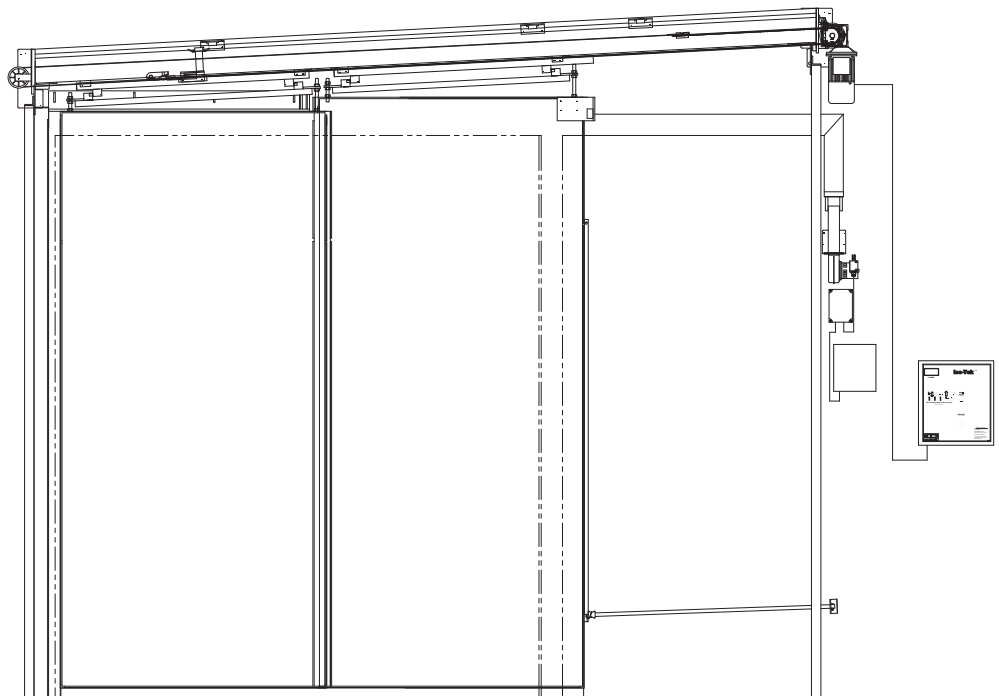
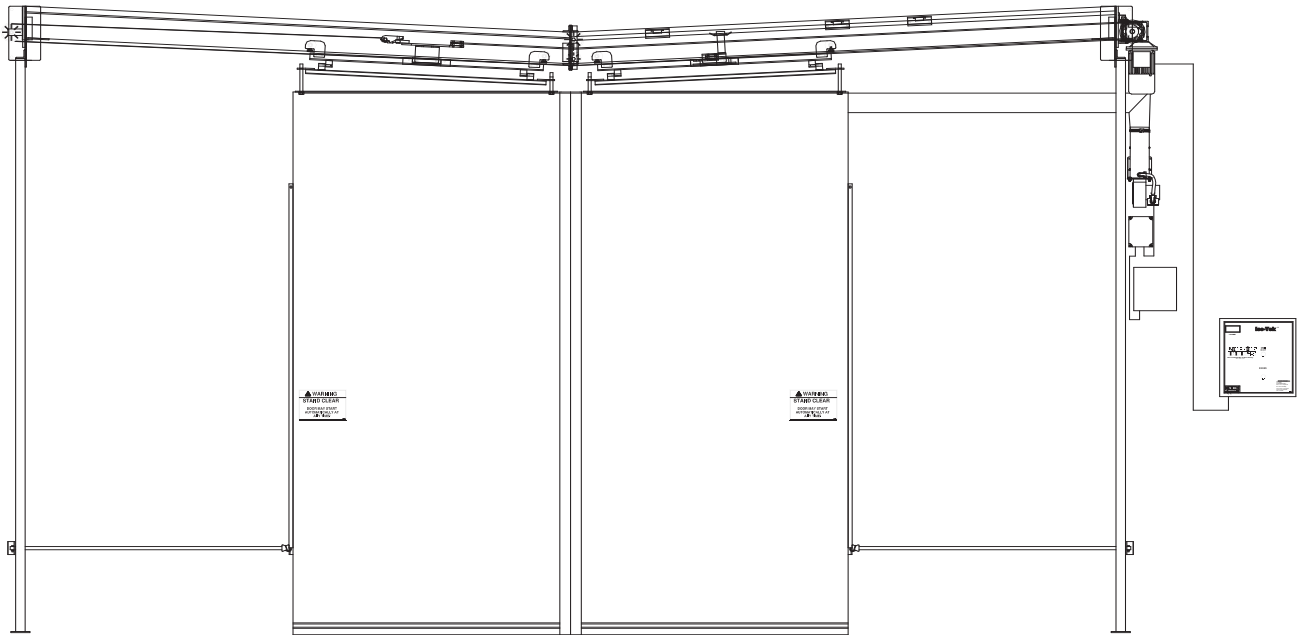


ISO-TEK®

BI-PARTING & SINGLE SLIDE DOOR

MODEL 8600



RITE·HITE®
DOORS
The Leading Edge In Door Safety.



This Manual Covers All Doors Shipped After 2-20-06.

PRODUCT INTRODUCTION

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NOTICE TO END USER

Our mission is to “Improve Industrial Safety, Security and Productivity Worldwide Through Quality and Innovation.”

Thank you for purchasing the ISO-TEK door from **RITE-HITE DOORS, INC.** The ISO-TEK Bi-Parting or Single Slide door system is a fast, smooth opening, low maintenance door that is designed to provide superior environmental separation while reducing passage time and temperature loss. The information contained in this manual will allow you to operate and maintain the door in a manner which will insure maximum life and trouble free operation.

This manual should be thoroughly read and understood before beginning the installation, operation or servicing of this door. Complete Final Checklist prior to leaving site. Refer to Partslist manual for exploded views and part numbers.

When ordering parts through Aftermarket or Warranty department, always include your door serial or RHC# to be sure that you receive the correct parts. The RHC and serial # for your door is located on a label on the side of the control box, **Figure 22**. The actual parts used on your door may be different than shown in this manual due to special engineering or product improvement.

Your local **RITE-HITE DOORS, INC.** Representative provides a Planned Maintenance Program (P.M.P.) which can be fitted to your specific operation. Call your local representative or **RITE-HITE DOORS, INC.** at 1-414-355-2600 or toll free at 1-800-456-0600. If any procedures for the installation, operation or maintenance of the ISO-TEK door system have been left out of this manual or are not complete, contact **RITE-HITE DOORS, INC. Technical Support** at 1-563-589-2722.

RITE-HITE DOORS, INC. are covered by one or more of the following U.S. patents, including patents applied for, pending, or issued: 5,025,846, 5,143,137, 5,203,175, 5,329,781, 5,353,859, 5,392,836, 5,450,890, 5,542,463, 5,579,820, 5,601,134, 5,638,883, 5,655,591, 5,730,197, 5,743,317, 5,794,678, 5,887,385, 5,915,448, 5,944,086, 5,957,187, 6,042,158, 6,089,305, 6,098,695, 6,145,571, 6,148,897, 6,192,960, 6,321,822, 6,325,195, 6,330,763, 6,352,097, 6,360,487, 6,574,832, 6,598,648, 6,612,357, 6,615,898, 6,659,158

FEATURES

- i-COMM™ Universal Controller
- Minimal space requirements
- Impactable panels with a high R value
- Unique sloped header provides minimal seal wear
- Smooth, fast opening
- Interlocking seals provide tight seal
- Heavy-duty industrial materials
- No external heat system required
- Motor torque detection prevents damage to product and door

RECOMMENDED SPARE PARTS LIST

Limit Switch w/16' [4877] Cable	72700117
Patch Kit	53700186
Relay 24Vac Dpdt 5 Amp	66450003
Strap Elastic	72200028
Fuse 10 Amp KLDR	51000033
Fuse 1 Amp KLDR	51000034
Side Roller	67200033

TOOLS AND MATERIALS REQUIRED

9/16" [14] and 15/16" [24] Open End Wrench
 Tubes of RTV Silicone Caulk (keep warm for use)
 9/16" [14] Socket
 Phillips Screwdriver
 Straight Screwdriver (small 1/8" [3] spade)
 Hammer
 Hammer Drill and Cordless Drill (3/8" [10] or 1/2" [13])
 #2 Square Driver, and Phillips Bit For Drill
 25' [7620] Tape Measure
 Utility Knife
 6' [1829] Carpenters Level
 Plumb Bob and Chalkline
 (2) 18" [457] Clamps
 Wire Strippers
 Straps For Lifting Header (optional)
 3/8" [10] and 5/8" [16] Masonry Bits
 Long 5/8" [16] Ø Drill Bits For Thru-Bolting Header
 Forklift Lift and Scissors Lift
 8' or 10' [2438 or 3048] Step Ladder

If the poly lumber kit was purchased with the door, hardware and backplates for mounting the header to the wall are provided. Hardware for mounting the poly lumber to wall, provided if it is a sheet metal wall and fasteners provide a secure method of fastening to the wall. If not proper hardware must be purchased in the field. Hardware for fastening support posts to concrete are included.

WARRANTY

RITE-HITE DOORS, INC. warrants that its ISO-TEK Bi-Parting or Single Slide door, including electrical components, will be free from defects in design, materials and workmanship for a period of one (1) year, or 150,000 cycles, from the date of shipment, whichever shall first occur. **RITE-HITE DOORS, INC.** warrants that the ISO-TEK seals shall be free from defects in design, materials and workmanship with a one (1) year limited warranty from the date of shipment, regardless of cycles. It does not cover damage incurred from abuse, misuse or impact. Belting, fuses, bulbs, and fogging or frosting of vision window, are not considered to be covered by warranty. All claims for breach of this warranty must be made within thirty (30) days after the defect is or can, with reasonable care, be discovered. To be entitled to the benefits of this warranty, the products must have been properly installed, maintained, operated within their rated capacities, and not otherwise abused. Periodic lubrication and adjustment is the sole responsibility of the owner. This is **RITE-HITE DOORS, INC.** exclusive warranty. **RITE-HITE DOORS, INC.** EXPRESSLY DISCLAIMS ALL IMPLIED WARRANTIES INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS. Non-standard **RITE-HITE DOORS, INC.** warranties, if any, must be specified by **RITE-HITE DOORS, INC.** in writing.

In the event of any defects covered by this warranty, **RITE-HITE DOORS, INC.** will remedy such defects by repairing or replacing any defective equipment or parts, bearing all of the costs for parts, labor, and transportation. This shall be the exclusive remedy for all claims whether based on contract negligence or strict liability. Neither **RITE-HITE DOORS, INC.** ANY OTHER MANUFACTURER WHOSE PRODUCTS ARE THE SUBJECT OF THIS TRANSACTION, NOR ANY **RITE-HITE DOORS, INC.** REPRESENTATIVE, SHALL IN ANY EVENT BE LIABLE FOR ANY LOSS OR USE OF ANY EQUIPMENT OR INCIDENTAL OR CONSEQUENTIAL DAMAGES OF ANY KIND WHETHER FOR BREACH OF WARRANTY, NEGLIGENCE, OR STRICT LIABILITY. The application of a manufacturer's specifications to a particular job is the responsibility of the purchaser. **RITE-HITE DOORS, INC.** SHALL NOT IN ANY EVENT BE LIABLE FOR ANY LOSS OF THE USE OF ANY EQUIPMENT OR INCIDENTAL OR CONSEQUENTIAL DAMAGES OF ANY KIND.

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 Service Fax: 563-589-2737
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INSTALLATION INSTRUCTIONS



Make sure to barricade the door opening on both sides to prevent unauthorized use until the door has been completely installed.

IMPORTANT!!!

An uneven or rough floor may cause seal wear and frost to develop.

It is important to verify the following basic information before starting with the installation.

TO PREVENT DAMAGE TO CONTENTS, STORE DRY BETWEEN 40° AND 80° F. [4° and 27° C]

1. Make sure that you are working at the correct location and that you have any special work permits.
2. Inspect the installation site to make sure that there are no overhead obstructions that might interfere with the lifting of the header during installation.
3. Verify there is nothing buried in the floor where the anchor bolts will be installed.
4. Detour material handling equipment (fork lift trucks, etc.) during the installation of the door and barricade both sides of the work area.
5. Make sure that the electrician is ready to bring the correct electrical power supply to the control box.
6. Make sure that the electrical power can be shut off without interfering with other plant operations.
7. Move the crate as close to the door opening as possible. There also will be one or two separate containers for the panels. **USE CAUTION** when moving the panel boxes, they **MUST BE** stored flat on the floor or placed with the longest side flat on the floor.

DO NOT lean the panel boxes height wise against a wall, as panels may become warped.

8. When unpacking the door components, first remove the parts box, electrical cables, and control box. Then, remove the poly lumber from crate and place in same environment where it will be installed. This is to allow its temperature to equalize with the surrounding temperature and allow for shrinkage or expansion. Remove the support posts, and the header assembly last.
9. Measure the overall width of the door opening near the floor and the top (Dimension A), [Figure 1 or 5](#).
10. Measure the height of the door opening at the left and right-hand sides (Dimension B), [Figure 1 or 5](#).
11. These dimensions should be within $\pm 1"$ [25] of the dimensions listed on the Serial Number label. If the measurements do not agree, STOP! Contact your **RITE-HITE DOORS, INC.** representative.
12. Using a 6' [1829] carpenter's level, verify that the door jambs are plumb and perpendicular, the header and floor are level, within $\pm 1"$ [25]. If the floor is not level to within 1" [25], shimming of the support post will be required, [Figure 1 or 5](#).

13. Poly lumber may need to be installed around the door jamb to provide an adequate mounting surface, as well as a flat surface for mounting the seals, [Figure 1](#).
14. D.O.W. / H. = Door Opening Width / Height
15. O.D.W. / H. = Ordered Door Width / Height
16. Alternate dimensions in brackets are in [millimeters].
17. Be sure to install any optional equipment last after verifying door operation.

NOTE: Check for electrical prints included in the parts or control box, as they supersede any prints included in this owners manual on [Pages 21-25](#).

OPTIONAL POLY LUMBER

NOTE:

If the poly lumber kit is utilized, it is important that the thickness of the material be added to the overall dimensions when determining space availability. The header must be spaced out an equivalent distance to the seal spacing from the wall.

1. If the wall is a flat surface and can be securely mounted to, the poly lumber is not required.
2. Find the center of the door jamb at the top and place a mark. Drop a plumb bob from the centerline mark at the top of the jamb, measure over (see below) from the centerline at the top and bottom and snap a chalk line on the wall from these marks. Repeat for both sides, [Figure 1](#).

2PN - 44 1/4" [1124]

2P - 62 3/4" [1594]

4P - 81 1/4" [2064]

SS - 1/2 O.D.W. Plus 8 1/2" [216], from these marks, measure 125 1/2" [3188] across the top and bottom and snap a chalk line at these marks, [Figure 5](#).

3. Place a bead of caulk in the middle on the back side of the poly lumber using RTV silicone and place vertically on each side of the jamb on the chalk line. Secure to wall using the pre-drilled holes and the 1.8" [46] fab lock fasteners. If the fab lock fasteners are not compatible with the wall material, assure that the proper fastener is used and does not protrude beyond the poly lumber. Backer plates for the poly lumber may be required.

NOTE: If thru-bolting is required on the poly lumber, fastening at the top, middle and bottom is adequate, and must be countersunk.

4. 2P door, snap a chalk line at O.D.H. plus 7 1/2" [191] and place the top of the poly lumber horizontally on the line, [Figure 1](#).

IMPORTANT!!!

The poly lumber may warp due to temperature changes, make sure to mount the lumber flush with the chalk line.

HEADER INSTALLATION (2P & 4P)

4P door, snap a chalk line at O.D.H. plus 9 1/2" [241] and place the top of the poly lumber horizontally on the line, **Figure 1**.

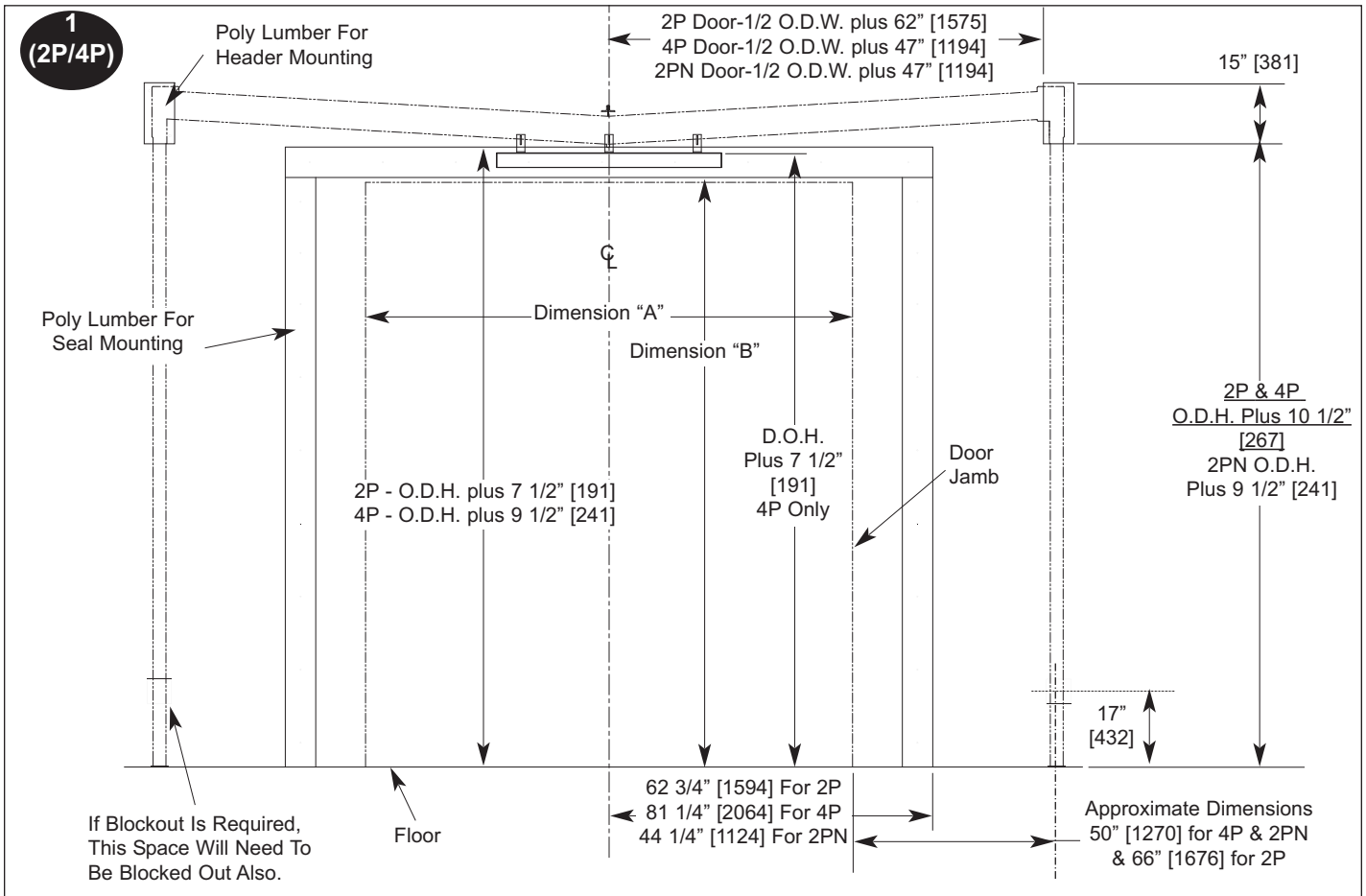
SS door, snap a chalk line at O.D.H. plus 11" [279] and place the top of the poly lumber horizontally on the line, **Figure 5**.

