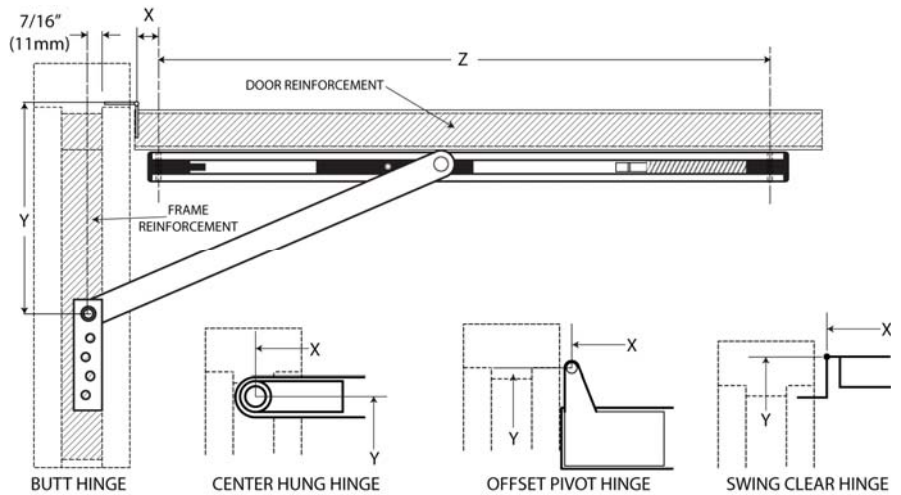


550 SERIES

SURFACE OVERHEAD HOLDER INSTALLATION TEMPLATE

1. The Cal-Royal Surface Overhead Holder should always be installed prior to installing door closers.
 - 1.1. Identify the type of mounting based on the hinge type to be used.

- 1.2. Depending on the hinge type and style, choose the mounting group from Table A. Continuous hinges are grouped with 4-1/2" Wide Butt or 4-1/2" swing clear hinge.



- 1.3. After determining the mounting group letter, overhead holder size and the degree of opening, calculate for "X" and "Y" dimensions using the figures in the following pages. Always add 9/16"(14mm) to the "X" dimension from the chart for DEAD STOP.

NOTES:

- A. Reinforcement plate for HOLLOW METAL DOORS should have a minimum thickness of 3/16"(5mm) by 2-1/2"(64mm) wide.
- B. Reinforcement plate for HOLLOW METAL FRAMES should have a minimum thickness of 3/16"(5mm) by 12"(305mm) long.
- C. For many fire door applications, STOP ONLY units are allowed with the exception of mechanical HOLD-OPEN devices that require MANUAL release.
- D. Templating on DEAD STOP (DS) can be used on HOLD-OPEN and STOP ONLY Models. The DS position is achieved when the shock spring is fully compressed.

TABLE A		
DOOR THICKNESS	HINGE TYPE & STYLE	MOUNTING GROUP
1-3/8" (35mm)	3" Wide Butt	D
	3-1/2" Butt	C
	3/4" Offset Pivot	C
	SOSS 216	D
1-3/4" (44mm)	4" Wide Butt	B
	4-1/2" Wide Butt	B
	5" Wide Butt	A
	3/4" Offset Pivot	B
	4" Swing clear	A
	4-1/2" Swing clear	A
	5" Swing clear	A
	SOSS 220	B
	Center hung pivot	E
2" (51mm)	4-1/2" Wide Butt	B
	5" Wide Butt	A
	3/4" Offset Pivot	A
	4-1/2" Swing clear	A
	5" Swing clear	A
	SOSS 220	B
	Center hung Pivot	E
2-1/4" (57mm)	4-1/2" Wide Butt	B
	5" Wide Butt	A
	4-1/2" Swing clear	A
	SOSS 220	A
	Center hung Pivot	E

SCREW DETAILS			
	QTY	WOOD	METAL
JAMB	4	#10 X 1-1/2" FPHSMS	10-32 X 1/2" FPHMS
DOOR	2	10-24 X 1-9/16" SEX BOLTS	10-24 X 1-9/16" SEX BOLTS
	2	10-24 X 1-1/2" PPHMS	10-24 X 1-1/2" PPHMS

