

8900 DS, DST, SDS, SDST

Door saver and spring door saver arms
with thumb turn and key turn hold open

Installation instructions

08279201 – 09-2019

| EN |

dormakaba 

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1 Generalization

1.1 Intended use

- To control ingress and egress of door in a fluid fashion as to ensure the maximum lifespan of the door itself.

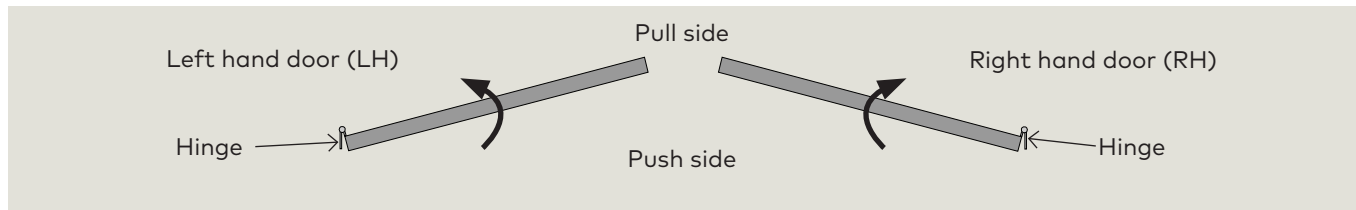
1.2 Technical specifications

- Door Saver Arms are always applied on the push side of the door.
- Minimum stop width 1-1/8" [28].
- Minimum door rail 5" [126] with a 5/8" [16] stop height.
- Minimum door width 24" [610] with a 5/8" [16] stop width.
- Maximum door opening. See dimension matrix template.

1.3 Maintenance, care, repair

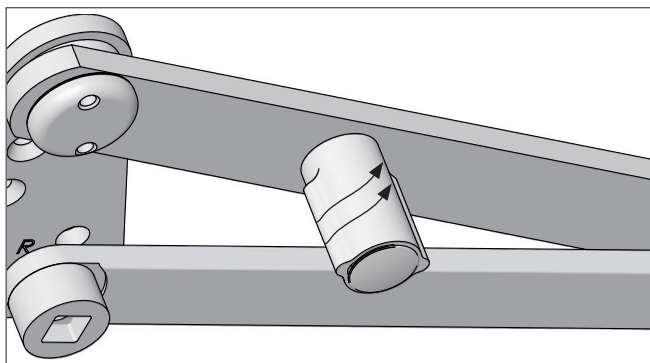
- Immediately replace damaged parts.
- Always use original dormakaba parts.
- High traffic door systems require inspection by properly qualified staff (specialized companies or installation firms.)

1.5 Handing of the door



1.6 Optional Thumb hold open Setting hold open DST/SDST

Fig. 1



1.4 Safety



CAUTION

Follow these instructions in addition to avoid damage of person, property and product.



WARNING

- Ensure the door operates efficiently prior to installation.
- Sex nuts are required for attachment of components to unreinforced doors and to wood or plastic faced composite type fire doors, unless an alternate method is identified in the individual door manufacturer's listings.

1.7 Spring power



NOTICE

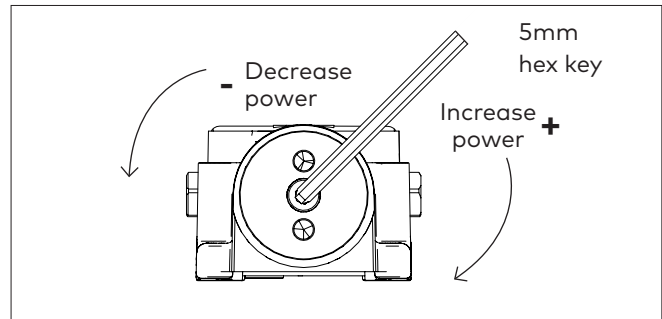
An 8916 is adjustable sizes 1 through 6. Built to size 4.



NOTICE

An 8956 is adjustable sizes 5 through 6 plus an additional 50%. Built to size 5.

