

**Norton®**

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# **8000** Architectural Series Door Closers

An ASSA ABLOY Group company

**ASSA ABLOY**

### OVERVIEW

#### Standard on all 8000 Series Closers

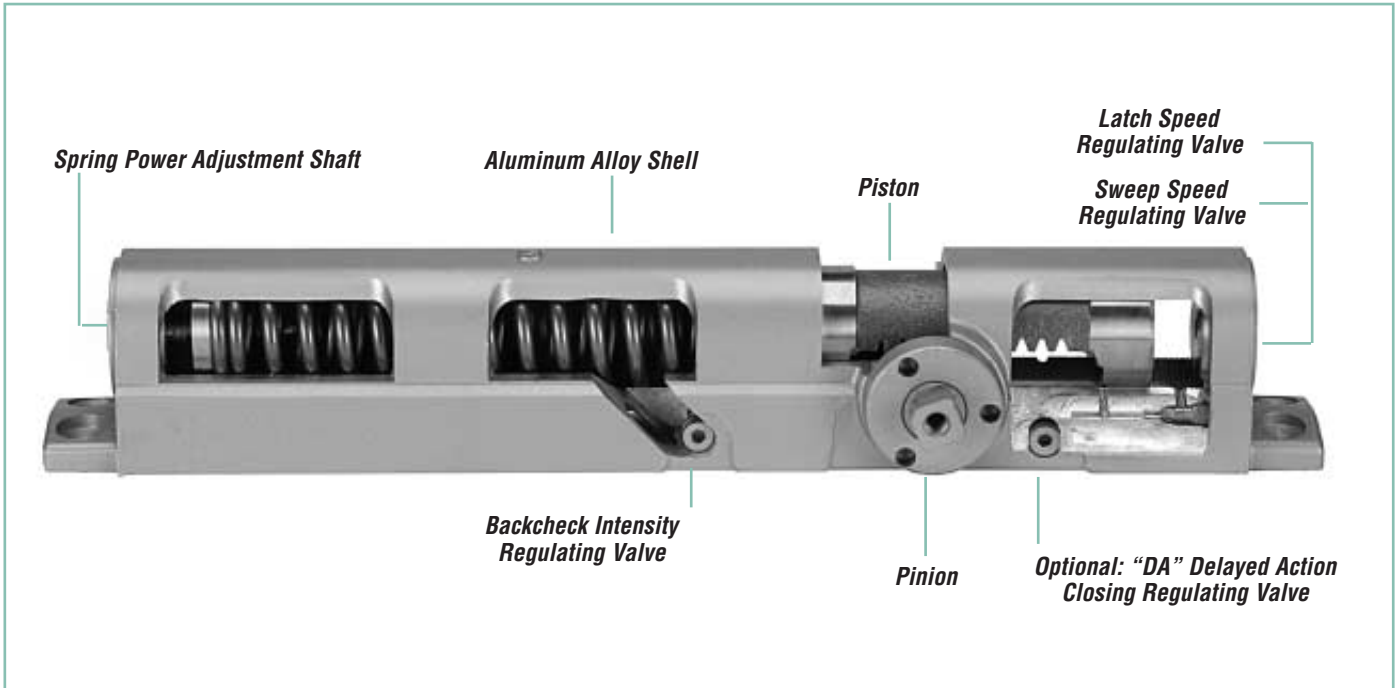
- ANSI A156.4, Grade 1
- 10-year warranty
- Non-handed
- UL10C
- Staked valves
- Cast aluminum body
- Rack-and-pinion design
- 1-1/4" (32mm) diameter piston
- 5/8" (16mm) diameter pinion journals
- Standard, separate and independent, latch, sweep and backcheck intensity valves
- 2-1/8" (54mm) projection (standard covers)
- All standard arm applications (with slim, full or metal covers) allow doors to swing 180°, conditions permitting
- Available with CLP, UNI, PR, ST arm and track options
- Delayed action option with pressure relief valve in piston

OPTIONAL FEATURES	8300	8500	8301	8501	8301BF	8501BF
Sized springs 2,3,4,5,6 with 50% additional adjustment	X	X				
Adjustable spring sizes 2 through 6			X	X		
Adjustable spring sizes 1 through 4					X	X
Molded slim line plastic cover standard	X		X		X	
Molded full plastic cover standard		X		X		X
Metal and Architectural covers optional		X		X		X
Bi-pack packaging standard (regular arm and top jamb mounting)	X	X				
Tri-pack packaging standard (regular arm, top jamb and parallel arm mounting)			X	X	X	X
Available with Parallel arm option	X	X				
ADA Compliant/ANSI A117.1					X	X

#### Table of Contents

Overview .....	2 - 3
How to Order .....	4
Fasteners/Finishes .....	5
Features .....	6
Optional Features .....	6-7
Suggested Specifications .....	8
Applications .....	9-11
Technical Details .....	12-19
Accessories .....	20-31
Parts List .....	32-40

### Cutaway View of Closer Body



## COMPLIANCE STANDARDS

Series 8301BF and 8501BF door closers are designed to comply with requirements of the Americans with Disabilities Act (A.D.A.) and ANSI standard A117.1. All series 8300/8500/8301(BF)/8501(BF) comply with ANSI A156.4 Grade 1 Specification. All Norton series 8300/8500/8301(BF)/8501(BF) closers with non-hold open arms are listed by Underwriters Laboratories for labeled fire doors. This includes compliance to UL10C and UBC-72 (1997) for 3-hour assemblies. The product is manufactured in an ISO 9001 facility. These closers are also listed by the California State Fire Marshal and the New York City Materials and Equipment Acceptance Division.

### HOW TO ORDER

For optimum protection of door and frame assemblies, always use auxiliary wall, floor, or overhead door stop.

**No Prefix** } 8300/8500 series designates bi-packed (regular & top jamb).  
(Top Jamb up to 3" reveal)  
8301/8501 series designates tri-packed (stock closers).

**J** - Top Jamb installation. 2-3/4 to 7" reveal - 150° swing.

**P** - 8300/8500 parallel arm only.  
- 8301/8501 parallel arm units with specialty brackets.  
- 8380/8580 low profile closer.

**PR** - Parallel rigid arm (parallel arm only - specify hand for hold open functions.)

**PRO** - Parallel rigid arm with offset soffit plate (parallel arm only - specify hand for hold-open applications).

**PS** - For push side mounted slide track only.

**CLP** - CloserPlus® arm (parallel arm only).

**UNI** - Unicontrol® arm (parallel arm only - specify **door width**).

**UNIJ** - Unicontrol arm (top jamb only - specify **frame reveal**).

**"No Suffixes"** - Standard Non-Hold Open arm

**"H"** - Standard Hold Open arm

**"M"** - Metal Cover; optional for Series 8501 and 8500 closers only (Specify hand for Top Jamb closer)

**"A"** - Optional Architectural Plastic cover (8500/8501 only)

**"MA"** - Optional Architectural Metal cover (8500/8501 only)

**"T"** - Thumbturn hold open on *CloserPlus* (CLP) arm

**"DA"** - Adjustable Delayed Action Closing Optional. Available with Adjustable Backcheck Cushioning for all series

**"ST"** - Slide Track Single lever arm (pull side standard. For push side prefix PS)

Appearance Options  
"1" - without cover  
"3" - closer with Slim Line cover  
"5" - closer with Full cover



"0" - Specifies Standard type arms for non-hold open, hold open closers  
"6" - Specifies Security Arms. See Security Closer catalog section  
"8" - Specifies a low profile arm for non-hold open closers only

"1" - Normal Power Range Closer adjustable sizes 2 thru 6  
"1BF" - Accessibility Code Closer adjustable sizes 1 thru 4  
"2" - ANSI size 2  
"3" - ANSI size 3  
"4" - ANSI size 4  
"5" - ANSI size 5  
"6" - ANSI size 6

**Note:**

- Warranty becomes void if door closer is installed on the exterior side of a door in the exterior wall of a building.
- It is strongly recommended, and required on fire door assemblies, that doors having a door closer be hung on ball bearing or anti-friction hinges or pivots.
- Failure to use the correct type and size fasteners may void factory warranty.
- Fasteners for fire/smoke door assemblies must conform to NFPA 80. In some applications additional fasteners may be mandated by NFPA 80 that are not shipped with Norton's standard product, such as sleeve-nuts/sex-nuts or through-bolts and grommet nuts.
- Door width information (pages 12-19) is based on 1-3/4" (44mm) x 7" (2.13m) standard weight doors swinging to 110°. Other conditions (such as door height or weight; or wind/draft conditions) may require a larger size closer.

### Fasteners

All closers, with standard non-hold open and hold open arms are shipped with self-drilling, self-tapping and machine screws. Sleeve nuts(SN) may be ordered as an option.

- PR, CLP, UNI arms and slide tracks also have sleeve nuts as part of the standard screw packs.
- Sleeve nuts (SN) are available for all closers and should be used on steel doors to prevent dimpling, or where proper door reinforcement has not been provided.
- Standard sleeve nuts are for 1-3/4" (44mm) doors. 1-3/8" (35mm) or 2-1/4" (57mm) door thicknesses are available and must be specified.
- Through-bolts and grommet nuts (TBGN) are another fastener alternative for wood doors. Specify door thickness 1-3/4" (44mm), 1-3/8" (35mm), or 2-1/4" (57mm) when ordering.
- Lobular torx® drive screws, for tamper resistance, are standard with series 8360/8560 and 8361(BF)/8561(BF). Available as a special order for all other series closers.

### Finishes

Product will be painted with a combination of waterborne acrylic and polyester powder coat. Closers will withstand 100 hours of salt spray. ANSI requires 25 hours.

#### Sprayed Finishes

Description	Specify New Norton® Designation (BHMA)	Complements the following finishes	Old Norton® Designation
Aluminum	689	628, 625, 629, 630, 651, 652	AL
Statuary Bronze	690	640, 613	STAT
Dull Bronze	691	612, 637, 639	DB
Black	693	315	315
Medium Amber	694	312	312
Gold	696	605, 606, 632, 633	GB
Prime Coat (Beige)*	600		SRI
Corrosion Inhibitor Prime Coat	SRI		SRI

\* Available at extra cost. Closers can be ordered prime coated only, i.e.(SRI) or prime coated with finish, i.e. SRI x 690. Finishes other than those listed above may be available on special order. A sample will be required.

#### Plated Finishes

		Cover				
		Metal	Plastic	Arch. Metal	Arch. Plastic	
Bright Brass	605E	Yes	Yes	Yes	No	US3
Satin Brass	606E	Yes	No	Yes	No	US4
Bright Bronze	611E	Yes	No	Yes	No	US9
Satin Bronze	612E	Yes	No	Yes	No	US10
Oxidized Oil Rubbed Bronze	613E	Yes	No	Yes	No	US10B
Bright Chrome	625E	Yes	Yes	Yes	No	US26
Satin Chrome	626E	Yes	No	Yes	No	US26D

\* When a plated finish is ordered, **arm and cover** will be plated unless "cover only" is specified. 8300/8301 - available with plated arm only.



### 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 series 8300/8500 and series 8301/8501 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. This permits the closer to be positioned on either right or left hand doors for most applications. Some options, as noted on pages 6-7, 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.

#### Tri-Pack

8301(BF)/8501(BF) comes with screws, brackets and soffit plates to allow for regular, top jamb, and parallel arm installations.

#### Adjustable Backcheck Valve

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

#### Standard Molded Cover

Molded of high-impact U.L. listed material. This cover is non-handed for all applications.

#### Warranty

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

#### Closer Fluid

NorGlide™ closer fluid is a specially formulated multi-viscosity hydraulic fluid that contains lubricity and anti-oxidation agents that provide optimum performance and efficiency. This fluid complements the interaction of the door closer's aluminum housing with its steel and zinc components, while maintaining stable viscosity to allow the door closer to perform in temperatures ranging from extremely high to as low as -40° F.

#### Door Closer Power Options

##### Series 8300/8500 Sized Door Closer

Available in five different power sizes (2, 3, 4, 5 or 6). Each power size is adjustable up to 50% stronger than the minimum closing force for that size; as outlined in ANSI standard A156.4. PT 4C.

##### Series 8301/8501 Multi-sized Door Closer

Adjustable through the power range of sizes 2 through 6; as outlined in ANSI specification A156.4. PT 4H.

##### Series 8301(BF)/8501(BF) Multi-sized Door Closer

Adjustable through the power range of sizes 1 through 4 to comply with the opening force requirements as outlined in the Americans with Disabilities Act (A.D.A.) and ANSI A117.1 for interior doors.

### OPTIONAL FEATURES 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 Architectural Covers \*

**Plastic** Architectural plastic covers are molded of high impact U.L. listed material. They are non-handed and available in sprayed finishes.

**Metal** The architectural metal covers are steel and non-handed for all applications. These covers are available in sprayed or plated finishes.



\* For Parallel Arm Applications - Consult factory for doors swinging more than 120°

**OPTIONAL FEATURES  
DELAYED ACTION**

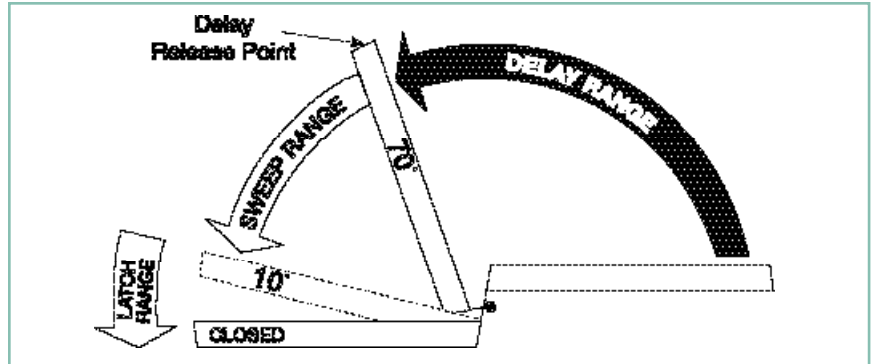
**Adjustable Delayed Action Closing**

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.

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... to list just a few.

**OPTIONAL FEATURES  
ARMS**

**Non-Hold Open**

Self-closes door every time door is opened. Auxiliary stop (by others) required except when using the CloserPlus® or Unitrol® arms.

**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.

**Door Opening Degrees**

Arm Function	Regular Arm, Top Jamb Parallel Arm	Parallel Rigid Arm	CloserPlus® Parallel Arm	Unitrol® Parallel Arm	Unitrol Top Jamb	Low Profile Regular, Parallel	Slide Track
NON-HOLD OPEN	✓	✓	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°	N/A	85° TO 110°

✓=180° trim and template permitting

### SUGGESTED SPECIFICATIONS

#### 8301/8501 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 2-1/8" from the surface of the door with standard cover. 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 [(BF) 1 through 4] [2 through 6] with additional spring power available. Closers shall have two non-critical valves, hex key adjusted, to independently regulate sweep and latch speed. Closers shall have adjustable backcheck intensity controlled by a hex key adjusted valve.

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

Regular arm and top jamb closers shall have a non-hold open shoe permitting 15% (+ or - 7-1/2%) power adjustment. \*\*Closers shall be enclosed in a [molded resin cover] [plated or sprayed metal cover], Closers to be Norton® [8301/8501] [8501M] [8301BF/8501BF] [8501BFM] [8501MA] [8501A].

\*\*For special arms insert that specification here (see column three on this page).

#### 8300/8500 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 2-1/8" from the surface of the door with standard cover. Closers shall be non-handed to permit installation of 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 power adjustment to permit a 50% increase in power over the minimum closing force for any size. Closers shall have two non-critical valves, hex key adjusted, to independently regulate sweep and latch speed. Closers shall have adjustable backcheck intensity controlled by a hex key adjusted valve.

