



# Owners Manual for the Mybo REVOLUTION Compound Bow

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## Introduction

Thank you for choosing the Mybo Revolution! If you have any questions, or need help, you can email us on [info@ilovemybo.com](mailto:info@ilovemybo.com).

Also, keep an eye out on YouTube for tuning tips and advice from our pro-team. Have fun and be safe!

<https://www.youtube.com/user/MerlinArchery>

## **WARNINGS**

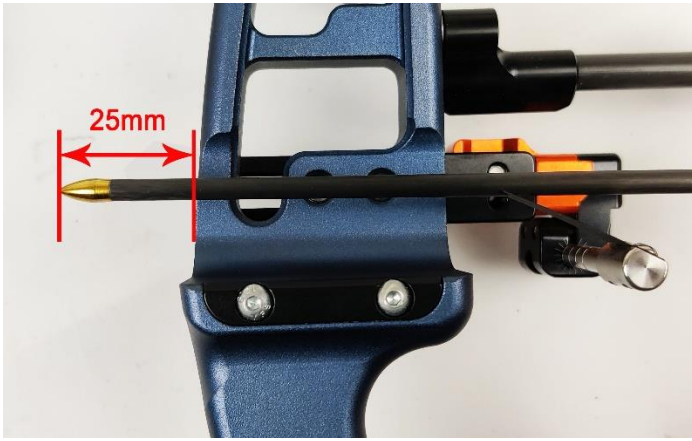
### **Important!**

This bow is a high energy, advanced piece of archery equipment. This owners manual is to assist with the operation of your bow and is not a training manual. **Do not attempt to shoot or adjust your bow without adequate training from an archery professional.** We recommend you utilise the services of an authorised dealer for adjustment and set up, and a qualified coach for instruction. If you have any doubts on any aspect, please contact your dealer for advice.

## Standard Safety Guidelines

Archery is a safe and enjoyable sport. However, bows and arrows are not toys. Used carelessly they can cause serious harm. A straightforward, common sense approach to safety should be adopted by all.

- Never point or shoot your bow at any person or object other than an archery target.
- Make sure the area you are using the bow in is completely clear, and that no one could accidentally walk within range of your bow. Be aware of arrow deflection should you miss, as it may travel at extreme angles to the target.
- Spectators must always stand behind the archer.
- When drawing the bow, keep it level with the target in case of accidental release.
- Children must be always supervised by an adult.
- Use armguards and safety glasses when adjusting and shooting your bow. Failure to do so increases the risk of injury.
- Do not shoot your bow with damaged or frayed bowstrings.
- Use only professionally built archery targets that will not damage your arrows.
- Set the draw length before attempting to draw the bow.
- Ensure arrows are the correct length and spine for the given draw length and poundage.



### Arrow Length

Use arrows that are cut approximately 25mm (1") in front of the far side of the bow.

It is common practice and acceptable to use arrows of a shorter length, but please be aware that this increases the risk of injury should the point of the arrow be inside the archers hand/fingers.

### Arrow Weight

Do not shoot arrows that weigh less than 5 grains per pound of draw weight or are under spine (too weak). E.g. If your draw weight is 60lbs, do not shoot arrows less than 300 grains.

Inspect each arrow for gouges, scratches and impact fractures. If there are any visible signs of damage, discard the arrow. Do not use wooden or fibreglass arrows.

Visit the website [www.safearrow.co.uk](http://www.safearrow.co.uk) for more information on arrow safety.

### Dry-Firing and Derailment

Do not 'Dry-Fire' your bow. (Shoot without an arrow, or an incorrectly attached arrow). This may damage your bow and possibly cause injury to yourself.

Derailment is a term used to describe the string slipping out of the string track either on let-down or on shot. This is caused by a twisting force applied by the archer to either the string, or the riser, resulting in a significant misalignment between the string groove of the cam and the string. As the string travels forward, the cam is unable to pull the string back into the track and a derailment occurs.

To minimise the risk of derailment, relax the bow grip hand and draw in a smooth, controlled action keeping everything square and straight. Execute a smooth shot. Do not shoot a draw weight that is too difficult to draw smoothly. Take extra care when drawing with fingers, **ESPECIALLY** on let-down. Letting down is the most common cause of a derailment because it is easy to tense up against the draw weight and torque the bow.

