

# **Environmentally harmful dumping of inefficient comfort fans in the European Union**

# Topten: Product lists of top products

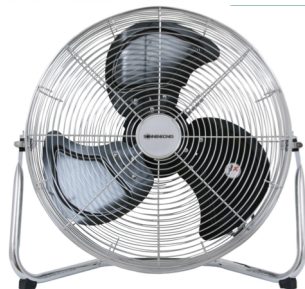
- Topten is a platform showing the most efficient products on the market.
- In preparation for the summer: Creation of a product list for comfort fans.
- Comfort fans serve as an alternative for air conditioners



Pedestal fan



Ceiling fan



Floor standing fan



Table fan



Tower fan



# Product research

## What is an efficient fan?

- Appliances that are designed to create air movement around or on part of a human body for personal cooling comfort.
- Over 52 million units sold in the European Union in 2020.
- Fan efficiency is measured with the Service Value

- $Service\ Value = \frac{\frac{m^3}{min}}{W}$

- The higher the value, the more air is displaced with less energy.
- Existing measurement method IEC 60879:2019 for all types of fans. Tower fans and bladeless fans were added to the latest version of the standard.

# Regulatory requirements

- Commission Regulation (EU) No 206/2012 for air conditioners and comfort fans set information requirements for comfort fans.
  - Gathering of product information for the next revision.
- No other requirements in terms of energy efficiency are included.
- MEPS for these products exist already in many countries (China since 2008, Malaysia, Vietnam, soon in Indonesia)
- 95% of all products sold in Europe are imported from China.

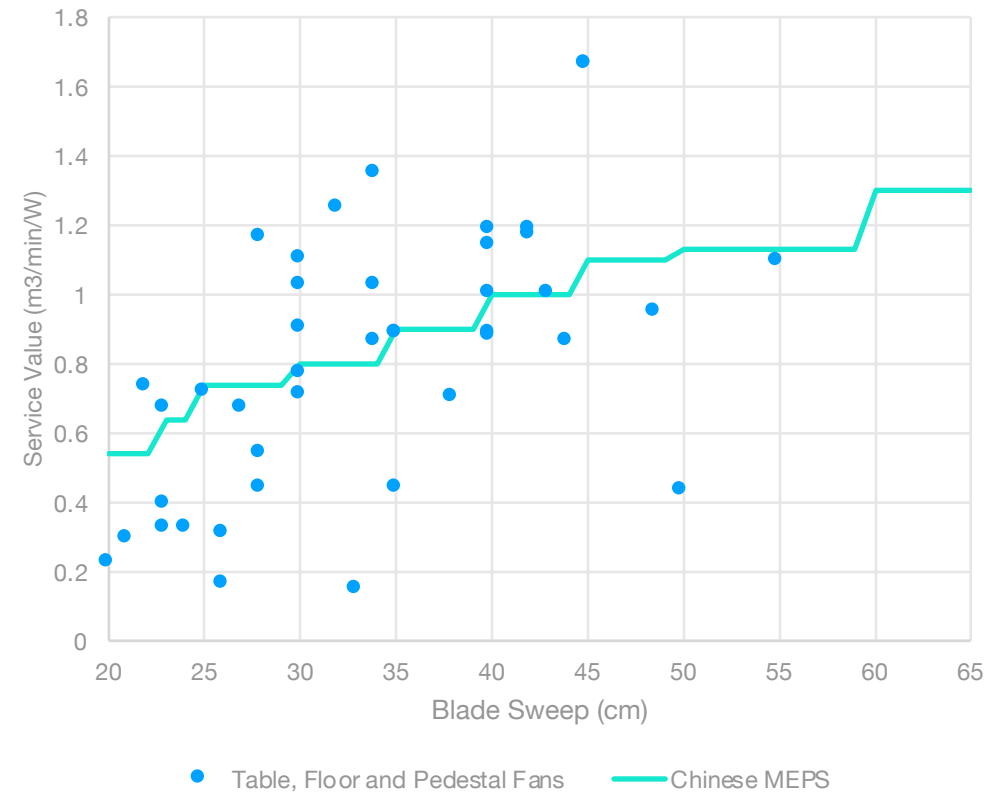
# Market assessment of products on the market

