

# TECHNICAL SPECIFICATION

## Firefighting Nozzles and STORZ Reduction Couplings

### Multifunctional Pistol-Grip Firefighting Nozzle with “Storz” Coupling

The procurement object consists of 26 multifunctional manual pistol-grip firefighting nozzles with a minimum flow rate of 150 L/min, equipped with a 25 mm quick-connect STORZ coupling.

The nozzles shall be manufactured from anodized aluminum (eloxed) with a special treatment ensuring resistance to corrosion, mechanical wear, and high temperatures, while also providing adequate thermal and electrical insulation for use in firefighting operations.

The nozzles shall be CE marked and shall be accompanied by a certificate of conformity, as well as operating and maintenance instructions, in accordance with applicable EU standards and requirements for pistol-grip firefighting nozzles.

The nozzles shall be equipped with a stainless steel inlet filter, a swivel base at the coupling, and a discharge nozzle with rotating teeth for producing a spray jet.

The nozzles shall be fitted with a sliding shut-off valve and durable sealing gaskets allowing quick start and stop of the water flow, without changing the flow setting or the selected jet pattern.

The nozzles shall allow flow rate adjustment, selection of jet pattern (straight stream / spray), and a flush/cleaning position for nozzle cleaning.

The nozzles shall be provided with sleeves or rings with tactile protrusions enabling identification of the flow position and the narrow cone jet position under reduced visibility conditions.

The nozzles shall be fitted with ergonomic handles made of anodized aluminum or lightweight aluminum alloy, with thermal insulation properties and enhanced grip for safe handling.

The nozzles shall have engraved markings on the flow selector ring and the spray selector ring, made on anodized aluminum, clearly legible and resistant to wear.

Each nozzle shall be marked with a unique serial number ensuring full traceability of components.

Each nozzle shall be provided with a standard warranty of 24 months against manufacturing defects, subject to compliance with the prescribed maintenance plan.

Specific requirements for multifunctional nozzles: At the inlet, a stainless steel filter shall be installed, with mesh openings of approximately 5 mm × 5 mm, intended to prevent dirt and foreign objects from entering the nozzle. The nozzle shall be equipped with a swivel base, allowing the nozzle to rotate independently of the hose. The nozzle shall be fitted with a milled rotating-tooth turbine-type head for producing a fine water mist. The nozzle shall also be fitted with a stainless steel sliding shut-off valve provided with a PTFE (Teflon) sealing gasket. The valve shall allow gradual opening and closing of the water flow in order to reduce the risk of water hammer. The nozzle shall be equipped with a large ergonomic handle for flow control and easy operation. The nozzle shall be fitted with a protective nozzle sleeve having a tactile protrusion for identifying the jet position in low-visibility conditions. The sleeve shall be made of a material resistant to high temperatures, hydrocarbons, and aggressive chemical substances. The jet pattern shall be adjusted by rotating the protective sleeve. The nozzle shall provide three jet forms: straight stream for direct attack, narrow cone spray for combined attack and cooling, and wide spray for creating a protective curtain for the operator. The nozzle shall be fitted with a large flow selector ring provided with a PTFE (Teflon) sealing gasket. The ring shall allow easy operation while wearing firefighting protective gloves. The flow selector ring shall allow adjustment of the flow rate between a minimum of 20 L/min and a maximum of 150 L/min. The nozzle shall be equipped with a flush function, activated by rotating the flow selector ring beyond the maximum operating flow position. This function shall allow the discharge of impurities and prevent nozzle blockage. The handle shall have a rubber-coated outer layer ensuring thermal insulation and high grip during operation.

Technical-tactical characteristics: The nozzle shall allow flow selection within the range of 20–150 L/min. The nozzle shall ensure nominal pressure PN16, in accordance with SM EN 15182-2:2020. The nozzle shall ensure nominal pressure PN40, in accordance with SM EN 15182-4:2020. The nozzle shall operate at a working pressure of 6–7 bar. The nozzle shall be resistant to abrasion, petroleum products, and chemical substances. The nozzle shall be equipped with a dedicated position for removing impurities (flush function). The nozzle shall be equipped with a swivel base. The nozzle shall be capable of operating at temperatures between -20°C and +100°C.

#### **“STORZ” Reduction Coupling, 52 mm - 25 mm**

The procurement object also consists of 26 STORZ-type reduction couplings intended for connecting two couplings with different nominal diameters, 52 mm and 25 mm.

The reduction coupling shall be manufactured from an aluminum alloy, produced by die casting, with mechanical properties suitable for use in emergency response equipment.

The reduction coupling shall: 3.1. allow rapid coupling and uncoupling of STORZ-type couplings; 3.2. ensure tight sealing of the connection by means of a rubber gasket; 3.3. operate without blockage or impediment during use; 3.4. be provided with four external radial protrusions (ribs) specific to the STORZ coupling system, for locking and tightening the coupling; 3.5. be resistant to the action of petroleum products and chemical substances used in intervention operations.

The reduction coupling consists of the following structural elements: 6.1. the body of the reduction coupling, provided with seats for two sealing gaskets; 6.2. the body of the larger-size coupling (52 mm), provided with: 6.1.1. two coupling claws (distance between claws - 66 mm); 6.1.2. two semicircular tightening grooves; 6.1.3. one internal threaded section; 6.1.4. two fixing screws. 6.3. The body of the smaller-size coupling (25 mm), provided with: 6.2.1. two coupling claws (distance between claws - 31 mm); 6.2.2. two semicircular tightening grooves; 6.2.3. external radial ribs for tightening; 6.2.4. one external threaded section. 6.4. The structural elements shall be assembled by screwing them into the body of the larger-size coupling and secured with two screws, in order to ensure reliable fixing and safe operation.

Reduction couplings manufactured from alloy powder by pressing method shall not be accepted.