

PCB magazines, series 100 / 180 / 300



The PCB magazines can be equipped in vertical and horizontal orientation. The systems are absolutely variable in width and can be individually mounted according to the PCB size. 100, 180 and 300 mm (heights) magazines are provided for the different types of PCB.

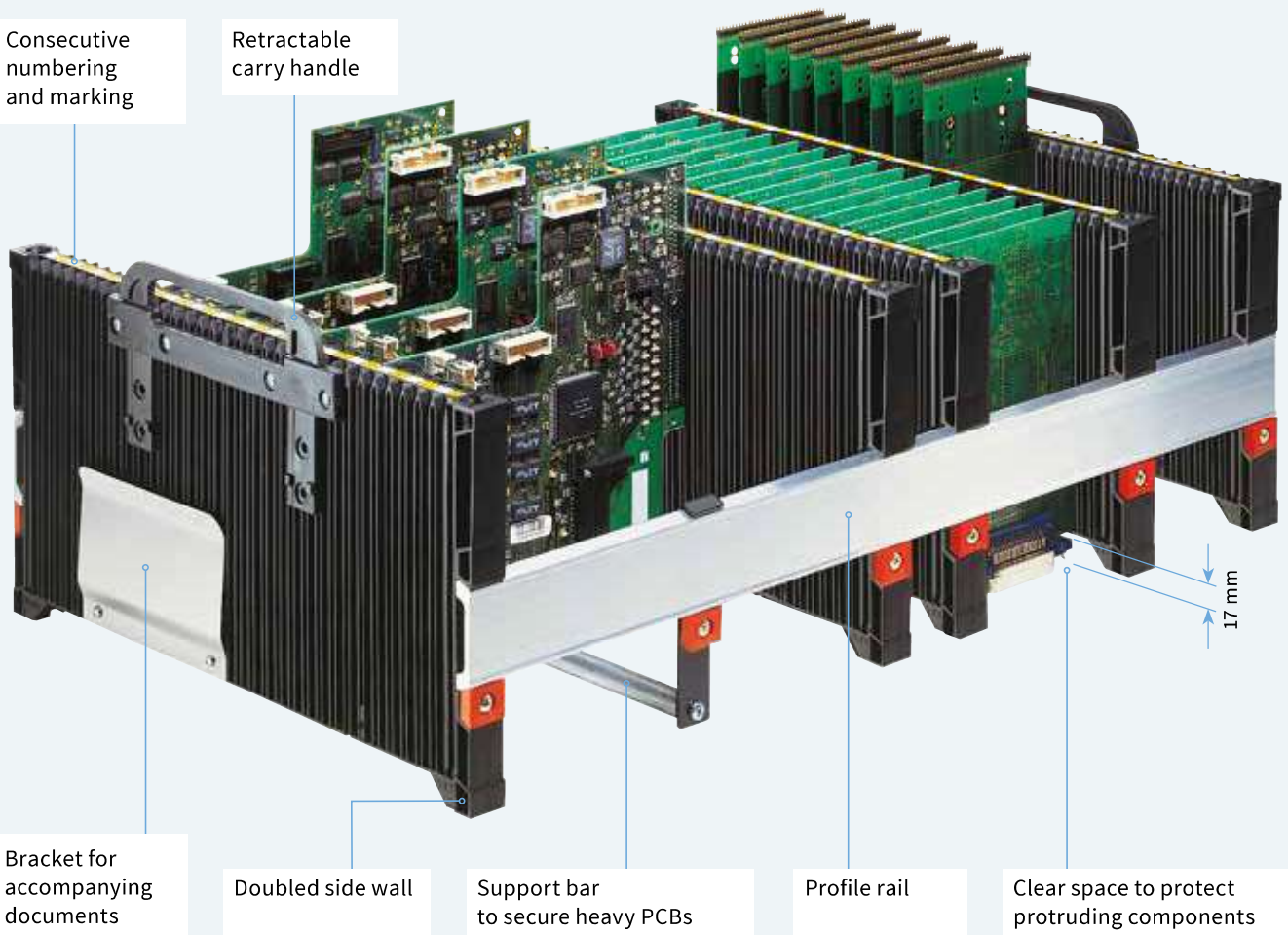
32 slots every 10 mm offer maximum packing density.

