DEANSTEEL

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NOTE: We reserve the right, without notice, to make changes in specification, construction, design, and detail at any time in such manner as we may consider necessary or advisable. Corrections to reflect any such changes shall be included in subsequent printing of the publication.

FOR ADDITIONAL INFORMATION OR CONFIRMATION OF DATE OF PUBLICATIONS PRESENTLY IN USE, PLEASE WRITE OR CALL:

Deansteel Manufacruring Company 931 S. Flores Street San Antonio, Texas 78204

(210) 226-8271 1-800-825-8271 FAX 1-210-224-7910

SDI CERTIFIED

DEANSTEEL

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(210) 226-8271 1-800-825-8271 FAX 1-210-224-7910

DOOR SPECIFICATIONS

SDI CERTIFIED

1) Doors shall be made of commercial quality, level, sheet steel conforming to the applicable standards noted below. Door face sheets will have a thickness of 16, 18, or 20 gauge (*20 ga is 6-panel Galvannealed only*) with no visible seams on either face.
   Cold-Rolled Steel (CRS) : ASTM A1008
   Galvannealed Steel (PG) : ASTM A653
   A-40 (ZF120) - 0.40 oz/ft^2 coating weight
   A-60 (ZF180) - 0.60 oz/ft^2 coating weight
   Stainless Steel (SS) : ASTM A240 - 304 or 316L

2) All doors shall be 1-3/4" in thickness, strong, rigid and neat in appearance and free from warpage. Edge bends shall be true and straight and minimum radius of the gauge of metal used.

3) The vertical edges of SP, SV and SF doors shall be reinforced by 16 gauge minimum continuous steel channel extending full height of the door. TD doors do not include an edge channel due to the hem and seam weld edge design. The top and bottom edges shall be reinforced with 16 gauge inverted channels spot-welded to the face sheets.

4) Internal construction of the SP & TD door consists of a polystyrene core of one pound density that is completely bonded to the door skins under pressure with a contact adhesive. Alternate constructions (SV, SF) and cores (mineral wool, polyurethane) are available. Insulation properties can be found on page 11 of this document.

5) All doors shall be mortised and reinforced to allow field application of hinges and locks in accordance with the approved hardware schedule and templates provided by the hardware contractor.
   Minimum hardware reinforcement requirements:
   Hinge Reinforcement (template hinge) - 7 gauge
   Lock Reinforcement - 12 gauge
   Closer Reinforcement - 14 gauge
   Other Surface Mounted Hardware - 16 gauge (minimum)
   Lock Support - 20 gauge

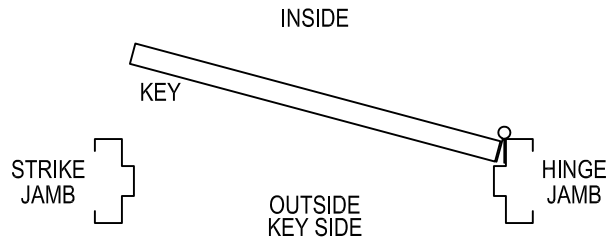
6) All doors shall be thoroughly cleaned, phosphatized and painted with one coat of primer to inhibit corrosion.

7) Doors shall be received by the contractor at the jobsite and handled in a manner so as not to be damaged. They shall be stored upright in a protected area on wood runners on skids and shall be covered with vented tarpaulins or vented plastic.

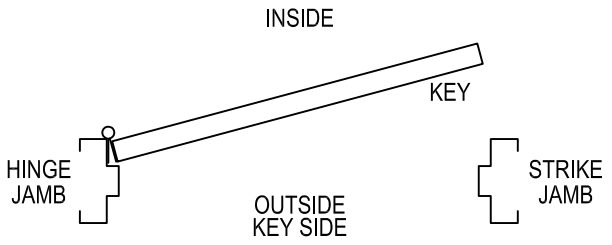
8) Installation of Doors - To be done by the contractor. Guidelines are available online to aid in installation and storage:
   The Steel Door Institute: steeldoor.org/installation , ANSI A250.11 & SDI 122
   Hollow Metal Manufacturer's Association (HMMA): www.naam.org (HMMA 840)

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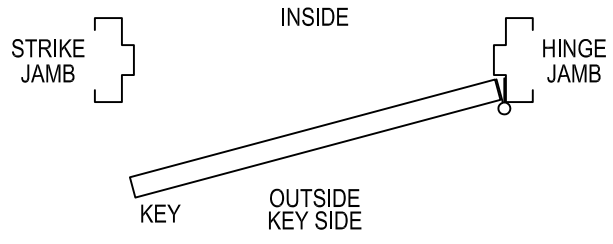
DOOR AND FRAME HANDING CHART



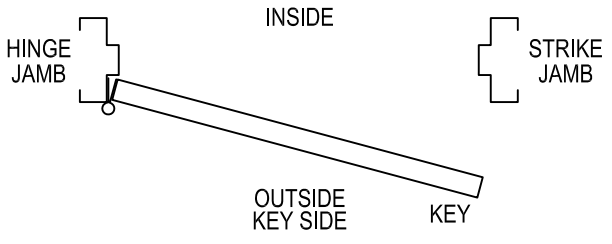
RIGHT HAND (SWING IN) - RH



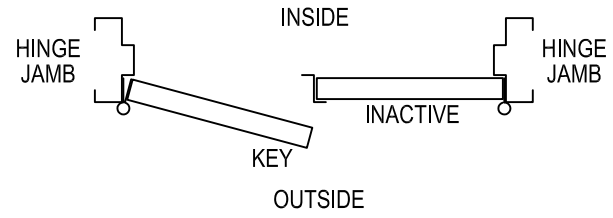
LEFT HAND (SWING IN) - LH



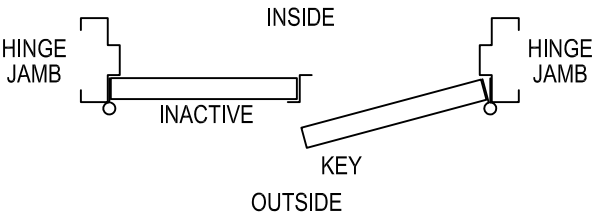
RIGHT HAND REVERSE (SWING OUT) - RHR



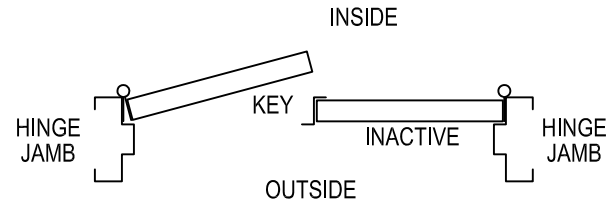
LEFT HAND REVERSE (SWING OUT) - LHR



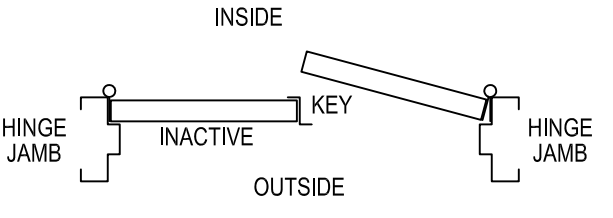
PAIR OF DOORS - LEFT HAND REVERSE ACTIVE (SWING OUT)



PAIR OF DOORS - RIGHT HAND REVERSE ACTIVE (SWING OUT)



PAIR OF DOORS - LEFT HAND ACTIVE (SWING IN)



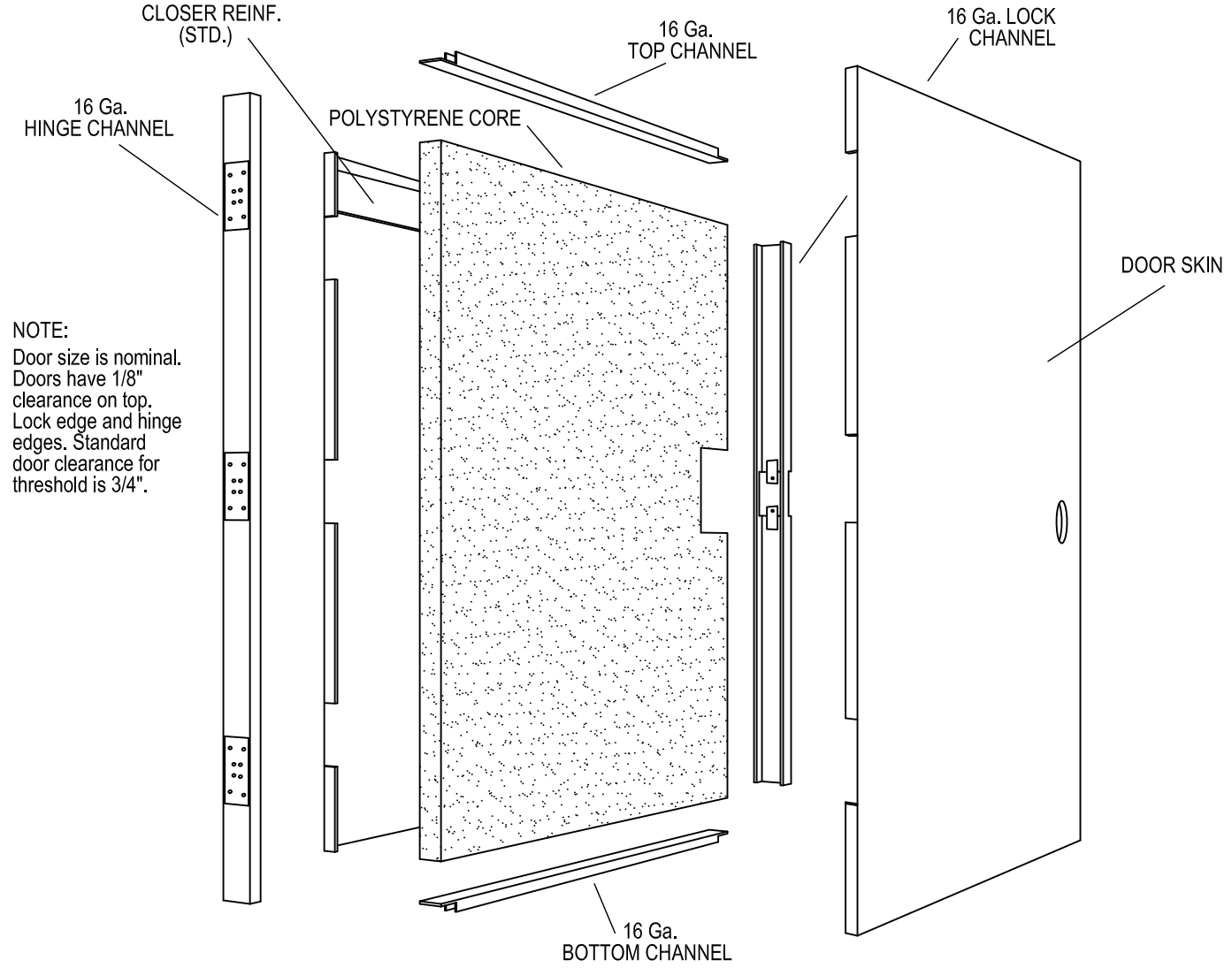
PAIR OF DOORS - RIGHT HAND ACTIVE (SWING IN)

S.D.I. CLASSIFICATIONS

LEVEL		MODEL	CONSTRUCTION	DEANSTEEL SERIES
1	Standard Duty (1 3/4" and 1 3/8") Minimum Gage = 18	1	Full Flush	SP - SV - TD
		2	Seamless	SP - SV
2	Heavy Duty (1 3/4" Only) Minimum Gage = 18	1	Full Flush	SP - SV
		2	Seamless	SP - SV
3	Extra Heavy Duty (1 3/4" Only) Minimum Gage = 16	1	Full Flush	SP - SV
		2	Seamless	SP - SV
		3	Flush Panel (STILE and RAIL)	NOT AVAILABLE
4	Maximum Duty (1 3/4" Only) Minimum Gage = 14	1	Full Flush	SP - SV
		2	Seamless	SP - SV

