



# BREACH PEN

**OPERATOR'S MANUAL**  
**REVISION 1.4**



**Website: <https://defco.us/>**  
**Email: [sales@defco.us](mailto:sales@defco.us)**

# CONTENTS

HISTORY.....	1
PRINCIPLES.....	2
SAFETY.....	3
STORAGE.....	4
SPECIFICATIONS.....	4
MISC. CONSIDERATIONS.....	4
ASSEMBLY LIGHTING PROCEDURES.....	5
USES & BURN TIMES.....	7
CATEGORIES OF USE.....	11
LETTER FROM THE FOUNDER.....	13



# BREACHPEN



## OPERATOR'S MANUAL

### Revision 1.4

Cover Image Photo Credit:  
John Michael  
@sierrasixactual

# HISTORY

*The Breachpen was invented when a scientist ignited a combustible metal blend to clear a downed power line following a fierce storm. That marked the conception of the idea to create an emergency cutting device, capable of employment in any environment, to deal with the unplanned barricade.*

*Years later, a USAF Pararescueman began the research and development to see how this tool fit the mission of the tactician. This led to redundancy and reliability; principles we all look for in our gear, to be applied to the tool to ensure it met mission requirements.*



*The Breachpen is a new concept that allows each person on target to have an emergency cutting tool that can keep the mission flow, ultimately aiding in suppressing the threat and saving life. The future of this tool is increasing the effectiveness, ease-of-use, and capabilities that data from the mission will dictate.*

Photo Credit: @jasondemo



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# PRINCIPLES

1. Master the lighting procedures.
2. Although autonomous of a fuel source; utilize gravity, pressure, and your angle as the fuel source for a successful cut.
3. The Breachpen is most effective when used in a plunge cut method.
4. Apply leverage and tension as much as possible to assist the ripping apart of the heated metal.
5. Have redundancy built in for any misfires (extra matches) and secondary fire (BDS40) from the slag.
6. The combination of tools makes each more efficient to accomplish the task.
7. Know the limitations of your personal protection equipment and employ the device accordingly.
8. The manufacturer's annual training requirement is those who are going to carry a Breachpen operationally must demonstrate two successful cuts on two different models.

When cutting with the Breachpen, horizontal and vertical plains have different approaches. An example of a horizontal plain is anything parallel with the surface you are standing on. Perpendicular (up-right) structures are considered vertical plains.

## VERTICAL PLAIN APPROACH

1. Visualize the target and area around the cut prior to lighting procedures.
2. Be aware what you are weakening / cutting does not have structural influence on the surface above you.
3. Utilize a one hand baseball bat hold.
4. Your angle needs to be as perpendicular as possible to what you are cutting.
5. Orient the tip of the rod to have less surface area on your target - focused heat will be a more effective plunge.
6. Firm & constant pressure is needed to perform the cut as gravity will be pulling the slag out of the cut.
7. Stand back to avoid slag splash.

## HORIZONTAL PLAIN APPROACH

1. Visualize the target and area around the target prior to lighting procedures.
2. Once the Breachpen is ignited, transfer to gripping the Breachpen like a pen. This 'pen hold' will enable the most effective pressure and angle to defeat your horizontal target.
3. Avoid spot welding and fire hazards by ensuring a clear fall-line for your slag.
4. Gravity, pressure, and your angle are the 'fuel source' for a successful cut.
5. Stand back to avoid slag splash.

**NOTE:** There is a learning curve you will need to beat. More repetitions and practice on different targets will increase the competence and confidence in employing this tool in crisis.



# SAFETY

1. Clear the environment around your cut.
2. Do not attack cut points above the head.
3. Drop the match once the rod is ignited.
4. Never attempt live vehicle extrication without a fire suppressant available.
5. Do not throw the rod into a normal fire unless already lit.
6. Cuts on any glass or concrete may result in spatter due to high-temperature air pockets.
7. If using with NVG's, minimize lens exposure by using cat-eyes or NVG covers.
8. In training and when feasible in operations utilize **OSHA shade tint 5** lenses. This is a requirement when cutting with consecutive Breachpens.
9. Always assess your foot position when cutting.
10. Take into account, wet surfaces will create larger slag splash.
11. Have a place to drop the Breachpen should you finish your cut before the rod burns out.