5. If there is a gap between the two vertical frames and the horizontal frame, fill the gap with the 5/8"Ø [16] foam provided and caulk in place.
6. Place a bead of caulk on both edges of the perimeter of the poly lumber and the countersunk holes (if applicable) using RTV silicone before proceeding to door installation.
7. Attach the one or two pieces of 15" [381] poly lumber to the header mounting bracket(s) with two each of #10 x 1" [25] wood screws provided before raising the header into position, **Figures 1**.

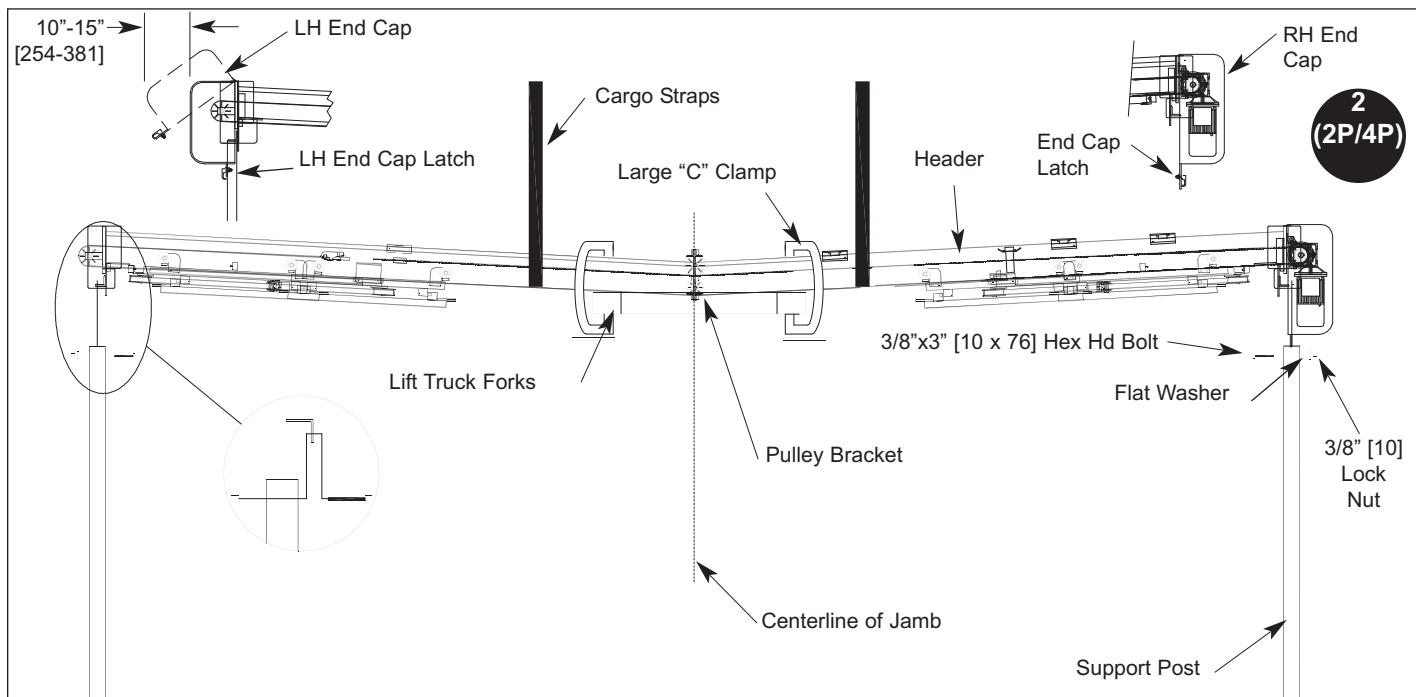
HEADER INSTALLATION (2P & 4P)

1. Place the header in front of the jamb and center so it is in the proper place when lifting.
2. Cut wire tie and make sure to slide the trolleys to the end of the header to make room for straps or dunnage, **Figure 2**. Make sure to clamp forks opposite the motor to prevent straps or dunnage from sliding off and the header from tipping.

3. The preferred method of raising the header is to lift with two cargo straps, (rated for 1000lb [454 kg] minimum each). Straps may need to slide toward drive side, as it is heavier and can cause the header to be unbalanced. Be sure to route the straps underneath all belting to prevent damage to the drive system.
 4. Carefully raise header with lift truck, and center header over opening.
 5. Attach support posts to header using the 3/8" x 3" [10 x 76] bolts, washers and lock nuts provided.
 6. Align the center splice of the header with the center mark on wall and with support posts providing support by resting on the floor. Plumb the posts in both directions.
 7. With the header centered in the opening, mark the holes for mounting the header and holes for anchoring the posts. Use the four 1/2" x 24" [13 x 610] threaded rods for header and the four 3/8" x 2 3/4" [10 x 70] concrete anchors for floor.
 8. Securely fasten all bolts and anchors for door.
 9. If nylon all thread is used for thru-bolting in freezer applications, use caution not to overtighten.
- NOTE: Do not move forklift until all header fasteners are in place.**
10. After header is installed make sure that it is level from front to back, **Figure 3**. Make sure that the header is



HEADER INSTALLATION

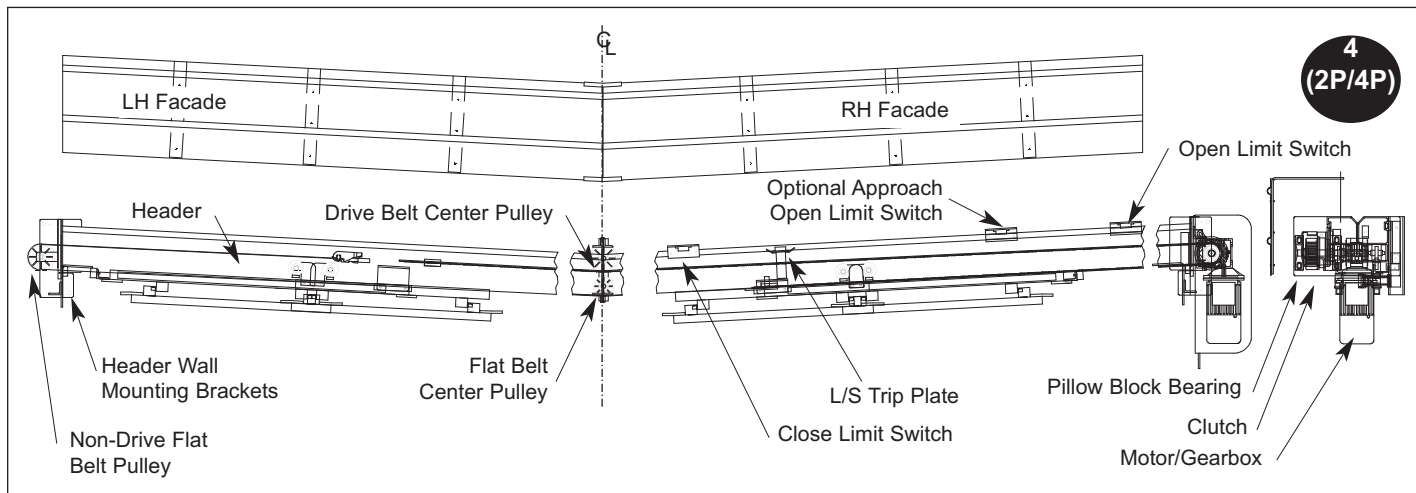
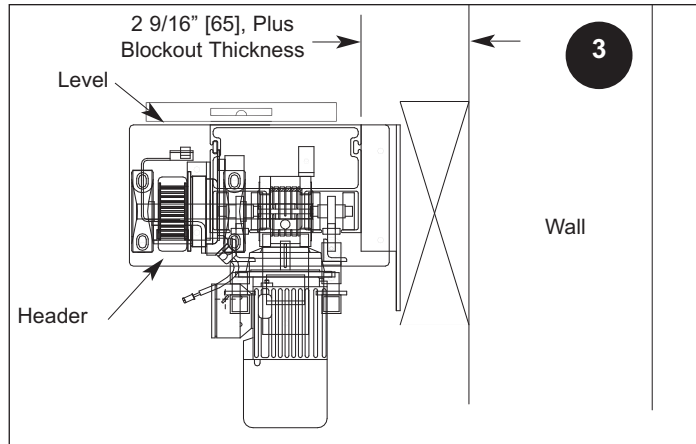


2 9/16" [65], plus blockout thickness away from the wall at each end and in the middle.

11. End caps are optional for the drive and non-drive sides, and require 4"-6" [102-152] clearance to open, as they hinge at the top, and lift upward, **Figure 2**.
12. To remove end caps, lift latch handle and pull upward.
13. Header facing is optional. Limit switch adjustment can be made without removal of the facing, **Figure 4**.
14. To install facing align latches with slot on top of the header and turn clock-wise to fasten, to remove facing, turn latches at top of header.
15. Make sure the center header facade mounting bracket does not interfere with the approach open limit switch function. If so, adjust the limit switch toward the opening so it is fully operational. Make sure the outside brackets do not interfere with open or closed limit switches.

IMPORTANT!!!

An uneven or rough floor may cause seal wear and frost to develop.

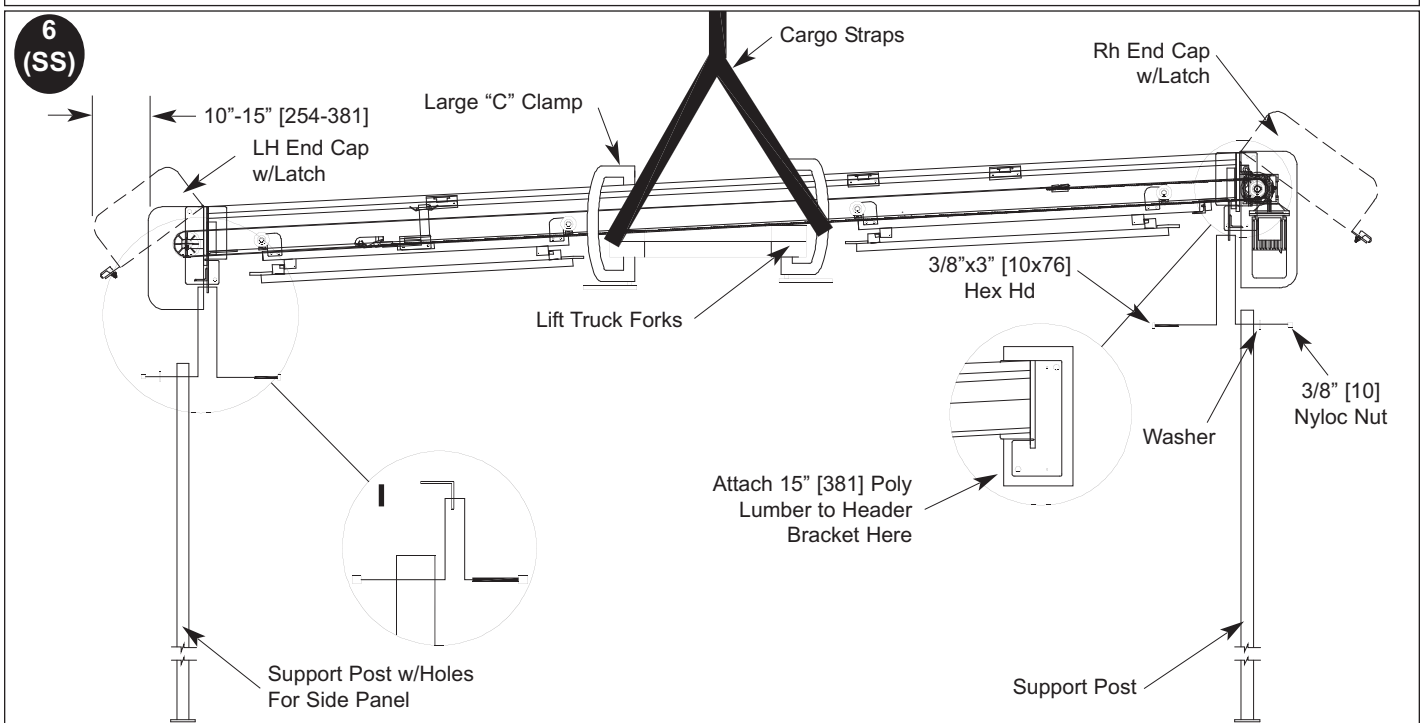
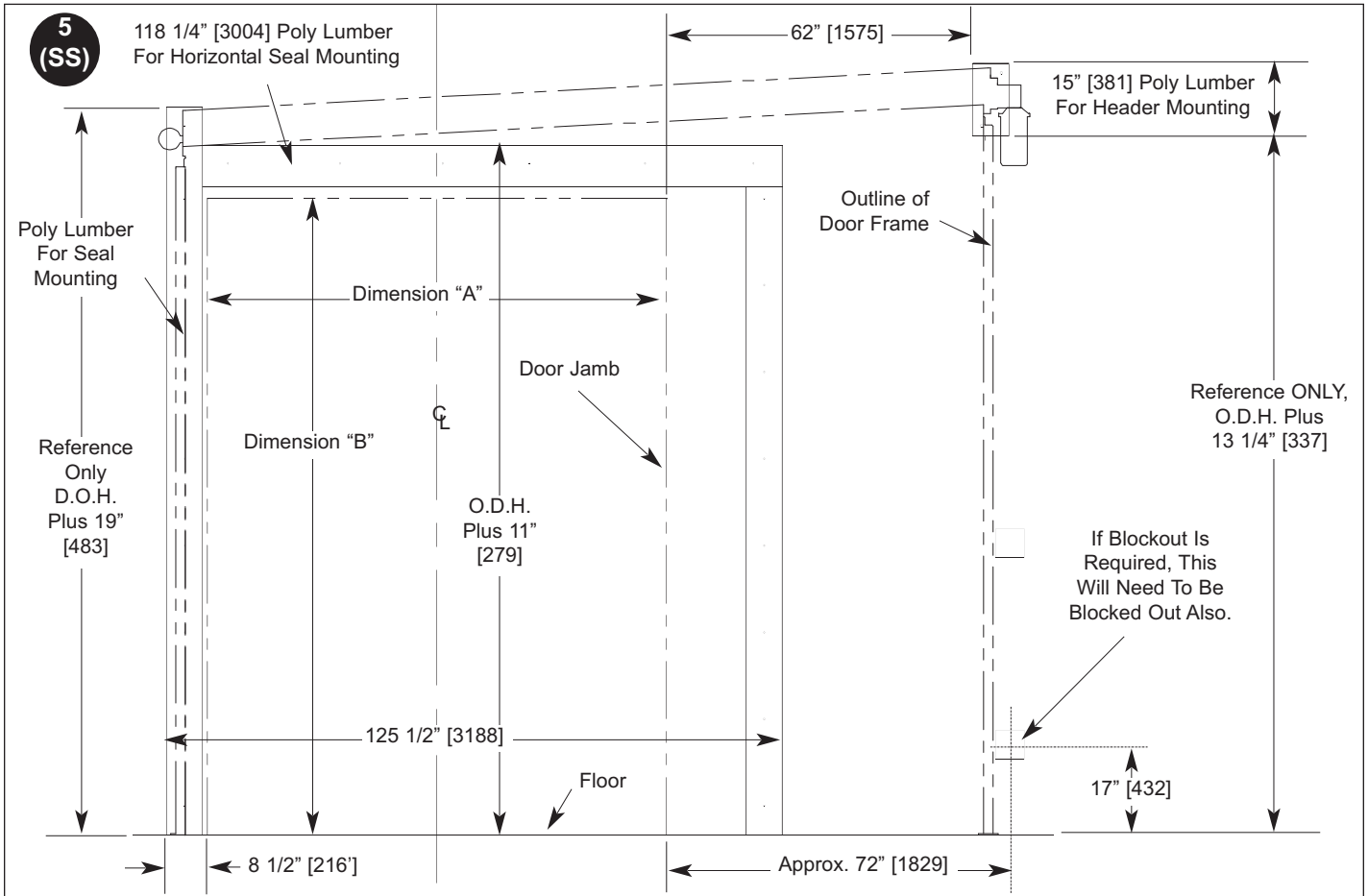


HEADER INSTALLATION (SS)

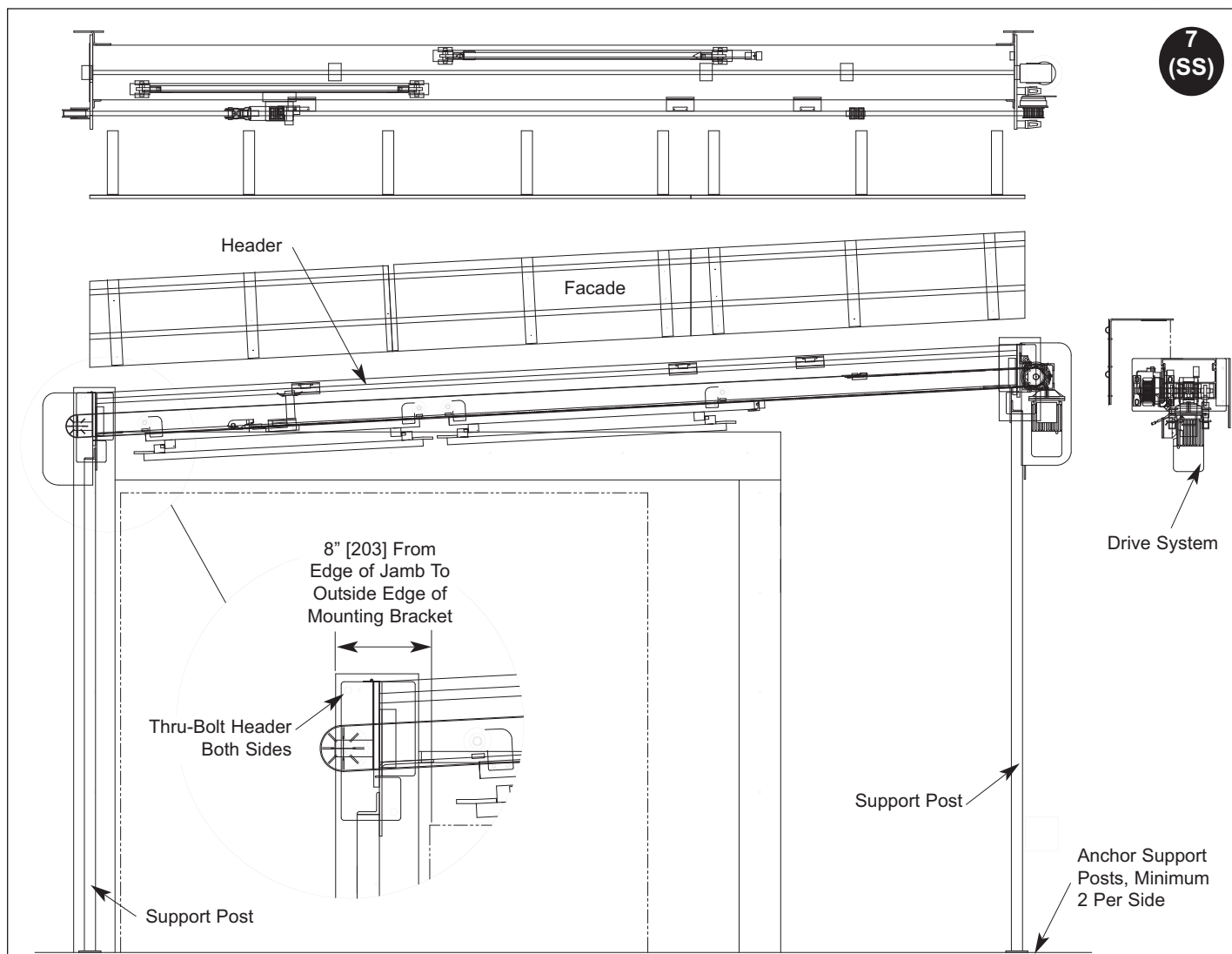
HEADER INSTALLATION (SS)

1. Place the header in front of the jamb and center so it is in the proper place when lifting.
2. Cut the cable tie holding the panel hanger brackets

together and slide to the end of the header to make room for straps or dunnage, **Figure 6**. Make sure to place clamps on the forks to prevent straps or dunnage from sliding off and the header from tipping. Since the header is at an angle, the drive side will require extra shims to balance the header.



