



# **Sauer Compressors**

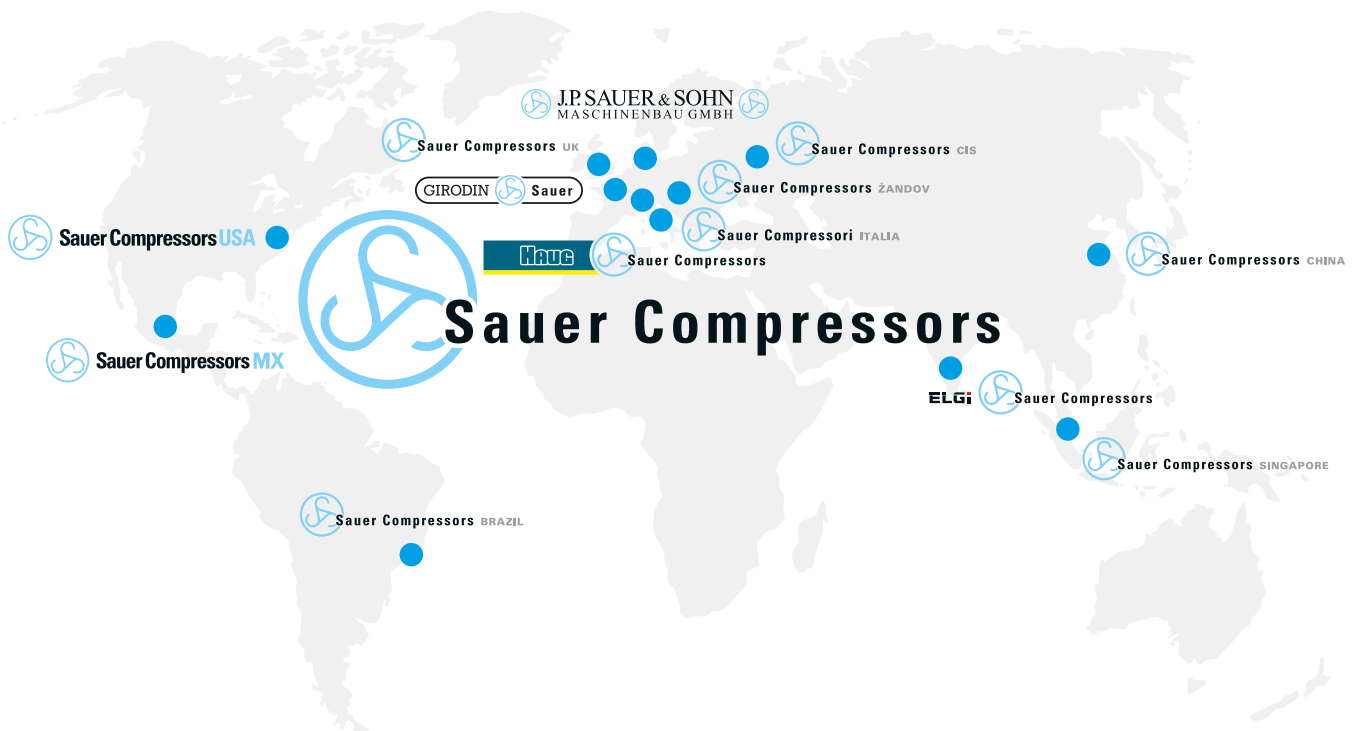


**PETRO INDUSTRY**

**Dependable up to 500 bar – anywhere, anytime, anygas.**



Dependable up to 500 bar – anywhere, anytime, anygas.



For your local contact please visit our website  
[www.sauercompressors.com](http://www.sauercompressors.com)

Dependable up to 500 bar – anywhere, anytime, anygas.

## Comprehensive industry expertise

With over 80 years of experience in compressed air technology, we know the challenges our customers are facing all over the world. As a global company we keep local requirements in mind: Our companies and partners around the globe know the particular demands in each area and provide exactly the right solutions and services to meet them. Our support knows neither business hours nor time zones – we are available whenever we are needed.

### Sauer – High-pressure know-how made in Germany

Our headquarters J.P. Sauer & Sohn in Kiel, Germany, serves as the centre of excellence for our renowned SAUER-range of piston compressors. The oil-lubricated machines are available for pressures up to 500 barg and designed for continuous operation. The reciprocating models allow compression in up to five stages. A total of up to six cylinders are mounted in a star, V or W arrangement. The compressors are the ideal solution for operation at atmospheric suction pressure or to be used as gas-tight boosters with pre-pressures up to 25 barg.

### HAUG – world's leading brand for oil-free piston compressors

HAUG compressors are the first choice when it comes to demanding applications that require maximum process purity and safety. The dry-running machines are entirely oil-free to prevent contamination and to provide hermetic gas-tightness. The modular and customisable design helps to achieve pressures from 1 to 450 barg. High-tech innovations, such as a non-contact magnetic coupling (up to 110 kW) and the high-pressure piston design "NanoLoc", add to the compressors' outstanding performance.



## Sauer Compressors for the Petro Industry

---



## We help to make your process safe and sound.

Sauer compressors have long been a staple of the oil and gas industry. Both offshore and onshore, they are synonymous with maximum reliability and process safety under the toughest conditions. Besides our extensive portfolio of turnkey products, we offer custom solutions specially tailored to the requirements of the oil and gas industry. Thanks to HAUG Sauer, these now include completely oil-free, dry-running and gas-tight compressors for a wide range of applications, including the legally required recovery of leakage gas.







