

# chemical injection systems

BoldEco offers proprietary OptiVap chemical injection nozzles and controls for various chemical injection applications in power, steel, cement, incineration, waste to energy, chemical processes and anywhere else precise dosing and efficient dispersion is required.



## OptiVap TF nozzle technology

Advanced OptiVap technology provides for new or retrofit installations in processes and with droplet residence times which were previously unfeasible. BoldEco OptiVap TF atomizers come pre-installed in custom-engineered spray lances.

BoldEco's patented OptiVap TF (Tri-fluid) atomizers are specifically designed for chemical dispersion applications of two or more reactive chemicals. The BoldEco OptiVap TF nozzle is used specifically where it is desirable that these reactive chemicals not mix upstream of the injection point and where such a premature reaction may result in dangerous consequences. These lances are utilized across numerous industries, providing unmatched performance and reliability with the lowest compressed air requirement and the smallest droplet sizes available in any related nozzle.



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## advantages of BoldEco systems

BoldEco's OptiVap chemical injection systems are comprised of maintenance friendly components, designed to withstand harsh industrial environments and process conditions.

One of the primary advantages of the OptiVap technology is that it is designed specifically to operate at higher liquid pressure than air pressure, avoiding the problem of over-driving that accompanies the performance of competitive atomizer designs where specific air pressure differentials must be maintained.

BoldEco's OptiVap atomizers are designed to provide a highly efficient level of reliable performance, and offer the following advantages in chemical injection applications:

### Finer droplet generation:

- Shorter droplet residence time
- Smaller evaporation chamber volume requirement
- Lower outlet temperatures

### More uniform droplet size:

- Less danger of wetting at low gas temperatures
- More predictable performance

### Lower compressed air consumption:

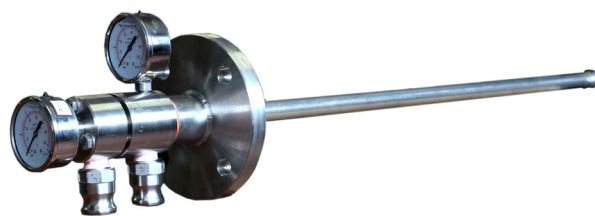
- Less air for same droplet size
- Same air for smaller droplet size
- Conserves energy

### Reactive chemical separation:

- Multiple liquids are mixed at the nozzle, avoiding any chance of dangerous reactions prior to the injection point.

## features of OptiVap TF

- Lowest compressed air consumption
- Finest droplet generation
- Uniform droplet size
- Single or multiple nozzle spray lances
- Effective in the harshest environments



## system performance evaluation

BoldEco maintains an a team of experienced, multi-discipline inside and field service engineers capable of evaluating system performance at competitive rates utilizing the latest numerical models and testing technologies.

## program highlights

- low capital and operating cost, including energy savings
- small, uniform droplet size at reduced air consumption
- rugged, flexible design
- reactive chemical injection

Available exclusively through:

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