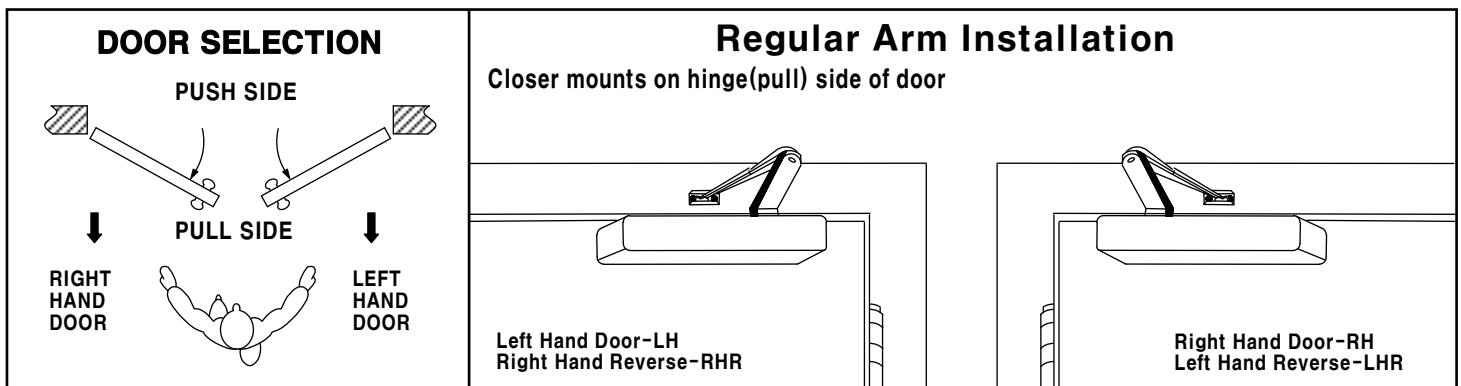


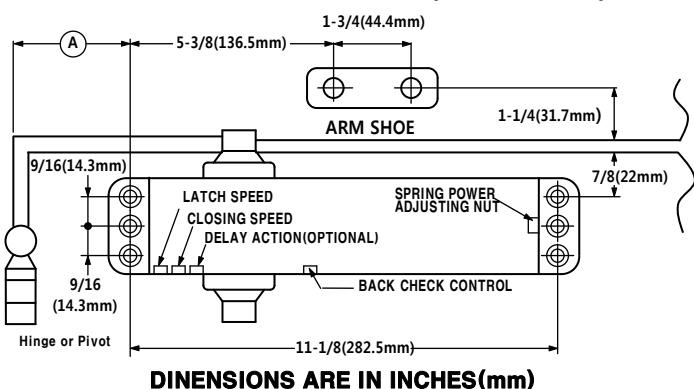
# Installation Instructions

Model 70 Series  
 Adjustable power size(2-6)  
 Adjustable Back Check  
 Optional Barrier Free(1/2-4)  
 Optional DA & BF/DA

## REGULAR ARM (PULL SIDE) Mounting



### RIGHT HAND DOOR SHOWN(FULL SIDE)



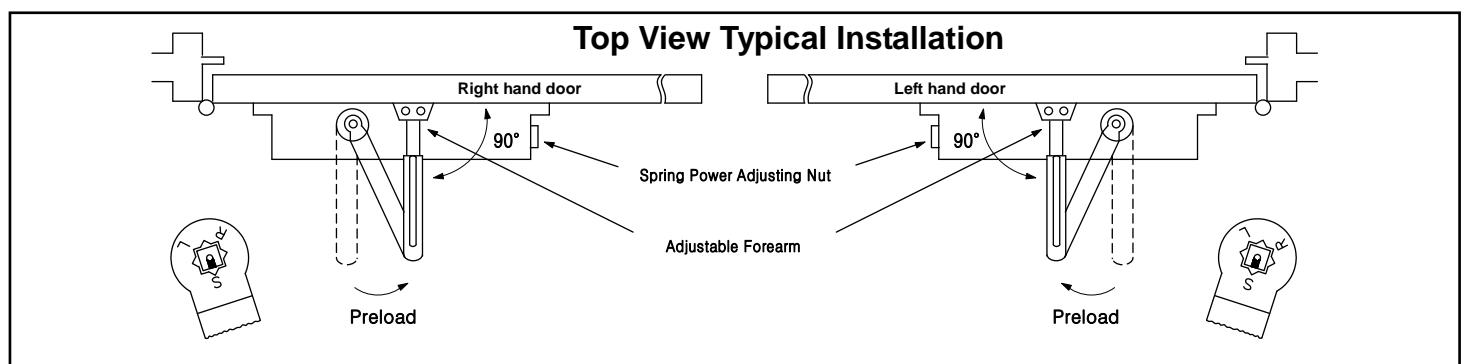
Optional BF.DA & BF/DA  
 BF Closer can be adjusted from power size  $\frac{1}{2}$  turn 4 intended for use where doors are operated by the elderly or handicapped.

