

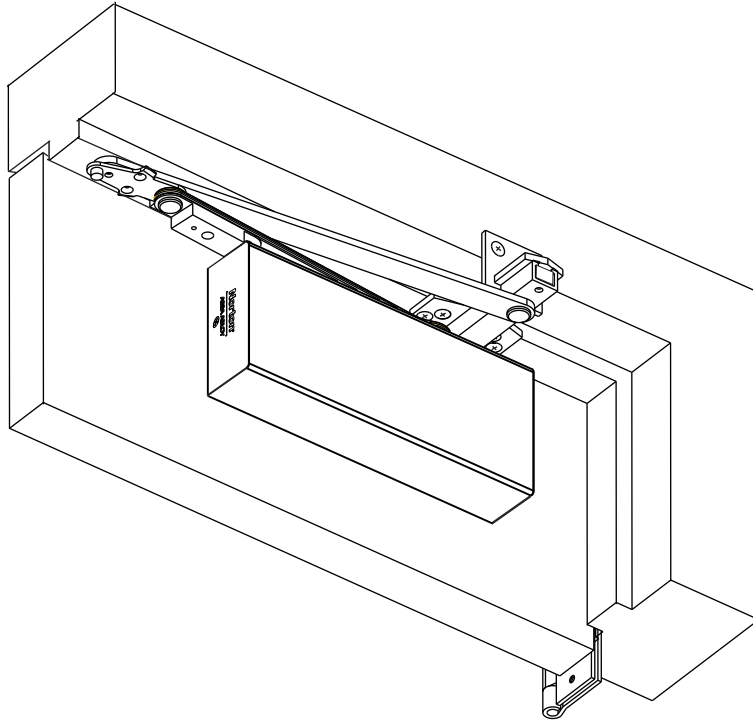


TRADEMARK  
HARDWARE

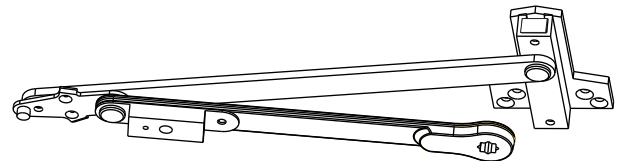


ASSA ABLOY

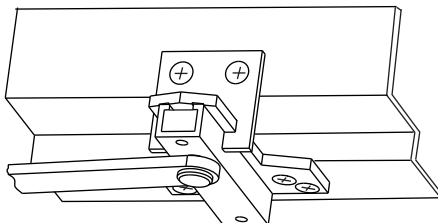
# 9510 Series Installation Instructions Multi-Sized 1 thru 6 With Unitrol® Arms



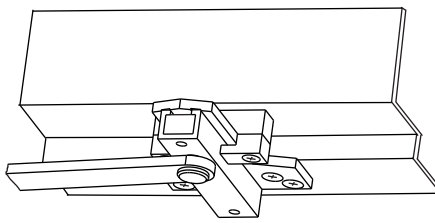
**Non-Hold Open Arm**



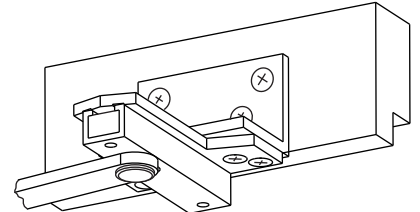
**Hold Open Arm**



**STANDARD APPLICATION  
WITH 9500-RB BRACKET**



**DEEP REVEAL APPLICATION WITH  
9500-DRK CLAMP KIT**



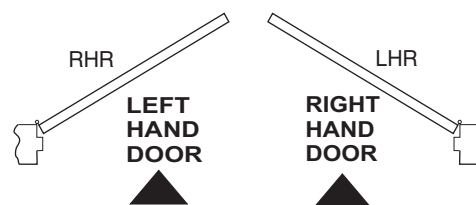
**FLUSH PARTITION APPLICATION WITH  
9500-FPB BRACKET**

## IMPORTANT:

- An improperly installed or incorrectly adjusted door closer may cause **property damage** or **personal injury**; and will void product warranty.
- To avoid personal injury, **DO NOT DISASSEMBLE THIS DOOR CLOSER BODY**.
- Door closers must be securely fastened to a properly reinforced door and frame with fasteners provided.
- Door closers with a HOLD OPEN ARM are not permitted to be installed in fire door assemblies.
- Door and frame must be specifically templated for 85°, 90°, 95°, 100°, 105° or 110° door swing.

