

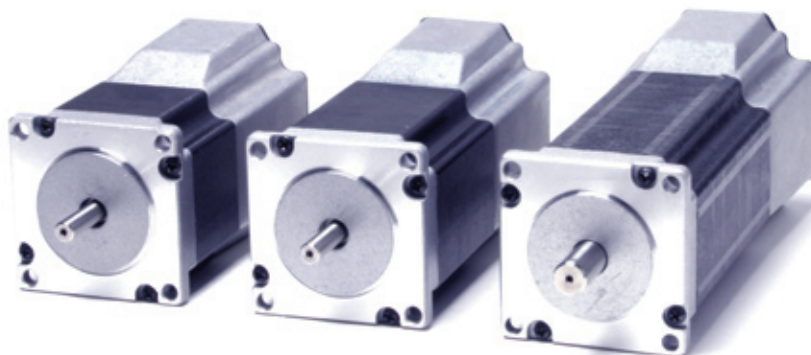
A newsletter from  
JVL Industri Elektronik A/S

## The New QuickStep Motors from JVL

Pulse & direction inputs. Now up to 4 different NEMA23 lengths and up to 2.5 Nm

JVL has now launched its newest product: 'QuickStep' — the integrated step motor. QuickStep will be available in 2 models. The first to reach the market is a model with pulse and direction inputs. The second model will have a position controller with a serial interface, 8 IOs, and an optional encoder and CANbus interface.

In the past decade, pulse/direction interfaces have become increasingly popular for the control of step and servo motors. This is due to the fact that pulse/direction signals provide a simple and reliable interface which is 100% digital, precise, and offers immediate response. When a pulse is sent, the motor instantaneously moves 1 step forward. For example, if the motor has a resolution of 200 steps/revolution, it will move 1.8 degrees. By changing the frequency of the applied pulse signal, it is possible to accelerate the motor.



By counting the number of pulses, the motor's position can be determined without any error whatsoever. The direction input is used to determine the motor's direction of rotation. JVL's QuickStep motors with pulse/direction interface offer the following advantages:

- Very simple technology that is easy to understand and apply.
- High stability and low cost because the technology is simple with few components.

- Only 1 cable with 3 or 4 wires are required, so cabling costs are a minimum.
- No controller in the control cabinet.
- All positioning and control is performed by the PLC, so there is no duplication of software or cabling.
- Robust IP67 connector and IP55 motor housing for applications in demanding environments.

...continued on page 3

## New Bluetooth module for the MAC motors

Now wireless control of the MAC motors — total freedom from cables

JVL has recently developed a new module that enables Bluetooth connection directly to the MAC range of motors. Via the Bluetooth link, the motor can be set up or controlled using the same features that a serial connection offers. Using the Module, motor control is typically done from a mobile telephone or a PC. On a PC, JVL's MacTalk software can be used directly, or commands can be sent from a user's own software. In addition, the Bluetooth module pro-



vides the possibility for connection of a local home sensor, 2 digital outputs and a multi-I/O port. The Multi-I/O port can be used for either an encoder output, pulse/direction input, or an encoder input. Connection of power supply and signals is achieved via 2 robust M12 connectors. The Module is equipped with a standard antenna connector, allowing the supplied antenna or other antenna to be used.

# Tobacco machines use MAC motors

## Molins in England Reduce Costs, Labour and Increase Performance with Integrated Servo Solution

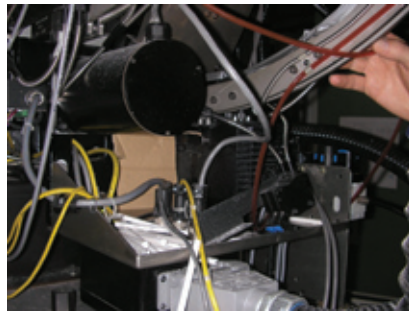
Nearly 130 years since the founding of Molins, the Tobacco Machinery division (MTM) continues to build upon its proud tradition in the creative design, manufacture and supply of tobacco-related equipment and services.

Molins Original Equipment encompasses all elements of the secondary process, from the Passim & MK9R Cigarette Maker, hundreds of which are operating throughout the world, through handling equipment, such as the Concord reservoir, MTU tray unloader and Pegasus plug distribution system, to packing combinations, founded on the HLP series of packers.

Molins remains dedicated to the development of innovative products and services, designed to meet the multi-faceted needs of the tobacco industry in the new millennium, and to its commitment to play an active partnership role in the continuing success of its customers.

As a further development Molins has looked into the latest technology available to increase productivity and decrease costs. Part of this process was to eliminate build time and complexity of each machine. Mike Kent Senior Systems Manager at Molins could see a great need to replacing Stepper Motors on their current Pegasus Distribution System. "Our Old system comprised of large 57 Frame Stepper Motors, Separate Stepper Drivers, Controller and Power Supply all mounted in a control cabinet with a PLC for control".

