Suppressor Evaluations

Pantera 30 Caliber Precision Suppressor

and

D30 Tactical Suppressor Prototypes

from Acadian Armament, LLC - Lafayette, LA 70508 (337) 739-1858

Shooter

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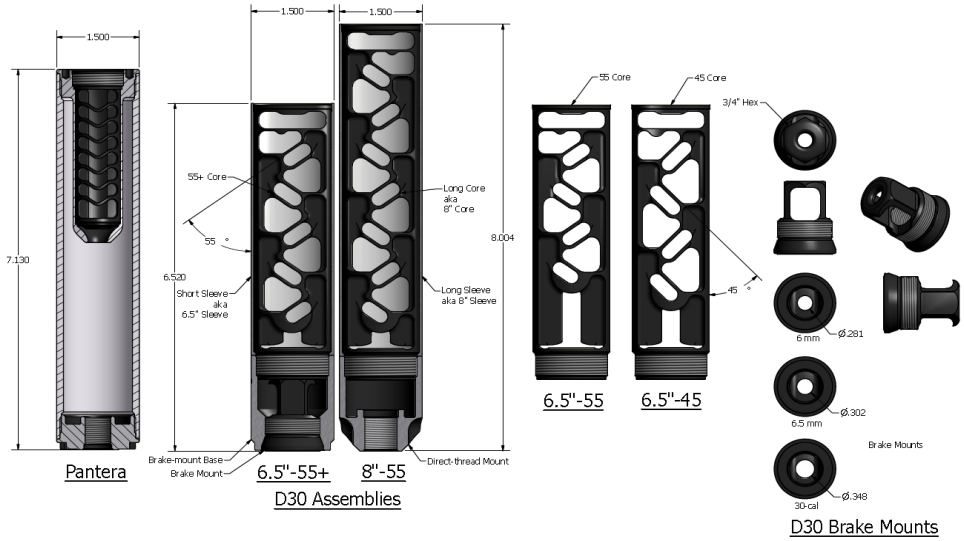
Configurations	**ID**
6.5" D30 with 3-45° Secondary Separation Chambers	6.5"-45
6.5" D30 with 3-55° Secondary Separation Chambers	6.5"-55
6.5" D30 with 4-55° Secondary Separation Chambers	6.5"-55+
8" D30 with 6-55° Secondary Separation Chambers	8"-55
Pantera 30-cal	Pantera

Conditions	
Atmospheric	
Temperature (°F)	58-64
Pressure (in)	30.41
Wind (mph)	ENE 3-5
Elevation (ASL-feet)	193
Range	
(as noted) 100-800 yds	100-800 yds
Zero, grouping, shot consistency	100 yds
Rifle & Ammunition	
Rifle	Rem 700
Caliber	0.308
Barrel length (in)	20
Rifling	1:10



Hornady 168gr Tap
Speer Gold Dot 168gr Bonded
Federal 168gr Sierra Match King
LCLR 175gr BTJHP (Limited data)

Protocol:

Obtain Muzzle Velocity of the ammunition without suppressors to determine deviation
Obtain Muzzle Velocity of each ammunition with each of the three suppressors for comparison
Obtain mechanical deviation of each of the suppressors as compared to no suppressor
Observe grouping during chrono to evaluate consistency
Observe POI during long range engagements with the Pantera as compared to the two D30 types
Evaluate recoil management, sound level, mechanical deviation from unsuppressed to suppressed
Interchange inserts to evaluate consistency in grouping, accuracy, and deviation

Muzzle Velocities Unsuppressed

	1	2	3	4	5	MAX	MIN	AVG	SD(calc)
Hornady 168gr Tap	2629	2607	2623	2635	2632	**2635**	**2607**	**2625.2**	**11.10**
Speer Gold Dot 168gr Bonded	2583	2568	2599	2572	2594	**2599**	**2568**	**2583.2**	**13.44**
Federal 168gr Sierra Match King	2610	2649	2608	2604	2607	**2649**	**2604**	**2615.6**	**18.80**
LCLR 175gr BTJHP (Limited data)	2658	2654	2679	2656	2663	**2679**	**2654**	**2662**	**10.07**

