Sauer Compressors

less temperature!

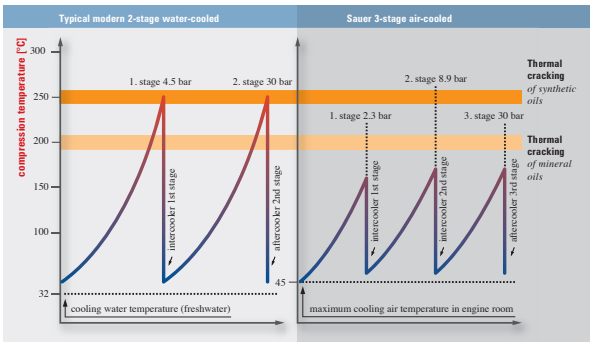
less maintenance cost!

less installation cost!

Every ship should have one!

Your advantages by using

Sauer 3-stage air-cooled compressors



Advantages of Sauer 3-stage air-cooled compressors

Less temperature due to lower stage pressure ratio!

In former times air-cooled compressors were limited to 80 m³/h due to the high compression temperatures (above 250°C). With the development of the 3-stage air-cooled compressors more than 30 years ago, a new generation of compressors appeared in the market. The 3 stages are the reason for the lower temperatures (less than 170°C) and make satisfactory cooling by air possible.

Due to the laws of physics air is heated during compression. The final compression temperature depends on the compression-ratio in each stage. By dividing up the total compression-ratio into 3 stages; lower compression temperatures in the cylinders and valves can be achieved compared to 2-stage water-cooled compressors.

Sauer 3-stage air-cooled compressors – standard for international shipping.

Less maintenance cost due to longer maintenance intervals!

Due to the lower compression temperatures the thermal cracking of the lubricating oil will not be reached and consequently the compressor valves will not be soiled by oil coke. Thus Sauer Compressors can guarantee maintenance intervals up to 4,000 hours for the valves which reduce the maintenance costs compared to 2-stage water-cooled compressors. The reduced compression temperatures allow the use of standard mineral oil SAE 30 as it is used e.g. in 2- and 4-stroke diesel engines. The use of expensive synthetic oil is not required for proper performance.

Sauer 3-stage air-cooled compressors – for lowest operation costs of your ship.

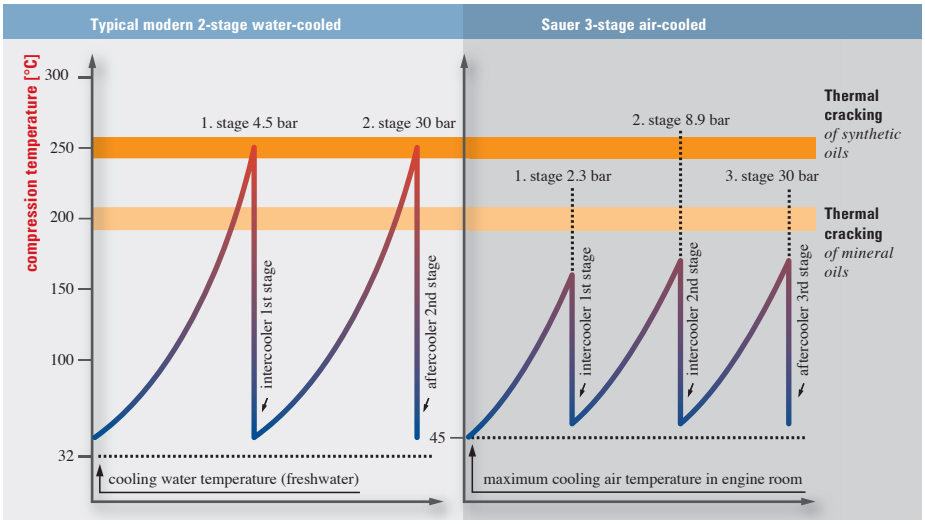
Less installation cost due to no cooling water system!

By abolishing the cooling water circuit with its flanges, packings, fittings and cooling water pumps, a higher reliability and an easier control and supervision of the compressors is achieved.

The simple way of cooling is also the reason for more and more shipyards to prefer air-cooled compressors. In addition to the fact that an auxiliary with less interfaces is installed, the weight and space is smaller thus enabling lighter and less expensive foundations. In total, cost savings of up to 7,500 USD per ship are possible during installation. The ventilation of the engine room has not to be increased, the compressors just need to be taken into consideration in the arrangement of the ventilation.

Sauer 3-stage air-cooled compressors – the most competitive option also for shipyard and shipowner.

Temperature rise of air during compression



Temperatures rise so far during compression. Temperatures calculated based on the laws of physics and technical regulations. Above mentioned temperatures occur in the cylinders/valves and cannot be compared with temperatures displayed on compressors by standard thermometers.

- Extended life time of the valves (up to 4,000 hours) with less maintenance costs due to lowest compression temperatures
- Reduced crew costs due to easy maintenance
- Designed for use with standard mineral oil SAE30
- No corrosion or water leakages
- Operation of air-cooled compressors independent from central CW system, as emergency compressor

3rd stage air-cooled valve after 2,500 hours

2nd stage water-cooled valve after 800 hours

Fits in every engine room.

No additional air duct

Self-regulating cooling

No cooling water

Any place

Features:

- Available from 60 up to 360 m³/h capacity
- Final pressure up to 45 bar
- More than 12,000 units sold since 1970
- Suitable for continuous running 24/7
- Separator mounted after each stage
- Reliable and safe operation up to 60 °C

Your local agent:

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QUALITY SYSTEM CERTIFICATION
DNV·GL
ISO 9001