



In the US, Atlas Copco has 14 manufacturing sites and approximately 4,600 employees.

Shaking Up the Business of

Salt

It's the universal seasoning.
It's the spice of life. It's salt.

Among the oldest spices known to humankind, salt is used the world over to enhance the flavor of practically every kind of food. But salt isn't only about adding flavor. Used in cooking it improves rising in baked goods, adds tenderness to meats, provides better consistency in cheese, and enhances the texture of sauces. Salt's preservative qualities also help protect foods against spoilage.

Salt is perhaps most familiar in that ubiquitous table top shaker (the one with more, larger holes), but that's only the beginning. In addition to processed granular table salt, a vast variety of salt comes from the sea.

Sea salt is harvested by evaporating seawater, which is about 3% salt by volume. Because sea salt receives little or no processing, the minerals present in seawater remain intact. The world's different sources of seawater produce sea salts with distinct colors, flavors and textures. Professional chefs, quality food processors, fine cooks and discerning diners prefer the special qualities offered by specific sea salts, and one company is devoted to providing a growing range of choices.

SaltWorks, Inc.[®], based near Seattle, Washington, is America's Sea Salt Company[®]. Founded in 2001, SaltWorks supplies premium grade specialty salts to wholesale, retail and consumer markets throughout the world.

"We boast the largest selection of specialty salts available, with over 110 varieties of gourmet salts from around the world," according to James Mackness, Manufacturing Engineer with SaltWorks. "Our customers range from individuals who order by the pound, to food processors, restaurants, grocery stores, salt mill manufacturers, and spice companies who order

by the pallet, truckload, and multiple ocean containers. SaltWorks maintains an inventory of over four million pounds, ready to ship, in our 100,000 square foot, climate-controlled warehouse."

SaltWorks is more than a seller of salt. It is also a fully-integrated processor with in-house capabilities including optical color sorting, size screening, de-dusting, magnetic cleaning, low temperature drying, natural salt smoking and natural salt flavoring.

"SaltWorks is the most trusted name in the salt business and our strict commitment to quality ensures that our customers will receive only the cleanest, most natural products possible," says Mackness. "Our facility is a showcase, but it's not a dog and pony show. It's a facility that makes food and we want to provide the best quality product to our customers."

Mackness points out that with many varieties of salt to choose from, SaltWorks' customers never tire of their condiment. "You can liven up your food by trying something different, such as smoked salt. It's nothing weird or fake, simply all natural smoke flavoring of sea salt. We use woods that are certified free of chain oil. It's all part of our quality control process. Add a bit of smoked salt to a bland tasting food like a white fish and it's transformative."

Throughout the SaltWorks facility, crucial processes including sorting, quality control and packaging employ pneumatic equipment. SaltWorks uses only oil-free compressed air. "As part of our quality control program, we decided to take the step to oil-free air so that no hydrocarbons can contaminate our product," Mackness explains. "We use compressed air mostly





Table salt is mined from underground salt deposits. Typically it is processed into very fine crystals and calcium silicate is added to prevent caking. Salt shakers are typically filled with table salt.

for pneumatic controls, but even if you're just blowing machines down with air, it's so important that the air be oil-free. Oil-free air is a statement by our company about our commitment to quality."

"When SaltWorks moved to a new facility in the end of 2011, the company took the opportunity to upgrade its entire compressed air system with new Atlas Copco oil-free scroll compressors and AIRnet piping," according to John Kuipers, Service Sales Manager for Atlas Copco Compressors LLC in the Pacific Northwest. "Unlike the reciprocating compressor that SaltWorks replaced, the scroll compressors use spiral elements. One element orbits around a second, fixed element. Intake air is continually compressed into a smaller and smaller pocket, and a pulse-free stream of compressed air is released through a port in the center. The scroll element is belt-driven and there is no metal-to-metal contact, so oil lubrication in the compression chamber is not required. As a result, air quality is exceptional and 100% oil-free. Compared to conventional compressors, scroll compressors can be more energy efficient. There are few moving parts, so reliability is high and service interventions minimal. To simplify maintenance further, SaltWorks has a Service Plan which includes an Atlas Copco Technician coming to their site for scheduled service on their machines."