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

Regular arm and top jamb closers shall have a non-hold open shoe permitting 15% (+ or - 7-1/2%) power adjustment. \*\* Closers shall be enclosed in a [molded resin cover] [plated or sprayed metal cover], Closers to be Norton [8300/8500] [8500M] [8500A] [8500MA].

\*\*For special arms insert that specification here (see column three on this page).

#### \*\*Unitrol® Arm

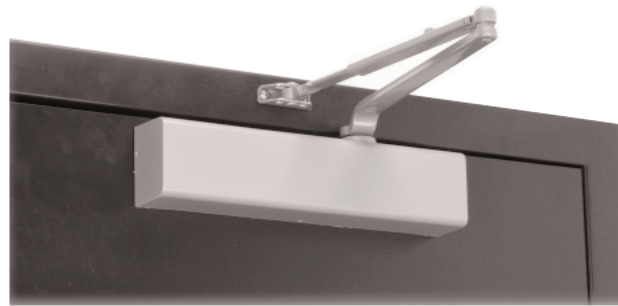
Door closers shall have field reversible door stop effective at one point selected at installation, from 90° - 115° in five-degree increments. Door stop shall be cushioned by a shock-absorbing heavy duty spring action effective at the [soffit plate] [arm shoe] pivot. [Closers shall be provided for parallel 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.]

#### \*\*CloserPlus® Arm

Door closers shall have a field reversible door stop. Door closer shall have a feature with selectable on and off ball and detent hold open. Hold open tension shall be adjustable effective at one point selected at installation, from 85° - 110° in five degree increments. Door stop mechanism shall be non-handed and attach to soffit plate. [Hold open mechanism shall have engage/disengage selection actuated by thumbturn]. Closers shall be provided for parallel arm installation using rigid steel main and secondary arm.



## APPLICATIONS

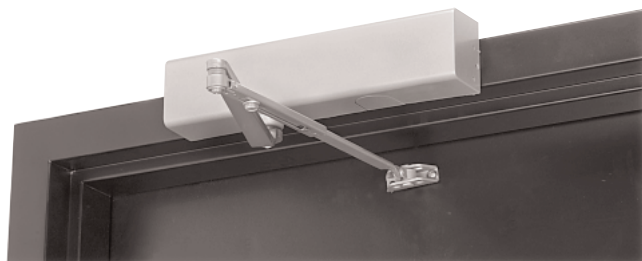


Non-hold open arm shown.  
Hold open arm available.

### 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.

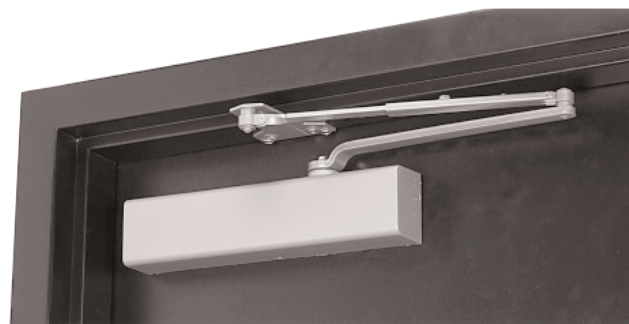


Non-hold open arm shown.  
Hold open arm available.

### 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 2-1/4" (57mm). 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 matters of appearance and malicious abuse can be of concern. Consideration must be given to depth of reveal.



Non-hold open arm shown.  
Hold open arm available.

### 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. Top rail clearance dimensions will vary based on the type of cover used. (See pg.14)

### APPLICATIONS



Pull Side



Push Side

### Slide Track

Whether pull or push side mounted, slide track 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.

#### Standard unit:

- Adjustable 85° - 110° (Hold Open and Non-Hold Open)
- Specify if hold open unit is required.
- 180° swing (Non-Hold Open, pull side only) is also available.



Non-Hold Open arm shown



Hold Open arm shown

### 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.

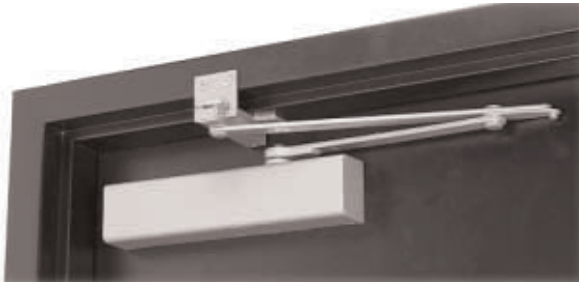
### CloserPlus® Arm

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.

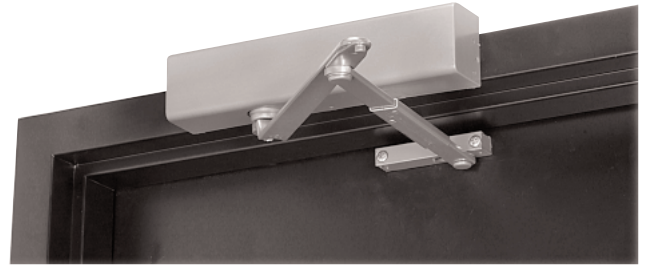
*CloserPlus* Arm is intended for use where an auxiliary door stop cannot be utilized and no more than moderate abuse is anticipated. Where more extreme conditions are expected, use of a Unitrol® arm is recommended.

Available with or without hold open. (Hold open is adjustable).

## APPLICATIONS



Parallel



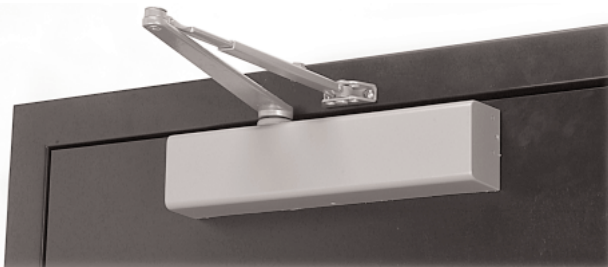
Top Jamb

### Unitrol® Arm

Can be used for either parallel arm or top jamb applications. *Unitrol* 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. They use 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

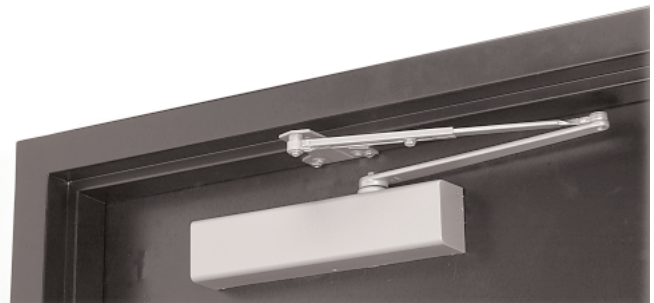
backcheck feature, you can achieve the most controlled stop available with a surface door closer.

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.



Regular Arm

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



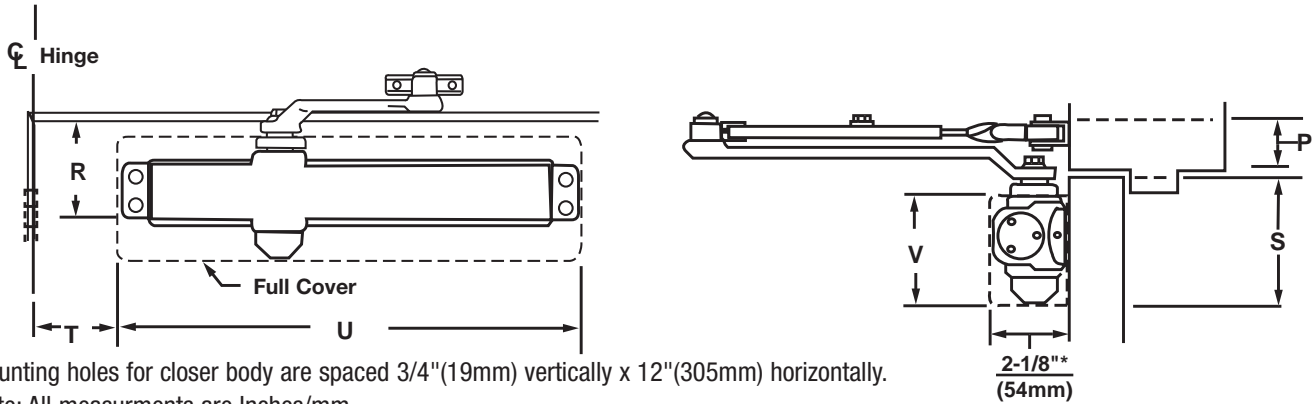
Parallel Arm

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

### Low Profile Arm

Supplied with 8380/8580, 8381(BF)/8581(BF) series door closers for non-hold open installations only. Low profile 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



Mounting holes for closer body are spaced 3/4"(19mm) vertically x 12"(305mm) horizontally.  
 Note: All measurements are Inches/mm

Closer Series	Covers	P Minimum Ceiling Clearance			R Minimum Top Rail				S Minimum Top Rail Clearance		T Template Position for 100° door opening	U Closer Length	V Closer Height
		NHO	Low Profile	HO	W/O Drop Plate		W/8146 Drop Plate		NHO/HO	Low Profile			
					NHO/HO	Low Profile	NHO/HO	Low Profile					
8100	No Cover										7-1/8" (181)	12-3/4" (324)	
8300	Slim Line Plastic												
8500	Full Plastic	1-1/2" (38)	1" (25)	1-5/8" (41)	2-1/2" (64)	2-3/8" (60)	1-5/8" (41)	1-1/2" (38)	3-1/2" (89)	3-3/8" (86)	7" (178)	13" (330)	2-7/8" (73)
8500M	Metal								4-1/4" (108)	4-1/8" (105)	6-3/4" (171)	13-5/8" (346)	3-3/4" (95)
8500A	Arch. Plastic								3-5/8" (92)	3-1/2" (89)	6-1/2" (165)	14" (356)	3-1/8" (79)
8500MA	Arch. Metal								3-1/2" (89)	3-3/8" (86)			3" (76)

Door Widths Inches (cm)		Catalog Number - Sized Closers
Interior	Exterior	
30" (76)		8302, 8502
36" (91)	30" (76)	8303, 8503
48" (122)	36" (91)	8304, 8504
	48" (122)	8305, 8505
Unusual		8306, 8506

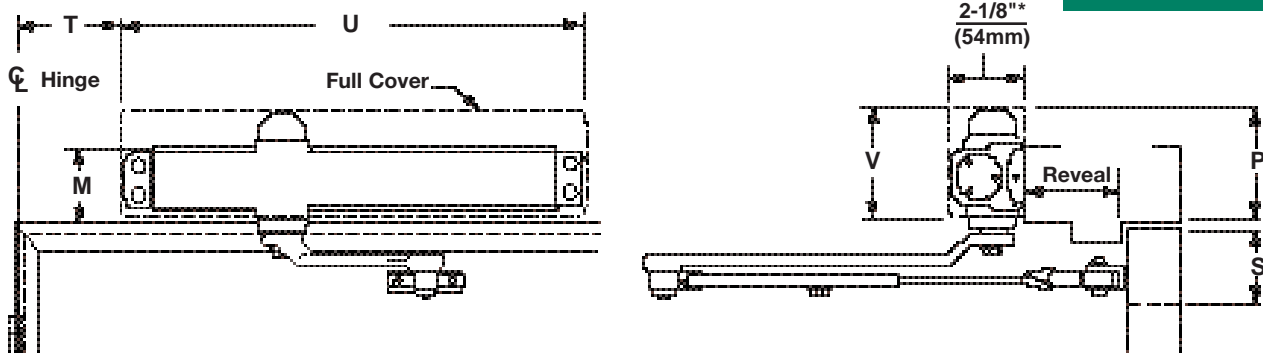
NOTE: 8301/8501 door closers can be adjusted for door sizes noted.

8301BF/8501BF door closers can be adjusted to interior door sizes shown and for exterior doors up to a maximum of 36"(91cm). All multi-size closers are set at mid power range from the factory.

\* Projection is for Slim Line, Full or Metal Covers.

Projection for Architectural Plastic & Architectural Metal Covers = 2-1/4" (57mm).

TOP JAMB ARM



Mounting holes for closer body are spaced 3/4"(19mm) vertically x 12"(305mm) horizontally.  
 Note: All measurements are Inches/mm

Closer Series	Covers	M Minimum Frame Face			P Minimum Ceiling Clearance			S Minimum Top Rail Clearance 5/8" (16mm) Frame Stop						T Template Position for 100° door opening	U Closer Length	V Closer Height			
		W/O Drop Plate	With 8146 Drop Plate	With 8148/8547 Drop Plate	W/O Drop Plate	With 8146 Drop Plate	With 8148/8547 Drop Plate	W/O Drop Plate			With 8148/8547 Drop Plate								
								NHO	Low Profile	HO	NHO	Low Profile	HO				NHO	Low Profile	HO
8100	No Cover														7-1/8" (181)	12-3/4" (324)			
8300	Slim Line Plastic																		
8500	Full Plastic	1-3/4" (44)	1-1/8" (29)	1-1/2" (38)	2-3/4" (70)	1-5/8" (41)	1-1/2" (38)	2-1/4" (57)	N/A	2-1/2" (64)	3-3/8" (86)	2-3/4" (70)	3-5/8" (92)	4-3/8" (111)	3-3/4" (95)	4-5/8" (117)	7" (178)	13" (330)	2-7/8" (73)
8500M	Metal		N/A	1-5/8" (41)	3-3/4" (95)	N/A	1-5/8" (41)										6-3/4" (171)	13-5/8" (346)	3-3/4" (95)
8500A	Arch. Plastic			1-1/2" (38)	3" (76)		1-1/2" (38)										6-1/2" (165)	14" (356)	3-1/8" (79)
8500MA	Arch. Metal				2-7/8" (73)														3" (76)

Reveal Information

Door Widths Inches (cm)		Catalog Number - Sized Closers
Interior	Exterior	
30" (76)		J8302, J8502
36" (91)	30" (76)	J8303, J8503
48" (122)	36" (91)	J8304, J8504
	48" (122)	J8305, J8505
Unusual		J8306, J8506

Sized Closers	Reveal Range Inches (mm)	Maximum Door Opening	
		NHO	Hold Open
J8000	2-3/4" (70) to 7" (178)	150°	
J8000H	2-3/4" (70) to 6-3/4" (171)		150°
Multi-Sized Closers			
J8301, J8501	2-3/4" (70) to 4-1/4" (108)	180°	
J8301, J8501	4-1/4" (108) to 7" (178)	150°	
J8301H, J8501H	2-1/8" (54) to 4-1/4" (108)		180°
J8301H, J8501H	4-1/4" (108) to 6-3/4" (171)		150°

Reveal Information (regular arm installed top jamb)

Sized Closers	Reveal Range Inches (mm)	Maximum Door Opening	
		NHO	Hold Open
8000	0 to 2-7/8" (73)	180°	
8080 w/Drop Plate**	0 to 2-3/4" (70)	180°	
8000H	0 to 2-3/4" (70)		180°
Multi-Sized Closers			
8301, 8501	0 to 2-7/8" (73)	180°	
8301, 8501 w/Drop Plate	0 to 2-3/4" (70)	180°	
8301H, 8501H	0 to 2-3/4" (70)		180°

Reference Note on page 12 for information regarding multi-sized closers.

\* Projection is for Slim Line, Full or Metal Covers.

