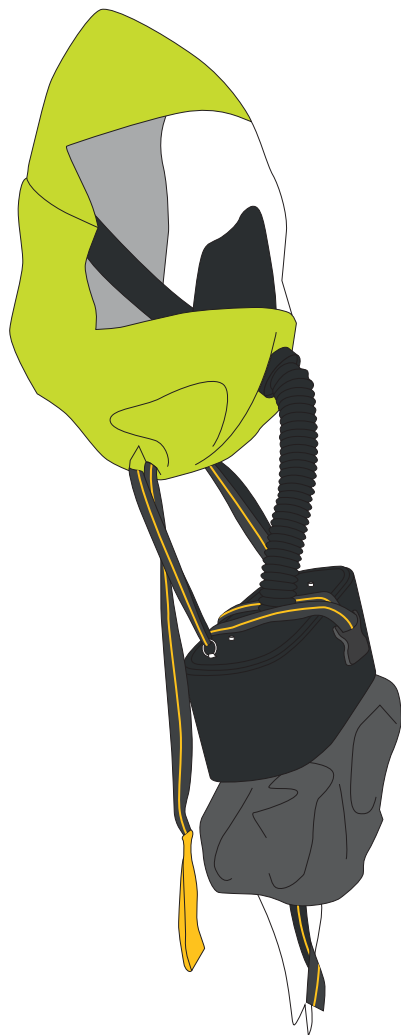

USER manual



Emergency escape hood **DEZEGA** **EmSCAPE**

EN 13794:2002



0477

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DEZEGA®

LIFELONG SAFETY EXPERIENCE

COMPLIES WITH:
EN 13794:2002, REGULATION 2016/425/EU

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INTRODUCTION

This User Manual introduces the user to the emergency escape hood DEZEGA EmSCAPE (hereinafter – escape hood, SCSR or self-rescuer).

The User Manual for the emergency escape hood contains basic information about the design of the escape hood and its parts, the rules of use, storage and transportation, instructions for maintenance and disposal.

The Manual uses a series of symbols to draw the user's attention to features, problems, and dangerous situations as may be encountered in the course of the use and maintenance of the breathing apparatus.

NOTE!

This symbol indicates additional information about the rules, methods and recommendations for the correct use of the breathing apparatus.

CAUTION!

This symbol indicates a dangerous situation that, if not eliminated, could result in equipment damage, injury or even death of the user or a member of the maintenance personnel.

DANGEROUS!

This symbol indicates an inevitable dangerous situation that, if not eliminated, can lead to a serious injury or death of the user.

The escape hood complies with the requirements of EN 13794:2002, REGULATION 2016/425/EU (Category III) and EN 403:2004 (7.6.2, 7.10).

EU declaration of conformity is supplied with the escape hood. Please contact the manufacturer for a copy.

It is strictly recommended to use DEZEGA EmSCAPE-T to train the users in donning and using DEZEGA EmSCAPE. Before using SCSR, please watch the training video.

DEZEGA EmSCAPE is not designed for use during the routine operations.

DEZEGA EmSCAPE is ready for immediate use.

DESCRIPTION AND OPERATING PRINCIPLE

NOTE!

DEZEGA EmSCAPE is a piece of complex equipment, which will save your life only if used and maintained in accordance with the manufacturer's instructions. Protect the unit from water, mechanical stress and wear. It is strictly prohibited to sit on the unit!

PRIOR TO USE

Ensure that the following actions are done before use:

1. Check the presence of damages of a box/bag (through holes, dents, splits etc.) that affect the integrity of the inner sealed bag.
2. Check the clear marking, including the date of expiration. SCSRs with expired date are forbidden for the further use.
3. Check the security seal for its absence or damage on bag or the integrity of detachable seal on box.

If one of the above-mentioned criteria does not meet the requirements, then DEZEGA EmSCAPE cannot be used as it is intended and should be withdrawn from operation.

PURPOSE

DEZEGA EmSCAPE is a self-contained respiratory protective equipment (RPE).

The emergency escape hood DEZEGA EmSCAPE isolates respiratory organs, head and eyes from the variety of poisonous substances in the ambient air resulting from fire, emergency situations associated with the release of chemically hazardous substances, industrial gases and other poisonous inhalants.

