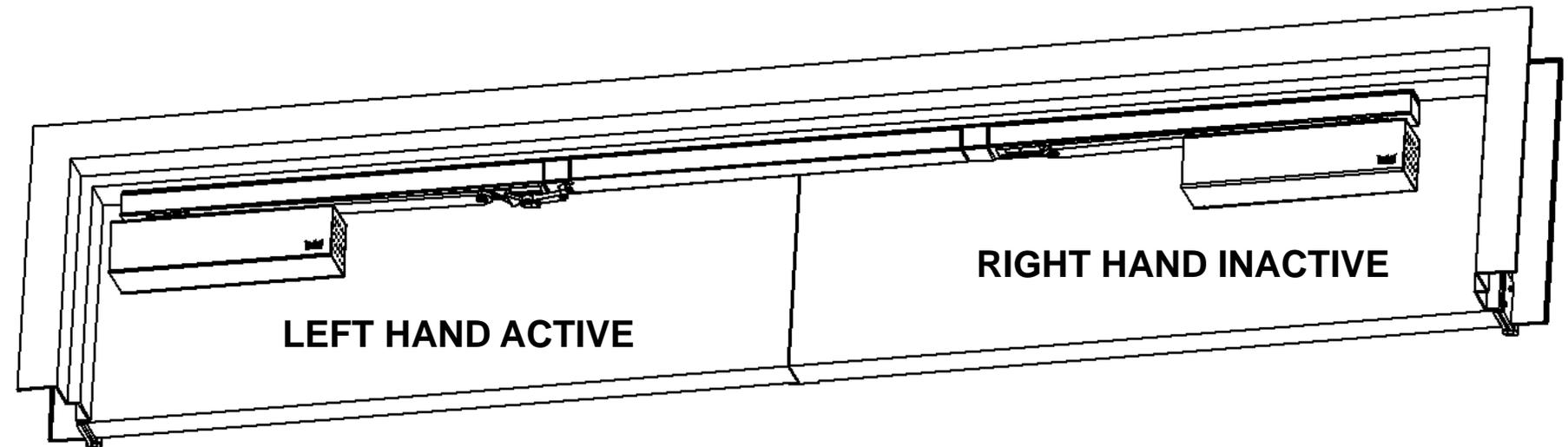
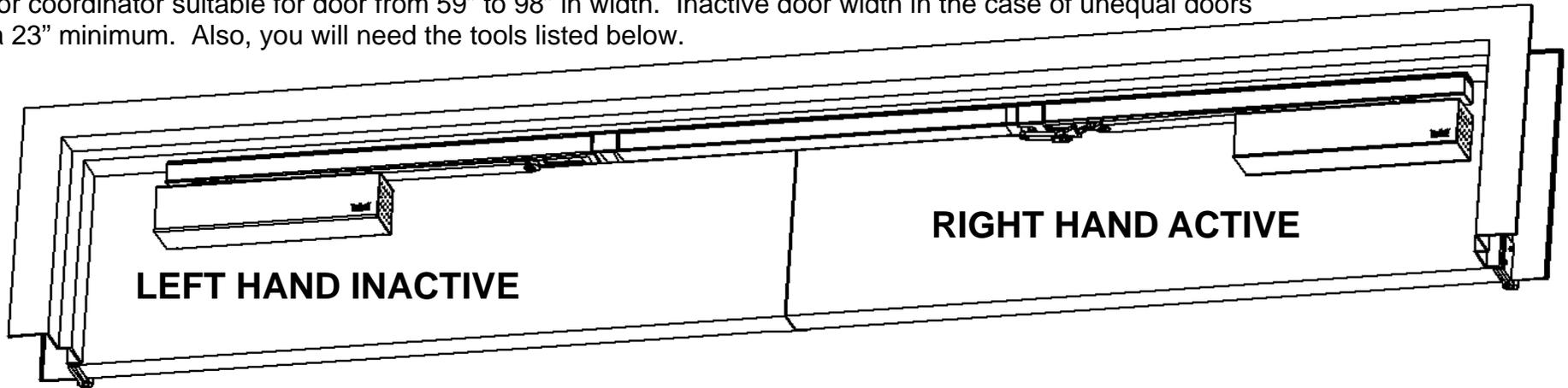


ATTENTION!!!

Before you begin, determine installation type (RIGHT HAND ACTIVE OR INACTIVE).
 Door coordinator suitable for door from 59" to 98" in width. Inactive door width in the case of unequal doors is a 23" minimum. Also, you will need the tools listed below.



