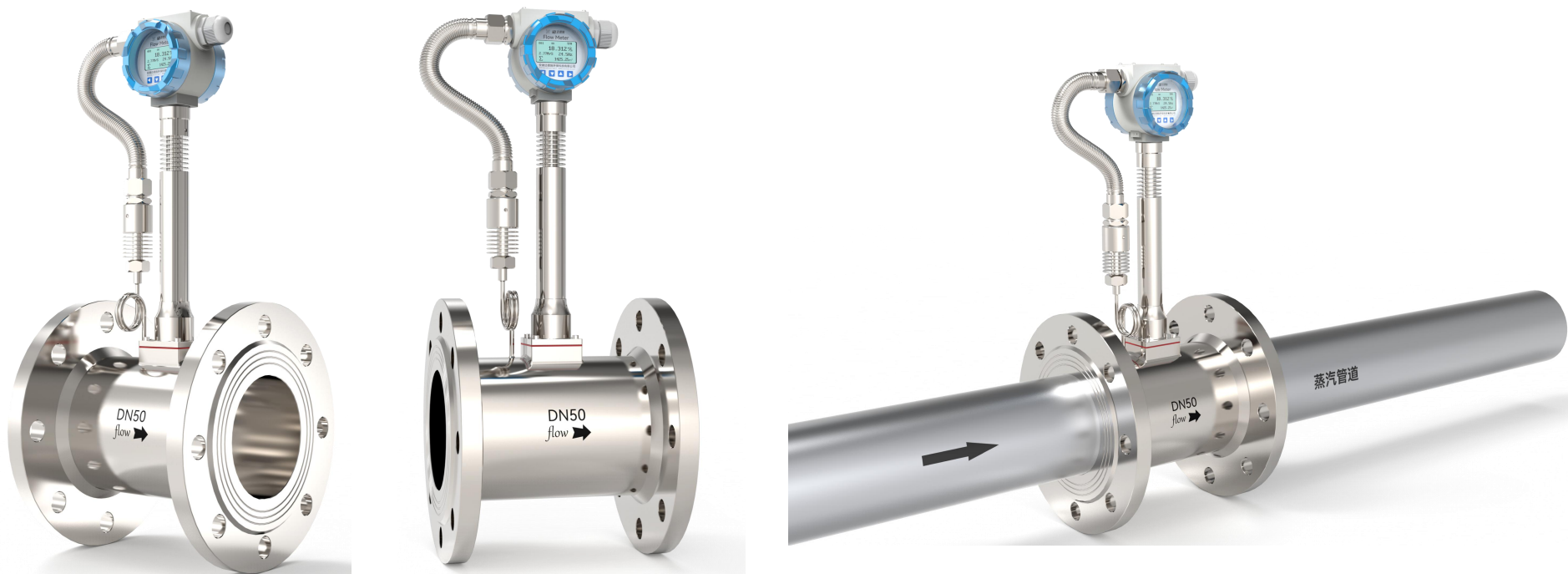




Product Overview >>

The MDS-WG Series Vortex Flow Meter is a velocity-type flow instrument designed for flow measurement and control of liquids, steam, and most gases in industrial processes.

It features a non-clogging design with all wetted parts (sensors and fluid-contacting components) constructed from stainless steel. With no moving parts and mechanical anti-vibration treatment, it effectively eliminates flow-induced and environmental vibration interference. The modular design allows for full interchangeability between converters and sensors, simplifying on-site maintenance and reducing downtime.

The meter is equipped with a low-power full-graphic LCD display for clear, intuitive readings and user-friendly operation. It supports RS485 (Modbus) or HART communication protocols to meet diverse data acquisition requirements. Integrated multi-segment linear correction and combined analog/digital signal processing ensure stable measurement, with a standard turndown ratio of 8:1 (max 10:1). Temperature-pressure compensated versions are available, along with multiple connection options including flanged, wafer, threaded, and tri-clamp types, to adapt to various on-site piping conditions.

Key specifications include: nominal size range DN15~DN300, medium temperature range -20~350°C, standard pressure rating 1.6MPa (higher ratings available upon request), accuracy grades of 1.0, 1.5, and 2.5, and an IP68 protection rating.

