

# Instruction Sheet

## Mounting the Probe in the Process Stream

### General Information

Two mounting configurations (handrail and float) are available from the manufacturer. Details and installation instructions are presented for each.

### Handrail Mount

#### Packing list — Handrail Mount

##### Swivel Assembly

Includes: U-bolts (2), nuts and washers (4 each), pivot pin with lanyard, position pin with lanyard, pipe holder assembly, and mounting bracket

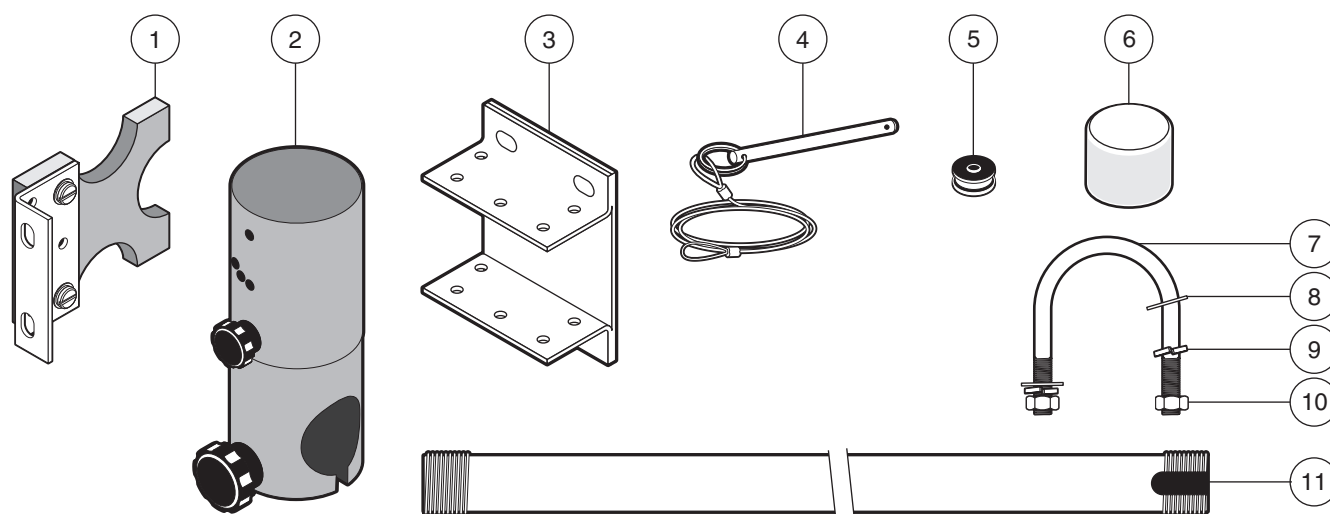
##### Pipe Assembly

Includes: mounting pipe and pipe end cap

##### Service Support Assembly

Includes: U-bolt, nuts, lock washers, flat washers, and service support assembly

**Figure 1 Handrail Mounting Components**



|                             |                              |
|-----------------------------|------------------------------|
| 1. Service support assembly | 7. U-bolt (3)                |
| 2. Swivel assembly          | 8. Flat washer (6) 5/16 inch |
| 3. Mounting bracket         | 9. Lock washer (6) 5/16 inch |
| 4. Pin with lanyard (2)     | 10. Hex nut (6) 5/16 inch    |
| 5. Grommet                  | 11. Mounting pipe with slot  |
| 6. Pipe end cap             |                              |

# Handrail Mount

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## Installation — Handrail Mount

### Assembling and Attaching the Mounting Bracket (see [Figure 2](#))

1. Place the flat surface of the mounting bracket on the horizontal pipe and attach through the left holes using a U-bolt, two flat washers, two lock washers, and two nuts.
2. Thread the lanyard of the pivot pin and the position pin onto the remaining U-bolt, and install the U-bolt through the right side holes. Secure with the washers and nuts.
3. Attach the pipe holder to the mounting bracket and secure with the pivot pin.
4. Determine the appropriate position for the service support assembly (a distance of approximately 5 ft). Mark the position.
5. Install the service support assembly using the remaining U-bolt, washers, and nuts. See [Figure 6 on page 7](#) for an example of the service support assembly in use.

