

ACCENTRA®

ASSA ABLOY

Experience a safer
and more open world

4400 SERIES

Institutional Door Closer



THE ENGINEER'S CHOICE

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4400 Series Door Closer

The ASSA ABLOY ACCENTRA® 4400 Series Institutional Door Closers offer customers the ideal combination of superior performance, quality and strength. With upgraded pinion and piston materials, improved valve design, and staked valves, the closers are the most efficient, dependable closers in the industry. The size 1-6 spring also simplifies the process of specifying and ordering product.

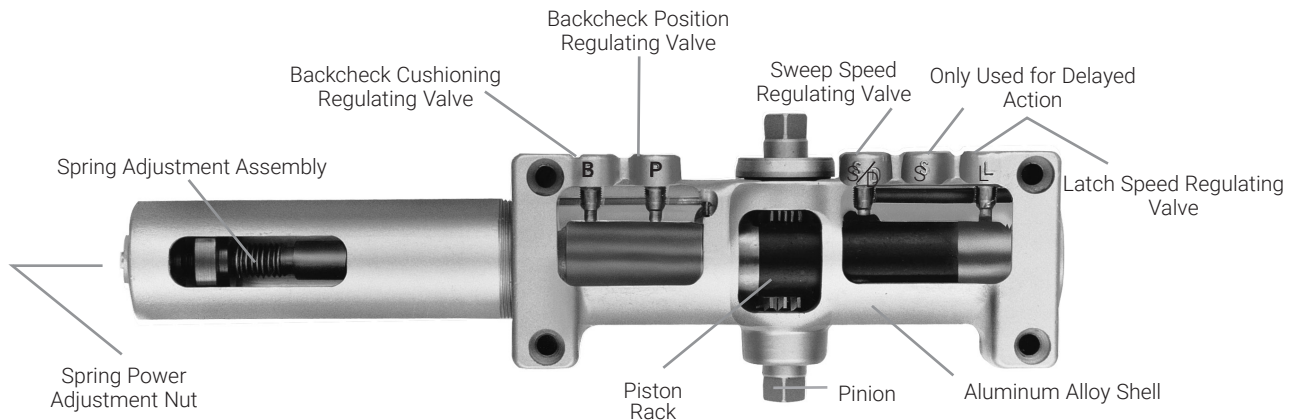
This U.L. listed, ANSI/BHMA Grade 1 certified closer has a proven history. It is an ideal choice for interior or exterior doors in facilities that demand reliability such as schools, office buildings, hospitals, department stores and airports.

WARNING




This product can expose you to lead which is known to the state of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65warnings.ca.gov.

OVERVIEW

Cutaway View



Compliance Standards

- ANSI/BHMA A156.4, Grade 1 certified 
- UL / cUL listed for use on fire rated doors 
- UL10C listed for positive pressure fire test
- 4400 door closers are designed to comply with requirements for the Americans with Disabilities Act (ADA) and ANSI standard A117.1 
- Manufactured in an ISO 9001, ISO 14001 facility



An Environmental Product Declaration (EPD) documents the cradle-to-grave life cycle of a product and how it affects the environment. An important aspect of EPD® is to provide the basis of a fair comparison of products and services by its environmental performance. EPDs can reflect the continuous environmental improvement of products and services over time and are able to communicate and add up relevant environmental information along a product's supply chain.

CAUTION: Door Closers for Low Opening Force Applications:

Door closers installed in openings required to meet the requirements of the Americans With Disabilities Act or ANSI/BHMA Standard A117.1, when adjusted to meet those requirements, may not provide adequate closing power to dependably close and latch the door based on opening or site conditions.

Features

- Cast aluminum body
- Adjustable spring sizes 1 through 6 (ADA Compliant)
- Tri-packed (regular arm, top jamb, and parallel arm mounting)
- Rack and pinion design
- Staked valves
- Separate and independent, latch, sweep and backcheck intensity valves
- Non-handed
- 1-1/2" (38mm) diameter piston
- 5/8" (16mm) diameter pinion journals
- 2-1/8" (54mm) projection (standard covers)
- All standard arm applications allow doors to swing 180°, conditions permitting
- Self-drilling screws
- Molded plastic cover
- Backcheck positioning valve
- Full-size template
- Door weight 250lbs.

Optional Features

- Corrosion-resistant model (Non-Hold Open only) (4400S only)
- Metal cover
- Enhanced backcheck (specify EBC suffix)
- Delayed action with pressure relief valve
- Heavy-duty arms: Regular Rigid, Parallel Rigid, Holder/Stop, Holder/Stop Spring, UNI Stop™
- Slide Tracks: push or pull side mounting
- Lead-lined metal cover (specify MLL suffix)

FASTENERS AND FEATURES

Fasteners

Type	Description	Arm								
		RA	PA	TJ	Low Profile	PR	HolderStop, Holder/Stop Spring	UNI	UNI-J	Slide Track
DOOR										
SDST	Self Drilling Self Tapping	S	S	S	S	S	S	S	O	O
MS	Machine Screw	S	S	S	S	S	S	S	S	S
SN	Sleeve Nut	O	O	O	O	S	S	S	S	S
TBGN	Thru Bolts & Grommet Nuts	O	O	O	O	O	O	O	O	O
SMS	Sheet Metal Screws	O	O	O	O	O	O	O	O	O
TORX	TORX Drive Security Screw	O	O	O	O	O	O	O	O	O
FRAME										
SDST	Self Drilling Self Tapping	S	S	S	S	S	S	S	S	S
MS	Machine Screw	S	S	S	S	S	S	S	S	S
SMS	Sheet Metal Screws	O	O	O	O	O	O	O	O	O
TORX	TORX Drive Security Screw	O	O	O	O	O	O	O	O	O

S = standard; O = optional

SN are for use on unreinforced hollow metal doors or to prevent any hollow metal door from collapse/dimpling. They can also be used for thru bolting on wood doors. **SN** are supplied for 1-3/4" (44mm) thick doors unless specified for 2-1/4" (57mm) thick doors.

TBGN are an alternative to **SN** for wood doors. **TBGN** are supplied standard for 1-3/4" (44mm) thick doors. They can be specified for 1-3/8" (35mm) thick doors.

SMS - when specified, closer will be packed with sheet metal screws for the door **AND** sheet metal screws plus machine screws for the frame.

TORX are only available with machine screw threads. Sheet metal screw threads are not available.

Features

Aluminum Alloy Housing

Closer bodies are constructed of a special aluminum alloy, carefully selected to accommodate interactive steel components and operating conditions.

Rack & Pinion Operation

Provides a smooth constant control of the door through its full opening and closing cycle. 180° door swing can be achieved when door, frame, hardware and arm function do not interfere.

Non-handed

With few exceptions all 4400 series door closers are non-handed and can be installed on either right or left-hand swing doors. Pinion shaft extends vertically through the closer body in both directions. Some options, as noted on page 5, will require that the hand of the closer be specified.

Sweep Speed Control Valve

Allows adjustment of door speed from the door's full open position down to approximately 10° from the closed position.

Latch Speed Control Valve

Allows adjustment of door speed from approximately 10° down to the door's fully closed position.

Closer Fluid

All door closers are supplied with a temperature stable, multi-viscosity fluid. This fluid will permit the door closer to perform within a wide temperature range: from very high to as low as -40°F.

Tri-Packed

4400 series come with screws, brackets and soffit plates to allow for regular, top jamb, and parallel arm installations.

Adjustable Backcheck Cushion Valve

Provides control of the door in the opening cycle, beginning at approximately 75° of door opening. It slows/cushions the door opening when the door is forcibly opened beyond its pre-adjusted limits.

Adjustable Backcheck Position Valve

Allows the door opening position, where backcheck cushioning begins to be adjusted to a greater door angle up to a maximum of 20° farther (approximately 95°).

Standard Molded Covers

Molded of high-impact U.L. listed material. This cover is non-handed for all applications. See page 5 for optional metal cover.

Warranty

Limited 30-year warranty for defects and life of the building on the aluminum housing.

OPTIONAL FEATURES

Door Closer Power Options

Series 4400 Multi-Sized Door Closer

Adjustable through the power range of sizes 1 through 6; as outlined in ANSI/BHMA standard A156.4.

The series 4400 also conforms to the minimum opening force requirements for The American with Disabilities Act (ADA) and ANSI/BHMA standard A117.1 for interior doors.

Optional Covers



Optional Metal Cover

This steel cover is non-handed for regular and parallel arm applications, but is handed for top jamb applications. Cover is available in sprayed or plated finishes.

Optional ABS Cover

Contact factory for details.

Optional Features

Corrosion-Resistant Door Closer

The series 4400S door closers with molded plastic cover are available for use where brass conditions exist. This series is provided with brass adjustment valves adjustment valves, a 440 grade stainless steel pinion shaft, an all-aluminum body and bronze closer arm bushing; all other components and fasteners are of 302/303 grade stainless steel. Fasteners are 8-18 stainless steel. This product is available for standard regular arm, top jamb and parallel arm, non-hold open applications only.

OPTIONAL FEATURES

Delayed Action

Adjustable Delayed Action Closing

An optional hydraulic feature that adds a third speed range to the closing cycle. This feature becomes effective when the door is opened and released at any point beyond 70°. The amount of time delay depends upon the combination of the angle of door release and valve adjustment. The valve can be adjusted with a 1/8" (3mm) hex key from no delay time up to maximum delay times of:

Door Opened and Released at	Approximate Time of Delay Cycle
180°	4-5 minutes
120°	2-3 minutes
90°	25-30 seconds

Pressure Relief Safety Valve

The delayed action hydraulic system contains a pressure relief valve. Any time the door is forced toward the closed direction while it is in the closing cycle, the valve will open and permit the door to close. This prevents damage to door, frame and closer.

Suggested Applications

Delayed Action closing allows slow-moving traffic to clear the opening before the door closer's normal closing cycle begins. This feature can be helpful in health care facilities such as hospitals and nursing homes. It provides sufficient time for persons on crutches or in wheelchairs to pass through a door without concern of it closing. At the same time, it can accommodate the facility's staff with movement of food service carts, beds, and other wheeled traffic.

Arms

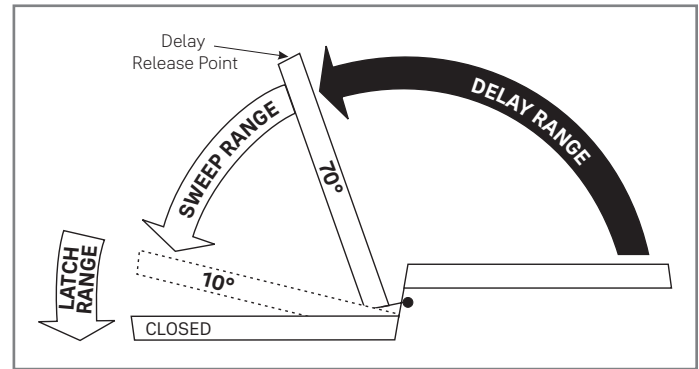
Non-Hold Open

Self-closes door every time door is opened. Auxiliary stop (by others) required except when using the Holder/Stop, Holder/Stop Spring or UNI Stop™ arms.

Door Opening Degrees

Arm Function	Regular Arm, Top Jamb, Parallel Arm	Parallel Rigid Arm	Holder/Stop Parallel Arm	Holder/Stop Spring Parallel Arm	UNI Stop Parallel Arm	UNI Stop Top Jamb	Low Profile	Slide Track
Non-Hold Open	✓	✓	85° to 110°	85° to 110°	85° to 110°	85° to 110°	✓	85° to 110°/180°
Hold Open	90° to 180°	85° to 180°	85° to 110°	85° to 110°	85° to 110°	85° to 110°	N/A	85° to 110°

✓=180° trim and template permitting



Use of delayed action closers on many doors throughout industrial and commercial buildings can also assist the flow of traffic. Locations where additional time to clear the opening is advantageous are doors between office and factory/warehouse facilities, doors to workshops or laboratories, to kitchen and food processing areas, etc.

Enhanced Backcheck

This feature provides adjustable backcheck intensity beginning at approximately 15° of the door opening cycle. It is intended for use in situations where the standard backcheck beginning at approximately 75° of door opening allows too much unrestricted door travel to obtain control of the door without the fear of peripheral damage to the door closer, door, frame, hinges or pivots; or adjacent walls or structures. This feature is most frequently used in schools and detention facilities. Specify suffix EBC.

Hold Open

Achieved by means of friction or ball and detent/roller. Friction hold open has a range of 90° to 180° using template location and mechanical adjustment.

Ball and detent or roller hold open is effective in a range of 85° to 110°.

Hold open arm door closers are not permitted to be used on fire door assemblies.

FINISHES

Product will be painted with a combination of waterborne acrylic and polyester powder coat. Closers will withstand 100 hours of salt spray. (The ANSI requirement is 25 hours.)

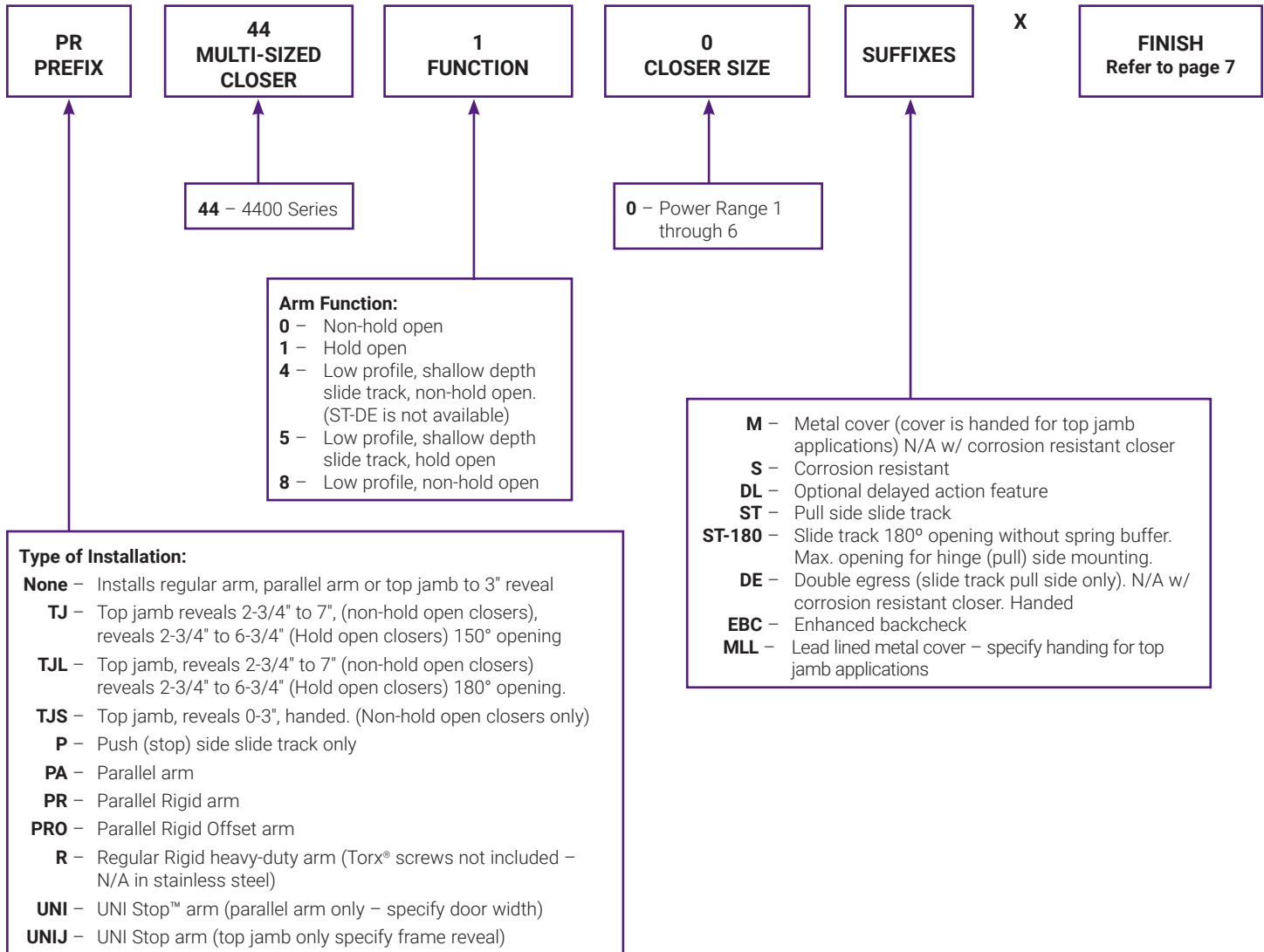
ANSI/BHMA Code Finish Description			
600* Primed for Painting	605 Bright Brass, Clear Coated	606 Satin Brass, Clear Coated	611 Bright Bronze, Clear Coated
			
612 Satin Bronze, Clear Coated	613E Dark Oxidized Satin Bronze - equivalent	625 Bright Chrome Plated	626 Satin Chrome Plated
			
689 Aluminum Painted	690 Dark Bronze Painted	691 Light Bronze Painted	693 Black Painted
			
694 Medium Bronze Painted	696 Satin Brass Painted	BSP Black Suede Powder Coat	WSP White Suede Powder Coat
			

Plated Finishes	Specify Designation (ANSI/BHMA)	Metal Covers Only
Bright Brass	605	Yes
Satin Brass	606	Yes
Bright Bronze	611	Yes
Satin Bronze	612	Yes
Bright Chrome	625	Yes
Satin Chrome	626	Yes

*600 is a special rust-inhibiting prime coat. Closers can be ordered prime coat only (specify closer x 600). An additional charge applies if finish coat is required over prime coat (ex: 4400 x 600 x 689).

