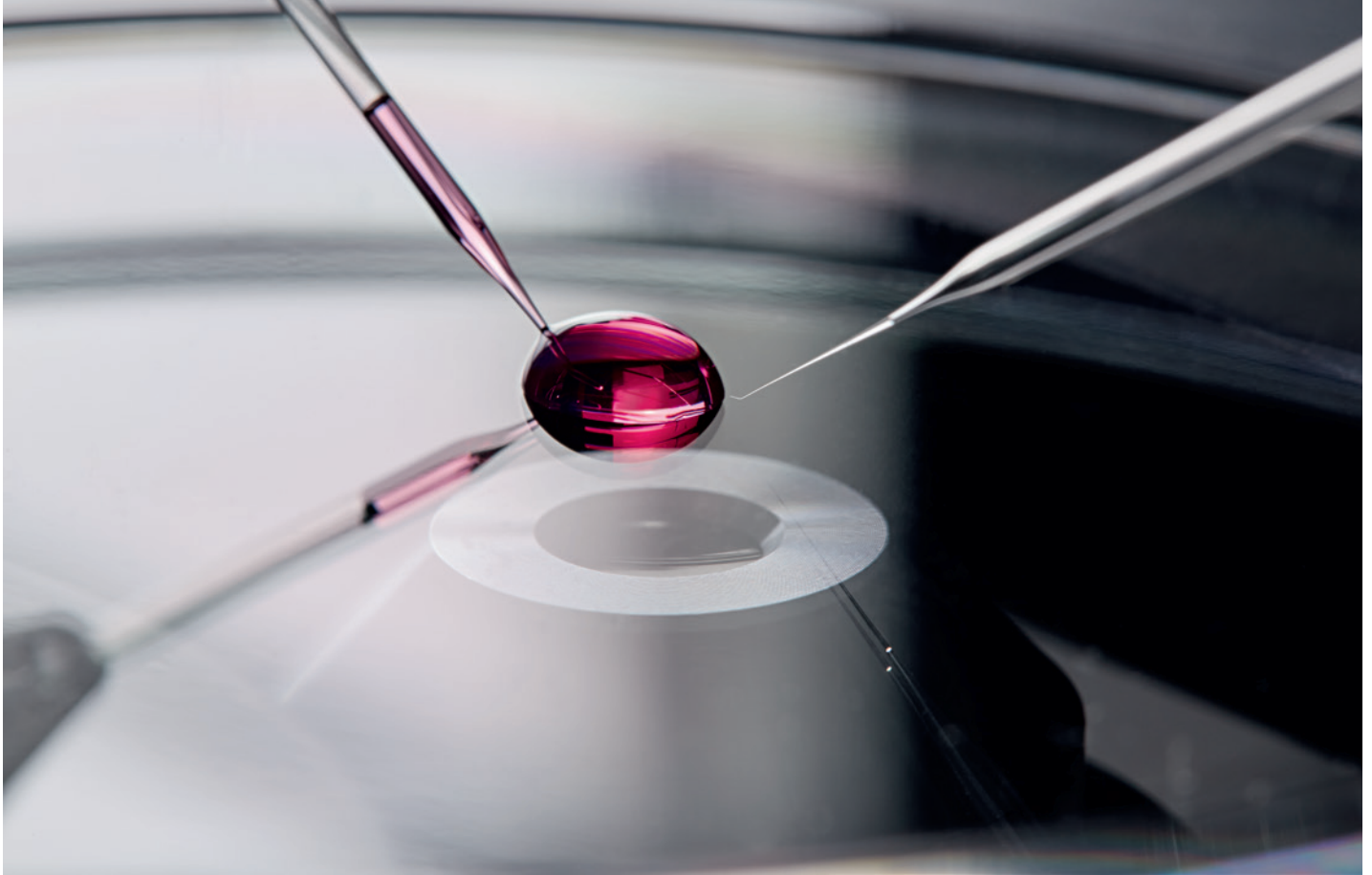


EU-Medical Devices



# Smooth Operator

Eppendorf equipment for IVF -  
TransferMan® 4m and CellTram® 4m Air/Oil



## Micromanipulation Expertise

Eppendorf has been your partner in IVF for more than twenty years. Despite rapid developments, we have always remained true to our principles of precision, quality and reliability. With the ongoing development of our products, we continue to set new standards to simplify your work.

