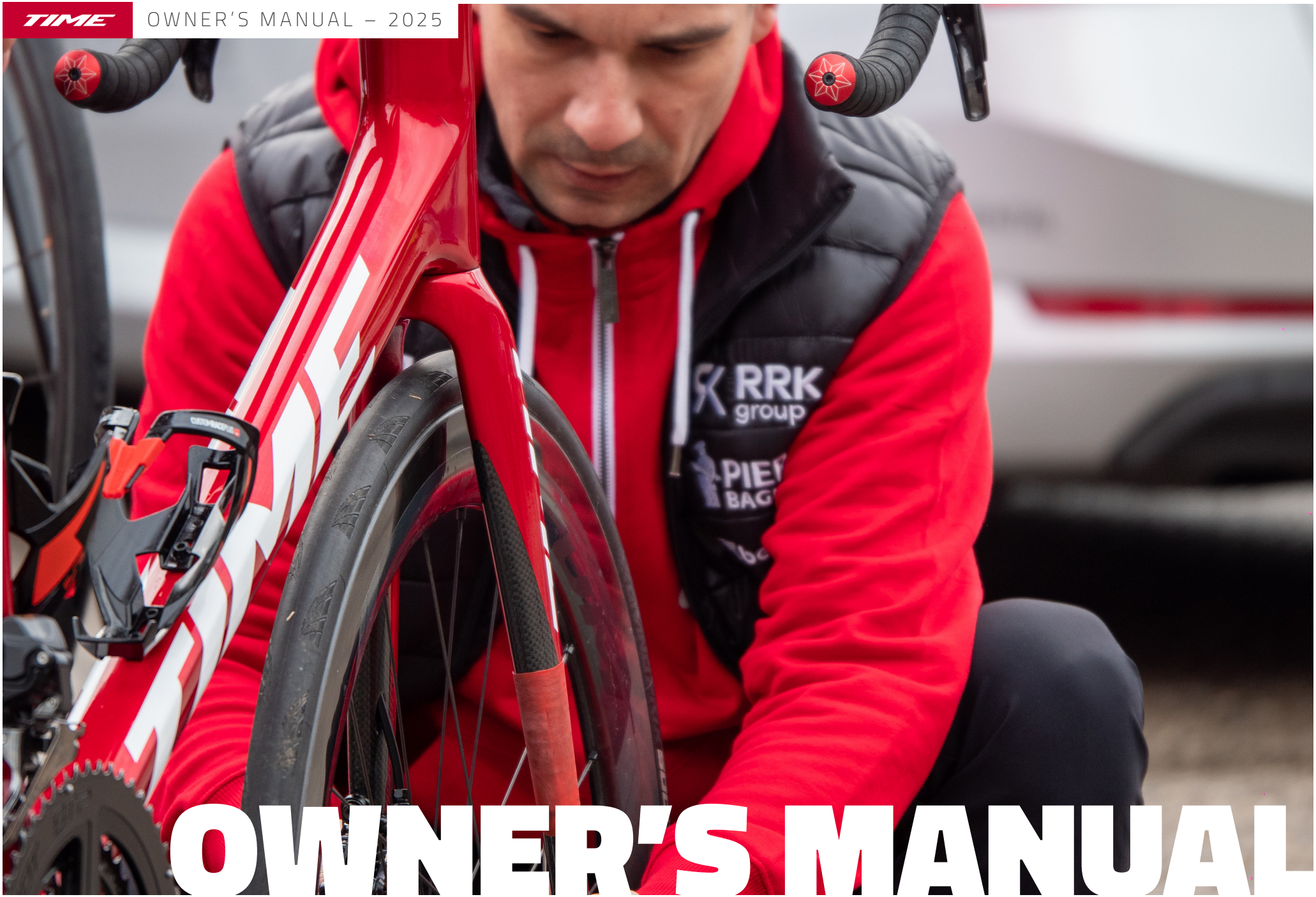


OWNER'S MANUAL

TIME OWNER'S MANUAL

CONGRATULATIONS

Congratulations and thank you for your confidence in us. Since our foundation in 1987, we've continually pushed the boundaries of technology, design and innovation. We are driven by the desire to build the best bikes in the world and our guiding principle - Le Defi / The Challenge - inspires us to never rest, never take the easy option and to always lead the way.

To guarantee perfect use of your frame, we advise you to consult a professional for the assembly of your components. Before use, it is essential to read the whole manual to fully understand the product and safe assembly practices. TIME reserves the right to modify the characteristics of the product without notice, for the purpose of continuous improvement.

Cycling is a discipline that involves some degree of risk and can cause falls or accidents. Exercise extreme caution when using your bike.
Obey all the rules of the highway code and don't forget to wear a helmet. We recommend Installing lighting and other safety equipment on your bike.

TIME OWNER'S MANUAL

WARRANTY

TIME Frameset Warranty
All TIME frames and forks are guaranteed for life against defects in materials and workmanship. This warranty is reserved for the buyer who has registered his product on the website www.timebicycles.com within 60 days of the date of purchase of the product (date of invoice). It is specified that all other products including hangers and other TIME frameset parts as well as paint and finish are guaranteed for 2 years from the product purchase date. All warranties in addition to legal warranties apply only to the original owner of the product and may not be transferred to a subsequent owner. TIME's warranty is limited at its sole discretion to the repair or replacement of the defective product. In the case of a product replacement, TIME will provide a new product of equal or greater value. The new product may not be exactly the same as the one originally purchased. The warranty applies only to defects discovered during the above warranty period and subject to the presentation of valid proof of purchase by the original owner.

Exclusions
The following are excluded from any guarantee:
▪ Damage resulting from normal wear and tear, including product fatigue. It is the owner's responsibility to check his bike before each ride and to maintain it by following the instructions provided in this user manual and best-practices for bicycle maintenance.
▪ Any damage resulting from product modification or improper mounting or assembly.
▪ Any damage resulting from misuse of the product (jumps, acrobatic tricks or similar activities), ill-treatment, accidents/impacts, negligence, poor maintenance, non-compliance with instructions or warnings contained in the instructions, or any other abnormal or inappropriate use for which the product was not designed. We remind you that the assembly, adjustment and repairs of your TIME product must be carried out by a specialist dealer with the technical knowledge and the appropriate tools to carry out these interventions or directly by TIME's after-sales service.

Important: If you choose to repair a defective product yourself or to not use a specialist dealer, or if you use a spare part that is not an original TIME one, TIME declines all liability for any damage resulting from the use of this type of part or from a non-conforming repair/maintenance.

Procedures
▪ If a product is defective, please report it to a specialist dealer, together with the original proof of purchase.
▪ For products bought online from TIME, you can find the Warranty Submission form on the website, or please contact the Customer Service directly.

Limitations
The terms of the guarantee may vary depending on the country. Some countries or states do not allow limitations on warranties or liabilities, so some limitations may not apply. No other explicit or implied warranty is granted by TIME.

Product Life Ccycle
▪ The TIME lifetime warranty on frames cannot mean or imply that a TIME frame cannot break or is eternal. The life of a frame varies depending on the type of frame, the conditions of use of the frame and the care provided by the buyer. Refer to Exclusions above.

TIME OWNER'S MANUAL

ASSEMBLY AND SAFETY

TIME Frames are high-technology products and they have all the safety guarantees for their intended use. Please read the following instructions carefully to guarantee proper use for your own safety.

Fork and Frame Precautions
- Do not use transport racks that attach to the front axle and fork ends.
- Do not impose abnormal forces on the legs during assembly or maintenance operations (e.g. straightening the handlebar without loosening the stem).
- Do not use axles with contact surfaces that are too aggressive and can damage the frame or fork.
- Tighten axles without excessive pressure (follow the manufacturer's instructions).
- Regularly check the appearance and wear of the frame and fork.

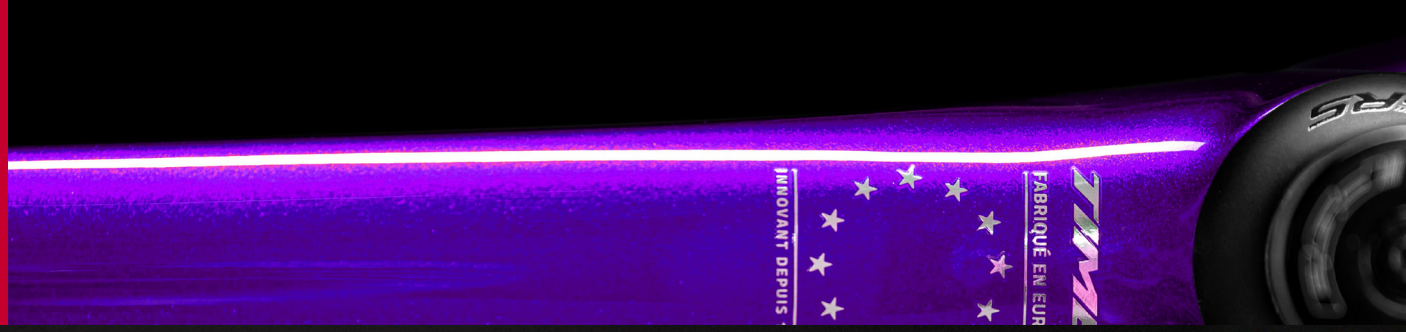
When carrying out maintenance or handling of the bicycle, never place the fork legs on the ground. Never file or alter the fork ends. Contact your specialist dealer with any concerns.

Replacement of parts
Only use genuine TIME parts when replacing used parts (bearings, derailleur hanger, etc.)

General usage
- It is strongly recommended that you have a professional assemble your frame.
- Take all necessary precautions during transport (especially by plane) so that the bike is not subjected to abnormal shocks.
- Inspect the bike regularly before use.
- Do not leave your bike exposed to high temperatures
- In the event of a fall, have the bike checked by a specialist dealer or by the TIME service department.
- If in doubt about any part of the frame, contact the specialist dealer.

TIME is released from all liability in the case of assembly not in accordance with the instructions, and which is not carried out with suitable tools and in compliance with best practices.

SCYLON
TECHNICAL OVERVIEW



FEATURES AT A GLANCE



SCYLON

SPECIFICATIONS

FRAME MATERIAL
Gen 2 BCS M46J / T800 Carbon Fiber Layup

SIZES
XXS, XS, SM, MD, LG, XL

FORK STEERER TUBE
Kevlar Enhanced BCS Carbon Fiber - Tapered 1–1/8" to 1–1/2"

HEADSET BEARINGS
FSA Headset/SRS Topcap for Semi & Fully-Integrated Cockpits

BOTTOM BRACKET
PF 386 EVO

DISC HUB STANDARD
12x100mm F, 12x142mm R

THRU AXLES
12x120x1.5mm pitch F, 12x161x1.5mm pitch R

MAX TIRE WIDTH
700 x 30MM

SEATPOST DIAMETER
Proprietary SCYLON Aero Carbon, -20/+10mm SB

SEATPOST CLAMP
Semi-Integrated TIME Alloy

SHIFTING
Compatible with all Electronic Shifting Systems

FRONT DERAILLEUR
Standard Mount

REAR DERAILLEUR
Standard Mount

BRAKE CALIPERS
Front and Rear Flat Mount Disc

ROTOR SIZE
140 or160mm with Adapter

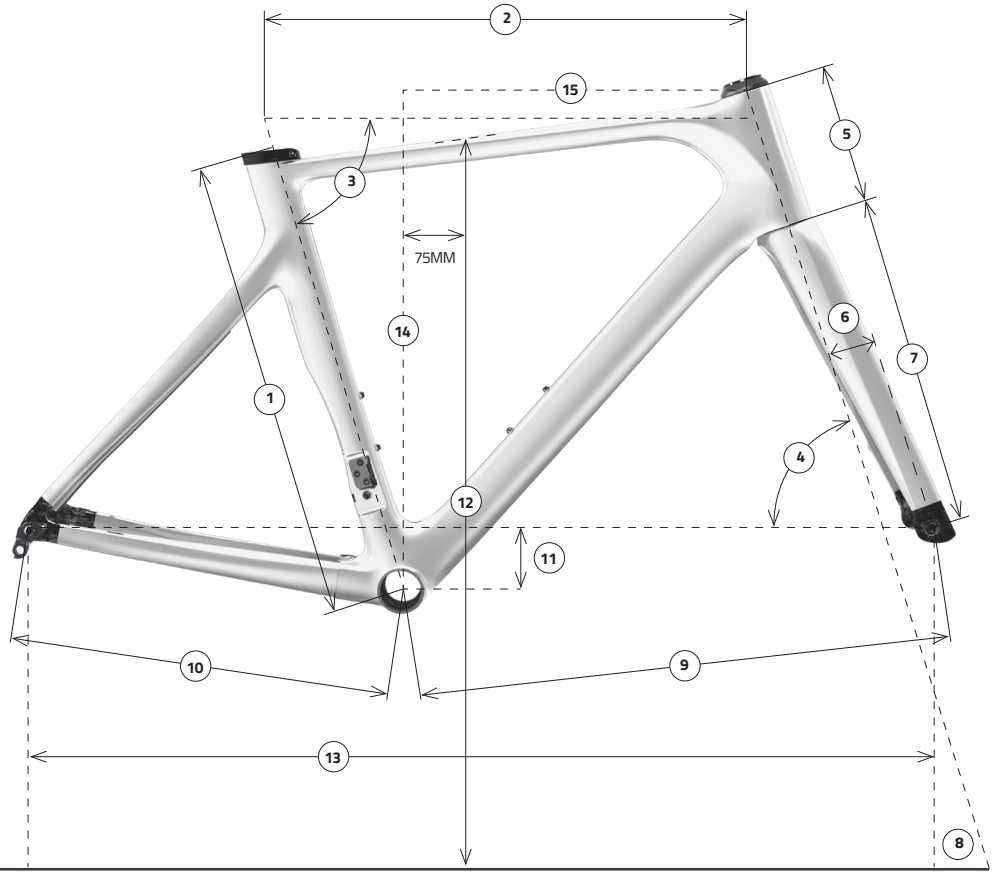
WHAT'S INCLUDED

- FSA Headset/SRS Topcap for Semi & Fully-Integrated Cockpits
- Front and Rear Thru Axles
- Alloy Bottle Bolts
- Semi-Integrated Seatpost Clamp
- Scylon Aero Seatpost
- Front and Rear Derailleur Hangers