Fig. 2 Spring power adjustment locations



1.7.1 Follow matrix to determine if an adjustment is necessary for your size door.

Table 1 Spring Power Matrix for Door Savers

Closer	Opening	2'-0" max	2'-6" max	3'-0" max	3'-6" max	4'-0" max	4'-6" max
8916	INTERIOR		Decrease -12x	Set	Increase +4x	Increase +12x	NA
	EXTERIOR	Decrease -12x	Set	Increase +4x	Increase +12x	NA	NA
8956	INTERIOR	NA	NA	NA	Decrease -6x	Set	Increase +6x
	EXTERIOR	NA	NA	NA	Set	Increase +6x	
FULL ROTATIONS							

1.8 Control functions



NOTICE

- Make any small adjustments to control valves after installation and verification of proper spring power.
- Use the 2.5mm hex key provided.
- Closers are factory pre-set to close between 3 and 6 seconds from 90° of opening.



CAUTION

- Valves are not to be adjusted as to expose the head (will cause a leak).
- Valves are not to be completely closed (not to be used as a dead stop).
- Only the back-check position valve is to be closed to properly locate the back-check range (opening speed control) at approximately 65° for parallel mounted applications.

Fig. 3 Control valve locations

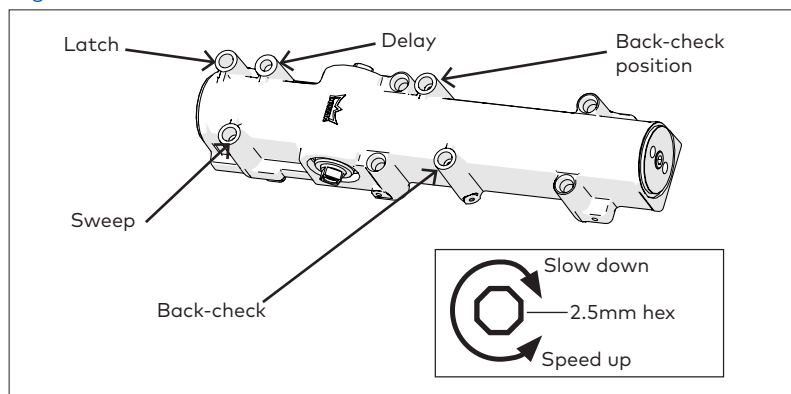
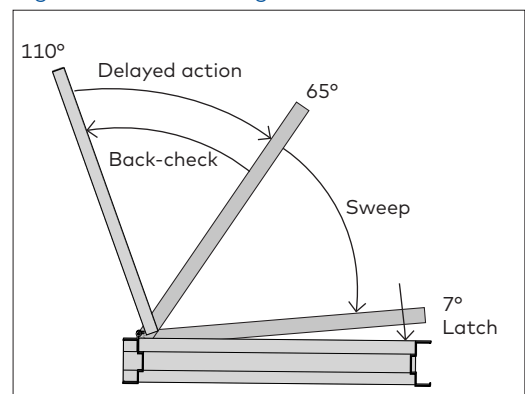


