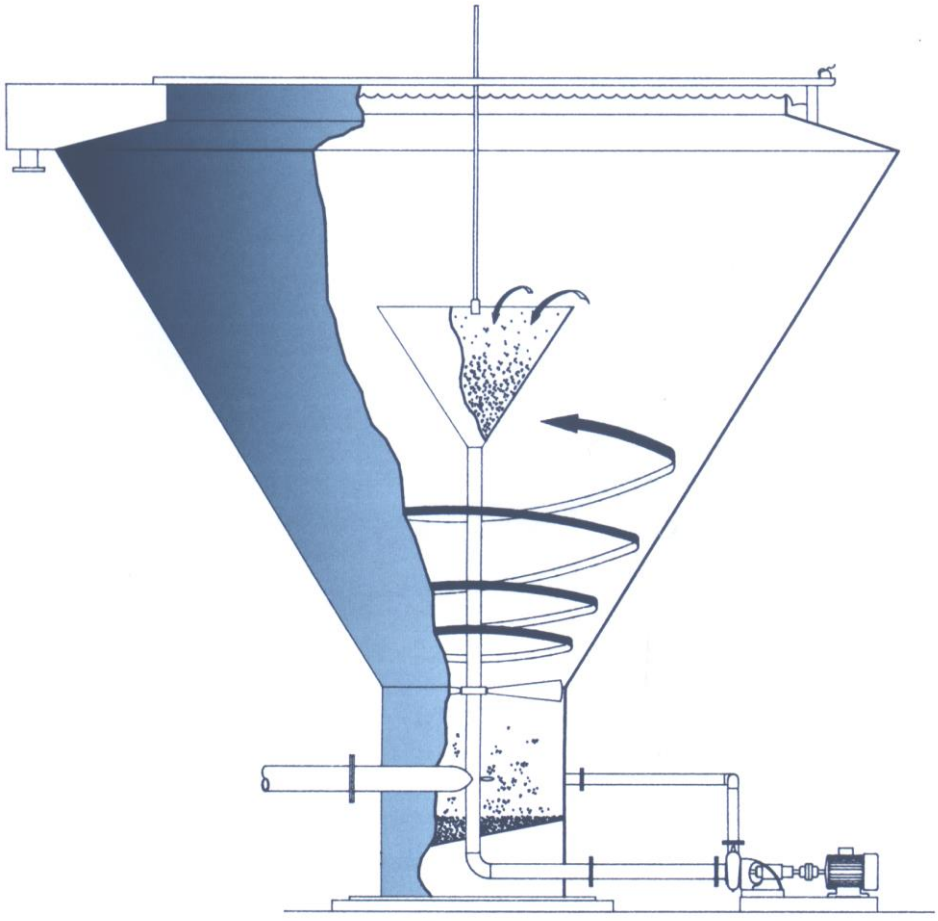
HYDROCONE CLARIFIER

For high quality potable or industrial water



Simple to Install * Compact Design * Simple Foundation * Low Power Consumption * Low Maintenance Cost * Simple Operation * High Efficiency * Exceptional Flexibility * Wide Selection

HYDREX
WATER & WASTE TREATMENT

GENERAL DECRIPTION

The Hydrocone Clarifier is a hydraulically operated, conical shaped, upflow, solids contact, sludge blanket type reactor-clarifier. It produces high quality treated water and is particularly suited to applications that require clear and clean water for industrial or potable use. The Hydrocone Clarifier combines mixing, coagulation, flocculation, settling and clarification within a single treatment unit. Its cost efficient design results in reduced capital outlay as well as minimal energy and operating expenditure. Furthermore, it eliminates the maintenance problems normally associated with conventional mechanical clarifiers and can be easily operated and maintained by semi-skilled labor.

Two, 100m^3/hr Unit installed at the Shwedaung Textile Finishing Plant in Burma for the purification of muddy water from the Irrawaddy River.

