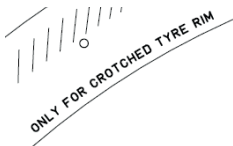


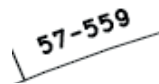


BICYCLE TYRE MOUNTING, CARE AND SERVICE INSTRUCTIONS

TYRE SIDEWALL MARKINGS



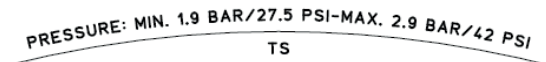
Indicates the typology of rim which the tyre is compatible with. If not indicated, it is meant to be used on hooked rims.



Nominal section width and fitting diameter in millimeter according to ETRTO.



Country of manufacturing.



Minimum and maximum pressure in bar and psi.



Indicates the direction the tread pattern have to point when rolling forward.



Indicates the tyre must be mounted only with an inner tube and not tubeless or with any other method.

TYRE CATEGORIES

- **TUBE TYPE:** tyre to be used only with an inner tube. Usually it requires an inner flap to protect the tube itself from being punctured by nipple head when inflated at riding pressure.
- **TUBELESS:** tyres to be used only on tubeless rims that can be mounted without an inner tube (but can be).
- **TUBELESS READY:** a particular type of tubeless tyres which do require sealant inside in order to keep the pressure.
- **TUBULAR:** a fully close construction of a tyre, sewed or vulcanized, which does require specific tubular rim and proper glue and gluing method to be mounted.

INFLATING PRESSURE RECOMMENDATIONS

- Never exceed recommended tyre inflation pressure. Correct pressures are related to load, speed and handling and are vital for proper performance and safety, such as braking, maximum traction and good tyre life.
- Under no circumstances should your tyre cold inflation pressure be less than that indicated on the sidewall of the tyre or exceed the maximum one.
- Under inflation causes excessive flexing, deterioration of the tyre and rapid wear.
- Over inflation results in an uncomfortable ride and reduced area of tyre contact with the road surface.
- Regular inflation pressure maintenance remains critical before every ride whilst the tyre is cold, especially on tubeless systems, which are more suitable of unexpected pressure losses.

WARNING: Riding on tyres with improper inflation pressure is dangerous. These situations can cause tyre failure, even at a later date, which could lead to an accident and serious personal injury or death.

TYRE INSPECTION

- Tyres should be examined and air pressure checked prior to every ride and even more carefully in case you strike any unusual object on the road.
- If the tread is worn and/or the casing material becomes visible, showing bulges, cracks, cuts, penetrations or uneven wear or the tyre has signs of any other damage, it is recommended to replace it immediately.
- The mere passage of time (age) does not cause tyres to deteriorate, but rather exposure to outside forces. Such outside forces can include, but are not limited to: road hazards, punctures, improper repairs, misalignment, under inflation operation, over inflated operation, excessive heat caused by over deflected operation, excessive exposure to ozone, improper storage conditions, etc. Tyre companies add anti-ozonants and anti-oxidants (anti-degradation compounds) to minimize degradation. Since there is no way to accurately predict what outside forces a tyre will be exposed to there is no scientifically supportable age limit that can be set for tyres. It is advisable to have tyres, as well as tubes and inner tapes checked on a regular basis by a bicycle specialist who can assess their suitability for continued use.
- In case of tubeless systems with liquid sealant inside, regularly check the status of the sealant itself and replace it on regular basis and accordingly to sealant manufacturer's instructions.
- To avoid cosmetic damage, use with low pressure tap water to clean sidewalls. Never apply cleaners or dressings to enhance sidewall appearance to avoid removal of anti-oxidants, this may degrade the rubber and can lead to sidewall cracking. The use of high pressure sprayers may cause sidewall damage.
- Avoid unnecessary mechanical stress to the tyres and the tubes (eg do not brake by locking the wheel, do not ride on sharp objects, do not ride with insufficient or excessive pressure etc).
- If your bike has rim brakes then the sides of the rim are subject to wear which may lead over time to damage of the inner tube, possibly leading to rapid air loss. If in doubt ask a bicycle specialist.
- High inflation pressure can damage the rim; check the maximum pressure of the rim or ask your specialist dealer or the rim manufacture if it can withstand the pressure of the tyre.
- Always check the maximum tyre width allowed by your bicycle frame. Inadequate clearance due to excessively wide tyres might result in damaging the frame, thus creating a potentially dangerous situation for the rider himself.

