

FLEX PROBE INSTALLATION & HANDLING PROCEDURE

The Flex Probe is a unique measuring sensor that provides the high accuracy measurement for tanks up to 50 feet (15 meters) in depth. It is important to follow the handling instructions to avoid damaging the probe and voiding the warranty.

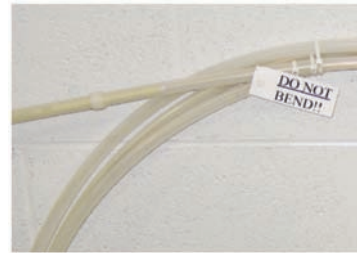
Unpacking the Flex Probe

CAUTION

- DO NOT CUT THE TIE WRAPS HOLDING THE FLEX PROBE TOGETHER BEFORE INSTALLATION.
- DO NOT BEND THE TOP 2 FEET OF THE PROBE. The top of the probe has electronic components inside of the tube and must remain straight.
- ALWAYS KEEP THE COILS PARALLEL. When the tie wraps are removed, do not lift one coil separately from the other coils. Never twist one coil 90° from the other coils. See Figure 1.
- DO NOT ASSEMBLE THE WEIGHT AND FLOATS ON THE FLEX PROBE UNTIL READY TO BE INSTALLED IN THE RISER. Carry the parts to the top of the tank before assembling. Do not unwrap the flex probe until ready to install.
- DO NOT TWIST THE PROBE DURING INSTALLATION. Always keep the coils of the probe parallel. “Unroll” it into the tank.
- DO NOT LET THE COIL BECOME LESS THAN 40” (1 meter) IN DIAMETER WHILE UNCOILING.



Figure 1



**DO NOT BEND
TOP OF PROBE**

Top Mounted Flex Probe Installation

- The weight holds the probe straight and functions as a spacer for the interface float.
- The interface float, product float and tank mounting components are in a separate box.
- The customer provides the following process connection: A bushing, flange or metal cover with a 2” NPT opening. The probe has a 3/4” NPT connector.

1. Cut the tie wrap at the end of the tube with a hole in the plug ONLY. Leave the other tie wraps intact. This will prevent the coil from unwrapping before installation.

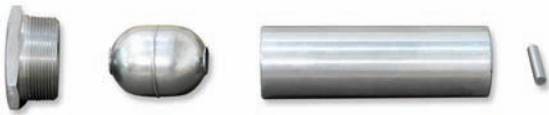


2. Place the appropriate equipment on the end of the probe in the following order:

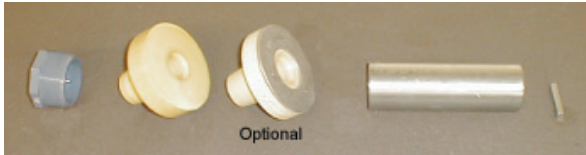
- a. Thread Adapter
- b. Product Float
- c. Interface Float (optional)
- d. Stainless Steel Weight
- e. Stainless Pin



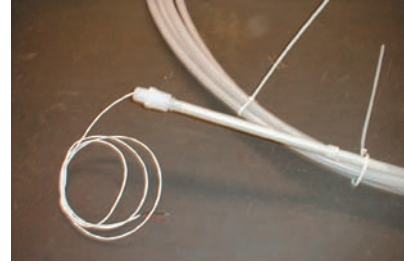
One Float for 7330



Two Floats for 7100 or 7250



5. Thread and tighten the 4"x 3/4" adapter to the top of the probe and mount in the riser. Do not lift the probe by the electrical cable.



Fixed Bottom Flex Probe Installation

The basic installation of the Fixed Bottom Probe is similar to the Top Mounted Probe. Be sure to observe all CAUTION notes as mentioned in the Top Mounted Probe installation.

The major difference between the two probes is that the Fixed Bottom Probe rests on the bottom of the tank. A constant tension spring is mounted on the top of the probe above the section with the sensor electronics and pulls the probe straight to accommodate the expansion and contraction of the PVDF tubing.

