



2009

# Head-2-Head Blind Bow Test

Produced and Sponsored by



Performed by Jon Silks

Silks Outdoors

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## 2009 H2H INTRO

Welcome to the 2009 Head2Head Bow Test. We have been at this for 7 years now and as happens with other worthwhile products others have copied Bowsite's test. In 2003 there was no other test that took many of the top rigs and put them up against one another for a real comparison, however, by 2005/2006 there were several. As they say, "Imitation is the ultimate form of flattery." Still, we are set apart through our methods and integrity. Brand loyalty is held at bay through blindfolds while rules and methods are followed strictly and all companies are placed on exactly the same playing field.

In past years we have ranked all of the bows from 1<sup>st</sup> through 9<sup>th</sup> (8<sup>th</sup> the first few years) using various methods. We started out with sort of a bracketed tournament type test and moved into a complete 1<sup>st</sup> to last elimination in the last few years. I think the full elimination method is the best and will stick to it, however, for the second year I have decided to only post the top five for each individual category and overall results. This is done to protect the companies and individuals that are represented by a bow that find themselves toward the bottom of the rankings. Consider things from the manufacturer's point of view. Nobody wants to bust their tail creating a bow and then have it come in 9<sup>th</sup> place out of 9 bows. In past years I tried to explain to you, the reader, and to the manufacturers that 9<sup>th</sup> place isn't a bad thing when you consider these are probably the best 9 bows in the business. There is a good chance that our number 9 bow would still be number nine if we tested 30 bows – then 9<sup>th</sup> wouldn't seem to bad, would it? Still, I struggled with it and in the end decided that it will be better for everyone if only the top five are posted. These are all quality bows worthy of a first-hand look should you be in the market for a new rig.

I have added another feature for 2009. For each bow you will see a completed force draw curve and associated information such as kinetic energy, dynamic efficiency, etc. In recent years I have worked with two skilled engineers to produce a force draw system with integrated software package – the Silks Outdoors Bow Analysis Program. While the system has certain automatic features and calculations we are in the process of upgrading it to fully automated.

What you will see this year:

- Pictures of each bow
- Specs for each bow
- Silks Outdoors Bow Analysis Program
- My personal commentary on each bow
- Individual category results
  - Draw cycle
  - Balance/feel
  - Shock/vibration
  - Shot noise
  - Speed
- Two overall results
  - Overall subjective (4 subjective categories combined)
  - Overall subjective plus speed

## H2H Prologue

For those that are new to the H2H let me explain how bows are selected for the test. A thread is started here on the Bowsite's national forum in which everyone is encouraged to register their single vote for the bow they want to see entered into the test. Only one vote per archer was accepted (as far as we know anyway) and only one bow per company was permitted entry into the test. Bows from the same family of companies are permitted to be entered. For example we would accept a Ross, Bowtech and Diamond bow into the test. They are all different companies with one common parent – Savage.

The most votes came in for the following rigs:

- Elite GT500
- Mathews Reezen 6.5
- Hoyt AlphaMax 32
- Bowtech Admiral
- Martin Warthog
- Diamond IceMan
- Rytera Alien X
- PSE GX

It has now become a tradition to enter one wild card into the H2H. It is my chance to select a bow that I believe would interest readers and provide some additional flavor to the test. This year's wildcard:

- Quest HPS 33

The whole idea behind the H2H is to, as best we know how, evaluate the **SUBJECTIVE** qualities of 9 bows – head to head. Many archers select a bow based on subjective traits such as the kick/vibration at the shot, how smooth it is on the draw, etc. A bow that is easy to draw, quiet, and generally shock free at the shot will many times win out over one that displays harsher characteristics. There is one **OBJECTIVE** factor that seems to come into play fairly often for those selecting their next bow – speed. For that reason we tested speed of each bow and used the results as part of our overall results.

