

Title (en)

Method of assembling electric motors, in particular printed motors, and motors assembled thereby.

Title (de)

Verfahren zum Zusammenbau elektrischer Motoren, insbesondere Motoren mit gedruckten Schaltungen, und danach zusammengebaute Motoren.

Title (fr)

Méthode d'assemblage de moteurs électriques, en particulier moteurs à circuits imprimés, et moteurs ainsi assemblés.

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Application

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Abstract (en)

A method for the assembly of electric motors of the printed type having a printed armature (18) that rotates in a flat, annular air gap (70) between a magnet assembly (12) and a magnetic flux plate (16), wherein the size (d) of the air gap (70) is accurately maintained at preselected value. In one embodiment of the invention, a precision shim, having a thickness (d) the same as the preselected air gap size, is placed on a flat work surface, the magnet assembly (12) is placed on the shim (48), and a motor housing (10) is placed over the magnet assembly (12) and shim. An epoxy fill (52) in the housing (10) is compressed as the housing is pressed down over the magnet assembly (12) until a reference surface (46) on the housing (10) contacts the work surface. In an alternate embodiment of the invention, an inner flux plate is formed to include a plurality of tines, so shaped and sized that, when the inner flux plate and the magnet assembly (12) are bonded together and inserted in the housing (10), the tines provide for a force fit in the housing (10). The magnet assembly (12) and inner flux plate are pressed into the housing (10) by a press tool with lugs that project from a flat surface of the tool by a distance (d) equal to the preselected size of the air gap. The method can be generally used for assembling electric motors of small overall size and high torque, especially for drive motors for tape transport apparatus.

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- GB 1136519 A 19681211 - LICENTIA GMBH
- FR 1519914 A 19680405 - GEN ELECTRIC
- FR 1452982 A 19660415 - BOSCH GMBH ROBERT

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