



500 West Big Beaver
Troy, MI 48084
troymi.gov

CITY COUNCIL AGENDA ITEM

Date: July 7, 2020

To: Mark F. Miller, City Manager

From: Robert J. Bruner, Assistant City Manager
Robert Maleszyk, Chief Financial Officer
Lisa Burnham, Accounting Manager
David Roberts, Fire Chief
Peter Hullinger, Assistant Fire Chief
MaryBeth Murz, Purchasing Manager

Subject: Budget Amendment & Bid Waiver - Breathing Air Compressor – Fire Department

History

Each fire station has been equipped with a stationary breathing air compressor and fill station for over 25 years. These systems are needed and used to fill the breathing air cylinders from the self-contained breathing apparatus (SCBA) that the firefighters wear for respiratory protection when encountering immediately dangerous to life and health (IDLH) situations. Once the air is used from the SCBA, it must be filled from an approved and certified breathing air compressor in order to have other harmful chemicals removed such as carbon monoxide (CO) and nitrogen. This refilling procedure is typically performed at an incident scene by the department's truck-mounted mobile air compressor known as an air tender. Often times, however, these air cylinders are filled at the fire station after use at incidents such as car fires or training evolutions where the air tender is not present.

These stationary breathing air compressors in the stations have extensive filters and air monitoring equipment to make sure that the air meets all necessary quality air requirements. The air in these SCBA cylinders is different than "normal" breathing air because the air in the cylinder is "compressed" to 4,500 PSI in order to provide 20-30 minutes of breathing. The air, therefore, must be very dry otherwise it would freeze from its moisture content (as a result of being compressed) when it comes out of the cylinder under "regulated" pressure into the face mask.

The Fire Department has historically had a service contract with various vendors over these many years to maintain and repair all of our breathing air compressors. Air quality is tested and any needed repairs and adjustments are made on a quarterly basis. A couple of years ago, the breathing air compressor at Fire Station 5 had some issues. The entire air compressor needed to be sent back to the manufacturer for repairs. Although repairs were made, the manufacturer was unsure if the repairs would correct the problem. When it came back and was put back into service, it appeared to be operating normally. As time went on, however, an issue arose mainly with the air being contaminated with oil from the compressor motor. The vendor has since serviced the unit multiple times but it was eventually discovered that the cause was with the air compressor itself and could not be repaired any further to correct the issue.



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Purchasing

It is vital that each station have their own breathing air compressor and fill station. Stations often train on multiple days of the week and respond to fire calls at various times of the days. As previously mentioned, the air tender is not at every call where the SCBA may be used. It is important, therefore, that when a firefighter needs to fill a SCBA cylinder, it is an easy and convenient task. By having a breathing air compressor and fill station at each fire station, it ensures that the SCBA will be full of air and ready to go into service in a timely manner.

The breathing air compressor at Station 5 is completely out of service and is no longer useable. The firefighters must now take SCBA cylinders to another fire station, or the Training Center, in order to refill them. This is proving to be a major inconvenience after calls or training sessions, especially at night.

Once it became apparent that the entire breathing air system had to be replaced, extensive research was done and the Bauer fill station was the best option. *Bauer Compressor of Norfolk, VA*, is the industry leader in breathing air compressor systems, and they have an extensive track record for quality and expertise in the industry.

The Fire Department has received a quote of **\$29,990.60**, from *Breathing Air Systems of Reynoldsburg, OH*, the authorized sole-source distributor of the Bauer fill station and the Fire Department's current contracted service provider, to replace and install the new compressor and fill station at Fire Station #5. A copy of the quote and the specification information is attached.

Financial

Unfortunately, the replacement of this equipment was not planned when preparing the Fire Department's FY2020-21 Capital Budget. Since this problem has become apparent at Station 5, and due to the nature and age of the remaining air compressor and fill stations in the other fire stations, replacing all of the breathing air systems that are exceeding their useful life will be considered in future budgets.

The current non-working air compressor and fill station, however, needs to be replaced now. The new system would be compliant with the current fire service breathing air standards, and give us another 25 years or more of useful life.

The total cost to purchase and install one (1) new air compressor and fill station is **\$29,990.60**. This project will require a budget amendment to the Capital Projects Fund under the Fire Department for the 2021 Fiscal Year in the amount of \$30,000. Expenditures will be charged to 401.336.338.7978.010 – Fire Operations, General Equipment.

Recommendation

Management recommends that the bid process be waived and a budget amendment approved, to award a contract to *Breathing Air Systems*, to purchase and install one (1) new *Bauer* air compressor and fill station at Fire Station #5 for an estimated total cost of **\$29,990.60**.

