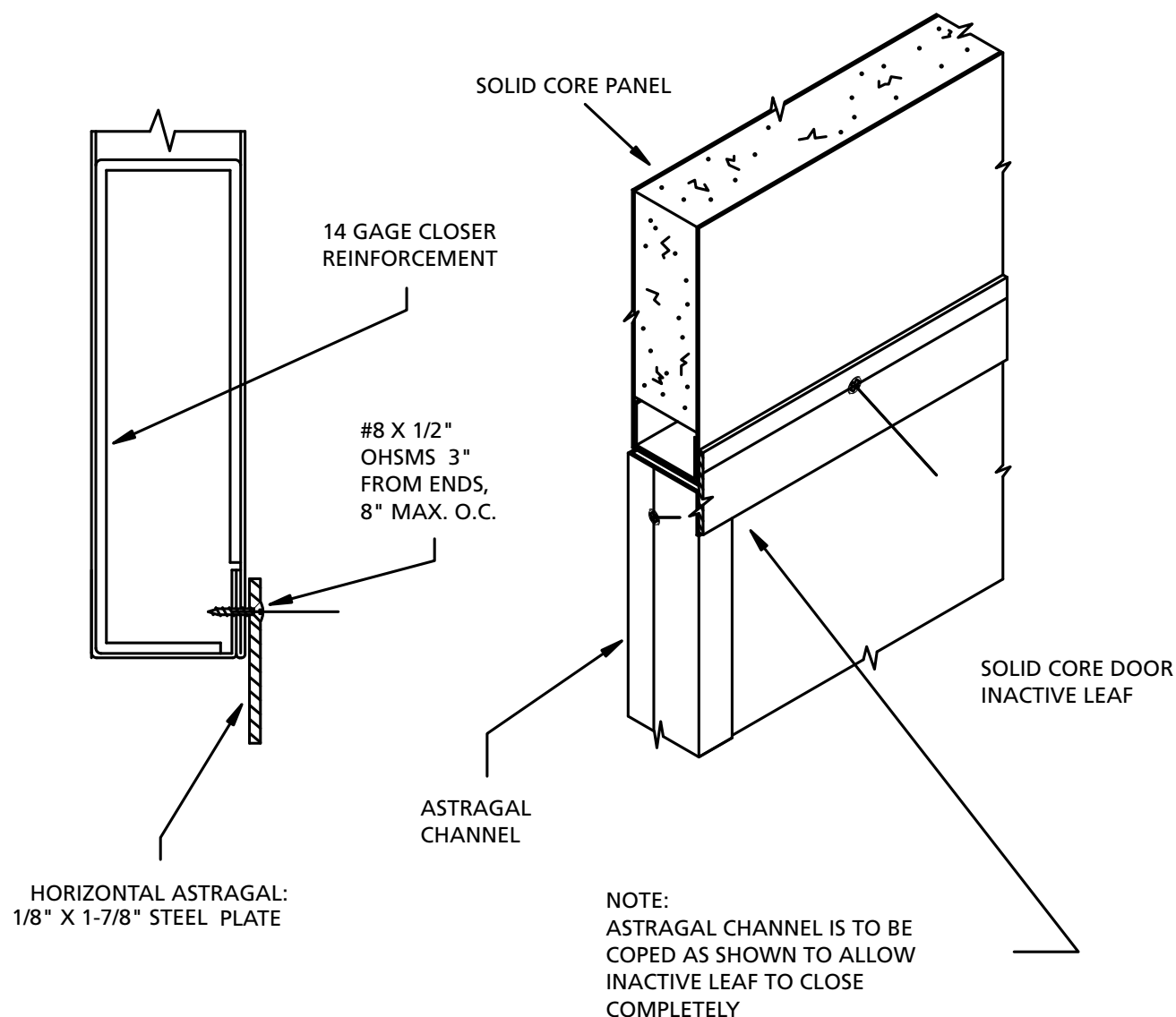
- 1 3/8" RIVET WELDED TO HEAD (OPTIONAL: TRANSOM BAR)
- 2 #12 SMS THRU CLEAR HOLE IN HEAD
- 3 16 GAGE CHANNEL ATTACHED TO EACH JAMB
- 4 16 GAGE CHANNEL ATTACHED TO VERTICAL CHANNEL EDGES
- 5 1/4" STEEL PLATE WELDED TO JAMB CHANNELS
- 6 1/4" STEEL PLATE WELDED TO PANEL CHANNELS
- 7 1/4-20 x 1" FHMS PANEL RETAINER (USED WHEN NO TRANSOM BAR IS PRESENT)

Distributor Tech Data

LABELED TRANSOM FRAME SOLID CORE PANEL INSTALLATION

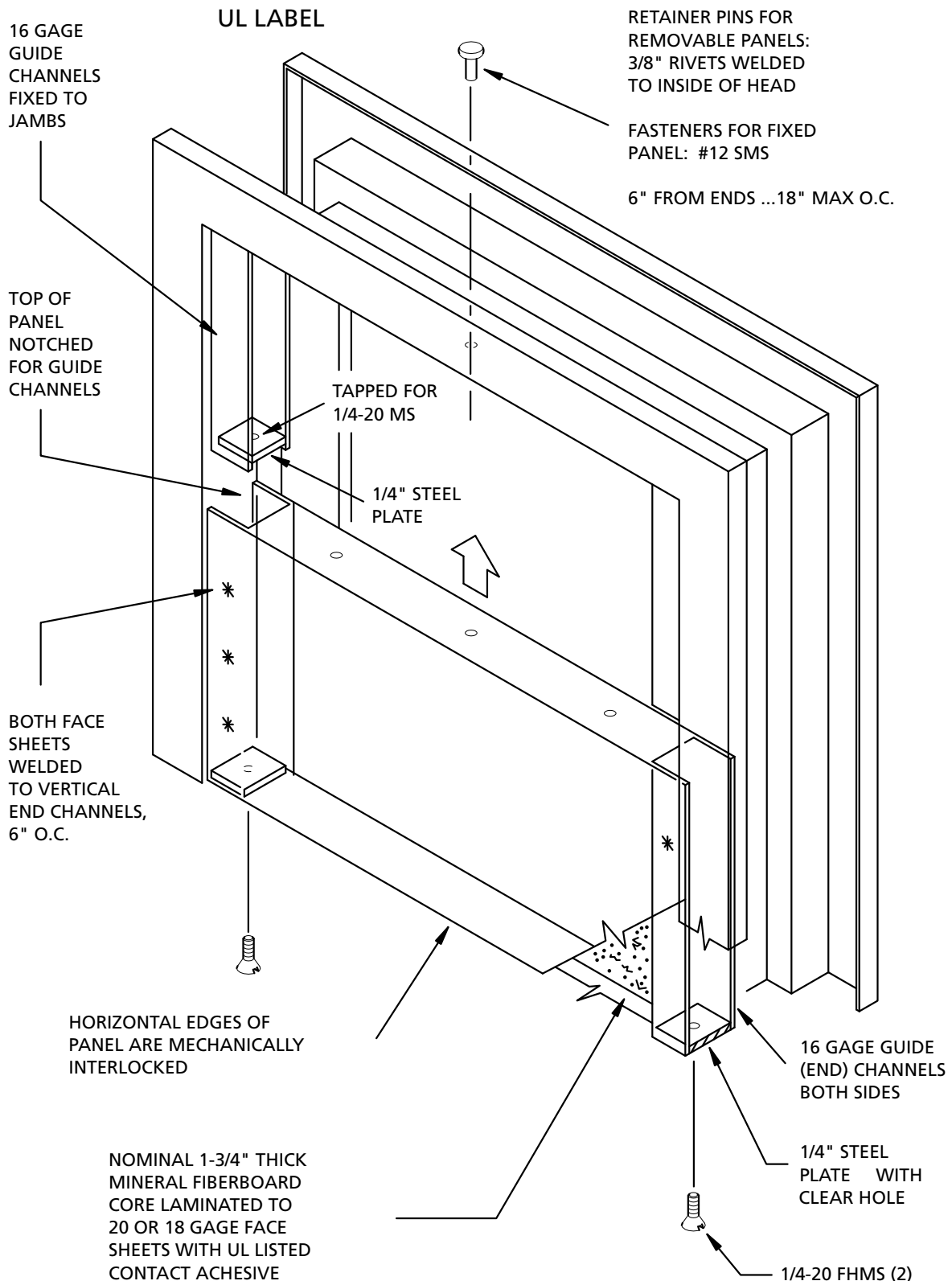
SECTION THRU DOOR
AT CLOSER LOCATION

DETAIL OF TYPICAL
DOOR AND SC/PANEL
APPLICATION

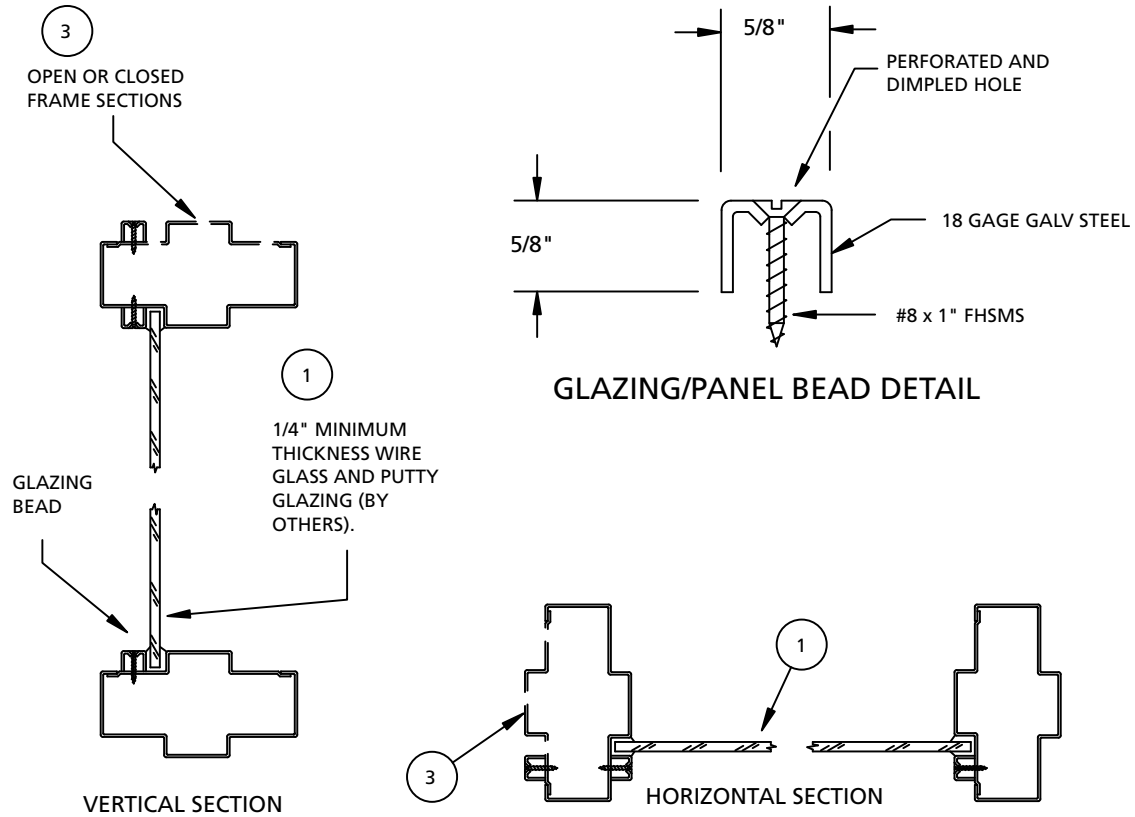


LABELED TRANSOM

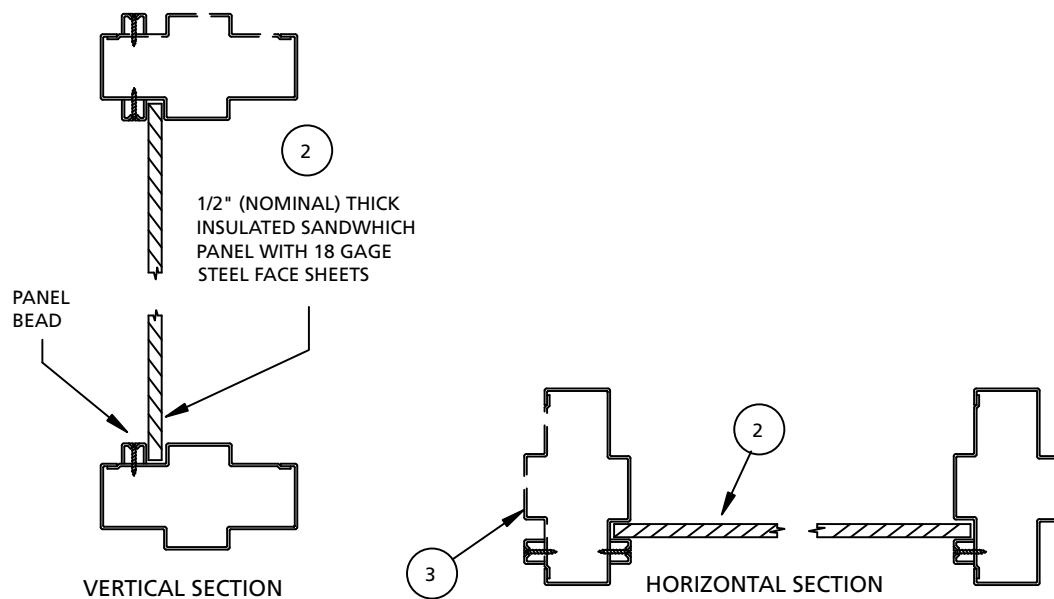
FRAME SOLID CORE PANEL INSTALLATION



GLAZING PROVISIONS AND RECESSED PANEL INSTALLATION DETAILS

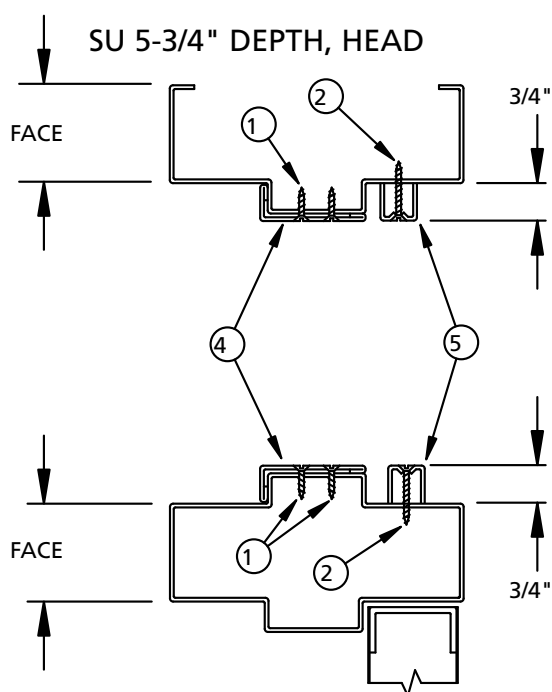


GLAZING BEAD PROVISIONS FOR LABELED FRAMES

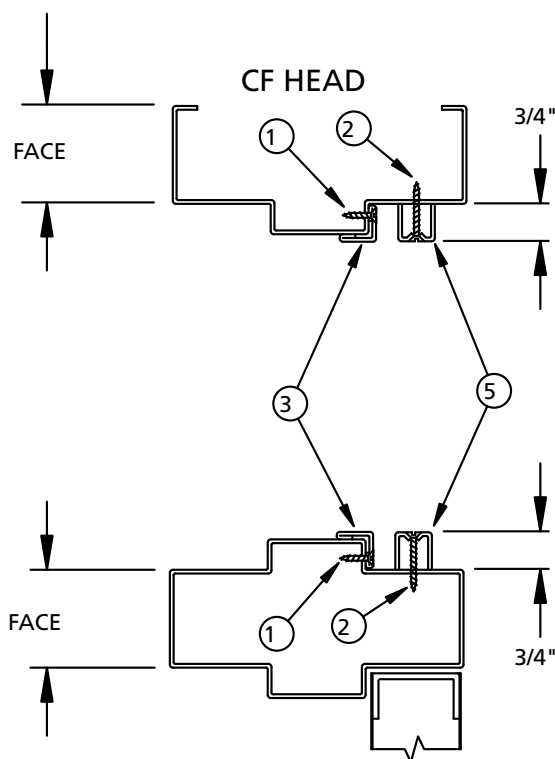


1/2" INSULATED STEEL PANEL INSTALLATION

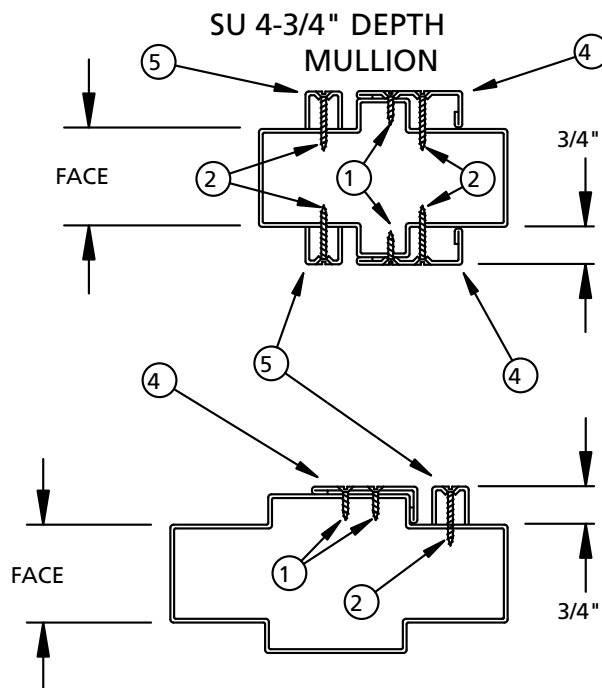
3/4" HIGH STOP BUILD UP



SU 5-3/4" DEPTH
TRANSOM BAR



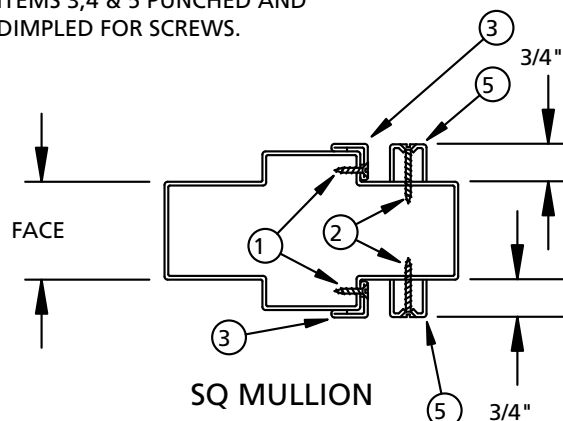
SQ TRANSOM BAR



SU 6-3/4", 7-3/4", 8-3/4"
TRANSOM BAR OR MULLION

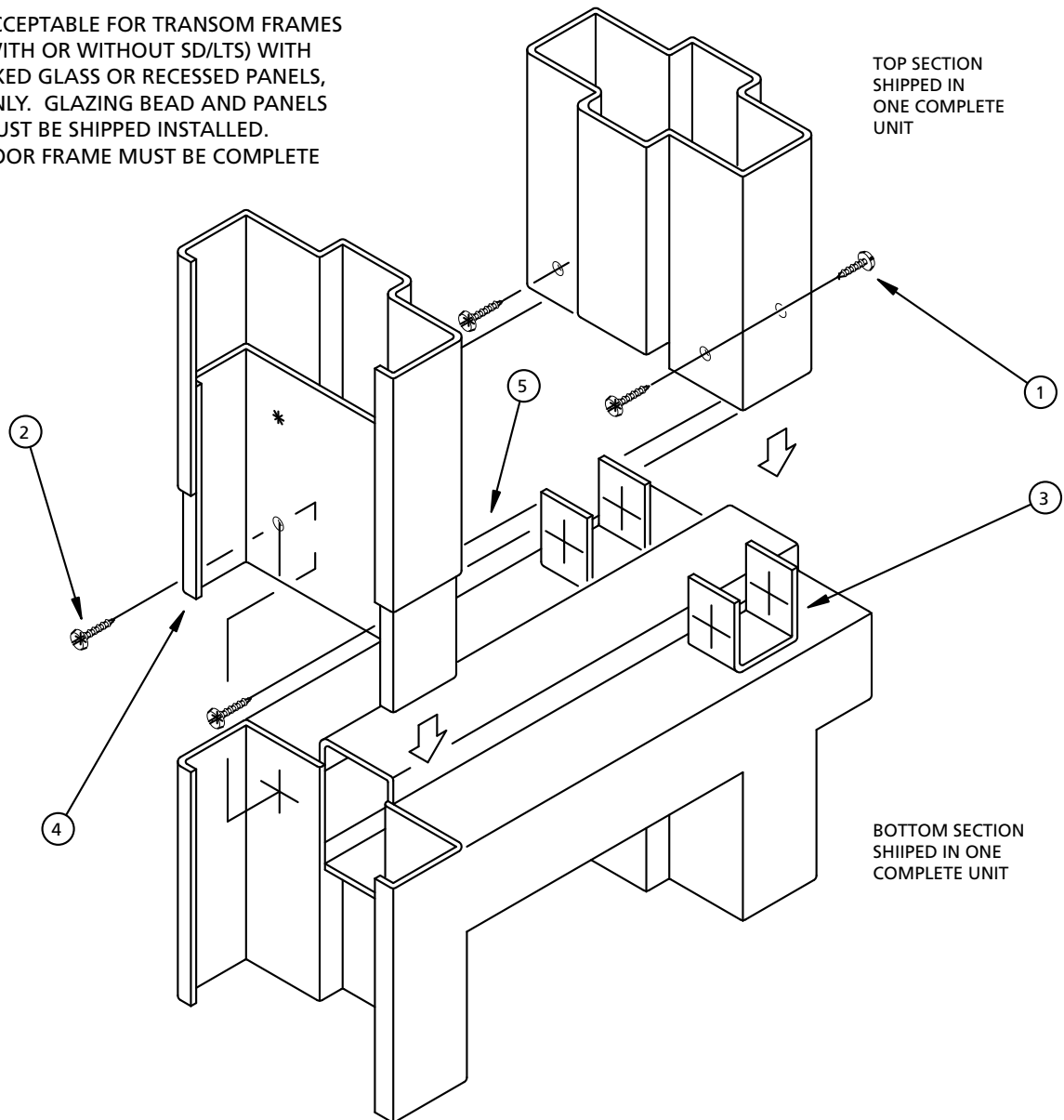
- ① #10 x 1/2" FHSMS
- ② #10 x 1-1/4" FHSMS
- FASTENER SPACING:
3" FROM ENDS, 8" O.C., MAX
- ③ FORMED 18 GA. STEEL: 3/4" X 3/4"
- ④ FORMED 18 GA. STEEL: 2-3/8" x 3/4"
- ⑤ FORMED 18 GA. STEEL: 1" x 3/4" LEGS

ITEMS 3, 4 & 5 PUNCHED AND
DIMPLED FOR SCREWS.

