

# AFX PUMPS IN FOOD & BEVERAGE

peristaltic hose pumps

Peristaltic pumps are regularly used in the food & beverage industry. The low shear peristaltic action is created by compressing the hose element between 2 rotating rollers. In between each pass of a roller, the hose recovers to create a vacuum and draw in fluid. This means that the pump is self-priming and dry running.

This simple dynamic effect requires no seals or valves, and the fluid is totally contained within the hose, separated from the pump. No other positive displacement pump offers this unique separation of pump and fluid. Peristaltic pumps regularly outperform other pump types, such as lobe or diaphragm pumps for example, which rely on their mechanism including seals and valves to work within your product.

Peristaltic pumps may be found during in the following processes:



# **PUMPS** **IN FOOD & BEVERAGE**

## brewery processes

**Yeast Cropping:** Yeast is easily damaged and should be pumped without shear. Traditional pumps can produce varying degrees of shear and damage to the yeast by impellers, vanes, lobes or valves. Peristaltic pumps are inherently low shear. Yeast quality is maintained, allowing accurate process control and improved finished product quality. Dependent upon the beer, yeast cropping can be bottom tank or top tank. Top tank, especially, can involve pumps running dry. This can be a problem for many pumps, but not for peristaltic pumps which can run dry indefinitely. Peristaltic pumps do not rely on the pumped media for lubrication, offering true dry running, improved reliability and eliminating unplanned maintenance.

**Diatomaceous Earth (Kieselgur):** the abrasive nature of the product causes premature failure of many pump types. Because peristaltic hose pumps contain the fluid entirely within the hose, the hose is the only wearing part. The rubber hose is highly abrasion resistant and where other types of pumps often fail because the product comes into contact with the rotors, stators, impellers and seals of the pump. In a peristaltic hose pump, however, the hose never fails due to abrasion.

## winery processes

Peristaltic pumps have a wide range of applications within the wine industry. Just about anywhere that a pump is required in a winery, a peristaltic pump can fit the bill. Peristaltic pumps can pass significant amounts of suspended solids, in the form of grape pulp, skins and seeds without grinding or breaking any seeds, and without overly macerating the skin, thereby increasing turbidity.

**Must from Destemmer to Fermenter or Press:** The pumps that move the grapes and juice from the destemmer to the fermenter. Peristaltic pumps can move the destemmed grapes from the destemmer to the tank or press without macerating them or their seeds. Press Sump pumping gently minimises emulsion of the solids in the free run.

**Wine, Pomace Fermenter to Press:** The design of a peristaltic pump means that the pomace isn't subjected to shearing forces as it moves through the pump.

