

Probe Anodes

Typical Applications

- Condenser waterboxes, waterfront structures, pump housings, sewage treatment tanks

Featuring

- Platinum(Pt) or mixed metal oxide (MMO) surface coatings
- Full resilient mount in glass reinforced epoxy and polyurethane

Design Considerations

Sizing - To determine proper anode size it is necessary to know the required current, operating electrolyte and service life. Current distribution will dictate the length of the probe anode rod. Once that has been decided and the intended service life is known, the proper amount of active surface coating can be selected. Although the coating material is the most expensive part of the anode, it is most efficient to design with as thick an active surface as possible. Doubling the coating thickness does not double the cost!

Style - Probe anodes are typically 3/8 inch (1 cm) or 1/2 inch (1.3 cm) diameter with 2 - 9 inch (5 - 23 cm) active length and 1- 9 inch (2.5 - 23 cm) standoffs. EDI also designs and builds custom anodes for special applications. Refer to our AX data sheet for examples.

Design Parameters

Max. Flow Rate 15 ft/sec (4.5 m/s)
Pressure Rating 150 psi (1,000 kPa)

Max. Operating Temp. 160F (70C)
Max. Excursion Temp. 200F (90C) for 1 hr

Substrates Available - Titanium or niobium for Pt; only titanium for MMO.

Surface Coating Selection - EDI's aqueous anodes are available with either platinum or mixed metal oxide active surfaces. Platinum is usually the best choice when current densities are below 10 A/ft². It is also the preferred coating in all seawater applications where chlorine is generated at the anode surface. Mixed metal oxide coatings are the best option where oxygen evolution is expected at the anode surface such as in fresh water locations.

Recycling - EDI will refurbish aqueous anodes whose active surfaces have been consumed and/or standoffs or mounting nipples have been damaged. In most cases an anode can be restored for less than half the cost of a new one. Contact the company for additional information on this service (info@edi-cp.com).

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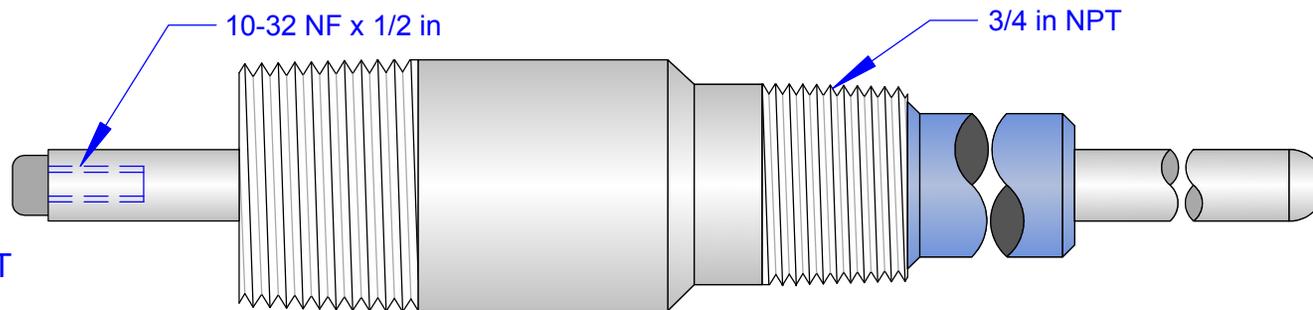
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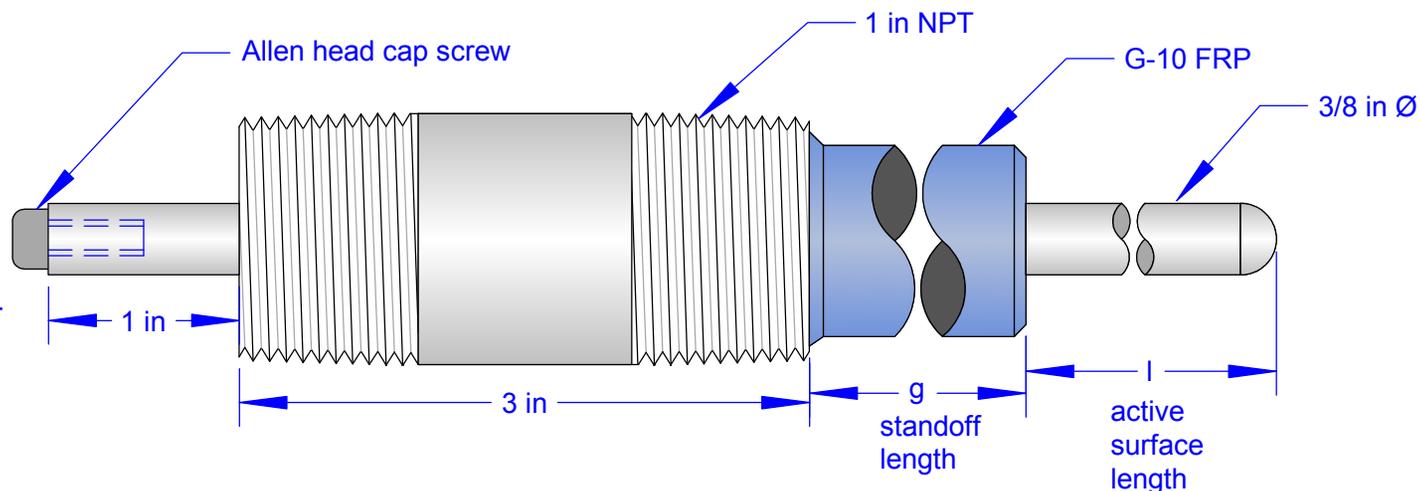
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*A Series
Impressed
Current Anodes*



