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Terminal Bullet Performance

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**RIP**

one of us

posted 30 January 2010 03:57

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Not magic,  
just the way it is.  
I better build a 1:10" twist .458 B&M  
and compare that to a 1:20" 45-70.  
Should be even more better.

Posts: **28032** | Location: **KY** | Registered: **09 December 2001**

**capoward**

One of Us



posted 30 January 2010 04:11

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quote:

Originally posted by Michael458:  
Now, please RIP, Jim, IBT, Boom, Glenn really, am I just being too simple with this twist thing? What am I missing? I mean honestly I really could be, it's all about stability to me, and makes good common sense to me, but I don't know anything about twist rates, hell I don't even know half the twist rates of my rifles for sure! I know the 500s! And after TWO SHOTS I made a decision to CHANGE EVERY SINGLE .500 made to 1:12 twist rates, and I promise that is not one rifle, but many rifles! All based on TWO SHOTS--NOT ONE. Pretty damn easy to see if you ask me!

Michael,

I've drafted a couple of fairly lengthy responses to this question, but I'll suffice it to say this, "Modern FN and expanding brass and copper bullets are changing perceptions that have existed for more than 100 years. One either approaches this with an open or closed mind. I approach your efforts with an open mind and hope that you don't let the closed minded individuals interrupt your efforts.

Myself, I could care less what scientific equation proves or disproves the impact of twist rate to bullet performance in your test mix in your laboratory environment or in your follow-up test against game animals in a hunting environment.

If it works, it works...that's what I care about...even if the equation says it doesn't.

Keep the faith, keep up the good work. Take a few days off to rest and then give us some more good stuff!

Jim   
"Life's hard; it's harder if you're stupid"  
John Wayne

Posts: **4954** | Location: **Central Texas** | Registered: **15 September 2007**

quote:

Originally posted by RIP:  
Jim,  
Alf will not accept the observation for consideration, until it has been verified by repeated similar results. Get the sample size up to at least 95 percent confidence interval. It may take 10 shots with the Barnes Buster in both the 20" twist and the 14" twist. 20 shots total. Get statistics book out and analyze for needed sample size. Only then will you get Alf to try to explain it by "wound ballistics theory and practice."  
My take is that the eggheads do not understand everything about twist and penetration. Not magic, just m  
np

That is what I have been encouraging Michael to do but there is another consideration and that is the standardizing of all test procedures and components except for the variable. I'll save Alf the time in responding. LOL

465H&H

465H&H



quote:

Originally posted by RIP:  
Jim,  
Alf will not accept the observation for consideration, until it has been verified by repeated similar results. Get the sample size up to at least 95 percent confidence interval. It may take 10 shots with the Barnes Buster in both the 20" twist and the 14" twist. 20 shots total. Get statistics book out and analyze for needed sample size. Only then will you get Alf to try to explain it by "wound ballistics theory and practice."  
My take is that the eggheads do not understand everything about twist and penetration. Not magic, just the way it is. I better build a 1:10" twist .458 B&M and compare that to a 1:20" 45-70. Should be even more better.

Rip,  
I totally understand. Reminds me of an argument I had about 10 years ago with 5 individuals all having degrees relating to statistics. Me, I don't.

Argument related to this:

The statisticians including their immediate supervisor were adamant in their stance that the work my office had performed over a nine month period was not statistically valid because we had not utilized the recognized sampling methodology from which to draw our conclusions. And further more that we could not claim that our conclusions had a 100% confidence level.

My stance, I didn't care what they said. I'd directed my office to review 100% of the cases therefore our conclusions had a 100% confidence level regardless of whether we'd utilized a statistically valid sampling methodology or not.

It took their lead contracting officer to get involved to finally admit that yes, since we'd performed a 100% sampling rather than their 3% statistical sampling that they'd have to agree that our finding were 100% accurate.

The statisticians couldn't see the results beyond the process. Myself, I was only interested in the results regardless of the process efforts.

Statistical data methodology and sampling size; I'll leave it up to Michael as to whether he wants to expend the time, effort, gunpowder, bullets, primers, and most especially the paper products mix to fire a 10 shot sampling each of the 400gr Barnes Buster from his 14" twist rate 458 B&M barreled rifle and his 20" twist rate 45/70 barreled rifle.