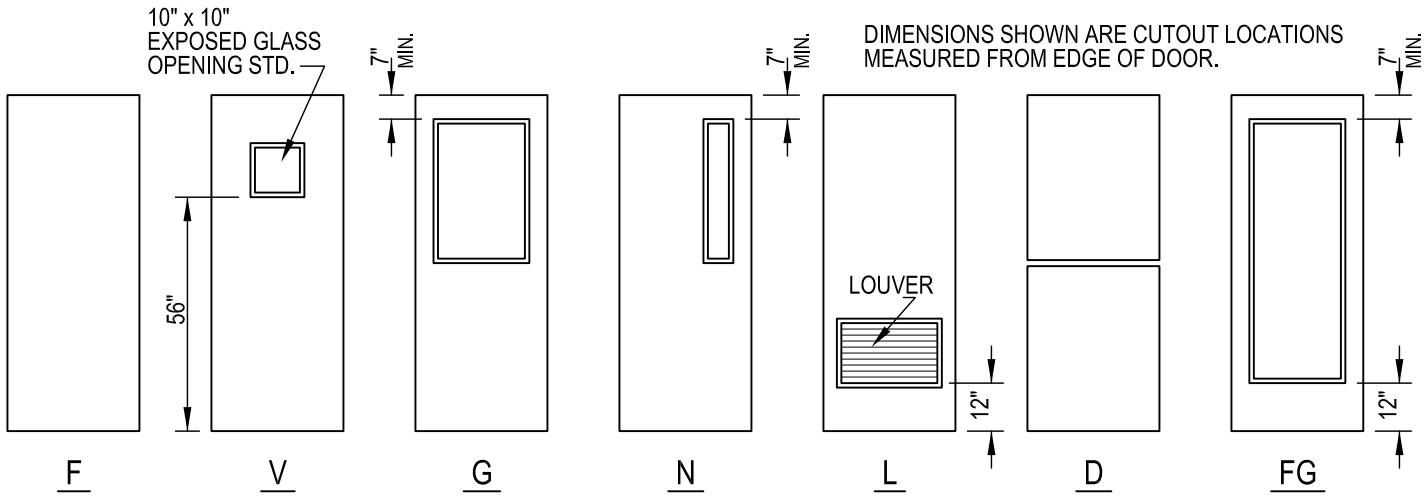
SP

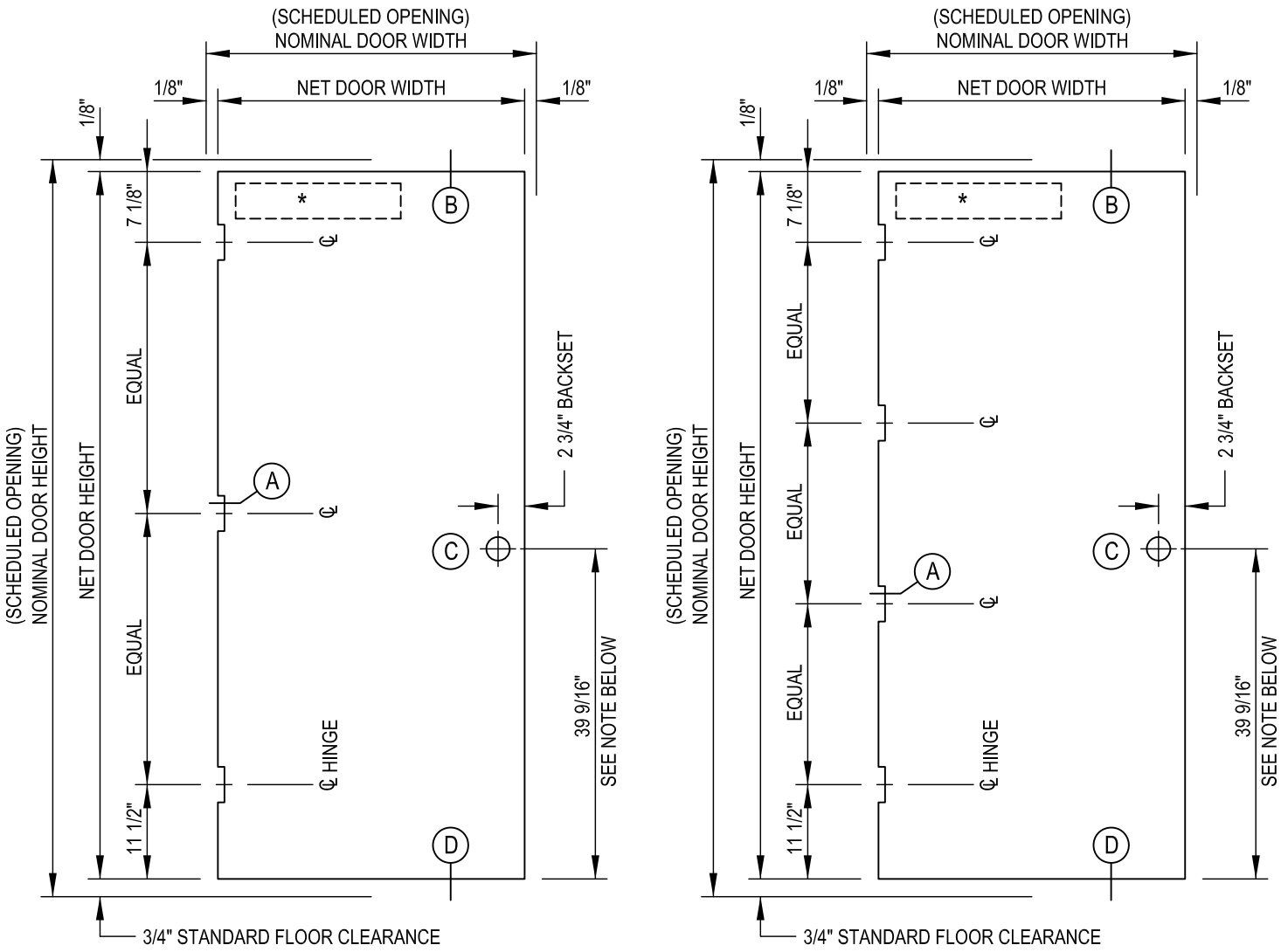
POLYSTYRENE DOORS



NOTE:
Door size is nominal. Doors have 1/8" clearance on top. Lock edge and hinge edges. Standard door clearance for threshold is 3/4".

ALL GLASS & INSTALLATION BY OTHERS





6'-8" THRU 7'-6" HIGH DOOR STANDARD HARDWARE LOCATION

OVER 7'-6" THRU 10'-0" HIGH DOOR STANDARD HARDWARE LOCATION

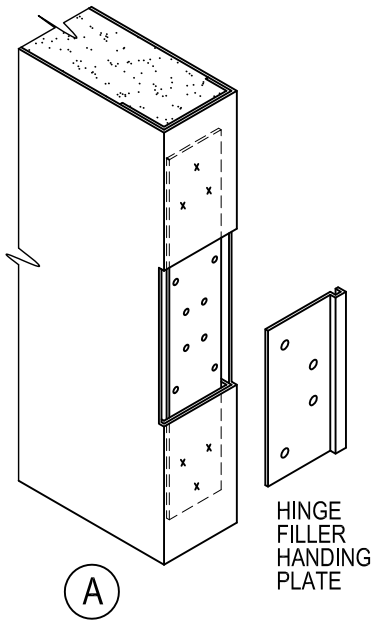
Note: Closer Reinforcement is standard on doors

For full spacing dimensions, please see the SDI 129 Technical Document @ steeldoor.org/tech_data/

Dimensions shown above are for cylindrical lock preparations (Gov't 161). When a mortise lock (Gov't 86) is used, dimensions to the centerline of the lock front will be $\frac{3}{8}$" less than indicated.

Example:
161 Prep: 39 $\frac{9}{16}$" from bottom of door to C/L of lock prep
MB (86) Prep: 39 $\frac{3}{16}$" from bottom of door to C/L of lock prep (edge cutout)

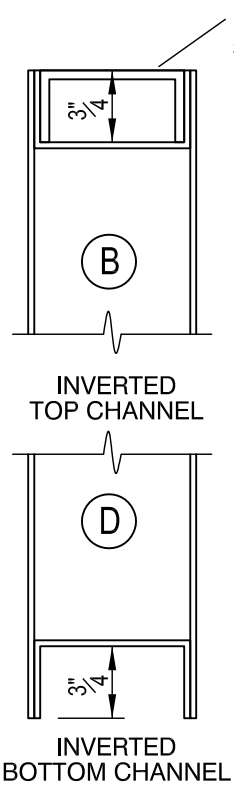
Standard Edge Preps & Details



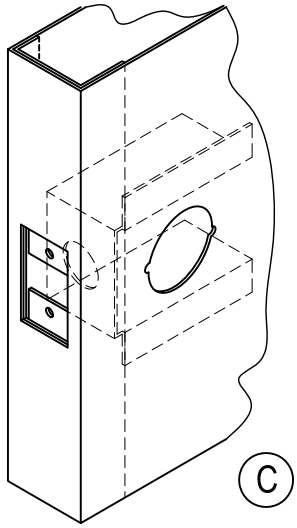
HINGE
FILLER
HANDING
PLATE

A

4 1/2" STD. WT. or
HVY. WT. FULL MORTISE
TEMPLATE HINGE
PROVISION

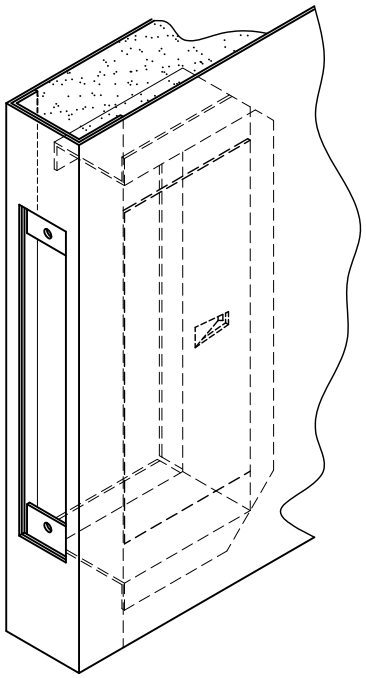


INVERTED
BOTTOM CHANNEL



C

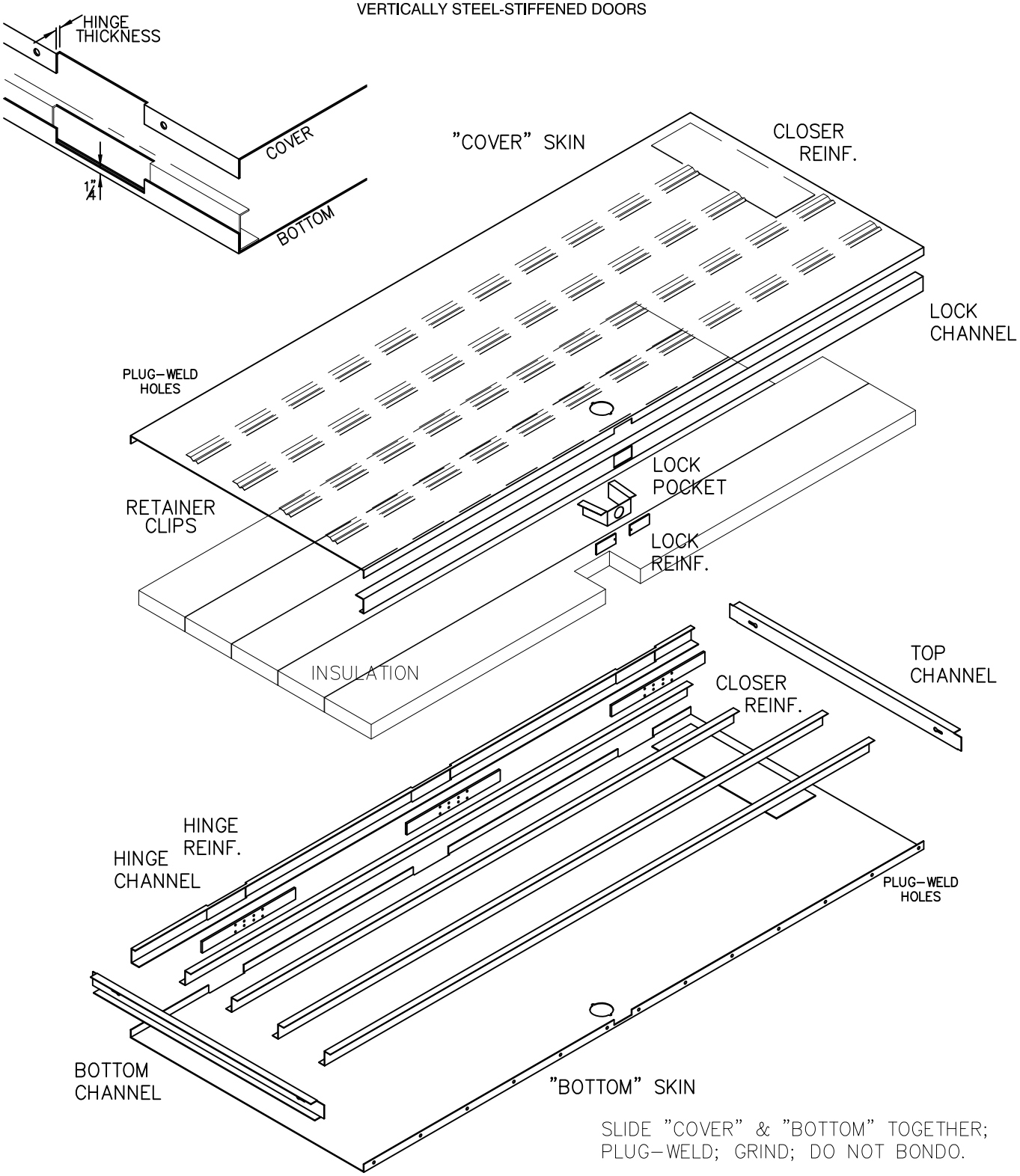
L1 LOCK PREP.
GOV'T 161



MB LOCK PREP.
GOV'T 86
(EDGE ONLY)