AR7 1 in x 3/4 in NPT
316 stainless nipple

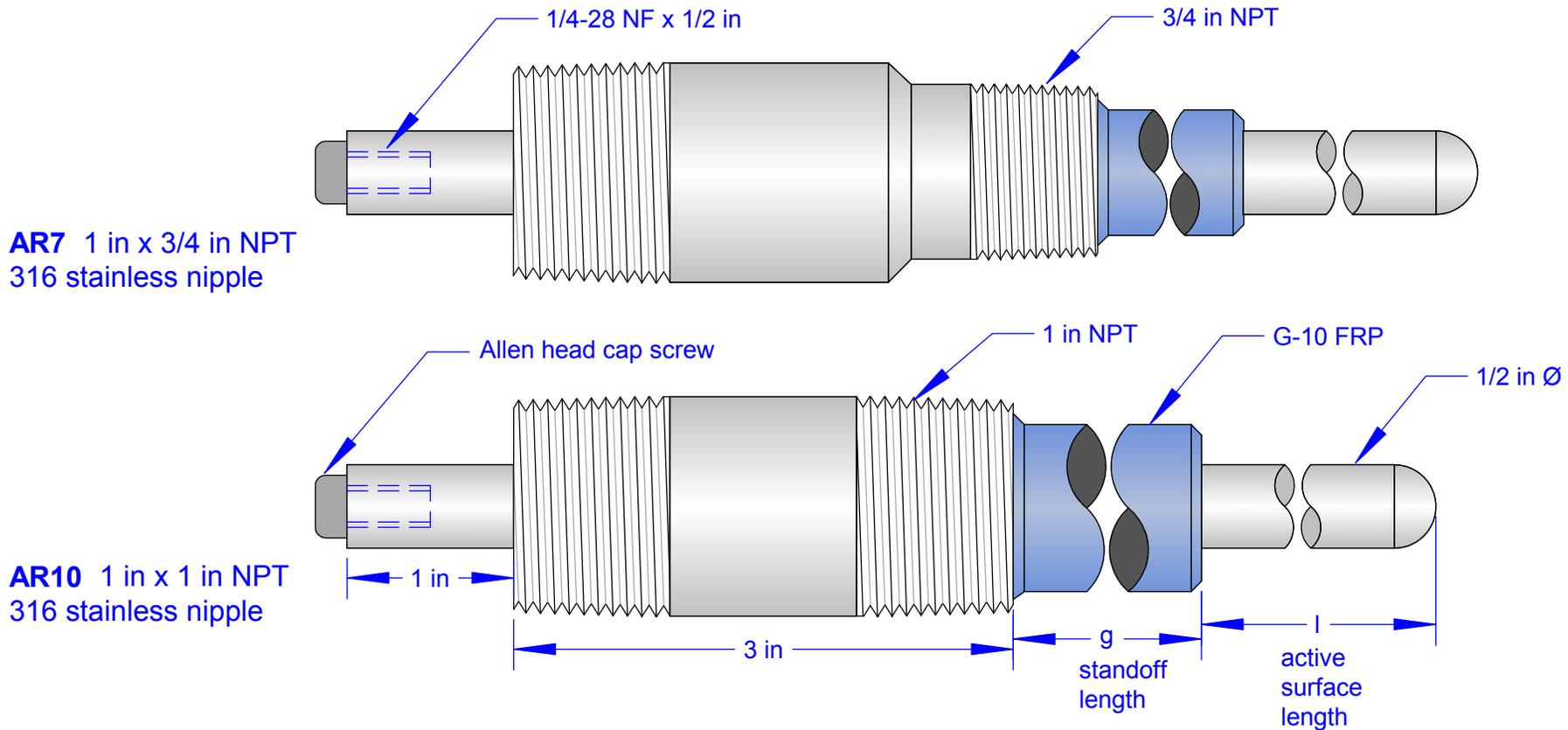


AR10 1 in x 1 in NPT
316 stainless nipple

Model Designation

Specify as EDI Model ARn-asd-g.l.ttt where
 n = nipple size: 7 for 1 x 3/4 in NPT, 10 for 1 x 1 in NPT
 a = active surface: M for mixed metal oxide, P for platinum
 s = substrate metal: T for titanium, N for niobium
 d = rod diameter, inches: 3 for 0.375, 5 for 0.50, 7 for 0.75
 g = standoff length, inches: 1 to 9 in 1 inch increments
 l = active surface length, inches: 1 to 9 in 1 inch increments
 ttt = micro-inches platinum: 100, 150, 200, 250, or 300; or
 electrolyte for mixed metal oxide: F, B, or S for Fresh, Brackish or Salt water

Note: A resilient mount is used between anode rod and FRP support to minimize fatigue loading on anode rod.



Model Designation

Specify as EDI Model ARn-asd-g.l.ttt where

