

TUBELITE®

DEPENDABLE

**LEADERS IN ECO-EFFICIENT STOREFRONT,
CURTAINWALL AND ENTRANCE SYSTEMS**



E N T R A N C E D O O R S
B l a s t m i t i g a t i o n

INSTALLATION INSTRUCTIONS

3056 Walker Ridge Dr. NW, Suite G • Walker, MI 49544 • 800-866-2227

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TABLE OF CONTENTS

GENERAL CONSTRUCTION NOTES 4

QUICK REFERENCE CHECK LIST 5

PARTS LIST6-7

ELEVATION TYPES and DETAILS 8-9

DOOR GLAZING

 Step 1 Preparation 10

 Step 2 Dry Glazing 11-12

 Step 3 Wet Glazing 13-15

 Step 4 Door Installation 15

GENERAL CONSTRUCTION NOTES

LEADERS IN ECO-EFFICIENT STOREFRONT,
CURTAINWALL AND ENTRANCE SYSTEMS

1. These instructions cover typical product application, fabrication, installation and standard conditions and are general in nature. They provide useful guidelines, but the final shop drawings may include additional details specific to the project. Any conflict or discrepancies must be clarified prior to execution.
2. Materials stored at the job site must be kept in a safe place protected from possible damage by other trades. Stack with adequate separation so materials will not rub together and store off the ground. Cardboard or paper wrapped materials must be kept dry. Check arriving materials for quantity and keep a record of where various materials are stored.
3. For cold weather installations, glazing materials (including but not limited to glazing gaskets, isolators and gaskets for air seals and expansion mullions) can become more rigid and thus more difficult to install. These materials should be installed at temperatures above 40°F for proper system performance and ease of installation. A hot box may be required to warm the glazing materials prior to installation. Allow glazing materials to lay flat at 50°F minimum temperature prior to installing.
4. All field welding must be done in accordance with AISC guidelines. All aluminum and glass should be shielded from field welding to avoid damage from weld splatter. Results will be unsightly and may be structurally unsound. Advise general contractor and other trades accordingly.
5. Coordinate protection of installed work with general contractor and/or other trades.
6. Coordinate sequence of other trades which affect framing installation with the general contractor (e.g. fire proofing, back up walls, partitions, ceilings, mechanical ducts, HVAC, etc.).
7. General contractor should furnish and guarantee bench marks, offset lines and opening dimensions. These items should be checked for accuracy before proceeding with erection. Make certain that all adjacent substrate construction is in accordance with the contract documents and/or approved shop drawings. If not, notify the general contractor in writing before proceeding with installation because this could constitute acceptance of adjacent substrate construction by others.
8. Isolate all aluminum to be placed directly in contact with masonry or other incompatible materials with a heavy coat of zinc chromate or bituminous paint. Fasteners attaching framing to building structure are typically not provided by Tubelite.
9. Sealant selection is the responsibility of the erector, installer and/or glazing contractor and must be approved by the sealant manufacturer with regard to application and compatibility for its intended use. All sealants must be used in strict accordance with the manufacturer's instructions and applied only by trained personnel to surfaces that have been properly prepared.
10. Sealant must be compatible with all materials with which they have contact, including other sealant surfaces. Consult the sealant manufacturer for recommendations relative to shelf life, compatibility, cleaning of substrate, priming, tooling adhesion, etc. Recommend sealant manufacturer perform adhesion "pull test" at "wet" glazing for quality assurance.
11. Drainage gutters and weep holes must be kept clean at all times. Tubelite will not accept responsibility for improper drainage as a result of clogged gutters and weep holes.
12. This product requires clearances at the head, sill and jambs to allow for thermal expansion and contraction as well as construction tolerances. Refer to final distribution drawings for joint sizes.
13. All framing members, entrances and other materials are to be installed plumb, level and true with regard to established bench marks, column center lines or other working points established by the general contractor and checked by the erector, installer and/or glazing contractor.
14. After sealant is set and a representative amount of the wall has been glazed (500 square feet or more), run a water hose test to check installation. On large projects, a hose test should be repeated during glazing operation. This testing should be conducted in accordance with AAMA 501.2 specifications.
15. Cleaning of exposed aluminum surfaces should be done per AAMA recommendations.
16. Care must be taken when assembling aluminum framing components. Over tightening any fastener may cause stripping or fastener failure. Tubelite recommends the use of clutched drivers to provide satisfactory tightening of the screw while preventing over torque. The use of impact drill motors is not recommended due to the absence of a clutch device.
17. Check www.tubeliteinc.com for any installation instruction updates.

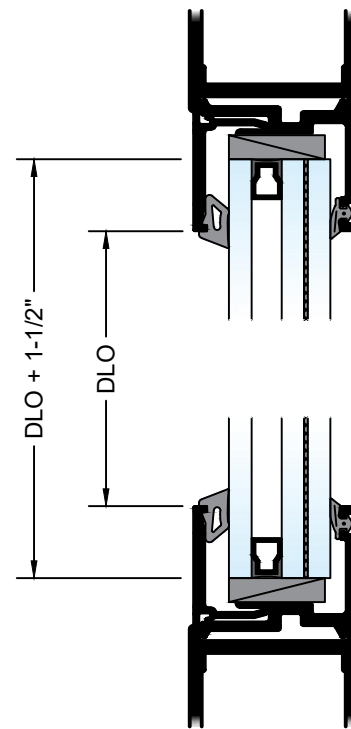
QUICK REFERENCE CHECKLIST

1. Make sure the opening is square and the caulk joints are 3/8" maximum around the frame.
2. Ensure surfaces that will be sealed are free of contaminants that can lead to adhesion issues.
3. Cap seal any exposed anchor or screw.
4. Seal ends of horizontal frame members that are joined to vertical members.
5. Check installation against instructions to ensure conformity.
6. Glass bites must be equal on all sides.
7. Double check anchor size and location against installation instructions or approved shop drawings.

