

Hold Open Door Closers

Model 900 Series

Surface Mounted

Adjustable & Preset "Back-Check"

Optional BF/DA

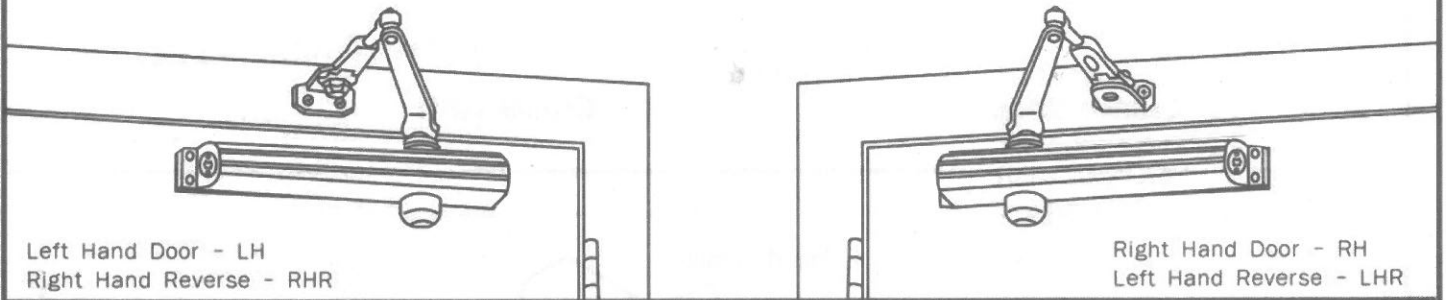
CAUTION AN INCORRECTLY INSTALLED OR IMPROPERLY ADJUSTED DOOR CLOSER CAN CAUSE PROPERTY DAMAGE OR PERSONAL INJURY. THESE INSTALLATION INSTRUCTIONS SHOULD BE FOLLOWED TO AVOID THE POSSIBILITY OF MISAPPLICAION OR MISADJUSTMENT **CAUTION**

INSTALLATION INSTRUCTIONS

Note: For Special Applications a separate door and frame preparation template is packed with these instructions. Use this instruction sheet for installation sequence and closer adjustments.