The validity of the H2H subjective results lies with the method of testing – blindfolded archers evaluating bows without regard to brand or looks. We followed last year's strict rule in keeping the identity of the bows hidden until an evaluator had completed the entire test. And it absolutely works! Every year some of the evaluators try to guess the bow that they are holding and while they occasionally get it right they much more often get it wrong. Throughout the test we (me and the folks who help with the test) share a snicker under our breath when guys insist they are holding a bow that is lying on the table behind them. This year one guy got a big smile on his face and said, "I thought this would happen. I knew I would know some of these bows. I KNOW this is a Mathews I am holding." Nope – he was holding the Quest! I couldn't even keep my laughter quiet on that one. Understand, these bows are being shuffled in and out of the testers hands very quickly and from their perspective it is pitch black under the blindfold.

Although I will include my personal opinion about the bows in their individual write-ups the results are based solely on the eight evaluators and their selections in each category.

## Voting and Test Procedure

Choosing the eight bows for the Head2Head Bow Test is done through a voting process on **BOWSITE.COM**. The poll was conducted in the same manner as last year – that is, voters not only chose the manufacturer but they also chose the model to be tested. Here is the official voting thread posted on February 6<sup>th</sup> of this year:

**From:** [Jon E. Silks](#)..... Date: 06-Feb-09

Most of you have seen or at least heard of all the new bows on the market for 2009 so it time again for our official vote. Here are the rules:

• 1 vote per Bowsiter.

• 1 bow per post - if you vote for more than one bow your entire thread will be disregarded.

• No "extra" talk about the test procedures, bows, etc - if your post includes more than the name of a bow it will be disregarded. Please start a new thread for those discussions.

Following these rules helps us get an accurate count of the bows and keep track of those that have voted.

This is the only place that will be used to count votes - no PMs, emails, other posts, etc.

The bows that receive the most votes will be included in our tests.

Start voting...

As you can see from the post we rely completely on the Bowsite for our votes and eventual test bow lineup. Once the 8 bows are selected I add an additional bow as my "Wild card". The first year I picked a wildcard it ended up placing very well and only retailed for approximately \$399.00!

Subjective tests were conducted with each bow set to a 28" draw length and 65 pound draw weight. Why 28/65? Several reasons. First, a 28" draw length is more common than a 30" draw length according to many manufacturers polled on the subject. Finding a tester with a 28" draw length is much easier than finding one with a 30" draw length. The 65-pound draw weight is also very common with today's hunters and is easier to handle through the entire test.

Each evaluator worked separately through all four categories. A blindfold was used to keep brand loyalty at bay and was worn from the beginning to the end of each session (noise, kick, etc.). Evaluators were not permitted to see the bows until after they were done with their evaluation. Following is an example of how the testing was performed:

- Example of the "draw cycle" category process:
- The evaluator is blindfolded.

- He is handed a bow to draw.
- The bow is handed back to the helper and the evaluator is given a second bow to draw.
- He then chooses between the two.
- The one that is not chosen as “best” between the two is put through the same process with the next bow in line.
- Both are drawn and one is chosen.
- Again, the one that is chosen is put up against the next bow in line.

This process is continued until only a single bow remains. The bow that remains is the evaluator’s #1 pick for that category. That bow is then taken out of the testing. The entire process is completed again for the remaining eight bows until only one remains, which becomes the evaluator’s #2 overall pick for that category. This process is repeated until all 8 bows (9 with the wild card) have been placed/ranked.

Each evaluator’s results are then scored. This was done by simply inverting the numbers of the rankings and rewarding points for each ranking. Just as an example we will rate the bows arbitrarily for draw cycle (**this is just an example – not actual results**):

1. PSE
2. Quest
3. Elite
4. Hoyt
5. Martin
6. Diamond
7. Rytera
8. Mathews
9. Bowtech

The bows would then be given the following scores for one evaluator for the draw category:

- PSE – 9 points
- Quest – 8 points
- Elite – 7 points
- Hoyt – 6 points
- Martin – 5 points
- Diamond – 4 points
- Rytera – 3 points
- Mathews – 2 points
- Bowtech – 1 point

The points are totaled for all evaluators in each category. The bow with the highest number of total points in that category was rated #1 and so on down the line to #9. In this way we were able to get a true ranking for each category based on the results from all evaluators.

