

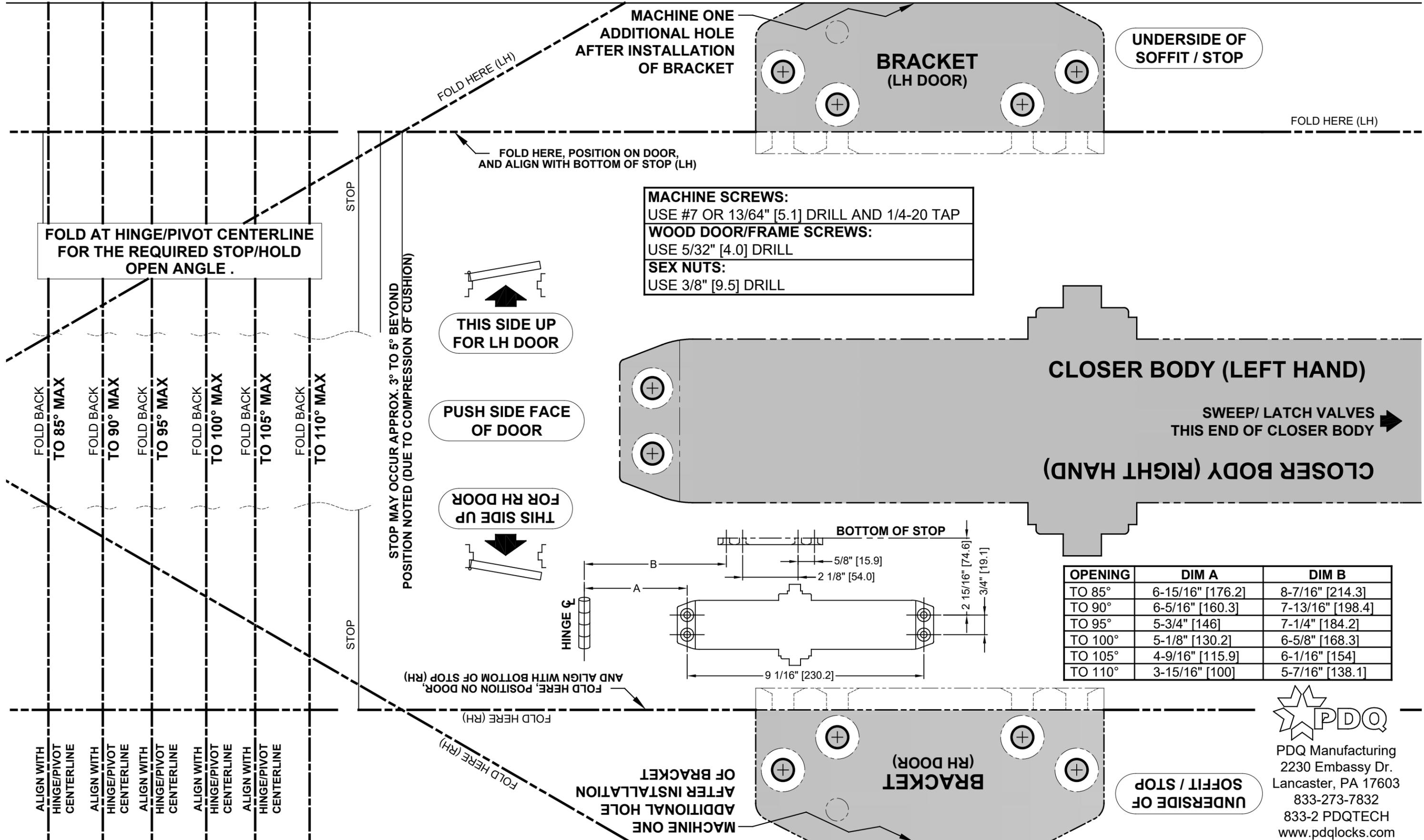
# 3100/3101 DOOR CLOSER INSTRUCTION SHEET

PARALLEL ARM INSTALLATION - PUSH SIDE - DS (NHO) AND DSHO (HO) APPLICATIONS - 110° MAX

INSTRUCTION: 319354

REV. 2

09-05-19



FOLD AT HINGE/PIVOT CENTERLINE FOR THE REQUIRED STOP/HOLD OPEN ANGLE .