Safe guidance

Funnel-shaped slot entries ensure safe PCB insertion. Yellow marked position stickers indicate the exact position of placement and prevent from PCB insertion diagonally by hand.

Consecutive numbering and marking

Retractable carry handle



17 mm

Bracket for accompanying documents

Doubled side wall

Support bar to secure heavy PCBs

Profile rail

Clear space to protect protruding components

PCB magazines, series 100 / 180 / 300



Quick and easy assembly

The side walls are adjustable on the profile rails as needed. Two PCBs are inserted into the outer adjusting grooves. The upper side wall has to be pressed against the PCBs and be fixed with screws.



Solid and torsion-resistant

Double-walled construction makes the side walls extremely solid. In addition, a side wall can be stiffened by a metal tube in case of high mechanic and thermal forces.



Slot lock

To prevent from component damage when inserting a PCB in the magazine, slots that are not in use can be covered.



Stackable

Boreholes and pins at the outside margins allow the PCB magazines to be stacked. Molded recesses on the bottom of the side walls simplify the lifting of the magazines.



Upright position

Assembled PCBs must be stored horizontally before soldering. For this purpose, the PCB magazines are set upright.



Transport containers

The PCB magazines can be inserted into standard 600 x 400 resp. 400 x 300 mm containers for transport. Retractable carry handles simplify the insertion and removal.

PCB magazines, series 100 / 180 / 300

with 32 PCB slots

Forced deflection of side walls

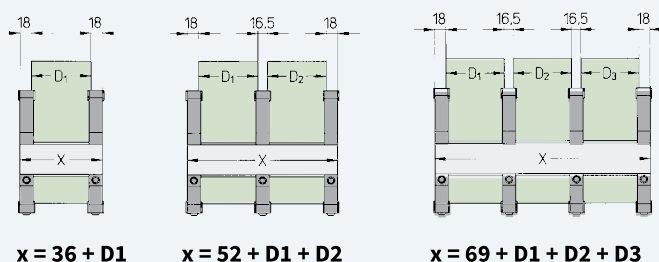
To ensure safe guidance of a PCB, the deflection of a side wall must not exceed 1.0 mm. This deflection has been calculated with 16 PCBs in distances of 20 mm and a weight of 500 g per PCB.

Critical force occurs

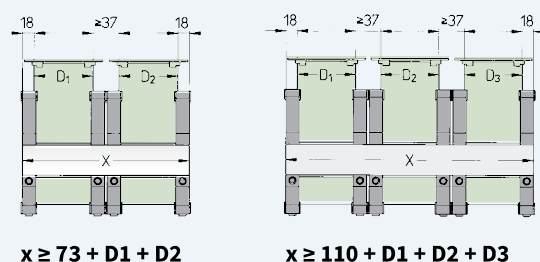
1. if a PCB side wall lies horizontally on a table and is freely lifted,
2. when changing from vertical to horizontal direction in transport.

Technical data		100	180	300
Material		Polypropylene		
Color		black		
Surface resistance		according to DIN EN 61340-5-1 <10 ⁹		
Dimensions				
Slot width mm		2.8	4.0	3.5
Slot depth mm		2.0	2.5	2.5
Number of slots		32	32	32
Distance between PCBs mm		10	10	10
Deflection at a total force of 8 kg				
Temperature 23°C	not reinforced	1.0	0.8	0.4
Temperature 23°C	reinforced	0.5	0.4	-
Temperature 70°C	not reinforced	-	-	0.8
Temperature 70°C	reinforced	0.9	0.7	-

The length of the profiles (dimension **x**) is calculated upon data as shown below.



D = PCB width
x = Length of profile rail





Part no.	Product
8910063	PCB magazine test set 100
e.g. for PCB width 100 mm	
Scope of delivery:	4 side walls 100 2 profile rails length 369 mm 1 bracket
Weight:	1.4 kg

Part no.	Product
8910064	PCB magazine test set 180
e.g. for PCB width 100 mm	
Scope of delivery:	4 side walls 180 2 profile rails length 369 mm 1 bracket 1 set of carry handles
Weight:	2.5 kg

Part no.	Product
8910065	PCB magazine test set 300
e.g. for PCB width 233.4 mm	
Scope of delivery:	2 side walls 300 4 profile rails length 269 mm 1 bracket 1 set of carry handles
Weight:	2.0 kg

