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# **Marine Compressors**

STEP THE



## **Extensively certified and absolutely seaworthy:** BOGE starting air compressors are building up pressure in the machine room.



#### **CERTIFICATION AT A GLANCE**

Type certificate:

- Lloyd Register of Shipmment (LRoS)
- Germanischer Lloyd (GL) / Det Norske Veritas (DNV)
- Bureau Veritas (BV)

Available certificates on request:

- American Bureau of Shipping (ABS)
- Korean rules (KR)
- China Classification Society (CCS)
- RINA (Registro Italiano Navale)

## **BOGE'S ADVANTAGE: LONG STAYING POWER**



### **BUILT WITH MACHINE ROOMS IN MIND**

Whether vessels are about to set sail or perform manoeuvring operations – if diesel engines need to be started up, the high pressures called for must be delivered right there and then without fail. BOGE SRH-/RH compressors deliver a constant pressure of 35 bar – and are capable of up to 40 bar, if required. And since they are built to be extremely compact, they are ideal for constricted machine rooms.



## **HEALTHY OPERATING TEMPERATURE**

Purpose-built ships' motors have the design advantage of being able to withstand adverse temperatures. That's why BOGE SRH and RH compressors don't break into a sweat even at 45°C. All components are adapted to the specific requirements of maritime shipping and are certified as well.



### **UNCOMPROMISING QUALITY**

BOGE's starting air compressors have significantly raised the bar for generating compressed air efficiently and reliably at sea: The use of only high-quality materials guarantees minimal maintenance costs, maximum reliability and a long lifetime.



#### **COMPLEX BUT "PLUG & PLAY"**

All BOGE marine systems are designed to be put to work immediately. The compressor and motor share a stable common base plate and everything is fully wired – this means that installation can be completed within normal berthing times. Even oil level and temperature monitoring can be included if required. On shore, BOGE compressors have achieved legendary status. What's new though is that they are now also seaworthy. BOGE has developed particularly robust starting air compressors expressly with the marine sector in mind – and they are fully certified as well. No matter whether they are 2-stage, 3-stage or 4-stage compressors, or have two or four cylinders – these compressors deliver constantly high pressures and withstand even soaring ambient temperatures. And the best thing about them is that their low speed makes them outstandingly durable. After all, even at sea, efficiency pays off just as quickly as on shore.

## MAXIMUM RELIABILITY - WELCOMED ACROSS THE WORLD'S OCEANS

BOGE starting air compressors will soon be plying the world's oceans since every detail of them is designed for the toughest conditions: Their air-cooled pistons – known for their reliability – deliver constantly high pressures even at ambient temperatures of 45°C due to the quality of their components.

## THIS IS WHY BOGE MARINE COMPRESSORS ARE SO DURABLE:

- 1. Cylinder and crankcase made of high-grade cast iron
- 2. Intake filter and intake duct thermally decoupled in cylinder head
- 3. Targeted cooling air flow over cylinder and aftercooler to maintain low compressed air temperature
- 4. Vibration damped through anti-vibration mounting
- 5. Quiet operation due to meticulous balancing in V configuration
- 6. Control pressure switch
- 7. Discharge solenoid valve
- - 8. Temperature sensor at compressed air outlet
  - 9. Compressor and motor mounted on common base plate
  - 10. Belt driven with pretensioned high capacity V-belts
- 11. Specially coated, energy-efficient drive motors built to IP 55 ISO F / efficiency class IE 3
- 12. Flexible high-pressure hose
- 13. Oil level monitoring (optional)
- 14. Cyclone separator

## DATA FOR BOGE SRH-/RH COMPRESSORS

BOGE Suction capacity **Effective free air Compressor-**No. of Motor rating Max. **Dimensions** Weight type delivery\* rotational speed cylinders pressure WxDxH m³/h cfm m³/h cfm UpM kW HP bar kg mm SRH 330 MC 19.8 2 3.0 1300 x 700 x 890 170 12 16.32 10 680 4.0 35 SRH 460 MC 27.6 17 22.38 13 950 2 4.0 5.0 35 1300 x 700 x 890 185 SRH 660 MC 39.6 24 30.54 18 680 5.5 35 1300 x 740 x 900 225 3 7.5 25 SRH 940 MC 56.4 33 42.36 970 3 7.5 10.0 35 1300 x 740 x 900 225 1300 x 740 x 900 SRH 1250 MC 75.0 45 56.52 33 1290 3 11.0 15.0 35 260 RH 2400 MC 144.0 90 108.00 60 930 4 22.0 30 30 1600 x 770 x 1500 680 100 129.60 37.0 1600 x 770 x 1500 RH 2830 MC 169.8 80 1100 4 50 30 680

\* Free air delivery as per VDMA 4362



## Extremely tough with a minimum of maintenance – that's no contradiction in terms for BOGE. No matter what different conditions the various compressor series are exposed to – they never fail to impress in the machine room with their

## **BOGE KOMPRESSOREN**

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## **BOGE MARINE PRODUCT PORTFOLIO**

outstanding efficiency.



#### STARTING AIR COMPRESSORS

The models in the SRH-/RH series react to the rocking movements of the sea swell by producing consistently steady high pressures. They are completely immune to the high operating temperatures encountered in the machine room and come with the assurance of a long service life. The range that they cover extends from 3 to 37 kW.



## WORKING AIR COMPRESSORS

BOGE's S-3 series has proved extremely successful on shore. But with their "effilence" air end, these compressors also have what it takes to excel at maintenance and repair work at sea. They achieve top marks for efficiency, extremely quiet operation and minimal sound pressure - from 22 to 45 kW.



## **NITROGEN AS FIRE PROTECTION**

Due to the "inert" property of the gas, BOGE nitrogen generators operating on the "Pressure Swing Adsorption" (PSA) principle prevent substances such as methane from attacking cargo tanks under the influence of oxygen. Purging tanks with nitrogen also removes any residue impurities.



#### **MEMBRANE GENERATORS ON-SITE**

Maritime vessels increasingly use Liquefied Natural Gas (LNG) or Liquefied Petroleum Gas (LPG) as a fuel and are accordingly required to have nitrogen generators on board. BOGE membrane generators supply nitrogen for purging with inert gas purities up to 99,9% and dew points down to  $-70^{\circ}$ C – to ensure safe bunkering, tank inspection and maintenance.



#### **COMPLETE EX WORKS SOLUTION**

BOGE is thoroughly conversant with the requirements of modern freight shipping. Even considering berthing times alone, it is essential delivered to the ship ready wired for connection. of these compressors dispenses entirely with Irrespective of whether a receiver, dryer or oil level monitor is included - everything is ready pre-installed and wired.



## LONG TRADITION OF INNOVATION

BOGE has made the compressed air industry sit up and take notice many a time before - most recently with the presentation of their whisper-quiet High that even complete compressed air systems are Speed Turbo compressors. The drive mechanism lubrication thanks to the air-supported motor shaft, resulting in energy savings alone of 30% compared to conventional screw compressors.