

polysius® pneumatic kiln seal



Inlet to the rotary kiln



Gimbaled suspension

A leaktight solution for less false air in the process

The pneumatic inlet and outlet seals isolate the kiln process from the environment. The aim is to seal against false air, which has a negative impact on the process, the final quality of the product and energy consumption. Our kiln seals withstand high radial and axial movements of the kiln exceptionally well, especially in two-station kilns. The low-wear design ensures a long service life.

Design and function

The pneumatic kiln seal connects the rotating kiln shell with either the stationary inlet housing or outlet housing. The sealing ring is gimbaled to either the inlet or outlet housing by means of the seal suspension and is used to support the pneumatic cylinders. Compensation for the rotational and axial movement is achieved differently in each case:

Rotational movement:

The wear rings are pressed against each other by the pneumatic cylinders to provide a sealing function for rotational movement—even if the kiln wobbles. The integral graphite lubrication device optimizes the friction coefficient between the fixed and the floating wear ring.

Axial movement:

Here, the sealing function is performed by the sealing cord which is fed through the sealing ring and pulled tautly around the non-rotating ring. During axial movement of the rotary kiln, the sealing cord around the non-rotating slip ring migrates circumferentially.



Wear ring during assembly

Your service advantages

- Less false air in the process which leads to stabilization of clinker production process, energy saving and lower CO2 emissions
- Separate sealing for axial and radial movement
- Sealing function is provided even in the event of eccentricity of the rotary kiln inlet
- Uniform contact pressure by pneumatic cylinder on axial expansion of the kiln shell
- Easy maintenance due to dual-circuit pneumatic system