



**FINAL YEAR PROJECT REPORT**

**ENERGY OPTIMIZED AND AUTOMATED AIR  
COMPRESSING SYSTEM**

In fulfillment of the requirement  
For degree of  
BEE (Electronics)

**By**

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## AUTOMATED AND ENERGY OPTIMIZED AIR COMPRESSING SYSTEM

### ABSTRACT

The aims and objectives of this project are the optimization of electricity, controlling of a starting torque and automating the air compressing plant in industry. Different equipment are used in our system for the saving of electricity, controlling of a starting torque and automating the air compressing plant which kind of equipment we used in our system in order to fulfil our goals and objective will be discuss later.

We use a method of regulation in order to saving of electricity and the regulation is done by VFD (variable frequency drive) and for automating the air compressing plant we use PLC (programmable logic controller) and starting torque is also control by VFD and pressure transducer is used for sensing of air pressure from air tank or reservoir and for controlling our whole system we use HMI(human machine interface).

After the installation of our system in industry it configures the one compressor as master and other compressor as slave in air compressing plant of any industry and both compressing units will regulates automatically according to the requirement of industry and this whole process will be operated by HMI and how regulation of compressing units happened with our system in industry will be discuss later in the implementation.

This system can save almost 20% electricity of the industry due which industry can save to much cost of their monthly bill and if an industry installed our system they can get extra profit within a few month after the installation of our system



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