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SURFACE CLOSERS

DOOR CLOSER

CATALOG



9500 SERIES CAST IRON DOOR CLOSER

INTRODUCTION

Ideal for high use openings, the 9500 Series Cast Iron door closer offers the durability, flexibility and strength required to meet the needs of your facility. For interior or exterior doors, this ANSI/ BHMA Grade 1 closer features a clean, modern cover aesthetic and durable cast iron body that can be used in a variety of institutional environments requiring ADA compliance.

FEATURES

- Cast iron closer body
- Non-handed
- Rack-and-pinion design
- Standard, separate and independent, latch, sweep and backcheck intensity valves
- Pressure relief valves for both opening and closing cycles protect the door and frame from damage and reduces maintenance costs
- Staked valves
- 2-1/4" (57mm) projection
- 1-1/2" (38mm) diameter piston
- 5/8" (16mm) diameter pinion journals
- Closer mounting plate for easy installation
- Tri-style[®] packaging: packed for regular, top jamb or parallel arm mounting
- Adjustable spring sizes 1-6
- Molded ABS plastic cover



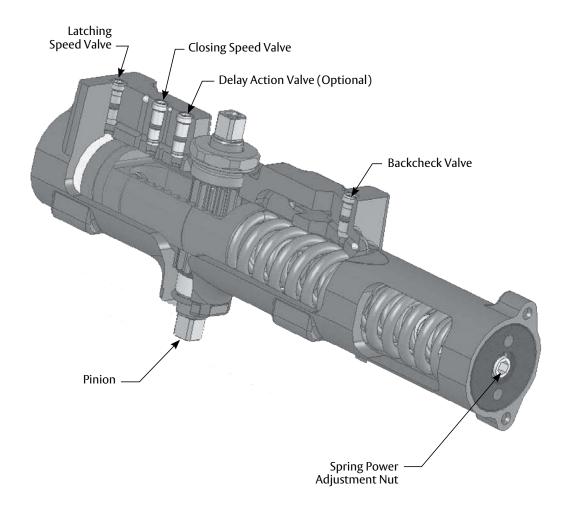
- All standard arm applications allow doors to swing 180°, conditions permitting
- Heavy-duty arms: Regular Rigid, Parallel Rigid, CloserPlus[®], Parallel Rigid Offset and Unitrol[®]
- Slide Tracks: push or pull side mounting
- 30-year limited warranty
- Exceeds 25 million cycles

OPTIONAL FEATURES

- Metal cover
- Delayed action



OVERVIEW



CERTIFICATIONS

- ANSI/BHMA A156.4, Grade 1 certified
- UL / cUL listed for use on fire rated doors 🖲
- UL10C listed for positive pressure fire test
- Comply with requirements for the Americans with Disabilities Act (A.D.A) and ANSI standard A117.1 占
- This product is manufactured in an ISO 9001, ISO 14001 facility
- UL certified environmental produced declaration
- GreenCircle certified environmental facts

CAUTION: Door Closers for Low Opening Force Applications:

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

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SPECIFICATIONS

Door closers shall be of full rack and pinion construction with a cold headed heat-treated steel spindle and a forged steel piston precision machined and heat treated. The case shall be of cast iron. All closers for both interior and exterior doors shall be the product of one manufacturer.

Surface closers shall be adjustable to provide sizes 1 though 6 and comply with ADA. All sizes shall be accommodated in one closer body.

Closing shall be controlled by two valves — one to control closing speed and one to control latching speed. Valves shall be concealed against unauthorized adjustment and be non-critical with "O" ring seals. Delayed action shall be available and shall be accomplished with a separate valve.

All arms shall be finely finished with heavy duty forged steel main arm. All closers shall be suitable for regular arm, top jamb, and parallel arm mounting and track type applications when provided with proper brackets and arms. Hold open and heavy duty arms are available. Closers mounted regular arm, top jamb and parallel arm shall allow for full 180° door opening, trim permitting.

Closers shall be available with an adjustable backcheck intensity valve with a safety feature that automatically relieves internal pressure when backcheck has reached the desired adjustment level. V alves shall be accessible without removing the closer from the door. Closers shall be available with a backcheck intensity valve. Backcheck begins at approximately 70° of door opening for all applications. This valve shall be operative on regular, top jamb, parallel arm, and track type mountings.