Speed is tested in the following manner (28/65 with 350 and 425 grain arrows):

- Just to make sure the bow is at least in the right ballpark the draw weight and draw length are roughly verified with Easton's Hand Held Bow Weight Scale and a simple draw length arrow correlated to a mark on the shelf equaling the deepest part of the grip. This saves me a lot of time if the bow is not close to the right draw length or draw weight.
- Brace height is tested using calibrated dial calipers
- Install New Archery Products Quik Tune 3000 Arrow Rest
- Set nock point
- Verify draw weight using a calibrated digital force gauge backed up with the Easton Bow Force Mapper (BFM) System handheld unit
- Verify draw length using my Silks Outdoors Bow Analysis Program, which is a combination of a custom software package, modified Apple Bow Drawing Machine, Chatillon force gauge, calibrated 36" steel rule and trammel point
- Mark cams at full draw
- Paper tune by hand
- Set bow on Spot Hogg's Hooter Shooter portable shooting machine – draw to cam marks and fire through two chronographs – Oehler and Easton. Both chronographs are equipped with indoor lighting kits.
- Speed is recorded from the average of 5 shots.

In the event that a bow that does not meet the draw length spec, either short or long, I will contact the manufacturer and get a module that brings them into spec or just get another bow altogether. **Strings and cables are not tweaked to bring a bow into spec.** The same goes for a bow that has "out of tune" cams– a term that is commonly used in referencing the timing, synchronization, etc of the bow's eccentric system.

## Disclaimers

Although the information found on this report is believed to be accurate and reliable, no warranty, expressed or implied, is made regarding the accuracy, adequacy, completeness, legality, reliability, or usefulness of any information, either isolated or in the aggregate.

While Bowsite.com is sponsored by some of the bow companies evaluated, no testing or commentary was performed by Bowsite.com. All testing and commentary is done by Silks Outdoors and independent of the site or anyone affiliated with them. Bowsite has no communication, nor do they see the results until they are completed and handed in at the conclusion of testing. Bowsite.com has maintained a strict, 'Hands off' policy regarding the H2H testing since its inception.

Maintaining the integrity of this test is what has made it so popular over the past several years. This is the top priority for both Silks Outdoors and Bowsite.com.

## 2009 H2H Evaluation Team

I cannot express my gratitude enough for those that volunteer their time and hard work to make the H2H possible! This test takes many hours and a ton of effort on everyone's part. This year we further changed the testing format to make it easier on the evaluators. In years past we would basically do the entire test in one session – an hours long grueling task. Two years ago we split the test up into 2 separate sessions making it much easier on the evaluators. Last year we further divided things up by performing two sessions per night at Yoder's Archery – one archer per session. Finally, this year we tested one archer per night. This makes it easier on the archer in terms of time commitment and also further isolates each tester – no talking between testers.

To all those listed below – **THANK YOU!**

- **Bryan Fultz** – This was Bryan's fourth year in performing the test. I generally do not allow repeat evaluators, however, Bryan and Todd (next on the list) are the exception. Bryan is a great friend and hunting partner. Bryan took the time required to be super precise in his decisions. He was very thorough. He made the comment, "This test is getting harder and harder each year because the bows are getting closer and closer in performance." Age: 39; Shooting since age 18; Animals hunted – whitetail, elk, mule deer and turkey; Currently shooting a PSE
- **Todd Jodon** – This is Todd's third year serving as an evaluator. Todd is also a great friend and hunting partner. This guy can work a turkey call. Todd is a "tell it like it is" kind of a guy, which is a great quality in a bow tester. Todd did not hesitate to ask to go over two bows several times if he felt that is what was needed. Age: 39; Shooting since age 10; Animals hunted – whitetail, elk, mule deer, boar, turkey and bear ; Currently shooting a Mathews
- **John Palm** – Another great friend, John Palm was an asset to the 2009 H2H. He was extremely thorough in his determinations and had his head in the game the whole time. John's son Kyle, who just entered the Marine Corps, uses the Hoyt from last year's test. John and I are diligently scouting for a big buck for Kyle's short leave at the end of basic training that coincides with our archery season. Kyle, if you don't get a big buck this fall I am going to blame it on your dad's treestand placement skills!! Age: 50; Shooting since age 20; Animals hunted – whitetail and bear; Currently shooting a Hoyt
- **Justin Wendorf** – Justin, is fast becoming a good friend. He is extremely passionate about the sport, has lifelong ties to a deep hunting heritage and is an accomplished shooter – finishing 8<sup>th</sup> in the country in 2001 and receiving All-American honors. Justin also does a great service as a deputy wildlife conservation officer for the Pennsylvania Game Commission. Age: 28; Shooting since 7; Animals hunted whitetail; Currently shooting a Mathews.
- The rest of the evaluators were previously unknown to me so I will simply share the basics:
  - **Matt Helm** – Age: 17; Shooting since age 4; Animals hunted – whitetail, bear and turkey; Currently shooting a Mathews
  - **Steve Helm** – Age: 50; Shooting since age 13; Animals hunted – whitetail, bear and turkey; Currently shooting a High Country
  - **Chad Smith** – Age: 34; Shooting since age 29; This will be Chad's first year of hunting; Currently shooting a Mathews
  - **Aaron Neideigh** – Age: 26; Shooting since age 21; Animals hunted – turkey and whitetail; Currently shooting a Reflex



