

TS93 ST

Surface Applied Closer

Pull side jamb mount spring spring (ST)

Installation instructions

08280181 – 08-2019

| EN |

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1 Technical specifications

1.1 Overview

-  Caution: sex nuts are required for attachment of components to unreinforced doors and to wood or plastic faced composite type fire doors, unless an alternative method is identified in the individual door manufacturer's listings.

 Maximum door opening degree is 175°.

 Minimum door width is 36".

 Use closer body style "B" for this installation.
-  Arrows on mounting plate point upward.

 Follow included template to properly prepare door and frame for all accessories of the closer installation.

 Know the swing of the door which is being installed prior to installation.

 Make sure door efficiently operates prior to installing closer.

 Verify closer spring size prior to installation.

1.2 Size selection chart

Table 1

Closer	Interior/ Exterior	Door width				
		3'-0" max.	3'-6" max.	4'-0" max.	4'-6" max.	5'-0" max.
TS9315	Interior	♿	♿	♿	N/A	N/A
TS9356	Interior	N/A	N/A	•	•	•

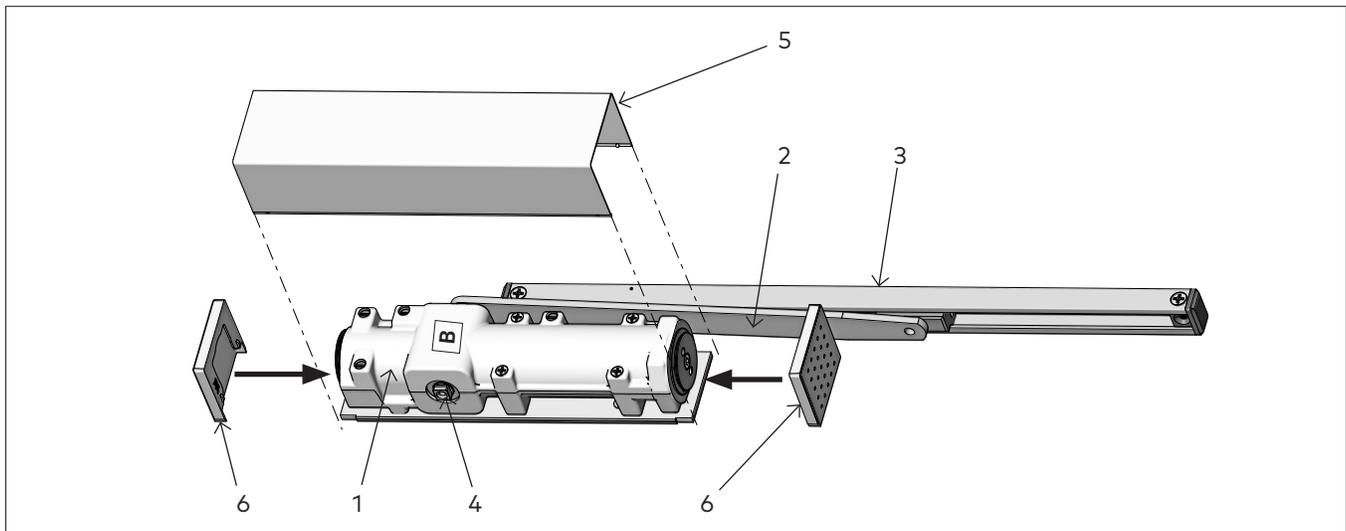
1.3 Tools recommended

Table 2

Drill bits:	#0 Phillips screwdriver	M5 hex key
Metal: No. 21 & 10-32 tap	#2 Phillips screwdriver	3/16" flathead screwdriver
No. 7 & 1/4-20 tap	#3 Phillips screwdriver	
Wood: 9/64"		
11/64"		

