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MINISTRY OF ELECTRONICS AND INFORMATION TECHNOLOGY

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Thiagarajar College of Engineering — Since 1957 — where quality and ethics matter

SEMI-AUTOMATIC AC DUST REMOVER AND ITS CLEANING APPARATUS

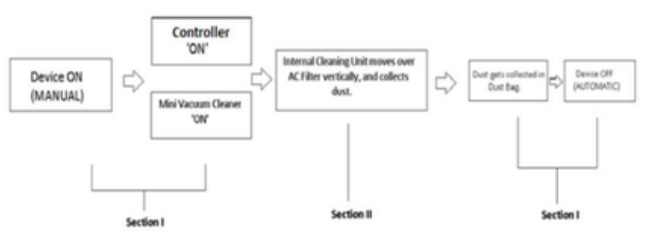
Seeking parties interested in licensing and commercialization of technology.

Technology Brief

This technology presents an innovative mechanical and electromechanical framework engineered to automate the arduous maintenance of air conditioning systems. By seamlessly incorporating a compact mini vacuum cleaner assembly, the system interfaces directly with existing, standard air conditioning units with minimal structural modifications. The architecture automates particulate extraction by sweeping across internal filters at scheduled monthly intervals, actively capturing trapped dust and debris. This captured waste is subsequently routed and consolidated into an integrated vacuum tube storage layout, which efficiently holds debris for up to six months before requiring manual disposal. By eliminating frequent manual scrubbing and mitigating efficiency degradation caused by filter clogging, the technology ensures sustained thermal exchange efficiency and reduced power consumption.

Block Diagram

FIGURE 1:



Technical Applications

The technology is highly suited for residential, commercial, and industrial HVAC maintenance sectors, enabling seamless retrofitting onto standard, currently available air conditioning models with minimal structural modifications. It can be adopted by facility management companies, smart home automation providers, and commercial building operators to reduce routine manual cleaning labor and lower long-term maintenance costs.

Salient Features

- Universal Model Compatibility
- Automated Periodic Cleaning
- Long-Interval Waste Collection

Glimpse of the Technology

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iTNT-TECH-0203

TECHNOLOGY SECTOR
Automobile, Auto-components & EV

IP STATUS
Patent Granted

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TECHNOLOGY READINESS LEVEL
TRL 3

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