

**PERMANENT REFERENCE ELECTRODES**  
**Cu/CuSO<sub>4</sub> and Ag/AgCl**

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German Cathodic Protection



**Type: Cu-PRE (Cu/CuSO<sub>4</sub>)**

Permanent reference electrode with a special, porous terracotta pot that allows humidity absorption from ground. This ensures that the copper sulfate solution inside the electrode remains saturated.

With 1.130 cm<sup>2</sup> of exposed surface, the copper wire spiral ensures constant reading even under difficult operating conditions.

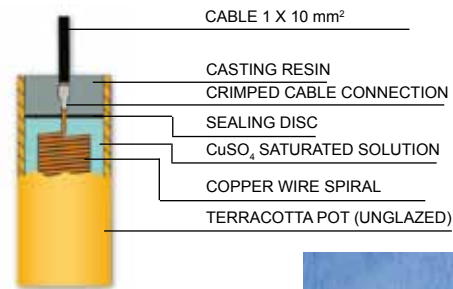
**Properties**

- Simple installation
- Service lifetime: min. 10 years  
(depending on local soil conditions and service)
- Excellent performance

**Note:**

In very dry or resistive ground, we recommend installing the electrode in bentonite bedding.

**GENERAL ASSEMBLY**



Reference electrode available with 5 m HEPR/PVC or (XLPE/PVC) 1 x 10 mm<sup>2</sup> cable

Potential referring to H <sub>2</sub> - electrode	+0.32 V
Temperature range	-10° - +50° C
Variation of potential, approx.	+0.9 mV / °C
Outside pot dimensions (mm)	D=150 , H=300
Weight, approx.	8.5 kg
The electrode can be delivered in a cotton bag surrounded of chemical backfill	50 % Gypsum 40 % Bentonite 10 % Salt
Max. dimensions of prepacked electrodes including cotton bag and backfill	Diameter: 200 mm Height: 450 mm Weight: 15 kg

**Type: Ag-W (Ag/AGCl)**

**Application**

Reference electrode Ag-W designed for use internally protected steel water containers, tanks, pipes, etc. and is supplied with a 1 inch screw-in thread for permanent fixture using a weld-in flange.

The measuring cell is contained inside a plastic tube with 2 holes on the lower side and 1 hole in the base for electrolytical contact to water.

Potential referring to H <sub>2</sub> - electrode	+ 0.25 V
Temperature range	acc. to Purchaser requirements
Operational pressure	acc. to Purchaser requirements
Length of measuring electrode X	acc. to Purchaser requirements
Cable type and length	acc. to Purchaser requirements

