

**Three-dimensional manipulator with added movement capability in the same direction as the pipette**

When using this unit to insert a pipette into the cell, operators can make further movement in the same direction, which minimizes the chance of damaging the cell. This single-axis oil hydraulic manipulator meets that requirement and can also be used as an add-on manipulator. A compact drive unit is installed on the tip of the ball joint, giving this model the same high accuracy as a general oil hydraulic micromanipulator. Using a general drum handle, the MMO-220A can be combined with any kind of three-dimensional manipulator.

**Specifications:**

Movement range	Fine	10 mm Full rotation of knob 250 $\mu$ m Minimum graduation 1 $\mu$ m
Dimensions/Weight	Control unit	W 70 $\times$ D 115 $\times$ H 100 mm, 1.15 kg
	Drive unit	W 52 $\times$ D 20 $\times$ H 35 mm, 38 g

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