



911396-00

# 98/9927 & 98/9927-F

# VON DUPRIN®

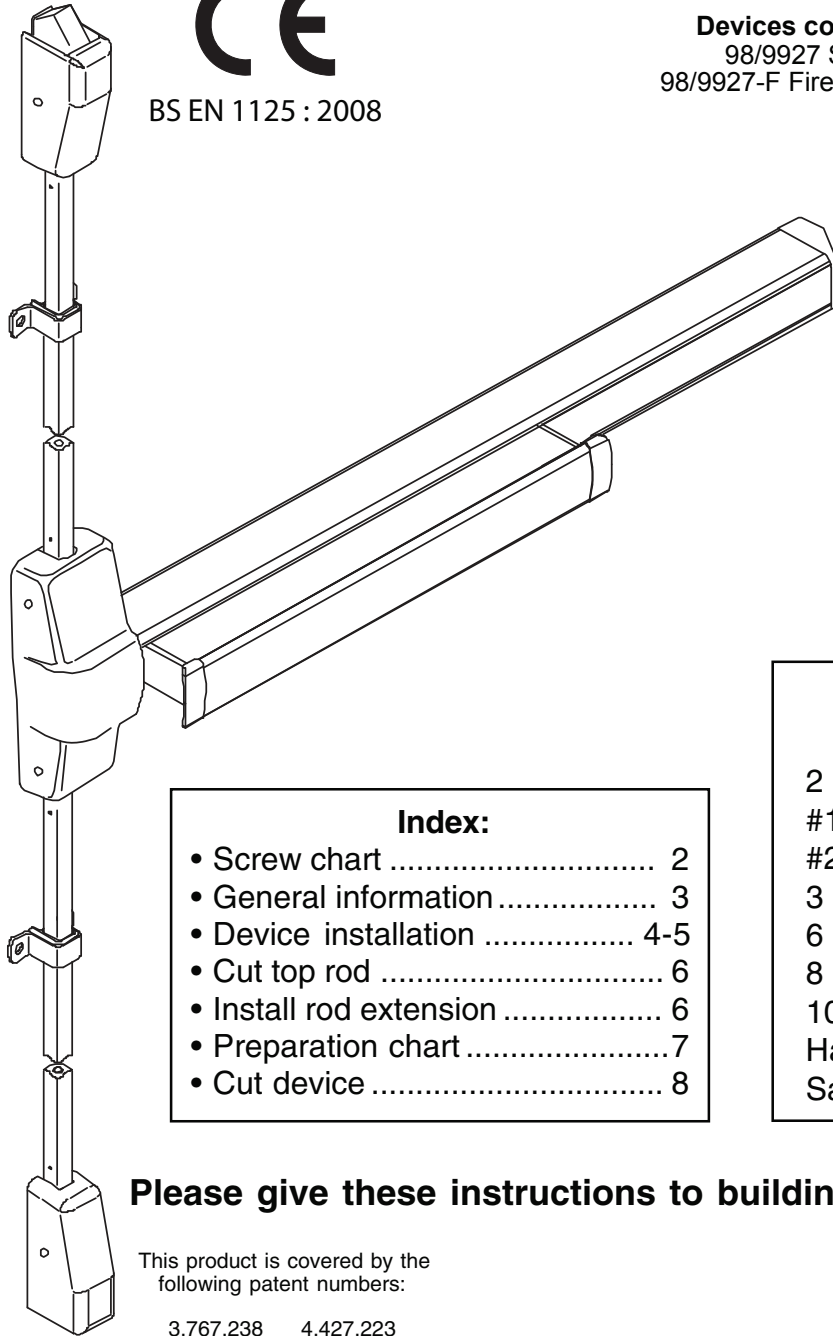
Surface Vertical Rod Exit Device

Installation Instructions



BS EN 1125 : 2008

**Devices covered by these instructions:**  
98/9927 Surface Vertical Rod Exit Device  
98/9927-F Fire Surface Vertical Rod Exit Device



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- | Special Tools Required:                 |
|---|
| 2 mm hex wrench                         |
| #10-24 tap                              |
| #25 drill bit (approximately 4 mm dia.) |
| 3 mm dia. drill bit                     |
| 6 mm dia. drill bit                     |
| 8 mm dia. drill bit                     |
| 10 mm dia. drill bit (for sex bolts)    |
| Hacksaw                                 |
| Sabre saw                               |

**Please give these instructions to building owner after device is installed**

This product is covered by the following patent numbers:

3,767,238	4,427,223
3,854,763	4,466,643
4,167,280	4,741,563

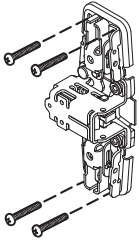


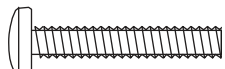
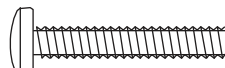
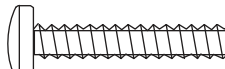

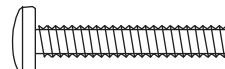
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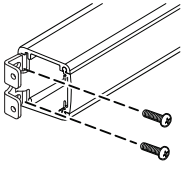
# SCREW CHART

