D17A-

ASSA ABLOY

1-3/4" StormPro®361 & 320 TORNADO RESISTANT DOOR & FRAME WITH SARGENT FM8700 SURFACE VERTICAL ROD EXIT DEVICE

MIN. $3'-0" \times 6'-8"$, MAX. $4'-0" \times 8'-0"$ SINGLES or MIN. $6'-0" \times 6'-8"$, MAX. $8'-0" \times 8'-0"$ PAIRS, 14 GA. A60 GALVANNEALED OR COLD ROLLED FACE SHEETS, WITH 14 GA TOP & BOTTOM CHANNELS, WELDED TOP CAP AND POLYSTYRENE CORE.

EXIT DEVICE:

SARGENT FM8700 SERIES SURFACE VERTICAL ROD.

CLOSER:

APPROVED CLOSERS ARE LISTED ON PAGE D17A-11.

HINGES:

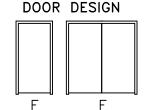
APPROVED HINGES ARE LISTED ON PAGE D17A-11.

OPTIONAL HARDWARE AND ACCESSORIES:

APPROVED OPTIONAL HARDWARE AND ACCESSORIES ARE LISTED ON PAGES D17A-10 AND D17A-11.

OPTIONAL FIRE RATING:

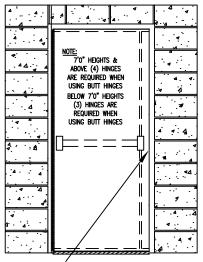
UP TO AND INCLUDING 3 HRS IN ACCORDANCE WITH UL 10B, UL 10C, UL 1784, & NFPA 252 FOR HONEYCOMB CORE DOORS ONLY.



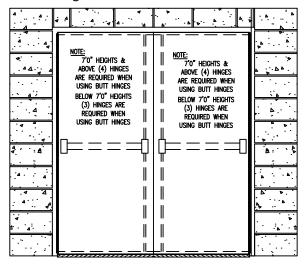
SUGGESTED USE: DISASTER AND TORNADO SHELTERS STORM SHELTERS **COMMUNITY SHELTERS** SCHOOL SHELTERS SCHOOL SAFE ROMS RESIDENTIAL "SAFE" ROOMS

UL CLASSIFIED TO:

- ICC 500(2014) "ICC/NSSA Standard for the Design and Construction of "Storm Shelters"
- FEMA P-361 (2015) "Safe Rooms for Tornadoes & Hurricanes: Guidance for Community and Residential Safe Rooms"
- FEMA P-320 (2014) "Taking Shelter from the Storm: Building a Safe Room for Your Home or Small Buisness"



(4) THERMAL PINS REQUIRED IN LOCK ÈDGE OF DOOR AND JAMB ON SINGLE FIRE RATED OPENINGS ONLY. (PINS SUPPLIED BY OTHERS) FOR FIELD PREP INSTRUCTIONS SEE HARDWARE MANUFACTURER'S INSTALLATION DOCUMENTS.



- 3/8" DOOR UNDERCUT WHEN SARGENT 655 STRIKE IS USED.
 5/8" DOOR UNDERCUT WHEN SARGENT 653 STRIKE IS USED.
- 1/8" MAX. BETWEEN BOTTOM OF DOOR AND TOP OF STRIKE
- BOTTOM STRIKE MUST BE ATTACHED TO CONCRETE OR STRUCTURAL STEEL AND ALLOW BOTTOM BOLT TO PROPERLY ENGAGE STRIKE.
- FLOOR MUST BE POURED LEVEL AND FRAME MUST BE INSTALLED SQUARE AND PLUMB TO ALLOW DOORS TO FUNCTION PROPERLY.

| STANDARD SWING | | RATING | | |
|----------------|-----------|---|--------------|------------|
| STANDARD | DIRECTION | IMPACT | DESIGN (PSF) | TEST (PSF) |
| ICC 500/NSSA | OLITOWING | 15-LB LUMBER 2X4 MISSILE IMPACT @ 100 MPH | +/-284 | +/-341 |
| FEMA 361/320 | OUTSWING | 15-LB LUMBER 2X4 MISSILE IMPACT @ 100 MPH | +/-284 | +/-341 |

DESIGN PRESSURES, ASSEMBLY CONSTRUCTION AND MANUFACTURING LOCATION MAY VARY TO COMPLY WITH DOMESTIC GOVERNMENT SOURCING REGULATIONS, TRADE AGREEMENTS OR ACQUISITION POLICIES. DESIGN PRESSURE MAY BE LIMITED TO +246/-225 PSF AND TEST PRESSURE MAY BE LIMITED TO +296/-270 PSF.

DESIGNED TO ENDURE TORNADO FORCE WINDS AND FLYING DEBRIS. DEVELOPED TO RESIST MISSILE PENETRATION FOR USE IN BUILDINGS DESIGNED AS SHELTERS OR SAFE ROOMS TO PROTECT OCCUPANTS FROM INJURY. SUCCESSFULLY TESTED AND COMPLIANT TO ICC 500-2014 STANDARD.

FRAMES ARE NOT REQUIRED TO BE GROUTED WHEN USING EXISTING WALL JAMB ANCHORS OR WHEN WELDED TO BUILDING STRUCTURE

ASSA ABLOY 1-3/4" StormPro® 361 & 320 TORNADO RESISTANT GLAZED DOOR & FRAME WITH SARGENT FM8700 SURFACE VERTICAL ROD EXIT DEVICE

MIN. 3'-0" x 6'-8", MAX. 4'-0" x 8'-0" SINGLES or MIN. 6'-0" x 6'-8", MAX. 8'-0" x 8'-0" PAIRS, 14 GA. A60 GALVANNEALED OR COLD ROLLED FACE SHEETS, WITH 14 GA TOP & BOTTOM CHANNELS, WELDED TOP CAP AND POLYSTYRENE CORE.

EXIT DEVICE:

SARGENT FM8700 SERIES SURFACE VERTICAL ROD.

CLOSER:

APPROVED CLOSERS ARE LISTED ON PAGE D17A-11.

HINGES:

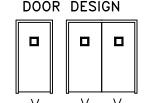
APPROVED HINGES ARE LISTED ON PAGE D17A-11.

OPTIONAL HARDWARE AND ACCESSORIES:

APPROVED OPTIONAL HARDWARE AND ACCESSORIES ARE LISTED ON PAGES D17A-10 AND D17A-11.

OPTIONAL FIRE RATING:

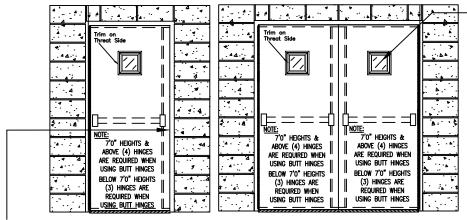
UP TO AND INCLUDING 90 MINUTE FOR GLAZED OPENINGS. IN ACCORDANCE WITH UL 10B, UL 10C, UL 1784, & NFPA 252 FOR HONEYCOMB CORE DOORS ONLY.



SUGGESTED USE: DISASTER AND TORNADO SHELTERS STORM SHELTERS **COMMUNITY SHELTERS** SCHOOL SHELTERS SCHOOL SAFE ROMS RESIDENTIAL "SAFE" ROOMS

UL CLASSIFIED TO:

- ICC 500(2014) "ICC/NSSA Standard for the Design and Construction of "Storm Shelters"
- FEMA P-361 (2015) "Safe Rooms for Tornadoes & Hurricanes: Guidance for Community and Residential Safe Rooms"
- FEMA P-320 (2014) "Taking Shelter from the Storm: Building a Safe Room for Your Home or Small Buisness"



.10"x10" VISIBLE GLASS ONLY CONTRAFLAM ULTIMAX 90 MUST BE GLASS THICKNESS IS 2-1/16" NOMINAL GLASS WILL EXTEND BEYOND THE FACE OF THE DOOR ON THE THREAT SIDE.

GLASS NOMINALLY CENTERED IN WIDTH AND LOCATED 60-1/8" ABOVE DOOR BOTTOM TO CENTERLINE OF GLASS ONLY.

MULTIPLE LITES NOT ALLOWED.

- (4) THERMAL PINS REQUIRED IN LOCK ÈDGE OF DOOR AND JAMB ON SINGLE FIRE RATED OPENINGS ONLY. (PINS SUPPLIED BY OTHERS) FOR FIELD PREP INSTRUCTIONS SEE HARDWARE MANUFACTURER'S INSTALLATION DOCUMENTS.
- 3/8" DOOR UNDERCUT WHEN SARGENT 655 STRIKE IS USED.
- 5/8" DOOR UNDERCUT WHEN SARGENT 653 STRIKE IS USED...
- 1/8" MAX. BETWEEN BOTTOM OF DOOR AND TOP OF STRIKE
- BOTTOM STRIKE MUST BE ATTACHED TO CONCRETE OR STRUCTURAL STEEL AND ALLOW BOTTOM BOLT TO PROPERLY ENGAGE STRIKE.
- FLOOR MUST BE POURED LEVEL AND FRAME MUST BE INSTALLED SQUARE AND PLUMB TO ALLOW DOORS TO FUNCTION PROPERLY.

| SWING | | RATING | | |
|--------------|-----------|---|--------------|------------|
| STANDARD | DIRECTION | IMPACT | DESIGN (PSF) | TEST (PSF) |
| ICC 500/NSSA | OUTSWING | 15-LB LUMBER 2X4 MISSILE IMPACT @ 100 MPH | +/-284 | +/-341 |
| FEMA 361/320 | OUTSWING | 15-LB LUMBER 2X4 MISSILE IMPACT @ 100 MPH | +/-284 | +/-341 |

ASSEMBLY MAY NOT COMPLY WITH DOMESTIC GOVERNMENT SOURCING REGULATIONS, TRADE AGREEMENTS OR ACQUISITION POLICIES.

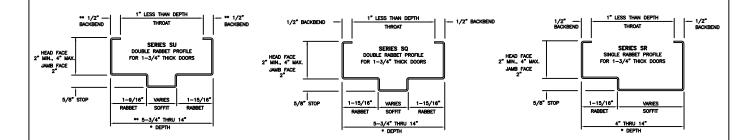
DESIGNED TO ENDURE TORNADO FORCE WINDS AND FLYING DEBRIS. DEVELOPED TO RESIST MISSILE PENETRATION FOR USE IN BUILDINGS DESIGNED AS SHELTERS OR SAFE ROOMS TO PROTECT OCCUPANTS FROM INJURY. SUCCESSFULLY TESTED AND COMPLIANT TO ICC 500-2014 STANDARD.

FRAMES ARE NOT REQUIRED TO BE GROUTED WHEN USING EXISTING WALL JAMB ANCHORS OR WHEN WELDED TO BUILDING STRUCTURE

D17A-1B

1-3/4" StormPro® 361 & 320 TORNADO RESISTANT DOOR & FRAME WITH SARGENT FM8700 SURFACE VERTICAL ROD EXIT DEVICE UL CLASSIFIED TO ICC 500(2014), FEMA P-361 (2015) AND FEMA P-320(2014)

Frame Profile Options and Parameters



NOTES:

- * FRAME DEPTHS AVAILABLE IN 1/8" INCREMENTS
- ** BACKBENDS FOR 5-3/4" DEPTH MAY BE 7/16", WHICH MEANS THE THROAT WOULD BE 4-7/8".

SMALLER DEPTHS MAY REQUIRE EXISTING OPENING ANCHORS TO BE LOCATED ON THE DOOR RABBET.

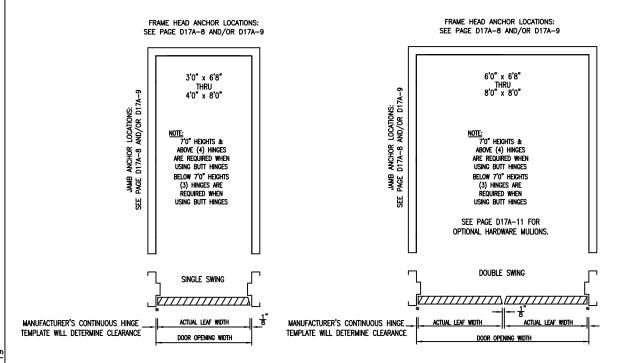
FRAMES ARE NOT REQUIRED TO BE GROUTED WHEN USING EXISTING WALL JAMB ANCHORS OR WHEN WELDED TO BUILDING STRUCTURE.

SEE PAGES D17A-8 & D17A-9 FOR ALL ANCHOR QUANTITIES & LOCATIONS.

FRAMES ARE 14 GAGE HOT-DIPPED A60 GALVANNEALED or COLD ROLLED STEEL.

FRAMES MAY BE KNOCK DOWN or WELDED CORNERS.

OPTIONAL HARDWARE AND ACCESSORIES ARE LISTED ON PAGES D17A-10 AND D17A-11.



HORIZONTAL SECTIONS

"FRAMES ARE NOT REQUIRED TO BE GROUTED WHEN USING EXISTING WALL JAMB ANCHORS OR WHEN WELDED TO BUILDING STRUCTURE"

1-3/4" StormPro® 361 & 320 TORNADO RESISTANT DOOR & FRAME WITH CORBIN RUSSWIN FE5400S SURFACE MULTI POINT EXIT DEVICE

DOOR:

D17A-2

MIN. 3'-0" X 6'-8", MAX. 4'-0" X 8'-0" SINGLES or MIN. 6'-0" X 6'-8", MAX. 8'-0" x 8'-0" PAIRS, 14 GA. A60 GALVANNEALED OR COLD ROLLED FACE SHEETS, WITH 14 GA. TOP & BOTTOM CHANNELS, WELDED TOP CAP AND POLYSTYRENE CORE.

EXIT DEVICE:

CORBIN RUSSWIN FE5400S SERIES

CLOSER:

APPROVED CLOSERS ARE LISTED ON PAGE D17A-11.

HINGES:

APPROVED HINGES ARE LISTED ON PAGE D17A-11.

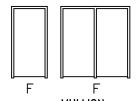
OPTIONAL HARDWARE AND ACCESSORIES:

APPROVED OPTIONAL HARDWARE AND ACCESSORIES ARE LISTED ON PAGES D17A-10 AND D17A-11.

OPTIONAL FIRE RATING:

UP TO AND INCLUDING 3 HRS IN ACCORDANCE WITH UL 10B, UL 10C, UL 1784, & NFPA 252 FOR HONEYCOMB CORE DOORS ONLY.

DOOR DESIGN



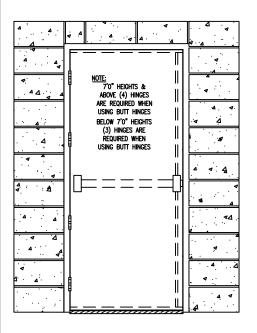
MULLION: CORBIN RUSSWIN FE707A or FE708A

SUGGESTED USE:

DISASTER AND TORNADO SHELTERS STORM SHELTERS COMMUNITY SHELTERS SCHOOL SHELTERS SCHOOL "SAFE" ROOMS RESIDENTIAL "SAFE" ROOMS

UL CLASSIFIED TO:

- ICC 500(2014) "ICC/NSSA Standard for the Design and Construction of "Storm Shelters"
- FEMA P-361 (2015) "Safe Rooms for Tornadoes & Hurricanes: Guidance for Community and Residential Safe Rooms"
- FEMA P-320 (2014) "Taking Shelter from the Storm: Building a Safe Room for Your Home or Small Buisness"



- 5/8" DOOR UNDERCUT
- 1/8" MAX. BETWEEN BOTTOM OF DOOR AND TOP OF STRIKE
- BOTTOM STRIKE MUST BE ATTACHED TO CONCRETE OR STRUCTURAL STEEL AND ALLOW BOTTOM BOLT TO PROPERLY ENGAGE STRIKE.
- FLOOR MUST BE POURED LEVEL AND FRAME MUST BE INSTALLED SQUARE AND PLUMB TO ALLOW DOORS TO FUNCTION PROPERLY.

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

| STANDARD | SWING | RATING | | |
|--------------|-----------|---|--------------|------------|
| STANDARD | DIRECTION | IMPACT | DESIGN (PSF) | TEST (PSF) |
| ICC 500 | OUTSWING | 15-LB LUMBER 2X4 MISSILE IMPACT @ 100 MPH | +/-284 | +/-341 |
| FEMA 361,320 | OUTSWING | 15-LB LUMBER 2X4 MISSILE IMPACT @ 100 MPH | +/-284 | +/-341 |

ASSEMBLY CONSTRUCTION AND MANUFACTURING LOCATION MAY VARY TO COMPLY WITH DOMESTIC GOVERNMENT SOURCING REGULATIONS, TRADE AGREEMENTS OR ACQUISITION POLICIES.

DESIGNED TO ENDURE TORNADO FORCE WINDS AND FLYING DEBRIS. DEVELOPED TO RESIST MISSILE PENETRATION FOR USE IN BUILDINGS DESIGNED AS SHELTERS OR SAFE ROOMS TO PROTECT OCCUPANTS FROM INJURY. SUCCESSFULLY TESTED AND COMPLIANT TO ICC 500-2014 STANDARD.

FRAMES ARE NOT REQUIRED TO BE GROUTED WHEN USING EXISTING WALL JAMB ANCHORS OR WHEN WELDED TO BUILDING STRUCTURE

08/27/19

D17A-2A

ASSA ABLOY 1-3/4" StormPro® 361 & 320 TORNADO RESISTANT GLAZED DOOR AND FRAME WITH CORBIN RUSSWIN FE5400S SURFACE MULTI POINT EXIT DEVICE

DOOR:

MIN. 3'-0" X 6'-8", MAX. 4'-0" X 8'-0" SINGLES or MIN. 6'-0" X 6'-8", MAX. 8'-0" x 8'-0" PAIRS, 14 GA. A60 GALVANNEALED OR COLD ROLLED FACE SHEETS, WITH 14 GA. TOP & BOTTOM CHANNELS, WELDED TOP CAP AND POLYSTYRENE CORE.

