



THE  
SPRAY NOZZLE  
PEOPLE

# Case Study

## Chemical Industry

### LOW INJECTION FLOW RATE SOLUTION

In the chemical processing industry, a process stream may sometimes require very low injection flow rates that may not be catered for by standard nozzles. However, it is exactly this sort of engineering challenge that leads to innovative solutions.

#### ► THE PROBLEM

A customer approached SNP to help it find a solution that would provide a very low injection flow rate for its material injection application. For many applications, our standard XA air atomising nozzles with their large number of possible fluid and air cap combinations, can deliver very low flows: down to 0.4 - 3.0 litres per hour, depending on the nozzle series. However, these were not low enough and it was apparent that a custom solution would be necessary.

#### ► THE SOLUTION

To deliver the even lower flow required, SNP developed a custom fluid cap which could deliver the very low liquid flow rate needed due to a very small orifice size. Using the fluid cap, we reduced the flow to as low as 0.10 litres per hour. Realising a need for this product, we subsequently launched FC14 and FC16 fluid caps as standard stock items.

Occasionally, the required flow rate may be far below anything that appears practical. In these situations, however, there are other techniques which may be used to reduce the flow into the process, including cycling the nozzle on and off to provide the correct total flow if the instantaneous flow is not critical. This can be accomplished by using SNP's air operated shutoff which can operate at rates of up to 3 cycles per second.



#### ► THE PRODUCTS

- XA nozzle range
- XA Fluid Cap 14 or 16
- XA Air shutoff