BREATHING AIR SYSTEMS

8855 E BROAD ST
REYNOLDSBURG, OH 43068

BREATHING AIR SYSTEMS SALES & SERVICE CENTERS

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CORPORATE HQ

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352.629.7712

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614.986.1025

217.768.4408

PENNSYLVANIA / WEST VIRGINIA

412.564.5756

MICHIGAN

517.786.4060

TENNESSEE /

423.634.3184

WWW.BREATHINGAIR.COM

THE NATION'S **BAUER**
COMPRESSORS

DATE: March 26, 2020

PROPOSAL
SUBMITTED

TO: TROY FIRE DEPT
500 W. BIG BEAVER
TROY, MI 48084

REQUESTED BY: Eric Emmons

TITLE:

EMAIL:

PHONE: (248) 524-3417

MOBILE PHONE: (248) 515-9803

TERMS: Net 30

ITEMS

QUOTED:

JOB LOCATION:

ACCOUNT # 700134

FAX:

ESTIMATED DELIVERY TIME: 10 weeks

F.O.B.: As shown on quote

NOTE: Our quote does not include off loading, uncrating, placement or the wiring to or into an electrical compressor to the electrical supply. Warranty is as proposed.

Quote

Part Number	Description	Price	Discount %	Adjusted Price	Qty	Extended Price
LEGACY 13	VERTECON 13CFM 6KPSI 10HP Bauer Open Vertical Compressor/Purifier configured for 13.0 scfm, 6000 psig, 4-stage compressor, 10 hp, phase motor and 67,000 scf capacity purifier, integrated purification system that meets NFPA 1989 requirements for firefighting and CGA Grade E air for SCUBA, purifier includes steel mechanical separator chamber, as well as purifier safety vent port to prevent operating system w/o cartridge. Standard with Bauer long-life, well-cooled, oil-pressure lubricated compressor block with stainless steel intercoolers, high-temperature & low oil pressure shutdowns. Mounted pressure gauges for oil, final stage and purifier. Includes PLC with touch pad controller with full color display, lighted on/off switch, hour meter, emergency stop button, safety over-time timer, motor controls/protection and UL-rated electrics. AUTO CONDENSATE DRAIN SYSTEM -Timed	\$19,084.00	17%	\$15,839.72	1	\$15,839.72

BREATHING AIR COMPRESSORS | FILL STATIONS | CASCADES | MOBILE AIR TRAILERS
FULL SERVICE | PARTS | HASSLE FREE AIR TEST PROGRAM | PREVENTIVE MAINTENANCE PROGRAMS

	automatic drain, includes silencer and collection reservoir and user display indicator if "full". MTD INTERSTAGE PRESSURE GAUGES SECURUS PURIFIER MONITOR SYSTEM - Built-in, continuous monitor for purification cartridges. - Includes user display indicators for "safe", "high moisture", "cartridges expired" and "contact fault". - Automatic system shutdown for faults; fail-safe (cannot be over-ridden); no warm up required. - Can extend the purifier cartridge's useable life.					
SHIPPING	Shipping & Freight Charges from Bauer – Norfolk Va				1	\$740.00
XLBOH	Service labor per hour for startup & training	\$119.00		\$119.00	20	\$2,380.00
SLP-HP-1X	Single High Pressure Air Test for start up	\$128.00		\$128.00	1	\$128.00
CFS5.5-1SX4X4	Fill Station - Bauer - Class 2. Independently tested containment fill station meets NFPA 1901. Fills one SCBA cylinder and has four cascade controls with valves and gauges. Features cylinder scuff guard - fill control panel with adjustable regulator - SCBA fill connection - side mounted cascade control panel - Fill hose with bleed valve and safety door interlock.	\$10,561.00	17%	\$8,765.63	1	\$8,765.63
BAS218	Monitor, Carbon Monoxide, Includes air reduction panel with flow control and flow sensor 6000 PSI inlet 20 PPM test gas included.	\$2,575.00	17%	\$2,137.25	1	\$2,137.25

Our company, Breathing Air Systems, is an Ohio based company that has been in the breathing air business since 1969. Our only business is breathing air and related products. It's not a sideline with us. We don't sell trucks or fire extinguishers. We sell and service only the highest quality American made breathing air equipment available. Since 1984 Breathing Air Systems has been the distributor for Bauer Compressors in your area.

The Bauer compressor in this system will greatly exceed your expectations. Items included as standard equipment on Bauer Compressors include PLC computer controls, cycle counter for the final separator, stainless steel cooling coils, forged connecting rods, gear driven oil pump, minimum of 2000 hour valve life, minimum of 3000-hour ring life and a 30,000-hour bearing life. The entire electrical system is UL listed. Other brands only use UL Listed components. Our warranty is for two full years! covers parts and labor, on-site. Additional five-year warranty for Municipal fire departments on the Compressor block, parts only after second year. As you do your research, you will discover that Bauer Compressors is the most reliable and dependable manufacturer on the market today.