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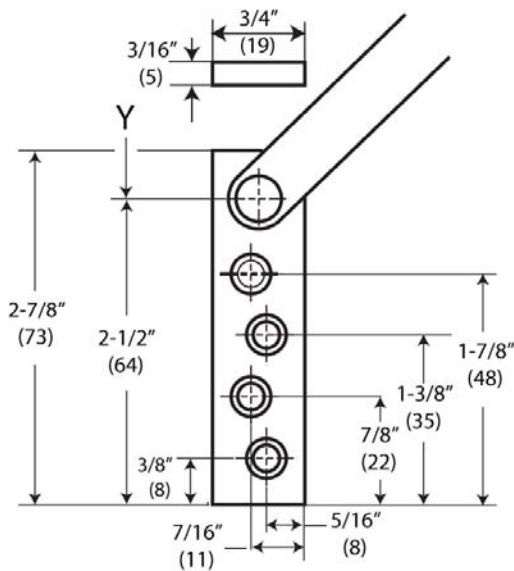
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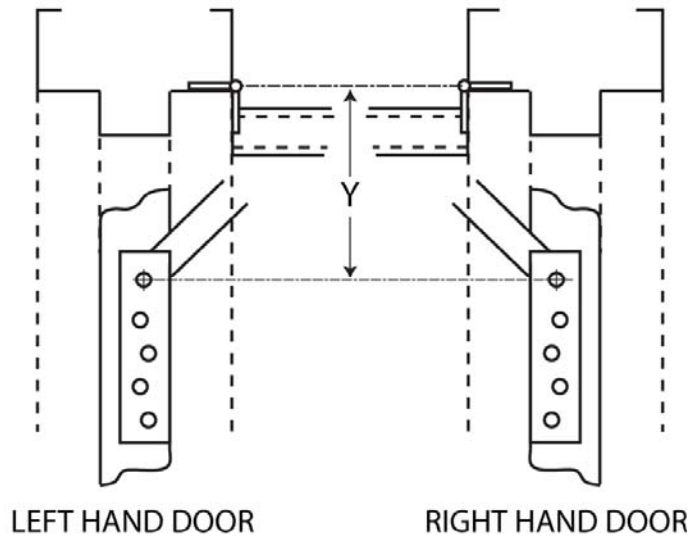
550 SERIES

SURFACE OVERHEAD HOLDER INSTALLATION TEMPLATE

- 1.4. Determine dimension "Y" on the frame. It is important to note that dimension "Y" is measured from the centerline of the hinge. (See figure 1 below)
- 1.5. Drill 1/8" pilot holes in 4 places for wood doors. Use a #21 drill and 10-32 tap in 4 places for metal frames. See figures 2 and 3 below for appropriate handing patterns



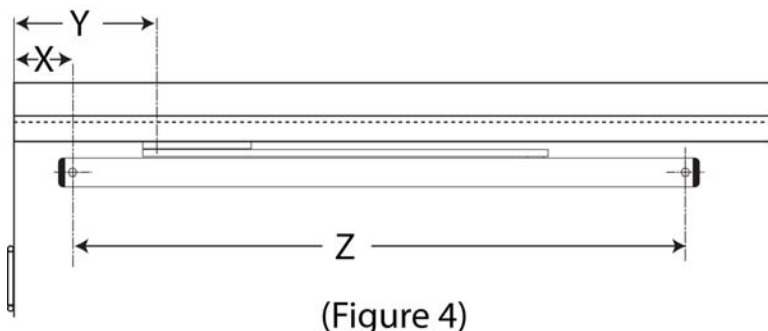
(Figure 1)



