BAUER COMPRESSORS

Quality. Our DNA

NITROGEN SYSTEMS CATALOG

Low to High-Pressure Systems for Industrial Applications

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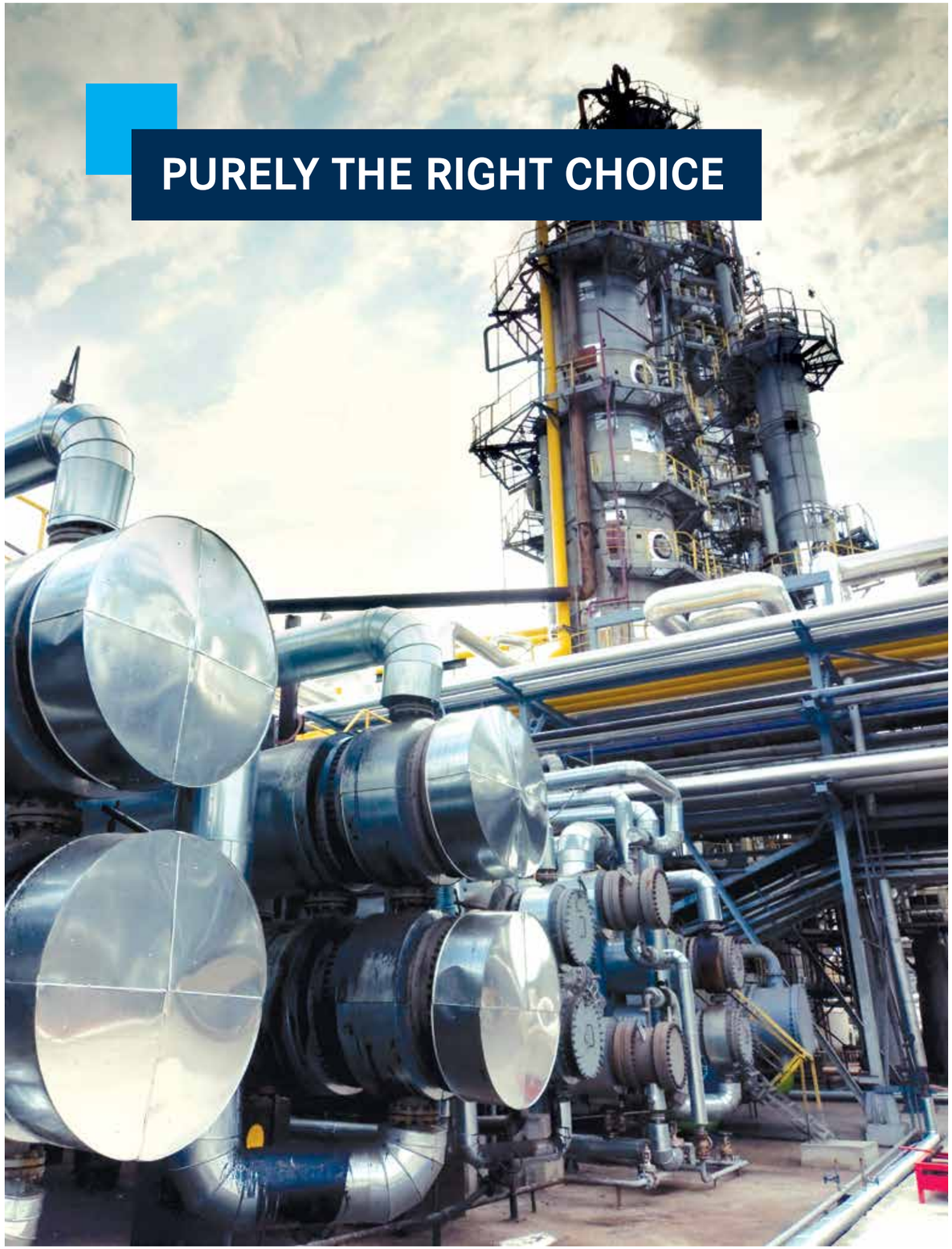
NITROGEN

WORLDWIDE QUALITY INNOVATION RELIABILITY



PURELY THE RIGHT CHOICE

CONTENTS

PROPERTIES OF NITROGEN

- Nitrogen is an inert gas that is abundant in nature. The air we breathe consists of 78% nitrogen.
- Two of the great properties of nitrogen are that it is inert and typically dry.
- What makes nitrogen practically inert is the triple atomic bond of the N_2 diatom, which is one of the strongest atomic bonds observed in nature. Significant energies are needed in order to break this bond.
- Nitrogen is extremely dry with a gaseous dew point of -70°F (-57°C).

USES OF NITROGEN

Because of its inert nature as well as extremely dry characteristics, nitrogen is used extensively in various industrial, oil & gas, aerospace and military applications.

SOME OF THE MOST COMMON USES OF NITROGEN:

- Drying of vessels and pipes.
- Fire and explosion prevention: When oxygen-rich air is replaced with nitrogen in vessels and critical spaces, ignition is suppressed. This prevents the possibility of fires and explosions.
- Corrosion protection: Since Nitrogen is non-reactive, oxidation and other forms of corrosion can be minimized.
  Prevention of chemical reactions: Because nitrogen is non-reactive, undesired chemical reactions in critical processes can be prevented.

GENERATING NITROGEN: PSA & MEMBRANE METHODS

Most of the nitrogen used in industrial applications is generated by separating the nitrogen from the oxygen present in ambient air.
The two most common separation technologies for nitrogen are membrane and pressure swing adsorbtion (PSA).
The benefit of these technologies is that nitrogen can be produced anywhere at any time.

PSA METHOD OF NITROGEN GENERATION

Pressure swing adsorption (PSA) is a technology used to separate some gas species from a mixture of gases under pressure according to the species' molecular characteristics and affinity for an adsorbent material. It operates at near-ambient temperatures and differs significantly from cryogenic distillation techniques of gas separation. Specific adsorbent materials are used as a trap, preferentially adsorbing the target gas species at high pressure. The process then swings to low pressure to desorb the adsorbed material.

MEMBRANE METHOD OF NITROGEN GENERATION

Incoming air is separated inside the membrane using tens of thousands of hollow fibers, each of which is sized to capture N_2 molecules. The remaining components (mostly water vapor and oxygen) that make up ambient air are vented away from the membrane inlet before the nitrogen is delivered to the membrane outlet.

Membranes have a size advantage over PSA nitrogen generation systems. They are therefore highly suitable for fully integrated nitrogen generation systems such as the NGM® and mobile systems.

	PSA	MEMBRANE
Reliability	High cyclical rate (every 60 - 90 seconds) switching valves contribute to much higher maintenance costs and increased system downtime.	Very few moving parts provides a high level of reliability.
Purity	Most economical at purities >99.5% N_2.	Most economical at purities <99.5% N_2.
Flow	Changing flow patterns will vary product purity requiring buffer tank to blend product. Overdrawing buffer tank will cause system production lapses. Systems operate best under steady flow conditions.	System is not adversely affected by flow swings or overdrawing. Easy to vary flowrate.
Noise	Pressure releases occur every 60 to 90 seconds from the adsorber beds and can be very loud.	Membranes are much quieter. No pressure releases or cycling.
Flexibility	PSA has a fixed product rate.	System capacity can be changed readily through the addition or removal of membrane bundles. Nitrogen purity can be adjusted by adjusting flow and temperature valves.
Air Feed Stock	Requires cleaner & dryer compressed air to avoid contamination of carbon molecular sieve	Membranes only need simple prefiltration. No dryer needed if inlet filtration is maintained properly.
Economics	At lower purities the unit cost of nitrogen is higher than for membranes At low flow rates (<1000 scfm) unit cost is much higher. Higher capital costs.	More economical than PSA especially at lower purities.
Operation	On-off requirements effect PSA's more drastically than membranes. Cyclical operation works the air compressor much harder as the system loads and unloads the adsorption beds. Sensitivity to moisture requires a separate inlet air dryer or activated alumina adsorbant.	Membranes can cycle off and on more easily. Steady state flow is easier on the compressor and allows it to 'turndown during reduced flow requirements for energy savings.

TYPES OF NITROGEN AND LOGISTICS

The two common forms of industrial nitrogen are nitrogen gas and liquid nitrogen. Liquid nitrogen can be vaporized to convert it into gaseous state. For industrial applications there are three ways in which nitrogen gas is supplied:

LIQUID NITROGEN

Nitrogen in liquid form purchased from a merchant gas supplier. The advantage of nitrogen in liquid form is that large volumes of nitrogen can be shipped and stored onsite. The disadvantage is that the end-user is dependent on a vulnerable supply chain. Furthermore, liquid nitrogen is stored in cryogenic vessels which are expensive, bulky and subject to leaks, thus creating waste. Cryogenic nitrogen suppliers typically require a long term contract at a locked-in rate which means that it is more expensive than other forms of nitrogen.

COMPRESSED NITROGEN GAS CYLINDERS:

Nitrogen can be purchased in compressed gas form. This requires the use of heavy, high-pressure cylinders which can be hazardous. The use of high-pressure nitrogen cylinders is limited to small applications because of the limited storage capacity of the bottles. Furthermore, not the entire volume of the bottles can be used thus the end-user pays for gas which is not being used. Users of nitrogen cylinders are subject to the same supply chain interruption risks as users of cryogenic nitrogen.

LOCALLY ON-DEMAND GENERATED NITROGEN:

Generating nitrogen onsite. This is the preferred method for end-users who are in remote locations or who cannot afford any interruption in their nitrogen supply. Generating nitrogen onsite, on-demand is simple and is explained in the following sections.

