



MOMENTUM 6 PLUS USER GUIDE



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LIMITED WARRANTY: GAMMA Sports (GAMMA) warrants to the original purchaser that the *Momentum 6 Plus* stringing machine ("EQUIPMENT") purchased is free from defects in materials and workmanship for a period of five (5) years from the date of original purchase for mechanical parts (excluding any electrical parts and string clamps), and for a period of one (1) year from the date of purchase for any electrical parts and string clamps. Should any defects develop under normal use within the specified time periods, GAMMA will at its option, repair or replace the defective EQUIPMENT provided it is returned to GAMMA prepaid at the purchaser's expense. This warranty does not apply to any damage or defect caused by negligence, abuse, misuse, unauthorized alteration, shipping, handling, or part wear and tear as a result of normal use. Routine maintenance, adjustment, and cleaning required to ensure proper operation are the responsibility of the purchaser and are not covered under the terms of this warranty. These include, but are not limited to: String Clamp adjustment, as described on page 15, Turntable Bushing Adjustment, as described on page 15 and the Rotational String Gripper. GAMMA's obligation under this warranty is limited to repair or replacement of defective EQUIPMENT, and no one is authorized to promise any other liability. GAMMA shall in no event be liable for any incidental or consequential damages. To return defective EQUIPMENT, a return authorization (RA#) must be obtained from a GAMMA customer service representative. The RA# must be marked on the outside of the shipping carton being returned. All returns must be shipped prepaid by the customer to GAMMA. Please retain the original shipping carton and packing materials for any future shipments. GAMMA will not be responsible for machines which are not sent in the original undamaged packaging. A GAMMA Care Service Plan is also available through GAMMA customer service, call 800.333.0337 for details.



FEATURES:

1. Drop Weight Tensioner with 9 to 90 lbs Tension Range
2. Permanently Engraved Weight Scale
3. Patented Parallel Jaw Rotating Ratchet Gripper with Diamond Dust Coated Gripping Surfaces
4. Six Point "Quick Mount" Racquet Mounting System- Accommodates All Racquets
5. Die Cast Aluminum string clamps and Quick Action clamp bases maintain precise tension
6. High Strength Die Cast Aluminum Base with Durable Painted Finish and Convenient Tool Tray
7. Unique Way finding sticker decal and labeling system for ease of use

100% Human Customer Support:

Toll-free at (800) 333-0337 Ext. 224 • ewan.melanfant@gammasports.com

ASSEMBLY INSTRUCTIONS

A. WINDER SUPPORT STAND INSTALLATION

STEP 1

Locate the 4 holes to attach the winder stand and align the winder stand and attachment plate with the holes.



STEP 2

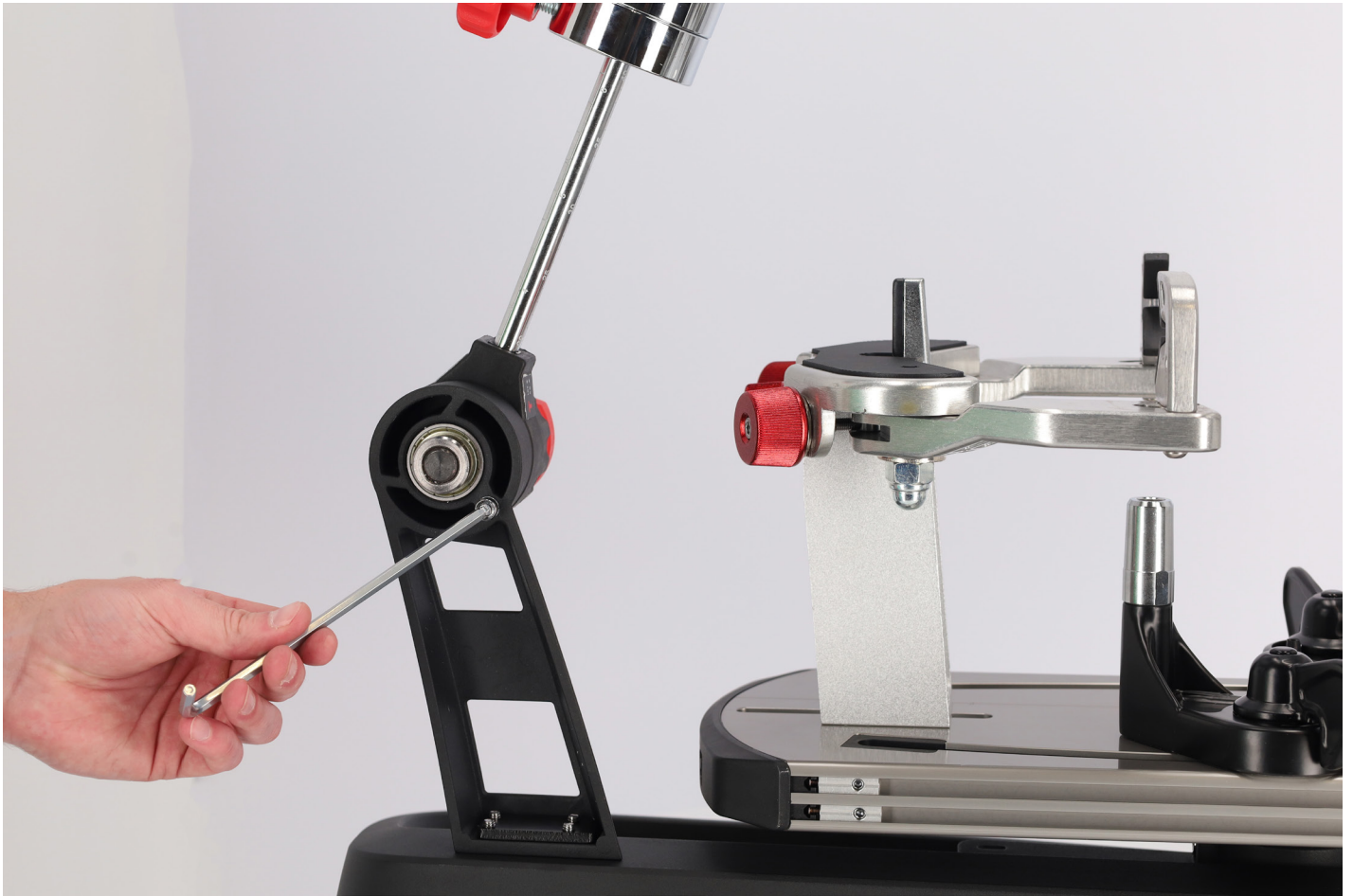
With the machine base on it's side, hold the winder stand in place while threading the 4 screws in from the bottom. Starting with the corners will make it easy to keep the winder stand and attachment plate aligned. After each screw is threaded, full tighten each one to secure the winder stand.



