



## Application Solution

SPECIAL NOZZLE DESIGN ENSURES  
PROPER FIT IN SPRAYING SYSTEM  
FOOD PROCESSING INDUSTRY



# SPRAY AREA MISTING SOLUTION

### ► PROBLEM: LIMITED SPACE AVAILABLE FOR MISTING NOZZLES

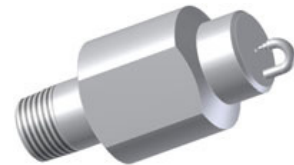
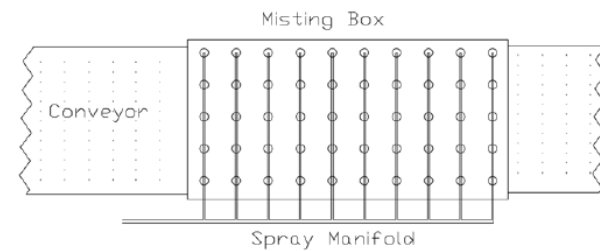
A customer required misting nozzles for spraying water onto vegetables on a conveyor. The spray system was to operate using plant water pressure, ranging from 40 to 80 psi (2.8 to 5.5 bar), to eliminate the need for a special pump. The nozzles had to fit through holes in a plastic sheet covering the conveyor with minimal protrusion below the sheet. The required flow rate was approximately 5.00 gpm (18.9 l/min) over a 4-ft (1.2-m) wide and 10-ft (3.0-m) long area along the conveyor. Additionally, there was a constraint of 6.00 in (152 mm) between the nozzle and the product for spraying.

### ► SOLUTION: P MISTING NOZZLE WITH SPECIAL BODY GEOMETRY

BETE's P and PJ series nozzles are ideal for low-pressure misting applications. These nozzles can produce a very fine spray even at pressures as low as 40 psi (2.8 bar), surpassing the capabilities of whirl-type misting nozzles at this pressure level.

BETE engineers recommended the P24 nozzle for this specific application, delivering a flow rate of approximately 0.10 gpm (0.38 l/min) per nozzle. Arranged in a five-by-ten array, these nozzles provide complete spray coverage over the entire area.

To address the customer's space constraints, BETE engineers designed a special body with a unique geometry. The special design allows for easy insertion into the plastic sheet, ensuring a secure fit that prevents nozzle slippage.



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