

Detex Corporation, 302 Detex Drive, New Braunfels, Texas 78130-3045 (830)629-2900 / 1-800-729-3839 / Fax 1-800-653-3839 / Text: 1-830-481-6433 / INTERNET: www.detex.com

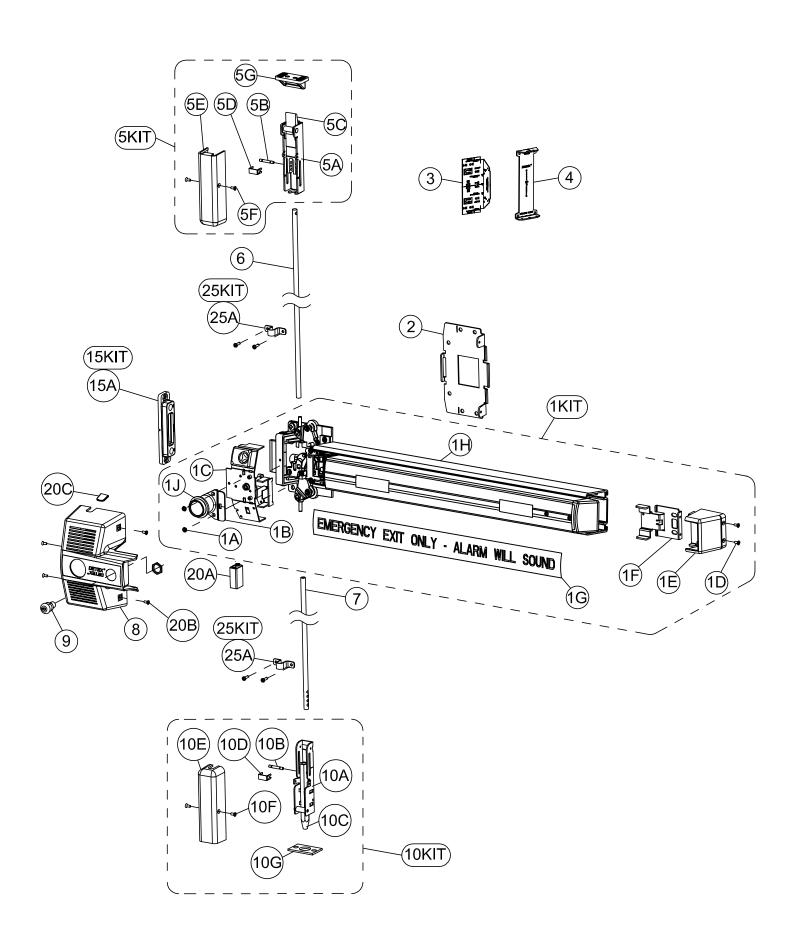
#### INSTALLATION INSTRUCTIONS FOR ECL-230X & H-ECL-230X HURRICANE DEVICES

Drawing: 103600

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For device installation videos, scan code below or go to detex.com





Your particular part or configuration may not be shown: contact Detex technical support at 1-800-729-3839 (option 2).

PARTS BREAKDOWN					
Item	Order Part #	Description			
	105431-1	S&R ECL-230X core assy, STD			
	105431-2	S&R ECL-230X core assy, TDB, TD		/:l	
1KIT	105431-3	S&R ECL-230X core assy, H (includes items			
	105431-4	1-4 S&R ECL-230X core assy, TDB, H			
	105431-5	S&R ECL-230X , core assy, 30" SINGLE		,	
	105431-6	S&R ECL-230X , core assy, 30" TDB			
1A	103699-104	Screw 8-32 x 1/4 cone			
1B	103629	IKC cylinder housing			
1C	103650-1	Siren bracket assy			
10	103650-2	Siren bracket assy, weatherized			
10	PP-5377-106	Screw 8-32 x 3/8 FH			
1D	101950-505	Screw 8-32 x 5/16 FH, weatherized			
1E	103641-1	Endcap cover			
1F	103625	Endcap bracket			
1G	103647-1	Pushpad sign, 230X, english, red, std			
16	103647-13	Pushpad sign, 230X, english, red, 30"			
	105432-1	S&R, ECL-230X Internal Pushpad Assy, STD			
1H	105432-2	S&R, ECL-230X Internal Pushpad Assy, TDB/TD			
'''	105432-3	S&R, ECL-230X Internal Pushpad Assy, H			
	105432-4	S&R, ECL-230X Internal Pushpad Assy, TDB, H			
1J	103629	IKC Cylinder Housing			
2	103632	Back-plate			
3	103643	Lockbody main template			
4	103687	Top & Bottom latch template			
5KIT	103693-1	Top bolt assy, standard	(inclu	des items	
JKIT	103693-2	Top bolt assy, weatherized	5	A-5G)	
5A	103691	Top bolt bracket			
5B	103533	Bolt pin			
5C	103639	Top bolt			
5D	103551	Bolt clip			
5E	103652-1	Top/bottom cover			
5F	100156-104	Screw 8-32 x 1/4 FH			
	101950-505	Screw 8-32 x 5/16 FH, weatherized			
5G	103634	Top strike			

