



AEROBAR TWO
GENERAL ASSEMBLY- DUAL STACK SYSTEMS

INTRODUCTION

We're pleased to welcome you to a global family of athletes embracing more comfortable, more effective time trial positions. Sync Ergonomics recommends the installation of your Sync components to be undertaken by a qualified bicycle mechanic, experienced with time trial and triathlon bicycles. Irrespective of your level of mechanical experience, please read the following guide as it contains information vital for correct setup and use.

This document has been prepared to guide you through the assembly of AeroBar Two (AB02). Care must be taken during the installation process to ensure proper function and ongoing maintenance must be performed to ensure longevity of your Sync Ergonomics components.

WARNING: In order to be installed correctly the components of AB02 require specialised knowledge of a time trial bicycle. It is recommended that installation should be performed by a qualified bicycle mechanic. Improper assembly of any of the components of AB02 could cause damage to the product(s) and/or bicycle, may lead to loss of control of the bicycle, and may lead to personal injury, or in severe cases even death. Sync Ergonomics assumes no responsibility for improper assembly and installation of the product(s).

WARNING: Please have your bicycle and Sync Ergonomics products regularly inspected for possible damage from use, especially from instances such as accidents, crashes, and/or impact that occurs with travel. In the event of an accident, crash and/or impact in travel, it is strongly recommended you stop using your bicycle immediately and take your bicycle to a professional bicycle mechanic for inspection to ensure proper function and safety. In the case of damage, replace affected parts immediately. Even when no damage is visible, there may be internal damage to the integrity of a component. Failure to replace damaged parts could result in loss of control, and may lead to personal injury, or in severe cases even death. Sync Ergonomics assumes no responsibility for improper maintenance and inspection of the product(s).

WARRANTY

Sync Ergonomics components are free from material and manufacturing defects for a period of 12 months starting from the original purchase date, unless otherwise stated in our warranty policy, detailed on our website at www.syncergonomics.com. This warranty is non-transferable and only applicable to the original customer who purchased this product and this product only. Any modifications to the product, other than for its original intended use, such as drilling, will effectively and immediately void the warranty.

For more information on our warranty policy and instructions for completing a warranty claim, please visit our website for full details at www.syncergonomics.com.

REQUIRED TOOLS AND PRODUCTS

Torque wrench (with Hex and Torx drivers)
4 mm T-Handle Hex key
T10, T20 and T25 Torx keys
Cutting guide (Park Tool SG-6)
Hack saw and a high-quality 32 TPI blade
Fine metal file or deburring tool
Isopropyl alcohol
MOTOREX Bike Grease
Assembly paste (carbon paste) – If using carbon extensions

WARNING: Your bike may require additional tools to what is mentioned above and we cannot guarantee that these recommendations will cover the requirements of all bikes. If in doubt, ensure assembly is handled by a qualified bicycle mechanic, experienced with the assembly and setup of a time trial bicycle.

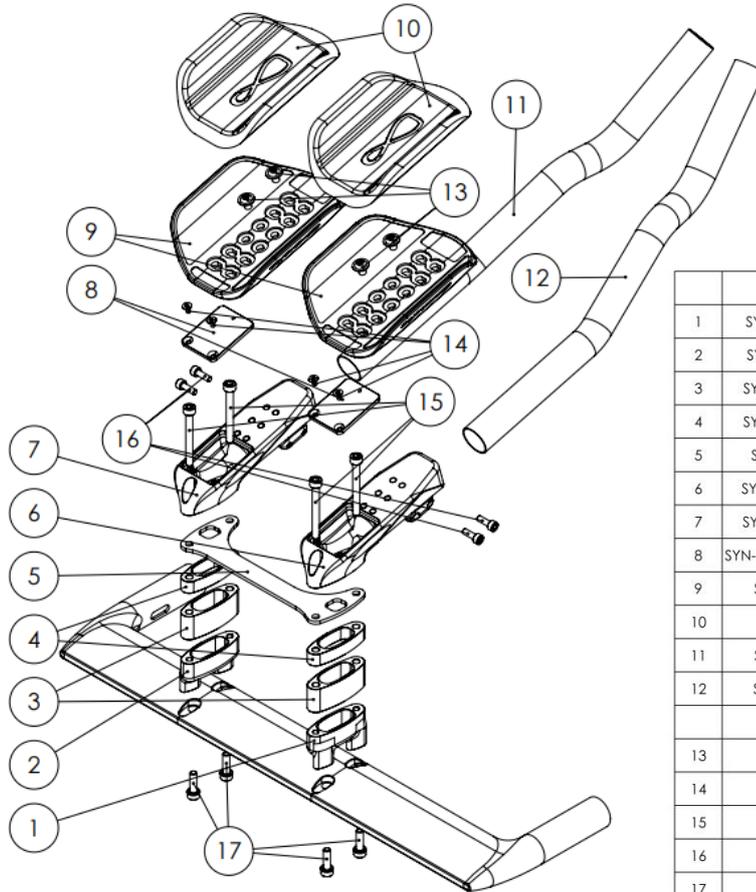
WARNING: Do not attempt to modify your Sync components, outside of what is described within this setup guide as appropriate for assembly. Modification may impact the structural integrity of the components and could result in component failure, or failure of the complete system. Sync Ergonomics is not liable for product damage and/or personal injury resulting from improper assembly.

