

History of medical bed



HISTORY OF MEDICAL BED

Multifunctional hospital bed - a bed with a special design developed for placing patients in a comfortable and physiological posture. Structural features designed to facilitate the medical staff and family care.

Even in ancient Egypt had a couch to sleep different from other forms of bed.

In the XIX century there were bed side rails and lifting worm gear.

In XX century physician Willis Gatch created triplex bed.

WestMedGroup offers for use in hospitals multifunctional hospital four-section-bed, electrically or hydraulically operated, capable of receiving all types of therapeutic products, such as surgical and Trendelenburg.

The first multifunctional hospital bed with electric drive and a built-in toilet appeared in 1945. The patient can control the bed using the keypad, if desired to lift his head and feet, or move up to face built-in sink with different temperature water, and go into the built the toilet without getting out of bed.

Thanks to adjustable multifunctional hospital beds are accepted medical positions of the patient: Fowler - half-sitting position in which the arms are raised at an angle of 45 - 60 °, the Trendelenburg position - lying on his back at an angle of 45° with a raised head against the pelvis.

Classification:

Health care beds are classified according to:

- the number of sections (1 to 4),
- simple and functional with electric drive,
- Drive type (mechanical, electrical)
- children, teenagers, adults, including reinforced bed
- equipped with active or passive anti-bedsores mattresses.

The number of sections related to the level of comfort of the patient and his anatomic posture: head, fixed intermediate, hip and foot section.

The drive mechanism that changes the angle of the sections can be: mechanical, screw, pneumatic, electric, hydraulic springs.

Production technology

A hundred years ago, hospital beds were made in the form of strong and durable steel and iron frames at factories on a par with the rest of the furniture and did not differ from conventional beds. 50 years ago mankind began to develop the first management and increased sanitary requirements for medical furniture, and today its manufacturing takes place at specialized factories.

The enterprise provides full production cycle - from product design to manufacturing, metal processing and assembly of plastic products. The manufacturers have need not only at blacksmiths, as in the beginning of the last century, but also engineers, turners, millers specialists in metalworking, electrical and lighting electronics. Today, companies are trying to make all the components bed within the same production site, or at least one company in order to achieve their ideal purposes.

Metal production is conducted in a closed cycle. All raw materials and components are stored in special rooms that ensure compliance with the storage conditions required by the relevant standards for materials and components.

The production process is now fully automated, minimizing the probability of the release of substandard products. Laser technology in the robotic welding makes it possible to achieve maximum compatibility of all components.

Advanced materials:

As technology advances, multifunctional hospital beds are becoming more comfortable and practical.

The furniture should be resistant to aggressive media. Materials should be minimally susceptible to the effects of acids, alkalis, and other chemicals, as well as have high fire safety. Due to the nature of operation of medical furniture (the need for regular sanitizing) in its production are used high-strength and hypoallergenic materials, which guarantees the safety of people.

Modern technologies of metal processing and plastics allow to achieve strength properties which are unattainable even 8-10 years ago.

- 1) Anodized aluminum: anodized aluminum profile to create a protective film that prevents oxidation and corrosion. Allocated film does not peel off from the profile during the whole period of operation.
- 2) A thin-walled steel profile (carbon steel) with addition of the minimum amount of titanium, boron, zirconium, rare earth elements carbon steel.
- 3) ABS plastic - it is impact-resistant engineering thermoplastic resin. The material has high elasticity, non-toxic, resistant to disinfectants, water resistance.
- 4) Duralumin: an aluminum alloy with copper, manganese, magnesium, silicon and iron. It strengthens heat treatment and aging. Its distinguishing characteristic - high static strength, the ability to retain more weight load.
- 5) Chipboard, plastic coated or laminated: eco-friendly and durable material for the production of medical furniture, resistant to disinfectants and UV, water-resistant and resistant to contamination.
- 6) Vinyl, leather or synthetic - material which is formed by coating the fibrous substrate or unilateral monolithic porous PVC. Used for the manufacture of mattresses. Resistance to deformation, abrasion and scratches, contaminants, it is hypoallergenic. The material is unpretentious in the care and insensitive to disinfectants and high temperatures.
- 7) Chemical-resistant laminates "sloplast" resistant to corrosion and to all the main types of aggressive chemical environments. By the means of postforming method it is deposited on the surface of furniture.
- 8) Stainless steel: opened in 1913, but thanks to its properties, it is now the most common material: corrosion resistant, lightweight and durable, aesthetic and impact resistant.
- 9) X-ray transparent side sections are made of MDF (dry pressing boards urea resins fire and water resistant), plastic (high strength, rigidity and light weight, stronger than steel and much lighter).
- 10) The polymeric powder coating - a multi-solid formulation for protective decorative coatings, which is under the influence of high temperature on the surface to form a thin, continuous film.
- 11) Chromium - the coating is applied for decorative purposes, to provide protection against corrosion or to increase the hardness of the surface, increasing durability.

Westmedgroup products cover the whole range of devices for intensive therapy: multifunctional medical beds, gas distribution consoles, terminals, medical monitors and valve system, compressor stations, anesthetic machines and ventilators.