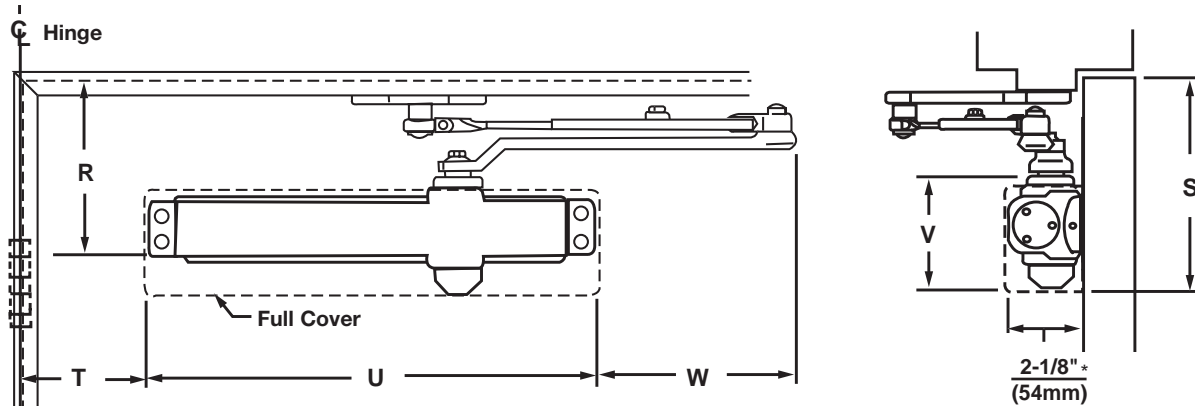
Projection for Architectural Plastic & Architectural Metal Covers = 2-1/4" (57mm).

Note: Reveal range information is based upon 1-3/4" (44mm) doors hung on 4-1/2" wide hinges.

\*\* Drop Plate 8146, 8148 or 8547



### PARALLEL ARM



Mounting holes for closer body are spaced 3/4" (19mm) vertically x 12" (305mm) horizontally.  
 Note: All measurements are Inches/mm

Closer Series	Covers	R Minimum Top Rail 5/8" (16mm) Frame Stop						S Top Rail Clearance			T Template Position for 120° door opening	U Closer Length	V Closer Height	W Arm Extension
		W/O Drop Plate			With 8148/8548 Drop Plate			NHO	Low Profile	HO				
		NHO	Low Profile	HO	NHO	Low Profile	HO							
8100	No Cover										3-3/8" (86)	12-3/4" (324)		8-1/8" (206)
8300	Slim Line Plastic													
8500	Full Plastic	5-1/4" (133)	4-5/8" (117)	5-1/4" (133)	3" (76)	2-3/8" (60)	3" (76)	6-1/4" (159)	5-5/8" (143)	6-1/4" (159)	3-1/4" (83)	13" (330)	2-7/8" (73)	8" (203)
8500M	Metal							6-7/8" (175)	6-1/4" (159)	6-7/8" (175)	3" (76)	13-5/8" (346)	3-3/4" (95)	7-5/8" (194)
8500A	Arch. Plastic							6" (152)	5-3/8" (137)	6" (152)	2-3/4" (70)	14" (356)	3-1/8" (79)	
8500MA	Arch. Metal							5-7/8" (149)	5-1/4" (133)	5-7/8" (149)			3" (76)	

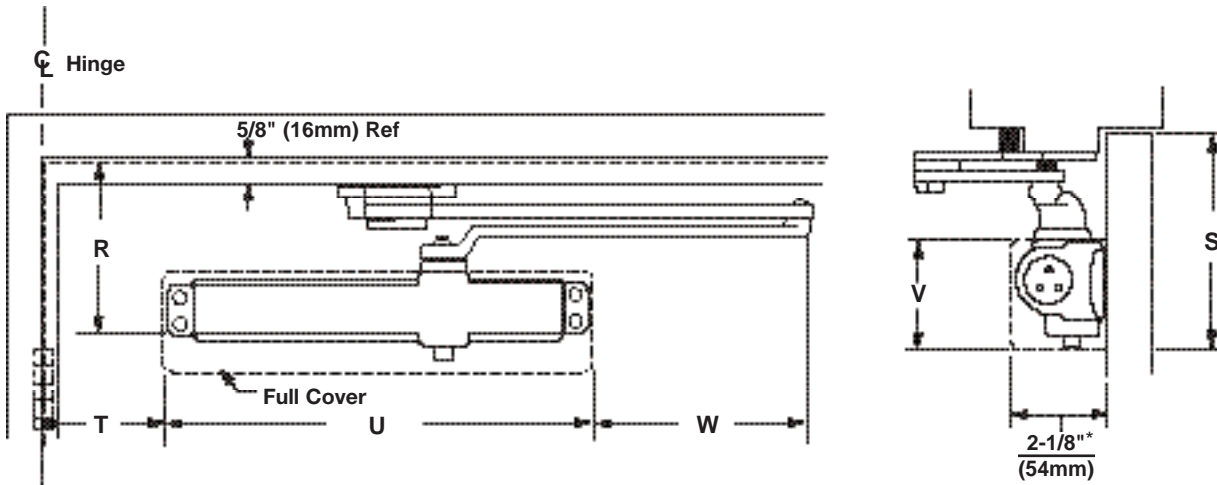
Door Widths Inches (cm)		Catalog Number - Sized Closers
Interior	Exterior	
30" (76)		P8302, P8502
36" (91)	30" (76)	P8303, P8503
42" (107)	36" (91)	P8304, P8504
48" (122)	42" (107)	P8305, P8505
	48" (122)	P8306, P8506

NOTE: 8301/8501 door closers can be adjusted for door sizes noted.

8301BF/8501BF door closers can be adjusted to interior door sizes shown and for exterior doors up to a maximum of 36" (91cm). All multi-size closers are set at mid power range from the factory.

\* Projection is for Slim Line, Full or Metal Covers.

Projection for Architectural Plastic & Architectural Metal Covers = 2-1/4" (57mm).



Mounting holes for closer body are spaced 3/4" (19mm) vertically x 12" (305mm) horizontally.

Note: All measurements are Inches/mm

Closer Series	Covers	R Minimum Top Rail		S Minimum Top Rail Clearance	T Template Position for Hold Open or Stop at Listed Angle						U Closer Length	V Closer Height	W Arm Extension
		W/O Drop Plate	With Drop Plate		85°	90°	95°	100°	105°	110°			
8100	No Cover												
8300	Slim Line Plastic	4-5/8" (117)	2-3/8" (60)	5-7/8" (149)	5" (127)	4-1/8" (105)	3-1/2" (89)	2-3/4" (70)	2-1/4" (57)	1-5/8" (41)	13" (330)	2-7/8" (73)	8" (203)
8500	Full Plastic												
8500M	Metal			6-1/2" (165)	4-3/4" (121)	3-7/8" (98)	3-1/4" (83)	2-1/2" (64)	2" (51)	1-3/8" (35)	13-5/8" (346)	3-7/8" (98)	7-5/8" (194)
8500A	Arch. Plastic			6" (152)	4-5/8" (117)		3-1/8" (79)		1-7/8" (48)	1-1/4" (32)	14" (356)	3-1/8" (79)	7-1/2" (191)
8500MA	Arch. Metal			5-7/8" (149)								3" (76)	

Door Size (Wood or Metal) Inches (cm)		CloserPlus Catalog Number- Sized Closers		Parallel Rigid Catalog Number- Sized Closers	
Interior	Exterior	Stop Only	Hold Open	Stop Only	Hold Open
28" (71) - 32" (81)	N/A	CLP8302, CLP8502	CLP8302T, CLP8502T	PR8302, PR8502	PR8302H, PR8502H
33" (84) - 36" (91)	28" (71) - 32" (81)	CLP8303, CLP8503	CLP8303T, CLP8503T	PR8303, PR8503	PR8303H, PR8503H
37" (94) - 41" (104)	33" (84) - 36" (91)	CLP8304, CLP8504	CLP8304T, CLP8504T	PR8304, PR8504	PR8304H, PR8504H
42" (107) - 48" (122)	37" (94) - 41" (104)	CLP8305, CLP8505	CLP8305T, CLP8505T	PR8305, PR8505	PR8305H, PR8505H
N/A	42" (107) - 48" (122)	CLP8306, CLP8506	CLP8306T, CLP8506T	PR8306, PR8506	PR8306H, PR8506H

NOTE: 8301/8501 door closers can be adjusted for door sizes noted.

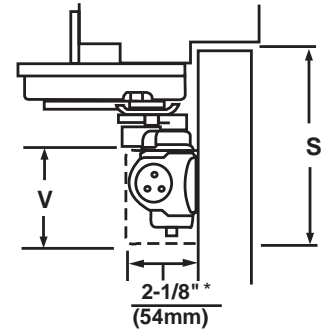
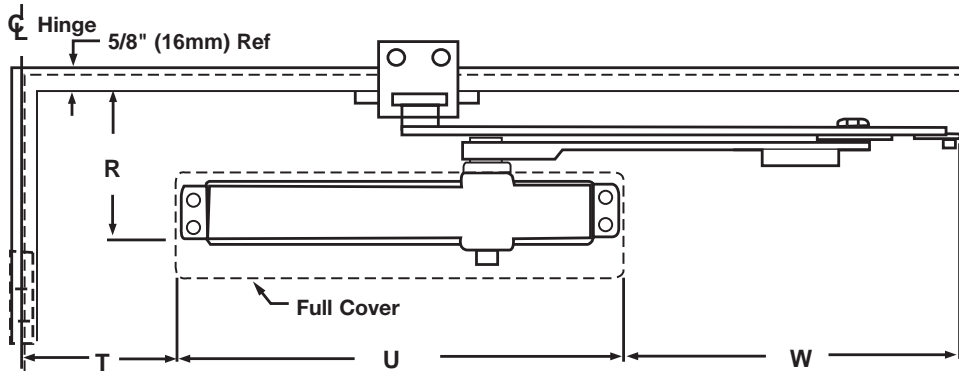
8301BF/8501BF door closers can be adjusted to interior door sizes shown and for exterior doors up to a maximum of 36" (91cm). All multi-size closers are set at mid power range from the factory.

\* Projection is for Slim Line, Full or Metal Covers.

Projection for Architectural Plastic & Architectural Metal Covers = 2-1/4" (57mm).

### PARALLEL UNITROL® ARM

Mounting holes for closer body are spaced 3/4" (19mm) vertically x 12" (305mm) horizontally.



Closer Series	Door Width	Covers	R		S	T- Template Position for Hold Open or Stop at Listed Angle						U	V	W			
			Minimum Top Rail			Minimum Top Rail Clearance	T										
			W/O Drop Plate	With Drop Plate			85	90	95	100	105				110	Closer Length	Closer Height
8300	28-32	Slim Line Plastic	4-3/4" (121)	2-1/2" (64)	5-3/4" (146)	4-5/8" (117)	4" (102)	3-1/2" (89)	3-1/8" (79)	2-3/4" (70)	2-3/8" (60)	13" (330)	2-7/8" (73)	8-3/8" (213)			
	33-41					7" (178)	6-1/4" (159)	5-3/4" (146)	5-1/4" (133)	4-3/4" (121)	4-3/8" (111)			9-7/8" (251)			
	42-48					9-1/4" (235)	8-3/8" (213)	7-3/4" (197)	7-1/8" (181)	6-5/8" (168)	6-1/4" (159)			11-1/4" (286)			
8500	28-32	Full Plastic	4-3/4" (121)	2-1/2" (64)	5-3/4" (146)	4-5/8" (117)	4" (102)	3-1/2" (89)	3-1/8" (79)	2-3/4" (70)	2-3/8" (60)	13-5/8" (346)	3-7/8" (98)	8-3/8" (213)			
8500M	Metal	6-3/8" (162)				4-3/8" (111)	3-3/4" (95)	3-1/4" (83)	2-7/8" (73)	2-1/2" (64)	2-1/8" (54)			8" (203)			
8500A	Arch. Plastic	5-1/2" (140)				7-5/8" (194)	7" (178)	6-1/2" (165)	6-1/8" (156)	5-3/4" (146)	5-3/8" (137)			3-1/8" (79)	7-7/8" (200)		
8500MA	Arch. Metal	5-3/8" (137)												3" (76)	7-1/2" (191)		
8500	33-41	Full Plastic				5-3/4" (146)	7" (178)	6-1/4" (159)	5-3/4" (146)	5-1/4" (133)	4-3/4" (121)			4-3/8" (111)	13" (330)	2-7/8" (73)	9-7/8" (251)
8500M	Metal	6-3/8" (162)				6-3/4" (171)	6" (152)	5-1/2" (140)	5" (127)	4-1/2" (114)	4-1/8" (105)			13-5/8" (346)	3-7/8" (98)	9-1/2" (241)	
8500A	Arch. Plastic	5-1/2" (140)				10" (254)	9-3/8" (238)	8-3/4" (222)	8-1/4" (210)	7-3/4" (197)	7-3/8" (187)			14" (356)	3-1/8" (79)	9-3/8" (238)	
8500MA	Arch. Metal	5-3/8" (137)													3" (76)	9" (229)	
8500	42-48	Full Plastic				5-3/4" (146)	9-1/4" (235)	8-3/8" (213)	7-3/4" (197)	7-1/8" (181)	6-5/8" (168)			6-1/4" (159)	13" (330)	2-7/8" (73)	11-1/4" (286)
8500M	Metal	6-3/8" (162)				9" (229)	8-1/8" (206)	7-1/2" (191)	6-7/8" (175)	6-3/8" (162)	6" (152)			13-5/8" (346)	3-7/8" (98)	10-7/8" (276)	
8500A	Arch. Plastic	5-1/2" (140)	12-1/4" (311)	11-1/2" (292)	10-7/8" (276)	10-1/4" (260)	9-3/4" (248)	9-1/4" (235)	14" (356)	3-1/8" (79)	10-3/4" (273)						
8500MA	Arch. Metal	5-3/8" (137)								3" (76)	10-3/8" (264)						

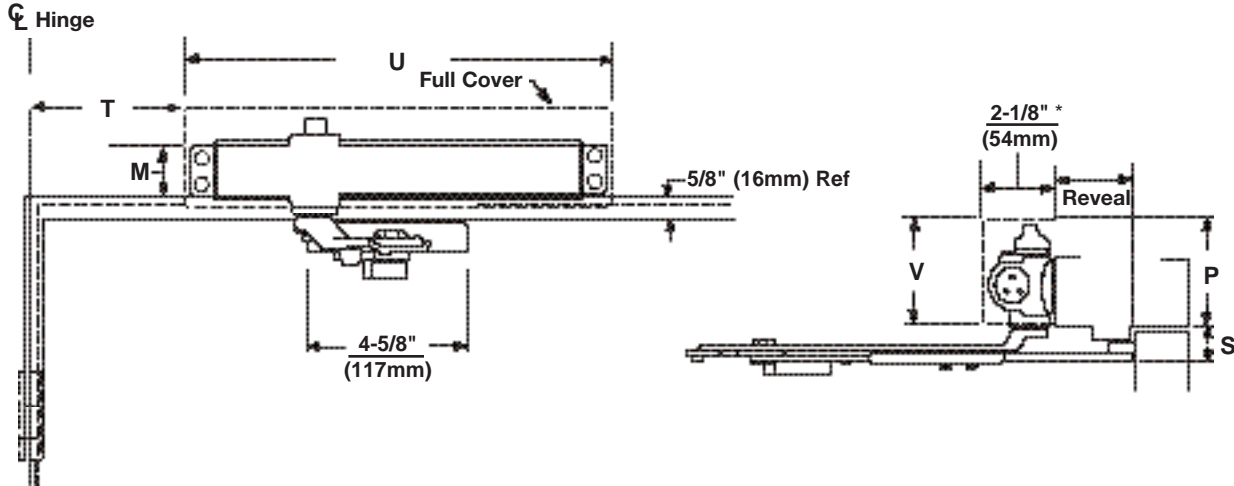
Door Widths (Wood or Metal) Inches (cm)		Parallel Unitrol® Catalog Number- Sized Closers		
Interior	Exterior	Stop Only	Hold Open	
28" (71) - 32" (81)	N/A	UNI8302, UNI8502	UNI8302H, UNI8502H	
33" (83) - 36" (91)	28" (71) - 32" (81)	UNI8303, UNI8503	UNI8303H, UNI8503H	
37" (94) - 41" (104)	33" (83) - 36" (91)	UNI8304, UNI8504	UNI8304H, UNI8504H	
42" (107) - 48" (122)	37" (94) - 41" (104)	UNI8305, UNI8505	UNI8305H, UNI8505H	
N/A	42" (107) - 48" (122)	UNI8306, UNI8506	UNI8306H, UNI8506H	

Reference Note on page 12 for information regarding multi-sized closers.