PCB magazines, series 100 / 180 / 300

Delivery program

	Part no.	Product	Weight
	8910050 8910102 8913913	Side wall 100 Side wall 100 reinforced Side wall 100 including boreholes for slot lock	0.28 kg 0.40 kg 0.28 kg
	8910060 8910104	Side wall 180 Side wall 180 reinforced including boreholes for slot lock	0.53 kg 0.65 kg
	8912049 8913914	Side wall 300 Side wall 300 including boreholes for slot lock	0.7 kg 0.7 kg
 The profile rails are supplied according to your requirements. xxxx is the desired length in mm	8910136 8910252 8910547 8911000 8912000 8913000 891xxxx	Length in mm Profile rail 0136 Profile rail 0252 Profile rail 0547 Profile rail 1000 Profile rail 2000 Profile rail 3000 Profile rail xxxx	0.06 kg 0.11 kg 0.24 kg 0.45 kg 0.90 kg 1.35 kg
	8910009	Bracket for accompanying documents	
	8912004 8912005 8912006	Support bar 100 Support bar 180 Support bar 300	
	8912007 8910097	Carry handle 100 Carry handle 180/300	Packing unit: 1 set
 Slot lock 1 Slot lock 2 enlarged display	8913916 8913917	Slot lock 1 Slot lock 2	Packing unit: 100 sets each

PCB magazines, series 600 / 700 / 800

Automation requires precision when magazines are in use in pick-and-place lines.



1 Knob

for magazine stacking

2 Base and cover plates

are made of cast aluminum or sheet steel

3 Numbering

along the PCB slots
simplifies manual insertion

4 Side walls

To operate in surrounding temperatures
between 50 and 200°C, they are made of
conductive plastic or metal.

5 Transport lock

A bar is mounted as standard
on the front and back sides.



Slots are locked



Slots are unlocked



Metal magazines

In case of high mechanic force and high thermal force up to 200°C, the magazines are available with metal side walls.



Stacking safely

All magazines can be stacked safely
and in a space-saving manner
with four knobs on the upper plate.

