Thermospan™

COMMERCIAL GARAGE DOOR INSTALLATION INSTRUCTIONS AND OWNER'S MANUAL

Read these instructions carefully before attempting installation.
If in question about any of the procedures, Do Not perform the work.
Instead have a qualified door agency do the installation or repairs.

⚠ IMPORTANT

SAFETY NOTICES

An overhead door is a large heavy object that moves with the help of springs under high tension. Moving objects and springs under tension can cause injuries. For your safety and the safety of others, follow these instructions:

1. Wear protective gloves during installation to avoid possible cuts from sharp metal edges.
2. It is always recommended to wear eye protection when using tools, other wise serious eye injury could result.
3. Operate door **ONLY** when properly adjusted and free of obstructions.
4. Keep door in full view while operating it. Watch the door open or close completely before leaving the area.
5. Should the door become hard to operate or completely inoperative, a qualified door agency should correct the problem to prevent damage to the door or serious personal injury.
6. **DO NOT PERMIT** children to play with the garage door or the electrical controls. Fatal injury could result, should the child become entrapped between the door and the floor.
7. To prevent serious injury or death, avoid standing in the open doorway or walking through the doorway while the door is moving.
8. Use lift handles/step plate when manually operating the door. **DO NOT** place fingers into section joints when operating the door.
9. Remove pull rope if door is operated by an electric opener.
10. Door is constantly under **EXTREME SPRING TENSION**. To prevent possible serious injury or death, adjustments, repairs, removal, or installation, **ESPECIALLY of SPRING ASSEMBLIES, CABLES, or BOTTOM BRACKETS**, should be performed **ONLY** by qualified door service people.
11. Check door and its hardware monthly for loose, worn, or broken parts. Have any repairs or adjustments made by a qualified door agency.
12. Have the door professionally inspected once a year.
13. Lubricate hinges, springs and rollers once a year.

CONTENTS

⚠ WARNING

IT IS RECOMMENDED THAT INSTALLATION, REPAIRS, OR ADJUSTMENTS OF THIS PRODUCT BE MADE BY A QUALIFIED DOOR AGENCY.

This manual MUST be attached to the wall in close proximity to the door.

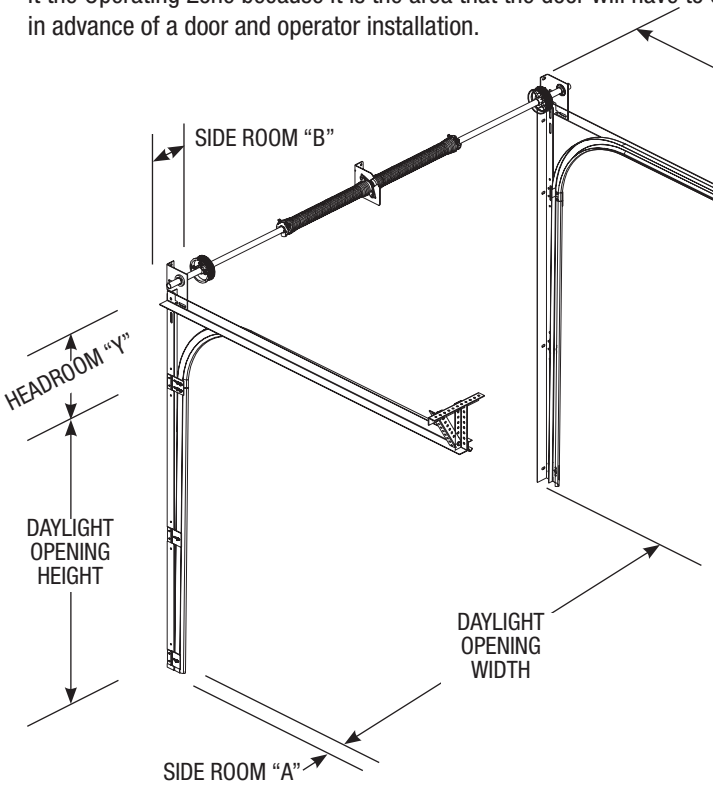
PART # 331661

REV2 02/04/2010

OPERATING ZONE

You Can Save Time And Effort If You First Establish **All** The Facts About The "Operating Zone"

The **" Operating Zone"** is the area surrounding the door opening, extending upward and backward as far as the door will travel. We call it the Operating Zone because it is the area that the door will have to operate within and the dimensions are critical and must be known in advance of a door and operator installation.



SIDEROOM CHART (Minimum Distance Required)

TRACK SIZE	MANUAL DEPTH INTO ROOM	DIM. A SIDEROOM TRACK		DIM. B SIDEROOM TORSION SHAFT	
		STEEL	MASONRY AND WOOD	SOLID	TUBE
2"	DOOR HEIGHT PLUS 18" MOTOR PLUS 66"	3-1/2"	4"	10"	5"
3"	DOOR HEIGHT PLUS 24" MOTOR PLUS 66"	4"	5"	10"	5"

1. **Daylight Opening:** Exact size of finished opening.
2. **Sideroom:** required distance from the door opening to a wall or any obstruction. **Refer To Sideroom Chart.**
3. **Headroom:** required distance from top of door opening to the ceiling or underside of joists. **Refer To Headroom Chart.**
4. **Backroom:** required distance from door opening header to the furthest back point to which the door track or operator unit, and their brackets, will extend.

HEADROOM CHART For Standard Lift Track (Minimum Distance Required)

DRUMS	DIMS	3" TRACK, 15" RADIUS	2" TRACK, 15" RADIUS	2" TRACK, 12" RADIUS
400-8, 400-12	HEADROOM DIM Y	15-1/2" 13"	14-1/2" 12"	12-1/2" 9"
5250-18	HEADROOM DIM Y	19" 14-1/2"	18" 13-1/2"	15" 10-1/2"
800-32	HEADROOM DIM Y	21" 16-1/2"	20" 15"	17" 12-1/2"

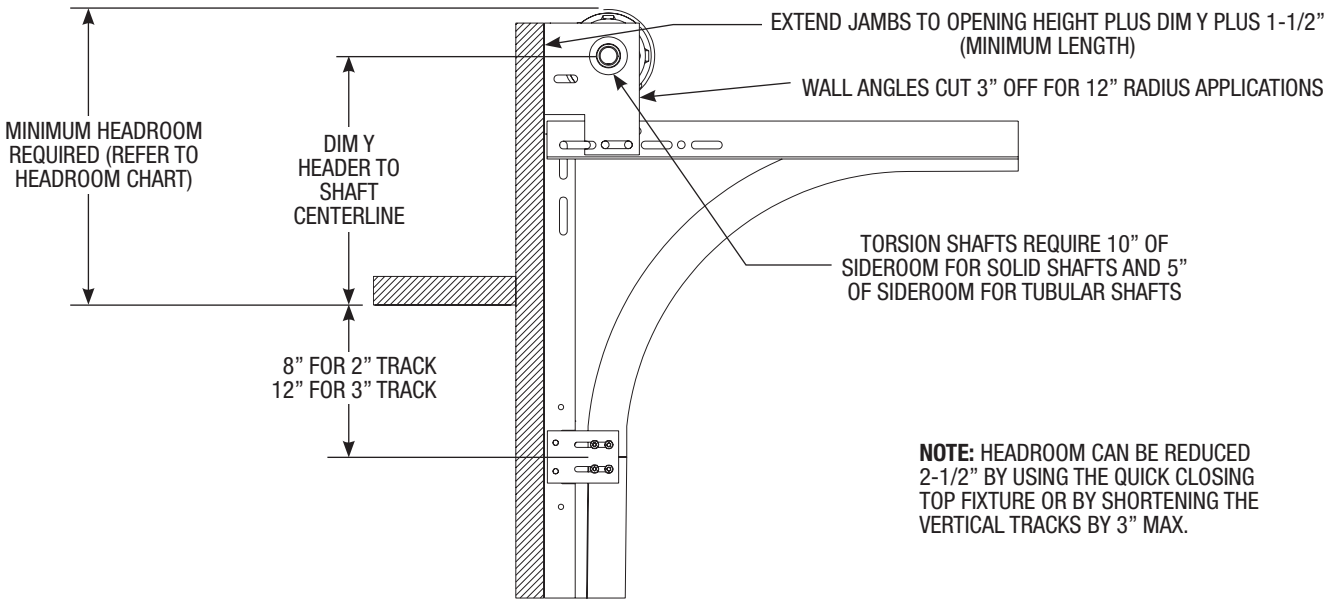
Dim. Y INDICATES THE DISTANCE FROM THE HEADER TO THE CENTER LINE OF TORSION SHAFT.

NOTE: 2 1/2" OF ADDITIONAL HEADROOM IS REQUIRED FOR SINGLE TROLLEY OPERATOR INSTALLATIONS.

STEP 1: Verify The **OPERATING ZONE** Dimensions

A - Exact size of finished daylight opening. Do you have the correct door size?
B - Sideroom requirements for track and spring shaft. (Refer to sideroom chart)
C - Headroom requirements. (Refer to headroom chart)
D - Backroom (depth into room) Manual lift = Door height plus 18" for 2" track; Manual lift = Door height plus 24" for 3" track; Operators = Door height plus 56"
E - Jambs must be plumb and solidly attached to the building. Floor must be level or exact gradeline established before you start.

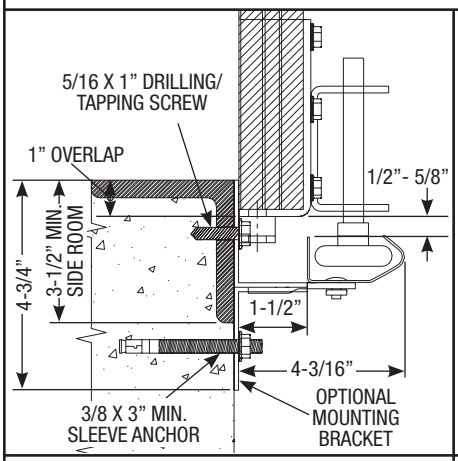
STEP 2: Shipping tags show important information, door size, track size and type, spring size and hardware type. Verify that all material is present and correct before attempting installation.



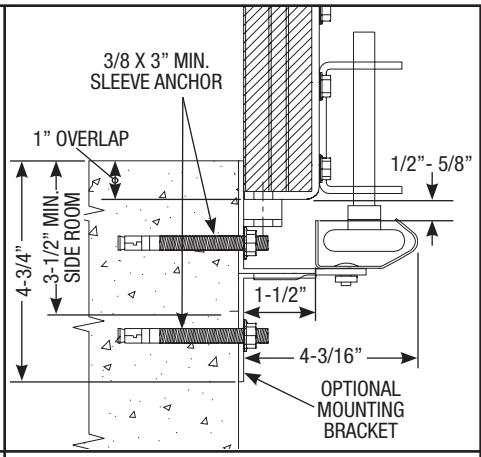
NOTE: HEADROOM CAN BE REDUCED 2-1/2" BY USING THE QUICK CLOSING TOP FIXTURE OR BY SHORTENING THE VERTICAL TRACKS BY 3" MAX.

SIDEROOM REQUIREMENTS

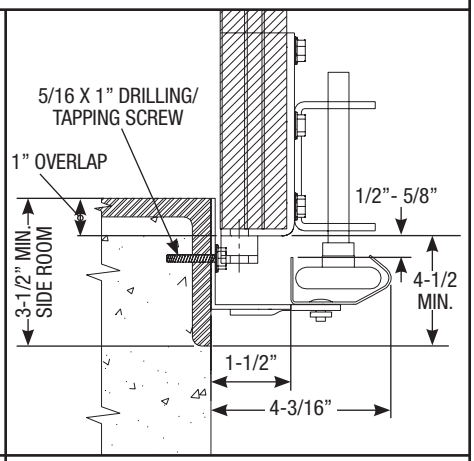
2 inch TRACK



PRECAST WALL WITH CORNER ANGLE 2" TRACK

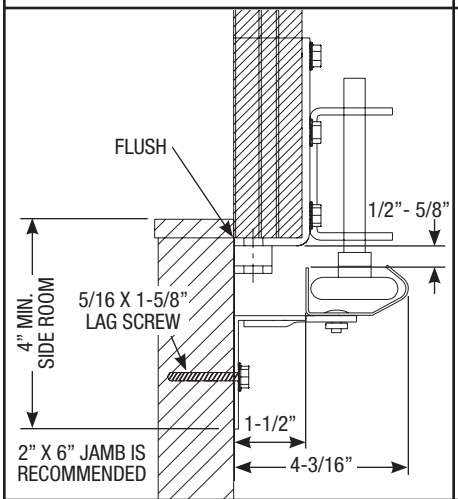


PRECAST WALL WITHOUT CORNER ANGLE 2" TRACK



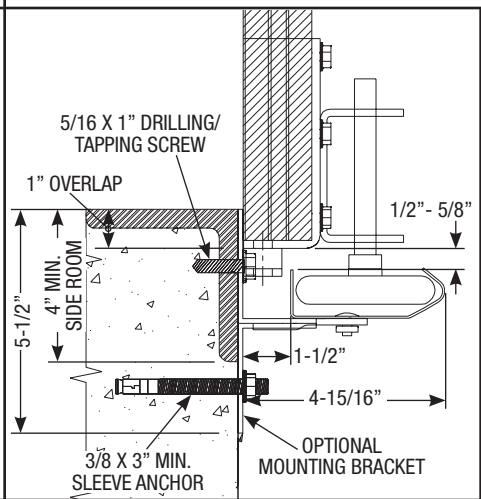
STEEL JAMBS 2" TRACK

2 inch TRACK

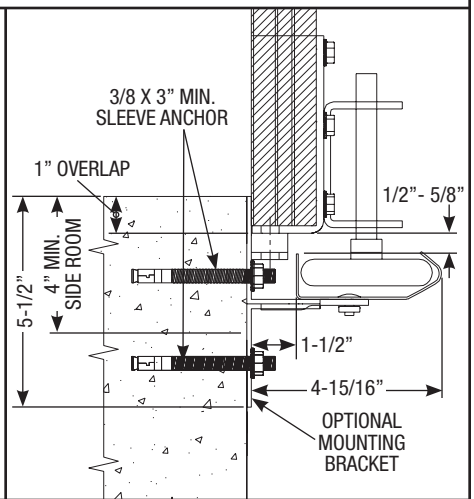


WOOD JAMBS 2" TRACK

3 inch TRACK

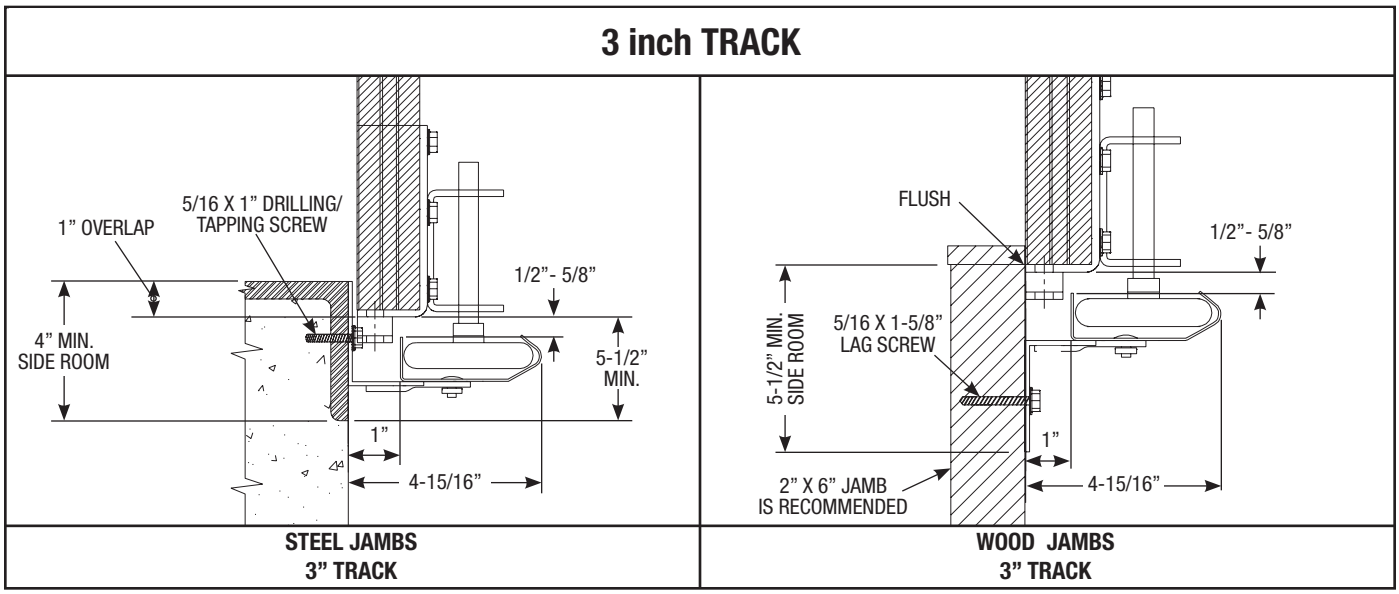


PRECAST WALL WITH CORNER ANGLE 3" TRACK



PRECAST WALL WITHOUT CORNER ANGLE 3" TRACK

SIDEROOM REQUIREMENTS continued...



STEP 3: Locate the bottom section, attach bottom seal using 1/4" self drilling and tapping screws as shown in Fig. A .

Locate the left and right hand bottom brackets, secure the counterbalance cable to the bracket using clevis pin, washer and cotter key shown in Fig. B.

