USRX Series
USRX Structural Fire Helmet
Technical Specifications

Helmets for Structural Firefighting shall meet or exceed NFPA 1971, *Standard on Protective Ensembles for Structural Fire Fighting and Proximity Fire Fighting,* 2013 Edition (Pertaining to Structural Fire Helmets). Helmets for Technical Rescue shall meet or exceed NFPA 1951, *Standard on Protective Ensembles for Technical Rescue Incidents,* 2013 Edition (Pertaining to Technical Rescue Helmets). Helmets for consideration must meet both NFPA requirements. Certification/verification shall be furnished by written documentation supplied by a recognized independent third party test laboratory.

A sample helmet meeting the requirements of this specification shall be supplied upon request for inspection and verification of compliance within 10 working days.

The authority having jurisdiction reserves the right to accept bids submitted per their evaluation based upon compliance to the Standard performance and any other applicable requirements concerning fit and function.

The authority having jurisdiction reserves the right to accept the most appropriate helmet based on the above stated criteria without regard to lowest price offerings.

Successful bidders shall ship helmets per award from the manufacturer within 14 working days after receipt of order from the distributor.

General
Helmets conforming to this specification are designed to help protect the firefighter from head and neck injuries related to structural firefighting activities and technical rescue activities.

The helmet manufacturer's quality system shall be certified to the ISO 9001-2008 standard to assure quality procedures and production capabilities.

Warranty
Bullard warrants to the original purchaser that the firefighter helmet and non-electronic components are free of defects in materials and workmanship under normal use and service for a period of five (5) years from the date of manufacture on the helmet shell and lifetime (as defined in NFPA 1851: 10 years) warranty on the non-electronic components.

Physical Configuration
The basic helmet shall be a condensed rear brim design with a length of 11 3/8", a width of 10" at the faceshield hardware and a height of 6-3/4".

Impact Management System
The impact management system of the helmet shall consist of an outer shell, a unitary inner shell and a crown strap suspension. These three components, working together as a system, reduce the force of an impact to the helmet and the helmet wearer.

Shell
The helmet shell shall be of contemporary style and shall be constructed of heat-resistant thermoplastic. Color pigment shall be added to the thermoplastic resin as part of the manufacturing process that molds the helmet to help maintain appearance by masking chips and scratches that might occur with daily wear and tear. The shell finish shall be available in white, yellow, red, black, blue, orange and lime-yellow.

The edge of the outer shell shall have aluminum reinforced, elastomeric edge beading that is secured at the rear of the brim by a stainless steel clip and D-ring fastened by a stainless steel rivet. The edge beading shall not melt, drip or ignite when tested to NFPA 1971-2013, Section 6-6.12, Heat Resistance requirements.

Unitary Inner Shell
The inner shell shall be of unitary design, incorporating impact attenuating structures and shall be constructed of a heat-resistant thermoplastic. No urethane or other foam shall be utilized.

Crown Strap Suspension
The crown strap suspension shall consist of two 3/4" nylon woven straps attached to four nylon keys. The keys shall be inserted into key sockets formed into the unitary inner shell.

Ratchet Headband
The helmet shall have a quick-adjustment sizing capability by means of a ratchet adjustment mechanism attached to a heat-resistant nylon headband. The headband shall be attached to the unitary inner shell by four black acetal buttons (two front, two rear). The headband shall have the ability to be raised or lowered inside of the unitary inner shell by adjusting the headband at one of three vertical positions on the T-shaped posts. The rear ratchet height adjuster shall permit at least 1" of travel to permit the ratchet to be positioned for comfort on the nape of the firefighter's head.

The ratchet housing shall be wrapped in a cushion-backed leather cover to enhance fit and comfort at the nape of the head. This leather ratchet cover shall be attached by four pieces of Velcro® hook and loop material to permit removal for cleaning and replacement.

Brow Pad

The headband shall be supplied with a fire retardant (FR) cotton brow pad, backed with foam cushion padding material at the forehead. This brow pad shall extend rearward on each side 6.5" from the centerline of the headband to provide stability and comfort to the firefighter. The brow pad shall be attached by hook and loop material to permit removal for laundering and replacement. Attachment to the headband with stitching will not be permitted.

Chin Strap

The chin strap shall be a three point design consisting of 3/4" black Nomex® webbing with a super-tough nylon quick-release buckle.

