

# 3M™ Scott™ Vision C5 Full Facepiece with E-Z Flo C5 Regulator

## **Full Facepiece Requirements**

• The full facepiece shall consist of the following components: (1) facepiece lens; (2) face seal; (3) head harness; (4) nose cup; and (5) multi-directional voicemitters.

## Regulatory Approvals

- The facepiece, when used as a component of a respirator, shall be compliant to NFPA 1981: Standard on Open-Circuit Self-Contained Breathing Apparatus (SCBA) for Emergency Services, 2018 Edition.
- The facepiece shall meet ANSI Z87.1-2015 standard for "impact" rating.

## **Facepiece Assembly**

- The facepiece shall have a large diameter inlet that enables both unrestricted breathing and voice communications, while also allowing for rehydration (oral) without having to remove the facepiece.
- The facepiece shall enable connection of the mask-mounted regulator by way of a quarter (1/4) turn rotation in a single direction.
- The facepiece shall interface with the mask-mounted regulator, without the use of tools, with an audible click to assure the user that
  the regulator is properly seated.
- The facepiece assembly shall be available in three sizes, marked "S" for small, "M" for medium and "L" for large.
- The facepiece sizes shall be color-coded for ease of identification.
- The facepiece nose cup assembly shall be available in three sizes, marked "S" for small, "M" for medium and "L," for large.
- The facepiece assembly, including head harness, shall not contain natural rubber latex.
- The facepiece shall include a face seal that is secured to the lens by a U-shaped bezel using no more than two fasteners.
- The face seal shall be a single-reflex design for enhanced comfort and easier donning.
- The facepiece shall contain inhalation valves that are contrasting in color and readily visible to enable quick visual inspection.
- Multi-directional voicemitters shall be recessed on both sides of the facepiece and ducted directly to an integral silicone nose
  cup to enhance voice transmission around the user.
- The facepiece shall meet the requirements of the NFPA 1981, 2018 Edition standard for nonelectronic communications.
- The face seal shall provide a landing area with ridges to help improve the interface with protective hoods.
- The facepiece shall incorporate attachment points for an optional accessory neck strap.
- The facepiece assembly shall be modular in design to enable ease of upgrading and serviceability.
- The facepiece shall incorporate a RFID tag for asset and maintenance tracking.
- The facepiece shall be capable of submersion for cleaning and disinfecting.

#### Facepiece Lens

- The lens is a component of the facepiece assembly and shall be a single, replaceable, modified-cone configuration, constructed of a high-temperature and radiant-heat-resistant, non-shatter type polycarbonate material.
- The lens shall be coated to resist abrasion and meet the requirements of NFPA 1981, 2018 Edition standard for lens abrasion.
- The lens shall have an internal anti-fog coating to reduce fogging of the lens.
- The lens shall meet the requirements of the NFPA 1981, 2018 Edition standard for radiant heat and elevated temperature heat and flame resistance tests.
- In accordance with NIOSH 42 CFR part 84, the facepiece shall meet the penetration and impact requirements, including compliance with ANSI Z87.1 2015.

### **Head Harness**

- The head harness is a component of the facepiece assembly and shall have five points of suspension connection, four of which
  shall be adjustable, made in the fashion of a net hood to minimize interference between securing of the facepiece and the wearing
  of head protection.
- The head harness shall be constructed of a para-aramid material for fire, first responder and CBRN applications.
- The head harness shall include an integrated handle to assist with donning of the facepiece.
- Two elastomeric straps, attached to the face seal in four locations, shall provide adjustment for proper seal to the face.
- The head harness shall be available in three sizes to accommodate persons of varying facial shapes and sizes.
- The head harness shall be designed for easy removal from the facepiece to assist with cleaning and serviceability.

## Regulator

- The mask-mounted regulator shall supply and maintain air to the facepiece to satisfy the needs of the user at a pressure greater than atmospheric by no more than 1.5 inches of water pressure static.
- The mask-mounted regulator shall maintain positive pressure during flows of up to 500 standard liters per minute.
- The mask-mounted regulator shall also meet or exceed a dynamic flow requirement of remaining positive while supplying a minute volume of 160 liters.
- The mask-mounted regulator shall be available in a continuous hose configuration, with an optional inline quick disconnect coupling.
- The optional quick disconnect coupling shall be easily connected and disconnected by trained individuals with a gloved hand and in limited visibility conditions.
- The optional quick disconnect coupling shall be guarded against inadvertent disconnect during use of the equipment.
- The low-pressure hose shall be equipped with a swivel attachment at the mask-mounted regulator.
- The mask-mounted regulator shall connect to the facepiece by way of a quarter (1/4) turn rotation in a single direction.
- An audible click shall provide notification that the mask-mounted regulator is securely attached to the facepiece.
- The mask-mounted regulator shall be equipped with a gasket to provide a seal against the mating surface of the facepiece.
- The mask-mounted regulator cover shall be fabricated of a flame resistant, high impact plastic.
- The mask-mounted regulator shall reactivate and supply air only in the positive pressure mode when the user affects a face seal and inhales.
- The mask-mounted regulator shall have a demand valve to deliver air to the user, activated by a diaphragm responsive to respiration.
- The diaphragm shall include an integrated exhalation valve and shall be constructed from a high strength butyl elastomer.
- A purge valve shall be situated at the inlet of the mask-mounted regulator and shall be capable of delivering air flow to the regulator of between 125 and 225 standard liters per minute.
- The mask-mounted regulator shall be designed to direct the incoming air through a spray bar and over the inner surface of the facepiece lens for defogging purposes.
- The components of the mask-mounted regulator shall be constructed of materials that are not vulnerable to corrosion.
- The mask-mounted regulator shall incorporate a Heads-Up Display (HUD) to provide visual alerts to the SCBA user of air status and critical alarm conditions.
- The HUD shall be recessed into the mask-mounted regulator body to help improve downward visibility through the facepiece.
- The HUD shall provide visual alerts to the SCBA user for electronic personnel accountability report, evacuation, and system integrity alarm.
- The mask-mounted regulator shall incorporate status lights to assist with remote identification of a user's SCBA air remaining.
- The mask-mounted regulator shall incorporate a latch mechanism to enable removal from the facepiece.
- When fully depressed, the latch mechanism shall act as an auto air-saver switch to stop the air flow.
- An audible click shall provide notification that the latch is fully depressed, and the air-saver switch has been activated to stop the air flow.
- The mask-mounted regulator shall require a quarter (1/4) turn rotation in a single direction for removal from the facepiece.

#### Warranty

- The facepiece assembly shall be warranted to be free from defects in workmanship and materials for as long as the original purchaser owns the product.
- Commonly-used parts are field replaceable.

## **Accessories**

- An optional neck strap that meets the accessory design requirements of NFPA 1981, 2018 Edition shall be offered to carry the facepiece in a ready position.
- A prescription lens kit shall be offered to accommodate different user needs.

All statements, technical information and recommendations set out in this Bid Specification are based on information believed to be reliable and reflect the 3M Scott product(s) referenced above, but the accuracy or completeness thereof is not guaranteed. Before utilizing this Bid Specification, the user should determine the suitability of its intended use. The user assumes all risks and liability associated with such use.

