

# DP SERIES INSERTION PADDLEWHEEL FLOW METER



**FLOMEC® DP Series Insertion Flow Meters** use a paddlewheel design to measure the flow of non-potable water, solvents, and other low-viscosity liquids in pipe sizes from 1.5-100 in. (10-2500 mm). DP Series insertion flow meters are a versatile and economical solution for measuring flow in large pipes, offering moderately accurate readings at a very low cost of ownership. When using a FLOMEC® flow rate totalizer with the DP series, it creates a fully programmable self-powered local display. Typical applications include HVAC, irrigation, hot and cold water, fire systems, water distribution (management and treatment), boiler feed water, waste water and hydrant flow testing.

## FEATURES / BENEFITS

- IP68 (NEMA6) submersible 316SS construction (cable connection only)
- Intrinsically safe option available
- DP525 version suitable for "hot tap" installations
- Quadrature pulse option available for bi-directional flow measurement
- ± 1.5% of reading accuracy provides exceptional measurement accuracy with limited investment
- Extremely versatile design means one product is suited for a huge variety of pipe sizes
- Only one moving part provides a reliable product with minimal maintenance costs
- IECEx/ATEX models available, making the product safe to use in flammable liquid applications

## SPECIFICATIONS

|                          |                                                                   |                            |
|--------------------------|-------------------------------------------------------------------|----------------------------|
| Technology:              | Paddlewheel                                                       |                            |
| Accuracy (% of Reading): | Typically ± 1.5%                                                  |                            |
| Housing Material:        | DP490                                                             | DP525                      |
| Line Sizes:              | 1.5-35.4 in.<br>(40-900 mm)                                       | 2-100 in.<br>(50-2500 mm)  |
| Pipe Connection:         | 1.5" or 2" BSPT or NPT male thread                                | 2" BSPT or NPT male thread |
| Material Housing:        | 316SS body and rotor shaft                                        |                            |
| Flow Range:              | 3 - 33 ft/sec (1 -10 m/s)                                         |                            |
| Pressure Rating:         | 1160 psi (80 bar)                                                 |                            |
| Operating Temperature:   | -40°F to 300°F (-40°C to 150°C)                                   |                            |
| Protection Class:        | IP68 (NEMA 6), optional I.S (Intrinsically Safe) Integral options |                            |
| Pulse Outputs            |                                                                   |                            |
| Hall Effect:             | 3 wire open collector, 5-24v (dc), 20mA max. Nom 0-240Hz          |                            |
| Reed*:                   | 30v (dc), 200mA max. Nom 0-80Hz                                   |                            |
| Voltage Pulse:           | Self Generated voltage, Nom 0-240Hz                               |                            |
| Non-Magnetic Sensor:     | 3 wire open collector, 5 - 24V (dc), 20mA max. Nom 0 - 240Hz      |                            |
| Optional Outputs**       | 4-20mA, scaled pulse, quadrature pulse                            |                            |

\*Reed Switch resolution is 1/3 of the NPN Hall Effect or Voltage Pulse outputs

\*\*Optional Integral option is required

## APPLICATIONS (Typical application but not limited to)

- HVAC
- Irrigation
- Hot and Cold Water
- Fire Systems
- Water Distribution (Management and Treatment)
- Boiler Feed Water
- Waste Water
- Hydrant Flow Testing

## APPROVALS / WARRANTY



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DP SERIES

INSERTION PADDLEWHEEL FLOW METER

DIMENSIONS

|                               | DP490                      | DP525                 |
|-------------------------------|----------------------------|-----------------------|
| Thread                        | 1.5 or 2 in.<br>BSP or NPT | 2 in.<br>BSP or NPT   |
| Dimension "A"<br>Flying Cable | 2.4 in.<br>(6 cm)          | 2.5 in.<br>(6.4 cm)   |
| Dimension "A"<br>RT14         | 4.8 in.<br>(12.2 cm)       | 4.8 in.<br>(12.2 cm)  |
| Dimension "A"<br>RT40         | 4.5 in.<br>(11.4 cm)       | 4.5 in.<br>(11.4 cm)  |
| Dimension "A"<br>F018-F115    | 5.1 in.<br>(13 cm)         | 5.1 in.<br>(13 cm)    |
| Dimension "B"<br>Flying Cable | 2.4 in.<br>(6 cm)          | 2.5 in.<br>(6.4 cm)   |
| Dimension "B"<br>RT14         | 2.1 in.<br>(5.3 cm)        | 2.1 in.<br>(5.3 cm)   |
| Dimension "B"<br>RT40         | 2.6 in.<br>(6.6 cm)        | 2.6 in.<br>(6.6 cm)   |
| Dimension "B"<br>F018-F115    | 2.95 in.<br>(7.5 cm)       | 2.95 in.<br>(7.5 cm)  |
| Dimension "C"<br>Flying Cable | 9.3 in.<br>(23.7 cm)       | 16.7 in.<br>(42.4 cm) |
| Dimension "C"<br>RT14         | 16.3 in.<br>(41.5 cm)      | 35.4 in.<br>(90 cm)   |
| Dimension "C"<br>RT40         | 14.96 in.<br>(38 cm)       | 34.1 in.<br>(86.5 cm) |
| Dimension "C"<br>F018-F115    | 16.3 in.<br>(41.3 cm)      | 35.4 in.<br>(89.8 cm) |

