Metron TFA EVO w/Carbon Extensions Installation Instructions

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Introduction

Congratulations on your Vision product. Please read these instructions and follow them for correct use. Failure to follow the warnings and instructions could result in damage to product not covered under warranty, damage to bicycle; or cause an accident resulting in injury or death. Since specific tools and experience are necessary for proper installation, it is recommended that the product be installed by a qualified bicycle technician. FSA & Vision assumes no responsibility for damages or injury related to improperly installed components.

Warranty

Full Speed Ahead (FSA) warrants all FSA and Vision products to be free from defects in materials or workmanship for a period of two years after original purchase unless otherwise stated in the full warranty policy. The warranty is non-transferable and valid to the original purchaser of the product only. Any attempt to modify the product in any way such as drilling, grinding, and painting will void the warranty. For more information on warranty policy and instructions for completing a warranty claim, check out the Full Warranty Policy found at our website: https://www.visiontechusa.com/en/support/warranty-policy

⚠ WARNING Always use a calibrated torque wrench to tighten all screws and bolts when assembling and adjusting the Vision handlebar to the bicycle. Failure to use a calibrated torque wrench can cause damage to the handlebar making it unsafe to ride and is not covered under warranty. Check bolt and screw torque before each ride to ensure they have not loosened during use.

⚠ WARNING Periodically inspect your aerobar for any cracks, chips, scratches, and any other visible damage. In the event of an accident do not ride the bicycle until the handlebar has been inspected by an experienced mechanic as the aerobar may be damaged or weakened even if no visible damage is apparent. If there is any visible damage, the aerobar should not be used any further and replaced.

⚠ WARNING When changing the Armrest Stack spacers ⑮, use the correct length bolt ⑯ as per the chart show in Table 1. Use only FSA supplied bolts. Failure to use the correct length bolt can result in thread strippage of the base bar, failure of base bar, and armrest pad and can cause serious accident or injury.

Specification

The instruction is for the installation and adjustment of the following Vision Brand components only:

Model Name **Metron TFA EVO w/Carbon Extensions**

- Speed Extension S-Bend: 429mm
- Speed Extension J-Bend: 383mm
- S-Bend: 350mm
- JS-Bend: 412mm
- J-Bend: 385.5mm

Speed Extension S-Bend
- Length: 429mm
- Angle: 2.5°

Speed Extension J-Bend
- Length: 383mm
- Angle: 50°

S-Bend
- Length: 350mm
- Angle: 5°

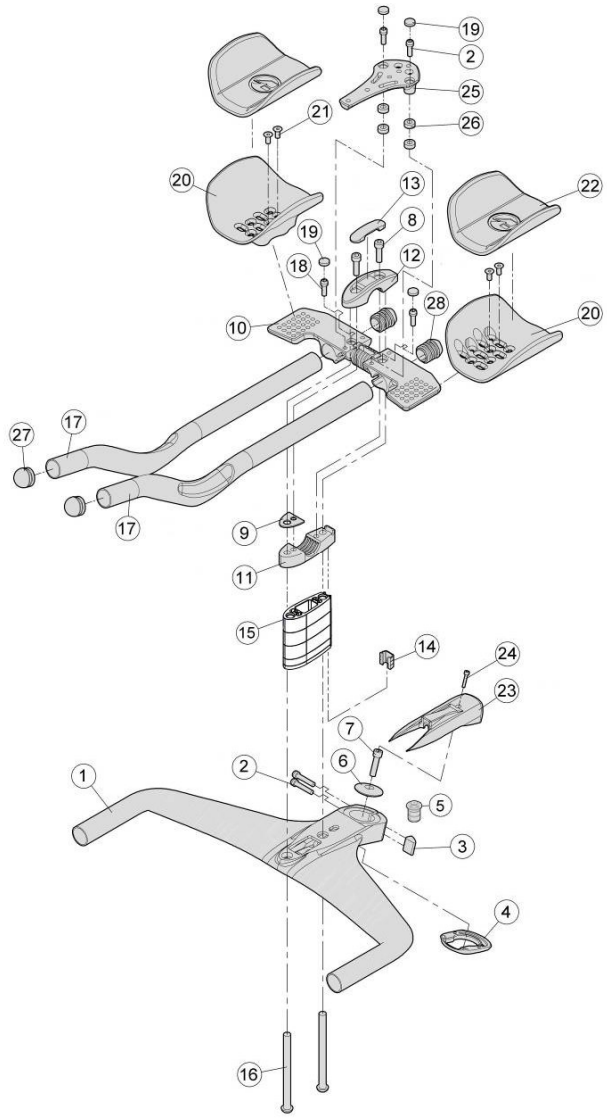
JS-Bend
- Length: 412mm
- Angle: 12 / 35°

