

# TANKS

CUSTOM MANUFACTURED TANKS AND ACCESSORIES



 **Hardwood Line**  
MANUFACTURING COMPANY

## MATERIALS AVAILABLE

Hardwood tanks are available in 5 basic materials.

1. Polypropylene – offers good chemical resistance and is able to withstand relatively high temperature solutions. Resists most acid and alkaline baths.

2. Steel – offers strength and durability at an economical price. Ideal for use as cleaning and/or electro cleaning tank. Gauge of materials used is dependent upon the size of the tank and its application .

3. Stainless Steel – available as Type 304, Type 316 or Carpenter 20. Provides strength and has good to fair resistance to mild acid/alkali solutions. Ideal for use as hot and cold water rinse, chemical storage, nitric acid or phosphating tank. Stainless steel tanks require little maintenance



Rectangular Poly Tank, standard one (1) piece wall construction, bent corners, extrusion welded bottom, 1" top flange.



20" x 36" Barrel Phosphate Tanks, all Steel/S.S. construction, shown with cast iron locating saddles and tank mounted barrel drive motors. Phosphate Tank shown with offset for larger solution volume.



Modularized, 16 Station Cleaning Line complete with spray rinses, electro-cleaners, heaters and controls, pumps, filters, ventilation hoods, water feeds, and drains. Natural polypropylene flanged tanks feature heat bent corners, fusion welded seams, and extrusion welded bottoms. Stainless steel tanks are incorporated into the system.



Solid Fiberglass Tank, 96" long x 72" wide x 72" deep, with 1-1/2" thick bottom. 2" x 6" top flanges and girth supports. Wall thickness specifically tapered from 3/4" to 1" to handle proportional increase in fluid pressure. Removable upper anode and cathode work bars allow for conversion to storage tank.

4. Fiberglass – Standard construction is solid fiberglass walls and bottom with a 30-35% glass ratio. Resin is dependent on application. Fiberglass tanks are lightweight, provide strength and good chemical resistance while using little floor space. Good for mild solution at high temperatures, plating and storage tanks.

5. Lined Steel – Koroseal® or Vulcanized Rubber Linings are available. Combines the economy and strength of a steel tank with the added chemical resistance of the lining. Excellent for chrome plating applications.

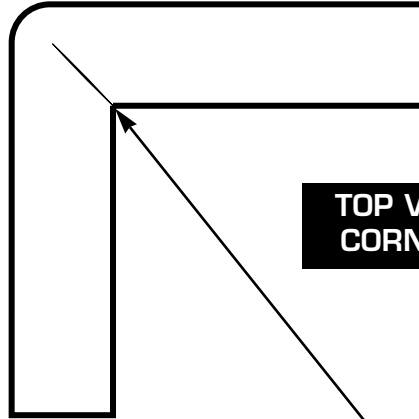
Other materials such as PVC, CPVC, and KYNAR are available upon request.



Sideway Rack Agitating Tank, 1/4" steel with Koroseal lining on internal side walls and bottom.