The male side of the quick-release buckle shall be anchored to the right side of the outer shell with a dielectric anchor block secured to the faceshield-mounting bracket with 2 stainless steel screws. The third point of the strap shall connect through a rear anchor loop. The female side of the quick-release buckle shall be attached to the left side of the outer shell in the same manner.

When the chin strap is connected and fully extended, maximum side-to-side length shall be at least 24" when measured from one anchor block to the opposite anchor block.

Ear/Neck Protector

The ear/neck protector shall consist of a 6 oz. rip-stop Nomex outer shell backed with two layers of FR cotton flannel for comfort and protection. A 1" strip of loop material shall be stitched in one continuous band across the top of the outer shell portion of the ear/neck protector for attachment to the three corresponding strips of 1" hook material located on the interior of the unitary inner shell.

When properly attached to the unitary inner shell of the helmet, the ear/neck protector shall have the following minimum coverage to the sides and rear of the helmet brim:

- 6" from the sides of the helmet brim at the chinstrap.
- 6-1/2" from the center rear of the helmet brim.

NFPA Compliant Goggles

- Shall interface and function well with all major firefighting helmet designs;
- Shall be certified by an independent test lab to meet the requirements of the NFPA Standard 1971-2013
- Shall be certified by an independent test lab to meet the requirements of the ANSI/ISEA Z87.1 occupational eye protection standard;
- Shall comply with Federal OSHA Standards for industrial eye protection.

Goggle Construction

Frame

a. The frame shall be made from a high heat and flame-resistant material, with large perimeter ventilation areas.

b. The ventilation areas shall be covered with high heat resistant and flame retardant foam for filtration. This ventilation system will allow humid air to escape (essential in eliminating lens fogging), while filtering out dust and particles from incoming air.

c. The frames must accommodate most prescription eyewear.

Lens

a. The lens shall be free of waves, ripples and distortions, exhibiting high level of clarity.

b. The lens shall be hard coated inside and out for scratch resistance.

c. The lens shall be anti-fog coated inside and out.

d. The lens shall be impact resistant, and exceed the U.S. Military .22 caliber ballistic impact test MIL-V-43511C.

Lens Retention System

a. 6 posts molded into the frame, which fit securely into the lens cutouts, shall retain the lens. There shall be no small parts used to retain the lens.

b. The lens shall be easily replaced without tools or special skills.

Strap System

a. The goggles shall have 1" wide woven Nomex® elastic straps.

b. The goggle shall have a quick-adjust strap system that provides secure goggle fit and functions with gloves on.

c. The goggle shall be attached to the helmet brim by either a permanently attached 2-piece strap system that can be stowed on the front or back of the helmet or attaches to the helmet with a wraparound strap secured to the helmet by a Nomex webbing loop on the rear of the helmet behind the headband.

Mounting Bracket Systems

a. Mounting brackets shall clamp securely to the helmet brim with setscrews that do not require drilling holes in a helmet shell.

b. All mounting brackets shall carry a lifetime warranty.

Faceshield (alternate configuration)

The faceshield shall be a hard-coated high heat thermoplastic material 4" x 15" that is molded in the formed position and designed to fit the contour of the helmet brim. The faceshield shall be certified to meet the optic requirements of ANSI/ISEA Z87.1 Standard for Eye and Face Protection. This certification shall be in addition to compliance with NFPA 1971 requirements for heat and impact performance.

When mounted, the faceshield shall permit a minimum retractability of 90º in the stowed position.

The faceshield shall be mounted to the brim of the outer shell by a glass-reinforced, flame resistant, nylon handwheel/stainless steel threaded stud attached to a brass T-nut which is supported by an aluminum washer fastened to Quick-Attach mounting blades. The faceshield hardware shall be tested to NFPA 1971-2013, Section 6-3 Flame Resistance Test Two.

The chinstrap/Quick-Attach combination mounting bracket shall be secured to the brim of the outer shell by 4 stainless steel bolts and nuts. A thermoplastic spacer washer shall be used to bridge the mounting bracket.

Retro-reflective trim

The outer shell shall have 5 - 1" x 4" fluorescent lime-yellow, retro-reflective markings located around the circumference of the outer shell. The reflective materials shall be glass bead based to maximize the resistance to heat exposure experienced in firefighting. Vinyl based reflective materials will not be considered equal.

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