Mackness says he chose the Atlas Copco scroll compressor for a number of reasons. "It was price competitive," he explains, "and the right stepping stone in terms of improving our

compressed air quality. We had a reciprocating oil-free compressor before, but when we planned our move into a new facility we took the opportunity to start from scratch and decided we'd do this right."

SaltWorks purchased an Atlas Copco SF22 4-element scroll compressor that produces 90 cfm of oil-free compressed air. They also bought a second SF15 scroll compressor to provide 100% redundancy. "We run both compressors to distribute the load between both units," according to Mackness. "Everything is integrated in one box so there's no messing around with wiring a dryer. It's easy to work and very ergonomic. It's also quiet. Our old reciprocating compressor was noisy, but you can have a conversation standing next to the scroll compressor when it's operating without raising your voice. It's the quietest of all the compressors I've worked with. Take a few steps away and it blends into the ambient background noise of the room. It's that quiet."

Kuipers points out that because Atlas Copco scroll compressors are so quiet, they are usually installed at the point of use rather than in a remotely located compressor room. "This reduces installation costs and adds convenience," he says.

Mackness emphasizes the importance of compressed air quality when the processing of

Sea salt is harvested from evaporated seawater. It receives little or no processing so the minerals present in seawater remain intact. Different sources of seawater produce sea salts with distinct colors and flavors. Professional chefs, fine cooks and discerning diners increasingly prefer the many special qualities offered by sea salt.

food is involved. "I think you just go straight for oil-free," he believes. "Whether you're making ice cream or bread or salt, you should have oil-free air if compressed air touches your product in any way."

Mackness offers this example at SaltWorks. "When people buy food, they want to know that it's clean and pure. SaltWorks adds value by making sure that the salt we sell is the perfect size and absolutely clean. With sea salt in particular, it is especially important that any sand, sea shells or other non-salt particles are removed prior to packaging. We have a state of the art optical sorting machine with high definition cameras. We set targets for what we want to remove from a stream of salt and a very precise puff of air is delivered to take targeted particles out of the stream. We set distinct parameters for each variety of salt and can target particles of any size or color, whatever it is that we want to remove. Obviously when using air in this manner it has to be oil-free."

When specifying manufacturing equipment for the new SaltWorks facility, Mackness selected an Atlas Copco AIRnet piping system and installed it himself. "It's such an easy system to install," he says. "I installed 800 feet of pipe with all the valves, about 20 drops and all the connections, over two weekends. It's the second AIRnet system I've installed. I don't

know of any other system similar to AIRnet that's so easy to install and looks so great. You can get very professional results installing it yourself. Everyone who sees it says 'wow.' It's a testimony to the design of the system. I love AIRnet's modularity which makes it easy to revise or add onto. It is price competitive and I'm a huge fan."

SaltWorks' company-wide commitment to quality and efficiency makes their selection of Atlas Copco scroll compressors and AIRnet piping an ideal fit. "We are proud of what we do, proud of our products and proud of our facility," Mackness says. "Would I recommend Atlas Copco to others? I already do."

SaltWorks' brands include Artisan Salt Company®, Pure Ocean®, Fusion®, Le Tresor™, Pacific Blue™, Bonfire®, Wildfire®, Hellfire®, Salish®, Durango®, Yakima®, Ceara™, Bokek®, Hiwa Kai™, TheraSoak™, Ultra Epsom®, Mineral Essence™, Sonoma™, EuroSpa™ and many more.



SaltWorks is Serious About Salt®. In addition to providing a vast range of salts, the company takes the time and care to educate consumers on the history of salt, the many benefits and uses of natural unrefined salt, the different types of salt and where they originate, and in-depth information for cooks and those interested in good health. More information is available at:

www.saltworks.us