

Rapid Intervention Team Rescue Pack Operating Instructions



WARNING!

Before use of the Rapid Intervention Team Rescue Pack in an emergency/rescue situation, the user must have been given proper training in its use, have read and understood these Operating Instructions and demonstrated proficiency to a responsible teacher or supervisor. Failure to do so can result in injury or death for the user and can have serious consequences for people to be rescued and/or items of value to be saved.

INTERSPIRO'S LIMITED WARRANTY

INTERSPIRO warrants this product against failure to comply with INTERSPIRO's published specifications for the product and against defects in materials and workmanship for a period of twelve (12) months after date of purchase. Within that period, INTERSPIRO will, at its option, repair or replace the product or refund your purchase price if INTERSPIRO determines the product does not conform to INTERSPIRO's specifications or is defective in material or workmanship.

To make a warranty claim, contact your authorized INTERSPIRO distributor or INTERSPIRO directly. For telephone inquiries please have your product invoice or other proof of purchase available. If you write, include proof of purchase and a written explanation of the problem. Warranty servicing will be provided on-site or at one of INTERSPIRO's authorized service facilities, at INTERSPIRO's discretion. If shipment to an authorized service facility is required, shipping instructions will be provided by INTERSPIRO or your authorized INTERSPIRO distributor. Do not ship any product or component without shipping authorization. All shipping charges to INTERSPIRO's service facility must be prepaid by the customer.

This limited warranty does not apply if the product has been (I) involved in an accident or subjected to misuse, improper maintenance or negligence; (II) altered or repaired in any way that has, in INTERSPIRO's judgment, adversely affected its performance or reliability; (III) used in an application or for a purpose for which the product was not designed or under stresses or conditions exceeding those specified for the product; or (IV) damaged after leaving INTERSPIRO's facility.

This limited warranty is valid only for the original purchaser, and is not transferable.

IMPORTANT! THIS LIMITED WARRANTY IS EXCLUSIVE AND IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. INTERSPIRO DISCLAIMS ALL OTHER LIABILITIES AND OBLIGATIONS, INCLUDING TO THE EXTENT ALLOWED BY LAW, NON-CONTRACTUAL LIABILITY FOR PERSONAL INJURY OR PROPERTY DAMAGE BASED UPON ITS NEGLIGENCE, STRICT LIABILITY OR ANY OTHER GROUND. TO THE FULL EXTENT ALLOWED BY LAW, AND REGARDLESS OF WHETHER LIABILITY IS ASSERTED ON THE BASIS OF BREACH OR WARRANTY, NEGLIGENCE, STRICT LIABILITY, BREACH OF CONTRACT OR OTHERWISE, INTERSPIRO SHALL NOT BE RESPONSIBLE FOR SPECIAL, INCIDENTAL, CONSEQUENTIAL OR PUNITIVE DAMAGES, INCLUDING LOSS OF PROPERTY, LOSS OF PROFITS OR REVENUES, DOWN-TIME COSTS AND THE COST OF SUBSTITUTE EQUIPMENT (SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU).

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

RAPID INTERVENTION TEAM Rescue Pack

CAUTIONS AND LIMITATIONS

- D. Air-line respirators can be used only when the respirators are supplied with respirable air meeting the requirements of CGA G-7.1 Grade D or higher quality.
- E. Use only the pressure ranges and hose lengths specified in the user's instructions.
- J. Failure to properly use and maintain this product could result in injury or death.
- M. All approved respirators shall be selected, fitted, used, and maintained in accordance with MSHA, OSHA, and other applicable regulations.
- N. Never substitute, modify, add, or omit parts. Use only exact replacement parts in the configuration as specified by the manufacturer.
- O. Refer to users instructions, and/or maintenance manuals for information on use and maintenance of these respirators.
- S. Special or critical users instructions and/or specific use limitations apply. Refer to instruction manual before use.

Approved for emergency rescue respiratory protection during escape from oxygen deficient atmospheres, gases, and vapors at temperatures above -25 degrees F (-32 degrees C). Approved only when compressed air reservoir is fully charged with air meeting the requirements of the Compressed Gas Association Specification G-7-1 for Type 1, Grade D air or higher quality, as well as meeting a dew point level of -65°F (-54°C) or dryer (24 ppm v/v or less), and a maximum particulate level of 5 mg/m³ air. The container shall meet applicable DOT specifications.

