



## Features

- Meets NACE MR0175 and MR0103
- Five Sample Elements for Analysis
- Material — 316 S.S.

The bio-probe is used to collect samples of bacteria in Oil and gas systems, including refineries, offshore platforms, pipelines, etc. Bacteria may be present in a system as either sessile (attached to the metal surface), or planktonic (present in the process fluid). There can be considerable differences between the types of bacteria present in either of these two forms. From a corrosion perspective, the sessile bacteria are the ones that are of primary importance since these are the ones that affect the corrosion, and the ones that must be controlled with chemical treatment. For this reason fluid samples for testing of bacteria only test for planktonic bacteria and may be of no relevance at all to corrosion.

The bio-probe has five sample elements, each with an exposed frontal area of 1cm<sup>2</sup>. Each time a sample is required for analysis a successive element is removed and replaced with a new one, leaving the other four in place. With this successive change of elements, a longer exposure is obtained for each element, but still permits a relatively frequent sample to be taken for analysis. For example, a sample may be removed every two weeks, but each element will have a 10 week exposure to the process fluid.

Cosasco Bio-Probes for the 2" system are used to suspend sample elements in the area to be monitored. Attached to the bottom of the solid plug by means of a left handed thread, the bio-probe also serves as a primary packing retainer. Formulas for sizing the Bio-Probes are shown to the right.

Formulas for sizing the Bio-probes are shown. All Bio-probes under 3.25" length are made from one piece in a non-welded construction. Non-welded Bio-probes 3.25" or above are available.

After selecting the access fitting with a solid plug, and knowing pipe or pressure vessel size, determine the position where the sample elements will be located. Use the formulas shown to calculate bio-probe length. If calculated length is not an even .25" increment, select next shortest to nearest .25".

### Bio-Probe Sizing:

#### Fixed

##### **Top of the Line Monitoring**

Bio-probe positions the effective length of sample elements into pipe vessel.

$$(A + Pw + Wg) - 2 \frac{1}{2}"$$

##### **Middle of the Line Monitoring**

Bio-probe positions  $\frac{1}{2}$  of the sample elements on either side of pipe centerline.

$$(A + 1/2Pd + Wg) - 2 \frac{1}{2}"$$

##### **Bottom of the Line Monitoring**

Bio-probe positions sample elements approximately  $\frac{1}{4}"$  off bottom of line.

$$(A + Pd + Wg) - (2 \frac{3}{4}" + Pw)$$

#### **WHERE:**

**A** = Length of Access fitting body

**Pw** = Pipe wall (wall thickness of pipe)

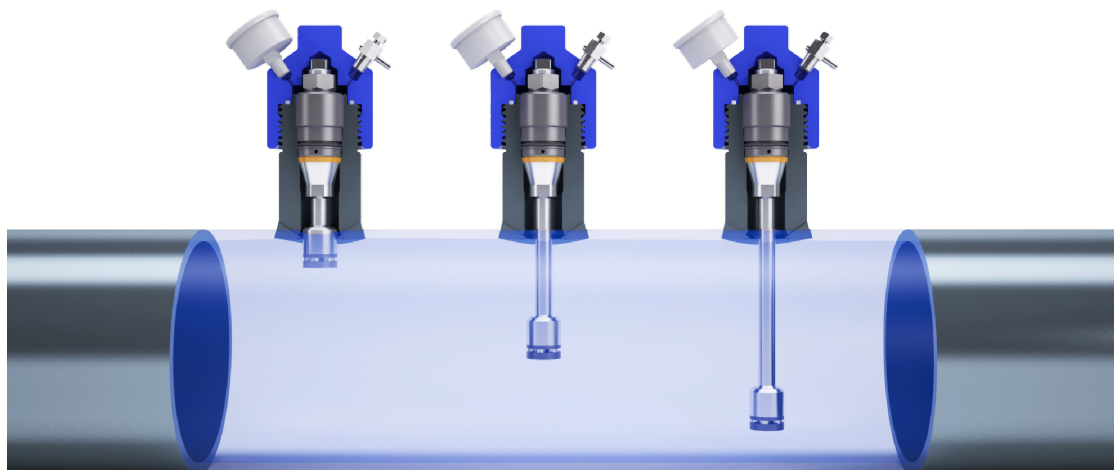
**Pd** = Pipe diameter (outside diameter of pipe)

