

Innovative solutions for sustainable and durable rotating applications

## Application

Medium:	Chocolate conche
Speed:	16 1/min
Temperature:	60°C / 140°F
Shaft diameter:	135 mm / 5,31"

## Challenge

- No buffer gas entering the chocolate → no use of conventional buffer gas seals
- Use of PFAS-free materials
- Small installation space for the sealing solution

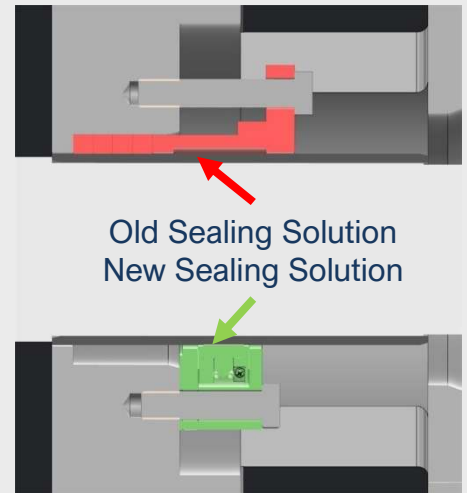
## Root Cause

- High temperature development due to the use of a stuffing box packing
- High maintenance intensity by qualified personnel
- Wear of the stuffing box packing and the shaft

## Solution

Installation of an airless SDF310 with spring-loaded sealing rings made of PFAS-free SK4133 without further modifications to the existing machine with the following result:

- low-maintenance and trouble-free operation with wear-resistant and readjustable sealing rings
- Minimal product leakage



Shaft Seal SDF310

# FIELD CASE

## SDF310 – Use of an airless PFAS-free shaft seal

**STASSKOL GmbH**  
39418 Stassfurt  
Maybachstrasse 2  
Germany  
Phone: +49 3925 288 100  
Mail: [info@stasskol.de](mailto:info@stasskol.de)  
Web: [www.stasskol.de](http://www.stasskol.de)

## SDF310 Shaft seal

### Design

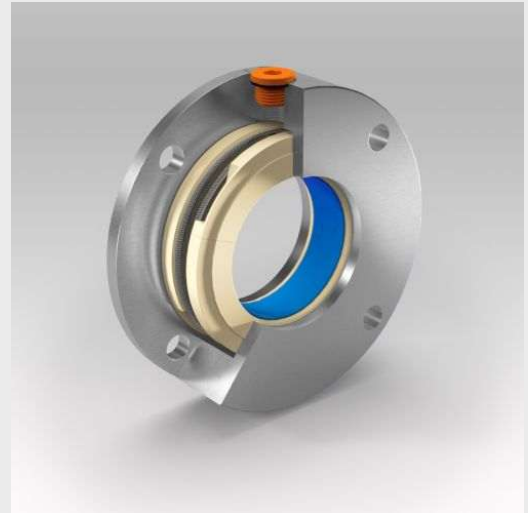
The shaft seals of the SDF Series feature two rotating sealing rings that seal axially against the running surfaces of the housing. The shaft is connected to the sealing rings via a silicone sleeve clamped onto the shaft. As a result, there are no components sliding on the shaft. This eliminates the need for an expensive coating. Thanks to the design of a clamping ring that applies spring pressure to the two sliding rings, the use of a typically costly buffer gas can be avoided. The system is available for any shaft diameter and can be flexibly adapted to existing installation spaces.

### Application

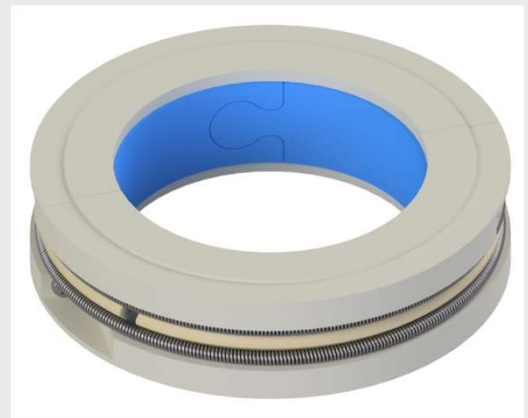
The Stasskol DynamicSeal SDF Series is used for sealing suspensions, liquids, dusts, vapors and powders in mixers and crushers, kneaders for bakeries, conching machines in chocolate production, mills, rollers, screw conveyors and other conveyor systems. Materials for FDA-compliant food applications are also available for these shaft seals.

### Materials

Sealing rings:	PTFE (SK133), PEEK (SK933), PFAS-free materials (SK4133) and carbon materials
Silicone sleeve:	Standard Silicon (SK5102) or high temperature silicone (SK5105)
Parameters:	
Speeds:	up to 1,6 m/s / 5,2 ft/s
Pressures:	Vacuum and higher pressures up to 2 bar(g)
Temperatures:	-20°C to 250°C -4°F to 482°F



Sectional view of the SDF310



Sealing rings with springs