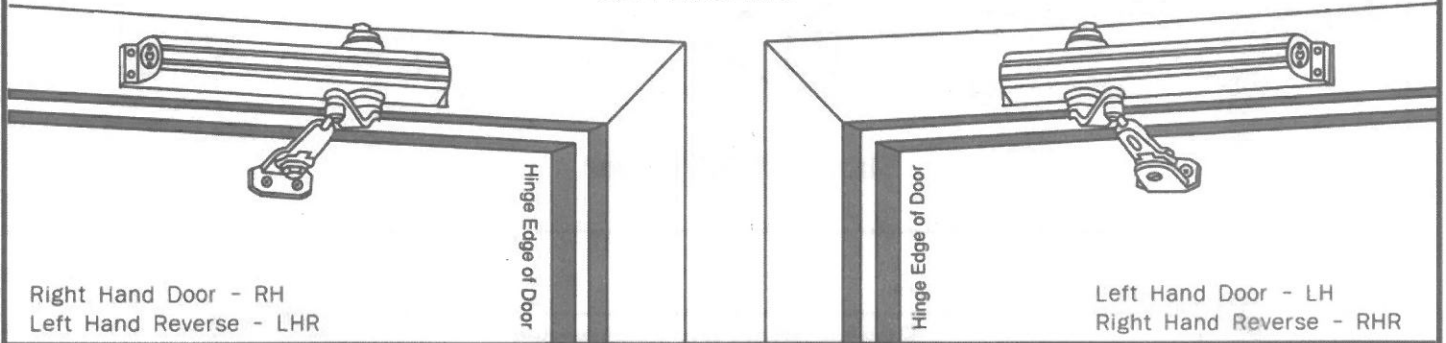
REGULAR ARM (PULL SIDE) INSTALLATION

CLOSER MOUNTS TO PULL SIDE OF DOOR
SEE PAGE #3



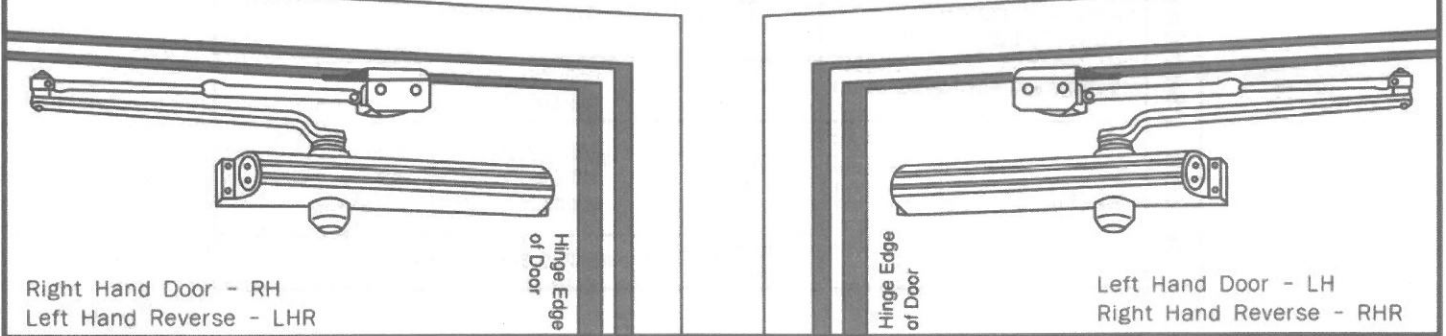
TOP JAMB (PUSH SIDE) INSTALLATION

CLOSER MOUNTS TO PUSH SIDE OF FRAME
SEE PAGE #4



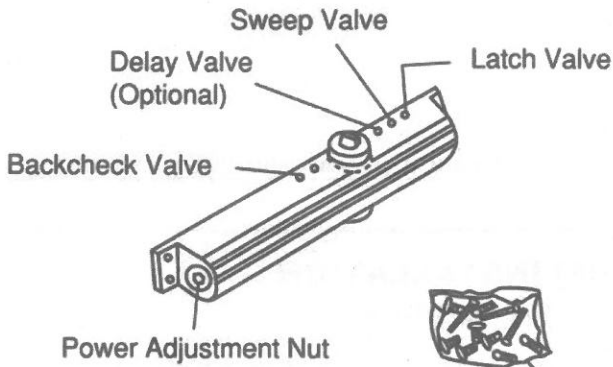
PARALLEL ARM (PUSH SIDE) INSTALLATION

CLOSER MOUNTS TO PUSH SIDE OF DOOR
SEE PAGE #5

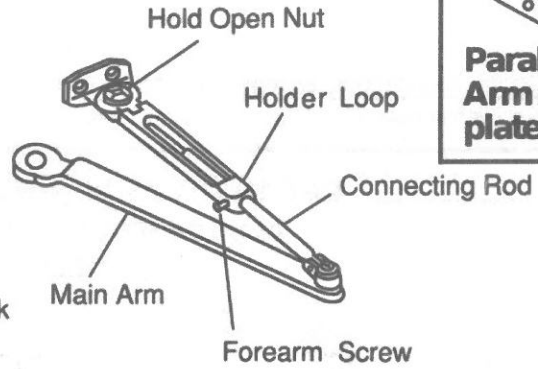


R7_7_13

Components



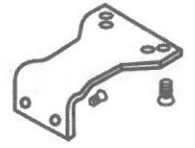
Closer Body



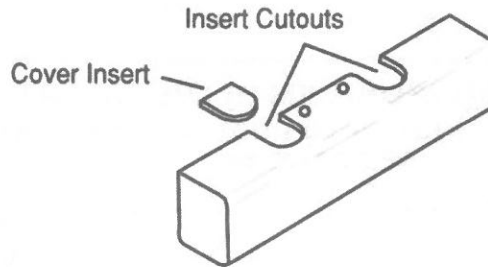
Closer Arm



Screw Pack



Parallel Arm Adaptor plate



Standard Full Cover

