

# EMISSION CONTROL SOLUTIONS

Gauge Pole Cover

Leg Sock / Leg Seal

Gauge Pole Sleeve & Float

Gauge Pole Retriever Device

Gauge Pole Float Basin

Pontoon Leaking Bladder

Emergency Roof Drain Valve



# THE BEST SOLUTION SUITED TO YOUR FLOATING ROOF EMISSION CONTROL REQUIREMENTS

## GAUGE POLE COVER

ATS "ATS-Guard" Environmental Gauge Pole Socks are designed to prohibit hydrocarbon vapors from escaping from Aboveground Storage Tank Slotted Gauge Poles/Guidepoles. ATS's socks seal in vapors that would otherwise leak from the inside of the tank through the slots in the pole and into the outside air. ATS ATS-Guard is an approved product for the Storage Tank Emission Reduction Partnership Program (STERPP).

ATS's Vapor Guard is a "green" product, designed to reduce emissions and protect our environment from atmospheric contamination.

In April of 2000, the EPA published its acceptable technologies for the control of emissions from gauge pole socks: Slotted Guidepoles at Certain Petroleum and Organic Liquid Storage Vessels (Federal Register 65 FR 19891). This volume stated the acceptance of the flexible enclosure system. ATS's ATS-Guard Gauge Pole Socks are at the forefront of this technology. Also refer to supplemental information here: Slotted Guidepoles at Certain Petroleum and Organic Liquid Storage Vessels (Federal Register volume 65 number 202)

ATS's Gauge Pole Socks are designed, tested and manufactured using ATS seal materials. The Gauge Pole Sock / Guide pole socks create casing around the exterior of the gauge pole/guidepole and includes a nylon zipper for installation while the tank remains in-service.

## ATS Gauge Pole Socks are the solution for product loss and environmental compliance

- Effectively prevent vapors from escaping through slots in the Gauge Pole.
- Meet or exceeds environmental regulation requirements.
- Custom designed to ensure effective operation for specific tank conditions.
- Ease of Installation.
- ATS's Gauge Pole Socks can be installed while tank is in-service.
- Excellent chemical resistance and UV protection.
- Simplest, most inexpensive solution.
- Significantly reduce product emissions (see reverse)
- Meet or exceed enviromental regulations
- Suitable for Internal and External Floating Roof Tanks
- Can be installed while tank remains in-service
- Allow gauging and sampling equipment to operate
- Excellent chemical resistance and UV protection
- Collapsible design provides flexibility
- Include zipper for easy installation
- Custom engineered to ensure effective operation

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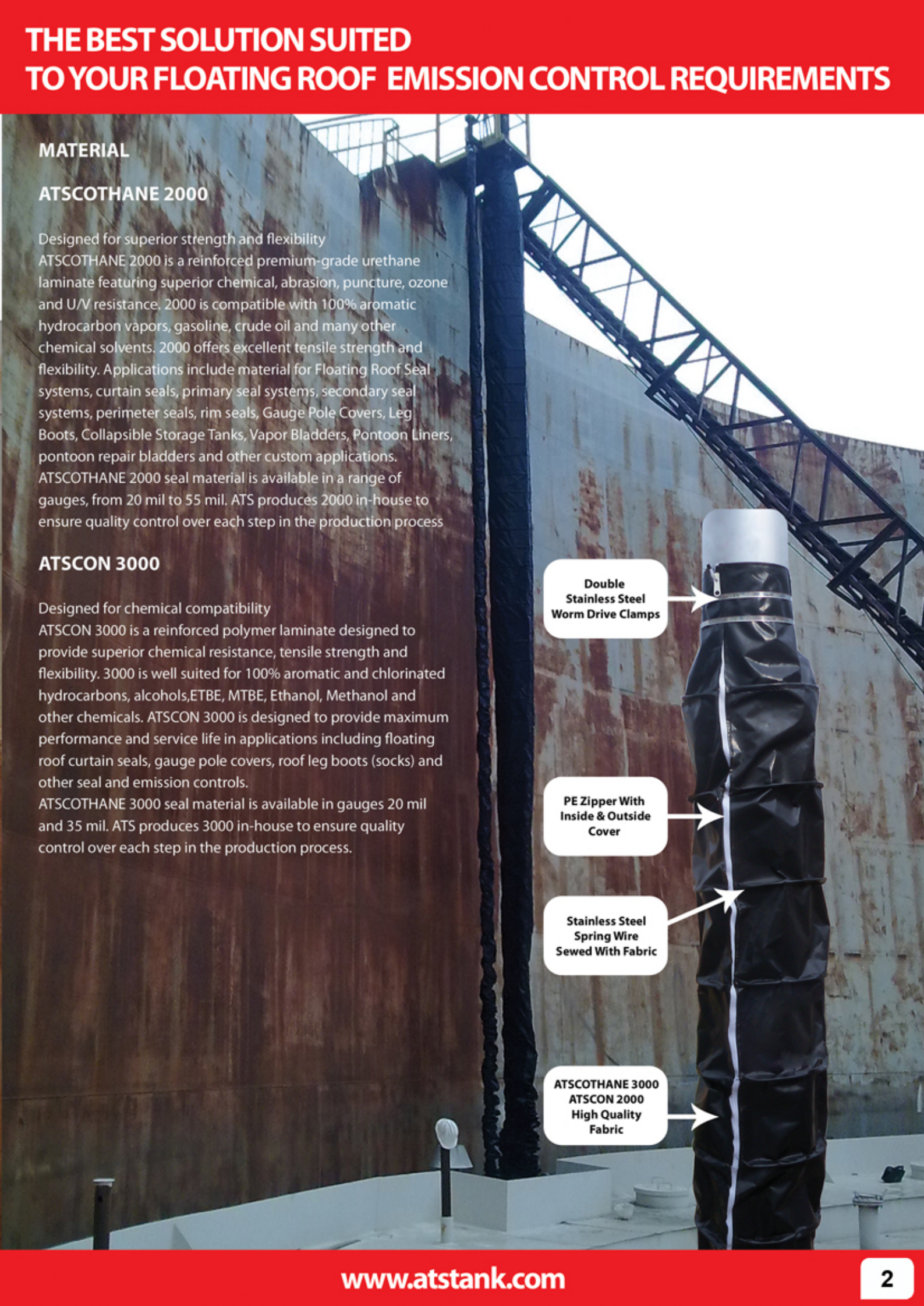
## MATERIAL

