

Product Data Sheet  
PDS-312/314  
2021-01-09

## Irrigation Saddle Meter

### FM312/314 Bolt-on Irrigation Saddle Propeller Meter



#### Description

Specifically designed to provide accurate and reliable flow measurement to the irrigation marketplace, Sparling's saddle flow meter is the ideal solution to trouble-free water flow measurement in irrigation's severe environments. The saddle design allows the meter to be used on existing piping, and in many cases, these meters can replace other saddle flow meters.

These meters feature cast saddles and gear boxes making them robust and reliable. The simple and rugged design ensures that the meter can be maintained using standard tools.

The design is based on Sparling's proven meters that have been used in agricultural, municipal and industrial applications for decades. The meter is perfect for measuring flow in sprinkler systems and center pivot systems as well as irrigation systems used in agriculture, golf courses and nurseries.

#### Accuracy

The meter's accuracy is  $\pm 2\%$  Full Scale of actual flow and each meter is certified by wet flow calibration in a NIST traceable flow lab.

#### Configurations

The meter is available in two configurations:

- 1) Mechanical, featuring a reliable worm and gear pair that prevents slippage and error in readings.
- 2) Electronic, featuring the reliability of fewer moving parts, permanent magnets and a digital display. Optional outputs allow for communication with data systems.

#### Options

A full line of accessories is available:

- Dummy covers
- Register Extensions
- Straightening vanes
- Meter tubes, with plain or flanged ends
- Outputs: Scaled Pulse Outputs and 4-20mA

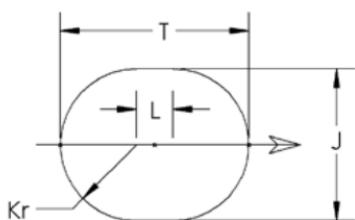
## Ordering Information

|   |   |                 |                 |                 |                |
|---|---|-----------------|-----------------|-----------------|----------------|
| <b>Table 1: Base Model Number</b><br><b>FM312</b> - Mechanical<br><b>FM314</b> - Electronic |   |                 |                 |                 |                |
|   | <b>Table 2: Size</b><br><b>04</b> - 4"<br><b>10</b> - 10"<br><b>06</b> - 6"<br><b>12</b> - 12"<br><b>08</b> - 8"<br><b>14</b> - 14"                                       |                 |                 |                 |                |
|   | <b>Table 3: Mounting</b><br><b>0</b> - U-Bolts  |                 |                 |                 |                |
|   | <b>Table 4: Register</b><br><b>1</b> - Mechanical Flow Totalizer<br><b>2</b> - Mechanical Flow Totalizer and Indicator<br><b>3</b> - FT194-II Digital Rate/Flow Totalizer |                 |                 |                 |                |
|   | <b>Table 5: Velocity</b><br><b>1</b> - Low Range<br><b>2</b> - Standard Range   |                 |                 |                 |                |
|   | <b>Table 6: Accessories</b><br><b>0</b> - None<br><b>1</b> - Bolting Vanes  |                 |                 |                 |                |
| <b>Model</b>  | <b>Size</b>   | <b>Mounting</b> | <b>Register</b> | <b>Velocity</b> | <b>Access.</b> |
| FM312   | 04  | 0               | 1               | 1               | 0              |

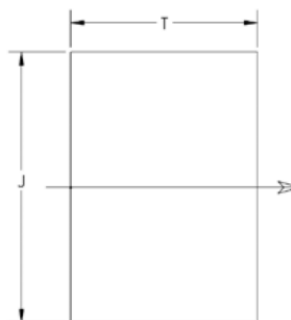
## Installation

To install the meterhead, prepare a template from the dimensions below. Using the template, scribe a line for cutting, and cut opening, removing all burrs and slag.

For 4" to 12" Meters



For 14 - 30" meters



| Size (in) | Max. Press. (psi) | Weight (lbs) | J (in) | T (in) | Kr (in) | L (in) | Flow Range (GPM) |            |
|-----------|-------------------|--------------|--------|--------|---------|--------|------------------|------------|
|           |                   |              |        |        |         |        | Low              | Standard   |
| 4.00      | 100               | 20.0         | 4.63   | 7.19   | 2.31    | 2.56   | 60.0 - 400       | 120 - 600  |
| 6.00      | 100               | 25.0         | 6.63   | 6.63   | 3.31    | 0.000  | 100 - 900        | 200 - 1600 |
| 8.00      | 100               | 30.0         | 6.25   | 7.75   | 3.13    | 1.50   | 120 - 1200       | 240 - 2300 |
| 10.0      | 100               | 35.0         | 6.75   | 8.00   | 3.38    | 1.25   | 160 - 1600       | 320 - 3000 |
| 12.0      | 100               | 40.0         | 8.00   | 8.00   | 4.00    | 0.000  | 200 - 2000       | 400 - 4000 |
| 14.0      | 50.0              | 50.0         | 6.38   | 14.9   | *       | *      | 260 - 2500       | 520 - 5000 |