SETUP GUIDE VISUALISATION

The following setup documentation depicts installation on a Giant Trinity basebar, using our Giant Trinity basebar adapters. There will be some variation in the connection of this component and visual appearance, depending on the bike in question. Please see setup guide supplements on our technical page, where significant design differences require a different setup approach.

For more information and technical resources, please visit <https://www.syncergonomics.com/technical>.

AEROBAR TWO DUAL STACK BOM (EXAMPLE)



	PART NO.	PART NAME	QTY
1	SYN-EVO-BA-XXX-XXX-RX	SYNC EVO BASEBAR ADAPTER, BIKE SPECIFC	1
2	SYN-EVO-BA-XXX-XXX-LX	SYNC EVO BASEBAR ADAPTER, BIKE SPECIFC	1
3	SYN-EVO-SP-M5-20-40-LW	SYNC EVO SPACER, 20MM	4
4	SYN-EVO-SP-M5-10-40-LW	SYNC EVO SPACER, 10MM	4
5	SYN-EVO-BR-M5-40-125	SYNC EVO BRIDGE, NON UCI	1
6	SYN-EVO-PRO-CL-TUBE RH	SYNC EVO CLAMP, TUBE TYPE, 22.2MM	1
7	SYN-EVO-PRO-CL-TUBE LH	SYNC EVO CLAMP, TUBE TYPE, 22.2MM	1
8	SYN-EVO-PRO-CL-MED-CVR-LR	SYNC EVO PRO CLAMP COVER, MEDIUM	2
9	SYN-EVO-CP-15-14-CB	V2 DEEP GROOVE ARM CUP	2
10	SYN-EVO-CP-PAD	EVA FOAM PAD	2
11	SYN-EVO-EX-340-25-LX	SYNC EVO LOW RISE 3D EXTENSION	1
12	SYN-EVO-EX-340-25-RX	SYNC EVO LOW RISE 3D EXTENSION	1
13	-	M5x8MM FLANGED BUTTON SCREW T25	4
14	-	M3x6MM CSK T10	4
15	-	M5x16MM-75MM SOCKET HEAD CAP SCREW	4
16	-	M4x12MM CAP SCREW T20	4
17	-	BASE BAR ADAPTER CONNECTION SCREW- BIKE SPECIFC	4