Approved for respiratory protection during emergency escape from hazardous atmosphere when supplied with respirable air at a pressure between 60 and 125 pounds per square inch and when using hoses with a total length between 25 and 300 feet, with a maximum of 12 hose lengths.

Contents

Important information to user	5
Technical description	6
Backpack/harness assembly	6
Air supply	7
Regulator manifold with low air warning	8
Audible warning	8
Revitox rescue mask	9
Usage	10
Preparation for use	10
Revitox rescue mask	12
Leakage and Function Test of Rescue Pack rescue breathing apparatus	13
Emergency rescue of an injured person	16
If the injured person is breathing spontaneously	17
If the injured person is not breathing spontaneously	18
During use	19
Additional Air supply	19
Emergency rescue of a firefighter wearing an SCBA	20
During use	21
Additional Air supply	21
Emergency operation	22
After use	23
Cleaning and maintenance	24
Air supply	24
Revitox mask	24
Cylinder charging	25
Service and testing	25
Replacement/Retirement Considerations	26
Storing the apparatus	26
Marking recommendations and restrictions	27

Important information to user

Please read this information carefully before referring to the apparatus instructions.

The Rapid Intervention Team Rescue Pack breathing apparatus should only be used by adults in good physical and physiological condition.

The Rapid Intervention Team Rescue Pack breathing apparatus must be used in a manner consistent with NFPA 1500, Standard on Fire Department Occupational Safety and Health Program.

The face mask may not seal properly with your face if you have a beard, heavy sideburns or other physical characteristics interfering with the mask's contour.

An improper facial seal may allow non-respirable air to leak into the mask, reducing or eliminating respiratory protection. The seal must be tested before each use.

OSHA 1910.134 requires that before any employee uses a positive pressure tight-fitting facepiece, they must pass an appropriate qualitative or quantitative fit test initially and at least annually thereafter.

Do not use Rapid Intervention Team Rescue Pack breathing apparatus in an emergency/rescue situation unless you have received proper training in its use, have read and understood this Instruction manual and demonstrated proficiency to a responsible teacher or supervisor. Special attention must be given to:

- face seal
- test before use
- awareness of different durations at different conditions
- emergency situation (loss of air and free air flow)
- procedure at low-air alarm.

Only holders of a valid INTERSPIRO Service Certificate may service and test SPIROMATIC S apparatus.

Failure to comply with these special points can result in respiratory injury or death for the user and may have serious consequences for people to be rescued and/or items of value to be saved.

Technical description

The Rapid Intervention Team Rescue Pack system is a compressed air breathing apparatus for rescue work in a contaminated environment. The apparatus consists of:

- A backpack/harness assembly
- An air supply cylinder
- A regulator unit with audible low air alarm
- A Revitox rescue mask with breathing valve and hose
- A 25' extra air/rescue hose
- A carry bag with room for additional tool storage

NFPA 1500 requires fire departments to have a rapid intervention team available for the rescue of members operating at emergency incidents. The Rapid Intervention Team must be equipped with the appropriate personal protective clothing, SCBA and any specialized rescue equipment that might be needed.

The Interspiro Rescue Pack has been developed as specialized rescue breathing apparatus equipment. The Rescue Pack is intended for the rescue of individuals in an IDLH atmosphere not wearing an SCBA. The Rescue Pack can also be used to for a firefighter wearing an SCBA in need of an additional dedicated rescue air supply.

NOTE: Rescue of Firefighters already wearing SCBA and requiring additional air can also be accomplished using the Interspiro Buddy Breathing Hose (see the Spiromatic S Operating Instruction).

The Rapid Intervention Team Rescue Pack breathing apparatus uses clean dry air compressed in a cylinder, carried on a backplate. The air is fed to a pressure regulator which reduces the cylinder air pressure to a secondary pressure of approximately 110 psi. The air is then supplied to a hose assembly with a "Y" connector. The "Y" connector can supply an SCBA or the Revitox rescue mask.

An audible warning device and the first stage regulator are located in a manifold bolted to the backplate at the handwheel connection to the cylinder valve. Both the audible warning device and the regulator unit are separate components and therefore easily assembled or dismantled from the unit in order to permit fast exchange service if required.

BACKPACK/HARNESS ASSEMBLY

The Rapid Intervention Team Rescue Pack is bolted to backpack/harness assembly.



