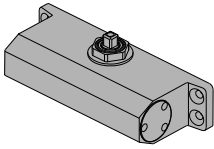


# SC90 SERIES

## ARCHITECTURAL DIAGRAMS



### SC90 Series

Designed for light-duty interior applications the Falcon SC90 closer ensures smooth, reliable operation, while meeting ADA accessibility requirements. The SC90 is backed by a ten-year warranty and is preset for easy installation.

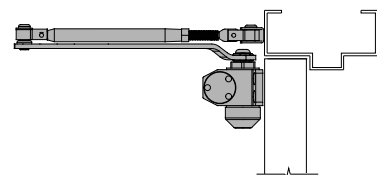
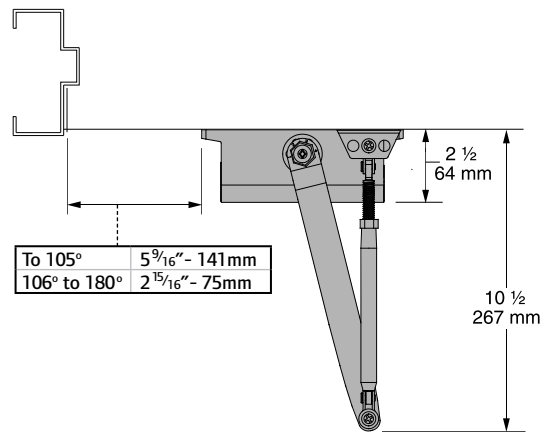
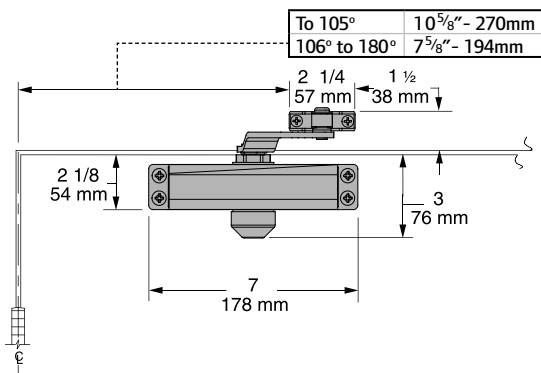
### Standard Features

- Meets ANSI A117.1
- ANSI/BHMA A156.4, Grade 3
- UL Listed
- Closer mounts hinge side, top jamb or parallel arm when either the Rw/PA or Hw/PA arm is specified.
- Fixed sizes 1, 3 & 4
- Single piece cast aluminum body
- Non-handed for left or right swinging doors
- Separate adjustable general speed and latch speed
- Heat-treated steel piston
- Heat-treated pinion
- UL 10C approved fluid
- Universal screw pack
- 10-year warranty

### Listings and Certifications

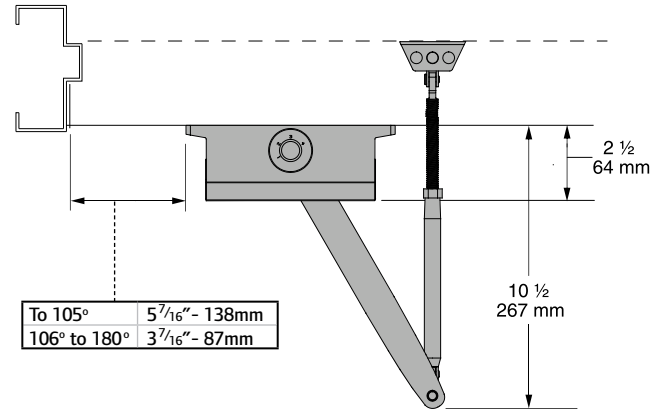
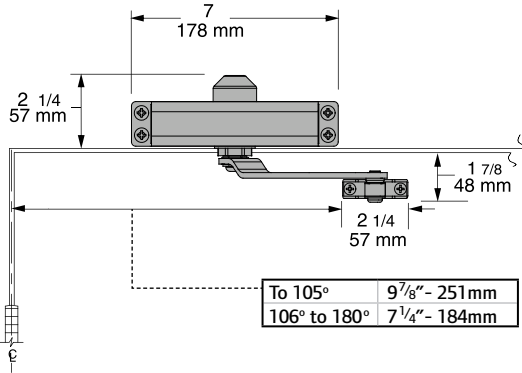
The Falcon SC90 Series is UL approved and compliant with the UL 10C and UBC 7-2 (1997) fire test. Additionally the SC90 Series is designed to meet the American Disabilities Act (ADA) and ANSI A117.1. The SC90 Series is ANSI/BHMA A156.4, Grade 3 certified.