HEADER INSTALLATION (SS)

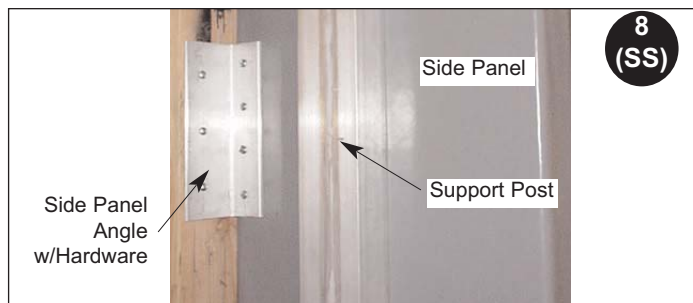


3. The preferred method of raising the header is to lift with two cargo straps, (rated for 1000lb [454 kg] minimum each). Straps may need to slide toward drive side, as it is heavier and can cause the header to be unbalanced. Be sure to route the straps underneath all belting to prevent damage to the drive system.
4. Carefully raise the header with the lift truck, and line up the outside edge of the non-drive header mounting bracket, 8" [203] from the edge of the jamb, **Figure 6**.
5. Attach the support posts to the header using the 3/8" x 3" [10 x 76] bolts, washers and Nyloc nuts provided. The support post with the holes for mounting the end panel needs to go on the non-drive side.
6. Place header into position with header against the wall and posts resting on the floor and plumb the posts in both directions.
7. After header is in position, make sure that it is level from front to back, **Figure 3**. Make sure that the header is 2 9/16" [65], plus blockout thickness away from the wall at each end and in the middle.
8. With the header positioned 8" [203] from edge of the jamb, **Figure 7**, mark the holes for mounting the header and holes for

anchoring the posts. If the poly lumber kit was purchased, use the four 1/2-13 x 24" [13 x 610] all thread bolts for header and the four 3/8" x 2 3/4" [10 x 70] anchors for floor. The non-drive side will require to have holes drilled through the poly lumber.

END PANEL INSTALLATION

1. Place the side panel to the inside of the non-drive support post with the angles facing away from the opening. This post will have holes for fastening the side panel, **Figure 8**.
2. Square the side panel to the wall or poly lumber and using the 1" [25] phillips head screws provided, fasten to the wall using all the holes in the angle. The side panel may have two, three or four angle brackets, **Figure 8**.



PERIMETER SEAL INSTALLATION

- Using the 3" [76] phillips head screws provided, fasten the side panel to the support post. USE CAUTION not to overtighten the screws.
- Caulk the inside perimeter of the side panel to avoid temperature loss and frost buildup.

LINTEL SEAL (4P)

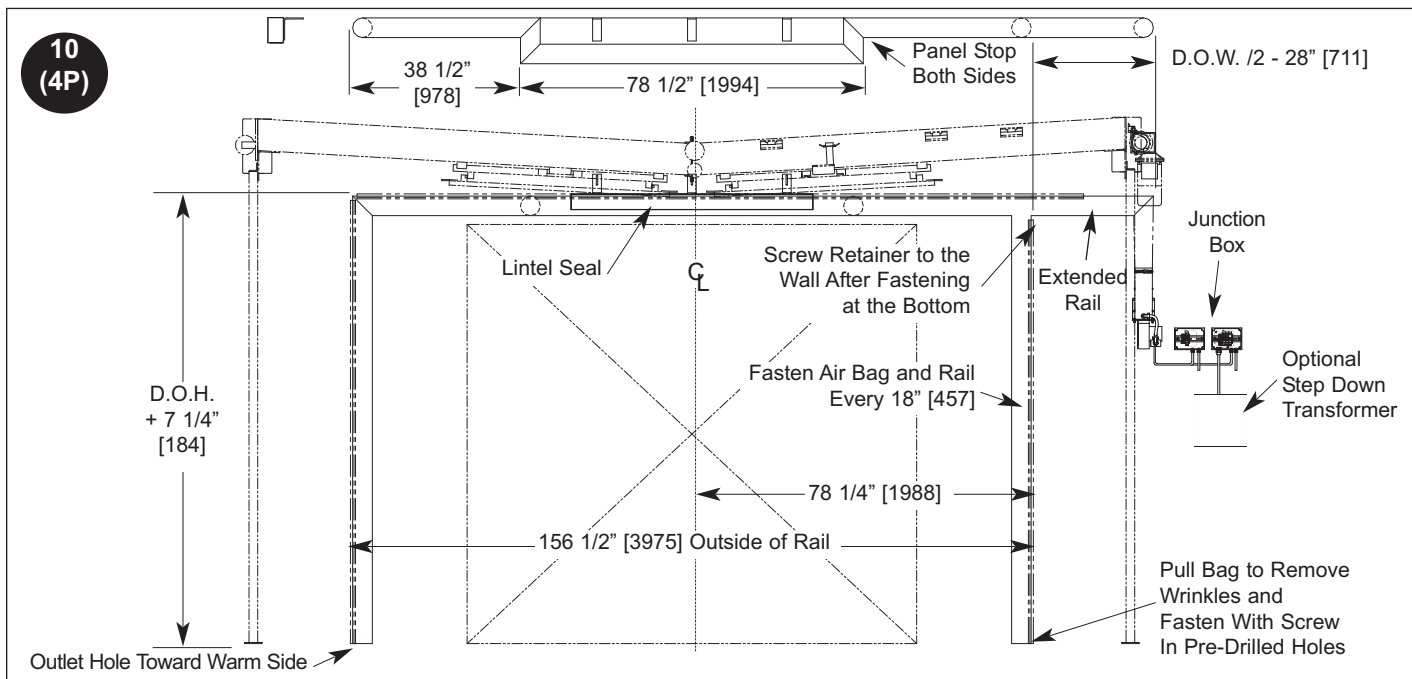
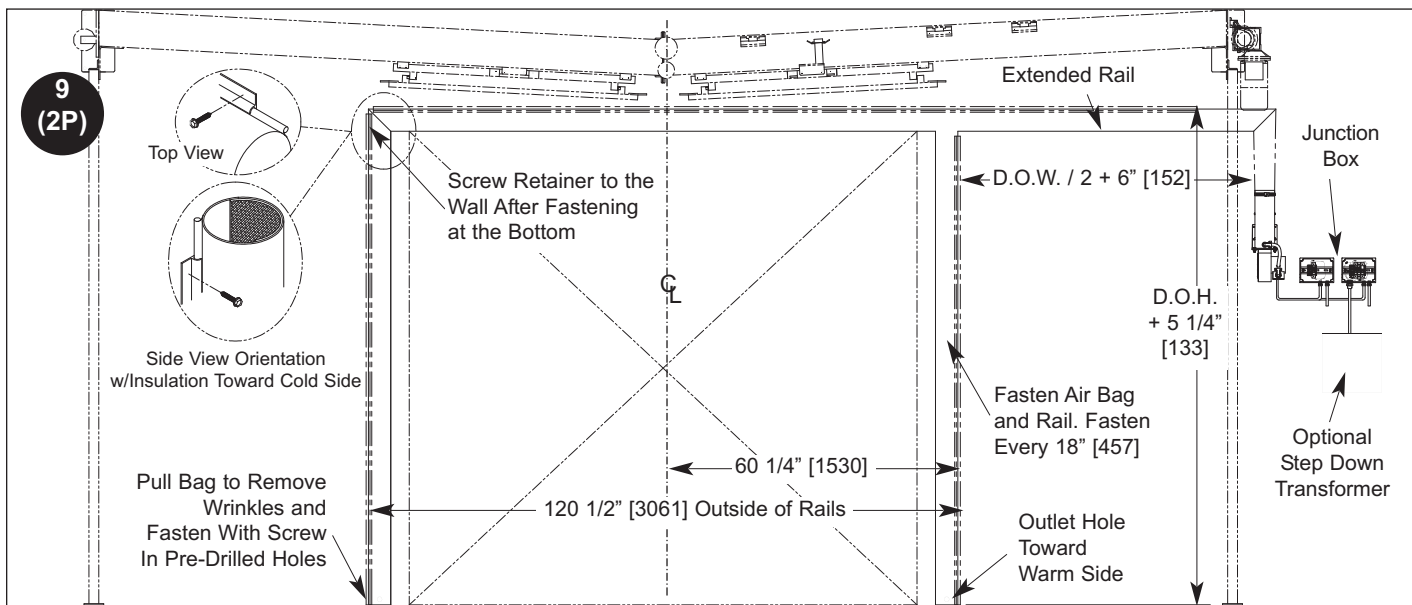
- Place a mark on the center of the lintel seal. Align with the centerline mark of the door jamb and the chalk line snapped at O.D.H. plus 7 1/4" [184], **Figure 1**.
- Fasten to wall using the fasteners provided or a fastener suitable for the wall that it is being mounted to.

LINTEL SEAL (SS)

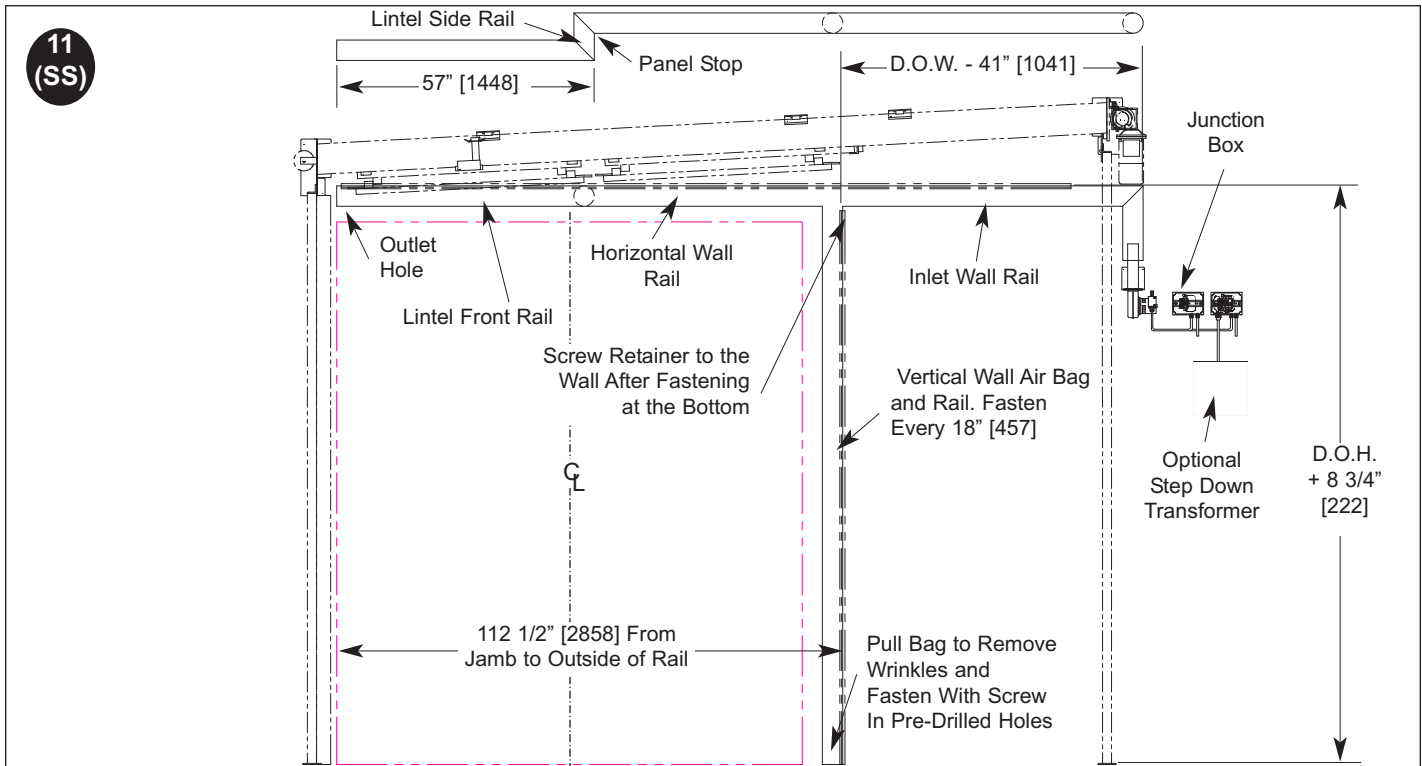
- Align the top of the aluminum Lintel Seal at O.D.H. plus 8 3/4" [222] at the snapped chalk line and tight against the side panel, **Figures 5 & 11**.
- Fasten to wall using the fasteners provided or a fastener suitable for the wall that it is being mounted to. Place fasteners in the middle of the slot on the lintel seal bracket for adjustment to slide up or down.
- Caulk the seal between the lintel seal and the side panel after the door is running and seals adjusted.

THERMAL AIR SEAL INSTALLATION

- Lay Thermal Air Seal assembly on the floor. The extended section with short 90° bend will be on the drive side, **Figure 9 - 2P, Figure 10 - 4P and Figure 11 - SS**.



PERIMETER SEAL INSTALLATION



CAUTION !!!

Use Caution When Fastening Seal to the Wall, So As Not to Puncture the Air-Bag.

2. Mark the centerline of the jamb, at the top of the lintel. Place horizontal marks across the header up from the top of the jamb as follows:

2P - 5 1/4" [133]

4P - 7 1/4" [184]

SS - 8 3/4" [222]

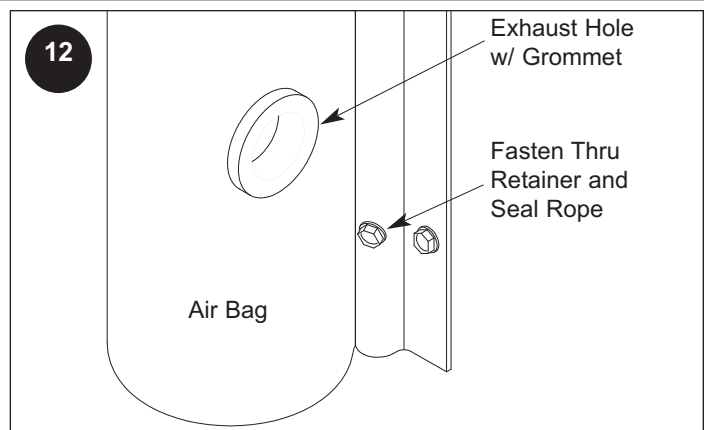
3. Fasten the top of the retainer to the wall at the previously marked lines every 18" [457].
4. Place marks on the side of the jamb from the centerline of the opening as follows:

2P - 60 1/4" [1530]

4P - 78 1/4" [1988]

SS - From the non-drive side of the opening, measure over 112 1/2" [2858] and place marks on the drive side of the jamb.

5. Fasten side seal outside edge of the aluminum retainer even with the marks and fasten every 18" [457].
6. With air bag seal tight to floor and exhaust hole free, place a screw in the predrilled holes of the retainer, 3" [76] from the top and bottom to hold in place, [Figure 12](#).
7. At the top of the side seal, pull seal taught, making sure seal is twist and wrinkle free and place screw through bulb to prevent from sliding down, [Figure 12](#).
8. Repeat procedure for opposite side.



BLOWER INSTALLATION

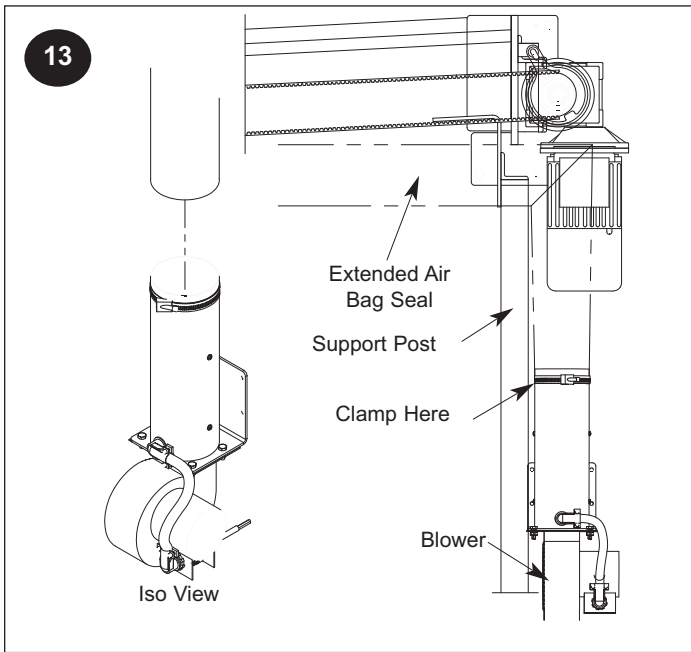
NOTE: End user is responsible for 120V supply to the blower unit. Wire blower unit per drawings on [Pages 21 - 25](#).

1. Mount the blower unit to the wall in line with the 90° extension part of the air bag. No part of the blower should be to the inside of the support post, [Figure 13](#).
2. The 5' [1524] blower cable will need to be hard wired to a junction box. Plugging into an outlet is not recommended as blower must continuously run.

NOTE: Blower unit **MUST** be mounted on a flat surface, if the wall has ridges, mount so it spans over two of the ridges.

3. Place air bag around the tube on the blower unit, remove wrinkles and strap in place with the clamp.
4. Route the cable to the 120V supply, hard wire.

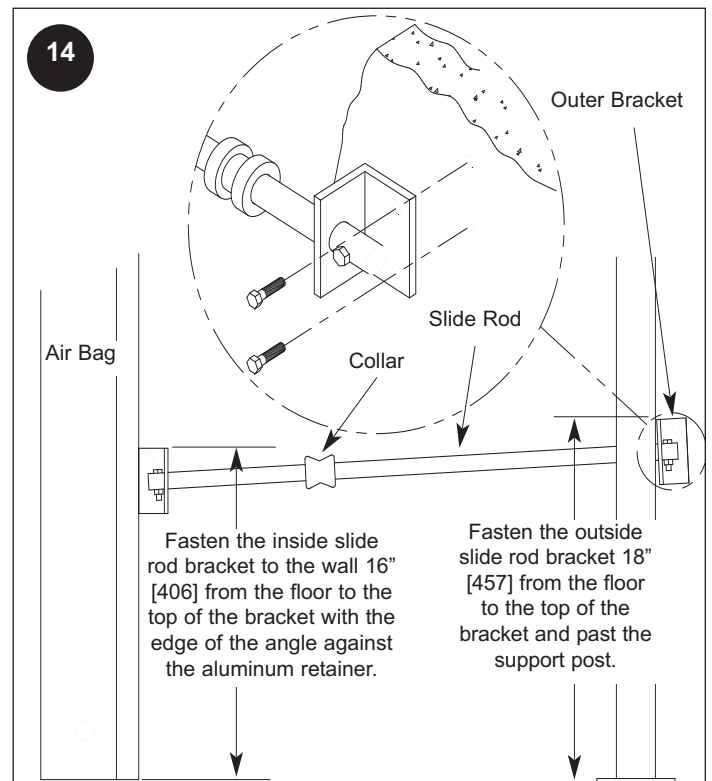
RETENTION SYSTEM INSTALLATION



- Assure that with the door in the closed position the air bags are sealing on the back side of the panels. If bag seal is past the end of the panel, loosen the retainer and move the seal closer to the opening. It is critical to have the seal properly sealing against the panel, versus the seal being mounted at an angle.

SEAL SHOULD NOT HANG INTO OPENING.

NOTE: Air bag legs should touch the floor allowing air to exit away from the freezer and should not have twists that obstruct air flow.