### ATSCOTHANE 2000

Designed for superior strength and flexibility  
ATSCOTHANE 2000 is a reinforced premium-grade urethane laminate featuring superior chemical, abrasion, puncture, ozone and U/V resistance. 2000 is compatible with 100% aromatic hydrocarbon vapors, gasoline, crude oil and many other chemical solvents. 2000 offers excellent tensile strength and flexibility. Applications include material for Floating Roof Seal systems, curtain seals, primary seal systems, secondary seal systems, perimeter seals, rim seals, Gauge Pole Covers, Leg Boots, Collapsible Storage Tanks, Vapor Bladders, Pontoon Liners, pontoon repair bladders and other custom applications. ATSCOTHANE 2000 seal material is available in a range of gauges, from 20 mil to 55 mil. ATS produces 2000 in-house to ensure quality control over each step in the production process

### ATSCON 3000

Designed for chemical compatibility  
ATSCON 3000 is a reinforced polymer laminate designed to provide superior chemical resistance, tensile strength and flexibility. 3000 is well suited for 100% aromatic and chlorinated hydrocarbons, alcohols, ETBE, MTBE, Ethanol, Methanol and other chemicals. ATSCON 3000 is designed to provide maximum performance and service life in applications including floating roof curtain seals, gauge pole covers, roof leg boots (socks) and other seal and emission controls. ATSCOTHANE 3000 seal material is available in gauges 20 mil and 35 mil. ATS produces 3000 in-house to ensure quality control over each step in the production process.



Double  
Stainless Steel  
Worm Drive Clamps

PE Zipper With  
Inside & Outside  
Cover

Stainless Steel  
Spring Wire  
Sewed With Fabric

ATSCOTHANE 3000  
ATSCON 2000  
High Quality  
Fabric

# THE BEST SOLUTION SUITED TO YOUR FLOATING ROOF EMISSION CONTROL REQUIREMENTS

## LEG SEAL

The leg seal is used on open-top storage tanks, often in situations where mixers are used. Nowadays it reduces emissions from roof legs considerably developing into a standard for tanks storing volatile hydrocarbons. It also ensures that the support legs remain operational by preventing rainwater ingress. The locking pin is completely surrounded by the leg seal, preventing the support legs from dropping down as a result of pin displacement caused by mixer vibrations.

### *Product Description:*

The leg seal consists of two circular parts, manufactured from flexible material, when combined surrounding the support leg and a part of the leg sleeve. The contact surfaces of both parts fit together with tongue and groove connections; the cylindrical surfaces have a sealing profile on the inside parts. Stainless steel hose clamps connect both individual parts against one another and around the support leg and the leg sleeve.

For gastight seals pin hole plugs can be included.

### *Product Features:*

- Excellent seal
- Long service life
- Maintenance free
- Fast and simple installation
- Prevents seizing of the support legs to the sleeves
- Extra locking pin
- Reusable

### *Material :*

The leg seal is made of EPDM rubber. This material is resistant to hydrocarbons, chemicals, ozone and is weather-proof.

### *Installation:*

The leg seal is easy to install and can be easily removed in order to either pull or push the legs to another position, subject to operational requirements for the tank involved

### *Leg Sizes Covered:*

Leg seals are available for 3" and 4" floating roof legs. It is required to verify exact leg details prior to fitting the leg seals however, this is required to identify suitability as leg penetrations typically are individually designed for each new tank, so sizing might be different for the same leg diameter

As an alternative to the rubber leg seals we also manufacture a leg sock. This is a tube in high weather and hydrocarbon resistant material, executed as a straight tube with an opening at the underside, which allows placement over the leg arrangement, either in the high pin or low pin position. Pulling the strap at the bottom ensures a tight installation, preventing rain water penetrating into the leg arrangement and stopping leg emissions.



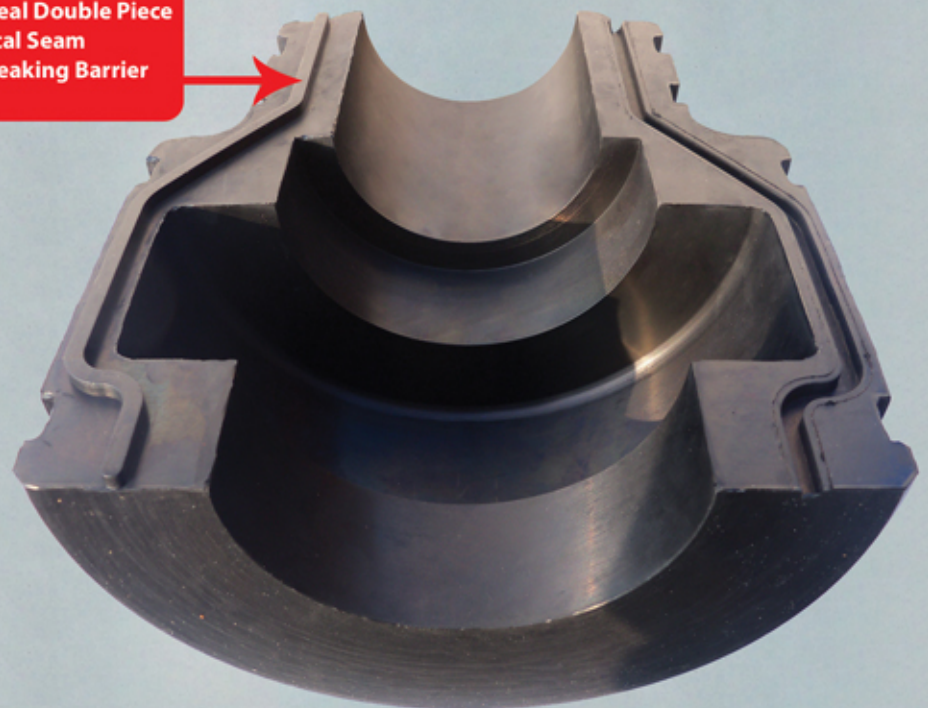
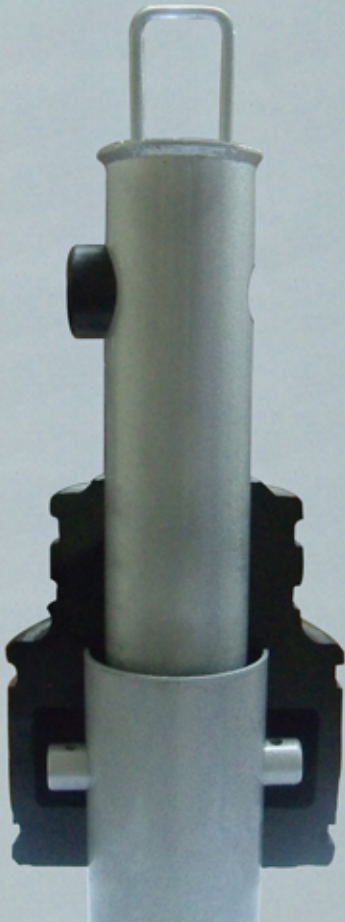
# THE BEST SOLUTION SUITED TO YOUR FLOATING ROOF EMISSION CONTROL REQUIREMENTS