The new micromanipulator TransferMan® 4m performs with outstanding technical performance and an overall ergonomic concept. The exceptional precision and smoothness of movements in all directions makes the TransferMan 4m the ideal platform for use in ICSI, IMSI and related techniques.

### Product features

- > Unprecedented direct transmission of movement without any recognizable latency
- > Unique DualSpeed™ joystick with direct and dynamic movement control
- > Maximum stability ensures vibration-free work
- > One-hand operation for easy capillary and angle settings
- > Programmable Z-axis limit for preventing capillary breakage

### Technical specifications

#### Control board

Control	<b>TransferMan® 4m</b>
Dimensions (W × H × D)	One joystick for movement control in X-,Y-, Z-dimension
Weight (incl. mains/power supply device)	205 mm × 288 mm × 152 mm
External device/PC	1.8 kg
Working area	Serial interface SubD9, male
Speed control	Coarse, fine, x-fine
	Proportional and dynamic kinetics

#### Motor module

Max. travelling distance	<b>TransferMan® 4m</b>
Weight (complete)	≥20 mm
Stepper motor	2.15 kg
	X-, Y-, Z-module

# The TransferMan<sup>®</sup> 4m

The user-friendly TransferMan<sup>®</sup> 4m micromanipulator combines an ergonomic and innovative operation concept that is ideal for IVF applications such as ICSI, IMSI and related techniques.

Application-specific user profiles simplify the individual workflow process with four predefined application masks to choose from (e.g. for ICSI, cell transfer, etc.). The freely programmable "My application" mask can be optimized for specific individual needs.

The unique DualSpeed<sup>™</sup> joystick combines precise and intuitive, direct movement with dynamic movement control for covering longer distances or speeding up sample processing.

Furthermore, the dynamic movement mode can easily be switched off depending on the application need and personal preference.



CE\*

1 4<sup>th</sup> gear: Unique DualSpeed<sup>™</sup> joystick for precise, instantaneous control and positioning using two adaptable speed modes

2 Ergonomically shaped control panel for fatigue-free work

3 Optimized user interface for various applications simplifies work procedures

4 Simple and quick capillary and sample change using automated home function

5 Selection and programming of additional functions (e.g. storage of up to 5 positions, limit, Y-off)

6 Comfortable, individual speed adjustment

The TransferMan 4m is compatible to microscopes from all major microscope brands.



## Technical specifications

### Module (X,Y,Z)

Step size (computational resolution)	<20 nm
Speed	0 – 10,000 µm/s
Mechanical adjustability	>80 mm
Dimensions	129 mm x 51 mm x 36 mm
Direction of rotation	-45° – +90°
Capillary exchange	Direction of rotation: forward (swivel out)
Sample replacement	Direction of rotation: backward (swivel in)
Operating angle of angle head	0° – 90°

\* The TransferMan<sup>®</sup> 4m was designed and manufactured for the purpose of intracytoplasmic sperm injection (ICSI) within the context of human reproductive medicine. Therefore the TransferMan<sup>®</sup> 4m is a medical product in accordance with the guideline 93/42/EEC of the European Union.

# CellTram<sup>®</sup> 4m Air

Working with the new generation of CellTram is like taking a breath of fresh air. Our new manual microinjectors have been designed with special emphasis on excellent ergonomics, ease of use and highest precision.

The CellTram 4m Air is a pneumatic microinjector optimized for safe and reliable use in assisted reproductive technology. It is ideal for gentle holding of cells or embryos.

Due to its improved characteristics the CellTram 4m Air is also highly suitable for **uptake and injection of cells** (e.g., of sperm or ES cells). For this application its performance is comparable to that of oil-filled injectors.

Have you been looking for a solution to work entirely oil-free? With the CellTram 4m Air you can avoid oil contaminations and save time by omitting the filling process.



## Features CellTram 4m Air

1 Non-hydraulic system for oil-free manipulation and injection of cells

2 Piston position scale allows to set air volume and injection characteristics according to individual needs

## Features CellTram 4m (both models)

3 Coarse and fine drive for precise and intuitive sample control

4 Improved rotary knob design for better handling and easier cleaning

5 Universal capillary holder 4 with markings for easier positioning



The CellTram 4m Air features single button aeration. This allows you to quickly equilibrate pressure differences between the cylinder and ambient pressure, thereby speeding up your workflow.

