

CRE-9 ISOTHERMAL CONTINUOUS STIRRED TANK REACTOR



DESCRIPTION : C.S.T.R is a reactor in which the content are well stirred and uniform throughout . Thus exit stream from this reactor has the same composition as the fluid within the reactor. We can refer also mixed type reactor. The reactants are initially charged in to a container, mixed well and then left to react for certain period of time. At any instant the composition throughout the reactor is uniform.

RANGE OF EXPERIMENTS :

1. Study of Isothermal Continuous stirred tank reactor.
2. To calculate the reaction rate constant k for given reaction in Isothermal Continuous stirred tank reactor

EXPERIMENTAL SETUP :

Reactor	:	Material Stainless steel (SS) ,
Flow Measurement	:	2 No. Pre calibrated Rota meter
Feed Tank	:	2 No. of stainless steel feed tank
Feed Circulation	:	By Compressed Air
Pressure Regulator	:	0-2 kgf / cm ²
Pressure Gauge	:	Bourdon type 0 – 2 kgf / cm ²
Water Bath	:	Material SS , Double Wall , Insulated with glass Wool
Heater	:	Nichrome wire heater
Stirrer	:	1 No.SS impeller and shaft coupled to FHP Motor
Digital Temp Indicator	:	0 – 200 0 C , Indicator cum Controller
Temp Sensor	:	CR/AL Type
stop watch	:	Electronic
Piping	:	SS , PVC
Setup Mounting	:	On sturdy MS stand with powder coated.

CHEMICALS REQUIRED : NaOH, Ethyl Acetate ,HCL ,
Phenolphthalein indicator , Distilled water

SERVICE REQUIRED : Air Supply : @ 6 CFM at 4 Kg /cm²
Water Supply : @ 2 lpm

Power Supply : 230 V, 50 Hz, A.C.

SPACE REQUIRED : 1.5 m. (L) x 1.0 m (W) X 1.5 m (H).

WEIGHT : @ 55 Kg