### SC91 Hinge (Pull Side)

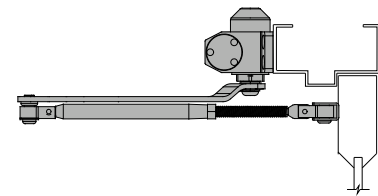


- Butt Hinges** should not exceed 5" (127mm) in width.
- Auxiliary Stop** is recommended at hold-open point or where a door cannot swing 180°.
- Reveal** should not exceed 3/4" (19mm) for regular arm or hold-open arm.
- Clearance** of 2 1/2" (64mm) behind door required for 90° installation.

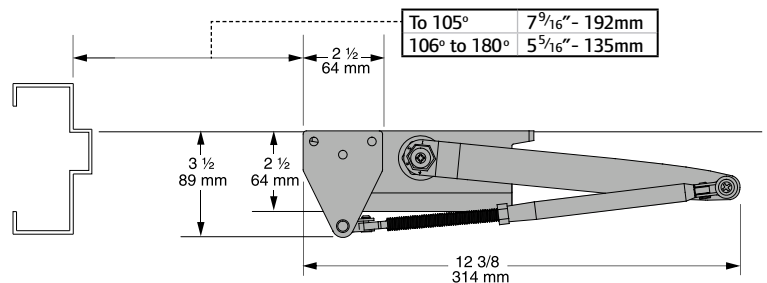
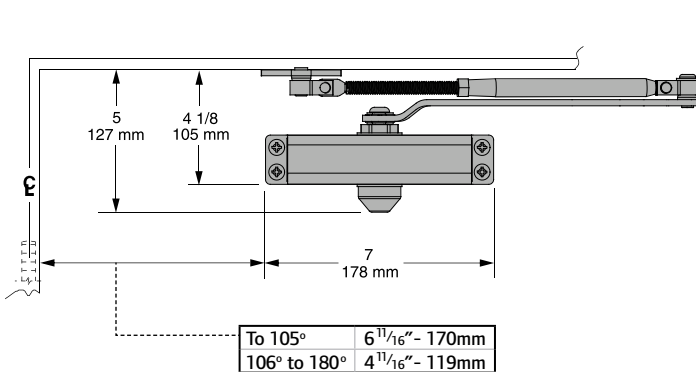
**SC91 Top Jamb (Push Side)**



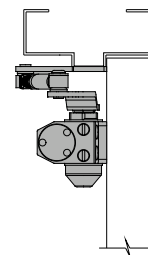
**Butt Hinges** should not exceed 5" (127mm) in width.  
**Auxiliary Stop** is recommended at hold-open point or where a door cannot swing 180°.  
**Reveal** should not exceed 3<sup>1</sup>/<sub>4</sub>" (83mm) for regular arm or hold-open arm.



**SC91 Parallel (Push Side)**

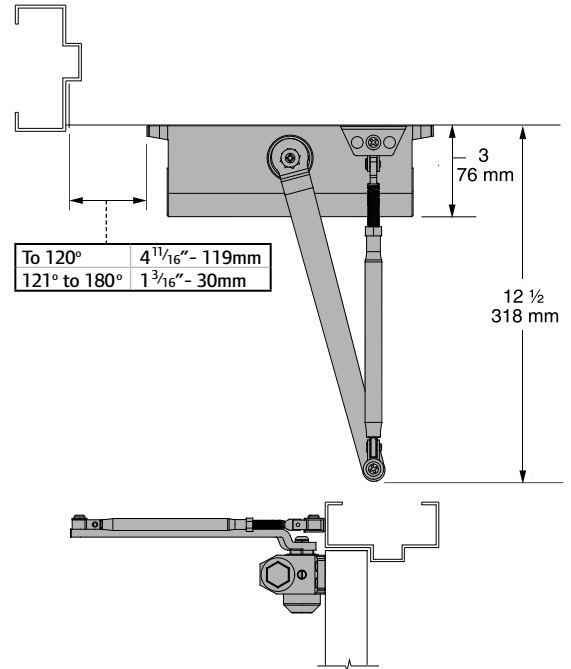
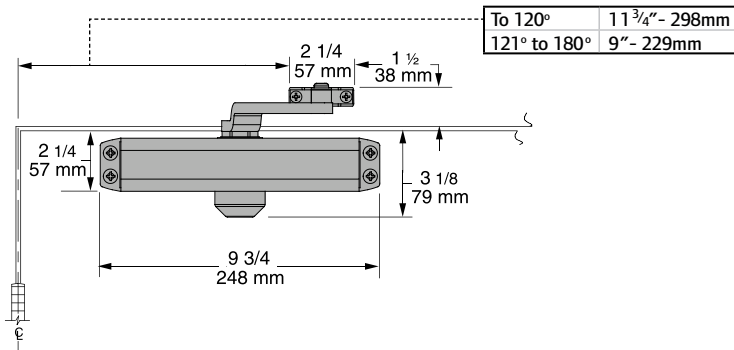


