



Model
CRT

Chemical Reaction Treatment Systems

The CRT, Chemical Reaction Treatment Systems provide a variety of flexible chemical treatment scenarios where continuous flow wastestreams are generated.

The CRT Series Chemical Reaction Treatment systems are designed to implement a wide variety of flexible chemical treatment sequences by continuous, sequential addition & reaction when treating a continuous wastestream.

Chemistry is dependent on the wastewater characteristics and usually requires jar testing to verify proper chemical recipe(s).

The CRT systems can also be provided as manually operated designs where flows are low or project capital cost reduction is important.

The system design provides a compact footprint, simple operation, adjustment and maintenance.

Customization, modifications & options are available to tailor the system to your project.

Chemical metering pump systems are provided to implement chemical makeup and injection based on the process required and the pump types and features required for each chemical.

Features Included:

- ◆ 1, 2, 3 & 4 tank reaction tanks
- ◆ Chemical metering pumps
- ◆ pH control.
- ◆ Variable & fixed speed mixers.
- ◆ Tank drain valves
- ◆ Nema 4 controls.
- ◆ Space saving, compact footprint.
- ◆ Polymer blending systems
- ◆ Skid base
- ◆ Lifting lugs
- ◆ Sequential reaction operations
- ◆ Steel, 304/316 stainless steel
- ◆ FRP & polyethylene tank construction

Typical applications:

- ◆ Metals precipitation/flocculation
- ◆ Solids coagulation/flocculation
- ◆ Emulsion breaking
- ◆ pH neutralization/solids removal
- ◆ DAF pretreatment



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Models

CRT-F & CRT-C Flocculation & Coagulation

A single stage reaction system with tank retention volume between 4 & 8 minutes. Systems are similar in design, model designation indicates use.

CRT-CF Coagulation and Flocculation

A two stage reaction system with variable retention volume up to 10 minutes in either or both chamber (greater volumes can be provided also).

CRT-FF Flash-mix Flocculation

A two-stage reaction system designed for one minute flash mix chamber retention and five minutes flocculation time. This is a two-stage system designed for the injection of a coagulant and/or a flocculant.

CRT-CpF Coagulation pH & Flocculation

A three stage reaction system with variable retention volumes up to 10 minutes in any or all chambers (greater volumes can be provided also). Typically provided where wastestream characteristics are highly variable, maximum chemical recipe flexibility is desired or emulsions are present.

CRT-p pH Adjustment or pH Neutralization

A single stage reaction system using acids and/or bases with 10 minutes retention volume. Single or double pump operation.

CRT-EC Emulsion Cracking

A three stage reaction system implementing coagulation, demulsification, pH adjustment & flocculation with variable retention volumes up to 10 minutes in any or all chambers (greater volumes can be provided also). Primarily designed for emulsion breaking where a more rigorous chemistry is required to break the emulsion.

Controls

The Nema 4 controls provide:

- pH/ORP controllers
- Variable Frequency Drives (VFD)
- HOA switches for manual & automatic control
- 115/230/460V/1 & 3 ph/50/60Hz power



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