CAL-ROYAL PRODUCTS, INC. USA

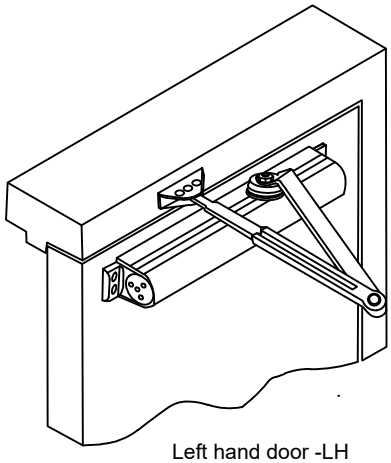
Installation Instructions
CR801S
Adjustable size 1 to 6

CAUTION

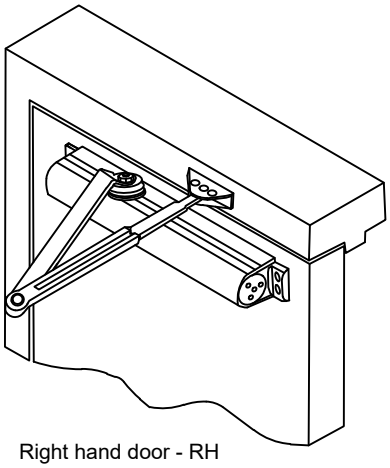
An incorrectly installed or improperly adjusted door closer can cause property damage or personal injury, These instructions should be followed to avoid the possibility of misapplication or misadjustment

Regular Arm Installation

closer mounts on hinges (pull) side of door
See page 3.
closer cover not shown



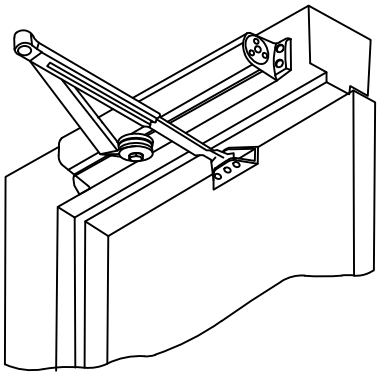
Left hand door -LH
Right hand reverse - RHR



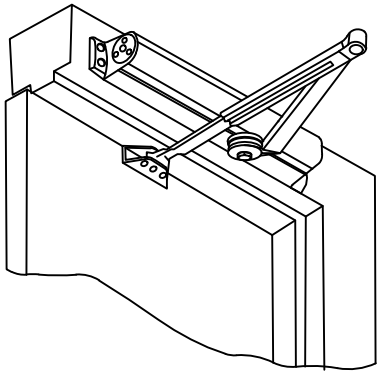
Right hand door - RH
Light hand reverse - LHR

Top Jamb Installation

closer mounts on frame face on opposite to hinge (push) side of door
See page 4.
closer cover not shown



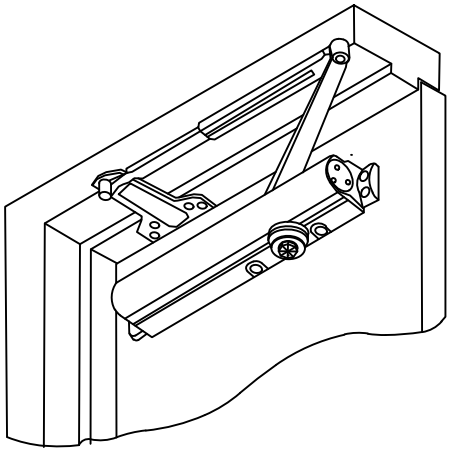
Left hand door -LH
Right hand reverse - RHR



