

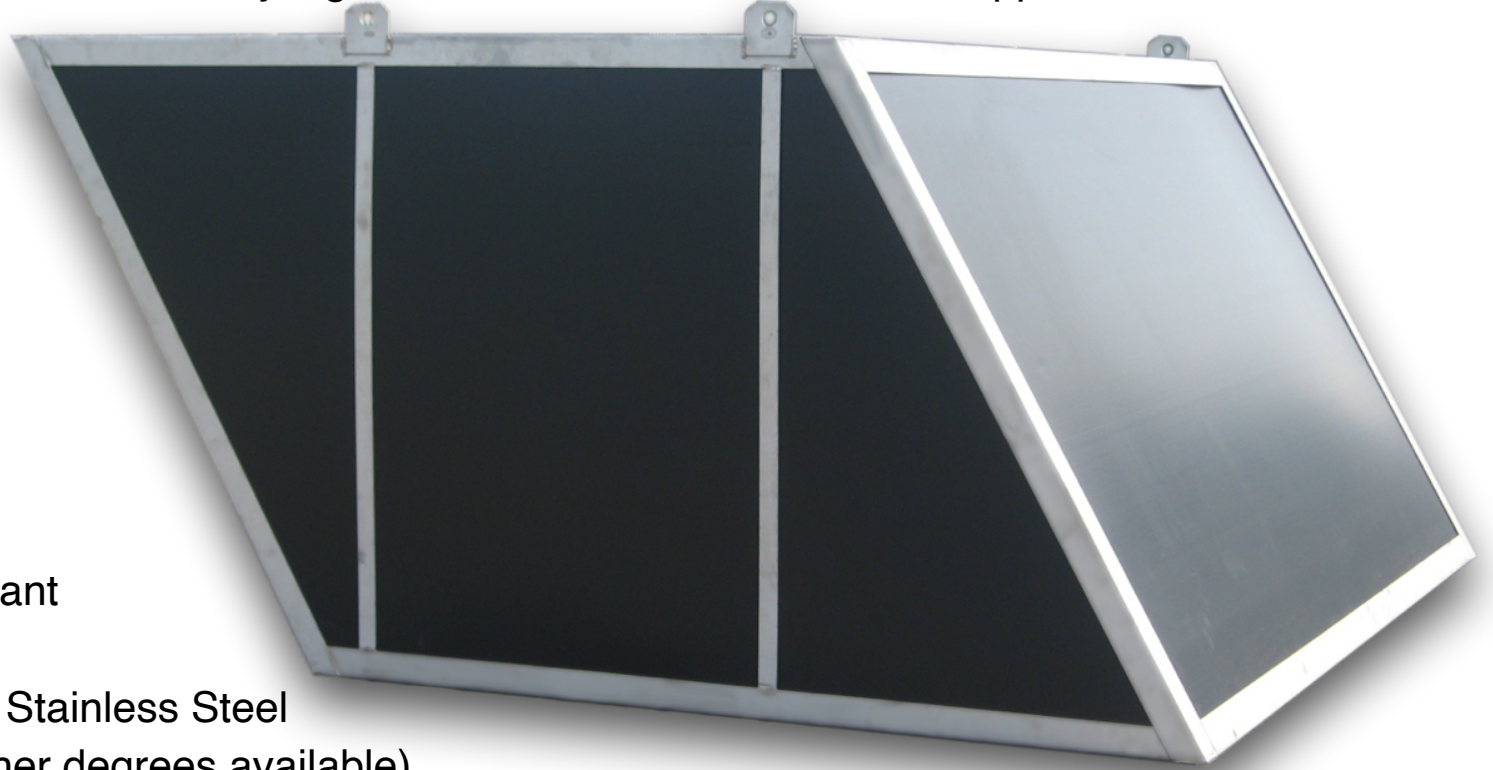
FLAT PLATE LAMELLA PACKING

FOR CORROSIVE FLUIDS TECHNICAL DATA SHEET

Flat Plate Lamella Packings by **United International Hydro Engineering Technologies (UIHET)** are designed to remove high concentrations of suspended solids from water, where the solids have a specific gravity > 1.0 . They are ideal for applications where the solids loading is > 30 mg/L, particle sizing is fine, or for removal of dissolved metals via hydroxide precipitation (Such as Lime Softening Process.) **UIHET** Flat Plate Lamella Packings are designed to sustain very high TDS values that reaches to 100 ppt.