SCYLON

GEOMETRY

	SCYLON SIZE	XXS	XS	S	M	L	XL
1	SEAT TUBE (ACTUAL)	470	485	505	525	545	565
2	TOP TUBE (VIRTUAL)	529	540	549	560	574	584
3	SEAT TUBE ANGLE	73	73	73	73	73	73
4	HEAD TUBE ANGLE	71.5	71.5	71.5	72	73	73
5	HEAD TUBE	120	138	154	167	185	203
6	FORK OFFSET	50	50	50	50	43	43
7	AXLE TO CROWN	370	370	370	370	370	370
8	TRAIL	62	62	62	59	60	60
9	FRONT CENTER	579	590	595	604	600	609
10	CHAINSTAY	410	410	410	410	410	410
11	DROP	67	67	67	67	67	67
12	STANDOVER (30C TIRE)	745	760	779	792	817	853
13	WHEELBASE	980	991	996	1005	1001	1011
14	STACK	515	532	549	567	584	601
15	REACH	372	377	382	389	392	397



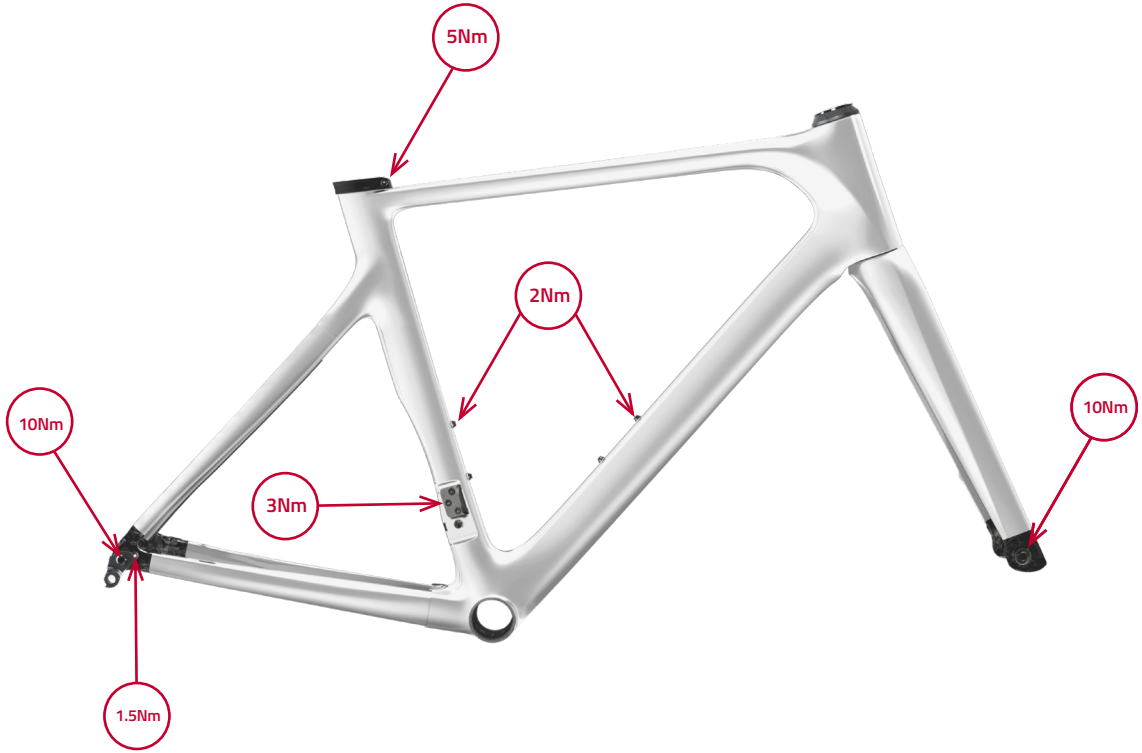
SCYLON

TORQUE SPECIFICATIONS

Strictly observe the tightening torques to ensure optimum operation and safety.

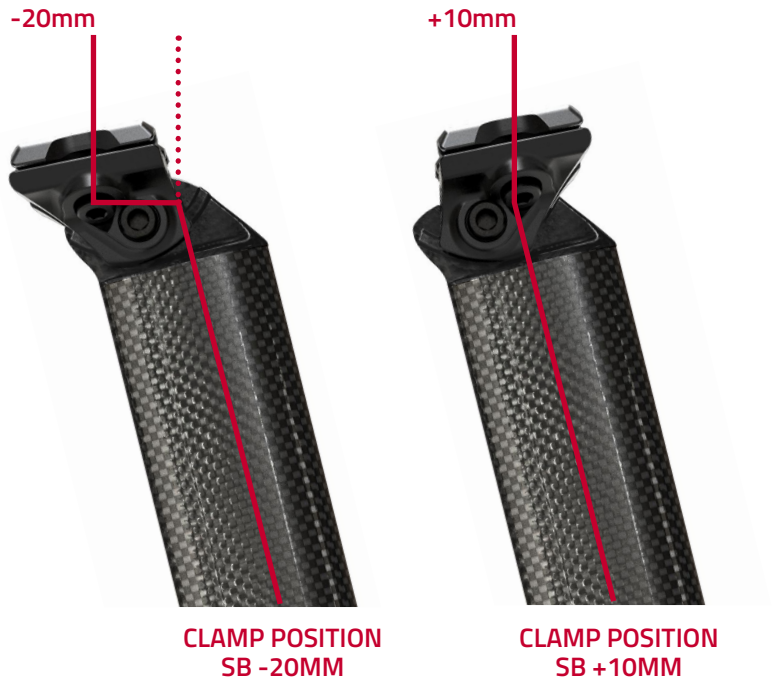
- Seat post clamp: 5 Nm
- Thru Axles: 10 Nm
- Front Derailleur Hanger Bolts: 3 Nm
- Rear Derailleur Hanger Small Bolt: 1.5 Nm
- Water Bottle Bolts: 2 Nm

Use a quality torque wrench and check all tightening torques after 500 km of use.



SEATPOST

REVERSIBLE SEAT CLAMP



TORQUE AND MINIMUM INSERT



⚠ Use carbon assembly paste between the saddle rail clamp assembly and the carbon seatpost head, and on the seat post itself when inserted in the frame.

⚠ Do not exceed recommended torque specs or rid with the seatpost above the MINIMUM INSERTION point

HEADSET

FULL SPEED AHEAD ICR and ACR HEADSETS

CABLE ROUTING:
OUTSIDE BAR/STEM
(recommendend for mechanical drivetrains)



HS NO.69 SRS
130-0025018010

CABLE ROUTING:
INSIDE BAR/STEM

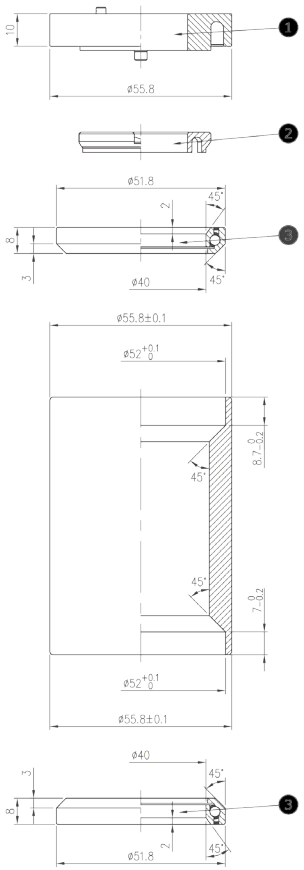


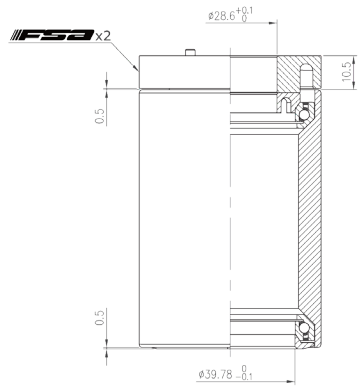
HS NO.55R ACR
(TH-894/CR-1 TOP COVER)
130-0020000010

Internal Headset (CC)

NO.55R 1.5''/CR/STD

1-1/8"/ 1.5", 45°/ 45° ACB





Stack Height 10.5+0.5=11



Weight - 92 grams

- For 55.8mm OD head tube
- For 1-1/8" to 1.5" tapered fork
- CR top cover
- Angular Contact Bearing (Black seal)

No	Item No	Material	Qty
③	MR171 {45°/45° x 51.8}	Chrome steel	2SETS
②	H2474{NO.55R 1.5"/CR}	Alloy	1PCS
①	H2473{NO.55R 1.5"/CR/STD}	Nylon	1PCS

HEADSET

FULL SPEED AHEAD HEADSET INSTALLATION INSTRUCTIONS

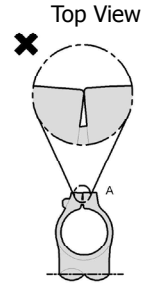


Fig. C

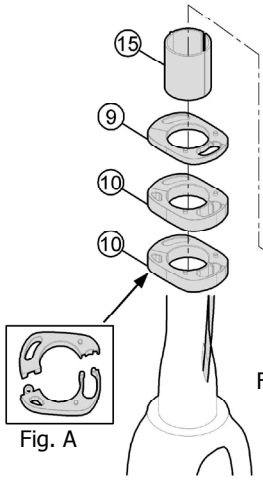


Fig. A

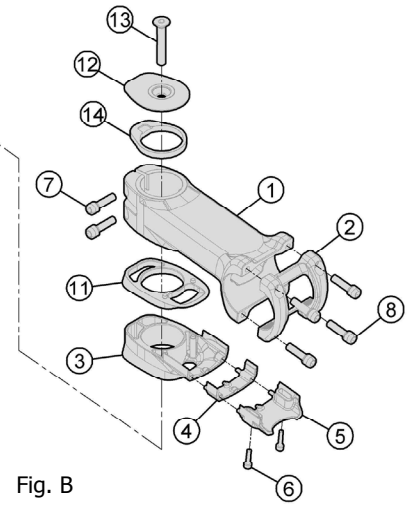
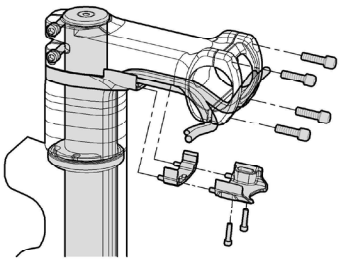
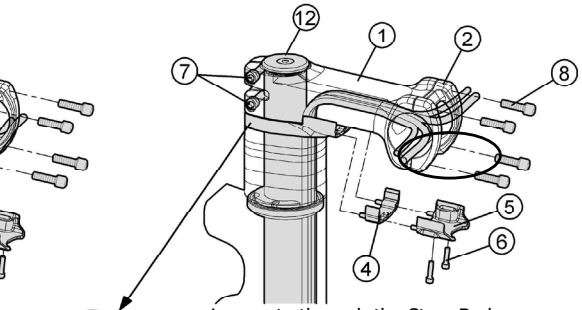
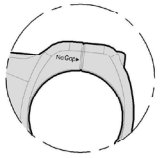


Fig. B


wires route beneath the Stem Body and through the cover



wires route through the Stem Body


Fig. D

Introduction

Congratulations on your Full Speed Ahead 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.fullspeedahead.com/en/technology

Specification

FSA Road, MTB and Vision stems are compatible with industry standard steerer tube and handlebar diameters. To choose the correct FSA stem, first check the specific diameter of steerer tube and handlebar to be used.

Components

Follow the assembly order in the illustration:

① NS SMR Stem Body x1
② Stem Face Plate x1
③ SMR Spacer x1

④

Stem size		

⑤ SMR Cable Cover x1
⑥ SMR Cable Cover Fixing Bolts x2
⑦ Steerer Clamp Bolts x2
⑧ Face Plate Fixing bolts x4
⑨ Left / Right spacer 5mm x1
⑩ Left / Right spacer 10mm x2

⑪ ACR Spacer x1
⑫ Top cap x1
⑬ Top cap Fixing bolt x1
⑭ Upper Spacer x1
⑮ Bushing 1 1/4" to 1 1/8" x1

HEADSET

FULL SPEED AHEAD HEADSET INSTALLATION INSTRUCTIONS (CONTINUED)

1. Before proceeding to installation, all Brake/ Hydraulic Hose / electronic wiring / should be run through the handlebar and SMR Stem Body ①, SMR Spacer ③ or Spacer for ACR ⑪, Spacers ⑨, ⑩ and headset.
2. SMR Stems have two options for cable routing. When using handlebars with internal routing ports, the housings and electronic wires can be routed through the Stem Body ①. Alternativly, the housings and electronic wires can be routed beneath the Stem Body and through the SMR Cable Cover ⑤ and Cover Spacers ④.
3. Front brake housings can only be internally routed for disc brakes. Compatible forks have an internal routing port on the steerer tube (Fig. B). All other front brake housings must be routed externally.
4. Depending on stem length you may need to install up to 4x SMR Cable Cover Spacers ④.
5. Installation is greatly improved when using a guide cable to gently pull the housing or electronic wires through the stem from either direction.

Stem Installation to Fork Steerer Tube

1. Measure diameter of steerer tube to be certain it is correct size for SMR stem installation. It's often required that the steerer tube be cut to length and should be performed by a qualified bicycle technician. Ensure the steerer tube is clean and free of burrs or chips before installing stem onto steerer tube.

Note: Carbon steerer tubes should extend through the stem completely for proper clamp pressure.
Note: If **0°** using with Bushing ⑮ for 1 1/8"steerer tube, install Upper Spacer ⑭ It is recommended to have minimum 2mm steerer tube extended above the stem.

2. Install fork through the Stem Body ①, place either the SMR Spacer ③ or ACR Spacer ⑪ over the fork and then according to your demand place left/right spacers ⑨, ⑩ (⑨, ⑩ are detachable, Fig A).
3. Headset should be installed per headset manufacturer's instructions.
4. Apply small amount of FSA Dynamic installation compound on Carbon steerer tube. Install the Expander Assembly (not shown) per Expander Assembly instructions below.

