



**HART**

**Protecting Assets,  
Safeguarding Lives**



## CATALOGUE

**HIGH PERFORMANCE  
PROTECTION**



**SCOTT**  
Fire & Safety

# ABOUT US

**Hart Engineering was established in 1971 and has been a trusted provider of comprehensive fire protection solutions for over fifty years. We specialize in ensuring personal safety and asset security through our expertise in fire safety systems.**



**We have a dedicated workshop for the servicing and maintenance of 3M Scott SCBA sets. With years of experience working with their products, we have developed extensive expertise in the sale, servicing, and maintenance of breathing apparatus. Our team consists of highly skilled professionals, many with decades of experience, whose dedication ensures that our fire protection solutions meet the highest industry standards while exceeding customer expectations.**

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# SIGMA 2 SCBA

The Sigma 2 is a compliant SCBA set giving the same high levels of respiratory protection as the Contour, but has been packaged to provide a simple & effective solution for use in industry, shipping and other non-firefighting environments.

- Proven high performance pneumatic system
- Compact first breath activated demand valve with bypass
- Flame resistant webbing with kevlar cylinder band
- Option of full face mask (Scott Promask PP or Vision 3)
- Corrosion resistant Nickel plated components
- Easy to use
- All components are serviceable and easy to maintain
- Approved with 200 & 300 bar cylinders



Sigma 2's proven durability, reliability and appeal is confirmed by an extensive user base who demand a combination of maximum performance and the operational quality.

# Breakdown of Sigma 2 SCBA Components



## Pneumatic System

The heart of the Sigma 2 set is a simple and reliable two-stage pneumatic system.

A first breath activated positive pressure demand valve provides low breathing resistance and excellent dynamic performance - particularly at high flow rates.

A first stage pressure reducing valve features only two moving parts and accepts cylinder pressures of up to 300 bar without adjustment.

A cylinder connector assembly with standard breathing air thread is fitted, with an easily removed bronze filter to protect the pneumatics.

The system includes a shoulder mounted combined pressure indicator with photo-luminescent face marking for low-light legability and a robust stainless steel and polycarbonate case with a protective rubber shroud.

A warning whistle has an operating pressure of 55 bar.

## Full Face Masks

- Wide choice of facemasks from the Vision 3, Promask PP and Panaseal ranges





# ProPak Sigma



## Description

The 3M™ Scott™ ProPak Sigma has been designed for use as a compliance set in marine or industrial fire fighting environments as a cost-effective solution with minimal padding.

The entire 3M™ Scott™ ProPak range has been approved to EN 137:2006 Type 2, incorporating the stringent full flame engulfment test and the MED.

## Product highlights

- EN 137:2006 Type 2 MED approved breathing apparatus
- Compliance set for marine or industrial fire fighting environments
- Rigid backframe construction
- No tools required to remove pneumatics
- Simple to service and maintain
- Webbing upper and lower harness to allow for ease in cleaning

### Pressure indicator and warning whistle

Bourdon tube type dial indicator

Heat and impact resistant polycarbonate lens

### Hoses

Stainless steel swivel hose fittings

#### Medium pressure hose

Maximum working pressure	16 bar
Minimum burst pressure	80 bar

#### High pressure hose

Maximum working pressure	450 bar
Minimum burst pressure	800 bar

### Weight/dimensions

Weight	Single configuration (less cylinder) 2.6kg Single configuration and facemask (less cylinder) 3.2kg
Length	630mm
Width	285mm
Depth (with 6.0 litre 200 bar cylinder)	215mm

## Ordering information

Part number	Description	Applications
ProPak-Sigma	EN 137 Approved, Type 2	Marine/industrial fire fighting

# Breakdown of ProPak Sigma Components



## 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 and hands free bypass facility.

## Reducing valve

First stage pressure reducing valve featuring non-adjustable, spring loaded piston mechanism and outlet supply protected by pressure relief valve.

## Communications

3M Scott offers the EPIC 3 voice projection unit, which increases intelligibility when using Promask and Vision.

The EPIC 3 Radio Interface offers full Bluetooth radio integration and voice projections, and for users that prefer a traditional radio interface we offer the Sabrecom communications interface that fully integrates with your existing radio and preferred choice of facemask. Both EPIC 3 RI and Sabrecom are intrinsically safe and approved to EN 136 Class 3.

## Options

The ProPak Sigma can be specified in many configurations including Duo, Split Demand Valve Coupling (SDC), Y-Piece (Y2C) and attachments for Airline, which can be used for Rescue Second Man and Decontamination.



# ProPak-f



## Description

The 3M™ Scott™ ProPak-f is a Type 2 open circuit, self-contained, compressed air breathing apparatus. It consists of a back plate, padded carrying harness and pneumatic system, containing a cylinder connector, reducer, pressure gauge, whistle and demand valve.