Whether upstream, midstream or downstream – we provide dependable solutions for the petro industry wherever you need them. Our products comply with all relevant standards, e.g. Norsok, ABS and DNV.GL and are designed to meet the challenges of 24/7 operation.

“Dependable up to 500 bar – anywhere, anytime, anygas.” With industry-leading oil-free and oil-lubricated compressors and accessories in a large variety of power and pressure ranges, we stand by that promise – onshore and offshore, upstream, midstream and downstream.

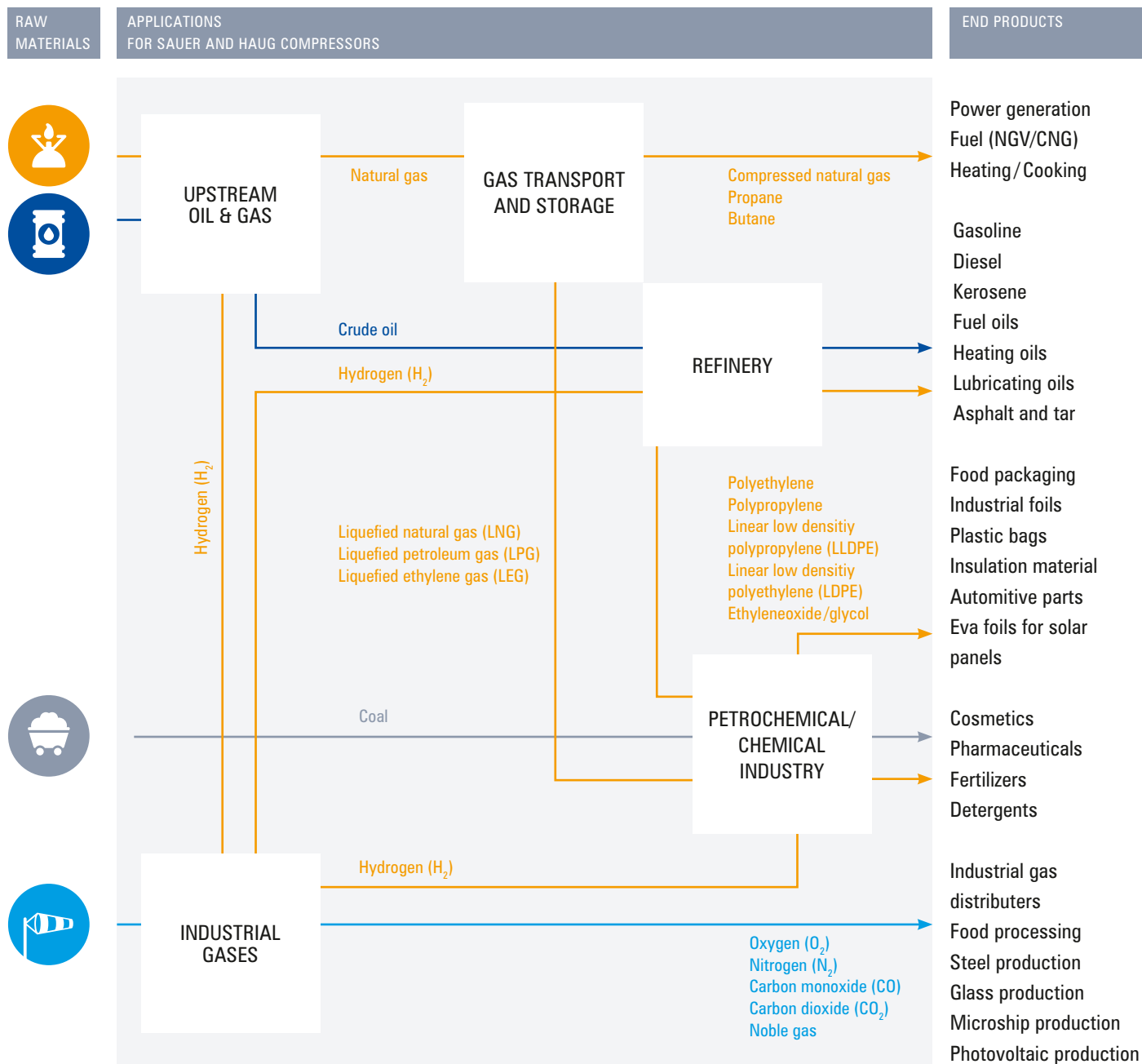
## Dependable up to 500 bar – anywhere, anytime, anygas.

### Our “anygas”-commitment

You name the gas – we provide the solution! Through the comprehensive know-how of renowned brands like [SAUER](#) and [HAUG](#), we are able to meet the requirements of virtually any gas. Even if a particular medium is not listed in the overview, customers are welcome to contact us – if there is no “off-the-shelf”-product to suit their needs, we provide individual custom solutions.

