The Van de Graaff accelerator at IRMM works since many years providing proton, deuteron and helium beams for nuclear data measurements. The original ion source was of RF type with quartz bottle. This kind of source, as well known, needs regular maintenance for which the accelerator tank must be completely opened. The heavy usage at high currents of the IRMM accelerator necessitated an opening about once every month. Recently, the full permanent magnet Microgan ECR ion source from PANTECHNIK was installed into a new terminal platform together with a solid state amplifier of 50W, a dedicated dosing system for 4 gases (with respective gas bottles H2, D2, He and Ar), and a set of dedicated power supplies and electronic devices for the remote tuning of the source. The new system shows a very stable behaviour of the produced beam allowing running the Van de Graff without maintenance for several months.