Tool List:

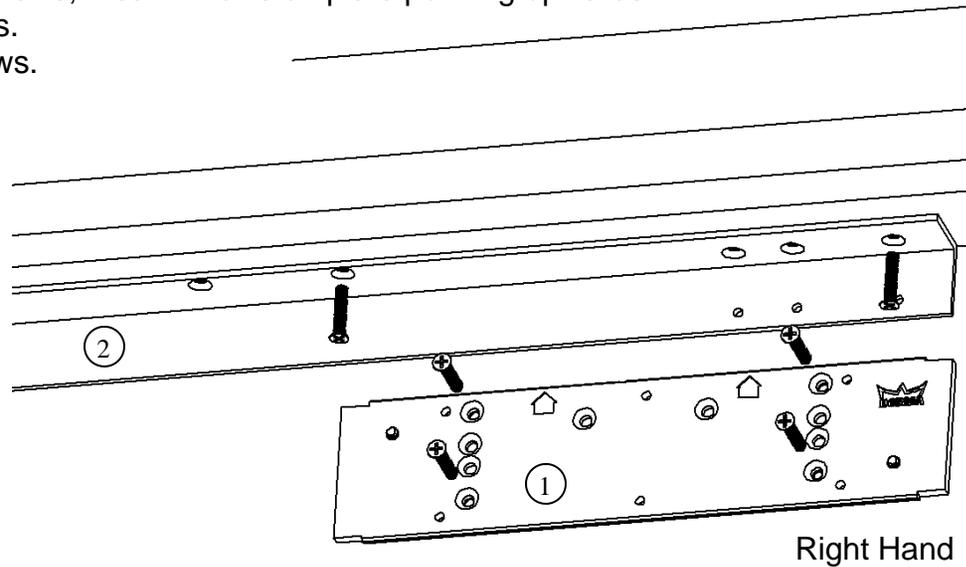
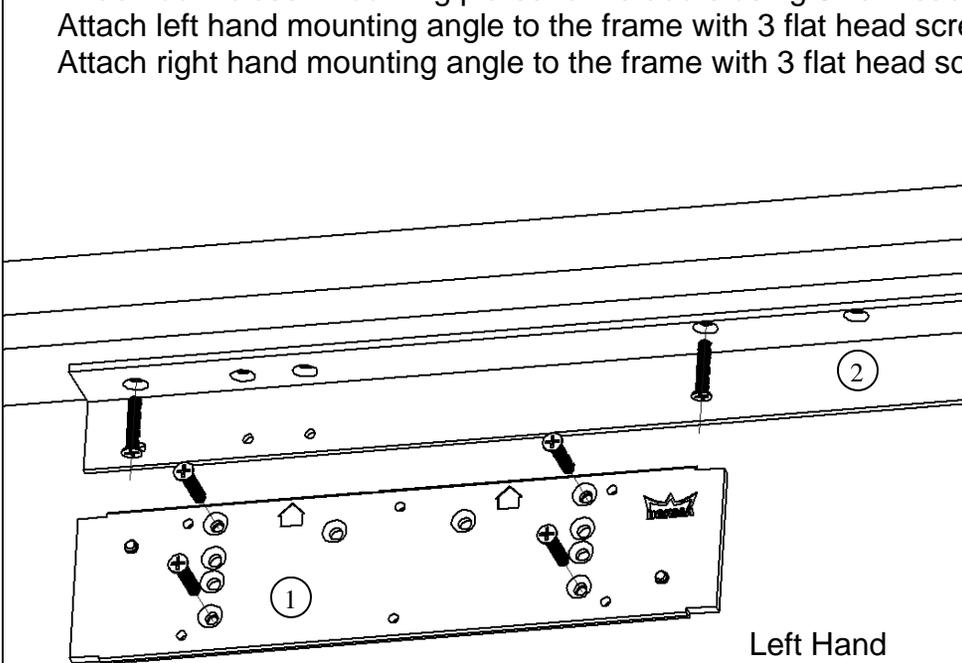
- | | | | |
|-----------------------|-----------------------|--|---------|
| Tape Measure | #10-32 Tap & Holder | No. 21 (.159") & 1/8" Drill Bits and Drill | Hacksaw |
| Center Punch & Hammer | 1/2" Box Wrench | #2 Cross-Point Screw Driver | |
| 3/16" Slotted Driver | 10" Adjustable Wrench | 2.5mm, 3mm & 5mm Hex Wrench (supplied) | |

TS93 GSR PT

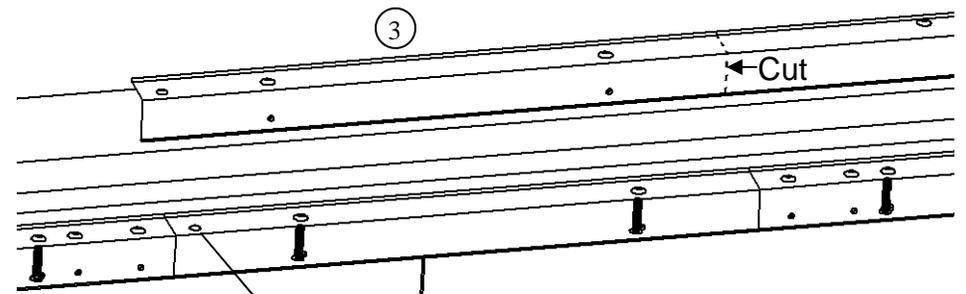
CAUTION: Sex nuts are required for attachment of components to unreinforced, wood or plastic faced composite type fire doors, unless an alternative method is identified in the individual door manufacture's listings. Make sure door efficiently operates prior to installing the closer. When Installing main arm, observe directions closely. .



- 1 Prepare door and frame using the template (TMP No. 08281030) provided in the back of the instructions. Attach both closer mounting plates to the doors using 8 flat head screws, 4 ea. Arrows on plate pointing upwards. Attach left hand mounting angle to the frame with 3 flat head screws. Attach right hand mounting angle to the frame with 3 flat head screws.



