

CASSETTE-S4 SEALS

The Freudenberg CASSETTE-S4 is the most advanced Freudenberg solution for construction and agriculture mobile machinery wheel hubs and undercarriage applications.

Our CASSETTE-S4 development was aimed at exceeding the performance in extremely harsh operating conditions—resistance to dirt ingress has been significantly increased compared to the existing CASSETTE-S3, Freudenberg’s current best-in-class cassette seal. Comparative mud bench testing demonstrates the CASSETTE-S4’s outstanding longevity, up to four times longer than the CASSETTE-S3. Field validation performance for the CASSETTE-S4 was equally significant.



VALUES FOR THE CUSTOMER

CASSETTE-S4 combines all the advantages of the cassette design with additional specific benefits:

- Sealing function and tailored contamination protection, combined in one single part
- All functional parts of the seal (sealing lip, optimized lip working surface, dirt exclusion lips, dedicated counter-surfaces and internal lubrication) are protected inside the closed design—reduces number of components to be managed and reduces risk of accidental damage during handling and assembly
- Shaft machining and surface finishing requirements are much lower than standard sealing solutions: cassette-to-shaft contact is limited to static sealing function
- No wear traces on the shaft during operation, no rework nor repositioning needed during service
- “Plug and play” concept: easy to install and to replace
- Dynamic seal + seal working surface + internal lubrication all engineered and manufactured by Freudenberg
- Due to its innovative dirt exclusion design, the CASSETTE-S4 delivers stable sealing performances in the harshest working conditions with extended seal life in high-contaminant environments



FEATURES AND BENEFITS

CASSETTE-S4 FEATURES

Static sealing function:

- OD: rubber + metal (typically)
- ID: full rubber

Dynamic sealing function:

- Freudenberg lip design with proprietary material according to given application conditions

- Optimized seal working surface

Dirt exclusion function:

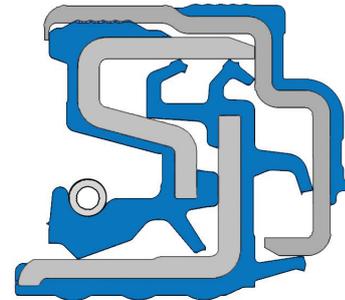
- Standard steel and stainless steel external cover

- Five internal dust lips
- Lifetime internal lubrication

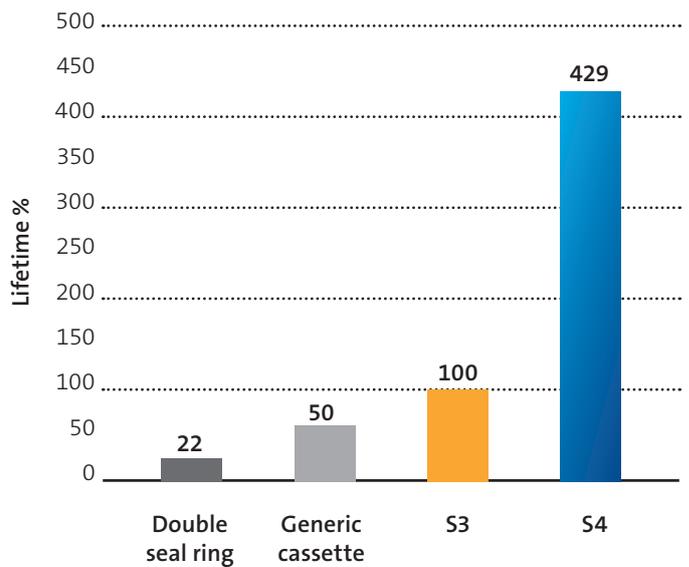
CASSETTE-S4 BENEFITS

- Over four times seal lifetime confirmed in mud conditions (bench test) compared to CASSETTE-S3 (see graph at right)
- Dirt excluder efficiency improved for the worst conditions: dry mud, abrasive sand, water
- Wider applicability on the field, given by increased capacity to work in highly contaminated environment
- No speed, temperature and pressure limitations compared to CASSETTE-S3

CASSETTE-S4 seal



CASSETTE-S4 longevity comparison



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