Series Gas	<b>HAUG</b>					<b>SAUER</b>							
	<i>HAUG.Pluto</i>	<i>HAUG.Mercure</i>	<i>HAUG.Neptune</i>	<i>HAUG.Sirius</i>	<i>HAUG.Titan</i>	 <i>Mistral</i>	 <i>Passat</i>	 <i>Breeze</i>	 <i>Typhoon</i>	 <i>Tornado</i>	 <i>Hurricane</i>	<i>5000 series</i>	<i>6000 series</i>
Air	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
CDA (clean dry air)	✓	✓	✓	✓	✓	–	–	–	–	–	–	–	–
Nitrogen N <sub>2</sub>	✓	✓	✓	✓	✓	✓	✓	–	✓	✓	✓	✓	✓
Oxygen O <sub>2</sub>	✓	✓	✓	✓	–	–	–	–	–	–	–	–	–
Helium He	✓	✓	✓	✓	✓	✓	✓	–	✓	✓	✓	✓	✓
Argon Ar	✓	✓	✓	✓	✓	✓	✓	–	✓	✓	✓	✓	✓
Hydrogen H <sub>2</sub>	–	–	✓	✓	✓	–	–	–	–	✓	✓	–	✓
Synthesis Gases	–	–	✓	✓	✓	–	–	–	–	–	–	–	–
Natural Gas CH <sub>4</sub>	–	–	✓	✓	✓	–	✓	–	–	✓	✓	–	✓
SF <sub>6</sub>	✓	✓	✓	✓	✓	–	–	–	–	–	–	–	–
Refrigerant gases	✓	✓	✓	✓	✓	–	–	–	–	–	–	–	–
Carbon Monoxide CO	–	–	✓	✓	✓	–	–	–	–	–	–	–	–
Carbon Dioxide CO <sub>2</sub>	✓	✓	✓	✓	✓	–	–	–	–	–	–	–	–
Gas mixtures	✓	✓	✓	✓	✓	–	–	–	–	–	–	–	–

# Petro Industry Applications



# Oil & Gas Applications



## Upstream

- Exploration and production in the oil & gas industry
- Includes everything from the search for potential reserves of oil and gas, exploration of promising sources to the final extraction of the resources.

- Seismic exploration
- Motion compensation for semi-submersible rigs
- Underwater hammering
- High pressure nitrogen boosting up to 500 barg



## Midstream

- All means of transportation, storage, support systems and marketing of oil & gas products.

- Pipeline-related services
- High pressure nitrogen boosting up to 500 barg



## Downstream

- Refining and processing of oil & gas products into usable products, such as petrol, diesel oil, jet fuel, fuel oils, liquefied petroleum gas (LPG), propane, natural gas, lubricants, plastics and pharmaceuticals.

- High pressure nitrogen boosting up to 500 barg
- Compressed natural gas (CNG) compression



## Auxiliaries

- Applications aside from the usual oil & gas processes

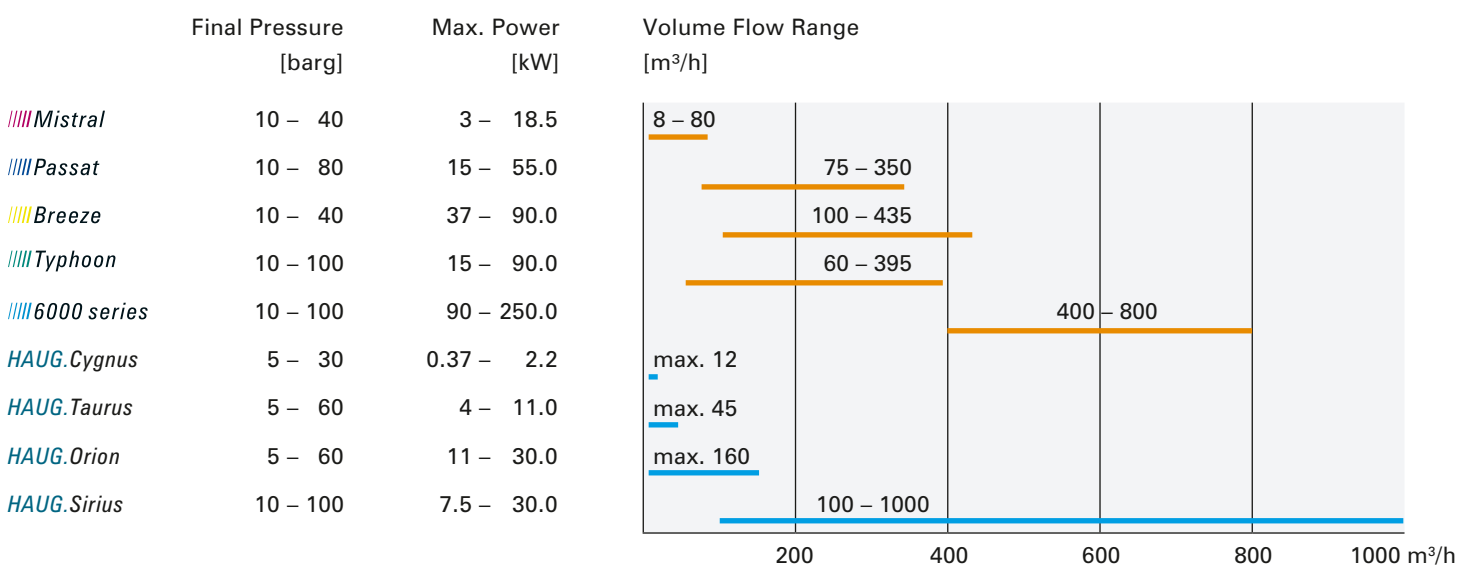
- Cold start compressors
- Breathing air, fire and safety