2009 H2H Support Team:

As it has been in past years I have relied on several behind-the-scenes people to make this thing work. My main testing partner is my 13-year-old son Michael. This year Michael had some extra time on his hands to invest in the H2H as he found himself on a life flight helicopter early in the summer and was not able to do much for two months. He poured himself into the test and was a key player in making it happen. Michael knows and understands our testing procedures not only for this test but also for my Petersen's Bowhunting, Arrow Trade and Bowhunting.Net testing as well. I may just let him take over the test soon!



## Special Thanks

A very special **thank-you** is in order for these sponsors and friends!!

**Yoder's Archery** – A special thanks to Bill Yoder for allowing us to perform the speed testing at his indoor shooting lanes.

**Bowtech/Diamond Archery** for providing the Hostage Pro Arrow Rests used during the subjective portion of the H2H. These are great rests!

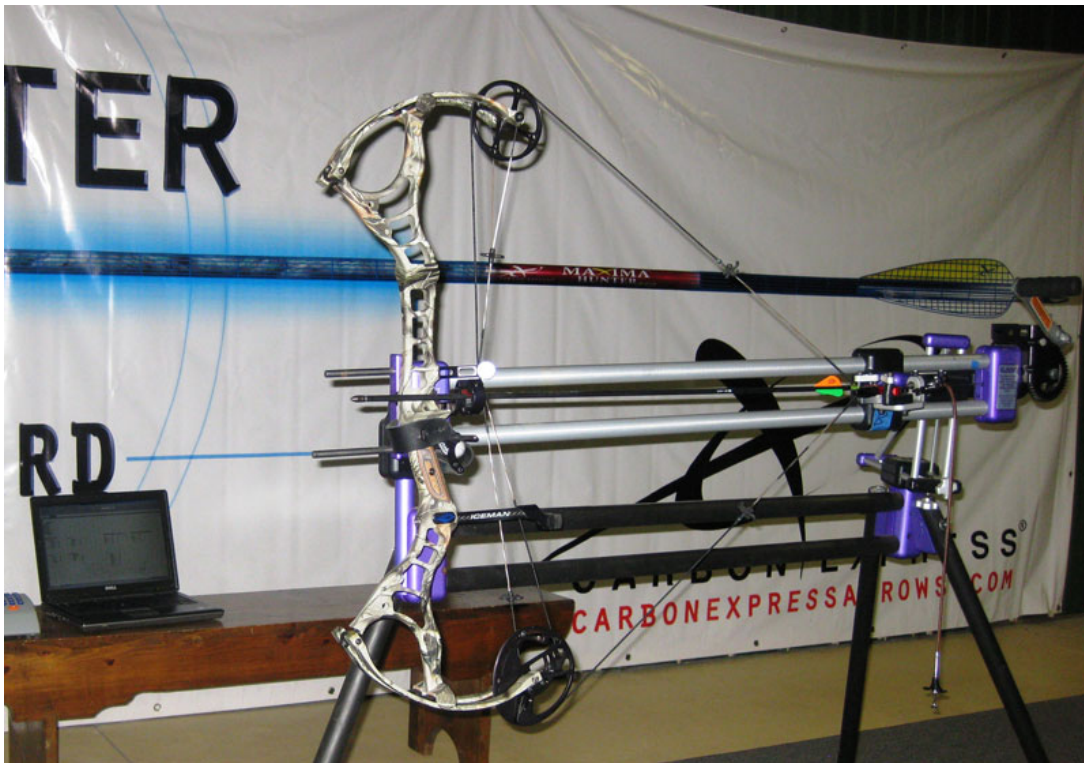
**Easton Archery** for providing their Bow Force Mapper System, Chronograph, and Grain Scales.