The escape hood is used:

- in the field of fire safety and protection as means of respiratory protection at escape from fire in offices, industrial buildings and facilities, including high-rise buildings, all types of transport vehicles and all kinds of crowded public spaces;
- in the field of chemical safety to protect the population in the areas of fire gases and chemical contamination caused by fire, self-inflicted accidents with the formation of chemically hazardous substances, industrial gases and poisonous inhalants;

- in the field of labor protection – to protect working personnel in hazardous industries related to the production (extraction), storage, transportation and utilization of oil and gas products as well as chemicals.

The escape hood completely isolates human respiratory organs from dangerous environmental factors, regardless of the concentration of poisonous substances and the oxygen content. It protects breathing organs and eyes at the escape or waiting for help in case of fire or other emergency. Gas mixture circulates in the breathing system. Regenerative product in the cartridge absorbs carbon dioxide and moisture on the exhale and generates oxygen for the inhale, and the breathing system of the device feeds the gas mixture into the half-mask space.

The escape hood is suitable for people with beard, long and/or lush hair.

The escape hood is a single use protection device and is ready for immediate use without prior training.

By climatic version, the escape hood is designed for use at ambient temperature from -5 to +60 °C and relative humidity up to 100% at a temperature of +35 °C.

SAFETY PRECAUTIONS

Do not store or leave DEZEGA EmSCAPE on operating mechanisms and equipment, as well as on heat sources.

It is forbidden to rub the self-rescuer against abrasive surfaces, sit on it, use it as a support.

Open the escape hood only in case of an emergency (for its intended use).

Keep unsealed, used or damaged SCSRs away from water, liquid or solid flammable materials, fuels and lubricants.

DEZEGA EmSCAPE is intended for a single activation and use only. Reusing is not allowed.

CAUTION!

Protect DEZEGA EmSCAPE from mechanical damages, which may cause destruction of the regenerative cartridge and other components.



CAUTION!

DEZEGA EmSCAPE should only be used for the purposes specified in this User manual.

TECHNICAL DATA

Parameter in accordance with EN 13794:2002	Value
Rated duration, minutes, at least: - at lung ventilation 35 l/min - at lung ventilation 10 l/min	15 45
Working duration (till collapsing of breathing bag), minutes, at least: - at lung ventilation 35 l/min - at lung ventilation 10 l/min	30 ¹ 90
Breathing resistance, Pa, no more than: - average load (inhalation or exhalation) - sum of breathing resistances	1000 1600
Temperature of inhaled gas during rated duration, °C, no more than	50
CO ₂ content in the inhaled gas, %, max	3,0
O ₂ content in the inhaled gas during rated working duration, at least	21 ²
Weight of the working part of the escape hood, kg	1,9±0,1
Weight of escape hood in box, kg	2,35±0,1
Weight of escape hood in bag, kg	2,15±0,1
Dimensions in box (bag), mm, no more than: - length - width - height	295 160 260
Warranted shelf life, incl. the period of storage of escape hoods (from the date of manufacturing till withdrawal), years	8 ³
Operational temperature, °C	from -5 to +60
Storage temperature, °C	from -5 to +40
Transportation temperature, °C	from -40 to +50
Permissible relative humidity during operation and storage (at +35 °C), %	up to 100

1. Working duration may vary under the escape conditions depending on physical activity and physiological peculiarities of the user.

2. Short-time decrease of oxygen volume fraction in the inhaled gas down to 17% is allowed during the first two minutes after the self-rescuer activation.

3. With a possible extension for another 2 years on conditions performing mandatory after-sales service at an authorized DEZEGA service center.

The escape hood does not limit the mobility of the head, neck, arms and torso of a person.

The design of the escape hood allows short-term negotiation between people who use the device.

The visor of the hood does not distort the view and does not significantly impair vision due to fogging.

The maximum surface temperature of the escape hood regenerative cartridge components that may contact the user does not exceed 80 °C during the rated working duration.

SCOPE OF SUPPLY

DEZEGA EmSCAPE is sealed in a package that is put into box or bag.