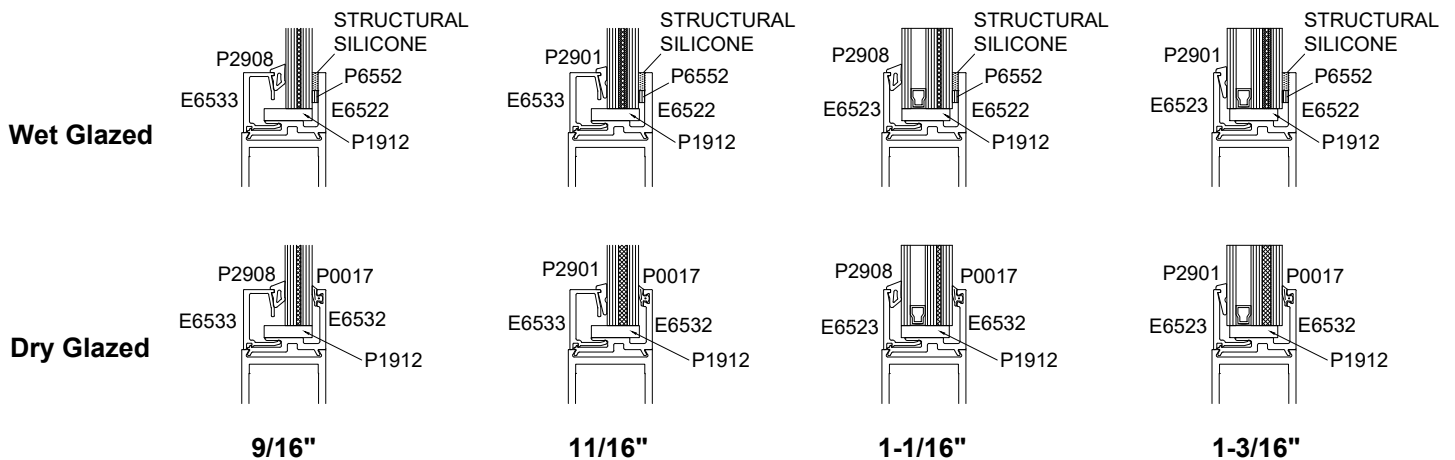
Entrance Doors:

Glass Width = D.L.O. plus 1-1/2"
Glass Height = D.L.O. plus 1-1/2"

GLASS SIZE CALCULATION



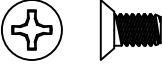

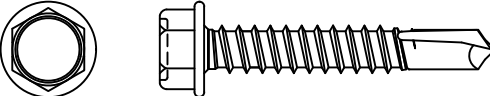
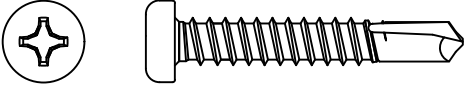
GLASS OPTIONS



ACCESSORIES







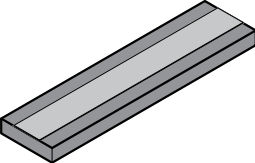
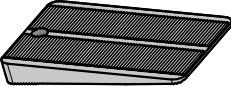
LEADERS IN ECO-EFFICIENT STOREFRONT,
CURTAINWALL AND ENTRANCE SYSTEMS

Refer to 400T and 34000 installation manual for accessories required for framing assembly/installation

SHAPE	DESCRIPTION	PART No.
	<p>#8-32 x 5/16" SS UC FL (Use at E6504 Door Stop)</p>	<p>S131</p>
	<p>#10-24 x 1/2" SS PH (Use at E650 Door Stop)</p>	<p>S206</p>
	<p>#12-14 x 1-1/2" HWH Self-Drilling, #3 pt (Use for Door Stop Attachment @ 34000)</p>	<p>S419</p>
	<p>#12-24 x 1-1/2" Phillips Pan Head Self-Drilling, #3 pt (Use for Door Stop Attachment @ 400T)</p>	<p>S083</p>

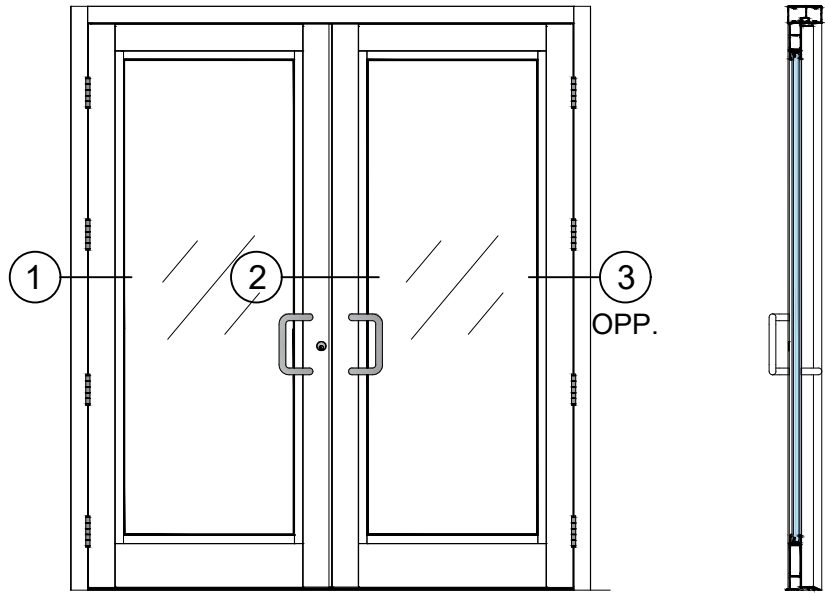
ACCESSORIES

Refer to 400T and 34000 installation manual for accessories required for framing assembly/installation

