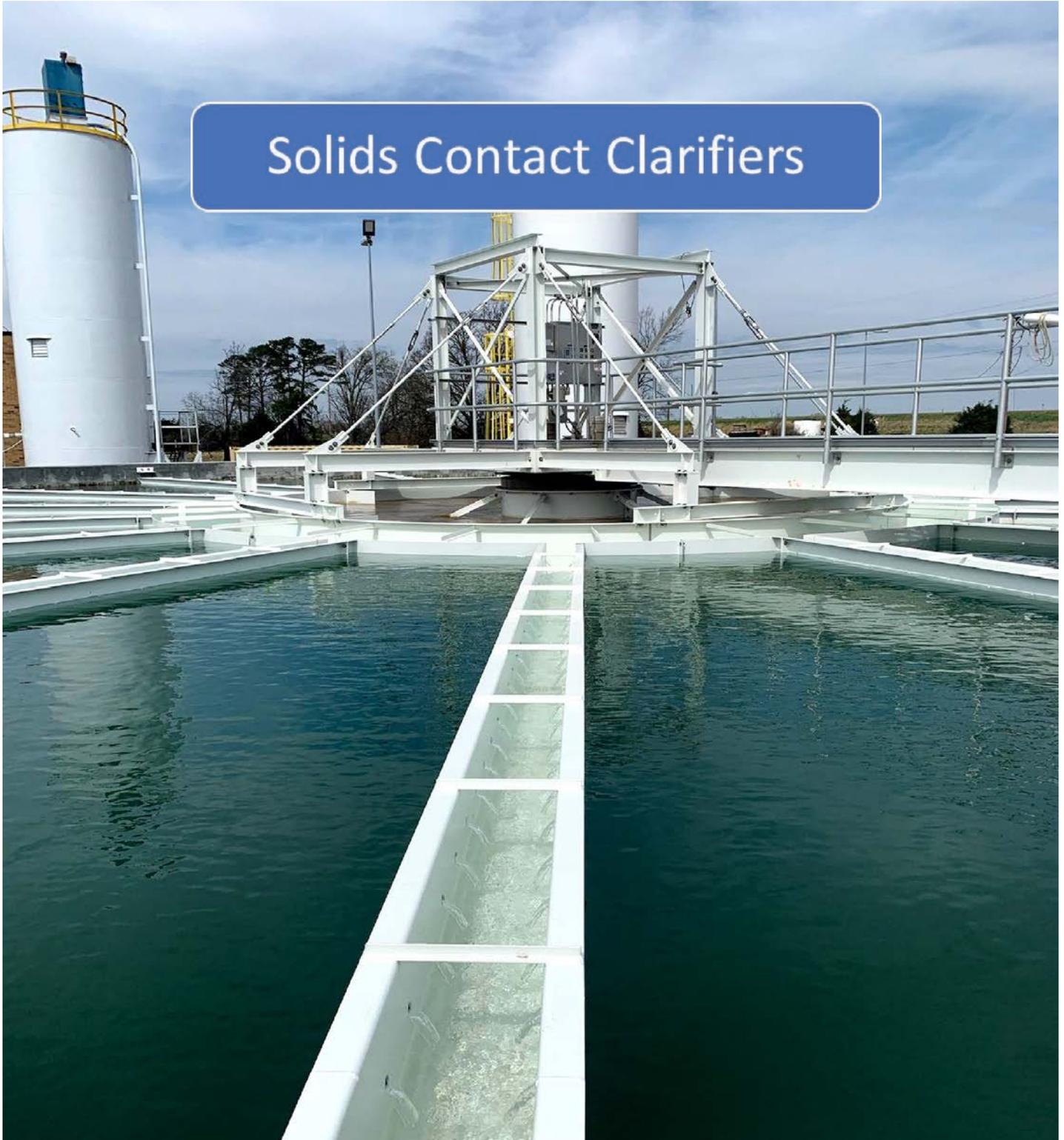




Quality Equipment: Competitive Price

## Solids Contact Clarifiers





## Solids Contact Clarifiers



Solids Contact Clarifiers combine the process of mixing, flocculation, and sedimentation in a single tank. Recirculation of solids and mixing is accomplished by a radial or axial impeller. Flocculation occurs within the reaction well.

Sedimentation occurs in the clarification zone. The clarifier is comprised of a mixing zone, flocculation (reaction) zone, sludge blanket zone, and a clarification zone. An impeller draws previously settled solids from the bottom and mixes them with the lower solids concentration influent and disperses it into the reaction well.