EXIT DEVICE:

CORBIN RUSSWIN FE5400S SERIES

CLOSER

APPROVED CLOSERS ARE LISTED ON PAGE D17A-11.

HINGES:

APPROVED HINGES ARE LISTED ON PAGE D17A-11.

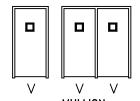
OPTIONAL HARDWARE AND ACCESSORIES:

APPROVED OPTIONAL HARDWARE AND ACCESSORIES ARE LISTED ON PAGES D17A-10 AND D17A-11.

OPTIONAL FIRE RATING:

UP TO AND INCLUDING 90 MINUTE IN ACCORDANCE WITH UL 10B, UL 10C, UL 1784, & NFPA 252 FOR HONEYCOMB CORE DOORS ONLY.

DOOR DESIGN



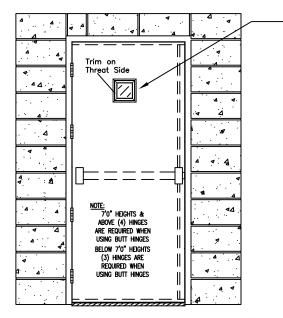
MULLION: CORBIN RUSSWIN FE707A or FE708A

SUGGESTED USE:

DISASTER AND TORNADO SHELTERS STORM SHELTERS COMMUNITY SHELTERS SCHOOL SHELTERS SCHOOL "SAFE" ROOMS RESIDENTIAL "SAFE" ROOMS

UL CLASSIFIED TO:

- ICC 500(2014) "ICC/NSSA Standard for the Design and Construction of "Storm Shelters"
- FEMA P-361 (2015) "Safe Rooms for Tornadoes & Hurricanes: Guidance for Community and Residential Safe Rooms"
- FEMA P-320 (2014) "Taking Shelter from the Storm: Building a Safe Room for Your Home or Small Buisness"



10"x10" VISIBLE GLASS ONLY

CONTRAFLAM ULTIMAX 90 MUST BE FACTORY INSTALLED. GLASS THICKNESS IS 2-1/16" NOMINAL. GLASS WILL EXTEND BEYOND THE FACE OF THE DOOR ON THE THREAT SIDE. GLASS NOMINALLY CENTERED IN WIDTH AND LOCATED 60-1/8" ABOVE DOOR BOTTOM TO CENTERLINE OF GLASS ONLY.

MULTIPLE LITES NOT ALLOWED.

- 5/8" DOOR UNDERCUT
- 1/8" MAX. BETWEEN BOTTOM OF DOOR AND TOP OF STRIKE
- BOTTOM STRIKE MUST BE ATTACHED TO CONCRETE OR STRUCTURAL STEEL AND ALLOW BOTTOM BOLT TO PROPERLY FNGAGE STRIKE.
- FLOOR MUST BE POURED LEVEL AND FRAME MUST BE INSTALLED SQUARE AND PLUMB TO ALLOW DOORS TO FUNCTION PROPERLY.

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

| STANDARD | SWING | RATING | | |
|--------------|-----------|---|--------------|------------|
| STANDARD | DIRECTION | IMPACT | DESIGN (PSF) | TEST (PSF) |
| ICC 500 | OLITSWING | 15-LB LUMBER 2X4 MISSILE IMPACT @ 100 MPH | +/-284 | +/-341 |
| FEMA 361,320 | OUTSWING | 15-LB LUMBER 2X4 MISSILE IMPACT @ 100 MPH | +/-284 | +/-341 |

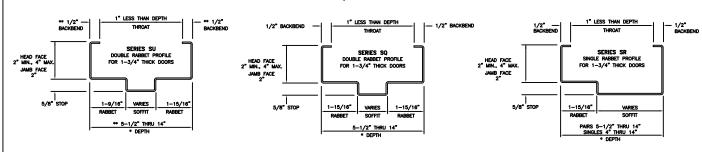
ASSEMBLY MAY NOT COMPLY WITH DOMESTIC GOVERNMENT SOURCING REGULATIONS, TRADE AGREEMENTS OR ACQUISITION POLICIES.

DESIGNED TO ENDURE TORNADO FORCE WINDS AND FLYING DEBRIS. DEVELOPED TO RESIST MISSILE PENETRATION FOR USE IN BUILDINGS DESIGNED AS SHELTERS OR SAFE ROOMS TO PROTECT OCCUPANTS FROM INJURY. SUCCESSFULLY TESTED AND COMPLIANT TO ICC 500-2014 STANDARD.

FRAMES ARE NOT REQUIRED TO BE GROUTED WHEN USING EXISTING WALL JAMB ANCHORS OR WHEN WELDED TO BUILDING STRUCTURE

1-3/4" StormPro® 361 & 320 TORNADO RESISTANT DOOR & FRAME WITH CORBIN RUSSWIN FE5400S SURFACE MULTI POINT EXIT DEVICE UL CLASSIFIED TO ICC 500(2014), FEMA P-361 (2015) AND FEMA P-320 (2014)

Frame Profile Options and Parameters



NOTES:

- * FRAME DEPTHS AVAILABLE IN 1/8" INCREMENTS
- ** BACKBENDS FOR 5-3/4" DEPTH MAY BE 7/16", WHICH MEANS THE THROAT WOULD BE 4-7/8".

SMALLER DEPTHS MAY REQUIRE EXISTING OPENING ANCHORS TO BE LOCATED ON THE DOOR RABBET.

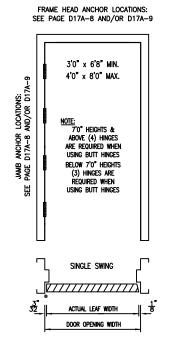
FRAMES ARE NOT REQUIRED TO BE GROUTED WHEN USING EXISTING WALL JAMB ANCHORS OR WHEN WELDED TO BUILDING STRUCTURE.

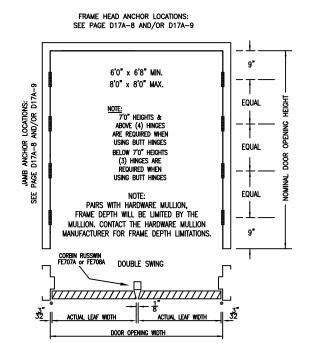
SEE PAGES D17A-8 & D17A-9 FOR ALL ANCHOR QUANTITIES & LOCATIONS.

FRAMES ARE 14 GAGE HOT-DIPPED A60 GALVANNEALED or COLD ROLLED STEEL.

FRAMES MAY BE KNOCK DOWN or WELDED CORNERS.

APPROVED OPTIONAL HARDWARE AND ACCESSORIES ARE SHOWN ON PAGES D17A-10 AND D17A-11.





HORIZONTAL SECTIONS

"FRAMES ARE NOT REQUIRED TO BE GROUTED WHEN USING EXISTING WALL JAMB ANCHORS OR WHEN WELDED TO BUILDING STRUCTURE"



1-3/4" StormPro® 361 & 320 TORNADO RESISTANT DOOR & FRAME WITH CORBIN RUSSWIN FE6600 or SARGENT FM7300 CONCEALED MULTI POINT LOCK

DOOR:

MIN. 2'-8" x 6'-8", MAX. 4'-0" x 8'-0" LEAF SIZE, 14 GA. A60 GALVANNEALED OR COLD ROLLED FACE SHEETS, WELDED TOP CAP AND WITH POLYSTYRENE CORE.

POLYURETHANE CORE MAY BE PROVIDED AT FACTORY DISCRETION.

CORBIN RUSSWIN FE6600 SERIES OR SARGENT FM7300 SERIES

CLOSER:

APPROVED CLOSERS ARE LISTED ON PAGE D17A-11.

APPROVED HINGES ARE LISTED ON PAGE D17A-11.

OPTIONAL HARDWARE AND ACCESSORIES:

APPROVED OPTIONAL HARDWARE AND ACCESSORIES
ARE LISTED ON PAGES D17A-10 and D17-11.

OPTIONAL FIRE RATING:

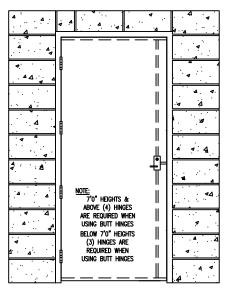
UP TO AND INCLUDING 90 MINUTES IN ACCORDANCE, WITH UL10B, UL 10C, UL 1784, & NFPA 252 IN HONEYCOMB CORE ONLY.

SUGGESTED USE:

DISASTER & TORNADO SHELTERS STORM SHELTERS COMMUNITY SHELTERS SCHOOL SHELTERS SCHOOL "SAFE" ROOMS RESIDENTIAL "SAFE" ROOMS

- Corbin Russwin FE6600 & Sargent FM7300 concealed vertical rods, top & bottom bolts, & mortise lock body casette must be factory installed in a CECO StormPro door. All other hardware components are shipped directly from Sargent or Corbin Russwin & must be installed by a factory trained installer.
- IMPORTANT: DO NOT REMOVE ANY HARDWARE BLOCKING OR FILLER PLATES IN DOOR & THE FRAME UNTIL THE MORTISE LOCK IS READY TO BE INSTALLED.

SEE PAGES D17A-8 & D17A-9 FOR ALL ANCHOR LOCATIONS.



UL CLASSIFIED TO:

- ICC 500(2014) "ICC/NSSA Standard for the Design and Construction of Storm Shelters"
- FEMA P-361(2015) "Safe Rooms for Tornados & **Hurricanes: Guidance for Community and Residential** Safe Rooms"
- FEMA P-320 (2014) "Taking Shelter from the storm: Building a Safe Room for Your Home or Small Buisness"

 - 3/8" DOOR UNDERCUT 3/8" MAX. FROM BOTTOM OF DOOR TO TOP OF STRIKE
 - WHEN USING 3-SIDED FRAMES, BOTTOM STRIKE MUST BE ATTACHED TO CONCRETE OR STRUCTURAL STEEL AND ALLOW BOTTOM BOLT TO PROPERLY ENGAGE STRIKE.
 - WHEN USING 3-SIDED FRAMES, BOTTOM STRIKE IS MANUFACTURED TO BE MORTISED IN FLOOR OR SURFACE MOUNTED.
 FLOORS MUST BE POURED LEVEL AND FRAMES MUST BE INSTALLED SQUARE AND PLUMB TO ALLOW DOORS TO FUNCTION PROPERLY. 4-SIDED FRAMES ARE OPTIONAL.

 - DOORS AND FRAMES MUST BE ORDERED AT THE SAME TIME.

| STANDARD SWING | | RATING | | |
|----------------|----------------|---|--------------|------------|
| STANDARD | DIRECTION | IMPACT | DESIGN (PSF) | TEST (PSF) |
| ICC 500/NSSA | | 15-LB LUMBER 2X4 MISSILE IMPACT @ 100 MPH | ±284 | ±341 |
| FEMA 320, 361 | OR OUTSWING | 15-LB LUMBER 2X4 MISSILE IMPACT @ 100 MPH | ±284 | ±341 |

DESIGN PRESSURES, ASSEMBLY CONSTRUCTION AND MANUFACTURING LOCATION MAY VARY TO COMPLY WITH DOMESTIC GOVERNMENT SOURCING REGULATIONS, TRADE AGREEMENTS OR ACQUISITION POLICIES. DESIGN PRESSURE MAY BE LIMITED TO +/-252 PSF AND TEST PRESSURE MAY BE LIMITED TO +/-302 PSF. ASSEMBLIES MAY BE LIMITED TO 3'0"x7'0" MINIMUM SIZE.

DESIGNED TO ENDURE TORNADO FORCE WINDS AND FLYING DEBRIS. DEVELOPED TO RESIST MISSILE PENETRATION FOR USE IN BUILDINGS DESIGNED AS SHELTERS OR SAFE ROOMS TO PROTECT OCCUPANTS FROM INJURY. SUCCESSFULLY TESTED AND COMPLIANT TO ICC 500-2014 STANDARD.

"FRAMES ARE NOT REQUIRED TO BE GROUTED WHEN USING EXISTING WALL JAMB ANCHORS OR WHEN WELDED TO BUILDING STRUCTURE" (Conversion: 1" = 25.4 mm, e.g., 1-3/4" = 44.45 mm)

D17A-3A

ASSA ABLOY 1-3/4" StormPro® 361 & 320 TORNADO RESISTANT GLAZED DOOR & FRAME WITH CORBIN RUSSWIN FE6600 or SARGENT FM7300 CONCEALED MULTI POINT LOCK

DOOR:

MIN. 2'-8" x 6'-8", MAX. 4'-0" x 8'-0" LEAF SIZE, 14 GA. A60 GALVANNEALED OR COLD ROLLED FACE SHEETS, WELDED TOP CAP AND WITH POLYSTYRENE CORE.

LOCK:

CORBIN RUSSWIN FE6600 SERIES OR SARGENT FM7300 SERIES **CLOSER:**

APPROVED CLOSERS ARE LISTED ON PAGE D17A-11.

HINGES:

APPROVED HINGES ARE LISTED ON PAGE D17A-11.

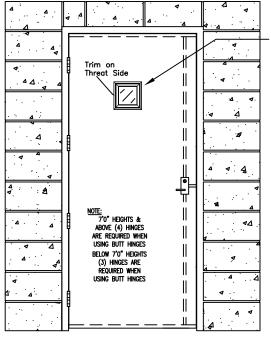
OPTIONAL HARDWARE AND ACCESSORIES:

APPROVED OPTIONAL HARDWARE AND ACCESSORIES ARE LISTED ON PAGES D17A-10 AND D17A-11.

OPTIONAL FIRE RATING:

UP TO AND INCLUDING 90 MINUTES IN ACCORDANCE, WITH UL 10B, UL 10C, UL 1784, & NFPA 252 IN HONEYCOMB CORE ONLY.

SEE PAGES D17A-8 & D17A-9 FOR ALL ANCHOR LOCATIONS.



SUGGESTED USE:

DISASTER & TORNADO SHELTERS STORM SHELTERS COMMUNITY SHELTERS SCHOOL SHELTERS SCHOOL "SAFE" ROOMS RESIDENTIAL "SAFE" ROOMS

- Corbin Russwin FE6600 & Sargent FM7300 concealed vertical rods, top & bottom bolts, & mortise lock body casette must be factory installed in a CECO StormPro door. All other hardware components are shipped directly from Sargent or Corbin Russwin & must be installed by a factory trained installer.
- IMPORTANT: DO NOT REMOVE ANY HARDWARE BLOCKING OR FILLER PLATES IN DOOR & THE FRAME UNTIL THE MORTISE LOCK IS READY TO BE INSTALLED.

10"x10" VISIBLE GLASS ONLY

CONTRAFLAM ULTIMAX 90 MUST BE FACTORY INSTALLED. GLASS THICKNESS IS 2-1/16" NOMINAL. GLASS WILL EXTEND BEYOND THE FACE OF THE DOOR ON THE THREAT SIDE. GLASS NOMINALLY CENTERED IN WIDTH AND LOCATED 60-3/8" ABOVE DOOR BOTTOM TO CENTERLINE OF GLASS ONLY.

MULTIPLE LITES NOT ALLOWED.

- 3/8" DOOR UNDERCUT 3/8" MAX. FROM BOTTOM OF DOOR TO TOP OF STRIKE
- WHEN USING 3-SIDED FRAMES, BOTTOM STRIKE MUST BE ATTACHED TO CONCRETE OR STRUCTURAL STEEL AND ALLOW BOTTOM BOLT TO PROPERLY ENGAGE STRIKE.
- WHEN USING 3-SIDED FRAMES, BOTTOM STRIKE IS MANUFACTURED TO BE MORTISED IN FLOOR OR SURFACE MOUNTED.
 FLOORS MUST BE POURED LEVEL AND FRAMES MUST BE INSTALLED SQUARE AND PLUMB TO ALLOW DOORS TO FUNCTION PROPERLY. 4-SIDED FRAMES ARE OPTIONAL.
- DOORS AND FRAMES MUST BE ORDERED AT THE SAME TIME.

UL CLASSIFIED TO:

- ICC 500(2014) "ICC/NSSA Standard for the Design and Construction or Storm Shelters"
- FEMA P-361(2015) "Safe Rooms for Tornados & Hurricanes: Guidance for Community and Residential Safe Rooms"
- FEMA P-320 (2014) "Taking Shelter from the storm: Building a Safe Room for Your Home or Small Buisness"

| CTANDADD | SWING | RATING | | |
|---------------|----------------|---|--------------|------------|
| STANDARD | DIRECTION | IMPACT | DESIGN (PSF) | TEST (PSF) |
| ICC 500/NSSA | INSWING | 15-LB LUMBER 2X4 MISSILE IMPACT @ 100 MPH | ±284 | ±341 |
| FEMA 320, 361 | OR OUTSWING | 15-LB LUMBER 2X4 MISSILE IMPACT @ 100 MPH | ±284 | ±341 |

ASSEMBLY MAY NOT COMPLY WITH DOMESTIC GOVERNMENT SOURCING REGULATIONS, TRADE AGREEMENTS OR ACQUISITION POLICIES.

DESIGNED TO ENDURE TORNADO FORCE WINDS AND FLYING DEBRIS. DEVELOPED TO RESIST MISSILE PENETRATION FOR USE IN BUILDINGS DESIGNED AS SHELTERS OR SAFE ROOMS TO PROTECT OCCUPANTS FROM INJURY. SUCCESSFULLY TESTED AND COMPLIANT TO ICC 500-2014 STANDARD.