FOLD BACK TO 85° MAX  
 FOLD BACK TO 90° MAX  
 FOLD BACK TO 95° MAX  
 FOLD BACK TO 100° MAX  
 FOLD BACK TO 105° MAX  
 FOLD BACK TO 110° MAX

ALIGN WITH HINGE/PIVOT CENTERLINE  
 ALIGN WITH HINGE/PIVOT CENTERLINE

MACHINE ONE ADDITIONAL HOLE AFTER INSTALLATION OF BRACKET

UNDERSIDE OF SOFFIT / STOP

**MACHINE SCREWS:**  
 USE #7 OR 13/64" [5.1] DRILL AND 1/4-20 TAP  
**WOOD DOOR/FRAME SCREWS:**  
 USE 5/32" [4.0] DRILL  
**SEX NUTS:**  
 USE 3/8" [9.5] DRILL

THIS SIDE UP FOR LH DOOR

PUSH SIDE FACE OF DOOR

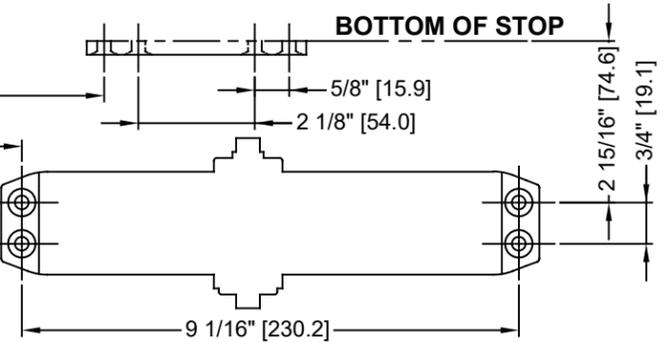
THIS SIDE UP FOR RH DOOR

CLOSER BODY (LEFT HAND)

SWEEP/ LATCH VALVES THIS END OF CLOSER BODY

CLOSER BODY (RIGHT HAND)

OPENING	DIM A	DIM B
TO 85°	6-15/16" [176.2]	8-7/16" [214.3]
TO 90°	6-5/16" [160.3]	7-13/16" [198.4]
TO 95°	5-3/4" [146]	7-1/4" [184.2]
TO 100°	5-1/8" [130.2]	6-5/8" [168.3]
TO 105°	4-9/16" [115.9]	6-1/16" [154]
TO 110°	3-15/16" [100]	5-7/16" [138.1]



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UNDERSIDE OF SOFFIT / STOP

MACHINE ONE ADDITIONAL HOLE AFTER INSTALLATION OF BRACKET

# 3100/3101 DOOR CLOSER INSTRUCTION SHEET

PARALLEL ARM INSTALLATION - PUSH SIDE - DS (NHO) AND DSHO (HO) APPLICATIONS - 110° MAX

INSTRUCTION: 319354

REV. 2

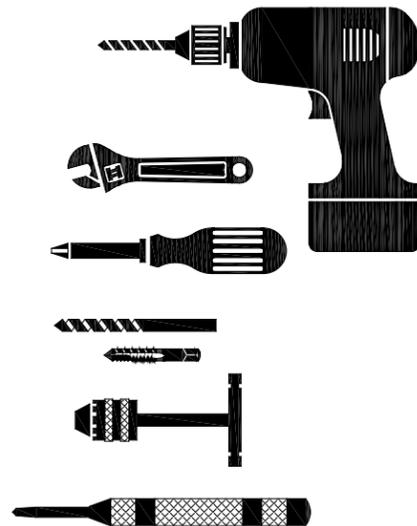
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- 1**
1. Confirm this sheet is correct for your product and application.
  2. Read the complete instruction sheet before starting installation.
  3. Incorrectly installed or adjusted door closers can cause personal injury or property damage.
  4. To ensure safe operation closers should be examined and serviced, regularly.

- 2**
1. See reverse side of this sheet to machine door & frame.
  2. Dimensions based on 4-1/2" x 4-1/2" full mortise butt hinges with 5/8" stop and 1/8" door gap.
  3. Confirm door & frame are properly reinforced.
  4. Sex nuts required for un-reinforced or composite fire doors.
  5. Do not install closer on the exterior (weather) side of building.