## Products – Performance Overview

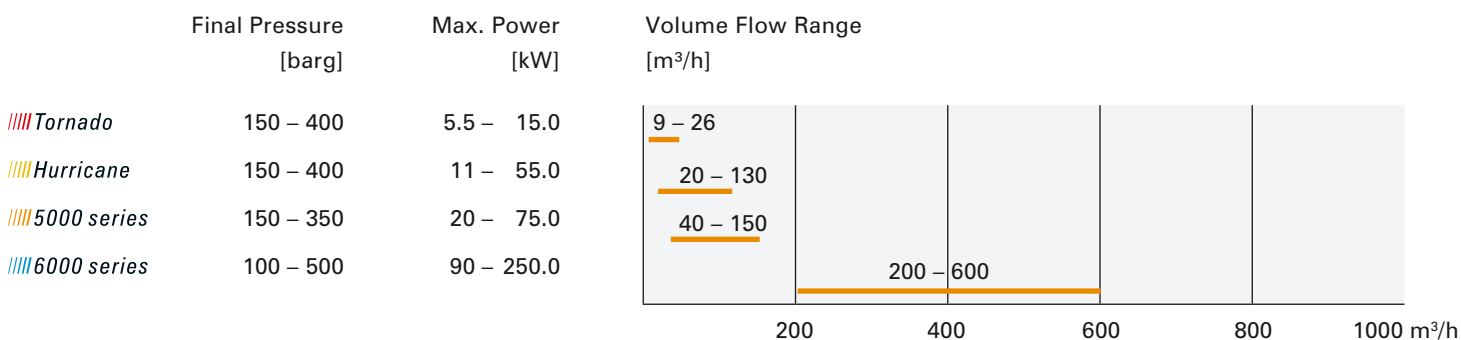
Our compressors are as diverse as our customers' requirements. We provide high-quality compressed air and gas solutions in various capacities and pressure ranges to meet the particular demands of a great number of industries and applications.

