**Auxiliary Device for Functional MRI Examinations**

of the Cervical Spine designed to facilitate the detection of cryptic lesions

Enhanced viewing of ligaments and vertebral joints during reproducible functional studies may help to optimise diagnostic and therapeutic decisions in arbitrary situations. Composed of an integrated system of surface coils, the NeuroSwing allows to carry out reproducible, high-resolution MRI examinations in the 6 degrees of freedom of the cervical spine. Currently, the functional system is compatible with the Siemens 1.0-T Magnetom Expert and the 1.5-T Magnetom Symphony, Sonata and Avanto. Once the device is positioned in the magnet, it allows to conduct a functional survey in passive flexion/extension (pneumatically driven), as well as active lateral flexion and rotation in less than 10 minutes. Functional studies of the cervical spine are a helpful means to detect cryptic lesions, particularly in younger “healthy” subjects. Typical indications include symptoms during movement, severe degenerative lesions, and symptoms following whiplash injury, spondylolisthesis, ligamental lesions and dysplastic changes in the occipito-cervical region. The usual MRI contraindications apply (metallic implants, pacemaker, vagal nerve stimulator). If used with simultaneous real-time imaging, such acute symptoms as luxations and unstable fractures can be investigated.

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