

AEM Multicore Factsheet

Enapter's novel AEM Multicore is designed to use our proven 2.4 kW Anion Exchange Membrane (AEM) stack technology. Based on millions of hours of data from our electrolyzers operative in commercial installations, this robust technology has shown itself to be perfect for building our megawatt AEM Electrolysers. In the AEM Multicore, a total of 420 stacks will work in unison to produce up to 450 kg (210Nm³/h) of hydrogen per day.

To do so, our 2.4 kW stacks will be electrically connected in series in groups of ten, and mounted into racks or frames. These stacks will soon be mass-produced with huge economies of scale. Borrowing from the PV industry, we call such a racked system a string. We have already built the first string prototypes, one of which can be seen in the image below.

Each string is connected to individual power units and these strings are then connected hydraulically in parallel. We opted for this solution to offer the lowest electrolyser prices to our customers: our standardised power supply units are off-the-shelf components (24 kW), which have been developed in the battery industry for decades.

Of interest to those producing their own renewable energy: Each string allows individual regulation and startup/shutdown. This ensures optimal operation at different load levels that can be expected when integrated with renewables like wind and solar energy.

We are soon going to deploy our first full demo unit with 420 stacks, so that commercial deliveries of the AEM Multicore 0-series can be delivered in the second half of 2023. We will only release ten units in the first year, while many more are expected to hit the market from June 2024 onwards, in our 1-series. If you want to secure your AEM Multicore for 2023, please get in touch with our team immediately. We are happy to schedule a visit in case you wish to see the string demo unit in operation.



Demo of a string with 10x AEM stacks in Münster, Germany (June 2022)