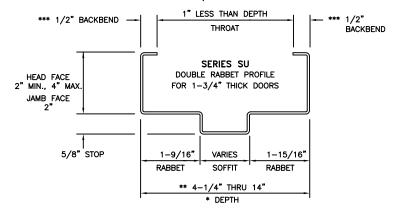
"FRAMES ARE NOT REQUIRED TO BE GROUTED WHEN USING EXISTING WALL JAMB ANCHORS OR WHEN WELDED TO BUILDING STRUCTURE" (Conversion: 1'' = 25.4 mm, e.g., 1-3/4'' = 44.45 mm)

D17A-3B

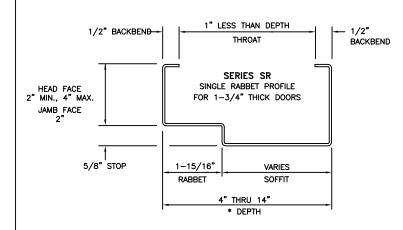
1-3/4" StormPro®361 & 320 TORNADO RESISTANT DOOR & FRAME WITH CORBIN RUSSWIN FE6600 or SARGENT FM7300 CONCEALED MULTI POINT LOCK

UL Classified to ICC 500 (2014), FEMA P-361 (2015) and FEMA P-320 (2014)

Frame Profile Options and Parameters



1" LESS THAN DEPTH 1/2" BACKBEND 1/2" THROAT BACKBEND SERIES SO DOUBLE RABBET PROFILE HEAD FACE MIN., 4" MAX. FOR 1-3/4" THICK DOORS JAMB FACE 5/8" STOP VARIES 1-15/16" RABBET SOFFIT RABBET **** 4-5/8" THRU 14" * DEPTH



ASSEMBLIES MAY BE LIMITED TO 3'0"x7'0" MINIMUM SIZE FOR COMPLIANCE WITH DOMESTIC GOVERNMENT SOURCING REGULATIONS, TRADE AGREEMENTS OR ACQUISITION POLICIES.

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

NOTES:

- * FRAME DEPTHS AVAILABLE IN 1/8" INCREMENTS
- **MINIMUM DEPTH APPLIES TO ALL ANCHOR CONDITIONS EXCEPT EXISTING OPENING ANCHORS. MINIMUM DEPTH FOR EXISTING OPENING ANCHORS IS 4-5/8".
- *** BACKBENDS FOR 5-3/4" DEPTH MAY BE 7/16", WHICH MEANS THE THROAT WOULD BE 4-7/8".
- **** MINIMUM DEPTH APPLIES TO ALL ANCHOR CONDITIONS EXCEPT EXISTING OPENING ANCHORS. MINIMUM DEPTH FOR EXISTING OPENING ANCHORS IS 5".

SMALLER DEPTHS MAY REQUIRE EXISTING OPENING ANCHORS TO BE LOCATED ON THE DOOR RABBET.

FRAMES ARE NOT REQUIRED TO BE GROUTED WHEN USING EXISTING WALL JAMB ANCHORS OR WHEN WELDED TO BUILDING STRUCTURE.

SEE PAGES D17A-8 & D17A-9 FOR ALL ANCHOR QUANTITIES & LOCATIONS.

FRAMES ARE 14 GAGE HOT-DIPPED A60 GALVANNEALED or COLD ROLLED STEEL.

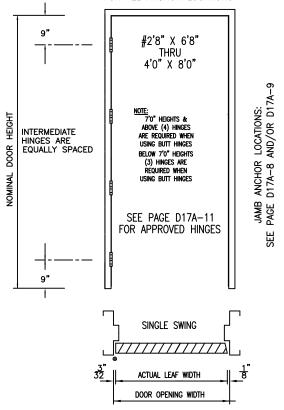
FRAMES MAY BE KNOCK DOWN or WELDED CORNERS.

SEE FRAME ELEVATION BELOW FOR HINGE QUANTITIES, LOCATIONS AND OPENING SIZES.

APPROVED HARDWARE AND ACCESSORIES ARE LISTED ON PAGES D17A-10 AND D17A-11.

4-SIDED FRAMES ARE OPTIONAL.

SEE PAGE D17A-8 AND/OR D17A-9 FOR ALL ANCHOR LOCATIONS.



HORIZONTAL SECTION

08/16/19

D17A-3C

ASSA ABLOY 1-3/4" StormPro® 361 & 320 TORNADO RESISTANT COMMUNICATING SINGLE DOOR & FRAME WITH CORBIN RUSSWIN FE6600 or SARGENT FM7300 CONCEALED MULTI POINT LOCK

ALL INFORMATION ON THIS PAGE APPLIES TO THE STORMPRO ASSEMBLY

MIN. 2'-8" x 6'-8", MAX. 4'-0" x 8'-0" LEAF SIZE, 14 GA. A60 GALVANNEALED OR COLD ROLLED FACE SHEETS, WELDED TOP CAP AND WITH POLYSTYRENE CORE.

POLYURETHANE CORE MAY BE PROVIDED AT FACTORY DISCRETION.

LOCK:

CORBIN RUSSWIN FE6600 SERIES OR SARGENT FM7300 SERIES

HINGES:

APPROVED HINGES ARE LISTED ON PAGE D17A-11. NON-STORMPRO DOORS DO NOT REQUIRE THE SAME HARDWARE, QUANTITIES OR LOCATIONS AS THE STORMPRO DOORS.

CLOSER:

APPROVED CLOSERS ARE LISTED ON PAGE D17A-11.

OPTIONAL HARDWARE AND ACCESSORIES:

APPROVED OPTIONAL HARDWARE AND ACCESSORIES ARE LISTED ON PAGES D17A-10 and D17A-11.

OPTIONAL FIRE RATING:

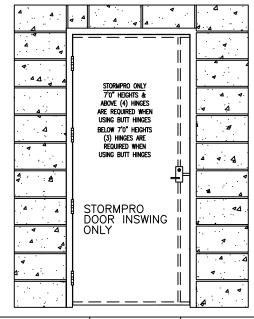
UP TO AND INCLUDING 3 HRS IN ACCORDANCE, WITH UL10B, UL10C, UL 1784, & NFPA 252 IN HONEYCOMB CORE ONLY.

SUGGESTED USE:

DISASTER & TORNADO SHELTERS STORM SHELTERS COMMUNITY SHELTERS SCHOOL SHELTERS SCHOOL "SAFE" ROOMS RESIDENTIAL "SAFE" ROOMS

- Corbin Russwin FE6600 & Sargent FM7300 concealed vertical rods, top & bottom bolts, & mortise lock body casette must be factory installed in a CECO StormPro door. All other hardware components are shipped directly from Sargent or Corbin Russwin & must be installed by a factory trained installer.
- IMPORTANT: DO NOT REMOVE ANY HARDWARE BLOCKING OR FILLER PLATES IN DOOR & THE FRAME UNTIL THE MORTISE LOCK IS READY TO BE INSTALLED.

SEE PAGES D17A-8 & D17A-9 FOR ALL ANCHOR LOCATIONS.



UL CLASSIFIED TO:

- ICC 500(2014) "ICC/NSSA Standard for the Design and Construction of Storm Shelters"
- FEMA P-361(2015) "Safe Rooms for Tornados & **Hurricanes: Guidance for Community and Residential** Safe Rooms"
- FEMA P-320 (2014) "Taking Shelter from the storm: Building a Safe Room for Your Home or Small Buisness"

 - 3/8" DOOR UNDERCUT 3/8" MAX. FROM BOTTOM OF DOOR TO TOP OF STRIKE
 - BOTTOM STRIKE MUST BE ATTACHED TO CONCRETE OR STRUCTURAL STEEL AND ALLOW BOTTOM BOLT TO PROPERLY ENGAGE STRIKE.
 BOTTOM STRIKE IS MANUFACTURED TO BE MORTISED IN FLOOR OR SURFACE MOUNTED.

 - FLOORS MUST BE POURED LEVEL AND FRAMES MUST BE INSTALLED SQUARE AND PLUMB TO ALLOW DOORS TO FUNCTION PROPERLY. DOORS AND FRAMES MUST BE ORDERED AT THE SAME TIME.

| STANDARD | SWING | RATING | | |
|---------------|-----------|---|--------------|------------|
| STANDARD | DIRECTION | IMPACT | DESIGN (PSF) | TEST (PSF) |
| ICC 500/NSSA | INSWING | 15-LB LUMBER 2X4 MISSILE IMPACT @ 100 MPH | ±284 | ±341 |
| FEMA 320, 361 | ONLY | 15-LB LUMBER 2X4 MISSILE IMPACT @ 100 MPH | ±284 | ±341 |

DESIGN PRESSURES, ASSEMBLY CONSTRUCTION AND MANUFACTURING LOCATION MAY VARY TO COMPLY WITH DOMESTIC GOVERNMENT SOURCING REGULATIONS, TRADE AGREEMENTS OR ACQUISITION POLICIES. DESIGN PRESSURE MAY BE LIMITED TO ± -252 PSF AND TEST PRESSURE MAY BE LIMITED TO ± -302 PSF. ASSEMBLIES MAY BE LIMITED TO 3'0"x7'0" MINIMUM SIZE.

DESIGNED TO ENDURE TORNADO FORCE WINDS AND FLYING DEBRIS. DEVELOPED TO RESIST MISSILE PENETRATION FOR USE IN BUILDINGS DESIGNED AS SHELTERS OR SAFE ROOMS TO PROTECT OCCUPANTS FROM INJURY. SUCCESSFULLY TESTED AND COMPLIANT TO ICC 500-2014 STANDARD.

"FRAMES ARE NOT REQUIRED TO BE GROUTED WHEN USING EXISTING WALL JAMB ANCHORS OR WHEN WELDED TO BUILDING STRUCTURE" (Conversion: 1" = 25.4 mm, e.g., 1-3/4" = 44.45 mm)

D17A-3D

 1 1-3/4" StormPr $^{\circ}$ 361 & 320 tornado resistant glazed communicating SINGLE DOOR & FRAME WITH CORBIN RUSSWIN FE6600 or SARGENT FM7300 CONCEALED MULTI POINT LOCK

ALL INFORMATION ON THIS PAGE APPLIES TO THE STORMPRO ASSEMBLY

 $\underline{\text{DOOR:}}$ Min. 2'-8" x 6'-8", Max. 4'-0" x 8'-0" leaf size, 14 ga. A60 galvannealed or cold rolled face sheets, welded top cap and with polystyrene core.

LOCK:

CORBIN RUSSWIN FE6600 SERIES OR SARGENT FM7300 SERIES

HINGES:

APPROVED HINGES ARE LISTED ON PAGE D17A-11.
NON-STORMPRO DOORS DO NOT REQUIRE THE SAME HARDWARE, QUANTITIES OR LOCATIONS AS THE STORMPRO DOORS.

CLOSER:

APPROVED CLOSERS ARE LISTED ON PAGE D17A-11.

OPTIONAL HARDWARE AND ACCESSORIES:

APPROVED OPTIONAL HARDWARE AND ACCESSORIES
ARE LISTED ON PAGES D17A-10 AND D17A-11.

OPTIONAL FIRE RATING:

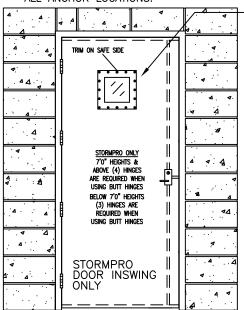
UP TO AND INCLUDING 90 MINUTE IN ACCORDANCE, WITH UL10B, UL 10C, UL 1784, & NFPA 252 IN HONEYCOMB CORE ONLY.

SUGGESTED USE:

DISASTER & TORNADO SHELTERS STORM SHELTERS COMMUNITY SHELTERS SCHOOL SHELTERS SCHOOL "SAFE" ROOMS RESIDENTIAL "SAFE" ROOMS

- Corbin Russwin FE6600 & Sargent FM7300 concealed vertical rods, top & bottom bolts, & mortise lock body casette must be factory installed in a CECO StormPro door. All other hardware components are shipped directly from Sargent or Corbin Russwin & must be installed by a factory trained installer.
- IMPORTANT: DO NOT REMOVE ANY HARDWARE BLOCKING OR FILLER PLATES IN DOOR & THE FRAME UNTIL THE MORTISE LOCK IS READY TO BE INSTALLED.

SEE PAGES D17A-8 & D17A-9 FOR ALL ANCHOR LOCATIONS.



10"x10" VISIBLE GLASS ONLY

CONTRAFLAM ULTIMAX 90 MUST BE FACTORY INSTALLED. GLASS THICKNESS IS 2-1/16" NOMINAL. GLASS WILL EXTEND BEYOND THE FACE OF THE DOOR ON THE THREAT SIDE. GLASS NOMINALLY CENTERED IN WIDTH AND LOCATED 60-3/8" ABOVE DOOR BOTTOM TO CENTERLINE OF GLASS ONLY.

MULTIPLE LITES NOT ALLOWED.

- 3/8" DOOR UNDERCUT
- 3/8" MAX. FROM BOTTOM OF DOOR TO TOP OF STRIKE
- BOTTOM STRIKE MUST BE ATTACHED TO CONCRETE OR STRUCTURAL STEEL AND ALLOW BOTTOM BOLT TO PROPERLY ENGAGE STRIKE.
- BOTTOM STRIKE IS MANUFACTURED TO BE MORTISED IN FLOOR OR SURFACE MOUNTED.
- FLOORS MUST BE POURED LEVEL AND FRAMES MUST BE INSTALLED SQUARE AND PLUMB TO ALLOW DOORS TO FUNCTION PROPERLY.
- . DOORS AND FRAMES MUST BE ORDERED AT THE SAME TIME.

UL CLASSIFIED TO:

- •ICC 500(2014) "ICC/NSSA Standard for the Design and Construction or Storm Shelters"
- FEMA P-361(2015) "Safe Rooms for Tornados & Hurricanes: Guldance for Community and Residential Safe Rooms"
- FEMA P-320 (2014) "Taking Shelter from the storm: Building a Safe Room for Your Home or Small Buisness"

| STANDARD SWING | | RATING | | |
|----------------|-----------|---|--------------|------------|
| STANDARD | DIRECTION | IMPACT | DESIGN (PSF) | TEST (PSF) |
| ICC 500/NSSA | INSWING | 15-LB LUMBER 2X4 MISSILE IMPACT @ 100 MPH | ±284 | ±341 |
| FEMA 320, 361 | ONLY | 15-LB LUMBER 2X4 MISSILE IMPACT @ 100 MPH | ±284 | ±341 |

ASSEMBLY MAY NOT COMPLY WITH DOMESTIC GOVERNMENT SOURCING REGULATIONS, TRADE AGREEMENTS OR ACQUISITION POLICIES.

DESIGNED TO ENDURE TORNADO FORCE WINDS AND FLYING DEBRIS. DEVELOPED TO RESIST MISSILE PENETRATION FOR USE IN BUILDINGS DESIGNED AS SHELTERS OR SAFE ROOMS TO PROTECT OCCUPANTS FROM INJURY. SUCCESSFULLY TESTED AND COMPLIANT TO ICC 500-2014 STANDARD.

"FRAMES ARE NOT REQUIRED TO BE GROUTED WHEN USING EXISTING WALL JAMB ANCHORS OR WHEN WELDED TO BUILDING STRUCTURE" (Conversion: 1" = 25.4 mm, e.g., 1-3/4" = 44.45 mm)

Experience a safer and more open world

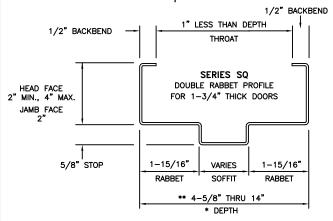


D17A-3E

1-3/4" StormPro® 361 & 320 TORNADO RESISTANT COMMUNICATING SINGLE STORMPRO DOOR & FRAME WITH CORBIN RUSSWIN FE6600 or SARGENT FM7300 MULTI POINT LOCK

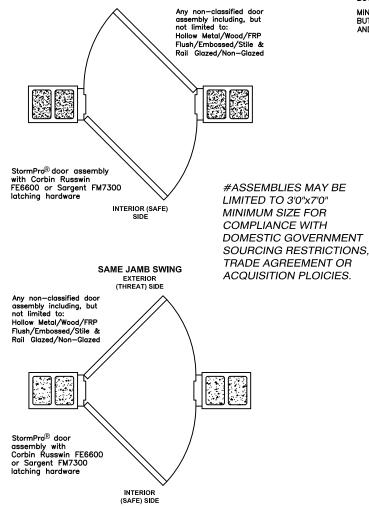
UL Classified to ICC 500 (2014), FEMA P-361 (2015) and FEMA P-320 (2014)

Frame Profile Options and Parameters



OPPOSITE JAMB SWING

EXTERIOR (THREAT) SIDE



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

NOTES:

- * FRAME DEPTHS AVAILABLE IN 1/8" INCREMENTS
- ***MINIMUM DEPTH APPLIES TO ALL ANCHOR CONDITIONS EXCEPT EXISTING OPENING ANCHORS. MINIMUM DEPTH FOR EXISTING OPENING ANCHORS IS 5". DEPTHS MAY ALSO BE LIMITED BY STORMPRO DOOR AND NON STORMPRO DOOR HARDWARE.

SMALLER DEPTHS MAY REQUIRE EXISTING OPENING ANCHORS TO BE LOCATED ON THE DOOR RABBET.