- In 2017, Topten decided to make a product list showing the most efficient comfort fans.
- Findings from the market assessment:
  - Products evaluated: 158
  - Products with complete information requirements: 8
  - Information requirements received upon request to the manufacturer or importer: 67
  - Total number of products used in the market assessment for the Topten list: 75

→ 89% of products did not comply with the regulation in force!

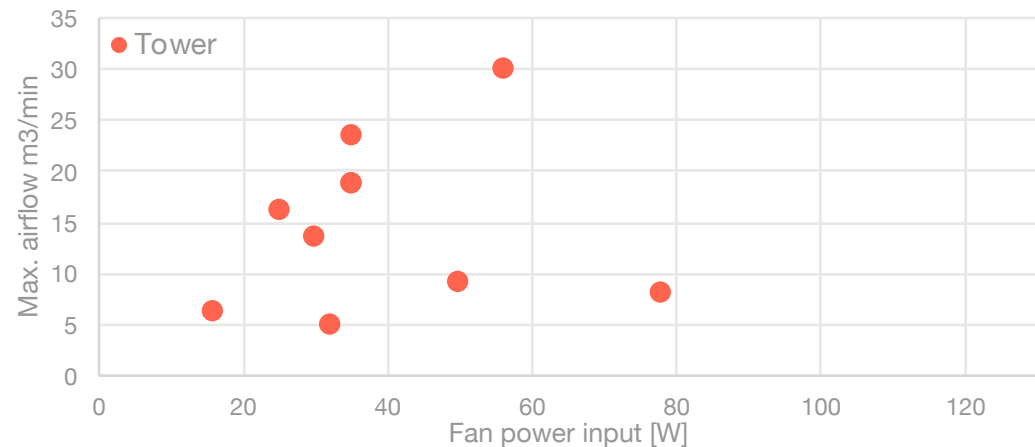
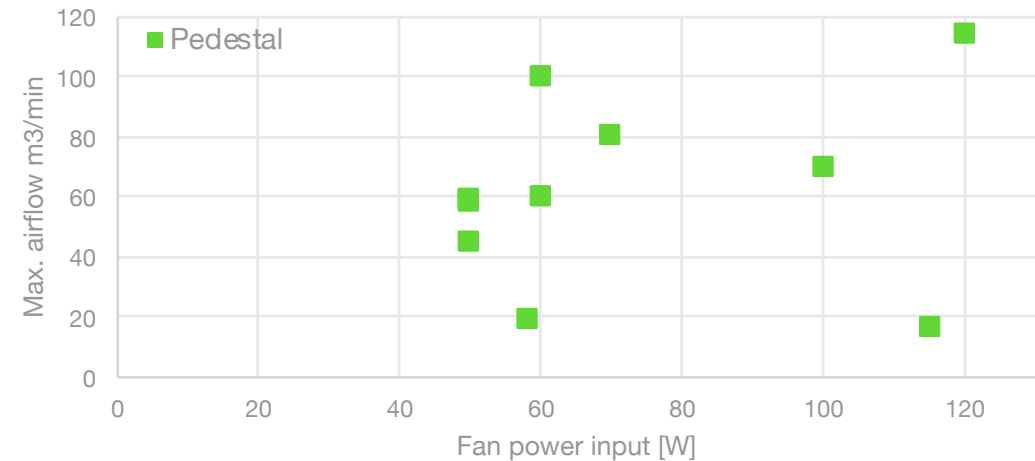
# Comparison with Chinese MEPS (2018)

