

Continuous cotton roll towels

# Top Environmental Performance



## Maximum quality

### Top environmental performance



There are many good reasons to opt for cotton towels. They not only provide excellent hygiene and functionality, convenience and cost-effectiveness. Their environmental performance is also similarly excellent, as the present study proves. In six out of seven environmental aspects, cotton towels outperform the paper alternatives. The cotton roll system also fosters recycling and the closed loop economy.

We shall not rest on our laurels, because the study has also shown that there is further scope to improve our environmental performance. We incorporate life cycle thinking in our decision making and are therefore aware of the critical points of leverage: Lower washing temperatures and extended service lives of cotton fabrics are noteworthy examples.

Our endeavour is to combine, for our members' clients, maximum quality with unbeatable environmental performance. Because we know that the continuous cotton roll system provides the best starting point for a continuous process of improvement, for your satisfaction and for the benefit of our environment.

Yours sincerely,

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# Cotton towels outperform the paper alternative

## Scientific comparison leaves no doubt

Towel dispensers are found in almost every public washroom – in hotels and restaurants, in offices, sports facilities or public venues. Two systems are in widespread use: reusable continuous cotton rolls, and disposable paper towels.

Which product delivers the best environmental performance? To find out, the European Textile Service Association (E.T.S.A.) commissioned the Öko-Institut, Germany, to carry out a Life Cycle Analysis. The answer to this question is crucial in determining which product system decision-makers opt for.

### Lowest environmental impact



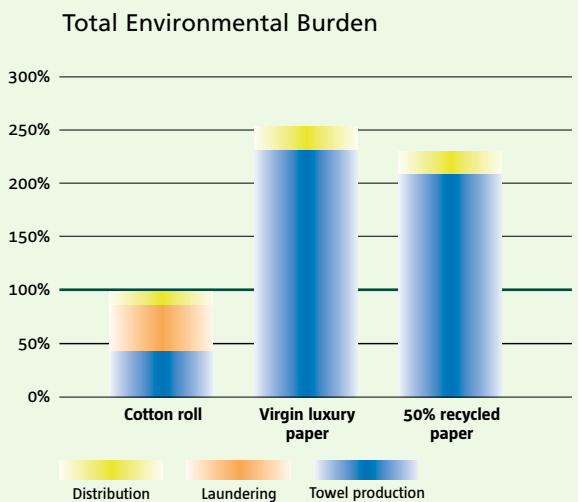
The outcome: In the overall comparison, continuous cotton towels generate the lowest environmental impact. This finding

applies both when cotton towels are compared with paper towels made from virgin luxury paper and when they are compared with paper towels made from 50% recycled paper.

The Total Environmental Burden associated with each of the three products underlines the environmental benefit of cotton towels. Paper towels made partly from recycled paper have an environmental impact that is 100% greater than cotton towels. The Total Environmental Burden associated with towels made from virgin luxury paper is greater still, at 2.5 times the impact.

Total Environmental Burden is a measure which takes into consideration:

- the quantity of greenhouse gas emissions such as carbon dioxide
- the contribution to the acidification and nutrient enrichment of soil and water
- the contribution to summer smog formation



*Cotton towels have the smallest environmental impact.*

Source: Total Environmental Burden. Supplement to the technical report (conducted by Öko-Institut)

### Cotton towels excel in six out of seven environmental aspects

Compared with paper products, the cotton roll system:

- uses up to 63% less energy
- generates up to 48% less greenhouse gases
- generates up to 79% less waste

The following table shows the aspects in which cotton towels perform better than the paper alternatives.