\* Projection is for Slim Line, Full or Metal Covers. Projection for Architectural Plastic & Architectural Metal Covers = 2-1/4" (57mm).

x Specify Door Width

TOP JAMB  
UNITROL® ARM



Mounting holes for closer body are spaced 3/4"(19mm) vertically x 12"(305mm) horizontally.  
Note: All measurements are Inches/mm

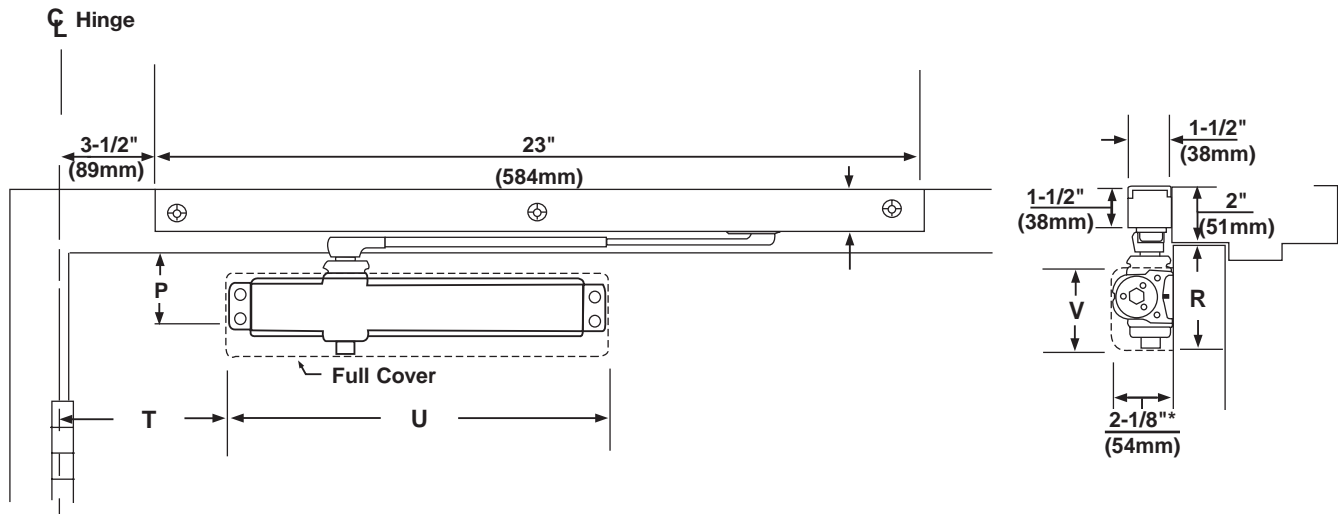
Closer Series	Covers	M Minimum Frame Face		P Minimum Ceiling Clearance		S Minimum Top Rail Clearance		T Template Position for Hold Open or Stop at Listed Angle						U Closer Length	V Closer Height		
		W/O Drop Plate	With 8148/8547 Drop Plate	W/O Drop Plate	With Drop Plate	W/O Drop Plate	With 8148/8547 Drop Plate	85°	90°	95°	100°	105°	110°				
8300	Slim Line	1-3/4" (44)	1-1/2" (38)	2-3/4" (70)	1-1/2" (38)	1-7/8" (48)	3-3/4" (95)	9-1/2" (241)	8-7/8" (225)	8-1/4" (210)	7-3/4" (197)	7-3/8" (187)	7" (178)	13" (330)	2-7/8" (73)		
8500	Full		1-5/8" (41)	3-3/4" (95)	1-5/8" (41)			9-1/4" (235)	8-5/8" (219)	8" (203)	7-1/2" (191)	7-1/8" (181)	6-3/4" (171)			13-5/8" (346)	3-7/8" (98)
8500M	Metal		1-1/2" (38)	3" (76)	1-1/2" (38)			8-7/8" (225)	8-1/4" (210)	7-5/8" (194)	7-1/8" (181)	6-5/8" (168)	6-1/4" (159)			14" (356)	3-1/8" (79)
8500A	Arch. Plastic		2-7/8" (73)														
8500MA	Arch. Metal																

Door Widths (Wood or Metal) Inches (cm)		Top Jamb Unitrol® Catalog Number- Sized Closers			
Interior	Exterior	Stop Only		Hold Open	
28" (71) - 30" (76)	N/A	UNIJ8302, UNIJ8502	UNIJ8302H, UNIJ8502H	x Specify Frame Reveal	
31" (79) - 36" (91)	28" (71) - 30" (76)	UNIJ8303, UNIJ8503	UNIJ8303H, UNIJ8503H		
37" (94) - 42" (107)	31" (79) - 36" (91)	UNIJ8304, UNIJ8504	UNIJ8304H, UNIJ8504H		
43" (109) - 48" (122)	37" (94) - 42" (107)	UNIJ8305, UNIJ8505	UNIJ8305H, UNIJ8505H		
N/A	43" (109) - 48" (122)	UNIJ8306, UNIJ8506	UNIJ8306H, UNIJ8506H		

NOTE: 8301/8501 door closers can be adjusted for door sizes noted.  
8301BF/8501BF door closers can be adjusted to interior door sizes shown and for exterior doors up to a maximum of 36"(91cm). All multi-size closers are set at mid power range from the factory.

\* Projection is for Slim Line, Full or Metal Covers.  
Projection for Architectural Plastic & Architectural Metal Covers = 2-1/4" (57mm).

### PULL SIDE SLIDE TRACK



Mounting holes for closer body are spaced 3/4" (19mm) vertically x 12" (305mm) horizontally.  
 Note: All measurements are Inches/mm

Closer Series	P Minimum Top Rail		R Minimum Top Rail Clearance				T Template Position				U Closer Length				V Closer Height			
	W/O Drop Plate	With 8146 Drop Plate	Slim or Full Cover	Metal Cover	Arch Plastic	Arch Metal	Slim or Full Cover	Metal Cover	Arch Plastic	Arch Metal	Slim or Full Cover	Metal Cover	Arch Plastic	Arch Metal	Slim or Full Cover	Metal Cover	Arch Plastic	Arch Metal
8300ST Series	2-1/2"	1-5/8"	3-1/2"	4-1/8"	3-5/8"	3-1/2"	5-1/8"	4-7/8"	4-3/8"	4-3/8"	13"	13-5/8"	14"	14"	2-7/8"	3-3/4"	3-1/8"	3"
8500ST Series	(64)	(41)	(89)	(105)	(92)	(89)	(130)	(124)	(111)	(111)	(330)	(346)	(356)	(356)	(73)	(95)	(79)	(76)

Maximum Door Width (Wood or Metal) Inches(cm)		Catalog Number					
Interior	Exterior	8300ST Slim Line Cover			8500ST Full Cover		
		Non-Hold Open		Hold Open	Non-Hold Open		Hold Open
		85°- 110°	85°- 180°	85°- 110°	85°- 110°	85°- 180°	85°- 110°
32" (81)	N/A	8304ST	8304ST-180	8304STH	8504ST	8504ST-180	8504STH
38" (97)	32" (81)	8305ST	8305ST-180	8305STH	8505ST	8505ST-180	8505STH
48" (122)	38" (97)	8306ST	8306ST-180	8306STH	8506ST	8506ST-180	8506STH

NOTE: 8301/8501 door closers can be adjusted for door sizes noted.

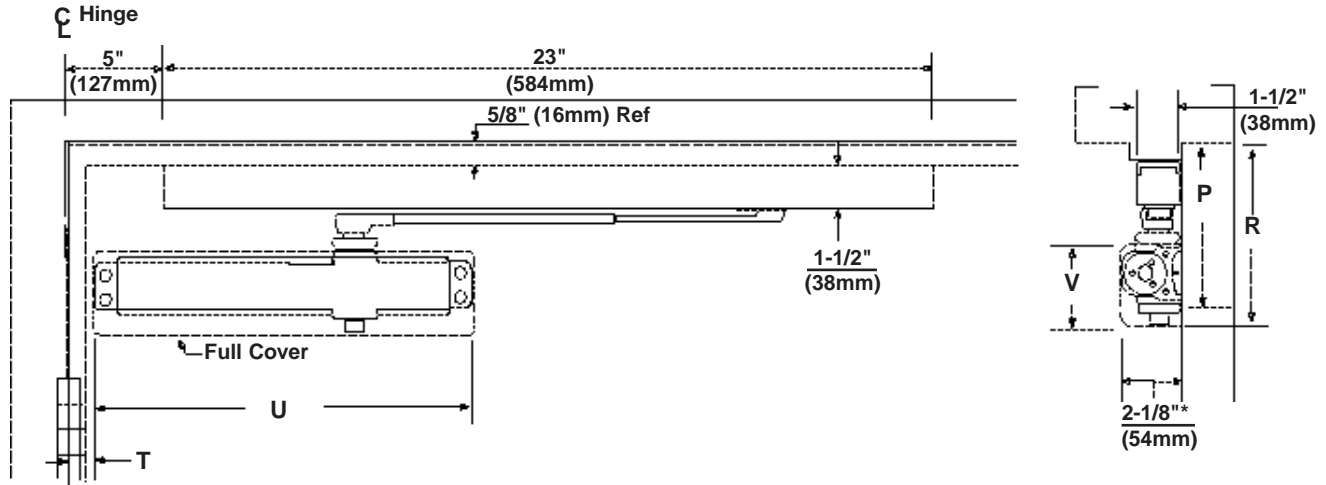
8301BF/8501BF door closers can be adjusted to interior door sizes shown and for exterior doors up to a maximum of 36" (91cm). All multi-size closers are set at mid power range from the factory.

\* Projection is for Slim Line, Full or Metal Covers.

Projection for Architectural Plastic & Architectural Metal Covers = 2-1/4" (57mm).



**PUSH SIDE  
SLIDE TRACK**



Mounting holes for closer body are spaced 3/4"(19mm) vertically x 12"(305mm) horizontally.  
 Note: All measurements are Inches/mm

Closer Series	P Minimum Top Rail		R Minimum Top Rail Clearance				T Template Position				U Closer Length				V Closer Height			
	W/O Drop Plate	With 8148 Drop Plate	Slim or Full Cover	Metal Cover	Arch Plastic	Arch Metal	Slim or Full Cover	Metal Cover	Arch Plastic	Arch Metal	Slim or Full Cover	Metal Cover	Arch Plastic	Arch Metal	Slim or Full Cover	Metal Cover	Arch Plastic	Arch Metal
PS8300ST Series	5"	2-3/4"	6"	6-5/8"	6-1/8"	6"	7/8"	5/8"	1/8"	1/8"	13"	13-5/8"	14"	14"	2-7/8"	3-3/4"	3-1/8"	3"
PS8500ST Series	(127)	(70)	(152)	(168)	(156)	(152)	(22)	(16)	(3)	(3)	(330)	(346)	(356)	(356)	(73)	(95)	(79)	(76)

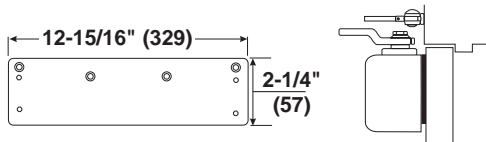
Maximum Door Width (Wood or Metal) Inches (cm)		Catalog Number			
Interior	Exterior	PS8300ST Slim Line Cover		PS8500ST Standard Cover	
		Non-Hold Open	Hold Open	Non-Hold Open	Hold Open
		85°-100°	85°-100°	85°-100°	85°-100°
32" (81)	N/A	PS8304ST	PS8304STH	PS8504ST	PS8504STH
38" (97)	32" (81)	PS8305ST	PS8305STH	PS8505ST	PS8505STH
48" (122)	38" (97)	PS8306ST	PS8306STH	PS8506ST	PS8506STH

NOTE: 8301/8501 door closers can be adjusted for door sizes noted.  
 8301BF/8501BF door closers can be adjusted to interior door sizes shown and for exterior doors up to a maximum of 36"(91cm). All multi-size closers are set at mid power range from the factory.

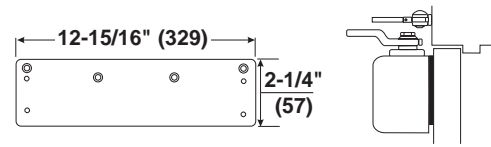
\* Projection is for Slim Line, Full or Metal Covers.  
 Projection for Architectural Plastic & Architectural Metal Covers = 2-1/4" (57mm).

### REGULAR ARM

## Closer Mounting Plates Slim Line or Full Cover Installations

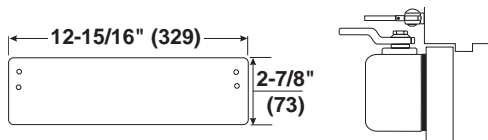


**Narrow Top Rail - #8146 Drop Plate:** For use where the narrow top rail of the door prevents the closer from being mounted directly on to the door surface. This drop plate must be used for any Series 8000 closer mounted on a top rail between 1-9/16" and 2-7/16" (40mm and 62mm) in height, or any Series 8080 closer mounted on a top rail between 1-7/16" and 2-5/16" (36mm and 59mm) in height.

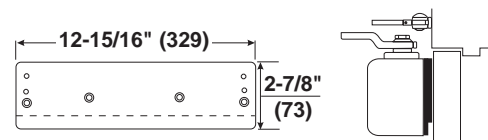


**Concealed Door Holder - #8146 Drop Plate:** For use where a concealed door holder prevents normal mounting of the closer to the door. This is the same plate used for narrow rail mounting, but is inverted for this application to permit the mounting screws to clear the bottom of the door-holder preparation in the top rail of the door. This places the centerline of the plate's upper mounting screws at 2-3/16" (56mm) from the top of the door.

## Full Cover Installations

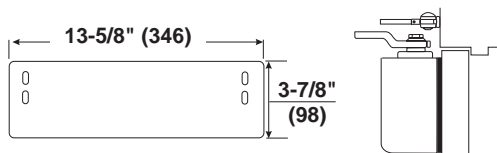


**Exposed Back - #8445 Molded Full Cover Decorative Back Plate:** For use on doors with glass lights where a closer with a molded full cover is installed and the closer back is exposed. This plate covers the back of the installation to give a pleasing appearance from the reverse side.