B. ENGAGING THE DROP WEIGHT BAR STOP

STEP 1

The stringing machine is shipped with the drop weight bar in the horizontal position. To limit the rotation of the drop weight bar and prevent racquet damage during stringing, the bar stop must be engaged. Hold the drop weight bar in the vertical position while turning the 5mm stop screw located on the back side of the winder stand clockwise.



C. INSTALLING THE DROP WEIGHT

STEP 1

Remove the end cap from the tension bar and slide the drop weight onto the bar. The weight should be oriented with the knob end closest to the string winder. Replace the endcap.



D. REMOVE MOUNTING BOLTS

STEP 1

While holding the mounting plate on the inside of the turntable remove the support post mounting bolts.

Note: There are two Nylon washers that are included for shipping purposes only.

Remove and discard the nylon washers. Repeat procedure on the opposite side of the turntable.



E. INSTALLING THE FRAME SUPPORT POSTS

STEP 1

Place the support post onto the central slot of the turntable. Locate the hole for accessing the mounting plate in the bottom of the turntable. While holding the mounting plate against the inside top surface of the turntable with your fingers, align the hole in the support post with the hole in the mounting plate. Install the mounting bolt through the support post and into the plate by hand and tighten with the 6 mm hex wrench. Repeat procedure on the opposite side of the turntable.



F. STRING CLAMP INSTALLATION

STEP 1

The post of the string clamp and tube of the string clamp base are treated with grease to provide protection against corrosion during shipping. Remove any excessive grease with a clean cloth prior to use. The post and tube may also be cleaned with isopropyl alcohol. After this type of thorough cleaning, the post and tube should be treated with a light coating of machine oil to protect the surfaces against corrosion and to ensure smooth operation.



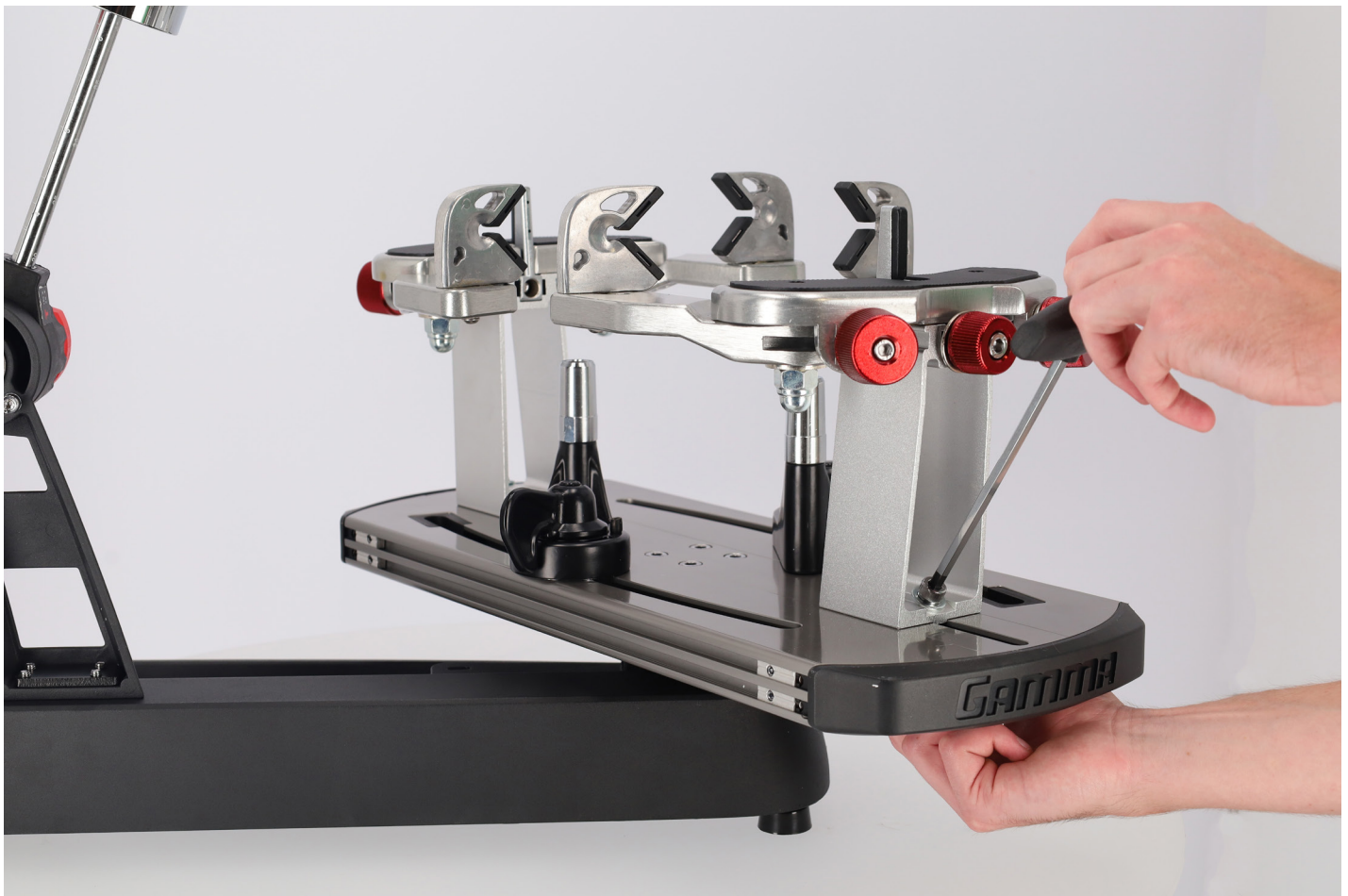
YOUR ASSEMBLY IS NOW COMPLETE.

