



Sealing Systems for Tunneling



CTS-Standard

The **CTS-Standard** seal is a classic mono-compression seal. Embedded within a groove around the tunnel segment and interacting with the opposite seal of the neighbouring segment it seals the circumferential and radial segment joints. Restoring and contact pressure forces developing from both compressed profiles increase with decreasing joint gaps and produce the grade of water tightness.

The advantages

Under consideration of the specific groove design and joint configuration details recommended by CTS the latest generation of **CTS-Standard** profiles provides improved sealing capacities with concurrently reduced compression forces.

The profile provides balanced and stabilized deformation behavior with an almost equal sealing performance at different offset scenarios.

All **CTS-Standard** seals are supplied as ready corner-vulcanized and project specifically tailor-made gasket frames. The profile geometry and also the procedures used for the project-related water-proofing performance and load-deflection behavior testing follow the recommendations of recognized institutions such as, e.g. STUVA (GER), AFTES (F), and BTS (UK).

The gasket installation

The **CTS-Standard** seals are optionally installed either by "brush-on" or "spray-on" gluing method. The **CTS-Teco-Bond-Gluing-System** is recommended.

The tunnel segment installation

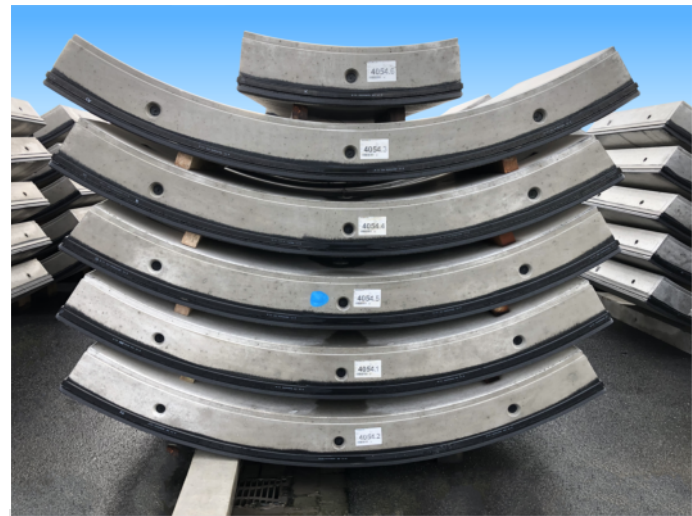
To obtain a proper seal, care must be taken to insure the gaskets are not damaged during installation. For the insertion of the key stone segment CTS recommends using the **CTS-Teco-Lube** on the gasket frames.

The material

The **CTS-Standard** seals are made of a high quality EPDM Compound that meets the material requisition recommended by STUVA.

In case of special requirements concerning chemical resistance when used in extremely contaminated ground CTS offers alternative materials (e.g. CR/SBR elastomer for better resistance against hydrocarbons found in ground water).

This alternative material can be offered as a reasonable compromise, but always under consideration of lowering the typical and physical properties of an EPDM-Compound with regard to aging performance and longevity.



CTS-Standard (Geometry and dimensions)

Groove design:

Profile:

26 x 10 mm



33 x 10 mm



36 x 11 mm



44 x 12 mm

