

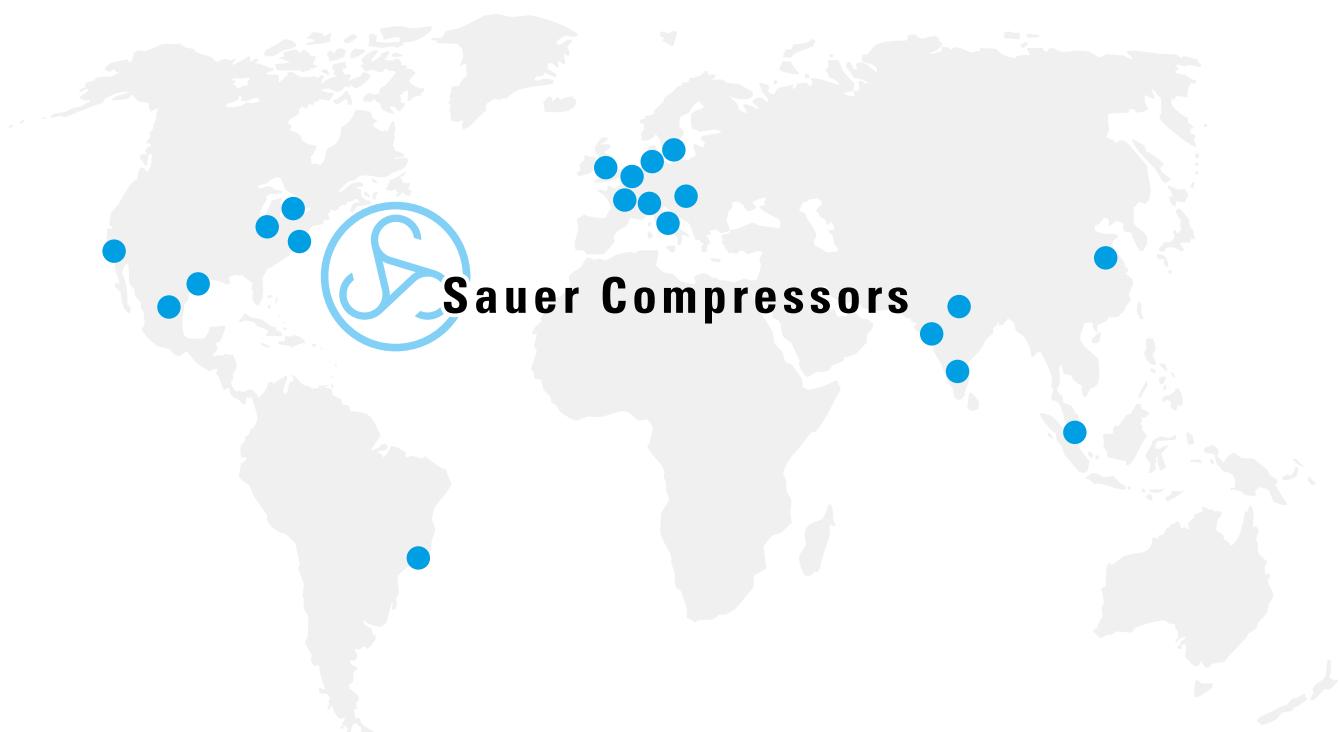
# Sauer Compressors

**SAUER**

**Haug**







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

## Comprehensive industry expertise

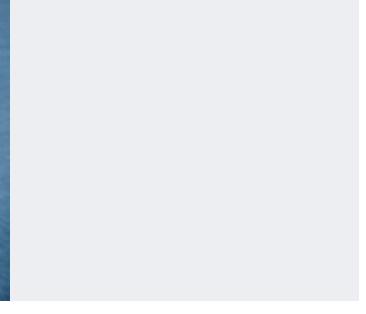
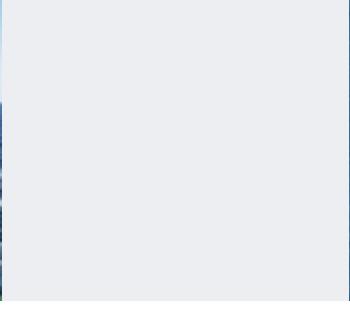
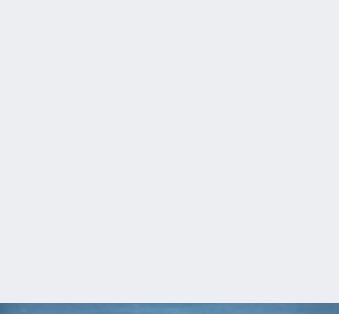
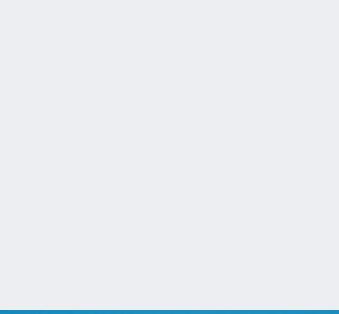
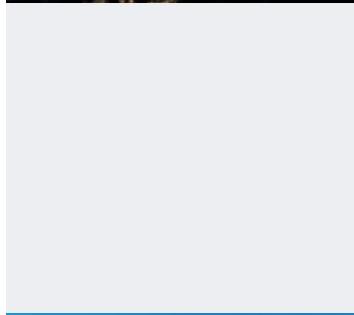
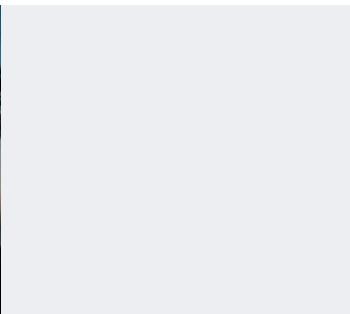
With over 90 years of experience in compressor technology, we know the challenges our customers are facing all over the world. As a global company we keep local requirements in mind: Our companies and partners around the globe know the particular demands in each area and provide exactly the right solutions 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 from Germany**

Our headquarters in Kiel, Germany, serves as the centre of excellence for our renowned SAUER-range of piston compressors. The oil-lubricated machines are available for final 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 suction pressures up to 25 barg.

### **HAUG – World leading oil-free piston compressors – Made in Switzerland**

HAUG compressors are the first choice when it comes to demanding applications that require maximum process purity and safety. The dry-running machines are completely oil-free and hermetically gas-tight, preventing gas contamination. The modular and tailor-made design helps to achieve final pressures up to 450 barg. High-tech innovations, such as a non-contact magnetic coupling and the high-pressure piston design NanoLoc, add to the compressors' outstanding performance.



