PATENT CLAIMS

1. The device for maintaining and changing the pressure in tyres, ***is characterised by the feature that*** there is a pump (K) interconnecting the inner pressure space of the tyre (P) and an accumulator (Z) which is provided with at least one pressure control element at its input and/or its output into the inner pressure space of the tyre (P).

2. The device, in accordance with claim 1, ***is characterised by the feature that*** the pressure accumulator (Z) is connected to and/or is a part of the tyre (P), the inner tube, or the rim.

3. The device, in accordance with claim 1 or 2, ***is characterised by the feature that*** the pressure accumulator (Z) is fitted with another air inlet from the outside (O) of the tyre (P) or an air outlet to the outside (O) of the tyre (P).

4. The device, in according with any of the previous claims, ***is characterised by the feature that*** the pump (K) is at one end connected to the inner pressure space of the tyre (P) and/or the outside (O) of the tyre (P) and/or the accumulator (Z) and at the other end it is connected to the inner pressure space of the tyre (P) and/or the outside (O) of the tyre (P) and/or the accumulator (Z).

5. The device for maintaining and changing the pressure in tyres, ***is characterised by the feature that*** the pump (K) consists of a peristaltic pump in the shape of a deformable hose positioned on the perimeter of the tyre (P), fitted with an air inlet (VST) and an air outlet (VYS) while the air inlet (VST) and air outlet (VYS) are positioned on the perimeter of the tyre (P) separated from each other by a preset length in accordance with the deformation of the tyre (P).

6. The device, in accordance with claim 5, ***is characterised by the fact that*** the pump (K) is fitted with at least one valve.

7. The device in accordance with claim 5 or 6, ***is characterised by the fact that*** there is a part with a minimum given volume at the input or output of the pump (K).

8. The device, in accordance with any of the above-mentioned claims, ***is characterised by the fact that*** the pump (K) is fitted with a valve (V), which is a three-way valve, the inputs of which are interconnected with the source of the pump (K) and the target of the pump (K), whereby one input (V1) is provided with a valve (JV), the second input (V2) is connected to the pump (K), and the last input (V3) is interconnected with the closure element (R).

9. The device, in accordance with any of the above-mentioned claims, ***is characterised by the fact that*** the inner side of the pump (K) is fitted with a ring (OK), the distance of the outer side of which from the rotation axis of the tyre (P) is equal to a 1 to 1.1 multiple of the distance of the bottom side of the pump (K) from the rotation axis of the tyre (P).

10. The device, according to any of the above-mentioned claims, ***is characterised by the fact that*** the pump (K) has the form of a curved hollow channel with at least one of its outer walls partially formed by the sections of two planes that lie in the same longitudinal direction as the pump (K), forming an angle of $\alpha = 0$ to 120°; while if $\alpha > 0^{\circ}$, it is located at the contact edge of these two planes, situated on the far side from the centre of the cross-section of the pump (K).

11. The tyre and/or rim and/or inner tube and/or pump, are ***characterised by the fact that*** they contain an adhesive and/or a sectional lock to interconnect them with any element from the tyre group (P) and/or the rim and/or the inner tube and/or the pump (K).

12. The tyre and/or the rim and/or the inner tube and/or the pump, ***are characterised by the fact that*** they are adapted for fitting any device, in accordance with the above-mentioned claims.

13. The device, in accordance with any of the above-mentioned claims, ***is characterised by the fact that*** it is a part of the tyre (P), inner tube, or rim.

CLAIMS

1. The device for maintaining and changing the pressure in tyres where a pump (K) is interconnecting the inner pressure space of the tyre (P) and an accumulator (Z) which is provided with at least one pressure control element at its input and/or its output into the inner pressure space of the tyre (P), **is characterised by the feature** that the pump (K) is at one end connected to the inner pressure space of the tyre (P) and/or the outside (O) of the tyre (P) and/or the accumulator (Z) and at the other end it is connected to the inner pressure space of the tyre (P) and/or the outside (O) of the tyre (P) and/or the accumulator (Z).

2. The device, in accordance with claim 1, **is characterised by the feature that** the pressure accumulator (Z) is connected to and/or is a part of the tyre (P), the inner tube, or the rim.

3. The device, in accordance with claim 1 or 2, **is characterised by the feature that** the pressure accumulator (Z) is fitted with another air inlet from the outside (O) of the tyre (P) or an air outlet to the outside (O) of the tyre (P).

4. The device for maintaining and changing the pressure in tyres**, is characterised by the feature that** the pump (K) consists of a peristaltic pump in the shape of a deformable hose positioned on the perimeter of the tyre (P), fitted with an air inlet (VST) and an air outlet (VYS) while the air inlet (VST) and air outlet (VYS) are positioned on the perimeter of the tyre (P) separated from each other by a preset length in accordance with the deformation of the tyre (P).

5. The device, in accordance with claim 4, **is characterised by the fact that** the pump (K) is fitted with at least one valve.

6. The device, in accordance with claim 4 or 5, **is characterised by the fact that** there is a part with a minimum given volume at the input or output of the pump (K).

7. The device, in accordance with any of the above-mentioned claims, **is characterised by the fact that** the pump (K) is fitted with a valve (V), which is a three-way valve, the inputs of which are interconnected with the source of the pump (K) and the target of the pump (K), whereby one input (V1) is provided with a valve (JV), the second input (V2) is connected to the pump (K), and the last input (V3) is interconnected with the closure element (R).

8. The device, in accordance with any of the above-mentioned claims, **is characterised by the fact that** the inner side of the pump (K) is fitted with a ring (OK), the distance of the outer side of which from the rotation axis of the tyre (P) is equal to a 1 to 1.1 multiple of the distance of the bottom side of the pump (K) from the rotation axis of the tyre (P).

9. The device, according to any of the above-mentioned claims, **is characterised by the fact that** the pump (K) has the form of a curved hollow channel with at least one of its outer walls partially formed by the sections of two planes that lie in the same longitudinal direction as the pump (K), forming an angle of $\alpha = 0$ to 120°; while if $\alpha > 0°$, it is located at the contact edge of these two planes, situated on the far side from the centre of the cross-section of the pump (K).

10. The tyre and/or rim and/or inner tube and/or pump, **are characterised by the fact that** they contain an adhesive and/or a sectional lock to interconnect them with any element from the tyre group (P) and/or the rim and/or the inner tube and/or the pump (K).

11. The tyre and/or the rim and/or the inner tube and/or the pump, **are characterised by the fact that** they are adapted for fitting any device, in accordance with the above-mentioned claims.

12. The device, in accordance with any of the above-mentioned claims, **is characterised by the fact that** it is a part of the tyre (P), inner tube, or rim.