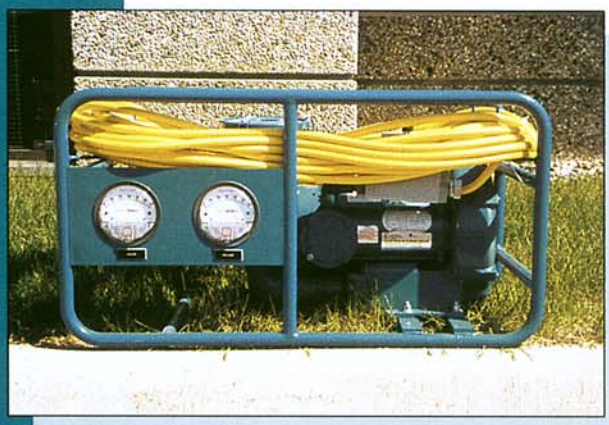
Custom-Built Vapor Extraction and Air Sparge Packages

EPG COMPANIES

Manufacturer of Industrial and Environmental Solutions

EPG Companies Inc. custom builds solutions for industrial process systems, environmental remediation, leachate collection, and off-gas treatment applications. The EPG team operates on the theory that keeping the design as functionally simple as the application permits is the most cost-effective approach. This is not only the case initially but also as the project progresses with enhanced reliability, reduced maintenance and service, and lower operating costs. EPG hardware is matched exactly to the performance requirements of the job.



Portable vapor extraction package for pilot studies

Vapor extraction, the removal of volatile organic compounds (VOCs) from soil using vacuum, has proven to be a highly efficient and cost-effective method of in-situ soil remediation.

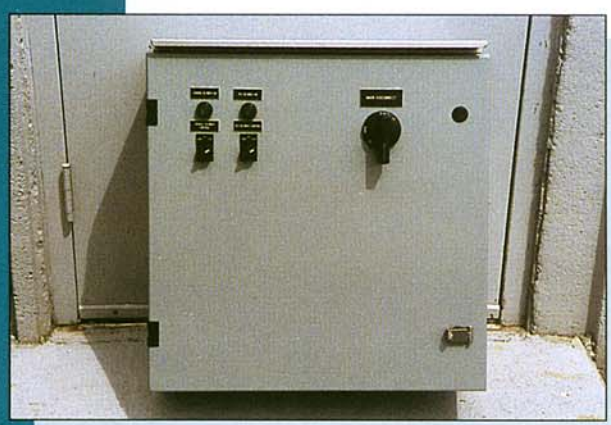
Conducting a pilot study on a potential vapor extraction site using EPG's portable vapor extraction package is instrumental in determining whether the technology is feasible, and further defines design parameters for a complete system.

An important component used in vapor extraction systems is EPG's high efficiency condensate filter separator, designed to operate at up to 16" HG vacuum. It is used to remove 99% of both particulates and liquid droplets 5 microns and larger from an air stream before entering the vapor extraction blower. EPG Model CS-16b is used for air flows up to 350 CFM and Model CS-24a for flows up to 850 CFM. Both units can be equipped with high condensate level sensors, manual or automatic drains, pump out pumps, and other accessories. Larger sizes are also available.

EPG's Series R755 Controller for vapor extraction and air sparge systems

Air sparging is often used in conjunction with vapor extraction for in-situ soil remediation. This process involves injecting pressurized air into the water table in order to strip VOCs by mass transfer. Air bubbles are created that come in contact with dissolved phase contaminants which are then volatilized. The injected air also enhances biodegradation by increasing dissolved oxygen levels. The volatilized contaminants either pass through the ground surface directly or are captured in the vadose zone using vapor extraction.

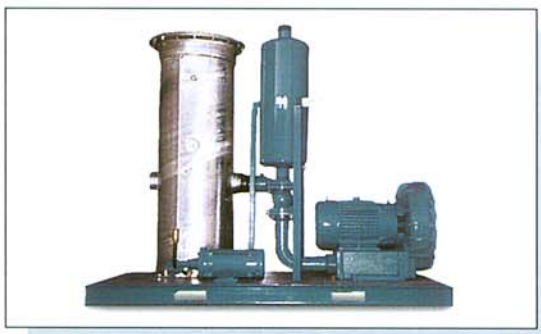
Combining air sparging with vapor extraction has greatly reduced overall site clean up time at many sites. The electrical controls for these technologies can be combined in the EPG's Series R755 Controller. It incorporates the vapor extraction blower and condensate separator controls with the air sparge blower. The blowers can be set to run continuously or intermittently with an adjustable cycle timer. Other options can be added to the EPG Series R755 Controller including controls to cycle the direction of the air flow by opening and closing solenoid valves.