When a plated finish is ordered, arm and cover will be plated unless "cover only" is specified.

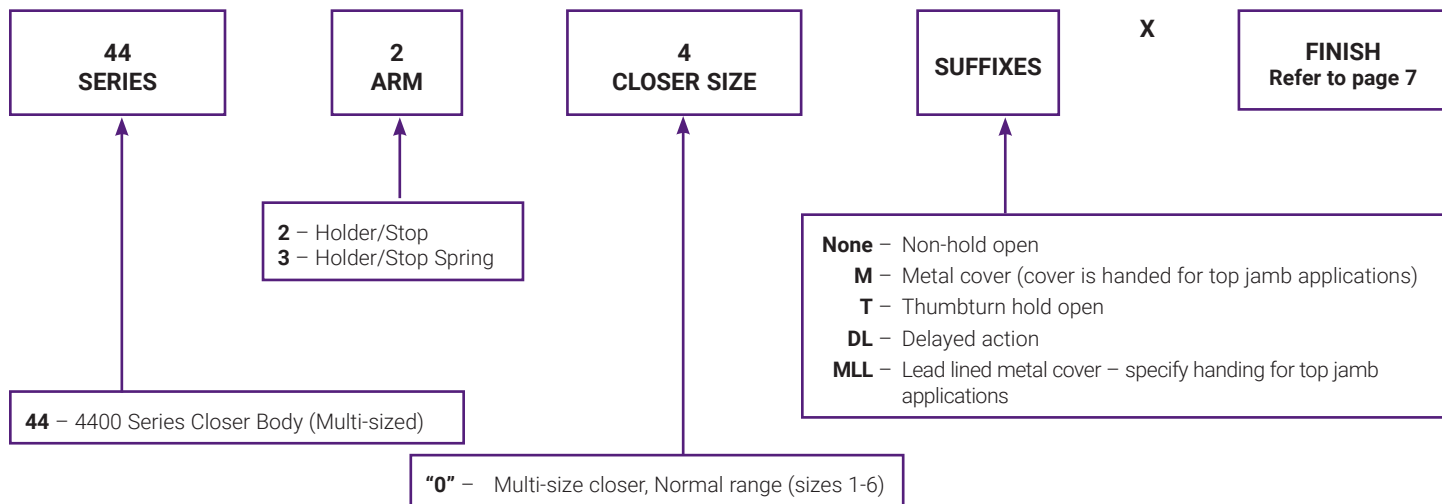
HOW TO ORDER 4400 SERIES



Notes:

- Before installing a door closer, verify the accessibility, fire, and life-safety requirements that are in effect. This includes the mounting height and projection into the clear opening. Check the adopted state and local building codes and consult the Authority Having Jurisdiction (AHJ).
- To maintain the warranty and ensure proper operation of the product, follow the installation instructions & templates and install on the inside of the building.
- Consult NFPA 80 for the hinge requirements on a fire door.
- Failure to use fasteners supplied with closer may void factory warranty.
- Optional fasteners are available for a variety of applications. Consult the door and frame manufacturer to ensure the proper fasteners are used to maintain certifications.
- Sizing charts are based on 1-3/4" x 7' standard weight doors swinging to 110°. Other application conditions (i.e. larger door heights or weight) may require larger size closer. Adjusting the spring power to meet the low opening force requirements of the Americans With Disabilities Act or ANSI/BHMA Standard A117.1, may not provide adequate closing power to dependably close and latch the door in some conditions (i.e. air movement from wind gusts or building stack pressure).

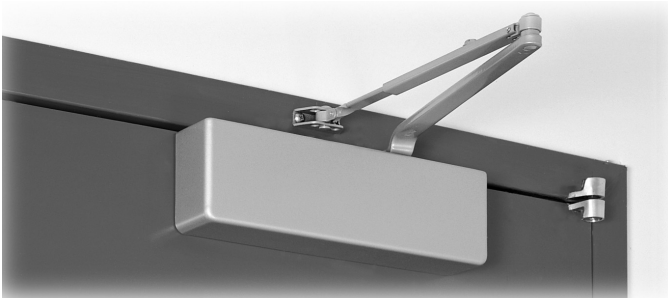
HOW TO ORDER HOLDER/STOP & HOLDER STOP SPRING ASSEMBLIES



Notes:

- Before installing a door closer, verify the accessibility, fire, and life-safety requirements that are in effect. This includes the mounting height and projection into the clear opening. Check the adopted state and local building codes and consult the Authority Having Jurisdiction (AHJ).
- To maintain the warranty and ensure proper operation of the product, follow the installation instructions & templates and install on the inside of the building.
- Consult NFPA 80 for the hinge requirements on a fire door.
- Failure to use fasteners supplied with closer may void factory warranty.
- Optional fasteners are available for a variety of applications. Consult the door and frame manufacturer to ensure the proper fasteners are used to maintain certifications.
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APPLICATIONS

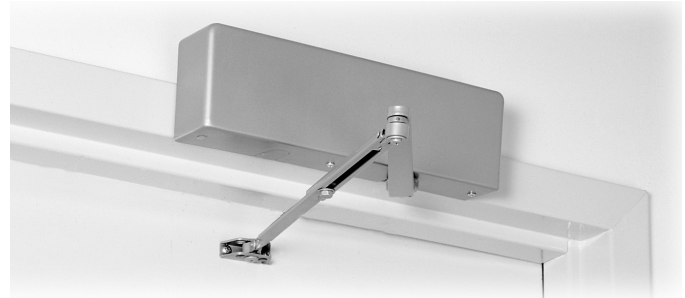


Non-hold open arm shown

Regular Arm

This is the only pull-side application where a double lever arm is used. It is the most power-efficient application for a door closer. Sufficient frame, door and/or ceiling clearance must be considered.

Since the arm assembly projects directly out from the frame, this application may present an aesthetics issue or be prone to vandalism.

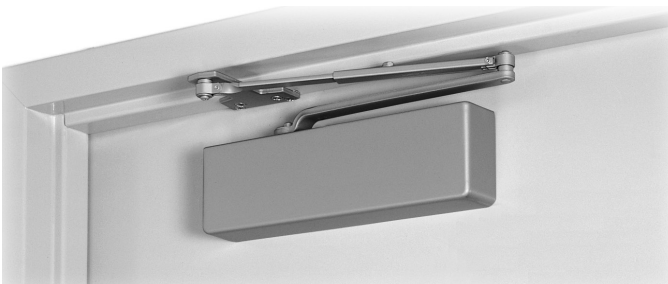


Non-hold open arm shown

Top Jamb

For efficiency reasons this application provides the best alternative to the regular arm application. There must be sufficient frame face and/or ceiling clearance for this application. It requires a top rail on the door of just 2-1/8" (54mm). This application provides the best door control for doors in exterior walls that swing out of a building.

The entire door closer and arm assembly project from the frame, similar to the regular arm application, where the matters of appearance and malicious abuse can be of concern. Consideration must be given to depth of reveal.



Non-hold open arm shown

Parallel Arm

This application provides the most appealing design appearance for a surface-mounted door closer having a double lever arm. This also makes it beneficial in vandalism-prone areas. It is on the push side of the door and the arm assembly extends almost parallel to the door. In the closed position, there is very little or no hardware projecting beyond the frame face in most situations.

Due to the geometry of the arm it is approximately 25% less power efficient than a regular arm application.

The entire closer and arm assembly are mounted below the frame stop, requiring a top rail clearance on the door of between 6-5/8" (168mm), when using a low profile arm, to 7-1/4" (184mm), when using the hold open arm.

APPLICATIONS



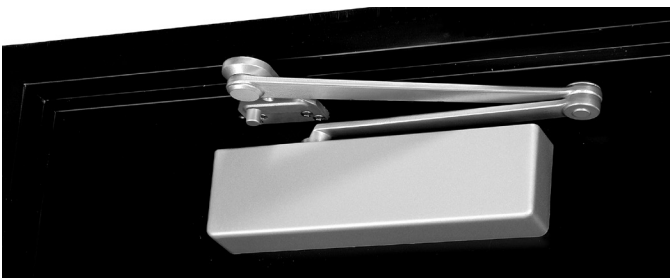
Parallel Rigid Arm

An enhanced variation of the standard parallel arm assembly that is intended for use in heavy traffic areas where auxiliary door stops are installed. Hold open available – specify hand when ordering.



Parallel Rigid Offset Arm

This heavy-duty parallel rigid arm provides additional vertical clearance. It is well suited for applications where weather-stripping or other hardware prevents the use of the standard Parallel Rigid (PR) soffit plate. The non-hold open and hold arms allow 1-1/4" clearance. When used in conjunction with a #6891 spacer block, the PRO arm provides 1-7/8" clearance to accommodate the use of a surface overhead stop/holder.

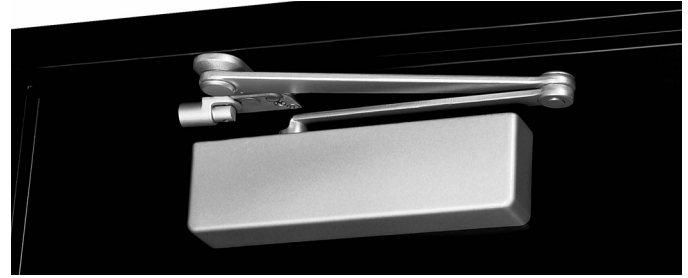


Holder/Stop Arm

Similar to the Parallel Rigid arm, this arm incorporates a stop at the arm's soffit plate to dead stop the door at a predetermined degree of door swing between 85° and 110°, in 5° increments. Prior to dead stop the door closer's backcheck feature slows the door speed to reduce the impact of the stop action.

The Holder/Stop Arm is intended for use where an auxiliary door stop cannot be utilized and no more than moderate abuse is anticipated. Where more extreme conditions are expected, use of a UNI Stop™ arm is recommended.

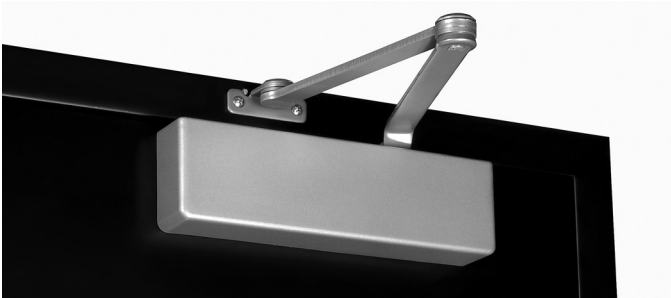
Thumbturn hold open available. (Hold open strength is adjustable.)



Holder/Stop Spring Arm

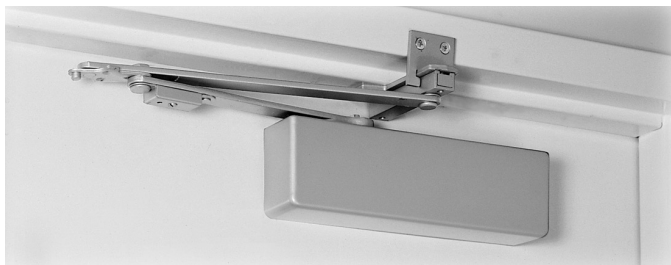
This heavy-duty stop arm includes all of the features of the Holder/Stop arm, plus an additional steel buffer spring that provides greater protection at the end of the door opening cycle. For extreme conditions, use of a UNI Stop™ is recommended. Available with or without hold open.

APPLICATIONS



Regular Rigid Heavy-Duty Arm

This double lever arm features a non-adjustable secondary arm. Orbitally riveted joints prevent tampering or disassembly. Prefix "R" to model number. Available non-hold open only.



Parallel arm



Top jamb

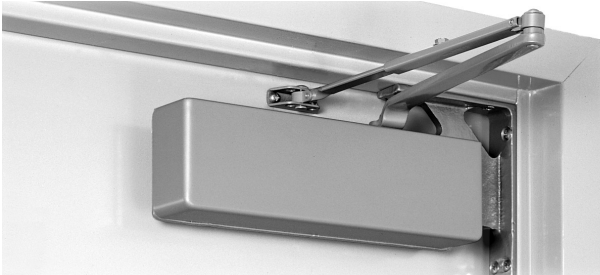
UNI Stop™ Arm

Can be used for either parallel arm or top jamb applications. UNI Stop arms combine the features of a double lever arm overhead door stop/holder with the backcheck feature of the door closer to reduce door stopping shock loads to a minimum. The UNI Stop uses a compression spring buffer at the soffit plate/arm shoe that will absorb 30 lbf. of force, 5° prior to the door's dead stop. Coupled with the door closer's backcheck feature, this arm provides the most controlled stop available with a surface door closer.

Only available in painted finishes.

For parallel arm applications there are three different length arm assemblies. Each length is designed for a specific range of door widths to provide precise door control. This further lessens the dead stop impact on the door's hinges/pivots.

APPLICATIONS



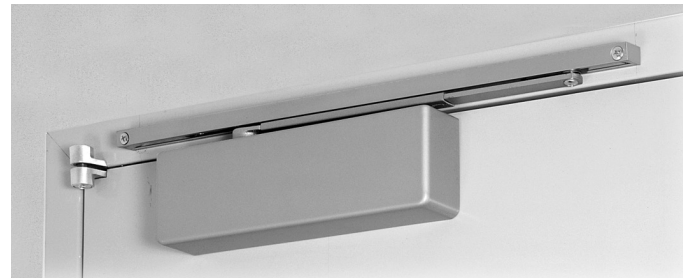
Corner Bracket

This application can be used where top jamb and parallel arm application will not accommodate the door and frame conditions. Requires minimal top rail on the door; however, vertical clearance to the floor within the door opening should be checked to ensure code compliance.

The close proximity, for this application, of the door closer to the door's pivot point reduces the door closer's power efficiency by approximately 25% when compared to a regular arm. The projection of the arm from the door face might pose questions regarding design parameters.



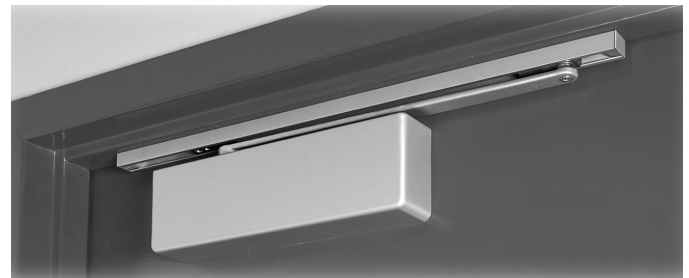
Pull Side



Low Profile Pull Side



Push Side



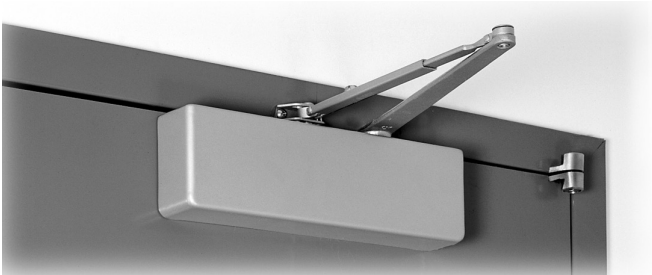
Low Profile Push Side

Slide Track

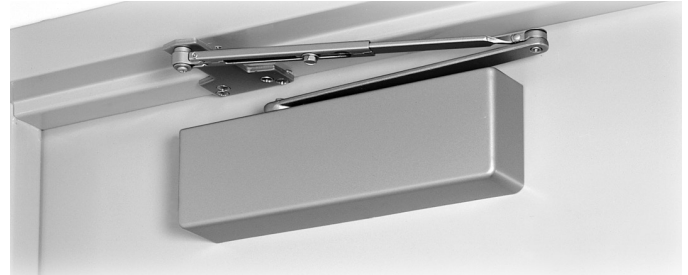
Whether pull or push side mounted, this provides the designer with the smoothest lines available in a surface mounted door closer. The single lever arm allows components to be located in a stack configuration to minimize projection and eliminate obtrusive arm angles.

The arm geometry reduces door closer power efficiency by approximately 25% from that of a regular arm.

APPLICATIONS



Regular arm



Parallel arm

PA4480

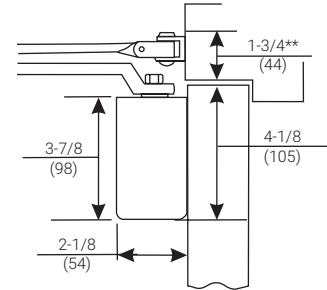
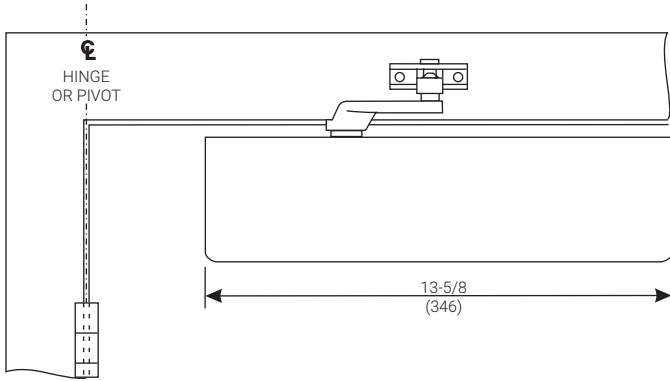
Low Profile Arm

Supplied with 4480 series door closers for non-hold open installations only. These arms have a reduced height elbow joint and a straight main arm. This enables the door closer to be installed in less vertical space:

Regular Arm Allows closer to be installed where there is as little as 1" (25mm) of frame face or ceiling clearance.