MOUNTING THE FRAME

A. ADJUSTING THE FRAME SUPPORT POSTS

STEP 1

Loosen the lock bolts of the frame support posts and space them apart with the frame support slides separated by the approximate length of the racquet head. Although it is not required, it is good practice to center the support posts on the turntable. Lock one of the posts in position by tightening the lock bolt and position the other post until the frame support slide is positioned near the inside surface of the racquet frame. Securely tighten the lock bolt of the second support post.



CAUTION: TO AVOID RACQUET DAMAGE, THE CENTER POSTS SHOULD NOT CONTACT THE RACQUET PRIOR TO LOCKING DOWN THE SUPPORT POSTS.

B. TIGHTENING THE FRAME SUPPORTS

STEP 1

Tighten the Frame Support Slides by turning the adjustment knob clockwise until snug against the racquet frame and slight resistance is felt.



CAUTION: OVERTIGHTENING THE CENTER SUPPORTS WILL STRETCH THE HEAD OF THE RACQUET AND COULD CAUSE RACQUET DAMAGE.

C. FRAME SHOULDER SUPPORT ADJUSTMENT

STEP 1

Being sure the shoulder supports are free to swivel in their mountings, simultaneously rotate the shoulder support adjustment knobs clockwise until both shoulder supports gently and squarely contact the frame.



D. SECURING THE FRAME

STEP 1

Adjust the position of the shoulder supports so they will contact the frame fully at approximately a right angle. Re-tighten all the frame supports in the same order as before. Do not overtighten any of the supports as racquet damage may occur. The supports should be tightened to the point where the racquet frame will not move in the mounting system when the handle is grasped, and attempts are made to move it. Should any supports lose contact with the frame while stringing they should be re-tightened.



E. BADMINTON SHOULDER SUPPORT PROTECTION PAD INSTALLATION

STEP 1

Slide the badminton shoulder support cover over the shoulder supports. There is no need to remove the tennis shoulder supports.



STRINGING THE FRAME

A. SETTING TENSION

STEP 1

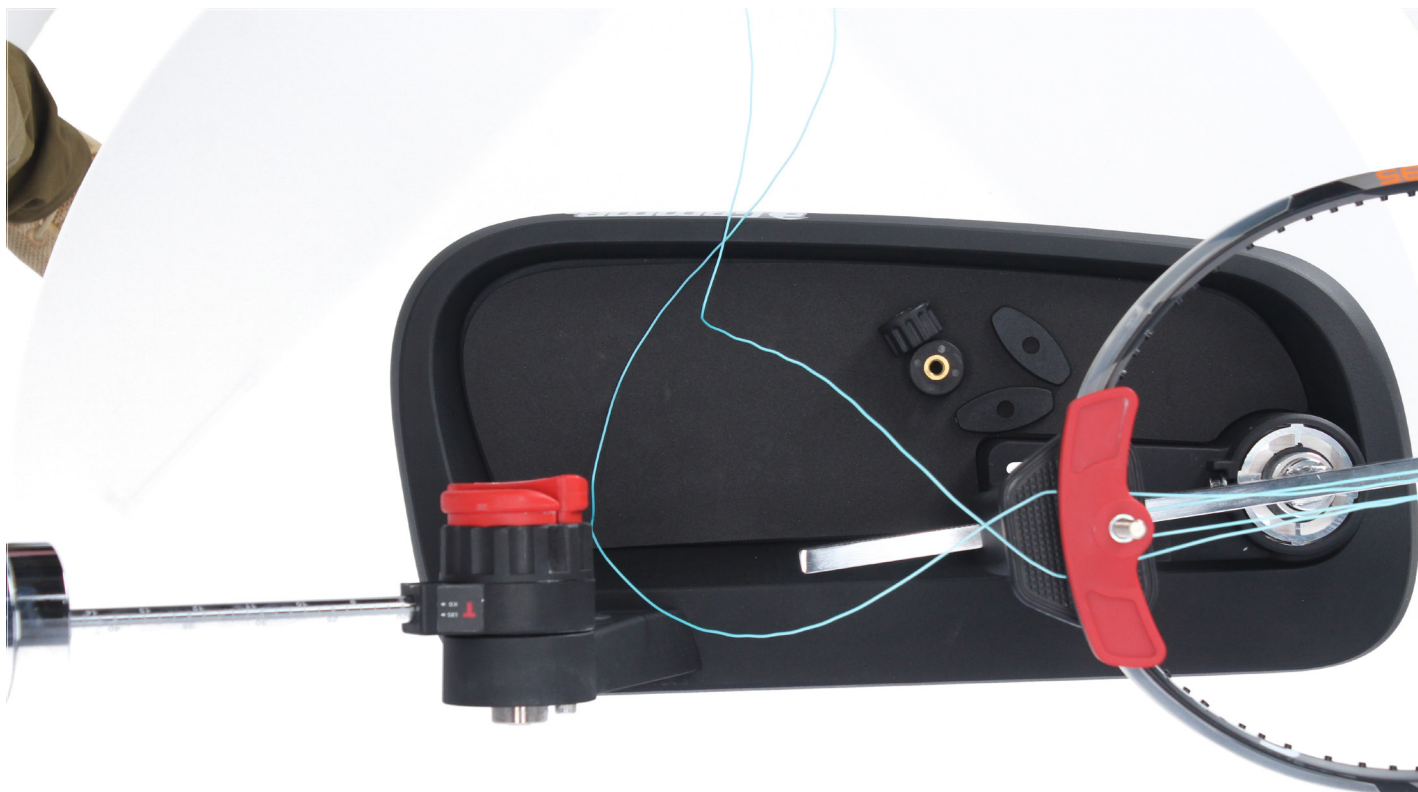
The drop weight is of a two-piece design. When assembled, it will accommodate tensions from 20 to 90 lbs. For tensions from 8 to 20 lbs., remove the 5mm bolt on the face of the drop weight, and use the smaller portion of the weight as described above.

Note: Tensions above 77lbs. require removal of the drop weight bar end cap.



STEP 2

The machine is equipped with stickers indicating the correct scales to use for stringing low and high tensions. Scales labeled for badminton should be used with the small portion of the weight.



