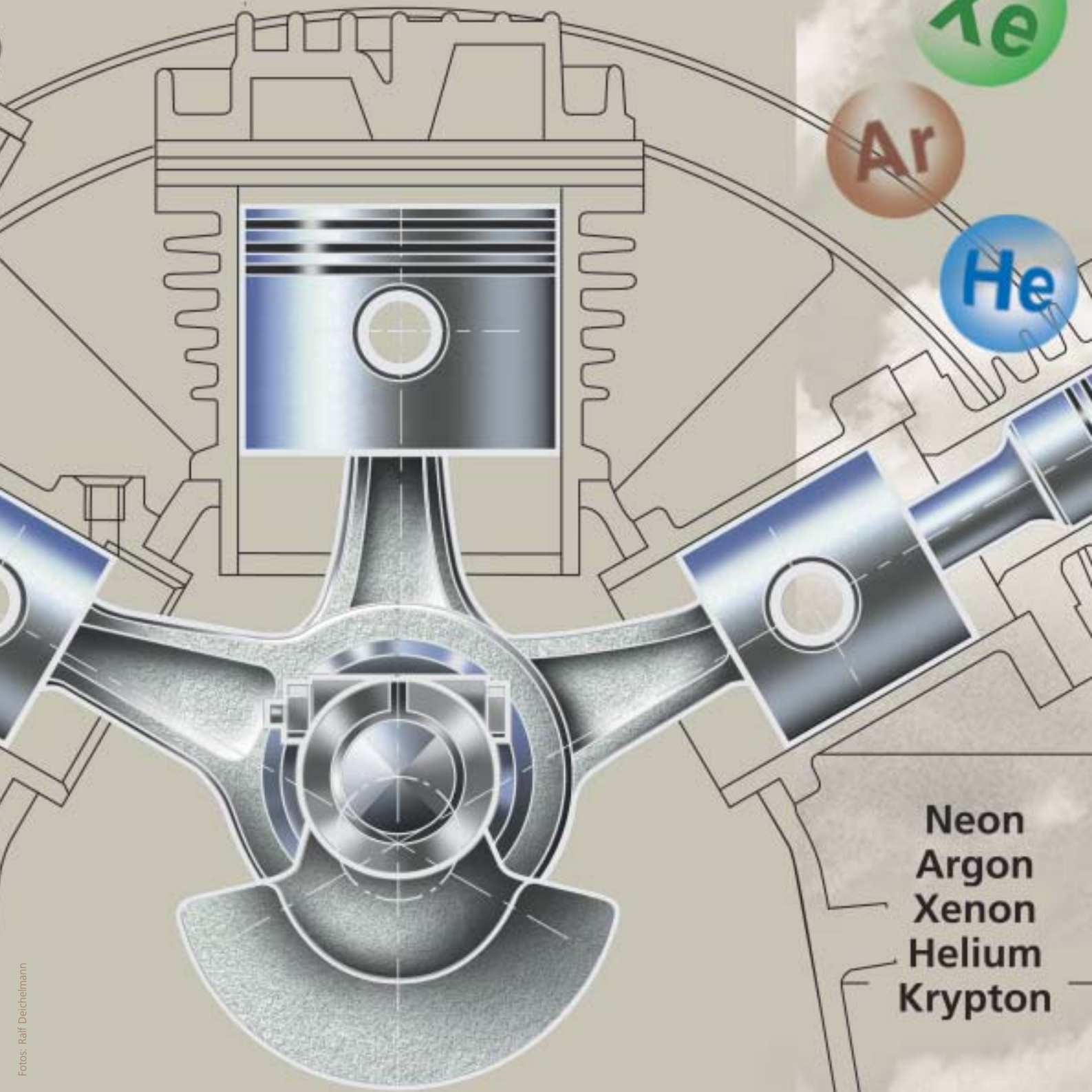


# Industrial Compressor Systems

*RARE GASES*



Xe

Ar

He

Neon  
Argon  
Xenon  
Helium  
Krypton

## HIGH PRESSURE INTEGRATED SYSTEM TECHNOLOGY

### CUSTOM-BUILT FOR SPECIFIC RARE GAS APPLICATIONS

Modern industrial processes require absolute operation safety, flexible unit configuration and investment security

High Pressure System Technology by BAUER enables **each customer** to recover and refill rare gases and gas mixtures in an **economic way** with **minimized gas losses**.

