



**Sauer Compressors**

**SAUER**

**HAUG**

**EK**

**GIRODIN**

# **Sauer Compressors UK**

**Chris Jones – National Sales Manager**

## ABOUT US



# Sauer Compressors

World market and technology leader

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Founded in 1884,  
family-owned in 3rd generation

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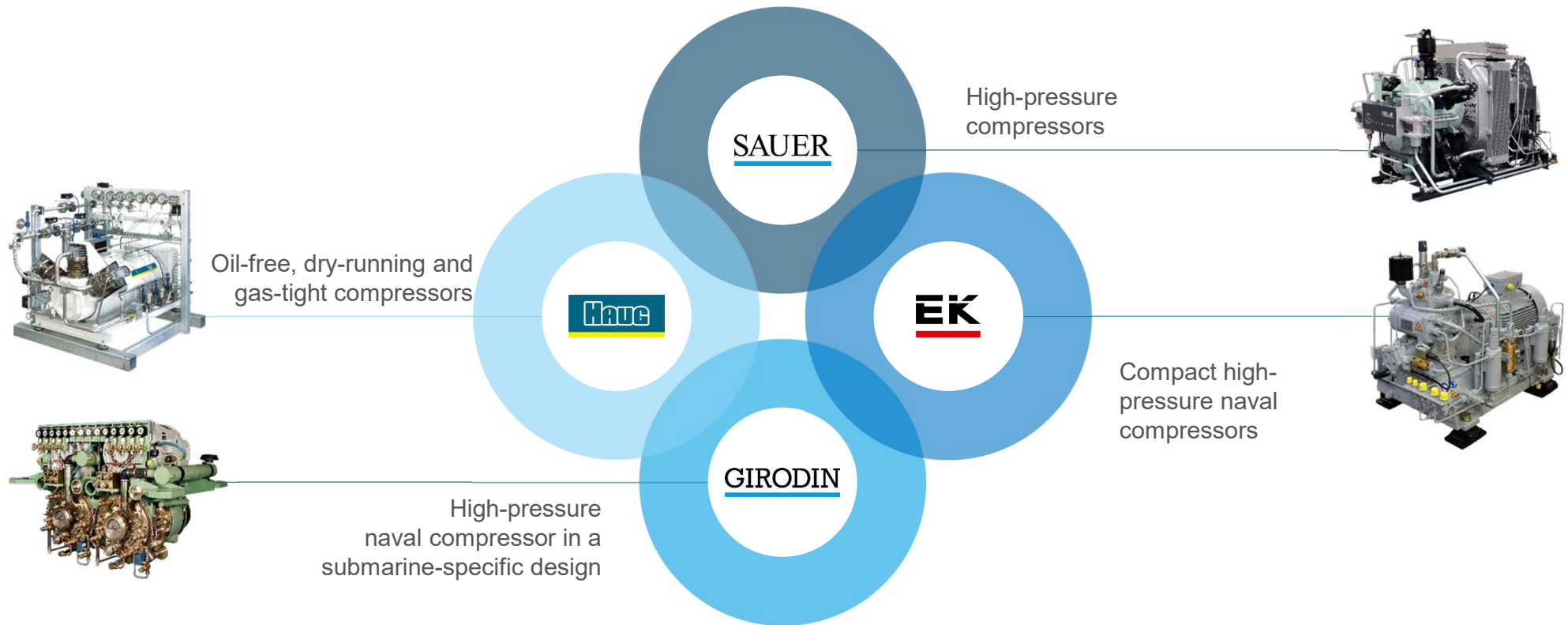
International, mid size group of companies  
with headquarters in Kiel, Germany.

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More than 90 years of experience  
in compressor technology..



## PRODUCT BRANDS



## CERTIFIED PRODUCTS



### HAUG hydrogen compressors

- First use on Hydrogen in 1989 for a solar energy demonstration project in Germany.
- Over the past 35 years, we have continuously improved and have set new standards in the industry.



ZERO LEAKAGE



OIL FREE

- ✓ Oil-free and dry-running design
- ✓ Hermetically gas-tight
- ✓ HAUG NanoLoc high-pressure stages
- ✓ Inlet pressures of up to 30 barg
- ✓ Suitable for final pressures up to 450 barg and max. volume flow rate of up to 100 m<sup>3</sup>/h
- ✓ Ex-proof versions acc. to ISO 80079-34:2020 and the European ATEX directive 2014/34/EU



Sauer Compressors



*Sirius*



## CERTIFIED PRODUCTS

# SAUER

SAUER Hydrogen compressors stand for oil-lubricated heavy-duty machines that are an efficient and economical solution for all kinds of industrial hydrogen applications.



### SAUER /// Hurricane

The 4-stage, air-cooled high-pressure compressors of the SAUER Hurricane series are the top choice for demanding applications.

- 4-stage compression
- Direct drive
- High-efficiency air cooling



### SAUER /// 6000 series

The water-cooled compressors of the SAUER 6000 series have a modular design with up to six cylinders, which allows many different variations. As the largest piston compressors of their kind, they allow maximum performance even in the most difficult conditions.