Flexible Double  
Circular Parts.  
Gas Leaking Barrier  
Designed.

Four Stainless Steel  
Worm Drive Clamps  
Wide Strip Clamps

Double Pin Hole Seal  
Completely Fits to the  
Pipe Outer Surface

Leg Seal Double Piece  
Vertical Seam  
Gas Leaking Barrier



# THE BEST SOLUTION SUITED TO YOUR FLOATING ROOF EMISSION CONTROL REQUIREMENTS

## LEG SOCK'S

ATS Leg Socks (floating roof leg socks) are designed to prevent product loss caused by vapor escaping from Floating Roof support legs. Leg Socks also serve the important function of allowing tanks to meet environmental regulations. The interior and exterior parts of the Leg Sock work together to provide resistance against product loss as well as environmental effects from outside of the tank. ATS's Leg Socks provide the following features.

### *Product Description:*

ATS Leg Socks are made using ATSPVC or ATSCON. Material specifications are available to eliminate virtually emissions from floating roof leg supports. ATS's design far exceeds emission reduction estimates, such as estimates for "deck legs with sock" contained in API MPMS 19.2).

ATS Leg Socks reduce vapors from escaping through Floating Roof legs while reducing hydrocarbon emissions as required by regulatory agencies. Leg Socks are efficacious in preventing product loss when used on non-gasketed, adjustable roof

### *Product Features:*

- Meet or exceeds environmental regulations.
- Compatible for 100% aromatics, neat M.T.B.E. and gasohol
- Resist U/V, water and ozone effects from outside of the tank
- Can be installed while tank is in-service.
- Very easy to install and remove.
- May be used with either "U-type" or "T-bar" leg handles.
- Standard sizes, configurations and custom designs are available.
- Seams are R/F factory welded.

### *Material:*

The leg seal is made of PVC-PU-PTFE fabric. This material is resistant to hydrocarbons, chemicals, ozone and is weather-proof.

### *Installation:*

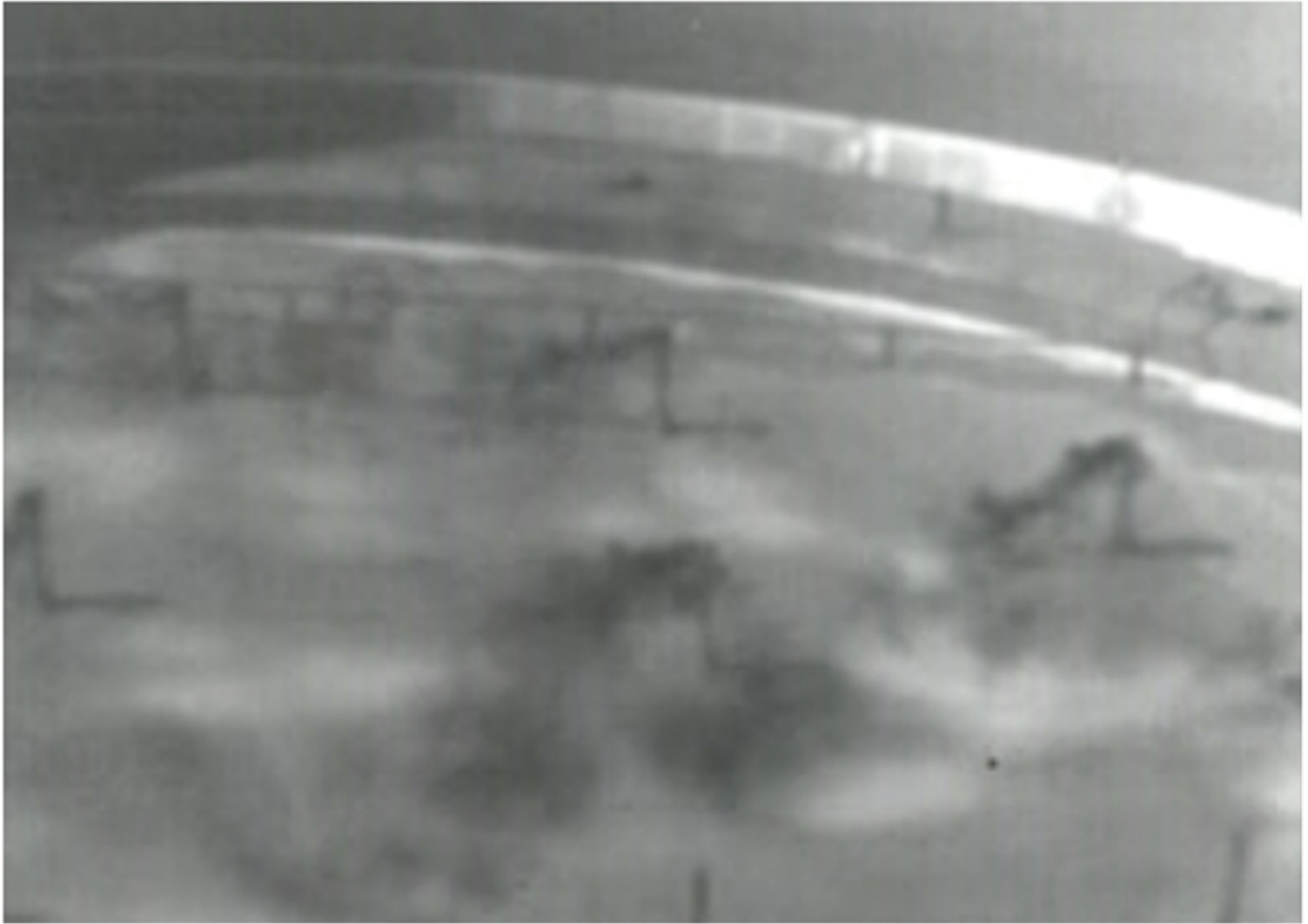
The leg sock is easy to install and easily removed in order to either pull or push the legs to another position, subject to operational requirements for the tank involved