STEP 3

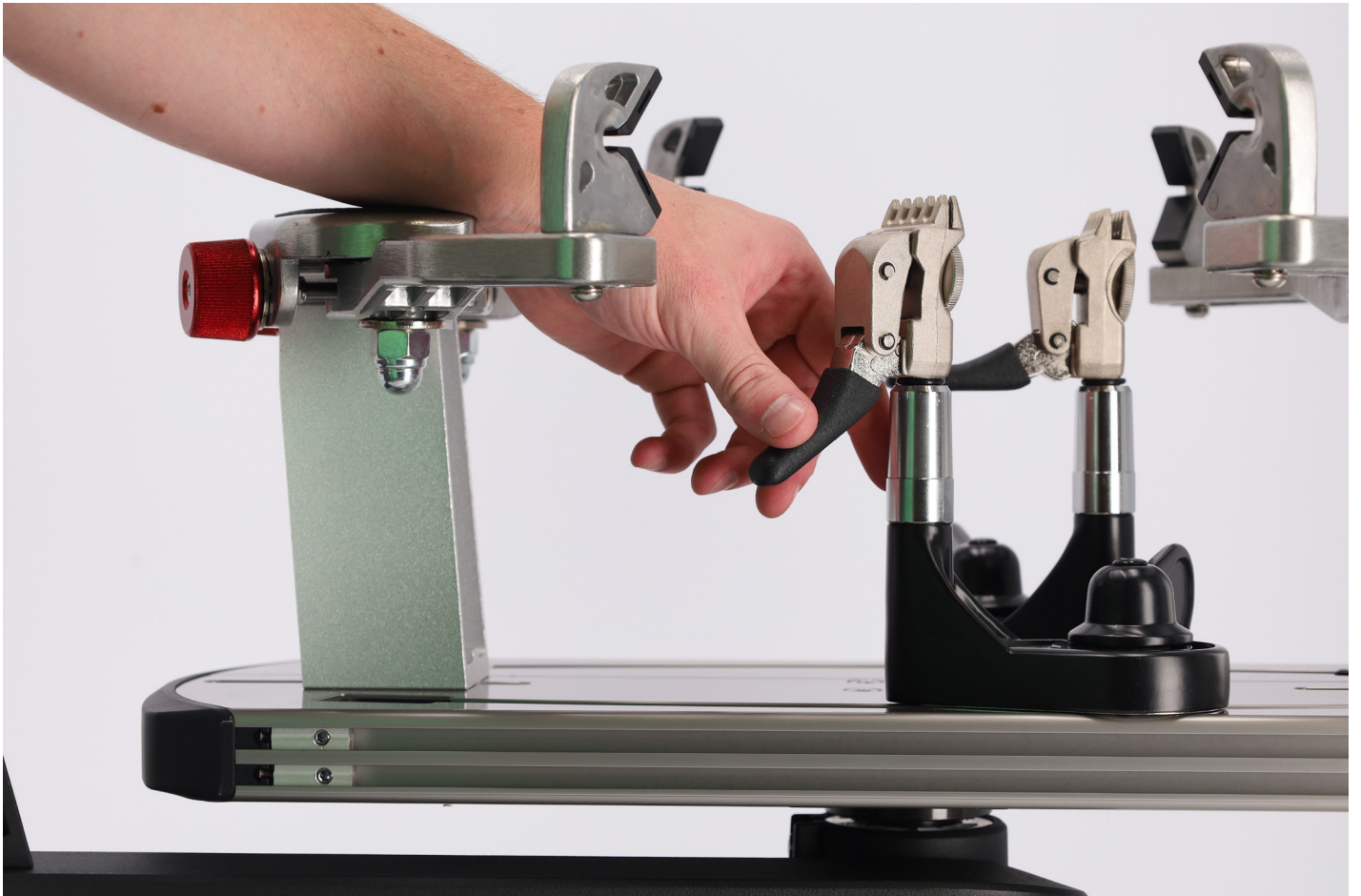
To set the stringing tension, loosen the locking knob on the side of the drop weight. Slide the weight in the appropriate direction until the face closest to the string gripper is indexed with the desired tension mark on the tension bar. There is a sticker on the weight indicating the correct side to use.



B. STRING CLAMP OPERATION

STEP 1

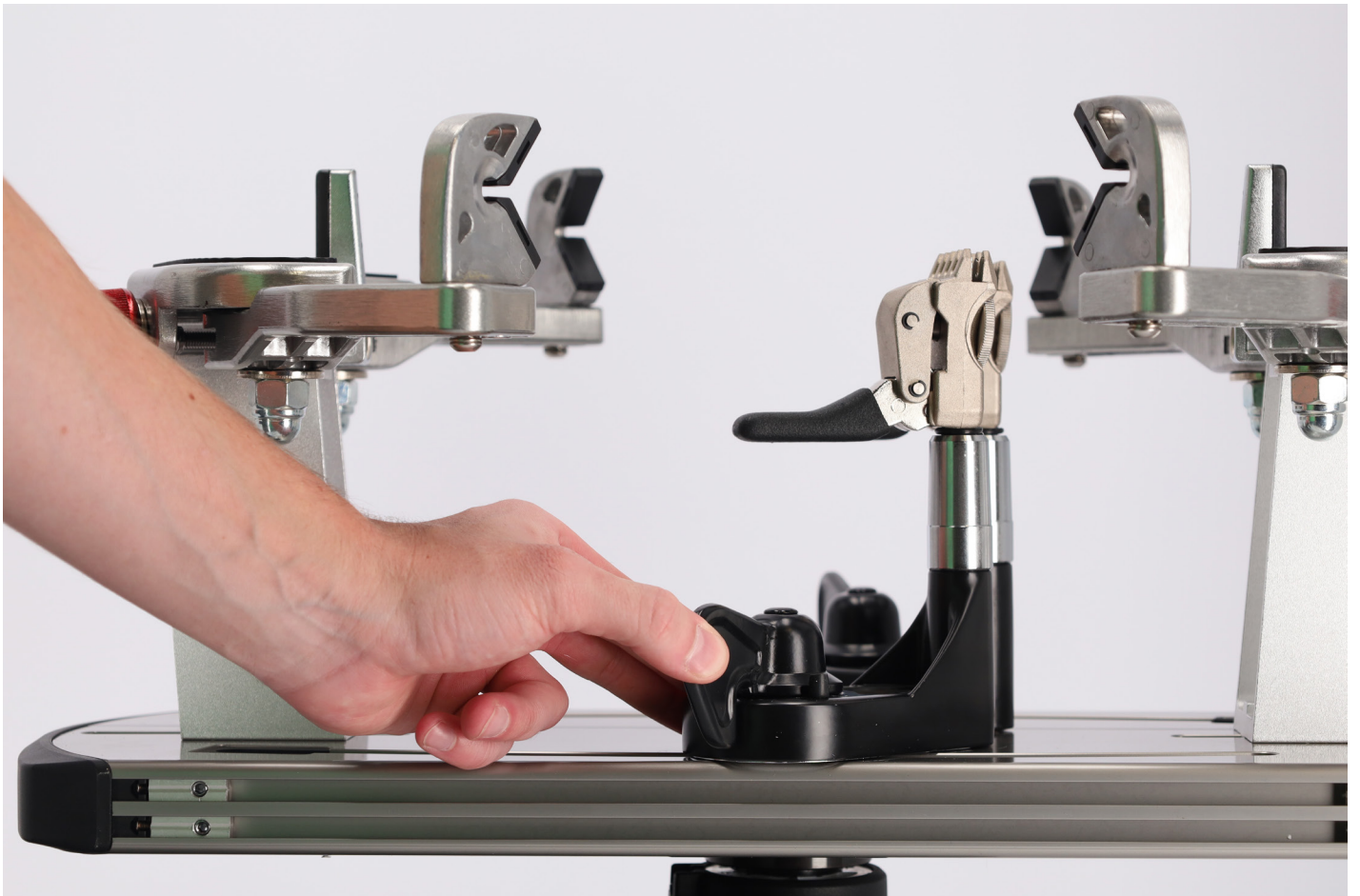
The fixed clamps are of a dual action design. The string clamp and the clamp base operate independently of one another. To clamp a string, lift the clamp head and place the string between the jaws. Depress the clamp head lever to secure the string. The clamping pressure applied to the string should be adjusted to provide sufficient pressure to secure the string when subjected to the desired pulling tension. The diamond coated gripper plates provide for increased friction between the clamps and the string to allow for reduced clamping pressure while securing and holding the string under tension.



