

ELSA 2000



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AS/NZS 1716 : 2012
Lic. BNP 540244 BSI
BENCHMARK

PRE-OPERATIONAL WARNINGS

GB






Please Read Carefully and Fully Understand

This manual is for use by personnel trained in the use and care of compressed air escape apparatus, and **MUST NOT** be used as a self-teaching guide by untrained users.




Scott Safety have taken great care to ensure that the information in this manual is accurate, complete and clear. However, **Training and Technical Support Services** will be pleased to clarify any points in the manual and answer questions on **Scott Safety** breathing apparatus.

If you need to use this apparatus you will be in an unusual, possibly life-threatening situation. Poor visibility and toxic fumes may add to your difficulties.





Prepare for that situation:

-  **Learn the location of escape apparatus and how to gain access to it.**
-  **Learn to use the escape apparatus, as detailed in these instructions.**
-  **Be aware of the protection limits provided by ELSA. Exceeding these limits may cost you your life or result in injury.**
-  **Be fully aware of workplace hazards.**
-  **Become familiar with planned escape routes.**

If the situation arises:

-  **Remain calm and remember what you must do to survive.**
-  **Don and activate the apparatus. Leave the hazard area immediately.**
-  **Do not enter a hazard area unless it is part of the escape route.**

General and Managerial:

-  **Check apparatus daily when issued to wearers or deployed in ready-use lockers; or monthly if held in stores.**
-  **ELSA is an escape apparatus. DO NOT use for other purposes, such as fire fighting or cargo handling.**
-  **Ensure wearers are fully trained in the use of the apparatus, advised of workplace hazards and planned escape routes.**
-  **Ensure ELSA provides respiratory protection for workplace hazards and has duration for planned escape routes.**

Refer to EN 529:2005 - Guide to implementing an effective respiratory protective device programme.


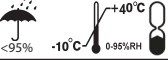
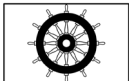


DISCLAIMER

Failure to comply with these instructions or misuse of the apparatus may result in death, injury or material damage, and invalidate any resulting warranty or insurance claims.

COPYRIGHT

This manual must not be copied in part or in whole, or used for purposes other than its intended purpose without the written permission of **Scott Safety**.

These products meet the requirements of European Regulation (EU) 2016/425 and applicable local legislation. The applicable European/local legislation and Notified Body can be determined by reviewing the Certificate(s) and Declaration(s) of Conformity at www.3m.com/Respiratory/certs

PRODUCT MARKINGS, SYMBOLS AND APPROVALS	
	You must fully read these instructions before using this equipment
	Storage information Humidity, temperature, end of shelf life
EN 1146:2005	Respiratory protective devices. Selfcontained open-circuit compressed air breathing apparatus incorporating a hood for escape. Requirements, testing, marking
 2489/yy	Conformity to Marine Equipment Directive (MED) 2014/90/EU yy = Date of Manufacture
	CE: European conformity - These products are type approved and annually audited by either BSI Group, The Netherlands B.V. Say Building, John M. Keynesplein 9, 1066 EP Amsterdam, The Netherlands, Notified Body No. 2797 and / or BSI Assurance UK Ltd, Kitemark Court, Davy Avenue, Knowlhill, Milton Keynes MK5 8PP, UK, Notified Body No. 0086
	AS/NZS1716:2012 - Australian/New Zealand standard, respiratory protective devices Lic. BNP 540244 - Approval body: BSI Benchmark, Suite 2, Level 7, 15 Talavera Road, Macquarie Park, NSW 2113 Australia

INTRODUCTION

BREATHABLE AIR

Air used to supply or charge breathing air may be natural or synthetic and must comply with EN 12021:2014 or AS/NZS1715:2009.

APPARATUS SELECTION

When selecting respiratory protective equipment the following factors must be considered:

Hazards likely to be encountered and their effect on the wearer.

Physical and emotional stress and their effect on wearer breathing rate.

The type of respiratory protection required.

In general, constant-flow escape breathing apparatus is NOT suitable for use where:

There are unknown hazards.

There are no planned escape routes.

There are escape routes that require physical exertion, e.g.: ladders, tunnels and hatches.

TRAINING

These instructions cannot replace an accredited training course run by fully qualified instructors in the proper and safe use of **Scott Safety** breathing apparatus.

Please contact **Training and Technical Support Services** or your **Scott Safety** distributor for training course details.