In the meantime, I'll accept Michael's efforts for what they've already demonstrated; .458 caliber 14" twist is better than .458 caliber 20" twist rate barrel for straight-line penetration results with an identical bullet and virtually identical muzzle velocity.

And yes I also agree, a 10" twist rate will be much better than the 14" twist rate and I'll completely ignore the 20" twist rate.

Jim  
*"Life's hard; it's harder if you're stupid"*  
John Wayne



Hey Boys, got a couple of new "lurkers" to venture out!



Welcome Phatman! Welcome Andrew!

Hi Guys!

Good to have you! Thanks for joining in.

Glenn

We'll just damn the torpedos full speed ahead!

Michael states that in his small bit of experience with twist rates He says that a faster twist does in fact "STABILIZE" the bullet during terminal penetration!

Anything else I would say would be a lie, can't do that? The above is a true statement to the best of my knowledge and experience.

Time of course will prove this out, not theory, not to me, simple fact. While if conducting true "scientific" tests, yes, we would need to shoot many more bullets, 10 each as RIP suggests, probably being about right....Very true.

However, please keep in mind, we are skimming the surface of MANY aspects of terminal performance, not one or two, perhaps 100s before it is done! Look at the ground covered in only a few weeks? This, is yet another aspect we are looking at, skimming over. Now as we move along, time will sort this out. I have experience with the .500s and now today's little 458 tests with different twists and so far the faster twist rate is holding out. The end.

I don't have a horse in this race. I could give a crap about twist rates as long as I get what I want, straight deep penetration. It seems to me, the faster that twist rate is, that's what gets me to where I need to be.

Alf, I don't care about wound ballistics, that is not the issue, and to be quite frank with you, probably most of the wound ballistics you may be speaking of are not pertaining to what we are doing anyway. Most of what you may be speaking of is handgun, military type projectiles and really has little to do with Big Bore rifles and solid flat nose or round nose projectiles. Do you have material done on wound ballistics directly related to Big Bore rifle projectiles, flat nose or round nose profiles? .308 caliber does not qualify, nor does spitzer profile bullets, and BC has no home here either. Handgun wound ballistics is useless here in this discussion. I personally have no knowledge of anything that would "DIRECTLY" relate to what is being done here, or even discussed? Of course, the "FOUNTAIN OF ALL KNOWLEDGE" does not flow from my lips alone. Just that I have no knowledge or have never seen any "wound ballistics" that would relate to this arena of "big bore" rifles? Certainly I would like to see such?

Now, please. Remember when I started this discussion, might want to go back and read the very first post again!

If I really had to prove twist rate, without doubt, shoot 10 each in the 45/70 and the 458 B&M. I know the outcome already, I know what I do here. The problem is this, I have many many many other things that I can spend my time on proper with other bullets that need much more than proving a point about twist rates. Think of how much paper and time I chew up doing that, the outcome being the same time after time. This would be a tremendous waste of assets that can be used in other areas of greater import!

465HH, While your opinions are extremely important and very valuable not only to me, and to everyone here, do keep in mind this, I am not trying to sell anything, I am not doing a book, nor an article, nor published anything in anyway. I state nothing except what I see and do, I do this for myself, my own satisfaction. My test medium has been standardized since 2005, and results are pretty damn close from test to test. Of course there are anomalies from time to time, but I have shot enough to recognize those. It is a tremendous undertaking just doing it the way I am, I have a ton of chewed up print right now, has to go out. I am trying to cover as much ground as possible, and do a lot of things. I can't really see getting tied up on any one thing over and over, especially knowing the outcome, and using that time elsewhere on something more important.

If my goal was to prove twist rates, then by god I would prove it, but it's not really worth all the effort. As far as I am concerned it's a moot point. It's proven. And for gods sake, it's about stability, seems to me any one with two cents worth of noggin could get that, without having to prove it "Scientifically" by testing, over and over? Yes, it would be best to shoot say 10 samples each. But guess what, even with all that effort, that work, that time, there would be someone that would say, "This is no good, you must shoot 20 bullets each".

I can load and shoot 100 round nose woodleighs 416-458-470-510 caliber, and in this medium they are going to veer off course time after time after time until the end of time! I never seen one not! Same with the old Barnes round nose. It's a fact, like it or not, work in the field or not, this is the way it is and will always be, in this medium!