Preparation for Fasteners				
		Fasteners	Door or Frame	Drill- Sizes
Standard	#14 type "A" screw Arm: 1-1/4" (32 mm) Closer: 1-1/2" (38 mm)		Wood	7/32" (5.50mm)
	1/4" -20 machine screw		Metal	Drill: #7 (.201" dia.) Tap: 1/4" -20
Optional	Sex nuts and bolts		Hollow Metal	9/32" (7.00mm) through 3/8" (9.50mm) on door opposite to closer
			Aluminum or Wood	3/8" (9.50mm) through

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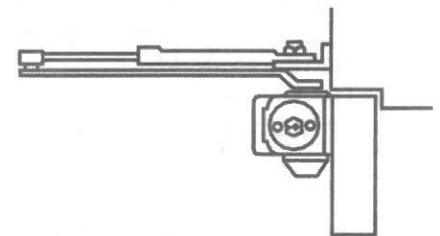
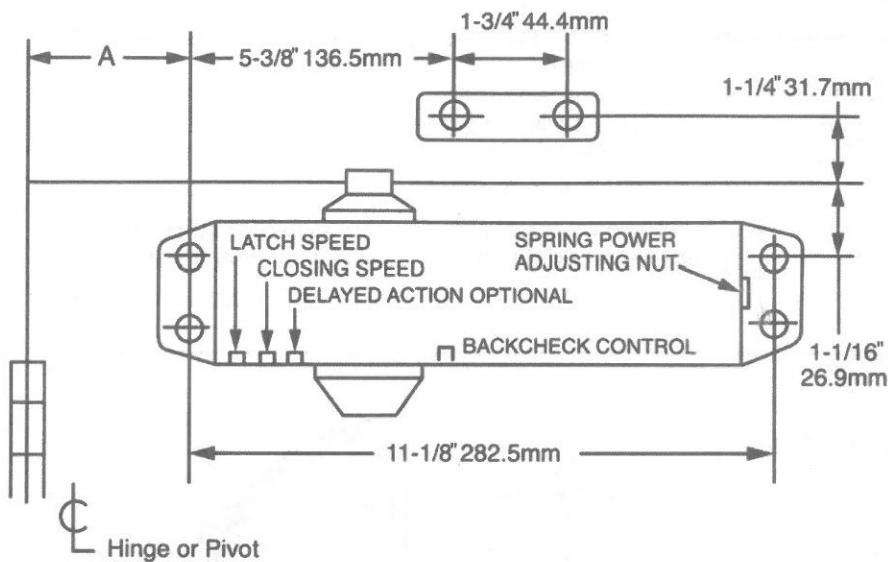
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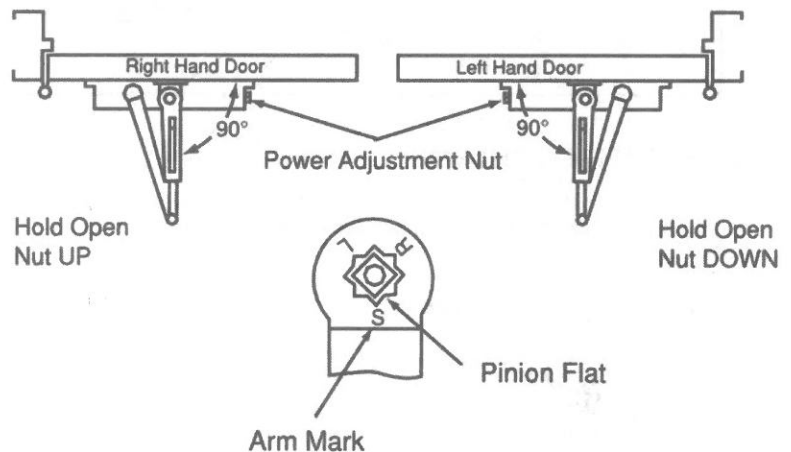
Optional BF/DA