TYRE REPLACEMENT

PREPARATION AND ADVICE

1. Before mounting or removing a wheel read through the bicycle manufacturer's instruction and make sure you are familiar with the locking mechanism.
2. Make sure the rim, the tyre and the tube are all compatible with each another by checking all the given instructions of each component manufacturer. An incorrect matching tyre/rim may result in unseating of the bead or damage to the inner tube and consequent rapid air loss. If you are not sure ask a Pirelli authorized dealer or a bicycle specialist.
3. Make sure that the area where the fitting operation is performed is clean and there is no chance of foreign objects getting into the tyre, as they may damage the tube, the rim tape, the tyre or contaminate the sealant in case of a tubeless-ready system.
4. Make sure the rim is in good condition. If it is damaged it must be replaced.
5. Check the conditions of the rim tape if present: if it is damaged or it does not completely cover the rim spoke holes it must be changed. Poor rim tape quality is very often the causa of unexpected air pressure loss.
6. Check the maximum pressure allowed for the rim tape. It must be equal or higher than both the ones of the tyre and rim. Tyres permitting an inflation pressure equal or greater than 43 psi (3 bar) should be mounted on hook-edged rims.
7. Tyres permitting an inflation pressure greater than 73 psi (5 bar) must be mounted on hook-edged rims. Hook-edged rims are identified by the letter "C" following the sizes designation. For any doubts ask a Pirelli authorized dealer or a bicycle specialist.
8. In case of a tube type setup, talcum powder helps the positioning of the tube into the tyre. Its use is mandatory in the case of latex tubes, while still recommended for butyl tubes. It is also recommended to fit a new tube each time a new tyre is fitted or after a tyre puncture.
9. In case of a tubeless setup, always check the valve status and eventually replace it if it looks damaged or if you were experiencing unexpected air pressure losses.
10. In case of a tubeless-ready setup, always check and replaced dried up sealant. Also read carefully sealant manufacturer's instruction in order to ensure tyre and sealant compatibility is granted.

TYRE REMOVAL PROCEDURE

1. Unscrew the valve cap and the locknut, and let the tyre deflate completely.
2. Push one side of the tyre along its whole circumference from the side of the rim to the center of the rim starting opposite to the valve. Tubeless tyres may require more force in doing so, and a “unlock” sound may occur.
3. Position a tyre lever close to the valve and gently push it in between the tyre and the rim taking care that the inner tube (if present) does not get pinched or trapped. Then lift the tyre sidewall over the rim flange. Always check the bead is positioned into the rim bed while doing so, in order to facilitate the operation.
4. Keeping the first lever in this position push a second lever about 4 inches (10 cm) apart from the first, and repeat the above operation until necessary. Then push the tyre levers around the circumference of the tyre to separate the first bead from the rim completely.
5. Remove the tube if present or the liquid sealant if present and still liquid, and then pull the second bead off the rim by hand.

TYRE FITTING PROCEDURE

1. In case of tubeless, make sure the rim is either an air-tight tubeless rim, or a tubeless compatible rim. In case of a tubeless compatible rim you will also need to apply a tubeless rim tape so that it completely covers the rim spokes. It might help to lubricate the rim bed along its whole circumference with a specific tubeless mounting lubricant (don't use oil or grease). This will facilitate the fitting procedure and the correct centering of the tyre on the rim.
2. Insert the first bead of the tyre into the rim, observing the direction of tyre rotation specified on the tyre sidewall, starting opposite to the valve. This always valid for both tube type and tubeless setup.
3. In case of a tube type setups, inflate the inner tube slightly, just enough to make it round and gently insert it into the tyre starting from the valve and pushing it fully into the rim well.
4. Starting from opposite the valve push the other bead of the tyre into the rim and work around the rim in both directions until the beads are positioned into the rim well. In case of tubeless setup, add the recommended amount of liquid sealant just before to insert the last bit of bead. In case it gets hard to push the tyre into the rim, or the last portion of bead doesn't snap into place, make sure the bead portion already in place sits deep into the rim well. If necessary help yourself by squeezing tyre sidewalls with your hands into the rim well.
5. In case of tube type setup, make sure the tube is not trapped between the tyre and rim in doing so, and the valve is straight, and then fasten the valve to the rim with the dedicated locknut.
6. Inflate the tyre to the maximum allowed pressure using a pump with pressure gauge, in order to sit the beads properly on the rim. Tubeless tyres will pop up into position with a clear “locking” noise. Make the wheel spinning at low speed (by hand) and at an angle in order to check the proper bead position and to let the liquid sealant spread all over the inside in case you mounted a tubeless-ready setup. The tyre is seated correctly when the fine line above the side of the rim is equidistant from the rim flange along the whole circumference of the tyre. Then reduce the pressure to your preferred riding pressure and close the valve. Do not exceed the maximum allowed inflation pressure of the tyre (see indication on the sidewall), the rim and the rim tape. When inflating tubeless a strong blast of air is required when pumping up the tyres for the first time, so it may be necessary to use a compressor.
7. Before each ride check inflating pressure, bead seating position, wheel assembly (fasteners) to the hubs and brake pads (either disc or rim ones).
8. Make sure you carry out a trial braking maneuver before use. maneuver before use.

