



IART

INTERNATIONAL ALLIANCE OF RACQUET TECHNICIANS

Moving Racquet Technicians Ahead Through Communication



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Wilson Baiardo

A Review



MSRP \$6,000.00

Wilson has entered the rarified air of technical stringing machines with the ergonomically designed Baiardo. Several years of study by non-stringers lead to the creation of the first electronically controlled ergonomically beneficial machine.

Any racquet technician that stands at the machine for several hours a day will quickly recognize the advantages of this design.

Mounting System

The machine uses a six (6) point mounting with 360 degree rotation. The side supports use the “flat V” design that captures the racquet and forces it down onto a flat surface for support.



There are two (2) adjustment knobs on each major support column, one for the 6 & 12 inside billiards and one to adjust the outer side supports.



Turning the lower knob activates the side supports and makes racquet mounting quick and easy.

The smaller upper knob adjusts the 6 & 12 billiards that should just touch the racquet. Try not to over tighten these supports.



Adapters for smaller racquets are included along with an adapter for the Head “deep throat” models.

You would think that a “knob” is a “knob” but the “knobs” on this machine are, for the lack of a better word, elegant. The rubber insert on the “knobs” changes these from plain to perfect.

With all mounting systems similar to this be sure not to over-tighten them. Doing this may make the racquet difficult to remove.

Tensioning

The Baiardo uses a constant pull linear tensioning system. The tension head is massive providing a positive grip on the string. A “anti-crush” adjustment is on the rear of the tension head and makes it easy to adjust clamp pressure for various string gauges if required.

The string gripper is tapered to allow easy insertion of the string. Be careful not to let the string slip between the gripper and the housing. Once you get the hang of it this is almost a “no-look” procedure.

The tension head is activated with a large “paddle” at the rear that is easily tapped with your little finger in a single motion of inserting the string and activating the tension head. The tension head uses a diabolo to create support for the string.



Before you can pull tension you need to set the desired tension. This is easy and fun! Using the touch screen you can set and adjust tension by tapping on the top of the number to increase it or the bottom of the number to decrease it. Tension can be set in .5 pound increments.

There is a lot that can be done on that screen so look at the Owners Manual for all the functions.

There is a pull speed setting, pre-stretch setting, knot tension setting, ponds/kilo setting, and the string measurement button, and of course, user setup!

String Clamps

The Baiardo uses swivel dual action clamps. Dual action clamps require the user to release the clamp base and string clamp. The Baiardo clamps have incorporated a “gravity” release function.

That is when the string clamp is released the clamp will drop onto the base and activate the release mechanism. If gravity fails there is a usable button that will release the clamp.



The string clamp portion is very robust and is of the “fit over” design. This allows for a fairly small diameter which can allow a closer fit between the two clamp bases.

The locking “handle” is nicely designed and fits the hand so a positive action is assured. A noticeable click indicates that the clamp is locked.

The clamp bases are large and ride on “arcs” to create an easy motion to move clamps from one end to the other. The “arc” surfaces can be easily removed for cleaning and maintenance. The clamp bases have easy to use adjustments, if required, to keep the clamp from creeping after tensioning.

The string clamps are of the four “teeth” design with a textured finish to eliminate slippage. The clamp pressure is easy to adjust with the large knob which is connected to the locking lever.

The locking lever is easy to activate due to the roller bearing design. These clamps are really sturdy.



Tool Tray

The “fixed” tool tray is very small but adequate if you have good aim! This issue has been addressed by accessory trays that can be fitted to the lower front and right side of the tension head housing.

The small compartments on the right side of the machine are perfect for tools while the front storage is fine for cell phones music devices.

These trays are now standard equipment with all new Baiardo machines and of course can be retro-fit to older models.

These trays add significant room for all the tools you should need during stringing.



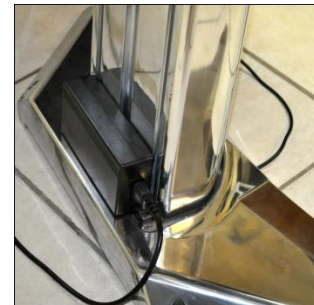
Table Brake

The Baiardo uses a very effective table brake. The brake is activated with the lever under the support table and applies pressure on the inside of the tube surrounding the support table. The table brake is useful when stringing racquets with “O” ports or other large holes.

The Machine Stand

The machine is an integral part of the electronics and mechanics of the Baiardo. Fortunately the stand does not require a lot of assembly but it is a two (2) person job. The base is best attached with the stand being on end and the base laid on it while the six (6) bolts are inserted.

