



**MIAL**<sup>®</sup>  
**INSTRUMENTS PVT. LTD.**  
*Measuring & Beyond*

## **MBF 700**

INLINE TURBINE FLOW METER



| Measuring & Beyond

**CE**

[www.mialinstruments.com](http://www.mialinstruments.com)

# MBF 700



## Inline Turbine Flow meter

### DESCRIPTION

MBF 700 turbine flow meter is engineered to excel in measuring liquid flow across diverse industrial landscapes. At the heart of this instrument lies a combination of cutting-edge foreign technologies, ensuring unparalleled accuracy and reliability. Our turbine flow meter boasts a simple yet robust structure, facilitating seamless installation and repair processes. Its versatility knows no bounds, finding applications in a multitude of industries including oil, chemical, metallurgy, water supply, paper-making, environmental protection, and food processing.

Designed to operate within closed pipelines, this flow meter is tailored to measure the flow of liquids that won't compromise the integrity of its construction materials, including stainless steel (1Cr18Ni9Ti), 2Cr13, Al203, and hard alloy. Moreover, it remains impervious to impurities such as fiber and granules, ensuring consistent and precise readings. Experience efficiency, accuracy, and peace of mind with the MBF 700 Turbine Flow Meter – your ultimate solution for liquid flow measurement needs.

### APPLICATIONS

#### Oil Industry:

In the oil industry, precise measurement of liquid flow is essential for various processes such as extraction, refining, and transportation. The MBF 700 Turbine Flow Meter provides accurate readings in closed pipelines, ensuring efficient operations and minimizing wastage.

#### Chemical Industry:

Chemical processes often involve the handling of corrosive substances where accurate flow measurement is crucial for maintaining safety and product quality. With its resistance to erosion and impurities, the MBF 700 ensures reliable performance in measuring liquid flow within chemical processing plants.

#### Water Supply:

Municipalities and utilities rely on accurate flow measurement to manage water distribution systems effectively. The MBF 700 enables precise monitoring of water flow rates & consumption in pipes, aiding in the optimization of water supply networks and the detection of leaks.

#### Paper-making:

Paper manufacturing requires precise control over various fluids used in the production process. The MBF 700's easy installation and maintenance, coupled with its resistance to contaminants, make it an ideal choice for monitoring liquid flow in paper mills.

#### Environmental Protection:

Monitoring liquid flow is essential in environmental applications such as wastewater treatment and pollution control. The MBF 700 helps ensure compliance with regulations by providing accurate measurements of liquid flow in systems designed to safeguard the environment.

#### Food Industry:

From beverage production to dairy processing, the food industry relies on accurate flow measurement to maintain product quality and safety standards. The MBF 700's compatibility with stainless steel and other food-grade materials makes it a reliable choice for measuring liquid flow in food processing facilities.



MBF 700 Turbine Flow Meter

## FEATURES

### Hard Alloy Thrust-Type Sensor:

The MBF 700 Turbine Flow Meter features a sensor crafted from hard alloy bearing thrust technology, ensuring exceptional precision and enhanced wear resistance. This innovative design optimizes performance, making it reliable even in demanding industrial environments.

### Simple and Sturdy Structure:

Engineered for simplicity and durability, the MBF 700 boasts a robust and straightforward structure, facilitating effortless installation and dismantling. This feature streamlines maintenance procedures, minimizing downtime and maximizing productivity.

### Wide Measuring Range:

With its capability for measuring across a wide range, the MBF 700 excels in applications where precise measurement at low flow velocities is critical. Its versatility ensures accurate readings regardless of varying flow rates, enhancing operational efficiency.

### Low Pressure Loss and High Precision:

Experience minimal pressure loss and exceptional precision with the MBF 700. Its finely tuned design delivers superior repeatability, allowing for precise measurement even in challenging operating conditions. This reliability translates to consistent and accurate data for informed decision-making.

### Resilience to Interference and Vibration:

Designed to withstand electromagnetic interference and vibrations, the MBF 700 ensures reliable performance in environments prone to external disturbances. This resilience guarantees consistent and accurate readings, even in the presence of external factors, bolstering confidence in measurement accuracy.

## BENEFITS OF FLOW METER

- High accuracy
- The bearings in MBF 700 flow meters are made from a hard alloy, providing high durability and resistance to wear, ensuring longer operational life and consistent performance in harsh fluid conditions..
- Simple structure minimizes downtime and labor costs.
- Wide range accommodates diverse flow rates for reliable performance.
- Maintains precision even in challenging conditions.
- Resilient to interference and vibrations for consistent accuracy.
- Designed to minimize pressure drop across the meter, ensuring efficient fluid flow within the system.

