

Spice in motion! igus linear guides for a quick movement in spice vending machine

The young engineers support (yes) programme, supports a student project at EMAG LaserTec GmbH with drylin W linear systems

Curry instead of cola! Five students from Heubach, together with engineers and trainees from EMAG LaserTec GmbH, developed a vending machine especially for packaged spices. In order to deliver the salt, curry and pepper cans quickly from the compartments, they used igus drylin W linear guides. They ensure that the machine moves quickly, smoothly and without lubricants.

Use learned knowledge directly: this opportunity was available to students of the student engineering academy and also to the students of the Rosenstein high school in Heubach. Five students from the 11th grade had the opportunity to get a taste of the engineering profession for over a year. In the process, they learned basic knowledge of project management, technical drawing, gear technology and programming. With the knowledge imbibed from the subjects taught as well as the training workshop at EMAG LaserTec GmbH, the pupils were now able to develop a spice vending machine by themselves. With the assistance of the young engineers support (yes) from igus, the young inventors opted for the drylin W linear modular system for the mechanics. The linear guides ensure a cost-effective and long-lasting automation solution.

From industry to the supermarket

The idea for the spice vending machine came up during a tour of the EMAG LaserTec factory in Heubach. There the students were fascinated by the automatic high-bay installation for tools and then thought about a task that could also be automated in everyday life. "The students quickly decided to construct a spice vending machine for supermarkets in order to speed up selection and shopping", explains Jens Gruber who supervised the project at EMAG LaserTec. "In order for the system to be able to take the right spice out of the machine, we needed long-lasting and smooth linear guides for the axes. So the students contacted igus."

drylin W for fast automation

A total of three linear guides from the drylin W modular system are used in the machine. They ensure that all compartments are easily accessible, so that the appropriate spice can be taken out and delivered. In the guide carriages of the linear rails, igus relies entirely on wear-resistant high-performance polymers. The tribo-plastics in the sliding elements are completely free of lubricants and are suitable for use in the food sector. As there is no lubricating grease, no dirt can stick to the linear carriage and block the guide. The young inventors chose a belt drive to drive the z-axis. The problem here was the high vibrations, which the guides were able to successfully absorb. The drylin linear technology is used not only in innovative spice machines, but also in many tried and tested machines such as ATMs, drinks machines and even in automated order picking systems in pharmacies.

igus supports school projects

Projects such as the spices vending machine are supported by igus as part of young engineers support. With the university initiative, igus wants to support pupils, students and lecturers with free samples, sponsorships and the development of innovative projects. For more information about the university support, visit www.igus.eu/yes.

Caption:



Picture PM0320-1

drylin W linear guides ensure lubrication-free adjustment in the spice vending machine. (Source: igus GmbH)

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