OVERVIEW OF BAUER NITROGEN SYSTEMS
35 Years Of Nitrogen Generation Experience

WHY BUY NITROGEN WHEN YOU CAN MAKE YOUR OWN?

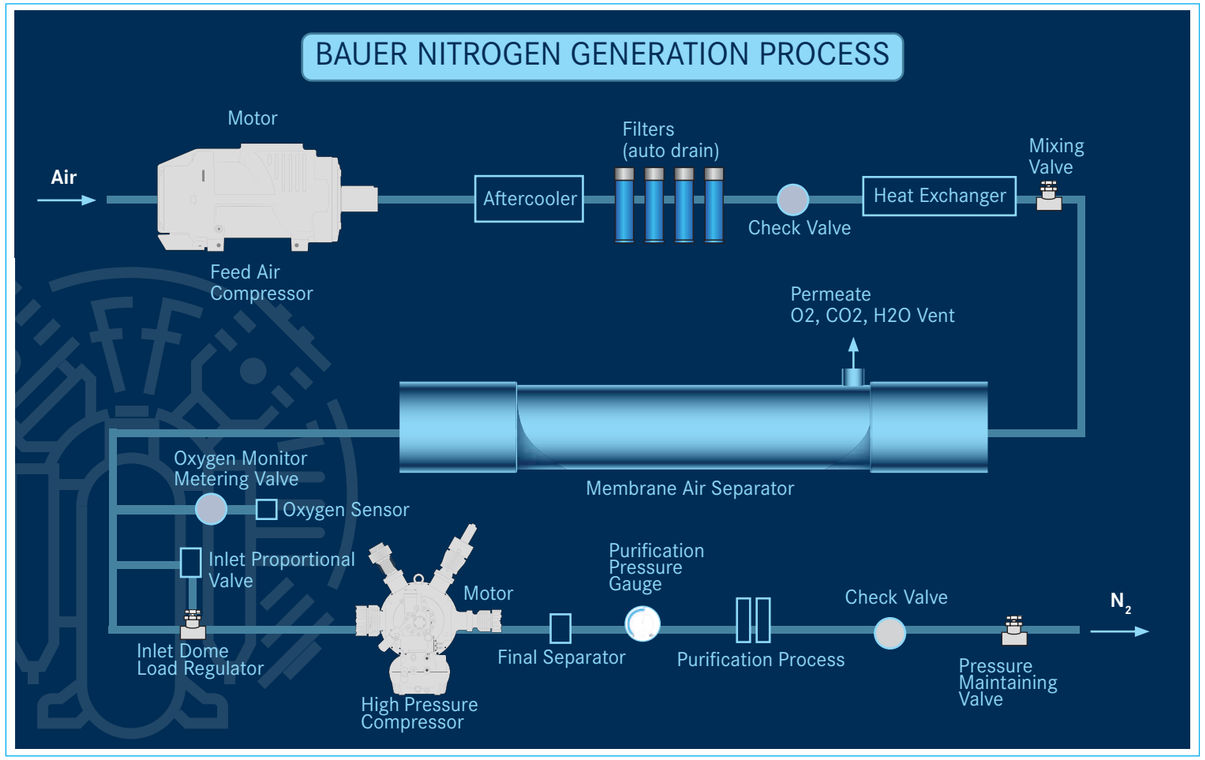
The BAUER Nitrogen Generators are self-contained, fully integrated, modular systems that eliminate the hazards involved with the handling of high-pressure cylinders, as well as the burden of the merchant, supplied nitrogen gas. BAUER nitrogen generator systems are designed for the on-demand supply of nitrogen gas at purities up to 99.5%.

Generating nitrogen to meet customer required purity and quality is a critical process. Nitrogen generation membranes require exact control of feed-air-flow, pressure, temperature, and quality (oil content, moisture content and particulate content), which BAUER provides in its turnkey systems.

All BAUER nitrogen systems are engineered to provide years of reliable performance. Critical performance values such as pressure, temperature and O_2 content are electronically monitored after each critical process step in order to assure optimal long-term total system performance. BAUER NGM® and SNG® nitrogen systems adapt automatically to changing environmental conditions as well as changes in membranes as they age.

BAUER GUARANTEES SYSTEM PERFORMANCE OVER TIME

- Process performance monitoring after each critical step to assure nitrogen quality and purity
- Adaptive system that automatically adjusts to various ambient conditions as well as membrane aging
- Remote telemetry to provide real-time feedback of system performance



BAUER MEMBRANE BASED NITROGEN SYSTEMS FOR A WIDE VARIETY OF APPLICATIONS

BAUER produces a complete product line of membrane-based nitrogen systems suitable for a wide variety of applications including:

- Industry (Plastic Injection Molding, Inerting)
- Oil & Gas (Upstream, Midstream, Downstream, Offshore)
- Energy and Alternative Energy (Transformer, Wind, Hydro)
- Aerospace
- Military

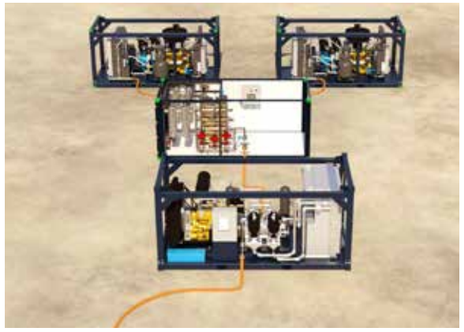
For these applications, BAUER provides a variety of specific nitrogen systems including:

- Low-Pressure Stationary Electric Drive Systems
- High- Pressure Stationary Electric Drive Systems
- Diesel Driven High and Low-Pressure Portable Systems
- System Size Ranges from 7.5 HP to 700 HP

› **NGM®** Stationary Nitrogen Generation System
(For low to medium-pressure applications)

› **SNG®** Stationary Nitrogen Generation System
(For high-pressure applications)

› **MNG™ II** Mobile Nitrogen Generation System
(For various high-pressure applications)



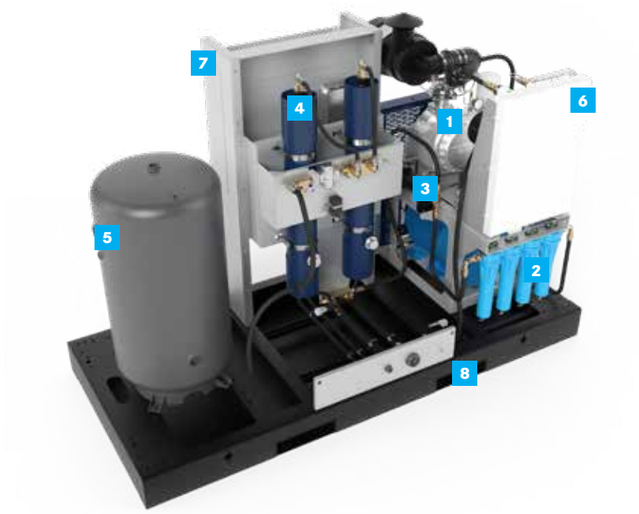
› **NITROMAX™** Mobile Nitrogen Generation System
(For large offshore & onshore high-pressure oil & gas applications)

Model Series	Drive	Use	Final Pressure		Flow Range		N_2 Purity Range
			PSIG	BAR	SCFM	M3/HR	
NGM™	Electric	Stationary	150	10	10-750	17-1274	95-99.5%
SNG™	Electric	Stationary	5000	345	9-750	15-1274	95-99.5%
MNG™ II	Diesel	Mobile	90-5000	6-345	9-16	15-27	98-99.5%
NITROMAX™	Diesel	Mobile	300-5000	20-345	400-950	680-1614	96-99.5%

BAUER NGM®
Membrane Based Low Pressure Nitrogen Systems

The BAUER NGM® system is an integrated stationary rugged membrane-based nitrogen generation system. Flow Range: (10 SCFM/16 m3/hr) to (750 SCFM / 1295 m3/hr). Nitrogen Purity Range: 96% to 99.5%. Final Pressure: Up to 150 PSIG (10 bar). All NGM® Nitrogen generation systems are fully integrated and designed to be “plug-and-play”. They incorporate a BAUER Rotorcomp™ feed air compressor, PLC control system with integrated BAUER CONNECT® IoT remote telemetry, inlet air filtration and reheating system, nitrogen separation membranes and a nitrogen buffer receiver.

This system has guaranteed performance in ambient conditions. By utilizing a variable speed motor drive to precisely control inlet airflow and pressure to the nitrogen separation membranes in various ambient conditions, BAUER NGM® systems are designed to always maintain consistent performance as related to output nitrogen flow and nitrogen purity.