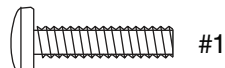
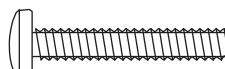
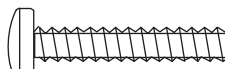
**A**



	#10-24 X 25mm	Surface mount or Sex bolts (45mm door)
	#10-24 X 38mm	Sex bolts (57mm door)
	#10 x 32mm Wood screw	Surface mount (wood)
- Packaged with trim -		
	#10-24 X 35mm	990 trims (45mm door)
	#10-24 X 48mm	990 trims (57mm door)


**B**



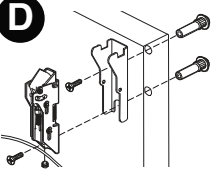
	#10-24 X 19mm	Surface mount or Sex bolts (45mm door)
	#10-24 X 29mm	Sex bolts 57mm door
	#10 x 32mm Wood screw	Surface mount (wood)



**C**



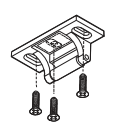
	#10-16 x 10mm Thread cutting	End cap
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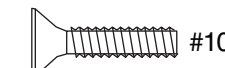
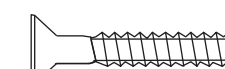
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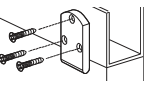
	1/4-20 X 19mm	45mm door
	1/4-20 X 32mm	57mm door

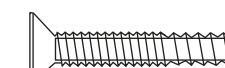
**E**



	#10-24 X 19mm	Metal frame
	#10 x 38mm Wood screw	Wood frame

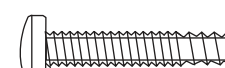
**F**



	#10-12 x 10-24 x 32mm Combination	Metal or wood frame
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**G**



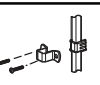
	#10-12 x 10-24 x 32mm Combination	Variable floor surfaces
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**H**



	#8-32 X 6mm	Latch covers
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**I**



	#10-12 x 10-24 x 25mm Combination	Metal or wood door
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**J**



	#8-18 x 10mm Thread cutting	Center case cover
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# GENERAL INFORMATION

These exit devices can be installed on the door widths listed below:

Device & Strike	Device Size	Code/Standard Requirement	Effective Door Width
98/9927	813 mm	BS EN 1125 : 2008	645 mm - 762 mm
98/9927	1118 mm	BS EN 1125 : 2008	797 mm - 1016 mm
EL98/9927	813 mm	BS EN 1125 : 2008	711 mm - 762 mm
EL98/9927	1118 mm	BS EN 1125 : 2008	864 mm - 1016 mm



## WARNING

The safety features of this product are essential to its compliance with BS EN 1125 : 2008. No modifications of any kind, other than those described in these instructions, are permitted.



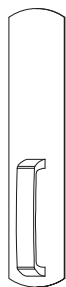
## NOTE

Dogging panic device during high traffic periods will increase life of device. To dog, depress pushbar and turn hex key or cylinder key one-quarter turn clockwise.

# OUTSIDE TRIM FUNCTIONS



**EO<sup>1</sup>**  
(exit only)



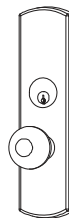
**DT**  
(pull when dogged)



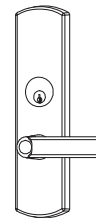
**NL**  
(key retracts latch bolt)



**TP<sup>2</sup>**  
(key locks thumbpiece)



**K<sup>3</sup>**  
(key locks knob)



**L<sup>3</sup>**  
(key locks lever)

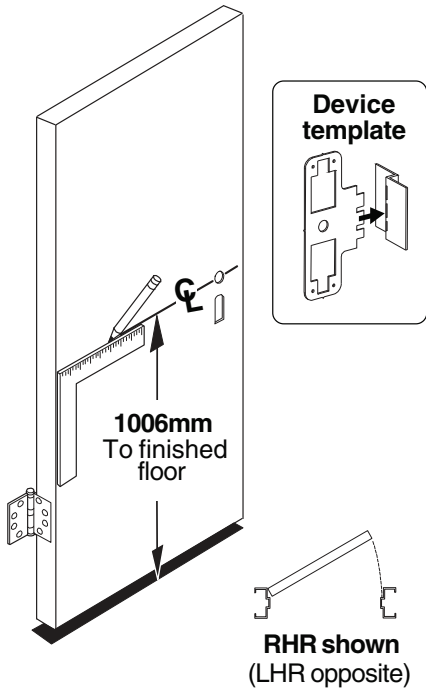


**NLOP**  
(cylinder, tailpiece, retaining cup)

- Notes**
1. No trim provided with EO; 990EO plate shown is optional.
  2. Also available as BE (no cylinder used; trim is always unlocked).
  3. Also available as: BE; Rigid (rigid knob or lever; key retracts latch bolt); DT (pull only).

