

CRE-10 THREE CONTINUOUS STIRRED TANK REACTOR IN SERIES



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 reactorThe 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 Continuous stirred tank reactor in series .
2. To calculate the reaction rate constant k for given reaction in Continuous stirred tank reactor in series

EXPERIMENTAL SETUP :

Reactor	:	Material Stainless steel (SS) , 3 No.
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
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Water Bath	:	Material SS, Double Wall, Insulated with glass Wool
Heater	:	Nichrome wire heater
Stirrer	:	3 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 : @ 70 Kg