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# **Pneumatic Mono Logo Printing Machine**

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Abstract - An engineer always focus on challenges of bringing ideas and concept of life. Hence, sophisticated machines and new modern technique have to be continuously developed and implemented for economical manufacturing of products. At that time we should take care that there has been no compromise made with the quality of product and also the accuracy of product. In the age of automation machine become an integral part of human life. By using automation machine prove itself that is giving the high production rate than that of the manual production rate. An engineer is constantly conformed to the challenges of bringing ideas and design. Now a days everyone wants to increase their production and make their machine multipurpose. So the pneumatic mono logo printing machine for punch and emboss the machine components name as well as symbol. This machine is easy to operate and simple to maintain requirement of automated plants. Therefore we are tried our hands on pneumatic mono logo printing machine is one of the principle machine impress and printing industry. It is generally used for the embossing purpose

Key Words: Pneumatics, automation, printing, logo, low cost

## **1. INTRODUCTION**

The invention of printing also change the occupational structure of many countries. Printer was a group of artisans for that people whose literacy was essential, although much more labor intensive occupation of the scribe naturally decline. Proof correcting across a new occupation while the rise in amount of bookseller and librarian naturally followed the explosion in the number of book.

Printing and embossing is a process for reproducing text and images using a master form or template. The earliest example examples include cylinder seals and the other objects such as that the crus cylinder and the cylinders. The earliest known form of woodblock printing come from china dating to before 220 A.D. Later development in printing include the movable type first developed by Bi Sheng in China. Gutenberg introduced mechanical movable printing type to Europe in the 15 century his printing press key role in the development of reformation. Scientific revolution and the material basis for the modern knowledge base economy and the spread of learning to the masses. Modern large scale printing and embossing is done typically using a printing press, while small scale printing is done free form with a digital printer. Though the paper is the most common material it is also frequently done on paper, plastic, cloth and composite material. By paper it is carried out as the high scale industrial process and is an essential part of publishing and transaction printing. Gutenberg has started work on the printing press in 1436 in partnership with Andreas whom he had previously instructed in gem cutting. Compared to woodblock printing, movable type page setting and printing using a press was a faster and more durable. Also the metal type pieces were studied and the lettering more uniform leading to typography and fonts.

The high quality and relatively low price of the Gutenberg Bible establish the superiority of movable type for Western languages. The printing press rapidly spread across Europe. Printing was instrumental for changing the nature of reading within society. Elizabeth identifies two long term effects of the invention of the printing. He claims that the print is created a sustained to knowledge as well as allowing for comparison between incompatible views.

Critical reading: Due to the facts that text finally become accessible to the generation population, critical reading become emerged because people were given the option for to form their own opinion.

Dangerous reading: Reading was seen dangerous pursuit because reading could stair up dangerous emotions such as love and that if woman could read they could read love notes.

## **1.1 Problem Statement**

The statement of the project is design and fabrication of pneumatic mono logo printing machine for used punch or emboss the machine components names, symbols and all other printing work.

#### 1.2 Objective

- 1. To reduce the power consumption during machining.
- To maintain the accuracy in production. 2.
- 3. To develop low cost automation unit, so that machine can easily be adopted.
- 4. This type of machine provides work practically at low cost, low maintenance, low capital investment in less space.
- 5. To perform the most rigid operation with high precision printing work.



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# 2. METHODOLOGY

Normally the PLC based power controller is implemented in recent logo printing machine while to validate the lowering the cost of machine setup of reducing the size of unit we are moving to implement micro controller operated system.

In usual logo printing machine there is use of non-contact type proximity switches so it increases the cost of setup to reduce we are going to use contact type switch.

The electric operated logo printing machine have constant RPM for which constant pressure ratio obtained for all kind of operation so while we are improving automation.

**3. FIGURES** 



Fig -1: Model of mono logo printing machine



 ${\bf Fig-2}$  . Basic principle of pneumatic system



Fig-3 Comparison between productivity per year by each machine







Fig-5 Timer with electronics control unit board.



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Fig-6 Applications

#### 4. CONCLUSION

An automatic stamping machine working on the principle of electro-pneumatic and PLC was successfully designed and developed. The sequencing of three actuators of the system was achived effectively using PLC. The simple double acting cylinder have good output for linear clamping, stamping and ejection of work pieces. Any double material of low impact strength upto 6bar can be stamped then then system can be replaced by a hydraulic where the material impact strength can be upto 100 bar. The stamping was successfully commissioned, although the concept of using PLC in pneumatics is new, it was successfully proved that the sequential operation can be achieved.

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