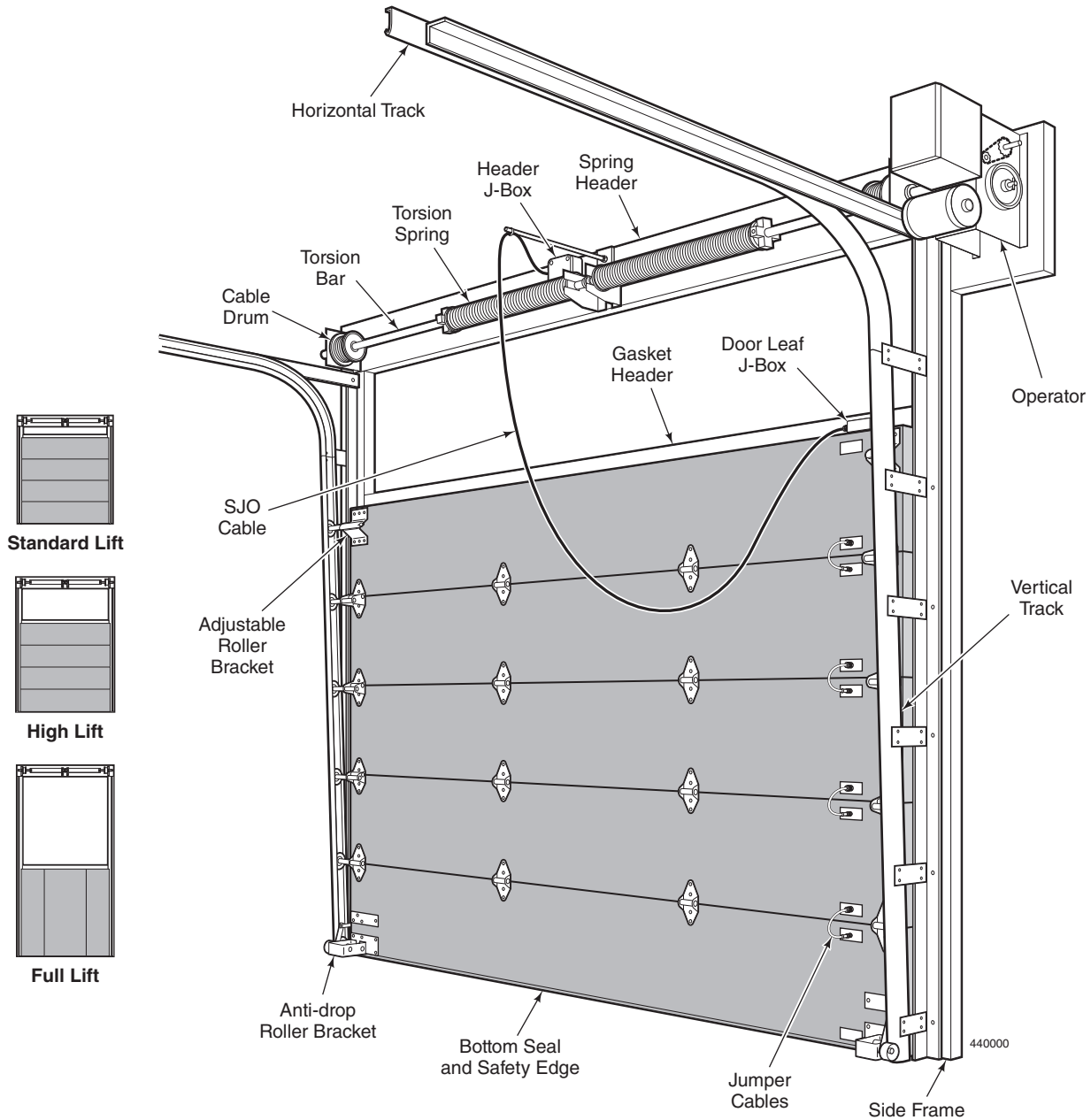


R-PLUS

COLD STORAGE DOORS



Release Date: 3-2013

R-PLUS Cold Storage Doors

2271 NE 194th • Portland, Oregon 97230

Toll Free (877) 320-3599 • Fax (503) 665-2929 • www.RPlusDoors.com

Table of Contents

	Page
Warnings and Cautions	3
Typical Installation – Overview	4
Preparation of Opening	5
Install Side Frames with Vertical Track	6
Install Gasket Header	6
Install Spring Header	6
Install Door Sections – Standard and High Lift Doors ONLY	7
Install Horizontal Tracks – Standard and High Lift Doors ONLY	8
Install Top Door Section – Standard and High Lift Doors ONLY	8
Install Door Panel – Full Lift Doors ONLY	9
Install Lift Cable	11
Connect Pull Rope – Manual Lift Doors ONLY	12
Adjust Torsion Springs	12
Door Gasket Adjustment	14
Install Side Lock – Manual Lift Doors ONLY	14
Heat Cable Wiring	15
Optional Frame Heater	16

Electric Lift Models

Door Operator Installation	16
Standard Wiring	16
Supplemental Wiring	16
Field Wiring Connections	17
Install the Door Control Wiring	18
Door Control Signals	18
Optional Pull Cord Installation	18
Adjust the Door Safety Edge	19

Maintenance

Periodic Maintenance	20
----------------------------	----

IMPORTANT

1. **To avoid possible injury, read all instructions carefully before attempting installation. If in doubt about any of the procedures, do not attempt the work.**
2. This installation must be performed by **qualified overhead door technicians only**. Many of the procedures require two such technicians.
3. Please *review all* illustrations and drawings *before installing* the door.
4. Inspect and report any damage and/or missing parts, before installing. The vendor will *not be responsible for costs* of installing or removing damaged doors.
5. Confirm the *opening* for the door matches the size on the *packing list*.

Warnings and Cautions

We have provided many important safety messages in this manual about your Door. Always read and obey all safety messages.



This is the safety alert symbol.

This symbol alerts you to potential hazards that can kill, injure, or damage equipment.

All safety messages will follow the safety alert symbol and either the word “Warning” or “Caution.” These words mean:



WARNING

You can be killed or seriously injured if you don't follow instructions.



CAUTION


Equipment can be damaged or destroyed if you don't follow instructions.


All safety messages will tell you how to proceed to reduce the chance of death, injury, or damage to the Door.


Important Safety Instructions – Read Prior to Installation


This installation must be performed by qualified overhead door technicians only. To avoid injury from sharp metal edges, they must be equipped with protective clothing, gloves, and eyewear.


To reduce the risk of fire, electrical shock, injury, death, or damage when installing or repairing the Door, follow basic precautions, including the following:


 **WARNING:** Improper wiring or lack of proper ground can result in fire, electrical shock, injury or death. Disconnect power to the Door before performing any electrical repairs. Field wiring or electrical repair should be done by a licensed professional electrician. Follow all local building codes and laws for electrical installation.


 **WARNING:** Control panel and anti-frost heaters operate on two different circuits. Make sure to turn power off to both circuits prior to servicing the Door.


 **WARNING:** Avoid installing the Door on windy days. The door panel or sections are difficult to handle in windy situations and could fall during installation.


 **WARNING:** When installing or servicing the Door, clear the area of children and unnecessary adults.


 **WARNING:** Do not stand or walk under a moving Door. Do not permit anybody to stand or walk under an electric Door.


 **WARNING:** In case of electrical fire, disconnect the power supply. Do not use water on electrical fires. Smother the fire with an extinguisher rated for C-class fires.


 **WARNING:** The Torsion Springs are under constant tension. Unless you are a qualified overhead door technician, avoid any adjustment, repair or alteration to these or any other part of the Door. In particular, avoid the springs, spring brackets, anti-drop roller brackets or cables.

 **WARNING:** Always keep your hands clear of the drive chain and other moving parts when door is powered or when it is to be moved manually. Do not place fingers or hands into open section joints when closing the Door. Use lift handles when operating a manual Door. Avoid loose fitting or hanging clothing. An electric door can start moving automatically, such as when the auto-close timer is activated.

 **CAUTION:** After changing any parts on the Door, always check that door tightness, anti-drop devices and safety edge sensors are working properly.

 **CAUTION:** Per NEC 300-7, all raceways passing from different temperatures shall be sealed with putty or other method to stop the travel of moisture. Furthermore, all junction box cover plates shall be sealed. Verify these seals are in place and functioning properly after performing any service on the Door.

 **CAUTION:** Do not hang tools, extra door parts, or anything else from the horizontal tracks. The track system is not intended or designed to support weight beyond that of the Door itself.

 **CAUTION:** If a Door becomes hard to operate, inoperative, or damaged, do not operate the Door until necessary adjustments or repairs have been made.

Typical Installation

Standard Lift Door shown

Figure 1 illustrates a typical Standard Lift door installation. The door shown is five sections high. Configurations change with opening sizes and clearances involved, but the basic installation instructions remain the same.

WARNING: Do Not, under any circumstances, attempt to adjust the Torsion Springs unless you are a qualified overhead door technician and are trained in proper adjustment procedures.

Improper installation or adjustment may cause premature wear and will void the warranty.

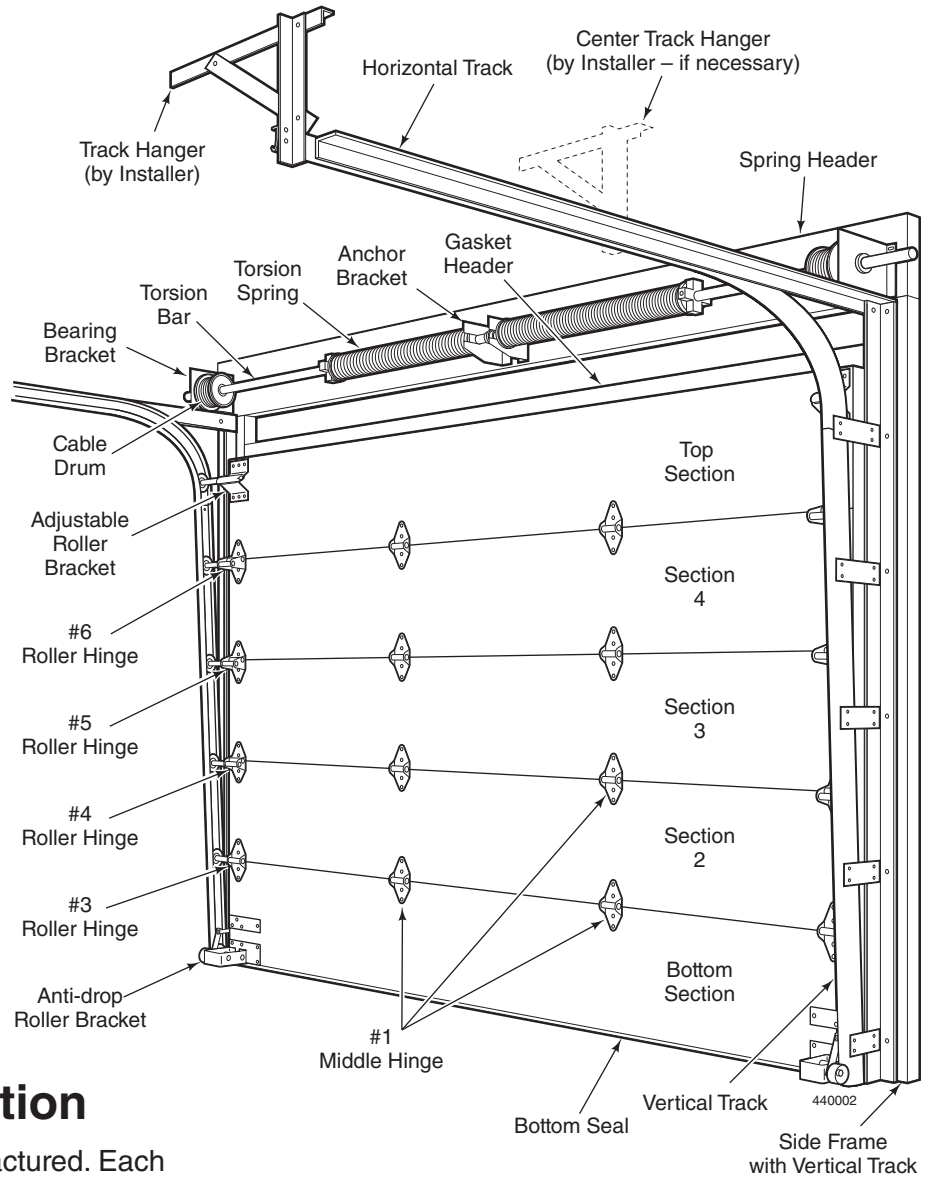


Figure 1

Vertical Door Identification

Three types of vertical doors are manufactured. Each type is available in manual and electric versions. Standard Lift and High Lift doors are sectional design. Full Lift doors are non-articulating (fixed panel) design. The Standard Lift Electric is equipped with a trolley type Operator, while the High Lift and Full Lift Electrics use a jack shaft type Operator. See Figure 2.

