## Electricity

As a result of the numerous power problems during the 2013 edition of the eat! BRUSSELS festival, we feel it is worthwhile to repeat some elementary electricity notions.
We provide you with a 3x16A electrical distribution (3 single-phased line feeders) per food stand.
The formula to calculate the electrical power of a line is:

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\mathbf{P}=\mathbf{V} \times \mathbf{C}
$$

$\mathbf{P}=$ power.
Expressed in watts (W).
$\mathbf{U}=$ voltage.
Expressed in volts (V).

I = current.
Expressed in amperes (A).

The standard electrical voltage is 220 volts (single-phased). When the voltage is 380 volts, we speak of a three-phased line (the plug is different).
A $3 \times 16$ A electrical distribution coincides with $10,5 \mathrm{~kW}$ or 10560 watts maximum per stand. Indeed:
$\mathrm{P}=\mathrm{V} \times \mathrm{C}$
$P=$ what we are calculating
$\mathrm{U}=220$ volts (pas it is single-phased)
I = 16 amperes
So, $P=220$ volts $\times 16$ amperes. $P=3560$ watts. 1 line $=3560$ watts maximum.
We provide 3 lines of 16A, thus: 3560 watts $\times 3=10560$ watts maximum per stand or 10,5kW.

For your information, please find below the energy consumption of some household appliances:

|  | Voltage | Power |
| :---: | :---: | :---: |
| 2 rings | single-phased (220 volts) | 2500 watts |
| 1 microwave | single-phased (220 volts) | 1000 watts |
| 1 700L fridge | single-phased (220 volts) | 456 watts |
| 1 combi steamer | three-phased (380 volts) | $16,5 \mathrm{~kW}$ or 16500 watts |
| 1 electric oven 4GN | single-phased (220 volts) | 2500 kW |
| 1 electric griddle | three-phased (380 volts) | 6 kW or 6000 watts |
| 1 induction griddle | single-phased (220 volts) | 3500 watts |
| 1 fryer | single-phased (220 volts) | 3500 watts |



As soon as the maximum power per line is reached, the fuse blows, causing a power cut.

## Example:

On a 16A line, or 3560 watts, we connect:
3 fridges of 700L $=456$ watts $\times 3=1368$ watts
2 microwaves $=1000$ watts $\times 2=2000$ watts
Total on the line: 3368 watts. The maximum electrical power is reached. If you add one extra appliance, the fuse blows. This means your power is cut.

