

# Integral flow orifice assembly

## Model : F510

Spec. sheet no. **FD05-02**

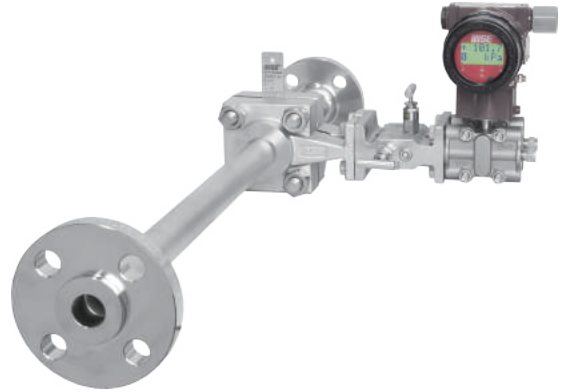
### Description

Integral orifice primary element utilizes a self centering orifice plate design to eliminate installation error. Enables highly accurate flow measurement in small line sizes. Available with a variety of process connections. Available in 1/2" to 1 1/2" (15 ~ 40 mm) line sizes.

**EAC CE**

### Principle

- Improves accuracy and repeatability
- Self-centering plate design eliminates installation errors that are magnified in small line sizes
- Installation flexibility with numerous process connections



### Specification

#### Line size

1/2"(15) ~ 1 1/2"(40)

- Maximum working pressure :  
Pressure retention per ANSI B16.5 1500Lb

#### Gaskets

Glass filled PTFE or Graphite

#### Orifice plate

316SS / 316L SS and Other

#### Orifice type

Square edge-orifice bore sizes

#### Body

CF8, CF8M, CF3M, Material per ASTM A351

#### Pipe material

A312 Gr 316SS / 316L SS and Other

#### Transmitter connections

2 1/8" (54 mm) center to center.

Other transmitter spacing can be accommodated using the optional remote adapters and customer supplied impulse piping. DIN 19213 connections are available

#### Flange

A182 F304 and Other

- Flange pressure limits are per ANSI B16.5  
Flange face finish per ANSI B16.5, 125 to 250 AARH

#### Body bolts / Studs

ASTM A 193 Gr B8 studs and Other

#### Note

Integral orifice bodies contain corner tapped pressure ports.

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## Main order

## Ordering information

### 1. Base model

**F510** Integral flow orifice assembly

### 2. Line size

|            |       |            |     |
|------------|-------|------------|-----|
| <b>A01</b> | ½"    | <b>J01</b> | 15A |
| <b>A02</b> | ¾"    | <b>J02</b> | 20A |
| <b>A03</b> | 1"    | <b>J03</b> | 25A |
| <b>A04</b> | 1½"   | <b>J04</b> | 40A |
| <b>ZZZ</b> | Other |            |     |

### 3. Connection

|            |            |            |         |
|------------|------------|------------|---------|
| <b>A01</b> | 150Lb RF   | <b>J01</b> | 10K RF  |
| <b>A02</b> | 300Lb RF   | <b>J02</b> | 16K RF  |
| <b>A03</b> | 600Lb RF   | <b>J03</b> | 20K RF  |
| <b>A04</b> | 900Lb RF   | <b>J04</b> | 30K RF  |
| <b>A05</b> | 1500Lb RF  | <b>J05</b> | 40K RF  |
| <b>A06</b> | 2500Lb RF  | <b>J06</b> | 63K RF  |
| <b>A11</b> | 150Lb FF   | <b>J11</b> | 10K FF  |
| <b>A12</b> | 300Lb FF   | <b>J12</b> | 16K FF  |
| <b>A13</b> | 600Lb FF   | <b>J13</b> | 20K FF  |
| <b>A14</b> | 900Lb FF   | <b>J14</b> | 30K FF  |
| <b>A15</b> | 1500Lb FF  | <b>J15</b> | 40K FF  |
| <b>A16</b> | 2500Lb FF  | <b>J16</b> | 63K FF  |
| <b>A21</b> | 150Lb RTJ  | <b>J21</b> | 10K RTJ |
| <b>A22</b> | 300Lb RTJ  | <b>J22</b> | 16K RTJ |
| <b>A23</b> | 600Lb RTJ  | <b>J23</b> | 20K RTJ |
| <b>A24</b> | 900Lb RTJ  | <b>J24</b> | 30K RTJ |
| <b>A25</b> | 1500Lb RTJ | <b>J25</b> | 40K RTJ |
| <b>ZZZ</b> | Other      | <b>J26</b> | 63K RTJ |
|            |            | <b>BUT</b> | B.W     |