Parallel Arm Allows closer to be installed 1/2" (13mm) higher up on door than standard parallel arm application.

REGULAR ARM



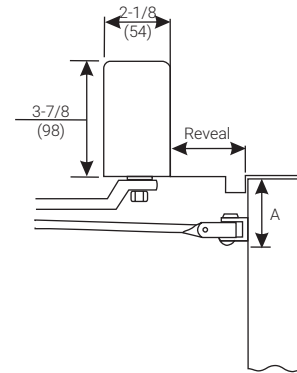
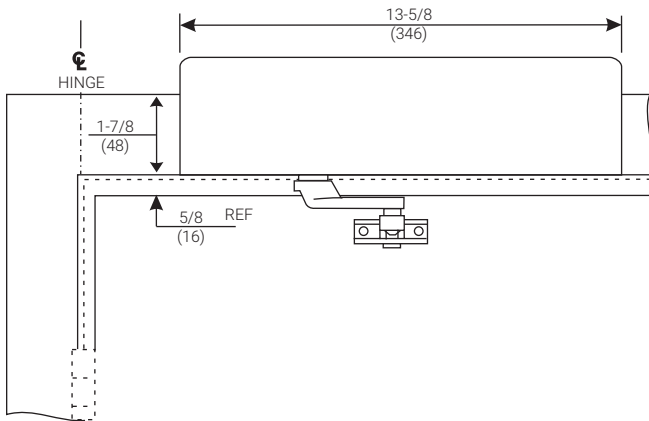
Mounting holes for closer body are spaced $2\frac{3}{8}$ " (60mm) vertically x $6\frac{3}{4}$ " (171mm) horizontally.

** This dimension will vary. Standard non-hold open arm illustrated.

Model Number	
Non-Hold Open	Hold Open
4400	4410

Standard Door Widths	
Interior	32" - 54" (81-137 cm)
Exterior	30" - 48" (76-122 cm)

TOP JAMB



Mounting holes for closer body are spaced 2-3/8" (86mm) vertically x 6-3/4" (171mm) horizontally.
** Minimum frame face with 486 back plate. 3-1/4" (83mm) required when drop plate is not used.

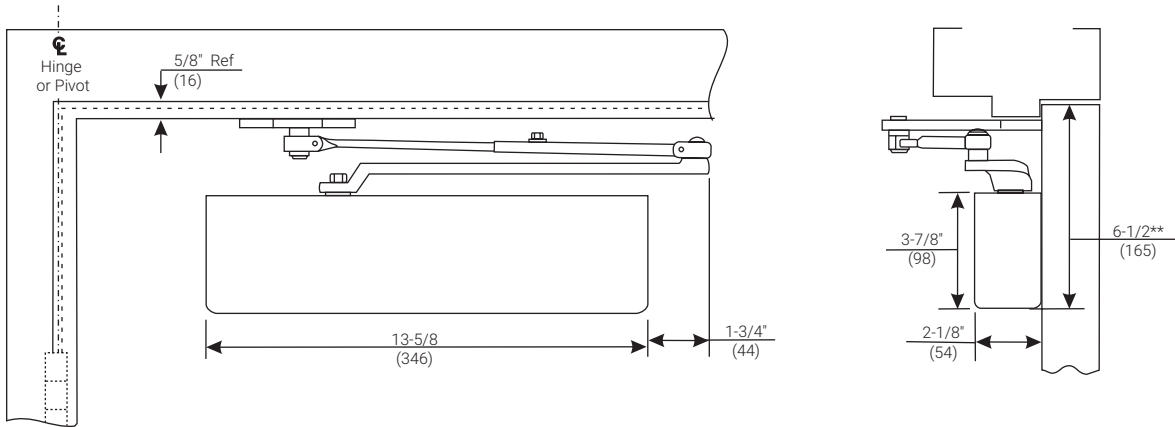
Model Number	Reveal Range Inches (mm)	Maximum Door Opening
Non-Hold Open Arm		
4400/4400M	0" to 3" (0 to 76)	180°
TJ4400	2-3/4" to 7" (70 to 178)	150°
TJL4400	2-3/4" to 7" (70 to 178)	180°
TJL4480 x 487	0" to 2-3/4" (0 to 70)	180°
Hold Open Arm		
4410 4410M	0" to 3" (0 to 76)	180°
TJ4410	2-3/4" to 6-3/4" (70 to 171)	150°
TJL4410	2-3/4" to 6-3/4" (70 to 171)	180°

A Minimum top rail of door Inches (mm)					
Without drop plate or with 486 back plate			With 487 drop plate		
(TJ)4400	(TJ)4410	(TJ)4480	(TJ)4400	(TJ)4410	(TJ)4480
2" (51)	2-1/2" (64)	N/A	4-1/8" (105)	4-5/8" (117)	3-5/8" (92)

Model Number	
Non-Hold Open	Hold Open
(TJ)4400	(TJ)4410

Standard Door Widths	
Interior	32" - 54" (81-137 cm)
Exterior	30" - 48" (76-122 cm)

PARALLEL ARM



Mounting holes for closer body are spaced 2-3/8" (86mm) vertically x 6-3/4" (171mm) horizontally.

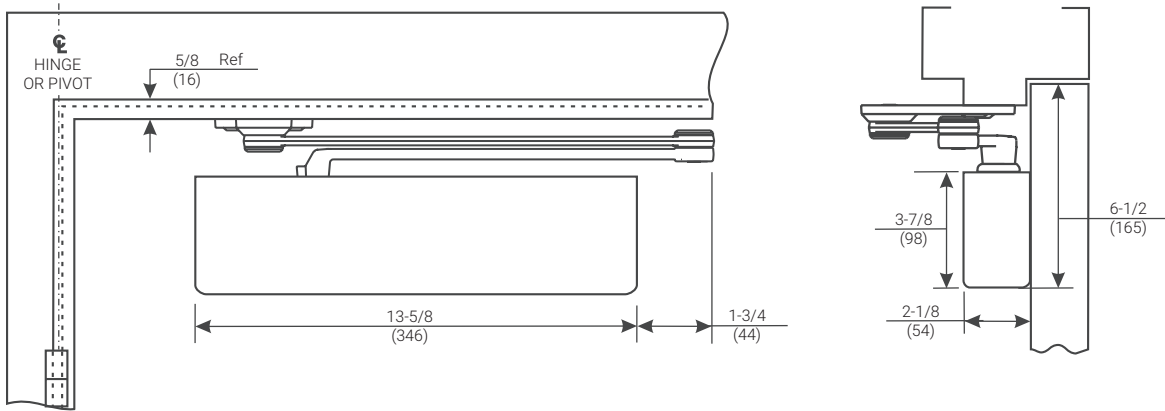
** This dimension will vary. Standard non-hold open arm illustrated.

Minimum top rail of door with 5/8" (16mm) frame stop Inches (mm)				
4400	4410	PA4480	4410	PA4480
5-7/8" (149)	6-1/4" (159)	5-3/8" (137)	2-3/4" (70)	1-7/8" (48)

Model Number	
Non-Hold Open	Hold Open
(PA)4400	(PA)4410

Standard Door Widths	
Interior	30" - 54" (76-137 cm)
Exterior	30" - 48" (76-122 cm)

PARALLEL RIGID ARM



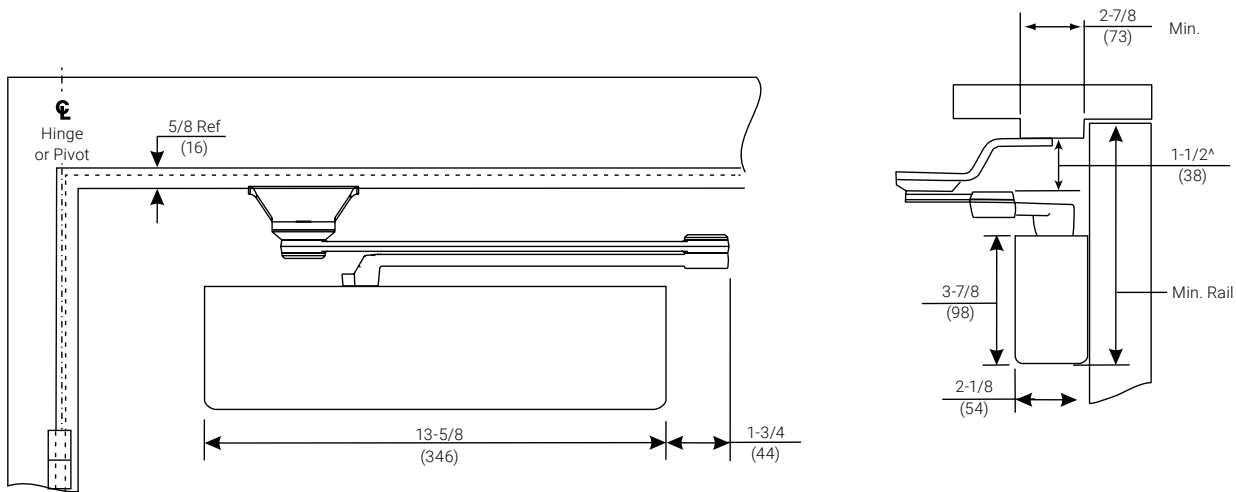
Mounting holes for closer body are spaced 2-3/8" (60mm) vertically x 6-3/4" (171mm) horizontally.

Model Number	
Non-Hold Open	Hold Open*
PR4400	PR4410

*Specify handing.

Standard Door Widths	
Interior	30" - 48" (76-122cm)
Exterior	32" - 48" (81-122cm)

PARALLEL RIGID OFFSET ARM



Mounting holes for closer body are spaced 2-3/8" (60mm) vertically x 6-3/4" (171mm) horizontally.

^ If clearance greater than 1-1/2" is needed, 6891 spacer block is required.

Minimum Top Rail of Door with 5/8" (16mm) Frame Stop		Minimum Top Rail of Door	
Without 6891 Spacer	With 6891 Spacer	Without 6891 Spacer	With 6891 Spacer
7-1/8" (181)	7-5/8" (194)	7-5/8" (194)	8-1/8" (206)

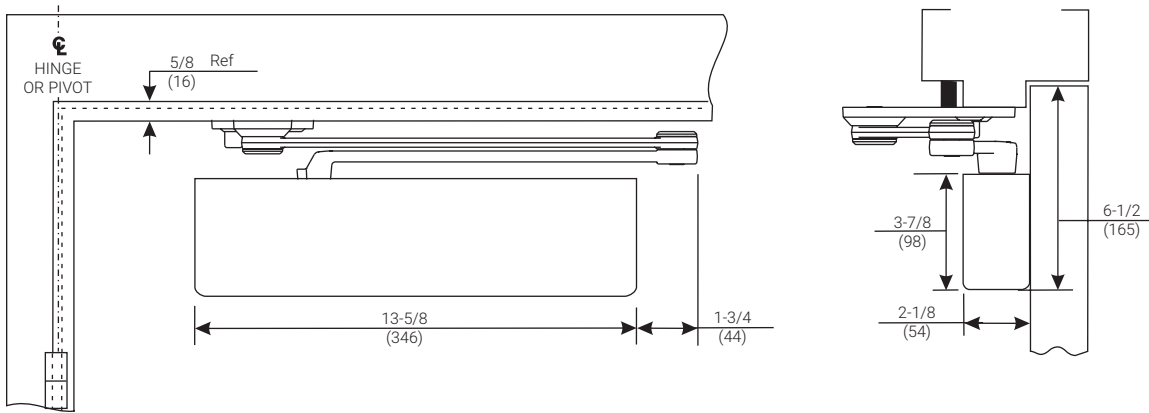
Model Number	
Non-Hold Open	Hold Open*
PRO4400	PRO4410

*Specify hand when ordering.

Notes:

- Door closers are set at midpower range from the factory
- Measurements are inches/mm unless noted
- Standard door widths: interior 30"-48" (76-122cm)
exterior 32"-48" (81-122cm)

HOLDER/STOP ARM

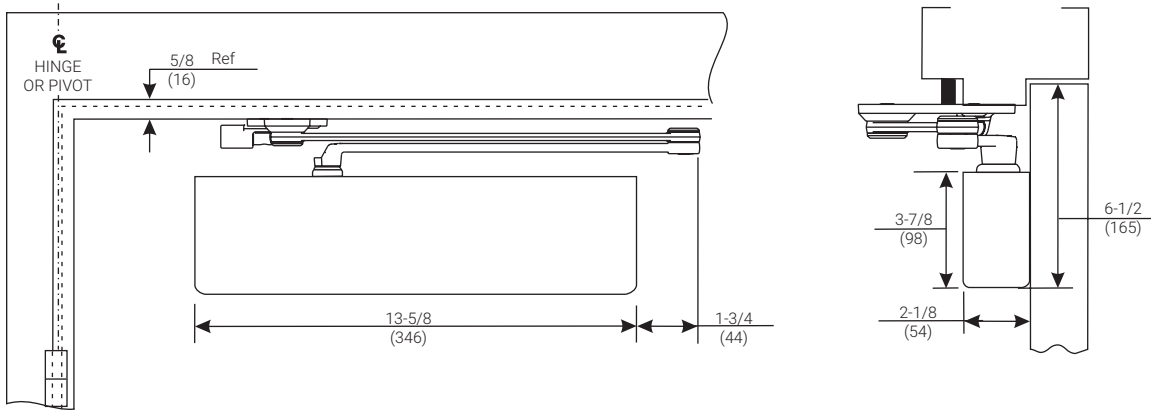


Mounting holes for closer body are spaced 2-3/8" (60mm) vertically x 6-3/4" (171mm) horizontally.

Model Number	
Non-Hold Open	Thumbturn Hold Open
4420	4420T

Standard Door Widths	
Interior	30" - 48" (76-122cm)
Exterior	32" - 48" (81-122cm)

HOLDER/STOP SPRING ARM

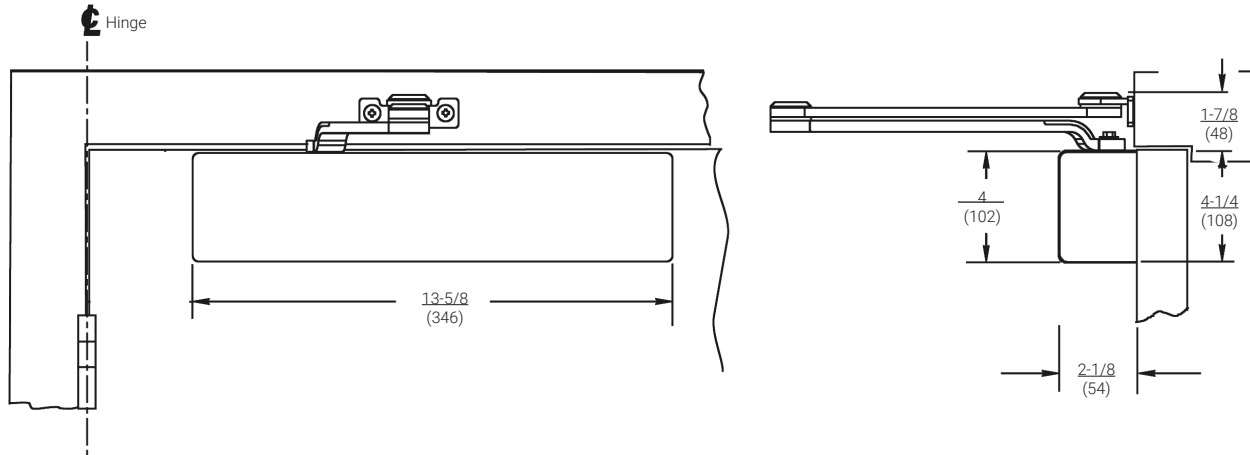


Mounting holes for closer body are spaced 2-3/8" (60mm) vertically x 6-3/4" (171mm) horizontally.

Model Number	
Non-Hold Open	Thumbturn Hold Open
4430	4430T

Standard Door Widths	
Interior	30" - 48" (76-122cm)
Exterior	32" - 48" (81-122cm)

REGULAR RIGID HEAVY-DUTY ARM

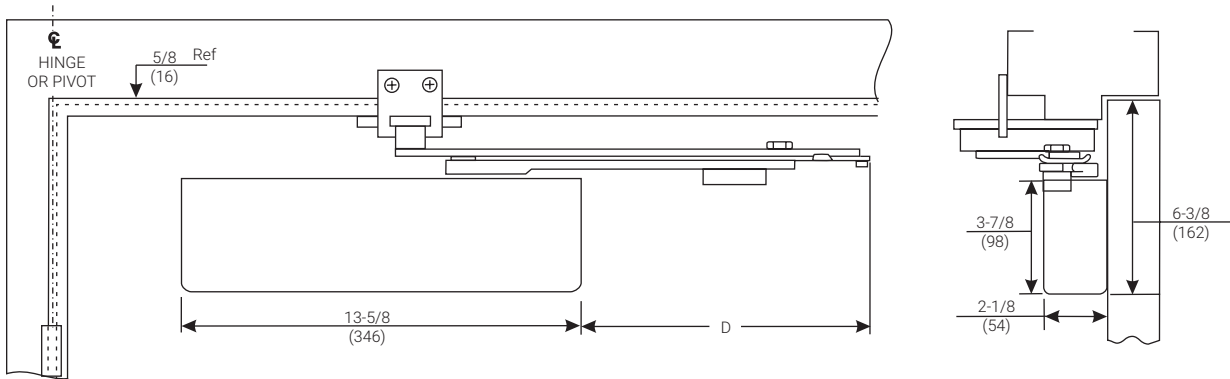


Mounting holes for closer body are spaced 2-3/8" (60mm) vertically x 6-3/4" (171mm) horizontally.