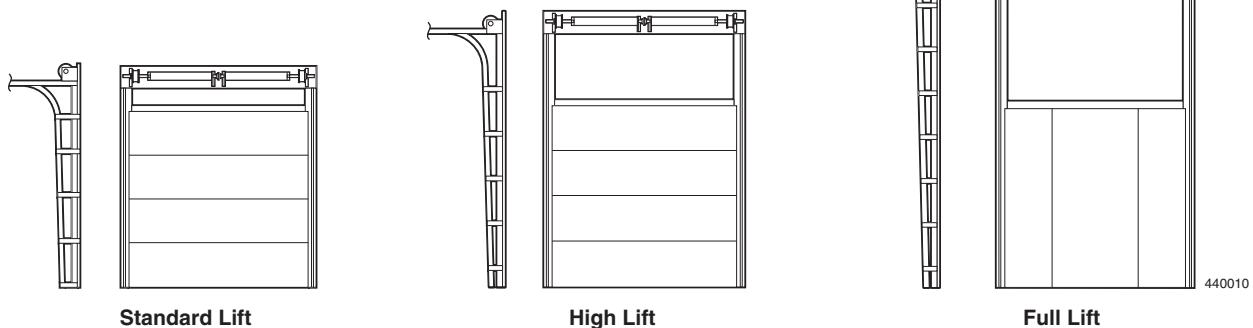


Figure 2

Preparation of Opening

1. Measure to determine that the door opening is square. To verify that the opening and wall are plumb, stretch two strings diagonally from corner to corner. The strings should *just touch* at the center. To correct for any out-of-square or out-of-plumb situation, shim the Side Frame and Door Header at installation. See *Install Side Frames* section. Any fasteners for *existing* jambs or headers must be countersunk flush or below the surface. See *Fig. 3*.
2. Verify that the opening size matches the door size. The door will overlap the opening by $1\frac{1}{4}$ " at the sides and top, so the door will actually be $2\frac{1}{2}$ " wider and $1\frac{1}{4}$ " taller than the opening.

Check the Head clearance, the Side clearance, and the Backroom clearance for horizontal track. The Head clearance and Backroom clearance (the distance the horizontal tracks extend into the room) will vary with each installation. Refer to the specific door installation drawing for your site. See *Figures 4 & 5*.

3. Before installing the door frame check for proper backing in the wall. See *Figures 5 & 6*.

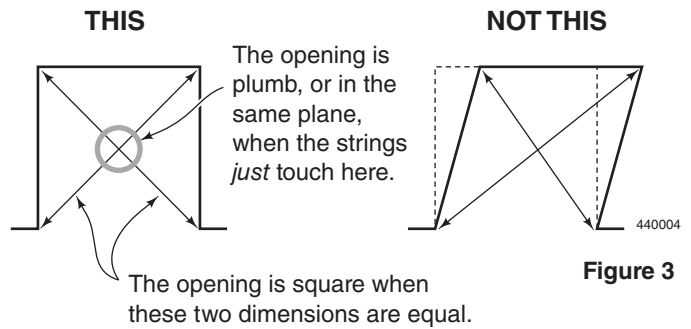


Figure 3

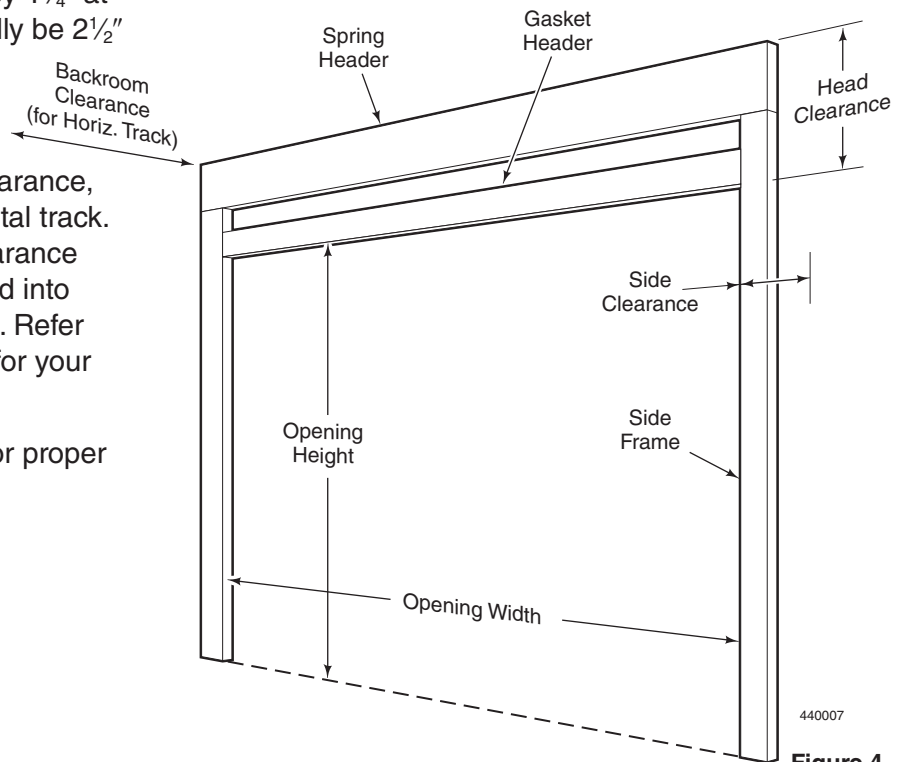


Figure 4

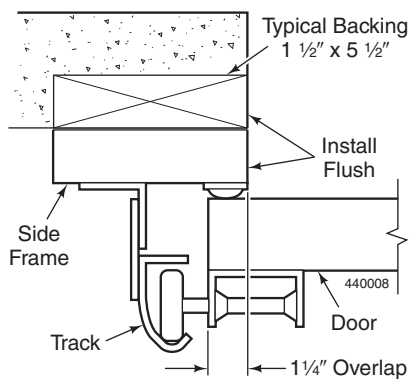


Figure 5

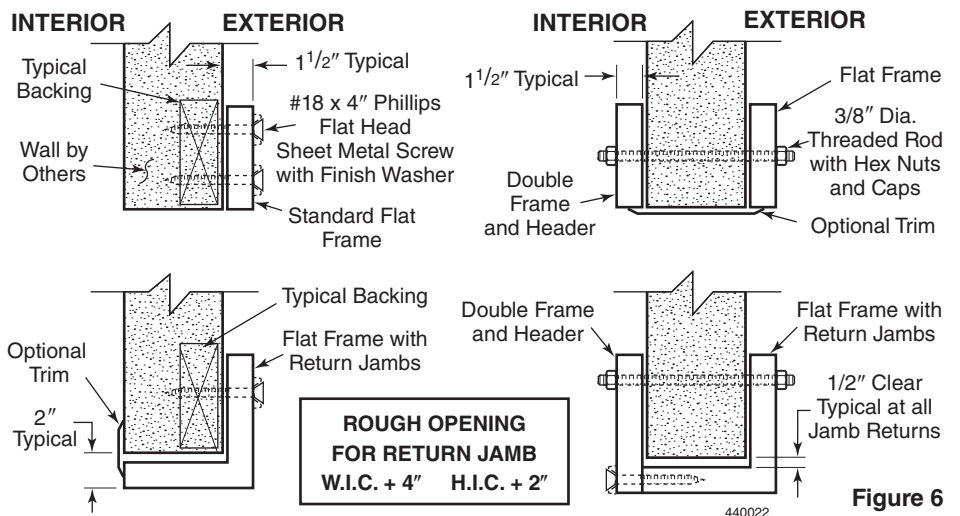


Figure 6

Install Side Frames with Vertical Track

- At job site, drill 5/16" holes in the frames and headers for mounting to the backing in the wall. Space holes 6" in from the end, then every 36".
NOTE: Add *Latex caulking* behind the Side Frames and Gasket Header before fastening to the wall.
- Clamp the left and right Side Frames against the wall, one on each side of the door opening so they are flush with the opening and parallel to each other. Adjust one side up or down so the tops are level with each other. See *Figure 7*.
- Be certain the Gasket Header will fit flush between the Side Frames. Attach the frames to the wall with #18 x 4" Phillips flat head sheet metal screws or 3/8" threaded rod, as necessary. See *Figure 6*. Verify that the frames are still plumb and square to the door opening. Verify with the string method previously described and shim as necessary. See *Fig. 3*.

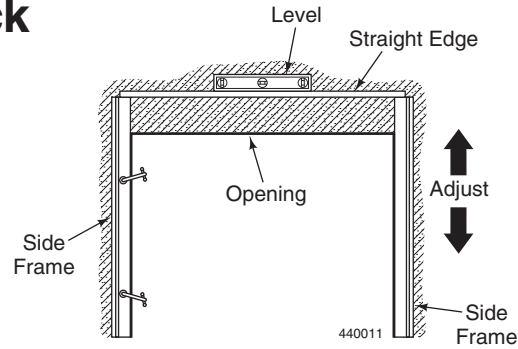


Figure 7

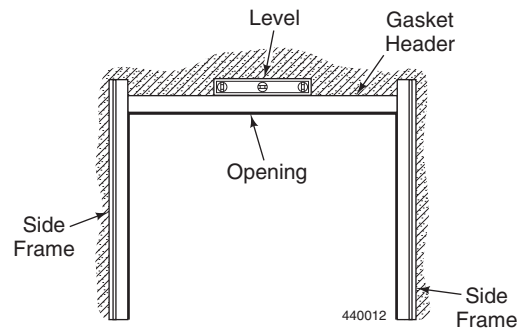


Figure 8

Install Gasket Header over opening

- Mount the Gasket Header above the door opening. See *Figure 8*. The Header should be level and flush with the opening as well as flush with the Side Frames. Anchor the Gasket Header with #18 x 4" Phillips flat head sheet metal screws or 3/8" threaded rod, as necessary. See *Figure 6*.
NOTE: Add *Latex caulking* behind the Side Frames and Gasket Header before fastening to the wall.
- Seal with *Silicone caulking*, around both sides of the Side Frames and Gasket Header, after tightening the screws.

