Daru Darman Persia Co. (ltd)

Pneumatic Pulmonary Resuscitating Device (Portable Ventilator)s

MADE IN IRAN
Knowledge-Based Enterprise

Science & Technology Park

DaruDarman Persia Company was founded in 2010 with Mr Peyman Mehrabian as the CEO for importing medical equipment. Throughout these years, the company served as a representative for reputable foreign manufacturing brands such as the Ambu of Denmark, Acutronics of Switzerland, and MediTech of the UK. This has positioned the company as a significant market holder for anaesthetics–respiratory instruments. Due to imposed sanctions on Iran, the Research and Development section of the company was founded in 2017 to produce a pneumatic pulmonary resuscitating device. In 2020, the company achieved a license for manufacturing and was certified as a knowledge enterprise. The Resuscitator Kit is a knowledge–based product of this company. It consists of a pneumatic–pulmonary resuscitating device (in three different models of Airmix, General, and Pediatric) and a High–pressure oxygen regulator (in two models of NFT200 and FT1400). The Research and Development Section of the company is currently situated in the technology park of Sharif University. It aims to improve the quality of its previous products and innovate new instruments with the help of students and professors of this university.

+1000
Devices

+100
Centers

Pneumatic Pulmonary Resuscitating Device

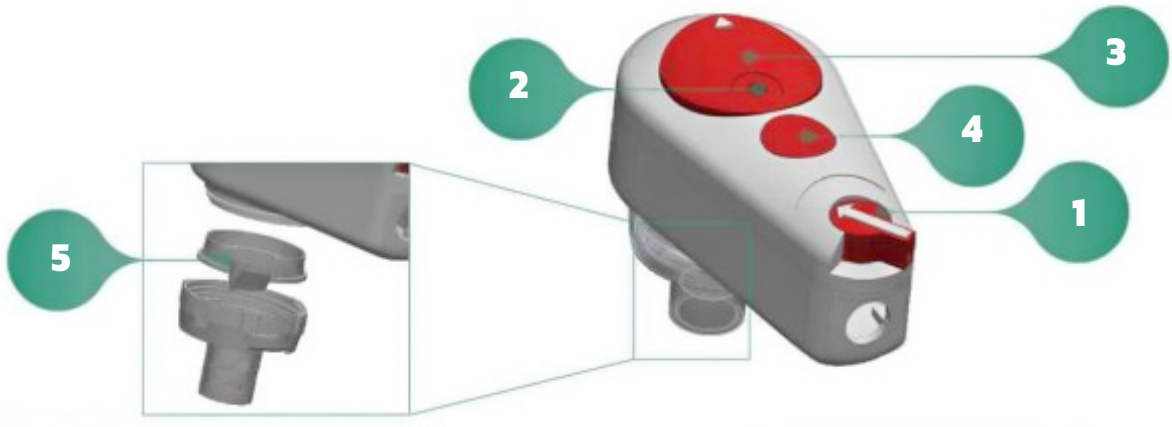
EasyVent is a pneumatic pulmonary resuscitating device used in respiratory emergencies to resuscitate patients. This device is mainly used when a patient is resuscitated and then transferred. The powering mechanism of the device is derived from the mechanical force of the oxygen gas and does not need electric power. EasyVent can connect to oxygen masks, endotracheal tubes, oxygen tanks, and central oxygen lines in hospitals and ambulances. The device has manual and automatic modes. In the manual mode, the operator can give oxygen to the patient by pressing a button during CPR. In the automatic mode, the respiratory volume and frequency can be selected according to the patient)s TV. It also has a safety exhalation system and a respiratory adaptation sensor. The safe exhalation system prevents barotrauma by exhausting the surplus oxygen volume while giving an auditory alarm. The respiratory adaptation sensor senses the patient)s respiratory system and provides an Assist Control SIPPV mode. This device can be used for all patients suffering from problems with spontaneous breathing, trauma patients, and hypoxemia in all the following conditions:

Hospital **Air Ambulance** **Ambulance** **Motorlance** **Field Hospital** **War Medicine**