J-Bend
- Length : 385.5mm
- Angle : 40°

Components

Follow the assembly order in the illustration:

① Metron TFA EVO Aerobar Basebar x1
② Steerer Clamp fixing Bolt (M5x22L) x4
③ Steerer Clamp Nut x1
④ Metron TFA EVO Base bar stem cover x1
⑤ Expander Assembly x1
⑥ Top Cap x1
⑦ Top Cap fixing bolt (M6x25L) x1
⑧ Metron TFA EVO Bridge clamp fixing bolts (M6x20L) x2
⑨ Metron TFA EVO Bridge clamp-plate x1
⑩ Metron TFA EVO Bridge x1
⑪ Metron TFA EVO Bridge clamp-lower x1
⑫ Metron TFA EVO Bridge clamp-upper x1
⑬ Metron TFA EVO Bridge clamp cover x1
⑭ Metron TFA EVO Spacer cover x7
⑮ Metron TFA EVO Spacer 5mm x1, 10mm x1, 20mm x5
⑯ Metron TFA EVO Spacer fixing bolts (M8x40L-130L) x2
⑰ Carbon Extensions (L+R) x1
⑱ Carbon Extension fixing bolts (M5x15L) x2
⑲ Carbon Extension fixing bolts plugs x4
⑳ Armrest Adjustment Plates (L+R) x1
㉑ Armrest Adjustment Plates Fixing bolts (M5x10L) x4
㉒ Armrest Pad (L+R) x1
㉓ Metron TFA EVO Basebar stem cover x1
㉔ Metron TFA EVO Basebar stem cover bolt (M3x16L) x1
㉕ Metron TFA EVO Bottle cage bracket x1
㉖ Metron TFA EVO Bottle cage bracket spacer x4
㉗ Carbon Extension Front Plug x2
㉘ Carbon Extension Rear Plug x2



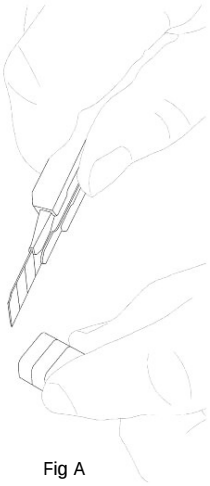


Fig A

Aerobar installation

1. Make certain that the diameter of the steerer tube matches the Metron TFA EVO ① Stem Steerer Clamp size 1-1/8″ (28.6mm).
2. Brake/electronic wiring should be run through the Metron TFA EVO Aerobar Basebar ① before installing. Install Steerer Clamp Bolt ② and Nut ③ to finger tighten, and avoid break the base bar or clamp wires.
3. Place the Base bar stem spacer ④ and Basebar ① onto the steerer tube. Adjust Expander Assembly ⑤ so it contacts the inner walls of the steerer tube but is still able to slide inside. Install the pre-adjusted Expander Assembly into the Carbon Steerer. Tighten the Expander Assembly with a 5mm hex wrench to torque of 61-92 kgf.cm / 6-9 Nm / 53-80 in.lbs. Tighten the Compression Cap ⑥ & Bolt ⑦ with a 4mm hex wrench to until proper bearing preload is achieved. **NOTICE** Proper bearing preload is apparent when there is no "knock" (fore / aft or up / down free play) in the headset assembly, while the bearings rotate freely (free steering motion). Do not tighten above 61 kgf.cm / 6 Nm / 53 in.lbs.
4. Using Bridge clamp fixing bolts ⑧ install Metron TFA EVO Bridge clamp plate ⑨, Extension Bridge ⑩ between Metron TFA EVO Bridge lower clamp ⑪ and upper clamp ⑫, and adjust to the desired angle. tighten fixing bolts ⑧ to torque of 61 kgf.cm / 6 Nm / 53 in.lbs. Install Bridge clamp cover ⑬, pay attention on the direction cover.
5. Slide spacer covers ⑭ into spacers ⑮ in need and reserve 5mm for cable routing, See Table 1 for Stack Spacers and bolt configuration to adjust the Bridge lower clamp ⑪ to the desired height. Use fixing bolts ⑯ tighten to torque of 92 kgf.cm / 9 Nm / 80 in.lbs. **NOTICE** The minimum height requires a 5mm spacer ⑮ to facilitate wiring, and the spacer cover ⑭ can be cut to the required height (Fig A).
6. Slide Carbon Extensions (L+R) ⑰ into Bridge ⑩. Set to desired length and rotation angle. Tighten Extension Fixing bolts ⑱ to 41 kgf.cm / 4 Nm / 35 in.lbs

