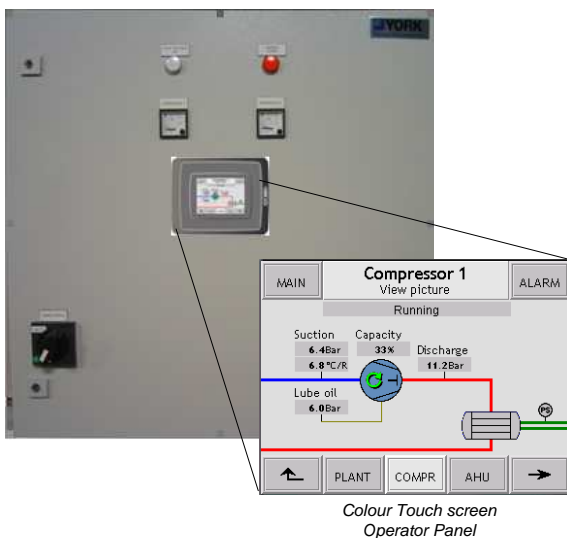




Marine Condensing Unit control concept

Efficient control and monitoring of standard Condensing Unit



Advantages

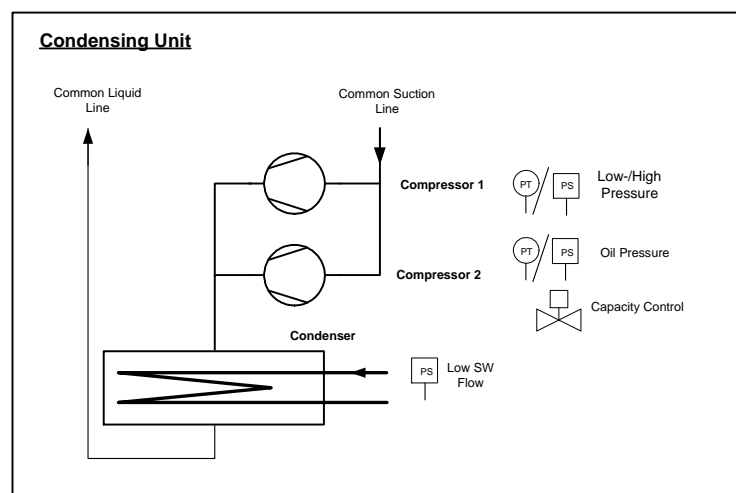
- Logical operation at a colour touch screen operator panel
- Compressor supervision and control
- Delayed start after blackout
- Password and alarm system
- Common alarm output to main alarm system
- Integrated electrical starter and control panel in IP55 execution, including:
 - Compressor motor starter(s)
 - Main switch, ammeters, and control lamps
 - Pilot voltage supply transformer
- Remote operator panel (Optional)
- Gas monitoring system (Optional)
- Network communication, on request, to SCADA system (Optional)
- Virtual Network Computing (VNC) Server function (Optional)
- Larger operator panel, such as 6.5" in stead of 3.5" (Optional)

Description

The Condensing Unit control concept integrates control and monitoring of compressors and condenser.

The combination of compressor types, capacity steps, supervision equipment and compressor control is configured according the specific design.

The Condensing Unit control concept includes an electrical panel complete with motor starters and configurable control equipment.



Additional benefits

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

Compressor control

Selections

- One or two compressors
- Screw-, reciprocating-, open- or semi hermetic
- Up to three capacity steps each compressor
- Capacity control by means of suction switch, suction transmitter or temperature sensor
- Compressor supervision by means of pressure switches or -transmitters
- Superheat supervision
- Condenser water flow supervision.
- Motor protection device for Semi-Hermetic compressor
- Refrigeration Liquid valve inlet ON/OFF control
- REQUEST (input) and READY (output) signals for communication with AHU
- Common or Separate liquid and suction lines

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

Measurements data and settings:

- Suction pressure and discharge pressure
- Lubrication oil pressure
- Compressor status
- Running hours, including service warnings
- Maximum Operating Pressure (MOP) function
- Capacity regulation
- Manual/auto mode

Compressor protection against:

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

Local operation

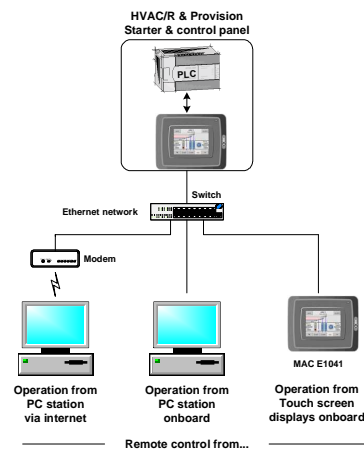
At the operator panel local operation of the Condensing Unit system includes:

- 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 that provides excellent overview of plant performance, e.g. temperature logging
- Trend curves and settings can be stored on a USB key

Remote operation

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

- Monitoring and remote control of all data from any given 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.