

NucFlow Corp.

Fluid Flow For Industrial Applications

Premier engineering and sales company offering proven design and fabrication services to the petrochemical and power generation industry. Products and services focused on:

1. Specialty **restriction orifice** plates (non-measurement), conventional orifice plates
2. Specialty heat exchangers / pressure vessels / tanks
 - a. **Spiral** heat exchangers for slurries and sludge
 - b. **Smaller** shell and tube heat exchangers: high pressure, alloys, special purposes

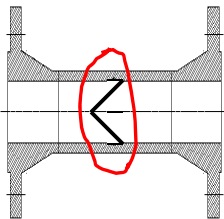
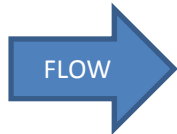
CONICAL SHAPED RESTRICTION ORIFICE PLATE

Replace Multi-Stage Orifice with Single Conical Orifice, 1 piece

With engineered hole size, placement and angle:

- **Increase production / throughput** by increasing flow rate *without* cavitation issues
- **Solve** problems associated with orifice **cavitation** (erosion, vibration, noise)
- **Reduce failure** potential by **minimizing** number of **welds** and **parts**.
- **Save space and weight**, one plate replaces multiple

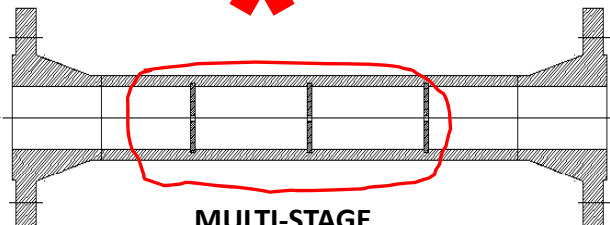
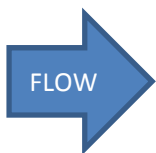
USE THIS ...



CONICAL
ORIFICE
Plate



INSTEAD OF THIS ...



MULTI-STAGE
ASSEMBLY

Testimonial

...Conical orifice plate is meeting our needs and allowing us to work over and above the pump curve, allows forgiveness for running pump above and beyond its published limits...

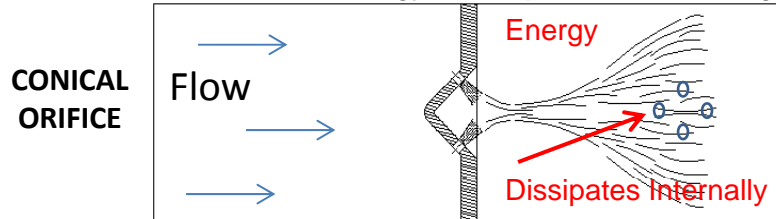
Paper Plant Process Engineer

Conical Orifice Plate

Eliminates damage caused by cavitation

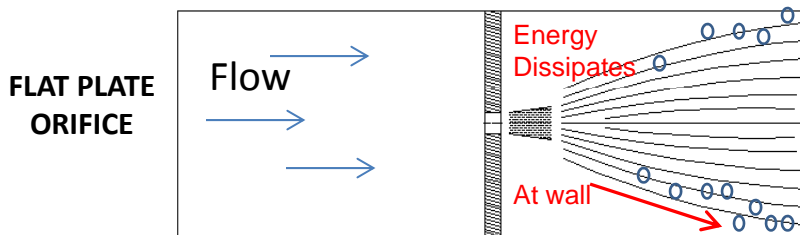
➤ Energy dissipated **inside the cone** of the orifice, not at pipe wall

➤ Conical orifice allows energy to dissipate before striking pipe wall



Flow re-develops from the inside out, eliminating the effect of cavitation erosion and vibration.

➤ Flat plate orifice creates damaging bubbles (cavitation) at pipe wall



Flow re-develops from the outside in. Cavitation at walls causes erosion and vibration.

Erosion, Vibration, Noise

Testimonial: "We had trouble with high pressure shower pumps on a machine. When operations would open the flushing line for the shower header, the pump would "run-out" far to the right of the curve, which would damage the high pressure pumps. We wanted to add an orifice plate to the flushing line to limit the flow. We did not have room for a traditional multistage orifice. We added the NucFlow orifice plates since they were compact. They also had a very short delivery period. They worked well and solved the problem with the pumps." *Project Engineer for Stantec*



Spiral HX
For "DIRTY JOBS"

Custom
Designed
Specialty
Heat
Exchangers
& Vessels



Shell and Tube HX
Smaller units that large companies
may not want to bid

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