

How To Find the Best Plating Amperage for Your Bath Plating Process

Each solution in the electroplating industry has different plating requirements, one of them being the desired plating amperage. There is a simple equation to determine amperage that is based off the total surface area you are plating onto and the cathode current density.

Keep in mind that this is not the only plating requirement that changes between solutions. Please see the Technical Data Sheet (TDS) for additional information. This can be found on our website under the "Resources" tab.

We recommend building a template in Excel or Numbers to quickly calculate amperage as needed. The amperage could be different for each project depending on the size of the items being plated.

Cathode Current Density can be found on the solution's TDS

$$\begin{aligned} \text{Surface Area} &= W \\ \text{Area per Square Foot (ASF)} &= X \\ \text{Cathode Current Density (CCD)} &= Y \\ \text{Amperage} &= Z \end{aligned}$$

<u>Formula</u>	<u>Example</u>
<ol style="list-style-type: none">1. Find your W (Surface Area)2. $W / 144 = X$ (ASF)3. $X * Y$ (CCD) = Z (Amperage)4. Z is the plating amperage	<p>CCD from Bright Nickel TDS = 20-50, midpoint: 35</p> <ol style="list-style-type: none">1. Surface Area = 162. $16 / 144 = 0.111$ (ASF)3. $0.111 * 35$ (CCD) = 3.8854. Plate your part at 3.885 Amps