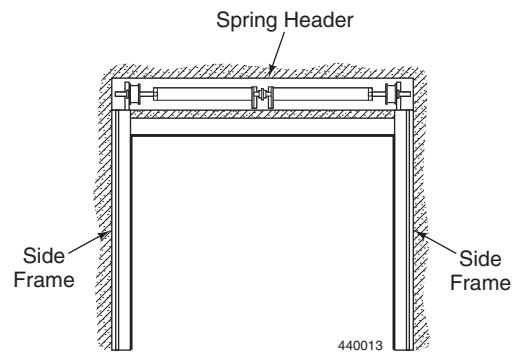
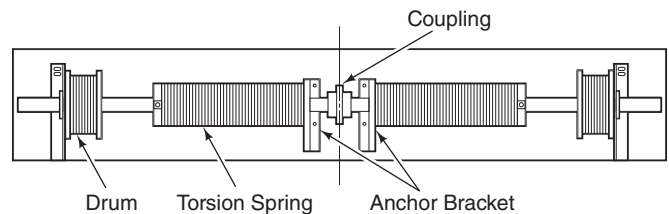


Figure 9

Standard Spring Arrangement



Duplex Spring Arrangement

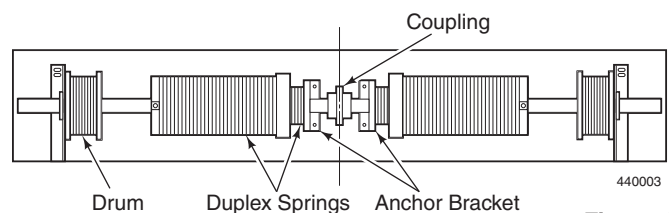


Figure 10

Install Spring Header (with Springs and Drums)

- Center the Spring Header assembly level and flush with the Side Frame tops. Fasten the Header with #18 x 4" Phillips flat head sheet metal screws or 3/8" threaded rod, as necessary. See *Figures 6 and 9*.
NOTE: There are two different spring arrangements used for vertical doors. Most doors use the standard single spring on each side. Tall doors sometimes require a Duplex spring arrangement. See *Figure 10*.

Install Door Sections – Standard and High Lift Doors ONLY (except Top Section)

Install Bottom Door Section

1. Remove the Anti-Drop Roller Brackets from the Bottom Door Section. On one of the Brackets rotate the Brake Arm up to move the Cam Brake away from the Track Roller. Block the Brake Arm in this open position with a C-Clamp or wire the Cable Arm to the Cable anchor. Tip the Roller and Bracket into the Vertical Track, then position it on the ground at the bottom of the Track. Repeat the procedure for the other Anti-Drop Roller Bracket. See Figure 11.
2. Set the Bottom Door Section between the Vertical Tracks and into the Anti-Drop Roller Brackets. Do not pinch or trap the Lift Cables out of position. Refasten the Roller Brackets to the Door Section. Leave the Cam Brake clamped or wired open.
3. Remove a Roller Hinge at the top of the Bottom Door Section. Insert a Roller, tip the Roller into the Track, and refasten the Roller Hinge. Repeat the procedure for the opposite Roller Hinge.
4. Check the level of the Bottom Door Section. Shim as necessary to bring the Section into level. Leave the shim in place until all Door Sections and Lift Cables are installed. See Figure 12.
5. Verify the clearance between the Door and the Vertical Track. It should be 1/2". See Figure 13.

Install the remaining Door Sections (except the Top Section)

6. Place Section 2 onto the Bottom Section and fasten the Middle Hinges to the pre-drilled holes. Remove, insert the Roller, and reinstall the Roller Hinges as above.
7. Install the remaining Door Sections in a similar manner. Do not install the Top Section yet.

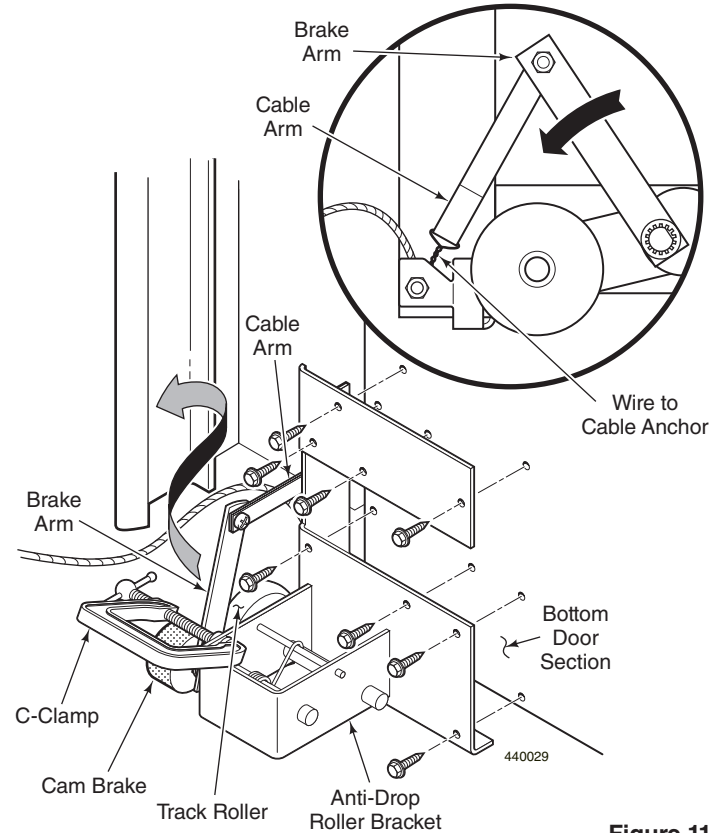


Figure 11

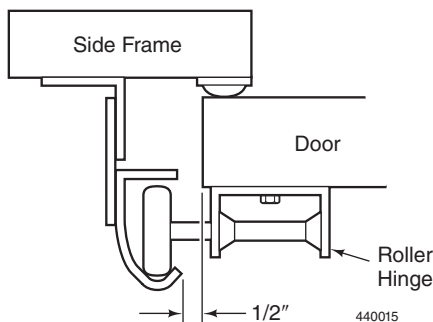


Figure 13

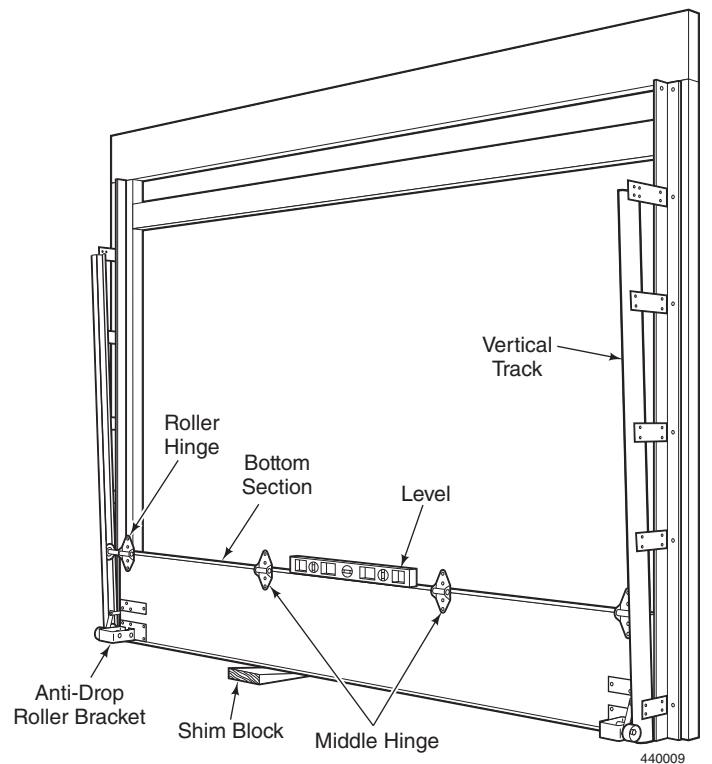
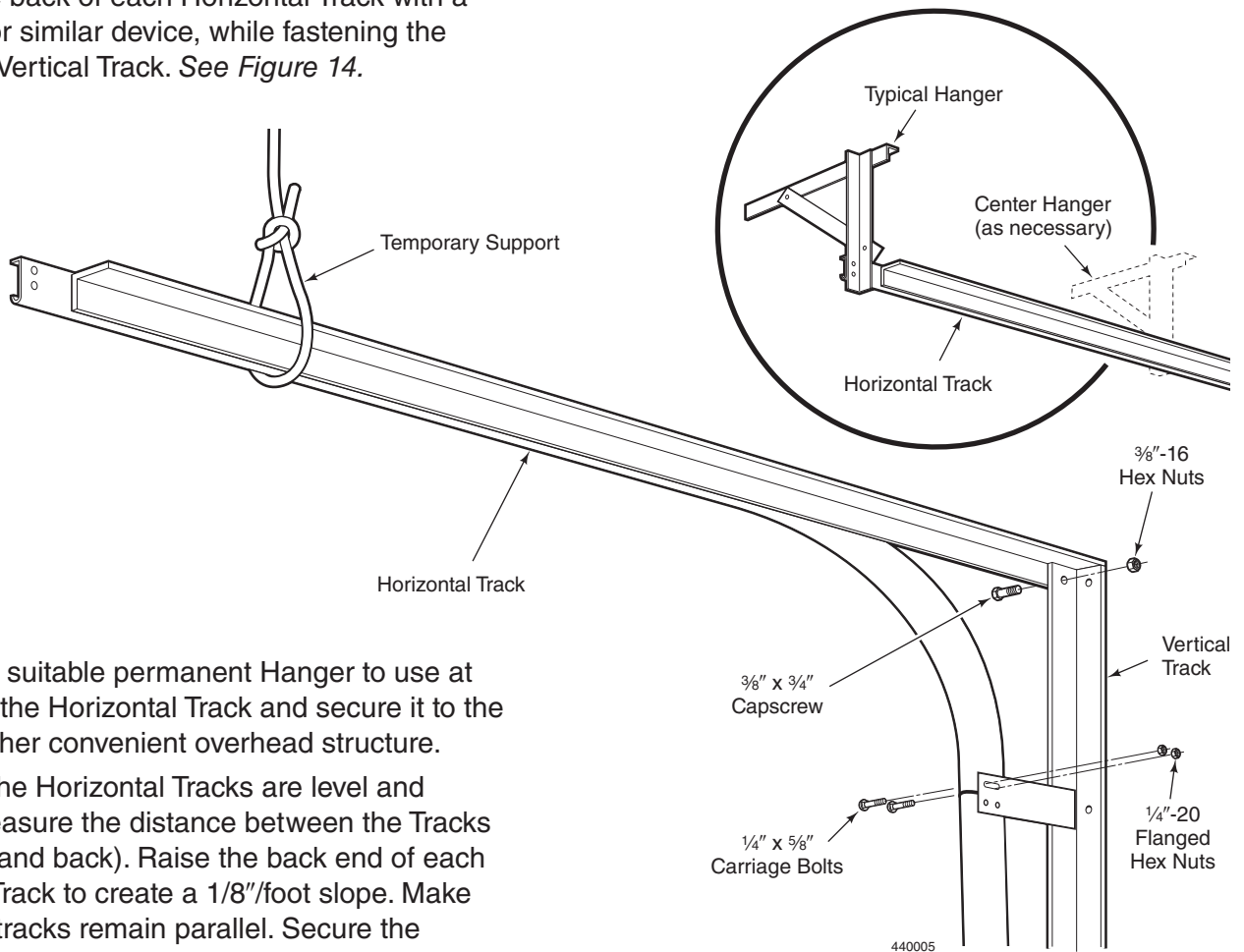


Figure 12

Install Horizontal Tracks – Standard and High Lift Doors ONLY

1. Support the back of each Horizontal Track with a rope loop, or similar device, while fastening the front to the Vertical Track. See Figure 14.



2. Construct a suitable permanent Hanger to use at the back of the Horizontal Track and secure it to the ceiling or other convenient overhead structure.
3. Verify that the Horizontal Tracks are level and parallel (measure the distance between the Tracks at the front and back). Raise the back end of each Horizontal Track to create a 1/8"/foot slope. Make certain the tracks remain parallel. Secure the Tracks to the Track Hangers.

