





Oil-free booster compression of oxygen

HAUG oxygen compressors are used as boosters for an on-site gas production plant. Oxygen is generated using a PSA-, VPSA- or membrane system. Depending on the process, the pressure from the gas generation plant is either at atmospheric pressure (VPSA) or at around 4 bar (PSA). Depending on the application for which the oxygen is being used, the pressure has to be increased. This is achieved using a booster compressor.

The oxygen compatibility is ensured by high quality materials and a completely oil-free compression. The compressor components that come into contact with the medium are specially selected and cleaned for operation with oxygen.

Oil-free booster compression of nitrogen and air (CDA = Clean Dry Air)

HAUG nitrogen compressors are used as boosters for an on-site gas production plant or for a pressure increase from an existing pressurized nitrogen network. As a result of the oil-free and gastight construction, contamination of the gas by oil or ambient air is prevented.

Oil-free compressed air booster compressors are used for a local pressure increase at the workplace. Raising the pressure locally saves energy and money. The central compressed air supply is operated at a lower pressure. Only a partial compressed air flow is compressed to the higher final discharge pressure by the booster compressor.



| HAUG.Mercure compressors for oxygen compression | | | | | | | |
|---|-----------------------------------|--------------------------------------|-----------------------------------|---|---|-------------------|--|
| | min. suction pressure in bar(abs) | average suction pressure in bar(abs) | max. suction pressure in bar(abs) | max. final discharge pressure in bar(abs) | Flow rate in Nm^3/h at average suction pressure and motor speed of 1450 rpm | Motor power in kW | |
| HAUG.Mercure 21E 45 LM-L | 5.0 | 6.0 | 7.0 | 16 | 36.8 | 4.0 | |
| HAUG.Mercure 21E 60 LM-L | 4.0 | 5.0 | 6.0 | 11 | 58.9 | 4.0 | |
| HAUG.Mercure 21E 60 LM-L | 5.0 | 6.0 | 7.0 | 16 | 68.0 | 4.0 | |
| HAUG.Mercure 22E 60-40 LM-L | 4.0 | 5.0 | 6.0 | 26 | 28.3 | 4.0 | |
| HAUG.Mercure 22E 80-45 LM-L | 1.0 | 1.2 | 1.4 | 11 | 11.4 | 4.0 | |

| HAUG.Mercure compressors for compression of nitrogen and air | | | | | | | |
|--|-----------------------------------|--------------------------------------|-----------------------------------|---|---|-------------------|--|
| | min. suction pressure in bar(abs) | average suction pressure in bar(abs) | max. suction pressure in bar(abs) | max. final discharge pressure in bar(abs) | Flow rate in Nm^3/h at average suction pressure and motor speed of 1450 rpm | Motor power in kW | |
| HAUG.Mercure 21E 45 LM-L | 6.0 | 8.0 | 10.0 | 16 | 52.1 | 4.0 | |
| HAUG.Mercure 21E 60 LM-L | 6.0 | 8.0 | 10.0 | 16 | 94.8 | 4.0 | |
| HAUG.Mercure 22E 60-40 LM-L | 6.0 | 8.0 | 10.0 | 41 | 23.6 | 4.0 | |
| HAUG.Mercure 22E 80-45 LM-L | 6.0 | 7.5 | 9.0 | 36 | 42.4 | 4.0 | |



Oil-free recovery and compression of SF₆ gas

 SF_6 gas is a halogen compound which has a very negative impact on the environment. The greenhouse effect of SF_6 is 23,900 times greater as for the same quantity of CO_2 . SF_6 gas is one of the six greenhouse gases which are prohibited from freely escaping into the atmosphere. The harmful effect on the environment makes the safe and gas-tight use of SF_6 an important issue for the whole society. It is absolutely essential to use gas-tight equipment and gas-tight processes in connection with SF_6 .

HAUG SF_6 compressors are used throughout the world by leading manufacturers of SF_6 recovery plants for gas-tight and oil-free compression.