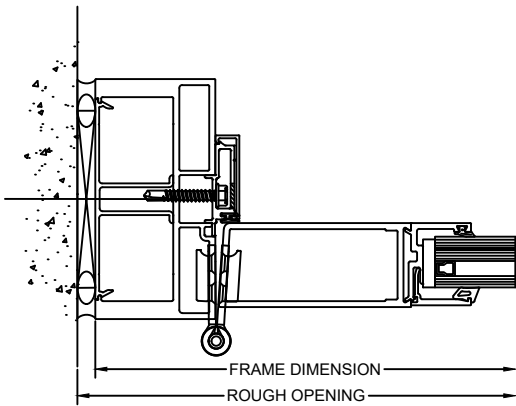
SHAPE	DESCRIPTION	PART No.
	Door Glazing Gasket (Use at Dry Glazing Applications)	P0017
	Door Glazing Wedge - 7/32 (Use at 9/16" & 1-1/16" Infill, Wet & Dry Glazing)	P2908
	Door Glazing Wedge - 1/8" (Use at 11/16" & 1-3/16" Infill, Wet & Dry Glazing)	P2901
	Door Stop Bulb Gasket	P6296
	E3550 Threshold Bulb Gasket	P3450
	Door Glazing Tape for Wet Glazing (1/8" x 1/4" Tremco SGT 922)	P6552
	Door Setting Block - EPDM (Use at All Wet/Dry Glaze Applications)	P1912
	Door Adjustment Blocks (Use at Top Rail Only, in Pairs)	P1911

ELEVATION DETAILS

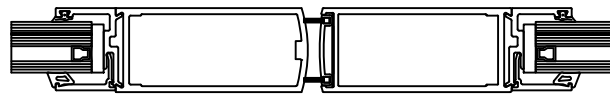
LEADERS IN ECO-EFFICIENT STOREFRONT,
CURTAINWALL AND ENTRANCE SYSTEMS



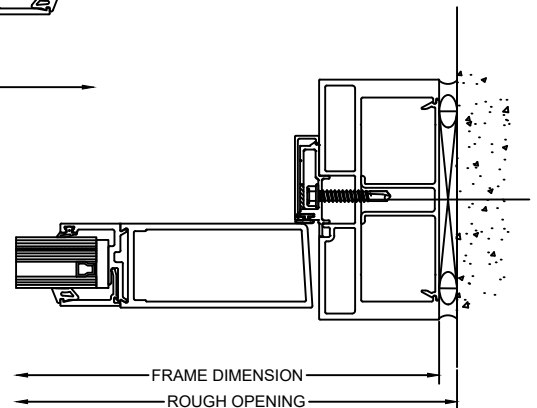
34000 frames shown for reference. Doors can also be installed into the 400T ForceFront Blast Framing



1



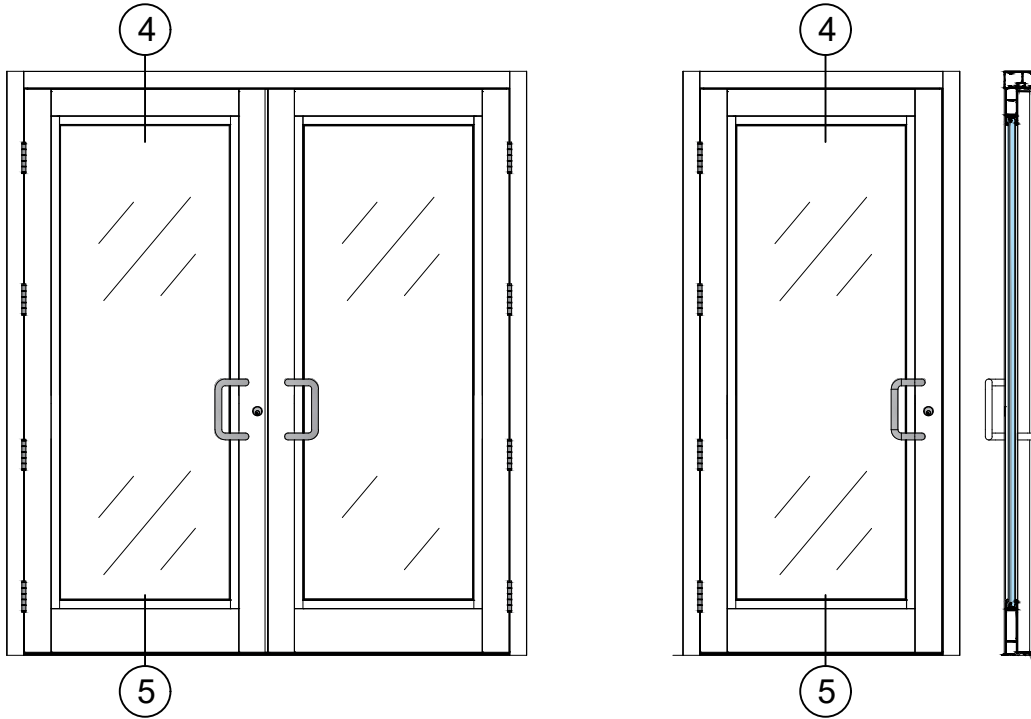
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3

Fig. 10.1

ELEVATION DETAILS



34000 frames shown for reference. Doors can also be installed into the 400T ForceFront Blast Framing

