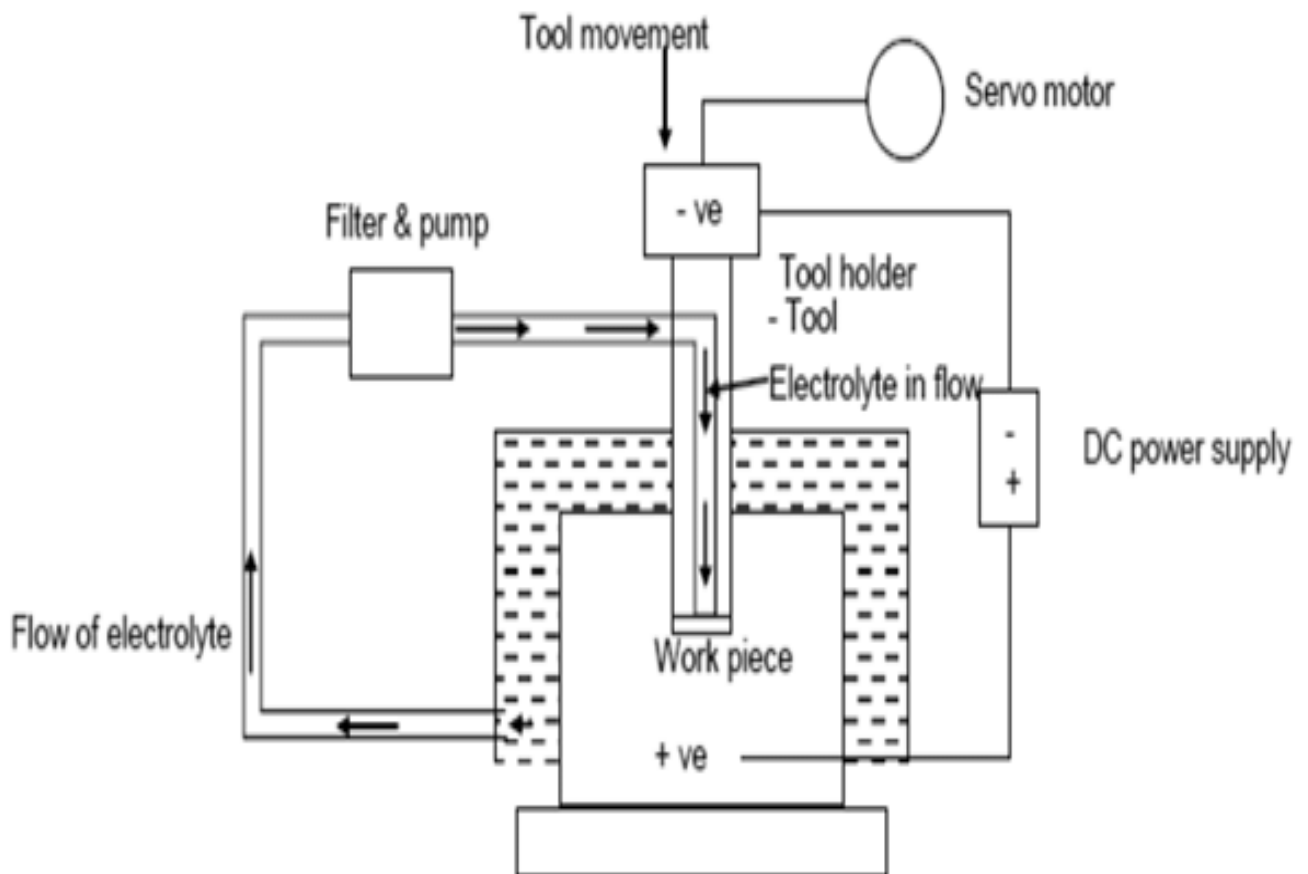


# Electro Chemical Machining

## Electro Chemical Machining Process

The electrolyte solution transfers charge in the gap between the cathode and workpiece, which causes electron transfer from the workpiece to remove surface material. The separation distance between the cathode and the workpiece is key to regulating the material removal process.

## Diagram electro chemical machining



## Electro Chemical Machining of Equipment

- ECM machines come in both vertical and horizontal types. Depending on the work requirements, these machines are built in many different sizes as well. The vertical machine consists of a base, column, table, and spindle head. The spindle head has a servo-mechanism that automatically advances the tool and controls the gap between the cathode (tool) and the workpiece.
- CNC machines of up to six axes are available.
- Copper is often used as the electrode material. Brass, graphite, and copper-tungsten are also often used because they are easily machined, they are conductive materials, and they will not corrode.