Secure bottom bracket to section using 1/4" drilling and tapping screws as shown in Fig. C (for doors over 18'2" wide use doublewide bottom brackets as shown in Fig. D)

Attach roller carrier to the bottom bracket by aligning the four holes of the roller carrier and bottom bracket as shown in Fig. E.

TS-125: Orient the loose roller carrier so that "TS 125" is up.

All Other Doors: Orient the loose roller carrier so that "STD" is up.

Secure the roller carrier to the bottom bracket with (4) 1/4-20 x 7/8" self drilling screws. For doors using broken cable safety device use the additional instructions located on page 17.

Insert roller into the roller carrier according to door model.

TS-125: Roller and a 3/16" roller spacer will be placed in the outer holes of roller carrier.

All Doors: Roller and a 3/16" roller spacer will be placed in inner holes of roller carrier for 2" track applications and outer holes for 3" track.

Align the appropriate end hinge to the pre-punched holes in the endcap and secure using (2) 1/4" x 5/8" self drilling and tapping screws per hinge leaf. Products 14'2" wide and less require (1) end hinge (Fig. F) and doors over 14'2" wide require double end hinges. (Fig. G)
TS-125 NOTE: End hinges will start with a #3, when using this bottom bracket.

The end hinge sequence is dependent on track size (2" or 3"). Illustrations on page 6.

2" track applications begin with a number 1 hinge attached to the top corners of the bottom section. (TS-125 starts with number three hinge)

3" track applications begin with a number 3 hinge. (Refer to the illustrations matching your track size)

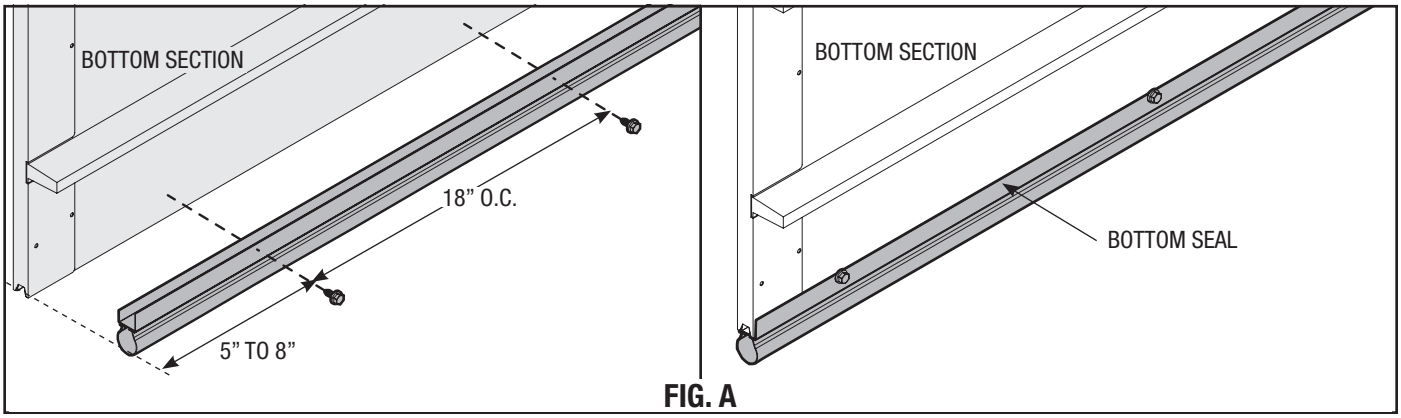


FIG. A

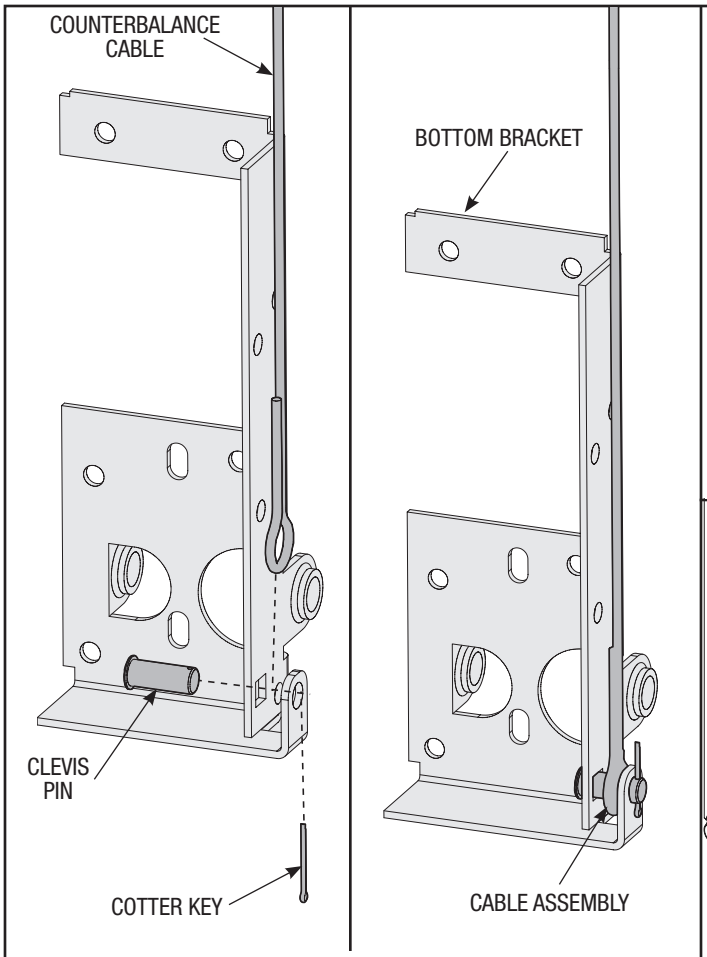


FIG. B

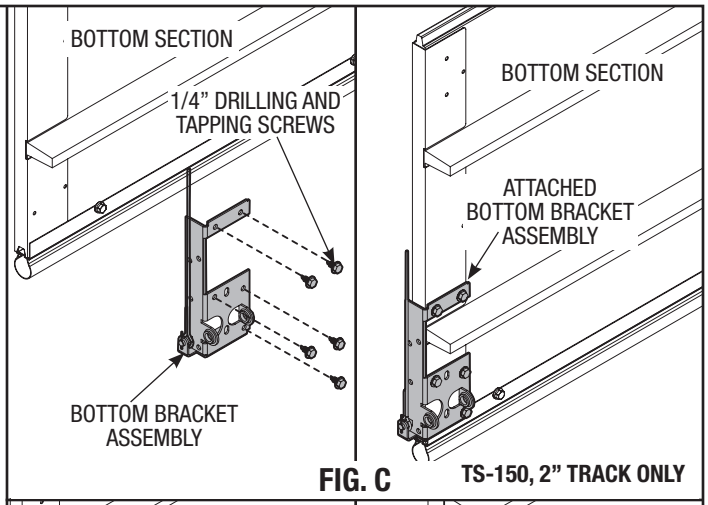


FIG. C **TS-150, 2" TRACK ONLY**

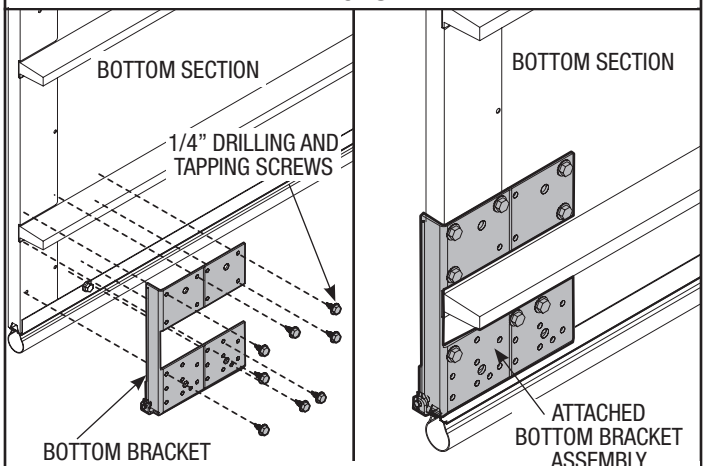
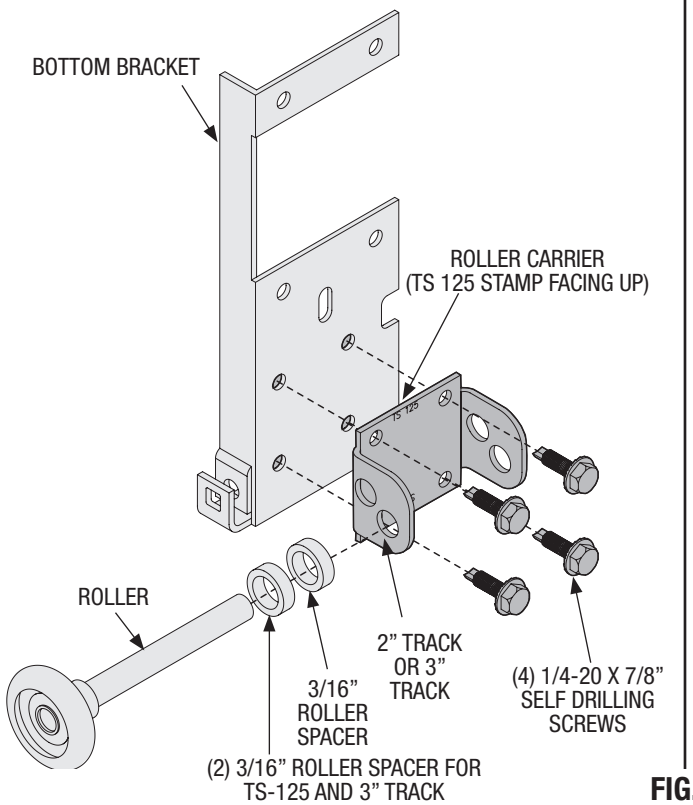


FIG. D

TS-125 Only



Standard Installation

(All commercial doors except TS-125)

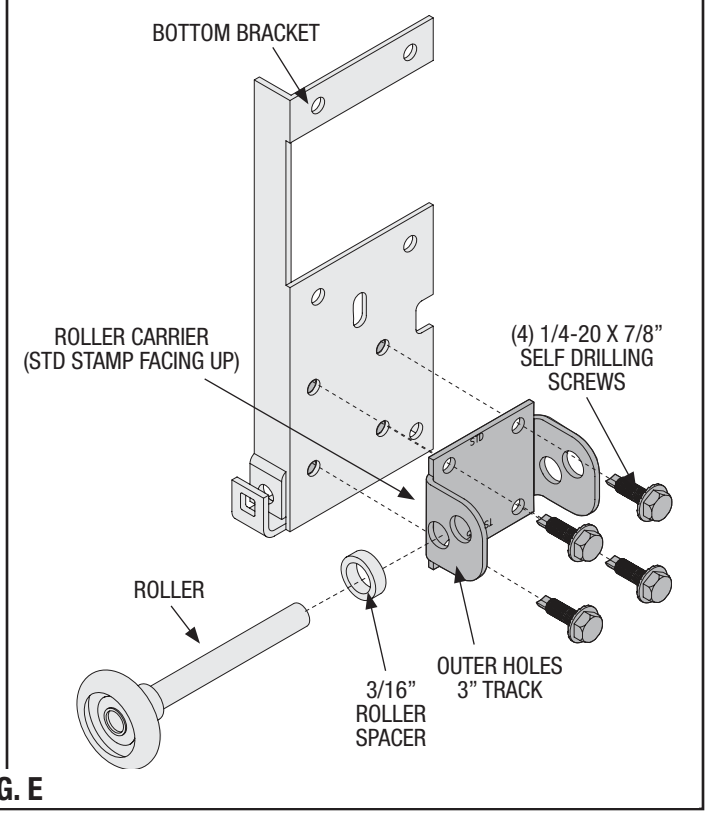


FIG. E

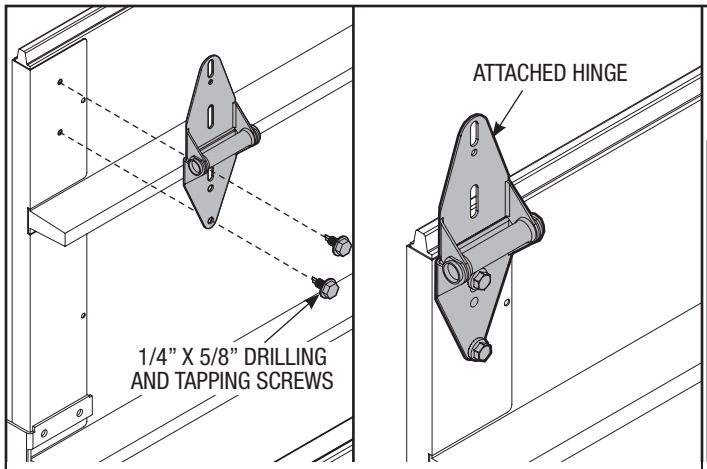


FIG. F

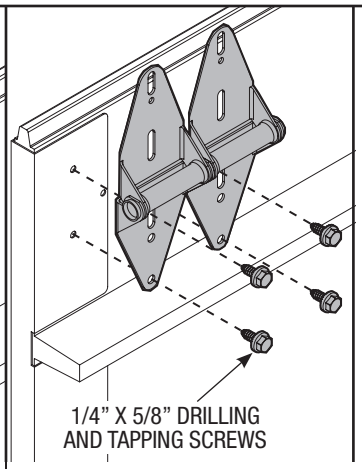
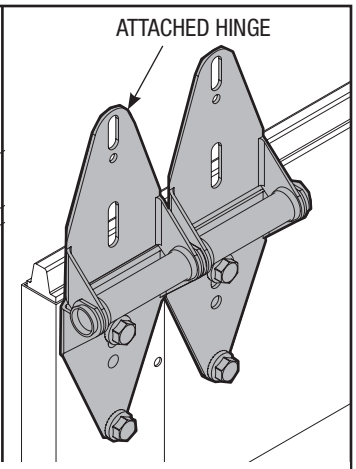
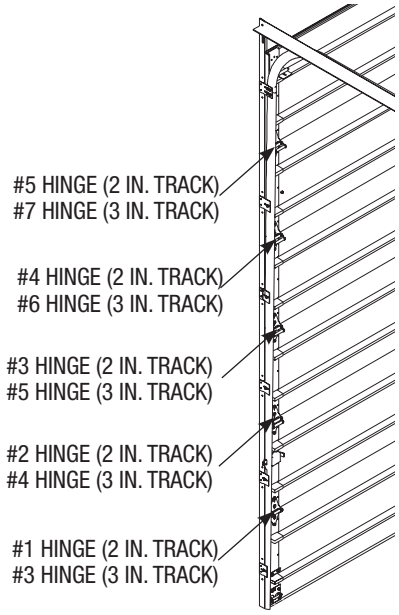


FIG. G

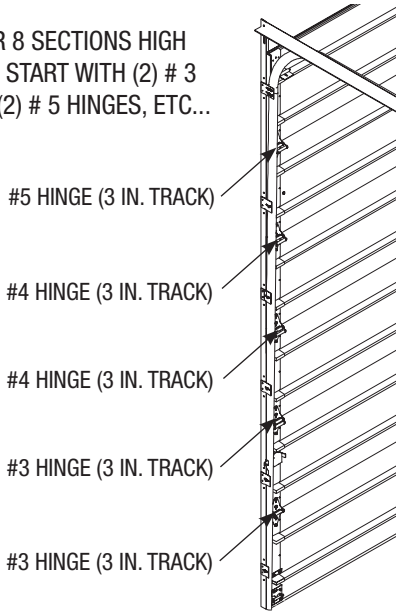


1/4" GRADUATION - 9 SECTIONS HIGH OR LESS ALL DOORS EXCEPT TS-125

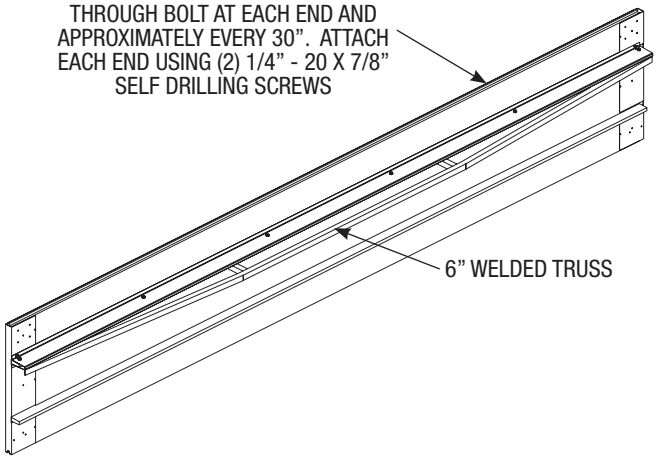


1/8" GRADUATION - OVER 9 SECTIONS HIGH

NOTE: FOR DOORS OVER 8 SECTIONS HIGH AND USING 3 IN. TRACK, START WITH (2) # 3 HINGES, (2) #4 HINGES, (2) # 5 HINGES, ETC...



STEP 4: Refer to Strutting Schedule for products requiring U-bars or trusses. Center strut on the appropriate rib, 1/2" from each end. Push strut tight against section and drill 9/32" holes every 30" through strut and rib. Secure using 1/4" x 1-1/4" bolts and nuts as shown in Fig. H . Attach the ends of each strut with 1/4"-20 x 7/8" self drilling screws.



