



SOGEVAC in maple sap collection



Everyone knows about maple syrup and its delicious and sweet taste once spread on fluffy pancakes... But have you ever thought that your maple syrup might have been collected with vacuum?

The use of vacuum can increase the production yields of about two third compared to normal collection by gravity and have proven to have no impact on the quality of a syrup neither on taste nor texture. From 200 to 20,000 taps on the maple trees can be connected to the same vacuum systems. Vacuum also helps to solve typical problems of collection by gravity when the maple trees are not of the same height, or at the same elevation.

But this is not an easy process for the pumps, and Chris Pfeil, owner of the Maple Guys, being in the sap production and sap equipment reselling for more than 17 years, can tell you a lot about it!

One of the biggest challenges in this application is linked to the seasonal activity. Indeed the harvesting period only lasts 6 to 8 weeks every year and generally takes place between January

to March or April. Most of the time, the producers have not used their pump in between!

"Reliability is key!" says Chris, "I need to know my pump will start when I need it and that it will not let me down during all the days the harvesting period lasts".

"I got my first SOGEVAC SV40B more than four years ago and know I can



The tubing in the maple orchard brings the sap to the sugarhouse



A view into the pump house shows a typical maple sap vacuum pump installation. Vacuum pump, moisture trap, sap vacuum extractor, that connects to the tubing in the woods. And the maple sap tank in which the extractor dumps maple sap.

trust it. It once got completely filled with sap due to mistake on the collection line but it could be drained, cleaned and re-started without any problem!”

The cold ambient temperature can sometime be an issue in this application, but this can easily be solved by using low viscosity oil allowing cold starts. On top of that, that oil has the food grade NSF H1 certification which guarantees a high level of food safety.

“SOGEVAC also have a very good tolerance to water and sugar vapor”, in this process, this avoids having any condensation in the oil and therefore too frequently oil exchanges.

Also very important is the noise level. Sap producers are spending a significant amount of time working in their sugar house, sometimes also with visitors. So any production equipment needs to be as quiet as possible to minimize the disturbance and prevent from wearing of uncomfortable ear protection.

“I have tried other technologies of vacuum pumps” says Chris “in particular dry ones, but they simply did not work!”. The challenges for dry pumps in this application, whether they are dry carbon vanes or claws type, is that, due to high temperature of the mechanical parts, the sugar has a tendency to caramelize and once the pump has been stopped, it is



Chris Pfeil, owner of the Maple Guys, being in the sap production and sap equipment reselling in USA and Canada for more than 17 years

completely stuck and can't be re-started. In consequence, the pump must be removed, given a thorough check and many parts need to be exchanged. SOGEVAC works great because the oil acts as a protection film and in case of sugar accumulation in the pump, it stays in the oil and can easily be removed by a simple oil drain.

“This pump is rated for 29 CFM, its motor has 2 hp, 3-phase and I have a drive running it which is really the best way to go for power efficiency and you can ramp up and down”.

“Maintenance work simply requires just a single oil change during the season or subsequent changes in case of having passed large amounts of sugar. At the end of every season or at the beginning of the new season, all you have to do is change your oil filter, really simple” Chris says.

“SOGEVAC is a modern rotary vane vacuum pump, efficient, quiet and with minimum loss of oil, not like these noisy fresh oil pumps we had 25 years ago. SOGEVAC is a really nice product!” concludes Chris.

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