C. BASE CLAMP OPERATION

STEP 1

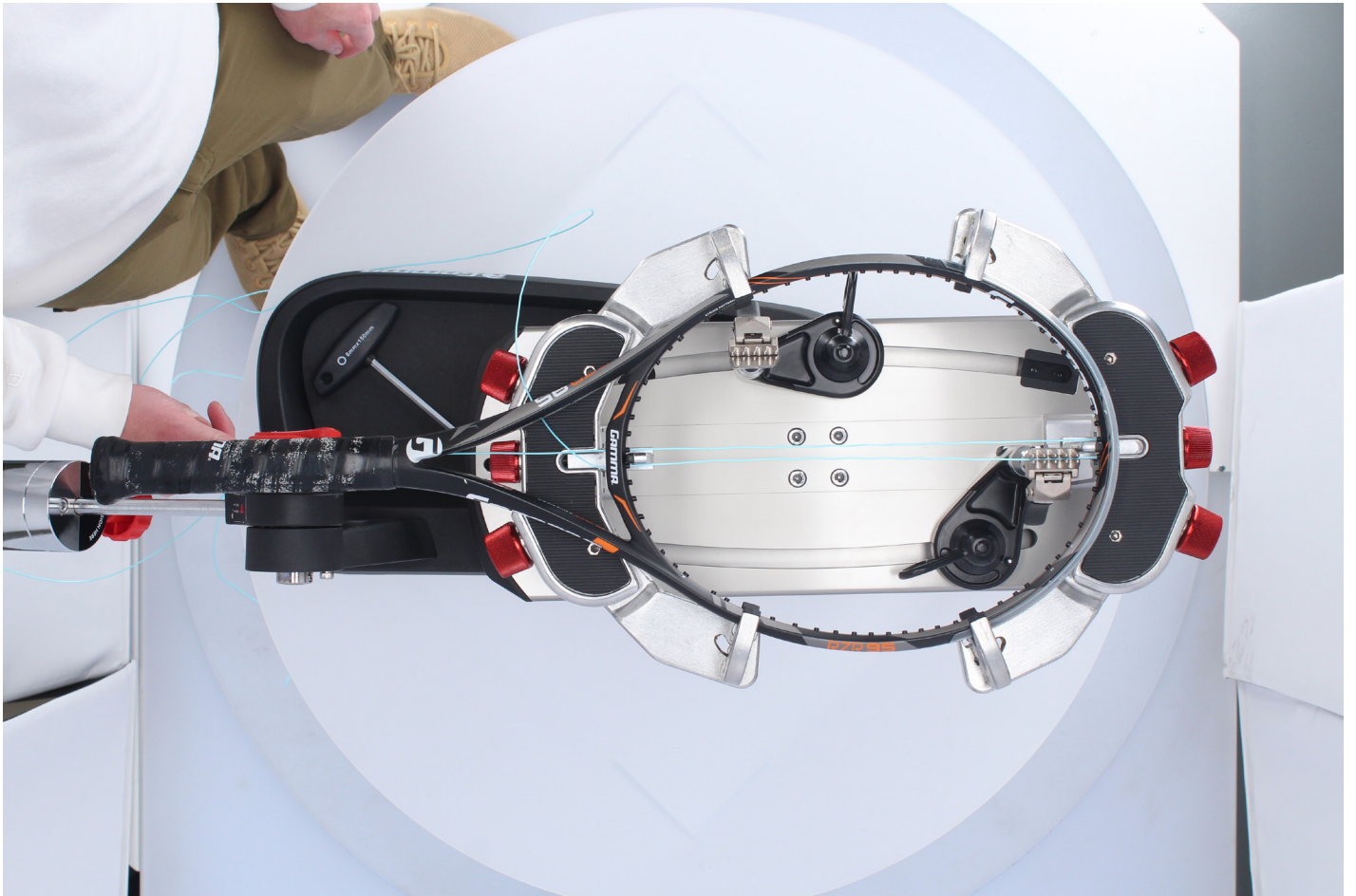
Rotate the lever lock clockwise to secure the clamp base to the turntable. Reverse the clamping procedure to unlock the string clamp. The lever should be tightened enough to prevent clamp base slippage on the turntable, when the desired tension is placed on the string. To go from the loose position to the clamped position and back, generally requires about $1/2$ to $3/4$ quarters of a turn. Although when stringing at extremely high tensions, additional tightness may be required.