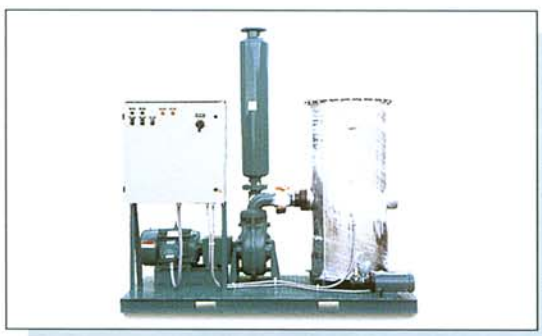
EPG's CS-24a and CS-16b condensate separators

COVER:
Skid mounted vapor extraction systems with heavy duty positive displacement blowers.

VES-RT1, vapor extraction system with regenerative blower and explosion-proof control panel

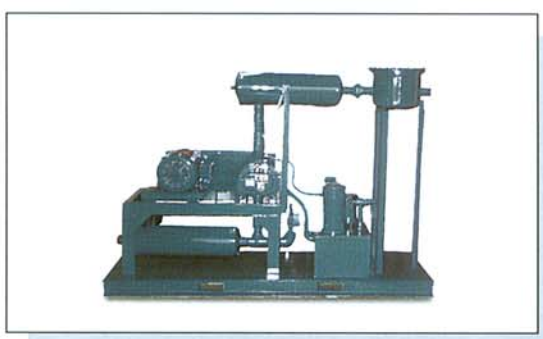


VES-RT7.5, vapor extraction system with regenerative blower, and optional condensate pump and discharge silencer



VES-CB20, vapor extraction system using a centrifugal blower

Stand mounted air sparge blower with heavy duty positive displacement blower



Skid mounted air sparge blower with heavy duty positive displacement blower and optional oil recirculation system

Blowers are selected based on the most effective solution to the work requirement of each site. Things considered in the selection process include design air flow, vacuum or pressure required, and initial equipment cost. Blowers commonly used by EPG are regenerative, centrifugal, multi-stage centrifugal, positive displacement, and liquid ring. Air sparge compressors, including rotary vane, reciprocating, single stage, two-stage, and rotary screw, are also selected to meet specific applications. EPG's vapor extraction and air sparge systems are available pre-packaged, skid mounted, base or stand mounted. Components may also be purchased separately.

Common accessories used with EPG's vapor extraction and/or air sparge systems are intake and discharge silencers, condensate separators, condensate solenoid drain valves, condensate pumps, high condensate level sensors, air flow switches, temperature gauges, vacuum and pressure gauges, dilution and bleed air valves, flow control valves, vacuum and pressure relief valves, and air to liquid and air to air heat exchangers.

Trailer mounted vapor extraction and water treatment system

Whatever equipment and controls your remediation sites demand, EPG is your complete supplier. With over 3,000 installations worldwide, EPG equipment has proven to provide durable, trouble-free service. EPG's knowledgeable engineering and applications people provide the after-sale support that any system may need. Give EPG a call at (800) 443-7426 for assistance on your next remediation project.

With air discharge regulations becoming increasingly more restrictive, off-gas from vapor extraction and process equipment in many areas requires secondary treatment. EPG's Oxidair™ thermal oxidizers are designed to destroy hydrocarbon vapors in a fume stream at an efficiency exceeding 99+%, with typical fuel savings of 30% over competitive oxidizers.

Vapor extraction and air sparge equipment can be made portable via trailer mounting. This equipment is often combined with pumping and water treatment equipment for a completely integrated mobile system. Prepackaged systems can also be mounted in a modular building ready for turn-key site installation.

An integral part of any remediation system are the electrical controls. All EPG controllers are UL listed and are custom configured to meet customer needs. EPG controllers for systems range from very simple to complex. All controllers are built site specific so customers do not have to compromise on the control of their systems. To help increase productivity, EPG offers telemetry systems which provides continuous monitoring and remote data acquisition.

EPG COMPANIES

Manufacturer of Industrial and Environmental Solutions

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