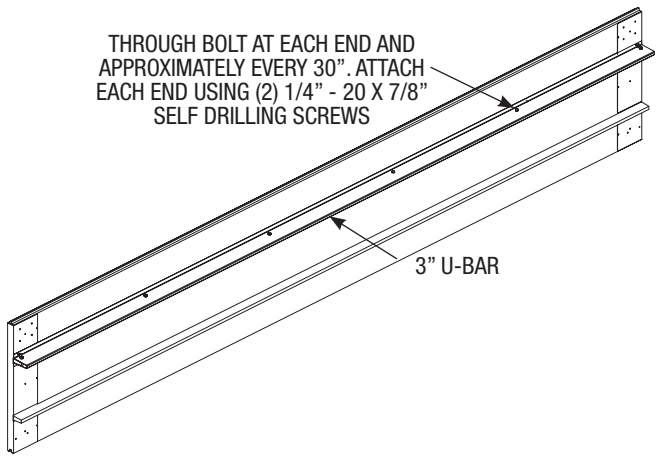


Fig. H

Strutting Schedule

TS 150 Strutting Schedule	
Door Widths	**Strutting**
LESS THAN 16' 2"	None
16' 3" - 18' 2"	(1) 3" U-Bar Per Section
18' 3" - 20' 2"	(1) 3" U-Bar Per Section plus (1) 3" U-Bar Every Other Section
20' 3" - 22' 2"	(2) 3" U-Bar Per Section
22' 3" - 26' 2"	(1) 6" Welded Truss Per Section

TS 200 Strutting Schedule Standard Section Reinforcement	
Door Widths	**Strutting**
LESS THAN 20' 6"	None
20' 7" - 23' 6"	(1) 3" U-Bar Per Section
23' 7" - 27' 11"	(2) 3" U-Bar Per Section
28' 0" - 33' 11"	(1) 6" Welded Truss Per Section
34' 0" - 36' 2"	(2) 6" Welded Truss Per Section
36' 3" - 40' 2"	(2) 8" Welded Truss Per Section

NOTE: TS-150 doors 16'3"-18'2" wide with intermediate aluminum full view (AFV) sections do not require strutting on AFV sections.
STEP 5: Center and level (or support to a known grade level) the bottom section in the opening, as seen in Fig. I. Temporarily attach the vertical tracks to the jambs. Allow 1/2" clearance between the section and the track as illustrated in the side room illustrations (page 2-4). It is important that the top of each track is at the same level. (shim if necessary)
Products being installed to precast or block must use a 3/8 x 3" long sleeve anchor (by others) to attach the verticals to the building. Use the slots in the wall angle as a drill template, drill a 3/8" hole (3-1/2" deep) and secure to anchor.

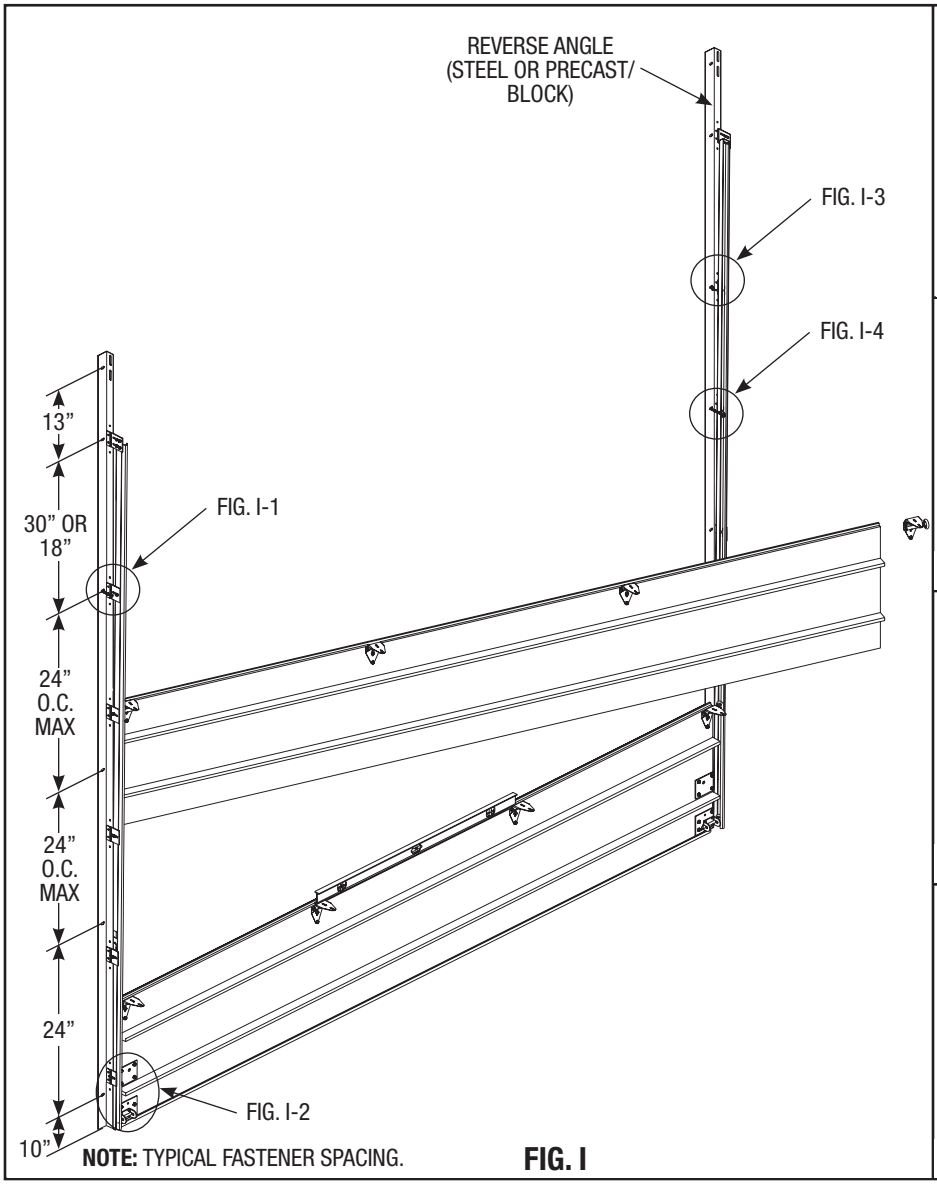


FIG. I

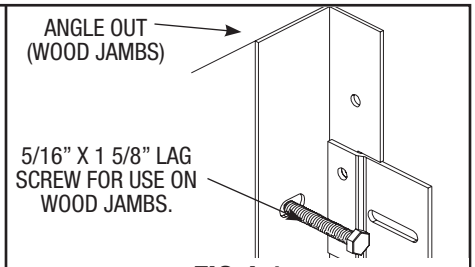


FIG. I-1

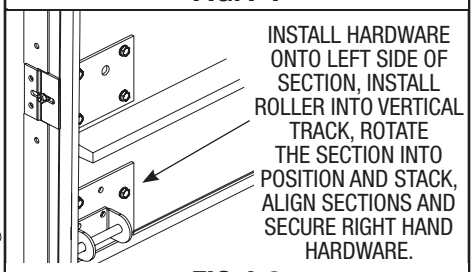


FIG. I-2

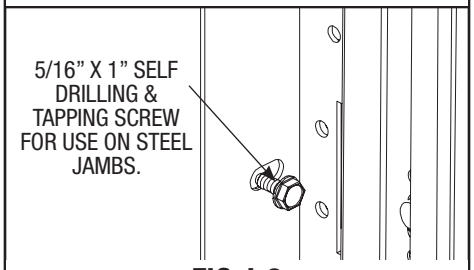


FIG. I-3

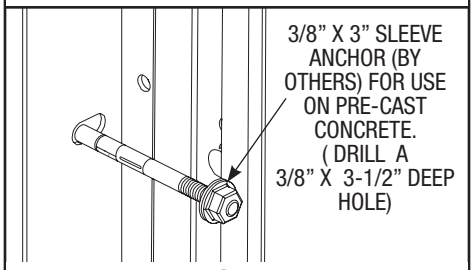


FIG. I-4

STEP 6: Secure the end hinges, (one side only) center hinges, and strutting (if applicable) as previously illustrated. Locate the Lock Section (usually the second section) and insert a roller into the end hinge. Stack this section into the opening by hooking the roller in the vertical track and lowering it onto the bottom section. Insert a roller into the appropriate end hinge and insert roller into vertical track on the opposite end. Secure end hinge to the section using the self-drilling and tapping screws. Align the section edges, flip up the upper hinge leafs and secure to the lock section using the self-drilling and tapping screws. Continue to hardware and stack the remaining sections in the proper sequence. Attach the top brackets to the upper corners of the top section, using (4) 1/4" self drilling and tapping screws per bracket as shown in Fig. J. Doors over 14'2" wide require double top brackets.

NOTE : Top section may be installed now or may wait until the last step (installer preference)

NOTE: For AFV sections with integral ribs, half hinges are provided for center hinges. Stack the Aluminum Full View section onto the door section and secure. Secure the lower end hinges, and center hinges as illustrated in your installation manual. Stack the next door section onto the AFV section and install the end hinges as illustrated in you instruction manual. Secure the center hinges as illustrated below. Half center hinges are secured with self-drilling/tapping screws on the upper hinge leaf and 1/4"-20 bolts and nuts on the lower hinge leaf as shown in Fig. K

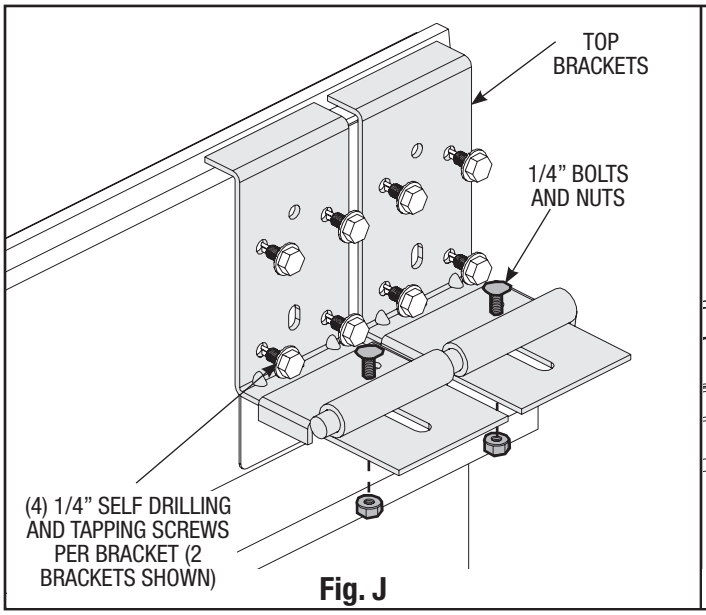


Fig. J

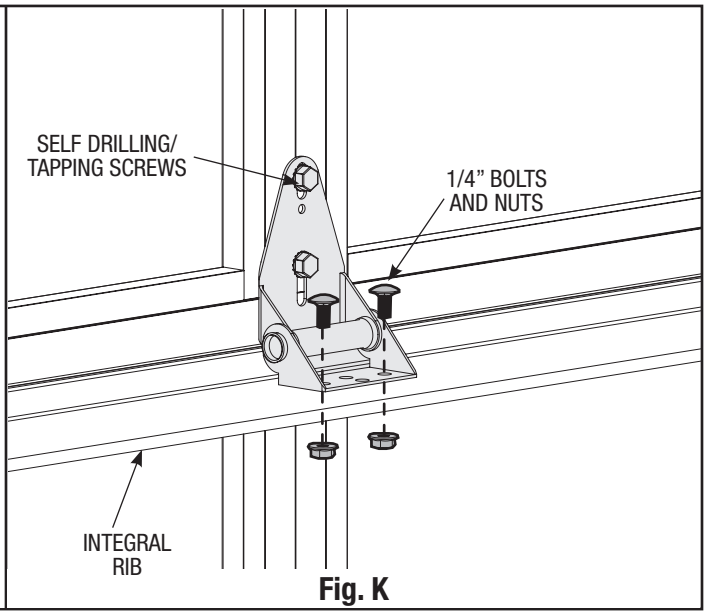


Fig. K

STEP 7: Adjust the vertical track from 1/2" spacing at the bottom section to 3/4" at the top section. Refer to page 3. Permanently secure each vertical to the jambs using the following fasteners:

Steel Jambs: 5/16" x 1" self drilling and tapping screw.
Wood Jambs: 5/16" x 1-5/8" lag screw.
Precast or Block: 3/8" x 3" sleeve anchor (by others).

The left hand vertical track assembly indicates the standard fastener spacing (Fig. I, page 7).

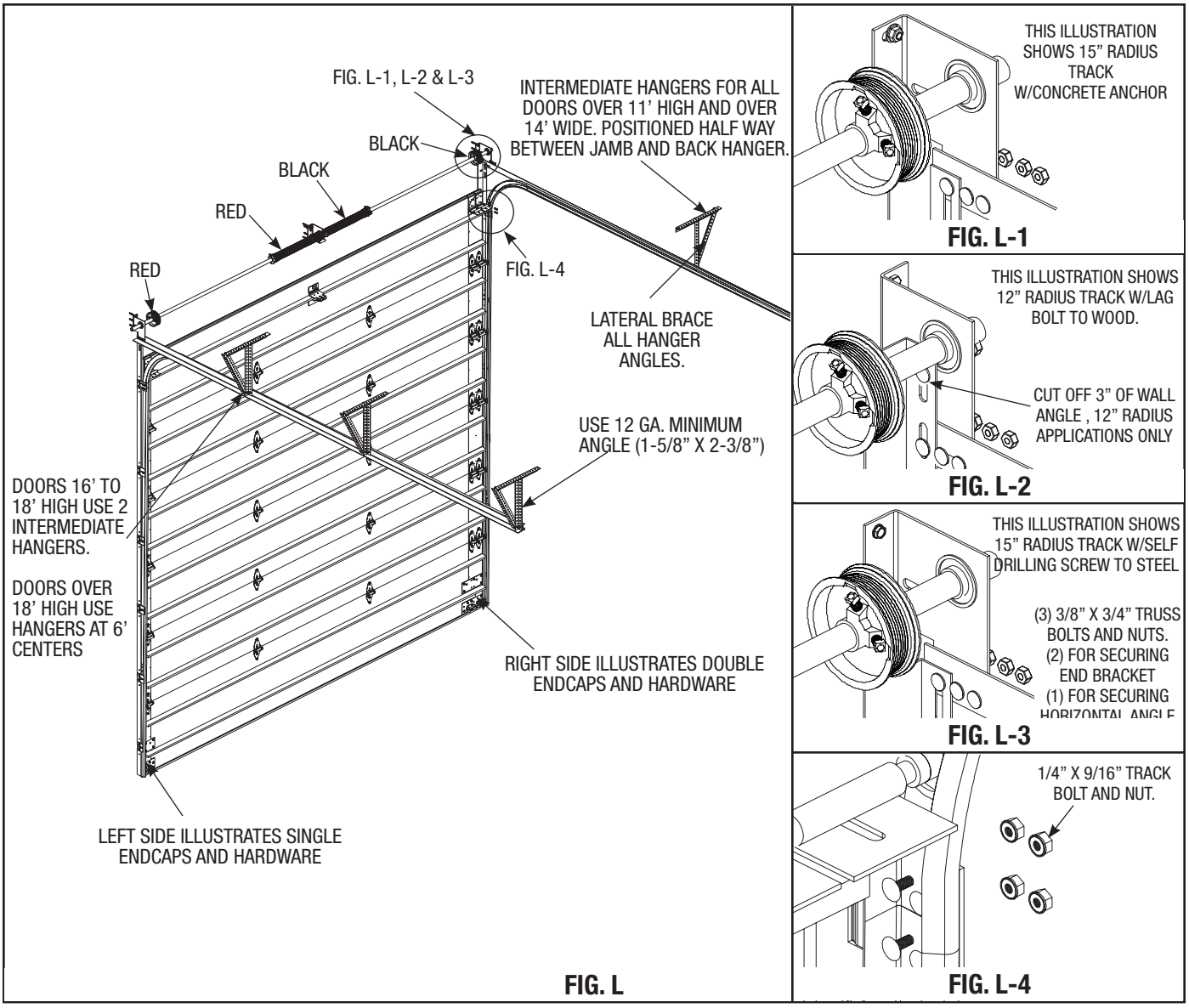
STEP 8: Use chain or cable to temporarily suspend the rear of the horizontal tracks. Secure the horizontal reinforcing angle to the wall angle using (1) 3/8" x 3/4" truss bolt and nut, then secure the horizontal track to the splice plate or flagangle using (2) track bolts and hex flange nuts.

STEP 9: Torsion spring assemblies can be of several configurations depending on door size and weight. Left or right hand spring(s) must be identified by the color of the winding cone. (Refer to Fig. L, pages 9-11)
Assemble torsion spring system components to the following applicable configurations. Ensure that spring warning tags are securely wired to all stationary spring cones.

⚠ WARNING

INSTALL SUPPORT BRACKETS TO SOLID STRUCTURAL MEMBERS ONLY. DO NOT INSTALL OVER DRY WALL OR PANELING.

NOTE: Use a chalk line or line level to ensure all support brackets are in line.



For All Spring Systems:
Attach the EBF'S (end bearing brackets) to the horizontal reinforcing angle and then attach to the jambs.
Install the Center Bearing Brackets to the spring pads at the same elevation as the bearing in the EBF.
For Standard Applications: All red winding cone springs will be on the left side and all black winding cone springs will be on the right side.