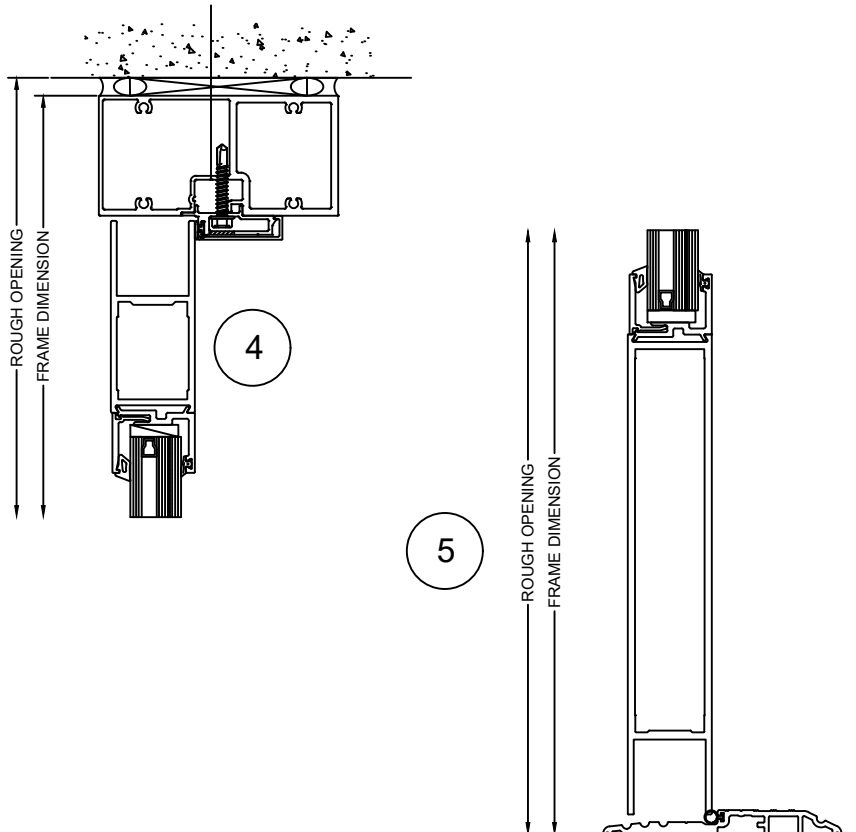


Fig. 11.1

DOOR GLAZING

**LEADERS IN ECO-EFFICIENT STOREFRONT,
CURTAINWALL AND ENTRANCE SYSTEMS**

Step 1: Frame assembly and installation

- A. Reference associated framing system for assembly and installation instructions.
- B. Door stops must be prepped and installed based on job-specific loads. Refer to **Fig. 16.2**, **16.3** and **Table 16.1**, **16.2** & **16.3** for fabrication, screw and spacing requirements.

Step 2: Dry Glazing

- A. Interior glazing gutter (E6532) is pre-installed into the door by Tubelite
- B. Install interior gasket (P0017) into the receiver on glazing gutter for dry glazed applications. **SEE Fig. 16.1**. Install glazing tape P6552 for wet glazed applications.
- C. Trim glazing gasket leaving 1/8" excess at each end
- D. After hanging the door, place self-adhesive setting blocks (P1912) in three locations on the interior glazing gutter (E6532). **SEE Fig. 17.1**
- E. Install glass into the door
- F. Square up door as desired
- G. Install vertical glass stops first by sliding the leg of E6523 or E6533 into the glazing gutter. **SEE Fig. 17.2**
- H. Starting at one end of the glass stop, push in toward the glass, making sure to align the snap fit detail.
- I. Use a wood block and mallet to complete the glass stop insertion
- J. Install glass stop at the bottom rail using the same method
- K. Place two wedge blocks (P1911) at the top corner as shown in **SEE Fig. 17.1**. If together properly the wedge blocks will interlock and form two flat surfaces.
- L. With the wedge blocks in place, push together until they press tightly against the underside of the glazing gutter and the top of the glass holding the door square.
- M. Install top rail glass stop
- N. Insert glazing wedge (P2901 or P2908, see page 5) into the glass stop making sure not to stretch it during installation.
- O. For wet glazed applications, apply structural silicone to the interior side of the glass.
- P. To square up the door in the future, remove the top rail glass stop and repeat steps L through N

