

TR/8/S3

The TR/8/S3 seal is a double acting axial seal commonly used in iron and steel applications, specifically in rolling mill plants. These seals are generally assembled on static flanges. The two the sealing lips provide the sealing function on the rotating flanges, thus preventing leakage of lubricating oil and/or water.



The current version of the TR/8/S3 seal is the result of more than 40 years of direct experience with OEMs and users in the metal industry – resulting in a design that can cope with the increasing speed requirements especially for the rolling mill applications.

In all versions, the L-shape ring is embedded into the seal body, avoiding any gluing operations, except for those users that prefer to glue the seals as a precautionary measure to compensate for irregularities on the housing diameter.

Exclusive features of TR/8/S3 seals are:

- Double acting axial seal function to the oil and water side
- Improved lip profile to increase seal life time
- Reduced friction and consequent temperature decrease
- Absence of external metallic parts and consequent prevention of damages to housing bore

Possible size range for TR/8/S3 seals: $\varnothing C_{min} = 60$ mm; $\varnothing C_{max} = 500$ mm (please also see the drawing at the next page).

Materials

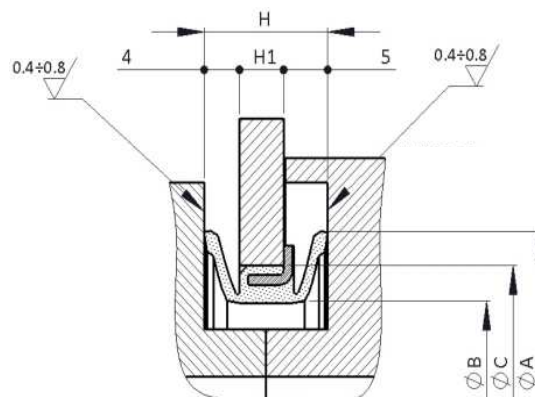
The table below shows working temperature ranges (minimum, maximum, peak (*)) applicable to each type of compound as well as coefficient of friction and the maximum recommended circumferential speed. Specific application requirements are to be aligned with the TENUTE Technical Department / SKF Seals Application Engineering.

| Material | Temperature | | Recommended circumferential shaft speed |
|-------------|-------------|-------------|---|
| | min | max | |
| | °C | °C (*) | m/s |
| NBR | -30 | +100 (+120) | 40 |
| HNBR | -40 | +150 (+175) | 90 |
| FKM | -20 | +200 (+225) | 90 |

Assembly of TR/8/S3 seals

The drawing shows the details of the housing dimensions and the assembly of the TR/8/S3 seal.

Particular applications or requirements different from those details shall be agreed with the TENUTE Technical Department / SKF Seals Application Engineering.



Housing height tolerances

| Housing height | Tolerance |
|----------------|-----------|
| | mm |
| H | +0,2 / 0 |
| H1 | 0 / -0,1 |

Housing bore tolerance

| Housing bore | Tolerance |
|--------------|-----------|
| ØC | H8 |

Shaft and housing surface finishing

A roughness of Ra from 0,2 to 0,6 µm is recommended for the shaft in standard applications, while in case of high speeds, a finishing to Ra from 0,2 to 0,4 µm is recommended. Plunge grinding is required. For the housing bore a finish turning is sufficient.

We recommend a chrome plating or a gas nitriding heat-treating process with the minimal hardness shown in the table below.

Shaft hardness

| | Water side | Oil side |
|---------------|------------------|------------------|
| Up to 120 m/s | 60 HRC and above | 50 HRC and above |

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