D. CLAMPING THE FIRST MAIN STRING

STEP 1

To begin stringing the main strings, thread the two ends of the string through the two center holes at the appropriate end of the frame and continue through the opposite center holes. Thread one end of the string through the adjacent grommet hole and pull excess by hand. Place the string clamp as close as possible to the frame and secure the string.

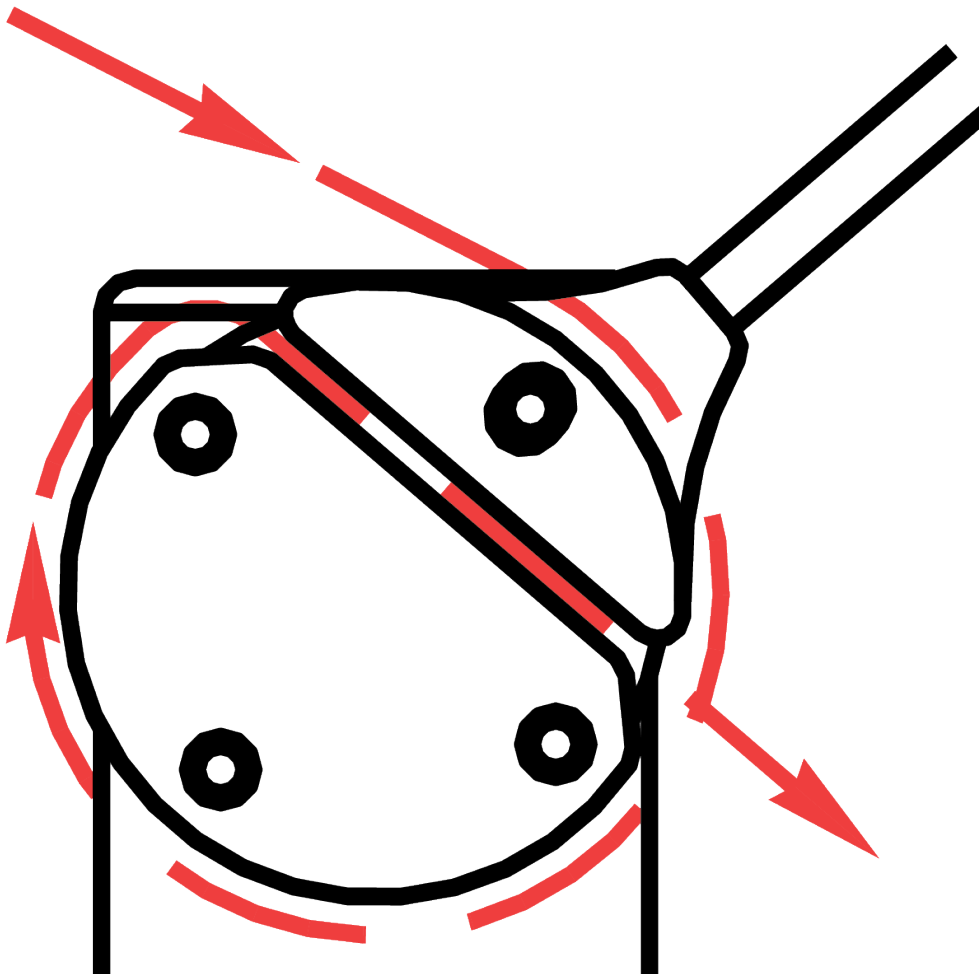


E. PULLING TENSION

STEP 1

Starting with the drop weight bar in the lowered position, wrap the free string clockwise around the gripper drum once and position between the gripper jaw. Gently turn the gripper clockwise while squeezing the jaws together until all slack in the string is removed.

Note: For proper operation, the string gripper jaw must be in the position shown. The tension in the string provides the clamping force to the jaws.



STEP 2

While holding the string gripper drum with your hand, lift the tension bar to approximately 45 degree angle and let fall. If the tension bar drops below horizontal, repeat the above action until the bar comes to rest parallel to the racquet. The set tension will be reached when the bar rests horizontal. If the bar comes to rest above horizontal, release the string and re-pull tension.

Manually forcing the bar into the horizontal position will greatly increase string tension and may result in racquet damage.



WARNING: TO AVOID INJURY, KEEP FINGERS AWAY FROM GRIPPER JAWS WHILE TENSIONING STRING.

F. CLAMPING THE STRING

STEP 1

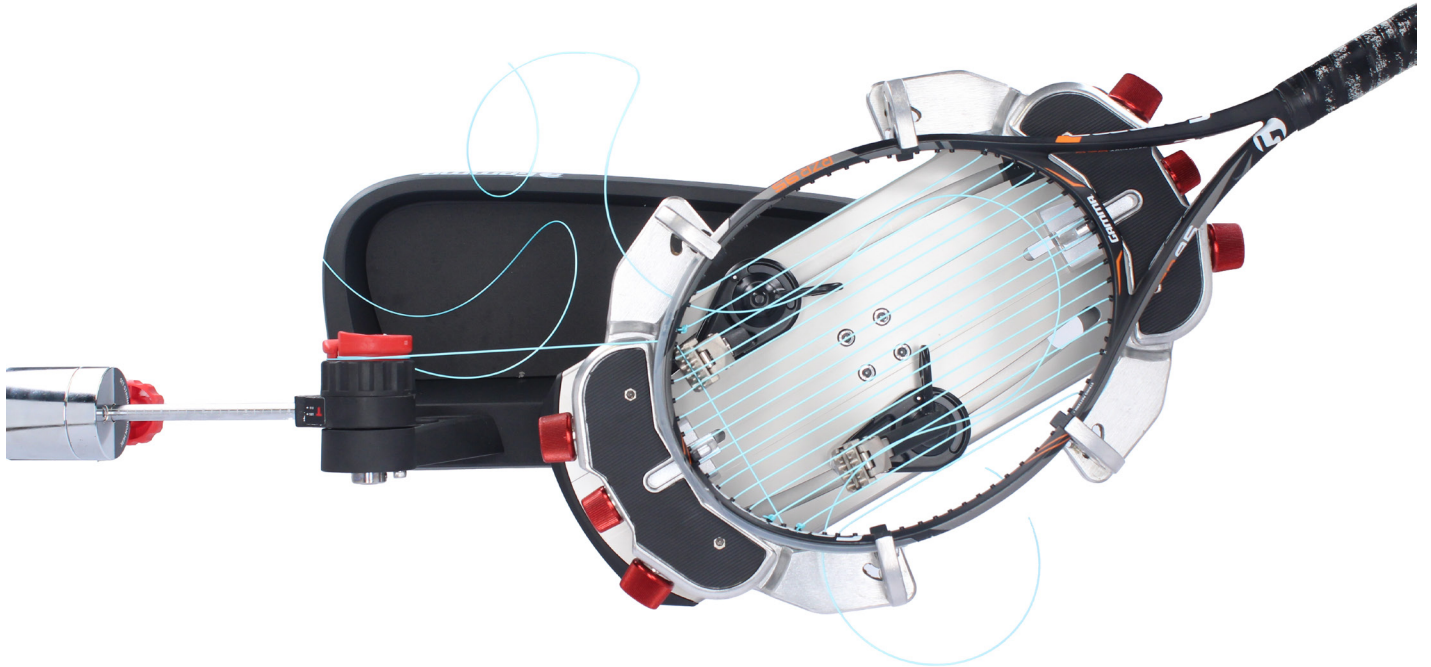
Clamp the tensioned string to the next adjacent string using the second string clamp. Release the tensioned string by raising the tension arm. Repeat the procedure for all of the remaining main strings and tie off following the racquet manufacturers recommendations.



