CAT/BBK/MANUAL

RATINGS AND RESTRICTIONS

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1. CARTRIDGE DESIGNATION

C.A.T's BBK Titanium suppressor is specifically optimized for the new age of "large bore" cartridges such as the **338ARC** and **8.6BLK**. These cartridges both have admirable terminal performance with subsonic projectiles but are also suited (each in their own way) to use with supersonic loads as well. As such, the BBK is purpose built to maximize the signature reduction of these loads in their subsonic form in order to exploit the greatest amount of performance. Said differently, the BBK is optimized for the **338ARC** and **8.6BLK subsonic pressure profile** but is also leagues ahead of it's competition on supersonic loads as well. BBK is a specialty large bore suppressor built specifically for the pressure profile of 338ARC and 8.6BLK it has not been tested or proofed on any other cartridges.

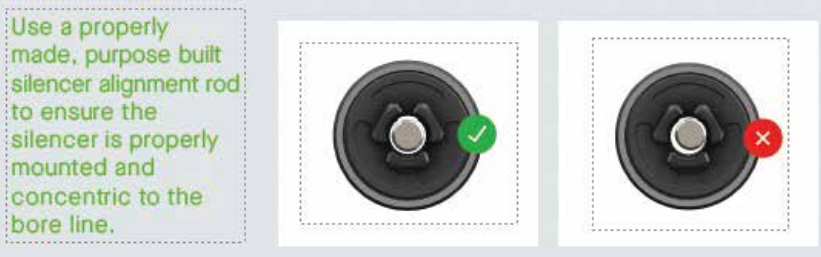
2. BARREL LENGTH

The realistic minimum barrel length for BBK on it's intended host system (8.6BLK or 338ARC described above) is 8 inches. **That is a generalized statement regarding the length of a system's barrel**. It still falls on you, the user, to ensure that the projectile fired out of whatever ammo you are using is stable once it leaves your barrel. For magnum cartridges, BBK should be used on barrels no shorter than 20".
If the specific round you are firing has too little or too much twist (or too little velocity in the case of very short barrels), the projectile has a significant propensity to become unstable in flight or – in fact – to never actually stabilize. Think of a tightly spiraling football (stable) versus a football lobbed end-over-end (unstable). If your projectile is yawing or tumbling, it is almost always evident on paper. We recommend you shoot 5-10 rounds at a
paper/cardboard target somewhere around 50m and inspect the holes created by the projectiles. While not a perfectly scientific test, if the diameter of the hole closely matches that of the bullet, then your projectile is most likely stable. If the hole is not circular, noticeably bigger than the projectile or you observe the profile of the bullet on the paper (keyholing), then no suppressor -including a C.A.T suppressor - should be used with that particular system (firearm and ammo).
Note: For best results, we recommend not grouping these shots. You are looking for the individual holes punched by the bullet and not a grouping of multiple shots in one hole.

3. CONCENTRICITY

In this instance, concentricity shall be defined as the parallelism of the line-of-bore of both the host firearm (barrel) and the suppressor. If the bore of your firearm is not perfectly centered and perpendicular to the shoulder of your threads, the suppressor may be far enough out of parallel that a round exiting the barrel would strike a portion of the suppressor. There are alignment rods sold in various places that will aid in checking the alignment of a suppressor and barrel/bore.
If you prefer to gamble there is a more "field expedient" method that can be used at your own risk. While C.A.T recommends the use of a caliber appropriate bore alignment rod, you can also conduct a more cursory visual inspection as well. With the firearm unloaded and suppressor properly mounted, remove the barrel from the firearm so that you can look down the proximal end (from the chamber not the muzzle) of the barrel. Aligning the chamber and muzzle similar to a set of ghost ring sights, center the exit pupil inside the ring of the chamber. If the end cap of the suppressor appears to be out of center, do not shoot. Purchase an alignment rod or take the firearm and suppressor into a gunsmith to inspect further.

Note: Diagram of an alignment rod in use is below for the visual learners.



WARNING - MATERIAL SPECIFIC FACTS

Once your cartridge, barrel and concentricity are established, you're cleared hot to do some shooting. In the next section, we will describe how to properly record your actual rate of fire for any titanium suppressor.