Installation Instructions for REGULAR ARM (PULL SIDE) Mount



Do Not Scale Drawing
Right Hand Door Shown
Same dimensions apply for Left
Hand Door measured from centerline
of pivot point

OPENING	DIM.A
To 120°	7-3/32" 180mm
120° - 180°	3-15/16" 100mm



INSTALLATION INSTRUCTIONS

- Select degree of opening from table and use template dimensions shown above. Mark four (4) holes on door for door closer and two (2) holes on frame for arm shoe.
- Drill pilot holes in door and frame for #14 all-purpose screws or drill and tap for 1/4 - 20 machine screws.
- Install adjustable forearm/arm shoe assembly to frame using screws provided.
- Install main arm to top pinion shaft using screw provided.
- Mount closer on door using screws provided. **SPRING POWER ADJUSTING NUT MUST BE POSITIONED AWAY FROM HINGE EDGE.**
- Adjust length of adjustable forearm so that adjustable forearm is perpendicular to frame when assembled to preloaded main arm (illustration above) Secure forearm to main arm with screw provided.
- Snap pinion cap over shaft at bottom of closer (When using full cover, pinion cap is not necessary)
- Adjust closing speed, back check control and spring power of door, following instructions as shown page 6 or "How To Adjust Spring Power"
- Remove hold open bracket and holder loop from arm assembly. Fasten hold open bracket and holder loop to frame. **Hold Open Nut UP** on Right Hand door. **Hold Open Nut DOWN** on Left Hand door.

HOW TO ADJUST SPRING POWER

BE NOTED THAT 900 SERIES ARE SET DOWN AS DOOR CLOSER SIZE 3 FROM THE FACTORY EX : SIZE 2 CLOSER CAN BE MADE BY ROTATING SPRING ADJUSTING NUT ANTI-CLOCKWISE 3 TURNS BECAUSE IT WAS SET DOWN AS SIZE 3 FROM THE FACTORY ORIGINALLY. ALSO IN A SAME WAY, SIZE 6 CLOSER CAN BE MADE BY ROTATING SPRING ADJUSTING NUT CLOCKWISE 9 TURNS.

DOOR CLOSER SIZE		CLOCKWISE TURNS OF ADJUSTING NUT		APPLICABLE DOOR SIZE		APPLICABLE DOOR WEIGHT
900-P/PDA (SIZE 1/2-6)	900-FBF/BPDA (SIZE 1/2-4)	900-P/PDA (SIZE 2-6)	900-FBF/BPDA (SIZE 1/2-4)	INTERIOR	EXTERIOR (SWING OUT)	
NOT RECOMMENDED USE 900-PBF/BFDA	1/2	N/A	• -9	28"(0.71m)	24"(0.51m)	22-33 Lbs (10-15kg)
NOT RECOMMENDED USE 900-PBF/BFDA	1	N/A	• -6	32"(0.81m)	28"(0.71m)	33-55 Lbs (15-30kg)
2	2	• -3	• -3	36"(0.91m)	32"(0.81m)	66-88 Lbs (30-45kg)
3	3	0 (FACTORY SET)	0 (FACTORY SET)	42"(1.07m)	38"(0.91m)	99-143 Lbs (45-85kg)
4	4	3	3	48"(1.22m)	42"(1.07m)	143-187 Lbs (65-85kg)
5	NOT RECOMMENDED USE 900-P/PDA	6	N/A	54"(1.371m)	48"(1.22m)	187-264 Lbs (85-120kg)
6	NOT RECOMMENDED USE 900-P/PDA	9	N/A	58"(1.47m)	52"(1.32m)	264-330 Lbs (120-150kg)