From **planning** and **advice** through expert commissioning up to **spare parts supply for decades** as well as **first class service** - Bauer provides you with a turnkey solution.



Helium recovery balloon

### Gas Balloons for Recovery

of rare gases

Available in **cylindrical** or **spherical** shape.

**Completely equipped with frame** for either ground- or roof-installation.

**Helium-tight execution** for gas volumes from 1 m<sup>3</sup> to 50 m<sup>3</sup>. **Integrated gas niveau control** regulates compressor operation.

Units for

## Compression

of rare gases

**Pressure Range:**

90 to 350 bar

**Delivery:**

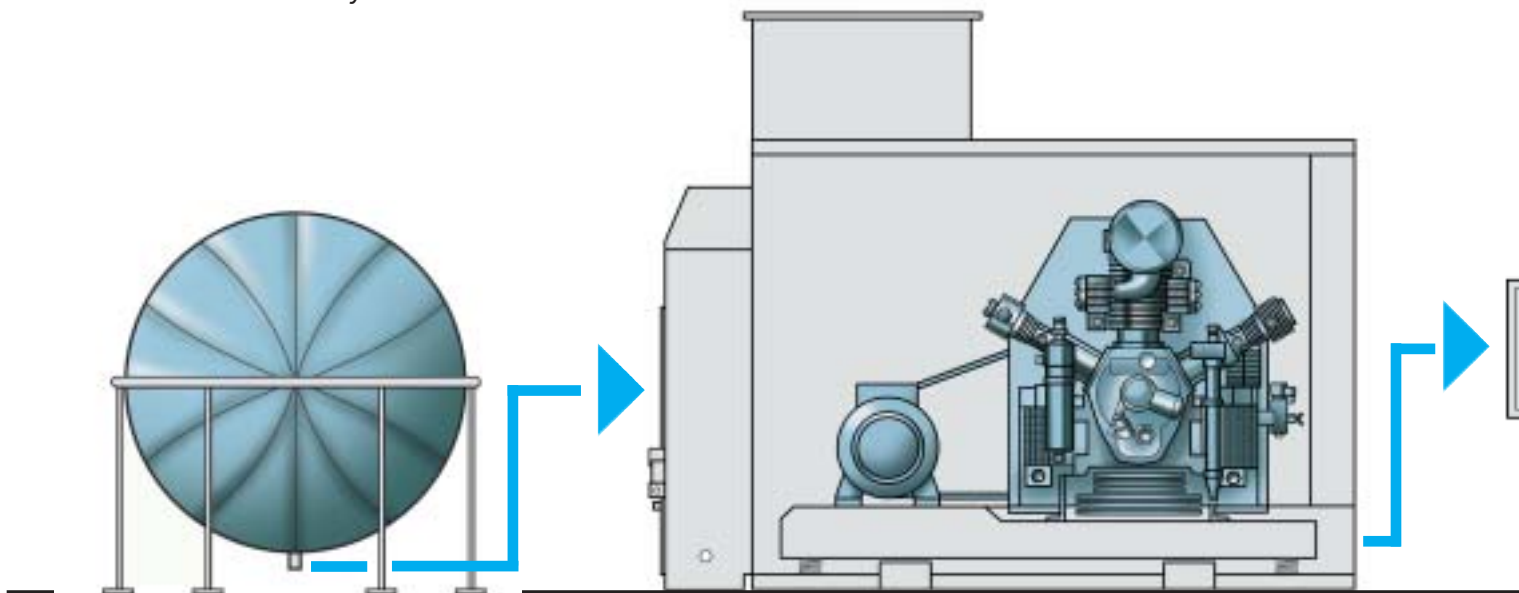
5 to 99 m<sup>3</sup>/h

**Design:**

Open Configuration or Super Silent (Enclosed)



Helium recovery unit



## Systems for Purification

of rare gases

### P-Filter systems:

Disposable filter cartridge systems for the removal of residual humidity, particles and oil vapours from the compressed gas down to a **max. residual oil content of  $\leq 10$  ppmv.**

Cartridge combination can be chosen acc. to the gas intake quality.

