

NEW!

# The Gentle Force

Cell Membrane Perforation with the Eppendorf PiezoXpert®

**eppendorf**

# A Giant Leap for Piezo-assisted Micromanipulation

## Eppendorf PiezoXpert®

The new star of our Cell Technology product portfolio is the ideal complement for a wide variety of micromanipulation or microinjection techniques in which additional force is needed to perforate cell membranes.

The Eppendorf PiezoXpert is used for piezo-assisted micromanipulation and facilitates easy perforation of cells for subsequent microinjection or manipulation.

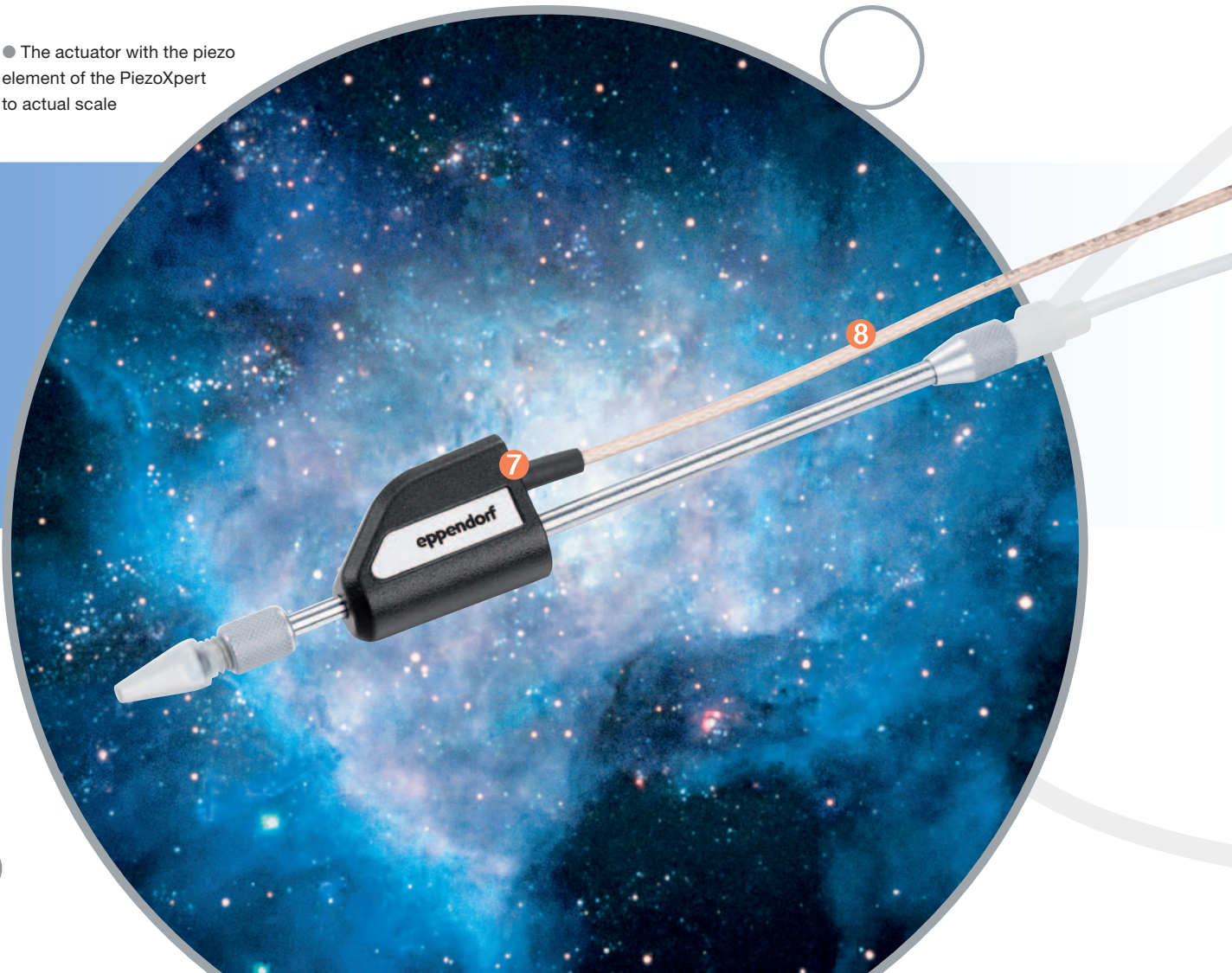
The penetration into cells is supported by piezo impulses that are directly and without loss transmitted onto the attached microcapillary. Intuitive operation and a wide adjustment range ensure best performance and reproducible work.

