

## VOLTAGE CONVERTERS

### Questions which are frequently posed

*Do voltage converters also convert the frequency?*

**-NO-**

All voltage converters we supply do only convert the voltage and not the frequency.

Almost all appliances, like e.g. household devices, computer and electronic appliances are working faultless in spite of that.

You will find a general view under „**plug systems – worldwide**“ in which countries which voltage and frequency is used.

Small problems may occur with appliances with built-in motors, for example:

- USA-appliances with 110 – 120 V, 60 Hz, are working in Germany with 220 – 240 V, 50 Hz, a little slower and German appliances are working a little quicker in the United States.
- At analog clocks and time switch circuits the precise time is no more indicated exactly.

There exist appliances which are converting the frequency, these cost, however, several thousand Euros.

We don't sell them.

### *Which voltage converter do I need for example for a television set?*

If a watt number is indicated on the backside of your television, you should select in every case a voltage converter which has a 20 – 30 % higher capacity than the television.

The reason is: on switching on the television, it needs a much higher switching-on voltage than the capacity which is mentioned by the manufacturer, for example:

- If your television indicates a capacity of 500 Watt, you should use a voltage converter with a capacity of approx. 700 Watt ( $500 \text{ W} + 30 \% = 650 \text{ Watt}$ ). Our next available type has 800 Watt.

### *How do I select the appropriate voltage converter for me?*

On the backside of the appliance which you want to use with a voltage converter, you will find normally the indication about the capacity of your appliance in Watt or Ampere.

For example: if the capacity of your appliance is indicated with 70 Watt, you will need a voltage converter with 100 Watt ( $70 \text{ Watt} + \text{approx. } 30 \% = 21 \text{ Watt} = \text{totally } 91 \text{ Watt}$ ).

### ***Can I use several electrical appliances with one voltage converter?***

If you want to use several appliances with one voltage converter, just add the capacities in Watt of your appliances, for example:

One of your appliances has 150 Watt, the other 200 Watt = totally 350 Watt.

You require then a voltage converter with 500 Watt (350 Watt + approx. 30 % = 455 Watt).

The capacity of the voltage converter must be always much higher than the capacity in Watt of your appliances which you want to connect.

### ***How do you find out the watt/capacity of your electrical device?***

If the label of your electrical device doesn't indicate a watt capacity (W), but you know the Ampere (A), you may calculate the watt capacity by yourself:

Ampere (A) x Volt (V) = Watt =

For example

3 A x 220 V = 660 Watt or

3 A x 110 V = 330 Watt.

To this value please add 20 – 30 % as reserve for the voltage converter which you will then need, e.g.

330 Watt + 20 % = 396 Watt, so you will need a voltage converter of 400 Watt or more.

### ***Information regarding our voltage converters:***

Standardly our voltage converters are supplied with a protective contact plug with 2 earth wiring systems (plug type E + F), therefore also usable e.g. in France, Belgium, Czech Republic, Poland etc, without an adapter needed.

For other countries relating adapters can be obtained which are included in our delivery programme (please refer to – **converter plugs** - ):

Of course you may buy the relating adapter also from your local dealer.

Our voltage converters from 100 Watt – 5000 Watt have the following functions which has not every voltage converter available on the market:

1.)

Our voltage converters are converting the voltage in both directions, e.g. from 230 V to 110 V and from 110 V to 230 V.

2.)

Our voltage converters are secured by 1 – 2 fuses depending on capacity.

3.)

A glass fuse is included free of charge.

4.)

On/off switch

5.)

Universal sockets for different plug types with earth.

When using a Schuko plug, the earth doesn't go through. Additionally an adapter has to be used, e.g. our no. 7351 254 W or an adapter cable.

6.)

Tripolar cable with Schuko plug which has 2 earth wires, so that the appliance can be also used in France, Belgium, Czech Republic, Poland etc. without adapter.

7.)

The voltage converters can be adjusted with a special plug to different voltages on the backside of the appliance, like

110 V

200 V

220 V

240 V.