

**Application solutions for packaging machines:
Servo drive systems from SEW-EURODRIVE for
Blister packaging machines**



Approximately 24,000 blister packages per hour



Blister packaging machines are increasingly used for packaging products in the pharmaceutical industry as well as the food and beverage industry. The drive engineering solutions used in these applications have to be reliable and fast while facing the tough challenges of hygiene and precision. Products from SEW-EURODRIVE use state-of-the-art technology and enable individual system solutions to be implemented. SEW-EURODRIVE is a strong and competent partner with specialists in 58 assembly centers throughout the world who can respond quickly and reliably to customers' needs.

The example shows a blister packaging machine in the pharmaceutical industry that produces approximately 400 blister packs a minute.

Application description

A PC-based software PLC controls the blister packaging machine. All packaging steps take place in a fixed sequence and are controlled by a fieldbus:

- Forming blister cavities in an aluminum or polypropylene film
- Filling blisters with product
- Removal of lidding foil and sealing filled blisters
- Punching blisters
- Stacking blisters
- Packaging sealed blisters in shipping containers / boxes
- Printing boxes and preparing for shipping

✓ Criteria

- Modular and cost-optimized machine design
- High flexibility due to quick format change
- Simple machine startup

Objectives

Efficient implementation of continuous and trouble-free production – approximately 24,000 blisters per hour.

Blister packaging machine has to operate flexibly and accurately with changing materials and products. All demands on productivity, precision and flexibility are met without separate motion control through direct control of the servo drives using the PC-based PLC via fieldbus.

✓ Technological requirements

- Modulo function for drives that operate continuously
- Exact synchronization of all drives for high precision and minimum cycle speeds
- Communication between the different system parts via PROFIBUS-DP, DeviceNet, INTERBUS, etc.
- Modular machine design



SEW-EURODRIVE solution

Exact positioning of the blisters through dynamic servo drives controlled by MOVIDRIVE® drive inverters. The system consists of cost-optimized geared servomotors with terminal box and standard bevel-helical gear unit.

The PC-based PLC communicates with the drives via PROFIBUS-DP. Control information is the actual Modulo position of each drive in a range of 0° to 360°, in reference to the mechanical axle position of the load end. This information is also used to control other machine parts, such as valves.

MOVIDRIVE® drive inverters control the machine axles with the technology functions phase-synchronous operation, electronic cam, register loop control (in case of optional lidding film printing) and modulo function, allowing operators to use economical standard gear units. Individual motion sequences can be coordinated without separate motion control by the PC-based PLC.

Criteria for success

- Drive inverter with fieldbus interface
- Technology functions: Internal synchronous operation, electronic cam, register loop control
- Position control with Modulo positioning based on user-defined units
- Reduction in costs: IPOS^{plus}® integrated positioning control for technology functions replaces separate motion control
- Based on the actual position of the drive, the integrated cam controllers activate other actuators, such as valves
- Efficient support from SEW-EURODRIVE during design, project planning and startup



The precise and dynamic geared servomotors in combination with intelligent MOVIDRIVE® drive inverters ensure high quality and productivity even in complex systems. They replace the separate motion control!

How we're driving the world

With people who think fast and develop the future with you.

With a worldwide service network that is always close at hand.

With drives and controls that automatically improve your productivity.

With comprehensive knowledge in virtually every branch of industry today.

With uncompromising quality that reduces the cost and complexity of daily operations.



SEW-EURODRIVE
Driving the world

With a global presence that offers responsive and reliable solutions. Anywhere.

With innovative technology that solves tomorrow's problems today.

With online information and software updates, via the Internet, available around the clock.