The power supply/transformer is neatly seated on the backside of the stand. When the tension head is located on the stand be sure the electrical connectors are accessible. On “start-up” the diagnostics will tell you if you have the connectors properly seated.



Assembly

The machine comes in two (2) sturdy boxes. As expected the machine components were very well protected. It is not surprising that you will want to assemble the stand

Great packaging!

There are smaller boxes inside a larger box that contains all the hardware, adaptors, spare contact pads, tools, and the owner's manual.

The included tools should be all you need. Two (2) floating clamps are included for special stringing needs.

Other Stuff

- Wilson's B.E.S.T. system-**B**iomechanically **E**fficient **S**tringing **T**echnology. Wilson claims that this makes BAIARDO the most comfortable machine in the world
- Ergonomic design in all parts of the machine
- The industry's first LED touch screen user interface displays in 6 different languages: English, Spanish, French, German, Chinese Mandarin and Korean.
- 13 customizable user settings
- More adjustment options than any other machine for pre-stretch, pull speed, cross-string tension+/- and over-tension features for knot tie-offs
- Personalized settings for up to 6 individual users
- Modular design for easy service
- Angled stand to allow closer access to the machine

Easy to use control panel.

Tap the top of the number to increase the setting and tap the bottom of the number to decrease the number.

After the power up diagnostics there are large numbers at the top of the screen. This is the *TENSION DISPLAY*. This is where you set your desired tension.



Tap the top of the number to increase and the bottom of the number to decrease. Directly below the tension display you'll see 6 icons. The first is a left pointing arrow that returns you to the main menu.

Directly to the right of the left pointing arrow is the *TOOLS* menu represented by a small wrench & hammer. This is where you change various machine settings including pre-stretch, pounds or kilograms, sound on/off, pulling speed, and cross string +/- . Tap the back arrow to return to the previous screen.

Next to the tools menu is the mounting menu depicted by two open arms. Selecting the *MOUNTING* icon automatically adjusts the machine to an ergonomically proper height and tilt to easily mount the racquet.

To fine tune the height and tilt hold down the icon when it's highlighted. Now touch the up or down triangles to adjust the height and tilt to your liking. These settings are done if you're using the traditional stringing mode. However, the fun part comes when you select B.E.S.T. stringing mode because this is where BAIARDO gets to showcase the ergonomic capabilities (in automatic mode) even further.

To the right of the mounting icon is a racquet with only the *MAIN STRINGS* shown. Tap this icon and BAIARDO automatically rises to a level and angle adjusting the turn table for easy installation of the main strings.

This is done in accordance to your individual height you programmed earlier. Once the main strings are installed look for the next icon just to the right of the main strings icon showing a racquet with only *CROSS STRINGS* displayed.

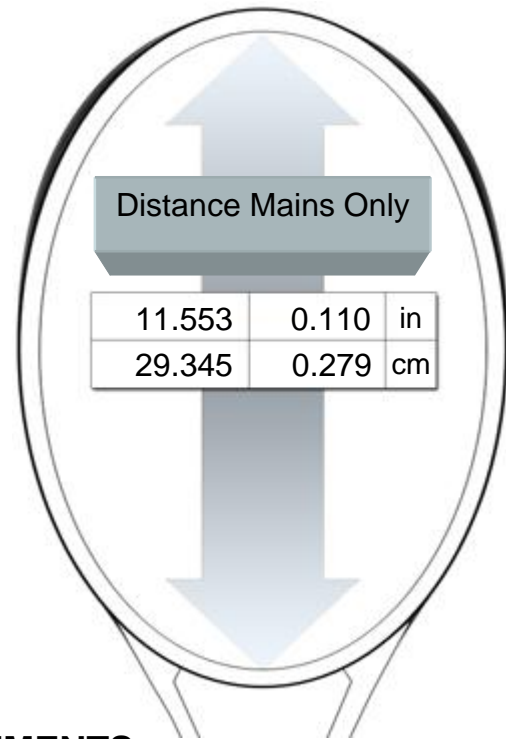
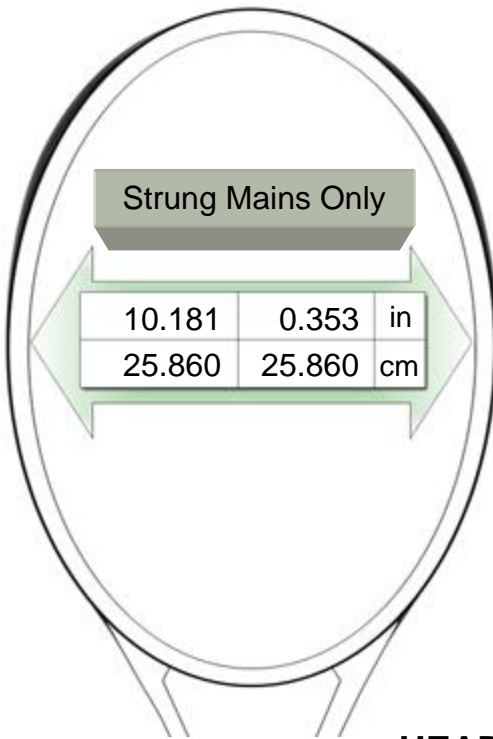
Tap this icon and the machine raises, tilts even more towards the user, and places the machine at a perfect height and angle that allows you to install the cross strings while standing in a fully erect position. Located under the turn table is a *FRICITION BRAKE*. Engage this while in B.E.S.T. mode and the brake applies just enough drag to the table to allow easy installation of the cross strings. You'll be glad to know that Wilson includes extra brake pads for this feature.

