



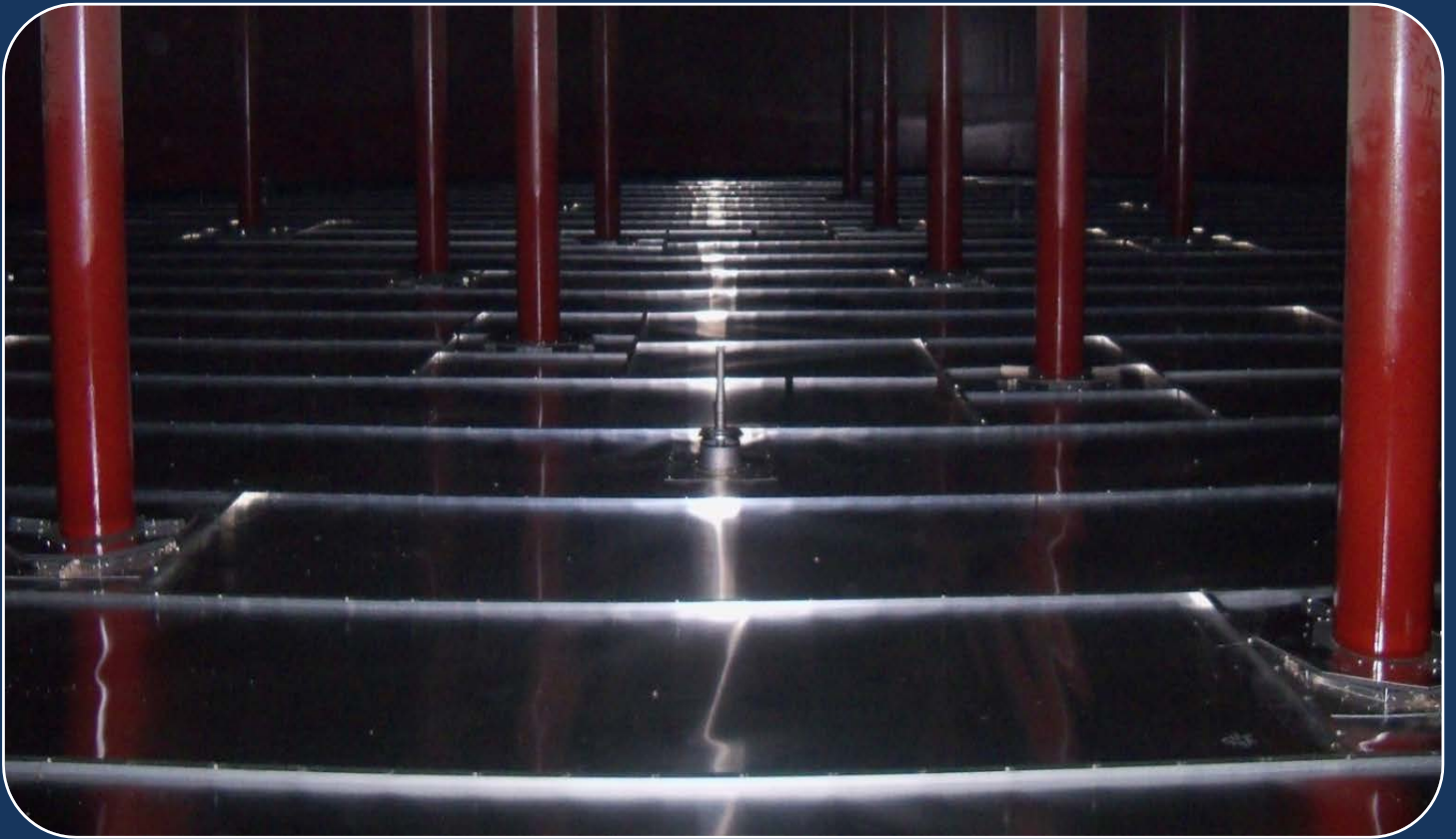
ROBUST

Internal Floating Roof

HEAVY DUTY (500 lbs/ft²)

INTERNAL FLOATING ROOF

[I-BEAM DESIGN]



ATECO TANK TECHNOLOGIES ENGINEERING CO.LTD.

www.atecotank.com

ATECO ALUMAX 500 LBS ROBUST HEAVY DUTY INTERNAL FLOATING ROOF

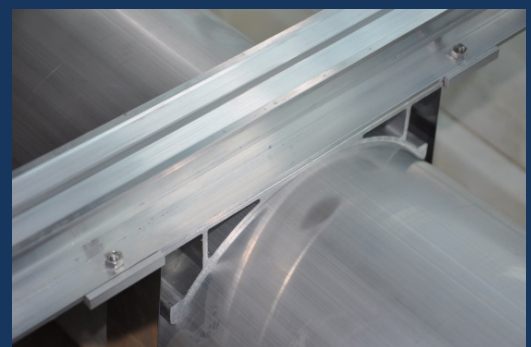
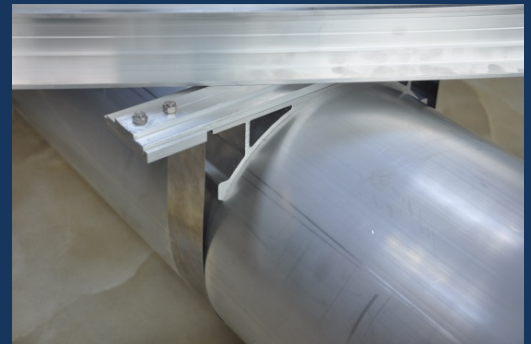
ATECO TANK 's **ALUMAX**™ family of internal floating roofs were developed in response to the market demand for a high quality, high strength aluminum pontoon roof that can readily accommodate a mechanical shoe seal and not be subject to the failure modes that plague conventional lightweight designs. All ALUMAX roofs meet or exceed the requirements of API 650 Appendix H.