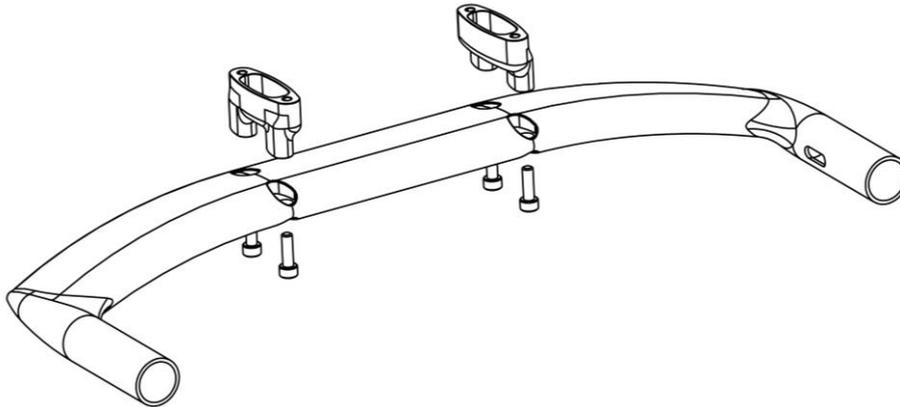
BASEBAR ADAPTERS

The purpose of the basebar adapters is to provide a consistent left-right spacing for the extension clamps – In most cases the spacing is 125 mm. For the Colnago TT1, the left to right spacing is 115 mm, after the Sync basebar adapters are installed. In certain instances, we supply basebar adapters that achieve a narrower spacing.

Please refer to the bike specific BOM that is downloadable via the [Technical](#) page.

Basebar adapters connect directly to the basebar or spacer stack. These components are bike/handlebar specific and it should not be attempted to mount these components on any other handlebar than specified.

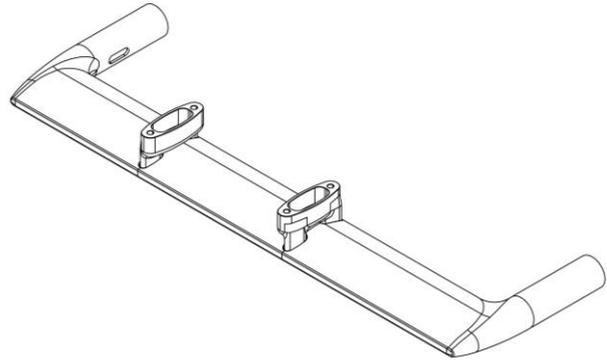
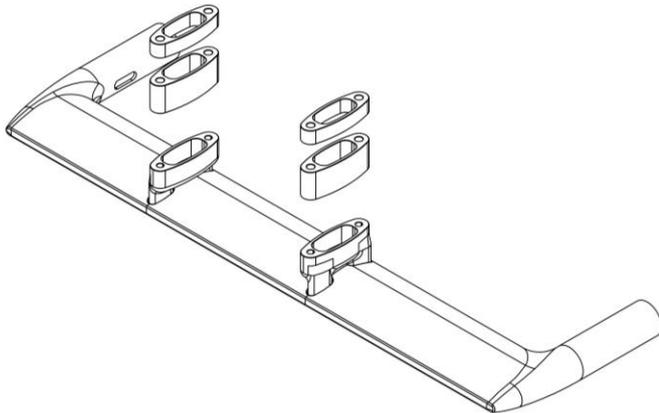
NOTE: Particular care should be taken to ensure the appropriate thread engagement when connecting the basebar adapter to the basebar/basebar components. Some variations may exist between the mounting requirements for each bike, due to the manufacturing tolerances or design revisions of the OE components. Please take special care to ensure that all threads are correctly engaged during assembly.



BAR ADAPTER INSTALLATION

The AB02 basebar adapters are installed directly on top of your basebar, or in some cases, directly on top of the bikes original spacer stack.

NOTE: Torque the basebar adapter bolts to the torque originally specified for your handlebar and the OE extension clamps. Each handlebar has unique requirements, please refer to the original assembly documentation.



SPACER INSTALLATION

Sync AB02 spacers are designed to replace the OE spacer stack. AB02 systems are supplied with 60 mm of spacers. If you require additional spacers, please contact us.