PRINCIPLE OF OPERATION

The water-chemical coagulant mixture enters the reaction-flocculation zone of the clarifier at a tangent to the base of the unit. The tangential force of the water, perpetuated by velocity control baffles, creates a spiral flow and provides a rapid and complete mixing of chemicals and the raw water. The water then flows upward through specially designed, adjustable baffles and enters the conical shaped solids contact zone.

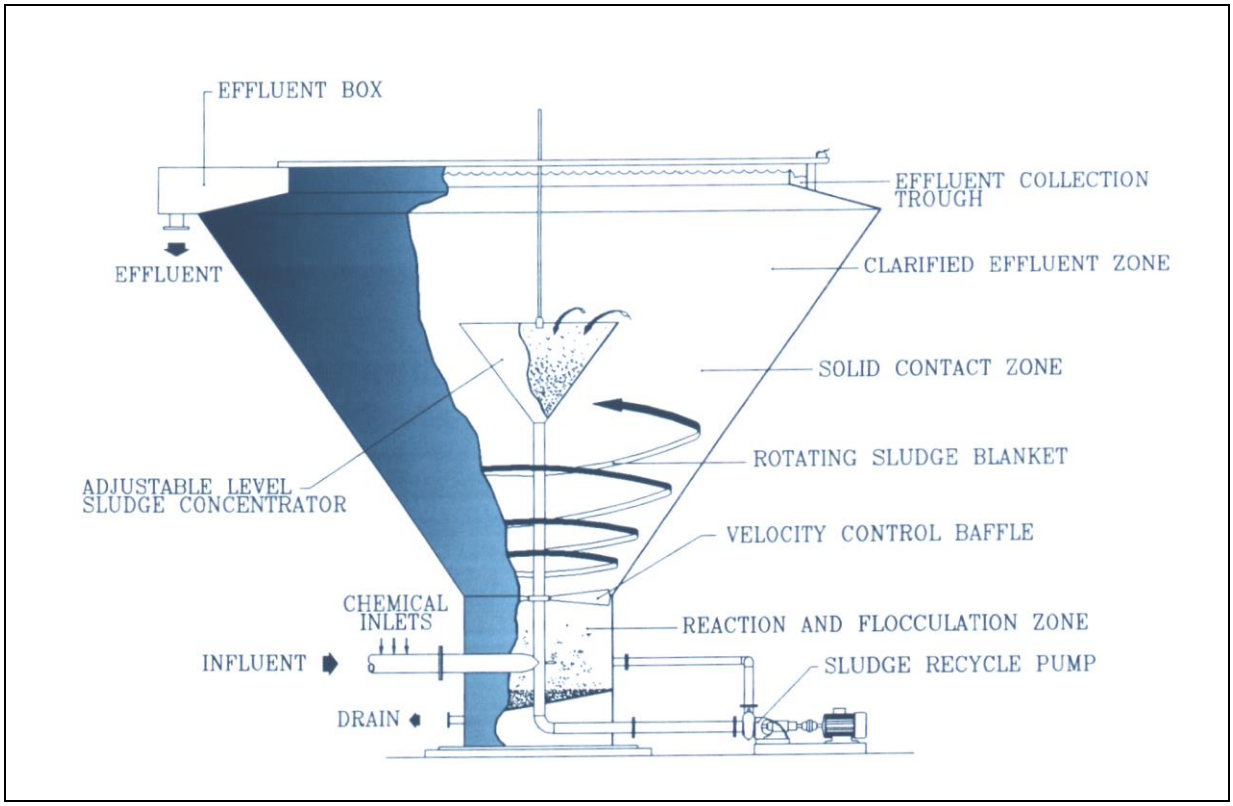
In the Hydrocone Clarifier, the coagulated particles are not allowed to settle to the bottom as in mechanical clarifiers. The spiral flow velocity through the sludge blanket is controlled by means of sludge blanket is controlled by means of sludge recycling so that the precipitates are kept in suspension up to a level just above the sludge concentrator without rising into the clarified liquid zone.