**NOTE:** Only shearing the rod will extinguish a burning Breachpen



## REQUIRED SAFETY EQUIPMENT:

- OSHA Shade Tint 5 Glasses
- Long Sleeve Top
- Pants
- Gloves

## RECOMMENDED SAFETY EQUIPMENT:

- Axe or Rescue Tool
- Fire Suppression System



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## STORAGE

- Store in a climate-controlled area away from sun exposure. Ensure there is a fire-suppression device nearby or a smoke/heat-activated sprinkler system.
- Place Breachpens in 1st, 2nd, 3rd-line gear as needed for crisis-action response. Inspect monthly for cracks or warping of the sheath.

## SPECIFICATIONS

Burn time	23-25 seconds
Weight	0.37 lbs
Length unassembled	12 inches
Length assembled	17.5 inches
Diameter	0.7 inches
Ignition temperature* (temperature required to ignite the rod)	2624 * F
Combustion temperature (burning temperature)	5073 * F



## MISC. CONSIDERATIONS

1. This is a non-hazardous shipping item. The Breachpen ships under tariff code 8311.30.6000, "welding rods of base metal for welding by flame."
2. The Breachpen burns underwater but **MUST** be ignited above the surface.
3. Low caliber rounds, 9mm, 5.56, and 7.62, and higher caliber rounds will not cause impact ignition.
4. The Breachpen can be checked in luggage in small quantities however **NOT** taken on an airplane in any carry-on capacity. Any attempt to carry the Breachpen into the cabin of a commercial airplane will be deemed a hostile act.



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1. Remove the unassembled Breachpen



2. Grasp the plunger end and remove the rod



3. Reverse plunge the rod into the same end you pulled the rod out of



4. Ensure the lip on the plunger seats into the sheath





5. Remove the match cap and grasp the match (choke up on the match, grasp 1" from the tip)



6. Firmly set match tip on bottom of striker paper



7. Pressing firmly into the strike paper, strike the match in the direction of the tip of the rod



8. Immediately place the igniting match against the purple edge, hold until second flash to confirm ignition







9. Drop the match



10. Re-grip the Breachpen  
(horizontal cut hand position)



11. Re-grip the Breachpen  
(vertical cut hand position)



12. Cut

# CHAINS

**TECHNIQUE:**

*½" ferrous / non-ferrous chains, cut through the long part on either side of a link utilizing the slag build up to direct the cut. Ensure the slag has a clear path to the ground. Look to a support tool or grip the chain a minimum of two links away from your cut to de-link the chain.*

*½" or less, use the directional slag through the apex of the chain or cut through both sides of the oval.*



**BURN TIME:**

*24 sec produces most successful cut for thickness > ½"*

*19 seconds or less for thickness < ½"*

*Note, you will need repetition on cutting through thicker chain on both sides. It takes practice to know when you have cut through one side and should move to cutting the other length of the oval.*

# REBAR

**TECHNIQUE:**

*Directing the slag is a principle to be used on each. For a cut on a vertical piece of rebar, firm pressure at a 60 degree angle, transferring to 90 degrees once cut has started.*

**BURN TIME:**

*Horizontal cuts 9' for thin rebar, 14' for 2x rebar,*

*19' 3x rebar, Vertical cut 1/2"; 15' or greater*



## CABLE

### TECHNIQUE:

*Cut on the most horizontal plain possible (get vertical with your angle). Rock the Breachpen back and forth to ensure the slag separates the strand.*

**NOTE:** When able, strip the plastic sheathing on the cable to avoid toxic fumes release from plastics.

### BURN TIME:

*3/4" cable, 20 seconds*



## BOLTS

### TECHNIQUE:

*Directional slag and firm pressure. Very similar to rebar.*

*Once the bolt is exposed, attempt to apply leverage above the cut to facilitate the tension as the metal heats. The added tension will provide a faster, cleaner cut on the bolt.*

**NOTE:** The bolt must be FULLY exposed before starting the cut. Do not attempt a blind cut towards a bolt (i.e. car door, industrial door, etc.).