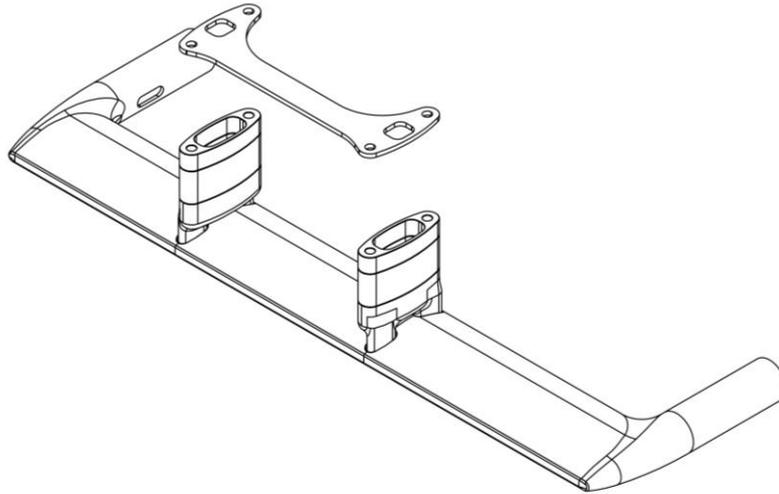
NOTE: Canyon Speedmax CF SLX H48/H49 AB02 systems come with 30 mm of spacers. Specialized Shiv TT Disc and Trek Speed Concept SLR systems use the original spacer stack of the bike.

BRIDGE SELECTION

We recommend the use of a bridge (support brace) on most bikes when your spacer height exceeds 30 mm. The AB02 non-UCI bridge can be placed at the top of the spacer stack, below the extension clamps.

For UCI application, our UCI bridge must be used. This meets the requirement for being 10 mm thick, where the standard 2.5 mm thick plate is non-compliant.

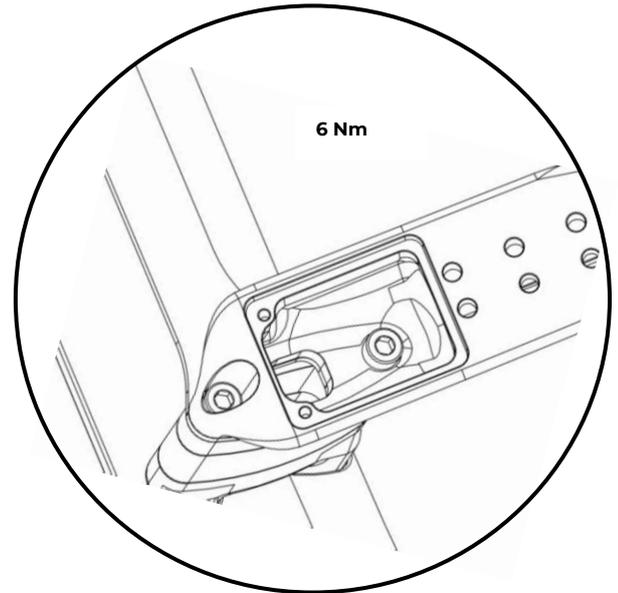
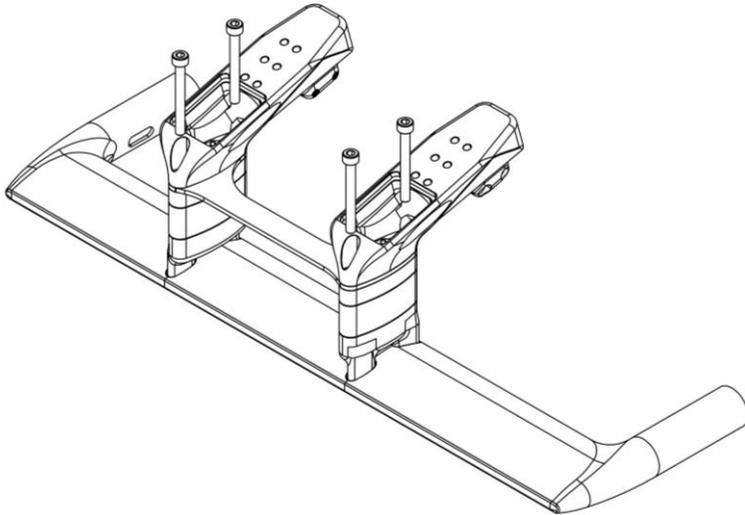
NOTE: Please refer to the following bolt selection tables to ensure you have the correct bolt length for your spacer configuration. There is no change to the bolt length when using the non-UCI bridge.



EXTENSION CLAMP INSTALLATION

The AB02 system uses a bolt down arrangement for all compatible bikes. Ensure you select the appropriate bolt length for the spacer stack you have installed. We recommend the application of MOTOREX Bike Grease for the clamp bolts.