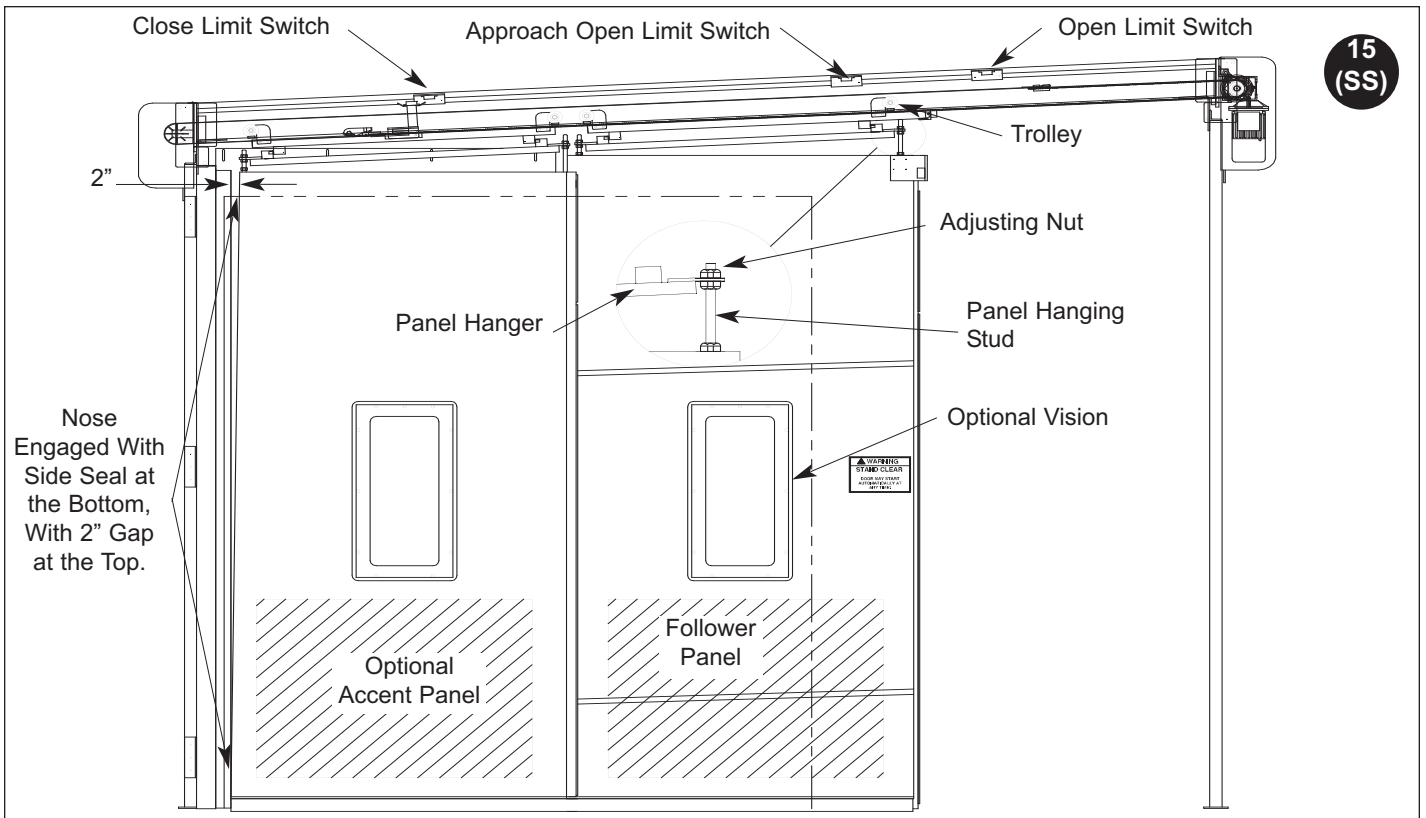


Fasten the inside slide rod bracket to the wall 16" [406] from the floor to the top of the bracket with the edge of the angle against the aluminum retainer.

Fasten the outside slide rod bracket 18" [457] from the floor to the top of the bracket and past the support post.

IMPORTANT!!!

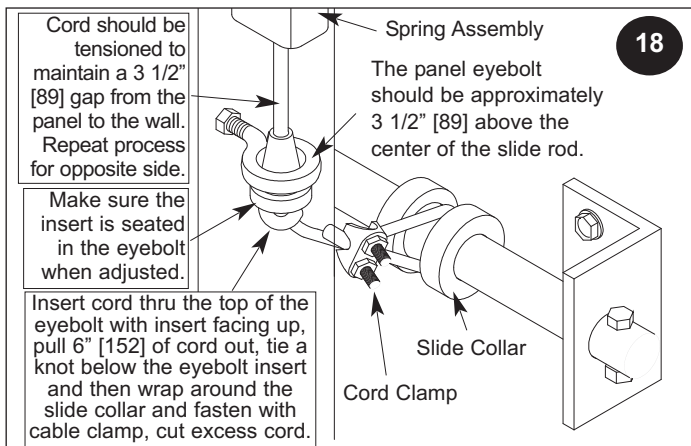
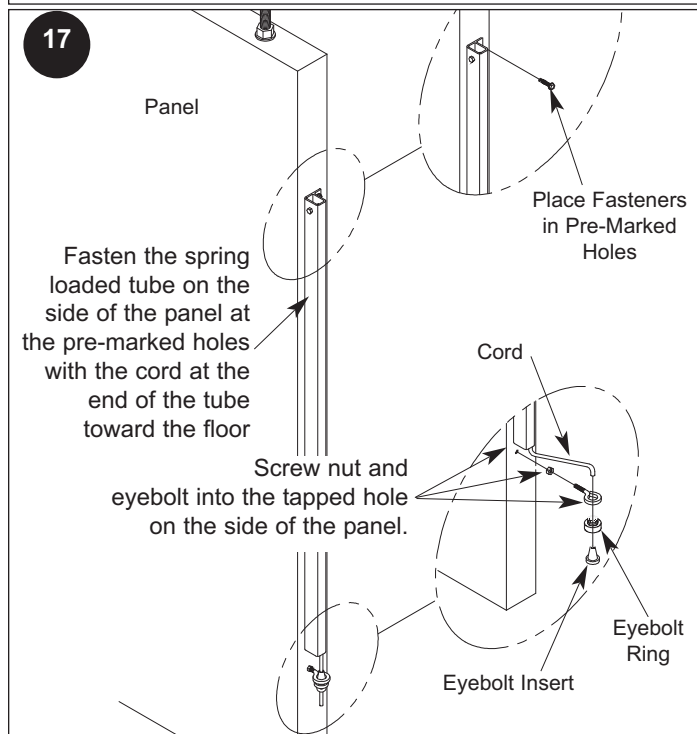
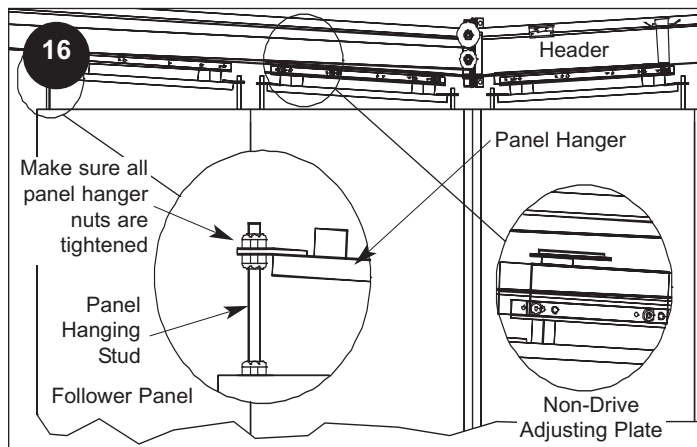
DO NOT BEND PANELS! Handle with care, panels must be laid flat on the floor or stood on the side of the box!



15 (SS)

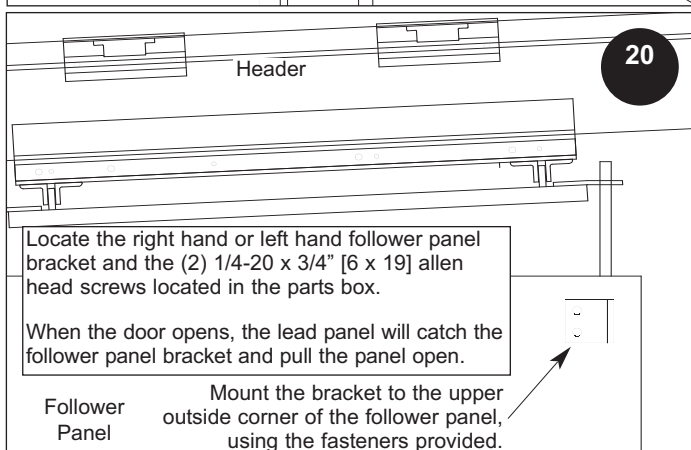
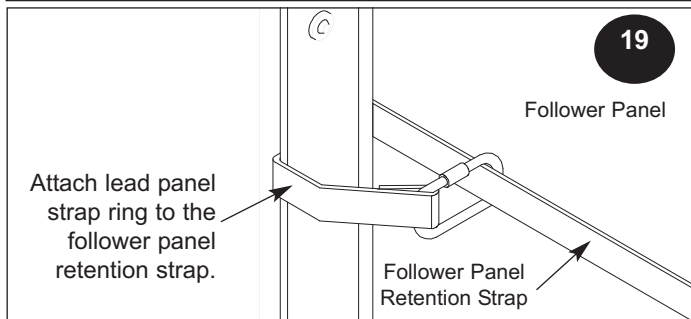
PANEL INSTALLATION

- Place panel on it's side and remove the top 5/8" [16] nut.
- Push the panel hangers toward the outside of header.
- With the 4P or SS design, install the follower panels to the rear panel hangers closest to the wall. The follower panels will be marked B-RH and B-LH. The 2 lead panels will be marked A-RH and A-LH.
- Install panel, making sure not to allow the panel to bend. Insert the studs at the top of the panel through the panel hanger holes and fasten with the 5/8" [16] nut removed prior, **Figures 15 & 16**. If room is limited, the stud may need to be loosened up and turned into panel to be able to get the panel low enough. Make sure to turn the stud back out the same number of threads turned in.
- If the door is a 2P design, install the lead panels in the same manner as the follower panel were installed.
- If the door is a 4P or SS design push door to full open position and clamp belting together to prevent the door from closing. Lift lead panel into place and insert studs through the panel hanger holes.
- If panels on the 4P door are not centered when closed, center the door with the non-drive side panel adjusting plate, **Figure 16**.
- The lead panels will need to be adjusted with door closed so that the bottom of the panel provides a tight seal at the floor, and the nose seals the full height of the door.
- For SS doors, adjust the lead panel so the bottom of the nose seal is touching the side seal and there is a 2" [51] gap at the top of the side panel.
- To adjust lead panels, push the panels closed and tighten all 5/8" [16] nuts so that the opening is sealed. Make sure there is at least 2 or 3 threads of the bolt sticking out past the nut, if not, turn stud out of panel.
- Adjust the vertical position of the lead panel so the back end of the floor seal is compressed at least 1/2" [13] with the door in the closed position.
- Final adjustment should occur after door is operational.



IMPORTANT!!!

DO NOT pull the cord so tight that the seal becomes distorted. This will cause lack of air flow and may result in moisture or frost build up.



ELECTRICAL INSTALLATION

⚠ WARNING!!!

When working with electrical or electronic controls, make sure that the power source has been locked out and tagged according to OSHA regulations and approved local electrical codes.

IMPORTANT!!!

A qualified electrician should install the wiring in accordance with local and national electrical codes. Use lockout and tagout procedures to avoid injury. Read and understand the safety warnings on the inside front cover of the owner's manual.

⚠ CAUTION !!!

When drilling holes in the box, DO NOT turn control box upside down or go too deeply into the box. Damage or debris may fall into electrical components causing failure or severe equipment damage.

IMPORTANT!!!

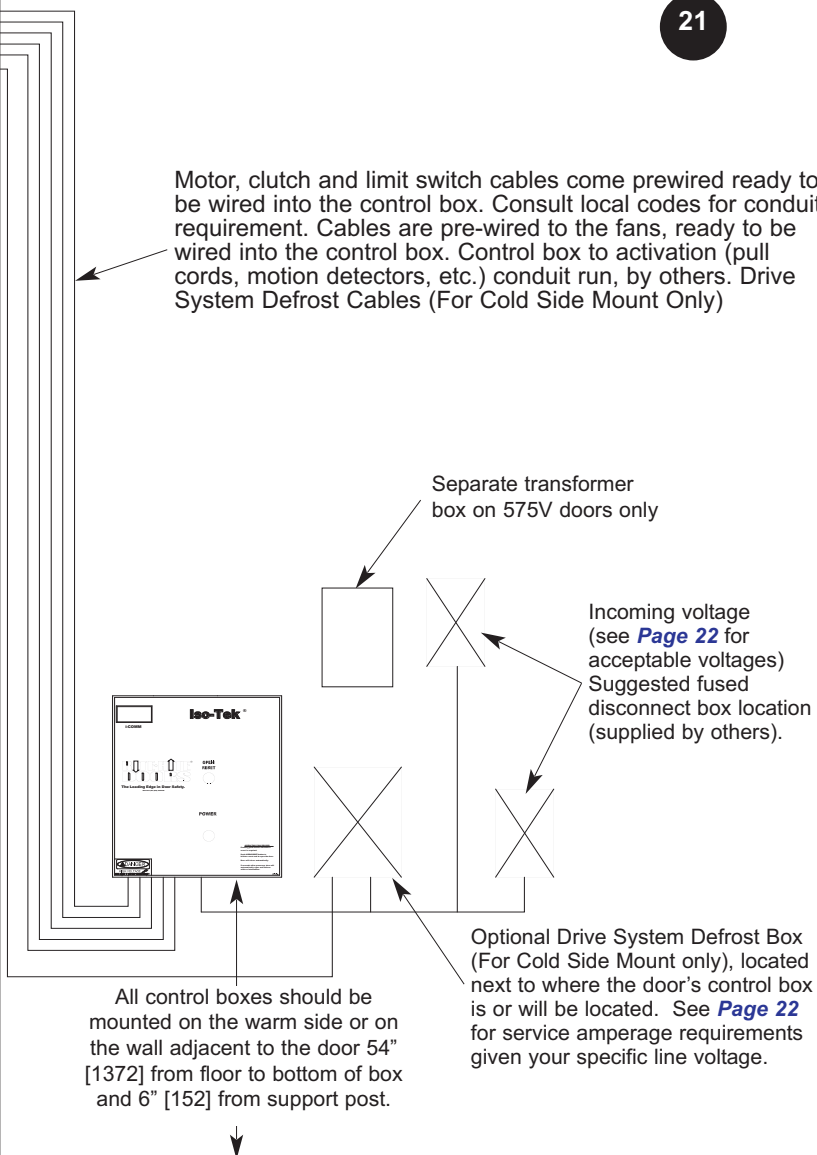
In freezer and cooler applications where a conduit passes from a warm to cold temperature zone, the conduit must be plugged with epoxy. This will help prevent condensation from forming in the conduit. For more information, see Section 300-7a of the National Electric Code.

IMPORTANT!!!

To reduce risk of injury or death. An earth ground connection **MUST BE** made to the green/yellow control box ground terminal. If metal conduit is used as the ground connector, an N.E.C. approved ground bushing and green/yellow wire **MUST BE** properly attached to the conduit for connection to the ground terminal.

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Motor, clutch and limit switch cables come prewired ready to be wired into the control box. Consult local codes for conduit requirement. Cables are pre-wired to the fans, ready to be wired into the control box. Control box to activation (pull cords, motion detectors, etc.) conduit run, by others. Drive System Defrost Cables (For Cold Side Mount Only)

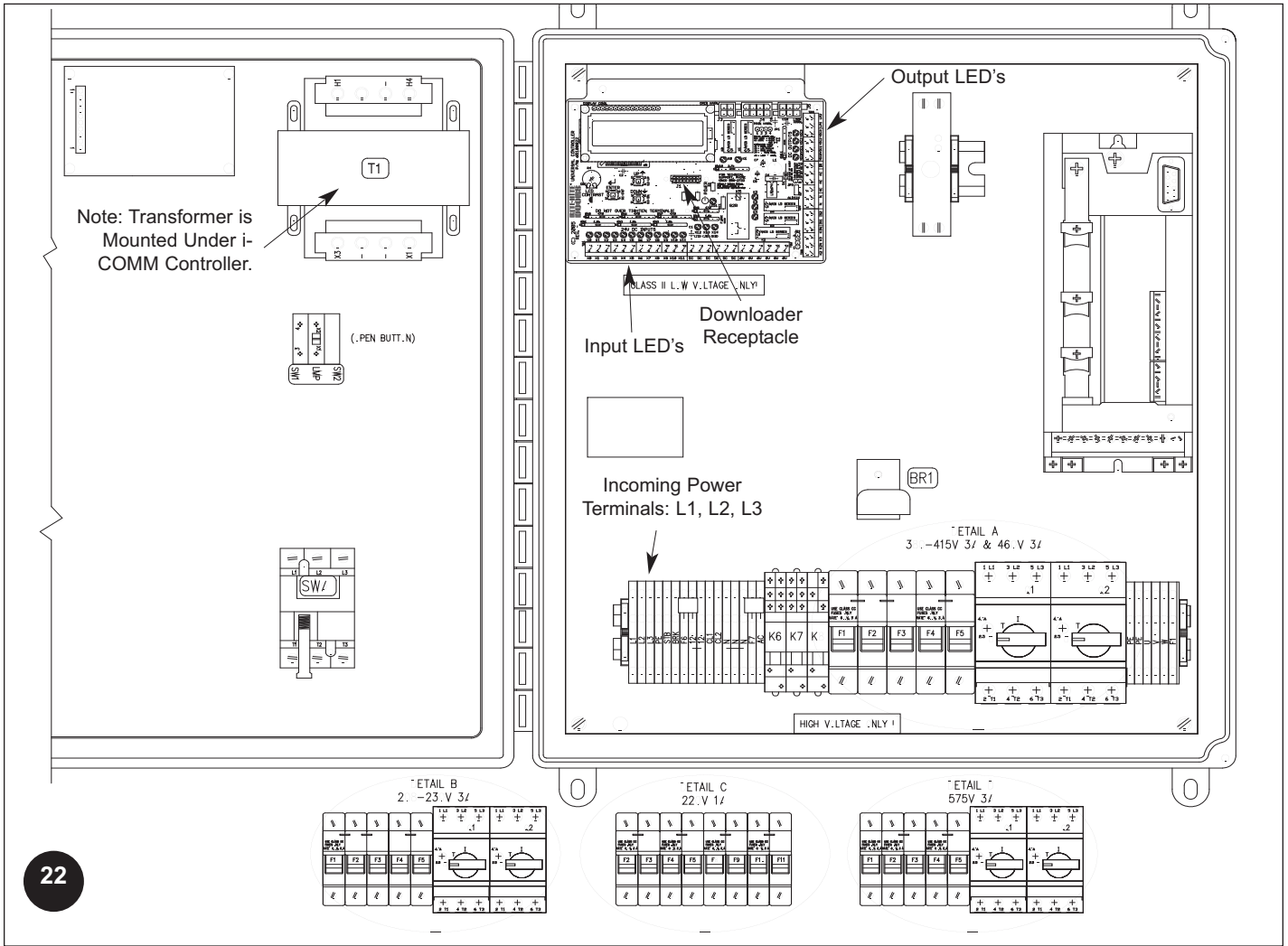


1. It is the responsibility of the installing electrician to be sure all local, state, and national electrical codes are met.
2. Local electrical codes may require the use of rigid conduit or a junction box when running the electrical cables from the header down to the control box. Make sure to route all conduit through the bottom of the control box.