Fig. 3a Control ranges



2 DS/SDS/DST/SDST Template:



NOTICE

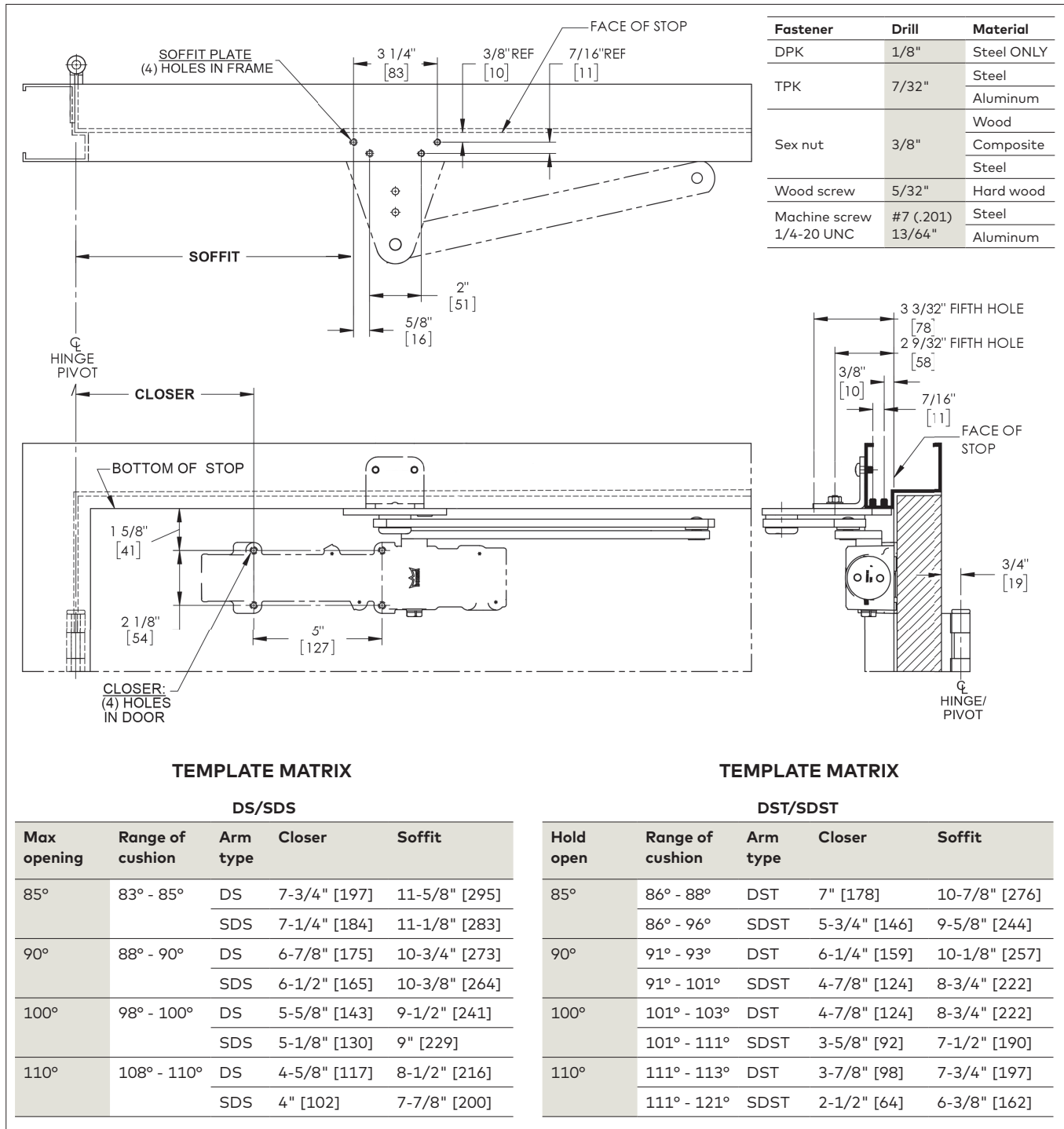
- Left hand door shown. All dimensions apply to right and left hand doors.
- Use full-size template as an accurate way to locate the fastening locations for both wood/metal, frame/door applications.



NOTICE

- Do not scale images.
- 4-1/2" x 4-1/2" [114 x 114] butt hinge or 3/4" [19] offset pivot
- 1-3/4" [44] thick metal/wood door
- Measure from center point of door pivot inches [mm].