NOTE: Horizontal Track lengths over 13'-6" require Center Hangers.

Figure 14

Install Top Door Section – Standard and High Lift Doors ONLY

1. Set the top Door Section in place. Install the Roller Hinges and Middle Hinges using the same procedures as the lower Door Sections.
2. Remove the adjustable portion from the Roller Bracket at the top of the Top Door Section. Insert a Roller, tip the Roller into the Track, and refasten loosely to the Roller Bracket. Repeat the procedure for the opposite Adjustable Roller Bracket.
3. With the Rollers fastened loosely in place, slide the adjustable portion down and away from the Door while pushing the Door Section snug to the Gasket Header. Tighten the nuts to secure the adjustable portion to the Roller Bracket.

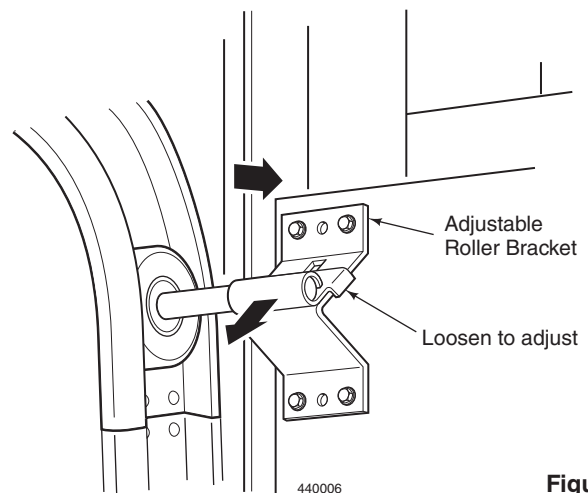


Figure 15

Install Door Panel – Full Lift Doors ONLY

1. Remove the Anti-Drop Roller Brackets from the Door Panel. On one of the Brackets rotate the Brake Arm up to move the Cam Brake away from the Track Roller. Block the Brake Arm in this open position with a C-Clamp or wire the Cable Arm to the Cable anchor. See Figure 16.
2. Center the Door on the floor between the Vertical Tracks. With the bottom of the Door resting on spacer blocks, tip the Door up into vertical position and flush to the Side Frames. See Figure 17.

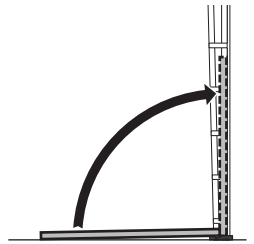


Figure 17

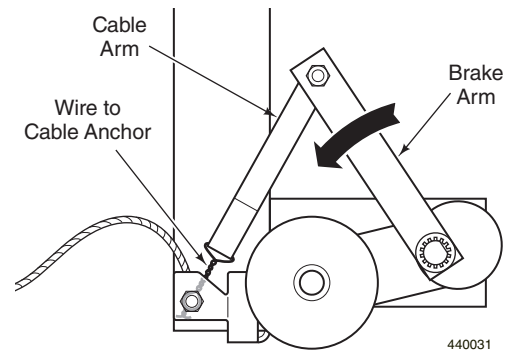


Figure 16

Use C-clamps, at the top of the door, to secure it loosely in position while still allowing vertical movement. See Figure 18.

3. Remove the adjustable portion from the Adjustable Roller Bracket at the top of the Door Panel. Insert a Roller, tip the Roller into the Track, and refasten loosely to the Roller Bracket. Repeat the procedure for the opposite Roller Bracket. See Figure 21.
4. With jacks or a suitable lifting device, carefully raise the Door approximately 12 inches (enough for clearance above the Anti-Drop Roller Brackets). Rest the Door on support blocks. See Figure 19.
5. Tip the Roller and Bracket into the Vertical Track, then position it on the ground at the bottom of the Track. Repeat the procedure for the other Anti-Drop Roller Bracket. See Figure 19.

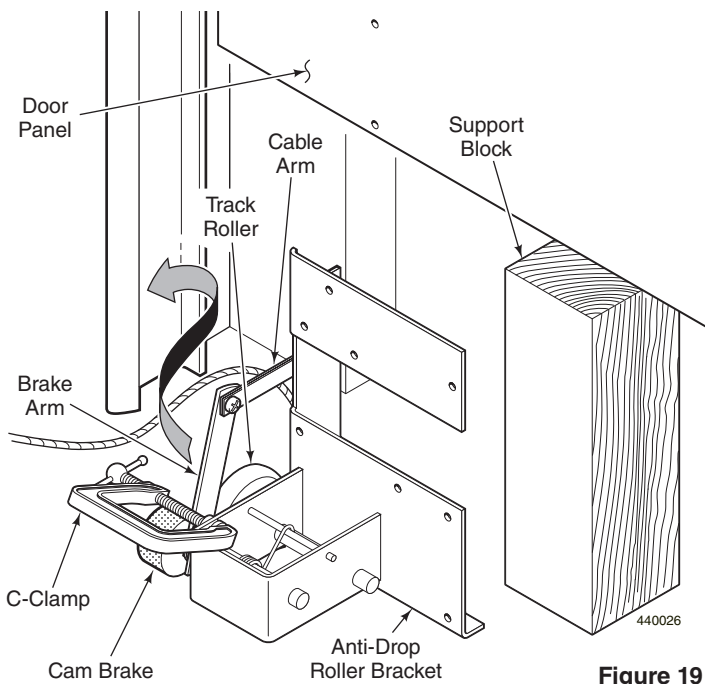


Figure 19

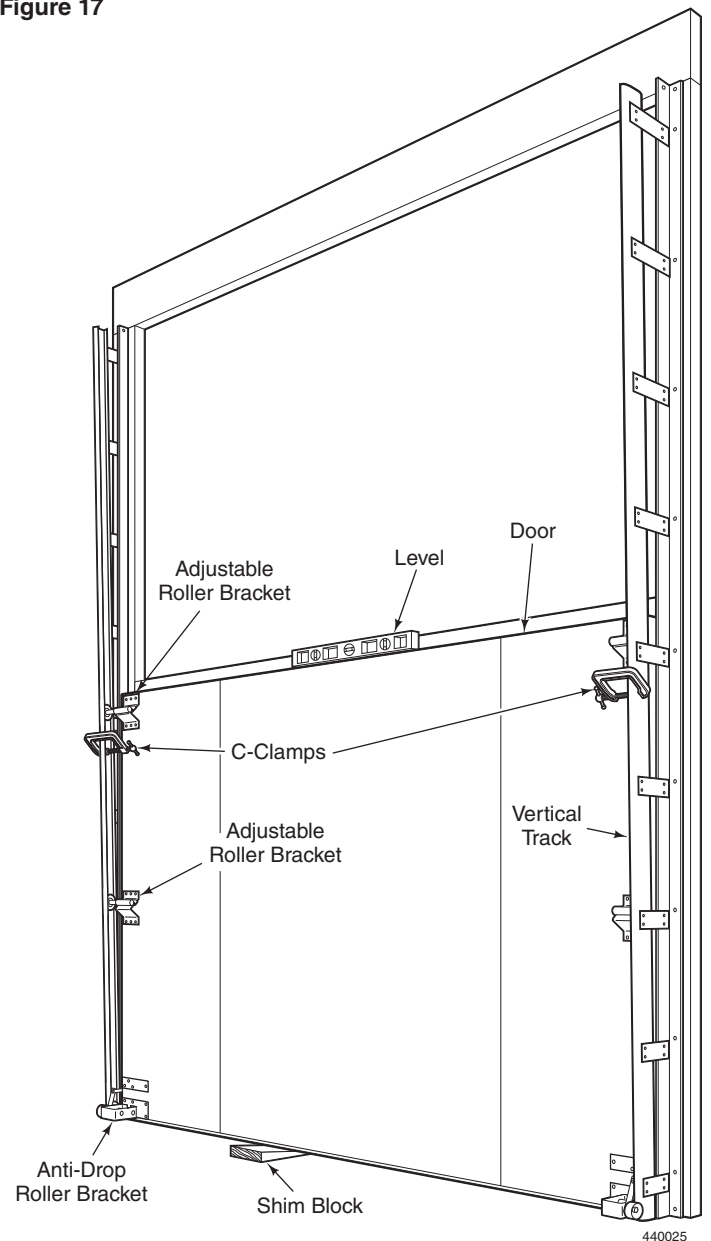


Figure 18

Install Door Panel – Full Lift Doors ONLY (continued)

6. Lower the Door Panel into the Anti-Drop Roller Brackets. Do not pinch or trap the Lift Cables out of position. Refasten the Roller Brackets to the Door Section. Leave the Cam Brake clamped or wired open. See Figure 20.
 7. Check the level of the Door. Shim as necessary to bring the Door into level. Leave the shim in place until all Rollers and Brackets are installed. See Figure 22.
 8. Install the remaining Rollers in the Adjustable Brackets as above. With the Rollers fastened loosely in place, slide the adjustable portion down and away from the Door while pushing the Door Panel snug to the Gasket Header. Tighten the nuts to secure the adjustable portion to the Roller Bracket. See Figure 21.
- The C-clamps securing the top of the door may now be removed. DO NOT remove the C-clamps or wire that is holding the Anti-Drop Roller Brackets in the open position.
9. Verify the clearance between the Door and the Vertical Track. It should be 1/2". See Figure 23.