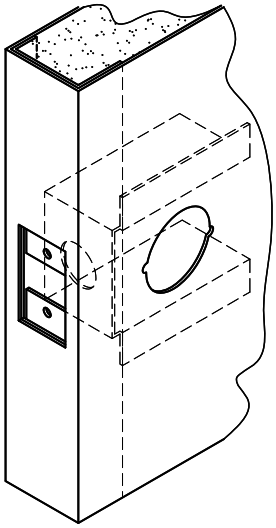
SV

VERTICALLY STEEL-STIFFENED DOORS



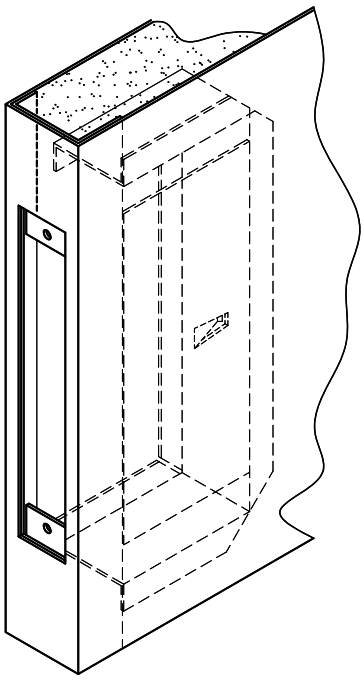
6P

6-PANEL DOORS

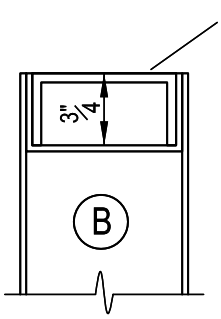


GOV'T 161
L1 LOCK PREP.

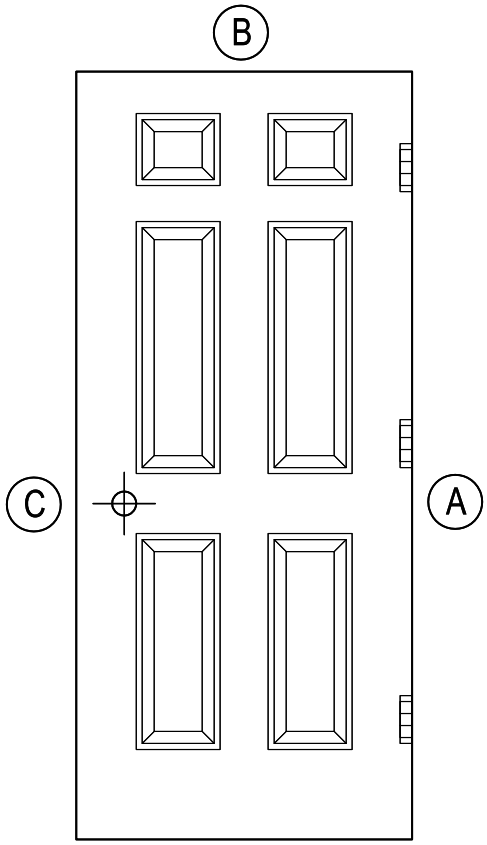
C

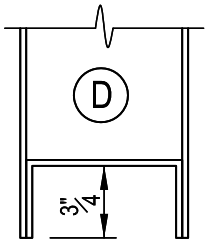


MB LOCK PREP.
GOV'T 86
(EDGE ONLY)

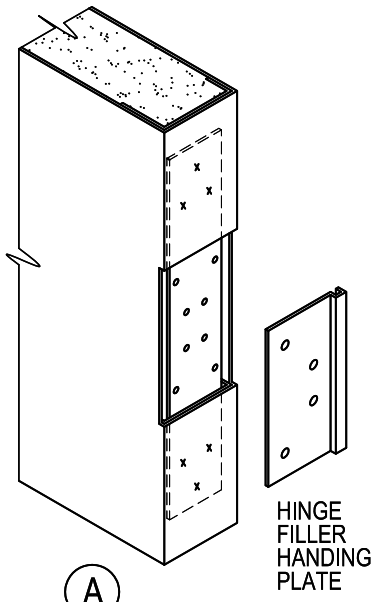


INVERTED
TOP CHANNEL





INVERTED
BOTTOM CHANNEL



4 1/2" STD. WT. or
HVY. WT. FULL MORTISE
TEMPLATE HINGE
PROVISION

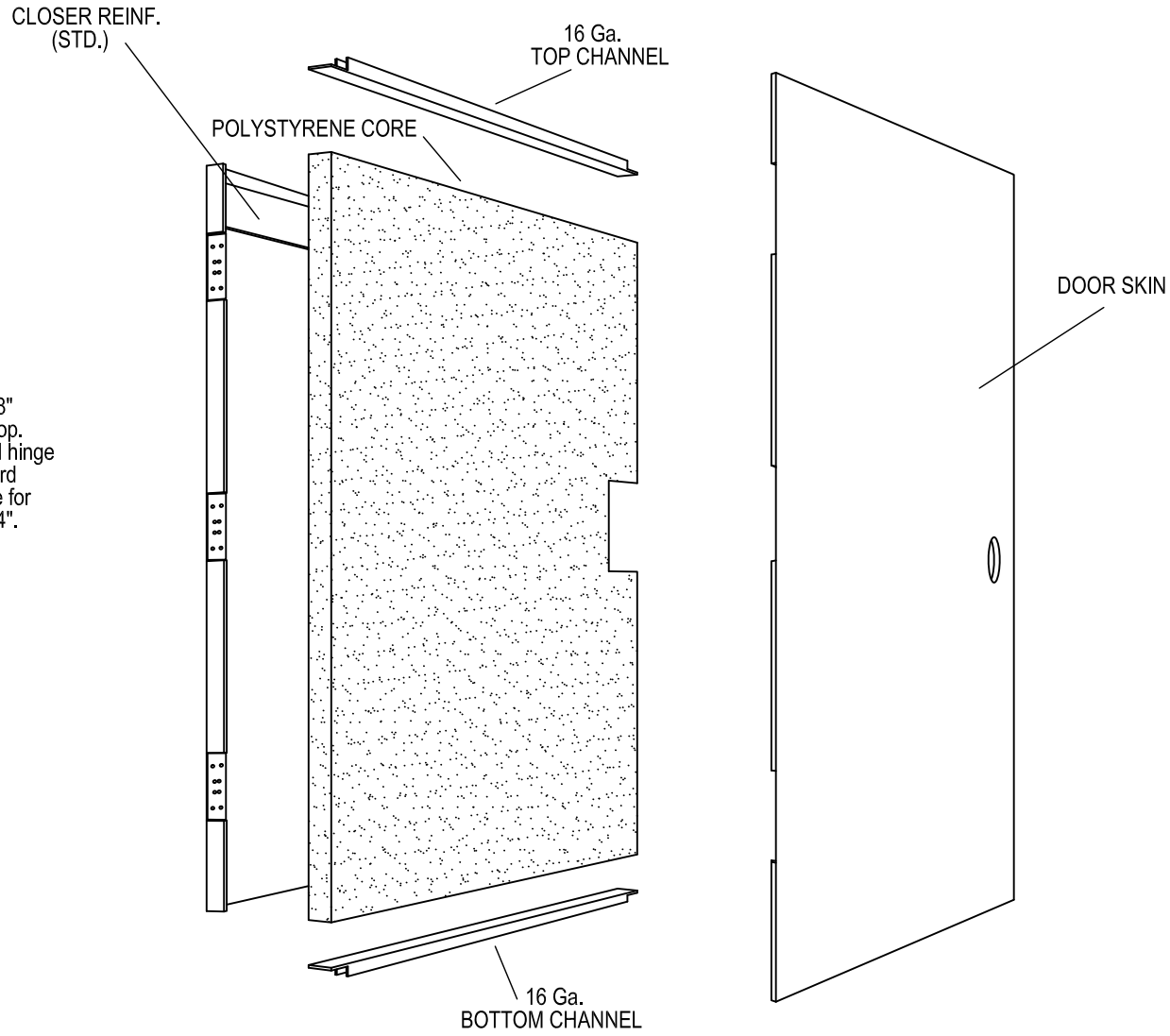
DOOR SIZES

2868
3068
2870
3070

MAXIMUM TRIM DIAMETER
IS 3 1/8" ON 28" DOOR

TD

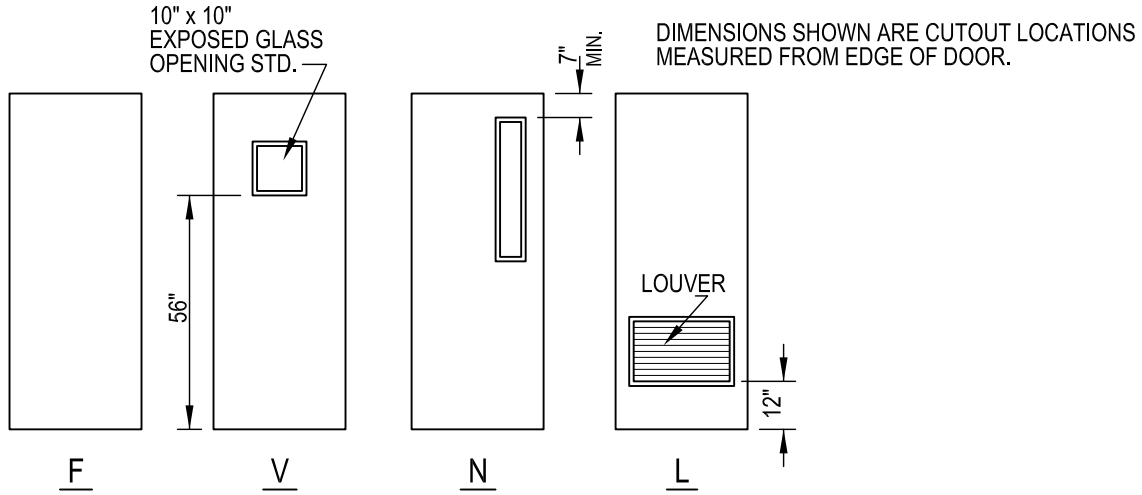
POLYSTYRENE DOORS



NOTE:

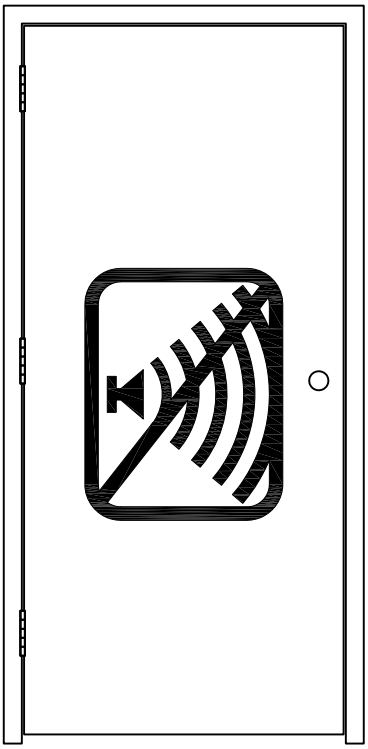
Doors have 1/8" clearance on top. Lock edge and hinge edges. Standard door clearance for threshold is 3/4".

ALL GLASS & INSTALLATION BY OTHERS



SQ

STC-RATED SOUND RESISTANT DOORS



DEANSTEEL OFFERS A VERY EFFICIENT, VERY AFFORDABLE, LIGHTWEIGHT ACOUSTICAL DOOR, FRAME AND SOUND SEAL PACKAGE IN ADDITION TO ITS LINE OF COMMERCIAL HOLLOW METAL, MARINE, BULLET-RESISTANT AND BLAST-RESISTANT PRODUCTS.

