

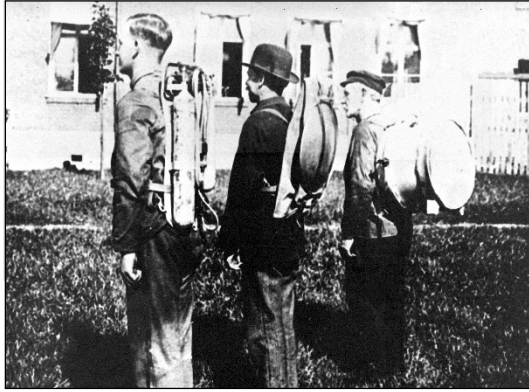


INTERSPIRO

Keeps You Breathing



**We've worked for
almost a hundred
years to keep
professionals
breathing in
hazardous
environments**



History

Keeping professionals breathing – for a hundred years

- Interspiro began as a part of AGA, founded in 1904 by Nobel Prize winner Gustaf Dalén.
- The company's leading position in regulator technology paved the way for advanced applications in the field of respiratory protection
- First breathing apparatus:
 - » for firefighting, in the early 1920's
 - » for diving, in 1948
- “AGA Spiro” becomes Interspiro in 1983





Technological Milestones

Many of our breakthroughs have become industry standard

- 1965 300 bar technology was introduced
- 1971 Positive pressure was invented
- 1977 Ventilation of gas-tight suits
- 1991 Full composite cylinders
- 1996 Computerized SCBA – Spirotroniq
- 1997 Integrated ambient air hatch – S mask
- 2002 CBRN approved SCBA
- 2003 High pressure surface supply – DP1
- 2010 Hands-free team talk – Spirocom
- 2015 Harness with a minimum of textile – Incurve



Interspiro World

Interspiro is a member of the Ocenco Group



- **Headquarters**
 - » Interspiro AB (Sweden)
- **Sales & Service Companies**
 - » Interspiro Inc. (USA)
 - » Interspiro GmbH (Germany)
 - » Interspiro Ltd. (United Kingdom)
 - » Interspiro GesmbH (Austria)
 - » Interspiro BV (Netherlands)
 - » Interspiro AG (Switzerland)
 - » Interspiro Sdn Bhd (Malaysia)
 - » Interspiro Safety Equipment Pvt Ltd (India)
- **Production & Central Warehouse**
 - » Interspiro Production SIA (Latvia)



Firefighting

Breathing apparatuses for
fire services and other
first responders



Diving

Breathing apparatuses for
professional divers



Shipping & Industry

Breathing protection for
industrial use

Products for Shipping



SCBA

Self-Contained Breathing Apparatus



- **Spiromatic 90U**

Spiromatic 90U is a excellent for industrial and maritime environments.

The configurations are CE approved according to European product standards and approved according to the Marine Equipment Directive (“ship wheel mark”).

SCBA

Self-Contained Breathing Apparatus



- **Spiromatic 90U**
- Padded shoulder straps and easily adjusted hip belt buckles
- Well-proven pneumatics and robust design
- Mask and breathing valve in a compact design
- Audible alarm placed on chest



SCBA

Spiromatic 90U configurations

- With or without face mask breathing valve
- Cylinders are sold separately
- Two face masks variants are delivered as standard:
 1. S mask with Ambient air hatch
Extended duration time by using ambient air in stand-by.
 2. S mask with First breath activation
Activates automatically when user takes the first breath.
- Basic configuration or extra connection for breathing hose and/or extra air connection for airline supply

S Masks

Face mask and breathing valve



- S Mask available in two variants
 - » Ambient air hatch
 - » First breath activation

Ambient air hatch

Standby mode



The mask is equipped with an ambient air hatch enabling the user to have the mask fully donned and still breathe ambient air to save the compressed air in the cylinder. With a very simple operation, a push on the hatch cover, the air from the cylinder is activated.

