PROTOTYPING MINI BELT CONVEYOR FOR CASHIER WITH MAXIMAL WEIGHT OF 48 KG AND THE SPEED 0,2 M/S

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Abstract

Big market like Supermarket that use cashier system, current state the consumer which have to pay at cashier still carrying the purchases, so that the consumer waste a lot of energy. Then for overcome that matter made mini belt conveyor for cashier.

Making mini belt conveyor must start from find the magnitude of carriage capacity on belt conveyor, make design of conveyor, looking force and power which happen on the belt conveyor for transport goods, looking element of machine which needed ( shaft, belt, pulley, and bearing).

From the plan and calculate on the “Mini Belt Conveyor”, get the result : power of machine 0,5 Hp. And using V-Belt type A which have length 711 mm. Using AISI 1045 shaft (carbon steel construction machine) diameter 15 mm. On one fold carriage, conveyor can fit to move 3 basket and maximal weight is 48 kg in one fold carriage.

Key word : Conveyor, Belt Conveyor, Unit