	PARTS BREAKDOWN			
Item	Order Part #	Description		
	103674	Top rod (84")		
6	103073-2	Top rod assy (96")		
	103073-3	Top rod assy (120")		
7	103544	Bottom rod		
	105435-1	Cover assy, TDB/TD		
	105435-2	Cover assy, Single point		
8	105435-3	Cover assy, TDB/TD, Weather		
	105435-4	Cover assy, Single point, Weather	•	
	105435-5	Cover assy, TDB/TD, Hurricane		
	105435-6	Cover assy, Single point, Hurrican	е	
9	PP-5572	Cover lock (optional)		
10KIT	103692-1	Bottom bolt assy (includes ite		
10KIT	103692-2	Bottom bolt assy, weatherized 10A-10G)		
10A	103555	Bottom bolt bracket subassy	•	
10B	103533	Bolt pin		
10C	103536-1	Bottom bolt		
10D	103551	Bolt clip		
10E	103652-1	Top/bottom cover		
10F	100156-104	Screw 8-32 x 1/4 FH		
105	101950-505	Screw 8-32 x 5/16 FH, weatherize	d	
10G	103546	Bottom strike plate		
4 C   Z   T	103660-1	Strike kit, standard	(includes item 15A)	
15KIT	103660-2	Strike kit, high strength	(includes item 15A)	
15A	103614	Strike		
20KIT	103640-X	Hardware kit (not shown) (includes items 20A-20C)		
20A	PP-5567	9V Battery		
20B	PP-5377-106	Screw, mach, 8-32 x 3/8" PFH		
20C	103645	Rod cover cap		
	104073-1	Rod guide kit one (not shown)		
25KIT	104073-2	Rod guide kit two (not shown)		
	104073-3	Rod guide kit three (not shown)		
25A	103534	Rod guide		

# Hardware Table for BASIC device mounting. Additional hardware is provided per the device configuration in kit form and is addressed on the appropriate pages as required

Machine Screws	Fastener Part No	Drill Bit coccess	
	P/N: 100980 1/4-20 x 1" PPH	#7 or 13/64"	
	P/N: 100954 1/4-20 x 1-1/2" PPH	#7 or 13/64"	
	P/N: PP-5377-106 <b>OR</b> P/N: 101950-505 8-32 x 3/8" PFH <b>OR</b> 8-32 x 5/16" PFH		
Self-drilling Screws / V	Self-drilling Screws / Wood Screws		
	P/N: 103276-63 #14 x 1" PPH	1/8 pilot hole recommended for self-drilling screws	
	P/N: 103276-65 #14 x 1-1/2" PPH	1/8 pilot hole recommended for self-drilling screws	
	P/N: 103993-1 #14 x 1-1/4" SMS PPH		

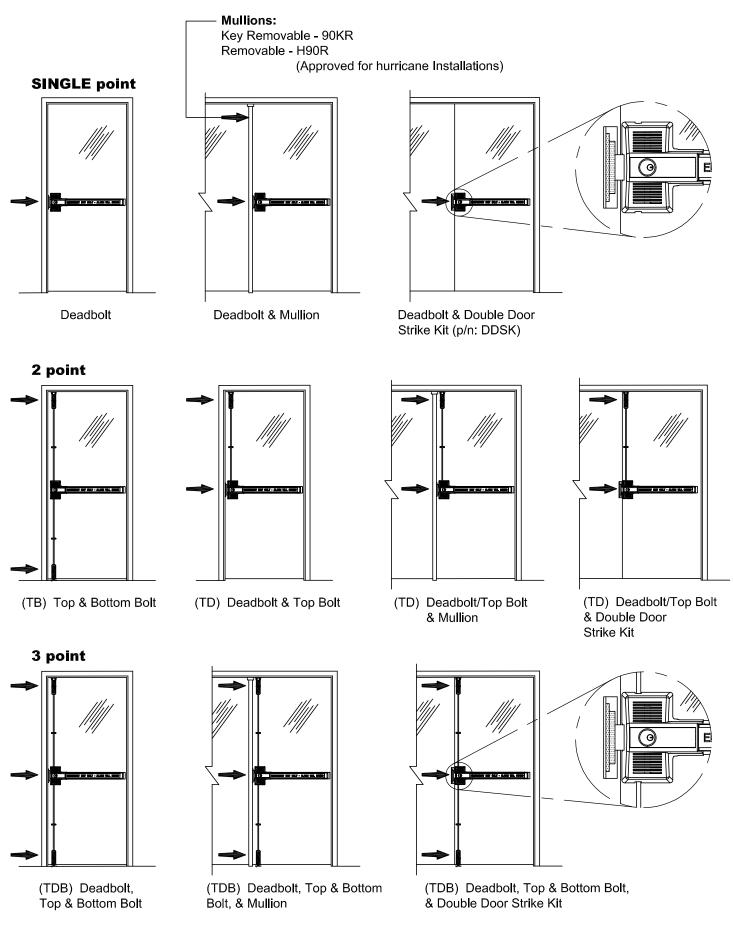
Socket Head Cap Screws (High strength bolts for TDB configurations)
Recommend using socket head cap screws with sex nuts.

**HURRICANE:** Sex nuts and socket head cap screws MUST be used with HURRICANE devices.

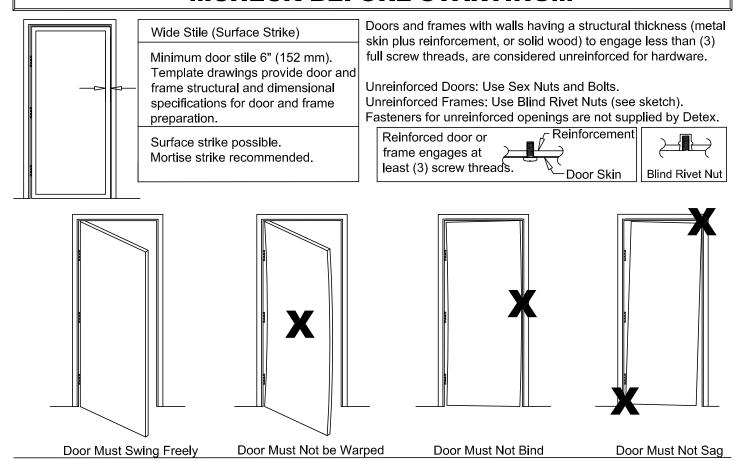
	P/N: 105773-7 1/4-20 x 1" 3/16 So	ocket HD	#7 or 13/64" for threaded hole or 9/32" for use with sex bolts
	P/N: 105773-9 1/4-20 x 1-1/2" 3/16 Socket HD		#7 or 13/64" for threaded hole or 9/32" for use with sex bolts
	Part No: 105209 (6 ea per kit)    (1/4-20 x 1-3/4")		1/2 Exterior door face (With Trim)
			3/8 Exterior door face (Without Trim)
	Catalog No: SN1-630 (2 ea per kit)		1/2 Exterior door face (With Trim)
			3/8 Exterior door face (Without Trim)
<del>20</del> 2	P/N: PP-5067-25 #14 Lockwasher		
	P/N: PP-5066-12 #12 Lockwasher		