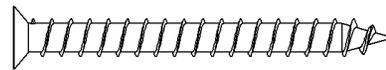
- 2 Cut middle filler angle as shown below. Attach Middle Filler Angle with 2 flat head screws.



When cutting filler angle be sure to plan for the conduit hole 5/16 DIA [8mm].

Parts List:

No.	Description	Qty
1)	Closer Mounting Plate	2
2)	Track Mounting Angle	2
3)	Middle Filler Angle (cut)	1
4)	Wood Door Screws	16
5)	#10-32 Metal Door Screws	16



Wood Door Screw (4)

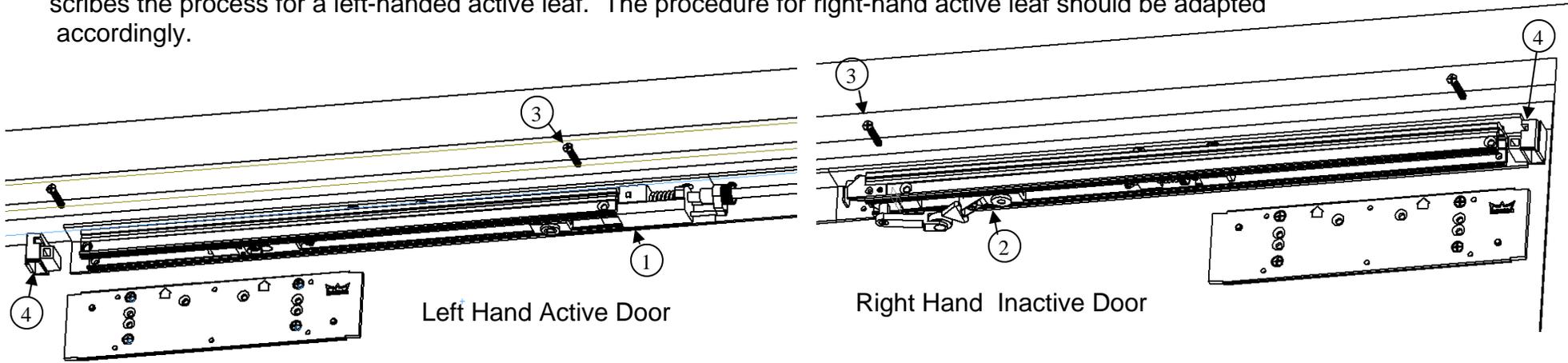


#10-32 Metal Door Screw

TS93 GSR PT



3 Attach active track assembly with two M5 flat head machine screws, be sure to insert the end cap as shown below. Attach the Inactive Track Assembly with two M5 Flat Head Machine Screws, be sure to insert the end cap. The following describes the process for a left-handed active leaf. The procedure for right-hand active leaf should be adapted accordingly.



4 Attach closers with eight (8) M5 flat head machine screws.

Parts List:

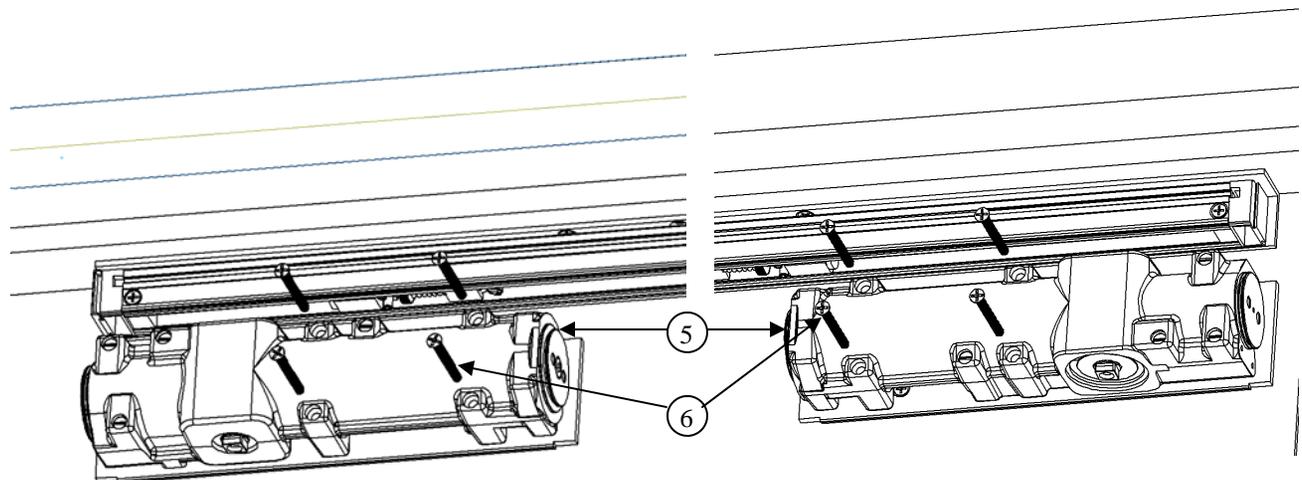
No.	Description	Qty
1)	Active Track Assembly	1
2)	Inactive Track Assembly	1
3)	M5 Metal Track Screws	4
4)	Plastic End Cap	2
5)	TS93 Closer	2
6)	M5 Closer Mounting Screws	8