1.4 Surface closer system

Fig.1

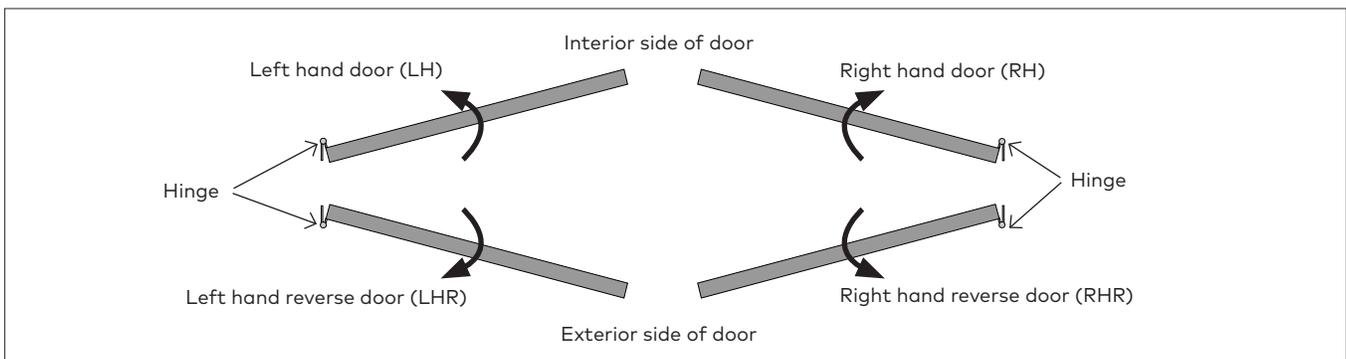


The surface closer is comprised of the following components.

- | | |
|--------------------------|----------------------|
| 1. Closer body: "B" body | 4. Pinion |
| 2. Main arm | 5. Closer cover |
| 3. Track assembly | 6. Closer end covers |

1.5 Handing the door

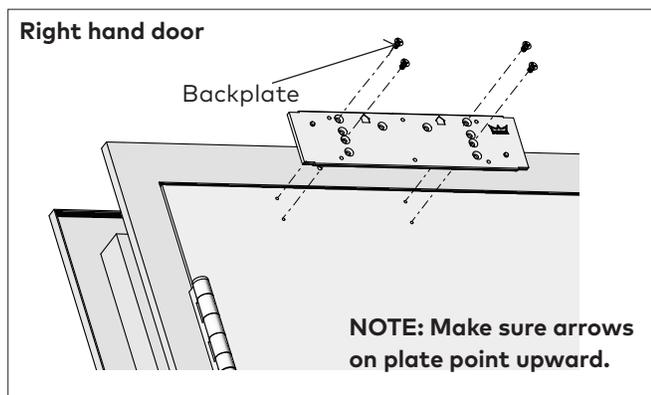
Fig.2



2 Installation instructions

2.1 Installing the back plate

Fig.3



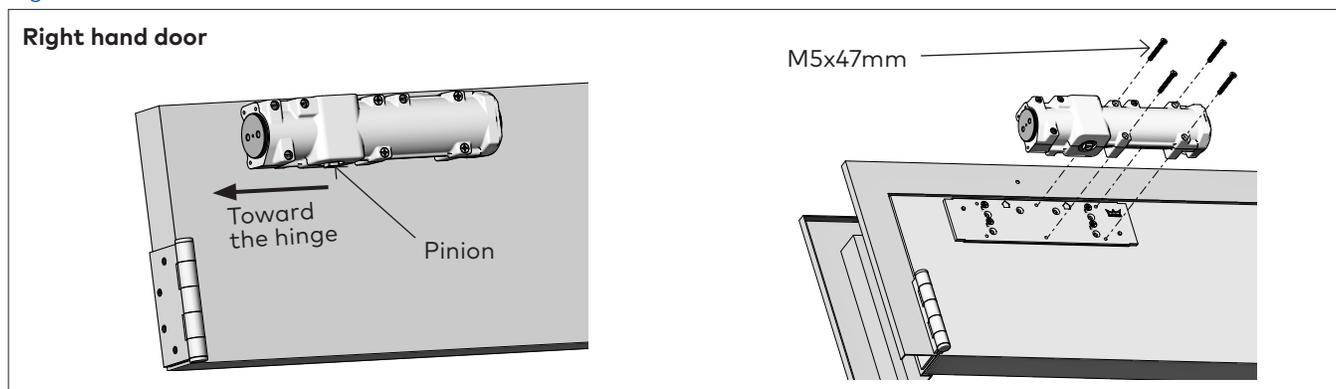
Reference template 08280182

NOTE: For use on top jamb applications on the pull side of the door.

- 2.1.1 Secure back plate to door.
- Use four 10-32x5/8" machine screws [#10x1" wood screws] provided.

2.2 Installing the surface closer

Fig.4

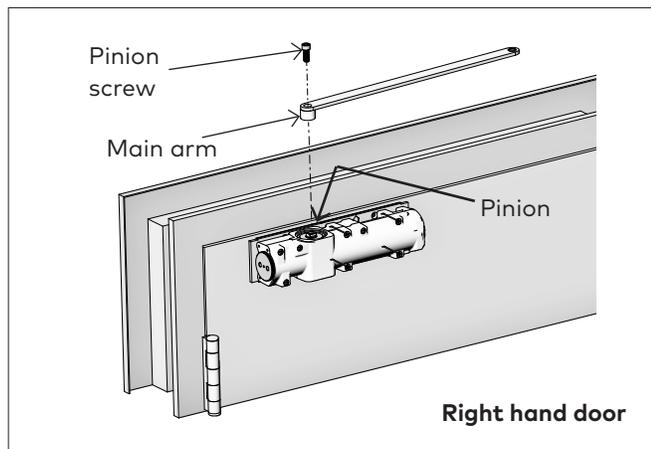


NOTE: Orient pinion closest to hinge.