On the far right of the screen is a % sign directly above an image of a knot. This is the *KNOT TENSION* option. For those who prefer to over-tension the last string prior to tie-off this feature lets you increase tension, with the touch of a finger, to a maximum of 30%. Just prior to applying tension to the tie-off string simply tap the knot tension icon and the machine will take your "set" tension, for example, 60 pounds, and increase it by the programmed knot tension you've selected.

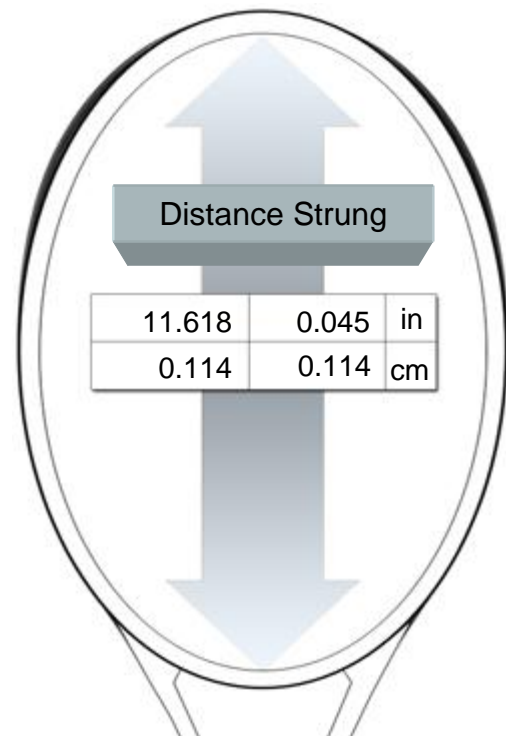
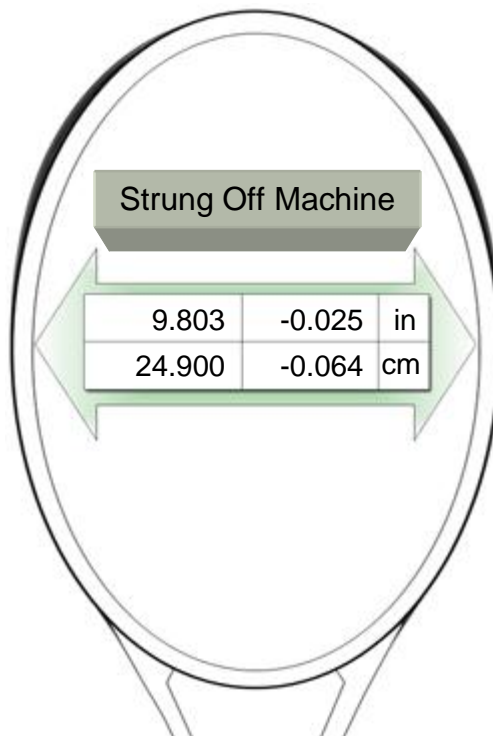
So, if you're stringing at 60 pounds and have the knot tension set at 10% the last pull is going to be at 66 pounds. Once you release the tension head the machine returns to the original set tension of 60 pounds.

You can adjust this setting any time during stringing. Simply tap and hold your finger on the knot tension icon and the screen changes to edit mode. Make the necessary adjustments, tap the check mark and you're ready to go.

