The actual product may differ from the illustration because these instructions are intended specifically to explain the procedure for use of the wheel.
WARNING!

Carefully read, follow and understand the instructions given in this manual. It is an essential part of the product, and you should keep it in a safe place for future reference.

MECHANIC QUALIFICATION - Please be advised that many bicycle service and repair tasks require specialized knowledge, tools and experience. General mechanical aptitude may not be sufficient to properly service or repair your bicycle. If you have any doubt whatsoever regarding your service/repair ability, please take your bicycle to a qualified repair shop.

INTENDED USE - This Fulcrum® product was designed and made to be mounted and used exclusively on bicycles which are installation-ready for “racing” or “cyclo cross” type disc brakes (which bear the CX denotation) and absolutely no other use. Any other use of this product (for example on tandem, cross-country, all mountain/enduro, acrobatic off-road, downhill, fourcross, freeride, free-style or any other type of UCI definition extreme off-road discipline) may cause accidents, physical injury or even death and must therefore be considered improper and inappropriate use and is highly discouraged.

“AN ACCIDENT” - Please note that throughout this manual, reference is made that “an accident” could occur. Any accident could result in damage to your bicycle, its components and, more importantly, could cause you or a bystander to sustain severe personal injury or even death.

LIFESPAN - WEAR - INSPECTION REQUIREMENT - The lifespan of Fulcrum® components depends on many factors, such as rider size and riding conditions. Impacts, falls, improper use or harsh use in general may compromise the structural integrity of the components and significantly reduce their lifespan. Some components are also subject to wear over time. Please have your bicycle and its components regularly inspected by a qualified mechanic for any cracks, deformation, signs of fatigue or wear (use of penetrating fluid or other visual enhancers to locate cracks on parts is recommended). Disassembly your bicycle components and especially the pedals, is required during these inspections. If the inspection reveals any deformation, cracks, impact marks or stress marks, no matter how slight, immediately replace the component; components that have experienced excessive wear also need immediate replacement. The frequency of inspection depends on many factors; check with your authorized representative of Fulcrum Wheels S.r.l. to select a schedule that is best for you.

• If you weigh over 109 kg/240 lbs we advise you not to use this product. Non compliance with this warning can damage the product irreversibly.

• If you weigh 82 kg/180 lbs or more, you must be especially vigilant and have your bicycle inspected more frequently (than someone weighing less than 82 kg/180 lbs). Check with your mechanic to discuss whether the wheels you selected are suitable for your use, and to determine the frequency of inspections.

Note: Tools supplied by other manufacturers for components similar to Fulcrum® components may not be compatible with Fulcrum® components. Likewise, tools supplied by Fulcrum Wheels S.r.l. may not be compatible with components supplied by other manufacturers. Always check with your mechanic or the tool manufacturer to insure compatibility before using tools supplied by one manufacturer on components supplied by another.

The user of this Fulcrum® product expressly recognizes that there are risks inherent in bicycle riding, including but not limited to the risk that a component of the bicycle can fail, resulting in an accident, personal injury or death. By his purchase and use of this Fulcrum® product, the user expressly, voluntarily and knowingly accepts and/or assumes these risks and agrees to hold Fulcrum Wheels S.r.l. harmless against any resulting damages.

If you ever have any questions, please contact your mechanic or your nearest Fulcrum® dealer for additional information.
WARNING!
Always wear protective gloves and glasses while working on the wheels.

• Ensure that the wheel locking is adjusted correctly (see the “Quick Release” instruction sheet or, in the case of a pass-through pin, see the installation instructions provided by the bicycle or fork manufacturer). Bounce the bicycle on the ground to check for any loosened parts.
• Be sure that your tires are inflated to the correct pressure and that there is no damage whatsoever in the tread or sidewall.
• Be sure that none of the spokes are damaged or loose.
• Ensure that the wheels are perfectly centred. Turn the wheel in order to ensure that it does not waver up and down or side to side and that when it turns the disc does not touch the brake calliper pads.
• Ensure that the brake system and the brake calliper pads are in good condition.
• Test your brakes in the beginning of your ride to make sure that they are operating properly.
• Check all reflectors to make sure that they are clean, straight, and securely mounted.
• Learn and follow the local bicycle laws and regulations, and obey all traffic signals, signs and laws while you ride.

DO NOT RIDE YOUR BICYCLE IF IT DOES NOT PASS THIS PRE-RIDE TEST. CORRECT ANY CONDITION BEFORE YOU RIDE!

