

Micromar Stereotactic  
**Aim**system

TM03B

Aim<sub>system</sub>



Antonio Martos – Micromar CEO and Aimsystem TM03B (Teixeira-Martos)

*"In order to reach a target it is necessary to use an extremely precise instrument.*

*Aimsystem abridges more than 30 years of intensive engineering development work alongside some of the most renowned neurosurgical centers worldwide, which has resulted in a complete, versatile and user-friendly system. Micromar has incorporated into its stereotactic system solutions which allow the neurosurgeon to carry out his work with excellence, reducing risks and assuring the very best results. Aimsystem is a unique piece of equipment which will satisfy all your needs".*

Antonio Martos Calvo



# Aim<sub>system</sub>

TM03B (Teixeira-Martos)

## Attributes which make the difference.

Isocentric system;

Compatible with CT-scan and MRI;

Centralized aiming system for the control and placing of electrodes;

Direct fixing with 3 or 4 screws, or with the use of extension posts;

CT support\* with angular movement system for greater precision in obtaining images;

Curved segment which allows the patient intubation.

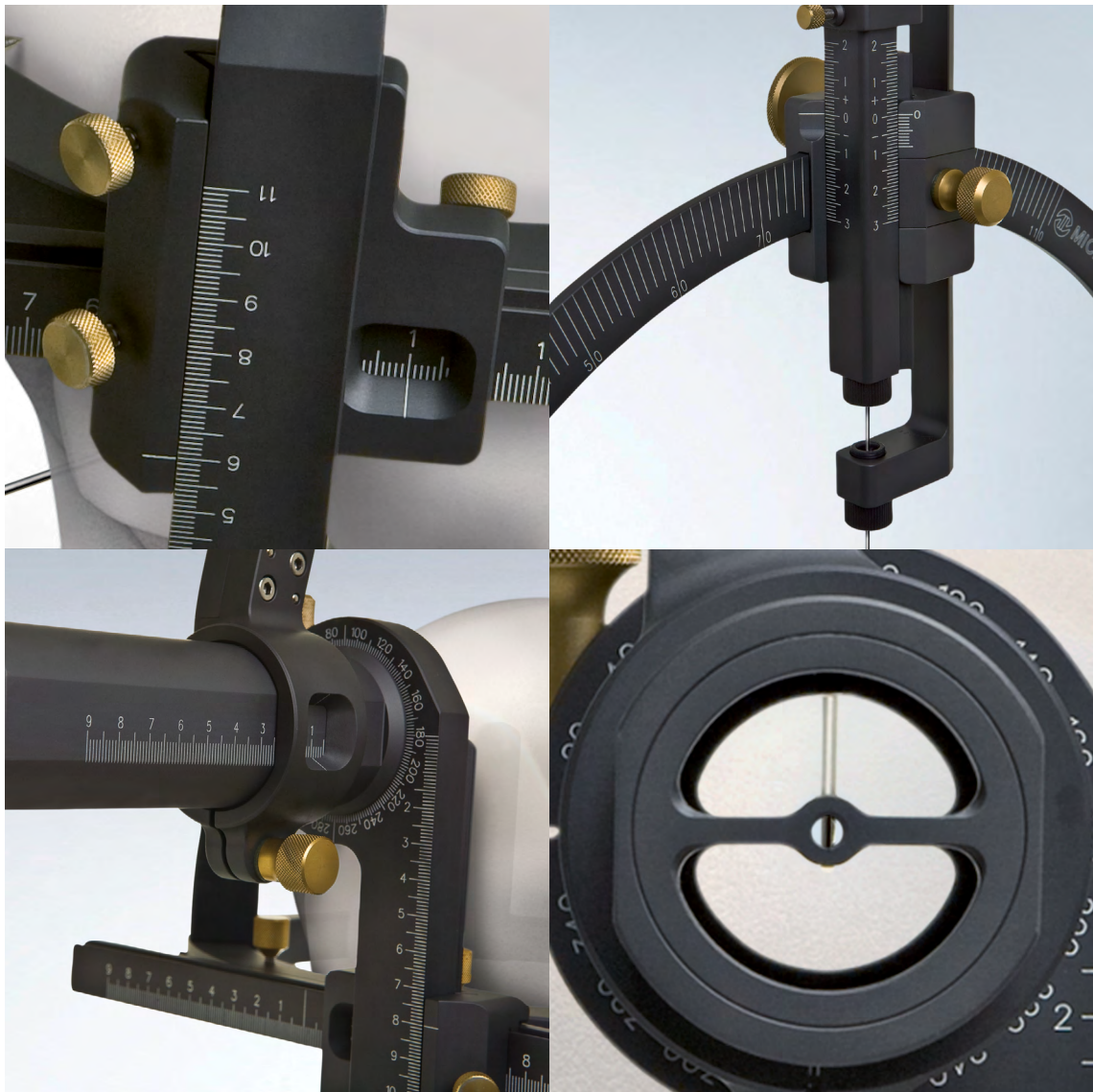
## Performance

### Precise and minimally invasive

Aim<sub>system</sub> is used as a means of stereotactic tracking and navigation.

The system assures the precise localization and approach of pre-determined targets from of CT-scan or MRI, allowing manual calculation or the use of software to obtain the stereotactic coordinates (X, Y and Z). Aim<sub>system</sub> is extremely versatile and can be used for several neurosurgical applications, offering maximum flexibility. It is ideal in situations where dependability and precision are fundamental.





# Application

Diagnosis
Biopsy
General Neurosurgery
Guided Surgery
Catheter Placement
Guided Neuroendoscopy
Therapeutic Neurosurgery
Evacuation of Haematomas
Brain Abscess Evacuation