NOTE: All set screws on drums and winding cones are painted red.

For 2" or 2-5/8" Springs (Tubular Shaft Only)
FIG M. Install the loose steel bearing on to shaft (1 per (1 or 2) spring(s)) and insert into the stationary cone.

For 2-5/8" , solid shaft with coupler, 1 spring per bracket or 3-3/4" Springs
FIG N. Install the loose steel bearing on to shaft (1 per spring) and insert into the stationary cone.
Fasten the stationary cones to the USA brackets.

NOTE: Additional center brackets are not required for coupler support.

For 6" Springs
FIG O. After the DSB wall angle(s) have been attached to the spring pads, fasten the spring plate to the wall angle bracket.

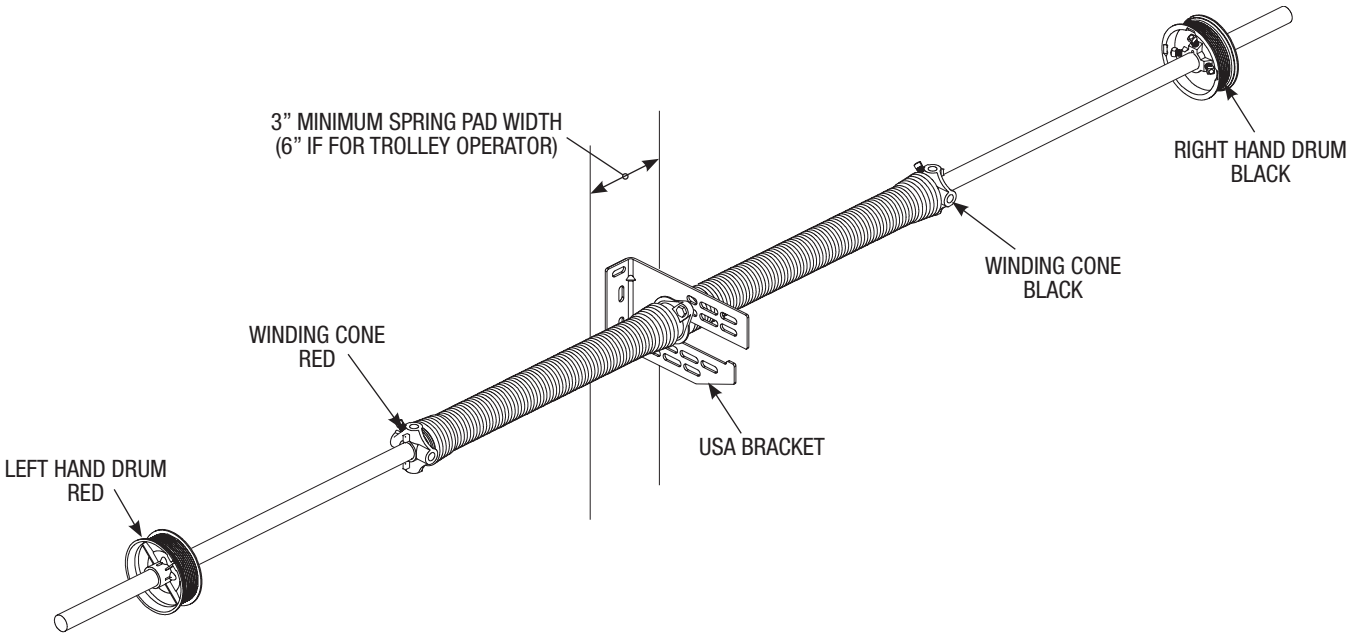
NOTE: 1" GRADE 5 bolts are provided and must be used with the flat and locking washers, to fasten the spring plate to the DSB wall angle.

NOTE: Additional center brackets are not required for coupler support.

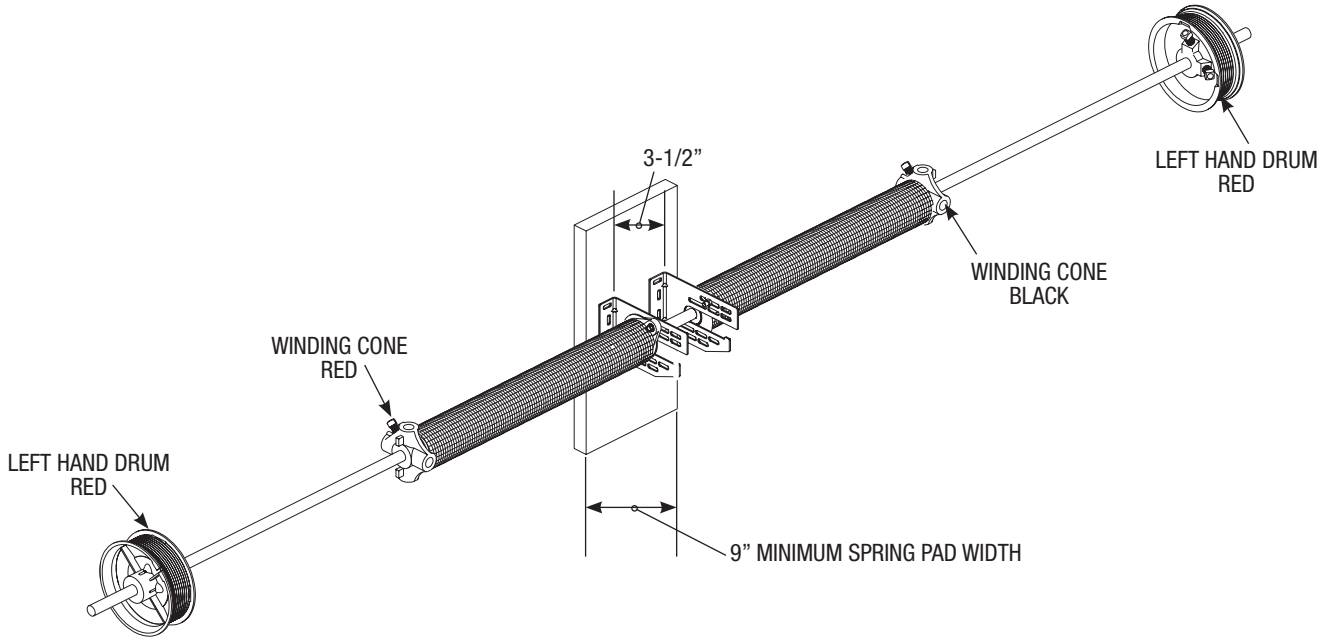
ALL SPRINGS:
After the Springs have been installed, adjust the shaft assembly until it is straight, at the same distance from the header, and at the same elevation, as the EBF's.

Tighten all bolts.

ONE or TWO SPRINGS (2" or 2-5/8" ONLY)



TWO SPRINGS (3-3/4") TUBULAR OR 1 PIECE SOLID SHAFT



NOTE: 6" SPRINGS UTILIZE SOLID SHAFTS

Fig. M

TWO OR MORE SPRINGS (2-5/8” or 3-3/4”) SPLIT SOLID SHAFT

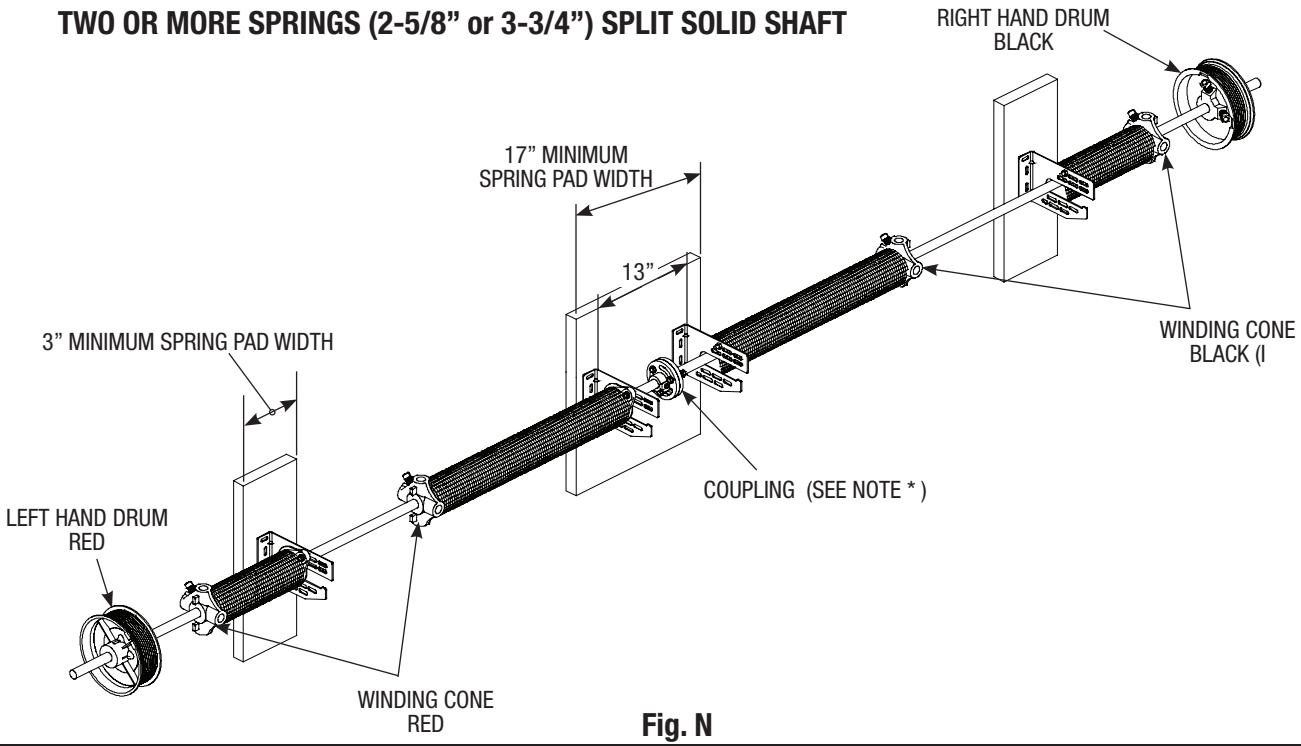


Fig. N

TWO OR MORE SPRINGS (6”) SPLIT SOLID SHAFT

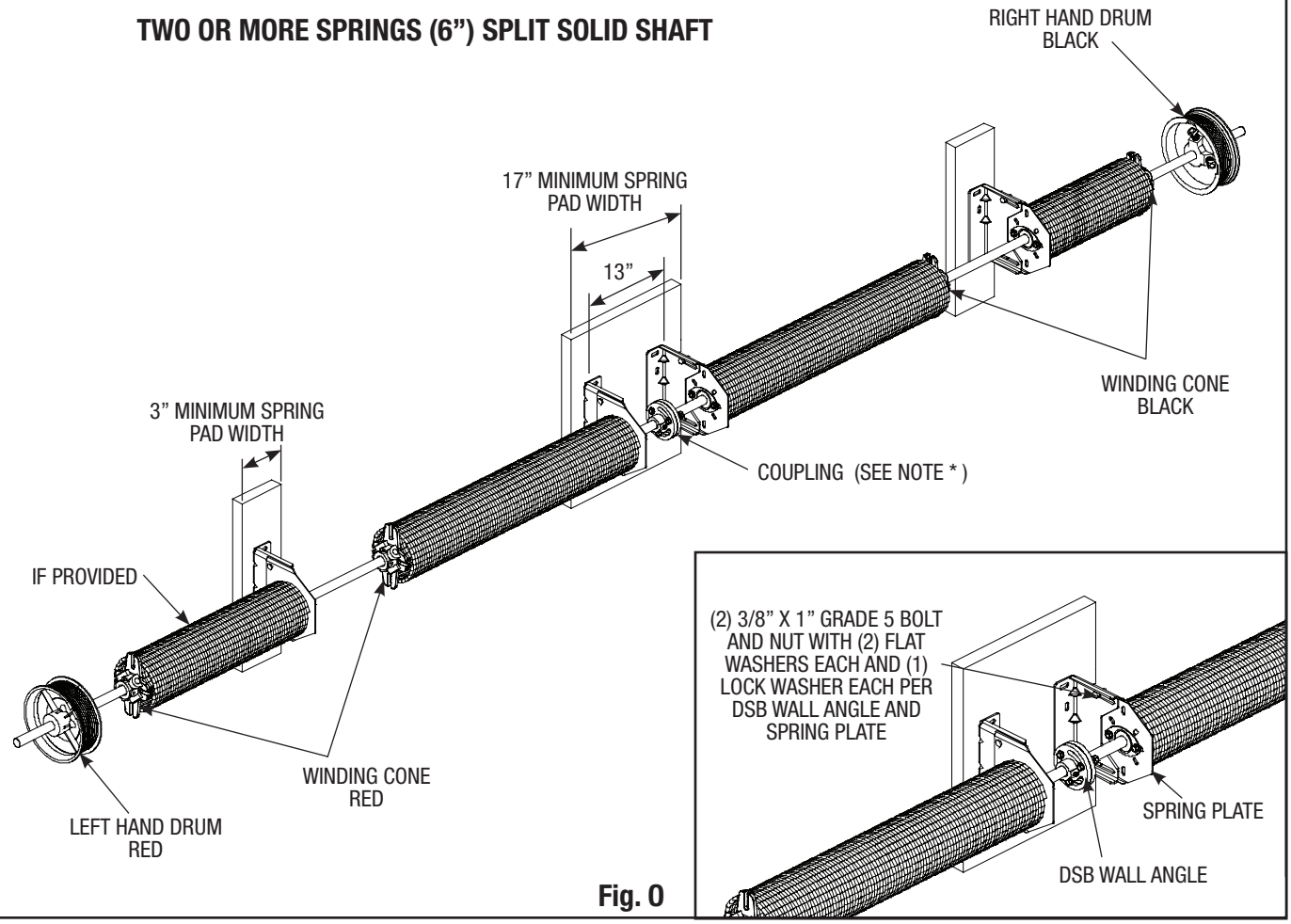


Fig. O

STEP 10: Position shaft(s) with spring system components to proper elevation, level and secure each end bracket to the horizontal reinforcing angle using (2) 3/8” x 3/4” truss bolts and nuts. Anchor the wall mounting flange of the end bracket to the jamb using (2) 5/16” x 1-5/8” lags (wood), (2) 5/16” x 1” self-drilling and tapping screws (steel), or (2) 3/8” x 3” sleeve anchors (precast) (anchors by others).

NOTE: Spring pads must be securely anchored before proceeding. The pads must by flush with the jambs.

Attach the spring support brackets to the pad(s) using the following fasteners:

Pre-Cast: Secure each spring support bracket using (2) 1/2" x 3" sleeve anchors (by others). This installation will require the 1/2" anchors to be secured to the building, then securing the brackets to the anchors as detailed in Fig. P-4.

Steel: Secure each spring support bracket using (3) 5/16" x 1" self-drilling and tapping screws as detailed in Fig. P-3.

Block Construction: Attach perforated angle 18" long to support bracket(s) using (2) 3/8" x 1-1/4" bolts and nuts. Chamfer angle to clear top section high arc. Secure support brackets and perforated angle to block using (4) 3/8" x 2-1/2" sleeve anchors as detailed in Fig. P-1.

Secure the stationary cone(s) (dead end) to the spring support bracket(s) using 3/8" bolts and nuts. Keep spring warning tags clearly visible.
NOTE: The spring support brackets require (2) fasteners in the lower slot and hole, then (1) fastener in the top slot.

⚠ WARNING

FAILURE TO USE PROPER NUMBER OF FASTENERS CAN RESULT IN SUDDEN SPRING TENSION RELEASE, CAUSING SEVERE INJURY OR DEATH.

NOTE: Each 3-3/4", 6" and Duplex spring is secured to a separate center support bracket. DO NOT attach two springs of this size to one support bracket.