STANDARD FEATURES

- Proven technology
- Big wetted periphery
- High settling efficiency
- Better laminar conditions
- Self-supporting structure
- High mechanical strength
- Easy installation of modules
- Up to 90°C temperature resistant
- Plates made of Strong FRP
- Frame made of Super Duplex Stainless Steel
- 60 Degree Parallel Plates (Other degrees available)

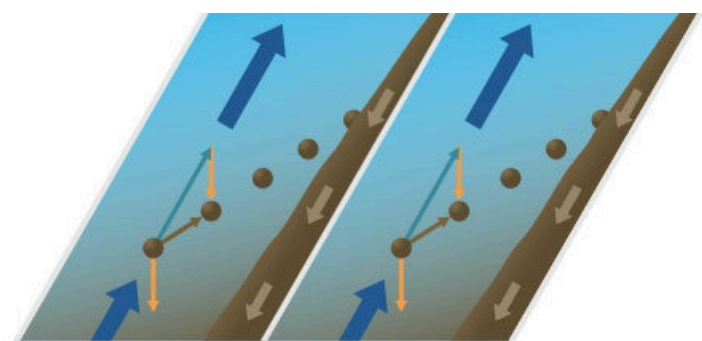


TYPICAL APPLICATIONS

- Industrial wastewater treatment
- Glass/ Ceramics/ natural stone
- Energy industry
- Wet scrubber and slaking effluents in the power industry
- Recycling industry
- Tunneling/ construction sites
- Waste/ Landfill/ street-cleaning
- Heavy metal precipitation
- Gravel and sand industry

WORKING PRINCIPLE

The principle of shallow depth sedimentation has been extended to the design of a parallel plate system. Flat Plate Lamella Packings separate settleable solids (particles) and is used for the treatment of process water and wastewater. Basically all solids that settle in a given time, can be separated easily and economically with the lamella separator. The wastewater enters the Flat Plate Lamella Packings from the inlet side, and the water flows between lamella plates from the bottom to the top of tank, where it overflows small particles adhere to the plates and gather to form larger and larger particles until their weight and concentration between the plates increases to a certain extent. The solids fall to the plate surface, where they slide by gravity down to sludge collection location, and the treated water will pass to the top and collect in required tank.



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

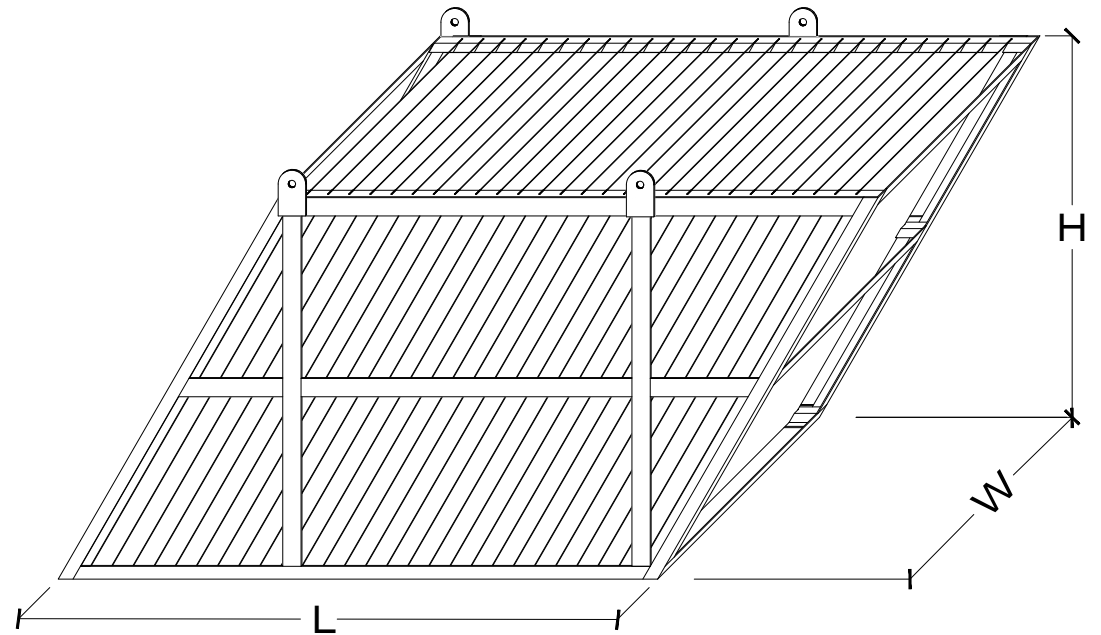


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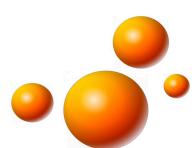
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The standard treatment process includes coagulant dosing and mixing, followed by solids separation with automated sludge wasting. Additional treatment steps, such as pH correction for precipitation of heavy metals, and various optional equipment are available to suit project specific requirements. **UIHET** Flat Plate Lamella Packings can be integrated into a treatment process, or supplied as a stand-alone system. **UIHET's** Flat Plate Lamella Packings feature smaller footprint than conventional settling clarifiers and the system requires no energy input and has a much lower probability of mechanical failure than other clarifiers. Moreover, **UIHET's** Flat Plate Lamella Packings are modular and can be resize to fit any treatment process requirements.



Parameter	Units	Model: LP-070
Individual Plate Length	mm	2,400
Individual Plate Width	mm	1,200
Number of Plates	No.	53
Gross Area	m ²	153
Inclination Angle	Degrees	60
Projected effective setting area (50 mm plate spacing)	m ²	76
Feed water flow rate (0.5 ~ 1.0 m/hr settling rate)	m ³ /hr	40 ~ 80
Pack Width (W)	mm	1,250
Pack Length (L)	mm	3,300
Pack Height (H)	mm	2,100



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