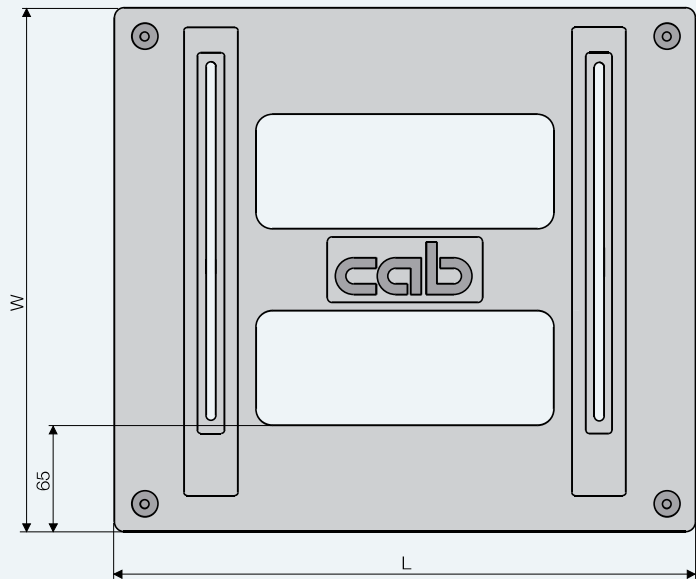
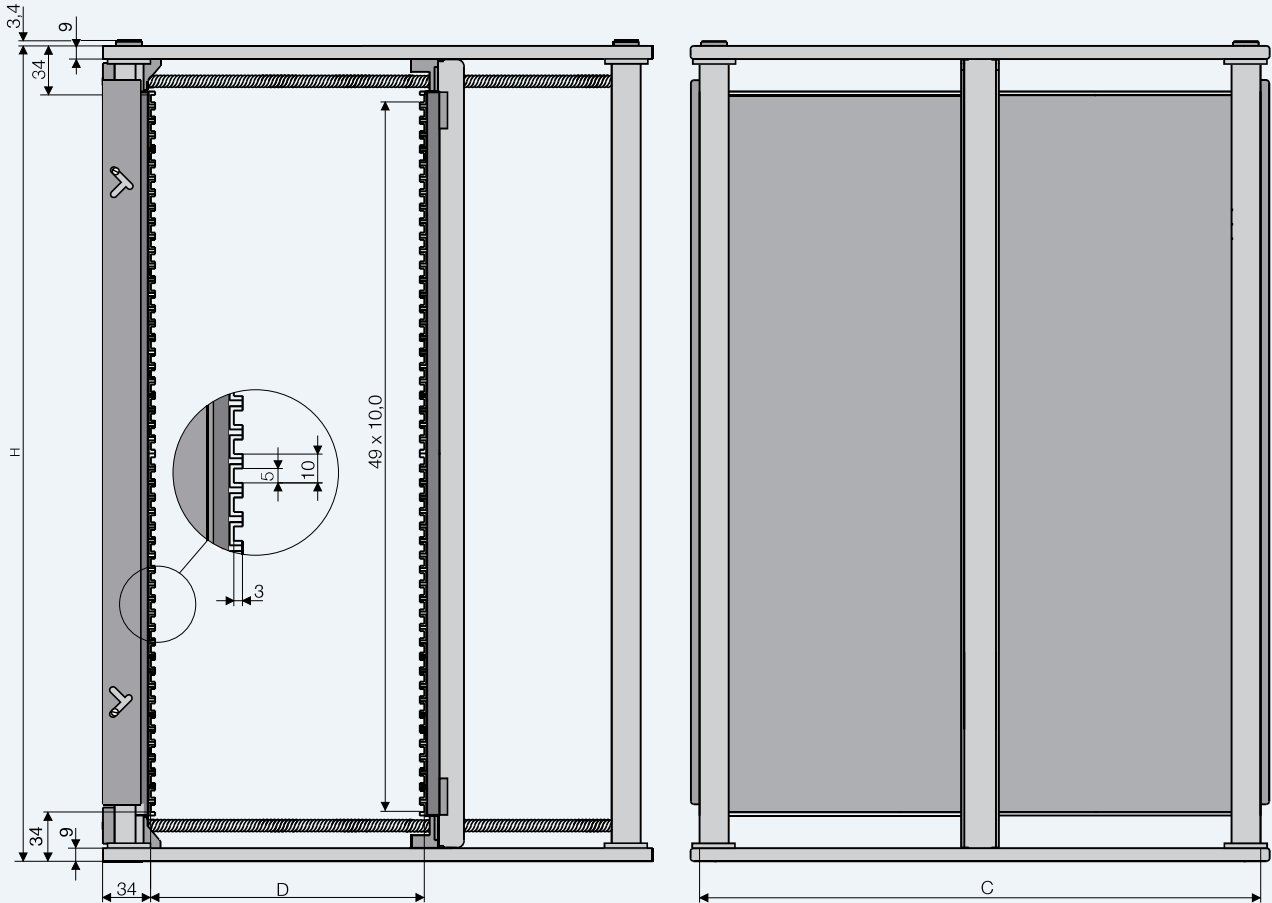


Perfecting operation

Vertical symmetry allows the magazines
to be turned upside down in case of
operation in perfecting mode.
Possible only without stacking knobs