Model Number
Non-Hold Open
R4400

Standard Door Widths	
Interior	36" - 54" (91-137 cm)
Exterior	30" - 52" (76-132cm)

UNI STOP™ PARALLEL ARM



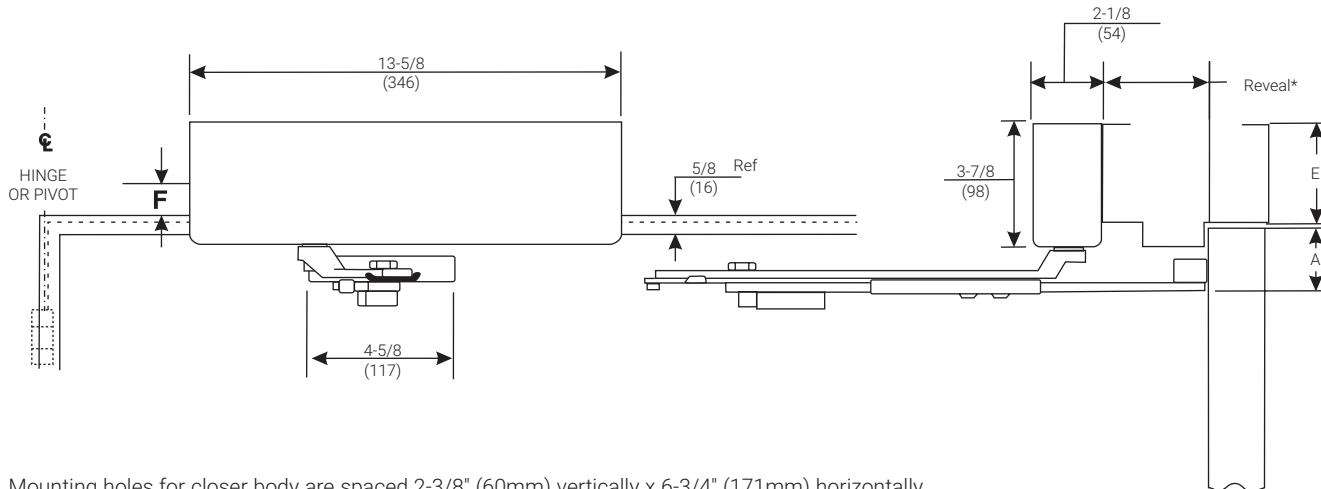
Mounting holes for closer body are spaced 2-3/8" (86mm) vertically x 6-3/4" (171mm) horizontally.
Door width must be specified when ordering.

Door Width Inches (cm)	D Arm Extension Beyond Closer
28-32" (71-81)	8-5/8" (219)
33-41" (84-104)	10-1/8" (257)
42-48" (107-122)	11-1/2" (292)

Standard Door Widths
30" - 48" (76-122cm)

Model Number		x Specify Door Width
Non-Hold Open	Hold Open	
UNI4400	UNI4410	

UNI STOP™ TOP JAMB ARM



Mounting holes for closer body are spaced 2-3/8" (60mm) vertically x 6-3/4" (171mm) horizontally.

*Reveals up to a maximum of 7-3/8" (187mm).

Reveal must be specified when ordering

Reveals 1-7/8" to 4-5/8" (48mm to 117mm) standard, uses 6190 bracket.

Reveals in excess of 4-5/8" (117mm) requires use of 6191 reinforcing kit.

Reveals to 1/8" (3mm) requires use of 589L angle bracket.

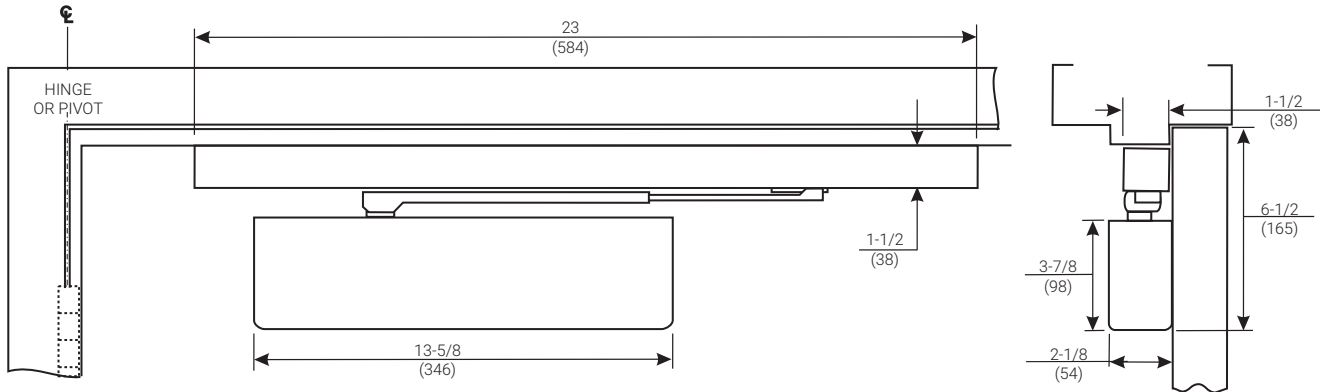
Backplates	F Minimum Frame Face	E Minimum Ceiling Clearance	A Minimum Top Rail Clearance
486 ¹	1-5/8" (41)	3-1/8" (79)	2-1/4" (57)
487	1-7/8" (48)		3-1/2" (89)

Model Number		
Non-Hold Open	Hold Open	
UNIJ4400	UNIJ4410	x Specify Frame Reveal

1. 486 backplate supplied standard with closer

Standard Door Widths
34" - 54" (86-137 cm)

PUSH SIDE SLIDE TRACK

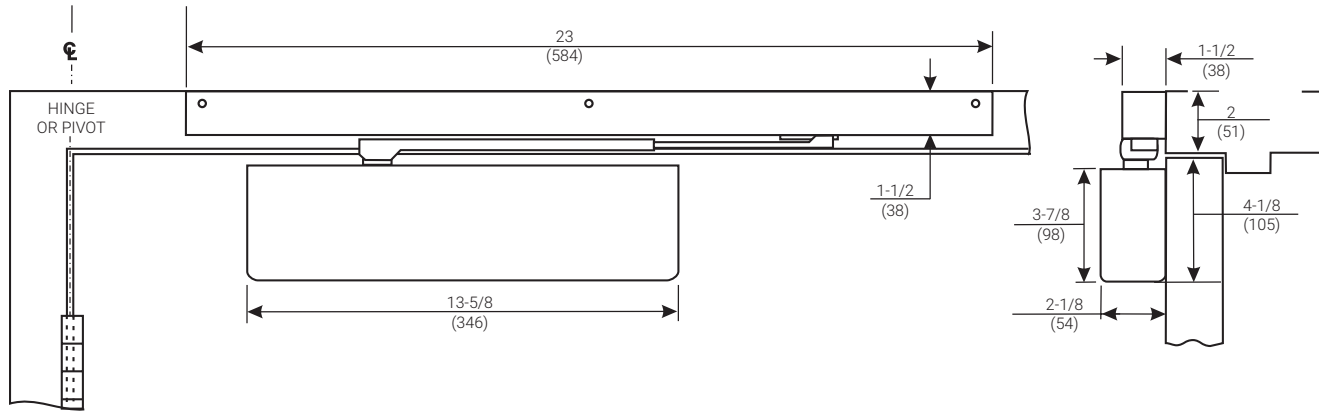


Minimum top rail of door with frame stop Inches (mm)	
Without drop plate	With 488 drop plate
6" (152)	2-5/8" (67)

Model Number	
Non-Hold Open 85°-100°	Hold Open 85°-100°
P4400ST	P4410ST

Standard Door Widths	
Interior	32" - 48" (81-122cm)
Exterior	32" - 38" (81-97cm)

PULL SIDE SLIDE TRACK



Mounting holes for closer body are spaced 2-3/8" (86mm) vertically x 6-3/4" (171mm) horizontally.

Minimum top rail of door with frame stop Inches (mm)	
Without drop plate	With 488 drop plate
3-1/2" (111)	2-5/8" (67)

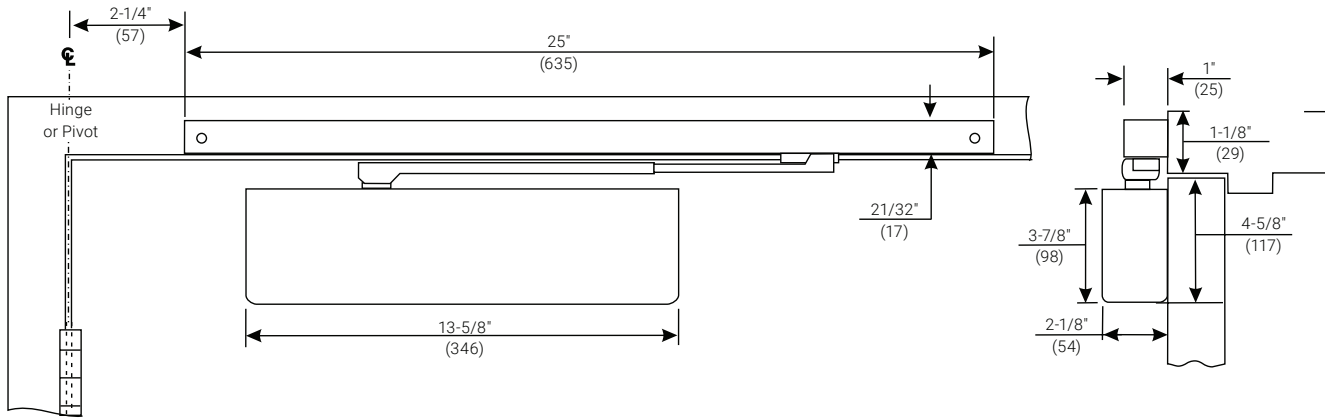
Model Number ^{1, 2}		
Non-Hold Open		Hold Open
85°-100°	85°-180°	85°-100°
4400ST	4400ST-180	4410ST

1-Units can be mounted with the closer body on the jamb. Prefix the model number with a "TJ". Where the frame face is less than 3-3/8" (86mm) a number 486JP backplate will be required.

2 - Units can also be installed on double egress doors using a handed arm that will accommodate the frame profile. Suffix the model number with "DE". For reveal ranges 1/4" to 3" (6 to 76mm).

Standard Door Widths	
Interior	32" - 48" (81-122cm)
Exterior	32" - 38" (81-97cm)

LOW PROFILE PULL SIDE SLIDE TRACK



Mounting holes for closer body are spaced 2-3/8" (60mm) vertically x 6-3/4" (171mm) horizontally.

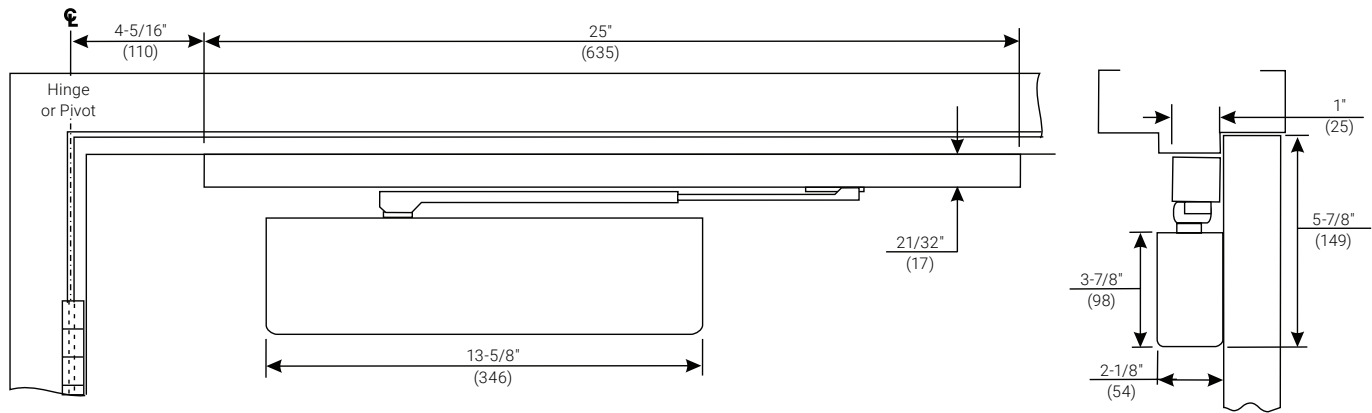
Minimum Top Rail of Door with Frame Stop	
Without Drop Plate	With 486 Drop Plate
3-1/2" (89)	2" (51)

Model Number	
Non-Hold Open	Hold Open
4440ST	4450ST

Notes:

- Door closers are set at midpower range from the factory
- Measurements are inches/mm unless noted
- Standard door widths: interior 32"-48" (81-122cm)

LOW PROFILE PUSH SIDE SLIDE TRACK



Mounting holes for closer body are spaced 2-3/8" (60mm) vertically x 6-3/4" (171mm) horizontally.

Minimum Top Rail of Door with Frame Stop	
Without Drop Plate	With 486 Drop Plate
5-1/4" (133)	3-5/8" (92)

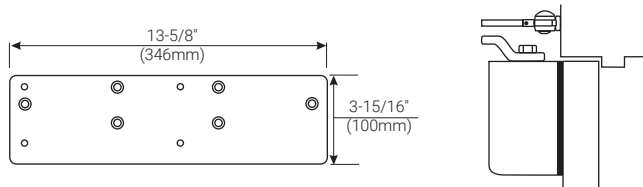
Model Number	
Non-Hold Open	Hold Open
P4440ST	P4450ST

Notes:

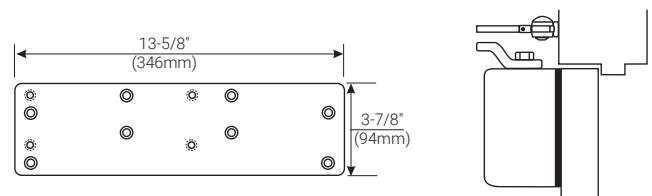
- Door closers are set at midpower range from the factory
- Measurements are inches/mm unless noted
- Standard door widths: interior 32"-48" (81-122cm)

REGULAR ARM

Closer Mounting Plate

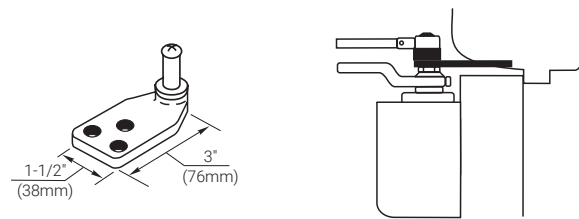


Narrow Frame (Top Rail) - 486 Drop Plate: For use where the narrow top rail of the door prevents the closer from being mounted directly to the door surface. This drop plate must be used for closer mounted on a top rail between 1-7/8" and 3-3/8" (48 and 86mm) in height.

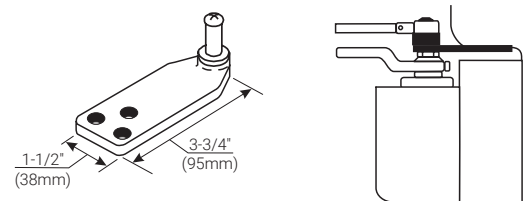


Overhead Door Holder - 486OH Drop Plate: For use when the presence of a surface or concealed overhead door holder prevents normal mounting of closer body due to interference between closer's mounting screws and door holder track. This drop plate's mounting screws are located on the door surface 2-3/8" down from the frame rabbet allowing room for placement of the surface mounted or overhead concealed door stop/holder.

Brackets For Non-Hold Open Arms



Molded/Bull Nose Trim - 291: For use where the door frame has molded or bull nose trim which will not accept a standard non-hold open shoe. The bracket is mortised into the frame rabbet, and projects beyond the face of the frame. It will accommodate a frame rabbet up to 2" (51mm) deep.

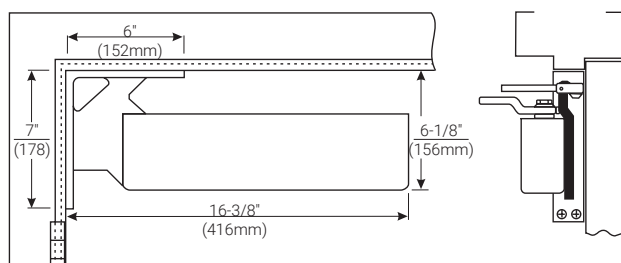


Molded/Bull Nose Trim - 291A Bracket: This bracket is similar to – but longer than – the 291 bracket. It is designed to accommodate frame rabbets from 2" to 2-7/8" (51 to 73mm) deep.

REGULAR ARM

Corner Brackets For Closer Mounting

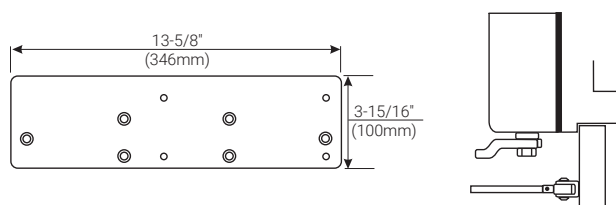
For closer sizing information use the Parallel Arm Sizing Chart on page 17. The use of a corner bracket requires a door closer of the opposite hand from that of the door when ordering handed closers.



