stringing machine REVIEW Babolat Star 5

If you visit the stringing room of most major tournaments, you'll find that with few exceptions, Babolat machines are the mainstay of the tour stringer. Rugged and reliable, with excellent mounting, clamping, and tensioning, a stringer could hardly ask for more.

In the summer of 2000, Babolat discontinued the manufacture of the de facto standard of the professional stringer, the Star 4, and replaced it with the even more capable Sensor line. Unfortunately, the Star 4 was portable, while the Sensor is just too much machine. As a result, touring stringers have been hanging onto their aging Star 4s despite the advances in stringing machine technology exemplified by the Sensor.

With the introduction of the Star 5, Babolat has retained the best features of the Sensor and made some improvements, while trimming the weight and the price of its entry-level machine. The 120-pound Star 5 sells for \$3,000 with a three-year warranty, and an optional five-year warranty is \$200 more. The price includes a cover, spare parts, and assembly wrenches. Clearly, the Star 5 is a serious effort by Babolat to make an exceptionally competent true constant-pull stringing machine available to serious stringers at a price that is almost too low to resist.

ASSEMBLY

Our Star 5 arrived in one 141-pound box. The unpacking and assembly instructions were right on top, as were the assembly tools. The directions are straightforward, and it took less than 15 minutes to go from the box to a functioning stringing machine. The instructions do recommend that you have two persons available to lift the unit onto the stand, and it's a good idea to have someone else available, if for no other reason than that the unit's shell is a thin plastic that is not fully supported around the edges. It is also useful to have someone to balance the machine atop the stand while the other person installs the bolts that hold the machine to the stand. The stand isn't necessary, however, as the

Star 5 is also equipped with rubber feet, so it can be set on a bench or other flat surface. In this configuration, the stringbed is 16 inches above the work surface.

If you are going to use the stand, you assemble it first. Babolat recommends that you level it, using the screw adjusters located at the ends of two of the legs. However, the placement of the adjustment screws means that not every floor can be accommodated. As with the Sensor, the power cord runs through the center of the stand. The legs are welded to the lower section of the stand.

COMPONENT	WEIGHT (LBS.)
Base	31
Machine	89
Tension head—24 pounds	
Clamp plate w/ clamps—34 pounds	
Shell—31 pounds	
Total	120

The stand is infinitely adjustable so that the height of the stringbed is between 41 inches and 52 inches above the floor. Here again, you will find it very helpful to have one person hold the machine while the other works the Allen wrench on the height-adjustment screw. The telescoping section of the stand is "crimped" in such a way that the depth of the adjustment screw is matched to the depth of the crimp. This ensures that once the adjustment screw is tightened, the two sections of the stand form a solid unit. The Allen screw is encased in a housing that, unlike the lever found on previous machines, seems incapable of catching string.

PROS

Once assembled, we turned the unit on and took some time to familiarize ourselves with the Star 5 "Navigator," which consists of an LCD read-out and three flush-mounted buttons, labeled "S" (for Shift), "+", and "-". Through the Navigator, the operator can set the reference tension (from 11 to 88 pounds in half-pound increments), lock the machine, set pounds or kilograms, add over-tension for knots (from .5 to 11 pounds, in half-pound



increments), activate the "knot" function (one pull per activation), set the amount of pre-stretch (5, 10, 15, or 20 percent of the reference tension), turn the tension buzzer on and off, and select from among English, French, German, Spanish, and Italian for the display. You can also check the version number, the number of pulls, a calculated number of racquets strung (based on the number of pulls), the length of time in hours the machine has been on, the serial number of the machine, and the Star 5's status. If you choose kilograms, the tension range is 5 to 40 kilograms, adjustable in one-tenth kilo increments. You also use the Navigator to turn off the welcome message, which we did before proceeding to check the calibration, which was right on. Subsequent checks showed excellent calibration maintenance.

The Star 5 has the familiar Babolat 6point mounting system, which Babolat refers to as a 10-point mounting system because the "V" of each of the four droparm side supports touches the frame in two places. The shafts of the "billiards," which is what Babolat calls the frame supports at 6 and 12 o'clock, glide in and out of the towers on bronze bushings. If you've ever used a Star 3, Star 4, or Sensor, the mounting system will hold no surprises. The adjustment knobs for the side support arms are easy to operate, making it a snap to mount the frame properly. Once mounted, if the frame is properly strung, there is no difficulty removing the racquet from the machine. Best of all, the side support arms seem never to get in the way of the stringing process. Even

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stringers accustomed to using a machine with 2- or 4-point mounting should have no trouble converting to the Star 5's 6point system. One of the first racquets we strung was one that is infamous for being shorter with strings than without. As with other Babolat machines before it, the Star 5 provided such good support that the finished length of the racquet was within 3/32-inches of the unstrung length.

The Star 5 double-action clamps are standard in every way except their implementation. The string clamp is identical to the three-tooth clamps found on the Sensor. The clamp heads appear bulky but are profiled to fit into tight spaces. The clamping faces are coated with tungsten carbide, and the clamping force is easily adjustable without tools, thanks to an oversize adjustment knob on the side of the clamp. As a test, we reduced the clamping force adjustment and pulled tension on a string. The slippage scarred the coating lightly but did not shred the surface. This may not be the case for every string, but we had no problems with slippage when the clamps were adjusted properly, and saw no damage aside from some slight bruising on delicate strings.

