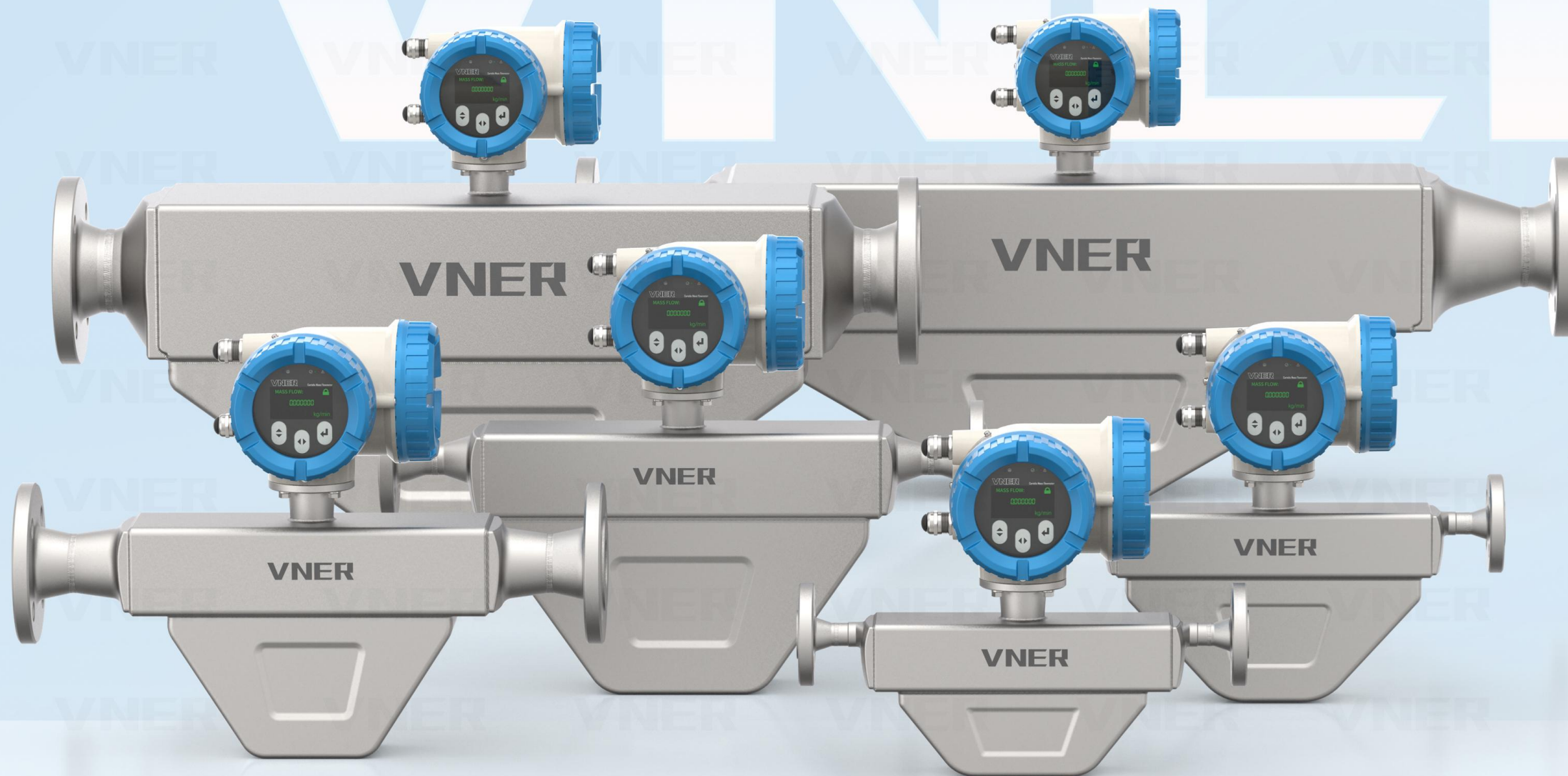


VNER



GENERAL HIGH ACCURACY CORIOLIS MASS FLOWMETER

AC SERIES

JIANGSU VNER ELECTRONIC TECHNOLOGY LTD

WWW.VNER.COM.CN

PRODUCT DESCRIPTION

The Coriolis mass flowmeter is a high-precision instrument based on the Coriolis force principle and mechanical vibration. It directly measures the mass flow rate, density, and temperature of a fluid.

Inside the sensor, a measuring tube vibrates due to a driving force, generating sinusoidal signals. When fluid flows through the tube, the Coriolis force causes a deformation, creating a phase shift between the tube's ends. The larger the mass flow, the greater the phase shift. The transmitter detects and calculates this phase difference to determine the mass flow rate.

The measuring tube vibrates at its resonant frequency, which shifts with changes in fluid density. The transmitter calculates the fluid's density by detecting this frequency change.

The sensor also includes a precise temperature measurement component, which monitors the tube's temperature and can be used to compensate for temperature effects on mass flow and density measurements.

PRODUCT FEATURES

- Best-in-class performance.
- Elite flow and density measurement for custody transfer and critical process control.
- Compact, self-draining, cleanable design.
- High temp, high pressure, cryogenic, hygienic, anti-corrosion.
- Multi measuring modules for complex process conditions.
- Broad range of I/O offerings, max 5 outputs.
- Easy Installation, no extra supporting needed, lower installation cost.
- Long-term stability, high frequency design avoiding piping vibration.
- Lower pressure drop, lower energy consumption, flow path reduced by 30%.
- Smooth flow path design to avoid cavitation, suitable for high viscosity fluids.

Technical Features

- Sizes: DN2 - DN150
- Flow Accuracy: $\pm 0.05\%$, $\pm 0.10\%$, $\pm 0.15\%$, $\pm 0.20\%$, $\pm 0.50\%$
- Density Accuracy (kg/m^3): ± 0.2 , ± 0.5 , ± 1.0 , ± 3.0 , Optional
- Temperature Accuracy ($^{\circ}\text{C}$): ± 1
- Fluid Types: Liquid/Gas/Slurries
- Flow Range: 0 - 495,000
- Pressure Rating (MPa): Standard: 10.0 MPa, High Pressure: 15.0MPa, Optional
- Fluid Temp Range ($^{\circ}\text{C}$): Standard: $-100 \sim +200$ $^{\circ}\text{C}$, Cryogenic: $-196 \sim +100$ $^{\circ}\text{C}$, High Temperature: $-60 \sim +380$ $^{\circ}\text{C}$

- Wetted Material: SS 316, Hastelloy C22, Optional
- Sensor Case Material: SS 304, SS 316
- Transmitter Housing Material: Die Cast Aluminium with Anti-corrosion Coating, SS 316
- Mounting Types: Integral, Extended Integral, Remote, Optional

- Signal/Communication: 4-20mA, Pulse 0~10kHz, Modbus RS485, HART, Profinet, Profibus-PA, Fieldbus Foundation, Optional
- Explosion-proof: Ex ib IIC T1~T6 Gb
- Ingress Protection: IP 66/67

