



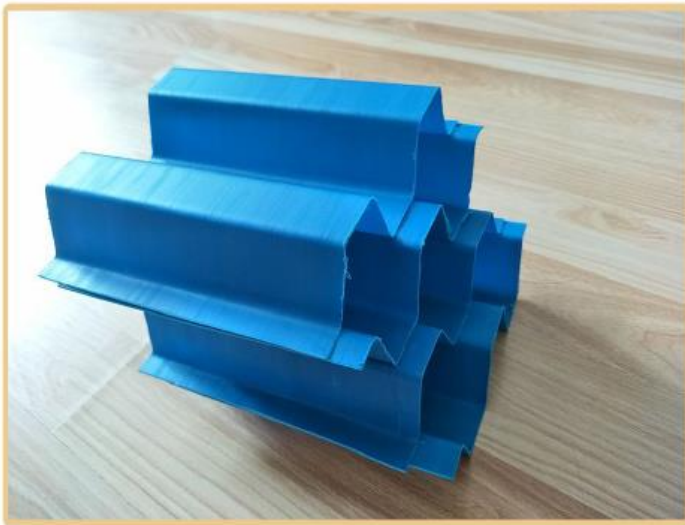
# CHEMNIUM

## Applications

Drinking Water Treatment  
Waste Water Treatment  
Municipal  
Industrial

# TUBE SETTLER

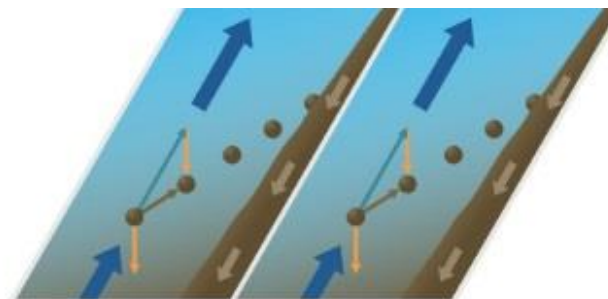
## Better Solution for Sedimentation System







PVC



PP



-  flow direction of untreated water/clear water
-  flow path of a solid particle
-  vectors of flow velocity and sink speed
-  flow direction of sludge

## APPLICATION

Tube settler produced by our company uses PP, PVC and FRP as its raw material. It was hot-drawn into a hexagonal tube shape by infrared thermal machine and then welded into the using shape with patented technology and high frequency.

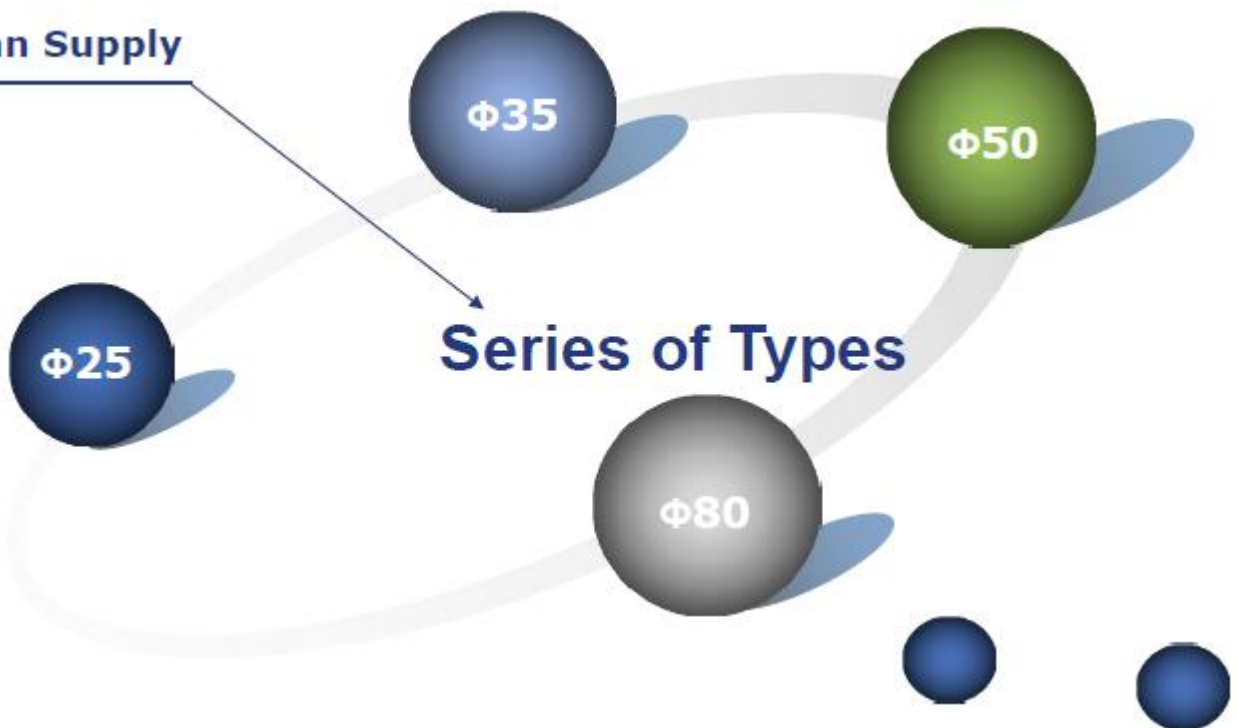
Our inclined tube settler can be applied to many kinds of precipitation and sand removing. In decades, it is the most mature water treatment device that widely used in drainage projects. With the advantages of wide application range, high treatment efficiency and small occupation area, it can be used in water inlet degritting, industrial and living water sedimentation, sewage sedimentation, grease and tailing enrichment processing...and so on. It not only can be applied to new construction project but also the transformation of existing old tank and you can achieve astounding economic benefit in both occasions.