Fig. 4 Template

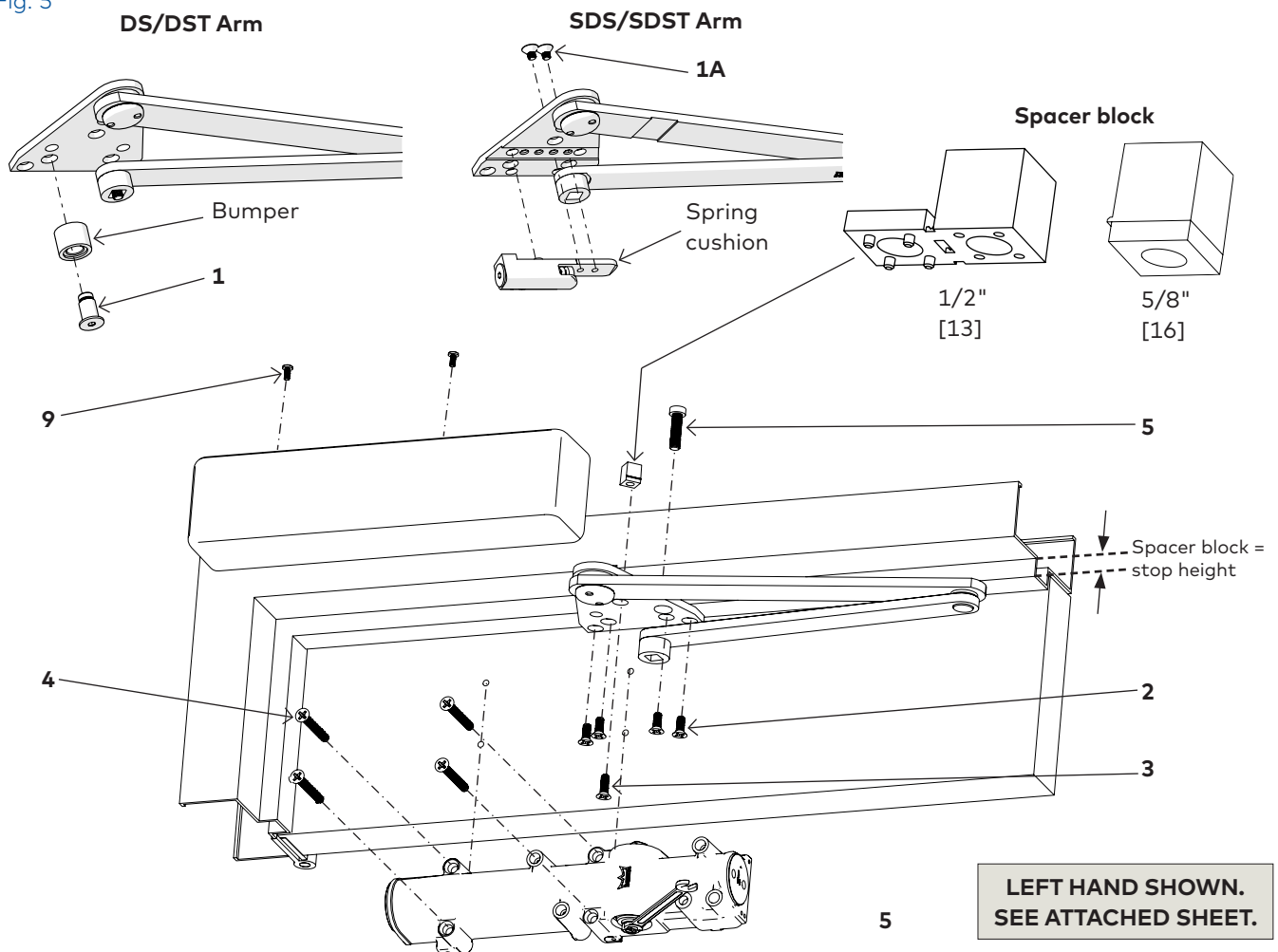


3 DS/SDS/DST/SDST Attachment

Sequence	Fastener	Quantity	Description	Tool
1	Shoulder bolt	1	Attach bumper to arm assembly; pay attention to handing.	5mm hex key
1A	Flat head	2	Attach spring cushion to arm assembly; pay attention to handing.	5/32" hex key
2	Flat head	4*	Fasten arm assembly securely to the frame.	#3 Phillips
3	Flat head	1*	Match spacer block to jamb stop height.	#3 Phillips
4	Flat head (longest)	4*	Fasten closer body securely to the door.	#3 Phillips
5	Socket head	1	Insert fastener in main arm counter bored hole. Place an adjustable wrench on exposed male square and rotate it towards hinge in order to insert the male square inside the square hole. Only then, open the door far enough to access fastener to tighten securely.	5mm hex key
6			Verify closer spring power and adjust if necessary. (Fig. 2) (Never use excessive force to make this connection!)	5mm hex key
7			Make any small control valve adjustments if necessary. (Fig. 3)	2.5mm hex key
8			Place 2.5mm hex wrench inside cover for future maintenance by using the plastic tab hook or masking tape for metal.	
9	Pan head	2	Secure closer controls by attaching full cover.	#1 Phillips

* MACHINE (1/4-20) AND WOOD SCREWS (14 GA) PROVIDED.

