

# HYPERION K SUPPRESSOR MANUAL (C)

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Before using this product, please take a moment to read and understand this manual. If you have any questions, please feel free to call us at any time!



## PRODUCT FEATURES

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- Variable Function, CGS silencers are the only silencers in the world capable of being a standard function type silencer or a flow bypass type silencer simply by changing the front cap.
- DMLS (Direct Metal Laser Sintered – 3D Printed) Construction.
- Modularity on the front end makes the Hyperion K very versatile.
- Shallow taper joints are used at the threaded junction to maintain concentricity and provide superior retention.
- Additional parts available for separate purchase depending on user needs.
- Proprietary coating prevents copper/carbon/lead/etc build up within the silencer, but the silencer can still be serviced if and when necessary.

## PRODUCT SPECIFICATIONS

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- Caliber – 7.62mm.
- Length – 6.4” in Default Direct Thread Config.
- Diameter – 1.75”.
- Weight – 10.5oz in Default Direct Thread Config.
- **10” minimum barrel length (5.56), none for subsonic Blackout.**

## MATERIAL SPECIFICATIONS

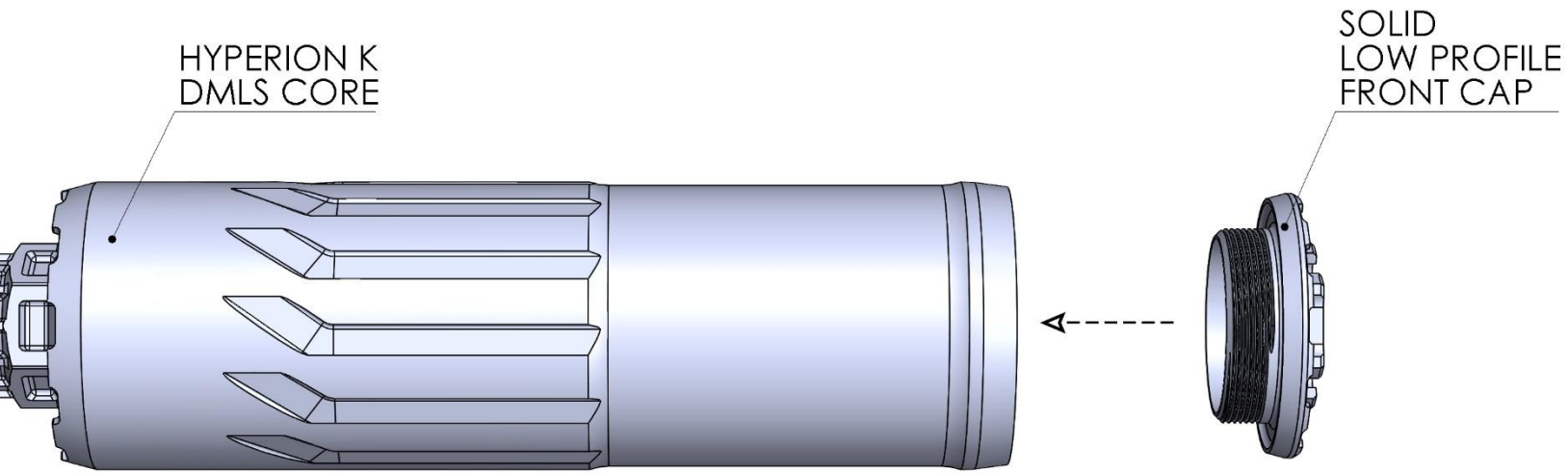
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- Hyperion K Core – Grade 5 Titanium
- Default Accessories – Grade 5 Titanium
- Finishes – S-Line (Boron Nitride), PVD



HYPERION K (COM) SUPPRESSOR PARTS DIAGRAM

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## GENERAL OVERVIEW

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The suppression system used in the CGS Hyperion K is based on the original Hyperion which was made as a lightweight precision rifle silencer for left handed shooters using semi auto host firearms to reduce/eliminate toxic gas in the face. The Hyperion K is simply a shorter version of the fullsize Hyperion. CGS Group rifle silencers are the only silencers that can completely change function simply by swapping out or removing the front cap.

The Hyperion K is limited to barrels of 10" or longer for 5.56, with no restrictions of 300 Blackout subsonic as long as your barrel will properly stabilize the projectile. The larger bore also helps with unstable 5.56mm and similar, limiting the potential for baffle strikes.