Piezo-assisted micromanipulation improves productivity and yields for many microinjection procedures, including nuclear transfer, intracytoplasmic sperm injection (ICSI), embryonic or induced pluripotent stem cell injection into blastocysts, and assisted hatching.

Get a helping hand with your experiments and experience the gentle force of the PiezoXpert.

**For further information, please visit**  
[www.eppendorf.com/micromanipulation](http://www.eppendorf.com/micromanipulation)

● The actuator with the piezo element of the PiezoXpert to actual scale



# Unique Features of the PiezoXpert®

- 1 Faster and easier sample handling – reproducible parameter setting
- 2 All settings viewable at one glance – all parameters for two channels are displayed at the same time and can be set independently by A and B rotary knobs
- 3 Ultra-fast and powerful cleaning function at your fingertips – e.g. for removing debris
- 4 Easily and freely programmable – saving your favorite sets of parameters
- 5 Intuitive use – triggering of the impulses either through an optimized foot control or button on device with optical feedback assists your work
- 6 Compact, space-saving design for placing the unit directly next to your micromanipulation workstation
- 7 State-of-the-art technology facilitates direct transmission of a pre-defined number of piezo impulses – the piezo element is located at the front of the capillary holder directly adjacent to the microcapillary
- 8 Ideal space-saving design of the actuator – easy and reproducible installation

A			B
1	Int.	10	
1	Speed	10	
9	Pulse	∞	



Original footprint size – only 17 × 23 cm (9.06 × 6.69 in)

The PiezoXpert fits next to every micromanipulation workstation as easily as on this page!



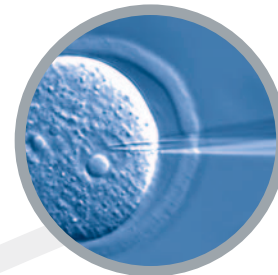
# Our Expertise Orbits around Your Cells

## Micromanipulation with Eppendorf ...

Eppendorf has a long tradition in micromanipulation, extending back over 20 years. This experience is mirrored in the performance and quality of our products.

The Eppendorf PiezoXpert follows these criteria and shines as the new star within the Eppendorf world of micromanipulation systems.

Eppendorf – your competent partner for all micro-manipulation and cell biology related applications.



● Eppendorf PiezoXpert



● New Brunswick GALAXY CO<sub>2</sub> Incubator

... success from one source!

**Flexible solutions for all your applications:**

### Typical applications

- ICSI
- IMSI
- TESE
- PGD
- Pronuclear injection
- ES cell injection
- Cloning
- Adherent cell injection
- Injection into embryos or small animals

### Other fields of application

- Single cell analysis
- Forensics
- Plant injections
- Selection of crystals
- Positioning of nanostructures
- Dissection of single cells from tissue