4. SCHEDULE OF FIRE

While specifically optimized for 338ARC and 8.6BLK platforms running "low heat" subsonic loads, users should not exceed a maximum service temperature of approximately **650°F (343°C)**. This is particularly important for users running supersonic and magnum cartridges. Once this temperature threshold is reached, the suppressor should be allowed to cool down. Titanium Ti6Al4V has inherent material properties which give the material a lower heat conductivity rating, and the suppressor is susceptible to particle erosion and melting past this temperature limit. If the user notices discoloration on the exterior discontinue use and allow it to cool down.

Do not dip the suppressor in water in an attempt to cool it down.

C.A.T recommends BBK Titanium users invest in an infrared thermometer and create their own platform specific firing schedule, based on ammunition and barrel length. It is recommended to create this firing schedule by shooting five round groups, with one second intervals between rounds, then testing the temperature of the suppressor up to **550°F (288°C)**. At this operating temperature, the user should record the amount of time until the suppressor returns to **150°F (65°C)**. This would become the baseline firing schedule based on the user's platform and ammunition type.

5. WEAR

C.A.T BBK Titanium has a dedicated "waffle" style erosion interface at the end of the blast chamber. This is a sacrificial erosion wall, and users should not be concerned if they are seeing wear, this is designed to support the erosion caused by unburnt particulates (especially in short barrel platforms) and is designed to protect other internal areas inside of the suppressor.

6. SPARKING

Excessive white sparking may be noticed upon first use, this is due to microscopic Titanium dust from the Additive Manufacturing process. Over the course of use this white sparking will subside but will never fully disappear. Titanium white sparking is separate from flash and cannot be controlled by a flash hider or other methods, as it is a byproduct of Titanium being classed as a reactive metal.

CAT/BBK/1.375x24 HUB

MODEL: CAT/BBK/A1
CALIBER: .338 (8.6MM)
WEIGHT TITANIUM: 15.5 OZ (MIL)*
OVERALL LENGTH: 9.5”
DIAMETER: 1.8”
MIN BARREL LENGTH: 8”
OPTIMIZED VELOCITY: 1000-2100FT/S
OPTIMIZED PLATFORM: 20” (MAGNUM)
TECHNOLOGY: SNIPER3
RECOMMENDATION: .338PRECISION & .338ARC/8.6BLK SUBSONIC
FINISH: DLC
MOUNTING: HUB NOT INCLUDED

INSTALLATION

STEP 1
Remove the magazine from the firearm, then visually and manually check and clear the action and chamber of the firearm. Ensure the host firearm is unloaded at all times.

STEP 2
Always ensure the barrel thread and shoulders are clean and free of debris. To install the C.A.T 1x16LH QD muzzle device, clean and degrease barrel threads and make sure barrel shoulder is also clean (pink surfaces).

IF USING A DIRECT THREAD MOUNT:

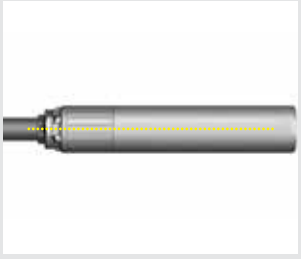
STEPS 3,4 & 5
Prior to installing the direct thread mount on the suppressor, inspect the mounting interface surfaces of the direct thread mount and ensure the threads and shoulders are clean and free of debris (gold and green surfaces). Ensure the C.A.T suppressor internal 1-3/8x24 (1.375x24) thread is clean and free of debris (blue).

INSTALLATION

STEPS 6,7 & 8
Screw the direct thread mount into the back of the C.A.T BBK suppressor and torque it down, with a 1-1/2" (1.500") wrench on the C.A.T BBK wrench flats and a 7/8" (.875") wrench on the direct thread mount wrench flats, to 25-30ft/lb. If you choose to use a thread locker between the direct thread mount and the C.A.T BBK, degrease the threads and allow the thread locker to fully cure before using the firearm.

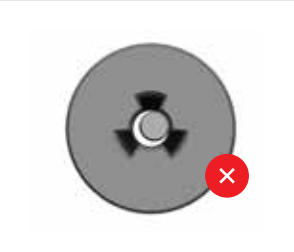
STEPS 9 & 10
To install the C.A.T BBK with direct thread mount assembly onto the firearm, again ensure the firearm is completely unloaded and safe, then slide the assembly over the barrel and thread it on CLOCKWISE (right hand to tighten) torquing it down first by hand like you don't want it to come off, tightening the C.A.T BBK direct thread mount assembly fully against the barrel shoulder. When installed by hand, you must check the suppressor repeatedly during use to ensure it doesn't come loose. To ensure the assembly won't come loose, torque the direct thread mount down to the barrel using a 7/8" (.875") wrench to 25-30ft/lb. If you choose to use a thread locker between the direct thread mount and the C.A.T BBK, degrease the threads and allow the thread locker to fully cure before using the firearm.