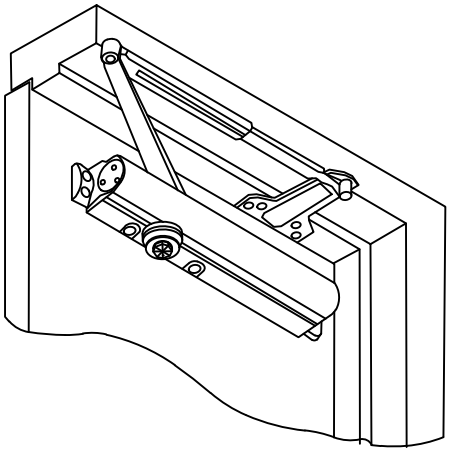
Right hand door -RH
Left hand reverse - LHR

Parallel Arm Installation

closer mounts on opposite to hinges (push) side of door
See page 5.
closer cover not shown



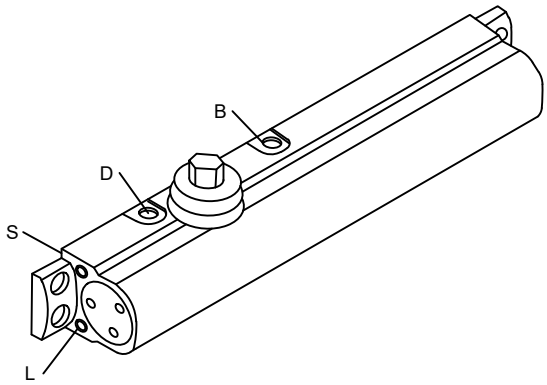
Left hand door -LH
Right hand reverse - RHR



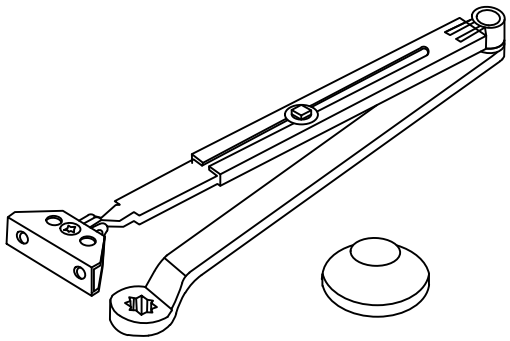
Right hand door -RH
Left hand reverse - LHR

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Components:

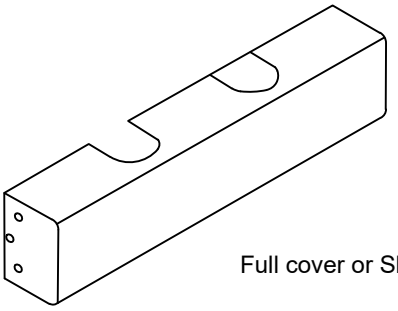


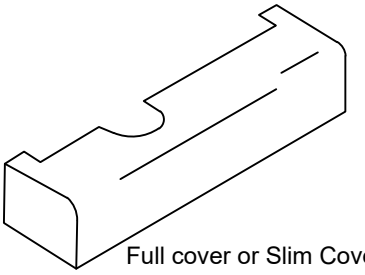
Standard Closer

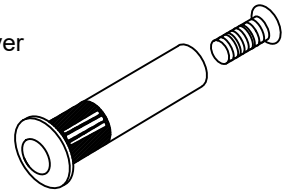

Closer Arm

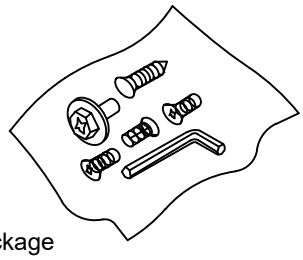
Pinion Cap

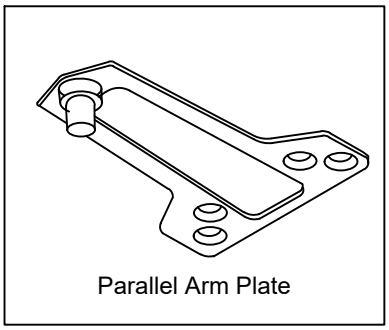

Main Arm Screw


Full cover or Slim Cover


Full cover or Slim Cover




Screw Package


Parallel Arm Plate

- It is recommended that the door be hung on ball bearing type hinges so door swings freely.
- A separate door stop (supplied by others) is recommended to prevent damage to the door closer, closer arm, or to the door, frame or adjacent walls.
- Door and frame must be properly reinforced or through bolts used to prevent the mounting screws from pulling out.

