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## eCLIP

efficient Compact Lightweight Injection Port Increase your efficiency, CLIP your OPEX

Increase your efficiency, CLIP your OPEX ProSep's patented eClip Mixers provide chemical savings in a compact, easy-to-install, and cost-effective product.

#### FEATURES

ProSep has optimized its ECLIPSE mixing technology to address specific geographical market needs including North America. The eCLIP provides injection, dispersion, and high efficiency mixing in a compact form. Clients will benefit from faster delivery time and flexible designs including wafer, threaded, and hammer union.

#### DESIGN

The eCLIP is provided in a series of compact designs for 2 to 8 inch production pipelines. Whether threaded or wafer designs are used, ProSep has a unit that quickly retrofits into existing pipeline infrastructure. The compact nature of the eCLIP unit allows for easy installation for field operations and when process conditions change, the eCLIP can be easily changed out to match the new production conditions to ensure the maximum performance is achieved.





#### APPLICATIONS

- Gaseous flows
- H2S scavenging
- Natural gas dehydration
- Amine injection

#### BENEFITS

- Chemical consumption reduced by 20 40%
- ROI < 1 year
- Low differential pressure
- Inline solution easily retrofitted
- No moving parts low maintenance
- Reduced CAPEX & footprint replaces contacting towers
- De-bottlenecks stressed process equipment
- Low injection rates achievable
- Optimization of chemical use

#### WAFER MODEL





Between the Flange (Installed)

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#### CONSTRUCTION

The eCLIP is a compact mixer built in a steel body with an integral specialized injection cone with no moving parts. The mixer is available in forged carbon steel or stainless steel depending on the application requirements. Maximum allowable pressure and temperature are set by the pipeline design class.

#### ACCESSORIES

Differential Pressure Gauge (DPI) can be added to the mixer configuration to provide feedback of differential pressure across the eCLIP mixer.

#### THE MIXING PROCESS

- 1) Process flow velocityincreases through restriction: Local dynamic pressures increase.
- 2) Inverted cone allows for centralized fluid injection: Even fluid distribution into high velocity zone.

Triazine Injection

Triazine Dispersion & H2S Capture

- Inertial force over surface tension favors droplet breakup: Slip edge allows inertia to disperse injected fluid.
- Turbulent mixing conditions created: Expanding pipe diameter creates turbulent mixing conditions.

eCLIP mixer illustrating full pipe diameter triazine dispersion at the outlet flange.

Atomizer illustrating comparative triazine dispersion at much longer distance.



Natural Gas & H2S



Natural Gas & H2S Triazine Dispersion & H2S Capture