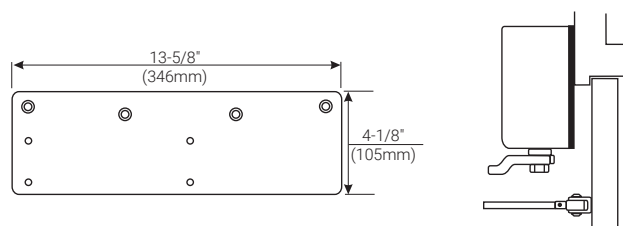
Mounting Opposite Hinge Side - 498 Standard Drop Corner Bracket: For use where it is desired to mount a regular arm non-hold open closer.

TOP JAMB

Closer Mounting Plates



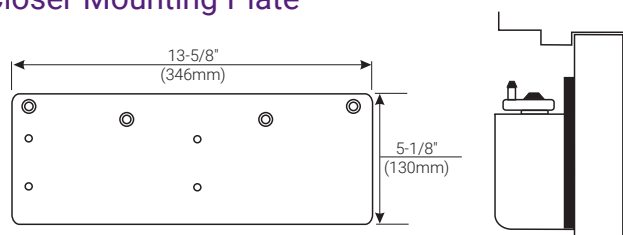
Narrow Frame - 486 Back Plate: For use where a narrow frame face prevents the closer from being mounted directly to the frame. This back plate must be used for closer mounted on a frame between 1-7/8" and 3-1/8" (48 and 79mm) in height.



Low Ceiling Clearance - Overhead Door Holder - 487 Drop Plate: For use where the ceiling clearance is between 1-7/8" and 3-7/8" (48 and 98mm) or where a surface or concealed overhead door holder prevents normal top jamb mounting. This plate drops the closer and allows the arm mounting screws to clear the bottom of the door holder. This places the centerline of the arm mounting screws at 3-1/8" (79mm) from the top of the door.

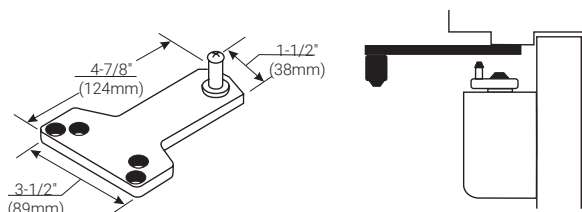
PARALLEL ARM

Closer Mounting Plate

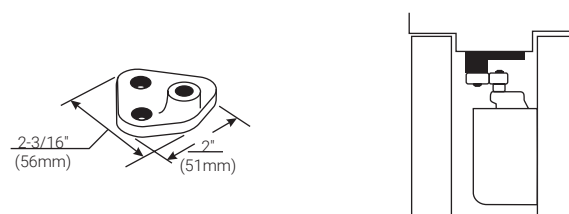


Narrow Top Rail - 488 Drop Plate: For use where a narrow top rail prevents the closer from being mounted directly to the door surface. This drop plate can be used to mount a closer on a top rail as narrow as 2-1/2" (64mm) in height.

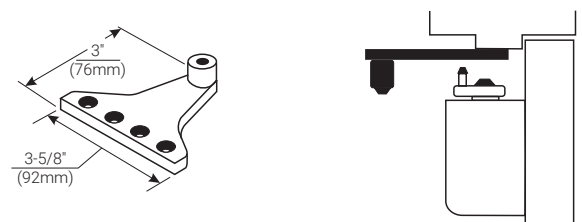
Brackets For Non-Hold Open Arms



Standard Installation - 289 Soffit Plate: This soffit plate is supplied standard with parallel arm closers. It can be mounted where the frame soffit is as narrow as 1" (25 mm).
Specify 289A-SS for stainless steel soffit plate.



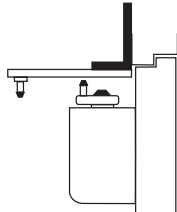
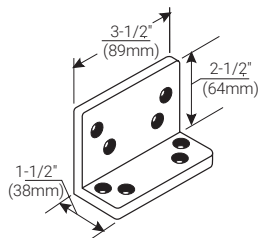
Mounting Between Doors - 413A Soffit Bracket: For use where insufficient space between companion doors does not permit use of other soffit plates. This bracket permits mounting of the closer between doors with as little as 3" (76mm) of header space. Permits closer arm to clear up to 5/8" (16mm) high stop.



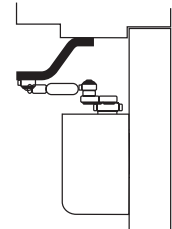
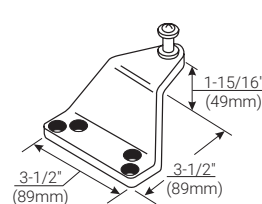
Narrow Frame/Removable Stop - 297 Soffit Plate: For use where a narrow frame or frame with removable stop does not permit use of the standard soffit plate. This soffit plate may be mounted on the frame soffit or the frame rabbet where the stop does not exceed 5/8" (16mm) in height. All of the screw holes are in a straight line, requiring as little as 1-1/4" (32mm) of frame reveal to mount bracket and maintain good closer arm geometry. Where the frame soffit is as wide as 2" (51mm), this soffit plate may be used to clear weather-stripping that is up to 1-3/8" (35mm) wide and 5/8" (16mm) in height.

PARALLEL ARM

Brackets For Non-Hold Open Arms (Continued)

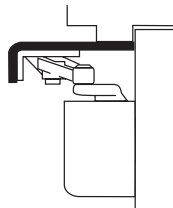
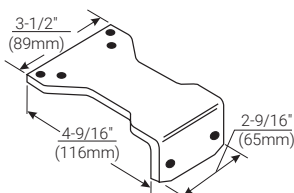


Flush Transom - 589L Angle Bracket: For use where rabbeted or flush transom conditions prevent installation of a soffit plate. Used in combination with the 289 soffit plate, or may be used in combination with the 290 soffit plate when it is necessary for the closer arm to clear a separate overhead door holder.

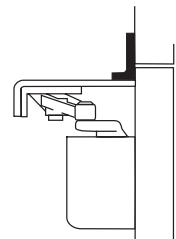
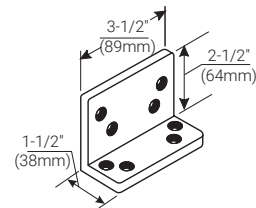


Extra-Clearance - 290 Offset Soffit Plate: For use where the need for additional clearance prevents use of the standard soffit plate. This plate mounts to the frame soffit to provide up to 2" (51mm) of clearance when a separate overhead door holder is used. Standard mounting requires a 2-5/8" (67mm) wide frame soffit. It may also be used where unusually high frame stops or weather-stripping prevent the use of other soffit plates.

Brackets For Hold Open Arms



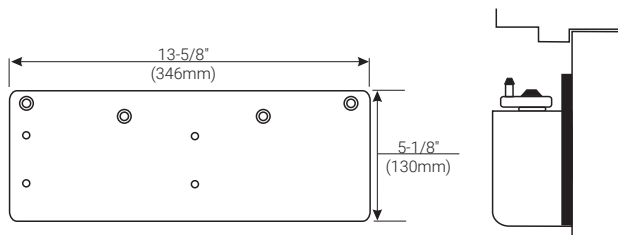
Parallel Hold Open - 588 Adapter Plate: This adapter plate is supplied standard with all parallel arm hold open closers. It can also be used to convert regular arm or top jamb hold open arms to parallel arm installation. It can be mounted where the frame soffit is as narrow as 1" (25mm).



Flush Transom Hold Open - 589L Angle Bracket: For use where rabbeted or flush transom conditions prevent installation of the standard 588 hold open adapter plate. It is used in combination with the 588 adapter plate.

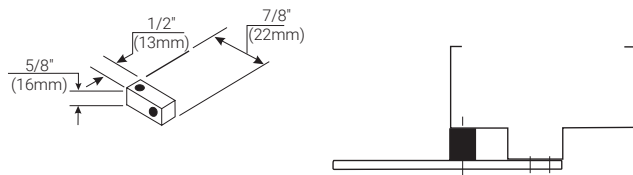
PARALLEL RIGID ARM

Closer Mounting Plate

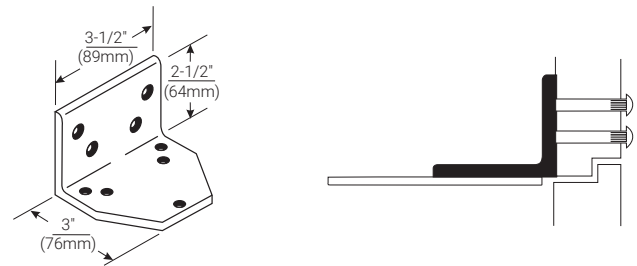


Narrow Top Rail - 488 Drop Plate: For use where a narrow top rail prevents the closer from being mounted directly to the door surface. This drop plate can be used to mount a closer on a top rail as narrow as 2-1/2" (64mm) in height.

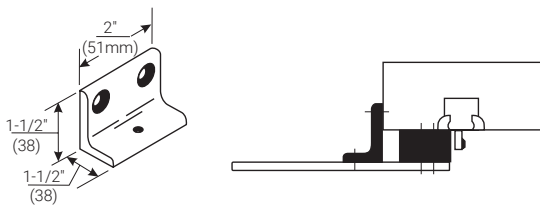
Brackets For Non-Hold Open Arms & Hold Open Arms



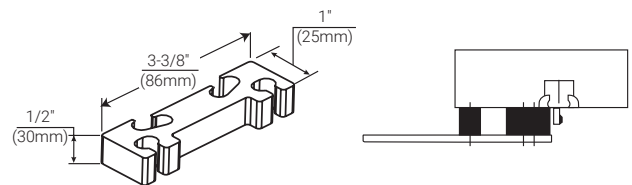
Standard - 293S Spacer Block: For use where a narrow frame soffit does not provide adequate support for the soffit plate. Supplied as standard with all parallel rigid arm closers.



Flush Rabbeted Transom - 293L Angle Bracket: For use where flush transom conditions prevent mounting of the standard soffit plate. This bracket is used in combination with the standard soffit plate.



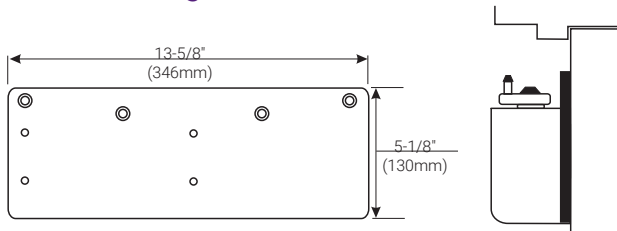
Narrow Frame - 890 Support Bracket: For use where the frame is narrow, and the soffit plate cannot be mounted directly to the frame soffit or rabbet. Used in combination with the #891 spacer block on blade stop frames to provide extra support and needed clearance of the blade stop.



Clearance/Support Blade Stop - 891 Spacer Block: For use where the door frame has a blade stop and the soffit plate must be mounted on the frame rabbet. This accessory is used in combination with the standard spacer block to provide clearance of the blade stop.

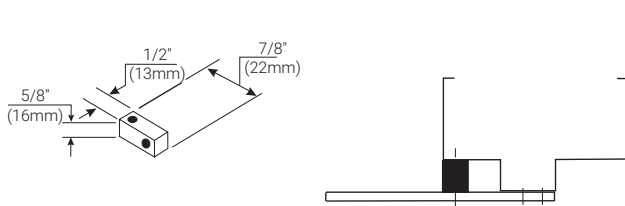
HOLDER/STOP ARM

Closer Mounting Plate

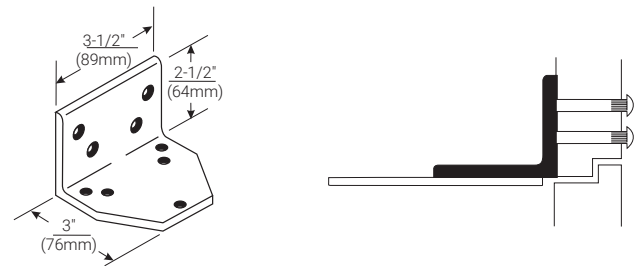


Narrow Top Rail - 488 Drop Plate: For use where a narrow top rail prevents the closer from being mounted directly to the door surface. This drop plate can be used to mount a closer on a top rail as narrow as 2-1/2" (64mm) in height.

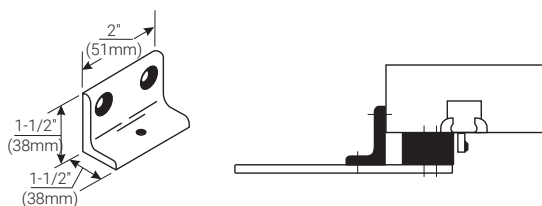
Brackets For Non-Hold Open Arms & Hold Open Arms



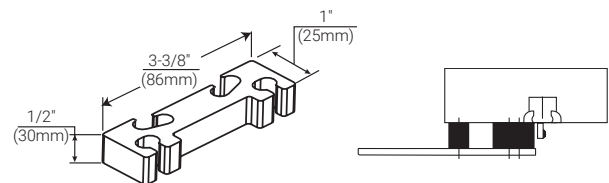
Standard - 293S Spacer Block: For use where a narrow frame soffit does not provide adequate support for the soffit plate.



Flush Rabbeted Transom - 293L Angle Bracket: For use where flush transom conditions prevent mounting of the standard soffit plate. This bracket is used in combination with the standard soffit plate.



Narrow Frame - 890 Support Bracket: For use where the frame is narrow, and the soffit plate cannot be mounted directly to the frame soffit or rabbet. Used in combination with the #891 spacer block on blade stop frames to provide extra support and needed clearance of the blade stop.

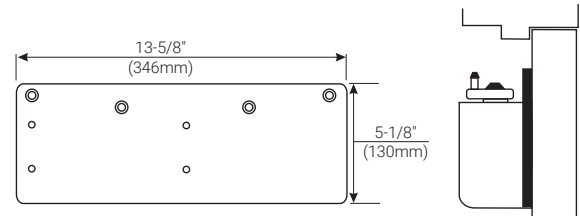


Clearance/Support Blade Stop - 891 Spacer Block: For use where the door frame has a blade stop and the soffit plate must be mounted on the frame rabbet. This accessory is used in combination with the standard spacer block to provide clearance of the blade stop.

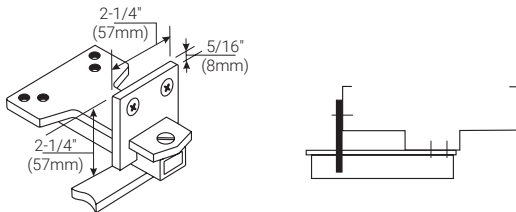
UNI STOP™ ARM

Closer Mounting Plate (For Parallel Arm)

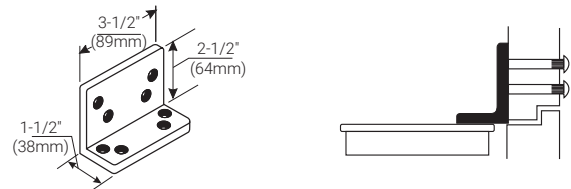
Narrow Top Rail - 488 Drop Plate: For use where a narrow top rail prevents the closer from being mounted directly to the door surface. This drop plate can be used to mount a closer on a top rail as narrow as 2-3/8" (60mm) in height.



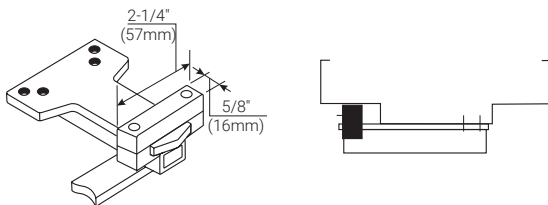
Soffit Plate Reinforcing Brackets (For Parallel Arm)



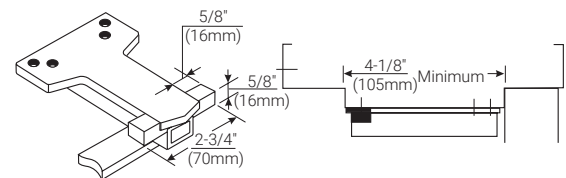
Additional Support - 6190 Reinforcing Bracket: Standard for use with all Parallel Arm UNI Stop Door Controls. Provides additional support to the soffit plate on installations with door frame reveals from 1-7/8" to 4-5/8" (48 to 117mm).



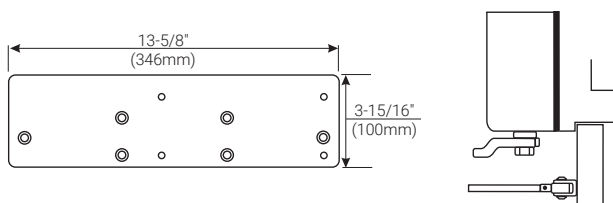
Flush Rabbeted Transom - 589L Angle Bracket: Optional for use with all Parallel Arm UNI Stop Door Controls. For use where rabbeted or flush transom conditions prevent installation of the soffit plate assembly. This bracket fastens to the overhead transom to provide a mounting surface for the soffit plate assembly.