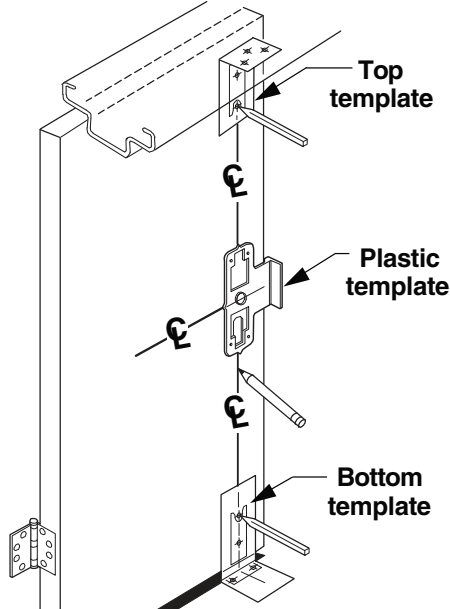
Von Duprin  
2720 Tobey Drive  
Indianapolis, IN 46219

**1** Draw horizontal center line (☉) and assemble device template.



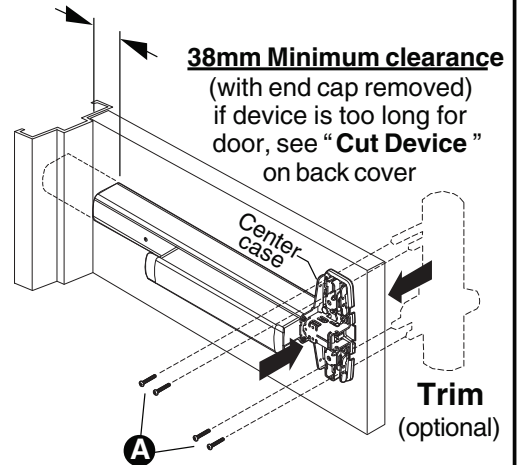
**3** Align top and bottom templates along center line, and prepare door.

See "Preparation Chart" on page 7 for drill, tap, and cut-out information



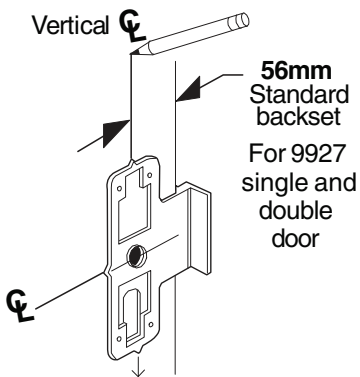
See trim instructions for pull side door preparation. Line X-X in trim instructions is same as vertical device

**5** Install trim (if using) and secure device center case to door.

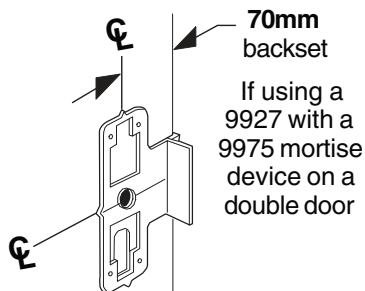


See "Screw Chart" on page 2 for screw types and sizes

**2** Position template as shown and mark vertical ☉.

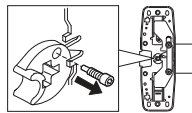


Or flip template over for:



**4** If using an outside cylinder, check NL drive screw and install tailpiece guide.

**NL drive screw**

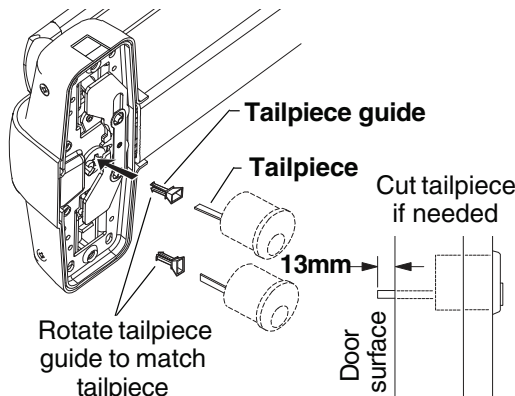


Note: When the NL drive screw is left in back of device, the outside cylinder will function only as a Night Latch.

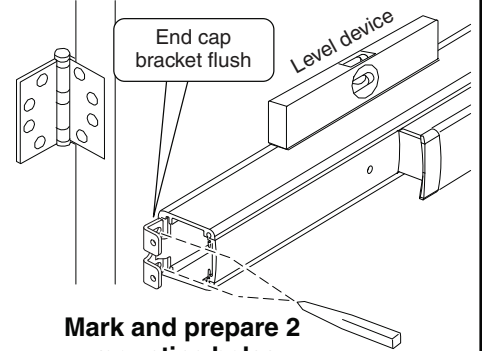
When installing trim that has a functional lever, knob, or thumb piece AND an outside cylinder to lock and unlock the trim, remove NL drive screw from back of device.

DO NOT remove NL drive screw for the following trims: NL, EO, DT, TP-2, L-2, and K-2.

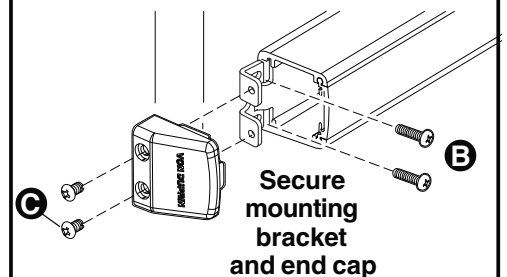
With "BE" trim, device may need rehanded. Look for instructions on back of trim.