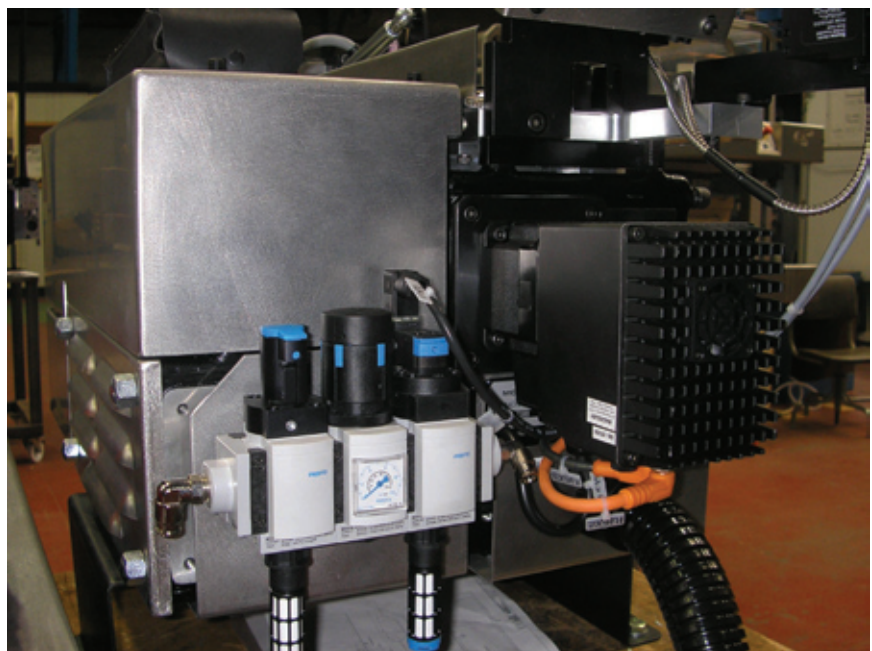
JVL experts in the field of Integrated Servo and Stepper Motors came up with the ideal solution. Servo Motor, Encoder, Servo Drive, Power Supply and Controller all in one Box the "MAC800".



Old solution with Stepper Motors



The integrated MAC800 servo motor



New Integrated Servo Solution

Molins managed to save money not only on the cost of parts for the machine but also made the machine less complex, reduced their cabinet size by 75% and performance and dynamic response was further improved. Speaking about JVL solution Mike Kent added "The technical support and knowledge from the JVL team were outstanding, we now have a more efficient and dynamic product, greatly reduced man hours on build due to the integrated solution and enhanced reliability.

The major cost savings were a significant reduction in the size of the control cabinet, reduced man hours on assembly and the ease of integration with our present control system made the transition very easy."

The MAC range of Integrated Servo Motors and Drives are available from 50-800 watts in Power. All feature JVLs unique plug and play module system that allows any of the MAC range to support a wide variety of Bus/Controller options ie CanOpen, Profibus, Device Net, High Speed RS485 and conventional analogue control.

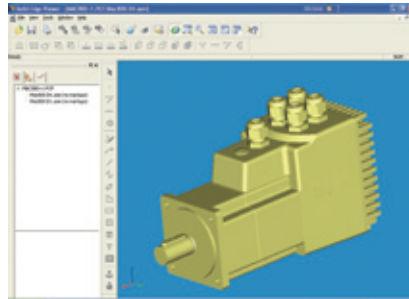


# MAC800 drawings now in 3D for CAD

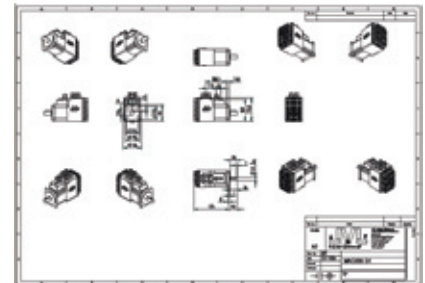
2D and 3D drawings can now be downloaded from [www.jvl.dk](http://www.jvl.dk)

In our continued efforts to provide the best possible support to our customers, 2D and 3D CAD drawings of the popular MAC series of integrated servo motors are now available for download from JVL's website: [www.jvl.dk](http://www.jvl.dk). Drawings are available for both the MAC800-D1 (motor without brake) and MAC800-D4 (motor with brake). Future additions to the CAD library will include other components of the MAC motor series. These draw-

ings simplify and shorten the design process for our customers, and are available in DXF, IGES and STEP for-



ings simplify and shorten the design process for our customers, and are available in DXF, IGES and STEP formats to meet most customer requirements. All drawings are to scale.



## New agents in Switzerland and Italy



### Regatron,

JVL's distributor in Switzerland  
Towards the end of 2005, JVL had the honour of closing an agreement with Regatron in Switzerland. Regatron was founded in 1969, has a total of some 50 employees, and for many years has acted as a distributor for Yaskawa motors. In addition to motion control, Regatron operates in other fields such as power supplies for special applications, automation,

and customised solutions. Regatron enjoys widespread recognition in the Swiss market as one of the best and most competent companies in motion control. With the company's extensive experience, it is a great pleasure to present Regatron as JVL's distributor in Switzerland.