#### **Tools Required:**

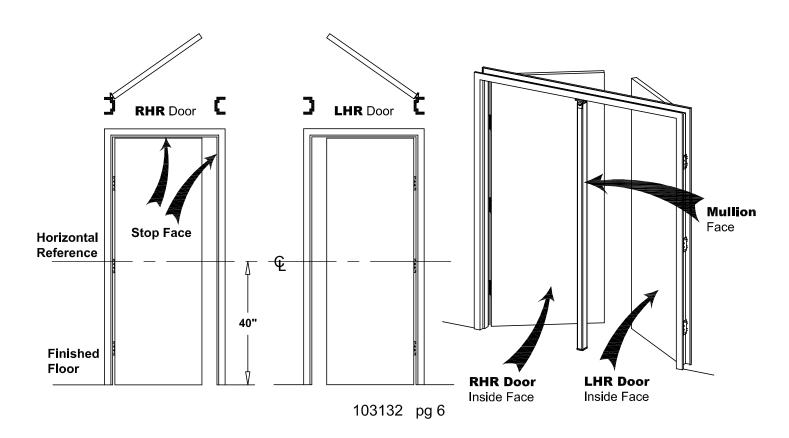
Power Drill Level Combination Square Safety Glasses Pencil Tape Measure Center Punch 3 /16" & 5 /32" Allen Wrenches #2 and #3 Phillips Screw Drivers



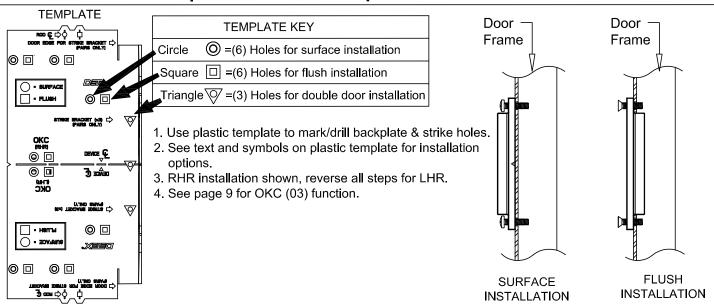
## **!!!CHECK BEFORE STARTING!!!**

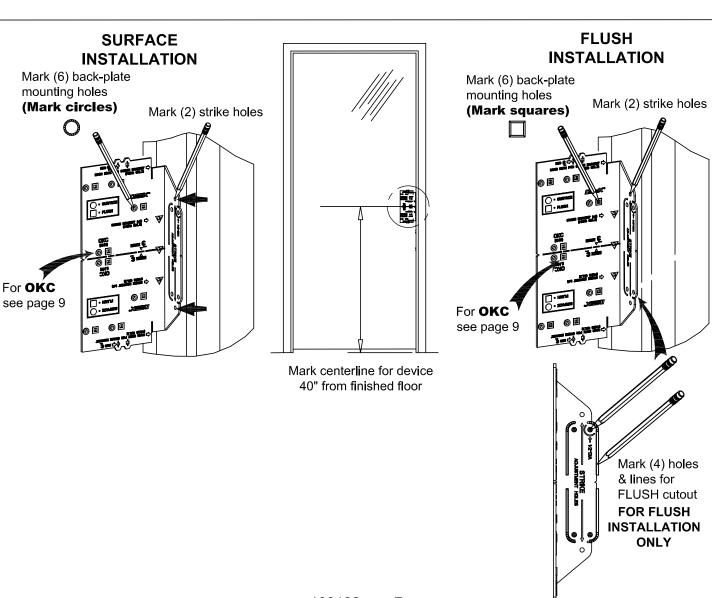


NO MODIFICATION OF ANY KIND, OTHER THAN THOSE DESCRIBED IN THESE INSTRUCTIONS ARE PERMITTED.



## **STEP 1:** Use template to locate backplate and strike





## **STEP 2:** Drill backplate and strike holes

# SURFACE & FLUSH INSTALLATIONS

#### **BACK-PLATE HOLES**

6 places for 1/4-20 machine screws (#7 or 13/64")

#### OR

#14 self-drilling screws (1/8 pilot hole)

#### OR

1/4-20 machine screws used with sex bolts (9/32")

NOTE: Sex nuts & socket head cap screws MUST be used with HURRICANE devices.

See OUTSIDE KEY CONTROL (page 9) for transferring hole locations from DEVICE side to TRIM side.

#### OR

See OUTSIDE KEY CONTROL INSTALLATION for TRIM option

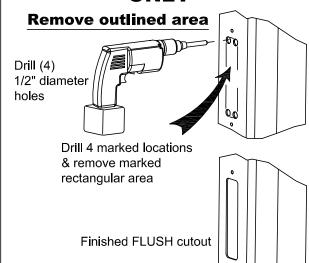
#### **STRIKE HOLES**

2 places for 1/4-20 machine screws (#7 or 13/64")

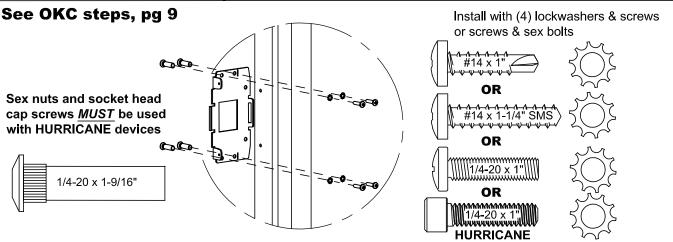
#### OR

#14 self-drilling screws (1/8 pilot hole)