The MDS-WG Series supports horizontal, vertical, or inclined installation, with dedicated installation guidelines provided for gas, liquid, and high/low-temperature media. It ensures reliable and stable measurement performance, making it widely applicable for flow monitoring in industrial process control systems.

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Features>>

1. Non-clogging Design: The sensor and all wetted parts are constructed of stainless steel. With a simple structure and no moving parts, it effectively prevents blockages caused by impurities, making it suitable for the measurement of dirty fluids.
2. Anti-vibration Treatment: Optimized with mechanical anti-vibration design, it effectively filters out interference frequencies caused by mechanical vibration in pipelines, ensuring stable signal output.
3. Simplified Maintenance: The sensor is isolated from the process medium, ensuring a constant meter factor. The converter and sensor are fully interchangeable, allowing for easy installation and quick on-site maintenance.
4. Dual-mode Signal Processing: It supports both manually configurable analog processing and adaptive digital processing, with a standard turndown ratio of 8:1 (max. 10:1).
5. Versatile Communication & Display: Supports RS485 or HART communication. Equipped with a low-power full-graphic LCD for clear, intuitive readings and easy operation.
6. Wide Media Compatibility: Suitable for liquids, steam, and most gases. Built-in multiple compensation algorithms are available, with optional temperature-pressure compensated versions to meet complex process conditions.

Equipment parameters >>

Nominal Diameter (DN)	15, 20, 25, 32, 40, 50, 65, 80, 100, 125, 150, 200, 250, 300.....
Pressure Rating	1.6 MPa (Higher ratings available upon request)
Medium & Temperature	Medium: Liquids, common gases, steam Temperature: -20~250°C; 250~350°C
Ambient Conditions	Temperature: -20~55°C; Relative Humidity: 5~95%; Atmospheric Pressure: 86~106kPa
Body Material	SS304; SS316L (available upon request)
Allowable Vibration Acceleration	0.2g
Accuracy Class	1.0; 1.5; 2.5
Turndown Ratio	1:6; 1:10; 1:20
Power Supply	3.6V Lithium Battery; DC24V
Output Signal	Pulse, 4~20mA, RS485, Hart Protocol
Explosion-proof Marking	Exd II CT6 Gb
Protection Rating	IP65; IP68
Display	No display; LCD display
Electrical Connection	M20×1.5; NPT1/2

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Technical parameters >>

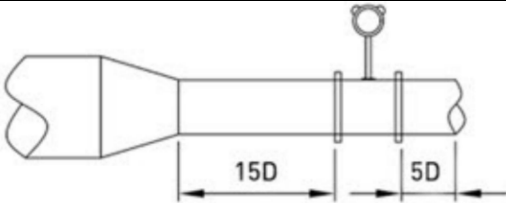
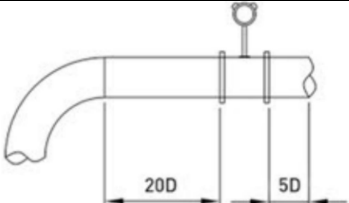
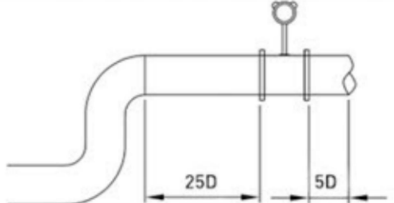
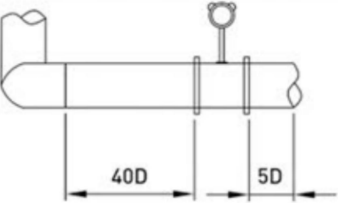
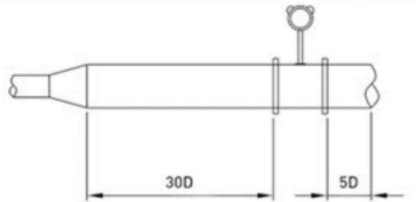
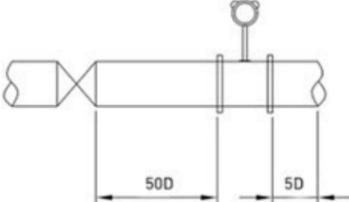
Model	WG1	WG2	WG3	WG4	WG5	WG6	WG7	WG8	WG9	WG10	WG11
Power Supply	Battery-powered	24VDC	24VDC	24VDC	24VDC + Battery Dual Power	12~24VDC	Battery-powered	24VDC	24VDC	24VDC	3.6V Battery + 24VDC Dual Power
Output Signal	/	4~20mA	Pulse, RS485	Pulse, 4~20mA, RS485	Pulse, 4~20mA, RS485	Pulse	/	4~20mA	Pulse, RS485	Pulse, 4~20mA, RS485	Pulse, 4~20mA, RS485
Display	LCD Display	LCD Display	LCD Display	LCD Display	LCD Display	LCD Display	LCD Display	LCD Display	LCD Display	LCD Display	LCD Display
Connection Type	Internal/ External Thread, Tri-clamp, Flange, Flange Wafer	Internal/ External Thread, Tri-clamp, Flange, Flange Wafer	Internal/ External Thread, Tri-clamp, Flange, Flange Wafer	Internal/ External Thread, Tri-clamp, Flange, Flange Wafer	Internal/ External Thread, Tri-clamp, Flange, Flange Wafer	Internal/ External Thread, Tri-clamp, Flange, Flange Wafer	Internal/ External Thread, Tri-clamp, Flange, Flange Wafer	Internal/ External Thread, Tri-clamp, Flange, Flange Wafer	Internal/ External Thread, Tri-clamp, Flange, Flange Wafer	Internal/ External Thread, Tri-clamp, Flange, Flange Wafer	Internal/ External Thread, Tri-clamp, Flange, Flange Wafer
/	(temperature and pressure compensated type)					(Without temperature and pressure compensated type)					