We help to make your process safe and sound.

Sauer compressors have long been a staple of the offshore industry. 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 offshore industry. Thanks to the HAUG product line these 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 offshore applications wherever you need them. Our products comply with all relevant standards, e.g. NORSO<sub>K</sub>, ABS and DNV and are designed to meet the challenges of 24/7 operation.

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.

## Offshore Applications

### Engine starting air



|||| *L3vante*

### Leakage Testing



|||| *Mistral*

### Pipeline purging



|||| *Hurricane*

### Blowout preventer (BOP) control



|||| *5000 series*

## Riser tensioning system/ Motion compensation for semi-submersible rigs



||||5000 series

## Nitrogen generation

SAUER



Offshore Nitrogen  
Generator

## Nitrogen booster



||||Tornado

## Legend



### Auxiliaries

- Applications aside from the usual oil & gas processes



### Midstream

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



### 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



### 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

## 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.

**SAUER**

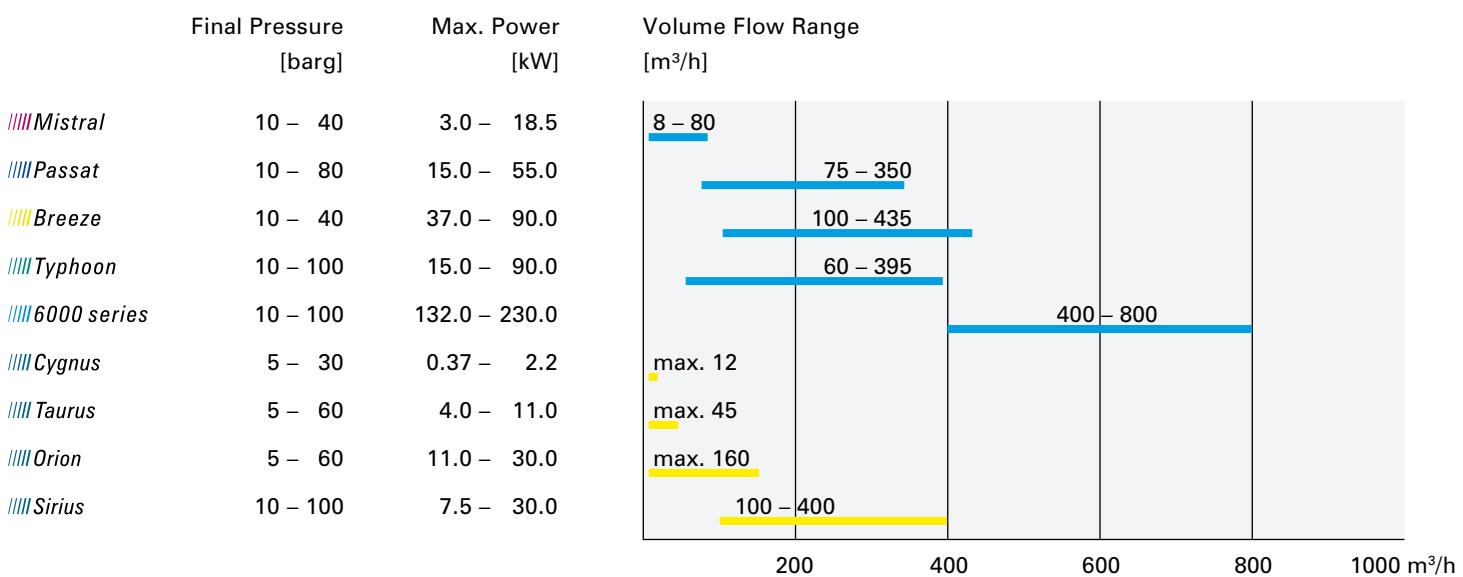
oil-lubricated,  
hermetically gas-tight

