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Issue	E3S Web of Conf. **Volume** 365, 2023 IV International Scienti c Conference "Construction Mechanics, Hydraulics and Water Resources Engineering" (CONMECHYDRO - 2022)
Article Number	04022
Number of page(s)	10
Section	Mechanization, Electri cation of Agriculture and Renewable Energy Sources
DOI	https://doi.org/10.1051/e3sconf/202336504022
Published online	30 January 2023

E3S Web of Conferences **365**, 04022 (2023)

Bench tests of friction drive of vertical spindle made of poly-V belts

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characteristics of the friction drive of vertical spindles, it was proposed to replace its conventional V-belts with poly-V-belts. Therefore, rollers with changed parameters are installed on the spindles while maintaining the magnitude of the rolling radius of serial rollers.

To determine the functionality of the new drive, a stand with a single spindle drum was created, which allows you to determine all the performance indicators of the polyline drive. The main research task on this stand was to determine the possibility of creating a traction (friction) force of the drive that always exceeds the resistance force of a cotton bush clamped in a narrow working slot of the harvesting apparatus. To assess the functionality of a new version of the friction drive, a comparison technique was used when, in the beginning, the friction (thrust) force of a serial roller with a V-belt drive was measured, and then, on the stand-pull force of the drive with a poly-V-belt. A special device was made to measure the pulling force of the belts.

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