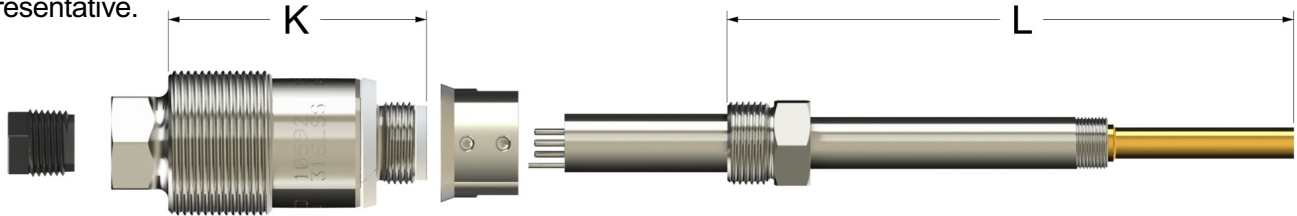


This information is provided as a general guide for sizing the following Caproco electronic probes:

- ER
- Galvanic
- Reference Cells
- LPR
- Hydrogen

For other probe types, or specific questions regarding probe sizing, please contact your nearest Caproco representative.



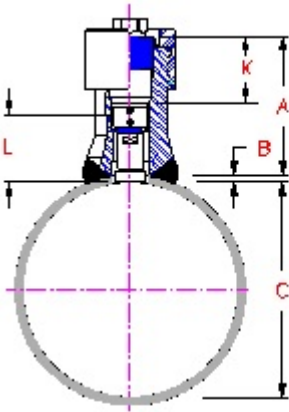
RETRIEVABLE PROBES

ORDERING INFORMATION

To calculate the probe length required (L), use the following key, selecting the desired location of the probe element.

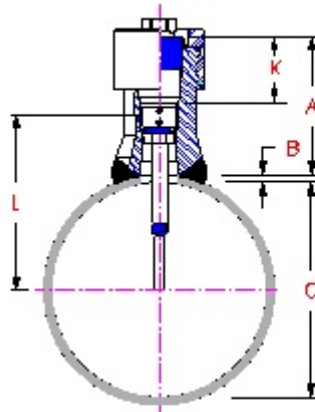
Notes:

K = Hollow plug dimension from top of external threads to bottom of probe packing = 3 1/8" (79.4mm).



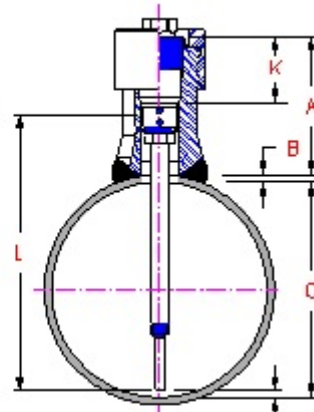
Flush with Inside Wall

$$L = A + B - 3.125" (79.4\text{mm})$$



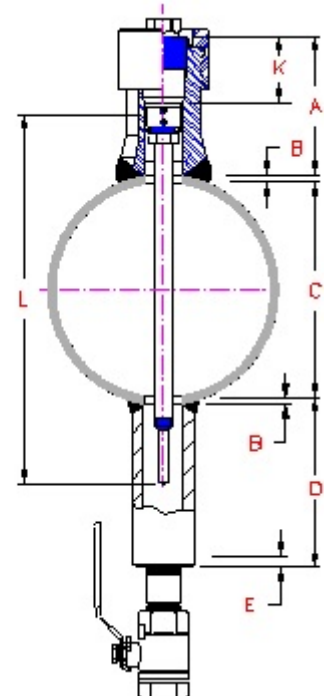
Middle Of Line

$$L = A + B + \frac{1}{2}C - 3.125"$$



Bottom Of Line

Extended to 1/4" (6.4mm) Above Bottom Of Line:
 $L = A + B + C - [3.125" + \frac{1}{4}"]$



Liquid Trap

$$L = A + 2B + C + D - [E + 3.125" + \frac{1}{2}"]$$

A = Access Fitting Top (cover off) to External Pipe / Vessel Wall

B = Pipe or Vessel Wall Thickness

C = Actual (not nominal) Pipe I.D.