G. WEAVING THE CROSS STRINGS

STEP 1

Follow the manufacturer's recommended stringing pattern for one or two piece stringing. This will determine the starting point for the cross strings. If applicable, tie the first cross string using an appropriate starting knot. Weave the cross strings over and under the main strings being careful to alternate the weave of each consecutive cross string so as to be opposite of the previously installed cross string.



H. FINISHING THE STRING JOB

STEP 1

Once the final cross string is tensioned and clamped, tie off at the appropriate hole specified by the racquet manufacturer and remove the frame.

STEP 2

First loosen the frame supports at 12 and 6 o'clock, then loosen the four shoulder supports.

ADDITIONAL FEATURES

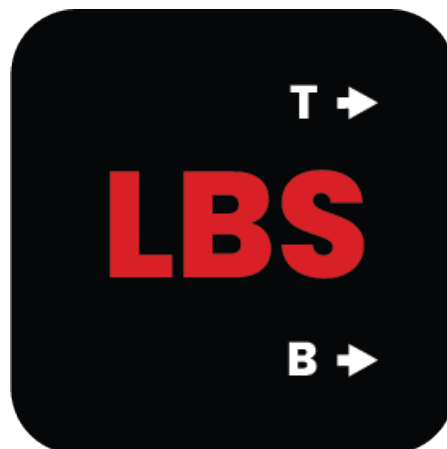
A. STORAGE AND TOOL TRAY

The machine base incorporates ample space to store tool and accessories for easy access during stringing, and for storage when the machine is not in use. A foam pad is included with the machine but not secured. Customers can choose to apply the pad or leave it free.



B. WAYFINDING DECALS

Decals help to guide the user through the stringing process, and weight scale labels help identify where to place the weight for different scenarios.



MAINTENANCE AND ADJUSTMENTS

A. CLAMPS ADJUSTMENT

The clamps provided with your stringing machine will need minor adjustments according to string type, construction, and gauge. To adjust, route the string through the racquet as if you were beginning the main strings. Clamp the strings and pull tension. If the string slips through the jaws of the clamp, tighten the clamp by turning the adjustment knob opposite of the handle, in the clockwise direction. If the clamp leaves impressions or damages the string, it is too tight and must be adjusted by turning the adjustment knob counterclockwise. The clamp jaws must be clean and free from dirt, oil, and any string coating for them to grip properly. Clean the clamp jaws with alcohol. Note: The string clamps supplied with your stringing machine can accommodate tight string patterns such as badminton. Depending on the string pattern, the clamp will spread the strings slightly which will not compromise the quality of the string job.



B. CLAMP BASE LOCKING NUT ADJUSTMENT

STEP 1

In the event the Locking Lever rotation is insufficient to ensure smooth operation of the clamp base, very minor adjustments to the Clamp Base Locking Nut can be made with the supplied 17mm socket. Tighten or loosen the locking nut in very small increments to provide more clamping pressure or running clearance as needed.



C. TROUBLE SHOOTING TIPS

PROBLEM: String slipping in clamp.

SOLUTION:

1. Adjust clamp jaw spacing.
2. Clean clamp jaws with alcohol or Gamma Cleaning Stone.

PROBLEM: String slipping in gripper.

SOLUTION:

1. Be sure to follow instructions for wrapping the string around the gripper.
2. Clean gripper jaws with alcohol or Gamma Cleaning Stone.

PROBLEM: String not releasing from gripper after pulling tension.

SOLUTION:

1. Remove tension bar stop screw for additional rotation freedom of the gripper.
2. To prevent this issue, start with the tension bar in the lowered position and use ratchet gripper for precise adjustments (this also helps achieve more consistent tension)

PROBLEM: String clamp base slips on turntable.

SOLUTION:

1. Clean bottom of clamp & top of turntable with alcohol
2. Adjust clamp base locking nut

ADDITIONAL PROBLEMS?

100% Human Customer Support:

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D. CARE AND CLEANING

With time and use, the clamping surfaces of your machine may become oily or dirty and result in string or clamp slippage while stringing. Periodic cleaning of the String Clamps and String Gripper is recommended. Knife sharpening stones work well for cleaning the diamond coated string clamping surfaces. Cleaning with a solvent such as isopropyl alcohol and a mild abrasive tool such as a toothbrush also works well to remove oily or greasy build up.