**New Archery Products** for providing QuikTune 3000 Arrow Rests for speed testing!

**Victory Archery** for providing the test arrows for this and all of my testing!

**American Whitetail Targets** for providing the huge bag targets necessary for blindfolded archers!!!!!!!!!!!!!!

And of course, all of the **manufacturers** who provided the bows for testing!!!



## SUBJECTIVE RESULTS



### Subjective Categories

**Noise Level**

**Balance/Feel**

**Shock / Vibration**

**Draw Cycle**

## Noise Level

One of the most sought after hunting bow characteristics is a low level of noise generated at the release. It has become a market obsession and the manufacturers have responded with parallel limbs, vibration dampening accessories of every sort and various machining features. Hunting rigs today are far quieter right out of the box than those just five years ago fully loaded.

*For this portion of the evaluation each tester was asked to sit in a different location and orientation related to the shooter's position. Their backs were turned to hide the identity of the bows. Results in this category:*

1	<b>Bowtech</b>	70
2	Diamond	65
3	Hoyt	56
4	Elite	40
5	Mathews	33

## Balance / Feel

The manner in which the grip of a bow naturally positions your hand and wrist is an important factor in attaining accuracy. Also, the feel of a bow in your hands can seriously affect your decision to buy a certain rig. A bow that meets your needs in some areas but feels like a block in your hand will likely be left on the shelf. **Results in this category:**

1	<b>Hoyt</b>	59
2	Mathews	50
3	Diamond	47
3	Bowtech	47
5	Martin	39
5	Elite	39

## Kick/Vibration

A special challenge exists with this category in that the evaluator has to concentrate extremely hard to separate the noise heard in their ears with the sensation felt in their hands. Many times when a bow produces a significant level of noise we mentally transfer that sound to our perception of the shock and vibration. The two do not always go hand in hand however. To help reduce the effects of this phenomenon the evaluators were asked to wear earplugs during the test. Results in this category:

1	<b>Diamond</b>	70
2	Bowtech	66
3	PSE	51
4	Hoyt	49
5	Quest	37

## Draw Cycle

The draw cycle of a bow plays a major role in our perceived enjoyment of shooting. It also keeps us going back to the practice range more often if we like shooting a particular bow. **Results in this category:**

1	Hoyt	72
2	Quest	58
3	Elite	47
4	Diamond	46
5	Mathews	43



## SPEED RESULTS

28" draw length / 65 pound draw weight

Make/Model	350 grain speed 1	350 grain speed 2	350 grain speed 3	350 grain speed 4	350 grain speed 5	avg	Rank
PSE GX	316.7	316.8	317	316.9	316.4	316.76	1
Rytera Alien X	300	300	300.3	300.6	300.7	300.32	2
Mathews Reezee 6.5	299.7	300.1	299.8	299.8	299.5	299.78	3
Elite GT500	298.3	299	298.4	298.5	298.3	298.5	4
Martin Warthog	298.3	297.9	297.9	298.4	298.4	298.18	5
Bowtech Admiral	287.5	288	288	287.9	287.8	287.84	6
Hoyt AlphaMax 32	286.2	286.4	286.5	286	285.8	286.18	7
Diamond IceMan	280.4	280.5	281	280.5	280.8	280.64	8
Quest HPS33	279.5	279.4	280.1	279.6	278.9	279.5	9