Fig. 5



4 Accessories: Plates

4.1 Back plate (BP89)

Plate	Mount	Condition
BP89	Parallel	avoid interference with a stops holder product or minimum door rail

4.2 Drop-plate (DP89)

Plate	Mount	Condition
DP89	Parallel	thin door rail/product conversion



NOTICE: Soffit hole location same without plate template.

Fig. 6

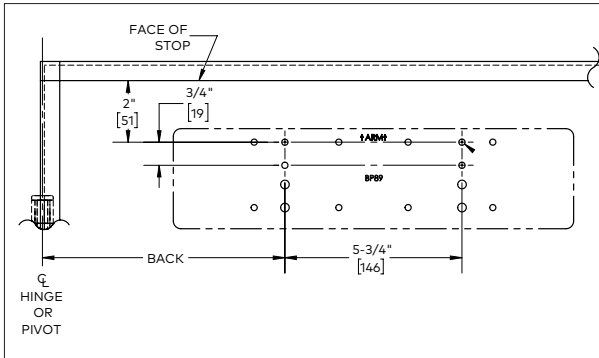


Fig. 8

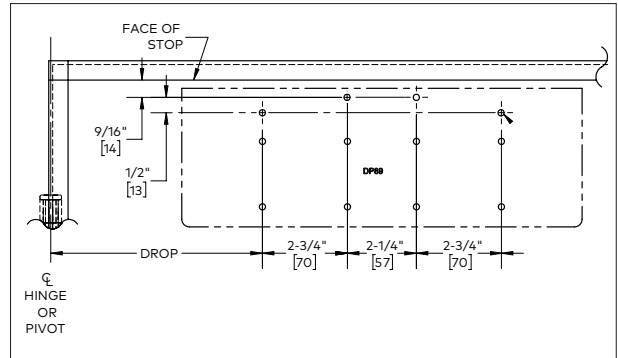


Plate Template Dimensional Chart: DS & SDS

Angle of cushion	Plate type	Plate
78° - 85°	DP	7-1/4" [184]
	BP	8-1/4" [210]
80° - 90°	DP	6-1/2" [165]
	BP	7-1/2" [191]
90° - 100°	DP	5-1/8" [130]
	BP	6-1/8" [156]
100° - 110°	DP	4" [102]
	BP	5" [127]

Plate Template Dimensional Chart: DST & SDST

Angle of cushion	Plate type	Plate
85°	DP	5-3/4" [146]
	BP	6-3/4" [171]
90°	DP	4-7/8" [124]
	BP	5-7/8" [149]
100°	DP	3-5/8" [92]
	BP	4-5/8" [117]
110°	DP	2-1/2" [64]
	BP	3-1/2" [89]

Fig. 7 Plate and closer attachment

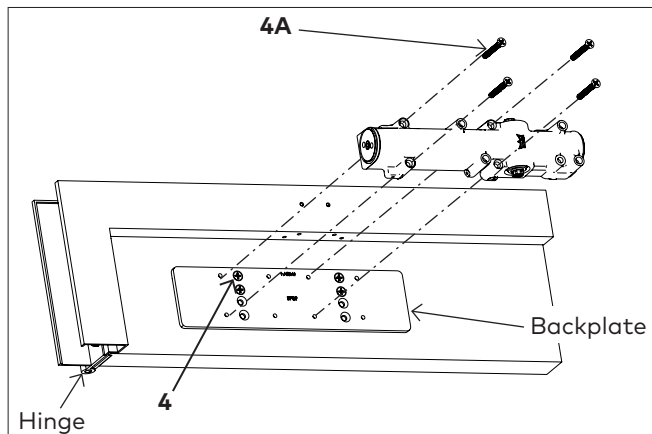
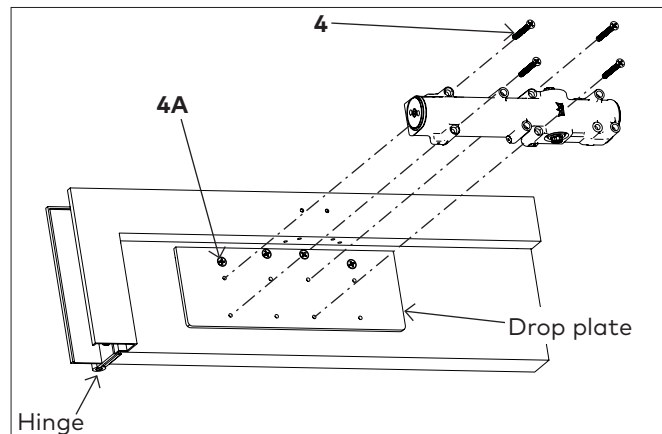


Fig. 9 Plate and closer attachment



Sequence	Quantity	Fastener	Description/Tool
4	4	Flat head	Secure plate to door. Use a #3 Phillips.
4A	4	Flat head	Secure closer to plate. Use a #3 Phillips.

