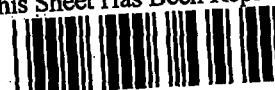


ABSTRACT**Electric motor with permanent magnet excitation.**

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The invention relates to an electric motor with permanent-magnet excitation, particularly an internal-rotor or external-rotor motor, having motor parts (7, 9) which are movable relative to one another, of which one motor part forms a multi-pole excitation field in an air gap by means of permanent magnets (7) and the other motor part comprises a coil configuration (9) situated in this air gap, which coil configuration is free of soft-magnetic material, the permanent-magnetically excited motor part comprising a cylindrical yoke (17) having substantially radial slots (18), which are uniformly spaced about the circumference and in which permanent magnets (9) are mounted, which permanent magnets are magnetised in a circumferential direction with directions of magnetisation which change from magnet to magnet, in which the cylindrical yoke (17) consists of an isotropic permanent-magnet material which in the yoke portions (22) between the permanent magnets (19) in the slots (18) is predominantly radially magnetised in such a manner that the resulting magnetic field in the air gap (12) has the same polarity as the magnetic field produced by the permanent magnets (19) in the slots (18), and in which the permanent magnets (19) in the slots (18) consist of an anisotropic permanent-magnet material.

Fig. 2