

Pegasus Salt Saturators

The problem

Brine is used in many industries including Water Treatment where it finds use in the regeneration of water softeners and as a pre-cursor for the electrolytic generation of chlorine. In order to make brine in large quantities, large volumes of salt (sodium chloride) are required.

The construction industry is becoming increasingly aware of Health and safety issues associated with manual



salt saturators



handling and this has impacted on traditional tasks such as adding heavy bags of salt to water softener brine tanks. This has led to an increasing requirement for the automation of such processes wherever practical. Our range of Salt Saturators have been designed to eliminate manual handling and provide a constant controllable supply of saturated brine solution.

The solution

The Bulk salt saturator is a system designed to eliminate manual handling and storage issues associated with bags of salt and make the delivery of brine to water softening systems a much safer and economical process. Salt Saturators work on the simple principal whereby a controlled addition of water is mixed with PDV salt (pure dried vacuum salt) to provide a source of brine.

Our standard range of salt saturators has been designed for an optimal operating water head pressure while allowing for the normal increase in the water level after a full recharge of salt. Goodwater can offer a standard range of salt saturators starting at 8 tonne capacity right through to 70 tonne capacity.

All salt saturators are supplied with a standard salt fill line and connector which is designed to accept the salt from a bulk delivery tanker.

The outlet of the salt saturator is connected to a brine collection system situated inside the vessel. The brine

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collection system is firstly covered by graded layers of gravel and then the bed of salt. Water is supplied to the salt saturator via a mains water supply which is controlled via a ball float valve system.

Now that the two main ingredients have been added, the water mixes with the salt to become Brine. This brine seeps through the graded filter bed and into the brine collection system offering clean, saturated brine through the outlet connection.

The shells of our salt saturators are translucent in order that the salt and water levels can be readily seen and also incorporate a UV stabiliser to prevent UV damage. The tops and bases are pigmented mid blue as standard, but any alternative colour to BS2800 can be supplied.

All standard models come complete with the following:

- Side man-way.
- Louvered vents.
- Standard salt delivery pipework c/w tanker connection.
- Lifting lugs.
- Float columns for the ball float valve.
- Internal brine collection system c/w integral Brine outlet connection.
- Graded gravel bed. (supplied in bagged form on pallets)
- Pressure relief vents.

A wide range of optional extras are available including the following:

- Salt dust arrester tanks.
- Vent filter Socks.
- Overflow downpipes.
- Brine outlet valves.
- Access steelwork.
- Salt level switches which allows alarms to be activated on both high and low level salt.
- Brine transfer pumps and control systems.



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Venting systems

As standard, all saturators incorporate a louvered vent system. However with this system, any escaping dust generated during the salt filling would be vented out through the louvered vent which may not be desirable, especially if the saturator is located inside a building or adjacent to sensitive equipment. In this case, other means of venting need to be considered.

Goodwater are able to offer alternate filter systems in the form of either a filter sock or salt dust arrester.

Filter sock

The filter sock is offered primarily for indoor applications. It is made up from a porous fabric material to prevent any pressurisation during filling. The filter sock is attached to the vent at the top of the vessel and is designed to catch any escaping dust within the sock itself. It is recommended that the sock is removed and emptied after each fill before being stored in a dry place.

Dust arrester

The dust arrester is a small tank installed next to the salt saturator. The dust arrester is connected to the vessel via a 12" PVC vent line. In this vent line there is a supply of water which passes through a spray nozzle. The spray



effect is designed to guide the dust into the arrester. The dust then sits in a bed of water and is distributed away via a 2" outlet.

Dust arresters will remove the majority of dust but in highly sensitive areas a specialist dust removal system may be required.

Brine transfer systems

Goodwater can also offer a range of standard brine transfer systems from a simple gravity feed system through to automated pumped brine delivery including the supply of brine day tanks. Our equipment sales team are able to advise on the most suitable system for a particular project.



Internal view showing brine collection system and ball float chamber.