FRAMES ARE NOT REQUIRED TO BE GROUTED WHEN USING EXISTING WALL JAMB ANCHORS OR WHEN WELDED TO BUILDING STRUCTURE.

SEE PAGES D17A-8 & D17A-9 FOR ALL ANCHOR QUANTITIES & LOCATIONS.

FRAMES ARE 14 GAGE HOT-DIPPED A60 GALVANNEALED or COLD ROLLED STEEL. FRAMES MAY BE KNOCK DOWN or WELDED CORNERS.

SEE FRAME ELEVATION BELOW FOR HINGE QUANTITIES, LOCATIONS AND OPENING SIZES, NON-STORMPRO FRAMES DO NOT REQUIRE THE SAME HARDWARE, QUANTITIES OR LOCATIONS AS THE STORMPRO FRAMES.

HARDWARE AND ACCESSORIES ARE LISTED ON PAGES D17A-10 AND D17A-11.
4-SIDED FRAMES ARE NOT ALLOWED.

WHEN DETERMINING FRAME DEPTH, CONSIDERATION SHOULD BE GIVEN REGARDING IF THE DEPTH WILL ACCOMMODATE HARDWARE INSTALLED ON BOTH THE PASSAGE DOOR AND STORMPRO DOOR.

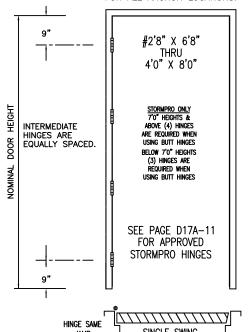
MINIMUM FRAME DEPTHS SHOWN ON THIS PAGE ARE FOR STORMPRO LIMITS, BUT MAY NOT ACCOMMODATE HARDWARE INSTALLED ON BOTH THE STORMPRO AND PASSAGE DOOR.

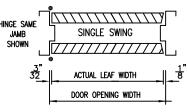
SEE PAGE D17A-8 AND/OR D17A-9 FOR ALL ANCHOR LOCATIONS.

ANCHOR LOCATIONS: D17A-8 AND/OR D17A-9

JAMB PAGE [

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HORIZONTAL SECTION

Experience a safer and more open world

1-3/4" StormPro®361 & 320 TORNADO RESISTANT PAIRS WITH CORBIN RUSSWIN FE6600 or SARGENT FM7300 CONCEALED MULTI POINT LOCK

 $\frac{\text{DOORS:}}{\text{MIN. 5'-4"}} \times 6'-8", \text{ MAX. 8'-0"} \times 8'-0" \text{ OPENING SIZE, 14 GA. A60 GALVANNEALED OR COLD ROLLED FACE SHEETS, WELDED TOP CAP AND WITH POLYSTYRENE CORE. POLYURETHANE CORE MAY BE PROVIDED AT FACTORY DISCRETION.}$

LOCK:

CORBIN RUSSWIN FE6600 SERIES or SARGENT FM7300 SERIES

INACTIVE DOOR SURFACE BOLTS:

REINFORCED FOR CORBIN RUSSWIN 988CR, SARGENT 988, OR YALE 988Y

APPROVED CLOSERS ARE LISTED ON PAGE D17A-11.

HINGES:

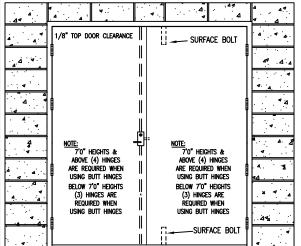
APPROVED HINGES ARE LISTED ON PAGE D17A-11.

OPTIONAL HARDWARE AND ACCESSORIES:
APPROVED OPTIONAL HARDWARE AND ACCESSORIES ARE LISTED ON PAGES D17A-10 AND D17A-11.

OPTIONAL FIRE RATING:

UP TO AND INCLUDING 3 HRS IN ACCORDANCE WITH UL 10B, UL 10C, UL 1784, & NFPA 252 IN HONEYCOMB CORE ONLY.

SEE PAGES D17A-8 & D17A-9 FOR ALL ANCHOR LOCATIONS.



SUGGESTED USE:

DISASTER & TORNADO SHELTERS STORM SHELTERS COMMUNITY SHELTERS SCHOOL SHELTERS SCHOOL "SAFE" ROOMS RESIDENTIAL "SAFE" ROOMS

- Corbin Russwin FE6600 & Sargent FM7300 concealed vertical rods, top & bottom bolts, & mortise lock body casette must be factory installed in a CECO StormPro door. All other hardware components are shipped directly from Sargent or Corbin Russwin & must be installed by a factory trained installer.
- IMPORTANT: DO NOT REMOVE ANY HARDWARE BLOCKING OR FILLER PLATES IN DOOR & THE FRAME UNTIL THE MORTISE LOCK IS READY TO BE INSTALLED.
- 3/8" DOOR UNDERCUT 3/8" MAX. FROM BOTTOM OF DOOR TO TOP OF STRIKE
- WHEN USING 3-SIDED FRAMES, BOTTOM STRIKES MUST BE ATTACHED TO CONCRETE OR STRUCTURAL STEEL AND ALLOW BOTTOM BOLTS TO
- PROPERLY ENGAGE STRIKES.

 WHEN USING 3—SIDED FRAMES, BOTTOM LOCK STRIKE IS MANUFACTURED TO BE MORTISED IN FLOOR OR SURFACE MOUNTED.

 FLOORS MUST BE POURED LEVEL AND FRAMES MUST BE INSTALLED SQUARE AND PLUMB TO ALLOW DOORS TO FUNCTION PROPERLY.

 4—SIDED FRAMES ARE OPTIONAL.

 DOORS AND FRAMES MUST BE ORDERED AT THE SAME TIME.

10 GAGE FLAT PLATE ASTRAGAL STRIP IS OPTIONAL AND WOULD BE FACTORY ATTACHED WITH SCREWS TO THE THREAT SIDE OF THE ACTIVE OR INACTIVE DOOR, DEPENDING ON IN SWING OR OUT SWING APPLICATION.

UL CLASSIFIED TO:

- ICC 500(2014) "ICC/NSSA Standard for the Design and Construction or Storm Shelters"
- FEMA P-361(2015) "Safe Rooms for Tornados & Hurricanes: Guldance for Community and Residential Safe Rooms"
- FEMA P-320 (2014) "Taking Shelter from the storm: Building a Safe Room for Your Home or Small Buisness"

"Frames are not required to be grouted when using existing wall jamb anchors or when welded to building structure"

| STANDARD SWING | | RATING | | |
|----------------|----------------|---|--------------|------------|
| STANDARD | DIRECTION | IMPACT | DESIGN (PSF) | TEST (PSF) |
| ICC500/NSSA | | 15-LB LUMBER 2X4 MISSILE IMPACT @ 100 MPH | ±284 | ±341 |
| FEMA 320, 361 | OR OUTSWING | 15-LB LUMBER 2X4 MISSILE IMPACT @ 100 MPH | ±284 | ±341 |

DESIGN PRESSURES, ASSEMBLY CONSTRUCTION AND MANUFACTURING LOCATION MAY VARY TO COMPLY WITH DOMESTIC GOVERNMENT SOURCING REGULATIONS, TRADE AGREEMENTS OR ACQUISITION POLICIES. DESIGN PRESSURE MAY BE LIMITED TO +/-252 PSF AND TEST PRESSURE MAY BE LIMITED TO +/-302 PSF. ASSEMBLIES MAY BE LIMITED TO 6'0"x7'0" MINIMUM SIZE.

DESIGNED TO ENDURE TORNADO FORCE WINDS AND FLYING DEBRIS. DEVELOPED TO RESIST MISSILE PENETRATION FOR USE IN BUILDINGS DESIGNED AS SHELTERS OR SAFE ROOMS TO PROTECT OCCUPANTS FROM INJURY. SUCCESSFULLY TESTED AND COMPLIANT TO ICC 500-2014 STANDARD.

1-3/4" StormPro®361 & 320 TORNADO RESISTANT GLAZED PAIRS WITH CORBIN RUSSWIN FE6600 or SARGENT FM7300 CONCEALED MULTI POINT LOCK

D17A-4A

 $\frac{\text{DOORS:}}{\text{MIN. 5'-4"}} \times 6'-8", \text{ MAX. 8'-0"} \times 8'-0" \text{ OPENING SIZE, 14 GA. A60 GALVANNEALED OR COLD ROLLED FACE SHEETS, WELDED TOP CAP AND WITH POLYSTYRENE CORE.} \\ SUGGESTED USE:$

LOCK:

CORBIN RUSSWIN FE6600 SERIES or SARGENT FM7300 SERIES

INACTIVE DOOR SURFACE BOLTS:

REINFORCED FOR CORBIN RUSSWIN 988CR, SARGENT 988, OR YALE 988Y

APPROVED CLOSERS ARE LISTED ON PAGE D17A-11.

HINGES:

APPROVED HINGES ARE LISTED ON PAGE D17A-11.

OPTIONAL HARDWARE AND ACCESSORIES:

APPROVED OPTIONAL HARDWARE AND ACCESSORIES ARE LISTED ON PAGES D17A-10 AND D17A-11.

OPTIONAL FIRE RATING:

UP TO AND INCLUDING 90 MINUTE IN ACCORDANCE WITH UL 10B, UL 10C, UL 1784, & NFPA 252 IN HONEYCOMB CORE ONLY.

SEE PAGES D17A-8 & D17A-9 FOR ALL ANCHOR LOCATIONS.

SUGGESTED USE:

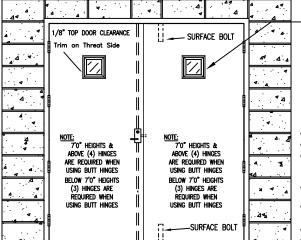
DISASTER & TORNADO SHELTERS STORM SHELTERS COMMUNITY SHELTERS SCHOOL SHELTERS SCHOOL "SAFE" ROOMS RESIDENTIAL "SAFE" ROOMS

- Corbin Russwin FE6600 & Sargent FM7300 concealed vertical rods, top & bottom bolts, & mortise lock body casette must be factory installed in a CECO StormPro door. All other hardware components are shipped directly from Sargent or Corbin Russwin & must be installed by a factory trained installer.
- IMPORTANT: DO NOT REMOVE ANY HARDWARE BLOCKING OR FILLER PLATES IN DOOR & THE FRAME UNTIL THE MORTISE LOCK IS READY TO BE INSTALLED.

10"x10" VISIBLE GLASS ONLY

CONTRAFLAM ULTIMAX 90 MUST BE FACTORY INSTALLED. GLASS THICKNESS IS 2-1/16" NOMINAL. GLASS WILL EXTEND BEYOND THE FACE OF THE DOOR ON THE THREAT SIDE. GLASS NOMINALLY CENTERED IN WIDTH AND LOCATED 60-3/8" ABOVE DOOR BOTTOM TO CENTERLINE OF GLASS ONLY.

MULTIPLE LITES NOT ALLOWED.



- 3/8" DOOR UNDERCUT
- 3/8" MAX. FROM BOTTOM OF DOOR TO TOP OF STRIKE
- WHEN USING 3-SIDED FRAMES, BOTTOM STRIKES MUST BE ATTACHED TO CONCRETE OR STRUCTURAL STEEL AND ALLOW BOTTOM BOLTS TO PROPERLY ENGAGE STRIKES.
- WHEN USING 3—SIDED FRAMES, BOTTOM LOCK STRIKE IS MANUFACTURED TO BE MORTISED IN FLOOR OR SURFACE MOUNTED.
- FLOORS MUST BE POURED LEVEL AND FRAMES MUST BE INSTALLED SQUARE AND PLUMB TO ALLOW DOORS TO FUNCTION PROPERLY.
 4-SIDED FRAMES ARE OPTIONAL.
 DOORS AND FRAMES MUST BE ORDERED AT THE SAME TIME.

10 GAGE FLAT PLATE ASTRAGAL STRIP IS OPTIONAL AND WOULD BE FACTORY ATTACHED WITH SCREWS TO THE THREAT SIDE OF THE ACTIVE OR INACTIVE DOOR, DEPENDING ON IN SWING OR OUT SWING APPLICATION.

UL CLASSIFIED TO:

- ICC 500(2014) "ICC/NSSA Standard for the Design and Construction or Storm Shelters"
- FEMA P-361(2015) "Safe Rooms for Tornados & Hurricanes: Guidance for Community and Residential Safe Rooms"
- FEMA P-320 (2014) "Taking Shelter from the storm; Building a Safe Room for Your Home or Small Buisness"

"FRAMES ARE NOT REQUIRED TO BE GROUTED WHEN USING EXISTING WALL JAMB ANCHORS OR WHEN WELDED TO BUILDING STRUCTURE"

| STANDARD | SWING | RATING | | |
|---------------|----------------|---|--------------|------------|
| STANDARD | DIRECTION | IMPACT | DESIGN (PSF) | TEST (PSF) |
| ICC500/NSSA | | 15-LB LUMBER 2X4 MISSILE IMPACT @ 100 MPH | ±284 | ±341 |
| FEMA 320, 361 | OR OUTSWING | 15-LB LUMBER 2X4 MISSILE IMPACT @ 100 MPH | ±284 | ±341 |

ASSEMBLY MAY NOT COMPLY WITH DOMESTIC GOVERNMENT SOURCING REGULATIONS, TRADE AGREEMENTS OR ACQUISITION POLICIES.

DESIGNED TO ENDURE TORNADO FORCE WINDS AND FLYING DEBRIS. DEVELOPED TO RESIST MISSILE PENETRATION FOR USE IN BUILDINGS DESIGNED AS SHELTERS OR SAFE ROOMS TO PROTECT OCCUPANTS FROM INJURY. SUCCESSFULLY TESTED AND COMPLIANT TO ICC 500-2014 STANDARD.

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

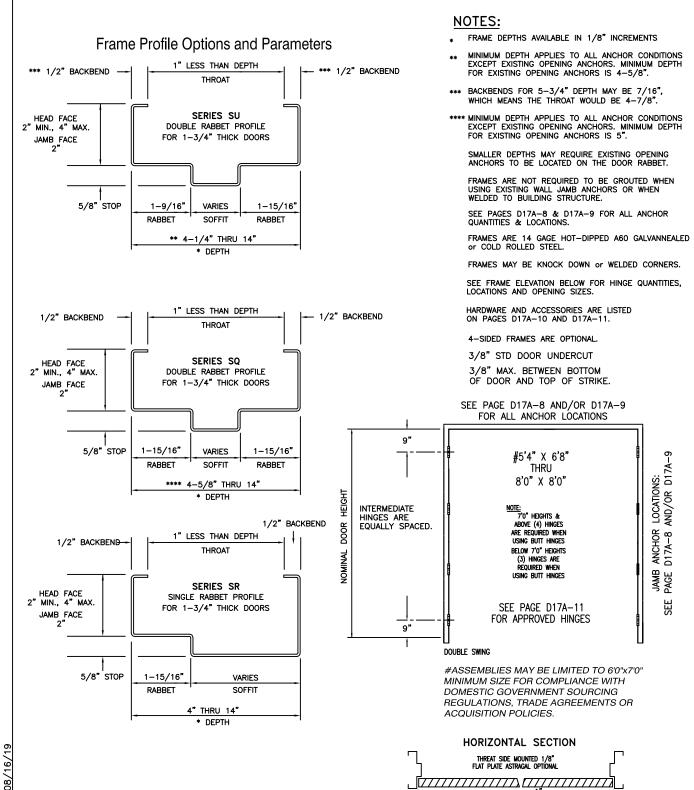
38/21



D17A-4B

1-3/4" StormPro® 361 & 320 TORNADO RESISTANT PAIRS WITH CORBIN RUSSWIN FE6600 or SARGENT FM7300 CONCEALED MULTI POINT LOCK

UL Classified to ICC 500 (2014), FEMA P-361 (2015) and FEMA P-320 (2014)



DOOR OPENING WIDTH

·32



ASSA ABLOY 1-3/4" StormPro®361 & 320 TORNADO RESISTANT COMMUNICATING PAIRS WITH CORBIN RUSSWIN FE6600 or SARGENT FM7300 CONCEALED MULTI POINT LOCK

ALL INFORMATION ON THIS PAGE APPLIES TO THE STORMPRO ASSEMBLY

<u>DOORS:</u> MIN. 5'-4" \times 6'-8", MAX. 8'-0" \times 8'-0" OPENING SIZE, 14 GA. A60 GALVANNEALED OR COLD ROLLED FACE SHEETS, WELDED TOP CAPS AND WITH POLYSTYRENE CORE. POLYURETHANE CORE MAY BE PROVIDED AT FACTORY DISCRETION.

LOCK:

CORBIN RUSSWIN FE6600 SERIES or SARGENT FM7300 SERIES

INACTIVE DOOR SURFACE BOLTS:

REINFORCED FOR CORBIN RUSSWIN 988CR, SARGENT 988, OR YALE 988Y

HINGES:

APPROVED HINGES ARE LISTED ON PAGE D17A-11. NON-STORMPRO DOORS DO NOT REQUIRE THE SAME HARDWARE, QUANTITIES OR LOCATIONS AS THE STORMPRO DOORS.

CLOSER:

APPROVED CLOSERS ARE LISTED ON PAGE D17A-11.

OPTIONAL HARDWARE AND ACCESSORIES:

APPROVED OPTIONAL HARDWARE AND ACCESSORIES
ARE LISTED ON PAGES D17A-10 AND D17A-11.