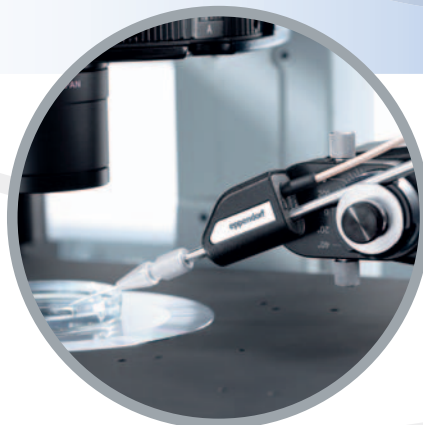
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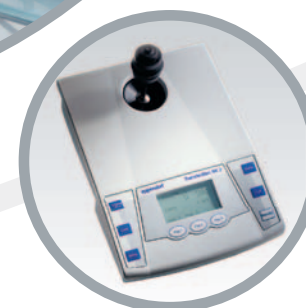
● The Multiporator – a modular system for electroporation and electrofusion



● Eppendorf microcapillaries



● PiezoXpert actuator mounted onto TransferMan NK 2



● TransferMan NK 2 electronic micromanipulator



# Small but Powerful – Eppendorf PiezoXpert®

## Technical specifications

Parameter	Values
<b>Input voltage</b>	100 V–240 V, 50 Hz–60 Hz
<b>Power input</b>	18 W
<b>Max. power input</b>	< 0.18 A
<b>Interface</b>	USB 2.0 (for technical service) RS232 (connection for foot pedal)
<b>Dimensions (L × W × H)</b>	23 × 17 × 11.5 cm / 9.06 × 6.69 × 4.53 in
<b>Weight</b>	2.8 kg

## Parameter of piezo impulses

Parameter	Values
<b>General parameter setting</b>	
<b>Int. (intensity of piezo impulses)</b>	1–50
<b>Speed (frequency of piezo impulses/sec)</b>	1–10
<b>Pulse (number of piezo impulses)</b>	1–10; ∞ (infinite)
<b>Clean function</b>	
<b>Int. (intensity of piezo impulses)</b>	1–86
<b>Speed (frequency of piezo impulses/sec)</b>	1–40

## Ordering information

Description	International Order No.	North America Order No.
<b>Eppendorf PiezoXpert®</b> Basic device incl. Actuator, Foot control and Spacer plate*	5194 000.016	5194000024
<b>Accessories</b>		
<b>Actuator</b> for PiezoXpert	5194 075.105	5194075105
<b>Foot control</b> for PiezoXpert	5194 075.202	5194075202
<b>Spacer plate</b> for PiezoXpert (included in standard delivery package of PiezoXpert)	5194 075.300	5194075300
<b>Service product</b>		
<b>Verification of Actuator***</b> Testing of electronical and mechanical performance according to manufacturer's specification.	5194 075.016	–
<b>Other related products</b>		
<b>TransferMan® NK 2**</b>	5188 000.012	9200000011
<b>InjectMan® NI 2</b>	5181 000.017	9200000029
<b>PatchMan NP 2</b>	5183 000.014	9200000037
<b>CellTram® Air**</b>	5176 000.017	9200002021
<b>CellTram® Oil**</b>	5176 000.025	9200002030
<b>CellTram® vario**</b>	5176 000.033	9200002111
<b>Piezo Drill Tip ES</b> , set of 25	5175 250.001	930001104
<b>Piezo Drill Tip Mouse ICSI</b> , set of 25	5175 220.005	930001091
<b>VacuTip®</b> , set of 25	5175 108.000	930001015
<b>VacuTip FCH®</b> , set of 25	5175 240.006	5175240006
<b>Grip head 0 for microcapillaries</b> with outer diameter of 1.0–1.1 mm, pack of 2	5176 210.003	–

\* For mounting the PiezoXpert onto TransferMan NK 2 and PatchMan NP 2.

\*\* This product is registered in Europe as a medical device (according to Medical Device Directive MDD 93/42/ECC).

\*\*\* In selected countries only, please contact your local sales organization for further information.

For more information on the Eppendorf PiezoXpert visit: [www.eppendorf.com/micromanipulation](http://www.eppendorf.com/micromanipulation)

**eppendorf**  
*In touch with life*

Your local distributor: [www.eppendorf.com/worldwide](http://www.eppendorf.com/worldwide)

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