THE UNIT INCLUDES THE DEANSTEEL "SQ" SERIES HOLLOW METAL DOOR, A WELDED "D" SERIES FRAME, THRESHOLD AND SOUND SEALS.

ADDITIONAL RATINGS FROM OUR OTHER PRODUCT LINES ARE SHOWN BELOW.

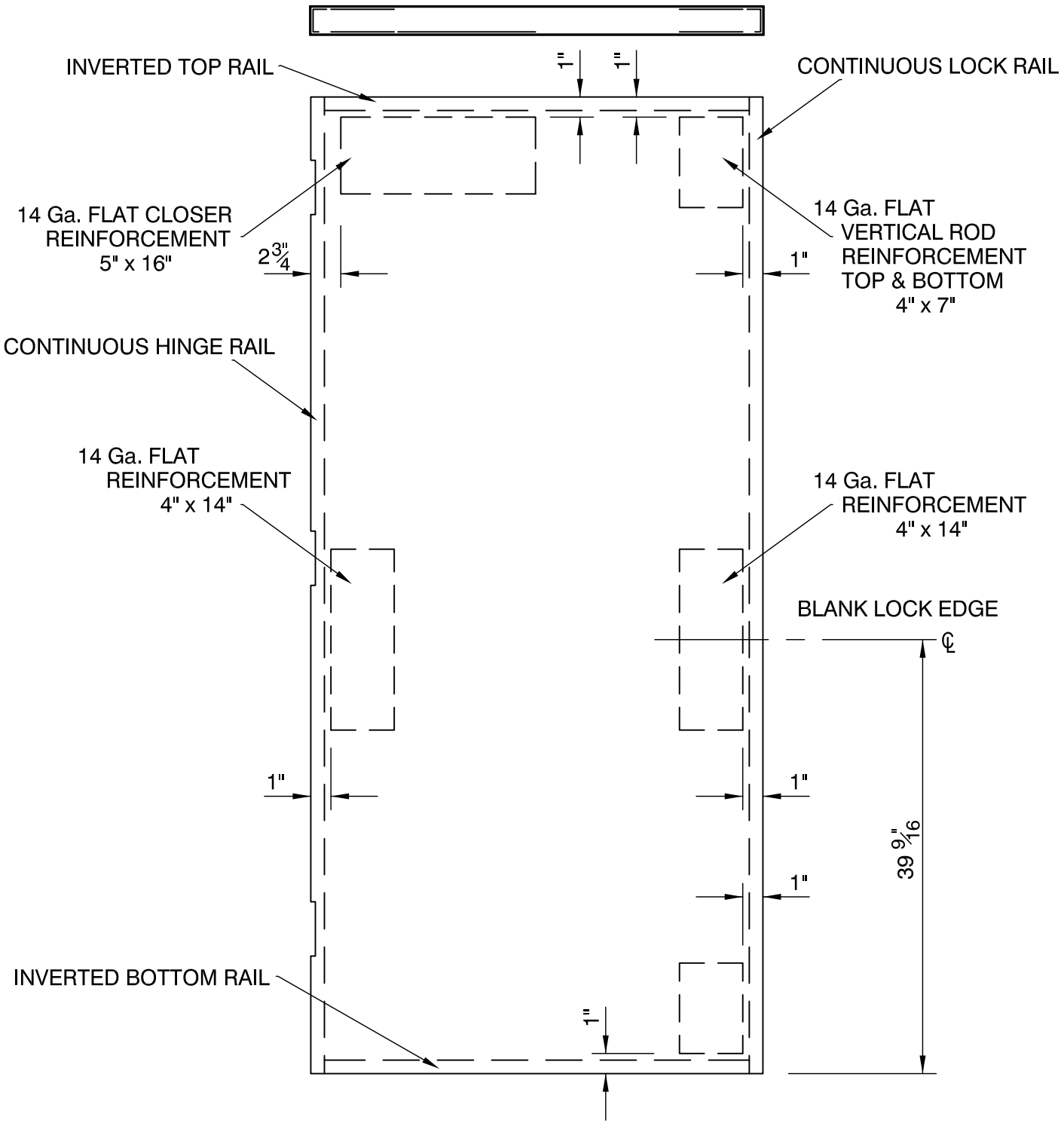
DOOR MODEL	CORE	STC RATING
SQ - SOUND DOOR [1]	PROPRIETARY	**48**
SP 18ga SKIN [2]	POLYSTYRENE	24

INDEPENDENT VERIFICATION AND QUALIFICATION TESTING

[1] RIVERBANK ACOUSTICAL LABORATORIES
ASTM E90-97 / ASTM E1408-91
FRAME, GASKET & THRESHOLD REQUIRED FOR STC RATING

[2] ETS LINDGREN ACOUSTIC RESEARCH LABORATORY
ASTM E90-09 / ASTM E413-04 / ASTM E1332-10a
SLAB TEST ONLY - NO FRAME OR HARDWARE

RVE Rim & Vertical Rod Exit reinforced door



NOT TO SCALE

DEANSTEEL SERIES	U-VALUE (°F * ft² * h) / BTU	R-VALUE BTU / (h * °F * ft²)	STC RATING	SURFACE BURNING (INSULATION DATA)
SP / TD POLYSTYRENE (EPS) 1 lb/ft³ density	0.146 to 0.171	5.85 to 6.8 [1] *(3.6 to 4.2 / inch)*	STC 24 / R_w = 31db [2]	FLAME SPREAD < 25 [3] SMOKE DEVELOPED < 450 [3]
SV STEEL STIFFENED ROCKWOOL SEAROX SL620 (6 lb/ft³ density)	0.154	6.5 [4] *(4.0 / inch)*	N/A	FLAME SPREAD < 0 [5] SMOKE DEVELOPED < 0 [5]
SF POLYURETHANE (POLYISOCYANURATE FOAM - 2 lb/ft³ density)	0.11	8.6 [6] *(5.3 / inch)*	N/A	FLAME SPREAD < 25 [3] SMOKE DEVELOPED < 450 [3]
SQ PROPRIETARY CORE	N/A	N/A	STC 48 [7]	N/A

Note 1: ASTM C578 & ICC ER ESR-1946 [Data shown is for insulation only]

Note 2: 3070 - 18ga CRS skin door tested at ETS Lindgren (12/19/2011) - ASTM E90-09 *inoperable panel test (no hardware or frame included during testing)

Note 3: ASTM E84

Note 4: ASTM C177 & ASTM C518 [Data shown is for insulation only]

Note 5: UL 723 (ASTM E84)

Note 6: ASTM C578 [Data shown is for insulation only]

Note 7: ASTM E90/ASTM E1408 (see Page 10)

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LABELED FIRE DOORS

The seven opening classifications shown below are the seven fire door ratings, their locations in the building and the maximun amount of glass is square inches allowed in each door.

LABEL CLASSIFICATION RATING	USE IN BUILDING	Maximum Visible Area (sq. inches)	Maximum Visible Width (inches)	Maximum Visible Height (inches)	GLAZING MATERIALS
3 HOUR	Opening in walls separating buildings or dividing a single building into fire areas. Doors are to be rated for 3 hours.	100 (3)	33	33	Listed and labeled glazing materials
1-1/2 HOUR	Openings in exterior walls which are subject to severe fire exposure from outside of the building. Doors have a rating of 1-1/2 hour.	552 (1)	12	46	Listed and labeled glazing materials
1-1/2 HOUR	Opening in enclosures of Vertical Communication through buildings. Doors have a rating of 1 hour or 1-1/2 hours.	100 (3)	33	33	Listed and labeled glazing materials
3/4 HOUR	Opening in Corridors and room partitions. Doors have a rating of 3/4 hour.	2856	34	84	Listed and labeled glazing materials
3/4 HOUR	Opening in exterior walls which are subject to moderate or light fire exposure from outside of the building. Doors have a rating of 3/4 hour.	1296 (2)	54	54	Listed and labeled glazing materials
20 MINUTE	Corridor walls	2856	34	84	Listed and labeled glazing materials
20 MINUTE	Corridor walls	1296 (2)	54	54	Listed and labeled glazing materials
20 MINUTE No Hose Stream	Corridor walls	2971	35 3/4	83 1/8	Listed and labeled glazing materials

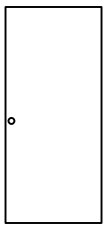
Footnotes :

1. Each door leaf can have up to four (4) vision panels, each with a maximum of 552 square inches clear view area.
2. 1296 sq. in. is the maximum visible glass. While each dimension maximum is 54 inches, the combination of width x height must still come in under the maximum square inches.
3. 100 sq. in. is the maximum visible glass. While each dimension maximum is 33 inches, the combination of width x height must still come in under the maximum square inches.

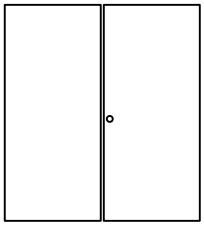
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LABELED FIRE DOORS

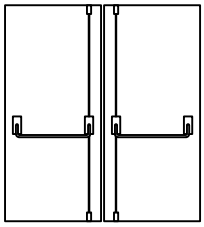
The seven opening classifications shown below are the seven fire door ratings, their locations in the building and the maximun amount of glass is square inches allowed in each door.



SINGLE DOOR



DOUBLE DOOR
(ACTIVE / INACTIVE)



DOUBLE DOOR
(ACTIVE / ACTIVE)

DOOR TYPES	MAXIMUM SIZES	LABEL AVAILABLE (UL 10C)
POLYSTYRENE		
SP18	4'-0" x 8'-0" / 8'-0" x 8'-0"	3 hr , 1-1/2 hr , 3/4 hr , 20 min
SP16	4'-0" x 8'-0" / 8'-0" x 8'-0"	3 hr , 1-1/2 hr , 3/4 hr , 20 min
SP14	4'-0" x 8'-0" / 8'-0" x 8'-0"	3 hr , 1-1/2 hr , 3/4 hr , 20 min
SP12 *	3'-0" x 7'-6"	3 hr , 1-1/2 hr , 3/4 hr , 20 min
TD18	4'-0" x 8'-0" / 8'-0" x 7'-2"	3 hr [1-1/2 hr , 3/4 hr , 20 min] **
* = Intertek Label Only & Flush Panel Only	Note: Astragal required on 3hr pairs Optional on 1-1/2 hr or less	
** = UL Label Only [in brackets]	Z Astragal Required on all TD Pairs	
STEEL-STIFFENED (ZEEs)		
SV18	4'-0" x 7'-2" / 6'-8" x 7'-0"	1-1/2 hr , 3/4 hr , 20 min
SV16	4'-0" x 7'-2" / 6'-8" x 7'-0"	1-1/2 hr , 3/4 hr , 20 min
SV14	4'-0" x 7'-2" / 6'-8" x 7'-0"	1-1/2 hr , 3/4 hr , 20 min
	Note: Astragal required on all pairs	
STEEL-STIFFENED (HATs)		
SV18	4'-0" x 10'-0" / 8'-0" x 10'-0"	3 hr , 1-1/2 hr , 3/4 hr , 20 min
SV16	4'-0" x 10'-0" / 8'-0" x 10'-0"	3 hr , 1-1/2 hr , 3/4 hr , 20 min
SV14	4'-0" x 10'-0" / 8'-0" x 10'-0"	3 hr , 1-1/2 hr , 3/4 hr , 20 min
SV12*	3'-6" x 7'-6"	3 hr , 1-1/2 hr , 3/4 hr , 20 min
SV18**	4'-10" x 10'-0" / 9'-8" x 10'-0"	1-1/2 hr , 3/4 hr , 20 min
SV16**	4'-10" x 10'-0" / 9'-8" x 10'-0"	1-1/2 hr , 3/4 hr , 20 min
SV14**	4'-10" x 10'-0" / 9'-8" x 10'-0"	1-1/2 hr , 3/4 hr , 20 min
* = UL Label Only & Flush Panel Only	Note: Astragal required on all pairs	
** = Special Constr. Contact Sales Dept.		

Louvers available in all doors noted above.

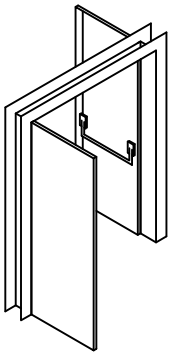
- Maximum dimensions of louvers shall be 24" W x 24" H x 1-9/16" Thick.
- Louvers are not permitted in doors with vision panels or in doors with fire exit hardware.
- Louvers may not be allowed in 20-minute locations in certain jurisdictions requiring smoke and draft control. Prior approval of the AHJ is required.
- Louvers shall be listed, labeled and have a listed (135°F) Fusible Link
- Louvers are not permitted in the upper half of the door above the neutral plane.