n = nipple size: 7 for 1 x 3/4 in NPT, 10 for 1 x 1 in NPT

a = active surface: M for mixed metal oxide, P for platinum

s = substrate metal: T for titanium, N for niobium

d = rod diameter, inches: 3 for 0.375, 5 for 0.50, 7 for 0.75

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l = active surface length, inches: 1 to 9 in 1 inch increments

ttt = micro-inches platinum: 100, 150, 200, 250, or 300; or

electrolyte for mixed metal oxide: F, B, or S for Fresh, Brackish or Salt water

Note: A resilient mount is used between anode rod and FRP support to minimize fatigue loading on anode rod.



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Probe anodes with 1/2 inch anode rod

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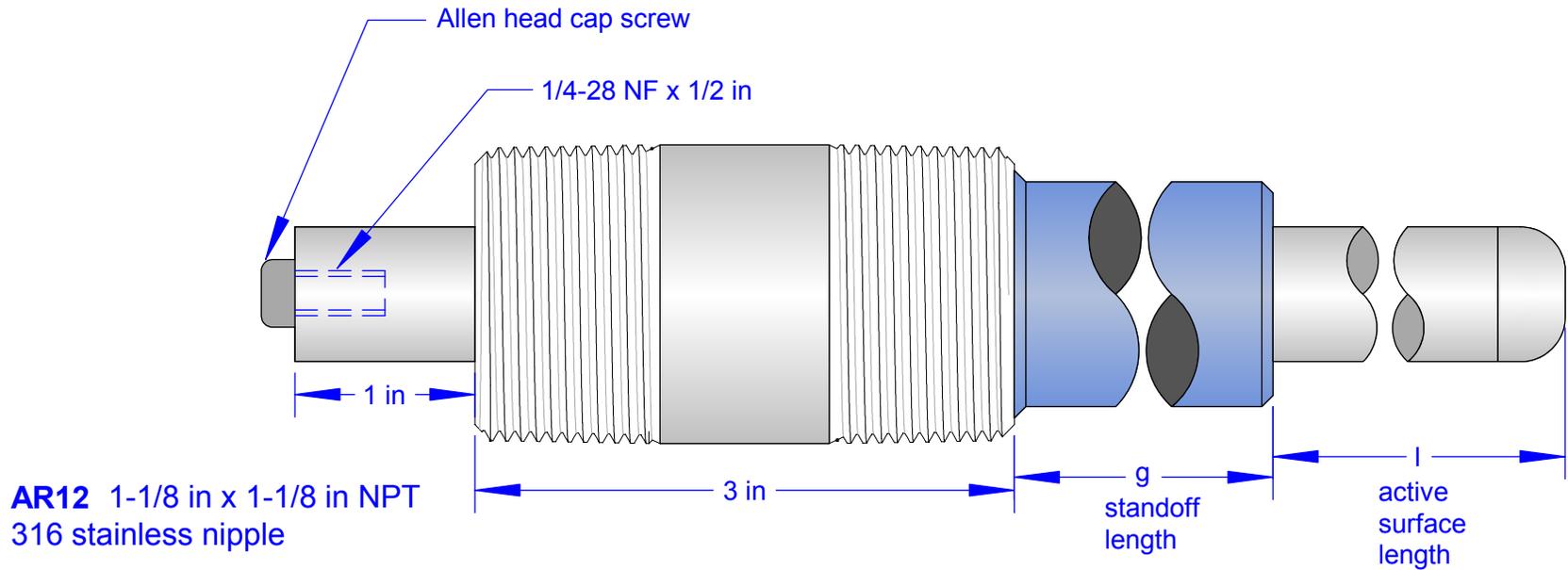
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DATE 24 APR 2015

