

Kendal Emergency Response Team Fire Fighting Equipment Specifications

1. Hand Controlled Branches / Nozzles

| Minimum Performance Criteria: Nozzle Type 1 | |
|--|---|
| <u>Pistol Grip</u> | Yes – below nozzle valve |
| <u>Pistol Grip Colour Code</u> | Green |
| <u>Selectable Flow Rates</u> | 360 to 950 l/min |
| <u>Inlet Coupling Style</u> | BIC Male |
| <u>Body Size</u> | 65mm |
| <u>Inlet Connection Type</u> | BIC Male |
| <u>Inlet Coupling Swivel</u> | Full-Time Swivel |
| <u>Style</u> | One Piece with Valve above pistol grip |
| <u>Pressure Mode</u> | Dual Pressure: |
| <u>Operating Pressure</u> | <ul style="list-style-type: none"> ✓ Low pressure: 3.8Bar ✓ High pressure: 5Bar |
| <u>Maximum Inlet Pressure</u> | 21Bar with valve shut-off |
| <u>Type</u> | Automatic |
| <u>Fog Teeth</u> | Fixed |
| <u>Fog Teeth Material</u> | Power Fog Teeth |
| <u>Remote Control</u> | No |
| <u>Bumper Material</u> | Rubber - bonded |
| <u>Warranty</u> | OEM five (5) year |
| <u>Certification</u> | EN 15182 |
| <u>Approvals</u> | NFPA / Factory Mutual (compliance certificates to be submitted with bid) |

| Minimum Performance Criteria: Nozzle Type 2 | |
|--|-----------------------------|
| <u>Pistol Grip</u> | Yes |
| <u>Selectable Flow Rates</u> | 110/230/360/470/570 l/min |
| <u>Inlet Coupling Style</u> | BIC Male |
| <u>Body Size</u> | 65mm |
| <u>Inlet Connection Type</u> | BIC Male |
| <u>Inlet Coupling Swivel</u> | Full-Time Swivel |
| <u>Style</u> | One Piece with Valve |
| <u>Pressure Mode</u> | Single |
| <u>Type</u> | Selectable |
| <u>Fog Teeth</u> | Spinning |
| <u>Fog Teeth Material</u> | Metal Teeth on Teflon™ base |
| <u>Operating Pressure</u> | 700 kpa (7 bar) |
| <u>Remote Control</u> | No |

| | |
|-------------------------------|--|
| <u>Bumper Material</u> | Rubber - bonded |
| <u>Certification</u> | EN 15182 |
| <u>Approvals</u> | NFPA / Factory Mutual (compliance certificates to be submitted with bid) |

Special Instructions:

- i. Body to be constructed from hard-coat anodised extruded aluminium alloy, with stainless steel components. Reflective labelling shall be standard.
- ii. Materials used shall incorporate: all aluminium components to be hard-coat anodised per military standard MIL-8625, type 3, class 2 compliant to test ASTM B117. Stainless steel 300 series, nylon 6-6 and nitrile rubber.
- iii. The nozzle shall have a swivel-type factory fitted rigid British Instantaneous Coupling (BIC) inlet.
- iv. Inlet to be fitted with a stainless-steel debris screen.
- v. The shaper of the two types of nozzles shall each incorporate:
 - a. Type 1: fixed rubber teeth for full-fill “power fog” and incorporate a protective rubber front bumper.
 - b. Type 2: stainless-steel spinning teeth, and incorporate a protective rubber front bumper.
- vi. Colour-coded, injection moulded nylon pistol grips and valve handle covers shall be available.
- vii. The nozzles shall deliver selectable flow settings as follows:
 - a. Type 1: from 360 to 950 litres/minute at dual pressure modes (minimum 3 bar and optimum 5 bar).
 - b. Type 2: five selectable flow settings of 110 – 230 – 360 – 470 and 570 litres/minute @ 7 bar.
- viii. The nozzle shall feature a stainless-steel slide valve with detent flow control which eliminates water turbulence when nozzle is operated anywhere in between fully open and closed.
- ix. Valve handle shall be produced from high strength moulded nylon and shall be provided with positive open and close stops.
- x. Nozzle shall be supplied standard with impact shock absorbing bumper designed to reduce impact damage when dropped or used in a forcible entry operation.
- xi. A factory fitted tactile indicator with reflective strip to designate stream setting shall be incorporated into the shaper bumper.
- xii. A serial number shall be laser engraved on the body.
- xiii. Five-year Original Equipment Manufacturer (OEM) warranty shall be standard.
- xiv. The branch shall allow for both low-expansion and multi-expansion purpose-designed foam aspirating attachments to be fitted to the bumper.
- xv. A demonstration model shall be made available on request for field trials and evaluation.
- xvi. A list of replacement parts readily available shall be submitted.
- xvii. Nozzle shall be FM and NFPA approved and compliance certificates to be submitted with bid.

- xviii. Nozzles must have the facility to be retro fitted with a foldable pistol grip if required. Tendered must include details with their bids. No exceptions.

