

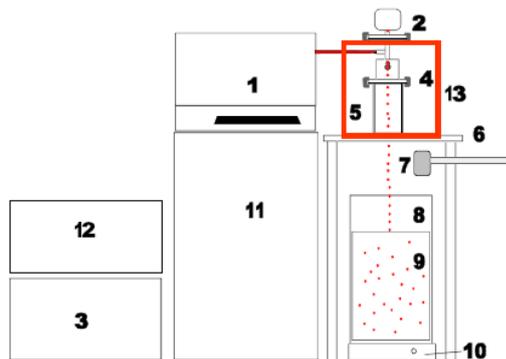
# Encapsulation Unit – Var D Generation II Thermal



**Nisco Engineering Inc.**  
Wehntalerstrasse 562  
CH-8046 Zurich, Switzerland

Tel: +41 44 380 06 30  
Fax: +41 44 380 06 31  
e-mail: mailbox@nisco.ch  
http://www.nisco.ch

The encapsulation unit is best suited for the generation of microbeads using matrices, where gelling is based on interfacial coacervation (e.g. alginate, carrageenan and the like). Which of these, or any other matrix might suit your specific needs, depends on what you want to encapsulate (e.g. proteins or bacteria), what properties the beads should have (physical strength, permeability, edibility, and so on) and which regulations and guidelines you have to follow (Hygienic Guidelines for Food, FDA etc.). With the optional heating chamber you can also dropletise low melting products such as agarose.



## Legend:

- 1 Heated feeding system
- 2 Vibration unit
- 3 Control cabinet for vibrator
- 4 Head with single nozzle
- 5 Stroboscopic light
- 6 Support for head
- 7 Bypass system
- 8 Beaker for hardening solution
- 9 Hardening solution with beads
- 10 Laboratory stirrer
- 11 Support for pump
- 12 Control cabinet for heating
- 13 Heating cylinder

The unit with its sophisticated multipurpose design and the flexible modular expandability has been tailored to the process developer's requirements. The modular approach in the design allows to change the unit repeatedly according to the changing requirements and to combine components delivered by us with equipment and devices already available in your laboratory.



## Control cabinets

- a) for vibrator:  
Rack with display, four lines x 16 characters, programmable microcontroller for vibration control (choice ranges 160 to 3000Hz or 160 to 10'000 Hz). Power supply between 110 and 240 V AC automatically adjusting.
- b) for auxiliary heating devices:  
Power supply 240 V or 110 V adjustable; connections for the pT-100, and for the heated hoses.

Included in the scope of supply are: two nozzles as per your choice.

 **The unit can be equipped with the coaxial or triple nozzle on request.**