

K-50 Kirk Cell

The **Kirk Cell** acts as an “electrochemical switch,” blocking DC voltages in the cathodic protection range while instantaneously shunting hazardous voltages to ground. The **Kirk Cell** consists of multiple pairs of stainless steel plates immersed in a potassium hydroxide electrolyte solution. An oil seal floating on the electrolyte prevents evaporation, absorption of atmospheric gases and excessive foaming under high current flow. DC current flow through the **Kirk Cell** causes a film of gas to form on the plates offering high resistance to low voltage DC current. As the applied voltage across the cell increases, current flow through the cell increases causing the thickness of the polarization gas film to increase. When the leakage threshold is exceeded, the film starts to break down and the cell resistance quickly decreases as the applied voltage increases. AC voltages and higher DC voltages see the Kirk Cell as a dead short. Galvanized steel enclosures are offered for exterior or interior installations of the cell.

The **Kirk Cell** comes in three different models: K-50, K-25 and K-5A. All models are available with enclosures on request.

K-50 KIRK CELL DIMENSIONS:

Height to top of lid: 15-1/8”
 Overall height: 16-3/4”
 Width at bottom: 11-1/8”
 Width at top: 12-1/16”
 Depth at bottom: 9-7/16”
 Depth at top: 10-1/16”

As the applied Electromagnetic Field (EMF) across the cell terminals increases, current flow through the **Kirk Cell** will increase in general agreement with the data in the Performance table below. Actual current flow will vary with ambient conditions including but not limited to: Temperature, solution concentration and age.

K-50 KIRK CELL PERFORMANCE TABLE

Delta E Across Cell Terminals (Volts)	Resultant Current Flow	Apparent Internal Impedance (Ohms)
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