

VERTICUS 5 INDUSTRY

COMPRESSOR SYSTEMS FOR RARE GASES



Neon
Argon
Xenon
Helium
Krypton

90 - 350 bar

1300 - 5000 psig



Photos: Ralf Deichelmann

Helium Recovery System

The heavy duty system with excellent reliability for compressing rare gases He, Ar.

The new BAUER B-Control combines fully automatic start-stop-operation with maximum user confidence.

The optional Bauer purification systems offer high gas purity.

Units available in standard open or Super Silent version.

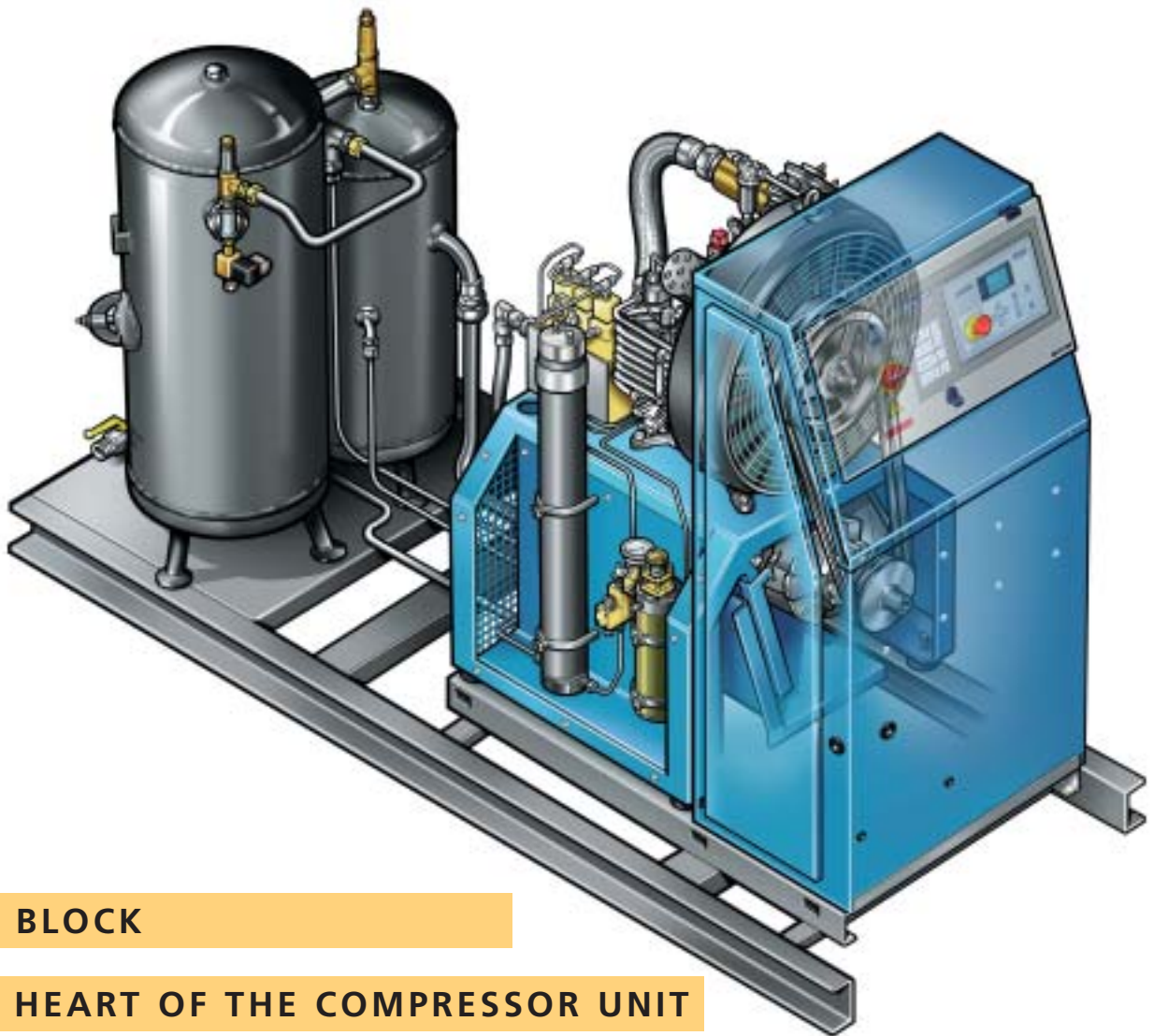
THE MODULAR SYSTEM

FIT FOR EVERY APPLICATION

Modern industrial manufacturing requires total safety of production, flexible unit design and effective investments.