⚠ WARNING Ensure the minimum insertion length indication on the Carbon Extensions ⑰ (MIN^INSERT) is flush with the Bridge ⑩ ends. Riding the bar without the MIN^INSERT behind the mount can cause damage and unexpected bar failure causing accident and injury.

7. If need to adjust Carbon Extensions ⑰ angle, open Cover ⑬, use a 5mm hex key loosen two or three full turns Bridge clamp bolts ⑧ .Set to desired angle and tighten Bolts ⑧ to torque 61 kgf.cm / 6 Nm / 53 in.lbs. Install Bridge clamp cover ⑬, pay attention on the direction cover.
8. Install Armrest Adjustment Plates ⑳ to Bridge ⑩ for desired fit position using Armrest Plate Fixing Bolts ㉑. Torque to 41 kgf.cm / 4 Nm / 35 in.lbs.
9. Remove the adhesive Velcro Strips from Armrest Pads ㉒ and attach to the top surface of left and right Armrest Pad Plate ⑳.
10. Ensure Aerobar is aligned straight and gradually tighten the Steerer Clamp Bolt ② by alternating turning each screw 1/4 to 1/2 turn at a time so both screws tighten simultaneously to 61 kgf.cm / 6 Nm / 53 in.lbs. DO NOT exceed maximum torque specification. Always use a calibrated torque wrench.
11. Install Stem cover ㉓ to Basebar ① use Stem cover Bolt ㉔ tighten to torque of 10 kgf.cm / 1 Nm / 9 in.lbs
12. Install bottle cage bracket ㉕ with Bracket spacer ㉖ to Extension Bridge ⑩. Bracket can be mounted in either direction depending on desired bottle placement. Torque fixing bolts ② to torque of 20 kgf.cm / 2 Nm / 18 in.lbs. Install bolt plugs ⑲.

Wiring Installation Tips

1. Electronic wiring should be run through the Metron TFA EVO Aerobar Basebar ① and installed to electronic drive train junction. Before installing Extension Bridge ⑩ brake/electronic wiring should be run through the Carbon Extensions ⑰ .
2. Installation is greatly improved when using a guide cable to gently pull the housing or electronic wires through the base bar from either direction.
3. Ensure enough wire is allowed from Carbon extensions ⑰ to be fed through the Bridge lower clamp ⑪ and account for the additional bends and length for needed riser spacers ⑮.
4. Electronic wire is allowed to be fed through the Bridge lower clamp ⑪ and attaching spacers ⑮ Attach Electronic wire to Bridge lower clamp ⑪ before installation, Slide spacer covers ⑭ into spacers ⑮ and reserve 5mm for wire fed through the Aerobar Basebar ①

⚠ WARNING Never attempt to modify the cable guide holes. Do not drill, saw, or file the holes larger or to a different shape. Modifications will void warranty and may result in failure of the handlebar while riding causing accident, injury, or death.

5. Install Carbon Extension Plugs ㉗㉘ if not using shifters and press into Carbon Extensions.

Extension tilt adjustment range

	Extensions	Speed S-Bend	Speed J-Bend	S-Bend	JS-Bend	J-Bend
01	Reach (Center of Base bar to rear edge of armrest - 7.5mm Increments)	-41 to 79.2mm	-41 to 79.2mm	-41 to 79.2mm	-41 to 79.2mm	-41 to 79.2mm
02	Extension length adjustment: (Center of Base bar to Tip)	310 to 405mm	265 to 360mm	240 to 315mm	245 to 385mm	280 to 355mm
03	Armrest width (outside-to-outside - 15mm Increments) :	216.6 to 351.6mm	216.6 to 351.6mm	216.6 to 351.6mm	216.6 to 351.6mm	216.6 to 351.6mm
04	Extension height : (c-c)	10mm	75mm	25mm	60mm	123mm
05	Bracket tilt adjustment	0° to 30°	0° to 30°	0° to 30°	0° to 30°	0° to 30°

It may be necessary to trim Carbon extensions if the rear of the extensions protrude behind the mount. Carbon Extensions can only be cut from the rear. Do NOT cut the extensions from the front. Cutting Extensions from the front will void the warranty. Make careful measurements before cutting and be sure of the cut location. Cutting extensions is a one-time and final adjustment.