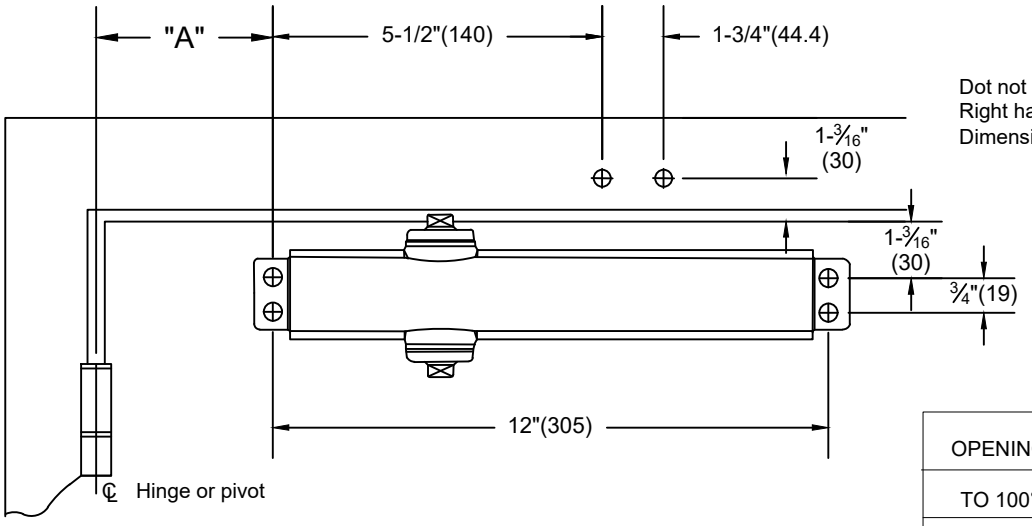
Preparation for Fasteners		
Fasteners	Door or frame	Drill-Sizes
Self Drilling/Tapping Machine Screw	Hollow Metal or Aluminum	No drill required
	Wood (see note)	3⁄16" pilot hole
1⁄4"-20 Machine Screw	Hollow Metal	Drill # 7 (0.201" dia.) & Tap 1⁄4"-20
Self Drilling/Tapping Machine Screw	Hollow Metal or Aluminum	9⁄32" drill closer side & 3⁄8" drill opposite side
	Wood Screw	
Wood Screw	Wood	3⁄16" pilot hole

NOTE: Wood doors/frames must have a pilot hole drilled when using Self Drilling/Tapping screws.

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Installation Instructions

Regular Arm Template

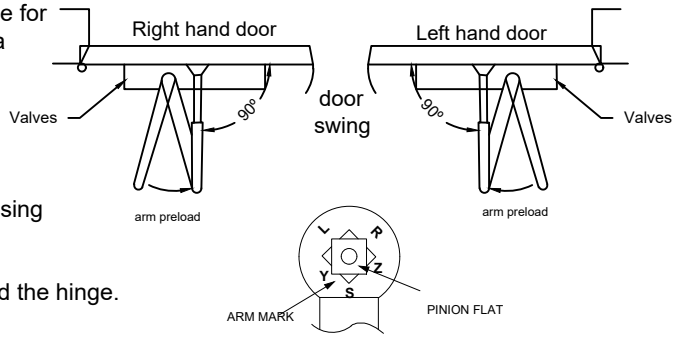


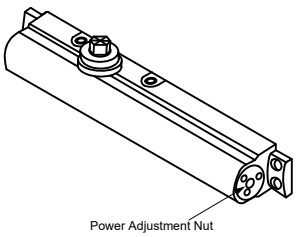
Dot not scale drawing
Right hand door shown
Dimensions are in Inches (mm)