Functional Neurosurgery
Treatment of Movement Disorders
Treatment for Chronic Pain
Behaviour Surgery
Spasticity
Epilepsy Treatment

# Pre operative

## Easy fixation of stereotactic frame.

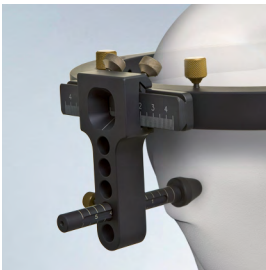
The frame can be fixed in a few minutes no matter how the images were taken: CT-scan or MR. The surgeon has the choice of fixing the frame directly on the patients head with 3 or 4 fixing screws with the target upward or downward; or he can use extension posts with a curved segment which allows operations in intubated patients. In this case the frame is in a low position, offering an ample field for open stereotactic guided procedures. Furthermore Aim<sub>system</sub> has CT table adapter\* which is adaptable to any CT model.

## Fixation screws.

Aim<sub>system</sub> offers several models of fixation screws with adapted dimensions and functional characteristics. The screws are made of modern material such as stainless steel, titanium and fiber composite compatible with MRI.

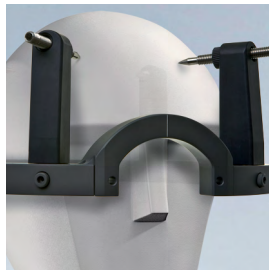






### Ear Aligners\*

This simple system facilitates the actions of positioning and fixing the stereotactic frame, avoiding undesired inclinations in the images for diagnosis.



### Curved Segment

The curved segment, used with the extension posts, allows patient intubation.



### Stereotactic Frame

Made of an extremely light material, resistant and compatible with CAT-scan and MRI, the Stereotactic frame can be fixed directly on the patient's head with 3 or 4 fixation screws, with the target upward or downward.



### A Segment\*

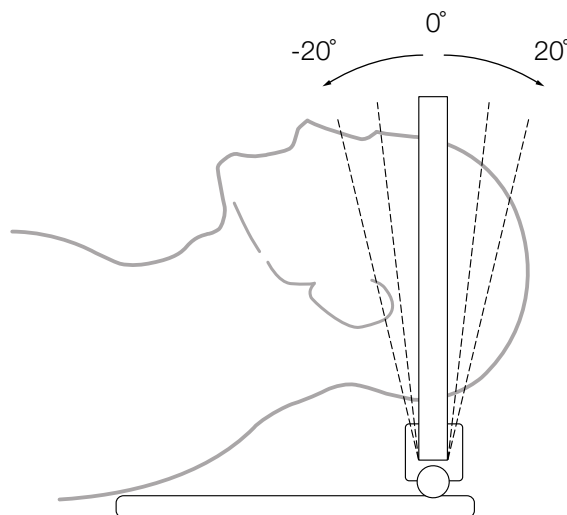
This item allows the use of extension posts for cranial fixation with only 3 points. Made of special compound material it does not produce artifact, allowing the patient intubation, as well as offering a wider area for frontal approach. It is an excellent solution for stereotactic guided surgeries.