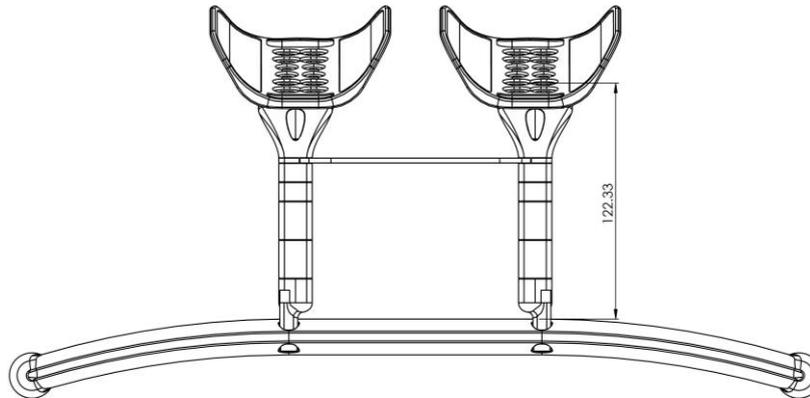
NOTE: Torque the AB02 extension clamp bolts to **6 Nm**.



AEROBAR TWO SPACER AND BOLT CHART

COMPONENTS	SPACER STACK (MM)	BOLT LENGTH (MM)
BASEBAR ADAPTER	0	16
WITH 10 MM SPACER	1 X 10 MM	25
WITH 20 MM SPACER	1 X 20 MM	35
WITH 30 MM SPACER	1 X 20 MM & 1 X 10 MM	45
WITH 40 MM SPACER	1 x 40 MM	55
WITH 50 MM SPACER	1 X 10 MM & 1 x 40 MM	65
WITH 60 MM SPACER	1 X 20 MM & 1 X 40 MM	75

STANDARD SPACER CONFIGURATION STACK HEIGHT (W/60 MM SPACER STACK)

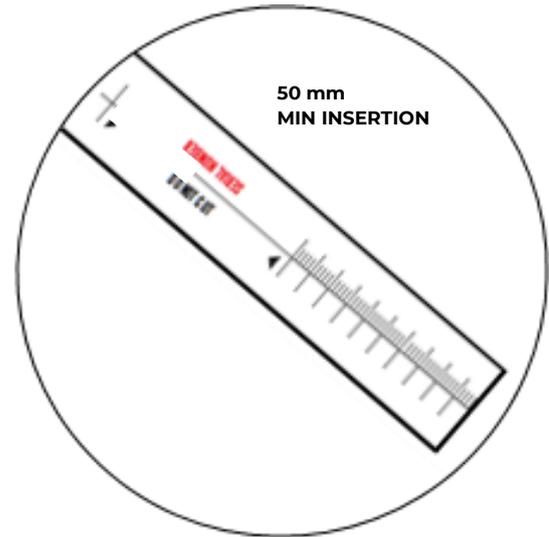
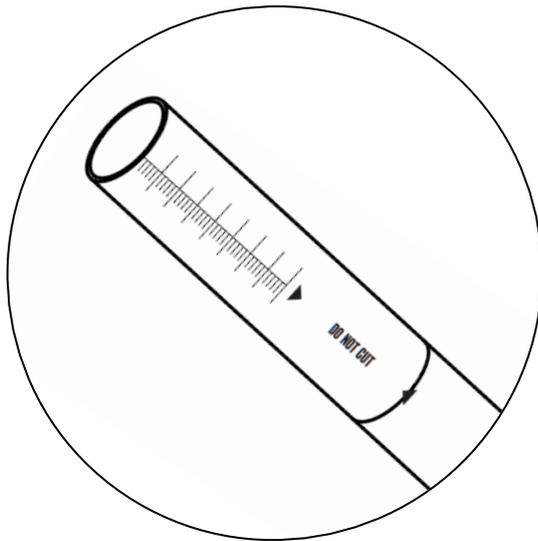


AERO TWO EXTENSION INSTALLATION

ABO2 extension clamps require the extension to be inserted a minimum of 50 mm. Please ensure that the trimming down of extensions factors this in and if excess material is removed, that replacement extensions are sought.