Closer covers shall be non-handed to meet a variety of door conditions and design requirements. Closer covers shall be of high impact plastic material of flame retardant grade, secured by machine screws. Projection of the closer body from the door shall not exceed 2-1/4". Closers shall be capable of mounting on 1-3/4" top rail or inverted mounting on 1-3/4" top jamb. Metal covers shall be available. All closers with metal covers shall be available in architectural finishes to match corresponding door hardware.

Closers without hold open shall be regularly furnished with power adjustment arm bracket capable of providing a 15% power adjustment.

A mounting bracket to attach the closer shall be regularly furnished.

Hydraulic fluid shall be of a type requiring no seasonal valve readjustment due to extreme temperature variations.

Closer shall have a 30-year limited warranty.

Closers with non-hold open arms shall be listed by Underwriters Laboratories.

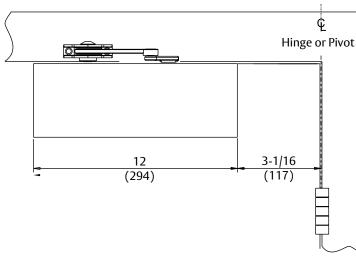


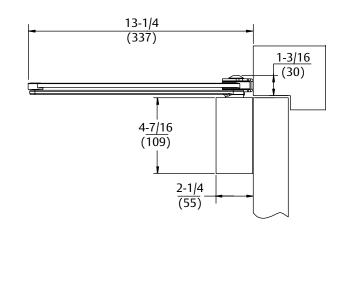
210 Series

9500 SERIES CAST IRON DOOR CLOSER

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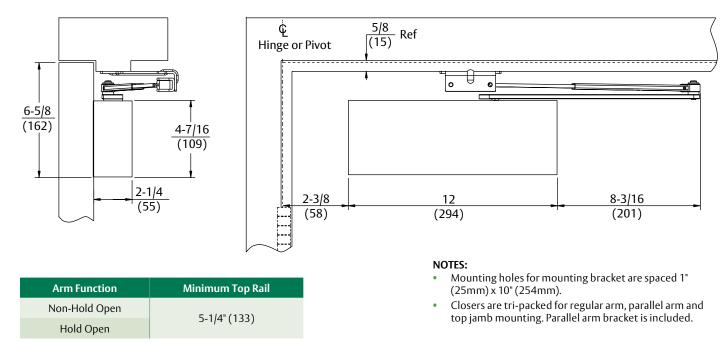
TECHNICAL DETAILS – REGULAR ARM





Arm Function	Minimum Header	Minimum Top Rail	Maximum Door Swing
Non-Hold Open	1-1/2" (38)	2"(76)	180° (trim permitting)
Hold Open	1-11/16 (43)	3" (76)	90°-180°

TECHNICAL DETAILS – PARALLEL ARM

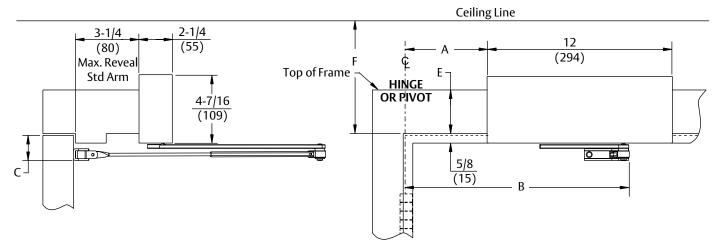


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TECHNICAL DETAILS – TOP JAMB



Maximum Opening	А	В	Hinge Condition
110°	7" (172)	16-1/16" (394)	Butts, Offset
140°	5-1/2" (135)	14-5/16" (351)	Pivots, and Swing Clear
180°	4" (98)	13-1/16" (320)	Hinges
140°	5-1/2" (135)	14-7/16" (354)	[^] Center Hung

Header Width	C Minimum Top Rail	E Header	F Ceiling Clearance	
Standard	1-7/8" (48)	2-1/8" (54)	4" (102)	
Narrow	2-1/4" (57)	2" (49)	3-5/8" (92)	

Dimensions "A" and "B" are taken from centerline of hinge as shown and apply to pivot point of swing clear hinges. Offset and center hung pivots. ^Must be single-acting door.