# POLY CONSTRUCTION METHODS

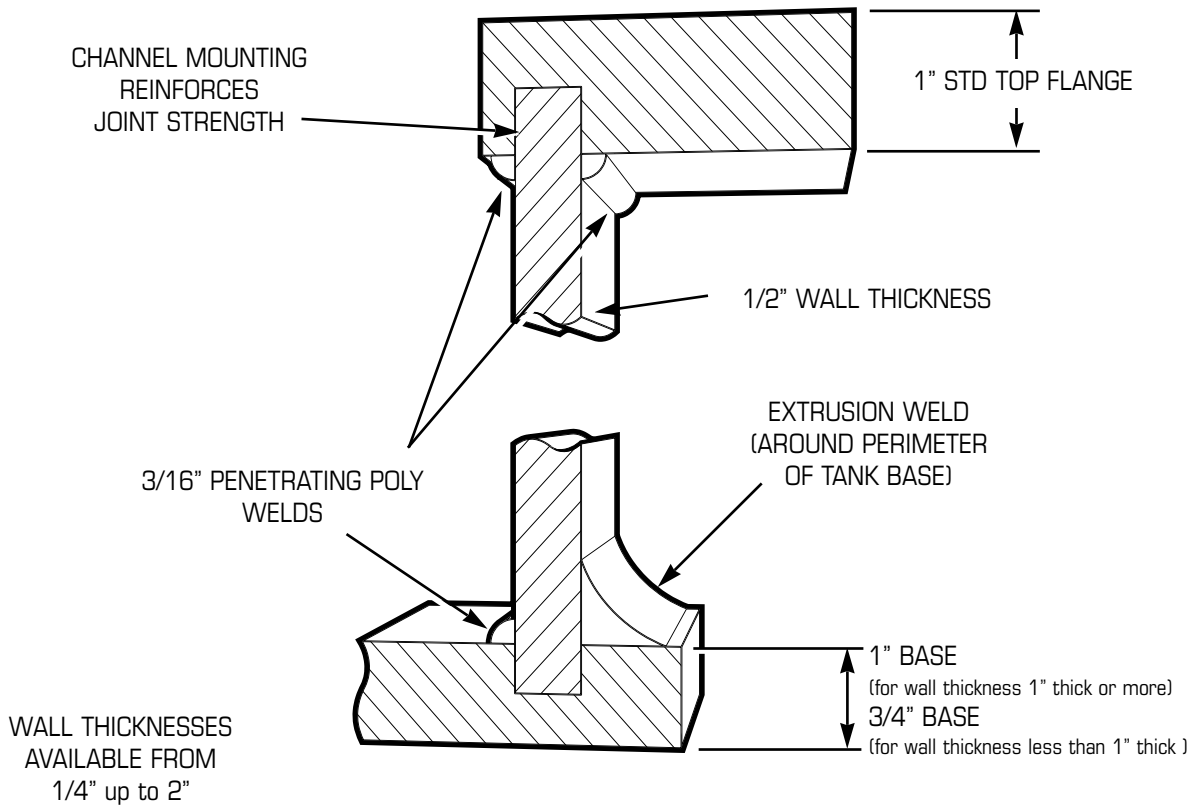
All Hardwood tanks, constructed of 1" or thicker poly walls, are fusion welded. Tanks with wall thicknesses less than 1" are constructed of a single heat formed piece. Both methods insure maximum strength at all stress points.



**TOP VIEW -HEAT FORMED CORNER CONSTRUCTION**

One piece construction means all four corners share one common piece of material. Heating swords penetrate 3/4 of the material thickness. When the bend is formed, molten poly is forced and fused together resulting in no loss of material thickness throughout the entire bend.

## POLY TANK CONSTRUCTION



WALL THICKNESSES AVAILABLE FROM 1/4" up to 2"

1" thick natural polypropylene tank, 48" high x 48" wide x 48" deep. One piece exterior wall construction insures both strength and a seamless seal. The tank is reinforced with two girths of 2"x2"x1/4" steel encapsulated with protective PVC jackets.



## TANK REINFORCEMENT METHODS:

- Encapsulated Steel Girth  
Standard is 2"x2"x1/4" thick steel tubing covered with a 1/16" PVC jacket to protect the steel from corrosive environments
- External Poly Ribs
- Steel Skeleton



6"X 1" thick top flange horizontal & vertical solid polypropylene reinforcing girths. No metal inserts were used.

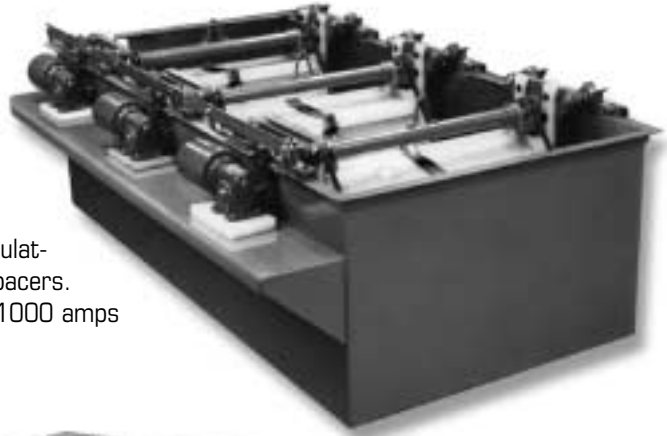


Large 1" thick polypropylene Storage Tank, set on I-Beams with total wrap around channel support system, for exceptional strength.