1. BAUER ROTORCOMP® LOW PRESSURE FEED AIR COMPRESSOR
2. MEMBRANE PREFILTRATION SYSTEM (Particulate, Moisture & Hydrocarbon)
3. FEED AIR PREHEATER
4. NITROGEN GENERATION MEMBRANE MODULE
5. ASME NITROGEN ACCUMULATOR TANK
6. COMBINATION AIR/OIL AFTERCOOLER
7. NEMA 4 ELECTRIC CONTROL CABINET WITH INTEGRATED TOUCH SCREEN HMI
8. PRECISION FORMED POWDER COATED STEEL SKID WITH FORKLIFT POCKETS AND LIFTING EYES

STANDARD SCOPE OF SUPPLY

- Self-contained, fully-integrated turnkey nitrogen generation system for discharge pressures up to 150 PSIG
- Engineered to operate reliably in harsh industrial settings
- Feed air compressor; single-stage air-cooled, oil-injected, continuous-duty rotary screw compressor
- Port for condensate drain to customer collection device or drain system
- 3-stage membrane pre-filtration system
- High durability membrane air separators
- TEFC electric motors for each compressor with v-belt drive, guard and tensioning device
- Variable frequency speed control
- UL® labeled Control Panel with PLC controller. Includes touchscreen interface (for operation, maintenance, and troubleshooting)
- In-line oxygen analyzer to determine nitrogen purity
- Pressure sensors for monitoring oil and final product pressure
- 24-month warranty, lifetime support guarantee

BAUER NGM™ SYSTEM FEATURES

- Wide ambient operating temperature range 40° to 113°F (4.4° to 45°C)
- Electrically powered and available in the following power configurations:
  - 460 v, 3ph, 60 hz (standard)
  - 380/400 v, 3 ph 50 hz or 60 hz (optional)
  - 580 v, 3 ph, 60 hz (optional)

*Other voltages available upon request

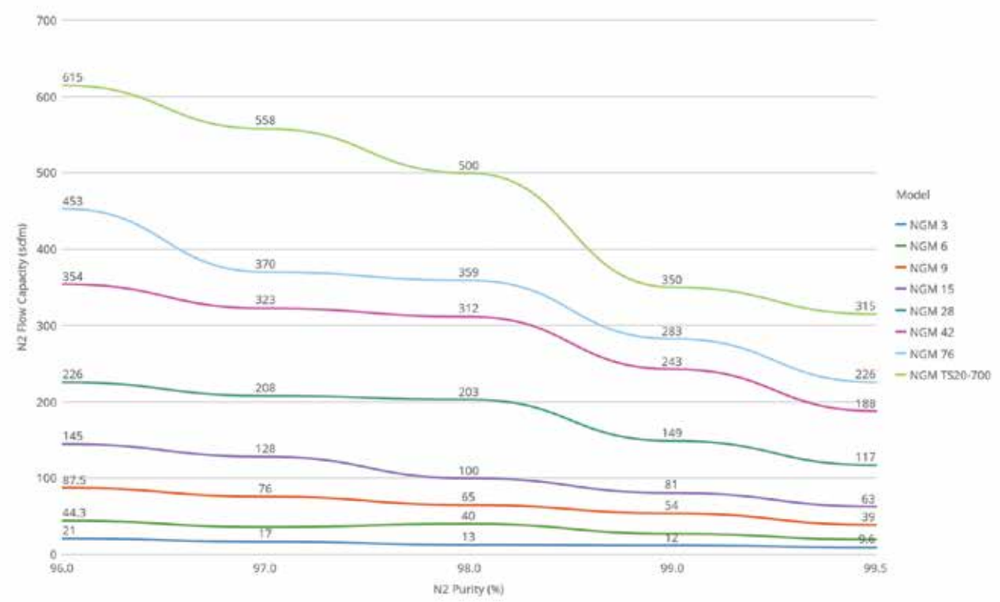
OPTIONAL FEATURES:

- Weatherproof enclosure
- Class1, Div2 execution for hazardous locations
- Sound attenuation (less than 85dBA)
- BAUER Connect® IoT Remote Telemetry
- Special Marine/Offshore Paint

KEY FEATURES AND BENEFITS

- **Uninterrupted N_2 Supply:** Point-of-use nitrogen generation provides an alternative to external sources of nitrogen by eliminating potential supply chain interruptions and the logistical hassles associated with merchant gas
- **Cost Savings:** Point-of-use nitrogen systems are a cost-effective alternative to merchant gas that require long-term contracts and are associated with long-term locked-in rates
- **Personnel Safety:** Point-of-use nitrogen is a safer alternative by eliminating the need for shuttling heavy merchant gas bottles back and forth between supplier and point of use
- **Robust Design:** All BAUER on-demand nitrogen systems are designed to operate continuously in all manner of severe ambient conditions indoors or outdoors
- **Superior Reliability:** All BAUER systems are designed and manufactured to provide BAUER’s legendary reliability and performance with the lowest overall lifecycle cost. In addition, every system is backed by BAUER’s two (2) year all-inclusive warranty and lifetime support

BAUER NGM® FLOW/PURITY PERFORMANCE PER MODEL

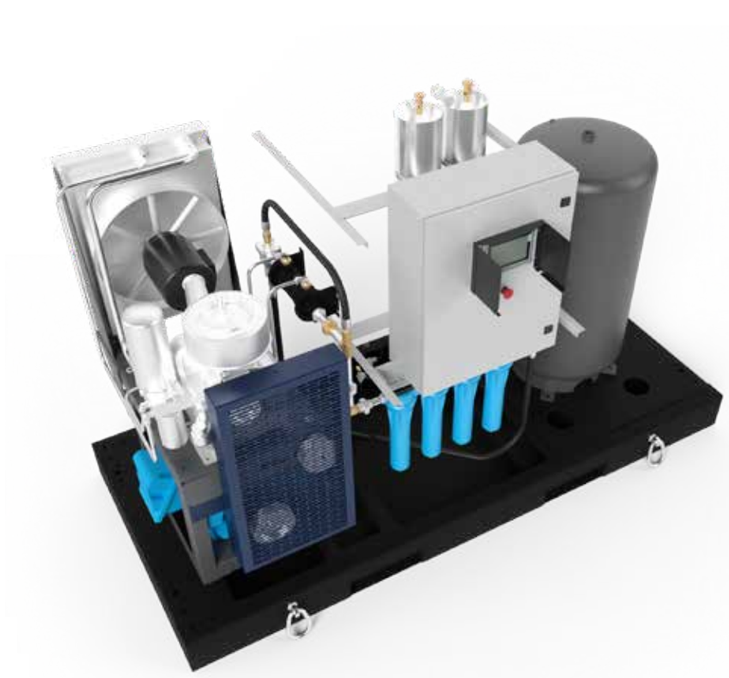


Performance based on Outlet Pressure of 150 PSIG (10 BARG), Ambient Temperature of 110°F (43°C), Elevation: Sea Level, and RH of 65%. Lower discharge pressures are possible with optional integrated pressure regulation. Motor power range of 10 HP (7.5 KW) to 750 HP (560 KW).

BAUER NGM® 3 & 6

Designed for Low Nitrogen Flow Requirements

- Nitrogen Purity Range: 96% to 99.5%
- Final Pressure: Up to 150 PSIG



Bauer NGM® with optional weatherproof sound attenuated enclosure.

AVAILABLE OPTIONS

- Marine / offshore special paint
- Class I, Div II for hazardous zone classification
- Two-stage intake filter for high-dust environments
- CE compliance

SYSTEM FOOTPRINT

DIMENSIONS L X W X H inches

- **NGM 3&6:** 108x48x80

WEIGHT pounds

- **NGM 3:** 3250
- **NGM 6:** 3500

TECHNICAL DATA

Model	Motor Size		Nitrogen Purity	Nitrogen Flow		Discharge Pressure	
	HP	KW		SCFM	M3/HR	PSIG	BAR
NGM®3							
NGM 3-25	25	18	96.0%	21	36	150	10
NGM 3-25	25	18	97.0%	17	29	150	10
NGM 3-25	25	18	98.0%	13	22	150	10
NGM 3-25	25	18	99.0%	12	20	150	10
NGM 3-25	25	18	99.5%	10	16	150	10
NGM®6							
NGM 6-50	50	37	96.0%	44	75	150	10
NGM 6-50	50	37	97.0%	36	61	150	10
NGM 6-50	50	37	98.0%	40	68	150	10
NGM 6-50	50	37	99.0%	27	46	150	10
NGM 6-50	50	37	99.5%	20	33	150	10

Note: NGM performance data is stated at the following ambient conditions: Temperature: 110°F / 43°C , Elevation: sea level, Relative Humidity: 65%.

BAUER NGM® 9

Designed for Low To Medium Nitrogen Flow Requirements

- Nitrogen Purity Range: 96% to 99.5%
- Final Pressure: Up to 150 PSIG

Bauer NGM® with optional weatherproof sound attenuated enclosure.

AVAILABLE OPTIONS

- Marine / offshore special paint
- Class I, Div II for hazardous zone classification
- Two-stage intake filter for high-dust environments
- CE compliance

SYSTEM FOOTPRINT

DIMENSIONS L X W X H inches

- 125 x 95 x 95

WEIGHT pounds

- 6250

TECHNICAL DATA

Model	Motor Size		Nitrogen Purity	Nitrogen Flow		Discharge Pressure	
	HP	KW		SCFM	M3/HR	PSIG	BAR
NGM®9							
NGM 9-75	75	55	96.0%	88	149	150	10
NGM 9-75	75	55	97.0%	76	129	150	10
NGM 9-75	75	55	98.0%	65	110	150	10
NGM 9-75	75	55	99.0%	54	92	150	10
NGM 9-75	75	55	99.5%	39	66	150	10

Note: NGM performance data is stated at the following ambient conditions: Temperature: 110°F / 43°C , Elevation: sea level, Relative Humidity: 65%.

BAUER NGM® 15/28

Designed for Medium Nitrogen Flow Requirements

- Nitrogen Purity Range: 96% to 99.5%
- Final Pressure: Up to 150 PSIG

Bauer NGM™ with optional weatherproof sound attenuated enclosure.