\*Optional Items

# Image acquisition

## Solutions which make the difference.

To satisfy the precision demanded in a stereotactic surgery it is necessary to have access to perfect images. For this reason it is important to use a special adapter, compatible with the CT table machine\*. Not only does Aimsystem have a different model of CT table adapter to each type of CT equipment, but it also has an exclusive adjusting system that offers 40 degrees freedom of movement which guarantees that a patient with the stereotactic frame fixed can be placed on the CT table without having his breathing obstructed and without any discomfort, even if this patient has cervical hipomobility.



### MRI Localizers\*

Made of material which does not produce artifact.  
These references are extremely compact and a useful aid in introducing into the MRI antenna, allowing a perfect take of images.



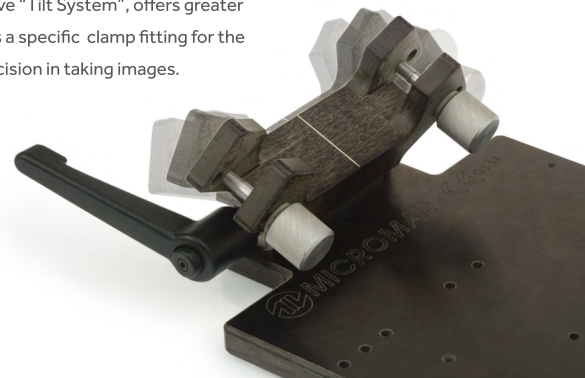
### CT-scan Localizers\*

This set allows images to be taken in upward and downward position.  
It has a set of infant localizers specifically for downward exams.

"Aimssystem comes with the exclusive 'Tilt System' which allows an ideal position with absolute comfort for the patient."

### CT table adapter with "Tilt System"\*

This support, with the exclusive "Tilt System", offers greater comfort for the patient. It has a specific clamp fitting for the CT table, offering greater precision in taking images.

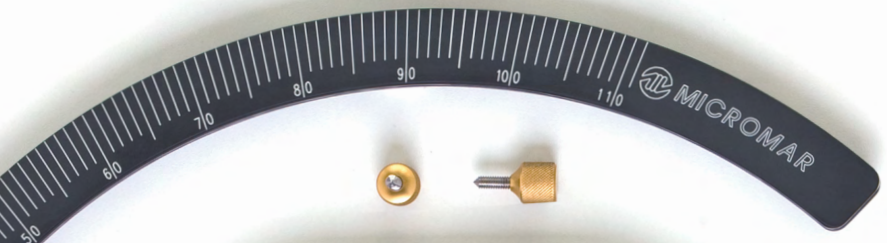


# Quick-attachments

Attachments which allow the quick and easy assembly.

Aim<sub>system</sub> comes with a specially designed clamping system to simplify assembly, facilitating the neurosurgeons work during all the surgery.

Its versatility allows the choice of the most convenient approach to reach the planned target, once it can be assembled in many different ways, amplifying its use. The Stereotactic frame can be fixed to the patient's head with or without extension posts, using 3 or 4 points of fixation upward or downward, offering a wide field of approach.





# Approaches

## Isocentric. All directions lead to the target.

Aim<sub>system</sub> is an isocentric tool which allows approach from all parts of the skull without restriction: upward or downward targets, from the cerebral stem to the vertex, lateral approach (right and left), anterior, posterior, temporal, posterior fossa or trans sphenoidal, offering maximum flexibility of procedures at all times. Isocentric, the system offers a wide range of options so that the neurosurgeon can choose between several combinations of approach angles (Alfa and Beta) without having to change the Stereotactic coordinates (X, Y and Z), avoiding undesired areas and always able to choose the best trajectory to the target.

“Discover new approaches - Aimsystem offers a wide range of options so that the surgeon can choose the best trajectory.”



