

Cross (Diagonal) Cutting Tape dispenser

Dr. Satyajit V Kasar, Kalyan S Jadhav, Balram B Bhosale

Department of Mechanical Engineering

JSPM's Rajarshi Collage of Engineering, Pune, India

Abstract: *This paper presents the design and functional evaluation of a motorized tape dispenser incorporating a scissor-based diagonal cutting mechanism. Addressing inefficiencies in conventional straight-cut dispensers, this project aims to reduce material wastage and enhance edge quality for applications in aerospace, electronics, and electrical panel manufacturing. The system utilizes a stepper motor-controlled feed and cut cycle, targeting precision, repeatability, and improved tape utilization. The prototype demonstrated approximately 41% material savings and increased cycle count per tape roll. These outcomes underline the potential of semi-automated solutions in reducing production costs and improving operational consistency in small to mid-scale industries.*

Keywords: *tape dispenser*

