

Why Must We Use Flow Conditioners?

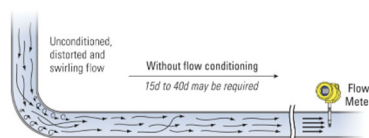
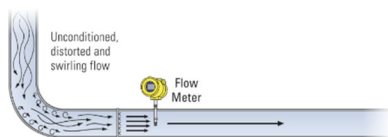
In many industrial flow measurement systems, accurate and repeatable readings are critical for operational safety, process control, and fiscal metering. However, flow disturbances caused by elbows, valves, tees, and other fittings upstream of the flowmeter often distort the velocity profile and create swirl or asymmetry. These disturbances lead to significant measurement errors.

✓ What is a Flow Conditioner?

A flow conditioner is a precision-engineered device installed upstream of flow meters to eliminate swirl, straighten the flow, and produce a fully developed and symmetrical velocity profile. It ensures that the flowmeter receives an ideal flow condition, even in installations with limited straight run length.

✓ Why is it necessary?

- Reduces measurement uncertainty
- Ensure compliance with standards (ISO 5167, AGA3, API MPMS)
- Enables accurate measurement where installation space is limited
- Minimizes repeatability and reproducibility errors



Available Models and Applications

◆ Tube Bundle Flow Conditioner

19 tubes bundle

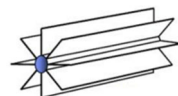
Application: Used in gas flow measurement to reduce swirl and asymmetry.



◆ Fin-Type Flow Conditioner

AMCA & Zanker

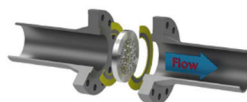
Application: Provides excellent flow conditioning performance in compact spaces.



◆ Plate-Type Flow Conditioner:

Zanker, NEL (Spearman), NOVA

Application: Widely used in custody transfer metering stations for highest accuracy.



Example Applications:

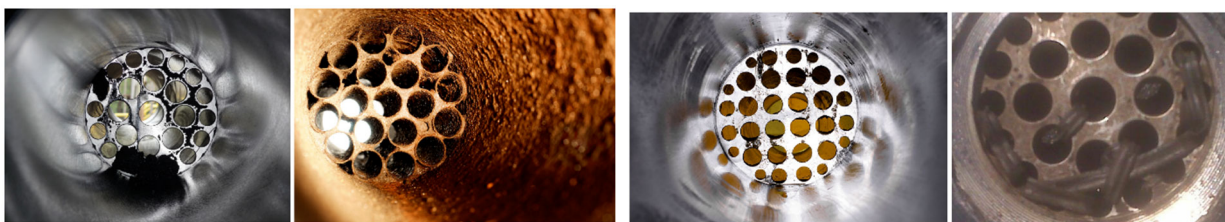
Gas metering stations, skids, compressor stations, custody transfer measurement, power plants, refineries.

** Reference Standards:**

ISO 5167, AGA Report No.3, API MPMS Chapter 14, CANALTA (<https://canaltaflow.com/>)



Pictures: Ref. CANALTA <https://canaltaflow.com/>



For technical support or selection of flow conditioners for your project, please contact:

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