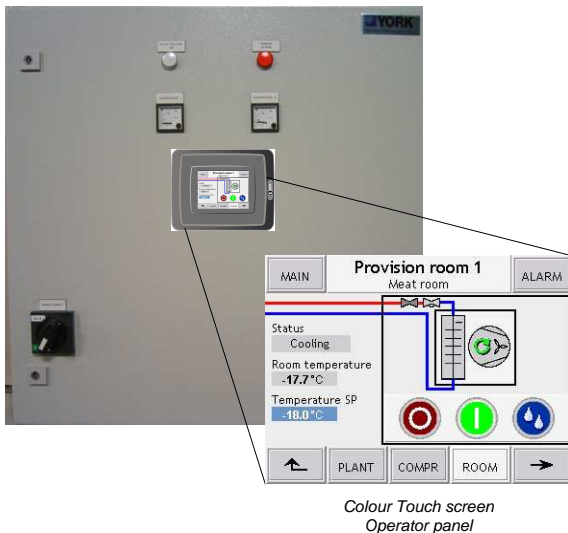




# Marine Provision Control concept

Control and monitoring of the standard Provision Store systems



## Description

The Provision Control concept integrates control and monitoring of max. two compressors and twelve rooms.

The combination of freezing-, cooling- and lobby rooms is configured according to the specific ship design.

The Provision Control concept includes an electrical panel complete with motor starters and configurable control equipment.

An “Intermittent Room Operation System” has been implemented in order to optimize the efficiency of the plant and minimize the compressor starts/stops.

Specification of the room type is:

**Freezing room:**

**Cooling room with electrical defrost:**

**Cooling room with fan defrost:**

**Cooling room:**

**Lobby room:**

## Advantages

- Easy operation at a colour touch screen operator panel
- Compressor supervision and control
- Control and monitoring of the condensing units
- Room supervision and control
- Accurate room temperature control by means of PT100 sensors
- Defrost control
- Password and alarm system
- Integrated electrical starter and control panel in IP55 , execution including
  - Compressor motor starter(s)
  - Fan motor starter(s)
  - Main switch, ammeters, and control lamp
- Remote operator panel (Optional)
- Gas monitoring system (Optional)
- Network communications to SCADA system (optional)
- Virtual Network Computing (VNC) Server function (Optional)
- Larger display, such as 6,5” in stead of 3,5” (Optional)

## Additional benefits

- Standardized system ensures optimal functionality and reliability
- Easy installation and commissioning
- ISO9001 compliance



## Compressor control

The below mentioned data, settings and functions ensure optimal compressor operation.

### Monitoring data

- Compressor status
- Running hours, including service warning
- Compressor capacity
- Manual/auto mode

### Compressor protection features

- High discharge pressure
- Low suction pressure
- Low lubrication-oil pressure
- Low condenser-water pressure
- Motor overload
- Motor recycling



## Room control

The following values are monitored and controlled by means of PT100 sensors placed in each room.

- Temperature at selected set-point
- High-temperature alarm
- Low-temperature alarm
- Defrosting sequence – time of day and duration
- Door switch – remote alarm if not closed (optional)
- Ozone generator (optional)

## Local operation

At the panel, local operation of the Provision Store system includes.

- Efficient operation from a 3.5" colour touch-screen display
- Graphic overview pictures of the entire system
- Monitoring of all status values, alarms and warnings
- Operation of connected equipment and setting of modes, limits and regulation set-points
- Trend curves (such as temperature logging) that provide an excellent overview of plant performance.
- Trend curves and settings can be stored on a USB key

## Remote operation

Connected to the ships LAN Network, the HVAC system can be remotely controlled and monitored from operator panels or PC stations, such as:

- Monitoring and remote control of all data from any PC on the network
- Monitoring and remote control, via the internet, to Johnson Controls Marine service centre or owners technical department, for optimal crew support at e.g. trouble shooting.

*The above technical information is subject to updates in content and specification without prior notice.*