

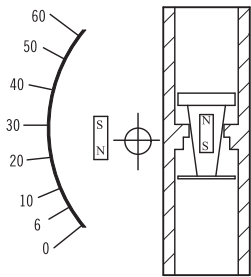
# METAL TUBE FLOW METER MF200E

## Technical Data

**MF200E for low flow of gas, liquid and steam**  
**Material:** 316 stainless steel for case and body or option.  
**Indication:** via magnetic coupling (no seals)  
**Scales:** calibrated in l/h, m<sup>3</sup>/h, kg/h, %  
**Flow rate:** water-0.4 l/h up to 4000 l/h  
 air-21 NL/h up to 120,000 NL/h  
**Connection types:** BSP, NPT, flange type on request  
**Working Temperature:**  
 Combine with electronic parts: -40°C~+150°C  
 Combine without electronic parts: -40°C~+180°C  
**Working Pressure:** Standard 100 kg/cm<sup>2</sup>;  
 other options upon request  
**Connection size:** 1/4" ~ 1 1/2"  
**Protection Class:** IP66  
**Accuracy:** ± 2% FS (± 1.6% FS option)



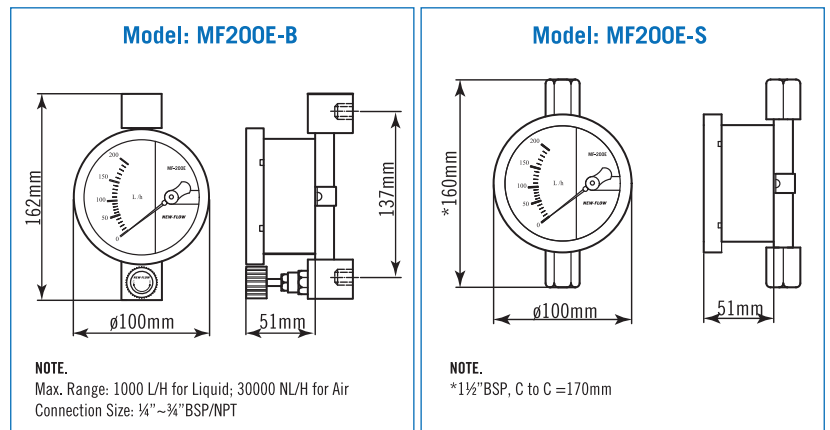
## Principle



## Standard Scales

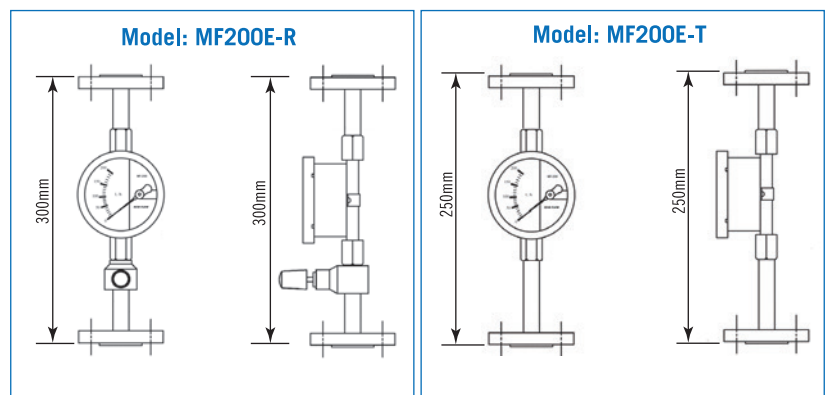
| Tube    | L/H 20°C Water | NL/H Air 0°C 1.013 bar | ΔPmm Water | BSP /NPT | Accuracy (NOTE 1.) |
|---------|----------------|------------------------|------------|----------|--------------------|
| MF2001E | 0.4 ~ 4        | 21 ~ 210               | 340        | 1/4"     | ±6% F.S            |
| MF2002E | 0.6 ~ 6        | 33~330                 | 340        | 1/4"     | ±3% F.S            |
| MF2003E | 1 ~ 10         | 48~480                 | 340        | 1/4"     | ±2% F.S            |
| MF2004E | 1.5 ~ 15       | 60~600                 | 340        | 1/4"     | ±2% F.S            |
| MF2005E | 2 ~ 20         | 72~720                 | 340        | 1/4"     | ±2% F.S            |
| MF2006E | 3 ~ 30         | 90~900                 | 340        | 1/4"     | ±2% F.S            |
| MF2007E | 5 ~ 50         | 120~1200               | 340        | 1/4"     | ±2% F.S            |
| MF2008E | 6 ~ 60         | 180~1800               | 340        | 1/4"     | ±2% F.S            |
| MF2009E | 10 ~ 100       | 300~3000               | 340        | 1/4"     | ±2% F.S            |
| MF2010E | 15 ~ 150       | 500~5000               | 340        | 1/2"     | ±2% F.S            |
| MF2011E | 25 ~ 250       | 750~7500               | 340        | 1/2"     | ±2% F.S            |
| MF2012E | 45 ~ 450       | 1500 ~ 15000           | 340        | 1/2"     | ±2% F.S            |
| MF2013E | 75~750         | 2000~20000             | 340        | 3/4"     | ±2% F.S            |
| MF2014E | 100~1000       | 3000~30000             | 340        | 1"       | ±2% F.S            |
| MF2015E | 150~1500       | 5000~50000             | 450        | 1-1/2"   | ±2% F.S            |
| MF2016E | 200~2000       | 7500~75000             | 450        | 1-1/2"   | ±2% F.S            |
| MF2017E | 300~3000       | 9000~90000             | 450        | 1-1/2"   | ±2% F.S            |
| MF2018E | 350~3500       | 11000~110000           | 450        | 1-1/2"   | ±2% F.S            |
| MF2019E | 400~4000       | 12000~120000           | 450        | 1-1/2"   | ±2% F.S            |