### DOOR OPENING ANGLE

| OPENING    | DIMENSION A    |
|------------|----------------|
| To 120°    | 7-3/32(180mm)  |
| 120° -180° | 3-15/16(100mm) |

### INSTALLATION SEQUENCE

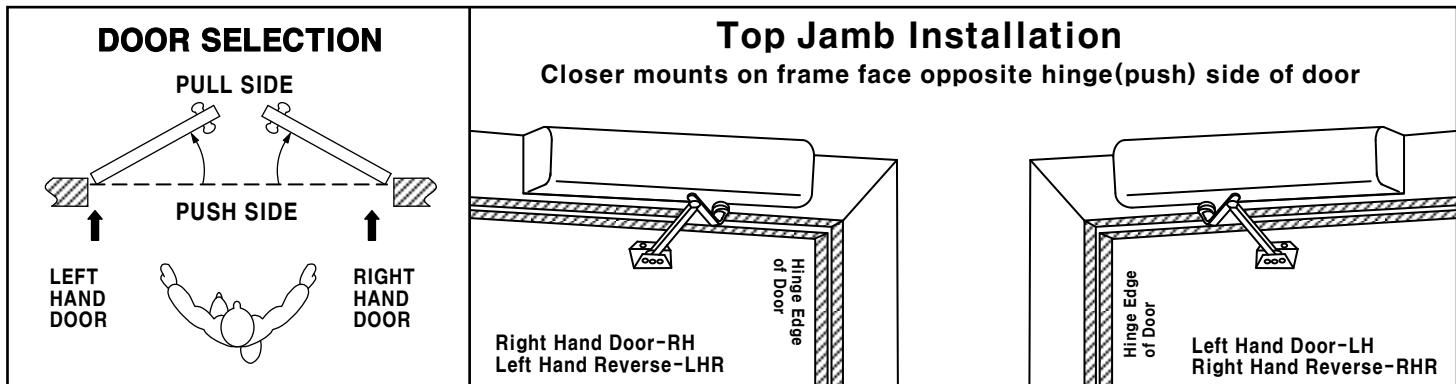
1. Select type of installation desired from above figure and degree of opening from table and use template dimensions shown in above, mark FORE(4) HOLES ON DOOR for door closer and TWO(2) HOLES ON FRAME for arm shoe.
2. Drill pilot holes in door and frame for #14 all-purpose screws or drill and tap for  $\frac{1}{4}$ -20 machine screws.
3. Install adjustable forearm/arm shoe assembly to frame using screws provided.
4. Install main arm to top pinion shaft using screw 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. Adjust closing & latching speed, back check control and spring power of door, following instructions as shown page 4.
8. Slide cover insert into the un-used cutout in cover. Install cover securely using screw provided.



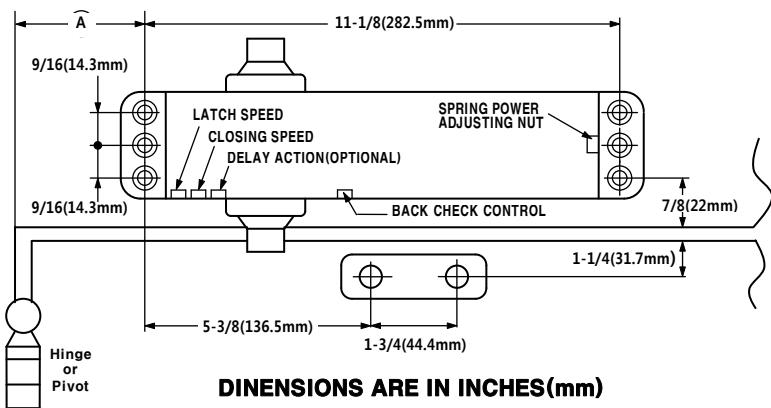
# Installation Instructions

Model 70 Series  
 Adjustable power size(2-6)  
 Adjustable Back Check  
 Optional Barrier Free(1/2-4)  
 Optional DA & BF/DA