**Haug**

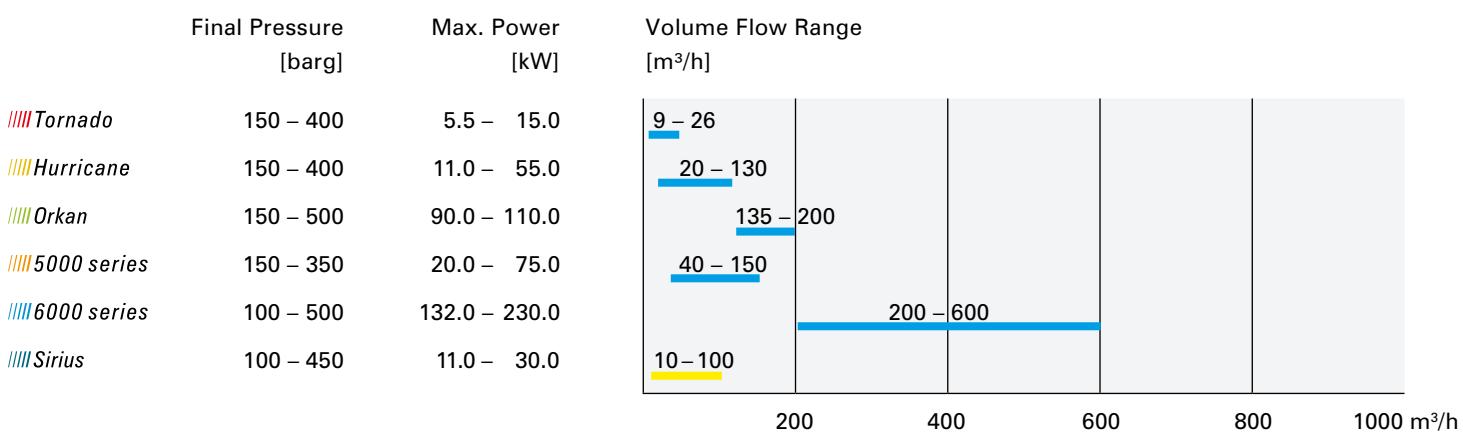
oil-free, dry-running and  
hermetically gas-tight