DRAWING NUMBER

ARASY-4



Model Designation

Specify as EDI Model ARn-asd-g.l.ttt where

n = nipple size: 7 for 1 x 3/4 in NPT, 10 for 1 x 1 in NPT

a = active surface: M for mixed metal oxide, P for platinum

s = substrate metal: T for titanium, N for niobium

d = rod diameter, inches: 3 for 0.375, 5 for 0.50, 7 for 0.75

g = standoff length, inches: 1 to 9 in 1 inch increments

l = active surface length, inches: 1 to 9 in 1 inch increments

ttt = micro-inches platinum: 100, 150, 200, 250, or 300; or

electrolyte for mixed metal oxide: F, B, or S for Fresh, Brackish or Salt water

Note: A resilient mount is used between anode rod and FRP support to minimize fatigue loading on anode rod.



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Probe anodes with 3/4 inch anode rod

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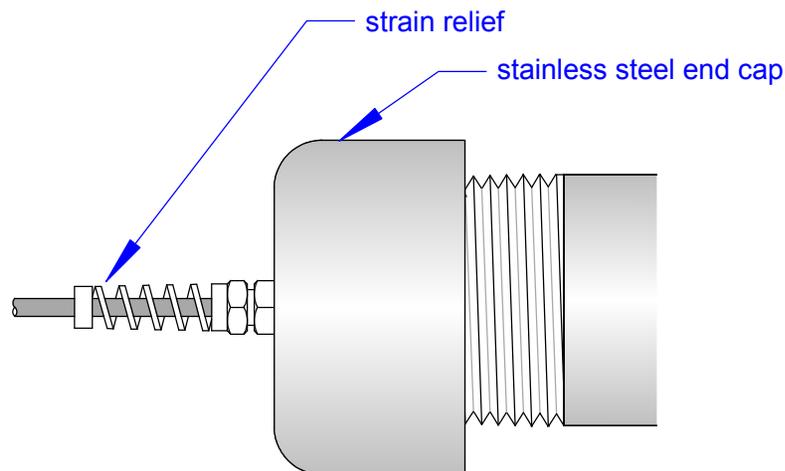
DATE 24 APR 2015

DRAWING NUMBER ARASY-5

Immersible End Cap

EDI model AR probe anodes can be fitted with an immersible end cap. The connection to the anode is made within the end cap and is fully potted. This allows the anode to be installed in a location where it is fully immersed.

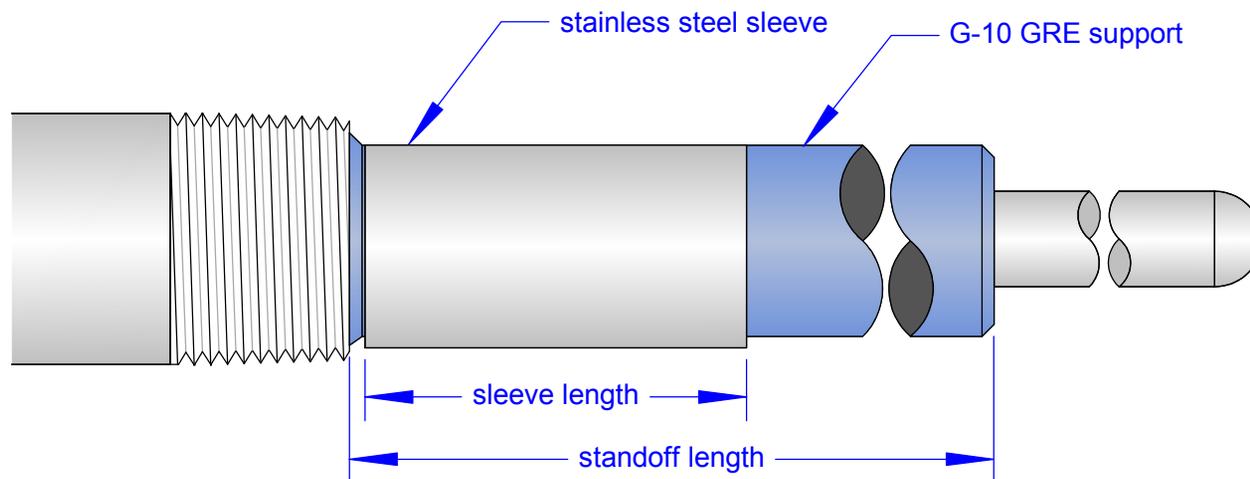
An immersible end cap must be specified at time of order. Type and length of lead wire must also be specified at this time.