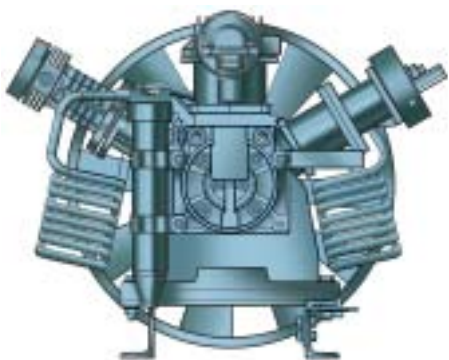
The new **modular unit concept** enables every user to choose the **most suitable unit** for his application and to **upgrade** it even **at a later date**.

Ex-proof versions of these systems can be used for compression of natural gas.



THE BLOCK

THE HEART OF THE COMPRESSOR UNIT



The high quality and availability of the block determine function of the unit and smooth production processes.

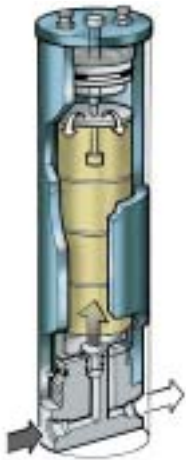
New driving gears guarantee **reliable** use for **years and years**. Heavy-duty industrial roller bearings with minimum friction are designed for **continuous operation**.

Piston rings made of hightech polymer in the final stage **minimize wear and tear** of the cylinder surface.

Our advanced valve technology is purpose-made for use with rare gases.

Intermediate coolers after each stage, **optimized cooling air management** and a perfect compression ratio result in a minimum thermal load.

The **maintenance free** low pressure oil pump with fine strainer guarantees **reliable lubrication** and **least wear** of all moving parts.



PURIFICATION SYSTEMS - TOTAL SECURITY

With a purification system integrated in the compressor unit customer's downstream system can effectively be kept free from impurities.

The optional Bauer purification systems offer an **effective** and **low-cost gas pre-cleaning** before the gas enters the production system.

A residual oil content of $\leq 10 \text{ ppm}_v$ free gas is achieved.

The systems P 61 and P 81 are designed for a **space-saving integration** in the housing.

An **extension of the filter capacity** can easily be realized by retrofitting an **additional filter housing**.

B-CONTROL - TOTAL CONTROL

Many industrial processes require remote monitoring and fully automatic operation.

The BAUER B-Control (**PLC control**) allows **free programming** acc. to customer's requirements.

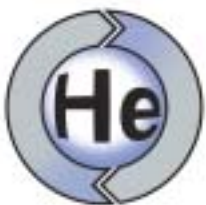
Compressor operation can be regulated via level indicators and proximity switches in the gas recovery balloon in dependency of the final pressure in the storage cylinders, so that the complete system is **operating fully automatically**.

Operating convenience due to a **big 8-line LCD-display** and free choice of languages (7 languages available).

An optional **CAN-Bus-interface** allows **interconnected operation** of several units, **remote online-monitoring** and **integration** in higher-ranking **control systems**.



CLOSED CIRCUIT - COST SAVINGS



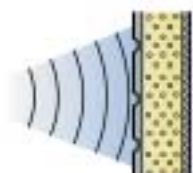
Only with a closed circuit, impurities and losses of the expensive process gases can be avoided.

Therefore BAUER compressor systems are manufactured **completely pressure-tight** against **penetration** of **atmospheric gases**. A purity of 4.6 (99,996 % He) is achieved.

All safety valves and the automatic condensate drain device are **recirculated** to the intake buffer tank.