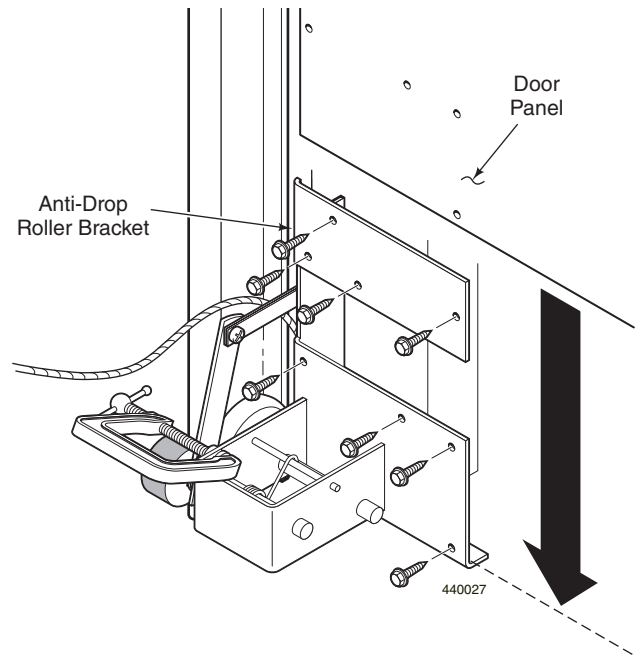


Figure 20

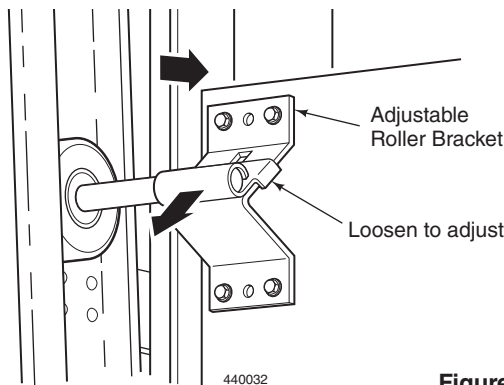


Figure 21

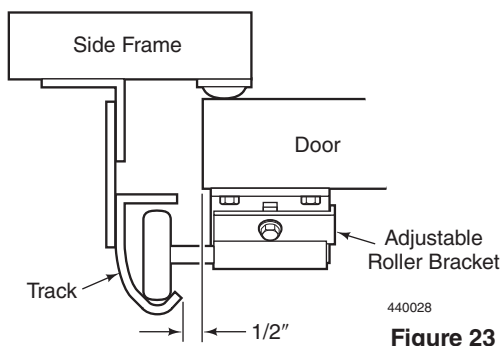


Figure 23

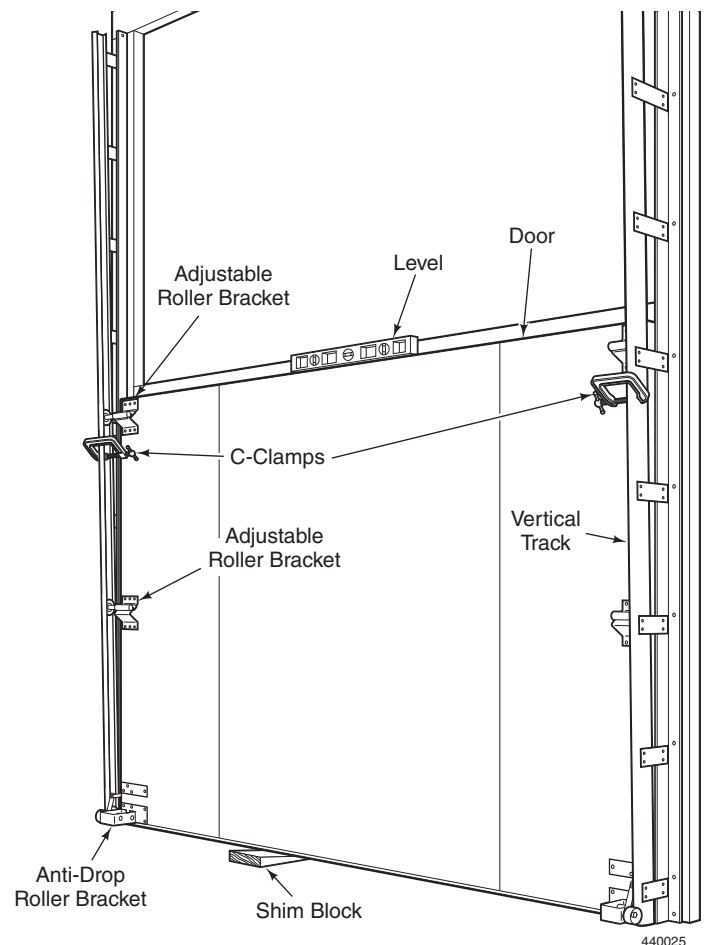


Figure 22

Install Lift Cable

The Lift Cable is fastened to an anchor pin on the Anti-Drop Roller Bracket and coiled up for shipping. The Cable is the correct length and should not require shortening.

1. Beginning at one of the Anti-Drop Roller Brackets, uncoil the Lift Cable and thread it through the Cable Arm, behind the rollers, and up to the Cable Drum. Feed the Cable behind and over the top of the Drum. See *Figures 24 and 25*.
2. Slide the end of the Cable into the cable slot in the Drum. See *Fig. 24*. It may be necessary to lift the door slightly to get sufficient slack for the Cable to fit over the Drum. DO NOT loosen the Drum from the shaft to get the slack. Be sure the cable ferrule is secure against the bottom of the cable slot and the cable aligns with the first groove in the Drum.

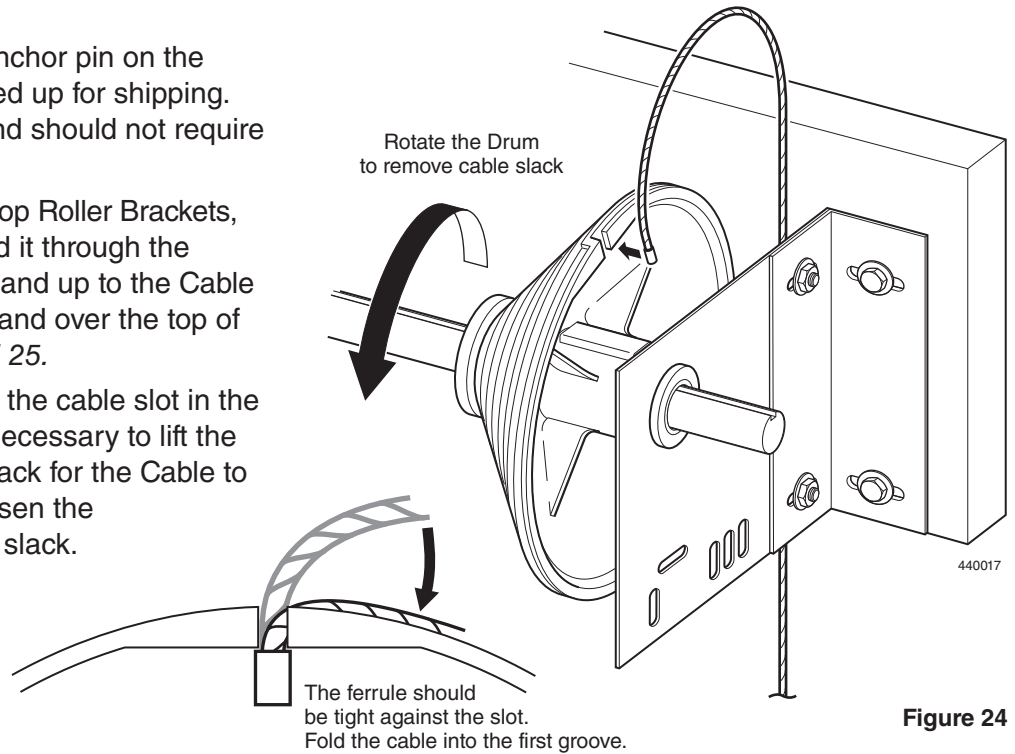


Figure 24

3. Attach the second Cable in a similar manner.
5. With both Cables attached, loosen the capscrews at the the Shaft Coupling. See *Figure 26*.
6. With the Door resting on the ground or shim block, release the Brake Arm and Cable Arm from the clamped or wired open position. The Cam Brake will clamp against the Vertical Track until the Cable installation is complete. See *Figure 25*.
7. Rotate each Drum to wind the Cable into the groove and take up the slack. Both Cables must have equal tension to prevent the door from binding. The Cam Brakes should be clear of the Track on both sides. Retighten the capscrews at the Shaft Coupling.
8. When done, remove any shim that may have been used under the bottom door section.

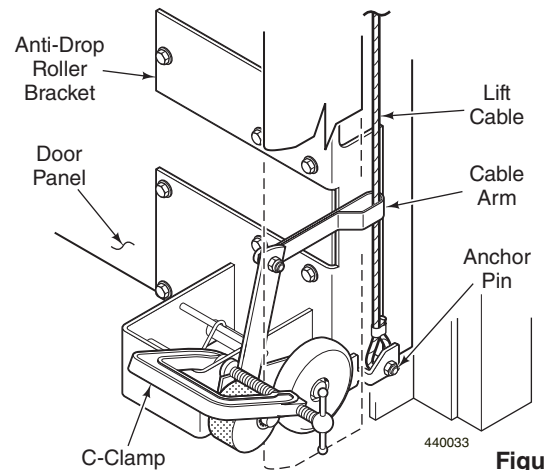


Figure 25

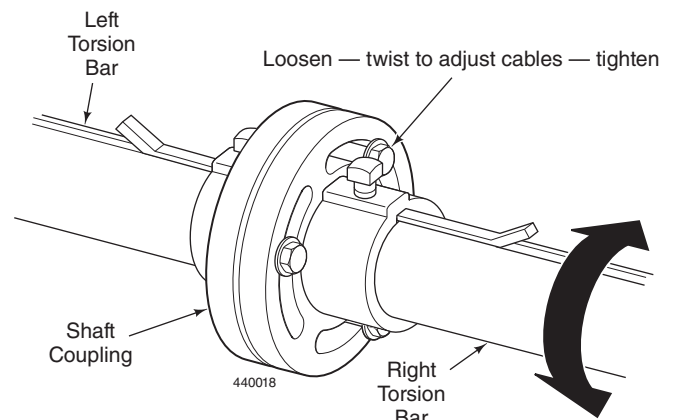


Figure 26

Connect Pull Rope – Manual Lift Doors ONLY

Manual lift doors use a Pull Rope for convenient operation.

1. Secure one end of the rope to the Roller Shaft in the Anti-Drop Roller Bracket and the other end to the Side Frame with a screw eye. See Figure 27.

Leave enough slack in the Rope to allow the Door to open fully.

CAUTION: If an electric door is being installed, do not install the Pull Rope. If the Door is later converted to electric operation, the Pull Rope must be removed.

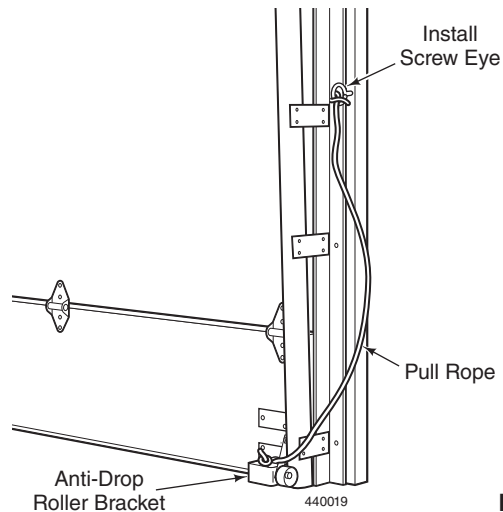


Figure 27

Adjust the Torsion Springs

EXTREME DANGER: The following procedures must be performed by a qualified overhead door technician ONLY.

Preparation

With the Horizontal and Vertical Tracks now securely fastened in place, remove any temporary hangers, rope, or clamps. Raise and lower the door to check for proper tracking and function.

When the spring tension is properly adjusted, the door will stop at any elevation and not drift up or down. If the door stops too hard at the floor, the spring tension must be increased. If the door lifts too quickly off the floor, the spring tension must be decreased.

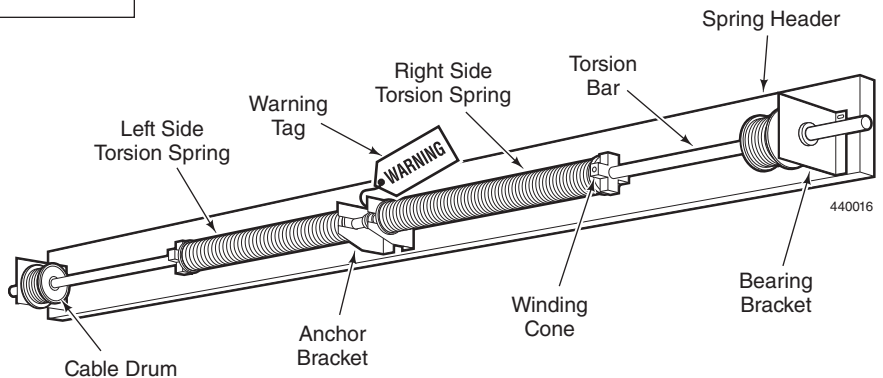


Figure 28

Torsion Spring Tension Adjustment

See the Warning tag on the Springs for the proper number of turns. Fine adjustment should be made in 1/4 turn increments. See Figure 28.

1. Maintain cable tension and prevent the Door from lifting by fastening a C-clamp, in both Vertical Tracks, directly above the Top Rollers. See Figure 29.