NOTE: The **MINIMUM INSERTION** for the extension in the ABO2 clamps is **50 MM**.

WARNING: ABO2 extensions are designed to work with Shimano SW-R9160 and SRAM eTap CLICS only. Any modification for other shifters voids the product warranty. Sync Ergonomics is not liable for product damage and/or personal injury resulting from product modification.

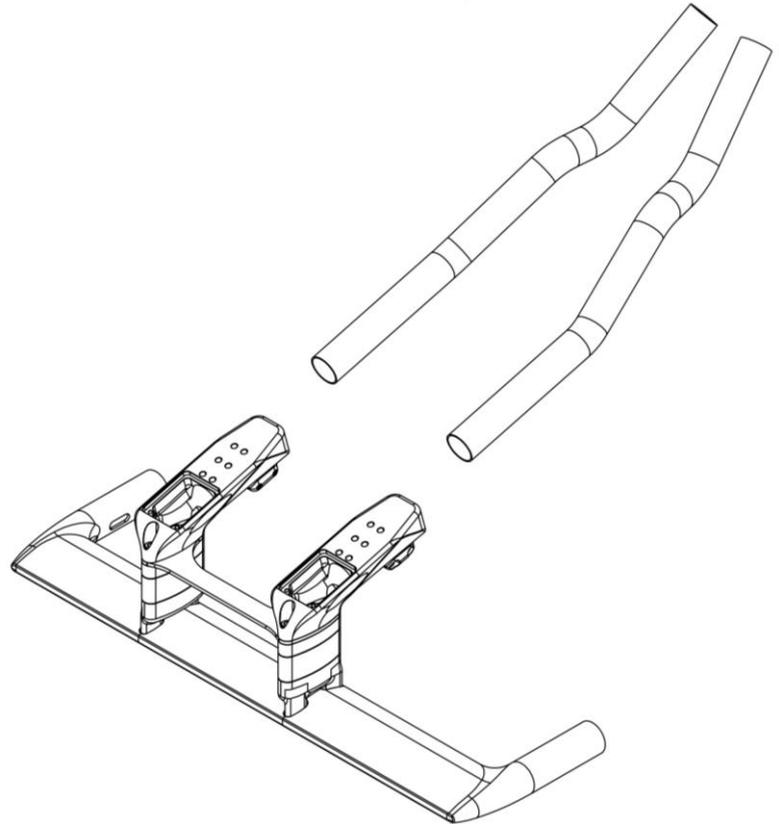
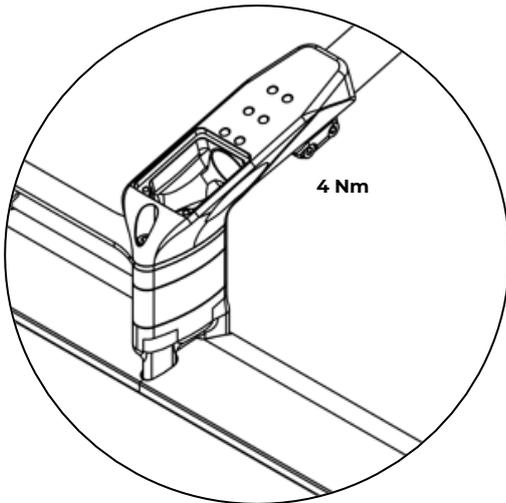


CLAMPING

AB02 extension clamps are designed to cater for a 22.2 mm round tube. Undersized tubes may not clamp effectively and we strongly recommend you check the tolerances when using extensions other than Sync Ergonomics extensions. When installing carbon tubes, we recommend the use of a fine-grit assembly paste or carbon paste. **NOTE:** Torque the AB02 extension clamping bolts to **4 Nm**.

WARNING: Ensure you do not crush tubes by over torquing the extension clamp screws.

WARNING: Third party extension can be used but the tolerance must be checked and where applicable, fine-grit assembly paste or carbon past must be used.