- Breathing valve always correctly connected
- Breathing valve always protected from dirt, contamination and mechanical exposure.

Ambient air hatch

Standby mode



- Demand controlled breathing valve activated from inner mask which gives very good breathing performance
- Prepared and compatible with voice communication systems, "Heads-Up Display" and spectacle kit
- Ergonomic head harness with easily operated buckles
- The standard version is made from natural rubber and has a 5-point head harness.
Available in the three different sizes Standard size, Small size (S) and Extra Large size (XL).

First breath activation

Automatic On



The mask is automatically activated when the user takes the first breath.

- Breathing valve always correctly connected
- Breathing valve always protected from dirt, contamination and mechanical exposure.

First breath activation

Automatic On



- Demand controlled breathing valve activated from inner mask which gives very good breathing performance
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Spirocom™

Simpler communication – safer work

Spirocom is a compact voice communication system built to handle the tough conditions characterized by the site of a fire.

- The wired version is available in two variants
 - » **Spirocom XL** PTT + TeamTalk
 - » **Spirocom L** PTT

PTT = Communication through long distance radio unit

TeamTalk = Internal short range communication inside a team of fire fighters



Spirocom™

Simpler communication – safer work

- PTT button of slide type for significantly easier activation and better ergonomics.
- Mode button / On and Off button.
- Cable that is easily connected to the long-range radio.
- The desired speaker position against the ear is easily set with the flexible speaker arm.
- The microphone is installed into the speech cone.



Spirocom™

Simpler communication – safer work

- Installation on the mask is very easy with a quick connector.
- A low battery is indicated with a blinking red LED on the mask unit and a voice that says “Low bat”.
- Powered with three AAA batteries, or for some models via the battery in the long-range radio.
- The sound volume is adjusted using the long-range radio.

Steel Cylinders

Cylinder volume 6 L



- Painted yellow
- Standard variant with in-line (hand wheel pointing down) cylinder valve.
- Other cylinder valve options:
 - » Safety ratchet to prevent unintentional closing
 - » 90 degree valve
 - » 180 degree valve
 - » Pressure gauge
 - » Excess Flow Valve (EFV) reducing the air flow from the cylinder in case of damage or unintentional opening

Steel Cylinders

Cylinder volume 6 L



- Empty cylinder excluding cylinder valve
 - » Length: 510 mm
 - » Diameter: 140 mm
 - » Weight: 7,2 kg
- Work pressure is 300 bar



Composite Cylinders

Ultra-light full composite (EN- ISO 11623 Type 4)

- Volume 6,8 L or 9 L
- Unlimited service life
"NLL" — Non-Limited Life
- Painted yellow
- PET liner (blown thermoplastic polyester)
- Carbon fiber reinforcement
- Epoxy resin



Composite Cylinders

Ultra-light full composite (EN- ISO 11623 Type 4)

- Standard variant with in-line (hand wheel pointing down) cylinder valve.
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 - » Safety ratchet to prevent unintentional closing
 - » 90 degree valve
 - » 180 degree valve
 - » Pressure gauge
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Composite Cylinders

Ultra-light full composite (EN- ISO 11623 Type 4)

- Empty 6,8 L cylinder excluding cylinder valve
 - » Length: 522 mm
 - » Diameter: 164 mm
 - » Weight: 2,9 kg

- Empty 9 L cylinder excluding cylinder valve
 - » Length: 545 mm
 - » Diameter: 184 mm
 - » Weight: 3,9 kg

- Work pressure is 300 bar

Spiroscape (EEBD)

Open circuit unit with compressed breathing air



- The Spiroscape Emergency Escape Breathing Device (EEBD) is used to escape from smoke-filled or toxic environments.
- It is commonly used onboard ships and in industrial facilities and can be used as rescue equipment in official buildings
- **Spiroscape variants**
 - » 200 bar version, 15 minutes & CE approved
 - » 3000 psi version, NIOSH approved
 - » MED & SOLAS & IMO approval