Sizes shown for the fire doors are the maximum sizes available.

Labeled openings include door, frame and hardware. The effectiveness of the entire opening as a fire barrier may be destroyed if any component is omitted, or substandard quality is used.

LABELED FIRE DOORS

The seven opening classifications shown below are the seven fire door ratings, their locations in the building and the maximun amount of glass is square inches allowed in each door.



DOUBLE EGRESS DOORS AND FRAME

DOOR TYPES	MAXIMUM SIZES	LABEL AVAILABLE (UL 10C)
POLYSTYRENE		
SP18	8'-0" x 7'-2"	3 hr , 1-1/2 hr , 3/4 hr , 20 min
SP16	8'-0" x 7'-2"	3 hr , 1-1/2 hr , 3/4 hr , 20 min
SP14	8'-0" x 7'-2"	3 hr , 1-1/2 hr , 3/4 hr , 20 min
	Note: Astragal required on 3hr pairs Optional on 1-1/2 hr or less	
STEEL-STIFFENED (HATs)		
SV18	8'-0" x 10'-0"	3 hr , 1-1/2 hr , 3/4 hr , 20 min
SV16	8'-0" x 10'-0"	3 hr , 1-1/2 hr , 3/4 hr , 20 min
	Note: Astragal required on all pairs	

For use with classified double egress DEANSTEEL frames. Doors must be provided with Listed and Labeled vertical rod fire exit hardware on each leaf.

Fire-Rated TD Doors are not listed to be used in double egress fire-rated frames.

Sizes shown for the fire doors are the maximum sizes available.

Labeled openings include door, frame and hardware. The effectiveness of the entire opening as a fire barrier may be destroyed if any component is omitted, or substandard quality is used.

NOTE: We reserve the right, without notice, to make changes in specification, construction, design, and detail at any time in such manner as we may consider necessary or advisable. Corrections to reflect any such changes shall be included in subsequent printing of the publication.

FRAME SPECIFICATIONS

1) Frames shall be made of commercial quality, level, sheet steel conforming to the applicable standards noted below. Frame profiles will have a standard thickness of 16 gauge. Alternate heavier gauges may be available, please contact Sales for details.
   - Cold-Rolled Steel (CRS) : ASTM A1008
   - Galvannealed Steel (PG) : ASTM A653
     - A-40 (ZF120) - 0.40 oz/ft^2 coating weight
     - A-60 (ZF180) - 0.60 oz/ft^2 coating weight
   - Stainless Steel (SS) : ASTM A240 - 304 or 316L (Matte Finish is Standard)

2) All finished work shall be strong, rigid and neat in appearance, square, true and free of defects, warp or buckle. Welded frames shall have trim faces mitered, welded and finished smooth.

3) Frames shall be mortised and reinforced for hardware. Drilling and tapping done at the factory for full template mortised hardware only in accordance with approved hardware schedule and templates provided by the hardware contractor. Minimum hardware reinforcement requirements:
   - Hinge Reinforcement - 7 gauge
   - Strike Reinforcement - 12 gauge
   - Closer Reinforcement - 12 gauge
   - Surface Mounted Hardware - 12 gauge

4) Frames shall be provided with welded-in 16 gauge anchors in each jamb. Three field-inserted steel lock-in anchors (four for 8'-0" jambs) shall also be provided for each jamb. The type of anchor provided is governed by the wall condition specified. Fire-rated frames may require additional or alternate anchors.

5) All frames shall be provided with dust cover boxes or mortar guards of not less than 24 gauge at all hardware mortises on frames to be set in masonry walls, optional on drywall frames. All strike jambs shall be prepared to receive rubber silencers.

6) All welded frames shall be provided with temporary steel spreader bars welded to the feet of the jambs to serve as bracing during shipping.

7) All frames shall be thoroughly cleaned, phosphatized, and painted with one coat of primer to inhibit corrosion.

8) Deansteel also offers custom order jamb depths -
   Frame profiles are available in $\frac{1}{8}$" increments from 3-3/4" to 12-3/4". If alternate sizes are requested, please contact Sales for availability.

9) Frames shall be received by the contractor at the jobsite and handled in a manner so as not to be damaged. They shall be stored upright in a dry, protected area on wood runners on skids and shall be covered with vented tarpaulins or vented plastic.

10) Frame Installation - To be done by the contractor. Guidelines are available online to aid in the installation and storage:
   - The Steel Door Institute: steeldoor.org/installation , ANSI A250.11 & SDI 122
   - Hollow Metal Manufacturer's Association (HMMA): www.naam.org (HMMA 840)

NOTE:
and detail at any time in such manner as we may consider necessary or advisable. Corrections to reflect any such changes shall be included in subsequent printing of the publication.

Recommended Erection Instructions for Steel Frames

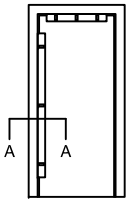
IMPORTANT NOTES:

1. STORAGE OF FRAMES AT THE JOB SITE — Frames shall be stored under cover on the building site on wood sill or of floors in a manner that will prevent rust and damage. Avoid creating a humidity chamber by using a plastic or canvas shelter and not venting the area covered.

2. GROUTING AND BACK PAINTING OF FRAMES — When temperature conditions necessitate the use of anti-freezing agents in plaster or mortar, or the frames are to be fully grouted, the inside of the frames must be coated with a bituminous water resistant paint by the contractor responsible for installation.

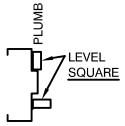
3. ASSEMBLY OF FRAME — Follow manufacturers recommended procedure.

BRACING FRAMES BEFORE WALL CONSTRUCTION

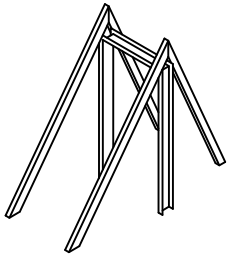


PLUMBING THE FRAME

The contractor should provide with a carpenter level, square and spreader. Set the frame in desired location and level the header. Shim under jambs if necessary. With frame on line, set spreader and fasten jambs to floor through floor anchors.



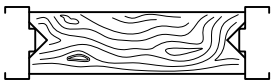
SECTION A - A

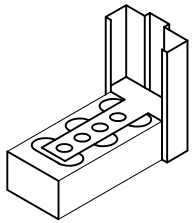


BRACING THE FRAME

Brace the frame. *Do Not Brace in the Direction of Intended Wall.* Plumb and square jambs.

MASONRY CONSTRUCTION



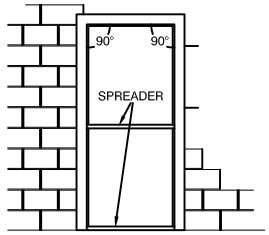


SPREADER

Typical wood spreader must be square and fabricated from lumber no less than 1" thick. Correct length is the door opening width between the jambs at the header. Cut clearance notches for frame stops. Spreader must be nearly as wide as frame depth for proper installation.

i.e. Single door 3'-0" - 36"

1. Set and Plumb Frame

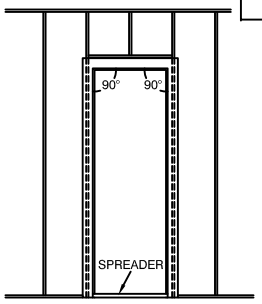


2. Install three anchors per jamb at hinge and strike levels as wall is laid up. Grout frame in the area of the anchors.

3. A second spreader is recommended at the mid point of the opening to maintain the door opening dimension.

4. Continually check plumb and square as wall

STEEL STUD WALL CONSTRUCTION



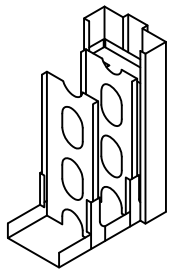
ELEVATION

1. Install minimum of three anchors per jamb at hinge and strike levls. Position anchors in frame through the throat and tap with a hammer.

2. Square, brace and plumb frame as shown.

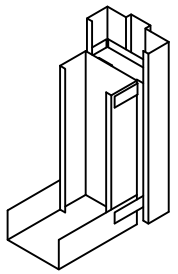
3. Set spreader. Attach jambs to floor through floor anchor or floor extension. Install jamb studs to floor and ceiling runners and tightly against frame anchors.

4. Continually check plumb and square as wall progresses.



TRUSS TYPE STEEL STUD

Place studs in anchor notches and wire tie or weld. Double studding at jambs is recommended.

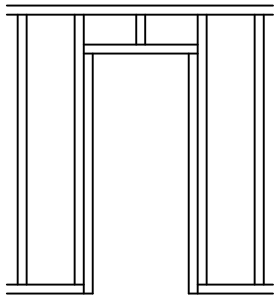


CHANNEL TYPE STEEL STUD

Center studs in frame throat or as desired and attach to anchors with screws or weld.

Note:
When attaching header stud to jamb studs, be sure the stud is above frame header. This will ensure ample room for attaching plaster, lath or drywall and will not interfere with installation of hardware attached to frame header.

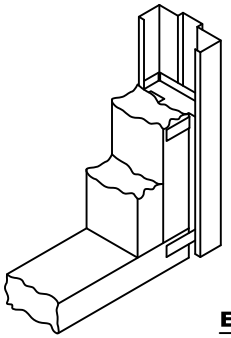
WOOD STUD CONSTRUCTION

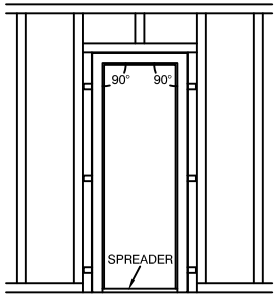


ROUGH STUD OPENING

Consult manufacturers' instructions for rough stud opening width and height dimensions.

DOOR WIDTH + 4 1/2"
DOOR HEIGHT + 2 1/4"





ELEVATION

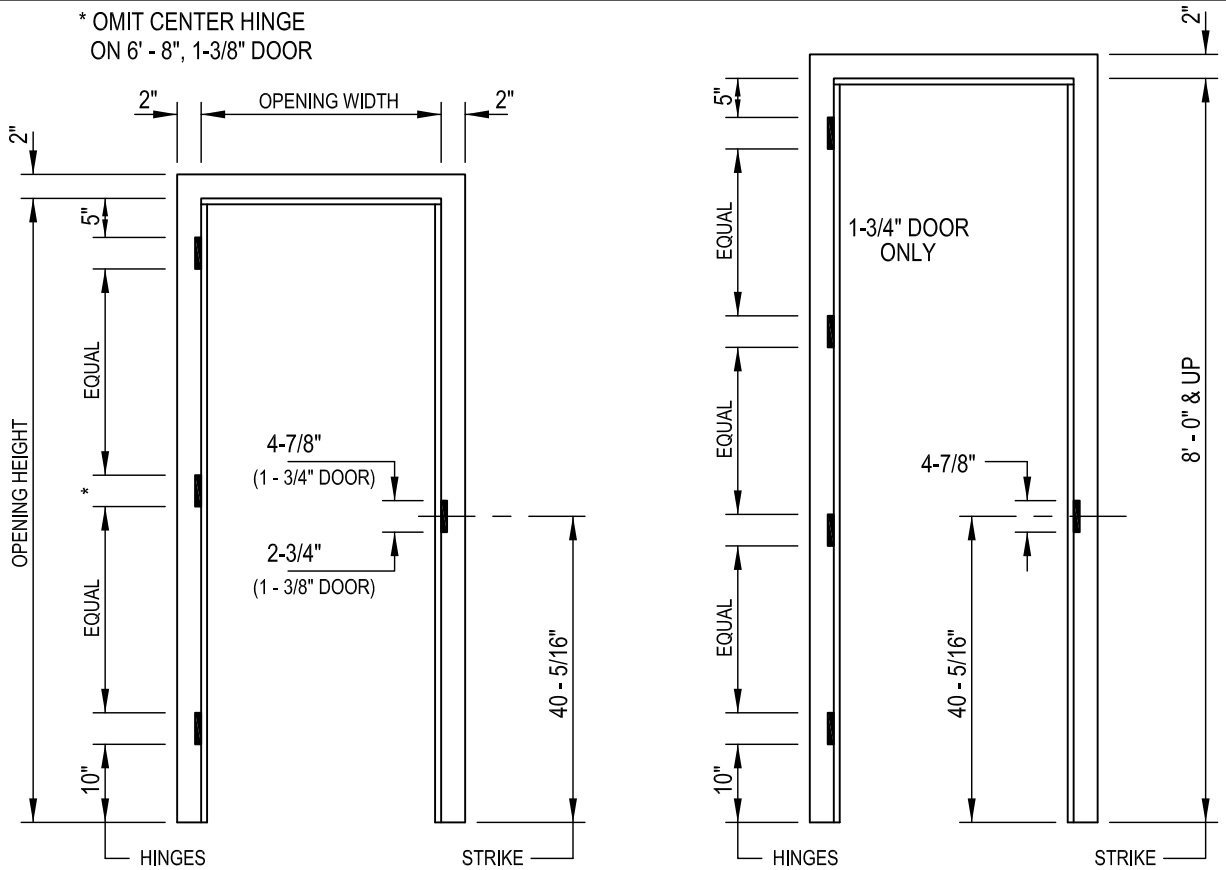
1. Insert anchors at hinge and strike levels. Position anchors in from throat and tap in with hammer. Base anchors may also be used.