## SIZE- FLOW RANGE- CONNECTION

Size (mm)	Standard Flow Range (m <sup>3</sup> /h)	Extended Flow Range (m <sup>3</sup> /h)
DN 15	0.6-6	0.4-8
DN 20	0.8-8	0.45-9
DN 25	1-10	0.5-10
DN32	1.5-15	0.75-15
DN40	2-20	1-20
DN 50	4-40	2-40
DN 65	7-70	3.5-70
DN 80	10-100	5-100
DN 100	20-200	10-200
DN 125	25-250	12.5-250
DN 150	30-300	15-300
DN 200	80-800	40-800

## MBF 700 specifications\*

### Operation and performance

#### Flow measurement

Turbine rotation technology

#### Fluid types

Most Clean Liquids

#### Fluid properties

Fluid with viscosity: 20 CST

#### Nominal drift diameter

DN 15 MM – DN 200 MM

#### Flow accuracy

±0.5%;

#### Measurement parameters

Standard : Total Flow, Instantaneous Flow,

Optional : Medium Pressure, Medium Temperature

#### Certification

Factory wet Calibration certificate & Test Report

### Electronics

#### Transmitter Type

Integral

#### Enclosure IP rating

IP65

#### Power supply

24 VDC/2A

Use SMPS when employing AC power

#### Ambient temperature

32°F to 140°F ( 0°C to 60°C)

#### Standard output

Analog output : 4-20mA

Pulse output

#### Network Connection

Modbus RTU RS 485

#### Operating Temperature range

-4°F to 176°F ( -20°C to 80°C)

#### Nominal Pressure

Standard: DN 15 –DN 200: 1.6 Mpa [*Flange Type*]

Optional: DN 4 –DN 50 : 6.3 Mpa [*Threaded*]

#### Process connections

Standard: ANSI 150 Flanges

Optional: BSP Threaded

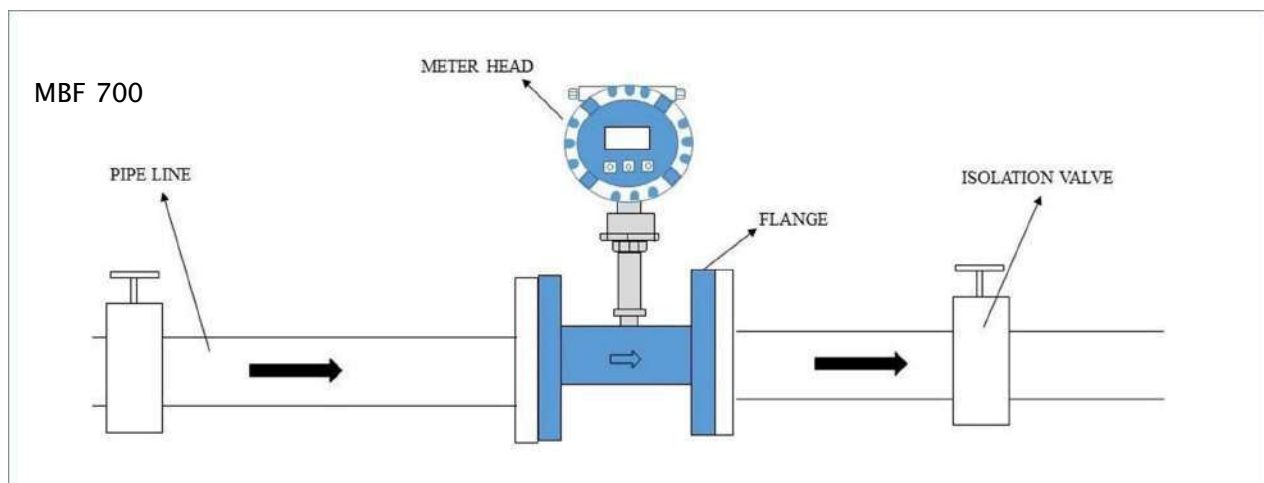
#### Sensor Materials

Standard : Stainless Steel 304

Optional : Stainless Steel 316

\*Specifications are subject to change without prior notice.

### INSTALLATION DIAGRAM



MBF 700 Turbine Flow Meter

## ORDERING CODE

### Meter Model Number Coding = MBF 700-B-CDE-FGHI

**MBF 700 = Mial Inline Turbine Flow Meter**

**BB = Pipe Size**

12 = 0.5"	25 = 2.5"
34 = 0.75	03 = 3"
01 = 1"	04 = 4"
24 = 1.25"	05 = 5"
15 = 1.5"	06 = 6"
02 = 2"	08 = 8"

**C = Outputs**

1 = Pulse Output, Analog 4-20mA Analog output

**D = Meter**

1 = Inline

**E = Process Connection**

1 = ANSI 150 Flanges  
2 = BSP Threaded

**F = Input Power**

1 = 24 VDC

**G = Communication**

1 = Modbus RS485

**H = Electronics Enclosure Mounting Configuration**

1 = Integral IP65 enclosure

**I = Sensor Materials**

1 = Stainless Steel 304

2 = Stainless Steel 316

*All future orders will adhere to the standard specifications outlined in the order code, ensuring consistency and quality across items*



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