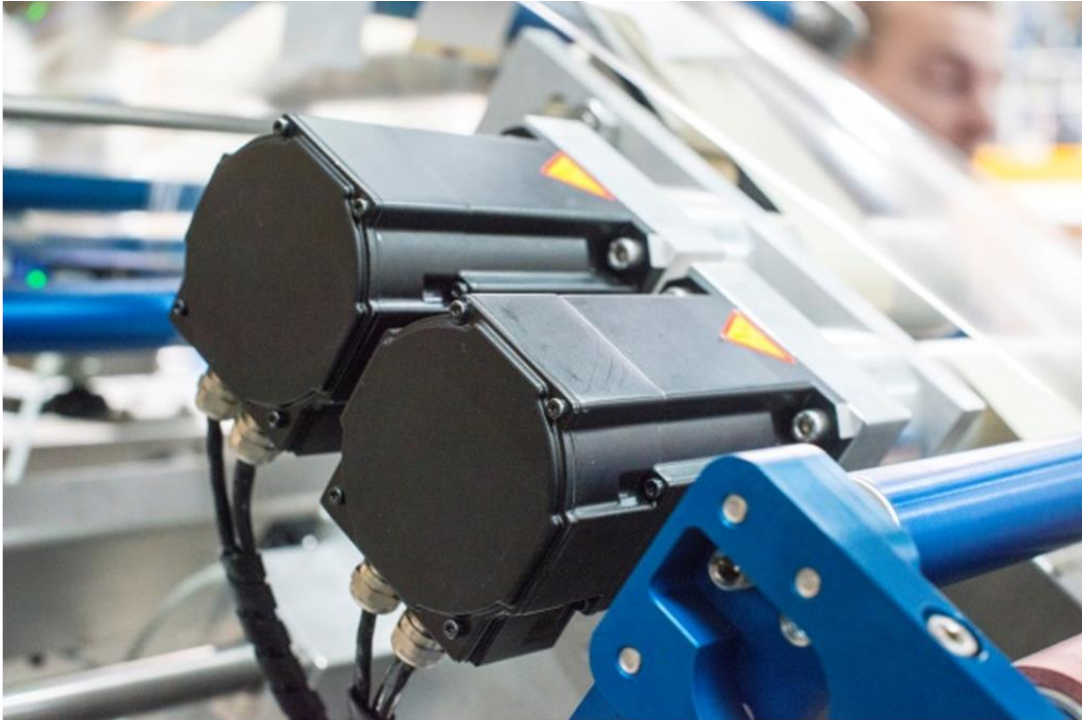


New potential with a separate labeler

Why VH Vertical Packaging is developing its own solutions and why servo motors with 48 volts from KOLLMORGEN are the perfect match



The Dutch packaging machine producer uses the AKM servo motors in the 48 volt versions as the drive for the labeler.

A Dutch packaging machinery manufacturer has now developed a labeler as part of a retrofit with servo-drive technology based on 48 volts. This is designed as an optional module for the company's own vertical packaging machines on the one hand and as a functional enhancement for retrofitting older machines of well-known producers on the other. The combination of the new [48 volt DC Servo Motor low voltage](#) from KOLLMORGEN and a Motion Control solution from SIGMATEK makes it possible for the labeling module to be integrated easily into new machines or for existing machinery to be retrofitted.

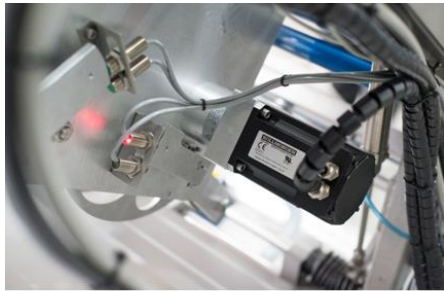
They do virtually everything in Weert: First of all VH Vertical Packaging develops its own packaging solutions. The Dutch company then becomes one of the first ports of call when it comes to complete overhauls for machines from other manufacturers and for updating the automation to the latest technology. And if that was not enough, the company then also starts in-house development for functions that are also available ready-made for the most part. What is the motivation for VH Vertical Packaging developing its own labeler? The response from Weert: Most of the equipment produced by established manufacturers is too big and too expensive and has limited functional scope for our own purposes. "This is why we asked ourselves why we could not develop something like that ourselves", says Marcel Wetemans, Managing Director and owner of the company specializing in form fill seal packaging machines based to the south-east of Eindhoven.



The labeler is structured in such a way that it can be used as an option both for new machines as well as for retrofitting systems from other manufacturers.

Personal contact with the customer brings success

VH Vertical Packaging really concentrates on building vertical form fill seal packaging machines, as its name suggests. “We fill anything related to foodstuffs. That can mean grated cheese, frozen vegetables, as well as pasta.” Its main customers are producers that as a result of their own size prefer to buy machines from companies that work on an equal scale. “We cultivate an environment of highly personal collaboration with our customers. This makes us attractive in terms of the competition. I would never have believed at the start that this would be so important”, is how Marcel Wetemans describes his company’s strategic direction.