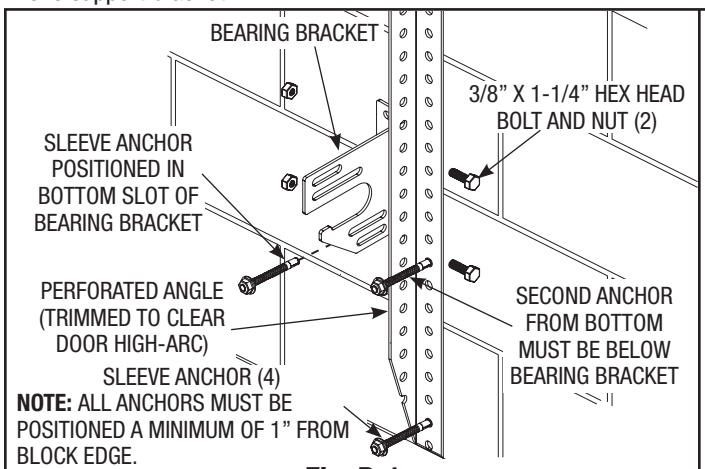


Fig. P-1

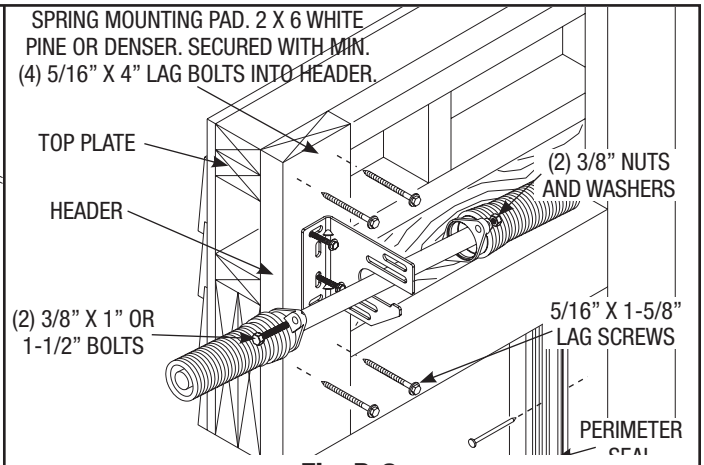


Fig. P-2

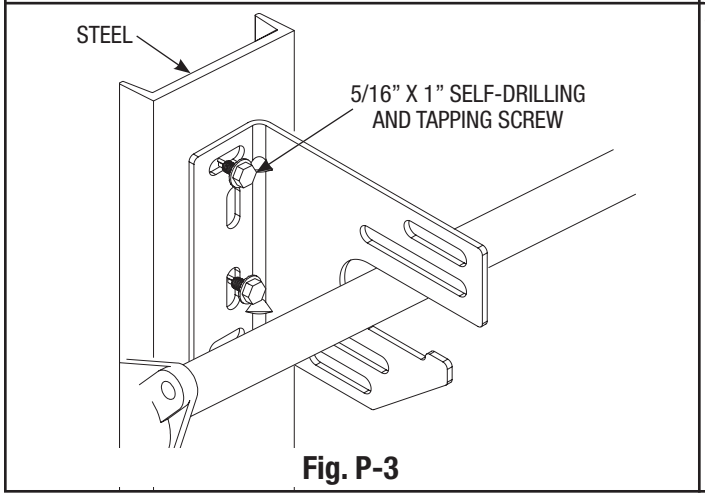


Fig. P-3

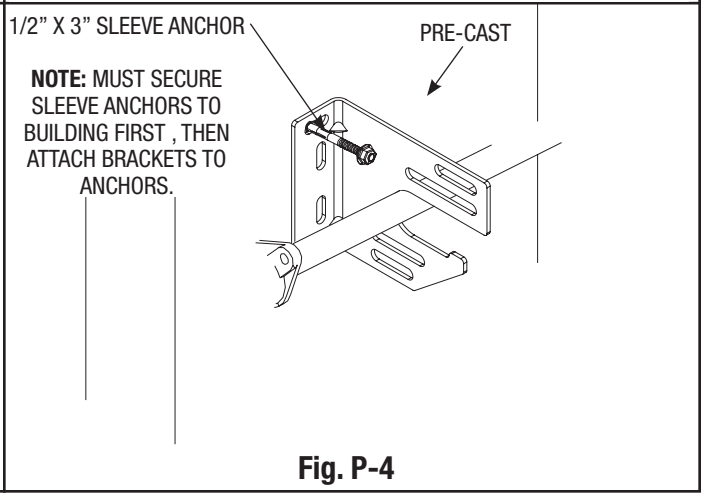


Fig. P-4

STEP 11: Feed the cable attached to the left hand bottom bracket up the vertical track, behind the roller shafts and secure to the left hand drum. Push the drum up against the end bearing bracket and secure to the shaft by tightening the set screws (solid shafts use 1/4" key(s) and set screws to secure drums).

Rotate drum and shaft until cable is taut, then apply vice grips to shaft, with end resting against header. This will hold cable taut and on

drum. There must be at least 1/2 wrap of cable on the drum. If not, contact Wayne-Dalton for proper length cables. Attach other cable to right hand drum. Push drum against end bearing bracket and rotate drum until cable is taut. Secure drum to shaft by tightening the set screws. Cable tension must be equal on both drums on single shaft applications. On split shaft applications, apply vice grips to both shafts and secure bolts in coupling after springs are fully wound.

If top section is not installed, do so now, before winding springs. Make sure hardware is securely attached to all sections.

Carefully following spring winding instructions detailed in Fig. Q, wind spring(s), using the appropriate 1/2", 5/8" or 3/4" diameter winding rods of sufficient length.

NOTE: COUPLING USED ON SOLID SHAFT ONLY. TIGHTEN CONNECTING BOLTS AFTER WINDING SPRING.

⚠ WARNING

WINDING BARS MUST FIT SNUGGLY INTO HOLES IN SPRING WINDING CONES. ATTEMPTING TO WIND SPRINGS WITH LOOSELY FITTING RODS, SCREWDRIVERS OR OTHER IMPROPER TOOLS CAN RESULT IN SEVER INJURY OR DEATH.

⚠ WARNING

APPLY LOCKING PLIERS TO THE TRACKS ABOVE THE THIRD ROLLER, OR LOCK DOOR IF APPLICABLE, BEFORE WINDING THE SPRING(S) TO PREVENT DOOR FROM RISING UNEXPECTEDLY, POSSIBLY RESULTING IN SEVERE INJURY OR DEATH.

Wind spring 1/4 turn at a time to the number of complete revolutions recommended on the spring tag. Wind up as shown Fig. Q. When the proper number of turns is reached, tighten the set screws on the winding cone. Release the vice grips from the spring shaft(s). Adjust the coupler on split solid shafts until drums are in time (check door level) and tighten coupler.

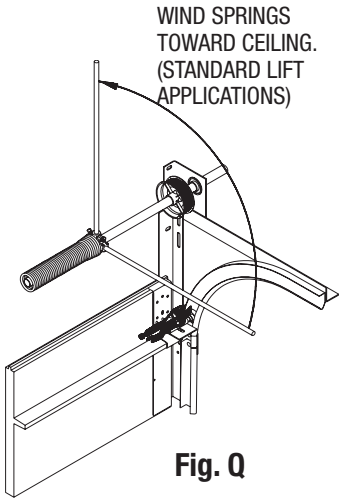


Fig. Q

SPRING TURN CHART

DOOR HEIGHT	400-8	400-12	5250-18	800-32
6'6"	7.5	7.5		
7'0"	7.875	7.875		
7'6"	8.5	8.5		
8'0"	8.875	8.875	6.75	
8'6"		9.25	7.125	
9'0"		9.5	7.375	
9'6"		10.125	7.75	
10'0"		10.5	8.125	5.375
10'6"		11	8.375	5.625
11'0"		11.5	8.875	5.875
11'6"		12	9.125	6
12'0"		12.5	9.5	6.25
12'6"			9.875	6.5
13'0"			10.25	6.75
13'6"			10.5	7
14'0"			10.875	7.375
14'6"			11.25	7.5
15'0"			11.5	7.625
15'6"			11.875	8
16'0"			12.25	8.125
16'6"			12.5	8.25
17'0"			12.875	8.625
17'6"			13.25	8.875
18'0"			13.5	9

DOOR HEIGHT	400-8	400-12	5250-18	800-32
18'6"				9.25
19'0"				9.5
19'6"				9.75
20'0"				9.875
20'6"				10.25
21'0"				10.375
21'6"				10.5
22'0"				11
22'6"				11.125
23'0"				11.375
23'6"				11.5
24'0"				11.75
24'6"				12
25'0"				12.25
25'6"				12.5
26'0"				12.75
26'6"				13
27'0"				13.25
27'6"				13.375
28'0"				13.5
28'6"				14
29'0"				14.125
29'6"				14.375
30'0"				14.5

STEP 12: After spring(s) are wound, cautiously remove locking pliers from vertical tracks, while pushing downward on door to prevent it from raising unexpectedly, in case spring(s) were over wound. Carefully and slowly raise door, until one and a half sections are in the horizontal tracks. Lock door in this position using locking pliers attached to vertical tracks above bottom roller on one side and below bottom roller on other side of door.

Space the horizontal tracks 3/4" from section edge and level. Using 1-5/8" x 2-3/8" x 12 Ga. angle, fabricate back hangers and attach them to building as shown in Fig. S using 3/8" bolts and nuts. Laterally brace all drop angles once proper spacing is achieved.

Doors over 11 ft. high and over 14 ft. wide must have (1) intermediate drop hanger as shown in Fig. S.

Doors between 16' and 18' high must have (2) intermediate drop hangers as shown in Fig. S.

Doors over 18' high must have intermediate drop hangers placed on 6' centers.

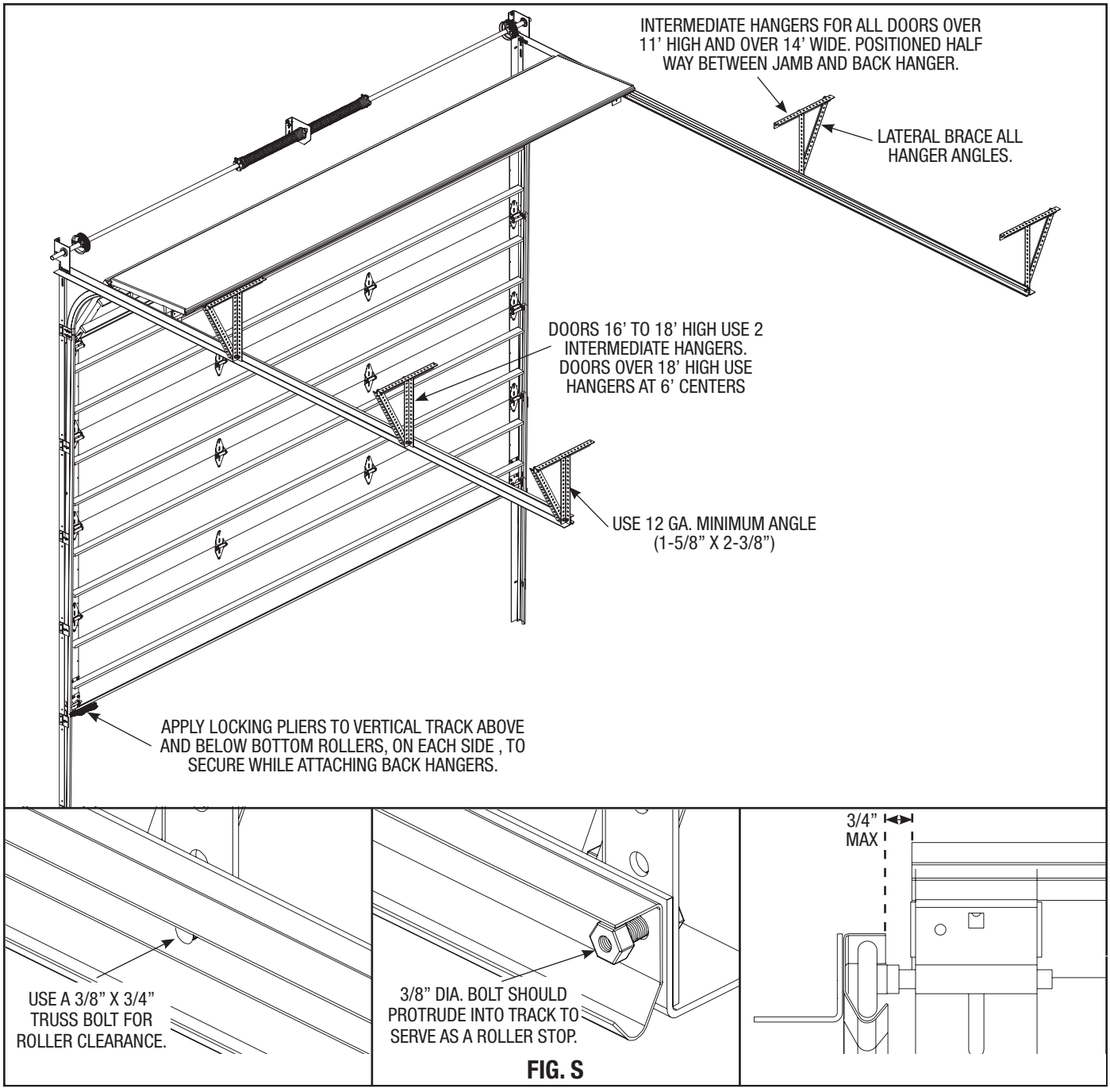


FIG. S

STEP 13: Release the locking pliers from vertical track and check the door's counterbalance. Adjust springs if necessary. If door does not balance properly, verify that all supplied components such as struts are installed. Verify quantity, wire diameter, spring size & drums to the spring tag. Check Cable length. Add or subtract up to one turn on the springs. Contact Wayne-Dalton if problem persists.

STEP 14: Vertical tracks can now receive final adjustments. Open and close the door a few times, checking and adjusting side clearance (if necessary). Tighten jamb fasteners (lags, self drilling, or anchors) to permanently secure verticals. Adjust door in or out from jamb by loosening the track to obtain proper seal. Permanently tighten all track bolts. Adjust top bracket roller carrier so that the top section is sealed against header.

STEP 15: Lubricate springs, rollers, and bearing with oil. **DO NOT GREASE THE INSIDE OF THE TRACKS**.

Alternate Steel Spring Pad Applications

Contact Manufacturer For Applications Not Covered Below

Maximum Door Size 9' x 9' (Maximum Door Weight 210 lb.) Fig T:
Cut perforated angle (1-5/8 x 2-3/8" x 11 GA.) to Dim "Y". Thru-bolt top and bottom of angle to each girt using (4) 3/8" x 1-1/4" bolts and nuts. Thru-bolt center bracket to perforated angle using (2) 3/8 x 1-1/4" bolts and nuts (See Fig. **P-2**).

Maximum Door Size 14' x 12' (Maximum Door Weight 400 lb.) Fig U:
Cut (2) perforated angle (1-5/8 x 2-3/8" x 11 GA.) to Dim "Y". Thru-bolt top and bottom of each angle to each girt using (4) 3/8" x 1-1/4" bolts and nuts. Thru-bolt each center bracket to perforated angle using (2) 3/8 x 1-1/4" bolts and nuts (See Fig. **P-2**).

Maximum Door Size 14'-2" x 12'-1" (Maximum Door Weight 800 lb.) Fig V:
Cut (2) pieces of perforated angle (1-5/8 x 2-3/8" x 11 GA.) to Dim "Y" and (2) more pieces at Dim "Y" minus 3. Bolt the angles together into a "Z" shape using (4) 3/8" x 1-1/4" bolts and nuts. Thru-bolt top and bottom of each "Z" shaped angle to each girt using (4) 3/8" x 1-1/4" bolts and nuts. Thru-bolt each center bracket to perforated angle assembly using (2) 3/8 x 1-1/4" bolts and nuts (See Fig. **P-2**).

NOTE: Do **NOT** Bolt (2) 3-3/4" Torsion Springs To ONE Center Bracket

NOTE: These spring mounting techniques are not supported for 800-32, 6375-164, 1100-18, 1350-28, & 800-120 drums. These instructions are also not applicable for 5750-120 drums with 72" Or more high-lift

NOTE: Maximum spacing for dimension "Y" is 84 in. (7 ft.) These instructions are not applicable for a span greater than 84 in.

