

# Fine tuning

Manual Microinjectors CellTram® Air/Oil/vario

**eppendorf**

# Precise, versatile ...

## CellTram<sup>®</sup> Microinjector

CellTram Air, CellTram Oil and CellTram vario—manual microinjectors for pressure control, manual microinjection, and liquid dispensing—are designed with special emphasis on optimal ergonomics, operational comfort, and high precision. All models offer simple and reliable maintenance free performance.

Our three manual microinjectors suit all applications and personal working techniques, satisfying even the most demanding requirements:

### All CellTram models offer the following advantages

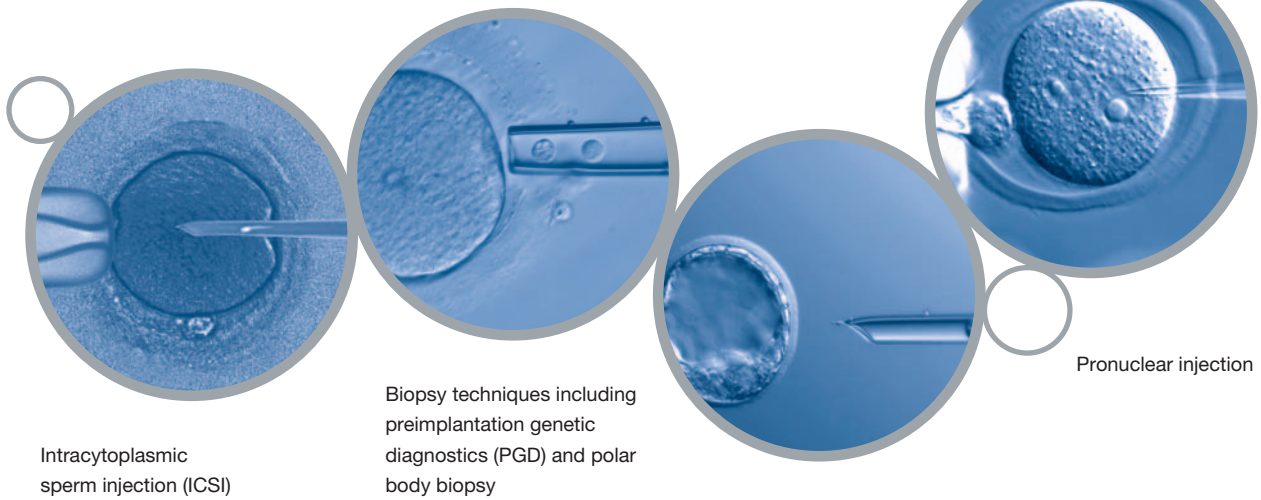
- High-precision pressure setting
- Maintenance-free piston/cylinder system
- Large, ergonomic dials
- Stable, nonslip base plate
- Universal capillary holder for mounting onto all common micromanipulators

CellTram microinjectors are the ideal complement to your Eppendorf workstation, yet they also fit into nearly all other common micromanipulator workstations.

- CellTram Air works with air, making it ideal for holding suspension cells. Manual microinjection and dispensing of aqueous solutions is simplified with this oil-free device.
- CellTram Oil works with oil and can be used for a wide range of microtransfer techniques. It is also perfectly suited for manual microinjection, e.g., into plant cells.

- CellTram vario is also an oil-filled system that enables flawless performance of highly sophisticated applications, including ICSI, ES cell transfer into blastocysts, nuclear transfer, blastomere biopsy and polar body biopsy, as well as experiments in developmental biology (e.g. transplantation experiments).

### Examples for applications



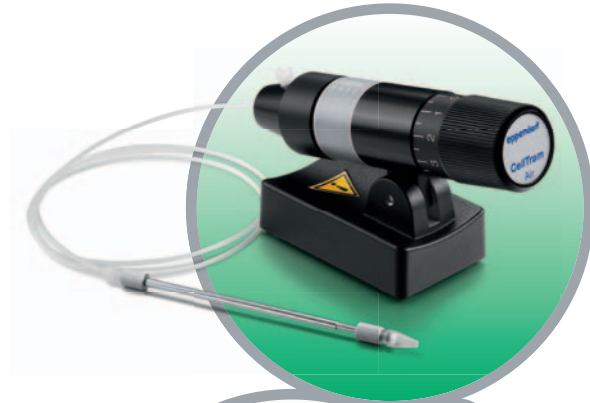
ES cell transfer for the production of transgenic animals