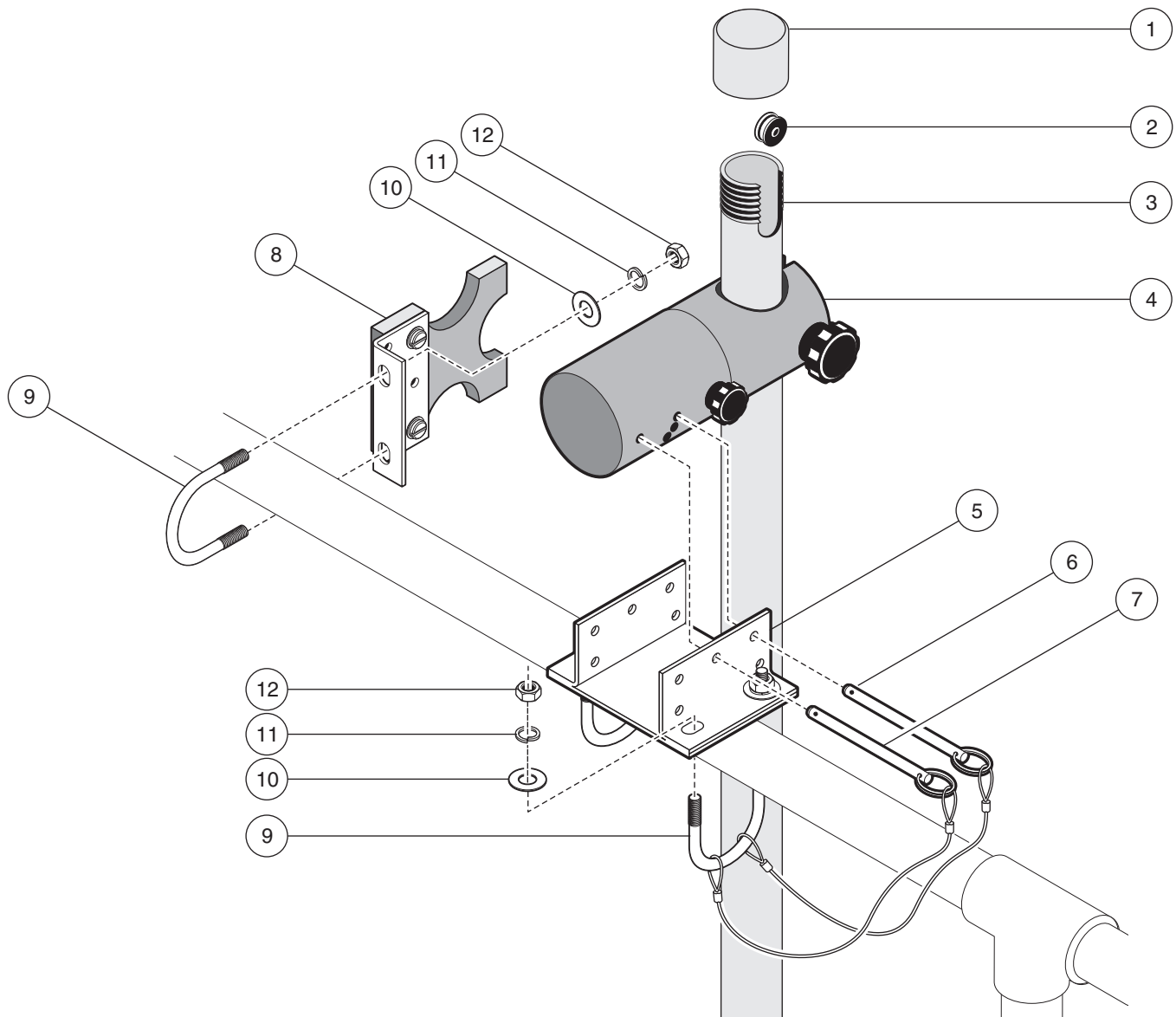
### Attaching the Mounting Pipe (see [Figure 2](#))