• Be sure that the periodic maintenance schedule is strictly followed (see Section 6).
• Always use original Fulcrum® spare parts.
• Parts which have been bent or otherwise damaged in an accident or as a result of any other impact must not be re-straightened. They must be replaced immediately with original Fulcrum® parts.
• Wear clothes which are snug-fitting and which make you visible to traffic, such as neon, fluorescent, or other bright colors.
• Avoid biking at night, because it is more difficult for you to be seen by traffic, and it is more difficult for you to see obstructions on the ground. If you do ride at night, you should equip your bicycle with and use a headlight and a taillight.
• When riding in wet conditions, remember that the stopping power of your brakes is greatly reduced and that the adherence of the tires on the ground is considerably reduced. Extra care is required when riding your bicycle in wet conditions to avoid an accident.
• Fulcrum Wheels s.r.l. recommends always wearing a properly latched protective helmet which is approved for use in your country.
1 - TECHNICAL SPECIFICATIONS

1.1 - WHEEL TECHNICAL SPECIFICATIONS / SPOKES TECHNICAL SPECIFICATIONS

<table>
<thead>
<tr>
<th>RIM: 700C (622x17C)</th>
<th>RIM TAPE: 20.5 mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>O.L.D: front: 100 mm Quick Release / Thru Axle 12 mm / Thru Axle 15 mm rear: Quick Release / 10 mm Thru Axle 135/142 mm / 12 mm Thru Axle 135/142 mm</td>
<td></td>
</tr>
<tr>
<td>INFLATION PRESSURE:</td>
<td>see the inflation pressure recommended by the producer of the tire</td>
</tr>
<tr>
<td>USE:</td>
<td>only on bicycles that are installation-ready for disc brakes for smooth asphalt street use or track use.</td>
</tr>
</tbody>
</table>

**WARNING!**

Only use genuine Fulcrum spokes for your specific type and model of wheel. Failure to use correct spokes can result in an accident, personal injury or death. To correctly assess wheel tension a tensiometer must be used: do not go by the tension you feel manually. It is therefore essential to have all the spoke replacement operations carried out by a Fulcrum Store, a Fulcrum Service Center or a mechanic specialised in assembly and maintenance on Fulcrum wheels. The spoke part numbers can be found in the spare parts catalogue which is downloadable from our website www.fulcrumwheels.com.

2 - TIRES

**WARNING!**

**RIM-TIRE COMPATIBILITY**

Fulcrum® rims are very precise dimensionally. If a tire is too easy to install on a Fulcrum® rim, that tire is most likely too big and will not seat properly on the rim. If a tire is too difficult to install, that tire is most likely too small. Use only high quality tires that require the use of tire levers and a reasonable installation effort. Using talcum powder on the tire will make installation easier. Using a tire that does not fit properly on the rim can cause unexpected tire failure, resulting in an accident, personal injury or death.

- The wheel you have purchased is designed to use clincher tires.
- Before mounting the clincher tyres, ensure that the diameter indicated on the clincher tyre is 622 mm and that the width of the clincher tyre is compatible with the width of the rim based on the ETRTO rim/clincher tyre compatibility table ("European Tyre and rim technical organisation standard manual - 2007").
WARNING!
Incorrect tire pressure could cause tire failure or loss of control of the bicycle, resulting in an accident, personal injury or death.

Never use a latex inner tube because the high temperature that may be reached during braking could lead to puncturing the inner tube with the risk of accidents, physical injury or even death.

<table>
<thead>
<tr>
<th>ETRTO</th>
<th>TIRE SECTION WIDTH</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>18</td>
</tr>
<tr>
<td>15c</td>
<td>X</td>
</tr>
<tr>
<td>17c</td>
<td>X</td>
</tr>
<tr>
<td>19c</td>
<td></td>
</tr>
</tbody>
</table>

2.1 - INSTALLING CLINCHER TIRES

Be sure that you do not bend or otherwise damage any portion of the rim when installing the tire.
- Insert one side of the clincher into the seat provided on the rim (Fig. 1).
- Slightly inflate the inner tube to facilitate assembly.
- Insert the valve through the hole in the rim, and then position the remainder of the inner tube between the rim and the tyre.
- In order to install the tube on the rim, inflate the tube slightly first.
- You should then manually set the tube and tire on the rim, making sure that the tube is positioned correctly within the tire and that the tire is positioned correctly on the rim.
- Insert the second side of the tyre tire into its seat in the rim.
You may then fully inflate the tube to the correct working pressure. Please inflate the tube slowly, making sure that you maintain the correct positioning of the tube and tire on the rim.