## CONSTRUCTION OPTIONS (continued)

Motor Platforms  
Sump Sections  
Partitions  
Dams  
Compartmentalization  
Top Flanges

Three station steel plating tank equipped with 1/4"x2" copper bar bussing ready for in shop hook up and fixed motor mounts. Tank saddles are insulated with bakelite® spacers. Current capacity is 1000 amps per station



Single Compartmentalized Circuit Board Tank. 1" thick white poly construction, with external overflow dams and a built-in exhaust hood.



Two (2) Station Counterflow Rinse Tank, 1/4" steel construction, with overflow dam and two partitions for proper counterflow.



Steel/Koroseal Lined Rinse Tank, with field adapted polypropylene overflow dam.

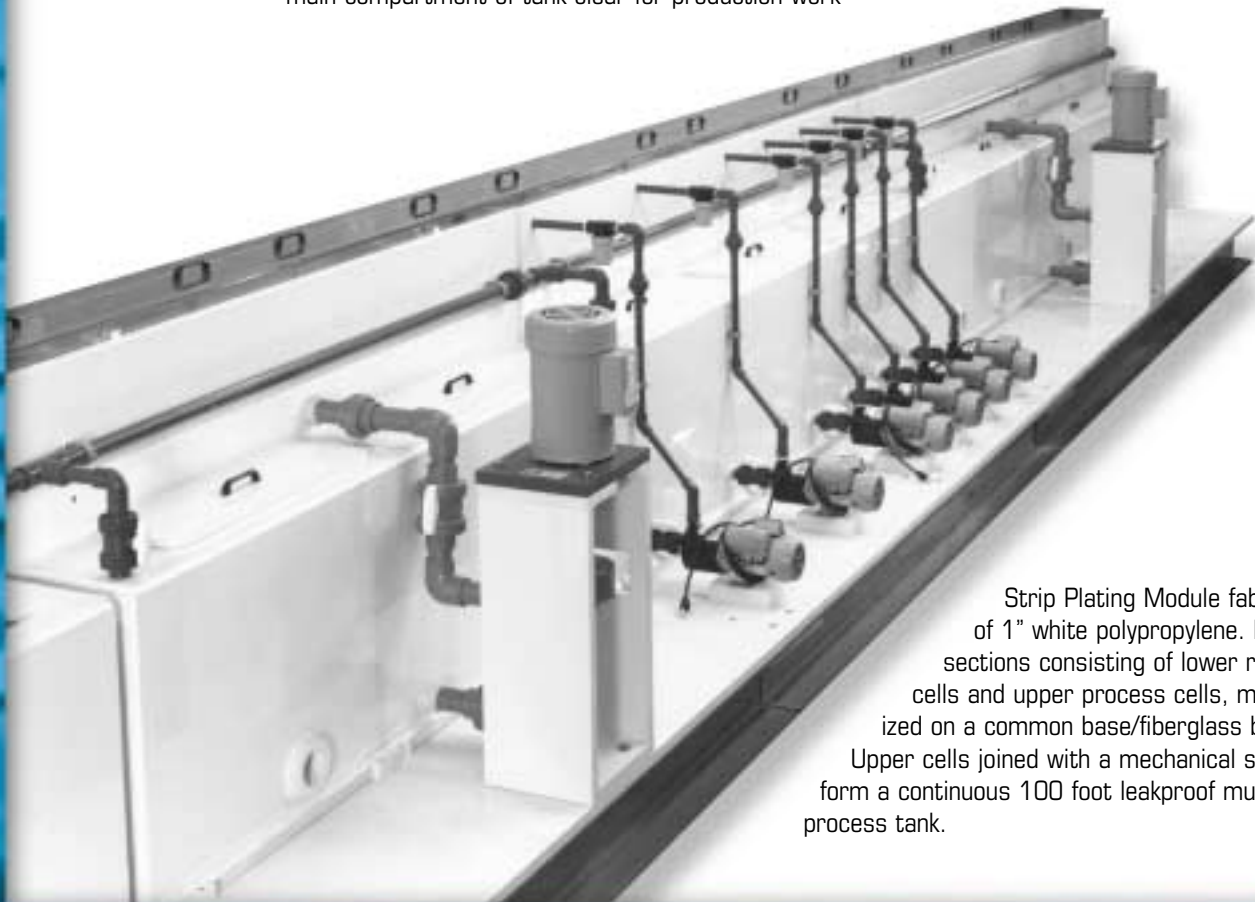
## TANK ACCESSORIES

- Plumbing
- Saddles
- Bussing
- Electric Heaters
- Plate Coils
- Recirculation Systems
- Air Sparges
- Anode Baskets
- Dummy Anodes
- Filters
- Agitation
- Digital Connections

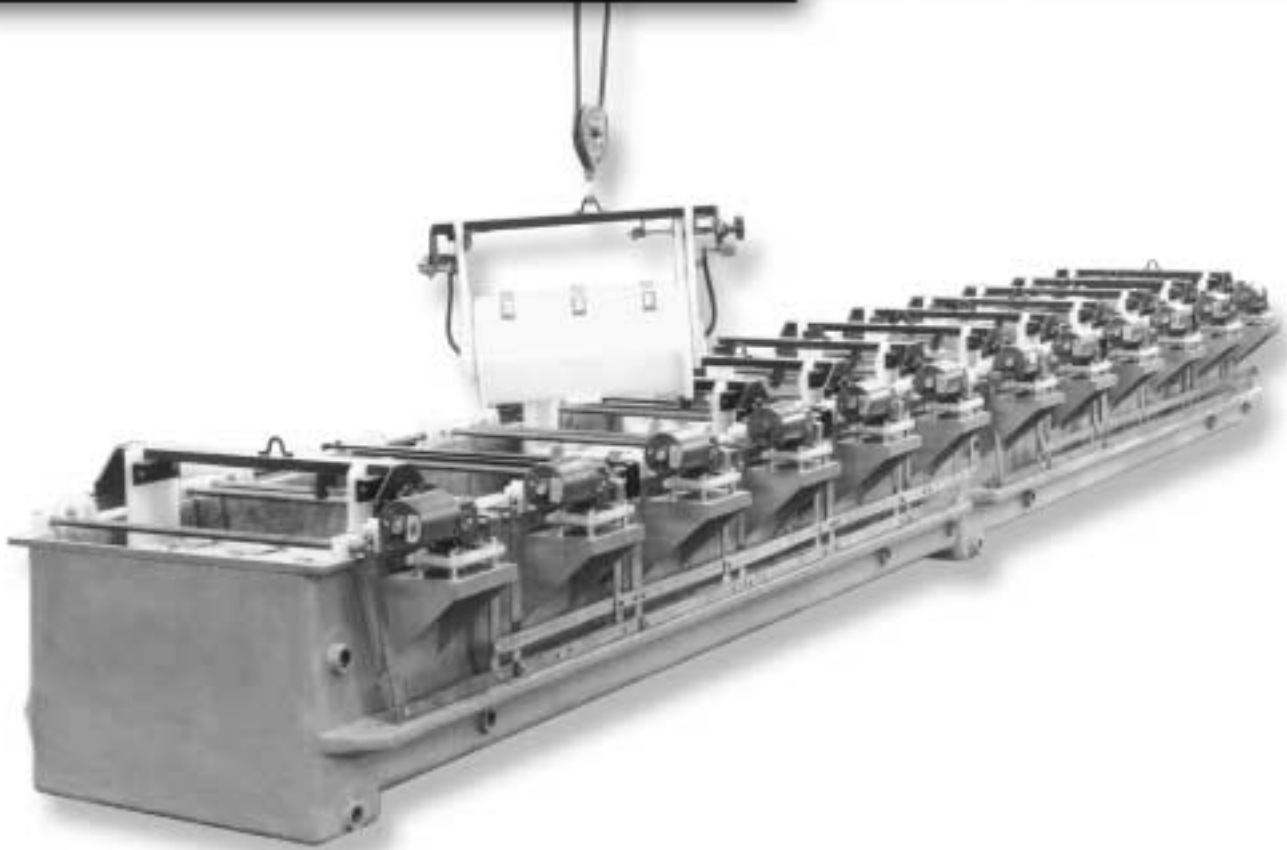
Two (2) Station Rod Agitator Tank, 1" thick poly construction, 1" diameter copper buss/poly roller saddles.



