

PEWO-form TLC





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→ OPERATION

The development of the PEWO form TLC is based on the idea of creating a highly flexible modular packaging machine system that is founded on a basic cell (robot cell). This cell can be duplicated as required to realize various packaging functions.

TLC is the abbreviation of Top Loading Casepacker and stands for high performance case packing of the most flexible kind. Four packaging processes can be realized by the TLC system: Erection, collation, top loading and closing of the cases or trays.

In the case of 'Toploading', the case is filled from above with products or product collations such as cartons, bottles, aerosol cans or tubes. These can be packed into the shipping case in a number of combinations (lying and/or standing), independent of the direction of transport. Intermediate layers or package enclosures can also be integrated. Consequently, a huge number of package forms can be realized while, at the same time, a highly efficient utilization of the case is achieved. As a result of simultaneous filling using 'Pick-and-Place', speeds of up to 40 cycles per minute can be realized.

→ FUNCTION

- Stand-up module

In the first process module, the case erector, vacuum suction is used to extract case blanks (American cases, trays) from the magazine and to open them. Folding devices close the bottom using adhesive tape or hot melt.

- Collation module

Well-engineered, proven product collation systems guarantee straight-forward grouping of the collation.

- Filling module

The products are filled into the cases from above. The control of the cases and filling funnels guarantees safe placement of the product.

- Closing module

After the filling process, the cases are closed by means of adhesive tape or hot melt (not applicable in the case of tray packaging).

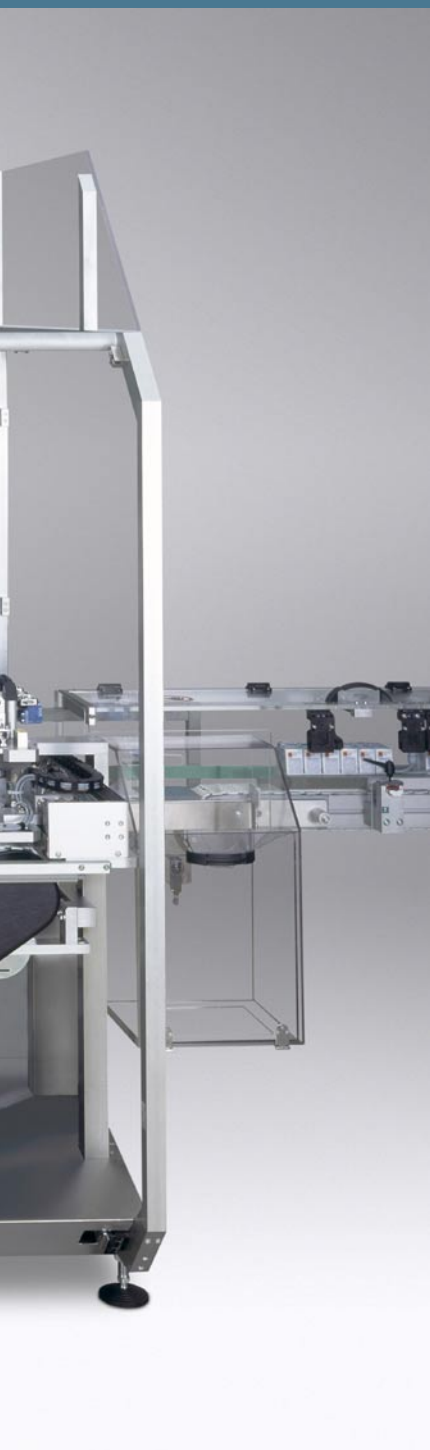
TLC ROBOT CELL – HIGHEST DEGREE OF LINE
EFFICIENCY THROUGH THE USE OF THE MOST MODERN
HIGHLY FLEXIBLE ROBOT TECHNOLOGY





PRODUCT INFEED SYSTEM

**HIGH LEVEL OF EFFICIENCY
DUE TO SIMULTANEOUS
FILLING OF MULTIPLE TRAYS**



DESIGN

The modular structure enables the system to be installed in the smallest of spaces. The compact and stable balcony style design exactly fulfills the requirements for ergonomics and good accessibility. The machine is designed for flexible use with a wide range of different formats.