### Air Compressor Range

#### Low and Medium Pressure



#### High and Highest Pressure



 oil-lubricated  
 oil-free

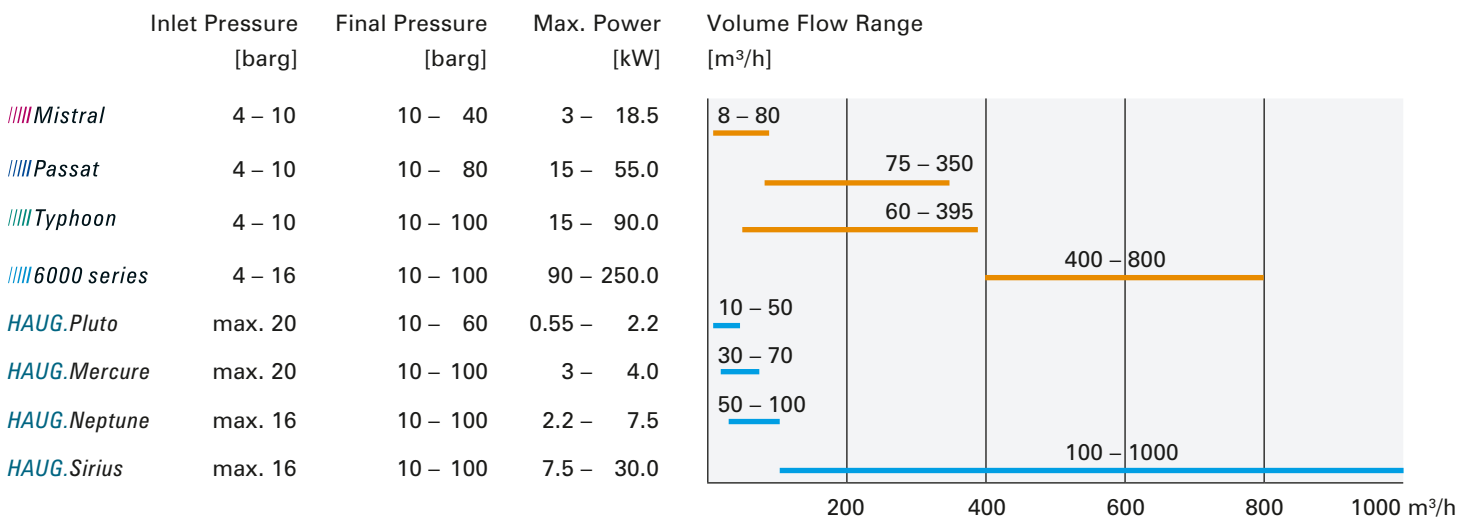
**SAUER** Quality made in Germany

**HAUG** Quality made in Switzerland

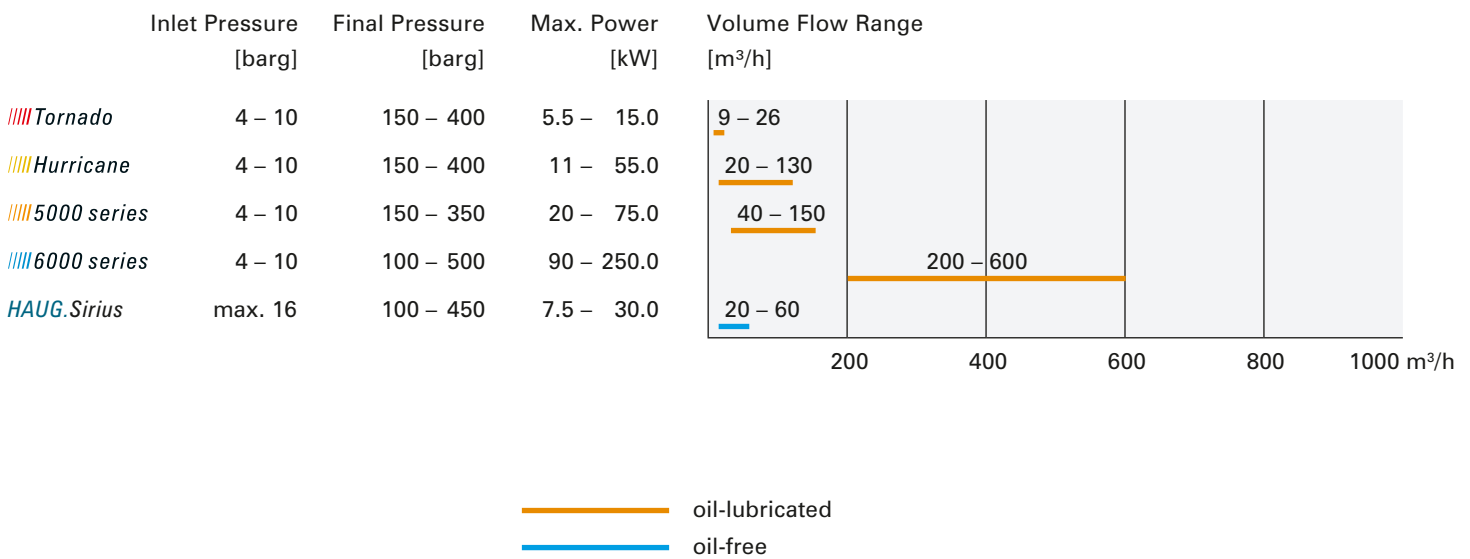


## Air and Nitrogen Booster Range

### Low and Medium Pressure

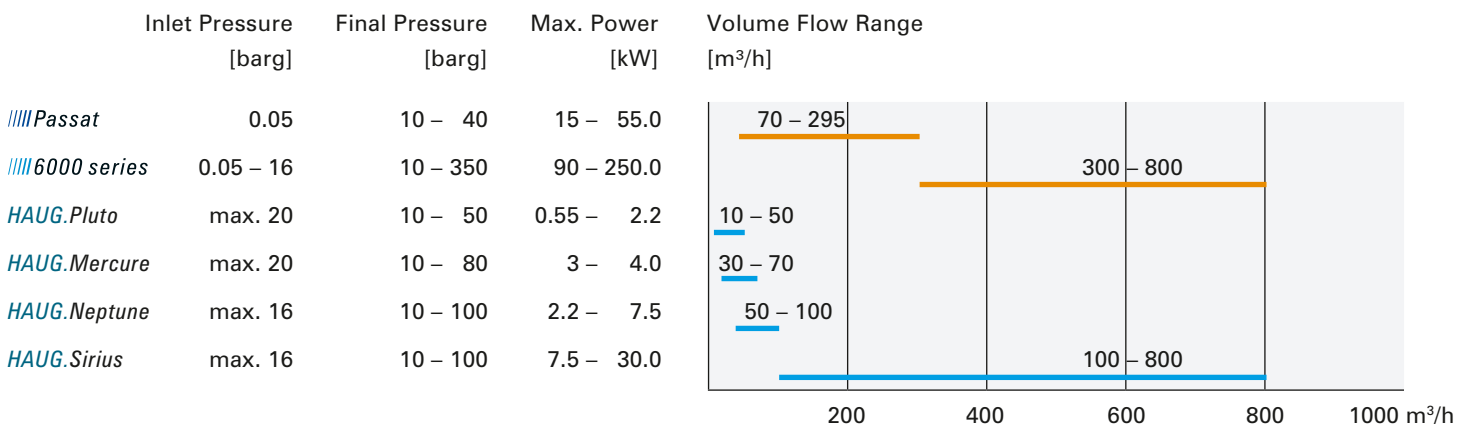


### High and Highest Pressure

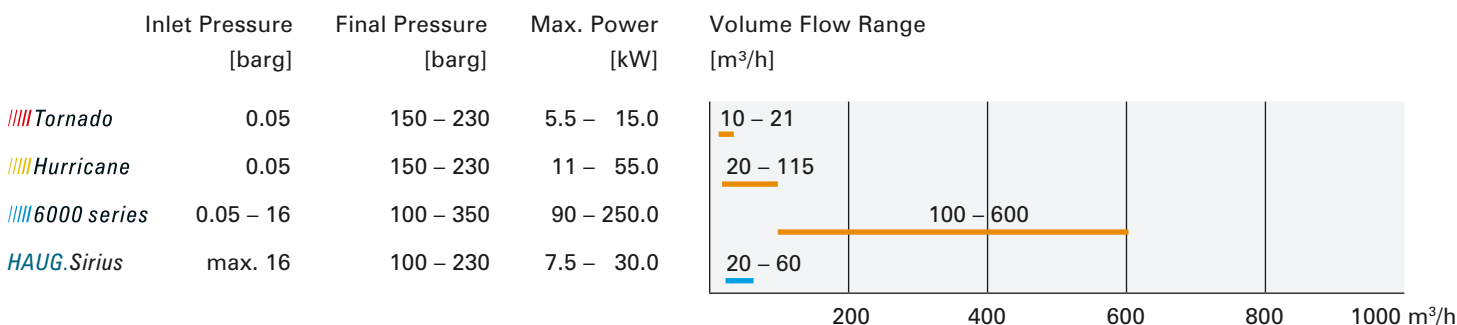


## Helium Compressor Range

### Low and Medium Pressure

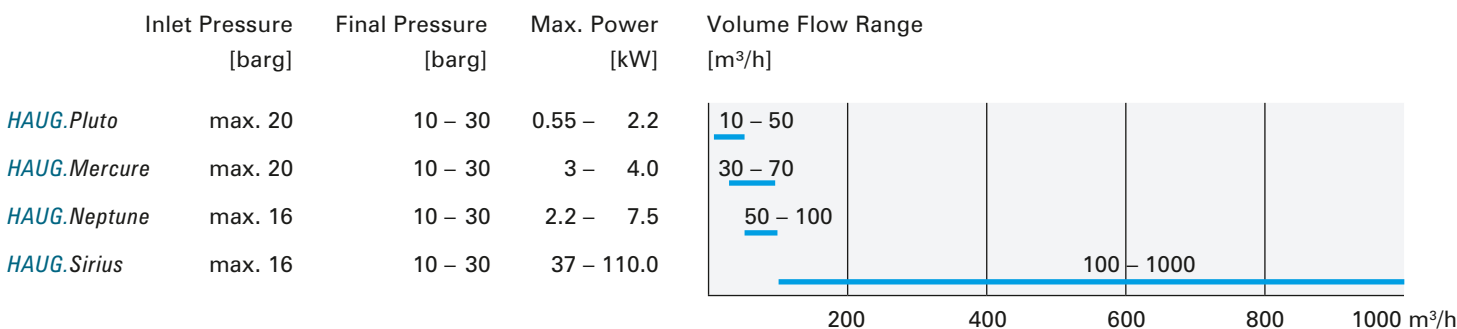


### High and Highest Pressure



## Oxygen Compressor Range

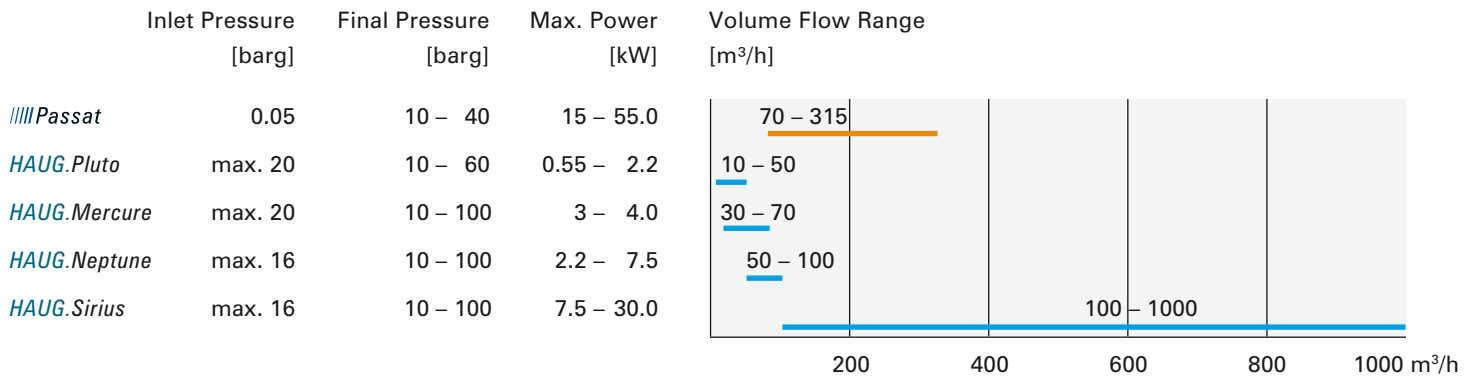
### Low and Medium Pressure



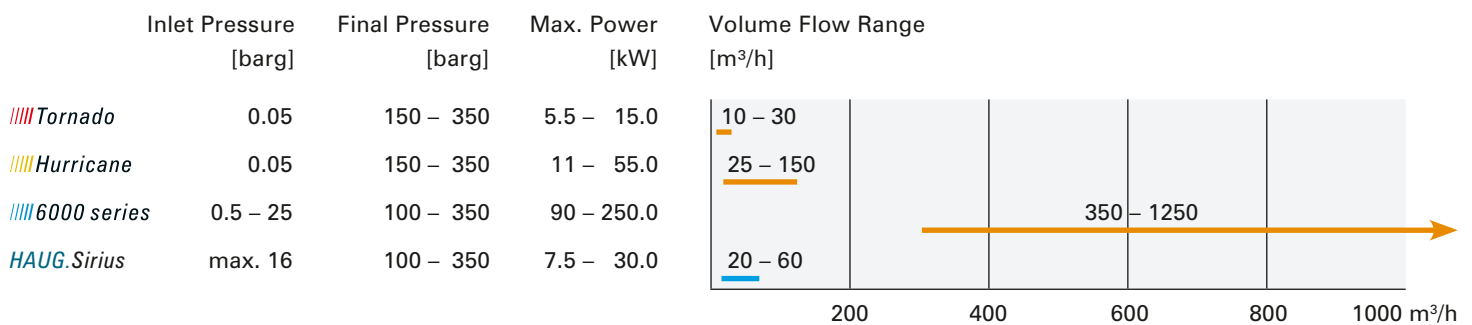
 oil-lubricated  
 oil-free

## CNG Compressor Range

### Low and Medium Pressure

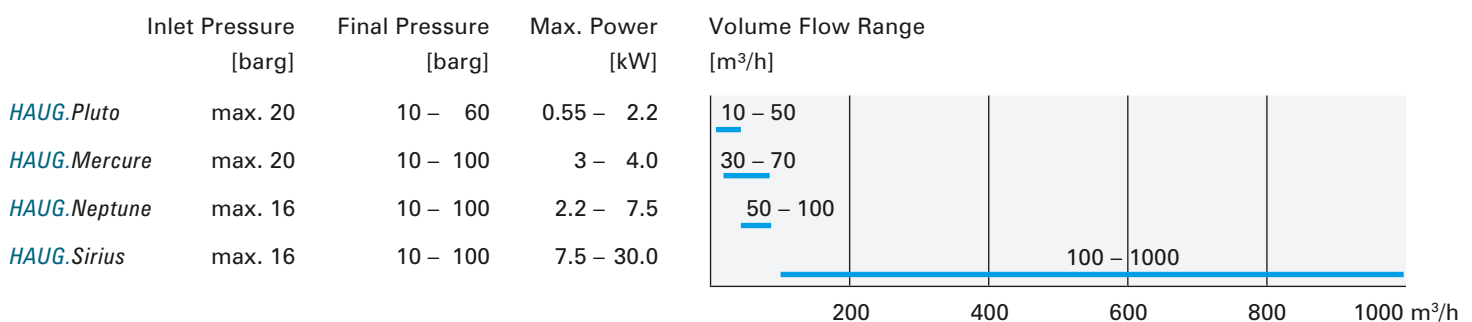