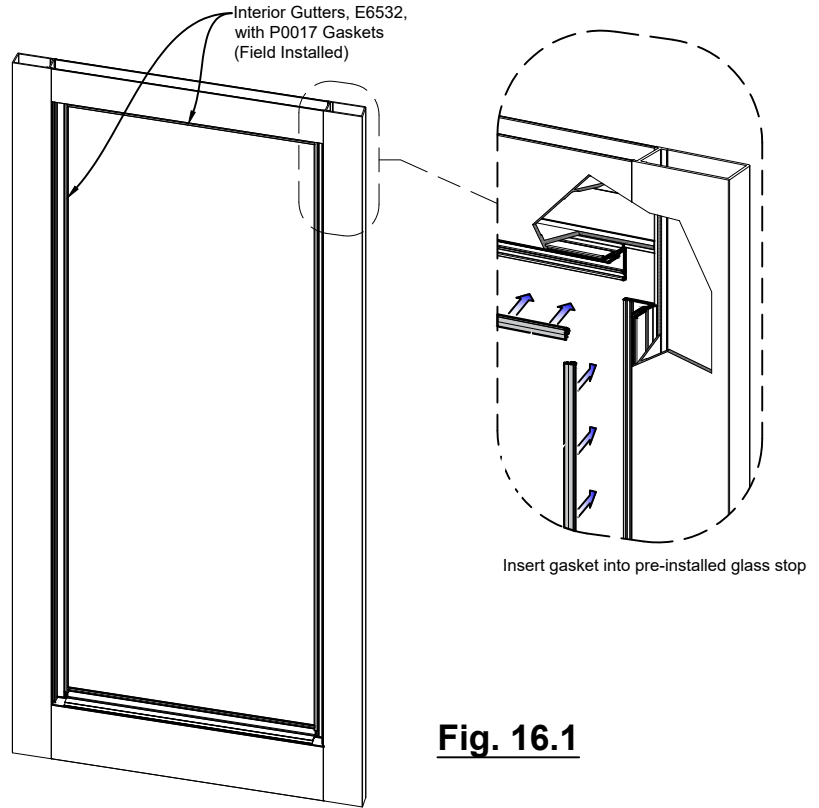


Fig. 16.1

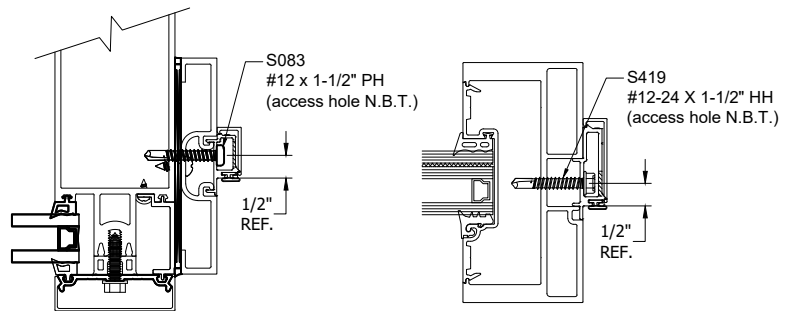


Fig. 16.2

Fig. 16.3

DOOR STOP ATTACHMENT - 400T			
EXTRUSION	SCREW SIZE	SCREW SPACING	SCREW SPACING @ HEAD (PAIR ONLY)
E4TB308	N/A	N/A	2" (9 TOTAL)
E4TB306	N/A	N/A	2" (9 TOTAL)
E4TB341	#12 MIN	5"	2" (9 TOTAL)
E4TB342	#12 MIN	5"	2" (9 TOTAL)

FOR 120 LBS/IN LOADS AT HEAD & JAMBS

Table 16.2

DOOR STOP ATTACHMENT - 34000			
EXTRUSION	SCREW SIZE	SCREW SPACING	SCREW SPACING AT HEAD (PAIR ONLY)
E34306	#12 MIN	17"	2" (3 TOTAL)
E34308	#12 MIN	19"	2" (2 TOTAL)
E34341	#12 MIN	12-1/2"	2" (4 TOTAL)
E34342	#12 MIN	12"	2" (4 TOTAL)

FOR 120 LBS/IN LOADS AT HEAD & JAMBS

Table 16.1

DOOR STOP ATTACHMENT - 400T (HIGH LOADS)			
EXTRUSION	SCREW SIZE	SCREW SPACING AT JAMBS	SCREW SPACING AT HEAD
E4TB308	#12 MIN	3-1/4"	3-1/4"
E4TB306	#12 MIN	3-1/4"	3-1/4"
E4TB341	#12 MIN	N/A	3-1/4"
E4TB342	#12 MIN	N/A	3-1/4"

FOR 200 LBS/IN LOADS AT HEAD & JAMBS

Table 16.3

DOOR GLAZING

Slide P1911 blocks onto each other to wedge between glazing track and glazing.

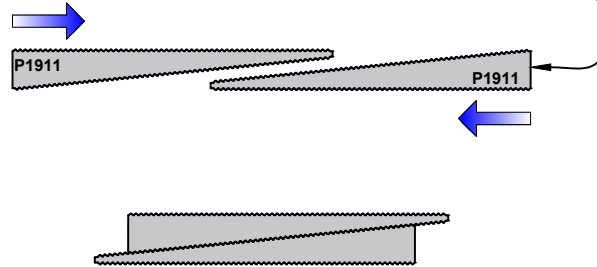


Fig. 17.1

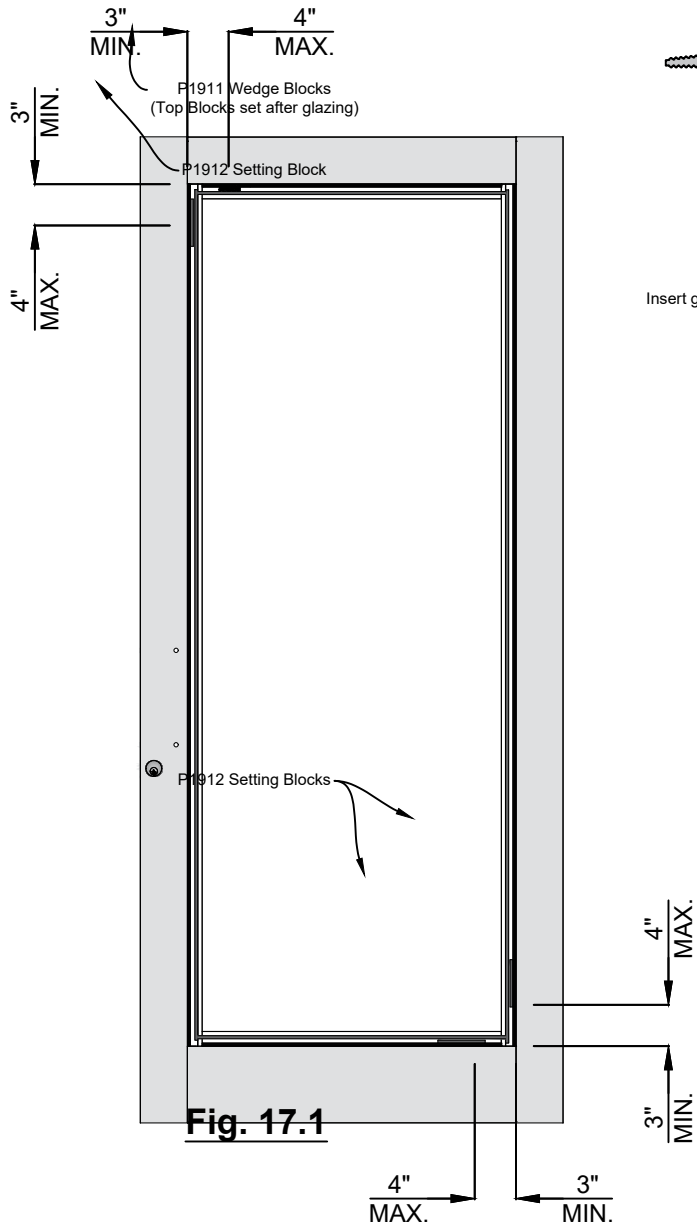


Fig. 17.1

Insert glass stop leg into glazing gutter

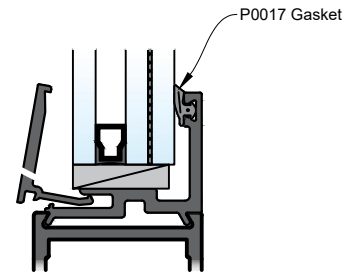


Fig. 17.2

Use a blunt object, or roller tool, to apply pressure and insert the gasket as required.

