

	Ep	Es	Np	Ns	step		Ep	Es	Np	Ns	step
1	120	12	660			26	240	24	200		
2	120	12		78		27	240	24		25	
3	120		820	82		28	240		300	60	
4		12	940	94		29		48	350	70	
5		24	1060	212		30		120	400	200	
6	120		1220	244		31	240		450	225	
7	120	24		284		32	240	120		250	
8	120	24	1600			33	240	120	550		
9	120	48		68		34	120	480		2400	
10	120		188	75		35	120		210	840	
11		48	193	77		36		480	230	460	
12		48	197	78		37		480	250	500	
13	120		220	440		38	277		270	116	
14	120	240		640		39	277	120		125	
15	120	240	420			40	277	120	310		
16	120	240		1040		41	277	120		142	
17	12		120	240		42	208		350	185	
18		24	160	320		43		110	370	195	
19		24	180	360		44		110	390	206	
20	12		200	400		45	208		400	211	
21	24	48		440		46	230	115		210	
22	24	48	240			47	230	115	440		
23	24	48		520		48	460	115		120	
24	24		280	560		49	460		490	122	
25		48	300	600		50		115	520	130	

eff = efficiency of a transformer represented as a decimal. step up = voltage up
 Ep is voltage primary/input voltage/line side voltage. step down = voltage down
 Es is voltage secondary/output voltage/load side voltage.
 Ip is current primary/input current/line side current.
 Is is current secondary/output current/load side current.
 Np is number of turns in the primary/input turns/line side turns.
 Ns is number of turns in the secondary/output turns/load side turns.
 These formulas are included in the Reference Formulas Appendix page 10.

$$\begin{array}{llll} \text{Ep} = \text{IsEs}/(\text{eff Ip}) & \text{Es} = \text{Ip Ep eff} / \text{Is} & \text{Np} = \text{Ns Is} /(\text{Ip eff}) & \text{Ns} = \text{IpNpeff} / \text{Is} \\ \text{Ip} = \text{Is Es} /(\text{eff Ep}) & \text{Is} = \text{Ip Np eff} / \text{Ns} & \text{eff} = \text{Is Es} / (\text{Ip Ep}) & \text{eff} = \text{Is Ns} /(\text{IpNp}) \\ \text{Ep} = \text{NpEs}/\text{Ns} & \text{Es} = \text{EpNs}/\text{Np} & \text{Np} = \text{EpNs}/\text{Es} & \text{Ns} = \text{NpEs}/\text{Ep} \end{array}$$