**Demand Calculations:**

This is your own personal Cheat Sheet for calculating Demand (KW)

<table>
<thead>
<tr>
<th>Key</th>
</tr>
</thead>
<tbody>
<tr>
<td>( KW = \text{Kilowatt (Demand)} )</td>
</tr>
<tr>
<td>( Kwh = \text{Kilowatt Hours (Energy)} )</td>
</tr>
<tr>
<td>( I = \text{Current} )</td>
</tr>
<tr>
<td>( I^1 = \text{Phase 1 Current} )</td>
</tr>
<tr>
<td>( I^2 = \text{Phase 2 Current} )</td>
</tr>
<tr>
<td>( I^3 = \text{Phase 3 Current} )</td>
</tr>
</tbody>
</table>

**Basic KW Calculation:**
The most basic calculation for Demand is:

\[
\text{Kwh ÷ Hours} = KW
\]

**Calculating Demand from Pulses:**
If you are trying to calculate Instantaneous Demand and have a pulse meter, try this equation:

\[
\frac{\text{Kwh/pulse} \times 3,600 \text{ sec/hour}}{\text{# of seconds between pulses}} = KW
\]

**Single Phase Calculation:**
Most Single-Phase applications will be for Residential and Small Commercial buildings

\[
I \times V = W
\]

\[
W ÷ 1,000 = KW
\]

**Balanced 3-Phase Power Measurement:**
Use if all 3 Phases pull the same amount of current

\[
I \times Vpp \times 1.73 = W
\]

\[
W ÷ 1,000 = KW
\]

**Individual 3-Phase Current Measurement - Phase to Neutral:**
Use if the Phases pull different amounts of current- Most simple calculation for these conditions

\[
(I^1 + I^2 + I^3) \times Vpn = W
\]

\[
W ÷ 1,000 = KW
\]

**Individual 3-Phase Current Measurement - Phase to Phase:**
Another method of calculating Demand if the Phases pull different amounts of current

\[
(I^1 + I^2 + I^3) \times Vpp \times .577 = W
\]

\[
W ÷ 1,000 = KW
\]

Want to know more about Demand? Contact the Demand Experts at Brayden Automation Corp.