The CGS Hyperion K comes with:

- 1) CGS Hyperion K Core
- 2) Solid Low Profile Front Cap, Hex, Flash Hider, Standard, Ti

1 - The CGS Hyperion K's core is made of Direct Metal Laser Sintered (DMLS - 3D printed) heat treated Grade 5 Titanium. The core utilizes the same Hyperion Technology that is present in all our rifle silencers. The direct thread mount at the rear uses the SIG 25 deg taper shoulder, which is compatible with barrels using a 90 degree shoulder if the shoulder is a minimum diameter of .735". If your barrel shoulder is not at least .735" OD, we offer muzzle adapters which will convert your 90 degree shoulder into a 25 degree shoulder (see CGS Hyperion Thread Adapter online).

The joint at the front for the front caps has a shallow taper which will maintain concentricity and do a better job at keeping things from coming loose compared to a traditional 90 deg shoulder, and can still be disassembled with ease using common tools such as a 7/8 socket and crescent wrench. The Hyperion Tech increases sound performance significantly especially with supersonic ammo compared to everything else available while also not sacrificing subsonic performance to achieve supersonic performance. It excels at both without compromise. There is nothing that compares to the suppression of the Hyperion.

The Hyperion Tech also reduces blowback and toxic gases blown back at the shooter compared to traditional designs, allows the system overall to be much stronger by immediately venting the blast chamber and reintroducing it later in the stack thereby reducing pressure and heat and more evenly distributing it to prevent hot spots, and also will eliminate or will significantly reduce particle erosion compared to any other traditional silencer design currently available leading to a far longer service life.

The Hyperion K core's dual functionality allows the user to change the function of the silencer completely simply by swapping out the front cap for a different one. Additional end caps beyond what comes with the Hyperion K may be purchased separately, allowing the user to tailor their silencer without buying a complete package of parts they may not end up using for their intended purposes. For example, the Solid Low Profile Front Cap that comes in the kit will allow the silencer to act as a really good traditional silencer, and the Vented Low Profile Front Cap that may be bought separately will allow the silencer to act as a "flow bypass" type silencer. For bolt action rifles and for many semi auto hosts the Standard front cap is ideal as bolt actions don't have gas blowback issues through the ejection port and most semi auto hosts are helped already by the larger bore which already reduces gas blowback and reduces ear sound very well while maintaining great 1m left of muzzle sound reduction. On bolt guns the performance is great for its size.

For over gassed hosts and for those people using semi auto hosts that prioritize preventing toxic gases from being blown back into the shooters face to a more significant degree and/or for people that don't want to deal with changing their gas system or other system modifications, then a Vented front cap is ideal. A Vented cap will help reduce ear sound in some instances depending on the host and ammo, but is primarily geared toward limiting gas blowback and further limiting the effect the silencer has on host firearm function and will increase the sound at the muzzle. When compared to an unsuppressed host, the Vented cap on the Hyperion K will maintain the default bolt velocity or limit the bolt velocity increase to ~1-7 % depending on the host firearm, gas system/setting, and cartridge. In the future there will be other vented front caps with smaller/fewer vent holes which will allow the user to tune the silencer to their exact host and their needs/wants.

Thanks to the DMLS manufacturing process and finish machining, the inner bore diameter and the outer tube diameter are all perfectly concentric by default. This translates to the taper joints at both ends which ensures that any current and future accessories made for the front end or the back end of the Hyperion K are always going to be concentric to the bore. The silencer is also coated internally with S-Line which will prevent fouling build up. This is a proprietary Dynamic Compound Deposition process used to apply Boron Nitride on every internal surface. It is a myth that rifle silencers "self-clean" regardless of who makes the silencer (NOTE A). The exterior is coated with DLC. The exterior of the core features a 7/8" hex feature for wrenches and is wide enough to use with most wrenches to prevent marring of the barrel.

2 - The different front caps, as talked about in Section 1, will change the function of the silencer entirely depending on which one is installed. In the future there will be different vented front caps which will have different numbers of vents and different sizes of vents. There will also be a version with a long central flash hider which will also have peripheral flash hidere for each coaxial vent hole to help alleviate peripheral flash that plagues the single function flow bypass silencers currently available.

