

# **City of Fenton Fire Department Request for Sealed Bids SCBA Replacement**

## **Sealed Bid**

All bids must be delivered to the City of Fenton at its fire station at 205 E Caroline St, Fenton MI 48430. Bids shall be submitted in a sealed envelope clearly marked "FD Sealed Bid for SCBA". Sealed bids are due by 3:00pm October 24, 2018. Any bids received after this time will not be considered. All bids received will be opened on October 25, 2018 at 10:00am at the Fenton City Fire Station.

## **Return the sealed bid to:**

City of Fenton Fire Department  
205 East Caroline Street  
Fenton MI 48430  
Marked "*FD Sealed Bid for SCBA*"

Any questions relating to this bid shall be directed to Deputy Chief Ed Hadfield, [FentonC3@aol.com](mailto:FentonC3@aol.com), (810) 629-8595.

The bid shall be in three parts. Primary section one, primary section two, and secondary bid. The secondary consisting of additional optional equipment.

The City of Fenton Fire Department realizes that most SCBA companies design and manufacture their equipment in many different ways. It is the intent of these specifications to establish a baseline for bid proposals. We encourage manufactures with design and manufacturing differences to bid on this equipment. Simply list your exceptions and provide enough detail for us to be able to understand it.

As required by Public Act 517 of 2012, the successful bidder shall not be an "Iran linked business" as that term is defined herein. An "Iran linked business" is defined in the Act but generally means a person engaging in investment activities in the energy sector of Iran, or a financial institution that extends credit to another person, if that person will use the credit to engage in investment activities in the energy sector of Iran.

The City of Fenton does not, in any way, obligate itself to accept the lowest bid and we reserve the right to reject any and all bids and to accept the bid it feels is in the best interest of the Department and the City.

## **Sealed Bid Breakdown**

All bids shall include shipping and handling to the aforementioned address.  
All bids shall include training of all City of Fenton Fire Department employees in the proper care and usage of the new units.

### **Primary Bid – Section One**

Twenty three (23) complete SCBA units. A SCBA Unit shall consist of but not limited to:

One (1) – Back frame, harness, and hose assembly as outlined in the attached SCBA Bid Requirement forms.

One (1) – SCBA Face Piece (mask) as outlined in the attached SCBA Bid Requirement forms.

One (1) – SCBA Face Piece (mask) Carry Bag.

Two (2) – Carbon Fiber Air Bottle – 4500 PSIG, 45 minute duration as outlined in the attached SCBA Bid Requirement forms.

Cost for all 23 Complete SCBA: \_\_\_\_\_

### **Primary Bid – Section Two**

Eleven (11) – SCBA Face Piece (mask) as outlined in the attached SCBA Bid Requirement forms.

Eleven (11) – SCBA Face Piece (mask) Carry Bag.

Cost for the (11) Face Pieces and (11) Bags: \_\_\_\_\_

### **Secondary Bid- Optional Equipment**

SCBA additional Face Piece (mask) as outlined in the attached SCBA Bid Requirement forms.

Cost for each: \_\_\_\_\_

SCBA additional Face Piece (mask) Carry Bag.

Cost for each: \_\_\_\_\_

SCBA additional Carbon Fiber Air Bottle – 4500 PSIG, 45 minute duration.

Cost for each: \_\_\_\_\_

Spectacle Kits (Cost each)

Cost for each: \_\_\_\_\_

Personalized markings on each SCBA tank.

Cost for each: \_\_\_\_\_

Updates to our RIT bag equipment to be compatible the new SCBAs. These required updates can be reviewed upon a scheduled meeting.

Cost for update: \_\_\_\_\_

Updates to our Aerial Ladder truck to be compatible with the new units. These required updates can be reviewed upon a scheduled meeting.

Cost for update: \_\_\_\_\_

Three (3) fit testing masks (S, M, L sizes) and associated adaptors to work with an OHD 3000 fit tester.

Total Cost: \_\_\_\_\_

Trade in options. Provide trade in option for one (1) complete set of SCBA consisting of harness, mask, and 2 tanks.

Trade in amount per SCBA (we have approx. 23 sets): \_\_\_\_\_

# City of Fenton Fire Department SCBA Bid Requirements

All **Do Not Comply** items must be explained in full on a separate page(s) noting the section number – any exceptions taken and not explained will result in bidder being disqualified.