## FOR FLUSH INSTALLATION ONLY



## STEP 3: Install back-plate

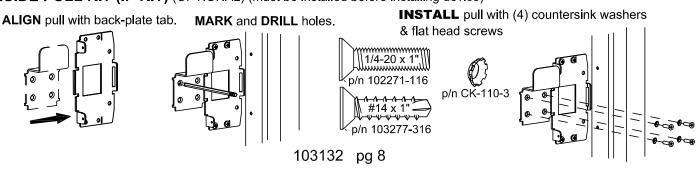


## **STOP:** IF PULL OR TRIM NOT ORDERED, CONTINUE ON TO STEP 4.

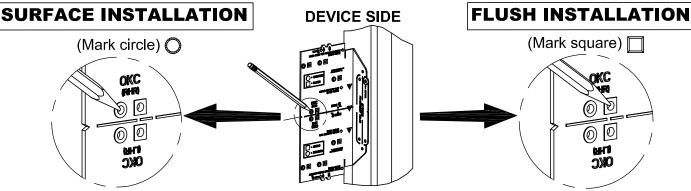
Inside PULL, OKC, PULL or TRIM PLATE must be installed before installing device.

- 1. Inside Pull....pg 8 (below)
- 2. Outside Key Control...pg 9
- 3. Pull and Trim Plate.....pg 10

#### **INSIDE PULL KIT (IP KIT)** (OPTIONAL) (must be installed before installing device)

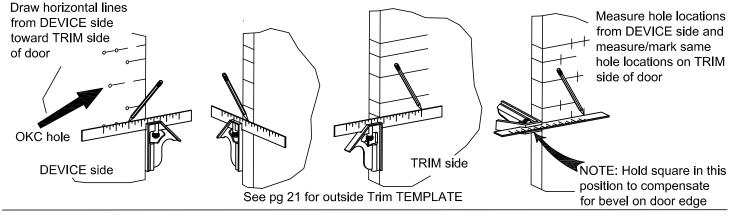


## **Outside Key Control Installation, if required**

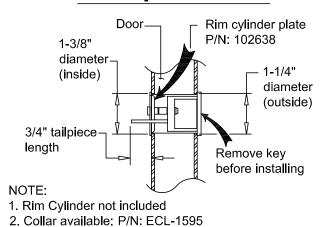


Align template with device centerline and mark/drill appropriate OKC hole through door (RHR Shown)

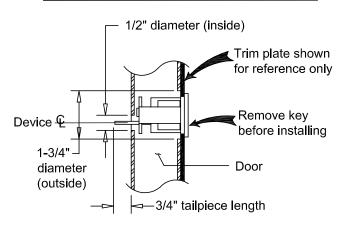
#### Transfer hole locations from DEVICE side to TRIM side



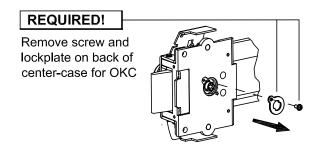
### **OKC** option shown



## **TRIM PLATE** option shown



## Remove OKC lockplate on device only if OKC is being installed



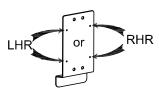


#### PULL PLATE and TRIM PLATE OUTSIDE INSTALLATION

(1) **DRILL** (2) 3/8" holes through plate at indentations for HURRICANE INSTALLATIONS.

These holes are also recommended on Fire Rated Wood and Unreinforced Hollow Metal Doors.

#### DRILL holes for HURRICANE

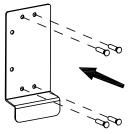


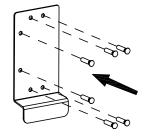
OR

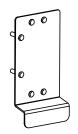
Sex Nut p/n: 105209 (6 ea per kit) **PREP door for SEX NUTS:** DRILL 9/32" hole through INTERIOR door face. DRILL 1/2" hole through EXTERIOR door face.

(2) PRESS sex nuts into PULL or TRIM PLATE (Pull plate shown)



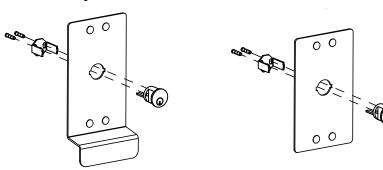






**HURRICANE** shown

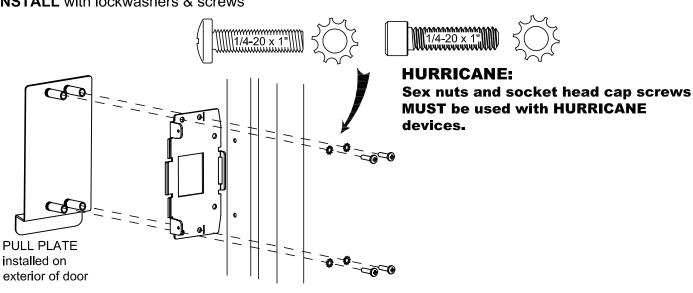
#### Cylinder collars can be used where needed