OVERALL LENGTH (including direct thread rear hex and Low Profile Front Cap front hex) – 6.4"

ADDED LENGTH (same config, assuming .625" barrel threads) – 5.8"

CORE ASSEMBLY WEIGHT (whatever accessories are chosen will add to this) - 10.5oz

DIAMETER - 1.75"

REAR CAP HEX – EXTERIOR 7/8"

FRONT CAP HEX - EXTERIOR 7/8"

NOTE A / CLEANING - All rifle silencers will build up fouling over time, regardless of what manufacturers choose to tell consumers. It is an internet myth that rifle silencers don't need to be cleaned, there is an abundance of actual physical evidence from many companies in the silencer industry that rifle silencers do accumulate fouling (copper/lead/carbon/etc) and that they do need to be cleaned as that fouling can lead to significant weight gain, significant sound increase, flash performance reduction, and in some cases accuracy reduction. It is best practice to weigh the silencer and record the base weight prior to use. Then every 1-3000rds weigh it again and see how much build up it has inside. After an ounce or so builds up then clean it according to the manufacturer's instructions. The S-Line internal coating used in all CGS rifle silencers prevents most build up from occurring in the first place, which is something that nearly all silencers do not have. Cleaning of the Hyperion can be accomplished when needed by dunking the core in titanium safe solvent for 24-48hrs and then draining it. You can then shoot a mag through it (using the Vented front cap or no front cap installed) to remove whatever fouling is loose. Repeat as needed. But chances are you will not get any meaningful build up over the course of tens of thousands of rounds thanks to the internal S-Line coating.

## ASSEMBLY / DISASSEMBLY

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Prior to use, ensure all taper shoulders are clean, threads are greased, and that components are properly shouldered against their corresponding surfaces and tightly secured to correct torque values. Front Caps should be tightened to the Hyperion K at 20-25ft/lb.

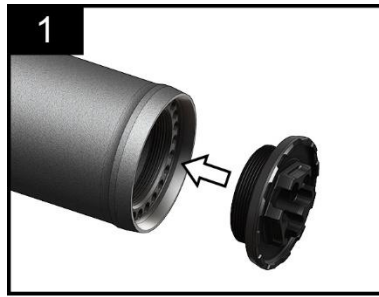
1. Thread the Front Cap into the front of the Hyperion K until hand tight (**Images 1-2**)
2. Using a torque wrench on the 7/8" wrench flats on the Front Cap, and while holding the core either by hand or with another hex wrench, tighten together until 20-25ft/lbs is achieved. (**Image 3**)

### NOTE:

If the suppressor parts appear to be misaligned when assembled, stop the installation process and contact **CGS**. Use of the suppressor if not properly assembled can cause damage to the suppressor and firearm and could cause injury to the shooter.

If you experience loosening of threaded joints during shooting it is recommended to degrease the threads and use a quality thread locker such as Vibra-Tite 123 and reasonably increase torque value.

To disassemble, simply reverse Steps 1 through 3.



## INSTALLATION

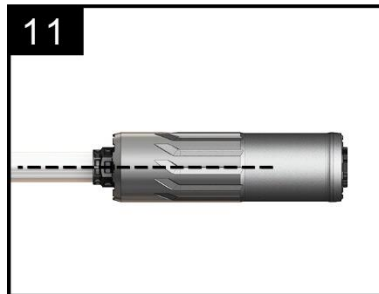
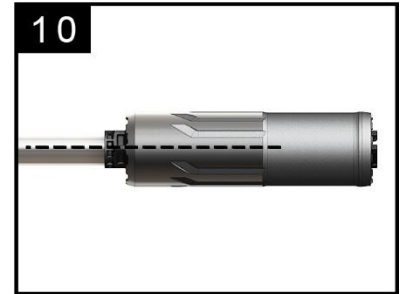
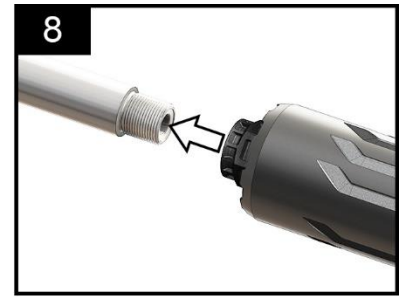
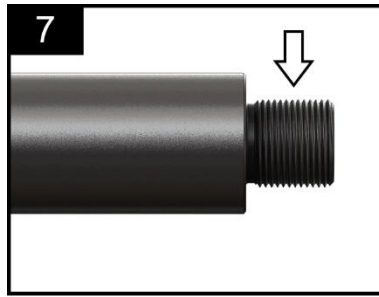
1. Remove the magazine from the firearm, then visually and manually check and clear the action and chamber of the firearm. Make sure the host firearm is unloaded at all times.
2. Check the barrel threads to ensure they are clean and free of debris. **(Image 7)**
3. Thread the assembled Hyperion K clockwise onto the barrel threads, being careful not to cross thread, until hand tight and secure against the shoulder of the barrel. **(Image 8-9)**
4. For normal use, very hand tight will do. For extended use, torque the Hyperion K using the 7/8" wrench flats to the barrel threads to 25-30ft/lbs while using an armorers tool such as the Geissele Reaction Rod (if needed) to prevent tweaking or damage to the host firearm gas system or barrel assembly.
5. Visually inspect that the suppressor is mounted straight to the centerline of the bore. Ensure that it is not tilted or canted in any way, and that it is fully shouldered and secure on the barrel. **(Images 10-11)**