Note: If use the Bushing ⑮ apply FSA Dynamic installation compound on between steerer tube and bushing AND bushing and stem for tight fit.

5. Apply grease to Steerer Clamp Bolts ⑦. Tighten the bolts to 61 kgf.cm / 6 Nm / 53 in.lbs. of torque by alternating between bolts 1/4 turn at a time so both bolts reach proper torque simultaneously.

⚠ CAUTION Do not go above maximum torque rating printed on the stem. If your steerer clamp looks like Fig. C it may be over torqued or installed incorrectly.If two Steerer Clamp Bolts ⑦ go over the maximum torque, can cause cracks in carbon steerer tube. Check stem for slippage on the steerer tube before proceeding.

Expander Assembly Installation

The Expander Assembly is designed to work with Carbon Steerer Tubes. Do not apply grease on the Carbon Steerer or Expander Assembly.

1. Install the NS SMR Stem ① onto the Carbon Steerer. Tighten the Steerer Clamp Bolts ⑦ finger tight only.
2. Adjust Expander Assembly so it contacts the inner walls of the steerer tube but is still able to slide inside. Install the pre-adjusted Expander Assembly. Tighten the Expander Assembly with a 5mm hex wrench to 51 kgf.cm / 5 Nm / 44 in.lbs. of torque. Note: The Expander Assembly must be complete assembled and adjusted to fit tightly into the Carbon Steerer before installation.
3. Install the Top Cap ⑫ by tighten the Fixing Bolt ⑬ with a 6mm hex wrench to until proper bearing preload is achieved. Note: 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).

⚠ CAUTION Check the alignment of Stem to the front wheel before final torque is applied to the Steerer Clamp Bolts, loosen and adjust if required. Be sure all bolts are tightened to recommended torque.

Handlebar Installation to Stem

1. Apply FSA Dynamic Installation Compound on handlebar clamp area. Insert the handlebar between SMR Stem Body ① and Face Plate ② Pre-tighten Face Plate Fixing bolts ⑧.
2. Apply grease to faceplate bolts ⑧ and tighten the upper bolts to a torque 61 kgf.cm / 6 Nm / 53 in.lbs Alternately tighten stem bolts until there is no gap between faceplate and stem body. (Fig. D).
3. Tighten the lower bolts ⑧ to a torque 61 kgf.cm / 6 Nm / 53 in.lbs 1/4 turn at a time to tighten faceplate evenly.

⚠ CAUTION Do not go above maximum torque rating printed on the stem. Check handlebar for slippage before each ride to ensure safe operation. Contact FSA for Troubleshooting information.

⚠ WARNING

Be sure to choose the correct stem to fit the steer tube and handlebar for which it is to be installed. Installing the stem on an incorrect steerer tube, or handlebar clamp diameter may cause damage to product, or cause an accident resulting in injury or death.

- FSA SMR ST-OS-188/SMR-0° stem is compatible with 1 1/4"steerer tubes and 1 1/8"steerer tube when the Bushing ⑮ is used (use FSA Dynamic installation compound on between steerer tube and bushing AND bushing and stem for tight fit).
- FSA Road and MTB stems are available to fit 31.8mm Handlebar clamp only.

⚠ WARNING

Measure Fork Steerer tube and handlebar clamp area before installing stem. Use an accurate measuring device such as a caliper or micrometer. Installing stem onto an undersized steertube or handlebar can cause stem or bar to slip causing loss of control of bicycle; resulting in an accident, damage to bicycle, injury or death. Use FSA Dynamic Assembly Paste between stem, steerer tube, and handlebar to reduce chances of slippage. Consult fork and handlebar manufacturer for exact diameter specification. If manufacturer specifications are unavailable, general guidelines are as follows:

Handlebar Clamp Area Dimensions:

- Φ31.8mm + 0.15 / -.00mm
- Φ26.0mm + 0.15 / -.00mm
- Φ25.4mm + 0.15 / -.00mm

Steerer Tube Dimensions:

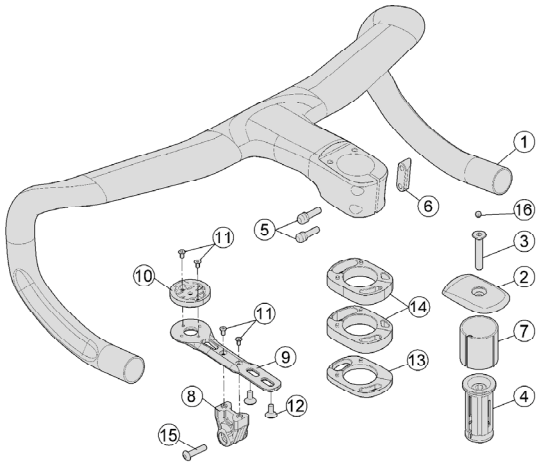
- 1 1/8" Φ28.6mm +.01 / -.00mm
- 1 1/4" Φ31.8mm +.01 / -.00mm
- 1 .5" Φ38.1mm +.01 / -.00mm

⚠ WARNING

Headset and Fork must be installed before stem installation. Headset and Fork installation requires specialized knowledge, tools, and experience. General mechanical aptitude may not be sufficient to properly install these components. It is recommended that the headset and fork be installed by a qualified bicycle technician. Improper installation can result in failure of headset, fork, stem, and cause personal injury or death.

METRON 5D

FULL SPEED AHEAD INSTALLATION INSTRUCTIONS



Introduction

Congratulations on your Full Speed Ahead 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

Specification

Model Name **Metron 5D ACR EVO Integrated**

Components

Follow the assembly order in the illustration:

① Handlebar body x1
② Stem Top Cap x1
③ Cap Fixing Bolt x1
④ Expander Assembly x1
⑤ Steerer Clamp Bolt x2
⑥ Steerer Clamp Nut x1
⑦ Shim (for Ø28.6mm steer tube) x1
⑧ GoPro Adapter x1
⑨ 5D ACR EVO Computer Mount Bracket x1 – Garmin / wahoo
⑩ Control Center Base x1 – Garmin / wahoo
⑪ Fixing Bolt 6L x4
⑫ 5D ACR EVO Computer Mount Bracket Bolt x2
⑬ 5mm Spacer x1
⑭ 10mm Spacer x2
⑮ GoPro Bolt x1
⑯ Rubber Cap x1

NOTICE Components ③、④、⑧、⑪、⑮、⑯ includes for different spec accordingly.

Handlebar Installation

1. Cut steerer tube according to manufacturer's instructions. Ensure there are no sharp burrs on the steerer tube. Select correct Spacers ⑬, ⑭ for the desired height of Handlebar.
2. It is recommended to apply a light coat of carbon assembly paste (ME068) on steerer tube. Slide Handlebar ① fully on to steerer tube.

⚠ WARNING Do not use grease on carbon steerers. Only use carbon assembly paste (ME068).

⚠ CAUTION When the Shim ⑦ is used with 1 1/8" steerer tube (Ø28.6mm) , use carbon installation compound between steerer tube and bushing AND bushing and stem for tight fit.

NOTICE Cable Routing should be done before final tightening and setup of headset preload.

3. Pre-adjust Expander ④ so it contacts the inner walls of the steerer tube but still can slide inside. Install the pre-adjusted Expander into steerer tube and tighten Expander ④ with a 6mm hex wrench to 61-92 kgf.cm / 6-9 Nm / 53-80 in.lbs. **⚠ CAUTION** Do not over-tighten the Expander ④ above 92 kgf.cm / 9 Nm / 80 in.lbs. damage may occur. Install Fixing Bolt ③ and Top Cap ② into the expander by use Fixing Bolt ③. Tighten the Fixing Bolt with a 5mm hex wrench to preload the headset bearings. Adjust the headset preload per the headset manufacturer's instructions. There should be no play in the headset, but the bearings should not feel rough or bind. Do not Tighten the Fixing Bolt ③ over torque 31 kgf.cm / 3 Nm / 27 in.lbs.
4. Ensure handlebar is aligned straight and gradually tighten the Steerer Clamp Bolt ⑤ and Stem Clamp Nut ⑥, by alternating turning each screws 1/4 to 1/2 turn at a time so both screws tighten simultaneously to 51-61 kgf.cm / 5-6 Nm / 44-53 in.lbs. DO NOT exceed maximum torque specification. Always use a calibrated torque wrench.
5. Install the Rubber Cap ⑯ to Cap Fixing Bolt ③.

Cable Installation

The brake and shifter housing can be routed internally through the cabe guide channel. Consult brake and shifter manufacturer for specific instruction of cable routing.

⚠ WARNING Never attempt to modify the cable guide holes. Do not drill, saw or file the holes larger or to a different shape. The position and size has been carefully engineered to maintain the strength of the handlebar. Any modification of the cable guide holes will void the warranty and may lead to premature failure of the handlebar, leading to possible loss of control of the bicycle resulting in injury or death.

5D ACR EVO Computer Mount Installation

1. Install EVO Computer Mount Bracket ⑨ on to bottom of Handlebar body ① by using Fixed Bolts ⑫. Adjust to desired position and alternately tighten Fixed Bolts to 31 kgf.cm / 3 Nm / 27 in.lbs. Do apply torque over 31 kgf.cm / 3 Nm / 27 in.lbs.
2. Install Control Center Base ⑩.Adjust to desired position and alternately tighten Fixing Bolts ⑪. Do not tighten over torque 20 kgf.cm / 2 Nm / 18 in.lbs.
3. Install GoPro Adapter ⑧ if GoPro Mount needed. Insert Fixing Bolt ⑪ through EVO Computer Mount Bracket ⑨ to tighten with the GoPro Adapter ⑧ to torque 20 kgf.cm / 2Nm / 18 in.lbs. Do not tighten over torque 20 kgf.cm / 2 Nm / 18 in.lbs.
4. If install Go Pro or other products follow the manufacturer's instructions and use Go Pro Bolt ⑮. Do not tighten over torque 31 kgf.cm / 3 Nm / 27 in.lbs ◦

ALPE D'HUEZ

TECHNICAL OVERVIEW



FEATURES AT A GLANCE



ALPE D'HUEZ

SPECIFICATIONS

FRAME MATERIAL
BCS Carbon Fiber, Vectran™ and Dyneema® Enhanced

SIZES
XS, SM, MD, LG, XL

FORK STEERER TUBE
Tapered 1–1/8" to 1–1/2" Vectran™ Enhanced

HEADSET BEARINGS
FSA Headset 1-1/2" ACB top and bottom for Semi & Fully-Integrated Cockpits

BOTTOM BRACKET
PF BB386 EVO

DISC HUB STANDARD
12x100mm F, 12x142mm R

THRU AXLES
12x120x1.5mm pitch F, 12x161x1.5mm pitch R

MAX TIRE WIDTH
700 x 28C

SEATPOST DIAMETER
ø27.2mm

SEATPOST CLAMP
Semi-Integrated TIME Alloy

SHIFTING
Compatible with all Electronic Shifting Systems

FRONT DERAILLEUR
Standard Mount

REAR DERAILLEUR
Standard Mount

BRAKE CALIPERS
Front and Rear Flat Mount Disc

ROTOR SIZE
140 or160mm with DM Adapter

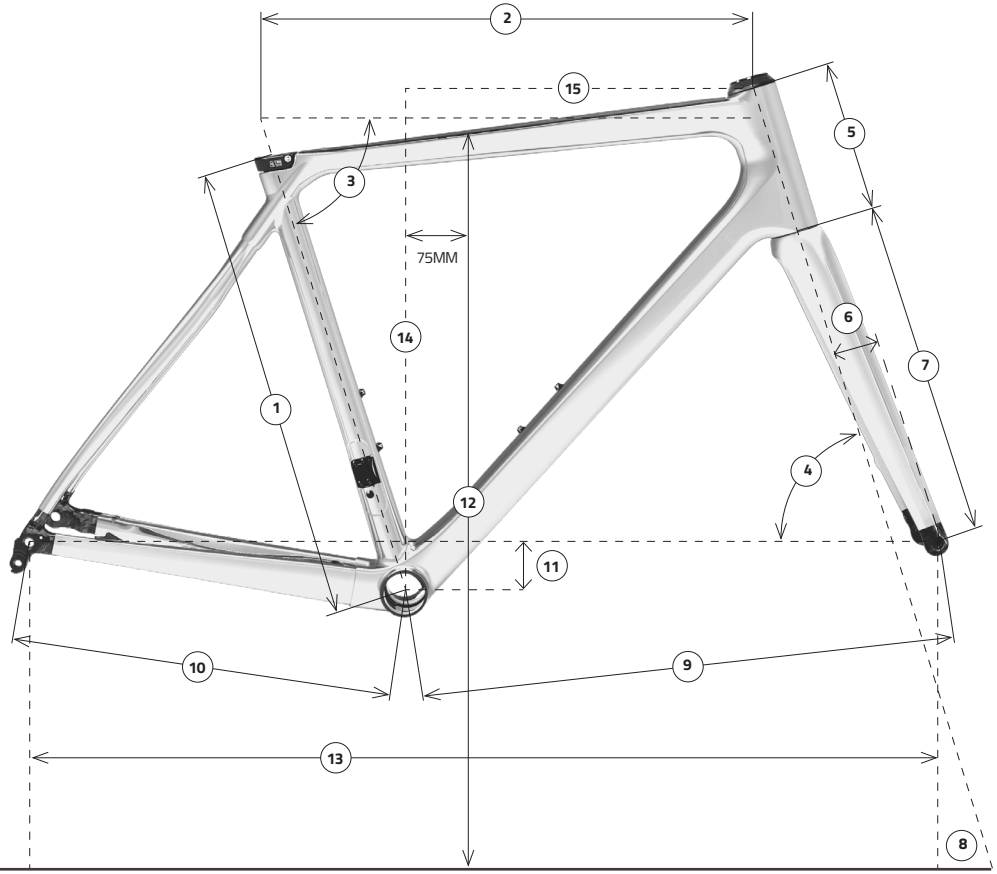
WHAT'S INCLUDED

- FSA Headset for Semi & Fully-Integrated Cockpits
- Front and Rear Thru Axles
- Alloy Bottle Bolts
- Semi-Integrated Seatpost Clamp
- Front and Rear Derailleur Hangers
- Single Cover and Drivetrain Conversion Kit