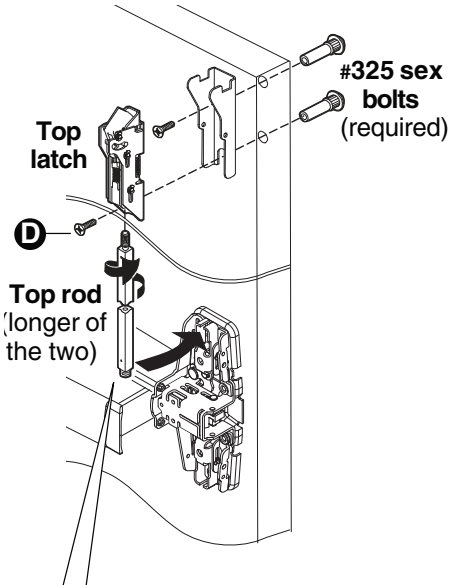
**6** Install mounting bracket and end cap.



See "Preparation Chart" on page 7 for preparation information



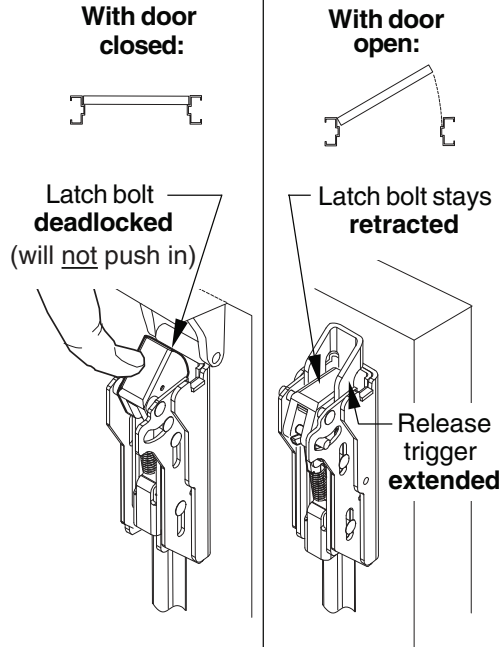
# 7 Install top latch and rod.



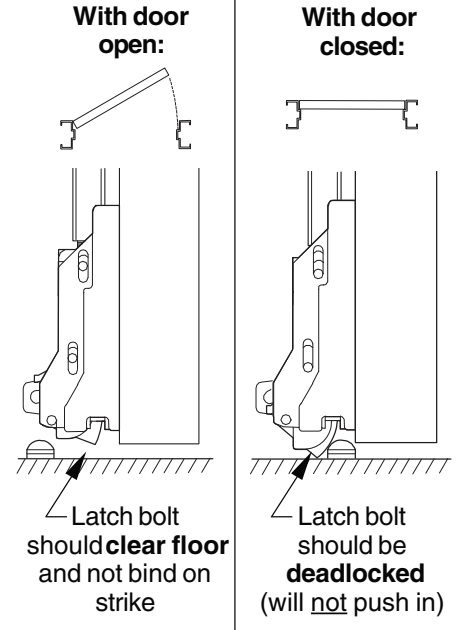
If top rod is too long, see "cut top rod" on page 6

If top rod is too short, see "install rod extension" on page 6

# 9 Adjust top rod (screw rod into or out of latch) until adjusted as shown.



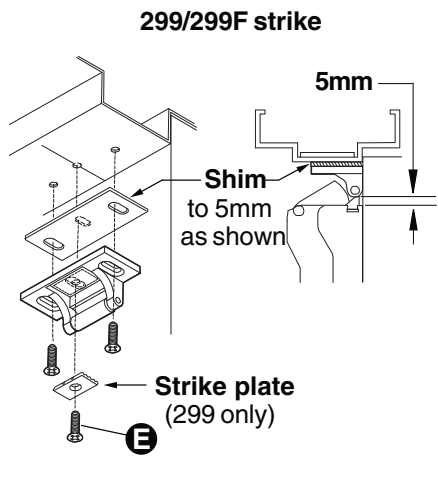
# 11 Adjust bottom rod with door open (top latch retracted).



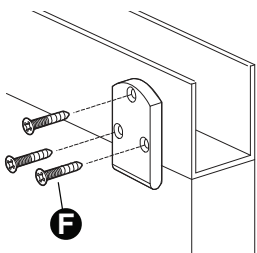
Open and close door a few times and check for deadlatching when door is closed

Readjust rods if needed

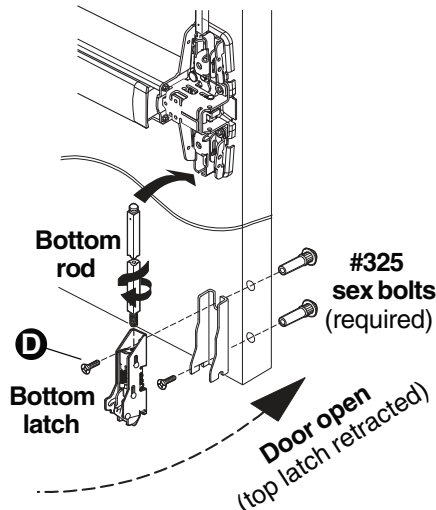
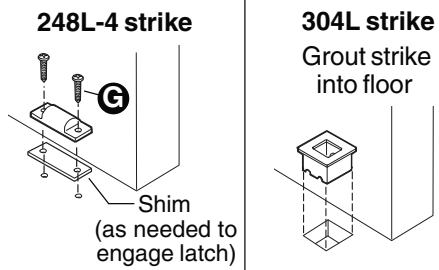
# 8 Install top strike.



