

Welcome to BOULDER BUSTER



We are proud to show you a new and innovative breaking technology. We manufacture this tool and it's accessories here in the USA so you can be sure of a dependable source for these supplies.

BOULDER BUSTER



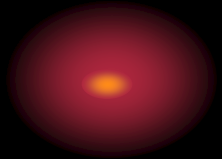
**SAFE & EFFECTIVE
BOULDER BREAKING**

**SOLID CAST
AND MACHINED
STEEL, USES
PROPELLANT
ENERGY IN A
DRILL HOLE
FULL OF WATER**



BENEFITS TO OPERATOR:



- **COMPLETELY CONTROLLED**
 - **CAN SAFELY BE USED IN CROWDED AREAS**
 - **MINIMAL NOISE AND VIBRATIONS**
 - **BLASTING LICENSE NOT REQUIRED**
- 

HERE'S THE HARD PART...



**YOU NEED EITHER A
1" OR A 1-1/2 INCH
DIAMETER HOLE
DRILLED TO THE
MIDDLE OF THE
ROCK**

**THEN FILL THE
HOLE WITH WATER**



HERE IS THE ENERGY SOURCE

**THE SMALL RIMFIRE
CARTRIDGE IS THE
IGNITION SOURCE THAT
FITS IN THE TOOL**

**THE LARGER
PROPELLANT
CARTRIDGE IS THE MAIN
CHARGE THAT GOES IN
THE WATER FILLED
DRILL HOLE**



About the Cartridges.....



- **There are 3 different cartridges available for the system. The appropriate size will depend on the job at hand.**
- **There are 3 different cartridge strengths used specifically as in-hole power cartridges. These cartridges go into the water filled drill hole to create the impulse that breaks the rock.**
- **The smallest cartridge is a #10 for smaller masses and exposed boulders. For medium masses a #20 is available. When breaking larger or more confined massive material, a #30 or a combination of cartridges is recommended.**
- **And finally there are the small initiation cartridges. They are a 27 cal. long, purple, initiation cartridge - the most powerful of its class available.**

More about Cartridges



This picture shows the tops of the power cartridges. They should be placed in the drill hole with the top end up, (facing the tool)



These cartridges contain their own firing pins and initiation primers. The cartridges are activated by the impulse (shock wave) traveling down the column of water. The maximum distance from the tool to the top cartridge should not exceed one meter. In deeper holes, use the cartridge wings to strategically place and space the cartridges.





**FOR A LARGE ROCK
LIKE THIS, DROP
ONE OR MORE
LARGER
CARTRIDGES INTO
THE WATER FILLED
HOLE, BEFORE
PLACING THE
MAGNUM BUSTER
TOOL.**

**USE THE SPECIAL
FIELD FIT WINGS
TO SPACE
CARTRIDGES AS
NECESSARY.**

**FILL THE
DRILL
HOLE
WITH
WATER**

**PLACE
THE
TOOL
INTO THE
HOLE**

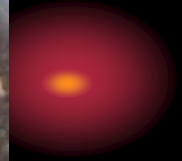


SAFETY ALERT



DO NOT PUT THE SMALL INITIATION CARTRIDGE IN IT'S BREACH IN THE TOOL, AS SHOWN IN THE FOLLOWING SLIDES, UNTIL THE TOOL IS PLACED IN THE DRILL HOLE, POSITIONED AND READY TO ACTIVATE.