# ... and easy to operate

## Precision in detail

### Additional product features of CellTram Air

- Optimized resolution for holding suspension cells
- Very easy to use



### Additional product features of CellTram Oil

- Maximum pressure of 20,000 hPa
- Suitable for manual microinjection under high pressure (e.g., into plant cells)
- QuickValve system for simple, rapid filling



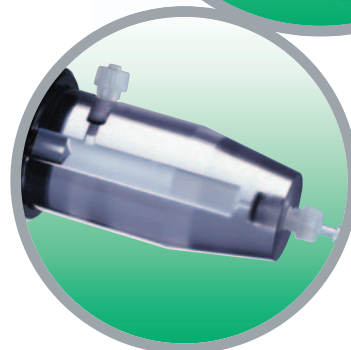
### Additional product features of CellTram vario

- All the advantages of CellTram Oil
- Optimized piston/cylinder system with minimized friction
- Variable transmission ratio (1:1 and 1:10) for applications that demand high resolution and sensitivity



### QuickValve system

With the QuickValve system, filling CellTram vario and CellTram Oil is quick and easy. A special valve screw allows the oil to be filled directly into the piston chamber. The optimized piston/cylinder system minimizes friction, providing the utmost reliability and ultrafine sensitivity.



# Eppendorf manual microinjectors

## Technical data

Volume	CellTram Air	CellTram Oil	CellTram vario
Generation of pressure	Cylinder/piston system air-filled	Cylinder/piston system with QuickValve System, oil-filled	Cylinder/piston system with gear and QuickValve System, oil-filled
Calculated volume change per revolution	88 µL	9,6 µL	9,6 µL / 960 nL (coarse / fine)
Maximum capacity	2,640 µL	960 µL	960 µL
Minimum adjustable volume	< 200 nL	< 20 nL	< 20 nL / < 2 nL (coarse / fine)
Maximum pressure	2,900 hPa	20,000 hPa	20,000 hPa
Pressure tube	Length: 1 m Diameter: 1 mm (inner) Material: polyethylene	Length: 1 m Diameter: 1 mm (inner) Material: polyethylene	Length: 1 m Diameter: 1 mm (inner) Material: polyethylene

## Ordering information

Article	Description	Order No. intern
CellTram® Air*	Pneumatic manual microinjector, complete with pressure tube and universal capillary holder with grip head for capillaries with an outer diameter of 1 mm	5176 000.017
CellTram® Oil*	Hydraulic manual microinjector, complete with pressure tube, filling tube, oil and universal capillary holder with grip head for capillaries with an outer diameter of 1 mm	5176 000.025
CellTram® vario*	Hydraulic manual microinjector with gear, complete with pressure tube, filling tube, syringe, oil and universal capillary holder with grip head for capillaries with an outer diameter of 1 mm	5176 000.033
Grip head 0	For capillaries with an outer diameter of 1.0–1.1 mm (2 pcs.)	5176 210.003
Grip head 1	For capillaries with an outer diameter of 1.2–1.3 mm (2 pcs.)	5176 212.006
Grip head 2	For capillaries with an outer diameter of 1.4–1.5 mm (2 pcs.)	5176 214.009
Grip head 3	For capillaries with an outer diameter of 0.7–0.9 mm (2 pcs.)	5176 207.002
<b>Spare parts:</b>		
O-ring	Includes seals and tool, set of 10	5176 196.000
Service kit	Includes O-ring set plus Femtotip adapter	5176 195.004
Pressure tube	1 m	5176 114.004
VacuTip*	Sterile microcapillaries for holding suspension cells; 35° angle; 15 µm inner diameter, (25 pcs.)	5175 108.000
TransferTip®-RP* (ICSI)	Sterile microcapillaries for ICSI; rigid parallel flange; 35° angle; 4 µm inner diameter, (25 pcs.)	5175 114.000
TransferTip®-F* (ICSI)	Sterile microcapillaries for sperm injection with the ICSI technique; flexible flange; 35° angle; 4 µm inner diameter, (25 pcs.)	5175 106.008
TransferTip®-R* (ICSI)	Sterile microcapillaries for sperm injection with the ICSI technique; rigid flange; 35° angle; 4 µm inner diameter, (25 pcs.)	5175 113.004
TransferTip® (ES)	Sterile microcapillaries for transferring ES cells into blastocysts; 20° angle; 15 µm inner diameter, (25 pcs.)	5175 107.004

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

For more information, visit our Cell Technology section at  
[www.eppendorf.com/cellmanipulation](http://www.eppendorf.com/cellmanipulation)

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