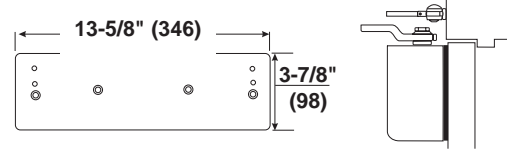


**Exposed Back/Narrow Top Rail - Exposed Back Concealed Door Holder - #8446 Molded Full Cover Drop Plate Kit:** For use with molded full cover installation when an 8146 Plate is needed as a drop plate on a narrow top rail, or as a clearance plate for a concealed door holder, and the closer back is exposed. Kit contains an 8146 Drop Plate and an 8445 Decorative Plate.

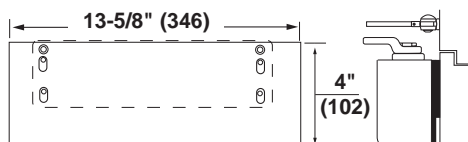
## Metal Cover Installations



**Exposed Back - #8545 Metal Cover Decorative Back Plate:** For use on doors with glass lights where a closer with a metal full cover is installed and the closer back is exposed. This plate covers the back of the installation to give a pleasing appearance from the reverse side.



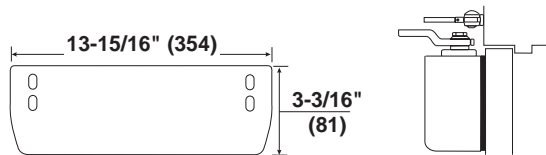
**Concealed Door Closer - #8546 Metal Cover Drop Plate:** For use where a concealed door holder prevents the normal mounting of the closer to the door. This plate permits the mounting screws to clear the bottom of the door-holder preparation in the top rail of the door. This places the centerline of the plate's upper mounting screws at 2-3/16" (56mm) from the top of the door.



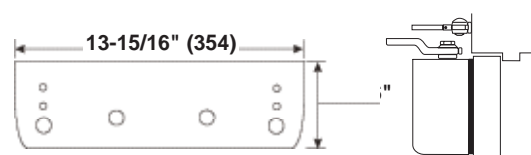
**Exposed Back/Narrow Top Rail - #8549 Metal Cover Drop Plate Kit:** For use with metal full cover installations, when an 8146 Plate is needed as a drop plate on a narrow top rail and the closer back is exposed. Kit contains an 8146 Drop Plate and an 8545 Decorative Plate.

Note: All measurements are Inches/mm

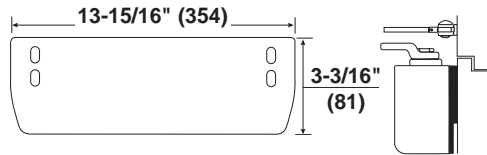
**Closer Mounting Plates**  
**Architectural Plastic or Metal Cover Installations**



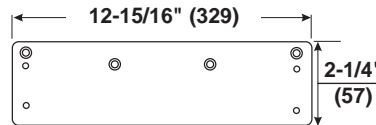
**Exposed Back - #8545A Architectural Plastic or Architectural Metal Cover Decorative Back Plate:** For use on doors with glass lights where a closer with an architectural plastic or metal cover is installed and the closer back is exposed. This plate covers the back of the installation to give a pleasing appearance from the reverse side.



**Concealed Door Holder - #8546A Architectural Plastic or Architectural Metal Cover Drop Plate:** For use where a concealed door holder prevents the normal mounting of the closer to the door. This plate permits the mounting screws to clear the bottom of door-holder preparation in the top rail of the door. This places the centerline of the plate's upper mounting screws at 2-3/16" (56mm) from the top of the door.



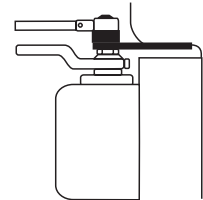
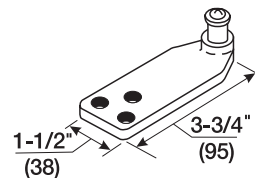
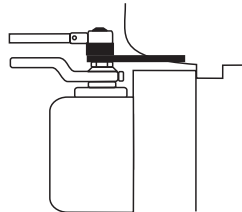
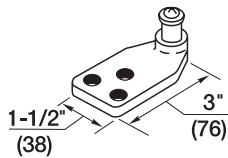
**Exposed Back/Narrow Top Rail - #8549A Architectural Plastic or Architectural Metal Cover Drop Plate Kit:** For use with architectural plastic or metal cover installations when an 8146 plate is needed as a drop plate on a narrow top rail and the closer back is exposed. Kit contains an 8146 Drop Plate and an 8545A Decorative Plate.



Note: All measurements are Inches/mm

### REGULAR ARM

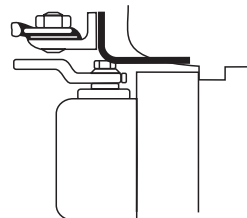
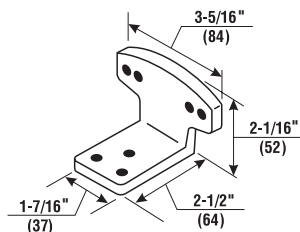
### Brackets for Non-Hold Open Arms



**Molded / Bull Nose Trim - #2403 Bracket:** 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 rabet, and projects beyond the face of the frame. It will accommodate a frame rabet up to 2" (51mm) deep.

**Molded / Bull Nose Trim - #2403-3/4 Bracket:** This bracket is similar to, but longer than, the 2403 bracket. It is designed to accommodate frame rabbets from 2" to 2-7/8" (51mm to 73mm) deep.

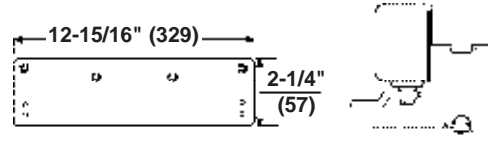
### Brackets for Hold Open Arms



**Molded / Bull Nose Trim - #80 Bracket:** For use where the door frame has molded or bull nose trim which will not accept a standard hold open shoe. It is mortised into the frame rabet, and projects beyond the face of the frame. It will accommodate a rabet up to 2" (51mm) deep. This bracket is used in combination with the standard hold-open mounting shoe.

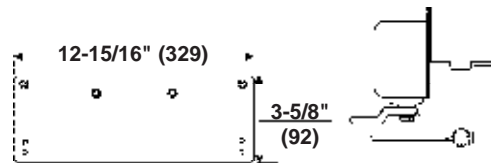
Note: All measurements are Inches/mm

### Closer Mounting Plates Slim Line or Full Cover Installations



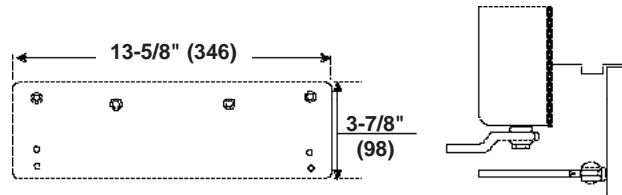
**Low Ceiling Clearance - #8146 Drop Plate:** For use where low ceiling clearance prevents normal top jamb mounting. This plate is used when clearance is from 1-7/8" to 2-7/8" (48mm to 73mm). Where ceiling clearance is less than 1-7/8" (48mm) see #8148 Drop Plate detailed in the following text.

**Overhead Door Holder - #8146 Drop Plate:** For use where a surface or concealed overhead door holder prevents normal top jamb mounting. This plate drops the closer and allows arm mounting screws to clear the bottom of the door holder. This places the centerline of the arm mounting screws at 2-7/8" (73mm) from the top of the door.



**Low Ceiling Clearance - #8148 Drop Plate:** For use where the ceiling clearance is between 1-1/2" and 1-3/4" (38mm and 44mm).

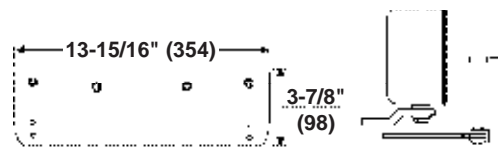
### Metal Cover Installations



**Low Ceiling Clearance - Overhead Door Holder - #8547 Metal Full Cover Drop Plate:** For use where a low ceiling clearance prevents normal top jamb mounting. This plate is used when the clearance is between 1-5/8" and 3-7/8" (41mm and 98mm). Or for use where a sur-

face or concealed overhead door holder prevents normal top jamb mounting of a closer with a metal full cover. This plate drops the closer and allows arm mounting screws to clear the bottom of the door holder. This places the centerline of the arm mounting screws at 3-7/8" (98mm) from the top of the door.

### Architectural Plastic or Metal Cover Installations



**Low Ceiling Clearance - Overhead Door Holder - #8547A Architectural Plastic or Architectural Metal Cover Drop Plate:** For use where low ceiling clearance prevents normal top jamb mounting. This plate is used when the clearance is between 1-5/8" and 3-7/8" (41mm and 98mm). Also for use where a surface or concealed overhead door holder prevents normal top

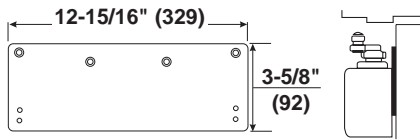
jamb mounting of a closer with an architectural plastic or metal full cover. This plate drops the closer and allows arm mounting screws to clear the bottom of the door holder. This places the centerline of the arm mounting screws at 3-7/8" (98mm) from the top of the door.

Note: All measurements are Inches/mm



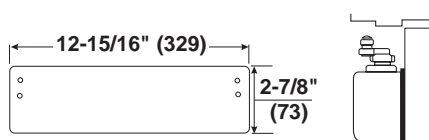
### PARALLEL ARM

## Closer Mounting Plates Slim Line or Full Cover Installations

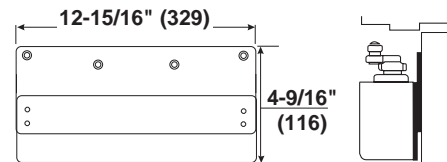


**Narrow Top Rail - #8148 Drop Plate:** For use where a narrow top rail prevents the closer from being mounted directly to the door surface. This drop plate can be used to mount a closer on a top rail as narrow as 2-7/8" (73mm) in height.

### Full Cover Installations

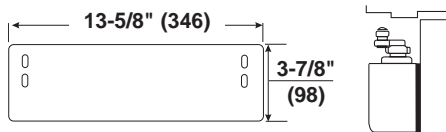


**Exposed Back - #8445 Molded Full Cover Decorative Back Plate:** For use on doors with glass lights where a closer with molded full cover is installed and the closer back is exposed. This plate covers the back of the installation to give a pleasing appearance from the reverse side.

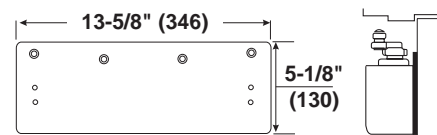


**Exposed Back/Narrow Top Rail - #8448 Molded Full Cover Drop Plate Kit:** For use on doors with glass lights where a closer with molded full cover is installed and the back of the closer is exposed. Kit consists of an 8148 Drop Plate and an 8445 Decorative Back Plate. This covers the back of the installation and gives a pleasing appearance from the reverse side.

### Metal Cover Installations

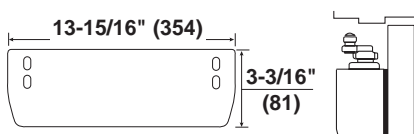


**Exposed Back - #8545 Metal Full Cover Decorative Back Plate:** For use on doors with glass lights where a closer with full metal cover is installed and the back of the closer is exposed. This plate covers the back of the installation and gives a pleasing appearance from the reverse side.

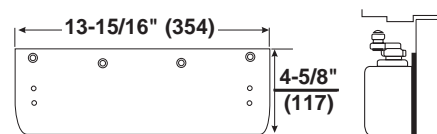


**Exposed Back/Narrow Top Rail - #8548 Metal Full Cover Drop Plate:** For use on doors with glass lights where a closer with metal full cover is installed on a narrow top rail, and the back of the cover is exposed. This drop plate can be used to mount a closer on a top rail as narrow as 2-7/8" (73mm) in height. This plate covers the back of the installation and gives a pleasing appearance from the reverse side.

### Architectural Plastic or Metal Cover Installations



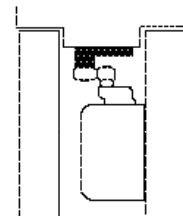
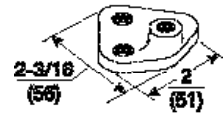
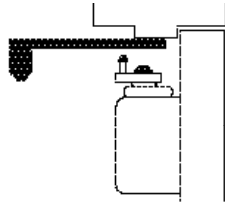
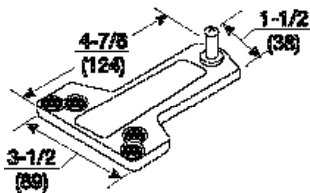
**Exposed Back - #8545A Architectural Plastic or Architectural Metal Cover Decorative Back Plate:** For use on doors with glass lights where a closer with an architectural plastic or metal cover is installed and the closer back is exposed. This plate covers the back of the installation to give a pleasing appearance from the reverse side.



**Exposed Back/Narrow Top Rail - #8548A Architectural Plastic or Architectural Metal Cover Drop Plate:** For use on doors with glass lights where a closer with an architectural plastic or metal cover is installed on a narrow top rail, and the back of the cover is exposed. This drop plate can be used to mount a closer on a top rail as narrow as 2-7/8" (73mm) in height. This plate covers the back of the installation to give a pleasing appearance from the reverse side.

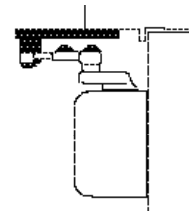
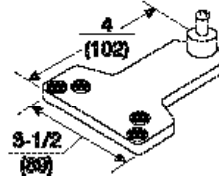
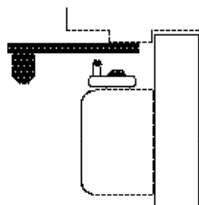
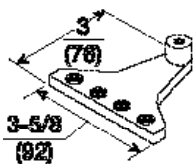
Note: All measurements are Inches/mm

Brackets for Non-Hold Open Arms



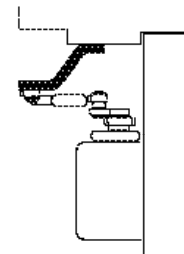
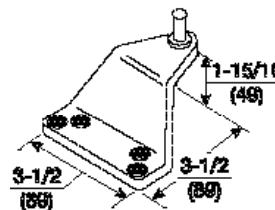
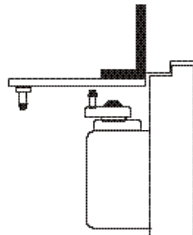
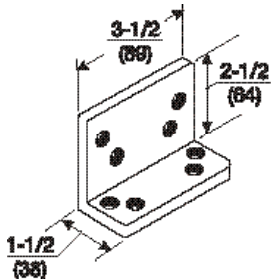
**Standard Installation - #1618A Soffit Plate:** This soffit plate is supplied standard with parallel arm closers. It can be mounted where the frame soffit is as narrow as 1" (25 mm).

**Mounting between doors - #2018 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 - #2018B 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.

**Blade/Applied Stop - #2018D Soffit Plate:** For use where a blade or applied stop does not permit installation of the standard soffit plate. Mounts to either the frame soffit or rabbet. Since this soffit plate projects 7/8" (22mm) less than a standard soffit plate, it requires a minimum frame reveal of 1-1/2" (38mm). Permits closer to clear up to a 5/8" (16mm) stop.



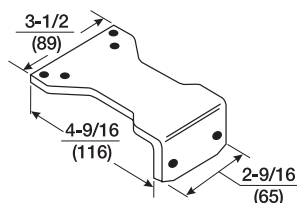
**Flush Transom - #2022 Angle Bracket:** For use where rabbeted or flush transom conditions prevent installation of a soffit plate. Used in combination with the 1618 soffit plate, or may be used in combination with the 2018S soffit plate when it is necessary for the closer arm to clear a separate overhead door holder.

