



**CORETAC SOLUTIONS**  
HOME OF THE QUIET WARRIORS

**Please follow the safety rules and product installation/removal directions at all times**

**WARNING:**

CORETAC SOLUTIONS INC. assumes no responsibilities for any injury or property damage resulting from improper or careless handling, intentional or accidental discharge of the firearm.

**WARNING:**

CORETAC SOLUTIONS INC. specifically disclaims responsibility for any damage or injury whatsoever occurring in connection with, or as the result of faulty, or non-standard, or “remanufactured”, or hand-loaded (reloaded) ammunition, or cartridges other than those for which the firearm was originally chambered.

Be certain that the ammunition is the appropriate caliber and loading for the firearm and is clean, dry, and in good condition. The cartridge designation for your rifle is marked on the side of the barrel and/or the action.

**WARNING:**

Please read this document before attempting to install or use the muzzle brake.

**Safety Rules:**

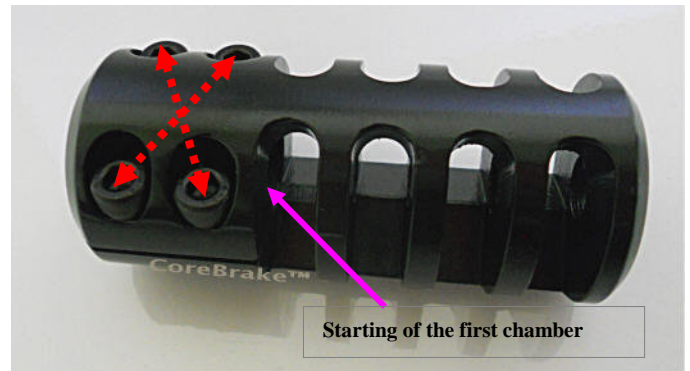
1. Assume every firearm is loaded.
2. Control the muzzle direction at all times.
3. Trigger finger off the trigger and out of the trigger guard.
4. See that the firearm is unloaded. **PROVE** it safe.
5. Always be aware of your target background and foreground.



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## Installation:

- Follow the SAFTEY Rule at all times
- Make sure the firearm is unloaded and the chamber is empty
- Remove the bolt and magazine from the rifle
- Loosen the quad bolts on the clamp on muzzle brake
- Align the muzzle brake with the barrel and slide over the barrel (about an inch)
- At this point *the tip of the barrel must be flush with the starting of the first muzzle brake chamber* (see picture)
- Our company name (CTS) and caliber stamping must be pointing to the ground. The mirage band screw (if applicable) must be centered with the action and pointing upward. In addition we have machined a centering notch in the back of the Clamp-on muzzle brake (at 12:00) to allow repeated and consistent installation.
- Tighten the fastening quad bolts in one-third increments in *Criss-Cross pattern* when the muzzle brake is fully aligned (see picture)
- Tighten each bolt to **65-70 Inch Pound** of torque. **DO NOT OVER TORQUE.**
- You can use various torque wrench products such as Fix It Sticks All-in-One Torque Driver or specific Fix It Sticks 65 Inch Lbs. torque limiter.





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**Removal:**

- Follow the SAFTEY Rule at all times
- Make sure the firearm is unloaded and the chamber is empty
- Remove the bolt and magazine from the rifle
- Loosen the fastening quad bolts in Criss-Cross pattern
- Pull the muzzle brake off the barrel to remove.



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### **Before test firing:**

- Follow the SAFTEY Rules at all times
- Make sure the firearm is unloaded and the chamber is empty
- Always check the barrel before firing to make sure it is free from obstruction. Even the slightest obstruction may damage the barrel and cause a serious accident. Look through the barrel since you have removed the bolt during the installation.
- Check to make sure the muzzle brake fastening quad bolts are fully tightened.
- Make sure you have the correct caliber ammunition for your rifle. All our muzzle brakes come stamped with our company name, rifle specific abbreviation and specific caliber (at the bottom) e.g. CTS REM 308, CTS BR 338 or CTS AR 223
- Always wear eye and ear protection. Generally when muzzle brakes are installed the firing noise is louder.

### **What are muzzle brakes?**

Muzzle Brake is a vented device that is fitted to the end of a rifle barrel; and is designed to significantly reduce the rifle's recoil.

In large calibers, recoil can cause flinching and other bad habits leading to loss of accuracy.

Expanding gases from the powder being ignited in the cartridge causes acceleration of the bullet through the barrel. When the bullet leaves the barrel so do the gases; this action causes the violent reaction of the rifle forcefully slamming rearward into the shoulder. This can cause disruption of your focus on the sight picture through the scope to the target, resulting in possible miss or less than desirable shot placement.

Muzzle brakes reduce recoil by diverting some of these gases out to the sides, through the vents or ports (holes) taking away a portion of the recoil. The effectiveness is dependent on the design of the brake and the caliber of the rifle.

The muzzle brake, fitted on to the end of your rifle barrel, will add a few inches to the length of the barrel, with no loss of velocity of the bullet.

The bullet never touches the device as it passes through the barrel. The expanding gases still accelerate the bullet as normal. It is the deflected gases through the muzzle brake that allows the rifle to remain considerably more still.