

Press Release

For the best in efficiency, intelligence, and technical cleanliness

The new DEPRAG step feeder system: “eacy step feed”

Specifically designed for longer screws!

The focus of the DEPRAG eacy feed equipment has always been the most efficient, fast, and low-abrasive supply of parts and fasteners for assembly - a critical component for the productivity and reliability of assembly processes. Feeding devices are designed to effectively and precisely supply the required quantity of correctly aligned components, parts, and fasteners. Screws are the most commonly fed parts, although other components include rivets, threaded pins, O-rings, and labels.



DEPRAG can provide optimal feeding technology for almost any application. “If the feed system needs to handle particularly long screws, which would be too long for a standard sword feeder or vibratory feeder, we have now come up with a new solution for this challenge. The new DEPRAG step feeder, “eacy step feed”, now enables the efficient, intelligent, and technically clean feeding of even longer screws,” explains Product Manager Daniel Guttenberger.

The complete system, including a storage container, material-handling technology, linear conveyor, separator, housing, and controller – specially designed for longer screws – offers a hassle-free and reliable operation with 24V technology, independent from mains voltage and mains frequency. The DEPRAG step feeder system combines all the advantages of a step feeder with the outstanding energy-efficiency of DEPRAG’s vibration and regulating technology.

Main features of the DEPRAG eacy step feed

The feed material is quietly fed in stages over linear feed plates from the storage container towards the feed rails. A brushless electric motor, controlled by the smart energy efficient DEPRAG eacy feed PFC100 controller, is used to drive the feed plates. The directly adjustable feed rate supports gentle part feeding.

The integrated sequence controller PFC100 regulates the complete feeding process for -EP and 11911-x designs used in combination with handheld screwdrivers. Each new cycle is triggered via a start impulse; this significantly reduces integration in higher-level system controllers. As an alternative, the system is controllable via an external PLC/IPC controller. Direct integration in IPC environments is also an option with the PFCi100.

The feed material is geometrically aligned in the feed rails. A linear conveyor then transports the feed parts towards the separator. Fill level sensors in the storage container and the feed rails measure and regulate the feed rate. In the separator, feed material is separated and pre-positioned to be the shot through the feed hose or for pick-up using vacuum tool or gripper.



Gentle component handling and CleanFeed concept

The feeding system exhibits particularly gentle handling of feed material. Vibration is only used in the vicinity of the linear feed rails. A brushless electric motor is used as the drive for the feed plates, ensuring a calm, gentle motion. The feed rate is controllable via the smart, energy-efficient DEPRAG eacy feed controller.

This gentle part handling and low friction feeding guarantee that particle build-up is kept to an absolute minimum. However, there is also the option of adding vacuum suction equipment to boost technical cleanliness at specific interface points. The DEPRAG CleanFeed concept is also available for each processing step of the eacy step feed system – from component handling and feeding to fastening – prevent, reduce, and remove abrasion.



Compatibility with other DEPRAG components

The step feeder has the option to be combined with DEPRAG storage systems. They are the ideal complement for optimal processing, ensuring a constant fill volume and extended re-load intervals. Eacy step feed is, of course, also compatible with DEPRAG's other automation components, such as the DEPRAG Feed Module DFM, the DEPRAG screwdriving function modules and DCOS, the DEPRAG Controller System.

Guttenberger clarifies, "The high feed rate, long life-span and compact size – specifically for longer feed parts – provides an alternative to vibratory spiral feeders and sword feeders."

It is clear that the step feed system, in combination with DEPRAG automation components, is an attractive complete solution for numerous assembly applications. All key technology is produced in-house, and therefore, all components are perfectly coordinated with one another.

In addition to their diverse range of components, the company is also presenting other highlights to support the interconnected digital factory: pioneering smart tools which optionally connects to the newly developed DEPRAG Cockpit software solution; this enables the supervision and evaluation of all assembly tasks and provides analysis tools for continuous process optimization and the recognition of trends.



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Background information:

DEPRAG SCHULZ GMBH u. CO. based in Amberg/Germany was founded in 1931 and today has over 700 employees and representatives in over 50 countries around the world. There are production facilities in Germany, the Czech Republic, and China as well as distribution and service subsidiary locations in France, Sweden, USA, Mexico, and the United Kingdom all providing support to their international clients around the globe. DEPRAG is rapidly increasing its market share through innovation and cutting-edge technology in the classic product lines of screwdriving technology, automation, air motors, and air tools and is one of the market leaders.

Exceptional precision and quality standards in production ensure the outstanding reliability of all products. Numerous renowned international companies have, therefore chosen DEPRAG as their assembly partner. From standardized devices to customized special designs, DEPRAG has solutions for a full spectrum of applications for complex assembly and production tasks – always with the focus on sustainability. DEPRAG quality management is certified according to ISO 9001:2008 and accredited to ISO 17025:2005.

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