

ABSTRACT
EXECUTIVE BUS AIR CONDITIONING

The most air-conditioned vehicle is the automobile, for which between 5 and 10 million systems are sold annually. The major contributor to the cooling load in many of these vehicles is heat from solar radiation, and in the case of public transportation, heat from people. The loads are also characterized by rapid changes and by a high intensity per unit volume in comparison to building air conditioning. Air conditioning embraces more than cooling. The definition of comfort air conditioning is the process of treating air to control simultaneously its temperature, humidity, cleanliness, and distribution to meet the comfort requirements of the occupants of the conditioned space.

The air conditioning system on the super executive bus is packaged in a rooftop unit and uses a single compressor, driven by the bus engine, which called, is direct system. The evaporator blowers draw return air from inside the bus, through the return air filter, into the return air chamber. Fresh air also enters to the return air chamber through the fresh air filter at the front of the unit. The air mixes and passes through the evaporator coils, where it is cooled and dehumidified. The conditioned air is then discharged into the ducts on each side of the bus, to be supplied to the cabin.