### Air Compressor Range

#### Low and Medium Pressure

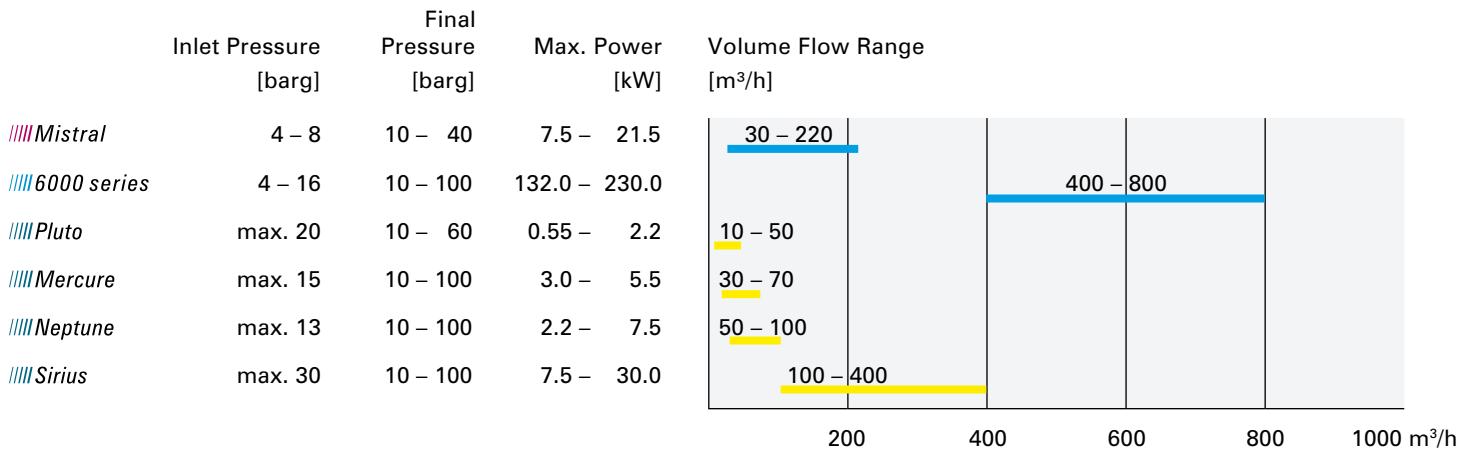


#### High and Highest Pressure

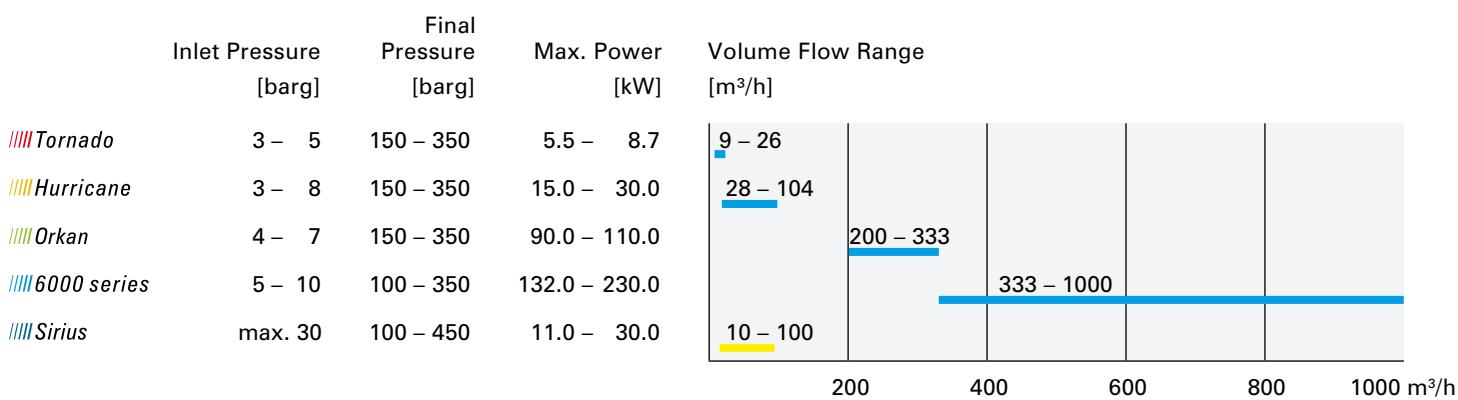


## Air and Nitrogen Booster Range

### Low and Medium Pressure

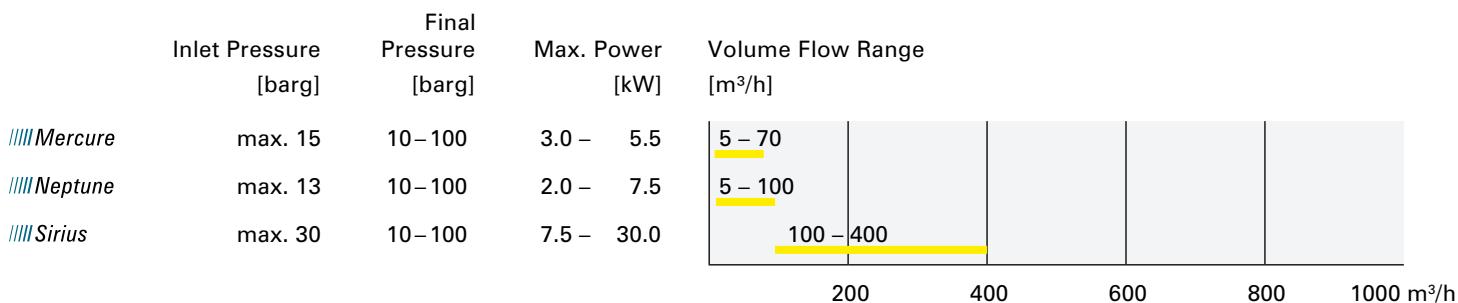