Harness assembly

THE RAPID INTERVENTION TEAM RESCUE PACK AIR SUPPLY

The compressed air supply for the Rapid Intervention Team Rescue Pack utilizes lightweight aluminum/composite cylinders wrapped in fiberglass, kevlar glass or carbon fiber.

The cylinders are fitted with a valve which includes a built-in pressure gauge. The cylinder valve is equipped also with a burst disc, designed to rupture and let air out if the cylinder should be inadvertently overcharged.

CAUTION!

Should the cylinder be exposed to a pressure that causes the burst disc to rupture, it must be returned to an authorized SPIROMATIC S service center for inspection and repair.

Table 1. Air cylinders

Model	Approx. content of free air in cu. ft.	Charging pressure psi	Duration*
9030	87	4500	60 min.
6630	66	4500	45 min.
4530	45	4500	30 min.
4515	45	2216	30 min.

RECOMMENDATION

The Interspiro Rescue Pack is always recommended to be used with a 60 minute cylinder.

LIMITATION

Approved only when compressed air reservoir is fully charged with air meeting the requirements of the Compressed Gas Association Specification G-7-1 for Type 1, Grade D air or higher quality, as well as meeting a dew point level of -65°F (-54°C) or dryer (24 ppm v/v or less), and a maximum particulate level of 5 mg/m³ air. The container shall meet applicable DOT specifications.

CAUTION!

Duration is dependent on the user's exertion, physical and emotional condition, as well as on environmental pressure and whether the cylinder was fully charged and whether the facepiece fits. **DURATION CAN VARY 50 % OR MORE.**

* Duration tested to NIOSH standards.
 Conversion of US units to metric or vice versa.
 1 cuft = 28.3 litres, 1 liter = 0.0353 cuft
 1 psi = 0.0689 bar, 1 bar = 14.5 psi

REGULATOR MANIFOLD WITH LOW AIR WARNING

The regulator manifold assembly is bolted to the backplate/harness assembly and comprises a regulator manifold with a handwheel connector for the cylinder valve, a particle filter, a pressure regulator, a low air warning whistle, and a hose assembly with a "Y" connector.

The regulator unit is of a "plug in" type which means that it is pushed into a manifold and locked in place with a locking clip and cover.

This modular system enables simple servicing to be carried out with minimum down time for the apparatus by using service exchange of modular components.

The pressure regulator used in the Rapid Intervention Rescue Pack is a balanced piston pressure reducer with an extremely high flow capacity. The very high capacity ensures that the positive pressure is maintained in the mask even at low cylinder pressures and at extremely high breathing rates.



Regulator Manifold with supply hose

AUDIBLE WARNING

The audible warning device, like the pressure regulator, is of the "plug in" type. It means that the same simple servicing system as for the regulator can be used.

When the primary air supply pressure has dropped to approximately 25 % the audible alarm will start to sound. The alarm signal is approx. 95 dBA and continues to sound until the cylinder contents are depleted.



Regulator and Low Air Warning Manifold

REVITOX RESCUE MASK

The Revitox is a Spiromatic mask that has been modified with an attachment for artificial respiration.

The Revitox rescue mask is connected via a supply hose with a female quick coupling to the male quick connection of the "Y" connector on the Rescue Pack supply hose.

With the aid of Revitox the rescue personnel can commence a rescue operation immediately in toxic atmosphere.

Revitox can also be used as an extra mask for instance when helping people through smoked filled environments. (see the Spiromatic SCBA Operating Instruction)



Revitox rescue mask with hose assembly

Interspiro Revitox consists of a facemask, cover, breathing valve and a supply hose (2.5 m). Revitox functions as a normal Spiromatic mask with automatic positive pressure. On the breathing valve there is a spring loaded button with which artificial respiration can be performed by alternatively pushing in the button and releasing it.

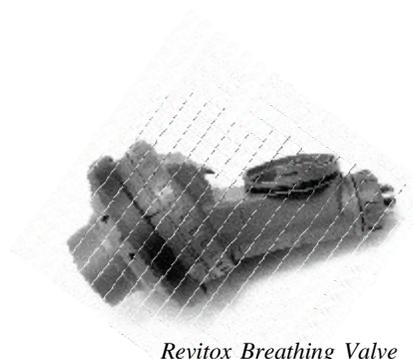
The inhalation air is forced in with a pressure of approximately 180-200 mm water column. The air flow gives efficient lung ventilation and the pressure is so low that the victim, when not unconscious, can breathe against it. The breathing valve is held in the face mask by a bayonet coupling and locked by the cover. The air is supplied to the Revitox by the supply hose connected to the Rescue Pack.



