



TECHNICAL DATA SHEET

MINE SELF-RESCUER PROX M60



Purpose and conditions of use

PROX M60 is designed to protect the respiratory system of underground workers in coal mines and industrial personnel in emergency situations accompanied by unbreathable and hazardous atmosphere. PROX M60 is a single-use respiratory protective device that is ready for immediate use by people over 16 years old.

PROX M60 is efficient at ambient temperatures from minus 20 to plus 60 ° C, relative air humidity up to 100% and atmospheric pressure from 93.1 to 133.3 kPa (700 to 1000 mm Hg).

Component parts

Smoke goggles



Nose clip



Mouthpiece



Heat exchanger



Connecting hose



Breathing bag



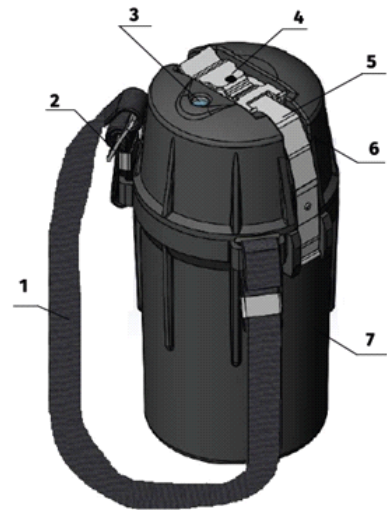
Starting device



Regenerative canister



PROX M60 assembly



- 1 – carrying strap
- 2 – buckle
- 3 – tightness indicator
- 4 – seal
- 5 – tie band
- 6 – case cover
- 7 – case body

Design and operation

The respiratory system is isolated from the environment to form a breathing circuit that maintains a breathing gas mixture. The breathing gas mixture flow is carried out in a pendulum system. When you exhale, the flow through the mouthpiece and a connecting hose enters the regenerative canister, where carbon dioxide and moisture are absorbed and oxygen is released in a volume proportional to the volume of absorbed substances. From the canister, the breathing gas mixture enters the breathing bag. During inhalation, the oxygen-enriched breathing gas mixture from the breathing bag enters the canister for the second time, where it is additionally cleaned of carbon dioxide and returns to the respiratory system through a connecting hose. The excess of the breathing gas mixture leaves the breathing bag, lowering the pressure.

Specifications

Name of indicator	Value of indicator
Protective factor (multiplicity of reducing the level of human exposure to a harmful or hazardous factor) - not less	2 · 10 ³
Breakthrough time, not less, min: - when performing an average physical activity (exit from the emergency section with an estimated speed of 5.6 km / h) - when performing heavy physical activity (running); - at rest.	60 18 260
Breathing resistance when inhaling and exhaling: - when performing an average physical activity, not more, Pa, - when performing heavy physical activity, not more, Pa.	980 1960
The temperature of inhaled gas breathing mixture, not more, ° C	55
The volume fraction of oxygen in the inhaled mixture, not less, %.	21
Weight, not more, kg.	3
Overall dimensions: - diameter, mm; - height, mm.	142 270
Activating of PROX M60, not more, s.	15

Operating limitations

The minimum response temperature of the PROX M60 regenerative canister is minus 20 ° C. PROX M60 should not be operated at ambient temperatures below minus 20 and above plus 60 ° C and at atmospheric pressure over 133.3 kPa (1000 mm Hg). PROX M60 should not be used beyond the expiration date stated in the product certificate and on the device itself.

Preparation for use

Before entering the mine, you must check:

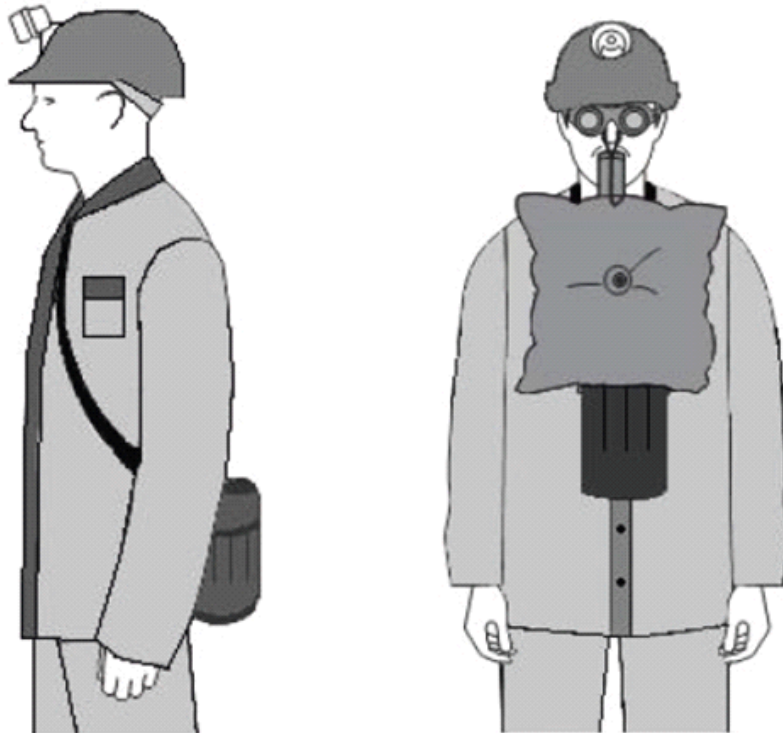
- the condition of the case (no cracks, holes and other damage);
- serviceability of tie straps, lock, presence of a seal;
- the presence of a carrying strap;
- tightness by visual control according to the color of the indicator.