### *Leg Sizes Covered:*

Leg socks are available for 3" and 4" floating roof legs. It is required to verify exact leg details prior to fitting the leg socks however, this to identify suitability as leg penetrations typically are individually designed for each new tank, so sizing might be different for the same leg diameter



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U/V, Water, Ozone Resist  
%100 Aromatic Compatible  
Fabric

Thermal Welded  
ATSPVC-ATSTHANE-ATSCON  
High Quality Fabric

Stainless Steel  
Worm Drive Clamps and  
Inner Side PE Seal

4" & 5" Floating Roof  
Leg Sleeve Pipe

# THE BEST SOLUTION SUITED TO YOUR FLOATING ROOF EMISSION CONTROL REQUIREMENTS

## GAUGE POLE SLEEVE AND FLOAT

Various regulatory agencies are requiring that slotted gauge/guide pole's being equipped with an emission control system. The ATS Gauge Pole Float and Sleeve has been designed to significantly reduce hydrocarbon emissions from slotted gauge/guide poles located on either external or internal floating roof storage tanks.

The ATS Gauge Pole Float and Sleeve features a "low-profile," stainless steel sleeve containing a 25-mil Atsflex™ PTFE (Teflon®) liner and pole wiper. This liner provides excellent chemical and abrasion resistance and effectively closes the slots in the gauge pole. The sleeve is equipped with a stainless steel slide plate containing a 10-mil reinforced Teflon gasket.

The sleeve completely seals off all the slots of the gauge pole within the gauge well, by eliminating vapor emissions through the gauge pipe.

The stainless steel float contains a 10-mil Teflon wiper and is designed to operate in specific gravities ranging from 0.60 to 1.00. It effectively "plugs" the gauge pole, preventing vapours from escaping to the atmosphere.

Both the float and sleeve are designed to be installed with the storage tank remaining in service. Additionally, the ATS Gauge Pole Float Basin should be considered as part of this complete installation for additional emission control.

This new emission control system is another example product of ATS's "Innovative Solutions" principle and commitment to provide high-quality products to the petroleum industry.

### *Advanced Design Features Of The Gauge Pole Float and Sleeve Include:*

- Resistant to all stored products stainless steel construction and components.
- PTFE (Teflon®) liners and wiper materials compatible with all stored products, abrasion resistant.
- Low profile - Sleeve length sized to fit type of well and floating roof (18"to 36" in overall lengths, overall length of float is 18").
- Designed for a long service life.
- Constructed with lightweight stainless steel.
- Free maintenance.
- Easily installed without removing the tank from service.





# THE BEST SOLUTION SUITED TO YOUR FLOATING ROOF EMISSION CONTROL REQUIREMENTS

## FLOAT OPERATED COVER FOR EMERGENCY ROOF DRAIN EMISSION



The unique ATS's Floated Cover is operated end line with emergency roof drain systems to prevent a possible product vapour from floating roof tank at the time of normal operation situation. When emergency drain line cause product vapouring, the valve closes automatically inside of emergency drain sump and prevents product vapour releasing/loss from the tank.

### Advantages

- \* Seals at Low Differential Pressures.
- \* Stainless Steel Construction.
- \* No Mechanical Moving in Inner Parts to Corrode or Get Stuck.
- \* No Drop in Flow Rates.

### Detail Description

1. ATS Float Operated Cover Valve is designed to operate outside of the emergency drain nozzle which is connected to complete emergency drainage systems on the tank.
2. When the rain water rises up to the float, it opens the emergency roof drain float operated cover. So, it prevents vapour loss of the drain system and keeps product vapour loss in the floating tank.



# THE BEST SOLUTION SUITED TO YOUR FLOATING ROOF EMISSION CONTROL REQUIREMENTS

## GAUGE POLE RETRIEVER DEVICE

The ATS Float Retriever provides an excellent "no mess" float retrieval system that allows the operator to retrieve the float and move it out of the way for the sampling process without product spill or mess.

The float chain is attached to a spool which is rotated by the hand crank. When the float reaches the top, the spool shaft and hand crank is then moved to the rear of the retriever housing. This action stores the float to one side and allows the operator access to the gauge pole. A stop rod is provided to lock the hand crank in this position.