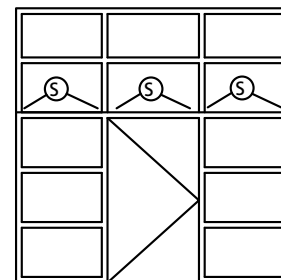


FIELD SPlicing FOR OVERSIZE FIRE DOOR FRAMES

ACCEPTABLE FOR TRANSOM FRAMES
(WITH OR WITHOUT SD/LTS) WITH
FIXED GLASS OR RECESSED PANELS,
ONLY. GLAZING BEAD AND PANELS
MUST BE SHIPPED INSTALLED.
DOOR FRAME MUST BE COMPLETE



- ① (4) #10 PHSMS AT MULLIONS
(FHSMS & CTSK HOLES OPTIONAL)
- ② (2) #10 PHSMS AT JAMBS
- ③ (2) 1/8" STEEL CHANNELS
- ④ 14 GAGE STEEL CHANNEL
SPLICE
- ⑤ TEMPORARY SPREADER



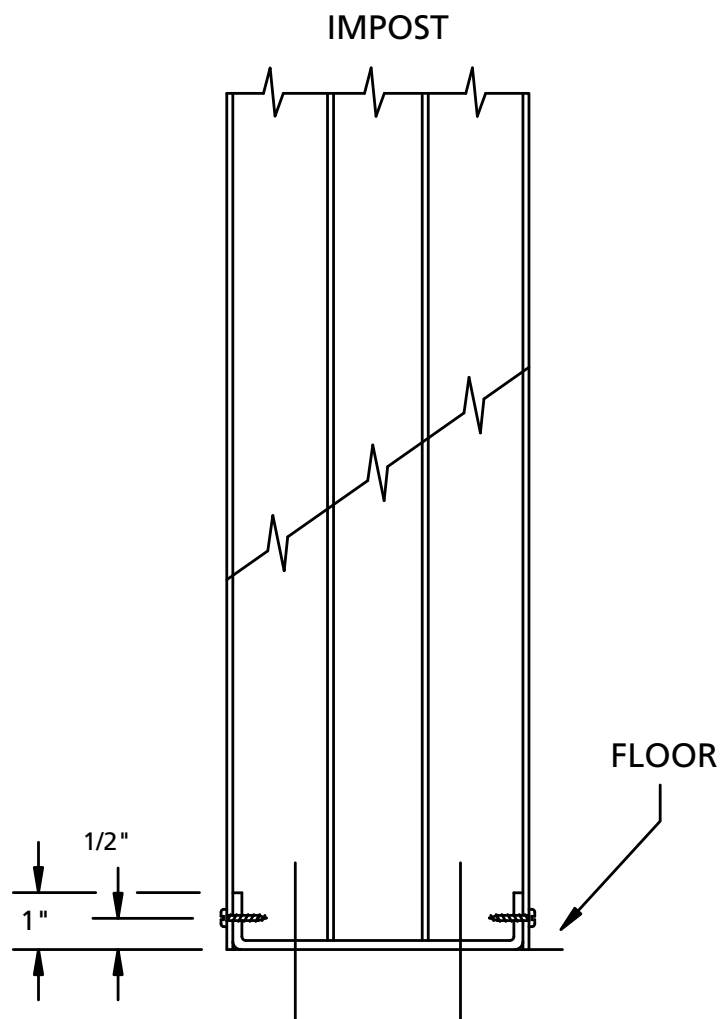
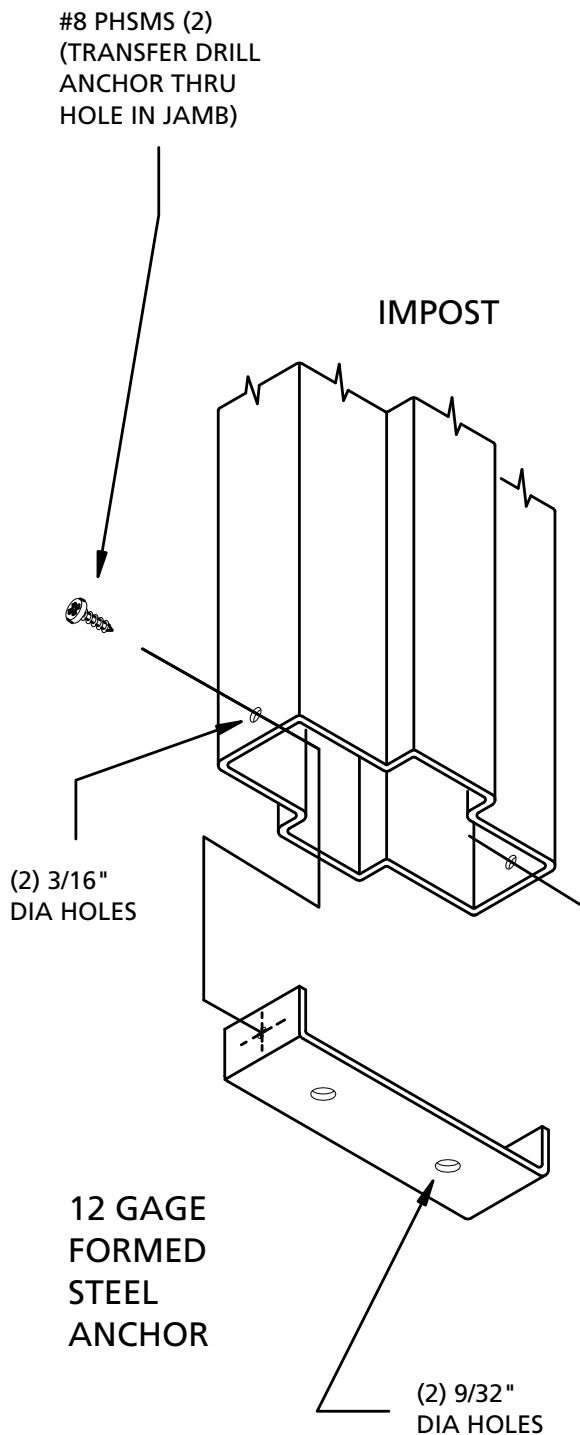
ELEVATION

⑤ FIELD SPLICE

Distributor Tech Data

SIDELITE FLOOR ANCHOR

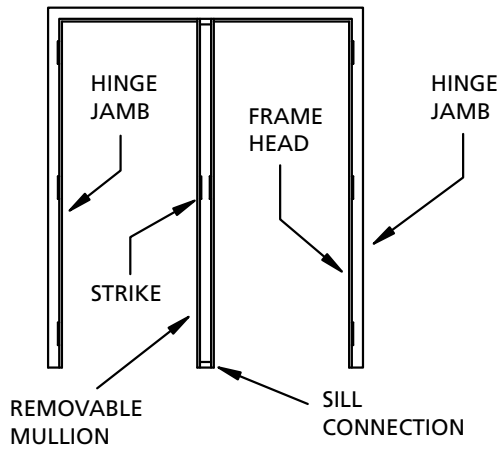
Anchor is attached to floor at two places. Closed frame section (impost/mullion) is slipped over anchor and fastened



Distributor Tech Data

REMOVABLE MULLION FOR LABELED FRAMES

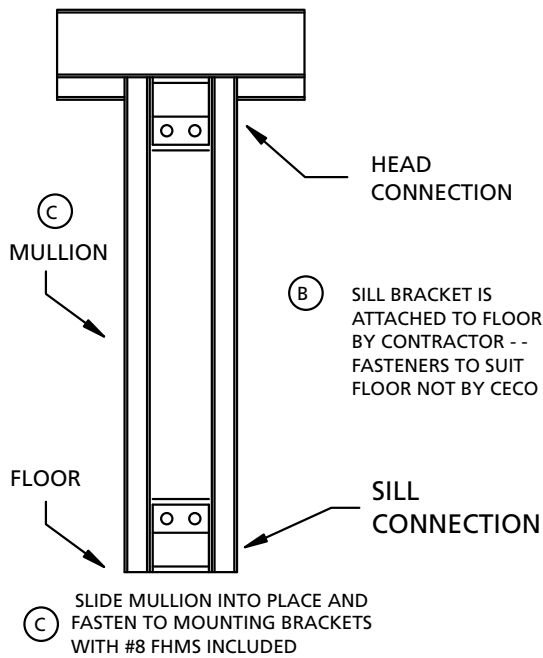
MAXIMUM DOOR SIZE: 4-0 X 8-0



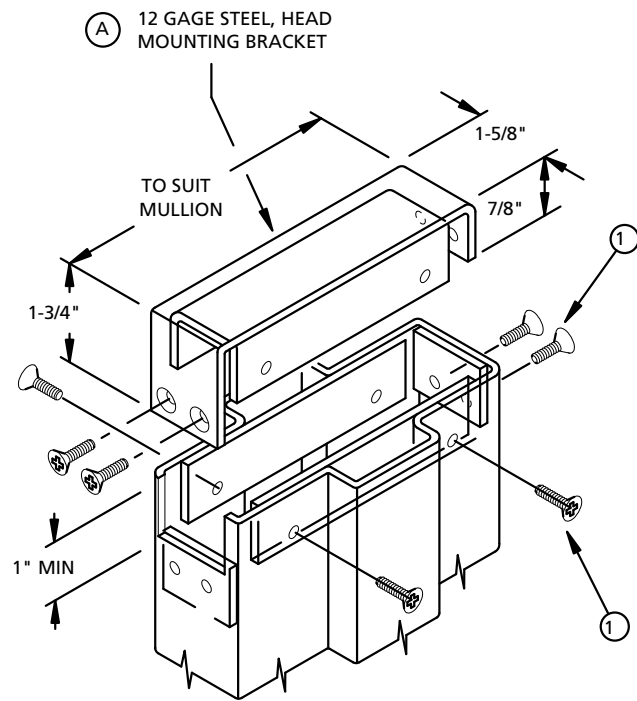
FRAME AND MULLION ASSEMBLY

- ① #8 X 1/2" FHMS, TYPICAL
- ② 12 GAGE STEEL REINFORCEMENT WELDED TO MULLION, TYPICAL

(A) MULLION MOUNTING BRACKET IS ATTACHED TO FRAME HEAD AT RABBETS BY MEANS OF (2) 3/8" PLUG WELDS OR (4) #8 M.S.



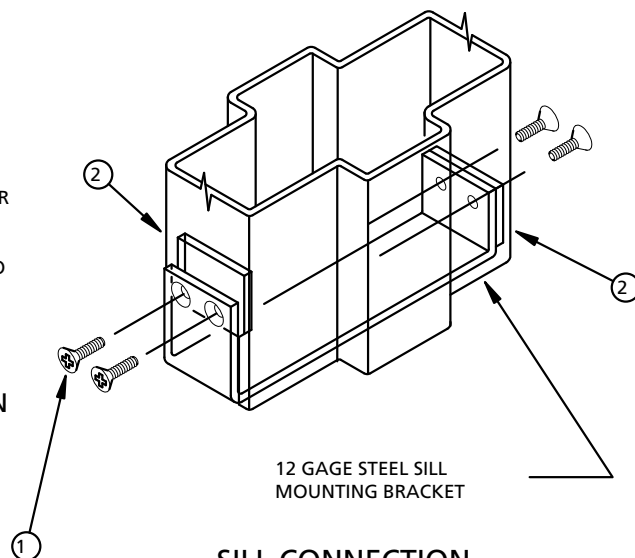
MULLION MOUNTING



HEAD CONNECTION

INSIDE

OUTSIDE



SILL CONNECTION

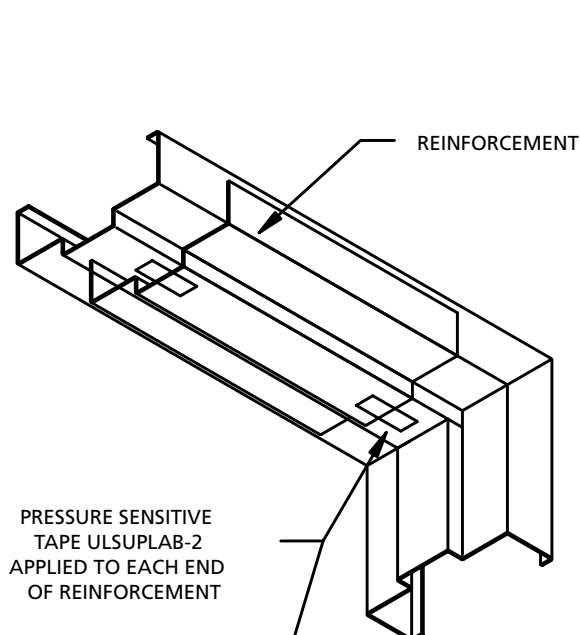
SLEEVE TYPE CLOSER REINFORCEMENT

CLOSER PROVISIONS

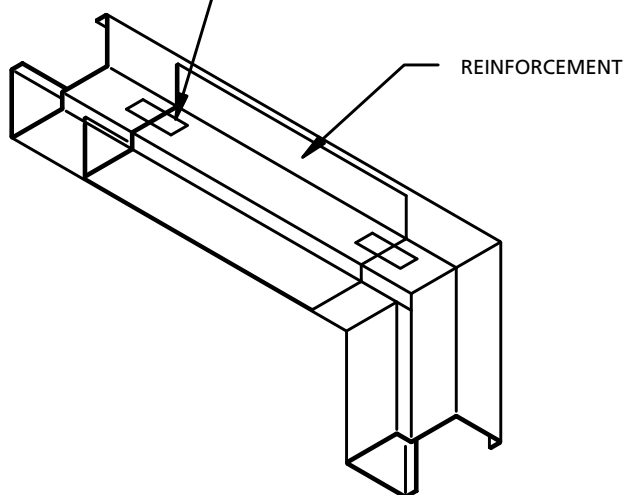
WH LABEL - REINFORCEMENT OPTIONAL

UL LABEL - PROVISIONS FOR CLOSING DEVICE IS REQUIRED IN EVERY UL FRAME

- A. REINFORCEMENT WELDED OR TAPED IN PLACE.
 - 1. DRILLING AND TAPPING IN SHOP OR FIELD.
- B. THREADED INSERTS APPLIED PER HARDWARE SCHEDULE AND TEMPLATE W/O REINFORCEMENT
 - 1. LABEL IDENTIFYING CLOSER NECESSARY.
- C. WHEN SPRING HINGES ARE USED, CLOSER REINFORCEMENT CAN BE OMITTED.
 - 1. SUPPLEMENTAL LABEL DESCRIBING CONDITION MUST BE AFFIXED DIRECTLY BELOW UL FRAME LABEL



DOUBLE RABBET



SINGLE RABBET

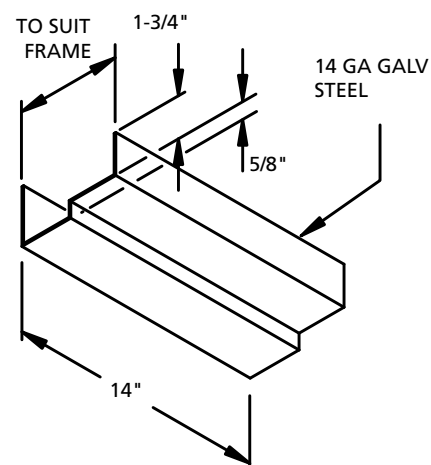
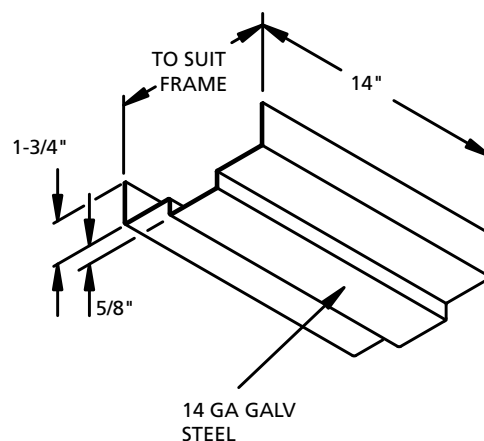
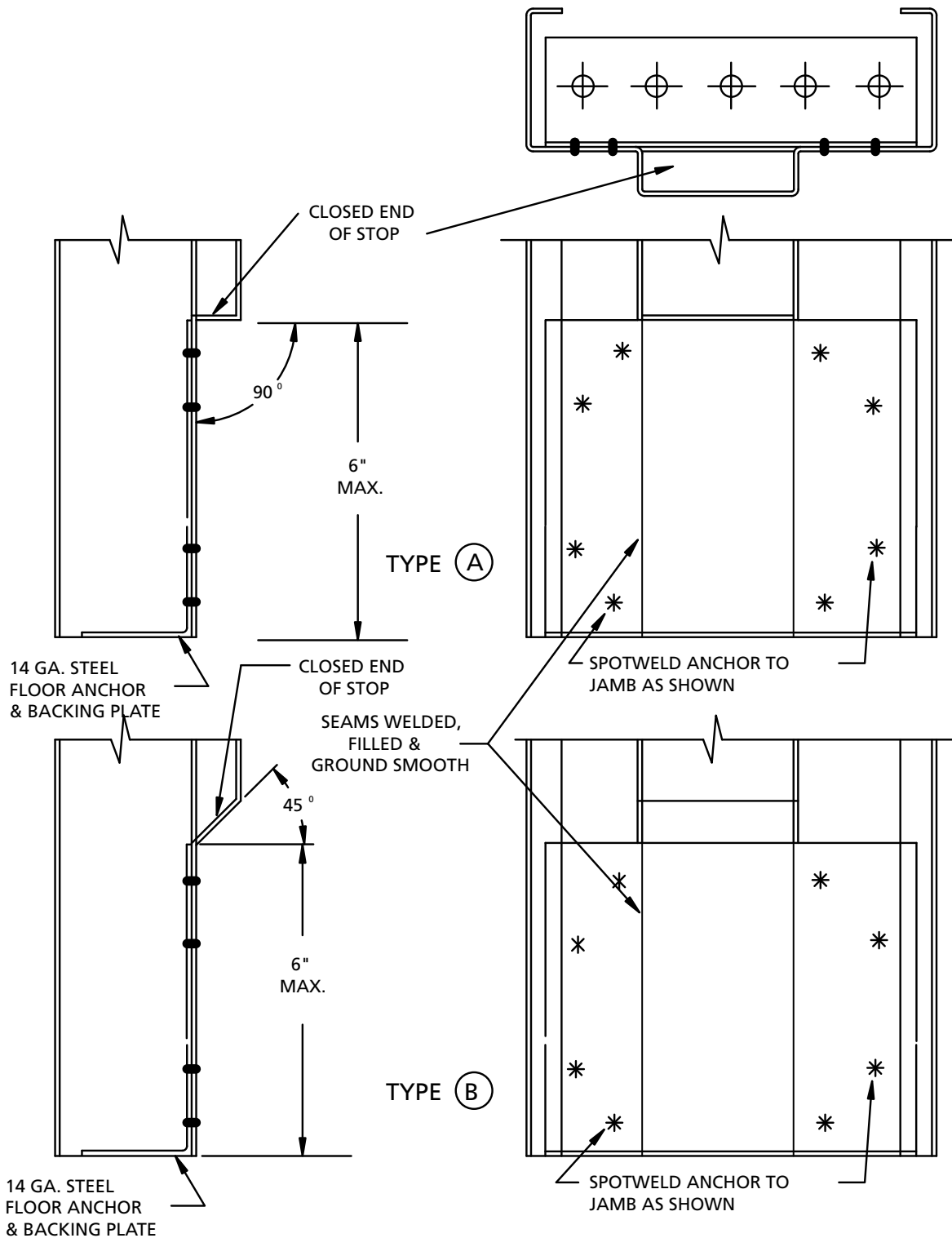