STEPS 11 & 12
Visually inspect that the C.A.T BBK with direct thread mount assembly is properly installed on the firearm barrel and that it's mounted straight to the centerline of the bore. Ensure the suppressor isn't canted in any way and that the C.A.T BBK is fully shouldered against the barrel shoulder.



INSTALLATION

STEPS 13 & 14
Use a properly made, purpose built suppressor alignment rod to ensure the suppressor is properly mounted and concentric to the bore line.



***To remove the C.A.T BBK with direct thread mount assembly from the host firearm barrel, wait for the suppressor to cool after use, ensure the firearm is completely unloaded and safe, then unscrew the suppressor COUNTER CLOCKWISE (left hand to loosen). If you experience the direct mount coming loose from the BBK suppressor body, you may need to use additional torque between the two parts within spec, or you may use an optional thread locker. If you choose to use a thread locker between the direct thread mount and the C.A.T BBK, degrease the threads and allow the thread locker to fully cure before using the firearm.**

IF USING THE CAT TSFX QD MOUNT (SOLD SEPARATELY):

STEPS 1 & 2
Prior to installing the C.A.T TSFX QD mount in the suppressor, inspect the mounting interface surfaces of the C.A.T TSFX QD mount and ensure the critical mounting surfaces are clean and free of debris (red/blue surfaces internal and green surfaces external - pay special attention to making sure the blue internal taper shoulder region is clean and free of debris). Ensure the C.A.T BBK suppressor internal 1-3/8x24 (1.375x24) thread is clean and free of debris

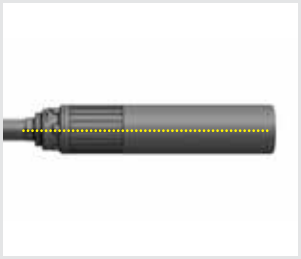
STEPS 3,4 & 5
Screw the C.A.T TSFX QD mount into the back of the C.A.T BBK suppressor and torque it down, with a 1-1/2" (1.500") wrench on the C.A.T BBK wrench flats and a 1-3/16" (1.1875") wrench on the C.A.T TSFX QD mount wrench flats, to 25-30ft/lb. If you choose to use a thread locker between the C.A.T TSFX QD mount and the C.A.T BBK, degrease the threads and allow the thread locker to fully cure before using the suppressor on a firearm.

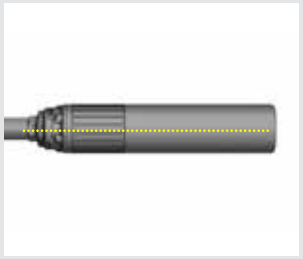
INSTALLATION

STEP 6
Inspect the muzzle device and ensure the critical surfaces are clean and free of debris (green surfaces, especially the taper shoulder).

STEPS 7 & 8
To install the C.A.T BBK with C.A.T TSFX QD mount assembly onto the firearm, again ensure the firearm is completely unloaded and safe, then slide the assembly over the C.A.T 1x16LH QD muzzle device (sold separately) and thread it on COUNTER-clockwise (left hand to tighten) and tighten the C.A.T BBK strongly by hand to the muzzle device like you don't want it to come off, tightening the C.A.T BBK fully against its taper shoulder interface. When JL is properly installed this taper shoulder interface will prevent loosening during use. If you choose to use a thread locker between the C.A.T TSFX QD mount and the C.A.T BBK, degrease the threads and allow the thread locker to fully cure before using the firearm.

STEPS 9 & 10
Visually inspect that the C.A.T BBK with C.A.T TSFX QD mount assembly is properly installed on the muzzle device and that it's mounted straight to the centerline of the bore. Ensure the suppressor isn't canted in any way and that the C.A.T BBK is fully shouldered against the taper on the muzzle device.





STEPS 11 & 12
Use a properly made, purpose built suppressor alignment rod to ensure the suppressor is properly mounted and concentric to the bore line.

***To remove the C.A.T BBK from the muzzle device, wait for the suppressor to cool after use, ensure the firearm is completely unloaded and safe, then unscrew the suppressor CLOCKWISE (right hand to loosen). Left hand threads are used on the C.A.T 1x16LH QD muzzle devices so that when uninstalling the suppressor, the QD muzzle device will always stay on the host firearm rather than coming off and becoming stuck inside the suppressor.**