1. Remove the end cap from the mounting pipe.
2. Pass the probe cable through the pipe. Install the grommet in the slot where the cable exits the pipe and route the cable through it.
3. Thread the probe onto the end of the pipe. Tighten securely by hand.
4. Insert the mounting pipe into the swivel assembly with the notch in the end facing down; allow the pipe to extend approximately 25 cm (1 ft) above the pipe holder. Tighten the pipe locking knob
5. Reinstall the end cap. Hand tighten.
6. Make appropriate connections at the controller. See the analysis system manual for additional information on connecting the probe to the controller.
7. Return the pipe to the measuring position and tighten the swivel-locking knob, see [Figure 5](#).
8. Insert the position pin into the mounting bracket to create the correct measurement angle.

## Parts List — Handrail Mount

|                                                        |             |
|--------------------------------------------------------|-------------|
| Hardware kit, handrail mounting .....                  | 57944-00    |
| Swivel assembly .....                                  | 276G1200    |
| Service support assembly .....                         | 276G1206    |
| Mounting pipe, handrail, schedule 80 PVC, 1½ NPT ..... | 57945-00 96 |
| End cap, schedule 80 PVC, threaded, 1½ NPT .....       | 1P2116-107  |

**Figure 2 Exploded Assembly — Handrail Mounting**



|                                                                                  |                             |
|----------------------------------------------------------------------------------|-----------------------------|
| 1. End cap                                                                       | 7. Pivot pin with lanyard   |
| 2. Grommet                                                                       | 8. Service support assembly |
| 3. Mounting pipe with slot (1½-inch PVC X 8 feet with slot)                      | 9. U-bolt (3)               |
| 4. Swivel assembly                                                               | 10. Flat washer (6)         |
| 5. Mounting bracket                                                              | 11. Lock washer (6)         |
| 6. Position pin with lanyard (do not use for probe float mounting configuration) | 12. Hex nut (6)             |

# Float Mount

## Float Mount

### Packing List — Float Mount

**Swivel Assembly**

Includes: U-bolts (2), Nuts and Washers (4 each), Pivot Pin with Lanyard, Position Pin with Lanyard (not used in this mounting configuration), and Swivel Assembly