5 Add'l accessories: Blade stop spacer & flush transom bracket

5.1 Blade stop spacer (BSHD)

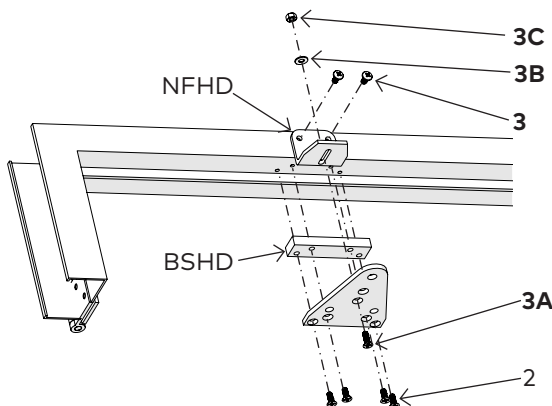
Fig. 8 For use with all Door Savers installed on cased frames with applied blade stops.

BSHD Dimention Matrix

Max opening	Range of cushion	Arm type	Back [inch]	Back [mm]
85°	75° - 85°	DS		
		SDS	8-1/4"	210
90°	80° - 90°	DS		
		SDS	7-1/2"	191
100°	90° - 100°	DS		
		SDS	6-1/8"	156
110°	100° - 110°	DS		
		SDS	5"	127
Hold open	Range of cushion	Arm type	Back [inch]	Back [mm]
85°	83° - 85°	DS	8-3/4"	222
		SDS		
90°	88° - 90°	DS	7-7/8"	200
		SDS		
100°	98° - 100°	DS	6-5/8"	168
		SDS		
110°	108° - 110°	DS	5-5/8"	143
		SDS		

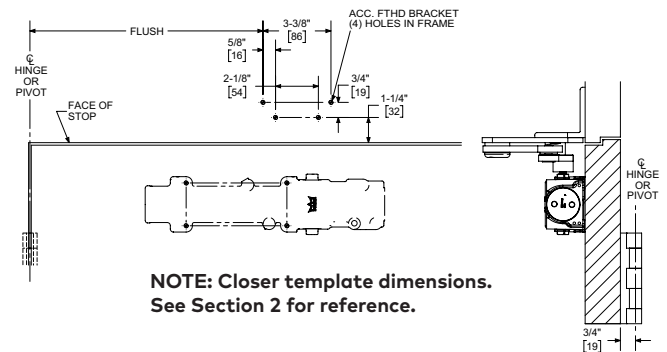
Sequence	Quantity	Fastener	Description/Tool
3	2	Pan head	Secure NFHD bracket. Use a #3 Phillips.
3B, 3C	1/1	Flat washer Hex nut	Reinforce arm soffit plate.
3A	1	Flat head	Use a #3 Phillips.

Fig. 9



5.2 Flush Transom (FTHD)

Fig. 10 For use with all Door Savers where flush transom conditions prohibit normal installation of arm soffit plate.



FTHD Dimention Matrix

Max opening	Range of cushion	Arm type	FTHD [inch]	FTHD [mm]
85°	83° - 85°	DS		
		SDS	7-3/4"	197
90°	88° - 90°	DS		
		SDS	6-7/8"	175
100°	98° - 100°	DS		
		SDS	5-3/4"	146
110°	108° - 110°	DS		
		SDS	4-5/8"	117

Sequence	Quantity	Fastener	Description/Tool
3D	4	Flat head	Secure FTHD bracket. Use a #3 Phillips.
2A	4	Flat head (shortest)	Secure soffit plate. Use a #3 Phillips.

Fig. 11