SCBA Brand being offered: \_\_\_\_\_

SCBA Model being offered: \_\_\_\_\_

## **1.0 INTRODUCTION**

- 1.1 The Self-Contained Breathing Apparatus (SCBA) is designed for fire service use to meet the requirements outlined in applicable NFPA and NIOSH standards.
- 1.2 The SCBA shall be designed to meet and exceed the NFPA 1981, 1982, 2013 Edition Standard and is approved for use in a CBRN environment. TC-13F-0739CBRN, SC/PD/CBRN, 45 MIN, 4500 PSIG, EOSTI-33.

COMPLY \_\_\_\_\_ DO NOT COMPLY \_\_\_\_\_

## **2.0 GENERAL REQUIREMENTS**

- 2.1 The apparatus covered by this specification shall be of the open circuit compressed air pressure demand (positive pressure) type.
- 2.2 It shall be certified by the National Institute for Occupational Safety and Health (NIOSH) and the Mine Safety and Health Administration (MSHA) for use as either a 30 minute, 45 minute, or 60 minute rated duration breathing apparatus. Additionally, the apparatus must be in compliance with all of the performance requirements of the National Fire Protection Association's 2013 Edition of their NFPA 1981 and 1982 standard.
- 2.3 It shall pass portions of MIL STD 810M.
- 2.4 It shall pass Intrinsic Safety testing UL913 6th edition.
- 2.5 The backframe shall withstand 700 lb lift capacity.

COMPLY \_\_\_\_\_ DO NOT COMPLY \_\_\_\_\_

## **3.0 GENERAL COMPONENTS**

The apparatus shall consist of the following major components:

- 3.1 The backframe assembly with universal cylinder band to accommodate a variety of cylinders from 2216 psi to 4500 psi; 30, 45, 60 minute duration.
- 3.2 A double curve facemask, available in 3 different sizes with permanent anti-fog and hard coated visor. Facemask has inner mask that will accommodate “end of service alarm” light display, waterproof microphone for VAS communications, and a spectacle kit mount. Head harness available in a Kevlar net head harness.
- 3.3 Quick release waistbelt and shoulder harness assembly for easy cleaning.

- 3.4 Enclosed “end of service alarms” (bell and in-mask HUD display).
- 3.5 Integrated 2nd stage regulator.
- 3.6 Facemask along with the head-up (HUD) display which is completely submersible for easy cleaning and disinfecting.
- 3.7 Fully sealed first stage pressure reducer.
- 3.8 Control Console with integrated VAS speaker, PASS reset.
- 3.9 Electronics package to include a Personal Alert Safety System (PASS), Control Console with integrated Voice Amplification (VAS), PASS controls and analog gauge.
- 3.10 Battery Pack with quick release system. Rechargeable battery options are not acceptable.

COMPLY \_\_\_\_\_ DO NOT COMPLY \_\_\_\_\_

**4.0 PNEUMATIC ASSEMBLY**

- 4.1 The 1st stage pressure reducer shall require no adjustment.
- 4.2 The 1st stage pressure reducer shall incorporate a self-seating pressure relief valve to prevent high-pressure air from entering the low-pressure side of the assembly and shall require no adjustment.
- 4.3 The 1st stage pressure reducer shall be capable of working at full input cylinder pressure of either 2216 psi or 4500 psi with no modification or adjustment.
- 4.4 The pneumatic assembly shall be capable of offering an optional dual tether, buddy-breathing system that will allow 2 or more people to use the same cylinder air in an emergency without unplugging pneumatics in an IDLH Atmosphere.
- 4.5 All solid state components are waterproof and intrinsically safe.
- 4.6 The Rescue Intervention Crew (RIC) fitting shall include a self-checking valve to prevent over pressurizing of a cylinder without venting air to atmosphere.
- 4.7 The hand wheel connection to the cylinder valve assembly shall be of a large design so that it is easily accessible to the user using gloved or non-gloved hands.