Measurement range >>

Nominal Diameter (mm)	Liquid Flow Range (m³/h)	Gas Flow Range (m³/h)	Nominal Diameter (mm)	Liquid Flow Range (m³/h)	Gas Flow Range (m³/h)
DN15	1~6	3~12	DN80	10~100	70~700
DN20	1~10	5~30	DN100	15~150	110~1100
DN25	1.6~16	8~70	DN125	27~275	150~1500
DN32	2.2~20	15~150	DN150	40~400	250~2200
DN40	2.5~25	20~200	DN200	80~800	600~4000
DN50	3.5~35	35~350	DN250	120~1200	960~5500
DN65	6.5~65	50~500	DN300	180~1800	1500~11500

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Installation Instructions >>

Upstream pipe type of sensor	Length of front and rear straight pipe sections	Upstream pipe type for the sensor	Length of front and rear straight pipe sections
Concentric contraction fully open valve		One 90° elbow;	
Two 90° bends on the same plane		Two 90° elbows on different planes;	
Concentric expansion pipe		Control valve partially open (not recommended)	

Note: The regulating valve should not be installed upstream of the vortex flow meter, but rather 10D downstream.

1. The upstream and downstream pipe inner diameters should be the same. The pipe inner diameter DP and the vortex flow meter body inner diameter DB should meet the following relationship: $0.98DB \leq DP \leq 1.05DB$;
2. The sealing gasket between the instrument and the flange should not protrude into the pipe during installation, and its inner diameter should be 1-2mm larger than the instrument body inner diameter;
3. When temperature and pressure transmitters need to be installed on the measured pipeline, the pressure measuring port should be set 3-5D downstream, and the temperature measuring port should be set 6-8D downstream;
4. The instrument can be installed horizontally, vertically, or inclined on the pipeline;
5. When measuring gas, the gas flow direction is not limited when installing the instrument on a vertical pipeline. If the pipeline contains a small amount of liquid, the gas flow should be from bottom to top;
6. When measuring liquid, when installing the instrument on a vertical or inclined pipeline, ensure that the liquid flow direction is from bottom to top. If it contains a small amount of gas, it should be installed at the lower end of the pipeline. When measuring high-temperature or low-temperature media, pay attention to insulation measures.
7. The internal temperature of the converter (inside the meter housing) should generally not exceed 70°C; low temperatures can easily cause condensation inside the converter, reducing the insulation resistance of the printed circuit board and affecting the normal operation of the instrument.

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