

A wave piezoelectric motor consists of a stator comprising a piezoelectric cell with electrodes for excitation of a wave quazi-running along a circle, to whose one cylindrical surface of permanent radius a rotor is pressed, directly or through a wear resistant layer, the rotor is made as a rotational body, which is characterized in that the surface area of diametral ring cross-section of piezoelectric cell is variable and has two minimums and maximums; herein, the electrodes and polarization of the piezoelectric cell are made that the following condition is provided: simultaneous excitation of two phase-shifted standing vibrations of second mode, longitudinal along a circle, the vibrations are generated by a single-phase AC source, maximums and minimums thereof are spaced by a quarter-wavelength.