



Palletizing Made Easy

Lightweight Layer Grippers

ZLW

WWW.SCHMALZ.COM/ZLW



Palletizing made easy.

The Lightweight Layer Gripper ZLW is the ideal solution for palletizing with smaller robots and cobots. Thanks to its innovative design, you can design palletizing and depalletizing processes sustainably and efficiently. The flexible sealing elements grip a wide variety of workpieces – regardless of shape, dimension and surface finish.



Watch video!

Highlights



Low gripper weight

Increased process efficiency and reduced initial costs through the use of robots with lower payload



Variable suction area

Optimally adapted to the workpiece position and equipped with flexible sealing elements



High energy efficiency

Minimized vacuum generation power due to optimized suction grid design



Complete solution from a single source

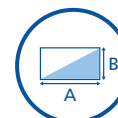
Optimally coordinated gripping system incl. vacuum generation and controllable valves

Lightweight Layer Grippers ZLW

More Flexibility Thanks to Modularity



MAX. 35 KG



MAX. 850 X 650 MM



Lightweight Layer Gripper ZLW when handling cardboard boxes

Applications

- Layer gripping system for automated EOL palletizing processes with lightweight robots
- Feeding workpiece layers into production
- Pick-and-place in the production process
- Pick-and-pack packaging processes
- Handling of various workpieces such as packages, packaging, jars, cans and buckets



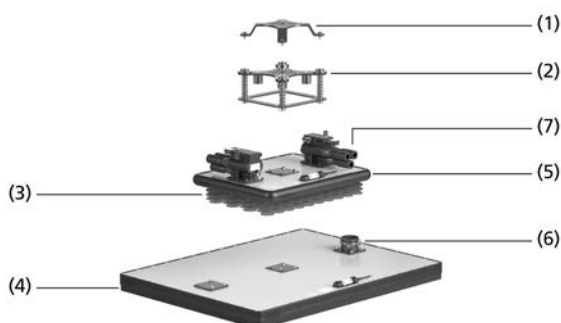
Open round workpieces
Glasses
Cardboard containers
Buckets



Closed round workpieces
Cans
Perfume containers



Rectangular workpieces
Cardboard boxes
Intermediate layers



Design

- Rigid flange (1) for connection to common robots and portals
- Optional: floating flange to compensate height differences in the workpiece layer (2)
- Gripper with sealing element made of plug-in suction cups (3) or sealing foam (4)
- Optional: rounded frame (5) for increased safety in HRC applications
- Connection for external vacuum generation (6)
- Optional: integrated vacuum generation (7)

Design Lightweight Layer Grippers ZLW

Performance optimized vacuum generation



Basic ejectors SBPL

- Suction rate up to 1.140 l/min
- Max. vacuum: 61 or 90 %



Vacuum blowers SB

- Suction rate up to 1.250 m³/h
- Max. vacuum: 40 %



Vacuum pumps EVE-TR

- Suction rate up to 244 m³/h
- Max. vacuum: 92 %



Vacuum filters

- Nominal flow rate up to 480 m³/h

Configuration and Technical Data

Designation Code Lightweight Layer Grippers ZLW

ZLW	-	FL	-	850x650	-	SE	-	O20KS	-	30T	-	SW80	-	G60
1		2		3		4		5		6		7		8

1 – Abbreviated designation

Code	Type
ZLW	Lightweight layer gripper

2 – Flange

Code	Type
RD	Rigid
FL	Floating

3 – Preferred dimensions

Code	LxW in mm
450x350	450x350
650x450	650x450
850x650	850x650

4 – Frame

Code	Type
SE	Straight edge
RE	Round edge

5 – Sealing element

Code	Height / Diameter in mm
O20KS	Sealing foam (H = 20)*
O20	Sealing foam (H = 20)**
SPB2 40	Suction cups (Ø = 40)***

6 – Grid

Code	Hole spacing in mm
20T	20
30T	30
45T	45

7 – Flow restrictor

Code	Cross section in mm
SW80	0,8 (sealing foam O20KS)
SW100	1,0 (sealing foam O20)
SW120	1,2 (suction cups)

8 – Vacuum connection

Code	Dimensions in mm
G32	Straight, Ø = 32 (external)
G60	Straight, Ø = 60 (external)
EB	With ejector block (internal)

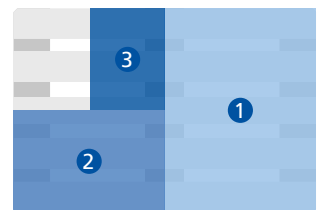
*Universal standard sealing foam with cone-shaped cut suction cells

**Universal standard sealing foam with cylindrically cut suction cells

***Plug-in bellows suction cups made of silicone

Technical Data Lightweight Layer Grippers ZLW

Gripper dimensions	1 850 x 650 mm		2 650 x 450 mm		3 450 x 350 mm	
	1/2 Euro pallet		1/4 Euro pallet		1/8 Euro pallet	
Reference size						
Sealing element	Sealing foam	Suction cups	Sealing foam	Suction cups	Sealing foam	Suction cups
Gripper weight [kg]*	9.7	14.6	5.6	8.3	3.6	4.5



*Weights are calculated including rigid flange and connection for external vacuum generation

The Lightweight Layer Gripper ZLW can be configured individually. We will be happy to offer you further gripper dimensions on request. Contact us for an individual system design, regarding the technical feasibility of your specific application as well as for carrying out tests with your original workpieces.