Damage caused by dry-firing or derailment is not covered under warranty, but we are sympathetic to these situations. A 50% reduction on parts accidentally damaged by dry-fire or derailment is available.



### Cable Guard Adjustment

Do not draw the bow without a properly installed cable guard!

The cams have been designed to be shot with a cable guard.

The cable guard can be adjusted for fletching clearance.

A good start position for right-handed archers is at 4 o'clock. (Opposite for left handed)

Also ensure the cables are crossed below the cable guard.

### Draw Weight Adjustment

Limbs can be backed out a maximum of 6 full turns from the fully wound-up position.

The amount of poundage change varies depending on the original peak weight. Typically, this equates to approximately 15%.

The limb bolt is M8 and requires a 6mm allen key.

The side lock screws are M4 and require a 2.5mm allen key.

To adjust the draw weight, first relax the side lock screws.

Adjust both limb bolts by equal amounts top and bottom. Turning the limb bolt clockwise increases draw weight, anti-clockwise reduces draw weight.

When the correct draw weight is set, re-tighten the side lock screws.



### Nocking points, D-loops and Arrow Rests

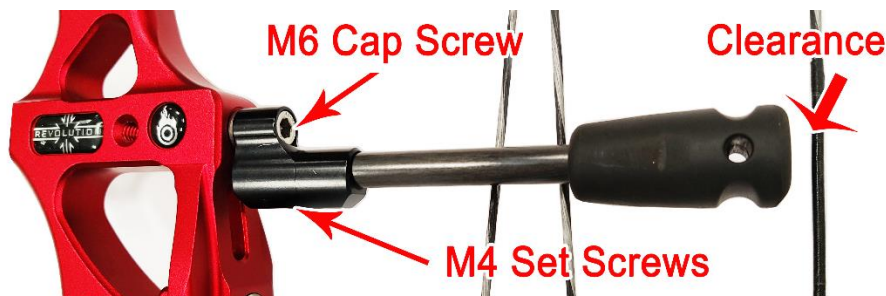
The bow must be fully set up with a nocking point, d-loop (If using a release aid) and arrow rest. **Do not try to shoot an arrow without these items correctly installed.** If you do not know how to fit these items, or need advice on the best types, please contact your dealer for assistance. A good start point is to set the arrow through the middle of the button holes, and the nocking point 2-3mm above square.



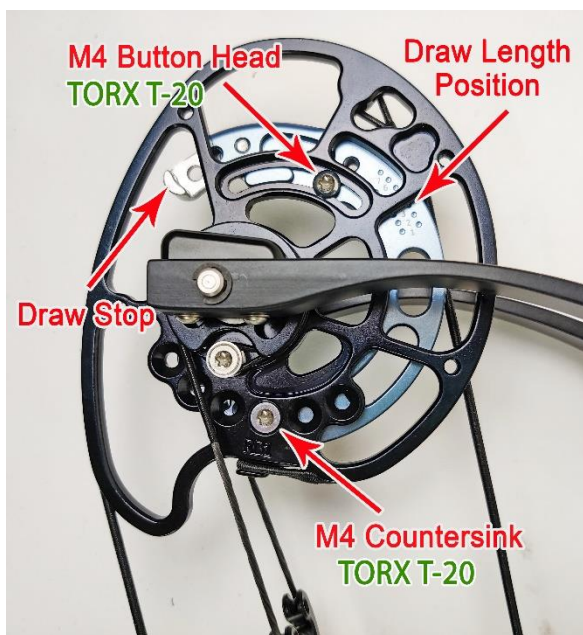
### String Suppressor

Adjust the angle of the suppressor with the M6 Cap screw. (Rotate the rubber stopper by hand to align the groove with the bowstring.) Adjust the clearance with the M4 set screws.

It is recommended to leave clearance between the bowstring and the suppressor to allow the arrow to disconnect from the string before it strikes the suppressor. This can be tested when paper tuning for arrow flight. If paper tuning shows variation depending on the position of the suppressor, continue to increase the gap until no change can be detected.