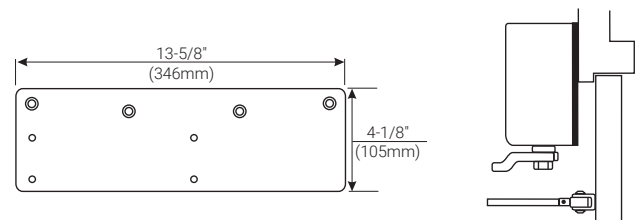
Wide Frame - 6191 Reinforcing Kit: Optional for use with all Parallel Arm UNI Stop Door Controls. Used to support the soffit plate on installations with wide frames. Clamps may be used with or without the spacer block, depending on frame conditions.



Closer Mounting Plates (For Top Jamb)



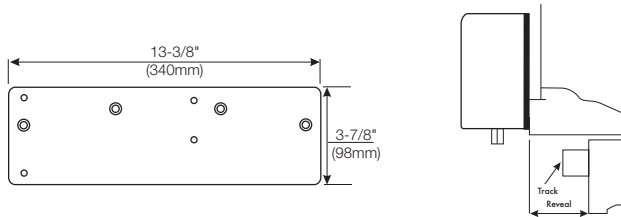
Standard Installation - 486 Back Plate: Can be mounted where a frame face is as narrow as 1-5/8" (41mm) in height.



Minimum Ceiling Clearance - 487 Drop Plate: For use where the ceiling clearance is as little as 1-7/8" (48mm).

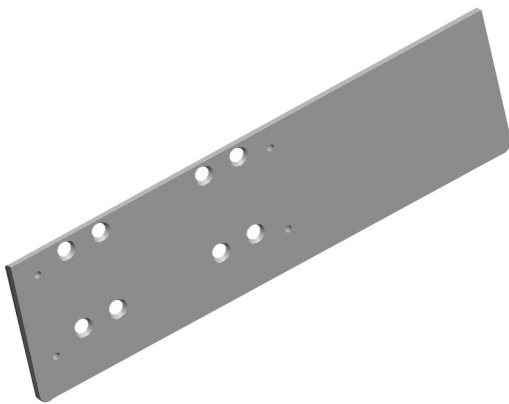
SLIDE TRACK

Closer Mounting Plate



Slide Track - 486JP Back Plate: Required for frames with standard 2" (51mm) profile face. Without plate, minimum 4" (102mm) face frame required.

RETROFIT PLATES

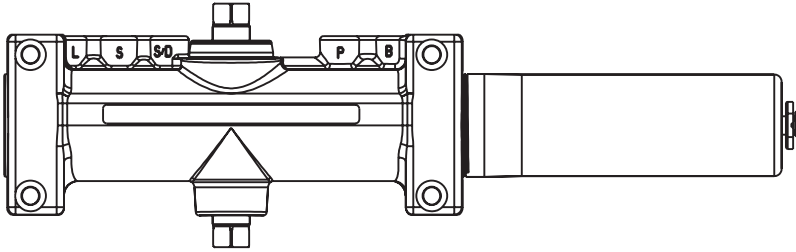


Model Number	Replaces
RP44-4040	LCN-4040
RP44-4010	LCN-4010

The retrofit plates allow a 4400 Institutional Door Closer to replace 4040 or 4010 closer without modifying the existing hole pattern in the door. The plates will work with regular and parallel arm applications.

Note: The location of the arm shoe on the frame will change, therefore the frame must be patched.

DOOR CLOSER BODY ASSEMBLIES



Closer Series	Closer Covers (Material)	Model Number	Dimensions Inches (mm)
4400 TJ4400	Plastic	400P	13-3/4" (349) x 4" (102) x 2-1/8" (54)
4400	Metal	400M	13-5/8" (346) x 3-7/8" (98) x 2-3/16" (56)
TJ4400	Metal	TJ400M x Hand	

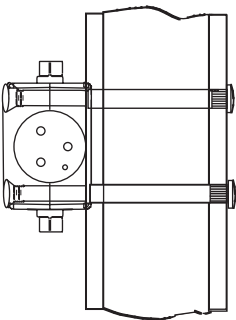
Model Number	Description
4400LAP	Multi Size Closer Body
4400SLAP	Corrosion Resistant Body

LAP = Less All Parts

Specialty Fasteners

Steel Door Application

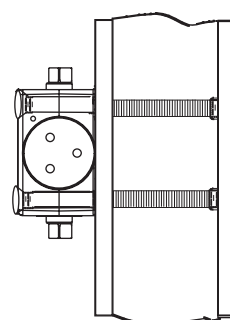
Sex Nut/Sleeve Nut & Screw:
"SNB" (4 per pack)



Door Thickness	SN's	SNB's
1-3/4"	SN-134	SNB134-47
2"	N/A	SNB200-47
2-1/4"	SN-214	SNB214-47
S.S. SNB'S 1-3/4" (Stainless Steel)	SN-134SS	SNB134SS-47

Aluminum and Wood Door Application (Aluminum Door Shown)

Sex Nut/Sleeve Nut: "SN"
(4 per pack)

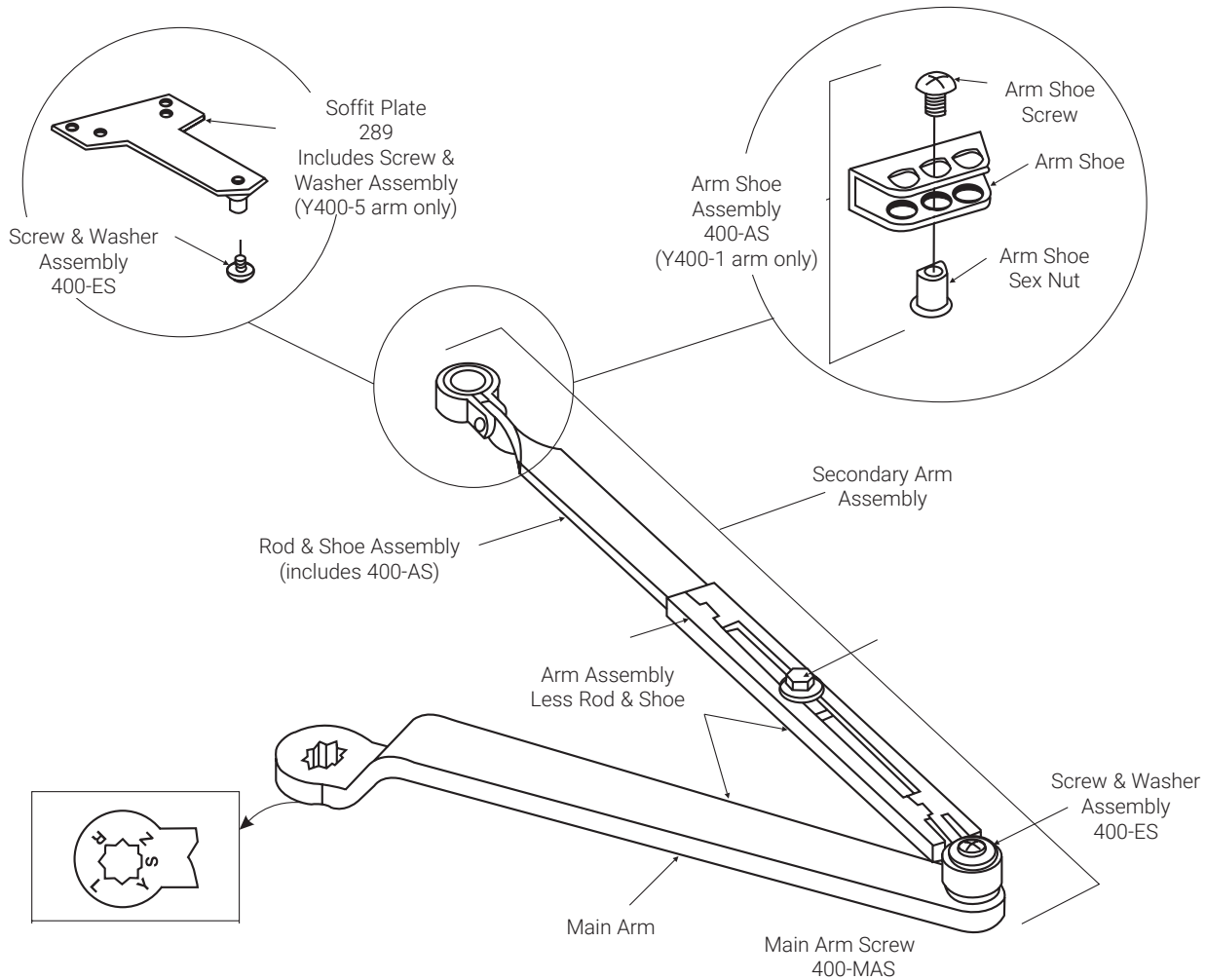


Thru-Bolt & Grommet Nut:
"TBGN" (4 per pack)

Door Thickness	TBGN's
1-3/8"	TBGN138-47
1-3/4"	TBGN134-47

Torx® Screw Packs	
Arm Type	Model Number
Regular, Parallel and Top Jamb	TX47
Parallel Rigid, Holder/Stop, Holder/Stop Spring	PRTX47
Regular Rigid Heavy-Duty Arm	RTX47
UNI Stop™ Arm	UNITX47
Slide Track	STTX47

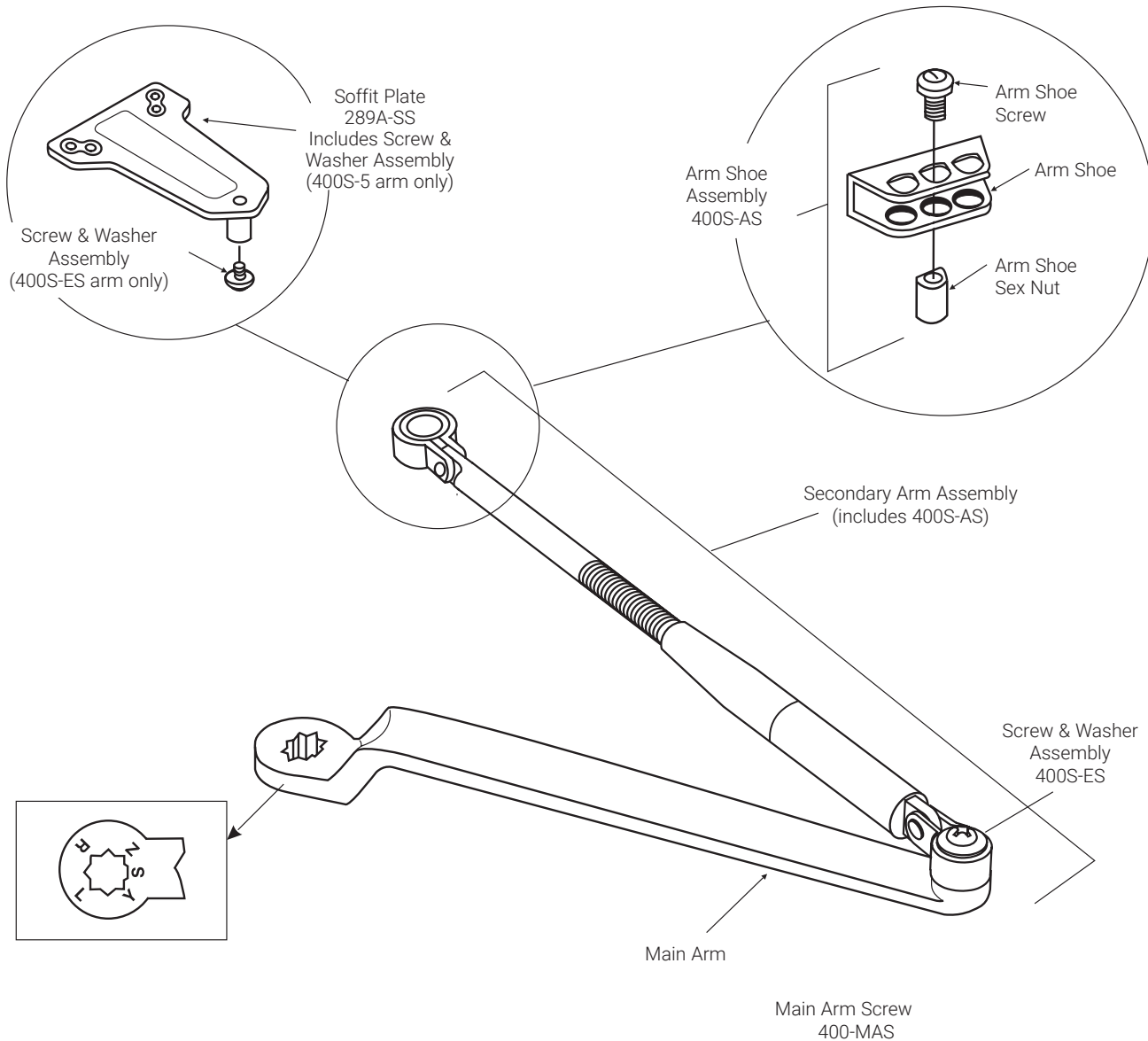
NON-HOLD OPEN ARM ASSEMBLIES



Closer Series	Complete Arm Assembly	Main Arm Assembly ¹ (includes 400-ES) Inches (mm)	Secondary Arm Assembly (includes 400-ES)	Arm Assembly Less Rod and Shoe	Rod & Shoe Assembly ² Inches (mm)
4400	Y400-1	400-1M (11)(279)	Y400-111	Y400-1W	Y400-11 (8-7/8)(225)
TJ4400	Y400-1A		Y400-121		Y400-11A (12-9/16)(319)
TJL4400	Y400-1B	400-2M (13-1/2)(343)	Y400-131	Y400-2W	Y400-11B (15-3/16)(386)
PA4400	Y400-5	400-1M (11)(279)	Y400-115	Y400-1W	Y400-15 (8-7/8)(225)
PA4400 ³	Y400-5A		Y400-115A		Y400-15A (12-9/16)(319)
4400	Y400-25 (tri pack includes Y400-1 plus 289 plate)	1. C to C length shown in parentheses. 2. C of connecting link to end of rod shown in parentheses. 3. For 180° door swing when using a special template for doors hung on 6" to 8" (152mm to 203mm) wide throw hinges.			

Note: Mounting hardware included with all parts orders.

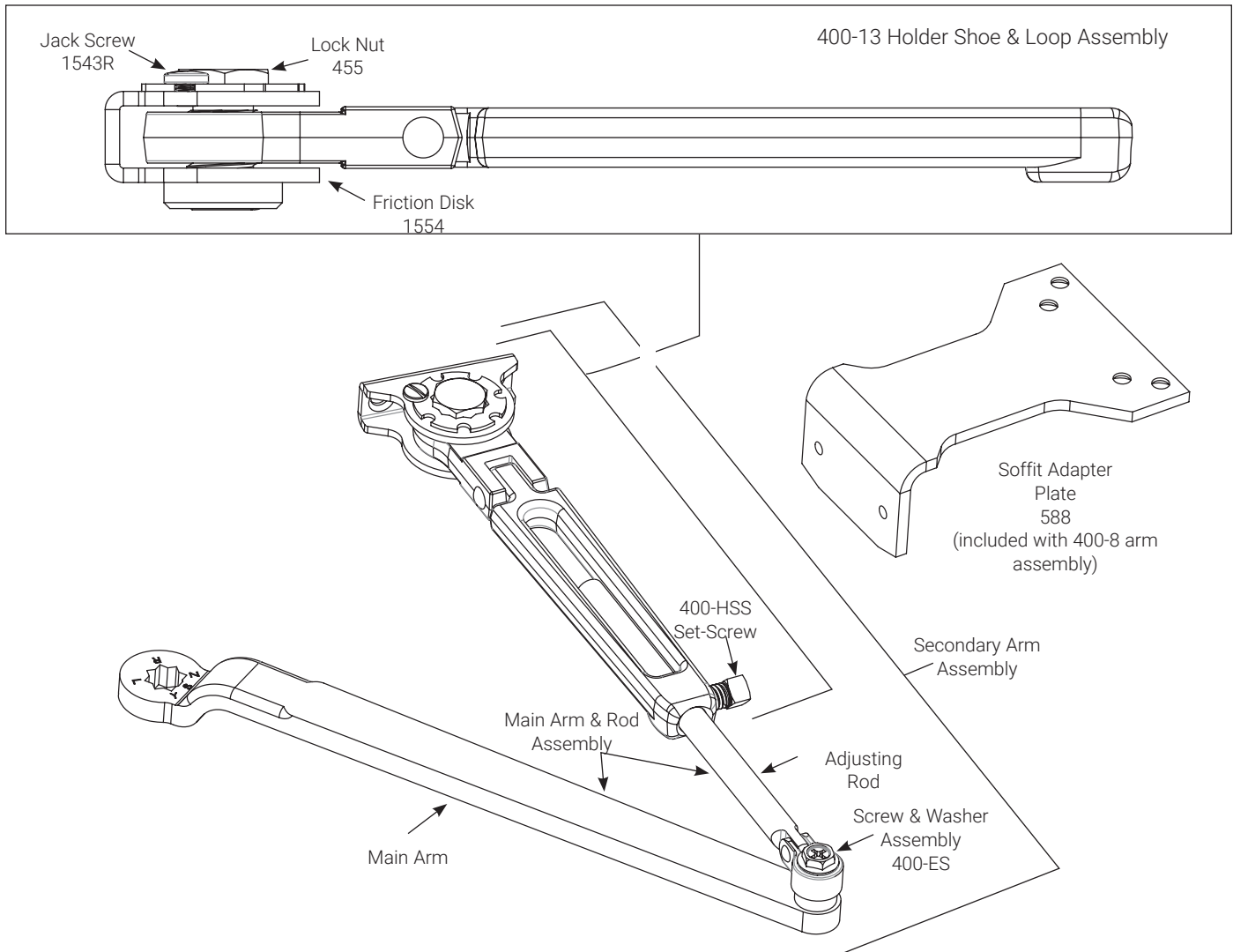
STAINLESS STEEL ARM ASSEMBLIES



Closer Series	Complete Arm Assembly	Main Arm Assembly ¹ (length)(mm) (includes 400S-ES)	Secondary Arm Assembly (includes 400S-ES)
4400S	400S-1	400S-1M (11)(279)	400S-111
TJ4400S	400S-1A		400S-121
PA4400S	400S-5		400S-115

Note: Mounting hardware included with all parts orders.
1. C to C length shown in parentheses.