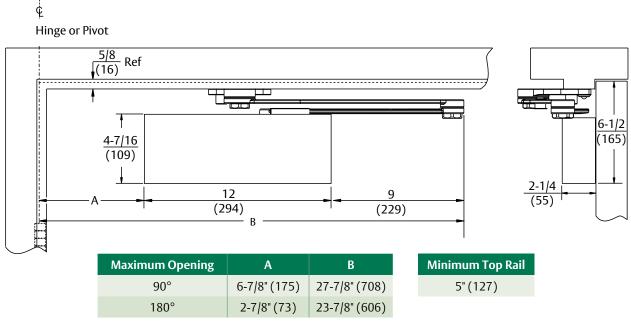
NOTES:

- Mounting holes for mounting bracket are spaced 1" (25mm) x 10" (254mm).
- Closers are tri-packed for regular arm, parallel arm and top jamb mounting. Parallel arm bracket is included.

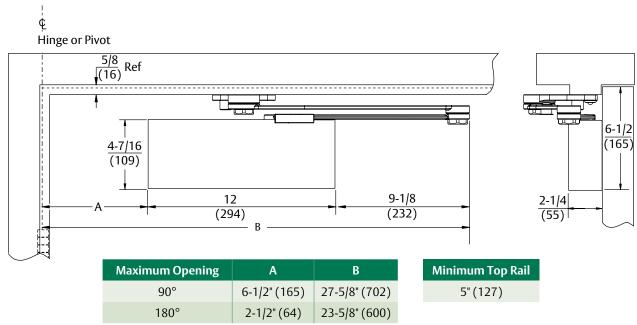
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TECHNICAL DETAILS – PARALLEL RIGID, FRICTION HOLD OPEN ARM



NOTE:

Mounting holes for mounting bracket are spaced 1" (25mm) x 10" (254mm).

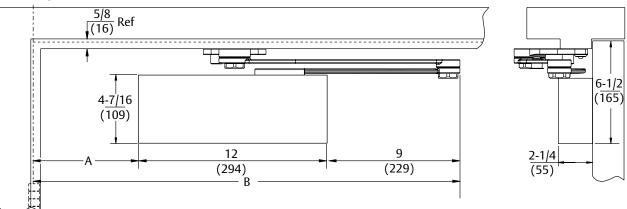
9500 SERIES



9500 SERIES CAST IRON DOOR CLOSER

TECHNICAL DETAILS – CLOSER PLUS® ARM

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ŀ	linge or Pivot
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Maximum Opening	А	В	Minimum Top Rail
85°	7-3/4" (197)	28-3/4" (730)	5" (127)
90°	6-3/4" (171)	27-3/4" (708)	
100°	5-1/4" (133)	26-1/4" (667)	
110°	3-7/8" (98)	24-7/8" (631)	

TECHNICAL DETAILS – PARALLEL RIGID, FRICTION HOLD OPEN ARM

င့် Hinge or Pivot 5/8 (16) Ref -31 197 4-7/16 (109) 12 9 2-1/4 (294)(55) (229) Minimum Top Rail of Door with 5/8" (16mm) Frame Stop Mounting holes for mounting bracket are spaced 1" (25mm) x 10" (254mm). Without 9500-1/2SP Spacer With 9500-1/2SP Spacer 7-3/8" (187) 6-7/8" (175)

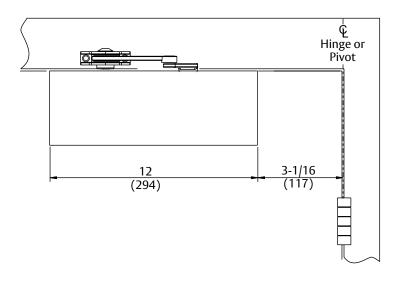
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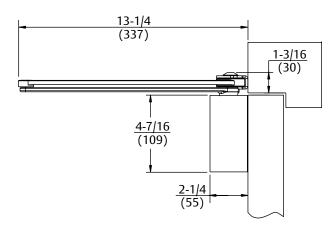
NOTE:

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TECHNICAL DETAILS – REGULAR RIGID ARM





Minimum Header	Minimum Top Rail
1-5/8" (41)	3" (76)

NOTE:

• Mounting holes for mounting bracket are spaced 1" (25mm) x 10" (254mm).

