

# [Air compressor set](https://assignbuster.com/air-compressor-set/)

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All of these components would be incorporated into the new design for the customer. The set would have a basic frame of steel with 0. 5% carbon content so that the frame is not too brittle to bear the weight of the set. A steel platform would hold the three compressors (it is a multi-compressor unit), the air reservoir/tank, and the motor. A small control panel would be fitted alongside the platform, and the whole set would be enclosed in a fabric glass case. Each compressor would have an independent belt for revolution, with separately adjustable speeds, to be switched on and off on demand. The reservoir would be divided into compartments of volumes of 100 liters each, to be utilized as per the demand. The whole system would be run by a motor attached to a power supply, with a second provisional motor that can be run if desired. A pressure gauge would constantly measure the pressure in the tank, and the control panel would make it easy to control it. The specifics would be the delivery rate at 30-100 CFM (adjustable) and pressure of 100psi (adjustable).
For safety purposes, there would be an automatic fuse in case there is a fluctuation of the voltage, and the DC motor in the set would be accordingly adjusted owing to its regulatory revolutions, controllable at all times. Transmissions would be sealed in PVC, and the whole interior of the set would be lined by the same material. This would not only prevent short-circuiting but would also reduce noise levels emanating from within the set to a maximum of 80dBA. The fiberglass casing would be light, durable, strong, and cost-effective, and together with the lining, would provide IP54 protection (for ingress of dust and moisture). A built-in stabilizer would monitor the load/supply ratio and induce the motor to work on the resulting voltage and amperes of current in order to minimize the power usage, and reducing cost.