The door frame is grounded via the motor ground wire provided.
3. It is the responsibility of the buyer to provide electrical service up to the control box with proper branch service protection and an approved means of disconnect. See amperage chart on [Page 22](#).
4. The control box is provided with class CC protective fusing for the incoming power.
5. Drill a hole for the power supply cable (by others) in the bottom of the control box.
6. The incoming power terminals in the control box will not accommodate wires larger than 10AWG.
7. Cables are prewired to the motor and brake. Cables for clutch and limit switches have connectors that need to be plugged together. The cables will then need to be run to a watertight fitting (not provided) in the bottom of the control box.
8. Connect wiring as indicated by the device field wiring diagram located on [Pages 21 - 25](#). Incoming 3-phase power must connect into terminals L1, L2, and L3. Ground must attach to the green/yellow terminal

NOTE: *Route all field installed wires inside the control box so that separation is maintained between line voltage wires and low voltage class II wiring. 575V Doors require the transformer to be in a separate control box, which will be mounted near the door control box.*

ELECTRICAL INSTALLATION



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ISO-TEK® i-COMM™ LOGIC TABLE

WHITE DOORS®

NAME	INPUT FUNCTION	STATE TABLE *				COMMENTS
		O	C	Ro	Rc	
X0	Open Limit Switch	1	0	1	1	On when door activates switch
X1	Close Limit Switch	0	1	1	1	On when door activates switch
X2	User Input (Activation) (4)	1	1	1	1	On to open door (4)
X3	User Input (Activation) (4)	X	X	X	X	On to open door (4)
X4	Approach Open Limit Switch	X	X	X	X	On when door activates switch
X5	Toggle Command (4)	X	X	X	X	On to toggle open or close (4)
X6	Activation Command - Open (4)	X	X	X	X	On to open door (4)
X7	Activation Command - Open (4)	X	X	X	X	On to open door (4)
X8	Non-Dedicated	X	X	X	X	Non-Dedicated
X9	Non-Dedicated	X	X	X	X	Non-Dedicated
X10	Reverse	X	X	X	X	Off to reverse door.
X11	Non-Dedicated	X	X	X	X	Non-Dedicated
X12	Open/Reset Switch (1)	X	X	X	X	On to reset from fault (1)
X13	Induction Loop Activation (1)	X	X	X	X	On to open door (1)
X14	Non-Dedicated	X	X	X	X	Non-Dedicated

NAME	OUTPUT FUNCTION	STATE TABLE *				COMMENTS
		O	C	Ro	Rc	
K0	VFD: Speed bit 1	0	0	1	0	On when door is operating
K1	VFD: Speed bit 2	0	0	X	1	On when door is closing and fast open.
K2	Brake Output	1	1	0	0	On to engage motor brake.
K3	User Out (Interlock) (4)	1	1	0	0	User selectable output (4)
K4	Fault	1	1	1	1	On when no fault.
K5	Fault	1	1	1	1	On when no fault.
YD0	User Out (Preamnounce) (4)	X	X	0	1	User selectable output (4)
YD1	User Out (4)	X	X	X	X	User selectable output (4)
YD2	User Out (4)	X	X	X	X	User selectable output (4)
YD3	User Out (4)	X	X	X	X	User selectable output (4)
J3-1	Fault (Flashing Push-button)	0	0	0	0	On when in fault
J3-2	Non-Dedicated	0	0	0	0	Non-Dedicated

Timer Adjustment

1. Press [ENTER]. Controller will stop and fault door.
2. Press [UP] until desired timer is displayed, display will read "Set Close Timer" or "Set Preamnounce".
3. Press [ENTER]. Display will show current timer value.
4. Using [UP] & [DOWN] keys select desired time.
5. Press [ENTER] to return to Main Menu.
6. Press [DOWN] until exit is displayed.
7. Press [ENTER] to save values.
8. Reset Door.

Preamnounce Timer is the amount of time the Preamnounce to close output will be on before door closes.
Close Timer is the amount of time the door will remain open before the preamnounce to close timer activates

*KEY:

- O = Open State
- C = Closed State
- Ro = Running Open
- Rc = Running Close

NOTES:

- (1) Device operation can be changed through menu. Consult i-COMM manual for additional details.
- (4) Default setting shown in table & comments. Record any changes on space provided. Consult i-COMM manual for additional details.

START-UP PROCEDURES

INITIAL START-UP PROCEDURES

It is important that the installer follow these procedures before applying power in order to prevent damage to the door control systems.

NOTE:

If the door is, or will be equipped with an activation device do not connect the device until after the door start-up has been completed.

1. Verify that all wires pre-coded wires are connected according to the wiring diagram.

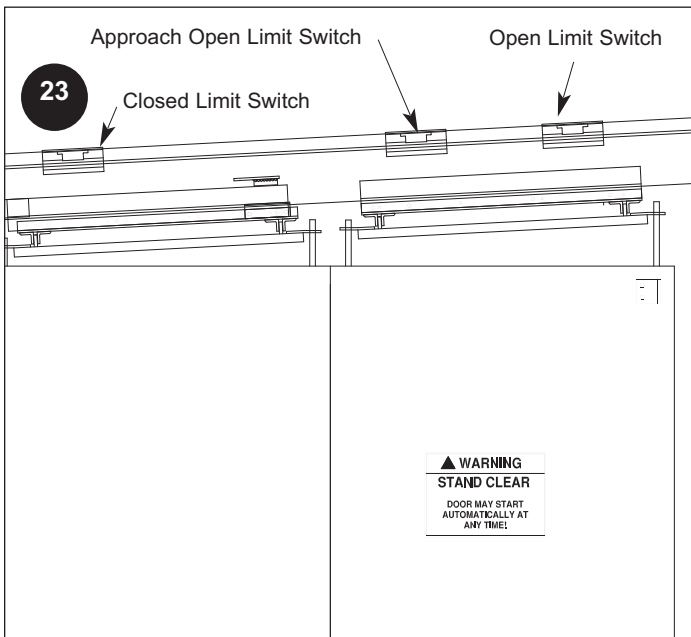
NOTE:

Electrical prints included in the control box supersede any prints included in this manual on Pages 21 -25. Always check parts or control box for prints.

2. Make sure the door is barricaded and clear of any obstructions.
3. Position door between the open and closed limit switches and not on the approach open limit switch, **Figure 23**.

CHECKING MOTOR ROTATION

1. Turn on the power from the disconnect box and then the disconnect on the front of the control box. Press the open button or wait 5 seconds for automatic door start-up.
2. The door should run in the open direction, if it runs in the closed direction, turn disconnect off and lock-out and tag-out the main power supply to the door and reverse the motor wires at terminals T2 and T3. Reconnect the power and repeat the test to verify operation.
3. If the door runs in the open direction it must stop on the open limit switch, observe that the input X0 illuminates when activated. When the door runs in the close direction it must stop on the close limit switch, observe that the input X1 illuminates, if not, check the wiring to the terminals and the plug-in connectors.



LIMIT SWITCHES

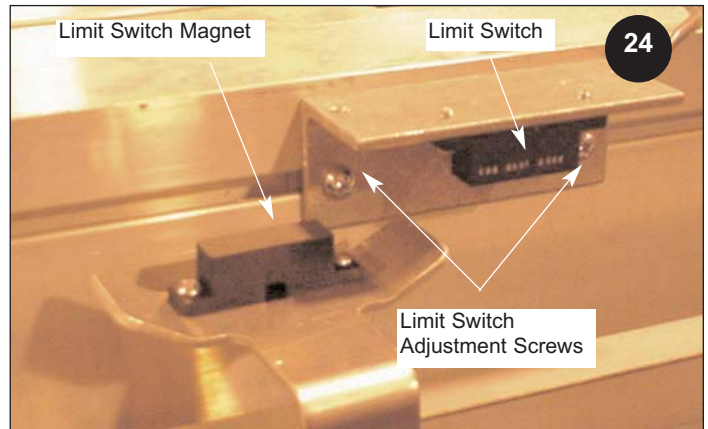
1. Limit switches are preset at the factory, but may need to be adjusted. If adjustments are needed refer to **Figure 24**.
2. To adjust limit switches turn off power, loosen screws, slide to the correct position, and retighten, **Figure 24**.
3. If the closed limit switch is not adjusted properly and the door overtravels the Torque Detect System can be triggered and the door may cycle 3 times and go into fault. After the problem has been corrected, press the open/reset button to clear the fault.
4. If the open limit switch is adjusted in any direction, the approach limit switch must adjusted accordingly. A distance of approximately:

- 4P - 26" [660]
- 2P - 20" [508]
- SS - 56" - 60" [1422 - 1524]

must be maintained between them. Adjust so lead panel does not throw the follower panel when opening. If this happens increase distance between switches until the panels open smoothly.

IMPORTANT!!!

If lag panel is thrown against the support post, adjust approach open limit switch to slow door down before lead panel picks up lag panel. Failure to do this may result in damage to the panel or the post-voiding the warranty.



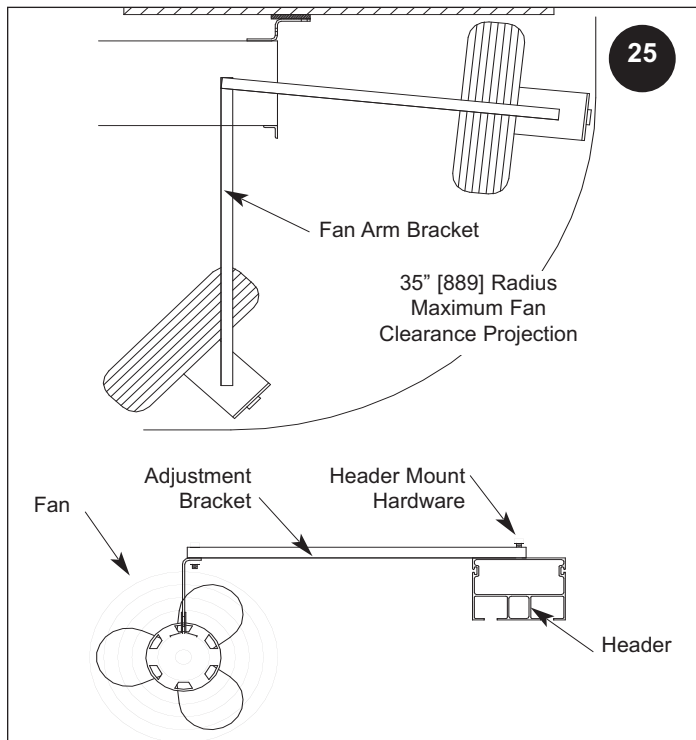
FAN INSTALLATION & CHECKLIST

FAN INSTALLATION

1. The fans are wired directly into the control box and match the voltage of the door.
2. Direct the fan to blow the greatest amount of air on the lowest 4' [1219] of the wall seal to minimize moisture, ice or frost buildup, **Figure 25**.
3. Secure fan wires away from all moving parts.
4. See **Pages 21 - 25** for wiring diagram.
5. Observe air flow out of the fan when power is applied. If significant air does not flow outward from the fan face, check phasing by removing power and reverse the fan leads in terminals "FN2" and "FN3" in the control box.
6. If switching fan voltage refer to **Figure 26**.

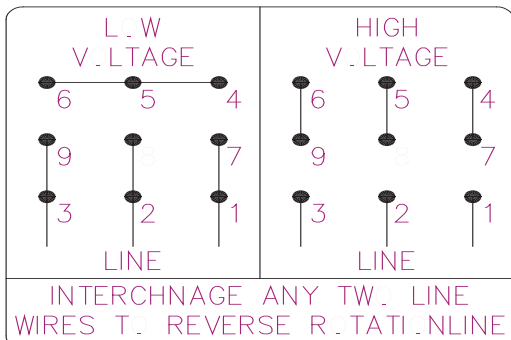
IMPORTANT!!!

Blow air across the door opening, but never into the opening.



208 v & 230 v

460 v



WIRING DIAGRAM LOCATED UNDER
THE M.T.R COVER PLATE

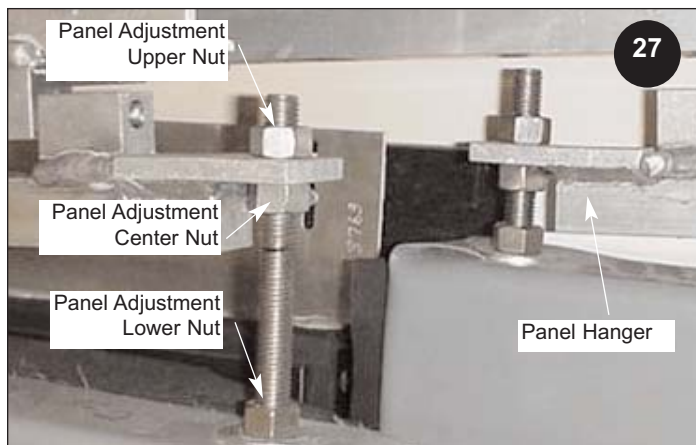
CHECKLIST:

NOTE: After the door installation is complete, the following **MUST BE** confirmed before the door is ready for operation.

1. The bottom panel seal should be touching the floor with no visible light showing.
2. 6" [152] of pre-tension should have been applied to the spring by pulling out the cord, inserting the eyebolt insert and tying a knot to keep the insert in place and maintain the proper 3 1/2" [89] distance from panel to wall.
3. Air bag should be tight to the floor, exhaust hole clear and free of obstructions and a screw placed in the pre-drilled holes in the aluminum retainer to prevent from sliding.
4. Air bag pulled up to remove any twists or wrinkles and a screw placed in the pre-drilled holes in the aluminum retainer to prevent from sliding.
5. Aluminum retainer caulked to prevent cold air infiltration and frost or ice developing.
6. Panel hanger nuts tightened to prevent them from loosening up, resulting in seal loss, **Figure 27**.

FINAL PANEL ADJUSTMENT

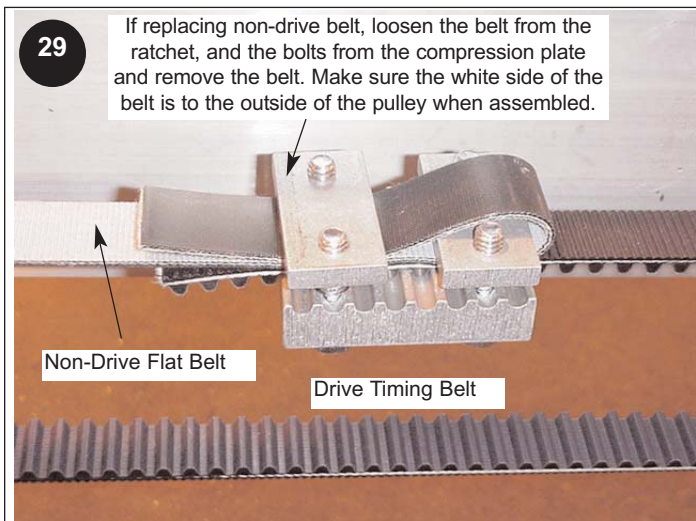
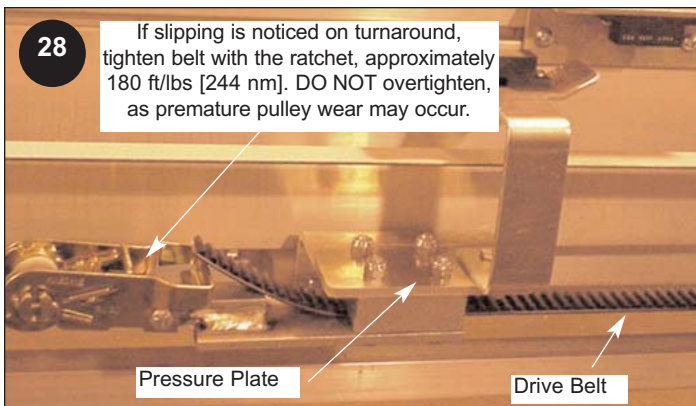
1. Turn power on and place door in the close position.
2. Make sure that the nose is tight and no light can be seen.
3. If adjustments are necessary, adjust close limit switch as needed, or tighten and loosen panel hanger nuts as required.
4. If all seals are tight and door closes properly, place any remaining screws in the lintel and perimeter seals.
3. Operate door and stand on opposite side of door to look for light at the seal areas and adjust as necessary.



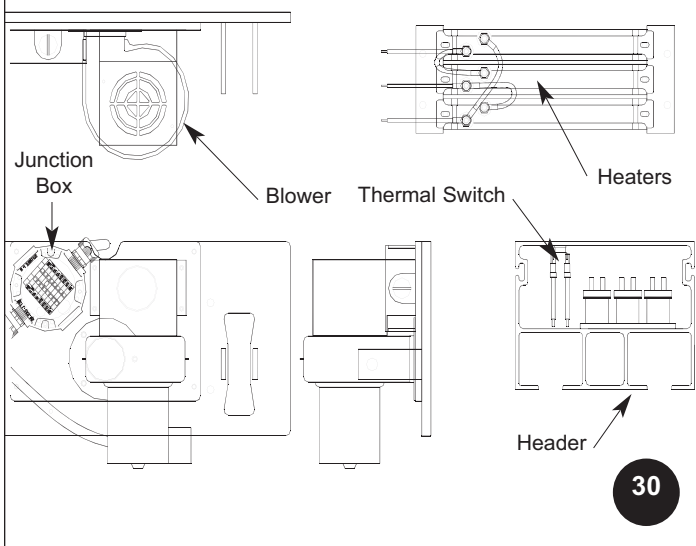
IMPORTANT!!!

Panel hanger nuts must be tightened after all panels have been adjusted and sealed to the wall. Failure to do so may result in panels coming loose and poor sealing capability.

MAINTENANCE PROCEDURES



1. For doors mounted on the inside of a freezer, a Drive System Defrost is available to minimize frost on drive components.
2. The design consists of a blower unit mounted to the header on the non-drive side plate. The unit blows air into the lower header cavity and through a heater coil. The heated air is then recirculated through the upper header cavity.



TORQUE DETECT SYSTEM

1. To test reversing function of door, place an object (pallet, box) in the jamb at the center of the opening. When impacted, door will reverse open.
2. After door has reached the open limit switch, it will time out and close according to the preset time.
3. If object remains in the door path and the door cannot close it will repeat this process three times, and then go into fault with the green open/reset button flashing until it is depressed and reset.
4. Before pressing reset button, check doorway for obstructions, to prevent damage to the door.

ACTIVATION DEVICE INSTALLATION

1. Proceed to install activation devices.
2. Verify operation of all activation devices.

NOTE: *Electrical prints included in the control box, supersede any prints included in this owners manual on Pages 21 - 25. Always check parts or control box for prints.*

Wire per electrical drawings on [Page 23](#).

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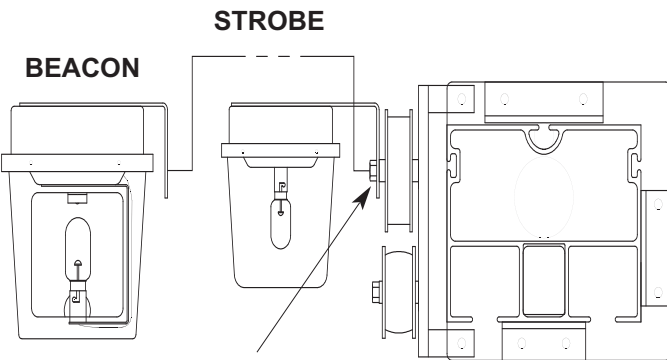
To replace the bulb. Remove power from the door.

Remove four phillips screws from cover, DO NOT drop cover.

Use caution not to break bulb when removing.