**Pipe Assembly**

Includes: Pipe, Pipe End Cap, Grommet, and Float Assembly

**Service Support Hardware**

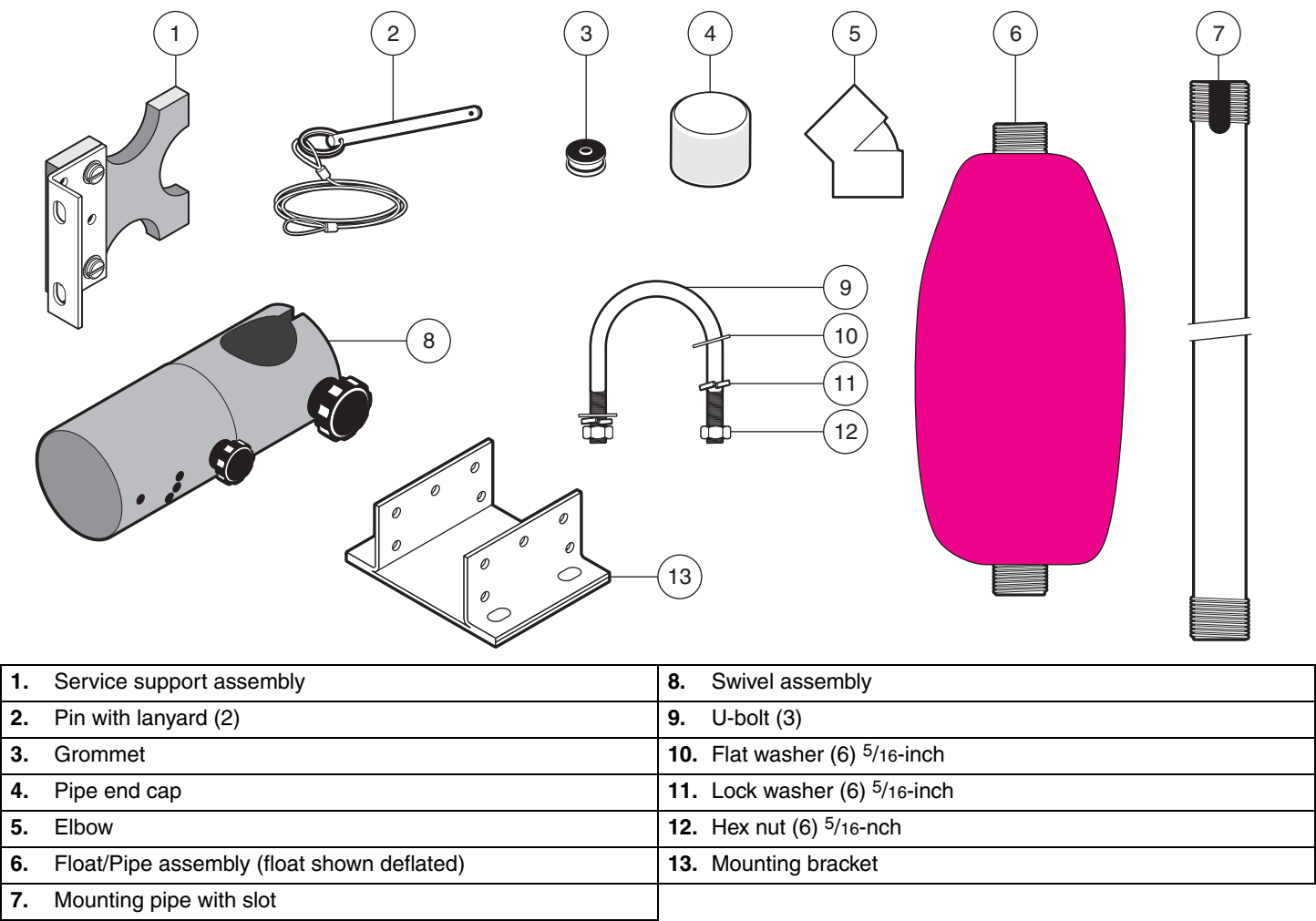
Includes: U-bolt, Nuts, Lock Washers and Flat Washers (3 each), and Service Support Assembly

**Float Assembly**

Includes: Float, Inner Float Pipe, and Threaded Elbow

### Installation — Float Mount

Figure 3 Probe Mounting Components



## Assembling and Attaching the Mounting Bracket (see [Figure 2](#))

1. Place the flat surface of the mounting bracket on the horizontal pipe and attach through the left holes using one U-bolt and two washers and nuts.
2. Thread the lanyard of the pivot pin and the position pin onto the remaining U-bolt and install the U-bolt through the right side holes. Secure with the washers and nuts.
3. Attach the swivel assembly to the mounting bracket and secure with the pivot pin.
4. Determine the appropriate position for the service support assembly (a distance of approximately 5 ft from the mounting bracket). Mark the position.
5. Install the service support assembly at the marked position using the remaining U-bolt, washers, and nuts. See [Figure 6 on page 7](#) for an example of the service support assembly in use.