• -3 MEANS 3TURNS TO ANTI - CLOCKWISE

Hold Open Door Closers

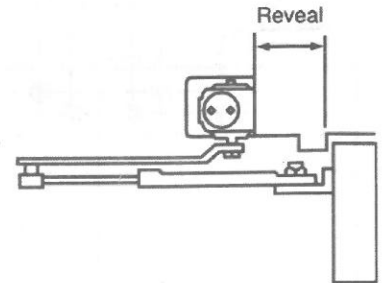
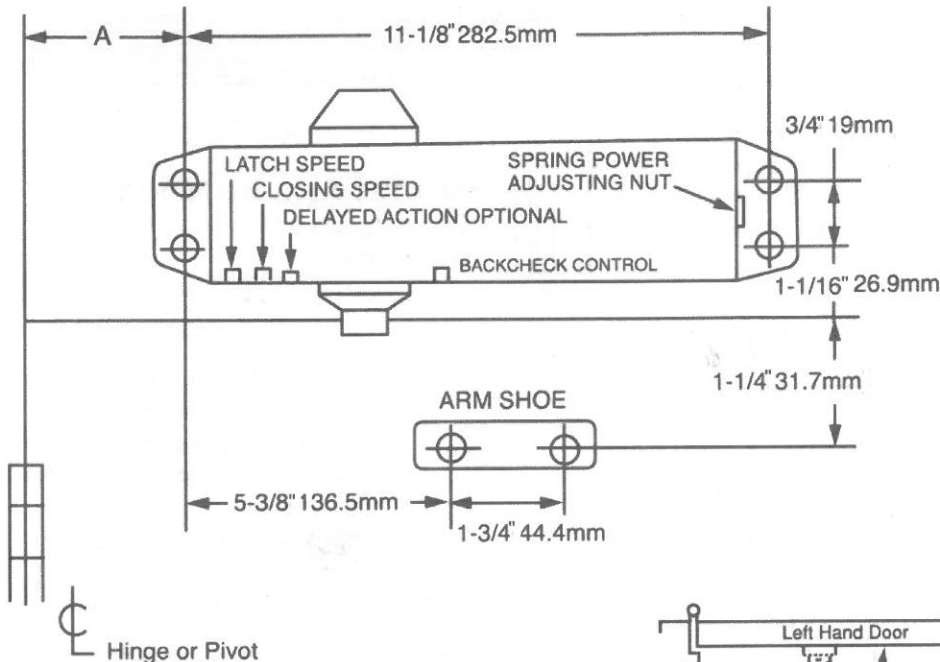
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Adjustable & Preset "Back-Check"

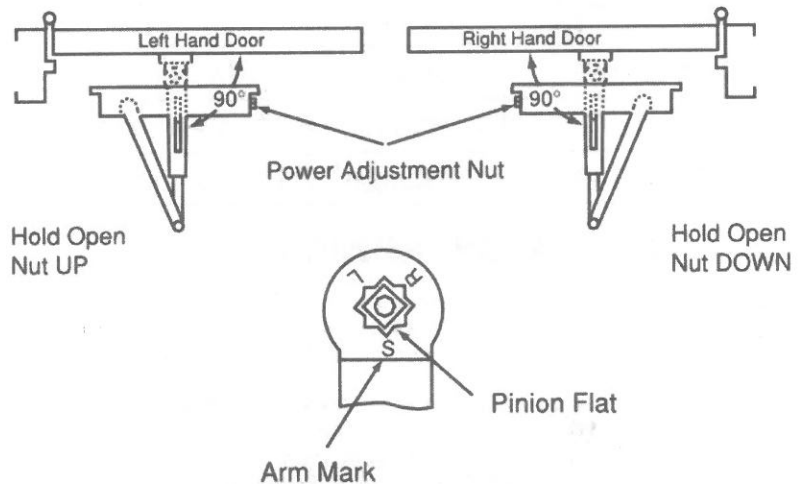
Optional BF/DA

Installation Instructions for TOP JAMB (PUSH SIDE) Mount



Do Not Scale Drawing
Left Hand Door Shown
Same dimensions apply for Right
Hand Door measured from centerline
of pivot point