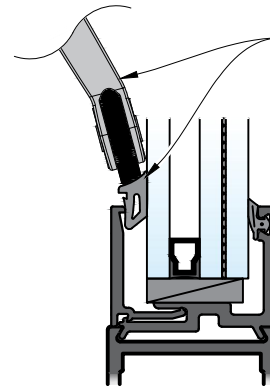


Fig. 17.3

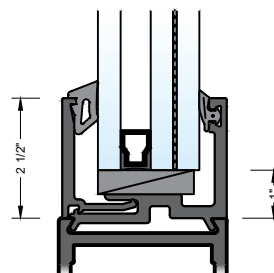
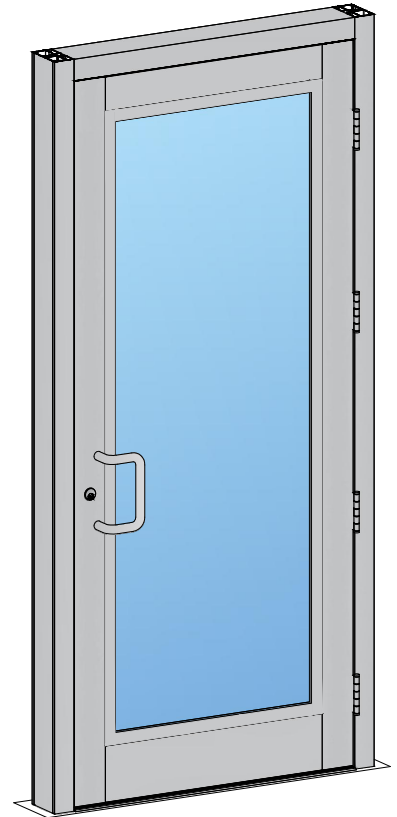
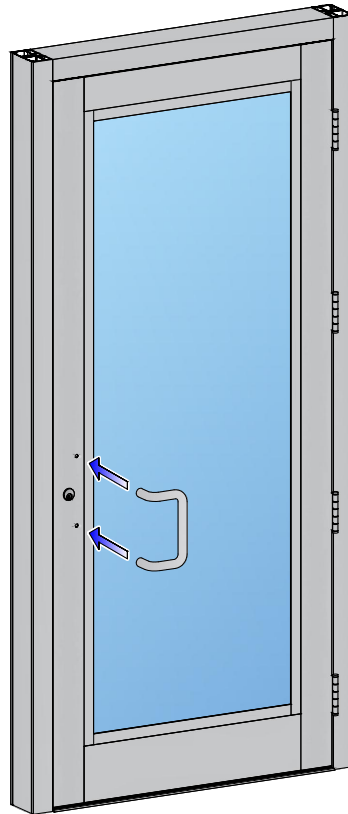
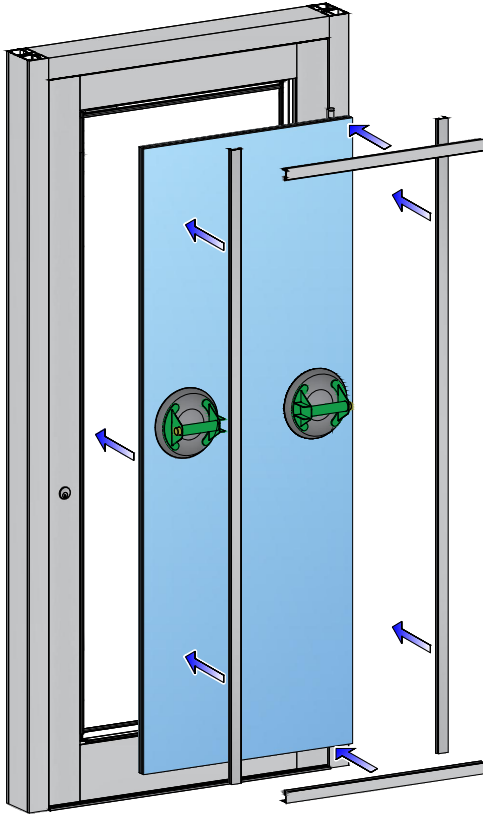