OPENING	A	
	INCHES	MM
TO 100°	7-1/2”	191
100° TO 130°	6”	152
OVER 130°	4-1/2”	114

Installation sequence:

- Select degree of opening and use dimensions shown to locate 4 holes on door for closer body and 2 holes on frame face for arm shoe. For application that are different from above, a Separate template will be required.
- Prepare door and frame fasteners. See "Preparation for Fasteners", Figure 2, Page 2.
- Before installing closer body... Set spring power closer using Power adjustment chart, below right.
- Install closer on door with speed regulating valves toward the hinge.
- Remove forearm screw from adjusting rod and disassemble arm, See Figure 1, Fasten arm shoe (with rod) to frame face.
- Mount main arm onto closer pinion shaft, aligning arm mark "S" with pinion flat. Secure with main arm screw.
- Reassemble arm. Adjust forearm length so that it will be perpendicular (at a 90º angle) to the door face. Secure with forearm screw.
- Adjust closer (see page 6) and install cover.






To increase power
Turn clockwise 12 turns maximun

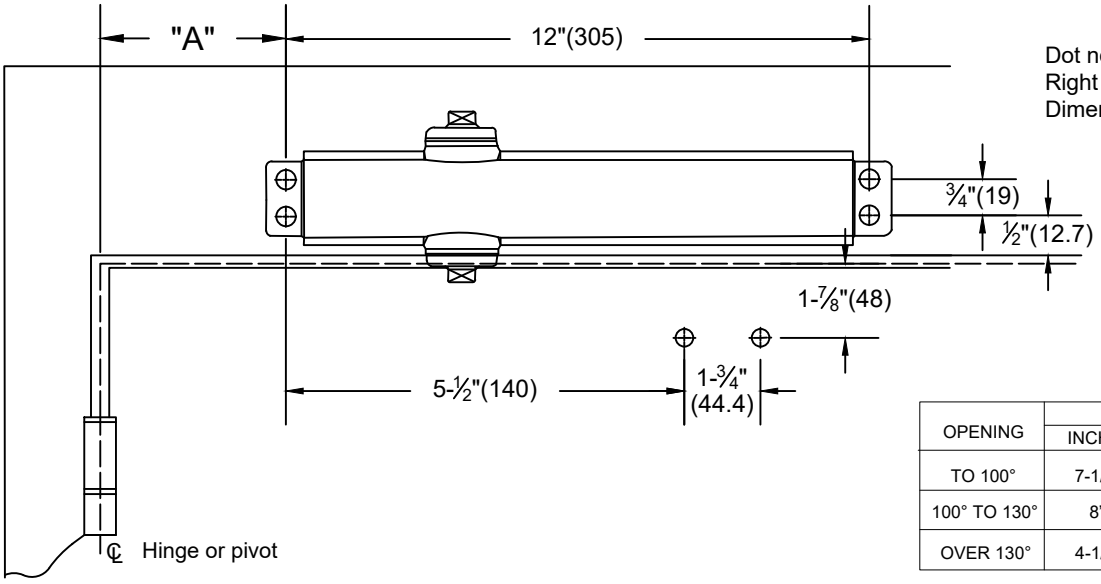

To decrease power
Turn counter-clockwise

Power Adjustment Chart		
Door Size Inches	Full clockwise turn of closer power adjustment nut (from "0" turns)	
	CR 800 Series	
	Interior door	Exterior door
24"-30" (610-762mm)	-7	-5
30"-34" (762-864mm)	-3	0
34"-38" (864-965mm)	0	4
38"-48" (965-1219mm)	4	8
48"-54" (1219-1372mm)	8	13
54"-60" (1372-1524mm)	13	
NOTE: Maximun of 20 turns (360º) of power adjustment nut. Closer is shipped set at 7 turns from the factory		

