

Design and Fabrication of Scissor Mechanism for Shoe Lifting

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Abstract: *The design and fabrication of a scissor mechanism for shoe lifting using a pneumatic cylinder is a common approach in industrial and household settings. This type of mechanism is used to lift human to the desirable height. The pneumatic cylinder is a type of actuator that converts compressed air into linear motion. The design of the mechanism includes a lifting shoe, a support frame, a pneumatic cylinder, the break wire and lever to release the pressure in the cylinder. The lifting platform is designed to support the load, while the support frame is used to hold the pneumatic cylinder in place. The fabrication process involves several steps, including designing the mechanism, selecting the appropriate materials, and assembling the components. The materials used for the mechanism must be strong and durable enough to handle the weight of the load being lifted. The assembly process includes mounting the pneumatic cylinder onto the support frame and connecting it to the lifting shoe. The pneumatic cylinder works by using compressed air to create a force that moves the piston within the cylinder. This linear motion is transferred to the lifting platform through a linkage system, which raises the platform and the load on it. The mechanism can be controlled using various methods, such as a manual valve or an automatic control system. In conclusion, the design and fabrication of a mechanism for shoe lifting using a pneumatic cylinder is a widely used approach in industrial and commercial settings. The process involves careful selection of materials, proper design, and precise assembly to ensure the mechanism is safe, reliable, and efficient in lifting the loads.*

Keywords: Scissor Lift Mechanism, Pneumatic Cylinder

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