Fire & Safety

Datasheet

3M™ Scott™ ELSA Sprint – Emergency Life Support Apparatus

Description

The 3M™ Scott™ ELSA Sprint is a positive pressure escape set providing air on demand for situations where the escape route may require a lot of physical exertion or where the maximum levels of protection are required.

The 3M™ Scott™ ELSA Sprint is available in durations of 10min 2 litre, 15min 3 litre steel cylinders and carbon composite versions 10min and 15min. The sets are carried in high visibility PVC or black anti-static materials. The apparatus consists of a cylinder with combined cylinder valve and reducer, supply hose with tempest demand valve connected to either a positive pressure hood or Promask carried in a storage bag. The 3M™ Scott™ ELSA Sprint is activated upon opening the bag which pulls the cord, which turns the cylinder valve handwheel to open the valve, which can also be manually activated. Medium-pressure air is immediately available at the facemask/hood demand valve which remains closed until the wearer pulls the facemask or hood from, the bag and dons the mask/hood and takes a first, sharp, breath.

Applications

Suitable for use in industrial escape settings for escape use only.

Cylinder valve

The combined cylinder valve and reducer (RCV) reduces the cylinder air pressure and tempest demand valve connects to a positive pressure facemask (Promask) or hood. The facemask is fitted with a net head harness with 2 straps to tighten when donning the mask, the hooded variant seals using an elastomeric neck seal.

Carrying bag

The carrying bag is made of PVC coated Polyester. This is coloured for high visibility and is both flame retardant chemical splash resistant. There is an anti-static option for working in potentially explosive atmospheres and this is made of polyurethane. The bag can be worn across the chest. Pictogram use instructions and the duration of the air supply are prominently visible on the bag. The cylinder contents gauge on the cylinder/reducer valve is visible though a transparent panel in the bag, permitting the cylinder charge state to be checked without opening the bag.

Pneumatics, mask and demand valve

The combined cylinder/reducer valve has a quick-fire cord which can be wound round the cylinder valve handwheel and attached to the bag's access flap. The act of opening the access flap pulls the cord, which turns the cylinder valve hand wheel to open the valve. Medium-pressure air is immediately available at the facemask demand valve, which remains closed until the wearer pulls the facemask from the bag, dons the mask and takes a first, sharp, breath. This activates the positive pressure tempest demand valve on the Promask full face mask or hood. The hooded variant has an inbuilt whistle to warn the user to remove the hood once the air supply is depleted.

Maintenance/cleaning/servicing

Cleaning should only be carried out as specified in the user instructions. Maintenance and servicing must only be performed by trained personnel following the procedures in the service and maintenance manual.

Specification

Approvals
CE marked to EN 402 in accordance with the PPE regulations

Annex II (technical specification for hood)

Materials	
Pressure reducing valve	Nickel plated brass
Rust tube	Brass
Reducing valve seat	Polyamide (nylon)
O-rings	Nitrile, silicone, EPDM
Reducing valve springs	Stainless steel
HP pressure gauge	Stainless steel, polycarbonate lens
MP air supply hose fittings	Nickel plated brass
Facemask	Procomp
Facemask visor	Polycarbonate
Air hood	Polyurethane coated viscose with clear PU visor
MP air supply hose	Chlorinated polyethylene, fabric braid reinforcement, nitrile liner
Carrying bag	PVC coated nylon (anti-static – polyurethane)
Valve handwheel	Glass filled polyamide
Strap buckles	Polyamide
Cylinder	Steel or composite
Demand valve casing	Glass filled polyacetal and polyamide

Tempest demand valve	
Compact positive pressure demand valve featuring servo-assisted, tilting diaphragm mechanism with low inspiratory resistance and responsive dynamic performance, automatic first breath actuation. Components injection moulded from polyamide with rubber seals and diaphragms.	
First breath activation	-20 to -30 mbar
Peak flow performance	In excess of 500 litres/minute
Bypass flow	150 litres/minute nominal
Static positive pressure	1.0 – 4.0 mbar

Combined reducer	
First stage pressure reducing valve featuring non-adjustable, spring loaded piston mechanism and outlet supply protected by pressure relief valve. Valve body and cap machined from nickel-plated brass with stainless steel spring and hose retainer U-clips.	
Outlet pressure	
200 bar inlet	5.5 to 9.5 bar
300 bar inlet	6.0 to 11.0 bar
Pressure relief valve protected	Approx. 13.5 bar

Hoses	
Swivel Hose fittings	Stainless Steel
Medium pressure hose	
Maximum working pressure	16 bar
Minimum burst pressure	80 bar

Packing specifications	
10 minute bag version	56×21×18cm, 6.0kg Steel, 5.1kg Composite
15 minute bag version	56×21×18cm, 6.5kg Steel, 5.5kg Composite

Weight/dimensions	
10 minute bag version	
Weight	5.2kg steel or 3.9kg composite
Length	545mm
Width	350mm
Depth	111mm
15 minute bag version	
Weight	5.6kg steel or 4.5kg carbon
Length	620mm
Width	350mm
Depth	125mm

3M Scott Fire & Safety

Pimbo Road
Skelmersdale
Lancashire, WN8 9RA
United Kingdom

Phone +44 (0)1695 711711
E-Mail skelmenq@mmm.com
Web www.3M.co.uk/air-supplied-respirators