PLATE TYPE (WELDED)
CLOSER REINFORCEMENT

HOSPITAL SANITARY STOP

UL OR WH LABEL

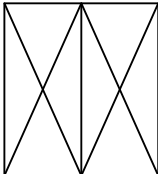
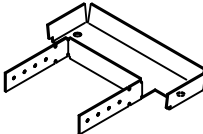
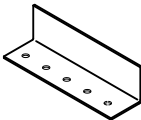
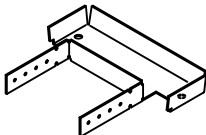


Distributor Tech Data

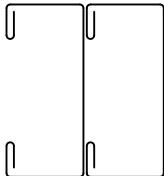
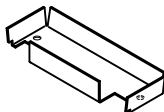
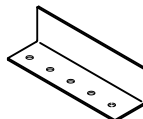
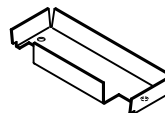
ANCHOR REQUIREMENTS FOR STUD WALLS

MAXIMUM HEIGHT: 10'-0"

WOOD STUD

WOOD STUD	JAMB ANCHORS			FLOOR ANCHORS	MUTES
	68	6	WS _ _ _ 	(2) SFA & (4) SCREWS 	(3) RM 
	70	6			
	72	6			
	710	8	OR (2) WS _ _ _ 		
	80	8			
	90	8			
	100	10			

METAL STUD

STUD	JAMB ANCHORS			FLOOR ANCHORS	MUTES
	68	6	MS _ _ _ 	(2) SFA & (4) SCREWS 	(3) RM 
	70	6			
	72	6			
	710	8	OR		
	80	8	(2) MS _ _ _ 		
	90	8			
	100	10			

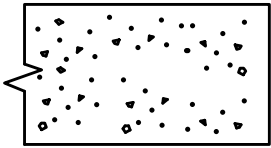
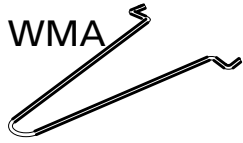
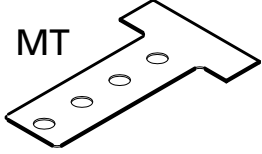
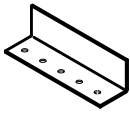
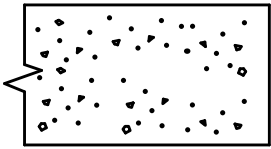
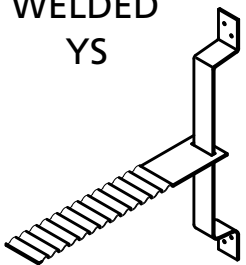
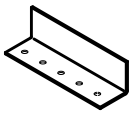
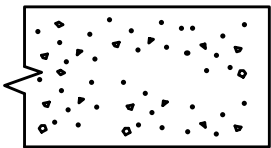
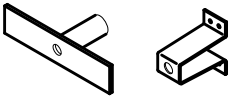
THE ABOVE GUIDELINES APPLY TO ALL CECO DOOR FRAMES
FOR STUD WALLS, UNLESS OTHERWISE NOTED

Distributor Tech Data

ANCHOR REQUIREMENTS FOR MASONRY WALLS

MAXIMUM SIZE: 8'-0" WIDE x 10'-0" HIGH

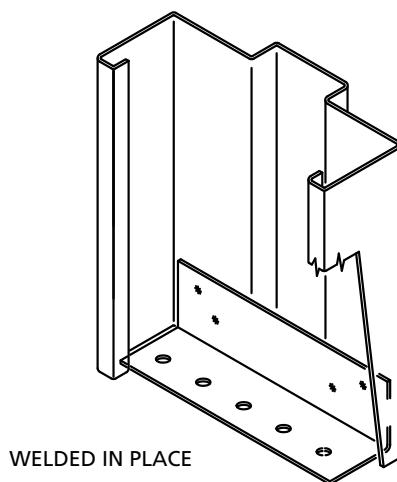
MASONRY

	JAMB ANCHORS			FLOOR ANCHORS	MUTES
NEW 	68	6	WMA  MT 	(2) SFA & (4) SCREWS 	(3) RM 
	70	6			
	72	6			
	710	8			
	80	8			
	90	8			
	100	10			
NEW 	68	6	WELDED YS 	(2) SFA & (4) SCREWS 	(3) RM 
	70	6			
	72	6			
	710	8			
	80	8			
	90	8			
	100	10			
EXISTING 	68	8	EOSF6/8  EO --- 	NONE	(3) RM 
	70	8			
	72	8			
	710	10			
	80	10			
	90	10			
	100	12			

THE ABOVE GUIDELINES APPLY TO ALL CECO DOOR FRAMES
FOR MASONRY WALLS, UNLESS OTHERWISE NOTED.

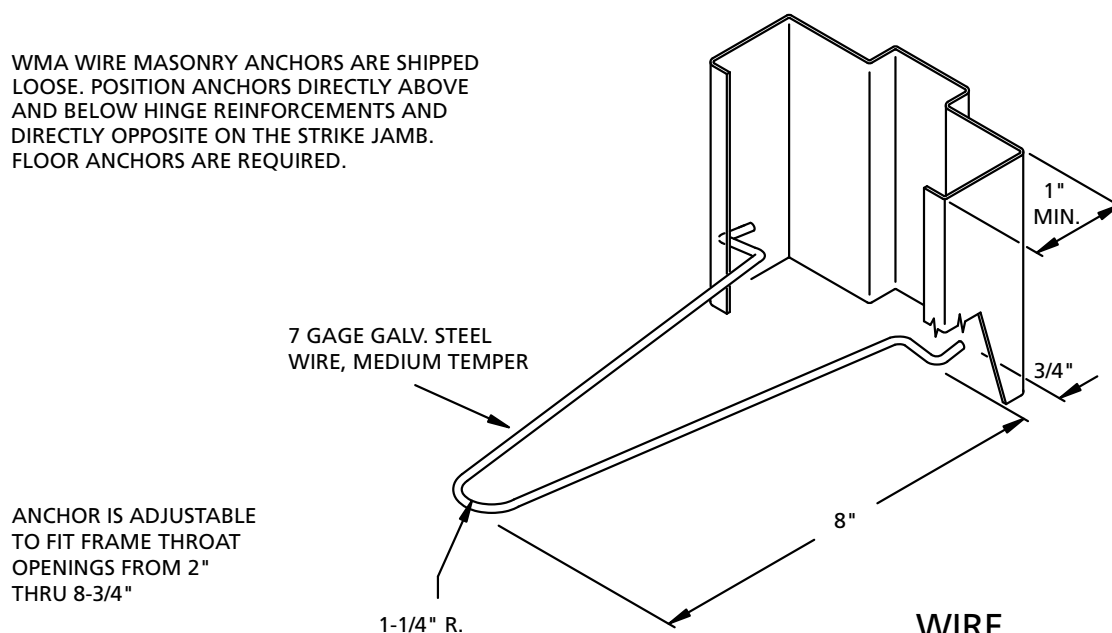
Distributor Tech Data

FLOOR ANCHOR AND WIRE MASONRY ANCHOR



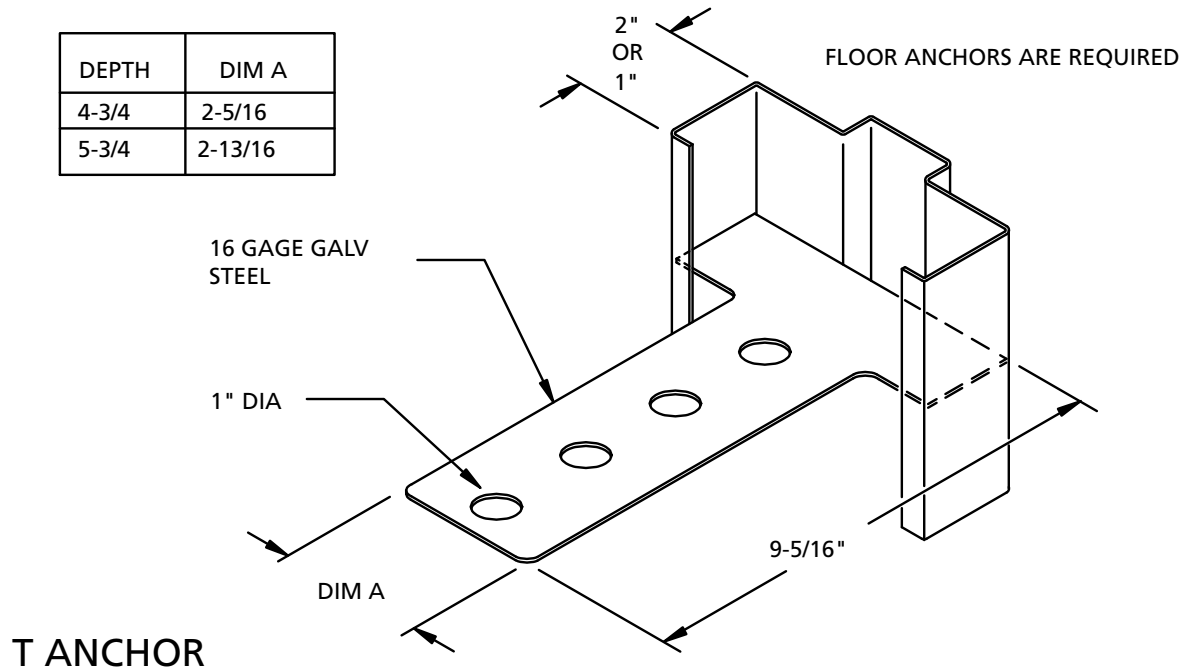
FLOOR ANCHOR

WMA WIRE MASONRY ANCHORS ARE SHIPPED LOOSE. POSITION ANCHORS DIRECTLY ABOVE AND BELOW HINGE REINFORCEMENTS AND DIRECTLY OPPOSITE ON THE STRIKE JAMB. FLOOR ANCHORS ARE REQUIRED.

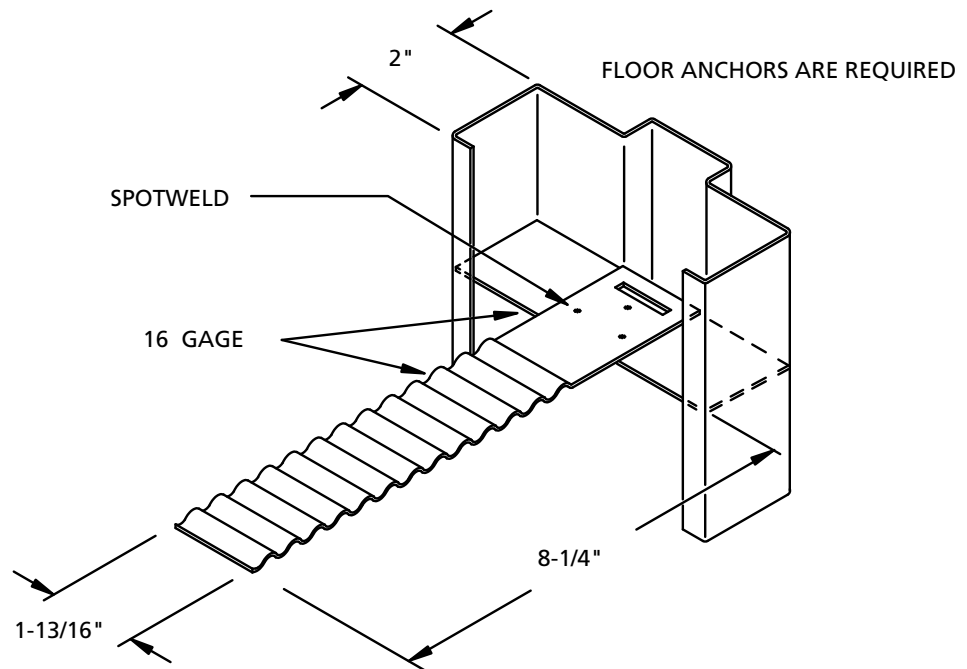


MASONRY T ANCHORS FIELD INSTALLED

DEPTH	DIM A
4-3/4"	2-5/16"
5-3/4"	2-13/16"

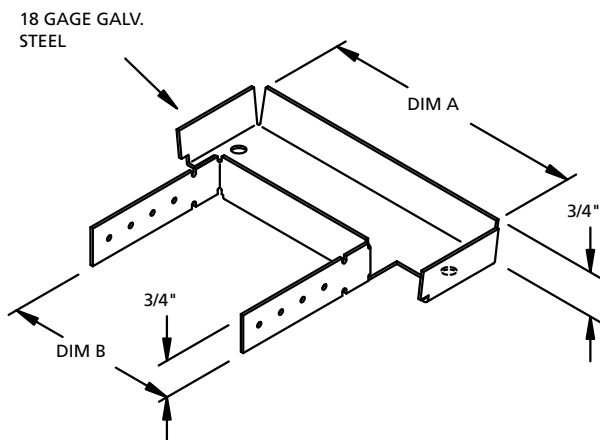


DEPTH
6-3/4"
7-3/4"
8-3/4"

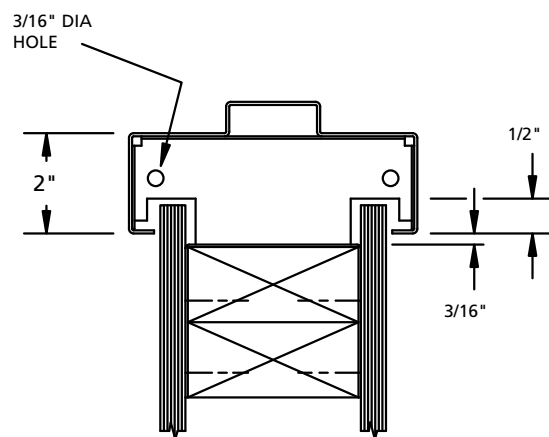


Distributor Tech Data

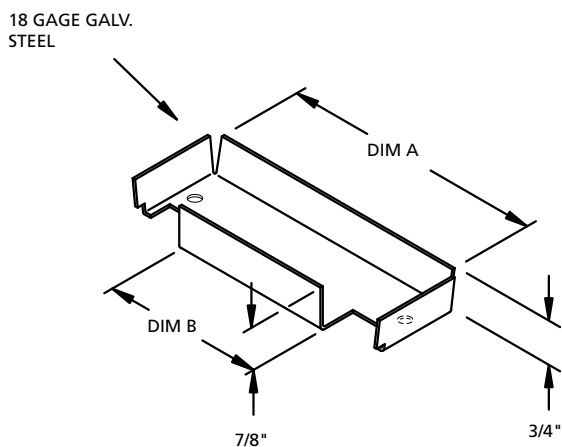
STUD ANCHORS FIELD INSTALLED



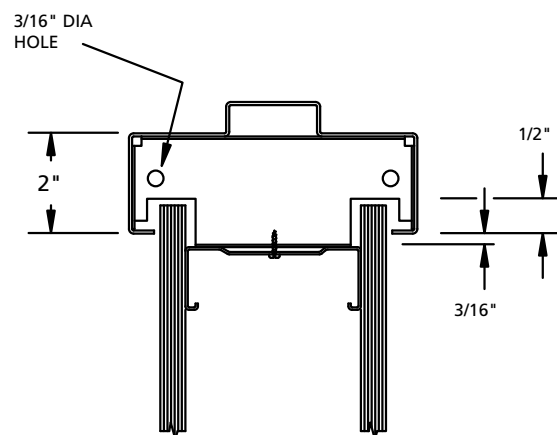
FRAME DEPTH	DIM A	DIM B
4-3/4	4-11/16	2-1/2
5-3/4	5-11/16	3-1/2
6-3/4	6-11/16	4-1/2
7-3/4	7-11/16	5-1/2
8-3/4	8-11/16	6-1/2



WOOD STUD ANCHORS



FRAME DEPTH	DIM A	DIM B
4-3/4	4-11/16	2-1/4
5-3/4	5-11/16	3-1/4
6-3/4	6-11/16	4-1/4
7-3/4	7-11/16	5-1/4
8-3/4	8-11/16	6-1/4

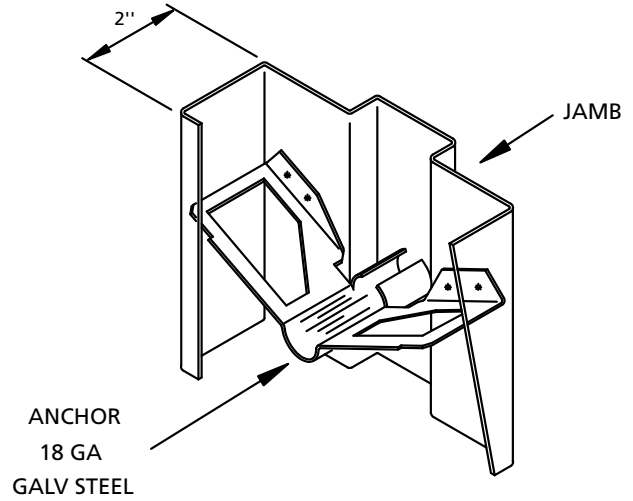


METAL STUD ANCHOR

EXISTING MASONRY OPENING ANCHOR FIELD INSTALLED

EXISTING OPENING (EO) ANCHORS ARE SHIPPED UNATTACHED FOR FIELD INSTALLATION. JAMB PUNCHING (3/8" DIA. HOLE) AND FH DYNABOLT ARE INCLUDED. FLOOR ANCHORS ARE NOT NORMALLY INCLUDED; AN EXISTING OPENING ANCHOR IS USED AT SILL INSTEAD. EO ANCHORS MAY ALSO BE SHOP INSTALLED AND WELDED IN PLACE (OPTIONAL).