- 2.2.1 Secure closer body to plate.
- Use four M5x47mm screws provided with plate itself.

2.3 Installing main arm

Fig.5



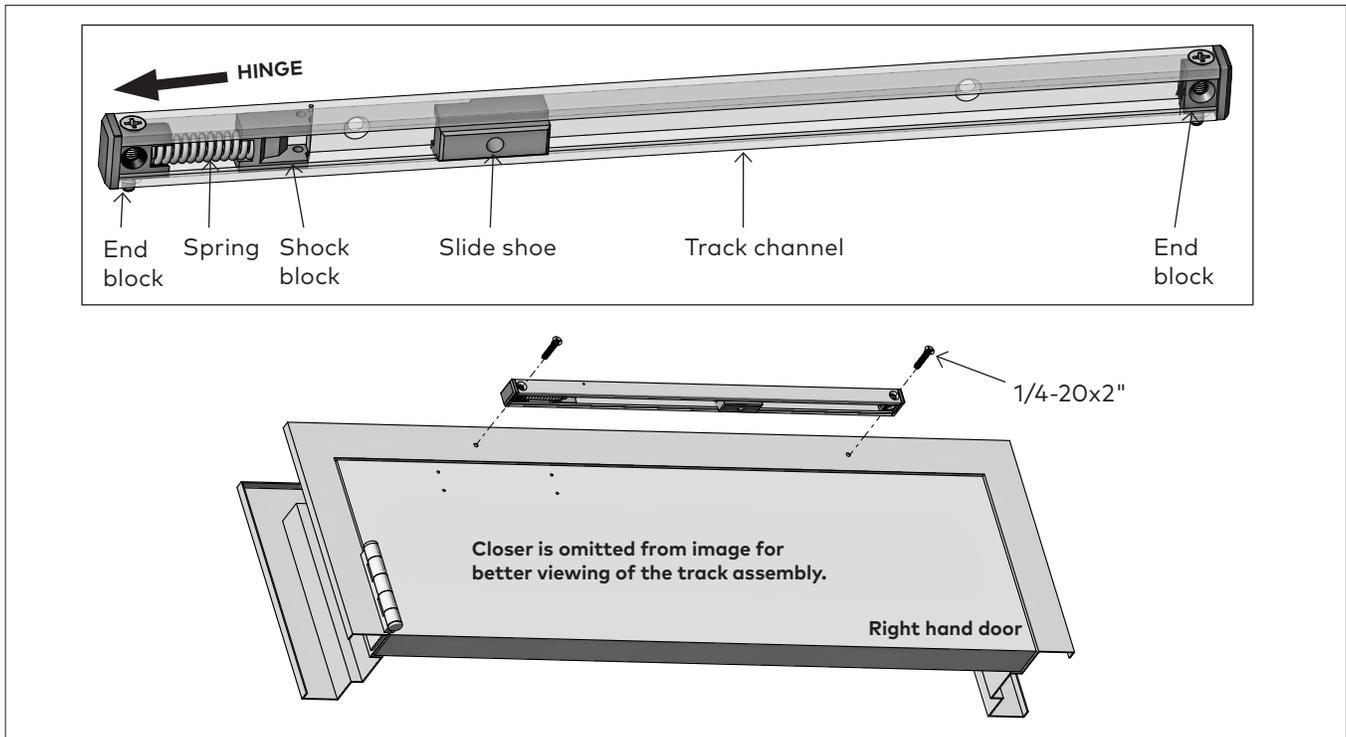
- 2.3.1 Secure main arm to closer pinion.
- Use an M5 hex key and provided pinion screw. [M6x20 SHCS]



Be sure main arm is parallel to door during application.