HOLD OPEN ARM ASSEMBLIES



Closer Series	Complete Arm Assembly	Main Arm ¹ (Length)(mm) (includes 400-ES)	Secondary Arm (includes 400-ES)	Main Arm & Rod Assembly	Holder Shoe & Loop Assembly	Adjusting Rod ² (Length)(mm)
4410	400-3/400-8 ³	400-1M (11)(279)	400-113/400-118 (Reg.) / (Par.)	400-3W	400-13	400-31 (7-3/8)(187)
TJ4410	400-3A		400-123	400-3WA		400-31A (10-13/16)(275)
TJL4410	400-3B	400-2M (13-1/2)(343)	400-133	400-3WB		400-31B (12-7/8)(327)

Note: Mounting hardware included with all parts orders.

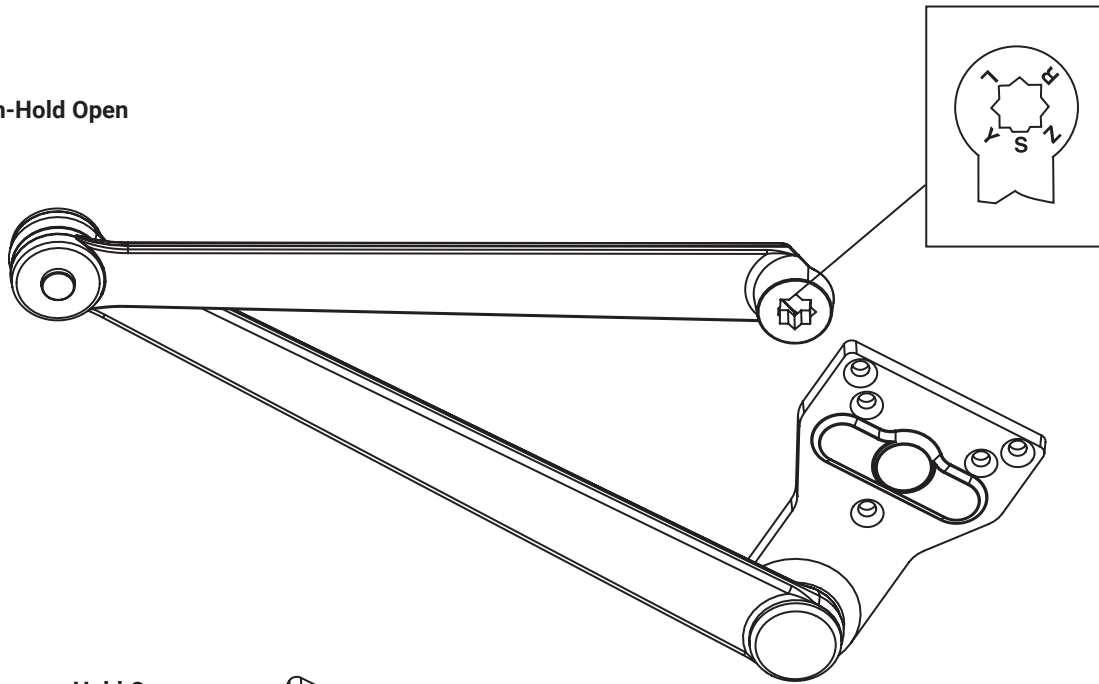
1. C to C length shown in parentheses.

2. C of connecting of connecting link to end of rod shown in parentheses.

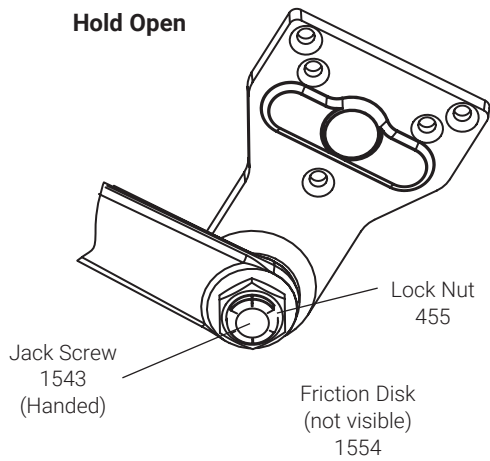
3. Same as 400-3 but includes #588 soffit adapter plate.

PARALLEL RIGID ARM ASSEMBLIES

Non-Hold Open



Hold Open

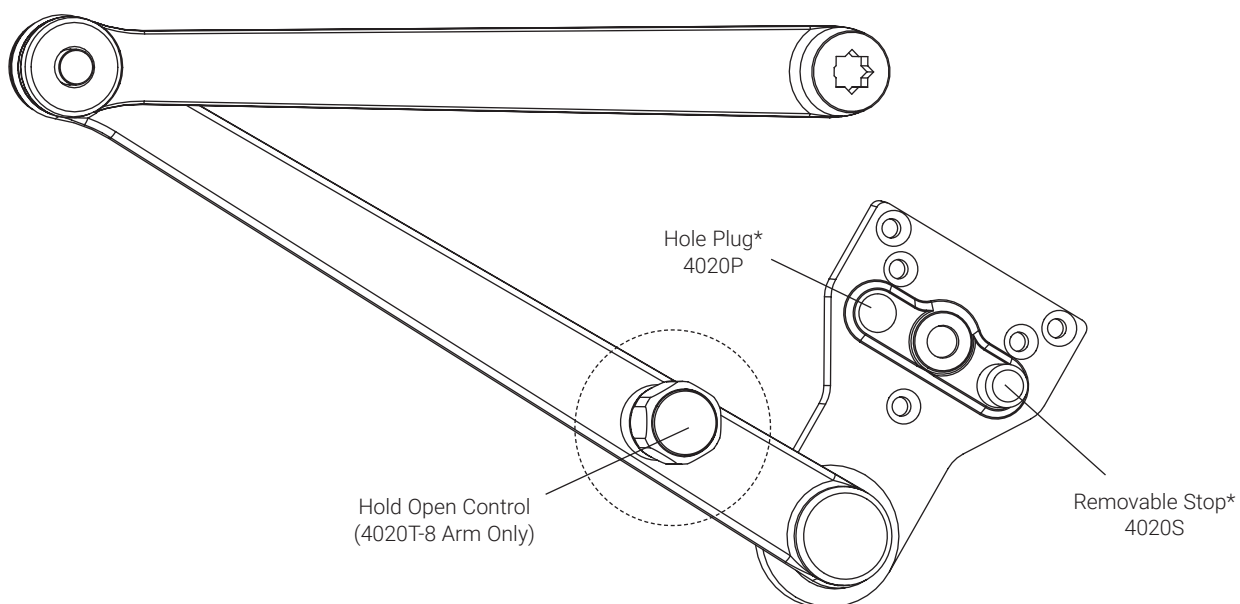


Arm Function	Complete Arm Assembly	Jack Screw
Non-Hold Open	PR400-5	N/A
Hold Open	PR400-8R (Right Hand)	1543R
	PR400-8L (Left Hand)	1543L

Note: Mounting hardware included with all parts orders.

HOLDER STOP ARM ASSEMBLIES

Hold Open Arm Shown



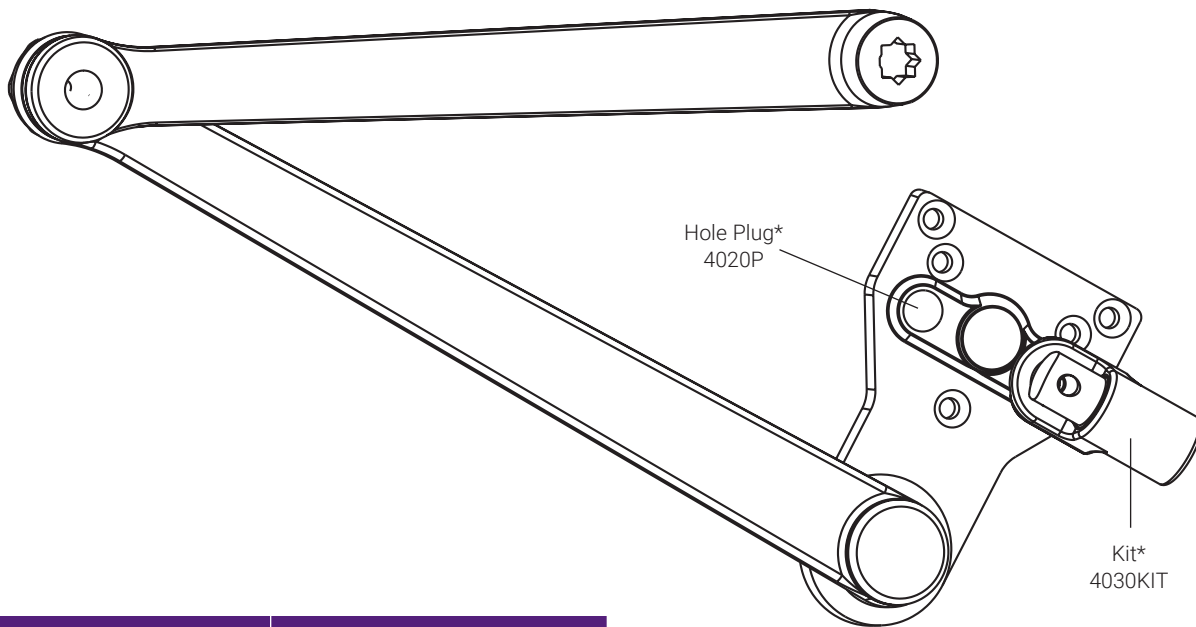
Arm Function	Complete Arm Package
Non-Hold Open	4020-5
Thumbturn Hold Open	4020T-8

Note: Mounting hardware included with all parts orders.

* These parts and screw pack are included with complete arm assemblies

HOLDER/STOP ARM ASSEMBLIES

Non-Hold Open Arm Shown

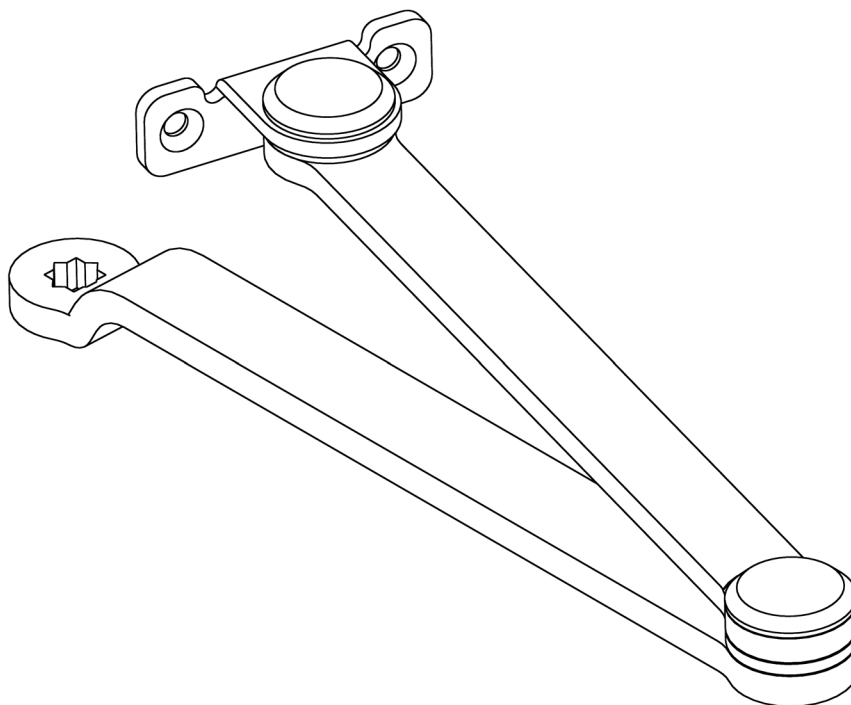


Arm Function	Complete Arm Package
Non-Hold Open	4030-5
Thumbturn Hold Open	4030T-8

Note: Mounting hardware included with all parts orders.

* These parts and screw pack are included with complete arm assemblies

REGULAR RIGID HEAVY-DUTY ARM ASSEMBLIES

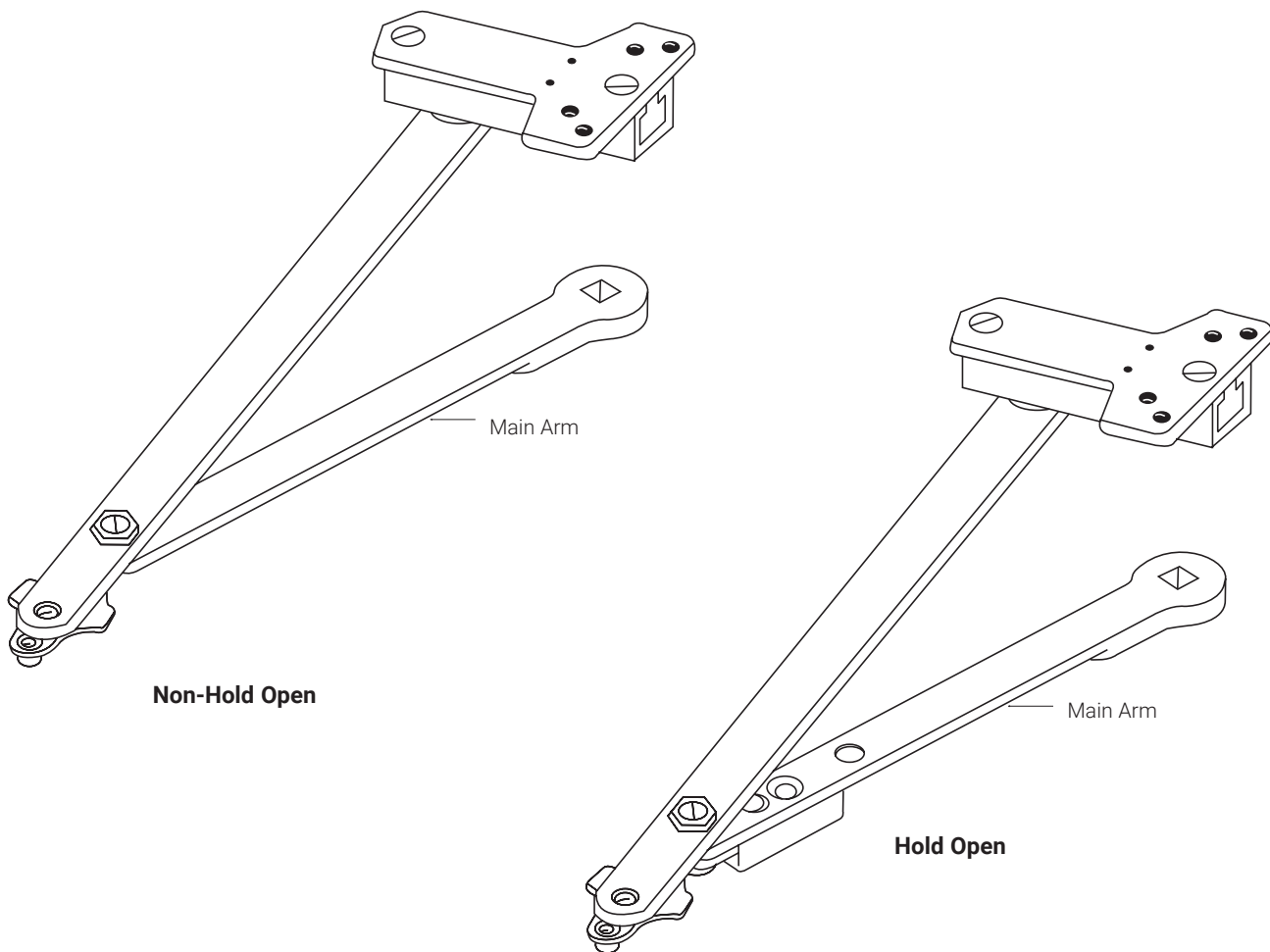


Closer Series	Arm Function	Complete Arm Package
R4400	Non-Hold Open	R400-1

Note: Mounting hardware included with all parts orders.

