



Gexfix external fixation orthopaedics

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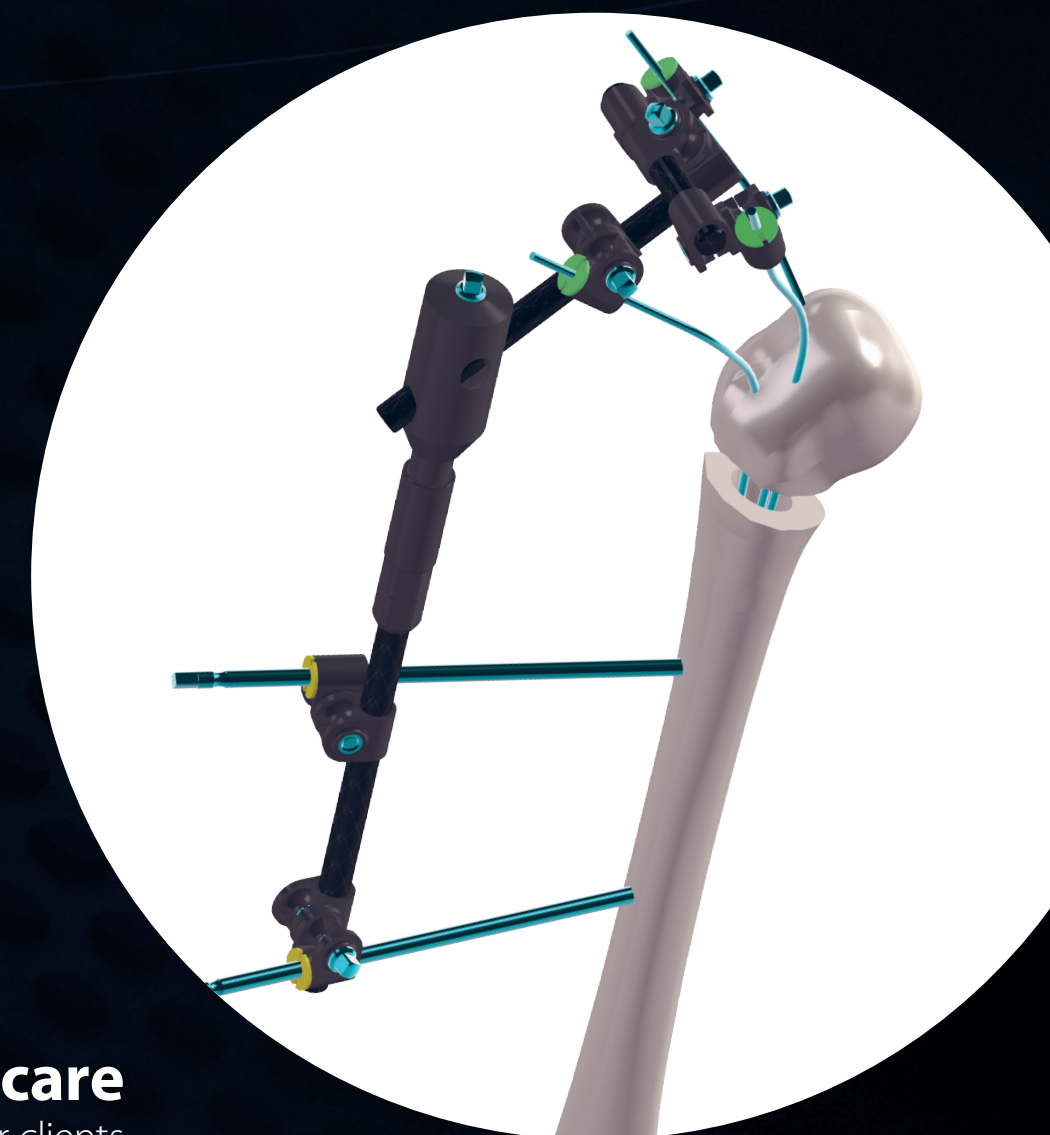
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New D.O.S.[®] System MRI compatible