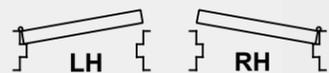
**3 TOOLS REQUIRED:**

1. Power drill
2. 14mm box/combo wrench
3. Phillips screw driver
4. #7 or 13/64" drill bit and 1/4-20 tap (machine screws)
5. Tap handle
6. 5/32" drill bit (wood screws)
7. 3/8" drill bit (sex nuts)
8. Center punch

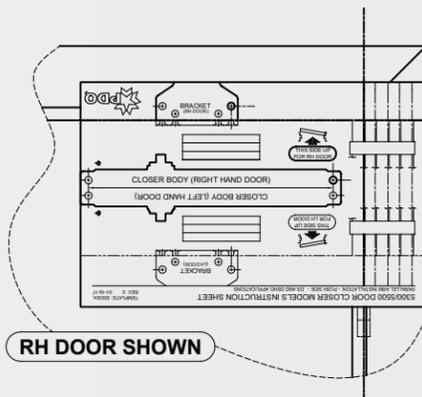


**4 PREPARE DOOR AND FRAME:**

1. Determine maximum opening angle.
2. Determine door hand (LH or RH).

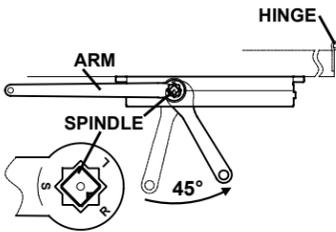
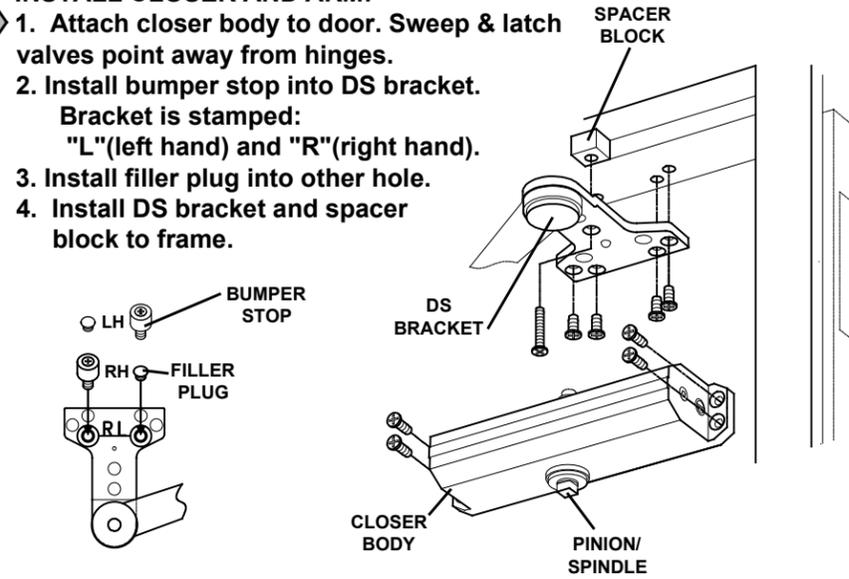


3. Align & attach full size template (see reverse side).
4. Mark door & frame with center punch.
5. Remove template before machining door & frame.



**5 INSTALL CLOSER AND ARM:**

1. Attach closer body to door. Sweep & latch valves point away from hinges.
2. Install bumper stop into DS bracket. Bracket is stamped: "L"(left hand) and "R"(right hand).
3. Install filler plug into other hole.
4. Install DS bracket and spacer block to frame.

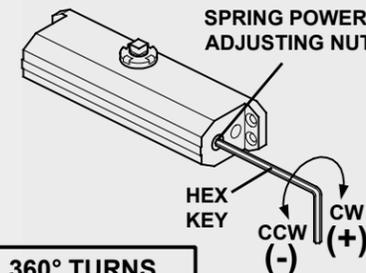


4. Close door & rotate closer spindle 45° toward hinge / pivot.
5. Install arm parallel to door face, pointing away from hinge.
6. Secure arm to closer spindle.