USE OF PIRELLI TYRES ON FULLY SEALED CARBON AND ALUMINIUM CLINCHER RIMS WITHOUT RIM STRIPS

Fully sealed carbon and aluminum rims, such as tubeless ones, do not usually feature drill holes in the rim well, therefore rim manufacturers usually do not suggest to apply rim tape. However it must be considered that in the case of bikes equipped with rim brakes, the heat generated by braking directly penetrates into the tyre system thus significantly increasing the thermal load on all the components such as tyre, inner tube (if present) and the rim itself. In case of extended braking, riding without a rim strip may result in a rapid tyre deflation with the risk of losing control of the bike.

This becomes even more relevant in the case of latex tubes and/or lightweight tubes, as well as with tubeless setups. In order to minimize the possibility of a failure as consequence of overheating Pirelli recommends the use of a rim tape strip in any case, while also avoiding constant long time braking when riding downhill.

USE OF PIRELLI CLINCHER TYRES WITH CARBON CLINCHER RIMS

Carbon clincher rims present the possibility that the tyre edge is damaged by the sharp edged design of the rim flanges. Therefore before fitting, it is recommended to ensure the hook of the rim is round. An aluminum hook edge type rim of a renowned manufacturer can be used as reference. To check that your wheels do not present any extremely rough or sharp edged areas carefully move your finger along both flanges; there should be no excessively rough or sharp edged areas, if any are found then the rim should be replaced. If in doubt please consult a bicycle specialist.

STORAGE

- Tyres should be stored in a cool, dry place (50°F-70°F) (10°C-21°C) and avoid contact with heaters or radiators.
- Avoid leaving the bike parked under direct sunlight or in very hot places for long periods.
- Very low temperatures in the storage area are not in themselves damaging, but can provoke rigidity of the tyre. In this case it is necessary to keep the tyre for a few hours in an area with a temperature of approximately 60°F (16°C) before unfolding (when applicable) and mounting.
- If the bike is not in use keep the tyres inflated and turn the wheels periodically to avoid flat spots, especially if they are set as tubeless with liquid sealant inside.

BAR/PSI CONVERSION TABLE

BAR	PSI	BAR	PSI	BAR	PSI	BAR	PSI	BAR	PSI	BAR	PSI
1.0	14	1.7	25	3.2	46	3.9	57	4.6	67	5.3	77
1.1	16	2.6	38	3.3	48	4.0	58	4.7	68	5.4	78
1.2	17	2.7	39	3.4	49	4.1	59	4.8	70	5.5	80
1.3	19	2.8	41	3.5	51	4.2	61	4.9	71	5.6	81
1.4	20	2.9	42	3.6	52	4.3	62	5.0	72	5.7	83
1.5	22	3.0	44	3.7	54	4.4	64	5.1	74	6.0	87
1.6	23	3.1	45	3.8	55	4.5	65	5.2	75	7.7	110

RIM/TYRE COMPATIBILITY ISO 5775-1

Nominal section width (mm)	Recommended rims (crotchet TT and TL)	Nominal section width (mm)	Recommended rims (crotchet TT and TL)
23, 24	13C > 16C	44, 45, 46	17C > 26C
25, 26, 28, 30	13C > 19C	47, 48, 49	17C > 27C
31, 32, 33, 34	16C > 20C	50, 51	17C > 28C
35, 36	17C > 22C	52, 53, 54	17C > 30C
37, 38, 39, 40, 41	17C > 23C	55, 56, 57, 58, 59, 60, 61, 62, 63	19C > 30C
42, 43	17C > 24C	64, 65	21C > 30C

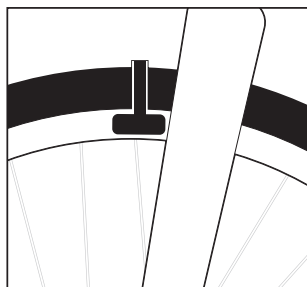
Crotchet type rims shall be used when tyre inflation pressures over 500 kPa are recommended.