Osteosynthesis Device for Shoulders

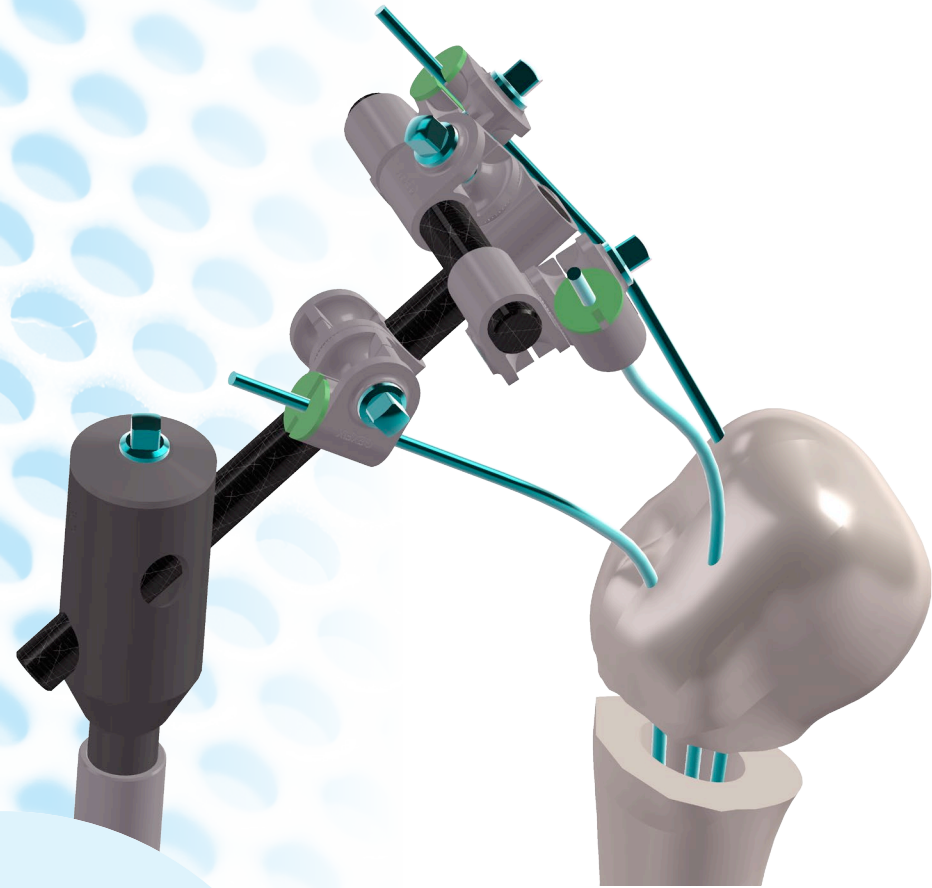


We care
about our clients



System D.O.S.® MRI compatible

The D.O.S. System was created in response to the need for a new minimally invasive reduction and osteosynthesis device for the treatment of fractures of the upper limbs (shoulder, humerus and elbow)



Characteristics

- MRI compatible
- Titanium
- Carbon Fibre
- Reduces post-op pain
- Resistant and flexible
- Radio Transparent

Indications

To be used mainly on two or three-fragment fractures of the proximal epiphysis, both with or without detachment of the greater tuberosity. Sometimes it is also possible to use it in case of more fracture fragments (i.e. four-fragment fractures) if the clinical condition of the patient (old age, general deterioration of the condition and associated comorbidities) make it impossible to replace the joint with prosthesis. Such cases represent only 8% of total fractures but are particularly common in women, especially when they are older and suffer from a low-energy fracture of an osteoporotic bone.

It is therefore essential to secure these fractures so that the joint can move in order to prevent pain and rigidity, which are the main causes of failure.

Components and surgical procedure

The D.O.S.® System is made up of two or three Kirschner wires titanium with a diameter of 2.5 or 3.5 mm depending on the consistency of the bone. After the fracture is manually reduced with the aid of ampliscopic control, these are secured to the head of the humerus in a proximal-distal axis and Eiffel tower-pinned so that they fill the diaphyseal canal and reinforce it. The wires are joined to a carbon fibre rod with single clips and the rod in turn connects two 4 mm titanium pins which are secured below the fracture to the diaphysis.

A traction system is therefore formed thanks to the flexibility of Kirschner wires and the rigidity of the pins. The structure is extremely light thanks to the use of carbon fibre (weight: 80 grams) and it keeps the fracture reduced, avoiding pain and making it possible to lift the arm just a few hours after the operation thanks to active and passive mobility exercises.

In addition, thanks to the 'closed-sky' procedure, there is no risk of damaging the periarticular structures (rotator cuff, tendon of the long head of the biceps) or of contracting infections due to the use of internal fixation devices.

The D.O.S.® System is fully adjustable to 360°, so the best position can be selected as the two rods (18 cm long arms or 7 cm short women's arms-9 cm short men's arms) have an inclination of 125°-130°.

Another rod exists, for those fractures that occur during the paediatric and adolescent phase (epiphysis fractures and detachments) - it has a similar inclination but it is 14 cm long for long arms and 6 cm long for short arms. The diameter is 8 mm and it is the same for all rods.

Surgery times to place the device have been assessed at approximately 20 minutes, whereas recovery times have been assessed at 6-8 weeks in combination with a rehabilitation scheme.

The device can be removed in an outpatient clinic without the need for admission into hospital or anaesthetic.