	425 grain speed 1	425 grain speed 2	425 grain speed 3	425 grain speed 4	425 grain speed 5	avg	Rank
PSE GX	289.4	289.4	288.8	288.8	289.1	289.1	N/A
Rytera Alien X	274.9	274.8	274.8	274.6	274.9	274.8	N/A
Mathews Reezee 6.5	276.6	276.5	276.9	277.1	276.8	276.78	N/A
Elite GT500	272.3	272.1	272.3	272.4	272.3	272.28	N/A
Martin Warthog	273.3	273.1	273.2	273.6	273.3	273.3	N/A
Bowtech Admiral	263.6	263.6	263.4	263.6	263.5	263.54	N/A
Hoyt AlphaMax 32	262.3	262	261.9	262.3	261.7	262.04	N/A
Diamond IceMan	258.6	258.7	258.7	258.6	258.7	258.66	N/A
Quest HPS33	257.6	258.2	258.3	258.1	258.2	258.08	N/A

### Results

1	PSE	72
2	Rytera	64
3	Mathews	56
4	Elite	48
5	Martin	40
6	Bowtech	32
7	Hoyt	24
8	Diamond	16
9	Quest	8

## FINAL RESULTS

The results of the 2009 H2H Blind Bow Test are:

### COMPOSITE SUBJECTIVE SCORES/PLACE

	<u>Score</u>	<u>Place</u>
<b>Hoyt</b>	236	1
<b>Diamond</b>	228	2
<b>Bowtech</b>	215	3
<b>Quest</b>	153	4
<b>Elite</b>	147	5

### SPEED PLUS SUBJECTIVE SCORE/PLACE

	<u>Score</u>	<u>Place</u>
<b>Hoyt</b>	260	1
<b>Bowtech</b>	247	2
<b>Diamond</b>	244	3
<b>PSE</b>	206	4
<b>Mathews</b>	201	5

## 2009 Bow Evaluation Commentary

Jon Silks' Personal Bow Commentary

### Rytera Alien X

Rytera's Alien X was one of my favorites for this year. I was immediately impressed with the bow's incredible balance at full draw. This bow appropriately has an "X" factor that I cannot explain. It has good qualities in the subjective categories although it did not break the top five in any of the four. Speed was definitely better than most as it placed second behind only PSE. The Alien's grip was its downfall in the balance/feel category as all of the testers made negative comments about the cutouts in the grip. As stated above however, I was particularly impressed with the balance of the Alien and think if it would have done very well had it been equipped with a relatively slender and well rounded grip with no holes. The best showing for the Alien came in the Shock/Vibration category, which considering the speed is excellent. This bow is proof that we are testing the best in the industry – it may not have broken the top five but it does impress in many ways.

#### Specs:

Axle-to-axle length: 31.5"

Brace Height: 7"

Mass weight: 3.5 pounds

Let-off: 80%

Draw lengths: 26-30"

Peak draw weights: 60 and 70 pounds





### Elite GT500

I'm not sure who designs the grips at Elite but they seem to make them custom just for me. Elite grips are among my favorite in the industry. They are well rounded, not too big or small and cradle your hand comfortably. The GT500's draw cycle is somewhat aggressive; however, it is also very consistent, affording it a well deserved #3 spot in the draw cycle category. Elite also hit #4 in the speed tests with less than 2 feet per second separating it from the #2 position. When shot the GT500 registers a notable "bump" in the handle with very little follow-on vibration. The rig is fairly lightweight and handles well both at rest and at full draw.

#### Specs:

Axle-to-axle length: 34-7/8"

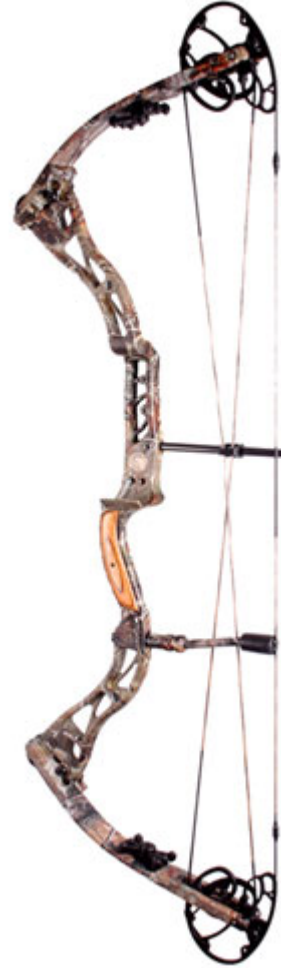
Brace Height: 7-1/8"