COMPLY \_\_\_\_\_ DO NOT COMPLY \_\_\_\_\_

**5.0 SECOND STAGE DEMAND VALVE**

- 5.1 The second stage regulator will incorporate the inhalation and exhalation into one component.
- 5.2 The second stage regulator shall be manufactured from rugged non-metallic material that will not corrode or deteriorate from chemical attack. It must be capable of delivering peak flows in excess of 500 lpm to a minimum of 30 breaths past the sounding of the audible alarm. The demand valve shall have been tested and remained functional after being subjected to direct flame for not less than 10 seconds at a peak temperature range of 1500 - 2000 degrees Fahrenheit. The average mean of all peak temperatures shall be no higher than 1742 degrees Fahrenheit. When the flame is extinguished, no part of the assembly shall show an after-flame duration of greater than 2.2 seconds.

- 5.3 The second stage regulator shall incorporate a true emergency bypass, which when manually activated will flow between 85/120 liters per minute. The bypass on/off hand wheel shall be at least 1½” in diameter, center mounted on the second stage demand valve, and allow for activation by a gloved hand. It shall take no more than a half turn of the bypass on/off hand wheel to activate the bypass fully.
- 5.4 The second stage demand valve shall incorporate a secondary sintered filter.

COMPLY \_\_\_\_\_ DO NOT COMPLY \_\_\_\_\_

**6.0 FACEMASK**

- 6.1 The facemask shall be a full facemask type that covers the wearer’s nose, mouth and eyes.
- 6.2 The facemask mask shall have a single intensifier edge seal.
- 6.3 The facemask visor shall be one piece and constructed of an impact resistant polycarbonate material in a double curve design; it shall be optically correct and have permanent anti-fog and hard coating on the visor. The visor shall be tested to and pass the NFPA Radiant Heat Test.
- 6.4 The facemask shall have a removable inner mask constructed of the same material as the outer shell of the mask and the inner mask shall be fitted with inlet valves and allow for a spectacle kit.
- 6.5 The facemask shall be available in 3 sizes.
- 6.6 The facemask shall contain a speech diaphragm and shall be mounted directly in line with the wearer’s mouth.
- 6.7 The facemask will have a Kevlar net head harness.
- 6.8 The facemask shall be made of a butyl blend.
- 6.9 The inner nose cup shall accommodate the “end of service alarm” light display that shows cylinder pressure in quarter increments, until it reaches 33% of full, by displaying LED lights.
- 6.10 VAS system shall have an internal waterproof microphone to provide clear communications.
- 6.11 The in-mask display shall have LED lights. LED lights indicating quarter rating of cylinder pressure, until the 33% of full level. One LED light indicating low battery status. PASS pre-alarm is indicated by alternately flashing LED lights.
- 6.12 The facemask shall have no loss of operational function after being subjected to direct flame for not less than 10 seconds at a peak temperature range of 1500 - 2000 degrees Fahrenheit. The average mean of all peak temperatures shall be no higher than 1742 degrees Fahrenheit. When the flame is extinguished, no part of the assembly shall show an after-flame duration of greater than 2.2 seconds.

COMPLY \_\_\_\_\_ DO NOT COMPLY \_\_\_\_\_

## **7.0 BACKFRAME AND HARNESS**

- 7.1 The backframe shall be made of fire retardant Thermoset Composite.
- 7.2 The backframe cover will be made of a stamped aircraft aluminum material, and the harness assembly and side arms will be attached to the cover.
- 7.3 The backframe shall have swinging sidearm to distribute weight for wearer comfort.
- 7.4 The right and left shoulder straps shall be constructed of 2 inch woven Kevlar and be padded in areas of contact with PBI/Kevlar. They will be contoured to the user's body.
- 7.5 Shoulder strap adjustable slides shall be constructed of stainless steel. Two-inch pull straps shall be fitted to harness to allow easy adjustment even with gloved hands.
- 7.6 The harness shall have sleeves with reflective material for the routing of the pneumatic hoses and electronic cables.
- 7.7 The harness waist belt shall be of 2" woven Kevlar and be fitted with a "Double Pull Forward" design and incorporate a buckle latch.
- 7.8 The harness assembly shall experience no loss of operational function after being subjected to direct flame for not less than 10 seconds at a peak temperature range of 1500 - 2000 degrees Fahrenheit. The average mean of all peak temperatures shall be no higher than 1742 degrees Fahrenheit. When the flame is extinguished, no part of the assembly shall show an after-flame duration of greater than 2.2 seconds.
- 7.9 The universal cylinder band assembly shall be adjustable in the field to accommodate all sizes of cylinders without the use of tools.
- 7.10 A universal cylinder band shall be designed so that during cylinder change it can remain in either the closed loop or fully open positions.
- 7.11 Cylinder changes shall be made without removing cylinder band.
- 7.12 All SCBA manufacturers' cylinders shall mount easily onto the backframe.
- 7.13 A standard lumbar support shall be made of PBI/KEVLAR.
- 7.14 Flashing locator lights to aid in rescue shall be emitting from the backframe and flash rapidly when the PASS is in full alarm.
- 7.15 Shoulder harnesses shall include large loop style buckles for use with gloved or non-gloved hands.