Size of Door & Door Closer					
Type of Installation	Interior	Exterior In -swinging	Exterior Out -swinging	Recommended Closer Size	**Max. Opening Force lbs/f
Parallel Arm	2'4"	_____	_____	1	8
	2'6"	_____	_____	2	14
	3'0"	_____	2'6"	3	16
	3'6"	_____	3'0"	4	22
	4'0"	_____	*3'6"	5	24
	4'6"	_____	*4'0"	6	26

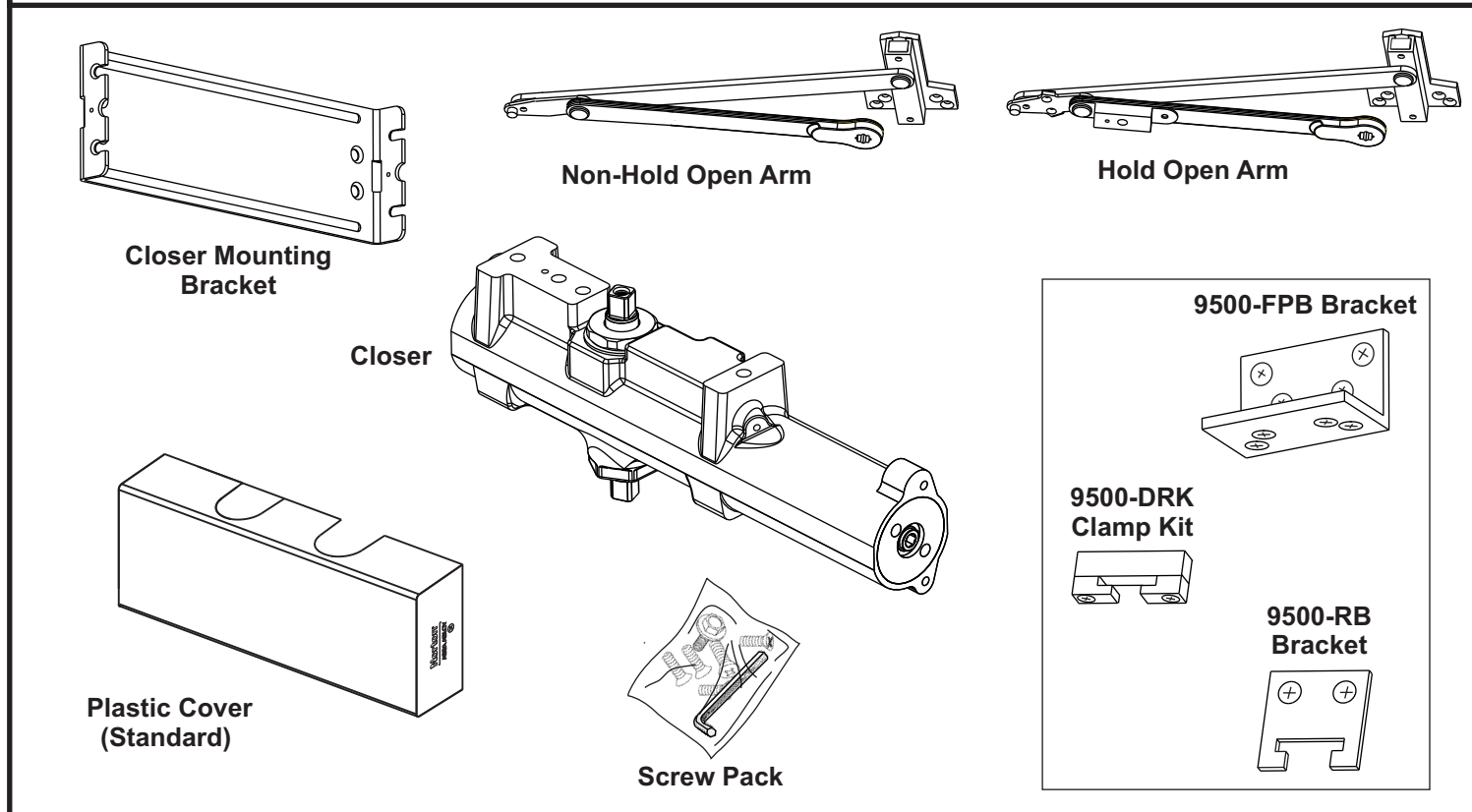
## TO DETERMINE HAND OF YOUR DOOR:



**\*\*NOTE:** These forces are for standard templating with bearing type hinges and do not account for pressure differentials and draft.