Oil-free booster compression of natural gas and biomethane

HAUG biomethane and natural gas booster compressors are used to feed natural gas networks or to raise the pressure between two natural gas network lines. An alternative use is the storage and use of biomethane or natural gas in a gas motor or in a thermal power station. Thanks to their oil-free and gas-tight operation mode, HAUG compressors are perfect to compress efficiently the climate-harming methane without leaks.



| HAUG.Mercure compressors for compression of SF ₆ gas | | | | | | | |
|---|-----------------------------------|--------------------------------------|-----------------------------------|---|---|-------------------|--|
| | min. suction pressure in bar(abs) | average suction pressure in bar(abs) | max. suction pressure in bar(abs) | max. final discharge pressure in bar(abs) | Flow rate in Nm^3/h at average suction pressure and motor speed of 1450 rpm | Motor power in kW | |
| HAUG.Mercure 22E 45-26 LM-L | 1.0 | 5.0 | 9.0 | 51 | 13.5 | 4.0 | |
| HAUG.Mercure 22E 60-30 LM-L | 1.0 | 3.0 | 5.0 | 51 | 13.6 | 4.0 | |
| HAUG.Mercure 21E 80 LM-L | 1.0 | 2.0 | 3.0 | 5.0 | 40 | 4.4 | |

| HAUG.Mercure compressors for booster compression of natural gas and biomethane | | | | | | | |
|--|-----------------------------------|--------------------------------------|-----------------------------------|---|---|-------------------|--|
| | min. suction pressure in bar(abs) | average suction pressure in bar(abs) | max. suction pressure in bar(abs) | max. final discharge pressure in bar(abs) | Flow rate in Nm^3/h at average suction pressure and motor speed of 1450 rpm | Motor power in kW | |
| HAUG.Mercure 21E 45 LM-L | 3.5 | 5.0 | 6.5 | 15 | 29.2 | 4.0 | |
| HAUG.Mercure 21E 60 LM-L | 3.5 | 5.0 | 6.5 | 15 | 54.6 | 4.0 | |
| HAUG.Mercure 22E 45-26 LM-L | 1.0 | 2.0 | 3.0 | 15 | 5.5 | 4.0 | |
| HAUG.Mercure 22E 60-30 LM-L | 1.0 | 2.0 | 3.0 | 15 | 10.1 | 4.0 | |

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HAUG.Mercure compressors — oil-free and gas-tight Power range 3.0—4.4 kW

The HAUG.Mercure series is used for gas recovery and booster compression of gases such as helium, SF₆, oxygen, nitrogen and Natural gas, as well as for booster compression of compressed air.

HAUG.Mercure compressors have the electric motor in the gas compartment. Power is supplied to the electric motor through a gas-tight connection in the crankcase. This construction, developed by HAUG Sauer, provides a permanent gas-tight compression without leaks. This hermetically sealed and completely wear-free drive was first employed in the HAUG.Mercure compressor in 1990 and can be used for suction pressures up to 20 bar.

Through the use of special measures, the HAUG.Mercure compressor can also be used for dry and explosive gases such as Natural gas.

The HAUG.Mercure compressor can also be used for SF_6 gas and with scope of delivery "Incomplete" for OEM applications, with integrated cooler over the electric motor and a minimal pipework and instrumentation for integration in an OEM system.

The modular HAUG.Mercure compressor concept allows highly individual and cost-effective adaptation of the compressor configuration to the customer's requirements. This allows development of technically, commercially and energetically optimum solutions.

Features

- Completely oil-free piston compressor
- Gas-tight design with integrated motor
- Compressor block leak rate < 0.0001 mbar 1/s
- Air-cooled
- Motor power from 3.0 to 4.4 kW
- Rotary speed range 970 to 1450 1/min
- Intake pressure max. 20 bar
- Final discharge pressure max. 100 bar
- Modular cylinder configuration with cylinder diameter up to 100 mm
- Version with 2 cylinders and 1- or 2-stages execution
- Maximum flow rate at atmospheric intake pressure approx. 30 m³/h
- Booster compressor version flow rate max. approx. 70 m³/h
- Scope of delivery version "Incomplete" with integrated cooler over the electric motor and minimal pipework and instrumentation for integration into an OEM system.
- Explosion-proof compressor version (conform with ATEX zone 2 externally)
- Very robust and long-lasting construction
- Compact and foundation-free installation
- Very quiet and hence suitable for installation directly at the workplace