⚠ WARNING Do not cut beyond the (MIN^INSERT) line indicators on the extensions.

1. Use an abrasive blade for best results on carbon extensions. Apply a layer of tape around area to be cut to reduce possibility of carbon fraying while cutting.
2. Use a cutting guide for the saw blade to ensure an even cut of the extensions. Cut the extension to desired length.
3. Remove any burrs or frayed carbon strands with sand paper.
4. Install shifter per shifter manufacturer's instructions.
5. Use Carbon Extension Rear Plug ㉘ over cable housing and press into Carbon Extensions (L+R) ⑰.

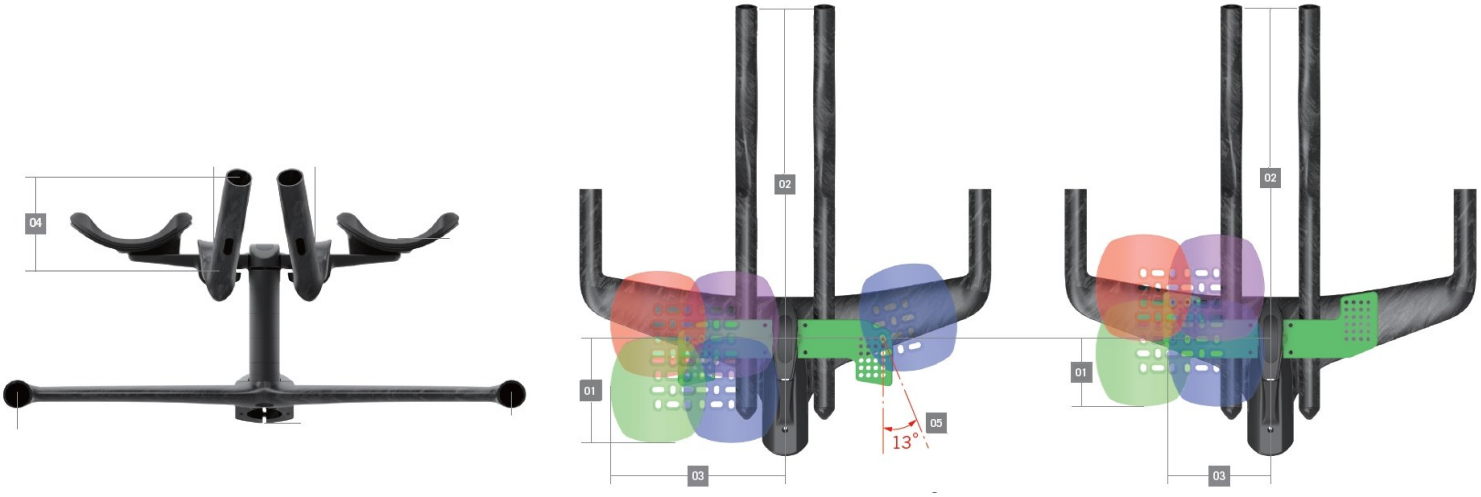


Table 1: Stack Spacer & Bolt Compatibility

Stack Height	Spacer ⑮			Bolt ⑯ length	Spacer cover ⑭
	5mm	10mm	20mm		
5mm	1	0	0	40mm	0
10mm	0	1	0	40mm	1
15mm	1	1	0	50mm	1
20mm	0	0	1	50mm	1
25mm	1	0	1	60mm	2
30mm	0	1	1	60mm	2
35mm	1	1	1	70mm	2
40mm	0	0	2	70mm	3
45mm	1	0	2	80mm	3
50mm	0	1	2	80mm	3
55mm	1	1	2	90mm	4
60mm	0	0	3	90mm	4
65mm	1	0	3	100mm	4
70mm	0	1	3	100mm	5
75mm	1	1	3	110mm	5
80mm	0	0	4	110mm	5
85mm	1	0	4	120mm	6
90mm	0	1	4	120mm	6
95mm	1	1	4	130mm	6
100mm	0	0	5	130mm	7

Contact

If you have questions, please visit our web site technical section: https://www.visiontechusa.com/en/support or contact:

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Notes: Specifications of product may be changed or improved for performance. Please refer to website periodically for technical updates and revised instructions.