ROBOTICS

The main element is the modular 6-axis jointed arm robot from KUKA that uses PC technology and, as a result of its kinematics, can move freely in 3 dimensions. Multifunctionality and movement with the smallest footprint saves space and enables a high packing density. Over 50,000 KUKA robots are in use worldwide. This technology guarantees the highest level of productivity with an availability of more than 99 percent (70,000 hours 'meantime between failures').

MECHANICAL CONSTRUCTION

Life cycle costs kept to a minimum as a result of completely maintenance-free operation and the use of linear bearings and wear-free ball-type bushing devices.

ELECTRICS

All control unit components are compactly integrated in the machine. Intelligent program management – all relevant parameters for product collation are automatically set up by selecting the collation on the operator console.

CONTROL UNIT

The control unit from KUKA KRC 2 is the standard choice. However, in order to offer a uniform operating concept, an ELAU PacDrive can also be selected. The PacController realizes control and movement functions. The programming for the PLC and servo functionality is identical and complies with the international norm, IEC 61131. The compact motor controller and dynamic servo motors are state-of-the-art.

FORMAT CHANGEOVER

As far as possible, format changeover requires no tools, and is mainly carried out on the operator side. Any necessary parameter changes are carried out by recipe management on the display. This enables highly flexible product handling.

EXAMPLE – TOPLOADING ROBOT CELL WITH
TRAY ERECTOR AND STRETCH BAND UNIT



TECHNICAL DATA PEWO-FORM TLC

Machine dimensions (approx.)	are dependent on the combination of the modules and are defined by the layout
Module dimensions	
Length	1000 mm
Width	2500 mm
Height	2200 mm
Output	
Cases/minute	5, 15, 30 depending on size and version
Trays/minute	10, 20, 40 depending on size and version
Kind of case	American cases, trays
Hot melt version	All common makes
Type of closing	
American case	Adhesive tape or hot melt
Tray	Hot melt
Format range	
Length	150 – 600 mm
Width	100 – 400 mm
Height	100 – 400 mm
Energy Connection	
Power supply	3 x 400 V + N + PE, 50/60 Hz
Power consumption	Greater than 7 kW, may be more depending on the configuration
Compressed air supply (input pressure)	
Air supply, max.	10 bar
Input pressure	6 bar
Operating pressure	6 bar
Subject to technical changes	

pester
pac automation
 Hauptstraße 50
 87787 Wolfertschwenden
 Germany
 Telephone +49 (0) 83 34/607-0
 Telefax +49 (0) 83 34/607-200
 info@pester.com
 www.pester.com

pester
pac automation
USA
 5 Pearl Court
 Allendale, NJ 07401
 USA
 Telephone +1 201 327 7009
 Telefax +1 201 327 7824
 pester-usa@pester.com
 www.pester.com

pester
pac automation
France
 Z.I. Portuaire
 Av. Augustin Normand
 14600 Honfleur
 France
 Telephone +33 (0) 2 31 81 60 84
 Telefax +33 (0) 2 31 81 60 80
 pester-france@pester.com
 www.pester.com

pester
pac automation
Benelux
 Pulsebaan 48/3
 2242 Zandhoven
 Belgique
 Telephone +32 (0) 34 660 000
 Telefax +32 (0) 34 660 001
 pester-benelux@pester.com
 www.pester.com

pester
pac automation
Japan
 4-2-5 Tanabe Higashi
 sumiyoshi-ku
 Osaka 546 – 0031
 Telephone +81 666 22 07 14
 Telefax +81 666 22 07 14
 pester-japan@pester.com
 www.pester.com