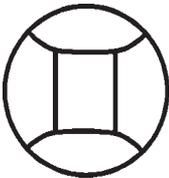


TM-VORTEX-2

OPERATION AND MAINTENANCE OF SOUND SUPPRESSOR MODEL Vortex-2

**Before using this suppressor,
be certain you have read and
understand this manual.**

Manufactured by



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ISSUED: July 23, 2003

☆☆☆☆ **WARNING** ☆☆☆

☞ **Because sound suppressed weapons make less noise than non-suppressed weapons, it is easy to forget that they are still firearms. It is of vital importance to remember that a sound suppressed firearm is just as dangerous as a non-suppressed one, and the same safe handling requirements apply.**

TM-VORTEX-2

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OPERATIONAL MANUAL FOR
SOUND SUPPRESSOR MODEL
Vortex-2™ (.22LR)

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☆☆☆☆☆ **WARNING** ☆☆☆☆☆

☞ **Failure to follow installation and maintenance instructions detailed in this manual can result in potential for serious injury to the user and damage to the weapon.** Firearm sound suppressors are user attached firearm muzzle devices, and as such are subject to improper attachment unless the proper procedures outlined in this manual are followed.

MANUFACTURER'S DISCLAIMER

The manufacturer is not responsible for improper usage of this product. This product is potentially dangerous, and as such it is the user's responsibility to understand and implement its proper use. If you do not understand the instructions in this manual, please contact the manufacturer for further clarification.

GENERAL DESCRIPTION

The VORTEX-2™ is a highly advanced suppressor design. It is constructed of 300 series stainless steel with some internal parts fabricated from high-tensile aluminum alloy. No packing material or wipes are used in these units. Designed to meet requirements for a compact, highly efficient muzzle suppressor, this unit is radically different from conventional silencer designs. The suppressor creates an extremely efficient aerodynamic flow of gases coupled with high internal turbulence to cool gases and impede their exit. It is engineered so that there is no necessity for disassembly for maintenance.

The VORTEX-2™ is optimized for maximum performance dry and will achieve its rated sound reduction specification, in excess of 39 dB on a pistol. Because of the high inherent efficiency, water or oil in the suppressor will have only a minimal increase performance and is not recommended.

AMMUNITION RECOMMENDATIONS

Because this is a muzzle suppressor, there is no velocity control of the projectile. High velocity ammunition will be accompanied by the "ballistic crack" of the bullet in flight. For maximum suppression effect, we suggest the use of standard velocity target type .22 LR ammunition. Hyper velocity cartridges such as the CCI Stinger® and Remington Yellow Jacket® will cause a significant increase in sound signature due to the ballistic crack. These cartridges should be avoided if possible. We have had good results using Remington Subsonic hollow point .22LR as well as CCI Green Tag Competition® .22LR cartridges. This suppressor is designed only for .22LR caliber rimfire ammunition. **It must not be used with any type of centerfire ammunition.**

The Aguilla SSS 60 gr. subsonic ammunition does not stabilize in barrel twist rates readily available and yaws badly on exit from the rifling. This can seriously damage the internal components of your suppressor, and use of this ammunition is at the user's risk and will void the warranty.

★ ★ ★ ★ ★ **WARNING** ★ ★ ★ ★ ★

☞ **Failure to follow installation instructions detailed in this manual can result in potential for serious injury to the user and damage to the weapon.**

INSTALLATION

Before installing (or removing) the suppressor on the weapon, be certain to remove the magazine, open the action, and visually ascertain that the weapon is unloaded.

Remove the thread protector from the end of the barrel and screw the suppressor tightly by hand onto the barrel threads. On some small automatic pistols, the thread protector will be accessible only after opening and locking the action in the open position.

For proper alignment, the muzzle threads must be absolutely concentric with the bore and must have a 90° rear shoulder perpendicular to the bore. We will guarantee alignment only on barrels threaded by us or gauged by us if threaded elsewhere.