ALPE D'HUEZ

GEOMETRY

ADH SIZE	XS	S	M	L	XL
1 SEAT TUBE (ACTUAL)	450	470	510	540	565
2 TOP TUBE (VIRTUAL)	513	531	555	570	580
3 SEAT TUBE ANGLE	74.7°	74°	73°	73°	73°
4 HEAD TUBE ANGLE	71°	72.5°	73°	73°	73.5°
5 HEAD TUBE	122	142	166	186	204
6 FORK OFFSET	43	43	43	43	43
7 AXLE TO CROWN	368	368	368	368	368
8 TRAIL	70	61	58	58	55
9 FRONT CENTER	576	575	584	599	604
10 CHAINSTAY	410	410	410	410	410
11 DROP	65	65	65	65	65
12 STANDOVER (28C TIRE)	741	763	795	821	840
13 WHEELBASE	977	976	985	1000	1005
14 STACK	514	538	562	582	601
15 REACH	372	377	383	392	397



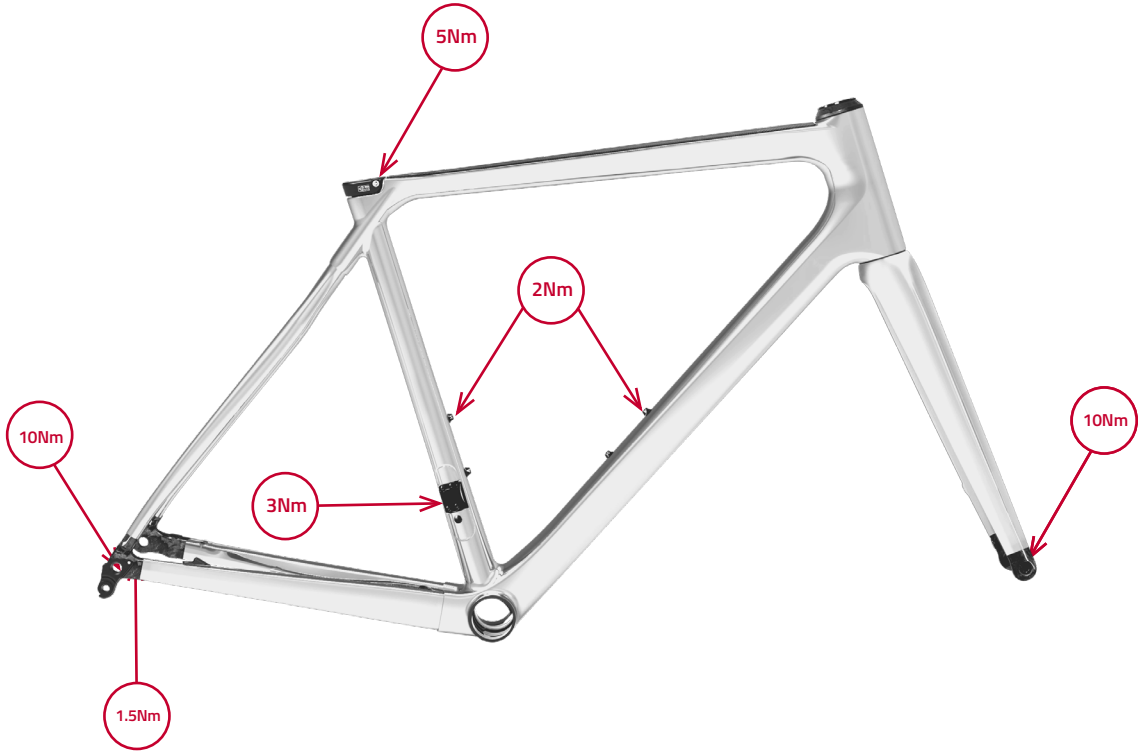
ALPE D'HUEZ

TORQUE SPECIFICATIONS

Strictly observe the tightening torques to ensure optimum operation and safety.

- Seat post clamp: 5 Nm
- Thru Axles: 10 Nm
- Front Derailleur Hanger Bolts: 3 Nm
- Rear Derailleur Hanger Small Bolt: 1.5 Nm
- Water Bottle Bolts: 2 Nm

Use a quality torque wrench and check all tightening torques after 500 km of use.



HEADSET

FULL SPEED AHEAD ICR and ACR HEADSETS

CABLE ROUTING:
OUTSIDE BAR/STEM
(recommendend for mechanical drivetrains)



HS NO.69 SRS
130-0025018010

CABLE ROUTING:
INSIDE BAR/STEM

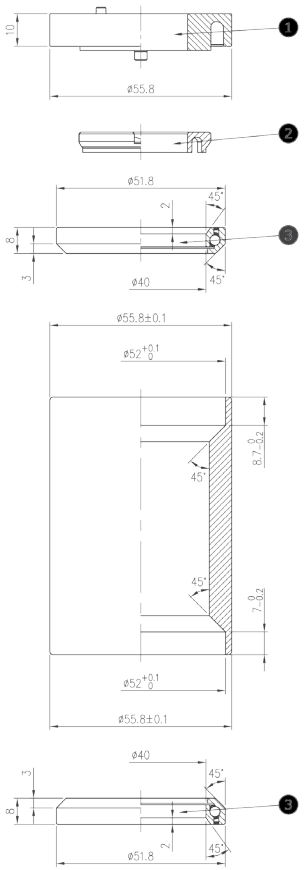


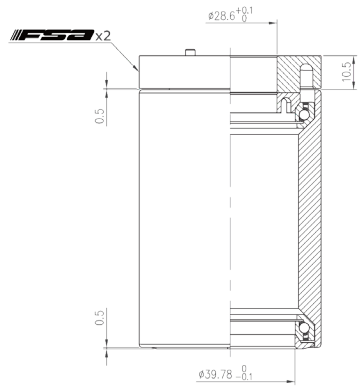
HS NO.55R ACR
(TH-894/CR-1 TOP COVER)
130-0020000010

Internal Headset (CC)

NO.55R 1.5''/CR/STD

1-1/8"/ 1.5", 45°/ 45° ACB





Stack Height 10.5+0.5=11



Weight - 92 grams

- For 55.8mm OD head tube
- For 1-1/8" to 1.5" tapered fork
- CR top cover
- Angular Contact Bearing (Black seal)

No	Item No	Material	Qty
③	MR171 {45°/45° x 51.8}	Chrome steel	2SETS
②	H2474{NO.55R 1.5"/CR}	Alloy	1PCS
①	H2473{NO.55R 1.5"/CR/STD}	Nylon	1PCS

HEADSET

FULL SPEED AHEAD HEADSET INSTALLATION INSTRUCTIONS

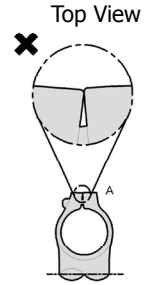


Fig. C

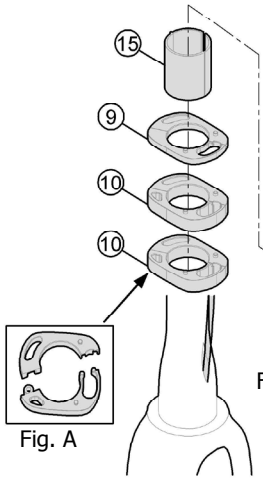


Fig. A

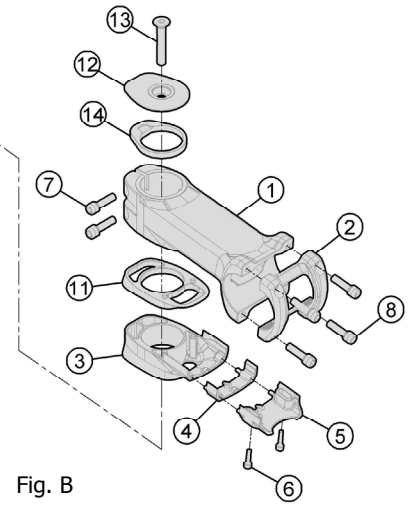
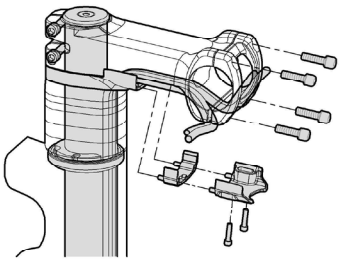
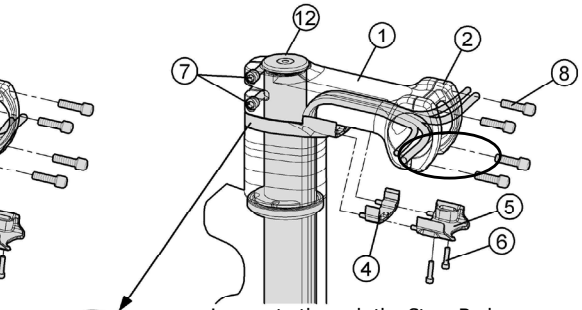
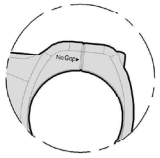


Fig. B


wires route beneath the Stem Body and through the cover



wires route through the Stem Body


Fig. D

Introduction

Congratulations on your Full Speed Ahead 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.fullspeedahead.com/en/technology

Specification

FSA Road, MTB and Vision stems are compatible with industry standard steerer tube and handlebar diameters. To choose the correct FSA stem, first check the specific diameter of steerer tube and handlebar to be used.

Components

Follow the assembly order in the illustration:

① NS SMR Stem Body x1
② Stem Face Plate x1
③ SMR Spacer x1

④

Stem size		

⑤ SMR Cable Cover x1
⑥ SMR Cable Cover Fixing Bolts x2
⑦ Steerer Clamp Bolts x2
⑧ Face Plate Fixing bolts x4
⑨ Left / Right spacer 5mm x1
⑩ Left / Right spacer 10mm x2

⑪ ACR Spacer x1
⑫ Top cap x1
⑬ Top cap Fixing bolt x1
⑭ Upper Spacer x1
⑮ Bushing 1 1/4" to 1 1/8" x1

HEADSET

FULL SPEED AHEAD HEADSET INSTALLATION INSTRUCTIONS (CONTINUED)

1. Before proceeding to installation, all Brake/ Hydraulic Hose / electronic wiring / should be run through the handlebar and SMR Stem Body ①, SMR Spacer ③ or Spacer for ACR ⑪, Spacers ⑨, ⑩ and headset.
2. SMR Stems have two options for cable routing. When using handlebars with internal routing ports, the housings and electronic wires can be routed through the Stem Body ①. Alternativly, the housings and electronic wires can be routed beneath the Stem Body and through the SMR Cable Cover ⑤ and Cover Spacers ④.
3. Front brake housings can only be internally routed for disc brakes. Compatible forks have an internal routing port on the steerer tube (Fig. B). All other front brake housings must be routed externally.
4. Depending on stem length you may need to install up to 4x SMR Cable Cover Spacers ④.
5. Installation is greatly improved when using a guide cable to gently pull the housing or electronic wires through the stem from either direction.

Stem Installation to Fork Steerer Tube

1. Measure diameter of steerer tube to be certain it is correct size for SMR stem installation. It's often required that the steerer tube be cut to length and should be performed by a qualified bicycle technician. Ensure the steerer tube is clean and free of burrs or chips before installing stem onto steerer tube.

Note: Carbon steerer tubes should extend through the stem completely for proper clamp pressure.
Note: If **0°** using with Bushing ⑮ for 1 1/8"steerer tube, install Upper Spacer ⑭ It is recommended to have minimum 2mm steerer tube extended above the stem.

2. Install fork through the Stem Body ①, place either the SMR Spacer ③ or ACR Spacer ⑪ over the fork and then according to your demand place left/right spacers ⑨, ⑩ (⑨, ⑩ are detachable, Fig A).
3. Headset should be installed per headset manufacturer's instructions.
4. Apply small amount of FSA Dynamic installation compound on Carbon steerer tube. Install the Expander Assembly (not shown) per Expander Assembly instructions below.

Note: If use the Bushing ⑮ apply FSA Dynamic installation compound on between steerer tube and bushing AND bushing and stem for tight fit.

5. Apply grease to Steerer Clamp Bolts ⑦. Tighten the bolts to 61 kgf.cm / 6 Nm / 53 in.lbs. of torque by alternating between bolts 1/4 turn at a time so both bolts reach proper torque simultaneously.

⚠ CAUTION Do not go above maximum torque rating printed on the stem. If your steerer clamp looks like Fig. C it may be over torqued or installed incorrectly.If two Steerer Clamp Bolts ⑦ go over the maximum torque, can cause cracks in carbon steerer tube. Check stem for slippage on the steerer tube before proceeding.

Expander Assembly Installation

The Expander Assembly is designed to work with Carbon Steerer Tubes. Do not apply grease on the Carbon Steerer or Expander Assembly.

1. Install the NS SMR Stem ① onto the Carbon Steerer. Tighten the Steerer Clamp Bolts ⑦ finger tight only.
2. Adjust Expander Assembly so it contacts the inner walls of the steerer tube but is still able to slide inside. Install the pre-adjusted Expander Assembly. Tighten the Expander Assembly with a 5mm hex wrench to 51 kgf.cm / 5 Nm / 44 in.lbs. of torque. Note: The Expander Assembly must be complete assembled and adjusted to fit tightly into the Carbon Steerer before installation.
3. Install the Top Cap ⑫ by tighten the Fixing Bolt ⑬ with a 6mm hex wrench to until proper bearing preload is achieved. Note: 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).

⚠ CAUTION Check the alignment of Stem to the front wheel before final torque is applied to the Steerer Clamp Bolts, loosen and adjust if required. Be sure all bolts are tightened to recommended torque.