# Components:

**Figure 1**



Preparation for Fasteners		Figure 2	
	Fasteners	Door or Frame	Drill-Sizes
<b>Standard</b>	#12-14 Self-Drilling Screw	Aluminum or Metal	No drill required
		Wood (see Note)	3/16" (4.30 mm)
	1/4" - 20 machine screw	Metal	Drill: #7 (0.201" dia.) Tap: 1/4" - 20
<b>Optional</b>	Sleeve nuts and bolts 1-9/32" (33) = 1-3/8" (35) Door Thk. 1-21/32 (42) = 1-3/4" (44) & Over Dr. Thk.	Hollow Metal	9/32" (7 mm) through; 3/8" (9.5 mm) door face opposite to closer
		Aluminum or Wood	3/8" (9.5 mm) through
	Through-bolts and grommet-nuts	All	9/32" (7 mm); 3/8" (9.5 mm) dia. x 3/8" (9.5 mm) deep on door opposite to closer

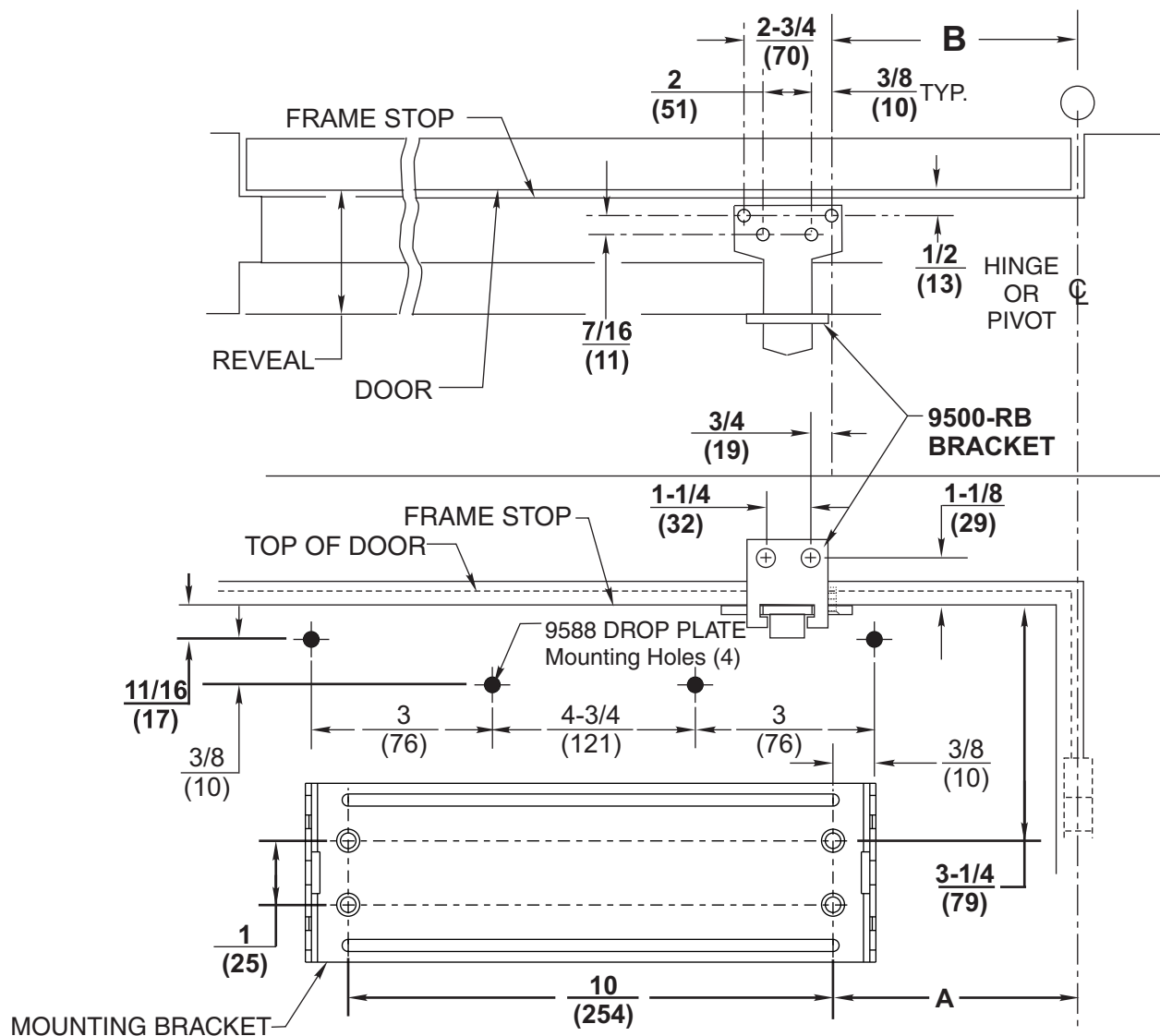
**Note:** Wood doors/frames: drill 1/8" (3.2) pilot hole when using Self-Drilling Screws.