## WORK PRINCIPLE

Tube settlers increase the settling capacity of circular clarifiers and/or rectangular sedimentation basins by reducing the vertical distance. The floc particles would settle before agglomerating to form larger particles. The settlers use multiple tubular channels sloped at an angle of  $60^\circ$  and adjacent to each other, which combine to form an increased effective settling area. This provides for a particle settling depth that is significantly less than the settling depth of a conventional clarifier, reducing settling times. Tube settlers capture the settle able fine floc that escapes the clarification zone beneath the tube settlers and allows the larger floc to travel to the tank bottom in a more settle able form. The settler's channel collects solids into a compact mass which promotes the solids to slide down the tube channel.

## DIFFERENT TYPES

We Can Supply



## MAIN FEATURES

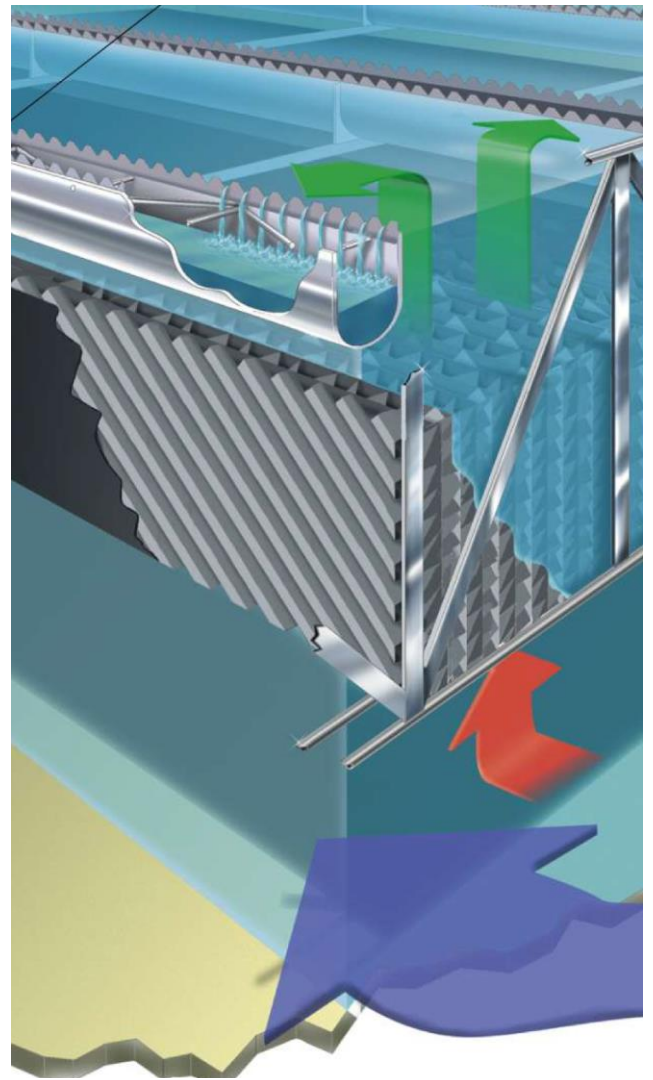
1. Large wetted perimeter, small hydraulic radius.
2. Good laminar flow conditions, particle deposition is out of turbulent flow interference.
3. When the oblique tube length is 1 meter, the effective payload is designed to meet 3-5t/m<sup>2</sup>, Vo is controlled within 2.5-3.0mm/seconds, then it has the best water quality.
4. After applied tube settler in water intake, if its length is 2.0-3.0meters, it can work effectively in high turbidity tank of 50-100kilogram/m<sup>3</sup> sediment concentration.
5. After applied tube settler in sedimentation tank, its water treatment capacity is 3-5 times of advection sedimentation tank and 2-3 times of the accelerating clarification tank and pulse clarification tank.

