VENTILATION REQUIREMENTS

CO-SOLVENT INJECTION MODULE

Our latest innovation takes advantage of the best of both ethanol and CO_2 to dramatically reduce processing cycle time by 66%! In a paradigm shift to existing CO_2 extraction technology, the new Co-Solvent Injection Module introduces ethanol as a co-solvent to ensure greater utilization of the biomass. Ethanol pulls out whatever the remaining cannabinoids CO_2 leaves in—along with significantly reducing extraction cycle time and improving operational efficiencies.

- Easier Separator Cleanout
- 2% yield increase
- 3x Faster

MADE IN USA

CO-SOLVENT INJECTION MODULE PROCESS HAZARD ANALYSIS

A Process Hazard Analysis (PHA) report has been done for the Apeks ethanol cosolvent module which deems this product may be installed in an ordinary electrical location, provided that adequate ventilation, spill containment, and mechanical-electrical interlocks are provided. To view the full report please contact Apeks Supercritical. It will be necessary to consult with a **ventilation specialist** to design the required hazardous exhaust ventilation system.

A local hazardous exhaust ventilation system is needed to ensure ethanol vapors are captured at the points of generation, diluted to below 25% of the lower flammability limit (LFL), and exhausted to a safe outdoor location. The fan(s) used needs to be Air Movement and Control Association International, INC. (AMCA) Type A or B spark resistant.

The exhaust registers need to be floor-level to capture ethanol vapors which are heavier than air. Exhaust ventilation needs to be provided in a sufficient volume to dilute ethanol vapors to below 25% of the LFL. The 76 cubic feet per minute (CFM) quoted in the PHA report for dilution to below 25% of the LFL is the minimum CFM required.

It is likely that additional exhaust ventilation will be needed to ensure an adequate capture velocity of at least 75 feet per minute (FPM) at the points of potential ethanol vapor generation (i.e., in the vicinity of the ethanol supply container and the ethanol tank). If ethanol vapors are not captured at the point of generation, the vapors will accumulate in the areas of generation and may also travel to and accumulate in other areas of the room over time.

Designing for capture velocity is site-specific and is dependent on the size/configuration of the exhaust register(s) and the distance of the generation area(s) from the exhaust register(s).

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Processing Solutions by GIBRALTAR

apeks supercritical

DELTA SEPARATIONS

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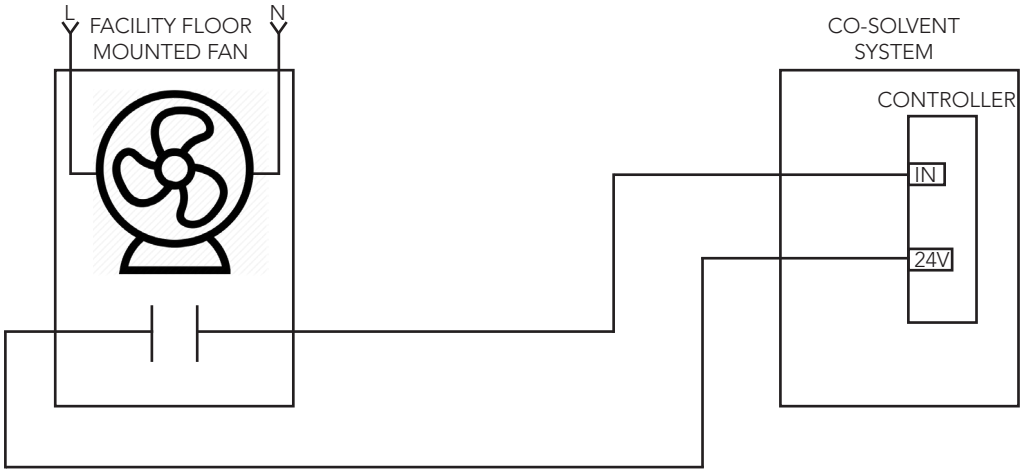
The performance of the exhaust system(s) must be field verified/tested prior to the commencement of operations (i.e. facility test and balance report , quantitative capture velocity measurements at the ethanol supply container and the ethanol tank locations, and a visual capture test).

The cosolvent system requires the facility fan to satisfy an interlock requirement on the cosolvent control system. This can be accomplished with a set of dry contacts. If the fan is running and the contacts are closed, the cosolvent system will be capable of running. A representation of the interlock can be seen below.

These requirements depend on usage of the supplied spill containment tray. Failure to use this tray will make this analysis null and void. For instructions on filling and operating the cosolvent module please refer to the operation manual provided by Apeks.



The Transformer® 5Lx20LD with co-solvent module