OPTIONAL FIRE RATING:

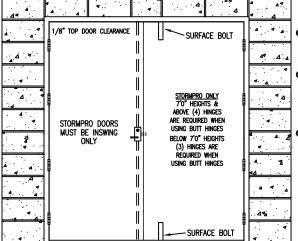
UP TO AND INCLUDING 3 HRS IN ACCORDANCE WITH UL 10B, UL 10C, UL 1784, & NFPA 252 IN HONEYCOMB CORE ONLY.

SEE PAGES D17A-8 & D17A-9 FOR ALL ANCHOR LOCATIONS.

SUGGESTED USE:

DISASTER & TORNADO SHELTERS STORM SHELTERS COMMUNITY SHELTERS SCHOOL SHELTERS SCHOOL "SAFE" ROOMS RESIDENTIAL "SAFE" ROOMS

- Corbin Russwin FE6600 & Sargent FM7300 concealed vertical rods, top & bottom bolts, & mortise lock body casette must be factory installed in a CECO StormPro door. All other hardware components are shipped directly from Sargent or Corbin Russwin & must be installed by a factory trained installer.
- IMPORTANT: DO NOT REMOVE ANY HARDWARE BLOCKING OR FILLER PLATES IN DOOR & THE FRAME UNTIL THE MORTISE LOCK IS READY TO BE INSTALLED.



10 GAGE FLAT PLATE ASTRAGAL STRIP IS OPTIONAL AND WOULD BE FACTORY ATTACHED WITH SCREWS TO THE THREAT SIDE OF THE INACTIVE DOOR.

UL CLASSIFIED TO:

- ICC 500(2014) "ICC/NSSA Standard for the Design and Construction of Storm Shelters"
- FEMA P-361(2015) "Safe Rooms for Tornados & Hurricanes: Guidance for Community and Residential Safe Rooms"
- •FEMA P-320 (2014) "Taking Shelter from the storm: Building a Safe Room for Your Home or Small Buisness"

 - 3/8" DOOR UNDERCUT 3/8" MAX. FROM BOTTOM OF DOOR TO TOP OF STRIKE
- BOTTOM STRIKES MUST BE ATTACHED TO CONCRETE OR STRUCTURAL STEEL AND ALLOW BOTTOM BOLTS TO PROPERLY ENGAGE STRIKES. BOTTOM LOCK STRIKE IS MANUFACTURED TO BE MORTISED IN FLOOR OR
- SURFACE MOUNTED.
- FLOORS MUST BE POURED LEVEL AND FRAMES MUST BE INSTALLED SQUARE AND PLUMB TO ALLOW DOORS TO FUNCTION PROPERLY. DOORS AND FRAMES MUST BE ORDERED AT THE SAME TIME.

"FRAMES ARE NOT REQUIRED TO BE GROUTED WHEN USING EXISTING WALL JAMB ANCHORS OR WHEN WELDED TO BUILDING STRUCTURE"

| STANDARD SWING | | RATING | | |
|----------------|-----------|---|--------------|------------|
| STANDARD | DIRECTION | IMPACT | DESIGN (PSF) | TEST (PSF) |
| ICC500/NSSA | INSWING | 15-LB LUMBER 2X4 MISSILE IMPACT @ 100 MPH | ±284 | ±341 |
| FEMA 320, 361 | ONLY | 15-LB LUMBER 2X4 MISSILE IMPACT @ 100 MPH | ±284 | ±341 |

DESIGN PRESSURES, ASSEMBLY CONSTRUCTION AND MANUFACTURING LOCATION MAY VARY TO COMPLY WITH DOMESTIC GOVERNMENT SOURCING REGULATIONS, TRADE AGREEMENTS OR ACQUISITION POLICIES. DESIGN PRESSURE MAY BE LIMITED TO +/-252 PSF AND TEST PRESSURE MAY BE LIMITED TO +/-302 PSF. ASSEMBLIES MAY BE LIMITED TO 6'0"x7'0" MINIMUM SIZE.

DESIGNED TO ENDURE TORNADO FORCE WINDS AND FLYING DEBRIS. DEVELOPED TO RESIST MISSILE PENETRATION FOR USE IN BUILDINGS DESIGNED AS SHELTERS OR SAFE ROOMS TO PROTECT OCCUPANTS FROM INJURY. SUCCESSFULLY TESTED AND COMPLIANT TO ICC 500-2014 STANDARD.



1-3/4" StormPro®361 & 320 TORNADO RESISTANT GLAZED COMMUNICATING PAIRS WITH CORBIN RUSSWIN FE6600 or SARGENT FM7300 CONCEALED MULTI POINT LOCK

ALL INFORMATION ON THIS PAGE APPLIES TO THE STORMPRO ASSEMBLY

DOORS:
MIN. 5'-4" x 6'-8", MAX. 8'-0" x 8'-0" OPENING SIZE, 14 GA.
A60 GALVANNEALED OR COLD ROLLED FACE SHEETS, WELDED TOP CAPS AND WITH POLYSTYRENE CORE.

LOCK:

CORBIN RUSSWIN FE6600 SERIES or SARGENT FM7300 SERIES

INACTIVE DOOR SURFACE BOLTS:

REINFORCED FOR CORBIN RUSSWIN 988CR, SARGENT 988, OR YALE 988Y

APPROVED HINGES ARE LISTED ON PAGE D17A-11.
NON-STORMPRO FRAMES DO NOT REQUIRE THE SAME HARDWARE,
QUANTITIES OR LOCATIONS AS THE STORMPRO FRAMES.

CLOSER:

APPROVED CLOSERS ARE LISTED ON PAGE D17A-11.

OPTIONAL HARDWARE AND ACCESSORIES:

APPROVED OPTIONAL HARDWARE AND ACCESSORIES ARE LISTED ON PAGES D17A-10 AND D17A-11.

OPTIONAL FIRE RATING:

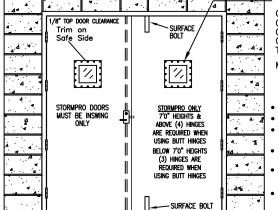
UP TO AND INCLUDING 90 MINUTE IN ACCORDANCE WITH UL 10B, UL 10C, UL 1784, & NFPA 252 IN HONEYCOMB CORE ONLY.

SEE PAGES D17A-8 & D17A-9 FOR ALL ANCHOR LOCATIONS.

SUGGESTED USE:

DISASTER & TORNADO SHELTERS STORM SHELTERS COMMUNITY SHELTERS SCHOOL SHELTERS SCHOOL "SAFE" ROOMS RESIDENTIAL "SAFE" ROOMS

- Corbin Russwin FE6600 & Sargent FM7300 concealed vertical rods, top & bottom bolts, & mortise lock body casette must be factory installed in a CECO StormPro door. All other hardware components are shipped directly from Sargent or Corbin Russwin & must be installed by a factory trained installer.
- IMPORTANT: DO NOT REMOVE ANY HARDWARE BLOCKING OR FILLER PLATES IN DOOR & THE FRAME UNTIL THE MORTISE LOCK IS READY TO BE INSTALLED.



10"x10" VISIBLE GLASS ONLY

CONTRAFLAM ULTIMAX 90 MUST BE FACTORY INSTALLED. GLASS THICKNESS IS 2-1/16" NOMINAL. GLASS WILL EXTEND BEYOND THE FACE OF THE DOOR ON THE THREAT SIDE. GLASS NOMINALLY CENTERED IN WIDTH AND LOCATED 60-3/8" ABOVE DOOR BOTTOM TO CENTERLINE OF GLASS ONLY.

MULTIPLE LITES NOT ALLOWED.

3/8" DOOR UNDERCUT 3/8" MAX. FROM BOTTOM OF DOOR TO TOP OF STRIKE

BOTTOM STRIKES MUST BE ATTACHED TO CONCRETE OR STRUCTURAL STEEL AND ALLOW BOTTOM BOLTS TO PROPERLY ENGAGE STRIKES.

BOTTOM LOCK STRIKE IS MANUFACTURED TO BE MORTISED IN FLOOR OR SURFACE MOUNTED.

FLOORS MUST BE POURED LEVEL AND FRAMES MUST BE INSTALLED SQUARE AND PLUMB TO ALLOW DOORS TO FUNCTION PROPERLY.

DOORS AND FRAMES MUST BE ORDERED AT THE SAME TIME.

10 GAGE FLAT PLATE ASTRAGAL STRIP IS OPTIONAL AND WOULD BE FACTORY ATTACHED WITH SCREWS TO THE THREAT SIDE OF THE INACTIVE DOOR.

UL CLASSIFIED TO:

- ICC 500(2014) "ICC/NSSA Standard for the Design and Construction or Storm Shelters"
- FEMA P-361(2015) "Safe Rooms for Tornados & Hurricanes: Guidance for Community and Residential Safe Rooms"
- FEMA P-320 (2014) "Taking Shelter from the storm: Building a Safe Room for Your Home or Small Buisness"

"FRAMES ARE NOT REQUIRED TO BE GROUTED WHEN USING EXISTING WALL JAMB ANCHORS OR WHEN WELDED TO BUILDING STRUCTURE"

| SWING | | RATING | | |
|---------------|-----------|---|--------------|------------|
| STANDARD | DIRECTION | IMPACT | DESIGN (PSF) | TEST (PSF) |
| ICC500/NSSA | INSWING | 15-LB LUMBER 2X4 MISSILE IMPACT @ 100 MPH | ±284 | ±341 |
| FEMA 320, 361 | ONLY | 15-LB LUMBER 2X4 MISSILE IMPACT @ 100 MPH | ±284 | ±341 |

ASSEMBLY MAY NOT COMPLY WITH DOMESTIC GOVERNMENT SOURCING REGULATIONS, TRADE AGREEMENTS OR ACQUISITION POLICIES.

DESIGNED TO ENDURE TORNADO FORCE WINDS AND FLYING DEBRIS. DEVELOPED TO RESIST MISSILE PENETRATION FOR USE IN BUILDINGS DESIGNED AS SHELTERS OR SAFE ROOMS TO PROTECT OCCUPANTS FROM INJURY. SUCCESSFULLY TESTED AND COMPLIANT TO ICC 500-2014 STANDARD.

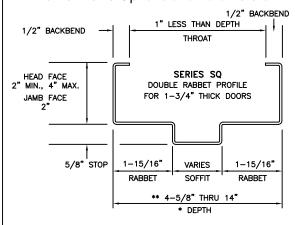


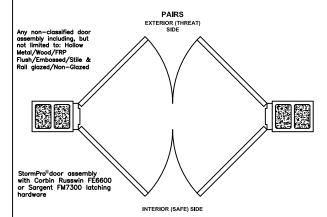
D17A-4E

1-3/4" StormPro® 361 & 320 TORNADO RESISTANT COMMUNICATING PAIRS WITH CORBIN RUSSWIN FE6600 or SARGENT FM7300 CONCEALED MULTI POINT LOCK

UL Classified to ICC 500 (2014), FEMA P-361 (2015) and FEMA P-320 (2014)

Frame Profile Options and Parameters





#Assemblies may be limited to 6'0"x7'0" minimum size for compliance with domestic government sourcing regulations. trade agreements or acquisition policies.

NOTES:

- FRAME DEPTHS AVAILABLE IN 1/8" INCREMENTS
- MINIMUM DEPTH APPLIES TO ALL ANCHOR CONDITIONS EXCEPT EXISTING OPENING ANCHORS. MINIMUM DEPTH FOR EXISTING OPENING ANCHORS IS 5". DEPTH MAY ALSO BE LIMITED BY STORMPRO DOORS AND NON STORMPRO DOOR'S HARDWARE.

SMALLER DEPTHS MAY REQUIRE EXISTING OPENING ANCHORS TO BE LOCATED ON THE DOOR RABBET.

FRAMES ARE NOT REQUIRED TO BE GROUTED WHEN USING EXISTING WALL JAMB ANCHORS OR WHEN WELDED TO BUILDING STRUCTURE.

SEE PAGES D17A-8 & D17A-9 FOR ALL ANCHOR QUANTITIES & LOCATIONS.

FRAMES ARE 14 GAGE HOT-DIPPED A60 GALVANNEALED or COLD ROLLED STEEL.

FRAMES MAY BE KNOCK DOWN or WELDED CORNERS.

HARDWARE AND ACCESSORIES ARE LISTED ON PAGES D17A-10 AND D17A-11. SEE FRAME ELEVATION BELOW FOR HINGE QUANTITES, LOCATIONS AND OPENING SIZES. NON-STORMPRO FRAMES DO NOT REQUIRE THE SAME HARDWARE, QUANTITIES OR LOCATIONS AS THE STORMPRO FRAMES.

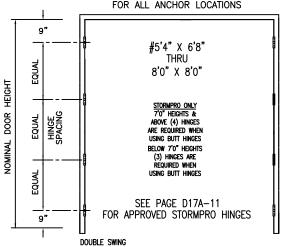
FRAMES MAY BE KNOCK DOWN or WELDED CORNERS.

4-SIDED FRAMES ARE NOT ALLOWED.

WHEN DETERMINING FRAME DEPTH, CONSIDERATION SHOULD BE GIVEN REGARDING IF THE FRAME DEPTH WILL ACCOMMODATE HARDWARE INSTALLED ON BOTH THE PASSAGE PAIR OF DOORS AND THE STORMPRO PAIR.

MINIMUM FRAME DEPTHS SHOWN ON THIS PAGE ARE STORMPRO LIMITS, BUT MAY NOT ACCOMMODATE HARDWARE INSTALLED ON BOTH PAIRS.

SEE PAGE D17A-8 AND/OR D17A-9 FOR ALL ANCHOR LOCATIONS

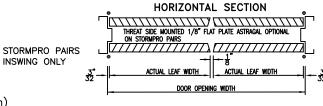


3/8" STD DOOR UNDERCUT 3/8" MAX. BETWEEN BOTTOM OF DOOR AND TOP OF STRIKE.

LOCATIONS: AND/OR D17A-9

ANCHOR I

JAMB PAGE 1



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

08/28/19



ASSA ABLOY 1-3/4" StormPro® Shutter TORNADO RESISTANT SINGLES WITH CORBIN RUSSWIN FE6700 or SARGENT FM6100 CONCEALED MULTI POINT LOCK

SHUTTER:

2'-6" x 3'-0" MIN. & 4'-0" x 6'-8" MAX. LEAF SIZE, 14 GA. A60 GALVANNEALED or COLD ROLLED FACE SHEETS WITH 10 GA. LINER & POLYSTYRENE CORE.

CORBIN RUSSWIN FE6700 SERIES or SARGENT FM6100 SERIES

CLOSER:

APPROVED CLOSERS ARE LISTED ON PAGE D17A-11.

HINGES:

APPROVED HINGES ARE LISTED ON PAGE D17A-11.

HINGE NOTES: HEIGHTS FROM 3'0" THRU 5'0" WILL HAVE (3) MORTISE BUTT HINGE PREPS.

HEIGHTS GREATER THAN 5'0" THRU 6'8" WILL HAVE (4) MORTISE BUTT HINGE PREPS.

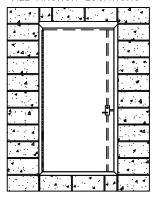
OPTIONAL HARDWARE AND ACCESSORIES:
APPROVED OPTIONAL HARDWARE AND ACCESSORIES ARE SHOWN ON PAGES D17A-10 AND D17A-11.

OPTIONAL FIRE RATING:

VERTICAL SECTION

UP TO AND INCLUDING 3 HOURS IN ACCORDANCE WITH UL 10B, UL 10C & NFPA 252 WITH STEEL STIFFENED CORE ONLY.

SEE PAGE D17A-5B FOR ALL ANCHOR LOCATIONS



THREAT SIDE THREAT SIDE PROTECTIVE PLATING PROTECTIVE PLATING 1-15/16"

INSWING OR OUTSWING

HORIZONTAL SECTION

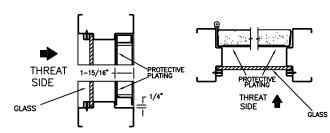
SUGGESTED USE:

DISASTER AND TORNADO SHELTERS STORM SHELTERS **COMMUNITY SHELTERS** SCHOOL SHELTERS SCHOOL "SAFE" ROOMS RESIDENTIAL "SAFE" ROOMS

UL CLASSIFIED TO:

- ICC 500 (2014) "ICC/NSSA Standard for the Design and Construction of Storm Shelters"
- FEMA P-361 (2015) "Safe Rooms for Tornados & **Hurricanes: Guidance for Community and** Residential Safe Rooms"
- FEMA P-320 (2014) "Taking Shelter from the Storm: **Building a Safe Room for Your Home or Small Buisness**"
- 1/4" UNDERCUT ONLY
- SILL MUST BE LEVEL & FRAME MUST BE INSTALLED SQUARE & PLUMB TO ALLOW SHUTTER TO FUNCTION PROPERLY.
- SHUTTER AND FRAME MUST BE ORDERED AT THE SAME TIME.

SHUTTER & WINDOW ASSEMBLY OPTION VERTICAL SECTION HORIZONTAL SECTION



- INSWING SHOWN ON EXTERIOR WALL
- BEAD SET TO STOP-POCKET TO BE SET IN THE FIELD
- GLASS BY OTHERS, AND IS NOT REQUIRED TO BE IMPACT RESISTANT.

| STANDARD | SWING | RATING | | | | | | |
|----------------|------------|---|--------------|------------|--|--|--|--|
| 31/11/0/11/0 | DIRECTION | IMPACT | DESIGN (PSF) | TEST (PSF) | | | | |
| ICC 500/NSSA | INSWING OR | 15-LB LUMBER 2X4 MISSILE IMPACT @ 100 MPH | ±284 | ±341 | | | | |
| FEMA 361 & 320 | OUTSWING | 15-LB LUMBER 2X4 MISSILE IMPACT @ 100 MPH | ±284 | ±341 | | | | |

ASSEMBLY MAY NOT COMPLY WITH DOMESTIC GOVERNMENT SOURCING REGLUATIONS, TRADE AGREEMENTS OR ACQUISITION POLICIES.