**Gas-tight construction** with feed-back of all safety valves.

### SECCANT

**Regenerative Dryer** made for **continuous operation** and efficient **economic drying** and de-oiling of wet gases.



*Compressor room of a helium recovery unit*

## Systems for Storage

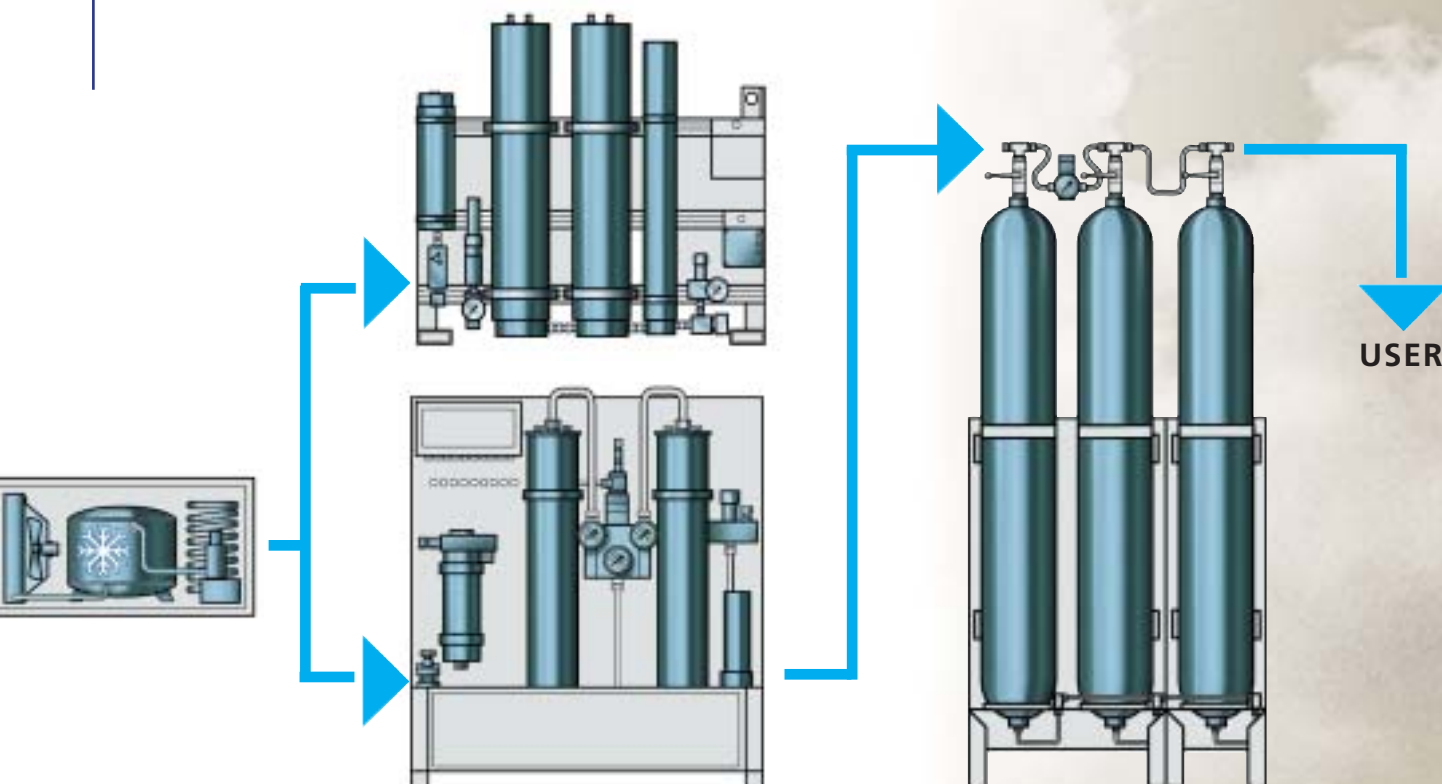
of rare gases

**Storage cylinder systems up to 350 bar** with 50 or 80 l water volume\*

Units are available as **single unit** or as an **extendable modular system** to provide the required storage capacity. Dependant upon physical limitations, **various configurations can be provided** to optimize the utilization of available space.

\*geometric volume

**Gas-tight construction** with feed-back of safety valves and regeneration gas. Connection of **up to 4 compressor units** possible.



## BAUER COMPRESSOR TECHNOLOGY

### ECONOMIC OPERATION THROUGH CLOSED GAS CIRCUIT

Easy integration and turnkey systems are the special features of the BAUER gas compressor concept.

Our engineering team in the BAUER Research and Development Center are continuously striving to **further improve the units** for various gas applications.

Reduction of valve vibrations, **improvement of the leakage rates and perfect interaction of system componentry** are only some of the challenges for development.

#### Safety through **Fully automatic** operation

Compressor operation is **regulated via level indicators and proximity switches** in the gas recovery balloon in dependency of the final pressure in the storage cylinders, so that the complete system is operating fully automatically. An intake pressure monitoring system provides **integral safety** to the machine.

#### Cost savings thanks to **Gas-Tight**

##### unit configuration

Optimization is rigorously directed to **minimize gas losses to guarantee an especially economic compressor operation:**