**PULL PLATE** shown with cylinder option

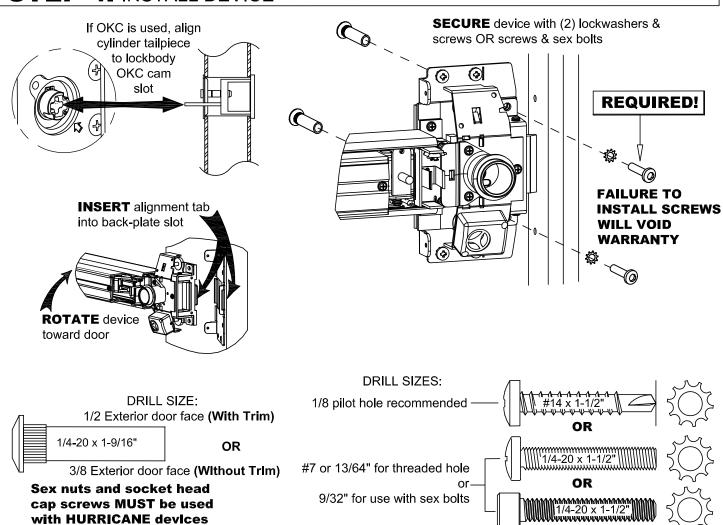
TRIM PLATE shown with cylinder option

#### (3) INSTALL with lockwashers & screws



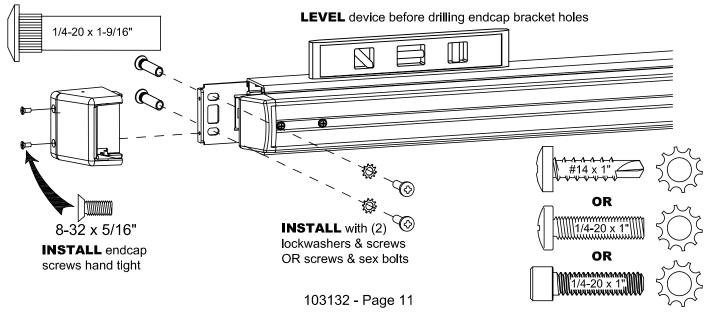
103132 pg 10

## **STEP 4: INSTALL DEVICE**



## **STEP 5:** INSTALL ENDCAP

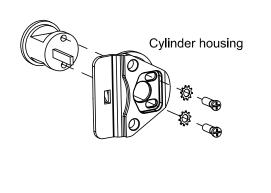
## Sex nuts and socket head cap screws MUST be used with HURRICANE devices

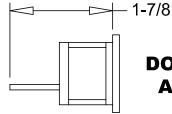


## **STEP 6:** INSTALL RIM CYLINDER

#### **NOTE:**

- 1. Rim cylinder NOT included.
- 2. REMOVE cylinder housing from device, then install rim cylinder.
- 3. REMOVE key before installing cylinder.

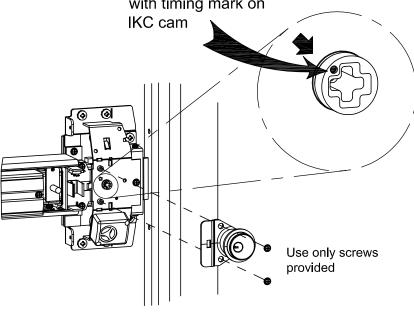




DO NOT USE A COLLAR

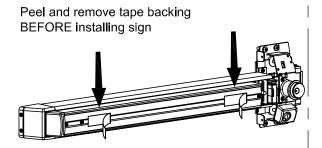
#### **REQUIRED!**

ALIGN arrow on bracket with timing mark on



## STEP 7: INSTALL SIGN

**INSERT** sign edge into bottom of push-pad and snap into top of push-pad. Slide hand along top edge of push-pad to fully seat sign





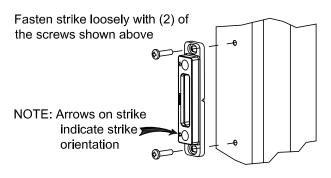
Edge of sign should be flush with edge of push-pad endcap

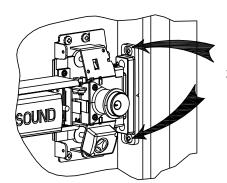
**NOTE:** A screwdriver handle, pen, or other small blunt tool can be used to snap/press the sign in.

## STEP 8: Install Deadbolt Strike - All hardware shown on this page is supplied in the strike kit p/n 103660

#### **SURFACE INSTALLATION**

Screw	Fastener Part No.	Drill Bit
	P/N: 100980 1/4-20 x 1" PPH	#7 or 13/64"
	P/N: 103276-65 #14 x 1-1/2" PPH	1/8 pilot hole recommended for self-drilling screws
	P/N: 105773-7 1/4-20 x 1" 3/16 Socket HD	#7 or 13/64" for threaded hole or 9/32" for use with sex bolts





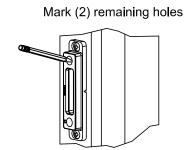
## **Adjust strike**

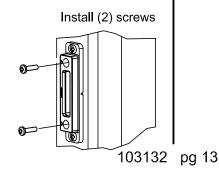
Adjust strike to desired fit. Tighten screws.

## Install two (2) inner screws

## **REQUIRED!**

Complete strike installation with (2) of the screws shown above

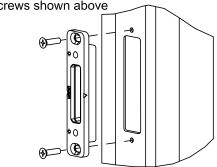


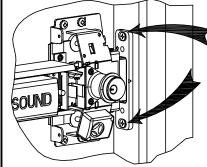


#### **FLUSH INSTALLATION**

Screw	Fastener Part No.	Drill Bit
	P/N: 102271-116 1/4-20 x 1" PFH	#7 or 13/64"
	P/N: 103277-324 #14 x 1-1/2" PFH	1/8 pilot hole recommended for self-drilling screws
	P/N: 105774-5 1/4-20 x 1" 5/32 Socket HD	#7 or 13/64"

