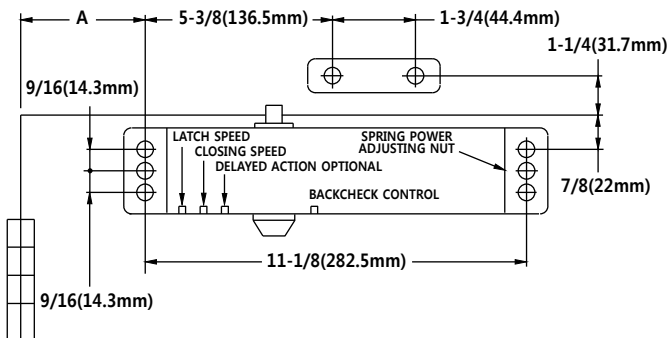
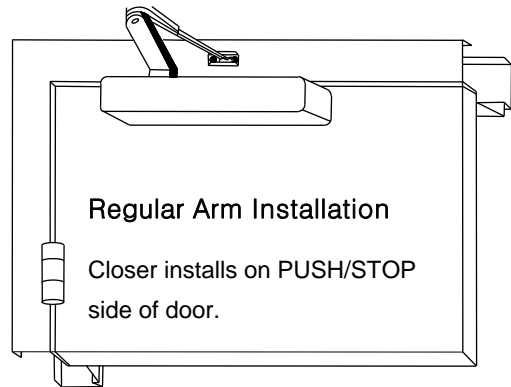


Surface Mounted
Adjustable & Preset "Back-Check"
900 Series
No Hold-Open/Hold-Open
Optional BF/DA

Installation Instructions for REGULAR ARM (PULL SIDE) Mounting



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

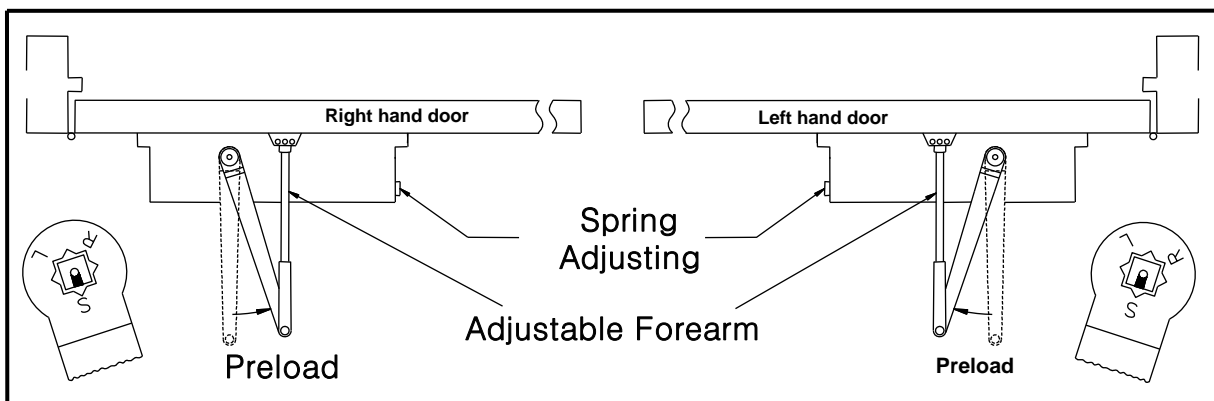


- Left hand door shown
- Right hand door opposite
- Dimensions are in inches
- Do not scale drawing