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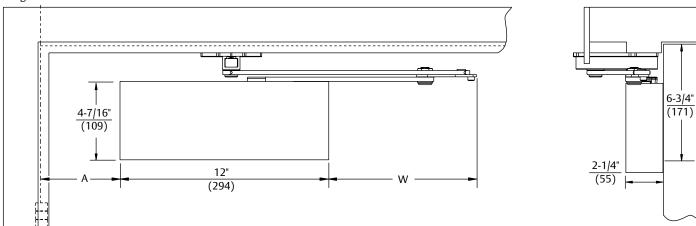
9500 SERIES CAST IRON DOOR CLOSER

210 Serie

TECHNICAL DETAILS – UNITROL® PARALLEL ARM

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Hinge or Pivot



Оре	ening Doors 28" - 32" Doors 33" - 4		Doors 28" - 32"		33" - 41"	41" Doors 42" - 48"	
Hold Open	Dead Stop	A	w	A	w	Α	W
85°	90°	4-3/4" (121)		5-3/8" (137)		5-7/8" (149)	
90°	95°	4-1/4" (108)	8-1/2" (216)	4-7/8" (124)		5-3/8" (137)	
95°	100°	3-3/4" (95)		4-3/8" (111)	10"	4-7/8" (124)	11-3/8"
100°	105°	3-3/8" (86)		3-7/8" (98)	(254)	4-3/8" (111)	(289)
105°	110°	3" (76)		3-1/2" (89)		4" (102)	
110°	115°	2-3/4" (70)		3-1/4" (82)		3-5/8" (92)	

Minimum Top Rail	
5" (127)	

NOTE:

• Mounting holes for mounting bracket are spaced 1" (25mm) x 10" (254mm).

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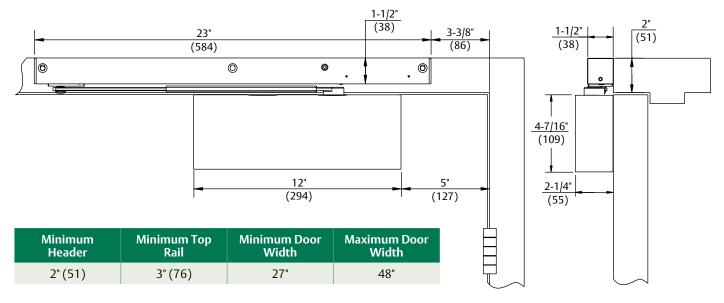




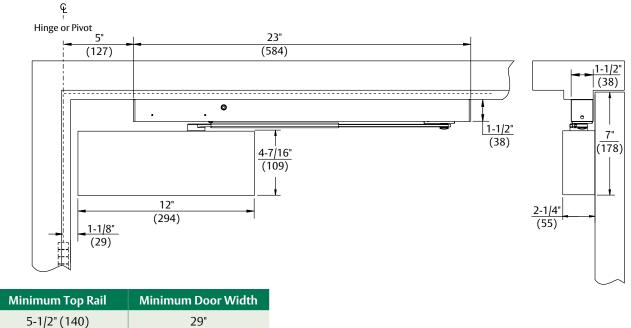
210 Series

9500 SERIES

TECHNICAL DETAILS – PULL SIDE MOUNTING



TECHNICAL DETAILS – PUSH SIDE MOUNTING



NOTE:

• Mounting holes for mounting bracket are spaced 1" (25mm) x 10" (254mm).