Fasten strike loosely with (2) of the screws shown above



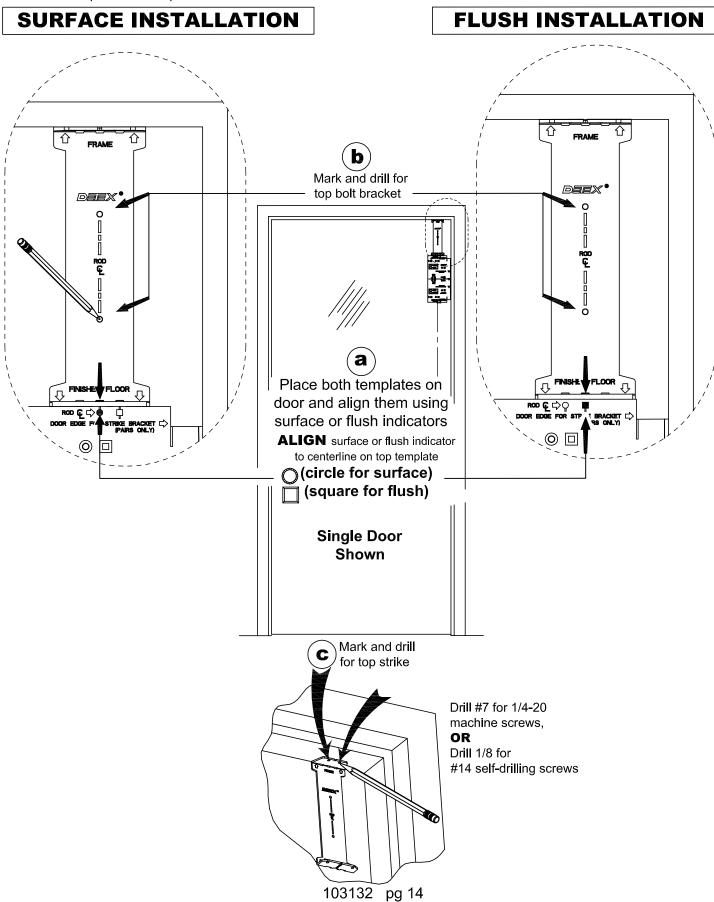


## **Adjust strike**

Adjust strike to desired fit. Tighten screws.

## 2-POINT and 3-POINT INSTALLATION (Top)

Mark & drill top strike and top bolt holes



## 2-POINT and 3-POINT INSTALLATION (Bottom)

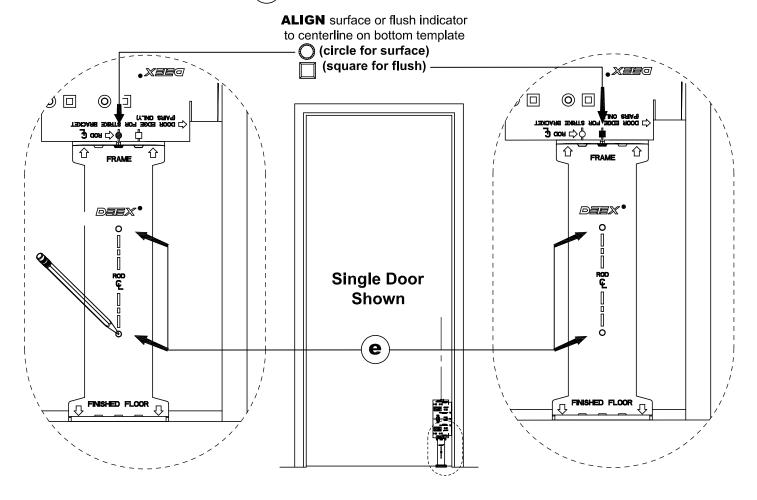
Mark & drill bottom strike and bottom bolt holes

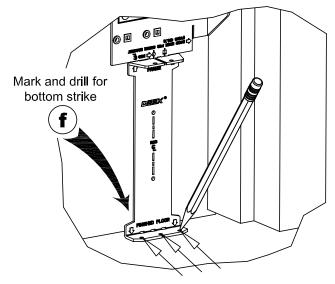
#### **SURFACE INSTALLATION**

## **FLUSH INSTALLATION**

 $(\mathbf{d})$ 

Place both templates on door and align them using surface or flush indicators



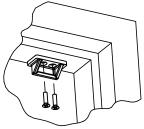


## TOP STRIKE and TOP BOLT INSTALLATION

NOTE: The top bracket, top bolt and cover are shipped as a unit. Remove cover to access parts. All hardware shown on this page except the Sex Nuts are supplied in the Top Bolt kit p/n 103693, 103693-1 or 103693-2

Screw	Fastener Part No.	Drill Bit	
1/4-20 x 1"	P/N: 103277-316 #14 x 1" PFH	1/8 pilot hole recommended for self-drilling screws	
1/4-20 x 1"	P/N: 105774-5 1/4-20 x 1" 5/32 Socket HD	#7 or 13/64"	
	P/N: 101950-505 8-32 x 5/16" PFH	Used to attach cover to	
	P/N: 100156-104 8-32 x 1/4" PFH	top bolt in later step	

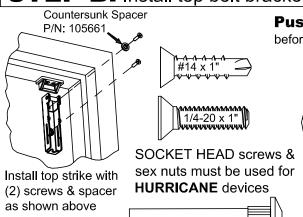
## **STEP A:** Install top strike



Install top strike with (2) screws

**NOTE:** SOCKET HEAD screws must be used for **HURRICANE** devices

## STEP B: Install top bolt bracket & top rod



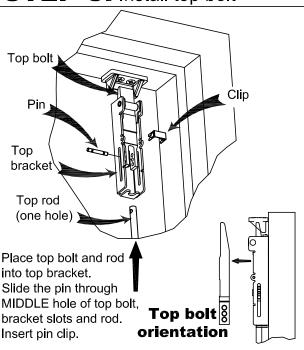
1/4-20 x 1-9/16"

# **Push in Pushpad** before installing top rod

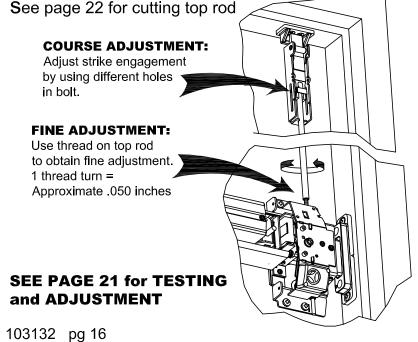
Screw top rod onto threaded rod 7 full turns minimum, then adjust as needed

> **CAUTION: With top** bolt extended, end of rod MUST NOT be visible when cover is installed (cover not shown)

## STEP C: Install top bolt



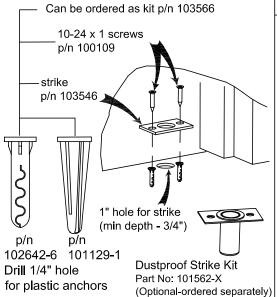
## **STEP D:** Top bolt adjustment



## **BOTTOM STRIKE and BOTTOM BOLT INSTALLATION**

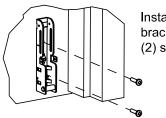
**NOTE:** The bottom bracket, bottom bolt and cover are shipped as a unit. Remove cover to access parts.