Muzzle Velocities Pantera

	1	2	3	4	5	MAX	MIN	AVG	SD(calc)
Hornady 168gr Tap	2642	2651	2658	2664	2647	**2664**	**2642**	**2652.4**	**8.73**
Speer Gold Dot 168gr Bonded	2692	2664	2697	2691	2712	**2712**	**2664**	**2691.2**	**17.37**
Federal 168gr Sierra Match King	2621	2635	2633	2665	2649	**2665**	**2621**	**2640.6**	**16.88**
LCLR 175gr BTJHP (Limited data)	2653	2660	2653	2621	2641	**2660**	**2621**	**2645.6**	**15.36**

Muzzle Velocities 8" D30

	1	2	3	4	5	MAX	MIN	AVG	SD(calc)
Hornady 168gr Tap	2637	2637	2638	2645	2672	**2672**	**2637**	**2645.8**	**15.02**
Speer Gold Dot 168gr Bonded	2603	2617	2621	2629	2634	**2634**	**2603**	**2620.8**	**11.97**
Federal 168gr Sierra Match King	2643	2645	2655	2646	2642	**2655**	**2642**	**2646.2**	**5.17**
LCLR 175gr BTJHP (Limited data)	0	0	0	0	0	**0**	**0**	**0**	**0.00**

Muzzle Velocities 6.5" 55+ D30

	1	2	3	4	5	MAX	MIN	AVG	SD(calc)
Hornady 168gr Tap	2640	2632	2634	2659	2671	**2671**	**2632**	**2647.2**	**17.05**
Speer Gold Dot 168gr Bonded	2688	2691	2699	2703	2710	**2710**	**2688**	**2698.2**	**8.93**
Federal 168gr Sierra Match King	2628	2643	2637	2671	2648	**2671**	**2628**	**2645.4**	**16.13**
LCLR 175gr BTJHP (Limited data)	0	0	0	0	0	**0**	**0**	**0**	**0.00**

Mechanical Deviation

Pantera

Mechanical deviation from the Pantera was noted consistently at approximately 2.5 inches lower than and 1.5 inches right of POA (2.5 MOA/ 1.5MOA). Grouping remained consistent at 1 MOA and sub- MOA. It is to be noted, the deviation was constant regardless of the load used. Recoil was noticeably reduced and generally directed rearward. The target remained inside the perimeter of the objective lens following recoil. I noted no effect with regard to accuracy as related to the grouping. With regards to accuracy at distances, I engaged targets from 100 yards to 840 yards in 50 yard increments. I engaged targets from 66% IPSG to 6” plates while testing. I noted no significant deviations as related to accuracy while engaging. I found the accuracy unaffected by the suppressor.

Defender 30 8”

Mechanical deviation in the D30 8” suppressor to group consistently 1” high and 2” right of POA (1 MOA/2 MOA). Grouping remained consistent from sub-MOA to MOA regardless of load tested. Recoil was reduced and was generally directed rearward. The target remained inside the perimeter of the objective lens during the firing sequence and shifted less than during testing of the Pantera. I noted no effect on accuracy as related to grouping. I found the accuracy was also unaffected during target engagements from 100 to 840 yards. Utilizing the same targets and engagement series as during the tests of the Pantera, I noted no significant deviations during testing. It is to be noted, the sound reduction seemed to be comparable to that of the Pantera. While firing from 100yds, the weapon system was under an overhand which reflected the sound. The D30 8” suppressor seemed to reduce the sound slightly more than the Pantera. Each were tolerable without hearing protection.