INSTALLATION INSTRUCTIONS

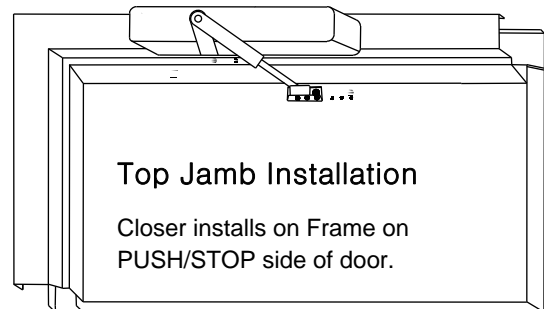
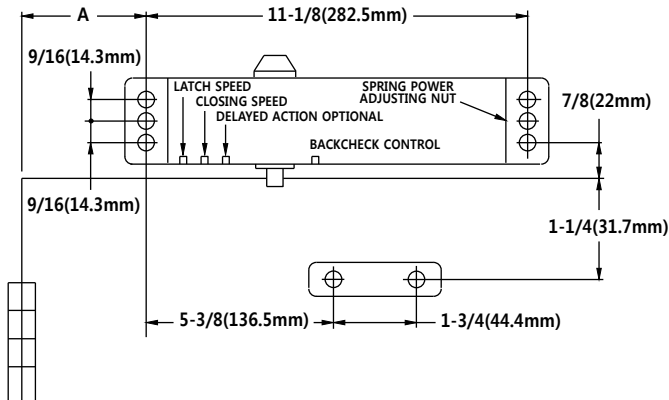
1. Select degree of opening from table and use template dimensions shown in above, mark six (6) holes on door for door closer and two (2) holes on frame for arm shoe.
2. Drill pilot holes in door and frame for #14 all-purpose screws or drill and tap for 1/4-20 machine screws.
3. Install adjustable forearm/arm shoe assembly to frame using screws provided.
4. Install main arm to top pinion shaft using screws provided.
5. Mount closer on door using screws provided. SPRING POWER ADJUSTING NUT MUST BE POSITIONED AWAY FROM HINGE EDGE.
6. Adjust length of adjustable forearm so that adjustable forearm is perpendicular to frame when assembled to preloaded main arm (illustration below) Secure forearm to main arm with screw provided.
7. Snap pinion cap over shaft at bottom of closer. (When using full cover, pinion cap is not necessary)
8. Adjust closing speed, back check control and spring power of door, following instructions as shown page 4.

Top View Typical Installation



Surface Mounted
Adjustable & Preset "Back-Check"
900 Series
No Hold-Open/Hold-Open
Optional BF/DA

Installation Instructions for TOP JAMB (PUSH SIDE) Mounting



Hinge Edge of Door

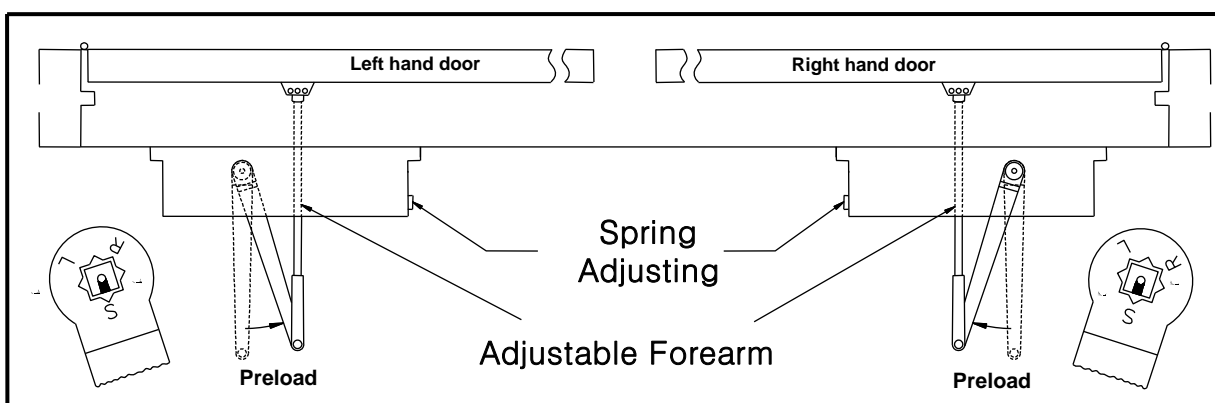
OPENING	DIM. A
To 120°	7-3/32(180mm)
120°~180°	3-15/16(100mm)

