Fixed Galvanic Probe
2 Element

GENERAL

Caproco offers a range of high quality, high integrity galvanic probes which utilize a 2 projecting element configuration to measure the galvanic current.

Water injection is a popular secondary recovery method for increasing oilfield production. When used as a displacing fluid, water is often treated to remove corrosive contaminants such as dissolved oxygen. Oxygen is a reactive gas which, when available, vigorously takes part in the corrosion process. Leakage of oxygen into a normally de-aerated process stream can increase corrosion in a galvanic cell. If brass valves and steel piping are exposed to de-aerated water, little galvanic interaction occurs and galvanic corrosion currents are low. However, if oxygen leaks into the system, then the corrosion reactions and galvanic currents both increase with the resultant corrosion of the steel piping. The appropriate instrument, connected to a probe installed with steel and brass electrodes, can quickly detect oxygen contamination in the process stream.

APPLICATION

The two electrode galvanic probe is designed to measure the magnitude of the galvanic corrosion current generated by a galvanic couple. The natural difference in potential existing between the metals in a galvanic couple serves as a driving force *(voltage)* to pass current through the electrolyte surrounding the two metals.

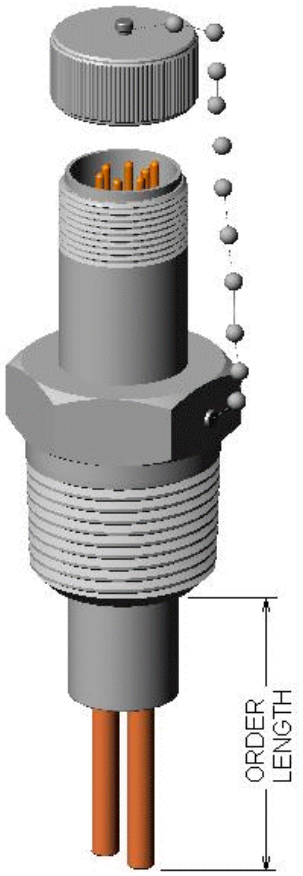
Galvanic probe elements are replaceable once they have corroded past their useful life. The fixed style probe must be used in systems which can be depressurized for insertion and removal.

Specifications

Caproco galvanic probes are manufactured from 316 stainless steel with AISI 1018 mild steel and brass elements. Probe bodies and elements are available in alternative materials upon request. Caproco fixed probes are designed for mounting through a standard thread-o-let fitting, available in ¾", 1", 1½" and 2" NPT configurations.

Element Length	3.00" x 0.25" (76mm x 6mm)
Maximum Operating Pressure	3,600 / 6,000 psi (24.8 / 41.4 MPa)
Maximum Operating Temperature	500○F (260○C)

PROBE SEALING	Element and connector pins hermetically sealed using high integrity glass ceramic seals.
ENCAPSULATION	Two part loaded resin with excellent thermal, electrical and mechanical properties.
CONNECTION	Interfaces with most commercial monitoring instrumentation, via a MIL standard 6 pin receptacle.



PROBE LENGTH IS MEASURED FROM THE START OF THE NPT THREAD TO ELEMENT END

PROJECTING 2 ELEMENT FIXED GALVANIC PROBES					
LENGTH (INCHES)	(MM)	3/4" NPT	1" NPT	1 ½" NPT	2" NPT
3.25	83	68300	68350	68400	68450
3.50	89	68301	68351	68401	68451
3.75	95	68302	68352	68402	68452
4.00	102	68303	68353	68403	68453
4.25	108	68304	68354	68404	68454
4.50	114	68305	68355	68405	68455
4.75	121	68306	68356	68406	68456
5.00	127	68307	68357	68407	68457
5.25	133	68308	68358	68408	68458
5.50	140	68309	68359	68409	68459
5.75	146	68310	68360	68410	68460
6.00	152	68311	68361	68411	68461
6.25	159	68312	68362	68412	68462
6.50	165	68313	68363	68413	68463
6.75	171	68314	68364	68414	68464
7.00	178	68315	68365	68415	68465
7.25	184	68316	68366	68416	68466
7.50	191	68317	68367	68417	68467
7.75	197	68318	68368	68418	68468
8.00	203	68319	68369	68419	68469
8.25	210	68320	68370	68420	68470
8.50	216	68321	68371	68421	68471
8.75	222	68322	68372	68422	68472
9.00	229	68323	68373	68423	68473
9.25	235	68324	68374	68424	68474
9.50	241	68325	68375	68425	68475
9.75	248	68326	68376	68426	68476
10.00	254	68327	68377	68427	68477
10.25	260	68328	68378	68428	68478
10.50	267	68329	68379	68429	68479
10.75	273	68330	68380	68430	68480
11.00	279	68331	68381	68431	68481
11.25	286	68332	68382	68432	68482
11.50	292	68333	68383	68433	68483
11.75	298	68334	68384	68434	68484
12.00	305	68335	68385	68435	68485
12.25	311	68336	68386	68436	68486

STANDARD CARBON STEEL/BRASS REPLACEMENT ELEMENTS (SET OF 2) PART NUMBER 63074