Revitox mask



Locking cover



Revitox Breathing Valve

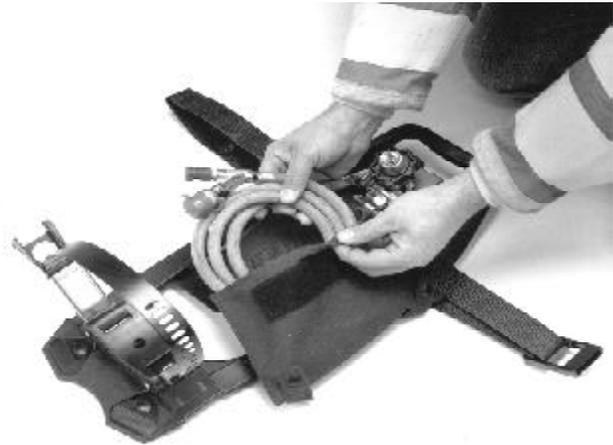


Revitox hose assembly

Usage

PREPARATION FOR USE

1. Open the pouch on the harness and insert the coiled hose assembly into the pouch.



Loading hose assembly into pouch

2. Close the velcro strap to secure the hose assembly inside the pouch.



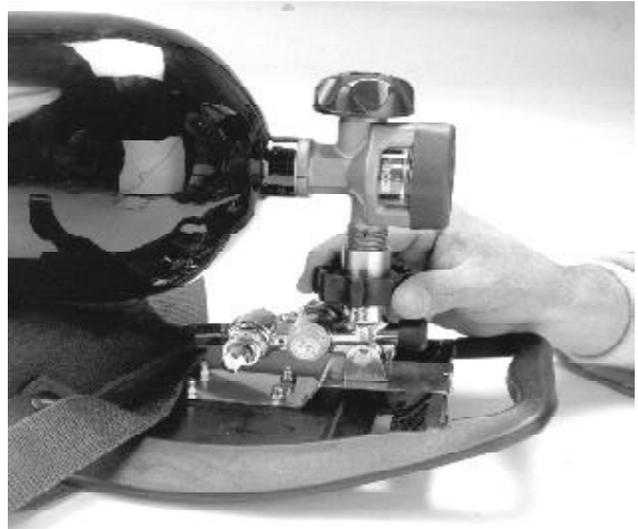
Securing velcro strap

3. Open the toggle link on the harness and check that the strap loop is big enough for the cylinder to be used. Slide the cylinder into the strap loop. Adjust the strap loop by pushing the strap into the guide plate until it fits snugly around the cylinder making sure that the hook on the side engages in one of the oblong holes.



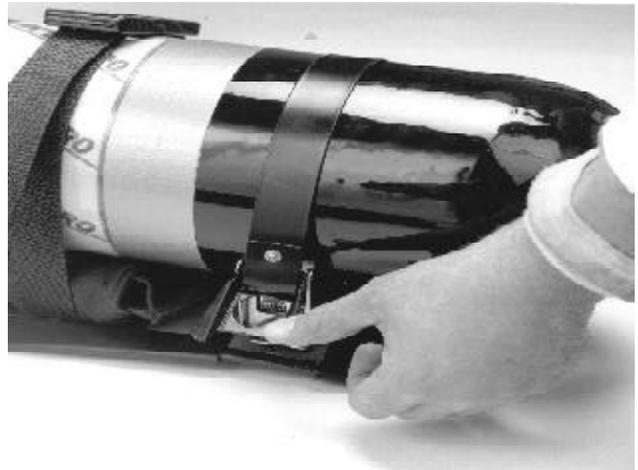
Cylinder Strap adjustment.