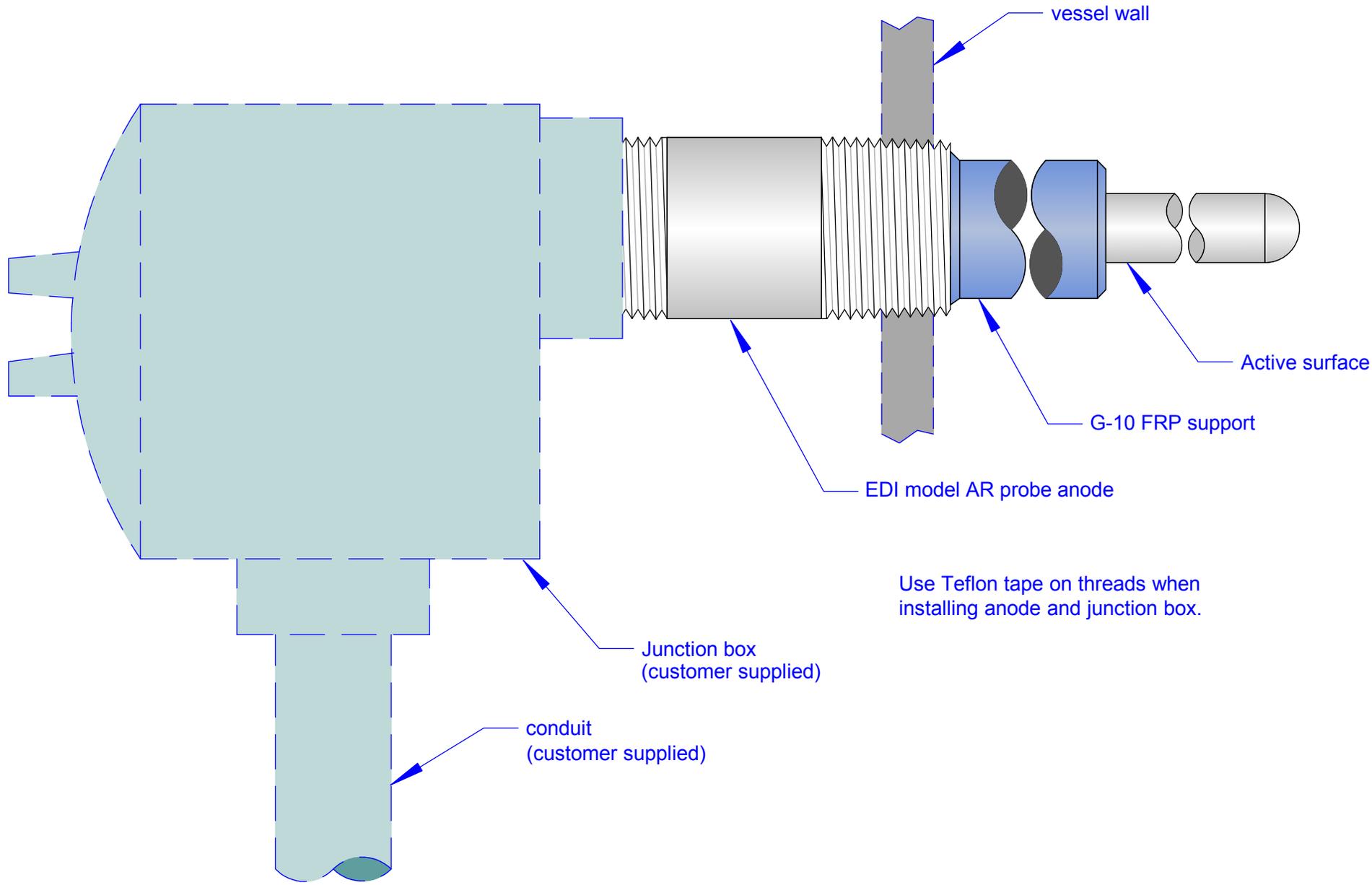


Armor Sleeve for Standoff

EDI model AR probe anodes can be fitted with a stainless steel sleeve over a portion of the standoff. This sleeve would be used where it is necessary to protect the standoff from abrasion.

The length of the armor sleeve and the total standoff length must be specified at time of order.





Probe Anode Installation