Faster twist rates in every test with solids I have done, mostly in .500 caliber looking for straight penetration, faster twist rates have given straighter deeper penetration. Why would I change the twist rate from 1:18 to 1:12 on the .500s? Not talking about 1 or two rifles here!

Now to begin with, would someone tell me exactly what the hell the issue is??? Is there some kind of "Devotion to a twist rate"? Does it piss someone off because I tread on "their own personal twist rate"? I am lost, I don't get it? Who cares? I don't, long as it works!

For all those who want me to PROVE something, and really want me to shoot 10-20-or a 100 in a test, I will by god do it!!!!!! But you can pack your damn bags, and get out of your damn lazy ass chair, and you can come help me do it! I will do the shooting, and you can deal with the chewed up mess I leave behind! And until there is something "WORTH" proving, then forget about it!

Like dealing with my damn kids or something!

Michael

<http://www.b-mriflesandcartridges.com/default.html>

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Posts: **8426** | Location: **South Carolina** | Registered: **23 June 2008**



**michael458**  
One of Us



posted 30 January 2010 04:46

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And I ain't through just yet either!

A special note for 465HH! If you get in your damn truck and head this way, then go by Texas, pick up your translator, and load the back of the truck full of sake by the time you get here. I shoot a lot better after about a quart of good sake, and then you have to keep me at that exact level, one way or the other off the fence the shooting goes to hell. In addition to that, if you are a good boy, I will have some proper .465 caliber bullets made up for you, that will work better for you.



Don't come here without the sake!!!! 😊

I can carry on eh?

Michael

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Posts: **8426** | Location: **South Carolina** | Registered: **23 June 2008**



**michael458**  
One of Us



posted 30 January 2010 04:47

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It's no wonder half of you don't read my posts, way too long! Good God! It's just I am a gifted typer is all!

Michael

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Posts: **8426** | Location: **South Carolina** | Registered: **23 June 2008**



**ALF**  
one of us



posted 30 January 2010 04:49

[Hide Post](#)

.

Posts: **7852** | Registered: **16 August 2000**



**michael458**  
One of Us



posted 30 January 2010 04:51

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Alf

OK I did not say you could leave! Where you going? Getting the sake maybe, picking up 465HH along the way?

NO, I will not allow you to take your leave!

Michael

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Posts: **8426** | Location: **South Carolina** | Registered: **23 June 2008**



**michael458**

One of Us



posted 30 January 2010 04:51

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Alf

Paper covers Rock!

<http://www.b-mriflesandcartridges.com/default.html>

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Posts: **8426** | Location: **South Carolina** | Registered: **23 June 2008**



**michael458**

One of Us



posted 30 January 2010 04:54

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Alf

ChickenSh0T!

Come on Alf, I was just funning!

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Posts: **8426** | Location: **South Carolina** | Registered: **23 June 2008**



**RIP**

one of us



posted 30 January 2010 05:11

[Hide Post](#)

Michael,  
Does this mean you are not going to calibrate  
each new batch of test media  
by shooting it with  
a BB gun?



Posts: **28032** | Location: **KY** | Registered: **09 December 2001**



**michael458**

One of Us



posted 30 January 2010 05:11

[Hide Post](#)

OK well looks like Alf is a ChickenShot! Gone! Don't worry,he will return if for no other reason to torment me! HEH!

I got one for you! I have been on the range all day, neighbor comes by with a gamo pellet rifle he bought from bass pro. He has the scope mounted, gamo scope, and a laser on top of that. Tells me he can't get it sighted in. OK, let's see, shoot one, can't see it, shoot two, find the little hole, look back at the scope and the cross hairs cocked over to one side, bottom kicking over to the right??? OK, neighbor must not have had the scope on tight. Loosen screws, straighten cross hairs. Shoot about 4 shots, CROSS HAIRS, kicked over to the right again????? Ok, it's broke, take it back to bass pro, get another one! Comes back tonight, new gamo in hand, new gamo scope, nice and tight, cross hairs straight up and down! Shoot 4 times, cross hairs kicked over to the right again???

Damn if I know? Never seen anything like that? Don't have a clue? Two broke scopes?  
Michael

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Posts: **8426** | Location: **South Carolina** | Registered: **23 June 2008**



capoward  
One of Us



posted 30 January 2010 05:27

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Michael,

Well your post, or posts I should say, eliminated the diatribe I was ready to spew forth. Thanks.

