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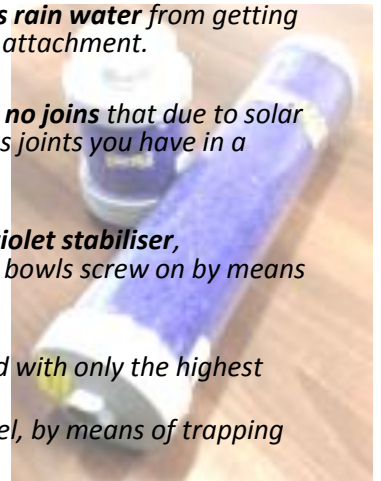


## BREATHHER FILTER RANGE



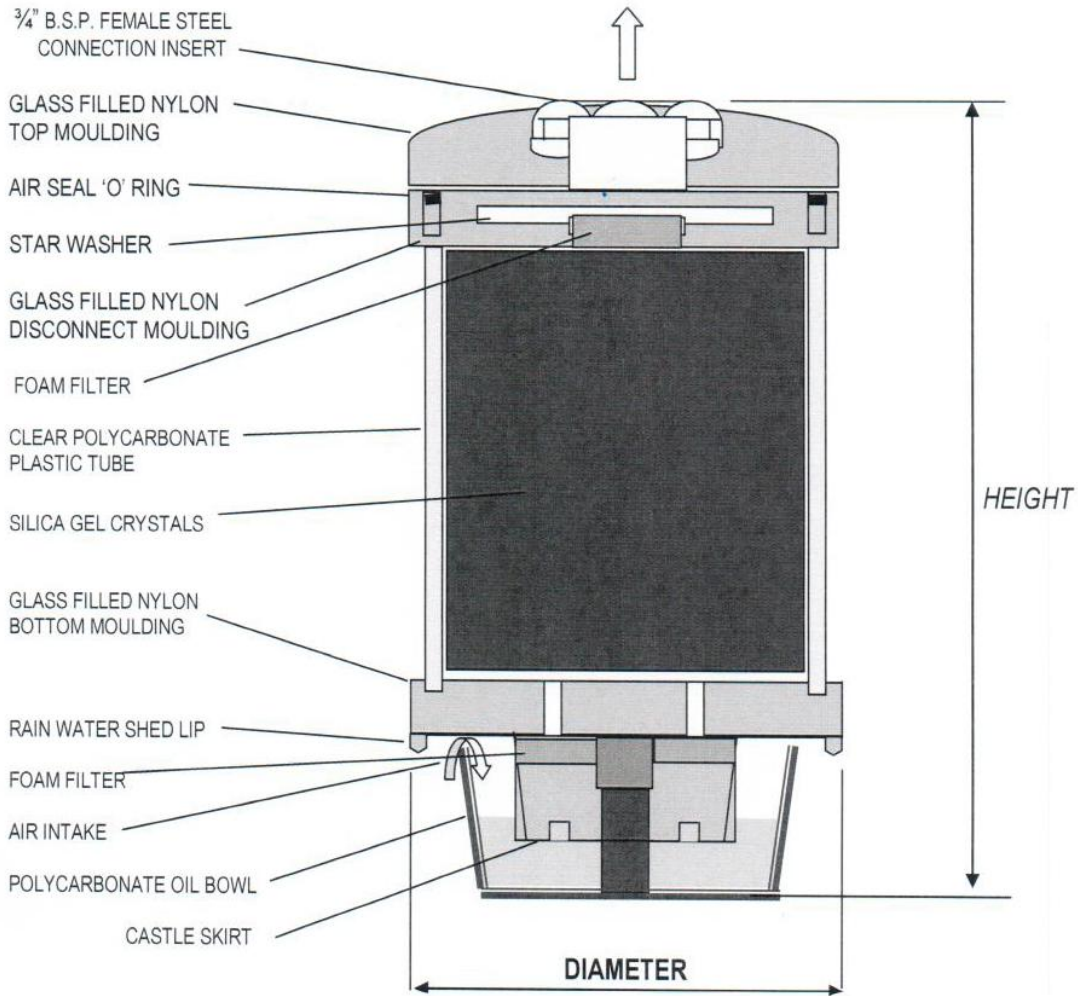
## FEATURES

- iCerMax™ Breather Filters comprise of 4 basic components , **the top, the main body the oil bowl and Filter foam**. iCerMax™ Breathers do not require any holding bolts, nor are there any complicated fastening methods for the assembly of the Filter Vessel
- The breather simply fits together by means of a **patented bayonet device that incorporates a “Turn to Close or Open” feature**, similar to that of a normal light bulb, making servicing extremely simple, quick and easy.( No Tools Required)
- The breather **top does not have to be removed** from the breather pipe every time , **the Silica needs to be replaced**, The Filter Head is permanently fixed to the Vessel or Tank breather stand pipe and is **sealed effectively** with thread seal or thread lock . Thread tape or Stag thread sealing compound may be used as a substitute, care must however be taken to ensure the bayonet connection will operate without the connection to the standpipe coming loose, a leak free seal needs to be established to prevent water getting into the breather via the stand pipe threads.
- The Breather pipe insert connector provides a connection in **3/4” B.S.P. female configuration through the entire range of Breathers, regardless of physical size** , This pipe connector is also galvanised for corrosion protection and protrudes out of the top moulding to allow for a positive steel to steel tightening with a 32 mm spanner, thus enabling the breather to be securely and effectively sealed onto the breather pipe, without causing damage or cracking to the breather top that can create leaks, and cause premature failure.
- The **Neoprene rubber “O” ring** that seals the point where the breather opens, is positioned in the breather top moulding in such a manner that it is protected from ultra violet rays that would otherwise age the rubber, causing premature failure. This seal will not allow air or water to enter the breather at this point. (Minor site adjustments can be made to increase the mechanical pressure on this seal)
