

<b>General features for the use of Pressure Leak Detectors</b>	<b>General features for the use of Vacuum Leak Detectors</b>
<ul style="list-style-type: none"> <li>- Less installation effort than for vacuum systems (no exhaust pipe no water trap is necessary).</li> <li>- With manifold systems multiple monitoring spaces of underground tanks can be monitored at the same time by one leak detector.</li> <li>- Considering the required guideline on protection against explosion, flammable liquids with flashing point <math>\leq 55^{\circ}\text{C}</math> can be monitored by pressure systems.</li> <li>- The permitted operating pressure and monitoring pressure of the tanks and the pipes have to be considered.</li> <li>- The monitoring medium (air or nitrogen) of the leak detector has to have a minimum air humidity. This can be managed by the use of air dryer which have to be serviced adequately. At higher operating pressure, usually nitrogen is used.</li> <li>- The reaction behaviour of the monitoring medium together with the stored liquid has to be considered. If necessary an inert gas has to be used as monitoring medium.</li> <li>- By monitoring double walled pipes with higher operating pressure, the guidelines according to item 3 passage 3 of the EU pressure equipment directive have to be considered.</li> <li>- The specific approval documents of the leak detector, the tank and the pipeline have to be considered. This also applies to the operating limits in terms of the density of the stored liquid and the maximum allowable pressure in the control room.</li> </ul>	<ul style="list-style-type: none"> <li>- Tanks with a protective lining system as well as large and high tanks can be monitored with vacuum leak detector systems. The suction pipe to the leak detector has to be placed at the lowest point of the monitoring space.</li> <li>- For monitoring of flammable liquids with flashing point <math>\leq 55^{\circ}\text{C}</math>, leak detectors with protection against explosion have to be used.</li> <li>- With vacuum leak detector systems only one leak detector can be used for each single monitoring space.</li> <li>- The leak detector and the connecting pipes have to be checked to the resistance against the stored medium.</li> <li>- Tanks with flexible lining and plastic pipes can be monitored with vacuum leak detectors.</li> <li>- Double walled tanks, which have been monitored by liquid leak detection systems (DIN EN 13160, class II system) in the past can be monitored by vacuum leak detectors. A certain volume of the monitoring liquid has to be removed from the monitoring space.</li> <li>- A water trap has to be installed into the suction pipe.</li> <li>- The exhaust air of the leak detector has to be fitted with an exhaust pipe. If it is not possible to lead the exhaust pipe back into the tank (for example tanks operated by pressure) a liquid trap has to be installed in the exhaust.</li> <li>- If it is not possible to install the monitoring pipe or the pressure pipe with a constant slope base, then additional water traps have to be installed at each low point of each pipe.</li> <li>- The specific approval documents of the leak detector, the tank and the pipeline have to be considered. This also applies to the operating limits in terms of the density of the stored liquid and the maximum allowable pressure in the control room.</li> </ul>