Mass weight: 4.1 pounds

Let-off: 80%

Draw lengths: 23 - 30"

Draw weights: 30 – 90 pounds in 10 pound increments



### Mathews Reezen 6.5

Understanding that this is not the typical Mathews that finds its way into our Head2Head test I was still somewhat surprised by the results for the Reezen 6.5. Considering the spectacular speed out of this single cam bow the draw cycle is one of the best I have tested this year. Still, it barely made the top five in this category. Where many will notice the change from the typical Mathews to this “speed focused” Mathews is in the shock and vibration category. While there is little kick in the handle at the shot, there is noticeable lasting vibration and this factor kept the Mathews from reaching the top five in the shock/vibration category for the first time in seven years. Mathews signature handle did the trick for me and most of the evaluators as it helped the Reezen 6.5 hit the #2 spot in this category.

#### Specs:

Axle-to-axle length: 32”

Brace Height: 6.5”

Mass weight: 4.15pounds

Let-off: 80%

Draw lengths: 24.5 - 30”

Draw weights: 40, 50, 60 and 70 pounds



### Diamond IceMan

The IceMan hit an impressive #3 spot in the balance and feel category and with good reason. The bow balances well and has a comfortably shaped grip with wood side panels that are blended nicely and the overall size is a good compromise between slender and full. A stiff draw cycle with consistent transitions gave the IceMan its lowest showing in the subjective categories at #4. Ranking at least #4 or better in all categories gave the Diamond rig an impressive #2 position overall in the subjective categories and a #3 position overall with speed factored in. If anything could hold the IceMan back it would have to be the speed as it came in next to last. The IceMan was top dog in the shock/vibration category registering a surprisingly low measure of either. Many testers were compelled to comment on this quality as the testing progressed.

#### Specs:

Axle-to-axle length: 31.5"

Brace Height: 6.875"

Mass weight: 4 pounds

Let-off: 65 - 80%, adjustable

Draw lengths: 24 - 30"

Draw weights: 60 and 70 pounds



### Quest HPS 33

The Quest HPS 33 was my wildcard entry into the 2009 H2H test, which tells you that I was personally impressed with this bow. While it did not break the top five in shot noise or balance/feel the HPS 33 showed up in a big way in the draw cycle category placing #2. Quest also found its way into the top five in the shock/vibration category coming in at # 5. These two categories helped Quest hit the #4 overall position in the combined subjective results. Where the HPS 33 trailed off a bit was in the speed category where it came in last. Personally I think this rig handles well at full draw and is easily maneuvered with its low mass weight. It has a smooth draw cycle and is well balanced.

#### Specs:

Axle-to-axle length: 33"

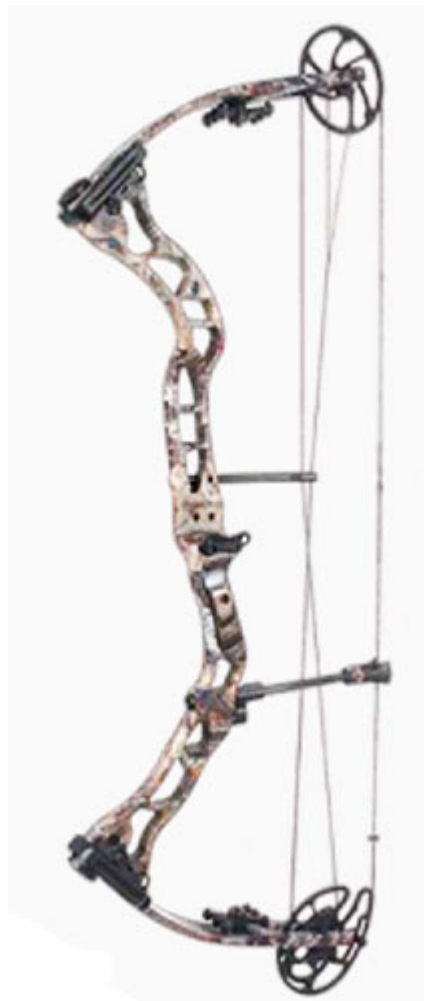
Brace Height: 7.125"