Twist rate? Thanks for running the 14" vs. 20" twist rate with the 400gr Barnes Buster for me. Yes I raised that ugly head; but sure didn't know it'd step on so many sensitive toes out there.

Me, I agree with Rip, if a 14" twist rate was better than a 20" twist rate then a 10" twist rate must be even better in the .458 caliber! Yep, I agree with that opinion regardless of scientific equations proving otherwise.

Keep the faith, keep up the good work! And don't freeze you yahoo off when the storm hits this weekend!

Jim 

"Life's hard; it's harder if you're stupid"  
John Wayne

Posts: 4954 | Location: **Central Texas** | Registered: 15 September 2007



michael458  
One of Us




posted 30 January 2010 05:36

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quote:

Originally posted by RIP:  
Michael,  
Does this mean you are not going to calibrate  
each new batch of test media  
by shooting it with  
a BB gun?



Now you gonna start something too? You are not going to believe this! I don't have a BB gun! 

And from the looks of that scope on the gamo thing, I don't want a pellet gun neither!

Could calibrate with a spear maybe? Throwing stars? I don't have those either!

I know! My Samurai Sword! That would do, but I am a little scared of it!

Swear, good story, try to be short. I can laugh at myself, but my god I am glad there is no video of this!

OK, all my life, wanted a real Samurai Sword! A few years ago my lovely (young) wife found one for my birthday! Real deal, very nice, pretty good condition too. Blade needed some sharpening and polishing, but it was mostly in excellent condition. I have a buddy, same one that cuts my brass for me, he's good with this sort of thing, so he cleaned, sharpened, polished, got it right!!!! So he brought it to me and we rubbed it a bit, he left, I am alone in the building here ok. So I am practicing my "Samurai Moves" (I saw it on tv ok) and I am looking pretty good, back and forth, that big blade slicing through the air! OK, get the picture? All the sudden I feel this wetness above my ankle, I look down and sure enough I had cut my fool self with this thing! I was pouring the blood everywhere. Damn thing was so sharp I did not even feel it! Well, cleaned everything up, made sure no one was around, and put that deadly dangerous thing away before I really hurt myself, or someone else! It was hilarious, I really am pleased no one actually saw this!

While it might be good to calibrate with, I think it's safer if it stays on top of the shelf, locked away in the gun lab!



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Posts: 8426 | Location: **South Carolina** | Registered: 23 June 2008



**michael458**

One of Us



posted 30 January 2010 05:39

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Hey Boys! Man what a fun day. Good shooting all day! But, like most good things, the night time comes! With that, I must retire to get started another day! I doubt I get much shooting in tomorrow, have to devote some time to Momma! Heh!!!!

But all next week my no shooting buddy from Ohio is here, we will be shooting something every single day, count on it!

But I will be up and at it in the morning, so I leave it to all you fine gents out there and I am sure you can handle things in my absence!

Thanks!!!

Michael

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Posts: **8426** | Location: **South Carolina** | Registered: **23 June 2008**



**MikeBurke**

One of Us



posted 30 January 2010 05:40

[Hide Post](#)

The lumber arrived today for the test box, my lovely wife picked up a huge load of newspaper, I am loading 470 Nitro with woodlieghs and hope to start testing on Sunday. Maybe the northforks will be in on Monday. I will run a separate thread but you guys will have to be nice, I am not that smart but will report my findings.

Posts: **2939** | Registered: **26 March 2008**



**capoward**

One of Us



posted 30 January 2010 06:12

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Hey Mike,

Welcome to the thread. Are you planning to replicate Michael's bullet box and paper media mix? I look forward to reading the results of your test efforts.

Jim

*"Life's hard; it's harder if you're stupid"*  
John Wayne

Posts: **4954** | Location: **Central Texas** | Registered: **15 September 2007**



**MikeBurke**

One of Us



posted 30 January 2010 06:18

[Hide Post](#)

Basically the same as Michael.

A while back I posted all you need to do is buy a box of Woodlieghs, load em up, practice alot, go kill an elephant. I did just that.

But there are plenty of things for me to learn. I will run test with solids first and then softs, all with the 470.