Head Width		Difference	Machine Supports		Difference
Unstrung	9.828		Distance Unstrung	11.663	
Strung Mains Only	10.181	0.353	Distance Mains Only	11.553	0.110
Strung Off Machine	9.803	-0.025	Distance Strung	11.618	0.045



HEAD MEASUREMENTS

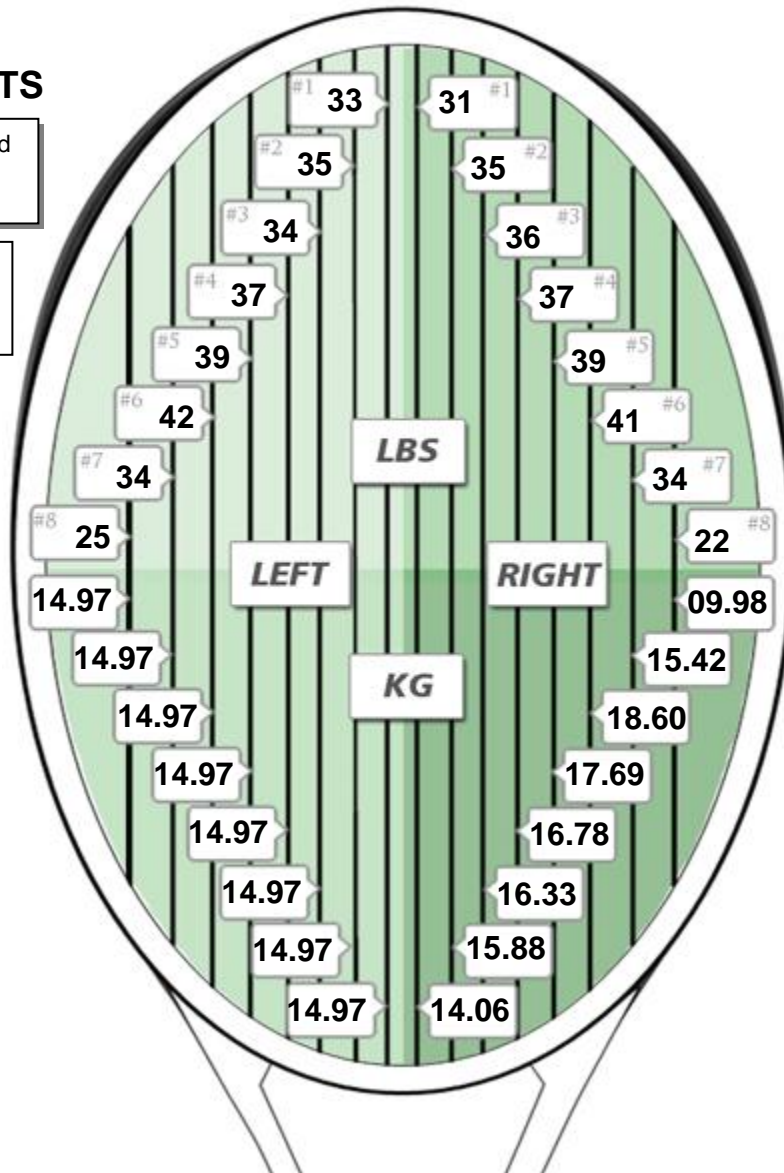


String #	Left Tension	Right Tension	% of Tension Set	
1	33	31	53.33%	
2	35	35	58.33%	
3	34	36	58.33%	
4	37	37	61.67%	
5	39	39	65.00%	
6	42	41	69.17%	
7	34	34	56.67%	
8	25	22	39.17%	
9				Average % of Tension Set 60.36%

TENSION MEASUREMENTS

Every machine is tested at a tension setting of sixty (60) pounds.

Last main tension is omitted for "Average % of Tension Set"



TOTAL RECOVERY

Most of the information and images are pretty clear, however, one section of data I take is the “Total Recovery” data. I believe this is important data because it shows the effect of machine “differential” when the cross strings are being installed.

Why?

Here is what I derived from this data:

A machine with a broad “differential” will pull, momentarily, tension to keep the tension head at the tension setting.

When this occurs the cross string does not have the “restoring force” to pull back that tension resulting in a Recovery Total of greater than 100 percent.