7500 Series	7570 Series	8000 Series	1600 Series	2800ST Series	9300 Series	78-BF Series	1700 Series	210 Series	<u>160 Series</u>	<u>9500 Series</u>	<u>9540 Series</u>	<u>410 Sei</u>
ASS	SA ABL	OY							CAST IR	950(ON DOC) SERIE DR CLOS	
////////				///////////////////////////////////////		///////////////////////////////////////	///////////////////////////////////////			///////////////////////////////////////	///////////////////////////////////////	
ARM	OPTIONS											
Regul	ar Arm									0		
9501-	1					9501-3	5					
(Non-	Hold Open)	/	-	1		(Hold (Open*)	05		=	-20	
	3	,			M						1	

• Used with Regular Arm mounting (pull side) and Top Jamb mounting (push side)

9500 SERIES

• Available in painted or plated finishes

	Part Number	Description		
	9501-1W	Main arm & tube assembly		
Non-Hold Open	9501-11	Rod & shoe assembly		
	9500-HS	Hex screw package		
	9501-3W	Main arm & rod assembly		
Hold Open	9501-13	Hold open bracket assembly		





- Mounted on push side
- Non-hold open arm combines regular arm with parallel arm mounting bracket
- Hold open arm combines regular hold open arm with parallel arm mounting bracket
- Available in painted or plated finishes

Top Jamb (Deep Reveal)



- Accommodates top jamb mounting for reveals from 3-3/8" (86mm) up to 7-1/4" (184mm), depending on door and frame conditions
- Mounted on push side
- Available in painted or plated finishes

	Part Number	Description
	9501-1B	Arm Assembly
Non-Hold Open	9501-2W	Main arm & arm tube assy
open	9501-11B	Rod & shoe assembly
Hold Open	9501-3B	Arm Assembly
Hold Open	9501-3WB	Main arm & rod assy
	9501-13	Hold open bracket assy

Specify finish when ordering arms. *Not allowed by code on fire doors.









ARM OPTIONS Parallel Rigid Arm PR9501-5 (Non-Hold Open)

- Recommended for high-use, high-abuse environments
- Tamper-resistant, solid forged steel riveted arm
- Mounted on push side
- Not available in plated finishes

Parallel Rigid - Friction Hold Open Arm*



- Recommended for high-use, high-abuse environment
- Requires auxiliary stop
- Allows door to swing 180°, conditions permitting
- Handed
- Mounted on push side
- Not available in plated finishes

Arm AssembliesHandingPR9501-8RRight HandPR9501-8LLeft Hand

CloserPlus[®] Arm

9770-5 (Non-Hold Open)



9870T-8

(Hold Open)*

- Recommended for high-use, high-abuse environments
- Tamper-resistant, solid forged steel riveted arm (mounted on push side)
- Field-reversible steel lug restricts degree of opening to protect door, wall and hardware
- Requires both backcheck valves on closer
- Shipped standard as left hand. Handing can be reversed in the field
- Not available in plated finishes

*Not allowed by code on fire doors.

Specify finish when ordering arms.

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ARM OPTIONS

Parallel Rigid Offset Arm



Arm Assemblies	Arm Function
PRO9501-5	Non-Hold Open

- Recommended for high-use, high-abuse environments
- Provides additional vertical clearance
- Mounted on push side
- Not available in plated finishes

Standard Clearance	Blade Spacer Part Number	Total Clearance
1-3/4"	9500-1/2SP	2-1/4"
	9500-5/8SP	2-3/8"

Regular Rigid Arm R9501-1

(Non-Hold Open)



- Recommended for high-use, high-abuse environments
- Tamper-resistant, solid forged steel riveted arm
- Mounted on pull side
- Not available in plated finishes

Unitrol[®] Parallel Arm

(Non-Hold Open)



(Hold Open)*



- Recommended for high-use, high-abuse environments
- Integrates a door closer, shock absorber and auxiliary heavyduty overhead stop
- Requires both backcheck valves on the closer
- Hold open*
 - Holder mechanism tension adjustable
 - Hold open can be engaged/disengaged with a 1/4 turn of the mechanism with a standard blade type screwdriver
- Not available in plated finishes

Door Width	Arm Assemblies		
Door width	Non-Hold Open	Hold Open*	
28" - 32" (71cm - 81cm)	9100-11	9100-1	
33" - 41" (84cm - 104cm)	9100-13	9100-3	
42" - 48" (107cm - 122cm)	9100-14	9100-4	

Specify finish when ordering arms. *Not allowed by code on fire doors.