Cast parts and fittings are **specially designed** for the **high requirements** of **rare gas** compression.

SUPER SILENT HOUSING - SILENCE ON DEMAND

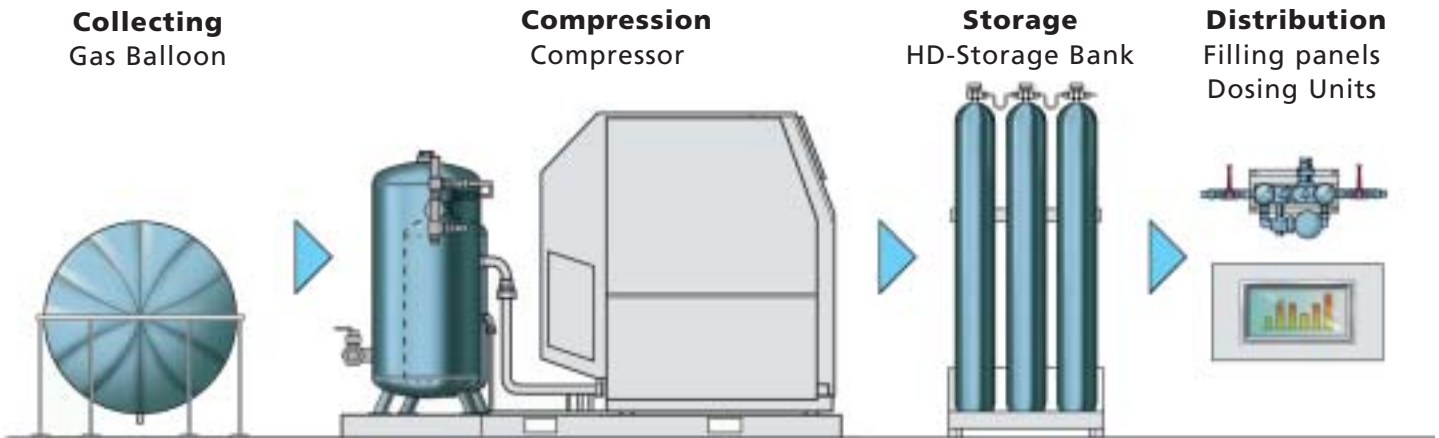


Depending on siting criteria noise reduction is mandatory.

All compressor units of the industrial VERTICUS range are available in standard open or Super Silent version **acc. to customer's requirement**.

Site conditions change? No problem! Thanks to the **modular concept** open units can be **upgraded** to **Super Silent** compressors **in next to no time**.

PROCESS SUPPLY SYSTEM



Dimensions in mm Length Width Height
 2350 1000 1665

TECHNICAL DATA

model- designation	Free gas delivery.*		number of compr. stages	speed rpm	motor power kW	power consumption** kW	net weight approx. kg	noise level (super-silent- housing) dB (A)
	l/min	cfm						
G - range 90 - 220 bar / 1300 - 3200 psig								
G 100 - 3 - 5	85	3	3	900	3	2,0	535	ca. 72
G 120 - 4 - 5	130	4,6	3	900	4	2,5	540	ca. 72
G 120 - 5.5 - 5	175	6,2	3	1250	5,5	3,6	555	ca. 72
G 15.1 - 7.5 - 5	300	10,6	4	880	7,5	5,5	620	ca. 72
G 15.1 - 11 - 5	400	14,1	4	1230	11	8,1	650	ca. 72
G 18.1 - 15 - 5	560	19,8	5	1320	15	11,6	670	ca. 72
G - range 220 - 350 bar / 3200 - 5000 psig								
G 15.1 - 7.5 - 11	300	10,6	4	880	7,5	5,9	670	ca. 72
G 15.1 - 11 - 5	400	14,1	4	1230	11	8,6	670	ca. 72
G 18.1 - 15 - 5	550	19,4	5	1320	15	12,0	670	ca. 72

* 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

** Power consumption at final pressure with an intake pressure between 0 and 100 mbar

Power Consumption correction factors when compressing:

Helium: Power consumption with air compression x 1,06

Argon : Power consumption with air compression x 1,15



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