**Extra-clearance - #2018S 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.

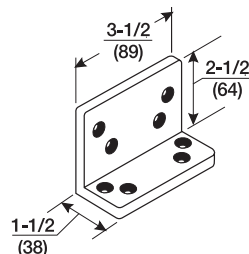
Note: All measurements are Inches/mm

### PARALLEL ARM

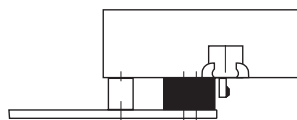
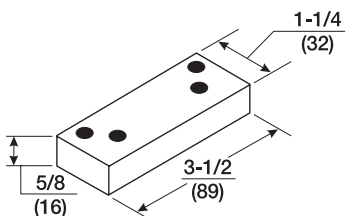
### Brackets for Hold Open Arms



**Parallel Hold-Open - #1628H Adapter Plate:** 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).



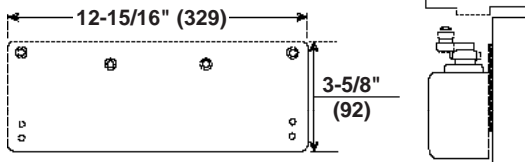
**Flush Transom - #2022 Angle Bracket:** For use where rabbeted or flush transom conditions prevent installation of a soffit plate. Used in combination with the 1628H adapter plate, this bracket fastens to the overhead transom to provide a mounting surface for the soffit plate assembly.



**Clearance/Support Blade Stop - #6891 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. Also used with non-hold open arms.

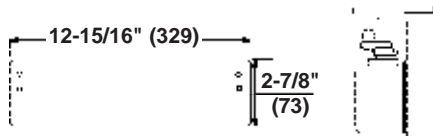
Note: All measurements are Inches/mm

**Closer Mounting Plates  
Slim Line or Full Cover Installations**

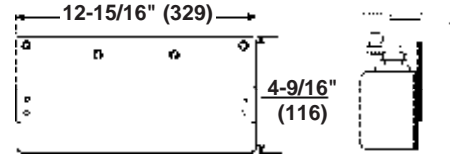


**Narrow Top Rail - #8148 Drop Plate:** For use where a narrow top rail prevents the closer from being mounted directly to the door surface. This drop plate can be used to mount a closer on a top rail as narrow as 2-9/16" (65mm) in height.

**Full Cover Installations**

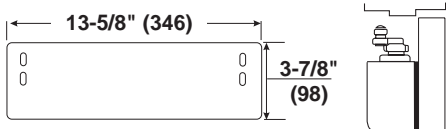


**Exposed Back - #8445 Molded Full Cover Decorative Back Plate:** For use on doors with glass lights where a closer with molded full cover is installed and the closer back is exposed. This plate covers the back of the installation to give a pleasing appearance from the reverse side.

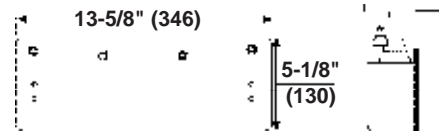


**Exposed Back/Narrow Top Rail - #8448 Molded Full Cover Drop Plate Kit:** For use on doors with glass lights where a closer with molded full cover is installed and the back of the closer is exposed. Kit consists of an 8148 Drop Plate and an 8445 Decorative Back Plate. This covers the back of the installation and gives a pleasing appearance from the reverse side.

**Metal Cover Installations**

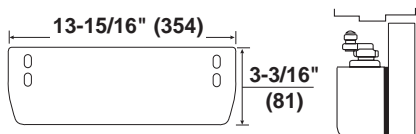


**Exposed Back - #8545 Metal Full Cover Decorative Back Plate:** For use on doors with glass lights where a closer with full metal cover is installed and the back of the closer is exposed. This plate covers the back of the installation and gives a pleasing appearance from the reverse side.

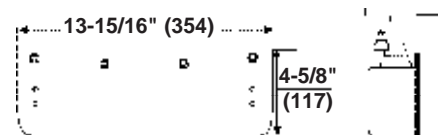


**Exposed Back/Narrow Top Rail - #8548 Metal Full Cover Drop Plate:** For use on doors with glass lights where a closer with metal full cover is installed on a narrow top rail, and the back of the cover is exposed. This drop plate can be used to mount a closer on a top rail as narrow as 2-9/16" (65mm) in height. This plate covers the back of the installation and gives a pleasing appearance from the reverse side.

**Architectural Plastic or Metal Cover Installations**



**Exposed Back - #8545A Architectural Plastic or Architectural Metal Cover Decorative Back Plate:** For use on doors with glass lights where a closer with an architectural plastic or metal cover is installed and the closer back is exposed. This plate covers the back of the installation to give a pleasing appearance from the reverse side.

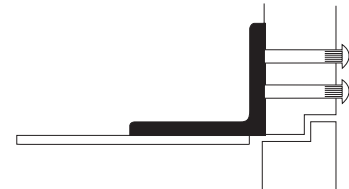
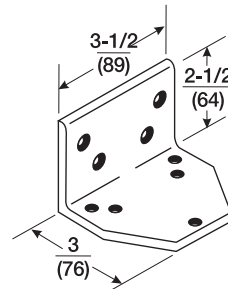
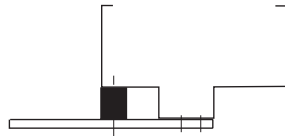
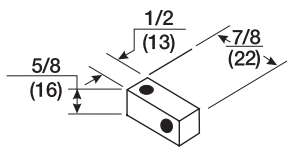


**Exposed Back/Narrow Top Rail - #8548A Architectural Plastic or Architectural Plastic or Architectural Metal Cover Drop Plate:** For use on doors with glass lights where a closer with an architectural plastic or metal cover is installed on a narrow top rail, and the back of the cover is exposed. This drop plate can be used to mount a closer on a top rail as narrow as 2-9/16" (65mm) in height. This plate covers the back of the installation to give a pleasing appearance from the reverse side.

Note: All measurements are Inches/mm

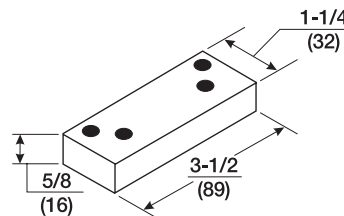
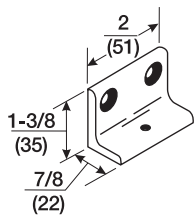
### PARALLEL RIGID/ CLOSERPLUS® ARM

### Brackets for Non-Hold Open Arms & Hold Open Arms



**Standard - #2019S 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 - #2019L 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.

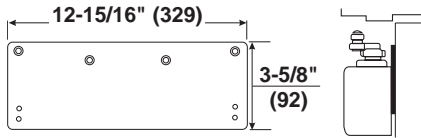


**Narrow Frame - #6890 Support Bracket:** For use where the frame is narrow and the soffit plate cannot be mounted directly to the frame soffit or rabbet. Used in combination with the #6891 Spacer Block on blade stop frames to provide extra support and needed clearance of the blade stop.

**Clearance/Support Blade Stop - #6891 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.

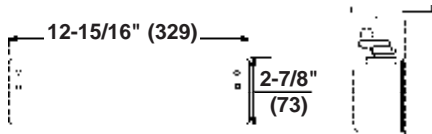
Note: All measurements are Inches/mm

### Closer Mounting Plates Parallel Arm

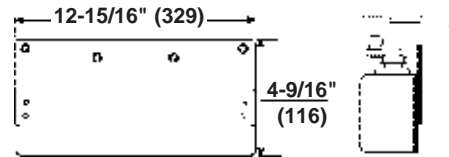


**Narrow Top Rail - #8148 Drop Plate:** For use where a narrow top rail prevents the closer from being mounted directly to the door surface. This drop plate can be used to mount a closer on a top rail as narrow as 2-7/16" (62mm) in height.

### Full Cover Installations

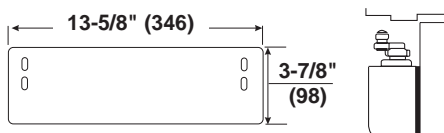


**Exposed Back - #8445 Molded Full Cover Decorative Back Plate:** For use on doors with glass lights where a closer with molded full cover is installed and the closer back is exposed. This plate covers the back of the installation to give a pleasing appearance from the reverse side.

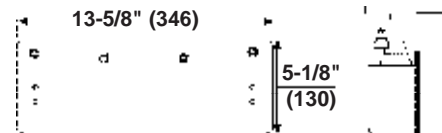


**Exposed Back/Narrow Top Rail - #8448 Molded Full Cover Drop Plate Kit:** For use on doors with glass lights where a closer with molded full cover is installed and the back of the closer is exposed. Kit consists of an 8148 Drop Plate and an 8445 Decorative Back Plate. This covers the back of the installation and gives a pleasing appearance from the reverse side.

### Metal Cover Installations

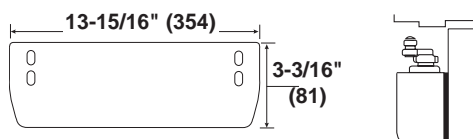


**Exposed Back - #8545 Metal Full Cover Decorative Back Plate:** For use on doors with glass lights where a closer with full metal cover is installed and the back of the closer is exposed. This plate covers the back of the installation and gives a pleasing appearance from the reverse side.

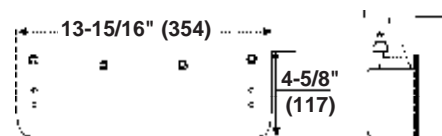


**Exposed Back/Narrow Top Rail - #8548 Metal Full Cover Drop Plate:** For use on doors with glass lights where a closer with metal full cover is installed on a narrow top rail, and the back of the cover is exposed. This drop plate can be used to mount a closer on a top rail as narrow as 2-9/16" (65mm) in height. This plate covers the back of the installation and gives a pleasing appearance from the reverse side.

### Architectural Plastic or Metal Cover Installations



**Exposed Back - #8545A Architectural Plastic or Architectural Metal Cover Decorative Back Plate:** For use on doors with glass lights where a closer with an architectural plastic or metal cover is installed and the closer back is exposed. This plate covers the back of the installation to give a pleasing appearance from the reverse side.



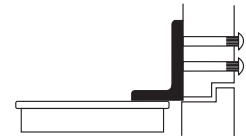
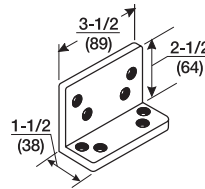
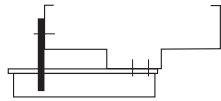
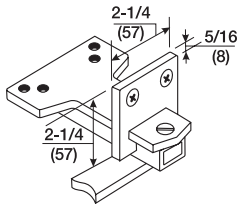
**Exposed Back/Narrow Top Rail - #8548A Architectural Plastic or Architectural Metal Cover Drop Plate:** For use on doors with glass lights where a closer with an architectural plastic or metal cover is installed on a narrow top rail, and the back of the cover is exposed. This drop plate can be used to mount a closer on a top rail as narrow as 2-7/16" (62mm) in height. This plate covers the back of the installation to give a pleasing appearance from the reverse side.

Note: All measurements are Inches/mm

### UNITROL® ARM

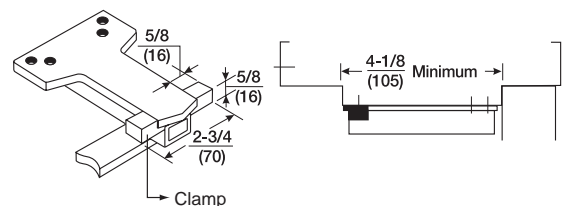
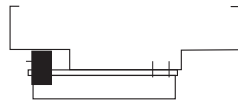
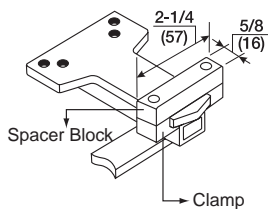
## Closer Mounting Plate

### Soffit Plate Reinforcing Brackets (for Parallel Arm)



**Additional Support - #6190 Reinforcing Bracket:** Standard for use with all parallel arm *Unitrol* door controls. Provides additional support to the soffit plate on installations with door frame reveals from 1-7/8" to 4-5/8" (48mm to 117mm).

**Flush Rabbeted Transom - #2022 Angle Bracket:** Optional for use with all parallel arm *Unitrol* 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.

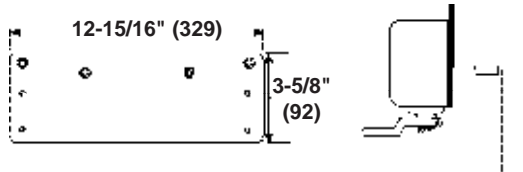


**Wide Frame - #6191 Reinforcing Kit:** Optional for use with all parallel arm *Unitrol* door controls. Used to support the soffit plate on installations with wide frames. Clamps may be used with or without the spacer block, depending on frame conditions.

Note: All measurements are Inches/mm

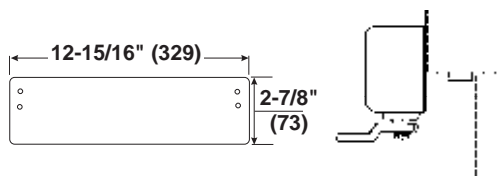


### Closer Mounting Plates Top Jamb



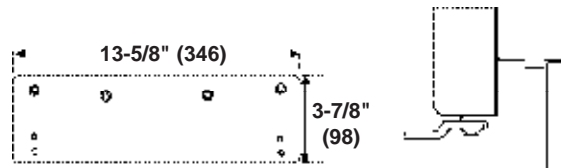
**Narrow Top Rail - #8148 Drop Plate:** For use where a narrow top rail prevents the closer from being mounted directly to the door surface. This drop plate can be used to mount a closer on a top rail as narrow as 2-7/16" (62mm) in height.

### Full Cover Installations



**Exposed Back - #8445 Molded Full Cover Decorative Back Plate:** For use on doors with glass lights where a closer with molded full cover is installed and the closer back is exposed. This plate covers the back of the installation to give a pleasing appearance from the reverse side.

### Metal Cover Installations

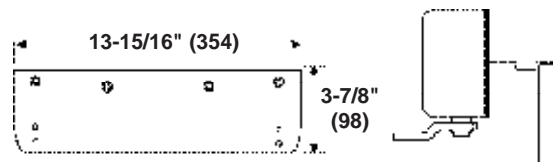


**Low Ceiling Clearance -  
Overhead Door Holder -**

**#8547 Metal Full Cover Drop Plate:** For use where a low ceiling clearance prevents normal top jamb mounting. This plate is used when the clearance is between 1-5/8" and 3-3/4" (41mm and 95mm). Or for use where a surface or concealed overhead door holder prevents normal

top jamb mounting of a closer with a metal full cover. This plate drops the closer and allows arm mounting screws to clear the bottom of the door holder. This places the centerline of the arm mounting screws at 3-7/8" (98mm) from the top of the door.