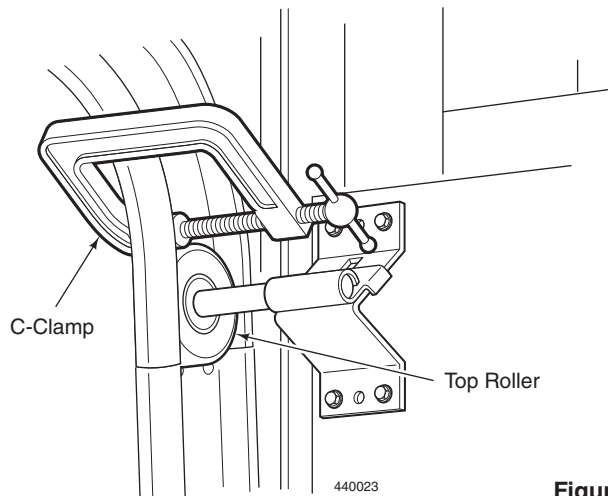


Figure 29

Adjust the Torsion Springs (continued)

WARNING: Torsion Springs can cause serious injury if not handled properly.

WARNING: Never stand directly in front of Winding Cones or Winding Bars.

2. For safety reasons, use a sturdy ladder or lift positioned so the Winding Cone is either to the right or left and not directly in front.

NOTE: For Winding Bars, use two 18" long steel rods that snugly fit the holes in the Winding Cones. Do not use undersized rods.
3. With one hand, insert one Winding Bar all the way into the hole of the Winding Cone and wind the spring up one-quarter turn. See *Figure 30*.
4. With the other hand, insert the second Winding Bar into the next hole. Remove the first Winding Bar and wind the second Bar one-quarter turn.
5. Proceed in this manner until the required number of turns have been made. Refer to the Warning Tag for the proper number of turns.
6. When complete, and *before removing the Winding Bars*, tighten the setscrews in Winding Cone to secure it to the shaft.
7. Repeat this procedure for the opposite Spring, then remove the C-clamps.
8. When the spring tension adjustments are completed, check for proper seal along the Side Frames and Header. Adjust the door tracking and the top Adjustable Roller Bracket as necessary. See *Door Gasket Adjustment*.

NOTE: If the springs are removed for any reason, keep in mind that they are not interchangeable from side to side. The right side spring is left hand wound and the left side spring is right hand wound.

IMPORTANT SAFETY NOTICE

Servicing any part of the counterbalance system (including springs, drums, sprockets, cables, bearing brackets, and anti-drop roller brackets where cable is attached to door) should be performed by qualified overhead door service technicians ONLY.

Operate door only when properly adjusted and free of obstructions. Door is under extreme spring tension. Repair and adjustments, especially to cables and torsion spring assembly, can be hazardous and must be performed by qualified overhead door service personnel only. They must be equipped with proper tools, safety gear and instructions.

Avoid standing in an open doorway or walking through a doorway while an electric door is moving. Do not permit children to play with or operate the door or electric controls.

If the door is now or later becomes electrically operated, the Pull Rope and Side Lock must be removed (if so equipped). Should the door become hard to operate or completely inoperative, contact a qualified overhead door technician for service.

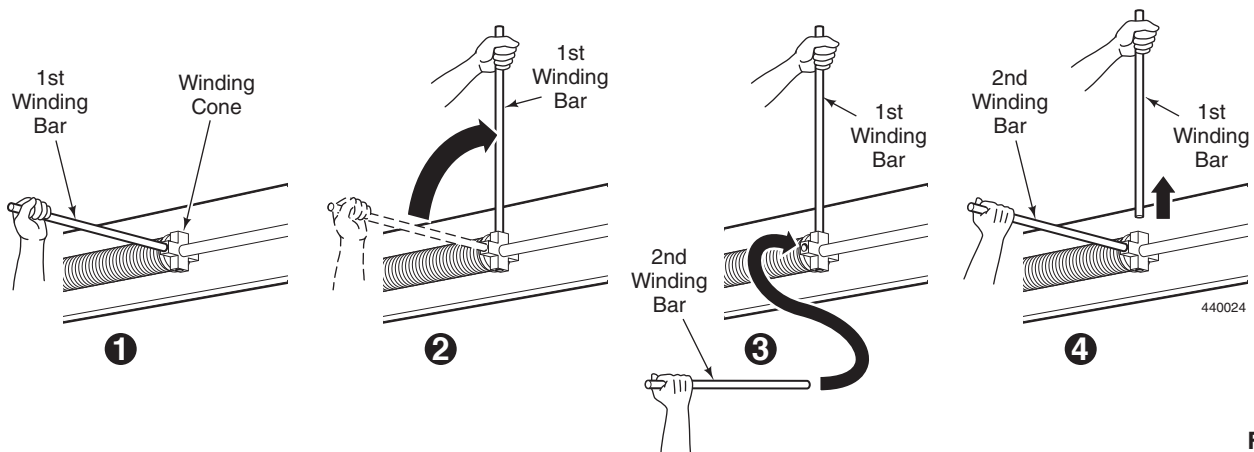


Figure 30

Door Gasket Adjustment

1. With the door in the closed position, the gasket should be compressed 1/8". Check the gasket at the four corners of the door for proper compression. See Figure 31.

CAUTION: Do not adjust the door so tight that it becomes hard to open. If electric doors are adjusted too tight, the motor drive will fault while opening the door.

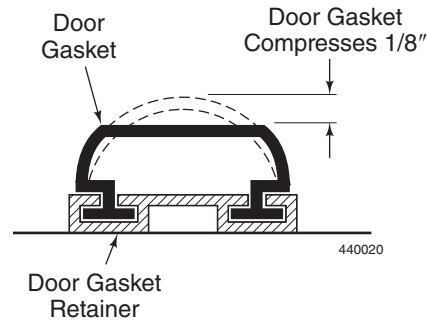


Figure 31

2. The gasket compression can be altered at the Adjustable Roller Brackets (the top Roller Bracket). Loosen the nut in the adjustable portion of the top Roller Bracket. Slide the adjustable portion down and away from the Door while pushing the Door section snug to the top Gasket Header. When the gasket is properly compressed, tighten the top nut. See Figure 32.

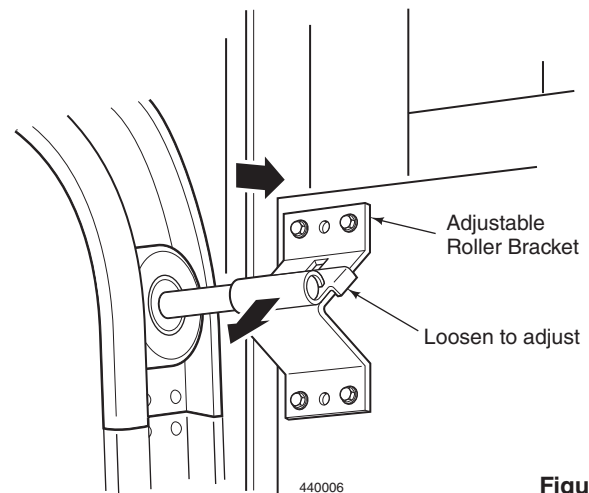


Figure 32

Install Side Lock – Manual Lift Doors ONLY

Align the side lock with the lock slot in the Vertical Track. Fasten in place with #14 x 1" Tek screws. See Figure 33.

CAUTION: Do not install any Side Lock if the Door is electric operated. If the Door is later converted to electric operation, the Side Lock must be removed.

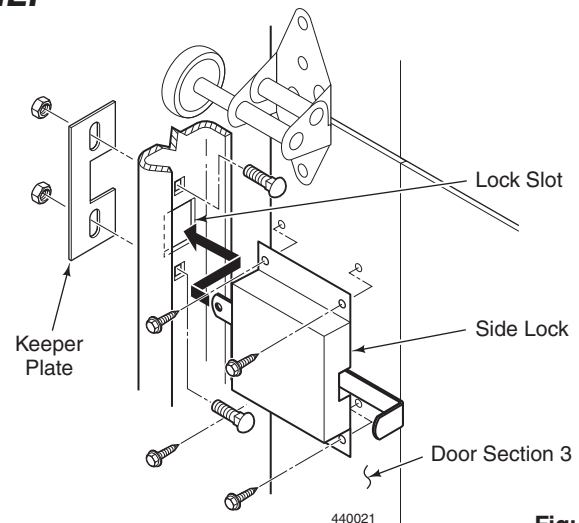


Figure 33

Heat Cable Wiring

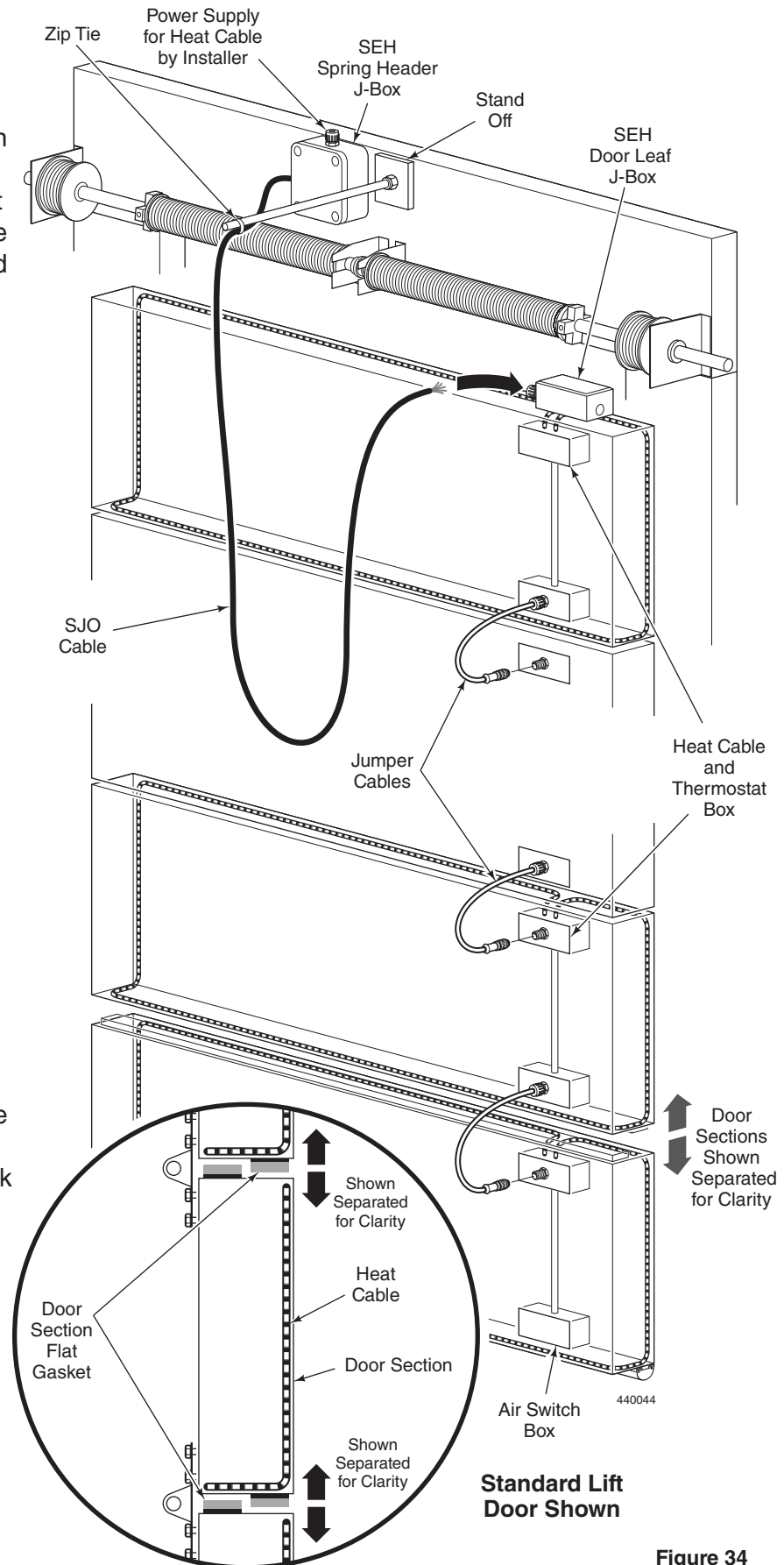
If the door is intended for freezer application, it will include 120VAC heaters in the form of thermostat controlled heat cable embedded in the door sections or panel. On Standard and High Lift doors Yellow Jumper Cables connect the door sections. Heater lead wires terminate in a 2x4 J-Box (SEH Door Leaf J-Box) located on top of the top door leaf section or door panel. A 16 ga. 5-conductor SJO cable connects this J-Box to a 4x4 J-Box (SEH Spring Header J-Box) at center of the Spring Header. The installer must provide a dedicated 120VAC circuit for the 4x4 J-Box. Current draw will vary with door model and size.

