

FPL-005 HYDRAULIC ACCUMULATOR TEST RIG



RANGE OF EXPERIMENTS TO BE CARRIED OUT:

- a. To study the performance of hydraulic accumulator at various loads

TECHNICAL DESCRIPTION :

A hydro-Pneumatic accumulator is a device used specifically for storage of liquid under pressure. As liquids, for all practical purposes, are incompressible, this objective is achieved by utilizing the compressibility of gases.

A flexible rubber separator i.e., diaphragm is fitted into the accumulator shell. An inert gas – nitrogen – is filled into the diaphragm through a pressure valve to a pressure p_0 . the diaphragm expands, filling the entire volume V_0 of the accumulator shell. When the system (Circuit) pressure P_1 is higher than the gas precharge pressure P_0 , the liquid enters the shell and diaphragm is compressed reducing the gas volume to V_1 . Should the liquid pressure rise to P_2 , the volume of gas reduces to V_2 with an attendant rise in pressure, thus balancing the liquid pressure.

A potential energy is now created in the accumulator to be utilized whenever needed. The system is provided with hydraulic power pack for applying pressure.

DIMENSIONS AND WEIGHT :

Size :1.2 m.(L)x 0.6 m(W) X 1.0m (H)

Weight :Approx. 75 Kg

SERVICE REQUIRED :

440 v Ac Supply 50 Hz , Three Phase

Hydraulic Oil : 60 ltrs

SCOPE OF DELIVERY:

1. Experimental Setup
2. Instructional Manual