

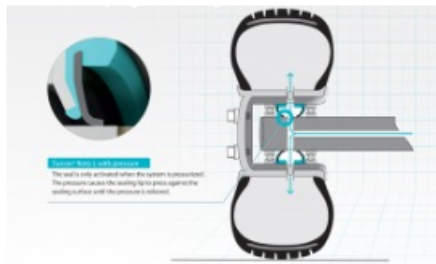
Central Tire Inflation Sealing Systems

Trelleborg Sealing Solutions has developed a unique engineered seal—specifically for use within Central Tire Inflation systems. Turcon® Roto L is the first ever active seal, engineered to only provide sealing when required. Eliminating friction and torque, this extends the seal life of axle systems and can significantly reduce fuel consumption for vehicle operators.



By eliminating friction when the tire is not pressurized, Turcon® Roto L prevents unnecessary energy loss, cutting fuel consumption appreciably

Conventional seals for Central Tire Inflation systems are constantly heavily in contact with a vehicle's axle, wearing the seal and causing friction that uses energy, thereby consuming fuel unnecessarily. By eliminating friction when the tire is not pressurized, Turcon® Roto L prevents unnecessary energy loss, cutting fuel consumption appreciably. Turcon® Roto L only seals around the axle of Central Tire Inflation Systems when required: when the tire is pressurized to inflate or deflate it.

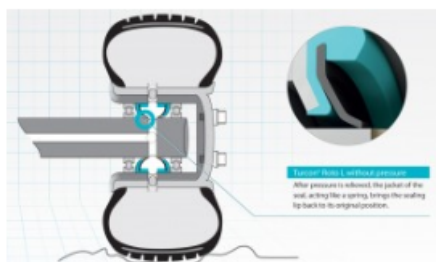


Turcon® Roto L operating with system pressure

Patented Design

Turcon® Roto L combines a PTFE sealing lip with an elastomer jacket and a stable shape-forming metal part. The seal's patented design means that for the majority of the time, the sealing lip is held lightly against the sealing surface. The seal is only activated when the system is pressurized. Then, the pressure causes the sealing lip to press against the sealing surface until the pressure is relieved. Afterward the jacket of the seal, acting like a spring, brings the sealing lip back to its original position.

As the seal has less than half the friction of a conventional seal for Central Tire Inflation Systems, its use also allows the vehicle operator to deflate and re-inflate tires when the vehicle is on the move. It can take between 20 and 30 minutes to adjust the pressure on large commercial tires. If this can be done while the vehicle is moving between jobs, that's up to 30 minutes that the commercial vehicle can be working rather than idle, further lowering a vehicle operators' overall costs.



Without system pressure, Turcon® Roto L eliminates friction and torque

Future Prospects

Though Turcon® Roto L was originally developed primarily for off-highway vehicles, there are other applications where it can provide benefits to users.

There are particular benefits for truck manufacturers for use on long-based and multi-trailer trucks, where tire pressures can be optimized to road and load conditions. This could improve traction and safety and potentially result in considerable fuel savings for transport companies.

When super sports cars drive slowly, tires should be kept at low pressure. At high speeds the cars will perform better if the tire is at high pressure, or different on each wheel, depending on the track it is traveling on.



The unique Turcon® Roto L only seals when sealing is required

Benefits of Turcon® Roto L:

- Eliminates friction when not pressurized resulting in significant energy and fuel savings for vehicle operators
- Extended seal life reduces maintenance and overall operator costs
- On the move optimization of tire pressures improve traction, safety and minimise down time