Remember, that is 100 percent of the “width” increase so in most cases it will have a minimum effect on the racquet

Head Width W/Cross Strings	Inches	Total Change	Total Recovery
Cross 4 Installed	10.18	0.004	1.13%
Cross 8 Installed	10.07	0.107	30.31%
Cross 12 Installed	9.93	0.253	71.67%
Cross 16 Installed	9.82	0.358	101.42%
Last Cross Installed	9.82	0.362	102.55%

REVIEW SCORING

Machine	Description	Score
Tennis	accommodates all tennis racquets	10
Racquetball	accommodates all racquetball racquets	10
Squash	accommodates all squash racquets	10
Badminton	accommodates all badminton racquets	10
Stand Included	floor stand included in price	10
Stand Available	floor stand available at additional cost	0
Table Top Standard	machine is used on a table top	0
Table Top Optional	machine can be used on a table top	0
Height Adjustable	height adjustable manually, electronically, or hydraulically	10
Angle Adjustable	machine can be tilted to suit operator ergonomics	10
Total Machine		70

Mounting	Description	Score
2 point mounting	racquet held at 12 and 6 o'clock only	0
4 point mounting	racquet held at 11/1 and 4/6 o'clock (Prince format)	0
4 point solid	racquet held at 12, 3, 6, and 9 o'clock on a solid plate (TT)	0
6 point mounting	racquet held at 12,6,1,10,5, and 7 o'clock approximately	10
Multi-point floating	"V" adaptors contact racquet in four places	0
Multi-point hold down	"V" shape forces racquet down onto a flat surface	10
Turntable Lock	keeps turntable from rotating if required	10
360 degree rotation	tension head is lower than mounted racquet	10
Turntable Tilt	turntable can be tilted to suit operator ergonomics	10
Total Mounting		50

Tensioning	Description	Score
Drop Weight	a solid weight adjusted up or down a shaft to set tension	0
Drop Weight w/Clutch	a solid weight as above w/clutch for horizontal position	0
Drop Weight w/Gear	a solid weight as above w/gear for horizontal position	0
Crank	tension head is moved using a manual crank w/lockout	0
Electric/Electronic	tension head is moved using an electric motor	10
Electric Add-On	electric tension head is retro-fit to crank machine	0
Multi Speed Pull	tension head can be set to pull fast or slow	10
Constant Pull	tension head will reach tension and compensate for creep	10
Lockout	tension head will reach tension and hold string at setting	0
Pre-Stretch	tension head pulls set tension plus an additional percentage	10
Linear Pull	tension head pulls string straight back in parallel jaws	10
Self Rising Linear Pull	tension head raises to reduce friction during pull	0
Tensioner Location	electronic tensioner can be moved forward or backward	0
Reduced Friction Pull	tension head and mounting system design to reduce friction	0
Rotational Tensioner	tension head wraps string around and rotates to pull tension	0
Nose Cone/Diablo	string is wrapped around this before inserting into tensioner	10
Foot Activation	foot pedal included for activation tension head	0
Pounds/Kilo Setting	tension can be set in pounds or kilo's	10
Manual Calibration	tension calibration is set with tools manually	0
Auto Calibration	tension calibration is set automatically by electronics	10
Coated Tension Head	tension head is coated to reduce/prevent slippage	10
Knob Tension Set	tension is set manually by an adjusting knob	0
Electronic Tension Set	tension is set using electronic key pad	10
LCD Display	functions are displayed on a Liquid Crystal display	10
Knot Tension Adjust	tension can be added to last string to compensate for knot	10
Cross String Tension	tension setting for cross string can be different than mains	10
Removable Tensioner	tension head can be removed for repair	0
Audible Tension Confirm	a beep will confirm proper tension is reached	10
Audible Error Warning	a beep will indicate a problem	10
Audible On/Off	audible can be turned on or off	10
Total Tensioning		160

Clamping	Description	Score
Flying Clamps	clamps not attached to the machine, rely on adjacent string	0
Fixed Clamps on glide bar	clamps are attached to the machine on glide bars	0
Swivel Single Action	clamps rotate and are locked with one action	0
Swivel Double Action	clamps rotate/ lock at the base and clamp - double action	10
Swivel on Glide Bar	clamps rotate on base fixed on glide bar - single action	0
Coated Clamps	clamps are coated to avoid slippage.	10
No Tool Adjustable Clamp	clamp force on string can be adjusted without tools	10
No Slots Main Clamps	main string clamps have no teeth to eliminate damage	0
Automatic Base Release	gravity or button releases the clamp and base	10
Magnetic Clamp Base	clamp base is secured by magnetic force	0
Total Clamping		40