- Left hand door shown
- Right hand door opposite
- Dimensions are in inches
- Do not scale drawing

INSTALLATION INSTRUCTIONS

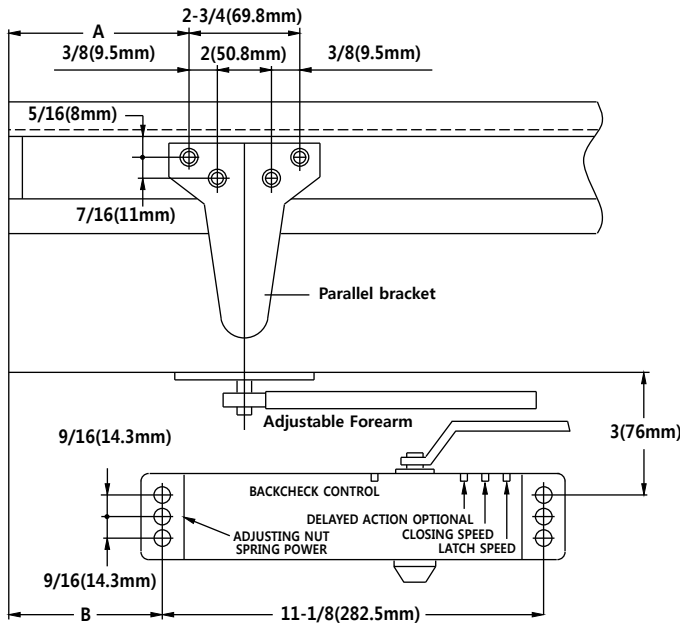
1. Select degree of opening from table and use template dimensions shown above, mark SIX (6) HOLES ON FRAME for closer and TOW (2) HOLES ON DOOR of arm shoe.
2. Drill pilot holes in door and frame for #14 all-purpose screws or drill and tap for 1/4-20 machine screws.
3. Install adjustable forearm/arm shoe assembly to door using screws provided.
4. Install main arm to top pinion shaft using screws provided.
5. Mount closer body on frame using screws provided. SPRING POWER ADJUSTING NUT MUST BE POSITIONED AWAY FROM HINGE EDGE.
6. Adjust length of adjustable forearm so that adjustable forearm is perpendicular to frame when assembled to preloaded main arm (illustration below). Secure forearm to main arm with screw provided.
7. Snap pinion cap over shaft on top of closer. (When using full cover, pinion cap is not necessary)
8. Adjust closing speed, back check control and spring power of door, following instructions as shown page 4.

Top View Typical Installation

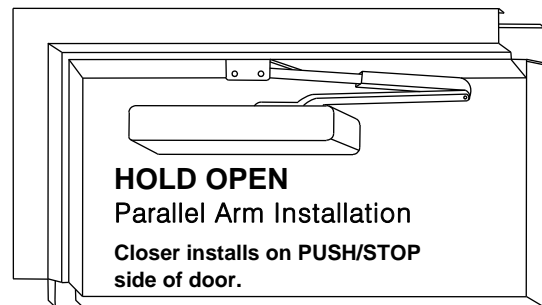
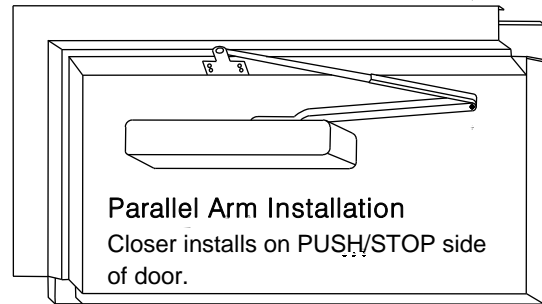


Surface Mounted
Adjustable & Preset "Back-Check"
900 Series
No Hold-Open/Hold-Open
Optional BF/DA