# Precision

## Maximum precision.

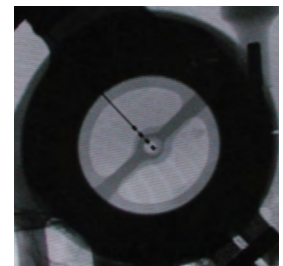
Aim<sub>system</sub> comes with easily reading scales which allow for a precise positioning of the stereotactic coordinates. See below some of the attributes which make this machine the ideal stereotactic for functional surgeries.

- Ear Aligners\*: guarantee perfect alignment;
- Short Z bar: avoids blind spots;
- Vernier: precision in movement of the instrument;
- Millimetrical tube: comes with integrated target finder.



## Total security

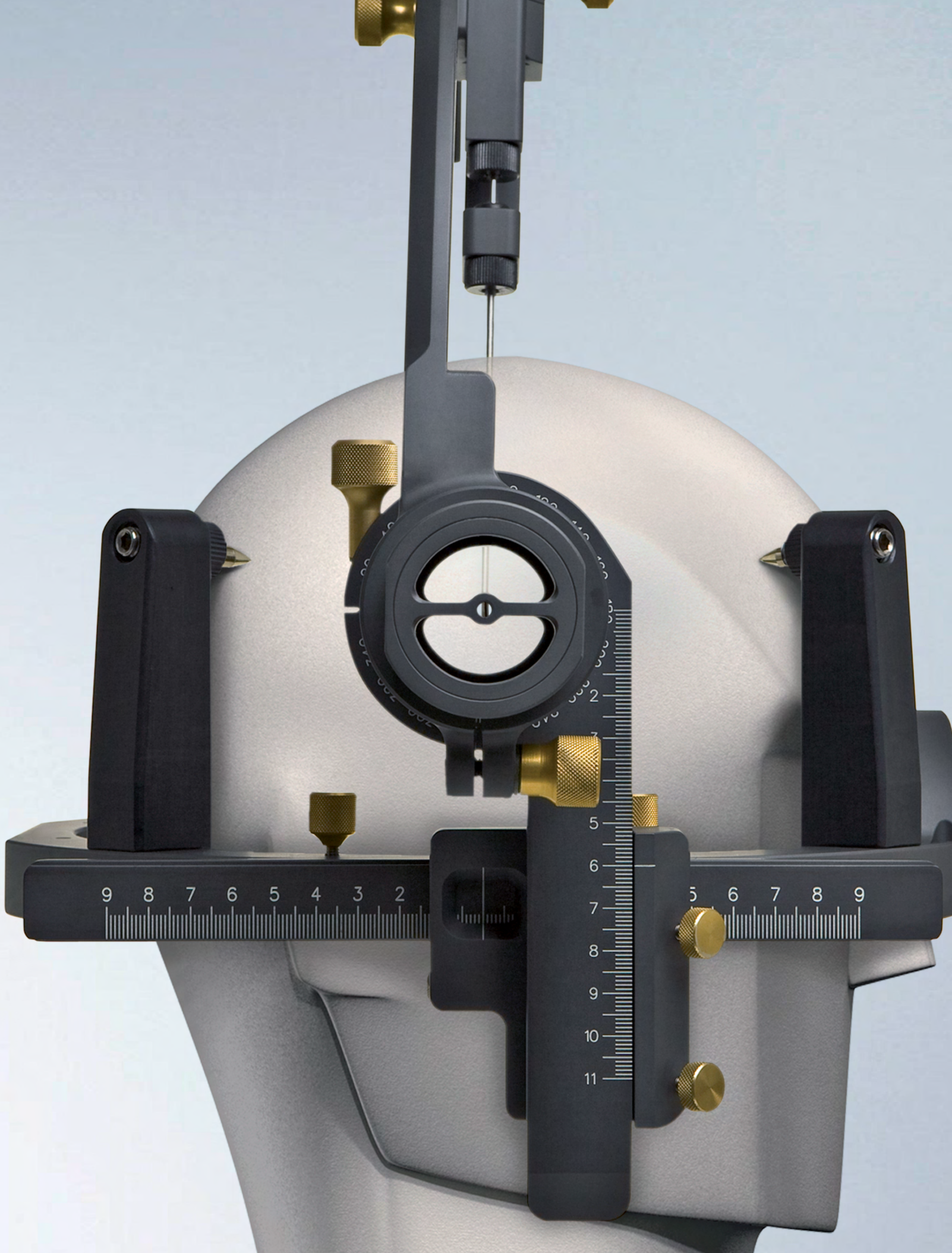
While passing the coordinates to Aim<sub>system</sub> the surgeon can still check the exact position of the instrument. Maximum precision in functional surgery.



