



SHROPSHIRE

Fire and Rescue Service

<u>CONTENTS</u>	Page No	
PURPOSE	1	BRIGADE ORDER TECHNICAL NO. 4
STRATEGIC AIMS AND OBJECTIVES	1	
ROLES, RESPONSIBILITIES AND REVIEW	1	
INTRODUCTION	2	
SECTION A –CRITICAL INFORMATION	3-4	
SECTION B – OPERATIONAL INFORMATION	5	PART 6
SECTION C – TECHNICAL INFORMATION	6	
		ACQUA-LIDER BACKPACK EXTINGUISHER

PART 6 – ACQUA-LIDER BACKPACK EXTINGUISHER

PURPOSE

To provide users with information and guidance in the use of the Acqua-Lider Backpack extinguisher.

STRATEGIC AIMS AND OBJECTIVES

Strategic Aim 3 “Secure the highest level of safety and welfare for all staff by providing effective supervision, training, equipment and systems of work.”

Corporate Objective 6: We will “Maintain and improve the health, safety and welfare of all employees”

ROLES, RESPONSIBILITIES AND REVIEW

The **Resources Manager** is responsible for ensuring this Order is implemented across the Brigade.

The **Officers in Charge** will be responsible for the day to day operation of the Order.

The **Operational Equipment Officer** will review this order annually in *July* and as and when organisational changes take place.

REASON FOR ISSUE

- Review of existing equipment
- Adaptation/modification of existing equipment
- Initial issue of equipment
- Other: Review of document

INTRODUCTION

The Acqua-Lider backpack extinguisher is a lightweight, portable, manually operated water extinguisher which allows firefighters to swiftly attack small fires such as grass and bin fires with the minimum of equipment. It is not for general use and should only be used by operators who have received training in its use and limitations. The unit is manually pressurised by the operator and can provide both a jet and a spray.

SECTION A - CRITICAL INFORMATION

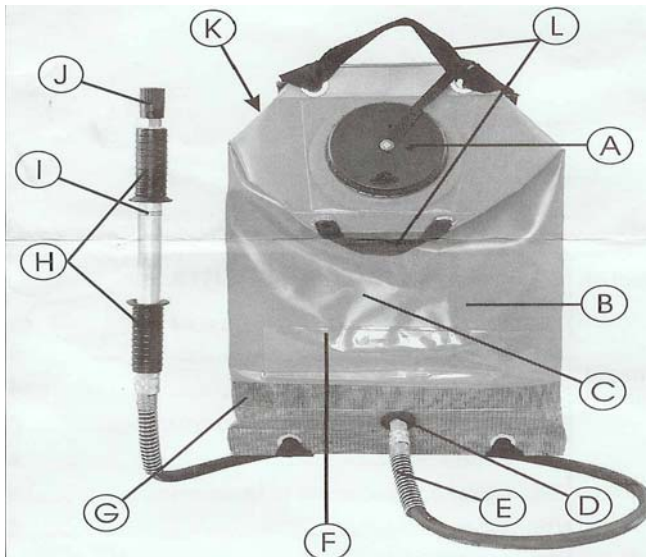
DESCRIPTION

The back pack extinguisher comprises of three main components.

An ergonomically designed 20 litre capacity flexible tank complete with shoulder harness and chest strap, which is designed to be worn as a backpack.

A manually operated hand-pump with an integral manually adjusted spray/jet nozzle.

A 1.5 metre by 25mm hose fitted at one end with a male quick-release coupling to attach to the tank and at the other end with a female screw connector to attach to the pump.



- A** 110 mm inlet with removable filter. Screw cap with retaining cord.
- B** Thermo-welded flexible tank in reinforced flame resistant PVC.
- C** Comfortable and ergonomic shaped red tank with internal water baffles and extra reinforcement, for better distribution of weight and safety.
- D** Instantaneous brass quick release outlet coupling with stop-valve.
- E** Metal coil protector to hose ends.
- F** Sealed transparent large identification sleeve.
- G** Blue exterior double reinforced lower section strengthened back support.
- H** Double handgrip sleeves for easier pump action.
- I** Hand-pump dog-clip and eyelet for easy transportation.
- J** Superior quality brass regulating nozzle with high impact resistant protector.
- K** Nylon padded hardwearing shoulder harness and chest strap with quick coupling.
- L** Transport and auxiliary handles for refilling.

LOCATION

One Aqua-Lider backpack extinguisher is carried on all water ladders and rescue pumps.

MAINTENANCE AND TESTING

The extinguisher should be tested on acceptance, quarterly and after use and should be inspected for signs of damage and wear and tear. The hand pump should be checked to ensure smooth action of the mechanism and a small amount of grease may be applied to the piston.

Particular attention should be paid to all connections and couplings to ensure that they are free from dirt and debris and correctly *hand* tightened. The tank filler filter and the pump nozzle should also be checked periodically to ensure that they are free of debris.

Should negative pressure occur in the flexible tank due to it being pumped empty and the filler cap is difficult to unscrew, introduce ambient air pressure by uncoupling and recoupling the quick-release outlet valve and this will equalise the pressure. Never use a wrench or other tool to open the filler cap.

The extinguisher can be stowed fully assembled, however it should be emptied of water and the tank filler cap replaced but not tightened.

Although the tank is made from a robust material, care should be taken when using and stowing the extinguisher that the tank is not punctured.

Any defects found should be reported to Technical Services.

HEALTH AND SAFETY

When using the backpack extinguisher attention should be paid to manual handling procedures.

Always seek assistance if when putting on or removing the extinguisher if full or partially full.

Always use the chest strap during use to ensure that the weight of the flexible tank is evenly distributed.

Never operate the extinguisher when wearing only one shoulder strap as this will put undue strain on the back or upper body or could cause overbalancing.

Gloves should always be worn when operating the extinguisher and care should be taken not to trap fingers between the handgrip and the cylinder when operating the pump.

Never operate the hand pump when pointing it at another person.

When wearing the back pack, if not operating the hand pump it should be clipped to the dog-clip on the harness to avoid causing a trip hazard or becoming damaged.

SECTION B - OPERATIONAL INFORMATION

USAGE

1. Connect the female screw connector of the hose to the hand pump and the quick release coupling to the outlet of the tank.
2. The operator should put on the empty backpack, adjusting the shoulder straps for individual comfort. If the pack is already full or there is a change of operator, assistance must be given when removing and replacing.
3. The tank should be filled with *clean* water through the inlet filter by an assistant. The tank may be filled from the appliance hose reel by removing the branch and placing the hose into the tank inlet with the pump on low setting and running at idle speed. When the tank is full the operator should make a final adjustment of the shoulder straps.
4. To pressurise the system the pump should be operated slowly at between 25 to 30 strokes per minute. The unit is designed to be used either left or right handed.
5. To achieve the desired delivery the nozzle is turned to create either a jet or a spray pattern. Clockwise for minimum spray through to anti-clockwise for maximum jet (2 turns). The extinguisher will produce between 3 metres for a spray up to 12 metres for a jet. Care should be taken not to fully unscrew the nozzle anti-clockwise.
6. When the extinguisher is being used operationally, the pump should not be placed on the ground as the weight of water in the tank will overcome the valve mechanism in the pump and allow water to gradually drain away. When not using the hand pump the operator should clip it to the dog-clip on the harness.

SECTION C - TECHNICAL INFORMATION

SPECIFICATION

Tank capacity	20 litres
Water inlet dia.	110mm
Maximum jet reach	12 metres
Maximum flow rate (jet)	4.2 lpm
Minimum flow rate (spray)	3.2 lpm
Net weight	3.3 kg