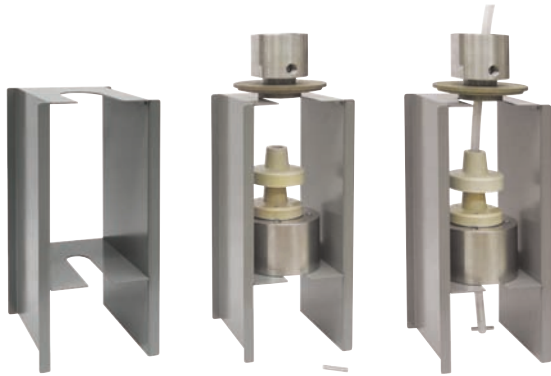
The Fixed Bottom Probe comes with a metal stand to support the 28 pound weight and other components during assembly. The support stand will help avoid damaging the probe by preventing the internal brass tube from being bent.

3. Hold the weighted end while another person holds the coiled probe. Slowly feed the probe into the riser, cutting the remaining tie wraps, one by one, as you go. Do not cut all of the tie wraps at once. They have been sequentially marked. Start with number 1 at the end of the probe.



4. Feed the weight in while uncoiling. Do not drop it the full length of the probe or it may damage the end of the probe. The weight must always hang down, not horizontal.





Weight Support Stand Stack Components Insert Probe and Pin



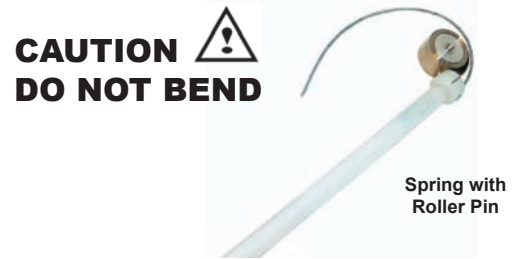
Final Assembly
Figure 2

CAUTION 
DO NOT BEND

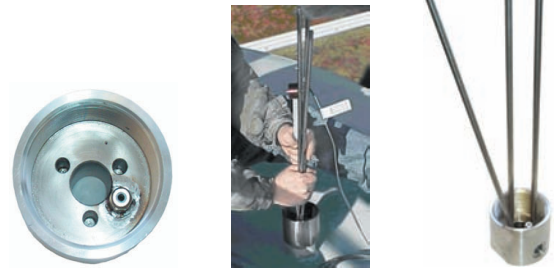


1. Assemble the components according to Figure 2 and insert the pin to hold the probe in place. Remove the assembly from the stand. Always keep the assembled components vertical and carefully insert the assembly into the tank

2. One person should hold the weighted end while another person holds the coiled probe. Slowly feed the probe into the riser or stilling well, cutting the remaining tie wraps, one by one, as you go. Do not cut all of the tie wraps at once.



3. Thread the adapter coupling into the riser or flange. Insert the 3 stainless steel rods into the adapter coupling.



4. Put the 2 half caps of the spring holder assembly together and place on rods. This design makes it possible to orient the spring so that it is not twisted when the weight is resting on the bottom of the tank.



5. Hook the spring assembly roller pin mounted on the end of the probe into the half cap bracket. Adjust the half caps and coupling so that the probe is straight and the cable gland is easily accessible.



6. With the spring mounted, release the probe so that the weight is resting on the bottom of the tank. If there is sediment on the bottom of the tank, the probe may drop several inches. Pull the cable through the cord grip in the adapter. When the spring is in position, make sure that it is not twisted.



IMPORTANT 
DO NOT TWIST



Tighten cord grip the cable inside the coupling and the conduit connector on the side of the coupling.

7. Place the housing over the probe assembly. The housing (assembly cover) is a 3" schedule 80 stainless steel pipe with cap. This serves as a water tight enclosure for the fixed bottom probe at the top of the tank.



8. Complete the wiring of the probe according to instructions provided with the probe and in the installation manual. The Top Mounted and Fixed Bottom Probes are intrinsically safe and require an appropriate barrier to be used as part of the installation.



Copyright 2005 by AMETEK AUTOMATION & PROCESS TECHNOLOGIES.
All Rights Reserved. Made in the USA.