FRAME DEPTH
4-1/2 THRU 6-3/4 AND 6-7/8 THRU 9-3/4"



STANDARD LOCATION OF DIMPLED HOLES IN JAMB STOPS

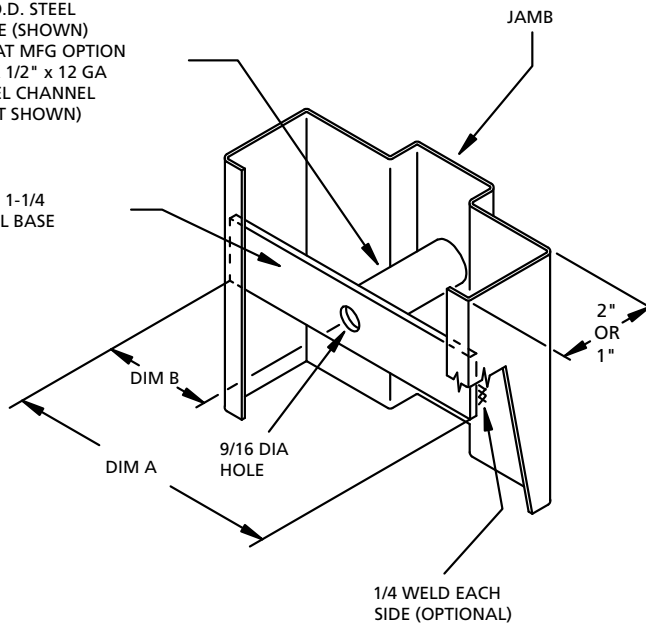
JAMB HEIGHT	DIMPLED HOLE SPACING	FASTENER QUANTITY
6-8, 7-0, 7-2	4" - 3 EQUAL SPACES - 4"	4
7-10	12" - 4 EQUAL SPACES - 4"	5
8-0, 9-0	4" - 4 EQUAL SPACES - 4"	5

FOR SPECIAL SIZES, ANCHORS ARE LOCATED AT A MAXIMUM OF 12" FROM ENDS AND 26" ON CENTER

RECOMMENDED HOLE IN MASONRY FOR DYNABOLT IS 3/8" DIA. BY 1-3/8" DEEP.
RECOMMENDED CLEARANCE NECESSARY FOR INSTALLATION AT BOTH JAMBS AND HEAD: 1/4"

1" O.D. STEEL
TUBE (SHOWN)
OR AT MFG OPTION
1" X 1/2" x 12 GA
STEEL CHANNEL
(NOT SHOWN)

1/8 x 1-1/4
STEEL BASE



PIPE AND PLATE EO ANCHOR
IS USED FOR STANDARD FRAMES
WITH 1" FACES OR FOR OTHER
SPECIAL PROFILE CONDITIONS

SUPPLIED BY SPECIAL ORDER ONLY

ANCHORS ON THIS PAGE ARE
CLASSIFIED AS MASONRY TYPE
FOR LABELING PURPOSES

Distributor Tech Data

WELDED FLOOR ANCHOR AND MASONRY JAMB ANCHOR

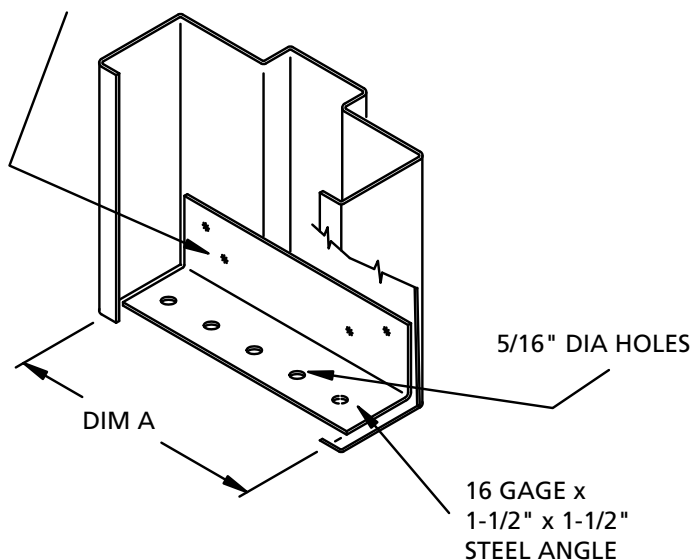
YOKE & STRAP ANCHORS FOR LABELED FRAMES ARE SHOP ATTACHED. ANCHORS ARE NORMALLY POSITIONED ON THE SAME CENTER LINE AS HINGE PREPARATIONS AND DIRECTLY OPPOSITE ON STRIKE JAMBS (BUT NOT TO EXCEED 30"). FLOOR ANCHORS ARE REQUIRED AND FURNISHED STANDARD.

16 GAGE GALV STEEL
STRAP APPROX 10"
LONG

1-25/32"

SPOTWELDED FOUR
PLACES TO FRAME

SPOTWELDED FOUR
PLACES TO FRAME



FRAME DEPTH	DIM A
3-1/4 TO 4-1/8	3"
4-1/4 TO 5-1/8	4"
5-1/4 TO 6-1/8	5"
6-1/4 TO 7-1/8	6"
7-1/4 TO 8-1/8	7"
8-1/4 TO 9-1/8	8"

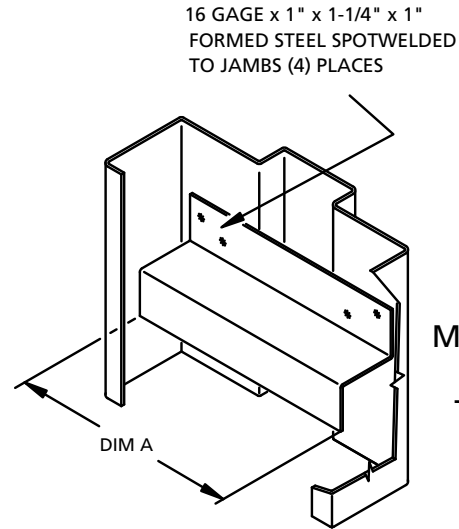
For depths NOT listed: Anchor length is provided 3/4" less than jamb depth (with end holes only).

STUD ANCHORS WELDED APPLICATION

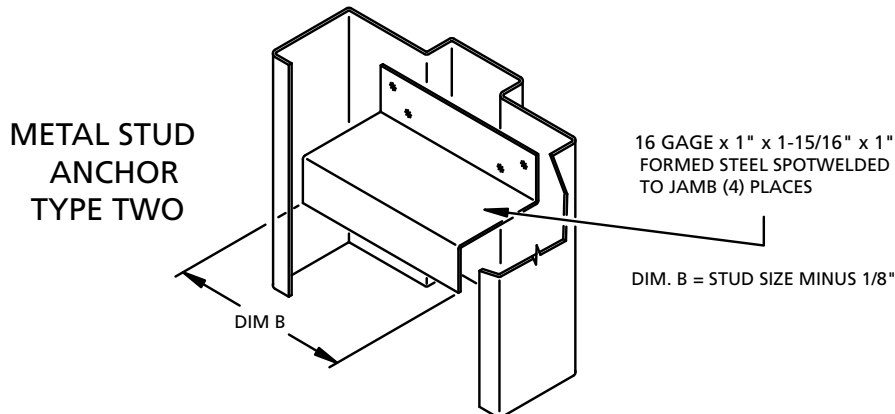
STUD ANCHORS SHOWN ON THIS PAGE ARE SHOP ATTACHED AT NO MORE THAN 30" ON CENTERS. ANCHORS ARE POSITIONED IN CENTER OF THROAT UNLESS OTHERWISE SPECIFIED.

For depths NOT listed: Anchor length is provided 3/4" less than jamb depth.

FRAME DEPTH	DIM A
3-1/4 TO 4-1/8	3"
4-1/4 TO 5-1/8	4"
5-1/4 TO 6-1/8	5"
6-1/4 TO 7-1/8	6"
7-1/4 TO 8-1/8	7"
8-1/4 TO 9-1/8	8"



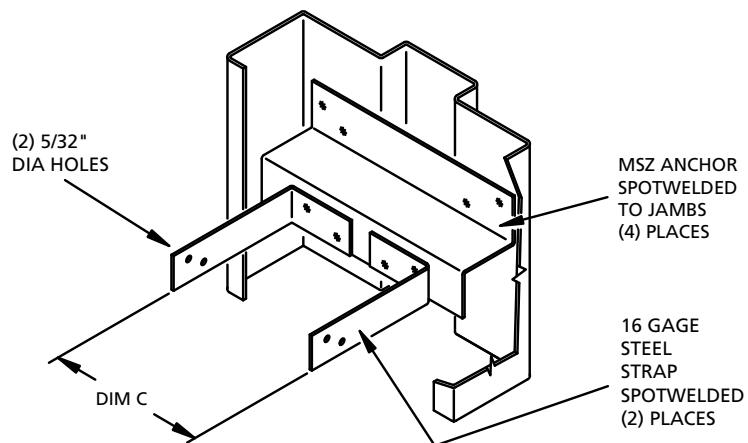
**METAL STUD
ANCHOR
TYPE ONE**



**METAL STUD
ANCHOR
TYPE TWO**

STUD SIZE	DIM C
2 x 4	3-1/2"
2 x 6	5-1/2"

WOOD STUD ANCHOR



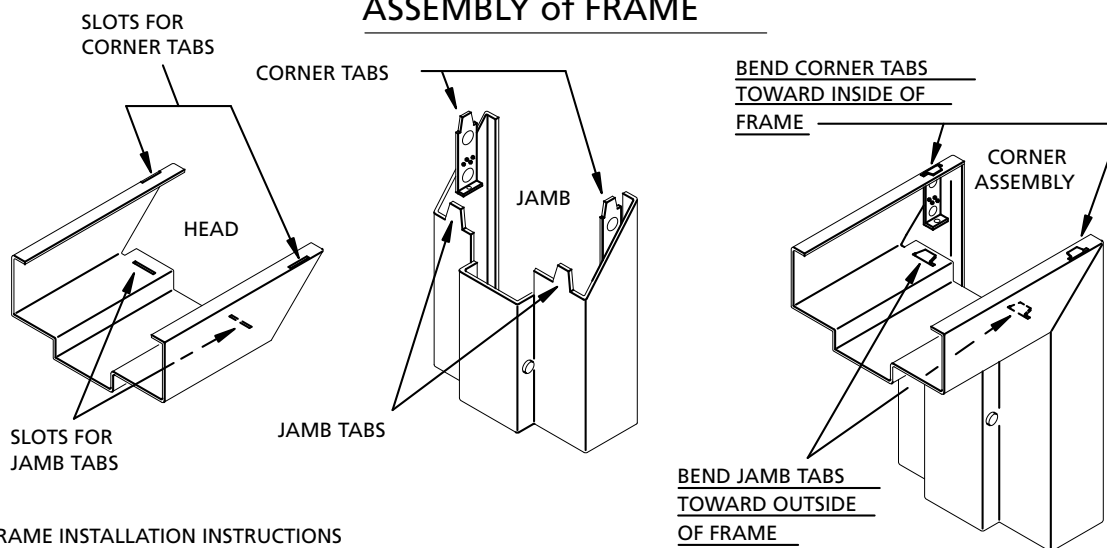
Distributor Tech Data

FRAME INSTALLATION FOR STUD WALL CONDITIONS

LABELED "FIRE RATED" SERIES "SU" & "SQ" FRAMES FOR WOOD OR METAL STUD WALL CONDITIONS

JOB SITE STORAGE: Store frames off the ground on wood runners or skids. Do not store directly on the ground. Cover frames with tarpaulin or plastic but do insure that adequate ventilation is provided to eliminate moisture condensation.

ASSEMBLY of FRAME



FRAME INSTALLATION INSTRUCTIONS

Installation instructions for "snap-in" type anchors.

Location & Spacing of Anchors:

An anchor must be used for each 30 inches of jamb height or fraction thereof. On the hinge jamb, each anchor must be located immediately above or below each hinge reinforcement. On the strike jamb, anchors must be located approximately opposite the anchors on the hinge jamb.

1) Wood Stud Anchor

Insert in frame and twist to lock in place at locations as indicated above. The anchor tail piece is bent around the wood stud and fastened in place with nails.

2) Adjustable Stud Anchor

Interlock (2) pieces of anchor together and adjust to fit correct depth of frame. Insert in frame and twist to lock in place at locations as indicated above. The anchor tail piece is bent around the stud and fastened in place with nails (can be used w/screws for metal stud).

3) Metal Stud Anchor

Insert in frame and twist to lock in place at locations as indicated above. When used with channel type studs, the stud is attached to the vertical leg of the anchor with sheet metal screws. When used with truss type studs, the stud is tied tightly to the anchor with wire through the prepunched holes in the anchor.

4) Existing Opening Anchor

Frame will be punched and dimpled at the factory for this type of anchor. Insert tube/plate or butterfly anchors in frame, twist and lock in place at dimpled hole locations. The bolt is inserted in a hole in the frame, passes through the anchor, and is attached to the wall. The tube resists the pressure exerted by tightening the bolts and thus prevents the frame from collapsing.

5) Floor Anchors

a) If the door frame is set before the wall framing, a standard fixed floor anchor can be used.

b) If the wall framing is up first, an extra wood stud anchor will be furnished to fasten to studs at floor.

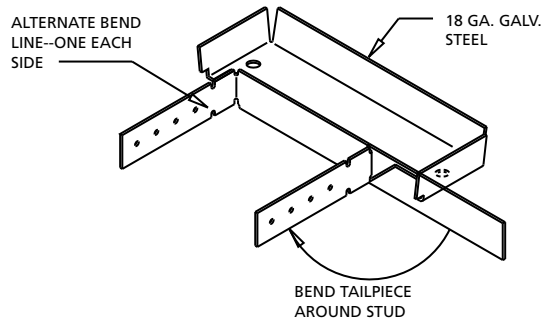
c) Fixed floor anchor. Fasten anchor to bottom of each jamb with (2) #8 x 5/8" PHSMS to holes provided in backbend of jambs at the bottom. The holes in anchor provide one inch of vertical adjustment. Fasten to floor through (2) 3/16" dia. holes.

(Fasteners for anchoring to floor are not included.)

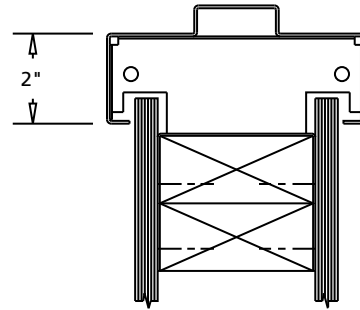
d) Keyed in floor anchor. Fasten (2) anchors to bottom of each jamb by inserting the key of the anchor into the hole provided in backbend of jambs at the bottom and twisting the anchor to horizontal. Fasten to floor through (2) 3/16" dia. holes.

(Fasteners for anchoring to floor are not included.)

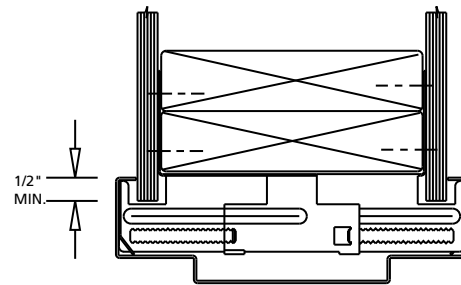
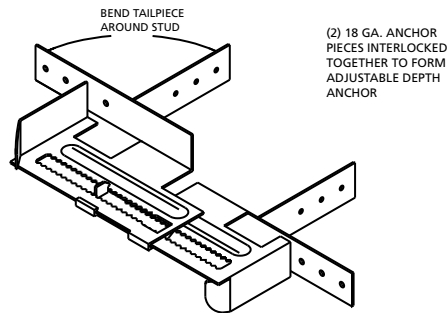
INSTALLATION INSTRUCTIONS STUD ANCHORS



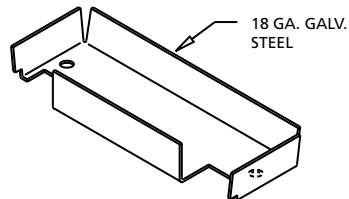
WOOD STUD ANCHOR



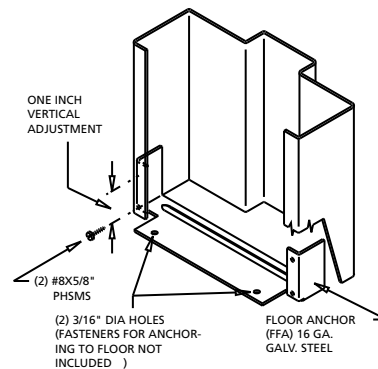
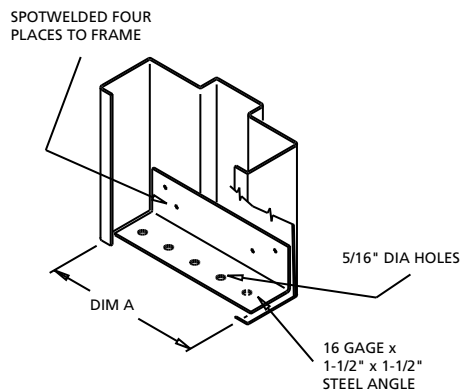
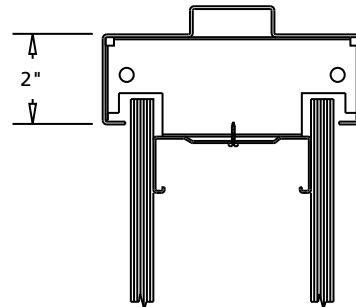
TO INSTALL STUD ANCHORS
INSERT INTO FRAME AND
TWIST TO LOCK IN PLACE



ADJUSTABLE STUD ANCHOR



METAL STUD ANCHOR



FLOOR ANCHORS

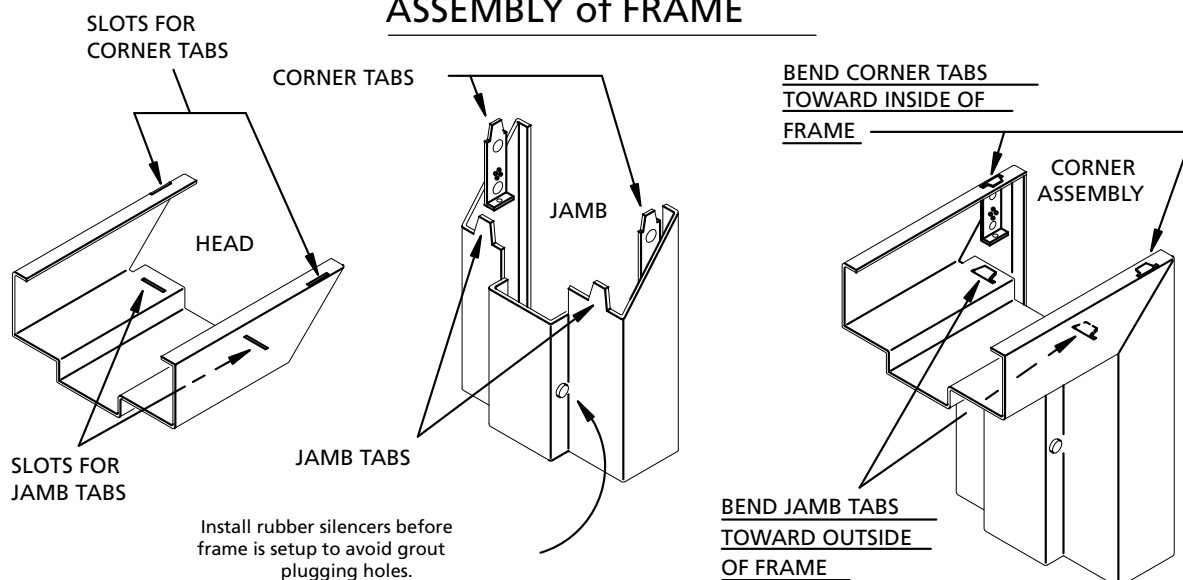
FRAME INSTALLATION FOR MASONRY WALL CONDITIONS

LABELED "FIRE RATED" SERIES "SU" & "SQ" FRAMES FOR NEW AND EXISTING MASONRY CONDITIONS

JOBSITE STORAGE: Store frames off the ground on wood runners or skids. Do not store directly on the ground. Cover frames with tarpaulin or plastic but do insure that adequate ventilation is provided to eliminate moisture condensation.

When frames are to be fully grouted and when plaster or mortar contain "anti-freeze" agents, the inside of the frames should be coated with a bituminous, water-resistant paint by the installation contractor. (Grouting of frames is optional and not a labeling requirement.)

ASSEMBLY of FRAME



FRAME INSTALLATION INSTRUCTIONS

Installation instructions for "snap-in" type anchors.

Location & Spacing of Anchors:

An anchor must be used for each 30 inches of jamb height or fraction thereof. On the hinge jamb, each anchor must be located immediately above or below each hinge reinforcement. On the strike jamb, anchors must be located approximately opposite the anchors on the hinge jamb.