★ ★ ★ ★ ★ **DANGER** ★ ★ ★ ★ ★

☞ **Before performing any maintenance operation, always remove the magazine from the firearm, open the action, and visually ascertain that the chamber is empty and the weapon unloaded. Failure to do so can result in potential for serious injury to the user and others in the vicinity.**

MAINTENANCE

The design of the VORTEX-2™ allows for maintenance without disassembly. At intervals of approximately 500 rounds, it is beneficial to submerge the silencer in an appropriate solvent such as Kroil®, WD-40®, or a 2:1 mixture of mineral spirits and automatic transmission fluid. Allow the unit to soak as long as possible and then drain threaded (rear) end down. Although the external parts of the suppressor are constructed of stainless steel, some

of the internal parts may be aluminum. Because of this, we discourage the use of water-based solutions for cleaning. Ultrasonic cleaners are of marginal value with hydrocarbon-based solvents. Compressed air can be used to speed the removal of excess fluids. Try to remove as much solvent as possible, but do not be overly concerned about achieving total drainage. Although stainless steel is corrosion resistant, we suggest light oiling after cleaning and drying to decrease internal carbon deposition. A suitable immersion tank can be made from a 6" piece of 1" PVC pipe and matching endcap.

☆☆☆☆☆ **CAUTION** ☆☆☆☆☆

 **Always read the warning label on any cleaner or solvent, and remember that virtually all solvents are inherently dangerous and potentially toxic. Always use adequate ventilation and both skin and eye protection when using organic solvents.**

We discourage any attempt at disassembly of the unit. Internal parts orientation is critical to the efficient operation of the suppressor, and reassembly requires special tooling and jigs available only at the factory. Any attempt at disassembly will void the warranty.

PHYSICAL SPECIFICATIONS

Length	5.2 in. (133 mm)
Diameter	1 in. (25 mm)
Weight	7 oz. (200 g)
Suppression	39 dB* (dry)
Test Weapon	Walther PPK/s
Caliber	.22 S, L, LR

*NOTES:

1. Degree of suppression varies with barrel length. Measurements were made on Walther pistols as noted. Although degree of suppression will be somewhat less on a longer barreled weapon (such as a rifle), the absolute suppressed sound pressure level will be comparable regardless of the barrel length. A longer barreled weapon has a lower non-suppressed sound signature.
2. Spectrum analysis has shown that 38% of the sound energy has been shifted above the range of human hearing.
3. This suppressor has not been tested with rimfire cartridges larger than .22LR, such as .22 Magnum or .17HMR. Use of this ammunition is done at the owner's sole risk and will void any warranty.

WARRANTY STATEMENT

The Magnuson-Moss Act (Public Law 93-637) does not require any seller or manufacturer of a consumer product to give a written warranty. It does provide that if a written warranty is given, it must be designated as "full" or as "limited" and sets minimum standards for a "full" warranty.

GEMTECH has elected not to provide any written warranty, either "limited" or "full," rather than to attempt to comply with the provisions of the Magnuson-Moss Act and the regulations issued thereunder.

There are certain implied warranties under state law with respect to sales of consumer goods. As the extent and interpretation of these implied warranties varies from state to state, you should refer to your state statutes.

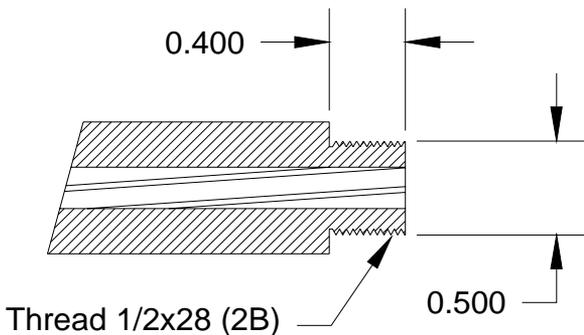
GEMTECH certifies that all sound suppressors manufactured by them are free of defects in materials or workmanship, and that they meet manufacturing specifications at the time of manufacture. Gemtech disavows responsibility for damages resulting from neglect, abuse, misuse, or acts of war.

GEMTECH denies any liability resulting from the use, abuse, or criminal misuse of this product.

Gemtech maintains complete repair facilities for all suppressors manufactured by them or their antecedent companies. Please contact Gemtech for details should return be necessary.

If repairs are required due to a defect in manufacturing or materials, there will be no charge for repairs. Otherwise, the owner will be invoiced for both time and materials required.

Barrel Threading Specifications Gemtech Vortex-2 and Outback



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