NOTE: The installers must be qualified overhead door service technicians.



WARNING: Shock Hazard! These instructions apply only to Door models equipped with *Yellow* Jumper cables. The cable connectors and pin wiring are different from the older *black* Jumper Cables. If you are installing or repairing a Door with black Jumper Cables, refer to Technical Bulletin No. 111220 for proper procedures.

1. Connect the Jumper Cables between the embedded boxes in the door sections. See *Figure 34*.
2. The SJO cable connected to the SEH Spring Header J-Box must be routed to clear the springs, secured to the end of the stand off, cut to length, and connected to the SEH Door Leaf J-Box. Be sure to check the cable length with the door in both the open and closed positions before cutting. See *Figure 34*.



Standard Lift Door Shown

Figure 34

Additional Instructions for Electric models

Door Operator Installation

Please refer to the Door Operator manual for general installation instructions. Included below are instructions for specific items or features that are part of your door.

R-Plus electric vertical lift doors are electrical doors that are operated by a commercial operator.

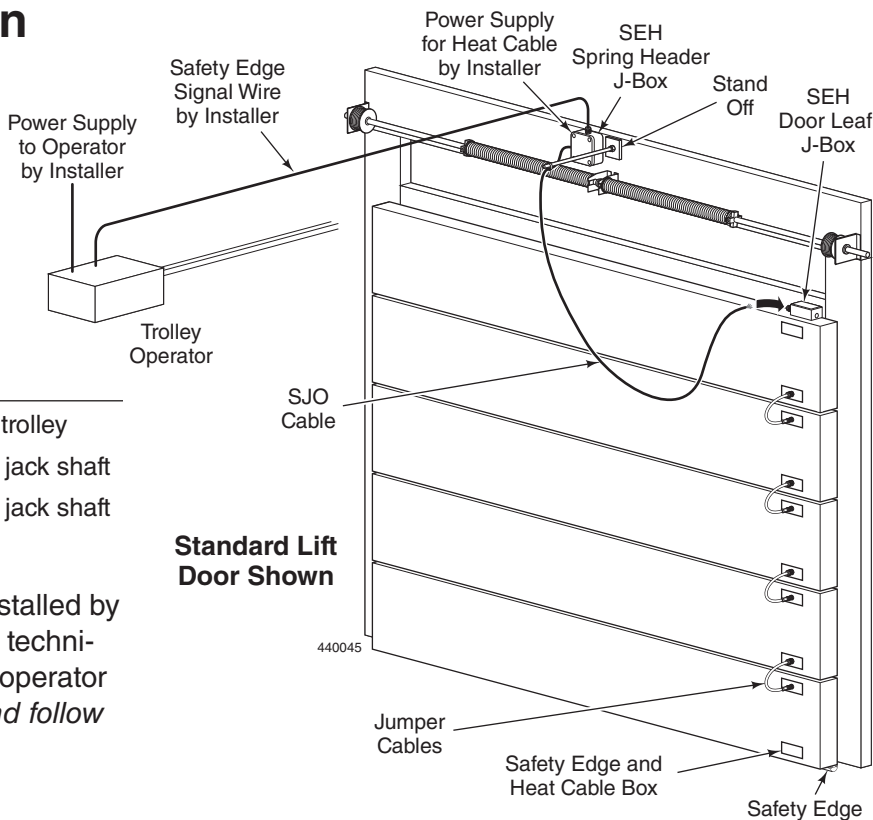


Figure 35

Door Type	Operator Type
Standard Lift Sectional Door	LiftMaster Model T trolley
High Lift Sectional Door	LiftMaster Model H jack shaft
Full Lift Door	LiftMaster Model H jack shaft

Standard Wiring

R-Plus electric vertical lift doors are to be installed by qualified commercial overhead door service technicians. Wiring is to be done according to the operator manufacturer’s installation manual. *Read and follow all safety warnings and information.*

Supplemental Wiring

See Figure 35.

Safety Edge – All doors are equipped with a pneumatic Safety Edge. The Safety Edge uses an air switch with a Normally Open contact.

Heaters – Freezer doors include 120VAC heaters. See *Heat Cable Wiring for installation information.*

SEH J-Box – Both Safety Edge and Heater lead wires terminate in a 2x4 J-Box (SEH Door Leaf J-Box) located on top of the top door leaf section or door panel.

SJO Cord – A 16 ga. 5-conductor SJO cable connects the Safety Edge and Heater lead wires to a 4x4 J-Box (SEH Spring Header J-Box) at center of the Spring Header.

Jumper Cables – Standard and High Left sectional design doors use short Jumper Cables to join the Heat Cable power and Safety Edge signals between sections. These cables are not required on Full Lift Doors.

Frame Heaters – Freezer doors may be equipped with optional 120VAC frame heaters. See *Optional Frame Heater for installation information.*

Optional Frame Heater

Optional 120VAC frame heaters may be added to the door at the time of installation. These are self-regulated heat cables that must be fed into the header and side frame gaskets in the field. Frame heater lead wires are terminated in a 2x4 J-Box (FH J-Box) mounted on one of the side frames. The J-Box must be provided with a dedicated 120VAC circuit. Current draw varies with door model and size.

Frame Heater J-Box

#	Wire Color	Function
1	Black (BLK)	Heater – 110V phase
2	White (WHT)	Heater – 110V neutral
3	Green (GRN)	Ground

Field Wiring Connections

The following electrical connections must be made by a qualified overhead door service technician.

SEH Door Leaf J-Box

1. Connect the SJO Cord wires from the 4x4 SEH Spring Header J-Box to the Safety Edge wires and Heater wires (if so equipped) in the 2x4 SEH Door Leaf J-Box. The cord must be routed to clear the springs, secured to the end of the stand off, and cut to length before connecting it to the SEH Door Leaf J-Box. Be sure to check the cable length with the door in both the open and closed positions before cutting. See Figures 36 and 37.

SEH Spring Header J-Box

1. Connect the Safety Edge wires to the Operator.
2. Connect the Heater wires (if so equipped) to a dedicated 120VAC circuit. Current draw varies with door model and size.

Jumper Cables

1. Standard and High Lift doors use short Jumper Cables to join the Heat Cable power and Safety Edge signals between sections. Connect these cables between the embedded boxes in the door sections.

FH Frame Heater J-Box (Optional)

1. Connect the Heater wires to a dedicated 120VAC circuit. Current draw varies with door model and size.

Spring Header and Door Leaf J-Boxes

#	Wire Color	Function
1	Black (BLK)	Heater – 110V phase
2	White (WHT)	Heater – 110V neutral
3	Green (GRN)	Ground
4	Orange (ORG)	Safety Edge
5	Red (RED)	Common

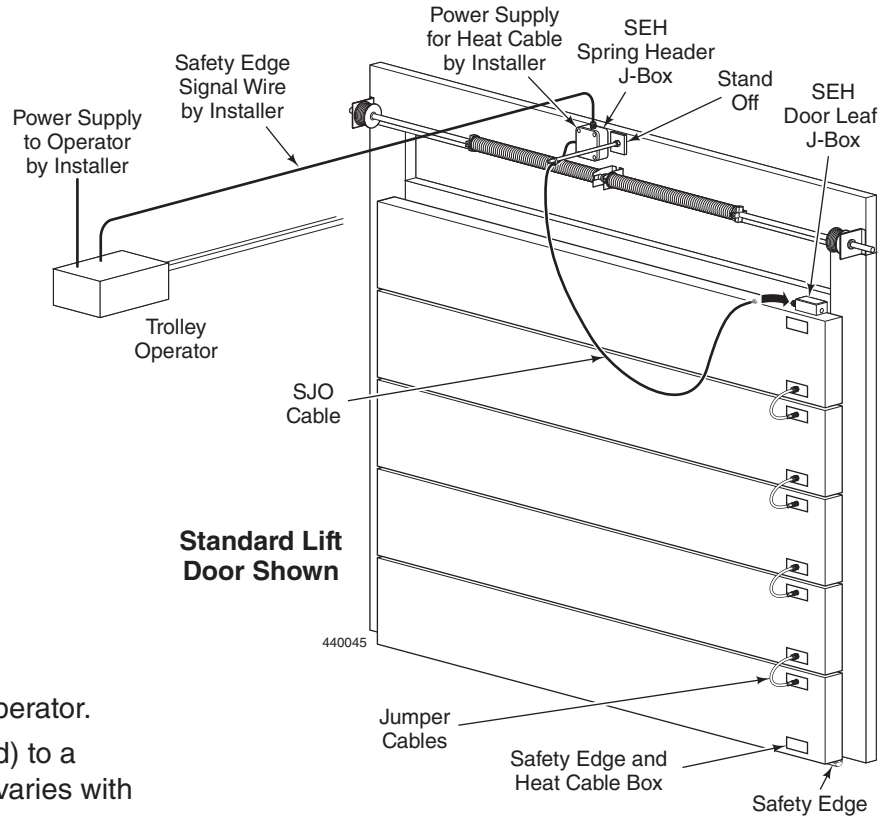


Figure 36

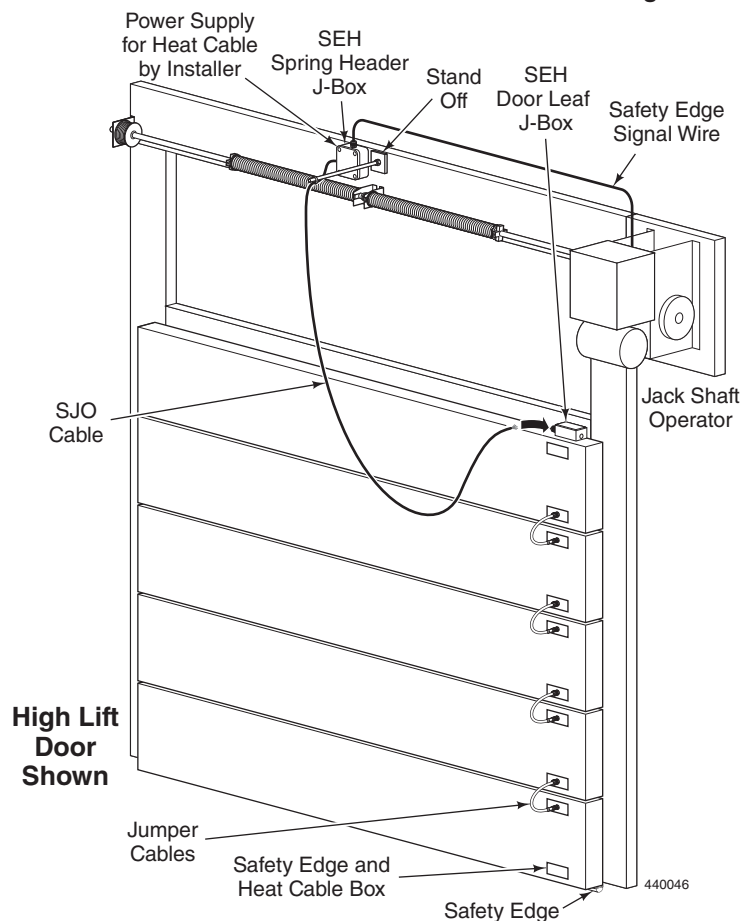


Figure 37

Install the Door Control Wiring

Please refer to the Door Operator manual for general installation instructions.