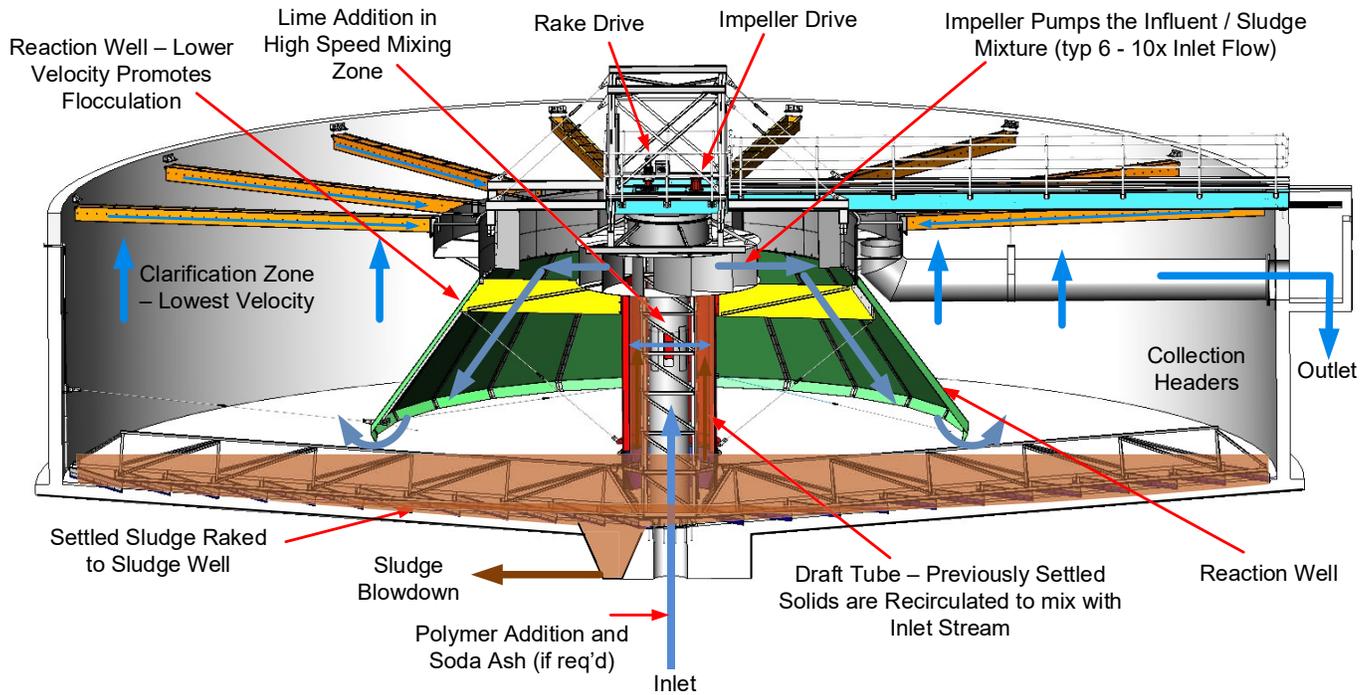
Solids Contact Clarifiers are typically used for water softening and / or color and turbidity removal in water treatment plants. They are also used for polishing or tertiary clarifiers in wastewater treatment plants.

Solids Contact Clarifiers are particularly advantageous in lime softening of groundwater since the precipitated solids help promote floc, growing larger crystals of precipitate to provide a thicker waste sludge.

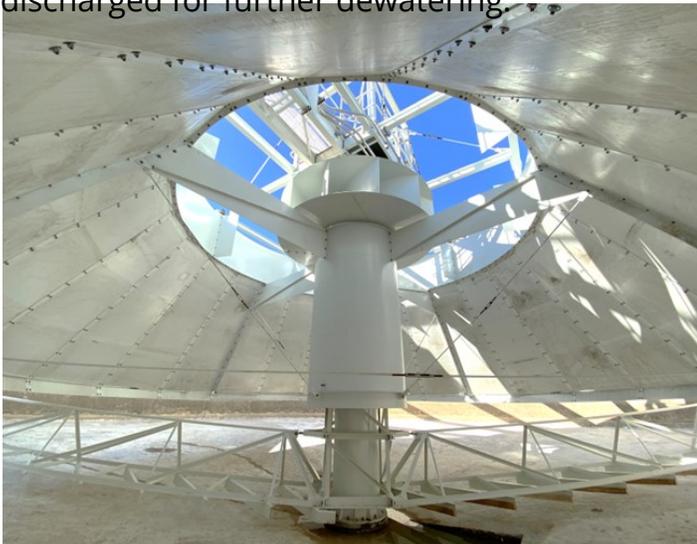
Solids Contact Clarifiers have also been applied in the chemical treatment of industrial wastes such as metals removal, and used successfully for cooling tower make-up water.



## Solids Contact Clarifier Operation



ClearStream's Solids Contact Clarifier combines a number of operations in a single unit. As the influent stream enters into the draft tube, it experiences fast mix with a recycled sludge stream of 6 to 10 times the inlet flow rate. Once passing through the impeller; which is a high flow, low shear, low head pump; the mixed streams pass into the reaction well which is a slow mix area that promotes flocculation. The flocculated solids are then directed to the clarifier portion of the unit, where the low velocity area allows them to settle. Once these solids are settled they are scraped to the center of the unit, where the majority are again recirculated through the process, thus promoting increased flock size and a thicker sludge. A portion of this sludge is discharged for further dewatering.