## Dimensions



**MF200E-B**  
 Basic Model:  
 Rear connection + needle valve

**MF200E-S**  
 Basic Model:  
 Thread connection



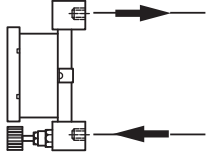
**MF200E-R**  
 Flange-needle Model:  
 flange connection + needle valve

**MF200E-T**  
 Flange Model:  
 flange connection

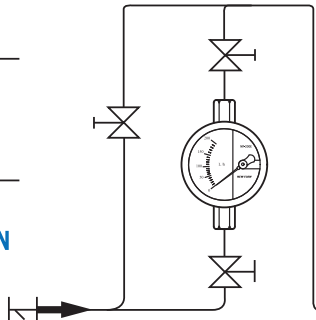
### NOTE.

- The accuracy ±6% F.S for tube MF2001E; The accuracy ±3% F.S for tube MF2002E.  
 The accuracy ±2% F.S for tube MF2003E~MF2019E and option ±1.6% F.S on request.
- Performance Technical Data are effective with date of issue and are subject to change without prior notice.

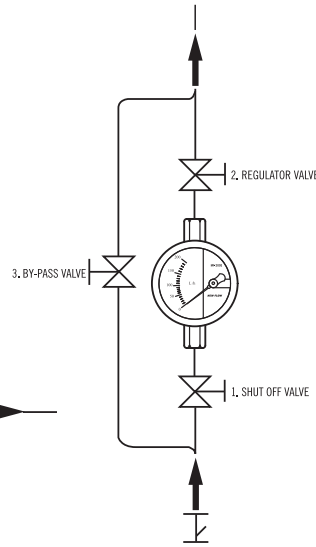
## Installation



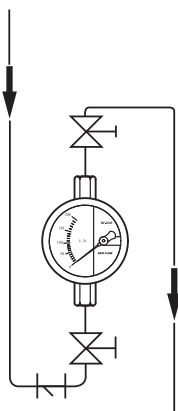
**REAR FLOW DIRECTION**



**HORIZONTAL FLOW DIRECTION**



**UP FLOW DIRECTION**



**FALLING FLOW DIRECTION**

**SPECIAL NOTE**  
No minimum length requirement for straight pipe.

## Ordering Information

| MF200E | Code   | Connection                        | Code                                    | Connection size  |                     |      |                  |    |                |   |  |   |        |   |       |
|--------|--|-----------------------------------|---|--|---------------------|------|------------------|----|----------------|---|--|---|--------|---|-------|
|        | S  | Thread connection                 | 4B                                      | 1/4" BSP (Female)  |                     |      |                  |    |                |   |  |   |        |   |       |
|        | R  | Connection with needle valve      | 4N                                      | 1/4" NPT (Female)  |                     |      |                  |    |                |   |  |   |        |   |       |
|        | T  | Flange connection                 | 2B                                      | 1/2" BSP (Female)  |                     |      |                  |    |                |   |  |   |        |   |       |
|        | B  | Rear connection with needle valve | 2N                                      | 1/2" NPT (Female)  |                     |      |                  |    |                |   |  |   |        |   |       |
|        | <b>Code</b>  | <b>Type</b>                       | 6B                                      | 3/4" BSP (Female)  |                     |      |                  |    |                |   |  |   |        |   |       |
|        | G  | Indicating only                   | 6N                                      | 3/4" NPT (Female)  |                     |      |                  |    |                |   |  |   |        |   |       |
|        |  | <b>Code</b>                       | <b>Alarm</b>                            | 1B   | 1" BSP (Female)     |      |                  |    |                |   |  |   |        |   |       |
|        |  | 0                                 | Without alarm switch                    | 1N   | 1" NPT (Female)     |      |                  |    |                |   |  |   |        |   |       |
|        |  | <b>Code</b>                       | <b>Body material</b>                    | 15B  | 1 1/2" BSP (Female) |      |                  |    |                |   |  |   |        |   |       |
|        |  | A                                 | SS316                                   | B  | SS316L              |      |                  |    |                |   |  |   |        |   |       |
|        |  | <b>Code</b>                       | <b>Float &amp; Wetted part material</b> | 15N  | 1 1/2" NPT (Female) |      |                  |    |                |   |  |   |        |   |       |
|        |  | A                                 | SS316                                   | B  | SS316L              |      |                  |    |                |   |  |   |        |   |       |
|        |  | <b>Code</b>                       | <b>Connection rating</b>                | 20B  | 2" BSP (Female)     |      |                  |    |                |   |  |   |        |   |       |
|        |  | 0                                 | Thread connection                       | 20N  | 2" NPT (Female)     |      |                  |    |                |   |  |   |        |   |       |
|        |  | 5                                 | JIS 5K                                  | 2F   | 1/2" Flange         |      |                  |    |                |   |  |   |        |   |       |