EXAMPLE STOP POSITION '0'



EXAMPLE STOP POSITION 'PLUS 3'



EXAMPLE STOP POSITION 'PLUS 7'



## Draw Length Adjustment

Draw length is adjusted through a combination of the module position and the draw stop position. There are two key stages when making this adjustment.

- 1) Module position
- 2) Draw stop position.

It is important to understand the relationship between the module and the draw stop. If you adjust the module and do not check that the draw stop is in the correct corresponding position, the cam will not feel as intended.

**Stage 1. Module Position:** To adjust the draw length, first make a note of the current draw length position. Then consult the draw length chart to assess the new position required, or if a module change is required.

If the correct module is currently installed, remove the M4 countersunk module screw completely using a **T20 TORX** key. Relax the M4 button head screw. (Do not fully remove). The module is then free to rotate.

Align the new draw length position and the new screw hole position and re-tighten screws. Repeat with opposite cam.

Note: The engraved numbers are aligned with the flat section of the cam, always on the side that is nearest the limb.

If the adjustment requires the module to be replaced, fully remove the M4 countersunk screw and the M4 button head screw. The module can then be completely removed, and the replacement module fitted.

**REMEMBER TO FIT THE DRAW STOPS TO THE NEW MODULE.**

**Stage 2. Draw Stop Position** When the module position has been set, you need to make sure the stop position is also correct. The draw stop controls let-off. When draw length is adjusted by rotating a module, let-off can vary from position to position.

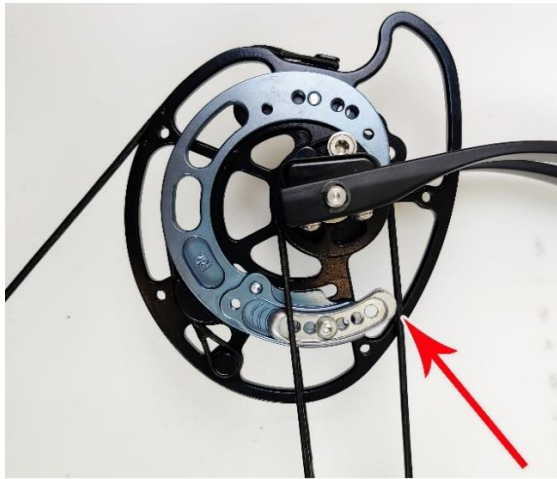
By consulting the draw length chart, you will see the stop position recommended for that given module position relative to the others. Consistent let-off can be maintained through the module range by adjusting this stop.

The stop position in the chart is for a typical 75% let-off and is a good start point. Feel free to make your own adjustments of the stop position to customize the feel. Sliding the stop forward will decrease let-off, Sliding the stop back will increase the let-off.

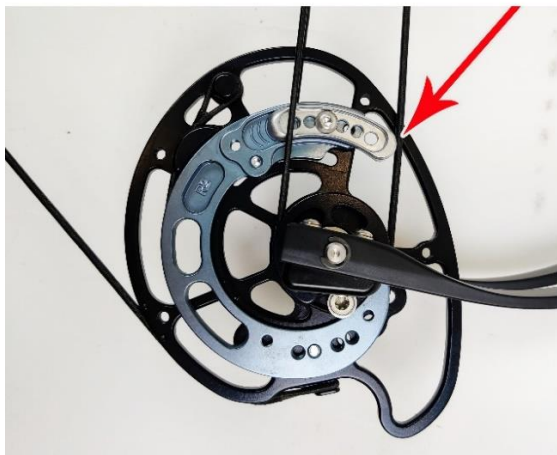
To adjust the stop position, Use a **T20 TORX** key to remove the M4 button head screw completely, slide the stop to the new position and re-tighten. Repeat with opposite cam.

Replace module screws should the heads start to become worn.