### High and Highest Pressure

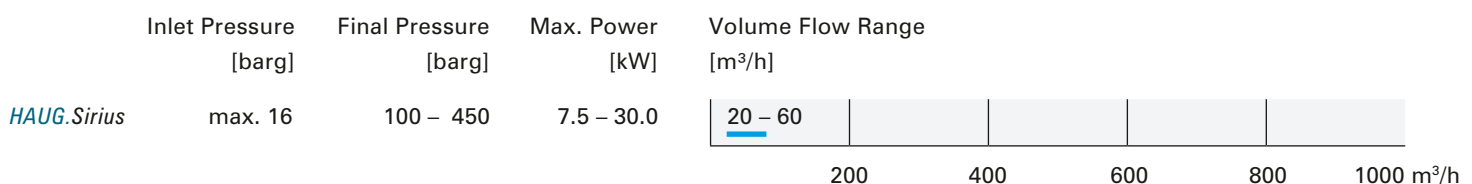


## “Anygas” Compressor Range

### Low and Medium Pressure



### High and Highest Pressure



## Seismic Exploration



Seismic air guns are used to find oil and gas underneath the seabed. Towed behind a vessel, air guns are mechanical devices with metal flaps that release high pressure air underwater. The air bubbles expand, generating seismic waves that reach the seabed. The reflections from these waves are received by a 'streamer' which then provides detailed information about the structure of the seabed and possible oil and gas fields.

### What are Sauer Compressors used for?

- Supplying high pressure air for the air gun

### Who are Sauer Compressors' customers?

- Seismic operators
- Research industries
- Shipyards
- Packagers

### Which Sauer product ranges are used?

- Product ranges: *//// Hurricane, //// 5000 series, //// 6000 series*
- Variants: Basic
- Volumetric flow: 120–720 m<sup>3</sup>/h | 2–12 m<sup>3</sup>/min | 70–420 scfm
- Pressure range: 120–207 barg | 1700–3000 psig
- Medium: Air



# Motion Compensation for Semi-submersible Rigs



Deep water drilling requires a rigid connection between the platform/drill-ship and the seabed. In order to keep on drilling in rough weather conditions, the movement of the derrick on the platform needs to be compensated. This compensation is done by wire-line or direct tensioning systems based on hydraulic systems and in order to keep the hydraulic pressure stable in the system, high pressure air or gas is used.

## What are Sauer Compressors used for?

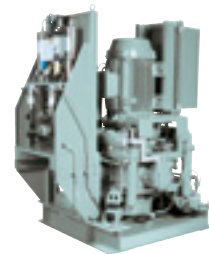
- Supplying an air or gas cushion on top of the hydraulic liquid

