Dyson Tangle-free Turbine (N254)

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This Q&A looks at:

- Product specification
- General product
- Range & availability

1. Product specification

Q: What is the Dyson Tangle-free Turbine?
A: The Tangle-free Turbine tool is a new tool, which replaces the mini-turbine head (N112). It is being introduced across the Dyson Animal vacuum cleaner range, and as a stand-alone tool.

Q: Why re-invent the mini-turbine head?
A: Dyson engineers discovered how to prevent hair becoming wrapped and tangled around the brushbar on mini-turbine heads – they've removed the brushbar altogether. In its place they created a new tool with a pair of counter-rotating heads that lift hair and fiber from carpets and upholstery before directing it into the bin.

Existing mini turbine heads have small diameter brushbars making it is easy for hairs and fibers to tangle around them. This means the fibers must be pulled out by hand, or even cut free.

Tangling also leads to a loss in performance– the rotation speed and effectiveness are reduced; a traditional tool can stall completely.

Q: How does it work?
A: To solve the problem of hair tangling around the brushbar, Dyson removed the brushbar from the tool altogether. There is no brushbar for hair and fiber to tangle around. The new design of the tool has counter-rotating heads that collect hair and fiber; the repositioned airway directs it into the airflow to be carried straight into the bin.

Q: What are these heads and how do they remove hair and fiber from a surface?
A: A traditional brushbar rotates on an axis that is parallel to the surface being cleaned, bringing the bristles around for a momentary contact in and out of the carpet. The bristles need to pluck the hair from the surface and direct it towards the airflow, however they can keep hold of the hair, grabbing it until it tangles around the brushbar.

The heads in the Tangle-free Turbine are made of a flexible material, thermoplastic polyurethane (TPU), within which [2] sets of bristles are attached to each head.

These heads are directly driven by the gears inside the tool's body. They rotate perpendicular to the surface being cleaned, as in a polishing motion, and the bristles maintain a constant contact with the surface.

During hair and fiber removal, this rotation of the heads with their bristles can have the effect of rolling collected hair and fiber into a ball. When the ball of hair and fiber is large enough it will be sucked away, off the bristles.

Q: I just used this tool and there are hairs left behind on the bristles. Does this mean it has become tangled?
A: No. Before hair enters the airflow, it can gather into a ball. With more usage these hairs will be disturbed or join with others and then be removed from the bristles.

Q: If the bristles make more contact does this mean they will wear the surface more quickly?
A: No. The heads on which the bristles are mounted are made of thermoplastic polyurethane (TPU), which is flexible and offers excellent abrasion resistance. The engineers chose this material to provide just the right amount of give and push to work effectively.

Q: What surfaces can the tool be used on?
A: The tool is designed to pick up hair and fibers on carpets, rugs, upholstery and furniture. We don't recommend it to be used hard surfaces, like hard wood floors. This is because the rapid rotating action may change surface lustre in highly polished finishes, and on harder wearing surfaces the tool itself will face accelerated bristle wear.

Q: The old mini-turbine head used a "clean air turbine" – does the new tool also use this, and why?
A: Yes. There are two advantages to the clean air turbine:
1) Clean air drives the turbine, leaving it free from dirt and debris which can lead to wear.
2) The turbine's dedicated flow of air comes through the top of the tool, leaving the airflow free from choking if the tool is fully compressed.

Q: This new tool sounds very effective but will I find cleaning with it any easier?
A: Yes. Dyson engineers have designed the Tangle-free Turbine to be easier to use. Two pivots points help ensure the tool is kept flat against a surface during cleaning. On the previous tool, the soleplate is fixed, preventing optimum contact and making it less comfortable to use.
Thanks to the rotation of the bristles you are less restricted in having to go forward and backwards with the tool, instead you can also use the tool in a more flexible range of movements to suit the surface being cleaned.

The edge-to-edge cleaning is improved and so you will find you do not need to return to the edges with a different tool.

Q: Is this the blueprint for all future Dyson "brushbars"?
A: Not necessarily. This tool has been re-designed to overcome the fundamental problem that are caused by a small diameter brushbar– the collection and tangling of hairs and fibers. For a tool that is specifically developed to remove hairs and fibers from tighter spaces and above-the-floor upholstered surfaces, this is an important issue to address.

Tangle-free Turbine isn't designed to pick-up the combined challenges of embedded dust, dirt and hairs and fibers from high-traffic, open areas. This is where the traditional brushbar still has an important role to play. On larger machines, the brushbars have larger diameters and are driven by higher power motors or turbines, and so hair tangling is less of an issue.

Q: Is this tool patented?
A: Globally, there are nineteen patents pending relating to the technology on the Tangle-free Turbine tool.

2. General product

Q: Is this new tool compatible with my old Dyson vacuum?

A: It depends. The Tangle-free turbine is designed to work with all Dyson vacuums from DC23 onwards, except for DC24 and the cordless range of products due to their lower airflows.

3. Range and availability

Q: When will the Tangle-free Turbine launch?
A:
The tool will be seen first along with the new DC41 Animal Complete, available from October 1st on Dyson.com and most major retailers, and as a stand-alone tool. [for internal reference? – the second phase commences in March 2013 with a refresh of all Dyson Animal variants.]

Q: What is the price of the Tangle-free Turbine?
A:
The tool will be sold for $69.99, the same price as the current mini turbine tool.

Q: Will the Mini turbine tool be discontinued?
A:
Yes, the current mini turbine tool will no longer be sold with new technology and will not be available for purchase within the tool assortment. However, if shoppers have any issues with the mini turbine tool, the customer service team will still be able to assist.