Another thing that spurred this testing was on another forum it was posted that solids at 16-1700 will out penetrate solids at 2150. I will prove the truth for myself.

Posts: **2939** | Registered: **26 March 2008**



**I Bin Therbefor**

One of Us



posted 30 January 2010 07:30

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"OK, all my life, wanted a real Samurai Sword! A few years ago my lovely (young) wife found one for my birthday! Real deal, very nice, pretty good condition too. Blade needed some sharpening and polishing, but it was mostly in excellent condition. I have a buddy, same one that cuts my brass for me, he's good with this sort of thing, so he cleaned, sharpened, polished, got it right!!!! So he brought it to me and we rubbed it a bit, he left, I am alone in the building here ok. So I am practicing my "Samurai Moves" (I saw it on tv ok) and I am looking pretty good, back and forth, that big blade slicing through the air! OK, get the picture? All the sudden I feel this wetness above my ankle, I look down and sure enough I had cut my fool self with this thing! I was pouring the blood everywhere. Damn thing was so sharp I did not even feel it! Well, cleaned everything up, made sure no one was around, and put that deadly dangerous thing away before I really hurt myself, or someone else! It was hilarious, I really am pleased no one actually saw this!"

Now you know why my wife will only permit me to own a Deluxe White Oak Bokken. Even that is labeled with a warning "use and misuse of martial arts weapons involve serious risks . . ." By the by, Jason, on Orange County Choppers, is apparently a student of the Way of the Sword. The other night the boys in the shop were pitching a base ball at him while he neatly cut in half and then again! Not known to many, but many of the the soldiers and many of the famous samurai used oak swords



Posts: **404** | Registered: **08 May 2005**





**someoldguy**  
One of Us



posted 30 January 2010 07:32

[Hide Post](#)

quote:

And what do you get when you multiply rpms and torque? You get horsepower!

Actually, that's not horsepower. To get horsepower, you have to divide rpms times torque by 5252. Sorry, I was just giddy with the excitement of discovery. 🌐

Actually, there's not much rotational horsepower to a bullet. If you take the example of the 510 grain .500 inch bullet, the "torque" would only be about .003 ft-lbs. The rpms would be 129,000 rpms for a bullet of about 2150 fps. Multiplying and dividing, the "horsepower" would be at most .075. (I've never estimated the horsepower of a bullet and I may have miscalculated.)

So not much to get excited about there.

-----  
Glenn

Posts: **942** | Location: **Alabama** | Registered: **16 July 2007**



**Macifej**  
One of Us

posted 30 January 2010 10:51

[Hide Post](#)

HP = (Disp x Bmep x RPM)/396,000

Posts: **13301** | Location: **On the Couch with West Coast Cool** | Registered: **20 June 2007**



**someoldguy**  
One of Us



posted 30 January 2010 12:24

[Hide Post](#)

quote:

HP = (Disp x Bmep x RPM)/396,000

Hi, Macifej!

Believe it or not, the formula that I gave and this formula intertwine so that they are exactly the same thing. (I could show you if you're interested, but not in here.) But I'm not certain how to apply this to a bullet, other than what I said. Since a bullet is roughly a cylinder, I could use the bullet length. However, the bullet length is implied by the twist rate, which I've already used.

Anyway, other than the rpms, the quantities involved are too small for a bullet to make much horsepower, rotation wise. At least that I can see.

However, if you use the sectional density (in pounds per square inch) as the bmep (brake mean effective pressure), and the displacement (bullet area times bullet length, giving cubic inches), something interesting happens. The bullet cross-sectional areas cancel out and you are left only with the bullet length times the bullet mass and the rpms, divided by 396,000. But the length (in feet) and the mass (in pounds) would be so small that the "horsepower" developed would still be miniscule. The load applied (resisting force of the target) would effectively "stall" the rotation of the bullet. However, this does not necessarily negate the importance of the twist rate, since the twist rate implies bullet length. It could be bullet length that is the main concern, rather than the twist rate itself. Food for thought, anyway.

-----  
Glenn

Posts: **942** | Location: **Alabama** | Registered: **16 July 2007**





michael458

One of Us



posted 30 January 2010 12:51

[Hide Post](#)

IBT

Oak Swords! HmMMM? I wish I had thought about that before! But I just don't think it would have been the same as swinging the "steel" and feeling the weight behind it!  
My man did one fine job on getting it sharp and looking good! WOW! Wonder how deep that would penetrate the box? I suppose it would depend on the velocity, and the twist rate of my thrust? 😊

Good tip! Pun intended!

