



Custom Solutions Bulletin

Industry: Chemical Processing

Application: Low Flow Material Injection

Product Descriptions: XA Fluid Cap 14

Situation: BETE Applications Engineers often receive requests for very low injection flow rates into a process stream. Using catalog values, the BETE XA nozzles can deliver very low flows, down to 0.1 to 0.8 gph (0.4 - 3.0 liters per hour), depending on the nozzle series. However, this is not always low enough for some applications. Often the requested flow rate is below any catalog value offered.

BETE's solution: By addressing a customer's individual needs, BETE's Applications Engineers can often come up with a custom solution to match the customer's flow and spray pattern requirements. While there are only a few setups for each XA type in our catalog, there are a large number of possible fluid and air cap combinations, which may be appropriate in certain situations.

Once a custom request, now standard stock item, BETE's XA Fluid Cap 14 and 16 (FC14 and FC16) can deliver very low liquid flow rates because of the very small orifice size. Depending on the type of XA used, the flow can be as low as 0.025 gallons per hour (0.10 liters per hour).

Occasionally, the required flow is far below anything that is practical. In these situations, other techniques may be used to reduce the flow into the process. The nozzle may be cycled on and off to provide the correct total flow if the instantaneous flow is not critical. This can be accomplished by using BETE's air operated shutoff, which can operate at rates of up to 3 cycles per second. Occasionally, the only option is to reduce the concentration of the material being injected with water or some other appropriate medium.

Technical Questions?

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