4. Connect the regulator unit to the cylinder valve. Tighten the handwheel connector by hand.



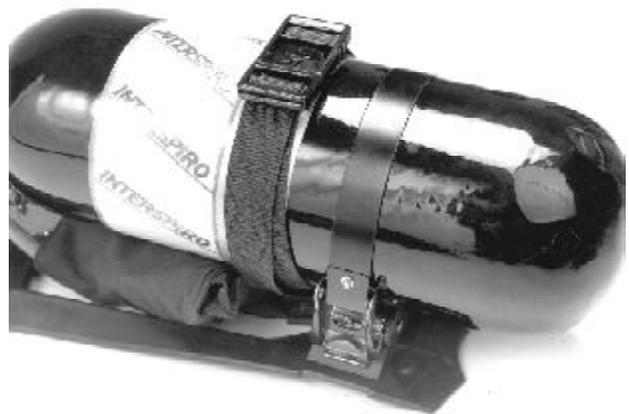
Connecting cylinder valve

5. Close the toggle link.



Toggle link

6. Insert the male buckle of the securing strap and tighten.



Secure belt assembly

REVITOX RESCUE MASK

1. Push the breathing valve into the face mask and turn so that the bayonet coupling connects.
2. Lock the breathing valve in place by pushing in the cover (apply a thin coating of lubricant 331-900-269 to o-ring if needed). Tighten the two handscrews moderately.
3. Connect the supply hose to the breathing valve and tighten the nut at the breathing valve connection.



Connecting the Revitox breathing valve

The Revitox rescue mask is connected via the female quick coupling of the Revitox supply hose to the male quick connection of the "Y" connector of the Rescue Pack. The locking sleeve of the female quick coupling will automatically move forward and snap into place, locking the hoses together.

A 25' extension rescue hose assembly with "Y" couplings on both ends is available as part of the Rescue Pack.



Revitox with hose assembly



25' extension rescue hose assembly

LEAKAGE AND FUNCTION TEST OF THE RESCUE PACK BREATHING APPARATUS

CAUTION!

Prior to and after use, perform a visual inspection of all plastic, rubber and metal parts for damage. If any damaged parts are found the Rescue Pack must be taken out of service and repaired according to the Service Manual. Repairs are to be made by INTERSPIRO or a holder of an INTERSPIRO Service Certificate.

1. Open the pouch and remove the Rescue Pack supply hose.



Remove Rescue Pack supply hose

2. Connect the female quick coupling of the Rescue Pack supply hose "Y" connector to the Revitox rescue mask supply hose female quick coupling. The locking sleeve of the quick coupling will automatically move forward and snap into place, locking the hoses together.

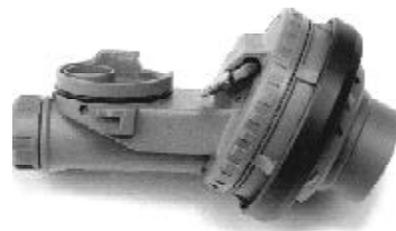


Connecting supply hoses

3. Turn off the positive pressure of the Revitox breathing valve (black lever against the valve housing).



Positive pressure turned off



Positive pressure turned on

4. Open the cylinder valve and charge the system. When pressurized the audible whistle will sound until the pressure is above 1/4 cylinder full cylinder pressure.

NOTE!

The cylinder valve pressure gauge must read full prior to use. NFPA 1404 requires that air cylinders shall be maintained at not less than 90 percent of the rated pressure stamped on the cylinder.



Opening cylinder valve

5. With the positive pressure still turned off, listen for leakage of air in the system.

NOTE!

If any leakage of air is heard or suspected, the unit must be removed from service. The Rescue Pack without the Revitox mask can be checked for leakage by spraying the regulator and cylinder valve with a soap/water solution with the system still pressurized. This leak check is also made during cleaning after each use. Any repairs must be carried out by a holder of an INTERSPIRO Service Certificate.

6. With cylinder valve still open, very briefly turn on the positive pressure of the Revitox breathing valve (the black lever away from the housing). A strong flow of air should be heard.

7. With head harness fully extended and folded over the visor, hold the mask against the face and push in the green button briefly to check the function of the artificial respiration. Do not exhale into the mask. Turn off the positive pressure again.

8. Close the cylinder valve.

9. Slowly release the air until the low air warning activates (approximately 1100 psi). After the low air warning activates the residual air can be evacuated.

10. Open the breathing valve of the Revitox mask by moving the black lever away from the valve housing and let the residual air escape slowly. Wipe the sealing edge of the of the mask with a clean damp cloth.

NOTE!

The Rescue Pack is not equipped with a remote pressure gauge, therefore the 1100 psi activation can not be measured without the use of Interspiro test equipment. This should be checked once a year. If the sound level of the low air warning whistle seems to be below normal, remove the unit from service. Service the low air whistle according to the INTERSPIRO Service Manual. This must be carried out by a holder of an INTERSPIRO Service Certificate.

NOTE!