Portable barrel/rack tanks with rear sump section for pumps and filters keeps main compartment of tank clear for production work



Strip Plating Module fabricated of 1" white polypropylene. Multiple sections consisting of lower reservoir cells and upper process cells, modularized on a common base/fiberglass beams. Upper cells joined with a mechanical seal to form a continuous 100 foot leakproof multi-process tank.



Two (2) fiberglass six station Zinc Chloride plating tanks equipped with bussing to accommodate 1000 amps/station. Tanks feature 1/2" thick walls, 1/2"-5/8" bottoms, 3" top angles on front and rear, and PVC laminated drains. Copper anode bars are insulated above the solution level. Openings in the tank walls allow for heat exchangers, filters, and drain connections. Each tank has individual motor shelves with attached motor bases for adjustable motor to barrel gear alignment.



Ten station etch module, 4'x24'x3'-6", 1/2" white polypropylene tanks, set in a steel framework, modularized, encapsulated with poly skirting for a one piece console effect, combination backsplash for housing controls and vent hoods



SprayThru™



Top view of rinsing tank with double wall pitched bottom and fixed spray manifolds.

SprayThru™ technology allows solution to be sprayed directly inside the barrel. This provides a higher level of concentrated solution next to the parts during the plating cycle, thereby yielding faster, higher quality plating.

The SprayThru™ barrel is designed to be used throughout all the stations of your plating line. When coupled with a RinseMaster™ counterflow rinsing system, it provides the quality equivalent of a seven station counterflow rinse in a single space saving station.

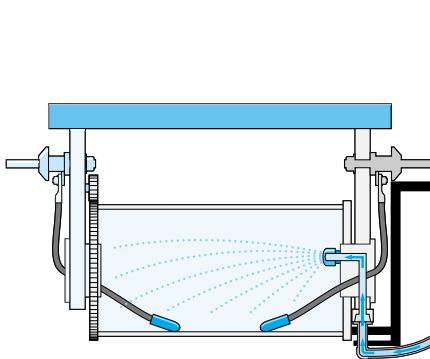
SprayThru™ systems not only increase plating and rinsing quality and efficiency, but also greatly reduce water consumption while minimizing pollution.

Please call for our SprayThru™ Systems brochure.

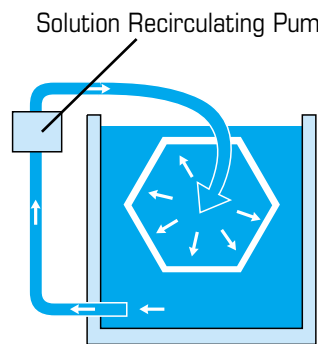


A switch on the tank saddle activates the submersible pump when the barrel is seated on the Z-bracket coupling

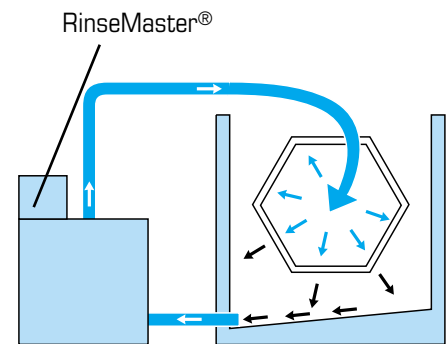
SprayThru™ Barrel equipped with internal spray bar



SprayThru™ Barrel equipped with internal spray nozzle.



Solution Recirculating Pump



RinseMaster®

Fresh solution is constantly pumped to the barrel interior throughout the plating cycle. The RinseMaster® delivers seven progressively cleaner sprays to the load, discarding only the first dragout "heavy" rinse.



Air drying station with pneumatically controlled air knives which are triggered automatically when a rack enters the tank. Knives move up and down blowing off the liquid until the rack leaves the tank.

SPECIAL APPLICATIONS



46" diameter x 48" deep storage tank. 3/8" thick walls are fusion welded for maximum strength. 1" thick milled base insures a positive inset fit. Interior and exterior welding at the base provides a leakproof finish. Upper reinforcing band provides structural strength to top edge and a broad base to mount accessories.