**Butt Hinges** should not exceed 5" (127mm) in width.  
**Auxiliary Stop** is recommended at hold-open point or where a door cannot swing 180°.



# SC90 SERIES ARCHITECTURAL DIAGRAMS

## SC93/94 Hinge (Pull Side)



**Butt Hinges** should not exceed 5" (127mm) in width.

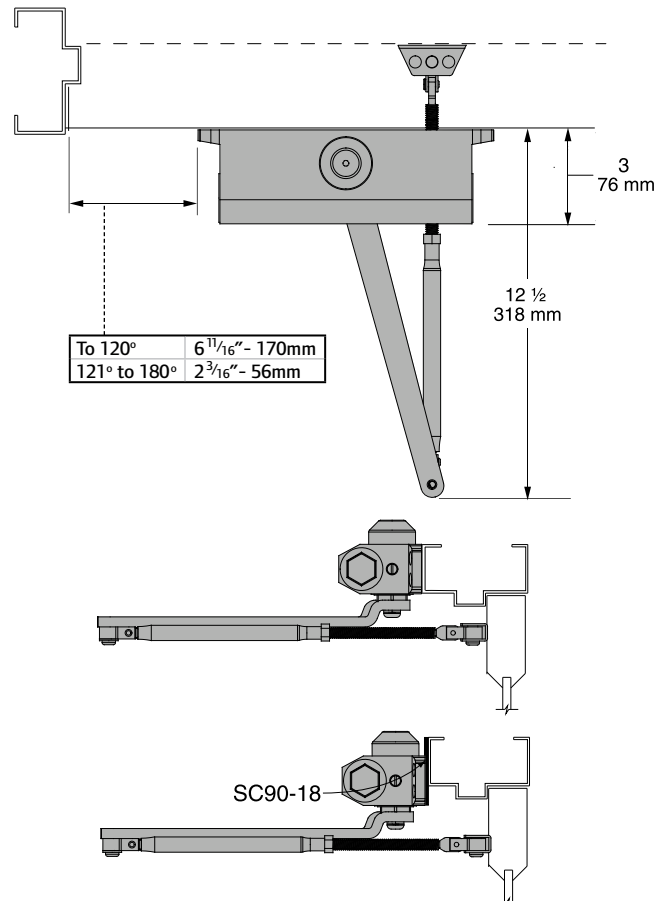
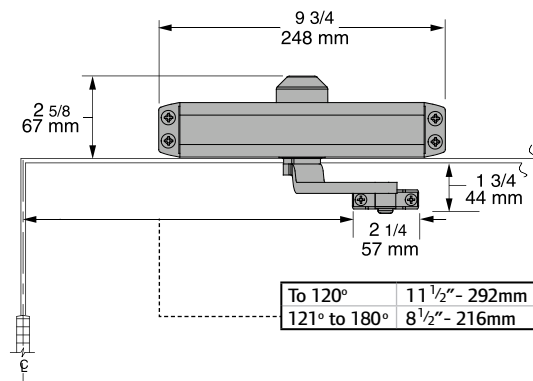
**Auxiliary Stop** is recommended at hold-open point or where a door cannot swing 180°.