The ProPak-f can be configured in a number of different ways with various size single cylinders. There are also a range of variants available including Airline (AC), Split Demand Valve Coupling (SDC or Y2C), Quick Connect Option or Duo variants.

The ProPak-f is used in conjunction with a range of composite or steel cylinders and the choice of Vision 3, Promask PP facemask or AV-3000 HT (with the EZ-Flo Demand valve fitted).



## Product highlights

- Certified to AS/NZS 1716:2012 and EN137:2006 Type 2 MED
- Designed for use by the Fire Service or the Oil & Gas market and industrial market
- the comfort of the padding means that it can also be worn in industrial applications where comfort is vital such as long duration usage
- Rigid backframe construction
- Easily removable pneumatics
- Simple to service and maintain



## 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.

# Specifications of ProPak-f

## Approvals

CE marked in accordance with EN 137:2006: Type 2

MED (Shipswheel)

## 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 and hands free bypass facility. Components injection moulded from polyamide with rubber seals and diaphragms.

First breath activation	-20 to -30 mbar
Peak flow performance	In excess of 1000 litres/minute
Bypass flow	150 litres/minute nominal
Static positive pressure	1.0 – 4.0 mbar

## Reducing valve

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
Flow restrictor to gauge supply hose	<25 litres minute

## Pressure indicator and warning whistle

Bourdon tube type dial indicator

Heat and impact resistant polycarbonate lens

Safety blow-out vent in rear of gauge

Accuracy	+/- 10 bar between 40-300 bar
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## Hoses

Stainless steel swivel hose fittings

### Medium pressure hose

Maximum working pressure	16 bar
Minimum burst pressure	80 bar

### High pressure hose

Maximum working pressure	450 bar
Minimum burst pressure	800 bar

## Weight/dimensions

Weight	Single configuration (less cylinder) 3.2kg Single configuration and facemask (less cylinder) 3.8kg
Length	630mm
Width	285mm
Depth (with 6.0 litre 200 bar cylinder)	220mm



**SCOTT**  
Fire & Safety

# 3M™ Scott™ ELSA

## Emergency Life Support Apparatus





# EEBD-ELSA 15B, Scott Safety



The ELSA is an escape breathing apparatus which provides a constant supply of air for rapid escape from hazardous industrial and marine environments.

The ELSA is available in duration of 15 minutes in high visibility PVC or black anti-static polyurethane materials. The ELSA apparatus consists of a cylinder with combined cylinder valve and reducer, supply hose to constant flow hood and stowage bag. The ELSA is activated upon opening the bag whereby a pin which is attached to the bag via a strap is released.

## Product highlights:

- Simple and quick to operate
- Reliable and robust
- Ensure maximum protection
- Breathing protection: 15 min
- Material cylinder: steel
- Content: 3 liter / 200 bar
- Colour: Orange
- Features: Automatic quick fire activation
- Corrosion: Resistant nickel plated components
- Dimensions: L 520 x W 135 x H 340 mm
- Total weight: 7 kg

# Breakdown of EEBD-ELSA 15B Components

Flat visor on three sides

Ori-nasal mask

Supply hose

Elastomeric neckseal

Quick release pin

Activating strap

Contents indicator

Combined cylinder valve and pressure reducer with charging connector

Whistle

2 or 3 litre 200 bar steel cylinder

## The 3M Scott ELSA hood

The hood is fabricated from PVC coated materials with an ozone resistant neckseal.

The three sided flat visor allows the hood to be flat packed avoiding creases to the visor and allowing rapid removal from the bag.

The large visor area provides peripheral vision.

An orinasal inner mask prevents misting and reduces carbon dioxide dead space.



# Servicing of 3M SCBA Sets

At Hart, our 3M Certified Technicians prioritize the safety of your workers by providing comprehensive inspection, maintenance, air-refill, testing service and eventual certification.

Our Maintenance and Servicing programs include:

- ✓ Visual Inspection
- ✓ Clean and Disinfect
- ✓ Check straps, hoses and gauge position
- ✓ First-Stage Pressure Check
- ✓ Inspect the Sintered Filter
- ✓ Cylinder Charge to Correct Working Pressure
- ✓ Check Charged Pressure
- ✓ Conduct Hydro-static testing
- ✓ Check Test Date of Cylinder
- ✓ Certification
- ✓ Posi Check



## Repairs and parts

- Our certified technicians use genuine 3M parts to replace any worn or faulty parts.
- We repair all SBCA according to the manufacturer's specifications and procedures.



# Project Reference

Below are examples of clients we have supplied & serviced with 3M Scott SCBA sets for our past projects



Changi Airport



Tan Tock Seng Hospital



Shell Eastern Petroleum



Singtel



MINDEF



Defence Science & Technology Agency



NUS University



Port of Singapore Authority



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