



PRIMARY & SECONDARY SEALS FOR FLOATING ROOF TANKS

Drawing on decades of industry leadership and real-world experience by our sister companies in the design, construction and maintenance of aboveground storage tanks, Matrix Applied Technologies offers both primary and secondary seals for floating roof tanks that are second to none in the industry.

All have been designed for easy and quick installation in the field at a competitive price point.

Our floating roof tank primary and secondary seals are engineered for extended life and reduced maintenance costs.

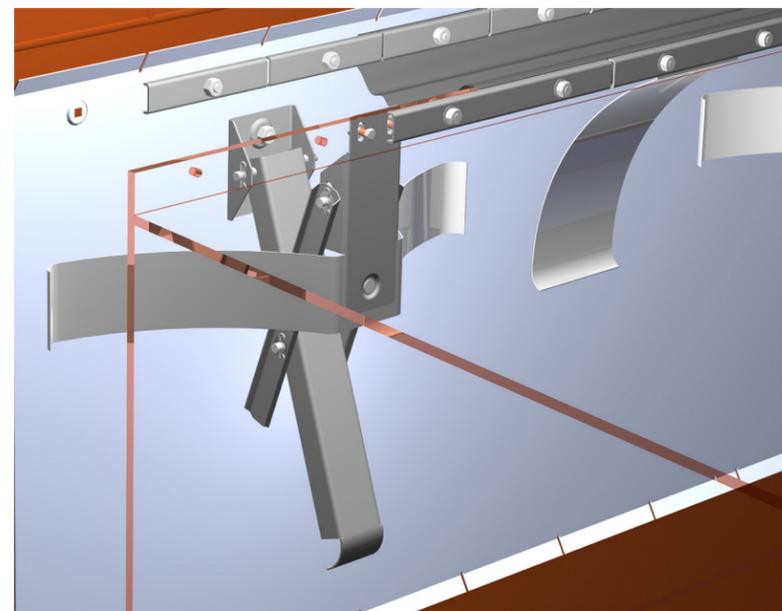
A HIGHER STANDARD IN **PRODUCTS**

PRIMARY SEALS

Why use a shoe seal?

Shoe seals have only metal parts in contact with the tank stored product. The vapor barrier fabric can be urethane, PVC/nitrile, or PTFE Teflon. Metal parts can be stainless or galvanized steel. The ability to mix and combine metals and vapor barrier fabrics, allows for the proper shoe seal to be designed for all products stored in tanks.

Historically, shoe seals offer the longest service life of all seal types. With rising costs, tank owners are seeking ways to reduce the maintenance cost of tanks. The Matrix Applied Technologies Pantograph primary shoe seal is the best solution with an expected life-span of an all stainless steel seal in excess of 25 years.



SS2 pantograph design

With a 30+ year history of proven performance, the Matrix Applied Technologies Pantograph primary shoe seal is designed to accommodate wide rim space and is also available with a proven wax scraper option added for heavier stored products. Our modern design uses the latest manufacturing techniques, resulting in the world's most cost-effective shoe seal design:

- 12 contact points per shoe. Seal is well able to conform to tank shell irregularities.
- 1/4" hard stainless steel leaf springs and spring pusher plates push against the shoes with low cyclic stress giving infinite life.
- 12mm diameter stainless steel pivot pins are used throughout. Stainless steel "R" retaining pins are used allowing quick and easy installation and removal of shoes.
- Adjacent shoe overlap by 50mm which provides the expansion joint.
- A spring pusher plate acts at the shoe lap to ensure the shoes remain in contact with the tank shell at all times at the shoe lap.
- No welding is required. The shoe pantograph hanger assemblies are bolted to the rim. Individual shoes can easily be removed and using proper safety procedures can be repaired or replaced while the tank is in service.
- Adjacent shoes are not bolted together. This means individual shoe can easily be installed or removed by hand using only a 3-man team.

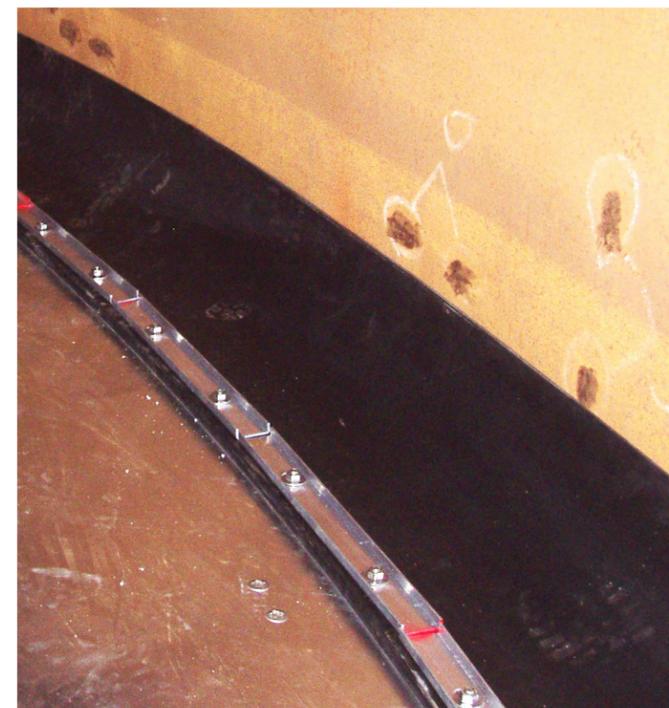


For more information
please contact
866 367 6879
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SECONDARY SEALS

The Matrix Applied Technologies line of secondary seals has been designed to minimize contamination of the stored product and extend the life of the primary seal. With no hot work required, all of our secondary seals have a compression shield and wiper at the tip which can be removed or installed while the tank is in service.