SEW-EURODRIVE is right there for you:

Argentina
Phone +54 3327 4572-84
Fax +54 3327 4572-21
sewar@sew-eurodrive.com.ar

Australia
Phone +61 3 9933-1000
Fax +61 3 9933-1003
enquires@sew-eurodrive.com.au

Austria
Phone +43 1 617 55 00-0
Fax +43 1 617 55 00-30
sew@sew-eurodrive.at

Belgium
Phone +32 10 231-311
Fax +32 10 231-336
info@sew.be

Brazil
Phone +55 11 6489-9133
Fax +55 11 6480-3328
sew@sew.com.br

Canada
Phone +1 905 791-1553
Fax +1 905 791-2999
l.reynolds@sew-eurodrive.ca

Chile
Phone +56 2 75770-00
Fax +56 2 75770-01
ventas@sew-eurodrive.cl

China
Phone +86 22 25322612
Fax +86 22 25322611
gm-tianjin@sew-eurodrive.cn

Colombia
Phone +57 1 54750-50
Fax +57 1 54750-44
sewcol@sew-eurodrive.com.co

Czech Republic
Phone +420 220121236
Fax +420 220121237
sew@sew-eurodrive.cz

Denmark
Phone +45 43 9585-00
Fax +45 43 9585-09
sew@sew-eurodrive.dk

Finland
Phone +358 201 589 300
Fax +358 3 7806-211
sew@sew.fi

France
Phone +33 3 88 73 67 00
Fax +33 3 88 73 66 00
sew@usocome.com

Great Britain
Phone +44 1924 893-855
Fax +44 1924 893-702
info@sew-eurodrive.co.uk

Hong Kong
Phone +852 2 7960477
Fax +852 2 7959129
sew@sewhk.com

Hungary
Phone +36 1 437 06-58
Fax +36 1 437 06-50
office@sew-eurodrive.hu

India
Phone +91 265 2831086
Fax +91 265 2831087
mdoffice@seweurodriveindia.com

Italy
Phone +39 02 96 9801
Fax +39 02 96 799781
sewit@sew-eurodrive.it

Japan
Phone +81 538 373811
Fax +81 538 373814
sewjapan@sew-eurodrive.co.jp

Malaysia
Phone +60 7 3549409
Fax +60 7 3541404
kchtan@pd.jaring.my

Mexico
Phone +52 442 1030-300
Fax +52 442 1030-301
scmexico@seweurodrive.com.mx

Netherlands
Phone +31 10 4463-700
Fax +31 10 4155-552
info@vector.nu

New Zealand
Phone +64 9 2745627
Fax +64 9 2740165
sales@sew-eurodrive.co.nz

Norway
Phone +47 69 241-020
Fax +47 69 241-040
sew@sew-eurodrive.no

Peru
Phone +51 1 3495280
Fax +51 1 3493002
sewperu@sew-eurodrive.com.pe

Poland
Phone +48 42 67710-90
Fax +48 42 67710-99
sew@sew-eurodrive.pl

Portugal
Phone +351 231 20 9670
Fax +351 231 20 3685
infosew@sew-eurodrive.pt

Russia
Phone +7 812 3332522
Fax +7 812 3332523
sew@sew-eurodrive.ru

Singapore
Phone +65 68621701
Fax +65 68612827
sewsingapore@sew-eurodrive.com

South Africa
Phone +27 11 248-7000
Fax +27 11 494-3104
dross@sew.co.za

South Korea
Phone +82 31 492-8051
Fax +82 31 492-8056
master@sew-korea.co.kr

Spain
Phone +34 9 4431 84-70
Fax +34 9 4431 84-71
sew.spain@sew-eurodrive.es

Sweden
Phone +46 36 3442-00
Fax +46 36 3442-80
info@sew-eurodrive.se

Switzerland
Phone +41 61 41717-17
Fax +41 61 41717-00
info@imhof-sew.ch

Thailand
Phone +66 38 454281
Fax +66 38 454288
sewthailand@sew-eurodrive.co.th

Turkey
Phone +90 216 4419163
Fax +90 216 3055867
sew@sew-eurodrive.com.tr

USA
Phone +1 864 439-7537
Fax +1 864 439-0566
cslyman@seweurodrive.com

Venezuela
Phone +58 241 832-9804
Fax +58 241 838-6275
sewventas@cantv.net

**SEW
EURODRIVE**

SEW-EURODRIVE GmbH & Co KG
P.O.Box 30 23 · D-76642 Bruchsal/Germany
Phone +49 7251 75-0 · Fax +49 7251 75-1970
sew@sew-eurodrive.com

→ www.sew-eurodrive.com