Sight system, radiographic instrument control (DBS).

\*Optional Items



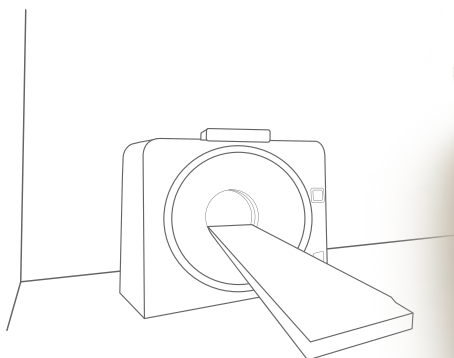


# Practicability

## Twin Tray, maximum practicability.

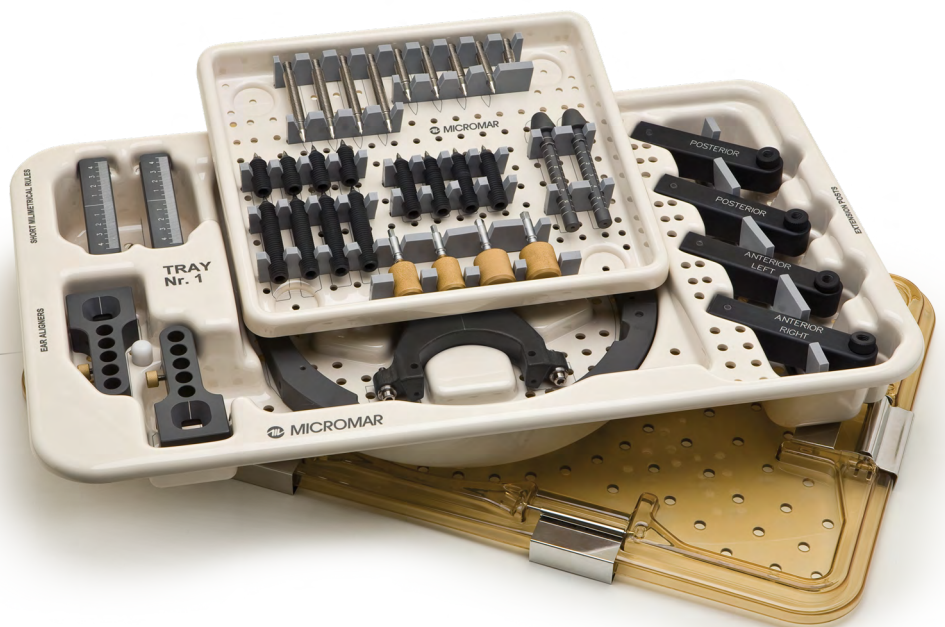
To help in transport and sterilization Aimsystem has a practical system of trays:

Twin Tray. These trays are made of last generation raw material compatible with all methods of sterilization. The stereotactic procedure is made up of two periods: pre-operative and intraoperative. This exclusive system of trays comes with logic organization which contemplates these two stages and allows the necessary components for cranial fixation to be manipulated independently from the items which will be used in the surgical phase of the procedure. Thus maximum practicability is guaranteed.



### Fixation Tray\*

Set for fixing the frame on the patient's head.