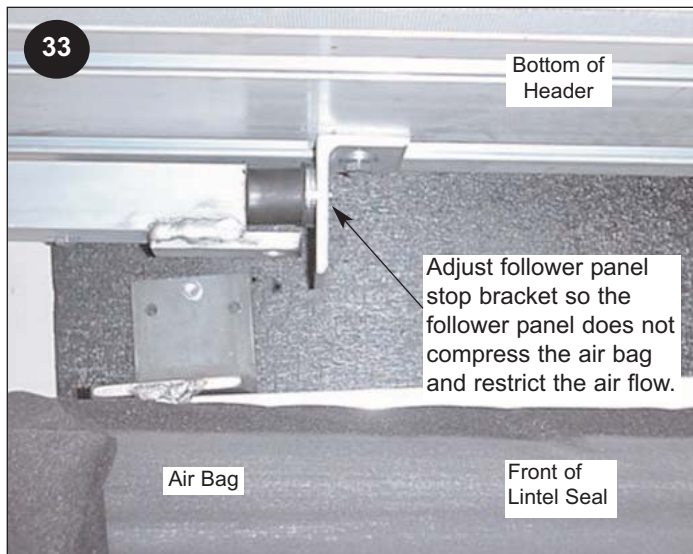
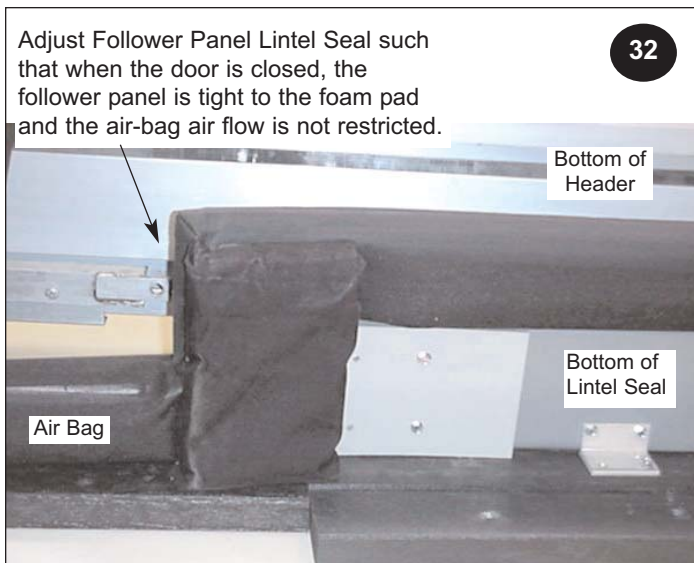
Insert new bulb, be careful NOT to touch bulb.

Replace cover and restore power to the door.



Remove the top bolt in pulley bracket and install the strobe or beacon. Reinstall the bolt and torque to 33lb-ft, [45nm].

MAINTENANCE PROCEDURES



RITE-HITE DOORS, INC. PLANNED MAINTENANCE									
Model 8600 ISO-TEK									
CUSTOMER:	JOB#			SERIAL#			DATE:		
Periodic Cycle Check: Planned Maintenance	Recommended P.M. Intervals (Time Shown In Months)								Inspect and Perform the Following (See Manual)
	1	4	8	12	18	24	30	36	
Activation				•		•			• Check all devices for proper operation.
Bearing (Pillow Block)				•					• Grease as required.
Belting (Drive & Flat)		•		•		•			• Check drive belt tension. Check belt tracking, should be centered, not wearing on the sides. If cracked or > 25% worn, replace.
Bumpers						•			• Inspect to make sure bumpers are in place, if missing or compressed, replace.
Control Box				•					• Make sure all connections are tight and box is clean.
Door Assembly				•					• Perform visual inspection for damage. Tighten all hardware. Use air hose to remove dust and debris. Replace any worn labels.
Door Operation				•					• Operate door and make sure all operations are functioning properly.
Drive System Defrost (optional)				•					• Note any ice or frost buildup and remove. Make sure the header blower and heater are functioning properly, header should be warm to touch.
Fans				•		•			• Inspect fans for proper operation, adjust as required. Do not blow fan into freezer.
Ice or Frost Buildup		•	•	•		•			• Remove any ice or frost buildup, adjust panel to seal on floor and at the nose.
Limit Switches		•		•		•			• Check open and close positions, door should not slam open and should fully close.
Motor, Brake, Clutch and Reducer				•		•			Inspect hardware, electrical connections and listen for grinding or odd noises.
Panels		•		•	•	•			• Inspect for wear or damage, clean with isopropyl alcohol or similar product. Repair any tears immediately, use duct tape temporarily. Hanger nuts should be tight.
Pulleys & Sprockets				•					• Inspect hardware and belt tracking.
Retention System		•		•		•			Check rope and spring tension. Adjust or repair as required.
Seals		•		•		•			• Make sure panels are tight against air bag. Panels are sealed at the floor and at the nose. Exhaust holes are open and there are no other holes. Repair all tears to avoid ice buildup and temperature loss.
Trolleys				•		•			• Make sure trolleys are riding smoothly and not damaged.

TROUBLESHOOTING

DEFINITION	FUNCTION
F1, F2 and F3 Fuses	F1, F2 and F3 Fuses are fuses for the incoming power and they supply voltage to the inverter, which supplies voltage to the motor. See chart on Page 23 for fuse sizing table.
F4 and F5 Fuses	F4 and F5 Fuses supply voltage to the transformer and protect the transformer and control box. The fuse is a 1amp KLD R slow blow.
F6 Resetting Fuse	F6 Fuse is for 120VAC devices and receives power from the X1 transformer tap. The 2.5amp PTC resettable fuse protects the clutch and strobes.
F7 Resetting Fuse	F7 Fuse is for 24VAC devices and receives power from the X2 transformer tap. The F7 fuse protects the photoeyes, relays and all 24VAC activation devices. The fuse is a 1 amp PTC resettable F6 fuse.
K6 Relay	K6-24VAC double pole relay is the brake relay and both sets of contacts are energized when the door is running open or close.
K7 Relay	K7-24VAC double pole relay is the clutch relay and both sets of contacts are energized when the door is operational.
K8 Relay	K8-24VDC single pole relay is an optional relay that is required when the pre-announce to close option is chosen.
Activation Devices	Operate the door using the activation devices to make sure that the door fully opens and closes after the time set on the re-close timer has expired. If the devices are wired in toggle mode, operate the device twice to verify that the door will open with an activation, and then close with an activation. For activation questions, refer to the Activation Manual.
Belting	The drive belting is a timing belt and the non-drive is a flat belt and are connected together with belt clamps. Check the following: a) If the drive belt is walking across the pulleys, check pulley bracket for squareness or a possible bent tab and align it such that the belt tracks properly. b) Reposition belt on the pressure plates to align. c) The tension is adjusted via a tensioner ratchet, and should be tensioned to 180 ft/lbs [244 nm].
Brake	If the brake is not functioning properly, check the following: a) Check terminals 120 and N for 120VAC. b) Brake wiring at terminals BRK and N and in motor junction box. c) The brake rectifier should put out 90-110VDC. d) Brake will have 750-760 ohms on normal readings, checked on the + and - terminals. e) The brake is approximately 95VDC and is released when the door is running and engaged when the door is open or closed or the power is off.
Clutch	If the clutch is not functioning properly, check the following: a) Check terminals 120 and N for 120VAC. b) Check rectifier-replace. c) Clutch wiring at terminals CL1 & CL2 and plug in connections. d) The clutch rectifier should put out 90-110VDC, between terminals CL1 and CL2. e) Clutch will have 227 ohms on normal readings. (must be checked after the rectifier). f) The clutch is supplied with 90VDC and is disengaged when the power is off and engaged when power is applied.
Control Box	The control box is NEMA 4X fuse protected. Standard controls include open/reset button with a disconnect switch. Voltages can be 208V, 230V, 400V, 460V, 575V 3-phase and 220V single phase.
Disconnect Q1 & Q2	Power for the fans are controlled by Disconnects Q1 & Q2.
Disconnect Switch	The large red button on the front of the control box, Figures 21 & 22 , may also be called the E-Stop. If it is required to stop the door at any time during its operation rotate the disconnect switch to the OFF position. This will disconnect power to the control circuit for the door. To return the door to normal operation, rotate the disconnect switch to the ON position, wait approximately 2 seconds and then press the OPEN/RESET button. The door will also automatically operate 5 seconds after power up. The disconnect switch is in line with terminals L1, L2, L3, and removes power from the entire control box, except for terminals L1, L2, L3 and on the incoming side of the switch.
D.O.H / D.O.W.	Door Opening Height or Width
Door does not stop when impacted	Check the following items for troubleshooting: a) Make sure door reverses when impacted between the noses. b) Inverter settings incorrect-consult factory.
Door Operation and Controls	The door operations are controlled by an i-COMM Universal Controller. The i-COMM is set-up and programmed during testing at the factory. Unless you are a RITE-HITE DOORS, INC. authorized service technician, you should not attempt to change the factory set program. A quick way of determining that the door is ready to operate normally is to open the control box and look for the green LED lights to be ON (Illuminated) at the X INPUTS and the Y OUTPUTS. Refer to the Input/Output logic table located on Page 13 of this manual. If the door fails to function, contact your local RITE-HITE DOORS, INC. representative or Technical Support at 563-589-2722.
Door reversal	If the door reverses when reaching the closed limit switch, check the following: a) Move closed limit switch to prevent door from closing to far. b) Make sure the limit switch wires are shielded.
End Cap Option	The door can be equipped with a drive and non-drive end cap.
Facade	The door can be equipped with a front Facade that will cover the face of the header and still allow for access to limit switch and belt adjustment.
Fans	Two fans are standard on all doors and are mounted from the top of the header, outside of the opening. The airflow is directed toward the wall seals and the panels at the floor to prevent moisture from freezing. The fans are supplied with 3-phase power directly from the control box.
Fault Conditions	The ISO-TEK door will enter into a fault condition and the green light will flash if: a) Motor runs for more than 8 seconds: 1-2 seconds for opening time and 3-6 seconds for closing. b) Open and Closed limit switches are on at the same time. c) Motor Torque Detect system has been activated three times d) There is a power outage-Light will flash for 5 seconds then auto-reclose.
Fault Reset	When a fault situation has occurred the system needs to be reset by pressing the OPEN/RESET button. The door will fully open and after the door has opened, it will time out and close automatically.

TROUBLESHOOTING

DEFINITION	FUNCTION
Header	The door has a unique sloped header design that will allow the panels to slide to the closed position in the event of a power outage, thereby maintaining room temperature.
i-COMM Controller™	The i-COMM controller is a circuit board that controls the actions of the door. There is a digital display that shows the cycles, status and position of the door at any time during its travel. For input and output function signals, refer to chart on Page 13 . Settings can be changed for re-close or pre-announce timers, interlocks, special activation commands, among many others, refer to instructional manual included.
Ice or Frost	If the door is not sealing properly, the door panels or seals may start to develop ice or frost. High humidity or a vast difference in temperature from side to side may be the cause of the ice or frost buildup. Adjust panels and seals after removing the ice and frost to maintain a tight seal.
Jumper JU1	The JU1 jumper MUST BE in place for door to operate, unless the door is interlocked.
Limit Switches	The Open, Closed, Approach Open and optional Alternate open limit switches are normally open and should only be closed when the magnet is lined up with the switch, if switch is closed, replace.
Manual Door Opening	When required, the door can be opened without electrical power. Separate panels at the middle and push or pull panels toward the open position. The clutch releases when power is removed from the door. When the power is restored press the OPEN/RESET button on the control box to open the door and reset the system. After 5 seconds the door will automatically reset.
Motor	The motor is a 1 HP 50/60Hz 208/230/380/415/460/575VAC motor. The 380/415/575V motor requires an extra transformer in the control box. If the door will not run when given an activation command, check the following: a) Check for loose wires at terminals, T1, T2, and T3 and wires on the inverter @ T1, T2, and T3. b) 208V-240V motor will have approx. 10.4 ohms on normal readings. c) 380V-480V motor will have approx. 20.7 ohms on normal readings.
Reducer	The reducer provides the ratio from the motor to the door.
Inverter	The Inverter controls the speed of the door, Torque Detect system, along with several other items. The inverter is powered from the F1, F2, and F3 fuses. A red light indicates that the unit has power. A blinking red light indicates the unit is in a fault mode. If the red light is not on, that would indicate no power to the unit. To reset the door, turn off the disconnect on the front of the box, wait 30 seconds, then restore power and reset by pushing the green reset button. If the inverter is not powered or functioning properly, check the following settings: a) Check fuses F1-F3 b) Check plug in connections and wiring terminations. c) Inverter must have red run light on, if not cycle power for 30 seconds, restore power, press green reset button to see if red light comes on. If the red light does not come on, consult your local representative or RITE-HITE DOORS, INC. The inverter can be equipped with a parameter unit that can assist in troubleshooting and monitoring the activities of the door. a) noP = No Operation: output voltage = 0V b) LS = Low Speed: output voltage=0V c) FAcc = Forward Acceleration d) FdEc = Forward Deceleration e) rAcc = Reverse Acceleration f) rdEc = Reverse Deceleration g) Fcon = Forward constant speed h) rcon = Reverse constant speed i) E.OP = Error overpotential: Input voltage too high j) E.UP = Error underpotential: Input voltage too low or unstable k) E.OC = Error overcurrent: Too much load l) E.OL = Error overload: Excessive load applied for longer than permissible m) E.PU = Power unit has failed-replace unit.
Motor phasing	If open button is pressed when the door is in the closed position and the door closes, check following. a) Confirm that the motor lead wires are in the proper terminals: 1-T1, 2-T2, 3-T3. b) Phasing is reversed, reverse wires in terminals, T2 and T3.
O.D.H / O.D.W.	Ordered Door Height or Width
Open Push Button	Located on the front of the control box, Figures 21 & 22 . When powered up, the green light will flash for 5 seconds then start to run. The first cycle will run slow and after that the door will run at the preset factory speeds. The open push button when pressed, gives a command to open the door, if the door closes see Motor phasing. The second function is to reset the door when the Torque Detect System has been initiated 3 times. When the door is in the fault mode the light will flash and the door will not operate from an activation command. The light will continue to flash until the open/reset button is pushed.
Panel (Follower) 4P and SS only	The follower panel is the rear or panel nearest to the wall. The panel seals the opening at the wall, the floor and to the lead panels. The panels can be raised or lowered by adjusted the nuts on the panel hanger. Upon an impact, the panels will flex.
Panel Bracket (Follower) 4P and SS only	The follower panel is equipped with a bracket that allows the lead panel to push the follower panel when the door is opening and holds it in place while the door is open. When the door closes the follower panel will slide closed.
Panel (Lead)	The lead panels seal the opening at the nose, the floor and wall or to the follower panel. The panels can be raised or lowered by adjusting the nuts on the panel hanger bracket. Upon an impact, the panels will flex. There is an option available for a vision window and an accent wear panel.
Plumb	Leveling an object to make true vertical.

TROUBLESHOOTING

DEFINITION	FUNCTION
Poly Lumber Kit	The poly lumber kit is optional, notice wall surface criteria found on Page 3, 4 or 6 . The kit consists of two vertical, one horizontal and one or two 15" [381] pieces of poly lumber for mounting the header and wall seals. Also included in the kit are four 1/2" x 24" [13 x 610] threaded rods for thru-bolting the header, four 3/8" x 2 3/4" [10 x 70] concrete anchors, four 6" x 6" [152 x 152] backer plates, 6' [1829] of 5/8"Ø [16] foam, hardware for mounting the poly lumber to the wall and the seals to the poly lumber.
Retention Straps	The retention cord is designed to provide a superior seal by keeping the panels tight against the seals and to the wall. When the door is impacted, cord will flex and allow the door to breakaway.
Seals	The door is equipped with the Thermal Air Sealing System.
Shim	Add layers of solid material to make an object level or plumb.
Torque Detect System	The Torque Detect system will detect an object that is in the opening. When the door is closing and impacts the object, the door will reverse and go open. If this process happens 3 times, the door will go open and stay open and the green open/reset button will flash. The light will flash until the button is de-pressed to reset the door. Must be on for door to run. If the door still will not close, check to make sure none of the limit switches are stuck on. Check reasons below why door will reverse. a) Object in the opening. b) Closed limit switch set too far, door not reaching limit and noses impact. c) Perimeter seals are not adjusted properly, either the sides or the top are too tight. A squeaking noise will be heard as the door closes, indicating too tight of a seal.
Transformer control	The transformer is a tri-volt transformer that takes an incoming voltage of 208V, 230V, 380V, 415V and 460V and converts it to 110VAC and 24VAC. An optional transformer is available for 575V doors. a) 208V(Taps H3-H4) 6-7 Ohms b) 230V(Taps H2-H4) 6-7 Ohms c) 380V(Taps H3-H4) 15.6 Ohms d) 460V(Taps H1-H4) 18.2 Ohms e) 415V(Taps H2-H4) 16.1 Ohms f) 120V(Taps X1-X3) 1.4-2.5 Ohms g) 24V(Taps X1-X2) 1.5-2.4 Ohms
Transformer step down	The step down transformer is for 575V applications only. It reduces the inverter input voltage to 230V.
Voltage Change	To change voltage in the field, the following will need to be done. Replace inverter, motor, rewire transformer taps and fans per electrical drawing, replace Drive System defrost strip heaters if present.
2P, 4P, 2PN, SS	2 Panel, 4 Panel, Narrow 2 Panel and Single Slide

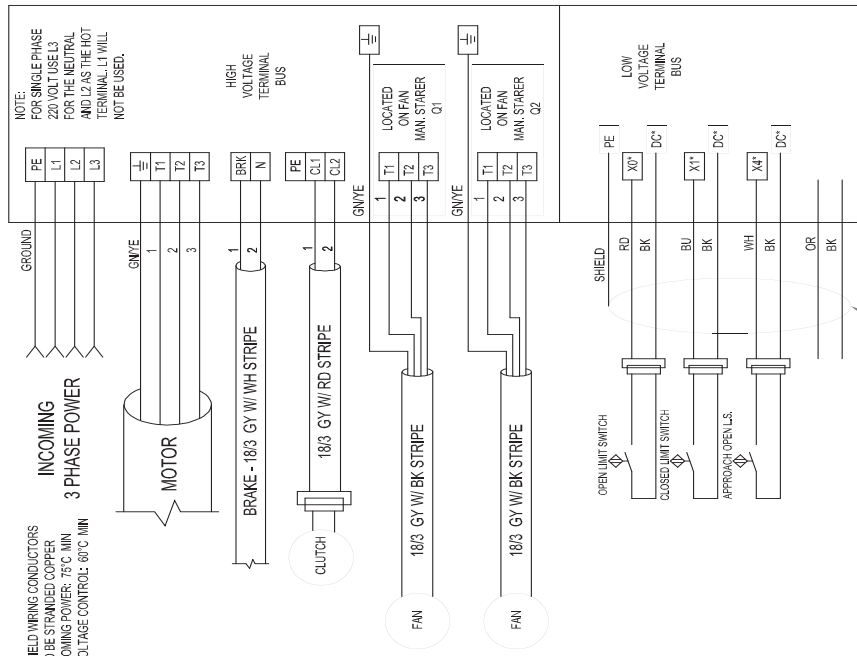
MANDATORY FIELD WIRING DIAGRAM

REV	DESCRIPTION	DATE	BY
A	PERFORMANCE	08/20/09	LJP

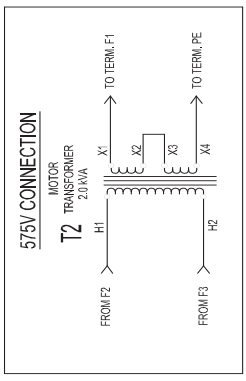
MODEL	VOLTAGE	MOTOR F.L.A.	TOTAL F.L.A.	SERVICE AMPS
8600 (NO FANS)	220 1 PHASE	3.0	8.7	30
	230-240		6.3	
	380-415	1.5	4.0	15
	440-480		4.0	
8600 (BK PART)	220 1 PHASE	3.0	12.7	30
	208		8.3	
	230-240		8.3	
8600 (SINGLE SLIDE)	220 1 PHASE	3.0	10.7	30
	208		7.3	
	230-240		7.3	
	380-415	1.5	4.5	15
	440-480		4.5	
	575	3.0	4.5	

BRANCH CIRCUIT PROTECTION
 NOTE: BRANCH CIRCUIT PROTECTION MUST BE SUPPLIED BY THE END USER AND COMPLY WITH ALL NATIONAL AND LOCAL ELECTRICAL CODES. SIZING FOR PROTECTIVE DEVICES MAY BE BASED ON INTERMITTENT DUTY.

NOTE: FOR SINGLE PHASE 220VOLT APPLICATION A SINGLE PHASE FAN MUST BE SPECIFIED. FOR SINGLE PHASE APPLICATIONS RN3 & FN6 WILL NOT BE USED.

