

# RoboMate STX

## Motorized Stereotaxic Instrument

Contact:  **red box direct**  
Think inside the box

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Since its introduction in 1908 the stereotaxic instrument has remained largely unchanged until now



### And it's about time

**RoboMate STX Motorized Stereotaxic .... €14,715--**

- 8 micron linear and 5 arcmin minimum angular increments
- Virtual Point<sup>TM</sup> Laser Positioning
- Precisely reach any target within the brain (regardless of approach angle)
- Clear and Unobstructed access to the operative field
- Precise software control of position, direction and speed
- Computer and/or Joystick Control both direction and velocity of movement
- Movement in 6 axes
- Undetectable backlash and drift

For nearly 100 years the basic design principle used in standard stereotaxic instruments has remained relatively unchanged based on traditional XY and XYZ linear displacement configurations. So **not only does RoboMate STX represent the first motorized stereotaxic it is also the lone stereotaxic instrument that can precisely position the probe/electrode/needle at infinitely variable angles with respect to the target.**

The core of the system's design is an advanced piezoelectric rotary motor driven by a digital signal processor (DSP) based controller. When the motor is de-energized, it operates as a steadfast position holder (brake) with almost undetectable backlash and drift.

Using laser guided Virtual Point<sup>TM</sup> technology the tip of the probe/electrode/needle remains fixed so that **no matter at what angle the probe/electrode/needle is placed, its tip will always precisely reach your target within the brain.**

The Virtual Point is formed where the axis of rotation of the first and second rotary motors and the longitudinal axis of the probe/electrode/needle intersect. When the tip of the probe/electrode/needle is positioned at the Virtual Point, changes in the angle of the probe/tool will not affect the position of the tip of the probe, which will remain at the Virtual Point.

The angular adjustments afford two additional advantages:

- (1) In different operations, diverse superstructures may be traversed on the way to the same target, thereby providing a control against incidental destruction of any particular structure in the brain above the target.
- (2) They make it very convenient to reach targets on the mid-line without having the approach obstructed by the sagittal (longitudinal) sinus.

## Technical specifications

<b>RoboMate STX</b>	
Rotary motor angular range (from vertical)	-90 deg to +70 deg
Minimum angular step	5 arcmin (0.09 deg)
Angular rate of rotation	20 arc sec/s - 90 deg/s
Range of linear motor movement	30 mm
Minimum linear increment	8 $\mu$ m
Range of linear velocity	1 $\mu$ m/s to 25 mm/s
Max. Load	0.5 kg
Push/Pull Force of the linear piezoelectric motor	20N
Rotary Axis Drift at 20°C	Less than 1 arc sec/hour
Linear Axis Drift at 20° C	Less than 2 nm/hour
Weight with base plate	9 kg
Dimensions (mm)	460(l) x 300(w) x 360(h)
Supply Voltage	12V
Nominal Power Consumption	10W



DTI-NanoTech

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