The string clamp slides over the post of the base clamp (as on the Sensor), and at the bottom of the base clamp post there is a rubber O-ring for cushioning. The clamp bases slide almost effortlessly across the surface of the anodized aluminum turntable, making the Star 5 even smoother in this regard than the Sensor. The circular track on which they run is similar to the system found on the Sensor and other highend Babolat machines. If you are accustomed to "straight-track" clamp motion, the only place where you have to think about what you are doing is when "reversing" the clamps halfway through the crosses; because the clamps don't clear the frame, there is only one way to turn each clamp to re-orient it to complete the crosses. The turntable offers 360-degree rotation, which turns easily with just enough drag to prevent undesired movement.

The method for locking the clamp bases is quite different from any other Babolat machine. The Star 5 has what Babolat calls an ergonomic locking knob. Turning the knob approximately 60 degrees locks the base solidly to the turntable. It took about a dozen racquets for the clamps on our unit to feel broken in. Stringing times were just as low as with other, more familiar stringing machines, from the first frame.

The linear-pull tension head has the "start" button mounted immediately behind and below the jaws of the tension head. The start button itself is a "capacitive" type switch, which means there are no moving parts: As soon as you touch the button, it senses the contact. We found that even with a piece of string blocking direct access to the button, the start switch responded perfectly.

Of all the advanced features of the Star 5, without a doubt the most advanced is the tensioning program. While there is no manual setting for pull speed, the Star 5 (as



with the Sensor) automatically adjusts the pull speed based on the string you are using, with no user intervention.

The LCD display always keeps you informed on your settings, even to the point of giving you instantaneous read-outs on the tension during a pull. The Star 5 continuously adjusts the pulling force to compensate for string elongation.

One much-appreciated feature of the Star 5 is the return of the nosecone (or diabolo). Besides reducing the clamping force needed by the tension jaws, the nosecone also helps the operator position the string into the tension jaws the same way each time. As a result, the Star 5 is very gentle on delicate strings. We experienced no string scarring or marking due to the tension jaws.

The entire traction unit assembly detaches from the machine base quickly and easily. It is no doubt designed this way to make maintenance and repairs more straightforward, but it might also make it easier for traveling stringers to break up the total weight of the machine for easier cartage. In either event, removing the traction unit requires nothing more than unplugging the power cord and loosening two screws. The traction unit then slides out the side of the machine.

For those who will be traveling with the Star 5, it is worth noting that the machine runs on 100-120 volts, or 220-240 volts. There is a voltage selector on the underside of the traction unit, which is also where you switch the fuse to match the line voltage.

CONS

The turntable lock lever is mounted on the front as it is on the Sensor, but recessed so that there is much less chance to snag the string. The location is fine, but the round knob doesn't afford as much leverage as the old lever. Also, access to the knob is partially obscured by the shroud of the machine, making it more difficult to immobilize the turntable when stringing "problem" racguets such as the larger Prince O3s, Wilsons with PowerHoles, and the Wilson T2000 series, especially if the Star 5 is mounted on a table or bench. Fortunately, Prince provides a "boomerang" tool for the O3 series of racquets, which eliminates the need of locking the turntable on by far the most common of these frames.

The rigid turntable and fixed-towers of the Star 5 (and its predecessors) do offer a stable base for the mounting system. We found only one frame—the throatless Head Ti.S7—that needed an adapter, and the Star 5 is hardly alone in this category. The Star 5 mounted even the Gamma Big Bubba, Wilson Hyper Hammer 3.3 "The Limits," and the Head i.160 squash frames with no problems. However the stock Star 5 will not mount small-headed racquets such as woodies and the Wilson T2000 series. If this is an important part of your business, you will need the optional badminton adapter kit at \$450.

Even some frames that mount fine still present problems, such as the Blackburne DS 107, which requires the removal of the machine clamps so that you can use floating clamps top and bottom, and racquetball frames that have the top cross so high that they are out of the reach of the Star 5 clamps.

Speaking of the clamps, we found that the three-tooth clamps are easier to fit

between the strings of most racquets. However, on exceptionally tight stringbeds, the more gradual angle of the sides of the teeth on the Star 5 clamp makes it more difficult to force the clamp up into position against the resistance of previously installed strings.

The small tool tray of the Star 5 disappointed us. Granted, extra tool trays mean the machine must be larger, and create more chances to catch string. Still, even with small pliers, small cutters, a starting clamp, and two awls, the tool tray was too full by half. If you use a stringing apron, or have a bench near your stringing machine that you can use for tool storage, this won't affect you.

The user's manual, which is otherwise complete, does not contain the procedure for calibrating the machine. In normal use, re-calibration might not be called for, but if you intend to travel with the Star 5, you might very well need to adjust the calibration at a tournament site, when Babolat is closed for the day.

CONCLUSION

Although we've been using a Babolat Star 3 for years as our "reference" machine for stringing playtest racquets and other inhouse stringing chores where we need the vear-in and vear-out reliability for which Babolat machines are famous, it took about seven minutes to feel comfortable on the Star 5, and after a couple of frames, the Star 5 feels better in every way than our old Star 3. Although our Star 3 has strung racquets for everything from photo shoots to tournaments such as the Pacific Life Open and the Acura Classic, the arrival of the Star 5 means our little Star 3 can now relax, until the odd wood racquet or T2000 wanders by.

And yet, even though it's bigger, heavier, and much more sophisticated than our Star 3, the Star 5 still feels like a lean, mean, stringing machine, at least, compared to the Babolat Sensor. If these machines were cars, the Star 5 would be the Porsche 356 Speedster, and the Sensor the Porsche 356 Carrera: The first, relatively inexpensive but capable in every way, with qualities that grow on you over time; the latter, more expensive, but worth every penny. It seems that the only question is whether Babolat can make enough of the Star 5 to meet the demand that's certain to come.

For the complete review, see www.racquettech.com