2.4 Installing track assembly

Fig.6



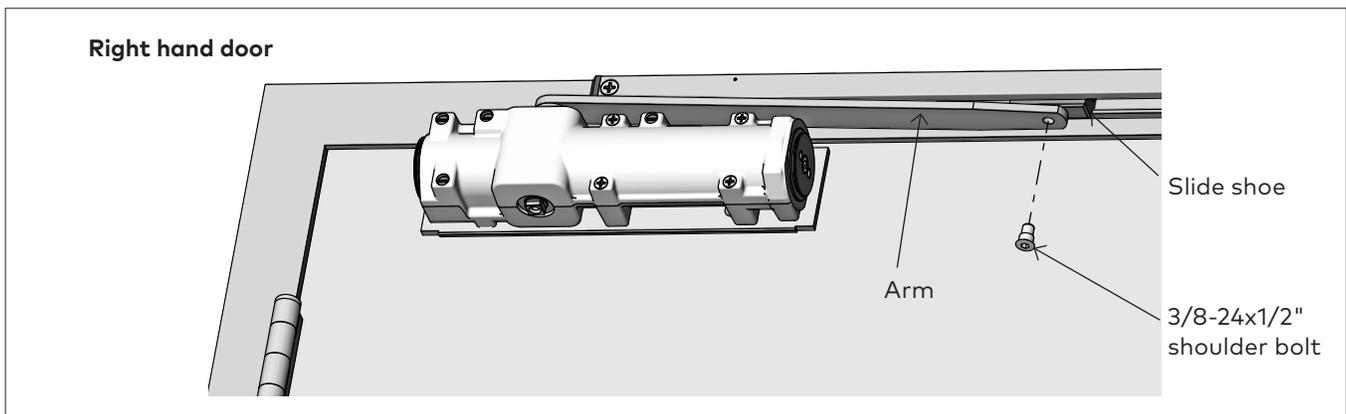
NOTE: Spring track is pre-assembled.

2.4.1 Secure track channel to door frame through end blocks.

- Use two 1/4-20x2" flat head Phillips screw [#14x3" wood screws].

2.5 Secure main arm

Fig.7



2.5.1 Secure arm to slide shoe.

- Use one 3/8-24 x 1/2" shoulder bolt and an M5 hex key.

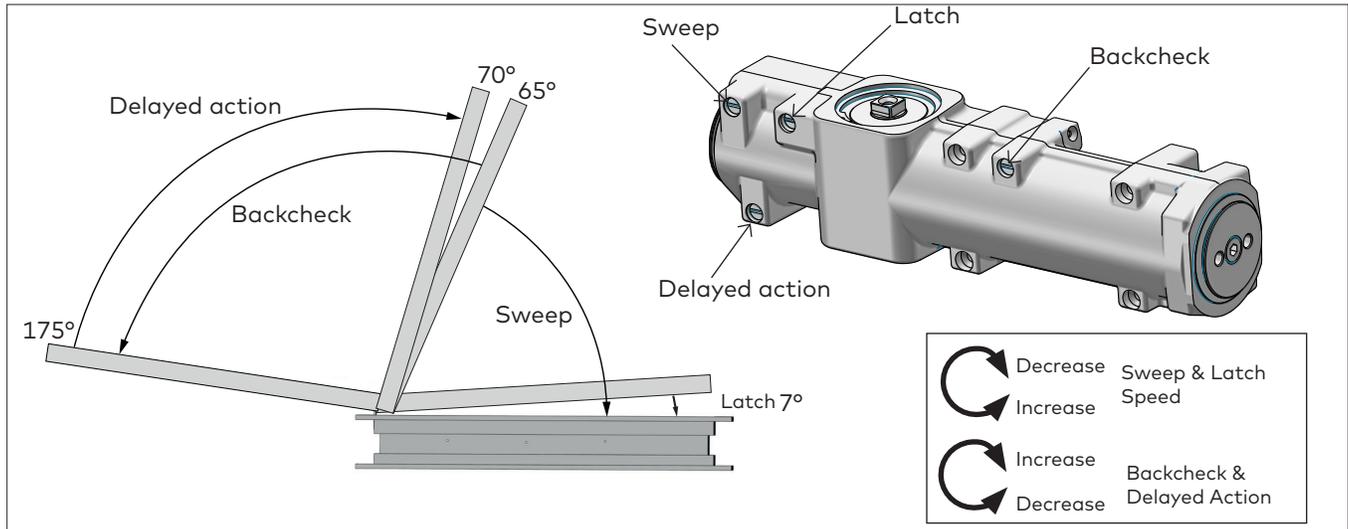
3 Adjustments

-  Confirm closer spring size prior to making any closing speed adjustments.
-  Do not back valve heads out beyond closer casting.

-  Maximum opening angle is 175°.
-  Door should close in 3 to 6 seconds from 90°.
-  Do not close valves completely.