WARNING!
Incorrect rim / clincher tyre coupling may cause it to deflate, burst or detach suddenly and cause accidents, serious injuries or even death.
2.2 - INFLATING AND DEFLATING THE TIRE

- **To inflate the tire:** 1) remove the cap, 2) unscrew the valve, 3) inflate the tire using a compressor or pump equipped with a pressure gauge to obtain the required pressure, then 4) tighten the valve and replace the cap.
- **To deflate the tire:** 1) remove the cap, 2) unscrew the valve, 3) press and hold down the valve to obtain the required pressure, then 4) tighten the valve and replace the cap.

⚠️ **WARNING!**

Never exceed the maximum pressure recommended by the tyre manufacturer. Excessive tire pressure reduces the grip of the tire on the road and increases the risk that the tire will unexpectedly burst. Inflation pressure that is too low reduces tire performance and increases the probability of sudden and unexpected loss of tire pressure. In addition, premature wear and damage to the rim may occur. Incorrect tire pressure could cause tire failure or loss of control of the bicycle, resulting in an accident, personal injury or death.

3 - FITTING THE WHEEL ON THE FRAME

These wheels are compatible with different axle locking systems.

3.1 - FRONT WHEEL

- If the FRONT wheel is predisposed for "Quick Release" mounting follow the “Quick Release” instructions which came with the wheel.
- If the FRONT wheel is predisposed for HH12 / HH15 through-axle mounting follow the mounting instructions provided by the bicycle or fork manufacturer.

3.2 - REAR WHEEL

- If the REAR wheel is predisposed for "Quick Release" mounting follow the “Quick Release” instructions which came with the wheel.
- If the REAR wheel is predisposed for HH10 through-axle mounting for 135 or 142 mm width follow the mounting instructions provided by the frame or bicycle manufacturer.
- If the REAR wheel is predisposed for HH12 through-axle mounting for 135 or 142 mm width follow the mounting instructions provided by the frame or bicycle manufacturer.
4 - SPROCKET ASSEMBLY AND REMOVAL

4.1 - 9S / 10S SPROCKETS OF CAMPAGNOLO S.R.L. (ON FW BODY FOR 9S / 10S SPROCKETS OF CAMPAGNOLO S.R.L.)

Refer to the instruction leaflet enclosed with the sprockets for all the assembly, disassembly, use and maintenance operations.

4.2 - 11S SPROCKETS OF CAMPAGNOLO S.R.L. (ON FW BODY FOR 11S SPROCKETS OF CAMPAGNOLO S.R.L.)

4.2.1 - ASSEMBLY

1) The sprockets are pre-assembled and timed on the plastic support (A - Fig. 2). The ring G (Fig. 2) is provided with a preassembled washer (H); ensure that it is positioned as in fig. 2.

2) Remove the ring (G - Fig. 2).

3) Insert the support on the side of the freewheel body, align the spline patterns, press the sprockets onto the freewheel and extract the support (A) from the hub (Fig. 2).

4) If installing the sprockets without the plastic support, install the individual or preassembled sprockets and the spacers on the sprocket body of the hub aligning the spline patterns (Fig. 3). The profile of the freewheel body with two asymmetrical grooves (Fig. 3) ensures automatic sprocket timing since there is only one assembly option.

5) Using a torque wrench (D - Fig. 4) together with the Campagnolo® tool UT-BB080 (B - Fig. 4), tighten the ring nut (G - Fig. 4) that came with the Campagnolo® sprocket pack onto the freewheel body, observing the tightening torque indicated on the instruction sheet of the sprocket pack.
4.2.2 - DISASSEMBLY

1) Remove the lockring (G - Fig. 5) using the Campagnolo® tool UT-BB080 (B - Fig. 5) with a 24 mm hexagonal wrench (E - Fig. 5) and the chain whip Campagnolo® UT-CS060 (F - Fig. 5).

2) Insert the plastic sprocket carrier on the side of the freewheel body and align the spline patterns on the body with those on the carrier. Slide the sprockets onto the carrier.

3) Slide the sprockets, off the freewheel body (Fig. 6).

4.3 - 9S, 10S, 11S SPROCKETS FROM SHIMANO INC. and SPROCKETS FROM SRAM CORPORATION
(on the Campagnolo® freewheel body for Shimano Inc. 9/10/11s sprockets and sprockets)

IMPORTANT!
WITH THE 11S FREEWHEEL BODY, ONLY USE THE ADAPTER (M - FIG.7) FOR 9S AND 10S SPROCKET PACKS BY SHIMANO INC. AND SRAM CO. (THE ADAPTER MUST NOT BE USED FOR 11S SPROCKET PACKS BY SHIMANO INC.).

