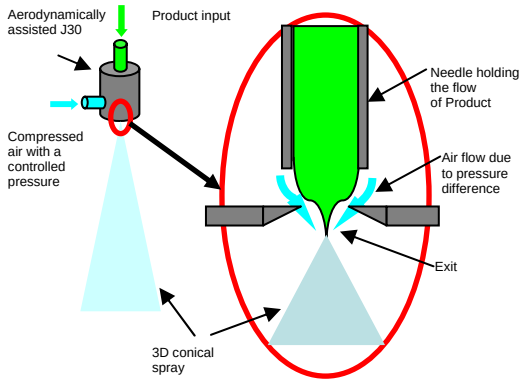
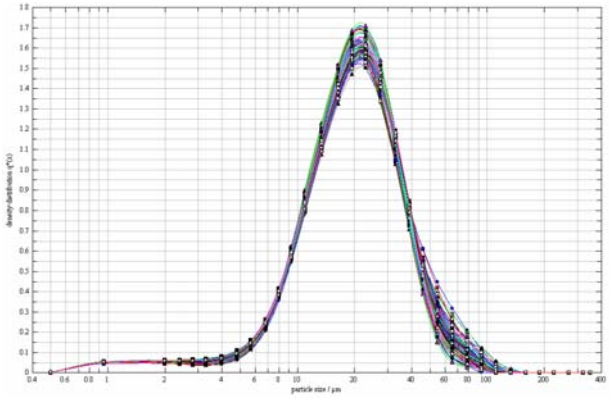
Encapsulation Unit – Var J30

The J30 is the aerodynamically assisted jetting equipment 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 hyprecision syringe 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. The pressure set point can be fixed with a potentiometer.



principle of aerodynamically assisted jetting



Typical bead distribution: The beads were made with the nominal sized unit of 350 µm, resulting peak at 20 µm

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The bead generator with coaxial airflow 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.

The VAR J30 is supplied with a nominal size of 0.35 or 0.1mm. This unique technology has the following advantages: The reachable smallest particle is approximately 1:10 smaller than the needle diameter, depending on the physical properties of the product and on the requirements in regard of the particle homogenety even smaller. So you can achieve very small particles with a minimised danger of clogging. So near homogenous particles around 10 micrometer are now in the reach with the J30.