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Installation Instructions

Top Jamb Template

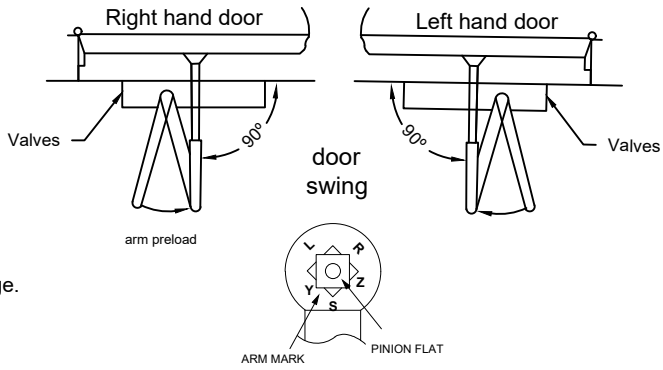


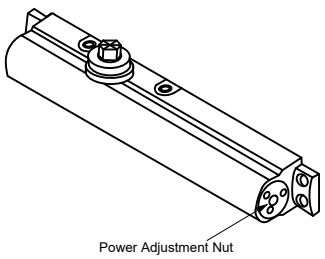
Dot not scale drawing
Right hand door shown
Dimensions are in Inches (mm)

OPENING	A	
	INCHES	MM
TO 100°	7-1/2"	191
100° TO 130°	8"	152
OVER 130°	4-1/2"	114

Installation sequence:

- Select degree of opening and use dimensions shown to locate 4 holes on Frame for closer body and 2 holes on door face for arm shoe. For application that are different from above, a Separate template will be required.
- Prepare door and frame fasteners. See "Preparation for Fasteners", Figure 2, Page 2.
- Before installing closer body... Set spring power closer using Power adjustment chart, below right.
- Install closer on frame with speed regulating valves toward the hinge.
- Remove forearm screw from adjusting rod and disassemble arm, See Figure 1, Fasten arm shoe (with rod) to frame face.
- Mount main arm onto closer pinion shaft, aligning arm mark "S" with pinion flat. Secure with main arm screw.
- Reassemble arm. Adjust forearm length so that it will be perpendicular (at a 90º angle) to the door face. Secure with forearm screw.
- Adjust closer (see page 6) and install cover.






To increase power
Turn clockwise 12 turns maximun


To decrease power
Turn counter-clockwise

Power Adjustment Chart

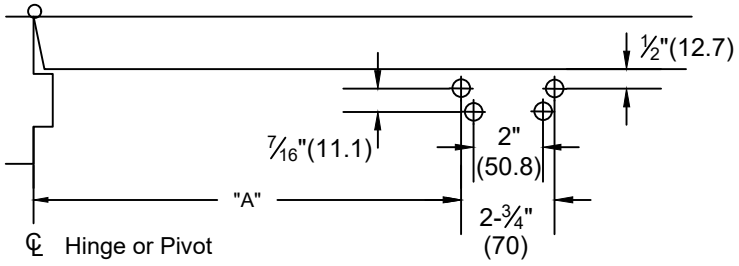
Door Size Inches	Full clockwise turn of closer power adjustment nut (from "0" turns)	
	CR 800 Series	
	Interior door	Exterior door
24"-30" (610-762mm)	-7	-5
30"-34" (762-864mm)	-3	0
34"-38" (864-965mm)	0	4
38"-48" (965-1219mm)	4	8
48"-54" (1219-1372mm)	8	13
54"-60" (1372-1524mm)	13	

NOTE: Maximun of 20 turns (360º) of power adjustment nut. Closer is shipped set at 7 turns from the factory