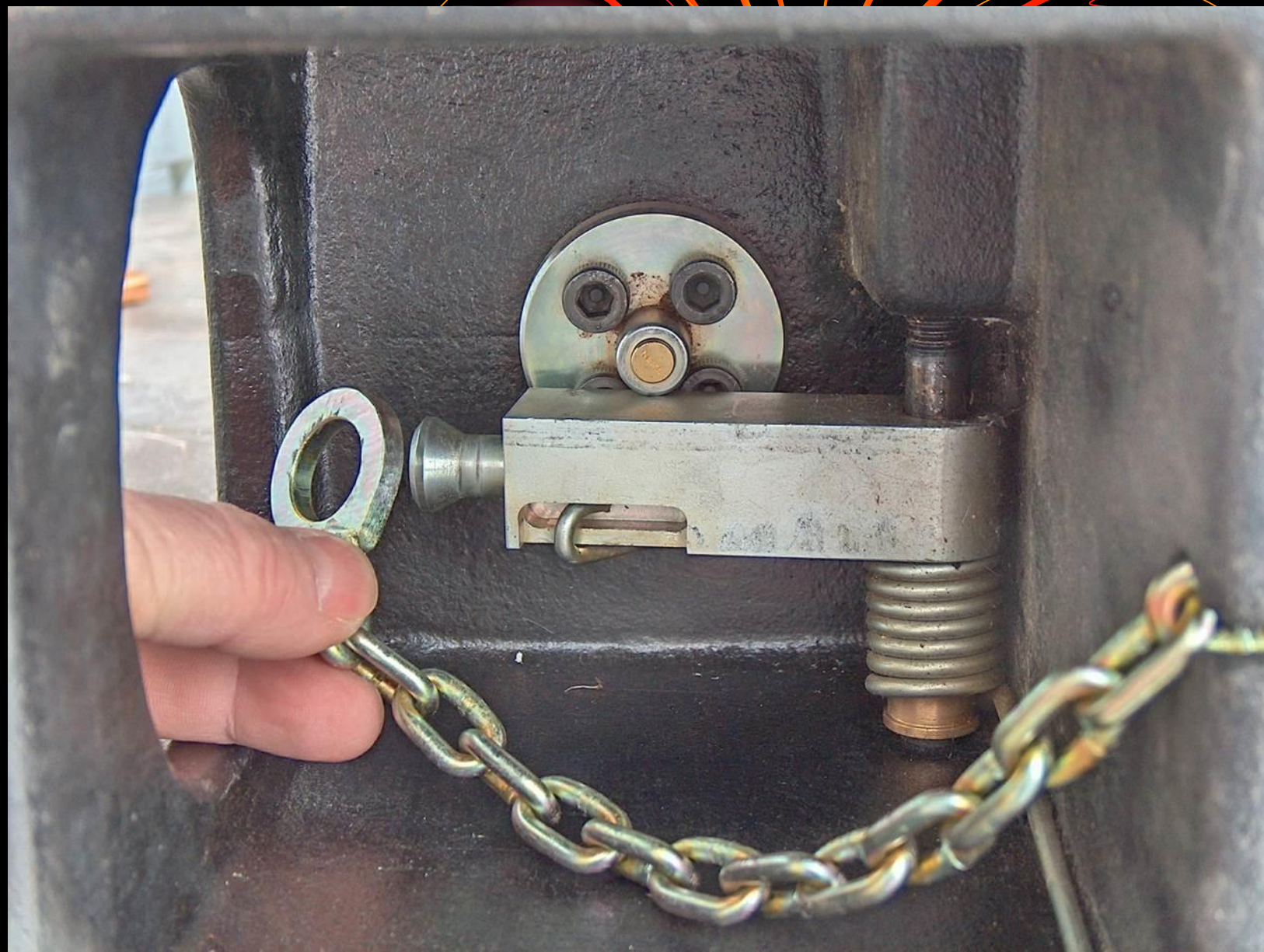
SLIDE THE HAMMER TO THE SIDE, EXPOSING THE OPENING FOR THE INITIATION CARTRIDGE. THIS IS THE SAFETY POSITION.