D* = Distance From External Pipe / Vessel Wall to Bottom of Trap

E* = Trap Bottom Wall Thickness

* Required for Installations into Traps only

Desired Probe Position:

-Flush with Inner Pipe Wall

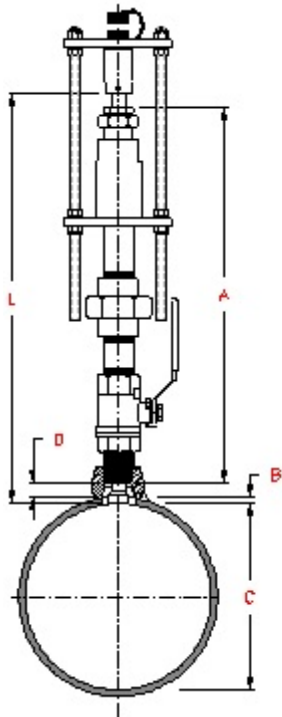
-Centered in Middle of Line

-Extended to 1/4" (6.4mm) above Bottom of Line

-Extended to 1/2" (12.7mm) above Bottom of Trap

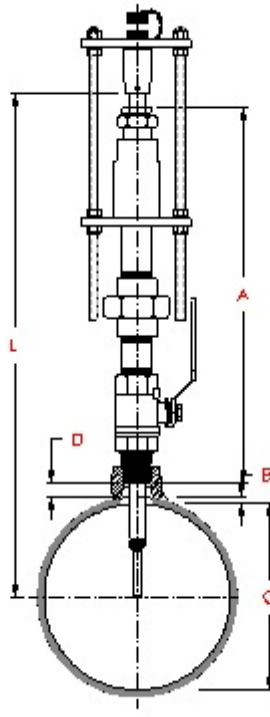
RETRACTABLE

Due to all the possible options of components that can be incorporated into low pressure access fitting assemblies, selecting a probe of suitable length must take into account the height differences of any variations. The following information is a guide for the standard low pressure access fitting (P/N 11653), which is 16.5" (419 mm) long. When selecting probes for variations of the standard fitting, contact Caproco for sizing and part number information.



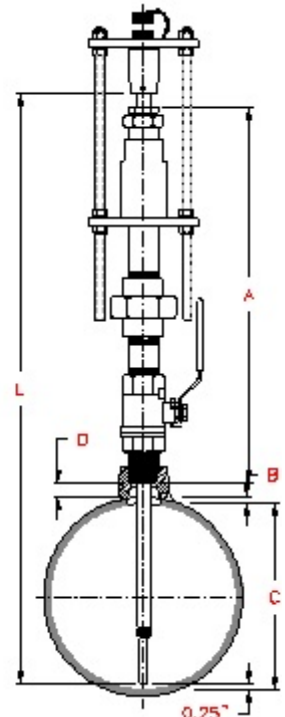
Flush with Inside Wall

$$L = A + B + D$$



Middle Of Line

$$L = A + B + \frac{1}{2}C + D$$



Bottom Of Line

Extended to ¼" (6.4mm) Above Bottom Of Line:

$$L = A + B + C + [D - \frac{1}{4}"]$$

A = Access Fitting Overall Length (16.5")
B = Pipe or Vessel Wall Thickness
C = Actual (not nominal) Pipe I.D.
D = Threadolet Height - 0.68" (17mm)
 (thread engagement)

Desired Probe Position:

- Flush with Inner Pipe Wall
- Centered in Middle of Line
- Extended to ¼" (6.4mm) above Bottom of Line
- Extended to ½" (12.7mm) above Bottom of Trap

FIXED

The sizing of fixed probes can depend on existing flange or piping configurations. Contact Caproco for assistance in selecting and sizing fixed probe systems.