

## DESIGNING AND ANALYSING STAIR CASE LIFT SYSTEM

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### ABSTRACT

A stair case lift is a mechanical device used for lifting old aged and disabled persons up and down on stairs that have no elevators. A chair or lifting platform is attached to the rail. There is D.C. electrical motor connected to rack and pinion gear to transmit the load. The advantages of this case are easy installation, cheap and not needed maintenance or so large place. In this study we designed and analyzed this device (chair & rail together) and gear system by using the solidworks software program. We chose the maximum load 95 kg for our analysis.

**Keywords:** Analysis, Chair & rail, Gear box, D.C. motor, Rack and pinion gear.