Michael

<http://www.b-mriflesandcartridges.com/default.html>

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Posts: **8426** | Location: **South Carolina** | Registered: **23 June 2008**



michael458

One of Us



posted 30 January 2010 13:03

[Hide Post](#)

Mike

Excellent! I welcome the help. Starting with 470 will be good, you know I am a little put off on 470, but I don't trust my Capsticks and the barrels on my Winchester, and the undersized bullets I have in 470. If I were to ever bring the 470s out and consider them in the field (I won't now because of the B&Ms) I am sure I would have to have some bullets made for them.

Unless you want to be different or something, you are more than welcome to post all results here? We work this together?

You are to be commended highly I think! Take the bull by the horns and find out yourself! Just remember, there are those who will say "the truth is not really the truth". But there are many more, like myself, that will be able to learn from your efforts and mine, so that makes it all worth while in the end!

Once RIP is up and running again, there will be 3 of us testing, there will be no limits to what we can accomplish!

My vote goes to Mike and I sharing this thread, and later joined by RIP when he is up and running! All posting results together!

Michael

<http://www.b-mriflesandcartridges.com/default.html>

The New Word is "Non-Conventional", add "Conventional" to the Endangered Species List!  
Live Outside The Box of "Conventional Wisdom"

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Posts: **8426** | Location: **South Carolina** | Registered: **23 June 2008**



someoldguy

One of Us



posted 30 January 2010 13:57

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quote:

It could be bullet length that is the main concern, rather than the twist rate itself.

To paraphrase Dan Ackroyd on Saturday Night Live:  
"Glenn, you ignorant slut!" 🤔

If you're going to use rpms, then you cannot discount the twist rate **at all** because the twist rate is also how you determine the rpms.  
Okay, so I'm on board now.



Glenn

Posts: **942** | Location: **Alabama** | Registered: **16 July 2007**



**someoldguy**  
One of Us



posted 30 January 2010 14:20

[Hide Post](#)

quote:

Once RIP is up and running again, there will be 3 of us testing, there will be no limits to what we can accomplish!

I'd like to see at least one test of RIP's .395.  
He and several others got me interested in this new/old development several years ago.

-----  
Glenn

Posts: **942** | Location: **Alabama** | Registered: **16 July 2007**



**I Bin Therbefor**  
One of Us

posted 30 January 2010 19:11

[Hide Post](#)

quote:

Originally posted by Macifej:

quote:

You have made a tougher test than any ele skull.

Affirmative!

Made some all copper SHARRC FN's for a DR customer a while back. .585" x 750 Grain. While regulating various loads, a 1/4" steel backstop was used behind the target at 25 yards. The FN's punched clean holes through the steel plate like butter. If Babar wore a helmet he'd still be toast.

During the Civil War Between the States, John M Brooke of the Southern Conf ran some tests to see what shape would best penetrate the sides of the iron clads then coming into service. The flat nosed shell shape won hands down. He likened it to the shape of the punches being used to put holes into

steel plate for the rivit holes. Round balls just bounced off.



Posts: **404** | Registered: **08 May 2005**



**465H&H**  
One of Us

posted 30 January 2010 19:12

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Michael,

I would love to come visit and shoot some of your smaller cannons! But since my budget is limited I prefer to spend it chasing elephants. I'm sure you will understand that. guess you will have to find someone else to quench your thirst for sake.

I guess my feeling is that you have an oppurtunity to prove one or more of the points of contention here to a standard that cannot be argued against based on scientific principles. Seems like a lost oppurtunity not to.

465H&H

Posts: **5686** | Location: **Nampa, Idaho** | Registered: **10 February 2005**



**michael458**

One of Us



posted 30 January 2010 21:03

[Hide Post](#)

quote:

Originally posted by 465H&H:  
Michael,

I would love to come visit and shoot some of your smaller cannons! But since my budget is limited I prefer to spend it chasing elephants. I'm sure you will understand that. guess you will have to find someone else to quench your thirst for sake.

