



## CTS1 LIQUID MOUNTED PRIMARY SHOE PLATE SEAL

*The first barrier against emission in the rim area of an external floating roof is the primary rim seal. It also serves at a safety device reducing the risk of combustible vapours in this area. The design of these primary seals is therefore very important. Our seals solutions provide an optimal combination of reliability and performance with a low total cost of ownership. We offer a full range of primary seals in all common seal design types in a wide variety of materials, including all grades of stainless steel and galvanised steel.*

Over the years our mechanical shoe plate seal has proven to be one of the most resilient and versatile solutions for sealing the gap between the tank shell and floating roof. It combines excellent sealing characteristics with very good product compatibility. The CTS 1 tank seal consists of metal shoe plates that connect to the tank shell, these shoe plates are fitted with scissors and pushed against the shell with special leaf springs. A suitable vapour barrier completes the seal.

This basic design will be tailored to each specific tank. This combination of proven technology and consideration for specific tank geometry makes our CTS 1 sealing system the best available technology for emission reduction on external floating roof tanks.

### Solutions

- Liquid mounted gas tight seal type for maximum emission reduction
- Optimal service life (expected more than 30 years)
- Best available emission control technology per EPA and IPPC BREF
- Optimal operability in all hydrocarbons and chemicals, including 100% aromatics
- Seals can be supplied per API RP 545

### Highlights

- Custom designed and manufactured for each specific tank and product service
- Short installation time with experienced supervisor or full installation crews
- Durable with low total cost of ownership
- Turn key solution, engineering, supply and installation available
- Available in many stainless steel grades and galvanized steel
- Only fire retardant sealing materials are used
- Wax scraper designs and Pantograph designs available

## CTS1

### Engineering

During the engineering phase our team of engineers will review local emission requirements, safety aspects and tank geometry to tailor the seal to each specific tank. This seal can be designed for large rim gap variations. All other important properties, such as material selection are taken into consideration for optimal performance of the seal. Proper material selection ensures a long term maintenance free service life. Seal materials have to withstand the stored product as well as the elements for longer periods of time. CTS will provide an optimum sealing solution that is suitable for dealing with these specific conditions.

Completely in line with our sustainability vision all emission requirements will play a major role in the decisions we make during design.

### Standards and safety

Our tank seals comply with all international standards such as API, EN, BREF IPPC, EPA, ATEX and NFPA as well as with specific requirements such as EEMUA, PGS 29 and VLAREM etc.

### Seal materials

Not just the design of the seal is important for its performance. Correct material selection is also very important to ensure a long term adequate performance for any seal. Seal materials have to withstand the stored product, ozone, UV-exposure and rain water contact. CTS is able to give you a reliable advise on the optimal combination of materials. This ensures an economic seal design that is able to deal with the specific conditions.

### Complete solution

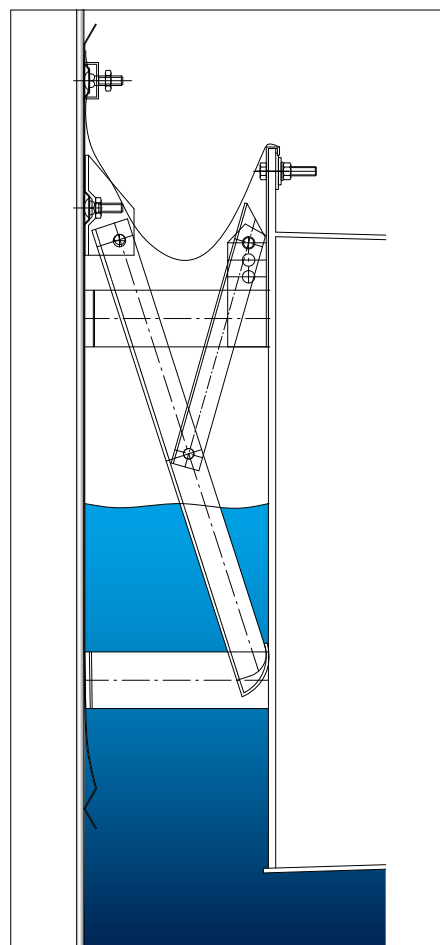
The CTS sealing solution is complete from engineering to commissioning. We will provide a turn key solution, experienced supervision or supply drawings, installation manual and installation advice that offer the opportunity for local crews to install the seal as well without compromising safety, durability or performance.

### Support and assistance

If this datasheet triggers more questions our team of experts will be always available to support and assist you in selecting the optimal solution for your specific application.



CTS1 scissor type shoe plate seal with energised hangers, ready to be fitted.



CTS1 shoe plate seal, cross section.



CTS1 scissor shoe plate seal, top view during installation.

*All our product information and specifications are drafted with care but can be subject to change. We reserve the right to change product specifications.*

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**CTS GROUP**

**PARTNER IN  
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SOLUTIONS.**

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