

## PROCESS COMPARISON

<b>Costs</b>	<b>PlafORIZATION™ Organic Phos</b>	<b>Conventional Aqueous Phos</b>
<b>Energy</b>	<b>Lower</b> – Energy requirements are minimal since there is no heating (cold process) and fewer and smaller pumps and motors to operate.	<b>Higher</b> – With several baths heated daily and several large motors running, the energy required is much greater. Final rinse requires additional energy to dry parts before painting.
<b>Water</b>	<b>None</b> – The process uses no water.	<b>High</b> – Water is the main ingredient, and a large amount of fresh water is used in the rinsing stages.
<b>Waste</b>	<b>None</b> – There is no waste water; no sludge is created.	<b>High</b> – Periodic replacement of chemicals plus purification of rinsing water plus periodic desludging of the phosphating bath.
<b>Analytical</b>	<b>Very Low</b> – Testing is required only every other month. Samples are sent to our facilities and no testing is required on-site.	<b>High</b> – Chemical baths require daily accurate analytical controls.
<b>Dead Time</b>	<b>None</b> – There is no waiting time before starting operations.	<b>High</b> – Must wait for bath warm-up before starting operations.
<b>Capital</b>	<b>Low</b> – Only one processing station plus one small pump, exhaust fan, blow-off fan and drier.	<b>High</b> – Several processing tanks plus several pumps, exhaust fan, oven, computerized analyzer, water treatment equipment, desludging equipment, and oil skimmers.
<b>Space</b>	<b>Low</b> – With only one processing station, plants are very compact and simple to install.	<b>High</b> – With three or more tanks (up to 7-9), the space required is significantly greater.
<b>Operating</b>	<b>Known</b> – Costs can be calculated down to the penny. The cost per sq. ft. is fixed; it does not matter how many sq. ft. you treat per day.	<b>Uncertain</b> – There are many hidden variables that make it difficult to calculate the actual running cost of the process.
<b>Chemicals</b>	<b>High</b> – Initially chemical costs are higher, but you never need to change the bath; unlimited life.	<b>Low</b> – Chemical costs are relatively low, but periodic replacement of phosphating baths is required.