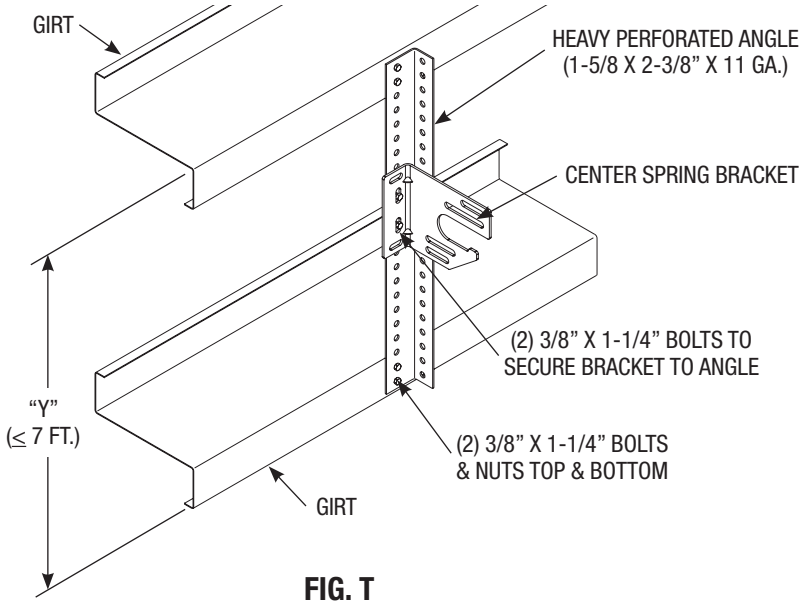


FIG. T

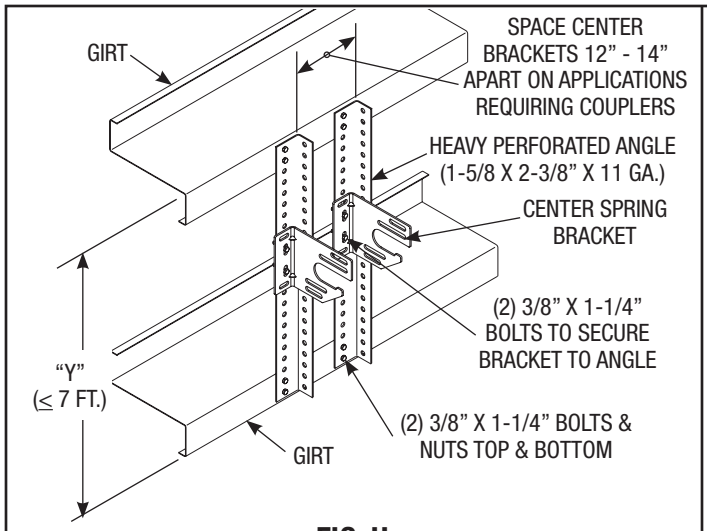


FIG. U

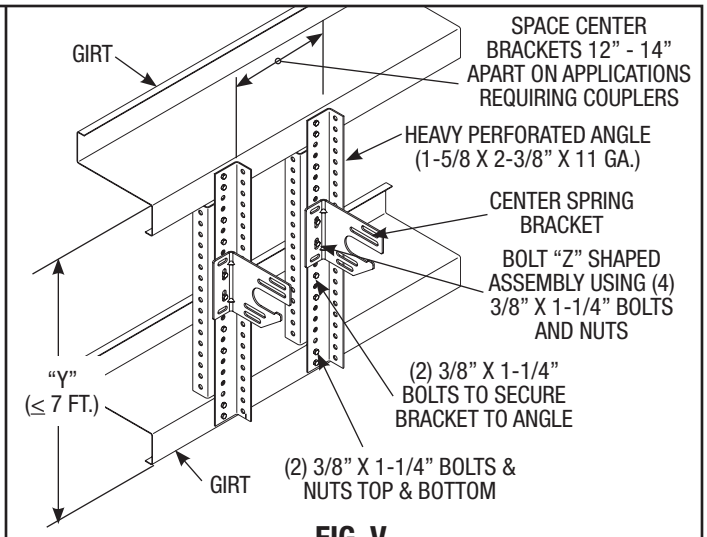


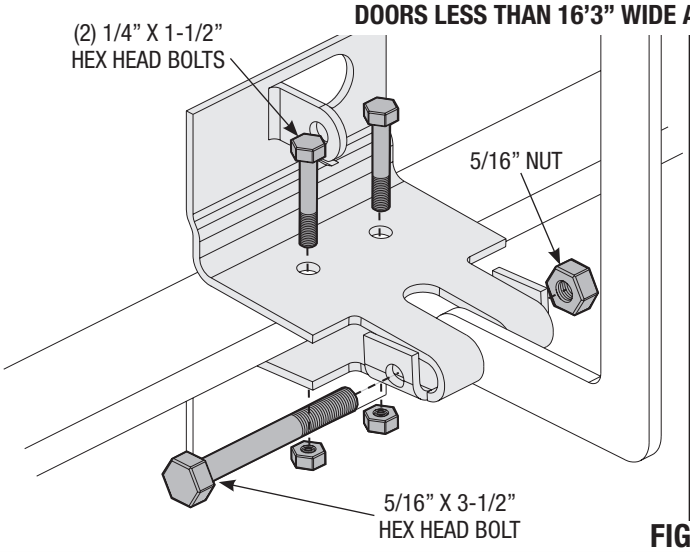
FIG. V

Trolley Bracket Installation

Attach the Thermospan operator brackets as illustrated in Fig.(s) W, X AND Y

NOTE: Wayne-Dalton strives to supply all necessary door reinforcements as standard equipment with each door. Unfortunately, it is not possible for Wayne-Dalton to account for all competitive operators. With some trolley operators, it may be necessary to reinforce the top section with a strut. In such cases, Wayne-Dalton's warranty will not apply if the strut is not used with a trolley operator. Extra reinforcement is not necessary when a Wayne-Dalton door is used with Wayne-Dalton iDrive operator or no operator.

DOORS LESS THAN 16'3" WIDE AND NOT EXCEEDING 160 SQ. FT.



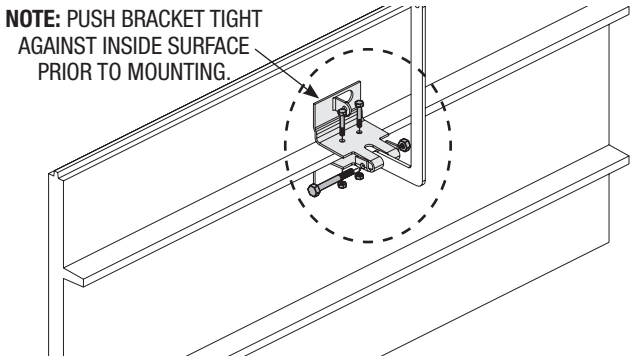
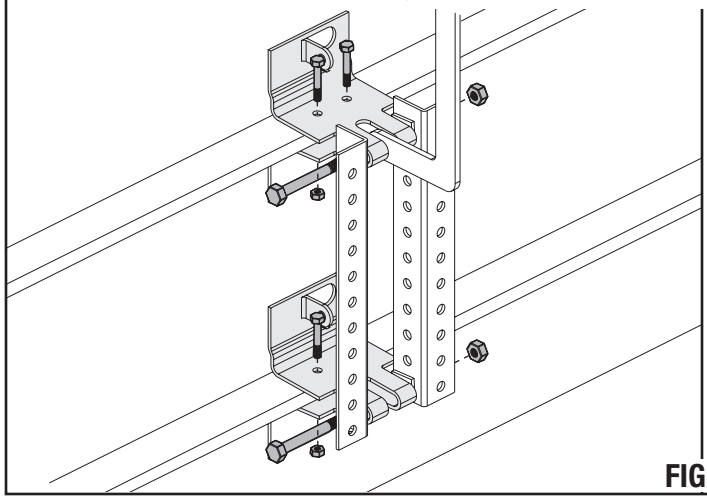


FIG. W

DOORS OVER 16'2" WIDE THROUGH 20'2" AND NOT EXCEEDING 240 SQ. FT.
REQUIRES TWO BRACKETS ATTACHED TOGETHER WITH ANGLES.



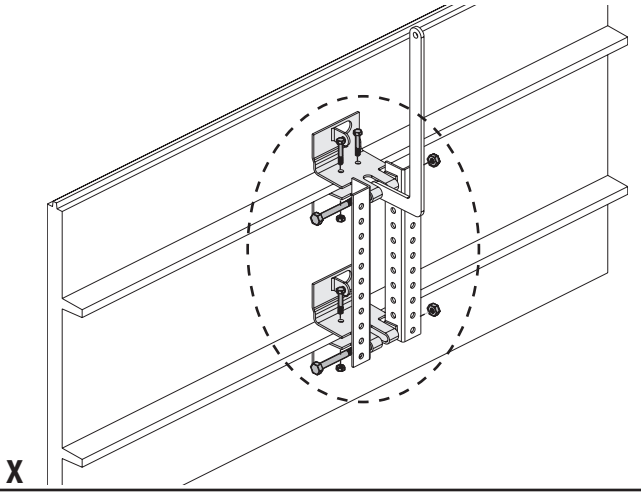


FIG. X

DOORS OVER 20'2" THROUGH 25'2" WIDE AND NOT EXCEEDING 400 SQ.FT. REQUIRES ONE 38" OPERATOR BRACKET.

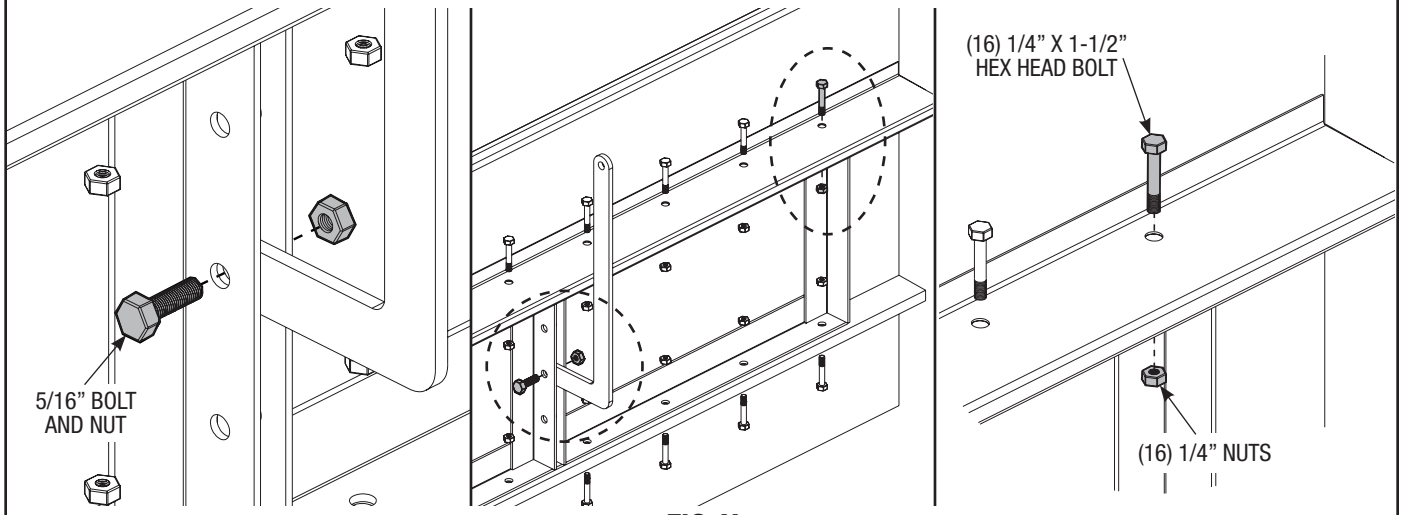


FIG. Y

DOORS OVER 25'2" WIDE AND ANY HEIGHT REQUIRES DUAL 38" TROLLEY BRACKETS.

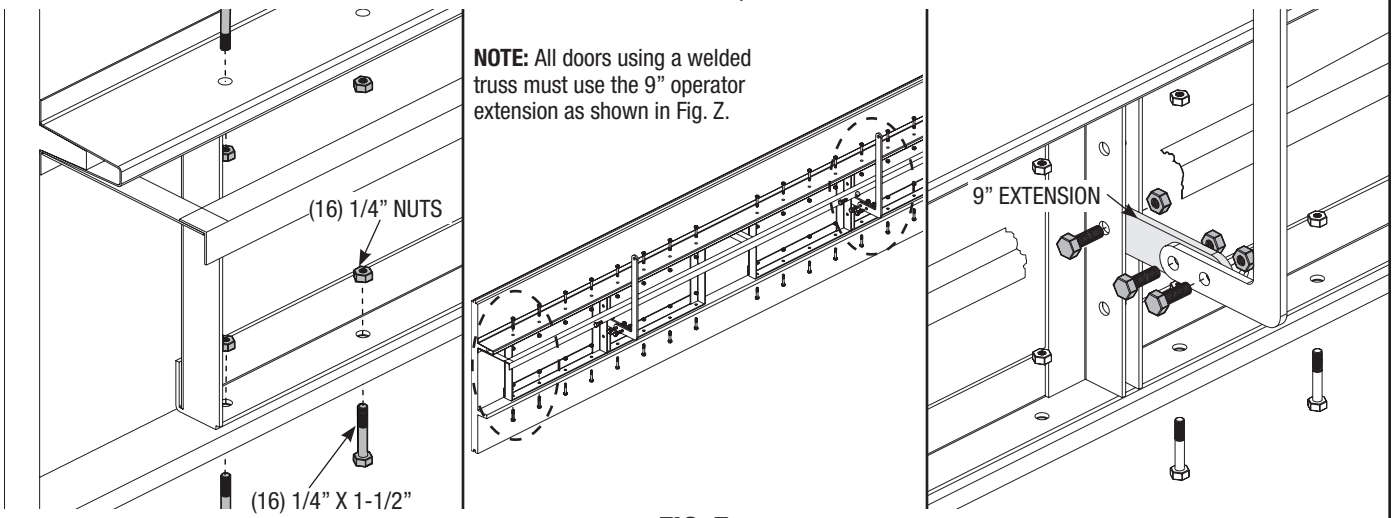
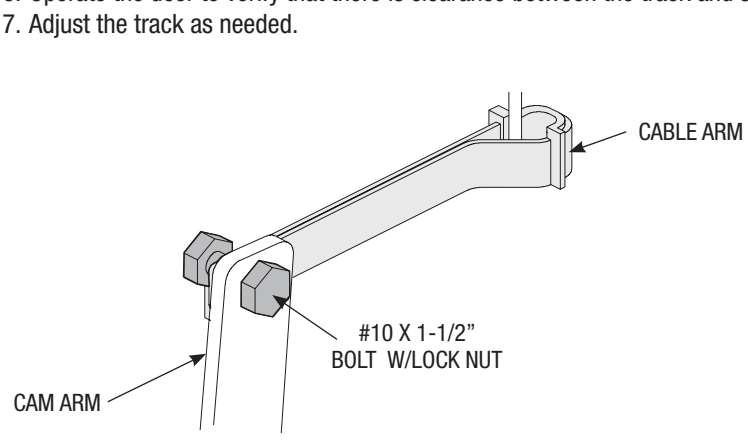
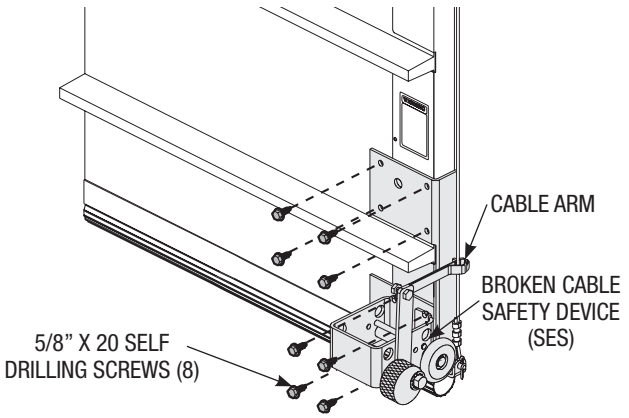


FIG. Z

Broken Cable Safety Device Installation

1. Attach the broken cable safety device, with cable attached, to the section using (8) 1/4"-20 X 5/8" self drilling screws.
2. Place the bottom section in the opening.
3. Install the verticals over the rollers.
4. Follow the rest of the door installation per the instruction manual.
5. After the door installation is complete, rotate the cam arm up, and connect the cable arm to the cam arm with the bolt and locking nut.
6. Operate the door to verify that there is clearance between the track and section for the cable arm.
7. Adjust the track as needed.



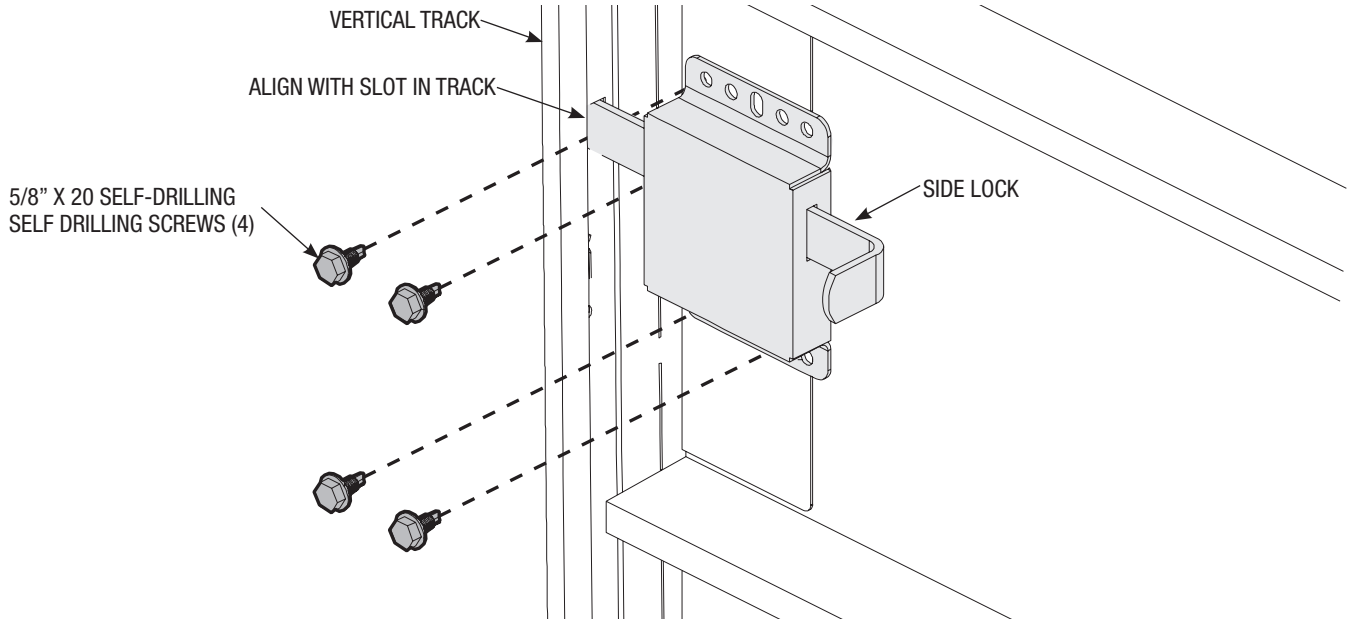


Inside Side Lock Installation (TS-125, TS-150 & TS-200)

Install lock on second section of door.

Secure the lock to the section with (4) 1/4”- 20 X 5/8” self drilling screws.

The side lock should be spaced approximately 1/8” from the section edge. Ensure that lock is square with section and lock bolt aligns with lock hole in vertical track.



Short Lock Bar Installation

Install lock on second section of door.

Make two measurements from the bottom rib and mark at 4” and 8-1/4”. These marks must be 12-1/2” from section edge. Drill 1/4” hole thru section at each mark.

From the outside enlarge the bottom hole to 7/8” without drilling thru the inner skin of door. Enlarge this hole in inner skin to 7/16”. Enlarge top hole to 1-1/4” all the way thru door section.

Align inside lock plate with two holes in section and drill (2) 3/8” holes thru door section above and below 7/16” hole, using lock plate as template.