1) Masonry "T" Anchor

Insert in frame in masonry joints at locations as indicated above. Set in place as masonry wall is built up. Jamb may be grouted to secure anchorage if specifications require.

2) Adjustable Masonry "T" Anchor

Bend each end of anchor at marked locations to fit correct depth of frame. Insert in frame in masonry joints at locations as indicated above. Set in place as masonry wall is built up. Jamb may be grouted to secure anchorage if specifications require.

3) Wire Masonry Anchor

Install anchor by squeezing together and inserting between backbends of frame. Position the anchors in mortar joints at locations similar to masonry "T" anchors. Jamb may be grouted to secure anchorage if specifications require.

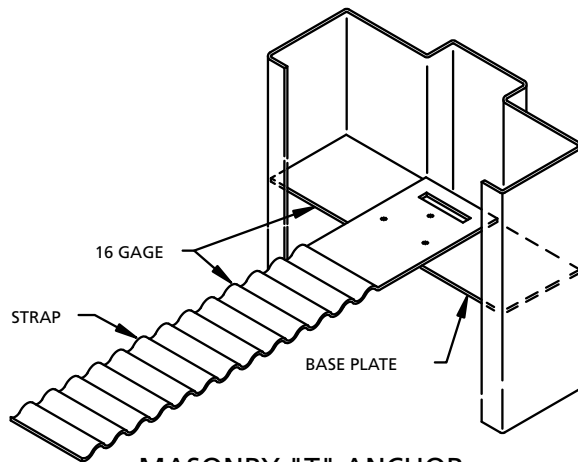
4) Existing Opening Anchor

Frame will be punched and dimpled at the factory for this type of anchor. Insert tube/plate or butterfly anchors in frame, twist and lock in place at dimpled hole locations. The bolt is inserted in a hole in the frame, passes through the anchor, and is attached to the wall. The tube resists the pressure exerted by tightening the bolts and thus prevents the frame from collapsing.

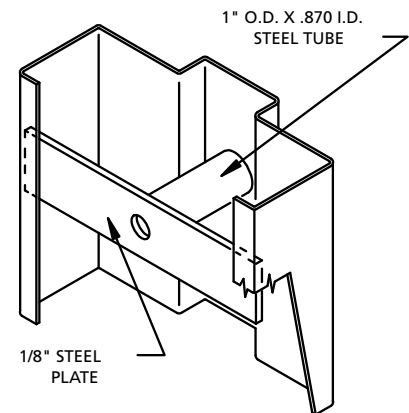
5) Floor Anchor

Fixed floor anchor. Fasten anchor to bottom of each jamb with (2) #8 x 5/8" PHSMS to holes provided in backbend of jambs at the bottom. The holes in anchor provide one inch of vertical adjustment. Fasten to floor through (2) 3/16" dia. holes. (Fasteners for anchoring to floor are not included.)

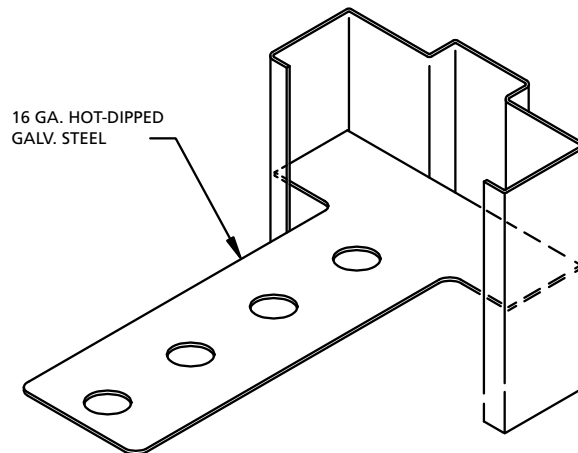
INSTALLATION INSTRUCTIONS MASONRY ANCHORS



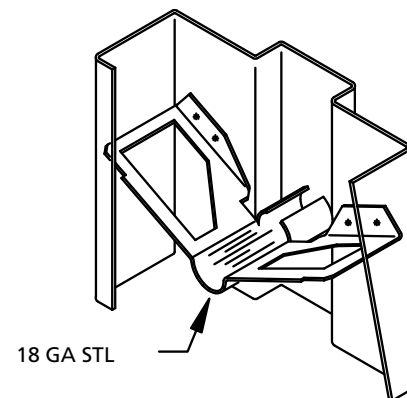
MASONRY "T" ANCHOR



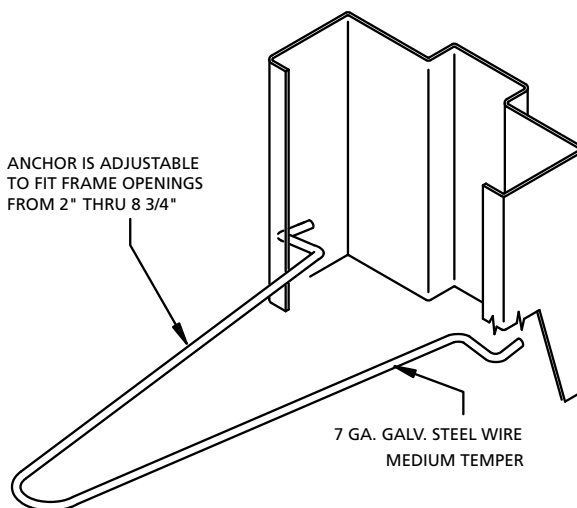
EXISTING OPENING ANCHOR



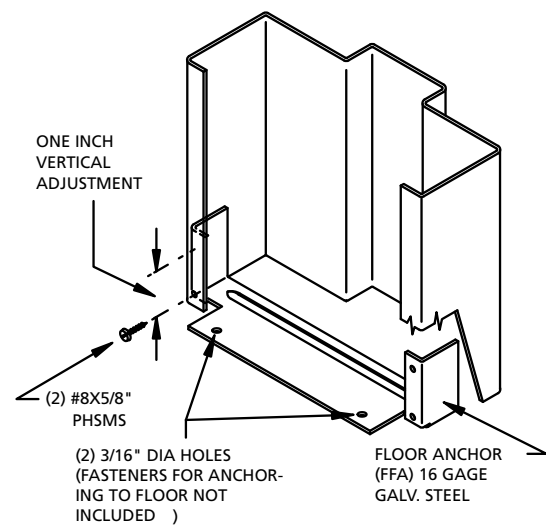
MASONRY "T" ANCHOR



EXISTING OPENING ANCHOR



WIRE MASONRY ANCHOR



FIXED FLOOR ANCHOR



Distributor Tech Data

INDEX - LABELED BEFORE DRYWALL FRAMES

GENERAL DATA	7-801
CONSTRUCTION GUIDELINES	7-802
INSTALLATION INSTRUCTIONS	7-803,7-804
(Before Wall Framing)	
INSTALLATION INSTRUCTIONS	7-805,7-806
(After Wall Framing)	



Distributor Tech Data

LABELED

"BEFORE DRYWALL" FRAMES

GENERAL INFORMATION

LABELING AGENCY: UNDERWRITERS LABORATORY (UL)
WARNOCK HERSEY (WH)
FACTORY MUTUAL (FM)

HOURLY RATING: 3 HR, 1-1/2 HR, 3/4 HR, 20 MIN.

DOOR THICKNESS: 1-3/4" OR 1-3/8"

HINGE AND STRIKE LOCATIONS: See section 11

HINGE AND STRIKE PREPARATIONS: See section 7-900 and section 11

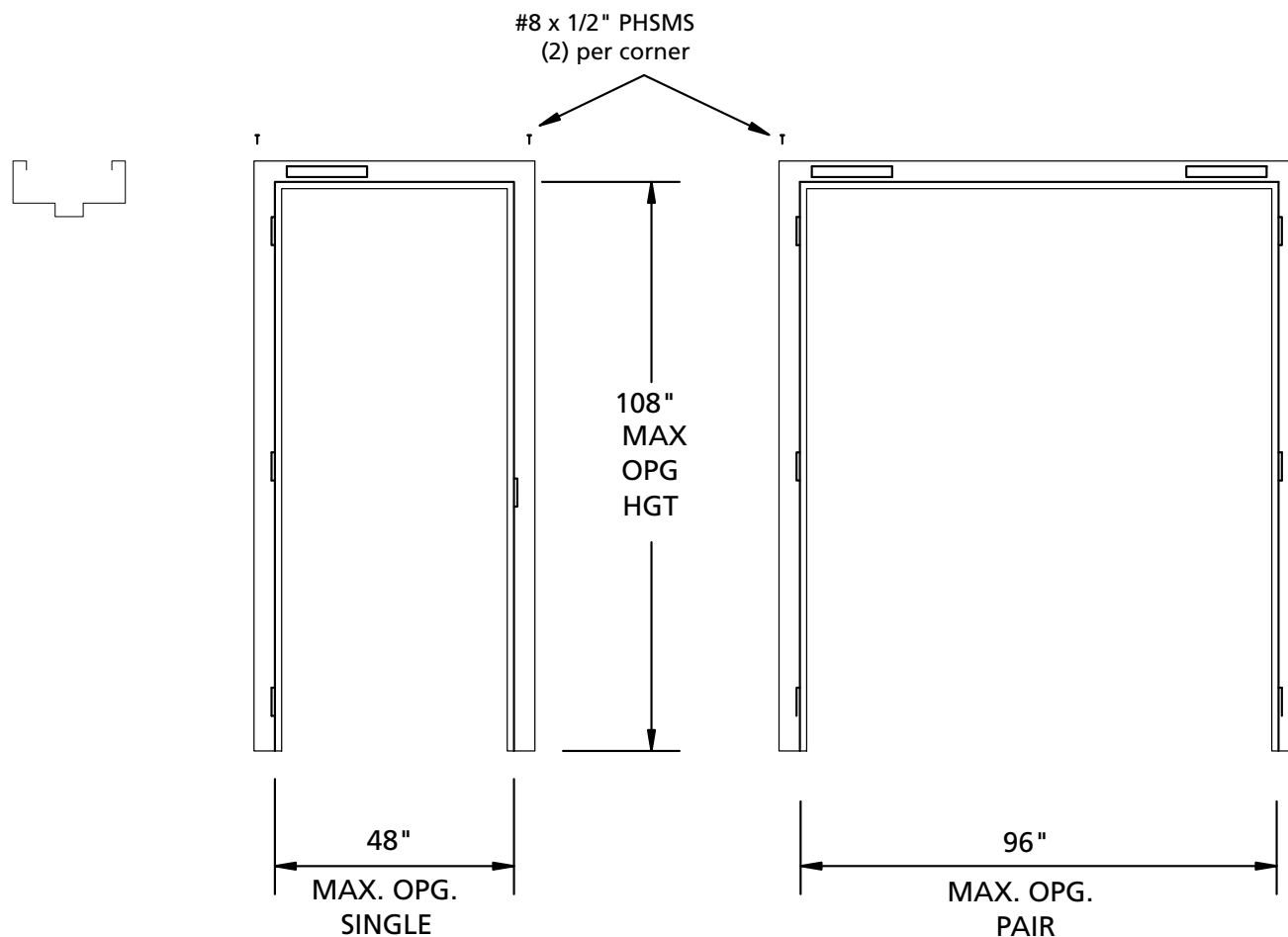
WALL AND FLOOR ANCHORS: WOOD STUD OR METAL STUD (loose or attached)
(30" o.c. max.)
FLOOR ANCHORS OR JAMB ANCHORS REQUIRED AT SILL
(loose or attached)

SIZES: WELDED - See page 7-702
KNOCKED-DOWN - See page 7-802

* Unlike fire doors, the hourly rating is not usually shown on frame labels.

Distributor Tech Data

LABELED "BEFORE DRYWALL" FRAMES CONSTRUCTION GUIDELINES



PROFILES: Series BU and BQ (See pages 7-905 and 7-904)

FRAME MATERIAL: 16, 14 or 12 gage CR or Galv.

CLOSER REINFORCEMENT: Sleeve or plate (optional)
See section 11

WELDED CORNERS: Series SU and SQ guidelines apply when corners are welded. See pages 7-701 and 7-702

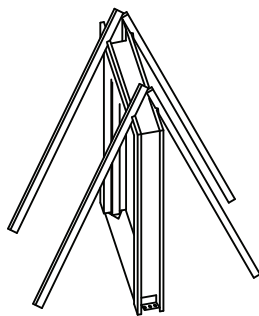
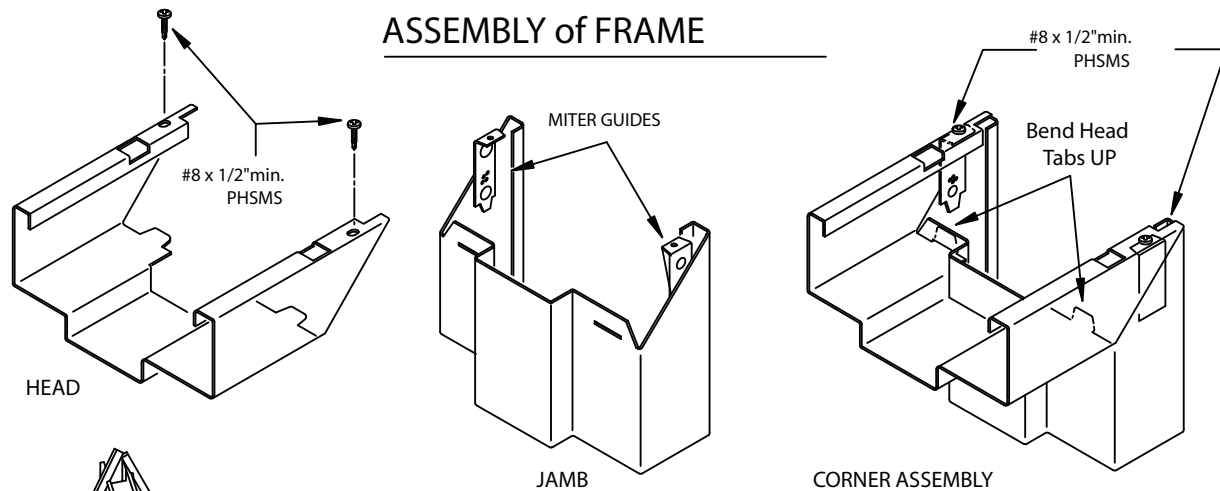
LABELED "BEFORE DRYWALL" FRAME INSTALLATION INSTRUCTIONS

FRAME INSTALLATION

LABELED "FIRE RATED" SERIES BU or BQ (BEFORE THE DRYWALL) FRAME (KD FRAMES ASSEMBLED AND ERECTED BEFORE WALL FRAMING)

JOBSITE STORAGE: Store frames off the ground on wood runners or skids. Do not store directly on the ground. Cover frames with tarpaulin or plastic but do insure that adequate ventilation is provided to eliminate moisture condensation.

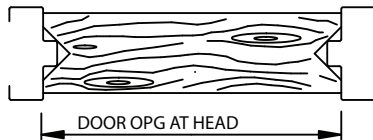
ASSEMBLY of FRAME



BRACING THE FRAME

SQUARING THE FRAME

The installer should use wood spreaders (as described below), a carpenter's level (the longer the better), and a carpenter's square (the bigger the better). Set the frame in the desired location. Level head and plumb jambs. Shim under jambs if necessary.



SPREADER

Typical wood spreader must be square and made from lumber at least 1" thick. Length of spreader equals door opening width at the head. Cut clearance notches for frame stops as shown. Spreader must be nearly as wide as frame depth for proper installation.

INSTALLATION INSTRUCTIONS

STEP 1

Assemble KD components (head and jambs) by slipping ends of head over miter guides attached to the top of jambs. Draw corner joint closed. Fasten head to jamb (through miter guides) with #8 x 1/2" min. PHSMS (4) places total. BEND HEAD TABS UP AS SHOWN.

STEP 2

If not already welded in place, install floor and jamb anchors as shown on Ill. 7-804. An anchor must be used for each 30 inches of jamb height or fraction thereof. On the hinge jamb, each anchor must be located immediately above or below each hinge reinforcement. On the strike jamb, anchors must be located approximately opposite the anchors on the hinge jamb.

STEP 3

Erect and brace frame as shown. Plumb and square jambs, level head, and shim jambs as necessary. Set temporary wood spreaders at bottom and at mid-point to maintain a constant door opening width from head to sill.

STEP 4

Attach jambs to floor through floor anchors.

STEP 5

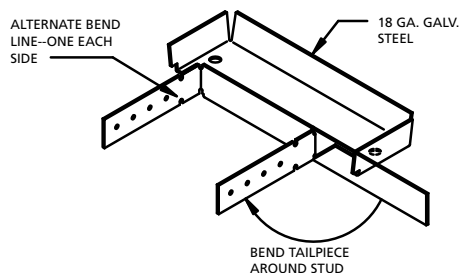
Construct wall rough-opening by assembling wall framing members around door frame.

STEP 6

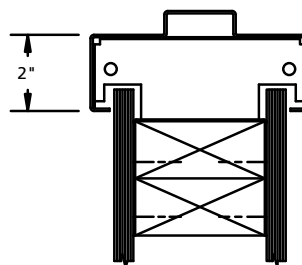
Bend anchor tabs around wood stud and nail tabs to stud --or-- fasten metal stud to anchor flange with sheet metal screws from backside. Check plumb and square of frame after attaching jamb anchors to studs. Install mutes in holes provided in strike jambs.

Distributor Tech Data

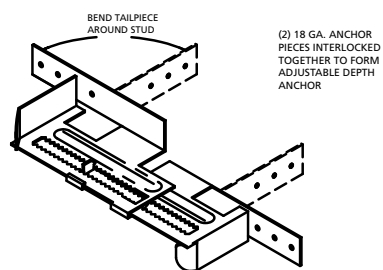
BEFORE WALL FRAMING JAMB AND FLOOR ANCHORS (refer to order writing manual for specific codes)



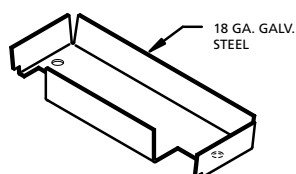
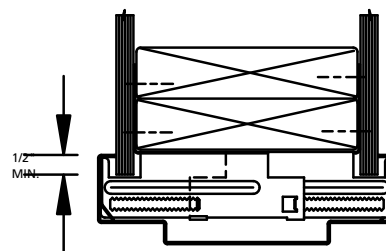
WOOD STUD ANCHOR



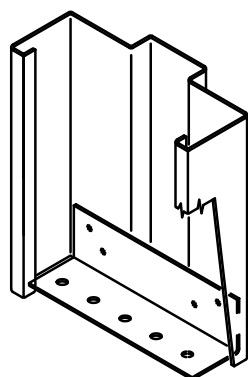
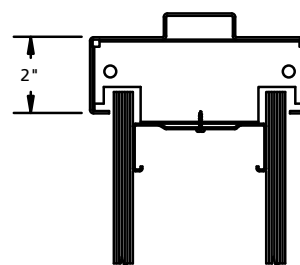
TO INSTALL STUD ANCHORS
INSERT INTO FRAME AND
TWIST TO LOCK IN PLACE



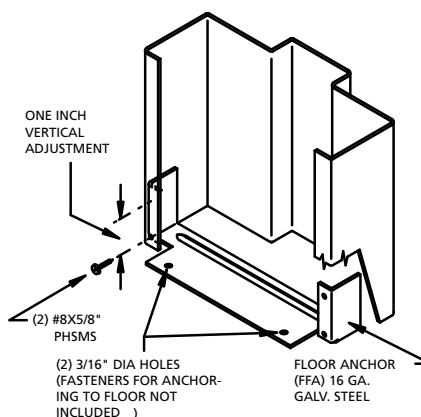
ADJUSTABLE STUD ANCHOR



METAL STUD ANCHOR



WELDED-IN FLOOR ANCHOR



FIXED FLOOR ANCHOR

Distributor Tech Data

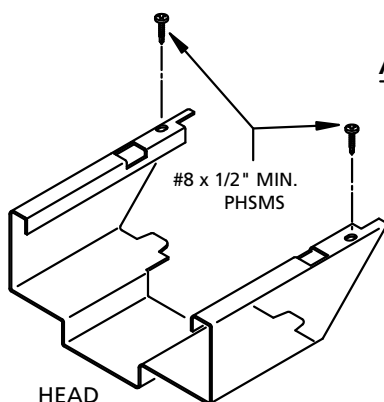
LABELED "BEFORE DRYWALL" FRAME INSTALLATION INSTRUCTIONS

FRAME INSTALLATION

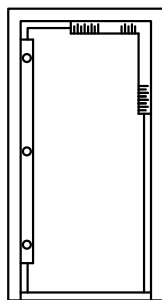
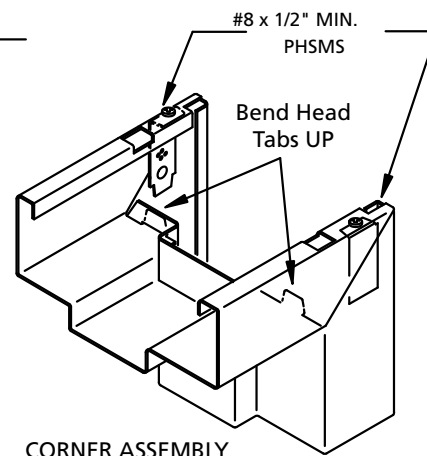
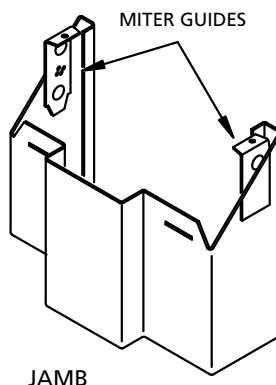
LABELED "FIRE RATED" SERIES BU or BQ (BEFORE THE DRYWALL) FRAME (KD FRAMES ASSEMBLED AND ERECTED AFTER WALL FRAMING)

ROUGH OPENING: ADD 3/16" TO OVERALL FRAME HEIGHT & 3/8" TO OVERALL FRAME WIDTH

JOB SITE STORAGE: Store frames off the ground on wood runners or skids. Do not store directly on the ground. Cover frames with tarpaulin or plastic but do insure that adequate ventilation is provided to eliminate moisture condensation.

