

Nisco Engineering AG Dufourstrasse 110 CH-8008 Zurich Switzerland www.nisco.ch

Whatever kind of beads you want to produce tomorrow...



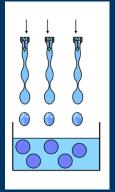


Your Nisco Encapsulation System will be a reliable key to success!

Our Technologies

Nisco's encapsulators are designed modularly, which allows adapting equipment to your changing needs and combining the Nisco's units with devices from your lab.

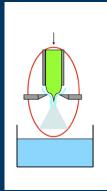


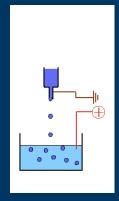


Laminar Jet Break-up

A laminar jet of a liquid feed passes a nozzle of appropriate diameter and breaks up into equally sized droplets by means of a mechanical vibration. The min. drop size is aprox. double the diameter of the nozzle.







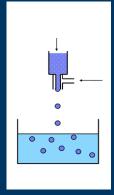
Aerodynamically Assisted Jetting

The liquid jet passes the pressure chamber while reducing its diameter before falling apart into the drops. The drops become smaller than the diameter of the nozzle.



The voltage forces pull droplets from a needle tip into a gelling bath and cause them to fall off the needle before they has grown to the point where they fall off due to its own weight.

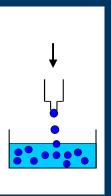




Coaxial Airflow Induced Dripping

The coaxial air stream blows droplets from a needle tip into a gelling bath before they fall due to gravity.





Gravity Assisted Dripping

The drop grows on the needle tip until it falls off the needle into the hardening solution by its own weight.

Multi Nozzles Systems



Nisco provide you not only with single nozzle units but also with the variety of multi-nozzles equipment up to 300 nozzles.



With multi nozzles systems you can scale up your process as all installed nozzles work in parallel.





What kind of microencapsulation are you involved in?

Biotechnology e.g. encapsulation of microorganism Tissue engineering e.g. immune system hiding Food technology e.g. taste hiding Environment e. g treatment of contaminated soil Drug formulation e.g. control drug release Cosmetics e.g. slow perception of flavours Agriculture e.g. artificial seed production

Nisco is keen on enforcing you with the equipment tailored to your need!

Nisco's encapsulation units allow to produce following bead size range:

Nisco's Units	Bead Size Range (mm)
Var. J30	0.005 up to 0.15
Var. A, B, C, D, E	0.1 up to 1.4
Var. V1	0.15 up to 1.5
Vibrating Units	0.15 up to 1.5
Var. J1	0.5 up to 1.4
Var. W1/W10	1.5 up to 4