

## Baseline Clamp-On Flow Sensors

The clamp-on flow sensors from Baseline eliminate the need to modify pipes. Baseline offers an indoor-only version that fits pipe sizes from ¼ inch to 2 inches and an indoor/outdoor version that fits pipe sizes from 3 inches to 8 inches.

With the customized product from Baseline, the integrated Baseline BL-5309 Flow biCoder transfers the data from the flow sensor to the BaseStation irrigation controller where it is analyzed, reported, and acted on according to the parameters that you set. You can view the data on the BaseStation irrigation controller, in BaseManager, PipeView or in BACnet Manager.

### Features

- The sensor clamps onto the outside of a pipe and can accurately sense the flow of liquid through the pipe.
- Requires no pipe modification
- Takes ultrasonic readings
- Transmits flow data in real time to a BaseStation irrigation controller
- Displays real-time flow data on the flow sensor screen

### IDFS Series Indoor Flow Sensors

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Baseline's IDFS Series Indoor Flow Sensors have clamp-on mounting brackets that fit pipe sizes from ¼ inch up to 2 inches. These ultrasonic flow sensors send flow data to the Baseline irrigation controller and to BaseManager and BACnet Manager.

### IDFS Features

- Specifically designed for indoor use
- Integrated Baseline BL-5309 Flow biCoder (Refer to the [Flow biCoder Technical Specification](#) on the Baseline website.) The flow biCoder can be connected directly to the two-wire path on any Baseline controller - no additional equipment required
- Pre-configured K and offset values
- Available in ¼", ⅜", ½", ¾", 1", 1¼", 1½", and 2" versions
- Settings are locked to prevent inadvertent changes. Can be unlocked with assistance from Baseline Support.

## IDFS Specifications

- Supported Pipe Materials
  - Pre-configured for Schedule 40 copper pipe
  - The settings can be changed to support other types of metal or resin pipe.
- Supported Fluids
  - Water
  - Oils
  - Chemicals
- Supported Fluid Temperature: 32° to 185° F (Pipe surface must be free of condensation or frost, which can affect the ultrasonic pulse)
- Flow Direction
  - Pre-configured for left-to-right flow
  - The settings can be changed to accommodate right-to-left flow
- Connection Type: Clamp on
- Repeatability: 1.5%
- Maximum Rated Flow

¼"	5.2 gpm	1"	52.8 gpm
⅜"	7.9 gpm	1¼"	79.3 gpm
½"	15.9 gpm	1½"	105.7 gpm
¾"	26.4 gpm	2"	132.1 gpm
- Pipe must be full
- No air pockets in liquid to be measured
- Oil-resistant Polyurethane connector cable
- Temperature Range: 14° to 140°F
- (-10° to 60°C), no freezing
- Relative Humidity: 35 to 85% non condensing
- Power Supply Voltage: 30 VDC
- Electrical Output: Baseline two-wire, 30 VAC RMS

## How to Specify the IDFS Series Flow Sensors

Baseline Part #	Nominal Pipe Size	Outside Diameter
BL-IDFS-25	¼"	13 - 16 mm
BL-IDFS-37	⅜"	16 - 18 mm
BL-IDFS-50	½"	18 - 23 mm
BL-IDFS-75	¾"	23 - 28 mm
BL-IDFS-100	1"	28 - 37 mm
BL-IDFS-125	1¼"	37 - 44 mm
BL-IDFS-150	1½"	44 - 52 mm
BL-IDFS-200	2"	52 - 64 mm

## Clamp-On Flow Sensors

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Baseline's COFS Series Clamp-on Flow Sensors have clamp-on mounting brackets that fit pipe sizes from 2 inches up to 8 inches. These ultrasonic flow sensors send flow data to the Baseline irrigation controller and to BaseManager, PipeView, and BACnet Manager.

### COFS Features

- Designed for either indoor or outdoor use
- Integrated Baseline BL-5309 Flow biCoder (Refer to the [Flow biCoder Technical Specification](#) on the Baseline website.) The flow biCoder can be connected directly to the two-wire path on any Baseline controller - no additional equipment required
- Pre-configured K and offset values
- Available in 3", 4", 5", 6" and 8" versions
- Settings are locked to prevent inadvertent changes. Can be unlocked with assistance from Baseline Support.

### COFS Data

You can view data on the clamp-on flow sensor display. However, with the customized product from Baseline, the flow biCoder transfers the data from the flow sensor to the BaseStation irrigation controller where it is analyzed, reported, and acted on according to the parameters that you set. You can view the data on the BaseStation irrigation controller, in BaseManager, PipeView or in BACnet Manager.

### COFS Specifications

- Supported Pipe Materials
  - Pre-configured for Schedule 40 PVC pipe
  - The settings can be changed to support other types of metal or resin pipe.
- Supported Fluids
  - Water
  - Oils
  - Chemicals
- Supported Fluid Temperature Range: -4° to 248°F (-20° to +120°C). Pipe surface must be free of condensation or frost, which can affect the ultrasonic pulse.

- Flow Direction
  - Pre-configured for left-to-right flow
  - The settings can be changed to accommodate right-to-left flow
- Flow Units
  - Pre-configured for gallons per minute (GPM)
  - The settings can be changed to accommodate L/min or m<sup>3</sup>/h
- Connection Type: Clamp on
- Repeatability: 1.5%
- Flow Rate Range

3"	24 - 390 gpm	6"	150 – 1400 gpm
4"	60 - 660 gpm	8"	150 – 2500 gpm
5"	60 - 990 gpm		
- Pipe must be full
- No air pockets or excessive bubbles in liquid to be measured
- Integrated temperature monitoring
  - Accuracy: ±5.4°F (±3°C)
- Power Supply Voltage: 30 VDC
- Electrical Output: Baseline two-wire, 30 VAC RMS

### ***Environmental Resistance***

- Enclosure ratings: IP65/67 (IEC60259), IP69K (ISO20653), Enclosure Type 4X (NEMA250)
- Ambient Temperature Range: -4° to +140°F (-20° to +60°C), no freezing
- Ambient Humidity: 5 to 90%RH (no condensation)
- Vibration Resistance: 10 to 55 Hz, compound amplitude 1.5 mm 0.06", XYZ axes 2 hours for each axis
- Shock Resistance: 100 m/s<sup>2</sup>, 16 ms pulse, XYZ axes, 1000 for each axis

## How to Specify the COFS Series Flow Sensors

Baseline Part #	Nominal Pipe Size	Outside Diameter
BL-COFS-300	3"	83 - 100 mm
BL- COFS-400	4"	100 - 127 mm
BL- COFS-500	5"	127 - 152 mm
BL- COFS-600	6"	152 - 191 mm
BL- COFS-800	8"	191 - 220 mm