Installation Instructions for PARALLEL ARM (PUSH SIDE) Mounting



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)

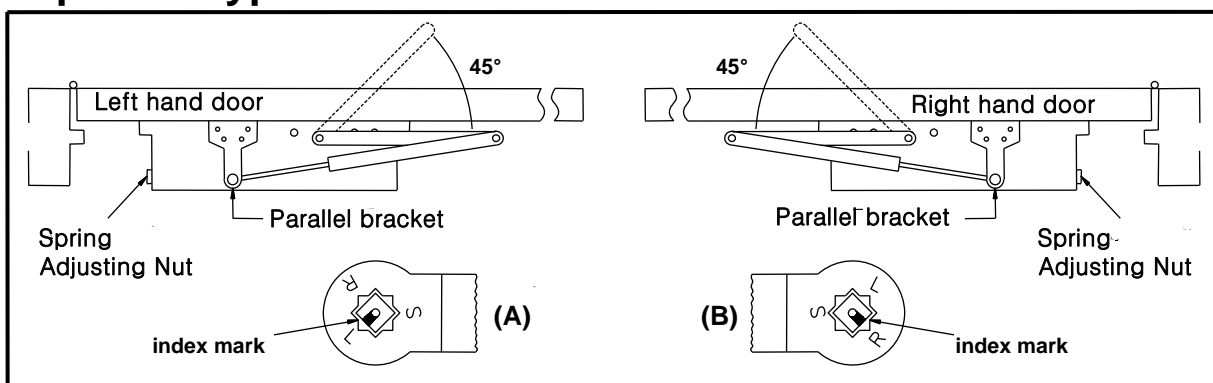


- Left hand door shown
- Right hand door opposite
- Dimensions are in inches
- Do not scale drawing

INSTALLATION INSTRUCTIONS

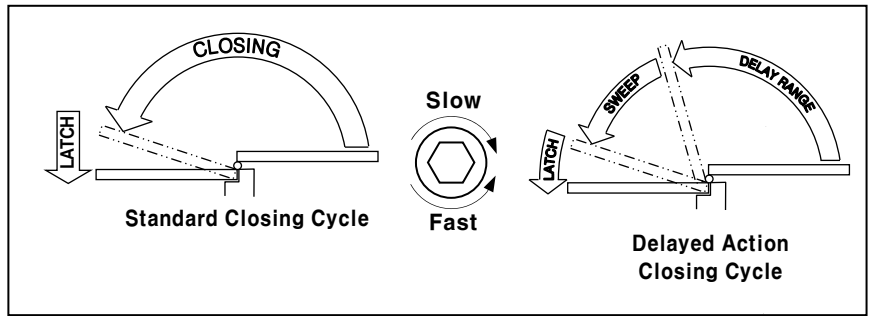
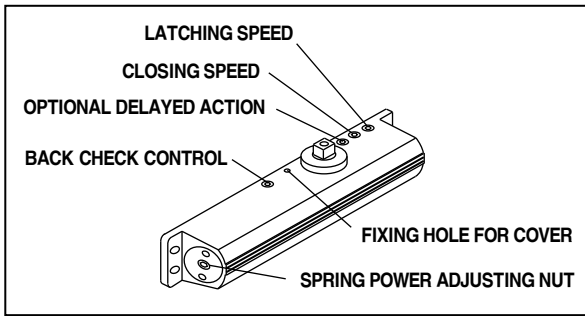
1. Select degree of opening from table and use template dimensions shown in above, mark six (6) holes on door for door closer and four (4) holes underside of frame for bracket.
2. Drill pilot holes in door and frame for #14 all-purpose screws or drill and tap for 1/4-20 machine screws.
3. Mount closer on door using screws provided. SPEED POWER ADJUSTING NET MUST BE POSITIONED TOWARD HINGE EDGE.
4. Install Parallel Arm Bracket to frame using screws provided.
5. 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 lock washer securely.
6. Remove arm shoe from the forearm and discard (arm shoe is not used for parallel installation) and tighten screw securely.
7. Adjust length of adjustable forearm so that adjustable forearm is parallel to frame.
8. Snap pinion cap over shaft at bottom of closer (When using full cover, pinion cap is not necessary)
9. Adjust closing speed, back control and spring power of door, following instructions as shown page 4.