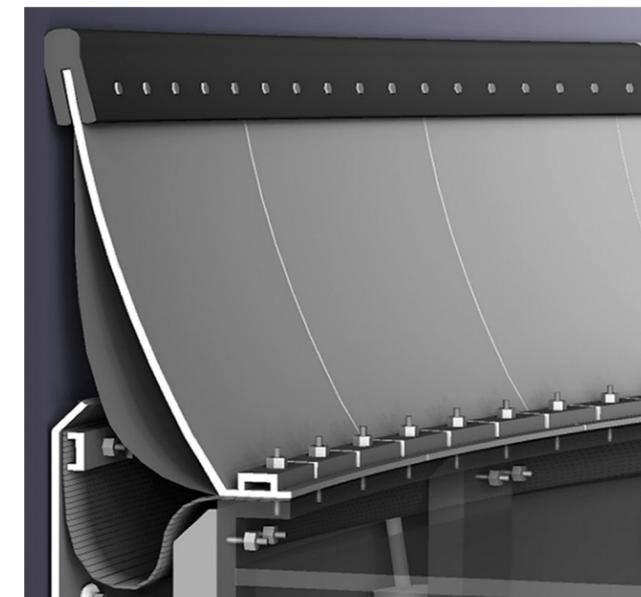
Our seals are custom designed to each tank's parameters to ensure proper fit and compliance with all air quality regulations. Each seal maintains a constant pressure force around the circumference of the floating roof and at each shell contact level, even as the roof travels during normal operation. Each seal is designed to accommodate a plus or minus four inches from the nominal rim space measurement.



FLEX-A-SEAL®

The Matrix Applied Technologies Flex-A-Seal® uses a patented tip design to reduce contamination due to weather or sand/dust with up to 98% watershed control. The compression plates are not bolted together, allowing each individual area to conform to the contours of the tank shell. The reinforced fabric placed under the compression plates provide a continuous vapor barrier and protect the underside of the plates from corrosion caused by product aromatics.

The PVC Nitrile flexible wiper tip blade is mounted vertically on the end of the compression shield to even further increase the sealing efficiency and virtually eliminates the release of hydrocarbons within the tank.



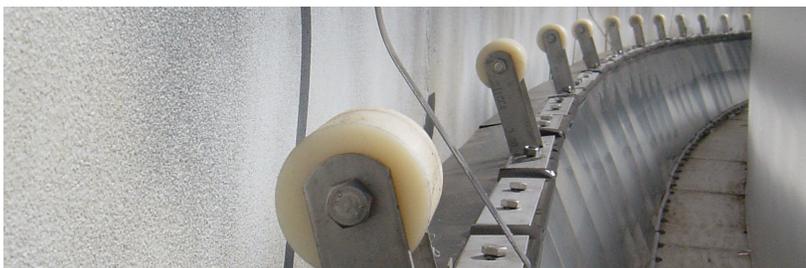
SECONDARY ROLLER SEAL & LOW PROFILE ROLLER SEAL

Secondary RollerSeal

The Matrix Applied Technologies Secondary RollerSeal is designed to provide secondary emission control for all floating roof applications. Metal parts can be galvanized or stainless steel with a variety of materials available for wiper tips and vapor barrier fabric. Our standard configuration includes neoprene wiper tips and urethane vapor barrier fabric.

A significant feature of the Matrix Applied Technologies Secondary RollerSeal is its synthetic roller assembly, designed to eliminate seal rollover for old, out-of-round tanks. The corrosion-free roller is also shell-contoured to minimize painted shell marking. The roller assembly allows a shorter support plate height for a given maximum rim space allowing greater tank volume. The roller normally only contacts the shell when the rim space is larger than nominal.

The Matrix Applied Technologies Secondary RollerSeal plates are not bolted together. Support plates can fan out independently of each other easily accommodating rim space changes. Because the seal is very flexible, less tension is required by the support plates to keep the wiper tip in contact with the shell. This results in lower tip wear.



Low Profile RollerSeal

The Matrix Applied Technologies Low Profile Secondary RollerSeal was specifically designed to allow tank owners to maximize the operation of their tanks. With its low profile design, it increases the capacity of a floating roof tank improving operating efficiency and allowing tank owners to maintain greater competitiveness. Our low profile secondary seal plates are not bolted together. Support plates can fan out independently of each other easily accommodating rim space changes.

As the standard Secondary RollerSeal, a significant feature of this seal is also the special synthetic roller assembly, which is designed to eliminate seal rollover. The corrosion-free roller is shell-contoured to minimize painted shell marking. The roller normally only contacts the shell when the rim space is larger than nominal.