PCB magazines, series 600 / 700 / 800

Dimensional drawing

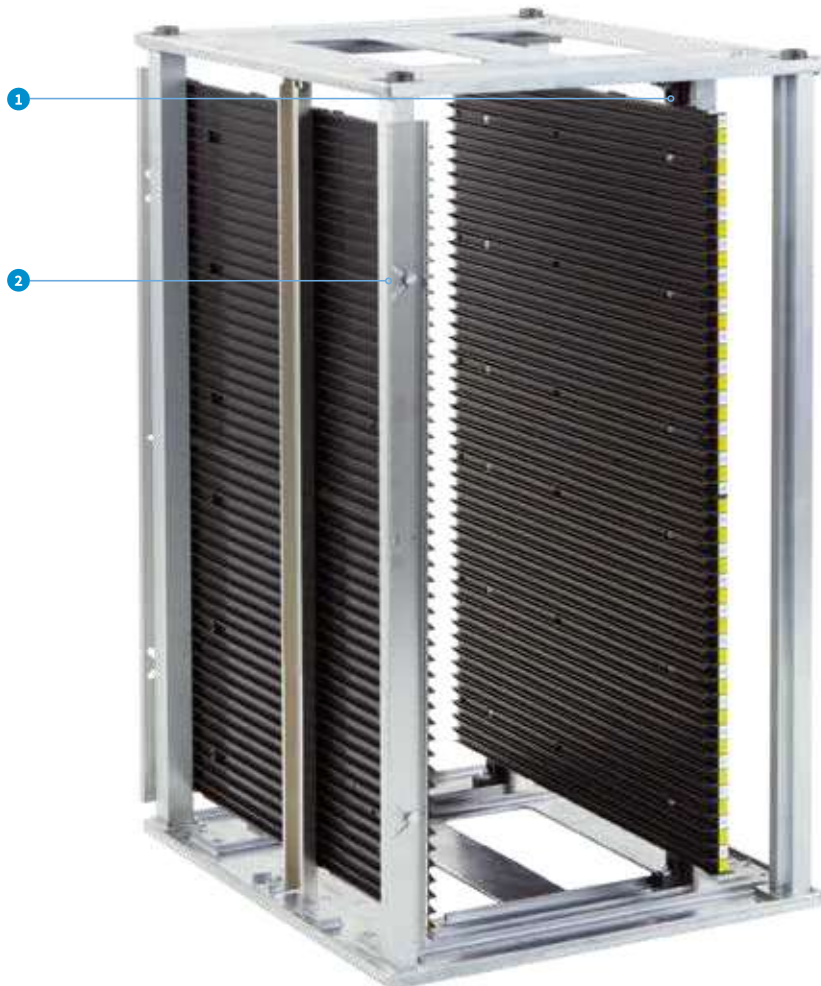


Series			Material	Surface resistance
60X.1	70X.1	80X.1	Polystyrene	according to DIN EN 61340-5-1 10^9
60X.2	70X.2	80X.2	Polycarbonate	
60X.3	70X.3	80X.3	Metal*	

*as measured on side wall to frame

PCB magazines, series 600

Width adjustment by screw clamping



1 Screw clamps

The series 600 are cost-effective models. By loosening the four screw clamps, the side wall can be adjusted to the requested PCB width.

2 Transport lock

A bar is mounted as standard on the front and back sides. At lifting, the bar moves outside and locks in the upper position. The PCBs can be inserted or removed. When lifted again, the slots are locked.

Type	Part no.	Material	Temperature °C		Weight kg	Outside dimensions			PCB		
			Insertions	Surrounding		L mm	W mm	H mm	Width D		Length C
									min. mm	max. mm	max. mm
601.1	8917601	Polystyrene	60	50	5.6	355	320	563	40	250	342
601.2	8916601	Polycarbonate	130	100	5.9						
601.3	8915601	Metal	200	200	6.9						
602.1	8917602	Polystyrene	60	50	5.8	400	320	563	40	250	387
602.2	8916602	Polycarbonate	130	100	6.1						
602.3	8915602	Metal	200	200	7.2						
603.1	8917603	Polystyrene	60	50	6.2	400	380	563	40	310	387
603.2	8916603	Polycarbonate	130	100	6.5						
603.3	8915603	Metal	200	200	7.6						

further sizes on request

PCB magazines 60X.1 and 60X.2

are delivered partially assembled; assembled magazines have to be ordered with an additional part no.