- The breather body is made up of 3 parts, the **“QD” moulding, the clear Polycarbonate tube**, and the **bottom moulding**. The “QD” and bottom mouldings each have a groove into which the Polycarbonate tube fits.
- These parts are assembled and **sealed together uniquely** in that the grooves in the mouldings are filled with Silicone sealant, before the clear Polycarbonate tube is inserted allowing the sealant to seal on the inside and the outside of the tube, forming a perfect water and air tight seal. The tube is then pinned into position with PVC Pins so that there is no mechanical stress on the sealant.
- The breather **bottom moulding has a sharp watershed rim that prevents rain water** from getting into the oil bowl, also a moulded-in brass insert for the screw-on oil bowl attachment.
- The clear extruded **Polycarbonate tube used is a continuous length with no joins** that due to solar related expansion and contraction could leak and become faulty. (The less joints you have in a breather, the better the life Expectancy & efficiency.
- **The oil bowls are made from high impact polycarbonate with an ultra violet stabiliser**, incorporating a moulded-in oil level line so that it is always constant. The bowls screw on by means of a 5mm moulded-in brass stud.
- **Silica gel is the principal component of a breather**. BREATHERS are filled with only the highest quality Silica Gel to provide the best performance,
- All iCerMax™ Breathers are fitted with a foam filters to assist the Silica Gel, by means of trapping large particulate, that would otherwise contaminate the Silica



# SPEC SHEET

## GUARDIAN "TXP 1 - TXP 7 BREATHER FILTER RANGE



MODEL TYPE	TXP1	TXP2	TXP3	TXP4	TXP5	TXP6	TXP7
OIL QTY	1,600 lts	3,310 lts	5,260 lts	6,610 lts	8,320 lts	10,010 lts	11,700 lts
SILICA GEL	0.48 kg	1.00 kg	1.58 kg	1.98 kg	2.50 kg	3.01 kg	3.51 kg
DIAMETER	108 mm	108 mm	108 mm	108 mm	108 mm	108 mm	108 mm
HEIGHT	175 mm	275 mm	375 mm	475 mm	575 mm	675 mm	775 mm
APPROX MASS	1.00 kg	1.63 kg	2.35 kg	2.85 kg	3.44 kg	3.97 kg	4.44 kg

# Interesting Facts – Microbial Growth

There is no single specific organism that can be identified as being responsible for degradation and spoilage.

