USER'S MANUAL

INSTRUCTIONS FOR SAP LIFTER

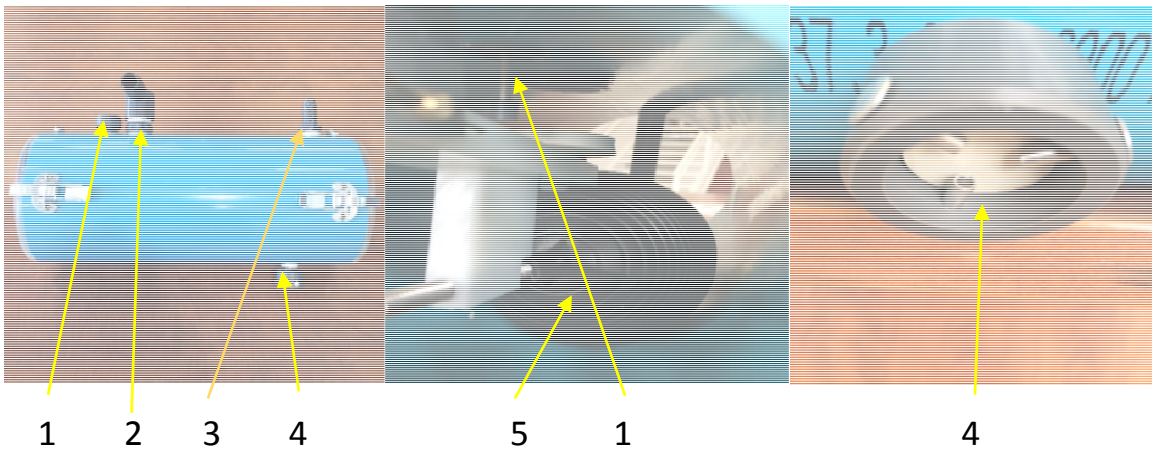
The sap lifter is used to bring sap from a lower tube to a higher tube. An elevation of 20 feet (6 meters) or more is possible with a vacuum of 20 inches of mercury or more.

The sap lifter is installed at the lowest master line, it's tank is under vacuum and the water enters because it is placed lower than the master line, therefor under the effect of gravity. When the tank is full, a float will plug the sap entrance and at the same time open a valve that lets air enter. Therefor, with a full tank, an air inlet and a tube under vacuum, the sap will go through the vacuum hose to the master line, this takes approximately 10 seconds. As the sap goes up, the vacuum also passes through the deviation tube collected directly at the lower master line, therefor the vacuum is non-stop, the sap accumulates in the lower master line (between A and B, see image) and will be drawn into the sap lifter when the transfer is finished. The more taps there are, the longer the tubing must be between A and B to be able to accumulate more sap.

A simple sap lifter = 300 taps. A double sap lifter = 600 taps.

A triple sap lifter = up to 1000 to 1200 taps.

When you stop the vacuum, a valve (situated underneath to the left) opens and the sap flows by gravity to the ground. The valve in question is susceptible to open frost at night, therefor it is recommended to protect the system from frost by covering it with isolated panels and install a heat source, either a light bulb or a candle.



1) Air inlet valve
2) Water inlet of lower master line.
3) Water exit towards the higher master-line.
4) Evacuation valve with absence of vacuum.
5) Inside sap lifter float.