

## Proposal for design and development of Automatic Hand sanitizing station

Transmission of Covid-19 virus from an asymptomatic person to other persons takes place by touching the infected surfaces by hand and further transmit the virus in to the body by touching the face by infected hand.

In social living infecting the hand by touching virus prone surfaces cannot be avoided as operating the ATM, handling money, holding handrails, touching infected taps etc are unavoidable.

To avoid transmission of virus into the body the hand should be washed with soap or sanitised with a sanitizer.

Typical handing washing requires turnaround time of approximately one minutes. In organisations, establishments where number of people need to handwash with existing washbasin may lose their precious productive time.

It is the need of the hour to have a facility where people can wash or sanitize their hands very quickly, using minimum disinfectants, avoiding cross contamination by hands free operation.

### Features of the proposed Hand sanitising station

- (1) reduce the time required for hand washing to improve the productivity
- (2) avoid cross contamination by using foot operation or hands-free operation
- (3) reduce the wastage of disinfectant by spraying optimum quantity
- (4) disinfect its own body by a suitable cleaning cycle.
- (5) Transmit important operating parameters for remote monitoring

The operation can be carried out in different modes handwash with water only mode, sanitisation with disinfectant only mode, a cycle consisting of hand washing and sanitising mode.

### Proposed method of execution:

A prototype can be built using existing spray nozzles for applying disinfectants within three months of sanctioning of the funds.

The model will be improved later with addition of electrostatic nozzles to reduce the time of washing and saving disinfectant further.



K.Pannir Selvam

Associate professor

Mechanical Department