Specifications

- The device can be used in emergency resuscitation.
- The tidal volume and respiratory rate are more consistent compared to what is provided by BVM masks and reduce human error.
- The device has a portable design and is the smallest and lightest portable ventilator in Iran.
- The device operation can be taught in a short time.
- The device can be quickly moved from one patient to another.
- Contagious disease spread between different patients could be prevented due to the fact that the device can be disinfected.
- No power source is needed.
- Operators can use the device during CBRNE and the new war.
- Safety pressure valve prevents barotrauma.
- The device is equipped with a pressure limiting system, and it can produce pressures below 60 cmH2O.
- Manual mode can be used in cases of hypoventilation, PaO2 and spO2 falling, and CPR.
- The device can be used during CPR.
- The implemented SIPPV (SIMV Assist Control) ± 5% mode and device syncing even in patients with breathing.
- Since the device can be disinfected (according to 1061515– standards), it can prevent disease transfer.

Device Components

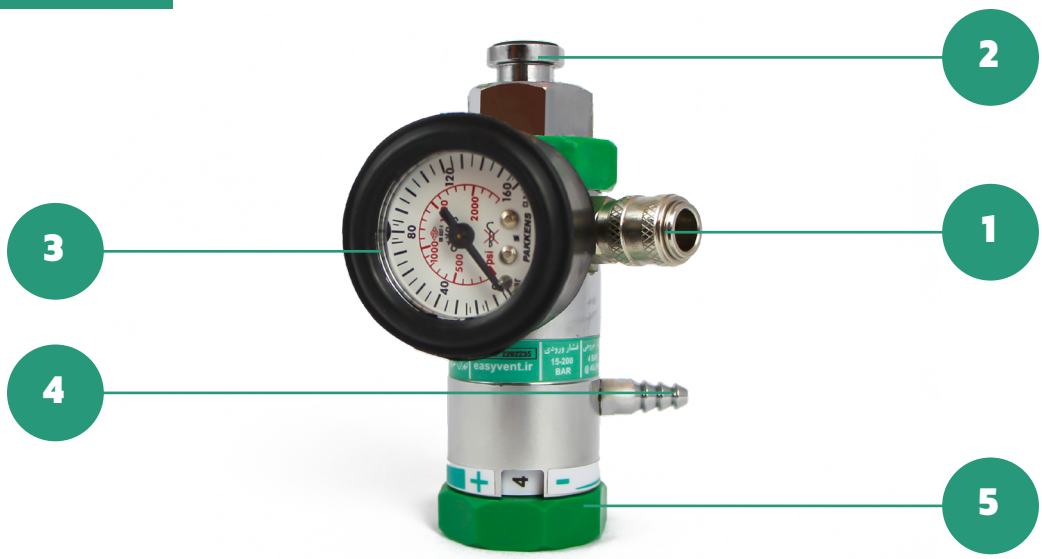


1. Toggling the device mode between manual or automatic
2. Different settings and parameters are accessible by pressing and rotating this button
3. Adjusting the respiratory rate and volume by rotating this controller
4. Activating oxygen flow in manual mode
5. Sterilizable exhaust

High–Pressure Gas Regulator Device

EasyVent therapy regulator can be used to adjust medical gas pressure for various usages and flow therapy. This device can be specifically matched with pneumatic pulmonary resuscitators. This regulator can be used in many different locations, such as emergency departments, health care centres, and any locations in which oxygen tanks and ventilators are active.

Components



1. Low–pressure output, which connects with medical devices
2. High–pressure input line, which connects to cylinders
3. Pressure gauge, which shows the tank)s pressure
4. Flow therapy output, which connects to the nasal cannula
5. Rotating handle for adjusting the flow

Oxygen is a flammable gas. When using the therapy regulator and changing the capsule, avoid smoking or being near the flame. Never use oil, grease or solvent on any part of the cylinder and therapy regulator.

Standards

Title	Jssuing Institute	Date of Issuance
The Production license of the device	The administrative office of medical equipment	2020
Quality management system standard for medical equipment (ISO13485)	Standards Certification Body (US Cert)	2020
Safety and Function Test according to ISO 10651– 5 standard	The referential laboratory for food and drugs	2020
Safety and Function Test according to ISO 10524– 1	Sadra Behineh Sanjesh Laboratory	2020
The confirmation of knowledge–based products	Vice–Presidency for Science and Technology	2020

Licenses

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