

Unisab II upgrading

Advanced control system retrofit package for refrigeration compressors



With one easy ready-to-install upgrade package, it is now possible to update a compressor control system to monitor and control a large number of different refrigeration compressor types, using a Unisab control system specially developed for the efficient, reliable operation of reciprocating and screw compressors. Retrofitting Sabroe Unisab II controllers improves the operation and control of a refrigeration plant in an efficient, user-friendly way that provides a substantial boost to a company's operational competitiveness.

Easy to install and operate

The Unisab II retrofit package is easy to install and operate. The overall Unisab II control structure features intuitive, user-friendly menus that require no special knowledge or training to operate. All Unisab II control panels have the same design and appearance.

Maximum reliability

To ensure the highest overall performance of Unisab II units in both industrial and marine environments, they have been rigorously tested in relation to factors that include electrical and EMC interference, vibrations, heat and cold, shock.

Advanced operation and monitoring

Retrofitting a Unisab II control system provides access to all monitoring, control and limitation functions, ensuring safer and more efficient compressor operation. The Unisab II control panel enables the operator to view several operating values simultaneously and in real time.

Advanced sequencing

Unisab II features optimised sequence control for any combination of up to 14 compressors in virtually any combination of types. Unisab II was specially developed for use with all types of Sabroe screw and reciprocating compressors, as well as most other makes of refrigeration compressors.

Significant advantages

Retrofitting the Unisab II control system provides highly advanced technology that is easy and straightforward to use. Advantages include

- improved performance
- safe operation/reduced downtime
- effective compressor operation and sequencing
- completely flexible communication for integration with other systems.

Customer benefits

The Unisab II retrofit control system provides absolute reliability at no additional cost. The customer benefits include

- easy upgrade of compressors with a simple on/off control to take advantage of all the monitoring and control features provided by the Unisab II system
- more efficient use of energy due to optimised compressor sequencing
- remote compressor control options that make it possible to connect compressor control with the main plant control systems, for full integration and optimal operation
- remote monitoring and control from a central computer or connection to a PC for remote supervision via Sabvisual, with access to operation logs, event logs and trend curves
- plant is able to achieve its full operational potential and reduced downtime boosts production.



For each particular compressor, the upgrade kit includes

- Unisab II control unit
- instruction manual
- sensors and fittings (Pt100 sensors to be ordered separately)
- installation notes.

Unisab II retrofit kits are available for screw compressors

- Sabroe VMY, SAB series
- Stal SV, R5, S80 series
- Gram GSV, GST, GSF series
- Frick XJS, XJE, TDSH series

Single-stage reciprocating compressors

- Sabroe CMO, SMC series
- Gram HC series

Two-stage reciprocating compressors

- Sabroe TCMO, TSMC series
- Gram HCT series

Other compressors and competitors' compressors available on request.

Technical data	
Compressors	Control of screw and reciprocating compressors as well as combinations of both types
Refrigerants	All refrigerants normally used
Display	LCD display with 4 lines of 20 characters each
Read-out values	4
Communication	RS 485 interface. Communication speed at 19,200 Baud
Diagnostic functions	Storage/analysis of up to 35 alarms
External control	Possible via 4–20 mA or via external communication
V _i regulation	From 0–100%
Configuration check	Possible during operation
Sequential operation	Unisab II controls and monitors any combination of up to 14 screw and reciprocating compressors through the built in Multisab program
Emergency stop	Included
Dimensions	Cabinet 450 x 210 x 130 mm
Voltage	24/115/230 V AC
Retrofit	Unisab II can easily be fitted onto most existing compressors. Unisab II also communicates with previous Unisab and Prosab II systems
Factory test	A computer test is performed on all Unisab II units and a test certificate is issued.

All information is subject to change without previous notice.