## Who are Sauer Compressors' customers?

- OEM companies
- Drilling operators
- Shipyards
- Packagers

## Which Sauer product ranges are used?

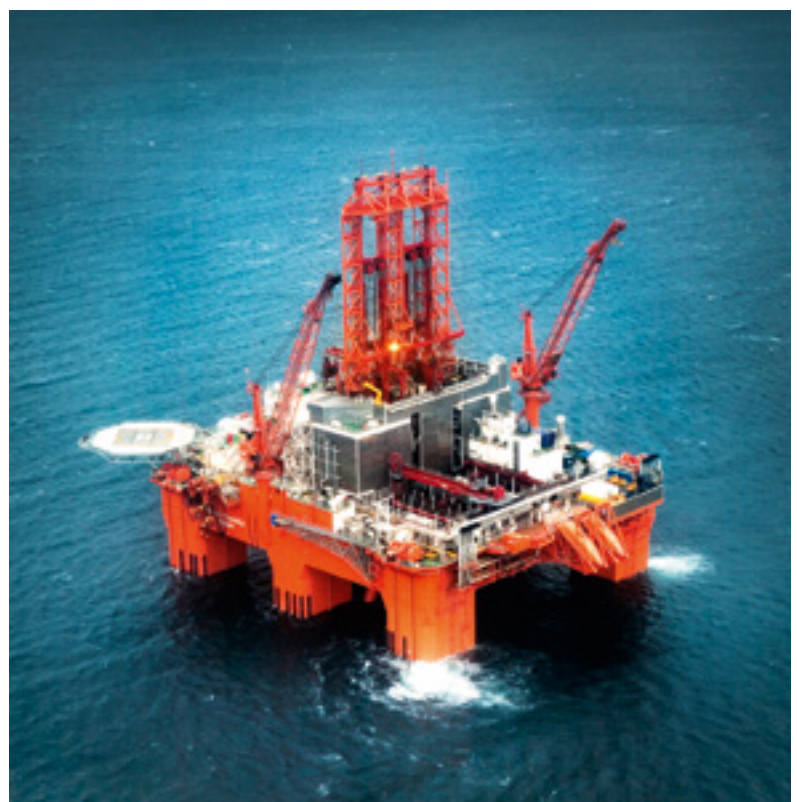
- Product ranges: *5000 series, 6000 series*
- Variants: Special Module
- Volumetric flow: 140 m<sup>3</sup>/h | 2.3 m<sup>3</sup>/min | 82 scfm
- Pressure range: 207–315 barg | 3000–4600 psig
- Media: Air or Nitrogen



## *5000 series*

**WP 5000**

Offshore module incl. adsorption dryer





## Compressed Natural Gas (CNG)



Compressed Natural Gas (CNG) has the potential to fuel millions of vehicles throughout the world, with significant economic, safety and environmental benefits. High pressure CNG boosters from Sauer are specially equipped for CNG compression. From single units for OEMs to customised solutions, Sauer CNG boosters represent a reliable, safe solution for CNG filling stations.

### What are Sauer Compressors used for?

- Vehicle Filling Stations
- Pipeline Gas Injection
- Natural Gas Engine Testing

### Who are Sauer Compressors' customers?

- OEM companies
- Packagers

### Which Sauer product ranges are used?

- Product ranges: *Passat*, *Hurricane*, *HAUG.Mercure*, *HAUG.Neptune*, *HAUG.Sirius*
- Variants: BasSeal
- Volumetric flow: 120–360 m<sup>3</sup>/h | 2–6 m<sup>3</sup>/min | 70–210 scfm
- Pressure range: 40–350 barg | 580–5000 psig
- Medium: Natural Gas



### *Hurricane*

**HURRICANE WP 4351 BasSeal<sup>CNG-B</sup>**  
140 m<sup>3</sup>/h @ 350 barg



## Anywhere, anytime, anygas – anything else?

In addition to high-quality compressors, control systems, accessories and services, Sauer Compressors customers benefit from:

### Engineering assistance

Through our local representations we can assist engineering teams locally and offer support with regard to integrating our products. In this way, we ensure our customers make the most of their installation.

### Documentation – Integrated Logistics Support (ILS)

High-value products and solutions require high-quality documentation. This includes the whole range of Integrated Logistics Support (ILS).

### Factory acceptance tests and third-party inspection

For Sauer Compressors, quality is not a promise – it's a fact! All our compressors are subjected to a 12-hour endurance test at final pressure and issued a high level 3.1 inspection certificate after the final inspection. Upon request, third-party inspections can be performed. For our helium compressors, we have devised an extensive 16-hour test procedure that is unprecedented in the industry. Both static and dynamic leak rates are tested with the noble gas itself. As a result, operators benefit from 'true' helium compressors providing unparalleled leak tightness.

### Installation and commissioning

Even the best product's performance will suffer if the installation is faulty. Upon request, our expertly trained service technicians will set up the newly acquired Sauer product and integrate it into established systems at our customer's facility. Thanks to our local representations, this service is available anywhere in the world. After the initial setup, the installation is thoroughly tested and finally commissioned. To ensure maximum performance, low operating costs and a long service life, we offer in-house trainings for the operating staff.

### Certifications

ISO 9001:2015  
BS OHSAS 18001:2007



Your local partner:

**J.P. Sauer & Sohn Maschinenbau GmbH**

P.O. Box 92 13, 24157 Kiel/Germany

PHONE + 49 431 3940-0  
FAX + 49 431 3940-24  
E-MAIL [info@sauercompressors.de](mailto:info@sauercompressors.de)  
WEB [www.sauercompressors.com](http://www.sauercompressors.com)

We reserve the right to make technical changes without prior notice.  
Please visit [www.sauercompressors.com](http://www.sauercompressors.com) for the latest version of the brochure.

**10/2018** [suw | s+k], pictures: seadrill; Menck; tomas, benamalice, Jim Parkin, Nikolay Zaburdaev, Peter Irman, Polshkov, PL-Pix, Nightman 1965, Andrei Merkulov, James, davispics – alle Fotolia.com; LovePhy – stock.adobe.com