Fig. 17.4

DOOR GLAZING

LEADERS IN ECO-EFFICIENT STOREFRONT,
CURTAINWALL AND ENTRANCE SYSTEMS

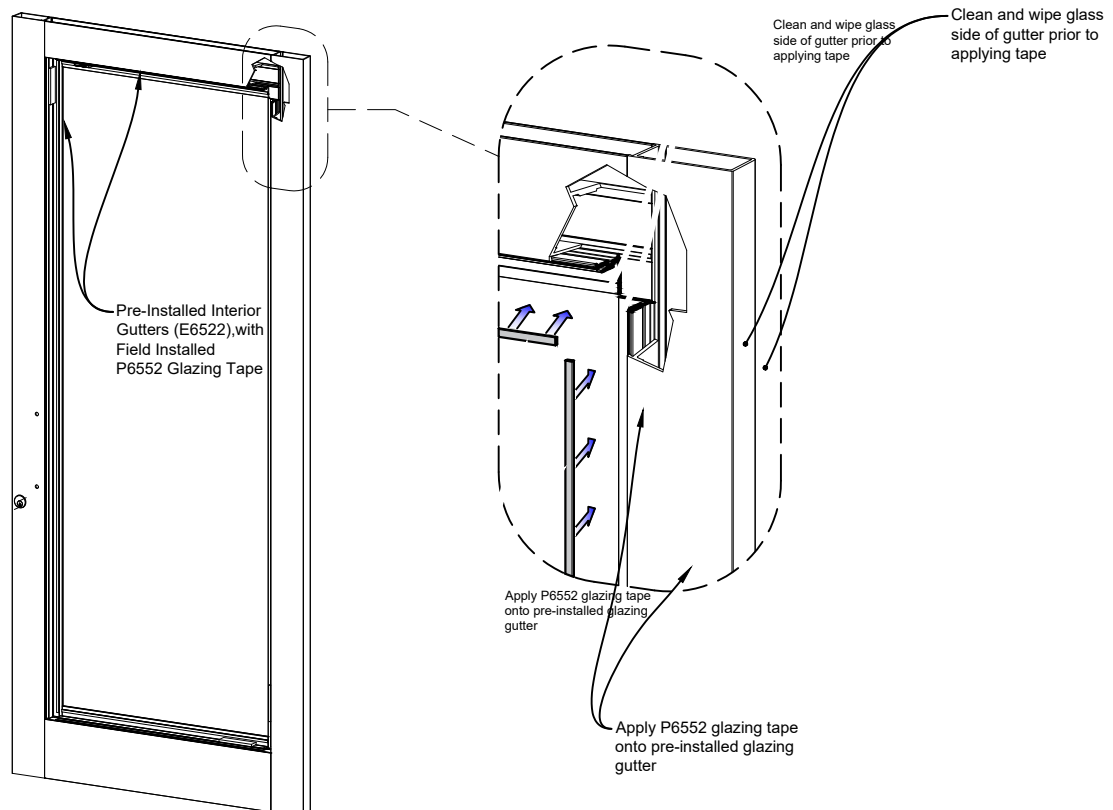


DOOR GLAZING

Step 3: Wet Glazing

- A. Interior glazing gutter (E6522) is pre-installed into the door by Tubelite
- B. Clean the glazing gutter surface that will be contacted by the tape using an approved cleaner and the two-cloth method
- C. Apply glazing tape (P6552) to the interior gutter using the I.D. groove to locate the tape. **SEE Fig. 19.1**
- D. Leave tape backer on but pull up corners leaving tabs accessible so the backer can be removed after glass is set in place
- E. After hanging the door, place self-adhesive setting blocks (P1912) in three locations on the interior glazing gutter (E6522). **SEE Fig. 20.1**
- F. Install glass into the door
- G. Place two wedge blocks (P1911) at the top corner as shown in Fig. 20.1. If together properly the wedge blocks will interlock and form two flat surfaces
- H. With the wedge blocks in place, push together until they press tightly against the underside of the glazing gutter and the top of the glass holding the door square
- I. Square up door as desired
- J. Install vertical glass stops first by sliding the leg of E6523 or E6533 into the glazing gutter. **SEE Fig. 20.2**
- K. Starting at one end of the glass stop, push in toward the glass, making sure to align the snap fit detail
- L. Use a wood block and mallet to complete the glass stop insertion
- M. Install glass stop at the bottom rail using the same method
- N. Install top rail glass stop
- O. Remove tape backer by pulling on the corner tabs taking care not to tear the backer
- P. Insert glazing wedge (P2901 or P2908) into the glass stop making sure not to stretch it during installation
- Q. Apply a low adhesion masking tape to surface of glass stop and glass
- R. From the bottom to the top, apply DOW 995 structural silicone into the cavity between the glazing tape and glass. Make sure entire void is filled with no air bubbles or voids in the silicone
- S. Using a beveled non-marring instrument, tool the silicone immediately after application
- T. Remove masking tape from the glass stop and glass before silicone skins over

Fig. 19.1



DOOR GLAZING

LEADERS IN ECO-EFFICIENT STOREFRONT,
CURTAINWALL AND ENTRANCE SYSTEMS

Slide P1911 blocks onto each other to wedge between glazing track and glazing.

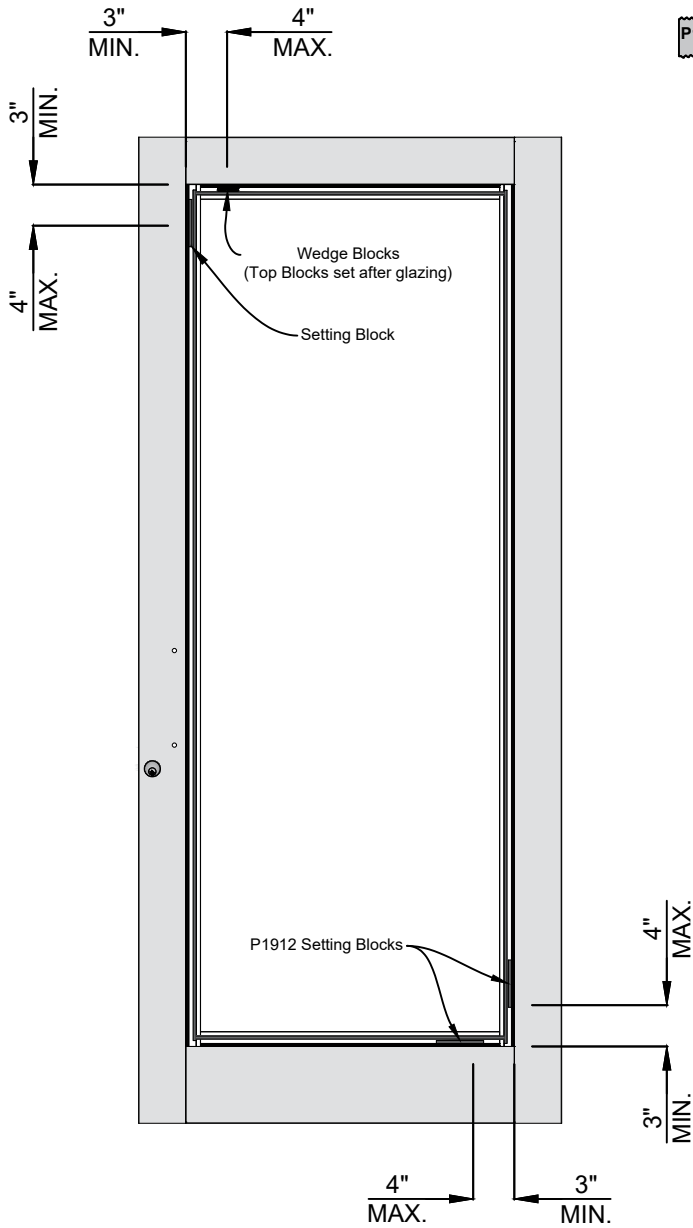
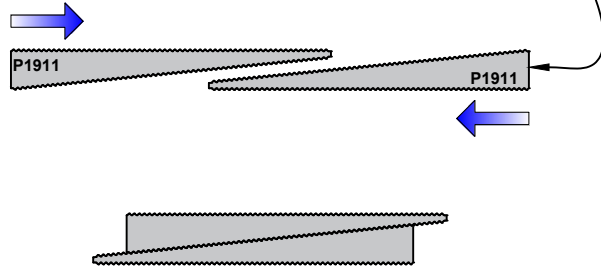