Handlebar Installation to Stem

1. Apply FSA Dynamic Installation Compound on handlebar clamp area. Insert the handlebar between SMR Stem Body ① and Face Plate ② Pre-tighten Face Plate Fixing bolts ⑧.
2. Apply grease to faceplate bolts ⑧ and tighten the upper bolts to a torque 61 kgf.cm / 6 Nm / 53 in.lbs Alternately tighten stem bolts until there is no gap between faceplate and stem body. (Fig. D).
3. Tighten the lower bolts ⑧ to a torque 61 kgf.cm / 6 Nm / 53 in.lbs 1/4 turn at a time to tighten faceplate evenly.

⚠ CAUTION Do not go above maximum torque rating printed on the stem. Check handlebar for slippage before each ride to ensure safe operation. Contact FSA for Troubleshooting information.

⚠ WARNING

Be sure to choose the correct stem to fit the steer tube and handlebar for which it is to be installed. Installing the stem on an incorrect steerer tube, or handlebar clamp diameter may cause damage to product, or cause an accident resulting in injury or death.

- FSA SMR ST-OS-188/SMR-0° stem is compatible with 1 1/4"steerer tubes and 1 1/8"steerer tube when the Bushing ⑮ is used (use FSA Dynamic installation compound on between steerer tube and bushing AND bushing and stem for tight fit).
- FSA Road and MTB stems are available to fit 31.8mm Handlebar clamp only.

⚠ WARNING

Measure Fork Steerer tube and handlebar clamp area before installing stem. Use an accurate measuring device such as a caliper or micrometer. Installing stem onto an undersized steertube or handlebar can cause stem or bar to slip causing loss of control of bicycle; resulting in an accident, damage to bicycle, injury or death. Use FSA Dynamic Assembly Paste between stem, steerer tube, and handlebar to reduce chances of slippage. Consult fork and handlebar manufacturer for exact diameter specification. If manufacturer specifications are unavailable, general guidelines are as follows:

Handlebar Clamp Area Dimensions:

- Φ31.8mm + 0.15 / -.00mm
- Φ26.0mm + 0.15 / -.00mm
- Φ25.4mm + 0.15 / -.00mm

Steerer Tube Dimensions:

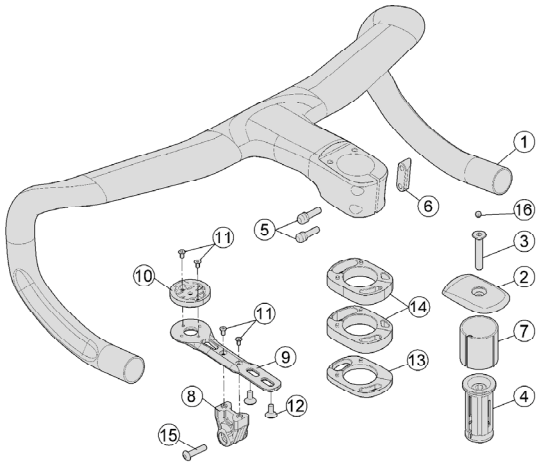
- 1 1/8" Φ28.6mm +.01 / -.00mm
- 1 1/4" Φ31.8mm +.01 / -.00mm
- 1 .5" Φ38.1mm +.01 / -.00mm

⚠ WARNING

Headset and Fork must be installed before stem installation. Headset and Fork installation requires specialized knowledge, tools, and experience. General mechanical aptitude may not be sufficient to properly install these components. It is recommended that the headset and fork be installed by a qualified bicycle technician. Improper installation can result in failure of headset, fork, stem, and cause personal injury or death.

METRON 5D

FULL SPEED AHEAD INSTALLATION INSTRUCTIONS



Introduction

Congratulations on your Full Speed Ahead 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

Specification

Model Name **Metron 5D ACR EVO Integrated**

Components

Follow the assembly order in the illustration:

① Handlebar body x1
② Stem Top Cap x1
③ Cap Fixing Bolt x1
④ Expander Assembly x1
⑤ Steerer Clamp Bolt x2
⑥ Steerer Clamp Nut x1
⑦ Shim (for Ø28.6mm steer tube) x1
⑧ GoPro Adapter x1
⑨ 5D ACR EVO Computer Mount Bracket x1 – Garmin / wahoo
⑩ Control Center Base x1 – Garmin / wahoo
⑪ Fixing Bolt 6L x4
⑫ 5D ACR EVO Computer Mount Bracket Bolt x2
⑬ 5mm Spacer x1
⑭ 10mm Spacer x2
⑮ GoPro Bolt x1
⑯ Rubber Cap x1

NOTICE Components ③、④、⑧、⑪、⑮、⑯ includes for different spec accordingly.

Handlebar Installation

1. Cut steerer tube according to manufacturer's instructions. Ensure there are no sharp burrs on the steerer tube. Select correct Spacers ⑬, ⑭ for the desired height of Handlebar.
2. It is recommended to apply a light coat of carbon assembly paste (ME068) on steerer tube. Slide Handlebar ① fully on to steerer tube.

⚠ WARNING Do not use grease on carbon steerers. Only use carbon assembly paste (ME068).

⚠ CAUTION When the Shim ⑦ is used with 1 1/8" steerer tube (Ø28.6mm) , use carbon installation compound between steerer tube and bushing AND bushing and stem for tight fit.

NOTICE Cable Routing should be done before final tightening and setup of headset preload.

3. Pre-adjust Expander ④ so it contacts the inner walls of the steerer tube but still can slide inside. Install the pre-adjusted Expander into steerer tube and tighten Expander ④ with a 6mm hex wrench to 61-92 kgf.cm / 6-9 Nm / 53-80 in.lbs. **⚠ CAUTION** Do not over-tighten the Expander ④ above 92 kgf.cm / 9 Nm / 80 in.lbs. damage may occur. Install Fixing Bolt ③ and Top Cap ② into the expander by use Fixing Bolt ③. Tighten the Fixing Bolt with a 5mm hex wrench to preload the headset bearings. Adjust the headset preload per the headset manufacturer's instructions. There should be no play in the headset, but the bearings should not feel rough or bind. Do not Tighten the Fixing Bolt ③ over torque 31 kgf.cm / 3 Nm / 27 in.lbs.
4. Ensure handlebar is aligned straight and gradually tighten the Steerer Clamp Bolt ⑤ and Stem Clamp Nut ⑥, by alternating turning each screws 1/4 to 1/2 turn at a time so both screws tighten simultaneously to 51-61 kgf.cm / 5-6 Nm / 44-53 in.lbs. DO NOT exceed maximum torque specification. Always use a calibrated torque wrench.
5. Install the Rubber Cap ⑯ to Cap Fixing Bolt ③.

Cable Installation

The brake and shifter housing can be routed internally through the cabe guide channel. Consult brake and shifter manufacturer for specific instruction of cable routing.

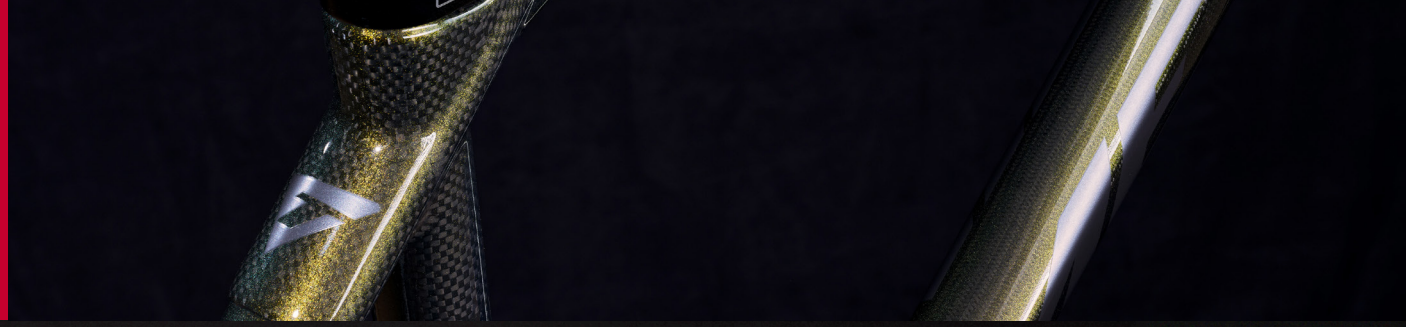
⚠ WARNING Never attempt to modify the cable guide holes. Do not drill, saw or file the holes larger or to a different shape. The position and size has been carefully engineered to maintain the strength of the handlebar. Any modification of the cable guide holes will void the warranty and may lead to premature failure of the handlebar, leading to possible loss of control of the bicycle resulting in injury or death.

5D ACR EVO Computer Mount Installation

1. Install EVO Computer Mount Bracket ⑨ on to bottom of Handlebar body ① by using Fixed Bolts ⑫. Adjust to desired position and alternately tighten Fixed Bolts to 31 kgf.cm / 3 Nm / 27 in.lbs. Do apply torque over 31 kgf.cm / 3 Nm / 27 in.lbs.
2. Install Control Center Base ⑩.Adjust to desired position and alternately tighten Fixing Bolts ⑪. Do not tighten over torque 20 kgf.cm / 2 Nm / 18 in.lbs.
3. Install GoPro Adapter ⑧ if GoPro Mount needed. Insert Fixing Bolt ⑪ through EVO Computer Mount Bracket ⑨ to tighten with the GoPro Adapter ⑧ to torque 20 kgf.cm / 2Nm / 18 in.lbs. Do not tighten over torque 20 kgf.cm / 2 Nm / 18 in.lbs.
4. If install Go Pro or other products follow the manufacturer's instructions and use Go Pro Bolt ⑮. Do not tighten over torque 31 kgf.cm / 3 Nm / 27 in.lbs ◦

ALPE D'HUEZ X

TECHNICAL OVERVIEW



FEATURES AT A GLANCE



ALPE D'HUEZ X

SPECIFICATIONS

FRAME MATERIAL
BCS Carbon Fiber, Vectran™ and Dyneema® Enhanced

SIZES
XS, SM, MD, LG, XL

FORK STEERER TUBE
Tapered 1–1/8" to 1–1/2" Vectran™ Enhanced

HEADSET BEARINGS
FSA Headset 1-1/2" ACB top and bottom for Semi & Fully-Integrated Cockpits

BOTTOM BRACKET
PF BB386 EVO

DISC HUB STANDARD
12x100mm F, 12x142mm R

THRU AXLES
12x120x1.5mm pitch F, 12x161x1.5mm pitch R

MAX TIRE WIDTH
700 x 38C

SEATPOST DIAMETER
ø27.2mm

SEATPOST CLAMP
Semi-Integrated TIME Alloy

SHIFTING
Compatible with 1x and 2x Electronic and Mechanical Shifting Systems

FRONT DERAILLEUR
1X and 2X Compatible with Integrated Single Cover and Drivetrain Conversion Kit

REAR DERAILLEUR
Standard Mount

BRAKE CALIPERS
Front and Rear Flat Mount Disc

ROTOR SIZE
140 or160mm with DM Adapter

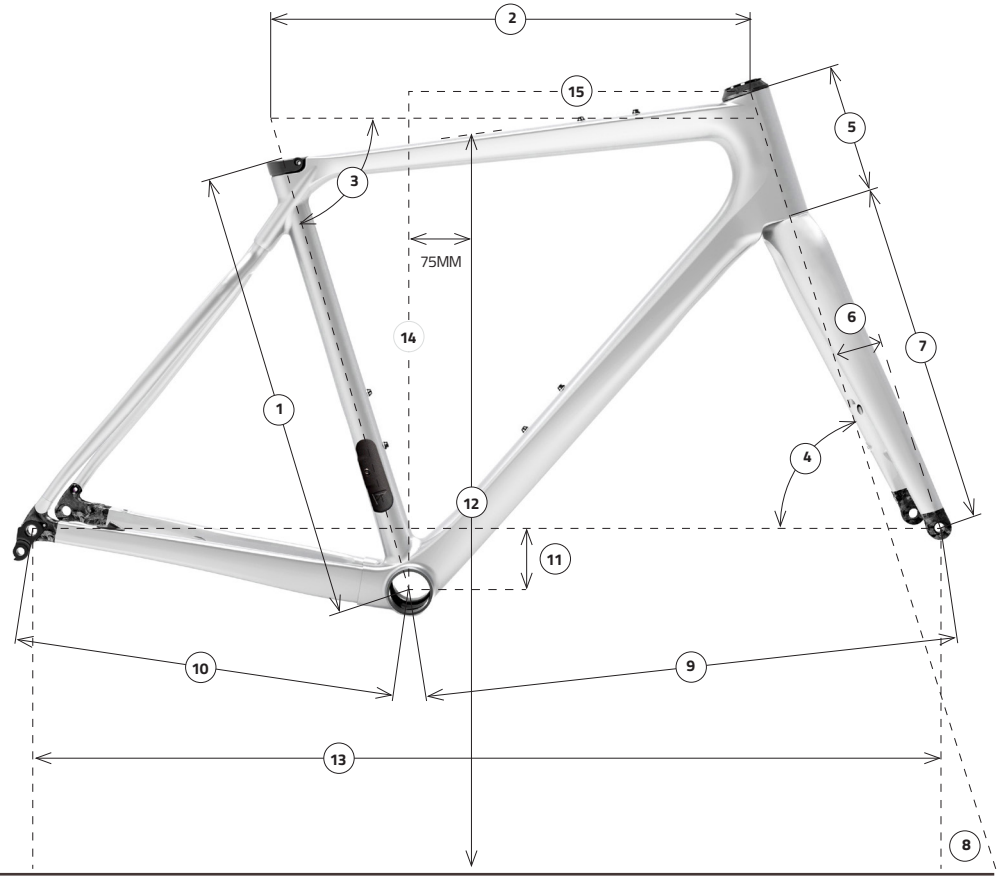
WHAT'S INCLUDED

- FSA Headset for Semi & Fully-Integrated Cockpits
- Front and Rear Thru Axles
- Alloy Bottle Bolts
- Semi-Integrated Seatpost Clamp
- Front and Rear Derailleur Hangers
- Single Cover and Drivetrain Conversion Kit