AVAILABLE OPTIONS

- Weatherproof sound attenuated enclosure for compressor and membrane module
- Marine / offshore special paint
- Class I, Div II for hazardous zone classification
- Two-stage intake filter for high-dust environments
- CE compliance

SYSTEM FOOTPRINT

DIMENSIONS L X W X H inches

- **NGM 15&28:** 161 x 95 x 95

WEIGHT pounds

- **NGM 15:** 9500
- **NGM 28:** 10000

TECHNICAL DATA

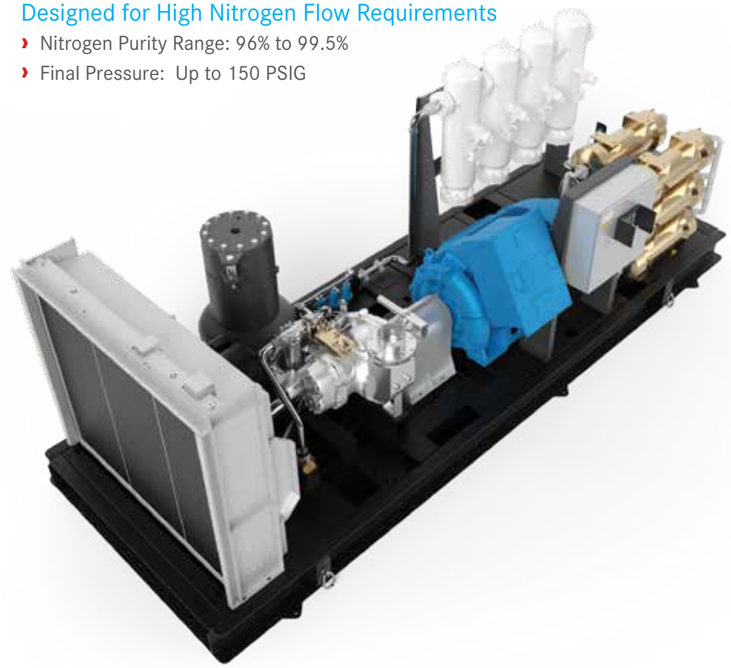
Model	Motor Size		Nitrogen Purity	Nitrogen Flow		Discharge Pressure	
	HP	KW		SCFM	M3/HR	PSIG	BAR
NGM®15							
NGM 15-125	125	90	96.0%	145	246	150	10
NGM 15-125	125	90	97.0%	128	217	150	10
NGM 15-125	125	90	98.0%	100	170	150	10
NGM 15-125	125	90	99.0%	81	138	150	10
NGM 15-125	125	90	99.5%	63	107	150	10
NGM®28							
NGM 28-250	250	187	96.0%	226	384	150	10
NGM 28-250	250	187	97.0%	208	353	150	10
NGM 28-250	250	187	98.0%	203	345	150	10
NGM 28-250	250	187	99.0%	149	253	150	10
NGM 28-250	250	187	99.5%	117	199	150	10

Note: NGM performance data is stated at the following ambient conditions: Temperature: 110°F / 43°C , Elevation: sea level, Relative Humidity: 65%.

BAUER NGM® 42/76/ NGM® TS

Designed for High Nitrogen Flow Requirements

- Nitrogen Purity Range: 96% to 99.5%
- Final Pressure: Up to 150 PSIG



AVAILABLE OPTIONS

- Weatherproof sound attenuated enclosure for compressor and membrane module
- Marine / offshore special paint
- Class I, Div II for hazardous zone classification
- Two-stage intake filter for high-dust environments
- CE compliance

SYSTEM FOOTPRINT

DIMENSIONS L X W X H feet

- **NGM 42/76 & TS:** 40 x 8 x 8

Model	Motor Size		Nitrogen Purity	Nitrogen Flow		Discharge Pressure	
	HP	KW		SCFM	M3/HR	PSIG	BAR
NGM®42							
NGM 42-350	350	260	96.0%	354	601	150	10
NGM 42-350	350	260	97.0%	323	549	150	10
NGM 42-350	350	260	98.0%	312	530	150	10
NGM 42-350	350	260	99.0%	243	413	150	10
NGM 42-350	350	260	99.5%	188	319	150	10
NGM®76							
NGM 76-500	500	373	96.0%	453	770	150	10
NGM 76-500	500	373	97.0%	370	629	150	10
NGM 76-500	500	373	98.0%	359	610	150	10
NGM 76-500	500	373	99.0%	283	481	150	10
NGM 76-500	500	373	99.5%	226	384	150	10
NGM®TS							
NGM TS-750	750	560	96.0%	614	1043	300	20
NGM TS-750	750	560	97.0%	558	948	300	20
NGM TS-750	750	560	98.0%	500	850	300	20
NGM TS-750	750	560	99.0%	350	595	300	20
NGM TS-750	750	560	99.5%	315	535	300	20

Note: NGM performance data is stated at the following ambient conditions: Temperature: 110°F / 43°C , Elevation: sea level, Relative Humidity: 65%.

BAUER SNG®
Membrane Based High Pressure Nitrogen Systems

The BAUER SNG® product line is an extension of the BAUER NGM® membrane-based nitrogen generation system but for applications where higher pressures up to 5000 PSIG (350 bar) required. Flow Range: (10 SCFM / 16 m3/hr) to (750 SCFM / 1295 m3/hr). Nitrogen Purity Range: 96% to 99.5%. Final Pressure: Up to 5000 PSIG (350 bar).

All BAUER SNG® nitrogen generator systems are fully integrated and designed to be "plug-and-play". They incorporate a BAUER NGM® nitrogen generation system with a matching BAUER high-pressure reciprocating booster compressor.

Guaranteed Performance In All Ambient Conditions–by utililizing a variable speed motor drive to precisely control air flow and pressure to the nitrogen separation membranes in various ambient conditions, BAUER SNG® systems are designed to always maintain consistent performance as related to nitrogen flow and nitrogen purity.

BAUER NGM®
NITROGEN GENERATION MODULE

BAUER HIGH-PRESSURE
BOOSTER COMPRESSOR

STANDARD SCOPE OF SUPPLY

- Self-contained, fully-integrated turnkey nitrogen generation system with integrated high- pressure booster for discharge pressures up to 6,000 PSIG
- Engineered to operate reliably in harsh industrial setting
- Feed air compressor: single-stage air-cooled, oil-injected, continuous-duty rotary screw compressor
- High pressure multi-stage reciprocating booster compressor, pressure-lubricated, continuous-duty rated
- 3-stage membrane pre-filtration system
- High durability membrane air separators
- TEFC electric motors for each compressor with v-belt drive, guard, and belt tensioning device
- Port for condensate drain to costumer collection device or drain system
- UL® labeled Control Panel with PLC controller. Includes touchscreen interface (for operation, maintenance and troubleshooting)
- In-line oxygen analyzer to determine nitrogen purity
- Pressure sensors for oil and final product pressure
- 24-month warranty, lifetime support guarantee

BAUER SNG® SYSTEM FEATURES

- Wide ambient operating temperature range 40° to 113°F (4.4° to 45°C)
- Electrically powered and available in the following power configurations:
  - 460 v, 3ph, 60 hz (standard)
  - 380/400 v, 3 ph 50 hz or 60 hz (optional)
  - 580 v, 3 ph, 60 hz (optional)

*Other voltages available upon request

OPTIONAL FEATURES:

- Weatherproof enclosure
- Class1, Div2 execution for hazardous locations
- Sound attenuation (less than 85dBA)
- BAUER CONNECT® IoT Remote Telemetry
- Special Offshore Paint

HIGH PRESSURE NITROGEN FROM THE HIGH PRESSURE EXPERTS

BAUER is recognized worldwide as the leader in high-pressure compressors. BAUER Compressors' durability, reliability, and wide range are unmatched in the industry. The entire range of the BAUER NGM® nitrogen generation systems can, therefore, be covered by integrating BAUER high-pressure booster compressor when nitrogen has to be delivered at pressures up 6000 PSIG. The table below illustrates the performance of the BAUER High-Pressure Booster range from 7.5 HP (5.5 kW) to 450 HP (315 kW).

KEY FEATURES AND BENEFITS

- **Uninterrupted N_2 Supply:** Point-of-use nitrogen generation provides an alternative to external sources of nitrogen by eliminating potential supply chain interruptions and the logistical hassles associated with merchant gas
- **Cost Savings:** Point-of-use nitrogen systems are a cost-effective alternative to merchant gas which require long-term contracts and are associated with long-term locked-in rates
- **Personnel Safety:** Point-of-use nitrogen is a safer alternative by eliminating the need for shuttling heavy merchant gas cylinders back and forth between supplier and point of use
- **Robust Design:** All BAUER on-demand nitrogen systems are designed to operate continuously in all manner of severe ambient conditions indoors or outdoors
- **Superior Reliability:** All BAUER systems are designed and manufactured to provide BAUER's legendary reliability and performance with lowest overall lifecycle cost. In addition, every system is backed by BAUER's two (2) year all-inclusive warranty and lifetime support

Model	Power		Speed	Inlet Pressure Range		Final Pressure		Min Flow (FAD)		Max Flow (FAD)	
	HP	KW	RPM	PSIG	BAR	PSIG	BAR	SCFM	M3/HR	SCFM	M3/HR
HIGH PRESSURE BOOSTER											
GIB 12.2	7.5	5.5	1230	60-160	4-11	5000	350	7	12	16	28
GIB 15.3	15.0	11.0	1140	100-145	7-10	5000	350	18	30.6	27	45
GIB 22.12	45.0	34.0	1180-1480	70-145	5-10	5000	350	40	68	70	119
GIB 23.12	60.0	45.0	1140	116-145	8-10	5000	350	95	162	116	198
GIB 26.12	175.0	132.0	1000-1485	87-145	6-10	5000	350	162	275	381	648
GIB 52.13	450.0	315.0	1000-1485	87-145	6-10	5000	350	324	550	766	1302

Note: SNG performance data is stated in accordance with ISO 1217 at the following ambient conditions: Temperature: 110°F / 43°C , Elevation: sea level, Relative Humidity: 65%.