COMPLY \_\_\_\_\_ DO NOT COMPLY \_\_\_\_\_

## **8.0 ALARM AND PRESSURE INDICATOR ASSEMBLY**

- 8.1 The primary "end-of-service" alarm shall be an independent bell. The secondary "end-of-service" alarm shall be a heads-up display with a flashing LED light for low air alert.
- 8.2 The bell alarm shall be located at the top of the backframe, close to the user's ear. The bell shall alarm at 33% of the remaining cylinder life.
- 8.3 The in-mask display shall have four lights that indicate cylinder pressure. When the cylinder is full, all four lights will be on. An additional fifth LED light on the display indicate a low battery.

- 8.4 In-mask pressure display will display one light per quarter increments of cylinder pressure until it reaches the 33% level. As the pressure decreases, the display lights will go out until the red light is “on” and flashing rapidly as the 33% of full indication.
- 8.5 One battery source that powers the HUD, PASS, Control Console and VAS. They shall be communicating via a wired network.
- 8.6 A low battery indicator shall illuminate when battery has at least a minimum of three hours remaining.
- 8.7 A redundant analog gauge shall be incorporated into the console assembly as a backup air pressure indicator.

COMPLY \_\_\_\_\_ DO NOT COMPLY \_\_\_\_\_

**9.0 CONTROL CONSOLE**

- 9.1 PASS operation shall be displayed within the control console. Light shall change from white to a red LED light when PASS is in alarm.
- 9.2 All communications shall be within the control console and can be operated hands free. This includes VAS.
- 9.3 The VAS threshold settings shall have multiple settings and house the information in the HUD.
- 9.4 The solid state components can be switched between 2216 and 4500 without any component changes.
- 9.5 The control console shall have a sensor to identify motion.
- 9.6 The PASS alarm shall be a wired system from the control console.

COMPLY \_\_\_\_\_ DO NOT COMPLY \_\_\_\_\_

**10.0 PASS**

- 10.1 The PASS shall activate after 30 seconds of no motion.
- 10.2 The PASS shall have a motion sensor to detect motion.
- 10.3 The PASS shall be enclosed inside the backframe.
- 10.4 The PASS shall only use one piezo alarm to meet the new NFPA standard, reducing battery consumption.
- 10.5 The PASS shall have Data Logging capability to log 2000 events.

COMPLY \_\_\_\_\_ DO NOT COMPLY \_\_\_\_\_

**11.0 BATTERY**

- 11.1 The SCBA shall only have one battery source to power all standard electronic features to include HUD, PASS and VAS.
- 11.2 The SCBA shall be powered by only disposable batteries. No rechargeable battery options are allowed.

COMPLY \_\_\_\_\_ DO NOT COMPLY \_\_\_\_\_

**12.0 RIC UNIVERSAL FITTING**

- 12.1 The RIC shall have a check valve that stops airflow when the cylinder is full.
- 12.2 The RIC shall not vent air to atmosphere.
- 12.3 The RIC connections shall allow a 2216 or 4500 psi cylinder to be used to transfer cylinder air.

COMPLY \_\_\_\_\_ DO NOT COMPLY \_\_\_\_\_

**13.0 CYLINDER AND CYLINDER VALVE**

- 13.1 All cylinders supplied with the SCBA are to be approved by the United States Department of Transportation (DOT).
- 13.2 Cylinder valve assemblies shall contain a safety relief device. The cylinder valve shall contain a protected gauge visible from both sides. Cylinder valve hand wheel shall be of the non-ratchet or locking type.
- 13.3 All high-pressure cylinder valve hand wheels will be red to identify a high pressure cylinder.
- 13.4 Cylinders shall be 4500psi / 45 minute carbon designs.
- 13.5 Cylinders shall have hydrostatic testing every five years.
- 13.6 Cylinders shall have life span of 15 years.

