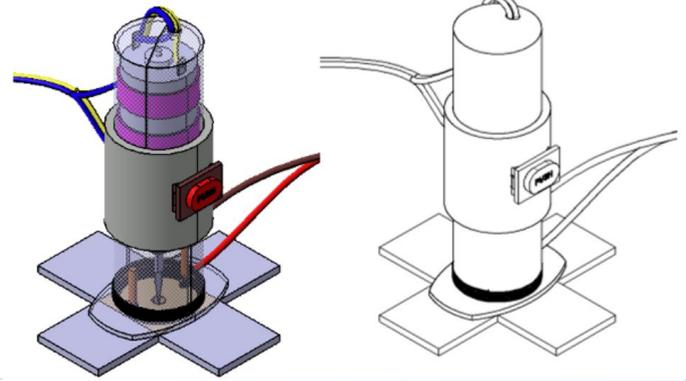


GRANTED

(IN515165)

## A portable handheld electrochemical discharge machining device



### NEED

Finishing and deburring of drilled holes in non-metallic materials and fibrous composites remain challenging with traditional methods. A portable electrochemical discharge machining device offers an efficient solution for precise removal of delaminated fibers in drilled holes.

### TECHNOLOGY OVERVIEW

This handheld electrochemical discharge machining device is designed for finishing and deburring holes in non-metallic materials and fibrous composites. Its unique design includes high-speed rotation, auxiliary electrodes, and controlled electrolytic solution, ensuring efficient and precise material removal for improved surface quality.

### TECHNOLOGY KEY FEATURES

Portable and handheld; high-speed rotational motor; conical tool electrode; auxiliary electrodes; electrolytic solution; insulation protection for motor; precise deburring and finishing; suitable for non-metallic and fibrous composite materials.

[Read more here](#)

Technology is available for licensing/ co-development.

Reach out to Prof. Deepak Chitkara, Coordinator, BITS Technology Enabling Centre,  
BITS Pilani Contact Details: tec.bits@pilani.bits-pilani.ac.in, 91 1596-255913

### MARKET ANALYSIS

The global machining market is expected to grow at a CAGR of 6.4% from 2023 to 2033, driven by the demand for precision machining in aerospace, automotive, and electronics sectors. (Source: Market Research Future, 2023)

### Target Industries

1) Aerospace manufacturing; 2) Automotive parts manufacturers; 3) Electronics and semiconductor industries; 4) Advanced materials manufacturing for composites.

### AT A GLANCE

- SDG 9 (Industry, Innovation, and Infrastructure), SDG 12 (Responsible Consumption and Production)