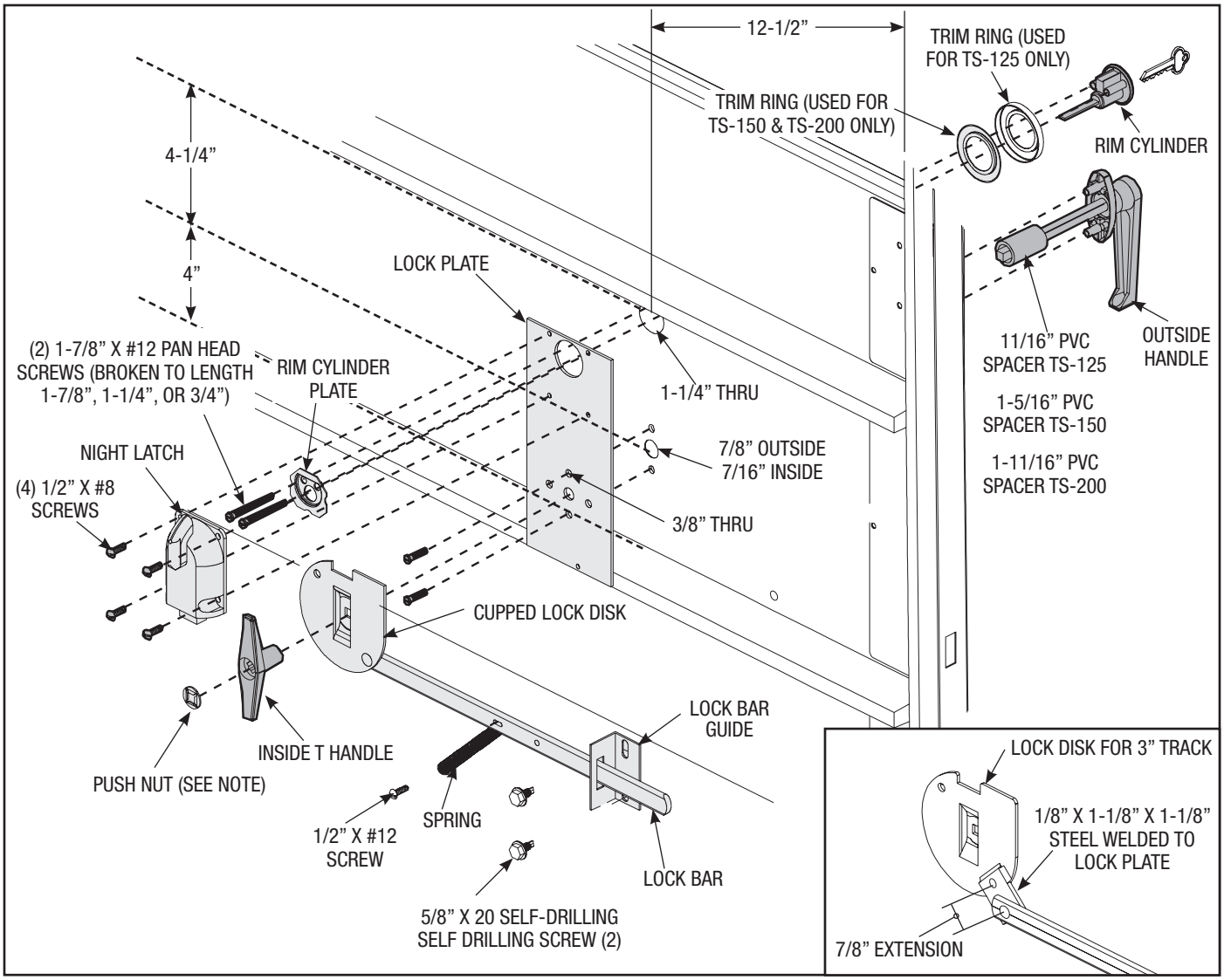
Install outside handle to section with (2) #10 pan head screws and proper spacer.

From inside secure the rim cylinder to the section with (2) #12 pan head screws, broken to correct length.

Secure the night latch to the lock plate with (4) 1/2” x #8 screws.

Attach spring to section with (1) 1/2” x #12 screw. Secure the inside “T” handle over square shank of outside handle with push nut. (See note)

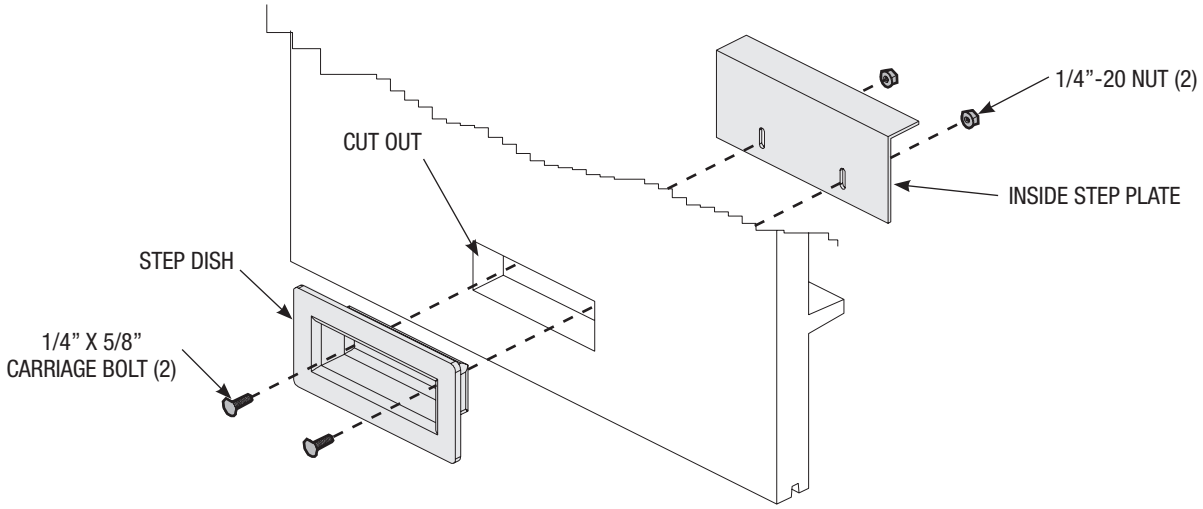
NOTE: Use a short piece of 7/16” to 1/2” ID steel pipe to tap push nut onto square shank.



Step Plate Installation (TS-200 and TS-200-20)

Install outside step in pre-cut opening and bolt together with inside step plate using (2) 1/4" x 1" carriage bolts and nuts.

If your door does not have the pre-cut opening you can cut a 7-5/8" wide by 3' high opening 3" from the bottom edge of the bottom section. This will need to be in vertical alignment with your lock.

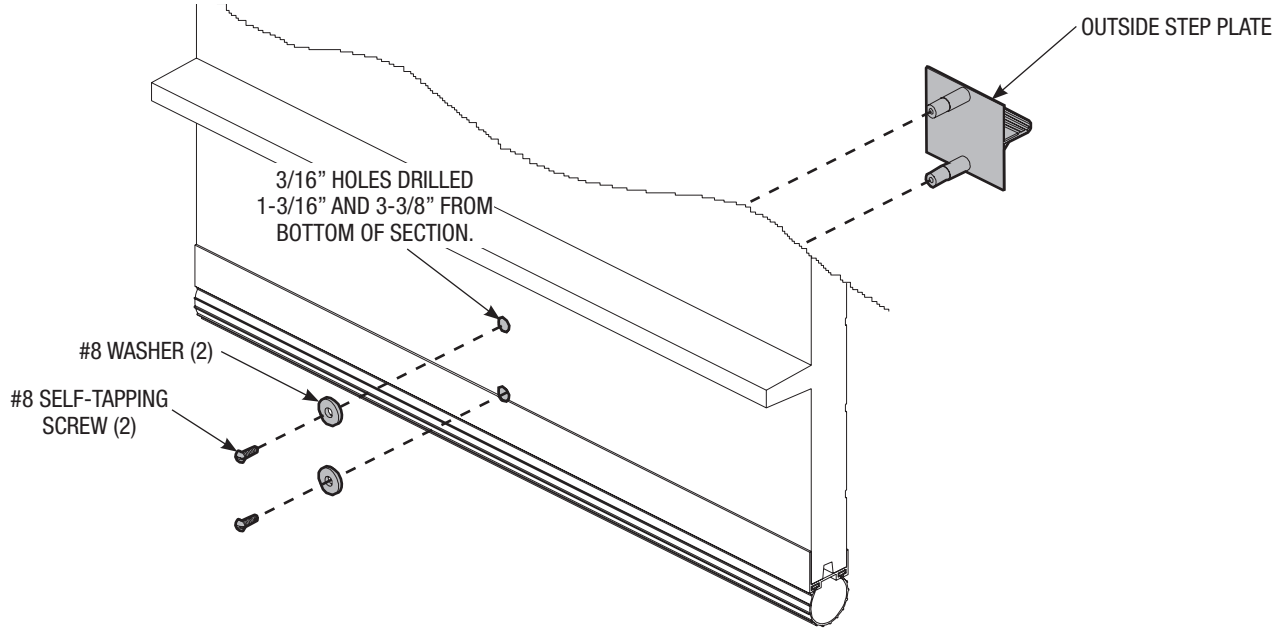


Step Plate Installation (TS-125 and TS-150)

At the desired location (typically below the lock) make two measurements from bottom of section and mark at 1-3/16" and 3-3/8". Drill 3/16" hole thru section at each mark.

From the outside enlarge both holes to 7/16" without drilling thru the inner skin of door.

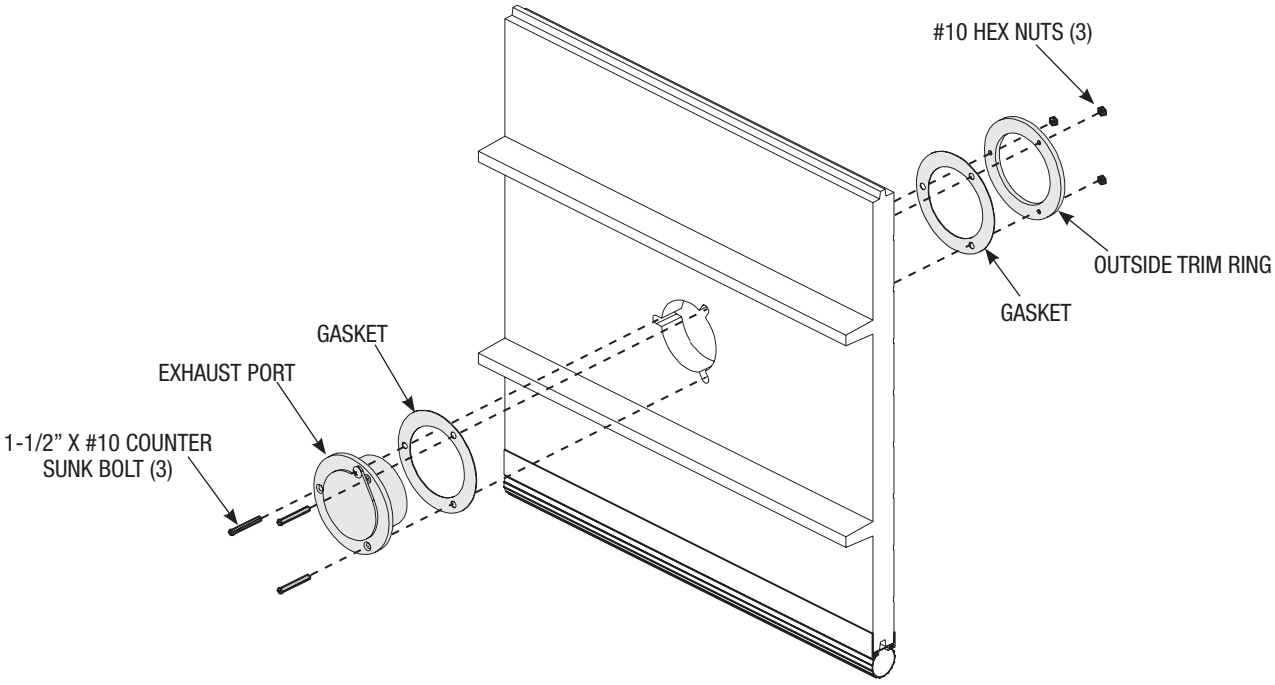
Secure to TS-125 section with (2) 3/4" x #8 self-tapping screws and (2) washers or secure to TS-150 section with (2) 1" x #8 self tapping screws and (2) washers.



Exhaust Port Installation

Install the exhaust port using (3) #10 x 1-1/2" counter sunk bolts and nuts.

Exhaust port goes on the inside of bottom section.



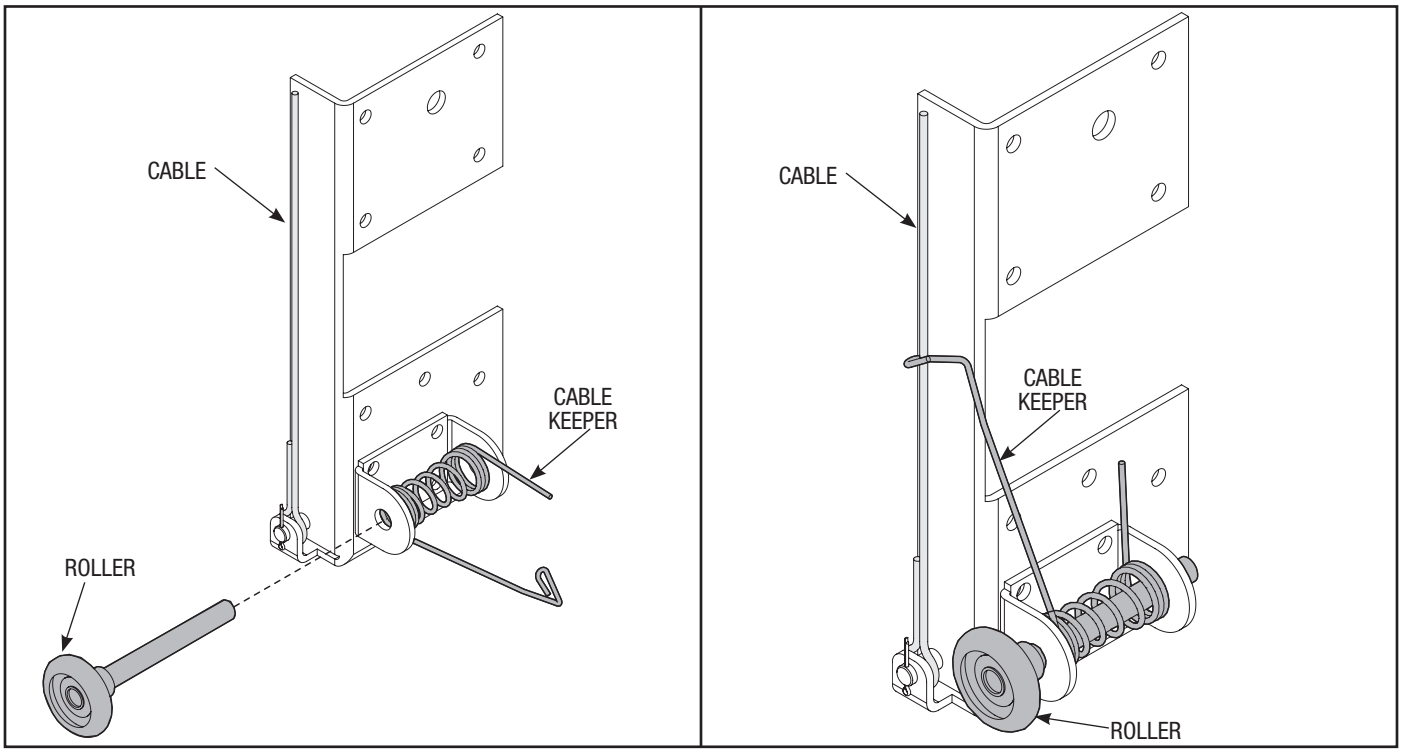
Cable Keeper Installation

Cable keepers are now being installed with bottom brackets for doors supplied with 850-11, 400-54, 500-84, 5750-120, 6375-164, 1100-18, 1350-28 and 5250-54 drums. (Standard breakaway)

Place cable keeper between roller carrier tabs. Insert roller through holes in the tabs and through cable keeper. Rotate arm up and hook around cable, letting cable keeper arm pull against the counterbalance cable, keeping it taut. (see figure)

NOTE: Cable keepers are color coded, black for right hand and red for left hand.

IMPORTANT: Cable keepers are intended to keep cables from coming off drums on manually operated doors.



Chain Hoist Installation (Standard Lift Applications)

Chain Hoists and JackShaft Operators are limited to:
1.) Standard Lift Doors with roof pitch track 2:12 or greater.
2.) High Lift track greater than or equal to 24".
3.) High Lift track 12" thru 24" with roof pitch track 1:12.

Wayne-Dalton recommends the use of a trolley rail(s) and auxiliary shaft for standard or high lift doors below these limits. Cable Keepers are recommended for all chain hoist or jackshafts operators. Install the chain hoist or sprocket as close to the end bearing bracket as possible, to minimize torsion shaft deflection. (Fig. XX). Chain tensioners are recommended for door over 144 sq. ft. with jackshaft operators.

Wayne-Dalton recommends the use of a trolley rail(s) coupled to an auxiliary shaft that is powered by a side mount type chain hoist as shown in the two illustrations.

