

Plate Settler Cost Anaysis

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Due to the high price of CPVC 1/2" caps, other options for plate settler construction are being considered. Below is a cost analysis of other options that have been proposed.

Costs are based on one sedimentation tank.

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Cap and Screw Attachment

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	Quantit y	Cost (Lempira)	Cost (Dollar)	Total Cost	Cost/sq ft
Caps	896	9	\$ 0.48	\$ 426.89	\$ 8.71
Screws	384	4	\$ 0.21	\$ 81.31	\$ 1.66
Nuts	384	0.75	\$ 0.04	\$ 15.25	\$ 0.31
Lamina	15	900	\$ 47.64	\$ 714.66	\$ 14.58
Total				\$ 1,238.12	\$ 25.27

One sheet of lamina is 900 Lempiras, and is 12 feet long. Each lamina in the plate settler is 3 feet long, so four lamina can be made from one sheet. The tank is 4.3 meters long, and there are lamina every 5 cm, so 86 lamina are needed, or 29 sheets per tank.

The tank dimensions are 14 feet long by 42 inches wide, giving an area of 49 square feet.

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Bolt and Spacer Attachment

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		Quantity	Cost (Lempira)	Cost (Dollar)	Total Cost	Cost/sq ft
12" stainless steel bolt	52	202.8786	\$ 10.74	\$ 558.48	\$ 11.40	
Nuts	112	4	\$ 0.21	\$ 23.69	\$ 0.82	
PVC Pipe	112 feet	4.96807	\$ 0.26	\$ 29.46	\$ 0.60	
Lamina	15	900	\$ 47.64	\$ 714.66	\$ 14.58	
Total				\$ 1,326.29	\$ 27.40	

1/4" diameter, 12 inch stainless steel bolt price taken from McMaster.com (Part Number: 98827A381)

PVC pipe price taken from McMaster.com (Part Number: 48925K11)

Price of nuts were conservatively estimated knowing that 1 small nut used in the Cap and Screw cost .75 Lempira.

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Pipe and Coupling Attachment

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	Quantit y	Cost (Lempira)	Cost (Dollar)	Total Cost	Cost/sq ft
1/2" Coupling	600	1.5	\$ 0.08	\$ 47.59	\$ 0.97
1/2" PVC Pipe	112 feet	4.96807	\$ 0.26	\$ 29.46	\$ 0.60

Lamina	19	900	\$ 47.59	\$ 8 904.2	\$ 5 18.4
Total				\$ 3 981.3	\$ 3 20.0

The cost of pipe was taken off Mcmastercarr.com, and may not reflect actual prices in Honduras.

The couplings are 4 cm long, therefore lamina spacing is 4 cm rather than 5 cm. This means that a total of 36 twelve foot sheets of lamina are needed.

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Brentwood Industries Commercial Products

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IFR-6036 tube settler cost approximately \$24 per square foot.

Plate settlers in 3' lengths and 42" widths would be approximately \$48 per square foot.

[Brentwood Ind. Tube Settlers & Plate Settlers](#)

*These prices do not take consider the cost of shipping.

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