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# Measuring the concentration of oil in refrigerants

#### Online monitoring of cooling circuits

The effectiveness of compression refrigeration systems can be excellently optimized by inline analytical technology. By using sonic velocity, the high-precision measurement of oil concentration in the refrigerant is possible to ensure the optimum ratio of oil and refrigerant. Because a too high oil concentration reduces the cooling capacity of the refrigerant, whereas a too low oil concentration reduces the lubrication of the compressor.

The process conditions in cooling systems place high demands on the analytical technology. The LiquiSonic<sup>®</sup> analyzer of SensoTech has been using successfully in global companies developing or operating automotive air conditioning and large refrigeration plants. The LiquiSonic<sup>®</sup> sensors measure continuously and directly in the main line, the temperature and pressure compensated oil concentration with ultra-fast update rate. This results in a maximum process effectiveness with complete documentation and storage of measuring results.

Image subtitle: The LiquiSonic<sup>®</sup> analyzer of SensoTech measures inline und highly precisely the oil concentration in refrigerants to optimize cooling and air-conditioning processes.



## SensoTech:

Since 25 years SensoTech has been focused on the development, manufacturing and sales of inline analysis systems for process liquids. With worldwide installed, highly precise and innovative measuring systems for monitoring of concentrations, compositions and changes of chemicals as well as properties directly in the process, SensoTech has significantly contributed to the enhancement of the state of the art. In addition to the measurement of concentration and density, the phase interface detection as well as the monitoring of chemical reactions like polymerization and crystallization are typical applications. SensoTech inline analyzers set standards in the technological and qualitative valence, user friendliness and reproducibility of process values. Special calculation methods and sophisticated sensor technologies enable reliable and precise measuring results even under the most difficult process conditions.

The knowledge and the experiences of the highly motivated and committed SensoTech staff are the result of many different applications supported by wellknown customers from the chemical and pharmaceutical industry, food technology, semiconductor technology, automotive and metal industry as well as many other industries. In addition, these experiences also open up unimagined solution possibilities for new measuring challenges.

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