



A mole for the heating system

Dunkermotoren drive solutions in intelligent wood pellet extraction system from Schellinger

The use of heating systems with renewable energies is becoming increasingly important, and not only for new buildings. Existing properties are also being converted step by step to green, efficient heat energy - the keyword being energy-efficient refurbishment. Especially for existing properties, the change is often difficult since a new heating system usually requires structural changes. In most cases, these are expensive and space-consuming. For pellet heating systems, however, there is an attractive solution that is neither expensive nor requires a special infrastructure for storage.

The company Schellinger KG from Weingarten enables space-saving pellet storage systems that make efficient use of existing space and can even increase storage capacity by up to 50% with the same space requirements.

Thus, multi-family houses, hotels or commercial enterprises can heat particularly cost-saving. This is made possible by the Pellet Maulwurf E3®, which was specially developed for large pellet stores. Thanks to robust and safe drive solutions from Dunkermotoren, a brand of AMETEK Advanced Motion Solutions, it regulates pellet extraction and empties each store reliably and completely, without any structural changes.

All good things come from above

Schellinger KG is a true pioneer in wood pellet production. At its two production sites in Buchenbach in the Black Forest and Krauchenwies in the district of Sigmaringen, the company produces around 120,000 tons of combustible Sonnen-Pellets®, which are made from 100% regional and renewable raw materials. Since 1998, the company has also been active in the field of storage technology for wood pellets and in 2004 it revolutionized the previous pellet storage with the introduction of its Sonnen-Pellet Maulwurf® extraction system. The special feature of the system is the extraction of the pellets "from above". The Pellet Maulwurf® works its way from top to bottom in the storage room. With the aid of three drive rollers arranged in a



star shape, it moves over the press grain and gently meters it in front of the suction nozzle. This allows the pellet supply to be extracted in a controlled manner. Thanks to sensor-based, intelligent control, the system manages to completely empty the store independent of the room geometry. Whether round, angular or asymmetrical - with the aid of the mole technology from Schellinger, existing rooms can be used one-to-one for pellet storage. Compared to previously common funnel-shaped storage chambers, which must be planned already during the construction of the building and make subsequent retrofitting almost impossible, it can be achieved a space gain of up to 50% thanks to the Pellet Maulwurf E3®. Thus, larger quantities can be ordered and, if necessary, quantity discounts can be realized. In addition, the number of delivery processes is reduced and thus also the effort required to manage the storage. This in turn has a positive effect on the costs for the operator.

With the right drive through the winter

The three drive rollers arranged in a star shape drive the mole and meter the wood pellets in front of the suction nozzle. The rotation of the rollers and thus the movement of the mole is made possible by one brushless DC motor of the series BG 32 series from Dunkermotoren for each roller. Unlike the traditional brushed technology, a brushless motor does not produce sparks, which ensures compliance with all safety regulations in the fire-hazard application area. The attached planetary gearbox with specially welded output shafts also allows the drives to easily achieve high torques. These are needed to move the 15 kg unit safely and permanently, even on uneven terrain. Integrated electronics give the drive solution its intelligence and also serve as an interface to the higher-level control system. This ensures that all areas of the warehouse are reached and completely emptied. In all drive solutions from Dunkermotoren, the electronics are completely integrated into the motor housing as a standard and are thus optimally protected from dirt and dust.

Thanks to intelligent drive solutions from Dunkermotoren, the extraction system Maulwurf® from Schellinger KG provides a space-saving and economical solution for wood pellet storage. This makes the use of renewable energy even easier and is also available to businesses,



apartment buildings, hotels, and local heating network operators with existing premises in an uncomplicated way.

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