Excellence in Cannabis Process Equipment, Technology & Customer Service

Pope Scientific was founded in 1963 to provide a variety of apparatus to laboratories and pilot plants. The company quickly started doing business worldwide in a broad variety of industries with expanded offerings of production processing equipment including the Wiped-Film Molecular Distillation line and Toll Processing Services. Our first cannabinoid customer application goes back to 2003 for CBD concentration via wiped film stills; with the hemp actually being tossed out as waste from hemp seed oil processing. How times have changed!

Today, Pope sits at the forefront of cannabis processing technology with distillation, extraction, and isolation equipment being provided in the USA and internationally.
The Molecular Background

Wiped-Film Still technology takes advantage of the scientific fact that each chemical substance has a characteristic vapor pressure. It is this relative difference in vapor pressures which dictates how compounds can be separated into their constituent components.

And that in the most simplistic terms is what happens inside our stills, causing: the cannabinoids to be caught and collected by the internal condenser; the distillate to flow into one receiver flask; the residue material to flow into a different receiver flask; and the terpenes to be isolated by an external condenser and collected in a third receiver flask.

Pope’s diagonally slotted wipers are designed to provide optimized thin film turbulence and to not only propel your material in a circular path around the inner cylindrical heater surface, but also downwards—resulting in shorter, more controllable residence time and minimizing product degradation. Rollers used by other manufacturers are not nearly as efficient or effective.

Diagram shows flow of feed material and the separation of component fractions.
Our multistage, stainless steel, PLC-controlled, fully turnkey skid-mounted systems serve major cannabis production installations requiring capacities anywhere from 10 kg/hr up to 100 kg/hr. We are capable of engineering and manufacturing industrial production-sized stills as massive as you need.

Along with the increased size and continuous operation comes the same consistency of product composition over time and sustained quality.
After distillation, isolation of certain cannabinoids by crystallization can be performed. A prime example is CBD production, where high purity and elimination of THC to less than 0.3% is required.

Pope’s Nutsche Filter-Dryers have been used by many clients to provide >99.5% CBD crystal with very low to undetectable levels of THC.