ATECO TANK 's **ALUMAX-ROBUST** Internal Floating Roof eliminates the typically weak and failure prone problems found in standard aluminum roofs. Broken leg gussets, legs ripped through deck sheeting, cracks in the welds of pontoon end caps, hydrocarbon vapor leakage through deck bolting, along with many other common AIFR problems are a thing of the past.

The **ALUMAX-ROBUST** 's unique structural arrangement is based on an extremely efficient strength to weight ratio deck support system. This high strength deck system allows for complete support of the roof, independent of the pontoons.

The unique rim channel design, incorporating the same superior strength given to the deck structure, allows for the mounting of primary shoe seals and secondary seals without any modifications to the standard roof.

Contact your local ATECO representative to discuss the full suite of products and services that will satisfy all your AST needs.



The ATECO "H" Beam , The heart of a superior design Internal Floating Roof



The ALUMAX-ROBUST 's Unique Design Features Include the Following:

- The ALUMAX-ROBUST utilizes a high strength deck system that allows for complete support of the roof independent of the pontoons.
- Girders are designed with an extruded continuous threaded bolting slot which prevents vapors from escaping through the deck seams and bolt holes. They also provide more thread engagement area than in conventional designs.
- The ALUMAX-ROBUST rim channel is specially designed with the strength to support both a primary mechanical shoe seal and a secondary seal without additional modifications. This design also allows the ability to put pontoons directly under the rim channel.
- The support legs connect to the girder structure instead of between the pontoons allowing for repeated flexibility without pontoon end cap failure.
- Standard 10 inch pontoons are attached to the roof using extruded pontoon saddles and straps. Pontoons are not structural components, they do not contain gussets and are not interconnected. The maximum spacing between pontoon rows is 3,6 mt.
- The ALUMAX-ROBUST can be cable suspended from either cone roof tanks or geodesic dome roofs. This option allows roof height adjustments to be completed from the outside of the tank. With no leg structure under the roof, cleaning inspection and repairs to the tank bottom are simplified.
- The ALUMAX-ROBUST can be altered to a hybrid stainless steel/aluminum design when the stored product is not completely compatible to the aluminum alloy.
- The ALUMAX-ROBUST is easily fitted with a mechanical shoe seal utilizing a laminated Teflon® vapor barrier fabric. This provides a compatible seal system to the many products and additives stored in the floating roof tanks.
- The ALUMAX-ROBUST is completely constructed without welding allowing for much faster installation and quicker tank turnaround.



10" Seamless 2,5 mm Extruded Pontoons High Quality Alloy Aluminium



Beam Joint Detail (Double Clamped)



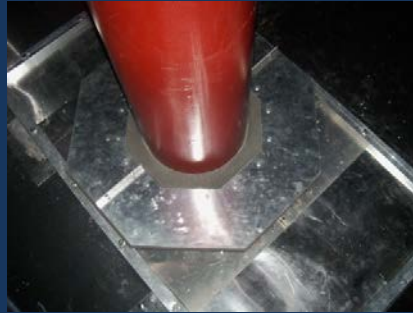
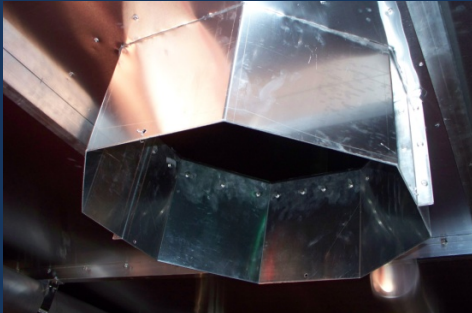
Beam-Girder Cross Connection (Double Angle)



Why? **ALUMAX-ROBUST** ; The ATECO ALUMAX-ROBUST IFR has many durable features, designed to provide indefinite maintenance free operation of the main structural components. The ATECO – ROBUST IFR is ideally suited to service in earthquake prone regions or in those tanks subject to sloshing and/or turbulence due to high fill rates or mixers.

ALUMAX-ROBUST Features

- ATECO IFR's are designed to meet or exceed the requirements of API-650 Appendix-H
- Heavy Duty Design – 500 lbs/ft² Loading Capacity
- High Section Modulus Main “H” Beam and Sheeting Clamp Channel
- 10” Seamless 2,5 mm Pontoons, High Strength , High Quality Aluminium Alloy
- %100 Pre-Fabricated (All components Pre-Punched in the workshop)
- Bended Peripheral Rim Channel (Special Design)
- Gas-Tight Bolting Channel (Special Clamping System)
- All Stainless Steel Fasteners
- 1 ½” – 3 mm High Strenght Support Legs At The Rim and Centre Deck.
- All Centre Deck Legs Are Connected To The IFR Frame, Not to Pontoon Ends. This Eliminates The Possibility Of Pontoon End Cracking Due To IFR Flexing In Service.
- Unique, Easy and Speedly Installation,
- Screwed Test Port. (Pop-Rivet Test Port Not Accepted)
- Cable Suspended Design Option.
- Hybrid IFR's with all-stainless steel wetted parts available



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