### 4. Element type

**1** Concentric  
**O** Other

### 5. Element material

**6** 316L SS  
**O** Other

### 6. Body / Pipe / Flange material

**44** A351 CF8 / A312 TP304 / A182 F304  
**66** A351 CF8M / A312 TP316 / A182 F316  
**6L** A351 CF3M / A312 TP316L / A182 F316L

### 7. Gasket material

**W** Spiral wound 3.2T  
**T** Teflon  
**G** Graphite  
**O** Other

### 8. Option

**C** Calibration test  
**O** Other  
**N** None

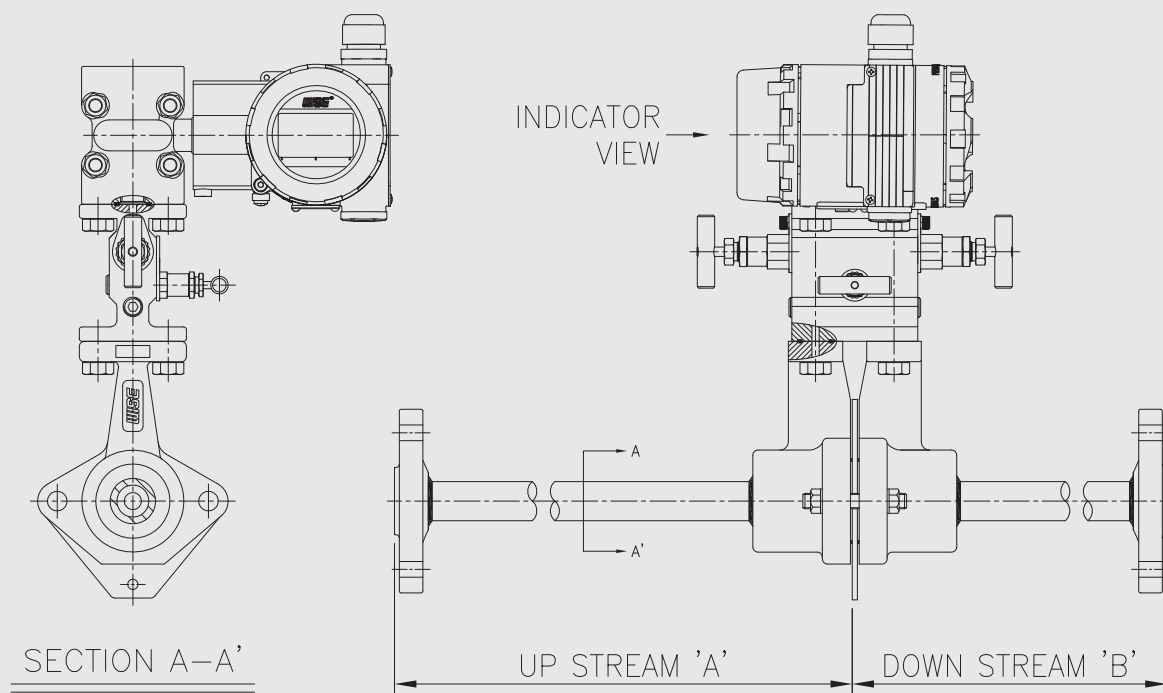
### Sample ordering code

|      |     |     |   |   |    |   |   |
|------|-----|-----|---|---|----|---|---|
| 1    | 2   | 3   | 4 | 5 | 6  | 7 | 8 |
| F510 | A01 | A01 | 1 | 6 | A4 | W | C |