TRACK OPTIONS	
Pull Side Track	3

- Provides a clean aesthetic look with maximum 100° door swing and a minimum door width of 28" (71cm)
- Mounted on pull side

9500 SERIES

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- Hold open can be set for 85°, 90°, 95°, or 100°
- Not available in plated finishes

	Part Number		
Arm/Track Function	Track Only	Arm Only	
Non-Hold Open	9501ST-1T	0E01CT 14	
Hold Open	9501ST-3T	9501ST-1A	

Push Side Track



- Clean aesthetic look for doors opening a maximum of 100° and a minimum door width of 32" (81cm)
- Backcheck option recommended
- Mounted on push side
- Hold open*
 - From 85° to 100°
 - Turn knob offers the use the option of turning hold open on or off
- Not available in plated finishes

	Part Number	
Arm/Track Function	Track Only	Arm Only
Non-Hold Open	9501ST-5T	9501ST-1A
Hold Open	9501ST-8T	97121-1A

Specify finish when ordering arms. *Not allowed by code on fire doors.



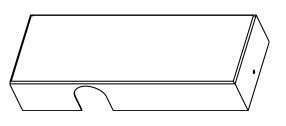
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9500 SERIES

COVERS AND PLATES

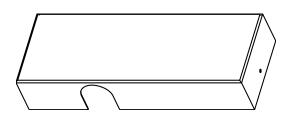
Full Plastic Cover



9500P

- Completely covers closer body
- Non-handed
- Dimensions: 12" (294) x 4-7/16" (109) x 2-1/4" (55)
- Available in painted finishes only •

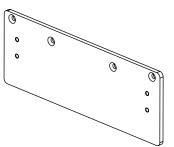
Full Metal Cover



- For use in high-abuse applications
- Specify hand; not field reversible
- Dimensions: 12" (294) x 4-7/16" (109) x 2-1/4" (55)
- Available in painted and plated finishes

Part Numbers	Handing
9500M-R	Right Hand
9500M-L	Left Hand

Drop Plate



- Permits parallel arm or top jamb mounting on door • when top rail is too narrow to install closer in the regular manner
- Minimum 2" (51mm) top rail required •
- To order separately, specify Part No. x Finish •

Drop Plate	Used with:	
9586	Regular Arm or Pull Side Track	
9587	Top Jamb	
9588	Parallel Arm or Push Side Track	

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9528H

- Converts regular arm hold open to parallel arm hold open closer
- Standard with parallel arm hold open mounting

Mortise Arm Bracket for Regular Arm Mounting

Bracket is first mounted to door or frame, then

Bracket size: 3-5/8" (92mm) x 11-1/2" (292mm)

Hole spacing: 1" (25mm) x 10" (254mm)

Parallel Arm Non-Hold Open Bracket



9518

- Converts regular arm to parallel arm closer
- Standard with parallel arm mounting

9500-PFTB

- Required when parallel arm mounting is used on a flush transom application
- Not available in plated finishes

Specify finish when ordering parts.



9500-OB

Required when parallel arm is used in conjunction with • an overhead door holder

Parallel Arm Flush Transom Bracket

Parallel Arm Offset Bracket





• For regular arm mounting where frame requires reinforcement, i.e., on frames with bull nose trim

• Not available in plated finishes







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BRACKETS

9500-CMB

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Mounting Bracket

Standard on all closers

closer is attached

Reduces installation time

Ensures correct mounting

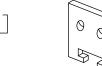
Parallel Arm Hold Open Bracket



BRACKETS

Reinforcing Bracket





9500-RB

- Supplied as standard for use with Unitrol[®] arms
- Provides additional support to the soffit plate on installations with door frame reveals from 1-7/8" to 4-5/8" (48 to 117mm)
- Not available in plated finishes

Deep Reveal Reinforcement Kit

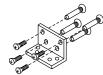




- 9500-DRKFor use with Unitrol[®] arms
- Used to support the soffit plate on installations with wide frames.
- Clamps may be used with or without the spacer block, depending on frame conditions
- Not available in plated finishes
- For frames deeper than 4-5/8" (117mm), specify closer x 9500-DRK

Flush Partition Bracket





9500-FPB

- For use with Unitrol[®] arms where rabbeted or flush transom conditions prevent installation of the soffit plate assembly
- Bracket fastens to the overhead transom to provide a mounting surface for the soffit plate assembly
- Specify closer x 9500-FP