Training and Technical Support Services:

Scott Safety

Pimbo Road, West Pimbo,
Skelmersdale, Lancashire,
WN8 9RA, England.

Tel.: +44 (0) 1695 711711

Fax: +44 (0) 1695 711775

SERVICING

ELSA must be serviced by personnel who have completed a formal training course and hold a current certificate for servicing and repairing **Scott Safety** breathing apparatus. Details of the servicing

schedule are contained in the **Scott Safety** ELSA Service Manual, copies of which can only be obtained by registered holders of a current certificate.

Your **Scott Safety** distributor or **Training and Technical Support Services** will be pleased to provide training course details and quotes for service contracts. Please see above for contact details.

STORAGE AND TRANSPORTATION

The Device must be protected from damage during transportation.

The equipment must be stored in a clean environment, away from direct heat, sunlight and less than 95% relative humidity, with a stable temperature of between -10°C to +40°C.

It is essential that ELSA is transported in suitable packaging. Refer to the Health and Safety document: Guide to the Pressure Systems and Transportable Gas Container Regulations 1989.

Where an ELSA with charged cylinder is to be transported by road, the Road Traffic Regulations 1986, although primarily intended to cover toxic, flammable and corrosive gases, should be observed.

After transportation, ELSA should be checked to ensure that:

The bag and contents gauge have not been damaged.

The anti-tamper tags are intact.

TECHNICAL DESCRIPTION

GENERAL

Scott Safety ELSA is a self-contained, open circuit, compressed air, constant-flow, escape breathing apparatus. ELSA comprises a compressed air cylinder with a combined reducer/cylinder valve, an escape hood, with a breathing hose and a stowage bag.

ELSA is fitted with a 2 litre (10 minute duration) or 3 litre (15 minute duration) steel cylinder. The constant flow rate is 38 litres per minute.

Owing to its weight, the 3 litre ELSA is not suitable for wearing for complete 8 hour shifts.

Pictogram user instructions and the duration of the air supply are prominently visible on the bag.

Two bright red anti-tamper tags seal the bag. The tags break easily when the bag is opened, or if the apparatus is tampered with.

The combined reducer/cylinder valve (RCV) is held closed by a firing pin, which is attached to the bag's flap by a quick-fire strap. When the access flap is opened it pulls the pin and opens the valve. Air immediately flows into the hood.

If the firing pin is not released when the bag is opened the quick-fire strap can be used to pull it. The red EMERGENCY PULL disc on the RCV can be used to pull the valve actuator once the firing pin has been released.

While ELSA is stored ready for use, the cylinder contents gauge, on the cylinder/reducer valve, is visible through a transparent panel in the bag, permitting the cylinder charge state to be checked without opening the bag.

Providing the apparatus is serviced regularly in accordance with the service requirements detailed in the ELSA Service Manual, there are no shelf life limits.

ELSA should be stored away from direct heat and sunlight, and operated between -15°C and +60°C. Prior to storing in very low temperatures the apparatus, especially the valve flaps, must be completely dry.

HOOD

The hood is fabricated in high-visibility, flame-resistant PVC or PVC coated materials with a rubber neck seal.

An inner mask, which covers the wearer's nose and mouth, minimises visor misting and carbon dioxide dead space.

Sprung metal strips hold the visor flat when in storage.

When in use, form the hood to a shape

that holds the inner mask against the wearer's face.

A sealed foam pad on the inner rear of the hood holds the hood in place when the wearer's head moves.

The spring-loaded exhale valve helps maintain an above ambient pressure within the hood.

REDUCER/CYLINDER VALVE

The reducer/cylinder valve (RCV) is screwed permanently into the cylinder. It is a spring and piston device with a fixed orifice outlet. The cylinder valve opens automatically when the firing pin is pulled, permitting air to flow from the reducer to the hood.

The quick-fire strap can be used to pull the firing pin in the unlikely event of the pin not releasing when the bag is opened.

The red EMERGENCY PULL disc on the RCV can be used to pull the valve actuator once the firing pin has been released.

The warning whistle sounds when the designed duration (10 or 15 minutes) is reached. Beyond this point the carbon dioxide level in the hood increases and the hood must be removed as soon as the wearer is clear of the hazard area.

The medium-pressure system is protected from over-pressurisation by a pressure relief valve (PRV) located in the reducer.

The contents gauge indicates the cylinder charge level, which must be maintained at fully-charged with the needle in the green sector of the gauge.