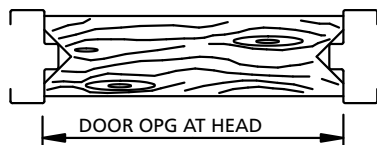


ASSEMBLY OF FRAME



SQUARING THE FRAME

The installer should use wood spreaders (as described below), a carpenter's level (the longer the better), and a carpenter's square (the bigger the better). Set the frame in the desired location. Level head and plumb jambs. Shim under jambs if necessary.



SPREADER

Typical wood spreader must be square and made from lumber at least 1" thick. Length of spreader equals door opening width at the head. Cut clearance notches for frame stops as shown. Spreader must be nearly as wide as frame depth for proper installation.

INSTALLATION INSTRUCTIONS

STEP 1

Construct and size rough opening in wall framework as indicated above.

STEP 2

If not already welded in place, install jamb anchors as shown on Ill. 7-806. An anchor must be used for each 30 inches of jamb height or fraction thereof. An additional jamb anchor must be used at the sill.

STEP 3

Assemble KD components (head and jambs) by slipping ends of head over miter guides attached to the top of jambs. Draw corner joint closed. Fasten head to jamb (through miter guides) with #8 x 1/2" PHMS (4) places total. BEND HEAD TABS UP AS SHOWN.

STEP 4

Erect and center door frame in rough opening. Plumb and square jambs and level head. Shim jambs as necessary. Set temporary wood spreaders at sill and at mid-point to maintain constant door opening from head to sill.

STEP 5

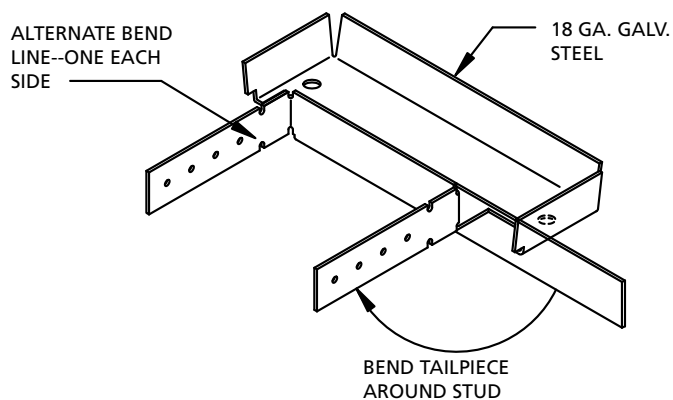
Bend anchor tabs around wood stud and nail tabs to stud --or-- fasten metal stud to anchor flange with sheet metal screws from backside. Check plumb and square of frame after attaching jamb anchors to studs. Install mutes in holes provided in strike jambs.

Distributor Tech Data

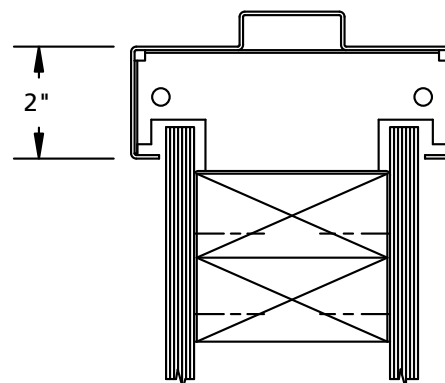
AFTER WALL FRAMING

JAMB ANCHORS

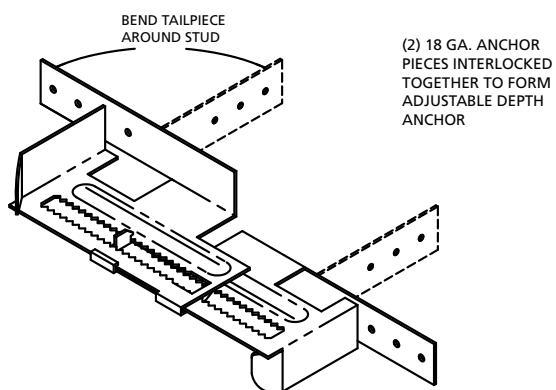
(refer to order writing manual for specific codes)



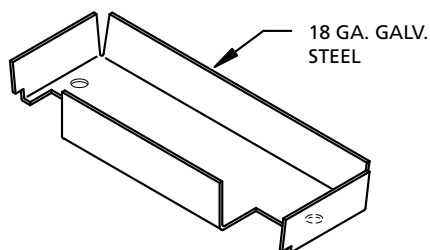
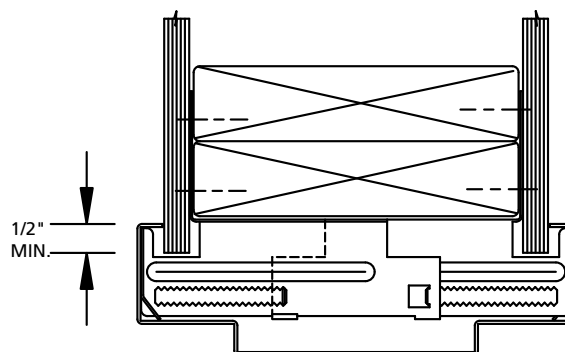
WOOD STUD ANCHOR



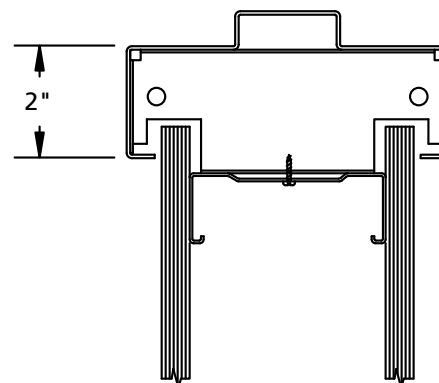
TO INSTALL STUD ANCHORS
INSERT INTO FRAME AND
TWIST TO LOCK IN PLACE



ADJUSTABLE STUD ANCHOR



METAL STUD ANCHOR





Distributor Tech Data

LABELED SLIP-ON DRYWALL FRAMES INDEX

GENERAL INFORMATION

Labeled Slip-On Drywall Frames Guidelines	7-902
Size and Material Guidelines	7-903

PROFILE GUIDELINES

Series DQ Slip-On Drywall Frames	7-904
Series DU Slip-On Drywall Frames.	7-905

CONSTRUCTION DETAILS

KD Corner Assembly	7-906
Jamb Anchor Data	7-907
Plumb Anchor	7-908
Dimpled Hole Sill Anchor	7-909
Strap-type Sill Anchor	7-910
Strike Jamb Zee Spacer	7-911
Closer Reinforcement Sleeve	7-912
Closer Reinforcement Plate.	7-913

INSTALLATION INSTRUCTIONS	7-915

Distributor Tech Data

SLIP-ON DRYWALL FRAMES LABEL RATING GUIDELINES

GENERAL

LABELING AGENCY: Underwriters Laboratory (UL)
Warnock Hersey (WH)
Factory Mutual (FM)

HOURLY RATING: 1-1/2 Hr., 3/4 Hr., 20 Min.

DOOR THICKNESS: 1-3/4" or 1-3/8"

HINGE AND STRIKE PREPARATIONS AND LOCATIONS: See Section 11

WALL AND FLOOR ANCHORS: See Pages 7-907 through 7-911

CLOSER REINFORCEMENT: See Pages 7-912 and 7-913

SPECIAL HARDWARE PREPARATIONS: Electric Strike
Fire Exit Hardware
Supplemental Deadlock Strike

HOSPITAL STOPS: See Section 13

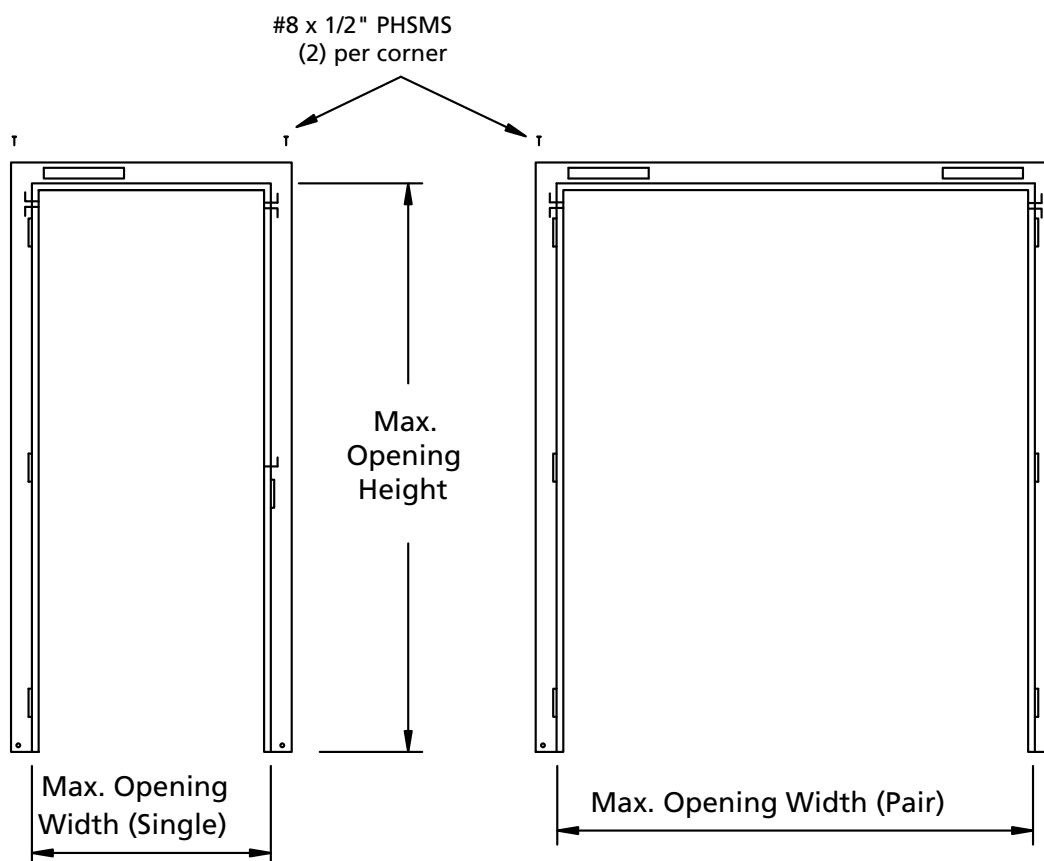
CORNERS: Knocked-down only. See Page 7-906

Hardware Requirements 7-106, 7-106A

* Unlike fire doors, the hourly rating is not usually shown on frame labels.

Distributor Tech Data

LABELED SLIP-ON DRYWALL FRAMES, STEEL GAGE AND DOOR OPENING SIZES



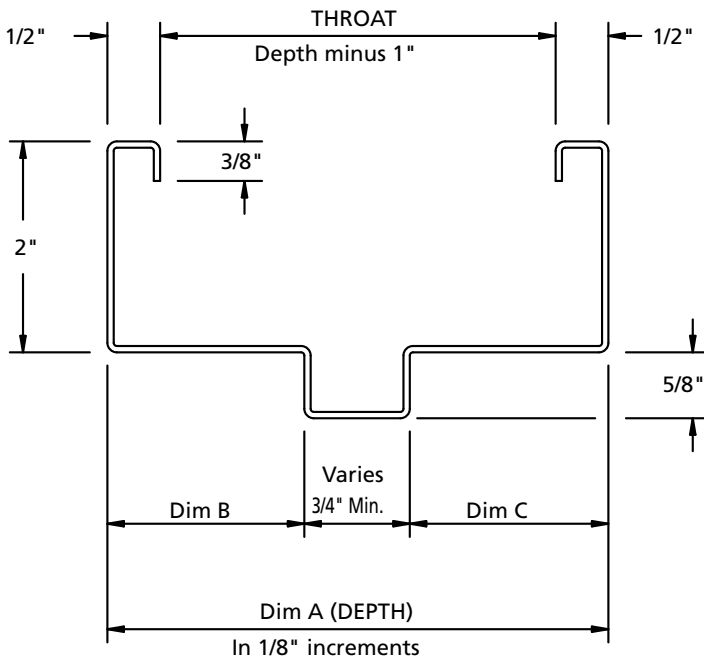
SINGLE or DOUBLE RABBET	AGENCY	GAGES	THROAT OPENING (INCHES)		FRAME RATINGS					
					20 MINUTE		3/4 HOUR		1-1/2 HOUR	
					MAXIMUM 1-3/4 "-THICK DOOR OPENING SIZES					
			MIN.	MAX.	SINGLE	PAIR	SINGLE	PAIR	SINGLE	PAIR
	WH & FM	18	3-3/4	13	4070	8070	4070	8070	4070	8070
		16	3-3/4	13	4090	8090	4090	8090	4090	8090
		14								
UL	18	2	13	4070	8070	4070	8070	4070	8070	
	16 14	2	13	4090	8090	4090	8090	4090	8090	

NOTES:

1. See fire door section for maximum Ceco fire door sizes.
2. Frames for 1-3/8" fire doors are also available: contact your Ceco representative for details.
3. Door opening sizes are in feet and inches: e.g., 4070 = 4'-0" x 7'-0".

LABELED DRYWALL FRAME

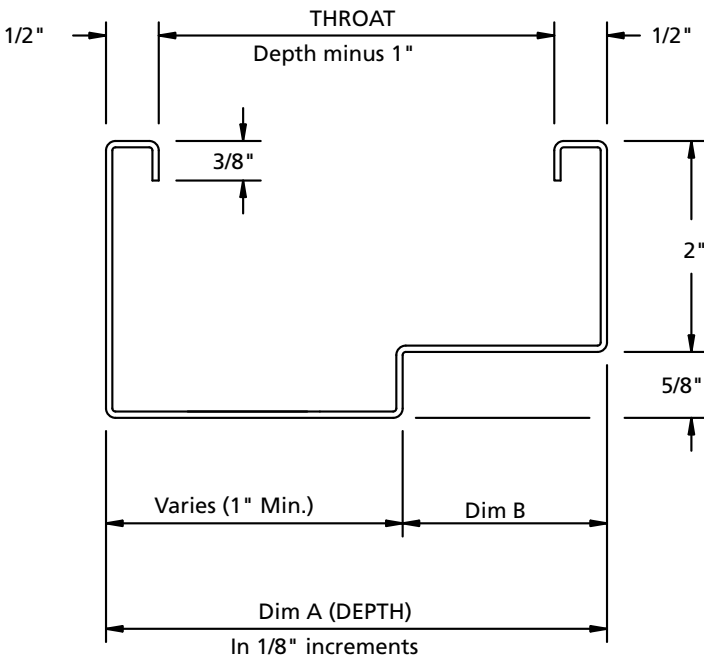
PROFILES FOR 1-3/4" AND 1-3/8" DOORS



DOUBLE RABBET PROFILE GUIDELINES			
Sizes and Dimensions			
SERIES	Dim A	Dim B	Dim C
DQ	14" Max, 4-5/8" Min	1-15/16"	1-15/16"
* DQ8	14" Max, 3-7/8" Min	1-9/16"	1-9/16"

* For 1-3/8" door

1. THROAT DIMENSION ALWAYS EQUALS WALL THICKNESS
2. Series DQ frames are for 1-3/4" thick doors and Series DR frames are for either 1-3/4" or 1-3/8" thick doors.
3. Drywall frames normally have two 1-15/16" rabbets except when depth would result in a stop dimension being less than the 3/4" dimension limitation (manufacturing limit).
4. Label procedure limits depth to 3", however, sum of the profiles dimensions sometimes exceeds 3", e.g., $(2) \times 1-15/16" + 1" = 4-7/8"$.
5. 4" Heads are available.