### *Product Features:*

- Excellent "no mess" float retrieval
- Long service life
- Free Maintenance
- Fast and simple installation
- Prevents seizing of the Gauge Pole Pipe
- Extra locking pin

### *Material:*

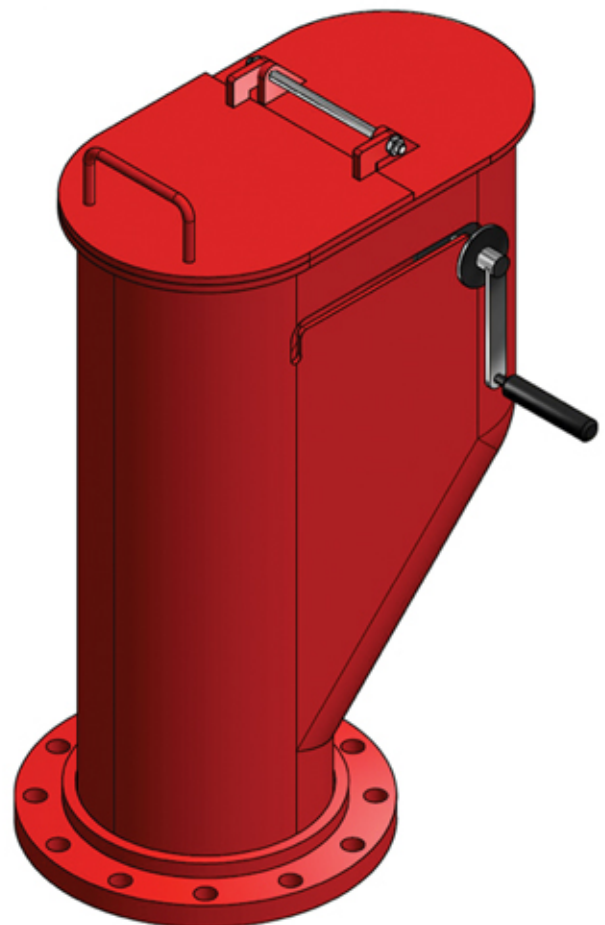
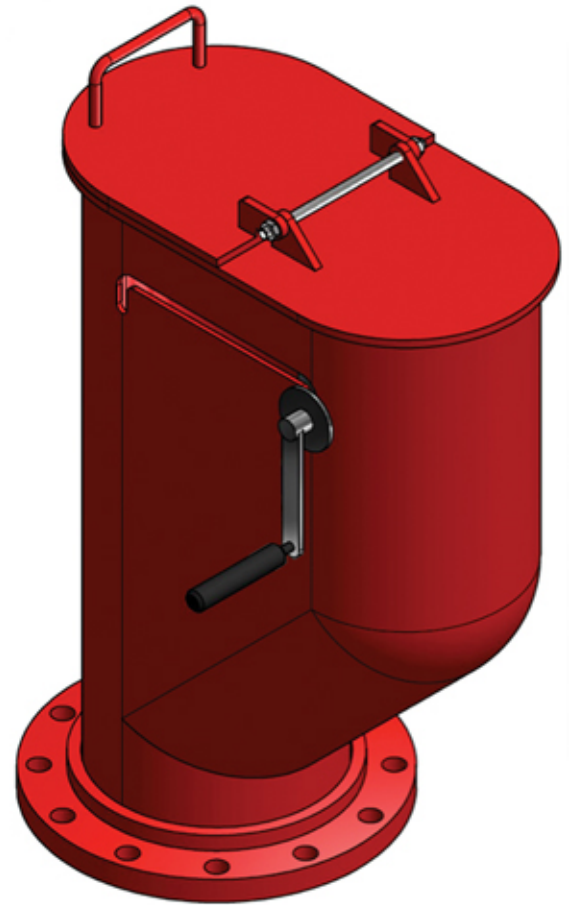
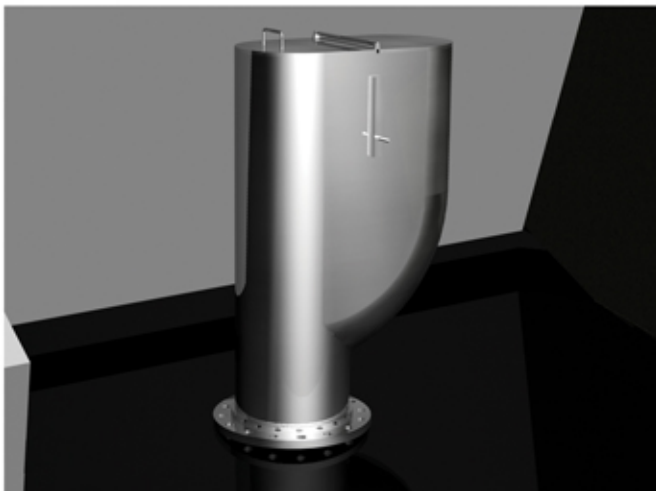
The Gauge Pole Retriever is made of Aluminium or Stainless Steel. This material is resistant to hydrocarbons, chemicals, ozone and is weather-proof.

### *Installation:*

The Gauge Pole Retriever is easy to install and easily can be removed.

### *Gauge Pole Retriever Sizes:*

Gauge Pole Retrievers are available from 6" to 16". It is required to verify exact gauge pole details prior to fitting the gauge pole pipes however, this to identify suitability as gauge pole installations typically are individually designed for each new tank, so sizing



# THE BEST SOLUTION SUITED TO YOUR FLOATING ROOF EMISSION CONTROL REQUIREMENTS

## GAUGE POLE FLOAT BASIN

Designed to be a Gauger's "best friend" by eliminating product spills on the gauger's platform!

ATS's Gauge Pole Float Basin not only provides the Gauger a place to set the float while taking samples, it also provides a place to set sample bottles and gauging tape.

Fabrication with stainless steel material, the basin is easily attached to the top of the gauge pole utilizing only four bolts and a gasket. A convenient, lightweight, gasketed, lift-top cover replaces the traditional gauge hatch.

ATS's Gauge Pole Float Basin is designed with a slope that allows the residual product from the float and chain to drain back into the gauge pole. Environmental contamination and safety hazards are eliminated when product spills on the gauger's platform.

ATS's Gauge Pole Float Basin is another product that demonstrates ATS's "Innovative Solutions" principle and our commitment to provide high quality products to the petroleum industry.

