



## UNIDECK® ALUMINUM INTERNAL FLOATING ROOF

The HMT UNIDECK® Aluminum Internal Floating Roof is a cost-effective, proven IFR technology that has been protecting stored liquid products in aboveground storage tanks for over 30 years.

Constructed of corrosion-resistant aluminum alloy, the interconnecting grid structure provides a high strength-to-weight ratio that easily handles loads generated by product turbulence and inspection personnel.

The UNIDECK structural design parameters were developed utilizing the guidelines of API Standard 650, Appendix H.

For a proven, cost-effective aluminum IFR technology, choose the HMT UNIDECK.

### Key benefits:

The UNIDECK is a great alternative to traditional steel floating roofs for medium-duty applications.

**Easy, fast installation** – all component parts are designed to pass through an existing manway, thereby reducing additional expenses and down time required for door sheets and other access openings

**Easily maintained** – can be suspended from either cone roof or geodesic dome roofs with no leg structure under the roof; cleaning, inspection and repair to the tank bottom is simplified

**Product compatibility options** – can be constructed of either aluminum or stainless steel for compatibility with identified products or chemical services

**Heavy duty rim channel** – extruded rim channel can support a primary mechanical shoe seal and a secondary seal without any modifications



### Key design features:

- Structural girders are extruded with a continuous, threaded bolting slot to protect fasteners from direct exposure to vapors and prevent vapors from escaping through fasteners
- Extruded rim channel for additional structural support
- Works with either leg-supported or suspended systems
- Pontoons equipped with fully-threaded test port for vapor testing
- Bolt-up assembly; no hot work required
- All components fit through manway for quick, easy installation
- Available in either aluminum or stainless steel models for complete chemical compatibility

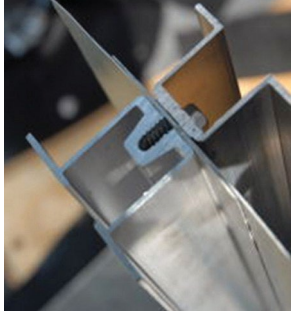
## THE HMT UNIDECK DESIGN

HMT's UNIDECK is known for its rugged construction, durability and efficiency.

### 1. Extruded structural members with a continuous, threaded bolting slot

The UNIDECK girders are designed with an extruded bolting slot which serves three key functions:

- 1) ensuring strong sheeting attachment by providing secure fastener engagement,
- 2) protecting the fasteners from direct exposure to product vapors and
- 3) preventing vapors from escaping through fastener penetrations.



### 2. Rim channel design

The UNIDECK rim channel is extruded, not fabricated, providing additional structural support. The rim channel is designed with the strength to support both a primary mechanical shoe seal and secondary seal without the need for additional modifications.

### 3. Easy, fast installation

The UNIDECK is completely assembled without welding and can fit through a 24-inch manway, allowing for much faster installation and quicker tank turnaround.

### 4. Suspension capabilities

The UNIDECK can be suspended from the tank's fixed roof, including conventional cone roofs and geodesic dome roofs. This option allows AIFR height adjustments to be completed from the outside of the tank, eliminating the need for confined-space entry. With no leg structure under the roof, cleaning, inspection and repairs to the tank bottom are simplified.

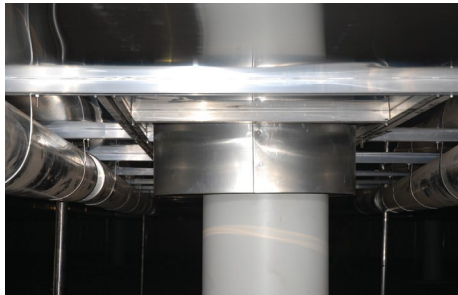
HMT uses a cable or chain suspended design with a 5:1 safety factor, designed under the guidelines of API 650, Appendix H.

### 5. Options available for product compatibility

The UNIDECK can be constructed of either aluminum or stainless steel to ensure compatibility with any product or chemical service.

### 6. Designed to last

All UNIDECK IFR penetrations, (columns, ladders, gauge pipes, etc.) are provided with negotiator wells, creating a positive liquid seal which isolates the area within the well from the main saturated vapor layer. A sliding seal plate with a flexible seal traps the saturated vapor emitted from within the negotiator well.



PTFE (Teflon®) Unipad® insulators insulate the aluminum leg from carbon steel tank bottoms, preventing galvanic corrosion.

The UNIDECK is constructed with a unique and proprietary design of reinforced pontoon gussets and end caps, reducing common failure modes with traditional skin and pontoon roofs.

Support pads are utilized between the deck sheeting and the leg support housing to prevent potential damage to the deck sheeting during normal operation.

## ABOUT HMT

HMT is the global leader in aboveground storage tank solutions. HMT provides advanced solutions 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:** Internal/External Seal Systems - Internal/External Floating Roofs - Drain and Floating Suction Systems - Aluminum Domes - Emissions Reduction Devices.

**HMT's quality services include:** Tank Repair & Maintenance - Floating Roof & Seal Repair/Replacement - Installation Services - Fabrication Services - Project Management/Turnkey - Inspection, Calibration, Verticality & Roundness Studies - New Tank Construction - Engineering Services.

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