Fig. 20.1



Insert glass stop leg into glazing gutter

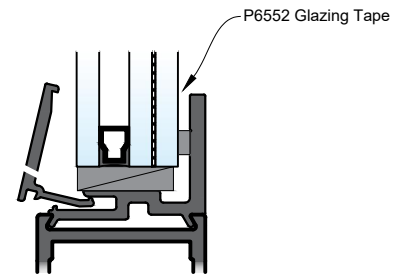


Fig. 20.2

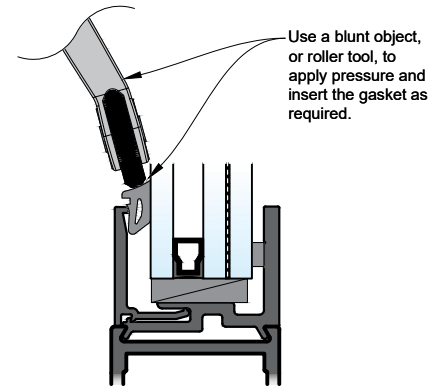


Fig. 20.3

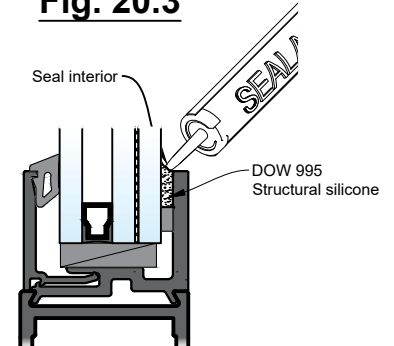
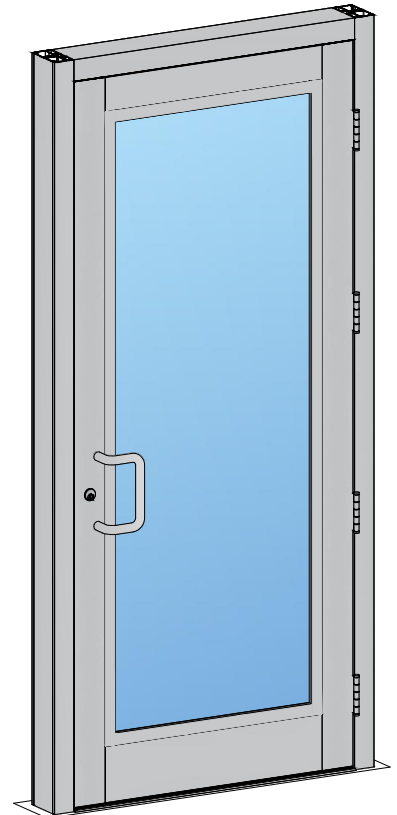
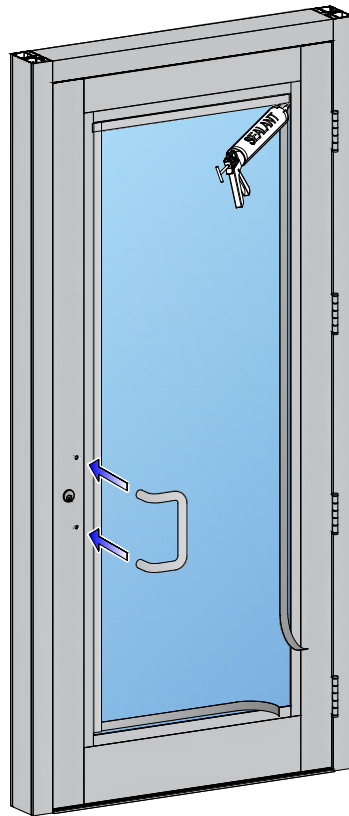
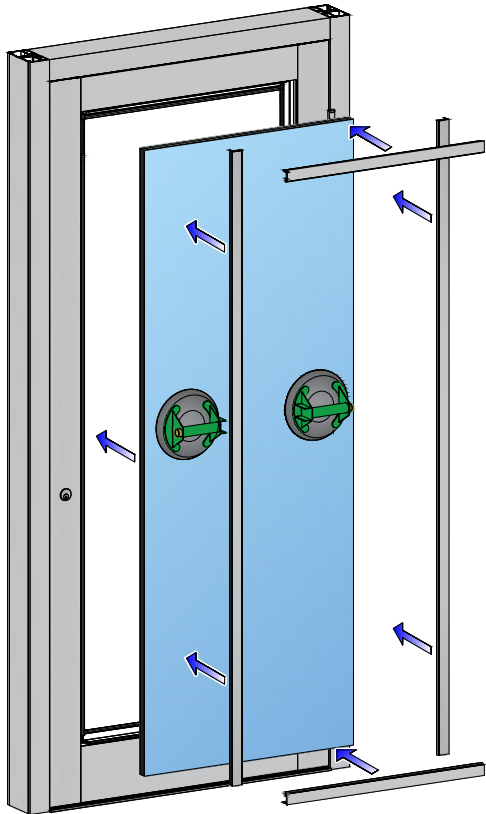


Fig. 20.4

DOOR GLAZING



Step 4: Install Door

Refer to Entrance & Frame Installation Manual