When inflation pressure over 500 kPa is recommended, an appropriate rim base protective flap must be used when spoke ends are apparent. Crotchet type rims can be used with rigid and foldable tyres.

SmarTUBE INSTRUCTIONS

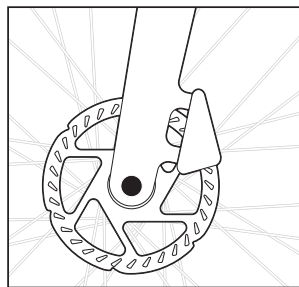
USAGE

DISC BRAKE



- ✓ PZERO SmartTUBE
- ✓ CINTURATO SmartTUBE
- ✗ SCORPION SmartTUBE

RIM BRAKE



- ✓ PZERO SmartTUBE
- ✓ CINTURATO SmartTUBE
- ✓ SCORPION SmartTUBE

FOR ALL SmartTUBE PRODUCTS

Only use rims designed for the correct valve diameter. DO NOT Scorpion™ SmartTUBE use with rim brakes.

The valve cores of all SmartTUBE tubes with Presta valves are glued in and therefore cannot be removed.

Only use tubes that are the appropriate size for the tyre and rim width. Do not remove tubes and use them in differently sized tyres. For example we do not recommend that you use a tube in a 28mm road tyre and then mount this same tube in a 22mm wide tyre. SmartTUBES do not go back to their original shape after inflating in the tyre. For information on the proper size SmartTUBE tube to use with a specific tyre width please visit <https://velo.pirelli.com/manual>

Always use eye and ear protection when repairing or servicing your bike. For inflating the tube use a manual floor pump instead of a compressor or service station air hose. According to ISO/TC31 for tyre inflation above 5 bar / 72 PSI crotchet/hooked type rims must be used.

A temperature increase of 3° C (5°F) produces approximately

1% increase in tyre pressure (fig. 7). An inflation of the tyre in a cool garage in the morning (at 18°C / 65°F) and a ride at higher ambient temperatures later in the day (at say 35°C / 95°F) can lead to a pressure increase (for example) of 0.5bar / 8 PSI. This is especially the case when riding on very hot black asphalt where temperatures can exceed 65°C (150°F). The tyre pressure may easily exceed the maximum allowed pressure of your tyres or rims. Tyre pressures that are too high can cause the tyre to unseat from the rim during riding causing a loss of control and possible injury. (fig 8).

If the inflated tyre is stored at temperatures of 60°C (140°F) or higher (e.g. on hot days in a car), deflate the tube to 1 bar / 15 PSI to avoid deformations of the valve.

SmartTUBE inner tubes like tyres, wear with use. We recommend changing to a new tube whenever a tyre or rim is changed or if the tube does not inflate uniformly (for example has bulges) or has creases, folds, stretch marks, thin spots or other signs of unusual wear or deformity that could result in a sudden deflation of the tube which could result in a loss of control or injury.

