

MD.12.**Title****BALL SCREW VARIATOR****Authors**

Valeriu DULGHERU; Radu CIOBANU; Oleg CIOBANU; Stanislav SLOBODEANIUC.

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The invention relates to the construction of machines, in particular, to transmissions with a variable transmission ratio.

The technical result of the invention consists of the following:

Description

- The execution of the inner bush with a spherical outer surface, on which one (or two) closed sinusoidal grooves with an inclined axis γ_1 are executed with the possibility of varying the angle of inclination of the sinusoidal groove(s) ensures the relatively easy variation of the speed of the driven shaft, using gear elements;

- The implementation of two closed sinusoidal grooves with a phase shift of 180° on the spherical outer surface of the inner bushing, and on the inner spherical surface of the outer bushing two rows of longitudinal grooves inclined at an angle γ_2 and γ_2+90° , respectively, ensures increased bearing capacity and compensation of axial forces, which occur in the gear;

- The execution of the mechanism to vary the inclination of the intermediate bushing with gravity elements ensures the automatic variation of the speed of the driven shaft depending on the load.