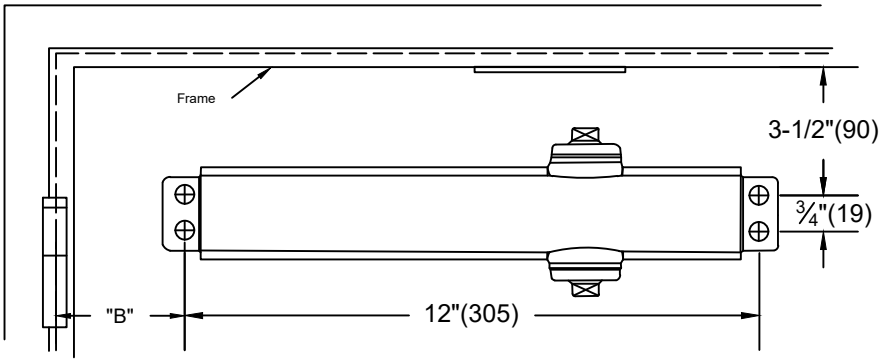
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Installation Instructions

Parallel Arm Template



OPENING	Dimension "A"	Dimension "B"
100° TO 130°	9-1/2"(241.3)	3-3/4"(95.25)
OVER 130°	7"(177.8)	1-1/4"(31.75)



Dot not scale drawing
Right hand door shown
Dimensions are in Inches (mm)

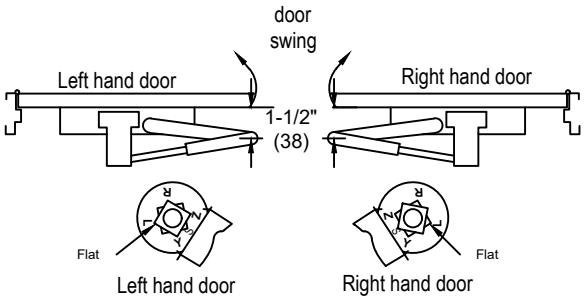
Installation sequence:

- Select degree of opening and use dimensions shown to locate 4 holes on door for closer body and 4 holes on underside of frame for PA plate. For application that are different from above, a Separate template will be required.
- Prepare door and frame fasteners. See "Preparation for Fasteners", Figure 2, Page 2.
- Before installing closer body... Set spring power closer using Power adjustment chart, below right.
- Install closer on door with power adjustment nut toward the hinge.
- Mount soffit plate to frame. Remove forearm screw from adjusting rod (See figure 1) and attach adjusting rod.
- Install main arm or pinion shaft... see main arm installation instruction below.

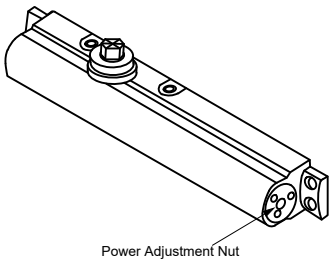
Power Adjustment Chart		
Door Size Inches	Full clockwise turn of closer power adjustment nut (from "0" turns)	
	CR 800 Series	
	Interior door	Exterior door
24"-30" (610-762mm)	-4	0
30"-34" (762-864mm)	0	5
34"-38" (864-965mm)	6	10
38"-48" (965-1219mm)	12	
48"-54" (1219-1372mm)		
NOTE: Maximun of 20 turns (360°) of power adjustment nut. Closer is shipped set at 7 turns from the factory		

- Reassemble arm. Preloads is accomplished by adjusting forearm length so that it will set arm elbow about 1-1/2"(38mm) with forearm screw.
- Adjust closer (see page 6) and install cover.

Main Arm Installation Instructions



Use adjustable wrench to rotate spindle 45º counter-clockwise for right hand door or clockwise for left hand door.Place main arm on spindle so that the "R" (Right hand door) or "L"(Left hand door) lines up with the spindle flat. Secure main arm and spindle by tightening spindle bolt.