The adapter (M - Fig.7) must be fitted on the freewheel body of the 9s or 10s sprocket pack, or on any washer supplied together with the 9s or 10s sprocket pack.

See the instruction sheet provided by the sprocket pack manufacturer for installation, removal and maintenance instructions.
5.1 - ASSEMBLING THE ROTOR ON AXIAL FIXING SYSTEM™ SYSTEMS

- Fit the rotor into its seat, taking care with the direction of rotation indicated by the arrow (Fig. 8).
- Fit the washer (A - Fig. 8) and screw the provided lockring, code M1-101 (B – Fig. 8).
- Tighten the lockring to **40 Nm (354 in.lbs)** using the tool UT-BB130 (C - Fig. 8 - not provided) and torque wrench (D - Fig. 8).

5.2 - ASSEMBLING THE ROTOR ON THE ISO 6-BOLTS SYSTEM

- Fit the rotor into its seat, taking care with the direction of rotation indicated by the arrow (Fig. 9).
- Screw in the 6 screws to **5/7 Nm (44/62 in.lbs)** (Fig. 9).

**WARNING**
After donning protective gloves turn the rotor clockwise and tighten the rotor fixing screws in the order illustrated in Fig. 10.
6 - MAINTENANCE

Note
We recommend that you contact a specialized mechanic for all the assembly, disassembly and all hub, rim and spoke replacement operations. Choose with him the most suitable interval of inspections for you on the basis of the conditions of use and intensity of your activities (e.g. racing, rain, salted roads, muddy roads, cyclist’s weight, etc.).

<table>
<thead>
<tr>
<th>TYPE OF OPERATION</th>
<th>KMS (MAX)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Check at a specialized mechanic’s:</td>
<td>2.000</td>
</tr>
<tr>
<td>• check the lubrication, rolling and clearance of the hubs</td>
<td></td>
</tr>
<tr>
<td>• check the wheel centering</td>
<td></td>
</tr>
<tr>
<td>Check at a specialized mechanic’s:</td>
<td>10.000</td>
</tr>
<tr>
<td>• check the lubrication, rolling and clearance of the hubs and replace any worn parts of the hubs and free wheel body</td>
<td></td>
</tr>
<tr>
<td>• check the wheel centering</td>
<td></td>
</tr>
<tr>
<td>• check the wear of the braking track and replace rim if required</td>
<td></td>
</tr>
</tbody>
</table>

• If the hub bearings are USB or Standard, periodically take the bicycle to a specialised mechanic to have the hub bearings and the balls lubricated with specific grease for bearings.
• When riding in wet conditions, remember that the stopping power of your brakes is greatly reduced and the adherence of the tires to the ground is considerably reduced. Extra care is required when riding your bicycle in wet conditions to avoid an accident. An accident could result in severe personal injury or death.
• Never make any modifications whatsoever to any component of any Fulcrum product.
• Parts which have been bent or otherwise damaged in an accident or as a result of any other impact must not be re-straightened. They must be replaced immediately with original Fulcrum parts.
• After using the wheel for the first time, check wheel trueness and circularity.
WARNING!
Using wheels that have not been centred properly or which have broken or damaged spokes may result in accidents, personal injury or death.

- Do not expose the carbon wheels to high temperatures. Do not store bike parts in vehicles parked in the sun, and do not store near radiators or other heat sources. Do not store carbon fiber products in direct sunlight.

6.1 - CLEANING THE WHEELS

When cleaning the wheels, only use non-aggressive, non-corrosive products such as water and neutral soap, or specific products specially designed for cleaning bicycles. Absolutely never use abrasive or metal sponges. Dry with a soft cloth.

NOTE
Never spray your bicycle with water under pressure. Pressurized water, even from the nozzle of a small garden hose, can pass seals and enter into your Fulcrum components, damaging them beyond repair. Wash your bicycle and Fulcrum components by wiping them down with water and neutral soap.

WARNING!
Salt water environments (as found on winter roads and near the seaside) can cause galvanic corrosion on most bike parts. Carefully rinse, clean, dry and re-lubricate all exposed parts to avoid damage, malfunctions and accidents.

6.2 - TRANSPORT AND STORAGE

When transporting the wheel separately from the bike or if the wheel will not be used for a long period of time, store it in the wheelbag to protect it against impacts and dirt.
The actual product may differ from the illustration because these instructions are intended specifically to explain the procedure for use of the wheel.