**IMPORTANT! DO NOT CONFUSE THE CABLE POST SCREW WITH THE MODULE SCREWS. THE CABLE POST HAS THE CABLE LOOPED AROUND IT AND IS UNDER TENSION. IF THIS SCREW IS REMOVED WHILE UNDER TENTION THE BOW WILL FAIL DERAILED CAUSING DAMAGE AND POSSIBLE INJURY TO YOURSELF.**



### Cam Timing Contact Points



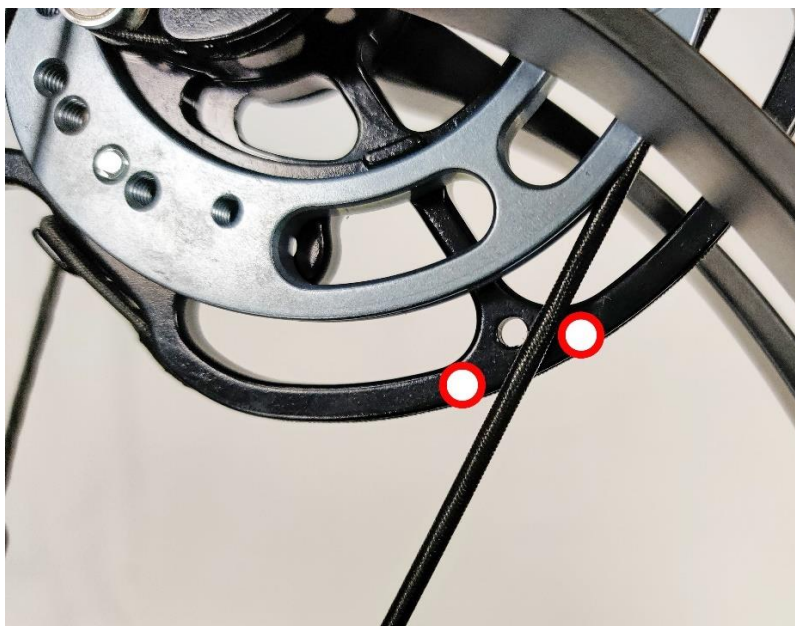
#### Cam Timing / Synchronisation

Ensure that the top and bottom cams are synchronised by viewing the contact points where the cables hit the stops.

The cables should hit the stops at the same time. If one cable hits before the other, then they are not fully synchronised.

Ask a friend to watch the contact as you draw back. Be careful to only draw gently against the stops to properly view the contact. If you pull hard on the stops when there is only a small difference, then one cable may flex, hiding the error.

Adjustment to synchronisation is performed on a bow press by twisting one of the cables. This should only be carried out by a competent bow technician. Please contact your dealer for assistance.



#### Cam Rotation

On all cam sizes there are two dots to reference cam rotation at brace height.

It is ok to tweak poundage and draw length by twisting/untwisting strings and cables.

Increasing rotation increases draw length and poundage. Shortening rotation decreases draw length and poundage. Keep the power cable within the two dots.

Note: The draw force profile also changes slightly when changing cam rotation.

## Lateral Limb Adjustment

The Revolution features a unique Limb adjuster. This feature has been added to provide an additional tuning aid and alignment mechanism. It can be adjusted in real time, without the need for a bow press.

Why? – Compounds bows are sensitive to influence in the horizontal plane. This is caused by cam let-off and is easily recognisable as that side to side 'waggle' of your stabiliser at full draw. It takes very little pressure to influence the angle the riser sits in your hand affecting the direction your stabiliser 'points' at full draw. For some archers it may point left at full draw, others right, others straight down the middle. The delivery of the arrow through the bow is affected by this position.

The lateral limb adjuster on the Revolution moves the limb tips horizontally, which in turn changes the horizontal relationship between the bow string plane and the grip pressure, which in turn changes the direction your bow points at full draw.

Before you start to make any adjustments there are some things to be aware of.

- 1) The lateral adjustment is an additional option for fine tuning. All the usual tuning requirements must still be considered, such as: Arrow spine, arrow rest centre shot adjustment, bowstring to face contact, bow hand placement, side rod configuration.
- 2) The best result may not be the stabiliser pointing dead straight at full draw. There can be a benefit to offsetting the stabiliser direction to one side as it compensates for torque or side rods, resulting in improved grouping. The lateral adjuster is designed to give you the ability to choose the direction the bow points, so you can find the best position for your individual circumstances.



### How to adjust

Relax the M6 locking screw with a 3mm allen key.

**IMPORTANT!** There is a white Delrin ball inside the M6 hole to protect the drive mechanism from the locking screw. If you were to replace the screw, ensure the Delrin is still there. If in doubt, do not tighten the screw, as this will damage the drive mechanism. The M6 set screw is not necessary but has been added as a 'peace of mind screw' to lock the mechanism.