Examples of identification articles when ordering DEZEGA EmSCAPE:

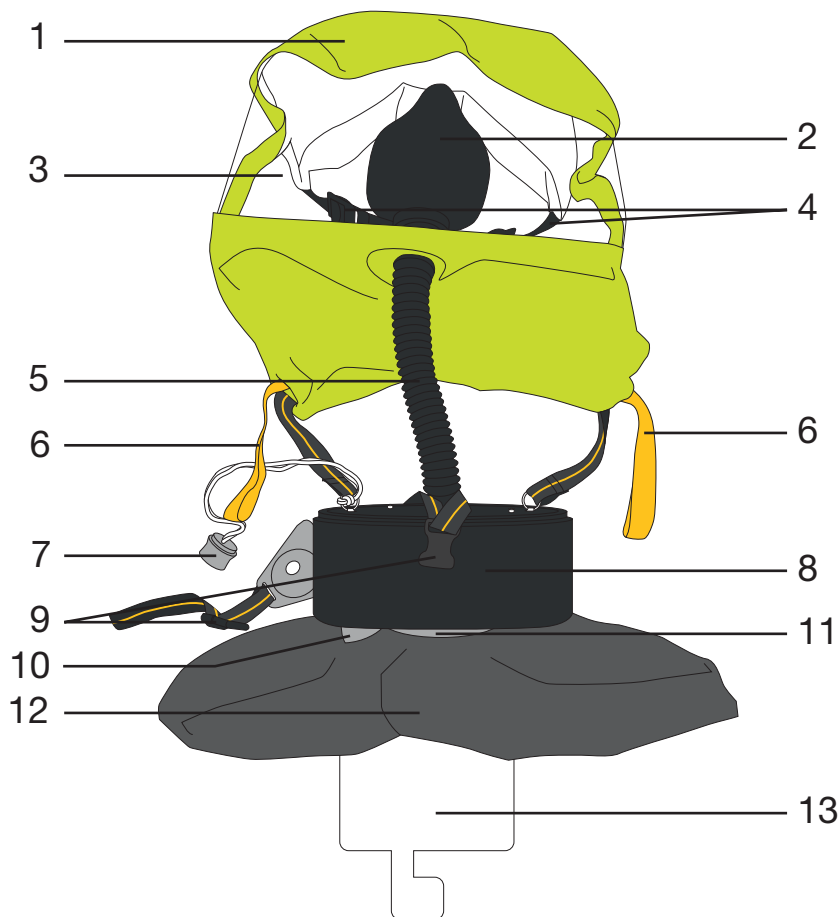
S-15CN1-NSH-EUENEU-IK(O)-10-x-x-10 – the escape hood in the cardboard box for stationary storage;

S-15CN1-NSH-EUENEU-PK(O)-10-x-x-10 – the escape hood in the bag for carrying.

DESIGN AND OPERATION

After donning the escape hood, the respiratory organs, head and eyes are isolated from the environment.

Working part of the escape hood (Picture 1) includes: a hood 1 with a half-mask 2, a regenerative cartridge 8, a breathing bag 12.



Picture 1 – Design of the escape hood

- 1 – fireproof hood; 2 – half-mask; 3 – visor; 4 – headband straps;
5 – breathing tube; 6 – adjusting straps; 7 – plug;
8 – regenerative cartridge with oxygen-containing product;
9 – quick-release buckle for starter launch; 10 – relief valve; 11 – starter;
12 – breathing bag; 13 – heat shield.

The hood 1 is made of reflective material and consists of a visor 3, a half-mask 2, headband straps 4. With headband straps 4 that require no adjustment, half-mask 2 fits tightly a human face. The obturator at the bottom of the hood prevents the suction of toxic substances under the hood.

Gas mixture in the breathing system of the escape hood circulates within the pendulum scheme of flow.

During exhale breathing mixture goes through the half-mask 2, then through the breathing tube 5 it gets into the regenerative cartridge 8. The regenerative cartridge absorbs carbon dioxide and moisture from the gas mixture and releases the volume of oxygen proportional to the volume of absorbed substances. Breathing mixture from regenerative cartridge 8 goes to the breathing bag 12.

When the user inhales, oxygen-enriched gas mixture from the breathing bag 9 re-enters the cartridge 8 where it is further purified from carbon dioxide and returns to the half-mask 2 to the respiratory organs through the breathing tube 5.

Surplus breathing mixture during exhale leaves the breathing bag 9 through the relief valve 10.

To fill the breathing bag 12 and provide oxygen in the first minutes after donning the escape hood, activate the starter by pressing the quick release buckle for starter launch 9.

After putting on the hood, tighten the adjusting straps 6.

When the oxygen-containing product in the cartridge absorbs carbon dioxide and moisture, heat is released. The surface of the cartridge and the breathing mixture therefore heat as well. This indicates, that the escape hood is operating correctly, and it should not cause any anxiety. To prevent discomfort after donning that is caused by excess heat formation, the heat shield 13 is used.