DESIGNED TO ENDURE TORNADO FORCE WINDS AND FLYING DEBRIS. DEVELOPED TO RESIST MISSILE PENETRATION FOR USE IN BUILDINGS DESIGNED AS SHELTERS OR SAFE ROOMS TO PROTECT OCCUPANTS FROM INJURY. SUCCESSFULLY TESTED AND COMPLIANT TO ICC 500-2014 STANDARD.

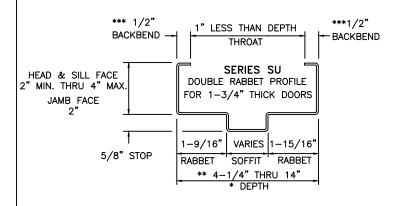
"FRAMES ARE NOT REQUIRED TO BE GROUTED WHEN USING EXISTING WALL JAMB ANCHORS OR WHEN WELDED TO BUILDING STRUCTURE"

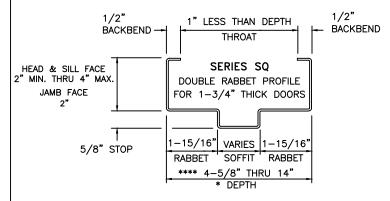


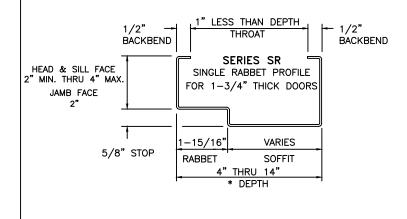
D17A-5A

ASSA ABLOY 1-3/4" StormPro® Shutter TORNADO RESISTANT SINGLES WITH CORBIN RUSSWIN FE6700 or SARGENT FM6100 CONCEALED MULTI POINT LOCK UL CLASSIFIED TO ICC 500(2014), FEMA P-361(2015) AND FEMA P-320(2014)

Frame Profile Options and Parameters







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

NOTES:

- FRAME DEPTHS AVAILABLE IN 1/8" INCREMENTS
- MINIMUM DEPTH APPLIES TO ALL ANCHOR CONDITIONS EXCEPT EXISTING OPENING ANCHORS. MINIMUM DEPTH FOR EXISTING OPENING ANCHORS IS 4-5/8".
- * BACKBENDS FOR 5-3/4" DEPTH MAY BE 7/16", WHICH MEANS THE THROAT WOULD BE 4-7/8".
- *MINIMUM DEPTH APPLIES TO ALL ANCHOR CONDITIONS EXCEPT EXISTING OPENING ANCHORS. MINIMUM DEPTH FOR EXISTING OPENING ANCHORS IS 5".

SMALLER DEPTHS MAY REQUIRE EXISTING OPENING ANCHORS TO BE LOCATED ON THE DOOR RABBET.

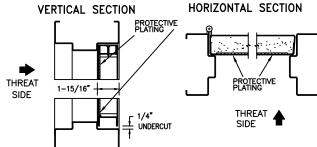
FRAMES ARE NOT REQUIRED TO BE GROUTED WHEN USING EXISTING WALL JAMB ANCHORS OR WHEN WELDED TO BUILDING STRUCTURE.

SEE PAGE D17A-5B FOR ALL ANCHOR QUANTITIES & LOCATIONS.

FRAMES ARE 14 GAGE HOT-DIPPED A60 GALVANNEALED or COLD ROLLED STEEL.

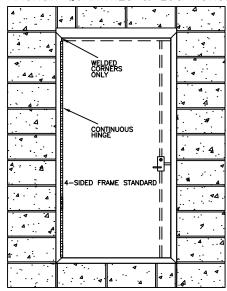
FRAMES WILL HAVE WELDED CORNERS.

APPROVED OPTIONAL HARDWARE AND ACCESSORIES ARE SHOWN ON PAGES D17A-10 AND D17A-11.



INSWING OR OUTSWING

SEE PAGE D17A-5B FOR ALL ANCHOR QUANTITIES & LOCATIONS.





D17A-5B

ASSA ABLOY 1-3/4" StormPro® Shutter TORNADO RESISTANT SINGLES WITH CORBIN RUSSWIN FE6700 or SARGENT FM6100 CONCEALED MULTI POINT LOCK

UL CLASSIFIED TO ICC 500 (2014), FEMA P-361 (2015) AND FEMA P-320 (2014)

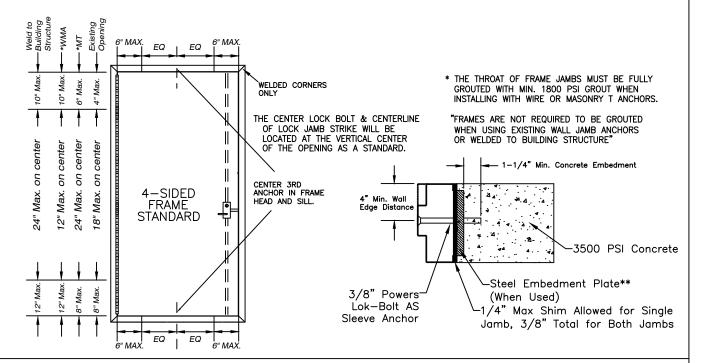
FRAME ANCHORING

FRAME HEAD & SILL ANCHORS:

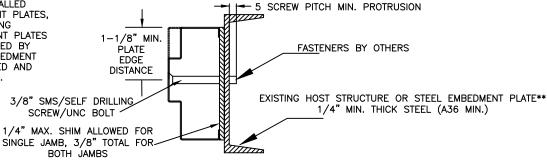
EXISTING OPENING DIMPLES W/ BOLTS, SCREWS
OR WELD TO BUILDING STRUCTURE

3 ANCHORS PER HEAD & SILL 2'6" THRU 4'0".

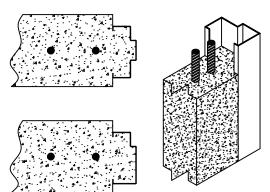
SEE PAGE D17A-8 FOR WIRE & MASONRY "T" ANCHORS, ANCHOR BOLTS & CAP PLUGS.



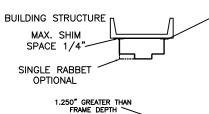
**ANCHORS MAY BE INSTALLED THROUGH EXISTING EMBEDMENT PLATES,
PROVIDED THAT DRILLING THROUGH EXISTING EMBEDMENT PLATES
IS PERMISSABLE AS VERIFIED BY OTHERS. ANY EXISTING EMBEDMENT PLATES SHALL BE DESIGNED AND VERIFIED BY OTHERS.



FRAME POURED IN PLACE WITH THE WALL DOES NOT REQUIRE ANCHORS



ANCHORING BY WELDING TO BUILDING STRUCTURE



18 GAGE MIN., 1/4" MAX. THICK A-36 STEEL SHIMS CENTERED UNDER FRAME.WELD PERIMETER OF 5/8" X 2" X 5/8" ENDS OF SHIMS TO STRUCTURAL BUILDING MEMBER WITH FILLET WELDS SIZED AS FOLLOWS USING E6018 AS FOLLOWS USING E6018
ELECTRODES. FILLET WELD SIZE
SAME AS SHIM THICKNESS FOR
0.053" TO 0.125" SHIM THICKNESS.
WELD SIZE 1/8" FOR 0.125" TO
1/4" SHIM THICKNESS.



Experience a safer and more open world

assa abloy

1-3/4" StormPro®Shutter TORNADO RESISTANT PAIRS WITH CORBIN RUSSWIN FE6700 or SARGENT FM6100 CONCEALED MULTI POINT LOCK

MIN. $5'-0" \times 4'-0"$, MAX. $8'-0" \times 6'-8"$ OPENING SIZE, 14 GA. A60 GALVANNEALED OR COLD ROLLED FACE SHEETS WITH 10 GAGE LINER, STIFFENER & POLYSTYRENE CORE. PAIRS CAN BE INSWING OR OUTSWING.

CORBIN RUSSWIN FE6700 SERIES or SARGENT FM6100 SERIES

INACTIVE SHUTTER SURFACE BOLTS:

REINFORCED FOR CORBIN RUSSWIN 988CR, SARGENT 988, OR YALE 988Y

APPROVED CLOSERS ARE SHOWN ON PAGE D17A-11.

APPROVED HINGES ARE SHOWN ON PAGE D17A-11.

HINGE NOTES:

HEIGHTS FROM 4'0" THRU 5'0" WILL HAVE (3) MORTISE BUTT HINGE PREPS.

HEIGHTS GREATER THAN 5'0" THRU 6'8" WILL HAVE (4) MORTISE BUTT HINGE PREPS.

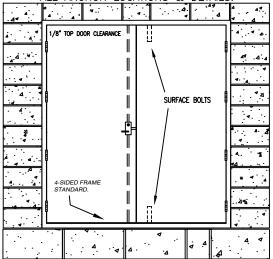
OPTIONAL HARDWARE & ACCESSORIES:

APPROVED OPTIONAL HARDWARE AND ACCESSORIES ARE LISTED ON PAGES D17A-10 AND D17A-11.

FIRE RATING:

NOT AVAILABLE

SEE PAGES D17A-6B & D17A-8 FOR ALL ANCHOR LOCATIONS & DETAILS



OPTIONAL FLAT PLATE ASTRAGAL:

10 GAGE FLAT PLATE ASTRAGAL IS FACTORY ATTACHED WITH SCREWS TO THE THREAT SIDE OF THE ACTIVE OR INACTIVE SHUTTER, DEPENDING ON IN SWING OR OUT SWING APPLICATION.

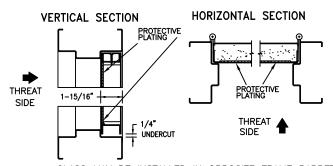
SUGGESTED USE:

DISASTER & TORNADO SHELTERS STORM SHELTERS COMMUNITY SHELTERS SCHOOL SHELTERS SCHOOL "SAFE" ROOMS RESIDENTIAL "SAFE" ROOMS

UL CLASSIFIED TO:

- ICC 500(2014) "ICC/NSSA Standard for the Design and Construction of Storm Shelters"
- FEMA P-361(2015) "Safe Rooms for Tornados & **Hurricanes: Guidance for Community and Residential** Safe Rooms[®]
- •FEMA P-320 (2014) "Taking Shelter from the storm: Building a Safe Room for Your Home or Small Buisness"
- 1/4" DOOR UNDERCUT. 1/4" MAX. FROM BOTTOM OF SHUTTER TO TOP OF LOCK STRIKE.
- FRAMES MUST BE INSTALLED SQUARE AND PLUMB TO ALLOW SHUTTERS TO FUNCTION PROPERLY.
- BOTTOM STRIKES MUST BE ATTACHED TO FRAME SILL AND ALLOW BOTTOM BOLTS TO PROPERLY ENGAGE STRIKES.

 SHUTTERS AND FRAMES MUST BE ORDERED AT THE SAME TIME.



GLASS MAY BE INSTALLED IN OPPOSITE FRAME RABBET AS AN OPTION. GLASS BY OTHERS, AND IS NOT REQUIRED TO BE IMPACT RESISTANT.

"FRAMES ARE NOT REQUIRED TO BE GROUTED WHEN USING EXISTING WALL JAMB ANCHORS OR WHEN WELDED TO BUILDING STRUCTURE"

| STANDARD SWING | | RATING | | | | | | |
|----------------|----------------|---|--------------|------------|--|--|--|--|
| STANDARD | DIRECTION | IMPACT | DESIGN (PSF) | TEST (PSF) | | | | |
| ICC500/NSSA | INSMING | 15-LB LUMBER 2X4 MISSILE IMPACT @ 100 MPH | ±284 | ±341 | | | | |
| FEMA 320 & 361 | OR OUTSWING | 15-LB LUMBER 2X4 MISSILE IMPACT @ 100 MPH | ±284 | ±341 | | | | |

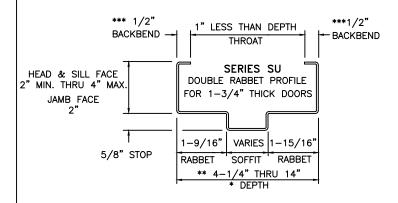
ASSEMBLY MAY NOT COMPLY WITH DOMESTIC GOVERNMENT SOURCING REGLUATIONS, TRADE AGREEMENTS OR ACQUISITION POLICIES.

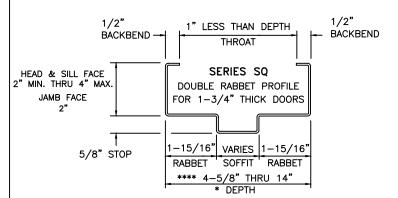
DESIGNED TO ENDURE TORNADO FORCE WINDS AND FLYING DEBRIS. DEVELOPED TO RESIST MISSILE PENETRATION FOR USE IN BUILDINGS DESIGNED AS SHELTERS OR SAFE ROOMS TO PROTECT OCCUPANTS FROM INJURY. SUCCESSFULLY TESTED AND COMPLIANT TO ICC 500-2014 STANDARD.

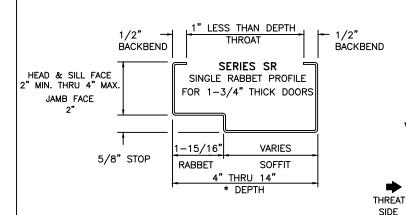
D17A-6A

ASSA ABLOY 1-3/4" StormPro® Shutter TORNADO RESISTANT PAIRS WITH CORBIN RUSSWIN FE6700 or SARGENT FM6100 CONCEALED MULTI POINT LOCK UL CLASSIFIED TO ICC 500(2014), FEMA P-361(2015) AND FEMA P-320(2014)

Frame Profile Options and Parameters







OPTIONAL FLAT PLATE ASTRAGAL:
10 GAGE FLAT PLATE ASTRAGAL IS FACTORY ATTACHED WITH SCREWS TO THE THREAT SIDE OF THE ACTIVE OR INACTIVE SHUTTER. DEPENDING ON IN SWING OR OUT SWING APPLICATION.

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

NOTES:

- * FRAME DEPTHS AVAILABLE IN 1/8" INCREMENTS
- MINIMUM DEPTH APPLIES TO ALL ANCHOR CONDITIONS EXCEPT EXISTING OPENING ANCHORS. MINIMUM DEPTH FOR EXISTING OPENING ANCHORS IS 4-5/8".
- *** BACKBENDS FOR 5-3/4" DEPTH MAY BE 7/16", WHICH MEANS THE THROAT WOULD BE 4-7/8".
- MINIMUM DEPTH APPLIES TO ALL ANCHOR CONDITIONS EXCEPT EXISTING OPENING ANCHORS. MINIMUM DEPTH FOR EXISTING OPENING ANCHORS IS 5".

SMALLER DEPTHS MAY REQUIRE EXISTING OPENING ANCHORS TO BE LOCATED ON THE DOOR RABBET.

FRAMES ARE NOT REQUIRED TO BE GROUTED WHEN USING EXISTING WALL JAMB ANCHORS OR WHEN WELDED TO BUILDING STRUCTURE.

SEE PAGES D17A-6B & D17A-8 FOR ALL ANCHOR LOCATIONS & DETAILS.

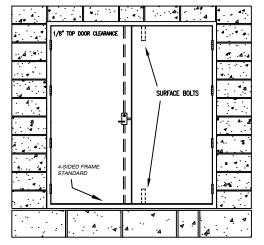
FRAMES ARE 14 GAGE HOT-DIPPED A60 GALVANNEALED or COLD ROLLED STEEL.

FRAMES WILL HAVE WELDED CORNERS.

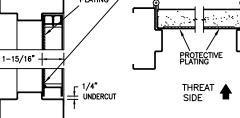
HEIGHTS FROM 4'0" THRU 5'0 WILL HAVE (3) HINGE PREPS. HEIGHTS OVER 5'0 THRU 6'8" WILL HAVE (4) HINGE PREPS.

APPROVED OPTIONAL HARDWARE AND ACCESSORIES ARE LISTED ON PAGES D17A-10 AND D17A-11.

SEE PAGES D17A-6B & D17A-8 FOR ALL ANCHOR LOCATIONS & DETAILS.









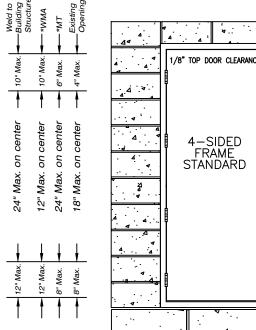
D17A-6B

ASSA ABLOY 1-3/4" StormPro® Shutter TORNADO RESISTANT PAIRS WITH CORBIN RUSSWIN FE6700 or SARGENT FM6100 CONCEALED MULTI POINT LOCK

UL CLASSIFIED TO ICC 500 (2014), FEMA P-361 (2015) AND FEMA P-320 (2014)

FRAME ANCHORING

See page D17A-8 for other anchor details.



TANDARD SURFACE BOLTS SURFACE BOLTS FRAME STANDARD Greate Min. of Center edges from Greate Min. of from edges 6" from Min. of Note:

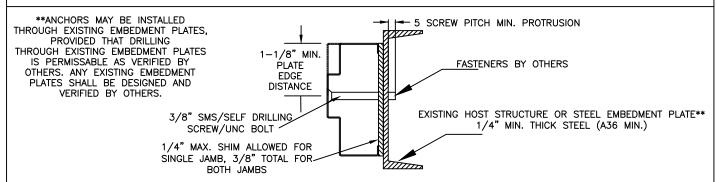
FRAME HEAD & SILL ANCHOR LOCATIONS:

Existing opening dimples with bolts, screws, or weld to building structure. Up to & including 6'0" wide:
Min. of (6) anchors located from center line of the door meeting edges both sides 8", 15" and 6" from door jamb rabbet.