Defender 30 6.5” 45°

Mechanical deviation in the D30 6.5” with 45* baffles was noted at 2” below and 1” left of POA (2 MOA/1 MOA). I found the grouping to be consistent regardless of the ammunition fired. Each load produced MOA grouping or better. As with the other suppressors, I noted the target remained inside the perimeter of the objective lens with very little shift. Felt recoil was reduced and directed in a generally rearward direction with no effect on grouping. This held consistent while engaging targets in the same sequence to 840yds as previously described.

Defender 30 6.5” 55°

Mechanical deviation in the D30 6.5” with 55* baffles was noted at 2” below and 1” left of POA (2 MOA/1 MOA). I observed the grouping and POI to be relatively consistent as the 45*baffle insert. The grouping was consistent regardless of the ammunition fired. Each load produced MOA grouping or better. As with the other suppressors, I noted the target remained inside the perimeter of the objective lens with very little shift. Felt recoil was reduced and directed in a generally rearward direction with no effect on grouping. The consistency of the shift and felt recoil remained while engaging targets in the same sequence to 840yds as previously described. I noted very little difference in sound mitigation between the 45* and 55* inserts.

Defender 30 6.5” 55+

Mechanical deviation in the D30 with the 55+ was noted to be the lesser of the models tested. I noted a 1” drop in the POI as opposed to POA (1 MOA) with little to no deviation in windage. I managed to maintain 1 MOA or better during grouping and found the grouping to remain consistent with all loads tested. With regard to recoil, felt recoil was reduced and directed rearward. The target remained inside the perimeter of the objective lens with minimal shifting. As for sound mitigation, I noted this configuration seemed to mitigate sound best. While engaging targets from 100-840, I observed no effect on accuracy.

Personal Observations

Sound Mitigation

I noted each of the suppressors effectively mitigated the sound of the report. I believe the 6.5” with the 55+ insert reduced the sound the best. I fired each of the configurations under an overhang and in the open. In each instance, the 6.5 in 55+ seemed to reduce the noise the best. All variations of the suppressors significantly reduced the noise as compared to firing unsuppressed.

Recoil Reduction

I observed very little deviation in recoil management between the different configurations. Again, the 6.5 with 55+ seemed to have the least amount of deviation and remained closer to the natural POA following recoil than the other configurations. Each configuration directed the recoil rearward and noticeably reduced felt recoil. The recoil management was notably enhanced compared to firing unsuppressed. One note I did make was the amount of reduced recoil felt while testing the 8” model. It seemed to produce the best result for felt recoil.

Pantera Specific Observations

I like the way the Pantera is designed. Having few parts and easy to disassemble/ assemble would make cleaning and maintenance more user friendly. It can be cleaned when the rifle is cleaned without any special parts or tools thus creating an environment to produce more consistent shots. With the suppressor I have for my SR25, I have to use a sonic bath in order to fully clean the suppressor. The Pantera performed very well during accuracy and stress firing. Shot placement stayed consistent despite temperature changes in the barrel and suppressor. I noted the accuracy remained consistent at distances out to 840 yards and believe that accuracy and consistency would remain regardless of the distances engaged. The direct thread base was convenient to install and remove. I believe it would be suitably applicable in a law enforcement setting. The smaller size and light weight make it easy to pack and readily deployable. It offered significant flash reduction and sound reduction for SRT application.

6.5” Models

I noticed very small differences in each of the configurations of the 6.5” model. Each produced similar mechanical deviation and I saw no changes in accuracy or grouping regardless of insert or ammunition load used. Each managed recoil sufficiently and there was no loss in accuracy. I found the most favorable results with the 55+ insert installed.

Other Notes

I was impressed at how easily each of the types of bases mounted to the rifle. Both have pros and cons. One thing I liked about the brake mounted as compared to the direct base is it can be mounted and taken off with a common wrench in the event it seats during firing. I set each with about 10 inch pounds. I recommend anti-seizing compound be applied prior to installation of either. I like the concept of the direct thread mount but I believe a different tool would be more practical. Perhaps something similar to a spanner wrench to install and remove the direct thread base.