

Continuous Stirrer Tank Reactor (C.S.T.R.)

Product Categories: [Chemical Reaction Engineering Lab](#), [Engineering Equipment](#)

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Product Description

Continuous Stirrer Tank Reactor (C.S.T.R.)

Technical Description:

In an ideal CSTR (i.e. an ideal steady state flow reactor) the contents in reactor are well mixed and have uniform composition throughout. Thus the exit stream has the same composition as the fluid within the reactor. This type of reactor is known as mixed flow reactor. This set-up is used to study a non-catalytic homogeneous second order liquid phase reaction under ambient condition. The set up consists of two feed tanks through which two reactants are fed to the reactor.

Rota meters are provided to measure the individual flow of Chemicals. The flow rate can be adjusted by operating the needle valves provided on respective Rota meter. The compressed air is used for circulation of feed. The C.S.T.R is fitted with stirrer for proper mixing. From top outlet of it samples are collected for analysis. Pressure Regulator, Pressure Gauge and Safety Valve are fitted in the compressed air line.

Technical Specifications:

Reactor: Material Stainless Steel, Capacity 2 Ltrs (Approx).

Stirrer: Stainless Steel Impeller and shaft coupled with FHP Motor

Feed Tank (2 Nos.): Material Stainless Steel, Capacity - 20 Ltrs

Feed Circulation: By compressed air.

Flow Measurement: Rota meter 2 Nos. (one each for Reactants).

Piping: Stainless Steel and PVC.

Pressure Regulator: 0-2 Kg/cm²

Pressure Gauge: Bourdon type 0-2 Kg/cm²

Stop Watch: Electronic.

The whole set-up is ingeniously designed and schematically arranged on a powder-coated rigid structure.