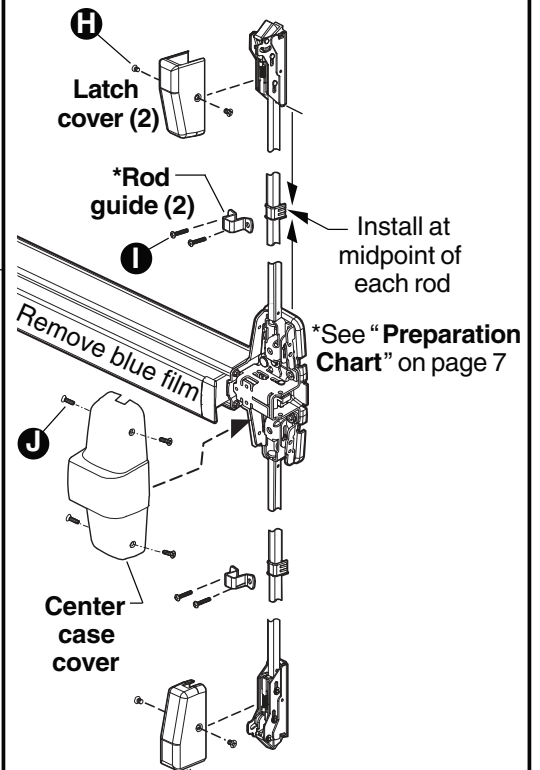
## 260U strike



# 10 Install bottom strike, latch, and rod.



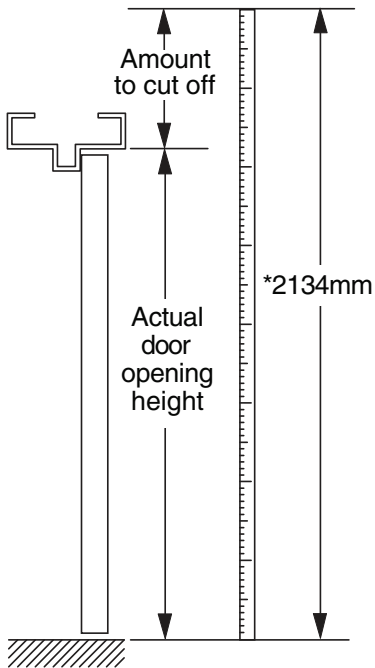
# 12 Install rod guides, and covers.



# CUT TOP ROD

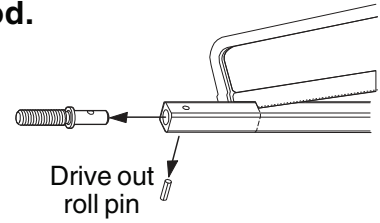
## 1. Measure amount to cut off rod as shown below.

Note: Rod cutting is required for doors shorter than 2134mm\*.

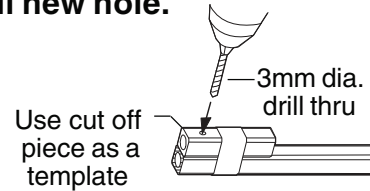


\*Rods are factory sized for 2134mm door. Measure actual door height and subtract that number from 2134mm to get amount to cut off top rod.

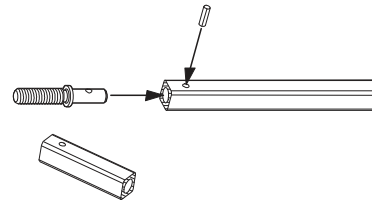
## 2. Cut rod.