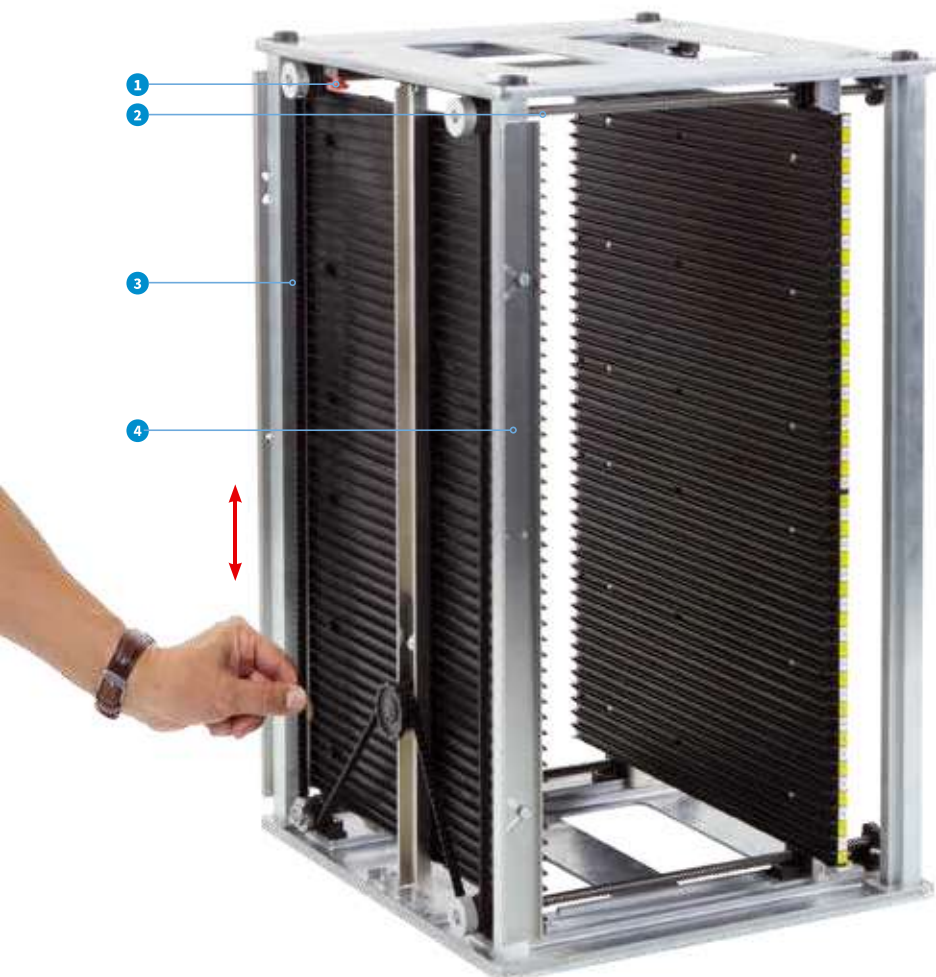
DL31001		assembled with stacking knobs
DL 31002		assembled for perfecting operation

PCB magazines 60X.3

are delivered assembled with stacking knobs

PCB magazines, series 700

Variable width adjustment by pulling gear belt by hand



1 Safety screw

Clamping the gear belt with a thumb screw prevents from accidental adjustment of the moveable side wall.

2 Four precision spindles

to adjust the moveable side wall

3 Gear belt

By pulling the gear belt, the side walls are adjusted to the requested PCB width.

4 Transport lock

A bar is mounted as standard on the front and back sides. At lifting, the bar moves outside and locks in the upper position. The PCBs can be inserted or removed. When lifted again, the slots are locked.

Type	Part no.	Material	Temperature °C		Weight kg	Outside dimensions			PCB		
			Insertions	Surrounding		L mm	W mm	H mm	Width D		Length C
									min. mm	max. mm	max. mm
701.1	8917701	Polystyrene	60	50	5.6	355	320	563	40	250	342
701.2	8916701	Polycarbonate	130	80	5.9						
701.3	8915701	Metal	200	100	6.9						
702.1	8917702	Polystyrene	60	50	5.8	400	320	563	40	250	387
702.2	8916702	Polycarbonate	130	80	6.1						
702.3	8915702	Metal	200	100	7.2						
703.1	8917703	Polystyrene	60	50	6.2	400	380	563	40	310	387
703.2	8916703	Polycarbonate	130	80	6.5						
703.3	8915703	Metal	200	100	7.6						
704.1	8917704	Polystyrene	60	50	7.8	460	400	563	10	330	447
704.2	8916704	Polycarbonate	130	80	8.0						
704.3	8915704	Metal	200	100	9.5						
716.2	8916716	Polycarbonate	130	80	9.5	535	460	563	10	390	522
716.3	8915716	Metal	200	100	10.9						
717.2	8916717	Polycarbonate	130	80	9.7	535	530	563	10	460	522
717.3	8915717	Metal	200	100	11.1						

further sizes on request

PCB magazines 70X.1 and 70X.2

are delivered partially assembled; assembled magazines have to be ordered with an additional part no.

