# Installing Air Fom 700c sizes

**Please reference our on line videos**

**Choosing the correct insert**

**https://www.youtube.com/watch?v=vgN70E2oEO8&t=20s**

**Installing the insert**

**https://www.youtube.com/watch?v=-ZuVxvBggHA&t=49s**

***Choosing the right insert.***

1. Air Fom will not fit every tire and rim on the market at this point in time. As Air Fom builds its library of sizes there will be more and more possibilities to fit most tire/rim combinations.

2. Select the correct size insert for the tire size using the Air Fom Fit Guide. Use the ETRTO marking on the tire casing for guidance. Tire sizing varies wildly despite ETRTO designations. Air Fom inserts are modeled against best in class dimensions for a given ETRTO size. If the tire says, for example; "ETRTO 622/38" then the Air Fom with that dimension should be a good fit for that tire. However if it is either too small or too big for the tire (see illustration) then select an Air Fom insert one size up or one size down and check for fit.

3. If a consumer's tire has a very thick puncture guard in the tire it may be useful to recommend that they purchase new tires that do not have the puncture guard. Why ? With Air Fom, they no longer need the puncture guard layer and therefore it is just dead weight (dead rolling weight, the worst kind). Also, the thickness of the puncture guard layer will make fitting the insert more difficult. The inner dimension of the tire is altered by the thick layer of the puncture guard and this will make mounting the bead of the tire over the Air Fom insert more difficult.

4. Choosing the correct system weight rating for the cyclist is very important. Note the "system weight rating" (SWR) on the information label on each box. This is a guide to how much weight the Air Fom insert can support safely long term. If the cyclist chooses a system weight rating with a "soft feeling" because they want a comfortable ride, the SWR must be higher than the combined weight of the cyclist and their bicycle. If the combined weight of the cyclist and their bicycle *exceeds* the SWR then the performance and durability of the Air Fom insert cannot be guaranteed. The professional Bicycle mechanic should make this recommendation to the customer.

## Installing Air Fom

### *Considerations*

Installing Air Fom will seem difficult at first. For Air Fom to work correctly the product requires measured force to install. If the Air Fom is mounted too easily then the fit is not correct and will be loose. As you become more experienced in installing air form you will soon learn the tips and tricks to achieve a very good fit in a short amount of time. Air Fom is an entirely new technology and as our front line installers, we value your observations, thoughts and feedback.

Rim construction and materials are very important to consider. If a rim is very lightweight with a thin wall thickness it can be easy to damage the rim during installation. When the mechanic is mounting the bead of tire, at the end of the process, due to the physics of the insert, the pressure on the bead becomes high. IF a mechanic attempts to leverage the bead on in a large section, the tire lever due to the force, can damage the sidewall of the rim. The key points are; 1. The rim should be made from thicker material, 2. The height of the side wall above the bead seat cannot be extreme, 3; The mechanic must mount the bead slowly and carefully in very small steps.

### *Installation*

Making sure the tire bead is correctly aligned into the bead track in the rim is critical to a good mount. If the bead of the tire is not fully mounted into the bead track then the tire could have what is called “radial mis-alignment” or a “wobble”. Radial mis-alignment can be prevented by following the steps below. Very small amounts of radial mis-alignment can be also be due to tire construction.

1. Prepare the Wheel and Tire for the mount. Bead Alignment
    a. Check the rim strip tape. The bead track cannot be covered by the rim tape. If the tape covers the bead track it must be removed and replaced with a thinner tape. Mount the tire, with a regular tube inside, onto the rim and fully inflate to high pressure to “snap” the bead into place on both bead tracks. Carefully unmount one of the beads. Pull out the tube. It is critical to keep the other mounted bead fully aligned on the installed side of the tire.
    b. IF the rim does not have well defined bead tracks then the alignment of the tire bead must be checked after the foam insert has been pressed into the rim. If the bead is not aligned use the tire levers to work the bead into the best possible position.