- Modular 4 or 6 cylinder design
- Up to 5-stage compression
- Hermetically gas-tight magnetic coupling drive
- Water-cooling system with individual cylinder/inter-stage cooling



- ✓ Special gas-tight design
- ✓ Proven in the most demanding conditions in industry and offshore applications
- ✓ Inlet pressures of up to 20 barg
- ✓ Suitable for final pressures up to 350 barg and a max. volume flow rate of up to 1,000 m<sup>3</sup>/h
- ✓ Ex-proof versions acc. to ISO 80079-34:2020 and the European ATEX directive 2014/34/EU

## WHERE DO WE FIT IN?



### Bulk Gases

- H<sub>2</sub> Cylinder Filling Station
- Tube Trailer Filling



### Decentralised Energy Supply

- Smaller than 5 MW Electrolyser Solutions
- Small scaled green energy concepts
- Critical infrastructure



### Recovery & Pipeline

- Boil of Gas of Liquid Hydrogen Storage
- Pipeline evacuating
- Seal gas or leakages gas



## HOW TIGHT IS “GASTIGHT”?



## HOW TIGHT IS “GASTIGHT”?

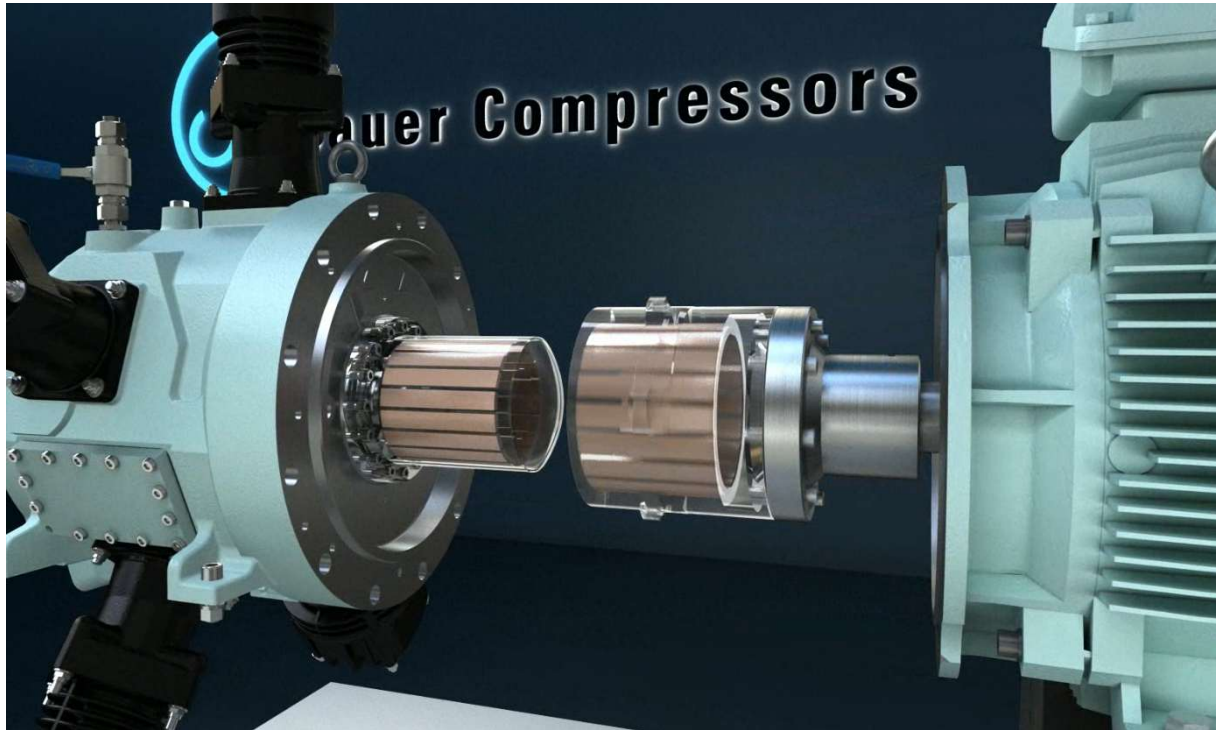
- ‘Gastight’ is no absolute technical term
- Everything leaks – it is just a matter of time to measure
- Test pressure, volume, gas needs to be defined
- Leakage rate **mbar \* l / s (millibar times liters per second)**
  - ➔ tiny flow rate
  - $\text{Mbar} \cdot \text{l/s} \cdot 60 = \text{cm}^3/\text{min}$
- Flanged connection  $10^{-4} \text{ mbar} \cdot \text{l/s}$ 
  - ‘bacteria-tight’
- $10^{-6} \text{ mbar} \cdot \text{l/s}$ 
  - ‘virus-tight’



- Marketing
  - ‘Hermetical gastight’
  - ‘Absolutely gastight’
- Technical terms
  - ‘permanently technically gastight’
    - gaskets, seals, o-rings, unions
  - ‘technically gastight’
    - packings and stuffings with wear
- Standards e.g.
  - TRBS 2152
  - DIN EN 1779



## MAGNETIC COUPLING



Gas tightness and shaft seals - MW/Bh - V1.4 - 04.07.2025



### Sauer 6000 and ORKAN Series HAUG Sirius and Neptune

- Seals against oil and gas
  - **overpressure** inside the crankcase up to 20 bar g
  - **vacuum** tight
- No friction, wear, seizure
  - maintenance-free
  - 'Set it and forget it!'



**Sauer Compressors**

**THANK YOU  
ANY QUESTIONS?**

If you would like to discuss your application contact:  
[Chris.jones@sauercompressors.co.uk](mailto:Chris.jones@sauercompressors.co.uk)  
01206 233 335