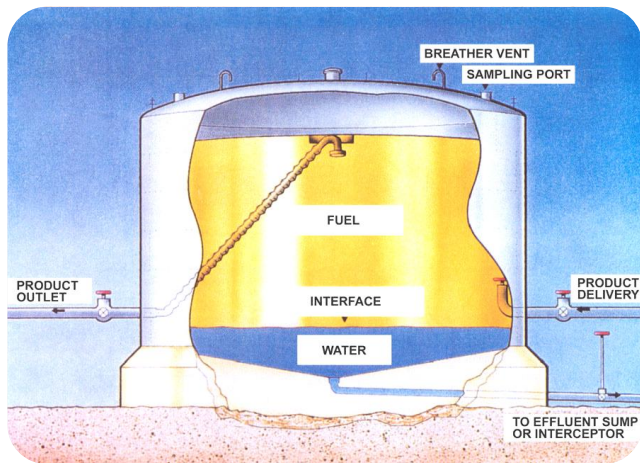
As a general rule, wherever fuel and water come into contact in a storage or distribution system microbial contamination is likely to occur.

No matter how well maintained a storage system is a water bottom is almost invariably present. This results from a number of sources:-

- Freshly refined fuel contains some water. This separates out as the fuel cools down.
- Atmospheric condensation: humidity in the air in the storage tank condenses out and adds to the water bottom.
- Rain or snow may enter the tank via sampling ports, breather vents or ill-fitting seals on floating roofs.

Transport or storage in tankers or barges can result in contamination from ballast Water. Consequently as the water in the bottom develops a microbial population and builds up in it.

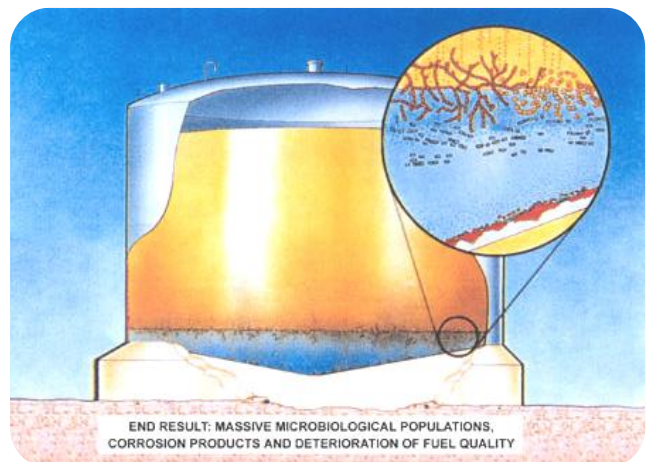
Once a microbial population becomes established fuel quality rapidly deteriorates. As outlined below problems such as haziness, failure to meet specifications, corrosion, filter plugging and additive degradation can occur.



## Sludge Formation:

Microbial debris is deposited on the tank bottom where it forms a layer of sludge. This sludge creates an environment which favours microbial induced corrosion. It may also become contaminated with viable micro-organisms and unless removed will act as a reservoir of infection every time the tank is used. The duration and conditions of storage are also important. If there is a low turnover of a stored fuel, such as in a strategic reserve, contamination is much more likely to develop.

Poorly maintained or outdated storage facilities also present greater opportunities for contamination.



## Degradation of Additives:

Certain additives, especially those rich in nitrogen and/or phosphorous, encourage microbial growth. In the process the additives are degraded and consequently their effect is lost.