#### Detailed comparison of environmental aspects analysed

| Environmental aspects                                   | Unit                      | Cotton roll system | Virgin luxury paper | 50% recycled paper |
|---|---------------------------|--------------------|---------------------|--------------------|
| Energy use  | MJ                        | 1500               | 4040                | 3510               |
| Water use   | m <sup>3</sup>            | 13.3               | 12.3                | 9.6                |
| Resultant waste   | kg                        | 8.1                | 37                  | 30                 |
| Global warming potential                                | kg CO <sub>2</sub> equiv. | 93                 | 180                 | 184                |
| Potential acidification of soil and water               | kg SO <sub>2</sub> equiv. | 0.6                | 2.0                 | 2.0                |
| Nutrient enrichment of soil and water                   | kg PO <sub>4</sub> equiv. | 0.08               | 0.15                | 0.10               |
| Potential creation of photochemical ozone (summer smog) | kg eth. equiv.            | 0.05               | 0.10                | 0.09               |

*The comparison of a range of environmental aspects shows that the cotton roll system comes out best in six out of seven cases.*

## Closing the cycle

The closed cycle of the cotton roll system is at the heart of this excellent environmental performance. While paper towels are discarded after use, cotton towels can be washed and reused about 100 times. At the end of their service life as towels, they have a final use in most cases as cleaning cloths. This means even the discarded towels continue to be useful.

Further reasons for the good environmental performance are that

- the energy for washing the towels comes almost completely from clean natural gas
- limited packaging materials are used for the distribution of cotton rolls

Water use is the only aspect in which cotton rolls perform less well. In the most unfavourable case, water use is nearly 40% higher than that of the paper towel system. This is due to the water needed to irrigate cotton crops. In contrast, the water necessary for washing the towels only accounts for 16% of the total use. Moreover, the total wastewater pollution attributable to the cotton roll system, expressed as Chemical Oxygen Demand, is only 10% of that of the paper towel system.

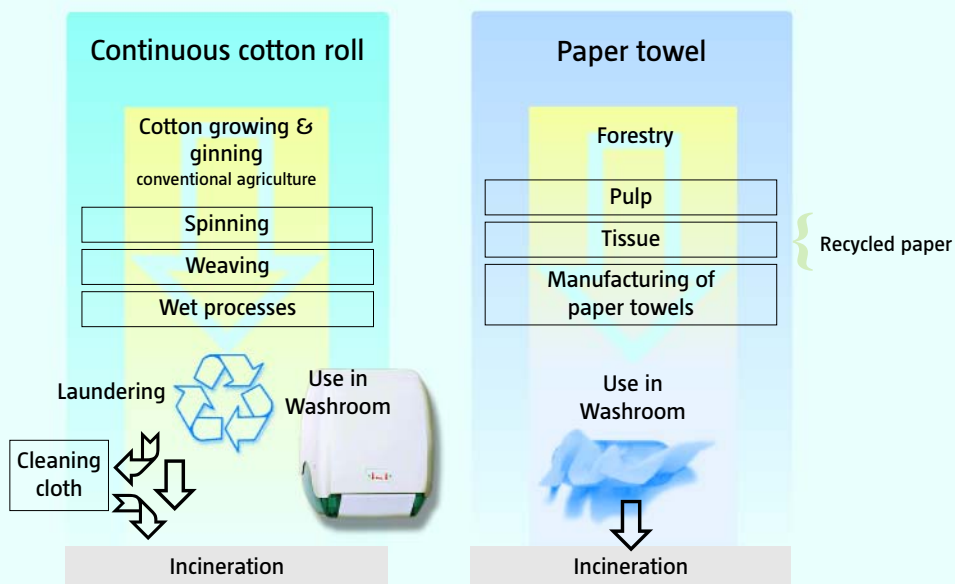


## Life cycle thinking

For both product systems studied, the scientists explored the entire life cycle from forestry and cotton farming, through towel production and use, up to recycling or final disposal, as shown

in the following Figure. One pull at a continuous cotton roll towel was considered to be the equivalent of using two paper towels.

## Overview of product systems



## Life Cycle Analysis

The Life Cycle Analysis (LCA) of Hand-Drying Systems followed the stringent requirements established by the ISO 14040 series of standards for LCA. The analysis was based on information provided by seven E.T.S.A. laundry companies based in six European countries. The paper towel system was modelled on the basis of pub-

licly available and up-to-date European average values for the pulp and paper industry. An independent critical review panel checked the LCA to ensure the neutral and unbiased nature of the study and its compliance with ISO standards. The detailed results of the study are available in the study report, which can be ordered from E.T.S.A..