ALPE D'HUEZ X

GEOMETRY

ALPE D'HUEZ X SIZE	XS	S	M	L	XL
1 SEAT TUBE (ACTUAL)	455	480	500	530	550
2 TOP TUBE (VIRTUAL)	521	539	555	570	580
3 SEAT TUBE ANGLE	73.7°	73°	73°	73°	73°
4 HEAD TUBE ANGLE	70.5°	71.5°	72.5°	72.5°	73°
5 HEAD TUBE	123	131	149	169	188
6 FORK OFFSET	50	50	50	50	50
7 AXLE TO CROWN	380	380	380	380	380
8 TRAIL	71	64	58	58	54
9 FRONT CENTER	585	587	594	609	615
10 CHAINSTAY	418	418	418	418	418
11 DROP	74	74	74	74	74
12 STANDOVER (32C TIRE)	753	775	794	819	839
13 WHEELBASE	992	994	1001	1016	1022
14 STACK	530	543	562	581	601
15 REACH	366	373	383	392	397



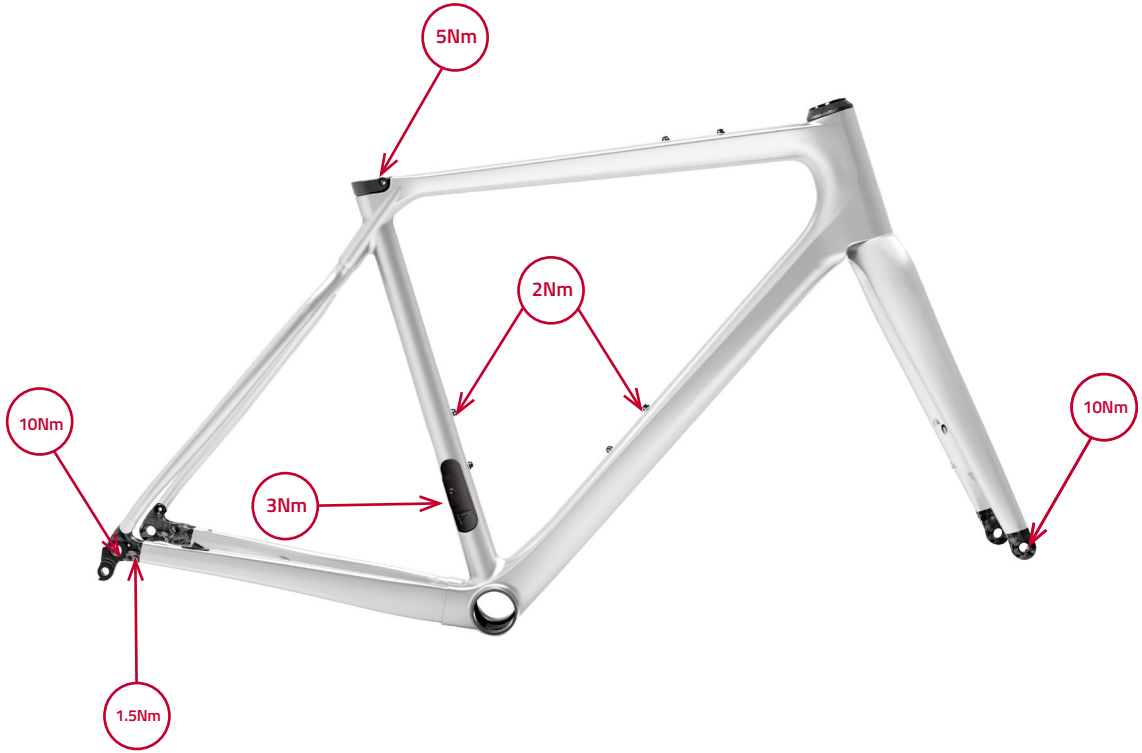
ALPE D'HUEZ X

TORQUE SPECIFICATIONS

Strictly observe the tightening torques to ensure optimum operation and safety.

- Seat post clamp: 5 Nm
- Thru Axles: 10 Nm
- Front Derailleur Hanger Bolts: 3 Nm
- Rear Derailleur Hanger Small Bolt: 1.5 Nm
- Water Bottle Bolts: 2 Nm

Use a quality torque wrench and check all tightening torques after 500 km of use.



HEADSET

FULL SPEED AHEAD ICR and ACR HEADSETS

CABLE ROUTING:
OUTSIDE BAR/STEM
(recommendend for mechanical drivetrains)



HS NO.69 SRS
130-0025018010

CABLE ROUTING:
INSIDE BAR/STEM

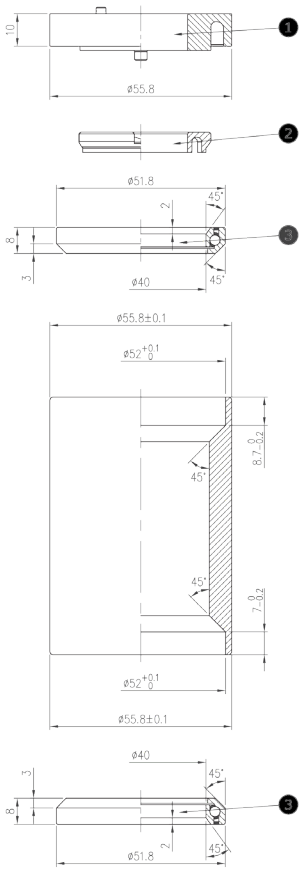


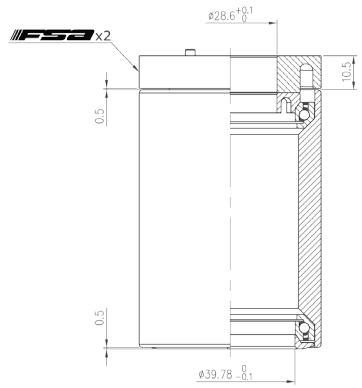
HS NO.55R ACR
(TH-894/CR-1 TOP COVER)
130-0020000010

Internal Headset (CC)

NO.55R 1.5''/CR/STD

1-1/8"/ 1.5", 45°/ 45° ACB





Stack Height 10.5+0.5=11



Weight - 92 grams

- For 55.8mm OD head tube
- For 1-1/8" to 1.5" tapered fork
- CR top cover
- Angular Contact Bearing (Black seal)

No	Item No	Material	Qty
③	MR171 {45°/45° x 51.8}	Chrome steel	2SETS
②	H2474{NO.55R 1.5"/CR}	Alloy	1PCS
①	H2473{NO.55R 1.5"/CR/STD}	Nylon	1PCS

HEADSET

FULL SPEED AHEAD HEADSET INSTALLATION INSTRUCTIONS

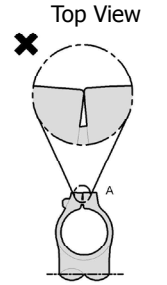


Fig. C

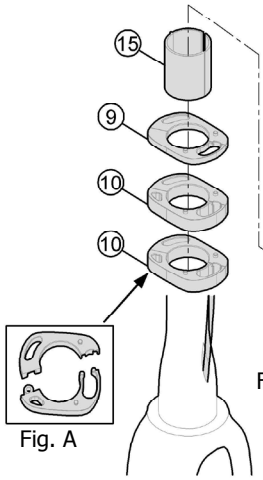


Fig. A

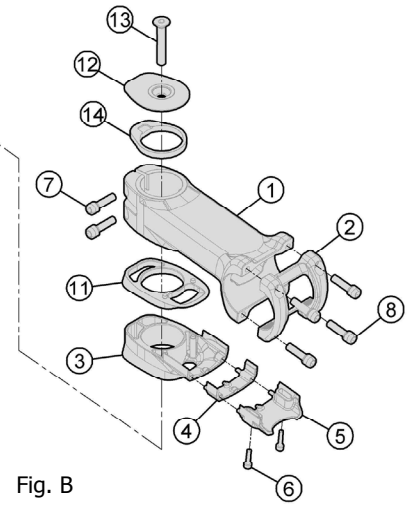
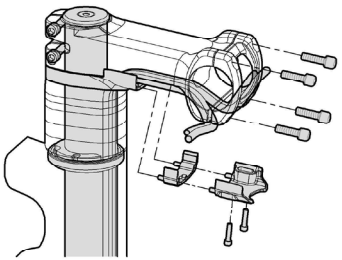
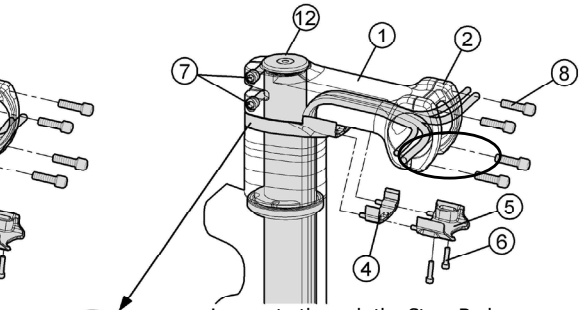
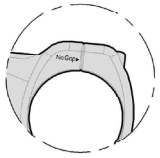


Fig. B


wires route beneath the Stem Body and through the cover



wires route through the Stem Body


Fig. D

Introduction

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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.fullspeedahead.com/en/technology

Specification

FSA Road, MTB and Vision stems are compatible with industry standard steerer tube and handlebar diameters. To choose the correct FSA stem, first check the specific diameter of steerer tube and handlebar to be used.

Components

Follow the assembly order in the illustration:

① NS SMR Stem Body x1
② Stem Face Plate x1
③ SMR Spacer x1

④

Stem size		

⑤ SMR Cable Cover x1
⑥ SMR Cable Cover Fixing Bolts x2
⑦ Steerer Clamp Bolts x2
⑧ Face Plate Fixing bolts x4
⑨ Left / Right spacer 5mm x1
⑩ Left / Right spacer 10mm x2

⑪ ACR Spacer x1
⑫ Top cap x1
⑬ Top cap Fixing bolt x1
⑭ Upper Spacer x1
⑮ Bushing 1 1/4" to 1 1/8" x1

HEADSET

FULL SPEED AHEAD HEADSET INSTALLATION INSTRUCTIONS (CONTINUED)

1. Before proceeding to installation, all Brake/ Hydraulic Hose / electronic wiring / should be run through the handlebar and SMR Stem Body ①, SMR Spacer ③ or Spacer for ACR ⑪, Spacers ⑨, ⑩ and headset.
2. SMR Stems have two options for cable routing. When using handlebars with internal routing ports, the housings and electronic wires can be routed through the Stem Body ①. Alternativly, the housings and electronic wires can be routed beneath the Stem Body and through the SMR Cable Cover ⑤ and Cover Spacers ④.
3. Front brake housings can only be internally routed for disc brakes. Compatible forks have an internal routing port on the steerer tube (Fig. B). All other front brake housings must be routed externally.
4. Depending on stem length you may need to install up to 4x SMR Cable Cover Spacers ④.
5. Installation is greatly improved when using a guide cable to gently pull the housing or electronic wires through the stem from either direction.

Stem Installation to Fork Steerer Tube

1. Measure diameter of steerer tube to be certain it is correct size for SMR stem installation. It's often required that the steerer tube be cut to length and should be performed by a qualified bicycle technician. Ensure the steerer tube is clean and free of burrs or chips before installing stem onto steerer tube.

Note: Carbon steerer tubes should extend through the stem completely for proper clamp pressure.
Note: If **0°** using with Bushing ⑮ for 1 1/8"steerer tube, install Upper Spacer ⑭ It is recommended to have minimum 2mm steerer tube extended above the stem.

2. Install fork through the Stem Body ①, place either the SMR Spacer ③ or ACR Spacer ⑪ over the fork and then according to your demand place left/right spacers ⑨, ⑩ (⑨, ⑩ are detachable, Fig A).
3. Headset should be installed per headset manufacturer's instructions.
4. Apply small amount of FSA Dynamic installation compound on Carbon steerer tube. Install the Expander Assembly (not shown) per Expander Assembly instructions below.

Note: If use the Bushing ⑮ apply FSA Dynamic installation compound on between steerer tube and bushing AND bushing and stem for tight fit.

5. Apply grease to Steerer Clamp Bolts ⑦. Tighten the bolts to 61 kgf.cm / 6 Nm / 53 in.lbs. of torque by alternating between bolts 1/4 turn at a time so both bolts reach proper torque simultaneously.

⚠ CAUTION Do not go above maximum torque rating printed on the stem. If your steerer clamp looks like Fig. C it may be over torqued or installed incorrectly.If two Steerer Clamp Bolts ⑦ go over the maximum torque, can cause cracks in carbon steerer tube. Check stem for slippage on the steerer tube before proceeding.

Expander Assembly Installation

The Expander Assembly is designed to work with Carbon Steerer Tubes. Do not apply grease on the Carbon Steerer or Expander Assembly.

1. Install the NS SMR Stem ① onto the Carbon Steerer. Tighten the Steerer Clamp Bolts ⑦ finger tight only.
2. Adjust Expander Assembly so it contacts the inner walls of the steerer tube but is still able to slide inside. Install the pre-adjusted Expander Assembly. Tighten the Expander Assembly with a 5mm hex wrench to 51 kgf.cm / 5 Nm / 44 in.lbs. of torque. Note: The Expander Assembly must be complete assembled and adjusted to fit tightly into the Carbon Steerer before installation.
3. Install the Top Cap ⑫ by tighten the Fixing Bolt ⑬ with a 6mm hex wrench to until proper bearing preload is achieved. Note: 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).

⚠ CAUTION Check the alignment of Stem to the front wheel before final torque is applied to the Steerer Clamp Bolts, loosen and adjust if required. Be sure all bolts are tightened to recommended torque.

Handlebar Installation to Stem

1. Apply FSA Dynamic Installation Compound on handlebar clamp area. Insert the handlebar between SMR Stem Body ① and Face Plate ② Pre-tighten Face Plate Fixing bolts ⑧.
2. Apply grease to faceplate bolts ⑧ and tighten the upper bolts to a torque 61 kgf.cm / 6 Nm / 53 in.lbs Alternately tighten stem bolts until there is no gap between faceplate and stem body. (Fig. D).
3. Tighten the lower bolts ⑧ to a torque 61 kgf.cm / 6 Nm / 53 in.lbs 1/4 turn at a time to tighten faceplate evenly.