GIB 15.3 Booster

GIB 22.12 Booster

GIB 23.12 Booster

GIB 26.12 Booster

BAUER SNG® III-3&6

Designed for Low Nitrogen Flow Requirements

Stationary On-Demand Nitrogen Generation System for High Pressure Applications up to 6000 PSIG

› SNG™ III-3

BAUER SNG® with optional weatherproof enclosure.

BAUER SNG® 9

Designed for Low to Medium Nitrogen Flow Requirements

Stationary On-Demand Nitrogen Generation System for High Pressure Applications up to 5000 PSIG

BAUER SNG® with optional weatherproof enclosure.

› SNG™ 9

SYSTEM FOOTPRINT

DIMENSIONS L X W X H inches

- **SNG III 3 & III-6 :** 108x48x80
- **SNG 9:** 125x95x95

WEIGHT pounds

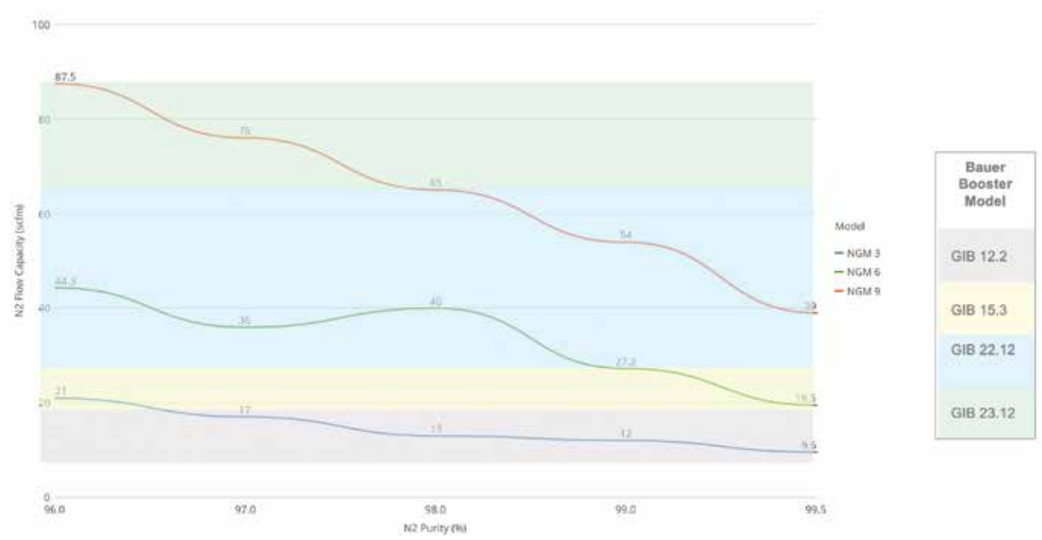
- **SNGIII-3 :** 3500
- **SNGIII-6:** 3750
- **SNG 9:** 7500

AVAILABLE OPTIONS

- Marine/offshore special paint
- Class I, Div II for hazardous zone classification
- Two-stage intake filter for high-dust environments
- CE compliance
- Modular high-pressure storage cylinder systems (UN ISO or ASME) with integrated high-flow pressure regulation panel
- BAUER Connect® IoT Remote Telemetry

BAUER SNG® HIGH PRESSURE NITROGEN SYSTEMS

BAUER Small to Medium Sized SNG® Systems - Integrated High Pressure Boosters with BAUER NGM® Low-Pressure Nitrogen Generation Systems



Performance based on Outlet Pressure of 5000 PSIG (350 BARG), Ambient Temperature of 110°F (43°C), Elevation: Sea Level, and RH of 65%.

TECHNICAL DATA

Model	Feed Air Compressor		Booster Compressor			Nitrogen Flow at 98.% Purity[2]		Nitrogen Flow at 99.% Purity[2]		Nitrogen Flow at 99.5% Purity[2]	
	Motor		Model	Motor							
	HP	KW		HP	KW	SCFM[1]	M³/HR	SCFM[1]	M³/HR	SCFM[1]	M³/HR
FINAL PRESSURE 5000 PSIG (345 BAR)											
SNG® III-3	**25**	18.6	**BK12.2**	**10**	7.5	**16**	27.2	**12**	20.3	**9**	15.2
SNG® III-6	**50**	37.3	**BK12.2**	**15**	11	**-**	-	**27**	45.8	**19**	32.2
SNG® 9	**75.0**	56.0	**GIB 22.12**	**45.0**	34.0	**65**	110	**54**	92	**39**	66

Stated performance based on ambient Temperature of 110°F (43°C), Elevation: Sea Level, and RH of 65%.

BAUER SNG® 15/28

Designed for Medium Nitrogen Flow Requirements

Stationary On-Demand Nitrogen Generation System for
High Pressure Applications up to 5000 PSIG

AVAILABLE OPTIONS

- Marine / offshore special paint
- Class I, Div II for hazardous zone classification
- Two-stage intake filter for high-dust environments
- CE compliance
- Modular high-pressure storage cylinders (UN ISO or ASME) with integrated high-flow pressure regulation panel
- BAUER CONNECT® IoT Remote Telemetry

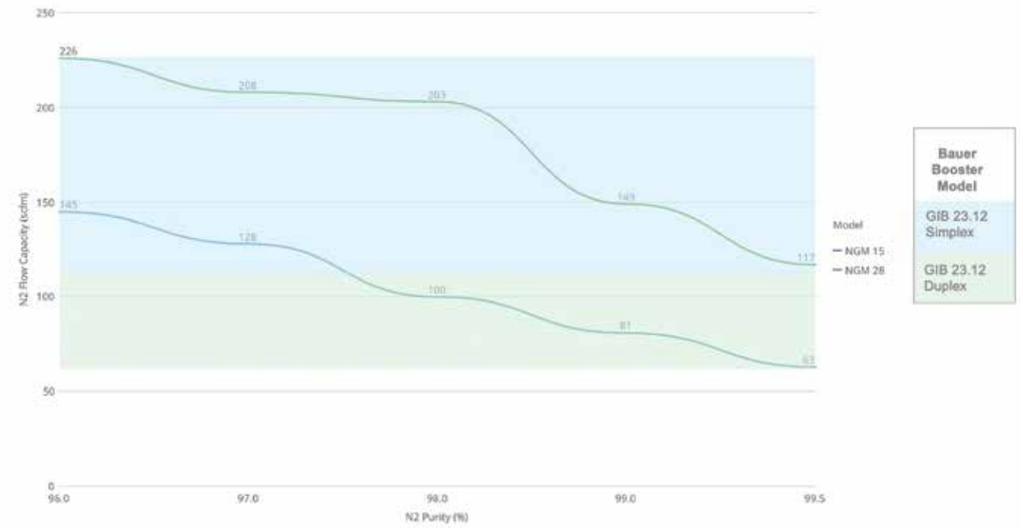
SYSTEM FOOTPRINT

DIMENSIONS L X W X H feet

- **SNG15/28:** 40 x 8 x 8

BAUER SNG® HIGH PRESSURE NITROGEN SYSTEMS

BAUER medium sized SNG® systems - integrated high pressure boosters with BAUER NGM® low-pressure nitrogen generation systems



Performance based on Outlet Pressure of 5000 PSIG (350 BARG), Ambient Temperature of 110°F (43°C), Elevation: Sea Level, and RH of 65%.

TECHNICAL DATA

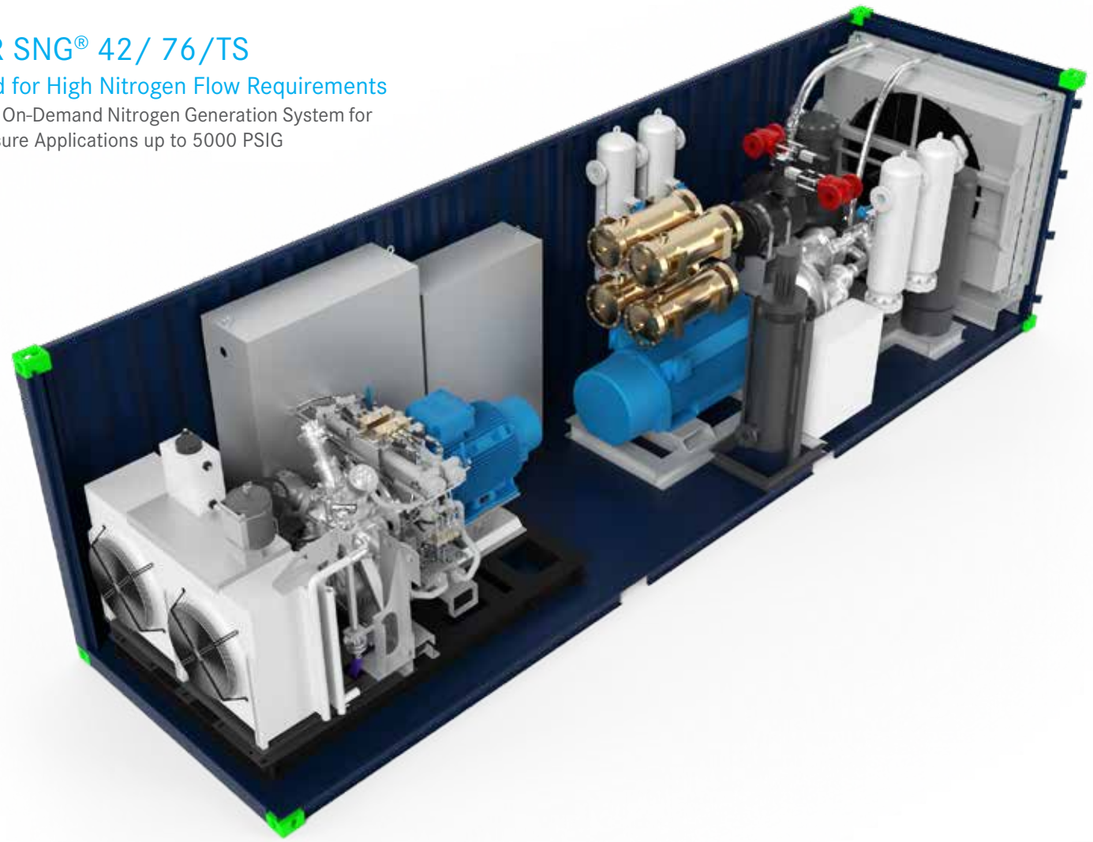
Model	NGM® Nitrogen Generation Module Power		SNG® Booster Compressor Model	SNG® Booster Compressor Max Power		Final Pressure		Flow at 98% N2 Purity		Flow at 99% N2 Purity		Flow at 99.5% N2 Purity	
	HP	KW		HP	KW	PSIG	BAR	SCFM	M³/HR	SCFM	M³/HR	SCFM	M³/HR
SNG® 15	125	93	GIB 23.12 or GIB 22.12	60	45	5000	345	100	170	81	138	63	107
SNG® 28	250	187	GIB 26.12 or GIB 23.12	150	112	5000	345	203	345	140	238	116	197