## 3. Drill new hole.

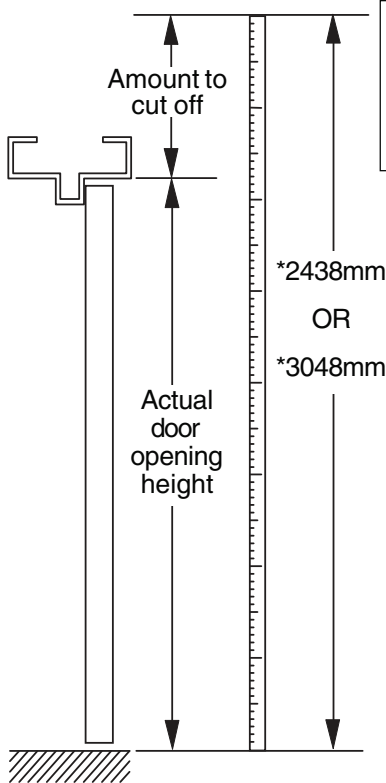


## 4. Reinstall rod end and roll pin.



# INSTALL ROD EXTENSION

## 1. Measure door opening to determine amount to cut off rod extension.

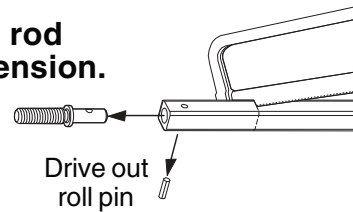


### \*Standard door heights:

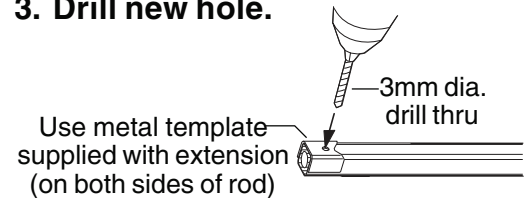
With no extension 2134mm  
With 305mm extension 2438mm  
With 914mm extension 3048mm

\*Rods are factory sized for door heights shown above. Measure actual door height and subtract that number from 2438mm (for 305mm extension) or 3048mm (for 914mm extension) to get amount to cut off extension.

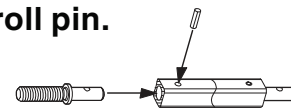
## 2. Cut rod extension.



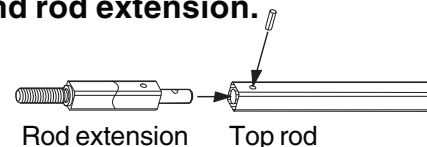
## 3. Drill new hole.



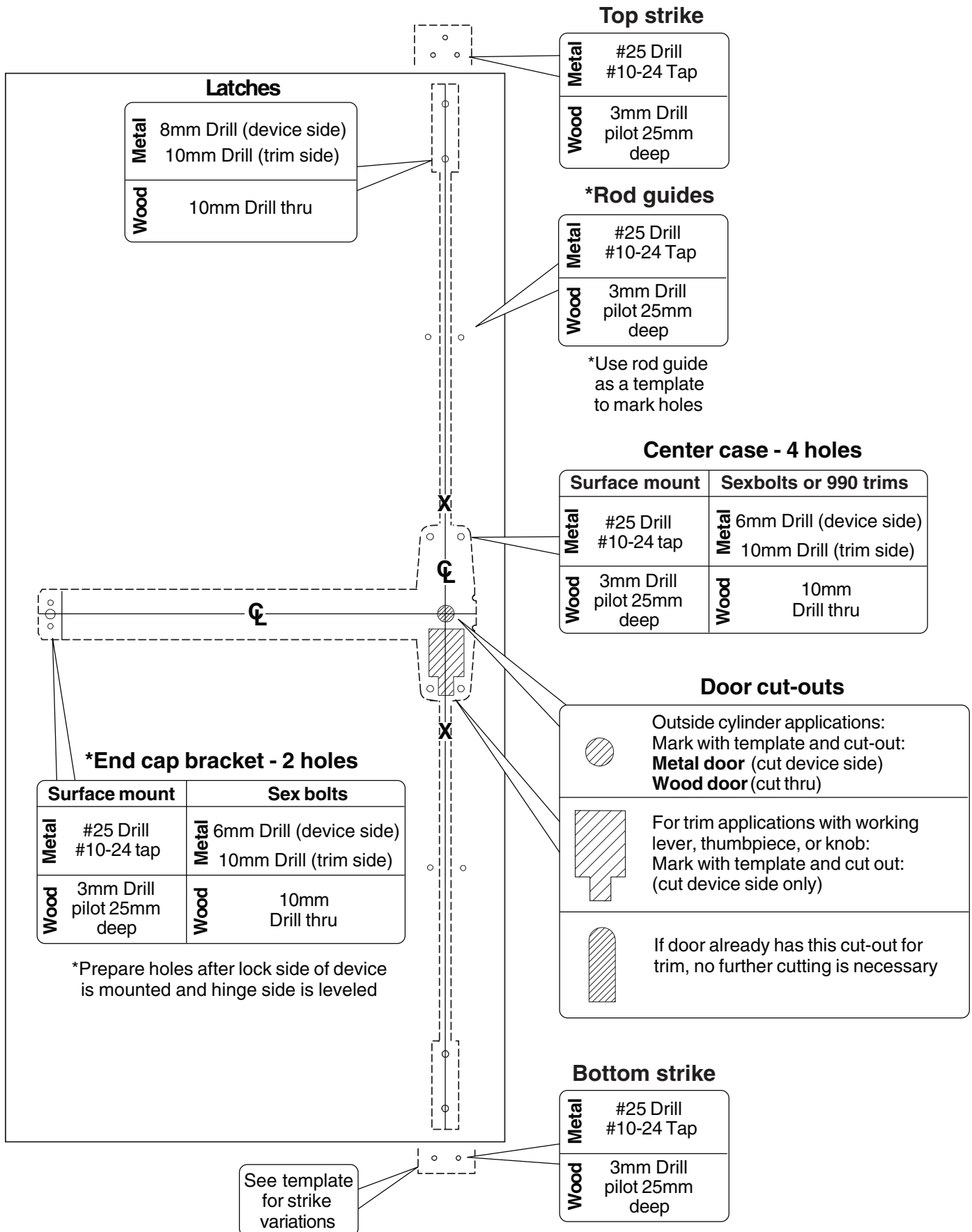
## 4. Reinstall rod end and roll pin.



