

Environmental Policy

Environmentally responsible engineering is efficient engineering. Doing more with less. Creating high performance machines and technology which maximise every Watt of power and gram of material. It is a mix of technological leaps and many small steps. Revolution and evolution in order to improve.

Efficient engineering

Dyson develops technology that works. A machine that doesn't do its job properly is a waste of time, money and resources.

Developing digital motor technology:

Motors convert electrical energy into mechanical might. By developing high-speed digital electric motors we are able to engineer smaller, lighter, more energy efficient machines. The Dyson digital motor in DC44/45 spins at up to 104,000 rpm – five times faster than an F1 race car with only 230 Watts.

Doing more with less:

Rather than relying on inefficient heating elements, Dyson Airblade™ hand dryers force unheated air through a slot as narrow as 0.3mm at 400 mph creating sheets of air that scrape water from people's hands. Compared with conventional warm air hand dryers, Dyson Airblade™ hand dryers are up to 80 per cent more energy efficient. And, unlike paper towels, Dyson Airblade™ contributes no waste to landfill or incineration during its working life.

Smaller, lighter:

Light weighting means minimising the volume of material in a machine, without compromising performance or durability. By selecting the material with the right properties, computer modelling and empirical testing, Dyson engineers have been able to slim down components, saving raw materials. Smaller machines also contribute to improved shipping efficiency and less waste at end of life. For example, Dyson's DC39 Ball vacuum is 7.5kg (total weight) at 290 Airwatts. It replaced DC23 Ball which was 8.8kg (total weight) at 280 Airwatts. DC39 Ball has higher flow, improved dust removal and is more manoeuvrable.

Understanding environmental impact:

Dyson engineers use a Carbon Trust approved lifecycle assessment method to measure environmental impact of machines from manufacture to disposal, helping them identify further opportunities for reduction.

No bags or replacement filters

Our vacuums do not have bags or replacement filters. So, no unnecessary waste.

Packaging

Robust boxes are designed to protect Dyson machines in transit, while also being environmentally responsible. Where possible we package our products using recycled materials. A Dyson machine box is made from over 85 per cent recycled cardboard.

Building machines that last

Dyson does not design for obsolescence. Engineers subject Dyson prototypes to an assault course of abuse tests so by the time our machines roll off the production line and come into service, they are strong enough to withstand many years of use.

The Dyson testing facility operates 24 hours a day, seven days a week and includes some 126 different test stations. With DC45, engineers simulated accidental collisions 7,462 times and conducted 4,008 impact tests on the wand and floor tool by striking them against the floor. The cleaner head was put through our push-pull testing rig, travelling some 360 miles – that's equivalent to a trip from London to Paris (and almost back again).

Every Dyson machine comes with a warranty and our award winning customer care team is on hand to help with any questions.

Reduce, reuse, recycle

By engineering machines with fewer but tougher materials, Dyson aims to reduce waste from the offset.

When electrical appliances reach the end of their life, they should be recycled. Our machines contain a high percentage of high grade recyclable materials. Dyson complies with the WEEE Directive in Europe which makes sure that waste electrical goods are recycled.

Take back schemes operate in a number of countries, refurbishing machines for resale or recycling those that are beyond repair.

Operations – logistics and buildings

Dyson operates in more than 60 countries. As with our technology, we aim for our operations to be energy efficient and environmentally responsible. Dyson tracks the environmental impact of its buildings and logistics to identify areas where further environmental savings can be made.

1. Dyson is growing fast, with new Dyson owners in different countries every day. By regularly reviewing the shipping routes and how our machines are stacked in containers and trucks, we ensure machines travel efficiently. For example by shipping Russia-bound machines directly to the port of St.Petersburg, we are reducing road kilometres travelled by 80 per cent.
2. We have eradicated the use of wooden pallets in more than 75 per cent of our shipping routes – doing away with the need to fumigate. Fewer pallets means we can fit more machines in a container – reducing the total number of containers shipped and saving fuel. Our container space utilisation has increased from nearly 70 per cent (2005) to 97 per cent (2013).
3. By fixing minimum and maximum temperatures in our buildings we are able to reduce the energy needed for heating and cooling our buildings. In Dyson UK, this contributed to an annual reduction in our carbon footprint.

The right materials

Materials scientists work with Dyson engineers to select the best materials for performance and endurance. This includes research into new materials with reduced environmental footprints.

All Dyson machines comply with RoHS, the European Directive on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic equipment. Examples of materials restricted by RoHS include lead, mercury and cadmium. Dyson is also compliant with the European regulation on the Registration of Chemicals known as REACH and California's Proposition 65.

Legislation

Dyson understands that the right laws help accelerate global environmental performance. We comply with applicable environmental laws and also influence the creation of new laws.

Dyson has always shown that through efficient engineering, high performance can be achieved with low power – and we're trying to encourage others to do the same. We have successfully lobbied the European Union to introduce a cap on the size of vacuum motors from 2014. The estimated energy savings from the EU Ecodesign and Energy Labelling measures for vacuum cleaners amount to 19 Terawatt hours of electricity per year by 2020. This corresponds to an estimated 8 million tons of CO₂e.