

# THE KIRK CELL<sup>®</sup>



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The **Kirk Cell** is a cathodic decoupling device specifically designed for fault current service and removal of induced AC power on protected structures.

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.



[www.kirkcell.com](http://www.kirkcell.com)