**Reveal** should not exceed 3/4" (19mm) for regular arm or hold-open arm.

**Clearance** of 3" (76mm) behind door required for 90° installation.

**Backcheck** closer with the backcheck option requires 105° mounting.

## SC93/94 Top Jamb (Push Side)



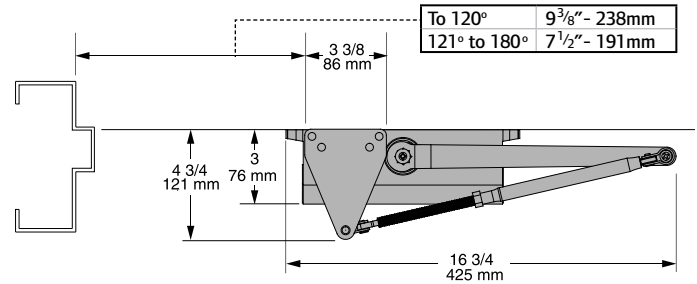
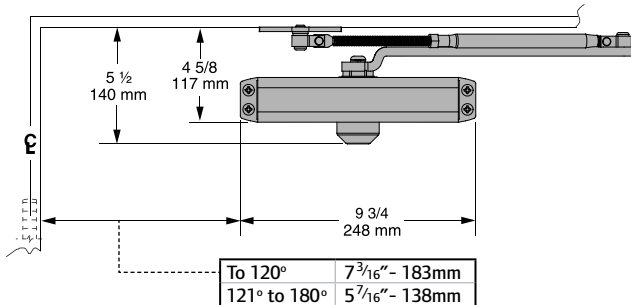
**Butt Hinges** should not exceed 5" (127mm) in width.

**Auxiliary Stop** is recommended at hold-open point or where a door cannot swing 180°.

**Reveal** should not exceed 3 1/4" (83mm) for regular arm or hold-open arm.

**Backcheck** closer with the backcheck option requires 105° mounting.

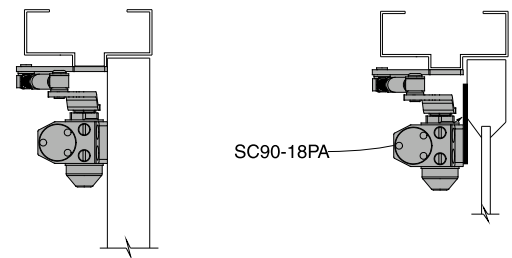
## SC93/94 Parallel (Push Side)



**Butt Hinges** should not exceed 5" (127mm) in width.

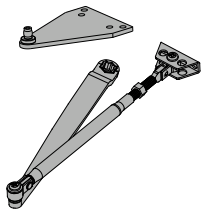
**Auxiliary Stop** is recommended at hold-open point or where a door cannot swing 180°.

**Backcheck** closer with the backcheck option requires 105° mounting.



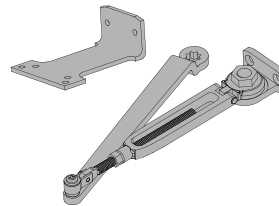
All SC90 Series closers come with standard arm and screw pack.

## Arm Types



### Regular Arm, SC90-3077PA

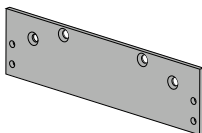
Non-handed arm with adjustable forearm assembly to accommodate a range of doors and frame reveal conditions. Mounts hinge side, top jamb or parallel arm. PA shoe included to allow installation in a parallel arm configuration.



### Hold-Open Arm, SC90-3049PA

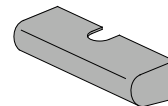
Optional, non-handed, hold open arm with adjustable forearm assembly to accommodate a range of doors and frame reveal conditions. Mounts hinge side, top jamb or parallel arm. PA shoe included to allow installation in a parallel arm configuration.

## Installation Accessories



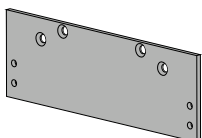
### Plate, SC90-18

Required for top jamb mounting where head frame is less than 1 3/4" (44mm) or flush ceiling conditions exists. Available only with SC93/94.



### Cover, SC90-72

Optional non-handed, slim plastic cover. Available only with SC93/94.



### Plate, SC90-18PA

Required for parallel arm mounting where top rail is less than 4 5/8" (117 mm), measured from the stop. Plate requires 2 1/8" (54mm) minimum top rail measured from stop. Available only with SC93/94.