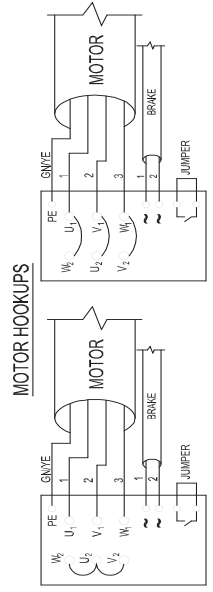


NOTE: TERMINALS MARKED WITH AN () ARE LOCATED ON THE F-COMM CONTROLLER.



COMPONENT	TORQUE (IN-LBS)	DRIVER SETTING
STARTER	20	6
DISCONNECT	20	6
INTERLOCK	20	6
INVERTER	5	2
OVERLOAD	20	6
TRANSFORMER	20	6
TERMINALS	12	5
RELAYS	12	5
PLC	10	4

TORQUE INSTRUCTIONS:
 1. TIGHTEN TO RECOMMENDED MIN TORQUE SETTING.
 2. PULL TEST ALL WIRES.
 3. IF WIRE PULLS OUT, TORQUE AGAIN TO MINIMUM VALUE. GENTLY HAND TIGHTEN UNTIL WIRE CANNOT BE PULLED LOOSE.



USE ONLY FACTORY SUPPLIED CABLE FOR MOTOR, PHOTOEYES, & LIMIT SWITCHES.

DO NOT SCALE DRAWING

DATE: 11/04/09
 DRAWN BY: RPB
 CHECKED BY: RPB
 APPROVED BY: RPB
 DATE: 11/04/09

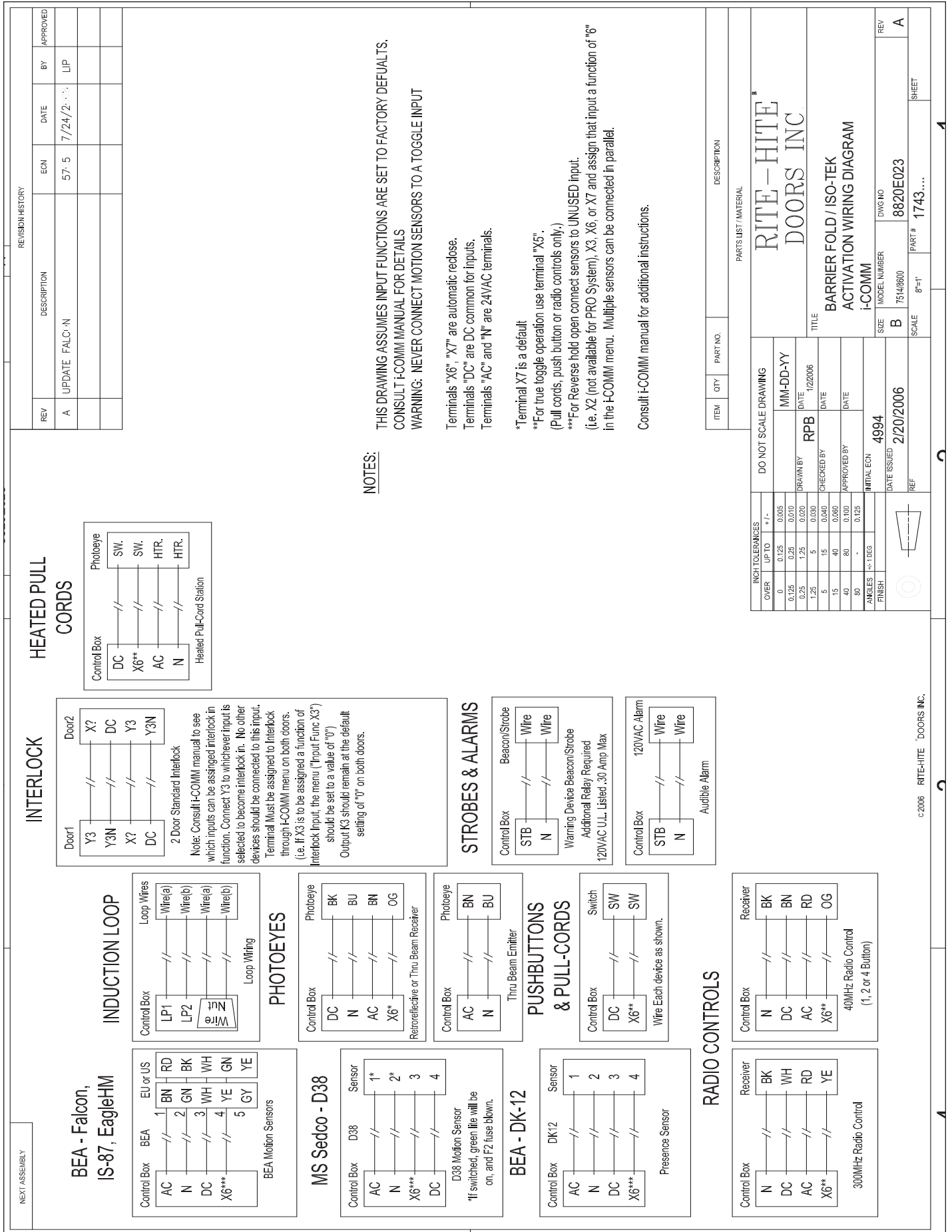
PROJECT: 8600 - F-COMM
 DRAWING NO: 8804E054

EXTERNAL FIELD WIRING DIAGRAM
 AC MOTOR

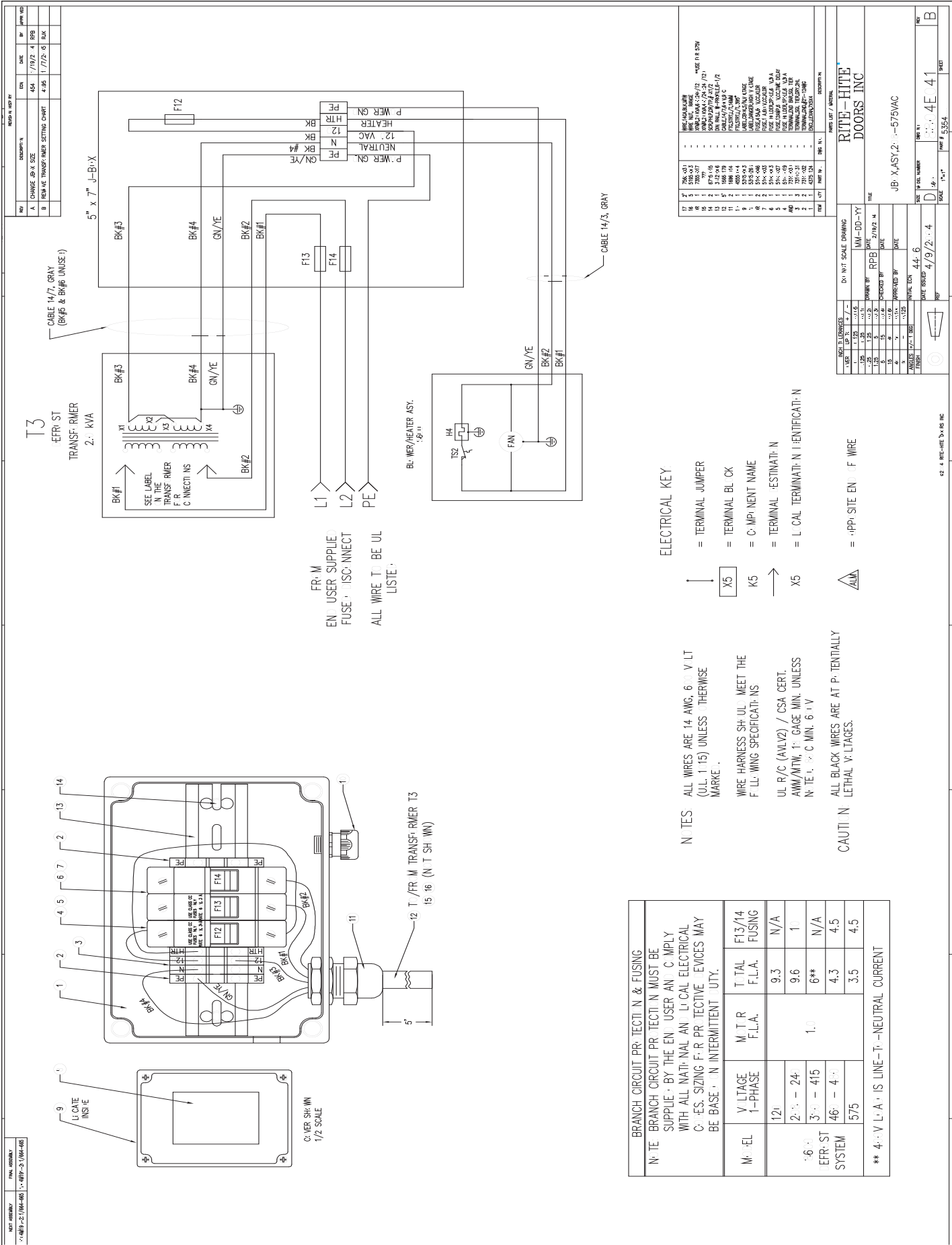
DATE: 11/04/09
 DRAWN BY: RPB
 CHECKED BY: RPB
 APPROVED BY: RPB
 DATE: 11/04/09

SCALE: 1" = 1'-0"

ACTIVATION WIRING DIAGRAM



J-BOX WIRING 208-575V (W/STEP DOWN TRANSFORMER)



ELECTRICAL KEY

- = TERMINAL JUMPER
- = TERMINAL BL CK
- = C-MP-NENT NAME
- = TERMINAL -ESTINATH-N
- = L-CAL TERMINATH-N IDENTIFICATH-N
- = -APP-SITE EN - F WIRE

NOTES

- ALL WIRES ARE 14 AWG, 60 VOLT (UL LISTED) UNLESS OTHERWISE MARKED.
- WIRE HARNESS SHALL MEET THE FOLLOWING SPECIFICATIONS:
UL R/C (AVL2) / CSA CERT.
AWM/MTW, 10 GAUGE MIN. UNLESS NOTED OTHERWISE.
MIN. 6 VOLT.
- ALL BLACK WIRES ARE AT POTENTIALLY LETHAL VOLTAGES.

BRANCH CIRCUIT PROTECTIVE DEVICES & FUSING			
NOTE: BRANCH CIRCUIT PROTECTIVE DEVICES MUST BE SUPPLIED BY THE END USER AND COMPLY WITH ALL NATIONAL AND LOCAL ELECTRICAL CODES. SIZING FOR PROTECTIVE DEVICES MAY BE BASED ON INTERMITTENT DUTY.			
M-EL	VOLTAGE 1-PHASE	M.T.R. F.L.A.	T.TAL F.L.A.
120	9.3	F13/14	FUSING
208	9.6	1	N/A
240	1	6**	N/A
415	4.3	4.5	4.5
460	3.5	4.5	4.5
575			

** 4-PHASE LINE-TO-NEUTRAL CURRENT

REV	DATE	BY	CHKD
1	1/18/12	4	BRS
2	1/17/12	5	DAK

NO.	DESCRIPTION	DATE	BY
A	CHANGE BOX SIZE	4/25/12	4
B	REMOVE TRANSFORMER SETTING CHART	4/25/12	5

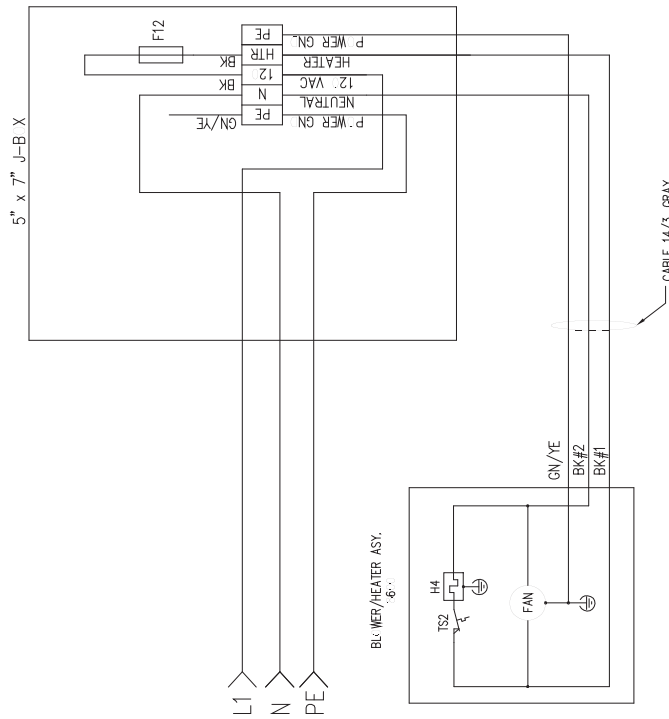
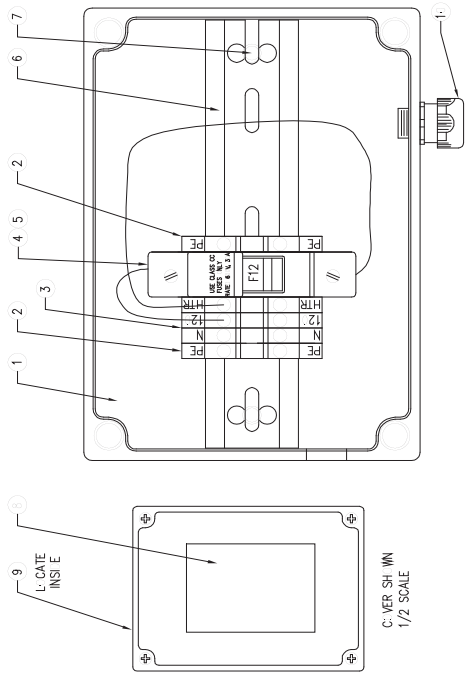
208-01	WIRE HARNESS	1	1
208-02	WIRE HARNESS	1	1
208-03	WIRE HARNESS	1	1
208-04	WIRE HARNESS	1	1
208-05	WIRE HARNESS	1	1
208-06	WIRE HARNESS	1	1
208-07	WIRE HARNESS	1	1
208-08	WIRE HARNESS	1	1
208-09	WIRE HARNESS	1	1
208-10	WIRE HARNESS	1	1
208-11	WIRE HARNESS	1	1
208-12	WIRE HARNESS	1	1
208-13	WIRE HARNESS	1	1
208-14	WIRE HARNESS	1	1
208-15	WIRE HARNESS	1	1
208-16	WIRE HARNESS	1	1
208-17	WIRE HARNESS	1	1
208-18	WIRE HARNESS	1	1
208-19	WIRE HARNESS	1	1
208-20	WIRE HARNESS	1	1
208-21	WIRE HARNESS	1	1
208-22	WIRE HARNESS	1	1
208-23	WIRE HARNESS	1	1
208-24	WIRE HARNESS	1	1
208-25	WIRE HARNESS	1	1
208-26	WIRE HARNESS	1	1
208-27	WIRE HARNESS	1	1
208-28	WIRE HARNESS	1	1
208-29	WIRE HARNESS	1	1
208-30	WIRE HARNESS	1	1
208-31	WIRE HARNESS	1	1
208-32	WIRE HARNESS	1	1
208-33	WIRE HARNESS	1	1
208-34	WIRE HARNESS	1	1
208-35	WIRE HARNESS	1	1
208-36	WIRE HARNESS	1	1
208-37	WIRE HARNESS	1	1
208-38	WIRE HARNESS	1	1
208-39	WIRE HARNESS	1	1
208-40	WIRE HARNESS	1	1
208-41	WIRE HARNESS	1	1
208-42	WIRE HARNESS	1	1
208-43	WIRE HARNESS	1	1
208-44	WIRE HARNESS	1	1
208-45	WIRE HARNESS	1	1
208-46	WIRE HARNESS	1	1
208-47	WIRE HARNESS	1	1
208-48	WIRE HARNESS	1	1
208-49	WIRE HARNESS	1	1
208-50	WIRE HARNESS	1	1
208-51	WIRE HARNESS	1	1
208-52	WIRE HARNESS	1	1
208-53	WIRE HARNESS	1	1
208-54	WIRE HARNESS	1	1
208-55	WIRE HARNESS	1	1
208-56	WIRE HARNESS	1	1
208-57	WIRE HARNESS	1	1
208-58	WIRE HARNESS	1	1
208-59	WIRE HARNESS	1	1
208-60	WIRE HARNESS	1	1
208-61	WIRE HARNESS	1	1
208-62	WIRE HARNESS	1	1
208-63	WIRE HARNESS	1	1
208-64	WIRE HARNESS	1	1
208-65	WIRE HARNESS	1	1
208-66	WIRE HARNESS	1	1
208-67	WIRE HARNESS	1	1
208-68	WIRE HARNESS	1	1
208-69	WIRE HARNESS	1	1
208-70	WIRE HARNESS	1	1
208-71	WIRE HARNESS	1	1
208-72	WIRE HARNESS	1	1
208-73	WIRE HARNESS	1	1
208-74	WIRE HARNESS	1	1
208-75	WIRE HARNESS	1	1
208-76	WIRE HARNESS	1	1
208-77	WIRE HARNESS	1	1
208-78	WIRE HARNESS	1	1
208-79	WIRE HARNESS	1	1
208-80	WIRE HARNESS	1	1
208-81	WIRE HARNESS	1	1
208-82	WIRE HARNESS	1	1
208-83	WIRE HARNESS	1	1
208-84	WIRE HARNESS	1	1
208-85	WIRE HARNESS	1	1
208-86	WIRE HARNESS	1	1
208-87	WIRE HARNESS	1	1
208-88	WIRE HARNESS	1	1
208-89	WIRE HARNESS	1	1
208-90	WIRE HARNESS	1	1
208-91	WIRE HARNESS	1	1
208-92	WIRE HARNESS	1	1
208-93	WIRE HARNESS	1	1
208-94	WIRE HARNESS	1	1
208-95	WIRE HARNESS	1	1
208-96	WIRE HARNESS	1	1
208-97	WIRE HARNESS	1	1
208-98	WIRE HARNESS	1	1
208-99	WIRE HARNESS	1	1
208-100	WIRE HARNESS	1	1

REV	DATE	BY	CHKD
1	4/9/12	4	B
2	4/9/12	5	B

J-BOX WIRING 120V

REV	DESCRIPTION	EN	DATE	BY	APPR
A	CHANGE JB X SIZE	4541	/19/2 4	RPB	

REV	DESCRIPTION	EN	DATE	BY	APPR
A	CHANGE JB X SIZE	4541	/19/2 4	RPB	



FR. M
EN USER SUPPLIE
FUSE DISCONNECT
ALL WIRE TO BE UL
LISTED

WIRE HARNESS SHALL MEET THE
UL R/C (ANV2) / CSA CERT.
ANN/MTW. 1. GAGE MIN. UNLESS
NOTED. C MIN. 6. V

ALL BLACK WIRES ARE AT POTENTIALLY
LETHAL VOLTAGES.

CAUTION

BRANCH CIRCUIT PROTECTIVE DEVICE	TOTAL F.L.A.	F13/14 FUSING
12. 2. - 24.	9.3	N/A
3. - 415	6**	N/A
46. - 4. -	4.3	4.5
575	3.5	4.5

** 4. V. L. A. IS LINE-T - NEUTRAL CURRENT

WIRE HARNESS SHALL MEET THE
UL R/C (ANV2) / CSA CERT.
ANN/MTW. 1. GAGE MIN. UNLESS
NOTED. C MIN. 6. V

ALL BLACK WIRES ARE AT POTENTIALLY
LETHAL VOLTAGES.

