

7000 PSIG Breathing Air Systems



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7000 PSIG HIGH PRESSURE BREATHING AIR COMPRESSORS SYSTEMS

As SCBA working pressures increase, so must the fire department's high pressure breathing air compressor system. If left unchecked, the Department runs the risk of not supporting their breathing air demand for grade "E" breathing air. BAUER Compressors, Inc. is the first company in the industry to offer a wide and varied product portfolio to meet your specific needs. We start with a performance proven BAUER air-cooled high-pressure compressor designed, built, and rated for continuous duty operations at 7000 PSIG. The compressor has been in existence long before others. It has proven itself since 1992 in the high-pressure, non-breathing air market where up-time demands are far more stringent than the breathing air market. We couple the compressor to one of our BAUER high-pressure breathing air purification systems, designed for continuous operations at 7000 PSIG while meeting the Compressed Gas Association's rigorous breathing air quality standards for grade "E" air, and or the National Fire Protection Association (1989 standard for high-pressure breathing air) along with many other recognized global standards.

BAUER Compressors, Inc. offers two (2) models of 7000 PSIG compressor package, each outfitted to meet your specific requirements. A simplistic component system utilizing one of our VERTECON® compressor packages. Along with an independently tested and verified CFS5.5-3S or CFS5.5-2S SCBA containment fill station and an ASME coded air storage system; Or step up to either a Unicus 4S or UNICUS 4i All-In-One compressor package, each outfitted to meet your specific needs. No matter which compressor system you select, rest assured all of the components were chosen in strict adherence to NFPA 1901-2016 edition, calling for a 4:1 structural safety factor.

VERTECON®

STANDARD SCOPE OF SUPPLY

- › BAUER breathing air purification system
- › Open vertical cabinet made of formed sheet steel providing a firm foundation for all pressure bearing components
- › Modern design with unsurpassed maintenance accessibility (no hand tools are required for normal maintenance checks and fluid level confirmation)
- › BAUER PLC based controller with four line text display
- › Self adjusting drive belt tensioner
- › NEMA 4 rated electrical enclosure with UL® listed control panel
- › All wiring harnesses incorporated within a corrugated loom with number coding for easy system diagnosis
- › Emergency stop push button
- › Stainless steel tubing throughout, no cheap plastic tubing
- › Rugged powder coat finish
- › Automatic condensate drain system with integral reservoir level sensor to provide system shutdown when the reservoir is full
- › Interstage pressure gauges (locally mounted)
- › SECURUS Moisture Monitor



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SYSTEM FOOTPRINT

DIMENSIONS L X W X H inches (mm)

- › 44" x 33" x 54" (1118mm x 838mm x 1372mm)

WEIGHT pounds (kg)

- › 1075 lb (488 kg)

PLC CONTROLLER

- › Compressor on/off, final pressure, oil pressure, high temperature shutdown
- › Supports automatic condensate drain system
- › Motor overload indication
- › Final separator counter with shutdown and operator indication

AVAILABLE ACCESSORIES (FACTORY INSTALLED)

- › CO monitoring system

TECHINICAL DATA

Model	Block	Charging Rate ¹		Number of Stages	Motor		FAD ²	RPM	Purification System
		SCFM	L/MIN		HP	kW			
7000 PSIG (476 BAR)									
VTC-7K/20	IK 18.111	20	566	5	20	15	17	1300	P5 SECURUS
VTC-7K/15	IK 15.11	13	368	4	10	7.5	11	960	P5 SECURUS

1) Based on recharging an 80 cubic foot tank from 500 to 3000 psig. 2) Compressor capacity referenced to standard inlet conditions. E3=Three phase electric, 208/230/460 VAC/60 Hz. Other voltages available on request.