### High and Highest Pressure

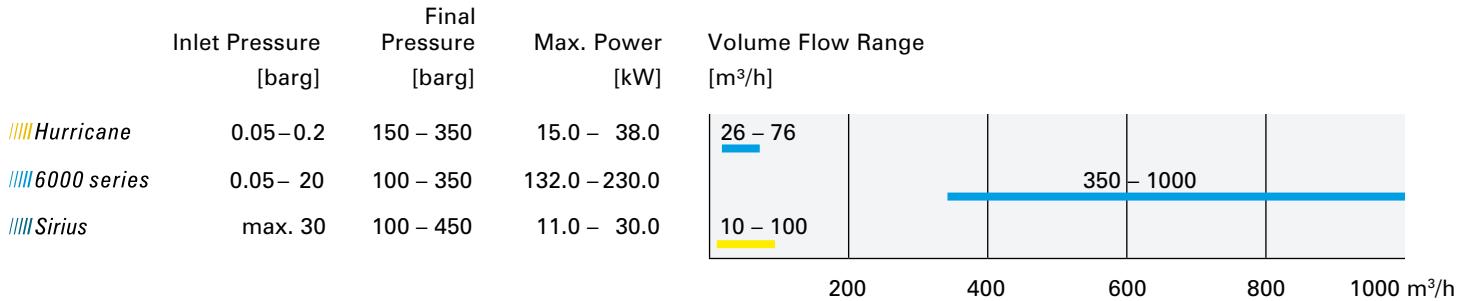


## Hydrogen Compressor Range

### Low and Medium Pressure



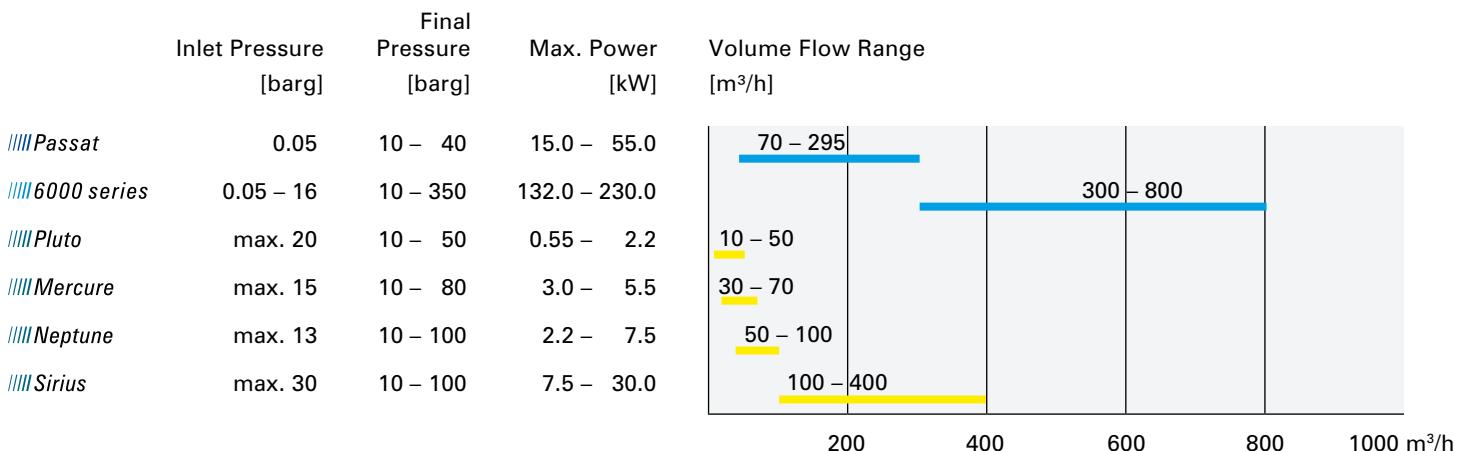
### High and Highest Pressure



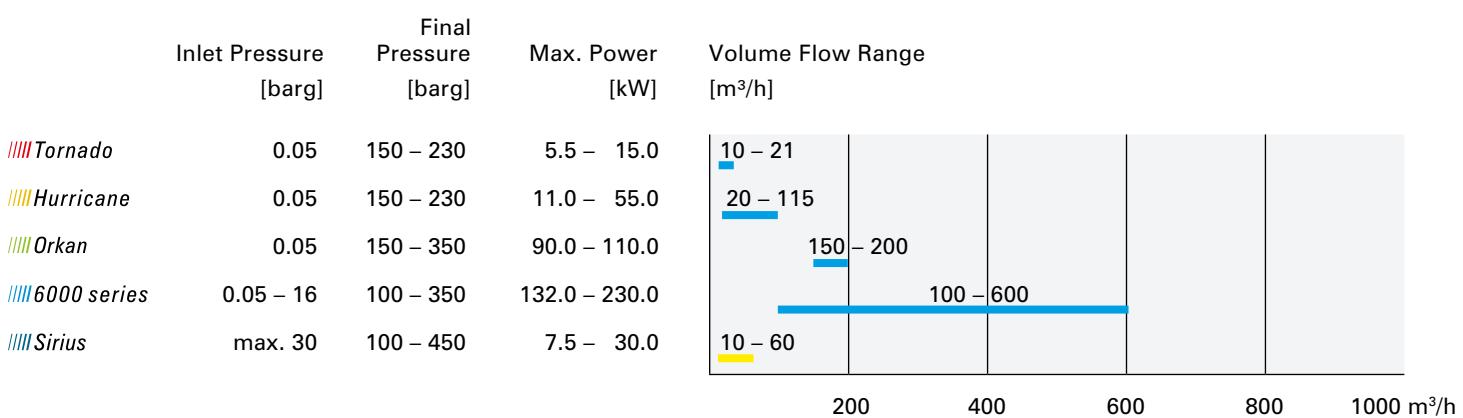
Conversion of volume flow into kg/h: 1 m³/h (20°C, 1,013 hPa) = 0.083 kg/h

