



## PARALLEL PLATE CLARIFIER MODEL PPC-\_\_\_\_\_

Pollution Control Systems, Inc. (PCS) is pleased to provide the following equipment specifications for your consideration.

One (1) prefabricated Parallel Plate Clarifier designed and constructed to provide for the removal of free settling, non-hindered concentrations of solids from wastewater. The solids separation process will utilize sets of inclined parallel plates fabricated from stressed relieved polypropylene material. This will allow solids to easily slide downward along the inclined parallel plates to the hopper bottom collection chamber. In the collection chamber, the solids will be allowed to thicken and be available for discharge via an outlet port. The clear effluent will exit via gravity flow.

### **A. General Specifications**

|                                   |                       |
|-----------------------------------|-----------------------|
| Model Number:                     | PPC-_____             |
| Capacity:                         | _____ gpm             |
| Solids Chamber Volume:            | _____ gallons         |
| Effective Settling Area:          | _____ square feet     |
| Surface Loading:                  | _____ gpm/sq.ft.      |
| Influent Temperature:             | _____ °F              |
| Inclined Parallel Plate Material: | Polypropylene         |
| Inclined Parallel Plate Spacing:  | 2 inches              |
| Influent Connection:              | _____ inches, flanged |
| Effluent Connection:              | _____ inches, flanged |
| Solids Outlet Connection:         | _____ inches, flanged |
| Length/Width/Height:              | _____ x _____ x _____ |
| Shipping Weight:                  | _____ lbs. (approx.)  |

### **B. Materials of Construction**

The tank shell, baffles, and structural members shall be constructed of 1/4" A-36 carbon steel. All weld joints necessary for watertight construction will be continuously welded. All piping shall be Schedule 40, steel pipe.

The inclined plates shall be constructed of polypropylene material. The polypropylene plates shall be ultraviolet light stabilized and stress relieved and the design shall permit easy removal of the individual plates from the clarifier for ease of cleaning or plate replacement.

To insure proper spacing the plates shall be held in position by use of PVC molded spacers mounted on the plates, two serrated supports on the bottom and one serrated spacer/hold-down bar on the top of the plates.

### **C. *Surface Preparation and Coating***

All vessel surfaces to be painted will be properly prepared in a workmanlike manner to obtain a smooth, clean, and dry surface. All rust, dust, and mill scale, as well as other extraneous matter, will be removed by means of cleaning by wire brushing or whatever means necessary.

All interior surfaces shall be prepared to SSPC-SP10 (near white metal sandblast) and coated with a High Solids Epoxy, 8-10 mil total dry film thickness.

All exterior surfaces shall be prepared to SSPC-SP6 (commercial sandblast) and coated with a High Solids Epoxy, 8-10 mil total dry film thickness.

### **D. *Influent Zone***

The influent zone shall be located between two sets of plates to dissipate the influent velocity and disperse the influent flow evenly along the length of each set of plates. This helps eliminate any flow short-circuiting and prevent any heavy solids plugging.

### **E. *Settling Chamber***

The parallel plates shall be arranged on 2" spacing and on a 55 degree angle from the horizontal to allow optimum solids removal. The set design of the plates shall enhance solids deposition on the plate surfaces. Settled solids will slide downward along the plate surfaces and drop off into the lower collection chamber.

The parallel plates shall be designed and installed with top mounted hold-down/space-bars to help properly space the plates, to prevent flotation during operation, and allowing easy removal of individual plates for cleaning if necessary.

### **F. *Collection Chamber***

The collection chamber (hopper) for settled solids shall be located directly below the sets of parallel plates and shall be equipped with pitched sides and a flanged outlet connection. The hopper design will minimize any turbulence from the incoming wastewater/process stream, and will allow for solids thickening.

### **G. *Effluent Chamber***

The effluent leaving the parallel plate sets shall pass over an adjustable stainless steel weir into the effluent collection trough. The water level in the clarifier is established by the adjustable weir plate height setting. Clarified effluent shall exit the collecting trough by way of a flanged outlet connection.

#### ***H. Inspection Hatch***

The clarifier shall be furnished with a removable inspection hatch to allow access into the settling chamber compartment. The hatch shall be sealed, gasketed, and suitably reinforced to provide a watertight assembly.

#### ***I. Guarantee***

PCS will guarantee for one (1) year from the date of shipment that the vessel and all component equipment will be free from defective materials and workmanship. PCS will furnish replacement parts for any component considered in the opinion of PCS to be defective, whether of his or other manufacturer during the guarantee period.