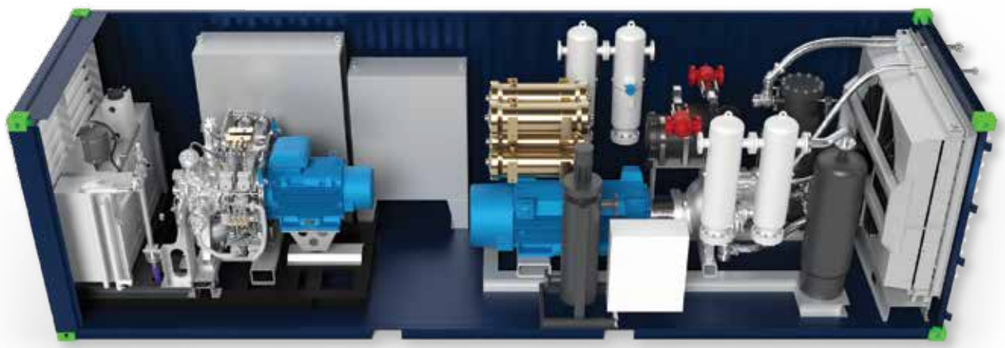
Note: SNG® performance data is stated at the following ambient conditions: Temperature: 110°F / 43°C , Elevation: sea level, Relative Humidity: 65%.

BAUER SNG® 42/ 76/TS

Designed for High Nitrogen Flow Requirements

Stationary On-Demand Nitrogen Generation System for
High Pressure Applications up to 5000 PSIG





AVAILABLE OPTIONS

- Marine/offshore special paint
- Class I, Div II for hazardous zone classification
- Two-stage intake filter for high-dust environments
- CE compliance
- BAUER CONNECT® IoT remote telemetry

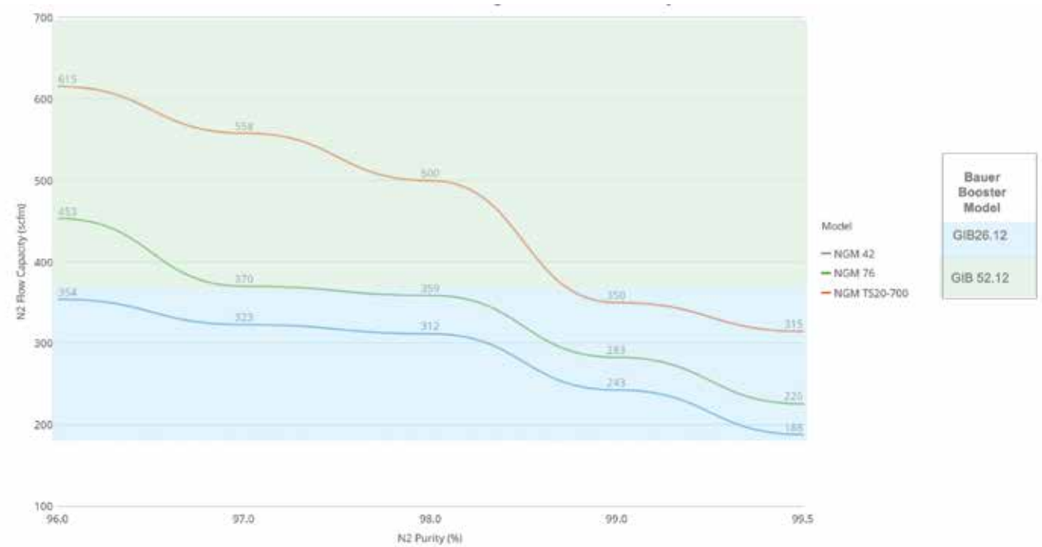
SYSTEM FOOTPRINT

DIMENSIONS L X W X H feet

- **SNG 42/76/TS:** 50 x 8 x 9.5

BAUER SNG® HIGH PRESSURE NITROGEN SYSTEMS

BAUER Large Sized SNG® Systems - Integrated High Pressure Boosters with
BAUER NGM® Low-Pressure Nitrogen Generation Systems



Performance based on Outlet Pressure of 5000 PSIG (350 BARG), Ambient Temperature of 110°F (43°C), Elevation: Sea Level, and RH of 65%.

TECHNICAL DATA

Model	NGM® Nitrogen Generation Module Power		SNG® Booster Compressor Model	SNG® Booster Compressor Max Power		Final Pressure		Flow at 98% N2 Purity		Flow at 99% N2 Purity		Flow at 99.5% N2 Purity	
	HP	KW		HP	KW	PSIG	BAR	SCFM	M3/HR	SCFM	M3/HR	SCFM	M3/HR
SNG® 42	350	240	GIB 26.12	175	132	5000	345	312	530	243	413	188	319
SNG® 76	500	373	GIB 26.12	175	132	5000	345	359	610	283	418	226	384
SNG® TS	700	522	GIB 52.12 or GIB 26.12	450	315	5000	345	500	850	350	595	315	535

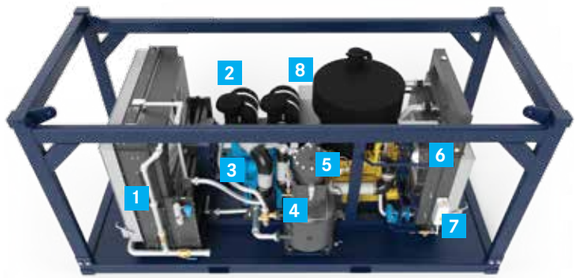
Note: SNG® performance data is stated at the following ambient conditions: Temperature: 110°F / 43°C , Elevation: sea level, Relative Humidity: 65%.

NITROMAX™
Large Mobile Engine Drive High Pressure Nitrogen Systems For Offshore & Onshore Oil & Gas Applications

APPLICATIONS
High purity nitrogen for coil tubing, gas lifting, well stimulation, pipeline pigging and inerting.

DESIGNED FOR OFFSHORE
Packaged in a heavy duty DNV certified container or crash frame weighing less than 14 tons for FPSO deployment.

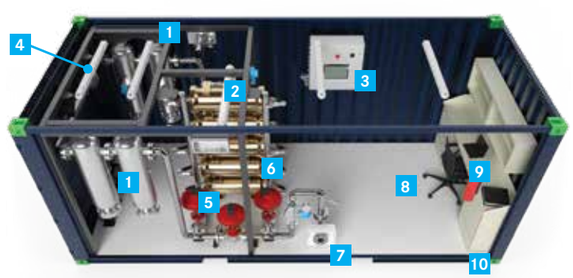
SUITABLE FOR ONSHORE
Can be place on standard and transported by truck to jobsite.



FEED AIR MODULE

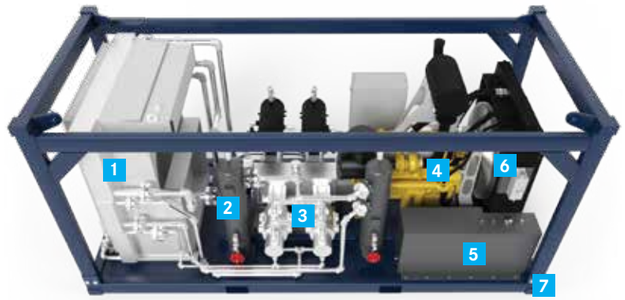
1. DEDICATED COMPRESSOR OIL AND AIR-AFTER COOLERS
2. HEAVY DUTY AIR INTAKE FILTERS
3. TWO (2) STAGE ROTARY SCREW COMPRESSOR FOR FEED AIR TO MEMBRANES (1,350-1500 SCFM EACH AT 350 PSIG DISCHARGE PRESSURE)
4. AIR/OIL SEPARATOR
5. 700 HP DIESEL ENGINE
6. ENGINE COOLER
7. DNV 2.7.1 CERTIFIED CRASH-FRAME AND SKID
8. 50 GAL ON-BOARD FUEL TANK*

