

HELIUM RECOVERY

COMPRESSORS & SYSTEMS



INDUSTRY

HELIUM RECOVERY SOLUTIONS FROM BAUER: THE HELIUM EXPERTS

Typical Helium applications include recovery and compression systems for liquid cooling used in research institutions, particle accelerators, nuclear medicine, aerospace, and military missile applications. Helium recovery and compression are also used in general industrial applications, commercial merchant gas filling plants, heliostat applications, and Helium mining.

Compressing Helium requires special purpose-built compressors. Helium gas has a density which is 86% less than air. This means that the compressor has to be built to extremely tight tolerances to effectively compress Helium gas without excessive blow-by. Furthermore, Helium when compressed releases large amounts of heat which the compressor has to be able to absorb and shed. Therefore, for larger helium compressors, BAUER uses water cooling for the compressor for increased cooling efficiency. Bauer has been building compressors designed specifically for Helium for many decades and is the current gold standard for Helium compression in the industry.

The typical components of a helium recovery system are shown in the image below.



- 1 Helium balloon
- 2 BAUER G-Series Helium Compressor
- 3 Dryer/oil removal filtration
- 4 High-pressure storage system
- 5 Helium liquefier (generally in universities and scientific institutes)
- 6 Gas mixer (for feeding helium or gas mixtures in industrial applications)

VERTICUS G-Series Helium Compressor with gas purifier and high-pressure storage system and intake buffer tank, condensate reservoir, complete with all pipework, mounted on base frame

BAUER G-SERIES COMPRESSORS

BAUER G-Series high-pressure compressor systems and boosters are designed specifically for rare gases such as helium. The experts at BAUER can assist with selecting the right model and accessories to meet your specific requirements. Refer to the technical data sheet on page 3 for capacity information and page 4 for the standard scope of supply.



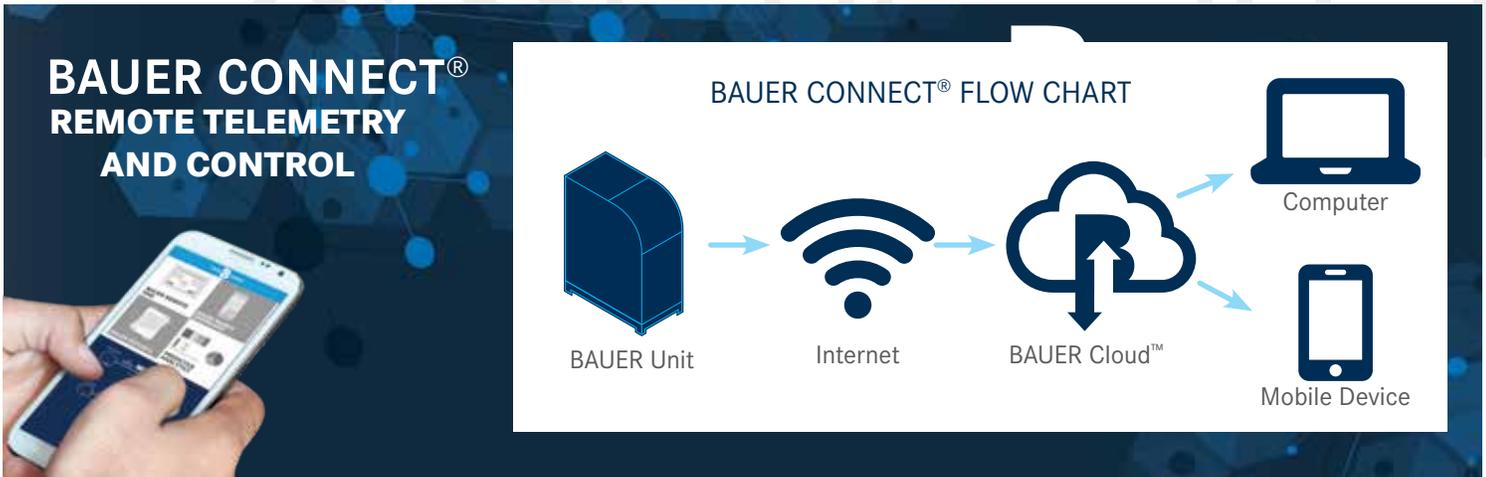
Vertical 40HP GR23 series high-pressure helium compressor, available air-cooled or water-cooled with inlet buffer tank and gas purifier/dryer.

TECHNICAL DATA FOR BAUER G-SERIES COMPRESSORS

Model	Inlet Pressure		Capacity FGD ¹		Number of Stages	Motor	
	PSIG	BAR	SCFM	M3/HR		HP	kW
3200 PSIG (221 BAR)							
G120	< 1.5	.1	5	8.5	3	7.5	5.5
G15.1 ²	< 1.5	.1	11	19	4	15	11
G220	< 1.5	.1	22.4	38	4	25	18.5
G220	< 1.5	.1	26.4	45	4	30	22
G23.1	< 1.5	.1	35	60	4	40	30
5000 PSIG (345 BAR)							
G18.1	< 1	.75	15	26	5	20	15
G25.9	< 1	.75	54	92	5	60	45
GIB23	29 - 200	2-14	38 - 99	65 - 168	4	50	37
WATER COOLED							
GIB23	29 - 200	2-14	38 - 99	65 - 168	4	50	37
GIB26	29 - 215	2-15	147 - 322	147 - 322	4	150 - 175	110 - 132
GIB52	29 - 215	2-15	296 - 644	296 - 644	4	350	260

STANDARD SCOPE OF SUPPLY/ BAUER G-SERIES COMPRESSORS

- › Continuous duty-rated, multistage pressure lubricated reciprocating compressor
- › Inlet buffer tank with particulate filter and solenoid valve, normally closed
- › Stainless steel intercoolers and aftercooler
- › Interstage moisture separators with drain, made of corrosion-resistant materials
- › Coalescing separator at compressor outlet made of corrosion-resistant materials
- › Automatic condensate drain (A.C.D.) complete with separator-muffler, drain solenoid, timer and condensate reservoir
- › Pressure maintaining valve with check valve at compressor outlet
- › Safety relief valve for each stage of compression (gastight version with gas vented back to inlet available)
- › Crankcase venting valve (gastight with gas vented back to gas inlet)
- › PLC control system with touch panel HMI
- › **UL**® listed electrical assembly with NEMA 4 enclosure
- › TEFC electric motor with spring-loaded belt tension idler assembly and belt guard
- › Initial oil fill (synthetic oil)
- › Pressure monitoring for inlet and interstage pressures
- › Factory tested to specified working pressure
- › Powder coated frame and enclosure, hammertone gray with blue accents
- › **Warranty:** 24 months from factory shipment date



BAUER CONNECT® REMOTE TELEMETRY AND CONTROL VIA MOBILE APP

The entire line of BAUER rare gas high-pressure compressor systems are available with optional BAUER CONNECT®

BAUER CONNECT® is an App-based IoT solution that allows BAUER customers to remotely monitor the performance as well as control the entire BAUER system through any wireless mobile device or computer anywhere, anytime. The key features of this IoT solution, allow customers to increase efficiency and productivity, save time, do more with fewer resources, have lower operational costs and have total flexibility with a solution tailored specifically for them. BAUER CONNECT® – Connection that matters



Available on



To sign up and register go to Signup.Bauer-Connect.com

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Subject to technical changes