



Energy storage flywheel size





Overview

Compared with other ways to store electricity, FES systems have long lifetimes (lasting decades with little or no maintenance; full-cycle lifetimes quoted for flywheels range from in excess of 10 , up to 10 , cycles of use), high (100-130 W·h/kg, or 360-500 kJ/kg), and large maximum power output. The (ratio of energy out per energy in) of flywheels, also known as , can be as high as 90%. Typical capacities range from 3 to 13.

The flywheel energy storage market size crossed USD 1.3 billion in 2024 and is expected to register at a CAGR of 4.2% from 2025 to 2034, driven by rising demand for reliable UPS systems in data centers.

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The global flywheel energy storage market was valued at USD 1.3 billion in 2024 and is expected to reach a value of USD 1.9 billion by 2034, growing at a CAGR of 4.2% from 2025 to 2034. Flywheels are used for uninterruptible power supply (UPS) systems in data centers due to their instant response.

The global flywheel energy storage market is projected to rise from USD 1.46 billion in 2025 to approximately USD 1.81 billion by 2034, registering a CAGR of 2.38%. The market is driven by rising demand for uninterrupted power supply and grid stabilization, especially across Europe, which accounted.

The global flywheel energy storage systems (FESS) market was estimated at USD 461.11 billion in 2024 and is projected to reach USD 631.81 billion by 2030, growing at a CAGR of 5.2% from 2025 to 2030. The market for Flywheel Energy Storage Systems (FESS) is experiencing significant growth driven by.

Flywheel energy storage (FES) works by spinning a rotor (flywheel) and maintaining the energy in the system as rotational energy. When energy is extracted from the system, the flywheel's rotational speed is reduced as a consequence of the principle of conservation of energy; adding energy to the.

The global flywheel energy storage market size was valued at USD 325.33 million in 2024. The market is projected to grow from USD 351.94 million in 2025 to USD 564.91 million by 2032, exhibiting a CAGR of 6.99% during the forecast period.



Asia Pacific dominated the global market with a share of.

The global flywheel energy storage market accounted for a revenue of USD 362.6 million in 2025 and is projected to reach a market size of USD 671.0 million by 2035, registering a CAGR of 6.2% from 2026 to 2035. The increasing integration of renewable energy sources is proliferating the demand of.



Energy storage flywheel size



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The global flywheel energy storage market size was valued at USD 325.33 million in 2024. The market is projected to grow from USD 351.94 million in 2025 to USD 564.91 ...

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The global flywheel energy storage market size accounted for USD 362.6 million in 2025 and is projected to hit around USD 671.0 million by 2035 at a CAGR of 6.2%.

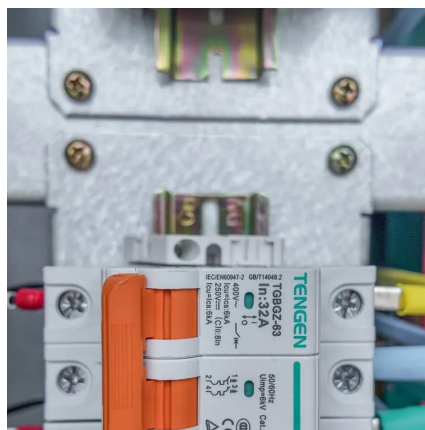
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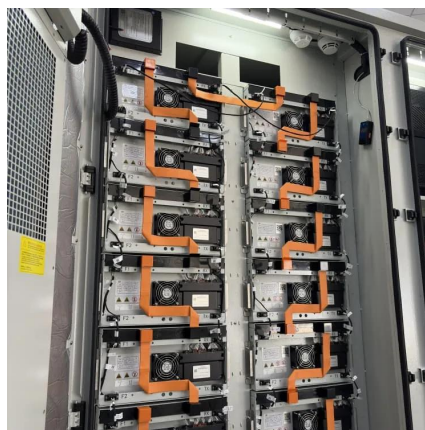
Flywheel Energy Storage System



Market Size, Share Report 2035

Flywheels can provide the necessary support to balance supply and demand, enhancing the overall efficiency of renewable energy systems. Technological advancements in flywheel ...

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The flywheel energy storage market size crossed USD 1.3 billion in 2024 and is expected to register at a CAGR of 4.2% from 2025 to 2034, driven by rising demand for reliable UPS ...

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[Flywheel Energy Storage Market Size to Worth ...](#)

The global flywheel energy storage market size was valued at USD 1.43 billion in 2024 and is projected to worth around USD 1.81 billion ...

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Modular and scalable flywheel systems empower localized deployment, supporting both centralized grid enhancement and distributed energy models. Advanced monitoring and ...

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Flywheel energy storage



First-generation flywheel energy-storage systems use a large steel flywheel rotating on mechanical bearings. Newer systems use carbon-fiber composite rotors that have a higher ...

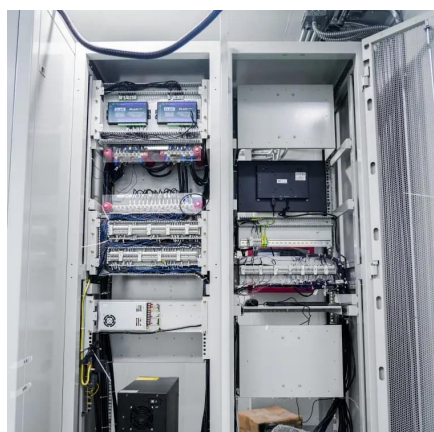
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Flywheel Energy Storage Market Size to Worth USD 1.81 Bn by ...

The global flywheel energy storage market size was valued at USD 1.43 billion in 2024 and is projected to worth around USD 1.81 billion by 2034 with a CAGR of 2.38%.

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Flywheel Energy Storage Market Size to Hit USD 671 Mn by 2035

The global flywheel energy storage market size accounted for USD 362.6 million in 2025 and is projected to hit around USD 671.0 million by 2035 at a CAGR of 6.2%.

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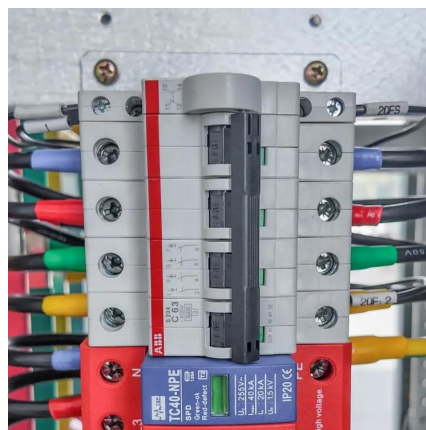


Flywheel energy storage



Overview
Physical characteristics
Main components
Applications
Comparison to electric batteries
See also
Further reading
External links

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[Global Flywheel Energy Storage Growth Analysis](#)

Global Flywheel Energy Storage size is estimated to grow by USD 224.2 million from 2024 to 2028 at a CAGR of 9% with the composite rims having largest market share.

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