CAUTION

BRANCH CIRCUIT PROTECTIVE DEVICE	TOTAL F.L.A.	F13/14 FUSING
12. 2. - 24.	9.3	N/A
3. - 415	6**	N/A
46. - 4. -	4.3	4.5
575	3.5	4.5

** 4. V. L. A. IS LINE-T - NEUTRAL CURRENT

ITEM	QTY	PART N	DESCRIP N
11	2	7560-1-3	WIRE (40/5) KUMH
1	1	4550-1-4	TEST REL. CT. BOX
9	1	53-5-1-3	LABEL GR. XLS/ALU LITAGE
1	1	53-5-26	LABEL GR. XLS/ALU LITAGE
7	2	67-5-15	SRR-PLP/BR/PL# X1/2
6	1	3-12-1-6	DN ROLL-IN-PR FILE6-1/2
5	1	5111-27	FUSE (AMP) 6 TV ACC TIME DELAY
4	1	7310-1-9	HEATER/HEATER ASY
3	3	7310-1-31	TERMINAL SOL. TIER GR. 2/EL
2	2	7310-1-32	TERMINAL SOL. TIER GR. 2/EL
1	1	4375-124	ENCLOSURE 7.5X4

DATE	BY	DATE	BY
MM-DD-YY	MM-DD-YY	MM-DD-YY	MM-DD-YY
2/19/2004	2/19/2004		

DATE ISSUED 4/9/2004

SIZE 11" x 17" (A)

SCALE 9" = 1"

PART # 5354

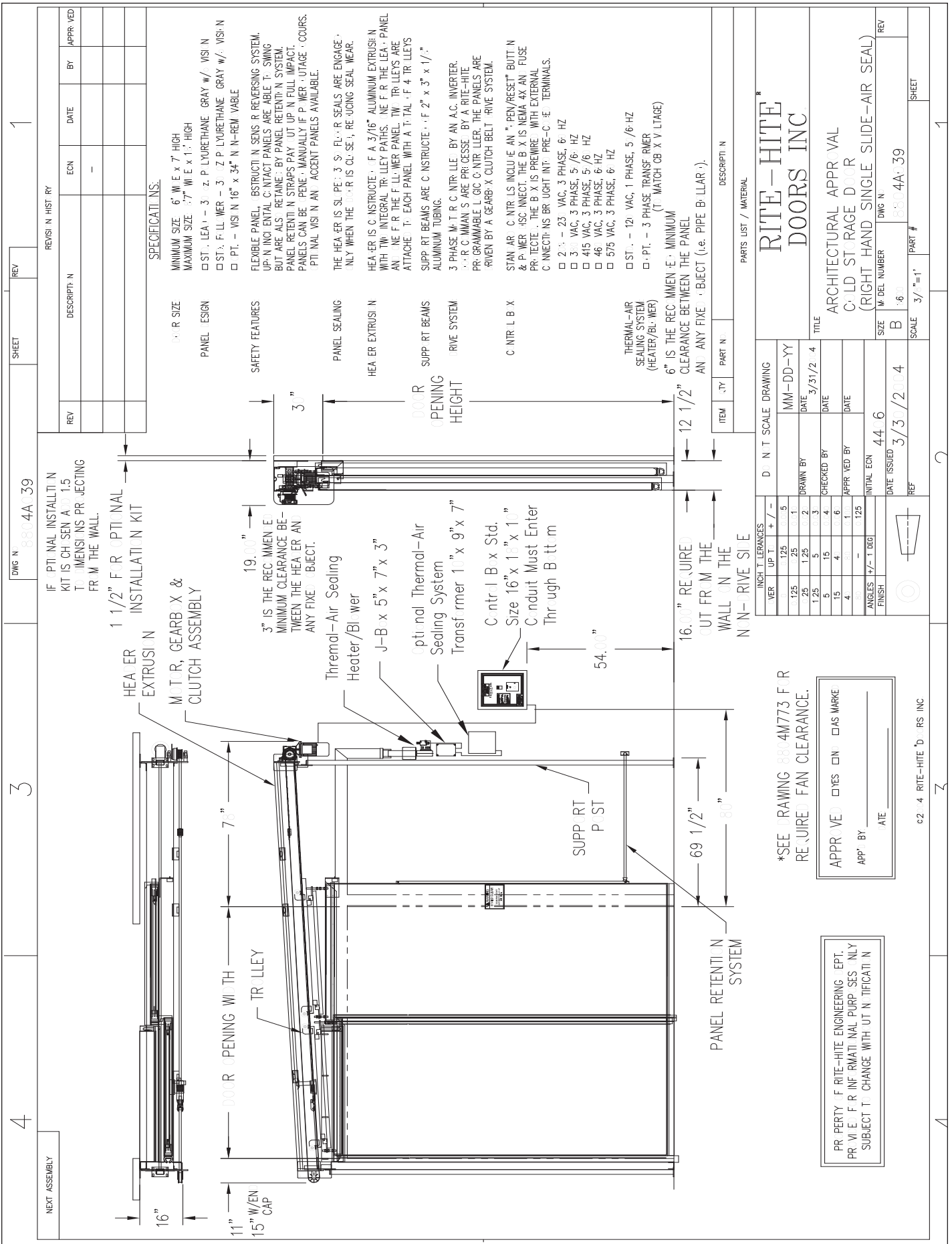
REV	DESCRIPTION	EN	DATE	BY	APPR
A	CHANGE JB X SIZE	4541	/19/2 4	RPB	

RITE-HITE DOORS INC

JB: X-ASY, 12-V

REV A

SINGLE SLIDE ARCHITECTURAL DRAWING



REV	DESCRIPTION	ECN	DATE	BY	APPR. VED

REVISION HISTORY

SPECIFICATIONS:
 MINIMUM SIZE: 6" W x 7" HIGH
 MAXIMUM SIZE: 7" W x 1" HIGH
 PANEL DESIGN: ST. LEA - 3. Z. P. LYURETHANE GRAY w/ VISI N
 □ ST. F. LL. WER - 3. Z. P. LYURETHANE GRAY w/ VISI N
 □ PT. - VISI N 16" x 34" N-N-REM VABLE
 FLEXIBLE PANEL, BSTRUCTI N SENS R. REVERSING SYSTEM.
 UP-NING ENTAL CONTACT PANELS ARE ABLE T. SWING
 BUT ARE ALS. RETANE. BY PANEL RETENTI N SYSTEM.
 PANEL RETENTI N STRAPS PAY UT UP N FULL IMPACT.
 PANELS CAN BE PENE. MANUALLY IF P. WER. UTAGE. COURS.
 PTI NAL VISI N AN. ACCENT PANELS AVAILABLE.
 THE HEA ER IS SL. PE. 3 S. FL. R SEALS ARE ENGAGE.
 ONLY WHEN THE. R IS CL. SE. I. RE USING SEAL WEAR.
 HEA ER IS C. NSTRUCTE. F. A 3/16" ALUMINUM EXTRUSI N
 WITH TW. INTEGRAL TR. LLEY PATHS. NE F. R. THE LEA. PANEL
 AN. NE F. R. THE F. LL. WER PANEL. TW. TR. LLEYS ARE
 ATTACHE. T. EACH PANEL WITH A T. TAL. F. 4 TR. LLEYS
 SUPP RT BEAMS ARE C. NSTRUCTE. F. 2" x 3" x 1/2"
 ALUMINUM TUBING.
 3 PHASE M. T. R. C. NTR. LLE. BY AN. A.C. INVERTER.
 R. R. C. MMAN. S ARE PRE. CESS. BY A RITE-HITE
 PR. GRAMMABLE L. GIC C. NTR. LLER. THE PANELS ARE
 RIVEN BY A GEARB. X. CLUTCH BELT. RIVE SYSTEM.
 STAN. AR. C. NTR. LS INCLU. IE AN. "PEN/RESET" BUTT N
 & P. WER. ISC. INNET. THE B. X IS NEMA 4X AN. FUSE
 PR. TECTE. THE B. X IS PREWIRE. WITH EXTERNAL
 C. NNECTI N S BR. UGHT INT. PRE-C. IE. TERMINALS.
 □ 2. - 23 VAC, 3 PHASE, 6. HZ
 □ 3. - VAC, 3 PHASE, 5 /6. HZ
 □ 4. 45 VAC, 3 PHASE, 5 /6. HZ
 □ 46. VAC, 3 PHASE, 6. HZ
 □ 575 VAC, 3 PHASE, 6. HZ
 □ ST. - 12. VAC, 1 PHASE, 5 /6. HZ
 □ P. T. - 3 PHASE TRANS. RMER
 (T. MATCH CB. X. Y. LTAGE)
 6" IS THE REC. MMIN. E. MINIMUM
 CLEARANCE BETWEEN THE PANEL
 AN. ANY FIXE. BJECT (I.E. PIPE B. LLAR.).

PARTS LIST / MATERIAL

ITEM	QTY	PART N	DESCRIPTION

DO NOT SCALE DRAWING

VER.	UP.	PL.	BY	DATE
1/25	1	5	MM-DD-YY	
1/25	2	1	DRAWN BY	
1/25	3	2	DATE	3/31/2004
1/25	4	3	CHECKED BY	
1/25	5	4	DATE	
1/25	6	5	APPR. VED BY	
1/25	7	6	DATE	

INITIAL ECN 44.6
DATE ISSUED 3/3/2004
REF

INCH TOLERANCES:

VER.	UP.	PL.	BY	DATE
1/25	1	5	MM-DD-YY	
1/25	2	1	DRAWN BY	
1/25	3	2	DATE	3/31/2004
1/25	4	3	CHECKED BY	
1/25	5	4	DATE	
1/25	6	5	APPR. VED BY	
1/25	7	6	DATE	

SCALE 3/8"=1"
PART # 8600 4A.39
SHEET 1

RITE-HITE DOORS INC
ARCHITECTURAL APPR VAL
C. LD ST RAGE D. OR
(RIGHT HAND SINGLE SLIDE-AIR SEAL)

DWG N 8600 4A.39
 SHEET 1

IF PTI NAL INSTALI TI N
 KIT IS CH. SEN. A. 1.5
 TO DIMENSI N S PR. JECTI N
 FR. M. THE WALL.
 1 1/2" F. R. OPTI NAL
 INSTALI TI N KIT

HEA ER
 EXTRUSI N
 M. T. R. GEARB. X &
 CLUTCH ASSEMBLY

Thermal-Air Sealing
 Heater/Blower
 J-B. x 5" x 7" x 3"

Optimal Thermal-Air
 Sealing System
 Transfomer 1 1/2 x 9 x 7"

Center Box Std.
 Size 16 x 1 1/2 x 1 1/2"
 Conduit Must Enter
 Through Bottom

19.00"
 3" IS THE REC. MMIN. E.
 MINIMUM CLEARANCE BE-
 TWEEN THE HEA ER AN.
 ANY FIXE. BJECT.

16.00" RE. QUIRE
 CLEARANCE BETWEEN THE
 WALL ON THE
 N-N-RIVE SLIE

69 1/2"
 80"

7.0"
 11"
 15" W/EN
 CAP

TR LLEY

SUPP RT
 PLST

12 1/2"

16.00" RE. QUIRE
 CLEARANCE BETWEEN THE
 WALL ON THE
 N-N-RIVE SLIE

69 1/2"
 80"

7.0"
 11"
 15" W/EN
 CAP

TR LLEY

SUPP RT
 PLST

12 1/2"

16.00" RE. QUIRE
 CLEARANCE BETWEEN THE
 WALL ON THE
 N-N-RIVE SLIE

69 1/2"
 80"

7.0"
 11"
 15" W/EN
 CAP

TR LLEY

SUPP RT
 PLST

12 1/2"

16.00" RE. QUIRE
 CLEARANCE BETWEEN THE
 WALL ON THE
 N-N-RIVE SLIE

69 1/2"
 80"

7.0"
 11"
 15" W/EN
 CAP

TR LLEY

SUPP RT
 PLST

12 1/2"

16.00" RE. QUIRE
 CLEARANCE BETWEEN THE
 WALL ON THE
 N-N-RIVE SLIE

69 1/2"
 80"

7.0"
 11"
 15" W/EN
 CAP

TR LLEY

SUPP RT
 PLST

12 1/2"

16.00" RE. QUIRE
 CLEARANCE BETWEEN THE
 WALL ON THE
 N-N-RIVE SLIE

69 1/2"
 80"

7.0"
 11"
 15" W/EN
 CAP

TR LLEY

SUPP RT
 PLST

12 1/2"

16.00" RE. QUIRE
 CLEARANCE BETWEEN THE
 WALL ON THE
 N-N-RIVE SLIE

69 1/2"
 80"

7.0"
 11"
 15" W/EN
 CAP

TR LLEY

SUPP RT
 PLST

12 1/2"

16.00" RE. QUIRE
 CLEARANCE BETWEEN THE
 WALL ON THE
 N-N-RIVE SLIE

69 1/2"
 80"

7.0"
 11"
 15" W/EN
 CAP

TR LLEY

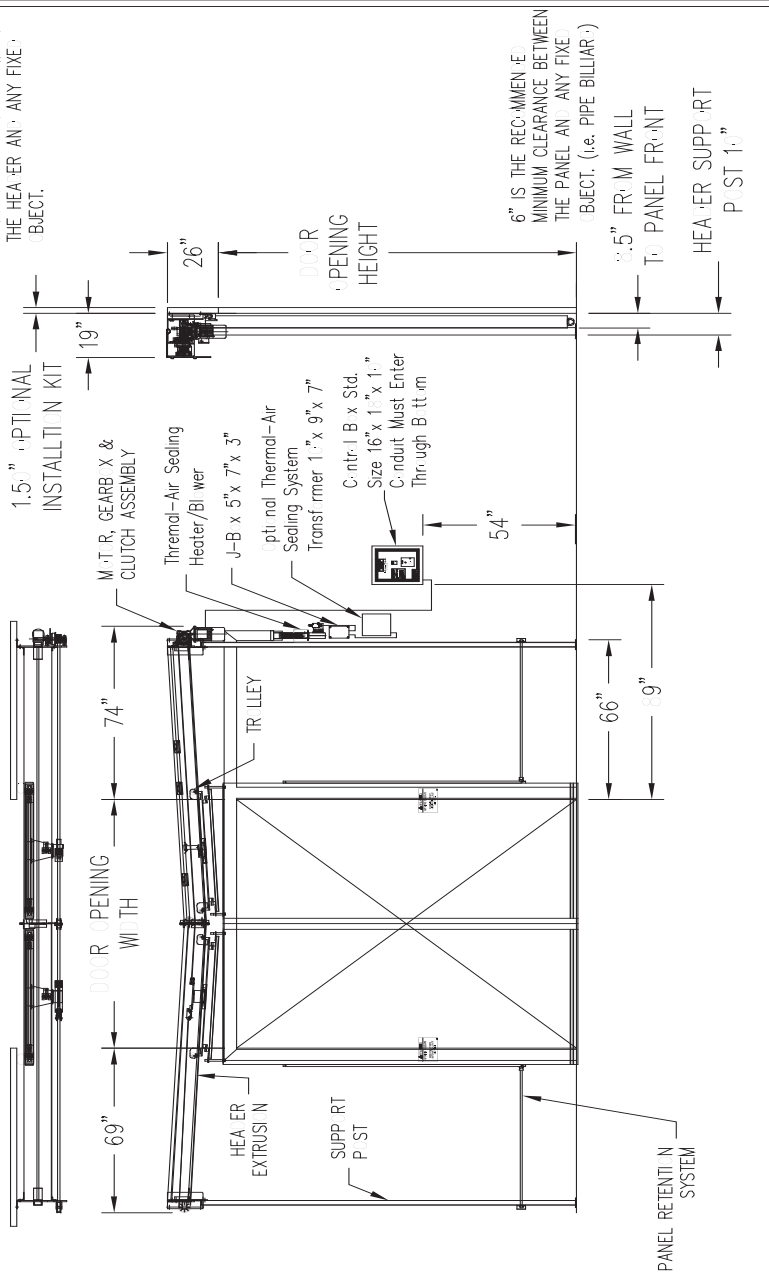
SUPP RT
 PLST

2 PANEL ARCHITECTURAL DRAWING

REV	DESCRIPTION	ECN	DATE	BY	APPROVED

IF PARTIAL INSTALLATION KIT IS CHosen ALTHOUGH DIMENSIONS PROJECT FROM THE WALL. 1.5" PARTIAL INSTALLATION KIT

3" IS THE RECOMMENDED MINIMUM CLEARANCE BETWEEN THE HEATER AND ANY FIXTURE.



REV	DESCRIPTION	ECN	DATE	BY	APPROVED

INCH TOLERANCES	UP	+	+	-	DOWN
125	125	25	1	5	5
25	125	1	2	2	2
125	125	3	3	4	4
5	15	4	6	4	4
15	4	1	1	1	1
4	1	125	125	125	125
ANGLES	±	1 DEG	125	125	125
FINISH	±	125	125	125	125

ITEM	QTY	PART N	DESCRIPTION

DATE	SCALE	ISSUED	BY	DATE	SCALE	ISSUED	BY
3/31/2004	1/4"=1'	3/31/2004		3/31/2004	1/4"=1'	3/31/2004	

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3/31/2004	1/4"=1'	3/31/2004		3/31/2004	1/4"=1'	3/31/2004	

SPECIFICATIONS:

- MINIMUM SIZE: 6" W x 4" H
- MAXIMUM SIZE: 72" W x 1" H
- OST. LEA. - 3" z. PLYURETHANE GRAY W/ VISI N
- PT. - VISI N 16" x 34" N N-REM VABLE
- FLEXIBLE PANEL, BSTRUCTURE IN SENS R REVERSING SYSTEM. UP N INO ENTAL C NTRACT PANELS ARE ABLE T SWING BUT ARE ALS RETANE BY PANEL RETENTIN SYSTEM. PANELS RETENTIN STRAPS PAY-UT UP N FULL IMPACT. PANELS CAN BE PENE MANUALLY IF PWER UTAGE COURS. PARTIAL VISI N AN ACCENT PANELS AVAILABLE.
- PTIAL VISI N AN ACCENT PANELS AVAILABLE.
- EACH HALF F THE HEATER IS SLPE 3.5. FL R SEALS ARE ENGAGE NLY WHEN THE OR IS CLSET, RE USING SEAL WEAR.
- HEATER IS C NSTRUCTURE F A 3/16" ALUMINUM EXTRUSI N WITH TW INTEGRAL TR LLEY PATHS. NE FR THE PANEL AN NE FR A STABILIZING TR LLEY. TW TR LLEYS ARE ATTACHE T EACH PANEL AN NE TR LLEY IS USE N EACH SI E FR STABILIZATI N. A T TAL F 6 TR LLEYS ARE USE .
- SUPP RT TUBES ARE C NSTRUCTURE F 2" x 3" x 1/2" ALUMINUM TUBING.
- 3 PHASE M T R C NTR LLE BY AN A.C. INVERTER. DOOR C NMAN S ARE PR CSESE BY A RITE-HITE PR GRAMMABLE L GIC C NTR LLER. THE PANELS ARE DRIVEN BY A GEARB X CLUTCH BELT RIVE SYSTEM.
- STAN AR C NTR LLS INCLU E AN " PEN/RESET" BUTT N & P WER. ISC NNECT THE B X IS NEMA 4X AN FUSE PR TECTE. THE B X IS PREWIRE WITH EXTERNAL C NNECTI NS BR UGHT INT PRE-CO IE TERMINALS.
- 2 - 23 VAC, 3 PHASE, 6 HZ
- 3 - VAC, 3 PHASE, 5 /6 HZ
- 415 VAC, 3 PHASE, 5 /6 HZ
- 46 VAC, 3 PHASE, 6 HZ
- 575 VAC, 3 PHASE, 6 HZ
- OST. - 12 VAC, 1 PHASE, 5 /6 HZ
- PT. - 3 PHASE TRANSFORMER (T MATCH CB X V LTAGE)

APPROVED: YES NO AS MARKED

APP. BY: _____ DATE: _____

PROPERTY OF RITE-HITE ENGINEERING, EPT.
 PR VIE. FR INF RMATI NAL PURP SES NLY
 SUBJECT T CHANGE WITH UT N TIFICATI N

