

SOLUTION IN DETAIL
FlexSILon TMC FOR TURBOMACHINERY AUTOMATION



Optimally Control and
Protect Turbomachinery

Safely at the Limit

Control Without Compromise

It is a difficult balancing act for plant operators: They must ensure that their turbomachinery continuously runs safely, while functioning at maximum profitability. Those who use obsolete control technology are unlikely to be able to achieve this. In numerous companies, this technology is as old as the turbomachinery itself. Due to the fact that the machine has grown considerably over time as a result of economic or legal factors, the controllers are not able to continuously operate machinery safely at the performance limit. This means operators must make a compromise – either in terms of safety or productivity.

Safety Must Remain a Core Focus

International organizations have since defined how the principles of functional safety have to be applied to turbomachinery. However, most companies do not have the resources to actually implement this. Ultimately, your technicians must take care of core business tasks and should not spend valuable time continuously keeping their safety expertise up to date.



HIMA FlexSILon TMC could
save you up to

**six-figure
sums**

yearly in terms of energy costs.

How do you ensure maximum availability of your plants with the highest level of performance and safety – even when your employees already have their hands full?



Fulfill all international standards with the FlexSILon TMC (turbomachinery control) solution from HIMA that ensures consistent compliance with SIL 3. However, you achieve much more than just safety: With the combined solution for safety and critical control, you can operate your turbomachinery at maximum efficiency and, above all, safely at its limits. Your technicians do not require special knowledge for this, as HIMA engineers support you throughout every phase.

Thanks to the high availability of FlexSILon TMC and integrated fallback strategies, you avoid unplanned shutdowns which can often escalate costs quickly.



Safety and Performance: They Effectively Take Care of Themselves

A powerful safety controller protects your machinery from malfunctions and your employees from accidents. But this is just half the battle. Ultimately, the machine should operate at maximum reliability as well as being as economical as possible. Consequently, we developed the package solution FlexSILon TMC. It combines the SIL 3 certified safety controller HIMax (including overspeed protection) with software function blocks for critical control tailored to the special requirements of turbines and compressors. Developed and continuously optimized by our experienced TMC experts, this solution enables you to control highly dynamic processes completely automatically in your turbomachinery network.

The solution repeatedly assesses the status of all critical parameters. In the event of a problem, the process is upheld within fractions of a second by means of integrated fallback strategies to avoid downtime. Based on precise trend and historical data analysis, maintenance intervals can be planned predictively (predictive maintenance). The result: Your turbomachinery maintains maximum availability.

Safety as a Complete Service

For turbomachinery operators, safety begins much earlier than with the implementation of a suitable solution. What are the