Angle Support Bracket



- Available separately for mounting Parallel Rigid and CloserPlus[®] arms heavy-duty arms on narrow frame or soffit conditions
- Specify closer x 9500-AB

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Flush Transom Bracket



9500-FTB

- Available separately for mounting Parallel Rigid and CloserPlus® arms rabbeted or flush transom conditions
- Not available in plated finishes





Spacer Size	Part Number
1/2"	9500-1/2SP
5/8"	9500-5/8SP

*Not for use with Unitrol arms

Power Adjustment Arm Bracket



- Standard on all closers without hold open, except heavy-duty and track type
- In regular arm or top jamb mounting, bracket may be reversed to increase closing power 15%

Specify finish when ordering parts.

9500 SERIES CAST IRON DOOR CLOSER

PARTS LIST

DOOR CLOSER BODY ASSEMBLIES

Part Number	Description	
9500LAP	Multi-Size Closer Body	

FASTENERS

Self drilling screws (for properly reinforced wood and metal doors) are supplied standard.

Sleeve nuts and bolts (SNB) are supplied standard with Parallel Rigid, CloserPlus[®] and Unitrol[®] arms and Slide Track (push and pull) closers. SNB's are optional for Tri-Style® packed closers (Regular, Top Jamb and Parallel arms). Torx[®] machine screws are optional for all 9500 series.

SCREW PACKS

SP9500	Standard screw package	
SP9500SN	Standard screw pack (includ sex nuts)	
SP9500SNB	Sex Nuts and Bolts (SNB) for 1-3/4" door	
95ASW	Main arm screw & washer	
SP9500COV	Cover screw pack	

TORX® SCREW PACKS

Arm Type	Part Number
Regular, Top Jamb & Parallel	TX95
Parallel Rigid, CloserPlus®	PRTX95
Regular Rigid Heavy-Duty	RTX95
Unitrol [®] Arm	UNITX95
Slide Track	TXTK95
70TK	Torx [®] tool kit

FINISHES

Norton Rixson offers waterborne acrylic, polyster powder coat and plated finishes. Custom finishes are available on special order. A sample and approval is required.

Waterborne acrylic and polyester powder coat will withstand 100 hours of salt spray (ANSI requires 25 hours).

Specify BHMA Designation	Description	Specify BHMA Designation	Description	Complements the following finishes
600 ¹	Prime Coat	689	Aluminum	628, 625, 629, 630, 651, 652
605 ²	Bright Brass	690	Statuary Bronze	640, 613
606 ²	Satin Brass	691	Dull Bronze	612, 637, 639
611 ²	Bright Bronze	693	Black	315
612 ²	Satin Bronze	694	Medium Amber	313
613E	Dark Oxidized Satin Bronze - Equivalent	696	Gold	605, 606, 632, 633
619 ²	Satin Nickel	BSP	Black Suede Powder	
625 ²	Bright Chrome	WSP	White Suede Powder	
626 ²	Satin Chrome			

1 600 is a special rust-inhibiting prime coat. Closers can be ordered prime coat only (specify closer x 600). An additional charge applies if finish coat is required over prime coat.

* Closer bodies and plastic covers are available in waterborne acrylic finishes. Arms and metal covers are available in powder coat or plated finishes.

2 Plated finish

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HOW TO ORDER

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

PR	9500	H
Prefixes	Defines closer series	Suffixes
 No Prefix 9500 series designates Tri-Style® packaging (regular arm, top jamb and parallel arm) 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 - 9500ST for push side mounting only. R - Rigid heavy-duty regular arm. (Torx® screws not included). CLP - CloserPlus® arm (parallel arm only). UNI - Unitrol® arm (parallel arm only - specify door width). Frame reveals 1-7/8" to 4-5/8" (48-117mm) standard. 		 None - Non-hold open arm function. H - Hold open arm function (specify hand when "PR" prefix is ordered). M - Metal cover. DA - Optional delayed action feature. ST - Slide track - single lever arm (auxiliary stop recommended). For push side - prefix PS. T - Thumbturn hold open on CloserPlus® (CLP).

NOTE:

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