PARTS LIST

PART NUMBER – PART DESCRIPTION

4A	TURNTABLE BUSHING
5	RUBBER FOOT
444	Bushing Sleeve
444A	Bushing Sleeve Bolt x2
8A	SET SCREW- M5x6
9	WASHER
14	WASHER
21A	FRAME SUPPORT SLIDE
25	TENSION BAR
26	TENSION BAR CAP
27	DROP WEIGHT KNOB
28	FRONT WEIGHT- BADM
29	BACK WEIGHT- TENNIS
30	TENSION BAR DRUM
30A	SET SCREW
31	STRING GRIPPER DRUM
34	RATCHET TEETH
35	RATCHET TEETH SPRING
83X	TENSION BAR STOP SCREW
88	CAP SCREW
133	FRAME SUPP SLIDE SCREW
140	MTNG STAND TOP PLATE
141	MTNG STAND TOP PAD
144B	SHLDER SUPP LOCK KNOB
447	SUPP ARM ADJUST KNOB
161	WINDER BEARING
162	GRIPPER PIVOT PIN
163	PIVOT PIN RETAINER COLLAR
440	Die Cast BASE

PARTS LIST CONTINUED

PART NUMBER – TOOL DESCRIPTION

441	DIE CAST WINDER STAND
442	WINDER STAND BRACKET
443	WINDER STAND BRACKET BOLTS
445	Tool Tray Pad
446	TURNTABLE END CAP
360	TURNTABLE TT7
262	SUPP POST MT PLATE

TOOLS AND ACCESSORIES

PART NUMBER – TOOL DESCRIPTION

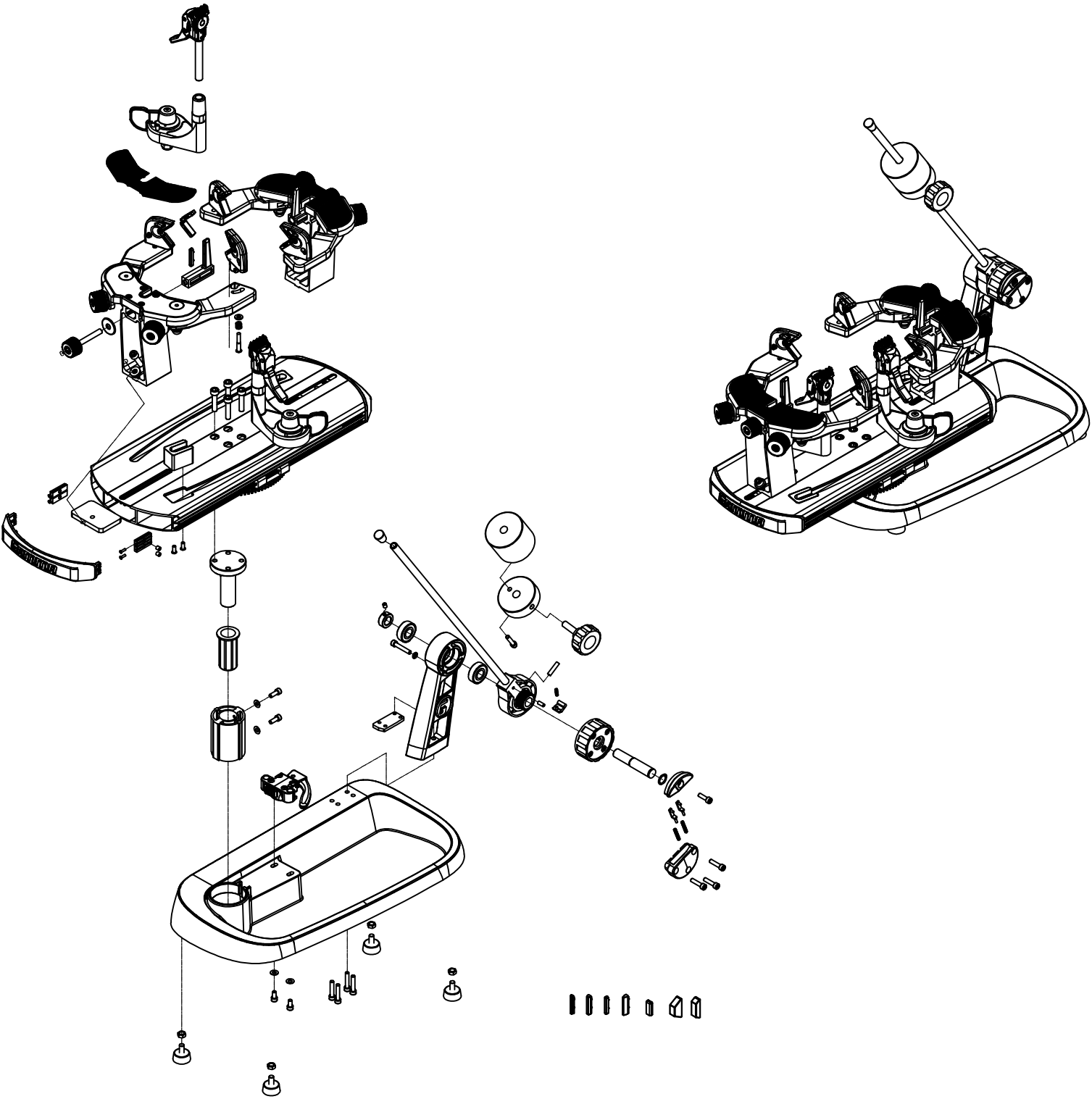
70	5 mm T HANDLE HEX WRENCH
71	6 mm T HANDLE HEX WRENCH
109	NEEDLE NOSE PLIERS
MA	STRAIGHT AWL
MPSA	PATHFINDER AWL
MFSP11	FRAME SUPPORT PADS
MMSP13	V-MOUNT SUPPORT PADS
MBMSP11	BADMINTON SHOULDER SUPPORT ADAPTERS

OPTIONAL TOOLS & ACCESSORIES

PART NUMBER – TOOL DESCRIPTION

MBFC	BADM FLOATING CLAMP
MPMC	MACHINE COVER
MPG	STARTING CLAMP
MPS	CLEANING STONE
MPMC	MACHINE COVER
MPXFS	FLOOR STAND
MMFSA	FLOOR STAND ADAPTER PLATE

PARTS DIAGRAM





STRINGING MACHINE

MOMENTUM DROP WEIGHT 6 PLUS



Engineered by
GAMMA
Pittsburgh, PA USA
www.gammasports.com
Phone 800.333.0337

Momentum Drop Weight 6 Plus Stringing Machine
Made in Taiwan
MOM6P10