|        |  | 10                                | JIS 10K                                 | 6F   | 3/4" Flange         |      |                  |    |                |   |  |   |        |   |       |
|        |  | 20                                | JIS 20K                                 | 10F  | 1" Flange           |      |                  |    |                |   |  |   |        |   |       |
|        |  | 15                                | ANSI 150#                               | 15F  | 1 1/2" Flange       |      |                  |    |                |   |  |   |        |   |       |
|        |  | 30                                | ANSI 300#                               | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>Code</th> <th>Protection Class</th> </tr> <tr> <td>IP</td> <td>IP66</td> </tr> </table>  |                     | Code | Protection Class | IP | IP66           |   |  |   |        |   |       |
| Code   | Protection Class   |                                   |   |  |                     |      |                  |    |                |   |  |   |        |   |       |
| IP     | IP66   |                                   |   |  |                     |      |                  |    |                |   |  |   |        |   |       |
|        |  | 40                                | ANSI 400#                               |  |                     |      |                  |    |                |   |  |   |        |   |       |
|        |  | 60                                | ANSI 600#                               | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>Code</th> <th>Fluid</th> </tr> <tr> <td>G</td> <td>Gas</td> </tr> <tr> <td>O</td> <td>Oil</td> </tr> <tr> <td>L</td> <td>Liquid</td> </tr> <tr> <td>S</td> <td>Steam</td> </tr> </table> |                     | Code | Fluid            | G  | Gas            | O | Oil  | L | Liquid | S | Steam |
| Code   | Fluid  |                                   |   |  |                     |      |                  |    |                |   |  |   |        |   |       |
| G      | Gas  |                                   |   |  |                     |      |                  |    |                |   |  |   |        |   |       |
| O      | Oil  |                                   |   |  |                     |      |                  |    |                |   |  |   |        |   |       |
| L      | Liquid   |                                   |   |  |                     |      |                  |    |                |   |  |   |        |   |       |
| S      | Steam  |                                   |   |  |                     |      |                  |    |                |   |  |   |        |   |       |
|        |  | T                                 | Other: _____                            | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>Code</th> <th>Range</th> </tr> <tr> <td>S</td> <td>Standard range</td> </tr> <tr> <td></td> <td>Please directly fill out the flow range in the order code.</td> </tr> </table>           |                     | Code | Range            | S  | Standard range |   | Please directly fill out the flow range in the order code. |   |        |   |       |
| Code   | Range  |                                   |   |  |                     |      |                  |    |                |   |  |   |        |   |       |
| S      | Standard range   |                                   |   |  |                     |      |                  |    |                |   |  |   |        |   |       |
|        | Please directly fill out the flow range in the order code. |                                   |   |  |                     |      |                  |    |                |   |  |   |        |   |       |
|        |  |                                   |   |  |                     |      |                  |    |                |   |  |   |        |   |       |

MF200E

+Complete ordering code

**NOTE:**  
 1. Custom-made flow range and flange size upon request.  
 2. Please fill in the ordering information and service condition, and fax this sheet along with your inquiry to 886-7-8225588.

**Special instruction, if any:**

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**Service Condition:**  
 Fluid name: \_\_\_\_\_  
 Sp. Gr. (density): \_\_\_\_\_  
 Viscosity: \_\_\_\_\_  
 Press.: \_\_\_\_\_  
 Temp.: \_\_\_\_\_  
 Full scale: \_\_\_\_\_