9'" of extra headroom are required for these installations.

Dual trolley rails are recommended on doors over 25' 2" wide .

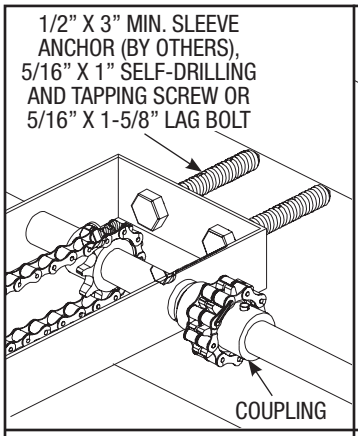
Assemble the trolley rail as per the manufactures installation instructions. Secure the trolley header bracket to the building using the appropriate fasteners (2-5/16" X 1-5/8" lags for wood, 2-5/16" X 1" self drilling and tapping screws for steel, and 2-3/8" 2-1/2" sleeve anchors for masonry.

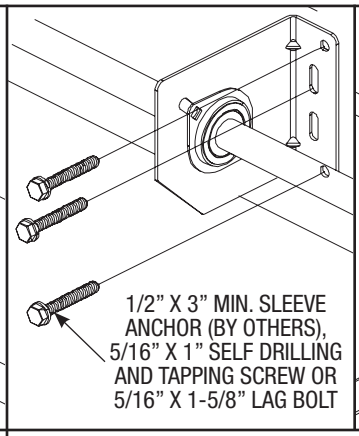
Back hang the trolley using angles, center hang supports are required for doors over 14' wide and 12' high.

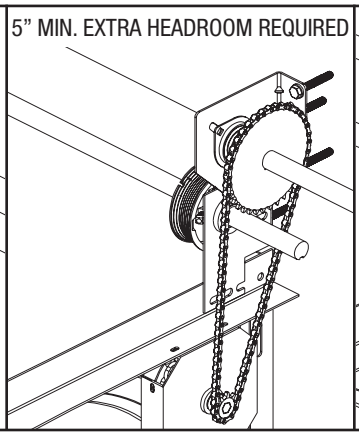
Attach the trolley arm to the bracket as instructed in the trolley operator installation section of the Thermospan installation manual.

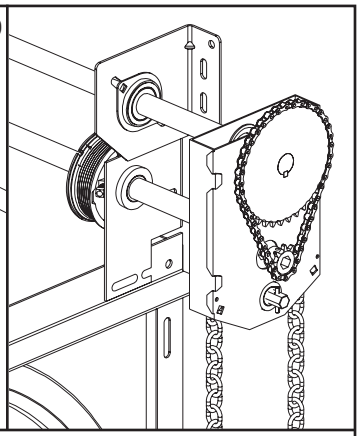
Secure the auxiliary shaft to the building with bearing brackets and couple the shaft to the trolley rail.

Assemble the chain hoist and secure to the auxiliary shaft.









NOTE: Install Sprocket or chain hoist as close to track as possible, minimum of 3/4", to minimize shaft deflection.

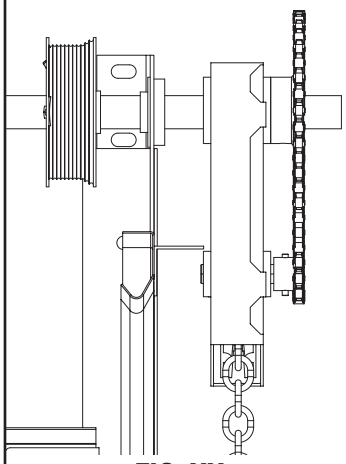
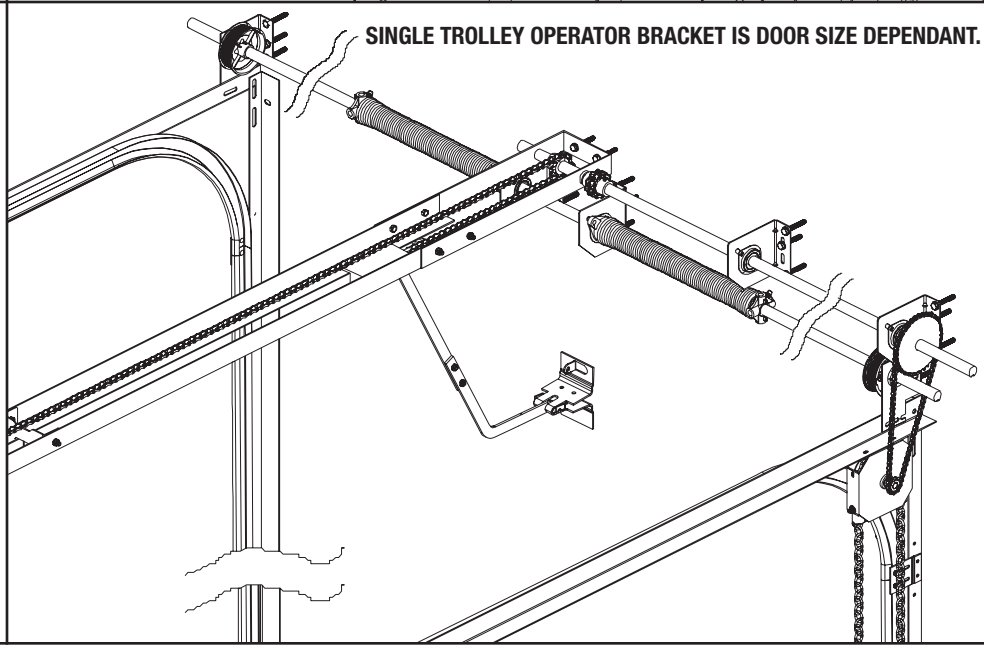
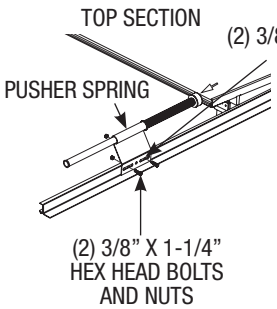


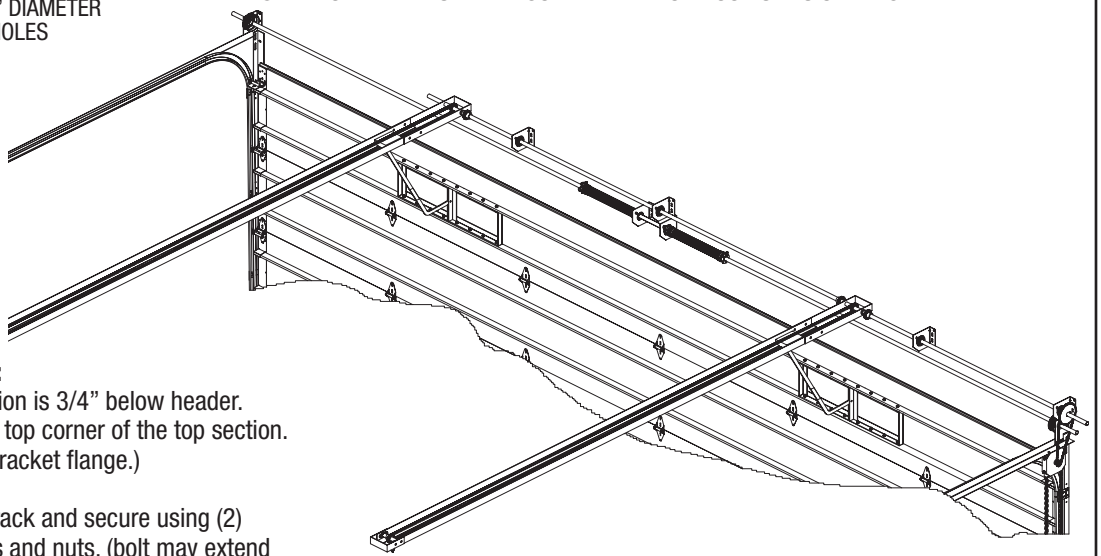
FIG. XX

SINGLE TROLLEY OPERATOR BRACKET IS DOOR SIZE DEPENDANT.





DUAL TROLLEY RAILS ARE RECOMMENDED FOR DOOR SIZES OVER 25' 2" WIDE.



Pusher Spring Installation:
Raise door until bottom section is 3/4" below header.
Align pusher spring with the top corner of the top section.
(Compress against the top bracket flange.)

Drill (2) 3/8" holes in each track and secure using (2) 3/8" x 1-1/4" hex head bolts and nuts. (bolt may extend into track.)

Maintenance and Finishing Instructions

MAINTENANCE

While factory-applied finishes for steel garage doors are so durable that they will last many years longer than ordinary paints, it is desirable to clean them thoroughly on a routine basis. Apparent discoloration of the paint may occur when it has been exposed in dirt-laden atmospheres for long periods of time. Slight chalking may also cause some change in appearance in areas of strong sunlight. A good cleaning will generally restore the appearance of these coatings and render repainting unnecessary. An occasional light cleaning will also help maintain an aesthetically pleasing appearance. To maintain the original finish of the garage doors, the only regular maintenance necessary is that of annual washing. Mild solutions of detergents or household ammonia will aid in the removal of most dirt, and the following are recommended levels:
One cup of Tide™, or other common detergents, which contain less than 0.5% phosphate, dissolved into five gallons of warm water.
NOTE: The use of detergents containing greater than 0.5% phosphate is not recommended for use in general cleaning of garage doors.
NEVER BLEND CLEANSERS OR DETERGENTS WITH BLEACH.

SURFACE PREPARATION FOR PAINTING

Wax on the surface must be removed or paint peeling/flaking will result. To remove this wax, it will be necessary to lightly scuff the surface with a gray (not green!) 3M ScotchBrite pad saturated with soapy water. A final wipe and rinse should be done with clean water only, to remove any loose dust or soap film.

Surface scratches, which have not exposed the metal substrate, can be lightly buffed or sanded with 0000 steel wool or No. 400 sand paper to create a smoother surface. Care must be taken to not expose the substrate under the paint (see Note No. 2). Once this exposed condition exists, the likelihood for rusting is greatly increased. See the following paragraph if the metal substrate is observed.

Exposed substrate must be treated to prevent rust from forming (see Note No. 2). Sand the exposed area lightly and paint with high quality metal primer to protect from corrosion. Follow drying time on primer can label before applying topcoat.

The surface to be recoated must not be to smooth or the repaint material will not adhere to it (see Note No. 2). It is advisable to test a representative area to evaluate adhesion. If poor adhesion is observed, the surface must be abraded by sanding or buffing using grades mentioned above. Care must be taken to not expose the substrate under the paint.

PAINTING

After the surface has been properly prepared it must be allowed to dry thoroughly, then coated immediately with a premium quality latex house paint. Follow the paint label directions explicitly. Oil base paint is not recommended. Please note that if substrate is exposed, painting with latex paint may cause accelerated rusting of steel.

NOTES:

1. Repainting of finish painted steel doors cannot be warranted as this condition is totally beyond door manufacturer's control.
2. If the steel door surface has a finish painted textured surface representing wood grain, stucco, etc., this step should not be attempted as danger of exposing substrate is greatly increased.
3. Consult a professional coatings contractor if in doubt about any of the above directions.
4. Follow directions explicitly on the paint and solvent container labels for proper applications of coatings and disposal of containers. Pay particular attention to those directions involving acceptable conditions in which to paint.

ACRYLIC GLAZING CLEANING INSTRUCTIONS:

1. To clean acrylic glazing wash with plenty of nonabrasive soap or detergent and water. Use the bare hand to feel and dislodge any caked dirt or mud. A soft, grit-free cloth, sponge or chamois may be used to wipe the surface. Do not use hard or rough cloth that will scratch the acrylic glazing. Dry with a clean damp chamois.
2. Grease and oil may be removed with kerosene or a good grade of naphtha (No aromatic content.). Users of these solvents should become familiar with their proper ties to handle them safely.
3. **Do not use:** Window cleaning fluids, scouring compounds, gritty cloths, leaded or ethyl gasoline, or solvents such as alcohol, acetone, carbon tetrachloride, etc.

Limited Warranty
Thermospan™

Subject to the terms and conditions contained in this Limited Warranty, Wayne-Dalton ("Manufacturer") warrants the sections of the door, which is described at the top of this page, for a period of **TEN (10) YEARS** from the date of installation against:

(i) The door becoming inoperable due to rust-through of the steel skin from the core of the door section, due to cracking, splitting, or other deterioration of the steel skin.

(ii) Peeling of the original paint on the door as a result of a defect in the original paint or in the application of the original paint coating, in cases where the door sections and the original paint: (a) have not been subjected to adverse atmospheric conditions or contaminates (such as salt water or other marine environment, or to toxic or abrasive substances, including those in the air); (b) have been maintained in compliance with Manufacturer's recommendations; and (c) have not been subject to physical abrasion, impacted by a hard object, or punctured (including without limitation "paint rub" occurring in metal to metal contact and movement).

The Manufacturer warrants the garage door hardware and the tracks of the above-described door, for a period of **ONE (1) YEARS** from the date of installation, against defects in material and workmanship, subject to all the terms and conditions below.

The Manufacturer warrants the sections of the Thermospan™ Series insulated garage door for a period of **SEVEN (7) YEARS**, from the date of installation against separation of the polyurethane foam from the steel skin of the sections. Other conditions and exceptions as contained herein apply.

This Limited Warranty is extended only to the person who purchased the product and continues to own the premises (where the door is installed) as his/her primary residence ("Buyer"). This Limited Warranty does not apply to residences other than primary, or to commercial or industrial installations, or to installations on rental property (even when used by a tenant as a residence). This Limited Warranty is not transferable to any other person (even when the premises is sold), nor does it extend benefits to any other person. As a result this Limited Warranty does NOT apply to any person who purchases the product from someone other than an authorized Wayne-Dalton dealer or distributor.

The Manufacturer will not be responsible for any damage attributable to improper storage, improper installation, or any alteration of the door or its components, abuse, damage from corrosive fumes or substances, salt spray or saltwater air, fire, Acts of God, failure to properly maintain the door, or attempt to use the door, its components or related products for other than its intended purpose and its customary usage. This Limited Warranty does not cover ordinary wear. This Limited Warranty will be voided if the original finish is painted over, unless Manufacturer's preparation and painting instructions are followed explicitly. This Limited Warranty will be voided if any holes are drilled into the door, other than those specified by the Manufacturer.

THIS LIMITED WARRANTY COVERS A COMMERCIAL PRODUCT. NO WARRANTIES, EXPRESS OR IMPLIED (INCLUDING BUT NOT LIMITED TO THE WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE) WILL EXTEND BEYOND THE TIME PERIOD SET FORTH IN UNDERSCORED BOLD FACE TYPE IN THIS LIMITED WARRANTY, ABOVE.

- Some States do not allow limitations on how long an implied warranty lasts, so the above limitations may not apply to you.

Any claim under this Limited Warranty must be made in writing, within the applicable warranty period, to the dealer from which the product was purchased. Unless the dealer is no longer in business, a written claim to the Manufacturer will be the same as if no claim had been made at all.

At the Manufacturer's option, a service representative may inspect the product on site, or Buyer may be required to return the product to the Manufacturer at Buyer's expense. Buyer agrees to cooperate with any representative of the Manufacturer and to give such representative full access to the product with the claimed defect and full access to the location of its installation.

If the Manufacturer determines that the claim is valid under the terms of this Limited Warranty, the Manufacturer will repair or replace the defective product. The decision about the manner in which the defect will be remedied will be at the discretion of the Manufacturer, subject to applicable law. THE REMEDY WILL COVER ONLY MATERIAL.

THIS LIMITED WARRANTY DOES NOT COVER OTHER CHARGES, SUCH AS FIELD SERVICE LABOR FOR REMOVAL, INSTALLATION, PAINTING, SHIPPING, ETC.

Any repairs or replacements arranged by Manufacturer will be covered by (and subject to) the terms, conditions, limitations and exceptions of this Limited Warranty; provided, however, that the installation date for the repaired or replaced product will be deemed to be the date the original product was installed, and this Limited Warranty will expire at the same time as if there had been no defect. If a claim under this Limited Warranty is resolved in a manner other than described in the immediately preceding paragraph, then neither this Limited Warranty nor any other warranty from the Manufacturer will cover the repaired or replaced portion of the product.

THE REMEDIES FOR THE BUYER DESCRIBED IN THIS LIMITED WARRANTY ARE EXCLUSIVE and take the place of any other remedy. The liability of the Manufacturer, whether in contract or tort, under warranty, product liability, or otherwise, will not go beyond the Manufacturer's obligation to repair or replace, at its option, as described above. THE MANUFACTURER WILL NOT UNDER ANY CIRCUMSTANCES BE LIABLE FOR SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, including (but not limited to) damage or loss of other property or equipment, personal injury, loss of profits or revenues, business or service interruptions, cost of capital , cost of purchase or replacement of other goods, or claims of third parties for any of the foregoing.

- Some States do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

No employee, distributor, dealer, representative, or other person has the authority to modify any term or condition contained in this Limited Warranty or to grant any other warranty on behalf of or binding on the Manufacturer, and anyone's attempt to do so will be null and void.

Buyer should be prepared to verify the date of installation to the satisfaction of the Manufacturer.

The rights and obligations of the Manufacturer and Buyer under this Limited Warranty will be governed by the laws of the State of Ohio, USA, to the extent permitted by law.

- This Limited Warranty gives you specific legal rights and you may also have other rights, which may vary from State to State.