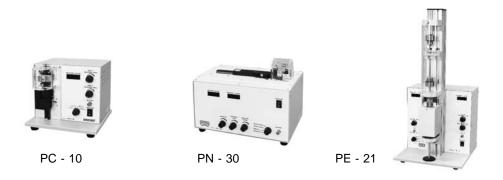
# **NARISHIGE WEB NEWS**

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# **PULLERS**

In this issue, we clarify the differences among various models of pullers to help you select the model that best suits your needs.



# Point of Difference : Weight or Magnet

Differences in the pulling force: "block weight" or "magnetic force" is used to pull a glass capillary.

### Weight-type (PC-10)

Block weights are used to pull glass capillaries with the aid of the pull of gravity. Two-stage pull in particular permits the production of a flexible micropipette that is resistant to breaks when used to penetrate a cell that has hard or thick walls or when a viscous reagent is used. Various types of micropipettes can be produced with PP-830/PC-10.



#### Magnet-type (PN-30/PE-21)

Electromagnetic force is employed to pull glass capillaries. Powerful electromagnetic force, as well as the long pulling length, permits the production of a long and thin micropipette with a sharp-pointed tip which reduces damage to a cell, when inserted, due to its smaller dimensions.



## Point of Difference : The Diameter of a Glass Capillary

The **PC-10/PN-30** are designed for use with 1mm glass capillaries, while 1.2mm and 1.5mm glass capillaries are also usable if adjustments are made accordingly. (When a 1.2mm or 1.5mm glass capillary is used, the heater sits off-center and thus adjustments should be made such as allowing the heater to produce a higher output.)

The **PE-21** is designed to accept 2 - 4mm thick glass capillaries as a drill chuck is used to hold a glass capillary in place. The PE-21 permits the production of multi-barreled microelectrodes using 1mm glass capillaries such as three-barrel, four-barrel or seven-barrel configurations.

#### What is More

You will find guide settings for the PC-10 puller in Narishige Web New No.001. It gives you ideas of parameters and settings which you adjust.

Check out Points of Difference above, and you will find the puller that's right for you!

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