**Wg** = Weld gap (per weld procedures, 1/16" is normal per ANSI B31.1 1973)

#### Adjustable

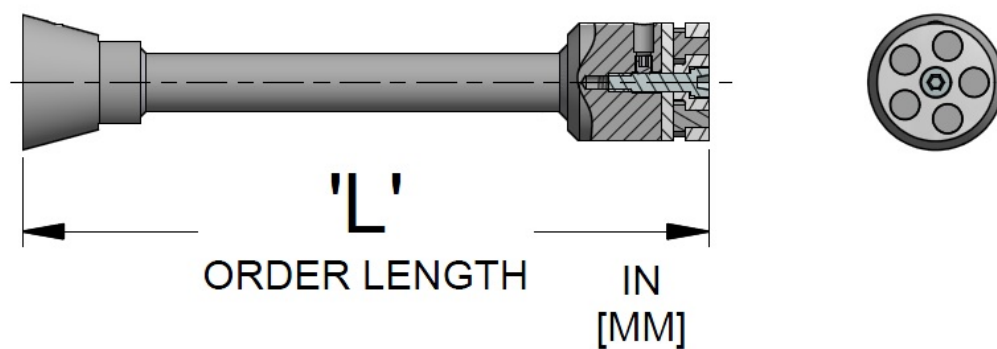
Customer adjustable within described parameters.

## Model 6205



Bio-probes shown Top, Middle, and Bottom of the Line

## Dimensions



# Model 6205

## Ordering Information

**Note:** For flush devices which are protruding into the line that may experience high velocity process conditions it is recommended that Wake Frequency Calculations be performed – please contact a Cosasco representative for further details.

| Model     |                                                                  |                                                                              |                  |
|-----------|------------------------------------------------------------------|------------------------------------------------------------------------------|------------------|
| 6205      | Bio-Probe Assembly Fixed                                         |                                                                              |                  |
| 6205-ADJS | Bio-Probe Assembly Adjustable (4.50" min - 6.00" max)            |                                                                              |                  |
| 6205N     | Bio-Probe Assembly Non-welded (minimum order length 3.25 inches) |                                                                              |                  |
|           | Code                                                             | Order Length                                                                 |                  |
|           | LL.LL                                                            | Order Length 3.00" – 36.00", For adjustable type enter ADJS (.25 increments) |                  |
|           | Code                                                             | Element Alloy*                                                               |                  |
|           | XXXXXX                                                           | K03005                                                                       |                  |
| 6205      | —                                                                | 3.00                                                                         | ← K03005 Example |
| 6205      | —                                                                | ADJS                                                                         | ← K03005 Example |

\* Other alloys available upon request

### Unit Weight

|                   |                  |
|-------------------|------------------|
| Up to 3 inches    | 1 lb. /.45 kg.   |
| 3 - 10 inches     | 2 lbs. /.90 kg.  |
| 10.25 - 20 inches | 3 lbs. /1.36 kg. |
| 20.25 - 36 inches | 5 lbs. /2.27 kg. |

### Accessories

P/N 625071-K03005 - Element Set (5 each per set)

P/N 124900 - Set Screw

P/N 003965-14 - Mounting Screw

### Cosasco

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Rohrbach Cosasco Systems Corrosion Monitoring Equipment is manufactured and sold under one or more of the following US Patents: 4138878, 4238298, 4338563, 4514681, 4537071, 4587479, 4605626, 4625557, 4755744, 4839580, 4841787, 4882537 5243297

6205-DS rev-A  
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