### Architectural Plastic or Metal Cover Installations



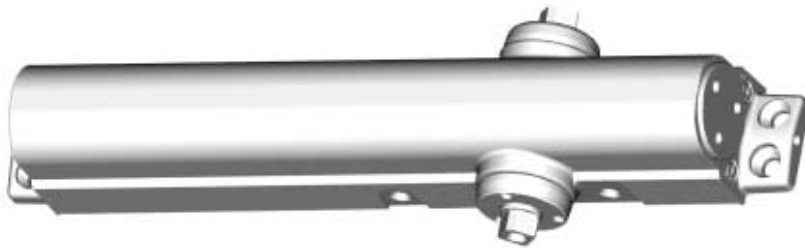
**Low Ceiling Clearance -  
Overhead Door Holder -**

**#8547A Architectural Plastic or Architectural Metal Cover Drop Plate:** For use where low ceiling clearance prevents normal top jamb mounting. This plate is used when the clearance is between 1-5/8" and 3-3/4" (41mm and 95mm). Or for use where a surface or concealed overhead door holder prevents normal top

jamb mounting of a closer with an architectural plastic or metal full cover. This plate drops the closer and allows arm mounting screws to clear the bottom of the door holder. This places the centerline of the arm mounting screws at 3-7/8" (98mm) from the top of the door.

Note: All measurements are Inches/mm

### DOOR CLOSER BODY ASSEMBLIES



Closer Model	Catalog Number
8100 (size 2,3,4,5 or 6)	810XLAP
8300 (size 2,3,4,5 or 6)	
8500 (size 2,3,4,5 or 6)	
8301 or 8501	8101LAP
8301BF or 8501BF	8101BFLAP

X= Specify Closer Size

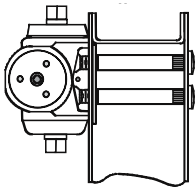
LAP = Less All Parts

#### Covers (Material)

Closer Series	Plastic	Metal	Arch. Plastic	Arch. Metal
8300 8301	8200P	N/A	N/A	N/A
8500 8501	8400P	8400M	8400A	8400MA

#### Steel Door Application

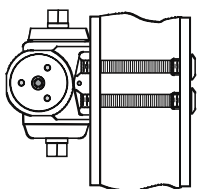
Sex-nut / Sleeve-nut : "SN" (4 per pack) or  
Sex-nut / Sleeve-nut & Screw: "SNB" (4 per pack)



Door	SN's	SNB's
1-3/8"	SN-138	SNB138-38
1-3/4"	SN-134	SNB134-38
2-1/4"	SN-214	SNB214-38
S.S. SNB's 1-3/4"	SN-134SS	SNB134SS-38

#### Aluminum and Wooden Door Application (Aluminum Door Shown)

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



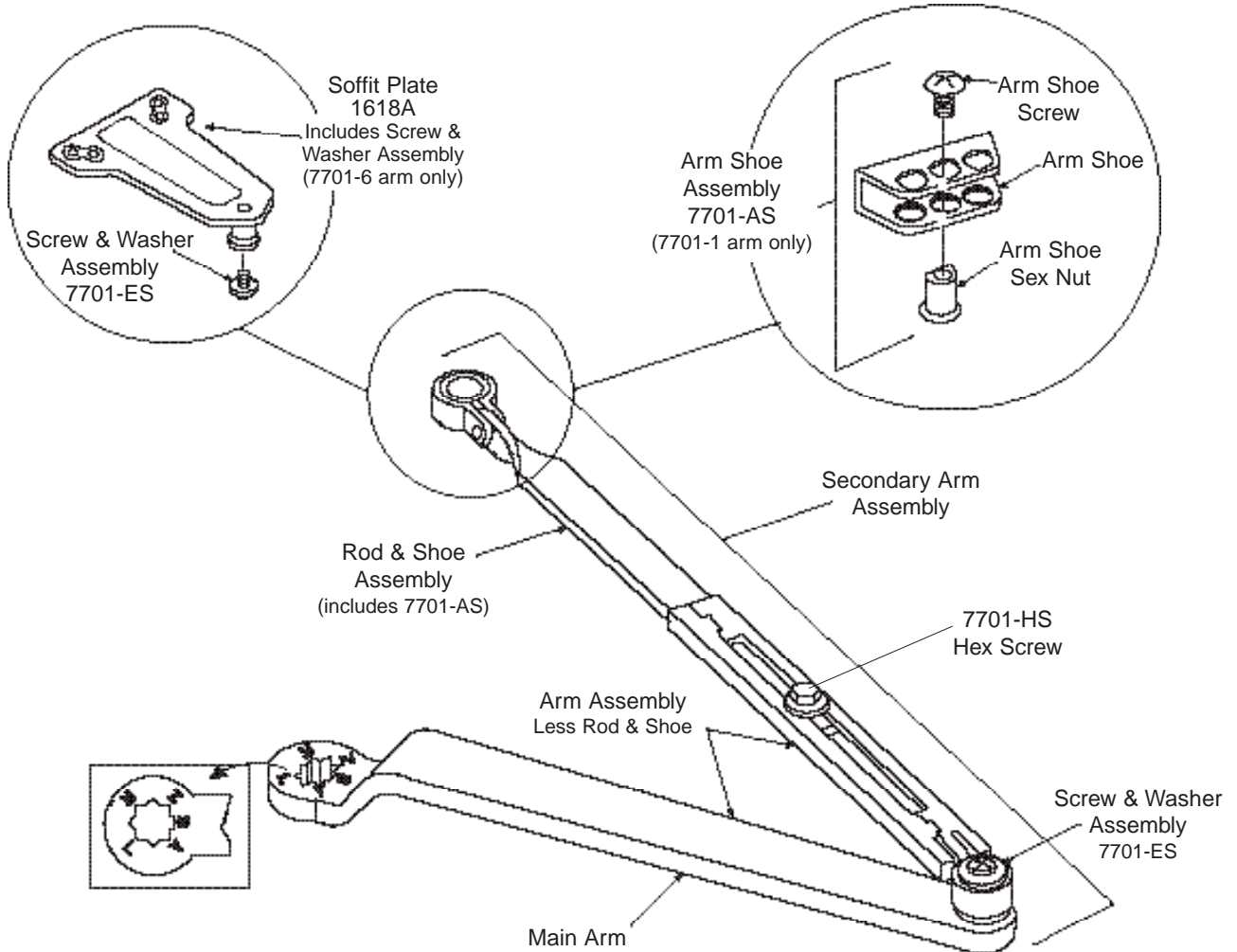
Door	TBGN's
1-3/8"	TBGN138-38
1-3/4"	TBGN134-38
2-1/4"	TBGN214-38

Cover Model	Cover Drawing
<b>Slim Line* 8200P</b> 1-3/4" high x 2-1/8" deep x 13" long (44 x 54 x 330)	
<b>Full Plastic 8400P</b> 2-7/8" high x 2-1/8" deep x 13" long (73 x 54 x 330)	
<b>Full Metal 8400M</b> 3-7/8" high x 2-1/8" deep x 13-5/8" long (98 x 54 x 346)	
<b>Architectural Plastic 8400A</b> 3-3/32" high x 2-1/4" deep x 13-7/8" long (79 x 57 x 352)	
<b>Architectural Metal 8400MA</b> 3" high x 2-3/16" deep x 13-15/16" long (76 x 56 x 354)	

\*Pinion cap not included with  
Slim Line cover. Part #1639



**NON-HOLD OPEN  
ARM ASSEMBLIES**



Closer Series	Complete Arm Assembly	Main Arm Assembly <sup>Ⓐ</sup> (length)(mm) (includes 7701-ES)	Secondary Arm Assembly (includes 7701-ES)	Arm Assembly Less Rod and Shoe	Rod & Shoe <sup>Ⓑ</sup> Assembly (length)(mm)
8000	7701-1	7701-1M (11)(279)	7701-111	7701-1W	7701-11 (8-7/8)(225)
J8000	7701-1A		7701-121		7701-11A (12-9/16)(319)
P8000	7701-6		7701-116		7701-16 (8-7/8)(225)
P8000 <sup>Ⓒ</sup>	7701-6A		7701-116A		7701-16A (12-9/16)(319)
8000	7701-26 (tri pack includes 7701-1 plus 1618A plate)				

Ⓐ C to C length shown in parentheses.

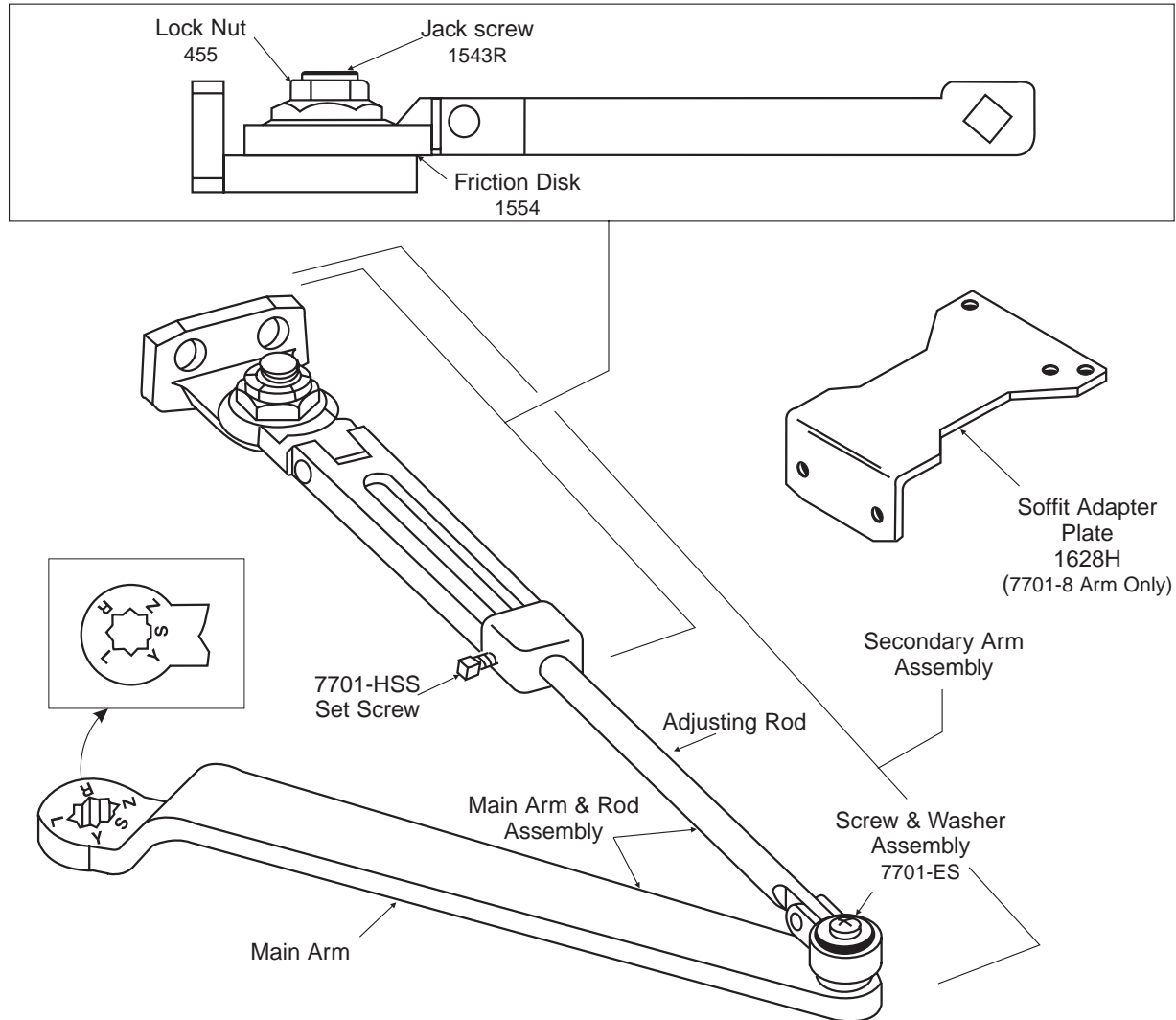
Ⓑ C of connecting link to end of rod shown in parentheses.

Ⓒ For 180° door swing when using a special template for doors hung on 6" to 8" (162mm to 203mm) wide throw hinges.

**Note: Mounting hardware included with all parts orders**

### HOLD OPEN ARM ASSEMBLIES

7701-13 Holder Shoe & Loop Assembly



Closer Series	Complete Arm Assembly	Main Arm <sup>®</sup> (Length)(mm) (includes 7701-ES)	Secondary Arm (includes 7701-ES)	Main Arm & Rod Assembly	Holder Shoe & Loop Assembly	Adjusting Arm <sup>®</sup> (Length)(mm)
8000H	7701-3/7701-8 ③	7701-1M (11)(279)	7701-113/7700-118 (Reg.) / (Par.)	7701-3W	7701-13	7701-31 (7-3/8)(187)
J8000H	7701-3A		7701-123	7701-3WA		7701-31A (10-13/16)(275)

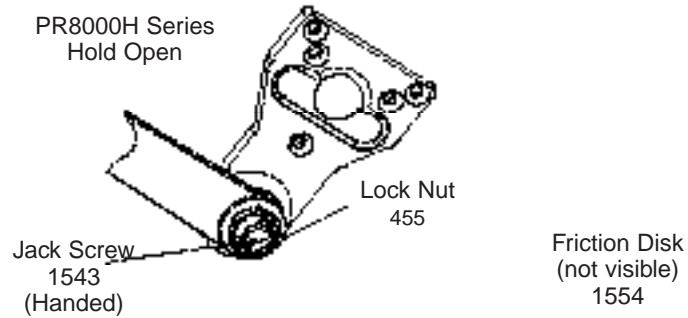
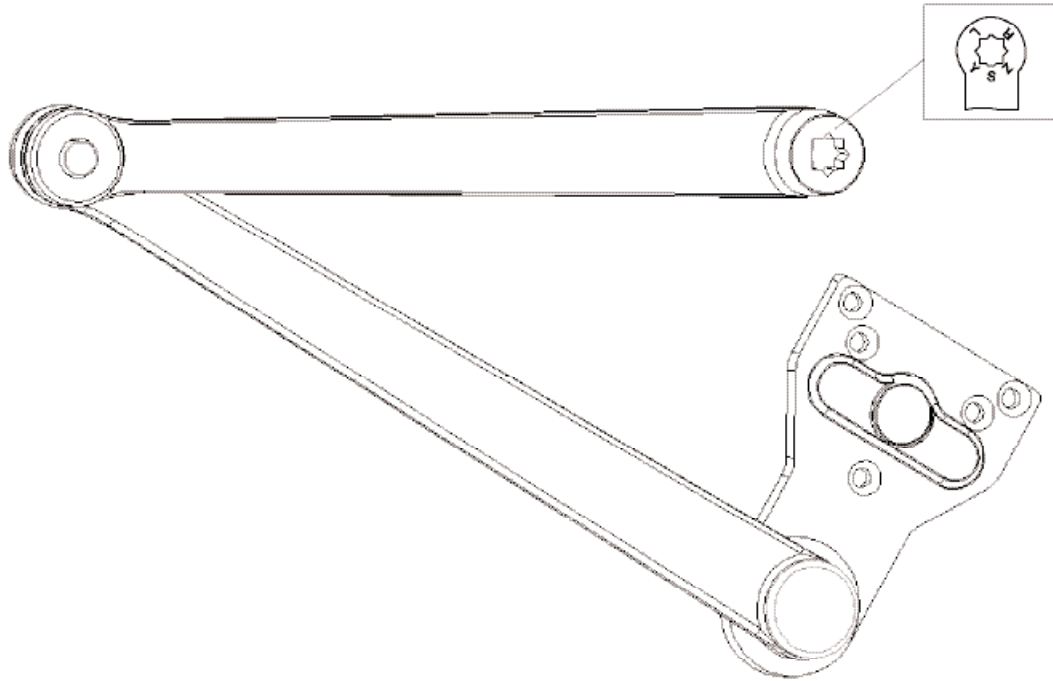
7701-18- Holder Shoe & Loop Assembly (7701- 13) with Soffit Adapter Plate (1628H)

- ① C to C length shown in parentheses.
- ② C of connecting link to end of rod shown in parentheses.
- ③ Same as 7701-3 but includes #1628H soffit adapter plate.