## TOP JAMB (PUSH SIDE) Mounting



### LEFT HAND DOOR SHOWN(FUSH SIDE)

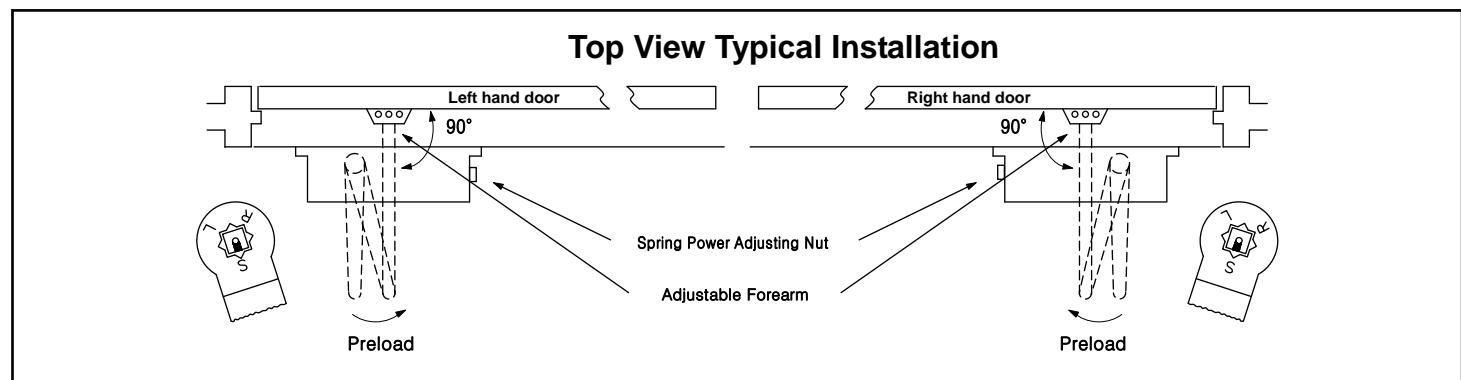


RIGHT HANDE DOOR OPPOSITE  
 DO NOT SCALE DRAWING

| DOOR OPENING ANGLE |                |
|--------------------|----------------|
| OPENING            | DIMENSION A    |
| To 120°            | 7-3/32(180mm)  |
| 120° -180°         | 3-15/16(100mm) |

### INSTALLATION SEQUENCE

1. Select type of installation desired from above figure and degree of opening from table and use template dimensions shown in above, mark FORE(4) HOLES ON FRAME for closer and TWO(2) HOLES ON DOOR 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 door using screws provided.
4. Install main arm to top pinion shaft using screw provided.
5. Mount closer body on frame using screws provided. SPRING POWER ADJUSTING NUT MUST BE POSITIONED AWAY FOROM HINGE EDGE.
6. Adjust length of adjustable forearm so that adjustable forearm is perpendicular to door when assembled to preloaded main arm (illustration below). Secure forearm to main arm with screw provided.
7. Adjust closing & latching speed, back check control and spring power of door, following instructions as shown page 4.
8. Slide cover insert into the un-used cutout in cover. Install cover securely using screw provided.

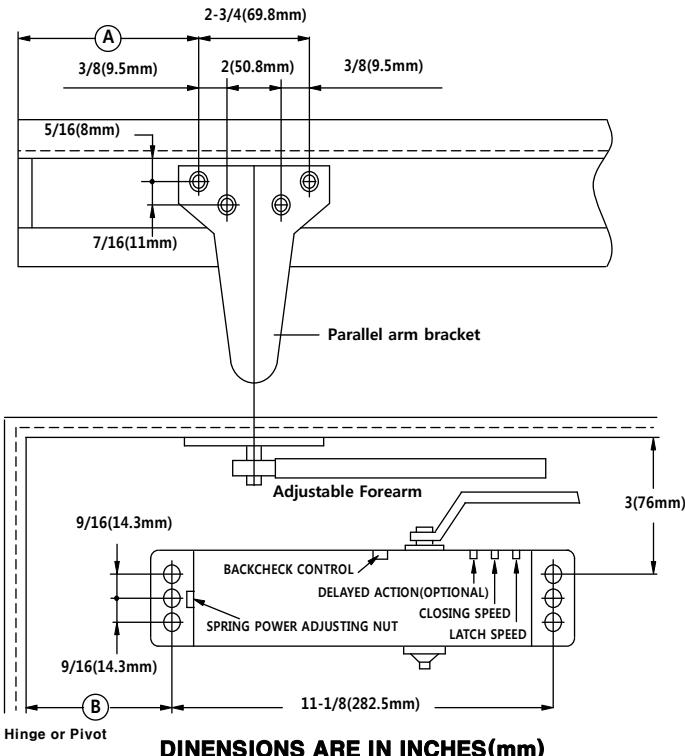


# Installation Instructions

Model 70 Series  
Adjustable power size(2-6)  
Adjustable Back Check  
Optional Barrier Free(1/2-4)  
Optional DA & BF/DA