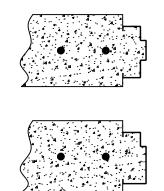
Greater than 6'0" thru 7'0" wide: Min. of (8) anchors located from center line of the door meeting edges both sides 8", 15", 22" & 6" from door jamb rabbet.

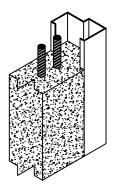
Greater than 7'0" thru 8'0" wide: Min. of (8) anchors located from center line of the door meeting edges both sides 8", 15", 24" & 6" from door jamb rabbet.

Note: For unequal width pairs, head & sill anchor quantity/spacing for each side of the centerline of the door meeting edges shall be determined as though the leaf size was part of an equal width pair.

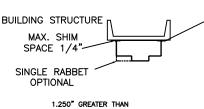


FRAME POURED IN PLACE WITH THE WALL DOES NOT REQUIRE ANCHORS

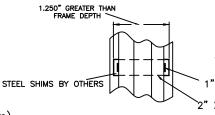




ANCHORING BY WELDING TO BUILDING STRUCTURE



18 GAGE MIN., 1/4" MAX. THICK A-36 STEEL SHIMS CENTERED UNDER FRAME.WELD PERIMETER OF 5/8" X 2" X 5/8" ENDS OF SHIMS TO STRUCTURAL BUILDING MEMBER WITH FILLET WELDS SIZED AS FOLLOWS USING E6018 ELECTRODES. FILLET WELD SIZE SAME AS SHIM THICKNESS FOR 0.053" TO 0.125" SHIM THICKNESS. WELD SIZE 1/8" FOR 0.125" TO 1/4" SHIM THICKNESS.



WELD HOLLOW METAL FRAME TO SHIM WITH 3/16" WELD, 1" LONG BOTH SIDES OF FRAME

2" X JAMB DEPTH + 1.250"

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

1-3/4" StormPro® 320 & 361 TORNADO RESISTANT FLUSH DOOR & FRAME

UL CLASSIFIED TO ICC 500 (2014), FEMA P-361 (2015) AND FEMA P-320 (2014)

DOOR:

D17A-7

MIN. 2'-8" x 6'-8", MAX. 3'-0" X 7'-0" LEAF SIZE, 14 GA. A60 GALVANNEALED OR COLD ROLLED FACE SHEETS, 12 GA. TOP & BOTTOM CHANNELS WITH 14 GA. TOP & BOTTOM CAPS. EDGE SEAMS ARE FULLY WELDED WITH A 12 GA. FULL LENGTH STIFFENER ALONG THE LOCK EDGE. 16 GAGE INTERMEDIATE STIFFENERS ARE SPACED A MAX. OF 6" APART. POLYSTYRENE FILLER IS USED BETWEEN THE STIFFENERS. DOORS HAVE SQUARE LOCK AND HINGE EDGES.

HARDWARE PROVIDED (SHIPPED LOOSE):

PASSAGE SET LOCK & DEADBOLTS

- (1) SARGENT 10 LINE GRADE 1 PASSSAGE SET. 28-10U15XLLX26DLHR
- (3) MEDECO MAXUM COMMERCIAL HIGH SECURITY DEADBOLTS. 11C602T-26-DL-T-N A, KA3

HINGES:

(3) McKINNEY SP3786 26D (4-1/2" X 4-1/2" X .180") WITHOUT QC OPTION

OPTIONAL HARDWARE NOT PROVIDED:

CLOSER:

APPROVED CLOSERS ARE SHOWN ON PAGE D17A-11.

HINGES:

APPROVED HINGES ARE SHOWN ON PAGE D17A-11.

OPTIONAL HARDWARE AND ACCESSORIES:

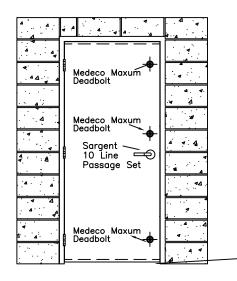
APPROVED OPTIONAL HARDWARE AND ACCESSORIES ARE SHOWN ON PAGES D17A-10 AND D17A-11.

UL CLASSIFIED TO:

- ICC 500(2014) "ICC/NSSA Standard for the Design and Construction of "Storm Shelters"
- FEMA P-361 (2015) "Safe Rooms for Tornadoes & Hurricanes: Guidance for Community and Residential Safe Rooms"
- FEMA P-320 (2014) "Taking Shelter from the Storm: Building a Safe Room for Your Home or Small Buisness"

FIRE RATING: NOT AVAILABLE

DOOR SWING: INSWING OR OUTSWING



SUGGESTED USE: RESIDENTIAL and SMALL BUSINESS "SAFE" ROOMS

_3/4" MAX. UNDERCUT

DESIGNED TO ENDURE TORNADO FORCE WINDS AND FLYING DEBRIS. DEVELOPED TO RESIST MISSILE PENETRATION FOR USE IN BUILDINGS DESIGNED AS SAFE ROOMS OR SHELTERS TO PROTECT OCCUPANTS FROM INJURY. SUCCESSFULLY TESTED AND COMPLIANT TO ICC 500-2014 STANDARD.

ASSEMBLY MAY NOT COMPLY WITH DOMESTIC GOVERNMENT SOURCING REGLUATIONS, TRADE AGREEMENTS OR ACQUISITION POLICIES.

"FRAMES ARE NOT REQUIRED TO BE GROUTED WHEN USING EXISTING WALL JAMB ANCHORS OR WHEN WELDED TO BUILDING STRUCTURE."

1-3/4" StormPro® 320 & 361 with Glass TORNADO RESISTANT DOOR & FRAME

UL CLASSIFIED TO ICC 500(2014), FEMA P-361 (2015) AND FEMA P-320 (2014)

DOOR:

D17A-7A

MIN. 2'-8" x 6'-8", MAX. 3'-0" X 7'-0" LEAF SIZE, 14 GA. A60 GALVANNEALED OR COLD ROLLED FACE SHEETS, 12 GA. TOP & BOTTOM CHANNELS WITH 14 GA. TOP & BOTTOM CAPS. EDGE SEAMS ARE FULLY WELDED WITH A 12 GA. FULL LENGTH STIFFENER ALONG THE LOCK EDGE. 16 GAGE INTERMEDIATE STIFFENERS ARE SPACED A MAX. OF 6" APART. POLYSTYRENE FILLER IS USED BETWEEN THE STIFFENERS. DOORS HAVE SQUARE LOCK AND HINGE EDGES.

HARDWARE PROVIDED (SHIPPED LOOSE)

PASSAGE SET LOCK & DEADBOLTS

- (1) SARGENT 10 LINE GRADE 1 PASSAGE SET. 28-10U15XLLX26DLHR
- (3) MEDECO MAXUM COMMERCIAL HIGH SECURITY DEADBOLTS. 11C602T-26-DL-T-N A, KA3

(3) McKINNEY SP3786 26D (4-1/2" X 4-1/2" X .180")

OPTIONAL HARDWARE NOT PROVIDED

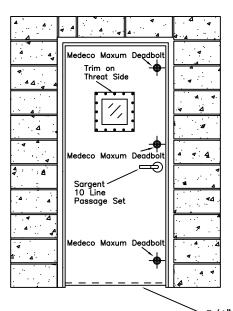
APPROVED CLOSERS ARE LISTED ON PAGE D17A-11.

HINGES: APPROVED HINGES ARE LISTED ON PAGE D17A-11.

OPTIONAL HARDWARE AND ACCESSORIES: APPROVED OPTIONAL HARDWARE AND ACCESSORIES ARE LISTED ON PAGES D17A-10 AND D17A-11.

FIRE RATING: NOT AVAILABLE

DOOR SWING: INSWING ONLY



SUGGESTED USE: RESIDENTIAL and SMALL **BUSINESS "SAFE" ROOMS**

*10"X10" VISIBLE GLASS ONLY *GLASS & KIT FACTORY

INSTALLED ONLY

*MULTIPLE LITES NOT ALLOWED

- *LOCATED 60" ABOVE DOOR **BOTTOM TO CENTERLINE OF** GLASS WITH 3/4" UNDERCUT & CENTERED IN DOOR WIDTH ONLY
- * DESIGN PATENT PENDING

* INSWING ONLY

>3/4" MAX. UNDERCUT

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

DESIGNED TO ENDURE TORNADO FORCE WINDS AND FLYING DEBRIS. DEVELOPED TO RESIST MISSILE PENETRATION FOR USE IN BUILDINGS DESIGNED AS SAFE ROOMS OR SHELTERS TO PROTECT OCCUPANTS FROM INJURY. SUCCESSFULLY TESTED AND COMPLIANT TO ICC 500-2014 STANDARD.

ASSEMBLY MAY NOT COMPLY WITH DOMESTIC GOVERNMENT SOURCING REGLUATIONS, TRADE AGREEMENTS OR ACQUISITION POLICIES.

FRAMES ARE NOT REQUIRED TO BE GROUTED WHEN USING EXISTING WALL JAMB ANCHORS" OR WHEN WELDED TO BUILDING STRUCTURE.

Experience a safer and more open world

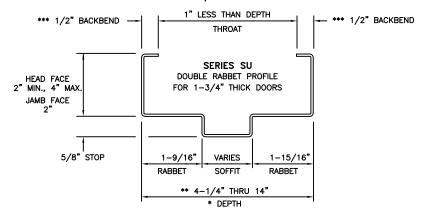


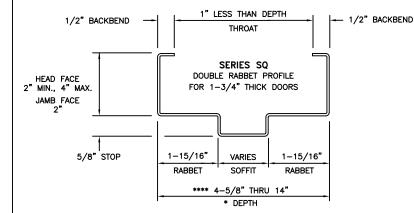
D17A-7B

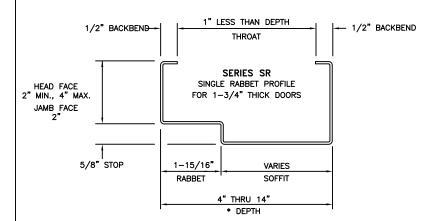
1-3/4" StormPro® 320 & 361 TORNADO RESISTANT DOOR & FRAME

UL CLASSIFIED TO ICC 500(2014), FEMA P-320 (2014) AND FEMA P-361 (2015)

Frame Profile Options and Parameters







| 1 | STANDARD SWING DIRECTION | | RATING | | | | | | | | | | | |
|---|--------------------------|----------|--------|--------|-----|---------|--------|--------|-------|------|-------|-----|-----|------|
| | | | IMPACT | | | | | DESIGN | (PSF) | TEST | (PSF) | | | |
| | ICC 500/NSSA | INSWING | 15-LB | LUMBER | 2X4 | MISSILE | IMPACT | 0 | 100 | MPH | +/- | 254 | +/- | -305 |
| | FEMA 320/361 | OUTSWING | 15-LB | LUMBER | 2X4 | MISSILE | IMPACT | 0 | 100 | MPH | +/- | 254 | +/- | -305 |

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

NOTES:

- * FRAME DEPTHS AVAILABLE IN 1/8" INCREMENTS
- ** MINIMUM DEPTH APPLIES TO ALL ANCHOR CONDITIONS EXCEPT EXISTING OPENING ANCHORS. MINIMUM DEPTH FOR EXISTING OPENING ANCHORS IS 4-5/8".
- *** BACKBENDS FOR 5-3/4" DEPTH MAY BE 7/16", WHICH MEANS THE THROAT WOULD BE 4-7/8".
- **** MINIMUM DEPTH APPLIES TO ALL ANCHOR CONDITIONS EXCEPT EXISTING OPENING ANCHORS. MINIMUM DEPTH FOR EXISTING OPENING ANCHORS IS 5".

SMALLER DEPTHS MAY REQUIRE EXISTING OPENING ANCHORS TO BE LOCATED ON THE DOOR RABBET.

FRAMES ARE NOT REQUIRED TO BE GROUTED WHEN USING EXISTING WALL JAMB ANCHORS OR WHEN WELDED TO BUILDING STRUCTURE.

FRAMES WILL HAVE 10" MORTAR GUARD/JUNCTION BOXES COVERING EACH DEADBOLT STRIKE PREPARATION. DEADBOLT STRIKE PREPS ARE A 1" ROUND HOLE WITH REINFORCING WELDED TO THE THROAT OF THE FRAME. DEADBOLT STRIKE PREPS DO NOT REQUIRE STRIKES TO BE INSTALLED.

SEE PAGES D17A-8 & D17A-9 FOR ALL ANCHOR QUANTITIES & LOCATIONS.

FRAMES ARE 16 GAGE MIN. HOT-DIPPED A60 GALVANNEALED or COLD ROLLED STEEL.

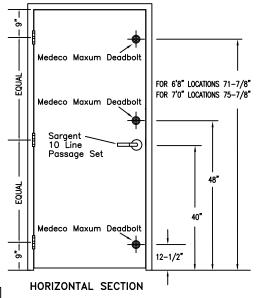
FRAMES MAY BE KNOCK DOWN or WELDED CORNERS.

(2) 12 GA. HIGH FREQUENCY HINGE STRAPS PER HINGE REINFORCEMENT.

OPTIONAL (1) 10"X10" VISIBLE GLASS LOCATED 60"
ABOVE DOOR BOTTOM WITH 3/" UNDERCUT TO CENTER
OF GLASS, CENTERED IN DOOR WIDTH AVAILABLE.
OPTIONAL DOOR WITH GLASS AVAILABLE AS INSWING
ONLY

APPROVED OPTIONAL HARDWARE AND ACCESSORIES ARE LISTED ON PAGES D17A-10 AND D17A-11.

SEE PAGES D17A-8 & D17A-9 FOR ALL ANCHOR QUANTITIES & LOCATIONS.



TECH-DATA

ASSA ABLOY

Max.

1−1/4" Greater Than
Frame Depth

D17A-8

1-3/4" StormPro® 320 & 361 TORNADO RESISTANT DOOR & FRAME ANCHOR LOCATIONS

UL CLASSIFIED TO ICC 500 (2014), FEMA P-361 (2015) and FEMA P-320 (2014)

Building Structure Maximum Shim Space 1/4 14" -

ANCHORING BY WELDING TO BUILDING STRUCTURE

18 ga. min. -1/4" max. thick A-36 steel shims centered under frame. Weld perimeter of 5/8" x 2" x 5/8" ends of shims to structural building member with fillet welds sized as follows using E6018 electrodes. Fillet weld size same as shim thickness for 0.053" to 0.125" shim thickness. Weld size 1/8" for 0.125" to 1/4" shim thickness.

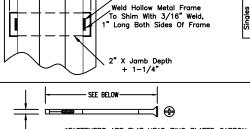
Frame Head (And Optional Frame Sill) Anchor Locations

| - 1 | Oponing Size | Alichol Type | Antition opacing |
|---------|--|-------------------------------------|--|
| Pairs | Approved min. opening size up to and including max. opening size | Welded to the Building Structure | Minimum of 5 weld locations & must weld on both faces of the frame head & sill at each Location; One location at the centerline of the door meeting edges. 2 are located 6" from the centerline of the door meeting edges & 2 welds are located 6" from each door jamb rabbet. |
| Singles | Approved min. opening size up to and including max. opening size | Ruilding Structure | Minimum of 2 weld locations required. Locations are 6" from each door jamb rabbet. Must weld on both faces of the frame head & sill at each location. |

Jamb Anchor Locations

| - 1 | - 1 | Opening Size | Anchor Type | Anchor Spacing | 1 |
|-----|-------------------------|--|---------------|--|---|
| | Singles and Pairs | Approved min. opening size up to and including max. opening size | weided to the | Weld locations, maximum of 12" from the sill, max. 10" from the head rabbet and 24" max. on center. Must weld on both faces of the frame at each location. | |

SEE APPROPRIATE PAGES TO MATCH HARDWARE AND SIZE INFORMATION. FRAMES ARE NOT REQUIRED TO BE GROUTED WHEN WELDED TO BUILDING STRUCTURE.



1/4" MIN. STEEL (A36) EMBEDMENT PLATE_ or HOST STRUCTURE

3/8" SMS/SELF DRILLING SCREW/ UNC BOLT (BY OTHERS) -1/8" MIN. PLATE ÉDGE DISTANCE 1/4" MAX. SHIM SPACE FOR 1 JAMB, 3/8" TOTAL FOR BOTH JAMBS 5 SCREW PITCH MIN. PROTRUSION

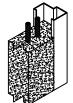
SCREW ATTACHMENT THROUGH EXISTING EMBEDMENT PLATE PROVIDED THAT DRILLING THROUGH PLATE IS PERMISSIBLE AS VERIFIED BY OTHERS.