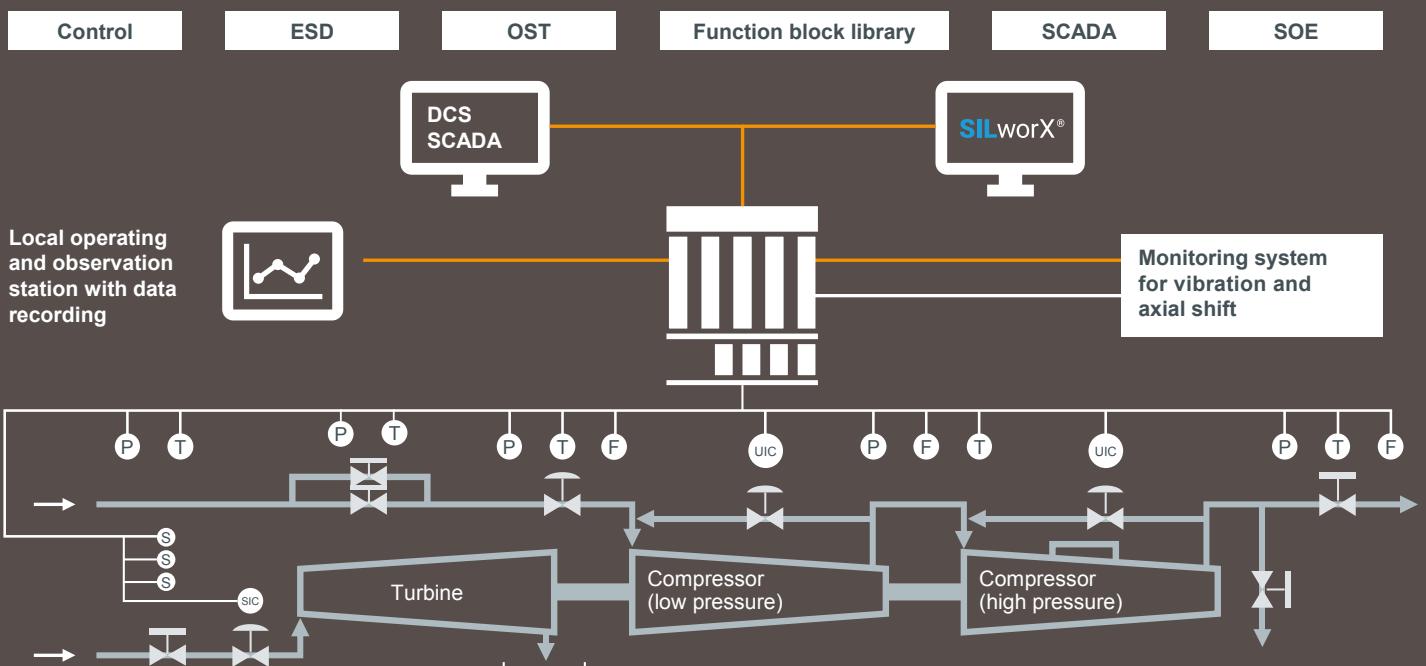
risks related to your machinery and what hazards are your employees exposed to? Which measures are possible, and which are advisable to minimize risks? How does critical control work throughout the overall process – and what must you consider from a technical and economic point of view?

You can of course train your employees in these fine details. But this costs time and money – and this isn't just a one-off. Standards continuously change. However, there is a way for you to focus on your core business with peace of mind. Leave the entire subject of „safety and critical control“ to experienced application engineers at HIMA.

Responsible Guidance from the Experts

The FlexSILon TMC solution includes comprehensive consulting and services to support you every step of the way. This begins at the pre-engineering stage where our TMC experts evaluate essential factors: How does the location of your machinery affect the safety concept? Are workflows defined? How are control and safeguarding realized and where is there potential for optimization? Once this is clarified, the implementation comes next as part of the complete production process. And when it's time to modernize, we are there for you – if you wish.

FlexSILon® TMC





Benefits

Your Turbomachinery – in Trusted Hands

FlexSILon TMC looks after the functional safety of your entire turbomachinery train, not just single components. Achieve uninterrupted operation of your machinery without having to deal with the latest standards internally. This reduces costs and increases profit – all with the highest level of safety.

Benefit from turbomachinery expertise: In addition to the safety controller, you receive comprehensive consulting and support from TMC specialists from a single source.

Increase machine profitability and availability: The machinery is cost-optimized and runs at increased efficiency. Downtime is avoided.

Get started more quickly: Standardized function blocks for flow calculation and setpoint specification enable you to put your turbomachinery into operation faster and save money.

Prepare for the future: FlexSILon TMC complies with SIL 3 specifications that go beyond the requirements of current standards. HIMA future-proofs your business.

Perform maintenance with ease: HIMA solutions are already used in various applications in many industrial companies. Maintenance teams are therefore familiar with the hardware and software and, thanks to concentration on a single supplier, do not need to retain as much specific knowledge.



Comprehensive services for the entire plant lifecycle are an integral part of HIMA solutions.

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Would you like to learn more? Contact us at:

HIMA Turbomachinery Competence Center

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Find out more online about HIMA solutions for turbomachinery:

 www.hima.com/en/industries-solutions/turbomachinery-tmc



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