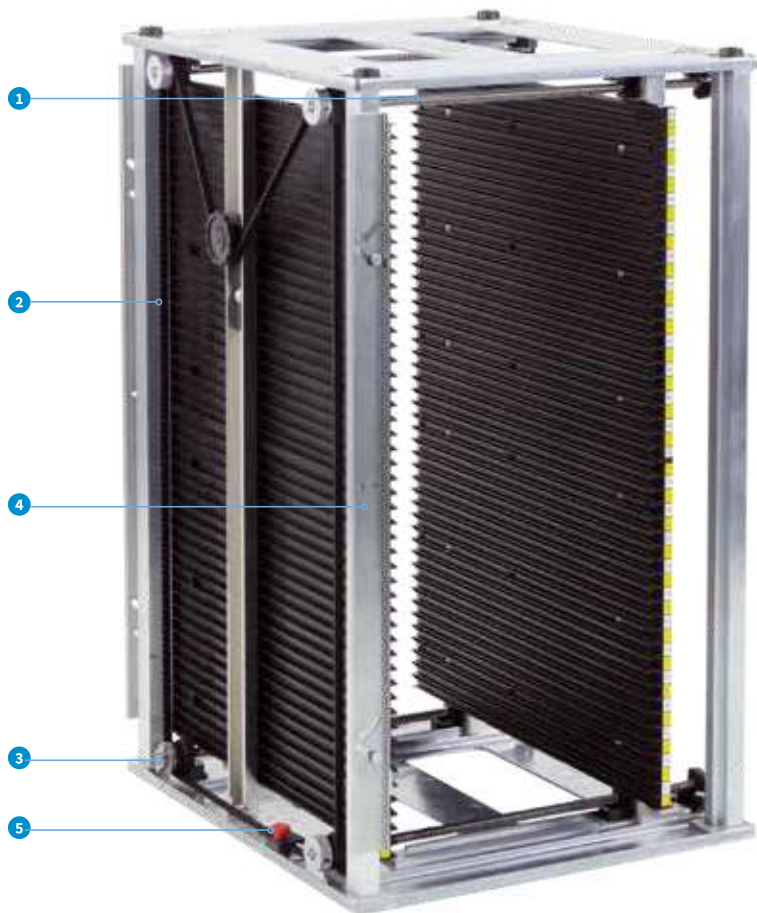
DL31001		assembled with stacking knobs
DL 31002		assembled for perfecting operation

PCB magazines 70X.3

are delivered assembled with stacking knobs

PCB magazines, series 800

Variable width adjustment by pulling gear belt motor-driven or by hand



1 Four precision spindles
to adjust the moveable side wall

2 Gear belt
for manual or automatic width adjustment

3 Clutch disc
for motor-driven width adjustment

4 Transport lock
A bar is mounted as standard
on the front and back sides.

Automatic operation

When the magazine is put onto a loader, this is moved outside by a wedge. The slot locks again when the magazine is removed.

Manual operation

At manual lifting, the bar moves outside and locks in the upper position. When lifted again, the slots are locked.

5 Safety screw
Clamping the gear belt with a thumb screw prevents from accidental adjustment of the moveable side wall.

Type	Part no.	Material	Temperature °C		Weight kg	Outside dimensions			PCB		
			Insertions	Surrounding		L mm	W mm	H mm	Width D		Length C
									min. mm	max. mm	max. mm
801.1	8919801	Polystyrene	60	50	5.6	355	320	563	40	250	342
801.2	8918801	Polycarbonate	130	100	5.9						
801.3	8915801	Metal	200	100	6.9						
802.1	8919802	Polystyrene	60	50	5.8	400	320	563	40	250	387
802.2	8918802	Polycarbonate	130	80	6.1						
802.3	8916740	Metal	200	100	7.2						
803.1	8919803	Polystyrene	60	50	6.2	400	380	563	40	310	387
803.2	8916745	Polycarbonate	130	80	6.5						
803.3	8915803	Metal	200	100	7.6						
804.1	8919804	Polystyrene	60	50	7.8	460	400	563	10	330	447
804.2	8918804	Polycarbonate	130	80	8.0						
804.3	8915804	Metal	200	100	9.5						
816.2	8916816	Polycarbonate	130	80	9.5	535	460	563	10	390	522
816.3	8915816	Metal	200	100	10.9						
817.2	8916817	Polycarbonate	130	80	9.7	535	530	563	10	460	522
817.3	8915817	Metal	200	100	11.1						

further sizes on request

PCB magazines 80X.1 and 80X.2

are delivered partially assembled; assembled magazines have to be ordered with an additional part no.