3.1 Adjust closing speeds: sweep, latch, backcheck, delayed action

Fig.8

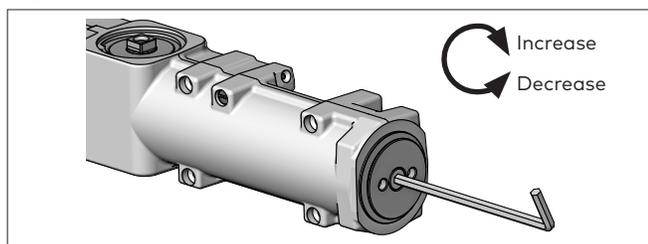


- 3.1.1 Adjust **closing sweep speed**: for the area from 70° to 0°
- Increase sweep speed: Turn valve counter-clockwise
 - Decrease sweep speed: Turn valve clockwise.
- 3.1.2 Adjust **closing latch speed**: for the area from 7° to 0°
- Increase latch speed: Turn valve counter-clockwise

- 3.1.3 Adjust **opening backcheck**: for the area from 65° - 175°.
- Increase resistance: Turn valve clockwise
 - Decrease resistance: Turn valve counter-clockwise.
- 3.1.4 Adjust **closing delayed action**: for the area from maximum opening to 70°:
- Increase delayed action: Turn valve clockwise
 - Decrease delayed action: Turn valve counter-clockwise

3.2 Adjust spring force

Fig.9



TS9356

NOTE: Supplied with a size 6 spring setting.

- Increase force: turn clockwise 6 times (max)

TS9315

NOTE: Supplied with a size 2 spring setting.

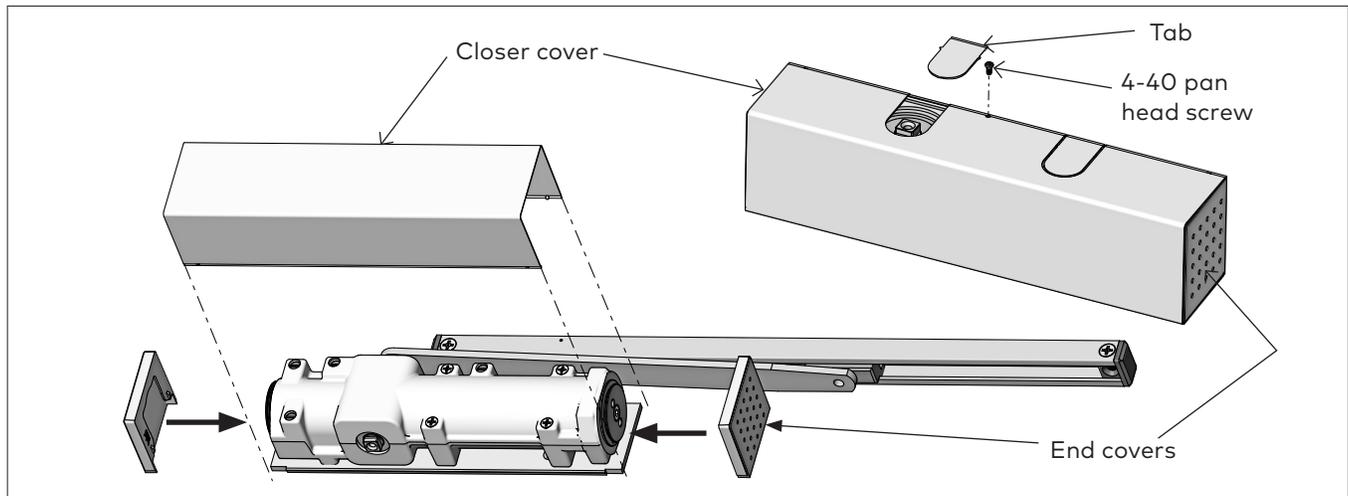
Barrier free openings: Take an opening force reading from the pull on the door. If required, adjust the spring force to meet the barrier-free requirement.

- **Decrease force:** turn counter-clockwise 5 times (max)
 - **Increase force:** turn clockwise 12 times (max)
- Depending on opening conditions, a door adjusted to meet barrier-free forces may not have sufficient power to reliably close and latch the door.

Top jamb mount, pull side					
	Closer size	Max door weight (lbs)	Door width		Full turns
			Interior	Exterior	
TS9315	2	100	2'6"	---	0
	3	125	3'	2'6"	+3
	4	150	3'6"	3'	+9
	5	200	4'	3'6"	+12
TS9356	5	200	4'	3'6"	-4
	6	250	4'6"	4'	0

4 Install covers

Fig.10



4.1.1 Snap both end covers into place.

4.1.2 Remove un-needed tab and snap cover over closer body.

4.1.3 Secure with one 4-40 Phillips pan head screw.

