

## Unisab III upgrade

For existing Marine refrigeration compressor control systems

### Retrofit

Using a Unisab III upgrade package, it is now possible to upgrade existing compressor control set-ups to enable them to monitor and control many different types of refrigeration compressors.

The Unisab III has been specially developed for the efficient, reliable operation of both reciprocating and screw compressors in a wide range of different configurations.

Retrofitting the control system of an existing refrigeration set-up improves operating efficiency and provides better control, thus delivering a substantial boost to a company's operational competitiveness.



### Significant advantages

- Compatible with virtually all types and makes of refrigeration compressor equipment currently available.
- Easy to integrate into the vast majority of industrial control systems, with no need for expensive additional equipment.
- One consistent control system for virtually all compressors, featuring an intuitive, easy-to-use interface.
- Compressor sequencing and load sharing are possible without additional equipment.
- Monitoring, control and diagnostics capabilities combined in one compact, integrated design.

### Easy to operate & Install

The Unisab III upgrade package is easy to operate. The overall Unisab III control structure features intuitive, service friendly menus that require no special knowledge or training to operate.

The Unisab III upgrade package is easy to install and ensure minimum downtime at installation.

### Maximum reliability

To ensure the highest overall performance of Unisab III 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, and shock.

### Customer benefits

- Makes sure that refrigeration installations have the best possible performance, maximum uptime and lowest possible operating costs.
- Seamless transfer of data between systems ensures effective monitoring, control and diagnostics.
- Consistent "look and feel" for operating and monitoring equipment requires fewer operator skills, resulting in lower training costs.
- Optimised, energy-saving operation of multiple compressors keeps power consumption to a minimum and reduces operating costs.
- A single integrated control solution does away with the need for additional equipment, resulting in significant savings on installation costs.

### Advanced operation and monitoring

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

The Unisab software includes speed control of reciprocating and screw compressors as standard.

Optional the Unisab III can be delivered with an evolution module enabling chiller control and non-standard I/O monitoring and control.

## Advanced sequencing

Unisab III features optimised sequence control for any combination of up to 14 compressors in virtually any combination of types.

Unisab III was specially developed for use with all types of Sabroe screw and reciprocating compressors, as well as most other makes of refrigeration compressors.

Unisab III upgrade kits are available for a large number of the compressor makes and types used in industry.

These include:

### Screw compressors

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

### Reciprocating compressors

- Sabroe CMO, SMC, TCMO, TSMC series
- Gram HC & HCT series

Unisab III upgrade's are also available for other compressors (including those manufactured by other companies) on request.

### The Unisab III upgrade kit

Unisab III can easily be fitted onto most existing compressors. It completely replaces the existing control unit, integrating with all other functionalities and parts of the refrigeration compressor installation.

Unisab III also communicates with the preceding Unisab II system and most supervisory systems.



**Unisab III upgrade kit**

## Technical data

### Compressors:

Control of screw and reciprocating compressors as well as combinations of both types

### Refrigerants:

All refrigerants normally used

### Display:

VGA b/w graphical display

### Communication:

Ethernet, Profibus, 2 x RS 485

### Diagnostic functions:

Storage/analysis of up to 30 alarms

### External control:

Possible via 4–20 mA or via external communication

### Vi regulation:

0–100%

### Configuration check:

Possible during operation

### Sequential operation:

Unisab III controls and monitors virtually any combination of up to 14 compressors through the built-in Multisab program

### Emergency stop:

Included

### Dimensions of cabinet:

380 x 300 x 210 mm

### Voltage:

85-250 V AC

### Factory test:

Computer test is performed on all Unisab III units and a test certificate is issued.