

## COMBINATION WATER METER (page1/4)

### MODEL: LXF-50



### MODEL: LXF-80-150

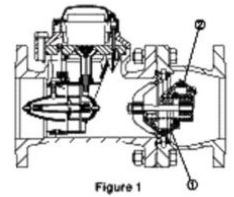


Figure 1

LXF-50(50mmx15mm)  
LXF-650(65mmx20mm)  
LXF-80(80mmx20mm)  
LXF-100(100mmx20mm)  
LXF-150(150mmx40mm)  
LXF-200(200mmx50mm)

This type of water meter can be used for a remote reading transmission system as equipped with a built-in sensor.

### APPLICATION

- ◆ For measurement of high flows of cold potable water passing through the pipeline.

### FEATURES

- ◆ Wide measuring range: From  $Q_{min}$  of the small caliber water meter to  $Q_{max}$  of the large caliber water meter
- ◆ As a dry meter, deposits in the register are avoided. This ensures a clear reading in long term service.
- ◆ The main register may rotate more than 360 degrees for easily reading in any position.
- ◆ Low head loss.
- ◆ Lower starting flow.
- ◆ Novel structure, simple maintenance.
- ◆ Can be equipped with reed switch option.
- ◆ Particularly suited in commercial, institutional places of assembly and facilities with fluctuating usage and flow rates.

### WORKING PRINCIPLE

- ◆ A changeover spring valve diverts flow to the appropriate meter, opening or closing according to pressure variations by changes in flow rate.
- ◆ At low flow rate, the changeover valve closes and only the small meter in operation 2 water flows through the bypass meter, and the usage is recorded on its register.
- ◆ When the flow rate increases, pressure is exerted on the large meter, until the flow rate reaches approximately one half the capacity of the bypass meter. At this point, the drop in pressure causes the valve to open 1, and water flows through both the main meter and bypass meter, and the overall consumption is read by combining the main and bypass registers.
- ◆ When flow is decreasing, the process is reversed. The valve is closed and water flows through the small meter.

### CONSTRUCTION

- ◆ The meter model LXF-50-200 combines a large caliber water meter (model LXLC-B) on the main line, a small water mete (model LXSG) on the bypass line, and a flow changeover valve.

Annotation: LXLC-B

removable element woltman water meter.

LXSG multi-jet dry type vane wheel water meter

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or(LXSY) multi-jet liquid type vane wheel water meter.

### WORKING CONDITION

◆Water temperature:  $\leq 50^{\circ}\text{C}$

◆Water pressure:  $\leq 1.6\text{Mpa}$

### MAXIMUM PERMISSIBLE ERROR

◆ In the lower zone from  $Q_{\min}$  inclusive up to but excluding  $Q_t$  is  $\pm 5\%$

In the upper zone from  $Q_t$  inclusive up to and including  $Q_s$  is  $\pm 2\%$

### INDICATION

◆Cubic meter( $\text{m}^3$ )

### INSTALLATION

◆The meter must be installed with the direction of the flow as indicated by the arrow cast in the meter body.

◆A horizontal position with the register face upwards is recommended.

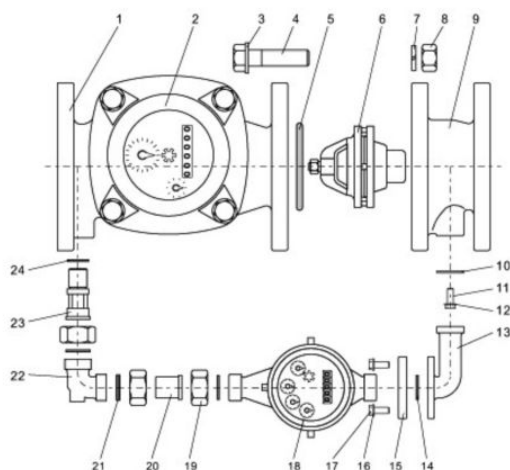
◆The meter must have 10 diameters straight pipe ahead of the meter and 5 diameters straight pipe after to insure proper flow through the meter.

◆The valves must be installed in the front and the back of the water meter.

### ATTACHMENT

◆With every water meter, there will be two flange gaskets.

◆If you need the connecting flanges(two pieces), please specially request that.



| No. | Name                       | Qty | No. | Name              | Qty | No. | Name                                 | Qty |
|-----|----------------------------|-----|-----|-------------------|-----|-----|--------------------------------------|-----|
| 1   | Body(main water meter)     | 1   | 9   | Adapting flange   | 1   | 17  | Bolt                                 | 2   |
| 2   | LXLC-B except for the body | 1   | 10  | Coupling gasket 2 | 1   | 18  | Bypass meter (LXSG)                  | 1   |
| 3   | Flat washer                | 8   | 11  | Bolt              | 2   | 19  | Nut                                  | 3   |
| 4   | Bolt                       | 8   | 12  | Flat washer       | 2   | 20  | Coupling 2                           | 1   |
| 5   | Flange o-ring              | 1   | 13  | Street elbow 2    | 1   | 21  | Coupling o-ring                      | 1   |
| 6   | Changeover valve           | 1   | 14  | Coupling gasket   | 3   | 22  | Street elbow 1 with non-return valve | 1   |
| 7   | Spring washer              | 8   | 15  | Connecting plate  | 1   | 23  | Coupling 1                           | 1   |
| 8   | Nut                        | 8   | 16  | Spring washer     | 2   | 24  | Coupling gasket 1                    | 1   |