M5 Metal Track Screws



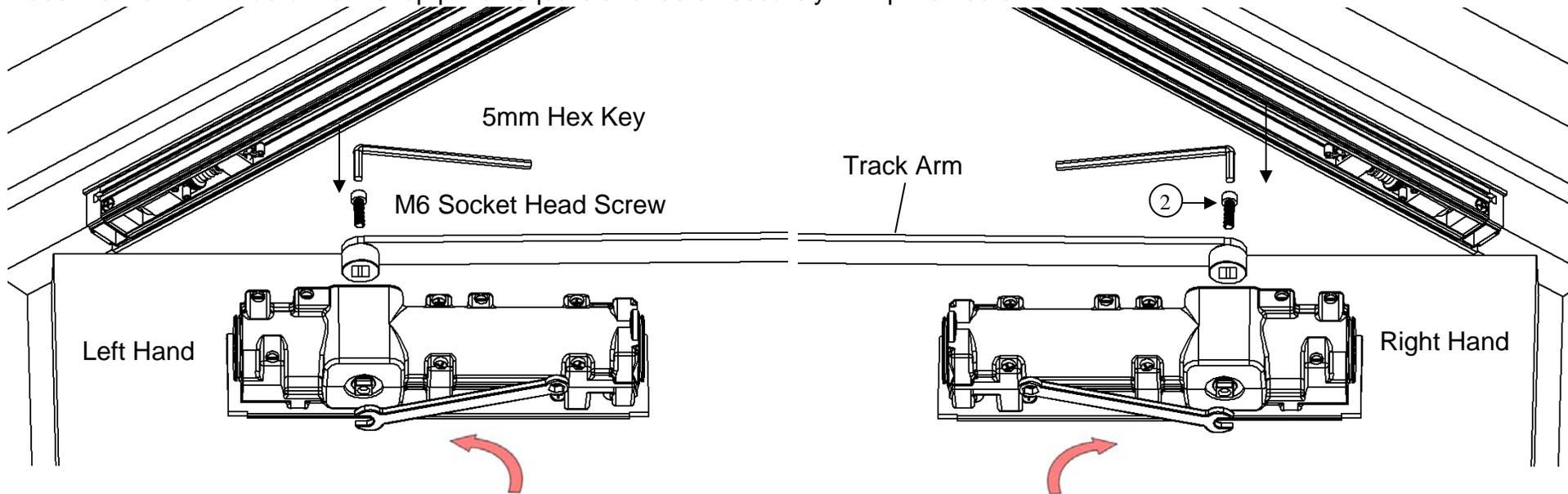
M5 Closer Mounting Screws



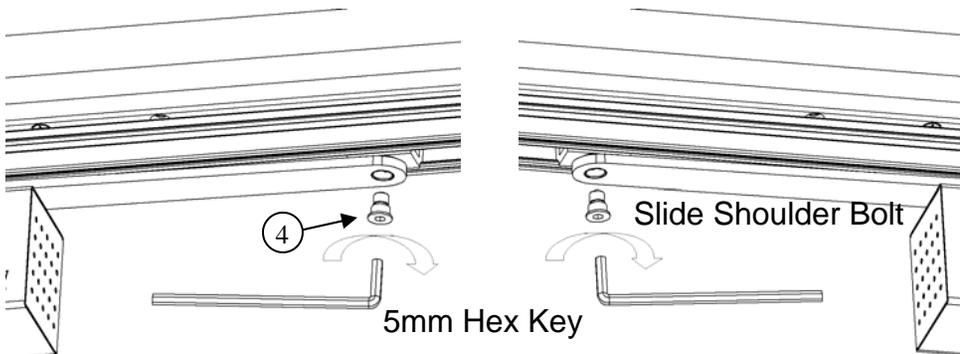
TS93 GSR PT



5 Place wrench on bottom of pinion square and rotate approximately 5 degrees as shown. With the main arm parallel to the door. Place the main arm hub on to the top pinion square and fasten securely with pinion screw.

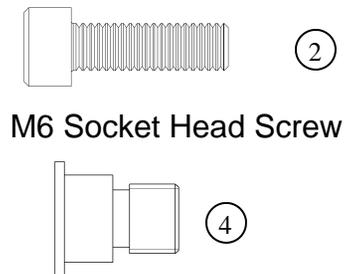


6 Attach arm to slide shoe. Continue to rotate arm until parallel to track (door closed). Insert screw and tighten securely.