\* The CellTram 4m was designed and manufactured for injection and aspiration of cells or cellular parts in the context of ex-vivo micromanipulations in combination with suitable microcapillaries in the area of human reproductive medicine. Therefore the CellTram 4m is a medical product in accordance with the guideline 93/42/EWG of the European Union.

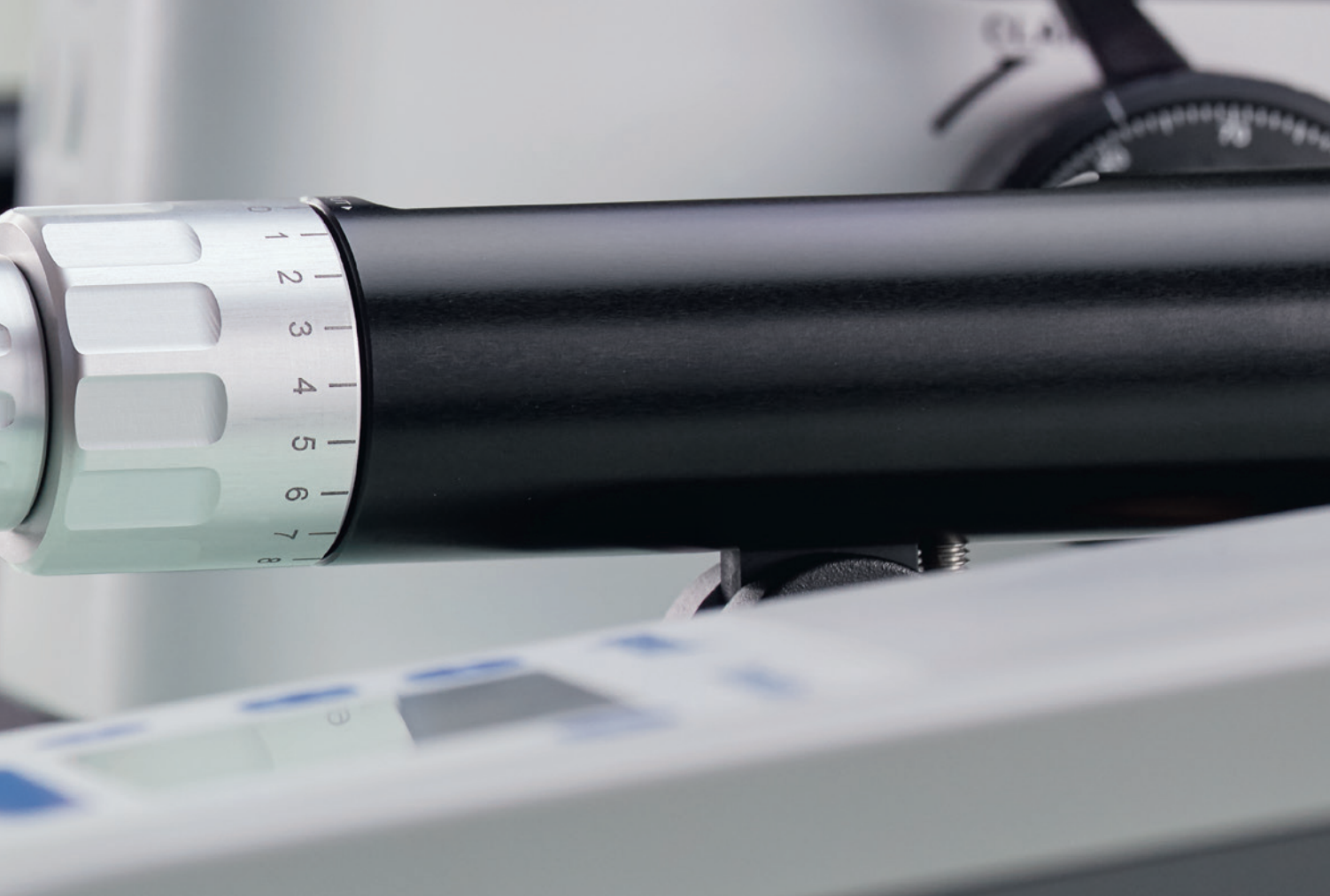


The right solution for your application



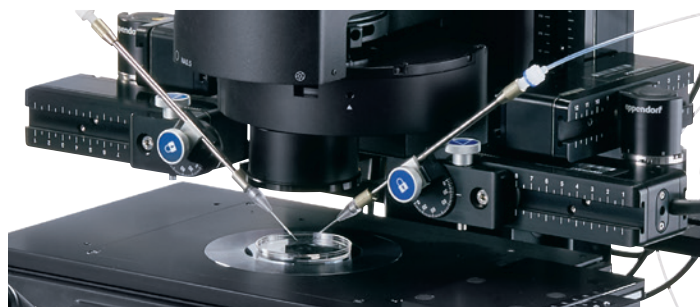
**Intracytoplasmic sperm injection (ICSI)**