2. Large Diameter Heavy Duty Flat-Lay Fire Hoses

| Minimum Performance Criteria | |
|---|--|
| <u>Hose Length:</u> | 30meter each |
| <u>Hose Diameters:</u> | 1. 1x 65mm 2. 1x 45mm 3. 1x 38mm |
| <u>Coupling Type:</u> | 1x 65mm instantaneous male & 1x 65mm instantaneous female (factory bounded) per length |
| <u>Coupling Material:</u> | Aluminium |
| <u>Minimum Performance Criteria</u> | Test Pressure : 24 Bar Working Pressure: 17 Bar Burst Pressure : 50 Bar |
| <u>Minimal Thermal Operating Range</u> | Cold-resistant up to: -35°C Heat-resistant up to: +100°C |
| <u>Hose Colour:</u> | Yellow |
| <u>Minimum Approvals / Certifications:</u> | 1. DIN 14811:2008-01 Class 3 2. BS 6391:1983 Type III 3. MED 96/98/EC SBG |

Special Instructions:

A. Construction of flat-lay hoses to comply with:

- i. Circular woven jacket out of 100% high tenacity synthetic yarn, embedded in a vulcanized high grade Nitrile/PVC compound using the "Through-the-weave-extrusion process".
- ii. The outer layer shall be ribbed to provide superior abrasion resistance.
- iii. Hose shall be manufactured and tested to provide high resistance to acids, salt solutions, oil, fuel and general chemicals
- iv. The hose shall be manufactured in an ISO 9001 Quality Management System facility
- v. Compliance certification documentation shall be provided and submitted with bid.

B. Couplings fitted to Flat-lay hoses to comply with:

- i. Each length of hose shall be factory fitted with a pair of aluminium alloy BIC Couplings which are stamped with relevant European markings.
- ii. Couplings shall be of the ribbed-tail type (Serrated-tail type couplings are not acceptable.)
- iii. Couplings shall be bounded by the continuous method in accordance with BS366 standards.
- iv. The binding wire used shall be high quality galvanised wire.

- v. Hose bindings shall be protected by means of a canvas collared sleeve under wiring and a rubber sleeve over the binding. No exceptions permitted.
- vi. Couplings are required to be factory fitted, marked and comply with BS 336 specification.
- vii. All hoses supplied to be complete factory assembled with hose rubber insert provided with female couplings.

3. Portable, Multi-Purpose Foam System for Fire-Fighting and HAZMAT Applications

| Minimum Performance Criteria | |
|---|-----------------------|
| Foam Expansion | Multi & Selectable |
| Nominal Flow Rate (all nozzles) | 45 l/min |
| Inlet Connection Size | 38 mm |
| Straight Stream Nozzle Reach | 15 meters @ 7.0 bar |
| Low Expansion Nozzle Reach | 11 meters @ 7.0 bar |
| Medium Expansion Nozzle Reach | 3 meters @ 7.0 bar |
| Inlet Coupling Style | 2.5 inch BIC Male |
| Inlet Coupling Swivel | Non-Full Time Swivel |
| Operating Pressure | 100 psi (7 bar) |
| Valve Actuation Method | Rotational |
| Valve Design | Aluminium Slide Valve |
| Weight (when empty) | 6Kg (less than) |
| Weight (when full) | 14Kg (less than) |
| Dimensions (Length x Width x Height) | 345mm x 275mm x 430mm |

Special Instructions:

- i. Concentrate tank to be constructed from high-impact plastic with all metallic components to be of stainless steel and hard-coat anodised aluminium. Reflective labelling shall be standard.
- ii. Concentrate tank capacity shall be 9 to 10 litres.
- iii. The unit will not exceed 6kg, and shall include the following integrated elements:
 - Straight stream quick-connect nozzle.
 - Low expansion quick-connect nozzle.
 - Medium expansion quick-connect nozzle.
 - Quick-connect discharge hose.
 - Shoulder carrying strap.
- iv. Operating pressure range shall be 3 - 40 bar
 - Minimum operating condition: 30 Litres per minute @ 3Bar
 - Maximum operating condition: 100 Litres per minute @ 40Bar
- v. The unit shall incorporate the following design elements:

- A twist grip flow control valve which additionally acts as a carrying handle.
- A large easy open fill port incorporation a screen strainer and contents/concentration indicator.
- A field changeable percentage knob selector offering the following user selectable proportioning ratios:
 - Class A foam concentrates: 0.1% - 1%.
 - Class B foam concentrates: 1%, 3% or 6%.
- vi. Operating instructions shall be permanently applied to the concentrate tank and a traceable serial number shall be laser engraved onto the unit.
- vii. Five-year warranty shall be standard.
- viii. A list of replacement parts readily available shall be submitted.
- ix. Additional equipment to be included with each unit as follows:
 - A piercing nozzle,
 - Lightweight supply hose,
 - 7.5 metre outlet extension hose,
 - Pre-connect tee,
 - 1 Inch wye for multiple unit application,
 - Waist strap and
 - Vehicle mounting bracket.

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