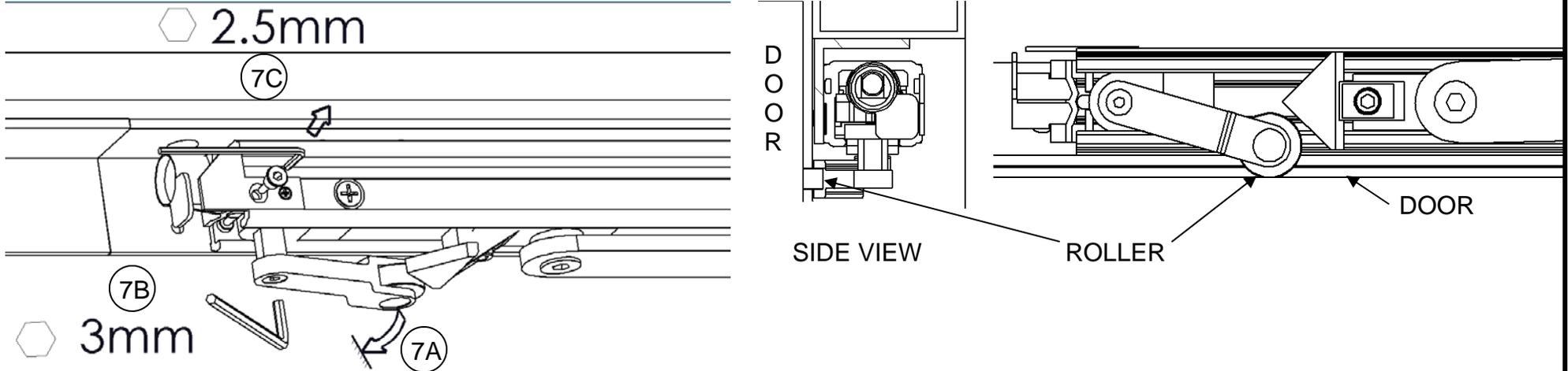
Parts List:

No.	Description	Qty
1)	Hex Key	1
2)	M6 Socket Head Screw	2
3)	Track Arm	2
4)	Slide Shoulder Bolt	2

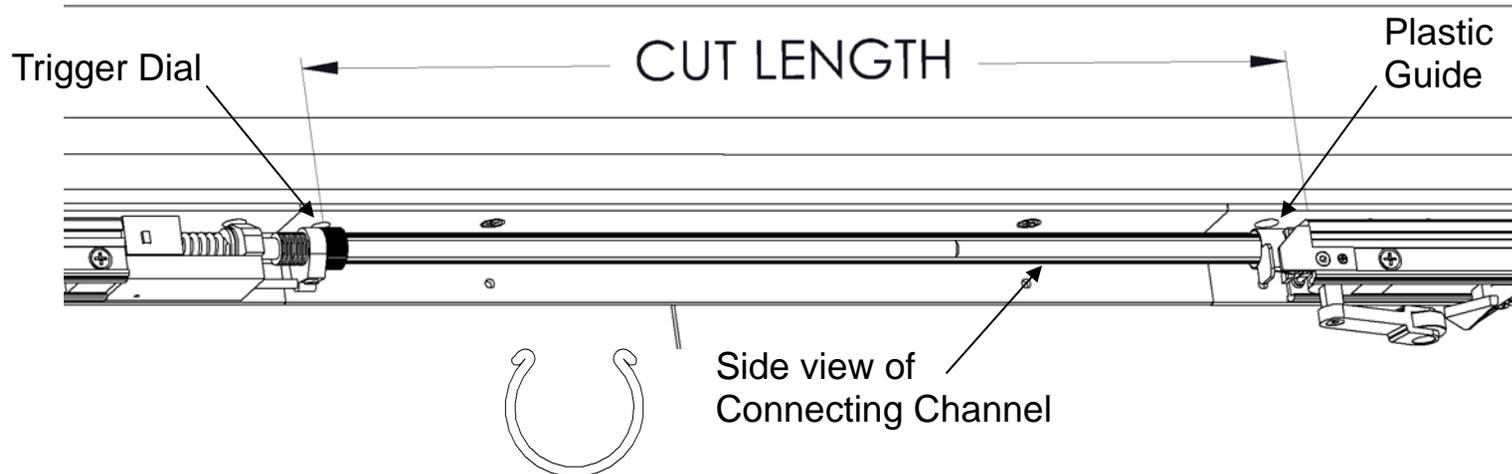


Note: Depress trigger dial, (see page 5) to allow the active slide shoe to move freely. Locking pin may fall out, (see page 6) and can be discarded after installation is complete.

- 7 Close both door leaves. Press lever with roller against the door (A) and tighten the hex screw (B). Remove Alignment screw (C).