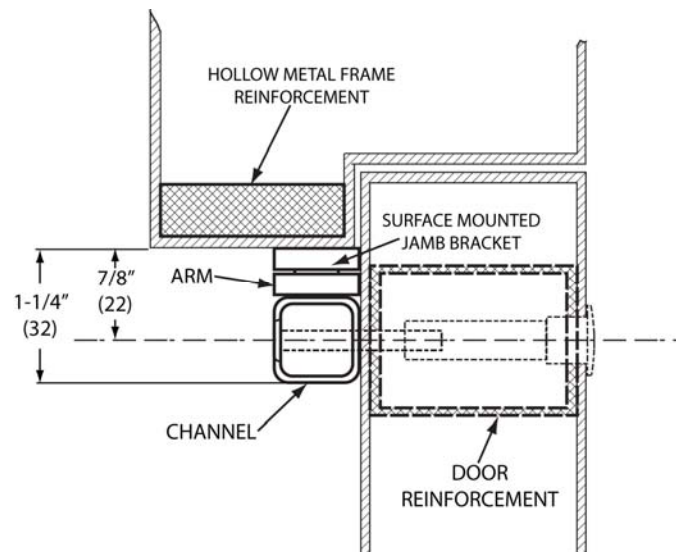
(Figure 2)

(Figure 3)

- 1.6. Determine dimensions "X" and "Z" on the door location. It is important to note that dimension "X" is measured from the centerline of the hinge. See figure 4 below.
- 1.7. Drill 1/4"(6mm) diameter through holes down 7/8"(22mm) down from stop in two places. Drill 13/32"(10mm) diameter hole, 1-5/8"(41mm) deep for sex bolt on the pull side of the door. Mounting holes should be prepared in the field.
- 1.8. Install the jamb bracket on the stop
- 1.9. Install the channel on the door with the shock spring towards the hinge edge of the door



(Figure 4)



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MOUNTING GROUPS A, B, C, D AND E 550 SERIES SURFACE OVERHEAD STOP AND HOLDER

**CAUTION: "X" AND "Y" DIMENSIONS ARE MEASURED FROM THE CENTERLINE OF PIVOT, NOT EDGE OF DOOR FOR DEAD STOP ADD 9/16" (14mm) TO THE "X" DIMENSION
L = ARM LENGTH FROM PIVOT CENTERLINE TO PIVOT CENTERLINE**