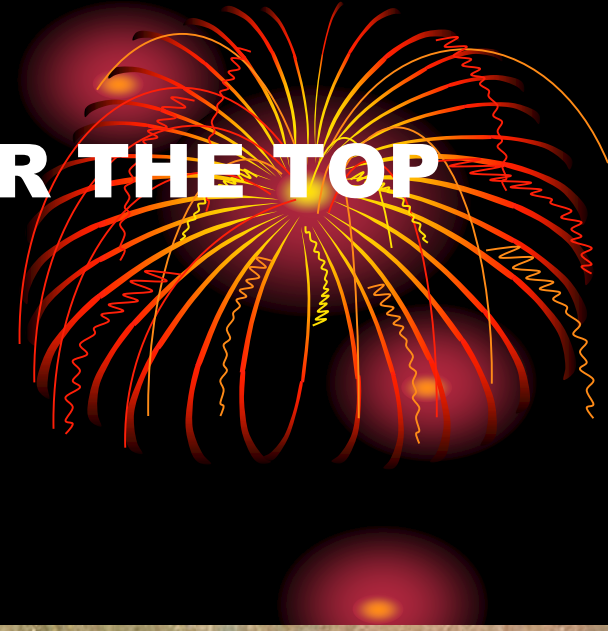
**PLACE THE INITIATION CARTRIDGE INTO
IT'S BREACH ALONGSIDE THE HAMMER.**



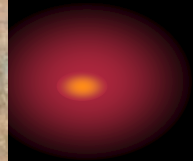
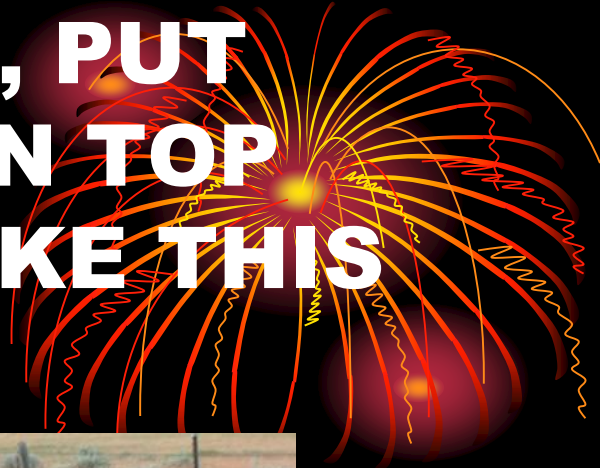
PUT THE LOOP IN THE CHAIN OVER THE KNOB ON THE HAMMER.



**PLACE THE CAST DISC OVER THE TOP
OF THE TOOL.**



**FOR OPTIMUM RESULTS, PUT
SOME ADDED WEIGHT ON TOP
OF THE DISC, A ROCK LIKE THIS
OR A SANDBAG.**



STRETCH OUT THE LANYARD, MAKE SURE EVERYBODY IS CLEAR, AND GIVE IT A PULL.



A man wearing a white hard hat, sunglasses, a blue sleeveless shirt, and dark pants stands next to a large, broken boulder. The boulder is split into several large pieces, with one large piece in the foreground and another piece to the right. The man is standing on a dirt surface, and a metal ring is visible on the ground in the foreground. The background shows a desert landscape with rolling hills and mountains under a clear blue sky.

**RESULT:
INSTANT BROKEN BOULDER**

IT'S NOT JUST FOR BOULDERS



- **HIGH SPOTS IN TRENCHES FOR UTILITY EXCAVATIONS.**
- **MASSIVE CONCRETE WITH OR WITHOUT RE-BAR IN DEMOLITION WORK.**
- **ROCK EXCAVATION IN AREAS WHERE REGULATIONS PROHIBIT USE OF CONVENTIONAL EXPLOSIVES.**
- **TRAIL BUILDING, CONCRETE FORM PLACING, COUNTY AND STATE HIGHWAY DITCHES, ETC.**

CONCRETE STEP DEMOLITION



URBAN BOULDERS

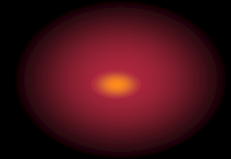


DIFFICULT TO DO THIS IN TOWN WITH CONVENTIONAL EXPLOSIVES.

BREAKING A BIG ONE



ANOTHER BIG ONE



MORE CONCRETE STEPS



IN THE EVENT OF A MISFIRE



- **Remove the Auxiliary Weight Disc from the BOULDER BUSTER.**
- **Move the Hammer to the side of the Breach Plug and inspect the Initiation Cartridge condition. Do not pull the hammer up into a position that it could slip and inadvertently initiate the Initiation Cartridge.**
- **If the Initiation Cartridge did not fire replace it with another and repeat the firing process.**
- **If the Initiation Cartridge did fire but not the BOULDER BUSTER Cartridge, inspect the Gas injection Stem for obstructions. If the Gas Injection Stem contains obstructions remove with the poker as necessary .**
- **If there is a spent Initiation Cartridge still stuck in the Breach Plug and the Poker will not remove it then use the Cartridge Extraction Tool for removal.**
- **Remove the Cartridge from the drill hole and Inspect the Cartridge for damage. If the Cartridge is damaged, or altered in any way, destroy the old Cartridge and replace it in the drill hole with a new Cartridge.**
- **Clean the BOULDER BUSTER by wiping off excess sand or dipping it in a bucket of water and cleaning with brush.**
- **The BOULDER BUSTER is now ready for the next firing.**
- **Never re-drill in an existing drill hole and always remove any suspected unfired cartridges in existing drill holes before leaving the worksite.**

