

HFD100 Head Fixation Device

MR-safe headholder system for neurosurgery



HFD100 enables optimal patient positioning both for surgical access and intraoperative imaging

Streamlined Clinical Workflow

The three piece design of the headholder – with table mount, linkage system, and skull clamp – enables the surgeon to place the patient in the desired prone, supine, or lateral position, and then have the linkage connected and securely tightened to maintain that desired position. With the HFD100's low profile design, the patient's head can be positioned lower than the table and still fit into the bore of the magnet without moving the patient from the table – thus providing more flexibility to position the head in MR iso-center.

Focus on Patient Safety

With titanium reinforced joints and MR safe materials, the HFD100 is a robust, rigid, and reliable head fixation device for neurosurgery.

The head clamp of the HFD100 features a smooth and precise ratchet mechanism that allows for fine adjustment of pressure on the patient's head. A torque screw pressure indicator provides immediate feedback on the amount of pressure on the patient's head. The HFD100 design also enables retractors, navigation reference frames, and IMRIS' flexible imaging coils to be quickly and securely attached.

Specification Overview

The HFD100 is a mechanical head fixation system that integrates six degrees of freedom for positioning. It is designed to hold a patient's head and neck securely in the surgical position. The HFD100 is indicated for use in open and percutaneous craniotomies, as well as, spinal surgery when rigid fixation is necessary, and can be used for procedures with or without intraoperative MR imaging.

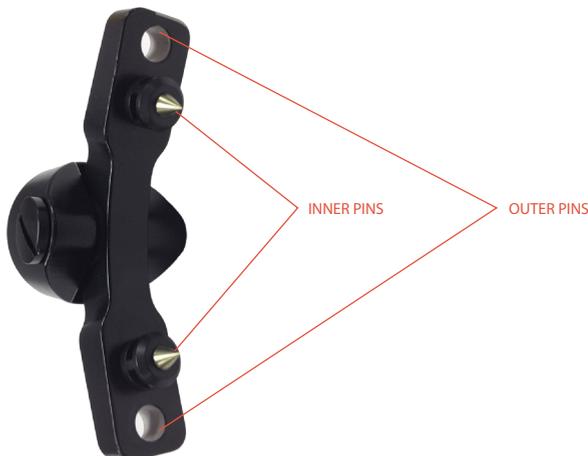
Fixation	3-pin fixation (Optional: 4-pin fixation and two choices of skull pin locations with HFD100 Rocker Arm Accessory. See below.)
Compatibility	Fully MR safe for both 1.5 and 3T field systems Supports IMRIS HC150 and HC300 flexible imaging coils, as well as InSitu wireless imaging coil Standard two-hole interface to IMRIS OR tables
Maximum Load	20kg (44 lb)
HFD Weight	8 kg (17.6 lb)
Patient Positioning	Headholder comes with choice of two lengths of linkage, providing flexible positioning based on patient anatomy and desired location of head for both surgery and iMRI scan. The linkage system allows flexible positioning of the head with translational movement in x, y, z directions, as well as rotational swivel, tilt, and pivot adjustability. Locking mechanism: gear and screw tightened with ergonomic knobs.
Patient Pinning	Skull clamp supports heads up to 95th percentile size and weight Rocker arm adjustability: 360 degree rotation; step locks every 9 degrees; +/- 20 degree swing adjustment of rocker arm Pin pressure mechanism: 0-360N (0-80lbf) Skull pins: MR conditional titanium pins for iMRI use; standard skull pins can be used for non-iMRI cases

Optional Rocker Arm Accessory

- » For each case, surgeon has option to select 3-pin or 4-pin fixation
- » 4-pin setup distributes skull clamp pressure across two points on the side the rocker arm accessory is added
- » Choice to use inner or outer pin holes on each rocker arm depending on skull anatomy (see below)



HFD100 with 3-pin fixation



HFD100 with accessory for 4-pin fixation