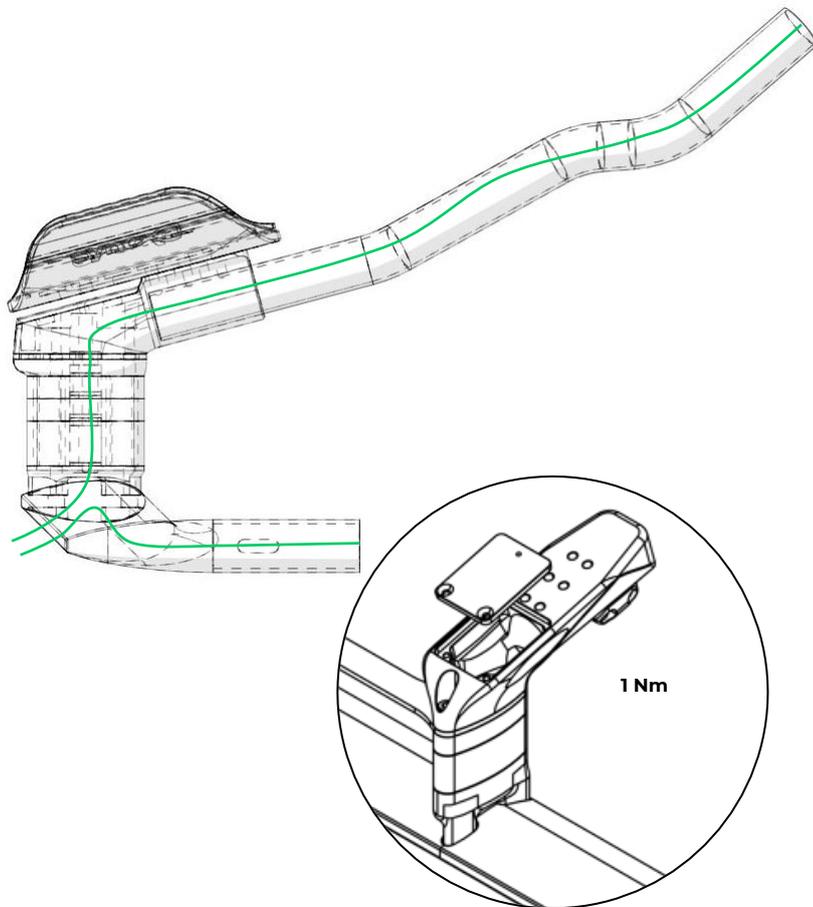
NOTES ON WIRING

SHIMANO DI2 Thanks to the connection at the shifter, you can run the Di2 wires through the spacer stack during assembly, leaving sufficient length to connect the shifters as a final step.

The wires will run through the basebar adapter/s, through the spacers, clamp adapter and carbon brace, into the clamp and up and out of the extensions. Install your TT grips before finally affixing your shifters in place.

SRAM E-TAP Due to the nature of the wiring of SRAM CLICS, it is important that you establish the correct fit on your ABO2 setup prior to wiring the shifters. Disassembly will be required before reassembly with the SRAM wires passed through each component.

Once you have completed installation of the extensions and finished wiring the shifters, complete the clamp assembly by securing the top caps, ensuring each top cap screw is torqued to 1 Nm.