2. Place frame in rough stud opening.

3. Bend anchor tabs around stud leaving desired clearance between frame return and stud for inserting finished wall material.

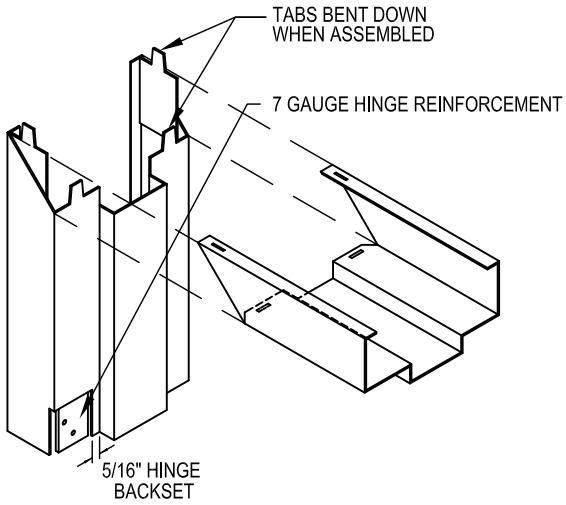
4. Set spreader and level frame. Shim jambs if necessary.

5. Square and nail top anchors to studs on *ONE JAMB ONLY.* Check plumb and square and continue to nail balance of anchors to studs. Repeat for opposite side.

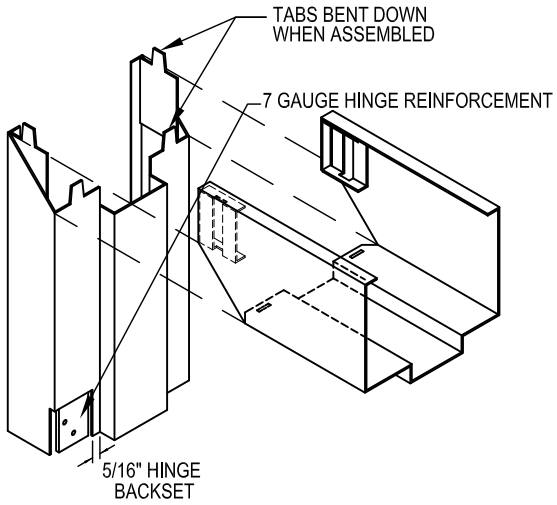


HARDWARE LOCATIONS

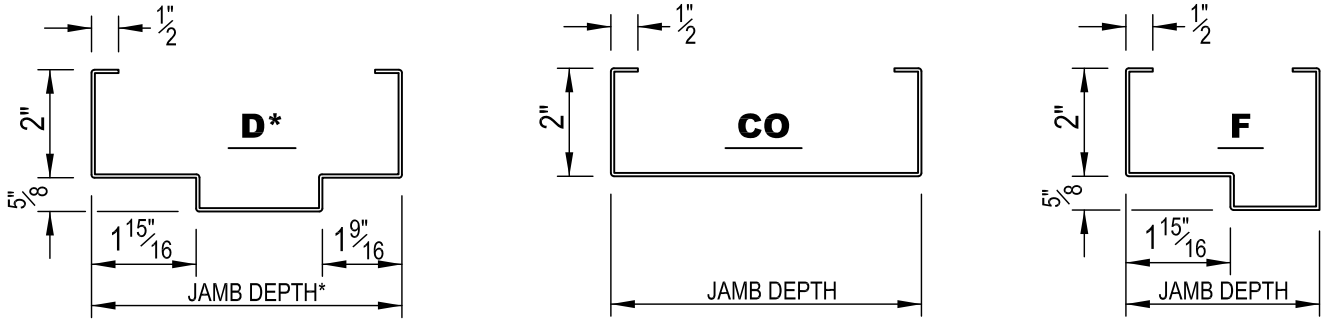
For full spacing dimensions, please see the SDI 129 Technical Document @ steeldoor.org/tech_data/



KNOCKED DOWN CORNER DETAIL 2" FACE HEAD



KNOCKED DOWN CORNER DETAIL 4" FACE HEAD

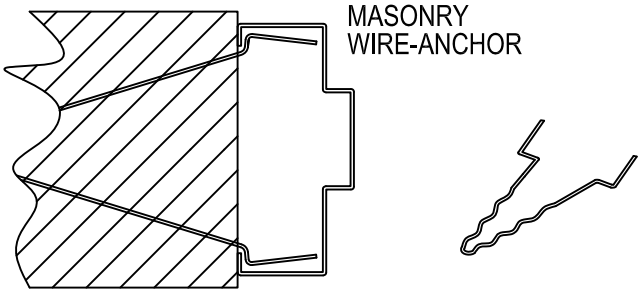


FRAME SECTIONS

*_ DEANSTEEL'S STANDARD 5-3/4" "D" PROFILE FRAME IS FURNISHED WITH 7/16" BACKBENDS AND A 4-7/8" THROAT OPENING UNLESS OTHERWISE SPECIFIED.

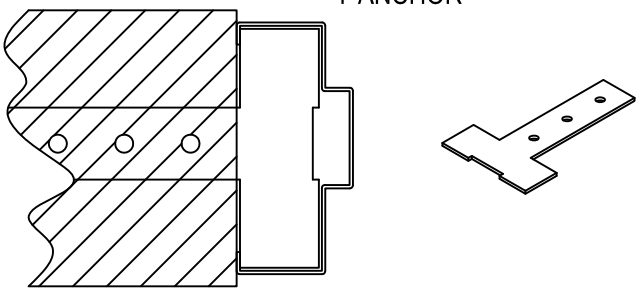
JAMB ANCHORS

MASONRY
WIRE-ANCHOR



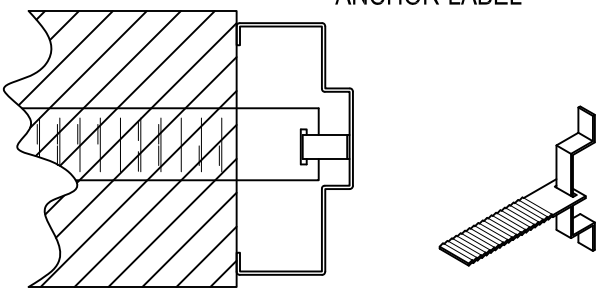
W

MASONRY
T-ANCHOR



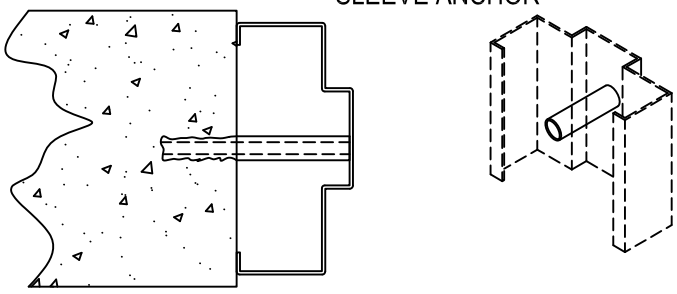
M

MASONRY
ANCHOR-LABEL



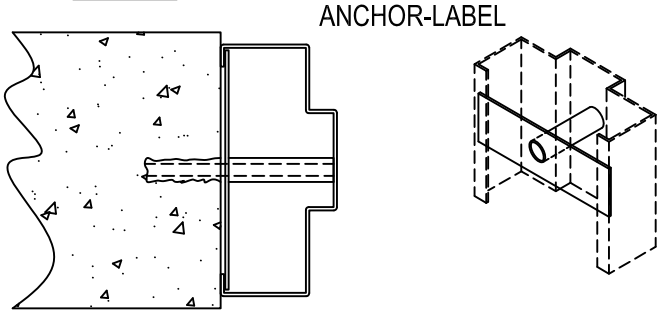
WML

WELDED PIPE-
SLEEVE ANCHOR



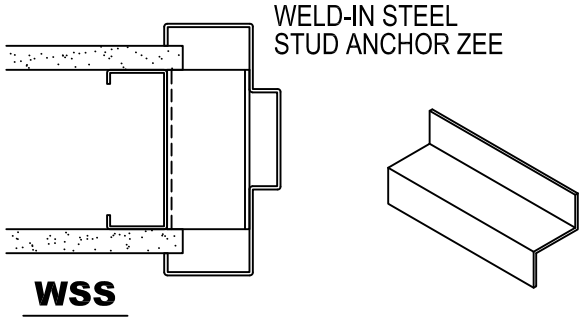
WPS

PIPE-SLEEVE
ANCHOR-LABEL



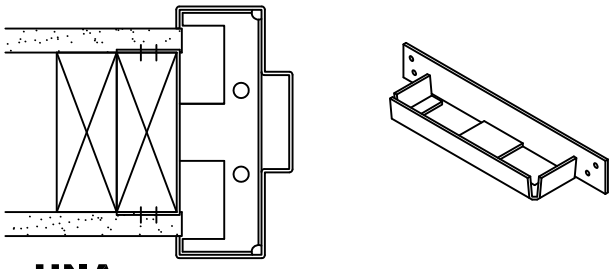
WPSL

WELD-IN STEEL
STUD ANCHOR ZEE



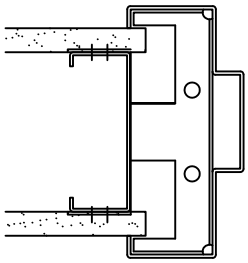
WSS

SNAP-IN WOOD
STUD ANCHOR

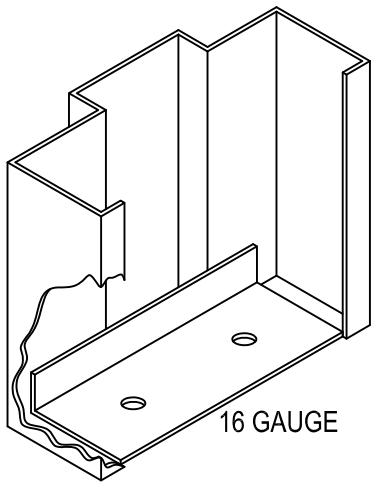


UNA

SNAP-IN STEEL
STUD ANCHOR



UNA



FLOOR ANCHOR

FRAME SPECIFICATIONS

1) Frames shall be made of commercial quality, level, sheet steel conforming to the applicable standards noted below. Frame profile will have a standard thickness of 16 gauge.
   Cold-Rolled Steel (CRS) : ASTM A1008
   Galvannealed Steel (PG) : ASTM A653
   A-40 (ZF120) - 0.40 oz/ft^2 coating weight
   A-60 (ZF180) - 0.60 oz/ft^2 coating weight

2) All finished work shall be strong, rigid and neat in appearance, square, true and free of defects, warp or buckle.

3) Frames shall be mortised and reinforced for hardware. Drilling and tapping done at the factory for full template mortised hardware only in accordance with approved hardware schedule and templates provided by the hardware contractor. Minimum hardware reinforcement requirements:
   Hinge Reinforcement - 7 gauge
   Strike Reinforcement - 12 gauge
   Closer Reinforcement - 12 gauge
   Surface Mounted Hardware - 12 gauge

4) Frames shall be provided with welded-in compression anchors in each jamb. Mounting holes are provided in the base of each jamb for field installation of screws into stud walls.

5) All strike jambs shall be prepared to receive silencers.

6) All frames shall be thoroughly cleaned, phosphatized, and painted with one coat of primer to inhibit corrosion.

7) Deansteel offers custom order jamb depths. Please contact Sales with your request to review.

8) Frames shall be received by the contractor at the jobsite and handled in a manner so as not to be damaged. They shall be stored upright in a dry, protected area on wood runners on skids and shall be covered with vented tarpaulins or vented plastic.