- Since 95% of products are imported from China, the energy efficiency of the fans in the sample were compared to the Chinese MEPS
- Out of the 75 models evaluated, 32 models (42%) did not comply with the Chinese MEPS.
- It is expected that the amount is even higher as there is a reporting bias where good performers tend to report more than bad performers.
- The export of product that cannot be sold domestically because they do not comply with the local energy efficiency requirements is a case of environmental dumping (Andersen et al., 2018)








# Final Topten product list

- The Topten product list went online in 2018 with 41 models.
- Topten defined selection criteria per fan type by selecting the 50% most efficient products according to their Service Value.
- On the Topten product list, almost  $\frac{1}{4}$  of the products did not comply with the Chinese MEPS



# Comparison with the Chinese MEPS (2021)

- The product list grew to 123 models.
- The selection criteria for table fans and floor standing fans could be strengthened.
- In 2021 the Topten list still contained products that do not comply with the Chinese MEPS (9%).
- The Topten product list shows the best performing products on the market!

	Marke & Modell	Energie	Typ	Technische Daten	Kosten (CHF)	Preisvergleich
	Stylies Lyra	Energie (kWh/Jahr): Effizienz-Index: Standby (W):	1.6 1.00 0.0	Tisch Geräuschpegel (dB): Volumenstrom (m³/min):	35 5.0 Strom in 15 J.: CHF 5	CHF 44.05
	Sonnenkönig TENERO	Energie (kWh/Jahr): Effizienz-Index: Standby (W):	4.0 0.51 0.1	Turm Geräuschpegel (dB): Volumenstrom (m³/min):	49 6.1 Strom in 15 J.: CHF 12	CHF 79.00
	TRISTAR Tischventilator, 15 cm, 15 Watt	Energie (kWh/Jahr): Effizienz-Index:	4.8 0.80	Tisch Geräuschpegel (dB): Volumenstrom (m³/min):	46 12.0 Strom in 15 J.: CHF 14	CHF 14.95
	CasaFan Eco Genuino 152	Energie (kWh/Jahr): Effizienz-Index:	4.9 13.73	Decke Geräuschpegel (dB): Volumenstrom (m³/min):	50 211.5 Strom in 15 J.: CHF 15	CHF 687.75
	Sonnenkönig DOLMEN 3	Energie (kWh/Jahr): Effizienz-Index: Standby (W):	5.2 0.47 0.5	Turm Geräuschpegel (dB): Volumenstrom (m³/min):	58 7.0 Strom in 15 J.: CHF 16	CHF 110.70
	Coop FT-23A	Energie (kWh/Jahr): Effizienz-Index:	5.6 0.90	Tisch Geräuschpegel (dB): Volumenstrom (m³/min):	54 15.7 Strom in 15 J.: CHF 17	CHF 19.95
	Sonnenkönig DOLMEN 4	Energie (kWh/Jahr): Effizienz-Index: Standby (W):	6.5 0.51 0.6	Turm Geräuschpegel (dB): Volumenstrom (m³/min):	58 9.3 Strom in 15 J.: CHF 19	CHF 109.00
	Stadler Form Leo	Energie (kWh/Jahr): Effizienz-Index: Standby (W):	6.2 0.80 0.4	Tisch Geräuschpegel (dB): Volumenstrom (m³/min):	57 15.0 Strom in 15 J.: CHF 19	CHF 99.00



# Environmental Dumping

- Legal practice.
- Historically associated with the export of hazardous product waste
- Andersen et al. (2018) expanded the definition:

*“practices of exporting products or technologies that cannot be legally sold in the country of origin because of environmental, safety, energy efficiency or any other product standards to another country or territory with less stringent or non-existent regulations. This practice undermines the ability of the importing country to fulfil their environmental objectives and is contrary to the interest of consumers”.*

# Recommendations for the European Union

- This practice can be easily avoided by aligning product requirements with the ones of exporting countries.
- The MEPS in China have been into force since 2008. Their adoption is a no-brainer.