Priming Chambers - the solution for Suction Lift Applications
Why Priming Chambers?

A centrifugal pump casing must be filled with liquid upon start-up for it to function correctly.

In case the pump suction is flooded (suction head), the unit will always remain full whether on or off. But in case of negative suction (suction lift), liquid tends to run back out of the pump down the suction line when the pump stops. Upon starting, the impeller cannot create enough vacuum to draw liquid back into the unit since the casing is filled with air or vapour. It is thus best to provide positive suction for a centrifugal pump. But if, that is not possible, the pump must be separately primed each time it is started. Rather than manually priming the pump at every start-up, ANTICO has developed moulded polypropylene priming chambers.

A priming chamber is a reservoir which maintains positive head on the pump. In case of suction lift applications, the priming chamber generates enough vacuum so that the liquid rises and enters the chamber thus continuing to keep it full. At every start-up, the cycle continues thus eliminating the need to prime the pump. Above all, the priming chamber retains a charge of liquid sufficient to prime the pump.

Care should be exercised to ensure that liquid is retained in the priming chamber. It is recommended to install an NRV in the suction line to the priming chamber. Suction piping should be leak-free as air ingestion could hamper normal operation of the priming chamber. Pumps with gland packing should be avoided with this arrangement. Also, suction piping should be designed such that no high points are created where air can be trapped which can hamper priming.

ANTICO priming chambers can take suction lifts of 03 m. with volume of 20 to 40 litres. These are available for HE and EXP Series Pumps. Priming Chambers to suit custom requirements for other models available on request.