## **STEP E:** Install bottom strike



# **STEP F:** Install bottom bolt bracket Hardware included in Bottom Bolt kit (p/n 103693-x)

Screw	Fastener Part No.	Drill Bit	
#14 x 1-1/2"	P/N: 103276-65 #14 x 1-1/2" PPH	1/8 pilot hole recommended for self-drilling screws	
1/4-20 x 1"	P/N: 100980 1/4-20 x 1" PPH	#7 or 13/64" for threaded hole	
1/4-20 × 1"	P/N: 105773-7 1/4-20 x 1" 3/16 Socket HD	or 9/32" for use with sex bol	



Install bottom bolt bracket with (2) screws

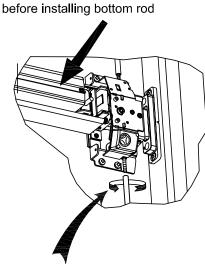
1/4-20 x 1-9/16"

SOCKET HEAD screws & sex nuts must be used for **HURRICANE** devices

Sex nuts sold separately

#### STEP G: Install bottom rod

## Push in Pushpad

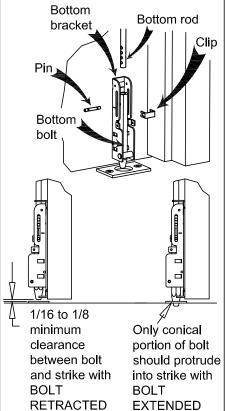


Screw bottom rod onto threaded rod 7 full turns minimum, then adjust as needed

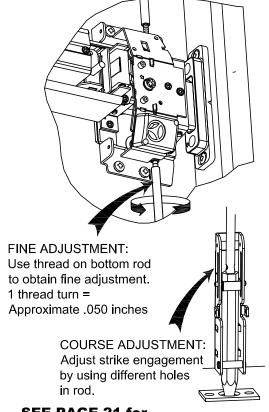
CAUTION: With bottom bolt extended, end of rod MUST NOT be visible when cover is installed (cover not shown)

#### STEP H: Install bottom bolt

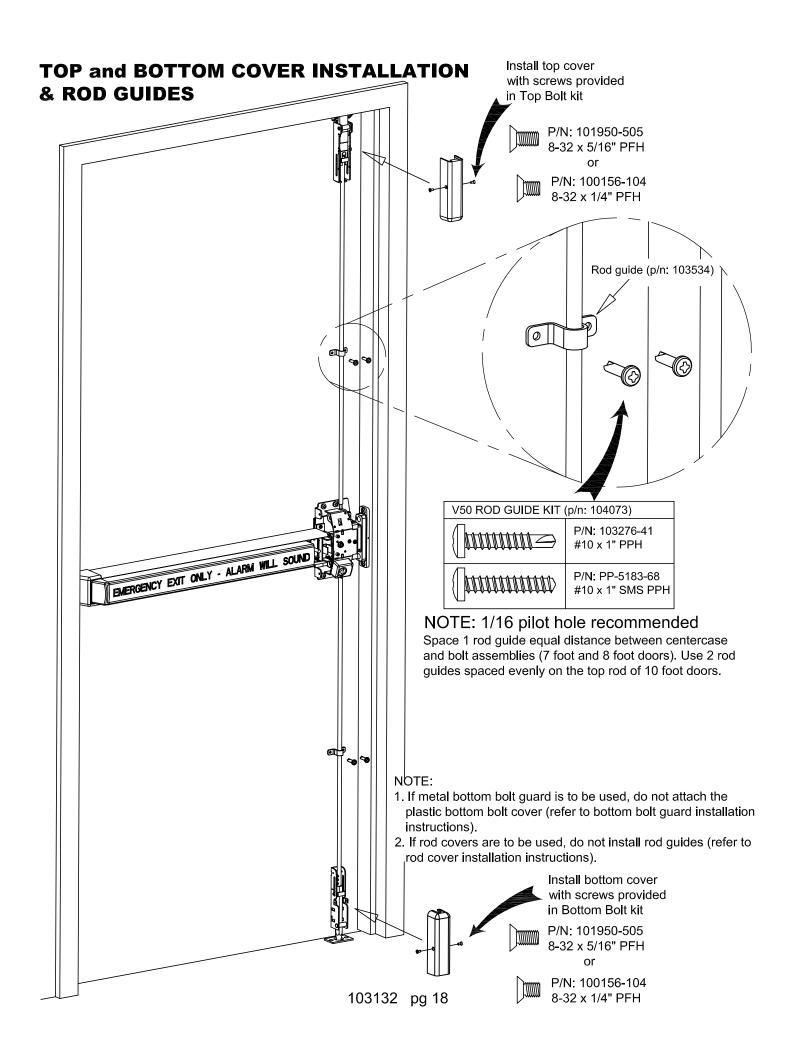
Place bottom bolt and rod into bracket. Slide the pin through bracket slots, bolt, and rod hole. Insert pin clip.