*External fuel supply required for extended operating conditions



NITROGEN MEMBRANE MODULE

1. FOUR STAGE MEMBRANE FEED AIR PRE-FILTRATION SYSTEM (ACTIVATED CARBON AND (1 TO 0.01) MICRON COALESING)
2. NITROGEN GENERATION MEMBRANE MODULES (CAPACITY UP TO 10 MEMBRANES)
3. HMI PANEL WITH PLC CONTROL SYSTEM
4. SHELL AND TUBE PRE-HEATER FOR FEED AIR
5. ELECTRIC ACTIVATED CONTROL VALVES
6. OUTLET FLOW METER
7. NITROGEN OUTLET FLANGE
8. STORAGE AND WORK AREA
9. WORK BENCH
10. DNV 2.7.1 CERTIFIED CONTAINER



SYSTEM FOOTPRINT

DIMENSIONS L X W X H feet

› **NITROMAX:** 40 x 8 x 9

BOOSTER MODULE

1. DEDICATED COMPRESSOR COOLER
2. PULSATION DAMPENING VESSELS
3. FOUR-STAGE NITROGEN BOOSTER COMPRESSOR (1500 SCFM 5,000 PSIG)
4. 540 HR DIESEL ENGINE
5. 50 GAL ON-BOARD FUEL TANK*
6. ENGINE COOLER
7. DNV 2.7.1 CERTIFIED CRASH-FRAME AND SKID

PERFORMANCE SPECIFICATIONS

Standard 4 Container System (2 x Feed Air Compressor Units, 1 x Nitrogen Production Unit, 1 x Booster Compressor Unit)

Nitrogen Purity	Nitrogen Flow	
	SCFM	M3/HR
96%	950	1614
97%	750	1274
98%	650	1104
99%	500	849
99.5%	400	679

Stated Performance Based on Tropical / Desert Conditions (122° F (50° C), Sea Level, 90% RH)

TECHNICAL SPECIFICATIONS

Feed Air Compressor System				Nitrogen Production Unit (NPU)			Nitrogen Booster Compressor System					
Feed Air Unit Model	Engine (Tier III)	HP	QTY	No. Of N2 Membranes	Discharge Pressure		Unit Model	Engine (Tier III)	HP	QTY	Discharge Pressure	
					PSIG	BAR					PSIG	BAR
FA -1500	CAT C19	700	2	4	300	20.6	B-1000	CAT-C18	630	1	5000	345
FA-1350	CAT C18	630	2	4	300	20.6	B-750	CAT-C15	540	1	5000	345
FA-1350	CAT C18	630	2	4	300	20.6	B-750	CAT-C15	540	1	5000	345
FA-1350	CAT C18	630	2	5	300	20.6	B-750	CAT-C15	540	1	5000	345
FA-1150	CAT C15	540	2	5	300	20.6	B-750	CAT-C15	540	1	5000	345

BAUER MNG™ II
Mobile on-site Nitrogen Generation System 90-5000 PSIG (6-350 BAR)

SYSTEM FOOTPRINT

DIMENSIONS L X W X H inches (mm)

› 199" L x 90" W x 84" H

WEIGHT pounds (kg)

› 11,000 lbs

STANDARD SCOPE OF SUPPLY

› Self-contained, fully-integrated turnkey mobile nitrogen generation system with high-pressure booster for discharge pressures up to 5,000 PSIG

› Feed air compressor: BAUER Rotocomp®, EVO 3 single-stage air-cooled, oil-injected, continuous-duty rotary screw compressor

› 3-stage membrane pre-filtration system

› High durability membrane air separators

› High-Pressure Booster: BAUER BK12.2 series air-cooled, oil-lubricated high-pressure reciprocating compressor

› Automatic condensate drain port for connection to the customer collection system

› **UL®** Labeled Control Panel with PLC controller. Includes touchscreen interface (for operation, maintenance and troubleshooting)

› In-line percent oxygen analyzer to monitor nitrogen purity

› Pressure sensors for oil and final product pressure

› Wide ambient operating temperature range 40° to 113°F (4.4° to 45°C)

› Integrated heavy-duty 50 HP diesel engine drives both compressors (drives both compressors)

› Two high-pressure fill hose reels (100ft. each) for remote filling

› Heavy Duty, weatherproof enclosure

› Integrated high-pressure storage (6x 5000 PSIG) UN/ISO bottles provides 2700 cubic foot storage

› Integrated pressure regulator panel (90-5000 PSIG)

› Remote diagnostics is capable through Bauer Connect™

› 24-month warranty, lifetime support guarantee

TECHNICAL DATA

Model	Diesel Engine		Nitrogen Flow at 98% Purity[2]		Nitrogen Flow at 99% Purity[2]		Nitrogen Flow at 99.5% Purity[2]	
	hp	kW	SCFM[1]	M³/HR	SCFM[1]	M³/HR	SCFM[1]	M³/HR
90-5000 PSIG (6-350 BAR) OUTLET PRESSURE								
MNG™ II	50	37.3	**16**	27.2	**12**	20.3	**9**	15.2

1) Capacity (FGD) is referenced to standard conditions. Tolerance +/- 5%. 2) Purity reflects content of 02-free gas produced.

SPECIALTY NITROGEN SYSTEMS

N2IT® XL

Comprehensive Gas Assist Molding System

G.I.T.

Gas Injection Technology

› Reduce cycle times

› Reduce resin cost

› Improve part quality

› Simplify mold design

CONTROL SYSTEM

State-of-the-art control system with TRUE TRACK RAMPING® and intuitive interface allows for simple operation

› Real-time accurate diagnostics

› Remote interface via smartphone option

› On-screen manual and maintenance instructions

SYSTEM FOOTPRINT

DIMENSIONS L X W X H inches (mm)

› 69.375" x 37" x 82" (1762.125mm x 939.8mm x 2082.8mm)

WEIGHT pounds (kg)

› 1,700 lb. (771.107 kg)

BENEFITS

› The N2IT® XL incorporates an integrated nitrogen generator, booster compressor, high-pressure storage, and 2-channel process control unit in one portable package

› Only compressed air and electrical power are required for the N2IT® XL to apply GIT (Gas Injection Technology) to any injection molding process, eliminating the need to purchase nitrogen

› The N2IT® XL is loaded with user-friendly features and maintains accurate and repeatable processing with the TRUE TRACK RAMPING® precision pressure control

› The N2IT® XL includes EUROMAP 62 interface, and can easily be connected with any injection molding machine in your facility

TECHNICAL DATA

Model	Nitrogen Flow at 98.0% Purity		Feed Air Required at: 101.5 PSIG (7 BAR)		Motor	
	SCFM	M³/HR	SCFM	M³/HR	HP	KW
5000 PSIG (414 BAR)						
N2IT XL	5	8.5	25	42.5	5	3.7

1) Capacity (FGD) is referenced to standard conditions. Tolerance +/- 5%. 2) Purity reflects content of 02-free gas produced. Dimensions and weight are approximate.
Volume flow rate is according to ISO 1217 with the following standard conditions: Inlet air pressure = sea level, 14.5 psia (1 bar a) Inlet air temperature = 68 oF (20 oC)
Relative Water Vapor Pressure = 0 Contact BAUER for site conditions that are other than standard. Correction factors may apply that may derate performance.

BAUER SNG® 4S

Stationary Nitrogen Generation System

FEATURES

- All aluminum frame and enclosure
- 316 stainless steel tubing and fittings
- Stainless steel hardware
- Lifting rings and forklift slots for mobility
- Inlet air filtration
- Electric membrane pre-heater

FEED AIR REQUIREMENTS

- Minimum -40˚F (-40˚C) Dewpoint
- Less than 10 Microns
- Zero Hydrocarbons (PPM)

SYSTEM FOOTPRINT

DIMENSIONS L X W X H inches (mm)

- 62" x 40" x 44" (1574.8 x 1016 x 1117.6)

WEIGHT pounds (kg)

- 950 (431)

BENEFITS

- **Enhanced Safety:** On-site generation of nitrogen eliminates the danger in transporting bulk or cryogenic tanks
- **Guaranteed Performance:** Engineered for reliable operations in all offshore environments
- **Innovative Design:** Compact footprint provides superior flexibility by minimizing deck space requirements
- **Exceptional Reliability and Best-in-class:** Quality creates the lowest cost of ownership

TECHNICAL DATA

Model	Nitrogen Flow at 98% Purity[2]		Feed Air Pressure Required		Feed Air Capacity Required at 125 PSIG		Motor	
	SCFM[1]	M³/HR	PSIG	BAR	SCFM[1]	M³/HR	HP	KW
5000 PSIG (345 BAR)								
SNG-4S	9	15.3	125	9	35	60	5	3.8

1) Capacity is referenced to maximum inlet pressure and standard conditions. Tolerance +/- 5%.
2) Purity reflects content of 02-free gas produced.
Dimensions and weight are approximate.

NITROGEN STORAGE SYSTEMS

STORAGE

For standard storage assemblies, BAUER utilizes a universal welded steel rack (RCK-0037) of our design that safely and securely accommodates two storage cylinders whether of the ASME or the UN variety. For storage system requirements of greater capacity, multiple rack assemblies can be bolted and tubed together. These storage rack assemblies are available in either vertical or horizontal configurations. All storage rack assemblies up to 2 modules deep and 2 modules wide can be shipped completely interpiped, bolted together, and placed horizontally on a single shipping pallet. For larger orders, a tubing and hardware kit for connecting the modules will be shipped loose for on-site assembly.
In addition to the standard storage rack assemblies as described above, we are capable of providing engineered solutions to accommodate customer specified storage and racking requirements.

- Storage assemblies can be configured in bulk or bank systems depending on the gas distribution system required
- BAUER can provide custom regulation/distribution panels for remote installation

- Shown with optional SKID for shipboard installation.

