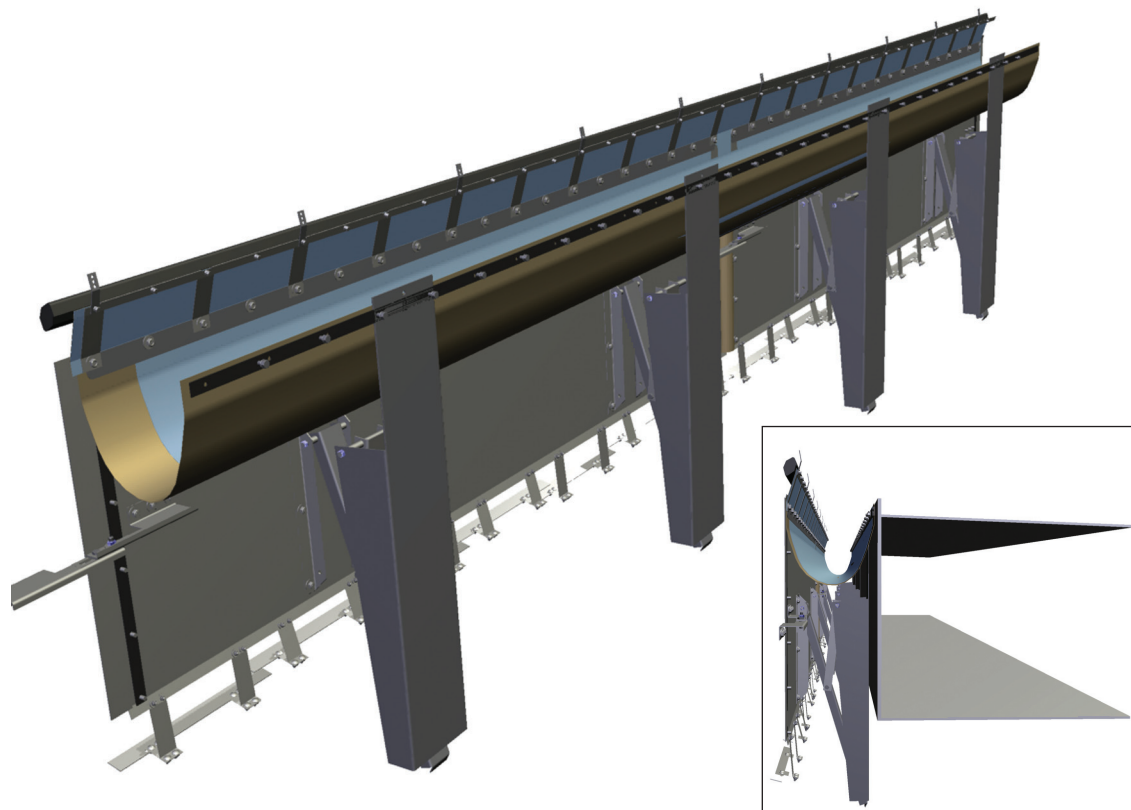# SM1 - HEAVY DUTY SHOE PLATE RIM SEAL

The SM1 Heavy Duty Shoe Plate Rim Seal is a liquid mounted primary shoe plate seal with a shoe mounted secondary seal. This robust seal is specially designed for arctic heavy snow load conditions. The scissor mechanism is designed and tested for a snow load of 10KN/m².

Key user benefits:

Complete product compatibility— all construction materials are selected to be compatible with the stored product

Worry-free operation — centers the floating roof and dampens horizontal roof movement

Designed to remain in contact with the tank at all times — the R(-X/+3X) design working range feature is an HMT innovation. Under all circumstances the SM1 seal will stay in contact with the tank shell

Flame retardant and UV resistant seal— materials are flame retardant in accordance with DIN 22100/ 22188. Additionally, materials subject to the atmosphere are UV resistant

Gas tight seal — with the shoe plate overlap membrane thermally welded to the primary seal membrane, this seal is gas tight

Key design features:

• Designed to operate in the arctic environments with heavy snow loads. Successfully tested for a snow load of 10KN/m²

• Gas tight seal for optimal emissions and product loss reduction

• Low profile secondary seal increases storage capacity by increasing the maximum roof height

• Cost effective solution

• Abrasion resistant

KEY DESIGN FEATURES

The SM1 is specially designed for arctic environments with heavy snow load and surpasses all other seals for these conditions. Here's why :

1. Designed for extreme weather conditions

The SM1, is equipped with weather plates and can be used in areas with extremely heavy snow load conditions (designed for 10KN/m^2).

2. Flame retardant

The SM1 seal is supplied with flame retardant membranes, the applied fabric has been fire tested in accordance with DIN 22100/22188. Being flame retardant and having an excellent electrical continuity will guard from rim fires for the complete lifespan of storage tank.

3. Gas tight seal

The SM1, a liquid mounted primary seal mitigates rim seal vapor losses through a unique design which envelops the vapor space.

### 4. Unsurpassed working range

Designed with a working range of R(-X/+3X) per EEMUA 159, which ensures that the seal will not gap, even under extreme ovality and lateral forces from wind or product turbulence.

5. Centers the floating roof and dampens lateral roof movements

The SM1 is designed to ensure excellent centering of the floating roof—if the rim gap gets smaller the seal exerts a progressively increasing force on the tank shell and vice versa. Keeping the roof centered is critical to safe operation for any floating roof tank. The SM1 design also keeps the floating roof from moving excessively during windy conditions or under turbulence from filling; this dampening capability is also critical to safe and effective operations.

SM1 FEATURES

- Working range of R(-X/+3X) in accordance with EEMUA 159, to seal off the worst of tank shells.
- Low profile to optimize working capacity.
- Abrasion resistant.
- Exposed fabrics are UV resistant.
- Complete product compatibility.
- Suitable for service in butt-welded or lap-welded storage tanks.
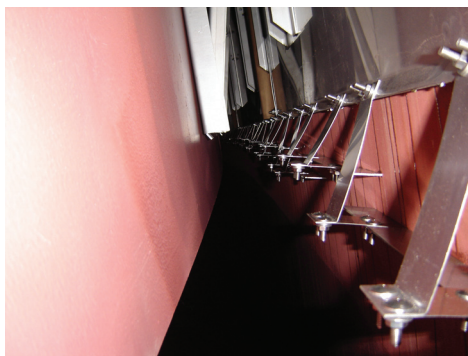
ABOUT HMT

HMT is the global leader in aboveground storage tank solutions. HMT's global team of engineers, project managers and field personnel can assist with common challenges including ways to reduce emissions, optimize tank capacity, reduce stranded inventory and engineer a tank system that exceeds safety standards and extends maintenance intervals.

HMT's full suite of tank products includes: External Seal Systems - Internal Seal Systems - Drain and Floating Suction Systems - Geodesic Domes - Skin and Pontoon IFRs - Full Contact IFRs - Emissions Reduction Devices

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