The orange sector of the gauge indicates the minimum cylinder charge that will achieve the specified duration. This is NOT an acceptable charge state for issued or ready-use apparatus.

The charging adaptor conforms to EN 144-2:1996.

CYLINDERS

The ELSA 2000 range is approved in various configurations which can utilise different cylinder shells, these shells are available in different materials (steel and composite). The variants using composite cylinder shells may be available in different charging pressures (200 bar and 300 bar) depending on the options or specification available, these are chosen at the time of ordering.

STORAGE BAG

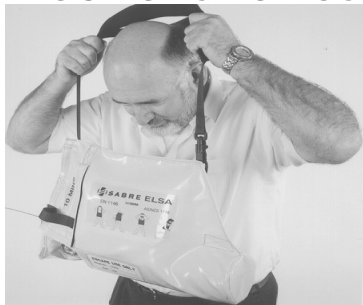
The standard bag is fabricated from high-visibility lightweight material. A bag fabricated from black anti-static material is also available for use with both versions. The flap, which is opened by pulling a webbing grab strap, is held closed by **Velcro™** strips.

An adjustable webbing neck-strap supports the bag when in use.

A transparent panel is provided to enable the cylinder contents gauge to be checked without opening the bag.

A waist belt, which prevents the bag swinging while in use, is available as an option for all versions of the bag.

INSTRUCTIONS FOR USE



Lift ELSA from the ready-to-use store and place the neck-strap around the neck so that the pictogram on the bag is outermost.

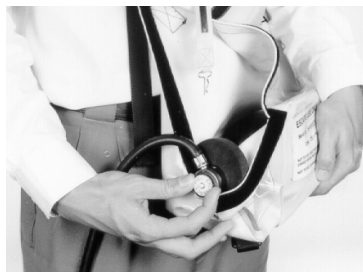


Hold the bag and pull the flap to withdraw the firing pin. Listen for air flowing into the hood.

If there is no sound, check that the firing pin is fully withdrawn.



If the firing pin is still in place, pull the yellow belt to free the pin.



If there is still no sound, access the reducer/cylinder valve and pull the red EMERGENCY PULL disc.



Pull the hood from the bag.



Place the palms of the hands together and insert through the rubber neck seal. Open the hands to open the hood.

CAUTION:

Ensure that finger nails and rings do not snag or tear the neck seal.

Do not roll or fold the neck seal when donning the hood.



Hold the hood with the neck seal over the crown of the head and pull the hood down over the head until the neck seal is around the neck. Check that clothing or hair is not trapped in the neck seal.



Check that there is a steady flow of air into the hood.

Breathe normally. LEAVE THE HAZARD AREA IMMEDIATELY.

When clear of the hazard area, insert thumbs under the neck seal and remove the hood.

When the cylinder is almost empty the warning whistle sounds. Beyond this point carbon dioxide within the hood will increase and the hood must be removed as soon as it is safe to do so.

Once the apparatus has been used it must be returned to be serviced and have the cylinder re-charged.

SCHEDULED MAINTENANCE MAINTENANCE RESPONSIBILITIES

Wearer maintenance options:

No wearer maintenance.

Wearer performs daily (or monthly) checks.

Wearer performs daily (or monthly) checks, cleans and when the apparatus has been used, prepares the apparatus for future use.

Your Safety Officer will advise which of the above applies.

Maintenance tasks not performed by

wearers must be referred to a properly equipped and trained service facility.

DO NOT perform maintenance tasks unless you have been trained and tasked to do so by a qualified, responsible expert.

It is a mandatory requirement that ELSA units are function-tested annually to ensure that the air supply is flowing freely from the cylinder into the hood. The Annual Flow test can be completed by the user in one of 2 ways, either using the ELSA flow meter or by activating the ELSA and timing that the whistle activates at the correct time.

For 10 minute set – 10-11 minutes (starting from a 200 bar charge)

For 15 minute set – 15-17 minutes (starting from a 200 bar charge)

This test can be done, for example, when replacing the air in the cylinders

ROUTINE CHECKS

It is a mandatory requirement that all escape apparatus shall be checked at monthly intervals.

In addition, apparatus issued to wearers should be checked when issued and daily thereafter.

Apparatus held in ready-use lockers should be checked daily.

Apparatus held ready for use in a central store must be checked monthly.

Routine checks consist of the following:



Check that the contents gauge needle is in the green sector, showing that the cylinder is fully-charged.