## 5. Connect top rod and rod extension.



# PREPARATION CHART



### Top strike

<b>Metal</b>	#25 Drill #10-24 Tap
<b>Wood</b>	3mm Drill pilot 25mm deep

### \*Rod guides




<b>Metal</b>	#25 Drill #10-24 Tap
<b>Wood</b>	3mm Drill pilot 25mm deep

\*Use rod guide as a template to mark holes

### Center case - 4 holes

Surface mount		Sexbolts or 990 trims	
<b>Metal</b>	#25 Drill #10-24 tap	<b>Metal</b>	6mm Drill (device side) 10mm Drill (trim side)
<b>Wood</b>	3mm Drill pilot 25mm deep	<b>Wood</b>	10mm Drill thru

### Door cut-outs

	Outside cylinder applications: Mark with template and cut-out: <b>Metal door</b> (cut device side) <b>Wood door</b> (cut thru)
	For trim applications with working lever, thumbpiece, or knob: Mark with template and cut out: (cut device side only)
	If door already has this cut-out for trim, no further cutting is necessary

### Latches

<b>Metal</b>	8mm Drill (device side) 10mm Drill (trim side)
<b>Wood</b>	10mm Drill thru

### \*End cap bracket - 2 holes

Surface mount		Sex bolts	
<b>Metal</b>	#25 Drill #10-24 tap	<b>Metal</b>	6mm Drill (device side) 10mm Drill (trim side)
<b>Wood</b>	3mm Drill pilot 25mm deep	<b>Wood</b>	10mm Drill thru

\*Prepare holes after lock side of device is mounted and hinge side is leveled

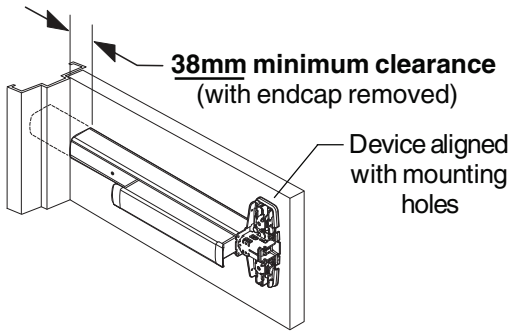
### Bottom strike

<b>Metal</b>	#25 Drill #10-24 Tap
<b>Wood</b>	3mm Drill pilot 25mm deep

See template for strike variations

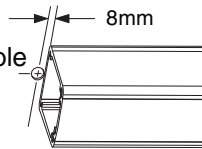
# CUT DEVICE

## 1 Measure amount to cut off device.

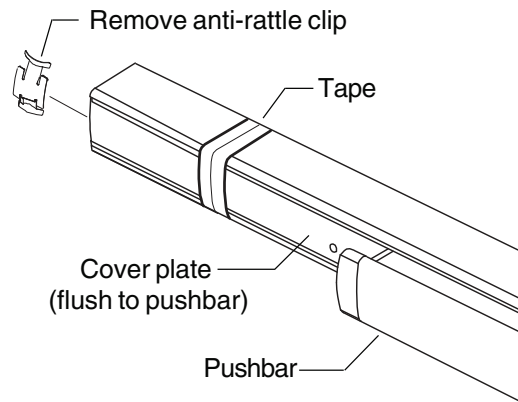


### Note

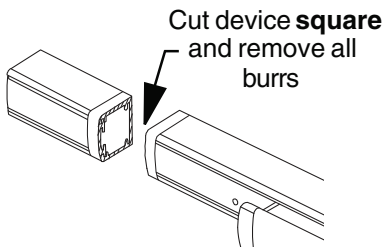
If 16mm diameter wire access hole has been predrilled in door, cut device 8mm from center of hole.



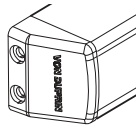
## 2 Tape and mark area being cut.



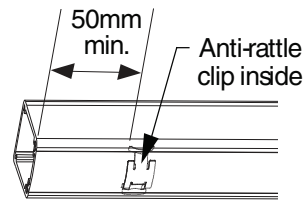
## 3 Cut device square.