OPENING	DIM.A
To 120°	7-3/32" 180mm
120° - 180°	3-15/16" 100mm



INSTALLATION INSTRUCTIONS

- Select degree of opening from table and use template dimensions shown in above. Mark four (4) holes on frame for closer and two (2) holes on door for arm shoe.
- Drill pilot holes in door and frame for #14 all-purpose screws or drill and tap for 1/4 - 20 machine screws.
- Install adjustable forearm/arm shoe assembly to door using screws provided.
- Install main Arm to top pinion shaft using screw provided.
- Mount closer body on frame using screws provided. **SPRING POWER ADJUSTING NUT MUST BE POSITIONED AWAY FROM HINGE EDGE.**
- Adjust length of adjustable forearm so that adjustable forearm is perpendicular to door when assembled to preloaded main arm (illustration above) Secure forearm to main arm with screw provided.
- Snap pinion cap over shaft at top of closer (When using full cover, pinion cap is not necessary)
- Adjust closing speed, back check control and spring power of door, following instructions as shown page 6 or "How To Adjust Spring Power"
- Remove hold open bracket and holder loop from arm assembly. Fasten hold open bracket and holder loop to door. **Hold Open Nut UP** on Left Hand door. **Hold Open Nut DOWN** on Right Hand door.

HOW TO ADJUST SPRING POWER

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 SIZE 6 CLOSER CAN BE MADE BY ROTATING SPRING ADJUSTING NUT CLOCKWISE 9 TURNS.

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NOT RECOMMENDED USE 900-PBF/BFDA	1/2	N/A	•-9	28"(0.71m)	24"(0.51m)	22-33 Lbs (10-15kg)
NOT RECOMMENDED USE 900-PBF/BFDA	1	N/A	•-6	32"(0.81m)	28"(0.71m)	33-55 Lbs (15-30kg)
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• -3 MEANS 3TURNS TO ANTI - CLOCKWISE

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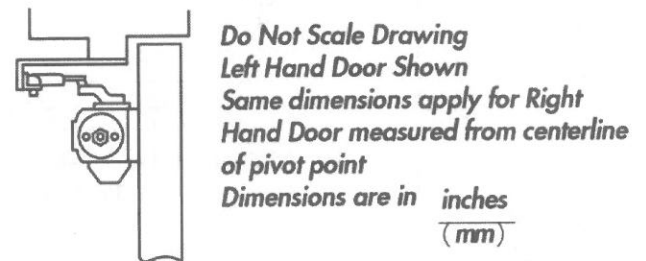
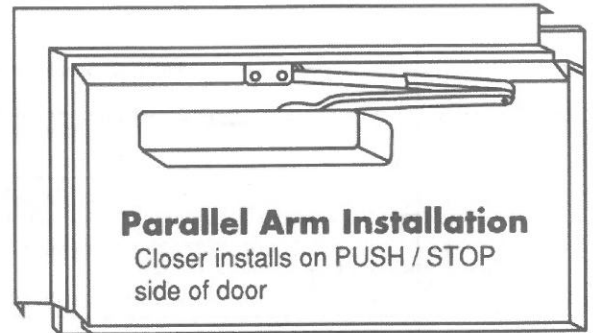
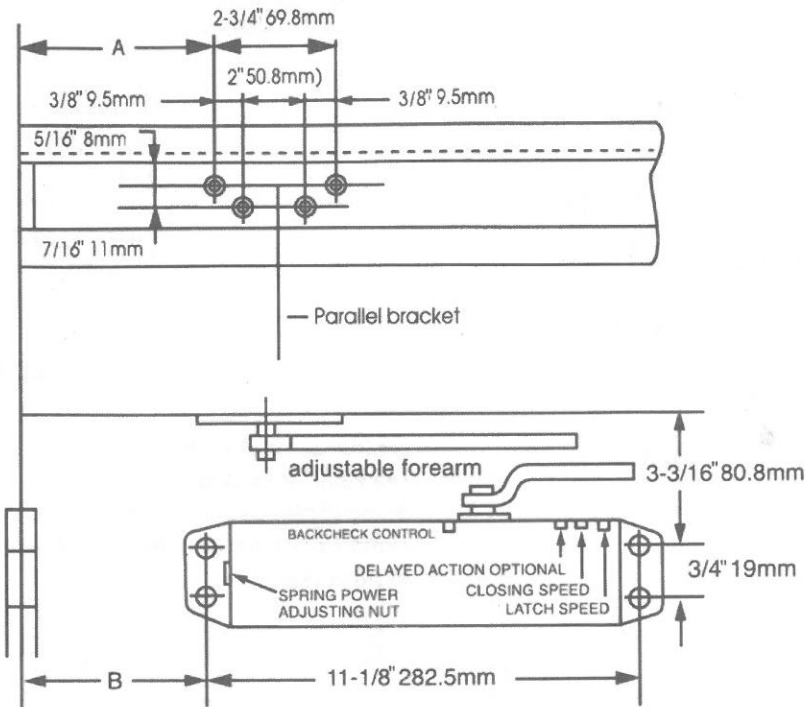
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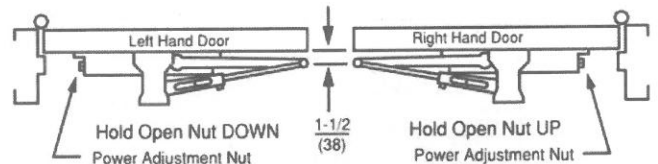
Adjustable & Preset "Back-Check"