Always consult door/frame manufacturer for fastener compatibility with the material of their door/frame.

- 
- It is recommended that the door, on which the door closer will be installed, be hung on ball bearing hinges. Door must swing freely.
  - A separate door stop, supplied by others, is recommended to prevent damage to the door closer, closer arm; or to the door, frame or adjacent walls.
  - Door and Frame must be properly reinforced, or use of special fasteners employed, to prevent the mounting screws from pulling out.
  - All dimensions are given in inches with corresponding metric dimensions (millimeters) in parentheses.
-

# Parallel Arm Template

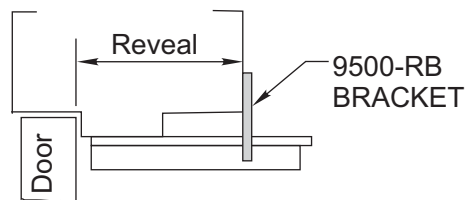
## Standard Application with 9500-RB Bracket Template



### NOTES:

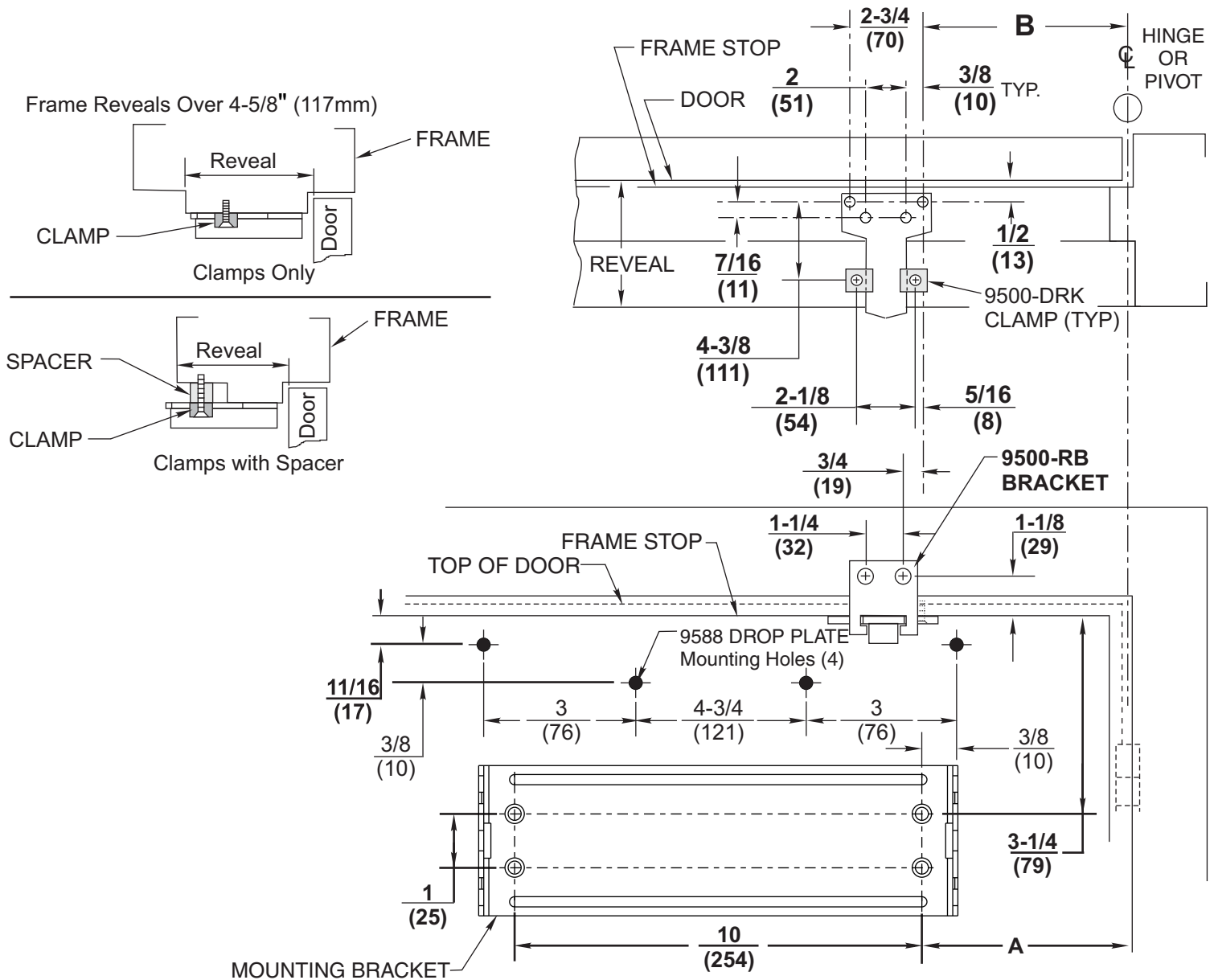
- Check hand of door, see page 2.
- Right Hand Application Shown. Left Hand Opposite.
- Dimensions given in inches (mm). Do Not Scale Drawing.
- Closer must be installed mounted level to ensure proper closer performance.