STEEL SHIMS BY **OTHERS**

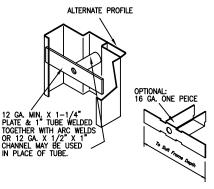
2" FACE FRAME HEAD ANCHORING HEAD & JAMB ANCHORING 4" MIN. NOTE: MINIMUM PRECAST OR CMU WALL EDGE DISTANCE 4" TO CENTER OF BOLT HOLE @ HEAD OR HEAD & JAMBS. NOTE: 1-1/4" MINIMUM BOLT EMBEDMENT 3/8" EXPANSION BOLT (SHIPS LOOSE FOR FIELD INSTALLATION)

VINYL CAP PLUG VINYL CAP PLUG (BAG OF 10) PART # 6111049 VINYL CAP PLUG (BAG OF 100) PART # 6111050 (SHIPS LOOSE FOR FIELD INSTALLATION)



POURED IN PLACE

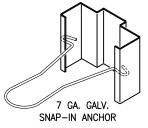
EXISTING OPENING -PIPE & PLATE FRAME NOT REQUIRED TO BE GROUTED



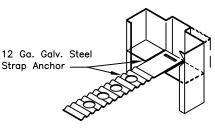
MASONRY -WIRE ANCHORS

MASONRY T **ANCHORS**

THE THROAT OF THE FRAME JAMBS MUST BE FULLY GROUTED WITH MIN. 1800 PSI GROUT.



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



Experience a safer and more open world

1-3/4" StormPro®320 & 361 TORNADO RESISTANT DOOR & FRAME ASSA ABLOY ANCHOR LOCATIONS. UL CLASSIFIED TO ICC 500 (2014), FEMA P-361 (2015) AND FEMA P-320 (2014)

HEAD (AND OPTIONAL SILL WHERE AVAILABLE) ANCHOR LOCATIONS FOR FM7300/FE6600, FM8700, FE5400S & (3) MEDECO DEADBOLTS ASSEMBLIES

NOTE: FOR UNEQUAL WIDTH PAIRS; ANCHOR QUANTITY/SPACING FOR EACH SIDE OF THE CENTERLINE OF THE DOOR MEETING EDGES SHALL BE DETERMINED AS THOUGH THE LEAF SIZE WAS PART OF AN EQUAL WIDTH PAIR.

| | Opening Size | Anchor Type | Anchor Spacing |
|-------------------|---|--|---|
| ng | Approved min. opening size up to & including 6'0" x 7'0" | Existing Wall Anchors Powers 3/8" Lok-Bolt AS Sleeve Anchor or 3/8" SMS/ Self Drilling Screw/ UNC Bolt | Minimum of 6 anchors. On both sides of the centerline of the door meeting edges: One each located at 8" and 15" from the centerline of the door meeting edges. 2 anchors required 6" from each door jamb rabbet. |
| Paired Opening | Greater than 6'0" x 7'0" Existing Wall Anchors Powers 3/8" Lok-Bolt AS Sleeve Anchor or 3/8" SMS/ Self Drilling Screw/ UNC Bolt | | Minimum of 8 anchors. On both sides of the centerline of the door meeting edges: One each located at 8", 15", and 22" from the centerline of the door meeting edges. 2 anchors required 6" from each door jamb rabbet. |
| | Greater than 7'0" x 7'0" and up to and including 8'0" x 8'0" | | Minimum of 8 anchors. On both sides of the centerline of the door meeting edges: One each located at 8", 15" and 24" from the centerline of the door meeting edges. 2 anchors required 6" from each door jamb rabbet. |
| Single Opening | Approved min. opening size up to & including 4'0" x 8'0" | Existing Wall Anchors Powers 3/8" Lock-Bolt AS Sleeve Expansion Bolt or 3/8" SMS/Self Drilling Screw/UNC Bolt | Minimum of 2 anchors required. Locations are 6" from each door jamb rabbet. When anchors are located in the door rabbet and latching hardware is FM7300/FE6600, the anchor at the lock jamb side will be located at 9". |

ANCHORS MAY BE INSTALLED THROUGH EXISTING EMBEDMENT PLATES, PROVIDED THAT DRILLING THROUGH EXISTING EMBEDMENT PLATES IS PERMISSIBLE AS VERIFIED BY OTHERS. ANY EXISTING EMBEDMENT PLATES SHALL BE DESIGNED AND VERIFIED BY OTHERS. FRAMES ARE NOT REQUIRED TO BE GROUTED WHEN USING EXISTING WALL JAMB ANCHORS. JAMB ANCHOR LOCATIONS FOR FM7300/FE6600, FM8700, FE5400S & (3) MEDECO DEADBOLT ASSEMBLIES

Existing Opening & Screw Fastened Jamb Anchor Locations

| | Opening Size | Anchor Type | Anchor Spacing | | | | |
|--------|--|--|---|--|--|--|--|
| | size up to and including | | Maximum of 8" from the sill, maximum of 4" from the head rabbet, and 24" maximum on center. | | | | |
| Paired | Greater than 6'0" x 7'0" up to and including 7'0" x 7'0" | Existing Wall Anchors Powers 3/8" Lok-Bolt AS Sleeve Anchor or 3/8" SMS/ Self Drilling Screw/ UNC Bolt | Maximum of 8" from the sill, maximum of 4" from the head rabbet, and 21" maximum on center. | | | | |
| | up to and including | Existing Wall Anchors Powers 3/8" Lok-Bolt AS Sleeve Anchor or 3/8" SMS/ Self Drilling Screw/ UNC Bolt | Maximum of 8" from the sill, maximum of 4" from the head rabbet, and 18" maximum on center. | | | | |
| 9 | size up to and including | Existing Wall Anchors Powers 3/8" Lok-Bolt AS Sleeve Anchor or 3/8" SMS/ Self Drilling Screw/ UNC Bolt | Maximum of 8" from the sill, maximum of 4" from the head rabbet, and 21" maximum on center. | | | | |
| Single | and up to and including | Existing Wall Anchors Powers 3/8" Lok-Bolt AS Sleeve Anchor or 3/8" SMS/ Self Drilling Screw/ UNC Bolt | Maximum of 8" from the sill, maximum of 4" from the head rabbet, and 18" maximum on center. | | | | |

12 Gage Masonry "T" anchors & Wire Masonry Anchors

| Paired Opening | Approved min. opening size up to and including max. opening size | 12 Ga. Masonry "T" Anchors | Maximum of 8" from the sill, maximum of 6" from the head rabbet, and 24" maximum on center. |
|-------------------|--|-------------------------------|---|
| Single Opening | Approved min. opening size up to and including max. opening size | 12 Ga. Masonry "T" Anchors | Maximum of 8" from the sill, maximum of 6" from the head rabbet, and 24" maximum on center. |
| Paired Opening | Approved min. opening size up to and including 7'0" x 7'0" | Wire Masonry Anchors | Maximum of 12" from the sill, maximum of 10" from the head rabbet, and 16" maximum on center. |
| Pair Ope | Greater than 7'0" x 7"0" and up to and including 8'0" x 8'0" | Wire Masonry Anchors | Maximum of 12" from the sill, maximum of 10" from the head rabbet, and 14" maximum on center. |
| Single Opening | Approved min. opening size up to and including 3'0" x 7'0" | Wire Masonry Anchors | Maximum of 12" from the sill, maximum of 10" from the head rabbet, and 18" maximum on center. |
| Sing Open | Greater than 3'0" x 7"0" and up to and including 4'0" x 8'0" | Wire Masonry Anchors | Maximum of 12" from the sill, maximum of 10" from the head rabbet, and 12" maximum on center. |

D17A-1

ASSA ABLOY StormPro®OPTIONAL ACCESSORIES

OPTIONS FOR SARGENT FM7300 OR CORBIN RUSSWIN FE6600 ASSEMBLIES PEMKO PERIMETER SEALS; S773, 305 PERIMETER SEAL S771 ASTRAGAL S771 ASTRAGAL
S772 ASTRAGA
S772 A OPTIONS FOR SARGENT FM6100 OR CORBIN RUSSWIN FE6700 ASSEMBLIES PEMKO PERIMETER SEALS:
S773, 305 PERIMETER SEALS:
346 RAIN DRIP (THREAT SIDE MOUNTING ONLY)
345 DOOR BOTTOM (THREAT SIDE MOUNTING ONLY)
S771 ASTRAGAL OR S772 ASTRAGAL
305_N SPLIT ASTRAGAL (THREAT SIDE ONLY) ELECTRONIC POWER TRANSFER:
CEPT, HANCHETT ENTRY SYSTEMS, DBA SECURITRON MAGNALOCK CORP.
DOOR POSITION SWITCH:
DPS-M, SECURITRON MAGNALOCK CORP. DOOR VIEWERS:
ROCKWOOD 620 OR 622
KICK PLATE:
ROCKWOOD K1050 (MUST BE SCREW APPLIED FOR FIRE RATED ASSEMBLIES) WIRE HARNESS: QC-C1500P ELECTROLYNX WIRE HARNESS OPTIONS FOR SARGENT FM8700 ASSEMBLIES

PEMKO PERIMETER SEALS:
\$773, 305 PERIMETER SEAL, \$771 ASTRAGAL OR \$772 ASTRAGAL
346 RAIN DRIP (THREAT SIDE MOUNTING ONLY)
345 DOOR BOTTOM (THREAT SIDE MOUNTING ONLY)
1715 THRESHOLD
305_N SPLIT ASTRAGAL (THREAT SIDE ONLY)
ELECTRONIC POWER TRANSFER:
CEPT, HANCHETT ENTRY SYSTEMS, DBA SECURITRON MAGNALOCK CORP.
DOOR POSITION SWITCH:
DPS-M, SECURITRON MAGNALOCK CORP.
ROD GUARDS:
ROCKWOOD BFLG1050 (NOT AVAILABLE FOR FIRE RATED ASSEMBLIES)
DOOR VIEWERS: OPTIONS FOR SARGENT FM8700 ASSEMBLIES DOOR VIEWERS: ROCKWOOD 620 OR 622 ROCKWOOD 620 GR 622 KICK PLATE: ROCKWOOD K1050 (MUST BE SCREW APPLIED FOR FIRE RATED ASSEMBLIES) WIRE HARNESS: QC-C1500P ELECTROLYNX WIRE HARNESS OPTIONS FOR CORBIN RUSSWIN FE5400S ASSEMBLIES PEMKO PERIMETER SEALS: \$773, 305 PERIMETER SEAL, \$771 ASTRAGAL OR \$772 ASTRAGAL 346 RAIN DRIP (THREAT SIDE MOUNTING ONLY) 345 DOOR BOTTOM (THREAT SIDE MOUNTING ONLY) 1715 THRESHOLD 305_N SPLIT ASTRAGAL (THREAT SIDE ONLY) 305_N SPLIT ASTRAGAL (IHREAL SIDE UNLT)
ELECTRONIC POWER TRANSFER:
CEPT, HANCHEIT ENTRY SYSTEMS, DBA SECURITRON MAGNALOCK CORP.
DOOR POSITION SWITCH:
DPS-M, SECURITRON MAGNALOCK CORP.
WIRE HARNESS:
QC-C1500P ELECTROLYNX WIRE HARNESS
ROD GUARDS:
ROCKWOOD BFLG1050 (NOT AVAILABLE FOR FIRE RATED ASSEMBLIES)
DOOR VIFWFRS: ROCKWOOD 620 OR 622 KICK PLATE: ROCKWOOD K1050 (MUST BE SCREW APPLIED FOR FIRE RATED ASSEMBLIES) OPTIONS FOR (3) MEDECO MAXUM DEADBOLT ASSEMBLIES PEMKO PERIMETER SEALS:

S773 OR 305 PERIMETER SEAL

346 RAIN DRIP (THREAT SIDE MOUNTING ONLY)

345 DOOR BOTTOM (THREAT SIDE MOUNTING ONLY)

154, 171, 1715 OR 2715 THRESHOLD

ELECTRONIC POWER TRANSFER:

CEPT, HANCHETT ENTRY SYSTEMS, DBA SECURITRON MAGNALOCK CORP.

DOOR POSITION SWITCH:

DPS-M, SECURITRON MAGNALOCK CORP.

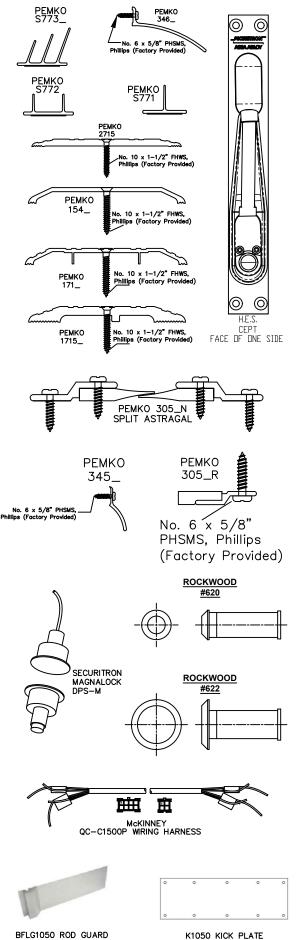
DOOR YIEWERS:

ROCKWOOD 620 OR 622

KICK PLATE:

ROCKWOOD K1050 (MUST BE SCREW APPLIED FOR FIRE RATED ASSEMBLIES)

WIRE HARNESS:



WIRE HARNESS: QC-C1500P ELECTROLYNX WIRE HARNESS



ASSA ABLOY 1-3/4" StormPro® 320 & 361 APPROVED HINGES, CLOSERS, HOLDERS, STOP/HOLDERS AND HARDWARE MULLIONS

CONTINUOUS HINGES

- •MARKAR HG305 CONTINUOUS HINGE
- •MARKAR FM300 CONTINUOUS HINGE (OUTSWING ONLY)
 •MARKAR CONTINUOUS HINGES WITH OR WITHOUT EL OPTION

 NOTE: A CONTINUOUS HINGE REQUIRES A CONTINUOUS HINGE REINFORCEMENT IN DOOR AND FRAME.

WIDE THROW CONTINUOUS HINGES

•MARKAR HG305WT10 WIDE THROW HINGE WITH OR WITHOUT EL OPTION •MARKAR FM300WT WIDE THROW HINGE (WT10 THRU WT50) OUTSWING ONLY WITH OR WITHOUT EL OPTION NOTE: A CONTINUOUS HINGE REQUIRES A CONTINUOUS HINGE REINFORCEMENT IN DOOR AND FRAME.

HEAVY WEIGHT STANDARD AND WIDE THROW FULL MORTISE BUTT HINGES

- •McKINNEY SP3786 (4-1/2" x 4-1/2" x .180 OR 5" x 4-1/2" x .190)
 •McKINNEY SP3386 (4-1/2" x 4-1/2" x .180 OR 5" x 4-1/2" x .190)
 •McKINNEY SP3386 & SP3786 (4-1/2" x 5", 4-1/2" x 6", 4-1/2" x 7", 4-1/2" x 8", 5" x 4-1/2", 5" x 5", 5" X 6", 5" X 7" & 5" X 8")
 •McKINNEY SP3386 & SP3786 WITH OR WITHOUT QC OPTION.
 •McKINNEY SP3386 & SP3786 WITH OR WITHOUT NRP

NOTE: WHEN BUTT HINGES ARE APPLIED TO SHUTTER DOORS, A QUANTITY OF (3) HINGES ARE REQUIRED ON HEIGHTS FROM 3'0" TO 5'0" AND (4) HINGES OVER 5'0" THRU 6'8".

NOTE: WHEN BUTT HINGES ARE APPLIED TO ASSEMBLIES WITH FM8700, FE5400S, FE6600 AND FM7300 LATCHING HARDWARE, ON HEIGHTS 7'0" & ABOVE (4) HINGES ARE REQUIRED. BELOW 7'0" HEIGHT (3) HINGES ARE REQUIRED.

DOOR CLOSERS

- *CORBIN RUSSWIN DC8000 SERIES DOOR CLOSER (THRU-BOLT MOUNTING OF BODY TO DOOR ONLY)
 *NORTON 7500 SERIES DOOR CLOSER (THRU-BOLT MOUNTING OF BODY TO DOOR ONLY)
 *SARGENT 281 SERIES DOOR CLOSER (THRU-BOLT MOUNTING OF BODY TO DOOR ONLY)
- YALE 4400 SERIES DOOR CLOSER (THRU—BOLT MOUNTING OF BODY TO DOOR ONLY)

DOOR CLOSERS/HOLDERS

- *SARGENT 2409 CLOSER/HOLDER (THRU-BOLT MOUNTING OF BODY TO DOOR ONLY)
- SARGENT 351 EHT CLOSER/HOLDER (THRU-BOLT MOUNTING OF BODY TO DOOR ONLY)
- NORTON 7700PT ELECTRIC DOOR CLOSER (THRU-BOLT MOUNTING OF BODY TO DOOR ONLY)

OVERHEAD STOP/HOLDERS

RIXSON 9 SERIES OVERHEAD STOP/HOLDER (THRU-BOLT MOUNTING OF BODY TO DOOR ONLY)

MECHANICAL HOLDERS

ROCKWOOD 491S OR 494S MECHANICAL HOLDERS (THRU—BOLT MOUNTING OF BODY TO DOOR ONLY)

ELECTROMECHANICAL HOLDERS

- *RIXSON 998, 998M, 999M, 980M, 990M, 991M, 996M OR 997M
- ELECTROMECHANICAL HOLDERS (THRU-BOLT MOUNTING OF DOOR ARMATURE TO DOOR ONLY)
- SARGENT 1560, 1561 OR 1562 ELECTROMECHANICAL HOLDERS (THRU-BOLT MOUNTING OF CONTACT PLATE TO DOOR ONLY)

MULLIONS

*SARGENT HC980 OR 12-HC980 MULLION AS AN OPTION WITH FM8700 ASSEMBLY ONLY

NOTES:

- THE SPECIFICATION WRITER SHOULD VERIFY THE CLOSER/HOLDER/STOP IS COMPATIBLE FOR USE WITH COMMUNICATING FRAMES/DOORS.
- •PAIRS WITH HARDWARE MULLION, FRAME DEPTH WILL BE LIMITED BY THE MULLION. CONTACT THE HARDWARE MULLION MANUFACTURER FOR FRAME DEPTH LIMITATIONS.