**Note: Mounting hardware included with all parts orders**

**PARALLEL RIGID  
ARM ASSEMBLIES**

Non-Hold Open Arm Shown

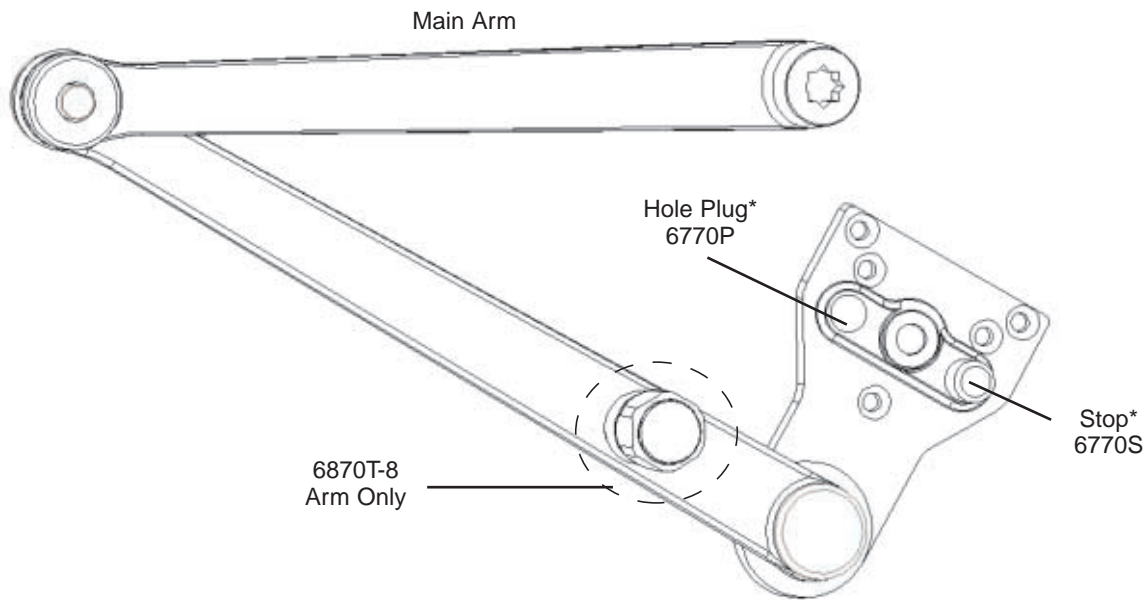


Closer Series PR8000	Complete Arm Assembly
NHO	PR7701-5
HO	PR7701-8R (Right Hand)
	PR7701-8L (Left Hand)

**Note: Mounting hardware included with all parts orders**

### CLOSERPLUS® ARM ASSEMBLIES

Hold Open Arm Shown (CLP-T)



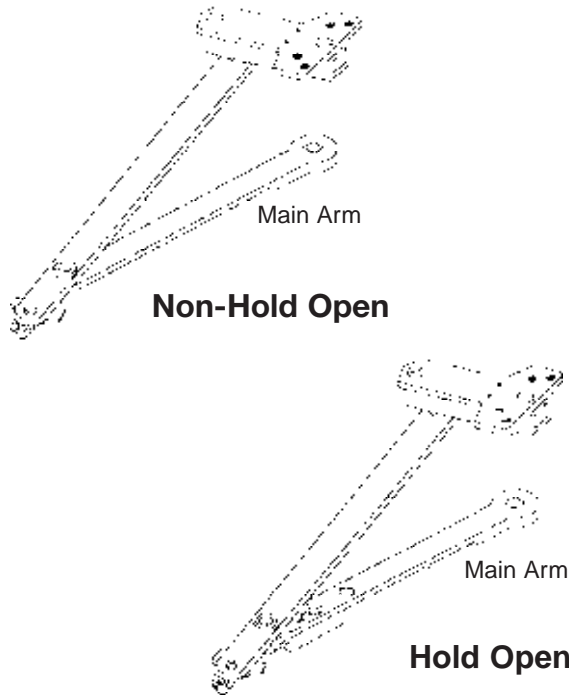
**Note:**  
Mounting hardware included with all parts orders

Closer Series	Arm Function	Complete Arm Package
CLP8000	Non-Hold Open	6770-5
CLP8000T	Thumbturn Hold Open	6870T-8

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

**Parallel Arm Hold Open & Non-hold Open Series**

**UNITROL®  
ARM ASSEMBLIES**

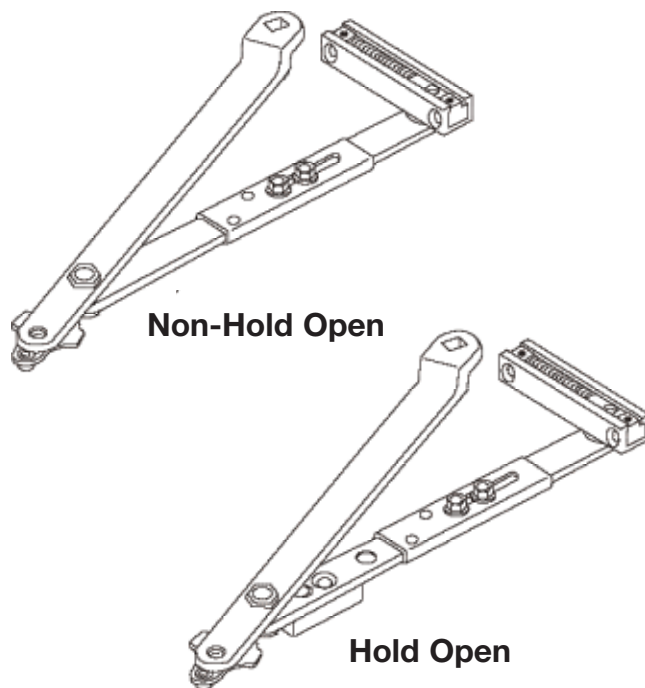


**Complete arm assembly**

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

\* Center to center length.

**Top Jamb Hold Open & Non-hold Open Series**

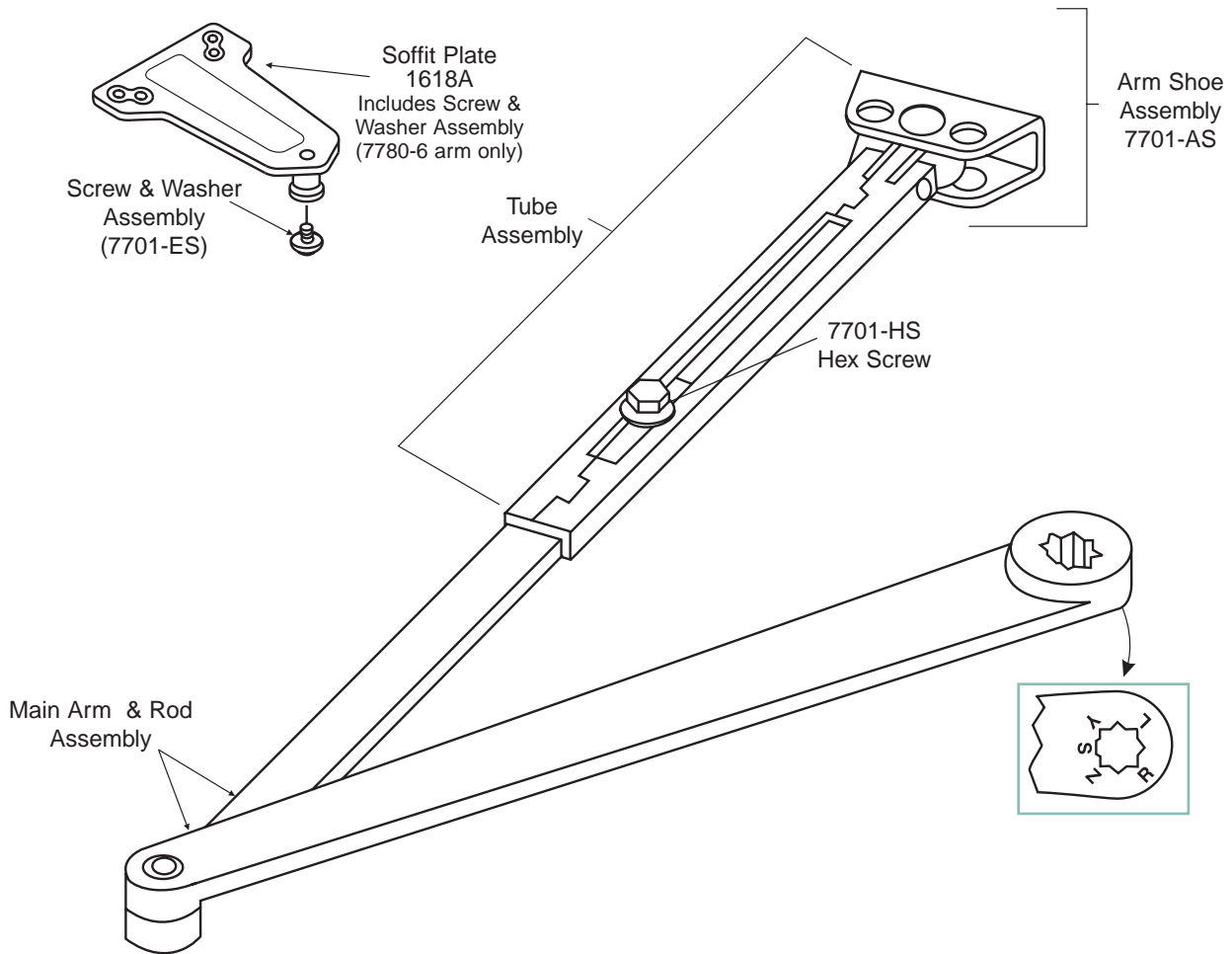


Non-Hold Open Complete Arm Assembly	Hold Open Complete Arm Assembly	For Frame Reveals (mm)
J6100-4	J6100-7	2-1/8" - 3-1/4" (54 - 83)
J6200-4	J6200-7	1/2" - 2" (13 - 51)
J6400-4	J6400-7	3-3/8" - 4-1/4" (86 - 108)
J6500-41	J6500-71	4-3/8" - 5-3/8" (111 - 137)
J6500-42	J6500-72	5-1/2" - 6-3/8" (140 - 162)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

**Note: Mounting hardware included with all parts orders**



### LOW-PROFILE ARM ASSEMBLIES



Arm Application	Complete Arm Assembly	Main Arm & Adjusting Rod Assembly	Tube & Shoe/Soffit Soffit Assembly
Regular Arm	7780-1	7780-1MR	7780-1TS (With 7701-AS)
Parallel Arm	7780-6		7780-6TS (With 1618A)
Tri-pack	7780-26		

**Note: Mounting hardware included with all parts orders**

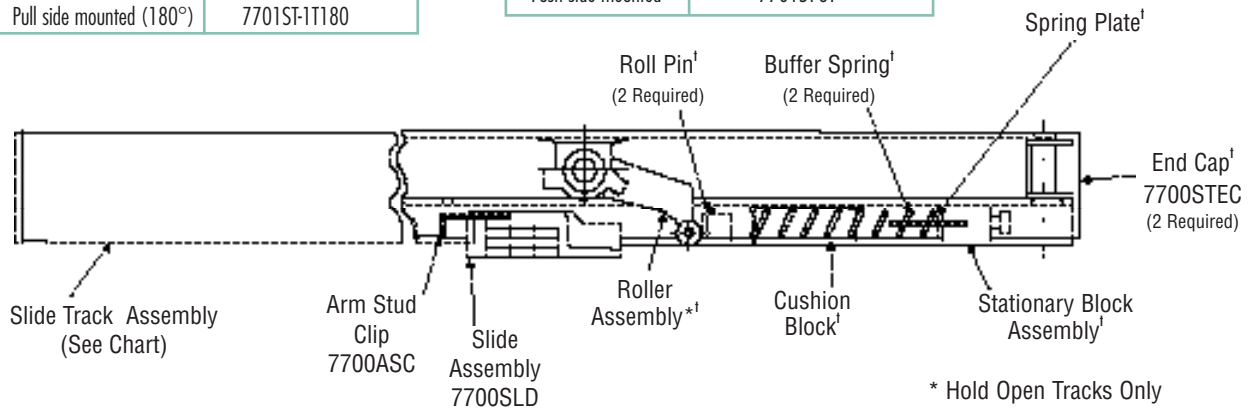
**TRACK & ARM ASSEMBLIES**

**Non-Hold Open**

Model	Slide track assembly
Pull side mounted	7701ST-1T
Push side mounted	7701ST-5T
Pull side mounted (180°)	7701ST-1T180

**Hold Open**

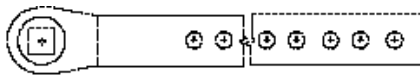
Model	Slide track assembly
Pull side mounted	7701ST-3T
Push side mounted	7701ST-8T



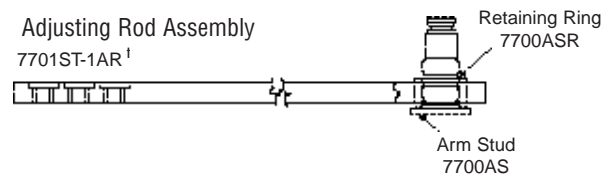
\* Hold Open Tracks Only  
† Part of Slide Track Assembly

**Standard Arm Assembly**  
7701ST-1A\*†

Arm Tube Assembly  
7701ST-1AT†

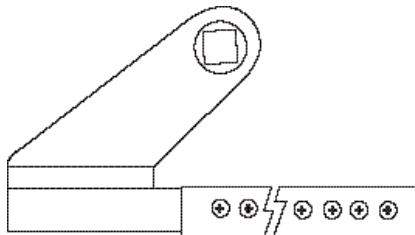


Adjusting Rod Assembly  
7701ST-1AR†



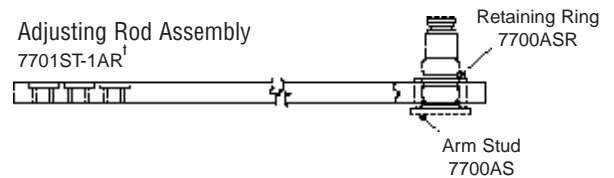
**Double Egress Arm Assembly**

7701PT-DE-1R (Right Hand)\*†  
7701PT-DE-1L (Left Hand)\*†

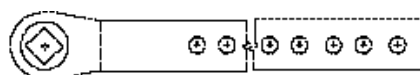


Arm Tube Assembly  
7701ST-1ATR† (right hand)  
7701ST-1ATL† (left hand)

Adjusting Rod Assembly  
7701ST-1AR†

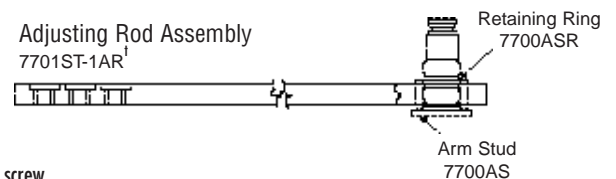


**STP Arm Assembly**  
7701STP-1A\*†



Arm Tube Assembly  
7701STP-1AT†


Adjusting Rod Assembly  
7701ST-1AR†



† Includes arm length adjusting screw  
\* Includes arm tube & adjusting rod assembly

**Note: Mounting hardware included with all parts orders**

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