If any leakage of air is heard or the Revitox mask and breathing valve does not function properly, the unit must be removed from service. Any repairs must be carried out by a holder of an INTERSPIRO Service Certificate.

10. The Rescue Pack emergency rescue breathing apparatus is now ready for use.



Rapid Intervention Team Rescue Pack

LIMITATION

Rescue Pack is only approved for use as an emergency rescue system by trained emergency response teams. The Rescue Pack is only a rescue breathing apparatus and is not to be used as a self-contained unit.

NOTE

The Rescue Pack supply hoses are equipped with male and female quick couplings that are only compatible with the Spiromatic S type couplings. If using the old style Spiromatic, an adapter hose p/n 95566 is available through Interspiro.

EMERGENCY RESCUE OF AN INJURED PERSON

A Rapid Intervention Team wearing SCBA can respond to an emergency rescue with the Rescue Pack. The entire Rescue Pack bag can be carried or dragged inside the IDLH atmosphere. The bag not only carries the Rescue Pack but can also carry additional tools supplied by the emergency response team. Once the team reaches the trapped individual, the Rescue Pack should be removed from the carry bag.

1. Remove the Rescue Pack from the carry bag.

CAUTION!

Training in the donning and before use test procedure should be given before use in an emergency situation. The user must demonstrate knowledge to a responsible teacher or supervisor.

2. Open the pouch and remove the Rescue Pack supply hose.

3. Connect the female quick coupling of the Rescue Pack supply hose "Y" connector to the Revitox rescue mask supply hose female quick coupling. The locking sleeve of the quick coupling will automatically move forward and snap into place, locking the hoses together. Gently pull the hoses to ensure, that the couplings are secure.

NOTE

A 25' extension rescue hose with "Y" couplings on both ends (see pg.12) is available if additional supply hose length is required.

4. Open the cylinder valve.



Removing supply hose



Connecting supply hoses



Opening cylinder valve

IF THE INJURED PERSON IS BREATHING SPONTANEOUSLY

1. Take off any spectacles.
2. Turn on the positive pressure of the Revitox breathing valve.



Turning on positive pressure

3. Place the mask on the face of the injured person.



Place mask on victim's face

4. Place the head harness over the head and tighten the straps, the lower two first. Make sure that hair does not come between the mask and the face. The injured person will now get air. The positive pressure in the mask will preclude any inward leakage.



Tighten head harness straps

IF THE INJURED PERSON IS NOT BREATHING SPONTANEOUSLY

1. Turn the person on his back if possible on a hard surface.
2. Loosen any clothes around the neck. Take off any spectacles.
3. Remove any parts that may prevent free air passage. (eg. denture, secretions).
4. Turn on the positive pressure in order to blow out any toxic fumes.



Turnig on positive pressure

5. Pull the head harness over the head and tighten the straps, the lower two first. Make sure that hair does not come between the mask and face. If there is a risk of the person vomiting do not pull the head harness over the head. Turn the injured person on a side or turn the head on a side and hold the mask against the face.

6. Bend the head backwards as far as possible.

7. Commence artificial respiration by pushing in the green button during approximately 1 second (Count nil-one).

8. Release the button completely (Count nil-two, nil-three). The exhalation is passive and the chest will return to normal position.

9. Continue the artificial respiration by alternatively pushing in and releasing the green button according to steps 7 and 8 (for children the time between pressing and releasing the button should be shorter).

10. Check that the airways are free all the time and that the artificial respiration is effective by noting the rise and fall of the chest.

11. Discontinue the artificial respiration as soon as the injured person is breathing spontaneously.



Artificial respiration

12. If necessary, wrap the webbing belt around the injured person's lower torso and connect the male and female buckles. Tighten securely to the injured person. Continue rescue transport to fresh air.



Connecting buckle

DURING USE

The Rescue Pack rescue breathing apparatus is equipped an audible low air warning whistle. When the primary pressure of the rescue cylinder has dropped to approximately 25% an audible alarm will start to sound. The alarm signal is approximately 95 dBA and continues to sound until the cylindere contents are depleted.

ADDITIONAL AIR SUPPLY

If the injured person is trapped or requires additional air supply, the rescue team can call for a second Rescue Pack. The "Y" coupling of second Rescue Pack supply hose can be connected to the "Y" coupling of the first Rescue Pack without interruption of the air supply.