WARNING

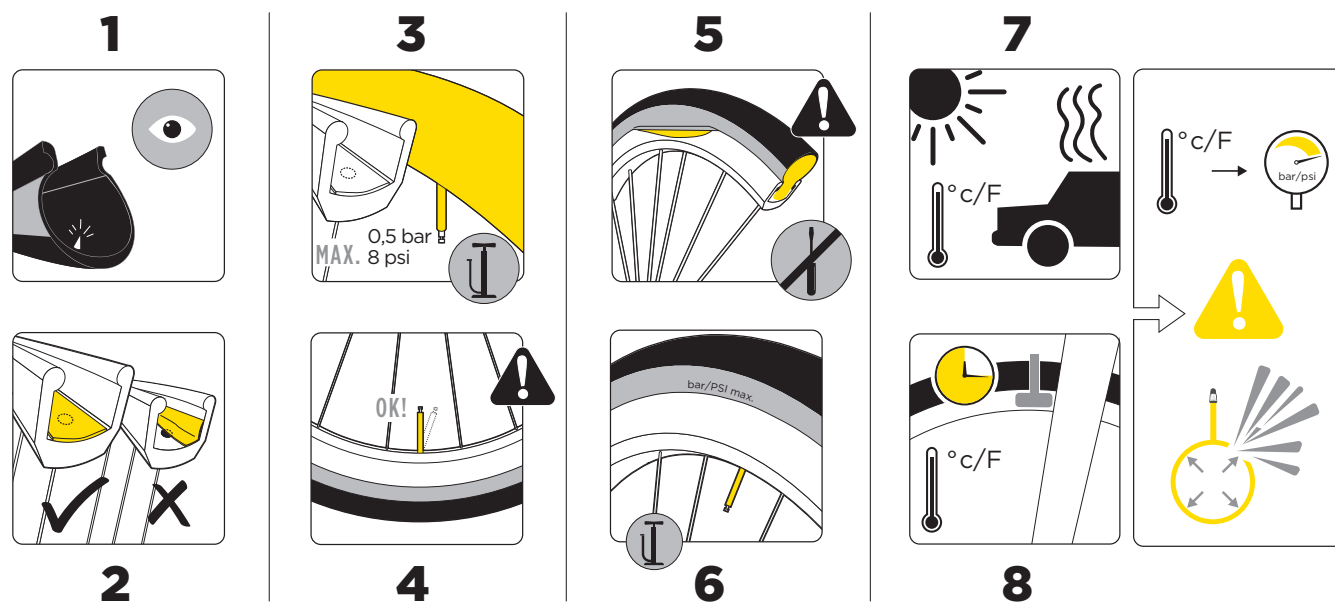
FOR ALL SmartTUBE PRODUCTS COMPATIBLE WITH CALIPER (RIM) BRAKES (P ZERO™ SmartTUBE and Cinturato™ SmartTUBE)

All SmartTUBE tubes designed for use with properly adjusted caliper (rim) brakes meet or exceed EN ISO 4210-4:2014 (chapter 4.7 brakes – thermal resistance). Please keep in mind that standard butyl rubber inner tubes have a slightly higher heat resistance than SmartTUBE tubes, however latex tubes have a slightly lower heat resistance than SmartTUBE tubes.

Pirelli advises avoiding the use of Scorpion™ SmartTUBE with rim brakes. In some rim (non disc) braking circumstances that exceed the normal heat build up, it is possible that the SmartTUBE will leak air and become permanently damaged which could result in loss of

control or injury. If the braking forces are expected to be beyond the standard above, we recommend pausing on long descents with continued braking (or where larger than normal loads are involved such as with tandems or when carrying panniers or extra gear) and continue the ride when the rims have cooled (to the point where you can comfortably touch them). Additionally, it is recommended to lower the tyre pressure approximately 1.5 bar / 20 PSI (from the maximum PSI rating on the tyre) before long descents so that it does not exceed the maximum allowed pressure of the tyre, rim and rim tape due to temperature increases in the wheel. (fig. 8 + 9).

INSTALLATION AND USE INSTRUCTIONS FOR ALL SmartTUBE TUBES (BOTH DISC ONLY AND RIM BRAKE COMPATIBLE)



1. Before installing the SmartTUBE tube, check the inside of the tyre, the rim, spoke issues and the rim tape for sharp objects that can cause a puncture. (fig. 1)

2. Always use correctly sized and fitted rim tape (fitted per the rim manufacturer's instructions), even with tubeless rims (fig. 2)

3. Before inflating the SmartTUBE tube, the valve should point inwards (towards the center of the inflated circle). Pump up the SmartTUBE inner tube a small amount until it is round in shape. Do not inflate it to more than 0.5 bar / 8 PSI outside of the tyre (fig. 3) The tube should be inflated partially before the installation procedure below.

4. Fit the tyre such that one side protrudes over the outside edge of the rim and then insert the inner tube into the tyre. Insure that the tube is not twisted or pinched between the rim and tyre bead. The valve must be aligned perpendicular to the rim as it fits thru the valve stem hole in the rim. (fig. 4)

5. DO NOT use any sharp or pointed tools for installing the tube as these could damage the tube or tyre leading to a later failure upon use or inflation. Beginning at the side of the valve, lift the protruding side of the tyre over the rim flange until the whole tyre is seated on the rim. Make sure that the tyre does not pinch the inner tube and that the tube is installed without creases. (fig. 5)

6. Roll the half-inflated tyre along the ground to release any wedging. Then slowly inflate the tyre completely insuring that the tyre bead on both sides is evenly seated around the rim during inflation. Do not exceed the maximum permissible tyre pressure for the rim, rim tape and tyre (fig. 6)

The tyre pressure should be checked before every ride. Only repair with TPU specific repairing kits.