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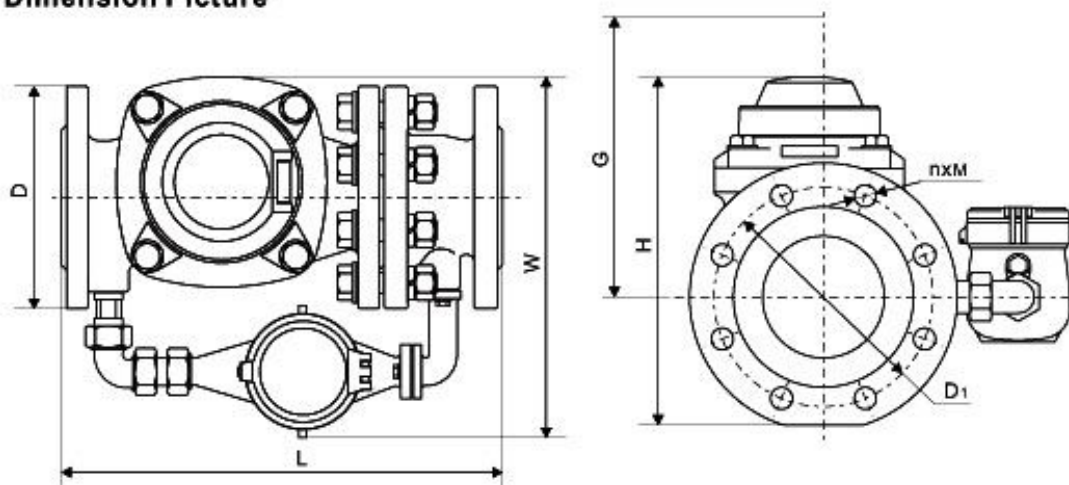
MAIN TECHNICAL DATA COMFORMS TO Q/ZN 184-2003(company standard)

| Type    | Size(mm)   | $q_s$    | $q_p$   | $q_t$        | $q_{min}$ | Min. Reading   | Max. Reading |
|---------|------------|----------|---------|--------------|-----------|----------------|--------------|
|         |            | Max Flow | Nominal | Transitional | Min. Flow |                |              |
|         |            |          |         |              |           | m <sup>3</sup> |              |
| LXF-50  | 50mmx15mm  | 30       | 15      | 0.12         | 0.03      | 0.0001         | 999999+99999 |
| LXF-80  | 80mmx20mm  | 80       | 40      | 0.20         | 0.05      | 0.0001         | 999999+99999 |
| LXF-100 | 100mmx20mm | 120      | 60      | 0.20         | 0.05      | 0.0001         | 999999+99999 |
| LXF-150 | 150mmx40mm | 300      | 150     | 0.80         | 0.20      | 0.001          | 999999+99999 |

### DIMENSIONS AND WEIGHTS

| Type    | Size DN    | Length | Width | Height | Height | Connecting flange |     |                     | Weight kg |
|---------|------------|--------|-------|--------|--------|-------------------|-----|---------------------|-----------|
|         |            | L      | W     | H      | G      | D                 | D1  | Connecting Bolt nxM |           |
|         |            |        |       |        |        | mm                |     |                     |           |
| LXF-50  | 50mmx15mm  | 300    | 165   |        | 213    | 165               | 125 | 4xM16               | 14.8      |
| LXF-80  | 80mmx20mm  | 370    | 310   | 279    | 450    | 200               | 160 | 8XM16               | 27.5      |
| LXF-100 | 100mmx20mm | 370    | 330   | 289    | 450    | 220               | 180 | 8XM16               | 33        |
| LXF-150 | 150mmx40mm | 500    | 445   | 319    | 550    | 285               | 240 | 8XM20               | 64        |
| LXF-200 | 200mmx50mm | 560    | 525   | 375    | 500    | 340               | 295 | 8XM20               | 114.5     |

### Dimension Picture

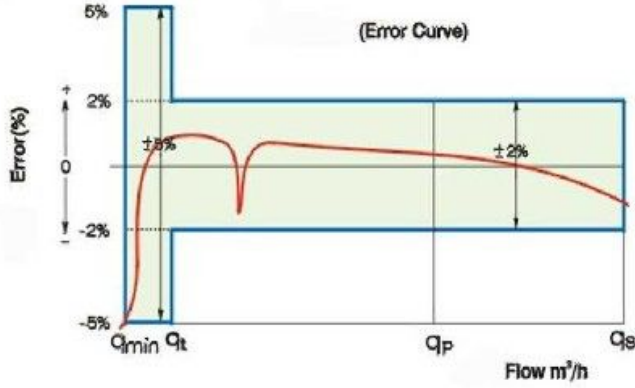


◆ The height "G" is necessary for removing the measuring unit.



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### ACCURACY CURVE



| Type    | Incr easing open flow rate(m <sup>3</sup> /h) | Decr easing Close flow rate(m <sup>3</sup> /h) |
|---------|---|--|
| LXF-50  | 1.4   | 0.7  |
| LXF-80  | 1.8   | 0.8  |
| LXF-100 | 1.8   | 1.2  |
| LXF-150 | 4.5   | 2.5  |

### PRESSURE LOSS CURVE

#### Head Loss Curve