## Attaching the Mounting Pipe and Float (see [Figure 2](#) and [Figure 3](#))

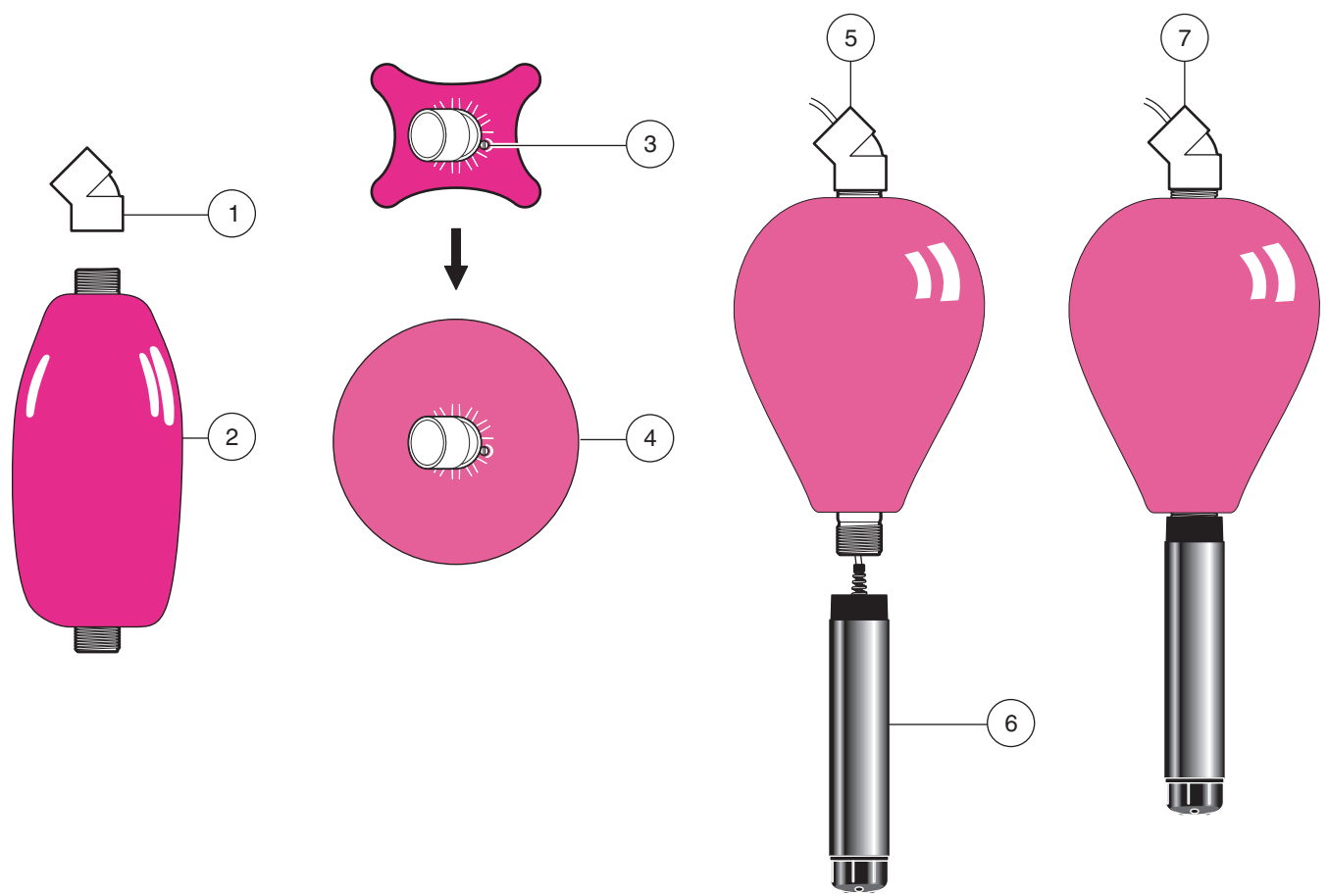
1. Attach the elbow to the inner float pipe at the tapered threads (at the end of the float with the valve) (see [Figure 4](#)).
2. Inflate the ball float until the measured circumference is  $120 \pm 2.5$  cm ( $48 \pm 1$  in.).
3. Thread the probe onto the other end of the inner float pipe. Tighten securely by hand.
4. Thread the mounting pipe (the end without the slot) onto the elbow.
5. Pass the probe cable through the pipe. Install the grommet in the slot where the cable exits the pipe and route the cable through it.
6. Remove the end cap from the mounting pipe and insert the pipe into the swivel assembly allowing the pipe to extend approximately 25 cm (1 ft) above the pipe holder. Tighten the pipe-locking knob, see [Figure 5 on page 7](#).
7. Reinstall the end cap. Hand tighten.
8. Make appropriate connections at the controller. See the analysis system manual for additional information on connecting the probe to the controller.
9. Return the pipe to the measuring position and tighten the swivel-locking knob, see [Figure 5 on page 7](#).
10. Insert the position pin into the mounting bracket to create the correct measurement angle, see [Figure 6 on page 7](#).