To increase power
Turn clockwise 12 turns maximun


To decrease power
Turn counter-clockwise

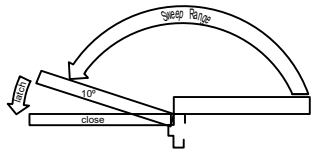
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Unit adjustment

Closing speed control (Figure 1,2, and 6)

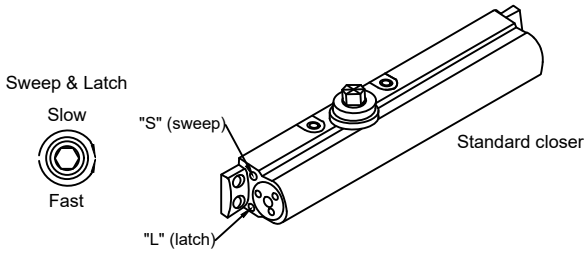
- Valve "S" control sweep range
- Valve "L" control latch range
- Valve "D" controls delayed action range

Opening speed controls — Figure 1



Standard
Closing cycle

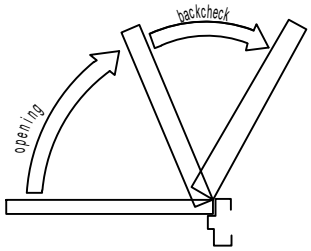
Closing speed controls — Figure 2



Opening door control (figure 4 and 5)

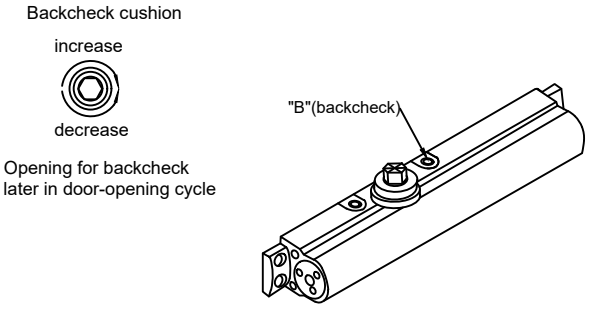
- Backcheck ("B") Valve control the hydraulic resistance to door opening. NEVER close this valve completely- it is not to provide a positive stop

Opening door controls — Figure 4



Opening cycle

Backcheck — Figure 5

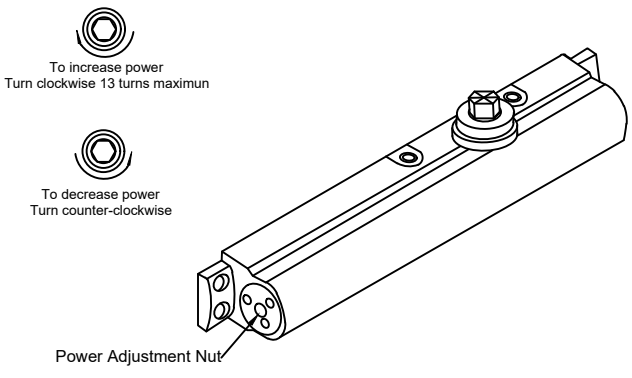


(NEVER close backcheck valve completely)

Closing power control (Figure 3)

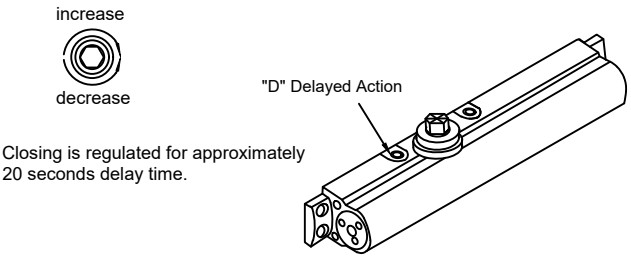
- Adjust as required (see charts on pages 3, 4, & 5)

Closing power controls — Figure 3



Delayed Action control (Figure 6) (Optional)

Delayed Action controls — Figure 6



(NEVER close backcheck valve completely)