Top View Typical Installation



Surface Mounted
Adjustable & Preset "Back-Check"
900 Series
No Hold-Open/Hold-Open
Optional BF/DA

CLOSER ADJUSTMENT



CLOSING SPEED CONTROLS

NOTE: Closing arcs ("CLOSE" and "LATCH") are controlled by two (2) separate speed adjusting valves adjust the Adjust the CLOSING speed first, and 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 SWEEP arc closing speed.
 - Turn the speed adjusting valve COUNTER–CLOCKWISE for a FASTER CLOSE arc closing speed.
- "LATCH" speed adjustment is same manner as. ("CLOSE")

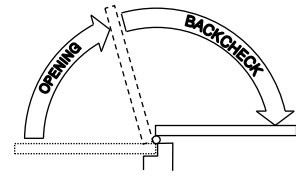
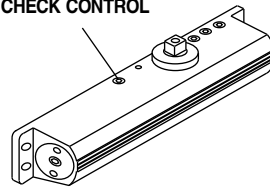
CAUTION!! Do not turn speed adjusting valve more than two(2) full turns counter-clockwise from its order not back the valves out of closer or a leak will result.

BACK CHECK CONTROL

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

* IF NEEDED THIS B.C FUNCTION, DO NOT CLOSE THE DELAYED ACTION VALVE.

BACK CHECK CONTROL

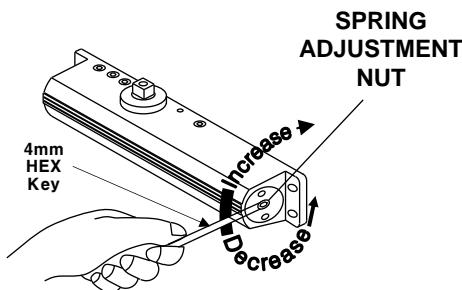


SPRING POWER CONTROL

- 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.

HOW TO ADJUST SPRING POWER

BE NOTED THAT 900 SERIES ARM 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.



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

DOOR CLOSER SIZE		CLOCKWISE TURNS OF ADJUSTING NUT		APPLICABLE DOOR SIZE		APPLICABLE DOOR WEIGHT
900-BC/DA (SIZE: 2~6)	900-BF/BF.DA (SIZE: BF~4)	900-BC/DA (SIZE: 2~6)	900-BF/BF.DA (SIZE: BF~4)	INTERIOR	EXTERIOR (SWING OUT)	
NOT RECOMMENDED USE 900-BF/BF.DA	1/2	N/A	*-3	28" (0.71m)	24" (0.61m)	22~33Lbs (10~15kg)
NOT RECOMMENDED USE 900-BF/BF.DA	1	N/A	0 (CFACTORY SET)	32" (0.81m)	28" (0.71m)	33~66Lbs (15~30kg)
2	2	*-4	3	38" (0.91m)	32" (0.81m)	66~99Lbs (30~45kg)
3	3	0 (CFACTORY SET)	6	42" (1.07m)	38" (0.91m)	99~143Lbs (45~65kg)
4	4	2	9	48" (1.22m)	42" (1.07m)	143~187Lbs (65~85kg)
5	NOT RECOMMENDED USE 900-BC/DA	4	N/A	54" (1.37m)	48" (1.22m)	187~264Lbs (85~120kg)
6	NOT RECOMMENDED USE 900-BC/DA	7	N/A	58" (1.47m)	54" (1.37m)	264~330Lbs (120~150kg)

* - 3 MEANS 3 TURNS TO ANTI - CLOCKWISE