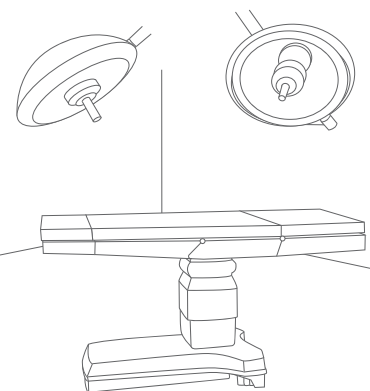
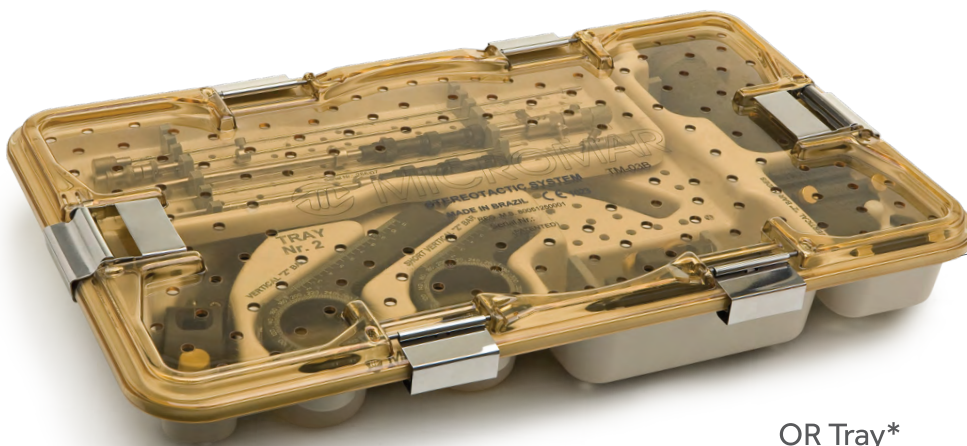


\*The images are illustrative, representing the basic composition of Aimsystem with some of their optional items.



## Easy Storage

Twin Tray has the identification of all components chosen, to facilitate packing, assuring maximum protection of the items in transport, guaranteeing the integrity of the system.



## OR Tray\*

Set made for carrying out stereotactic procedures in the operating room.

\*The images are illustrative, representing the basic composition of Aimsystem with some of their optional itens.



## Versatility

### Many more possibilities.

To offer still further possibilities to Aimsystem, Micromar has accessories which allow amplified interaction of the system with other surgical techniques. The ability to adapt and customize procedures according to the needs of each case allows the neurosurgeon to approach different strategies and expand the therapeutic options available.

“Stereotaxy, with its incomparable ability to map the brain with millimeter precision, serves as the infallible guide for neurosurgeons during guided procedures for DBS.”

## Micromar Electrode Placer\*

Aimsystem offers an exclusive system for the introduction of deep stimulation electrodes (DBS). The electrode is placed stereotactically, allowing radioscopical checking of the intracranial position, as well as having an attachment which avoids movement of the electrode during the removal procedure.

Micromar deep brain stimulation cannula (DBS) has adapters to be compatible with electrodes from the main brands on the market.



## Canullas\*

Aimssystem offers a set of canullas to attend to each stereotactic need.



Biopsy Canulla\*



Abscess Evacuation Canulla\*



Haematoma Evacuation Canulla\*

“Boundless possibilities - Aimssystem is the complete stereotactic equipment.”

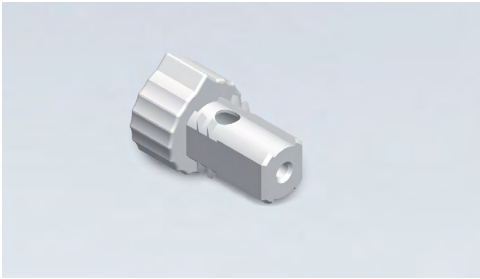


## Support for Retractor Arms\*

This exclusive system allows the the Retractor Arms to be used along with the Aimssystem frame, which is ideal for carrying out open guided surgeries.

\*Optional Items

"Micromar has an engineering and support departments, fully qualified to meet the main needs of its customers."



Quick Bolting Bushing Guides\*

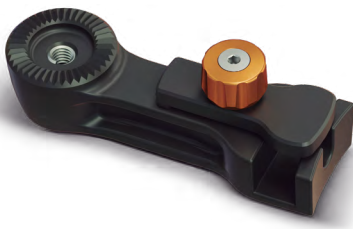
Integrated with the disposable cannulas, they allow a quick connection to the stereotactic chariot.



Security Lock

The use of this lock ensures that the chariot remains in the arc even when released.

"Attachments which simplify the neurosurgeon's work."



Stereotactic System Adapter/ Cranial Fixation\*

With this unique adapter, stereotactic surgeries can be made with the advantage of total mobility of the HeadFix cranial fixation system.





The best products easily attainable.  
Guarantee of services that fit your needs:

- **Personal training.** Micromar products used to their best potential;
- **Technical Assistance.** Revision and maintenance of products at your disposal;
- **Guaranteed substitution of parts.**

Main Distributor:



M I C R O M A R

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