TROUBLESHOOTING MISFIRES



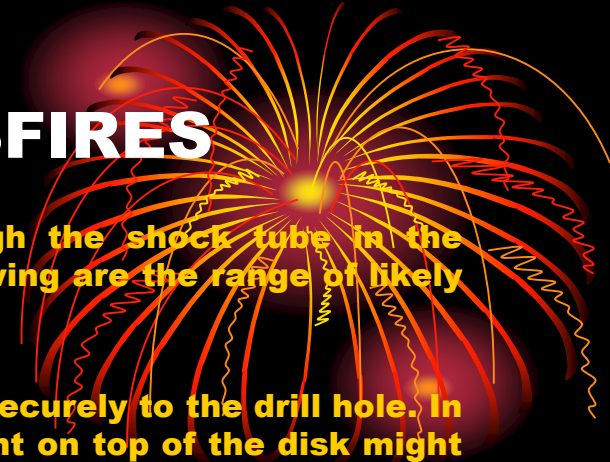
Misfires are a condition where it becomes necessary to exercise extra vigilance. Although the probability of a cartridge not firing is low when the proper setup and operational procedures are followed, a misfire is still possible. Again the approach to a safe solution may have a variety of options. If the operator is simply dealing with a known misfire and the hole will still hold water it is acceptable to initiate the firing sequence again (with a new initiation cartridge), or even several times, or adding another cartridge in the hole placed within 6 to 12 inches of the barrel. It might be that a better seal can be affected by placing some weight against the tool (using the weight disk provided or a field determined alternative). This might lower the chances of a misfire. On occasion, a misfire might occur that would rupture the cartridge case but not fire adequately. This would render its propellant harmless by water dilution. The operator may want to better analyze what actually happened with a particular cartridge and to try and determine, with our help, what might be the cause. In that case removing the cartridge from the hole is the best option.

Only remove a known cartridge misfire according to the procedure described in the Operating Manual.

TROUBLESHOOTING MISFIRES

If misfires persist than the shock energy transmitted through the shock tube in the Ignition Barrel is insufficient to initiate the cartridge. The following are the range of likely causes and should be evaluated for cause and effect:

- The tool may not have sufficient weight to hold and seal it securely to the drill hole. In that case use the supplied weight disk and additional weight on top of the disk might be necessary to seal the drill hole and better contain the shock wave.
- Check that the bolts securing the Breach Plug and Ignition Barrel are tight in order to containing the gas pressure from the initiation Cartridge. If these bolts become progressively looser during operation pressure can escape through the Breach Plug/Ignition Barrel interface and sufficiently dilute the shock wave effectiveness.
- Assure that the Ignition Barrel is inside the water phase of the drill hole. Be careful not to drop the barrel in the hole at a rate that pushes the water from the hole leaving an air pocket between the shock tube and cartridge. This will require too much energy from the Initiation Cartridge to first compress the air before it is able transmit sufficient shock energy through the water phase.
- Only use drill hole sizes recommended according to the Ignition Barrel size in use. Drill hole sizes that are oversized can allow shock energy to transfer back up the annulus between Barrel and hole and dilute the effective shock wave away from the cartridge.
- Evaluate the internal parts (Spring and Hammer and Breach Plug) for excessive wear and loss of spring tension. It is important to have these parts in good working order so that the hammer not only properly impacts the Ignition Cartridge but also holds its force long enough to contain the initial ignition pressure.



**THE CURRENT PRICES LIST CAN BE FOUND
ONLINE AT www.boulderbuster.com**

**On the main page click on the
“Product Store “ link, user name is boulder
and the password is buster**

**IF YOU HAVE QUESTIONS OR NEED MORE
INFORMATION: CONTACT**

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