**Frame Reveals 1-7/8" to 4-5/8"**  
(48mm to 117mm)



# Parallel Arm Template

## Deep Reveal Frame Template Application With 9500-DRK Clamp Kit

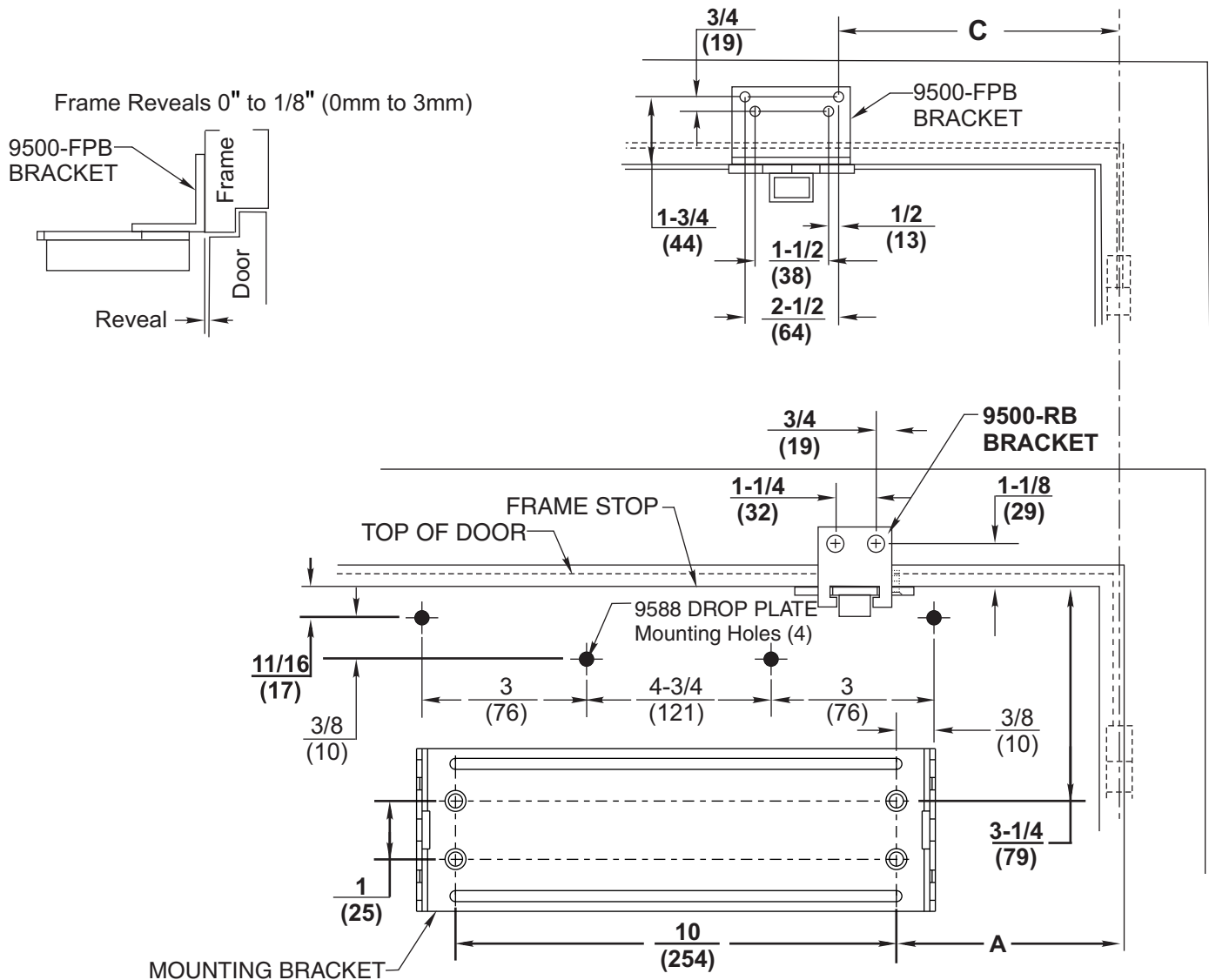


### NOTES:

- Check hand of door, see page 2.
- Right Hand Application Shown. Left Hand Opposite.
- Dimensions given in inches (mm). Do Not Scale Drawing.
- Closer must be installed mounted level to ensure proper closer performance.

# Parallel Arm Template

## Flush Partition Frame Template Application With 9500-FPB Bracket



### NOTES:

- Check hand of door, see page 2.
- Right Hand Application Shown. Left Hand Opposite.
- Dimensions given in inches (mm). Do Not Scale Drawing.
- Closer must be installed mounted level to ensure proper closer performance.

# Parallel Arm Installation Sequence

## NOTE:

- See chart to select degree of door opening and Door width for your door. Then, determine frame condition: STANDARD & DEEP REVEAL (use Dim's A & B) or FLUSH PARTITION (use Dim's A & C).
- MINIMUM TOP RAIL for Standard Application: 5" (127)
- MINIMUM TOP RAIL for Drop Plate Application: 2" (51)

\*Dimension "C" is only used for Flush Partition application (page 3).

Opening		DOORS 28" TO 32" 9100-11 NHO ARM 9100-1 HO ARM			DOORS 33" TO 41" 9100-13 NHO ARM 9100-3 HO ARM			DOORS 42" TO 48" 9100-14 NHO ARM 9100-4 HO ARM		