9) Frame Installation - To be done by the contractor. Guidelines are available online to aid in the installation and storage:
   The Steel Door Institute: steeldoor.org/installation , ANSI A250.11 & SDI 122
   Hollow Metal Manufacturer's Association (HMMA): www.naam.org (HMMA 840)

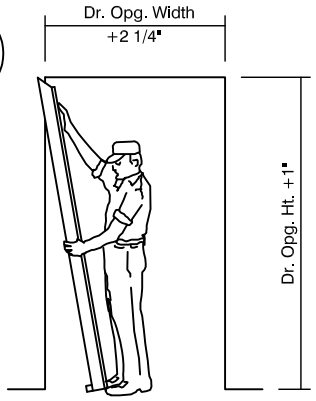
10) Drywall frames are designed to be installed after partition walls are in place. The variety of throat openings available allow the drywall frame to be used with almost any condition of metal or wood stud and partition board.

NOTE:
and detail at any time in such manner as we may consider necessary or advisable. Corrections to reflect any such changes shall be included in subsequent printing of the publication.

INSTALLATION INSTRUCTIONS

Typical Rough Opening:
Door opening width: + 2 1/4"
Door opening height: + 1"

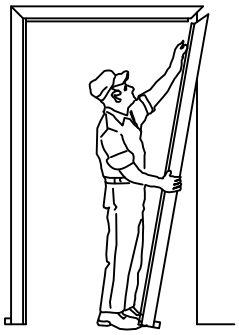
1



Provide for rough opening dimensions shown.

Fully retract compression anchor and install sill anchors (if loose type are used) then slip jamb into position over sill.

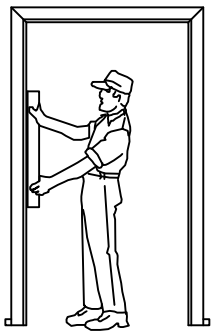
2



Start header onto wall engaging corner clips and/or aligning tabs of jamb and push header up to position.

Place second jamb onto wall and engage corner clips and/or aliging tabs with the header. Pivot the jamb into position on the wall to form a completely assembled frame.

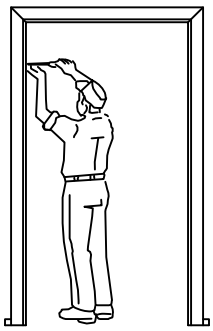
3



Adjust compression anchors evenly until they contact studs. Level the header by shimming under jambs if required.

Plumb hinge jamb and fasten hinge jamb sill anchors.

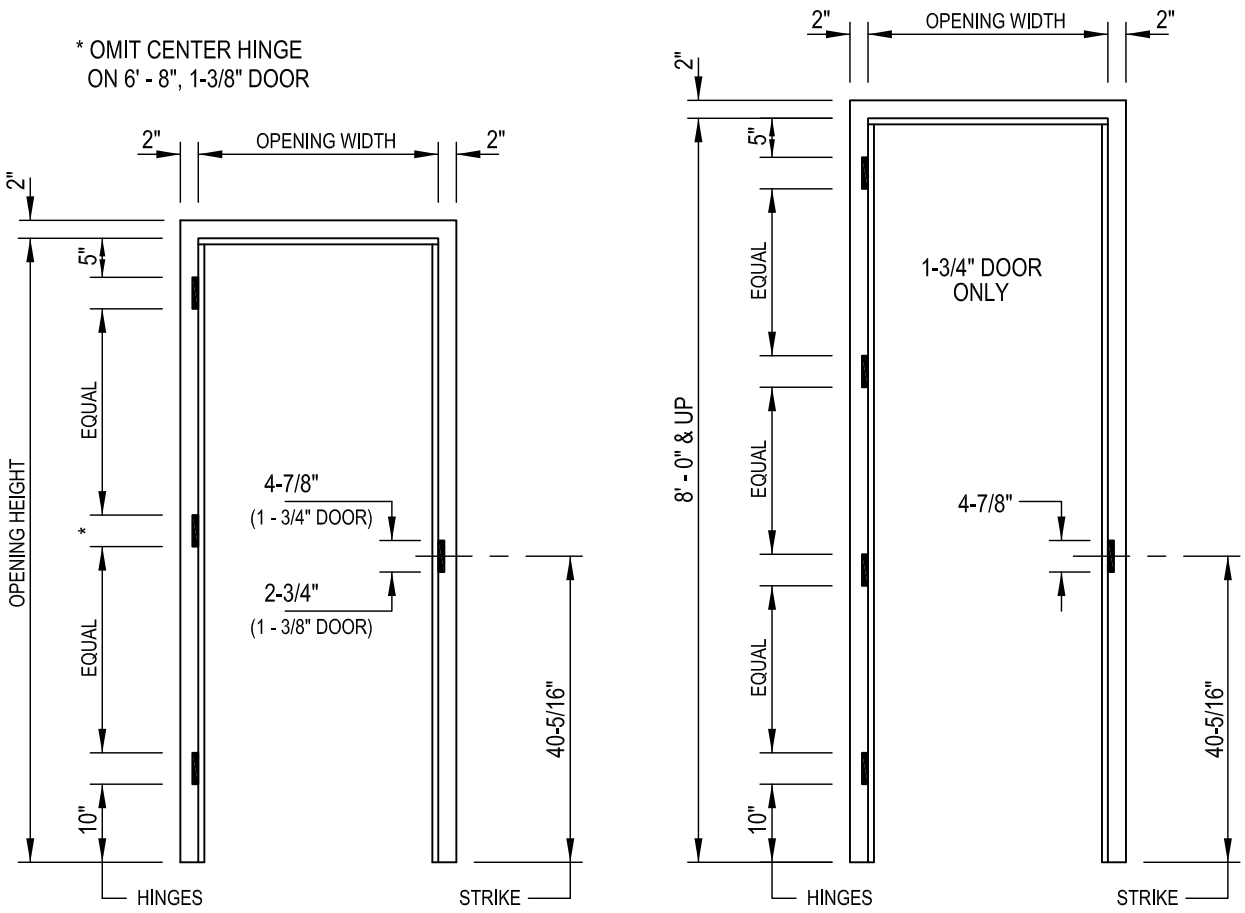
4



Install spreader bar at the base and fasten sill anchor of strike jamb.

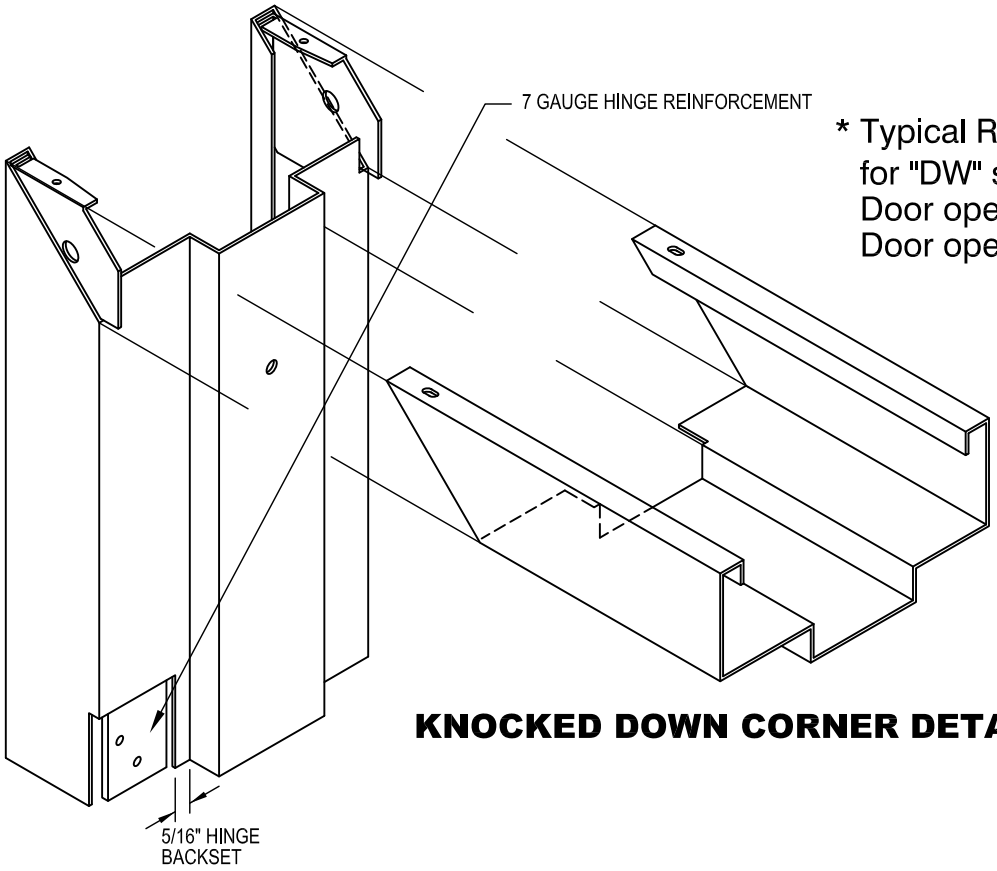
Square frame and tighten into final position by adjusting compression anchor screws.

Install (4) #8 sheet metal screws at top corners of header.



HARDWARE LOCATIONS

For full spacing dimensions, please see the SDI 129 Technical Document @ steeldoor.org/tech_data/

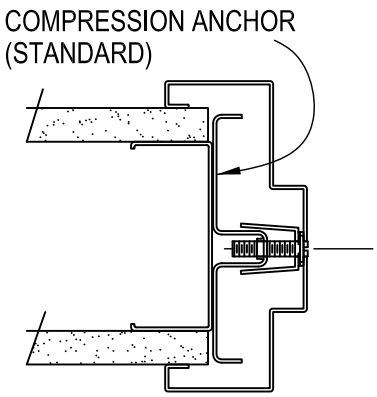


* Typical Rough Opening
for "DW" series frames:
Door opening width: + 2 1/4"
Door opening height: + 1"

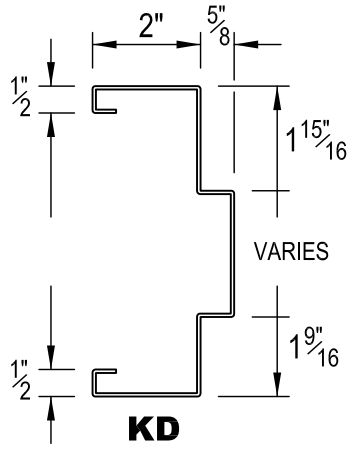
KNOCKED DOWN CORNER DETAIL

STANDARD DRYWALL FRAME SIZES FOR SERIES DW 16-4					
Door Frame Size	**Series 16-4**	**Door Frame Size**	**Series 16-4**	**Door Frame Size**	**Series 16-4**
2068	"	2080	"	2090	"
2468	"	2480	"	2490	"
2668	"	2680	"	2690	"
2868	"	2880	"	2890	"
3068	"	3080	"	3090	"
3468	"	3480	"	3490	"
3668	"	3680	"	3690	"
3868	"	3880	"	3890	"
4068	"	4080	"	4090	"
2070	"	2084	"		
2470	"	2484	"		
2670	"	2684	"		
2870	"	2884	"		
3070	"	3084	"		
3470	"	3484	"		
3670	"	3684	"		
3870	"	3884	"		
4070	"	4084	"		

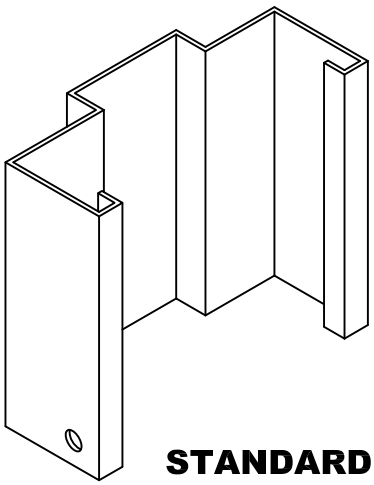
NOTE: Above sizes are available in pairs
Standard Drywall frames are 5-7/8" Jamb Depth. Contact Sales for the availability of alternate jamb depths.



