

Reactivator® Clarifier

ECODYNE Limited



For nearly 60 years, Ecodyne has been supplying **Reactivator® Clarifiers** for both industrial and municipal applications.

Ecodyne's Reactivator is a high-rate water treating clarifier which, in minimal time, footprint and chemical usage, produces an effluent of the highest quality. It is used principally for softening by the cold lime process or for clarification by coagulation of water containing suspended solids, turbidity, colour and organic impurities. Coagulation and softening can be carried out simultaneously if required. Various chemicals such as lime, soda ash, coagulants and chlorine can be added to the process in order to coagulate precipitates and reduce hardness, heavy metals, organic matter, silica and phosphates.

Design Principles and Features

- Short retention time/ smaller footprint
- Solids contact
- Positive sludge recirculation
- Deep clear water zone
- Positive sludge removal system
- Radial pipe effluent collectors
- Access bridge with walkway
- Above grade influent pipe
- Variable speed recirculator drive
- High torque, constant speed scraper drive

Applications

- Boiler make up pretreatment
- Potable water treatment
- Whitewater clarification
- Reverse osmosis pretreatment
- Demineralizer pretreatment
- Cooling tower make up and blow down
- Cooling tower side stream treatment
- Secondary treatment of municipal effluent

Installations

Ecodyne has installed hundreds of Reactivators all over the world. An installation list can be provided upon request.



A Marmon Water/Berkshire Hathaway Company

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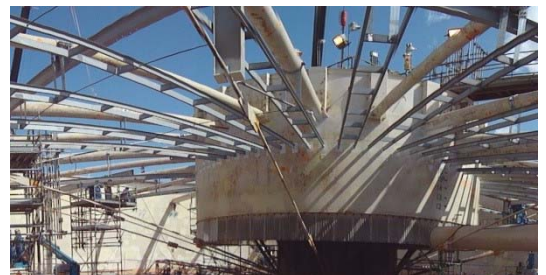
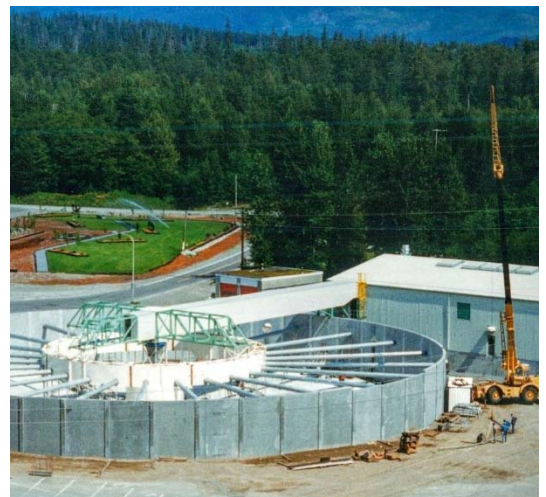
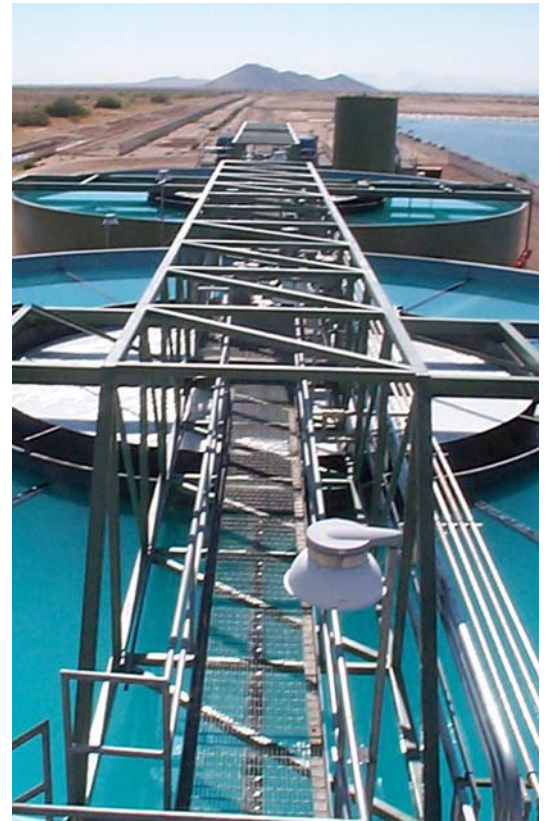
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Process Features and Advantages

- Rapid chemical reactions and efficient chemical usage
- Intimate and prolonged contact with previously formed solids
- Positive, uniform recirculation of solids independent of flow
- Minimum sludge depth with just enough solids inventory to achieve proper recirculation
- Entire bottom of reactivator used for settling and collection of dense precipitates
- Slowly moving multi-blade sludge scraper arms carry the settled precipitates into a sludge pit in the centre of the reactivator
- Thickening pickets concentrate the settled sludge, which is then removed as a highly concentrated slurry
- Effective sludge removal in high TSS/ turbidity water
- Simple to operate
- Hydraulic recirculation can be used

Options

- Floc barrier tube settlers for increased throughput
- Scum baffle and oil skimmer designs
- Circular stairway or ladder access to drive platform
- Scraper drive torque over-load protection device
- Concrete shell design
- Above grade false bottom design (on smaller units)
- Field erection of shell and internals
- Automatic chemical feed and desludging controls
- Chemical feed equipment
- External sludge thickener
- Sludge pumps and filter press
- Gravity or pressure filters for effluent polishing
- Full cover for fume control
- PLC control system
- Pilot size units for on-site testing
- Ice design for operation in cold climates



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