

# Cassette seal System 3000



Field test  
**Rally Paris-Dakar**  
Passed



## Your Partner for Sealing Technology

The System 3000 Cassette seal is designed especially for use with vehicles working in arduous conditions, such as heavy trucks, forestry machinery, agricultural equipment and general off-road vehicles. In addition to the sealing function performed by the spring-activated sealing lip, there are several dust and exclusion lips that form effective barriers against water, sand and dust. System 3000 is optimized for use in rotating hub applications. When optimized, the press-fit of the outside metal casing within the wheel hub ensures an efficient transfer of frictional heat from the seal. The inside elastomeric portion is fitted on the shaft and remains static when the equipment is in use, ensuring constant sealing force, independent of the vehicle speed. This, and the totally enclosed nature of System 3000, means service life is considerably longer than other current designs.

The System 3000 HS (High Speed) seal is based on the well proven System 3000, and as the name implies, is developed for equipment running at higher speeds. A part of our product development testing for System 3000 HS included field-testing with axles installed on the "de-Rooy Transport" team's heavy trucks, which successfully completed the Paris-Dakar Rally 2001.

During the race the seal performed perfectly even when exposed to speeds up to 95 mph under severe road and weather conditions. Subsequent inspection revealed there to be no signs of excessive wear nor deterioration of the sealing lips and the mating metal surfaces.

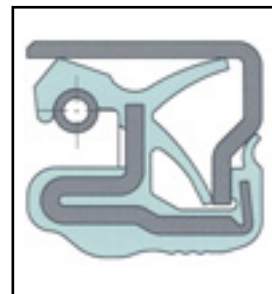
# Cassette seal System 3000

## Special Features:

- Positioning and design of the sealing lip optimized for low-friction
- Efficient transfer of frictional heat from the seal due to metallic contact between casing and hub
- Enclosed design protects the sealing lips
- The seal is press fitted into the housing and requires no further means of retention
- Spring-energized sealing lip towards the oil side
- Sealing force is not influenced by the wheel rotation, as the lips are stationary
- Built-in distance lugs ensure correct positioning of sealing element
- The seal has built-in grease reservoirs and is delivered grease-filled for ideal start up conditions and long life
- System 3000 has a spring-energized sealing lip towards the external side, ensuring efficient exclusion of dust and water

The **Off-Road** version has two spring-energized sealing lips and two excluder lips, for excellent performance in dirt and water.

The **On-Road** version has one spring-energized sealing lip and three excluder lips, resulting in lower seal torque and higher allowable speed.



## Operational advantages:

- Long service life
- Best possible sealing and protection of the bearing
- High reliability in service
- Protects the environment, by eliminating unnecessary leakage
- Easy installation
- Up to 1200 ft/m rotational speed allowed for System 3000 HS
- Savings on machining and hardening of hub and shaft
- Reduction in number of parts in the hub assembly
- Change of seal at overhaul does not require rework of hardware

Material	NBR (75 Shore A)	HNBR (75 Shore A)	FKM (75 Shore A)
Reference number	4N063	4H063	4V063
Metal casing	Carbon steel	Carbon steel	Carbon steel
Spring	Stainless steel	Stainless steel	Stainless steel

These indications are based on laboratory values. The application limits for pressure, temperature, speed and media are maximum values determined in the laboratory. During practical applications it should be remembered that due to the interaction of the operating parameters the maximum values must be set correspondingly lower. It is vital that customers satisfy themselves as to the suitability of individual products through adequate testing. For exceptional operating conditions please contact your Trelleborg Sealing Solutions representative. The data sheet is not subject to an updating service.

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