

<b>GP1023</b>	<b>Design and Fabrication of Floor Cleaning and Drying Machine</b>		
<b>Group</b>	<b>1. K. Shinoj</b>	<b>5. Emanul Tarul</b>	
	<b>2. Nikhil Joseph</b>	<b>6. Anve Tom Antony</b>	
	<b>3. T. A. Jinesh</b>		
	<b>4. Franklin F. Pinto</b>		
<b>Department</b>	Mechanical and Manufacturing Engineering (FT-2012)		
<b>Mentor(s)</b>	S. Vijaya Kumar		

Hygiene is most important aspect of a healthy life. Cleanliness may be gifted with a moral quality as indicated by the saying “cleanliness is next to godliness”, and is regarded as contributing to good health and beauty. So it is important to keep the surroundings neat and clean. On a practical level it can be said that cleanliness is related to hygiene and disease prevention. Washing is one method of achieving cleanliness, which is usually performed with water or soap. There are many types of equipment which reduces the efforts of humans in cleaning. There are equipments to clean and equipments to dry, but equipment which performs both the functions is rare. Here comes the scope of the floor cleaning and drying equipment for house hold purpose. The project is to design and fabricate such a machine at low cost for usage in houses.

The major objective of the project was to design and fabricate a floor cleaning and drying machine for house hold purpose. Bench marking and QFD analysis was done to conclude the design and concept for the equipment. The cleaning equipments available in the market were reviewed for the frame work of the machine. The CAD model was developed and optimized considering the voice of customers. Optimization of the product focuses delivering of an ergonomic, comparatively cheap and efficient cleaner and drier to the customer. The power drive is selected to be electric and to be driven by a single motor for achieving the desired rpm's. The parts were procured as per the design done and were assembled in workshop. During the assembly, it was taken care to provide necessary space and ergonomics of handling. Considerations for the storage and easy handlings are taken at every stage. The cleaning brush is selected to be of cotton, the fan is selected as aluminium which is lighter in weight. The water tank has a capacity of two liters and the water flow can be controlled by knob provided. For a faster drying heater was provided and removed later as the consumption of power was more. The equipment was tested for performance and photos/videos were taken for necessary documentation purposes.



**Floor cleaning and drying machine**