### BURN TIME:

*20 seconds for 3/4" iron bolt, 17 seconds or less with tension*



**WARNING:** Do not use the Breachpen as a primary vehicle extrication tool. There is a trained technique when using ANY thermal cutting on vehicles. Even if trained there must be fire suppression readily available.



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## CHAINLINK FENCE GLASS

### TECHNIQUE:

*Apply tension if possible. Trace to the connection point and angle towards cutting single wire. This allots for maximum amount of cuts over a 24 second burn time.*

### BURN TIME:

*24 seconds to open up 4' hole.*

*Training your technique is paramount for effectiveness.*

### TECHNIQUE:

*Standoff with distance by using a probe or lateral stance to the cut point is paramount to the safety of the operator.*

*Glass has tempered areas that will change pressure and 'pop' with no notice. The Breachpen does defeat glass, however use caution when employing the tool in this manner.*

### BURN TIME:

*15 seconds through re-enforced glass*

## LOCKS

### TECHNIQUE:

*Similar to a chain, less than 1/2" thickness, aggressively cut on the apex. Get as vertical as possible with your angle. Greater than 1/2", cut along the long part of the U, look to force or support tool to "de-link" the lock.*

### BURN TIME:

*24 seconds to clear > 1/2" pad lock. Apex cut with pressure on < 1/2" lock can get time to 12-15 seconds.*



## CATEGORIES OF USE:



### MILITARY / LAW ENFORCEMENT:

- *Surgical thermite for disabling vehicles/weapons*
- *Emergency access through chains, gates, and locks*
- *Internal breaches to avoid over-pressure injuries from explosive breach*
- *Aircraft signaling/emergency fire starting*
- *Sensitive Site Exploitation*
- *Disabling power sources*



### RESCUE SPECIALIST:

- *Emergency metal cutting capability—great as a support tool to a crash axe*
- *Surgical thermite for disabling vehicles/weapons*
- *Emergency fire starting capability in every environment*
- *Support tool for mechanical breaches with halligan and sledge*
- *Extrication (fire suppression MUST be nearby)*

## CATEGORIES OF USE:



### DISASTER RESPONSE:

- *Cutting off power sources*
- *Downed power-line and debris clearing*
- *Emergency cable and wire cutting*
- *Support tool for quick access into bolted/locked areas*

### FIRE SERVICE:

- *Emergency access cutting through chains, gates, and locks*
- *Support tool to mechanical breaches with halligan, crash axe, and sledge*
- *Extrication (fire suppression MUST be nearby)*



### CONSTRUCTION:

- *Emergency metal cutting*
- *Highly effective at clearing wires and cables*
- *For demolition teams making quick access and clearing rebar*
- *Cutting off power sources in emergency situations\*\**

**\*\*We recommend fire suppression to be nearby when using this tool. BDS40 is an inexpensive and highly effective solution to ensuring those carrying the BREACHPEN can take care of a secondary fire**

LETTER FROM

## THE FOUNDER

*Through my interaction with law enforcement, fire, and military, I have found it is most important to pass on the idea of emergency cutting for each operator instead of just another tool that can cut through metal. If the unexpected breach is encountered, and the breaching equipment is not available, what could be the cost? You need something that can cut through metal while remaining unhindered in your performance up to that point. This is the critical gap in the mission that we are addressing.*



## THE BREACHPEN EXISTS FOR YOU TO MAKE IT TO THE X AND PREVENT LOSS OF LIFE.



*Perpetrators come equipped to wreak havoc on the innocent. The Breachpen exists for YOU to make it to the X and prevent loss of life. This is a race against time, and in a moment's notice, someone else's time will be dependent on how well you prepared for the unexpected.*

**Brian P. Cole**  
**Breachpen Founder**  
**& Developer**  
**Former USAF Pararescueman**



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