EMERGENCY RESCUE OF A FIREFIGHTER WEARING AN SCBA

If a firefighter already wearing an SCBA is injured and/or has a low air supply, the Rescue Pack can be utilized as an additional rescue air supply. Carry the bag to the injured firefighter in need of additional air and remove the Rescue Pack for rescue of the person.

1. Open the pouch and remove the supply hose.



Down firefighter requiring extra air supply

2. Connect the female quick coupling of the Rescue Pack supply hose "Y" connector to the extra air male quick coupling of the Spiromatic S SCBA. The locking sleeve of the quick coupling will automatically move forward and snap into place, locking the hoses together. Gently pull the hoses to ensure, that the couplings are secure.

3. The rescuer shall listen for a strong flow of air from the SCBA of the person to be rescued.

A: A strong flow of air would indicate a leakage on the SCBA of the person to be rescued. If a strong flow is heard, disconnect the rescue hose before the Rescue Pack air supply is depleted. Then use the Revitox rescue mask as described previously.

B: If a strong flow of air leakage is not heard, proceed with the emergency rescue.



Connecting Rescue Pack to SCBA

4. Wrap the webbing belt around the injured firefighter's lower torso and connect the male and female buckles. Tighten securely to the injured person. Continue rescue transport to fresh air.



Connectig buckle

DURING USE

The Rescue Pack rescue breathing apparatus is equipped an audible low air warning whistle. When the primary pressure of the rescue cylinder has dropped to approximately 25% an audible alarm will start to sound. The alarm signal is approximately 95 dBA and continues to sound until the cylinder contents are depleted.

ADDITIONAL AIR SUPPLY

If the injured firefighter is trapped or requires additional air supply, the rescue team can call for a second Rescue Pack. The "Y" coupling of second Rescue Pack supply hose can be connected to the "Y" coupling of the first Rescue Pack without interruption of the air supply.

NOTE

A 25' extension rescue hose with "Y" couplings on both ends (see pg.12) is available if additional supply hose length is required.

NOTE

Multiple connections of "Y" couplings are possible to make in an emergency situation.

WARNING

Although multiple connections of "Y" couplings are possible to make in an emergency situation, more than one person breathing from one air supply greatly reduces the duration time of the cylinder air. Rescuer's should only make multiple connections in extreme emergency situations and continue the escape to fresh air immediately.

EMERGENCY OPERATION

There are two major failure modes which require immediate corrective action: loss of demand air supply and free flow of the air supply.

1. Should the injured person be unable to inhale easily, first verify that the Rescue Pack cylinder has not run out of air by reading the Rescue Pack cylinder pressure gauge. Then check that the cylinder valve is fully open. Call for a back-up Rescue Pack if necessary. Leave the contaminated area.

2. Should the unit free flow, you will notice air blowing into the facepiece of the injured person and out of the exhalation valve. Use the Rescue Pack cylinder valve as the control by closing the valve and opening as required. Leave the contaminated area.

EMERGENCY ACTIONS IN BRIEF

At loss of air:

- 1. Check Rescue Pack cylinder air pressure.**
- 2. Fully open cylinder valve and continue rescue escape.**

At free air flow:

- 1. Regulate flow with cylinder valve and continue rescue escape.**

After use

1. If the Revitox was used, remove the face mask by loosening the lowest head harness straps first. Switch off the positive pressure by pressing in the black lever and remove the mask at the same time.
2. Undo the waist belt buckle.
3. Take the Rescue Pack rescue apparatus off the rescued person.
4. Close the cylinder valve.
5. Bleed off the air pressure by turning the positive pressure on (black lever away from the housing).
6. Disconnect the supply hose quick couplings by pushing in on the couplings and pulling back on the locking sleeve of the female quick coupling at the same time.
7. Unscrew handwheel connector of the regulator unit.
8. Remove cylinder from harness.
9. Charge cylinder according to cylinder charging instructions.

Cleaning and maintenance

Regulations state that respirators must be regularly cleaned and disinfected. Furthermore, respirators that are used by more than one person must be cleaned and disinfected after each use.

CAUTION!

Service beyond the following procedures must be handled by a holder of an INTERSPIRO Service Certificate

AIR SUPPLY

1. Check that the positive pressure of the Revitox breathing valve is turned off.

IMPORTANT!

Check the pressure on the cylinder pressure gauge and open the cylinder valve before cleaning the apparatus. The air pressure in the cylinder prevents water from entering the regulator.

2. Put the apparatus, except the Revitox mask with breathing valve and the regulator manifold with warning device into water with a mild detergent.

