

Safe, Stable and Efficient Operation of Turbocompressors

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"A trouble-free turbocompressor is loud and boring" says **Karl Morgenbesser**, long-time experienced commissioning engineer, troubleshooter, founder and managing director of **kmo turbo** GmbH. In turn, every plant operator has an increased interest in ensuring that his machines are and remain as "boring" as possible.

There is no time for boredom, if a turbocompressor accidentally "surges": cyclic backflow of the compressed medium can lead to high vibrations, pressure surges, rapid temperature rise and ultimately to massive damage in the compressor. A loss of flow can have fatal consequences for the downstream process.

Reverse-flow Protection for Turbocompressors
based on Siemens Simatic S7-1200/-1500



Uncompromising Reliability



Reverse-flow Protection and Anti-surge Control

kmo turbo GmbH, the German specialist for compressor control systems, located in the Zeppelin city Friedrichshafen at Lake Constance, has treasured up decades of hands-on experience in the field of compressor control and has focused on ensuring uncompromisingly reliable operation of turbocompressors.

The goal is achieved by using the transparent and intuitively parameterized **kmo Anti-surge Control**. This maintains stable operation and also maximizes the usable range of the compressor's characteristics.

The three-stage **kmo Reverse-flow Protection** system offers the highest level of protection by means of diversely redundant surge detection and monitoring of up to four transmitter signals with typical surge behaviour. This exceeds the requirements of an API 670.

Users of the compressor controllers from **kmo turbo**, which are based on commercially available Siemens hardware (Simatic S7-1200/-1500), appreciate the outstanding diagnostic functions in case of a fault analysis as well as the simple integration (Profibus, Modbus-TCP, ...) into higher-level controls. The web-based user interface does not require any software installation; parameterization, visualization and commissioning can be carried out via any networkable device (such as a PC, smartphone, etc.).

Anti-surge Control for Turbocompressors
based on Siemens Simatic S7-1200/-1500



Stable and Efficient Operation



Turbocompressor Audit

The safety and availability as well as the economic efficiency of an entire plant depend on surge monitoring. Since a large number of interferences can occur over time, a recurring inspection of the compressor control settings is recommendable as integral part of the maintenance policy.

kmo turbo offers the **auditing of existing surge monitoring systems** of any kind. The new range of services is designed to create transparency and increase production reliability. At the end of the assessment, specific recommendations for action are made available to the customer for necessary improvement and sensible optimization. The recommendations aim at ensuring stable, trouble-free operation, reliable compressor protection and optimum utilization of the compressor's characteristics.

Turbocompressor Audit for Anti-surge Control and Reverse-flow Protection



Code of Best Practice

Last but not least, **kmo turbo** uses its technical competence and practical expertise to significantly support the development of profound corporate guidelines for the safe, stable and efficient operation of turbocompressors, which is of great benefit especially to larger company groups.

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