COMPLY \_\_\_\_\_ DO NOT COMPLY \_\_\_\_\_

**14.0 BUDDY BREATHING SYSTEM**

- 14.1 Tether Buddy Breather shall be provided on each SCBA. It is an externally stored in a Kevlar pouch design mounted on the left side of the waist belt with a three foot tether.
- 14.2 This Buddy Breather shall also be able to be used as a stand-alone airline connection for making connection to breathing air supply system. This connection is NFPA/NOISH approved as an airline connection system.

COMPLY \_\_\_\_\_ DO NOT COMPLY \_\_\_\_\_



**15.0 WARRANTY**

15.1 The SCBA and all of its components including the following – mask, 2<sup>nd</sup> stage regulator, 1<sup>st</sup> stage regulator, back frame, all harnesses, and all electronic components shall have a 15 year warranty.

COMPLY \_\_\_\_\_ DO NOT COMPLY \_\_\_\_\_

**16.0 SERVICE**

16.1 The vendor shall be a certified / authorized Service Center for the SCBA you are bidding. Your Service Center shall be able to make field calls and repair the SCBA at the fire department’s station.

16.2 The Service Center shall be able to Flow Test the SCBA, including spare face pieces at the fire department.

16.3 The Service Center shall be able to conduct Technical Repair and Maintenance Classes at your place of business to Certified Fire Personal to do annual flow testing, repairs, and upgrades.

COMPLY \_\_\_\_\_ DO NOT COMPLY \_\_\_\_\_

**17.0 IN-HOUSE FLOW TESTING SOFTWARE**

17.1 The vendor shall provide to Fenton City Fire Department the correct and up-to-date Posi-Chek software to be downloaded onto existing Posi-Chek unit that currently exists at Fenton City Fire Department.

17.2 Training shall be provided for new software when installed.

COMPLY \_\_\_\_\_ DO NOT COMPLY \_\_\_\_\_

**18.0 NFPA 1981 UPGRADE 2018 / 2019**

18.1 The awarded SCBA shall be able to be upgrade to the next NFPA1981 standard when it becomes approved and available.

18.2 The bid pricing shall include all of the cost associated with making that NFPA1981 upgrade regardless the time when it becomes available.

18.3 The NFPA1981 upgrade shall be done at the City of Fenton Fire Department when it becomes approved and is available.

18.4 ***The NFPA1981 upgrade shall be furnished and installed by the awarded vendor as part of this bid.***

COMPLY \_\_\_\_\_ DO NOT COMPLY \_\_\_\_\_

**19.0 DELIVERY**

19.1 Delivery time frame of the SCBAs to Fenton City Fire Department shall be indicated.

19.2 All shipping and delivery costs shall be included in the bid.

COMPLY \_\_\_\_\_ DO NOT COMPLY \_\_\_\_\_

**20.0 NO CONFLICT OF INTEREST:**

20.1 Section 5.13 of the Fenton City Charter provides that “no contract or purchase involving an amount in excess of one hundred dollars shall be made by the City in which any elective or appointive officer or any member of his [or her] family has any pecuniary interest, direct or indirect” unless the City Council determines, by unanimous vote, that it is in “the best interests of the City” to enter into such contract. Section 5.13 further provides that “an officer shall be deemed to have a pecuniary interest in a contract if he [or she] or any member of his [or her] family is an employee, partner, officer, director or sales representative of the person, firm or corporation with which such contract is made, or of a sales representative of such person, firm or corporation.”

In accordance with Section 5.13, the bidder shall disclose and describe any business, financial, pecuniary or familial relationship existing between the Bidder (or any officer, agent, or employee of the Bidder) and any officer, employee, or agent of the City. For purposes of this provision, “familial relationship” and “relative” are defined as: father, mother, husband, wife, son, daughter, sister, brother, father-in-law, mother-in-law, son-in-law, daughter-in-law, sister-in-law, or brother-in-law.

In the space provided below, list and describe all existing conflicts of interest or check the box, indicating that there are no known conflicts of interest.

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To the best of my knowledge, no conflict of interest exists.