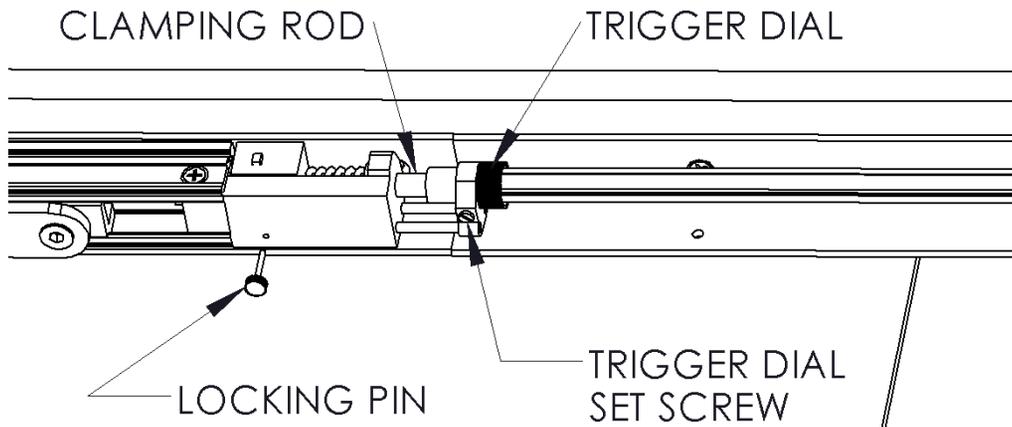


- 8 Mark and cut the length of the connecting channel as shown. In doing so, it will ensure that the plastic guide element is pushed up against the slide shoe, and the trigger dial has been fully turned in (clockwise). Cut the connecting channel at the cut mark. Remove burrs and set the connecting channel in place by opening both doors leaves. Move arm with roller to maximum degree, in the direction of the open door leaf. Insert the channel into the trigger dial of the active leaf and then place into the plastic guide of the inactive leaf.

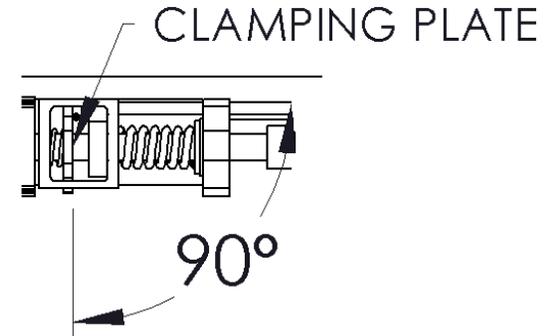


- 9 Close both door leaves. Unwind the trigger dial (counter clockwise) by hand until the pin drops out. The active door will start to close. Ensure that the clamping plate remains perpendicular (90 deg) to the clamping rod. Tighten set screw to secure trigger dial.

- 10 The clamping rod will only operate smoothly if the clamping plate has been properly adjusted. Only then will the active leaf swing freely with the inactive leaf closed.



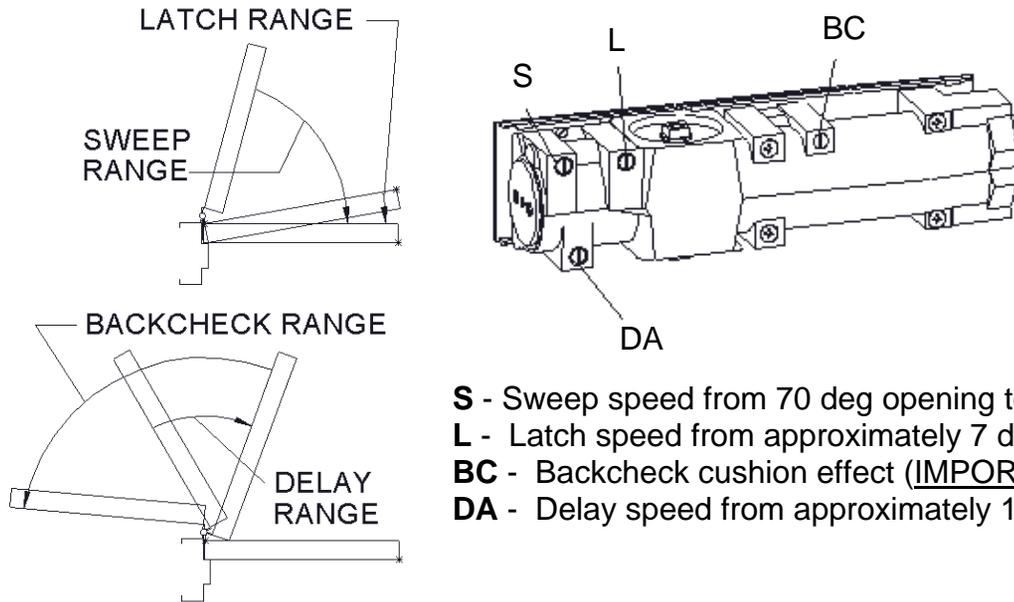
Pin can be discarded once the system has been installed.



TS93 GSR PT



11 Adjust sweep (S), latch (L), backcheck (BC) and delay action (DA) valves.



- S** - Sweep speed from 70 deg opening to close (0 deg).
- L** - Latch speed from approximately 7 deg to close (increase speed only).
- BC** - Backcheck cushion effect (**IMPORTANT** Do **NOT** close valve completely)!
- DA** - Delay speed from approximately 135 deg to 70 deg.

CAUTION: DO NOT REMOVE VALVE!!!

Adjust Sweep (S), Latch (L) valves.

- DECREASE SPEED
- INCREASE SPEED

Adjust Backcheck (BC) and delay action (DA) valves.

- DECREASE (BC INTENSITY)
- INCREASE (DA TIME)

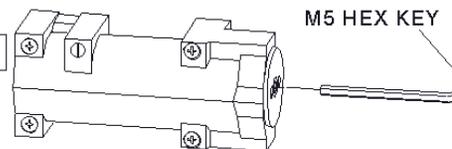
12 Adjust spring power (**IMPORTANT**: Adjust clockwise according to chart).
Barrier free openings should be adjusted to use the minimum closing force required to close and latch the door.