The rotating sludge blanked acts as a filter and promotes intimate contact between the previously formed flocs and the incoming water to ensure complete removal of the fine impurities. The sludge blanked also provides an extended contact time between the flocculated particles and raw water.

As the water moves upward within the solids contact zone, vertical and tangential velocities decreased due to increasing clarifier area. When the sludge blanked achieves its maximum height the decreasing water velocity can no longer suspend the particles. At that level clear water continues to rise into the clarified effluent zone while the separated sludge particular drop back into the sludge blanket zone.

Clean and clear water is collected at the surface of the clarifier over submerged orifices and discharged into a clearwell for further filtration or use.

An adjustable level sludge concentrator is centrally located within the sludge blanket zone and provides for the removal of sludge from within the sludge blanket over a large area. This is an important design feature of the Hydrocone Clarifier as it prevents accidental disposal of the entire sludge blanked while the surplus sludge can be disposal of continuously or intermittently.



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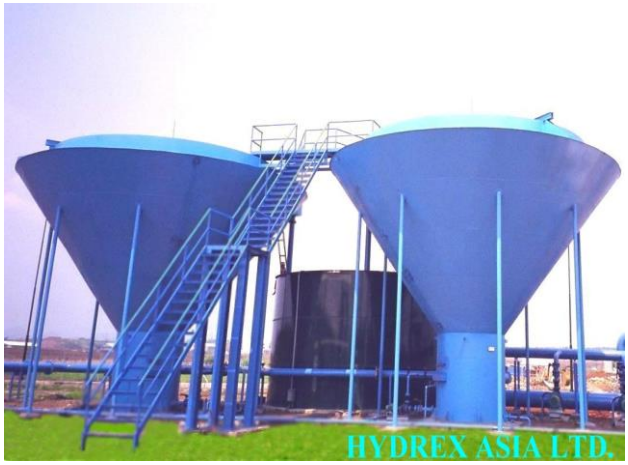
Two units 100 m^3/hr total installed in one of the largest bottling plants in the world for soft drink manufacturing. (Shanghai, China)



Two units 270 m^3/hr total installed in Kawarang Industrial Park, for industrial and potable water treatment. (Java, Indonesia)

HYDROCONE CLARIFIER SELECTION TABLE

Model No.	Cap. M^3/hr	Top Dia. m	Base Dia. m	Height m	Rise Rate m/hr	Inlet in.	Outlet in.	Recycle in.	Operating Wt. tons	Ship. Wt. tons
HCC-1	20	4.5	0.7	4.2	1.26	2	3	1	22.0	3.0
HCC-2	30	5.0	0.9	4.8	1.53	3	4	1-1/4	32.0	3.6
HCC-3	40	5.5	1.0	5.3	1.68	3	4	1-1/4	43.7	4.2
HCC-4	50	6.0	1.1	5.4	1.77	3	4	1-1/2	52.2	4.6
HCC-5	60	6.5	1.2	5.5	1.81	4	6	1-1/2	61.4	5.1
HCC-6	70	6.5	1.3	6.1	2.11	4	6	1-1/2	69.7	5.4
HCC-7	80	7.0	1.4	6.1	2.08	4	6	1-1/2	81.0	5.9
HCC-8	90	7.5	1.5	6.2	2.04	4	6	2	93.2	6.5
HCC-9	100	7.5	1.6	6.7	2.26	6	6	2	104.4	6.9
HCC-10	125	8.0	1.8	6.8	2.49	6	8	2	120.8	7.6
HCC-11	150	9.0	2.0	7.0	2.36	6	8	2	153.4	8.8
HCC-12	175	9.5	2.1	7.1	2.47	6	8	2-1/2	171.4	9.5

FOR FURTHER INFORMATION

A full range of water and wastewater treatment systems and equipment are available from Hydrex. For further information, please contact us or our authorized agent.

Authorized Agent:

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