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How do we calculate the running costs of paper towels?

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

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 0800 345 7788

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).

Annual carbon impact is calculated based on 200 uses per day, 365 days per year.

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.

[> back to top](#)

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.

[> back to top](#)

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

[> back to top](#)

Environmental Impact

In collaboration with Carbon Trust, Dyson has produced a method to measure the environmental impact of electrical appliances and paper towels. The carbon calculations were produced using GaBi software provided by PE International, based on product use over 5 years and using the US as a representative country of use.

[> back to top](#)

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(<http://www.dyson.co.uk/hand-dryers/calculator/calculations.aspx>)

Products	Shopping info	Support	Community	General
Vacuum cleaners (http://www.dyson.co.uk/vacuum-cleaners.aspx)	Browse vacuum cleaners (http://www.dyson.co.uk/shop/vacuum-cleaners.aspx)	Get expert help (http://www.dyson.co.uk/support.aspx)	About Dyson (http://www.dyson.co.uk/community/about-dyson.aspx)	Contact us (http://www.dyson.co.uk/contact.aspx)
Fans and Heaters (http://www.dyson.co.uk/fans-and-heaters.aspx)	Browse Fans and Heaters (http://www.dyson.co.uk/shop/fans-and-heaters.aspx)	Register your guarantee (https://www.dyson.co.uk/product-registration/select-product.aspx)	Press (http://www.dyson.co.uk/community/press.aspx)	Privacy (http://www.dyson.co.uk/support/privacypolicy.aspx)
Lighting (http://www.dyson.co.uk/lighting/csyst.aspx)	Browse Lighting (http://www.dyson.co.uk/shop/jake-dyson-lighting.aspx)	Customer service (http://www.dyson.co.uk/support/customer-service.aspx)	WEEE Recycling (http://www.dyson.co.uk/support/wee-recycling.aspx)	Terms and conditions (http://www.dyson.co.uk/support/terms.aspx)
Hand dryers (http://www.dyson.co.uk/hand-dryers.aspx)	Delivery details (http://www.dyson.co.uk/support/delivery-details.aspx)	Your account (https://www.dyson.co.uk/youraccount/my-machines.aspx)	Careers (http://careers.dyson.com)	Terms of website use (http://www.dyson.co.uk/support/terms-of-use.aspx)
Tools (http://www.dyson.co.uk/vacuum-cleaners/accessories.aspx)	Guarantee details (http://www.dyson.co.uk/support/guarantee.aspx)	Energy Ratings (http://www.dyson.co.uk/energy-ratings.aspx)	Affiliates (http://www.dyson.co.uk/community/affiliates.aspx)	Cookie policy (http://www.dyson.co.uk/support/cookies.aspx)
	Returns policy (http://www.dyson.co.uk/support/delivery-details.aspx)	AM04/AM05 safety recall (http://www.dyson.co.uk/AM04-AM05-safety-recall.aspx)	Follow us on Facebook (http://www.facebook.com/dyson)	Corporate social responsibility (http://www.dyson.co.uk/community/sustainability-engineering.aspx)
	Shop (http://www.dyson.co.uk/shop.aspx)		James Dyson Foundation (http://www.dyson.co.uk/community/james-dyson-foundation.aspx)	Sitemap (http://www.dyson.co.uk/sitemap.aspx)
	Spares (http://www.dyson.co.uk/spares.aspx)			
	Find a retailer (http://www.dyson.co.uk/shop/find-a-retailer.aspx)			

¹ Tested using EN 60312-1:2013 Cl 5.1, 5.2, 5.3, 5.9. At bin full DC41 Mk2 removes more dust in total from hard floors, carpets and crevices.

* Bosch Athlet 25.2V and Dyson DC59. Suction test based on IEC 60312-1, 5.8 and 5.9 loaded to bin full, tested at the hose.

² Historically, manufacturers based “no loss of suction” claims on a single test that can be completed before a vacuum’s bin is full. We repeat that test to bin full 100s of times consecutively, amounting to 10 years’ worth of test dust, to ensure vacuums containing Dyson Cinetic™ science maintain constant suction.

³ Compared to DC41.

⁴ Based on testing of cordless stick products. Tested at the hose/wand

** GTech AirRam AR02 and Dyson DC59. Suction test based on IEC 60312-1, 5.8 and 5.9 loaded to bin full, tested at the cleaner head.

*** Calculated lifetime based on IES TM-21-11. 37 years (or 154,000 hours) is based on 11 hours continual use per day.

**** Based on Tolomeo lettura halo aluminium reading lamp using a 70W halogen bulb at a cost of £2.29, electricity cost of £0.10 per kWh and 154,000 hours duration.

⁵ Closing date 30th June 2015, for terms and conditions, visit www.dyson.co.uk/support/smokebox-competition-terms (<http://www.dyson.co.uk/support/smokebox-competition-terms.aspx>)

⁶ See calculations (<http://www.dyson.co.uk/hand-dryers/calculator/calculations>)

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