**Radial Impeller**



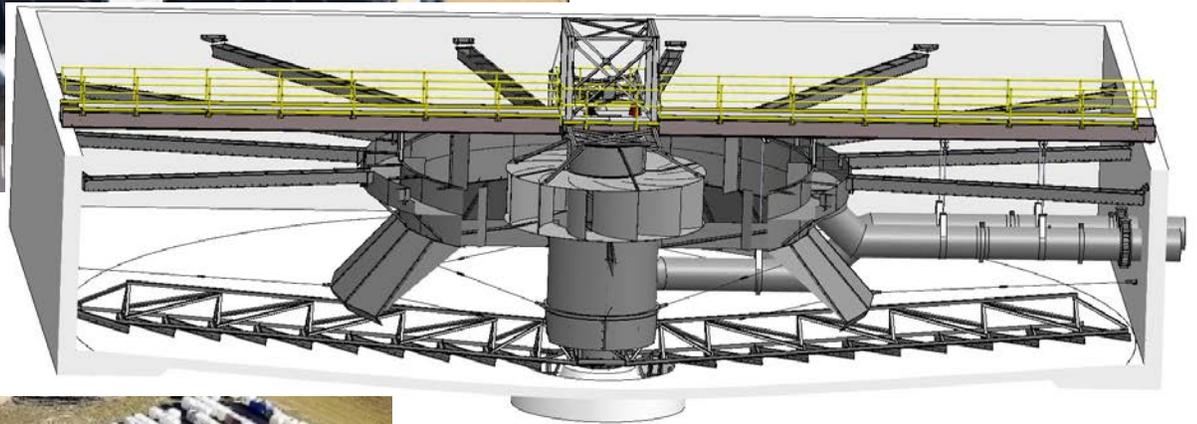
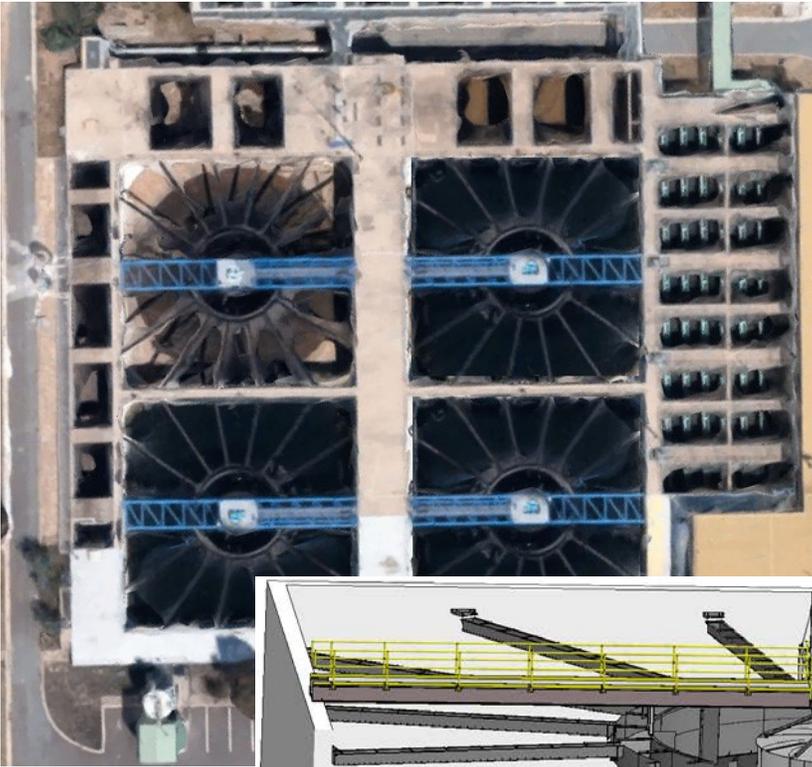
**Axial Impeller**



## Solids Contact Clarifiers

### 3D Models of Every Project

ClearStream produces a 3D model of every unit which we manufacture. These models are extremely valuable to ensure proper fit up. In addition, these models can be a useful tool for operators training and understanding of the unit design and operation. ClearStream provides these 3D models as well as the means for clients to view and manipulate these models at their own site or offices. This affords operations and maintenance personnel with a unique opportunity to "preview" the unit prior to any planned maintenance without having to drain the tank.



Water & Wastewater Treatment Solutions  
Municipal, Industrial, Power & Mining

9090 South 300 West  
Sandy, UT 84070

Phone (801) 676-1890

Fax (801) 676-1893

[www.clearstreameng.com](http://www.clearstreameng.com)