Check that the bag is clean and undamaged.



Check that the anti-tamper tags are in place and unbroken.

Check that access to the bag is unobstructed.

Check that the quick fire strap and pin are in place.

Apparatus that fails any of these checks must be withdrawn from use and returned for workshop service or repair.

AFTER-USE CLEANING

CAUTION:

DO NOT immerse the hood or reducer/cylinder valve. Fluid must not enter the inner mask.

Wipe the surface of the hood and bag using a clean lint-free cloth moistened in a solution of **Distel™** (available from **Scott Safety** in 1 litre and 5 litre containers) and warm water.

Allow the hood and bag to dry naturally away from direct heat and sunlight.

Disinfect the neck seal using a **Distel™** hygienic wipe, available from **Scott Safety**.

Use an **Exxene™** de-misting wipe, available from **Scott Safety**, to polish the visor.

CHARGING CYLINDERS

WARNING:

HP compressors and charging apparatus must only be used by trained operators.

Wear eye protection when working with HP air.

Air used to charge cylinders must conform to EN 12021:2014.

Remove Cylinder from Bag:

Break anti-tamper tags, open the bag flap carefully and release quick-fire strap from firing pin.

Open the bag fully and check that firing pin is fully home. If necessary push the actuator into the reducer/cylinder valve and fit the firing pin.

Ease the contents gauge through the slot in the bag window and withdraw the cylinder from the bag.

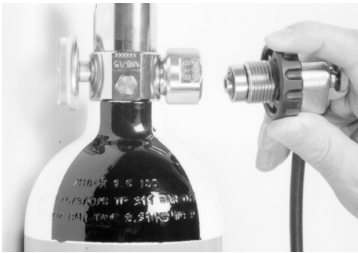
Flex the hose and check for wear and damage. Return apparatus for service if hose is worn or damaged.

Charge Cylinder:

Remove the charging adaptor dust cover and store safely for use later.



Fit the firing pin and quick-fire strap.



Fit 200 bar G5/8 pattern charging connector to the charging adaptor.

CAUTION:

DO NOT immerse the cylinder valve.

Keep the reducer/cylinder valve clear of the water and immerse the cylinder vertically in water so that three quarters of the cylinder is covered.

Slowly open the compressor supply valve. Charge cylinders at 40 L/min, (10 min.

cylinders should take approximately 10 minutes to charge and 15 min. cylinders approximately 15 minutes), then close the compressor supply valve.

When the cylinder has cooled check that it is full. If necessary, open the compressor supply valve briefly until the contents gauge shows full.



Close the compressor supply valve, bleed off pressure from the supply hose, disconnect the charging adaptor from the cylinder and fit the charging adaptor dust cover.

Re-fit Cylinder into Bag:

Remove the cylinder from water, dry thoroughly and fit it into the bag.

Fit the contents gauge through the slot in the bag so that the gauge can be seen clearly when the bag is closed.

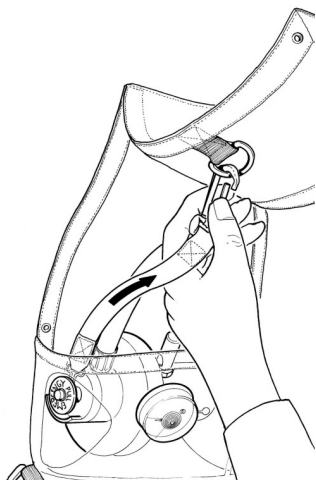


Feed approximately half of the breathing hose into the bag.



Fold hood into bag and arrange the breathing hose under the rear of the hood so that it will not foul when the hood is pulled from the bag.

Fit quick-fire strap to the bag flap.



WARNING:

When fitting the quick-fire strap, check that it will not foul the air hoses or wrap round the reducer/cylinder valve when pulled.



Close the bag flap and fit anti-tamper tags.

WORKSHOP REPAIR AND ANNUAL SERVICING

The apparatus must be returned for workshop servicing if:

The anti-tamper tag is broken.

The contents gauge shows less than full.

The apparatus has been used.

A scheduled, annual service is due

(please refer to the ELSA Service Manual).

Apparatus stored in a corrosive, dusty, or humid environment may require more frequent servicing. Please contact **Training and Technical Support Services** if you have any service or operating enquiries.

OBSOLESCENCE

Refer to product marking and packaging.



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