### NOTE:

If the suppressor appears to be misaligned, stop the installation process and contact CGS.

Use of the suppressor if not properly mounted will cause damage to the suppressor and firearm and could cause injury to the shooter.

To uninstall, simply reverse Steps 3 and 4.



## MAINTENANCE

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1. It is recommended that the suppressor be weighed prior to use and recorded, and at intervals of 1000-3000 rounds depending on the ammunition being used record the weight and round count. Once the Hyperion K is an extra ounce or two over the base weight, it is a good time to clean the silencer. Only clean if actually necessary.
2. If cleaning becomes necessary, disassemble, and dunk the Hyperion K Core in a titanium safe solvent for 24-48 hours.
3. After the soak time has elapsed, assemble the Hyperion K and ensure all taper shoulders are clean, threads are greased, and that components are properly shouldered against their corresponding surfaces and tightly secured to correct torque values.
4. Ensure the suppressor has drained completely and fire ~10rds through it with the front cap removed. This will blow out any excess solvent. Installed desired front cap after this process is complete.
5. Do not use a bore patch or jag to clean the suppressor.
6. After cleaning a light coating of grease should be applied the threads, and all taper shoulders should be cleaned.

## WARNINGS AND DISCLAIMERS

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- Always practice the basic rules of firearms safety when using the suppressor.
- Silencers may loosen during firing. It is important that you frequently verify that your suppressor is securely tightened during use. It is recommended that you check for tightness every 30 rounds and use gloves or another barrier to ensure you are not burned.
- **CGS** is not responsible or liable for damages or injuries resulting from the improper use of this product; it is the user's responsibility to read and completely understand the instructions in this manual before using this product.

## AMMUNITION RECOMMENDATIONS

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- The Hyperion K was designed for semi auto firing of factory 5.56mm, 7.62mm, 6mm, 6.5mm, 6.8mm, 7.62x39, 300 AAC Blackout and similar ammunition only. Contact **CGS** regarding other types of ammunition.
- We recommend the use of high quality factory loaded ammunition with this product for best sound performance, accuracy, and reliability.
- Suppressors are designed to attenuate the muzzle blast of a firearm, but they do not alter or suppress the sonic crack caused by supersonic projectiles as they break the sound barrier. Subsonic ammunition may be used.

## AMMUNITION RECOMMENDATIONS

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- The minimum barrel length allowed is 10.0" for 5.56x45mm NATO. 300 Blackout has no barrel length restrictions. For any other questions on what is allowed, contact CGS with specific information about your intended use (host, barrel length, cartridge, etc).

## WARRANTY

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Subject to restrictions, CGS warrants this suppressor to be free from any manufacturing defects for life. In the unlikely event that you received a defective product, **CGS** will repair or replace the suppressor; it is at the discretion of CGS to determine if a particular defect or condition is covered by this warranty.

If a repair is necessary, please contact CGS at [Sales@CGSGroup.com](mailto:Sales@CGSGroup.com) for a CGS representative to make arrangements for the proper and legal return of the product.

**Please do not ship anything to CGS without first contacting CGS.**

**CGS Group, LLC**

Customer Service

**[sales@cgsgroup.com](mailto:sales@cgsgroup.com)**

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