A device for magnetic cleaning of liquid contains a housing from nonmagnetic material located between the plungers of electromagnetic system, which are adjacent to the housing, a ferromagnetic bed located in the housing, feeding and unloading branch pipes. For the purpose of increase of the efficiency of the process of cleaning due to decrease of the losses of magnetic flux and increase of induction of magnetic field into the volume of filtering bed the housing is made with magnetic-conducting inserts located in the places of adjoining of plungers to it.