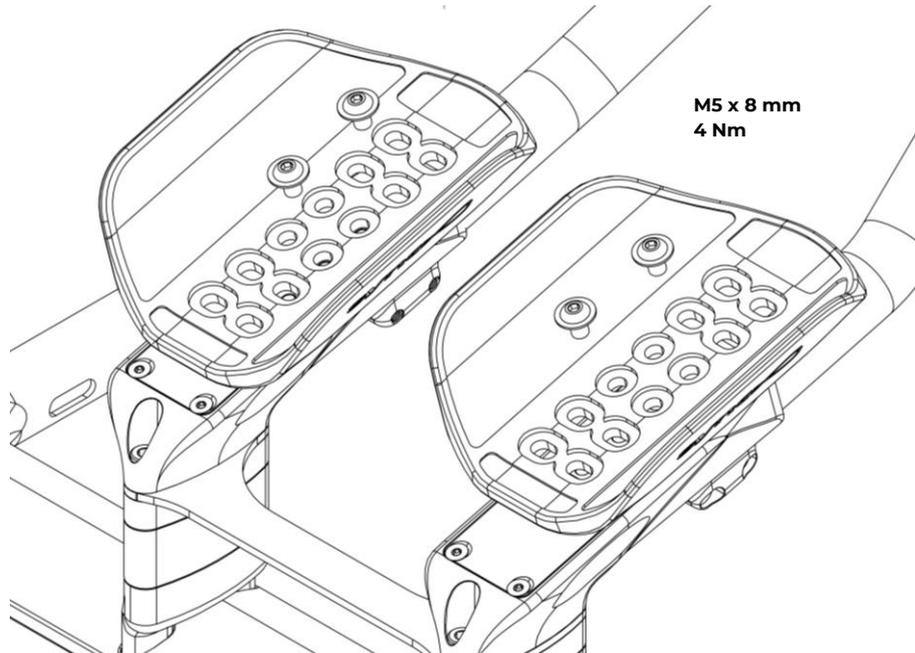


BASE ARM CUP INSTALLATION

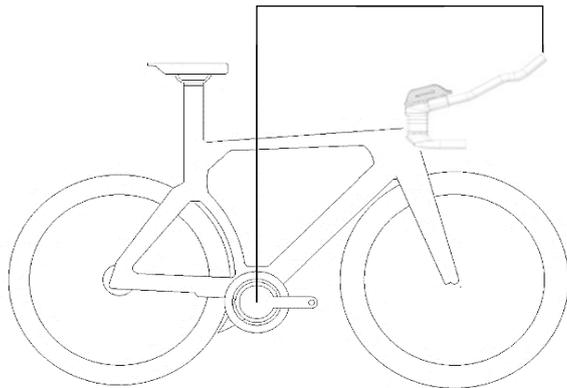
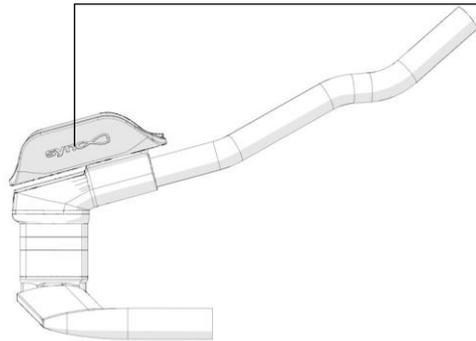
Base arm cups are directional. Cups should be mounted with the rounded edge of the arm cup facing forward. Use the supplied M5 x 8 mm Torx flanged button head screws for connection to the extension clamp. We recommend the application of MOTOREX Bike Grease for the arm cup screws.

Base arm cup pads are placed scooped end facing forward. When installing and removing the arm pad start at the sides, this prevents creasing of the pad and ensures the adhesive backed Velcro does not come away from the underlying arm cup. Replacement arm cup pads are available from the Sync Ergonomics online store and can be purchased separately when worn out.

WARNING: Over torquing the cup connection screws will lead to permanent damage of the arm cup base plate. Sync Ergonomics is not liable for product damage and/or personal injury resulting from inappropriate product setup.



AEROBAR TWO UCI COMPLIANCE CHECK



For clarification of the UCI Technical regulation, please see here:
https://www.uci.org/equipment/bh2JJzwIeB0n876rX2iB1?_ga=2.231545055.1112098212.1671983685-1469624865.1671983685

CATEGORY X

SADDLE OFFSET - 0-50 MM
LENGTH ALLOWED – 750 MM
HEIGHT ALLOWED – 100 MM
ANGLE SUGGESTED – 15 DEGREES

CATEGORY 1

ATHLETE HEIGHT - <180 CM TALL
SADDLE OFFSET - \neq 50 MM
LENGTH ALLOWED – 800 MM
HEIGHT ALLOWED – 100 MM
ANGLE SUGGESTED – 15 DEGREES

CATEGORY 2

ATHLETE HEIGHT - \neq 180 CM TALL
SADDLE OFFSET - \neq 50 MM
LENGTH ALLOWED – 830 MM
HEIGHT ALLOWED – 120 MM
ANGLE SUGGESTED – 17 DEGREES

CATEGORY 3

ATHLETE HEIGHT - \neq 190 CM TALL
SADDLE OFFSET - \neq 50 MM
LENGTH ALLOWED – 850 MM
HEIGHT ALLOWED – 140 MM
ANGLE SUGGESTED – 20 DEGREES