Mass weight: 3.9 pounds

Let-off: 65 - 80%

Draw lengths: 26 - 30"

Draw weights: 50, 60 and 70 pounds



## Hoyt AlphaMax 32

To sit atop the competition for the second straight year is a great sign for Hoyt. They are producing rigs that excel in all areas rather than in just one or two. They hold the bar high for others to shoot for and do it all with the utmost integrity. When I get a bow to test from Hoyt it is within spec and generally shoots either as fast or faster than their advertised IBO specs! As a tester I have to tell you that this kind of thing gets me excited. Unfortunately it does not happen nearly often enough in our industry. If I had any criticism of the Hoyt lineup in years past it was the mass weight. When the company introduced the AlphaMax 32 at only 3.9 pounds I knew they were going to be extremely successful with it. Their grip is one of the best in the bunch and their draw cycle was tops by a long shot. The bow balances well and reports little shock or vibration at the shot. As stated above – this bow hits high marks across the board not just here or there.

### Specs:

Axle-to-axle length: 32"

Brace Height: 7 "

Mass weight: 3.9 pounds

Let-off: 75%

Draw lengths: 26 - 30"

Draw weights: 50, 60, 70 and 80 pounds



### Bowtech Admiral

Bowtech's Admiral came on strong in the test and jumped from #3 to #2 in the overall results when speed was factored in. This bow is much like the Diamond Iceman with a little better speed. The two rigs dominated the shot noise and shock/vibration categories. The Admiral took top honors in the shot noise arena with one of the quietest shots I have ever heard out of a compound bow – truly remarkable! Handling the Admiral was a comfortable experience as the grip's two wood side panels were well blended with the riser and the overall size was well chosen. In the shock/vibration category the Admiral could have easily been number one, as it flirted with the top spot often, only to be edged out by its brother. Only in the draw cycle category did the Admiral miss out on the top five. The Admiral is simply one of the best bows you will find on pro shop racks.

#### Specs:

Axle-to-axle length: 31-1/16"

Brace Height: 7.5"

Mass weight: 4.1 pounds

Let-off: 65 - 80%

Draw lengths: 24 - 30"

Draw weights: 40, 50, 60 and 70 pounds



## PSE GX

Fast. Fast. Fast. The GX is a flat out screamer trouncing the competition in our speed trials. All of the other rigs were separated by slightly over 20 fps and then there was the GX, which had its closest competitor come in between 16 and 17 fps behind. The dual cams pull stiff as you might expect from a speed bow, however, a surprise was found in the Shock/vibration category as this rocket launcher scored an impressive #3 position. During my personal testing of each rig I kept going back to the PSE as a comparison for shock/vibration for the other bows. If PSE can design a lightning bolt to register little shock/vibration I expect that slower rigs should be able to compete with it. Its #3 shock/vibration ranking would seem to indicate otherwise however. I personally prefer a grip that is somewhat thicker than PSE's BEST grip, however, it certainly has its fans. The GX has excellent balance and handles well with a comfortable mass weight and relatively short axle-to-axle measurement.

### Specs:

Axle-to-axle length: 32.5"

Brace Height: 6"

Mass weight: 4.1 pounds

Let-off: 80%

Draw lengths: 26 - 30"

Draw weights: 50, 60, 70 and 80 pounds



### Martin Warthog

The warthog had its best showing in the balance/feel category as it tied for fifth place. A well-rounded grip, while maybe a little too full, helped the Warthog get to the top 5. Martin's rig also hit the 5<sup>th</sup> spot in the speed test behind the #4 bow by less than a half foot per second and only missing the #2 spot by nearly 2 fps! This is a fast bow. A significant shock in the handle with follow-on lasting vibration coupled with notable noise at the shot held the Warthog back overall.

#### Specs:

Axle-to-axle length: 35"

Brace Height: 6.25"

Mass weight: 3.85 pounds

Let-off: 80%

Draw lengths: 27 - 31"

Draw weights: 60 and 70 pounds