UNI STOP™ ARM ASSEMBLIES

Parallel Applications



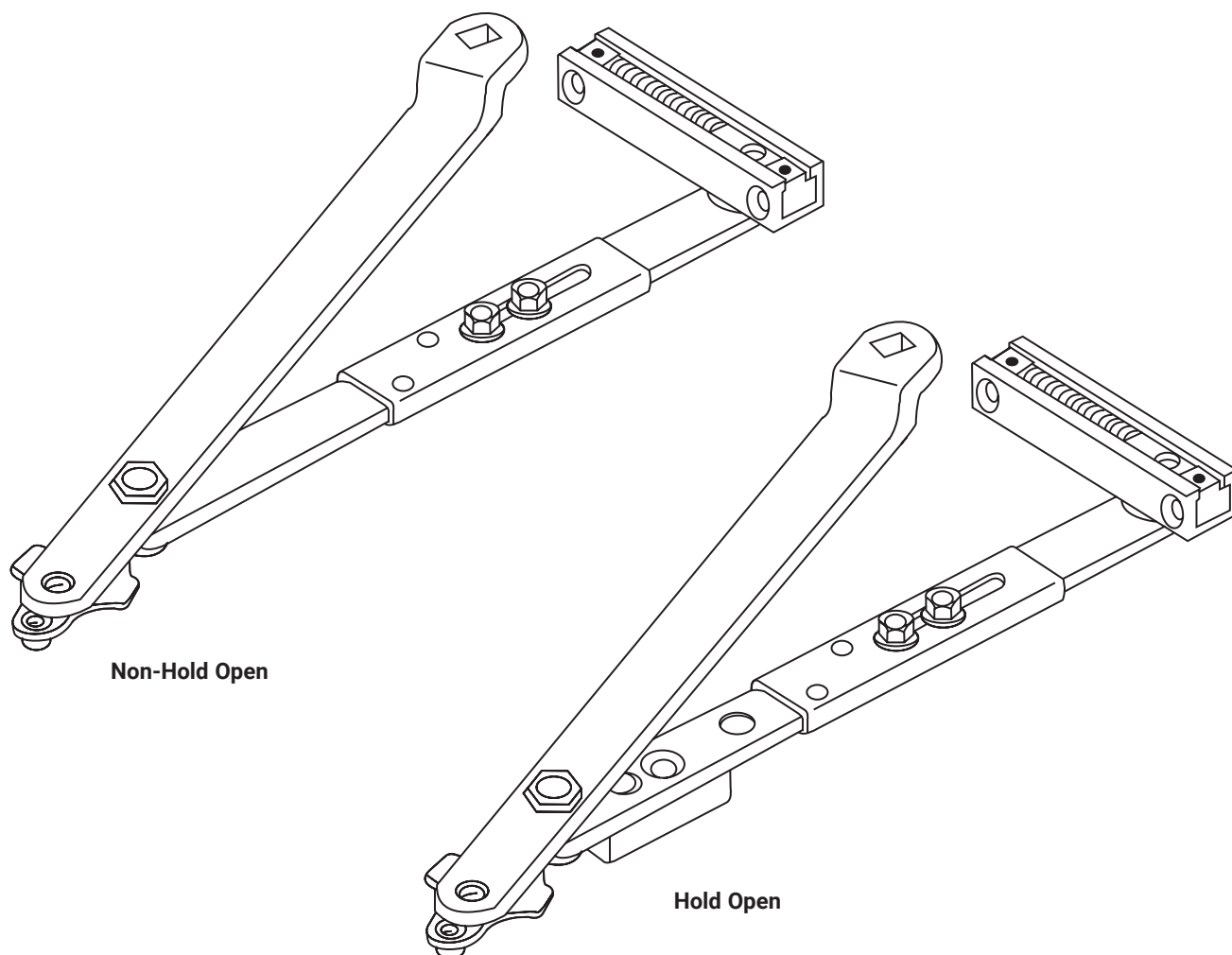
Complete Arm Assembly		Door Width (cm)	Main Arm Length* (mm)
Non-Hold Open	Hold Open		
6100-11	6100-1	28" - 32" (71 - 81)	9-1/2" (241)
6100-13	6100-3	33" - 41" (84 - 104)	11" (279)
6100-14	6100-4	42" - 48" (107 - 122)	12-1/2" (318)

* Center to center length.

Notes:
Mounting hardware included with all parts orders.
Only available in painted finishes.

UNI STOP™ ARM ASSEMBLIES

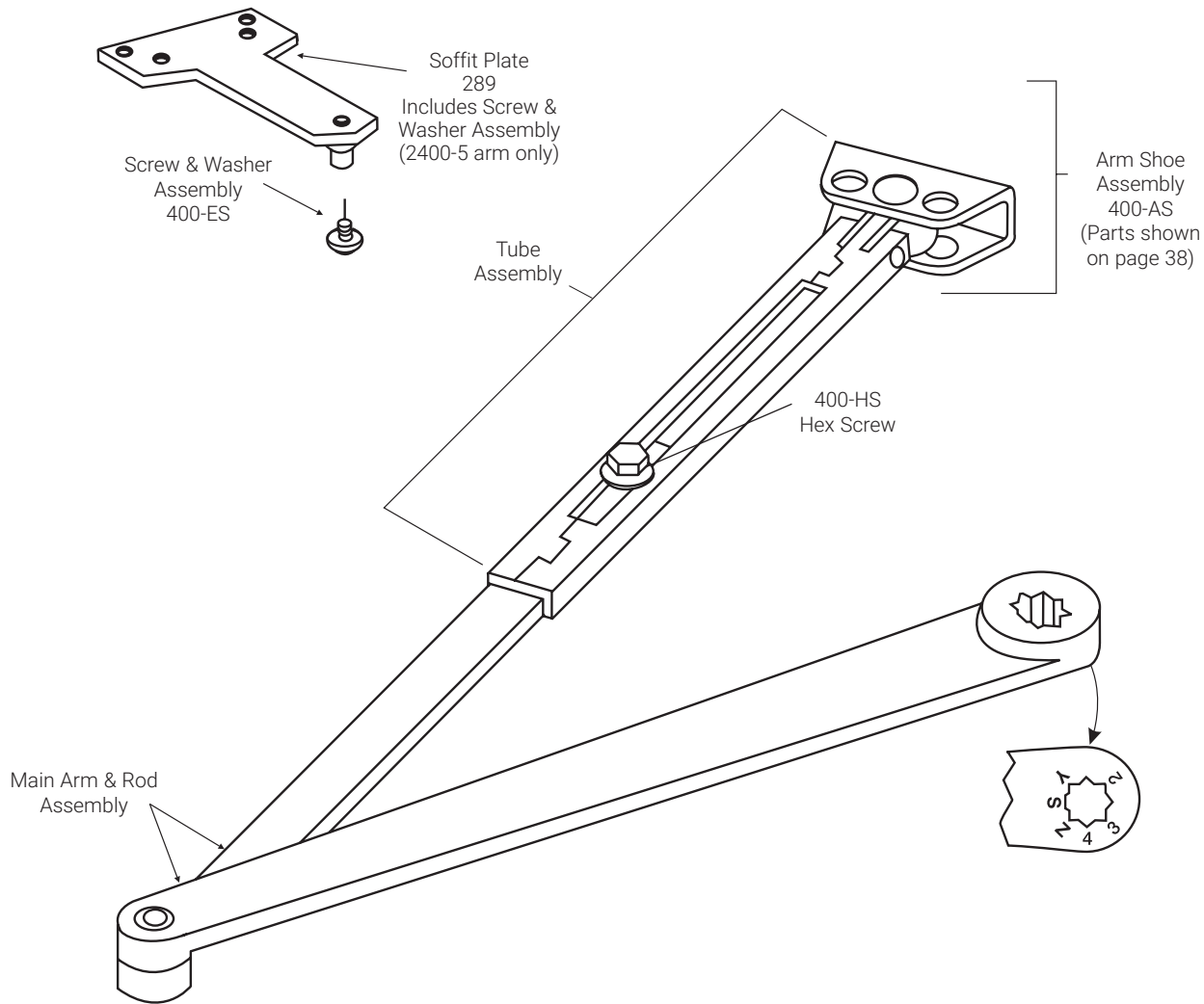
Top Jamb Applications



Complete Arm Assembly		For Frame Reveals (mm)
Non-Hold Open	Hold Open	
J6100-4	J6100-7	2-1/8" - 3-1/4" (54 - 83)
J6200-4	J6200-7	1/2" - 2" (13 - 51)
J6400-4	J6400-7	3-3/8" - 4-1/4" (86 - 108)
J6500-41	J6500-71	4-3/8" - 5-3/8" (111 - 137)
J6500-42	J6500-72	5-1/2" - 6-3/8" (140 - 162)
J6500-43	J6500-73	6-1/2" - 7-3/8" (165 - 187)
J6600-4	J6600-7	0" - 3/8" (0 - 10)

Notes:
Mounting hardware included with all parts orders.
Only available in painted finishes.

LOW PROFILE ARM ASSEMBLIES

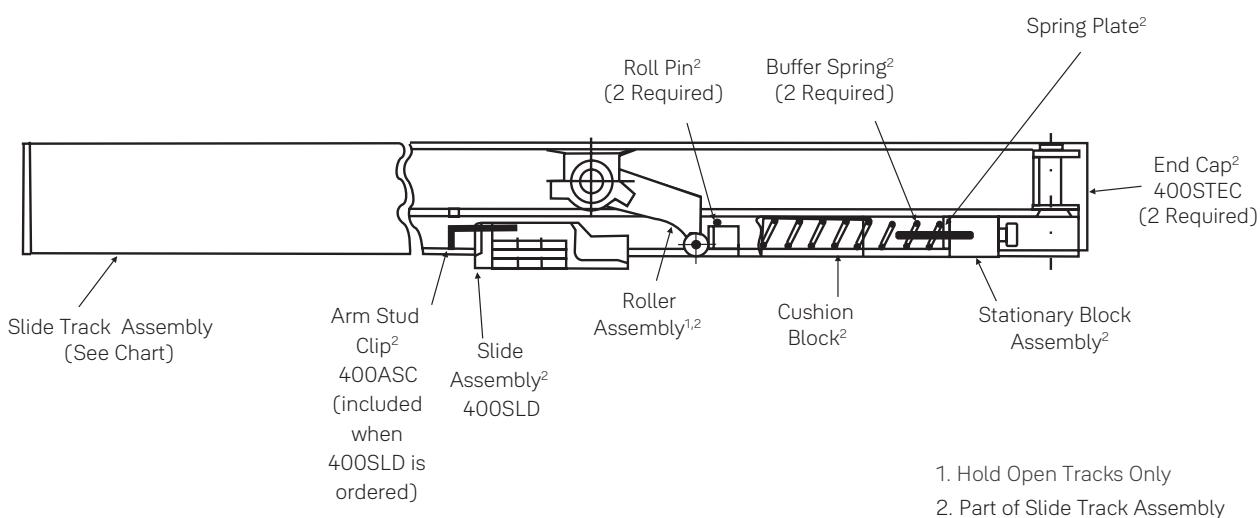


Arm Application	Complete Arm Assembly	Main Arm & Adjusting Rod Assembly	Tube & Shoe/Soffit Assembly
Regular Arm	2400-1	2400-1MR	2400-1TS (With 400-AS)
Parallel Arm	2400-5		2400-5TS (With 289)
Tri-pack	2400-25		

Note: Mounting hardware included with all parts orders.

TRACK ASSEMBLIES 4400ST & STP

Track Assemblies	Part Number	
	Non-Hold Open	Hold Open
Pull side mounted	400ST-1T	400ST-3T
Push side mounted	400ST-5T	400ST-8T
Pull side mounted (180°)	400ST-1T180	N/A

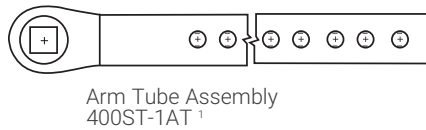


Note: Mounting hardware included with all parts orders.

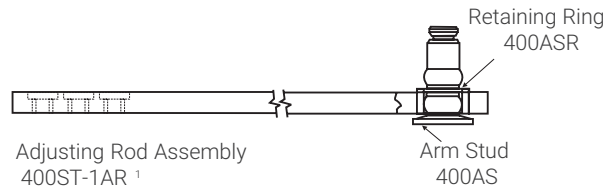
TRACK ASSEMBLIES 4400ST & STP

Standard Arm Assembly

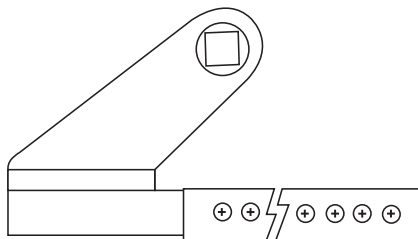
Arm tube assembly



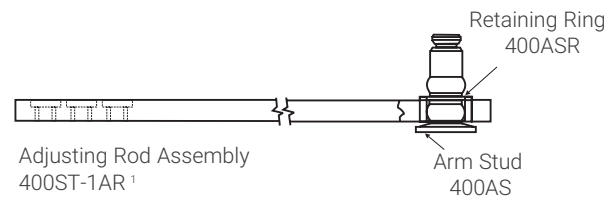
400ST-1A^{1,2}



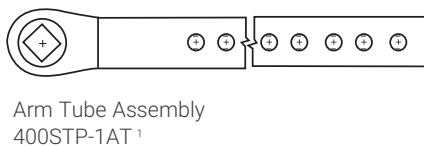
Double Egress Arm Assembly



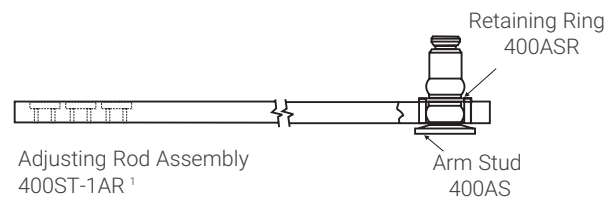
400PT-DE-1R (Right Hand)^{1,2} 400PT-DE-1L (Left Hand)^{1,2}



STP Arm Assembly



400STP-1A^{1,2}



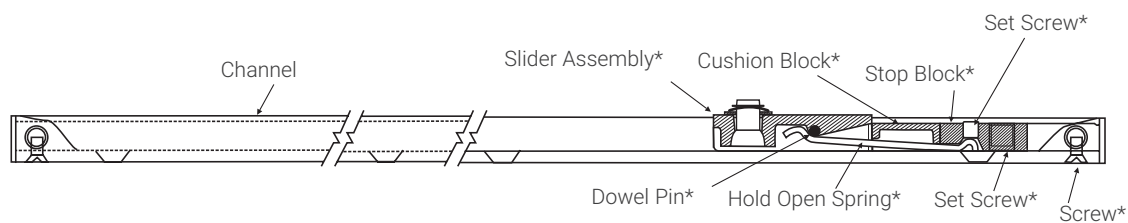
1. Includes arm length adjusting screw #400-ALAS

2. Includes arm tube & adjusting rod assembly

Note: Mounting hardware included with all parts orders.

TRACK ASSEMBLIES 4400ST

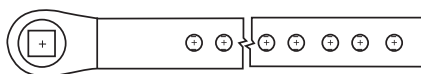
Slide Track Assembly		
Description	Non-Hold Open	Hold Open
Pull side mounted	440ST-1T	440ST-3T
Push side mounted	440ST-5T	440ST-8T



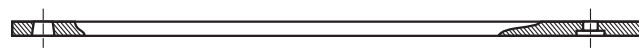
*Part of an Assembly Pack
NHO= 440SLD
HO= 440HSLD

Arm Assembly

440ST-1A^{1,2}



Arm Tube Assembly
440ST-1AT²



Adjusting Rod Assembly
440ST-1AR²

1. Includes arm length adjusting screw
2. Includes arm tube & adjusting rod assembly

Note: Mounting hardware included with all parts orders.

SAMPLE SPECIFICATIONS

4400 Series

Closers for interior and exterior doors shall be full rack-and-pinion type with cast aluminum alloy shell. Closers shall be surface mounted and shall project no more than 2-3/16" from the surface of the door. Closers shall be non-handed to permit installation on doors of either hand. Closer fluid shall contain lubricity and anti-oxidation agents. Closer fluid shall maintain stable viscosity to allow door closer to perform in temperatures ranging from extremely high to as low as -40°F. Closers shall have multi-size spring power adjustment to permit setting of spring from size 1 through 6. Closers shall have two non-critical valves, hex key adjusted, to independently regulate sweep and latch speed. Closers shall have backcheck cushioning controlled by a hex key adjusted valve. Closers shall have backcheck position controlled by a hex key adjusted valve.

[Closers shall have adjustable delayed-action closing controlled by a hex key adjustable valve.]

[Closers shall be highly corrosion resistant and shall have all external body components of aluminum, zinc alloy or stainless steel material and all fasteners of stainless steel.]

Regular arm and top jamb closers shall have a non-hold open shoe permitting 15% (± 7-1/2%) power adjustment.**Closers shall be enclosed in a [molded resin cover], [plated or sprayed metal cover]. Closers to be ASSA ABLOY ACCENTRA® [4400] [4400M] [4400S].

**For special arms insert the appropriate specification here (see below).

**UNI Stop™ Arm

Door closers shall have a fixed door stop feature effective at one point selected at installation, from 85-110° in five-degree increments. Door stop shall be cushioned by a shock-absorbing heavy-duty spring action effective at the [soffit plate] [arm shoe] pivot. [Closers shall be provided for parallel arm installation using rigid steel main arm and secondary arm lengths proportional to the door width.] [Closers shall be provided for top jamb installation using steel, rigid main arm and telescoping secondary arm adequate for the frame reveal of the openings.]

**Holder/Stop Arm

Door closers shall have a field reversible door stop. Hold open tension shall be adjustable effective at one point selected at installation, from 85° - 110° in five degree increments. Closers shall be provided for parallel arm installation using a forged rigid steel main arm and secondary arm.

**Holder/Stop Spring Arm

Door closers shall have built-in door stop [and holder] effective at one point selected at installation, from 85° - 110° in five-degree increments. Door stop mechanism shall be reversible and have a buffer spring that engages prior to the dead stop feature, reducing shock loads to the door and frame assembly. Door stop mechanism shall be attached to soffit plate. [Hold open mechanism shall have engage/disengage selection actuated by thumbturn]. Closers shall be provided for parallel installation using a forged rigid steel main arm and secondary arm.

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