CAUTION!

Do not use bleach or solutions containing bleach as it can degrade Kevlar and/or rubber parts.

3. Look for bubbles indicating leaks. Any leakage should be repaired by INTERSPIRO or an authorized Service Agent.
4. Wash the apparatus. Clean the regulator manifold and warning device using a brush if necessary to remove heavy dirt. Check the regulator manifold and the warning device for leaks using a soap and water solution.

REVITOX

For maintenance, cleaning, and disinfection of the Revitox, see the Operating Instructions for the Spiromatic mask and breathing valve with automatic positive pressure.

5. After cleaning, rinse in clean water.
6. Close the cylinder valve. Turn on the positive pressure of the Revitox breathing valve to vent the system.
7. Let the apparatus dry. Reassemble the apparatus.
8. Change to a fully charged cylinder. Perform leakage and function test as described on pg.13.

Cylinder charging

The cylinder must be fully charged with air meeting the requirements of the Compressed Gas Association Specification G-7- I for type I, Grade D air, or higher quality, as well as meeting a dew point level of -65°F (-54°C) or dryer (24 ppm v/v or less), and a maximum particulate level of 5 mg/m³ air. The container shall meet applicable DOT specifications.

CAUTION!

The cylinder must be inspected for damage before charging.

Do not overcharge the cylinder. Fill only to the pressure indicated on the cylinder label.

Topping off each cylinder is recommended to ensure proper service time.

Service and testing

The Rescue Pack rescue breathing apparatus was designed for ease of use and maintenance.

To ensure that your Rescue Pack is working properly a complete test at least once a year must be performed, even if it has not been used. These tests are carried out on the SPIROMATIC test equipment which enables you to test all Rescue Pack functions and identify areas requiring repair.

WARNING!

Except for cleaning, lubrication, inspection and test procedures according to this Operating Instruction, only the holder of an INTERSPIRO Repair Certificate should service the Rescue Pack rescue Breathing Apparatus. Work by unauthorized or untrained persons and/or the use of other than INTERSPIRO parts may void the approval and safety of the unit.

When	What
Every day (if used daily)	Check cylinder pressure
Every week (if stored)	Check the cylinder pressure
Before use	See this manual
After use	See this manual
Every year	Complete service and test
Every 3 years	Cylinder reinspection
Every 8 years	Change low pressure hoses

Recommended minimum test and service

WARNING!

The minimum test and service procedures are intended for normal use only. If the Rescue Pack has been exposed to extreme conditions such as extreme heat or cold, harsh liquids or chemicals, heavy duty dust particles, or extreme shock or vibration, the Rescue Pack must undergo a test and inspection by a holder of an INTERSPIRO Service Certificate. If the Rescue Pack does not meet the values in the SPIROMATIC Test Instruction or if it shows signs of wear, the Rescue Pack must be taken out of service and repaired according to the SPIROMATIC Service Manual.

Replacement/Retirement Considerations

When any breathing apparatus component or part shows signs of wear and/or damage, these items must be replaced. The service life of the breathing apparatus can be maintained indefinitely as long as the breathing apparatus meets the values in the SPIROMATIC Test Instructions.

Units contaminated by chemical or radioactive materials must be disposed of or decontaminated in accordance with all applicable regulatory standards

Composite cylinders have a 15 year lifetime according to DOT exemption, provided satisfactory hydrostatic testing is accomplished. If damaged, these cylinders may be repaired or condemned according to the Guidelines for the Visual Inspection of Compressed Gas Cylinders in CGA C-6.2.

Storing the apparatus

Upon completion of all required service, the Rescue Pack should be stored in the carrying case.

Store the apparatus ready for use. The apparatus should normally be stored in dry conditions, well protected from direct sunlight and extremes of temperature.

The Revitox mask assembly should be stored in the mask bag of the Rescue Pack. The supply hose should be connected to the breathing valve. The positive pressure should be turned on.

The cylinder must be fully charged and ready for use.

Follow the minimum Test and Service Requirements..

Marking recommendations and restrictions

Special user identification/markings on Rescue Pack breathing apparatus equipment must be accomplished in a manner that does not interfere with regulatory labels such as DOT. Further, manufacturer traceability markings such as embossed serial numbers or part numbers can not be obscured.

Marking of cylinders and/or other breathing apparatus components may be done with a non-flammable marking medium.

INTERSPIRO

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