

- Up to 1,000 MSCF / day processing capacity
- Ideal for tank vapor capture and gas conditioning applications
- Rapidly deployed & redeployed
- Scalable via paralleled units
- Extreme turndown – no minimum flowrate requirement
- Ethane is removed (tunable down to as low as 2%)
- Fully autonomous with 24/7/365 remote monitoring

### Description

The Vaporcatcher is a refrigeration and separation system that can be used for a variety of applications. When used for **emissions mitigation**, it captures and monetizes the high BTU vapors from oil tanks, producing Y-Grade NGLs and a conditioned gas stream. The Vaporcatcher captures up to 75% of VOC contributing components from tank vapors, helping producers manage site emissions which enables more oil production. The Vaporcatcher can also be used in **gas conditioning applications**, cooling the associated gas and removing water and heavy hydrocarbons. When used prior to injection into a gathering system, this helps reduce pooling and hydrate formation while managing injection temperature. The Vaporcatcher can also remove condensables to provide conditioned fuel gas for compressors.

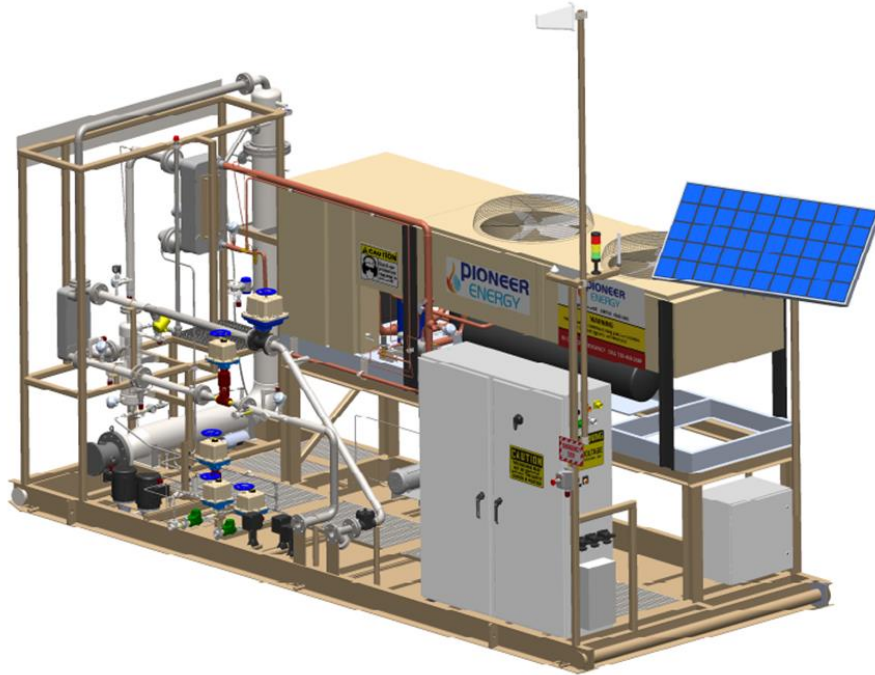
The Vaporcatcher operates at a modest pressure between 150 and 225 PSIG. In tank vapor capture applications, a standard vapor recovery unit (VRU) can be utilized to boost the vapors from atmospheric pressure to the processing pressure. A mechanical refrigerator cools the gas to between **+5°C and -10°C** (depending upon flow rate and gas composition) condensing water and C3+ components. A sophisticated separation system dissociates the gas into two streams: on-spec **Y-Grade NGLs** (to be transported to market) and **conditioned gas**. Water is separated from the NGLs through use of an external two-phase separator.



### Vaporcatcher Characteristics

<b>OPERATING PRESSURE</b>	System processing pressure between 150 and 225 PSIG
<b>FREEZE PREVENTION</b>	Methanol injection prevents internal freeze-ups
<b>REFRIGERATION</b>	Semi-hermetic reciprocating compressor Oil-separators, filter-driers, suction-accumulators used to improve reliability and performance Plate-heat-exchangers 304SS (copper-brazed in refrigeration, nickel-brazed where associated gas contacts) Air-cooled condensing units with floating-coils
<b>SEPARATION</b>	Carbon steel construction Cyclonic-separator: Outputs lean gas and feeds condensed liquid to stripping column Stripping column: Random-fill design to maximize C3+ capture in NGLs Reboiler: Electric immersion heaters 30-kWe to control ethane content in NGLs Transfer Pump: Mag-coupled rotary-vane Two-Phase Separator (external): Removes water from NGLs
<b>FILTRATION</b>	Duplex basket strainer
<b>CONTROLS</b>	Wireless cellular communications protocol used with satellite back-up Opto22 controllers, mGuard security firewall All control valves either electrically actuated or pneumatically actuated via onboard instrument air Control valves equipped with limit-switches to report valve position
<b>SKID DIMENSIONS</b>	20-ft long x 8.5-ft wide x 10-ft tall Est. Weight: 15,000 lbs
<b>POWER REQUIREMENTS</b>	~70 kWe, 480V 3phase 60Hz Power can be provided via grid power or by use of a natural gas genset which can be fueled by the conditioned gas
<b>SAFETY &amp; COMPLIANCE</b>	UL 508 Electrical Pressure relief valves and rupture-disks. 250 PSI MAWP Automatic blow-down system to quickly and safely empty system of all liquid hydrocarbons Redundant instrumentation used in critical areas Compliant with EPA OOOO/VVa

## Deployed Configuration



## Typical Site Configuration – Vapor Capture Application