If any defects are found, replace the device with a new one.

Using the device

In an emergency situation, put on the self-rescuer in the following order:

- hold your breath;
- take the device and quickly put on the neck strap;
- pressing the case with one hand, open the lock with the other hand;
- tear off the cover of the case, so that it is separated from the body of the case together with the cap of the starting device;
- quickly take the mouthpiece in your mouth;
- put on a nose clip;
- exhale through the mouthpiece and continue breathing;
- adjust the length of the belt by tightening it so that the connecting hose does not hamper the head movement;
- take the goggles and put them on (if necessary).



Recommendations

PROX M60 is activated when the breathing bag is inflated and there is the supply of warm breathing gas mixture.

After making sure that PROX M60 is working properly, you can leave the emergency area. Running is not recommended. In all cases of breathing difficulty, you need to slow down or stop and take several deep breaths until breathing is restored.

After that you can continue movement.

During PROX M60 operation, dry warm breathing mixture with increased oxygen content is supplied, which can cause a feeling of dry mouth and sore throat. During the second half of PROX M60 operation, a slight increase in breathing resistance may occur.

ATTENTION! UNDER REAL CONDITIONS, PROX M60 BREAKTHROUGH TIME MAY CHANGE SIGNIFICANTLY DEPENDING ON INDIVIDUAL PHYSIOLOGICAL FEATURES OF THE USER, AND THE PHYSICAL ACTIVITY DURING THE EXIT.

Safety requirements

- Contacting with organic liquids (oils, alcohols, acetone, etc.) and immersing PROX M60 in water are not allowed.
- Prevent damage of PROX M60 and remember that in case of destruction, the oxygen-containing product may cause inflammation.
- Do not leave PROX M60 near heating devices and do not wash it with pressurized water. If PROX M60 is dirty, wipe it with a wet sponge.
- PROX M60 must not be left in a mine or passed on to another person unless it is necessary to save lives.

IT IS FORBIDDEN TO:

- USE PROX M60 WITH A BROKEN SEAL;
- USE PROX M60 OVER THE WARRANTY PERIOD;
- REMOVE THE MOUTHPIECE AND THE NOSE CLIP IN THE DANGEROUS AREA;
- PUT PROX M60 ON AN ELECTRIC TRUCK, MINING MACHINE, ETC.;
- ALLOW CONTACTING OF PROX M60 WITH POWER SUPPLY ELEMENTS;
- USE PROX M60 NOT FOR DIRECT PURPOSE;
- INHALE MINING AIR BEFORE EXITING TO A FRESH AIR;
- SQUEEZE THE BREATHING BAG;
- PUT ON USED PROX M60.

Transportation and storage

- Transportation of PROX M60 is allowed by any type of transport at temperatures from minus 50 to plus 50° C and relative humidity up to 100% (at a temperature of 25°C).
- Transportation is carried out in accordance with the rules of this type of transport, provided that they are protected from mechanical damage, moisture, exposure to direct sunlight, aggressive environments and in conditions that exclude unauthorized access.
- Packages with PROX M60 are fixed to the vehicle in such a way that they cannot be moved.
- Packages with PROX M60 are stored in dry rooms (warehouses) at ambient temperatures from minus 50 to plus 40° C and relative humidity up to 98% (at 25°C).
- Packages with PROX M60 are stored on stacks at a distance of at least 1 m from heating devices, separate from aggressive, organic and flammable substances.
- The distance between the stacks must be at least 1 m. Packages are stacked to four rows in height with covers up, while the distance between the top rows of packages and the ceiling must be at least 1 m.
- It is not allowed to throw the packages, put them with their covers down or on the side.

Disposal

Used, damaged or expired devices must be disposed at the manufacturing site or in specialized organizations that have an official permission from the manufacturer.

It is strictly forbidden to dispose PROX M60 in public places, or to dispose it on your own.

Certification

The product is under certification tests.

Shelf life

5,5 years