### *Advanced Design Of The Gauge Pole Float Basin Features Include:*

- Designed with an easily opened, gauge cover.
- The cover is gasketed to comply with the most stringent environmental regulations.
- Easily installed without removing the tank from service.
- Constructed with lightweight stainless steel.
- Designed to eliminate mess by keeping product off of the gauger's platform.



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## ROOF DRAIN SPILL STOPPER - HYDROCARBON SENSING VALVE

These hydrocarbon spills have cost money and embarrassment to your company – until now! Spill Stopper is now available to detect the presence of hydrocarbons in the liquid flow and to close automatically, thus protecting the surrounding soil or the ground water from hydrocarbon contamination.

Primarily designed for floating roof storage tank drain systems, tank farm dike drain systems and wastewater treatment facilities, Spill Stopper remains open during normal operation, allowing rainwater and non-hydrocarbon liquids to flow and drain from the tank or dike area. However, hydrocarbons enter the liquid flow, the internal sensing characteristics of the Spill Stopper cause it to close, containing the problem and protecting the environment.

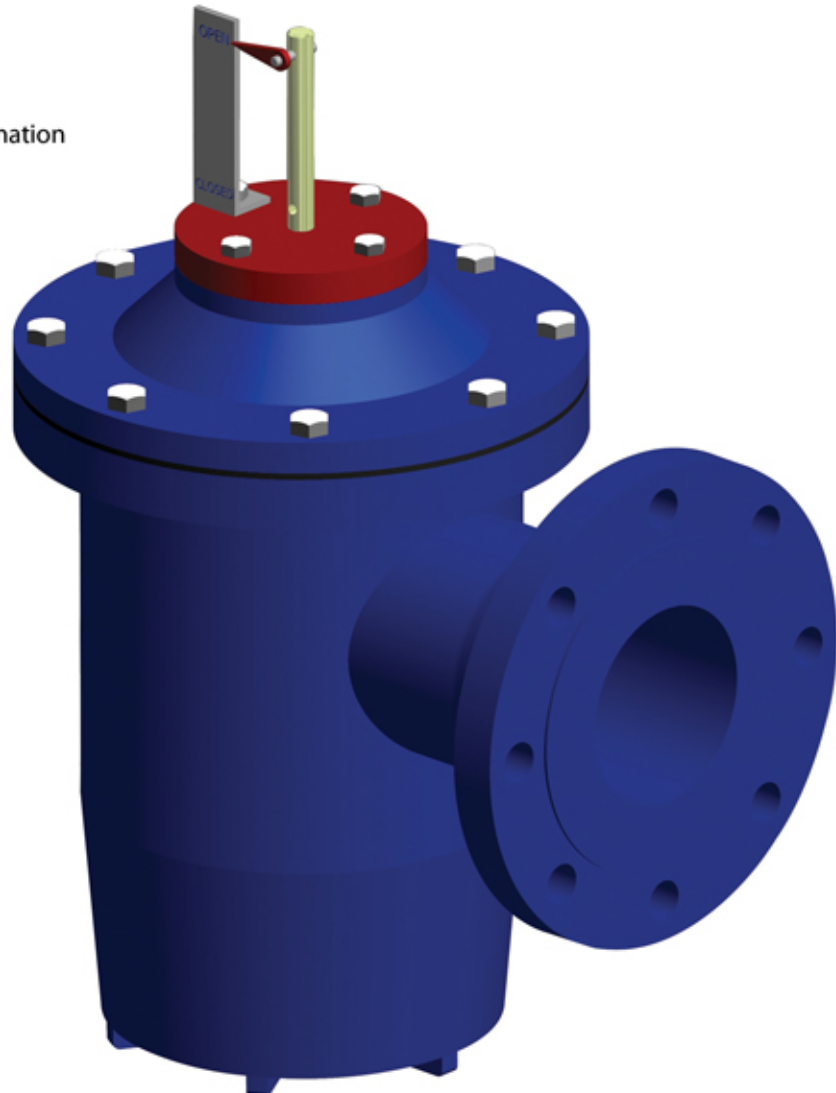
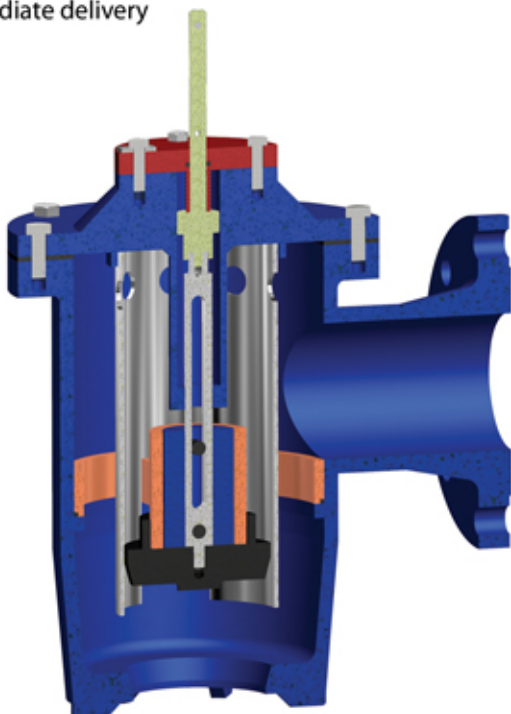
Spill Stopper has been designed for trouble-free performance. Since this valve is mechanically actuated, replacement of the Hydrocarbon Sensing Element upon repair of the source of the hydrocarbon leak source will reset the actuator. Winter freeze-ups are reduced because the drainage system can remain open while Spill Stopper is monitoring the liquid flow.

Spill Stopper Hydrocarbon Sensing Valves are available in 4" Diameter size, with 150# flanges. The rugged aluminum and stainless steel construction of this full flow valve offers lightweight, plus long service life, durability and strength. Spill Stopper makes good economic and environmental sense.