HOLD OPEN	DEAD STOP	Dim. A	Dim. B	*Dim. C	Dim. A	Dim. B	*Dim. C	Dim. A	Dim. B	*Dim. C
85°	90°	5-3/4 (146)	9-3/4 (248)	9-7/8 (251)	8-1/8 (206)	11-7/8 (302)	12 (305)	10-1/4 (260)	14-1/4 (362)	14-3/8 (365)
90°	95°	5-1/4 (133)	9-1/4 (235)	9-3/8 (238)	7-5/8 (194)	11-3/8 (289)	11-1/2 (292)	9-3/4 (248)	13-3/4 (349)	13-7/8 (352)
95°	100°	4-3/4 (121)	8-3/4 (222)	8-7/8 (225)	7-1/8 (181)	10-7/8 (276)	11 (279)	9-1/8 (232)	13-1/8 (333)	13-1/4 (337)
100°	105°	4-3/8 (111)	8-3/8 (213)	8-1/2 (216)	6-5/8 (168)	10-3/8 (264)	10-1/2 (267)	8-1/2 (216)	12-1/2 (318)	12-5/8 (346)
105°	110°	4 (102)	8 (203)	8-1/8 (206)	6-1/4 (159)	10 (254)	10-1/8 (257)	8 (203)	12 (305)	12-1/8 (308)
110°	115°	3-3/4 (95)	7-3/4 (197)	7-7/8 (200)	6 (152)	9-3/4 (248)	9-7/8 (251)	7-5/8 (194)	11-5/8 (295)	11-3/4 (298)

- Select angle of opening and use dimensions shown in template to locate 4 holes  $\oplus$  on door for Closer Mounting Bracket (or 4 holes  $\bullet$  for optional drop plate) and 4 holes on jamb for arm bracket (additional holes required for optional brackets).  
For applications that are different from above, a separate template will be supplied for door and frame preparation.

- Prepare door and frame for fasteners using "Preparation for Fasteners" chart, Figure 2, Page 4.

- Fasten Closer Mounting Bracket to door. Fasten optional drop plate to door, only if it is required for the door conditions.