## ADVANTAGES

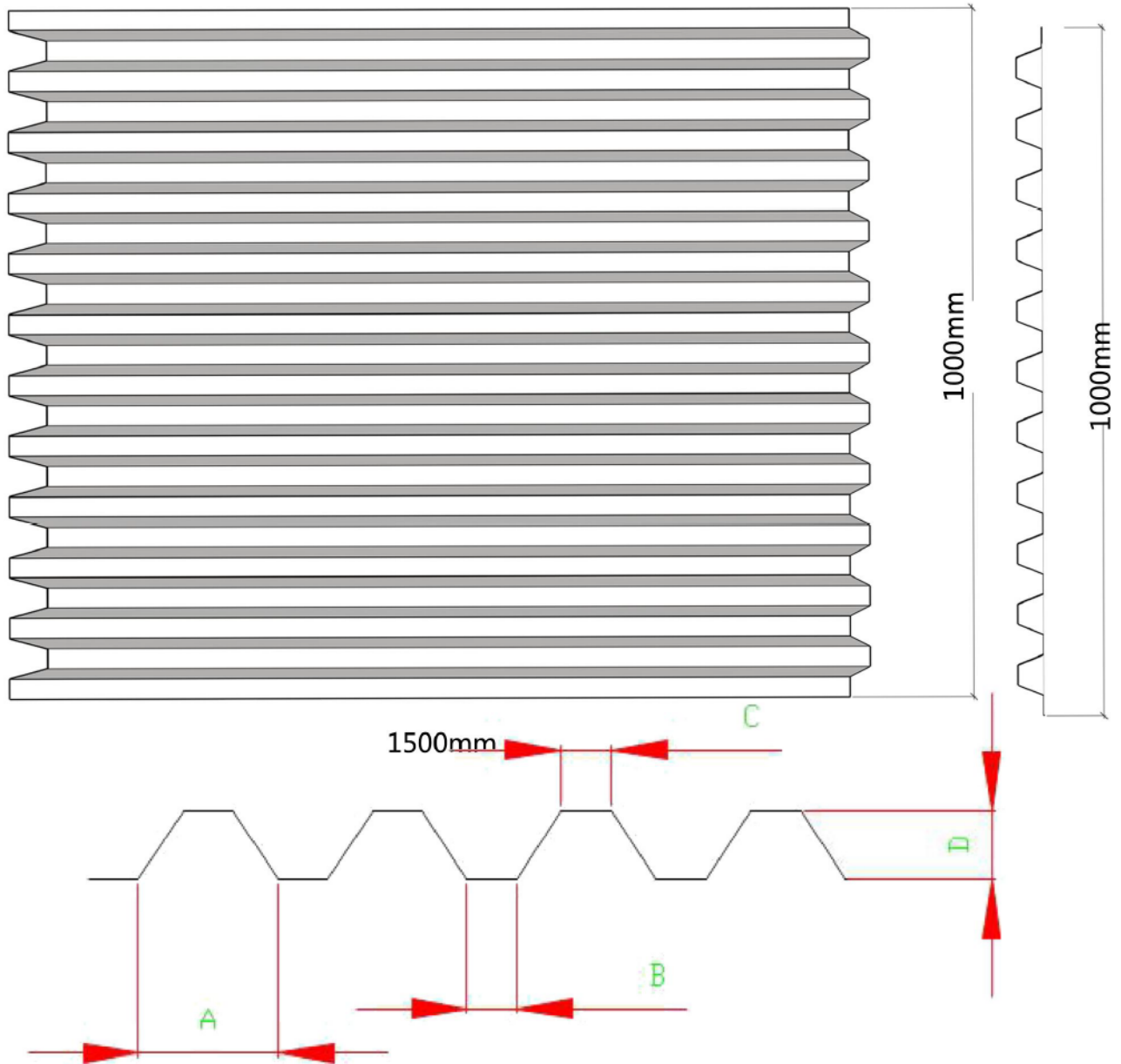
- ❖ The advantages of tube settlers can be applied to new or existing clarifiers/basins of any size.
- ❖ Clarifiers/basins equipped with tube/lamella settlers can operate at 4 to 8 times the normal rate of clarifiers/basins without tube or lamella settlers.
- ❖ It is possible to cut coagulant dosage by up to half while maintaining a lower influent turbidity to the treatment plant filters.
- ❖ Less filter backwashing equates to significant operating cost savings for both water and electricity. New installations using tube can be designed smaller because of increased flow capability.
- ❖ Flow of existing water treatment plants can be increased through the addition of tube or lamella settlers.
- ❖ Tube increase allowable flow capacity by expanding settling capacity and increasing the solids removal rate in settling tanks.

## SPECIFICATION

Size (mm)	Thickness (mm)	Quantity (pcs/m <sup>2</sup> )	Weight (kgs/m <sup>2</sup> )	Specific Surface Area (m <sup>2</sup> /m <sup>3</sup> )
φ25	0.40	62	30	139
	0.45	62	35	139
φ35	0.40	42	22	109
	0.45	42	25	109
	0.50	42	28	109
φ50	0.40	30	16.5-17	87
	0.45	30	17.5-18	87
	0.50	30	18.5-19	87
	0.60	30	22	87
φ80	0.70	19	19.5	50
	0.80	19	22	50



## SPECIFICATION



Item	A	B	C	D (Theoretically)	D (Actually)
Dia 35mm	40mm	20mm	20mm	17.5mm	<20mm
Dia 50mm	60mm	28mm	28mm	25mm	<30mm
Dia 80mm	80mm	35mm	35mm	40mm	<45mm