Resistance Welding Transformer Calculations	
Required Inputs	
Rated Primary Voltage	U
Secondary Voltage at Rated primary Voltage	S
Name Plate kVA Rating under recommended operating conditions	Kn
Name Plate Duty Cycle under recommended operating conditions	Dn
To Calculate kVA @ 50% Duty, K50 (If Name Plate Duty Cycle Dn is not equal to 50)	$$K_{50} = K_n * \sqrt{\dfrac{D_n}{50}}$$
To Calculate kVA @ 100% Duty, K100 (If Name Plate D is not equal to 100)	$$K_{100} = K_n * \sqrt{\dfrac{D_n}{100}}$$
Calculate Thermal Current, I100 (Current @ 100% Duty Cycle)	$$I_{100} = \dfrac{K_{100}}{S}$$
For Calculating Maximum Spots per Minute permissible	
Required Inputs	
kVA Rating @ 100% Duty	K100
Supply Line Frequency	f
Secondary Voltage at Rated primary Voltage	S
Welding Current	Iw
Weld Cycles per Spot	Tw
Maximum Spots per Minute, (N) welder can perform	$$N = \dfrac{\left(\dfrac{K_{100}}{S}\right)^2 * f * 60}{\left(I_W\right)^2 * T_W}$$