When adjusting, use a 4mm Allen key to turn the lateral adjuster screw **CLOCKWISE** only. If you need to adjust in the opposite direction, switch the allen key to the opposite side and turn **CLOCKWISE**.

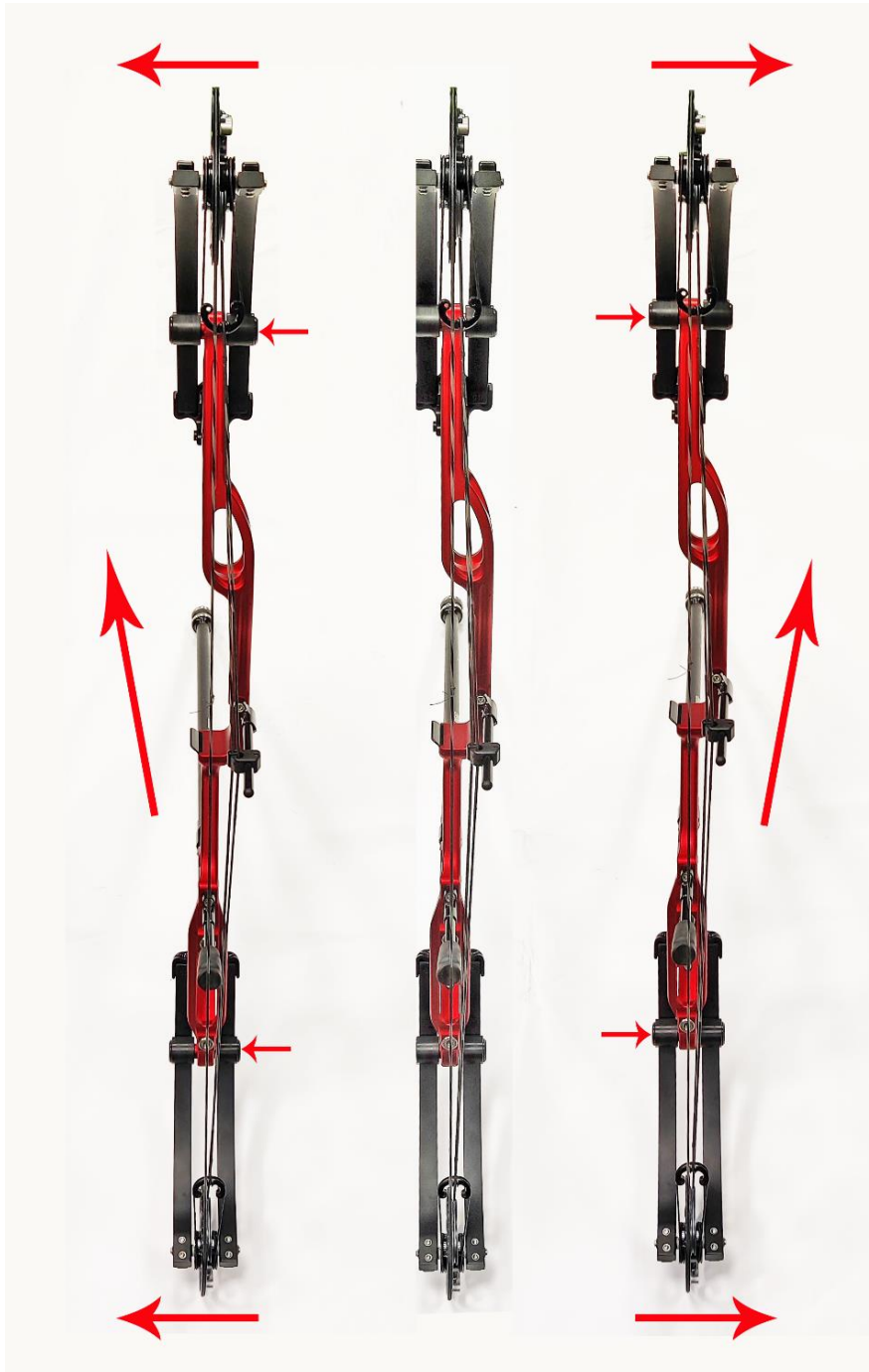
If you turn anticlockwise, the screw may undo without moving the mechanism. If it does, simply put an allen key in both sides and tighten back together.