MARKING AND SEALING

The following information is indicated on the box (bag), the sealed package, according to the technical documentation of DEZEGA EmSCAPE:

«DEZEGA»:	trade mark;
«Emergency escape hood DEZEGA EmSCAPE»:	designation of the self-rescuer;
«S-15CN1-NSH»:	type identification marking;
EN 13794:2002:	reference standard used for the design and certification of the PPE;
CE :	marking of conformity;
0477:	identification number of the Notified Body involved in the control procedure according to REGULATION 2016/425/EU;
«Made in Türkiye»:	inscription that indicates the country of manufacturing;
«15 min»:	nominal rated duration;
«30 min»:	working duration;
«45 min»	nominal rated duration at rest;
«90 min»:	working duration at rest;
«K»:	symbol that means that the device uses chemical oxygen to produce oxygen and absorb carbon dioxide (KO ₂ device);
«SSSSS P MM YY»:	serial number, where SSSSS is the sequential number (consecutive number 00001-99999), P is the producer code (T is Turkey), MM is the month, YY is the year of manufacture;
«XX YYYY»	date of manufacture;
«MM YY»	expiration date;
QR code	a link to the User Manual;
Pictograms:	illustrations with the donning procedure.

PACKAGING

The working part of the escape hood is packed into a sealed bag. The package protects the working part and ensures the air-tightness of the escape hood during storage. The top of the package is tightly sealed, and has an incision in the middle from the edge to the welding line for easy opening.

The package with the working part lies upwards in the individual package.

Escape hoods in the individual packaging are packed in transport boxes of 4 or 6 pcs. depending on its type.

MANUFACTURER'S WARRANTY

The manufacturer guarantees the safekeeping of the technical characteristics of the escape hood during the service life, provided that the consumer observes the rules of transportation, storage and use for the intended purpose.

If the integrity of the box (bag) or the conditions of storage of escape hoods are violated due to the customer's fault, the guarantee is not applied.

Warranty shelf life is 8 years with a possible extension for another 2 years on condition that the mandatory after-sales service is performed in an authorized DEZEGA service center.

INTENDED USE

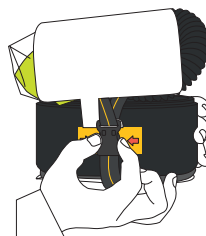
The escape hood is ready for immediate use if the sealing of the box or the bag and the sealed package are intact.

In case of fire or other emergency, don the escape hood in the following order:

- open the box or the bag, remove a package with the working part, open the sealed package at the incision and take out the working part;



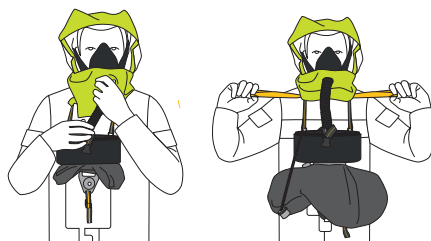
- unclip the quick-release buckle to launch the starter;



- remove the plug from half-mask, spread the hood, stretch out the hood obturator with both hands, take a deep breath, hold your breath and quickly put the hood on your head, so that the half-mask closes your nose and mouth. Then pull the hood on the back of your head;



- hold the tube, pull the half-mask and adjust it, so that it fits your face tightly. Tighten the adjusting straps. Exhale and continue breathing. Spread the breathing bag with your hands if necessary;



**YOU ARE ALREADY ISOLATED
FROM THE AMBIENT ATMOSPHERE!**

- leave the emergency area.



CAUTION!

Users with long hair and voluminous hairstyles need to hide their hair completely under the hood.

 CAUTION!

If filling of the breathing bag with the oxygen has not started, remove the hood, inhale and exhale into the half-mask. Repeat 5 times until the breathing bag is full, put on the hood and continue breathing in DEZEGA EmSCAPE.

If there is a difficulty in breathing while moving, stop without doffing the escape hood, take a few deep breaths, catch your breath and continue moving.

Leave the emergency area in a rapid, controlled step. Running is not recommended, as when running and fast walking, it is easy to «disrupt» the breath.

Filling of the breathing bag and the inflow of warm breathing mixture into the breathing system is a sign that the escape hood is in a working condition and starts off as it should.

 DANGEROUS!

Doffing the self-rescuer, removing the half-mask or hood before reaching a safe place is strictly forbidden, except the situations when you need to vomit. To remove the escape hood, stretch the obturator of the hood with both hands and remove the hood.

