



COMPUTATIONAL FLUID DYNAMICS

SERVICE INFORMATION

Although Fluenta flare gas meters require only 15 diameters of straight pipe for accurate measurement, some customers may not have this available. For these instances, computational fluid dynamics (CFD) offers a solution by simulating the flow of fluids and gasses in a system, and their

interactions with boundaries and other such objects. Fluenta will commission an independent CFD study based on your specific process and facility to reveal the gas flow profiles and provide adjustments for the meter to enable measurements with the best possible accuracy.

WHAT WE PROVIDE?

Mechanical Optimization

By carrying out mechanical optimization CFD studies we calculate the optimal transducer angles and chord offsets that would provide maximum performance given the provided pipe network and process information.

Advanced Optimization

Depending upon the client's requirement and budget we can take it one step further and calculate the flow profile correction factors (k-factors) to compensate for non-uniform flow profiles.

WHAT WE NEED?

To run a successful CFD analysis Fluenta needs the following information as a minimum:

- Pipe internal diameter
- Pipe network diagram and measurement point restrictions
- Pipe materials and internal surface roughness
- Typical/reference gas composition
- Typical/reference temperature and pressure
- Velocity Range