

E300V2 control cabinet for SKF S2M Magnetic Bearings

for improved oil and gas turbomachinery performance



The latest generation magnetic bearing controller

As the latest generation control cabinet for SKF S2M Magnetic Bearings, the E300V2 is the result of expertise gained at more than 1 000 oil and gas installations worldwide. The new cabinet design uses the latest technology acquired during the development of the subsea control cabinet used in the world's first gas compression system ever installed on the seafloor, now operating in the Åsgard gas field off the Norwegian coast.

The E300V2 provides an optimized, fully digital control loop that can handle 30 MW compressors and beyond. Suitable for topside applications and virtually any unmanned site, the E300V2 allows users to increase the uptime of their rotating equipment and help minimize costs over the entire system life cycle, from installation and commissioning to long-term operation.

Increased uptime and MTBF

Thanks to major advances made during subsea compression projects, the E300V2 cabinet gives operators new maintenance and monitoring functionalities to keep turbomachinery running longer, with less downtime.

Users can check ball bearing air gaps and magnetic bearing loads at any time, locally or remotely, with no additional equipment. Battery exchanges can be performed while the turbomachinery operates, avoiding a planned shutdown.

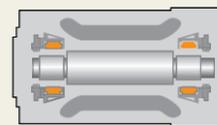
Several optional cabinet functions also support reliability and uptime, including full and partial power supply redundancy for unmanned applications. Optional field security capabilities include purge/fire and gas functions.

Configurable to your rotating equipment

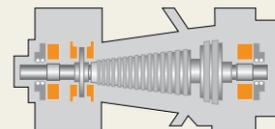
Modular architecture allows the E300V2 to control any type of turbomachinery equipment – everything from high-speed motors with basic, 2 radial bearing (4 control axes) arrangements to integrated motor compressors with more complex 4 radial + 1 axial bearing (9 control axes) designs.

The cabinet also offers several power supply options, and up to 700 meter cable length between the controller and the mechanical skid for turboexpanders.

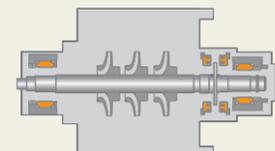
Multi-machine configurability



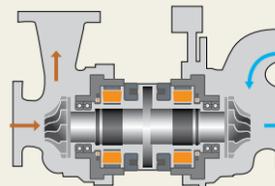
Electric motors



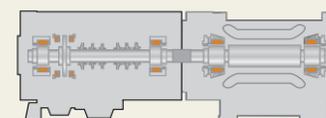
Gas turbines



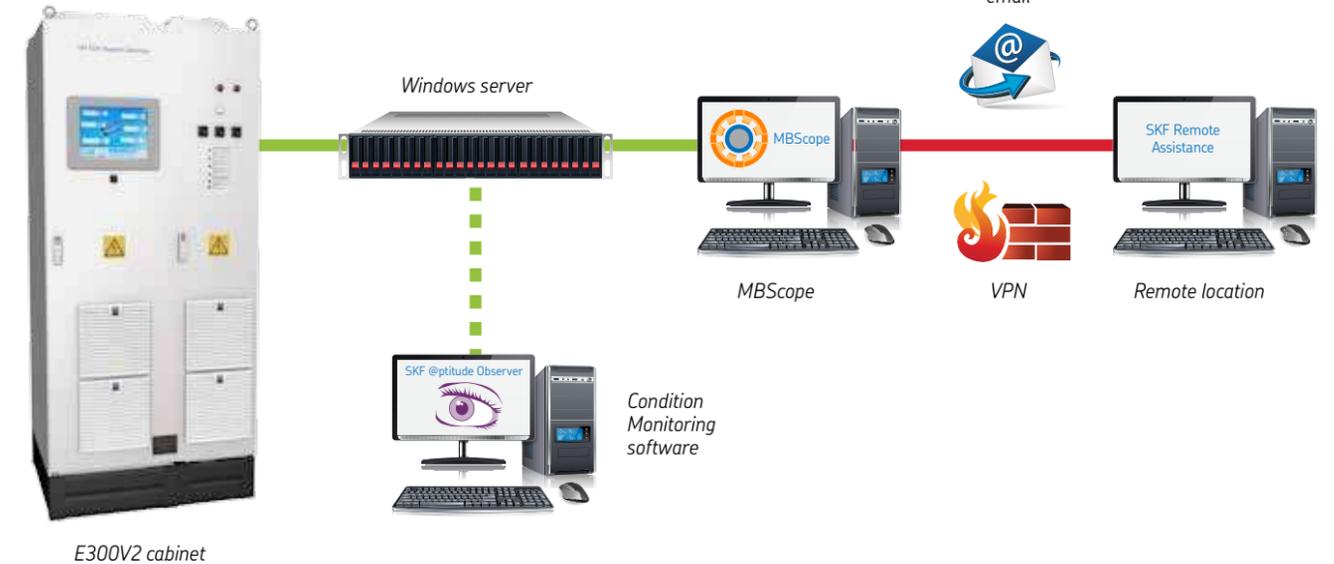
Standalone compressors



Turboexpanders



Integrated motor-compressors



Simplified commissioning and servicing

During factory testing, system set-up, configuration and field commissioning, the E300V2 uses MBScope software locally or remotely to verify machine health and optimize performance. During operation, the cabinet's smaller, lighter battery racks can be replaced or hot-swapped quickly.

Along with a user-friendly touchscreen on the cabinet door, the E300V2 features two distinct operational areas – one for magnetic bearing control and one for the power supply. Keeping them separate can improve maintenance practices and reduce safety risks, as operators can work in one area without affecting the other.



Remote diagnostics and support

The E300V2 lets operators choose a level of autonomy best suited to their needs. Its technology helps minimize the need to dispatch magnetic bearings experts on-site. Operators can perform first-level troubleshooting on their own and exchange operating data with their own experts or SKF remote diagnostic services.

Superior monitoring and decision support

PC-based MBScope software works with the E300V2 to deliver new online measurement and post-processing functionality:

- Check machine health vs. API617/ISO14389 at any time
- Generate transfer functions, spectrums, orbits and waterfalls
- Capture high-resolution data for bearing positions, speed and currents
- Log high-resolution data in case of trip events up to 14kHz
- Link with SKF @ptitude Observer software and other decision support software

The Power of Knowledge Engineering

Combining products, people, and application-specific knowledge, SKF delivers innovative solutions to equipment manufacturers and production facilities in every major industry worldwide. Having expertise in multiple competence areas supports SKF Life Cycle Management, a proven approach to improving equipment reliability, optimizing operational and energy efficiency and reducing total cost of ownership.

These competence areas include bearings and units, seals, lubrication systems, mechatronics, and a wide range of services, from 3-D computer

modelling to cloud-based condition monitoring and asset management services.

The SKF BeyondZero portfolio offers products and services with enhanced environmental performance characteristics.

SKF's global footprint provides SKF customers with uniform quality standards and worldwide product availability. Our local presence provides direct access to the experience, knowledge and ingenuity of SKF people.

Dedicated service and support worldwide

The E300V2 control cabinet for SKF S2M Magnetic Bearings gives operators unprecedented freedom to conduct their own monitoring and servicing functions. Should operators ever require on-site assistance, SKF S2M Magnetic Bearing systems are backed by a network of dedicated field engineers serving every major oil and gas region worldwide.

Local specialists are available in:

- France
- Canada
- The United States
- Russia
- Japan
- The United Arab Emirates



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