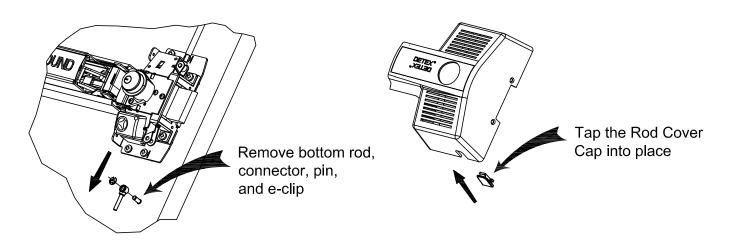
#### STEP I: Bottom Bolt Adjustment



SEE PAGE 21 for TESTING and ADJUSTMENT



## **DEADBOLT AND TOP BOLT INSTALLATION (TD)**

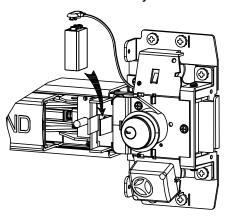


## **Install Battery and Cover**

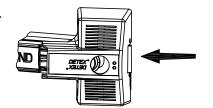


#### Before installing battery, **RETRACT** bolt with key

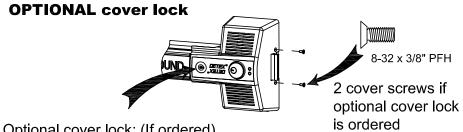
Connect 9V battery



Rotate slightly over retracted bolt while installing cover



8-32 x 3/8" PFH Install cover 4 cover screws if optional cover lock not ordered



Optional cover lock: (If ordered)

Turn cover lock key 4 to 5 turns (CW) to fasten cover

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## **DOUBLE DOOR INSTALLATION Active Leaf:** \*\*If gap is larger than Align template with 3/8, use flush holes door edge on template (squares) Mark (6) holes with circled symbols for mounting back-plate\*\* **Active Leaf Inactive Leaf Inactive Leaf:** Align template with door edge Mark centerline for device 40" from finished floor. Mark (3) holes with triangular symbols for mounting double door bracket **OPTIONAL:** Double door strike kit P/N: DDSK Bracket p/n 103683 1/4-20 x 5/8" PH #14 x 1-1/2" PPH 1/8 pilot hole 1/4-20 x 1" PH #14 x 1-1/4" SMS PPH 1/8 pilot hole 1/4-20 x 5/8" PH

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**Operations:** Turn the cylinder key 360 degrees clockwise (CW) to arm the device and lock the door. With the door locked, pushing the bar will unlock the door and sound the alarm. Turn the cylinder key 360 degrees clockwise (CW) to turn off the alarm, lock the door and arm the device.

Unlocking door with key: Turn the key 360 degrees counterclockwise (CCW) to unlock the door without setting off the siren.

Note: 360 degrees is the cylinder requirement, do not exceed. DO NOT turn past the HOME POSITION.

#### **Troubleshooting:**

#### 1. How to remove cover

a) Remove cover by unfastening four screws. If a cover lock is provided with cover, insert the cover lock key and turn it counter-clockwise approximately 4-5 complete turns in addition to removing 2 screws in front of cover.

#### 2. Trouble installing cover:

- a) No cylinder collar is needed and will cause problems installing cover, remove collar.
- b) The cover needs to rotate slightly over the dead bolt.

#### 3. Siren does not sound:

- a) Confirm the 9V battery voltage is good.
- b) Confirm the battery connector and wires are ok.
- c) Remove siren bracket assembly Check micro-switches With both switches open, the siren should sound.
- d) For a quick test to check siren, a 9V battery can be connected straight to the red (+) and black (-) wires on the siren.

#### 4. Key control cylinder (IKC) - Hard to turn (Binding), does not turn:

- a) Verify the tailpiece is the right length and not bottoming out.
- b) Verify the cylinder cam is timed correctly, see page 12, step 6
- c) Verify the dead bolt or rod bolts are not bottoming out or rubbing on the strike.
- d) Push bar in and release, the bar should spring back out.
- e) Make sure the device back-plate and end mounting bracket are on the same level surface.
- f) Confirm two screws are installed to secure locking mechanism to door, see page 11, step 4.

#### Two point locking

g) Confirm bottom rod connector was removed, see page 19.

#### 5. The unit sounds when the dead bolt is extended:

- a) Verify the cylinder cam is timed correctly, see page 12, step 6.
- b) Verify the dead bolt or rod bolts are not bottoming out or rubbing on the strike.

#### 6. The alarm does not reset:

a) Turn the key 360 degrees clockwise.

#### 7. The rod adjustments can cause malfunction of the product.

a) If the multi-point device is malfunctioning, remove one rod at a time and recheck operations. See rod adjustment operations on page 16 and 17

Call DETEX Technical Support at 1-800-729-3839

#### **Testing and Adjustment:**

#### **Testing: (TOP BOLT)**

- 1. Close the door; turn key (CW) to lock door; bolt should project into the strike cavity and lock securely.
- 2. Push on the push-pad to open the door. The top bolt should retract from the strike and clear by 1/16" to 1/8". Bolt should remain retracted.
- 3. Close the door: turn key (CW) to lock door. Bolt should project into strike cavity.

#### Adjustment: (TOP BOLT) - Adjust bolt engagement by using holes in top bolt:

1. If top bolt hits edge of strike when door is opened:

Remove clip and pin, move bolt down and insert pin in next lower bolt hole. Insert clip and pin. Test door for bolt clearance.

2. If top bolt does not engage strike:

Remove clip and pin, move bolt up and insert pin in next upper bolt hole. Insert clip and pin. Test door for bolt engagement.

#### NOTE: Fine adjustment can be obtained by using thread on bottom rod (1 thread turn = Approx .050 inches)

#### **Testing: (BOTTOM BOLT)**

- 1. Close the door; turn key (CW) to lock door; bottom bolt should drop into the strike with door closed.
- 2. Push on the push-pad to open the door. The bottom bolt should retract from the strike and clear by 1/16" to 1/8". Bolt should remain retracted.
- 3. Close the door; turn key (CW) to lock door. Bolt should drop into strike.

#### Adjustment: (BOTTOM BOLT) - Adjust bolt engagement by using holes in rod:

1. If bottom bolt drags on the floor or hits edge of strike:

Remove clip and pin, move bolt up and insert pin in next upper rod hole. Insert clip and pin. Test door for bolt clearance.

2. If bottom bolt does not engage strike:

Remove clip and pin, move bolt down and insert pin in next lower rod hole. Insert clip and pin. Test door for bolt engagement.

NOTE; Fine adjustment can be obtained by using thread on bottom rod (1 thread turn = Approx .050 inches)

## **Cutting Top Rod (For non-standard doors)**