## How to Order SC80 Series

		Cylinder	Size	Cover	Finish	Arm	Accessories
<b>STD</b>	Standard						
<b>DEL</b>	Delay						
<b>1-6</b>	SC81						
<b>Slim</b>	SC80-72						
<b>Full</b>	SC80-72FC (optional, please specify)						
<b>Aluminum</b>							
<b>Dark Bronze</b>							
<b>Brass</b>							
<b>Rw/PA</b>	Regular with Parallel Arm Shoe						
<b>Hw/PA</b>	Hold Open with Parallel Arm Shoe						
<b>HD</b>	Heavy Duty Arm						
<b>DS</b>	Dead Stop Arm						
<b>DS/HO</b>	Dead Stop Hold Open Arm						
<b>SS</b>	Spring Stop Arm						
<b>SS/HO</b>	Spring Stop Hold Open Arm						
<b>Soffit Shoe Support</b>	SC80-30						
<b>Blade Stop Spacer</b>	SC80-61						
<b>Auxiliary Shoe</b>	SC80-62A						
<b>Plate</b>	SC80-18						
<b>Plate - Full Cover</b>	SC80-18FC						
<b>Plate PA</b>	SC80-18PA						
<b>Plate PA - Full Cover</b>	SC80-18PAFC						

## How to Order SC90 Series

		Cylinder	Size	Cover	Finish	Arm	Accessories
<b>STD</b>	Standard						
<b>1</b>	SC91						
<b>3</b>	SC93						
<b>4</b>	SC94						
<b>Full</b>	SC90-72 (optional, available with SC93/94 only, please specify)						
<b>Aluminum</b>							
<b>Dark Bronze</b>							
<b>Brass</b>							
<b>Rw/PA</b>	Regular with Parallel Arm Shoe						
<b>Hw/PA</b>	Hold Open with Parallel Arm Shoe						
<b>Plate</b>	SC90-18 (available with SC93/94 only)						
<b>Plate PA</b>	SC90-18PA (available with SC93/94 only)						

## How to Order OHC100 Series

				Cylinder	Size	Arm Finish	Arm	Accessories
<b>STD 90°</b>	Standard	<b>STD 105°</b>	Standard					
<b>HO 90°</b>	Hold Open	<b>HO 105°</b>	Hold Open					
<b>3</b>	OHC100	<b>Fixed</b>						
<b>2-4</b>	OHC100A	<b>Adjustable</b>						
<b>Aluminum</b>								
<b>Dark Bronze</b>								
<b>S</b>	Side Load Arm							
<b>A</b>	End Load Arm							
<b>VO</b>	Offset Arm and Track							
<b>FK Bracket</b>								
<b>AFK Bracket</b>								
<b>GE Pivot</b>	(not available with VO arm type)							
<b>DP Pivot</b>	(not available with VO arm type)							

# COMPETITIVE CROSS REFERENCE AND SAMPLE SPECIFICATIONS

## Competitive Cross Reference

Surface Closer Cross Reference				
Dor-O-Matic	SC71 <sup>1</sup>	SC80 <sup>2</sup> , SC81 <sup>2</sup>	SC60 <sup>3</sup> , SC61 <sup>3</sup>	SC94 <sup>4</sup> , SC91
Corbin	DC6000	3210M76 (3210)		4604M70
Dorma	8916	86162 <sup>2</sup>	640BCPA <sup>3</sup> /7302 <sup>3</sup>	644BCPA <sup>4</sup> /7203
Norton	7500 <sup>1</sup> /7700	P8300 (P8500) <sup>2</sup>	P1600BC <sup>3</sup>	P9304BC <sup>4</sup>
Sargent	351	1430/1330 <sup>2</sup>	11303 <sup>3</sup>	
Stanley	D-4550	D-3550	1650	
Yale	P400	P3300 (P3500) <sup>2</sup>	P51BC <sup>3</sup>	P2304BC <sup>4</sup>

<sup>1</sup>Indicates identical footprint, <sup>2</sup>Indicates identical footprint, <sup>3</sup>Indicates identical footprint, <sup>4</sup>Indicates identical footprint

Concealed Closer Cross Reference	
Dor-O-Matic	OHC100 Series
Dorma	RTS88
Global	TC7000
International	Series 100 and Series 200
Jackson	20-330
Kawneer	Husky II
Rixson	608, 0608, 700, 0700, 800
Sentinel	30 Series
Stanley	30 Series

