

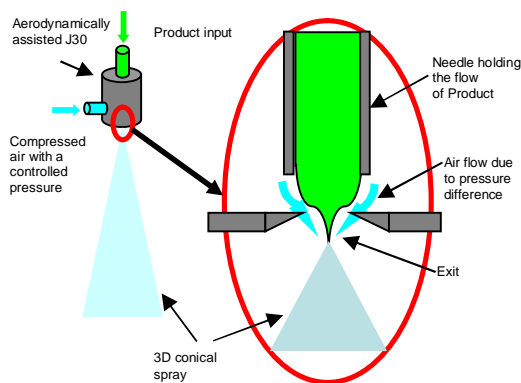
VARD2Go with Aerodynamic Nozzle



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The aerodynamically assisted jetting equipment is showed on the figure below. The product enters through a central needle. The exit orifice, which is centrally in line with the axis of the needle, has been counter sunk externally. The counter sunk leads to the aero dynamical effect that the jet has the smaller diameter when it is passing the orifice than the needle. The needle is enclosed in a pressure chamber with an exit through the orifice. The size of the drops is determined by the product flow rate and the pressure inside the chamber. The product flow rate is typically controlled by a high precision syringe pump to be connected to the product nozzle. The pressure in the pressure chamber is controlled by the especially for the unit developed Nisco pressure control unit consisting of a pressure sensor with digital indication and a control cabinet with the pressure controller. The pressure set point can be fixed via HMI (Human Machine Interface).



The bead generator with pressure chamber is basically made of stainless steel 1.4435 (equivalent 316L) and can withstand most chemicals and high temperatures, which make the unit very suitable for any disinfecting/cleaning method including autoclave cleaning. As gaskets O-rings made of EPDM are delivered. For pharmaceutical or medical applications the required material certificates are available



During the work with very low pressure the drops won't be produced, but there will be a laminar jet smaller than the nozzle applied. If the vibration would be superimposed the even sized beads down to half the size of the applied nozzle could be produced.

Example:

With laminar jet break-up you produce drops double the size of the used nozzle diameter. If you need smaller beads you can combine the laminar jet-break-up with aerodynamic nozzle and achieve a drop size of 200 micrometers or even smaller with a 200 micrometer nozzle.

Remarks:

- The aerodynamic nozzles for vibrating units are available in the range of 100 to 350 μ m.
- An adapter for the VARJ30 coaxial nozzles is available on request!