Of course, our system will include a service that we pioneered years ago, an On-Site Start Up. Our factory trained service technician will set up the system and train you in safe operation and maintenance.

We are 100% full service. We have a full-size repair shop and are the largest stocking parts distributor in the U.S. today. We offer emergency service, routine service, preventative maintenance, air analysis, training seminars, an "800" number for parts and service, and more.

Quote subtotal	
Shipping & Handling	
Quote Total	\$29,990.60

PAYMENT TO BE MADE AS FOLLOWS: (UNLESS OTHERWISE NOTED, TERMS ARE NET PAYMENT DUE WITHIN 30 DAYS AFTER DELIVERY)
 Note: Payment by Credit Card will incur a convenience fee totaling 3.0% of the transaction amount on all transactions exceeding \$1,500.00.

Proposal Submitted By: Pat Linn Prices Good For 60 Days

BAUER CLASS 2 FILL STATIONS

For SCBA and SCUBA Cylinders up to 5500psi



Model CFS5.5-2S
52" H x 30" W x 22" D

INCLUDES:

- * Safety Interlock
 - * **NEPA-1901 Compliant**
 - * Front Loading Tilt-Out Door
 - * Adjustable Regulator
 - * Fill Hoses with Bleeders
 - * Textured Finish, (Powder Coat)
 - * Cylinder Scuff Guard
 - * Fill Control Panel with and
 - * without Cascade Controls
 - * ISO 9001 Quality Assurance
- Fits SCBAs and SCUBA Cylinders



58" H x
30" W x 22" D

Model CFS5.5-2Sx4x4
Includes 4 cascade control valves ,
gauge, and regulated remote fill

Some units include an auxiliary
port to refill mobile systems

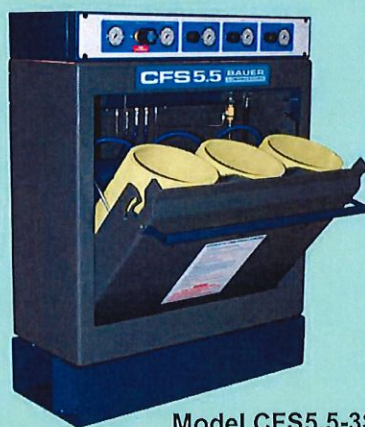


Mobile Station
Model CFS5.5-1M

Requires a Fill
Control Panel

Available with
mounting stand

As shown:
38" H x 18" W x 22" D
(46" H with optional stand)



Model CFS5.5-3S
52" H x 30" W x 22" D



Model CFS5.5-1Sx4x4
52" H x 18-1/2" W x 22" D

FOR SAFE, RELIABLE FILLING UP TO 5500psi
ALL TYPES OF SCBAs AND MOST SCUBA CYLINDERS,
Call Breathing Air Systems at 800-937-2479 for details and specifications

10/14



BREATHING AIR SYSTEMS

8855 E. Broad St., Reynoldsburg, OH 43068 - Phone: (614) 864-1235

SALES: (800) 937-2479

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Michigan Center, MI
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Compressor system - 13 cfm. B (S3-6K13E1-VEC)

Compressor system - 13 cfm. Bauer Vertecon Air System 6000 psi., 13 cfm. Charging rate with pressure switch for automatic start & stop control. Locally mounted interstage pressure gauges. P2S 67,000 cu ft purification system with SECURUS electronic cartridge monitor. Pressure lubricated with low oil protection. Automatic condensate drain system and PLC controller with E-Stop Button. Entire electrical assembly is UL LISTED. Single phase electric. 230VAC

Includes:

- BAUER breathing air purification system
- Open vertical cabinet provide a firm foundation for all pressure bearing components
- Modern design with unsurpassed maintenance accessibility
- BAUER PLC based controller with 7" color HMI touchscreen display
- Belt adjustment tool
- NEMA 4 rated electrical enclosure with UL® listed control panel
- Wiring harnesses incorporated within a corrugated loom with number coding for easy system diagnosis
- Emergency stop push button
- .049 wall thickness stainless steel tubing throughout, no cheap plastic tubing
- Rugged powder coat finish
- Zero loss automatic condensate drain system
- Interstage pressure gauges (locally mounted)
- Compressor on/off, final pressure, oil pressure and high temperature shutdown
- Motor overload indication
- Final separator counter with shutdown and operator indication
- Unique integrated positioning base which ensures correct installation every time

[Download: Product Datasheet](#)

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