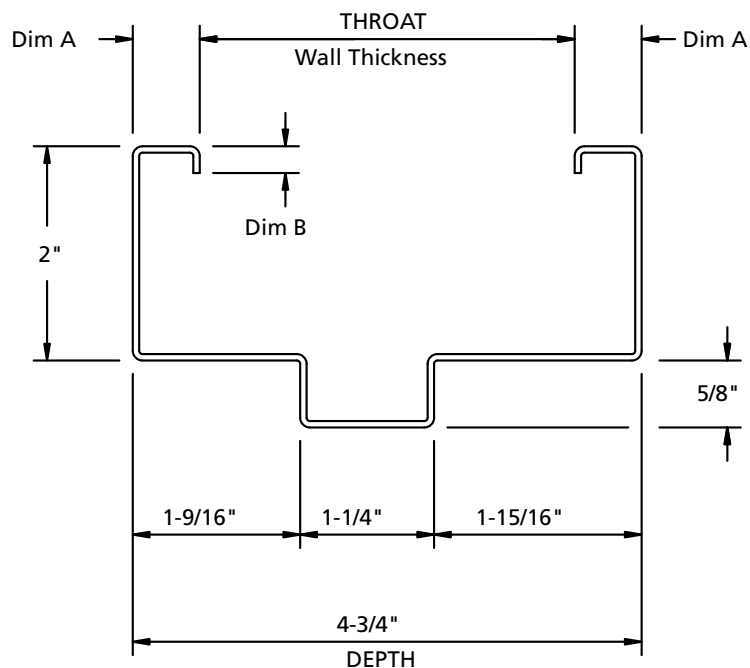


SINGLE RABBET PROFILE GUIDELINES		
Sizes and Dimensions		
SERIES	Dim A	Dim B
DR	14" Max, 3" Min	1-15/16"
* DR8	14" Max, 3" Min	1-9/16"

* For 1-3/8" door

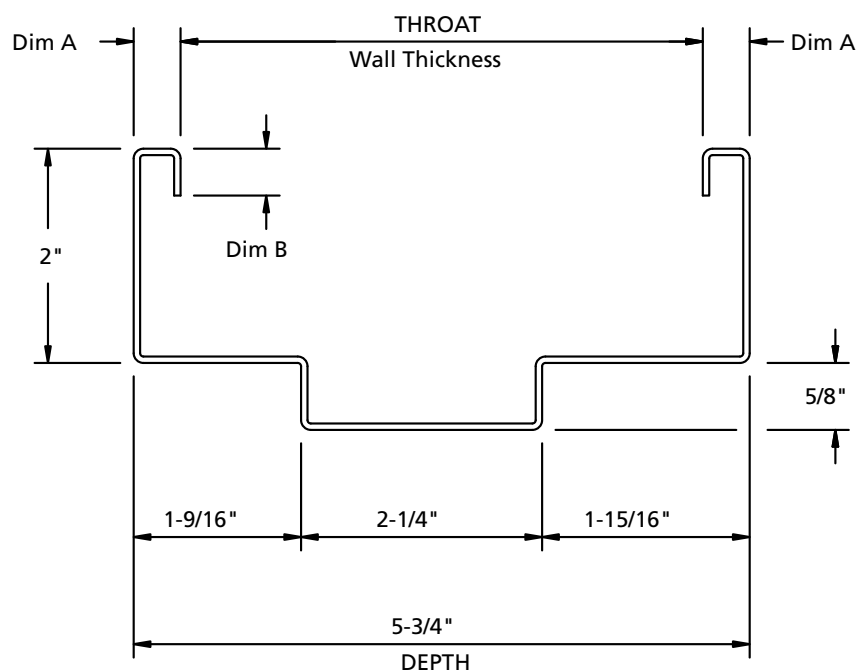
Distributor Tech Data

LABELED SERIES DU PROFILES FOR 1-3/4" DOORS



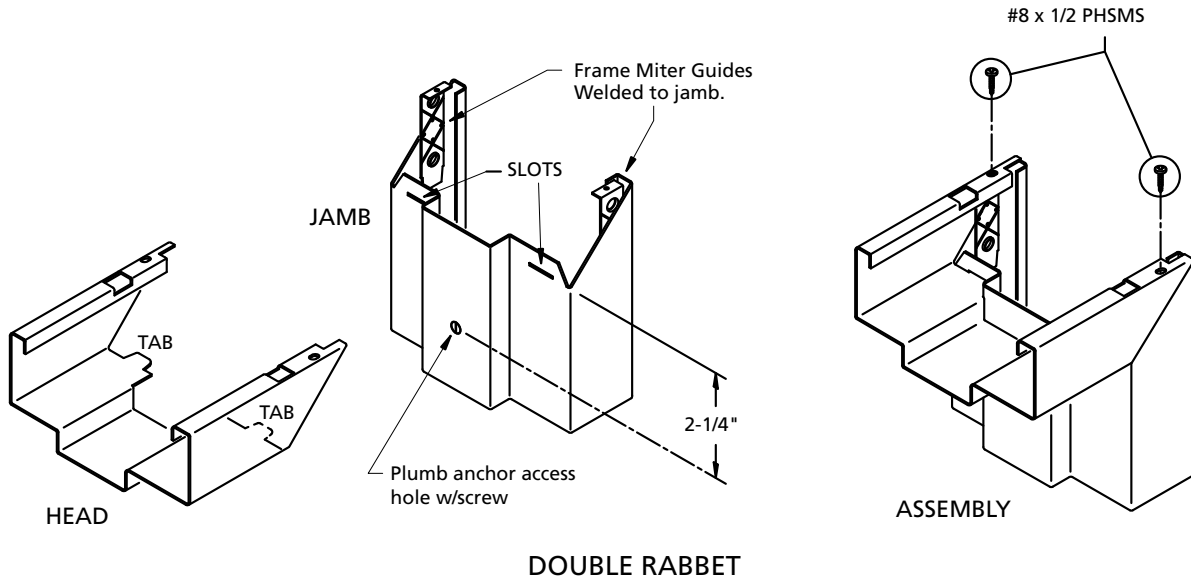
PROFILE GUIDELINES			
Sizes and Dimensions			
Profile Size	THROAT	Dim A	Dim B
434/312	3-1/2"	5/8"	1/4"

Dim A = Size of backbend.
Dim B = Size of backbend returns.



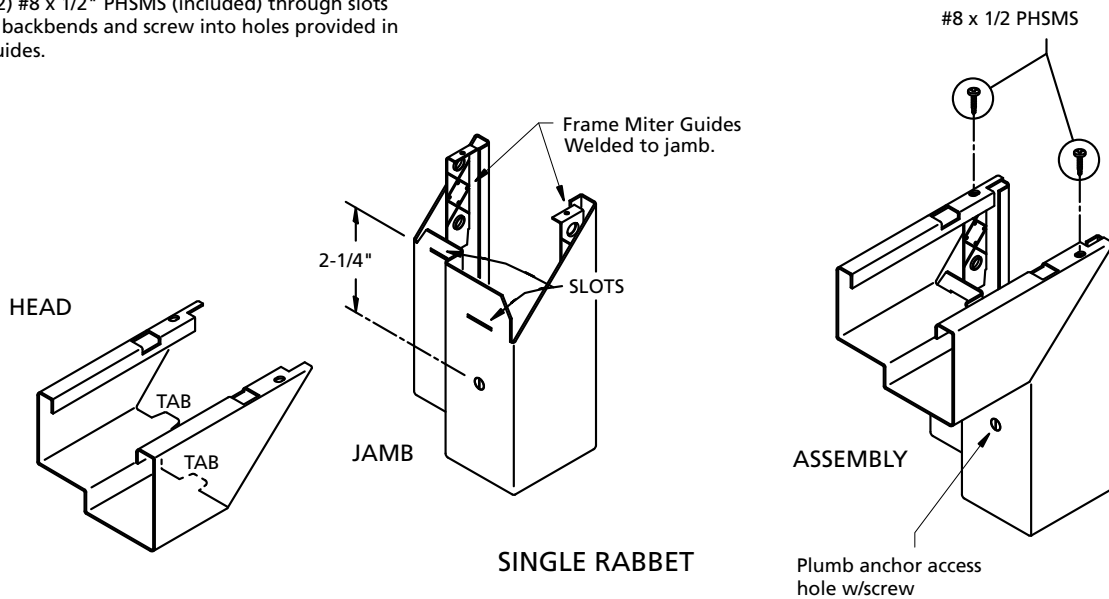
PROFILE GUIDELINES			
Sizes and Dimensions			
Profile Size	THROAT	Dim A	Dim B
534/458	4-5/8"	9/16"	5/16"
534/478	4-7/8"	7/16"	7/16"

LABELED DRYWALL FRAME KD CORNER AND ASSEMBLY



ASSEMBLY PROCEDURE:

1. Align head-tabs with jamb slots. Slide components together while engaging tabs in slots. Tabs and slots are mated when miter seam is closed tight.
2. Insert (2) #8 x 1/2" PHSMS (included) through slots in head backbends and screw into holes provided in jamb guides.



Slip-on Drywall Frames are designed for installation **AFTER** the partition framework is erected, **AFTER** the wallboard is applied, and **AFTER** the surface is finished. To realize this design intent, these frames are always furnished knocked-down.

Distributor Tech Data

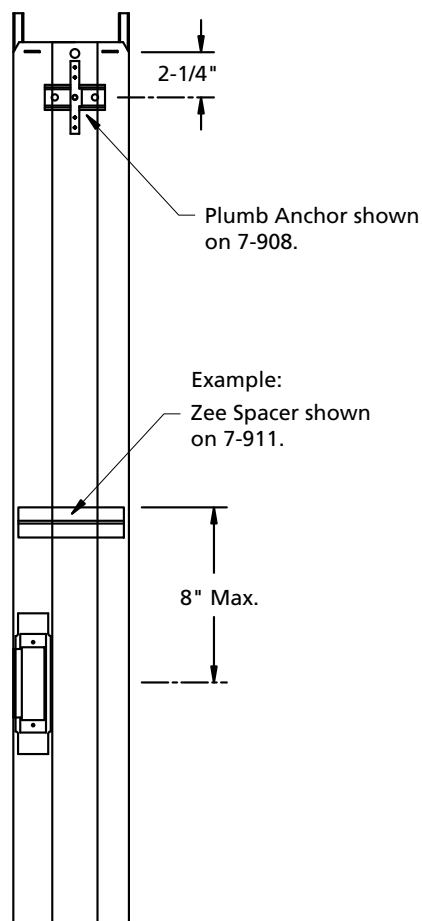
LABELED SLIP-ON DRYWALL FRAME JAMB ANCHOR LOCATIONS

Top Plumb Anchor is required for all slip-on drywall frames with UL, WH, or FM label.

Intermediate Plumb Anchor, Z Spacer, or Dust Box in strike prep must be used on all strike jambs.

The standard Sill Anchor for UL or WH labeled slip-on drywall frames is a dimpled (CTSK) hole for a bugle-head, type "S" drywall screw (the screw is provided by contractor at a length to securely engage stud). Welded Strap-type Sill Anchor is optional for FM, UL or WH labeled slip-on drywall frames.

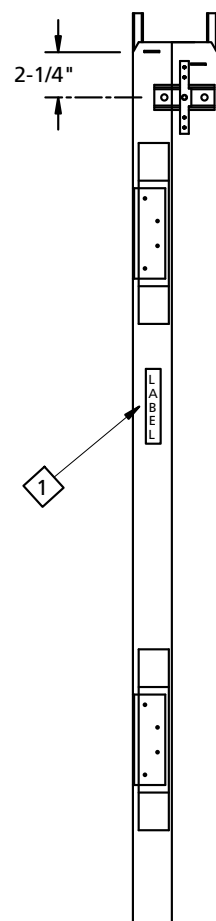
DOUBLE RABBET



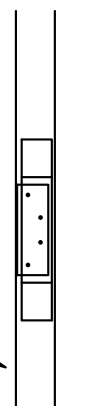
STRIKE JAMB



SINGLE RABBET



HINGE JAMB



For Sill Anchor Details see pages 7-909 and 7-910.

1

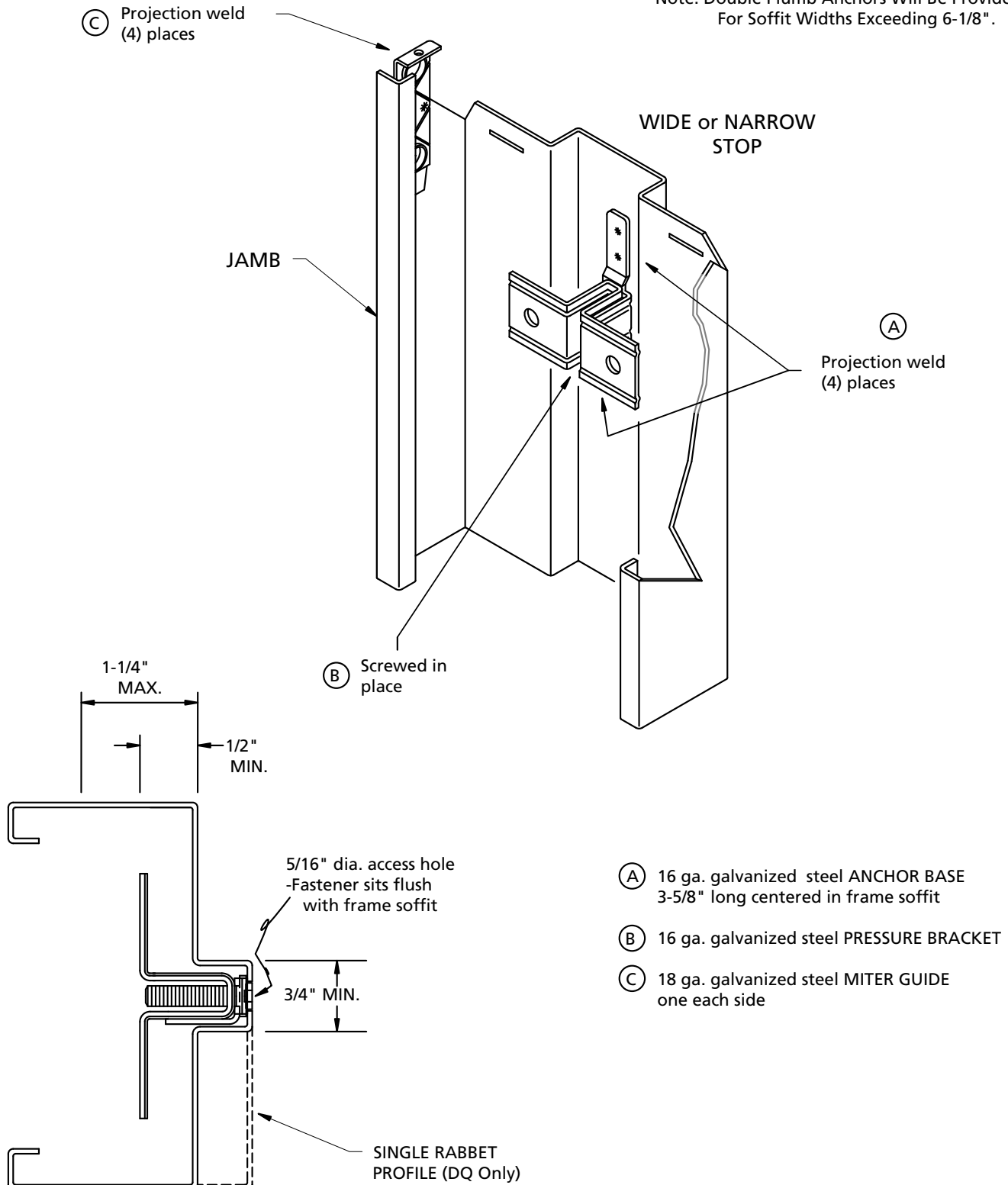
LABEL ATTACHMENT

1. UL / WH standard method: Label impression is die-stamped into the steel of the frame.
2. UL / WH optional method: A metal label is fastened to the hinge jamb as shown.
3. FM standard method: A metal label is fastened to the hinge jamb as shown.
4. A pressure sensitive paper label is applied to the backside of head and both jambs which identifies components as "KNOCKED-DOWN FRAME PARTS FOR (UL) LISTED FIRE DOOR FRAME".

Distributor Tech Data

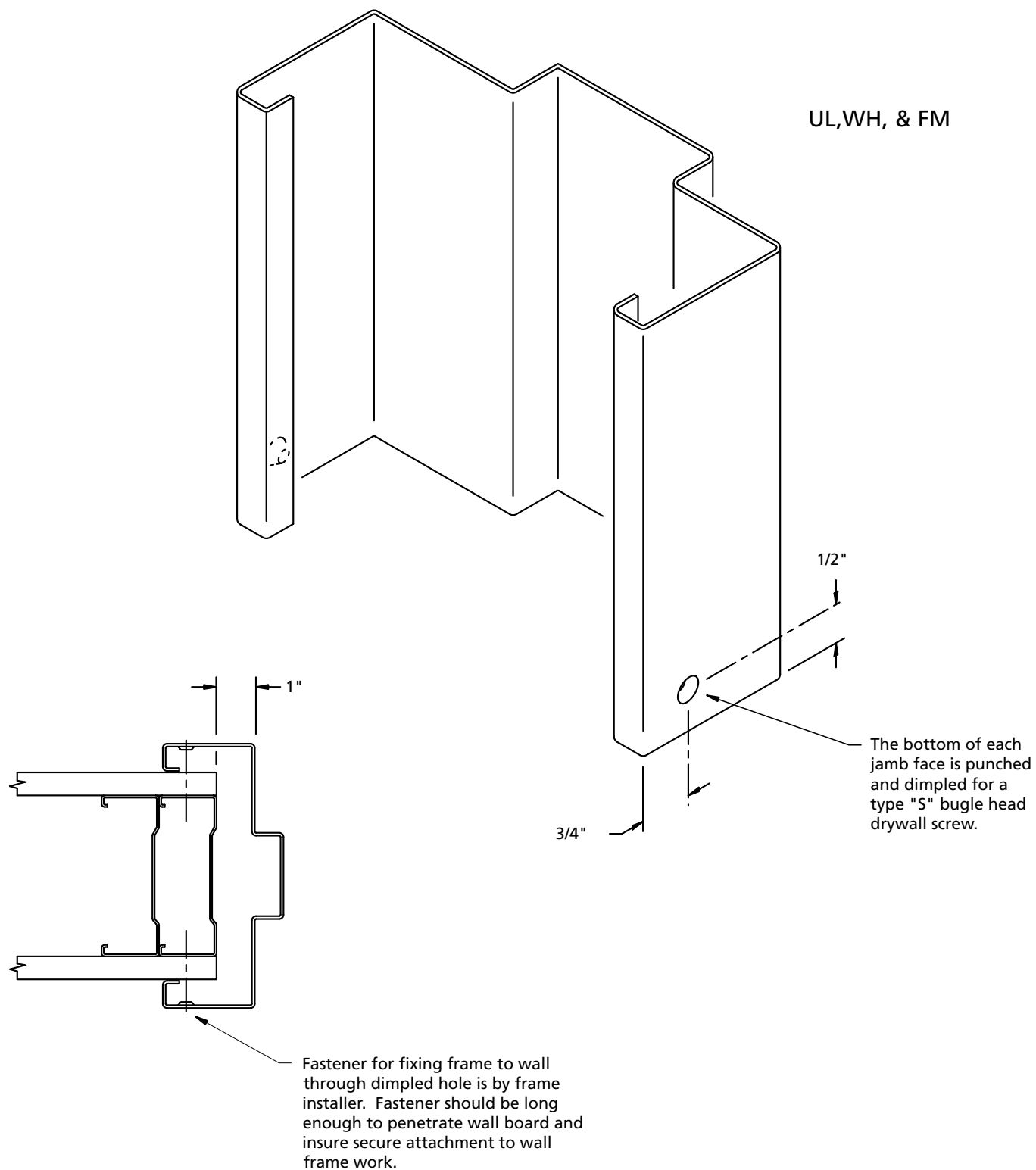
LABELED SLIP-ON DRYWALL FRAME JAMB PLUMB ANCHOR

Note: Double Plumb Anchors Will Be Provided For Soffit Widths Exceeding 6-1/8".