Combination Workstation/Exhaust Hood is 45" wide x 23" deep x 111" high and fabricated of 1/2" polypropylene with a 36" work height. Table serves as a common support for the sloped exhaust hood. The front sliding panel can be closed when not in use. Shelf below table top provides storage.



# TANK ORDERING INFORMATION

PLEASE PHOTOCOPY THIS PAGE, THEN FAX OR MAIL US YOUR TANK SPECS. WE WILL PROVIDE YOU WITH OUR RECOMMENDATIONS AND A NO OBLIGATION QUOTATION.

DATE \_\_\_\_\_ PHONE \_\_\_\_\_ FAX \_\_\_\_\_

YOUR NAME \_\_\_\_\_

COMPANY \_\_\_\_\_

ADDRESS \_\_\_\_\_

CITY, STATE, ZIP \_\_\_\_\_

### TANK DIMENSIONS, INSIDE:

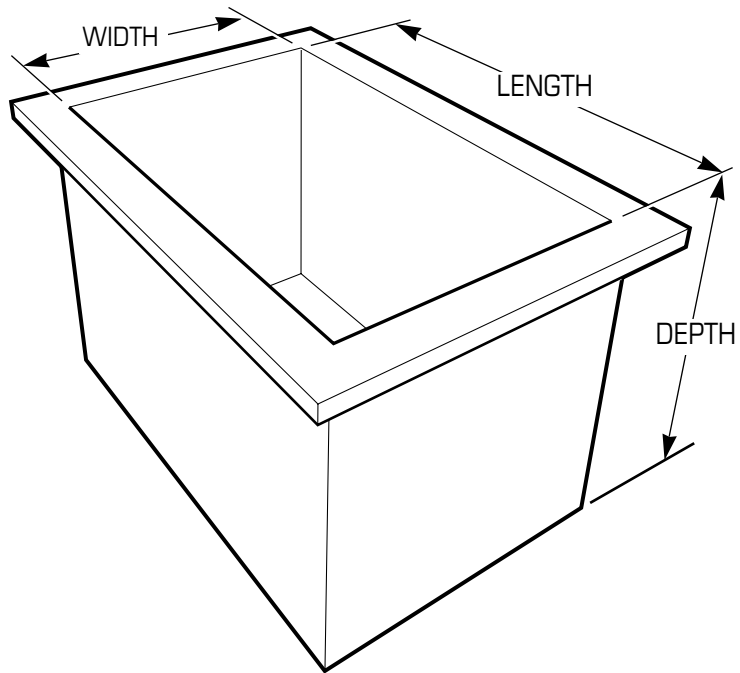
LENGTH \_\_\_\_\_

WIDTH \_\_\_\_\_

DEPTH \_\_\_\_\_

GALLONS \_\_\_\_\_

SOLUTION LEVEL FROM TANK LIP \_\_\_\_\_



### TANK LIP DIMENSIONS:

WIDE \_\_\_\_\_

THICK \_\_\_\_\_

NOTES: \_\_\_\_\_

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## OTHER PRODUCTS BY HARDWOOD LINE

### PORTABLE AND PRODUCTION POLY BARRELS

Our comprehensive barrel line allows you the flexibility to put together the combination of cylinder style, construction method and superstructure configuration that best suits your application.

Call or write for our Plating Barrel brochure.

### METAL BARRELS

Hardwood manufactures a full line of metal barrels. All are engineered to withstand heavy load requirements, high temperatures and acidic/caustic solutions.

Call or write for our Metal Barrel brochure.

### COMPLETE TURNKEY AUTOMATIC SYSTEMS

Hardwood offers complete manual or automatic turnkey systems. We can either automate your existing system or develop a new one specifically designed for your applications.

Shown at right is a PC driven, multi-tasking, automatic SprayThru™ system. Random load, dynamic control scheduling and in-line que stations enable both rack and barrel plating in a single line. The system also features an in-line air drying station, RinseMaster™ and Solo Rinsing stations.

Hardwood Line also manufactures ventilation systems designed for existing fume scrubbers, or new installations.

Call or write for more information.



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