 CAUTION!

Do not touch the bottom parts of the cartridge with your hands to prevent skin exposure, caused by high temperature.

 CAUTION!

It is forbidden:

- to use an escape hood with a broken seal or breached integrity of a vacuum package;
- to remove and put the hood back on during escape from the dangerous area or waiting for help;
- to re-use the escape hood;
- to use an escape hood for purposes other than intended;
- to use an escape hood after the end of service life;
- to put the hood on before unclipping of quick-release buckle.

The escape hood should not be operated at an ambient temperature of less than -5 °C and more than +60 °C.

Possible malfunctions during donning and use of the escape hood, and the ways to eliminate them:

Name of malfunctions, their manifestation and additional indicators	Possible reason	Troubleshooting method
Lack of air for inhalation at the start of using	Starter did not start; Loss of oxygen due to prolonged or incorrect donning; No inhalation-exhalation before donning	Remove the hood, inhale and exhale into the half-mask. Repeat 5 times until the breathing bag is full, put on the hood and continue breathing in DEZEGA EmSCAPE
The viewing window is not at eye level	The hood is not pulled on the back of the head	Adjust the hood so that the field of the view becomes maximum
Inability to open the quick-release buckle	The buckle has been jammed	If it is impossible to open the quick-release buckle after several attempts, cut one of the straps that connects the buckle and the cartridge with improvised means (for example, with a knife, scissors etc.) and continue donning
The visor got fogged	Specifics of antifogging coating that usually disappears in several minutes	Wipe away fogging by folding the visor in two layers with your fingers

TECHNICAL MAINTENANCE

No special maintenance is required for the storage and the operation of escape hoods.

Maintenance of escape hoods includes periodic visual check of the sealing safety, the presence of the pictograms, the absence of damages to the box (bag).

TRANSPORTATION AND STORAGE

Transport the packaged escape hoods by any type of transport in accordance with the rules that are in force on this type of transport. The packages should be protected from penetration of atmospheric precipitation and solar radiation and fixed inside the vehicle to prevent them from moving freely.

CAUTION!

- **Never drop escape hoods packages and never keep them in the bulk.**
- **Never drop or roll up packages, never drag them, do not put them lid-down or on the side.**

During the designated period of a storage, escape hoods should be stored in warehouses in dry heated and non-heated rooms in the original manufacturer's packaging at an ambient temperature of -5 to +40 °C.

Transportation conditions - at ambient temperature from -40 °C to +50 °C.

Escape hoods must be stored separately from aggressive and combustible substances.

Packages should be located not more than five pieces in a stack or on racks at a distance of at least 1 m from the heaters.

Ready-for-use escape hoods should be stored in the users' workplace or in containers on escape routes from premises and hazardous areas. The choice of storage location should take into account the quickest access to the escape hood in case of fire or other emergency.

CAUTION!

- **Keep away from children.**
- **Avoid contact with water.**

DISPOSAL

Used escape hoods, recognized as unusable or expired ones, should be disposed by the manufacturer organizations authorized by the manufacturer.

Organizations that provide escape hoods disposal services should have:

- license for the disposal of escape hoods and oxygen-containing products;
- official permission from the manufacturer;
- technological regulations, approved by the manufacturer, for the disposal of escape hoods and oxygen-containing products.

Before proceeding for disposal, escape hoods should be placed in specially designated dry rooms equipped with powder extinguishers, at a distance of at least 1 m from the heating systems. At the same time, the risk of contact of water, oil, organic liquids with the escape hoods should be excluded.



The symbol above means that, in accordance with local laws and regulations, products marked with this symbol must be disposed of separately from household waste. When the product reaches its end of life, take it to a collection point designated by your local Organizations that provide escape hoods disposal services.

Separate collection and recycling of your goods during disposal will help to conserve natural resources and make sure that it is recycled safely for human health and the environment.

For disposal, please contact the address provided at www.dezega.com

CAUTION!

It is strictly forbidden to burn and discard into commonly available places, provide disposal by oneself, or transfer them to the disposal for organization that does not correspond the foregoing requirements.

Disposal of withdrawn escape hoods, considered as unusable or expired, carried out according to the instructions mentioned in this User Manual and local laws that are implemented on user's territory.

DEZEGA SP GÜVENLİK ÜRÜNLERİ SANAYİ VE TİCARET ANONİM ŞİRKETİ
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