## Sample Specifications

### Large Cylinder Closer

#### 2.01 Closers and Door Control Devices

- A. Where manual closers are indicated for doors required to be accessible to the physically challenged, provide adjustable units complying with ANSI A117.1 provisions for door opening force and delayed action closing.
- B. Shall conform to ANSI A156.4, Grade 1, NFPA 80, NFPA 101 and UL10C.
- C. Closers shall be aluminum construction with steel lever arms, independent adjusting valves for closing, latching and back check. Hydraulic regulation controlled by tamper-proof, non-critical screw valves. All closer adjustments shall be shielded by plastic cover after installation. Pressure relief valve, PRV, doors closers will not be permitted.
- D. Full rack-and-pinion type closer, single-piece forged piston, chrome silicon steel spring, non-critical screw valves; backcheck, main speed and latch.
- E. Closers to be non-sized, field adjustable from size 1 to 6.
- F. Furnish all large cylinder non-sized closers with minimum 1 ½" diameter piston.
- G. Install closers to allow maximum degree of opening, position backcheck to activate well in advance of the stop position to cushion the swing and prevent door and frame damage. Do not use door closer to stop door travel. Unless specified, install closers with thru-bolt mounting method on metal and wood doors. Do not thru bolt if there has been special blocking specified in the wood door specification. Coordinate with the wood door specification.
- H. Available manufacturers: Subject to compliance with requirements. See competitive cross reference above.

## Cylinder Options

**Standard Cylinder (STD)** – Standard cylinder provides a main speed function to control the motion of the door from maximum opening angle until the door is a few inches from the latch where latch function controls the final closing motion. The opening swing is controlled by the hydraulic backcheck function from about 70° to maximum opening angle.

**Without Backcheck (WOBC)** – Special cylinder provides a main speed function to control the motion of the door from maximum opening angle until the door is a few inches from the latch where latch function controls the final closing motion.

**Delayed Action Cylinder** – Special cylinder provides a separate adjustable delayed closing motion from maximum opening angle to approximately 70°. Then the main speed function controls the door motion until the door is a few inches from the latch where latch function controls the final closing motion. During the opening swing the door is controlled by the hydraulic backcheck function from about 70° to maximum opening angle.

## WARRANTY

Falcon Door Hardware warrants its mechanical offering of locks, exit devices and door controls products manufactured to be free from defects in materials and workmanship for a period of **TEN (10) YEARS** from the date of manufacture with the exception of the products detailed in the table below. The terms and conditions of this new warranty apply to Falcon Door Hardware shipments made on or after November 1st, 2008.

This limited warranty does not cover products that (i) are not the proper size for the application; (ii) are not installed in accordance with Falcon’s published installation instructions; (iii) are installed with improper or incorrect parts; (iv) have been, in the opinion of Falcon, modified, repaired, or altered in any way without the express written consent of Falcon; (v) are used for purposes which they are not designed or intended; (vi) are subjected to misuse, abuse, negligence, or accident; or (vii) are grade 2 products used in educational facilities. The following costs and expenses are not covered by the provisions of this limited warranty; (i) labor costs for the removal and reinstallation of products; (ii) shipping and freight expenses required to return products to Falcon; (iii) normal maintenance; and (iv) economic losses. **THE PREVISIONS OF THIS WARRANTY DO NOT APPLY TO FINISHES.**

Falcon will replace the products which, in the opinion of Falcon, are found to be defective, provided said products are returned to Falcon.

FALCON SHALL IN NO EVENT BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL, INDIRECT, SPECIAL, OR PUNITIVE DAMAGES FOR ANY CLAIM WHETHER BASED ON CONTRACT; WARRANTY, TORT (INCLUDING, BUT NOT LIMITED TO, STRICT LIABILITY OR NEGLIGENCE), PATENT INFRINGEMENT, OR OTHERWISE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

This limited warranty is in place of all other warranties, expressed or implied, and excludes any warranties of fitness for a particular purpose or merchantability. No agent, representative, dealer, or employee of Falcon has the authority to increase or alter the obligations of this limited warranty.

Note: Should the Product be considered a “consumer product” as may be covered by the Magnuson-Moss Federal Warranty Act, please be advised that: (1) Some states do not allow limitations on incidental or consequential damages or how long an implied warranty lasts, so that the above limitations may not fully apply; and (2) This warranty gives specific legal rights and a user may have rights which may vary from state to state.

Falcon, Ingersoll Rand Security Technologies, 121 West Railroad Avenue, Princeton, IL 61356

PRODUCT EXCEPTION	WARRANTY
OHC100A CONCEALED CLOSERS	5 YEARS
ELECTRONICS/ELECTRIFIED	1 YEAR