**I guess my feeling is that you have an opportunity to prove one or more of the points of contention here to a standard that cannot be argued against based on scientific principles. Seems like a lost opportunity not to.**

465H&H

465HH

I was hoping to fool you into a visit! Even if I supply the Sake? No I understand totally and completely of how to spend the budget with the most bang!

Oh my, that part about proving the point, that's some really good psychology you are using on me! You are playing me like a fiddle my man! My big question is this, Do you really and truly believe if I do this that it cannot be argued against? I am very seriously considering biting the bullet (pun intended) on this one! But will it actually prove it beyond all doubt? Or is there an alibi waiting for me after I do all the work involved?

How many bullets each for the 45/70 and the 458 B&M--same velocity same bullet (400 Barnes Buster of course). 5? 10? 6? Each. What if I do 5 and the results are the same each time or close?

IBT

Excellent point! Good info!

Michael

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Posts: **8426** | Location: **South Carolina** | Registered: **23 June 2008**



**Phatman**

One of Us



posted 31 January 2010 02:28

[Hide Post](#)

I would gladly donate my back and my shovel to the cause if you were about a thousand miles closer.

Hell, I'd even bring your drink of choice if you would test Rob's 12 ga From Hell with the big brass bullets of his...lol

Cheers, John

Give me COFFEE and nobody gets hurt

Posts: **1608** | Location: **San Antonio, Texas** | Registered: **04 January 2010**



**DWright**

One of Us



posted 31 January 2010 05:08

[Hide Post](#)



Posts: **1324** | Location: **Oregon rain forests** | Registered: **30 December 2007**



RIP  
one of us

posted 31 January 2010 11:35

[Hide Post](#)

Michael,  
Duncan MacPherson bemoaned a 5-shot string with one test as not inspiring confidence. He seemed to prefer 10 data points much better.  
Sorry to say, I know what a bunch of work your testing is.  
To really analyze the data for predictive value, or confidence interval, you need the means of the two values, variance, standard deviation, blah, blah, blah.  
I may have aced statistics courses over 30 years ago (engineering and business courses at U.K. and F.S.U.) but I have forgotten most of it and would fall asleep trying to look up the tables and formulae. Maybe Alf will come back for help with that. 😊

I gotta build a .458 B&M, with 10" twist, and try to do 10 shots of 10" twist with that, and 10 shots of 20" twist with my 45/70, both with 400-grain Barnes Busters around 2000 fps ... in wet print. I figure to squeeze in 6" of newspaper and 2" of glossy magazine (JAMA, Journal of the American Medical Association, finally useful), 8" compartments, waterlogged, times 10 in a train. The more the merrier with sample size.  
Then analyze the data.

Interesting passage from the Duncan MacPherson book, pages 142-143 of **BULLET PENETRATION**, Chapter 7, **Bullet Expansion Analysis and Testing**:

#### Effect of Sectional Density

"An increase in initial (undeformed) bullet sectional density will cause equivalent expansion at lower velocity. Greater expansion occurs at the same velocity because the decelerating forces must act for a larger time interval to reduce the bullet velocity (the decelerating force and the stagnation pressure causing deformation are highly correlated). This effect can also be quantified analytically in principle, but is complex because equal bullet distortion requires an equal force integral over position (of the distorted bullet surface), whereas a changed sectional density changes the force integral over time. The relationship between distorted bullet surface position and time is difficult to model. A very crude analysis shows that a 20% increase in sectional density would lower the velocity for equivalent expansion by 5%. ...  
... More extensive testing is required for reliable quantification, but this was not done as part of this study, and no such test results by others are known to the author."

Letter Rip

Posts: **28032** | Location: **KY** | Registered: **09 December 2001**



someoldguy  
One of Us



posted 31 January 2010 15:36

[Hide Post](#)

quote:

"An increase in initial (undeformed) bullet sectional density will cause equivalent expansion at lower velocity."

I admit that I had a blond moment when I read that sectional density drives expansion and I halfway disagreed. Of course, this makes perfect sense, now that I've had time to think about it.

OK, I'm on board now. 😊

-----  
Glenn

Posts: **942** | Location: **Alabama** | Registered: **16 July 2007**



**michael458**

One of Us



posted 31 January 2010 16:31

[Hide Post](#)

Phats!

I might have to make a run to the newspaper plant for that! Probably about 1 shot per BOX!

