

# CORRUGATED PARALLEL PLATE CABINET

CPPX Series  
Capacity up to 220 m<sup>3</sup>/hr



UNITED INTERNATIONAL  
HYDRO ENG. TECH

## GENERAL DESCRIPTION

Corrugated Plate Cabinet Filter are common oil separation systems due to their simplicity, modularity, and economic cost. Corrugated Parallel Plate Cabinet Oil Separator have no moving parts, the configuration of plates simply enhances the coalescence of small droplets making them larger which is reflected in a faster rise rate according to Stoke's Law.

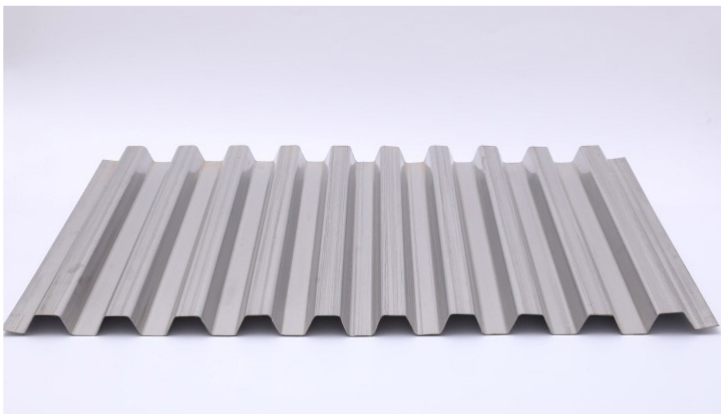
Moreover, a proper arrangement of inclined plates will force the fluid stream to rise while passing between plates, decreasing the rise distance of oil droplets. In contrast, solids gathered between plates will sink by gravity moving backward ideally towards the sludge hopper. In addition to the above, this simple process results in a very low failure possibility and requires minimum efforts for maintenance as plates can be removed individually for cleaning and replacement.

## PRINCIPLE OF WORK

The Corrugated Parallel Plate Cabinet Oil Separator forces the water stream to pass through narrow tortuous inclined paths between corrugated plates. This hard path increase the probability of collision between oil droplets, which tend to accumulate and form larger drops. Oil droplets also stick to plates surface breaking from water stream, and they get larger as more drops collide with them until they reach to sufficiently large size where gravitational rising force is able to pull them out of plates. These separated large oil drops have diameter of hundreds of microns, or even millimeters, and hence they rise easily to top surface. The Corrugated Parallel Plate Cabinet Oil Separator product is modular and customizable; it is afforded to meet the specific application and situation for each customer. The number of plates and dimensions are determined by various calculations considering the influent flow amount, characteristics and desired product specifications.

## TYPICAL APPLICATIONS

- Oil Water Separation
- Activated sludge, wastewater
- Removal of oil from ammonia
- Petroleum plants/ refineries
- Separation of water from hydrogen peroxide
- Oxidation of ferric, manganese and arsenic
- Wetland water treatment systems
- Lube oil recovery
- Industrial wastewater treatment
- Agricultural waste water
- Chemical processing
- Landfill leachate waste water



## FUNCTION

The CPPX main function is to enhance the oil-water separation systems by capturing the small oil droplets of the oily water stream, enlarge their size, and help to float the oil to the top surface. Moreover, the Corrugated Plate Separator can collect other suspended solids also that pass through plates and enhance the water stream overall parameters.

# CORRUGATED PARALLEL PLATE CABINET

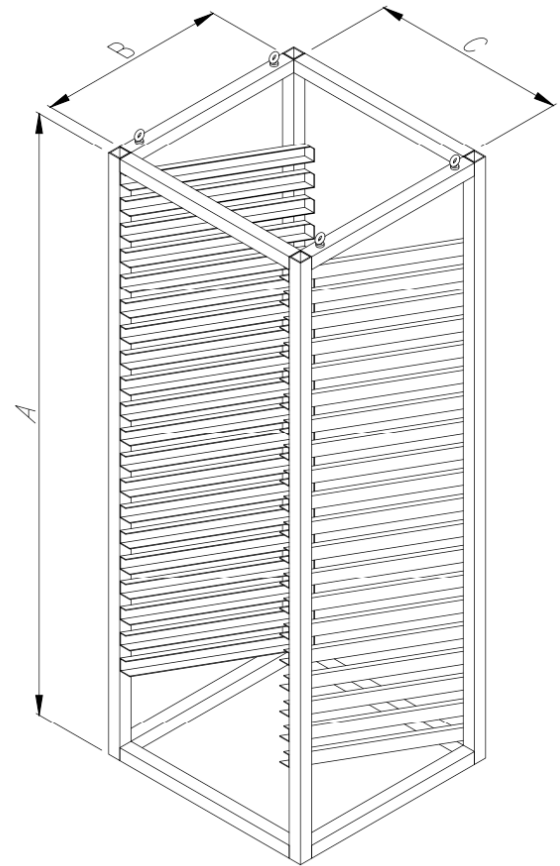
CPPX Series  
Capacity up to 220 m<sup>3</sup>/hr



UNITED INTERNATIONAL  
HYDRO ENG. TECH

## BENEFITS & FEATURES

- Lower Disposal and Maintenance Costs
- Applicable to various pipe materials and dimensions
- Inlet water temperature is up to 80°C
- Improved Fluid Quality, Value and the oil separation
- Enhance the raw water quality by getting rid of impurities and suspended solids
- No electrical power supply required, so no additional operating cost
- Very low maintenance cost since there are no moving parts
- Made from high-quality materials
- Highly resistant to most acids and alkalis
- High tensile & compression strength
- Lightweight and rigid
- Offers proven performance with years of expected service
- High efficiency and capacity combined with compact volume



MODEL	FLOW RATE (M3/HR)	NO. OF PLATES	MATERIAL	HEIGHT (A) (MM)	DEPTH (B) (MM)	WIDTH (C) (MM)	TOTAL AREA PER CABIN (M2)
CPPX-140	140	16	SS-316	1240	620	620	6.15
CPPX-160	160	20	SS-316	1550	620	620	7.69
CPPX-180	180	24	SS-316	1860	620	620	9.23
CPPX-200	200	28	SS-316	2170	620	620	10.76
CPPX-220	220	32	SS-316	2480	620	620	12.30