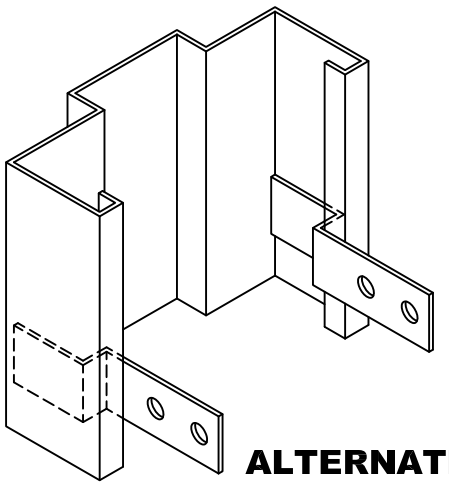
DW
ADJUSTABLE ANCHOR



KD
DRYWALL



STANDARD
BASE ANCHOR

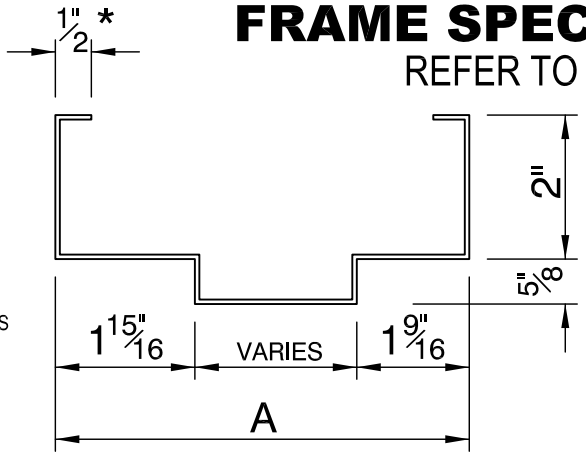


ALTERNATE
BASE ANCHOR

FRAME SPECIFICATIONS

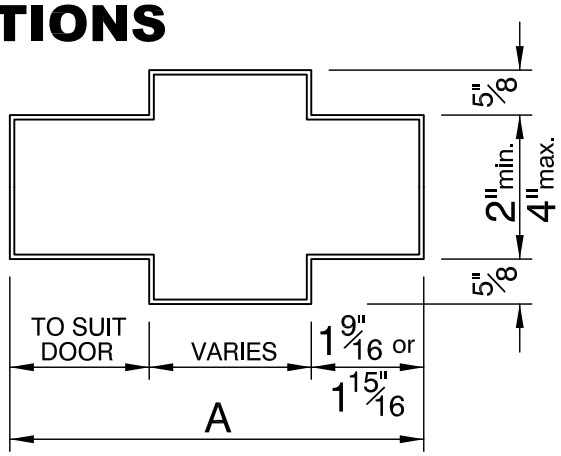
REFER TO PAGE 15

*NOTE:
DEANSTEEL'S STANDARD 5-3/4" "D" PROFILE FRAME IS FURISHED WITH 7/16" FLANGE RETURNS AND A 4-7/8" THROAT OPENING UNLESS OTHERWISE SPECIFIED.



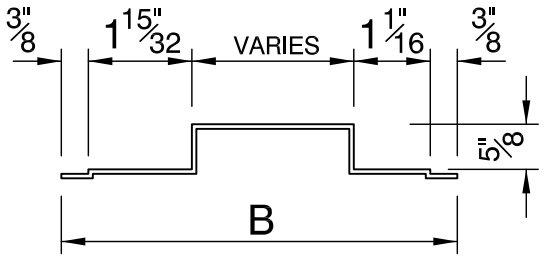
"STANDARD "D" FRAME SECTION

A = 4-3/4", 5-3/4", 6-3/4", 7-3/4"



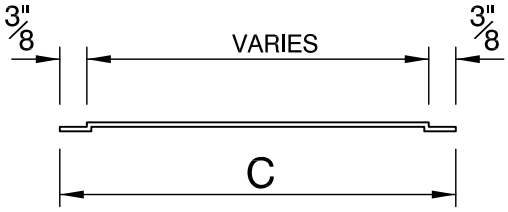
"D-1" MULLION SECTION

A = 4-3/4", 5-3/4", 6-3/4", 7-3/4", 8-3/4"



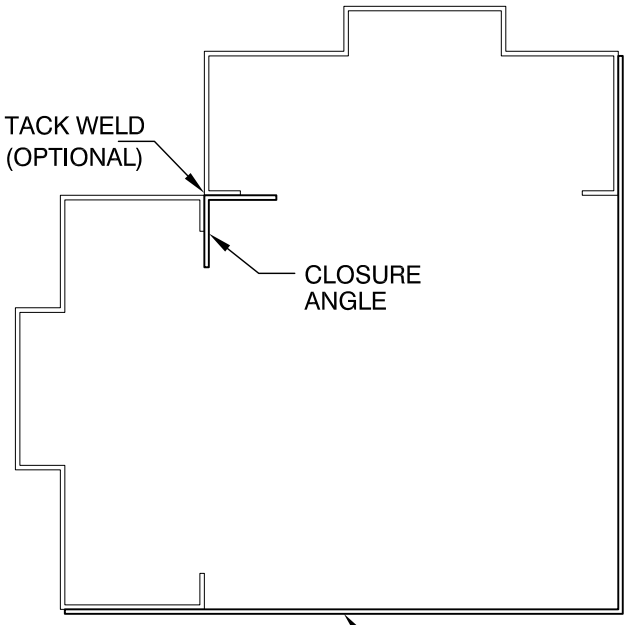
"IC" INTERNAL CAP SECTION

B = 4-1/2", 5-1/2", 6-1/2", 7-1/2", 8-1/2"

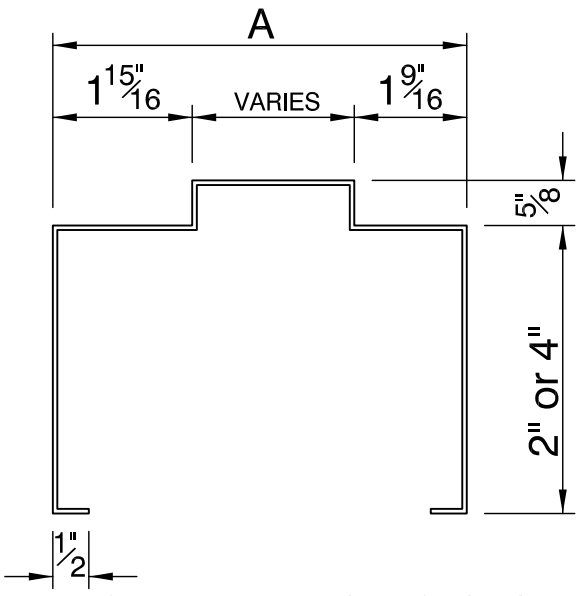


"IC" INTERNAL CAP SECTION (NO STOP)

C = 4-1/2", 5-1/2", 6-1/2", 7-1/2", 8-1/2"



CORNER DETAIL



STANDARD "D" SILL SECTION

A = 4-3/4", 5-3/4", 6-3/4", 7-3/4", 8-3/4"

LABELED FIRE DOOR FRAMES

Deansteel offers a complete line of labeled fire door frames for 1 3/4" thick labeled fire doors to meet most fire protection requirements. Since label requirements vary through the country, local authorities having jurisdiction regarding the use of openings should be consulted during the design and planning stage.

Door frames approved by Underwriters Laboratories, Inc., and Intertek Testing Services have been investigated, fire tested in accordance with test procedure UL10C, UBC 7-2 under the Underwriters Laboratories and Intertek / Warnock Hersey Factory Inspection and Labeling Service Program.

Fire door frames shall be fabricated from a minimum of 16 Ga. steel.

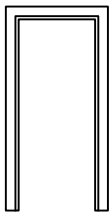
Labeled Drywall Frames will be shipped knock-down. Labeled Universal Frames will be shipped either knock-down or set-up & welded. Transom/side-light & side-panel frames and Fire Window frames will be shipped set-up and weld only.

Loose anchors are acceptable for use on fire door frames and can be furnished for frame installation in masonry, wood stud or steel stud construction. Anchors and installation sheets are packaged with each frame or packaged with anchors.

Fire labels on frames may be either an embossed marking, stamped into the steel during manufacture or may be an attached label. This identification is located in the rabbet of the hinge jamb, approximately one third the distance down from the top.

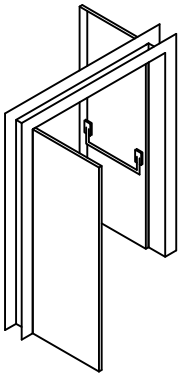
NOTE: We reserve the right, without notice, to make changes in specification, construction, design, and detail at any time in such manner as we may consider necessary or advisable. Corrections to reflect any such changes shall be included in subsequent printing of the publication.

D SERIES FRAMES



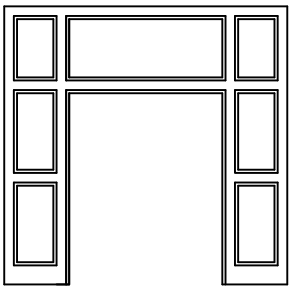
- GAUGE OF STEEL: 16, 14 OR 12
- JAMB DEPTH: 4" THRU 14"
- MAXIMUM DOOR OPENING SIZE:
  4'-0" x 10'-0" SINGLE 8'-0" x 10'-0" DOUBLE
- COMMUNICATING FRAMES ARE AVAILABLE
- MAXIMUM RATING: 3 HRS.

DOUBLE EGRESS FRAMES



- GAUGE OF STEEL: 16
- JAMB DEPTH: 4-3/4" TO 14"
  OTHER JAMB DEPTHS MAY BE AVAILABLE
- MAXIMUM DOOR OPENING SIZE:
  8'-0" x 10'-0" (LARGER SIZES MAY REQUIRE SPECIAL CONSTRUCTION DOORS)
- MAXIMUM RATING: 3 HRS.
- FOR USE WITH DEANSTEEL LISTED DOORS

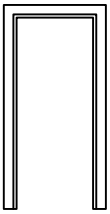
TRANSOM / SIDE LIGHT (or PANEL) FRAMES



- GAUGE OF STEEL: 16 OR 14
- JAMB DEPTH: 4" THRU 14"
- MAXIMUM OVERALL FRAME SIZE:
  VARIES BY RATING (20, 45, 60 or 90min*)
  UP TO 12'-0" X 11'-4" (TRANSOM / SIDE PANEL)
  UP TO 13'-6" X 12'-0" (TRANSOM / SIDE LIGHT)
- MAXIMUM VISIBLE GLASS:
  VARIES BY RATING (20m, 45m, 60m or 90m*)
  CONTACT DEANSTEEL SALES WITH YOUR REQUEST
- MAXIMUM DOOR SIZE:
  4'-0" x 10'-0" SINGLE, 8'-0" x 10'-0" DOUBLE
- MAXIMUM TRANSOM PANEL: 8'-0" W x 4'-0" H
- MAXIMUM SIDE PANEL: 4'-0" W x 8'-0" H

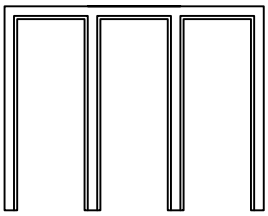
*NOTE: 90-min ONLY AVAILABLE WITH TRANSOM PANEL OR SIDE PANEL (NO GLASS)

DW SERIES FRAMES



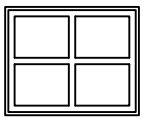
- GAUGE OF STEEL: 16
- JAMB DEPTH: 4" THRU 10"
- MAXIMUM DOOR OPENING SIZE:
  4'-0" x 8'-0" SINGLE
- MAXIMUM RATING: 1-1/2 HRS.

MULTIPLE OPENING FRAMES



- GAUGE OF STEEL: 16 OR 14
- JAMB DEPTH: 4-3/4" THRU 14"
- MAXIMUM FRAME SIZE:
  12'-8" W X 8'-0" H (OVERALL SIZE)
  4'-0" x 7'-10" SINGLE (SCHED.)
  8'-0" x 7'-0" DOUBLE (SCHED.)
- MAXIMUM QUANTITY OF DOORS: 4
- MAXIMUM RATING: 1-1/2 HRS.
- CONTACT DEANTSEEL SALES WITH YOUR SPECIFIC REQUEST

FIRE WINDOW FRAMES



- GAUGE OF STEEL: 16, 14 or 12
- JAMB DEPTH: 5" THRU 13-1/2"
- MAXIMUM OVERALL FRAME SIZE:
  VARIES BY RATING (20, 45, 60 or 90-min)
  13'-2" W X 9'-7" H [20min w/o HS]
  11'-4" W X 10'-0" H [45min]
  10'-2" W X 10'-1" H [60min & 90min]
- MAXIMUM VISIBLE GLASS:
  VARIES BY RATING (20, 45, 60 or 90min)
  CONTACT DEANSTEEL SALES WITH YOUR REQUEST
- FIRE WINDOW FRAMES ARE INTENDED FOR INSTALLATION IN MASONRY WALL OR DRYWALL PROVIDED THAT THE FRAME IS INSTALLED ON A MASONRY SILL