RIP

Yes, I had hoped I could slip by with 5 each! Of course 10 is better, then again, 20 each would be twice as good eh? And so on! I am thinking on it. I am thinking I might could be talked into doing 5 each for our purposes and see. This seems to be a good bullet to do that with too.

I think Alf has taken his leave, I am sorry to say! Maybe it's my sense of humor? I think his frustrations with me was "more than he could bear?" I know he's out there watching! Might as well come back Alf!

If I do 5 and satisfied with the results, and the results are consistent?

The "Effect of SD" explains exactly the situation I had with the ever increasing weight and therefore SD of my .500 copper HPs! The heavier I went, the less velocity it took to shear the petals! When at first I was thinking in only 1 dimension!

Glenn

Follow with us my man, try not fall off the board again!   
But if you do, don't worry, I fall off sometimes too!

Now I must put some thought into this weeks shooting, have a "yankee" buddy of mine arriving this evening and must entertain him all week, of course he makes a decent paper man, maybe?

Michael

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Posts: **8426** | Location: **South Carolina** | Registered: **23 June 2008**



**465H&H**

One of Us



posted 31 January 2010 18:16

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Michael,

My suggestion is to do 5 of each meplat size. Then we can look at the variance of the samples and if there is overlap, we can make an estimate of the number of additional rounds needed to get statistical significance. As far as some people arguing with the results, that is a given. Some on here will argue with Einstein. or the bible.

But be sure to talk to me before you run the tests so we can be sure to eliminate the other variables.

465H&H

Posts: **5686** | Location: **Nampa, Idaho** | Registered: **10 February 2005**



**RIP**

one of us



posted 31 January 2010 20:53

[Hide Post](#)

Yep,  
465H&H is your statistician.  
However I suspect his hearing trouble diminishes his speech discrimination, and he is past the point where a hearing aid helps.  
Hard to read lips over the telephone.  
Hence the need for an interpreter from Texas.  
Does he sign or lip read the high-volume, exaggerated mouthing of the Texan?  
Something about elephant hunting with double rifles and lack of hearing protection ... 😊

Posts: **28032** | Location: **KY** | Registered: **09 December 2001**



**I Bin Therbefore**  
One of Us

posted 31 January 2010 23:22

[Hide Post](#)

quote:

Originally posted by michael458:  
RIP

It is the ONLY use I have seen for a WSM anything! 50-458-416-9.3 B&M! Best of show? All of them! 458 is damn hard to beat. I have a couple in 20 inch barrel, a couple in 18 inches, and have a 1885 with 24 inches. It's proven to be quite a nice fit, excellent small short platform, plenty of good bullets, plenty of case, zero issues. 458 B&M is hard to beat. I had no idea you were shopping! When you are ready let me know how I can help out!

A good goose is hard to beat! 🍷🍷🍷  
Michael!

416 Kilimanjaro is a wildcat by Kilimanjaro on the 325 WSM. claims are: "This Rifle is chambered in our very special "416 Kilimanjaro" cartridge developed from the 325WSM, and provides equivalent power and ballistics of the 416 Rem. in a shorter, lighter action with less felt recoil." 🍷🍷🍷

Posts: **404** | Registered: **08 May 2005**



**RIP**  
one of us

posted 01 February 2010 00:53


[Hide Post](#)

While off on the WSM tangent, does SSK have to pay a royalty to Rick Jamison whenever they chamber a 9.3, .416, .458, or 50 B&M rifle barrel?  
What about the me-too .416 Kilimanjaro?  
How far does Rick Jamison's 300 WSM crook reach? 😏

I have a mind to try a .500 MDM on that 300 RUM M70 lying fallow, just to totally fly in the face of good wildcat design principles.  
Surely Rick Jamison has no claims on that one.

As for twist on the 500 MDM, or anything from .375 to .510 caliber:

1:12" TWIST is very magic.

That way the revolutions per second of the bullet is the same numerically as the MV in fps. 

Posts: **28032** | Location: **KY** | Registered: **09 December 2001**



**michael458**  
One of Us

posted 01 February 2010 01:01

[Hide Post](#)



50-458-416-9.3 B&M, 500 MDM all based off the RUM case.

Michaels says Rick Who?

.500 caliber, Rick Who?

Michael

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Posts: **8426** | Location: **South Carolina** | Registered: **23 June 2008**



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