For treatment of certain forms of male infertility



## Teaming up for success

While compatible with all systems, the new CellTram develops its full potential when used in combination with Eppendorf micromanipulators. The Eppendorf system offers many advantages, such as utmost smoothness of movement, fast capillary exchange and smart functions like position memory or Z-limit to prevent capillary breakage. All this helps to simplify your work and protect your precious samples.



	CellTram® 4m Air	CellTram® 4m Oil
<b>Applications</b>	<ul style="list-style-type: none"> <li>&gt; Gentle holding of cells in suspension (e.g., oocytes or blastocysts)</li> <li>&gt; Aspiration and dispensing of small cells (e.g., sperm)</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Aspiration and dispensing of small cells (e.g., sperm)</li> <li>&gt; Removal of cells (e.g., for embryo biopsies)</li> </ul>
<b>Generation of pressure</b>	Cylinder/piston system, air-filled	Cylinder/piston system, oil-filled
<b>Volume change per revolution</b>	60 µL / 600 µL	1 µL / 10 µL
<b>Total volume</b>	10 mL	1,000 µL
<b>Minimum adjustable volume</b>	<100 nL	<1.5 nL
<b>Maximum pressure</b>	3,000 hPa	20,000 hPa
<b>Injection tube</b>	Fluorinated ethylene propylene (FEP), 1.3 m length, inner diameter 0.5 mm, outer diameter 2 mm	Fluorinated ethylene propylene (FEP), 1.3 m length, inner diameter 1 mm, outer diameter 2 mm

**Ordering Information**

Description	Order No.
<b>TransferMan® 4m</b> , micromanipulator with DualSpeed™ joystick for direct and dynamic movement control	5191 000.015
<b>Microscope adapters</b> , for all common microscopes	available upon request
<b>Accessories for TransferMan® 4m</b>	
Positioning aid, pack of 2, for mounting the universal capillary holder on TransferMan® 4m	5192 072.001
Spare parts kit	5192 071.005
Foot control, for Eppendorf micromanipulators	5252 070.020
<b>Antivibration Pad</b>	
Antivibration Pad XS	5181 301.009
Antivibration Pad S	5181 303.001
Antivibration Pad M	5181 305.004
Antivibration Pad L	5181 307.007
Antivibration Pad XL	5181 309.000
<b>Microinjectors</b>	
<b>CellTram® 4m Air*1</b> , pneumatic, manual microinjector with gear, with capillary holder 4 and injection tube Air inner diameter = 0.5mm (white ring mark)	5196 000.021
<b>CellTram® 4m Oil*1</b> , hydraulic, manual microinjector with gear, with capillary holder 4, injection tube Oil inner diameter = 1.0mm (blue ring mark) and Filling and Cleaning set	5196 000.048
<b>Accessories for CellTram® 4m Air and CellTram® 4m Oil</b>	
<b>Capillary holder 4</b> for mounting grip heads 4	5196 081.005
<b>Grip head set 4 size 0</b> for microcapillaries with outer diameter 1.0 to 1.1 mm	5196 082.001
<b>Grip head set 4 size 1</b> for microcapillaries with outer diameter 1.2 to 1.3 mm	5196 083.008
<b>Grip head set 4 size 2</b> for microcapillaries with outer diameter 1.4 to 1.5 mm	5196 084.004
<b>Grip head set 4 size 3</b> for microcapillaries with outer diameter 0.7 to 0.9 mm	5196 085.000
<b>O-ring-set 4</b> for grip head sets 4	5196 086.007
<b>Injection tube Air</b> , inner diameter = 0.5 mm (white ring mark)	5196 061.004
<b>Injection tube Oil</b> , inner diameter = 1.0 mm (blue ring mark)	5196 089.006
<b>Filling and Cleaning set</b> for CellTram® 4m Oil	5196 088.000

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