

**EVEN COATINGS, CONSTANT SIZE DRIED PARTICLES,  
BETTER BURNING EFFICIENCY, FULL ATOMIZATION**

**INCOMPLETE ATOMIZATION**  
**BEFORE** Stop Globlets, Drops & Squirts **AFTER**  
- when you want a fine spray -



Depending on viscosity and nozzle design  
**KEEP PRESSURE VARIATION  
LESS THAN 5%**

A spray nozzle is usually designed to atomize a liquid stream of a given viscosity, at a known flow velocity. The hissing noise that can often be heard, may be up around 1000Hz.

This is similar to the frequency one listens for, to find leakage and is akin to what may be called “channel cavitation”.

Basically, as flow goes passed a sudden change in diameter, from a small very high velocity flow path, and out into a substantially unlimited space a very high frequency stream of pressure disturbances breaks the flow into minute droplets.

If the flow rate falls, the high frequency is no longer created, and the liquid stream becomes a squirt or series of globlets and splodges.

Stabilizing flow with a flow fluctuation “damper” to within 5% of the nozzle design flow rate will normally ensure constant atomization.



**PulseGuard** Ltd. & Inc.