2. Insert the Air Fom sections
    a. Lay the wheel on a flat surface and begin to place the inserts into the cavity of the tire. Using the Air Fom "spoon" or a tool like it, leverage the inserts into the rim track. You can use measured force with the tool to push the foam in. You can feel the inserts slowly move into the rim track. If the inserts become very difficult to press in then the inserts are too big and they can be damaged by too much force. When you get to the last ($4^{th}$) insert you will must be careful to press the insert into tire and gently place the tabs together to form a complete insert. When the foam is fully installed into the rim track the uninstalled bead of the tire should be very close to the rim.

3. Check the Alignment of the installed bead
    a. Check the installed bead on the opposite side to see if it is still aligned into the bead track and that the tire is evenly mounted around the rim. If it is evenly mounted onto the bead track the mechanic can now mount the bead.

4. Apply protective installation tape.
    a. At the last section of bead mounting the pressure required to insert the tire lever below the bead may mar the rim sidewall surface, especially on rims that have a CNC style brake track. The Air Fom protective tape is a very tough PET tape that will protect the surface of the rim under very high force. Put this tape on any section of the rim. *This is the section where the mechanic must finish the bead mounting*.

5. Apply the Bead Butter
    a. Get the tube of Bead Butter from the small box in the Air Fom package. Apply the butter to tire bead surface using a small brush, cloth or foam applicator. Liberally coat the outer surface of the bead area of the tire. Let the Bead Butter "soak into" the rubber for @ 60 seconds. Dry time is @ 45 minutes from application. Bead Butter reduces friction between rubber and metal parts by 80%. Bead Butter, once dry, will not be re-activated by water. Bead butter will not harm any material used in bicycle wheels.

6. Mount the bead
    a. You will need three tire levers to do this properly You may need assistance at first from another mechanic in order to help steady the wheel while installing. One lever is your "anchor" lever that holds the bead into the rim while you work around the rim installing the bead with the other two levers. KEY; never attempt to use the levers to install large portions of the bead at one time. Install the bead in 15-20mm steps. IF you attempt to lever in a large portion of the bead the leverage required to force in this large section will damage the rim. As approach the final sections of the tire bead installation you will need greater and greater force. This is a critical section due to the fact that in some instances where rim sidewalls are high (aero rims) the amount of force required to lever the bead into the track can damage the rim if done improperly. You must judge the force you are

applying and make sure that the tire lever is not denting the rim when you are installing the last portion of the bead.

b. You can use a technique where you install a section of bead and then move to the opposite side of the wheel and install a section of bead and then rotate the wheel 90 degrees and install a section of bead until fully mounted. In this way you can use lower force and get a more balanced force on the bead.

7. Finishing
   a. Congratulations, you have successfully installed a revolutionary new air less technology. The last step is clean off any residual bead butter with soap and water. And that is it.

## Rider experience; “Breaking in” the Inserts

During the first few kilometers that a cyclist uses their bike with new Air Fom inserts installed they may feel the seams of the product as the tire rotates. It's a very subtle but perceptible bump. As they ride the bike for some period of time, the inserts will “settle in” and the seams will lock together completely. This break in period should be short and the ride of the bike should smooth from this point on.

**Rim Profile considerations**

## 1. Specification

### a. Rim

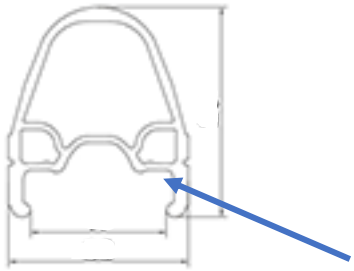
i. Profiles for best installation.

1. Two key features for best installation result (speed of installation and alignment) are:
    a. UST style “bead track”
    b. Rim sidewall height of 6mm or less

Disc Urban, Trekking

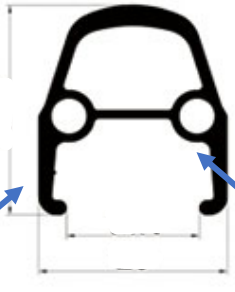
Side wall Height >6mm

Non Disc Urban Trekking



Bead Track

Profile that can be difficult installation.



Side wall Height <6mm

No Bead Track