Optional BF/DA

Installation Instructions for PARALLEL ARM (PUSH SIDE) Mount

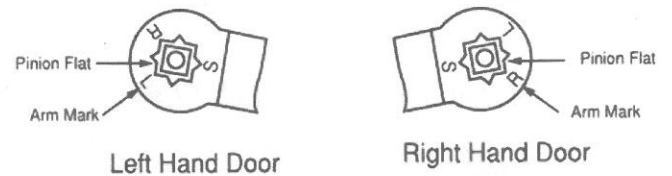


OPENING	DIM.A	DIM.B
To 120°	9-1/8" 241mm	6-1/8" 156mm
120° - 180°	5-7/8" 149.2mm	2-9/16" 65mm



INSTALLATION INSTRUCTIONS

- Select degree of opening from table and use template dimensions shown in above, mark four (4) holes on door for door closer and four (4) holes on underside of frame stop for bracket.
- Drill pilot holes in door and frame for #14 all-purpose screws of drill and tap for 1/4 - 20 machine screws.
- Mount closer on door using screws provided. **SPRING POWER ADJUSTING NUT MUST BE POSITIONED TOWARD HINGE EDGE.**
- Install Parallel Arm Bracket to frame using screws provided.
- Using a wrench on the square shaft at bottom of closer, rotate shaft approximately 45° toward hinge edge of door. Hold and place main arm of shaft on top of closer at proper index mark as illustrated.
FOR LEFT HAND DOOR "L" (illustration "A")
FOR RIGHT HAND DOOR "R" (illustration "B"). Tighten arm screw with lockwasher securely.
- Remove arm shoe from the forearm and discard (arm shoe is not used for parallel installation) and tighten screw securely.
- Adjust length of adjustable forearm so that main arm is 1-1/2" from inside face of door (in closed position).
- Snap pinion cap over shaft at bottom of closer (When using full cover, pinion cap is not necessary)
- Adjust closing speed, back check control and spring power of door, following instructions as shown page 6 or "How To Adjust Spring Power"
- Remove hold open bracket and holder loop from arm assembly. Assemble adaptor plate to hold open bracket. **Hold Open Nut DOWN on Left Hand door. Hold Open Nut UP on Right Hand door.** Fasten assembled adaptor plate and hold open bracket to soffit.



NOTE: TO install main arm, pinion shaft must be rotated in excess of 50° to permit alignment with proper arm mark.