There is an indicator dot on the mechanism end caps. Use this as a reference to track your movements. If you wish to reset back to centre, you can measure using callipers as shown in the photo to compare left to right position.

**IMPORTANT!** When the lateral adjuster approaches the end of its adjustable limit do not continue to tighten. Be aware of the adjuster coming to a stop, both visually and by feel.







### Preliminary Set-up

Start with the lateral adjusters in a central position and fit your stabiliser. Visually align the bow string down the centre of the riser and check it splits the stabiliser. If it does not, make small adjustments to the lateral adjuster to square the stabiliser up with the bow string, and the string with the centre of the riser.

To move the rod to the left, move the limb tips to the left by moving the limb adjuster to the left. Reverse for opposite movement.

When the bow is visually aligned, fit the rest, nocking point, loop, and all accessories.

Set the arrow rest centre shot square with the inside face of the bow.

Everything should look nice and straight and is ready to shoot and tune.

To assess if your bow torques, at full draw aim at a target, (with an arrow!) line up your peep sight so everything feels good.

Lift your head a little so you can just see the tip of your stabiliser in relation to the bow and make a note. Check several times to ensure consistency. (You may need a friend to stand behind you to help look).

**Note: If the stabiliser is not straight at full draw, but arrow flight is clean, that is ok! It is not critical that your stabiliser must point a certain direction.**

If arrow flight is not good, and the bow is being torqued off-line at full draw, using the lateral adjuster to change the alignment of the bow can help with the tune.

Experiment with different positions and monitor the effects of arrow flight and grouping. Remember, that when you use the lateral adjuster it also affects the arrow rest centre shot position, so this will need to be adjusted.

Tip: If the bow is torquing off-line, a good neutral position is to make any correction at full draw by only 50% of the distance required to push it back to centre.

Why 50%? Because as we start to square the rod at full draw, it is also moving the position at brace height in the opposite direction. Splitting the difference between its position at brace height and its position at full draw is a good balance.

## Maintenance

A bow is a mechanical device subject to stress, vibration and wear and tear. Periodic inspection and maintenance will ensure trouble free use.

Use a string wax regularly to prolong the life of your strings and cables.

Do not shoot strings and cables that show signs of damage or have broken strands. We recommend changing your strings and cables once per year, or sooner if the need arises.

Before shooting, check all screws are tight and inspect the bow for damage.

Do not store your bow wet and be careful not to leave your bow in or near heat sources. The most common heat related damage is when bows are stored in cars on hot sunny days. Think of your bow as a finely tuned musical instrument and treat it as such.

The cam bearings are sealed and fully stainless steel. Lubrication is not required.

Be careful of bumping your limbs against hard objects and particular caution should be paid to using any bow stands that clamp on the limbs, and items that may move around your bow case when stored.

Clean your bow with a soft, slightly damp cloth. Do not use solvents.



## Bow Presses

Your bow can only be serviced in a bow press and should be done only by an authorised dealer.

**Only bow presses that compress the bow by the limb tips are permitted.** Other types of presses, such as those that use rollers resting on the limb faces, are not permitted and WILL damage your bow.

**Bow press damage is not covered under warranty.**

## Warranty

Your bow is guaranteed to be free of defects in materials and workmanship for a period of 3 years.

After 3 years, and subject to available compatible components, a 50% discount will be offered on replacements parts.

If your item should develop a fault, first contact the dealer where the item was purchased. We will then work with the dealer to resolve the problem as quickly as possible. The part will either be repaired or replaced. If we replace the part, we reserve the right to change it to a different or newer designed alternative.

Issues not covered under warranty are:

- Fair wear and tear
- Paint finish, anodising, chips, scratches, or dents
- Stripped threads, seized screws, rounded or broken screw heads.
- Wearable items such as bearings, axels, cable slides, cable guards, strings and cables
- Accidental damage, including issues caused by Dry-Fire, derailment, modification or misuse.

This warranty is to the original owner and is not transferable.