7K



› CFS5.5-3S

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CFS5.5®

STANDARD SCOPE OF SUPPLY

- › Complete with SCBA fill connection, fill hose and bleed valve
- › Fill control panel with adjustable regulator, relief valve, manual control valve and pressure gauge for each fill position
- › Convenient door handle actuation, bottom venting and reduced footprint
- › Hands free door interlock
- › Compliant with NFPA 1901 2016 Edition
- › Four bank dual function cascade controls
- › Air direction valve

SYSTEM FOOTPRINT

CFS5.5[°]-3S

DIMENSIONS L X W X H inches (mm)

- › 41" x 21" x 57" (1041mm x 533mm x 1448mm)

WEIGHT pounds (kg)

- › 1000 lb (454 kg)

CFS5.5[°]-2S

DIMENSIONS L X W X H inches (mm)

- › 30" x 21" x 57" (762mm x 533mm x 1448mm)

WEIGHT pounds (kg)

- › 750 lb (390.2 kg)

TECHINICAL DATA

Model	Description
CFS5.5 [°] -3S	Three position CFS equipped with inlet pressure gauge adjustable regulator, regulated pressure gauge, fill control valve and fill pressure gauges. Unit will consist of Dual function, top mount, four bank cascade panel. The dual function feature offers the ability to refill a storage bank, even with the bank valve closed, while filling SCBA's from another bank. It also includes an air direction valve allowing the operator to select "fill from storage" or "fill from compressor", additionally the system includes a regulated remote fill outlet.
CFS5.5 [°] -2S	Two position CFS equipped with inlet pressure gauge adjustable regulator, regulated pressure gauge, fill control valve and fill pressure gauges. Unit will consist of Dual function, top mount, four bank cascade panel. The dual function feature offers the ability to refill a storage bank, even with the bank valve closed, while filling SCBA's from another bank. It also includes an air direction valve allowing the operator to select "fill from storage" or "fill from compressor", additionally the system includes a regulated remote fill outlet.

AIR STORAGE STANDARD SCOPE OF SUPPLY

- › The scope of supply for the ASME cylinder assembly includes four ASME coded cylinders, an ASME safety relief valve, cylinder valve and drain valve for each cylinder
- › Assemblies are designed to be used with a BAUER four bank cascade panel. Gauges are not included on the individual cylinders as they are on the cascade pane.
- › ASME-7K-3 is a heavy-duty, welded steel rack designed for vertical cylinder configuration for stationary or mobile applications. Each cylinder is independently affixed to the rack with unistrut type clamps
- › ASME-7K-4 is a heavy-duty, welded steel rack designed for horizontal cylinder configuration for stationary applications. Each cylinder is independently affixed to the rack with clamps

SYSTEM FOOTPRINT

ASME-7K-3

DIMENSIONS L X W X H inches (mm)

- › 52" x 17.5" x 69.5" (1320.8mm x 444.5mm x 1765.3mm)

WEIGHT pounds (kg)

- › 2000 lb (3220 kg)

ASME-7K-4

DIMENSIONS L X W X H inches (mm)

- › 95" x 34" x 44" (2413mm x 864mm x 1118mm)

WEIGHT pounds (kg)

- › 7100 lb (3220 kg)



› ASME-7K-3

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TECHINICAL DATA

Model	Description
ASME - 7K-3	4 Cylinder System with maximum operating pressure of 7000 PSIG installed in a vertical rack. System shall provide a 3:1 structural safety factor
ASME - 7K-4	4 Cylinder System with maximum operating pressure of 7000 PSIG installed in a horizontal rack. System shall provide a 4:1 structural safety factor

7000 PSIG ALL IN ONE SYSTEM: UNICUS® 4S & 4i

Bauer Compressors, Inc. is the first company to offer a fully unitized compressor system built for 7000 PSIG service. Let's start with continuous duty BAUER 7000 PSIG compressors, which were in existence well before others put pen to paper. We couple the compressor to a BAUER high pressure breathing air purification system that meets the rigorous CGA, NFPA, and many other Global standards for high pressure breathing air. A sound attenuated cabinet enclosure incorporates a four (4) cylinder 7000 psi ASME air storage system along with an NFPA compliant 3-position containment SCBA fill station. Operations and systems functions are simplified with everything located on a centrally located and illuminated operations panel, including an ergonomic and intuitive HMI touchscreen.

Additionally, we are offering you two (2) modes of operation, analog or automatic. The Unicus 4S is your choice for all things manually controlled. Should your department wish the automated path, select the Unicus 4i. If you want to dress your unit in concert with the Fire Department theme, ask about our Fire Edition package. Look to BAUER COMPRESSORS when your department needs the best all-in-one compressor system on the market today, backed by our global network of service partners.