A **closed circuit** is realized by the recirculation of safety valves and the automatic condensate drain device to the combined intake buffer- and condensate tank; thus gas losses and **leakages are reduced to minimum values.**



G 25.9 Super Silent Unit



Automatic condensate drain device

## Total Control

with B-Control

The BAUER **B-CONTROL** (PLC control) **regulates** and **monitors** the compressor, the electric motor and the automatic condensate drain system **fully automatically**.

**Operating convenience** due to an **easy menu guiding** on the big LCD display and key pad. B-CONTROL allows the **control** of the **complete system** from gas recovery balloon to storage cylinder. Optional **integration** in **higher-ranking control systems**, **modular extension** and the possibility to realize **interconnected operation** of several units bring investment security.



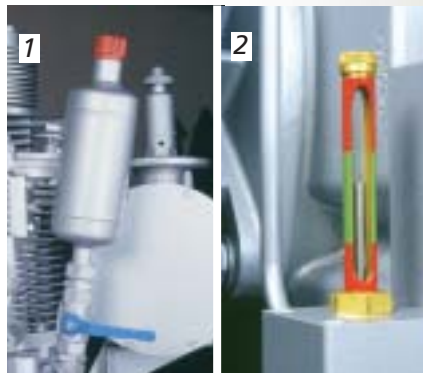
B-CONTROL

## Best Noise Reduction

due to smart engineering

A **sophisticated labyrinth system** to rebound the air-borne sound. Result in an **outstanding reduction of noise** in the cooling air inlet and outlet area.

Integrated ventilators lead the cooling air flow reliably and safe through the compressor housing. The transmission of structure-borne noise is effectively blocked by impedance leaps.



1. Bubble-free oil filling
2. Easy oil level control

## Ready to Use

with turn-key systems

BAUER compressor units are delivered to the customer **completely pretested** and **ready for operation**.

This guarantees a **quick**, simple and **safe commissioning**.



## Uncompromised Quality

through perfect control

BAUER ensures **maximum quality** by **extensive quality assurance** monitoring during and after production according to the requirements defined in **DIN EN ISO 9001**.

**Each single compressor block** is tested in a **continuous test run**.

The **final unit test** is done under **real operating conditions**.