Adjust spring tension, if required.

CRITICAL



CAUTION: DO NOT OVERTIGHTEN



NON-BARRIER-FREE OPENINGS:

ULC LABELED UNITS "ONLY"

Adjust according to chart.

NOTE: TS9315 supplied with a size 2 spring setting.

REFERENCE LABEL ON CLOSER FOR MINIMUM/MAXIMUM SETTINGS

BARRIER-FREE OPENINGS -

Take an opening force reading from the pull on the door. If required, adjust the spring tension to meet the barrier-free requirement. Maximum number of turns counter clockwise=5. Maximum number of turns clockwise =12. Depending on opening conditions, a door adjusted to meet barrier-free forces may not have sufficient power to reliably close and latch the door.

TS9315	DOOR WIDTH		FULL TURNS OF SPRING ADJUSTER	CLOSER SIZE
	INT.	EXT.		
	2'6"	---	0	2
	3'	2'6"	+3	3
	3'6"	3'	+9	4
	4'	3'6"	+12	5

TS9356	DOOR WIDTH		FULL TURNS OF SPRING ADJUSTER	CLOSER SIZE
	INT.	EXT.		
	4'	3' 6"		
4' 6"	4'	0	6	

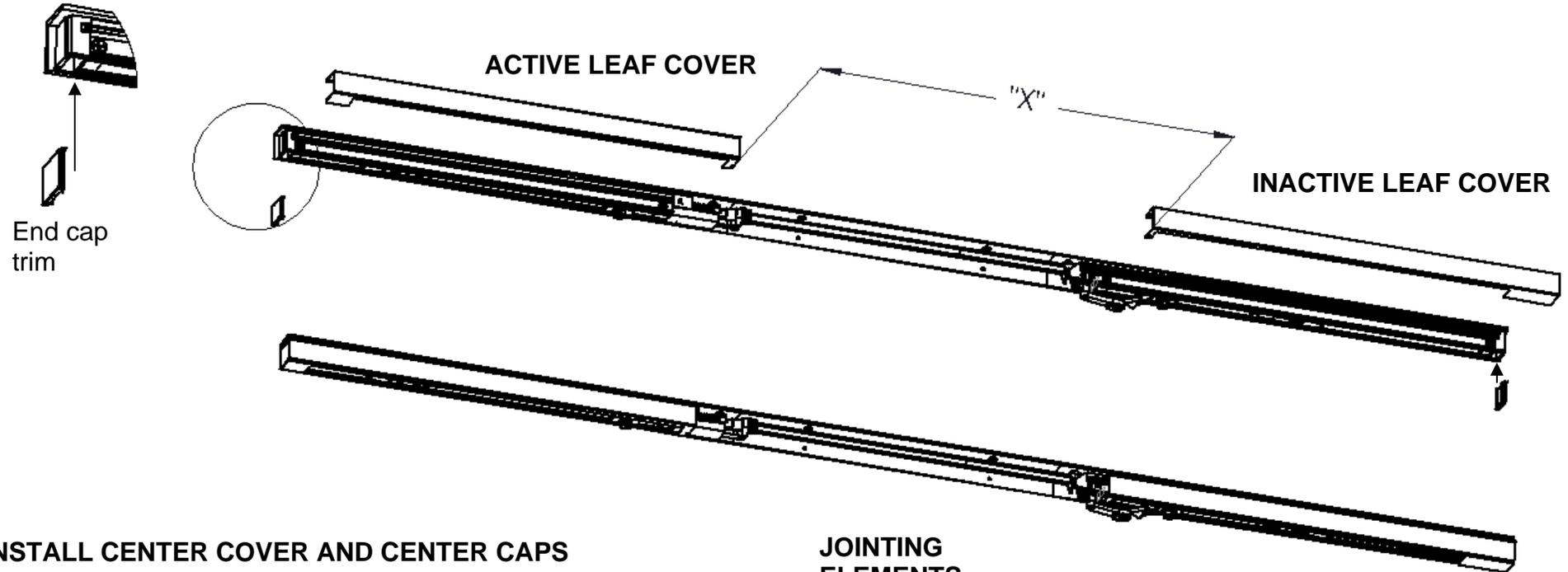
CLOSER TYPE	MAX. DOOR WEIGHT (LBS)	SPRING SIZE	FULL TURNS OF SPRING ADJUSTER
TS9315	100	2	0
	125	3	+3
	150	4	+9
TS9356	200	5	+12
	200	5	-4
	250	6	0

NOTE: TS9356 supplied with a size 6 spring setting.

Maximum number of turns clockwise = 6
Adjust according to chart.