Spiroscape (EEBD)

Open circuit unit with compressed breathing air



- Once donned, the user can focus on escape. The unique ambient air valve automatically opens when the cylinder is empty - eliminating the risk of suffocation inside the hood and no air is wasted on a low air warning alarm.
- The patented air distribution system expels carbon dioxide from the hood optimizing the use of air from the cylinder.
- Quiet air delivery system allows voice communication
- The air flow activates by pulling the quick start tab which at the same time opens the zipper on the carrying bag, giving the user access to the hood

Spiroscape (EEBD)

Open circuit unit with compressed breathing air



- An anti-tamper tag verifies the integrity of the unit and the cylinder gauge is read from the outside.
- The cylinder can be easily recharged with the simple quick fill system, making the unit easy to re-use and ideal for training. To charge the Spiroscape unit the Quick fill adapter is needed.
- The hood has a very flexible neck seal providing an effective seal and making the hood easy to don and comfortable to wear. The two-layered hood positions the inner mask correctly.

Spiroline

Airline system



- For inspection, decontamination procedures or search and rescue operations.
- Available as:
 - » Medium Pressure (MP) system
 - » High Pressure (HP) system
- Several variants of user interface.

Spiroline MP

Medium Pressure airline system



- The Spiroline TRS is a mobile unit with two connections for cylinders/air supplies, each with a pressure regulator, a pressure gauge and a warning whistle. Medium pressure gauge and two connections for airline hoses.
- Medium-pressure supply hose with one male and one female connection. Variants available with connection type "Interspiro" or "Euro".
- Optional lengths ranging from 5 meters up to 30 meters. Two hoses may be connected together for a maximum overall length of 60 meters.

Spiroline HP

High Pressure airline system



- Spiroline HP is a ground-breaking innovative airline system supplying high pressure all the way to the user.
- Spiroline HP consist of:
 - » HP1 Distribution Panel
 - » High Pressure supply hose with regulator unit
 - » Holdall - carrying / storage bag – with winding posts fitting up to a 60 meter supply hose
 - » Two cylinders working as air supply

Spiroline HP

Distribution Panel HP1

- The Spiroline HP1 is a mobile and easy-to-use distribution panel

Suitable for rapid deployment in remote locations.

Two connections for cylinders/air supplies and a central block with pressure gauge and warning whistle which automatically switches to the air supply with the highest pressure.



Spiroline HP

Supply hose with regulator



- Small diameter and low weight.
- A 60-meter supply hose only weighs 5.3 kg and is extremely easy to handle.
- Possible to have hose lengths up to 120 meters.
- The supply hose is available with connector of type "Interspiro" and connector of type "Euro". The Euro variant includes a warning whistle that warns the user if pressure in the air supply is disrupted.

Spiroline MP & HP

User interface options



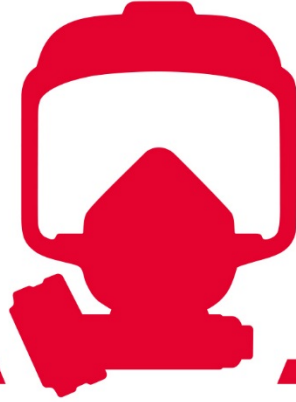
- SCBA with airline connection
- Hip-worn belt with waist buckle and breathing hose to mask. Optional pressure gauge. Variants with connection of type "Interspiro" and type "Euro".
- Bail-out unit with integrated fall arrest harness and other options on project basis.



SCBA Accessories

For a higher level of safety

- **E.A.S.E.** – Emergency Air Supply Equipment
Used to assist a trapped fire fighter.
- **EVAC hood** – Provides protection during rescue of distressed persons to a safe zone.
- **SuperPass II** – Personal Alert Safety Systems
Warning system detecting lack of movement and providing a panic button alarm.
- **Test Equipment** – Ranging from small and portable mechanical units to computerized versions.



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