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- › **PRESSURE:**
Up to 7000 PSIG
(483 BAR)
- › **CHARGING RATE:**
13 to 20 SCFM
(368 to 566 L/MIN)
- › **POWER:**
15 to 20 HP
(11 to 15 kW)



› UNICUS 4i

OPTIONAL



UNICUS 4
FIRE EDITION
OPTIONAL FIRE EDITION PAINT SCHEME
(SHOWN HERE)

STANDARD SCOPE OF SUPPLY

- › BAUER breathing air purification system with B-SECURUS
- › BAUER PLC based controller with 7" color HMI touchscreen display on 4S; 15" HMI on 4i
- › NEMA 4 rated electrical enclosure with **UL**® listed control panel
- › Compressor low oil pressure and high temperature safety shutdowns
- › Emergency stop push button
- › Hinged cascade fill control panel with Lexan laminate air flow/fill schematic
- › Audible alarm on safety shutdowns
- › Inlet filter maintenance indicator
- › Automatic condensate drain system with non-corrosive condensate reservoir and integrated float sensor and automatic "Full" indication and compressor shutdown
- › Four (4) ASME 7000 PSI code stamped air cylinders; Cylinders are rated with a 3:1 SF
- › Sound attenuating enclosure with slam-action latches and lift-off type hinges
- › NFPA 1901 2016 edition compliant 3 position containment fill station accommodates SCBA or SCUBA cylinders up to 31" overall length
- › Manually controlled dual-function 4 bank cascade controls with air direction valve are standard on the 4S models; Automatic cascade controlled logic is standard on the 4i models

AVAILABLE ACCESSORIES (FACTORY INSTALLED)

- › Lab-On-Locale (UNICUS 4i)
- › RFID SCBA data logging intergrated into fill station (UNICUS 4i)
- › RFID data tags (UNICUS 4i)
- › CO monitoring system
- › 100 ft high pressure cabinet enclosed hose reel
- › Panel mounted remote fill hose connection
- › Dual Fill-all SCBA positions
- › Tri Fill-all SCBA positions

SYSTEM FOOTPRINT

DIMENSIONS L x W x H inches (mm)

- › 101" x 38" x 78" (2565mm x 965mm x 1981mm)

WEIGHT pounds (kg)

- › 4350 - 4550 lb (1973 - 2064 kg)