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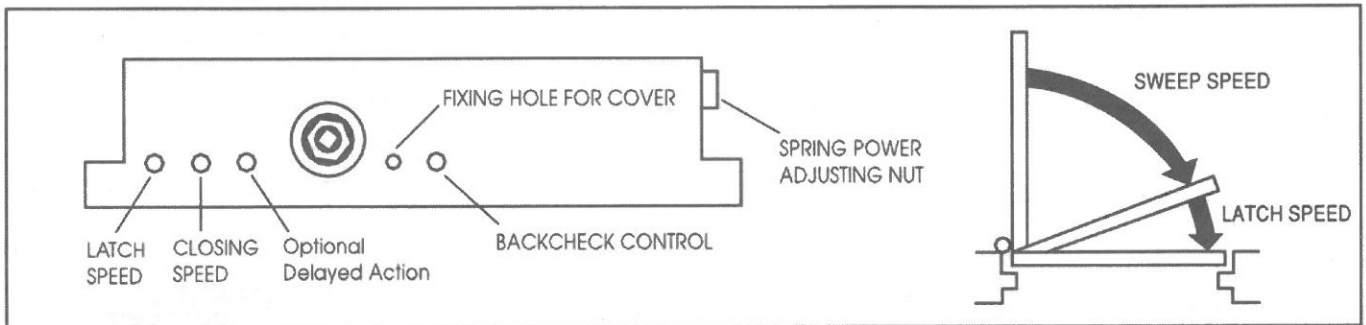
CLOSER ADJUSTMENT

CLOSING CYCLE

NOTE: Closing arcs ("CLOSE" and "LATCH") are controlled by two (2) separate speed adjusting valves. Adjust the CLOSING speed first, then adjust the LATCHING speed.

- "CLOSING" speed adjustment is accomplished by full rotations of the speed adjusting valve.
 - Turn the speed adjusting valve **CLOCKWISE** for a **SLOWER** closing speed.
 - Turn the speed adjusting valve **COUNTER-CLOCKWISE** for a **FASTER** closing speed.
- "LATCH" speed adjustment is accomplished by full rotations of the speed adjusting valve.
 - Turn the speed adjusting screw **CLOCKWISE** for a **SLOWER** closing speed.
 - Turn the speed adjusting screw **COUNTER-CLOCKWISE** for a **FASTER** closing speed.

CAUTION!! Do not turn speed adjusting valve more than two (2) full turns counter-clockwise from its factory set position, as two speed adjusting valves could become dislodged from the door closer body, resulting in the loss of internal fluid and failure of the device.



BACK CHECK CONTROL

- To increase back check intensity, turn back check control valve clockwise
- To decrease back check intensity, turn back check control valve counter-clockwise.

SPRING POWER CONTROL

- To increase opening force and closing force, turn the spring adjusting nut clockwise
- To decrease opening force and closing force, turn the spring adjusting nut counter-clockwise.

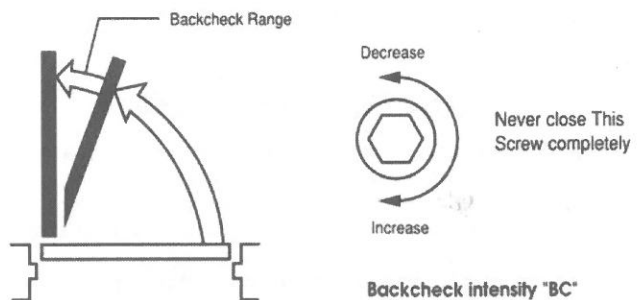
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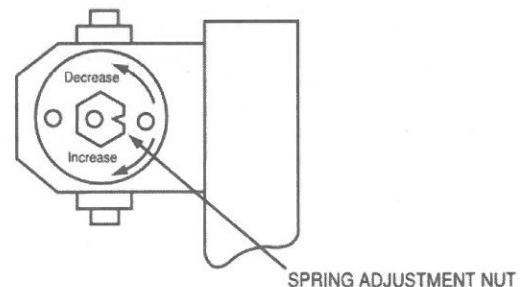
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• -3 MEANS 3TURNS TO ANTI - CLOCKWISE

OPENING CYCLE



ADJUSTABLE SPRING MODELS



NOTE: MAXIMUM ADJUSTMENT IS APPROXIMATELY 10 TURNS. DO NOT FORCIBLY EXTEND ADJUSTMENT BEYOND LIMITS.