

# NEW ENERGY STORAGE MAGNETIC PUMP



What is a moving magnet pump (MMP)? A moving magnet pump (MMP) is a unique type of electromagnetic (EM) pump that does not suffer from the shortcomings of other induction-style EM pumps. MMPs produce a traveling magnetic field that induces electrical currents within electrically-conductive liquid metals.



How do moving magnet pumps work? Moving magnet pumps (MMPs) work by having liquid metal flows in the direction of magnet rotation. (Disc-style MMPs typically have two discs, one on either side of the duct. For this image, the second disc was omitted for clarity.) MMPs are powerful and useful tools with immediate industrial applications.



When were the first EM pumps created? To take advantage of promising liquid-metal technologies, many different types of electromagnetic (EM) pumps have been created since the 1940s. High-temperature, liquid metals can be used in a variety of ways to enhance both energy production and energy storage, as highlighted by Table 1.



What is the difference between MMP & other electromagnetic pumps? Moving magnet pumps (MMPs) generate a travelling magnetic field with a spinning array of permanent magnets instead of polyphase field coils. This difference allows MMPs to be made much more quickly, reliably, and inexpensively than other types of electromagnetic pumps.



Can computer simulations improve next-generation EM pumps? It is believed that more accurate computer simulations will enable the development of improved next-generation electromagnetic (EM) pumps. Analyzing the impact of secondary magnetic fields caused by the induced electrical currents within the liquid metal. For this paper, these effects were found to be very small and were therefore neglected.

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How are MMPs made more quickly than other pumps? MMPs generate a travelling magnetic field with a spinning array of permanent magnets instead of polyphase field coils. This difference allows MMPs to be made much more quickly than other types of electromagnetic pumps.



Their special feature: They are an energy store and a hydroelectric power plant in one. If there is a surplus of power in the grid, the pumped storage power station switches to pumping mode an electric motor drives the pump turbines, which



A typical SMES is made up of four parts: a superconducting coil magnet (SCM), a power conditioning system (PCS), a cryogenic system (CS), and a control unit (CU). In superconducting magnetic energy storage (SMES) devices, the



Subscribe to Newsletter Energy-Storage.news meets the Long Duration Energy Storage Council Editor Andy Colthorpe speaks with Long Duration Energy Storage Council director of markets and technology Gabriel



Energy Storage 195 . Foam Products but canned motor pumps require a new pump for any alterations. While magnetic drive motors feature a single containment zone, canned motor pumps offer double containment with



a, Schematic of pumped-storage renovation.b, Short-duration energy storage, which can be provided by reservoirs with a water storage capacity of at least several hours.c, Long-duration energy

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Energy Storage; Solar and Thermal Hydro Energy Storage; Hydrogen;  
Our journey to lower emissions, decarbonizing customer operations, and  
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Magnet Motors for ???



Recently, Anhui Tenglong Pump Valve Manufacturing Co., Ltd.  
successfully won a bid for a large-scale flow battery energy storage  
project, providing a batch of heavy-duty ???



New to Grundfos? Create an account today and get access to our wide  
range of online services. As shown on the illustration, the magnetic-driven  
pump is made of two groups of magnets; an inner magnet and an outer  
magnet. A non ???



The TMV series of pumps features advanced permanent magnet  
technology and frequency conversion, making them highly efficient and  
energy-saving. These pumps are specifically designed to handle a wide  
variety of ???