- Install closer body with tube end **TOWARDS** hinge, with valves:

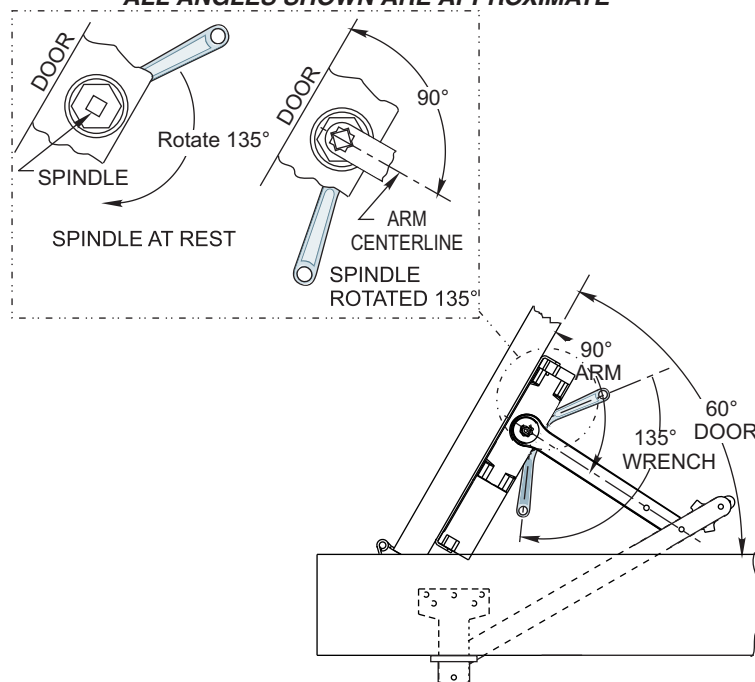
**DOWN** for **Left Hand** door

**UP** for **Right Hand** door

- Attach arm to door frame.
- Connect arm to closer. Using hex wrench provided, turn closing speed and latching speed valves clockwise until completely closed. DO NOT OVER TIGHTEN.

- Open door to approximately 60°. Using wrench on underside of spindle, rotate spindle approximately 135° toward hinge edge of door. Install arm on spindle at an approximate 90° angle to door. Reopen CLOSING SPEED VALVE. Install and tighten 5/16 Hex Head Arm Washer and Screw Assembly.

**LEFT HAND DOOR SHOWN BELOW**  
**ALL ANGLES SHOWN ARE APPROXIMATE**



- Make closer adjustments using information on page 9, then install closer cover.



## Unit Adjustment



### Spring Power Adjustment

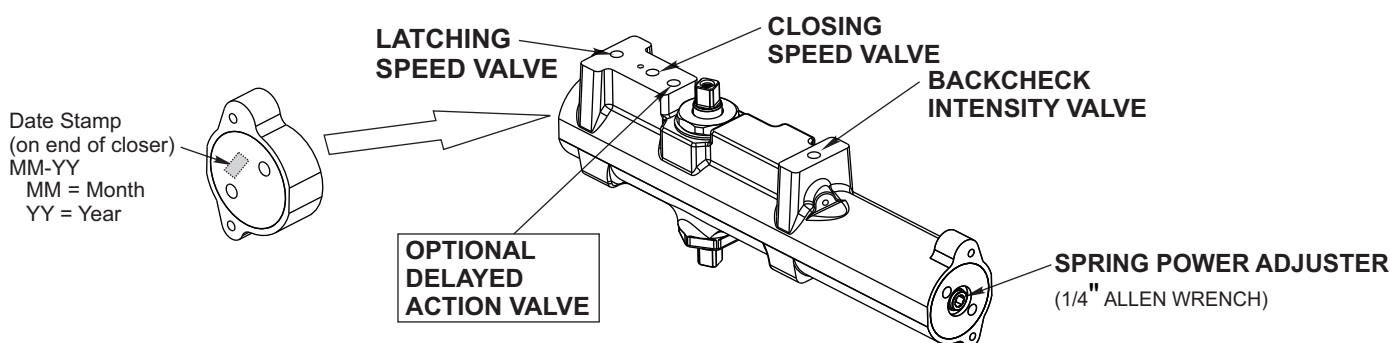
Locate spring power adjuster from illustration below