⚠ CAUTION Do not go above maximum torque rating printed on the stem. Check handlebar for slippage before each ride to ensure safe operation. Contact FSA for Troubleshooting information.

⚠ WARNING

Be sure to choose the correct stem to fit the steer tube and handlebar for which it is to be installed. Installing the stem on an incorrect steerer tube, or handlebar clamp diameter may cause damage to product, or cause an accident resulting in injury or death.

- FSA SMR ST-OS-188/SMR-0° stem is compatible with 1 1/4"steerer tubes and 1 1/8"steerer tube when the Bushing ⑮ is used (use FSA Dynamic installation compound on between steerer tube and bushing AND bushing and stem for tight fit).
- FSA Road and MTB stems are available to fit 31.8mm Handlebar clamp only.

⚠ WARNING

Measure Fork Steerer tube and handlebar clamp area before installing stem. Use an accurate measuring device such as a caliper or micrometer. Installing stem onto an undersized steertube or handlebar can cause stem or bar to slip causing loss of control of bicycle; resulting in an accident, damage to bicycle, injury or death. Use FSA Dynamic Assembly Paste between stem, steerer tube, and handlebar to reduce chances of slippage. Consult fork and handlebar manufacturer for exact diameter specification. If manufacturer specifications are unavailable, general guidelines are as follows:

Handlebar Clamp Area Dimensions:

- Φ31.8mm + 0.15 / -.00mm
- Φ26.0mm + 0.15 / -.00mm
- Φ25.4mm + 0.15 / -.00mm

Steerer Tube Dimensions:

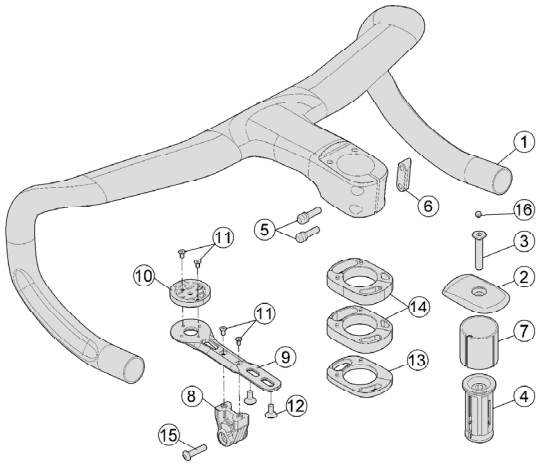
- 1 1/8" Φ28.6mm +.01 / -.00mm
- 1 1/4" Φ31.8mm +.01 / -.00mm
- 1 .5" Φ38.1mm +.01 / -.00mm

⚠ WARNING

Headset and Fork must be installed before stem installation. Headset and Fork installation requires specialized knowledge, tools, and experience. General mechanical aptitude may not be sufficient to properly install these components. It is recommended that the headset and fork be installed by a qualified bicycle technician. Improper installation can result in failure of headset, fork, stem, and cause personal injury or death.

METRON 5D

FULL SPEED AHEAD INSTALLATION INSTRUCTIONS



Introduction

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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

Specification

Model Name **Metron 5D ACR EVO Integrated**

Components

Follow the assembly order in the illustration:

① Handlebar body x1
② Stem Top Cap x1
③ Cap Fixing Bolt x1
④ Expander Assembly x1
⑤ Steerer Clamp Bolt x2
⑥ Steerer Clamp Nut x1
⑦ Shim (for Ø28.6mm steer tube) x1
⑧ GoPro Adapter x1
⑨ 5D ACR EVO Computer Mount Bracket x1 – Garmin / wahoo
⑩ Control Center Base x1 – Garmin / wahoo
⑪ Fixing Bolt 6L x4
⑫ 5D ACR EVO Computer Mount Bracket Bolt x2
⑬ 5mm Spacer x1
⑭ 10mm Spacer x2
⑮ GoPro Bolt x1
⑯ Rubber Cap x1

NOTICE Components ③、④、⑧、⑪、⑮、⑯ includes for different spec accordingly.

Handlebar Installation

1. Cut steerer tube according to manufacturer's instructions. Ensure there are no sharp burrs on the steerer tube. Select correct Spacers ⑬, ⑭ for the desired height of Handlebar.
2. It is recommended to apply a light coat of carbon assembly paste (ME068) on steerer tube. Slide Handlebar ① fully on to steerer tube.

⚠ WARNING Do not use grease on carbon steerers. Only use carbon assembly paste (ME068).

⚠ CAUTION When the Shim ⑦ is used with 1 1/8" steerer tube (Ø28.6mm) , use carbon installation compound between steerer tube and bushing AND bushing and stem for tight fit.

NOTICE Cable Routing should be done before final tightening and setup of headset preload.

3. Pre-adjust Expander ④ so it contacts the inner walls of the steerer tube but still can slide inside. Install the pre-adjusted Expander into steerer tube and tighten Expander ④ with a 6mm hex wrench to 61-92 kgf.cm / 6-9 Nm / 53-80 in.lbs. **⚠ CAUTION** Do not over-tighten the Expander ④ above 92 kgf.cm / 9 Nm / 80 in.lbs. damage may occur. Install Fixing Bolt ③ and Top Cap ② into the expander by use Fixing Bolt ③. Tighten the Fixing Bolt with a 5mm hex wrench to preload the headset bearings. Adjust the headset preload per the headset manufacturer's instructions. There should be no play in the headset, but the bearings should not feel rough or bind. Do not Tighten the Fixing Bolt ③ over torque 31 kgf.cm / 3 Nm / 27 in.lbs.
4. Ensure handlebar is aligned straight and gradually tighten the Steerer Clamp Bolt ⑤ and Stem Clamp Nut ⑥, by alternating turning each screws 1/4 to 1/2 turn at a time so both screws tighten simultaneously to 51-61 kgf.cm / 5-6 Nm / 44-53 in.lbs. DO NOT exceed maximum torque specification. Always use a calibrated torque wrench.
5. Install the Rubber Cap ⑯ to Cap Fixing Bolt ③.

Cable Installation

The brake and shifter housing can be routed internally through the cabe guide channel. Consult brake and shifter manufacturer for specific instruction of cable routing.

⚠ WARNING Never attempt to modify the cable guide holes. Do not drill, saw or file the holes larger or to a different shape. The position and size has been carefully engineered to maintain the strength of the handlebar. Any modification of the cable guide holes will void the warranty and may lead to premature failure of the handlebar, leading to possible loss of control of the bicycle resulting in injury or death.

5D ACR EVO Computer Mount Installation

1. Install EVO Computer Mount Bracket ⑨ on to bottom of Handlebar body ① by using Fixed Bolts ⑫. Adjust to desired position and alternately tighten Fixed Bolts to 31 kgf.cm / 3 Nm / 27 in.lbs. Do apply torque over 31 kgf.cm / 3 Nm / 27 in.lbs.
2. Install Control Center Base ⑩.Adjust to desired position and alternately tighten Fixing Bolts ⑪. Do not tighten over torque 20 kgf.cm / 2 Nm / 18 in.lbs.
3. Install GoPro Adapter ⑧ if GoPro Mount needed. Insert Fixing Bolt ⑪ through EVO Computer Mount Bracket ⑨ to tighten with the GoPro Adapter ⑧ to torque 20 kgf.cm / 2Nm / 18 in.lbs. Do not tighten over torque 20 kgf.cm / 2 Nm / 18 in.lbs.
4. If install Go Pro or other products follow the manufacturer's instructions and use Go Pro Bolt ⑮. Do not tighten over torque 31 kgf.cm / 3 Nm / 27 in.lbs ◦

ADHX 45

TECHNICAL OVERVIEW



FEATURES AT A GLANCE



ADHX 45

SPECIFICATIONS

FRAME MATERIAL
BCS Carbon Fiber, Vectran™ and Dyneema® Enhanced

SIZES
XS, SM, MD, LG, XL

FORK STEERER TUBE
Tapered 1–1/8" to 1–1/2" Vectran™ Enhanced

HEADSET BEARINGS
FSA Headset 1-1/2" ACB top and bottom for Semi & Fully-Integrated Cockpits

BOTTOM BRACKET
PF BB386 EVO

DISC HUB STANDARD
12x100mm F, 12x142mm R

THRU AXLES
12x120x1.5mm pitch F, 12x161x1.5mm pitch R

MAX TIRE WIDTH
700 x 45C

SEATPOST DIAMETER
ø27.2mm

SEATPOST CLAMP
Semi-Integrated TIME Alloy

SHIFTING
Compatible with 1x and 2x Electronic and Mechanical Shifting Systems

FRONT DERAILLEUR
1X and 2X Compatible with Integrated Single Cover and Drivetrain Conversion Kit

REAR DERAILLEUR
Standard Mount (UDH 2025)

BRAKE CALIPERS
Front and Rear Flat Mount Disc

ROTOR SIZE
140 or160mm with DM Adapter

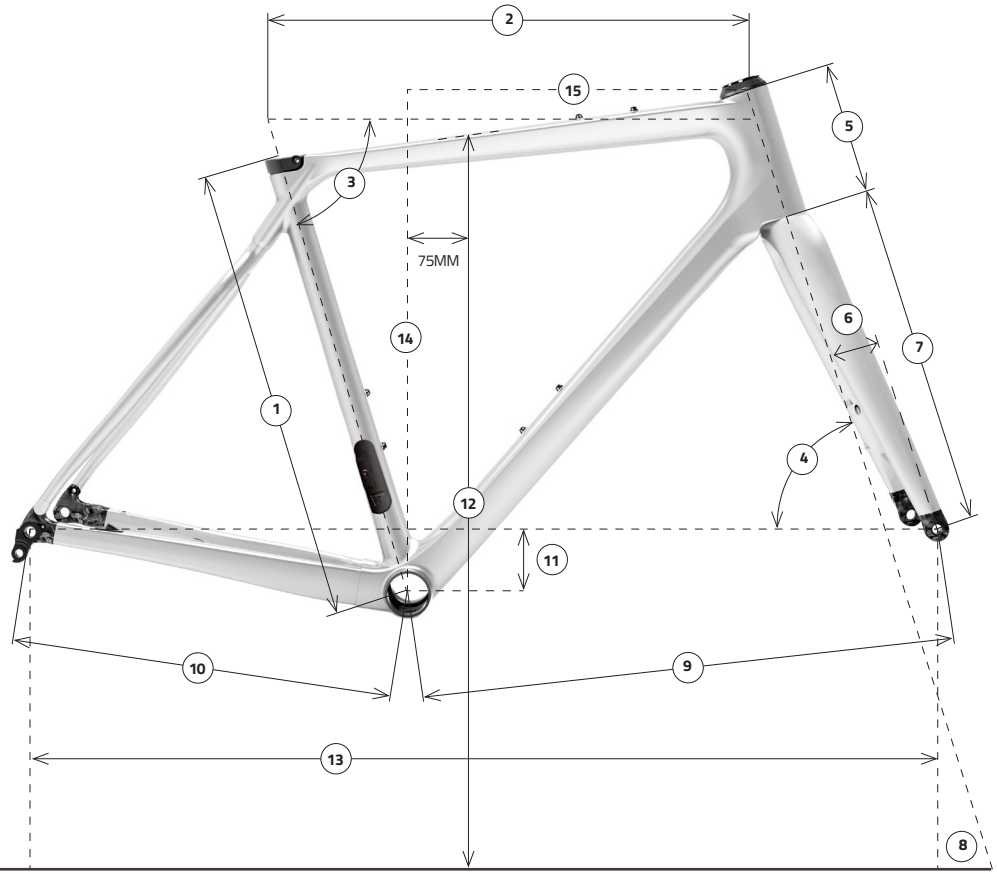
WHAT'S INCLUDED

- FSA Headset for Semi & Fully-Integrated Cockpits
- Front and Rear Thru Axles
- Alloy Bottle Bolts
- Semi-Integrated Seatpost Clamp
- Front and Rear Derailleur Hangers
- Single Cover and Drivetrain Conversion Kit

ADHX 45

GEOMETRY

ADHX 45 SIZE	XS	S	M	L	XL
1 SEAT TUBE (ACTUAL)	455	480	500	530	550
2 TOP TUBE (VIRTUAL)	519	537	553	568	578
3 SEAT TUBE ANGLE	73.5°	72.8°	72.8°	72.8°	72.8°
4 HEAD TUBE ANGLE	70.3°	71.3°	72.3°	72.3°	72.8°
5 HEAD TUBE	123	131	149	169	188
6 FORK OFFSET	53	53	53	53	53
7 AXLE TO CROWN	383	383	383	383	383
8 TRAIL	71	65	59	59	57
9 FRONT CENTER	589	591	598	613	618
10 CHAINSTAY	430	430	430	430	430
11 DROP	71	71	71	71	71
12 STANDOVER (45C TIRE)	763	785	804	829	849
13 WHEELBASE	1009	1011	1018	1033	1038
14 STACK	532	543	564	583	603
15 REACH	364	371	381	390	395



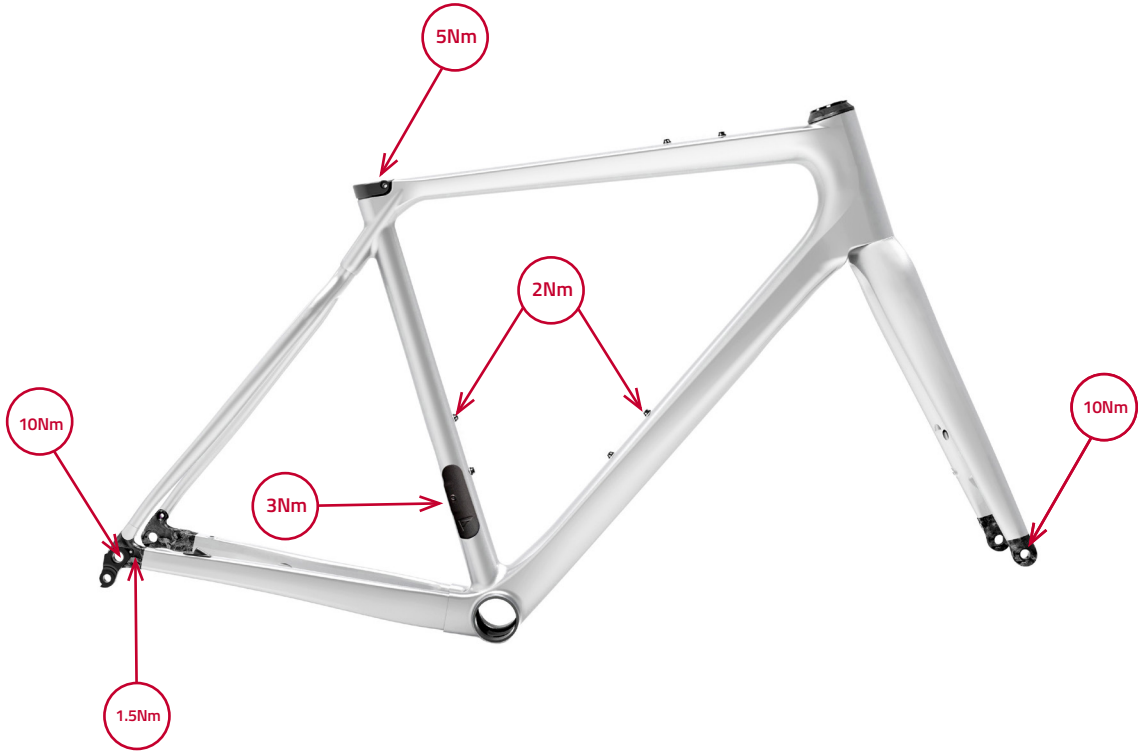
ADHX 45

TORQUE SPECIFICATIONS

Strictly observe the tightening torques to ensure optimum operation and safety.