## Replacement Parts

|                                                               |                 |
|---------------------------------------------------------------|-----------------|
| Ball float mounting hardware .....                            | 57944-00        |
| Swivel assembly .....                                         | 276G1200        |
| Service support assembly .....                                | 276G1206        |
| Elbow, 45° , schedule 80 PVC, threaded, 1½ NPT.....           | 1P2106-107      |
| End cap, schedule 80 PVC, threaded, 1½ NPT .....              | 1P2116-107      |
| Pipe, mounting, 90 inches schedule 80 PVC, 1½ NPT, slot ..... | 1000F3407-00882 |
| Pipe, inner float, schedule 80 PVC, 1½ NPT .....              | 57917-00        |
| Float, red marine .....                                       | 57920-00        |

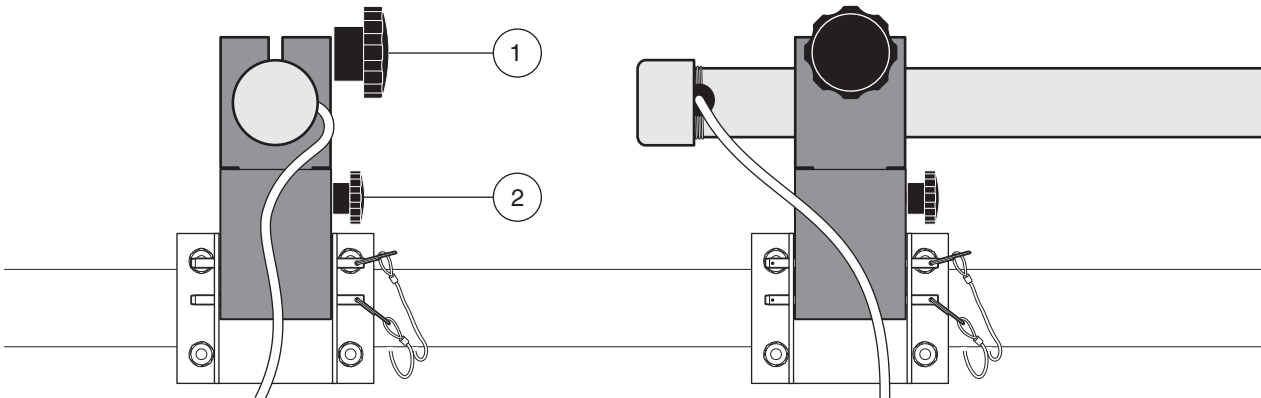
# Float Mount

Figure 4    Assembling the Ball Float



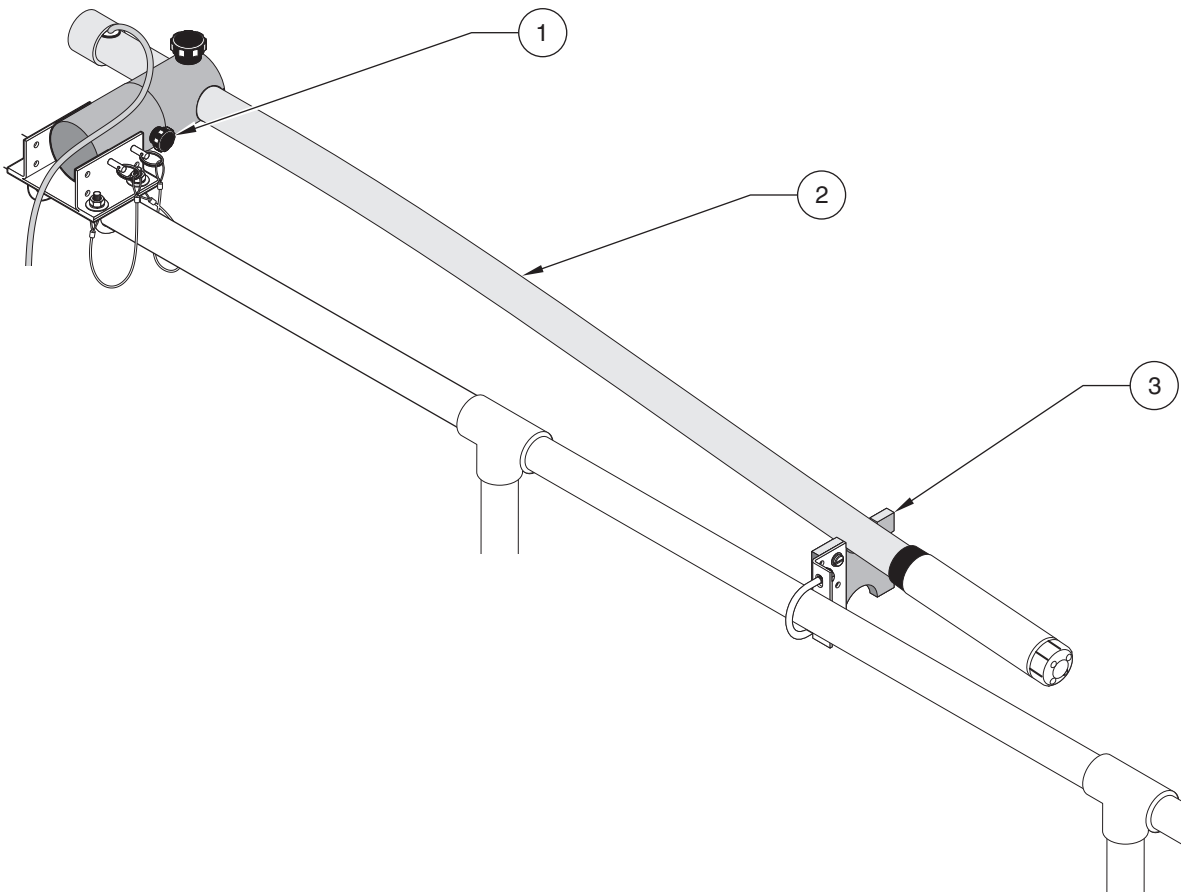
|                                                                 |                              |
|-----------------------------------------------------------------|------------------------------|
| 1. Elbow                                                        | 5. Elbow/float/pipe/assembly |
| 2. Float/pipe assembly (float shown deflated)                   | 6. Probe                     |
| 3. Float valve (open to fill float with air)                    | 7. Finished assembly         |
| 4. Float/pipe assembly, circumference = 120 cm ±2.5 (48 ±1inch) |                              |

Figure 5    How to Use the Knobs



- |                      |                        |
|----------------------|------------------------|
| 1. Pipe-locking knob | 2. Swivel-locking knob |
|----------------------|------------------------|

Figure 6    Using the Service Support



- |                        |                            |                             |
|------------------------|----------------------------|-----------------------------|
| 1. Swivel-locking knob | 2. Mounting pipe with slot | 3. Service support assembly |
|------------------------|----------------------------|-----------------------------|