Extras	Description	Score
No Tool Tray	no tool tray is provided = -5 points	0
Tool Tray < 36	tool tray is less than 36 square inches = 2 points	0
Tool Tray > 50	tool tray is more than 50 square inches = 4 points	4
Tool Tray > 75	tool tray is more than 75 square inches = 6 points	0
Tool Tray >100	tool tray is more than 100 square inches = 8 points	0
Tool Tray > 144	tool tray is more than 144 square inches = 10 points	0
String Tip Holder	holding device is included to keep string tip close	0
String Measure Ruler	string can be measured at machine with included ruler	0
String Measure Counter	string can be measured at machine with rotational counter	0
Reel Holder	secure reel attachment for string reel storage	0
Racquet Holder	secure racquet holder for storage and convenience	0
Cabinet	a storage cabinet is included for tools and accessories	0
Protective Cover	a cover is included for protection	10
Leveling Pads	adjustable pads for leveling the machine	0
Right or Left Operator	option for right or left handed operator	0
Color Options - Free	offers color options at no charge	0
Color Options- Charged	offers color option at additional cost	0
Total Extras		14

Weight	Description	Score
Under 50 pounds	machine weighs less than 50 pounds = 6 points	0
50 to 75 pounds	machine weighs up to 75 pounds = 8 points	0
76 to 100 pounds	machine weighs up to 100 pounds = 4 points	0
Over 100 pounds	machine weighs more than 100 pounds = 2 points	2
Total Weight		2

Tools	Description	Score
Calibrator	manual or electronic calibration tool included	0
Starting Clamp	starting clamp is included	0
Instructional DVD	DVD is included for set-up, function, and maintenance	0
Owner Manual	Printed owner manual is included	10
Assembly Tools	tools necessary to assemble the machine are included	10
Telephone/Internet Help	Support is available during what hours	10
Warranty	None = -5 points	0
Warranty One Year	One (1) Year warranty is included = 2 points	0
Warranty Two Year	Two (2) Year warranty is included = 4 points	0
Warranty Three Year	Three (3) Year warranty is included = 6 points	0
Warranty Four Years	Four (4) Year warranty is included = 8 points	0
Warranty Five Years	Five (5) Year warranty is included = 9 points	9
Warranty Over Five Years	Over Five Year warranty is included = 10 points	0
Total Tools		39

Additional Information	Description	Score
Web Site	a comprehensive web site is available and easy to use	0
Shipping Included	shipping costs are included in the price	0
Country of Origin	identification of country of origin	0
Total Additional Information		0

Racquet Support	Description	Score
Racquet Distortion	Width distortion occurring when only mains are installed	
Width Increase <.062	racquet width increases less than .062 = 20 points	0
Width Increase .062-.093	racquet width increases less than .093 = 18 points	0
Width Increase .094-.125	racquet width increases less than .125 = 16 points	0
Width Increase .126-.175	racquet width increases less than .175 = 12 points	0
Width Increase .176-.225	racquet width increases less than .225 = 10 points	0
Width Increase .226-.325	racquet width increases less than .325 = 6 points	0
Width Increase .326-.375	racquet width increases less than .375 = 2 points	2
Width Increase >.376	racquet width increases more than .376 = -5 points	0
Machine Distortion	Distance between head and throat supports mains installed	
Distance <.0625	supports get this much closer to each other = 20 points	0
Distance .062-.093	supports get this much closer to each other = 18 points	0
Distance .094-.125	supports get this much closer to each other = 16 points	0
Distance .126-.175	supports get this much closer to each other = 14 points	14
Distance .176-.225	supports get this much closer to each other = 10 points	0
Distance .226-.275	supports get this much closer to each other = 6 points	0
Distance .276-.325	supports get this much closer to each other = 4 points	0
Distance .326-.375	supports get this much closer to each other = 2 points	0
Distance over .376	supports get this much closer to each other = -5 points	0
Percent of Tension Set	Percent of set tension with all main strings installed	
100-90 Percent	Outstanding = 20 points	0
89-80 Percent	Very Good = 18 points	0
79-70 Percent	Good = 16 points	0
69-60 Percent	Acceptable = 12 points	12
59-50 Percent	Marginal = 10 points	0
49-40 Percent	Sub-Marginal = 6 points	0
39-30 Percent	Unacceptable = 2 Points	0
29-20 Percent	Unacceptable = -5 points	0
Total Racquet Support		28

Overall Score: 403

Manufacturers Suggested Retail Price: (MSRP) \$6000.00

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Customers must contact manufacturer for all current pricing information and purchasing option(s)

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