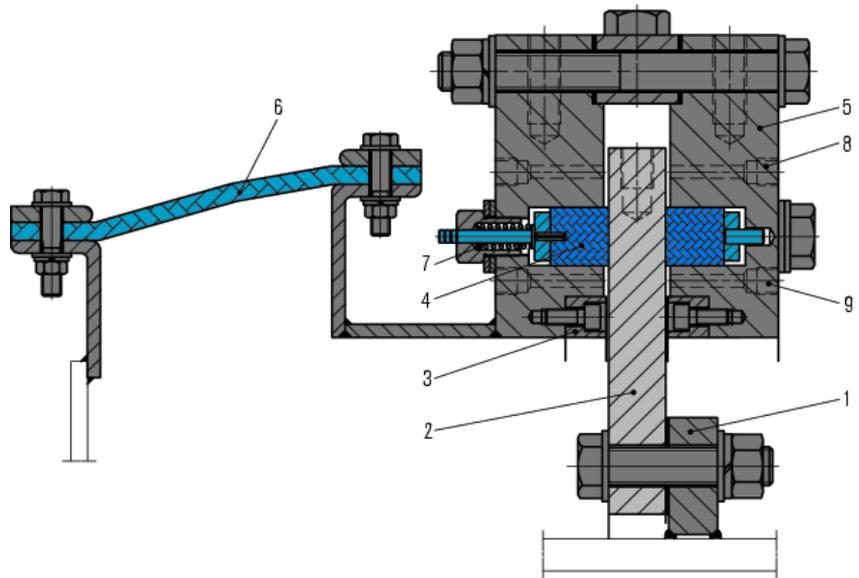


DRO Rotary kiln sealing system



DRO Rotary kiln sealing system



Features

- Special sealing systems for rotary kilns
- Packing rings (self-adjusting) with permanent spring-action for optimal, continuous contact with the seal disc, optical wear indicator
- Can be pressurized with buffer gas
- Optional dust extraction at the expansion joint
- Optional flush fitting to remove dust deposits at the seal disc
- Double-acting seal rings for use with process-compatible barrier gas or to drain toxic or aggressive gas
- Cutting-edge materials, supports broad range of applications

Advantages

- Reduced pollution emissions
- Clean residue combustion
- No partial temperature reduction below the residue combustion threshold due to air infiltration (no dioxin formation)
- Safe operation
- Significant reduction in primary energy consumption
- Long service life, low wear
- Predictable downtime (e.g. annual inspection)
- Available as retrofit on existing systems

Item Description

Item	Description
1	Mounting flange (kiln shell)
2	Seal disc (rotating)
3	Bronze seal face
4	Packing ring (static)
5	Housing
6	Expansion joint
7	Spring system
8	Thermal sensor fitting
9	Flush fitting

Recommended applications

- Process industry
- Petrochemical industry
- Chemical industry
- Pharmaceutical industry
- Toxic, hazardous, chemical media
- Residue and waste incineration
- Cement production
- Calcination
- Reduction

Functional description

The sealing system consists of a mounting flange welded on to the kiln shell. The two connected halves of the split case engage at the seal disk which is screw mounted to the flange. Depending on requirements, two or four packing rings are provided and a thrust ring presses them against the seal disk. A spring mechanism generates the contact force for the packing rings. A specially designed expansion joint compensates for axial (thermal) expansion and change in the position of the kiln shell. A torque damper prevents rotation of the seal carrier assembly. With the exception of the seal disc, the entire sealing system is free moving and runs on roller supports in the damper. The seal is able to follow any movement by the oven with the sealing function remaining intact. The seal disc compensates for radial deflection of the rotary kiln (caused by ovality, etc.) by submerging to a greater or lesser extent into the seal housing.

Operating range

Diameter: $d_1 = 2,000 \dots 8,000 \text{ mm}$ (78" ... 315")
 Pressure: $p = -50 \dots +250 \text{ mbar}$ (-0,72 ... 3,62 PSI)
 Temperature (oven surface): $t = \text{max. } 300 \text{ }^\circ\text{C}$ (572 °F)
 Rotational speed: ... 2.5 m/s (8.2 ft/s)
 Radial movement capability: ... 35 mm (1,38")*
 Axial movement capability: ... 150 mm (5,91")*

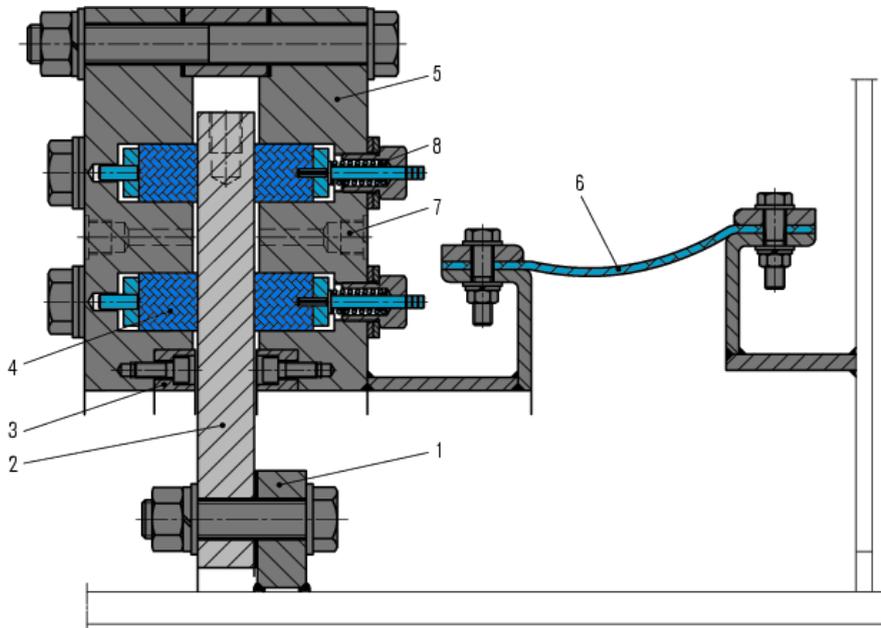
* Greater values on request

Materials

Metal parts: Steel S235JR (St 37-2 / 1.0037)
 CrNiMo steel (1.4571)

Other materials on request

Product variants



DRO Double seal

- 1 Mounting flange (kiln shell)
- 2 Seal disc (rotating)
- 3 Bronze seal face
- 4 Packing ring (static)
- 5 Housing
- 6 Expansion joint
- 7 Flush fitting
- 8 Spring system



Torque damper with roller support

Important note

All the technical specifications are based on extensive tests and our many years of experience. However, the diversity of possible applications means that they can serve as guide values only.

It should be noted that the extremal values of each operating parameter cannot be applied at the same time because of their interaction. Furthermore, the operating range of each specific product depends on the respective shaft diameter, materials used, mode of operation and on the medium to be sealed.

A guarantee can only be given in the individual case if the exact conditions of application are known and these are confirmed in a special agreement. When critical conditions of operation are involved, we recommend consulting with our specialist engineers.

Subject to change.

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