ABSTRACT

Car Air Conditioner fitting hose pressing device with hydraulic drive system is built to press fitting as connection component on car Air Conditioner system. And the hydraulic drive system is used so that the process will be done more efficiently compared to the manual drive system.

In the design of this fitting hose pressing device, a double-acting single ended hydraulic cylinder is used as an actuator, with 2" piston diameter, 1.125" rod diameter, and 4" stroke, on an operation pressure of 1277.76 psi, to create a pressing force of 1574 kgf. As the controlling component of the hydraulic system, a directional control valve type $\frac{4}{3}$ and a pressure control valve type pressure relief valve, are used. For the pump, an external gear pump is used, with the capacity up to 5,680 l/min.

The testing of the design of this device is done by deviating the pressure above and below the operation pressure, and then the pressed results are compared with the pressed result on operation pressure. And with a proper maintenance system, this car Air Conditioner fitting hose pressing device is expected to be long lasting.