## Helium Compressor Range

### Low and Medium Pressure

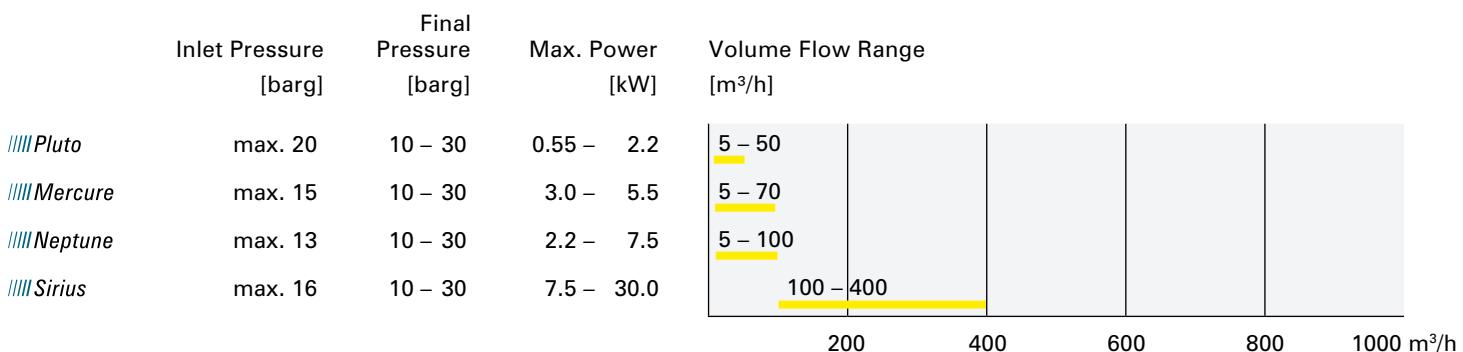


### High and Highest Pressure



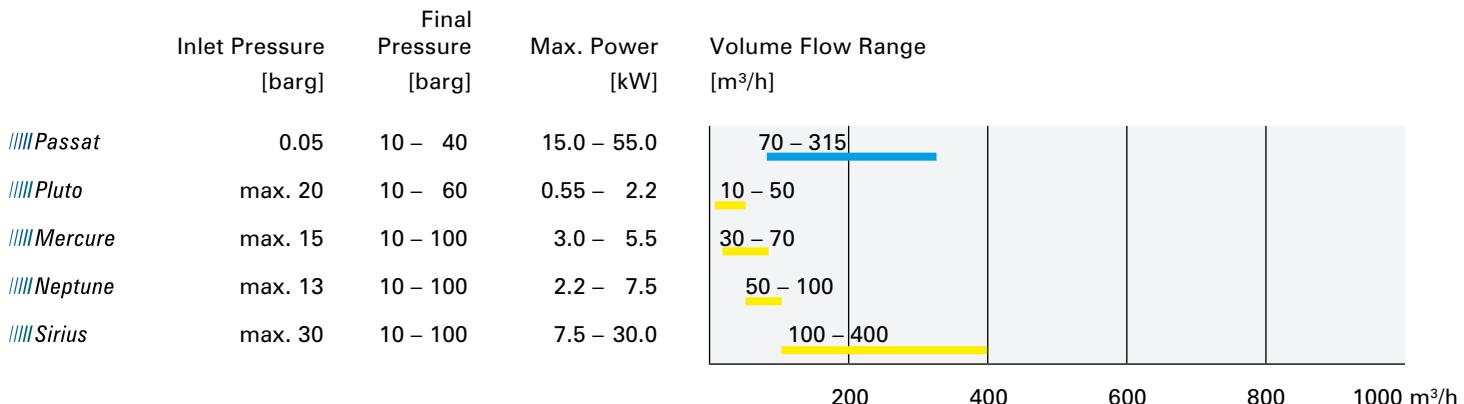
## Oxygen Compressor Range

### Low and Medium Pressure

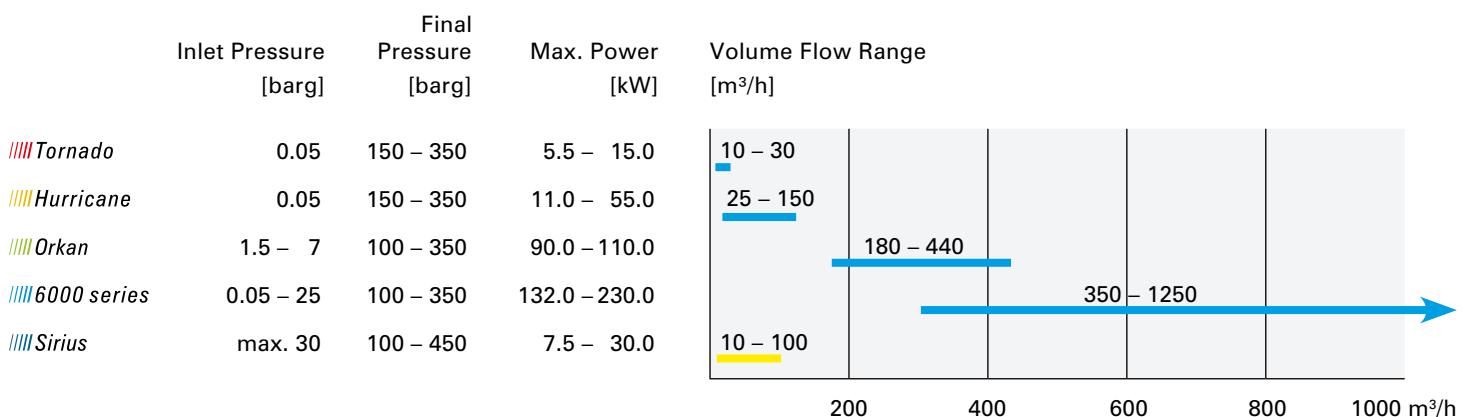


## CNG Compressor Range

### Low and Medium Pressure

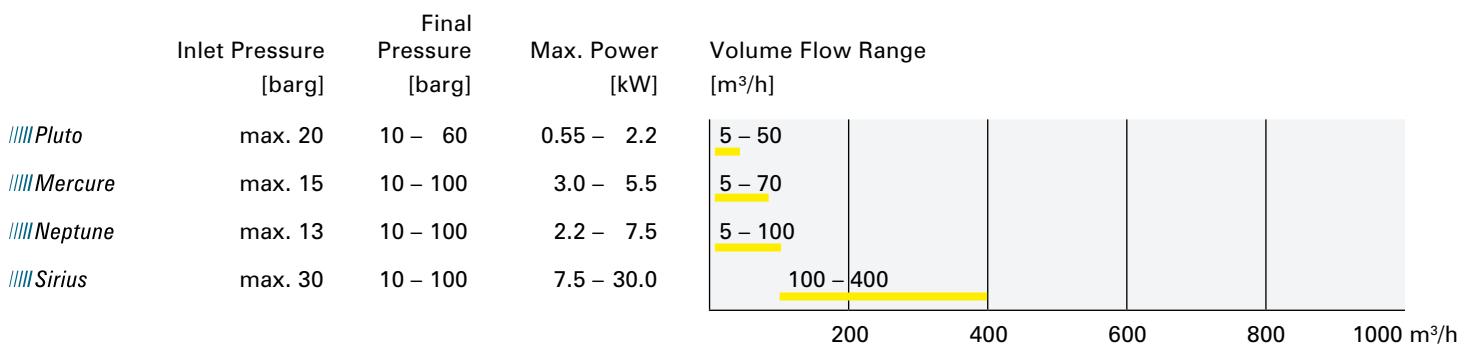


### High and Highest Pressure

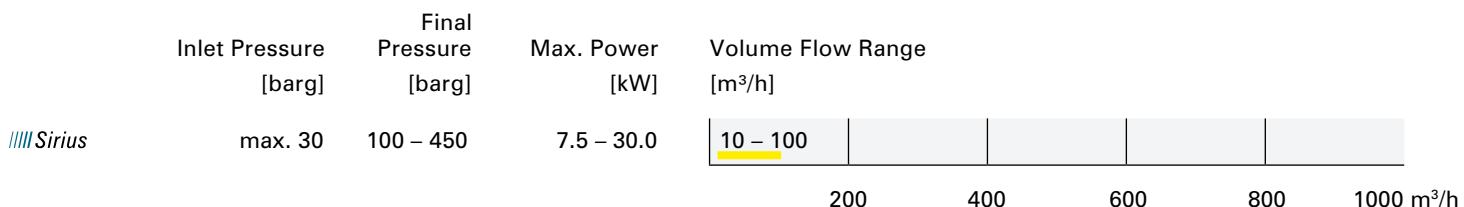


## Gas Mixtures & Special Gases Compressor Range

### Low and Medium Pressure



### High and Highest Pressure (on request)





## 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.

### Application(s)

- Supplying high pressure air for the air gun

### Customers

- Seismic operators
- Research industries
- Shipyards
- Packagers



### Suitable products SAUER

Series	Volume flow	Pressure range	Medium
Hurricane	120–720 m <sup>3</sup> /h	120–207 barg	
5000 series	2–12 m <sup>3</sup> /min	1,700–3,000 psig	
6000 series	70–420 scfm		Air

### Customised Solutions

#### 20' Offshore Container for Seismic Exploration

##### 6000 series – WP 6442 Basic

- Mobile solution for different research vessels
- Certified according to DNV 2.7-1