## PARALLEL (PUSH SIDE) Mounting

LEFT HAND DOOR SHOWN(FUSH SIDE)

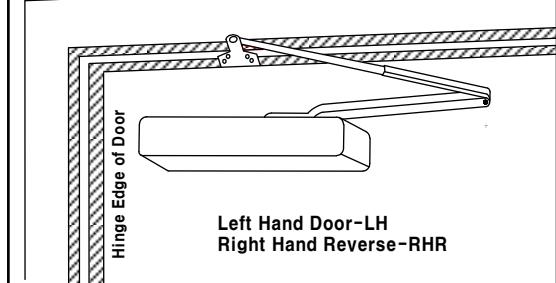


### IMPORTANT

PARALLEL ARM MOUNTING SHOULD BE  
INSTALLED ON PUSH SIDE OF DOORS FOR BOTH OF  
RIGHT & LEFT DOOR BECAUSE OF DOOR CLOSER  
STRUCTURE

### Parallel Arm Installation

Closer mounts on hinge(pull) side of door



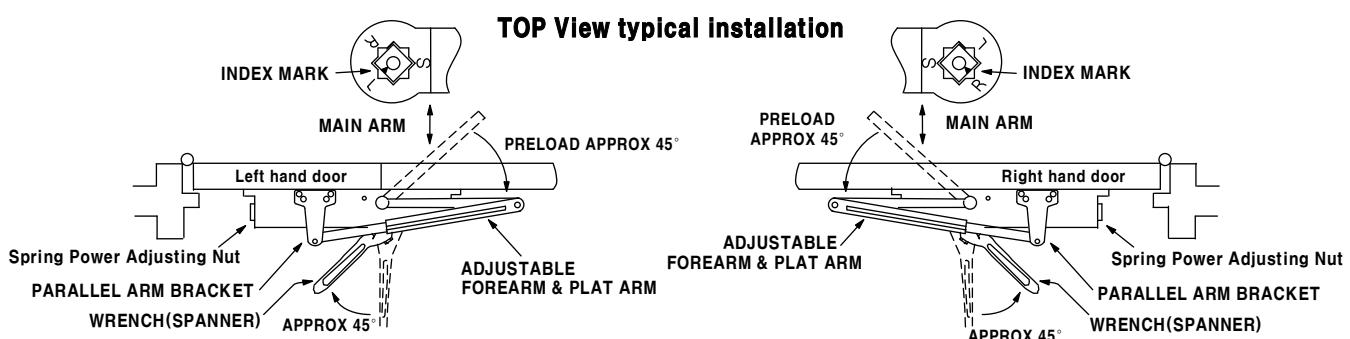
### DOOR OPENING ANGLE

| OPENING    | DIMENSION A    | DIMENSION B  |
|------------|----------------|--------------|
| To 120°    | 9-1/8(241mm)   | 6-1/8(156mm) |
| 120° -180° | 5-7/8(149.2mm) | 2-9/16(65mm) |

### INSTALLATION SEQUENCE

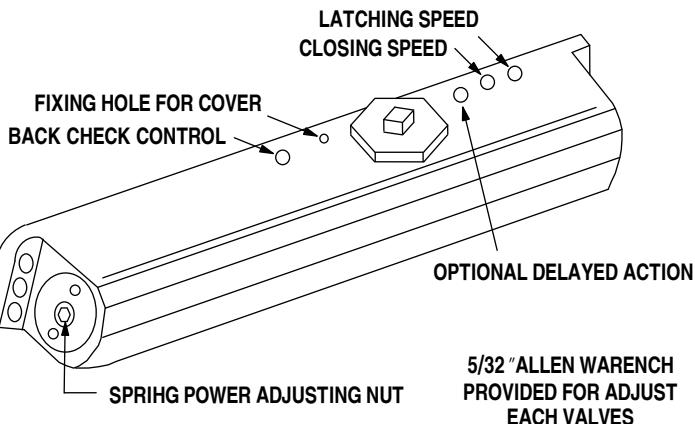
1. Select type of installation desired from above figure and degree of opening from table and use template dimensions shown in above, mark FORE(4) HOLES ON DOOR for door closer and fore(4) holes underside of frame for bracket.
2. Drill pilot holes in door and frame for #14 all-purpose screws or drill and tap for  $\frac{1}{4}$ -20 machine screws.
3. Mount closer on door using screws provided. SPRING POWER ADJUSTING NUT MUST BE POSITIONED TO 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 lockwasher 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. Adjust closing & latching speed, back check control and spring power of door, following instructions as shown page 4.
9. Slide cover insert into the un-used cutout in cover. Install cover using screw provided.