Each compressor unit undergoes an **extensive function- and safety test**.

All units are **built to satisfy customer requirements**.

## THE BAUER COMPRESSOR BLOCK

### EVERY UNIT HAS A STRONG HEART BEATING WITHIN

More than 50 years of experience and the knowledge in our Research and Development Center are devoted to each BAUER compressor block.

Our reputation has been well earned through considerable time and effort spent on the development of our machines with intelligent detailed solutions and the use of highest quality materials combined with uncompromised manufacturing quality.



*Cylinders with extreme stability*

### Made for highest **Durability**

The bearings in the BAUER compressors are designed and constructed for a working life of more than 30.000 operating hours.



*A cool solution*

### Designed for **Continuous**

operation

The intelligent cooling system with over-sized coolers combined with large-surface ribbed cylinders ensure optimum cooling of each compression stage.

An efficient force-feed lubrication system with an oil micro-filter guarantees minimum of wear of all moving parts.

### Low **Costs**

for maintenance and operation

Long maintenance intervals for valve checking and oil change (every 2000 operating hours) as well as piston ring check (every 3000 operating hours) keep the operating costs for the unit at a minimum.



KB 60

## Optimized for Rare Gas

compression

Optimized valve vibration **guarantee** a **long life time**. The compression ratio is especially designed to reach **low interstage temperatures**. Recirculated safety valves result in **economic operation** with minimized gas losses.



*K 22 Range*

## High Efficiency

guaranteed

**Optimized cylinder design** and gas flow characteristics provide the BAUER compressor with **absolute maximum performance** at minimum power consumption. **Best efficiency** due to better design.