DL31001		assembled with stacking knobs
DL 31002		assembled for perfecting operation

PCB magazines 80X.3

are delivered assembled with stacking knobs

PCB magazines, series 600 / 700 / 800

Accessories



Slot lock for plastic side parts

to lock the slots of series 6XX.1/2, 7XX.1/2 and 8XX.1/2 magazines. Clipping and removal are without additional tools. With a slot lock in use, the maximum PCB width adjustable is reduced by 3 mm.

Pos.	Part no.	Product	Packing unit
1.1	8916571	Slot lock 1 (onefold)	100
1.2	8916575	Slot lock 5 (fivefold)	20



Bracket on plastic side parts

to easily attach accompanying documents

Part no.	Product	Packing unit
8913416	Bracket	1



ESD protection cover

The conductive, solid and tear-proof Permastat® ESD protection cover prevents the PCBs in a magazine from pollution. Color: pink; thickness: 150 µm

Type	Part no.	Packing unit
601/701/801	8916411	10
602/702/802	8916412	10
603/703/803	8916413	10
704/804	8916414	10
716/816	8916416	10
717/817	8916417	10

Special magazines



Low structural heights for series 600 / 700 / 800 magazines

Low height PCB magazines, e.g. for use in annealing furnaces.

Reducing the height also prevents from overload with heavy PCBs

or any need of product carriers. Side wall material: metal; plastic on request

Type	Part no.	Temperature		Weight kg	Outside dimensions			Insertions	Screw clamping	Gear belt
		°C Insertions	°C Surrounding		L mm	W mm	H mm			
601.3	8916130	200	200	5.5	355	320	343	28	■	-
701.3	8916410	200	100	5.9	355	320	263	20	-	■
701.3	8916175	200	100	6.1	355	320	343	28	-	■



Twin and triple models to process long PCB with series 700 magazines

The PCB magazines are assembled torsion resistant.

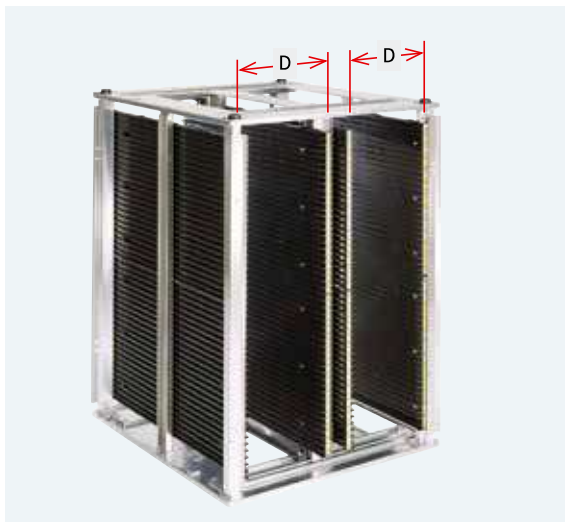
Thus, PCB up to 1,187 mm can be safely stored and transported.

Side wall material: polycarbonate

Twin magazine delivery: fully assembled

Triple magazine delivery: partially assembled

Type	Part no.	Temperature		Weight kg	Outside dimensions			PCB		
		°C Insertions	°C Surrounding		L mm	W mm	H mm	Width D		Length C
							min. mm	max. mm	max. mm	
701.2-2	8916712	130	100	12.3	710	320	563	40	250	697
702.2-2	8916722	130	100	12.7	800	320	563	40	250	787
703.2-2	8916732	130	100	13.5	800	380	563	40	310	787
701.2-3	8916713	130	100	18.7	1,065	320	563	40	250	1,052
702.2-3	8916723	130	100	19.3	1,200	320	563	40	250	1,187
703.2-3	8916733	130	100	20.5	1,200	380	563	40	310	1,187



Double capacity by parallel insertion into series 600 magazines

Up to 100 PCBs in a series 600 magazine. In case narrow PCBs are processed, magazines with two insertion units can be used side by side.

Side wall material: polystyrene, polycarbonate, metal

Type	Part no.	Temperature		Outside dimensions			PCB		
		°C Insertions	°C Surrounding	L mm	W mm	H mm	Width D		Length C
							min. mm	max. mm	max. mm
601.1-P	8916435	60	50	355	320	563	40	100	342
601.2-P	8915485	130	100	355	320	563	40	100	342
603.2-P	8916425	130	100	400	380	563	40	130	387
603.3-P	8916395	200	200	400	380	563	40	130	387