Optional nitrogen storage assembly configured for up to twelve (12) high pressure UN/ISO or ASME storage vessels with integrated high-flow pressure regulator.

TECHNICAL DATA

Storage Pressure		Nitrogen Volume of 12 cylinder configuration
5000 PSIG		
	ASME	5057 SCF
	UN/ISO	5470 SCF
6000 PSIG		
	ASME	5694 SCF
	UN/ISO	5926 SCF

- Shown with optional lifting provisions.

Nitrogen storage assembly configured for up to two (2) UN/ISO or high pressure ASME storage vessels.

TECHNICAL DATA

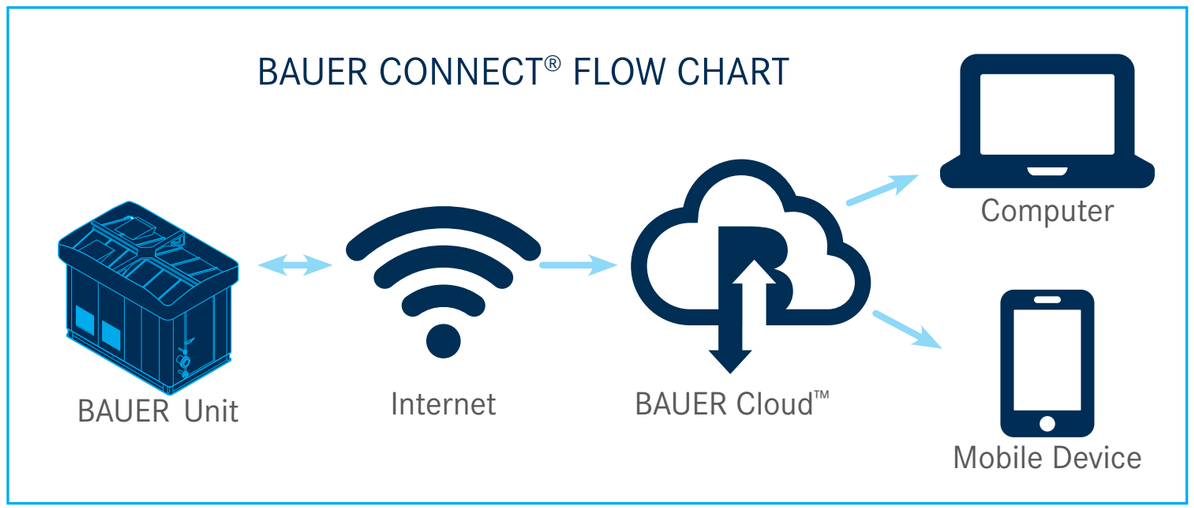
Storage Pressure		Nitrogen Volume of 2 cylinder configuration
5000 PSIG		
	ASME	843 SCF
	UN/ISO	911 SCF
6000 PSIG		
	ASME	950 SCF
	UN/ISO	988 SCF

BAUER CONNECT®

REMOTE TELEMETRY

BAUER CONNECT® REMOTE TELEMETRY AND CONTROL VIA MOBILE APP

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



BAUER REMOTE HMI

The BAUER Remote HMI function allows factory-trained technical personnel to remotely control the BAUER system via the BAUER CONNECT® App with the same functionality as if one were standing in front of the actual unit.

- Live connection and control of all units no matter the location(s)
- Save time and money with remote monitoring
- Secure log-ins - Only approved team members can access and control your compressor system

BAUER REPORTS

The BAUER Reports feature is a function that generates custom reports tailored to the specific needs of the customer. Customers can have access to historical data via a multitude of standard and customized reports.

NOTIFICATIONS

The BAUER CONNECT® Mobile App will send push notifications if certain critical parameters of the BAUER system fall outside of normal operating range or if triggered by a system alert. This assures that essential personnel is notified immediately, thus allowing for pro-active intervention in a situation that could potentially be detrimental to the BAUER system as well as the customer's operation.

MOBILE DASHBOARDS

BAUER CONNECT® App will also display a real-time graphical display of the entire system (SCADA view). The Mobile Dashboard feature provides information such as compressor system status, error log, critical pressures and temperatures, and volume of air dispensed in storage information, etc.

- Quick reference of all of your units at your fingertips
- Does not require password validation every time app is used
- Beneficial tool, that allows for monitoring without the ability to control the unit(s)
- Dashboards can be customized to specific customer needs

BAUER PREDICTIVE ANALYTICS

This feature of BAUER CONNECT® provides a new pro-active dimension to perpetually maintaining customers' compressor systems at peak conditions with minimum downtime. BAUER's predictive analytics algorithm uses artificial intelligence to analyze the collected system information on the BAUER Cloud™ to predict upcoming maintenance requirements and preventative actions to avoid unplanned shutdowns.

Available on App Store Google play

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

PARTS

OEM PARTS WARRANTY

RAPID DELIVERY

QUALITY AND RELIABILITY

Our factory-original replacement parts assures you that when maintenance or repair is performed, you are restoring the unit to its original specifications and performance.

1. Purification
2. Gaskets and Seals
3. Lubricants
4. Fill Hose and Assemblies
5. Valves
6. Air Intake Filters
7. **All 10,000+ Parts**

PLUS, OVER 10,000 OEM PARTS

COMPATIBILITY

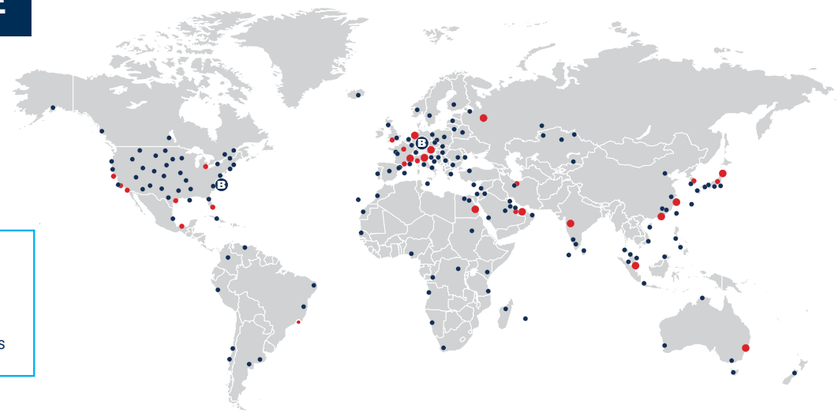
We configure our designs with interchangeability and our end user in mind. You can count on parts being available for all BAUER models.

PartsSales@BauerComp.com or 1-(844)-500-5822

GLOBAL SERVICE

GLOBAL SERVICE REACH

FACTORY TRAINED TECHS



BAUER Germany & BAUER Norfolk

BAUER Branches

BAUER Service Centers/Distributors

SERVICE AND SUPPORT

Our compressors are designed with you in mind. Easy to use manuals guide you through clear, mechanically accessible repairs. Our worldwide distribution network was developed to assist in after-sales support, along with product and maintenance parts assistance.

FROM THE SOURCE

BAUER Compressors Inc., is certified with **ISO 9001:2015** quality processes providing you with confidence that cannot be duplicated by sub-standard after-market parts and service.

TRAINING

ON SITE/OFF SITE TRAINING

FACTORY TRAINED TECHS

BAUER Compressors Inc. offers a variety of on site & off site Training Schools. Our on site classes are held at our BAUER Training Facility and are taught by the same people that help manufacture, test and service our products. From electrical systems to hands-on break downs, we cover all areas of compressor operation.

TRAINING TOPICS

Basic mechanical theory, control system theory (electric and pneumatic) along with troubleshooting for all BAUER systems.

Class schedule and course registration at:

www.BauerCustomerTraining.com

BAUER HELPDESK

24-7 PHONE TECH SUPPORT

LIFECYCLE PERFORMANCE

MECHANICAL & ELECTRICAL

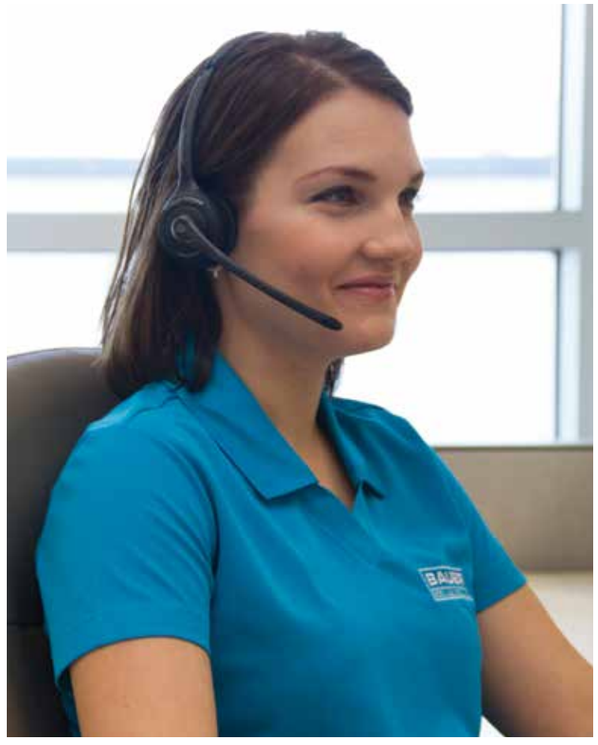
Total customer satisfaction is our top priority. BAUER provides 24-7 phone tech and **troubleshooting** support at our BAUER Helpdesk. Our support continues throughout our warranty period and beyond.

For BAUER Helpdesk please email:

CustomerService@BauerComp.com

or call at:

1-(844)-500-5822



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Subject to technical changes