

Sustainability Brochure



Embroidered Hat



What's the impact:

Dyeing with Twine vs. current industry processes

A life cycle analysis (LCA) assesses the environmental impacts and attributes associated with all the life cycle stages of a commercial product.

This LCA compares Twine's TS-1800 digital thread and yarn dyeing machine with current industry processes from the moment the raw materials are excavated, up until the polyester thread is dyed.

This LCA was made in collaboration with Made2Flow, with a 3rd party validation by Quantis.

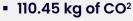


	Functional Unit	Benchmark
Thread	White 100% polyester threads	100% polyester threads
	243 Denier	243 Denier
Machine location	Guangdong province, China	Guangdong province, China
Dyeing color	Navy, Pantone 19-4030	Navy, Pantone 19-4030
Quantity	3.24 kg per head	5.76 kg per head
Boundary	Cradle - Dyed Thread	Cradle - Dyed Thread

Assumptions

The TS-1800 has a capacity to support 30 embroidery heads.

Avoided Results



Benchmark: 140.23 kg

Savings: 21.24%



 Measured in CO² equivalent, it includes gases such as carbon dioxide, nitrous oxide & methane



229 km driven by car



 CO^2

- 5.25 m³ of water
- Benchmark: 8.31 m³
- Savings: 36.83%
- All water used in the direct process or sub-processes (such as energy generation)



875 days of drinking



- 516.234 MJ of energy
- Benchmark: 448.60 MJ
- Savings: -15.07%
- The use of energy across all processes and sub-processes includes electricity and heat sources. It's measured in Megajoule (MJ)



-51 hours of watching Netflix



- 0.79 m² of land use
- Benchmark: 1.61 m²
- Savings: 50.80%
- The environmental impacts of occupying, Reshaping, and managing land for human purposes. It is measured in square meters (m²)



13.11 paper sheets of a size A4

About Twine

Twine's technology & solution presents a waterless, sustainable thread and yarn dyeing system, which can reduce time to market, and streamline inventory management while enabling an unlimited color palette.

With our zero water use technology, Twine's TS-1800 presents a sustainable thread and yarn dyeing system that addresses the serious water pollution and environmental issues that have been a part of the dyeing industry for decades.

Be Fast. Be Creative. Be Sustainable.











