

Custom Solutions Bulletin

Industry: Utilities

Application: Material Injection (Purify Lake Water)

Product Description: Special Flanged NCK Nozzle

Situation: A customer contacted BETE Applications Engineering with an unusual application. They were looking for a large nozzle capable of injecting 1500 gpm (5678 L/min) of water along with a chemical, effectively mixing the two with each other and into a larger line. The pressure available was about 9 PSI (0.62 bar). The 8" nozzle would be positioned to

Please contact:
Applications Engineering

Technical Questions?

(appeng@bete.com)

413-772-0846

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spray counter currently in the 48" line carrying fresh lake water. Ammonia and Sodium Hypo-Chlorite (bleach) would be added as part of the purification process producing drinking water.

BETE's solution: BETE Application Engineers worked to develop a special 8"NCFL 80 1333 K-15 designed specifically to have up to a 1" pipe inserted through its center. That inner pipe would be used to inject the chemical, while the water would flow through the nozzle and around the pipe. The large amount of force from the water flow would provide the energy for thorough mixing of the water and chemical. The nozzle includes a retaining ring near the nose that holds the pipe in place. The customer bought four nozzles and has installed two already.