### TOP View typical installation

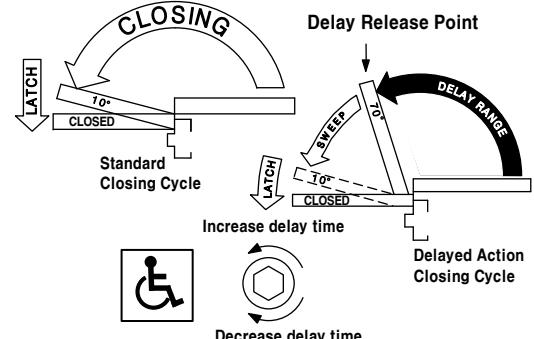


# CLOSER ADJUSTMENT

**Model 70 Series**  
**Adjustable power size(2-6)**  
**Adjustable Back Check**  
**Optional Barrier Free(1/2-4)**  
**Optional DA & BF/DA**



## Closing Speed Controls & Delayed Action



※ IF NEEDED THIS D.A. FUNCTION, DO NOT CLOSE THE BACK CHECK VALVE

## Closing Speed Controls

**NOTE:** Closing arcs ("SWEEP" and "LATCH") are controlled by two (2) separate speed adjusting valves

Adjust the CLOSING speed first, then adjust the LATCHING speed.

1. "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.

2. "LATCH" speed adjustment is same manner as. "CLOSING" speed adjustment

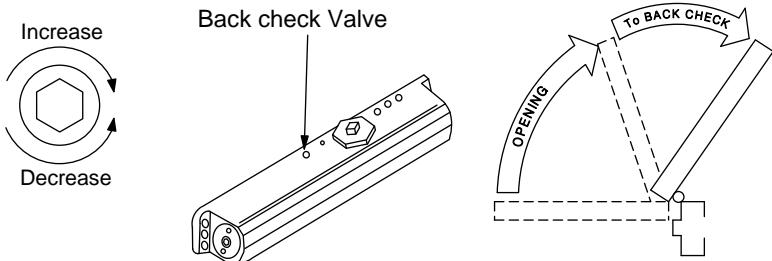
**CAUTION!!** Do not turn speed adjusting valve more than two(2) full turns counter-clockwise from its factory set position, in order not to back the valves out of closer or a leak will result.

## 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.

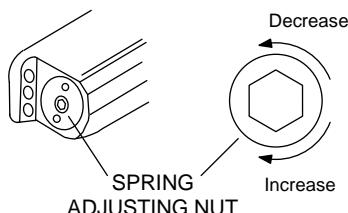


- NEVER close this valve completely

Opening Cycle

## 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 anticlockwise.



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

## HOW TO ADJUST SPRING POWER

BE NOTED THAT 70 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.

| DOOR CLOSER SIZE                | CLOCKWISE TURNS OF ADJUSTING NUT | APPLICABLE DOOR SIZE                         | APPLICABLE DOOR WEIGHT                          |
|---------------------------------|----------------------------------|--|---|
| 70-BC/DA (SIZE 2-6)             | 70-BF/BC.DA (SIZE 1/2-4)         | 70-BC/DA (SIZE 2-6) 70-BF/BC.DA (SIZE 1/2-4) | INTERIOR EXTERIOR (SWING OUT)                   |
| NOT RECOMMENDED USE 70-BF/BC.DA | 1/2                              | N/A  | 28 "(0.71m) 24 "(0.61m) 22-33 Lbs (10-15kg)     |
| NOT RECOMMENDED USE 70-BF/BC.DA | 1                                | N/A  | 32 "(0.81m) 28 "(0.71m) 33-66 Lbs (15-30kg)     |
| 2                               | 2                                | •-3  | 36 "(0.91m) 32 "(0.81m) 66-99 Lbs (30-45kg)     |
| 3                               | 3                                | (FACTORY SET)                                | 42 "(1.07m) 36 "(0.91m) 99-143 Lbs (45-85kg)    |
| 4                               | 4                                | 3  | 48 "(1.22m) 42 "(1.07m) 143-187 Lbs (65-85kg)   |
| 5                               | NOT RECOMMENDED USE 70-BC/DA     | 6  | 54 "(1.37m) 48 "(1.22m) 187-264 Lbs (85-120kg)  |
| 6                               | NOT RECOMMENDED USE 70-BC/DA     | 9  | 58 "(1.47m) 52 "(1.32m) 264-330 Lbs (120-150kg) |

• - 3 MEANS 3 TURNS TO ANTI - CLOCKWISE