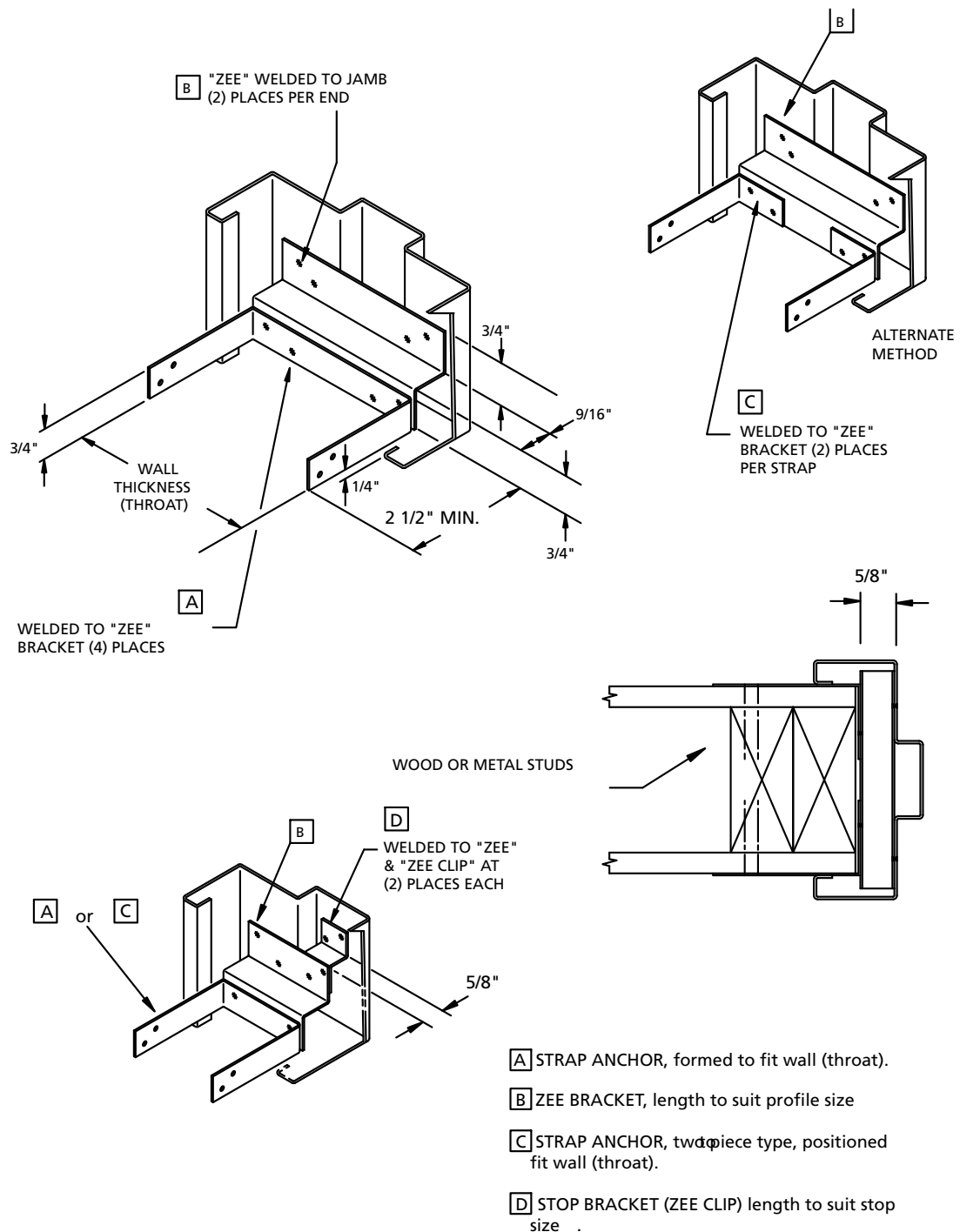


Distributor Tech Data

† LABELED SLIP-ON DRYWALL FRAME DIMPLED HOLE SILL ANCHOR



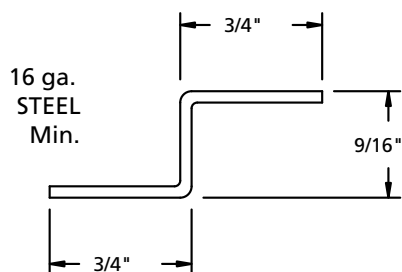
LABELED SLIP-ON DRYWALL FRAMES STRAP-TYPE SILL ANCHORS



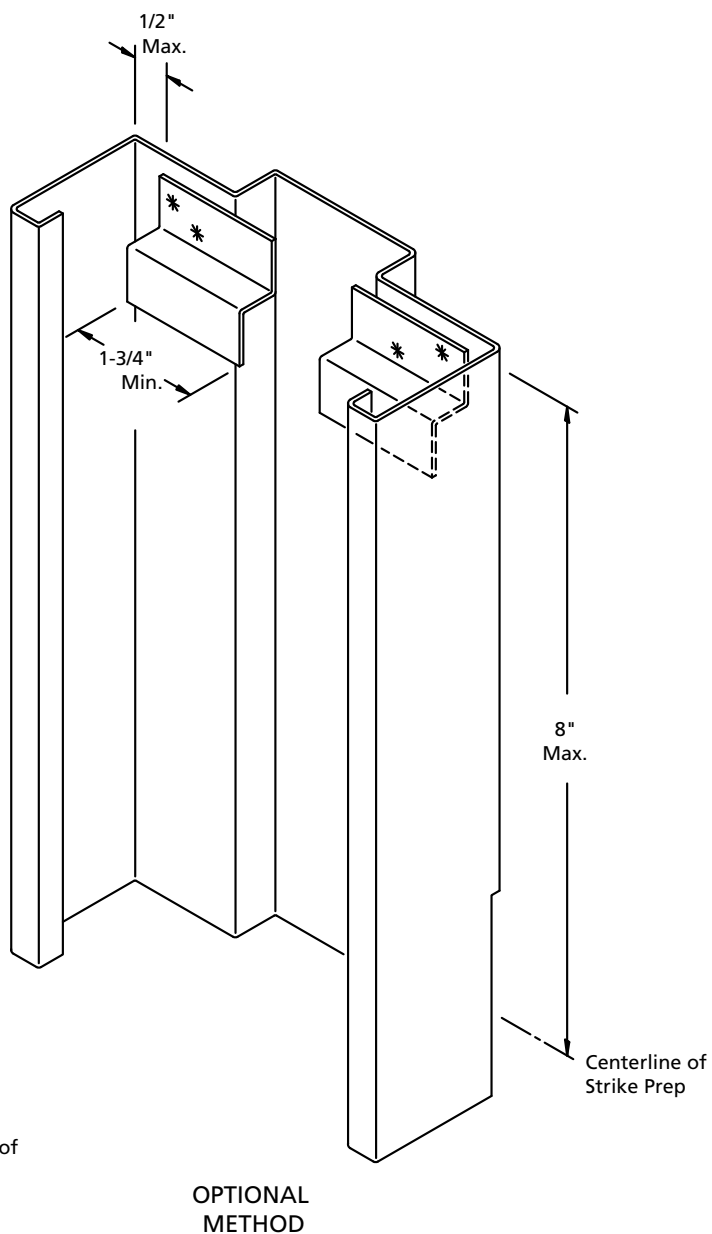
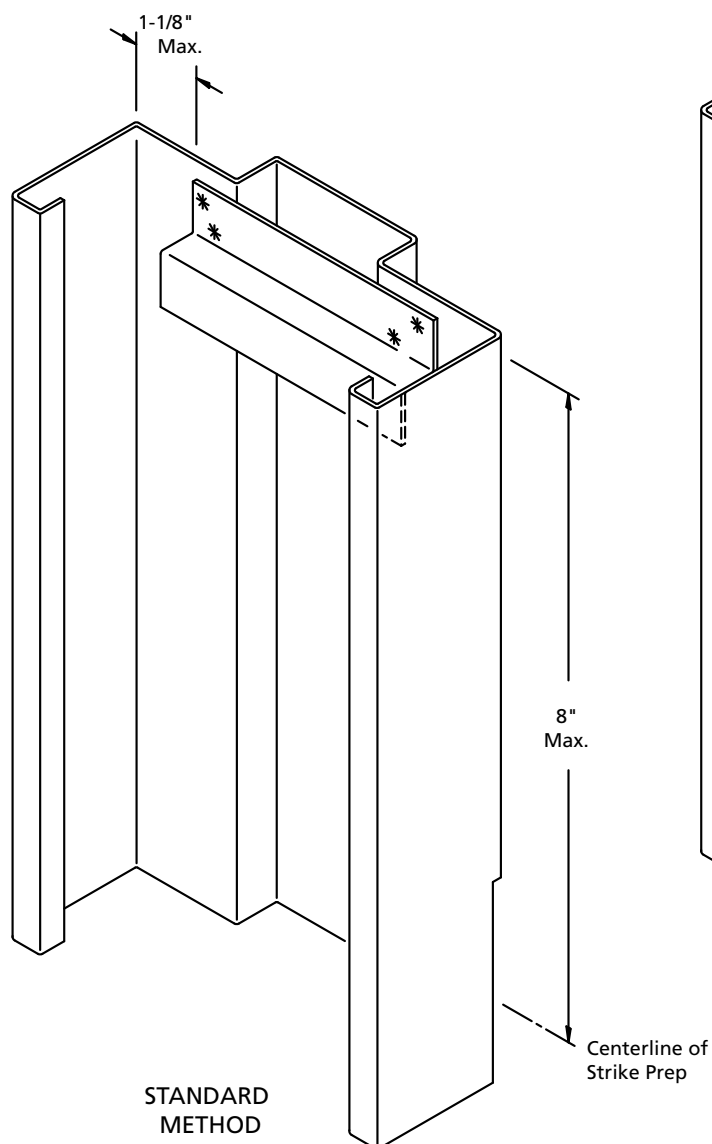
STRAP TYPE SILL ANCHORS are available as an option for FM, UL and WH labeled slip-on drywall frames. STRAP TYPE SILL ANCHORS may be one piece type **A** or two piece type **C**, see Fig. 1 & 2. One piece ZEE BRACKET **B** is required for all applications shown above. For labeled single rabbet profiles, STOP BRACKET **D** is welded in place, see Fig. 3. Fasteners For fixing strap anchor to wall are to be furnished by frame installer, see Fig. 4. Fasteners should be of sufficient length to penetrate wall board and insure secure attachment to wall frame work. Strap anchor is normally concealed by wall base-board.

Distributor Tech Data

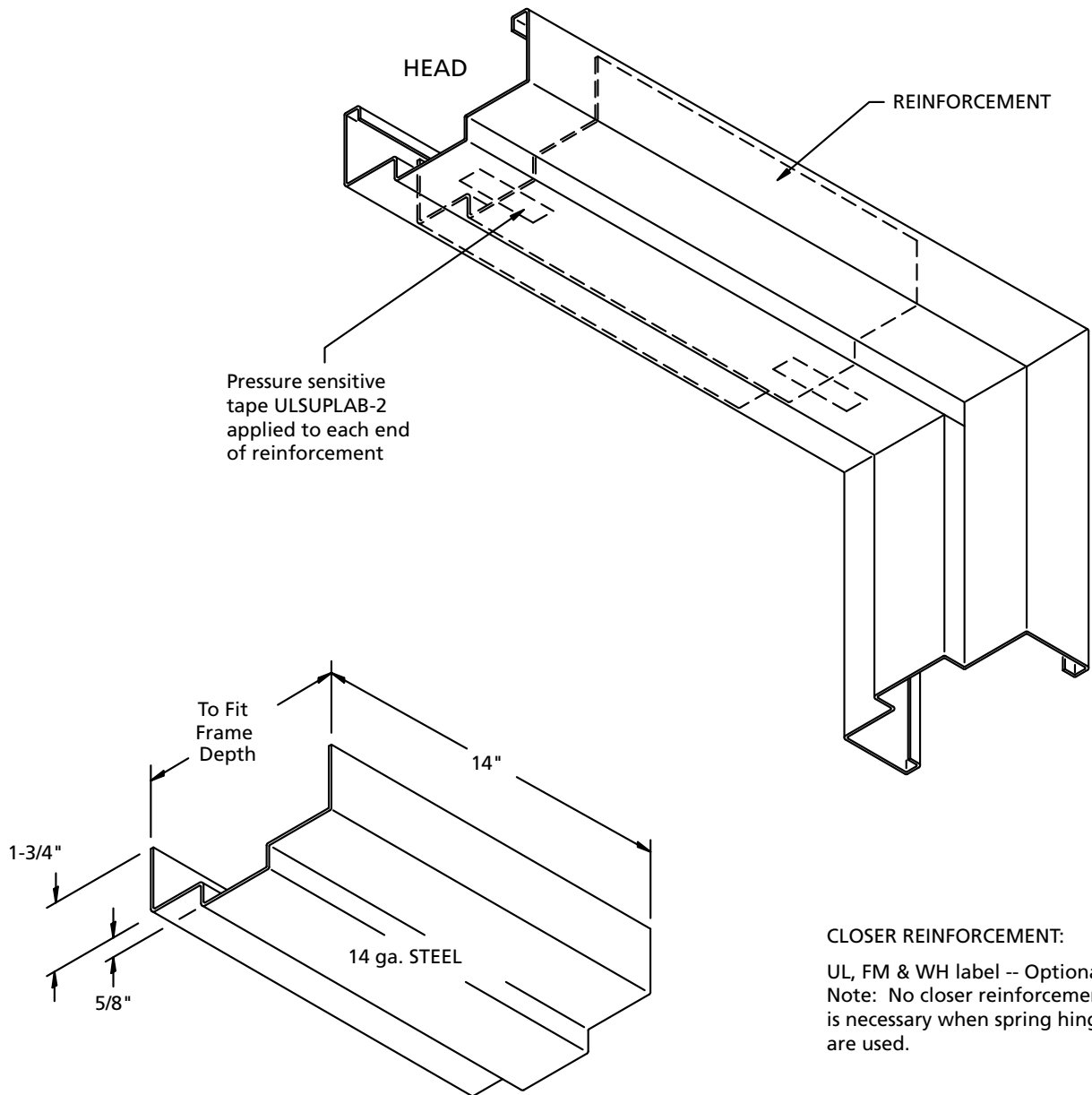
STRIKE JAMB ZEE SPACER FOR LABELED SLIP-ON DRYWALL FRAMES



Application Shown On Page 7-907



CLOSER REINFORCEMENT SLEEVE FOR LABELED SLIP-ON DRYWALL FRAMES



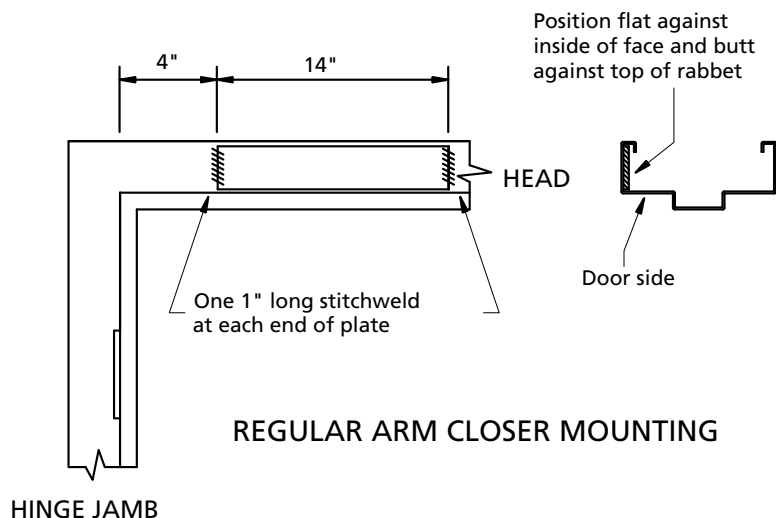
CLOSER REINFORCEMENT:
UL, FM & WH label -- Optional
Note: No closer reinforcement
is necessary when spring hinges
are used.

REINFORCEMENT	FRAME DEPTH
CR434	4-3/4"
CR534	5-3/4"

Full length closer reinforcement is also available (UL & WH)

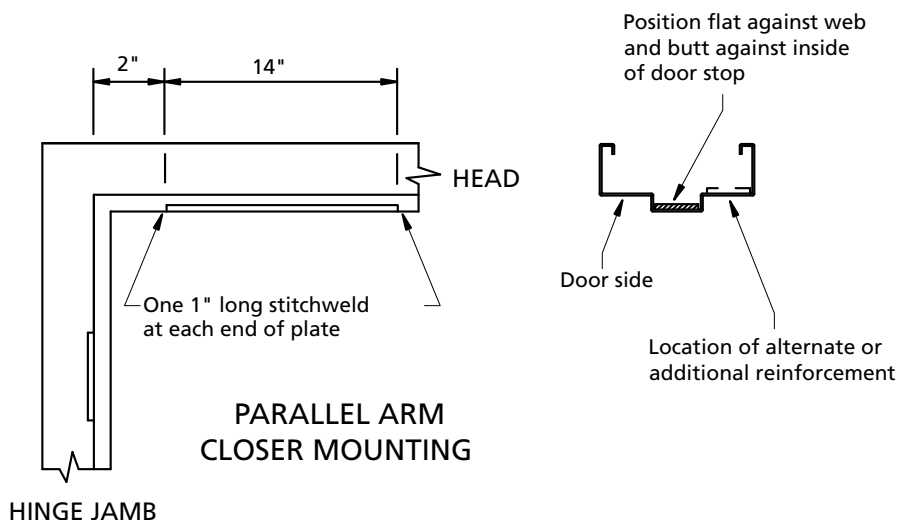
Distributor Tech Data

CLOSER REINFORCEMENT PLATE - TYPE FOR LABELED SLIP-ON DRYWALL FRAMES

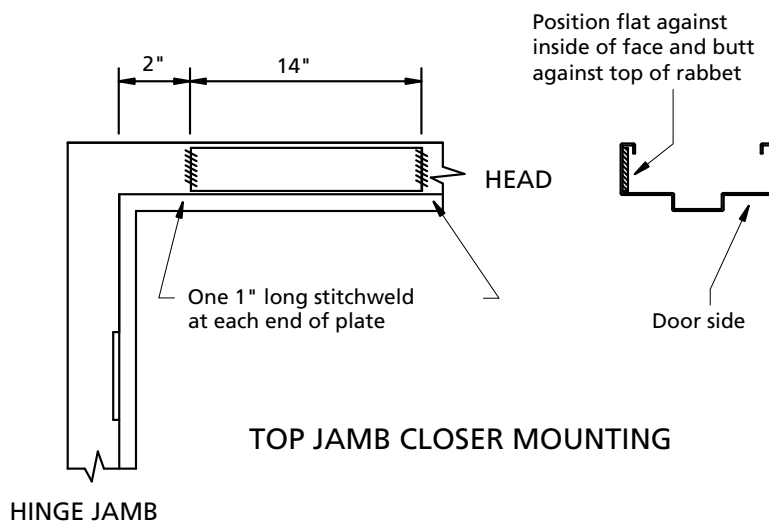


CLOSER REINFORCEMENT:

UL, FM & WH label -- Optional
Note: No closer reinforcement is necessary when spring hinges are used.



All Reinforcement Plates are
14 ga. min. steel x 1-3/4" x 14"

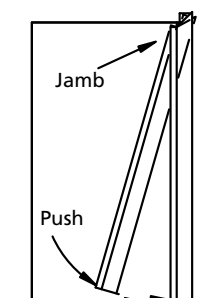


LABELED SLIP-ON DRYWALL FRAME INSTALLATION INSTRUCTIONS

ROUGH OPENING: ADD 1" TO DOOR OPENING HEIGHT & 2" TO DOOR OPENING WIDTH

JOBSITE STORAGE: Store frames off the ground on wood runners or skids. Do not store directly on the ground. Cover frames with tarpaulin or plastic but do insure that adequate ventilation is provided to eliminate moisture condensation.

STEP 1



PROCEDURE:

STEP 1

- A. Begin installation by pushing the top of one jamb over the wall.
- B. Hold the top in place then push the bottom in towards and over the wall.

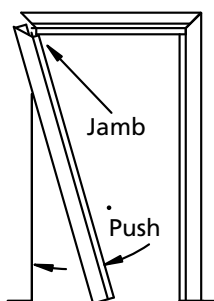
STEP 2

- A. Position frame head over the wall.
- B. Align head tabs with jamb slots then slide head towards jamb and engage tabs in slots.

STEP 3

- A. Push the top of the remaining jamb over wall and mate jamb slots and head tabs.
- B. Push the bottom of this jamb in towards and over the wall.
- C. Level the head.

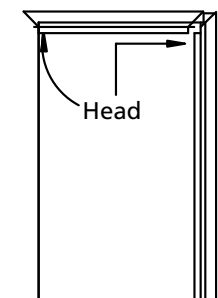
STEP 3



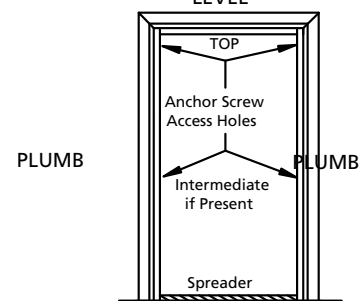
STEP 4

- A. Insert screw driver (Phil #2 blade) into top plumb anchor screws. Alternately adjust top plumb anchors until they bear firmly against studs.
- B. Insert (4) #8 x 1/2" MIN. (Phil) PHSMS through holes in head backbends and fasten to jamb miter guides.
- C. Plumb hinge jamb and fasten at sill. *
- D. Place a temporary wood spreader between jambs at sill. Adjust strike jamb to fit firmly against spreader and fasten at bottom of this jamb. *
- E. Adjust intermediate plumb anchors (if present) until they too bear firmly against studs
- F. Install mutes in holes provided in door stops.
- G. Insert plastic plug buttons in plumb anchor screw access holes

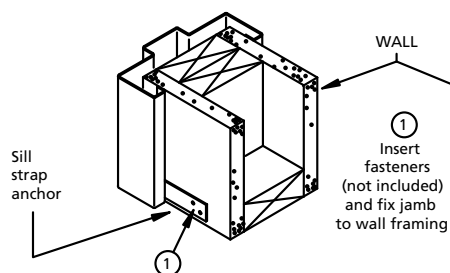
STEP 2



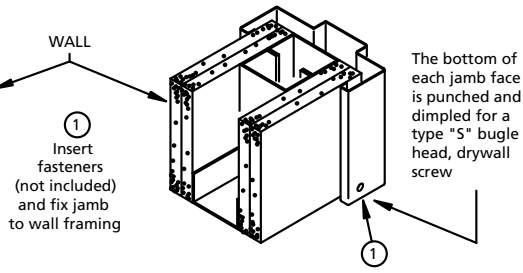
STEP 4



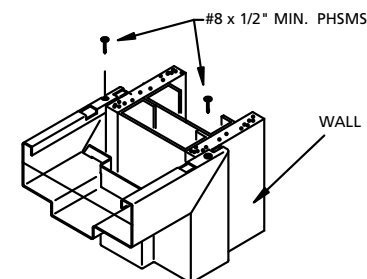
* Some installers prefer to hang door and fit frame to door prior to anchoring at sill.



OPTIONAL SILL ANCHOR



STANDARD SILL ANCHOR



FASTENERS AT HEAD
(All labeled frames)