Door Control Signals

There are many signals devices used to control the door Operator. The most common are pull cord switches or stations, three button stations (i.e. open, close, stop) and radio control. All three may be used separately, in combination, or all together. The control circuit is 24 VDC. See the Door Operator manual for wiring instructions.

NOTE: If Pull Cord switches are to be used, they must be located carefully. Refer to the following instructions.

NOTE: Per NEC 300-7, all raceways passing from different temperatures shall be sealed with putty or other method to stop the travel of moisture.

NOTE: Power supply wiring to the operator must comply with NEC and all local electrical codes. We recommend using a surge protector.

Typical Input/Output Signal Devices

- Three-button stations
- Open and close switches
- Tap switches
- Magnetic loops
- Single-button stations
- Optical sensors
- Motion sensors
- Interlock signal
- Emergency stop
- Pull cord switches

Optional Pull Cord Installation

1. Do not mount the pull cord switch in the air flow of the coils. Air flow will move the cord and activate the switch. If the pull cord switch must be mounted in front of the coils, provide an air baffle (by others) to prevent icing of the switch. The air baffle must be of adequate size to protect the pull cord itself, but not obstruct function of the coils. Consult the cold storage contractor. See *Figure 38*.
2. Mount the pull cord switch to the wall or ceiling using the switch mounting holes or the mounting plate provided. Locate the switches at least 24" from the conduit penetration through the ceiling or wall. See *Figure 39*.



WARNING: Drilling of the pull cord switch will void any and all Warranties of the complete door.

3. Locate the pull cord switch away from the door and out of the way of lift trucks and loads. It is most common to locate one pull cord at the interior and one at the exterior of the door opening.
4. Fasten the switch securely to the wall or ceiling and attach the pull cord to the switch arm. Allow the pull cord to hang straight; do not use guide rings or screw eyes to reposition the cord. Such items can hinder operation of the cord or switch.
5. To complete the wiring, refer to Single-button station instruction in the Door Operator manual.

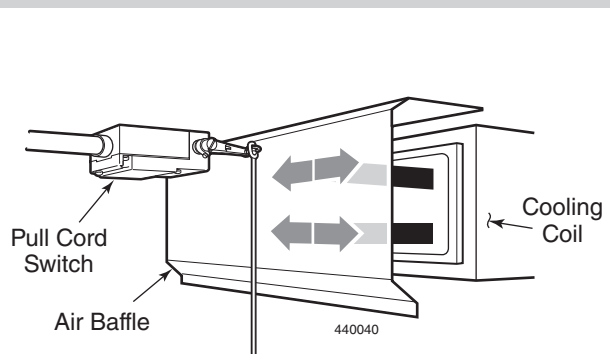


Figure 38

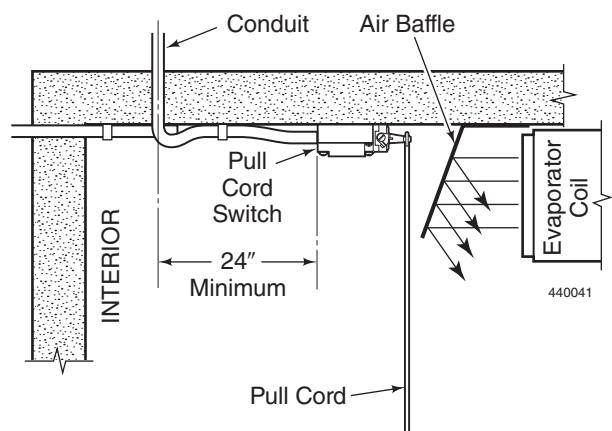


Figure 39

Adjust the Door Safety Edge

When the door travel limits are properly adjusted, the door Safety Edge can be adjusted. Please refer to the Door Operator manual for door travel limit instructions. Locate the Safety Edge J-Box and remove the cover plate. Optimum sensitivity can be achieved using a simple two step process. See *Figure 40*.

1. With the power on and the Door open about 5 feet high, insert a small screwdriver in the hole marked +/- . Turn the screw clockwise (toward the -) to *increase* sensitivity. Turn the screw counterclockwise (toward the +) to *decrease* sensitivity.



WARNING: Turn the screw $\frac{1}{8}$ turn at a time and test the door (see below). Do not turn too far — the Air Switch can be damaged.

2. Test the sensitivity. Start the Door toward the closed position. Touch the Safety Edge with a tool to reverse the Door and verify the proper sensitivity. Alternatively, lay a 2x4 board flat under an open Door. The Door should reverse upon contact. See *Figure 41*.

Test the Door travel limits and adjust as necessary.

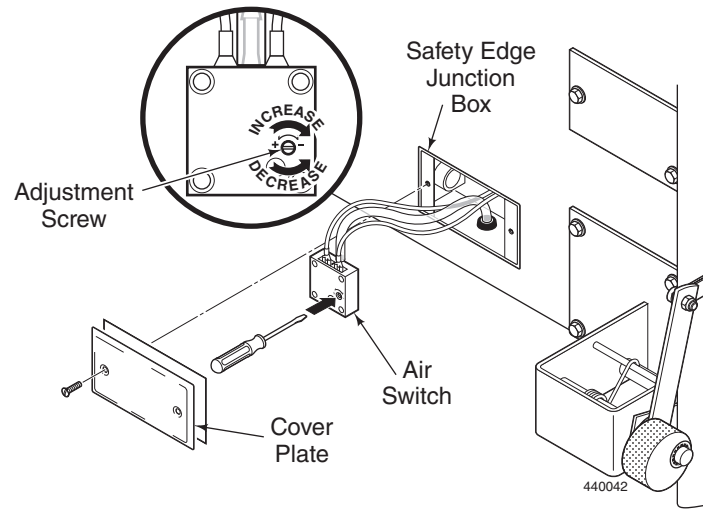


Figure 40

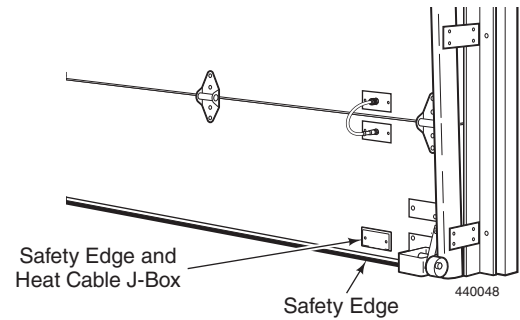


Figure 41

PERIODIC MAINTENANCE

All Door Models

General Inspection

Visually inspect Door and hardware weekly for worn and/or broken parts. Check to be certain the Door operates smoothly and freely. Operate the Door only when it is properly adjusted and free from obstructions. If a Door becomes hard to operate, inoperative, or damaged, do not operate the Door until necessary adjustments or repairs have been made.

Roller Hinges and Section Hinges

1. Inspect for undue wear and proper alignment. Replace if needed.

Lift Cable

1. Inspect for undue wear and proper alignment. Replace if needed.

Anti-Drop Roller Bracket

1. Inspect visually for abnormality or undue wear. Replace if needed.

Gaskets

1. Inspect the Bottom 'D' Gasket for proper light-tight seal. Adjust or replace as needed.
2. Inspect the Flat Gasket, between the Door Sections, for proper light-tight seal. Replace if needed.
3. Inspect the Side Frame Gaskets and Header Gasket for proper 1/8" compression and light-tight seal.
See Figure 31.

Door

1. Inspect periodically for proper operation. Repair or replace as needed.

Heated Door Models

Door Leaf Heaters

1. Check for ice formation around door Side Frame Gaskets, Header Gasket and between Door Sections. Before determining a repair is necessary, be certain the Heater breaker switch is not off. Replace the thermostat or heat cable as needed.

Door Frame Heaters (Optional)

1. Check for ice formation around door Side Frame Gaskets and Header Gasket. Before determining a repair is necessary, be certain the Heater breaker switch is not off. If Door Leaf Heaters are working properly, replace the Frame Heater thermostat or heat cable as needed.

Electric Operator Door Models

General Inspection

Visually inspect Door and hardware weekly for worn and/or broken parts. Check to be certain the Door operates smoothly and freely. Operate the Door only when it is properly adjusted and free from obstructions. If a Door becomes hard to operate, inoperative, or damaged, do not operate the Door until necessary adjustments or repairs have been made.

Safety Edge

1. Inspect and test the Door Safety Edge as described in the section titled Adjust the Door Safety Edge. If equipped with a photoelectric eye system, test this at the same time. Repair or replace as needed.

Operator Related Components

1. Test the Electric Operator's safety features weekly. Refer to the Operator manual provided by the manufacturer.

WARRANTY

R-Plus Walk-In Cooler Cold Storage Doors warrants to the original purchaser of its products that the foamed-in-place urethane panels purchased from R-Plus Walk-In Cooler Cold Storage Doors are free from defects in material and workmanship for a period of five (5) years and a one (1) year warranty on all other parts from the date of original shipment under normal use and service. This warranty is limited to replacement (FOB R-Plus Doors) of malfunctioning parts and does not include damage resulting from accident or malicious misuse.

Exclusive Warranty - No Implied Warranties

This written and expressed warranty is the only warranty provided by R-Plus Walk-In Cooler Cold Storage Doors on the products they sell.

All warranties, which might otherwise be implied in this contract, are hereby excluded from this contract. This includes excluding the implied warrant of merchantability and fitness for a particular purpose. There are no warranties, which extend beyond the description of the warranties on the face hereof.

Exclusive Remedies

The buyer's exclusive remedy under this warranty or for the breach of this warranty shall be the repair or the replacement of the defective part by R-Plus Walk-In Cooler Cold Storage Doors. R-Plus Walk-In Cooler Cold Storage Doors shall repair, or at its option replace, F.O.B. the factory, any part of the product which their examination shall disclose, to their satisfaction, to be defective.

No other remedy, including rejection of goods, revocation of acceptance, nor consequential damages for personal or property damage, nor incidental damages shall be allowed to the buyer of this product.

Hardware, Electrical Components and Accessories

All hardware, electrical components and accessories are warranted to be free of defects in materials and workmanship under normal use and service for one (1) year from the date of original shipment.

Voidability of Warranty

This warranty is void and of no force or effect, and the buyer shall have no expressed or implied warranties against defects, nor remedies for defects, if any of the following events occur:

- The door(s) are not installed within 120 days of original shipment
- The door(s) are not installed by a factory authorized installer
- The door(s) have been subjected to improper installation, misuse, abuse, neglect, alteration, accident, fire, flood, earthquake or other natural disasters.

This warranty does not include food or product loss, labor or transportation charges for replacement or repair of defective parts. This warranty is nontransferable. The original purchaser is the firm or individual to whom R-Plus Walk-In Cooler Cold Storage Doors originally sold this product.

*R-Plus doors are designed to operate within the following temperature ranges:

Interior Freezer: -10 degrees F. to 32 degrees F.

Interior Cooler: 33 degrees F. to 100 degrees F.

Exterior Ambient Temperature: 65 deg F. to 80 deg F.

WE MUST BE NOTIFIED UPON PLACEMENT OF THE ORDER IF OPERATING TEMPERATURES ARE OUTSIDE THE ABOVE NORMAL DESIGN TEMPERATURES TO PROPERLY DESIGN THE PRODUCT OR THE WARRANTY MAY BE VOIDED.

R•PLUS

COLD STORAGE DOORS

2271 NE 194th • Portland, Oregon 97230
Toll Free (877) 320-3599 • Fax (503) 665-2929
www.RPlusDoors.com

For the latest manuals and resources, just
snap on the QR Code, or visit
sp.rplusdoors.info