- Seat post clamp: 5 Nm
- Thru Axles: 10 Nm
- Front Derailleur Hanger Bolts: 3 Nm
- Rear Derailleur Hanger Small Bolt: 1.5 Nm
- Water Bottle Bolts: 2 Nm

Use a quality torque wrench and check all tightening torques after 500 km of use.



HEADSET

FULL SPEED AHEAD ICR and ACR HEADSETS

CABLE ROUTING:
OUTSIDE BAR/STEM
(recommendend for mechanical drivetrains)



HS NO.69 SRS
130-0025018010

CABLE ROUTING:
INSIDE BAR/STEM

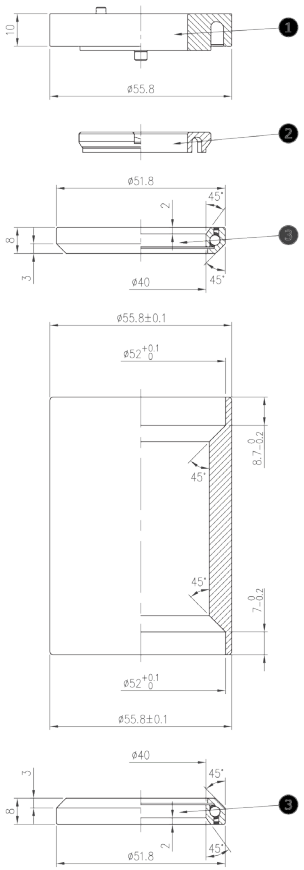


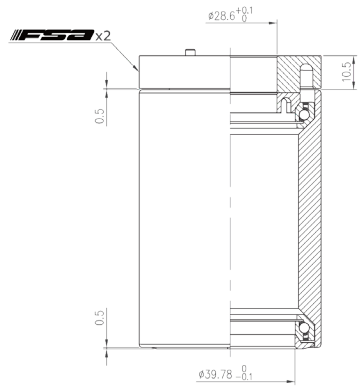
HS NO.55R ACR
(TH-894/CR-1 TOP COVER)
130-0020000010

Internal Headset (CC)

NO.55R 1.5''/CR/STD

1-1/8"/ 1.5", 45°/ 45° ACB





Stack Height 10.5+0.5=11



Weight - 92 grams

- For 55.8mm OD head tube
- For 1-1/8" to 1.5" tapered fork
- CR top cover
- Angular Contact Bearing (Black seal)

No	Item No	Material	Qty
③	MR171 {45°/45° x 51.8}	Chrome steel	2SETS
②	H2474{NO.55R 1.5"/CR}	Alloy	1PCS
①	H2473{NO.55R 1.5"/CR/STD}	Nylon	1PCS

HEADSET

FULL SPEED AHEAD HEADSET INSTALLATION INSTRUCTIONS

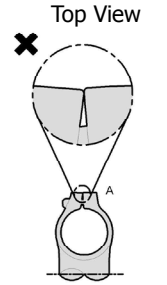


Fig. C

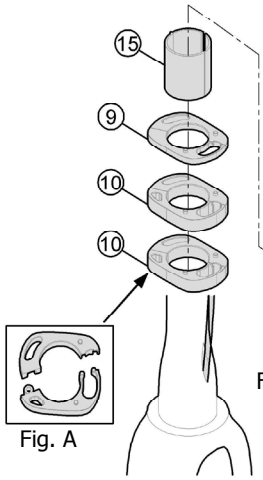


Fig. A

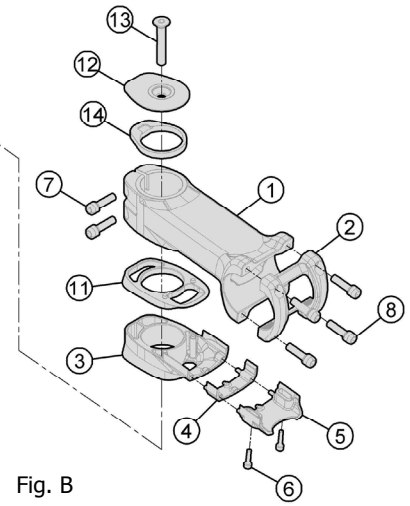
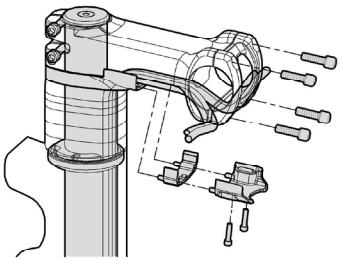
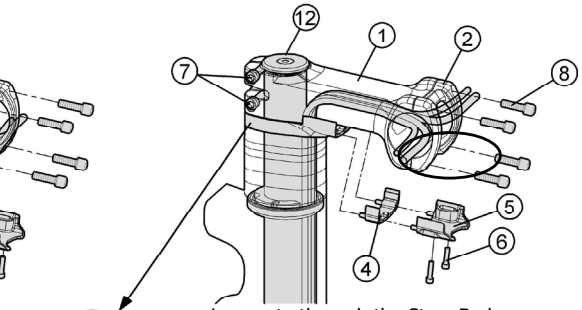
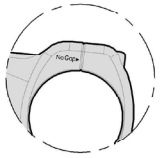


Fig. B


wires route beneath the Stem Body and through the cover



wires route through the Stem Body


Fig. D

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Specification

FSA Road, MTB and Vision stems are compatible with industry standard steerer tube and handlebar diameters. To choose the correct FSA stem, first check the specific diameter of steerer tube and handlebar to be used.

Components

Follow the assembly order in the illustration:

① NS SMR Stem Body x1
② Stem Face Plate x1
③ SMR Spacer x1

④

Stem size		

⑤ SMR Cable Cover x1
⑥ SMR Cable Cover Fixing Bolts x2
⑦ Steerer Clamp Bolts x2
⑧ Face Plate Fixing bolts x4
⑨ Left / Right spacer 5mm x1
⑩ Left / Right spacer 10mm x2

⑪ ACR Spacer x1
⑫ Top cap x1
⑬ Top cap Fixing bolt x1
⑭ Upper Spacer x1
⑮ Bushing 1 1/4" to 1 1/8" x1

HEADSET

FULL SPEED AHEAD HEADSET INSTALLATION INSTRUCTIONS (CONTINUED)

1. Before proceeding to installation, all Brake/ Hydraulic Hose / electronic wiring / should be run through the handlebar and SMR Stem Body ①, SMR Spacer ③ or Spacer for ACR ⑪, Spacers ⑨, ⑩ and headset.
2. SMR Stems have two options for cable routing. When using handlebars with internal routing ports, the housings and electronic wires can be routed through the Stem Body ①. Alternativly, the housings and electronic wires can be routed beneath the Stem Body and through the SMR Cable Cover ⑤ and Cover Spacers ④.
3. Front brake housings can only be internally routed for disc brakes. Compatible forks have an internal routing port on the steerer tube (Fig. B). All other front brake housings must be routed externally.
4. Depending on stem length you may need to install up to 4x SMR Cable Cover Spacers ④.
5. Installation is greatly improved when using a guide cable to gently pull the housing or electronic wires through the stem from either direction.

Stem Installation to Fork Steerer Tube

1. Measure diameter of steerer tube to be certain it is correct size for SMR stem installation. It's often required that the steerer tube be cut to length and should be performed by a qualified bicycle technician. Ensure the steerer tube is clean and free of burrs or chips before installing stem onto steerer tube.

Note: Carbon steerer tubes should extend through the stem completely for proper clamp pressure.
Note: If **0°** using with Bushing ⑮ for 1 1/8"steerer tube, install Upper Spacer ⑭ It is recommended to have minimum 2mm steerer tube extended above the stem.

2. Install fork through the Stem Body ①, place either the SMR Spacer ③ or ACR Spacer ⑪ over the fork and then according to your demand place left/right spacers ⑨, ⑩ (⑨, ⑩ are detachable, Fig A).
3. Headset should be installed per headset manufacturer's instructions.
4. Apply small amount of FSA Dynamic installation compound on Carbon steerer tube. Install the Expander Assembly (not shown) per Expander Assembly instructions below.

Note: If use the Bushing ⑮ apply FSA Dynamic installation compound on between steerer tube and bushing AND bushing and stem for tight fit.

5. Apply grease to Steerer Clamp Bolts ⑦. Tighten the bolts to 61 kgf.cm / 6 Nm / 53 in.lbs. of torque by alternating between bolts 1/4 turn at a time so both bolts reach proper torque simultaneously.

⚠ CAUTION Do not go above maximum torque rating printed on the stem. If your steerer clamp looks like Fig. C it may be over torqued or installed incorrectly.If two Steerer Clamp Bolts ⑦ go over the maximum torque, can cause cracks in carbon steerer tube. Check stem for slippage on the steerer tube before proceeding.

Expander Assembly Installation

The Expander Assembly is designed to work with Carbon Steerer Tubes. Do not apply grease on the Carbon Steerer or Expander Assembly.

1. Install the NS SMR Stem ① onto the Carbon Steerer. Tighten the Steerer Clamp Bolts ⑦ finger tight only.
2. Adjust Expander Assembly so it contacts the inner walls of the steerer tube but is still able to slide inside. Install the pre-adjusted Expander Assembly. Tighten the Expander Assembly with a 5mm hex wrench to 51 kgf.cm / 5 Nm / 44 in.lbs. of torque. Note: The Expander Assembly must be complete assembled and adjusted to fit tightly into the Carbon Steerer before installation.
3. Install the Top Cap ⑫ by tighten the Fixing Bolt ⑬ with a 6mm hex wrench to until proper bearing preload is achieved. Note: 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).

⚠ CAUTION Check the alignment of Stem to the front wheel before final torque is applied to the Steerer Clamp Bolts, loosen and adjust if required. Be sure all bolts are tightened to recommended torque.

Handlebar Installation to Stem

1. Apply FSA Dynamic Installation Compound on handlebar clamp area. Insert the handlebar between SMR Stem Body ① and Face Plate ② Pre-tighten Face Plate Fixing bolts ⑧.
2. Apply grease to faceplate bolts ⑧ and tighten the upper bolts to a torque 61 kgf.cm / 6 Nm / 53 in.lbs Alternately tighten stem bolts until there is no gap between faceplate and stem body. (Fig. D).
3. Tighten the lower bolts ⑧ to a torque 61 kgf.cm / 6 Nm / 53 in.lbs 1/4 turn at a time to tighten faceplate evenly.

⚠ CAUTION Do not go above maximum torque rating printed on the stem. Check handlebar for slippage before each ride to ensure safe operation. Contact FSA for Troubleshooting information.

⚠ WARNING

Be sure to choose the correct stem to fit the steer tube and handlebar for which it is to be installed. Installing the stem on an incorrect steerer tube, or handlebar clamp diameter may cause damage to product, or cause an accident resulting in injury or death.

- FSA SMR ST-OS-188/SMR-0° stem is compatible with 1 1/4"steerer tubes and 1 1/8"steerer tube when the Bushing ⑮ is used (use FSA Dynamic installation compound on between steerer tube and bushing AND bushing and stem for tight fit).
- FSA Road and MTB stems are available to fit 31.8mm Handlebar clamp only.

⚠ WARNING

Measure Fork Steerer tube and handlebar clamp area before installing stem. Use an accurate measuring device such as a caliper or micrometer. Installing stem onto an undersized steertube or handlebar can cause stem or bar to slip causing loss of control of bicycle; resulting in an accident, damage to bicycle, injury or death. Use FSA Dynamic Assembly Paste between stem, steerer tube, and handlebar to reduce chances of slippage. Consult fork and handlebar manufacturer for exact diameter specification. If manufacturer specifications are unavailable, general guidelines are as follows:

Handlebar Clamp Area Dimensions:

- Φ31.8mm + 0.15 / -.00mm
- Φ26.0mm + 0.15 / -.00mm
- Φ25.4mm + 0.15 / -.00mm

Steerer Tube Dimensions:

- 1 1/8" Φ28.6mm +.01 / -.00mm
- 1 1/4" Φ31.8mm +.01 / -.00mm
- 1 .5" Φ38.1mm +.01 / -.00mm

⚠ WARNING

Headset and Fork must be installed before stem installation. Headset and Fork installation requires specialized knowledge, tools, and experience. General mechanical aptitude may not be sufficient to properly install these components. It is recommended that the headset and fork be installed by a qualified bicycle technician. Improper installation can result in failure of headset, fork, stem, and cause personal injury or death.