„DEROTATOR R.PAN”

Product description

The results of research carried out by a scientist from Medical University of Gdańsk enabled the creation of innovative invention called DEROtator R.PAN. It is a device used during hospital treatment of spinal curvature, that is scoliosis. DEROtator R.PAN is a small surgical instrument by means of which a surgeon can grab the lopsided vertebrates and rotate them until they have reached the correct position. Derotator is equipped in a special indicator through which it is possible to specify the critical corrective force which may be applied during the conducted surgery. Thanks to this, the proposed device allows greater and safer direct derotation of a spine in the course of surgical treatment of scoliosis.

Key words

scoliosis, derotation, spinal surgery

Legal status of product

The European Union Intellectual Property Office (EUIPO):
– registered as designs (23.12.2016), number: 003536192-0001

Subject of the offer

The subject of the offer is a device for derotation of spine called DEROtator R.PAN. Derotator enables specifying critical corrective force which may be applied during surgery on scoliosis as well as indication of safety factor and a safe moment of direct derotation in the accepted scope.

Analysis of market competition

The greatest degree of spine derotation in surgical treatment of scoliosis is possible to be obtained post applying the systems of direct derotation. Experimental research results of several authors indicate that presently applied systems of direct spine derotation are insufficiently successful and one cannot reach satisfactory outcome of treatment having applied them. The majority of methods are based on strenuous manoeuvre of derotation the safe scope of which is estimated solely on the basis of own, subjective feel and surgeon's experience.
The author of this invention, in the course of original and unique on a world scale test, managed to define the maximum and thus- safe scope of derotation possible to be reached during surgery. Based on the obtained test results he construed and adequately calibrated an innovative derotator which allows for a safe and more effective spinal derotation. At present, there are no similar tools which would improve the manoeuvre of direct derotation to such extent on the market of orthopaedic tools.

Advantages of the proposed product

DEROtator R.PAN is a device which constitutes an integral part of entire derotating system, applied during surgical treatment of scoliosis. The device was made with the use of stainless material, compliant with the requirements of manufacture of surgical instruments and it may be subjected to multiple processes of washing and disinfecting. Derotator is capable of adopting to the selected direct derotation system.

The main purpose of surgical treatment of scoliosis is to inhibit the progression of spine deformation as well as correct the already existing scoliosis. Derotator, apart from inhibiting the progression of scoliosis, enables liquidation of costal hump which improves the quality of life of patients to a significant degree.

Introduction to use of this tool is a significant step towards improving derotation technique on which, for the most part, the surgical treatment of scoliosis is based. It is expected that the described product will become a permanent element of all systems for scoliosis correction, impacting the improvement of treatment results through safe shift of derotation to the level of correction of the remaining components of deformation in scoliosis.

Furthermore, on 1 April 2018, the Medical University of Gdańsk obtained the status of AOSpine Spine Center, thus becoming a member of the global network of clinical institutions, fulfilling the highest standards in the field of orthopaedics and traumatology. Moreover, it obtained the rights to carry out trainings and certification of actions related to spine treatments.