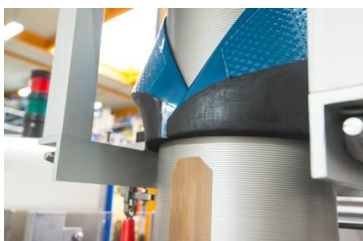
The 48 volt version of the AKM in frame size 3 provides an output of 300 watt.

And whatever is important in terms of customers is also valuable with the company’s own suppliers. “We have seen strong growth over the last few years. This success is down to our flexibility and also most certainly to good collaboration with technology partners. We arrive at good solutions time and time again with our partner Dynamic Drives when it comes to engineering projects.” The labeling module is one such result. As a certified Silver Partner to KOLLMORGEN, Dynamic Drives uses [synchronous servo motors](#) from the AKM series for the servo-drive technology. Sigmatek is used for the PLC and Motion Control. Designing the process control and motion control together with the motor controls as

a separate low voltage solution independent of the [packaging machine](#) was a special feature of the labeler. The aim was also to make the entire unit compact enough to allow existing filling systems to be retrofitted, including in particular without a second control cabinet.

48 volts for the ideal drive

These objectives ultimately resulted in servo-drive technology that works with a voltage supply of 48 volts. The benefit: Dynamic Drives – a high-performance system partner to KOLLMORGEN in Belgium and the Netherlands for more than 20 years – has now been able to implement the ultra-compact S-Dias range from SIGMATEK. The compact fully-integrated servo amplifiers with DC 061 axis modules for motors with resolver input fit on the DIN rails and feature dimensions reminiscent of I/O systems. The controllers are designed for nominal power ratings of up to 300 watts at 6 amps of continuous current and voltage of 48 volts. “This output is enough to drive the labeler with sufficient dynamic and at high precision”, says Frank ten Velde, Account Manager at SigmaControl (exclusive partner to SIGMATEK in the Benelux countries). KOLLMORGEN chose an AKM synchronous servo motor with frame size 3 as a basis for the 48 volt motor and adapted this for low voltage use with corresponding adjustments to the winding.



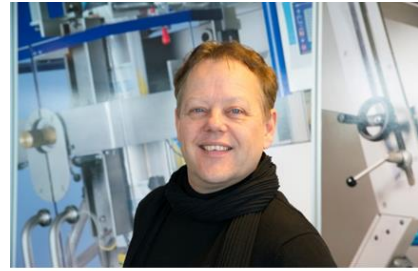
The plastic film is combined to form a tube using the forming shoulder.

The motors are responsible for taking the labeling material from the roll with synchronized speed to the actual packaging process on the outer side of the packaging film so that it can then be applied before entering the forming shoulder. A total of three AKM 3 units in the 48 volt version are installed for unwinding, feeding and winding up the carrier material. VH Vertical Packaging also uses [AKM synchronous servo motors](#) from KOLLMORGEN for other machine processes, although these are in the standard three-phase design. Uses include for instance the drive for the welding beam for transverse sealing as well as the vertical feed for the filled bags. As the Dutch

company also uses the same control and drive architecture from both manufacturers for these tasks which require higher nominal ratings from the actuators, the company saves time in engineering through standardization and thereby also reduces the interfaces in the machine.

Labels are becoming increasingly important for efficient packaging

The new module is positioned in front of the forming shoulder during the packaging process, i.e. before the level packaging film is combined to form a tube. This synchronized action before filling has the advantage that labels can be attached with greater precision. "Yet this only works if the labels adhere properly to the packaging film", says Wetemans, referring to secure processes without disruptions caused by labels peeling off or attached in crooked positions. The Dutch entrepreneur is convinced that [labelers](#) will have a major place in packaging technology in future, since manufacturers are increasingly resorting to the use of standard films and are then creating the individual features using the label. This development is manifesting itself in supermarkets through the form fill seal packages for different frozen vegetables, which now differ in terms of the label instead of the primary packaging. The benefits for food producers and contract packaging companies: less variance in the packaging and therefore lower procurement and storage costs. A look at the shelves also shows that the quality of the labels printed is so good that they do not even look like labels on the packaging.



Marcel Wetemans, Managing Director of VH Vertical Packaging

Lot size 1 as a short-term objective for Industry 4.0

Marcel Wetemans sees increased options for implementation in terms of ongoing customization of consumer products, since personalized labels in lot size 1 are also possible using a high-performance printer. Form fill seal machines will thereby become an important player within Industry 4.0. The solutions from Weert are already aligned towards this concept. The labeling module can be operated as a standalone feature in terms of the drive and automation technology. This is also why it is so easy to retrofit the units and incorporate these into existing networks using Ethernet communication.



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ABOUT KOLLMORGEN

Since its founding in 1916, Kollmorgen's innovative solutions have brought big ideas to life, kept the world safer, and improved peoples' lives. Today, its world-class knowledge of motion systems and components, industry-leading quality, and deep expertise in linking and integrating standard and custom products continually delivers breakthrough solutions that are unmatched in performance, reliability, and ease-of-use. This gives machine builders around the world an irrefutable marketplace advantage and provides their customers with ultimate peace-of-mind. For further information please contact think@kollmorgen.com or visit our website www.kollmorgen.com/uk