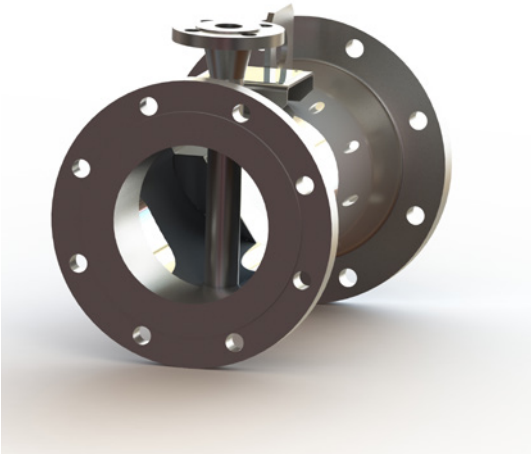
Mixing to the edge – Sulzer EDGE™ for turbulent flow regimes

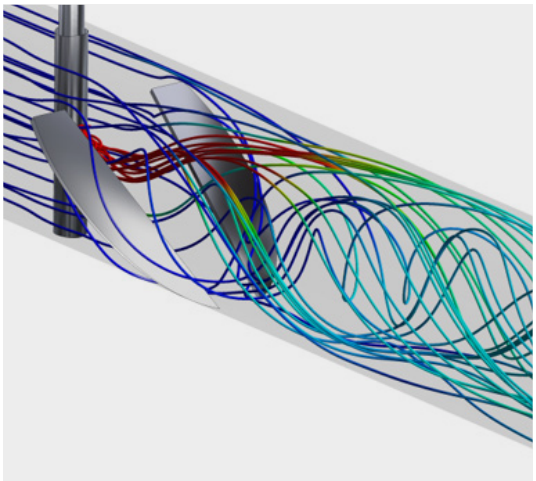
The patented Sulzer EDGE™ static mixer is an efficient solution for mixing low viscosity fluids (gases, low viscosity liquids) in the turbulent flow regime where an efficient blending/mixing action is required at very low pressure drops. The EDGE™ mixing vanes on the pipe wall generate larger counter rotating eddy currents in the main fluid flow, which help ensure a very effective cross flow pattern over the entire pipe cross-section of the mixer, including flow regions close to the pipe walls.



Sulzer EDGE™ Mixer

Patented open structure

The mixer has a patented open structure which minimizes the risk of clogging or ragging. Operating in tandem with an integral dosing system, very good homogeneities can be reached - even if several additives must be injected. This mixer design features an optimal combination of simple installation, very low pressure drops, and highly efficient mixing within a short pipe-length.



Outstanding features

- Very efficient mixing (CoV≤ 0.05)
- Lowest possible pressure drop (typically by factor smaller than other mixer types)
- Easy to fit
- Low installation costs
- Wafer-insert configuration for existing pipes
- Optimized dosing point for additive mixing
- No clogging
- Robust construction
- Excellent price/performance ratio

Different design options are available, ranging from versions with flanged or welded ends to wafer-insert configurations for existing pipes.

The Sulzer EDGE™ is available in the following materials and EN or ASME Sch10 S pipe dimensions:

DN50/80/100/150/200/250 / (2”-10”)
- Stainless Steel (SS) 1.4404 / 316 SS
- Polypropylene (PP)
- PLA

Bigger than DN 250 / 8“ available as Non Standard

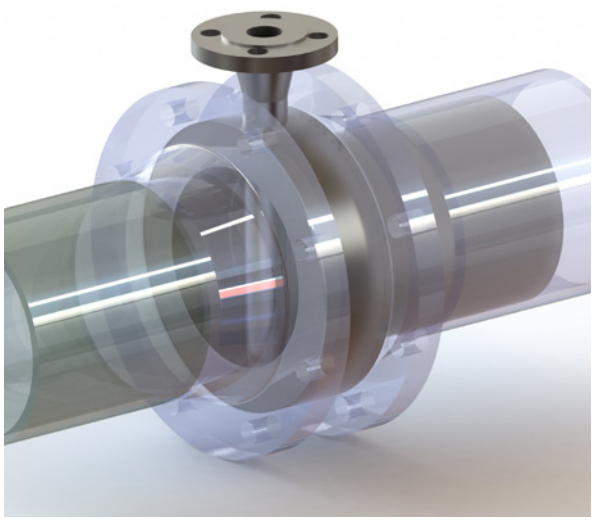
The Sulzer EDGE™ is an optimized static mixer to mix additives into the main stream. Ratios smaller than 1:10 can be injected via the existing dosing pipe connected to the mixer (for multi-injections, the number of dosing pipes can be increased)

For turbulent flow regimes with Reynolds no. >10’000 CoV values of ≤ 0.05 are reached after 5 pipe diameters downstream of the injection point.

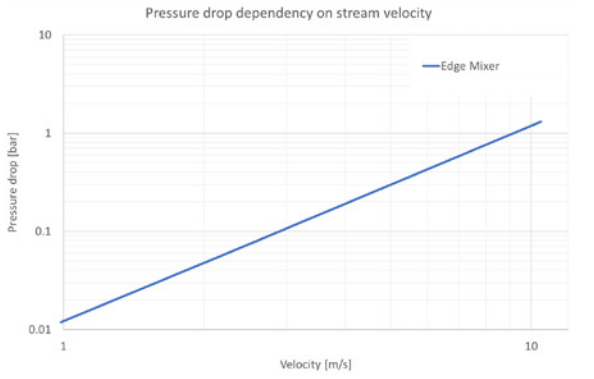
Typical applications are:
- Flocculation of water
- pH control
- Addition of chemicals
- Injection of inhibitors
- Blending of drinks

The pressure drop can be calculated as follows

$\Delta p = \mathbf{0.0108 \times \rho \times v^2}$
Δp = Pressure drop [mbar]
ρ = Density [kg/m^3]
v = Velocity [m/s]



Installation scheme of EDGE Insert



Pressure drop through EDGE with water

How can we help you?
Contact us today to find your best solution.

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