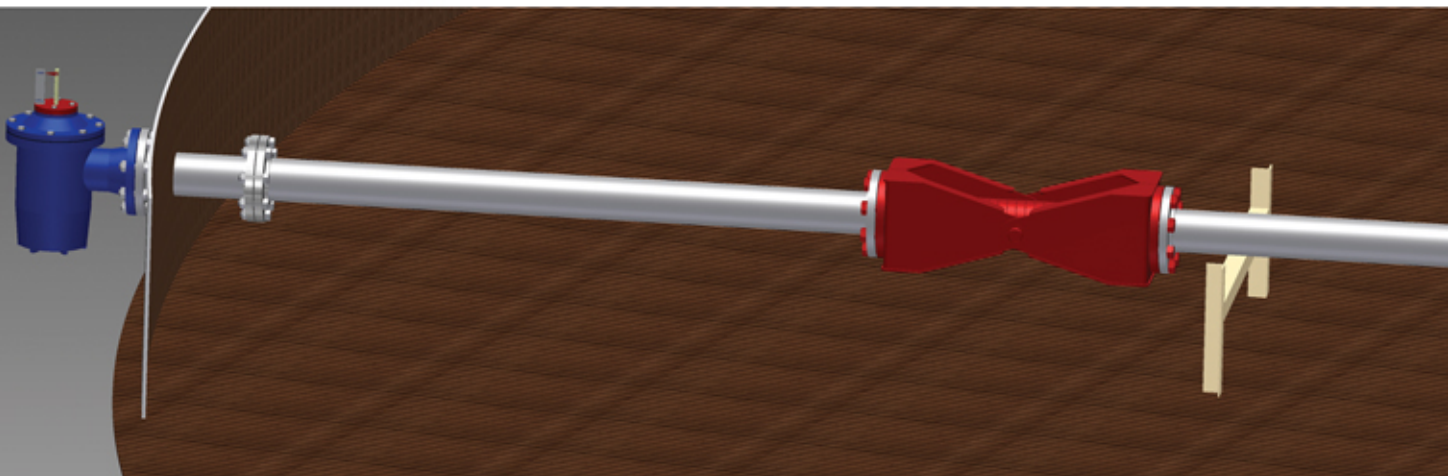
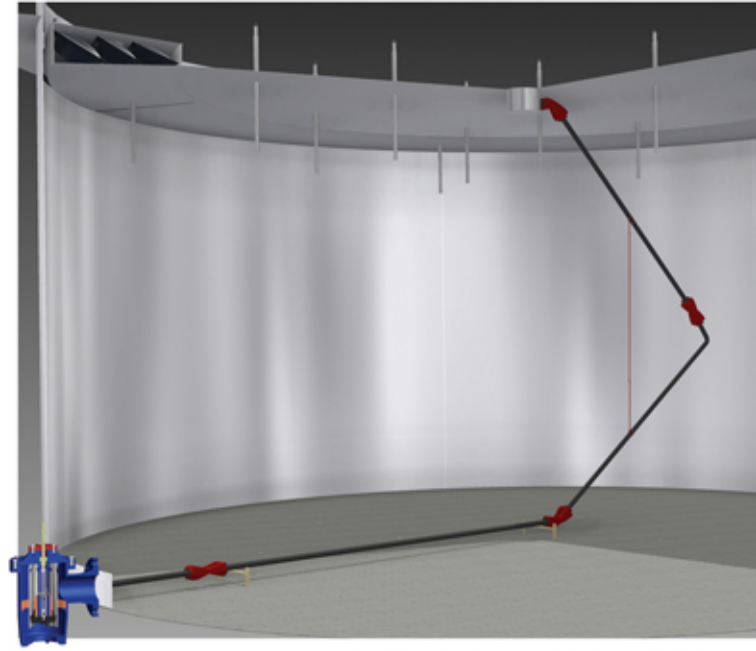
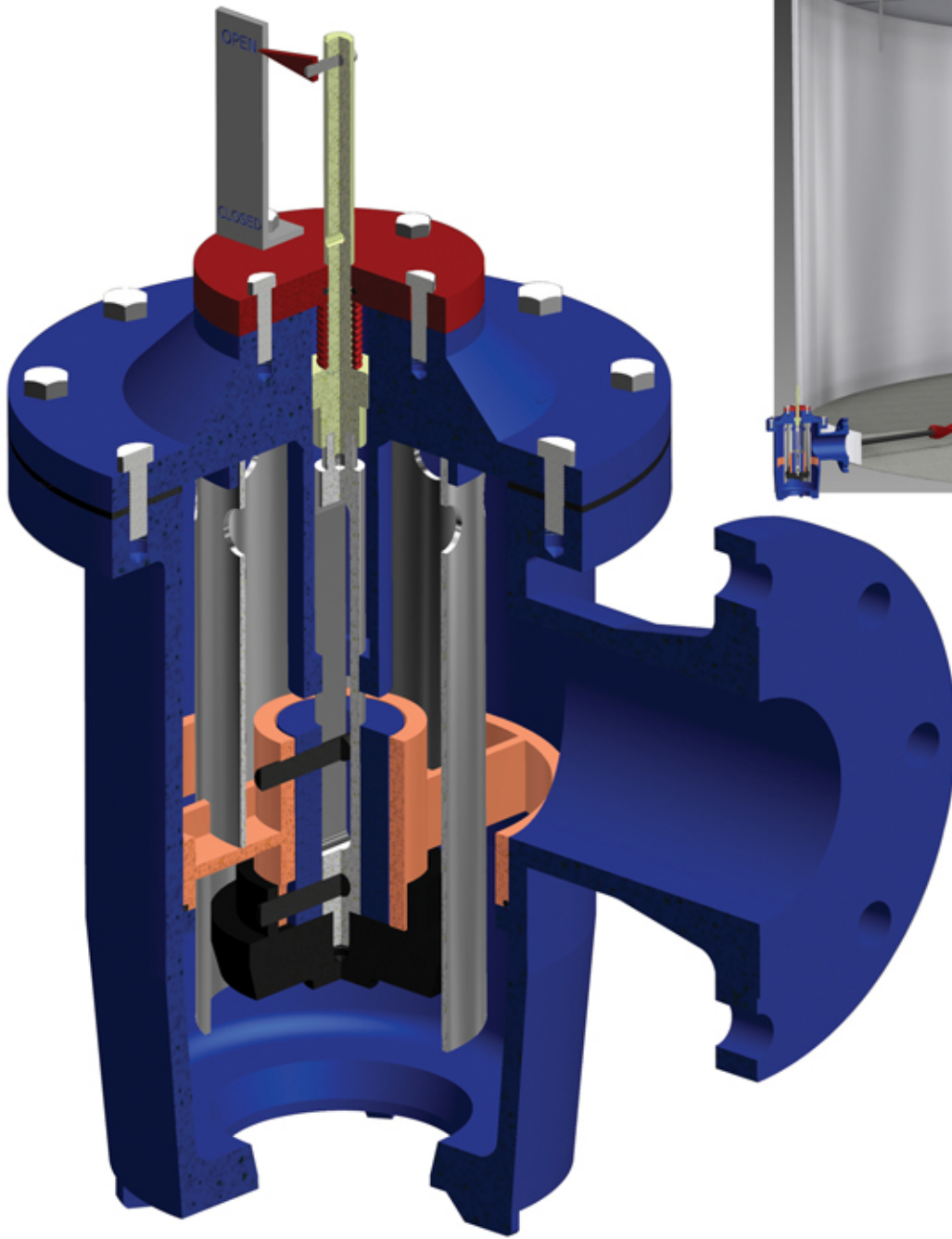
Spill Stopper has been designed and manufactured through the collaborative efforts of AKTEK Inc.