**6 ADJUST SPRING POWER:**

1. Use 4 mm hex key provided to adjust to size on chart. Clockwise (CW) turns increase spring power (+). Counter-clockwise (CCW) turns decrease spring power (-).

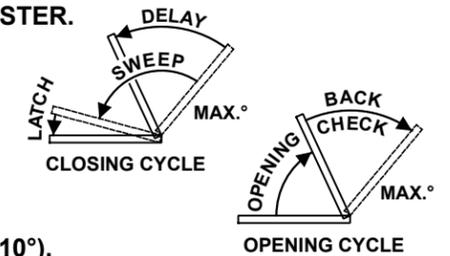
3101 Series closers can be adjusted to meet ADA Barrier Free (BF) applications. Compliance with ADA/BF requirements may result with door not fully closing and latching. Check with local AHJ. Closer size may vary due to site conditions.



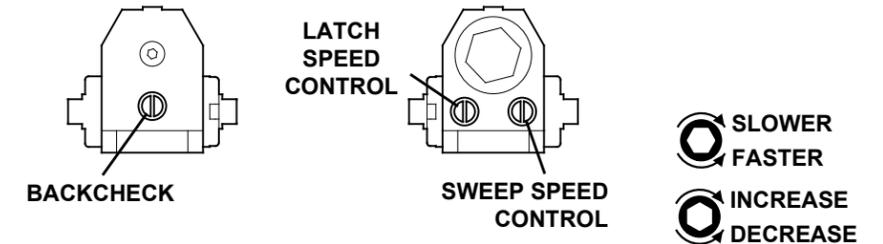
SIZE	DOOR WIDTH		APPROX. 360° TURNS	
	INTERIOR	EXTERIOR	3100	3101
BF	BF ON 36"	--	--	-16 (CCW)
1	28" [711.2]	--	--	-11 (CCW)
2	32" [812.8]	28" [711.2]	--	-6 (CCW)
3	36" [914.4]	32" [812.8]	0 (PRESET)	0 (PRESET)
4	42" [1066.8]	36" [914.4]	+5 (CW)	+5 (CW)
5	48" [1219.2]	42" [1066.8]	+9 (CW)	--
6	54" [1317.6]	48" [1219.2]	+12 (CW)	--

**7 CONTROL ADJUSTMENTS:**

- Closing time of 3-7 seconds is typical. More time may be needed for ADA/BF access. Clockwise (CW) = SLOWER. Counter-clockwise (CCW) = FASTER. DO NOT REMOVE VALVES

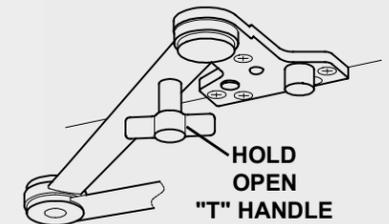


1. Use hex key provided.
2. Adjust SWEEP (closing max.° - 10°).
3. Adjust LATCH (closing 10° - 0°).
4. Adjust BACKCHECK resistance (opening 70° - max.°). DO NOT COMPLETELY CLOSE VALVE
5. Adjust (optional) DELAYED ACTION (closing max.° - 70°); Provides additional hesitation for access (ADA/BF) through door.



**8 OPTIONAL HOLD OPEN:**

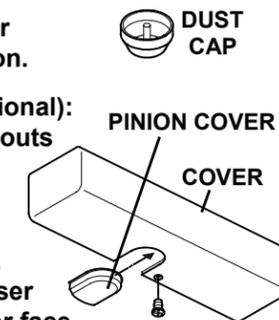
1. DSHO arm has an optional thumb turn "T" handle.
2. A 1/4 rotation of "T" engages or disengages hold open.
3. Door can also be manually pulled in and out of hold open without rotating the "T" handle.
4. Greasing detent ball is recommended to prevent wear.



**9 INSTALL DUST CAP:**

1. Press dust cap over bottom closer pinion.

- INSTALL COVER (Optional):
1. Orient cover so cutouts align with closer pinion.
  2. Slide pinion cover into bottom cutout.
  3. Slip cover over closer until flush with door face.
  4. Secure with screw provided.



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