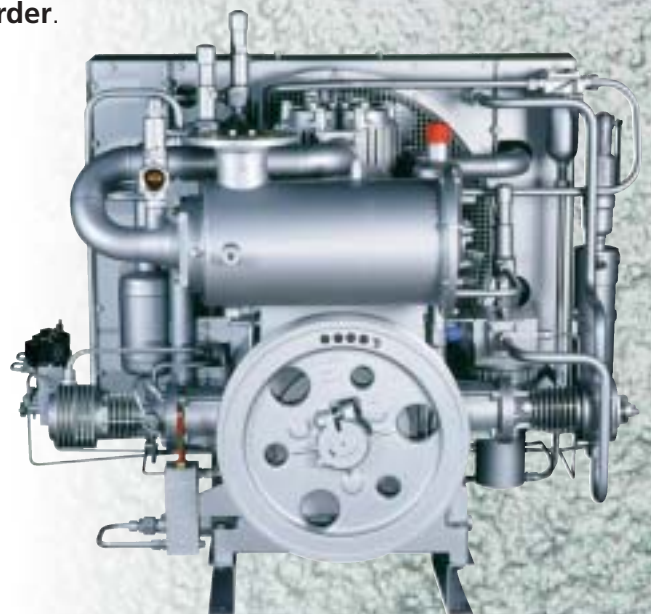


*K 25 Range*

## Trimmed for Quiet

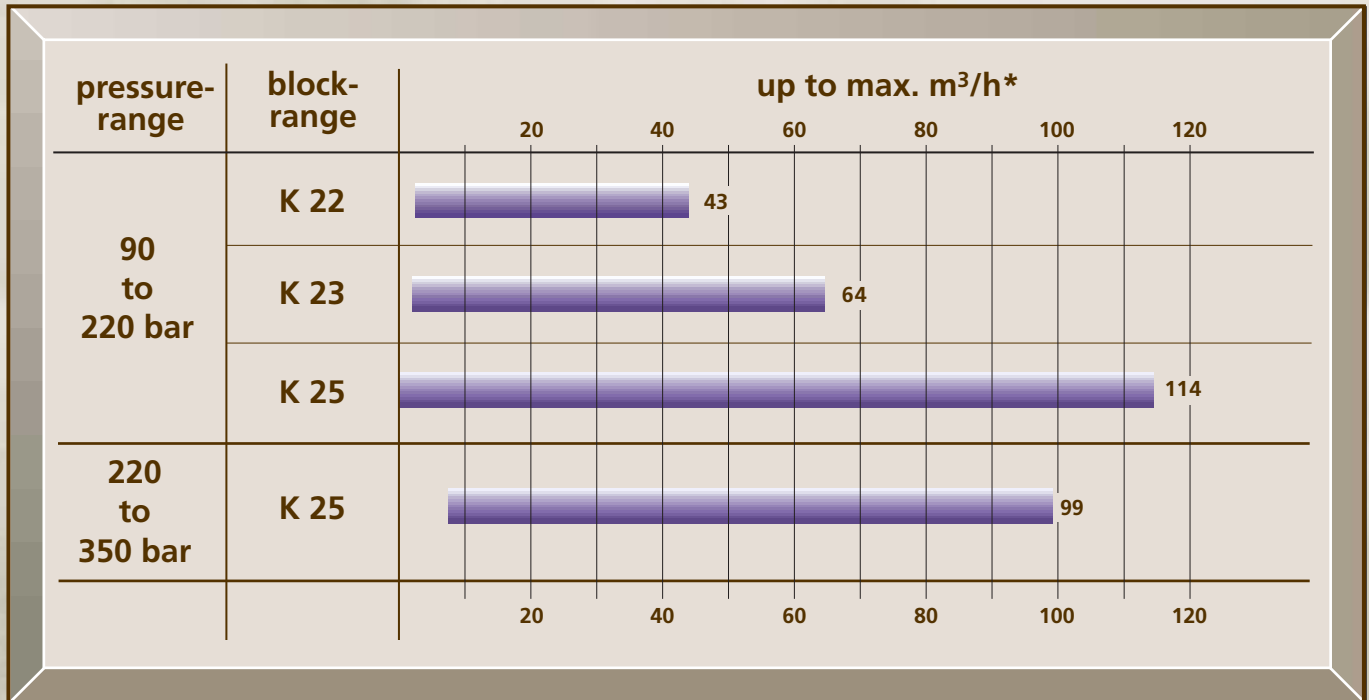
running

For a **smooth** and **vibration-free running** all driving gears are **dynamically balanced** to a mass balance of **1st order**.



*K 23 Range*

## OUR PRODUCT RANGE

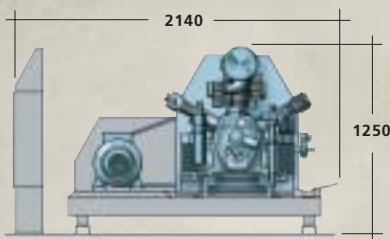


\* measured acc. to VDMA 4362 with gas flow meter/air at 0,8-factor of final pressure (+/-5%)

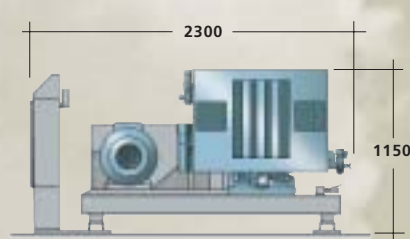
F.A.D. Correction factors for the compression of:

Helium: F.A.D. with air compression x 0,95

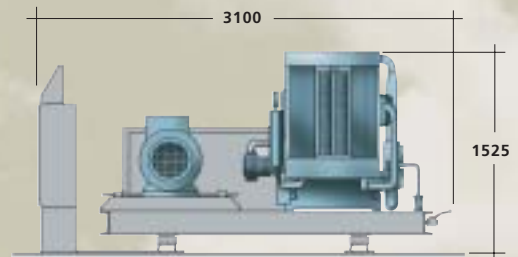
Argon : F.A.D. with air compression x 1,04



K22 Range



K23 Range



K25 Range

Our Projecting- and Industrial Sales Departments are eager to assist you with experienced know-how in selecting, calculating and composing your gas-recovery system. So you can be sure to receive an economically and technically tailored solution for your proper application.



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