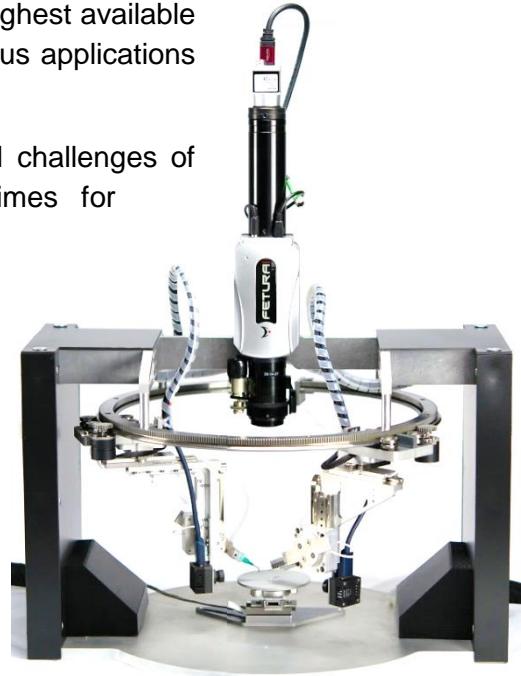Micro-assembly device
MiCROW-Pro
Datasheet

Description

MiCROW-Pro is a micro-assembly device offering highest available accuracy combined with intuitive operation for various applications on the same machine.

MiCROW-Pro is designed to satisfy all needs and challenges of modern, miniaturized assembly. Short set-up times for different tools and the use of latest nanoscale driving technology to move freely in 6D allow for the production of various products.

Our own control software lets you use intuitive input devices, such as gamepads or haptic devices, making working with MiCROW-Pro extremely easy and quick to learn. All control parameters, for example for the illumination, can easily be set with a few mouse clicks.

Applications

Typically, the MiCROW-Pro is used for the production of miniaturized devices, such as sensors or actuators for e.g. instrumentation or medical devices. Laboratory automation or prototyping are additional fields of application. The MiCROW-Pro is intended for small series with batch sizes starting at "1" but can also be used for semi- or fully automated tasks.

Specifications

Dimensions MiCROW-Pro W x H x D	52 cm x 70 cm x 38 cm
Dimensions control elec. W x H x D	49.5 cm x 69.5 cm x 50 cm
Workspace dimensions	80 mm x 60 mm x 80 mm (related to the main camera zoom)
Weight	ca. 12 kg (excl. control electronics)
Interfaces control electronics	USB 2.0 (1x), USB 3.0 (1x)
Operation modes	tele-operated, semi- and fully automated
Supply	230 V (1x)
Included in delivery	customized MiCROW-Pro, Control Computer with *MiCROW Control Application*, input devices (Keyboard, Mouse, Gamepad), instruction manual

Handling Tools

Step size	50 nm to 1500 nm, or continuous stepping mode
Movement resolution	sub-nanometer
Possible tools	two-jaw gripper, vacuum gripper, fluid dispenser, solder tip*, micro-welding device*
Options	tool-cameras for the side-observation of the assembly scene; custom tool integration

* In preparation

Tool options (selection): Two-jaw gripper (left), vacuum gripper (center), and dispensing unit (right)

Overview Camera

Resolution	2046 x 1086 px at 50 fps maximum
Working distance	169 mm
Zoom	12.5:1, (dynamically) controllable with the *MiCROW Control Application* Software
Illumination	ring lights, brightness and color (RGB) controllable with the *MiCROW Control Application* Software
Options	Infrared lights, strobe lights

Contact

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