Dyson Airblade Calculations

At Dyson we engineer machines that work properly, and to help our customers understand how they work, we are transparent about all of the claims we make.

Unfortunately, some of our competitors do not act the same way. They often use misleading claims, which can be confusing.

Below is an explanation of how we calculate our claims. If you would like more information, please contact us at 1800 239 766

- **Find out how we calculate running costs of paper towels**
- **How we calculate the running costs of Airblade and other hand dryers**
- **More about hand dryer environmental impact studies and calculations**

Cost savings:

At Dyson we use the following figures in our calculations:

Number of paper towels per use = 2
This is based on our own internal research. We know that people can often take more than 2 paper towels to dry hands but we believe in estimating costs as cautiously as possible.

Paper towel cost = $0.01
This is based on our own internal research. We have taken paper towels costs from the five most popular sources and calculated the average cost across all territories.

Bathroom usage per day = 200
This is based on our own internal research into the usage of an average sized bathroom. For smaller bathrooms with low footfall we use a figure of 100, and for high footfall areas such as service stations or airport bathrooms we use a figure of 400.

Number of days the bathroom is in use = 365 days.
We assume a whole year.

Electricity price per kWh = $0.10
This is based on our own internal research. We have taken electricity costs from 5 different sources and calculated the average cost across all territories.

Wattage = as stated by the manufacturer

Standby power = as stated by the manufacturer or as tested by Dyson.

Dry time is based on the National Sanitation Foundation's Protocol P335 (NSF P335).

Watch out: most hand dryer manufacturers do not follow NSF P335, so may quote incorrect dry times. NSF is an independent hygiene specialist. If you want an accurate dry time, insist on the NSF P335 test results.

For more information on NSF P335 please click here

How do we calculate the running costs of paper towels?

The annual running cost of paper towels is estimated by =

The average number of paper towels used to dry hands x the average cost of the paper towels x the assumed number of uses per day x an assumed number of days the bathroom is in use

How do we calculate the running costs of the Dyson Airblade™ hand dryer and other hand dryers?

There are 2 steps to this calculation.

Step 1: Running costs when in use (without standby)

dry time of hand dryer (in hours) x rated wattage of hand dryer (kW) x the assumed number of uses per day x the assumed number of days the bathroom is in use x electricity price per kWh.

Step 2: Running costs when in use (with standby)

Result of step 1 +

((Electricity price per kWh * number of hours in a year) – (estimated uses per day (100/200/400) * dry time of hand dryer (in hours))) * Standby power (kW)

= Annual running cost

Environmental Impact:

At Dyson we define environmental impact by calculating the amount of carbon (g) a hand drying solution uses.

The figures we use are based on a recent piece of research by a leading Massachusetts-based research university. They used a scientific method known as "Life Cycle Assessment" (LCA) to measure the overall environmental impact of seven hand drying systems including cotton towels, virgin and recycled paper towels and hand dryers – both conventional warm air and high speed dryers. Researchers considered all life cycle stages from manufacturing to end of life and calculated findings based on the systems' impact on CO2 emissions, ecosystem quality, land and water use, human health and resource intensity. An increasing number of companies including Apple, Walmart and Google have performed life cycle analysis of their products.

The report – a major step forward for Life Cycle Assessment – could be applied to other industries to help quash inaccurate "green" claims by making it easier to compare the environmental impact of day-to-day products, helping to answer questions such as 'paper or plastic?'

This LCA report is one of the most robust reports of its kind to date and looks beyond all current international standards by considering current and hypothetical scenarios that could impact the environment. It's a first step in developing a gold standard for comparing the environmental impact of products – helping consumers interpret the growing number of environmental claims.

The study was done in accordance with ISO standards 14040 and 14044 and relied upon all available data from current and relevant LCA research by paper towel, hand dryer and roller towel manufacturers to ensure the impartiality and accuracy of the peer-reviewed research.

Read the full report (link will open in a new window)