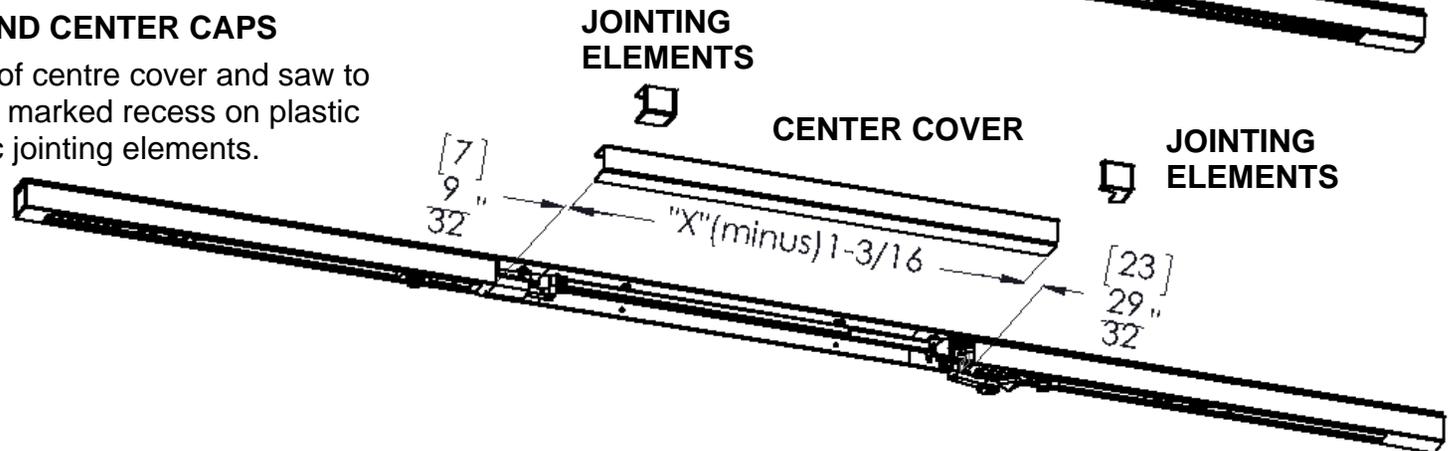
13 INSTALL END CAP TRIM AND COVERS

Clip on end cap trims.
Break out marked recess in the active and inactive leaf track cover and clip cover into position



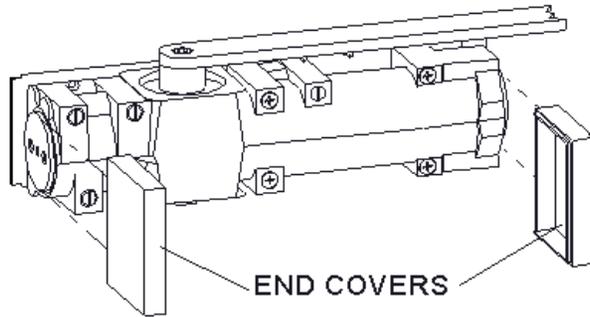
14 INSTALL CENTER COVER AND CENTER CAPS

Determine the required length of centre cover and saw to size. Clip on cover. Break out marked recess on plastic trim for inactive leaf. Fit plastic jointing elements.

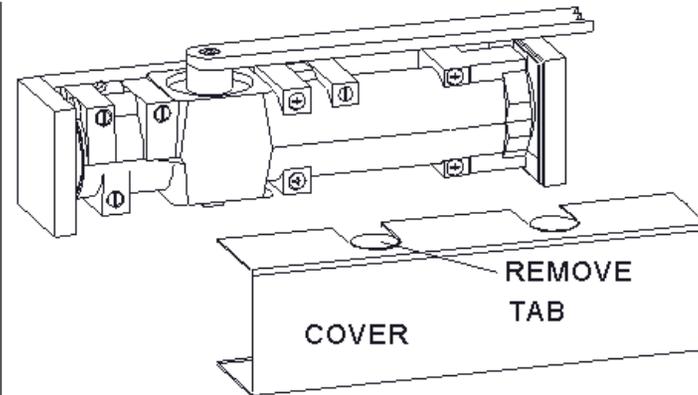


15 INSTALL CLOSER COVERS

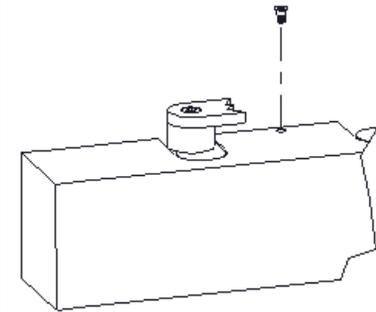
Install closer end covers and closer covers.



Slide end covers over closer body end caps.



Remove tab that aligns with arm hub. Slide cover onto plate.



Secure with locking screw.

16 INSTALL CARRY BAR

A carry bar must be installed to insure that the active door is opened far enough for the inactive door to close. DORMA carry bar MK-398 (3'-6" and wider door) is required! Installation instructions are included with the carry bar.

17 FINAL INSTALLATION AND TEST

1. After installation is complete, check all connections.
2. Open doors to desired position.
3. For EMF activate system in alarm so the electromagnets release, and the doors close.

Normal Operation - The unit's electromagnet will be energized by the alarm system, by applying 24VDC power supply.

Fire Alarm - When the alarm activates, current will automatically be cut, causing the electromagnets to release, allowing the doors to close.

IMPORTANT: The unit must be tested after installation, by the end user, to be certain the door closer unit functions properly when the alarm system is activated. The entire system must be tested periodically after the initial installation test, in conjunction with the testing of the fire alarm system. The end user is responsible for maintaining the door closing system.