### SPILL STOPPER OFFERS MANY ADVANTAGES

- Can be used in many drainage system applications
- Protection of surrounding soil and ground water from contamination
- No external power required for operation
- Visual and remote indicator signal valve closure
- Reduced maintenance costs
- Floating roof drain system valves can remain open
- Reduces possibility of floating roof sinking
- Easy to install
- Immediate delivery



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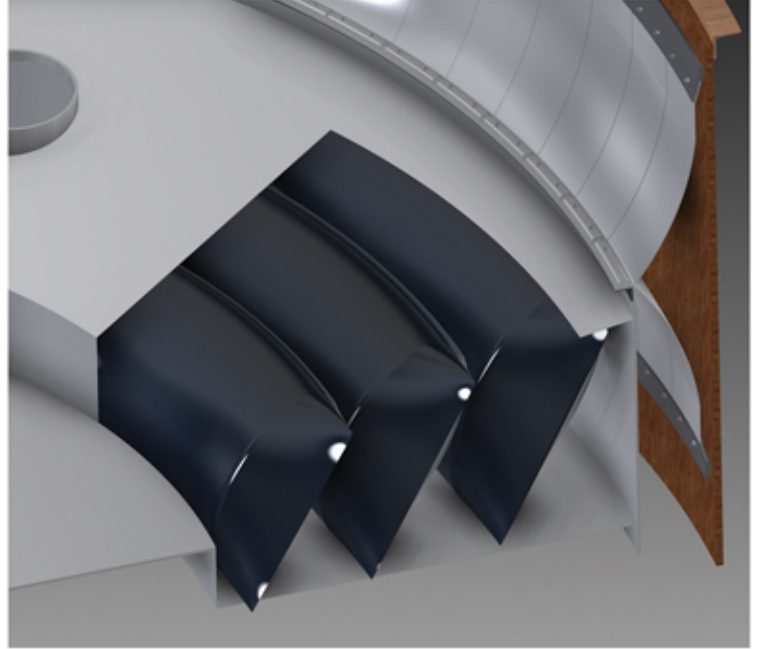
## TEMPORARY SOLUTION FOR LEAKING PONTOONS

ATS Pontoon Liners (inflatable “pillow-type” bladders) are inserted into floating roof pontoons that have taken on liquid from the storage tank.

ATS custom designs Pontoon Liners for Pontoon Floating Roof tanks. The pontoon liner is installed inside of the pontoon and inflated to displace product and keep the roof afloat. ATS's Pontoon Liners are most commonly used in a pontoon that has begun to leak. Leaking pontoons can fill with product from the tank causing the floating roof to sink. Sunken roofs can cause a range of undesirable situations in the tank. ATS's Pontoon liners prevent undesirable situations caused by a sunken roof, and offer the following features:

- Provide additional buoyancy to pontoons
- Allow for stabilization of floating roof
- Temporary fix until pontoons repaired
- Help preventing of sunken roof
- Avoid tank damage
- Avoid roof damage
- Avoid environmental hazards or violations
- Avoid costly cleanup and decontamination

ATS's Pontoon liners are engineered, manufactured and tested using the latest polymer technology. Liners are made from ATShane, which provides flexibility and hydrocarbon resistance.



**THE BEST SOLUTION SUITED**

**TO YOUR FLOATING ROOF EMISSION CONTROL REQUIREMENTS**

# **The unique ATS's Floating Roof Equipments and Solutions**

**Automatic Breather Vents  
Rim Vents  
Foam Dams  
Rim Seal Fire Protection Systems  
Overflow Vents  
Secondary Containment Systems  
Floating Suction Systems  
Drain Dry Sumps/Quick Draw Sumps  
Circulation Vents  
Tank Gauges  
Charge Dissipation Systems  
Self Leveling Stair Tread  
Internal Walkway Systems  
Wax Scrapers  
Seal Fabrics  
Metallic Seal Parts  
Bolting Hardware  
Gas Holder Seals  
Gauge Pole, Column & Ladder Seals  
Miscellaneous Gaskets & Seals  
Gauge Hatch Covers  
Water Draw Valves  
Tank Gauges  
Manways and Nozzles  
Roof Vents  
Slotted and Non-slotted Gauge Poles  
Platforms & Rolling Ladders**



Geodesic  
Dome Roof



Internal  
Floating Roof



Floating  
Roof Seal



Floating  
Suction System



Roof  
Drain System



Emission  
Control Systems



Special  
Products



Engineering



**ADVANCED TANK SYSTEMS ENGINEERING SERVICES COMPANY**

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