DIM.	DEGREE	85° HO		90° HO		95° HO		100° HO		105° HO		110° HO		Z	L
		X	Y	X	Y	X	Y	X	Y	X	Y	X	Y		
552S	23-1/16 - 27 *	2-15/16	4-15/16	2-9/16 *	4-9/16 *	-	-	-	-	-	-	-	-	16-3/8	10
	585 - 686	75	125	65	116	-	-	-	-	-	-	-	-	416	254
553S	27-1/16 - 33	6-7/8	6-1/16	6-7/16	5-11/16	6-1/8	5-5/16	5-13/16	5	-	-	-	-	17-5/8	14
	687 - 838	175	154	164	144	156	135	148	127	-	-	-	-	448	356
554S	33-1/16 - 39	10-3/4	7-5/8	10-1/4	7-3/16	9-13/16	6-3/4	9-7/16	6-3/8	9-1/8	6	8-13/16	5-13/16	19-3/8	18
	839 - 991	273	194	260	183	249	171	240	162	232	152	224	148	492	457
555S	39-1/16 - 45	14-5/16	9	13-3/4	8-7/16	13-1/4	8	12-7/8	7-1/2	12-1/2	7-1/8	12-3/16	6-13/16	20-7/8	21-3/4
	992 - 1143	364	229	349	214	337	203	327	191	318	181	310	173	530	552
552S	23-1/16 - 27	3-1/8	5-1/8	2-13/16 *	4-3/4 *	2-1/2 *	4-1/2 *	-	-	-	-	-	-	16-3/8	10
	585 - 686	79	130	71	121	64	114	-	-	-	-	-	-	416	254
553S	27-1/16 - 33	7-1/16	6-5/16	6-11/16	5-13/16	6-5/16	5-1/2	6	5-3/16	5-3/4	4-15/16	-	-	17-5/8	14
	687 - 838	179	160	170	148	160	140	152	132	146	125	-	-	448	356
554S	33-1/16 - 39	10-7/8	7-7/8	10-7/16	7-3/8	10	6-15/16	9-5/8	6-9/16	9-5/16	6-3/16	9-1/16	5-15/16	19-3/8	18
	839 - 991	276	200	265	187	254	176	244	167	237	157	230	151	492	457
555S	39-1/16 - 45	14-9/16	9-3/16	13-15/16	8-11/16	13-1/2	8-1/16	13	7-11/16	12-11/16	7-5/16	12-5/16	7-1/16	20-7/8	21-3/4
	992 - 1143	370	233	354	221	343	205	330	195	322	186	313	179	530	552
552S	23-1/16 - 27	3-5/16	5-5/16	3	5	2-3/4	4-3/4	2-1/2	4-1/2	2-1/4	4-1/4	-	-	16-3/8	10
	585 - 686	84	135	76	127	70	121	64	114	57	108	-	-	416	254
553S	27-1/16 - 33	7-1/4	6-1/2	6-7/8	6-1/8	6-1/2	5-3/4	6-1/4	5-7/16	6	5-3/16	5-3/4	5	17-5/8	14
	687 - 838	184	165	175	156	165	146	159	138	152	132	146	127	448	356
554S	33-1/16 - 39	11-1/8	8-1/16	10-5/8	7-9/16	10-3/16	7-1/8	9-13/16	6-13/16	9-1/2	6-7/16	9-1/4	6-1/8	19-3/8	18
	839 - 991	283	205	270	192	259	181	249	173	241	164	235	156	492	457
555S	39-1/16 - 45	14-3/4	9-1/2	14-1/8	8-13/16	13-5/8	8-5/16	13-3/16	7-15/16	12-7/8	7-1/2	12-1/2	7-1/4	20-7/8	21-3/4
	992 - 1143	375	241	359	224	346	211	335	202	327	191	318	184	530	552
552S	23-1/16 - 27	3-1/2	5-1/2	3-3/16	5-1/8	2-7/8	4-7/8	2-11/16	4-5/8	2-7/16	4-7/16	2-1/4	4-1/4	16-3/8	10
	585 - 686	89	140	81	130	73	124	68	117	62	113	57	108	416	254
553S	27-1/16 - 33	7-7/16	6-11/16	7	6-1/4	6-11/16	5-15/16	6-3/8	5-9/16	6-1/8	5-5/16	5-7/8	5-1/8	17-5/8	14
	687 - 838	189	170	178	159	170	151	162	141	156	135	149	130	448	356
554S	33-1/16 - 39	11-1/4	8-1/4	10-3/4	7-3/4	10-5/16	7-1/4	9-15/16	6-15/16	9-5/8	6-5/8	9-5/16	6-5/16	19-3/8	18
	839 - 991	286	210	273	197	262	184	252	176	244	168	237	160	492	457
555S	39-1/16 - 45	14-7/8	9-9/16	14-1/4	9	13-3/4	8-1/2	13-5/16	8	13	7-5/8	12-5/8	7-5/16	20-7/8	21-3/4
	992 - 1143	378	243	362	229	349	216	338	203	330	194	321	186	530	552
552S	27-1/16 - 33	3-3/4	5-3/4	3-1/2	5-1/2	3-1/4	5-1/4	3	5	2-3/4	4-3/4	2-5/8	4-5/8	16-3/8	10
	688 - 838	95	146	89	140	83	133	76	127	70	121	67	117	416	254
553S	33-1/16 - 39	7-3/4	7	7-3/8	6-5/8	7	6-1/4	6-11/16	5-15/16	6-7/16	5-11/16	6-3/16	5-7/16	17-5/8	14
	839 - 991	197	178	187	168	178	159	170	151	164	144	157	138	448	356
554S	39-1/16 - 45	11-9/16	8-9/16	11	8	10-5/8	7-5/8	10-1/4	7-1/4	9-15/16	6-15/16	9-5/8	6-5/8	19-3/8	18
	992 - 1143	294	217	279	203	270	194	260	184	252	176	244	168	492	457
555S	45-1/16 - 51	15-1/4	10	14-5/8	9-3/8	14-1/8	8-7/8	13-5/8	8-3/8	13-1/4	8	12-7/8	7-5/8	20-7/8	21-3/4
	1144 - 1295	387	254	371	238	359	225	346	213	337	203	327	194	530	552

* "X" AND "Y" DIMENSION CHANGES FOR MOUNTING GROUP "E"

* - NOT TO BE USED WITH SWINGCLEAR HINGES