TECHNICAL DATA

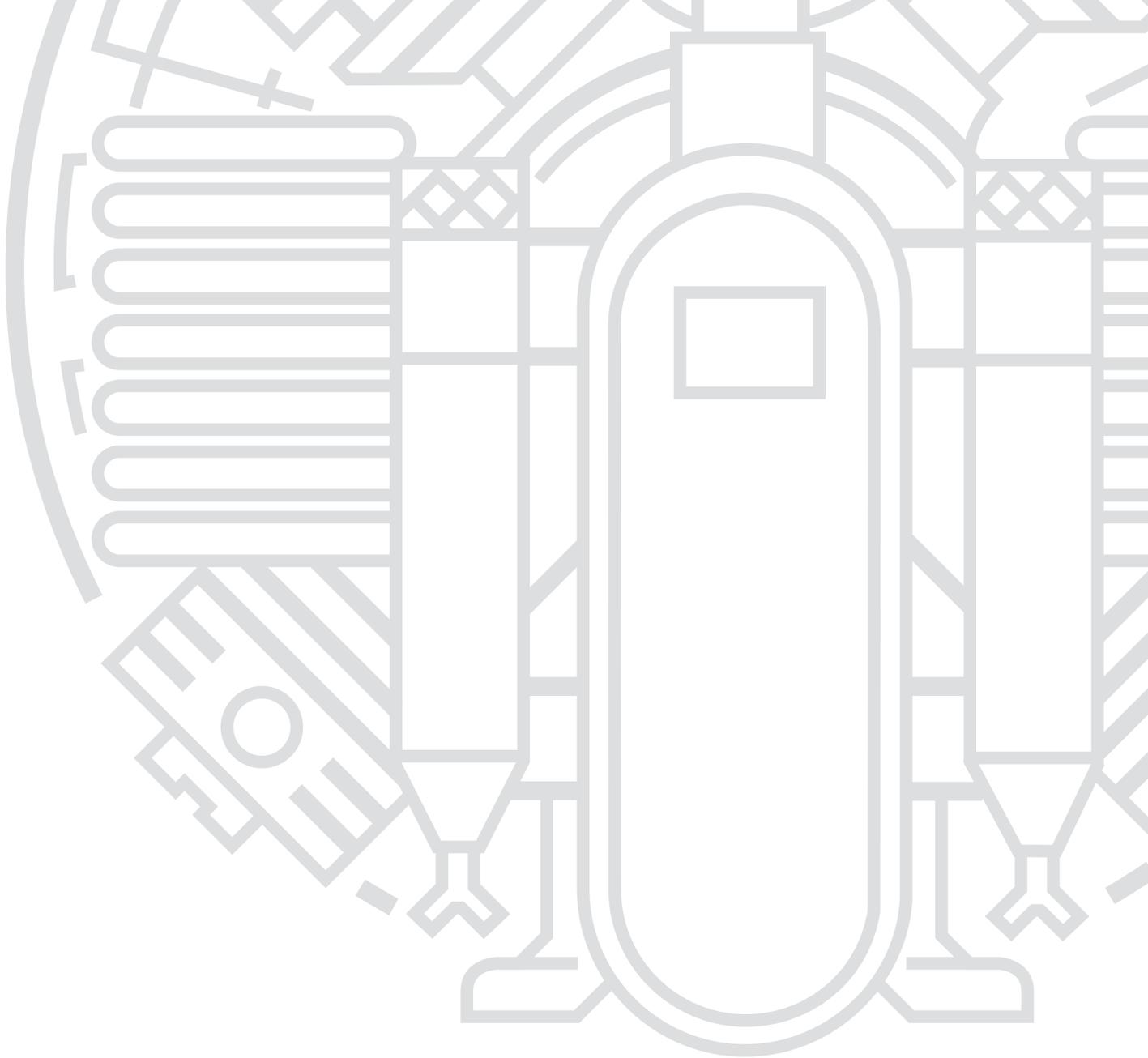
Model	Charging Rate ¹		Number of Stages	Motor		FAD ²	RPM	Purification System
	SCFM	L/MIN		HP	kW			
7000 PSIG (483 BAR)								
UN 4S-15/7K	13	368	4	15	11	10.8	960	P5 SECURUS
UN 4S-20/7K	20	566	5	20	15	17	1300	P5 SECURUS
UN 4i-15/7K	13	368	4	15	11	10.8	960	P5 SECURUS
UN 4i-20/7K	20	566	5	20	15	17	1300	P5 SECURUS

1) Based on recharging an 80 cubic foot tank from 500 to 3000 psig. 2) Compressor capacity referenced to standard inlet conditions. E3=Three phase electric, 208/230/460 VAC/60 Hz. Other voltages available on request. Dimensions and weight are approximate and are subject to change.

OPTIONAL ACCESSORIES - 7000 SERIES UNICUS 4S & UNICUS 4I

Item	Description	
0001	Electronic carbon monoxide monitor complete with calibration kit wired for alarm and shutdown. (calibration gas included)	GT/CO/III
0002	Panel mounted remote fill hose connection. Includes bulkhead fitting, adjustable regulator for up to 6000 PSIG service, gauge, isolation valve and quick connect/disconnect fitting (hose no included)	/RF/REG
0003	UN4 remote fill hose connection including adjustable regulator for up to 6000 PSIG service, gauge and isolation valve connected to a cabinet enclosed hose reel with 100 feet of hose rated for 6000 PSIG service	UN4/RF/REL-9
0004	DUAL-FILL, high/low, quick connect fill system (specify fill pressures)	DUAL-FILL/3 position
0005	TRI-FILL, high/low/SCUBA, quick connect fill system (specify fill pressures)	TRI-FILL/3 position
0006	Fire Edition paint scheme	
FOR UNICUS 4i ONLY		
0007	LAB-ON-LOCALE and including 12-each accredited t ests, and control module swap out in first year.	LOL4
0008	RFID SCBA Data Logging	RFID4i
0009	RFID DATA TAGS Each Kit inclues 25-each tags	KIT-0557

FIRE



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Subject to technical changes