Size 1 thru 6 Adjustment See Chart

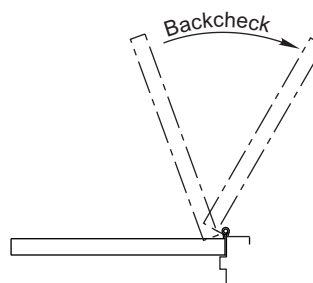
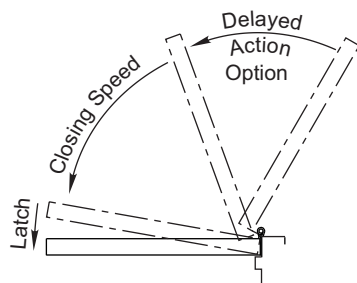
### SPRING POWER ADJUSTMENT CHART

- All 9500 closers are factory set at an approximate **Size 3**.
- Adjust closer as necessary for door size using this chart.
- Readjustment may be required to suit prevailing conditions.

Size of Door			Spring Power Adjustment No. Full Turns Clockwise	Equivalent Closer Size (Approx.)
Interior	Exterior In Swing	Exterior Out Swing		
2' 4" (712)	2' 6" (764)		2-7	3
2' 6" (764)	3' 0" (915)		7-11	4
3' 0" (915)	3' 6" (1067)	2' 6" (764)	11-15	5
3' 6" (1067)	4' 0" (1219)	3' 0" (915)	15-17	6



Date Stamp  
(on end of closer)  
MM-YY  
MM = Month  
YY = Year



### Closing Speed Valve (1/8 Allen Wrench Provided)

Factory preset for typical doors.

To adjust speed of door closing from fully open to a position 2" to 5" from closed, turn Closing Speed Valve **CLOCKWISE** to SLOW closing, **COUNTER-CLOCKWISE** to SPEED closing.

### Latching Speed Valve (1/8 Allen Wrench Provided)

Factory preset for typical doors.

After closing speed has been obtained, turn latching speed valve **CLOCKWISE** to SLOW latching or **COUNTER-CLOCKWISE** to SPEED latching for last 2" to 5" of door travel.

**NOTE:** Set combination of CLOSING and LATCHING speeds to between 3 and 7 seconds. Use of door by handicapped, elderly or small children may require even greater closing time.

### Delayed Action Valve (1/8 Allen Wrench Provided)

Factory preset for typical doors.

Turn valve **CLOCKWISE** to SLOW closing, **COUNTER-CLOCKWISE** to SPEED closing. Delayed action may be adjusted from 20 seconds to 90 seconds, depending on degree of door swing. Delay occurs at the beginning of the door closing cycle from fully open down to 70°, where the closing speed valve then begins its control.

### Backcheck Intensity Valve

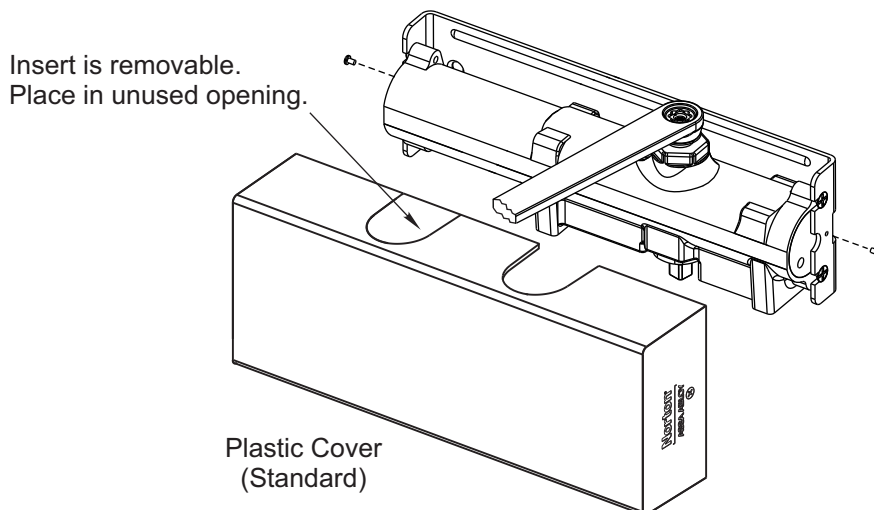
Factory preset for typical doors.

Turn valve **COUNTER-CLOCKWISE** to reduce backcheck or **CLOCKWISE** to increase backcheck. (Backcheck should be set to give a soft cushioning action, not a sudden stop.)

## Installing Cover



- Slip cover over closer.
- Hold tightly against Closer Mounting Bracket surface.
- Secure on each side with 6-32 x 1/4" screws.



## Hold Open Adjustments