### Servotecnica,

JVL's distributor in Italy  
As JVL distributor in Italy, Servotecnica has already sold its first solutions on the Italian market. JVL and Servotec-

nica entered into an agreement to distribute JVL products in Italy in 2005. Servotecnica was founded in 1980 and is one of the largest motion control houses in Italy today. Servotecnica has extensive experience ranging from sales and service to the supply of large turnkey systems. JVL looks forward to a rewarding co-operation with Servotecnica in the future.



## Thw QuickStep motors ...continued from the front page

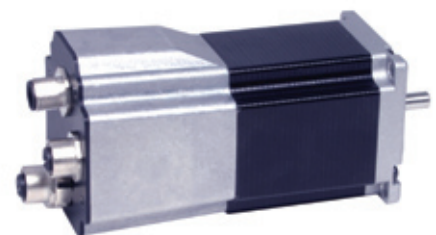
- Thermally protected against current overload and short-circuit.
- Reacts instantaneously. The motor starts within microseconds.
- 5V or 24V PNP/NPN inputs ensure compatibility with any controller.
- Step resolution of 200, 400, 800, 1000 or 1600 pulses/revolution.
- Supply voltage 12-28 VDC.
- Possibility for encoder feedback.

All the required electronics are

integrated in the motor itself in a single compact unit. The motor can be supplied with the connector either on the back or side of the housing. Either a M12 connector, screw terminal or DSUB connector can be sup-

Type	Torque (Nm)	Length (mm)
MIS230	0.8	86
MIS231	1.1	96
MIS232	1.6	119
MIS234	2.5	154

plied. The QuickStep motors, cables and planetary gears can be supplied from stock.

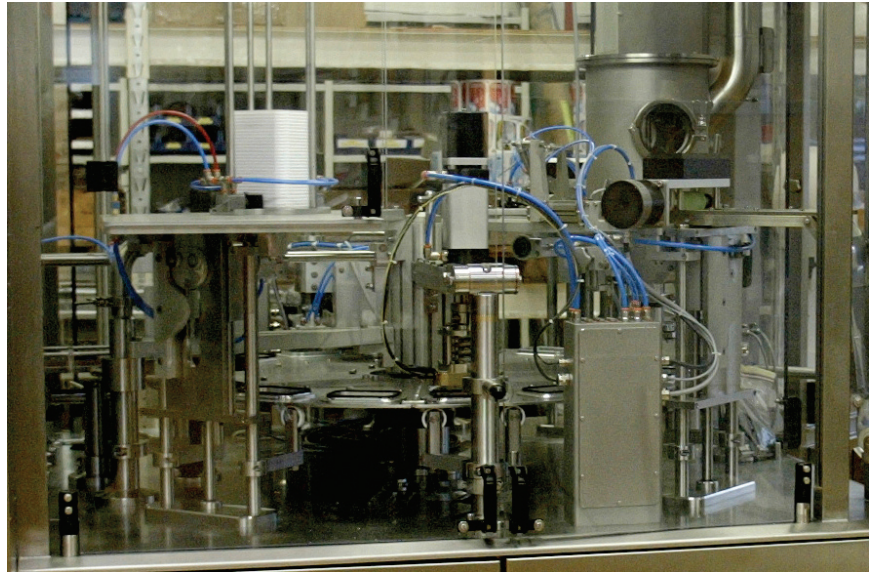


# JVL Step Motors in Food-processing Machinery

Danish company Primodan in Holbæk uses a wide range of JVL controllers and motors

At the Danish company Primodan in the town of Holbæk, a wide range of machinery is made for applications in the food-processing industry. The machines are exported throughout the world, and are used for example in the production of feta-cheese, salads, liver-paté, juice, ketchup, dressing and mustard – and other applications where there is a need for filling bottles, jars and containers. Primodan has collaborated with JVL for many years on the motion control of these machines. For example, a newly completed machine for producing feta-cheese includes a total of 4 step motors and associated JVL controllers type SMC35. The machine, which has been sold to Iran, consists of several sections that process raw material entering the machine at one end, right through the production process to completed sealed containers of feta-cheese at the other end. The overall control process is managed by a Siemens S7 PLC.

The step motors are used in the processes for foil feeding, paper feeding, dosing salt, and container transport. Commenting on the reason for specifically choosing JVL as the supplier of these motors and controllers, Primodan programmer Carsten Olsen highlights the excellent service provided by JVL during development of the systems. In



View of the filling and packaging processes of the machine.



Step Motor Controllers SMC35 in the machine's control panel.

the future Primodan also plans to use JVL's integrated MAC servo motors and has already purchased a MAC800 for a new machine.



One of the step motors in the filling and packaging component of the machine.

## JVL at SPS/IPC Drives



From the 22<sup>nd</sup> to the 24<sup>th</sup> November last year, JVL took part at the SPS/IPC Drives Exhibition in Nuremberg, Germany. This special exhibition is Europe's leading event in automation. In all, a total of 1100 companies from 31 countries were represented. We experienced a large number of visitors to our stand, where interest focussed naturally enough on the MAC series of integrated motors and on the new integrated step motors, QuickStep.



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