**Mybo is a division of Merlin Archery Ltd.**

**Unit 1, Great Central Trading Park, Great Central Road, Loughborough, Leicestershire. LE11 1RW. UK**

[www.ilovemybo.com](http://www.ilovemybo.com)



REVOLUTION DRAW LENGTH CHARTS BASE CAM 'R'				REVOLUTION 40	REVOLUTION 37	REVOLUTION 34
Base Cam Size	Module	Module Position	Stop Position at 75% let-off	Draw Length	Draw Length	Draw Length
R	R3	1	plus 1	28.50	27.25	26.00
R	R3	2	plus 2	28.75	27.50	26.25
R	R3	3	plus 2	29.00	27.75	26.50
R	R3	4	plus 2	29.25	28.00	26.75
R	R3	5	plus 2	29.50	28.25	27.00
R	R3	6	plus 2	29.75	28.50	27.25
R	R3	7	plus 2	30.00	28.75	27.50
R	R3	8	plus 2	30.25	29.00	27.75
R	R3	9	plus 1	30.50	29.25	28.00
R	R2	1	plus 4	29.75	28.50	27.25
R	R2	2	plus 3	30.08	28.83	27.58
R	R2	3	plus 3	30.42	29.17	27.92
R	R2	4	plus 3	30.75	29.50	28.25
R	R2	5	plus 2	31.08	29.83	28.58
R	R2	6	plus 2	31.42	30.17	28.92
R	R2	7	plus 1	31.75	30.50	29.25
R	R1*	1	plus 3	31.75	30.50	29.25
R	R1*	2	plus 2	32.15	30.90	29.65
R	R1*	3	plus 1	32.50	31.25	30.00
REVOLUTION DRAW LENGTH CHARTS BASE CAM 'M'				REVOLUTION 40	REVOLUTION 37	REVOLUTION 34
Base Cam Size	Module	Module Position	Stop Position at 75% let-off	Draw Length	Draw Length	Draw Length
M	M3	1	plus 1	27	25.75	24.5
M	M3	2	plus 1	27.25	26	24.75
M	M3	3	plus 1	27.5	26.25	25
M	M3	4	plus 2	27.75	26.5	25.25
M	M3	5	plus 2	28	26.75	25.5
M	M3	6	plus 2	28.25	27	25.75
M	M3	7	plus 2	28.5	27.25	26
M	M3	8	plus 1	28.75	27.5	26.25
M	M3	9	plus 1	29	27.75	26.5
M	M2	1	plus 4	28	26.75	25.5
M	M2	2	plus 3	28.25	27	25.75
M	M2	3	plus 4	28.5	27.25	26
M	M2	4	plus 3	28.75	27.5	26.25
M	M2	5	plus 3	29	27.75	26.5
M	M2	6	plus 2	29.25	28	26.75
M	M2	7	plus 2	29.5	28.25	27
M	M2	8	plus 1	29.75	28.5	27.25
REVOLUTION DRAW LENGTH CHARTS BASE CAM 'S'				REVOLUTION 40	REVOLUTION 37	REVOLUTION 34
Base Cam Size	Module	Module Position	Stop Position at 75% let-off	Draw Length	Draw Length	Draw Length
S	S3	1	plus 0	25.00	23.75	22.50
S	S3	2	plus 1	25.25	24.00	22.75
S	S3	3	plus 1	25.50	24.25	23.00
S	S3	4	plus 2	25.75	24.50	23.25
S	S3	5	plus 2	26.00	24.75	23.50
S	S3	6	plus 2	26.25	25.00	23.75
S	S3	7	plus 2	26.50	25.25	24.00
S	S3	8	plus 1	26.75	25.50	24.25
S	S3	9	plus 1	27.00	25.75	24.50
S	S3	10	plus 1	27.25	26.00	24.75
S	S2	1	plus 3	27	25.75	24.50
S	S2	2	plus 3	27.25	26	24.75
S	S2	3	plus 2	27.5	26.25	25.00
S	S2	4	plus 2	27.75	26.5	25.25
S	S2	5	plus 1	28	26.75	25.50

Note: Actual draw lengths may vary slightly depending on let-off, draw weight position and cam rotation.