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## Dimensional drawing

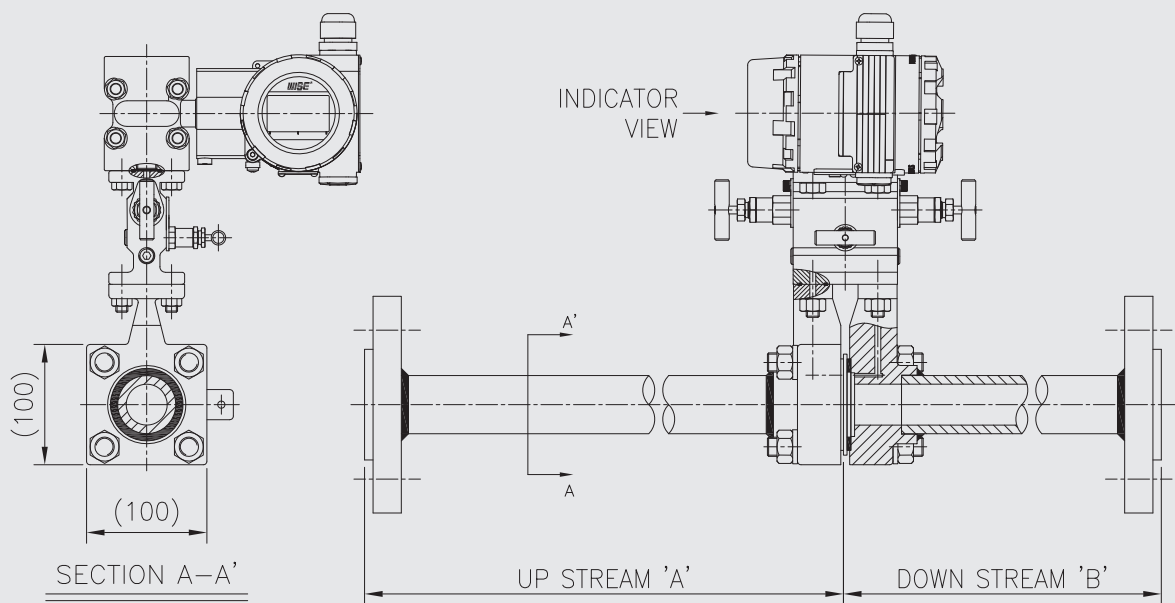


INTEGRAL TYPE ORIFICE FLOW METER. UP TO 300LB

| SIZE<br>IN<br>(INCH) | THICKNESS<br>OF<br>PLATES | THICKNESS<br>OF<br>EDGE | LENGTH<br>OF<br>UP STREAM | LENGTH<br>OF<br>DOWN STREAM |
|----------------------|---------------------------|-------------------------|---------------------------|-----------------------------|
|                      | T                         | e                       | A                         | B                           |
| 1/2                  | 4                         | 0.5                     | 330                       | 150                         |
| 3/4                  | 4                         | 0.5                     | 400                       | 200                         |
| 1                    | 4                         | 0.5                     | 520                       | 230                         |
| 1 1/2                | 4                         | 0.7                     | 730                       | 310                         |

UNIT : mm

Dimension



INTEGRAL TYPE ORIFICE FLOW METER. 600LB TO 1500LB

| SIZE<br>IN<br>(INCH) | LENGTH<br>OF<br>UP STREAM | LENGTH<br>OF<br>DOWN STREAM | OUTSIDE<br>DIAM OF<br>PLATE | THICKNESS<br>OF<br>PLATES | THICKNESS<br>OF<br>EDGE | DIAM<br>OF<br>HOLE |       | TAP HANDLE |        |
|----------------------|---------------------------|-----------------------------|-----------------------------|---------------------------|-------------------------|--------------------|-------|------------|--------|
|                      |                           |                             |                             |                           |                         | G1                 | K1/K2 | WIDTH      | HEIGHT |
| 1/2                  | 330                       | 150                         | 84                          | 3                         | 0.5                     | –                  | –     | 25         | 60     |
| 3/4                  | 400                       | 200                         | 84                          | 3                         | 0.5                     | –                  | –     | 25         | 60     |
| 1                    | 520                       | 230                         | 84                          | 3                         | 0.5                     | –                  | –     | 25         | 60     |
| 1 1/2                | 730                       | 310                         | 84                          | 3                         | 0.7                     | 1.6                | *     | 25         | 60     |

UNIT : mm