NOTE: Device must be cut **square** for proper end cap fit



## 4 Slide anti-rattle clip into device.





## ADDITIONAL INSTALLATION REQUIREMENTS

- Before installation ensure door and frame are in good condition, correctly hung and not distorted  
**Note** - Maximum door distortion of 5mm to ensure safe exit.
- It is not recommended that exit devices be fitted to hollow core doors unless specially designed for this type of door.
- It is recommended to verify that the door construction allows the use of the device, i.e. to verify that offset hinges and engaging leaves allow both leaves to be opened simultaneously, or to verify that the gap between door leaves does not differ from that defined by the exit device producer, or to verify that the opening elements do not interfere, etc.
- Before fitting an emergency exit device to a fire/smoke resisting door, the fire certification of the fire door assembly on which the exit device has been tested to prove suitability for use on a fire door should be examined. It is of utmost importance that an exit device is not used on a fire door assembly of a greater fire resistance time than approved for.
- Care should be taken to ensure that any seals or weather-stripping fitted to the complete door assembly does not inhibit the correct operation of the emergency exit device.
- On double door sets with rebated meeting stiles and where both leaves are fitted with emergency exit devices, it is essential to check that either leaf will open when its emergency exit device is activated and also that both leaves will open freely when both emergency exit devices are operated simultaneously.
- Category 2 (Standard projection) emergency exit devices should be used in situations where there is restricted width for escape, or where the doors to be fitted with the emergency exit devices are not able to open beyond 90°
- Different fixing can be necessary for fitting emergency exit devices to wood, metal or frameless glass doors. For more secure fixing, male and female through-door bolts, reinforcement and rivets can be used.
- These exit devices are not intended for use on double action (double swing) doors.
- These fixing instructions should be carefully followed during installation. These instructions and any maintenance instructions should be passed on by the installer to the user.
- When installing lever operating emergency exit devices, particularly on doors with raised or recessed surfaces, consideration should be given to minimizing any potential safety risks, such as the trapping of fingers or clothing.
- The bolt heads and keepers should be fitted to provide secure engagement. Care should be taken to ensure that no projection of the bolt heads, when in the withdrawn position, can prevent the door swinging freely.
- Where emergency exit devices are to be fitted to double doorsets with rebated meeting stiles and self closing devices, a door coordinator device in accordance with EN 1158 should be fitted to ensure the correct closing sequence of the doors. This recommendation is particularly important with regard to smoke/fire-resisting door assemblies.
- No devices for securing the door in the closed position should be fitted other than specified in EN 1125 / EN 179. This does not preclude the installation of self-closing devices.
- If a door closing device is to be used to return the door to the closed position, care should be taken not to impair the use of the doorway by the young, elderly and infirm.
- Where applicable, the "Push to open" sign should be applied on the inside face of the door immediately above the operating element.

## MAINTENANCE INSTRUCTIONS

To ensure performance in accordance with the relevant standard, the following routine maintenance checks should be undertaken at intervals of not more than one month.



- a) Inspect and operate the emergency exit device to ensure that all components are in a satisfactory working condition.  
Using a force gauge, measure and record the operating forces to release the exit device.
- b) Ensure that the keepers are clean and free from obstruction
- c) Check that the emergency exit device is lubricated if required.
- d) Check that no additional locking devices have been added to the door since its original installation.
- e) Check periodically that all components of the system are still correct in accordance with the list of approved components originally supplied with the system.
- f) Check periodically that the operating element is correctly tightened and, using a force gauge, measure the operating forces to release the exit device.  
Check that the operating forces have not changed significantly from the operating forces recorded when originally installed.
- g) Check that all fixing screws are tight.

These instructions should be passed on by the installer to the user on completion of installation.

## PRODUCT INFORMATION

- To comply with EN1125 : 2008 door leaf must not exceed 2500mm high x 1300mm wide x 200Kg maximum weight.
- This product is intended for use on single and / or double leaf outward opening fire escape route doors.
- Category of projection : Category 2
- Field of door application : Category A
- Resistance of door leaf against pulling force of the recommended fixing screws: 1000N maximum achieved.

**CERTIFICATION DETAILS**

	<b>ALLEGION</b> 									
	Bescot Crescent Walsall, WS1, 4DL England									
1121-CPD-AAA027	2009									
EN 1125:2008	3	7	6	B	1	3	2	2	B	A

**FIRE / SMOKE DOOR SUITABILITY**

120 minutes except when fitted with approved trim devices shown in the table below

**Door type:** Insulated timber or mineral composite tested in accordance with BS EN1634-1 : 2000 (single or double leaf configuration)

**Note** - when fitted with the following accessories, fire door suitability is reduced to 60 minutes

<b>22 Series</b>	210DT#	210NL*	230L#	230DT#	230NL*
<b>33A Series</b>	OL*	360T*	386NL#	386DT#	388*
<b>35A Series</b>	OL*	360T*	386NL#	386DT#	388*
<b>98 Series</b>	990DT#	990NL*	990TP*	991K*	992L*
<b>99 Series</b>	990DT#	990NL*	990TP*	991K*	992L*

All items marked ‘#’ may be fitted to timber or mineral composite based doorsets for up to 60 minutes integrity.

All items marked ‘\*’ may be fitted to timber or mineral composite based doorsets for up to 60 minutes integrity, having a minimum thickness of 52mm and including sub facings comprising a minimum of 3mm thick non-combustible board, with their lock cylinders wrapped with a 1mm thick Interdens intumescent.

For additional information and full details of certification and fire door suitability:

Telephone : 01922 707400

[www.allegion.com](http://www.allegion.com)