##### Technical Data

Volume flow: 600 m<sup>3</sup>/h | 10 m<sup>3</sup>/min | 350 scfm  
Max. pressure: 207 barg | 3,000 psig

|||| 6000 series

WP 6442 Basic  
720 m<sup>3</sup>/h @ 207 barg



## 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.

### Application(s)

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

### Customers

- OEM companies
- Drilling operators
- Shipyards
- Packagers



### Suitable products SAUER

Series	Volume flow	Pressure range	Medium
Hurricane      5000 series	140 m <sup>3</sup> /h 2.3 m <sup>3</sup> /min 82 scfm	207 – 315 barg 3,000 – 4,600 psig	Air or Nitrogen

### Customised Solutions

#### WP 5000 Offshore Module for Motion Compensation

##### 5000 series – WP 5000 Basic

- Integrated adsorption dryer
- Compliant with NORSO, DNV Offshore and ABS CDS 2011 Cat. 01
- Installed at over 100 offshore platforms already

##### Technical Data

Volume flow: 140 m<sup>3</sup>/h | 2.3 m<sup>3</sup>/min | 83 scfm  
Max. pressure: 350 barg | 5,000 psig



|||| 5000 series

WP 5000  
Offshore module  
incl. adsorption dryer



## High-Pressure Nitrogen Boosting

Many applications in the oil & gas world require nitrogen, which is mostly used for blanketing in order to prevent an explosive atmosphere. Sauer offers a wide range of boosters for such applications. The nitrogen is produced by membranes or PSA systems and Sauer compressors are used to store the gas at a higher pressure.

### Application(s)

- Boosting nitrogen to a higher pressure level

### Customers

- OEM companies
- Shipping companies
- Drilling companies
- Packagers



### Suitable products

#### SAUER

Series	Volume flow	Pressure range	Medium
Mistral			
Tornado			
Hurricane			
Orkan			
6000 series	10 – 1,000 m <sup>3</sup> /h 5 – 589 scfm	20 – 350 barg 290 – 5,000 psig	Nitrogen

#### Haug

Series	Volume flow	Pressure range	Medium
Mercure			
Neptune			
Sirius	10 – 300 m <sup>3</sup> /h 5 – 175 scfm	10 – 40 barg 145 – 580 psig	Nitrogen

## Core advantages

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





# Sauer Compressors



Find your local partner at our global website

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**HAUG Sauer Kompressoren AG**  
Industriestrasse 6  
9015 St. Gallen  
Switzerland  
[www.haug.ch](http://www.haug.ch)

**Girodin-Sauer SAS**  
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95240 Cormeilles en Parisis  
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