

SCBA Bid Information

The West Columbia Fire Department is currently accepting bids for **fifteen (15) MSA G1** self-contained breathing apparatus (SCBA). So that the West Columbia Fire Department can continue to work with neighboring districts, the SCBA must be manufactured by MSA and meet the following specification;

SCBA apparatus should be approved by the National Institute for Occupational Safety and Health (NIOSH), under 42 CFR, Part 84 for chemical, biological, radiological, and nuclear protection (CBRN) with 45 minute-rated service life and be compliant with all the requirements of the most current NFPA 1981 standard, the Standard on Open-Circuit Self Contained Breathing Apparatus and the most current NFPA 1982 standard, Standard on Personal Alert Safety Systems. Because the specification is listed below, the SCBA apparatus must also meet the minimum requirements of FCC part 15 and part 90 on accountability systems.

Facepieces

The bid should include **twenty-five (25) facepieces**. The facepiece shall have removable inhalation check valve to prevent exhaled air from entering and contaminating regulator. The facepieces shall not contain electronic components and shall have open port to provide miniscule breathing resistance when regulator is not attached. The facepiece shall have a means to display to the user with visual indicators through a heads-up display (HUD), the status of the apparatus air supply. The facepieces shall be made of Hycar Rubber and come in small, medium, and large sizes with nose cones made of silicone rubber and also come in small, medium, and large sizes. The successful bidder will properly size all members of the West Columbia Fire Department prior to facepiece order. The masks shall have flame/heat resistant Kevlar head harness with 4-point adjustments with flame/heat resistant neck strap. The facepiece lens shall be non-shatter material hard-coated on outside and anti-fog on the inside. Facepiece shall have removable speaking diaphragm with aluminum-coated membrane, suitably protected and located centrally on facepiece for optimal voice projection. Facepiece shall be capable of water submersion for cleaning and disinfection.

Heads-Up Display (HUD)

Heads-Up Display (UD) System shall be integrated within regulator, eliminating snag hazards and be powered from central power system. HUD System shall be immune to radio frequency interference (RFI) and must function properly near fire service hand-held radios. The HUD System shall separate pressure indicators from status indicators. The status indicators on left shall display battery life warning, PASS alarms, EVACUATE indicator, and secondary alarm indicator. The air pressure indicators on right shall provide user with remaining cylinder air volume.

Mask-Mounted Regulator

Regulator shall house electronic module that functions as microphone and HUD system and be equipped with variable flow bypass. Regulator shall have hard cover and shall not have exposed wiring to prevent snags. Regulator shall have continuous hose from pressure reducer to regulator. Regulator must be

equipped with positive protection Tetraplex Shield membrane that covers diaphragm, preventing permeation of CBRN agents.

Universal Air Connection (UAC)

System shall be capable of refill within IDLH atmospheres, transfilling between two SCBA wearers, providing emergency breathing system (EBS) while maintaining NIOSH approvals, and quickly refilling (approximately one-minute duration) SCBA cylinder from mobile compressor, cascade system or RIT pack.

Pressure Reducer with Primary Low-Pressure Warning Device

Pressure reducer shall incorporate bell alarm mechanism. Bell alarm mechanism shall be an air-actuated, continuously ringing audible warning alarm, automatically operating when supply cylinder air pressure reaches approximately 35% of rated service life and shall cover multiple levels of frequencies to cover all hearing levels. Pressure reducer shall quick-connect. Quick-connect connection shall not be removable from cylinder while under pressure. Pressure reducer shall be sealed system that does not allow moisture to enter valve components.

Cylinders

Bid shall include **thirty (30), 45-minute rated cylinders with operating pressure of 4500 psig**. Cylinders shall be constructed of deep-drawn, seamless aluminum liner that is fully wound over entire surface (except for thick neck area) with high-strength carbon fiber filaments impregnated with epoxy resin. Cylinder shall contain cylinder valve that shall incorporate pressure gauge to indicate cylinder pressure at all times. Pressure gauge face shall be luminescent. Hand wheel shall be placed at 90° angle from cylinder axis.

Carrier and Harness

Shoulder harness shall be standard design with Kevlar webbing and retro-reflective markings for better visibility within low light conditions. Shoulder harness shall have localized frictions pads on shoulders to prevent slippage. Carrier should also include chest strap. Waist pad shall be adjustable swiveling which shall be one-handed operation and can be performed while on the user's back. Backplate shall have two side handles and one top handle that are accessible with gloved hand. Backplate side handles shall be capable of 500 lbs. of force. Backplate top handle shall be capable of 1000 lbs. of force. Backplate cylinder band shall be metal. Waist straps shall be double-pull forward design. Harness design shall have regulator keeper for storage that can be attached to waist strap or chest strap. Regulator keeper shall allow regulator to be connected at any angle.

Power Source

All components of the SCBA must be powered from single rechargeable power source. Rechargeable battery must recharge from full discharge in less than 7 hours. Rechargeable battery will have full charge capabilities for no less than 300 cycles. Bid will include **one (1) rechargeable battery charger** which must be a smart charger which will rapid charge, analyze condition, and switch to trickle charge mode when charge is complete.

Other Specifics of Bid

All **fifteen (15) SCBA apparatus should be equipped with telemetry.**

Bid shall include **three (3)** of the SCBA units equipped with **MSA iTic** units.

Bid shall include four **(4) MSA G1 ExtendAire II** conversion kit for the SCBA on the West Columbia Fire aerial device.

Bid shall include **two (2) MSA RescueAire II G1 conversion kits** to convert the current RIT packs over.

***There shall be no exceptions to these specifications.

Sealed bids are due no later than 4pm on August 15, 2018.

Bids will be opened at 4pm on August 15, 2018 in the New Brookland Room, City Hall, City of West Columbia. City Hall is located at 200 N. 12th Street, West Columbia, SC 29169.

Bids should be mailed or hand delivered to:

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